



Supplemental Report 1

The original report has been revised to include the Level III deliverables package.

**WORK ORDER NUMBER: 17-03-1523**

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For**Client:** Andersen Environmental**Client Project Name:** Burbank Airport / 9836002041

Attention: Brian Martasin
5261 West Imperial Highway
Los Angeles, CA 90045-6231

A handwritten signature in black ink, appearing to read "S. Nowak".

Approved for release on 04/28/2017 by:
Stephen Nowak
Project Manager

ResultLink ▶

Email your PM ▶

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 Work Order Number: 17-03-1523

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/21/17. They were assigned to Work Order 17-03-1523.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: Andersen Environmental	Work Order:	17-03-1523
5261 West Imperial Highway	Project Name:	Burbank Airport / 9836002041
Los Angeles, CA 90045-6231	PO Number:	
	Date/Time Received:	03/21/17 15:37
	Number of Containers:	11

Attn: Brian Martasin

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
IDW-S	17-03-1523-1	03/20/17 15:30	2	Solid
IDW-W	17-03-1523-2	03/21/17 11:30	9	Aqueous

Detections Summary

Client: Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Work Order: 17-03-1523
 Project Name: Burbank Airport / 9836002041
 Received: 03/21/17

Attn: Brian Martasin

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Client SampleID

<u>Analyte</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>Units</u>	<u>Method</u>	<u>Extraction</u>
IDW-S (17-03-1523-1)						
Arsenic	1.07		0.728	mg/kg	EPA 6010B	EPA 3050B
Barium	60.2		0.485	mg/kg	EPA 6010B	EPA 3050B
Chromium	5.31		0.243	mg/kg	EPA 6010B	EPA 3050B
Cobalt	4.63		0.243	mg/kg	EPA 6010B	EPA 3050B
Copper	7.97		0.485	mg/kg	EPA 6010B	EPA 3050B
Lead	1.97		0.485	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.26		0.243	mg/kg	EPA 6010B	EPA 3050B
Vanadium	17.6		0.243	mg/kg	EPA 6010B	EPA 3050B
Zinc	26.0		0.971	mg/kg	EPA 6010B	EPA 3050B
TPH as Diesel	41	HD	4.9	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Motor Oil	70	HD	4.9	mg/kg	EPA 8015B (M)	EPA 3550B
IDW-W (17-03-1523-2)						
Antimony	0.0226		0.0150	mg/L	EPA 6010B	EPA 3010A Total
Barium	0.160		0.0100	mg/L	EPA 6010B	EPA 3010A Total
Chromium	0.104		0.0100	mg/L	EPA 6010B	EPA 3010A Total
Copper	0.0602		0.0100	mg/L	EPA 6010B	EPA 3010A Total
Molybdenum	0.0412		0.0100	mg/L	EPA 6010B	EPA 3010A Total
Nickel	0.0258		0.0100	mg/L	EPA 6010B	EPA 3010A Total
Vanadium	0.0235		0.0100	mg/L	EPA 6010B	EPA 3010A Total
Zinc	0.539		0.0100	mg/L	EPA 6010B	EPA 3010A Total
TPH as Diesel	12000	HD	200	ug/L	EPA 8015B (M)	EPA 3510C
TPH as Motor Oil	12000	HD	200	ug/L	EPA 8015B (M)	EPA 3510C
Bis(2-Ethylhexyl) Phthalate	16		10	ug/L	EPA 8270C	EPA 3510C
2,4-Dimethylphenol	16		10	ug/L	EPA 8270C	EPA 3510C
Phenol	12		10	ug/L	EPA 8270C	EPA 3510C

Subcontracted analyses, if any, are not included in this summary.

* MDL is shown

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S	17-03-1523-1-A	03/20/17 15:30	Solid	GC 49	03/23/17	03/27/17 17:39	170323B07A

Comment(s): - Motor Oil Range Organics (C17-C44) uses a Diesel Range Organics (C10-C28) standard for quantitation and quality control.

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	41	4.9	1.00	HD
TPH as Motor Oil	70	4.9	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	107	61-145	

Method Blank	099-14-353-12	N/A	Solid	GC 49	03/23/17	03/25/17 02:04	170323B07A
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Comment(s): - Motor Oil Range Organics (C17-C44) uses a Diesel Range Organics (C10-C28) standard for quantitation and quality control.

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	
TPH as Motor Oil	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	98	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Date Received: 03/21/17
 Work Order: 17-03-1523
 Preparation: EPA 3510C
 Method: EPA 8015B (M)
 Units: ug/L

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-W	17-03-1523-2-G	03/21/17 11:30	Aqueous	GC 49	03/22/17	03/27/17 14:15	170322B03

Comment(s): - Motor Oil Range Organics (C17-C44) uses a Diesel Range Organics (C10-C28) standard for quantitation and quality control.

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	12000	200	2.00	HD
TPH as Motor Oil	12000	200	2.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	110	68-140	

Method Blank	099-14-355-12	N/A	Aqueous	GC 49	03/22/17	03/23/17 13:07	170322B03
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Comment(s): - Motor Oil Range Organics (C17-C44) uses a Diesel Range Organics (C10-C28) standard for quantitation and quality control.

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	100	1.00	
TPH as Motor Oil	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	116	68-140	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: ug/L

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-W	17-03-1523-2-D	03/21/17 11:30	Aqueous	GC 56	03/24/17	03/25/17 11:21	170324L035

Comment(s): - The reporting limit is elevated resulting from matrix interference.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline	ND	5000	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	102	38-134	

Method Blank	099-15-704-1685	N/A	Aqueous	GC 56	03/24/17	03/24/17 22:04	170324L035
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Gasoline	ND	100	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	102	38-134	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: mg/kg

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S	17-03-1523-1-B	03/20/17 15:30	Solid	GC 56	03/21/17	03/23/17 20:55	170323L034

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.51	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	100	42-126	

Method Blank	099-14-571-3547	N/A	Solid	GC 56	03/23/17	03/23/17 13:58	170323L034
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Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene - FID	86	42-126	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S	17-03-1523-1-A	03/20/17 15:30	Solid	ICP 7300	03/24/17	03/27/17 13:01	170324L15

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.728	0.971	
Arsenic	1.07	0.728	0.971	
Barium	60.2	0.485	0.971	
Beryllium	ND	0.243	0.971	
Cadmium	ND	0.485	0.971	
Chromium	5.31	0.243	0.971	
Cobalt	4.63	0.243	0.971	
Copper	7.97	0.485	0.971	
Lead	1.97	0.485	0.971	
Molybdenum	ND	0.243	0.971	
Nickel	4.26	0.243	0.971	
Selenium	ND	0.728	0.971	
Silver	ND	0.243	0.971	
Thallium	ND	0.728	0.971	
Vanadium	17.6	0.243	0.971	
Zinc	26.0	0.971	0.971	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Date Received: 03/21/17
 Work Order: 17-03-1523
 Preparation: EPA 3050B
 Method: EPA 6010B
 Units: mg/kg

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	097-01-002-24506	N/A	Solid	ICP 7300	03/24/17	03/27/17 11:00	170324L15

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Antimony	ND	0.725	0.966	
Arsenic	ND	0.725	0.966	
Barium	ND	0.483	0.966	
Beryllium	ND	0.242	0.966	
Cadmium	ND	0.483	0.966	
Chromium	ND	0.242	0.966	
Cobalt	ND	0.242	0.966	
Copper	ND	0.483	0.966	
Lead	ND	0.483	0.966	
Molybdenum	ND	0.242	0.966	
Nickel	ND	0.242	0.966	
Selenium	ND	0.725	0.966	
Silver	ND	0.242	0.966	
Thallium	ND	0.725	0.966	
Vanadium	ND	0.242	0.966	
Zinc	ND	0.966	0.966	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3010A Total
Method: EPA 6010B
Units: mg/L

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-W	17-03-1523-2-F	03/21/17 11:30	Aqueous	ICP 7300	03/23/17	03/24/17 12:44	170323LA5

Parameter	Result	RL	DF	Qualifiers
Antimony	0.0226	0.0150	1.00	
Arsenic	ND	0.0100	1.00	
Barium	0.160	0.0100	1.00	
Beryllium	ND	0.0100	1.00	
Cadmium	ND	0.0100	1.00	
Chromium	0.104	0.0100	1.00	
Cobalt	ND	0.0100	1.00	
Copper	0.0602	0.0100	1.00	
Lead	ND	0.0100	1.00	
Molybdenum	0.0412	0.0100	1.00	
Nickel	0.0258	0.0100	1.00	
Selenium	ND	0.0150	1.00	
Silver	ND	0.00500	1.00	
Thallium	ND	0.0150	1.00	
Vanadium	0.0235	0.0100	1.00	
Zinc	0.539	0.0100	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3010A Total
Method: EPA 6010B
Units: mg/L

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	097-01-003-16377	N/A	Aqueous	ICP 7300	03/23/17	03/24/17 12:38	170323LA5

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Antimony	ND	0.0150	1.00	
Arsenic	ND	0.0100	1.00	
Barium	ND	0.0100	1.00	
Beryllium	ND	0.0100	1.00	
Cadmium	ND	0.0100	1.00	
Chromium	ND	0.0100	1.00	
Cobalt	ND	0.0100	1.00	
Copper	ND	0.0100	1.00	
Lead	ND	0.0100	1.00	
Molybdenum	ND	0.0100	1.00	
Nickel	ND	0.0100	1.00	
Selenium	ND	0.0150	1.00	
Silver	ND	0.00500	1.00	
Thallium	ND	0.0150	1.00	
Vanadium	ND	0.0100	1.00	
Zinc	ND	0.0100	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 7470A Total
Method: EPA 7470A
Units: mg/L

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-W	17-03-1523-2-F	03/21/17 11:30	Aqueous	Mercury 07	03/27/17	03/27/17 18:02	170327LA2

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.000500	1.00	

Method Blank	099-04-008-8158	N/A	Aqueous	Mercury 07	03/27/17	03/27/17 15:11	170327LA2
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.000500	1.00	

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 7471A Total
Method: EPA 7471A
Units: mg/kg

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S	17-03-1523-1-A	03/20/17 15:30	Solid	Mercury 08	03/24/17	03/24/17 20:48	170324L04

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.0794	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-272-2901	N/A	Solid	Mercury 08	03/24/17	03/24/17 19:38	170324L04

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.0833	1.00	

Analytical Report

Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Date Received: 03/21/17
 Work Order: 17-03-1523
 Preparation: EPA 3510C
 Method: EPA 8270C
 Units: ug/L

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-W	17-03-1523-2-I	03/21/17 11:30	Aqueous	GC/MS SS	03/22/17	03/23/17 16:01	170322L01

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	10	1.00	
Acenaphthylene	ND	10	1.00	
Aniline	ND	10	1.00	
Anthracene	ND	10	1.00	
Azobenzene	ND	10	1.00	
Benzidine	ND	50	1.00	
Benzo (a) Anthracene	ND	10	1.00	
Benzo (a) Pyrene	ND	10	1.00	
Benzo (b) Fluoranthene	ND	10	1.00	
Benzo (g,h,i) Perylene	ND	10	1.00	
Benzo (k) Fluoranthene	ND	10	1.00	
Benzoic Acid	ND	50	1.00	
Benzyl Alcohol	ND	10	1.00	
Bis(2-Chloroethoxy) Methane	ND	10	1.00	
Bis(2-Chloroethyl) Ether	ND	25	1.00	
Bis(2-Chloroisopropyl) Ether	ND	10	1.00	
Bis(2-Ethylhexyl) Phthalate	16	10	1.00	
4-Bromophenyl-Phenyl Ether	ND	10	1.00	
Butyl Benzyl Phthalate	ND	10	1.00	
4-Chloro-3-Methylphenol	ND	10	1.00	
4-Chloroaniline	ND	10	1.00	
2-Chloronaphthalene	ND	10	1.00	
2-Chlorophenol	ND	10	1.00	
4-Chlorophenyl-Phenyl Ether	ND	10	1.00	
Chrysene	ND	10	1.00	
Di-n-Butyl Phthalate	ND	10	1.00	
Di-n-Octyl Phthalate	ND	10	1.00	
Dibenz (a,h) Anthracene	ND	10	1.00	
Dibenzofuran	ND	10	1.00	
1,2-Dichlorobenzene	ND	10	1.00	
1,3-Dichlorobenzene	ND	10	1.00	
1,4-Dichlorobenzene	ND	10	1.00	
3,3'-Dichlorobenzidine	ND	25	1.00	
2,4-Dichlorophenol	ND	10	1.00	
Diethyl Phthalate	ND	10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Burbank Airport / 9836002041

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Dimethyl Phthalate	ND	10	1.00	
2,4-Dimethylphenol	16	10	1.00	
4,6-Dinitro-2-Methylphenol	ND	50	1.00	
2,4-Dinitrophenol	ND	50	1.00	
2,4-Dinitrotoluene	ND	10	1.00	
2,6-Dinitrotoluene	ND	10	1.00	
Fluoranthene	ND	10	1.00	
Fluorene	ND	10	1.00	
Hexachloro-1,3-Butadiene	ND	10	1.00	
Hexachlorobenzene	ND	10	1.00	
Hexachlorocyclopentadiene	ND	25	1.00	
Hexachloroethane	ND	10	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.00	
Isophorone	ND	10	1.00	
2-Methylnaphthalene	ND	10	1.00	
1-Methylnaphthalene	ND	10	1.00	
2-Methylphenol	ND	10	1.00	
3/4-Methylphenol	ND	10	1.00	
N-Nitroso-di-n-propylamine	ND	10	1.00	
N-Nitrosodimethylamine	ND	10	1.00	
N-Nitrosodiphenylamine	ND	10	1.00	
Naphthalene	ND	10	1.00	
4-Nitroaniline	ND	10	1.00	
3-Nitroaniline	ND	10	1.00	
2-Nitroaniline	ND	10	1.00	
Nitrobenzene	ND	25	1.00	
4-Nitrophenol	ND	10	1.00	
2-Nitrophenol	ND	10	1.00	
Pentachlorophenol	ND	10	1.00	
Phenanthrene	ND	10	1.00	
Phenol	12	10	1.00	
Pyrene	ND	10	1.00	
Pyridine	ND	10	1.00	
1,2,4-Trichlorobenzene	ND	10	1.00	
2,4,6-Trichlorophenol	ND	10	1.00	
2,4,5-Trichlorophenol	ND	10	1.00	
2,6-Dichlorophenol	ND	10	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Burbank Airport / 9836002041

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	86	33-120	
2-Fluorophenol	31	24-120	
Nitrobenzene-d5	66	38-120	
p-Terphenyl-d14	73	41-137	
Phenol-d6	21	16-120	
2,4,6-Tribromophenol	41	27-159	

Analytical Report

Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Date Received: 03/21/17
 Work Order: 17-03-1523
 Preparation: EPA 3510C
 Method: EPA 8270C
 Units: ug/L

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	095-01-003-4349	N/A	Aqueous	GC/MS SS	03/22/17	03/23/17 12:50	170322L01

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	10	1.00	
Acenaphthylene	ND	10	1.00	
Aniline	ND	10	1.00	
Anthracene	ND	10	1.00	
Azobenzene	ND	10	1.00	
Benzidine	ND	50	1.00	
Benzo (a) Anthracene	ND	10	1.00	
Benzo (a) Pyrene	ND	10	1.00	
Benzo (b) Fluoranthene	ND	10	1.00	
Benzo (g,h,i) Perylene	ND	10	1.00	
Benzo (k) Fluoranthene	ND	10	1.00	
Benzoic Acid	ND	50	1.00	
Benzyl Alcohol	ND	10	1.00	
Bis(2-Chloroethoxy) Methane	ND	10	1.00	
Bis(2-Chloroethyl) Ether	ND	25	1.00	
Bis(2-Chloroisopropyl) Ether	ND	10	1.00	
Bis(2-Ethylhexyl) Phthalate	ND	10	1.00	
4-Bromophenyl-Phenyl Ether	ND	10	1.00	
Butyl Benzyl Phthalate	ND	10	1.00	
4-Chloro-3-Methylphenol	ND	10	1.00	
4-Chloroaniline	ND	10	1.00	
2-Chloronaphthalene	ND	10	1.00	
2-Chlorophenol	ND	10	1.00	
4-Chlorophenyl-Phenyl Ether	ND	10	1.00	
Chrysene	ND	10	1.00	
Di-n-Butyl Phthalate	ND	10	1.00	
Di-n-Octyl Phthalate	ND	10	1.00	
Dibenz (a,h) Anthracene	ND	10	1.00	
Dibenzofuran	ND	10	1.00	
1,2-Dichlorobenzene	ND	10	1.00	
1,3-Dichlorobenzene	ND	10	1.00	
1,4-Dichlorobenzene	ND	10	1.00	
3,3'-Dichlorobenzidine	ND	25	1.00	
2,4-Dichlorophenol	ND	10	1.00	
Diethyl Phthalate	ND	10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Burbank Airport / 9836002041

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Dimethyl Phthalate	ND	10	1.00	
2,4-Dimethylphenol	ND	10	1.00	
4,6-Dinitro-2-Methylphenol	ND	50	1.00	
2,4-Dinitrophenol	ND	50	1.00	
2,4-Dinitrotoluene	ND	10	1.00	
2,6-Dinitrotoluene	ND	10	1.00	
Fluoranthene	ND	10	1.00	
Fluorene	ND	10	1.00	
Hexachloro-1,3-Butadiene	ND	10	1.00	
Hexachlorobenzene	ND	10	1.00	
Hexachlorocyclopentadiene	ND	25	1.00	
Hexachloroethane	ND	10	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.00	
Isophorone	ND	10	1.00	
2-Methylnaphthalene	ND	10	1.00	
1-Methylnaphthalene	ND	10	1.00	
2-Methylphenol	ND	10	1.00	
3/4-Methylphenol	ND	10	1.00	
N-Nitroso-di-n-propylamine	ND	10	1.00	
N-Nitrosodimethylamine	ND	10	1.00	
N-Nitrosodiphenylamine	ND	10	1.00	
Naphthalene	ND	10	1.00	
4-Nitroaniline	ND	10	1.00	
3-Nitroaniline	ND	10	1.00	
2-Nitroaniline	ND	10	1.00	
Nitrobenzene	ND	25	1.00	
4-Nitrophenol	ND	10	1.00	
2-Nitrophenol	ND	10	1.00	
Pentachlorophenol	ND	10	1.00	
Phenanthrene	ND	10	1.00	
Phenol	ND	10	1.00	
Pyrene	ND	10	1.00	
Pyridine	ND	10	1.00	
1,2,4-Trichlorobenzene	ND	10	1.00	
2,4,6-Trichlorophenol	ND	10	1.00	
2,4,5-Trichlorophenol	ND	10	1.00	
2,6-Dichlorophenol	ND	10	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3510C
Method: EPA 8270C
Units: ug/L

Project: Burbank Airport / 9836002041

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	92	33-120	
2-Fluorophenol	66	24-120	
Nitrobenzene-d5	89	38-120	
p-Terphenyl-d14	97	41-137	
Phenol-d6	39	16-120	
2,4,6-Tribromophenol	109	27-159	

Analytical Report

Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Date Received: 03/21/17
 Work Order: 17-03-1523
 Preparation: EPA 3545
 Method: EPA 8270C
 Units: mg/kg

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S	17-03-1523-1-A	03/20/17 15:30	Solid	GC/MS CCC	03/22/17	03/23/17 15:21	170322L02A

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1.00	
Acenaphthylene	ND	0.50	1.00	
Aniline	ND	0.50	1.00	
Anthracene	ND	0.50	1.00	
Azobenzene	ND	0.50	1.00	
Benzidine	ND	10	1.00	
Benzo (a) Anthracene	ND	0.50	1.00	
Benzo (a) Pyrene	ND	0.50	1.00	
Benzo (b) Fluoranthene	ND	0.50	1.00	
Benzo (g,h,i) Perylene	ND	0.50	1.00	
Benzo (k) Fluoranthene	ND	0.50	1.00	
Benzoic Acid	ND	2.5	1.00	
Benzyl Alcohol	ND	0.50	1.00	
Bis(2-Chloroethoxy) Methane	ND	0.50	1.00	
Bis(2-Chloroethyl) Ether	ND	2.5	1.00	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1.00	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1.00	
4-Bromophenyl-Phenyl Ether	ND	0.50	1.00	
Butyl Benzyl Phthalate	ND	0.50	1.00	
4-Chloro-3-Methylphenol	ND	0.50	1.00	
4-Chloroaniline	ND	0.50	1.00	
2-Chloronaphthalene	ND	0.50	1.00	
2-Chlorophenol	ND	0.50	1.00	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1.00	
Chrysene	ND	0.50	1.00	
Di-n-Butyl Phthalate	ND	0.50	1.00	
Di-n-Octyl Phthalate	ND	0.50	1.00	
Dibenz (a,h) Anthracene	ND	0.50	1.00	
Dibenzofuran	ND	0.50	1.00	
1,2-Dichlorobenzene	ND	0.50	1.00	
1,3-Dichlorobenzene	ND	0.50	1.00	
1,4-Dichlorobenzene	ND	0.50	1.00	
3,3'-Dichlorobenzidine	ND	10	1.00	
2,4-Dichlorophenol	ND	0.50	1.00	
Diethyl Phthalate	ND	0.50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Date Received: 03/21/17
 Work Order: 17-03-1523
 Preparation: EPA 3545
 Method: EPA 8270C
 Units: mg/kg

Project: Burbank Airport / 9836002041

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Dimethyl Phthalate	ND	0.50	1.00	
2,4-Dimethylphenol	ND	0.50	1.00	
4,6-Dinitro-2-Methylphenol	ND	2.5	1.00	
2,4-Dinitrophenol	ND	2.5	1.00	
2,4-Dinitrotoluene	ND	0.50	1.00	
2,6-Dichlorophenol	ND	0.50	1.00	
2,6-Dinitrotoluene	ND	0.50	1.00	
Fluoranthene	ND	0.50	1.00	
Fluorene	ND	0.50	1.00	
Hexachloro-1,3-Butadiene	ND	0.50	1.00	
Hexachlorobenzene	ND	0.50	1.00	
Hexachlorocyclopentadiene	ND	2.5	1.00	
Hexachloroethane	ND	0.50	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1.00	
Isophorone	ND	0.50	1.00	
2-Methylnaphthalene	ND	0.50	1.00	
1-Methylnaphthalene	ND	0.50	1.00	
2-Methylphenol	ND	0.50	1.00	
3/4-Methylphenol	ND	0.50	1.00	
N-Nitroso-di-n-propylamine	ND	0.50	1.00	
N-Nitrosodimethylamine	ND	0.50	1.00	
N-Nitrosodiphenylamine	ND	0.50	1.00	
Naphthalene	ND	0.50	1.00	
4-Nitroaniline	ND	0.50	1.00	
3-Nitroaniline	ND	0.50	1.00	
2-Nitroaniline	ND	0.50	1.00	
Nitrobenzene	ND	2.5	1.00	
4-Nitrophenol	ND	0.50	1.00	
2-Nitrophenol	ND	0.50	1.00	
Pentachlorophenol	ND	2.5	1.00	
Phenanthrene	ND	0.50	1.00	
Phenol	ND	0.50	1.00	
Pyrene	ND	0.50	1.00	
Pyridine	ND	0.50	1.00	
1,2,4-Trichlorobenzene	ND	0.50	1.00	
2,4,6-Trichlorophenol	ND	0.50	1.00	
2,4,5-Trichlorophenol	ND	0.50	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Burbank Airport / 9836002041

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	70	27-120	
2-Fluorophenol	62	25-120	
Nitrobenzene-d5	53	33-123	
p-Terphenyl-d14	71	27-159	
Phenol-d6	64	26-122	
2,4,6-Tribromophenol	90	18-138	

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-549-3830	N/A	Solid	GC/MS CCC	03/22/17	03/23/17 10:24	170322L02A

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1.00	
Acenaphthylene	ND	0.50	1.00	
Aniline	ND	0.50	1.00	
Anthracene	ND	0.50	1.00	
Azobenzene	ND	0.50	1.00	
Benzidine	ND	10	1.00	
Benzo (a) Anthracene	ND	0.50	1.00	
Benzo (a) Pyrene	ND	0.50	1.00	
Benzo (b) Fluoranthene	ND	0.50	1.00	
Benzo (g,h,i) Perylene	ND	0.50	1.00	
Benzo (k) Fluoranthene	ND	0.50	1.00	
Benzoic Acid	ND	2.5	1.00	
Benzyl Alcohol	ND	0.50	1.00	
Bis(2-Chloroethoxy) Methane	ND	0.50	1.00	
Bis(2-Chloroethyl) Ether	ND	2.5	1.00	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1.00	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1.00	
4-Bromophenyl-Phenyl Ether	ND	0.50	1.00	
Butyl Benzyl Phthalate	ND	0.50	1.00	
4-Chloro-3-Methylphenol	ND	0.50	1.00	
4-Chloroaniline	ND	0.50	1.00	
2-Chloronaphthalene	ND	0.50	1.00	
2-Chlorophenol	ND	0.50	1.00	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1.00	
Chrysene	ND	0.50	1.00	
Di-n-Butyl Phthalate	ND	0.50	1.00	
Di-n-Octyl Phthalate	ND	0.50	1.00	
Dibenz (a,h) Anthracene	ND	0.50	1.00	
Dibenzofuran	ND	0.50	1.00	
1,2-Dichlorobenzene	ND	0.50	1.00	
1,3-Dichlorobenzene	ND	0.50	1.00	
1,4-Dichlorobenzene	ND	0.50	1.00	
3,3'-Dichlorobenzidine	ND	10	1.00	
2,4-Dichlorophenol	ND	0.50	1.00	
Diethyl Phthalate	ND	0.50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Date Received: 03/21/17
 Work Order: 17-03-1523
 Preparation: EPA 3545
 Method: EPA 8270C
 Units: mg/kg

Project: Burbank Airport / 9836002041

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Dimethyl Phthalate	ND	0.50	1.00	
2,4-Dimethylphenol	ND	0.50	1.00	
4,6-Dinitro-2-Methylphenol	ND	2.5	1.00	
2,4-Dinitrophenol	ND	2.5	1.00	
2,4-Dinitrotoluene	ND	0.50	1.00	
2,6-Dichlorophenol	ND	0.50	1.00	
2,6-Dinitrotoluene	ND	0.50	1.00	
Fluoranthene	ND	0.50	1.00	
Fluorene	ND	0.50	1.00	
Hexachloro-1,3-Butadiene	ND	0.50	1.00	
Hexachlorobenzene	ND	0.50	1.00	
Hexachlorocyclopentadiene	ND	2.5	1.00	
Hexachloroethane	ND	0.50	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1.00	
Isophorone	ND	0.50	1.00	
2-Methylnaphthalene	ND	0.50	1.00	
1-Methylnaphthalene	ND	0.50	1.00	
2-Methylphenol	ND	0.50	1.00	
3/4-Methylphenol	ND	0.50	1.00	
N-Nitroso-di-n-propylamine	ND	0.50	1.00	
N-Nitrosodimethylamine	ND	0.50	1.00	
N-Nitrosodiphenylamine	ND	0.50	1.00	
Naphthalene	ND	0.50	1.00	
4-Nitroaniline	ND	0.50	1.00	
3-Nitroaniline	ND	0.50	1.00	
2-Nitroaniline	ND	0.50	1.00	
Nitrobenzene	ND	2.5	1.00	
4-Nitrophenol	ND	0.50	1.00	
2-Nitrophenol	ND	0.50	1.00	
Pentachlorophenol	ND	2.5	1.00	
Phenanthrene	ND	0.50	1.00	
Phenol	ND	0.50	1.00	
Pyrene	ND	0.50	1.00	
Pyridine	ND	0.50	1.00	
1,2,4-Trichlorobenzene	ND	0.50	1.00	
2,4,6-Trichlorophenol	ND	0.50	1.00	
2,4,5-Trichlorophenol	ND	0.50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Project: Burbank Airport / 9836002041

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	94	27-120	
2-Fluorophenol	79	25-120	
Nitrobenzene-d5	78	33-123	
p-Terphenyl-d14	87	27-159	
Phenol-d6	81	26-122	
2,4,6-Tribromophenol	89	18-138	

Analytical Report

Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Date Received: 03/21/17
 Work Order: 17-03-1523
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-W	17-03-1523-2-A	03/21/17 11:30	Aqueous	GC/MS V V	03/22/17	03/22/17 21:20	170322L037

Comment(s): - The reporting limit is elevated resulting from matrix interference.

Parameter	Result	RL	DF	Qualifiers
1,1,1,2-Tetrachloroethane	ND	500	500	
1,1,1-Trichloroethane	ND	500	500	
1,1,2,2-Tetrachloroethane	ND	500	500	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5000	500	
1,1,2-Trichloroethane	ND	500	500	
1,1-Dichloroethane	ND	500	500	
1,1-Dichloroethene	ND	500	500	
1,1-Dichloropropene	ND	500	500	
1,2,3-Trichlorobenzene	ND	500	500	
1,2,3-Trichloropropane	ND	2500	500	
1,2,4-Trichlorobenzene	ND	500	500	
1,2,4-Trimethylbenzene	ND	500	500	
1,2-Dibromo-3-Chloropropane	ND	2500	500	
1,2-Dibromoethane	ND	500	500	
1,2-Dichlorobenzene	ND	500	500	
1,2-Dichloroethane	ND	250	500	
1,2-Dichloropropane	ND	500	500	
1,3,5-Trimethylbenzene	ND	500	500	
1,3-Dichlorobenzene	ND	500	500	
1,3-Dichloropropane	ND	500	500	
1,4-Dichlorobenzene	ND	500	500	
2,2-Dichloropropane	ND	500	500	
2-Butanone	ND	5000	500	
2-Chlorotoluene	ND	500	500	
2-Hexanone	ND	5000	500	
4-Chlorotoluene	ND	500	500	
4-Methyl-2-Pentanone	ND	5000	500	
Acetone	ND	10000	500	
Benzene	ND	250	500	
Bromobenzene	ND	500	500	
Bromochloromethane	ND	500	500	
Bromodichloromethane	ND	500	500	
Bromoform	ND	500	500	
Bromomethane	ND	5000	500	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Burbank Airport / 9836002041

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon Disulfide	ND	5000	500	
Carbon Tetrachloride	ND	250	500	
Chlorobenzene	ND	500	500	
Chloroethane	ND	2500	500	
Chloroform	ND	500	500	
Chloromethane	ND	5000	500	
Dibromochloromethane	ND	500	500	
Dibromomethane	ND	500	500	
Dichlorodifluoromethane	ND	500	500	
Ethylbenzene	ND	500	500	
Isopropylbenzene	ND	500	500	
Methylene Chloride	ND	5000	500	
Naphthalene	ND	5000	500	
Styrene	ND	500	500	
Tetrachloroethene	ND	500	500	
Toluene	ND	500	500	
t-1,2-Dichloroethene	ND	500	500	
Trichloroethene	ND	500	500	
Trichlorofluoromethane	ND	5000	500	
Vinyl Acetate	ND	5000	500	
Vinyl Chloride	ND	250	500	
c-1,3-Dichloropropene	ND	250	500	
c-1,2-Dichloroethene	ND	500	500	
n-Butylbenzene	ND	500	500	
n-Propylbenzene	ND	500	500	
o-Xylene	ND	500	500	
p-Isopropyltoluene	ND	500	500	
sec-Butylbenzene	ND	500	500	
t-1,3-Dichloropropene	ND	250	500	
tert-Butylbenzene	ND	500	500	
p/m-Xylene	ND	500	500	
Methyl-t-Butyl Ether (MTBE)	ND	500	500	
Tert-Butyl Alcohol (TBA)	ND	5000	500	
Diisopropyl Ether (DIPE)	ND	1000	500	
Ethyl-t-Butyl Ether (ETBE)	ND	1000	500	
Tert-Amyl-Methyl Ether (TAME)	ND	1000	500	
Ethanol	ND	50000	500	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Burbank Airport / 9836002041

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	84	77-120	
Dibromofluoromethane	111	80-128	
1,2-Dichloroethane-d4	94	80-129	
Toluene-d8	99	80-120	

Analytical Report

Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Date Received: 03/21/17
 Work Order: 17-03-1523
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-22761	N/A	Aqueous	GC/MS V V	03/22/17	03/22/17 16:02	170322L037

Parameter	Result	RL	DF	Qualifiers
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
1,1-Dichloropropene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trimethylbenzene	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	
2-Butanone	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
2-Hexanone	ND	10	1.00	
4-Chlorotoluene	ND	1.0	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	1.0	1.00	
Bromomethane	ND	10	1.00	
Carbon Disulfide	ND	10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Date Received: 03/21/17
 Work Order: 17-03-1523
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Burbank Airport / 9836002041

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
Dibromochloromethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
Ethylbenzene	ND	1.0	1.00	
Isopropylbenzene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
Naphthalene	ND	10	1.00	
Styrene	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
n-Butylbenzene	ND	1.0	1.00	
n-Propylbenzene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
tert-Butylbenzene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	85	77-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental	Date Received:	03/21/17
5261 West Imperial Highway	Work Order:	17-03-1523
Los Angeles, CA 90045-6231	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: Burbank Airport / 9836002041		Page 6 of 6

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	107	80-128	
1,2-Dichloroethane-d4	93	80-129	
Toluene-d8	98	80-120	

Analytical Report

Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Date Received: 03/21/17
 Work Order: 17-03-1523
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/kg

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IDW-S	17-03-1523-1-B	03/20/17 15:30	Solid	GC/MS Q	03/21/17	03/23/17 04:25	170322L049

Parameter	Result	RL	DF	Qualifiers
1,1,1,2-Tetrachloroethane	ND	5.0	1.00	
1,1,1-Trichloroethane	ND	5.0	1.00	
1,1,2,2-Tetrachloroethane	ND	5.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	1.00	
1,1,2-Trichloroethane	ND	5.0	1.00	
1,1-Dichloroethane	ND	5.0	1.00	
1,1-Dichloroethene	ND	5.0	1.00	
1,1-Dichloropropene	ND	5.0	1.00	
1,2,3-Trichlorobenzene	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trichlorobenzene	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	5.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	25	1.00	
1,2-Dibromoethane	ND	5.0	1.00	
1,2-Dichlorobenzene	ND	5.0	1.00	
1,2-Dichloroethane	ND	2.5	1.00	
1,2-Dichloropropane	ND	5.0	1.00	
1,3,5-Trimethylbenzene	ND	5.0	1.00	
1,3-Dichlorobenzene	ND	5.0	1.00	
1,3-Dichloropropane	ND	5.0	1.00	
1,4-Dichlorobenzene	ND	5.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	
2-Butanone	ND	50	1.00	
2-Chlorotoluene	ND	5.0	1.00	
2-Hexanone	ND	50	1.00	
4-Chlorotoluene	ND	5.0	1.00	
4-Methyl-2-Pentanone	ND	50	1.00	
Acetone	ND	130	1.00	
Benzene	ND	5.0	1.00	
Bromobenzene	ND	5.0	1.00	
Bromochloromethane	ND	5.0	1.00	
Bromodichloromethane	ND	5.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	25	1.00	
Carbon Disulfide	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Date Received: 03/21/17
 Work Order: 17-03-1523
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/kg

Project: Burbank Airport / 9836002041

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon Tetrachloride	ND	5.0	1.00	
Chlorobenzene	ND	5.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	5.0	1.00	
Chloromethane	ND	25	1.00	
Dibromochloromethane	ND	5.0	1.00	
Dibromomethane	ND	5.0	1.00	
Dichlorodifluoromethane	ND	5.0	1.00	
Ethylbenzene	ND	5.0	1.00	
Isopropylbenzene	ND	5.0	1.00	
Methylene Chloride	ND	50	1.00	
Naphthalene	ND	50	1.00	
Styrene	ND	5.0	1.00	
Tetrachloroethene	ND	5.0	1.00	
Toluene	ND	5.0	1.00	
t-1,2-Dichloroethene	ND	5.0	1.00	
Trichloroethene	ND	5.0	1.00	
Trichlorofluoromethane	ND	50	1.00	
Vinyl Acetate	ND	50	1.00	
Vinyl Chloride	ND	5.0	1.00	
c-1,3-Dichloropropene	ND	5.0	1.00	
c-1,2-Dichloroethene	ND	5.0	1.00	
n-Butylbenzene	ND	5.0	1.00	
n-Propylbenzene	ND	5.0	1.00	
o-Xylene	ND	5.0	1.00	
p-Isopropyltoluene	ND	5.0	1.00	
sec-Butylbenzene	ND	5.0	1.00	
t-1,3-Dichloropropene	ND	5.0	1.00	
tert-Butylbenzene	ND	5.0	1.00	
p/m-Xylene	ND	5.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	50	1.00	
Diisopropyl Ether (DIPE)	ND	10	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1.00	
Ethanol	ND	250	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Burbank Airport / 9836002041

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-133	
1,2-Dichloroethane-d4	90	71-155	
Toluene-d8	100	80-120	

Analytical Report

Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Date Received: 03/21/17
 Work Order: 17-03-1523
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/kg

Project: Burbank Airport / 9836002041

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-796-12486	N/A	Solid	GC/MS Q	03/22/17	03/22/17 22:54	170322L049

Parameter	Result	RL	DF	Qualifiers
1,1,1,2-Tetrachloroethane	ND	5.0	1.00	
1,1,1-Trichloroethane	ND	5.0	1.00	
1,1,2,2-Tetrachloroethane	ND	5.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	1.00	
1,1,2-Trichloroethane	ND	5.0	1.00	
1,1-Dichloroethane	ND	5.0	1.00	
1,1-Dichloroethene	ND	5.0	1.00	
1,1-Dichloropropene	ND	5.0	1.00	
1,2,3-Trichlorobenzene	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trichlorobenzene	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	5.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	25	1.00	
1,2-Dibromoethane	ND	5.0	1.00	
1,2-Dichlorobenzene	ND	5.0	1.00	
1,2-Dichloroethane	ND	2.5	1.00	
1,2-Dichloropropane	ND	5.0	1.00	
1,3,5-Trimethylbenzene	ND	5.0	1.00	
1,3-Dichlorobenzene	ND	5.0	1.00	
1,3-Dichloropropane	ND	5.0	1.00	
1,4-Dichlorobenzene	ND	5.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	
2-Butanone	ND	50	1.00	
2-Chlorotoluene	ND	5.0	1.00	
2-Hexanone	ND	50	1.00	
4-Chlorotoluene	ND	5.0	1.00	
4-Methyl-2-Pentanone	ND	50	1.00	
Acetone	ND	120	1.00	
Benzene	ND	5.0	1.00	
Bromobenzene	ND	5.0	1.00	
Bromochloromethane	ND	5.0	1.00	
Bromodichloromethane	ND	5.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	25	1.00	
Carbon Disulfide	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Burbank Airport / 9836002041

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Carbon Tetrachloride	ND	5.0	1.00	
Chlorobenzene	ND	5.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	5.0	1.00	
Chloromethane	ND	25	1.00	
Dibromochloromethane	ND	5.0	1.00	
Dibromomethane	ND	5.0	1.00	
Dichlorodifluoromethane	ND	5.0	1.00	
Ethylbenzene	ND	5.0	1.00	
Isopropylbenzene	ND	5.0	1.00	
Methylene Chloride	ND	50	1.00	
Naphthalene	ND	50	1.00	
Styrene	ND	5.0	1.00	
Tetrachloroethene	ND	5.0	1.00	
Toluene	ND	5.0	1.00	
t-1,2-Dichloroethene	ND	5.0	1.00	
Trichloroethene	ND	5.0	1.00	
Trichlorofluoromethane	ND	50	1.00	
Vinyl Acetate	ND	50	1.00	
Vinyl Chloride	ND	5.0	1.00	
c-1,3-Dichloropropene	ND	5.0	1.00	
c-1,2-Dichloroethene	ND	5.0	1.00	
n-Butylbenzene	ND	5.0	1.00	
n-Propylbenzene	ND	5.0	1.00	
o-Xylene	ND	5.0	1.00	
p-Isopropyltoluene	ND	5.0	1.00	
sec-Butylbenzene	ND	5.0	1.00	
t-1,3-Dichloropropene	ND	5.0	1.00	
tert-Butylbenzene	ND	5.0	1.00	
p/m-Xylene	ND	5.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	50	1.00	
Diisopropyl Ether (DIPE)	ND	10	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	10	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	10	1.00	
Ethanol	ND	250	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	98	80-120		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Burbank Airport / 9836002041

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	95	79-133	
1,2-Dichloroethane-d4	90	71-155	
Toluene-d8	100	80-120	



Calscience

Quality Control - Spike/Spike Duplicate

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1667-1	Sample	Concrete	GC 49	03/23/17	03/25/17 03:28	170323S07
17-03-1667-1	Matrix Spike	Concrete	GC 49	03/23/17	03/25/17 02:46	170323S07
17-03-1667-1	Matrix Spike Duplicate	Concrete	GC 49	03/23/17	03/25/17 03:07	170323S07

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	ND	400.0	356.2	89	368.0	92	64-130	3	0-15	


 Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1124-2	Sample	Aqueous	GC 56	03/24/17	03/24/17 22:36	170324S015
17-03-1124-2	Matrix Spike	Aqueous	GC 56	03/24/17	03/24/17 23:08	170324S015
17-03-1124-2	Matrix Spike Duplicate	Aqueous	GC 56	03/24/17	03/24/17 23:39	170324S015

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	ND	2000	1826	91	1886	94	68-122	3	0-18	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1236-1	Sample	Solid	GC 56	03/16/17	03/23/17 15:38	170323S013
17-03-1236-1	Matrix Spike	Solid	GC 56	03/16/17	03/23/17 16:10	170323S013
17-03-1236-1	Matrix Spike Duplicate	Solid	GC 56	03/16/17	03/23/17 16:42	170323S013

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	13.65	80.16	89.35	94	94.66	101	48-114	6	0-23	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3050B
Method: EPA 6010B

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
IDW-S	Sample	Solid	ICP 7300	03/24/17	03/27/17 13:01	170324S15				
IDW-S	Matrix Spike	Solid	ICP 7300	03/24/17	03/27/17 13:02	170324S15				
IDW-S	Matrix Spike Duplicate	Solid	ICP 7300	03/24/17	03/27/17 13:02	170324S15				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	13.66	55	12.74	51	50-115	7	0-20	
Arsenic	1.075	25.00	26.42	101	23.95	91	75-125	10	0-20	
Barium	60.20	25.00	83.79	94	81.35	85	75-125	3	0-20	
Beryllium	ND	25.00	26.08	104	24.17	97	75-125	8	0-20	
Cadmium	ND	25.00	26.20	105	24.17	97	75-125	8	0-20	
Chromium	5.311	25.00	31.03	103	30.89	102	75-125	0	0-20	
Cobalt	4.630	25.00	30.04	102	28.07	94	75-125	7	0-20	
Copper	7.968	25.00	33.62	103	31.70	95	75-125	6	0-20	
Lead	1.970	25.00	27.88	104	25.81	95	75-125	8	0-20	
Molybdenum	ND	25.00	25.56	102	24.46	98	75-125	4	0-20	
Nickel	4.262	25.00	29.15	100	27.37	92	75-125	6	0-20	
Selenium	ND	25.00	26.03	104	23.60	94	75-125	10	0-20	
Silver	ND	12.50	13.02	104	12.12	97	75-125	7	0-20	
Thallium	ND	25.00	24.65	99	22.87	91	75-125	7	0-20	
Vanadium	17.62	25.00	40.36	91	38.52	84	75-125	5	0-20	
Zinc	25.96	25.00	48.97	92	47.16	85	75-125	4	0-20	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3010A Total
Method: EPA 6010B

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
17-03-1614-1	Sample	Aqueous	ICP 7300	03/23/17	03/24/17 12:51	170323SA5				
17-03-1614-1	Matrix Spike	Aqueous	ICP 7300	03/23/17	03/24/17 12:52	170323SA5				
17-03-1614-1	Matrix Spike Duplicate	Aqueous	ICP 7300	03/23/17	03/24/17 12:53	170323SA5				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	0.5000	0.4801	96	0.4962	99	72-132	3	0-10	
Arsenic	0.01171	0.5000	0.4935	96	0.5282	103	80-140	7	0-11	
Barium	0.1240	0.5000	0.6010	95	0.6555	106	87-123	9	0-6	4
Beryllium	ND	0.5000	0.4743	95	0.5122	102	89-119	8	0-8	
Cadmium	ND	0.5000	0.4831	97	0.5235	105	82-124	8	0-7	4
Chromium	ND	0.5000	0.4952	99	0.5329	107	86-122	7	0-8	
Cobalt	ND	0.5000	0.4905	98	0.5079	102	83-125	3	0-7	
Copper	0.02312	0.5000	0.5037	96	0.5417	104	78-126	7	0-7	
Lead	0.1053	0.5000	0.6002	99	0.6253	104	84-120	4	0-7	
Molybdenum	ND	0.5000	0.4932	99	0.5094	102	78-126	3	0-7	
Nickel	ND	0.5000	0.4691	94	0.4854	97	84-120	3	0-7	
Selenium	ND	0.5000	0.4765	95	0.4923	98	79-127	3	0-9	
Silver	ND	0.2500	0.2424	97	0.2628	105	86-128	8	0-7	4
Thallium	ND	0.5000	0.4875	98	0.4915	98	79-121	1	0-8	
Vanadium	ND	0.5000	0.4912	98	0.5306	106	88-118	8	0-7	4
Zinc	0.5233	0.5000	1.047	105	1.139	123	89-131	8	0-8	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 7470A Total
Method: EPA 7470A

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1870-1	Sample	Aqueous	Mercury 07	03/27/17	03/27/17 15:16	170327SA2
17-03-1870-1	Matrix Spike	Aqueous	Mercury 07	03/27/17	03/27/17 15:18	170327SA2
17-03-1870-1	Matrix Spike Duplicate	Aqueous	Mercury 07	03/27/17	03/27/17 15:21	170327SA2

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.01000	0.01092	109	0.01084	108	55-133	1	0-20	


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RPD: Relative Percent Difference. CL: Control Limits



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Quality Control - Spike/Spike Duplicate

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1383-1	Sample	Solid	Mercury 08	03/24/17	03/24/17 19:43	170324S04
17-03-1383-1	Matrix Spike	Solid	Mercury 08	03/24/17	03/24/17 19:45	170324S04
17-03-1383-1	Matrix Spike Duplicate	Solid	Mercury 08	03/24/17	03/24/17 19:47	170324S04

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.8350	0.8098	97	0.7868	94	71-137	3	0-14	

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RPD: Relative Percent Difference. CL: Control Limits



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Quality Control - Spike/Spike Duplicate

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3545
Method: EPA 8270C

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1546-22	Sample	Solid	GC/MS CCC	03/22/17	03/23/17 13:12	170322S02
17-03-1546-22	Matrix Spike	Solid	GC/MS CCC	03/22/17	03/23/17 11:05	170322S02
17-03-1546-22	Matrix Spike Duplicate	Solid	GC/MS CCC	03/22/17	03/23/17 11:23	170322S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	5.000	4.434	89	4.395	88	34-148	1	0-20	
Acenaphthylene	ND	5.000	4.313	86	4.241	85	50-125	2	0-20	
Aniline	ND	5.000	2.762	55	2.637	53	50-130	5	0-20	
Anthracene	ND	5.000	4.428	89	4.268	85	25-140	4	0-20	
Azobenzene	ND	5.000	3.199	64	3.094	62	50-130	3	0-20	
Benzydine	ND	5.000	1.530	31	1.431	29	50-130	7	0-20	3
Benzo (a) Anthracene	ND	5.000	4.900	98	4.721	94	30-145	4	0-20	
Benzo (a) Pyrene	ND	5.000	5.205	104	4.957	99	15-165	5	0-20	
Benzo (b) Fluoranthene	ND	5.000	5.207	104	5.083	102	20-160	2	0-20	
Benzo (g,h,i) Perylene	ND	5.000	4.771	95	4.750	95	20-180	0	0-20	
Benzo (k) Fluoranthene	ND	5.000	4.978	100	4.760	95	20-160	4	0-20	
Benzoic Acid	ND	5.000	2.788	56	2.583	52	50-130	8	0-20	
Benzyl Alcohol	ND	5.000	3.340	67	3.154	63	50-130	6	0-20	
Bis(2-Chloroethoxy) Methane	ND	5.000	3.504	70	3.349	67	30-185	5	0-20	
Bis(2-Chloroethyl) Ether	ND	5.000	3.339	67	3.224	64	10-160	3	0-20	
Bis(2-Chloroisopropyl) Ether	ND	5.000	2.787	56	2.704	54	35-170	3	0-20	
Bis(2-Ethylhexyl) Phthalate	ND	5.000	4.546	91	4.374	87	20-165	4	0-20	
4-Bromophenyl-Phenyl Ether	ND	5.000	4.219	84	4.123	82	50-130	2	0-20	
Butyl Benzyl Phthalate	ND	5.000	4.767	95	4.619	92	40-140	3	0-20	
4-Chloro-3-Methylphenol	ND	5.000	3.997	80	3.865	77	50-125	3	0-20	
4-Chloroaniline	ND	5.000	3.567	71	3.439	69	50-130	4	0-20	
2-Chloronaphthalene	ND	5.000	4.219	84	4.085	82	60-120	3	0-20	
2-Chlorophenol	ND	5.000	3.910	78	3.812	76	53-120	3	0-20	
4-Chlorophenyl-Phenyl Ether	ND	5.000	4.597	92	4.574	91	20-160	1	0-20	
Chrysene	ND	5.000	4.547	91	4.387	88	15-170	4	0-20	
Di-n-Butyl Phthalate	ND	5.000	4.506	90	4.323	86	20-120	4	0-20	
Di-n-Octyl Phthalate	ND	5.000	4.754	95	4.535	91	20-150	5	0-20	
Dibenz (a,h) Anthracene	ND	5.000	4.666	93	4.609	92	20-180	1	0-20	
Dibenzofuran	ND	5.000	4.485	90	4.517	90	50-130	1	0-20	
1,2-Dichlorobenzene	ND	5.000	3.492	70	3.382	68	32-129	3	0-20	
1,3-Dichlorobenzene	ND	5.000	3.314	66	3.229	65	20-130	3	0-20	
1,4-Dichlorobenzene	ND	5.000	3.431	69	3.292	66	43-120	4	0-26	
3,3'-Dichlorobenzidine	ND	5.000	5.054	101	4.828	97	20-180	5	0-20	
2,4-Dichlorophenol	ND	5.000	4.222	84	4.052	81	39-135	4	0-20	
Diethyl Phthalate	ND	5.000	4.526	91	4.471	89	20-145	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3545
Method: EPA 8270C

Project: Burbank Airport / 9836002041

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Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Dimethyl Phthalate	ND	5.000	4.762	95	4.680	94	50-125	2	0-20	
2,4-Dimethylphenol	ND	5.000	3.742	75	3.626	73	32-119	3	0-20	
4,6-Dinitro-2-Methylphenol	ND	5.000	5.308	106	5.066	101	20-180	5	0-20	
2,4-Dinitrophenol	ND	5.000	5.137	103	4.911	98	20-180	5	0-20	
2,4-Dinitrotoluene	ND	5.000	5.553	111	5.466	109	51-129	2	0-20	
2,6-Dichlorophenol	ND	5.000	4.096	82	3.905	78	75-125	5	0-20	
2,6-Dinitrotoluene	ND	5.000	5.273	105	5.140	103	50-158	3	0-20	
Fluoranthene	ND	5.000	4.971	99	4.806	96	25-140	3	0-20	
Fluorene	ND	5.000	4.665	93	4.660	93	50-130	0	0-20	
Hexachloro-1,3-Butadiene	ND	5.000	3.744	75	3.626	73	20-120	3	0-20	
Hexachlorobenzene	ND	5.000	3.903	78	3.836	77	20-150	2	0-20	
Hexachlorocyclopentadiene	ND	5.000	4.853	97	4.695	94	50-130	3	0-20	
Hexachloroethane	ND	5.000	3.197	64	3.156	63	40-115	1	0-20	
Indeno (1,2,3-c,d) Pyrene	ND	5.000	4.563	91	4.539	91	20-180	1	0-20	
Isophorone	ND	5.000	3.312	66	3.165	63	20-196	5	0-20	
2-Methylnaphthalene	ND	5.000	4.100	82	4.013	80	20-145	2	0-20	
1-Methylnaphthalene	ND	5.000	3.755	75	3.606	72	20-180	4	0-20	
2-Methylphenol	ND	5.000	3.985	80	3.806	76	50-130	5	0-20	
3/4-Methylphenol	ND	10.00	7.713	77	7.342	73	50-130	5	0-20	
N-Nitroso-di-n-propylamine	ND	5.000	3.295	66	3.219	64	38-140	2	0-20	
N-Nitrosodimethylamine	ND	5.000	2.669	53	2.533	51	50-130	5	0-20	
N-Nitrosodiphenylamine	ND	5.000	4.562	91	4.542	91	50-130	0	0-20	
Naphthalene	ND	5.000	3.688	74	3.587	72	20-140	3	0-20	
4-Nitroaniline	ND	5.000	5.411	108	5.278	106	50-130	2	0-20	
3-Nitroaniline	ND	5.000	4.983	100	4.892	98	50-130	2	0-20	
2-Nitroaniline	ND	5.000	4.396	88	4.344	87	50-130	1	0-20	
Nitrobenzene	ND	5.000	3.415	68	3.289	66	35-180	4	0-20	
4-Nitrophenol	ND	5.000	5.010	100	4.687	94	14-128	7	0-59	
2-Nitrophenol	ND	5.000	4.359	87	4.331	87	25-185	1	0-20	
Pentachlorophenol	ND	5.000	3.872	77	3.700	74	10-124	5	0-20	
Phenanthrene	ND	5.000	4.494	90	4.404	88	50-125	2	0-20	
Phenol	ND	5.000	3.817	76	3.702	74	22-124	3	0-20	
Pyrene	ND	5.000	4.701	94	4.542	91	31-169	3	0-20	
Pyridine	ND	5.000	1.876	38	1.801	36	50-130	4	0-20	3
1,2,4-Trichlorobenzene	ND	5.000	3.811	76	3.757	75	40-130	1	0-20	
2,4,6-Trichlorophenol	ND	5.000	4.549	91	4.498	90	37-144	1	0-20	
2,4,5-Trichlorophenol	ND	5.000	4.282	86	4.307	86	50-130	1	0-20	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8260B

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1540-1	Sample	Aqueous	GC/MS V V	03/22/17	03/22/17 16:55	170322S020
17-03-1540-1	Matrix Spike	Aqueous	GC/MS V V	03/22/17	03/22/17 20:01	170322S020
17-03-1540-1	Matrix Spike Duplicate	Aqueous	GC/MS V V	03/22/17	03/22/17 20:27	170322S020

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1,1,2-Tetrachloroethane	ND	5000	6395	128	6314	126	70-135	1	0-20	
1,1,1-Trichloroethane	ND	5000	5259	105	5183	104	68-140	1	0-20	
1,1,2,2-Tetrachloroethane	ND	5000	5346	107	5104	102	70-137	5	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5000	6471	129	6258	125	21-190	3	0-40	
1,1,2-Trichloroethane	ND	5000	5540	111	5496	110	70-130	1	0-20	
1,1-Dichloroethane	ND	5000	5321	106	5210	104	64-130	2	0-20	
1,1-Dichloroethene	195.4	5000	5370	104	5267	101	51-153	2	0-21	
1,1-Dichloropropene	ND	5000	5485	110	5389	108	66-132	2	0-20	
1,2,3-Trichlorobenzene	ND	5000	5332	107	5267	105	64-142	1	0-22	
1,2,3-Trichloropropane	ND	5000	5265	105	5054	101	67-130	4	0-20	
1,2,4-Trichlorobenzene	ND	5000	5218	104	5210	104	60-144	0	0-24	
1,2,4-Trimethylbenzene	ND	5000	5256	105	5084	102	70-133	3	0-20	
1,2-Dibromo-3-Chloropropane	ND	5000	4804	96	4580	92	67-133	5	0-20	
1,2-Dibromoethane	ND	5000	5665	113	5426	109	70-130	4	0-20	
1,2-Dichlorobenzene	ND	5000	5670	113	5507	110	70-130	3	0-20	
1,2-Dichloroethane	ND	5000	4980	100	4896	98	69-135	2	0-20	
1,2-Dichloropropane	ND	5000	5425	109	5263	105	70-130	3	0-20	
1,3,5-Trimethylbenzene	ND	5000	5912	118	5730	115	70-139	3	0-20	
1,3-Dichlorobenzene	ND	5000	5578	112	5500	110	70-130	1	0-20	
1,3-Dichloropropane	ND	5000	5448	109	5268	105	70-130	3	0-20	
1,4-Dichlorobenzene	ND	5000	5684	114	5540	111	70-130	3	0-20	
2,2-Dichloropropane	ND	5000	4330	87	4115	82	37-169	5	0-23	
2-Butanone	ND	5000	4385	88	4141	83	39-159	6	0-21	
2-Chlorotoluene	ND	5000	5699	114	5592	112	70-137	2	0-20	
2-Hexanone	ND	5000	4033	81	3863	77	59-149	4	0-20	
4-Chlorotoluene	ND	5000	5193	104	5093	102	70-130	2	0-20	
4-Methyl-2-Pentanone	ND	5000	4405	88	4173	83	67-139	5	0-20	
Acetone	ND	5000	4844	97	4692	94	22-178	3	0-26	
Benzene	ND	5000	5838	117	5710	114	70-130	2	0-20	
Bromobenzene	ND	5000	6148	123	6029	121	70-130	2	0-20	
Bromochloromethane	ND	5000	6071	121	5892	118	70-132	3	0-20	
Bromodichloromethane	ND	5000	5674	113	5558	111	69-135	2	0-20	
Bromoform	ND	5000	6311	126	6099	122	70-133	3	0-20	
Bromomethane	ND	5000	4171	83	4497	90	11-167	8	0-32	
Carbon Disulfide	ND	5000	6618	132	6475	130	54-138	2	0-23	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8260B

Project: Burbank Airport / 9836002041

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Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Carbon Tetrachloride	ND	5000	6427	129	6178	124	63-153	4	0-22	
Chlorobenzene	ND	5000	6067	121	5929	119	70-130	2	0-20	
Chloroethane	ND	5000	4330	87	4134	83	44-140	5	0-32	
Chloroform	ND	5000	5317	106	5201	104	68-134	2	0-20	
Chloromethane	ND	5000	4273	85	4238	85	20-158	1	0-40	
Dibromochloromethane	ND	5000	6353	127	6209	124	70-133	2	0-20	
Dibromomethane	ND	5000	5565	111	5426	109	70-130	3	0-20	
Dichlorodifluoromethane	ND	5000	4318	86	4290	86	10-190	1	0-40	
Ethylbenzene	ND	5000	5781	116	5631	113	70-134	3	0-24	
Isopropylbenzene	ND	5000	5818	116	5723	114	70-141	2	0-27	
Methylene Chloride	ND	5000	5609	112	5490	110	69-130	2	0-21	
Naphthalene	ND	5000	4815	96	5009	100	61-139	4	0-20	
Styrene	ND	5000	5957	119	5883	118	18-174	1	0-40	
Tetrachloroethene	828.4	5000	6675	117	6548	114	33-147	2	0-30	
Toluene	ND	5000	5892	118	5789	116	70-130	2	0-20	
t-1,2-Dichloroethene	ND	5000	6039	121	5921	118	68-134	2	0-20	
Trichloroethene	9796	5000	15180	108	14920	103	42-156	2	0-20	
Trichlorofluoromethane	ND	5000	5214	104	5195	104	54-162	0	0-30	
Vinyl Acetate	ND	5000	4068	81	3928	79	10-190	3	0-40	
Vinyl Chloride	ND	5000	4370	87	4440	89	59-137	2	0-20	
c-1,3-Dichloropropene	ND	5000	5056	101	4957	99	67-139	2	0-20	
c-1,2-Dichloroethene	ND	5000	5665	113	5527	111	56-146	2	0-20	
n-Butylbenzene	ND	5000	5130	103	5056	101	62-152	1	0-28	
n-Propylbenzene	ND	5000	5849	117	5729	115	70-140	2	0-24	
o-Xylene	ND	5000	5702	114	5572	111	70-142	2	0-31	
p-Isopropyltoluene	ND	5000	5458	109	5299	106	65-143	3	0-39	
sec-Butylbenzene	ND	5000	5331	107	5248	105	70-143	2	0-24	
t-1,3-Dichloropropene	ND	5000	5056	101	4918	98	58-136	3	0-20	
tert-Butylbenzene	ND	5000	5488	110	5395	108	70-140	2	0-20	
p/m-Xylene	ND	10000	11740	117	11470	115	67-145	2	0-28	
Methyl-t-Butyl Ether (MTBE)	ND	5000	4413	88	4305	86	69-130	2	0-20	
Tert-Butyl Alcohol (TBA)	ND	25000	27780	111	27360	109	70-132	2	0-20	
Diisopropyl Ether (DIPE)	ND	5000	4615	92	4477	90	56-140	3	0-25	
Ethyl-t-Butyl Ether (ETBE)	ND	5000	4080	82	4075	82	61-133	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	5000	4447	89	4422	88	69-130	1	0-20	
Ethanol	ND	50000	49270	99	43710	87	65-137	12	0-21	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



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Quality Control - Spike/Spike Duplicate

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8260B

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-1591-5	Sample	Solid	GC/MS Q	03/22/17	03/22/17 23:49	170322S023
17-03-1591-5	Matrix Spike	Solid	GC/MS Q	03/22/17	03/23/17 00:17	170322S023
17-03-1591-5	Matrix Spike Duplicate	Solid	GC/MS Q	03/22/17	03/23/17 00:45	170322S023

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloroethene	ND	50.00	43.92	88	46.13	92	47-143	5	0-25	
1,2-Dibromoethane	ND	50.00	45.69	91	46.16	92	64-124	1	0-20	
1,2-Dichlorobenzene	ND	50.00	41.79	84	43.20	86	35-131	3	0-25	
1,2-Dichloroethane	ND	50.00	41.13	82	42.15	84	80-120	2	0-20	
Benzene	ND	50.00	46.53	93	48.34	97	61-127	4	0-20	
Carbon Tetrachloride	ND	50.00	38.71	77	43.42	87	51-135	11	0-29	
Chlorobenzene	ND	50.00	42.86	86	44.51	89	57-123	4	0-20	
Ethylbenzene	ND	50.00	42.40	85	44.39	89	57-129	5	0-22	
Toluene	ND	50.00	44.33	89	46.10	92	63-123	4	0-20	
Trichloroethene	ND	50.00	45.78	92	46.99	94	44-158	3	0-20	
Vinyl Chloride	ND	50.00	38.18	76	40.12	80	49-139	5	0-47	
o-Xylene	ND	50.00	43.56	87	45.33	91	70-130	4	0-30	
p/m-Xylene	ND	100.0	86.40	86	89.99	90	70-130	4	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	43.08	86	43.90	88	57-123	2	0-21	
Tert-Butyl Alcohol (TBA)	ND	250.0	264.3	106	255.4	102	30-168	3	0-34	
Diisopropyl Ether (DIPE)	ND	50.00	45.90	92	47.48	95	57-129	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	43.18	86	44.64	89	55-127	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	42.66	85	44.22	88	58-124	4	0-20	
Ethanol	ND	500.0	368.2	74	343.2	69	17-167	7	0-47	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-353-12	LCS	Solid	GC 49	03/23/17	03/25/17 02:25	170323B07A
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Diesel		400.0	374.8	94	61-145	

Quality Control - LCS/LCSD

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3510C
Method: EPA 8015B (M)

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-14-355-12	LCS	Aqueous	GC 49	03/22/17	03/23/17 13:27	170322B03			
099-14-355-12	LCSD	Aqueous	GC 49	03/22/17	03/23/17 13:49	170322B03			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	4000	3611	90	3574	89	51-141	1	0-11	

Quality Control - LCS

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-704-1685	LCS	Aqueous	GC 56	03/24/17	03/24/17 21:33	170324L035
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Gasoline		2000	1921	96	78-120	

Quality Control - LCS

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-571-3547	LCS	Solid	GC 56	03/23/17	03/23/17 13:26	170323L034

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Gasoline	10.00	10.10	101	70-124	

Quality Control - LCS

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3050B
Method: EPA 6010B

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
097-01-002-24506	LCS	Solid	ICP 7300	03/24/17	03/27/17 11:01	170324L15	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Antimony		25.00	22.59	90	80-120	73-127	
Arsenic		25.00	22.50	90	80-120	73-127	
Barium		25.00	25.47	102	80-120	73-127	
Beryllium		25.00	22.95	92	80-120	73-127	
Cadmium		25.00	23.83	95	80-120	73-127	
Chromium		25.00	24.27	97	80-120	73-127	
Cobalt		25.00	24.77	99	80-120	73-127	
Copper		25.00	24.72	99	80-120	73-127	
Lead		25.00	24.69	99	80-120	73-127	
Molybdenum		25.00	23.79	95	80-120	73-127	
Nickel		25.00	24.45	98	80-120	73-127	
Selenium		25.00	22.64	91	80-120	73-127	
Silver		12.50	11.96	96	80-120	73-127	
Thallium		25.00	24.10	96	80-120	73-127	
Vanadium		25.00	23.30	93	80-120	73-127	
Zinc		25.00	24.04	96	80-120	73-127	

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

Quality Control - LCS

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3010A Total
Method: EPA 6010B

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
097-01-003-16377	LCS	Aqueous	ICP 7300	03/23/17	03/24/17 12:39	170323LA5	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Antimony		0.5000	0.4219	84	80-120	73-127	
Arsenic		0.5000	0.4927	99	80-120	73-127	
Barium		0.5000	0.5354	107	80-120	73-127	
Beryllium		0.5000	0.5139	103	80-120	73-127	
Cadmium		0.5000	0.5453	109	80-120	73-127	
Chromium		0.5000	0.5540	111	80-120	73-127	
Cobalt		0.5000	0.5688	114	80-120	73-127	
Copper		0.5000	0.5581	112	80-120	73-127	
Lead		0.5000	0.5651	113	80-120	73-127	
Molybdenum		0.5000	0.5161	103	80-120	73-127	
Nickel		0.5000	0.5490	110	80-120	73-127	
Selenium		0.5000	0.5041	101	80-120	73-127	
Silver		0.2500	0.2662	106	80-120	73-127	
Thallium		0.5000	0.5526	111	80-120	73-127	
Vanadium		0.5000	0.5328	107	80-120	73-127	
Zinc		0.5000	0.5687	114	80-120	73-127	

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

Quality Control - LCS

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 7470A Total
Method: EPA 7470A

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-04-008-8158	LCS	Aqueous	Mercury 07	03/27/17	03/27/17 15:14	170327LA2
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Mercury		0.01000	0.01110	111	80-120	

Quality Control - LCS

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 7471A Total
Method: EPA 7471A

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-272-2901	LCS	Solid	Mercury 08	03/24/17	03/24/17 19:41	170324L04
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Mercury		0.8350	0.9045	108	85-121	

Quality Control - LCS/LCSD

Andersen Environmental
 5261 West Imperial Highway
 Los Angeles, CA 90045-6231

Date Received: 03/21/17
 Work Order: 17-03-1523
 Preparation: EPA 3510C
 Method: EPA 8270C

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
095-01-003-4349	LCS	Aqueous	GC/MS SS	03/22/17	03/23/17 12:13	170322L01				
095-01-003-4349	LCSD	Aqueous	GC/MS SS	03/22/17	03/23/17 12:31	170322L01				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acenaphthene	200.0	184.4	92	188.3	94	61-120	51-130	2	0-20	
Acenaphthylene	200.0	187.7	94	186.9	93	55-120	44-131	0	0-20	
Butyl Benzyl Phthalate	200.0	161.5	81	161.6	81	56-122	45-133	0	0-20	
4-Chloro-3-Methylphenol	200.0	162.5	81	158.5	79	52-120	41-131	3	0-20	
2-Chlorophenol	200.0	167.4	84	170.7	85	47-120	35-132	2	0-20	
1,4-Dichlorobenzene	200.0	132.4	66	134.6	67	36-120	22-134	2	0-20	
Dimethyl Phthalate	200.0	183.6	92	184.2	92	60-120	50-130	0	0-20	
2,4-Dinitrotoluene	200.0	202.7	101	196.4	98	61-121	51-131	3	0-20	
Fluorene	200.0	191.2	96	186.8	93	67-120	58-129	2	0-20	
N-Nitroso-di-n-propylamine	200.0	151.3	76	153.0	77	39-123	25-137	1	0-20	
Naphthalene	200.0	154.9	77	154.8	77	54-120	43-131	0	0-20	
4-Nitrophenol	200.0	97.71	49	90.16	45	14-120	0-138	8	0-20	
Pentachlorophenol	200.0	131.4	66	129.5	65	31-127	15-143	1	0-20	
Phenol	200.0	76.68	38	76.48	38	17-120	0-137	0	0-20	
Pyrene	200.0	177.5	89	177.3	89	58-124	47-135	0	0-20	
1,2,4-Trichlorobenzene	200.0	144.4	72	147.9	74	49-120	37-132	2	0-20	

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 3545
Method: EPA 8270C

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-12-549-3830	LCS	Solid	GC/MS CCC	03/22/17	03/23/17 10:44	170322L02A	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Acenaphthene		5.000	4.888	98	51-123	39-135	
Acenaphthylene		5.000	4.667	93	52-120	41-131	
Butyl Benzyl Phthalate		5.000	4.494	90	43-139	27-155	
4-Chloro-3-Methylphenol		5.000	4.281	86	55-121	44-132	
2-Chlorophenol		5.000	4.284	86	58-124	47-135	
1,4-Dichlorobenzene		5.000	3.982	80	42-132	27-147	
Dimethyl Phthalate		5.000	4.793	96	51-123	39-135	
2,4-Dinitrotoluene		5.000	5.839	117	51-129	38-142	
Fluorene		5.000	5.154	103	54-126	42-138	
N-Nitroso-di-n-propylamine		5.000	3.665	73	40-136	24-152	
Naphthalene		5.000	4.058	81	32-146	13-165	
4-Nitrophenol		5.000	4.644	93	24-126	7-143	
Pentachlorophenol		5.000	2.988	60	23-131	5-149	
Phenol		5.000	4.007	80	40-130	25-145	
Pyrene		5.000	4.497	90	47-143	31-159	
1,2,4-Trichlorobenzene		5.000	4.339	87	45-129	31-143	

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass



Return to Contents

Quality Control - LCS

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8260B

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-14-001-22761	LCS	Aqueous	GC/MS V V	03/22/17	03/22/17 15:10	170322L037	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
1,1,1,2-Tetrachloroethane		50.00	59.75	119	80-129	72-137	
1,1,1-Trichloroethane		50.00	49.00	98	76-124	68-132	
1,1,2,2-Tetrachloroethane		50.00	49.34	99	74-122	66-130	
1,1,2-Trichloro-1,2,2-Trifluoroethane		50.00	60.48	121	54-150	38-166	
1,1,2-Trichloroethane		50.00	52.68	105	80-120	73-127	
1,1-Dichloroethane		50.00	48.88	98	72-126	63-135	
1,1-Dichloroethene		50.00	48.42	97	66-132	55-143	
1,1-Dichloropropene		50.00	51.35	103	75-123	67-131	
1,2,3-Trichlorobenzene		50.00	50.99	102	72-132	62-142	
1,2,3-Trichloropropane		50.00	50.88	102	75-123	67-131	
1,2,4-Trichlorobenzene		50.00	50.02	100	74-134	64-144	
1,2,4-Trimethylbenzene		50.00	48.04	96	74-128	65-137	
1,2-Dibromo-3-Chloropropane		50.00	44.84	90	66-126	56-136	
1,2-Dibromoethane		50.00	53.68	107	80-120	73-127	
1,2-Dichlorobenzene		50.00	53.34	107	80-120	73-127	
1,2-Dichloroethane		50.00	47.20	94	76-120	69-127	
1,2-Dichloropropane		50.00	50.20	100	80-120	73-127	
1,3,5-Trimethylbenzene		50.00	54.35	109	77-131	68-140	
1,3-Dichlorobenzene		50.00	52.25	104	80-120	73-127	
1,3-Dichloropropane		50.00	50.56	101	80-120	73-127	
1,4-Dichlorobenzene		50.00	52.77	106	80-120	73-127	
2,2-Dichloropropane		50.00	45.94	92	50-150	33-167	
2-Butanone		50.00	41.59	83	60-126	49-137	
2-Chlorotoluene		50.00	52.42	105	80-121	73-128	
2-Hexanone		50.00	40.51	81	63-123	53-133	
4-Chlorotoluene		50.00	47.54	95	80-120	73-127	
4-Methyl-2-Pentanone		50.00	42.97	86	65-125	55-135	
Acetone		50.00	47.13	94	53-137	39-151	
Benzene		50.00	53.60	107	79-121	72-128	
Bromobenzene		50.00	57.77	116	80-120	73-127	
Bromochloromethane		50.00	57.25	114	80-122	73-129	
Bromodichloromethane		50.00	52.95	106	80-124	73-131	
Bromoform		50.00	60.82	122	73-127	64-136	
Bromomethane		50.00	41.32	83	50-150	33-167	
Carbon Disulfide		50.00	60.62	121	50-150	33-167	
Carbon Tetrachloride		50.00	59.74	119	65-143	52-156	
Chlorobenzene		50.00	56.05	112	80-120	73-127	
Chloroethane		50.00	39.01	78	62-128	51-139	

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8260B

Project: Burbank Airport / 9836002041

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<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Chloroform	50.00	49.53	99	80-120	73-127	
Chloromethane	50.00	38.21	76	43-133	28-148	
Dibromochloromethane	50.00	60.72	121	80-123	73-130	
Dibromomethane	50.00	52.89	106	80-120	73-127	
Dichlorodifluoromethane	50.00	41.17	82	50-150	33-167	
Ethylbenzene	50.00	53.06	106	80-120	73-127	
Isopropylbenzene	50.00	53.94	108	80-128	72-136	
Methylene Chloride	50.00	51.14	102	61-133	49-145	
Naphthalene	50.00	48.98	98	69-129	59-139	
Styrene	50.00	55.28	111	80-126	72-134	
Tetrachloroethene	50.00	57.42	115	55-139	41-153	
Toluene	50.00	54.30	109	80-120	73-127	
t-1,2-Dichloroethene	50.00	55.08	110	66-132	55-143	
Trichloroethene	50.00	53.27	107	79-121	72-128	
Trichlorofluoromethane	50.00	47.37	95	72-132	62-142	
Vinyl Acetate	50.00	38.56	77	50-150	33-167	
Vinyl Chloride	50.00	40.55	81	63-129	52-140	
c-1,3-Dichloropropene	50.00	49.09	98	77-131	68-140	
c-1,2-Dichloroethene	50.00	51.99	104	78-120	71-127	
n-Butylbenzene	50.00	47.92	96	72-138	61-149	
n-Propylbenzene	50.00	53.94	108	80-128	72-136	
o-Xylene	50.00	52.46	105	80-128	72-136	
p-Isopropyltoluene	50.00	50.17	100	73-133	63-143	
sec-Butylbenzene	50.00	49.64	99	77-131	68-140	
t-1,3-Dichloropropene	50.00	49.19	98	76-136	66-146	
tert-Butylbenzene	50.00	50.85	102	80-125	72-132	
p/m-Xylene	100.0	108.3	108	80-122	73-129	
Methyl-t-Butyl Ether (MTBE)	50.00	42.92	86	69-123	60-132	
Tert-Butyl Alcohol (TBA)	250.0	268.8	108	80-124	73-131	
Diisopropyl Ether (DIPE)	50.00	43.57	87	79-121	72-128	
Ethyl-t-Butyl Ether (ETBE)	50.00	40.06	80	71-125	62-134	
Tert-Amyl-Methyl Ether (TAME)	50.00	44.19	88	70-124	61-133	
Ethanol	500.0	419.2	84	53-149	37-165	

Total number of LCS compounds: 71

Total number of ME compounds: 0

Total number of ME compounds allowed: 4

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/21/17
Work Order: 17-03-1523
Preparation: EPA 5030C
Method: EPA 8260B

Project: Burbank Airport / 9836002041

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-12-796-12486	LCS	Solid	GC/MS Q	03/22/17	03/22/17 21:59	170322L049	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
1,1-Dichloroethene		50.00	48.40	97	68-128	58-138	
1,2-Dibromoethane		50.00	53.15	106	80-120	73-127	
1,2-Dichlorobenzene		50.00	49.65	99	80-120	73-127	
1,2-Dichloroethane		50.00	47.31	95	80-120	73-127	
Benzene		50.00	52.90	106	80-120	73-127	
Carbon Tetrachloride		50.00	44.03	88	65-137	53-149	
Chlorobenzene		50.00	50.26	101	80-120	73-127	
Ethylbenzene		50.00	49.04	98	80-120	73-127	
Toluene		50.00	50.58	101	80-120	73-127	
Trichloroethene		50.00	50.98	102	80-120	73-127	
Vinyl Chloride		50.00	41.23	82	67-127	57-137	
o-Xylene		50.00	50.16	100	75-125	67-133	
p/m-Xylene		100.0	99.56	100	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)		50.00	49.23	98	70-124	61-133	
Tert-Butyl Alcohol (TBA)		250.0	303.6	121	73-121	65-129	
Diisopropyl Ether (DIPE)		50.00	51.50	103	69-129	59-139	
Ethyl-t-Butyl Ether (ETBE)		50.00	49.08	98	70-124	61-133	
Tert-Amyl-Methyl Ether (TAME)		50.00	49.91	100	74-122	66-130	
Ethanol		500.0	387.8	78	51-135	37-149	

Total number of LCS compounds: 19

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

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Sample Analysis Summary Report

Work Order: 17-03-1523

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<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 6010B	EPA 3010A Total	935	ICP 7300	1
EPA 6010B	EPA 3050B	935	ICP 7300	1
EPA 7470A	EPA 7470A Total	868	Mercury 07	1
EPA 7471A	EPA 7471A Total	868	Mercury 08	1
EPA 8015B (M)	EPA 3510C	682	GC 49	1
EPA 8015B (M)	EPA 3550B	682	GC 49	1
EPA 8015B (M)	EPA 5030C	1083	GC 56	2
EPA 8260B	EPA 5030C	1055	GC/MS Q	2
EPA 8260B	EPA 5030C	1073	GC/MS V V	2
EPA 8270C	EPA 3545	923	GC/MS CCC	1
EPA 8270C	EPA 3510C	923	GC/MS SS	1


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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 17-03-1523

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<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Analytical Laboratory: Calsciencce Job # 9836002041

Project Name: Burbank Airport NA

Project Address: 2627 N. Hollywood Way, Burbank

Project Manager: B. Mantasin

Sampled by: G. Baader

Phone/Email: 310-854-6300, brian_mantasin@efiglobal.com

Phone/Email: Robert Cheung, 510-529-5948, R.Cheung@Geosyntec.com

Number	Sample ID	Lab ID	Type		Matrix				Preservative				Sampling Information		
			Grab	Decorate	Water	Soil	Vapor	Other	Cold (4° C)	HNO3	NaHSO4	HCl	Date	Time	
1	IDW-S	1	X	X	X	X	X	X	X	X	X	X	X	3/20/17	15:30
2	IDW-W	2	X	X	X	X	X	X	X	X	X	X	X	3/20/17	11:30
														3/20/17	
														3/21/17	
														3/21/17	

Method	Method	Time	Remarks
VOCS, EPA Method 8260B	VOCS, EPA Method 8260B	15:37	
Metals, EPA Method 6010B/7471A	Metals, EPA Method 6010B/7471A	15:37	
Lead, EPA Method 6010B	Lead, EPA Method 6010B	15:37	
Arsenic, EPA Method 6010B	Arsenic, EPA Method 6010B	15:37	
STLC Lead EPA Method	STLC Lead EPA Method	15:37	
TCLP Lead EPA Method	TCLP Lead EPA Method	15:37	
PCBs, EPA Method 8082	PCBs, EPA Method 8082	15:37	
TPH full chain, EPA Method 8015M	TPH full chain, EPA Method 8015M	15:37	
TPHd, TPHmo, EPA Method 8015M	TPHd, TPHmo, EPA Method 8015M	15:37	
Composite	Composite	15:37	
Hold	Hold	15:37	
4- or 8-ounce Glass	4- or 8-ounce Glass	15:37	
250-ml Poly Bottle	250-ml Poly Bottle	15:37	
EZ Draw (EPA 5035) Vials	EZ Draw (EPA 5035) Vials	15:37	
Acetate Liner	Acetate Liner	15:37	
1-1 Amber Bottle	1-1 Amber Bottle	15:37	
24 hours	24 hours	15:37	
48 hours	48 hours	15:37	
Normal	Normal	15:37	

Relinquished by: [Signature]

Received by: [Signature]

Date: 3/20/17 **Time:** 15:45

Date: 3/21/17 **Time:** 11:45

Date: 3/21/17 **Time:** 15:37

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: EFT

DATE: 03/21/2017

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC3B (CF: 0.0°C); Temperature (w/o CF): 3.8 °C (w/ CF): 3.8 °C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: 678

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A

Checked by: 678

Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: 1110

SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples Yes No N/A

COC document(s) received complete Yes No N/A

Sampling date Sampling time Matrix Number of containers

No analysis requested Not relinquished No relinquished date No relinquished time

Sampler's name indicated on COC Yes No N/A

Sample container label(s) consistent with COC Yes No N/A

Sample container(s) intact and in good condition Yes No N/A

Proper containers for analyses requested Yes No N/A

Sufficient volume/mass for analyses requested Yes No N/A

Samples received within holding time Yes No N/A

Aqueous samples for certain analyses received within 15-minute holding time

pH Residual Chlorine Dissolved Sulfide Dissolved Oxygen Yes No N/A

Proper preservation chemical(s) noted on COC and/or sample container Yes No N/A

Unpreserved aqueous sample(s) received for certain analyses

Volatile Organics Total Metals Dissolved Metals

Container(s) for certain analysis free of headspace Yes No N/A

Volatile Organics Dissolved Gases (RSK-175) Dissolved Oxygen (SM 4500)

Carbon Dioxide (SM 4500) Ferrous Iron (SM 3500) Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation Yes No N/A

CONTAINER TYPE: 5 (Trip Blank Lot Number: _____)

Aqueous: VOA VOAh VOAna2 100PJ 100PJna2 125AGB 125AGBh 125AGBp 125PB

125PBzna 250AGB 250CGB 250CGBs 250PB 250PBn 500AGB 500AGJ 500AGJs

500PB 1AGB 1AGBna2 1AGBs 1PB 1PBna _____ _____ _____ _____

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (_____) EnCores® (_____) TerraCores® (_____) _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (____): _____ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO3, na = NaOH, na2 = Na2S2O3, p = H3PO4, Labeled/Checked by: 1110

s = H2SO4, u = ultra-pure, x = Na2SO3+NaHSO4.H2O, zna = Zn (CH3CO2)2 + NaOH Reviewed by: 678

Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1523

CONDITION UPON RECEIPT:

Eurofins Calscience, Inc. received (1) aqueous sample and (1) solid sample on March 21st, 2017. A total of (11) containers were received in good condition and at a temperature of 3.8°C, which was within the recommended temperature of 0°C – 6°C.

Client Sample ID	Lab Sample ID	Date & Time Sampled	Date & Time Received
IDW-S	17-03-1523-1	03/20/17 15:30	03/21/17 15:37
IDW-W	17-03-1523-2	03/21/17 11:30	03/21/17 15:37

DATA SUMMARY:

As per the chain of custody (COC), the samples were analyzed using one or more of the following methodologies:

- EPA 6010B Title 22 Metals (Aqueous)
- EPA 6010B Title 22 Metals (Solid)
- EPA 7470A Mercury (Aqueous)
- EPA 7471A Mercury (Solid)
- EPA 8015B (M) Diesel and Motor Oil Ranges (Aqueous)
- EPA 8015B (M) Diesel and Motor Oil Ranges (Solid)
- EPA 8015B (M) TPH Gasoline (Aqueous)
- EPA 8015B (M) TPH Gasoline (Solid)
- EPA 8260B Volatile Organics (Aqueous)
- EPA 8260B Volatile Organics (Solid)
- EPA 8270C Semi-Volatile Organics (Aqueous)
- EPA 8270C Semi-Volatile Organics (Solid)

The samples were analyzed within the suggested EPA holding time for the requested methods unless otherwise noted.

Sample results were reported in the RL format.

Any dilutions made to the sample(s) and/or QC will be noted in the following narrative. Reporting limits have been adjusted accordingly.

Manual integrations made to the data will be noted in the following narrative. The before and amended chromatograms have been included in the data package.

All sample and analytical QC are within acceptance criteria unless otherwise noted.

Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1523

EPA 6010B Title 22 Metals (Aqueous):

Sample -2 was analyzed for Metals by EPA 6010B. The sample was prepared on 03/23/17 and analyzed on 03/24/17 in batch #s 170323LA5 / 170323SA5 on ICP 7300.

Initial Calibration, Initial Calibration Verification, and Initial Calibration Blank:

All values were within acceptance criteria.

Continuing Calibration Verification and Continuing Calibration Blank:

All values were within acceptance criteria.

ICS A/AB:

All values were within acceptance criteria.

Sample and QC:

The method blank was non-detect and the LCS was within acceptance criteria.

A non-client sample was used for the MS/MSD; refer to the MS/MSD summary form for further information.

EPA 6010B Title 22 Metals (Solid):

Sample -1 was analyzed for Metals by EPA 6010B. The sample was prepared on 03/24/17 and analyzed on 03/27/17 in batch #s 170324L15 / 170324S15 on ICP 7300.

Initial Calibration, Initial Calibration Verification, and Initial Calibration Blank:

All values were within acceptance criteria.

Continuing Calibration Verification and Continuing Calibration Blank:

All values were within acceptance criteria.

ICS A/AB:

All values were within acceptance criteria.

Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1523

Sample and QC:

Sample -1 was used for the MS/MSD. The method blank was non-detect; the LCS and MS/MSD were within acceptance criteria for all project-specific analytes.

EPA 7470A Mercury (Aqueous):

Sample -2 was analyzed for Mercury by EPA 7470A. The sample was prepared and analyzed on 03/27/17 in batch #s 170327LA2 / 170327SA2 on Mercury 07.

Initial Calibration, Initial Calibration Verification, and Initial Calibration Blank:

All values were within acceptance criteria.

Continuing Calibration Verification and Continuing Calibration Blank:

All values were within acceptance criteria.

Sample and QC:

The method blank was non-detect and the LCS was within acceptance criteria.

A non-client sample was used for the MS/MSD; refer to the MS/MSD summary form for further information.

EPA 7471A Mercury (Solid):

Sample -1 was analyzed for Mercury by EPA 7471A. The sample was prepared and analyzed on 03/24/17 in batch #s 170324L04 / 170324S04 on Mercury 08.

Initial Calibration, Initial Calibration Verification, and Initial Calibration Blank:

All values were within acceptance criteria.

Continuing Calibration Verification and Continuing Calibration Blank:

All values were within acceptance criteria.

Sample and QC:

A sample from a different work order was used for the MS/MSD. The method blank was non-detect; the LCS and MS/MSD were within acceptance criteria.

Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1523

EPA 8015B (M) Diesel and Motor Oil Ranges (Aqueous):

Sample -2 was analyzed for Diesel and Motor Oil Ranges by EPA 8015B (M). The sample was prepared on 03/22/17 and analyzed on 03/27/17 in batch # 170322B03 on GC 49.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 03/15/17 on GC 49. The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 30% D acceptance criteria.

For the Diesel and Motor Oil Ranges, Diesel is used for the initial calibration and spiking standards. The surrogate recoveries for the samples and QC were calculated from the 5-point surrogate curve analyzed with the Diesel ICAL.

Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

Sample and QC:

The method blank was non-detect; the LCS/LCSD and all surrogate recoveries were within acceptance criteria.

Sample -2 was analyzed at a 2x dilution.

Manual integration was performed on the sample to correct the peak and/or baseline integration.

For sample -2, the sample chromatographic pattern did not match the TPH Diesel standard. Quantitation of the unknown hydrocarbons in the sample was based upon the specified Diesel standard.

EPA 8015B (M) Diesel and Motor Oil Ranges (Solid):

Sample -1 was analyzed for Diesel and Motor Oil Ranges by EPA 8015B (M). The sample was prepared on 03/23/17 and analyzed on 03/27/17 in batch #s 170323B07A / 170323S07 on GC 49.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 03/15/17 on GC 49. The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 30% D acceptance criteria.

For the Diesel and Motor Oil Ranges, Diesel is used for the initial calibration and spiking standards. The surrogate recoveries for the samples and QC were calculated from the 5-point surrogate curve analyzed with the Diesel ICAL.

Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1523

Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

Sample and QC:

The method blank was non-detect; the LCS and all surrogate recoveries were within acceptance criteria.

A non-client sample was used for the MS/MSD; refer to the MS/MSD summary form for further information.

Manual integrations were performed on the sample, MS/MSD and MS/MSD parent sample to correct the peak and/or baseline integration.

For sample -1, the sample chromatographic pattern did not match the TPH Diesel standard. Quantitation of the unknown hydrocarbons in the sample was based upon the specified Diesel standard.

EPA 8015B (M) TPH Gasoline (Aqueous):

Sample -2 was analyzed for TPH Gasoline by EPA 8015B (M). The sample was prepared on 03/24/17 and analyzed on 03/25/17 in batch #s 170324L035 / 170324S015 on GC 56.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 01/18/17 on GC 56. The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 15% D acceptance criteria.

Manual integration was performed on one or more of the ICAL standards to correct the peak and/or baseline integration.

Continuing Calibration Verification:

All values were within the 15% D acceptance criteria.

Sample and QC:

The method blank was non-detect; the LCS and all surrogate recoveries were within acceptance criteria.

A non-client sample was used for the MS/MSD; refer to the MS/MSD summary form for further information.

Sample -2 was analyzed at a 50x dilution due to sample matrix interference.

Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1523

EPA 8015B (M) TPH Gasoline (Solid):

Sample -1 was analyzed for TPH Gasoline by EPA 8015B (M). The sample was prepared on 03/21/17 and analyzed on 03/23/17 in batch #s 170323L034 / 170323S013 on GC 56.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 01/18/17 on GC 56. The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 15% D acceptance criteria.

Manual integration was performed on one or more of the ICAL standards to correct the peak and/or baseline integration.

Continuing Calibration Verification:

All values were within the 15% D acceptance criteria.

Sample and QC:

The method blank was non-detect; the LCS and all surrogate recoveries were within acceptance criteria.

A non-client sample was used for the MS/MSD; refer to the MS/MSD summary form for further information.

Manual integrations were performed on the MS/MSD and MS/MSD parent sample to correct the peak and/or baseline integration.

EPA 8260B Volatile Organics (Aqueous):

Sample -2 was analyzed for Volatile Organics by EPA 8260B. The sample was prepared and analyzed on 03/22/17 in batch #s 170322L037 / 170322S020 on GC/MS V V.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 03/07/17 on GC/MS V V. The ICAL was within the % RSD acceptance criteria and the ICV was within the % D acceptance criteria.

Manual integration was performed on one or more of the ICAL standards to correct the peak and/or baseline integration.

Continuing Calibration Verification:

All values were within the % D acceptance criteria for project-specific analytes.

Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1523

Tuning Standards:

All instrument tuning standards (BFB) were within acceptance criteria.

Sample and QC:

The method blank was non-detect; the LCS, all surrogate and internal standard recoveries were within acceptance criteria.

A non-client sample was used for the MS/MSD; refer to the MS/MSD summary form for further information.

Sample -2 was analyzed at a 500x dilution due to sample matrix interference.

EPA 8260B Volatile Organics (Solid):

Sample -1 was analyzed for Volatile Organics by EPA 8260B. The sample was prepared on 03/21/17 and analyzed on 03/23/17 in batch #s 170322L049 / 170322S023 on GC/MS Q.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 03/10/17 on GC/MS Q. The ICAL was within the % RSD acceptance criteria. Linear regression was used for Bromoform, Carbon Tetrachloride, Dibromochloromethane, 1,2-Dibromo-3-Chloropropane, c-1,3-Dichloropropene, t-1,3-Dichloropropene, 1,1,1,2-Tetrachloroethane and Ethanol.

The ICV was within the % D acceptance criteria.

Manual integration was performed on one or more of the ICAL standards to correct the peak and/or baseline integration.

Continuing Calibration Verification:

All values were within the % D acceptance criteria.

Tuning Standards:

All instrument tuning standards (BFB) were within acceptance criteria.

Sample and QC:

The method blank was non-detect; the LCS, all surrogate and internal standard recoveries were within acceptance criteria.

Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1523

A non-client sample was used for the MS/MSD; refer to the MS/MSD summary form for further information.

EPA 8270C Semi-Volatile Organics (Aqueous):

Sample -2 was analyzed for Semi-Volatile Organics by EPA 8270C. The sample was prepared on 03/22/17 and analyzed on 03/23/17 in batch # 170322L01 on GC/MS SS.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 01/31/17 on GC/MS SS. The ICAL was within the % RSD acceptance criteria. Linear regression was used for Benzoic Acid, 2,4-Dinitrophenol, 4,6-Dinitro-2-Methylphenol, Pentachlorophenol, Butyl Benzyl Phthalate, 3,3'-Dichlorobenzidine, Bis(2-Ethylhexyl) Phthalate and Di-n-Octyl Phthalate.

The ICV was within the % D acceptance criteria.

Manual integrations were performed on one or more of the ICAL standards and ICV to correct the peak and/or baseline integration.

Continuing Calibration Verification:

All values were within the % D acceptance criteria.

Tuning Standards:

All instrument tuning standards (DFTPP) were within acceptance criteria.

Sample and QC:

The method blank was non-detect; the LCS/LCSD, all the surrogate and internal standard recoveries were within acceptance criteria.

EPA 8270C Semi-Volatile Organics (Solid):

Sample -1 was analyzed for Semi-Volatile Organics by EPA 8270C. The sample was prepared on 03/22/17 and analyzed on 03/23/17 in batch #s 170322L02A / 170322S02 on GC/MS CCC.

Case Narrative

Client Project Name: Burbank Airport / 9836002041

Work Order Number: 17-03-1523

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 02/01/17 on GC/MS CCC. The ICAL was within the % RSD acceptance criteria. Linear regression was used for Benzoic Acid, 2,4-Dinitrophenol and 4,6-Dinitro-2-Methylphenol.

The ICV was within the % D acceptance criteria.

Continuing Calibration Verification:

All values were within the % D acceptance criteria except for N-Nitrosodimethylamine, Bis(2-Chloroisopropyl) Ether, Hexachlorocyclopentadiene, 2,4-Dinitrophenol and Pyridine.

Tuning Standards:

All instrument tuning standards (DFTPP) were within acceptance criteria.

Sample and QC:

The method blank was non-detect; the LCS, all the surrogate and internal standard recoveries were within acceptance criteria.

A non-client sample was used for the MS/MSD; refer to the MS/MSD summary form for further information.

Manual integrations were performed on the LCS and MS/MSD to correct the peak and/or baseline integration.

EPA 8015B (M)
Diesel + Motor Oil
(Solid)

RAW DATA

EPA 8015B (M)
Diesel + Motor Oil
(Solid)

INITIAL CALIBRATION

INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8015B (M)

ICAL WORK ORDER: 099-14-354-39-5901
ICAL BATCH ID: 1703151003
INSTRUMENT: GC 49

ANALYZED BY: 682
ICAL D/T ANALYZED: 2017-03-15 14:40
REVIEWED BY: 1,027
D/T REVIEWED: 2017-03-21 11:23

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD CL	%RSD CL	R or R ² CL	R or R ² CL	STATUS
TPH as Diesel	C	Avg RF	1,099.623	926.110	910.084	938.965	922.917					959.5	0.00	8	0-20			PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2017-03-15 14:40	S:\GC_49\GC_49_data\2017\170315\17031505.d\Report.txt\7031505
2	2017-03-15 15:00	S:\GC_49\GC_49_data\2017\170315\17031506.d\Report.txt\7031506
3	2017-03-15 15:21	S:\GC_49\GC_49_data\2017\170315\17031507.d\Report.txt\7031507
4	2017-03-15 15:42	S:\GC_49\GC_49_data\2017\170315\17031508.d\Report.txt\7031508
5	2017-03-15 16:03	S:\GC_49\GC_49_data\2017\170315\17031509.d\Report.txt\7031509

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor

LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)

LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8015B (M)

ICV WORK ORDER: 099-14-354-39-5901

INITIAL BATCH: 1703151003

INSTRUMENT: GC 49

ANALYZED BY: 682

D/T ANALYZED:

INITIAL:

ICV:

REVIEWED BY:

D/T REVIEWED:

2017-03-15 14:40

2017-03-15 16:23

1,027

2017-03-21 11:23

DATA FILE: S:\GC_49\data\2017\170315\17031510.d\Report.txt\17031510

<u>COMPOUND NAME</u>	<u>COMP TYPE</u>	<u>CALIB MODEL</u>	<u>MIN RF</u>	<u>AVG RF</u>	<u>ICV RF</u>	<u>AMOUNT</u>	<u>ICV CONC</u>	<u>ICV %D</u>	<u>ICV %D CL</u>	<u>STATUS</u>
TPH as Diesel	C	Avg Resp	0.00	959.540	908.665			5	0-30	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 16-Mar-2017 11:21

Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15
 End Cal Date : 15-MAR-2017 20:19
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP Genie
 Method file : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Cal Date : 16-Mar-2017 11:21 umd6
 Curve Type : Average

Calibration File Names:

Level 1: /chem1/SVOA/GC_49.i/170315.b/17031517.d
 Level 2: /chem1/SVOA/GC_49.i/170315.b/17031518.d
 Level 3: /chem1/SVOA/GC_49.i/170315.b/17031519.d
 Level 4: /chem1/SVOA/GC_49.i/170315.b/17031520.d
 Level 5: /chem1/SVOA/GC_49.i/170315.b/17031521.d

Compound	5.000	200.000	400.000	800.000	1600.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5		
S 1 TPH as Jet A rf	886434	816845	849166	1193052	863474	921794	17
S 4 TPH as JP5 rf	822008	830452	736341	726438	850947	793237	7
S 7 TPH Gas/Diesel rf	680407	736825	739485	764573	759730	736204	5
S 14 TPH as Diesel rf	1099623	926110	910084	938965	922917	959540	8

Report Date : 16-Mar-2017 11:21

Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15
 End Cal Date : 15-MAR-2017 20:19
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP Genie
 Method file : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Cal Date : 16-Mar-2017 11:21 umd6
 Curve Type : Average

Compound	5.000 Level 1	200.000 Level 2	400.000 Level 3	800.000 Level 4	1600.000 Level 5	RRF	% RSD
18 TPH as Diesel (C6-C28)	++++	++++	++++	++++	8368	8368	0
S 26 Diesel Range Organics rf	991346	849923	843605	871178	856237	882458	7
S 31 Oil Range Organics rf	670790	671675	659566	660552	629634	658444	3
S 35 TPH as Motor Oil rf	699444	676875	662693	663714	632255	666996	4
36 TPH as Motor Oil Range	++++	++++	++++	++++	14874	14874	0

Report Date : 16-Mar-2017 11:29

Page 8

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15
 End Cal Date : 15-MAR-2017 20:19
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP Genie
 Method file : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Cal Date : 16-Mar-2017 11:27 umd6
 Curve Type : Average

Compound	5.000 Level 1	200.000 Level 2	400.000 Level 3	800.000 Level 4	1600.000 Level 5	RRF	% RSD
S 274 Micro-TPH as Motor Oil rf	531070	608933	689551	700484	707426	647493	12
S 200 NWTPH_Diesel rf	838068	650960	682751	690067	691436	710656	10
S 268 NWTPH_Diesel Range rf	838068	650960	682751	690067	691436	710656	10
S 201 NWTPH_Motor Oil rf	386163	394983	425714	434936	389269	406213	6
\$ 92 n-Octacosane	1027693	967893	945977	964911	950550	971405	3
\$ 93 C28 n-Octacosane	340990	511509	511646	496028	456324	463300	16

Data File: /chem1/SVOA/GC_49.i/170315.b/17031510.d
 Report Date: 03/16/2017 10:51

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_49.i Injection Date and Time: 15-MAR-2017 16:23
 Sample Name: ICV D400 C28 50 L102516G Initial Calibration Date(s): 09-NOV-2016 15-MAR-2017
 Sublist used: CCV_D-DRO.sub Initial Calibration Time(s): 21:15 19:16
 Method used: /chem1/SVOA/GC_49.i/170315.b/8015d.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift /Drift	Max%D 	Curve Type
Diesel Range Organics	882457.968	862592.935	0.00	2	15	Averaged
TPH as Diesel	959539.736	908665.145	0.00	5	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift /Drift	Max%D 	Curve Type
n-Octacosane	971404.651	963377.780	0.00	1	20	Averaged

page 1

Data File: /chem1/SVOA/GC_49.i/170315.b/17031505.d
 Report Date: 15-Mar-2017 17:57

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031505.d
 Lab Smp Id:
 Inj Date : 15-MAR-2017 14:40
 Operator : 682 Inst ID: GC_49.i
 Smp Info : ICAL D5 C28 0.625 L102516B
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Meth Date : 15-Mar-2017 17:57 d2ef Quant Type: ESTD
 Cal Date : 25-JAN-2017 00:58 Cal File: 17012441.d
 Als bottle: 5 Calibration Sample, Level: 1
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.710-7.945			5498115	5.00000	5.729
S 26 Diesel Range Organics	2.309-7.945			4956730	5.00000	5.616
\$ 92 n-Octacosane	7.745	7.745	0.000	642308	0.62500	0.661

Data File: /chem1/SVDA/GC_49.i/170315.b/17031505.d

Date : 15-MAR-2017 14:40

Client ID:

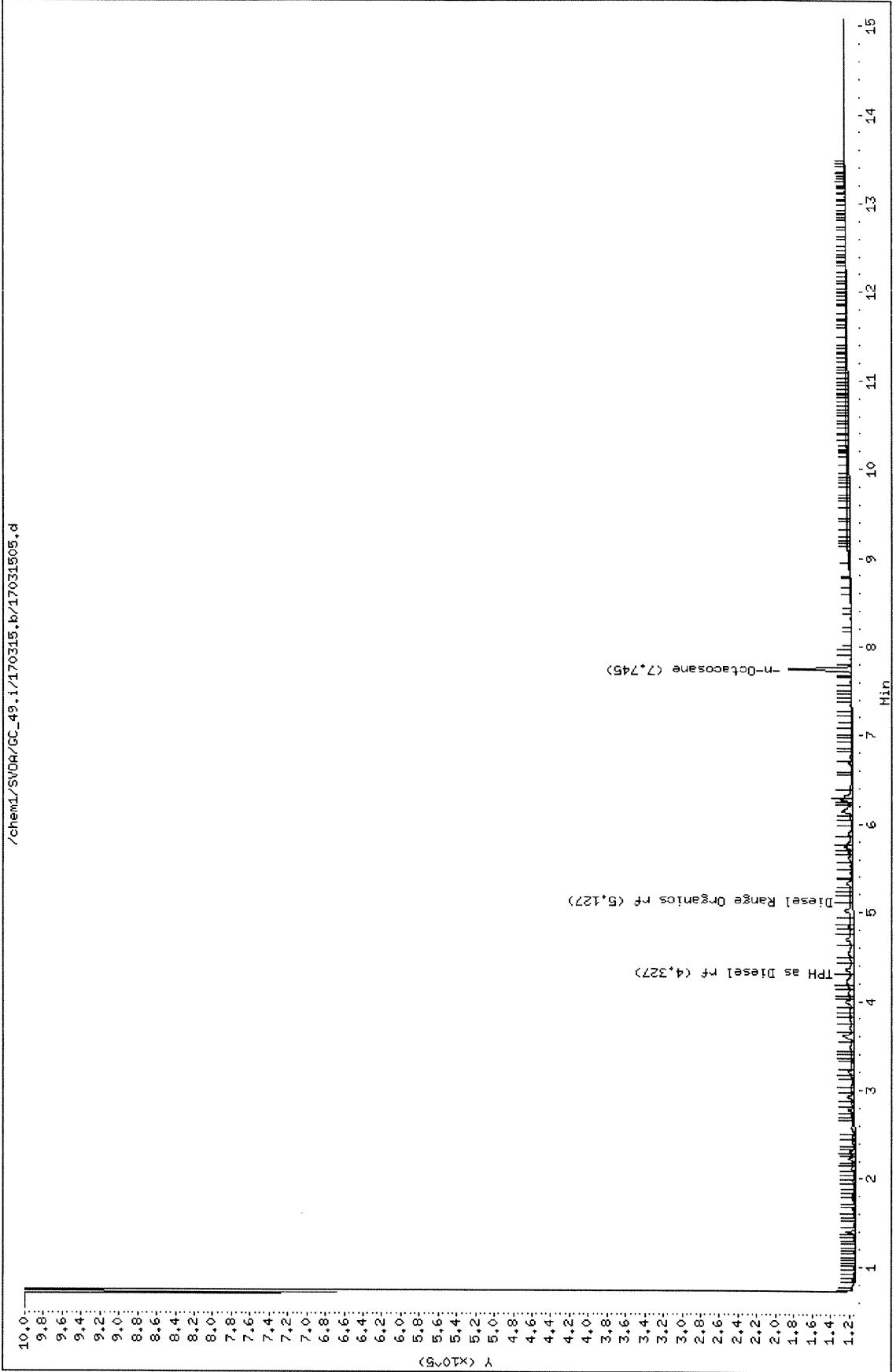
Sample Info: ICAL D5 C28 0.625 L102516B

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_49.i/170315.b/17031506.d
 Report Date: 15-Mar-2017 17:57

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031506.d
 Lab Smp Id:
 Inj Date : 15-MAR-2017 15:00
 Operator : 682
 Smp Info : ICAL D200 C28 25 L102516C
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Meth Date : 15-Mar-2017 17:57 d2ef
 Cal Date : 25-JAN-2017 01:19
 Als bottle: 6
 Dil Factor: 1.00000
 Integrator: HP Genie
 Target Version: 3.50
 Processing Host: US26TAR4

Inst ID: GC_49.i

Quant Type: ESTD

Cal File: 17012442.d

Calibration Sample, Level: 2

Compound Sublist: ICAL_D-DRO.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

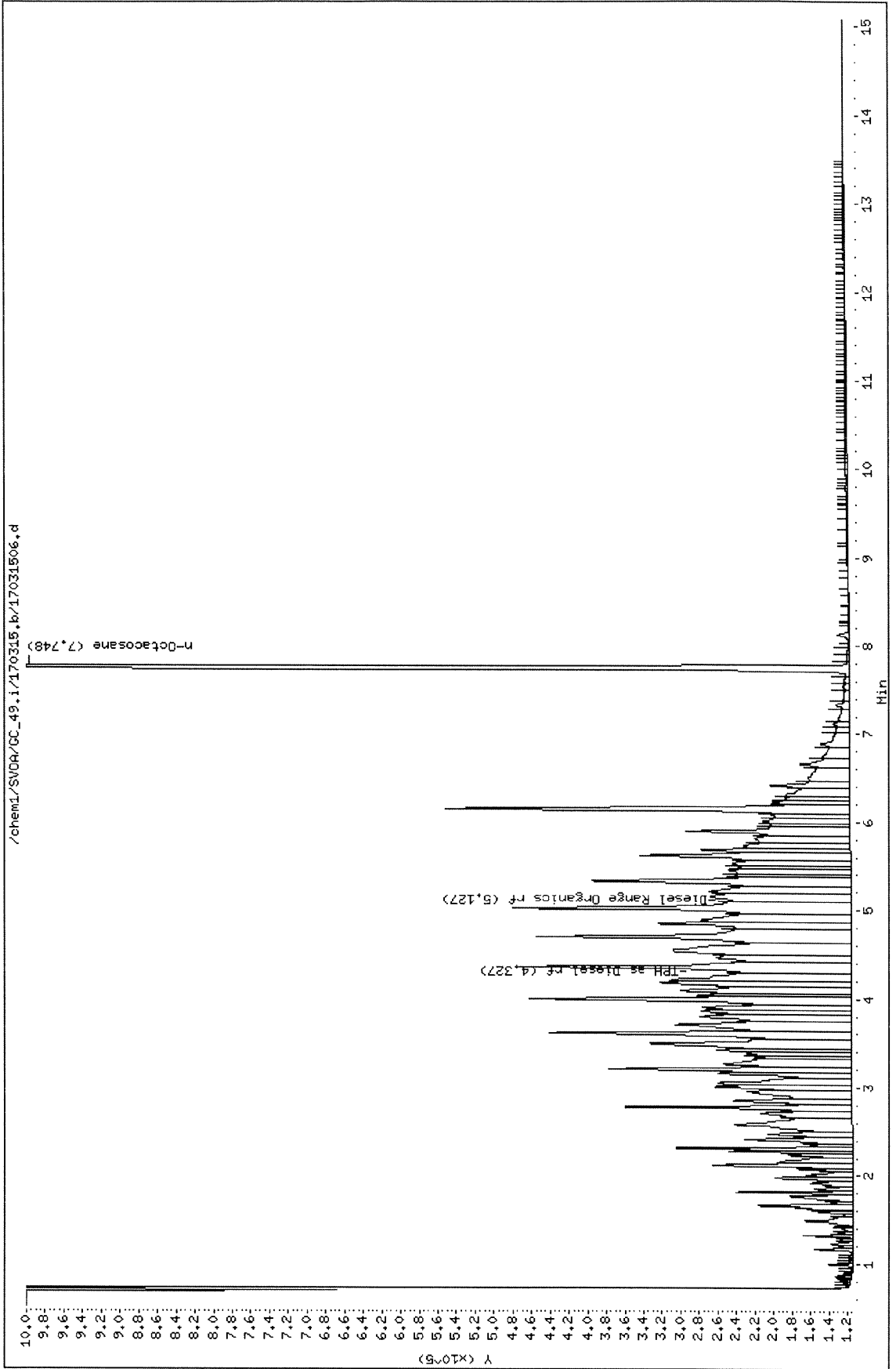
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.710-7.945			185222018	200.000	193.032
S 26 Diesel Range Organics	2.309-7.945			169984668	200.000	192.626
\$ 92 n-Octacosane	7.748	7.748	0.000	24197319	25.0000	24.909



Data File: /chem1/SVDA/GC_49.i/170315.b/17031506.d
Date : 15-MAR-2017 15:00
Client ID:
Sample Info: ICHL D200 C28 25 L102516C

Instrument: GC_49.i
Operator: 682
Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_49.i/170315.b/17031507.d
 Report Date: 15-Mar-2017 17:57

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031507.d
 Lab Smp Id:
 Inj Date : 15-MAR-2017 15:21
 Operator : 682 Inst ID: GC_49.i
 Smp Info : ICAL D400 C28 50 L102516D
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Meth Date : 15-Mar-2017 17:57 d2ef Quant Type: ESTD
 Cal Date : 25-JAN-2017 01:41 Cal File: 17012443.d
 Als bottle: 7 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

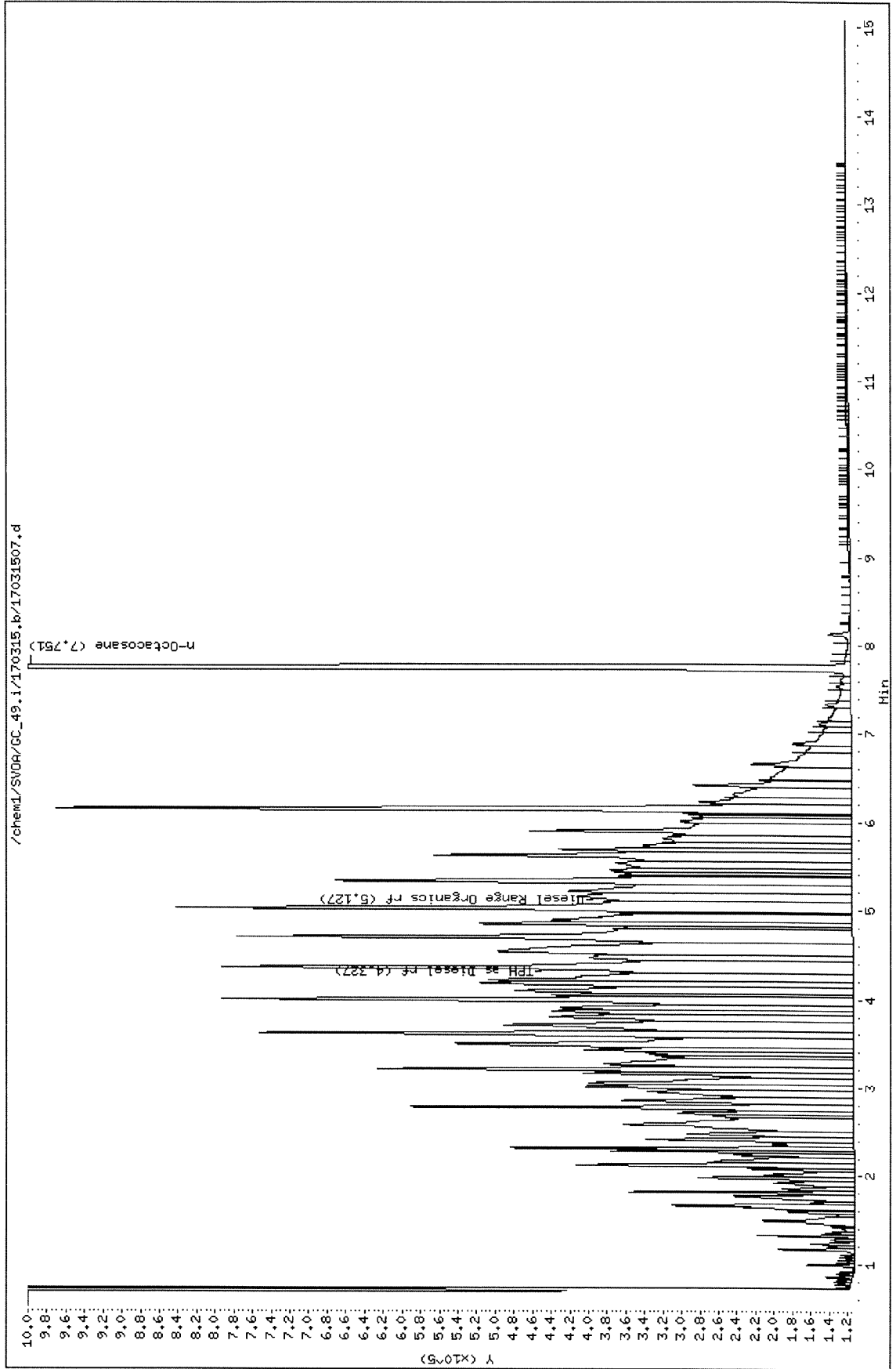
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.710-7.945			364033443	400.000	379.383
S 26 Diesel Range Organics	2.309-7.945			337441946	400.000	382.388
S 92 n-Octacosane	7.751	7.751	0.000	47298825	50.0000	48.691

Data File: /chem1/SV0A/GC_49.i/170315.b/17031507.d
Date : 15-MAR-2017 15:21
Client ID:
Sample Info: ICAL D400 C28 50 L102516D

Instrument: GC_49.i

Operator: 682
Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_49.i/170315.b/17031508.d
 Report Date: 15-Mar-2017 17:57

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031508.d
 Lab Smp Id:
 Inj Date : 15-MAR-2017 15:42
 Operator : 682
 Smp Info : ICAL D800 C28 100 L102516E
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Meth Date : 15-Mar-2017 17:57 d2ef
 Cal Date : 25-JAN-2017 02:02
 Als bottle: 8
 Dil Factor: 1.00000
 Integrator: HP Genie
 Target Version: 3.50
 Processing Host: US26TAR4

Inst ID: GC_49.i
 Quant Type: ESTD
 Cal File: 17012444.d
 Calibration Sample, Level: 4
 Compound Sublist: ICAL_D-DRO.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.710-7.945			751172141	800.000	782.846
S 26 Diesel Range Organics	2.309-7.945			696942778	800.000	789.774
\$ 92 n-Octacosane	7.758	7.758	0.000	96491101	100.000	99.331

Data File: /chem1/SV0A/GC_49.i/170315.b/17031508.d

Date : 15-MAR-2017 15:42

Client ID:

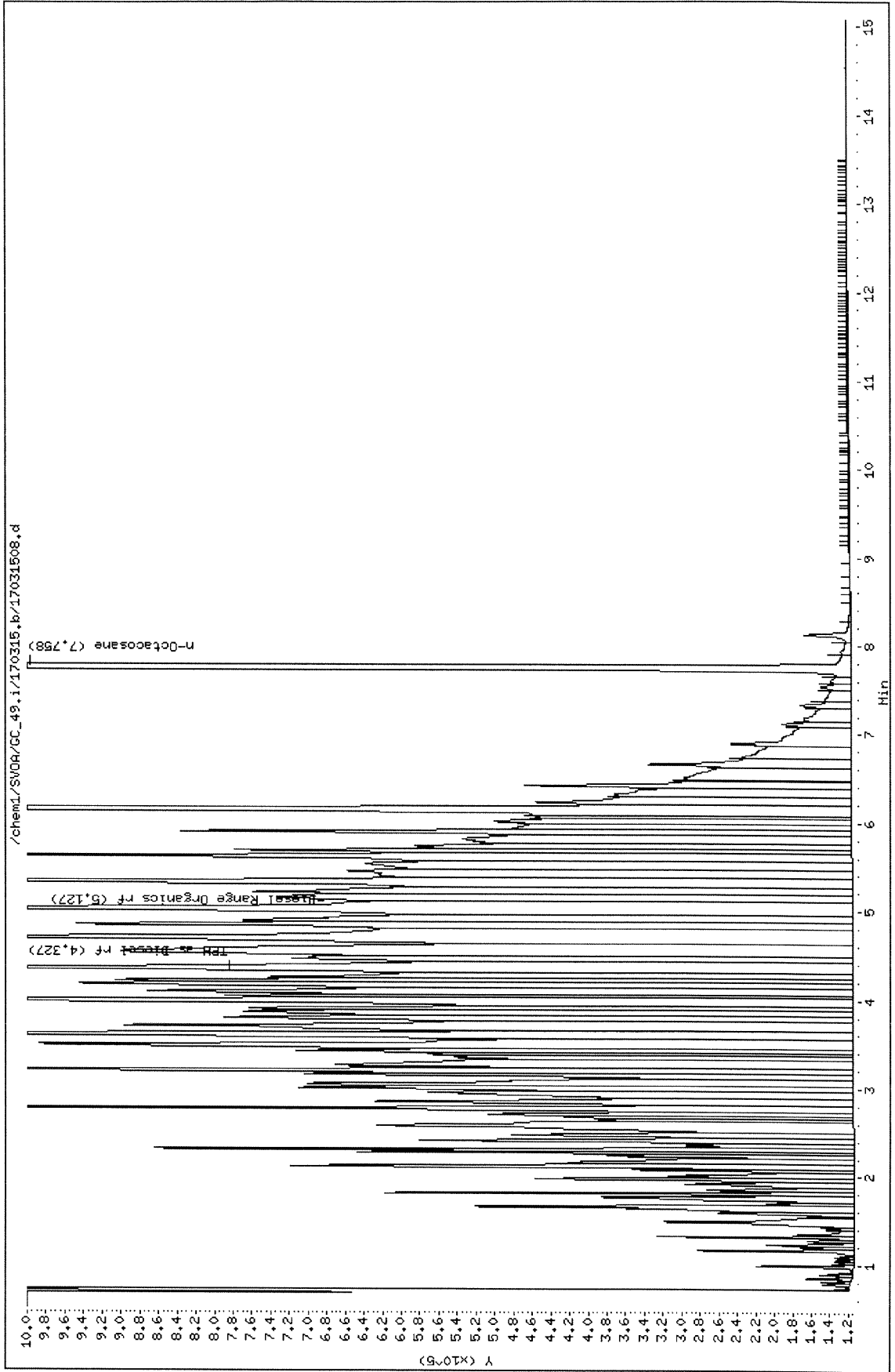
Sample Info: ICAL D800 C28 100 L102516E

Instrument: GC_49.i

Operator: 682

Column diameter: 2,00

Column phase:



Data File: /chem1/SVOA/GC_49.i/170315.b/17031509.d
 Report Date: 15-Mar-2017 17:57

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031509.d
 Lab Smp Id:
 Inj Date : 15-MAR-2017 16:03
 Operator : 682 Inst ID: GC_49.i
 Smp Info : ICAL D1600 C28 200 L102516F
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Meth Date : 15-Mar-2017 17:57 d2ef Quant Type: ESTD
 Cal Date : 25-JAN-2017 02:23 Cal File: 17012445.d
 Als bottle: 9 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.710-7.945			1476666887	1600.00	1538.932
S 26 Diesel Range Organics	2.309-7.945			1369979459	1600.00	1552.458
S 92 n-Octacosane	7.771	7.771	0.000	190110037	200.000	195.706

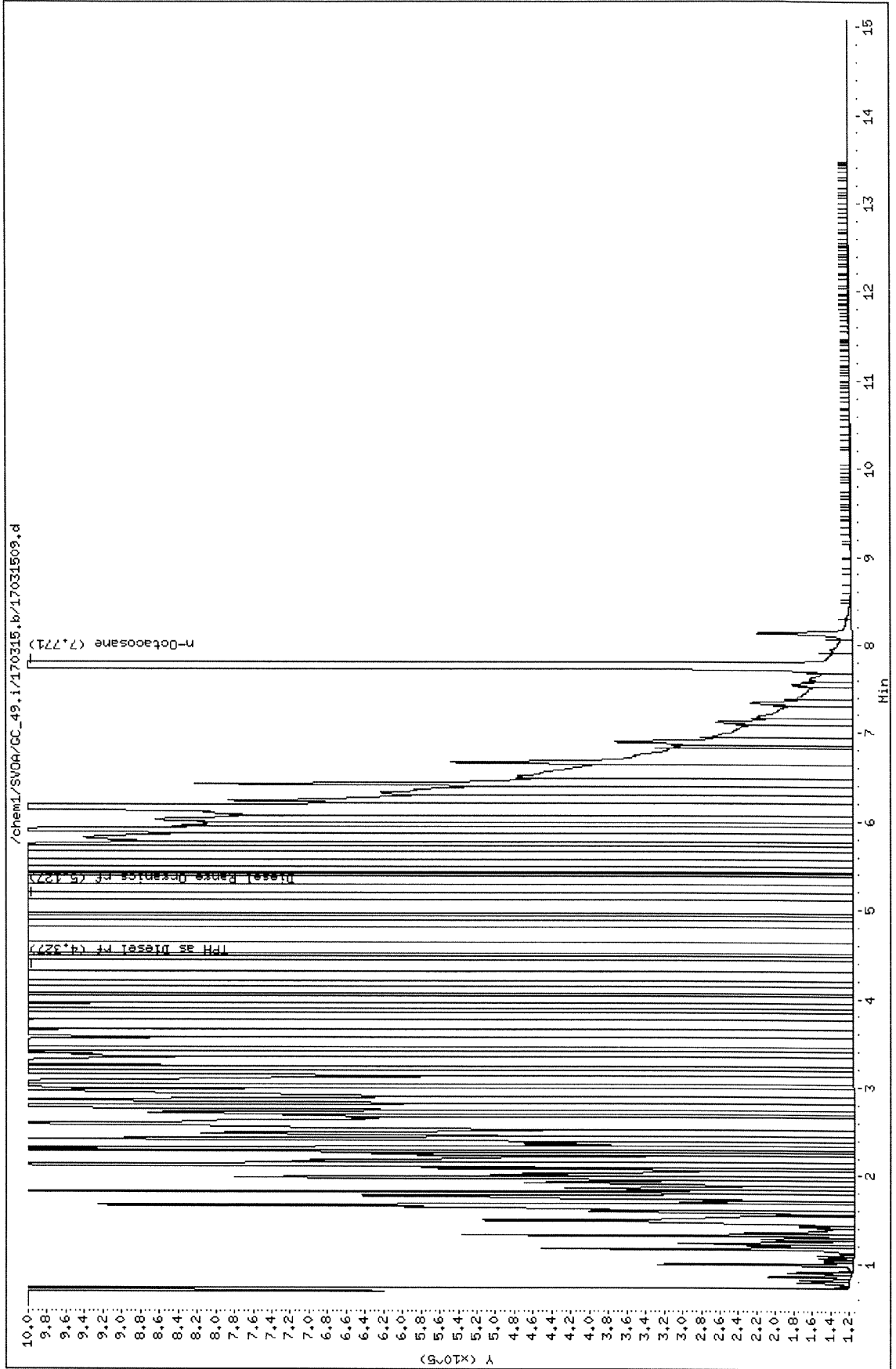
Data File: /chem1/SV0A/GC_49.i/170315.b/17031509.d
Date : 15-MAR-2017 16:03
Client ID:
Sample Info: ICAL D1600 C28 200 L102516F

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_49.i/170315.b/17031510.d
Report Date: 15-Mar-2017 17:57

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031510.d
Lab Smp Id:
Inj Date : 15-MAR-2017 16:23
Operator : 682
Smp Info : ICV D400 C28 50 L102516G
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
Meth Date : 15-Mar-2017 17:57 d2ef
Cal Date : 25-JAN-2017 02:23
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP Genie
Target Version: 3.50
Processing Host: US26TAR4
Inst ID: GC_49.i
Quant Type: ESTD
Cal File: 17012445.d
Continuing Calibration Sample
Compound Sublist: CCV_D-DRO.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.710-7.945			363466058	400.000	378.792
S 26 Diesel Range Organics	2.309-7.945			345037174	400.000	390.995
\$ 92 n-Octacosane	7.752	7.752	0.000	48168889	50.0000	49.586



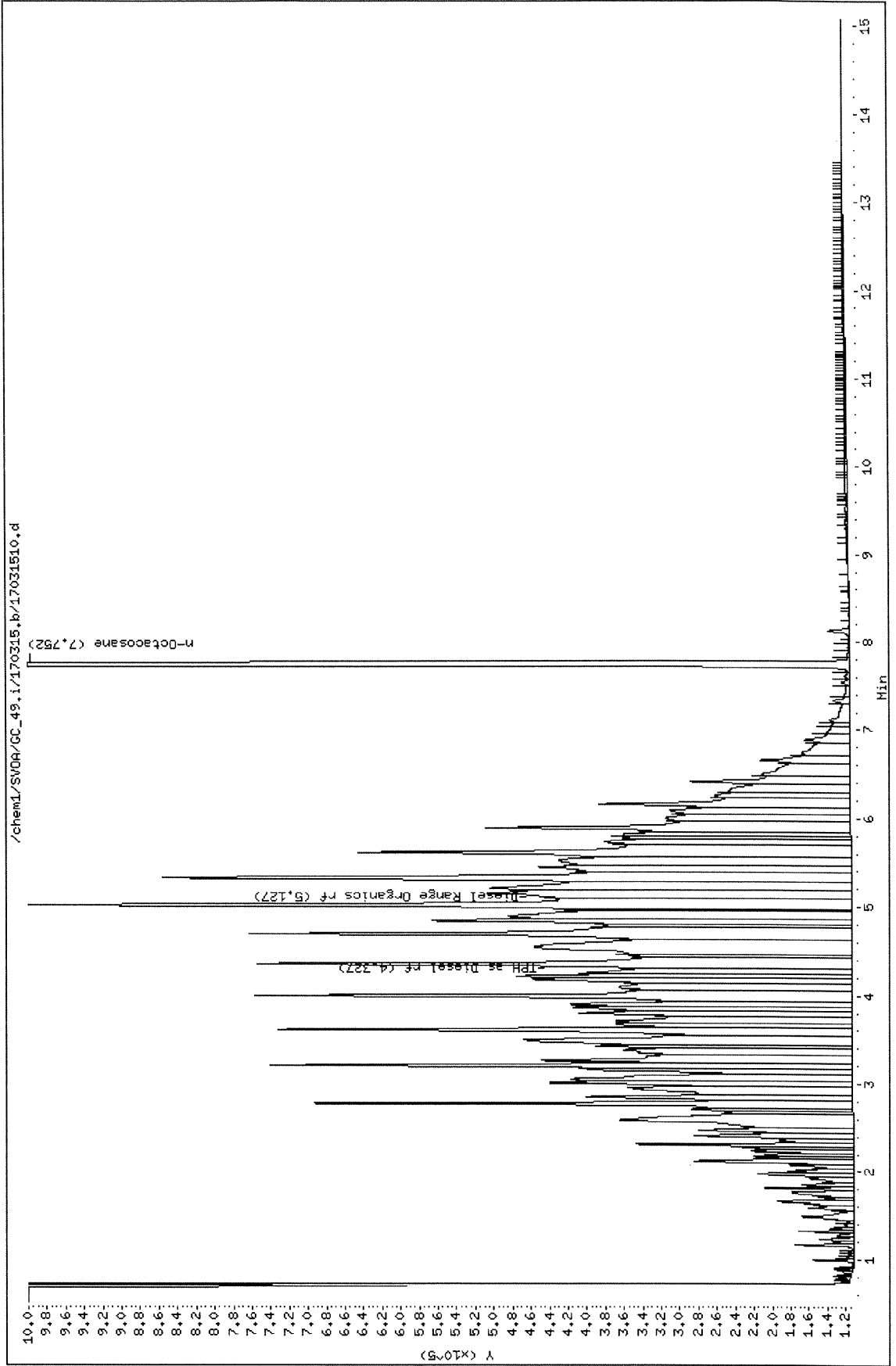
Data File: /chem1/SV0A/GC_49.i/170315.b/17031510.d
Date : 15-MAR-2017 16:23
Client ID:
Sample Info: ICV D400 C28 50 L102516G

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



=====
 External Standard Report
 =====

Data File Name : /chem1/SVOA/GC_49/170315/17031502.d
 Page Number :
 Operator : 682 Vial Number : Vial 2
 Instrument : GC 49 Injection Number : 2
 Sample Name : C6-C44 L110816A Sequence Line : 0
 Instrument Method: 8015d.m
 Acquired on : 15 MAR 17 12:39
 Report Created on: 16-MAR-17 11:22 Compound Sublist : all
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC_49.i/170315.b/17031502.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.710	7.850	7.140	1725246.00	0.00	C6-Hexane
0.892	7.850	6.958	4229459.00	0.00	C7-Heptane
1.321	7.850	6.529	9379566.00	0.00	C8-Octane
1.812	7.850	6.038	8348198.00	0.00	C9-Nonane
2.309	7.850	5.541	9247136.00	0.00	C10-Decane
2.775	7.850	5.075	9595844.00	0.00	C11-Undecane
3.208	7.850	4.642	9587885.00	0.00	C12-Dodecane
3.613	7.850	4.237	10694823.00	0.00	C13-Tridecane
3.995	7.850	3.855	9633301.00	0.00	C14-Tetradecane
4.355	7.850	3.495	10620901.00	0.00	C15-pentadecane
4.694	7.850	3.156	12907796.00	0.00	C16-Hexadecane
5.017	7.850	2.833	14689279.00	0.00	C17-Heptadecane
5.324	7.850	2.526	15643068.00	0.00	C18-Octadecane
5.616	7.850	2.234	15640513.00	0.00	C19-Nonadecane
5.894	7.850	1.956	16281885.00	0.00	C20-Eicosane
6.160	7.850	1.690	16253708.00	0.00	C21-Heneicosane
6.416	7.850	1.434	16861443.00	0.00	C22-Docosane
6.660	7.850	1.190	16948602.00	0.00	C23-Tricosane
6.895	7.850	0.955	16902474.00	0.00	C24-Tetracosane
7.121	7.850	0.729	16999893.00	0.00	C25-Pentacosane
7.338	7.850	0.512	17852373.00	0.00	C26-Hexacosane
7.548	7.850	0.302	16901615.00	0.00	C27-Heptacosane
7.750	7.850	0.100	17085911.00	26.81	n-Octacosane
7.945	7.850	-0.095	16170720.00	0.00	C29-Nonacosane
8.134	7.850	-0.284	14560802.00	0.00	C30-Triacontane
8.317	7.850	-0.467	11203518.00	0.00	C31-Hentriacontane
8.493	7.850	-0.643	7395071.00	0.00	C32-Dotriacontane
8.664	7.850	-0.814	3928559.00	0.00	C33-Tritriacontane
8.831	7.850	-0.981	1771584.00	0.00	C34-Tetratriacontane
8.993	7.850	-1.143	850126.00	0.00	C35-Pentatriacontane
9.151	7.850	-1.301	641152.00	0.00	C36-Hexatriacontane
9.327	7.850	-1.477	566322.00	0.00	C37-Heptatriacontane
9.531	7.850	-1.681	456273.00	0.00	C38-Octatriacontane
9.768	7.850	-1.918	489213.00	0.00	C39-Nonatriacontane
10.046	7.850	-2.196	558981.00	0.00	C40-Tetracontane
11.752	7.850	-3.902	1064858.00	0.00	C44-Tetratetracontane

End of File

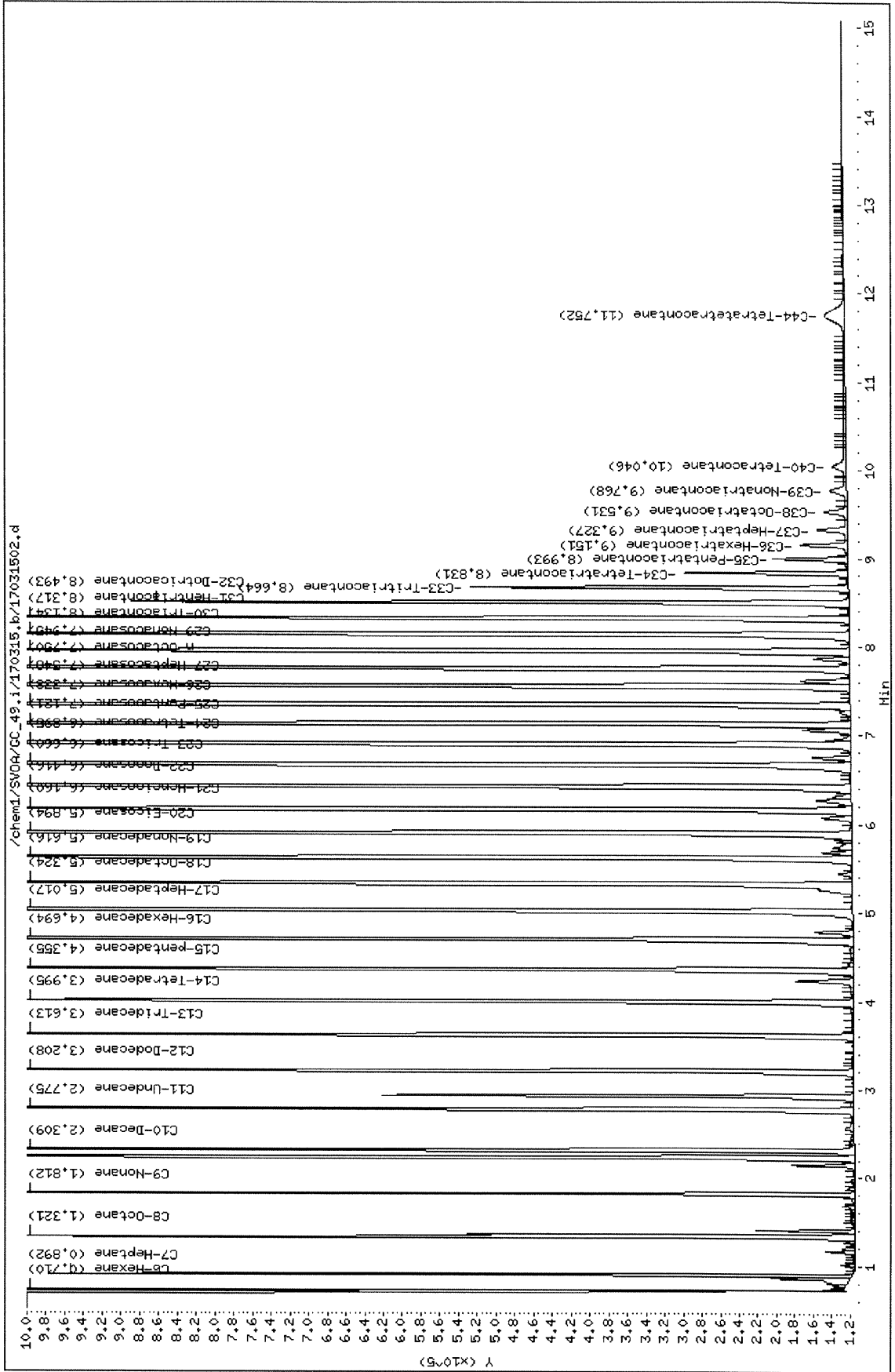
Data File: /chem1/SVDA/GC_49.i/170315.b/17031502.d
 Date : 15-MAR-2017 12:39
 Client ID:
 Sample Info: C6-C44 L110816A

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



EPA 8015B (M)
Diesel + Motor Oil

SAMPLE DATA

RAW DATA SHEET FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-1523
INSTRUMENT: GC 49
EXTRACTION: EPA 3550B
D/T EXTRACTED: 2017-03-23 00:00

ANALYZED BY: 682
D/T ANALYZED: 2017-03-27 17:39
REVIEWED BY: *27*
D/T REVIEWED:

DATA FILE: S:\GC_49\GC_49_data\2017\170327\17032739.d\Report.txt17032739

1 **CLIENT SAMPLE NUMBER: IDW-S**

LCS/MB BATCH: 170323B07A **SAMPLE VOLUME / WEIGHT:** DEFAULT: 10.00 g / ACTUAL: 10.20 g
MS/MSD BATCH: 170323S07 **FINAL VOLUME / WEIGHT:** DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
UNITS: mg/kg **ADJUSTMENT RATIO TO PF:** 0.98

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
TPH as Diesel	42.3	1.00	41.5	4.9	b
TPH as Motor Oil	71.8	1.00	70.4	4.9	b

```

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External Standard Report
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```

```

Data File Name   : /chem1/SVOA/GC_49/170327/17032739.d
Page Number      :
Operator         : 682                               Vial Number      : Vial 39
Instrument       : GC 49                             Injection Number  : 39
Sample Name     : 17-03-1523-1 RB                   Sequence Line    : 0
                                                    Instrument Method: 8015d.m

Acquired on     : 27 MAR 17  17:39
Report Created on: 28-MAR-17 10:00                   Compound Sublist : all
Software Revision: Target 3.50

```

```

Sig. 1 in /chem1/SVOA/GC_49.i/170327.b/17032739.d
RT Range      Exp RT   DLT RT   Response      ppm      Compound
|-----|-----|-----|-----|-----|-----|
      7.677      7.850      0.173      52056345.00   53.59   n-Octacosane
2.280- 7.864      40567781.53   42.28   TPH as Diesel
4.959-11.552      68903300.33   71.81   TPH as Motor Oil
End of File

```

Data File: /chem1/SV0A/GC_49.i/170327.b/17032739.d

Date : 27-MAR-2017 17:39

Client ID:

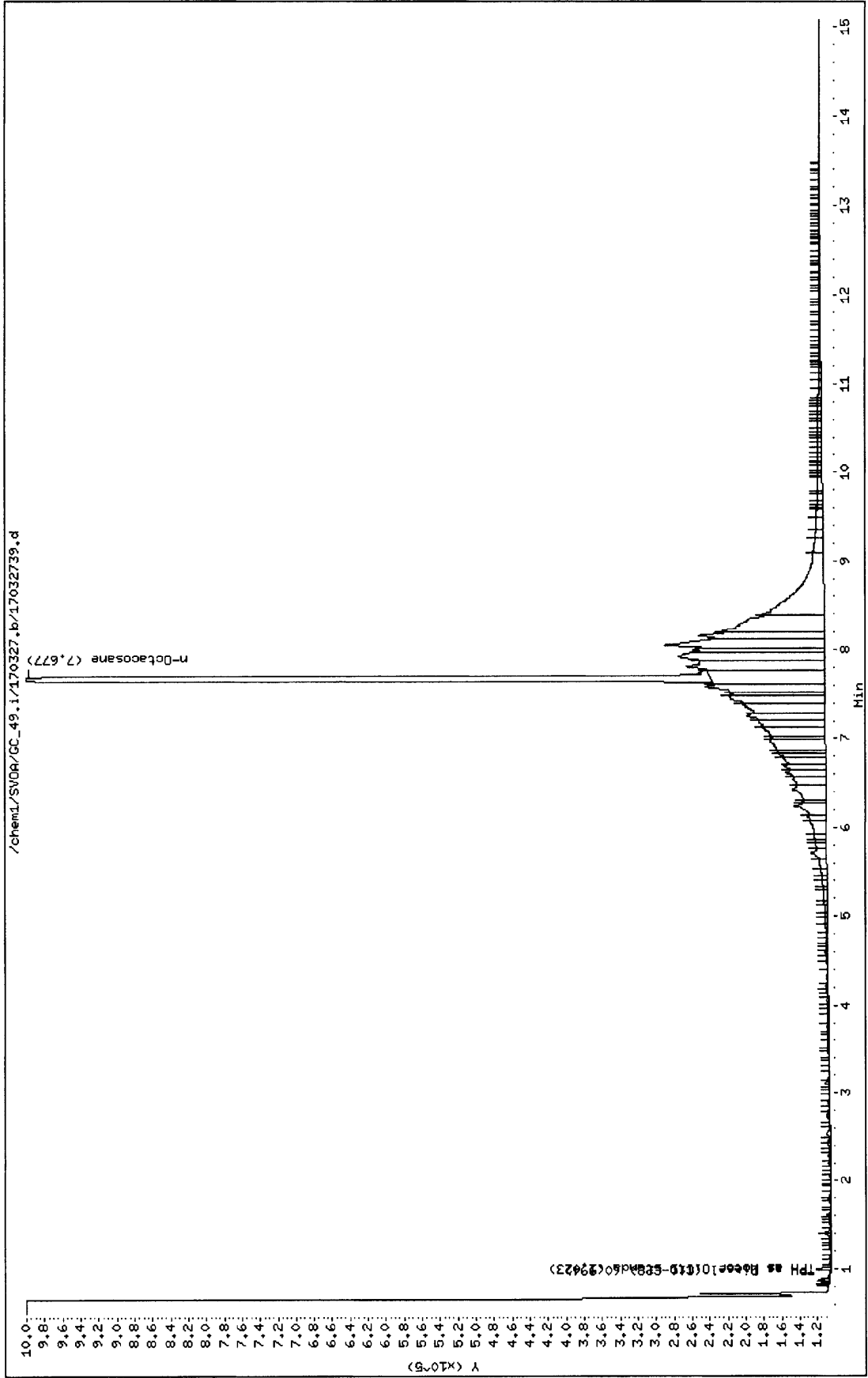
Sample Info: 17-03-1523-1 RB

Instrument: GC_49.i

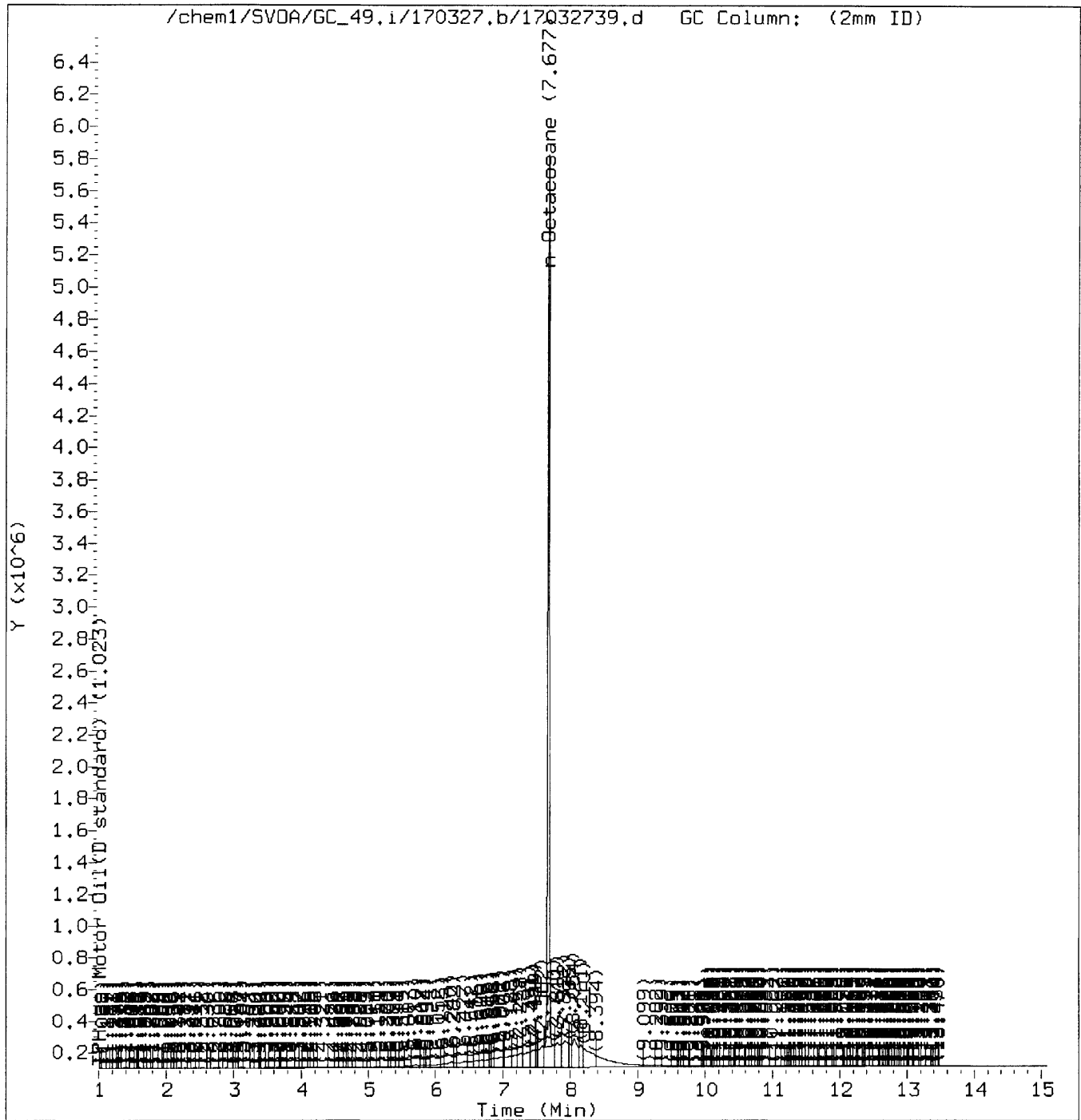
Operator: 682

Column diameter: 2.00

Column phase:



Manually Integrated Data File



Reason for manual integration: Signal not integrated by automation

Digitally signed by Minhchi Doan

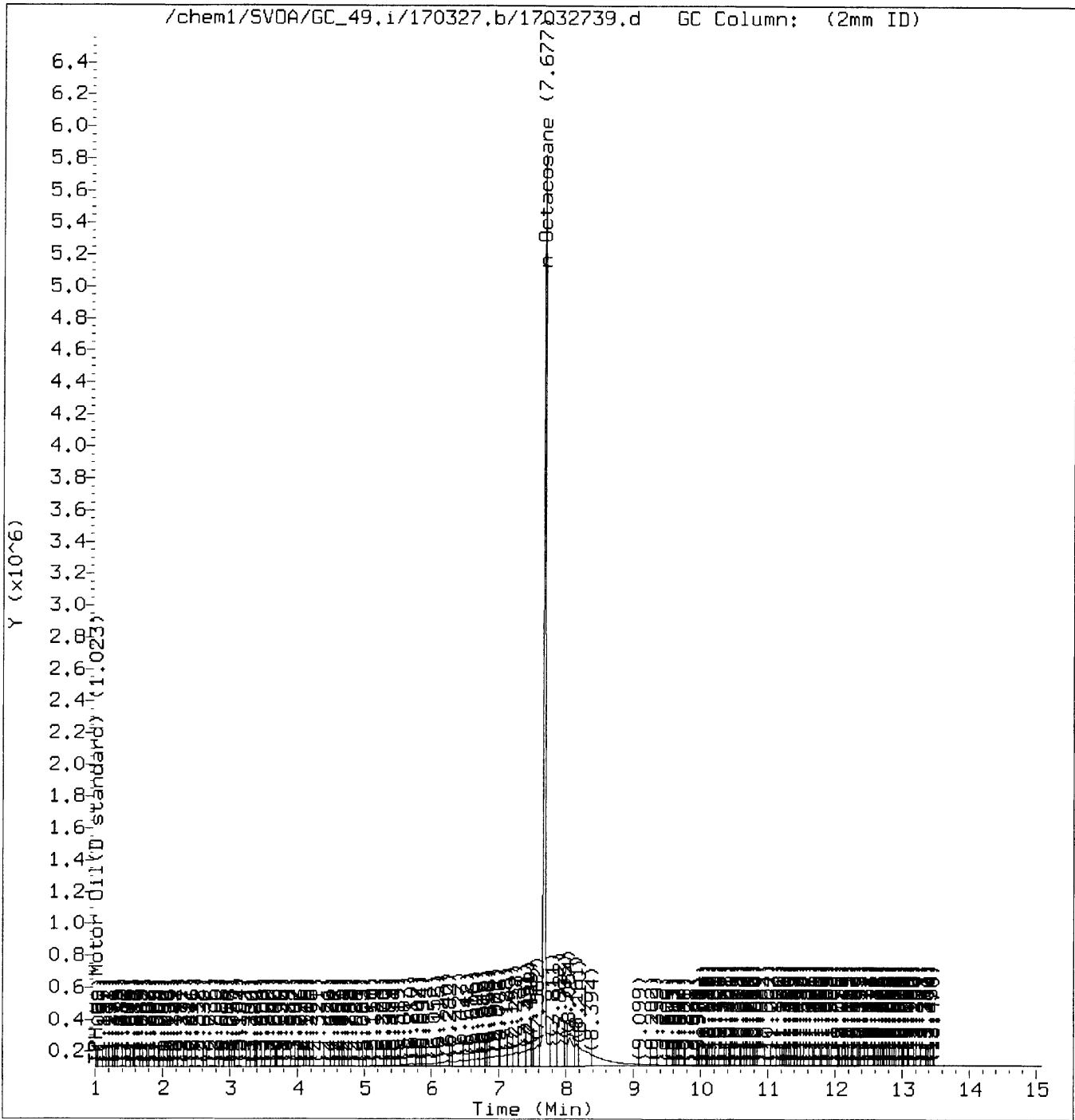
Analyst responsible for change: on 03/28/2017 at 09:59.

Target 3.5 esignature user ID: umd6

Audit/management approval: _____ *21*



Original Data File



EPA 8015B (M)
Diesel + Motor Oil

QUALITY CONTROL

Method Blank
LCS/LCSD
MS/MSD

**METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8015B (M)**

MB SAMPLE ID: 099-14-353-12
MB BATCH ID: 170323B07A
INSTRUMENT: GC 49
EXTRACTION: EPA 3550B
D/T EXTRACTED: 2017-03-23 00:00

ANALYZED BY: 682
D/T ANALYZED: 2017-03-25 02:04
REVIEWED BY: *m*
D/T REVIEWED:
MATRIX: Soil

DATA FILE: S:\GC_49\GC_49_data\2017\170324\17032444.d\ReportDMOsd.txt17032444

CLIENT WORK ORDER: 17-03-1523

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	IDW-S		2017-03-27 17:39	S:\GC_49\GC_49_data\2017\170327\17032739.d\Report.txt17032739

RAW DATA SHEET FOR METHOD: EPA 8015B (M)

WORK ORDER: 099-14-353
INSTRUMENT: GC 49
EXTRACTION: EPA 3550B
D/T EXTRACTED: 2017-03-23 00:00
DATA FILE: S:\GC_49\GC_49_data\2017\170324\17032444.d\ReportDMOsd.txt17032444

ANALYZED BY: 682
D/T ANALYZED: 2017-03-25 02:04
REVIEWED BY:
D/T REVIEWED: 11

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170323B07A **SAMPLE VOLUME / WEIGHT:** DEFAULT: 10.00 g / ACTUAL: 10.00 g
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
UNITS: mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
TPH as Diesel	0.420	1.00	ND	5.0	
TPH as Motor Oil	0.600	1.00	ND	5.0	



LCS QUALITY CONTROL SHEET FOR METHOD: EPA 8015B (M)

LCS SAMPLE ID: 099-14-353- 12
LCS/MB BATCH ID: 170323B07A
INSTRUMENT: GC 49

EXTRACTION: EPA 3550B
D/T EXTRACTED: 2017-03-23 00:00

ANALYZED BY: 682
D/T ANALYZED: 2017-03-25 02:25
REVIEWED BY:
D/T REVIEWED:

M

DATA FILE: S:\GC_49\data\2017\170324\17032445.d\Report.txt\17032445

<u>COMPOUND NAME</u>	<u>CONC ADDED</u>	<u>CONC REC</u>	<u>%RECOVERY</u>	<u>%REC CONTROL LIMIT</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
TPH as Diesel	400.0	374.8	94	61-145	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8015B (M)

SPIKED SAMPLE ID: 17-03-1667-1
MS/MSD BATCH: 170323S07

INSTRUMENTS:

SAMPLE: GC 49
MS: GC 49
MSD: GC 49

EXTRACTION: EPA 3550B
D/T EXTRACTED:

SAMPLE: 2017-03-23 00:00
MS: 2017-03-23 00:00
MSD: 2017-03-23 00:00

ANALYZED BY: 682
D/T ANALYZED:

SAMPLE: 2017-03-25 03:28
MS: 2017-03-25 02:46
MSD: 2017-03-25 03:07

REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC.CL	RPD	RPD.CL	STATUS	QUALIFIERS
TPH as Diesel	ND	400.0	400.0	356.2	89	368.0	92	64-130	3	0-15	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17032446	S:\GC_49\GC_49_data\20171170324\17032446.d\Report.txt
MSD	17032447	S:\GC_49\GC_49_data\20171170324\17032447.d\Report.txt

SURROGATE RECOVERIES FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-1523

REVIEWED BY: 

BATCH ID:

D/T REVIEWED:

LCS/MB: 170323B07AMS: 170323S07

EXTRACTION: EPA 3550B

1 **CLIENT SAMPLE NUMBER : IDW-S**INSTRUMENT: GC 49ANALYZED BY: 682D/T EXTRACTED: 2017-03-23 00:00D/T ANALYZED 2017-03-27 17:39DATA FILE: S:\GC_49\GC_49_data\2017\170327\17032739.d\Report.txt17032739COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
n-Octacosane	107	61-145	PASS	

MB **CLIENT SAMPLE NUMBER : Method Blank**INSTRUMENT: GC 49ANALYZED BY: 682D/T EXTRACTED: 2017-03-23 00:00D/T ANALYZED 2017-03-25 02:04DATA FILE: S:\GC_49\GC_49_data\2017\170324\17032444.d\ReportDMOsd.txt17032444COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
n-Octacosane	98	61-145	PASS	

LCS **CLIENT SAMPLE NUMBER : Lab Control Sample**INSTRUMENT: GC 49ANALYZED BY: 682D/T EXTRACTED: 2017-03-23 00:00D/T ANALYZED 2017-03-25 02:25DATA FILE: S:\GC_49\GC_49_data\2017\170324\17032445.d\Report.txt17032445COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
n-Octacosane	99	61-145	PASS	

MS **CLIENT SAMPLE NUMBER : Matrix Spike**INSTRUMENT: GC 49ANALYZED BY: 682D/T EXTRACTED: 2017-03-23 00:00D/T ANALYZED 2017-03-25 02:46DATA FILE: S:\GC_49\GC_49_data\2017\170324\17032446.d\Report.txt17032446COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
n-Octacosane	97	61-145	PASS	

**SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)**

WORK ORDER: 17-03-1523
BATCH ID:
LCS/MB:
MS: **170323S07**
EXTRACTION: EPA 3550B

REVIEWED BY:
D/T REVIEWED: 2

MSD **CLIENT SAMPLE NUMBER : Matrix Spike Duplicate**

INSTRUMENT: GC 49 ANALYZED BY: 682
D/T EXTRACTED: 2017-03-23 00:00 D/T ANALYZED 2017-03-25 03:07
DATA FILE: S:\GC_49\GC_49_data\2017\170324\17032447.d\Report.txt17032447

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
n-Octacosane	94	61-145	PASS	

```

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External Standard Report
=====

```

```

Data File Name   : /chem1/SVOA/GC_49/170324/17032444.d
Page Number      :
Operator         : 682                               Vial Number      : Vial 44
Instrument       : GC 49                             Injection Number  : 44
Sample Name     : MB 17032307                       Sequence Line    : 0
                                                        Instrument Method: 8015d.m

Acquired on      : 25 MAR 17 02:04
Report Created on: 27-MAR-17 17:38                 Compound Sublist : all
Software Revision: Target 3.50

```

```

Sig. 1 in /chem1/SVOA/GC_49.i/170324.b/17032444.d
RT Range      Exp RT   DLT RT   Response      ppm      Compound
|-----|-----|-----|-----|-----|-----|
      7.686      7.850      0.164      47582607.00  48.98   n-Octacosane
2.280- 7.877      405816.77   0.42   TPH as Diesel
4.964-11.581      579845.92   0.60   TPH as Motor Oil
End of File

```

Page 1

Data File: /chem1/SVDA/GC_49.i/170324.b/17032444.d

Date : 25-MAR-2017 02:04

Client ID:

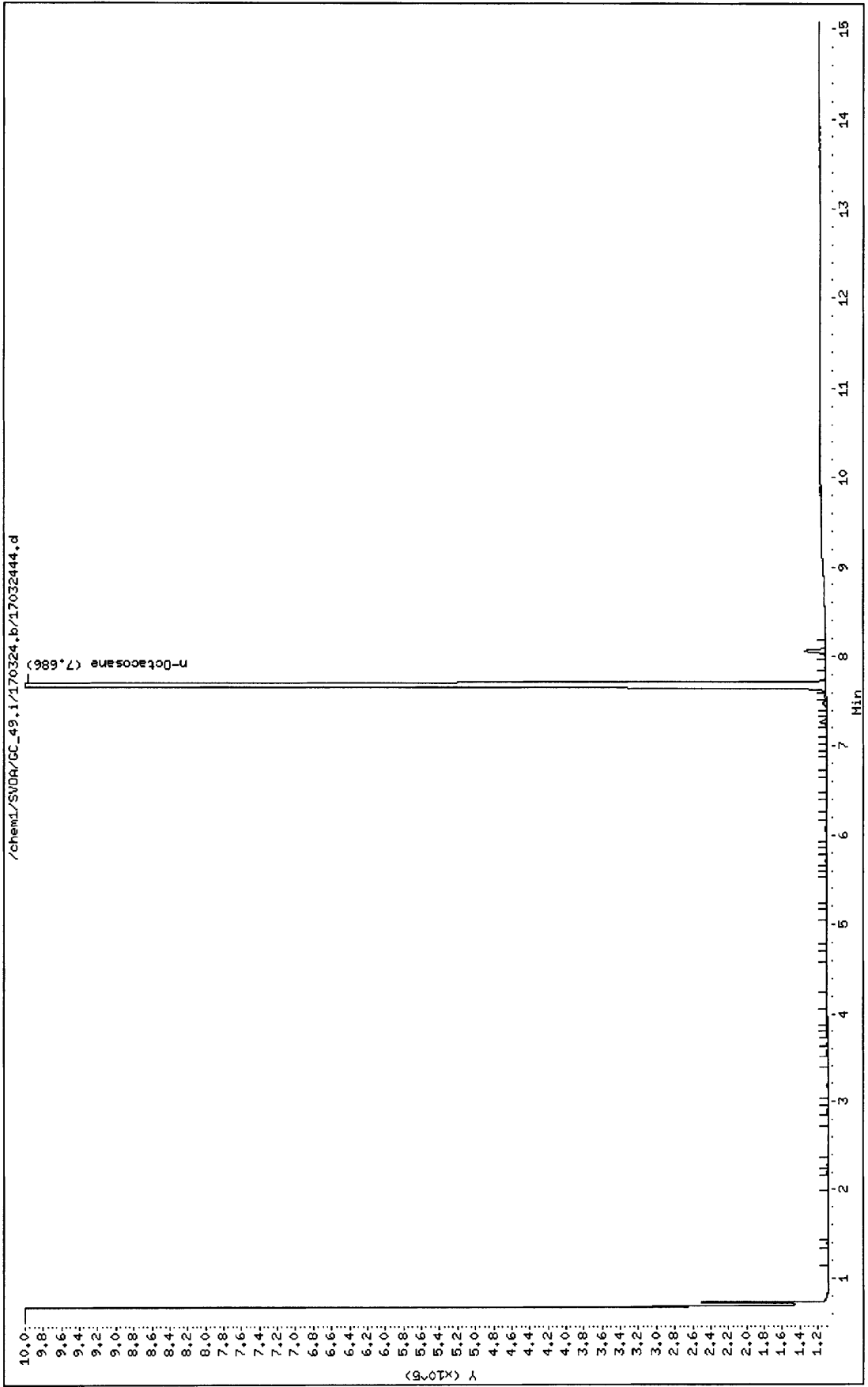
Sample Info: MB 17032307

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



```

=====
External Standard Report
=====

```

```

Data File Name   : /chem1/SVOA/GC_49/170324/17032445.d
Page Number      :
Operator         : 682                               Vial Number      : Vial 45
Instrument        : GC 49                             Injection Number  : 45
Sample Name      : LCS 17032307                       Sequence Line    : 0
                                                         Instrument Method: 8015d.m

Acquired on      : 25 MAR 17 02:25
Report Created on: 27-MAR-17 13:55                   Compound Sublist : all
Software Revision: Target 3.50

```

```

Sig. 1 in /chem1/SVOA/GC_49.i/170324.b/17032445.d

```

RT Range	Exp RT	DLT RT	Response	ppm	Compound
7.686	7.850	0.164	47873639.00	49.28	n-Octacosane
0.718- 7.877			359587433.66	374.75	TPH as Diesel
2.280- 7.877			341497218.48	386.98	Diesel Range Organics

End of File

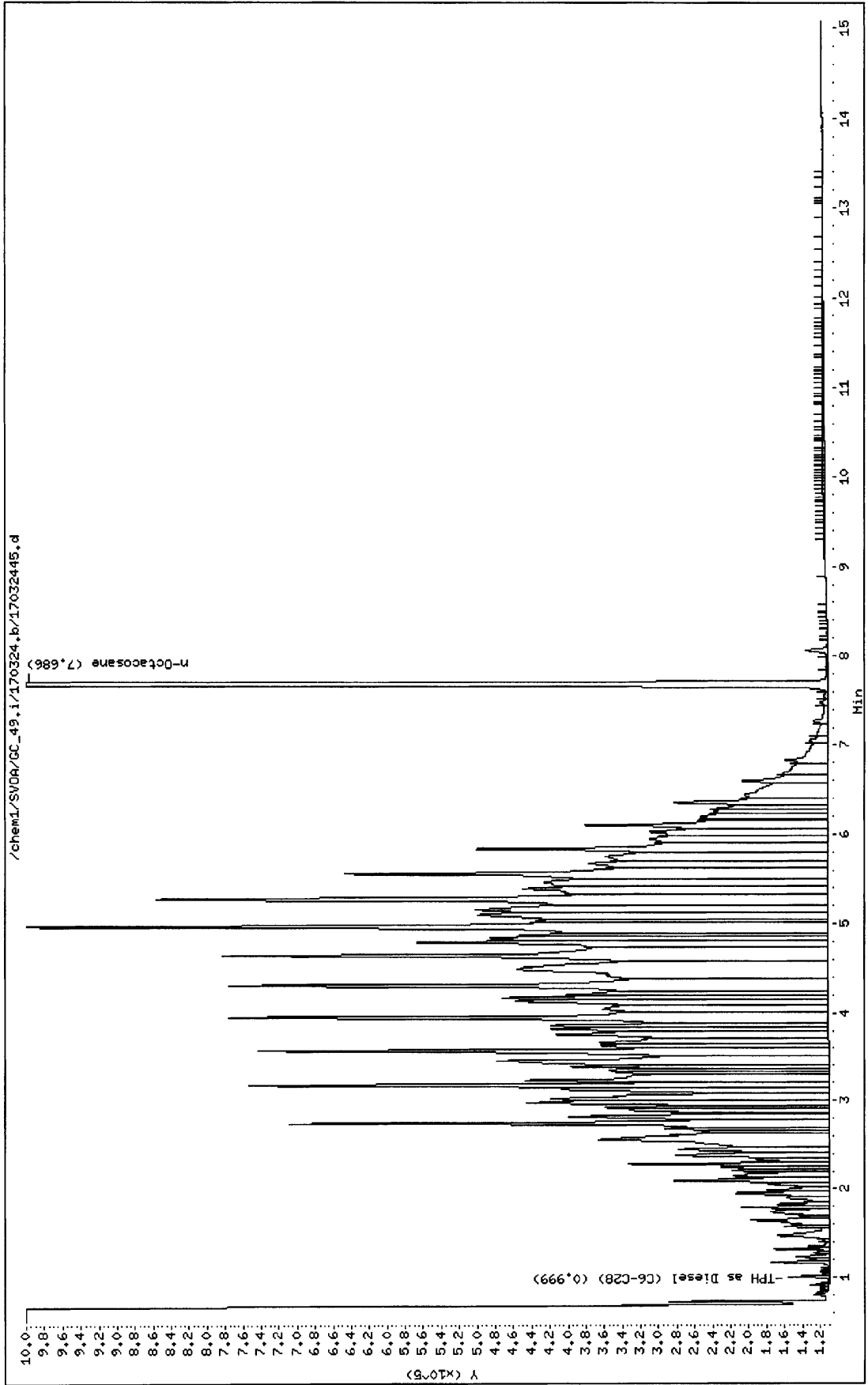
Data File: /chem1/SVDA/GC_49.i/170324.b/17032445.d
Date : 25-MAR-2017 02:25
Client ID:
Sample Info: LCS 17032307

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



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External Standard Report
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```

Data File Name   : /chem1/SVOA/GC_49/170324/17032446.d
Page Number      :
Operator         : 682                               Vial Number      : Vial 46
Instrument       : GC 49                             Injection Number : 46
Sample Name      : MS 17-03-1667-1                 Sequence Line    : 0
                                                    Instrument Method: 8015d.m

Acquired on      : 25 MAR 17 02:46
Report Created on: 27-MAR-17 13:58                 Compound Sublist : all
Software Revision: Target 3.50

```

```

Sig. 1 in /chem1/SVOA/GC_49.i/170324.b/17032446.d

```

RT Range	Exp RT	DLT RT	Response	ppm	Compound
7.687	7.850	0.163	46976881.00	48.36	n-Octacosane
0.718- 0.906			98439.96	0.10	C6
0.906- 1.315			1316903.99	1.37	C7
1.315- 1.789			4039976.43	4.21	C8
1.789- 2.740			27560090.00	28.72	C9-C10
2.740- 3.571			59745225.66	62.26	C11-C12
3.571- 4.307			71344248.81	74.35	C13-C14
4.307- 4.964			46153928.76	48.10	C15-C16
4.964- 5.558			63635744.67	66.32	C17-C18
5.558- 6.099			43448693.60	45.28	C19-C20
6.099- 6.596			12115605.66	12.63	C21-C22
6.596- 7.054			5721164.08	5.96	C23-C24
7.054- 7.877			1459008.35	1.52	C25-C28
7.877- 8.596			564010.29	0.59	C29-C32
8.596- 9.246			135794.09	0.14	C33-C36
9.246- 9.937			237850.03	0.25	C37-C40
9.937-11.581			457733.96	0.48	C41-C44
0.718-11.581			338034418.33	352.29	TPH as Diesel
0.718-11.581			338034418.33	352.29	C6-C44 Total

End of File

Page 1

Data File: /chem1/SVDA/GC_49.i/170324.b/17032446.d

Date : 25-MAR-2017 02:46

Client ID:

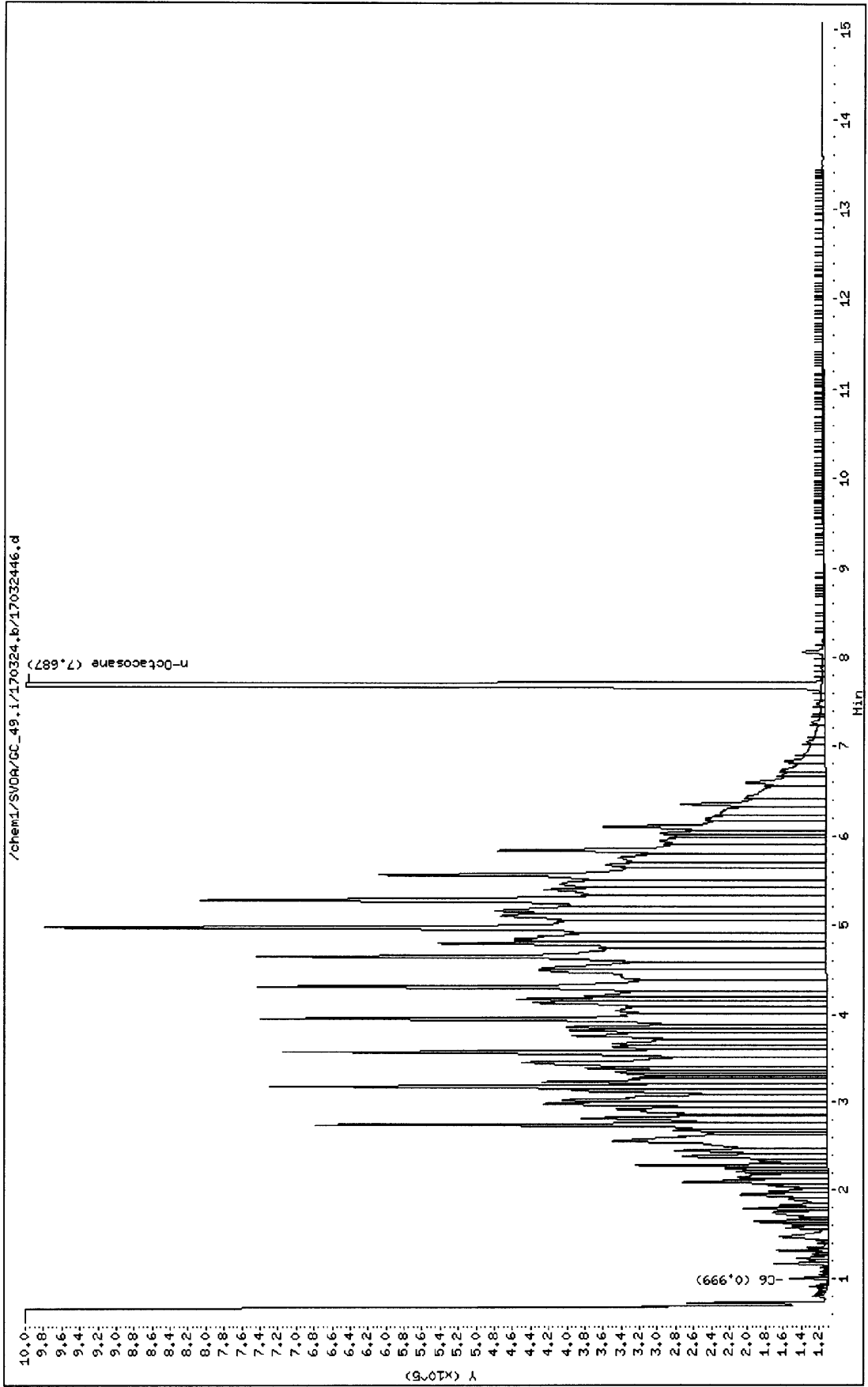
Sample Info: MS 17-03-1667-1

Instrument: GC_49.i

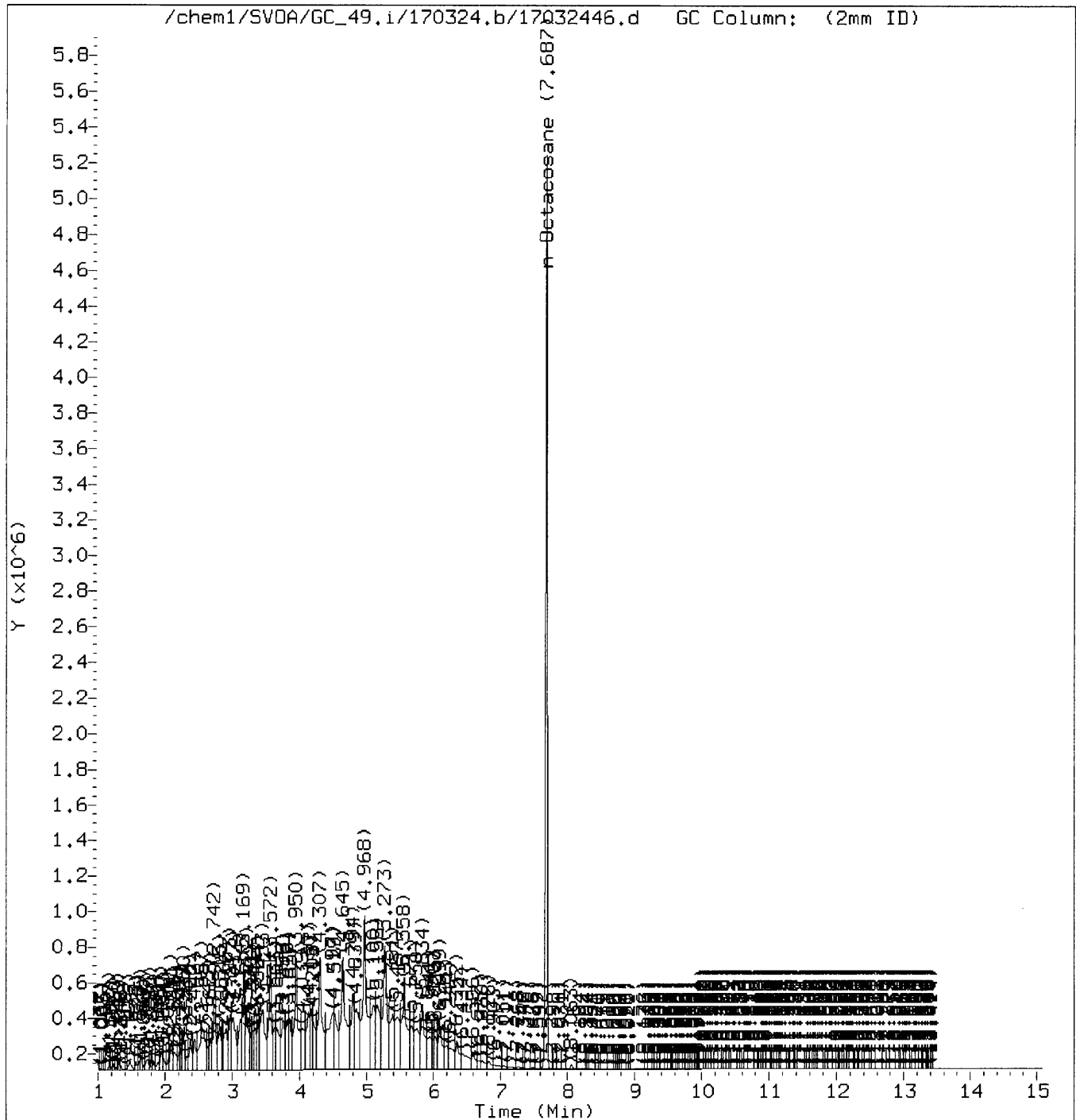
Operator: 682

Column diameter: 2.00

Column phase:



Manually Integrated Data File

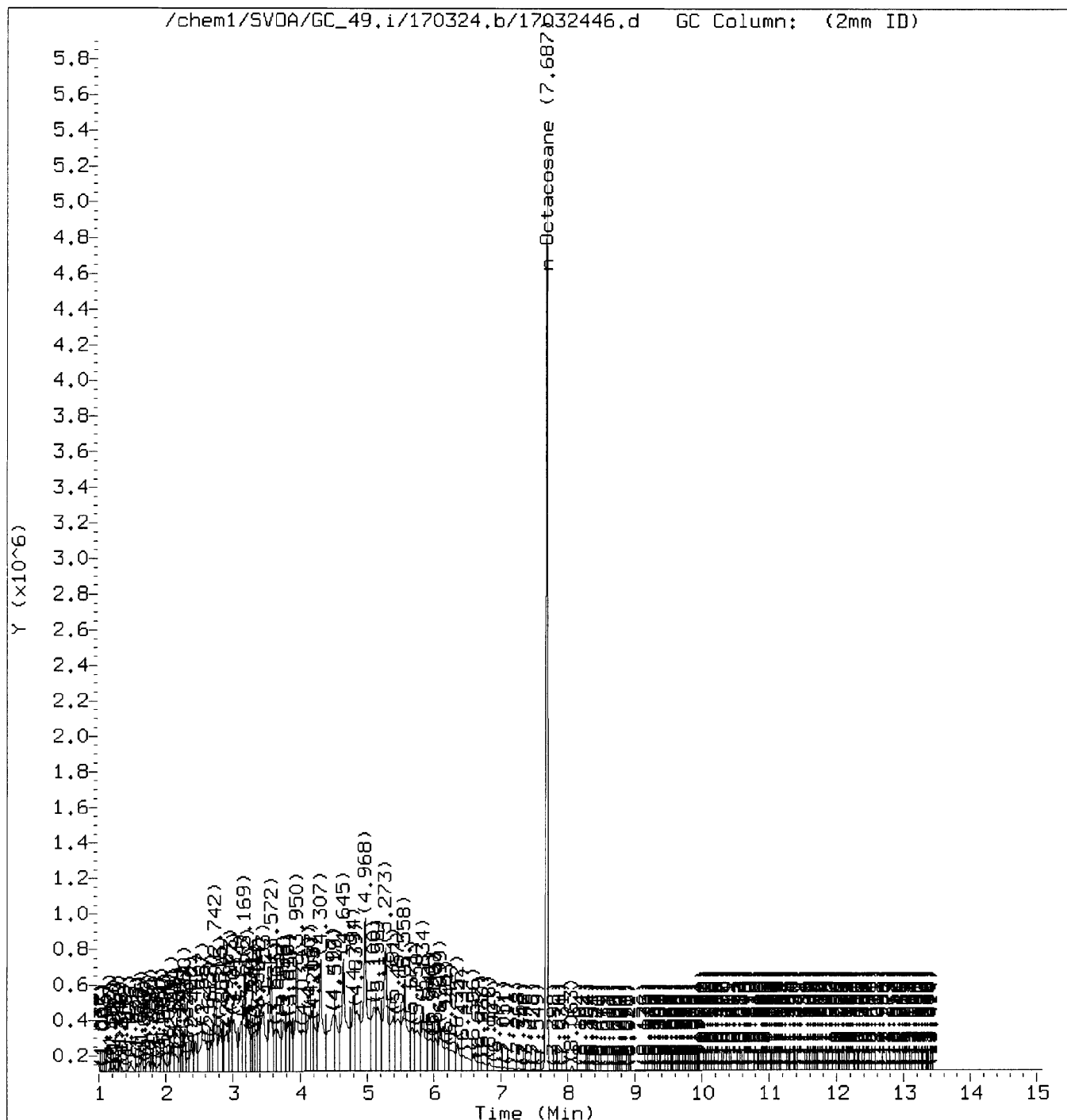


Reason for manual integration: Signal not integrated by automation

Digitally signed by Minhchi Doan
 Analyst responsible for change: on 03/27/2017 at 13:58.
 Target 3.5 esignature user ID: umd6

Audit/management approval: _____ JD

Original Data File



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External Standard Report
=====

```

```

Data File Name   : /chem1/SVOA/GC_49/170324/17032447.d
Page Number      :
Operator         : 682                               Vial Number      : Vial 47
Instrument       : GC 49                             Injection Number : 47
Sample Name     : MSD 17-03-1667-1                 Sequence Line    : 0
                                                    Instrument Method: 8015d.m

Acquired on      : 25 MAR 17 03:07
Report Created on: 27-MAR-17 13:58                 Compound Sublist : all
Software Revision: Target 3.50

```

```

Sig. 1 in /chem1/SVOA/GC_49.i/170324.b/17032447.d
RT Range      Exp RT    DLT RT    Response      ppm      Compound
|-----|-----|-----|-----|-----|-----|
  7.687          7.850     0.163     45899497.00   47.25   n-Octacosane
0.718- 0.906          187100.53    0.19   C6
0.906- 1.315          1287545.39   1.34   C7
1.315- 1.789          4223866.85   4.40   C8
1.789- 2.740          28575638.38  29.78  C9-C10
2.740- 3.571          71512167.21  74.53  C11-C12
3.571- 4.307          64196834.23  66.90  C13-C14
4.307- 4.964          48319245.56  50.36  C15-C16
4.964- 5.558          77820469.90  81.10  C17-C18
5.558- 6.099          33132624.81  34.53  C19-C20
6.099- 6.596          14122100.22  14.72  C21-C22
6.596- 7.054          3830912.68   3.99   C23-C24
7.054- 7.877          1454354.05   1.52   C25-C28
7.877- 8.596          524388.37    0.55   C29-C32
8.596- 9.246          99994.96     0.10   C33-C36
9.246- 9.937          192126.01    0.20   C37-C40
9.937-11.581          409300.21    0.43   C41-C44
0.718-11.581          349888669.37 364.64 TPH as Diesel
0.718-11.581          349888669.37 364.64 C6-C44 Total
End of File

```

Page 1

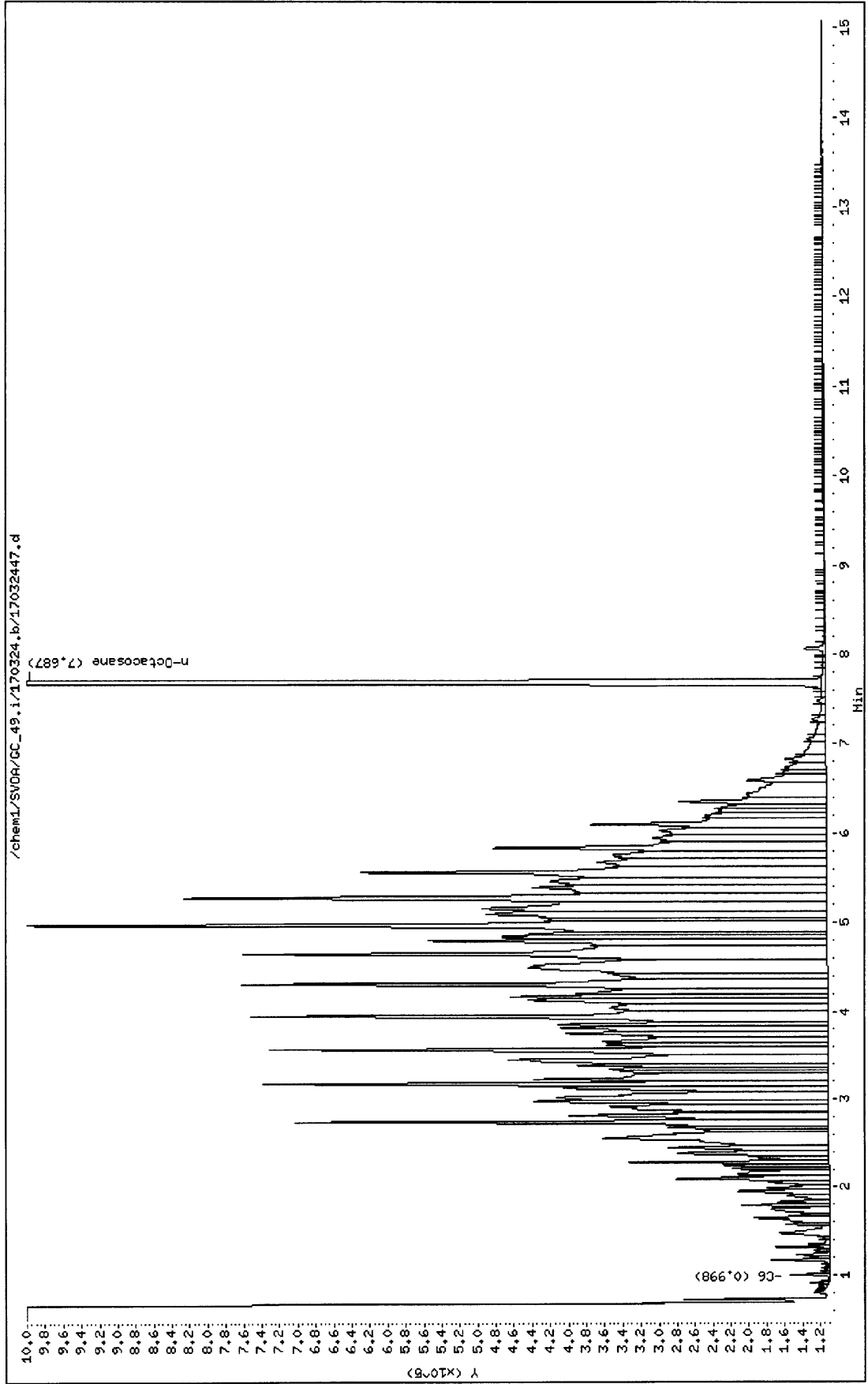
Data File: /chem1/SVDA/GC_49.i/170324.b/17032447.d
Date : 25-MAR-2017 03:07
Client ID:
Sample Info: MSD 17-03-1667-1

Instrument: GC_49.i

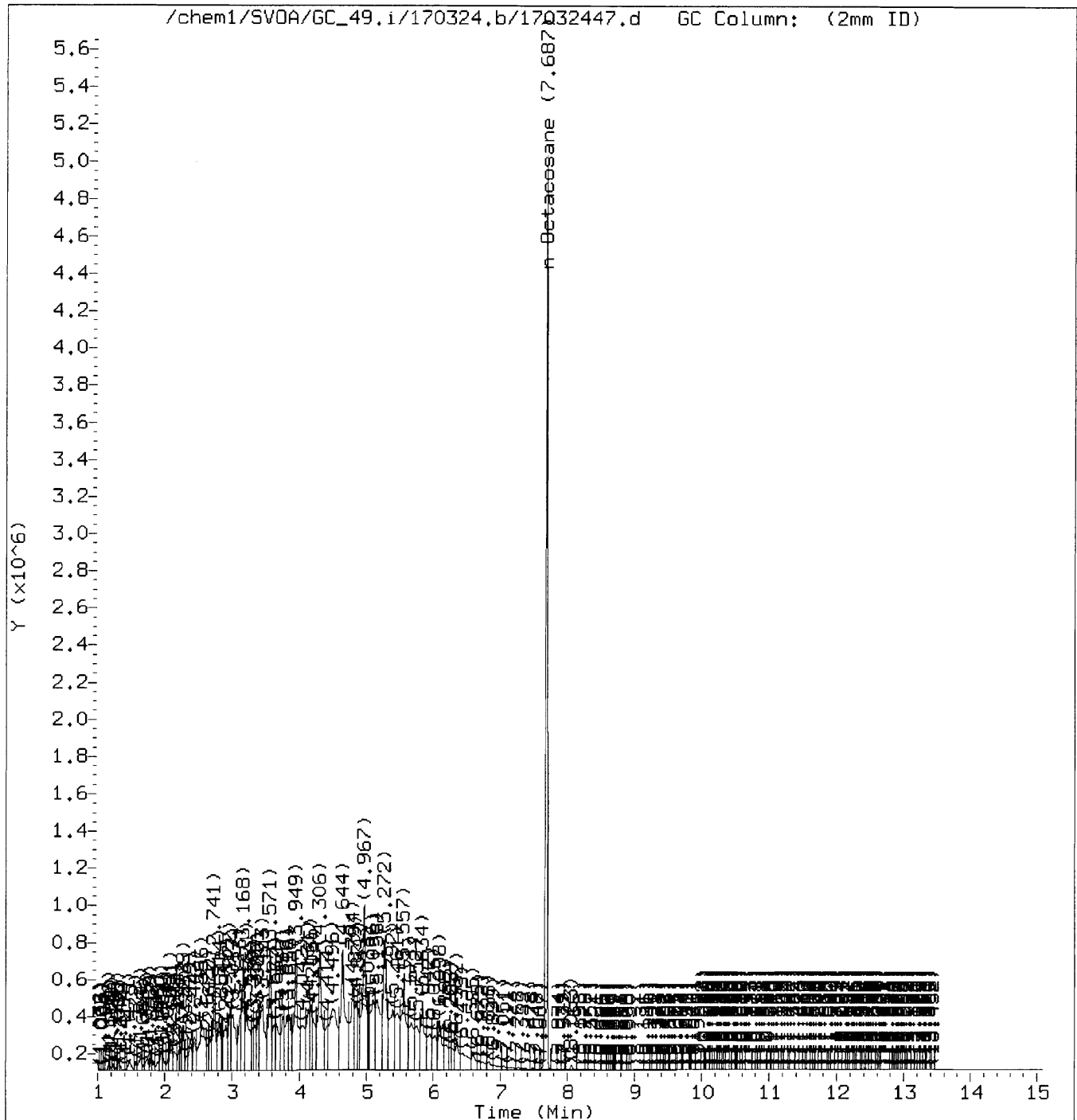
Operator: 682

Column diameter: 2.00

Column phase:



Manually Integrated Data File



Reason for manual integration: Signal not integrated by automation

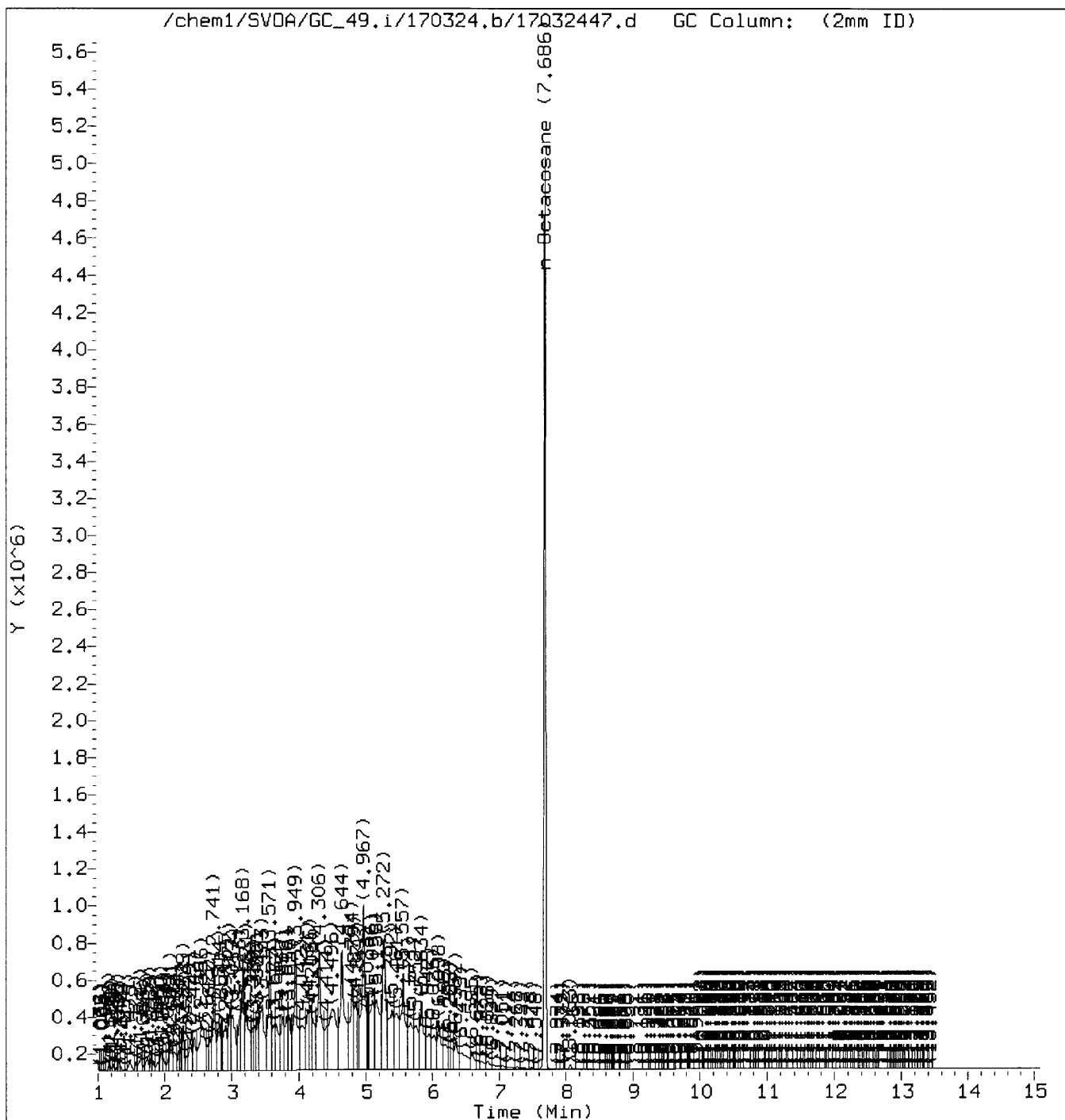
Digitally signed by Minhchi Doan

Analyst responsible for change: on 03/27/2017 at 13:58.

Target 3.5 esignature user ID: umd6

Audit/management approval: _____ JD

Original Data File



```

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External Standard Report
=====

```

```

Data File Name   : /chem1/SVOA/GC_49/170324/17032448.d
Page Number      :
Operator         : 682                               Vial Number      : Vial 48
Instrument       : GC 49                             Injection Number  : 48
Sample Name     : 17-03-1667-1 UTC                  Sequence Line    : 0
                                                    Instrument Method: 8015d.m

Acquired on      : 25 MAR 17 03:28
Report Created on: 27-MAR-17 13:59                  Compound Sublist : all
Software Revision: Target 3.50

```

```

Sig. 1 in /chem1/SVOA/GC_49.i/170324.b/17032448.d
RT Range      Exp RT    DLT RT    Response      ppm      Compound
|-----|-----|-----|-----|-----|-----|
0.718- 0.906      7.683      7.850      0.167      41729550.00  42.96  n-Octacosane
0.906- 1.315      0.906      0.906      16918.39    0.02  C6
1.315- 1.789      1.315      1.315      7728.70     0.01  C7
1.789- 2.740      1.789      1.789      36650.53    0.04  C8
2.740- 3.571      2.740      2.740      162171.56   0.17  C9-C10
3.571- 4.307      3.571      3.571      70964.80    0.07  C11-C12
4.307- 4.964      4.307      4.307      53314.11    0.06  C13-C14
4.964- 5.558      4.964      4.964      26506.77    0.03  C15-C16
5.558- 6.099      5.558      5.558      119612.22   0.12  C17-C18
6.099- 6.596      6.099      6.099      309840.19   0.32  C19-C20
6.596- 7.054      6.596      6.596      341484.23   0.36  C21-C22
7.054- 7.877      7.054      7.054      220202.10   0.23  C23-C24
7.877- 8.596      7.877      7.877      561782.69   0.59  C25-C28
8.596- 9.246      8.596      8.596      471471.66   0.49  C29-C32
9.246- 9.937      9.246      9.937      7163.78     0.01  C33-C36
9.937-11.581     9.937     11.581     0.00        0.00  C37-C40
11.581-17.032    11.581    17.032     0.00        0.00  C41-C44
0.718-11.581     0.718     11.581     2405811.73  2.51  TPH as Diesel
0.718-11.581     0.718     11.581     2405811.73  2.51  C6-C44 Total

End of File

```

Data File: /chem1/SVDA/GC_49.i/170324.b/17032448.d

Date : 25-MAR-2017 03:28

Client ID:

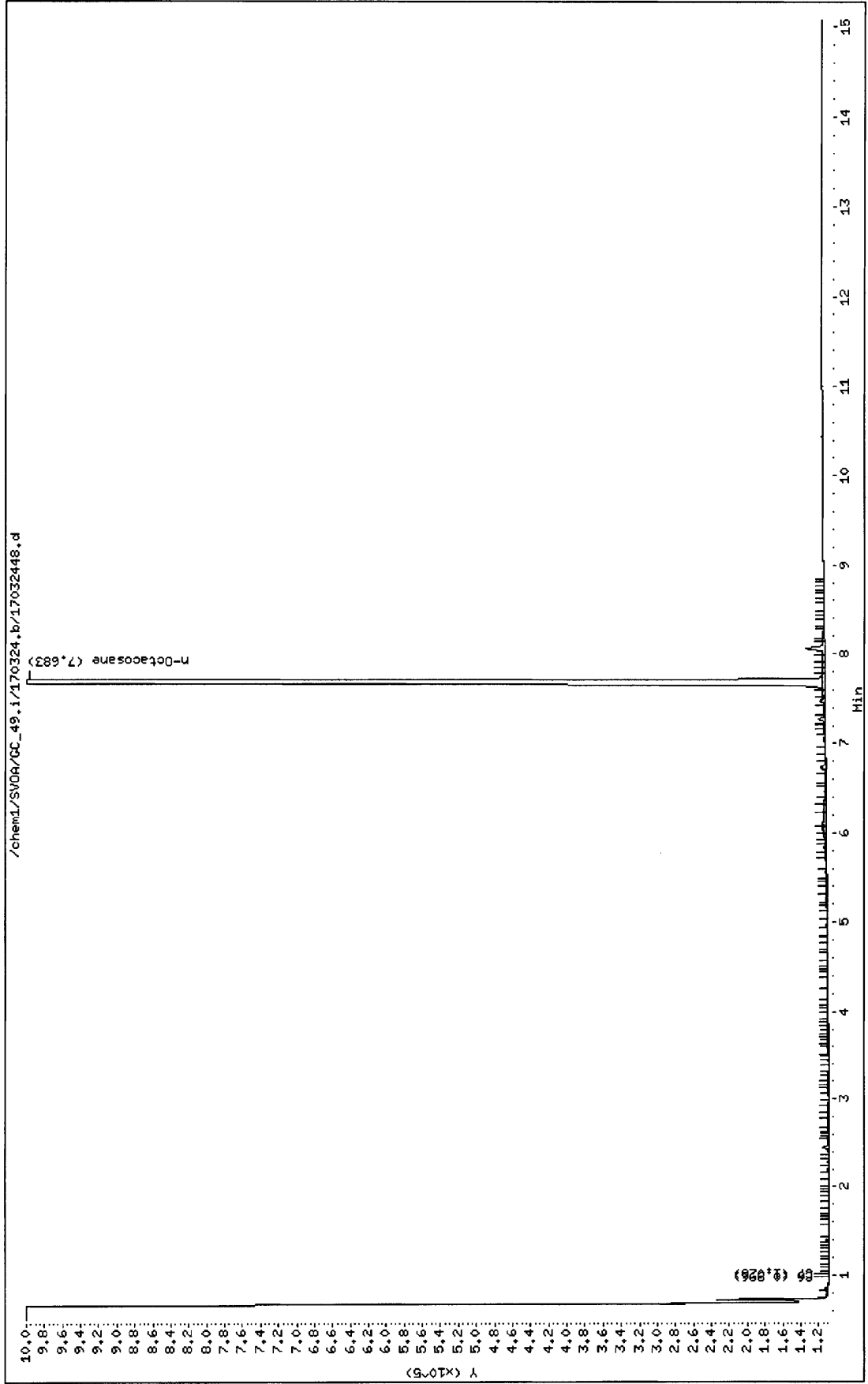
Sample Info: 17-03-1667-1 UTC

Instrument: GC_49.i

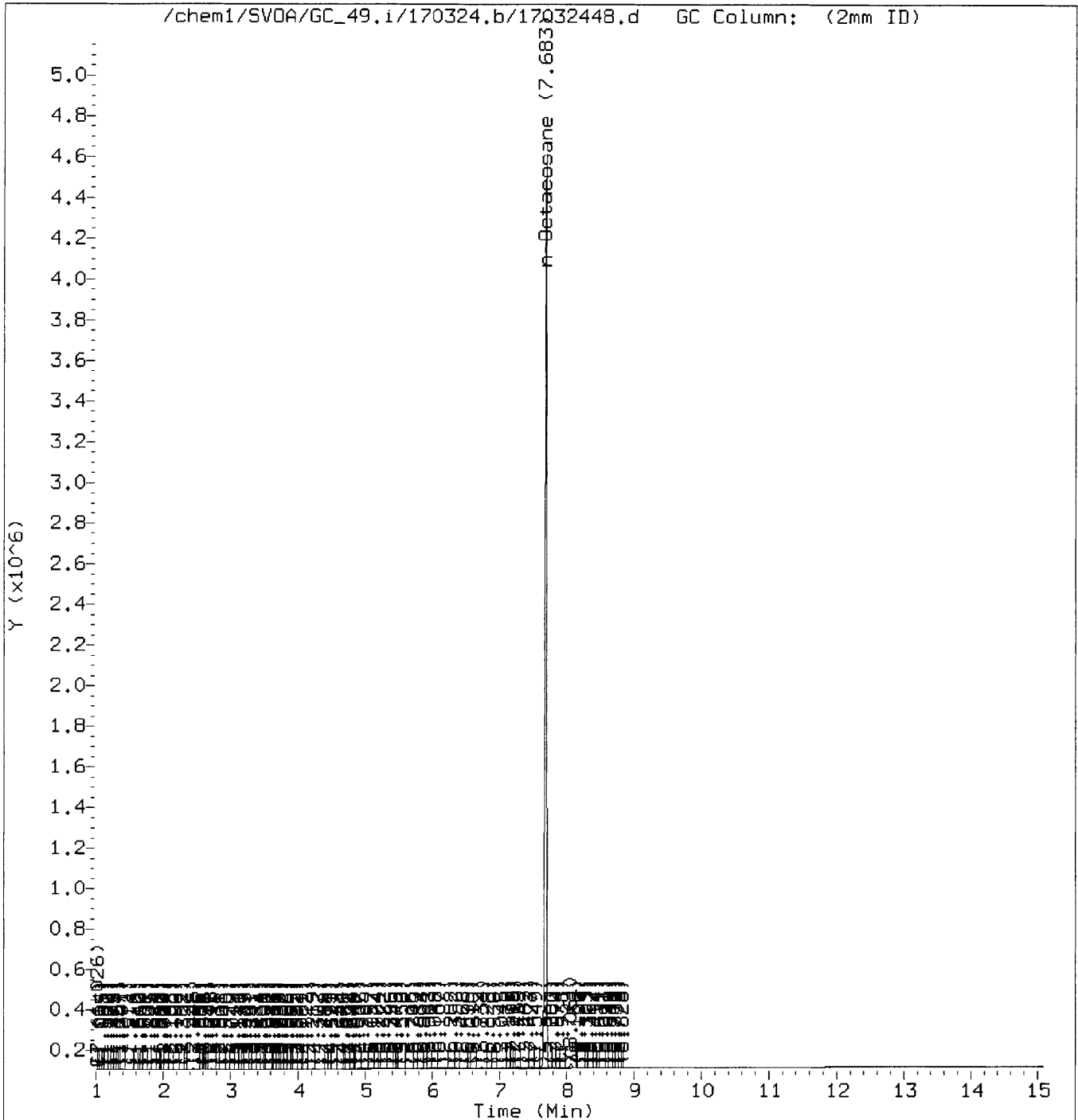
Operator: 682

Column diameter: 2.00

Column phase:



Manually Integrated Data File

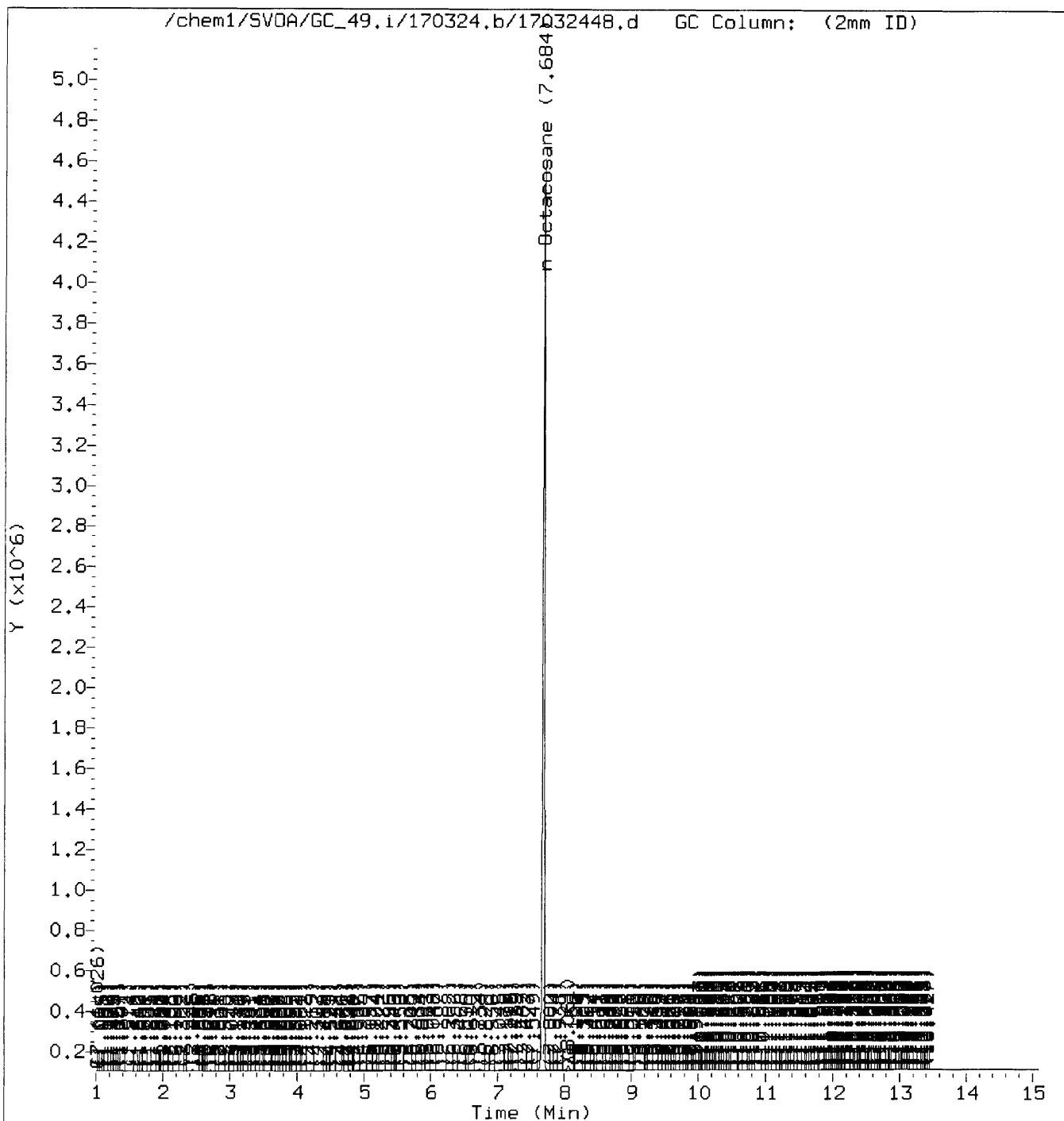


Reason for manual integration: Signal not integrated by automation

Digitally signed by Minhchi Doan
Analyst responsible for change: on 03/27/2017 at 13:59.
Target 3.5 esignature user ID: umd6

Audit/management approval: _____ *JD*

Original Data File



EPA 8015B (M) Diesel + Motor Oil

CONTINUING CALIBRATION

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8015B (M)

CCV WORK ORDER: 099-14-354-47-5901

BATCH ID:

170315I003
170324A077
GC 49

INITIAL:

2017-03-15 14:40
2017-03-25 01:43

INSTRUMENT:

GC 49

ANALYZED BY: 682

D/T ANALYZED:

INITIAL:

CCV:

REVIEWED BY:

D/T REVIEWED:

~

DATA FILE: S:\GC_49\GC_49_data\2017\170324\17032431.d\Report.txt\17032431

<u>COMPOUND NAME</u>	<u>TYPE</u>	<u>CALIB MODEL</u>	<u>MIN RF</u>	<u>AVG RF</u>	<u>CCV RF</u>	<u>AMOUNT</u>	<u>CCV CONC</u>	<u>CCV %D</u>	<u>CCV %D CL</u>	<u>STATUS</u>
TPH as Diesel	C	Avg Resp	0.00	959.540	925.834			4	0-20	PASS

MIN RF: Method Specified Minimum Response Factor



Data File: /chem1/SVOA/GC_49.i/170324.b/17032431.d
 Report Date: 03/27/2017 13:52

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_49.i Injection Date and Time: 25-MAR-2017 01:43
 Sample Name: CCV D400 C28 50 L102516D Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017
 Sublist used: CCV_D-DRO.sub Initial Calibration Time(s): 21:15 15:11
 Method used: /chem1/SVOA/GC_49.i/170324.b/8015d.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
Diesel Range Organics	882457.968	849501.863	0.00	4	15	Averaged
TPH as Diesel	959539.736	925834.360	0.00	4	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
n-Octacosane	971404.651	1033858.120	0.00	-6	20	Averaged

page 1

Data File: /chem1/SVOA/GC_49.i/170324.b/17032431.d
 Report Date: 27-Mar-2017 13:45

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170324.b/17032431.d
 Lab Smp Id:
 Inj Date : 25-MAR-2017 01:43
 Operator : 682 Inst ID: GC_49.i
 Smp Info : CCV D400 C28 50 L102516D
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170324.b/8015d.m
 Meth Date : 27-Mar-2017 13:45 umd6 Quant Type: ESTD
 Cal Date : 16-MAR-2017 15:11 Cal File: 17031609.d
 Als bottle: 31 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.721-7.877			370333744	400.000	385.949
S 26 Diesel Range Organics	2.280-7.877			339800745	400.000	385.061
\$ 92 n-Octacosane	7.686	7.686	0.000	51692906	50.0000	53.214

Data File: /chem1/SVDA/GC_49.i/170324.b/17032431.d

Date : 25-MAR-2017 01:43

Client ID:

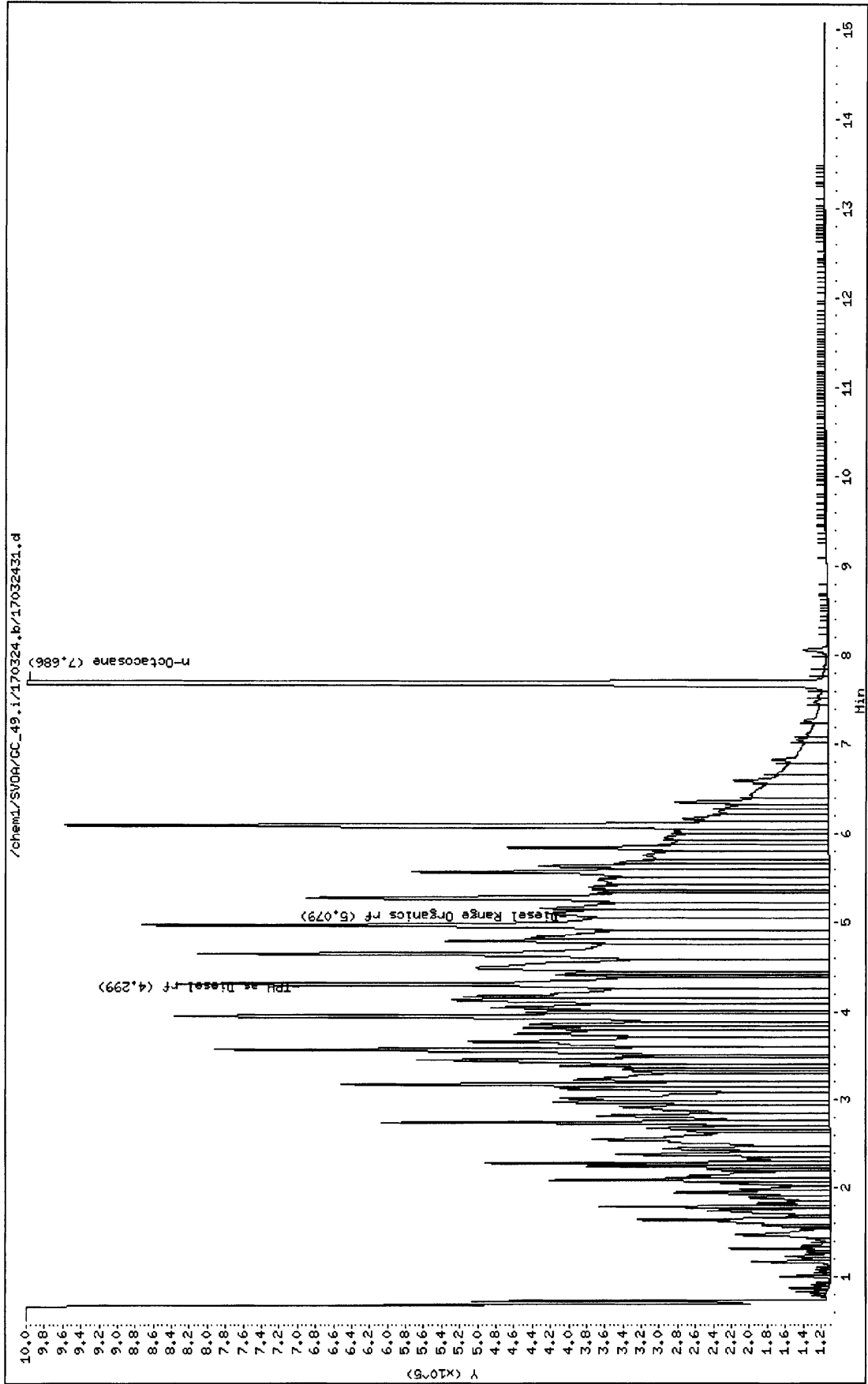
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_49.i/170324.b/17032453.d
Report Date: 03/27/2017 14:00

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_49.i Injection Date and Time: 25-MAR-2017 05:13
Sample Name: CCV D400 C28 50 L102516D Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017
Sublist used: CCV_D-DRO.sub Initial Calibration Time(s): 21:15 15:11
Method used: /chem1/SVOA/GC_49.i/170324.b/8015d.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
Diesel Range Organics	882457.968	867155.805	0.00	2	15	Averaged
TPH as Diesel	959539.736	936712.233	0.00	2	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
n-Octacosane	971404.651	1003874.860	0.00	-3	20	Averaged

Data File: /chem1/SVOA/GC_49.i/170324.b/17032453.d
 Report Date: 27-Mar-2017 13:48

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170324.b/17032453.d
 Lab Smp Id:
 Inj Date : 25-MAR-2017 05:13
 Operator : 682 Inst ID: GC_49.i
 Smp Info : CCV D400 C28 50 L102516D
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170324.b/8015d.m
 Meth Date : 27-Mar-2017 13:48 umd6 Quant Type: ESTD
 Cal Date : 16-MAR-2017 15:11 Cal File: 17031609.d
 Als bottle: 53 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.721-7.877			374684893	400.000	390.483
S 26 Diesel Range Organics	2.280-7.877			346862322	400.000	393.063
S 92 n-Octacosane	7.684	7.684	0.000	50193743	50.0000	51.671



Data File: /chem1/SVDR/GC_49.i/170324.b/17032453.d

Date: 25-MAR-2017 06:13

Client ID:

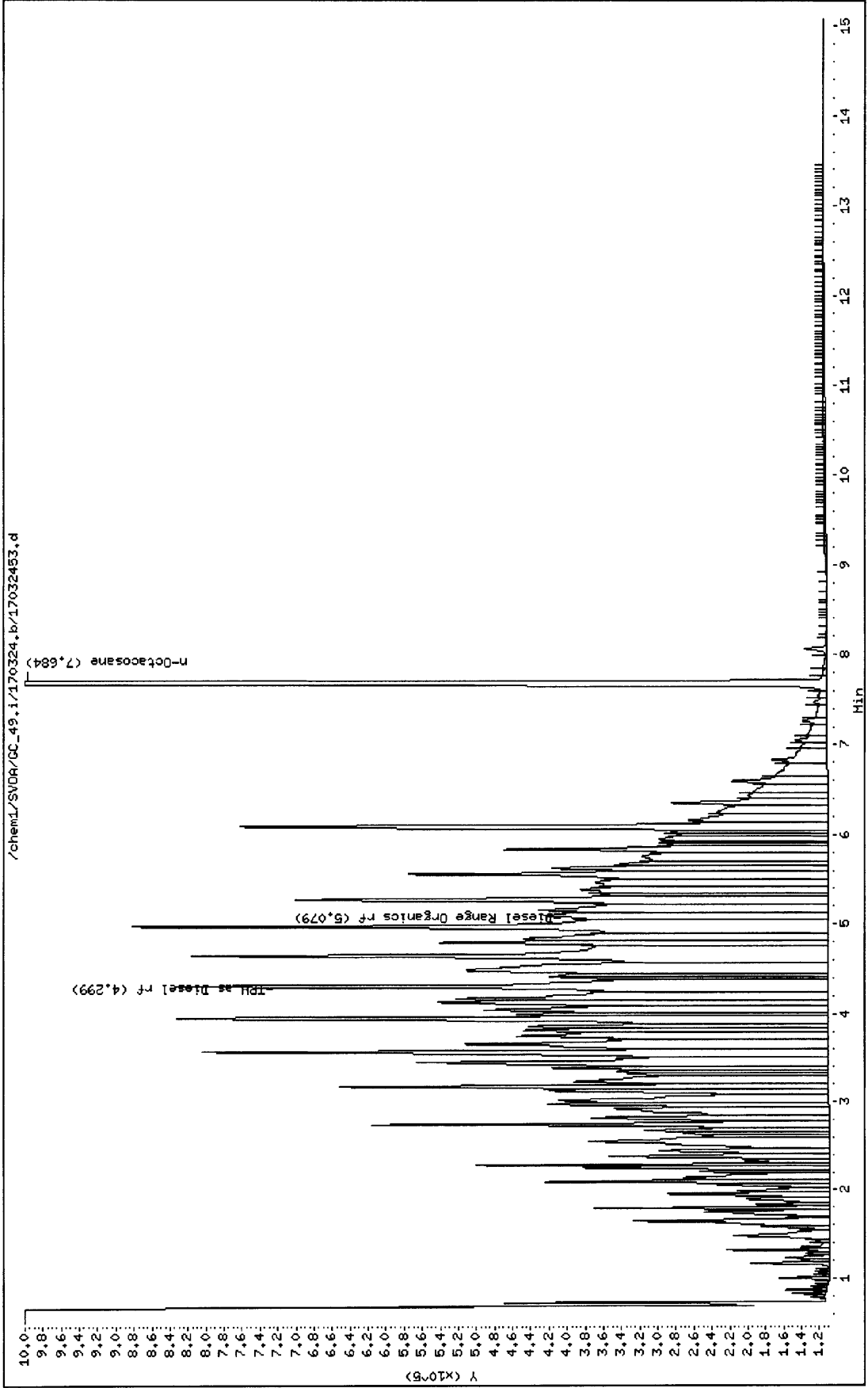
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



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External Standard Report
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Data File Name   : /chem1/SVOA/GC_49/170324/1703240201.d
Page Number      :
Operator         : 682                               Vial Number      : Vial 2
Instrument       : GC 49                             Injection Number  : 2
Sample Name     : C6-C44 L110816A                   Sequence Line    : 0
                                                    Instrument Method: 8015d.m

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Acquired on      : 25 MAR 17 01:22
Report Created on: 27-MAR-17 13:41                 Compound Sublist : all
Software Revision: Target 3.50

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Sig. 1 in /chem1/SVOA/GC_49.i/170324.b/1703240201.d

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RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.721	7.850	7.129	1828842.00	0.00	C6-Hexane
0.906	7.850	6.944	3572358.00	0.00	C7-Heptane
1.315	7.850	6.535	5069952.00	0.00	C8-Octane
1.789	7.850	6.061	5362967.00	0.00	C9-Nonane
2.280	7.850	5.570	5651448.00	0.00	C10-Decane
2.740	7.850	5.110	5788015.00	0.00	C11-Undecane
3.169	7.850	4.681	5803907.00	0.00	C12-Dodecane
3.571	7.850	4.279	6821614.00	0.00	C13-Tridecane
3.950	7.850	3.900	7540870.00	0.00	C14-Tetradecane
4.307	7.850	3.543	8378107.00	0.00	C15-pentadecane
4.644	7.850	3.206	8823064.00	0.00	C16-Hexadecane
4.964	7.850	2.886	9111382.00	0.00	C17-Heptadecane
5.268	7.850	2.582	9328316.00	0.00	C18-Octadecane
5.558	7.850	2.292	9321847.00	0.00	C19-Nonadecane
5.835	7.850	2.015	9534032.00	0.00	C20-Eicosane
6.099	7.850	1.751	9560007.00	0.00	C21-Heneicosane
6.353	7.850	1.497	9799958.00	0.00	C22-Docosane
6.596	7.850	1.254	9827590.00	0.00	C23-Tricosane
6.829	7.850	1.021	9988306.00	0.00	C24-Tetracosane
7.054	7.850	0.796	10071978.00	0.00	C25-Pentacosane
7.271	7.850	0.579	10520848.00	0.00	C26-Hexacosane
7.480	7.850	0.370	10259275.00	0.00	C27-Heptacosane
7.682	7.850	0.168	10716285.00	11.03	n-Octacosane
7.877	7.850	-0.027	10751826.00	0.00	C29-Nonacosane
8.065	7.850	-0.215	10869799.00	0.00	C30-Triacontane
8.248	7.850	-0.398	10541539.00	0.00	C31-Hentriacontane
8.424	7.850	-0.574	10099917.00	0.00	C32-Dotriacontane
8.596	7.850	-0.746	9036893.00	0.00	C33-Tritriacontane
8.762	7.850	-0.912	7232478.00	0.00	C34-Tetratriacontane
8.923	7.850	-1.073	5154545.00	0.00	C35-Pentatriacontane
9.080	7.850	-1.230	3506319.00	0.00	C36-Hexatriacontane
9.246	7.850	-1.396	1966973.00	0.00	C37-Heptatriacontane
9.441	7.850	-1.591	1152699.00	0.00	C38-Octatriacontane
9.669	7.850	-1.819	672815.00	0.00	C39-Nonatriacontane
9.937	7.850	-2.087	481222.00	0.00	C40-Tetracontane
11.581	7.850	-3.731	870539.00	0.00	C44-Tetratetracontane

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End of File

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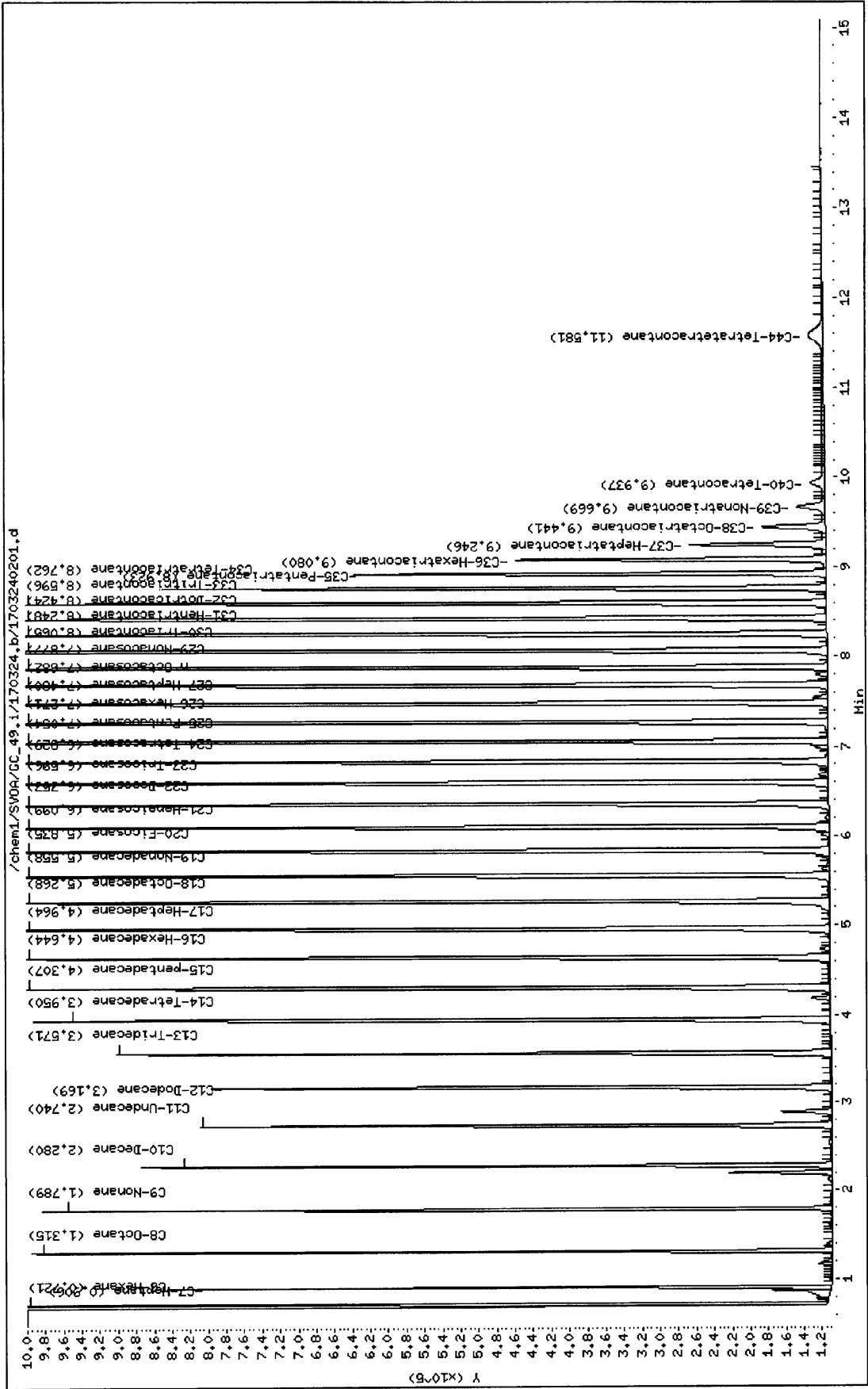
Data File: /chem1/SV00A/GC_49.i/170324.b/1703240201.d
Date : 25-MAR-2017 01:22
Client ID:
Sample Info: C6-C44 L110816A

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



**CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8015B (M)**

BATCH ID: 170327A058
INSTRUMENT: GC 49

ANALYZED BY: 682

WORK ORDER: 099-14-354
MATRIX: Water

REVIEWED BY: 27
D/T REVIEWED: 2017-03-28 11:39

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
49	Daily Calibration	2017-03-27 16:37	S:\GC_49\GC_49_data\2017\170327\17032737.d\Report.txt17032737

WORK ORDER: 17-03-1523
MATRIX: Soil

REVIEWED BY: 27
D/T REVIEWED: 2017-03-28 11:41

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	IDW-S	2017-03-27 17:39	S:\GC_49\GC_49_data\2017\170327\17032739.d\Report.txt17032739

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8015B (M)

CCV WORK ORDER: 099-14-354-49-5901

BATCH ID:

INITIAL: 170315I003
CCV: 170327A058
INSTRUMENT: GC 49

ANALYZED BY: 682

D/T ANALYZED:

INITIAL: 2017-03-15 14:40
CCV: 2017-03-27 16:37

REVIEWED BY:

D/T REVIEWED: 27

DATA FILE: S:\GC_49\GC_49_data\2017\170327\17032737.d\Report.txt17032737

<u>COMPOUND_NAME</u>	<u>TYPE</u>	<u>CALIB MODEL</u>	<u>MIN RF</u>	<u>AVG RF</u>	<u>CCV RF</u>	<u>AMOUNT</u>	<u>CCV CONC</u>	<u>CCV %D</u>	<u>CCV %D CL</u>	<u>STATUS</u>
TPH as Diesel	C	Avg Resp	0.00	959.540	882.610		8	0-20		PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_49.i/170327.b/17032737.d
 Report Date: 03/27/2017 18:06

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_49.i Injection Date and Time: 27-MAR-2017 16:37
 Sample Name: CCV D400 C28 50 L102516D Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017
 Sublist used: CCV_D-DRO.sub Initial Calibration Time(s): 21:15 15:11
 Method used: /chem1/SVOA/GC_49.i/170327.b/8015d.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
Diesel Range Organics	882457.968	810764.343	0.00	8	15	Averaged
TPH as Diesel	959539.736	882610.300	0.00	8	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
n-Octacosane	971404.651	994155.860	0.00	-2	20	Averaged

page 1

Data File: /chem1/SVOA/GC_49.i/170327.b/17032737.d
 Report Date: 27-Mar-2017 18:05

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170327.b/17032737.d
 Lab Smp Id:
 Inj Date : 27-MAR-2017 16:37
 Operator : 682 Inst ID: GC_49.i
 Smp Info : CCV D400 C28 50 L102516D
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170327.b/8015d.m
 Meth Date : 27-Mar-2017 18:05 umd6 Quant Type: ESTD
 Cal Date : 16-MAR-2017 15:11 Cal File: 17031609.d
 Als bottle: 37 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

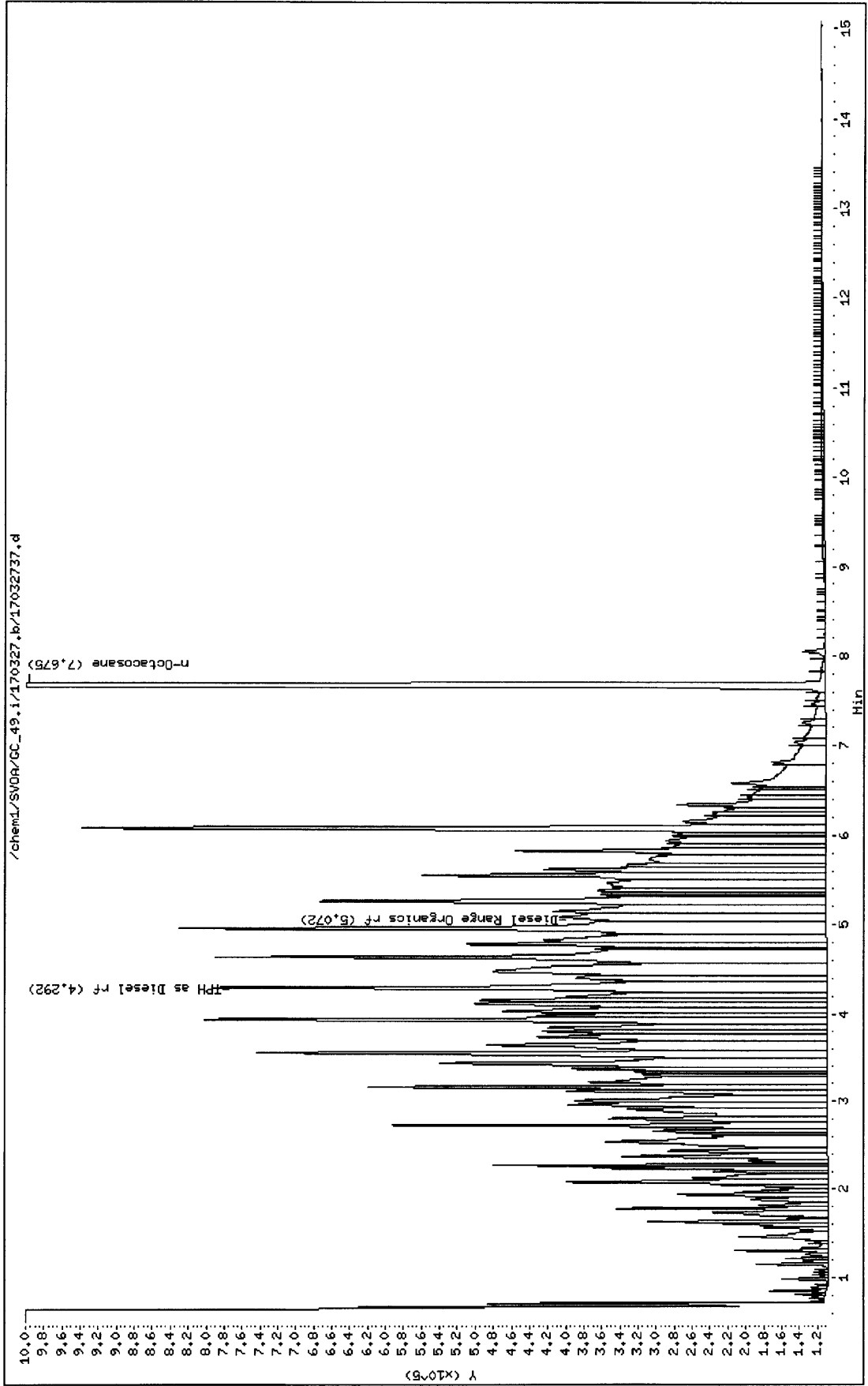
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.720-7.864			353044120	400.000	367.930
S 26 Diesel Range Organics	2.280-7.864			324305737	400.000	367.502
S 92 n-Octacosane	7.675	7.675	0.000	49707793	50.0000	51.171



Data File: /chem1/SV0A/GC_49.i/170327.lb/17032737.d
Date : 27-MAR-2017 16:37
Client ID:
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC_49.i
Operator: 682
Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_49.i/170327.b/17032717.d
 Report Date: 03/28/2017 10:03

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_49.i Injection Date and Time: 27-MAR-2017 19:46
 Sample Name: CCV D400 C28 50 L102516D Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017
 Sublist used: CCV_D-DRO.sub Initial Calibration Time(s): 21:15 15:11
 Method used: /chem1/SVOA/GC_49.i/170327.b/8015d.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
Diesel Range Organics	882457.968	899790.913	0.00	-2	15	Averaged
TPH as Diesel	959539.736	978143.230	0.00	-2	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
n-Octacosane	971404.651	1056998.100	0.00	-9	20	Averaged

page 1

Data File: /chem1/SVOA/GC_49.i/170327.b/17032717.d
 Report Date: 28-Mar-2017 10:03

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170327.b/17032717.d
 Lab Smp Id:
 Inj Date : 27-MAR-2017 19:46
 Operator : 682 Inst ID: GC_49.i
 Smp Info : CCV D400 C28 50 L102516D
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170327.b/8015d.m
 Meth Date : 28-Mar-2017 10:02 umd6 Quant Type: ESTD
 Cal Date : 16-MAR-2017 15:11 Cal File: 17031609.d
 Als bottle: 17 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.720-7.864			391257292	400.000	407.755
S 26 Diesel Range Organics	2.280-7.864			359916365	400.000	407.856
\$ 92 n-Octacosane	7.677	7.677	0.000	52849905	50.0000	54.405

Data File: /chem1/SVDA/GC_49.i/170327.b/17032717.d

Date : 27-MAR-2017 19:46

Client ID:

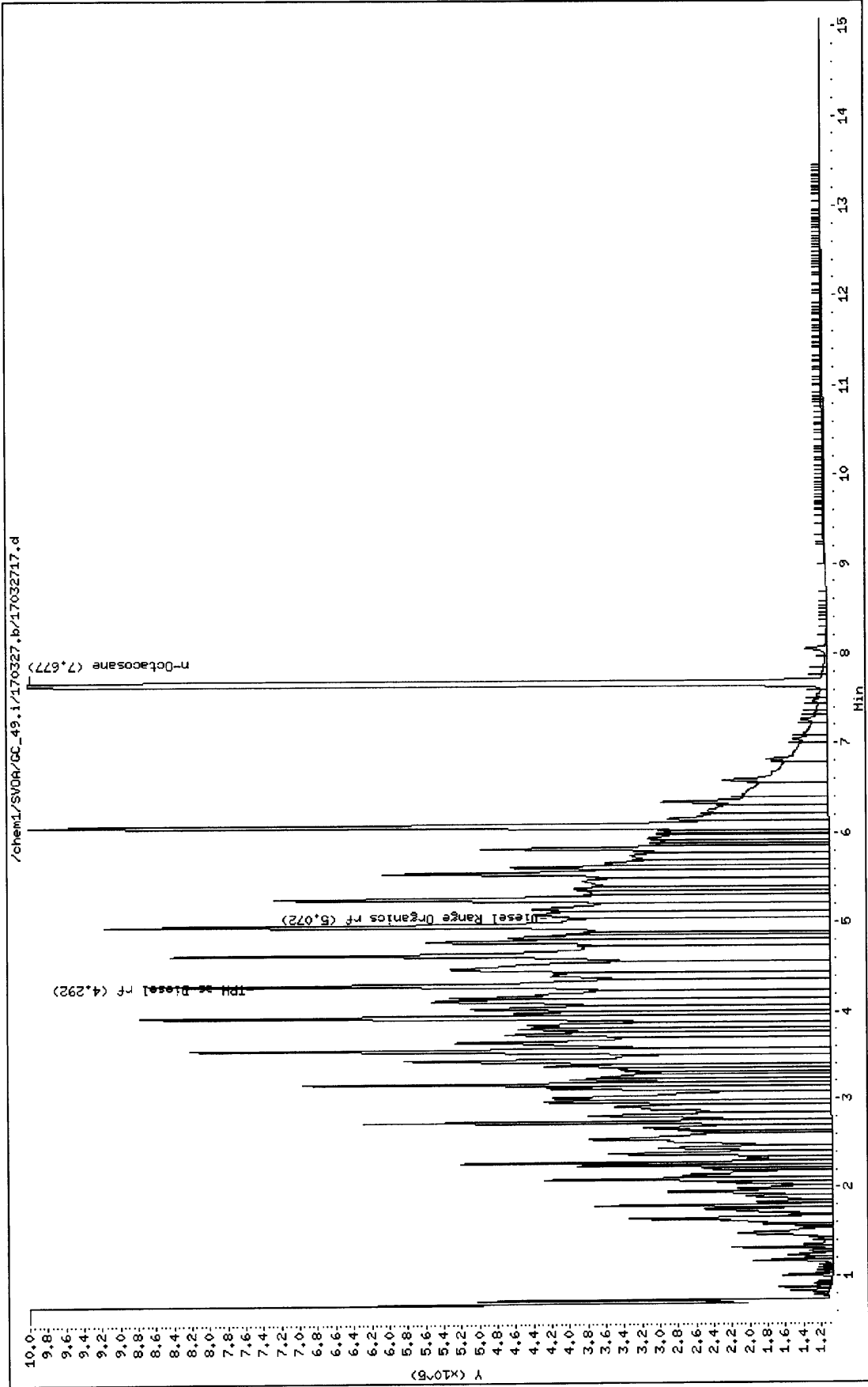
Sample Info: CCV D400 C28 50 L102816D

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



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 External Standard Report
 =====

Data File Name : /chem1/SVOA/GC_49/170327/17032702.d
 Page Number :
 Operator : 682 Vial Number : Vial 2
 Instrument : GC 49 Injection Number : 2
 Sample Name : C6-C44 L110816A Sequence Line : 0
 Instrument Method: 8015d.m
 Acquired on : 27 MAR 17 10:54
 Report Created on: 27-MAR-17 12:02 Compound Sublist : all
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC_49.i/170327.b/17032702.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.720	7.850	7.130	1620895.00	0.00	C6-Hexane
0.906	7.850	6.944	3553597.00	0.00	C7-Heptane
1.317	7.850	6.533	6885947.00	0.00	C8-Octane
1.791	7.850	6.059	6855802.00	0.00	C9-Nonane
2.280	7.850	5.570	7785873.00	0.00	C10-Decane
2.739	7.850	5.111	8226711.00	0.00	C11-Undecane
3.167	7.850	4.683	8276219.00	0.00	C12-Dodecane
3.568	7.850	4.282	9381396.00	0.00	C13-Tridecane
3.946	7.850	3.904	9118427.00	0.00	C14-Tetradecane
4.302	7.850	3.548	9583117.00	0.00	C15-pentadecane
4.638	7.850	3.212	9856263.00	0.00	C16-Hexadecane
4.959	7.850	2.891	10110781.00	0.00	C17-Heptadecane
5.261	7.850	2.589	10342570.00	0.00	C18-Octadecane
5.551	7.850	2.299	10347466.00	0.00	C19-Nonadecane
5.827	7.850	2.023	10657240.00	0.00	C20-Eicosane
6.091	7.850	1.759	10756028.00	0.00	C21-Heneicosane
6.344	7.850	1.506	10986755.00	0.00	C22-Docosane
6.587	7.850	1.263	10983126.00	0.00	C23-Tricosane
6.820	7.850	1.030	11054069.00	0.00	C24-Tetracosane
7.044	7.850	0.806	11069153.00	0.00	C25-Pentacosane
7.261	7.850	0.589	11462845.00	0.00	C26-Hexacosane
7.468	7.850	0.382	10983064.00	0.00	C27-Heptacosane
7.669	7.850	0.181	11143971.00	11.47	n-Octacosane
7.864	7.850	-0.014	10659020.00	0.00	C29-Nonacosane
8.052	7.850	-0.202	9909568.00	0.00	C30-Triacontane
8.233	7.850	-0.383	8386733.00	0.00	C31-Hentriacontane
8.410	7.850	-0.560	6518076.00	0.00	C32-Dotriacontane
8.581	7.850	-0.731	4364192.00	0.00	C33-Tritriacontane
8.747	7.850	-0.897	2459782.00	0.00	C34-Tetratriacontane
8.908	7.850	-1.058	1223532.00	0.00	C35-Pentatriacontane
9.066	7.850	-1.216	622647.00	0.00	C36-Hexatriacontane
9.228	7.850	-1.378	344047.00	0.00	C37-Heptatriacontane
9.421	7.850	-1.571	252165.00	0.00	C38-Octatriacontane
9.646	7.850	-1.796	183360.00	0.00	C39-Nonatriacontane
9.914	7.850	-2.064	134964.00	0.00	C40-Tetracontane
11.552	7.850	-3.702	377614.00	0.00	C44-Tetratetracontane

End of File

Data File: /chem1/SV04/GC_49.i/170327.b/17032702.d

Date: 27-Mar-2017 10:54

Client ID:

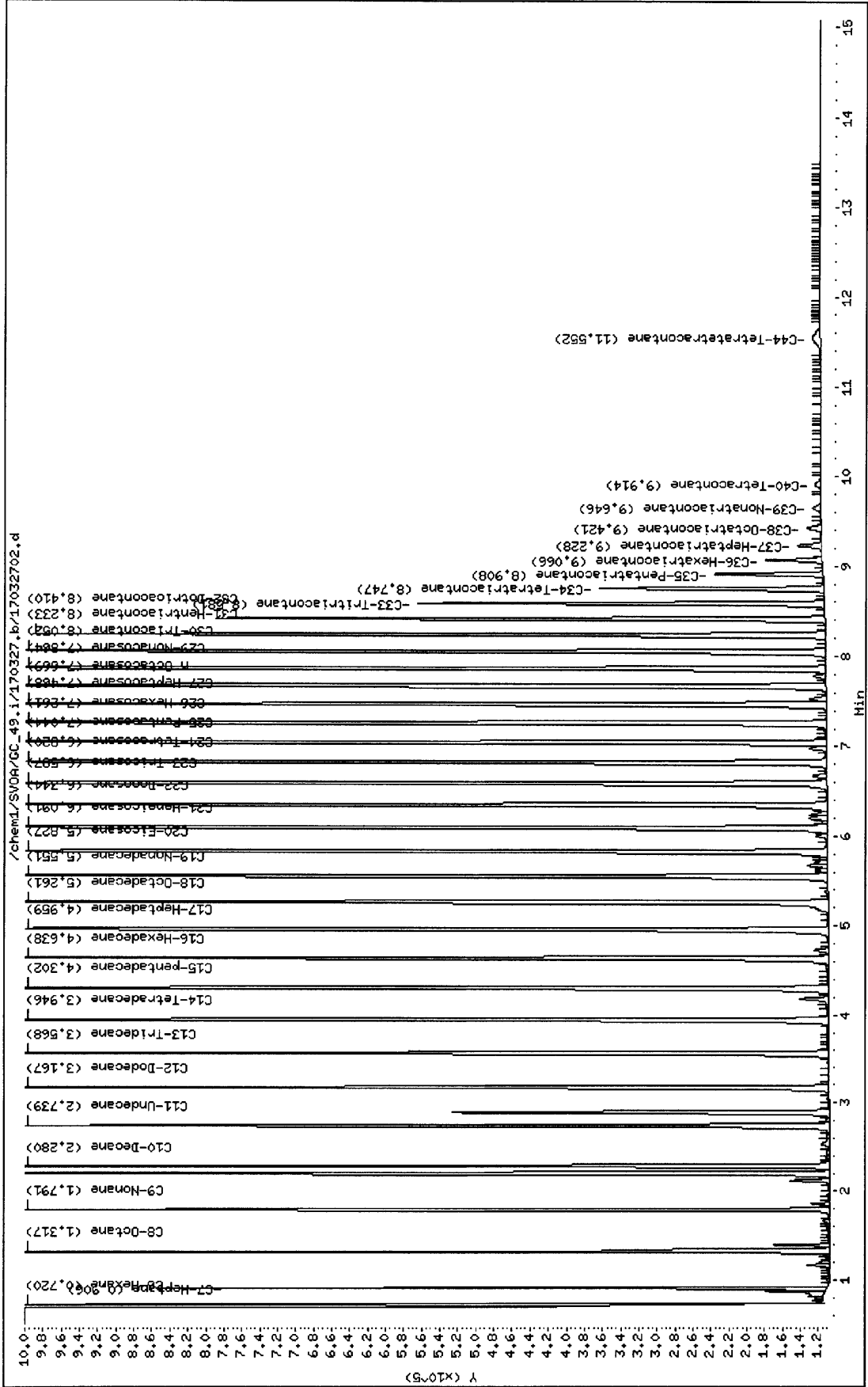
Sample Info: C6-C44 L110816A

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



EPA 8015B (M) Diesel + Motor Oil

RUN LOGS

Line	Vial	File	Name	Method	InjVolume	Acquired
1	1	17031500	BLK	8015D		15-Mar-17, 10:55:17
2	1	17031501	BLK	8015D		15-Mar-17, 12:18:41
3	2	17031502	C6-C44 L110816A	8015D		15-Mar-17, 12:39:15
4	3	17031503	CCV D400 C28 50 L102516D	8015D		15-Mar-17, 13:00:13
5	4	17031504	CCV MO400 L030317D	8015D		15-Mar-17, 13:21:25
6	1	1703150101	BLK	8015D		15-Mar-17, 13:59:20
7	1	1703150102	BLK	8015D		15-Mar-17, 14:19:48
8	5	17031505	ICAL D5 C28 0.625 L102516B	8015D		15-Mar-17, 14:40:12
9	6	17031506	ICAL D200 C28 25 L102516C	8015D		15-Mar-17, 15:00:54
10	7	17031507	ICAL D400 C28 50 L102516D	8015D		15-Mar-17, 15:21:44
11	8	17031508	ICAL D800 C28 100 L102516E	8015D		15-Mar-17, 15:42:39
12	9	17031509	ICAL D1600 C28 200 L102516F	8015D		15-Mar-17, 16:03:21
13	10	17031510	ICV D400 C28 50 L102516G	8015D		15-Mar-17, 16:23:50
14	11	17031511	ICAL MO25 L030317B	8015D		15-Mar-17, 16:44:45
15	12	17031512	ICAL MO200 L030317C	8015D		15-Mar-17, 17:06:01
16	13	17031513	ICAL MO400 L030317D	8015D		15-Mar-17, 17:26:43
17	14	17031514	ICAL MO600 L030317E	8015D		15-Mar-17, 17:47:14
18	15	17031515	ICAL MO800 L030317F	8015D		15-Mar-17, 18:07:56
19	16	17031516	ICV MO400 L030317G	8015D		15-Mar-17, 18:28:52
20	17	17031517	ICAL GD5 L031017B	8015D		15-Mar-17, 18:56:10
21	18	17031518	ICAL GD200 L031017C	8015D		15-Mar-17, 19:16:43
22	19	17031519	ICAL GD400 L031017D	8015D		15-Mar-17, 19:37:45
23	20	17031520	ICAL GD800 L031017E	8015D		15-Mar-17, 19:58:35
24	21	17031521	ICAL GD1600 L031017F	8015D		15-Mar-17, 20:19:12
25	22	17031522	ICV GD400 L031017G	8015D		15-Mar-17, 20:39:35
26	23	17031523	CCV D400 C28 50 L102516D	8015D		15-Mar-17, 21:00:22
27	24	17031524	CCV MO400 L030317D	8015D		15-Mar-17, 21:21:48
28	25	17031525	CCV GD400 L031017D	8015D		15-Mar-17, 21:42:23
29	26	17031526	MB 17031507	8015D		15-Mar-17, 22:02:46
30	27	17031527	GDLCS 17031507	8015D		15-Mar-17, 22:23:44
31	28	17031528	MS 17-03-0952-1	8015D		15-Mar-17, 22:44:36
32	29	17031529	MSD 17-03-0952-1	8015D		15-Mar-17, 23:05:33
33	30	17031530	17-03-0952-1	8015D		15-Mar-17, 23:26:09
34	31	17031531	17-03-0952-2	8015D		15-Mar-17, 23:46:38
35	32	17031532	17-03-0952-3	8015D		16-Mar-17, 00:07:00
36	33	17031533	17-03-0952-4	8015D		16-Mar-17, 00:27:41
37	34	17031534	17-03-0952-5	8015D		16-Mar-17, 00:48:24
38	35	17031535	17-03-0952-6	8015D		16-Mar-17, 01:09:15
39	36	17031536	17-03-0952-7	8015D		16-Mar-17, 01:30:22
40	37	17031537	17-03-0952-8	8015D		16-Mar-17, 01:51:34
41	38	17031538	17-03-0952-9	8015D		16-Mar-17, 02:12:32
42	39	17031539	17-03-0952-10	8015D		16-Mar-17, 02:33:05
43	40	17031540	CCV GD400 L031017D	8015D		16-Mar-17, 02:53:34
44	41	17031541	CCV D400 C28 50 L102516D	8015D		16-Mar-17, 11:36:46

I003

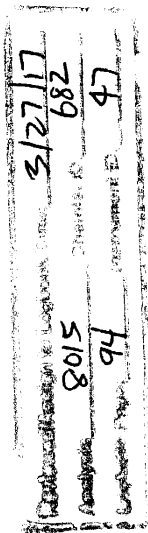
A053

Revised/Assign to Logbook Date:	3/16/17
Analysis	8015
Chemist ID	682
Logbook Page	85
Instrument ID	49

Sequence: C:\CHEM32\1\SEQUENCE\170324.S

Table: Rear DataPath: W:\GC_49\DATA\GC49\2017\170324\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	1	17032400	BLK	8015D		24-Mar-17, 09:13:08
2	1	17032401	BLK	8015D		24-Mar-17, 09:33:34
3	2	17032402	C6-C44 L110816A	8015D		24-Mar-17, 09:54:17
4	3	17032403	CCV D400 C28 50 L102516D A039	8015D		24-Mar-17, 10:15:35
5	4	17032404	CCV MO400 L030317D	8015D		24-Mar-17, 10:36:17
6	5	17032405	MB 17032407 UTC	8015D		24-Mar-17, 12:04:33
7	6	17032406	LCS 17032407	8015D		24-Mar-17, 12:25:21
8	7	17032407	MS 17-03-1781-9	8015D		24-Mar-17, 12:45:59
9	8	17032408	MSD 17-03-1781-9	8015D		24-Mar-17, 13:06:36
10	18	17032418	17-03-1781-9 5X	8015D		24-Mar-17, 13:27:37
11	9	17032409	17-03-1781-1	8015D		24-Mar-17, 13:48:53
12	10	17032410	17-03-1781-2	8015D		24-Mar-17, 14:09:38
13	11	17032411	17-03-1781-3	8015D		24-Mar-17, 14:37:44
14	33	17032433	CCV D400 C28 50 L102516D A040	8015D		24-Mar-17, 14:58:09
15	34	17032434	CCV GD400 L031017D	8015D		24-Mar-17, 15:19:16
16	35	17032435	GDLCS 17032204	8015D		24-Mar-17, 15:40:24
17	36	17032436	GDLCS 17032204	8015D		24-Mar-17, 16:01:00
18	37	17032437	MB 17032409	8015D		24-Mar-17, 16:22:21
19	38	17032438	GDLCS 17032409	8015D		24-Mar-17, 16:43:25
20	39	17032439	GDMS 17-03-1466-4	8015D		24-Mar-17, 17:04:10
21	40	17032440	GDMS 17-03-1466-4	8015D		24-Mar-17, 17:24:59
22	41	17032441	17-03-1466-2	8015D		24-Mar-17, 18:03:13
23	42	17032442	17-03-1466-4	8015D		24-Mar-17, 18:24:23
24	12	17032412	17-03-1781-4	8015D		24-Mar-17, 18:44:58
25	13	17032413	17-03-1781-5	8015D		24-Mar-17, 19:05:45
26	15	17032415	CCV D400 C28 50 L102516D A075	8015D		24-Mar-17, 19:26:56
27	43	17032443	CCV GD400 L031017D	8015D		24-Mar-17, 19:47:47
28	14	17032414	17-03-1781-6	8015D		24-Mar-17, 20:08:17
29	16	17032416	17-03-1781-7	8015D		24-Mar-17, 20:29:10
30	17	17032417	17-03-1781-8	8015D		24-Mar-17, 20:50:34
31	19	17032419	17-03-1781-10	8015D		24-Mar-17, 21:11:10
32	20	17032420	17-03-1781-11	8015D		24-Mar-17, 21:31:58
33	21	17032421	17-03-1781-12	8015D		24-Mar-17, 21:53:37
34	22	17032422	17-03-1781-13	8015D		24-Mar-17, 22:14:18
35	23	17032423	17-03-1781-14	8015D		24-Mar-17, 22:35:06
36	24	17032424	17-03-1781-15	8015D		24-Mar-17, 22:56:25
37	25	17032425	17-03-1781-16	8015D		24-Mar-17, 23:17:26
38	26	17032426	CCV D400 C28 50 L102516D A076	8015D		24-Mar-17, 23:38:03
39	27	17032427	17-03-1781-17	8015D		24-Mar-17, 23:58:54
40	28	17032428	17-03-1781-18	8015D		25-Mar-17, 00:20:09
41	29	17032429	17-03-1781-19	8015D		25-Mar-17, 00:41:04
42	30	17032430	17-03-1781-20	8015D		25-Mar-17, 01:01:50
43	2	1703240201	C6-C44 L110816A	8015D		25-Mar-17, 01:22:33
44	31	17032431	CCV D400 C28 50 L102516D A077	8015D		25-Mar-17, 01:43:44
45	44	17032444	MB 17032307	8015D		25-Mar-17, 02:04:39
46	45	17032445	LCS 17032307	8015D		25-Mar-17, 02:25:24
47	46	17032446	MS 17-03-1667-1	8015D		25-Mar-17, 02:46:27
48	47	17032447	MSD 17-03-1667-1	8015D		25-Mar-17, 03:07:48
49	48	17032448	17-03-1667-1 UTC	8015D		25-Mar-17, 03:28:40
50	49	17032449	17-03-1667-3	8015D		25-Mar-17, 03:49:22
51	50	17032450	17-03-1667-5	8015D		25-Mar-17, 04:10:44
52	51	17032451	17-03-1667-7	8015D		25-Mar-17, 04:32:09
53	52	17032452	17-03-1667-9	8015D		25-Mar-17, 04:52:56
54	53	17032453	CCV D400 C28 50 L102516D A078	8015D		25-Mar-17, 05:13:36
55	54	17032454	17-03-1680-1 20X	8015D		25-Mar-17, 05:34:29
56	55	17032455	17-03-1680-2 20X	8015D		25-Mar-17, 05:55:48
57	56	17032456	17-03-1680-3 20X	8015D		25-Mar-17, 06:16:55
58	57	17032457	17-03-1680-4 20X	8015D		25-Mar-17, 06:37:31
59	58	17032458	17-03-1680-5 20X	8015D		25-Mar-17, 06:58:14
60	59	17032459	17-03-1680-6	8015D		25-Mar-17, 07:19:29



Sequence: C:\CHEM32\1\SEQUENCE\170327.S
 Table: Rear DataPath: W:\GC_49\DATA\GC49\2017\170327\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	1	17032700	BLK	8015D		27-Mar-17, 10:11:19
2	1	17032701	BLK	8015D		27-Mar-17, 10:33:14
3	2	17032702	C6-C44 L110816A	8015D		27-Mar-17, 10:54:21
4	3	17032703	CCV D400 C28 50 L102516D A057	8015D		27-Mar-17, 11:15:15
5	4	17032704	CCV MO400 L030317D	8015D		27-Mar-17, 11:36:31
6	6	17032706	CCV JA 400 L121416D	8015D		27-Mar-17, 11:58:03
7	7	17032707	17-02-2255-4 100X CONF.	8015D		27-Mar-17, 12:19:16
8	8	17032708	MB 17032702	8015D		27-Mar-17, 13:31:23
9	9	17032709	LCS 17032702	8015D		27-Mar-17, 13:52:23
10	34	17032734	17-03-1523-2 2X RB	8015D		27-Mar-17, 14:15:07
11	35	17032735	CARRYOVER BLK	8015D		27-Mar-17, 14:35:54
12	10	17032710	LCS D 17032702	8015D		27-Mar-17, 14:56:42
13	11	17032711	17-03-1795-5 5X	8015D		27-Mar-17, 15:17:51
14	36	17032736	17-03-1781-19 5X RB	8015D		27-Mar-17, 15:39:19
15	12	17032712	17-03-1795-7 5X	8015D		27-Mar-17, 16:00:41
16	37	17032737	CCV D400 C28 50 L102516D A039	8015D		27-Mar-17, 16:37:22
17	38	17032738	CCV JA 400 L121416D	8015D		27-Mar-17, 16:58:06
18	33	17032733	17-03-1652-2 20X	8015D		27-Mar-17, 17:18:51
19	39	17032739	17-03-1523-1 RB	8015D		27-Mar-17, 17:39:50
20	1	1703270101	CARRYOVER BLK	8015D		27-Mar-17, 18:01:27
21	13	17032713	17-03-1795-8	8015D		27-Mar-17, 18:22:44
22	14	17032714	17-03-1795-9	8015D		27-Mar-17, 18:43:49
23	15	17032715	17-03-1795-17	8015D		27-Mar-17, 19:04:45
24	16	17032716	17-03-1795-18	8015D		27-Mar-17, 19:25:36
25	17	17032717	CCV D400 C28 50 L102516D A061	8015D		27-Mar-17, 19:46:58
26	18	17032718	CCV JA 400 L121416D	8015D		27-Mar-17, 20:08:26
27	42	17032742	MB 17032306	8015D		27-Mar-17, 20:29:41
28	43	17032743	LCS 17032306	8015D		27-Mar-17, 20:50:28
29	44	17032744	LCS D 17032306	8015D		27-Mar-17, 21:11:31
30	45	17032745	17-03-1593-2	8015D		27-Mar-17, 21:33:00
31	46	17032746	17-03-1593-4	8015D		27-Mar-17, 21:54:23
32	47	17032747	17-03-1593-5	8015D		27-Mar-17, 22:15:16
33	48	17032748	17-03-1593-6	8015D		27-Mar-17, 22:35:56
34	49	17032749	17-03-1593-13	8015D		27-Mar-17, 22:57:25
35	50	17032750	CCV D400 C28 50 L102516D A062	8015D		27-Mar-17, 23:18:49
36	19	17032719	MB 17032702 S	8015D		27-Mar-17, 23:40:12
37	20	17032720	LCS 17032702 S	8015D		28-Mar-17, 00:01:04
38	21	17032721	LCS D 17032702 S	8015D		28-Mar-17, 00:21:51
39	22	17032722	17-03-1704-1	8015D		28-Mar-17, 00:43:07
40	23	17032723	17-03-1704-2	8015D		28-Mar-17, 01:04:39
41	24	17032724	17-03-1704-3	8015D		28-Mar-17, 01:25:31
42	25	17032725	17-03-1704-4	8015D		28-Mar-17, 01:46:17
43	26	17032726	17-03-1704-5	8015D		28-Mar-17, 02:07:03
44	27	17032727	17-03-1704-6	8015D		28-Mar-17, 02:28:07
45	28	17032728	17-03-1704-7	8015D		28-Mar-17, 02:49:33
46	29	17032729	CCV D400 C28 50 L102516D A063	8015D		28-Mar-17, 03:11:01
47	30	17032730	17-03-1704-8	8015D		28-Mar-17, 03:32:18
48	31	17032731	17-03-1704-9	8015D		28-Mar-17, 03:53:22
49	32	17032732	17-03-1704-10	8015D		28-Mar-17, 04:14:20
50	40	17032740	CCV D400 C28 50 L102516D	8015D		28-Mar-17, 04:35:09

03/28/17
 8015
 682
 49
 96

BP-D40
 RB
 on
 GC 47

EPA 8015B (M)
Diesel + Motor Oil

PREPARATION LOGS

Analysis Method (EPA Method): TPH 8015 NWTPH 8015

Extraction Method (EPA Method): 3510 3511 3550

Analyst ID#: Measuring Sample- 605 Start Extraction- 605 Blow Down- Clean Up-

Matrix: Solid Aqueous Oil Wipe/Filter Balance ID#: 15 (Sand) or Filter ID#: 16-19-20

Extraction Start Date & Time: 2-23-17 9:50 Extractions End Date & Time: 2-23-17 18:20

Drying Agent & ID#: Na₂SO₄ 16-23-20 Spike Added to: LCS LCSD MS MSD

Surrogate Std ID# & Volume Added (mL): 10107A 0.5

Spike Std ID# & Volume Added (mL): D: 1102416 B 0.2 MO:

Extraction Solvent & ID#: MeCl₂ 507-59-1 Elution Solvent ID# & Volume (mL): 10

Reverse Surrogate ID#: & Volume Added (mL):

Clean Up Start Date & Time: Clean Up End Date & Time:

SGC Clean Up: 1. CEL 0.5g 2. 3630 - 2g 3. 3630 - 10g SPE Cartridge ID#:

Clean Up Solvent ID#: Silica Gel ID#:

QC Batch #: <u>17032307</u>	Test Analyte	Sample W (g)/V (mL)		SCG Clean Up	Comments
		Initial	Final		
MB	CC	10.0	10	<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
CC		10.0		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
MS 17-03-1667-1 AA		9.89		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
MSD V		9.91		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
17-03-1667-1 AA		10.1		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
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Peer Reviewed by: 972

Peer Reviewed Date: 3/24/17

Revision Date: 10/24/16



EPA 8015B (M)
Diesel + Motor Oil
(Aqueous)

RAW DATA

EPA 8015B (M)
Diesel + Motor Oil
(Aqueous)

INITIAL CALIBRATION

INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8015B (M)

ICAL WORK ORDER: 099-14-354-39-5901
ICAL BATCH ID: 1703151003
INSTRUMENT: GC 49

ANALYZED BY: 682
ICAL D/T ANALYZED: 2017-03-15 14:40
REVIEWED BY: 1,027
D/T REVIEWED: 2017-03-21 11:23

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD CL	R of R ² CL	R or R ² CL	STATUS
TPH as Diesel	C	Avg RF	1,099.623	926.110	910.084	938.965	922.917					959.5	0.00	8	0-20		PASS
													40				

Data Files:

Level #	D/T Analyzed	Data File
1	2017-03-15 14:40	S:\GC_49\GC_49_data\2017\170315\17031505.d\Report.txt17031505
2	2017-03-15 15:00	S:\GC_49\GC_49_data\2017\170315\17031506.d\Report.txt17031506
3	2017-03-15 15:21	S:\GC_49\GC_49_data\2017\170315\17031507.d\Report.txt17031507
4	2017-03-15 15:42	S:\GC_49\GC_49_data\2017\170315\17031508.d\Report.txt17031508
5	2017-03-15 16:03	S:\GC_49\GC_49_data\2017\170315\17031509.d\Report.txt17031509

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor

LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)

LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8015B (M)

ICV WORK ORDER: 099-14-354-39-5901
INITIAL BATCH: 1703151003
INSTRUMENT: GC 49

ANALYZED BY: 682
D/T ANALYZED: 2017-03-15 14:40
INITIAL: 2017-03-15 16:23
ICV: 1,027
REVIEWED BY: 2017-03-21 11:23
D/T REVIEWED:

DATA FILE: S:\GC_49\data\2017\170315\17031510.d\Report.txt\17031510

<u>COMPOUND NAME</u>	<u>COMP TYPE</u>	<u>CALIB MODEL</u>	<u>MIN RF</u>	<u>AVG RF</u>	<u>ICV RF</u>	<u>AMOUNT</u>	<u>ICV CONC</u>	<u>ICV %D</u>	<u>ICV %D CL</u>	<u>STATUS</u>
TPH as Diesel	C	Avg Resp	0.00	959.540	908.665			5	0-30	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 16-Mar-2017 11:21

Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15
 End Cal Date : 15-MAR-2017 20:19
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP Genie
 Method file : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Cal Date : 16-Mar-2017 11:21 umd6
 Curve Type : Average

Calibration File Names:

Level 1: /chem1/SVOA/GC_49.i/170315.b/17031517.d
 Level 2: /chem1/SVOA/GC_49.i/170315.b/17031518.d
 Level 3: /chem1/SVOA/GC_49.i/170315.b/17031519.d
 Level 4: /chem1/SVOA/GC_49.i/170315.b/17031520.d
 Level 5: /chem1/SVOA/GC_49.i/170315.b/17031521.d

Compound	5.000	200.000	400.000	800.000	1600.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5		
S 1 TPH as Jet A rf	886434	816845	849166	1193052	863474	921794	17
S 4 TPH as JP5 rf	822008	830452	736341	726438	850947	793237	7
S 7 TPH Gas/Diesel rf	680407	736825	739485	764573	759730	736204	5
S 14 TPH as Diesel rf	1099623	926110	910084	938965	922917	959540	8

Report Date : 16-Mar-2017 11:21

Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15
 End Cal Date : 15-MAR-2017 20:19
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP Genie
 Method file : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Cal Date : 16-Mar-2017 11:21 umd6
 Curve Type : Average

Compound	5.000 Level 1	200.000 Level 2	400.000 Level 3	800.000 Level 4	1600.000 Level 5	RRF	% RSD
18 TPH as Diesel (C6-C28)	+++++	+++++	+++++	+++++	8368	8368	0
S 26 Diesel Range Organics rf	991346	849923	843605	871178	856237	882458	7
S 31 Oil Range Organics rf	670790	671675	659566	660552	629634	658444	3
S 35 TPH as Motor Oil rf	699444	676875	662693	663714	632255	666996	4
36 TPH as Motor Oil Range	+++++	+++++	+++++	+++++	14874	14874	0

Report Date : 16-Mar-2017 11:29

Page 8

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15
 End Cal Date : 15-MAR-2017 20:19
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP Genie
 Method file : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Cal Date : 16-Mar-2017 11:27 umd6
 Curve Type : Average

Compound	5.000 Level 1	200.000 Level 2	400.000 Level 3	800.000 Level 4	1600.000 Level 5	RRF	% RSD
S 274 Micro-TPH as Motor Oil rf	531070	608933	689551	700484	707426	647493	12
S 200 NWTPH_Diesel rf	838068	650960	682751	690067	691436	710656	10
S 268 NWTPH_Diesel Range rf	838068	650960	682751	690067	691436	710656	10
S 201 NWTPH_Motor Oil rf	386163	394983	425714	434936	389269	406213	6
\$ 92 n-Octacosane	1027693	967893	945977	964911	950550	971405	3
\$ 93 C28 n-Octacosane	340990	511509	511646	496028	456324	463300	16

Data File: /chem1/SVOA/GC_49.i/170315.b/17031510.d

Report Date: 03/16/2017 10:51

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_49.i Injection Date and Time: 15-MAR-2017 16:23
Sample Name: ICV D400 C28 50 L102516G Initial Calibration Date(s): 09-NOV-2016 15-MAR-2017
Sublist used: CCV_D-DRO.sub Initial Calibration Time(s): 21:15 19:16
Method used: /chem1/SVOA/GC_49.i/170315.b/8015d.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
Diesel Range Organics	882457.968	862592.935	0.00	2	15	Averaged
TPH as Diesel	959539.736	908665.145	0.00	5	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
n-Octacosane	971404.651	963377.780	0.00	1	20	Averaged

page 1

Data File: /chem1/SVOA/GC_49.i/170315.b/17031505.d
 Report Date: 15-Mar-2017 17:57

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031505.d
 Lab Smp Id:
 Inj Date : 15-MAR-2017 14:40
 Operator : 682 Inst ID: GC_49.i
 Smp Info : ICAL D5 C28 0.625 L102516B
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Meth Date : 15-Mar-2017 17:57 d2ef Quant Type: ESTD
 Cal Date : 25-JAN-2017 00:58 Cal File: 17012441.d
 Als bottle: 5 Calibration Sample, Level: 1
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.710-7.945			5498115	5.00000	5.729
S 26 Diesel Range Organics	2.309-7.945			4956730	5.00000	5.616
\$ 92 n-Octacosane	7.745	7.745	0.000	642308	0.62500	0.661



Data File: /chem1/SVDA/GC_49.i/170315.b/17031505.d

Date : 15-MAR-2017 14:40

Client ID:

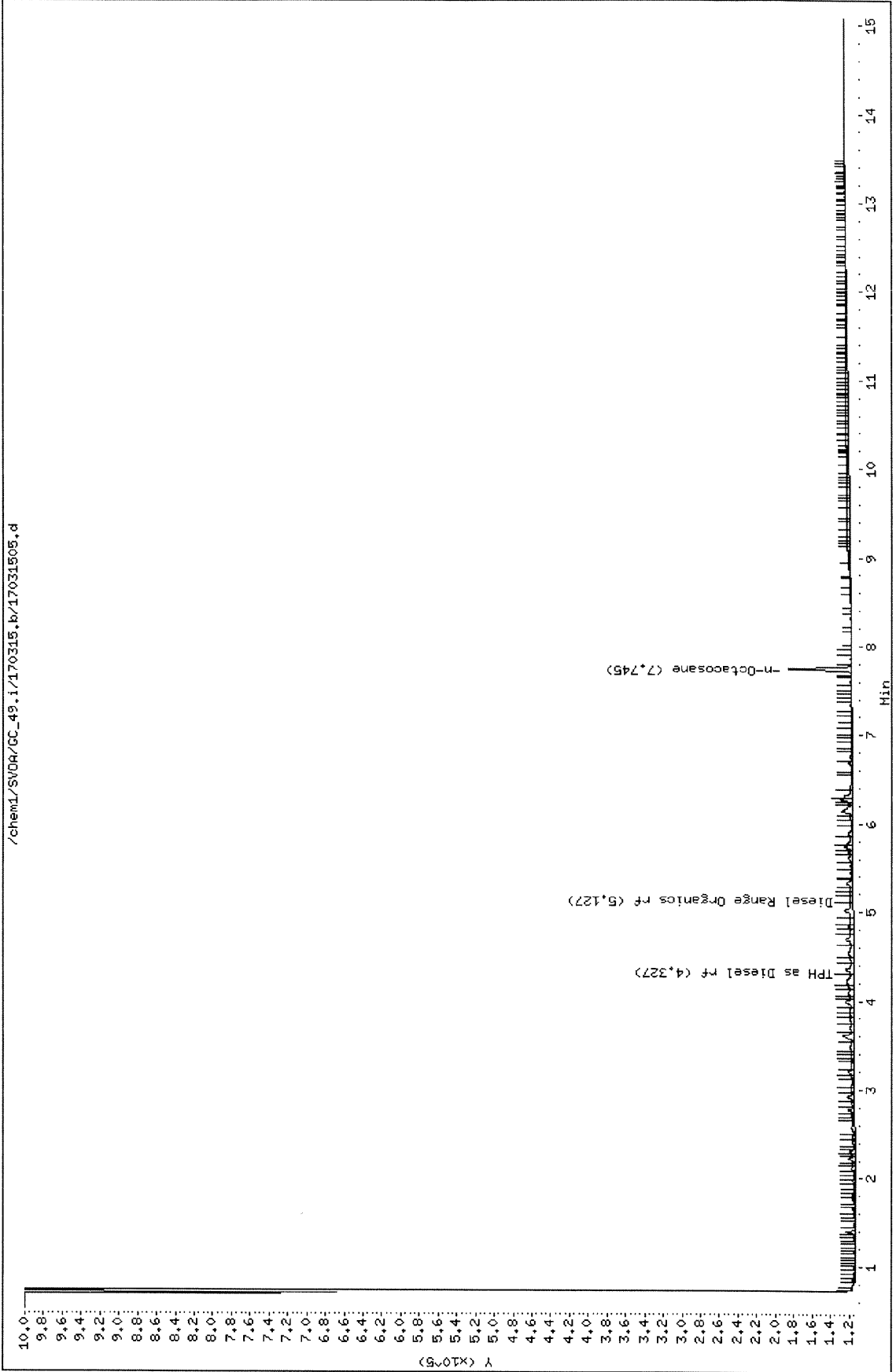
Sample Info: ICAL D5 C28 0.625 L102516B

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_49.i/170315.b/17031506.d
 Report Date: 15-Mar-2017 17:57

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031506.d
 Lab Smp Id:
 Inj Date : 15-MAR-2017 15:00
 Operator : 682
 Smp Info : ICAL D200 C28 25 L102516C
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Meth Date : 15-Mar-2017 17:57 d2ef
 Cal Date : 25-JAN-2017 01:19
 Als bottle: 6
 Dil Factor: 1.00000
 Integrator: HP Genie
 Target Version: 3.50
 Processing Host: US26TAR4

Inst ID: GC_49.i

Quant Type: ESTD

Cal File: 17012442.d

Calibration Sample, Level: 2

Compound Sublist: ICAL_D-DRO.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

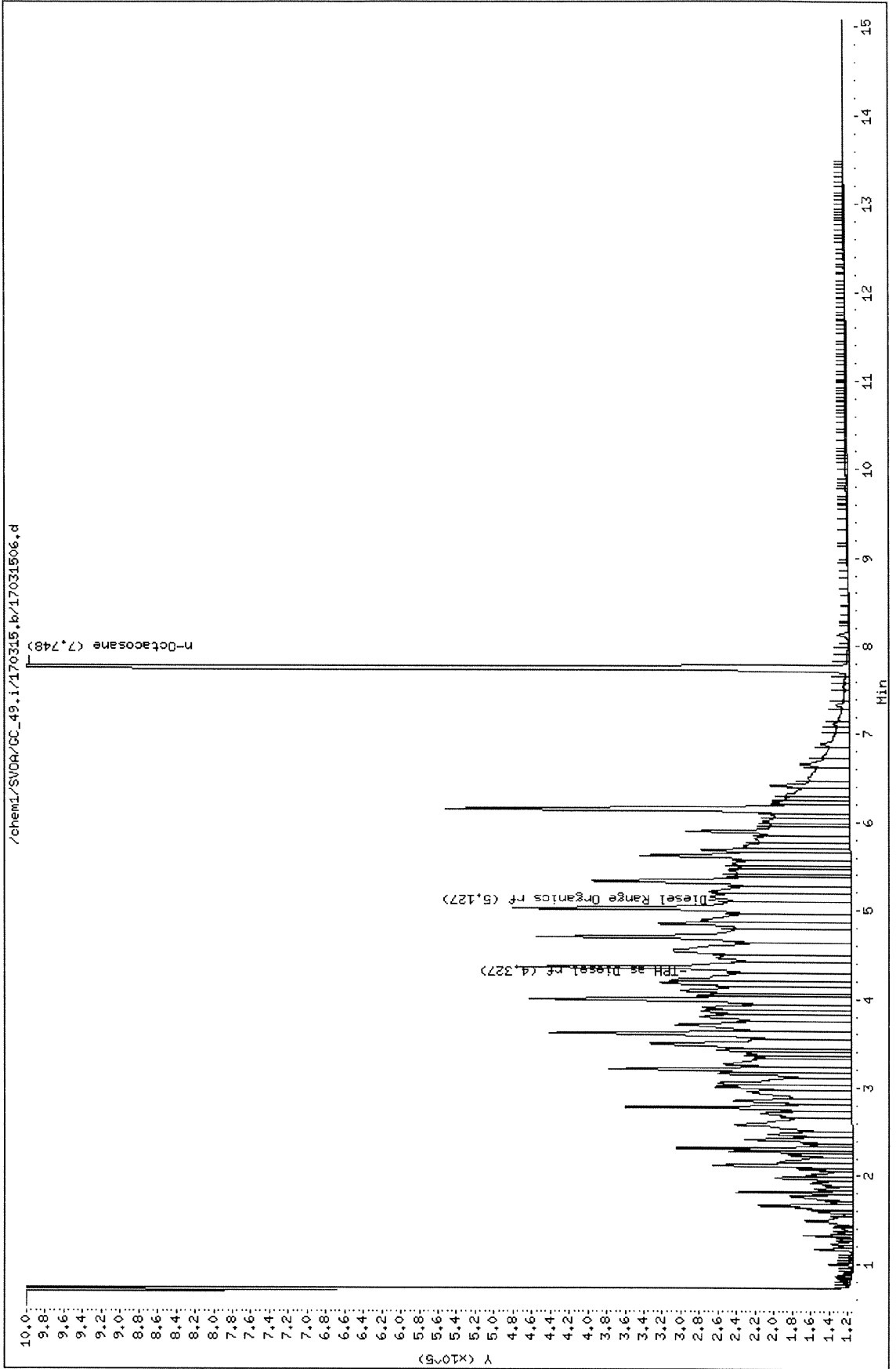
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.710-7.945			185222018	200.000	193.032
S 26 Diesel Range Organics	2.309-7.945			169984668	200.000	192.626
\$ 92 n-Octacosane	7.748	7.748	0.000	24197319	25.0000	24.909



Data File: /chem1/SVDA/GC_49.i/170315.b/17031506.d
Date : 15-MAR-2017 15:00
Client ID:
Sample Info: ICHL D200 C28 25 L102516C

Instrument: GC_49.i
Operator: 682
Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_49.i/170315.b/17031507.d
 Report Date: 15-Mar-2017 17:57

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031507.d
 Lab Smp Id:
 Inj Date : 15-MAR-2017 15:21
 Operator : 682 Inst ID: GC_49.i
 Smp Info : ICAL D400 C28 50 L102516D
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Meth Date : 15-Mar-2017 17:57 d2ef Quant Type: ESTD
 Cal Date : 25-JAN-2017 01:41 Cal File: 17012443.d
 Als bottle: 7 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.710-7.945			364033443	400.000	379.383
S 26 Diesel Range Organics	2.309-7.945			337441946	400.000	382.388
S 92 n-Octacosane	7.751	7.751	0.000	47298825	50.0000	48.691



Page 1

Data File: /chem1/SV0A/GC_49.i/170315.b/17031507.d

Date : 15-MAR-2017 15:21

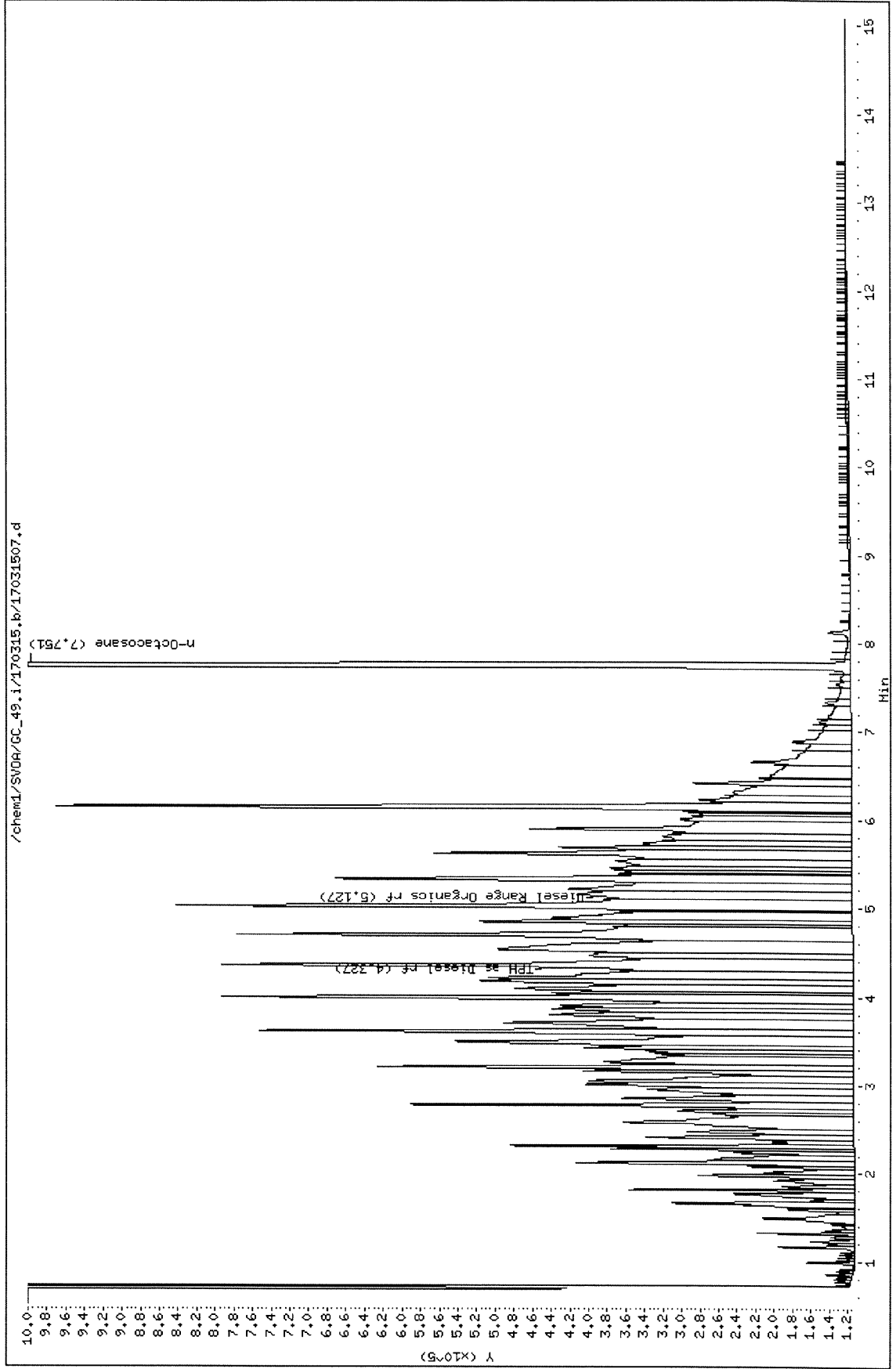
Client ID:

Sample Info: ICAL D400 C28 50 L102516D

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00



Data File: /chem1/SVOA/GC_49.i/170315.b/17031508.d
 Report Date: 15-Mar-2017 17:57

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031508.d
 Lab Smp Id:
 Inj Date : 15-MAR-2017 15:42
 Operator : 682
 Smp Info : ICAL D800 C28 100 L102516E
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Meth Date : 15-Mar-2017 17:57 d2ef
 Cal Date : 25-JAN-2017 02:02
 Als bottle: 8
 Dil Factor: 1.00000
 Integrator: HP Genie
 Target Version: 3.50
 Processing Host: US26TAR4

Inst ID: GC_49.i
 Quant Type: ESTD
 Cal File: 17012444.d
 Calibration Sample, Level: 4
 Compound Sublist: ICAL_D-DRO.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.710-7.945			751172141	800.000	782.846
S 26 Diesel Range Organics	2.309-7.945			696942778	800.000	789.774
\$ 92 n-Octacosane	7.758	7.758	0.000	96491101	100.000	99.331



Data File: /chem1/SV0A/GC_49.i/170315.b/17031508.d

Date : 15-MAR-2017 15:42

Client ID:

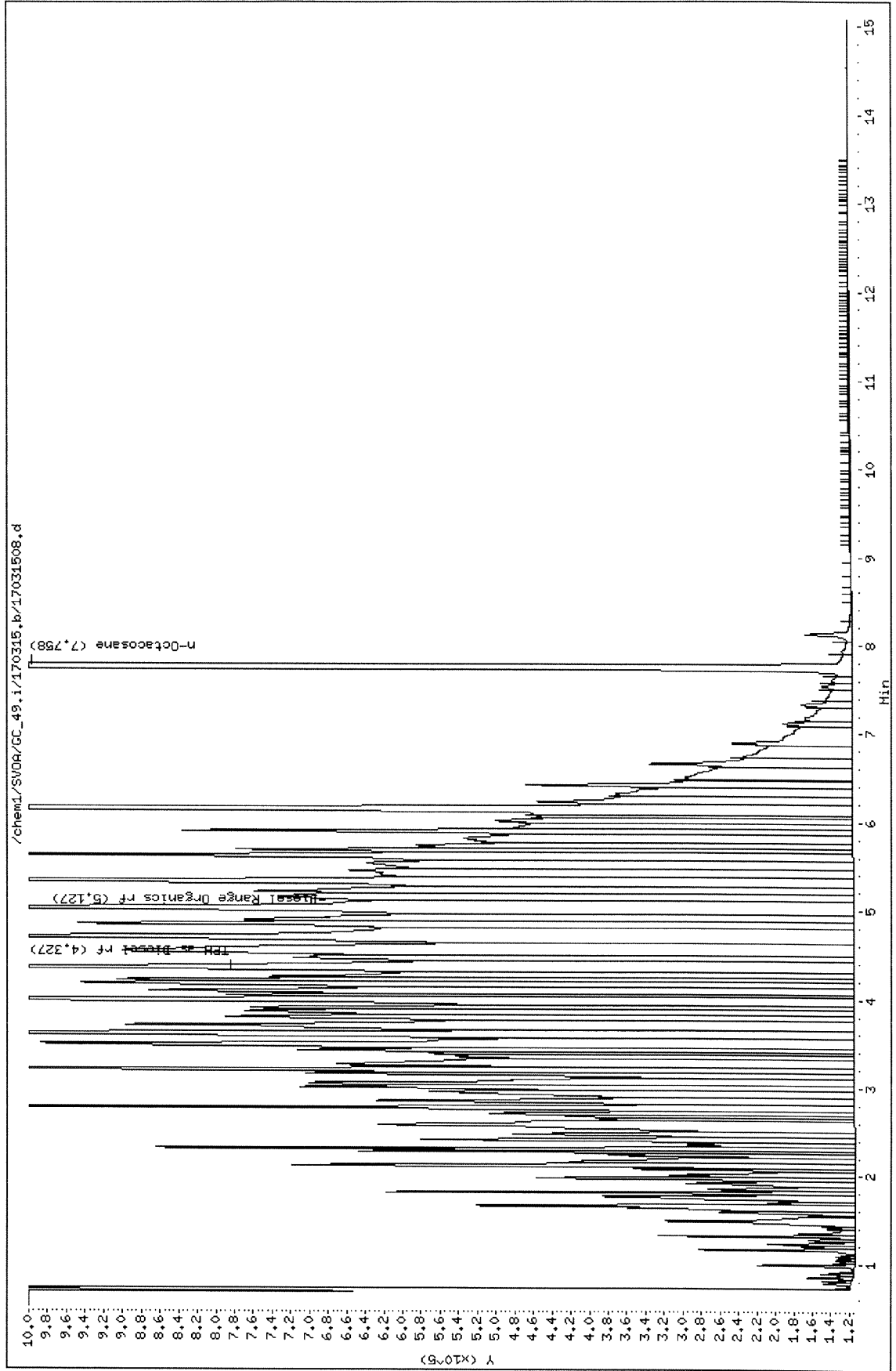
Sample Info: ICAL D800 C28 100 L102516E

Instrument: GC_49.i

Operator: 682

Column diameter: 2,00

Column phase:



Data File: /chem1/SVOA/GC_49.i/170315.b/17031509.d
 Report Date: 15-Mar-2017 17:57

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031509.d
 Lab Smp Id:
 Inj Date : 15-MAR-2017 16:03
 Operator : 682 Inst ID: GC_49.i
 Smp Info : ICAL D1600 C28 200 L102516F
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Meth Date : 15-Mar-2017 17:57 d2ef Quant Type: ESTD
 Cal Date : 25-JAN-2017 02:23 Cal File: 17012445.d
 Als bottle: 9 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.710-7.945			1476666887	1600.00	1538.932
S 26 Diesel Range Organics	2.309-7.945			1369979459	1600.00	1552.458
S 92 n-Octacosane	7.771	7.771	0.000	190110037	200.000	195.706



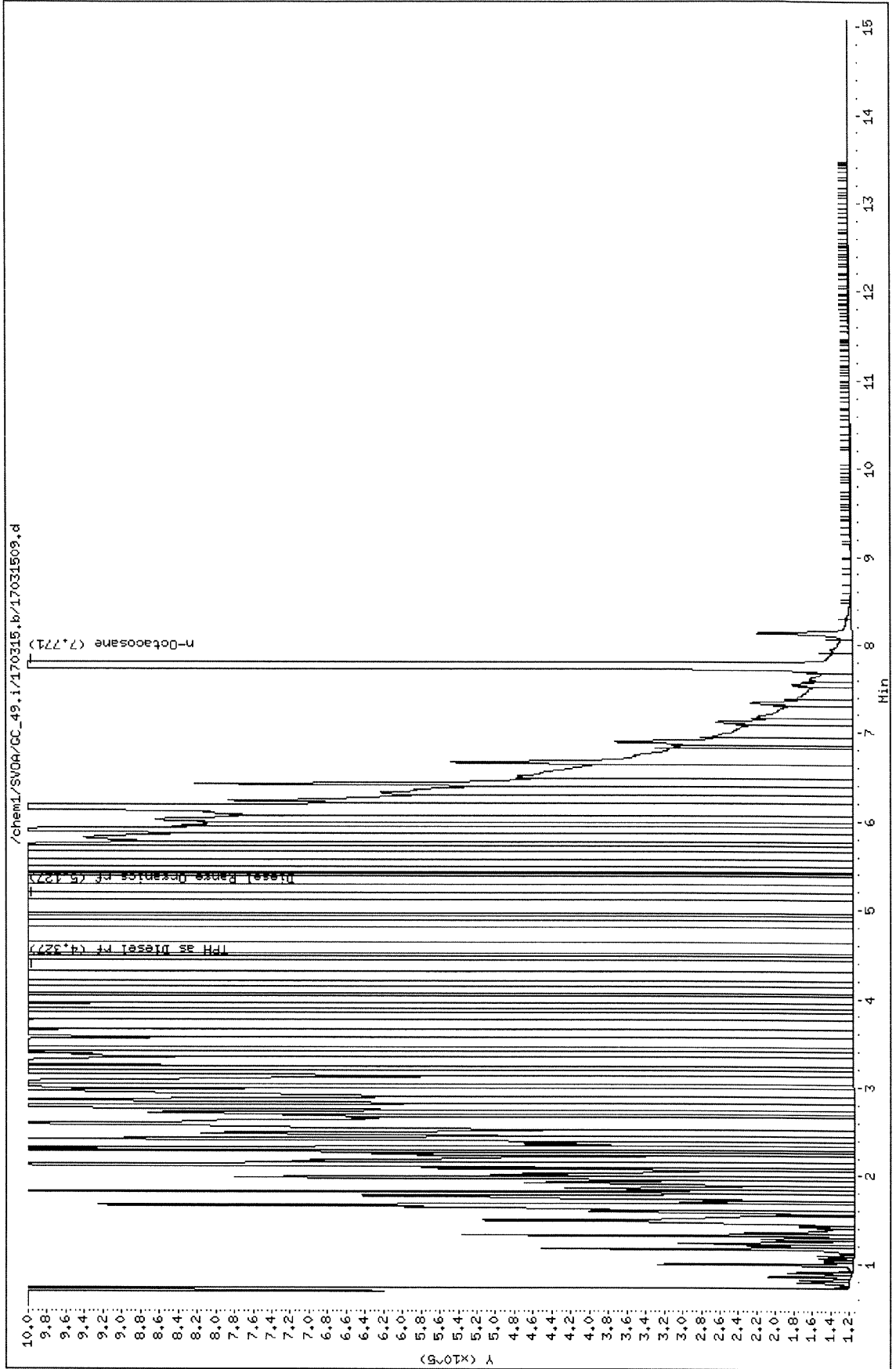
Data File: /chem1/SV0A/GC_49.i/170315.b/17031509.d
Date : 15-MAR-2017 16:03
Client ID:
Sample Info: ICAL D1600 C28 200 L102516F

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_49.i/170315.b/17031510.d
 Report Date: 15-Mar-2017 17:57

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170315.b/17031510.d
 Lab Smp Id:
 Inj Date : 15-MAR-2017 16:23
 Operator : 682
 Smp Info : ICV D400 C28 50 L102516G
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170315.b/8015d.m
 Meth Date : 15-Mar-2017 17:57 d2ef
 Cal Date : 25-JAN-2017 02:23
 Als bottle: 10
 Dil Factor: 1.00000
 Integrator: HP Genie
 Target Version: 3.50
 Processing Host: US26TAR4

Inst ID: GC_49.i
 Quant Type: ESTD
 Cal File: 17012445.d
 Continuing Calibration Sample
 Compound Sublist: CCV_D-DRO.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.710-7.945			363466058	400.000	378.792
S 26 Diesel Range Organics	2.309-7.945			345037174	400.000	390.995
\$ 92 n-Octacosane	7.752	7.752	0.000	48168889	50.0000	49.586

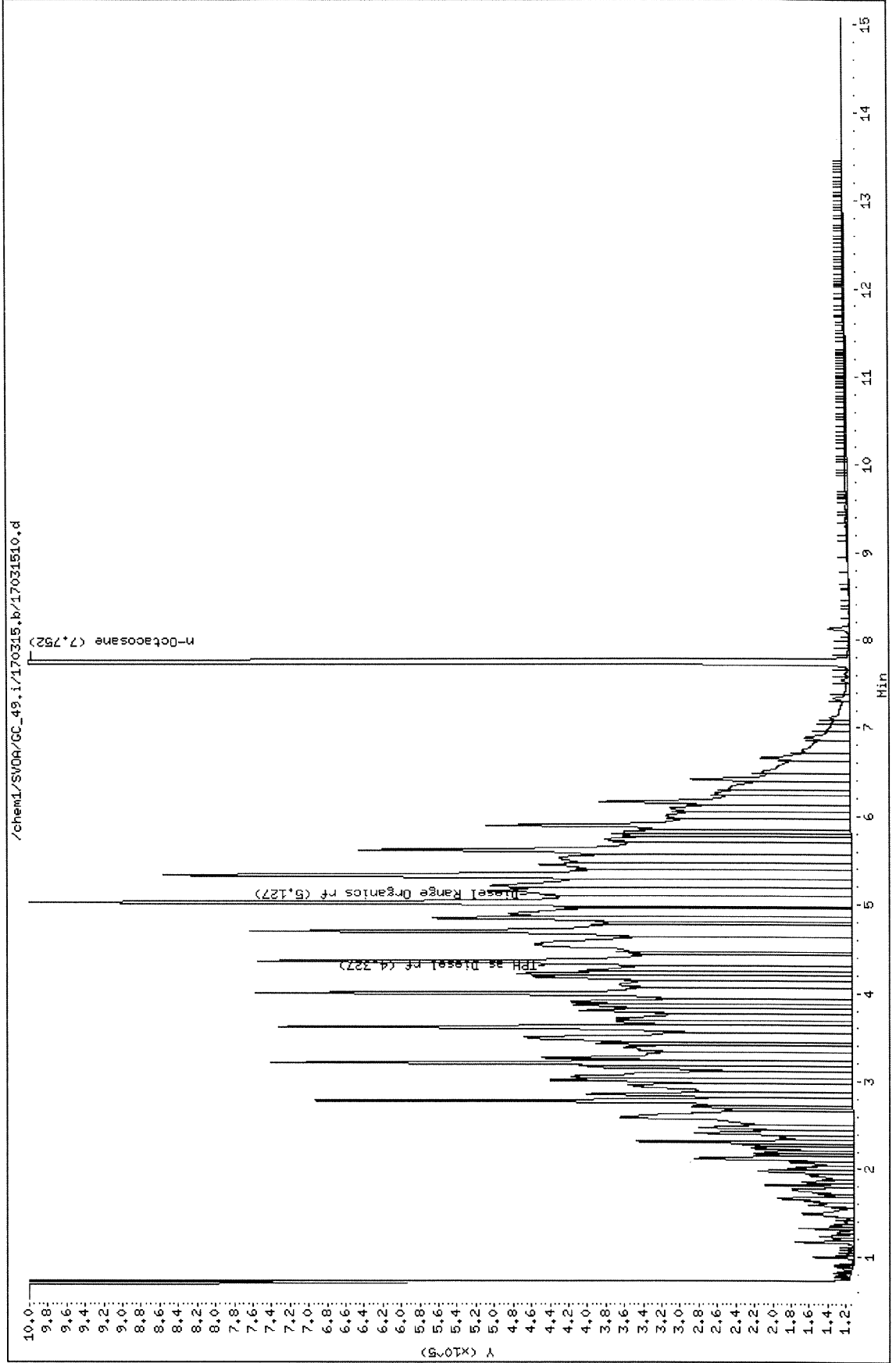


Data File: /chem1/SV0A/GC_49.i/170315.b/17031510.d
Date : 15-MAR-2017 16:23
Client ID:
Sample Info: ICV D400 C28 50 L102516G

Instrument: GC_49.i

Operator: 682
Column diameter: 2.00

Column phase:



External Standard Report

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Data File Name   : /chem1/SVOA/GC_49/170315/17031502.d
Page Number      :
Operator         : 682                               Vial Number      : Vial 2
Instrument       : GC 49                             Injection Number : 2
Sample Name     : C6-C44 L110816A                  Sequence Line   : 0
                                                    Instrument Method: 8015d.m

Acquired on     : 15 MAR 17 12:39
Report Created on: 16-MAR-17 11:22                Compound Sublist : all
Software Revision: Target 3.50
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Sig. 1 in /chem1/SVOA/GC_49.i/170315.b/17031502.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.710	7.850	7.140	1725246.00	0.00	C6-Hexane
0.892	7.850	6.958	4229459.00	0.00	C7-Heptane
1.321	7.850	6.529	9379566.00	0.00	C8-Octane
1.812	7.850	6.038	8348198.00	0.00	C9-Nonane
2.309	7.850	5.541	9247136.00	0.00	C10-Decane
2.775	7.850	5.075	9595844.00	0.00	C11-Undecane
3.208	7.850	4.642	9587885.00	0.00	C12-Dodecane
3.613	7.850	4.237	10694823.00	0.00	C13-Tridecane
3.995	7.850	3.855	9633301.00	0.00	C14-Tetradecane
4.355	7.850	3.495	10620901.00	0.00	C15-pentadecane
4.694	7.850	3.156	12907796.00	0.00	C16-Hexadecane
5.017	7.850	2.833	14689279.00	0.00	C17-Heptadecane
5.324	7.850	2.526	15643068.00	0.00	C18-Octadecane
5.616	7.850	2.234	15640513.00	0.00	C19-Nonadecane
5.894	7.850	1.956	16281885.00	0.00	C20-Eicosane
6.160	7.850	1.690	16253708.00	0.00	C21-Heneicosane
6.416	7.850	1.434	16861443.00	0.00	C22-Docosane
6.660	7.850	1.190	16948602.00	0.00	C23-Tricosane
6.895	7.850	0.955	16902474.00	0.00	C24-Tetracosane
7.121	7.850	0.729	16999893.00	0.00	C25-Pentacosane
7.338	7.850	0.512	17852373.00	0.00	C26-Hexacosane
7.548	7.850	0.302	16901615.00	0.00	C27-Heptacosane
7.750	7.850	0.100	17085911.00	26.81	n-Octacosane
7.945	7.850	-0.095	16170720.00	0.00	C29-Nonacosane
8.134	7.850	-0.284	14560802.00	0.00	C30-Triacontane
8.317	7.850	-0.467	11203518.00	0.00	C31-Hentriacontane
8.493	7.850	-0.643	7395071.00	0.00	C32-Dotriacontane
8.664	7.850	-0.814	3928559.00	0.00	C33-Tritriacontane
8.831	7.850	-0.981	1771584.00	0.00	C34-Tetratriacontane
8.993	7.850	-1.143	850126.00	0.00	C35-Pentatriacontane
9.151	7.850	-1.301	641152.00	0.00	C36-Hexatriacontane
9.327	7.850	-1.477	566322.00	0.00	C37-Heptatriacontane
9.531	7.850	-1.681	456273.00	0.00	C38-Octatriacontane
9.768	7.850	-1.918	489213.00	0.00	C39-Nonatriacontane
10.046	7.850	-2.196	558981.00	0.00	C40-Tetracontane
11.752	7.850	-3.902	1064858.00	0.00	C44-Tetratetracontane

End of File

Data File: /chem1/SVDA/GC_49.i/170315.b/17031502.d

Date : 15-MAR-2017 12:39

Client ID:

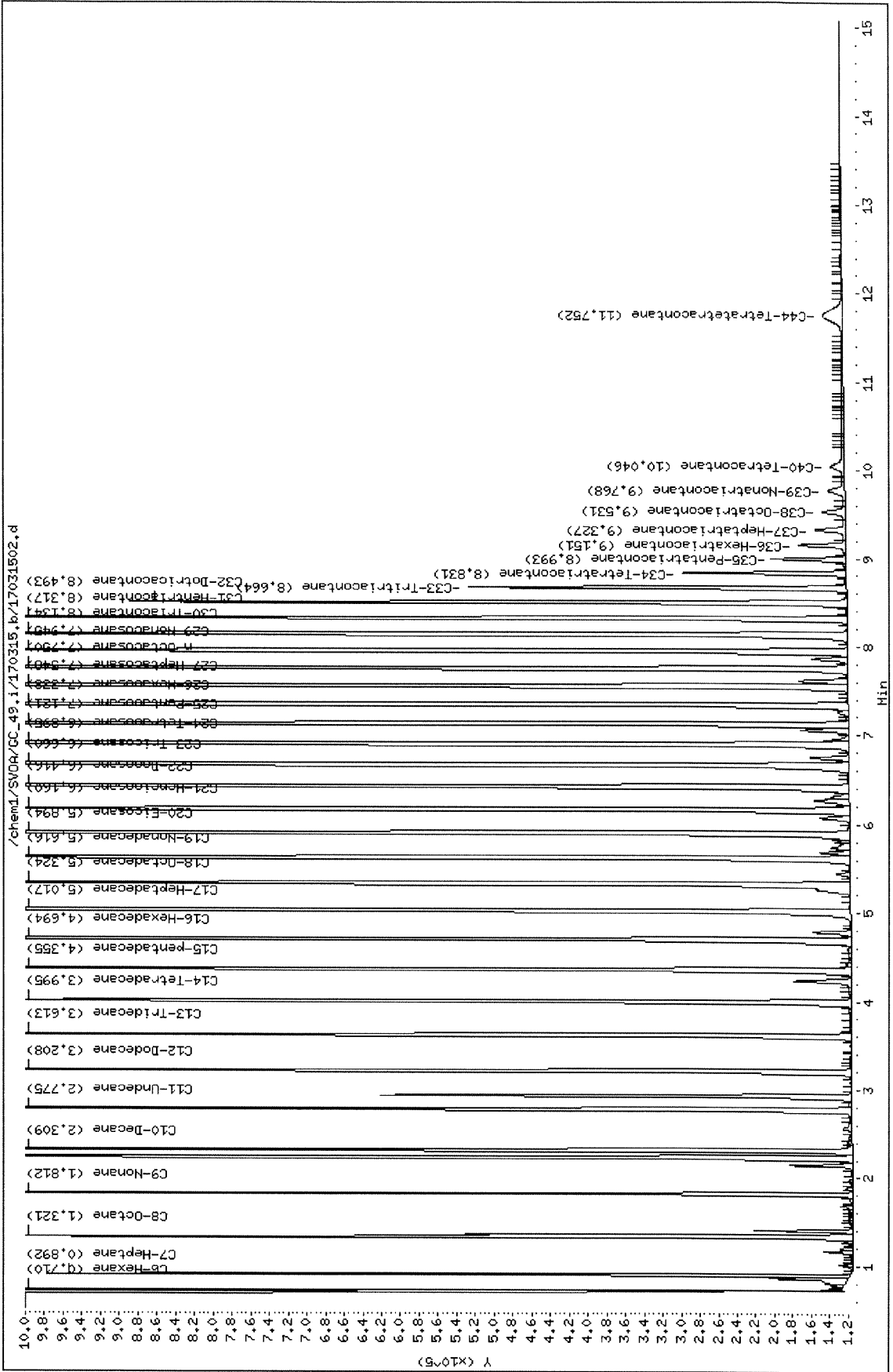
Sample Info: C6-C44 L110816A

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



EPA 8015B (M)
Diesel + Motor Oil

SAMPLE DATA

RAW DATA SHEET FOR METHOD: EPA 8015B (M)

<u>WORK ORDER:</u> 17-03-1523	<u>ANALYZED BY:</u> 682
<u>INSTRUMENT:</u> GC 49	<u>D/T ANALYZED:</u> 2017-03-27 14:15
<u>EXTRACTION:</u> EPA 3510C	<u>REVIEWED BY:</u> 421
<u>D/T EXTRACTED:</u> 2017-03-22 00:00	<u>D/T REVIEWED:</u> 2017-03-28 12:06
<u>DATA FILE:</u> S:\GC_49\GC_49_data\2017\170327\17032734.d\Report.txt17032734	

2 **CLIENT SAMPLE NUMBER:** IDW-W

<u>LCS/MB BATCH:</u> 170322B03	<u>SAMPLE VOLUME / WEIGHT:</u>	DEFAULT: 500.00 ml / ACTUAL: 500.00 ml
<u>MS/MSD BATCH:</u>	<u>FINAL VOLUME / WEIGHT:</u>	DEFAULT: 5.00 ml / ACTUAL: 5.00 ml
<u>UNITS:</u> ug/L	<u>ADJUSTMENT RATIO TO PF:</u>	1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
TPH as Diesel	611000	2.00	12200	200	bD
TPH as Motor Oil	609000	2.00	12200	200	bD



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External Standard Report
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Data File Name   : /chem1/SVOA/GC_49/170327/17032734.d
Page Number      :
Operator         : 682                               Vial Number      : Vial 34
Instrument       : GC 49                             Injection Number : 34
Sample Name      : 17-03-1523-2 2X RB               Sequence Line    : 0
                                                    Instrument Method: 8015d.m

Acquired on      : 27 MAR 17 14:15
Report Created on: 27-MAR-17 16:47                 Compound Sublist : all
Software Revision: Target 3.50

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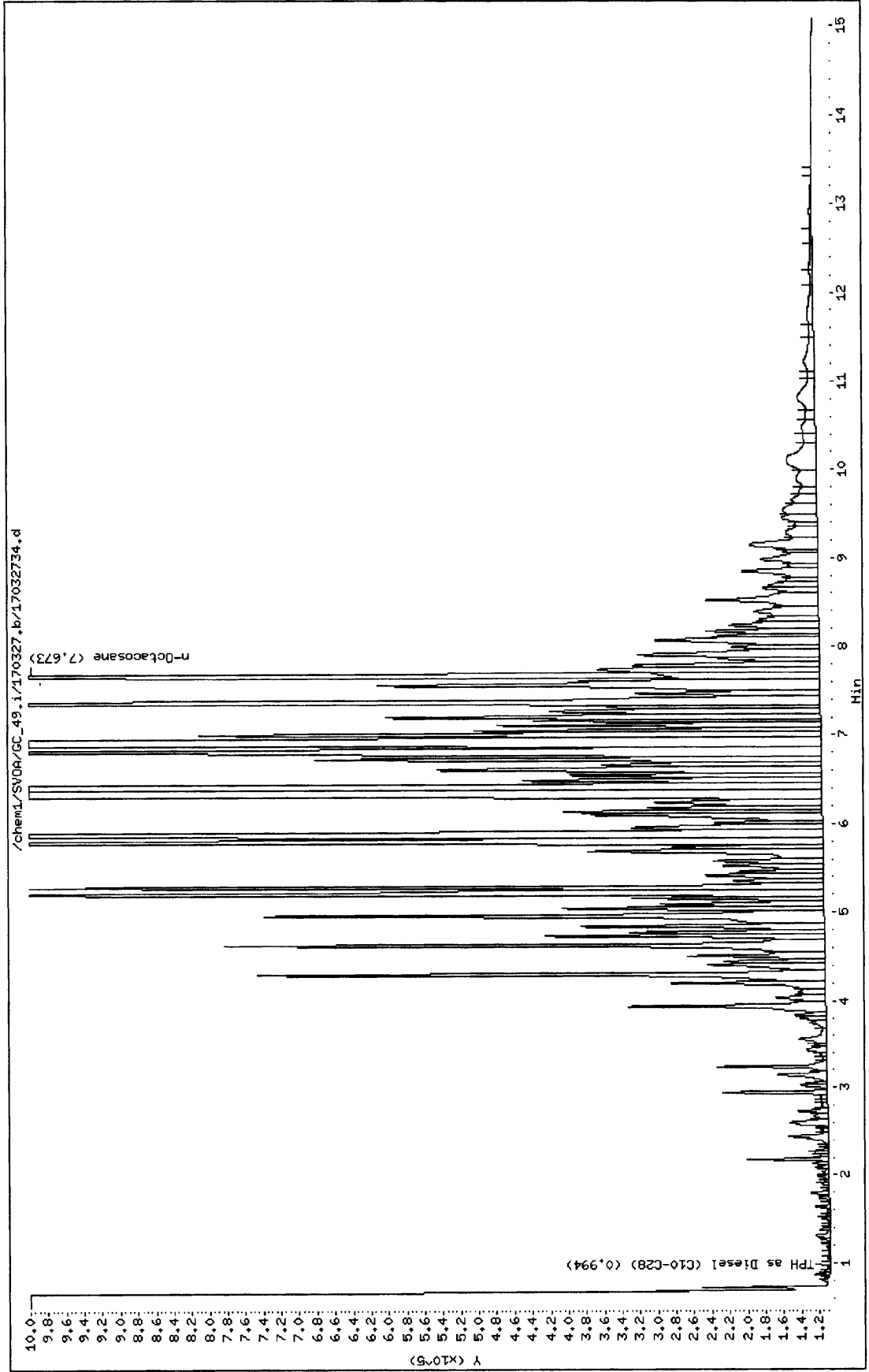
Sig. 1 in /chem1/SVOA/GC_49.i/170327.b/17032734.d
RT Range      Exp RT      DLT RT      Response      ppb      Compound
|-----|-----|-----|-----|-----|-----|
          7.673          7.850          0.177          26682961.00          27468.43          n-Octacosane
2.280- 7.864          586002452.65          610712.02          TPH as Diesel
4.959-11.552          584288723.67          608926.03          TPH as Motor Oil
End of File

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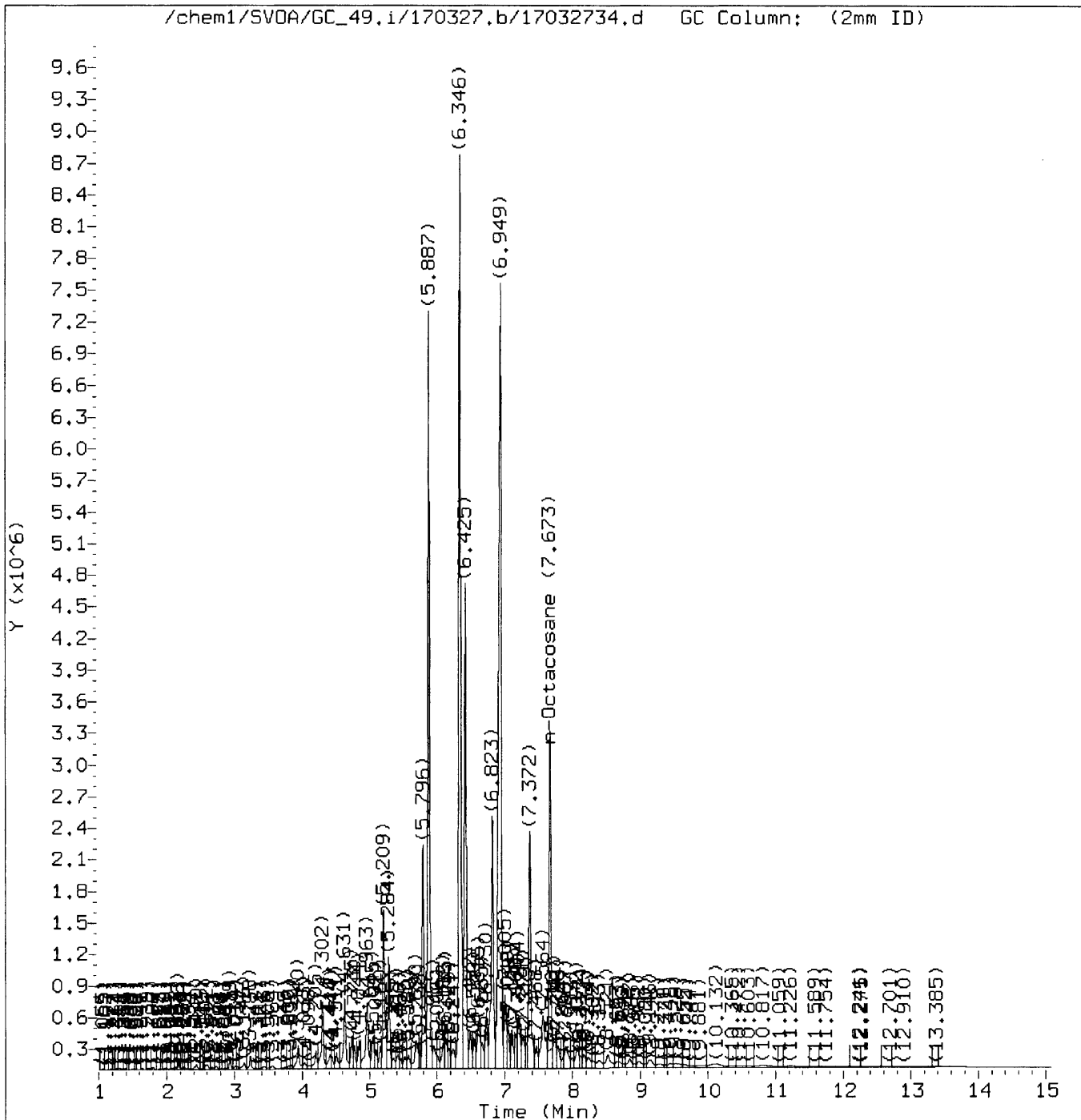
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Date : 27-HAR-2017 14:15
Client ID:
Sample Info: 17-03-1523-2 2X RB

Instrument: GC_49.i
Operator: 682
Column diameter: 2.00

Column phase:



Manually Integrated Data File



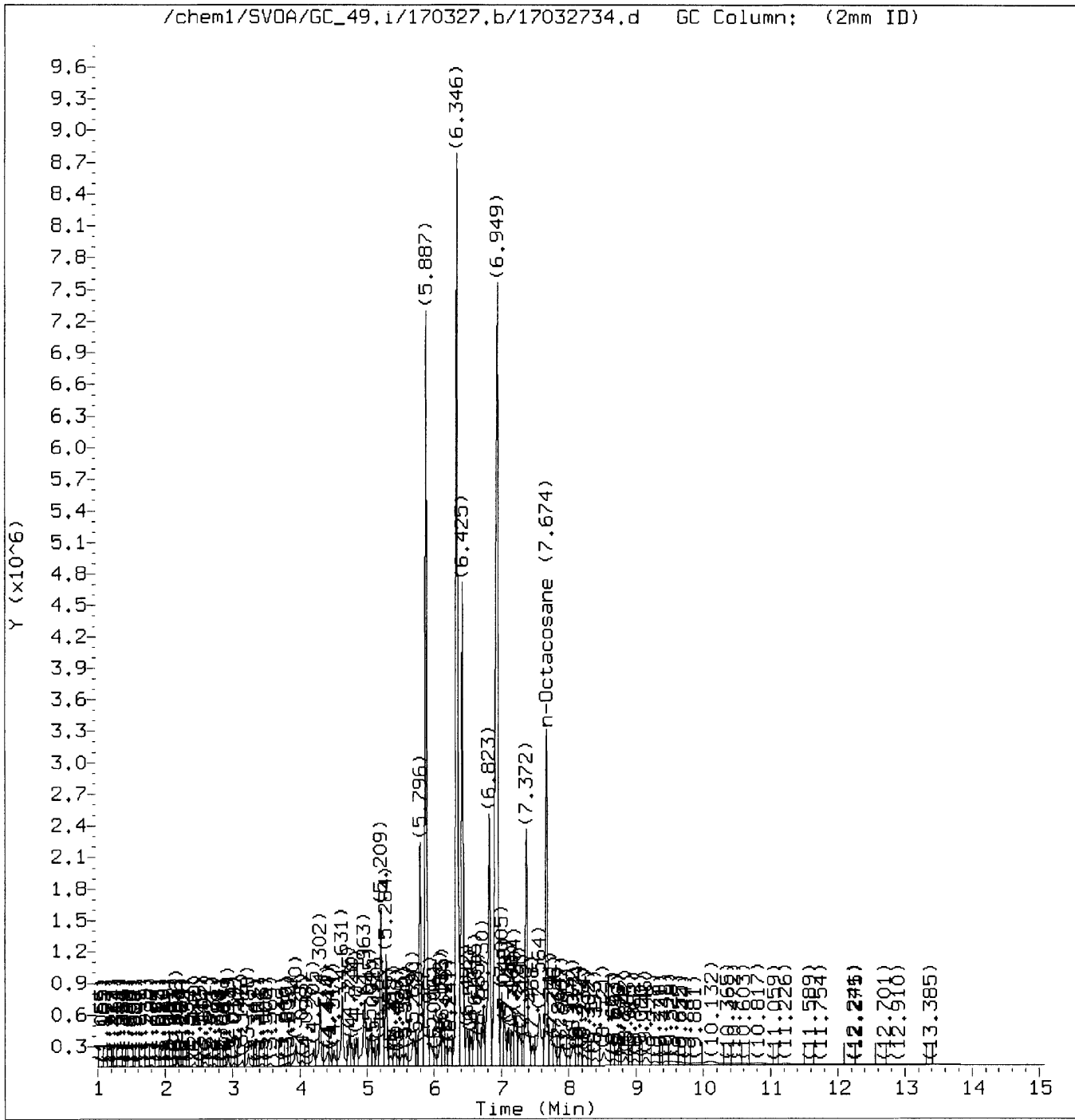
Reason for manual integration: Signal not integrated by automation

Digitally signed by Minhchi Doan
 Analyst responsible for change: on 03/27/2017 at 16:47.
 Target 3.5 esignature user ID: umd6

Audit/management approval: _____

1027

Original Data File



EPA 8015B (M)
Diesel + Motor Oil

QUALITY CONTROL

Method Blank
LCS/LCSD
MS/MSD

**METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8015B (M)**

MB SAMPLE ID: 099-14-355-12
MB BATCH ID: 170322B03
INSTRUMENT: GC 49
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 972
D/T ANALYZED: 2017-03-23 13:07
REVIEWED BY:
D/T REVIEWED:
MATRIX: Water

DATA FILE: T:\GC_49\GC_49_data\2017\170323\17032307.d\ReportDMOS_sd.txt17032307

CLIENT WORK ORDER: 17-03-1523

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
2	IDW-W		2017-03-27 14:15	S:\GC_49\GC_49_data\2017\170327\17032734.d\Report.txt17032734

**RAW DATA SHEET
FOR METHOD: EPA 8015B (M)**

WORK ORDER: 099-14-355
INSTRUMENT: GC 49
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 972
D/T ANALYZED: 2017-03-23 13:07
REVIEWED BY:
D/T REVIEWED:

DATA FILE: T:\GC_49\GC_49_data\2017\170323\17032307.d\ReportDMOS_sd.txt17032307

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170322B03 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 500.00 ml / ACTUAL: 500.00 ml
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 ml / ACTUAL: 5.00 ml
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
TPH as Diesel	914	1.00	ND	100	
TPH as Motor Oil	918	1.00	ND	100	

LCS / LCSD QUALITY CONTROL SHEET FOR METHOD: EPA 8015B (M)

LCS/LCSD SAMPLE ID: 099-14-355-12
LCS/LCSD BATCH: 170322B03

EXTRACTION: EPA 3510C
D/T EXTRACTED:

ANALYZED BY: 972
D/T ANALYZED:

INSTRUMENTS:
LCS: GC 49
LCSD: GC 49

LCS: 2017-03-22 00:00
LCSD: 2017-03-22 00:00

LCS: 2017-03-23 13:27
LCSD: 2017-03-23 13:49

REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
TPH as Diesel	4000	3611	90	3574	89	51-141	1	0-11	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	17032308	T:\GC_49\GC_49_data\2017\170323\17032308.d\Report.txt
LCSD	17032309	T:\GC_49\GC_49_data\2017\170323\17032309.d\Report.txt

SURROGATE RECOVERIES FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-1523

BATCH ID:

LCS/MB: 170322B03**MS:**

EXTRACTION: EPA 3510C

REVIEWED BY:

D/T REVIEWED:

2 **CLIENT SAMPLE NUMBER: IDW-W**

INSTRUMENT: GC 49

ANALYZED BY: 682

D/T EXTRACTED: 2017-03-22 00:00

D/T ANALYZED 2017-03-27 14:15

DATA FILE: S:\GC_49\GC_49_data\2017\170327\17032734.d\Report.txt17032734

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
n-Octacosane	110	68-140	PASS	

MB **CLIENT SAMPLE NUMBER: Method Blank**

INSTRUMENT: GC 49

ANALYZED BY: 972

D/T EXTRACTED: 2017-03-22 00:00

D/T ANALYZED 2017-03-23 13:07

DATA FILE: T:\GC_49\GC_49_data\2017\170323\17032307.d\ReportDMOS_sd.txt17032307

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
n-Octacosane	116	68-140	PASS	

LCS **CLIENT SAMPLE NUMBER: Lab Control Sample**

INSTRUMENT: GC 49

ANALYZED BY: 972

D/T EXTRACTED: 2017-03-22 00:00

D/T ANALYZED 2017-03-23 13:27

DATA FILE: T:\GC_49\GC_49_data\2017\170323\17032308.d\Report.txt17032308

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
n-Octacosane	101	68-140	PASS	

LCD **CLIENT SAMPLE NUMBER: Lab Control Sample Duplicate**

INSTRUMENT: GC 49

ANALYZED BY: 972

D/T EXTRACTED: 2017-03-22 00:00

D/T ANALYZED 2017-03-23 13:49

DATA FILE: T:\GC_49\GC_49_data\2017\170323\17032309.d\Report.txt17032309

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
n-Octacosane	99	68-140	PASS	

```

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External Standard Report
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```

```

Data File Name   : /chem1/SVOA/GC_49/170323/17032307.d
Page Number      :
Operator         : 682                               Vial Number      : Vial 7
Instrument       : GC 49                             Injection Number  : 7
Sample Name      : MB 17032201/02/03/04            Sequence Line    : 0
                                                    Instrument Method: 8015d.m

Acquired on      : 23 MAR 17 13:07
Report Created on: 24-MAR-17 16:23                 Compound Sublist : all
Software Revision: Target 3.50

```

```

Sig. 1 in /chem1/SVOA/GC_49.i/170323.b/17032307.d
RT Range      Exp RT   DLT RT   Response      ppb          Compound
|-----|-----|-----|-----|-----|-----|
      7.708      7.850      0.142      56405528.00   58065.94    n-Octacosane
2.290- 7.902                877493.71     914.49      TPH as Diesel
4.982-11.646                880656.41     917.79      TPH as Motor Oil
End of File

```

Data File: /chem1/SV0A/GC_49.i/170323.b/17032307.d

Date : 23-MAR-2017 13:07

Client ID:

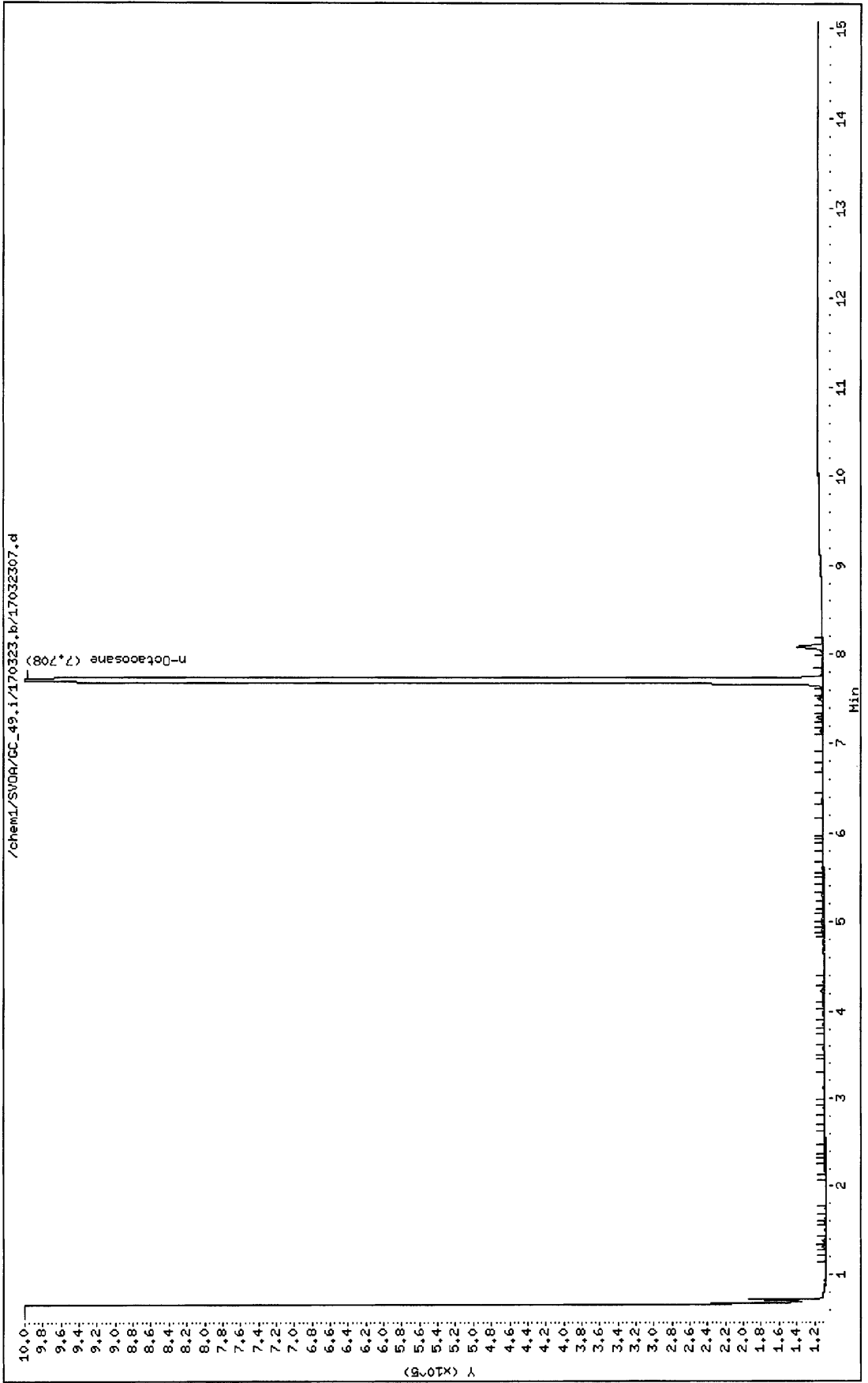
Sample Info: HB 17032201/02/03/04

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



```

=====
External Standard Report
=====

```

```

Data File Name   : /chem1/SVOA/GC_49/170323/17032308.d
Page Number      :
Operator         : 682                               Vial Number      : Vial 8
Instrument       : GC 49                             Injection Number  : 8
Sample Name      : LCS 17032201/03                 Sequence Line    : 0
                                                    Instrument Method: 8015d.m

Acquired on      : 23 MAR 17 13:27
Report Created on: 24-MAR-17 14:11                 Compound Sublist : all
Software Revision: Target 3.50

```

```

Sig. 1 in /chem1/SVOA/GC_49.i/170323.b/17032308.d
RT Range      Exp RT      DLT RT      Response      ppb      Compound
|-----|-----|-----|-----|-----|-----|
0.714- 7.902      7.850      0.143      48816244.00      50253.25      n-Octacosane
2.290- 7.902      346535241.28      361147.36      TPH as Diesel
End of File      330463058.89      374480.23      Diesel Range Organics

```

Data File: /chem1/SV0A/GC_49.i/170323.b/17032308.d

Date : 23-MAR-2017 13:27

Client ID:

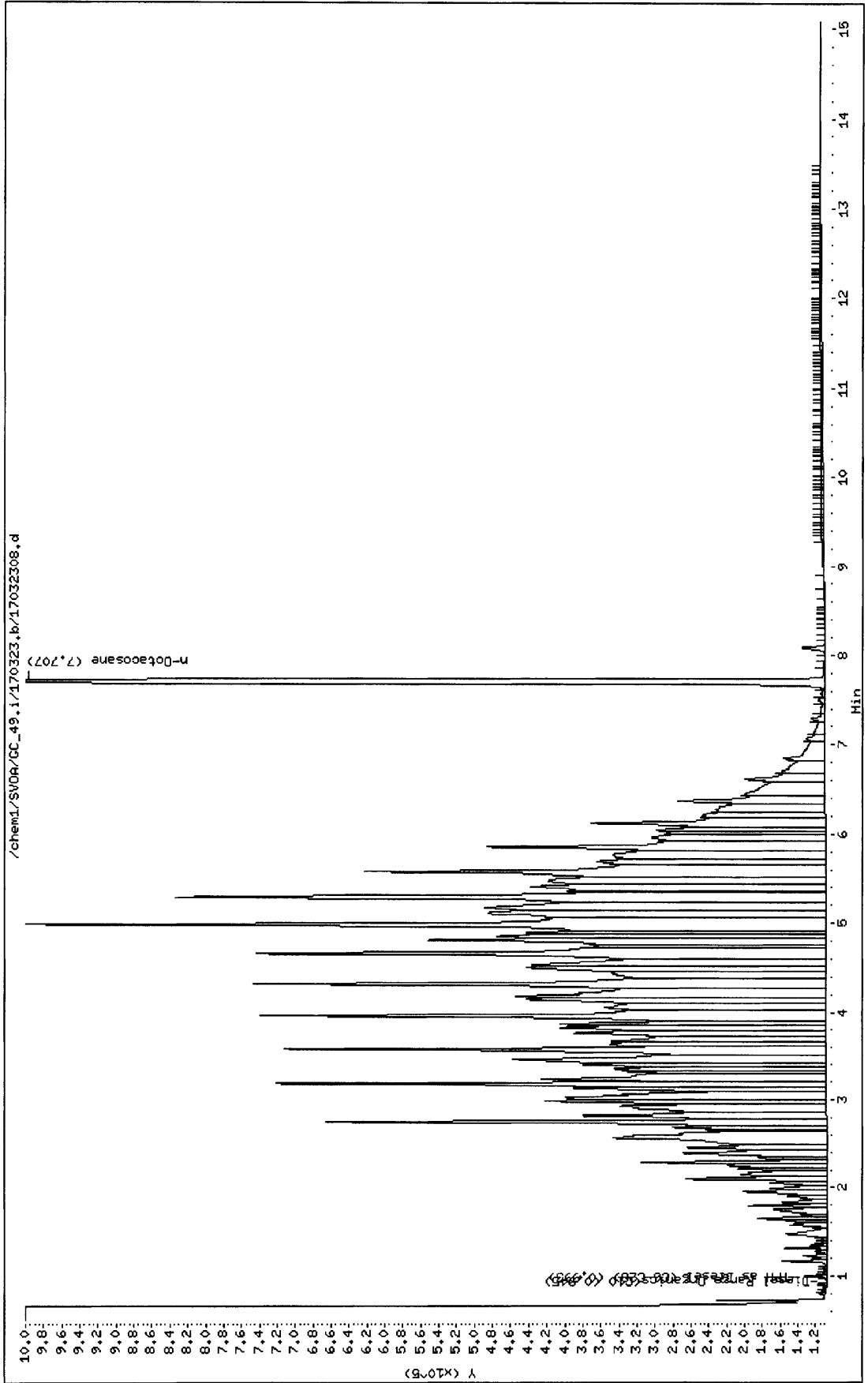
Sample Info: LCS 17032201/03

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:




```

=====
External Standard Report
=====

```

```

Data File Name   : /chem1/SVOA/GC_49/170323/17032309.d
Page Number      :
Operator         : 682                               Vial Number      : Vial 9
Instrument       : GC 49                             Injection Number  : 9
Sample Name      : LCSD 17032201/03                 Sequence Line    : 0
                                                    Instrument Method: 8015d.m

Acquired on      : 23 MAR 17 13:49
Report Created on: 27-MAR-17 13:22                   Compound Sublist : all
Software Revision: Target 3.50

```

```

Sig. 1 in /chem1/SVOA/GC_49.i/170323.b/17032309.d
RT Range      Exp RT   DLT RT   Response      ppb          Compound
|-----|-----|-----|-----|-----|-----|
0.714- 7.902   7.850     0.142   48116525.00   49532.94    n-Octacosane
2.290- 7.902   342950489.33  357411.45    TPH as Diesel
End of File    326988334.39  370542.67    Diesel Range Organics

```

Data File: /chem1/SV06/GC_49.i/170323.b/17032309.d

Date : 23-MAR-2017 13:49

Client ID:

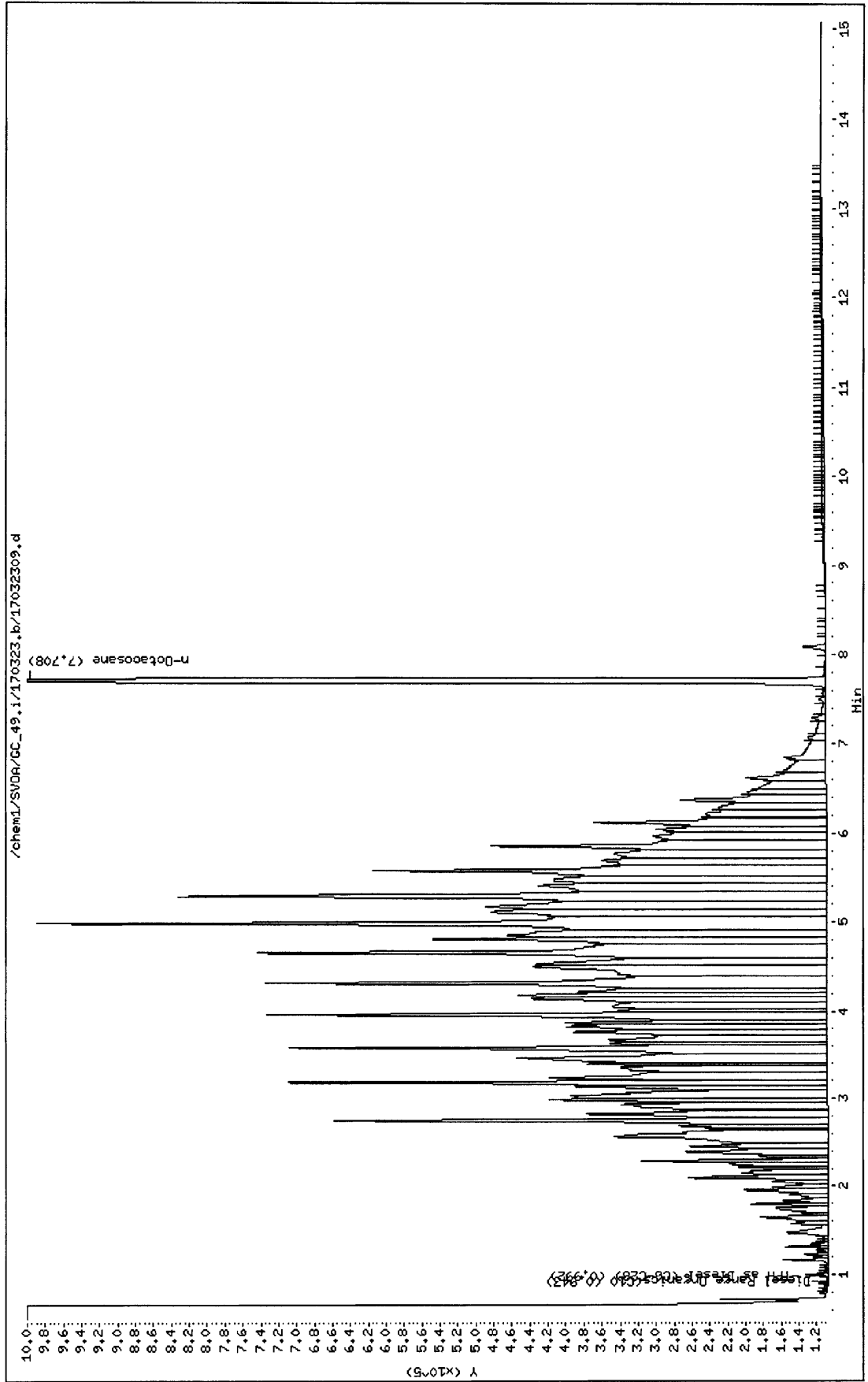
Sample Info: LCSD 17032201/03

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



EPA 8015B (M) Diesel + Motor Oil

CONTINUING CALIBRATION

**CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8015B (M)**

CCV WORK ORDER: 099-14-354-46-5901

BATCH ID:

INITIAL: 170315I003
CCV: 170323A080
INSTRUMENT: GC 49

ANALYZED BY: 972

D/T ANALYZED:

INITIAL: 2017-03-15 14:40
CCV: 2017-03-23 11:31

REVIEWED BY:

D/T REVIEWED:

DATA FILE: T:\GC_49\data\2017\170323\17032303.d\Report.txt\17032303

<u>COMPOUND NAME</u>	<u>TYPE</u>	<u>CALIB MODEL</u>	<u>MIN RF</u>	<u>AVG RF</u>	<u>CCV RF</u>	<u>AMOUNT</u>	<u>CCV CONC</u>	<u>CCV %D</u>	<u>CCV %D CL</u>	<u>STATUS</u>
TPH as Diesel	C	Avg Resp	0.00	959.540	941.984		2	0-20		PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_49.i/170323.b/17032303.d
 Report Date: 03/24/2017 13:55

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_49.i Injection Date and Time: 23-MAR-2017 11:31
 Sample Name: CCV D400 C28 50 L102516D Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017
 Sublist used: CCV_D-DRO.sub Initial Calibration Time(s): 21:15 15:11
 Method used: /chem1/SVOA/GC_49.i/170323.b/8015d.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Diesel Range Organics	882457.968	865321.585	0.00	2	15	Averaged
TPH as Diesel	959539.736	941984.160	0.00	2	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	971404.651	1069363.640	0.00	-10	20	Averaged

page 1

Data File: /chem1/SVOA/GC_49.i/170323.b/17032303.d
 Report Date: 24-Mar-2017 13:54

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170323.b/17032303.d
 Lab Smp Id:
 Inj Date : 23-MAR-2017 11:31
 Operator : 682 Inst ID: GC_49.i
 Smp Info : CCV D400 C28 50 L102516D
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170323.b/8015d.m
 Meth Date : 24-Mar-2017 13:54 umd6 Quant Type: ESTD
 Cal Date : 16-MAR-2017 15:11 Cal File: 17031609.d
 Als bottle: 3 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.714-7.902			376793664	400.000	392.681
S 26 Diesel Range Organics	2.290-7.902			346128634	400.000	392.232
\$ 92 n-Octacosane	7.710	7.710	0.000	53468182	50.0000	55.042



Data File: /chem1/SVDA/CC_49.i/170323.b/17032303.d

Date : 23-MAR-2017 11:31

Client ID:

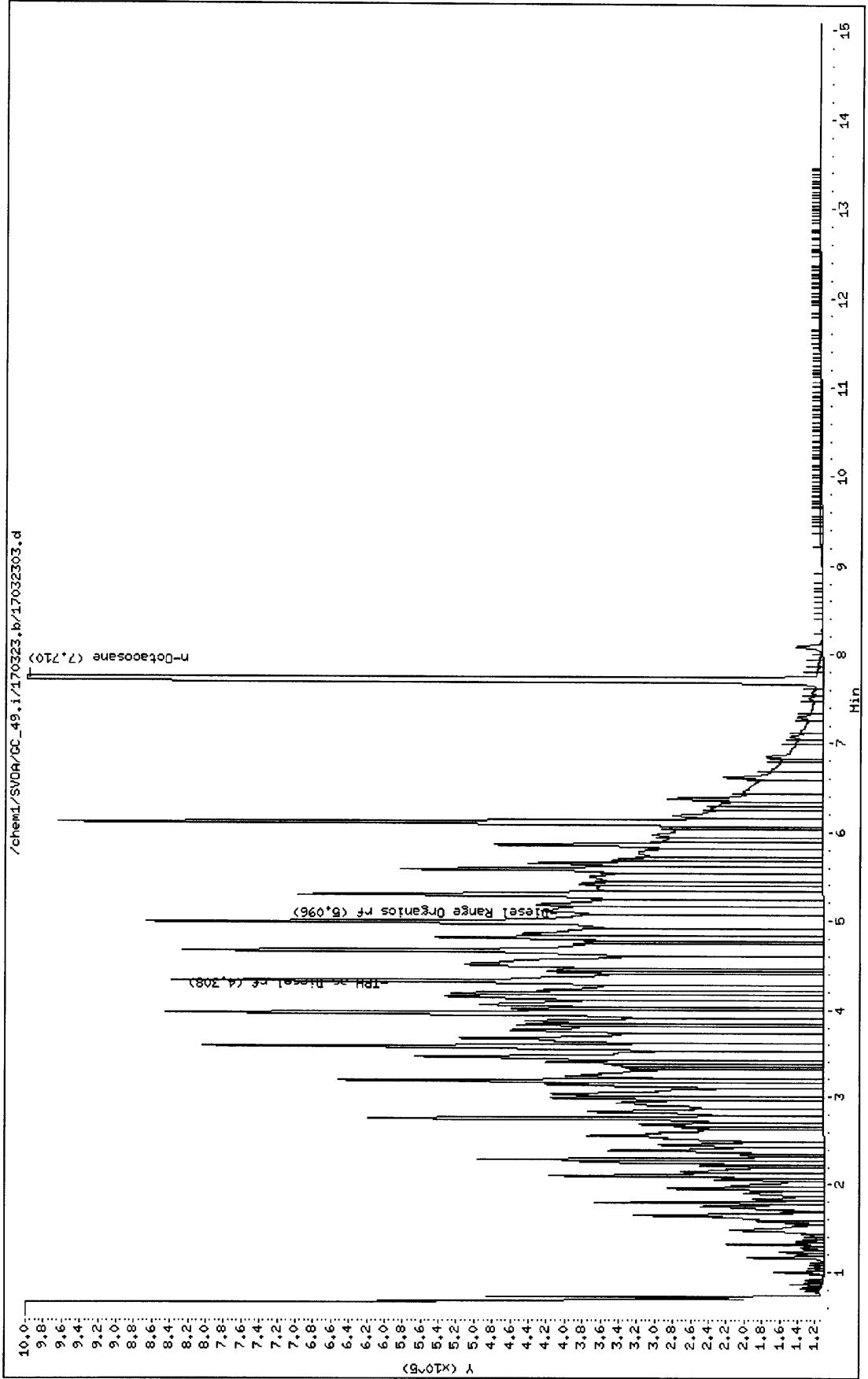
Sample Info: CCV B400 C28 50 L102516D

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_49.i/170323.b/17032317.d
 Report Date: 03/24/2017 14:16

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_49.i Injection Date and Time: 23-MAR-2017 18:31
 Sample Name: CCV D400 C28 50 L102516D Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017
 Sublist used: CCV_D-DRO.sub Initial Calibration Time(s): 21:15 15:11
 Method used: /chem1/SVOA/GC_49.i/170323.b/8015d.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Diesel Range Organics	882457.968	813535.268	0.00	8	15	Averaged
TPH as Diesel	959539.736	886275.985	0.00	8	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	971404.651	996474.140	0.00	-3	20	Averaged

page 1

Data File: /chem1/SVOA/GC_49.i/170323.b/17032317.d
 Report Date: 24-Mar-2017 14:08

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170323.b/17032317.d
 Lab Smp Id:
 Inj Date : 23-MAR-2017 18:31
 Operator : 682 Inst ID: GC_49.i
 Smp Info : CCV D400 C28 50 L102516D
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170323.b/8015d.m
 Meth Date : 24-Mar-2017 14:08 umd6 Quant Type: ESTD
 Cal Date : 16-MAR-2017 15:11 Cal File: 17031609.d
 Als bottle: 17 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.714-7.902			354510394	400.000	369.458
S 26 Diesel Range Organics	2.290-7.902			325414107	400.000	368.758
S 92 n-Octacosane	7.699	7.699	0.000	49823707	50.0000	51.290



Data File: /chem1/SV0A/GC_49.i/170323.b/17032317.d

Date : 23-MAR-2017 18:31

Client ID:

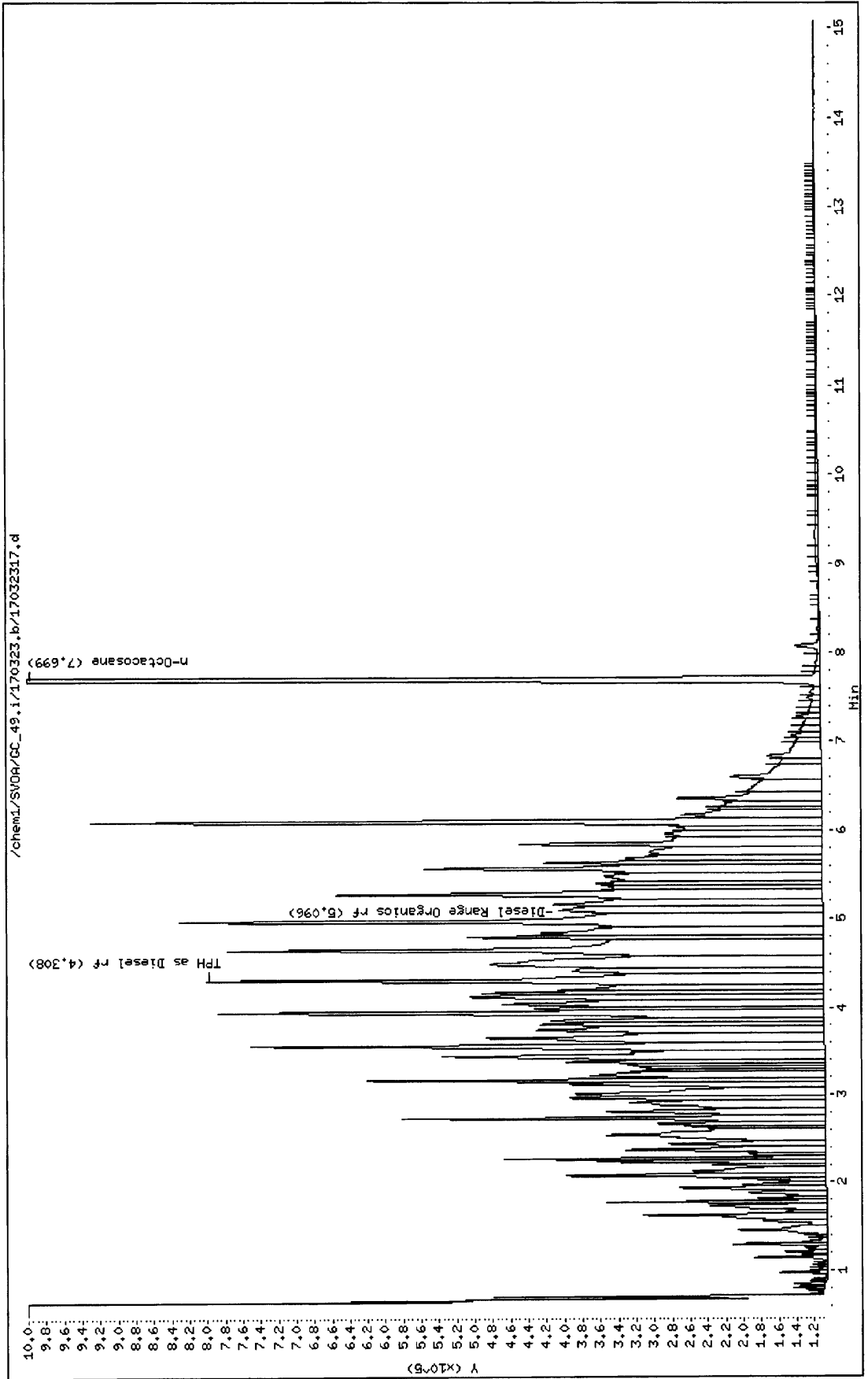
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



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 External Standard Report
 =====

Data File Name : /chem1/SVOA/GC_49/170323/17032302.d
 Page Number :
 Operator : 682 Vial Number : Vial 2
 Instrument : GC 49 Injection Number : 2
 Sample Name : C6-C44 L110816A Sequence Line : 0
 Instrument Method: 8015d.m
 Acquired on : 23 MAR 17 11:09
 Report Created on: 24-MAR-17 13:55 Compound Sublist : all
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC_49.i/170323.b/17032302.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.714	7.850	7.136	1843058.00	0.00	C6-Hexane
0.897	7.850	6.953	5464623.00	0.00	C7-Heptane
1.314	7.850	6.536	11583632.00	0.00	C8-Octane
1.794	7.850	6.056	15143172.00	0.00	C9-Nonane
2.290	7.850	5.560	18085265.00	0.00	C10-Decane
2.752	7.850	5.098	19361520.00	0.00	C11-Undecane
3.183	7.850	4.667	19603380.00	0.00	C12-Dodecane
3.586	7.850	4.264	22667045.00	0.00	C13-Tridecane
3.965	7.850	3.885	20276468.00	0.00	C14-Tetradecane
4.323	7.850	3.527	20954978.00	0.00	C15-pentadecane
4.661	7.850	3.189	21343437.00	0.00	C16-Hexadecane
4.982	7.850	2.868	21701349.00	0.00	C17-Heptadecane
5.287	7.850	2.563	22111253.00	0.00	C18-Octadecane
5.578	7.850	2.272	21892941.00	0.00	C19-Nonadecane
5.855	7.850	1.995	22482383.00	0.00	C20-Eicosane
6.121	7.850	1.729	22473452.00	0.00	C21-Heneicosane
6.375	7.850	1.475	23306712.00	0.00	C22-Docosane
6.619	7.850	1.231	23557199.00	0.00	C23-Tricosane
6.853	7.850	0.997	24053362.00	0.00	C24-Tetracosane
7.079	7.850	0.771	24131653.00	0.00	C25-Pentacosane
7.296	7.850	0.554	25239807.00	0.00	C26-Hexacosane
7.505	7.850	0.345	24322427.00	0.00	C27-Heptacosane
7.707	7.850	0.143	24781537.00	25.51	n-Octacosane
7.902	7.850	-0.052	24074056.00	0.00	C29-Nonacosane
8.091	7.850	-0.241	23189035.00	0.00	C30-Triacontane
8.273	7.850	-0.423	20657226.00	0.00	C31-Hentriacontane
8.450	7.850	-0.600	17419192.00	0.00	C32-Dotriacontane
8.621	7.850	-0.771	13037206.00	0.00	C33-Tritriacontane
8.787	7.850	-0.937	8330793.00	0.00	C34-Tetratriacontane
8.948	7.850	-1.098	4638115.00	0.00	C35-Pentatriacontane
9.106	7.850	-1.256	2558028.00	0.00	C36-Hexatriacontane
9.274	7.850	-1.424	1307212.00	0.00	C37-Heptatriacontane
9.471	7.850	-1.621	810896.00	0.00	C38-Octatriacontane
9.703	7.850	-1.853	599873.00	0.00	C39-Nonatriacontane
9.974	7.850	-2.124	467343.00	0.00	C40-Tetracontane
11.646	7.850	-3.796	914394.00	0.00	C44-Tetratetracontane

End of File

Data File: /chem1/SVDA/GC_49.i/170323.b/17032302.d

Date : 23-MAR-2017 11:09

Client ID:

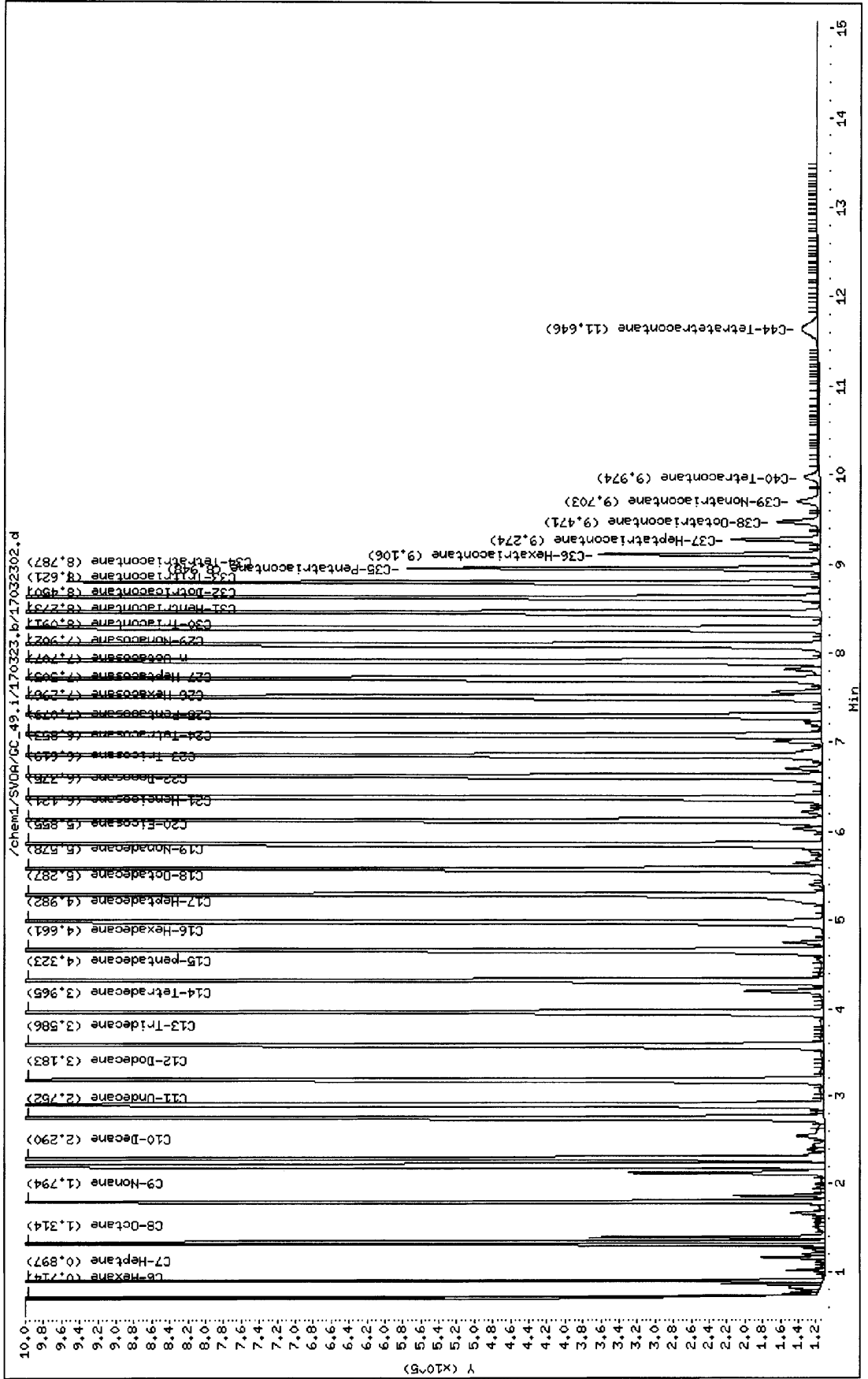
Sample Info: C6-C44 L110816A

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8015B (M)

BATCH ID: 170327A057
INSTRUMENT: GC 49

ANALYZED BY: 682

WORK ORDER: 099-14-354
MATRIX: Water

REVIEWED BY: 421
D/T REVIEWED: 2017-03-28 11:35

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
48	Daily Calibration	2017-03-27 11:15	S:\GC_49\GC_49_data\2017\170327\17032703.d\Report.txt17032703

WORK ORDER: 17-03-1523
MATRIX: Water

REVIEWED BY: 421
D/T REVIEWED: 2017-03-28 12:13

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
2	IDW-W	2017-03-27 14:15	S:\GC_49\GC_49_data\2017\170327\17032734.d\Report.txt17032734

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8015B (M)

CCV WORK ORDER: 099-14-354-48-5901

ANALYZED BY: 682

BATCH ID:
INITIAL: 170315I003
CCV: 170327A057
INSTRUMENT: GC 49

D/T ANALYZED:
INITIAL: 2017-03-15 14:40
CCV: 2017-03-27 11:15
REVIEWED BY:
D/T REVIEWED:

DATA FILE: S:\GC_49\GC_49_data\2017\170327\17032703.d\Report.txt\17032703

<u>COMPOUND NAME</u>	<u>TYPE</u>	<u>CALIB MODEL</u>	<u>MIN RF</u>	<u>AVG RF</u>	<u>CCV RF</u>	<u>AMOUNT</u>	<u>CCV CONC</u>	<u>CCV %D</u>	<u>CCV %D CL</u>	<u>STATUS</u>
TPH as Diesel	C	Avg Resp	0.00	959.540	952.002			1	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_49.i/170327.b/17032703.d
 Report Date: 03/27/2017 16:49

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_49.i Injection Date and Time: 27-MAR-2017 11:15
 Sample Name: CCV D400 C28 50 L102516D Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017
 Sublist used: CCV_D-DRO.sub Initial Calibration Time(s): 21:15 15:11
 Method used: /chem1/SVOA/GC_49.i/170327.b/8015d.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D Drift	Curve Type
Diesel Range Organics	882457.968	874661.615	0.00	1	15	Averaged
TPH as Diesel	959539.736	952002.260	0.00	1	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D Drift	Curve Type
n-Octacosane	971404.651	1051337.920	0.00	-8	20	Averaged

page 1

Data File: /chem1/SVOA/GC_49.i/170327.b/17032703.d
 Report Date: 27-Mar-2017 16:44

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170327.b/17032703.d
 Lab Smp Id:
 Inj Date : 27-MAR-2017 11:15
 Operator : 682 Inst ID: GC_49.i
 Smp Info : CCV D400 C28 50 L102516D
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170327.b/8015d.m
 Meth Date : 27-Mar-2017 16:44 umd6 Quant Type: ESTD
 Cal Date : 16-MAR-2017 15:11 Cal File: 17031609.d
 Als bottle: 3 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.720-7.864			380800904	400.000	396.857
S 26 Diesel Range Organics	2.280-7.864			349864646	400.000	396.466
\$ 92 n-Octacosane	7.679	7.679	0.000	52566896	50.0000	54.114



Data File: /chem1/SVOR/GC_49.i/170327.b/17032703.d

Date : 27-HAR-2017 11:15

Client ID:

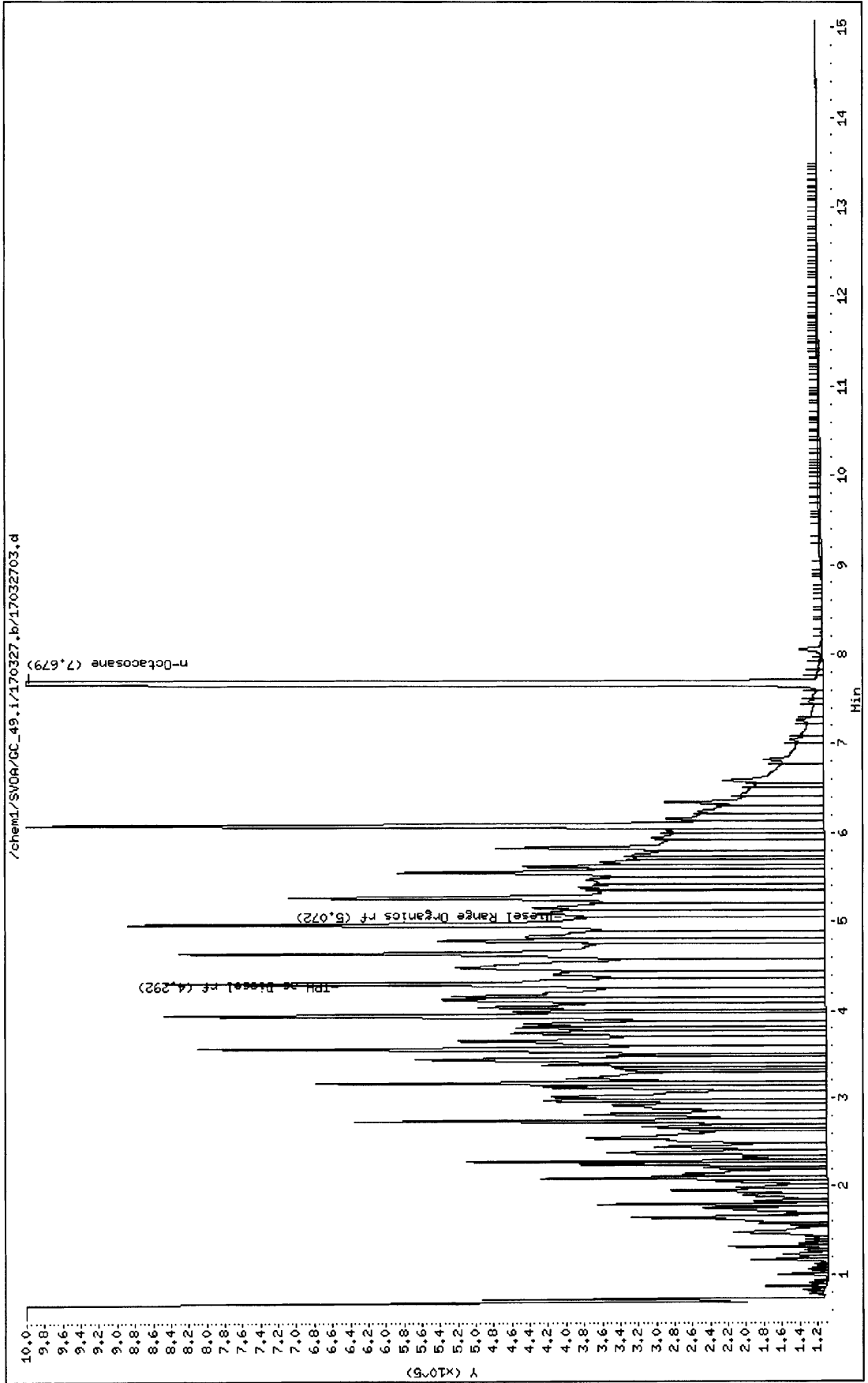
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_49.i/170327.b/17032737.d
 Report Date: 03/27/2017 18:06

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_49.i Injection Date and Time: 27-MAR-2017 16:37
 Sample Name: CCV D400 C28 50 L102516D Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017
 Sublist used: CCV_D-DRO.sub Initial Calibration Time(s): 21:15 15:11
 Method used: /chem1/SVOA/GC_49.i/170327.b/8015d.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Diesel Range Organics	882457.968	810764.343	0.00	8	15	Averaged
TPH as Diesel	959539.736	882610.300	0.00	8	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	971404.651	994155.860	0.00	-2	20	Averaged

page 1

Data File: /chem1/SVOA/GC_49.i/170327.b/17032737.d
 Report Date: 27-Mar-2017 18:05

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170327.b/17032737.d
 Lab Smp Id:
 Inj Date : 27-MAR-2017 16:37
 Operator : 682 Inst ID: GC_49.i
 Smp Info : CCV D400 C28 50 L102516D
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170327.b/8015d.m
 Meth Date : 27-Mar-2017 18:05 umd6 Quant Type: ESTD
 Cal Date : 16-MAR-2017 15:11 Cal File: 17031609.d
 Als bottle: 37 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.720-7.864			353044120	400.000	367.930
S 26 Diesel Range Organics	2.280-7.864			324305737	400.000	367.502
\$ 92 n-Octacosane	7.675	7.675	0.000	49707793	50.0000	51.171



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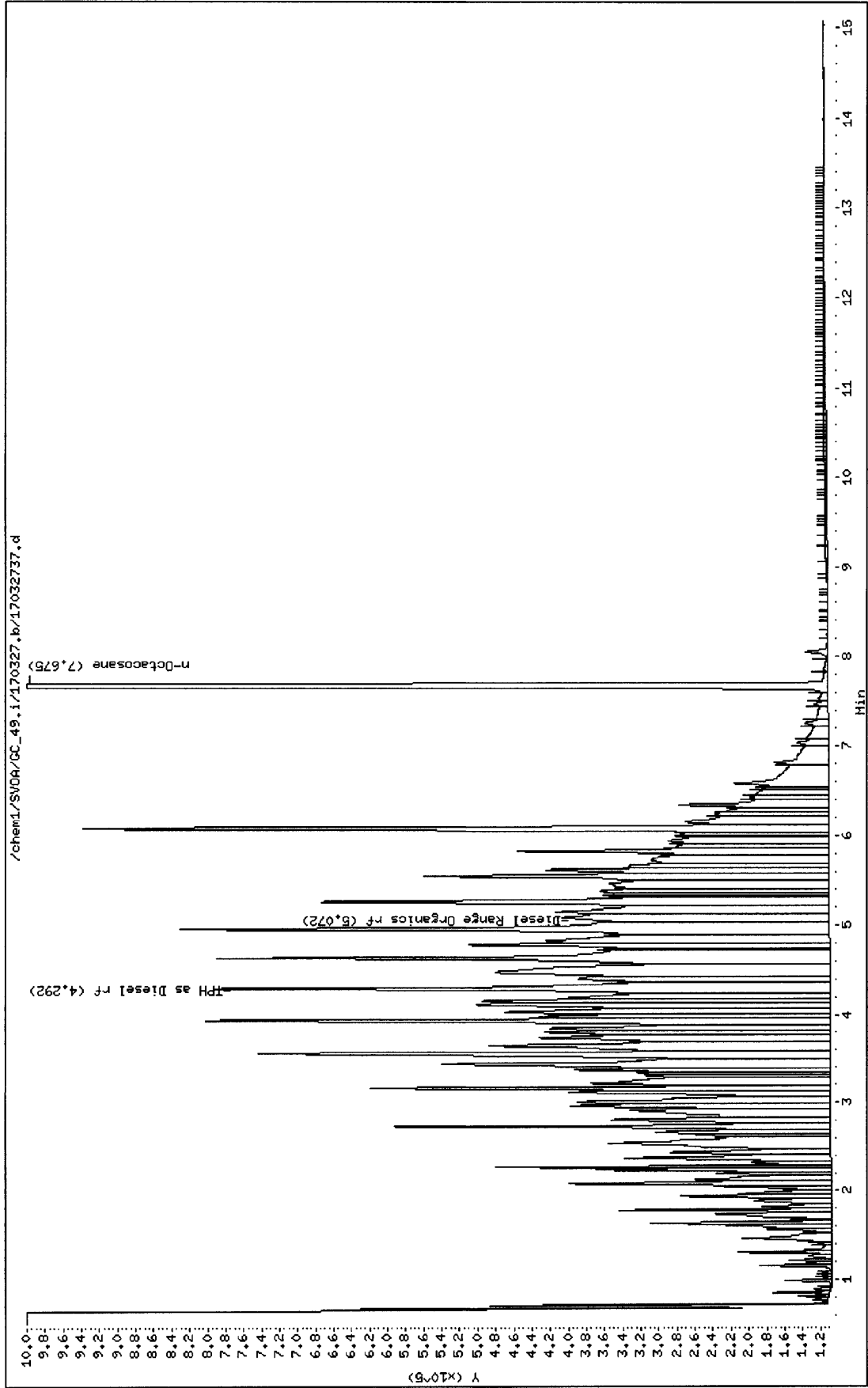
Data File: /chem1/SV0A/GC_49.i/170327.b/17032737.d
Date : 27-MAR-2017 16:37
Client ID:
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



Data File: /chem1/SVOA/GC_49.i/170327.b/17032717.d
 Report Date: 03/28/2017 10:03

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_49.i Injection Date and Time: 27-MAR-2017 19:46
 Sample Name: CCV D400 C28 50 L102516D Initial Calibration Date(s): 09-NOV-2016 16-MAR-2017
 Sublist used: CCV_D-DRO.sub Initial Calibration Time(s): 21:15 15:11
 Method used: /chem1/SVOA/GC_49.i/170327.b/8015d.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D Drift	Curve Type
Diesel Range Organics	882457.968	899790.913	0.00	-2	15	Averaged
TPH as Diesel	959539.736	978143.230	0.00	-2	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D Drift	Curve Type
n-Octacosane	971404.651	1056998.100	0.00	-9	20	Averaged

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Data File: /chem1/SVOA/GC_49.i/170327.b/17032717.d
 Report Date: 28-Mar-2017 10:03

Page 1

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170327.b/17032717.d
 Lab Smp Id:
 Inj Date : 27-MAR-2017 19:46
 Operator : 682 Inst ID: GC_49.i
 Smp Info : CCV D400 C28 50 L102516D
 Misc Info :
 Comment :
 Method : /chem1/SVOA/GC_49.i/170327.b/8015d.m
 Meth Date : 28-Mar-2017 10:02 umd6 Quant Type: ESTD
 Cal Date : 16-MAR-2017 15:11 Cal File: 17031609.d
 Als bottle: 17 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
 Target Version: 3.50
 Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

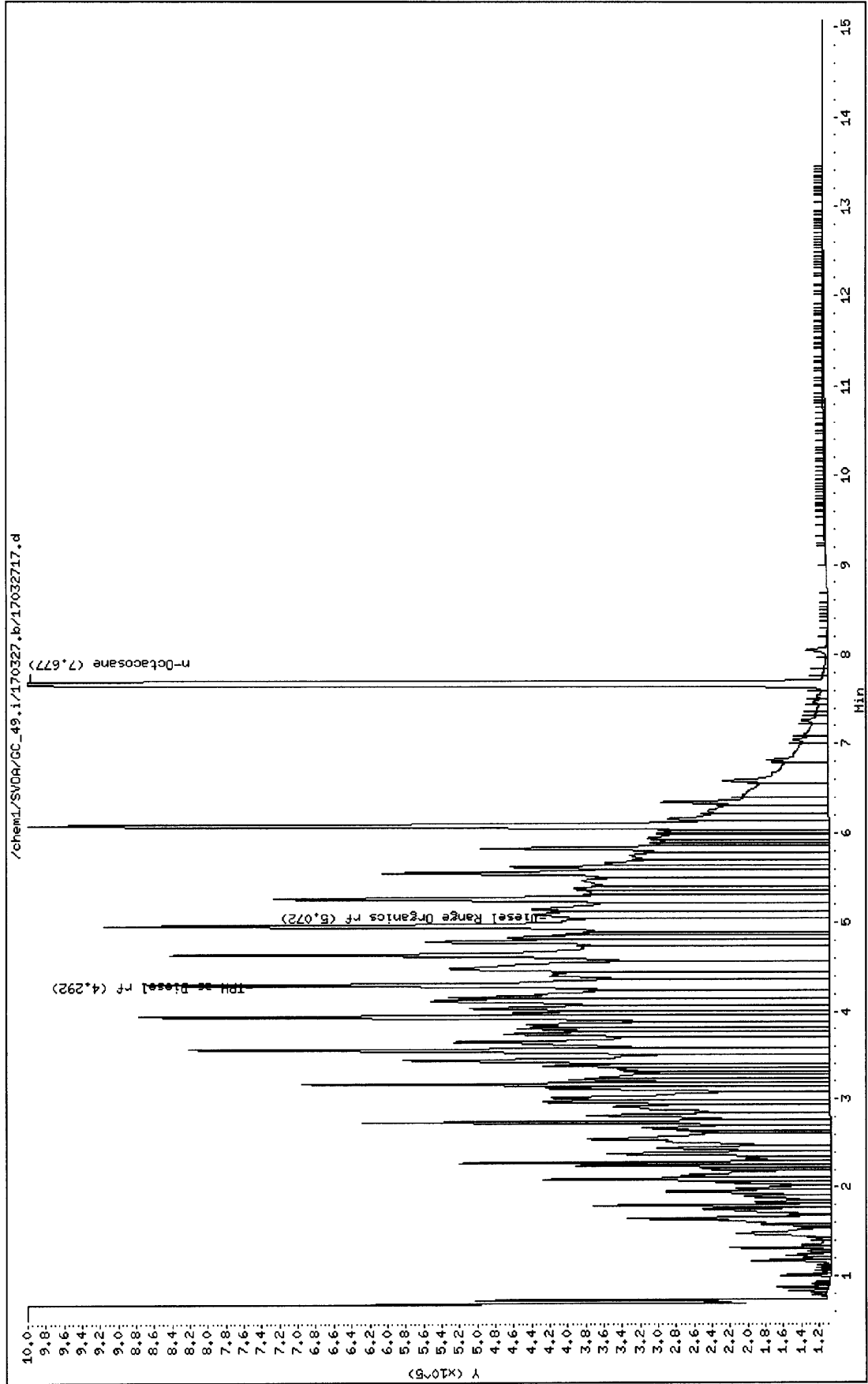
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ppm)	ON-COL (ppm)
S 14 TPH as Diesel	0.720-7.864			391257292	400.000	407.755
S 26 Diesel Range Organics	2.280-7.864			359916365	400.000	407.856
\$ 92 n-Octacosane	7.677	7.677	0.000	52849905	50.0000	54.405

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Data File: /chem1/SVDA/GC_49.i/170327.b/17032717.d
Date : 27-MAR-2017 19:46
Client ID:
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC_49.i
Operator: 682
Column diameter: 2.00

Column phase#



=====
 External Standard Report
 =====

Data File Name : /chem1/SVOA/GC_49/170327/17032702.d
 Page Number :
 Operator : 682 Vial Number : Vial 2
 Instrument : GC 49 Injection Number : 2
 Sample Name : C6-C44 L110816A Sequence Line : 0
 Instrument Method: 8015d.m
 Acquired on : 27 MAR 17 10:54
 Report Created on: 27-MAR-17 12:02 Compound Sublist : all
 Software Revision: Target 3.50

Sig. 1 in /chem1/SVOA/GC_49.i/170327.b/17032702.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.720	7.850	7.130	1620895.00	0.00	C6-Hexane
0.906	7.850	6.944	3553597.00	0.00	C7-Heptane
1.317	7.850	6.533	6885947.00	0.00	C8-Octane
1.791	7.850	6.059	6855802.00	0.00	C9-Nonane
2.280	7.850	5.570	7785873.00	0.00	C10-Decane
2.739	7.850	5.111	8226711.00	0.00	C11-Undecane
3.167	7.850	4.683	8276219.00	0.00	C12-Dodecane
3.568	7.850	4.282	9381396.00	0.00	C13-Tridecane
3.946	7.850	3.904	9118427.00	0.00	C14-Tetradecane
4.302	7.850	3.548	9583117.00	0.00	C15-pentadecane
4.638	7.850	3.212	9856263.00	0.00	C16-Hexadecane
4.959	7.850	2.891	10110781.00	0.00	C17-Heptadecane
5.261	7.850	2.589	10342570.00	0.00	C18-Octadecane
5.551	7.850	2.299	10347466.00	0.00	C19-Nonadecane
5.827	7.850	2.023	10657240.00	0.00	C20-Eicosane
6.091	7.850	1.759	10756028.00	0.00	C21-Heneicosane
6.344	7.850	1.506	10986755.00	0.00	C22-Docosane
6.587	7.850	1.263	10983126.00	0.00	C23-Tricosane
6.820	7.850	1.030	11054069.00	0.00	C24-Tetracosane
7.044	7.850	0.806	11069153.00	0.00	C25-Pentacosane
7.261	7.850	0.589	11462845.00	0.00	C26-Hexacosane
7.468	7.850	0.382	10983064.00	0.00	C27-Heptacosane
7.669	7.850	0.181	11143971.00	11.47	n-Octacosane
7.864	7.850	-0.014	10659020.00	0.00	C29-Nonacosane
8.052	7.850	-0.202	9909568.00	0.00	C30-Triacontane
8.233	7.850	-0.383	8386733.00	0.00	C31-Hentriacontane
8.410	7.850	-0.560	6518076.00	0.00	C32-Dotriacontane
8.581	7.850	-0.731	4364192.00	0.00	C33-Tritriacontane
8.747	7.850	-0.897	2459782.00	0.00	C34-Tetratriacontane
8.908	7.850	-1.058	1223532.00	0.00	C35-Pentatriacontane
9.066	7.850	-1.216	622647.00	0.00	C36-Hexatriacontane
9.228	7.850	-1.378	344047.00	0.00	C37-Heptatriacontane
9.421	7.850	-1.571	252165.00	0.00	C38-Octatriacontane
9.646	7.850	-1.796	183360.00	0.00	C39-Nonatriacontane
9.914	7.850	-2.064	134964.00	0.00	C40-Tetracontane
11.552	7.850	-3.702	377614.00	0.00	C44-Tetratetracontane

End of File

Data File: /chem1/SVDA/GC_49.i/170327.lb/17032702.d

Date : 27-MAR-2017 10:54

Client ID:

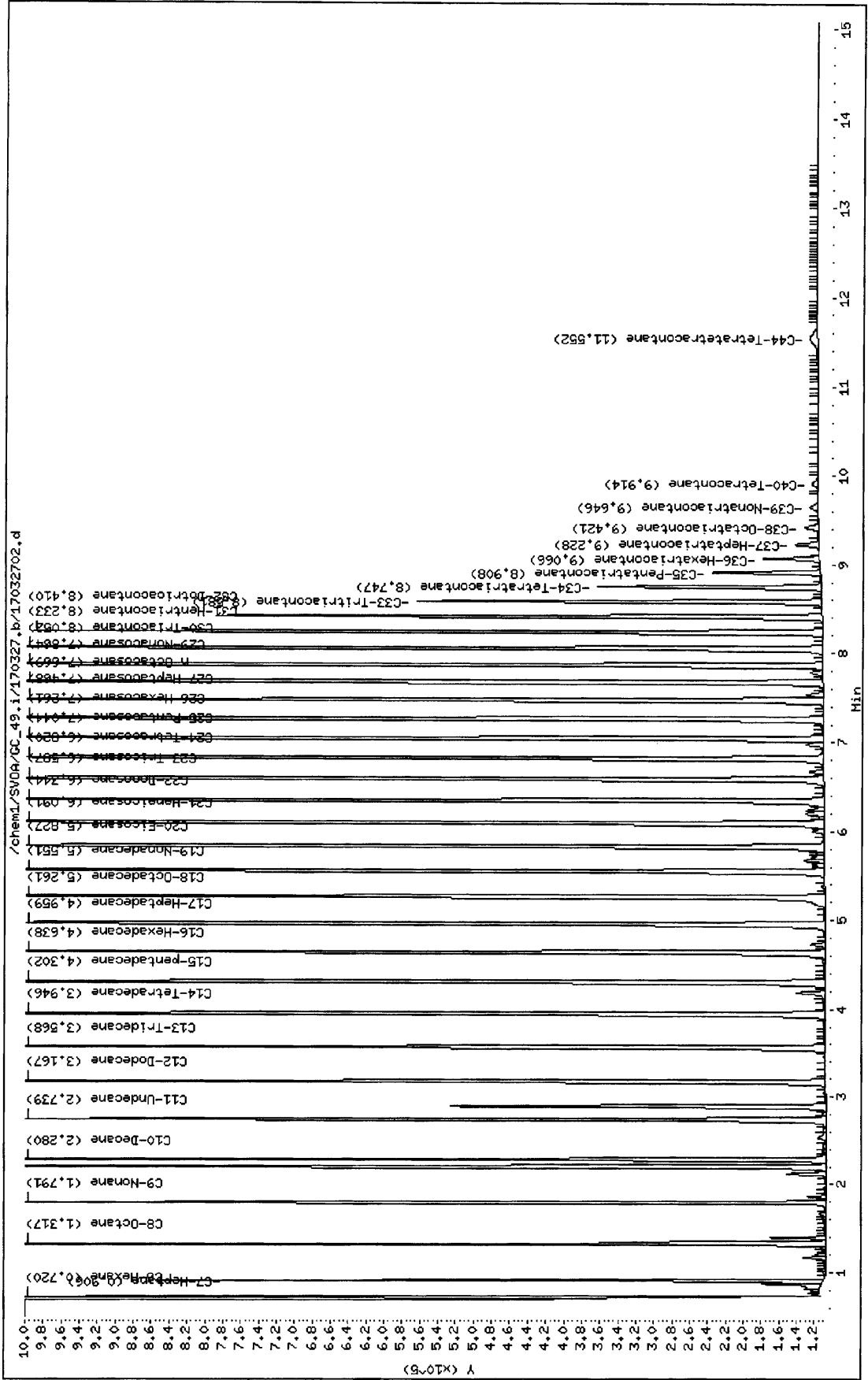
Sample Info: C6-C44 L110816A

Instrument: GC_49.i

Operator: 682

Column diameter: 2.00

Column phase:



EPA 8015B (M) Diesel + Motor Oil

RUN LOGS

Line	Vial	File	Name	Method	InjVolume	Acquired
1	1	17031500	BLK	8015D		15-Mar-17, 10:55:17
2	1	17031501	BLK	8015D		15-Mar-17, 12:18:41
3	2	17031502	C6-C44 L110816A	8015D		15-Mar-17, 12:39:15
4	3	17031503	CCV D400 C28 50 L102516D	8015D		15-Mar-17, 13:00:13
5	4	17031504	CCV MO400 L030317D	8015D		15-Mar-17, 13:21:25
6	1	1703150101	BLK	8015D		15-Mar-17, 13:59:20
7	1	1703150102	BLK	8015D		15-Mar-17, 14:19:48
8	5	17031505	ICAL D5 C28 0.625 L102516B	8015D		15-Mar-17, 14:40:12
9	6	17031506	ICAL D200 C28 25 L102516C	8015D		15-Mar-17, 15:00:54
10	7	17031507	ICAL D400 C28 50 L102516D	8015D		15-Mar-17, 15:21:44
11	8	17031508	ICAL D800 C28 100 L102516E	8015D		15-Mar-17, 15:42:39
12	9	17031509	ICAL D1600 C28 200 L102516F	8015D		15-Mar-17, 16:03:21
13	10	17031510	ICV D400 C28 50 L102516G	8015D		15-Mar-17, 16:23:50
14	11	17031511	ICAL MO25 L030317B	8015D		15-Mar-17, 16:44:45
15	12	17031512	ICAL MO200 L030317C	8015D		15-Mar-17, 17:06:01
16	13	17031513	ICAL MO400 L030317D	8015D		15-Mar-17, 17:26:43
17	14	17031514	ICAL MO600 L030317E	8015D		15-Mar-17, 17:47:14
18	15	17031515	ICAL MO800 L030317F	8015D		15-Mar-17, 18:07:56
19	16	17031516	ICV MO400 L030317G	8015D		15-Mar-17, 18:28:52
20	17	17031517	ICAL GD5 L031017B	8015D		15-Mar-17, 18:56:10
21	18	17031518	ICAL GD200 L031017C	8015D		15-Mar-17, 19:16:43
22	19	17031519	ICAL GD400 L031017D	8015D		15-Mar-17, 19:37:45
23	20	17031520	ICAL GD800 L031017E	8015D		15-Mar-17, 19:58:35
24	21	17031521	ICAL GD1600 L031017F	8015D		15-Mar-17, 20:19:12
25	22	17031522	ICV GD400 L031017G	8015D		15-Mar-17, 20:39:35
26	23	17031523	CCV D400 C28 50 L102516D	8015D		15-Mar-17, 21:00:22
27	24	17031524	CCV MO400 L030317D	8015D		15-Mar-17, 21:21:48
28	25	17031525	CCV GD400 L031017D	8015D		15-Mar-17, 21:42:23
29	26	17031526	MB 17031507	8015D		15-Mar-17, 22:02:46
30	27	17031527	GDLCS 17031507	8015D		15-Mar-17, 22:23:44
31	28	17031528	MS 17-03-0952-1	8015D		15-Mar-17, 22:44:36
32	29	17031529	MSD 17-03-0952-1	8015D		15-Mar-17, 23:05:33
33	30	17031530	17-03-0952-1	8015D		15-Mar-17, 23:26:09
34	31	17031531	17-03-0952-2	8015D		15-Mar-17, 23:46:38
35	32	17031532	17-03-0952-3	8015D		16-Mar-17, 00:07:00
36	33	17031533	17-03-0952-4	8015D		16-Mar-17, 00:27:41
37	34	17031534	17-03-0952-5	8015D		16-Mar-17, 00:48:24
38	35	17031535	17-03-0952-6	8015D		16-Mar-17, 01:09:15
39	36	17031536	17-03-0952-7	8015D		16-Mar-17, 01:30:22
40	37	17031537	17-03-0952-8	8015D		16-Mar-17, 01:51:34
41	38	17031538	17-03-0952-9	8015D		16-Mar-17, 02:12:32
42	39	17031539	17-03-0952-10	8015D		16-Mar-17, 02:33:05
43	40	17031540	CCV GD400 L031017D	8015D		16-Mar-17, 02:53:34
44	41	17031541	CCV D400 C28 50 L102516D	8015D		16-Mar-17, 11:36:46

je

I003

A053

Revised/Assign to Logbook Date: 3/16/17
Analysis: 8015 Chemist ID: 682
Logbook Page: 85 Instrument ID: 49

Return to Contents

Sequence: C:\CHEM32\1\SEQUENCE\170323.S

Table: Rear DataPath: W:\GC_49\DATA\GC49\2017\170323\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	1	17032301	BLK	8015D		23-Mar-17, 10:48:54
2	2	17032302	C6-C44 L110816A	8015D		23-Mar-17, 11:09:56
3	3	17032303	CCV D400 C28 50 L102516D A080	8015D		23-Mar-17, 11:31:30
4	4	17032304	CCV MO400 L030317D	8015D		23-Mar-17, 11:52:50
5	5	17032305	CCV JA400 L121416D	8015D		23-Mar-17, 12:17:57
6	6	17032306	CCV GD400 L031017D	8015D		23-Mar-17, 12:39:07
7	7	17032307	MB 17032201/02/03/04	8015D		23-Mar-17, 13:07:05
8	8	17032308	LCS 17032201/03	8015D		23-Mar-17, 13:27:49
9	9	17032309	LCS D 17032201/03	8015D		23-Mar-17, 13:49:03
10	10	17032310	JALCS 17032202	8015D		23-Mar-17, 14:10:18
11	11	17032311	JALCSD 17032202	8015D		23-Mar-17, 14:31:11
12	12	17032312	17-03-1545-1	8015D		23-Mar-17, 14:51:45
13	13	17032313	17-03-1545-2	8015D		23-Mar-17, 15:12:42
14	14	17032314	17-03-1523-2	8015D		23-Mar-17, 15:33:47
15	15	17032315	17-03-1551-1	8015D		23-Mar-17, 15:54:55
16	16	17032316	17-03-1551-2	8015D		23-Mar-17, 16:15:39
17	17	17032317	CCV D400 C28 50 L102516D A081	8015D		23-Mar-17, 18:31:32
18	18	17032318	CCV JA400 L121416D	8015D		23-Mar-17, 18:52:06
19	19	17032319	CCV GD400 L031017D	8015D		23-Mar-17, 19:12:29
20	20	17032320	GDLCS 17032204	8015D		23-Mar-17, 19:36:05
21	21	17032321	GDLCS D 17032204]@ injection problem	8015D		23-Mar-17, 19:56:52
22	22	17032322	17-03-1445-1	8015D		23-Mar-17, 20:17:23
23	23	17032323	17-03-1553-1	8015D		23-Mar-17, 20:38:33
24	24	17032324	17-03-1519-1	8015D		23-Mar-17, 20:59:49
25	25	17032325	17-03-1519-2	8015D		23-Mar-17, 21:20:40
26	26	17032326	17-03-1516-1	8015D		23-Mar-17, 21:41:37
27	27	17032327	17-03-1516-2	8015D		23-Mar-17, 22:02:52
28	28	17032328	17-03-1516-3	8015D		23-Mar-17, 22:23:30
29	29	17032329	17-03-1516-4	8015D		23-Mar-17, 22:44:12
30	30	17032330	CCV D400 C28 50 L102516D	8015D		23-Mar-17, 23:05:08
31	31	17032331	CCV JA400 L121416D	8015D		23-Mar-17, 23:26:18
32	32	17032332	CCV GD400 L031017D	8015D		23-Mar-17, 23:46:57

Review and Assign to Logistics Unit
 Attachments: 312417
 8015
 Content ID: 682
 Location: 49

Sequence: C:\CHEM32\1\SEQUENCE\170327.S
 Table: Rear DataPath: W:\GC_49\DATA\GC49\2017\170327\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	1	17032700	BLK	8015D		27-Mar-17, 10:11:19
2	1	17032701	BLK	8015D		27-Mar-17, 10:33:14
3	2	17032702	C6-C44 L110816A	8015D		27-Mar-17, 10:54:21
4	3	17032703	CCV D400 C28 50 L102516D A057	8015D		27-Mar-17, 11:15:15
5	4	17032704	CCV MO400 L030317D	8015D		27-Mar-17, 11:36:31
6	6	17032706	CCV JA 400 L121416D	8015D		27-Mar-17, 11:58:03
7	7	17032707	17-02-2255-4 100X CONF.	8015D		27-Mar-17, 12:19:16
8	8	17032708	MB 17032702	8015D		27-Mar-17, 13:31:23
9	9	17032709	LCS 17032702	8015D		27-Mar-17, 13:52:23
10	34	17032734	17-03-1523-2 2X RB	8015D		27-Mar-17, 14:15:07
11	35	17032735	CARRYOVER BLK	8015D		27-Mar-17, 14:35:54
12	10	17032710	LCSD 17032702	8015D		27-Mar-17, 14:56:42
13	11	17032711	17-03-1795-5 5X	8015D		27-Mar-17, 15:17:51
14	36	17032736	17-03-1781-19 5X RB	8015D		27-Mar-17, 15:39:29
15	12	17032712	17-03-1795-7 5X	8015D		27-Mar-17, 16:00:41
16	37	17032737	CCV D400 C28 50 L102516D A039	8015D		27-Mar-17, 16:37:22
17	38	17032738	CCV JA 400 L121416D	8015D		27-Mar-17, 16:58:06
18	33	17032733	17-03-1652-2 20X	8015D		27-Mar-17, 17:18:51
19	39	17032739	17-03-1523-1 RB	8015D		27-Mar-17, 17:39:50
20	1	1703270101	CARRYOVER BLK	8015D		27-Mar-17, 18:01:27
21	13	17032713	17-03-1795-8	8015D		27-Mar-17, 18:22:44
22	14	17032714	17-03-1795-9	8015D		27-Mar-17, 18:43:49
23	15	17032715	17-03-1795-17	8015D		27-Mar-17, 19:04:45
24	16	17032716	17-03-1795-18	8015D		27-Mar-17, 19:25:36
25	17	17032717	CCV D400 C28 50 L102516D A061	8015D		27-Mar-17, 19:46:58
26	18	17032718	CCV JA 400 L121416D	8015D		27-Mar-17, 20:08:26
27	42	17032742	MB 17032306	8015D		27-Mar-17, 20:29:41
28	43	17032743	LCS 17032306	8015D		27-Mar-17, 20:50:28
29	44	17032744	LCSD 17032306	8015D		27-Mar-17, 21:11:31
30	45	17032745	17-03-1593-2	8015D		27-Mar-17, 21:33:00
31	46	17032746	17-03-1593-4	8015D		27-Mar-17, 21:54:28
32	47	17032747	17-03-1593-5	8015D		27-Mar-17, 22:15:16
33	48	17032748	17-03-1593-6	8015D		27-Mar-17, 22:35:56
34	49	17032749	17-03-1593-13	8015D		27-Mar-17, 22:57:25
35	50	17032750	CCV D400 C28 50 L102516D A062	8015D		27-Mar-17, 23:18:49
36	19	17032719	MB 17032702 S	8015D		27-Mar-17, 23:40:12
37	20	17032720	LCS 17032702 S	8015D		28-Mar-17, 00:01:04
38	21	17032721	LCSD 17032702 S	8015D		28-Mar-17, 00:21:51
39	22	17032722	17-03-1704-1	8015D		28-Mar-17, 00:43:07
40	23	17032723	17-03-1704-2	8015D		28-Mar-17, 01:04:39
41	24	17032724	17-03-1704-3	8015D		28-Mar-17, 01:25:31
42	25	17032725	17-03-1704-4	8015D		28-Mar-17, 01:46:17
43	26	17032726	17-03-1704-5	8015D		28-Mar-17, 02:07:03
44	27	17032727	17-03-1704-6	8015D		28-Mar-17, 02:28:07
45	28	17032728	17-03-1704-7	8015D		28-Mar-17, 02:49:33
46	29	17032729	CCV D400 C28 50 L102516D A063	8015D		28-Mar-17, 03:11:01
47	30	17032730	17-03-1704-8	8015D		28-Mar-17, 03:32:18
48	31	17032731	17-03-1704-9	8015D		28-Mar-17, 03:53:22
49	32	17032732	17-03-1704-10	8015D		28-Mar-17, 04:14:20
50	40	17032740	CCV D400 C28 50 L102516D	8015D		28-Mar-17, 04:35:09

Reprinted/Updated to Logbook Date: 03/28/17
 Analyst: 8015
 Chromat ID: 682
 Logbook Page: 96
 Inj Volume: 49

BP-D40
 RB
 on
 GC 47

EPA 8015B (M)
Diesel + Motor Oil

PREPARATION LOGS

Analysis Method (EPA Method): TPH 8015 NWTPH 8015
 Extraction Method (EPA Method): 3510 3511 3550
 Analyst ID#: Measuring Sample- 605 Start Extraction- 605 Blow Down- 605 Clean Up-
 Matrix: Solid Aqueous Oil Wipe / Filter Balance ID#: Sand or Filter ID#:
 Extraction Start Date & Time: 3-22-17 10:40 Extractions End Date & Time: 3-22-17 18:00
 Drying Agent & ID#: Na₂SO₄ L0-23-20 Spike Added to: LCS LCSD MS MSD
 Surrogate Std ID# & Volume Added (mL): L011717A 0.125
 Spike Std ID# & Volume Added (mL): D: L102416B 0.05 MO:
 JA L121416A 0.05 GD L011717A 0.05
 Extraction Solvent & ID#: MeCl₂ S07-55-1 Elution Solvent ID# & Volume (mL): 2FX3
 Reverse Surrogate ID# & Volume Added (mL):
 Clean Up Start Date & Time: Clean Up End Date & Time:
 SGC Clean Up: 1. CEL 0.5g 2. 3630 - 2g 3. 3630 - 10g SPE Cartridge ID#:
 Clean Up Solvent ID#: Silica Gel ID#:
 QC Batch #: 17032201/02/03/04 Test Analyte Sample W (g) / (mL) SCG Clean Up Comments

Cel ID#:	Test Analyte	Sample W (g) / (mL)		SCG Clean Up	Comments
		Initial	Final		
MB	CYD/SA/60	500	2.5	<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
L05		500		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
L02b		500		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
L03 JA		500		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
L03D JA		500		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
L03 GD		500		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
L03D GD		500		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
17-03-1516-1F	CC JA	500		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
↓ -2F		500		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
↓ -3F		500		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
↓ -4F		550		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
17-03-1519-1L	CC	550		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
↓ -2L		550		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
17-03-1553-1J		500		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
17-03-1545-1K		500		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
↓ -2K		550		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
17-03-1551-1G	CC	500	5.0	<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	L28 L011717A 0.25 (3)
↓ -2G		500		<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
17-03-1523-2G	D+MO	500	50	<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
17-03-1445-1A	GD	500	50	<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	(14)
17-03-1021A				<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
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				<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
				<input type="checkbox"/> NA <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	



EPA 8015B (M)
TPH as Gasoline
(Aqueous)

RAW DATA

EPA 8015B (M) TPH as Gasoline

INITIAL CALIBRATION

INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8015B (M)

ICAL WORK ORDER: 099-15-705-3108-4982
ICAL BATCH ID: 1701181022
INSTRUMENT: GC 56

ANALYZED BY: 1,083
ICAL D/T ANALYZED: 2017-01-18 19:09
REVIEWED BY: 607
D/T REVIEWED: 2017-01-27 16:21

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD CL	R or R ² CL	R or R ² CL	STATUS
TPH as Gasoline	C		9,022.196	6,521.518	6,030.798	5,974.0	6,072.592					6,724.240	0.00	19	0-20		PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2017-01-18 19:09	\\Us26prvp001\lufg\GC_56\GC_56_data\2017\170118\17011802.d\Report.txt17011802
2	2017-01-18 19:41	\\Us26prvp001\lufg\GC_56\GC_56_data\2017\170118\17011803.d\Report.txt17011803
3	2017-01-18 20:13	\\Us26prvp001\lufg\GC_56\GC_56_data\2017\170118\17011804.d\Report.txt17011804
4	2017-01-18 20:44	\\Us26prvp001\lufg\GC_56\GC_56_data\2017\170118\17011805.d\Report.txt17011805
5	2017-01-18 21:16	\\Us26prvp001\lufg\GC_56\GC_56_data\2017\170118\17011806.d\Report.txt17011806

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor

LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)

LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8015B (M)

ICV WORK ORDER: 099-15-705-3108-4982

INITIAL BATCH: 1701181022

INSTRUMENT: GC 56

ANALYZED BY: 1083

D/T ANALYZED:

INITIAL:

ICV:

REVIEWED BY:

D/T REVIEWED:

2017-01-18 19:09

2017-01-18 21:48

607

2017-01-27 16:21

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170118\17011807.d\Report.txt\17011807

<u>COMPOUND NAME</u>	<u>COMP TYPE</u>	<u>CALIB MODEL</u>	<u>MIN RF</u>	<u>AVG RF</u>	<u>ICV RF</u>	<u>AMOUNT</u>	<u>ICV CONC</u>	<u>ICV %D</u>	<u>ICV %D CL</u>	<u>STATUS</u>
TPH as Gasoline	C	Avg Resp	0.00	6724239.883	7268323.191			-8	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 19-Jan-2017 13:25

Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 18-JAN-2017 18:38
 End Cal Date : 18-JAN-2017 21:16
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP Genie
 Method file : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Cal Date : 19-Jan-2017 13:25 ulmc
 Curve Type : Average

Calibration File Names:

Level 1: /chem1/VOA/GC_56.i/170118.b/17011802.d
 Level 2: /chem1/VOA/GC_56.i/170118.b/17011803.d
 Level 3: /chem1/VOA/GC_56.i/170118.b/17011804.d
 Level 4: /chem1/VOA/GC_56.i/170118.b/17011805.d
 Level 5: /chem1/VOA/GC_56.i/170118.b/17011806.d

Compound	50.000	1000.000	2000.000	5000.000	1.000e+04	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5		
S 1 TPH as Gasoline rf	9022196	6521518	6030798	5974096	6072592	6724240	19
M 2 TPH as Gasoline	9022196	6521518	6030798	5974096	6072592	6724240	19
S 4 Gasoline Range Organics	6762658	5866162	5448652	5422879	5554348	5810940	10
S 5 C4-C12 (TPH as Gas)	8213869	6409138	5935579	5896321	6001007	6491183	15
S 6 GRO (C4-C8)Total	6652083	5134515	4765704	4721887	4823252	5219488	16
S 7 GRO (C6-C12)	7073635	6265016	5811965	5798006	5931804	6176085	9
S 8 GRO (C4-C12)	8213869	6409138	5935579	5896321	6001007	6491183	15
15 C4-Butane	845732	++++	++++	++++	++++	845732	0
16 C5-Pentane	3756836	++++	++++	++++	++++	3756836	0
17 C6-Hexane	9121076	++++	++++	++++	++++	9121076	0
18 C7-Heptane	9915207	++++	++++	++++	++++	9915207	0
19 C8-Octane	9628932	++++	++++	++++	++++	9628932	0
20 C9-Nonane	10318752	++++	++++	++++	++++	10318752	0
21 C10-Decane	9145854	++++	++++	++++	++++	9145854	0
22 C11-Undecane	5794223	++++	++++	++++	++++	5794223	0

GC 56
 ulmc
 01/19/17

Report Date : 19-Jan-2017 13:25

Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 18-JAN-2017 18:38
 End Cal Date : 18-JAN-2017 21:16
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP Genie
 Method file : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Cal Date : 19-Jan-2017 13:25 ulmc
 Curve Type : Average

Compound	50.000 Level 1	1000.000 Level 2	2000.000 Level 3	5000.000 Level 4	1.000e+04 Level 5	RRF	% RSD
23 C12-Dodecane	5662747	+++++	+++++	+++++	+++++	5662747	0
24 C13-Tridecane	1241097	+++++	+++++	+++++	+++++	1241097	0
\$ 25 1,4-Bromofluorobenzene	3293002	3746863	3868238	5700846	5561007	4433991	25

Data File: /chem1/VOA/GC_56.i/170118.b/17011807.d
 Report Date: 01/19/2017 13:42

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_56.i Injection Date and Time: 18-JAN-2017 21:48
 Sample Name: 2PPM TPH ICV Initial Calibration Date(s): 18-JAN-2017 18-JAN-2017
 Sublist used: TPH_Gas.sub Initial Calibration Time(s): 18:38 21:16
 Method used: /chem1/VOA/GC_56.i/170118.b/80158021b.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
TPH as Gasoline rf	6724239.883	7268323.191	0.01	-8	15	Averaged
GRO (C4-C8)Total	5219488.155	5328209.243	0.01	-2	15	Averaged
GRO (C4-C12)	6491182.558	6998593.760	0.01	-8	15	Averaged
C4-C12 (TPH as Gas)	6491182.558	6998593.760	0.01	-8	15	Averaged
Gasoline Range Organics	5810939.854	5762646.237	0.01	1	15	Averaged
GRO (C6-C12)	6176085.174	6237517.312	0.01	-1	15	Averaged
TPH as Gasoline	6724239.883	7268323.191	0.01	-8	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
1,4-Bromofluorobenzene	4433991.152	3396696.260	0.01	23	30	Averaged

page 1

Data File: /chem1/VOA/GC_56.i/170118.b/17011802.d
 Report Date: 19-Jan-2017 13:24

Page 1

Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170118.b/17011802.d
 Lab Smp Id:
 Inj Date : 18-JAN-2017 19:09
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 0.05PPM TPH ICAL
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Meth Date : 19-Jan-2017 13:24 ulmc Quant Type: ESTD
 Cal Date : 18-JAN-2017 19:09 Cal File: 17011802.d
 Als bottle: 2 Calibration Sample, Level: 1
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

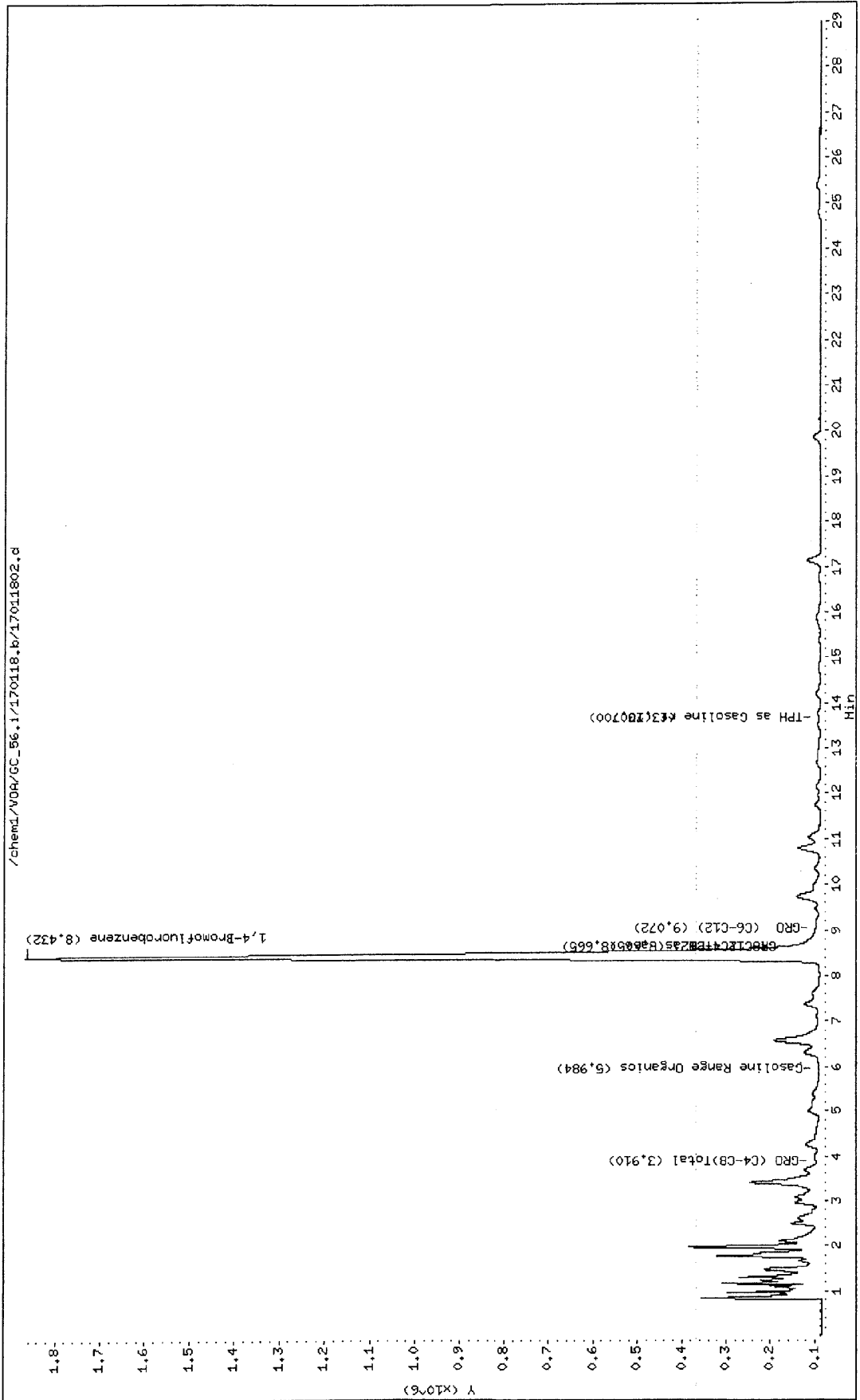
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			451109778	50.0000	50.00000
M 2 TPH as Gasoline				451109778	50.0000	50.00000
S 4 Gasoline Range Organics	1.075-10.893			338132919	50.0000	50.00000
S 5 C4-C12 (TPH as Gas)	0.400-16.931			410693458	50.0000	50.00000
S 6 GRO (C4-C8)Total	0.400-7.421			332604158	50.0000	50.00000
S 7 GRO (C6-C12)	1.212-16.931			353681764	50.0000	50.00000
S 8 GRO (C4-C12)	0.400-16.931			410693458	50.0000	50.00000
\$ 25 1,4-Bromofluorobenzene	8.432	8.432	0.000	329300177	100.000	100.00000

Data File: /chem1/V09/GC_56.i/170118.b/17011802.d
Date: 18-JAN-2017 19:09
Client ID:
Sample Info: 0.05PPH TPH ICAL

Instrument: GC_56.i
Operator: 1083
Column diameter: 2.00

Column phase:



Data File: /chem1/VOA/GC_56.i/170118.b/17011803.d
 Report Date: 19-Jan-2017 13:24

Page 1

Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170118.b/17011803.d
 Lab Smp Id:
 Inj Date : 18-JAN-2017 19:41
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 1PPM TPH ICAL
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Meth Date : 19-Jan-2017 13:24 ulmc Quant Type: ESTD
 Cal Date : 18-JAN-2017 19:41 Cal File: 17011803.d
 Als bottle: 3 Calibration Sample, Level: 2
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

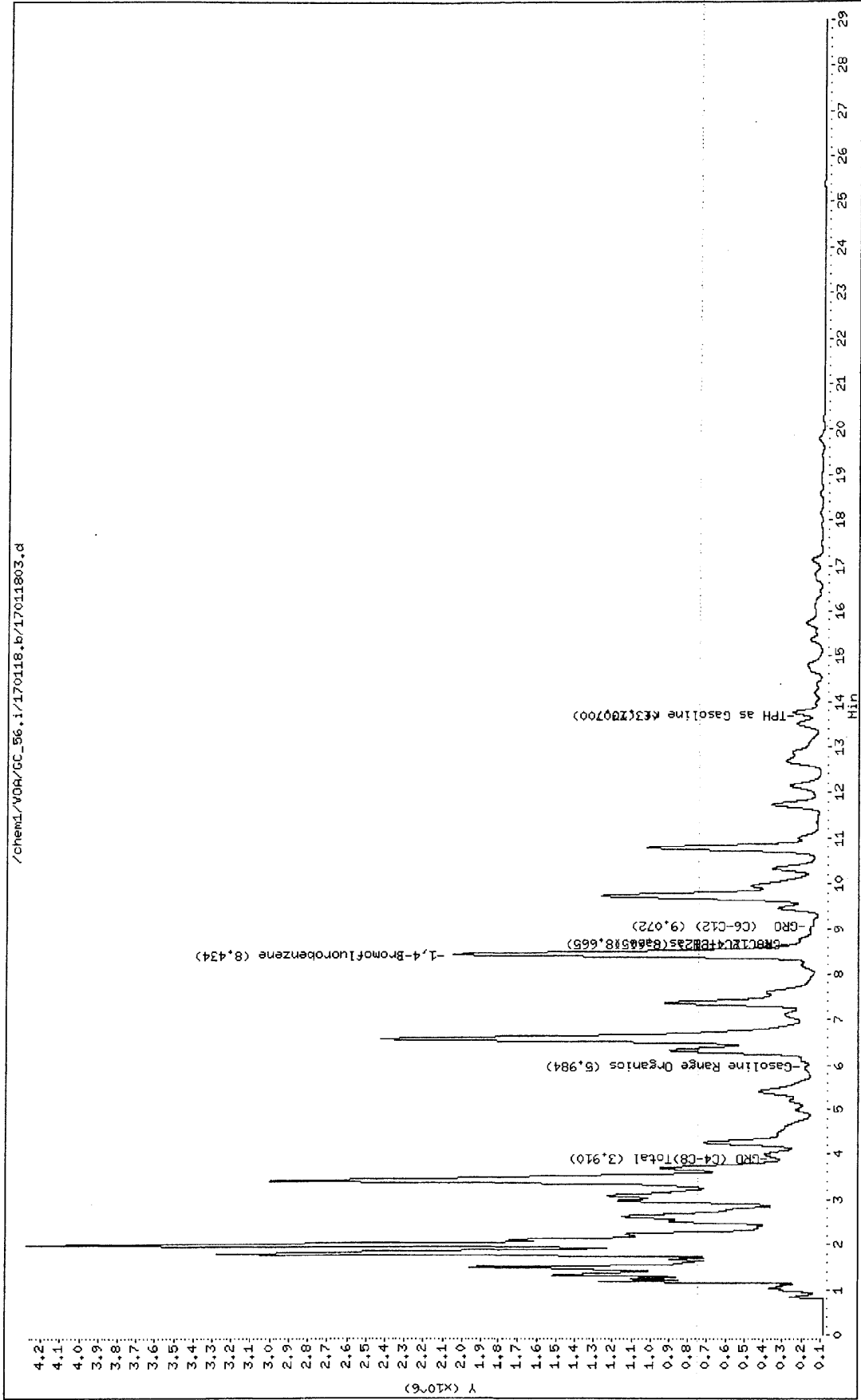
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			6521517750	1000.00	839.11966
M 2 TPH as Gasoline				6521517750	1000.00	839.11966
S 4 Gasoline Range Organics	1.075-10.893			5866162322	1000.00	929.01189
S 5 C4-C12 (TPH as Gas)	0.400-16.931			6409137751	1000.00	876.58274
S 6 GRO (C4-C8) Total	0.400-7.421			5134514913	1000.00	871.24628
S 7 GRO (C6-C12)	1.212-16.931			6265015607	1000.00	939.37770
S 8 GRO (C4-C12)	0.400-16.931			6409137751	1000.00	876.58274
S 25 1,4-Bromofluorobenzene	8.434	8.434	0.000	374686329	100.000	106.44702



Data File: /chem1/V09/GC_56.i/170118.b/17011803.d
Date: 18-JAN-2017 19:41
Client ID:
Sample Info: 1PPH TPH ICAL

Instrument: GC_56.i
Operator: 1083
Column diameter: 2.00

Column phase:



Data File: /chem1/VOA/GC_56.i/170118.b/17011804.d
 Report Date: 19-Jan-2017 13:24

Page 1

Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170118.b/17011804.d
 Lab Smp Id:
 Inj Date : 18-JAN-2017 20:13
 Operator : 1083
 Smp Info : 2PPM TPH ICAL
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Meth Date : 19-Jan-2017 13:24 ulmc
 Cal Date : 18-JAN-2017 20:13
 Als bottle: 4
 Dil Factor: 1.00000
 Integrator: HP Genie
 Target Version: 3.50
 Processing Host: US26TAR2

Inst ID: GC_56.i
 Quant Type: ESTD
 Cal File: 17011804.d
 Calibration Sample, Level: 3
 Compound Sublist: TPH_Gas.sub

Concentration Formula: Amt * DF * CpndVariable

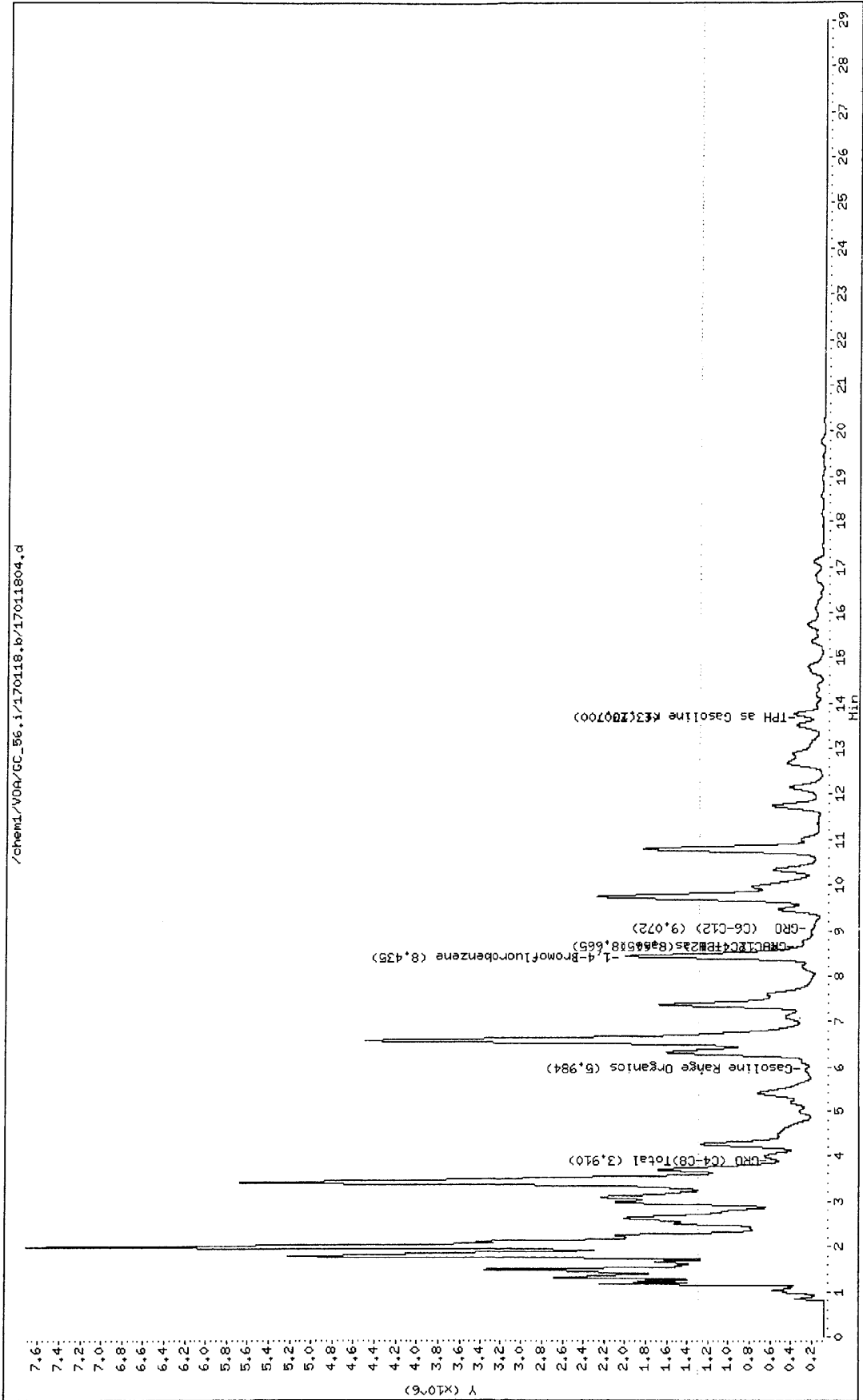
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			12061596980	2000.00	1677.20091
M 2 TPH as Gasoline				12061596980	2000.00	1677.20091
S 4 Gasoline Range Organics	1.075-10.893			10897304557	2000.00	1808.43382
S 5 C4-C12 (TPH as Gas)	0.400-16.931			11871157212	2000.00	1732.29192
S 6 GRO (C4-C8) Total	0.400-7.421			9531408041	2000.00	1727.50738
S 7 GRO (C6-C12)	1.212-16.931			11623929396	2000.00	1820.92257
S 8 GRO (C4-C12)	0.400-16.931			11871157212	2000.00	1732.29192
\$ 25 1,4-Bromofluorobenzene	8.435	8.435	0.000	386823804	100.000	106.38617

Data File: /chem1/V04/CC_56.i/170118.b/17011804.d
Date : 18-JAN-2017 20:13
Client ID:
Sample Info: 2PPH TPH ICAL

Instrument: GC_56.i
Operator: 1083
Column diameter: 2.00

Column phase:



Data File: /chem1/VOA/GC_56.i/170118.b/17011805.d
 Report Date: 19-Jan-2017 13:24

Page 1

Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170118.b/17011805.d
 Lab Smp Id:
 Inj Date : 18-JAN-2017 20:44
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 5PPM TPH ICAL
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Meth Date : 19-Jan-2017 13:24 ulmc Quant Type: ESTD
 Cal Date : 18-JAN-2017 20:44 Cal File: 17011805.d
 Als bottle: 5 Calibration Sample, Level: 4
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

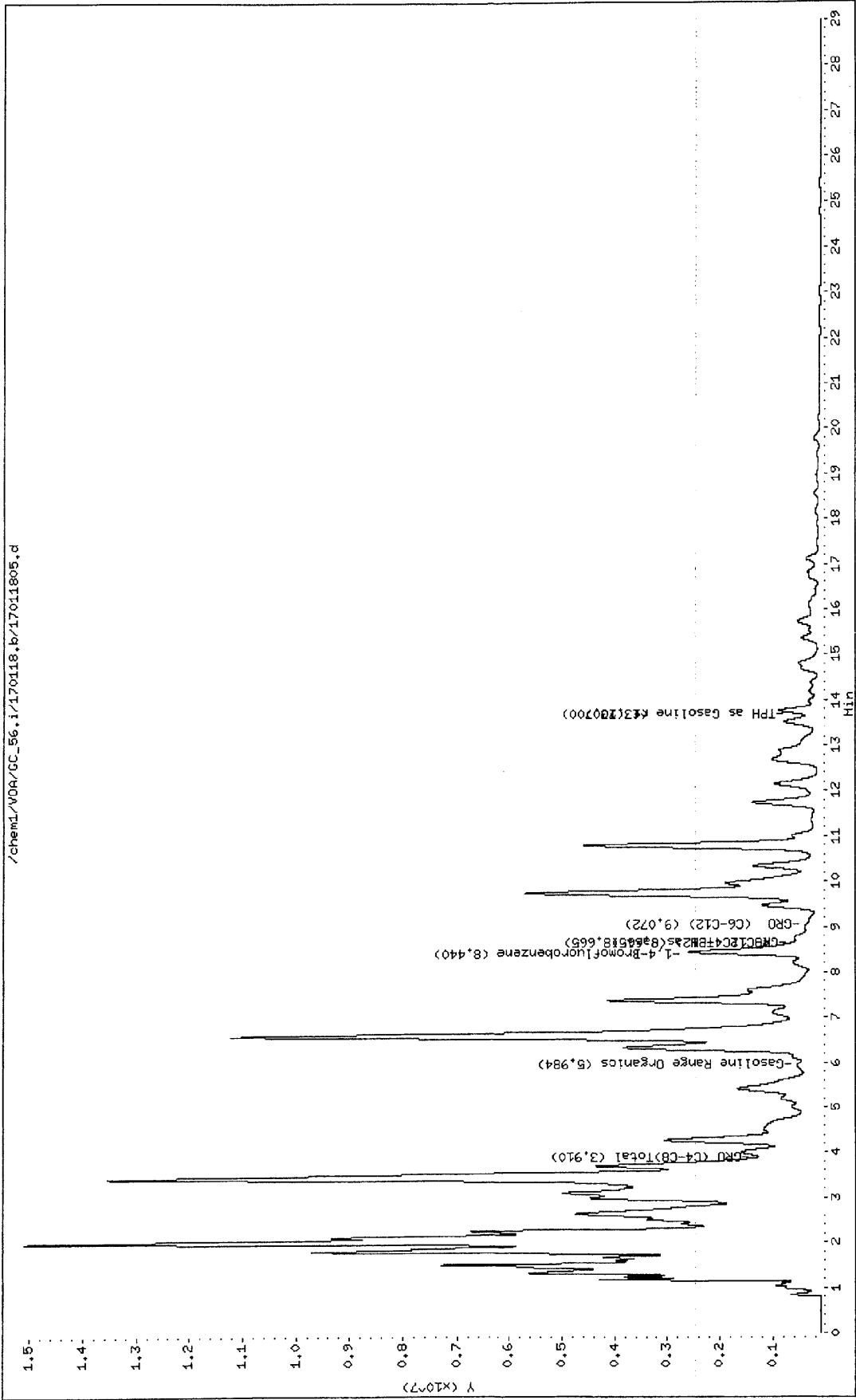
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			29870478365	5000.00	4337.13078
M 2 TPH as Gasoline				29870478365	5000.00	4337.13078
S 4 Gasoline Range Organics	1.075-10.893			27114393902	5000.00	4615.14690
S 5 C4-Cl2 (TPH as Gas)	0.400-16.931			29481603631	5000.00	4457.63872
S 6 GRO (C4-C8)Total	0.400-7.421			23609432724	5000.00	4439.07556
S 7 GRO (C6-C12)	1.212-16.931			28990028933	5000.00	4647.95685
S 8 GRO (C4-C12)	0.400-16.931			29481603631	5000.00	4457.63872
\$ 25 1,4-Bromofluorobenzene	8.440	8.440	0.000	570084555	100.000	137.29575

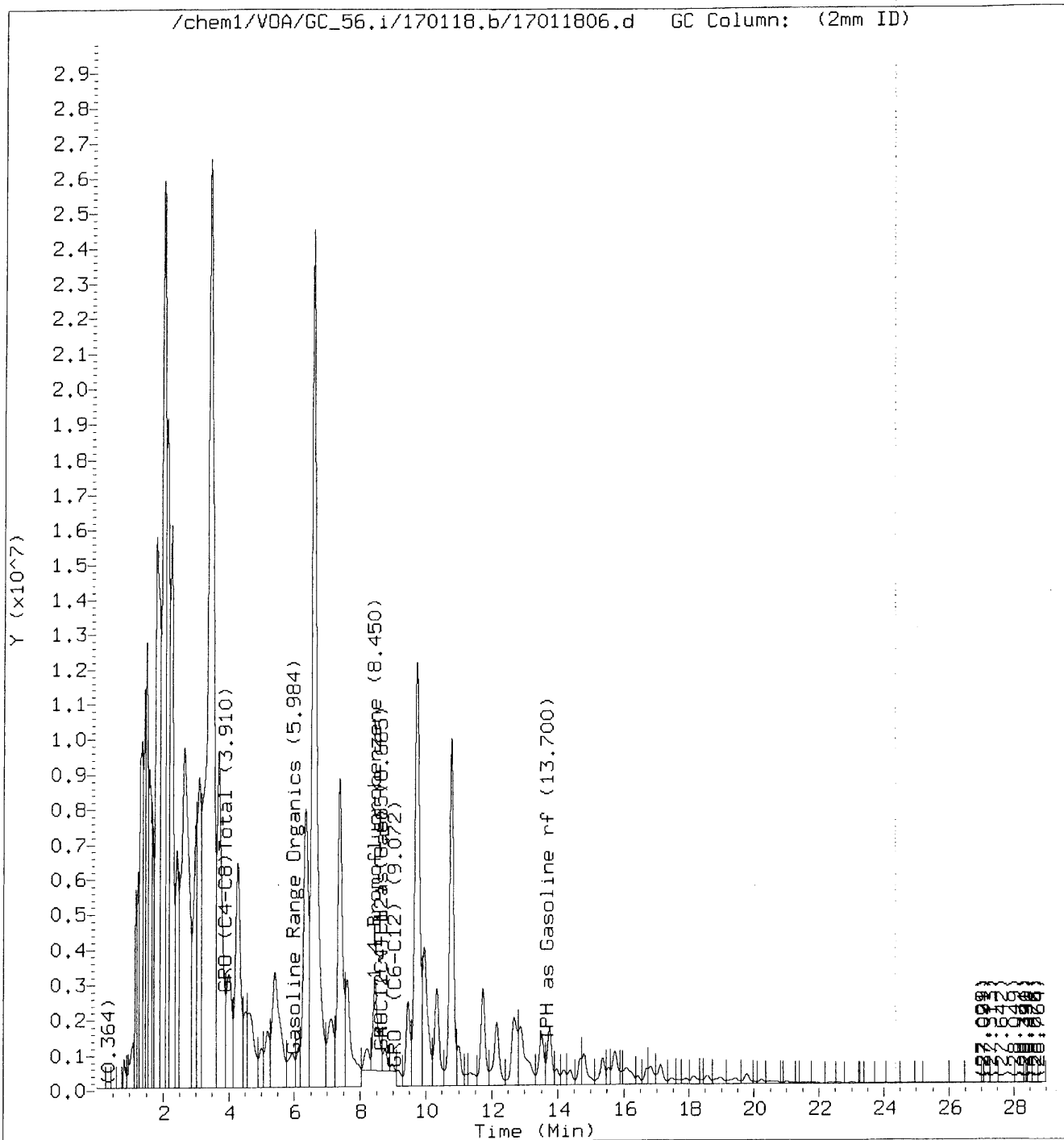
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Date : 18-JAN-2017 20:44
Client ID:
Sample Info: 5PPH TPH ICAL

Instrument: GC_56.i
Operator: 1083
Column diameter: 2.00

Column phase:



Manually Integrated Data File

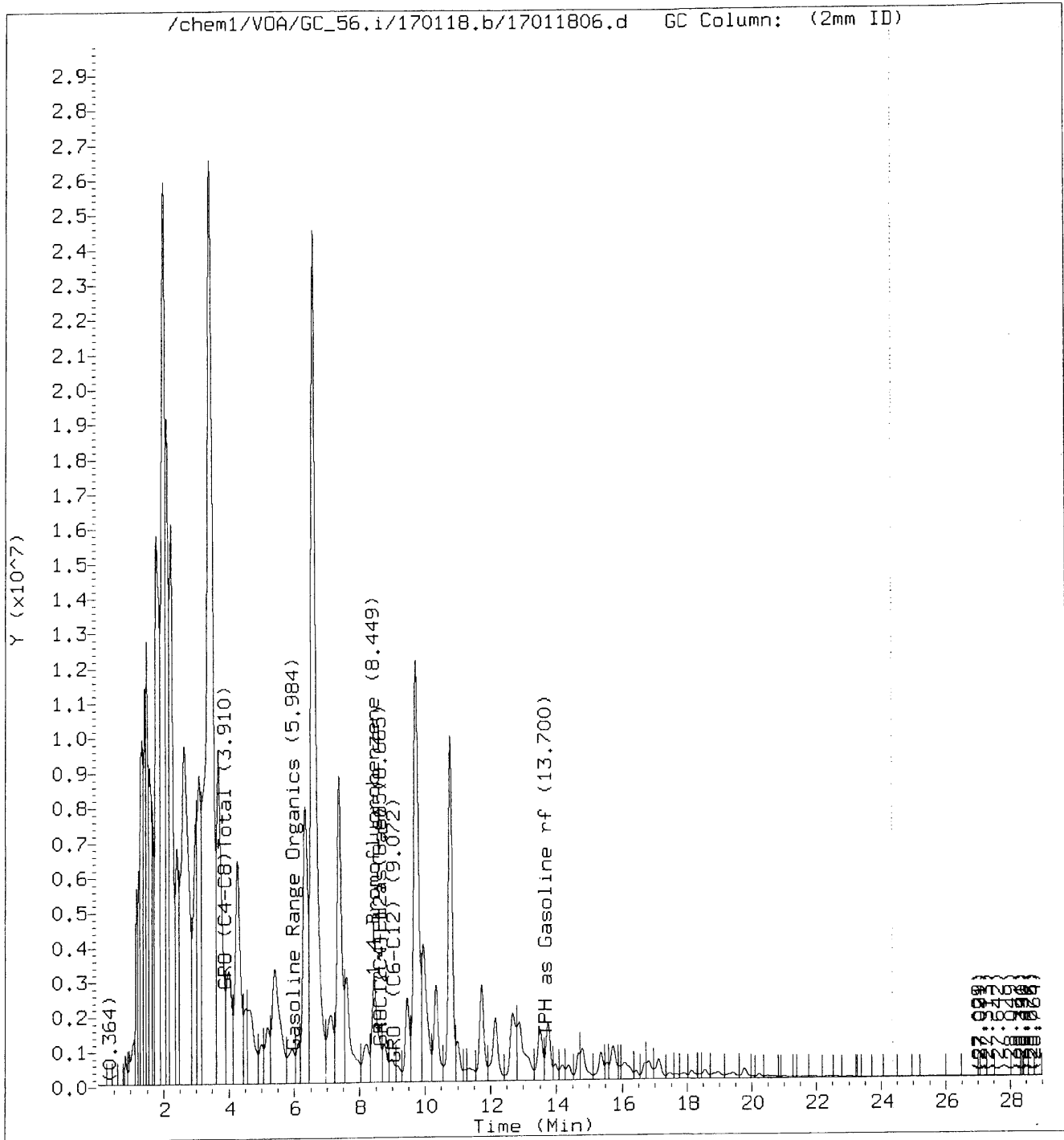


Reason for manual integration: Signal not integrated by automation

Digitally signed by
Analyst responsible for change: on at .
Target 3.5 esignature user ID:

Audit/management approval: *Mc*

Original Data File



Data File: /chem1/VOA/GC_56.i/170118.b/17011806.d
 Report Date: 19-Jan-2017 13:25

Page 1

Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170118.b/17011806.d
 Lab Smp Id:
 Inj Date : 18-JAN-2017 21:16
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 10PPM TPH ICAL
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Meth Date : 19-Jan-2017 13:25 ulmc Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 6 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			60725919400	10000.0	9030.89724 (M)
M 2 TPH as Gasoline				60725919400	10000.0	9030.89724
S 4 Gasoline Range Organics	1.075-10.893			55543475101	10000.0	9558.43228 (M)
S 5 C4-C12 (TPH as Gas)	0.400-16.931			60010065477	10000.0	9244.85868 (M)
S 6 GRO (C4-C8) Total	0.400-7.421			48232521355	10000.0	9240.85272 (M)
S 7 GRO (C6-C12)	1.212-16.931			59318044976	10000.0	9604.47327 (M)
S 8 GRO (C4-C12)	0.400-16.931			60010065477	10000.0	9244.85868 (M)
\$ 25 1,4-Bromofluorobenzene	8.450	8.450	0.000	556100711	100.000	125.41764 (M)

QC Flag Legend

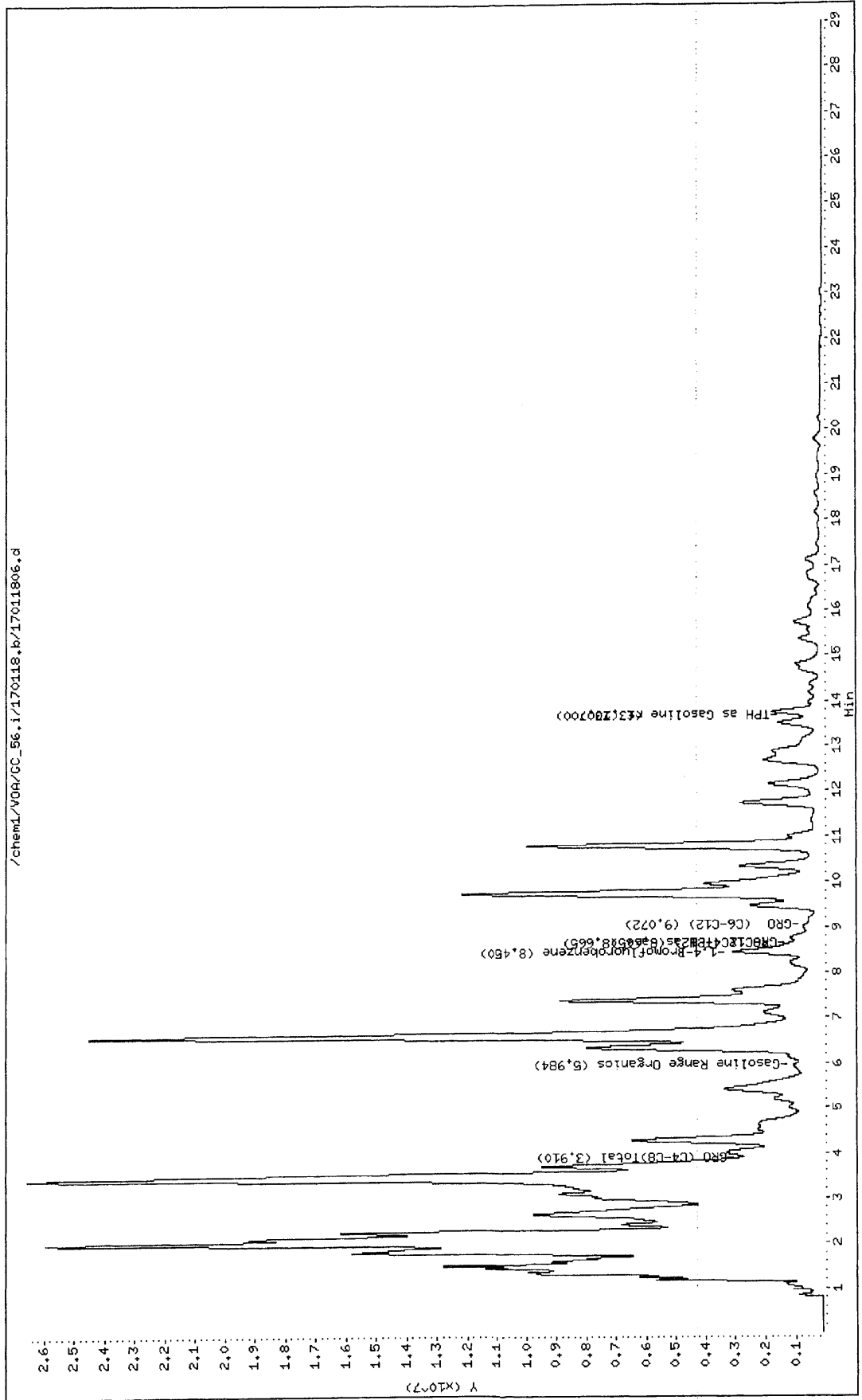
M - Compound response manually integrated.



Data File: /chemd/V09/GC_56.i/170118.b/17011806.d
Date : 18-JAN-2017 21:16
Client ID:
Sample Info: 10PPM TPH ICAL

Instrument: GC_56.i
Operator: 1083
Column diameter: 2.00

Column phase:



Data File: /chem1/VOA/GC_56.i/170118.b/17011807.d
 Report Date: 19-Jan-2017 13:25

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Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170118.b/17011807.d
 Lab Smp Id:
 Inj Date : 18-JAN-2017 21:48
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 2PPM TPH ICV
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Meth Date : 19-Jan-2017 13:25 ulmc Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 7 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

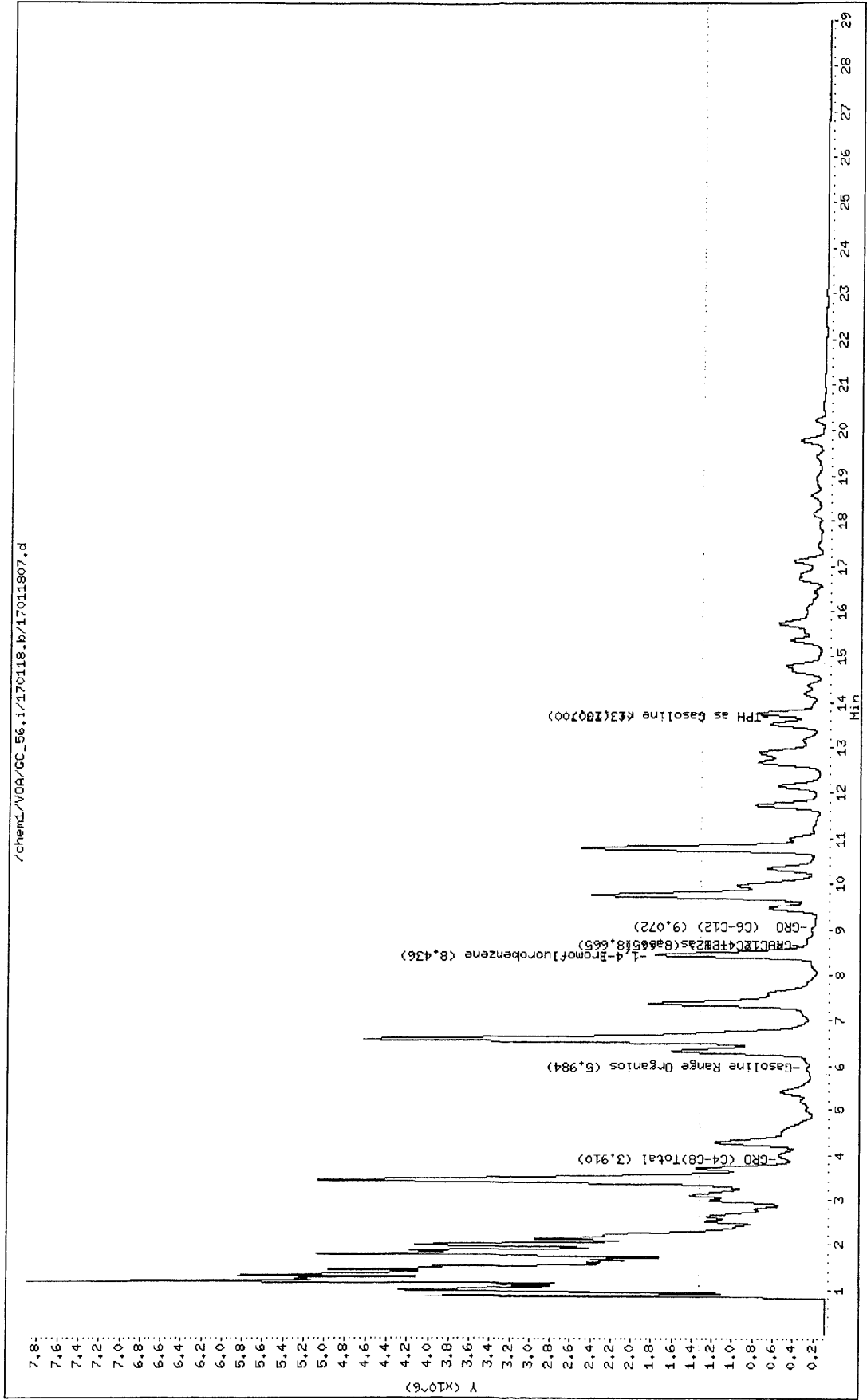
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			14536646382	2000.00	2161.82745
M 2 TPH as Gasoline				14536646382	2000.00	2161.82745
S 4 Gasoline Range Organics	1.075-10.893			11525292474	2000.00	1983.37837
S 5 C4-C12 (TPH as Gas)	0.400-16.931			13997187519	2000.00	2156.33860
S 6 GRO (C4-C8)Total	0.400-7.421			10656418486	2000.00	2041.65967
S 7 GRO (C6-C12)	1.212-16.931			12475034623	2000.00	2019.89355
S 8 GRO (C4-C12)	0.400-16.931			13997187519	2000.00	2156.33860
\$ 25 1,4-Bromofluorobenzene	8.436	8.450	-0.014	339669626	100.000	76.60584



Data File: /chem1/V09/CC_56.i/170118.b/17011807.d
Date : 18-JAN-2017 21:48
Client ID:
Sample Info: 2PPH TPH ICV

Instrument: GC_56.i
Operator: 1083
Column diameter: 2.00

Column phase:



=====
 External Standard Report
 =====

Data File Name : /chem1/VOA/GC_56/170118/17011801.d
 Page Number :
 Operator : 1083 Vial Number : Vial 1
 Instrument : GC 56 Injection Number : 1
 Sample Name : MARKER STD T122016B Sequence Line : 0
 Instrument Method: 80158021b.m
 Acquired on : 18 JAN 17 18:38
 Report Created on: 19-JAN-17 13:24 Analysis Method : 80158021b.m
 Software Revision: Target 3.50

Sig. 1 in /chem1/VOA/GC_56.i/170118.b/17011801.d

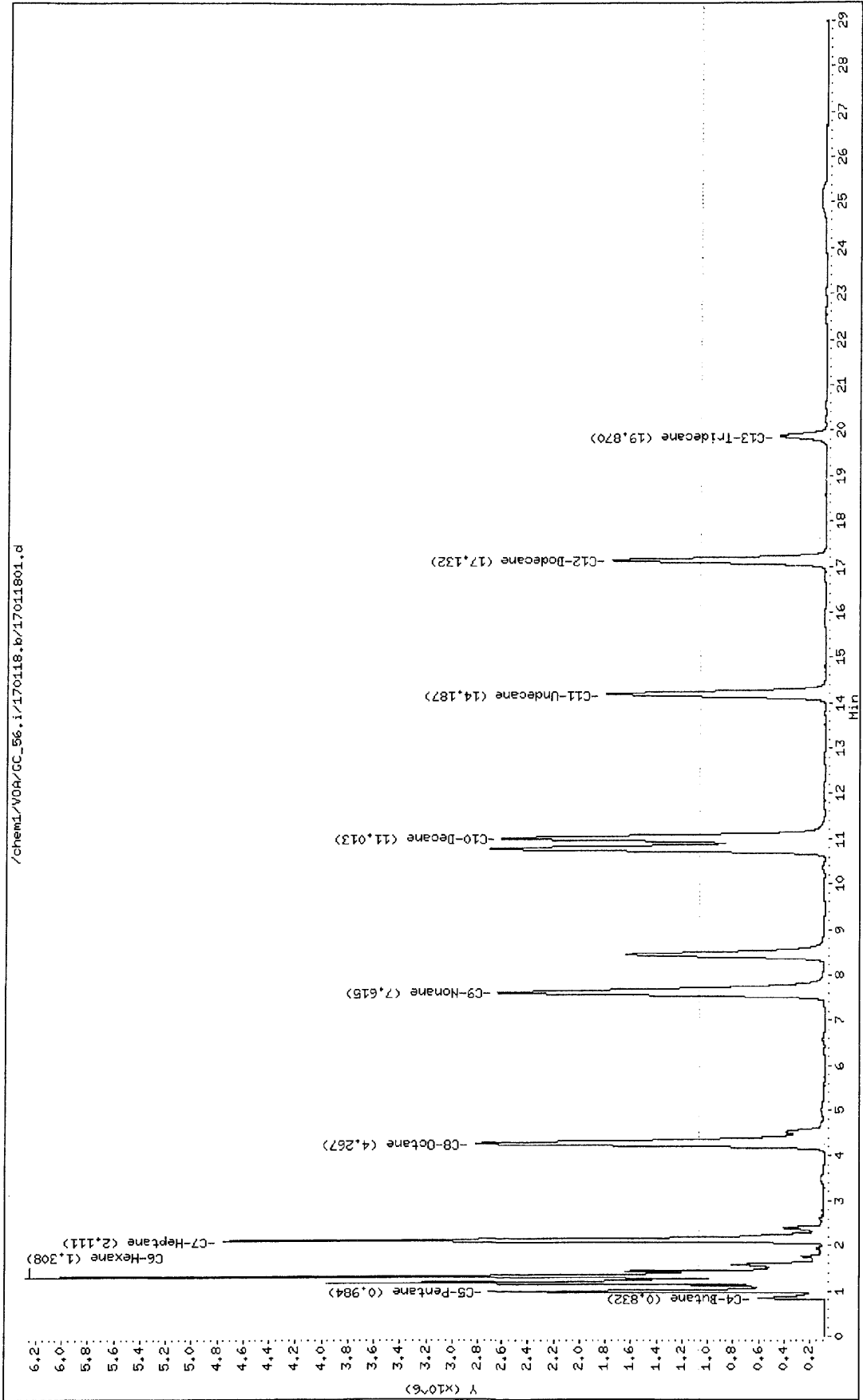
RT Range	Exp RT	DLT RT	Response	ug/L	Compound
0.832	8.450	7.618	42286622.00	50.00	C4-Butane
0.984	8.450	7.466	187841821.00	50.00	C5-Pentane
1.308	8.450	7.142	456053801.00	50.00	C6-Hexane
2.111	8.450	6.339	495760331.00	50.00	C7-Heptane
4.267	8.450	4.183	481446596.00	50.00	C8-Octane
7.615	8.450	0.835	515937618.00	50.00	C9-Nonane
11.013	8.450	-2.563	457292711.00	50.00	C10-Decane
14.187	8.450	-5.737	289711149.00	50.00	C11-Undecane
17.132	8.450	-8.682	283137358.00	50.00	C12-Dodecane
19.870	8.450	-11.420	62054829.00	50.00	C13-Tridecane

End of File

Data File: /chem1/V04/GC_56.i/170118.b/17011801.d
Date : 18-JAN-2017 18:38
Client ID:
Sample Info: MARKER STD T122016B

Instrument: GC_56.i
Operator: 1083
Column diameter: 2.00

Column phase:



EPA 8015B (M)
TPH as Gasoline

SAMPLE DATA

RAW DATA SHEET FOR METHOD: EPA 8015B (M)

<u>WORK ORDER:</u> 17-03-1523	<u>ANALYZED BY:</u> 1,083
<u>INSTRUMENT:</u> GC 56	<u>D/T ANALYZED:</u> 2017-03-25 11:21
<u>EXTRACTION:</u> EPA 5030C ✓	<u>REVIEWED BY:</u>
<u>D/T EXTRACTED:</u> 2017-03-24 00:00 ✓	<u>D/T REVIEWED:</u>
<u>DATA FILE:</u> \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170324\17032440.d\Report.txt17032440 ✓	

2 **CLIENT SAMPLE NUMBER: IDW-W**

<u>LCS/MB BATCH:</u> 170324L035	<u>SAMPLE VOLUME / WEIGHT:</u> DEFAULT: 5.00 ml / ACTUAL: 5.00 ml
<u>MS/MSD BATCH:</u> 170324S015	<u>FINAL VOLUME / WEIGHT:</u> DEFAULT: 5.00 ml / ACTUAL: 5.00 ml
<u>UNITS:</u> ug/L	<u>ADJUSTMENT RATIO TO PF:</u> 1.00

COMMENT: The reporting limit is elevated resulting from matrix interference. ✓

<u>COMPOUND</u>	<u>ON COL</u>	<u>CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
TPH as Gasoline	47.5	50.0	✓	ND	5000	D

Data File: /chem1/VOA/GC_56.i/170324.b/17032440.d
 Report Date: 25-Mar-2017 12:07

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Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170324.b/17032440.d
 Lab Smp Id:
 Inj Date : 25-MAR-2017 11:21
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 03-1523-2D 100uL<2 ✓
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170324.b/80158021b.m
 Meth Date : 25-Mar-2017 08:56 tempan Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 40
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			319323801	47.4885	47.48846
M 2 TPH as Gasoline				319323801	47.4885	47.48846 ✓
S 4 Gasoline Range Organics	1.193-10.893			77646376	13.3621	13.36210
S 5 C4-C12 (TPH as Gas)	0.400-16.931			197124232	30.3680	30.36800
S 6 GRO (C4-C8) Total	0.400-7.421			116120615	22.2475	22.24751
S 7 GRO (C6-C12)	1.212-16.931			142406470	23.0577	23.05772
S 8 GRO (C4-C12)	0.400-16.931			197124232	30.3680	30.36800
\$ 25 1,4-Bromofluorobenzene	8.440 8.450 -0.010			451222354	101.764	101.76437



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Data File: /chem1/V06/GC_56.i/170324.b/17032440.d

Date : 25-MAR-2017 11:21

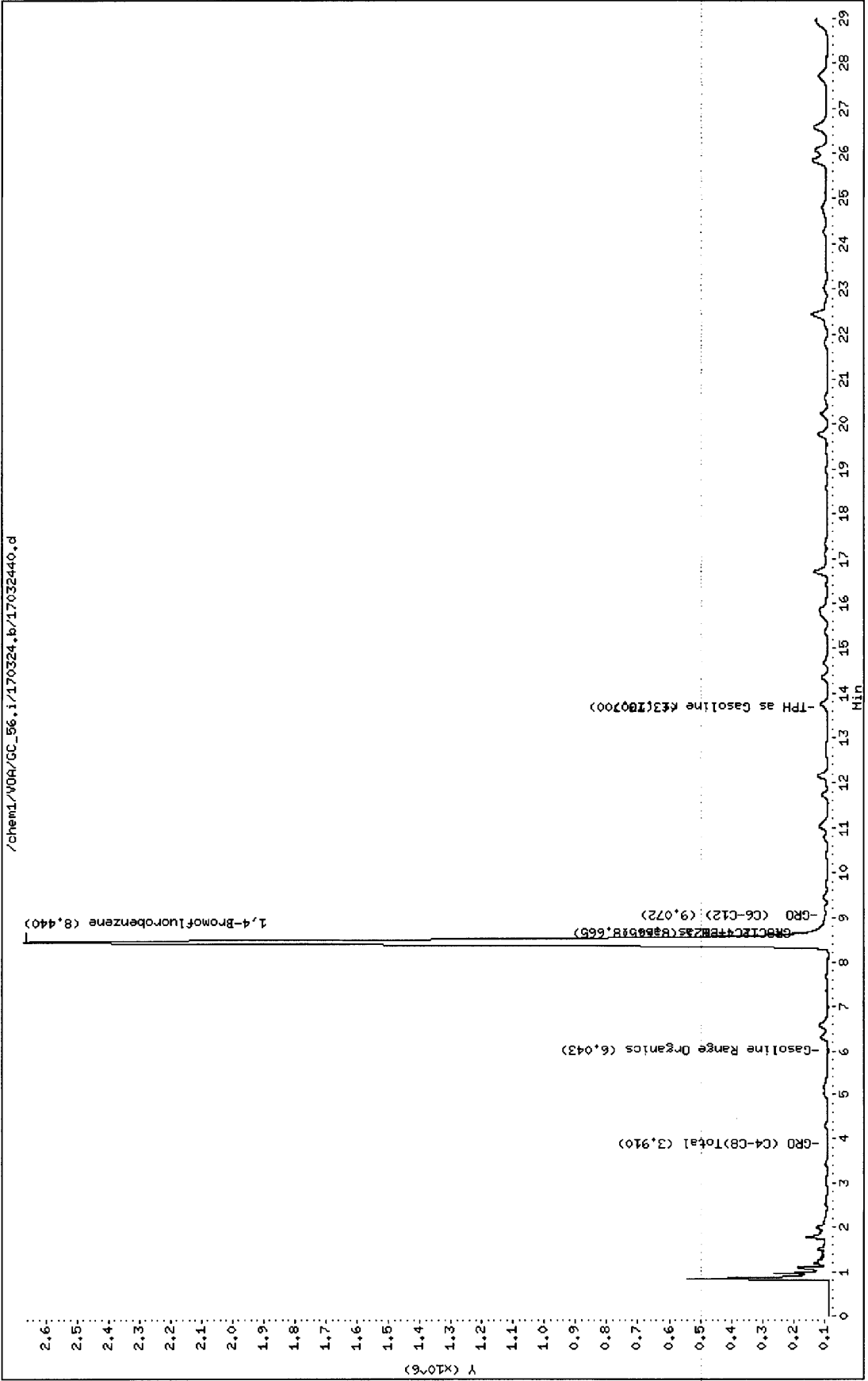
Client ID:

Sample Info: 03-1523-2D 100uL<2

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00



EPA 8015B (M)
TPH as Gasoline

QUALITY CONTROL

Method Blank
LCS/LCSD
MS/MSD

**METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8015B (M)**

MB SAMPLE ID: 099-15-704-1685
MB BATCH ID: 170324L035
INSTRUMENT: GC 56
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 1,083
D/T ANALYZED: 2017-03-24 22:04
REVIEWED BY:
D/T REVIEWED:
MATRIX: Water

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170324\17032415.d\Report.txt17032415

CLIENT WORK ORDER: 17-03-1523

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
2	IDW-W		2017-03-25 11:21	\\Us26prvp001\luftg\GC_56\GC_56_data\2017\170324\17032440.d\Report.txt1703244

**RAW DATA SHEET
FOR METHOD: EPA 8015B (M)**

WORK ORDER: 099-15-704
INSTRUMENT: GC 56
EXTRACTION : EPA 5030C
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 1,083
D/T ANALYZED: 2017-03-24 22:04
REVIEWED BY:
D/T REVIEWED:

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170324\17032415.d\Report.txt17032415

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 170324L035 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 5.00 ml / ACTUAL: 5.00 ml
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 ml / ACTUAL: 5.00 ml
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
TPH as Gasoline	31.6	1.00	ND	100	

**LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 8015B (M)**

LCS SAMPLE ID: 099-15-704- 1685
LCS/MB BATCH ID: 170324L035
INSTRUMENT: GC 56

EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 1,083
D/T ANALYZED: 2017-03-24 21:33
REVIEWED BY:
D/T REVIEWED:

DATA FILE: \\Us26prvp001\lufg\GC_56\data\GC_56_data\2017\170324\17032414.d\Report.txt17032414

<u>COMPOUND NAME</u>	<u>CONC ADDED</u>	<u>CONC REC</u>	<u>%RECOVERY</u>	<u>%REC CONTROL LIMIT</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
TPH as Gasoline	2000	1921	96	78-120	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8015B (M)

SPIKED SAMPLE ID: 17-03-1124-2
MS/MSD BATCH: 170324S015

INSTRUMENTS:

SAMPLE: GC 56
MS: GC 56
MSD: GC 56

EXTRACTION: EPA 5030C
D/T EXTRACTED:

SAMPLE: 2017-03-24 00:00
MS: 2017-03-24 00:00
MSD: 2017-03-24 00:00

ANALYZED BY: 1,083
D/T ANALYZED:

SAMPLE: 2017-03-24 22:36
MS: 2017-03-24 23:08
MSD: 2017-03-24 23:39

REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC.CL	RPD	RPD.CL	STATUS	QUALIFIERS
TPH as Gasoline	ND	2000	2000	1826	91	1886	94	68-122	3	0-18	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17032417	\\Us26prvp001\luftg\GC_56\GC_56_data\2017\170324\17032417.d\Report.txt
MSD	17032418	\\Us26prvp001\luftg\GC_56\GC_56_data\2017\170324\17032418.d\Report.txt

SURROGATE RECOVERIES FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-1523

BATCH ID:

LCS/MB: 170324L035**MS:** 170324S015

EXTRACTION: EPA 5030C

REVIEWED BY:

D/T REVIEWED:

2 **CLIENT SAMPLE NUMBER : IDW-W**

INSTRUMENT: GC 56

ANALYZED BY: 1,083

D/T EXTRACTED: 2017-03-24 00:00

D/T ANALYZED 2017-03-25 11:21

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170324\17032440.d\Report.txt17032440

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
1,4-Bromofluorobenzene	102	38-134	PASS	

MB **CLIENT SAMPLE NUMBER : Method Blank**

INSTRUMENT: GC 56

ANALYZED BY: 1,083

D/T EXTRACTED: 2017-03-24 00:00

D/T ANALYZED 2017-03-24 22:04

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170324\17032415.d\Report.txt17032415

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
1,4-Bromofluorobenzene	102	38-134	PASS	

LCS **CLIENT SAMPLE NUMBER : Lab Control Sample**

INSTRUMENT: GC 56

ANALYZED BY: 1,083

D/T EXTRACTED: 2017-03-24 00:00

D/T ANALYZED 2017-03-24 21:33

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170324\17032414.d\Report.txt17032414

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
1,4-Bromofluorobenzene	127	38-134	PASS	

MS **CLIENT SAMPLE NUMBER : Matrix Spike**

INSTRUMENT: GC 56

ANALYZED BY: 1,083

D/T EXTRACTED: 2017-03-24 00:00

D/T ANALYZED 2017-03-24 23:08

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170324\17032417.d\Report.txt17032417

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
1,4-Bromofluorobenzene	127	38-134	PASS	

**SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)**

WORK ORDER: 17-03-1523

REVIEWED BY: 607

BATCH ID:

D/T REVIEWED: 2017-03-27 09:59

LCS/MB:

MS: **170324S015**

EXTRACTION: EPA 5030C

MSD CLIENT SAMPLE NUMBER : **Matrix Spike Duplicate**

INSTRUMENT: GC 56

ANALYZED BY: 1,083

D/T EXTRACTED: 2017-03-24 00:00

D/T ANALYZED 2017-03-24 23:39

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170324\17032418.d\Report.txt17032418

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
1,4-Bromofluorobenzene	113	38-134	PASS	

% Rec.

Bay. CCV - 125%

Middle CCV - 102%

End CCV - 115%

Data File: /chem1/VOA/GC_56.i/170324.b/17032415.d
 Report Date: 25-Mar-2017 08:46

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Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170324.b/17032415.d
 Lab Smp Id:
 Inj Date : 24-MAR-2017 22:04
 Operator : 1083
 Smp Info : MB
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170324.b/80158021b.m
 Meth Date : 25-Mar-2017 08:46 tempn
 Cal Date : 18-JAN-2017 21:16
 Als bottle: 15
 Dil Factor: 1.00000
 Integrator: HP Genie
 Target Version: 3.50
 Processing Host: US26TAR2

Inst ID: GC_56.i
 Quant Type: ESTD
 Cal File: 17011806.d
 QC Sample: BLANK
 Compound Sublist: TPH_Gas.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			212769365	31.6421	31.64214
M 2 TPH as Gasoline				212769365	31.6421	31.64214
S 4 Gasoline Range Organics	1.193-10.893			87822642	15.1133	15.11332
S 5 C4-C12 (TPH as Gas)	0.400-16.931			147269714	22.6877	22.68765
S 6 GRO (C4-C8)Total	0.400-7.421			79767706	15.2827	15.28266
S 7 GRO (C6-C12)	1.212-16.931			131779484	21.3371	21.33705
S 8 GRO (C4-C12)	0.400-16.931			147269714	22.6877	22.68765
\$ 25 1,4-Bromofluorobenzene	8.440	8.450	-0.010	450824882	101.675	101.67473



Page 1

Data File: /chem1/V09/GC_56.i/170324.b/17032415.d

Date : 24-HAR-2017 22:04

Client ID:

Sample Info: MB

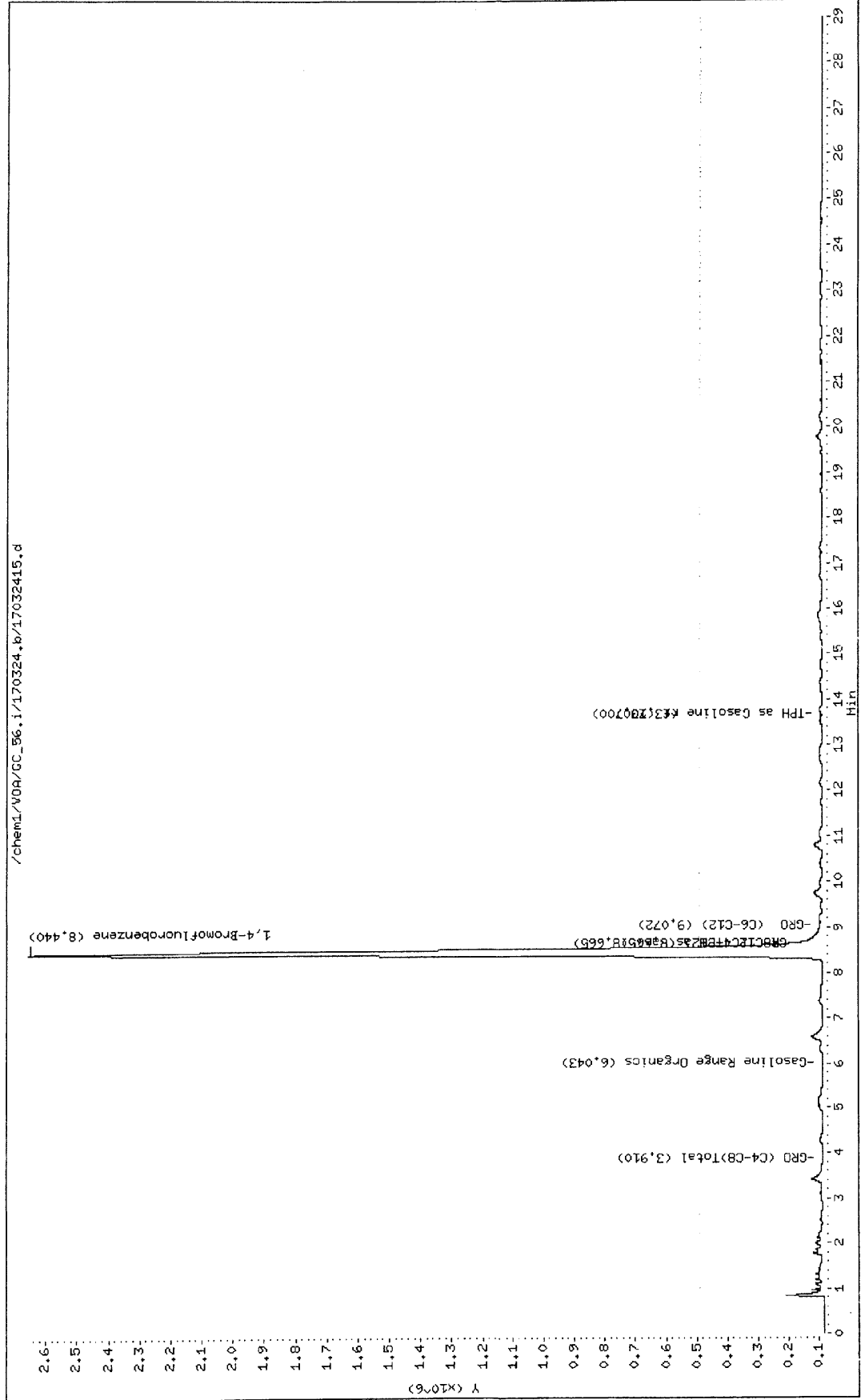
Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:

/chem1/V09/GC_56.i/170324.b/17032415.d



Data File: /chem1/VOA/GC_56.i/170324.b/17032414.d
 Report Date: 25-Mar-2017 08:46

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Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170324.b/17032414.d
 Lab Smp Id:
 Inj Date : 24-MAR-2017 21:33
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 2PPM TPH LCS
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170324.b/80158021b.m
 Meth Date : 25-Mar-2017 08:46 tempn Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 14 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			12920486326	1921.48	1921.47908
M 2 TPH as Gasoline				12920486326	1921.48	1921.47908
S 4 Gasoline Range Organics	1.193-10.893			9203728348	1583.86	1583.86226
S 5 C4-C12 (TPH as Gas)	0.400-16.931			12107520707	1865.23	1865.22572
S 6 GRO (C4-C8)Total	0.400-7.421			8228113103	1576.42	1576.42145
S 7 GRO (C6-C12)	1.212-16.931			11347570852	1837.34	1837.34040
S 8 GRO (C4-C12)	0.400-16.931			12107520707	1865.23	1865.22572
\$ 25 1,4-Bromofluorobenzene	8.449	8.450	-0.001	562946653	126.962	126.96160

Page 1

Data File: /chem1/V09/CC_56.i/170324.b/17032414.d

Date : 24-MAR-2017 21:33

Client ID:

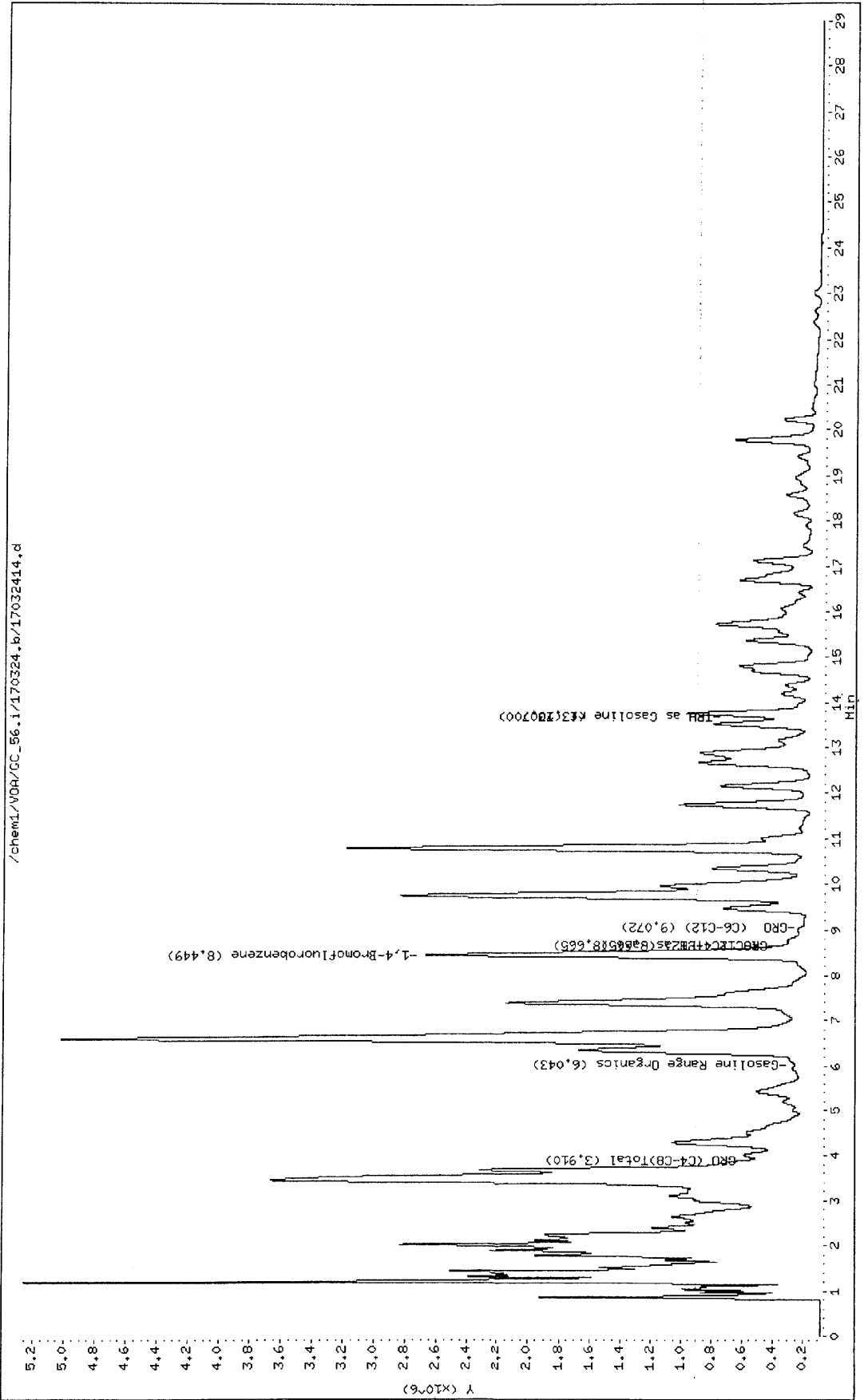
Sample Info: 2PPH TPH LCS

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:



Data File: /chem1/VOA/GC_56.i/170324.b/17032417.d
 Report Date: 25-Mar-2017 08:46

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Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170324.b/17032417.d
 Lab Smp Id:
 Inj Date : 24-MAR-2017 23:08
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : MS 03-1124-2F 5ML<2
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170324.b/80158021b.m
 Meth Date : 25-Mar-2017 08:46 tempn Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 17 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			12277560816	1825.87	1825.86597
M 2 TPH as Gasoline				12277560816	1825.87	1825.86597
S 4 Gasoline Range Organics	1.193-10.893			9242913846	1590.61	1590.60566
S 5 C4-C12 (TPH as Gas)	0.400-16.931			11546804151	1778.84	1778.84446
S 6 GRO (C4-C8) Total	0.400-7.421			7916578450	1516.73	1516.73463
S 7 GRO (C6-C12)	1.212-16.931			10835501442	1754.43	1754.42875
S 8 GRO (C4-C12)	0.400-16.931			11546804151	1778.84	1778.84446
S 25 1,4-Bromofluorobenzene	8.458	8.450	0.008	562685698	126.903	126.90275

Return to Contents

Data File: /chem1/V04/CC_56.i/170324.b/17032417.d

Date : 24-MAR-2017 23:08

Client ID:

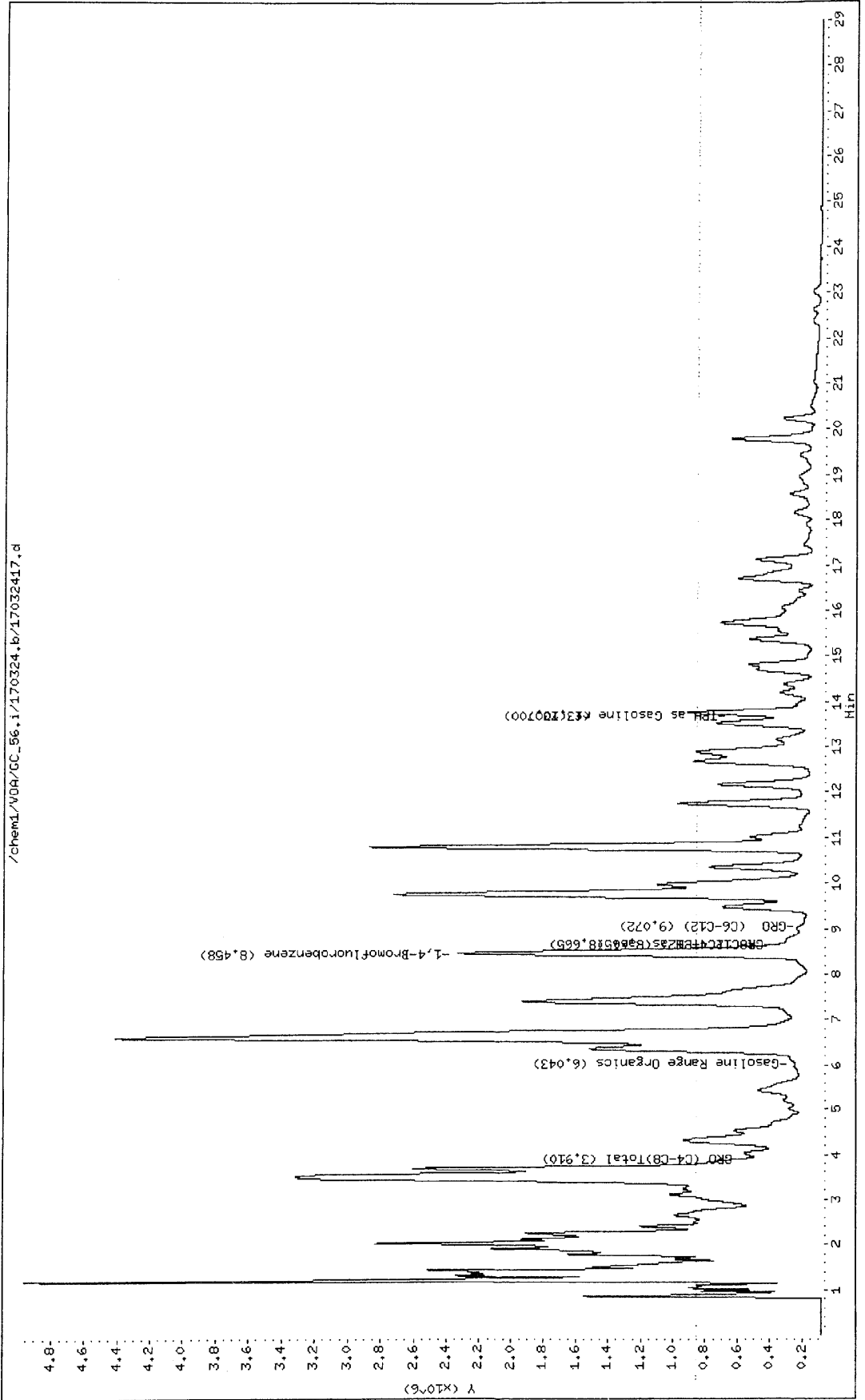
Sample Info: MS 03-1124-2F 5MLx2

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column Phase:



Data File: /chem1/VOA/GC_56.i/170324.b/17032418.d
 Report Date: 25-Mar-2017 08:46

Page 1

Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170324.b/17032418.d
 Lab Smp Id:
 Inj Date : 24-MAR-2017 23:39
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : MSD 03-1124-2F 5ML<2
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170324.b/80158021b.m
 Meth Date : 25-Mar-2017 08:46 tempn Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 18 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (ug/L)
S 1 TPH as Gasoline rf	0.400	27.000		12684974850	1886.45	1886.45483
M 2 TPH as Gasoline				12684974850	1886.45	1886.45483
S 4 Gasoline Range Organics	1.193	10.893		9594637610	1651.13	1651.13352
S 5 C4-C12 (TPH as Gas)	0.400	16.931		11959316386	1842.39	1842.39409
S 6 GRO (C4-C8)Total	0.400	7.421		8159346622	1563.25	1563.24650
S 7 GRO (C6-C12)	1.212	16.931		11199498277	1813.37	1813.36525
S 8 GRO (C4-C12)	0.400	16.931		11959316386	1842.39	1842.39409
\$ 25 1,4-Bromofluorobenzene	8.451	8.450	0.001	503141087	113.474	113.47363



Page 1

Data File: /chem1/V04/GC_56.i/170324.b/17032418.d

Date : 24-MAR-2017 23:39

Client ID:

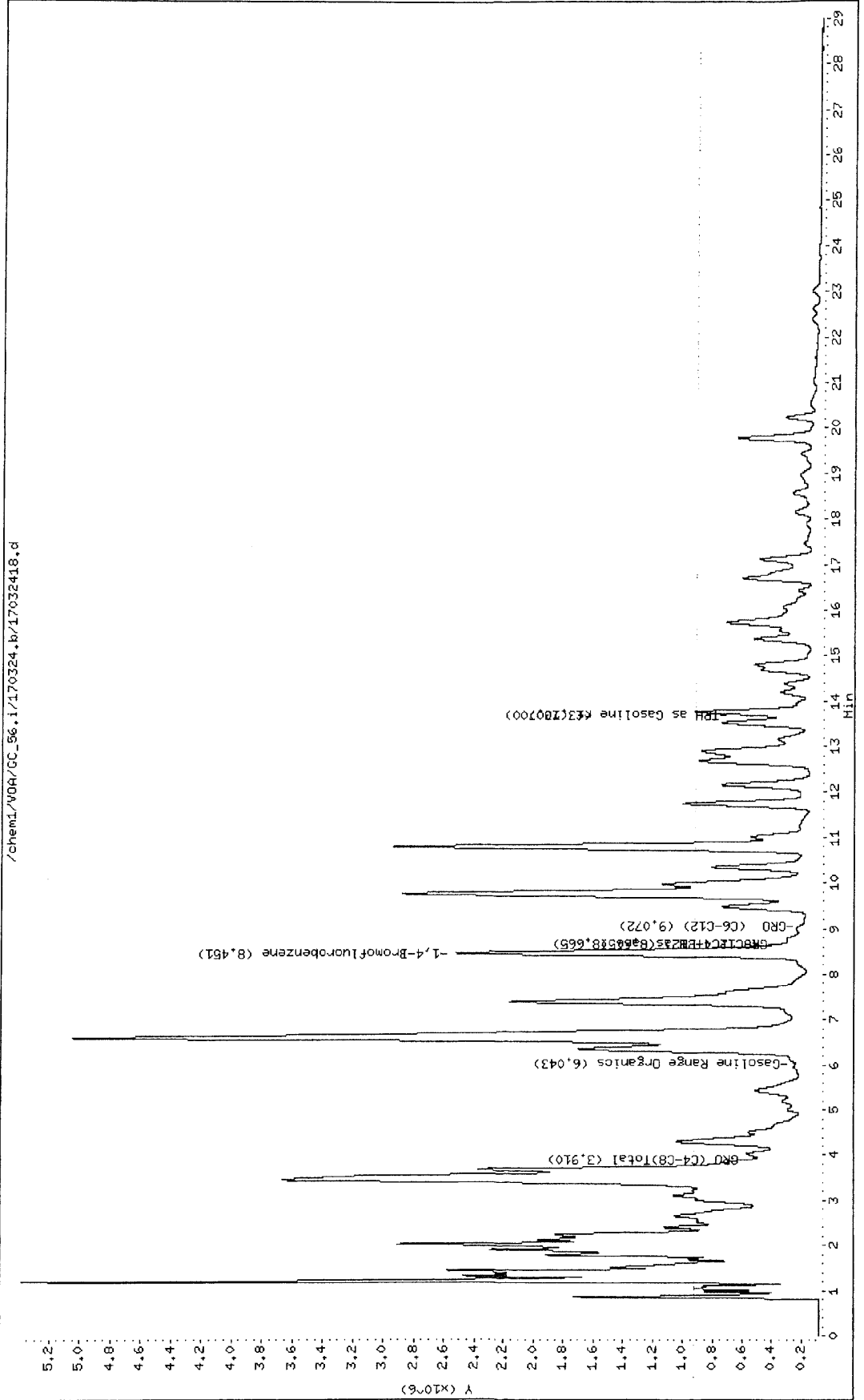
Sample Info: MSD 03-1124-2F BHL<2

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:



Data File: /chem1/VOA/GC_56.i/170324.b/17032416.d
 Report Date: 25-Mar-2017 09:21

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Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170324.b/17032416.d
 Lab Smp Id:
 Inj Date : 24-MAR-2017 22:36
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 03-1124-2F 5ML<2
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170324.b/80158021b.m
 Meth Date : 25-Mar-2017 08:56 tempn Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 16
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (ug/L)
=====	==	=====	=====	=====	=====	=====
S 1 TPH as Gasoline rf	0.400-27.000			169473639	25.2034	25.20338
M 2 TPH as Gasoline				169473639	25.2034	25.20338
S 4 Gasoline Range Organics	1.193-10.893			56803251	9.77523	9.77522
S 5 C4-C12 (TPH as Gas)	0.400-16.931			122361102	18.8504	18.85035
S 6 GRO (C4-C8) Total	0.400-7.421			76559232	14.6680	14.66795
S 7 GRO (C6-C12)	1.212-16.931			92957702	15.0512	15.05123
S 8 GRO (C4-C12)	0.400-16.931			122361102	18.8504	18.85035
\$ 25 1,4-Bromofluorobenzene	8.440 8.450 -0.010			430551103	97.1024	97.10238

Data File: /chem1/V0A/GC_56.i/170324.b/17032416.d

Date : 24-MAR-2017 22:36

Client ID:

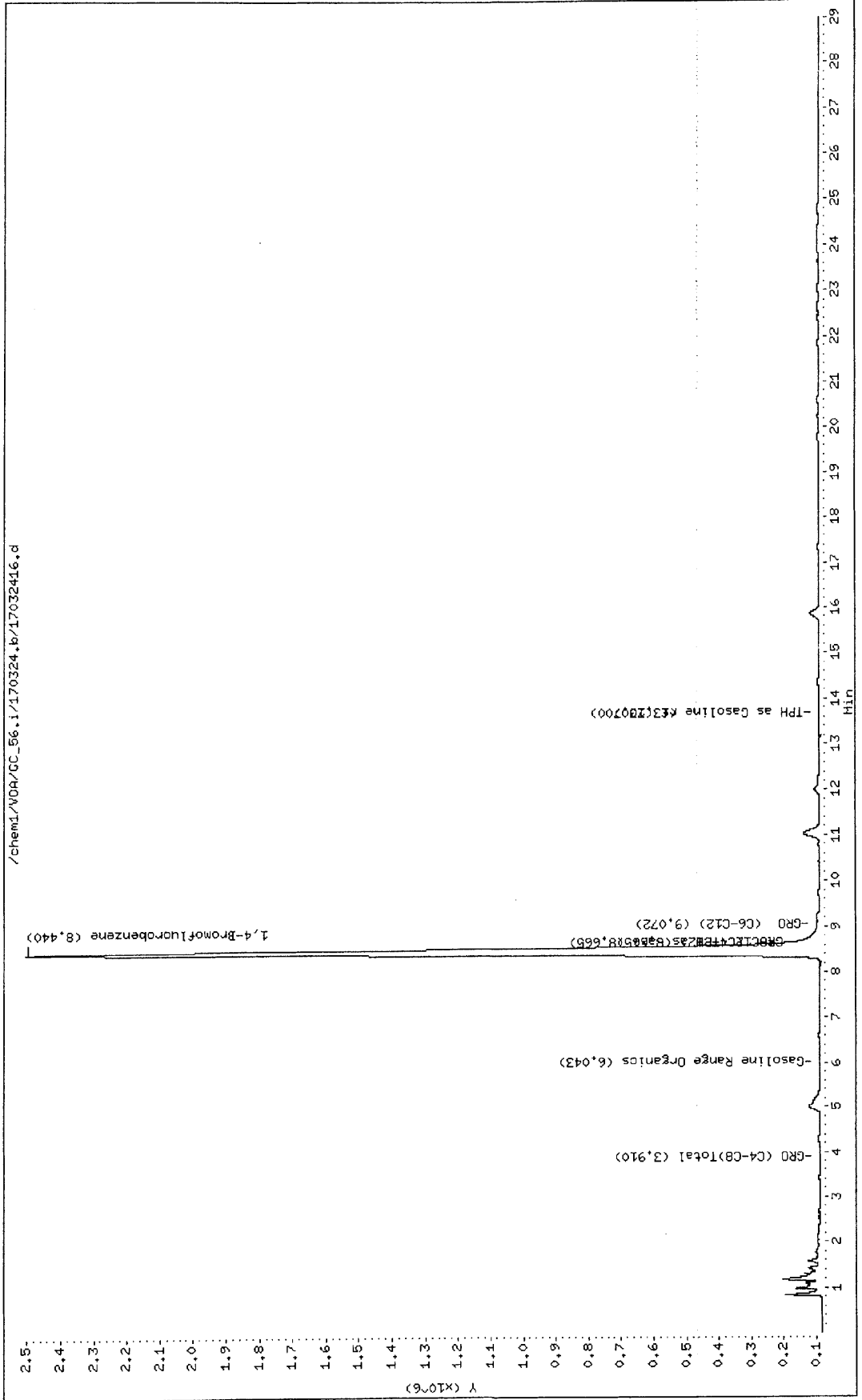
Sample Info: 03-1124-2F 5ML<2

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:



EPA 8015B (M) TPH as Gasoline

CONTINUING CALIBRATION

**CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8015B (M)**

BATCH ID: 170324A053
INSTRUMENT: GC 56

ANALYZED BY: 1,083

WORK ORDER: 099-15-705
MATRIX: Water

REVIEWED BY: 607
D/T REVIEWED: 2017-03-27 09:58

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
3204	Daily Calibration	2017-03-24 21:01	\\Us26prvp001\luftg\GC_56\GC_56_data\2017\170324\17032413.d\Report.txt17032413

WORK ORDER: 17-03-1523
MATRIX: Water

REVIEWED BY:
D/T REVIEWED:

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
2	IDW-W	2017-03-25 11:21	\\Us26prvp001\luftg\GC_56\GC_56_data\2017\170324\17032440.d\Report.txt17032440

**CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8015B (M)**

CCV WORK ORDER: 099-15-705-3204-4982

ANALYZED BY: 1083

BATCH ID:
INITIAL: 1701181022
CCV: 170324A053
INSTRUMENT: GC 56

D/T ANALYZED:
INITIAL: 2017-01-18 19:09
CCV: 2017-03-24 21:01
REVIEWED BY:
D/T REVIEWED:

DATA FILE: \\Us26prvp001\lufg\GC_56_data\2017\170324\17032413.d\Report.txt17032413

<u>COMPOUND NAME</u>	<u>TYPE</u>	<u>CALIB MODEL</u>	<u>MIN RF</u>	<u>AVG RF</u>	<u>CCV RF</u>	<u>AMOUNT</u>	<u>CCV CONC</u>	<u>CCV %D</u>	<u>CCV %D CL</u>	<u>STATUS</u>
TPH as Gasoline	C	Avg Resp	0.00	6724239.883	6694173.908			0	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/VOA/GC_56.i/170324.b/17032413.d
 Report Date: 03/25/2017 08:51

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_56.i Injection Date and Time: 24-MAR-2017 21:01
 Sample Name: 2PPM TPH CCV Initial Calibration Date(s): 18-JAN-2017 18-JAN-2017
 Sublist used: TPH_Gas.sub Initial Calibration Time(s): 18:38 21:16
 Method used: /chem1/VOA/GC_56.i/170324.b/80158021b.m

Target Compounds	ICAL RRF or Amount	CCV RRF	Min. RRF	%D / %Drift /Drift	Max%D	Curve Type
TPH as Gasoline rf	6724239.883	6694173.908	0.01	0	15	Averaged
GRO (C4-C8)Total	5219488.155	5528366.662	0.01	-6	15	Averaged
GRO (C4-C12)	6491182.558	6576728.379	0.01	-1	15	Averaged
C4-C12 (TPH as Gas)	6491182.558	6576728.379	0.01	-1	15	Averaged
Gasoline Range Organics	5810939.854	6013343.404	0.01	-3	15	Averaged
GRO (C6-C12)	6176085.174	6328538.686	0.01	-2	15	Averaged
TPH as Gasoline	6724239.883	6694173.908	0.01	0	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift /Drift	Max%D	Curve Type
1,4-Bromofluorobenzene	4433991.152	5548949.440	0.01	-25	30	Averaged

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Data File: /chem1/VOA/GC_56.i/170324.b/17032413.d
 Report Date: 25-Mar-2017 08:46

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Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170324.b/17032413.d
 Lab Smp Id:
 Inj Date : 24-MAR-2017 21:01
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 2PPM TPH CCV
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170324.b/80158021b.m
 Meth Date : 25-Mar-2017 08:46 tempn Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 13 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			13388347815	2000.00	1991.05743
M 2 TPH as Gasoline				13388347815	2000.00	1991.05743
S 4 Gasoline Range Organics	1.193-10.893			12026686808	2000.00	2069.66293
S 5 C4-Cl2 (TPH as Gas)	0.400-16.931			13153456758	2000.00	2026.35754
S 6 GRO (C4-C8)Total	0.400-7.421			11056733324	2000.00	2118.35586
S 7 GRO (C6-C12)	1.212-16.931			12657077372	2000.00	2049.36897
S 8 GRO (C4-C12)	0.400-16.931			13153456758	2000.00	2026.35754
\$ 25 1,4-Bromofluorobenzene	8.455	8.450	0.005	554894944	100.000	125.14570

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Date : 24-MAR-2017 21:01

Client ID:

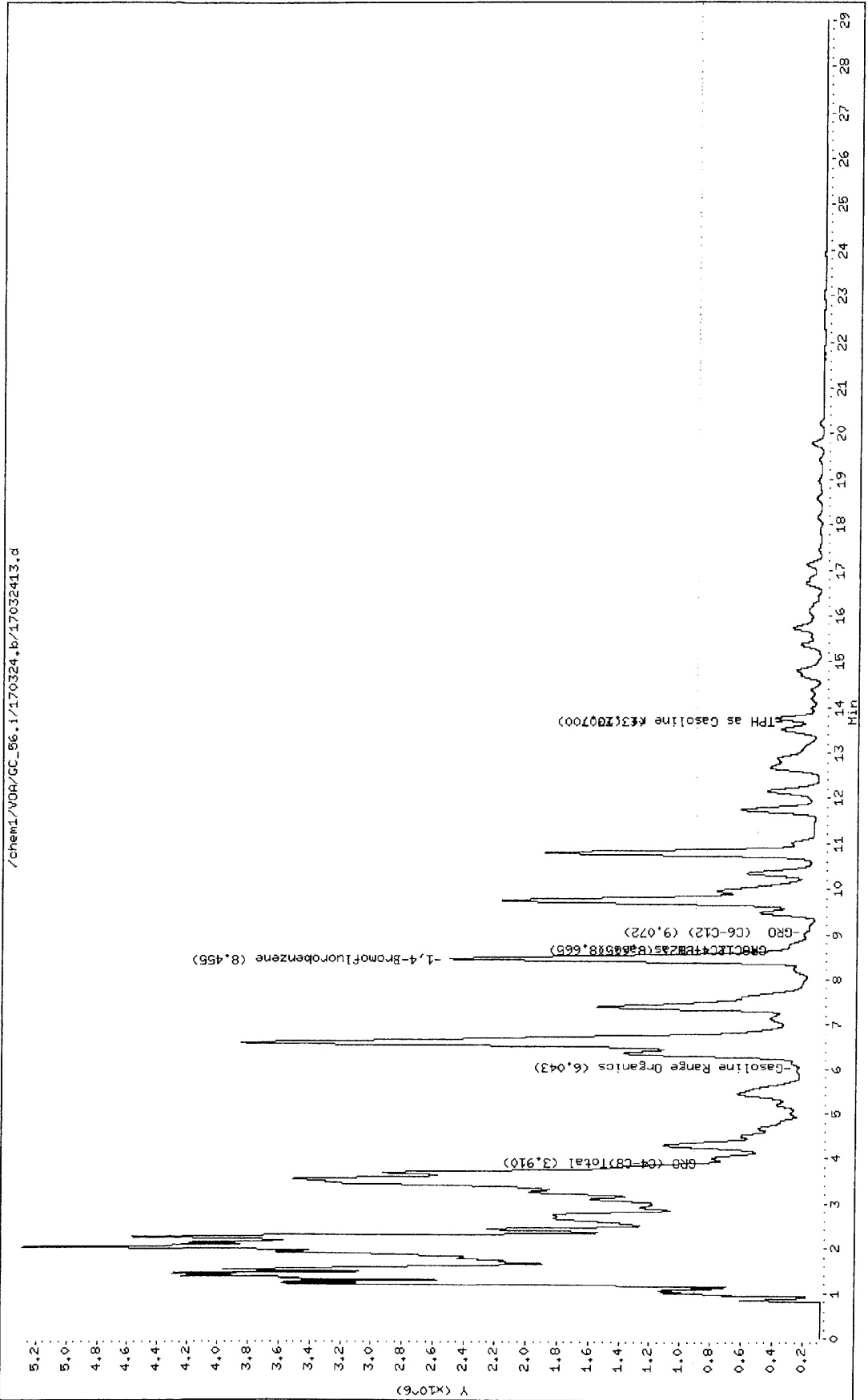
Sample Info: 2PPH TPH CCV

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:



Data File: /chem1/VOA/GC_56.i/170324.b/17032429.d
 Report Date: 03/25/2017 08:51

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_56.i Injection Date and Time: 25-MAR-2017 05:28
 Sample Name: 2PPM TPH CCV Initial Calibration Date(s): 18-JAN-2017 18-JAN-2017
 Sublist used: TPH_Gas.sub Initial Calibration Time(s): 18:38 21:16
 Method used: /chem1/VOA/GC_56.i/170324.b/80158021b.m

Target Compounds	ICAL RRF or Amount	CCV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Gasoline rf	6724239.883	6376347.322	0.01	5	15	Averaged
GRO (C4-C8) Total	5219488.155	5215055.546	0.01	0	15	Averaged
GRO (C4-C12)	6491182.558	6279677.602	0.01	3	15	Averaged
C4-C12 (TPH as Gas)	6491182.558	6279677.602	0.01	3	15	Averaged
Gasoline Range Organics	5810939.854	5748872.651	0.01	1	15	Averaged
GRO (C6-C12)	6176085.174	6039020.322	0.01	2	15	Averaged
TPH as Gasoline	6724239.883	6376347.322	0.01	5	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
1,4-Bromofluorobenzene	4433991.152	4525206.390	0.01	-2	30	Averaged

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Data File: /chem1/VOA/GC_56.i/170324.b/17032429.d
 Report Date: 25-Mar-2017 08:46

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Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170324.b/17032429.d
 Lab Smp Id:
 Inj Date : 25-MAR-2017 05:28
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 2PPM TPH CCV
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170324.b/80158021b.m
 Meth Date : 25-Mar-2017 08:46 tempn Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 29 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400	27.000		12752694645	2000.00	1896.52583
M 2 TPH as Gasoline				12752694645	2000.00	1896.52583
S 4 Gasoline Range Organics	1.193	10.893		11497745303	2000.00	1978.63780
S 5 C4-C12 (TPH as Gas)	0.400	16.931		12559355204	2000.00	1934.83315
S 6 GRO (C4-C8) Total	0.400	7.421		10430111092	2000.00	1998.30151
S 7 GRO (C6-C12)	1.212	16.931		12078040644	2000.00	1955.61432
S 8 GRO (C4-C12)	0.400	16.931		12559355204	2000.00	1934.83315
S 25 1,4-Bromofluorobenzene	8.450	8.450	0.000	452520639	100.000	102.05718

Data File: /chem1/V09/CC_56.i/170324.b/17032429.d

Date : 25-MAR-2017 05:28

Client ID:

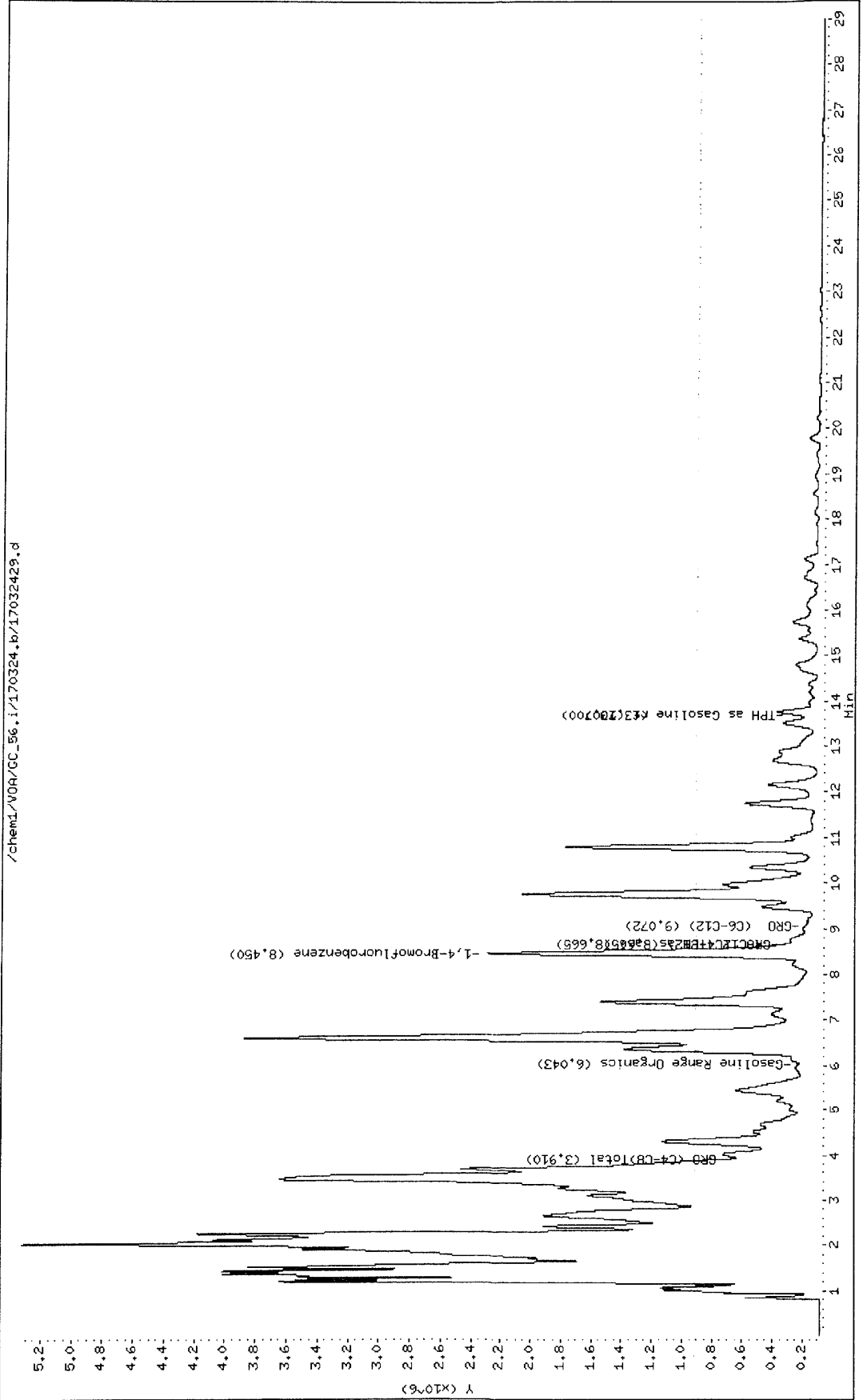
Sample Info: 2PPH TPH CCV

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:



Data File: /chem1/VOA/GC_56.i/170324.b/17032443.d
 Report Date: 03/25/2017 17:01

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_56.i Injection Date and Time: 25-MAR-2017 12:56
 Sample Name: 2PPM TPH CCV Initial Calibration Date(s): 18-JAN-2017 18-JAN-2017
 Sublist used: TPH_Gas.sub Initial Calibration Time(s): 18:38 21:16
 Method used: /chem1/VOA/GC_56.i/170324.b/80158021b.m

Target Compounds	ICAL RRF or Amount	CCV RRF	Min. RRF	%D / %Drift	Max%D/ Drift	Curve Type
TPH as Gasoline rf	6724239.883	6294592.194	0.01	6	15	Averaged
GRO (C4-C8)Total	5219488.155	5258975.414	0.01	-1	15	Averaged
GRO (C4-C12)	6491182.558	6203161.920	0.01	4	15	Averaged
C4-C12 (TPH as Gas)	6491182.558	6203161.920	0.01	4	15	Averaged
Gasoline Range Organics	5810939.854	5556412.441	0.01	4	15	Averaged
GRO (C6-C12)	6176085.174	5948859.845	0.01	4	15	Averaged
TPH as Gasoline	6724239.883	6294592.194	0.01	6	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D/ Drift	Curve Type
1,4-Bromofluorobenzene	4433991.152	5088341.220	0.01	-15	30	Averaged

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Data File: /chem1/VOA/GC_56.i/170324.b/17032443.d
 Report Date: 25-Mar-2017 17:00

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Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170324.b/17032443.d
 Lab Smp Id:
 Inj Date : 25-MAR-2017 12:56
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 2PPM TPH CCV
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170324.b/80158021b.m
 Meth Date : 25-Mar-2017 17:00 tempn Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 43 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			12589184388	2000.00	1872.20929
M 2 TPH as Gasoline				12589184388	2000.00	1872.20929
S 4 Gasoline Range Organics	1.193-10.893			11112824882	2000.00	1912.39716
S 5 C4-C12 (TPH as Gas)	0.400-16.931			12406323840	2000.00	1911.25788
S 6 GRO (C4-C8)Total	0.400-7.421			10517950828	2000.00	2015.13070
S 7 GRO (C6-C12)	1.212-16.931			11897719690	2000.00	1926.41768
S 8 GRO (C4-C12)	0.400-16.931			12406323840	2000.00	1911.25788
\$ 25 1,4-Bromofluorobenzene	8.452	8.450	0.002	508834122	100.000	114.75758



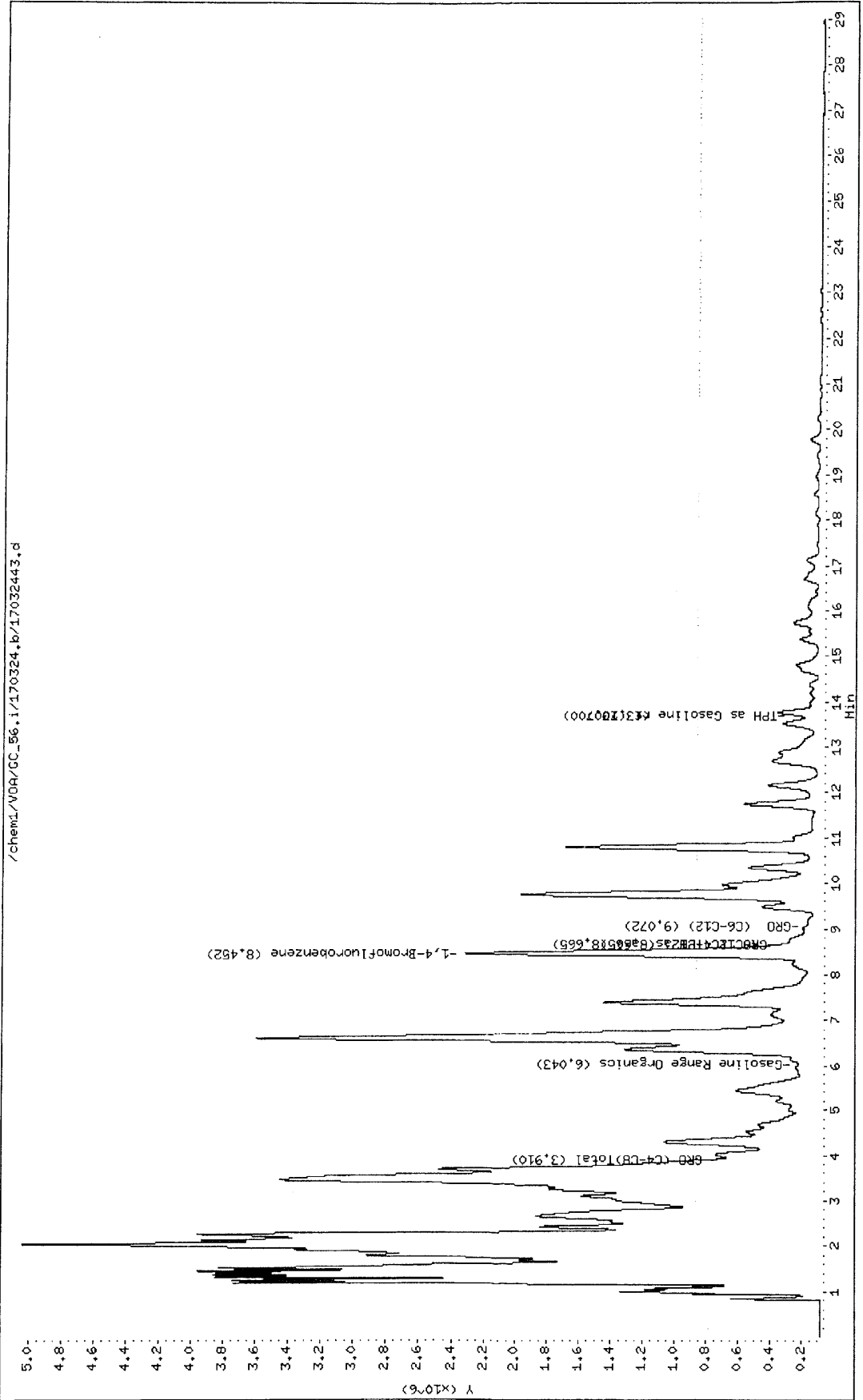
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Date : 25-MAR-2017 12:56
Client ID:
Sample Info: 2PPH TPH CCV

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:



EPA 8015B (M) TPH as Gasoline

RUN LOGS

Line	Vial	File	Name	Method	InjVolume	Acquired
1	1	17011801	MARKER STD T122016B	80158021B	T122210A	18-Jan-17, 18:38:03
2	2	17011802	0.05PPM TPH ICAL	80158021B	T081210A	18-Jan-17, 19:09:38
3	3	17011803	1PPM TPH ICAL	80158021B	T122110A	18-Jan-17, 19:41:16
4	4	17011804	2PPM TPH ICAL	80158021B	T122110A	18-Jan-17, 20:13:00
5	5	17011805	5PPM TPH ICAL	80158021B	T122110A	18-Jan-17, 20:44:41
6	6	17011806	10PPM TPH ICAL	80158021B	T122110A	18-Jan-17, 21:16:22
7	7	17011807	2PPM TPH ICV	80158021B	T100010A	18-Jan-17, 21:48:04



Line	Vial	File	Name	Method	Inj Volume	Acquired
1	1	17032401	MARKER STD T122016B	80158021B	T122216 A	24-Mar-17, 13:29:27
2	2	17032402	2PPM TPH CCV	80158021B	T122116A	24-Mar-17, 14:01:11
3	3	17032403	2PPM TPH LCS	80158021B	T011817A	24-Mar-17, 14:32:51
4	4	17032404	MB	80158021B		24-Mar-17, 15:04:31
5	5	17032405	XMB	80158021B		24-Mar-17, 16:48:28
6	6	17032406	03-1451-2A 1.04170324050/L031	80158021B		24-Mar-17, 17:20:08
7	7	17032407	MS 03-1451-2A 0.981703245014	80158021B	T011817A	24-Mar-17, 17:51:51
8	8	17032408	MSD 03-1451-2A 1.04(Fail)	80158021B	T011817A	24-Mar-17, 18:23:27
9	9	17032409	03-1766-3A 5.00 250uL 170324032	80158021B		24-Mar-17, 18:55:01
10	10	17032410	BLANK	80158021B		24-Mar-17, 19:26:41
11	11	17032411	MSD 03-1451-2A 0.99	80158021B	T011817A	24-Mar-17, 19:58:25
12	12	17032412	BLANK	80158021B		24-Mar-17, 20:30:06
13	13	17032413	2PPM TPH CCV	80158021B	T122116A	24-Mar-17, 21:01:43
14	14	17032414	2PPM TPH LCS	80158021B	T011817A	24-Mar-17, 21:33:20
15	15	17032415	MB	80158021B		24-Mar-17, 22:04:56
16	16	17032416	03-1124-2F 5ML<2 170324052/L034	80158021B		24-Mar-17, 22:36:35
17	17	17032417	MS 03-1124-2F 5ML<2 1703245015	80158021B	T011817A	24-Mar-17, 23:08:14
18	18	17032418	MSD 03-1124-2F 5ML<2	80158021B	T011817A	24-Mar-17, 23:39:55
19	19	17032419	03-1124-1F 5ML<2	80158021B		25-Mar-17, 00:11:34
20	20	17032420	03-1124-3F 5ML<2	80158021B		25-Mar-17, 00:43:13
21	21	17032421	03-1124-4F 5ML<2	80158021B		25-Mar-17, 01:14:55
22	22	17032422	03-1124-5F 5ML<2	80158021B		25-Mar-17, 01:46:37
23	23	17032423	03-1124-6F 5ML<2	80158021B		25-Mar-17, 02:18:14
24	24	17032424	03-1124-7F 5ML<2	80158021B		25-Mar-17, 02:49:59
25	25	17032425	03-1124-8F 5ML<2	80158021B		25-Mar-17, 03:21:38
26	26	17032426	03-1124-9F 5ML<2	80158021B		25-Mar-17, 03:53:20
27	27	17032427	03-1124-10F 5ML>2	80158021B		25-Mar-17, 04:25:04
28	28	17032428	BLANK	80158021B		25-Mar-17, 04:56:47
29	29	17032429	2PPM TPH CCV	80158021B	T122116A	25-Mar-17, 05:28:29
30	30	17032430	03-1124-12C 5ML<2	80158021B		25-Mar-17, 06:00:13
31	31	17032431	03-1124-11F 5ML2 H3FB	80158021B		25-Mar-17, 06:31:50
32	32	17032432	03-1870-1F 5ML<2 170324052/L035	80158021B		25-Mar-17, 07:03:34
33	33	17032433	BLANK	80158021B		25-Mar-17, 07:35:16
34	34	17032434	03-1371-1E 5ML<2	80158021B		25-Mar-17, 08:06:59
35	35	17032435	03-1677-1E 5ML<2	80158021B		25-Mar-17, 08:38:40
36	36	17032436	03-1254-1B 5ML<2 H1607054/L032	80158021B		25-Mar-17, 09:10:19
37	37	17032437	MS 03-1254-1B 5ML<2 1703245016	80158021B	T011817A	25-Mar-17, 09:41:57
38	38	17032438	MSD 03-1254-1B 5ML<2	80158021B	T011817A	25-Mar-17, 10:17:50
39	39	17032439	03-1124-11G 5ML>2	80158021B		25-Mar-17, 10:49:31
40	40	17032440	03-1523-2D 100uL<2	80158021B		25-Mar-17, 11:21:11
41	41	17032441	BLANK	80158021B		25-Mar-17, 11:52:57
42	42	17032442	BLANK	80158021B		25-Mar-17, 12:24:39
43	43	17032443	2PPM TPH CCV	80158021B	T122116A	25-Mar-17, 12:56:20
44	44	17032444	2PPM TPH LCS	80158021B	T011817A	25-Mar-17, 13:27:58
45	45	17032445	MB	80158021B		
46	46	17032446	03-1750-5F 5ML<2 H1607054/L017	80158021B		
47	47	17032447	MS 03-1750-5F 5ML<2 H1607054/L017	80158021B	T011817A	
48	48	17032448	MSD 03-1750-5F 5ML<2	80158021B	T011817A	
49	49	17032449	03-1750-6F 5ML<2	80158021B		
50	50	17032450	03-1750-7F 5ML<2	80158021B		
51	51	17032451	03-1750-8F 5ML<2	80158021B		
52	52	17032452	03-1750-9F 5ML<2	80158021B		
53	53	17032453	03-1750-10F 5ML<2	80158021B		
54	54	17032454	03-1750-1F 10X<2	80158021B		
55	55	17032455	03-1750-4F 5X<2	80158021B		
56	56	17032456	03-1750-3F 10X<2	80158021B		
57	57	17032457	03-1750-2F 10X<2	80158021B		

EPA METHOD 8015B (M)
TPH as GASOLINE

(Solid)

EPA METHOD 8015B (M)
TPH as GASOLINE

Initial Calibration

INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8015B (M)

ICAL WORK ORDER: 099-14-570-2822-6010
ICAL BATCH ID: 1701181016
INSTRUMENT: GC 56

ANALYZED BY: 1,083
ICAL D/T ANALYZED: 2017-01-18 19:09
REVIEWED BY: 607
D/T REVIEWED: 2017-01-25 12:50

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD CL	R of R ² CL	R of R ² CL	STATUS
PH as Gasoline	C	Avg RF	9,022,195,560	6,521,195,750	6,030,517,490	5,974,095,673	6,072,591,940					6,724,239,883	0.00	19	0-20		PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2017-01-18 19:09	\\Us26prvp001\luftg\GC_56\GC_56_data\20So\So\17011802.d\Report.txt17011802
2	2017-01-18 19:41	\\Us26prvp001\luftg\GC_56\GC_56_data\20So\So\17011803.d\Report.txt17011803
3	2017-01-18 20:13	\\Us26prvp001\luftg\GC_56\GC_56_data\20So\So\17011804.d\Report.txt17011804
4	2017-01-18 20:44	\\Us26prvp001\luftg\GC_56\GC_56_data\20So\So\17011805.d\Report.txt17011805
5	2017-01-18 21:16	\\Us26prvp001\luftg\GC_56\GC_56_data\20So\So\17011806.d\Report.txt17011806



INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8015B (M)

ICV WORK ORDER: 099-14-570-2822-6010
INITIAL BATCH: 1701181016
INSTRUMENT: GC 56

ANALYZED BY: 1083
D/T ANALYZED:
INITIAL: 2017-01-18 19:09
ICV: 2017-01-18 21:48
REVIEWED BY: 607
D/T REVIEWED: 2017-01-25 12:50

DATA FILE: \\Us26prvp001\lurftg\GC_56\data\20So\So\17011807.d\Report.txt17011807

<u>COMPOUND NAME</u>	<u>COMP TYPE</u>	<u>CALIB MODEL</u>	<u>MIN RF</u>	<u>AVG RF</u>	<u>ICV RF</u>	<u>AMOUNT</u>	<u>ICV CONC</u>	<u>ICV %D</u>	<u>ICV %D CL</u>	<u>STATUS</u>
TPH as Gasoline	C	Avg Resp	0.00	6724239882.622	7268323191.100			-8	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 19-Jan-2017 13:25

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 18-JAN-2017 18:38
 End Cal Date : 18-JAN-2017 21:16
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP Genie
 Method file : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Cal Date : 19-Jan-2017 13:25 ulmc
 Curve Type : Average

Calibration File Names:

Level 1: /chem1/VOA/GC_56.i/170118.b/17011802.d
 Level 2: /chem1/VOA/GC_56.i/170118.b/17011803.d
 Level 3: /chem1/VOA/GC_56.i/170118.b/17011804.d
 Level 4: /chem1/VOA/GC_56.i/170118.b/17011805.d
 Level 5: /chem1/VOA/GC_56.i/170118.b/17011806.d

Compound	50.000 Level 1	1000.000 Level 2	2000.000 Level 3	5000.000 Level 4	1.000e+04 Level 5	RRF	% RSD
S 1 TPH as Gasoline rf	9022196	6521518	6030798	5974096	6072592	6724240	19
M 2 TPH as Gasoline	9022196	6521518	6030798	5974096	6072592	6724240	19
S 4 Gasoline Range Organics	6762658	5866162	5448652	5422879	5554348	5810940	10
S 5 C4-C12 (TPH as Gas)	8213869	6409138	5935579	5896321	6001007	6491183	15
S 6 GRO (C4-C8) Total	6652083	5134515	4765704	4721887	4823252	5219488	16
S 7 GRO (C6-C12)	7073635	6265016	5811965	5798006	5931804	6176085	9
S 8 GRO (C4-C12)	8213869	6409138	5935579	5896321	6001007	6491183	15
15 C4-Butane	845732	++++	++++	++++	++++	845732	0 <-
16 C5-Pentane	3756836	++++	++++	++++	++++	3756836	0 <-
17 C6-Hexane	9121076	++++	++++	++++	++++	9121076	0 <-
18 C7-Heptane	9915207	++++	++++	++++	++++	9915207	0 <-
19 C8-Octane	9628932	++++	++++	++++	++++	9628932	0 <-
20 C9-Nonane	10318752	++++	++++	++++	++++	10318752	0 <-
21 C10-Decane	9145854	++++	++++	++++	++++	9145854	0 <-
22 C11-Undecane	5794223	++++	++++	++++	++++	5794223	0 <-

Return to Contents

GC 56
 M/LP 07
 9/10/17

Report Date : 19-Jan-2017 13:25

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 18-JAN-2017 18:38
 End Cal Date : 18-JAN-2017 21:16
 Quant Method : ESTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP Genie
 Method file : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Cal Date : 19-Jan-2017 13:25 ulmc
 Curve Type : Average

Compound	50.000 Level 1	1000.000 Level 2	2000.000 Level 3	5000.000 Level 4	1.000e+04 Level 5	RRF	% RSD	
23 C12-Dodecane	5662747	+++++	+++++	+++++	+++++	5662747	0	<-
24 C13-Tridecane	1241097	+++++	+++++	+++++	+++++	1241097	0	<-
\$ 25 1,4-Bromofluorobenzene	3293002	3746863	3868238	5700846	5561007	4433991	25	

Data File: /chem1/VOA/GC_56.i/170118.b/17011807.d
 Report Date: 01/19/2017 13:42

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_56.i Injection Date and Time: 18-JAN-2017 21:48
 Sample Name: 2PPM TPH ICV Initial Calibration Date(s): 18-JAN-2017 18-JAN-2017
 Sublist used: TPH_Gas.sub Initial Calibration Time(s): 18:38 21:16
 Method used: /chem1/VOA/GC_56.i/170118.b/80158021b.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Gasoline rf	6724239.883	7268323.191	0.01	-8	15	Averaged
GRO (C4-C8)Total	5219488.155	5328209.243	0.01	-2	15	Averaged
GRO (C4-C12)	6491182.558	6998593.760	0.01	-8	15	Averaged
C4-C12 (TPH as Gas)	6491182.558	6998593.760	0.01	-8	15	Averaged
Gasoline Range Organics	5810939.854	5762646.237	0.01	1	15	Averaged
GRO (C6-C12)	6176085.174	6237517.312	0.01	-1	15	Averaged
TPH as Gasoline	6724239.883	7268323.191	0.01	-8	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
1,4-Bromofluorobenzene	4433991.152	3396696.260	0.01	23	30	Averaged

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Data File: /chem1/VOA/GC_56.i/170118.b/17011802.d
 Report Date: 19-Jan-2017 13:24

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Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170118.b/17011802.d
 Lab Smp Id:
 Inj Date : 18-JAN-2017 19:09
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 0.05PPM TPH ICAL
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Meth Date : 19-Jan-2017 13:24 ulmc Quant Type: ESTD
 Cal Date : 18-JAN-2017 19:09 Cal File: 17011802.d
 Als bottle: 2 Calibration Sample, Level: 1
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

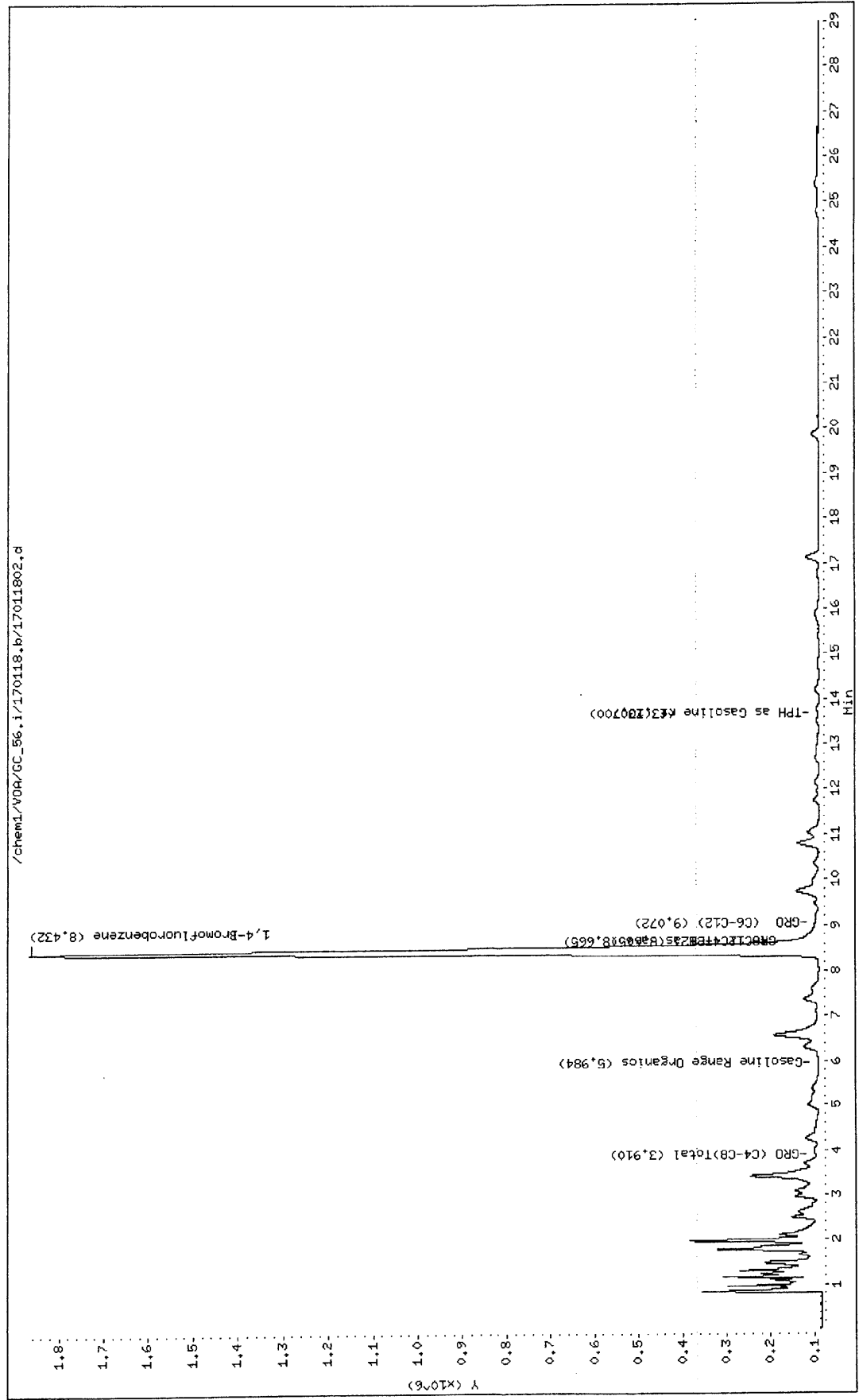
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			451109778	50.0000	50.00000
M 2 TPH as Gasoline				451109778	50.0000	50.00000
S 4 Gasoline Range Organics	1.075-10.893			338132919	50.0000	50.00000
S 5 C4-C12 (TPH as Gas)	0.400-16.931			410693458	50.0000	50.00000
S 6 GRO (C4-C8) Total	0.400-7.421			332604158	50.0000	50.00000
S 7 GRO (C6-C12)	1.212-16.931			353681764	50.0000	50.00000
S 8 GRO (C4-C12)	0.400-16.931			410693458	50.0000	50.00000
§ 25 1,4-Bromofluorobenzene	8.432	8.432	0.000	329300177	100.000	100.00000

Data File: /chem1/V00/CC_56.i/170118.b/17011802.d
Date : 18-JAN-2017 19:09
Client ID:
Sample Info: 0.05PPM TPH ICAL

Instrument: GC_56.i
Operator: 1083
Column diameter: 2.00

Column phase:



Data File: /chem1/VOA/GC_56.i/170118.b/17011803.d
 Report Date: 19-Jan-2017 13:24

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Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170118.b/17011803.d
 Lab Smp Id:
 Inj Date : 18-JAN-2017 19:41
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 1PPM TPH ICAL
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Meth Date : 19-Jan-2017 13:24 ulmc Quant Type: ESTD
 Cal Date : 18-JAN-2017 19:41 Cal File: 17011803.d
 Als bottle: 3 Calibration Sample, Level: 2
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			6521517750	1000.00	839.11966
M 2 TPH as Gasoline				6521517750	1000.00	839.11966
S 4 Gasoline Range Organics	1.075-10.893			5866162322	1000.00	929.01189
S 5 C4-C12 (TPH as Gas)	0.400-16.931			6409137751	1000.00	876.58274
S 6 GRO (C4-C8) Total	0.400-7.421			5134514913	1000.00	871.24628
S 7 GRO (C6-C12)	1.212-16.931			6265015607	1000.00	939.37770
S 8 GRO (C4-C12)	0.400-16.931			6409137751	1000.00	876.58274
S 25 1,4-Bromofluorobenzene	8.434	8.434	0.000	374686329	100.000	106.44702

Data File: /chem1/V00/CC_56.i/170118.b/17011803.d

Date : 18-JAN-2017 19:41

Client ID:

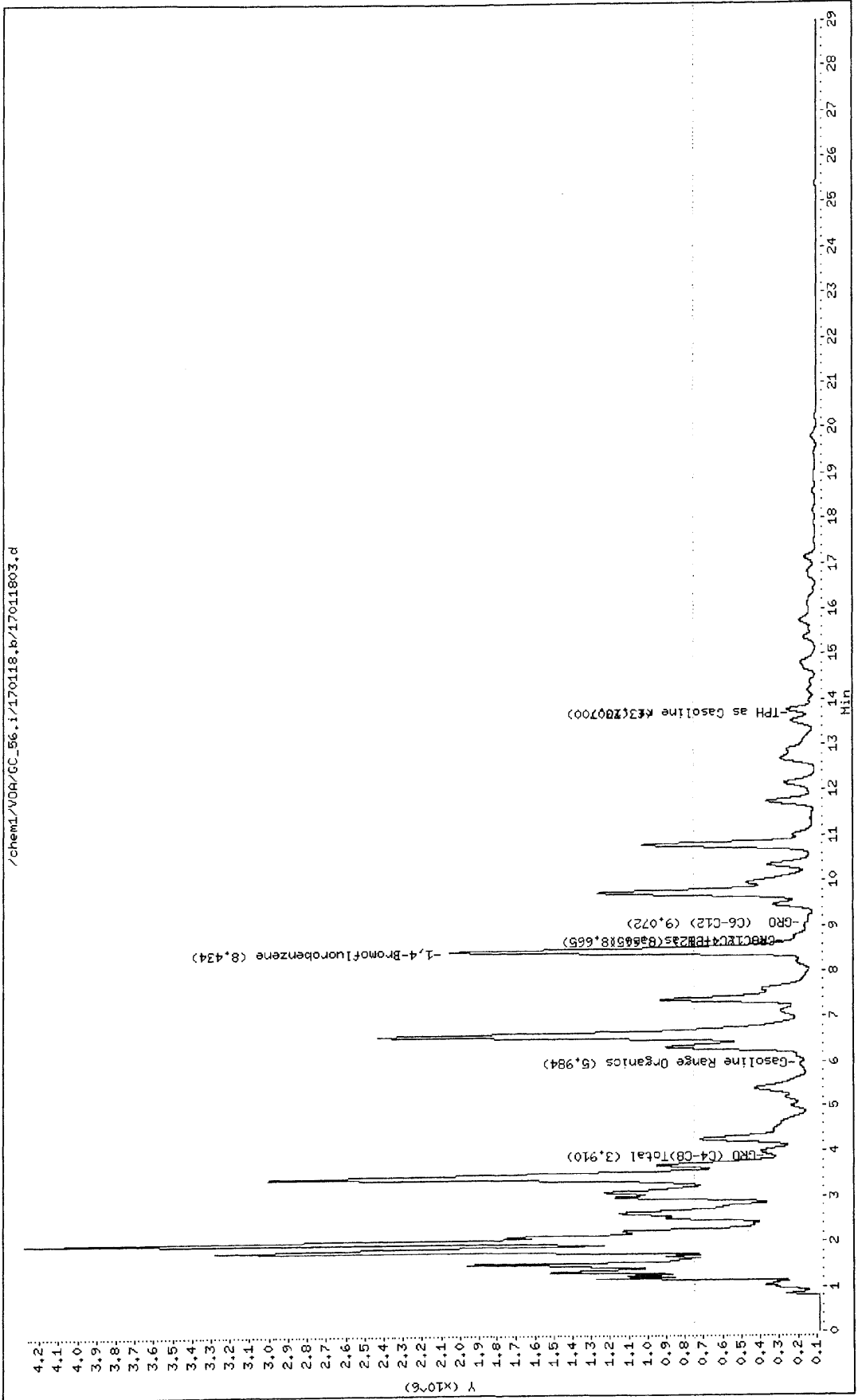
Sample Info: 1PPH TPH ICAL

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase: /chem1/V00/CC_56.i/170118.b/17011803.d



Data File: /chem1/VOA/GC_56.i/170118.b/17011804.d
 Report Date: 19-Jan-2017 13:24

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Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170118.b/17011804.d
 Lab Smp Id:
 Inj Date : 18-JAN-2017 20:13
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 2PPM TPH ICAL
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Meth Date : 19-Jan-2017 13:24 ulmc Quant Type: ESTD
 Cal Date : 18-JAN-2017 20:13 Cal File: 17011804.d
 Als bottle: 4 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			12061596980	2000.00	1677.20091
M 2 TPH as Gasoline				12061596980	2000.00	1677.20091
S 4 Gasoline Range Organics	1.075-10.893			10897304557	2000.00	1808.43382
S 5 C4-C12 (TPH as Gas)	0.400-16.931			11871157212	2000.00	1732.29192
S 6 GRO (C4-C8) Total	0.400-7.421			9531408041	2000.00	1727.50738
S 7 GRO (C6-C12)	1.212-16.931			11623929396	2000.00	1820.92257
S 8 GRO (C4-C12)	0.400-16.931			11871157212	2000.00	1732.29192
S 25 1,4-Bromofluorobenzene	8.435	8.435	0.000	386823804	100.000	106.38617



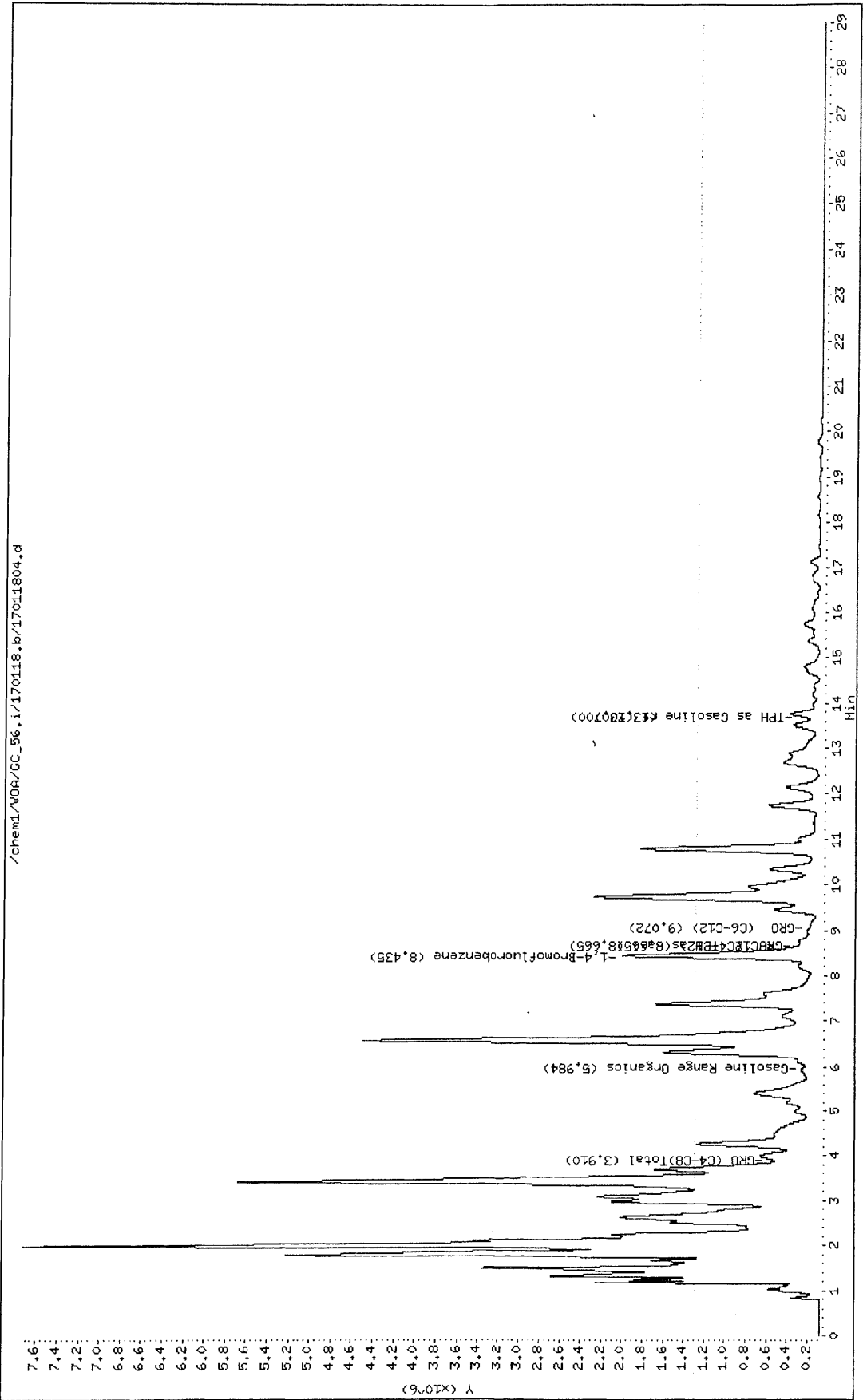
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Date: 18-JUN-2017 20:13
Client ID:
Sample Info: 2PPH TPH ICAL

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:



Data File: /chem1/VOA/GC_56.i/170118.b/17011805.d
 Report Date: 19-Jan-2017 13:24

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Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170118.b/17011805.d
 Lab Smp Id:
 Inj Date : 18-JAN-2017 20:44
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 5PPM TPH ICAL
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Meth Date : 19-Jan-2017 13:24 ulmc Quant Type: ESTD
 Cal Date : 18-JAN-2017 20:44 Cal File: 17011805.d
 Als bottle: 5 Calibration Sample, Level: 4
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RT	RESPONSE	AMOUNTS	
						CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000				29870478365	5000.00	4337.13078
M 2 TPH as Gasoline					29870478365	5000.00	4337.13078
S 4 Gasoline Range Organics	1.075-10.893				27114393902	5000.00	4615.14690
S 5 C4-C12 (TPH as Gas)	0.400-16.931				29481603631	5000.00	4457.63872
S 6 GRO (C4-C8)Total	0.400-7.421				23609432724	5000.00	4439.07556
S 7 GRO (C6-C12)	1.212-16.931				28990028933	5000.00	4647.95685
S 8 GRO (C4-C12)	0.400-16.931				29481603631	5000.00	4457.63872
\$ 25 1,4-Bromofluorobenzene	8.440	8.440	0.000		570084555	100.000	137.29575

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Data File: /chem1/W09/CC_56.i/170118.b/17011805.d

Date : 18-JAN-2017 20:44

Client ID:

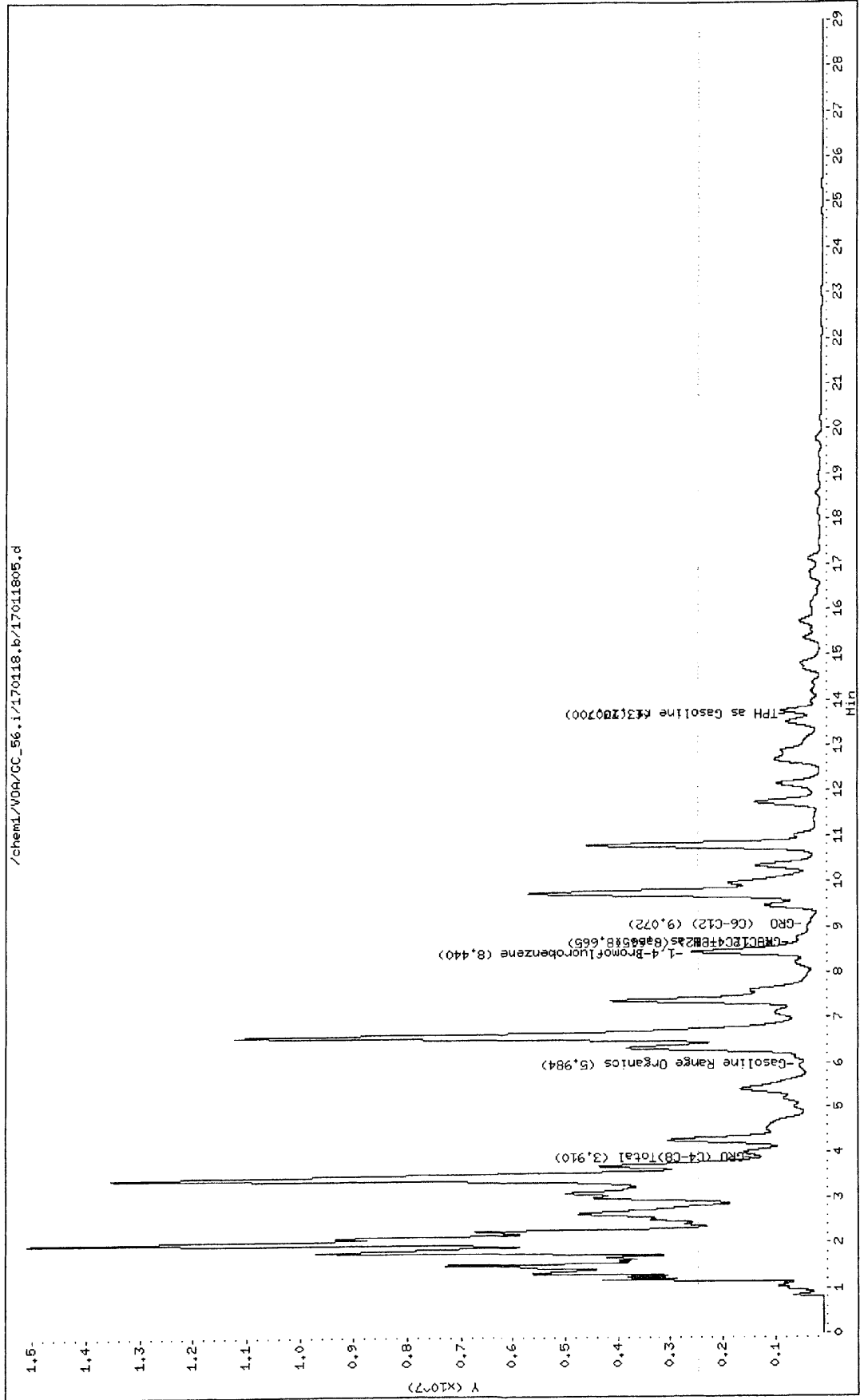
Sample Info: 5PPH TPH ICAL

Instrument: GC_56.i

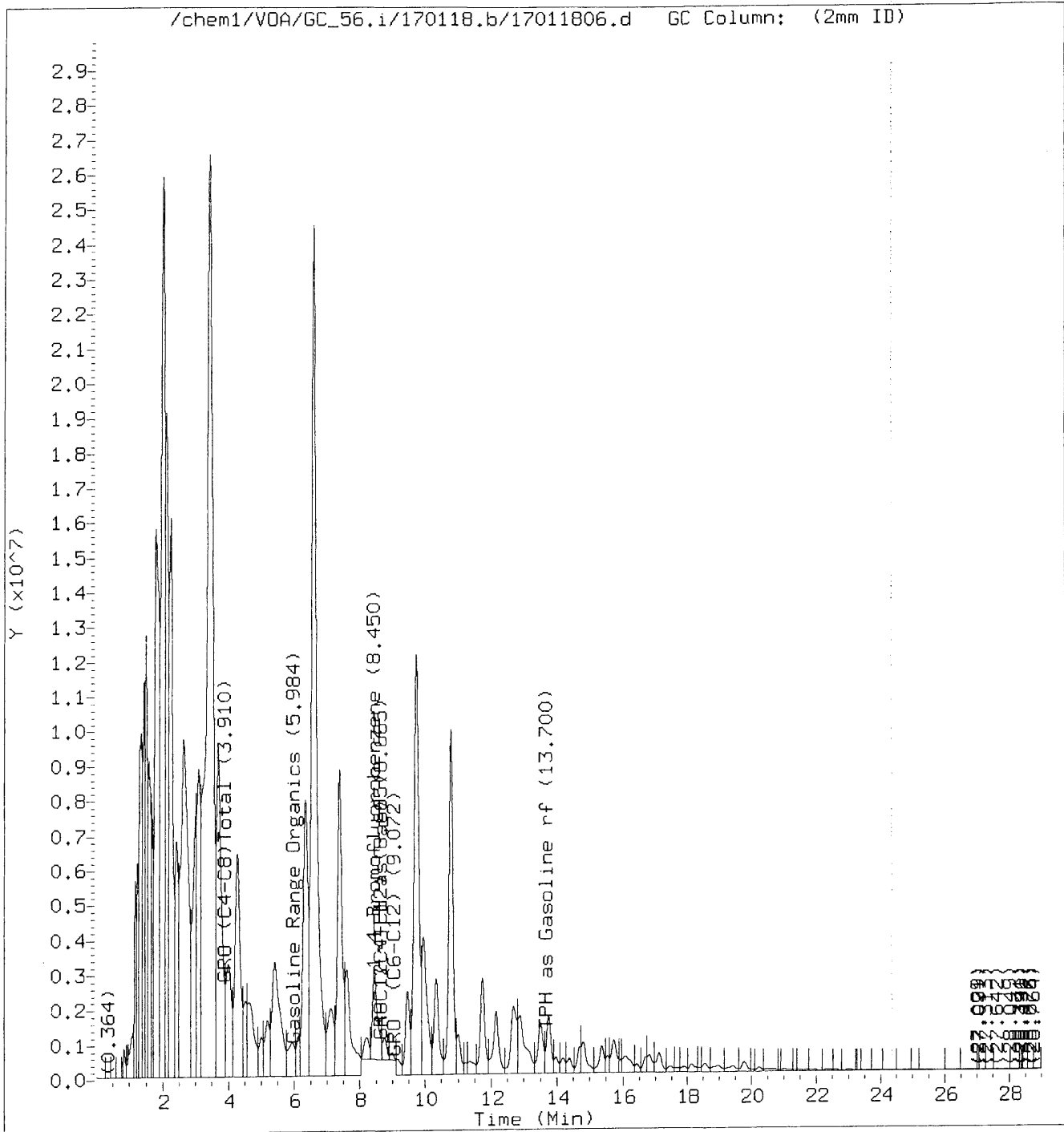
Operator: 1083

Column diameter: 2.00

Column phase:



Manually Integrated Data File



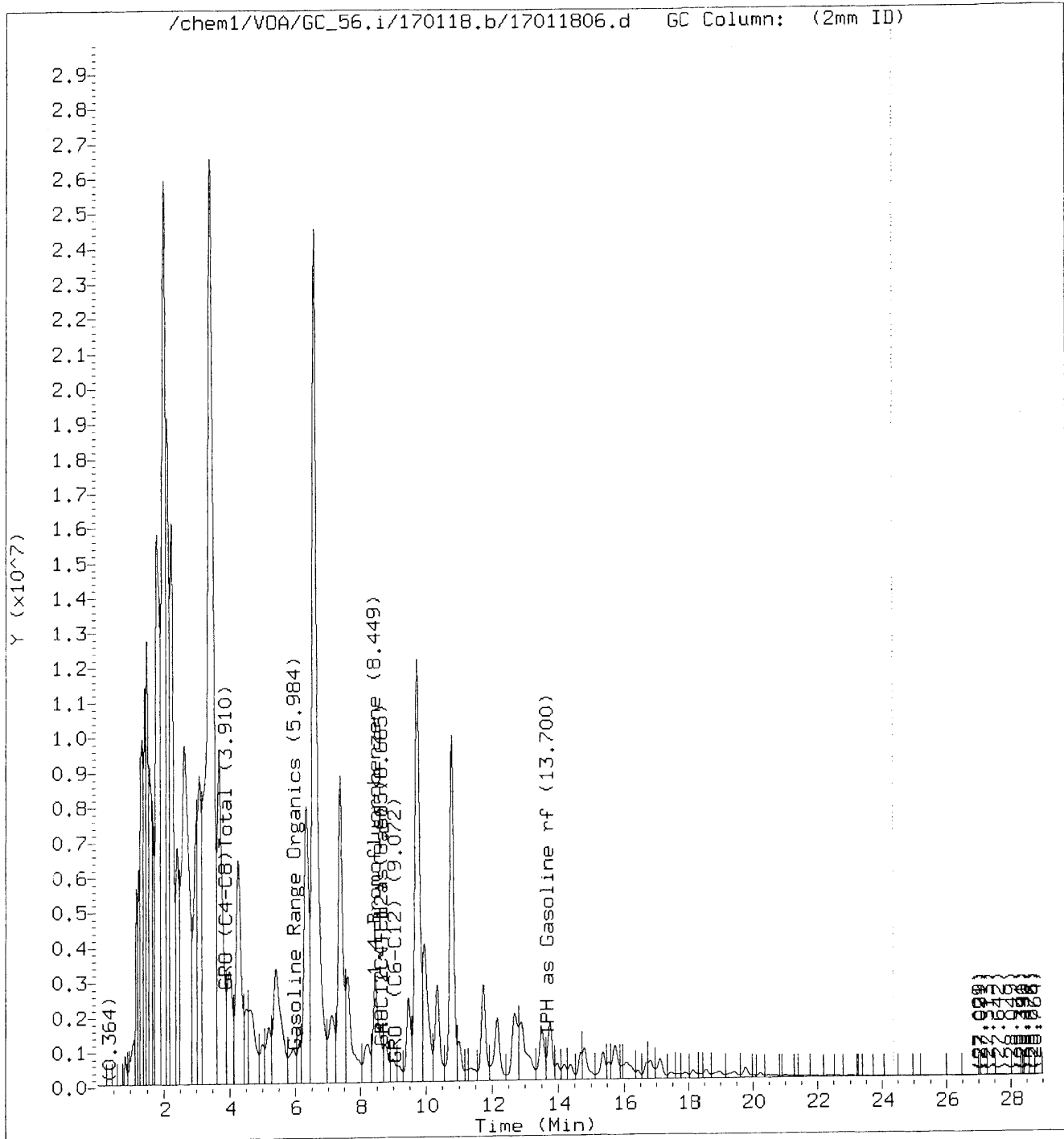
Reason for manual integration: Signal not integrated by automation

Digitally signed by

Analyst responsible for change: on at .
Target 3.5 esignature user ID:

Audit/management approval: *MC*

Original Data File



Data File: /chem1/VOA/GC_56.i/170118.b/17011806.d
 Report Date: 19-Jan-2017 13:25

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Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170118.b/17011806.d
 Lab Smp Id:
 Inj Date : 18-JAN-2017 21:16
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 10PPM TPH ICAL
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Meth Date : 19-Jan-2017 13:25 ulmc Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 6 Calibration Sample, Level: 5
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400	27.000		60725919400	10000.0	9030.89724 (M)
M 2 TPH as Gasoline				60725919400	10000.0	9030.89724
S 4 Gasoline Range Organics	1.075	10.893		55543475101	10000.0	9558.43228 (M)
S 5 C4-C12 (TPH as Gas)	0.400	16.931		60010065477	10000.0	9244.85868 (M)
S 6 GRO (C4-C8) Total	0.400	7.421		48232521355	10000.0	9240.85272 (M)
S 7 GRO (C6-C12)	1.212	16.931		59318044976	10000.0	9604.47327 (M)
S 8 GRO (C4-C12)	0.400	16.931		60010065477	10000.0	9244.85868 (M)
S 25 1,4-Bromofluorobenzene	8.450	8.450	0.000	556100711	100.000	125.41764 (M)

QC Flag Legend

M - Compound response manually integrated.



Data File: /chem1/V04/GC_56.1/170118.b/17011806.d

Date : 18-JAN-2017 21:16

Client ID:

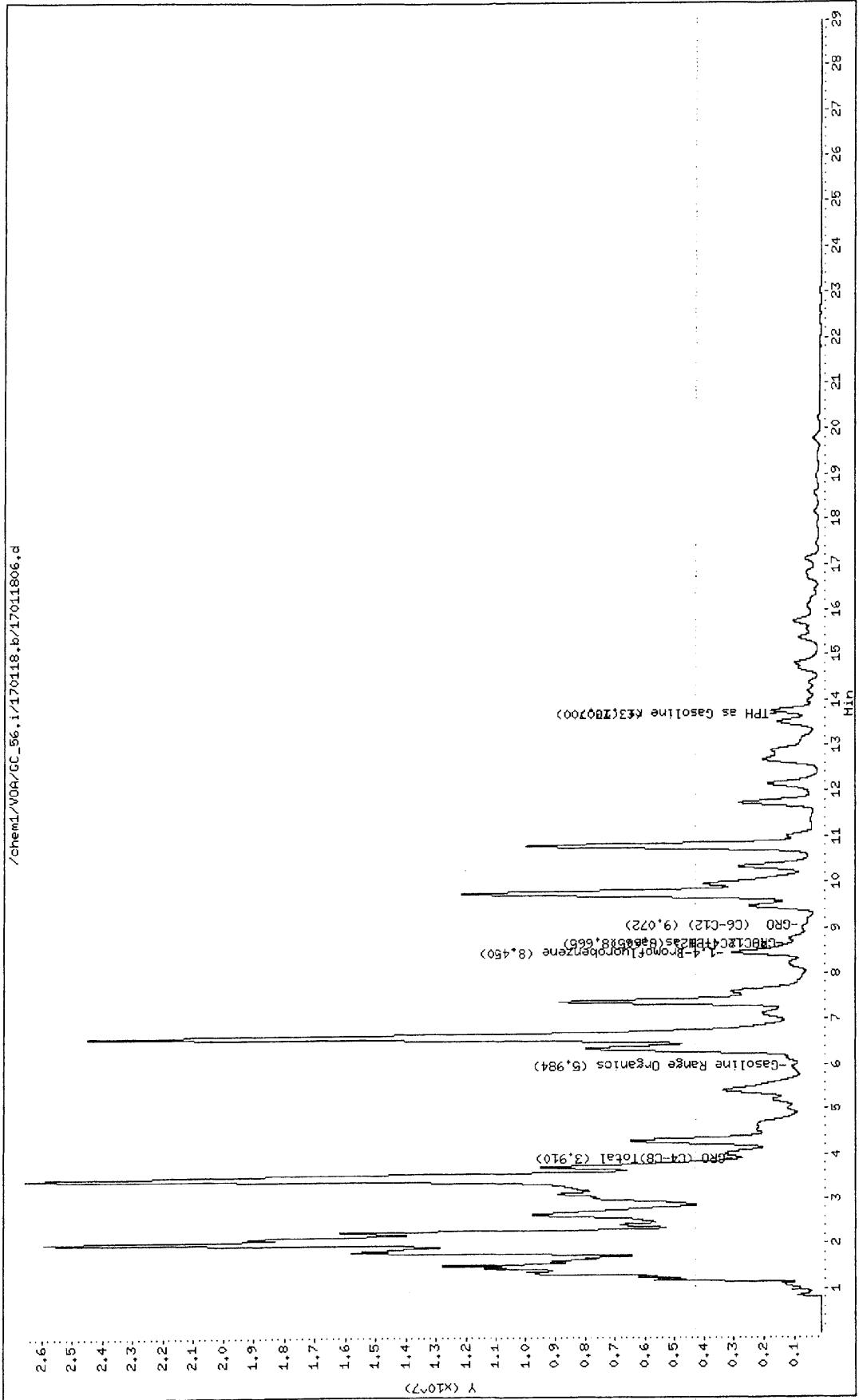
Sample Info: 10PPH TPH ICAL

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:



Data File: /chem1/VOA/GC_56.i/170118.b/17011807.d
 Report Date: 19-Jan-2017 13:25

Page 1

Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170118.b/17011807.d
 Lab Smp Id:
 Inj Date : 18-JAN-2017 21:48
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 2PPM TPH ICV
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170118.b/80158021b.m
 Meth Date : 19-Jan-2017 13:25 ulmc Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 7 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable

Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			14536646382	2000.00	2161.82745
M 2 TPH as Gasoline				14536646382	2000.00	2161.82745
S 4 Gasoline Range Organics	1.075-10.893			11525292474	2000.00	1983.37837
S 5 C4-C12 (TPH as Gas)	0.400-16.931			13997187519	2000.00	2156.33860
S 6 GRO (C4-C8) Total	0.400-7.421			10656418486	2000.00	2041.65967
S 7 GRO (C6-C12)	1.212-16.931			12475034623	2000.00	2019.89355
S 8 GRO (C4-C12)	0.400-16.931			13997187519	2000.00	2156.33860
\$ 25 1,4-Bromofluorobenzene	8.436	8.450	-0.014	339669626	100.000	76.60584



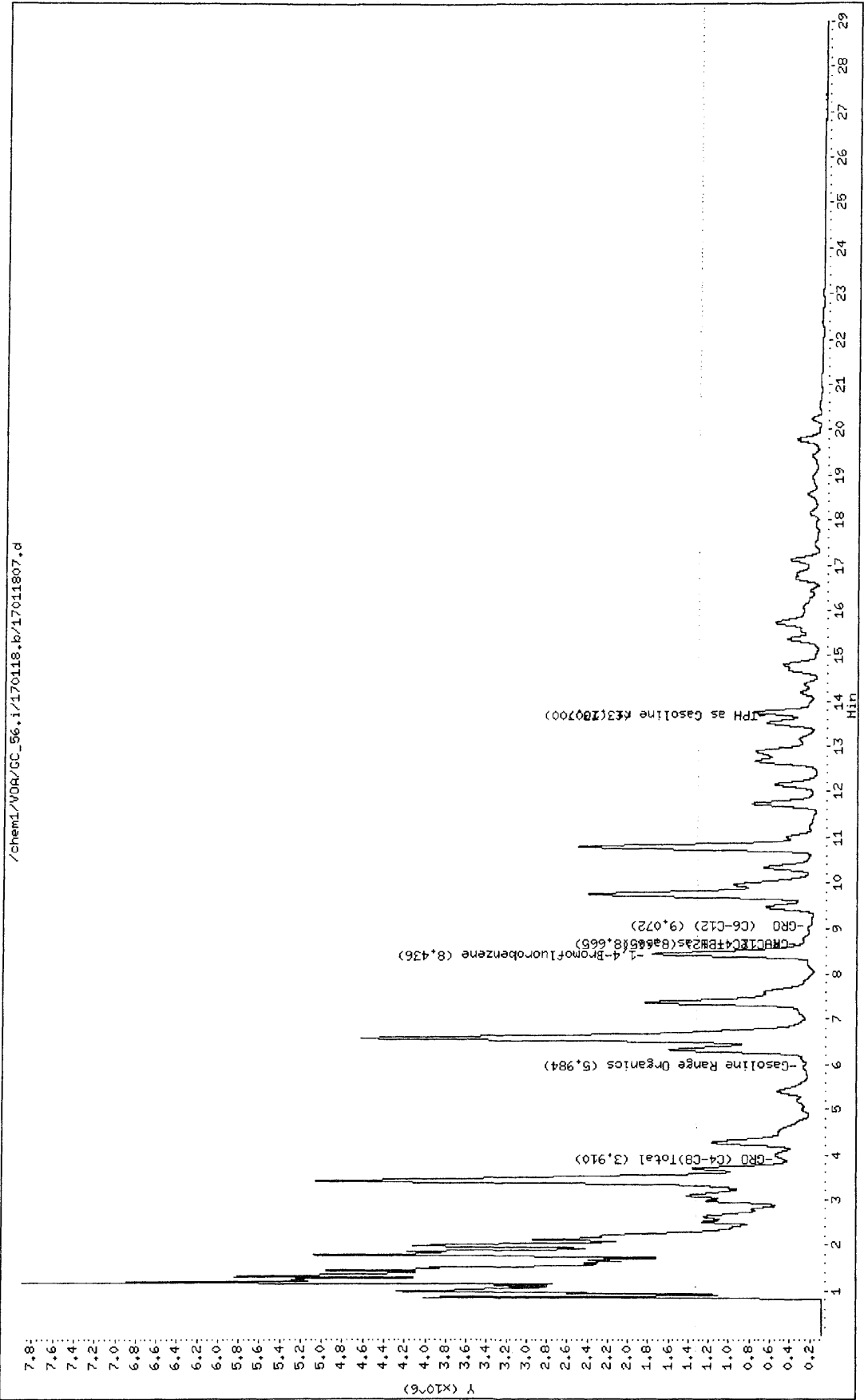
Data File: /chem1/VOR/GC_56.i/170118.b/17011807.d
Date : 18-JAN-2017 21:48
Client ID:
Sample Info: 2PPH TPH ICV

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:



=====
 External Standard Report
 =====

Data File Name : /chem1/VOA/GC_56/170118/17011801.d
 Page Number :
 Operator : 1083 Vial Number : Vial 1
 Instrument : GC 56 Injection Number : 1
 Sample Name : MARKER STD T122016B Sequence Line : 0
 Instrument Method: 80158021b.m
 Acquired on : 18 JAN 17 18:38
 Report Created on: 19-JAN-17 13:24 Analysis Method : 80158021b.m
 Software Revision: Target 3.50

Sig. 1 in /chem1/VOA/GC_56.i/170118.b/17011801.d

RT Range	Exp RT	DLT RT	Response	ug/L	Compound
0.832	8.450	7.618	42286622.00	50.00	C4-Butane
0.984	8.450	7.466	187841821.00	50.00	C5-Pentane
1.308	8.450	7.142	456053801.00	50.00	C6-Hexane
2.111	8.450	6.339	495760331.00	50.00	C7-Heptane
4.267	8.450	4.183	481446596.00	50.00	C8-Octane
7.615	8.450	0.835	515937618.00	50.00	C9-Nonane
11.013	8.450	-2.563	457292711.00	50.00	C10-Decane
14.187	8.450	-5.737	289711149.00	50.00	C11-Undecane
17.132	8.450	-8.682	283137358.00	50.00	C12-Dodecane
19.870	8.450	-11.420	62054829.00	50.00	C13-Tridecane

 End of File

Page 1

Data File: /chem1/V00/CC_56.i/170118.b/17011801.d

Date : 18-JAN-2017 18:38

Client ID:

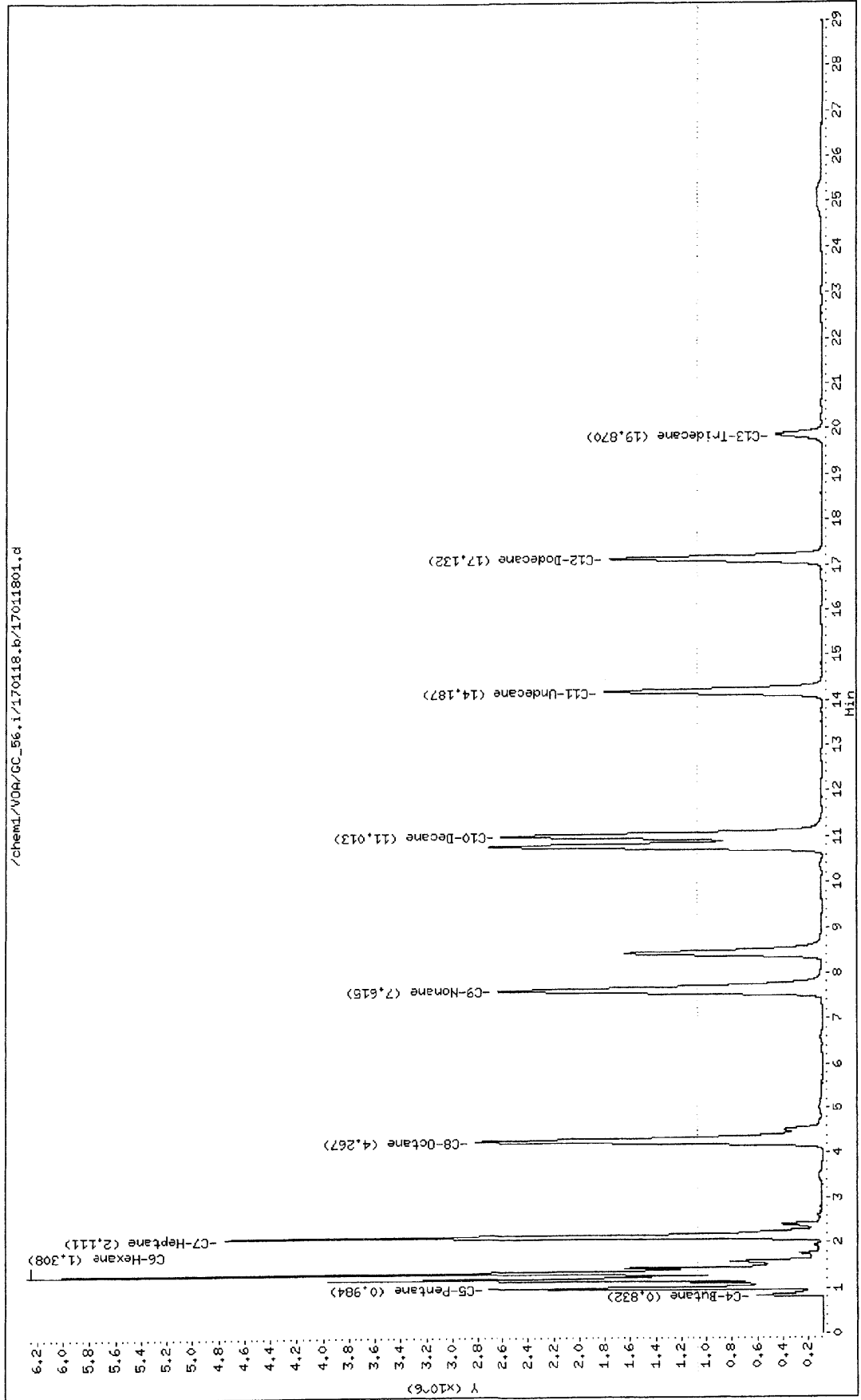
Sample Info: MARKER STD T1220168

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:



EPA METHOD 8015B (M) TPH as GASOLINE

Sample Data

**RAW DATA SHEET
FOR METHOD: EPA 8015B (M)**

WORK ORDER: 17-03-1523

INSTRUMENT: GC 56

EXTRACTION: EPA 5030C ✓

D/T EXTRACTED: 2017-03-21 17:52 ✓

ANALYZED BY: 1,083

D/T ANALYZED: 2017-03-23 20:55

REVIEWED BY:

D/T REVIEWED:

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170323\17032316.d\Report.txt17032316 ✓

1 **CLIENT SAMPLE NUMBER:** IDW-S

LCS/MB BATCH: 170323L034

MS/MSD BATCH: 170323S013

UNITS: mg/kg

SAMPLE VOLUME / WEIGHT:

FINAL VOLUME / WEIGHT:

ADJUSTMENT RATIO TO PF:

DEFAULT: 1.00 g / ACTUAL: 0.99 g ✓

DEFAULT: 5.00 ml / ACTUAL: 5.00 ml

1.01

COMMENT:

COMPOUND

TPH as Gasoline

ON COL CONC

DF

CONC

RL

QUAL

0.0560

1.00 ✓

ND

0.51

Data File: /chem1/VOA/GC_56.i/170323.b/17032316.d
 Report Date: 24-Mar-2017 11:37

Page 1

Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170323.b/17032316.d
 Lab Smp Id:
 Inj Date : 23-MAR-2017 20:55
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 03-1523-1B 0.99 ✓
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170323.b/80158021b.m
 Meth Date : 24-Mar-2017 11:31 tempam Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 16
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH-Gas_Soil.sub ✓
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * 0.001 * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (mg/Kg)
S 1 TPH as Gasoline	0.400	27.000		376694536	56.0204	0.05602 ✓
\$ 25 1,4-Bromofluorobenzene - FID	8.440	8.450	-0.010	443040269	99.9191	0.09991



Data File: /chem1/V08/GC_56.i/170323.b/17032316.d

Date : 23-MAR-2017 20:55

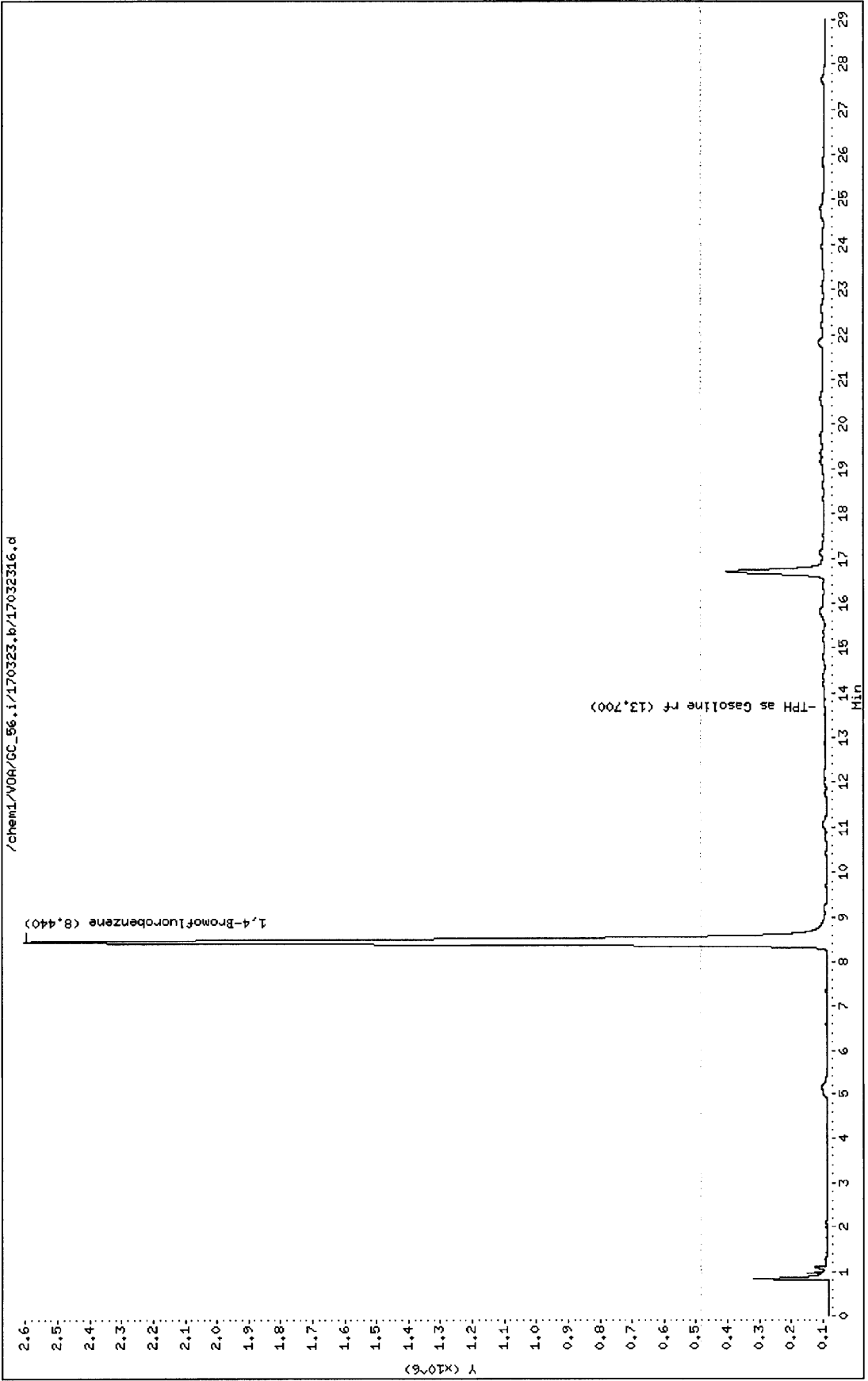
Client ID:

Sample Info: 03-1823-1B 0.99

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00



EPA METHOD 8015B (M) TPH as GASOLINE

Quality Control

Method Blank
LCS/LCSD
MS/MSD

**METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8015B (M)**

MB SAMPLE ID: 099-14-571-3547
MB BATCH ID: 170323L034
INSTRUMENT: GC 56
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-23 00:00

ANALYZED BY: 1,083
D/T ANALYZED: 2017-03-23 13:58
REVIEWED BY:
D/T REVIEWED:
MATRIX: Soil

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170323\17032304.d\Report.txt17032304

CLIENT WORK ORDER: 17-03-1523

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	IDW-S		2017-03-23 20:55	\\Us26prvp001\luftg\GC_56\GC_56_data\2017\170323\17032316.d\Report.txt1703231

**RAW DATA SHEET
FOR METHOD: EPA 8015B (M)**

WORK ORDER: 099-14-571
INSTRUMENT: GC 56
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-23 00:00

ANALYZED BY: 1,083
D/T ANALYZED: 2017-03-23 13:58
REVIEWED BY:
D/T REVIEWED:

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170323\17032304.d\Report.txt17032304

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 170323L034	SAMPLE VOLUME / WEIGHT: DEFAULT: 1.00 g / ACTUAL: 1.00 g
MS/MSD BATCH:	FINAL VOLUME / WEIGHT: DEFAULT: 5.00 ml / ACTUAL: 5.00 ml
UNITS: mg/kg	ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
TPH as Gasoline	0.0389	1.00	ND	0.50	

**LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 8015B (M)**

LCS SAMPLE ID: 099-14-571- 3547
LCS/MB BATCH ID: 170323L034
INSTRUMENT: GC 56

EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-23 00:00

ANALYZED BY: 1,083
D/T ANALYZED: 2017-03-23 13:26
REVIEWED BY:
D/T REVIEWED:

DATA FILE: \\Us26prvp001\luffg\GC_56\data\2017\170323\17032303.d\Report.txt17032303

<u>COMPOUND NAME</u>	<u>CONC ADDED</u>	<u>CONC REC</u>	<u>%RECOVERY</u>	<u>%REC CONTROL LIMIT</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
TPH as Gasoline	10.00	10.10	101	70-124	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8015B (M)

SPIKED SAMPLE ID: 17-03-1236-1
MS/MSD BATCH: 170323S013

INSTRUMENTS:
SAMPLE: GC 56
MS: GC 56
MSD: GC 56

EXTRACTION: EPA 5030C
D/T EXTRACTED:

SAMPLE: 2017-03-16 16:35
MS: 2017-03-16 16:35
MSD: 2017-03-16 16:35

ANALYZED BY: 1,083
D/T ANALYZED:

SAMPLE: 2017-03-23 15:38
MS: 2017-03-23 16:10
MSD: 2017-03-23 16:42

REVIEWED BY:
D/T REVIEWED:

COMMENT:

<u>COMPOUND NAME</u>	<u>SAMPLE</u>	<u>INITIAL</u>	<u>FINAL</u>	<u>MS CONC</u>	<u>% MS.REC</u>	<u>MSD CONC</u>	<u>% MSD.REC</u>	<u>% REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
TPH as Gasoline	13.65	2.000	80.16	89.35	94	94.66	101	48-114	6	0-23	PASS	

Data Files:

<u>TYPE</u>	<u>DATA FILE</u>	<u>DATA FILE PATH</u>
MS	17032307	\\Us26prvp001\luffig\GC_56\GC_56_data\2017\170323\17032307.d\Report.txt
MSD	17032308	\\Us26prvp001\luffig\GC_56\GC_56_data\2017\170323\17032308.d\Report.txt

SURROGATE RECOVERIES FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-1523

BATCH ID:

REVIEWED BY:

D/T REVIEWED:

LCS/MB: 170323L034MS: 170323S013

EXTRACTION: EPA 5030C

1 **CLIENT SAMPLE NUMBER : IDW-S**

INSTRUMENT: GC 56

ANALYZED BY: 1,083

D/T EXTRACTED: 2017-03-21 17:52

D/T ANALYZED 2017-03-23 20:55

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170323\17032316.d\Report.txt17032316

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
1,4-Bromofluorobenzene - FID	100	42-126	PASS	

MB **CLIENT SAMPLE NUMBER : Method Blank**

INSTRUMENT: GC 56

ANALYZED BY: 1,083

D/T EXTRACTED: 2017-03-23 00:00

D/T ANALYZED 2017-03-23 13:58

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170323\17032304.d\Report.txt17032304

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
1,4-Bromofluorobenzene - FID	86	42-126	PASS	

LCS **CLIENT SAMPLE NUMBER : Lab Control Sample**

INSTRUMENT: GC 56

ANALYZED BY: 1,083

D/T EXTRACTED: 2017-03-23 00:00

D/T ANALYZED 2017-03-23 13:26

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170323\17032303.d\Report.txt17032303

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
1,4-Bromofluorobenzene - FID	108	42-126	PASS	

MS **CLIENT SAMPLE NUMBER : Matrix Spike**

INSTRUMENT: GC 56

ANALYZED BY: 1,083

D/T EXTRACTED: 2017-03-16 16:35

D/T ANALYZED 2017-03-23 16:10

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170323\17032307.d\Report.txt17032307

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
1,4-Bromofluorobenzene - FID	111	42-126	PASS	

SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-1523

BATCH ID:

LCS/MB:

MS: 170323S013

EXTRACTION: EPA 5030C

REVIEWED BY: 607

D/T REVIEWED: 2017-03-24 12:33

MSD CLIENT SAMPLE NUMBER: Matrix Spike Duplicate

INSTRUMENT: GC 56

ANALYZED BY: 1,083

D/T EXTRACTED: 2017-03-16 16:35

D/T ANALYZED 2017-03-23 16:42

DATA FILE: \\Us26prvp001\luftg\GC_56\GC_56_data\2017\170323\17032308.d\Report.txt17032308

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
1,4-Bromofluorobenzene - FID	121	42-126	PASS	

CW: BFB

beginning : 104.7

middle : 118.3

Ending : 99.7

Data File: /chem1/VOA/GC_56.i/170323.b/17032304.d
 Report Date: 23-Mar-2017 16:43

Page 1

Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170323.b/17032304.d
 Lab Smp Id:
 Inj Date : 23-MAR-2017 13:58
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : MB
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170323.b/80158021b.m
 Meth Date : 23-Mar-2017 16:43 tempn Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 4 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			261816833	38.9363	38.93627
M 2 TPH as Gasoline				261816833	38.9363	38.93627
S 4 Gasoline Range Organics	1.193-10.893			90331299	15.5450	15.54504
S 5 C4-C12 (TPH as Gas)	0.400-16.931			156948734	24.1788	24.17875
S 6 GRO (C4-C8)Total	0.400-7.421			81083961	15.5348	15.53484
S 7 GRO (C6-C12)	1.212-16.931			142081984	23.0052	23.00518
S 8 GRO (C4-C12)	0.400-16.931			156948734	24.1788	24.17875
\$ 25 1,4-Bromofluorobenzene	8.441	8.450	-0.009	382974672	86.3724	86.37244

Data File: /chem1/V04/GC_56.i/170323.b/17032304.d

Date: 23-MAR-2017 13:58

Client ID:

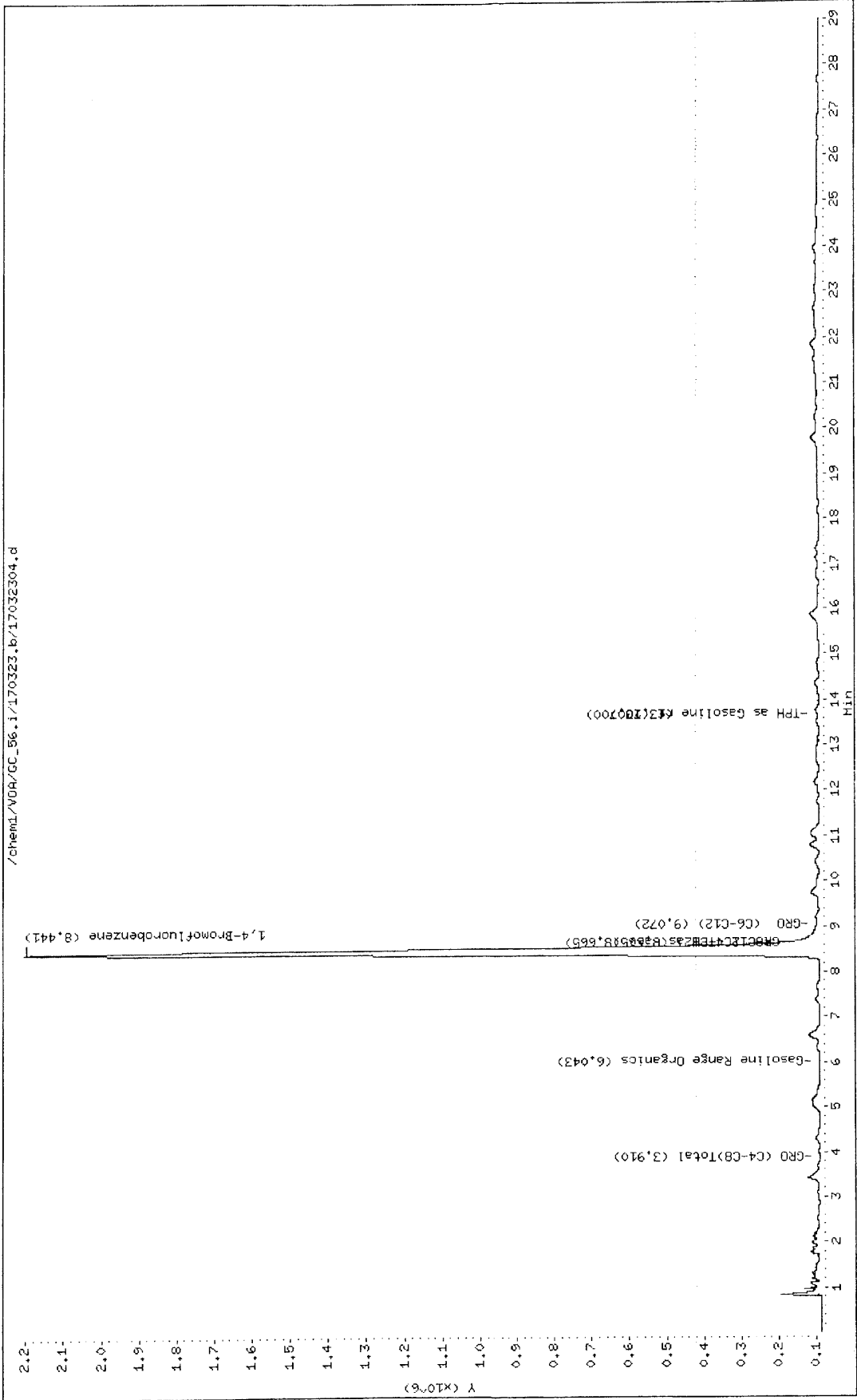
Sample Info: MB

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:



Data File: /chem1/VOA/GC_56.i/170323.b/17032303.d
 Report Date: 23-Mar-2017 16:43

Page 1

Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170323.b/17032303.d
 Lab Smp Id:
 Inj Date : 23-MAR-2017 13:26
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 2PPM TPH LCS
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170323.b/80158021b.m
 Meth Date : 23-Mar-2017 16:43 tempn Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 3 QC Sample: BLANK
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			13585712863	2020.41	2020.40871
M 2 TPH as Gasoline				13585712863	2020.41	2020.40871
S 4 Gasoline Range Organics	1.193-10.893			10098846645	1737.90	1737.90245
S 5 C4-C12 (TPH as Gas)	0.400-16.931			12672457941	1952.26	1952.25720
S 6 GRO (C4-C8)Total	0.400-7.421			8522117946	1632.75	1632.74974
S 7 GRO (C6-C12)	1.212-16.931			11940881439	1933.41	1933.40621
S 8 GRO (C4-C12)	0.400-16.931			12672457941	1952.26	1952.25720
S 25 1,4-Bromofluorobenzene	8.453	8.450	0.003	477286333	107.643	107.64259



Data File: /chem1/VDA/GC_56.i/170323.lb/17032303.d

Date : 23-MAR-2017 13:26

Client ID:

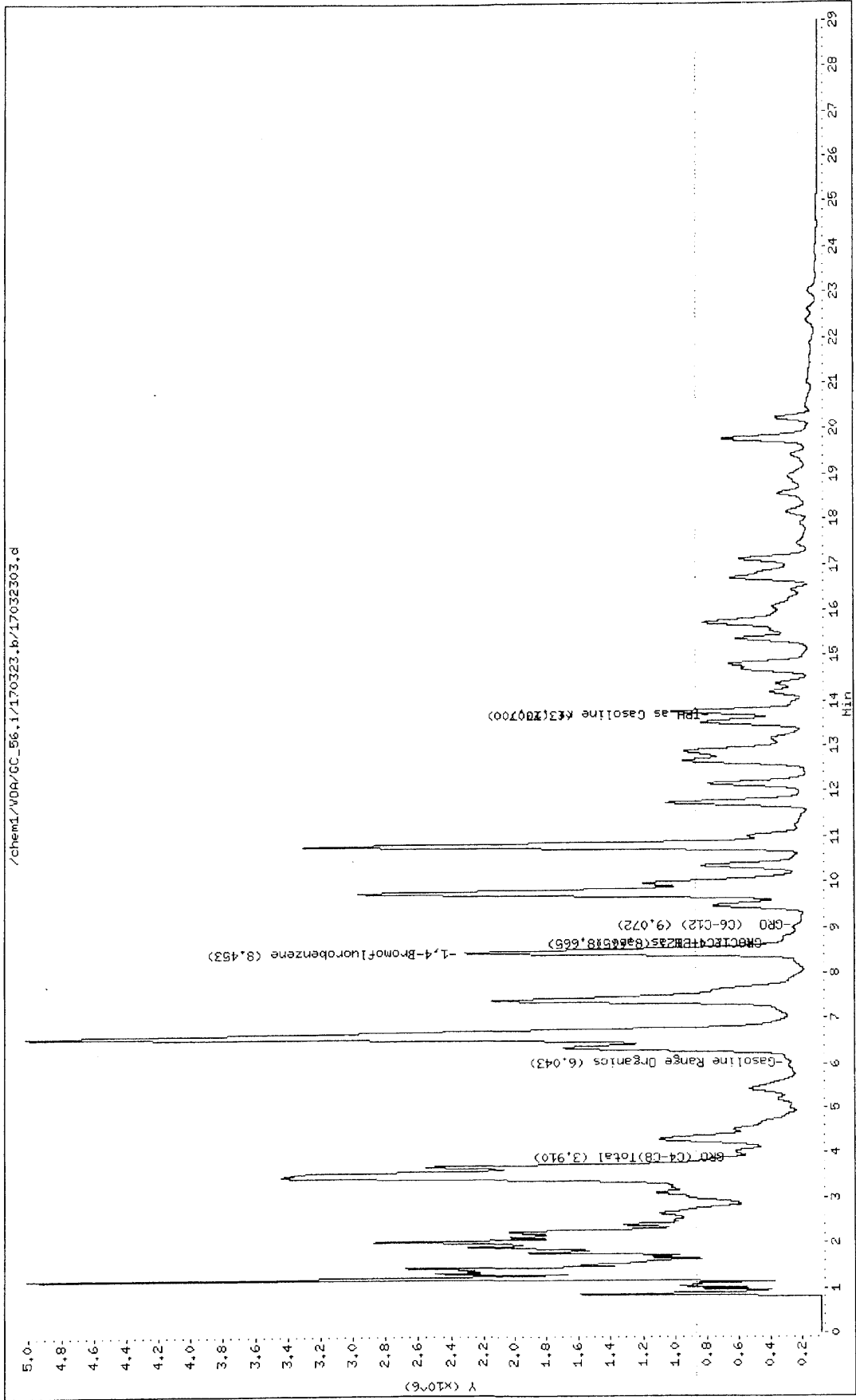
Sample Info: 2PPH TPH LCS

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column Phase:



Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170323.b/17032307.d
Lab Smp Id:
Inj Date : 23-MAR-2017 16:10
Operator : 1083 Inst ID: GC_56.i
Smp Info : MS 03-1236-1A 4.99 250uL
Misc Info :
Comment :
Method : /chem1/VOA/GC_56.i/170323.b/80158021b.m
Meth Date : 23-Mar-2017 16:46 tempn Quant Type: ESTD
Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: TPH-Gas_Soil.sub
Target Version: 3.50
Processing Host: US26TAR2

Concentration Formula: Amt * DF * 0.001 * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (mg/Kg)
S 1 TPH as Gasoline	0.400-27.000			14990597814	2229.34	2.22933 (M)
\$ 25 1,4-Bromofluorobenzene - FID	8.447	8.450	-0.003	490025472	110.516	0.11051

QC Flag Legend

M - Compound response manually integrated.



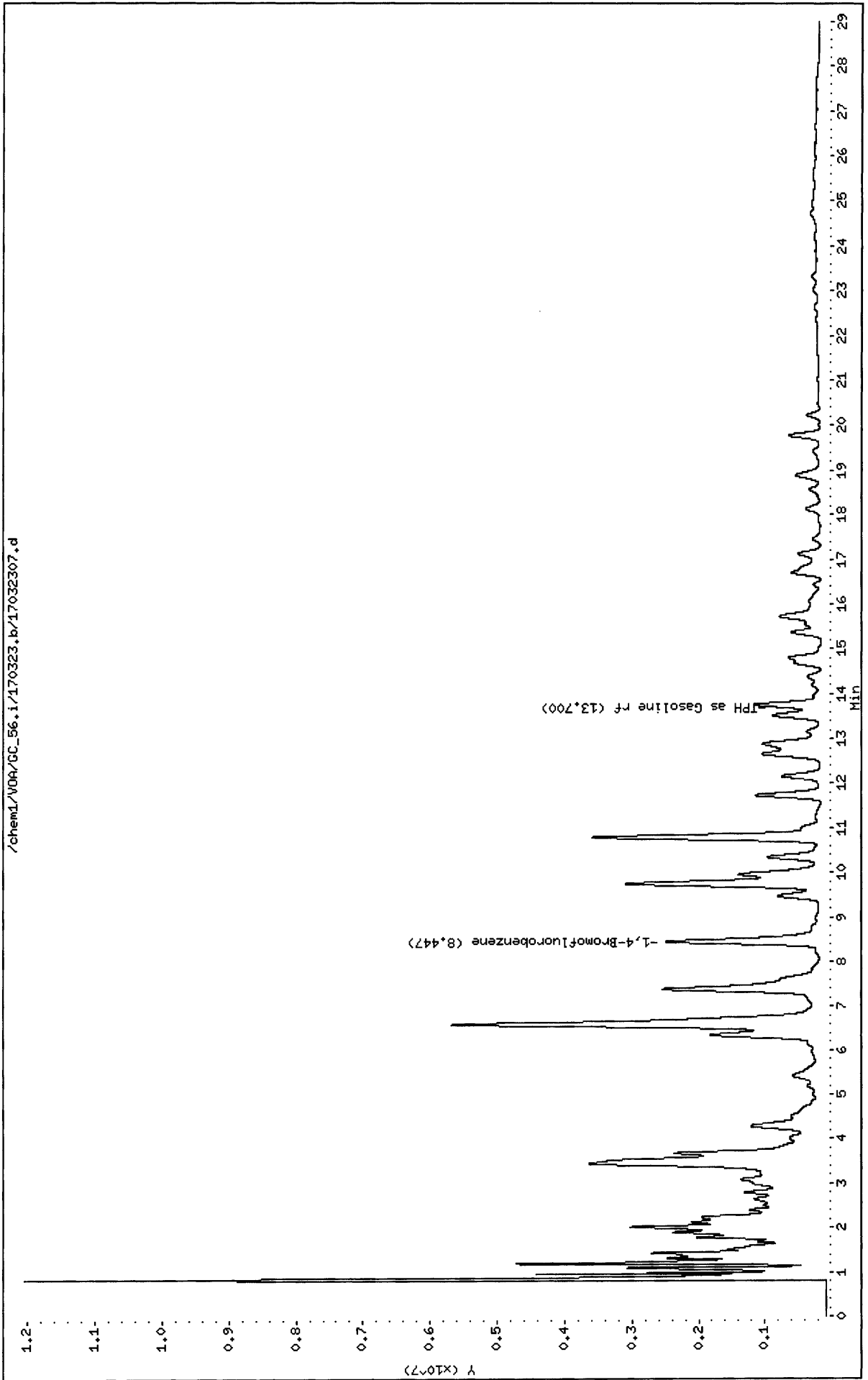
Data File: /chem1/VOA/CC_56.i/170323.b/17032307.d
Date : 23-MAR-2017 16:10
Client ID:
Sample Info: MS 03-1236-1A 4.99 250ul

Instrument: GC_56.i

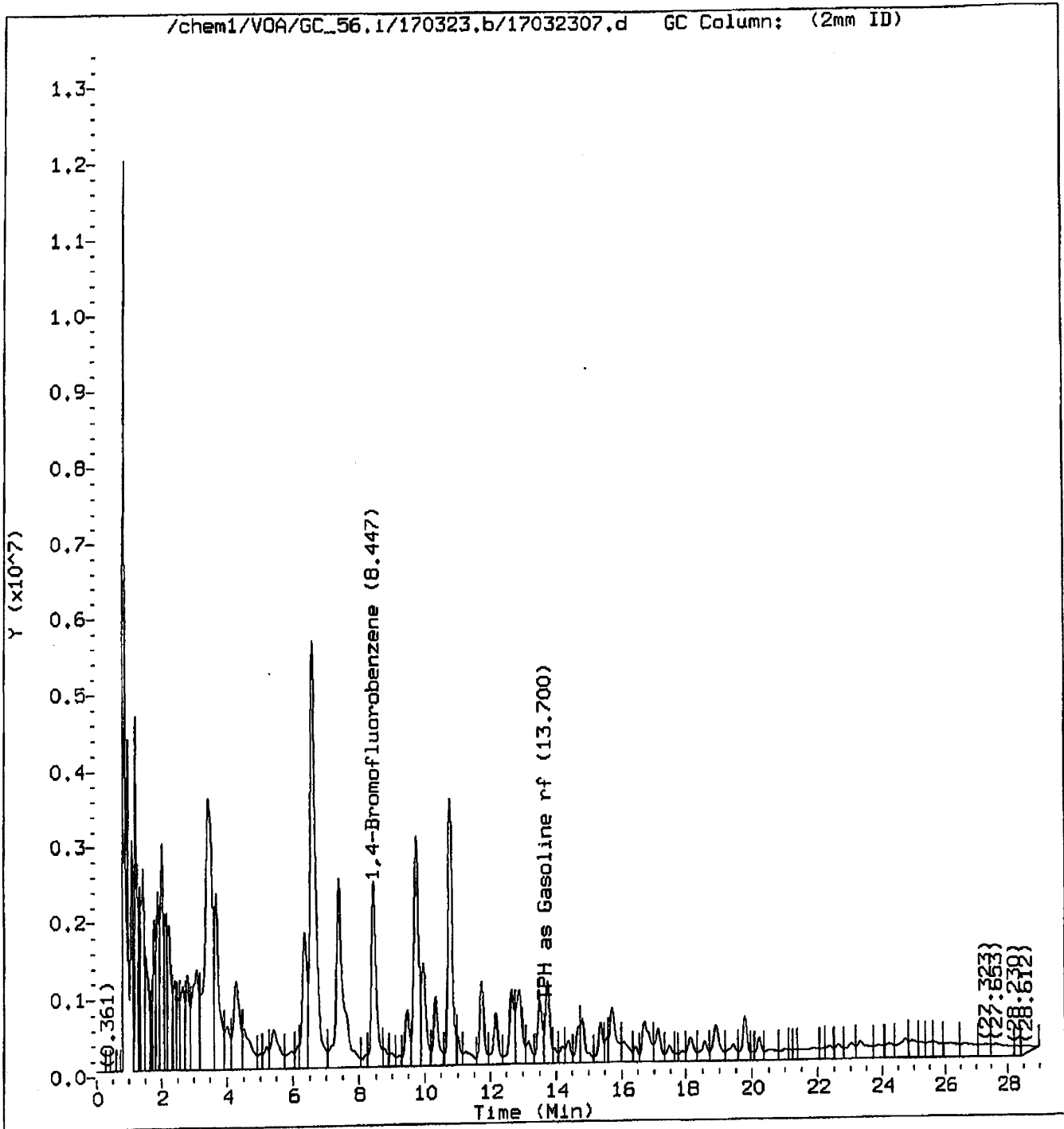
Operator: 1083

Column diameter: 2.00

Column phase:



Manually Integrated Data File

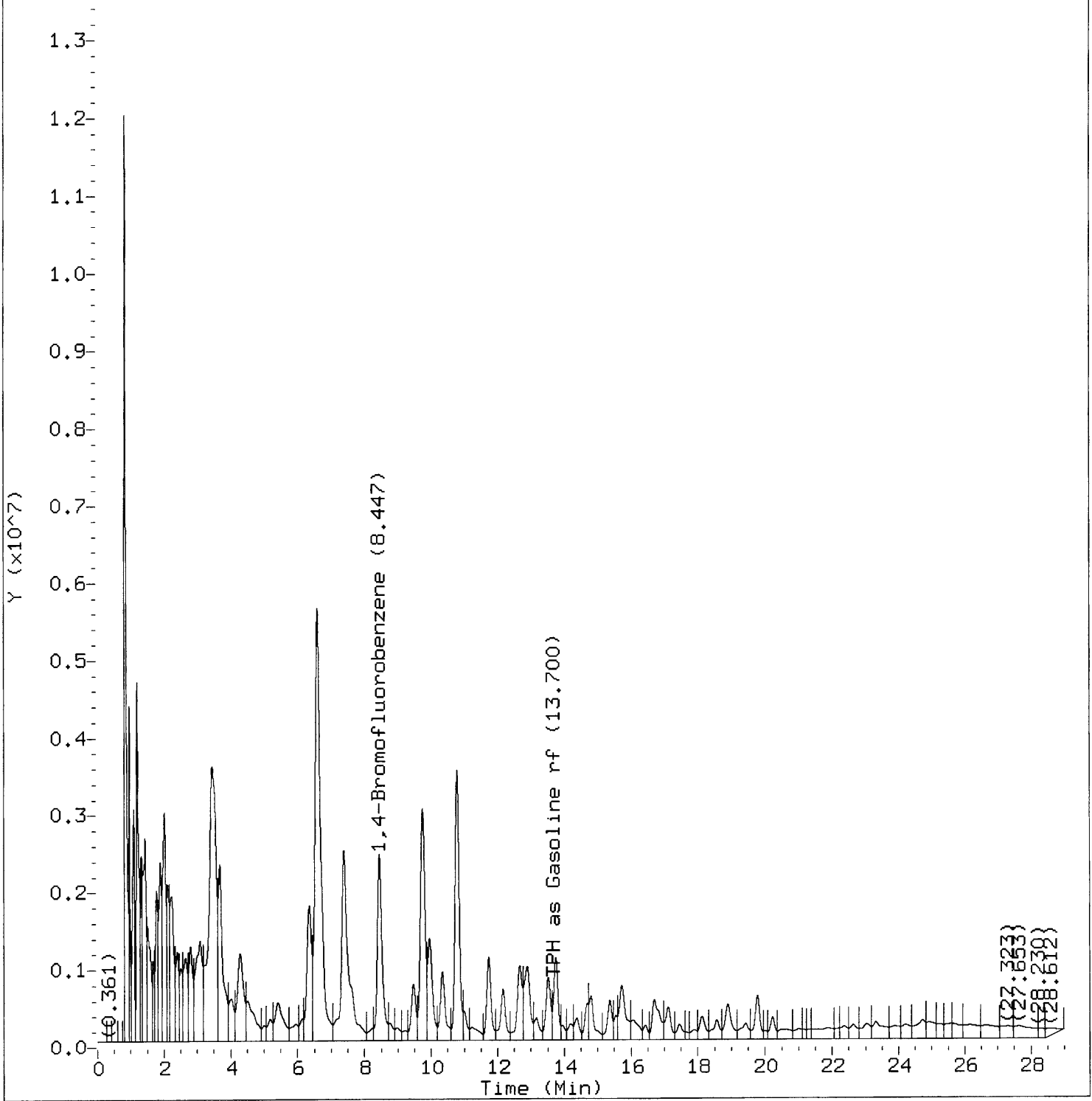


Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by on at Target 3.5 esignature user ID:

Audit/management approval: *607*

/chem1/VOA/GC_56.i/170323.b/17032307.d GC Column: (2mm ID)



Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170323.b/17032308.d
Lab Smp Id:
Inj Date : 23-MAR-2017 16:42
Operator : 1083 Inst ID: GC_56.i
Smp Info : MSD 03-1236-1A 4.99 250uL
Misc Info :
Comment :
Method : /chem1/VOA/GC_56.i/170323.b/80158021b.m
Meth Date : 23-Mar-2017 16:46 tempn Quant Type: ESTD
Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: TPH-Gas_Soil.sub
Target Version: 3.50
Processing Host: US26TAR2

Concentration Formula: Amt * DF * 0.001 * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (mg/Kg)
S 1 TPH as Gasoline	0.400-27.000			15881240233	2361.79	2.36178 (M)
\$ 25 1,4-Bromofluorobenzene - FID	8.452	8.450	0.002	535070815	120.675	0.12067

QC Flag Legend

M - Compound response manually integrated.

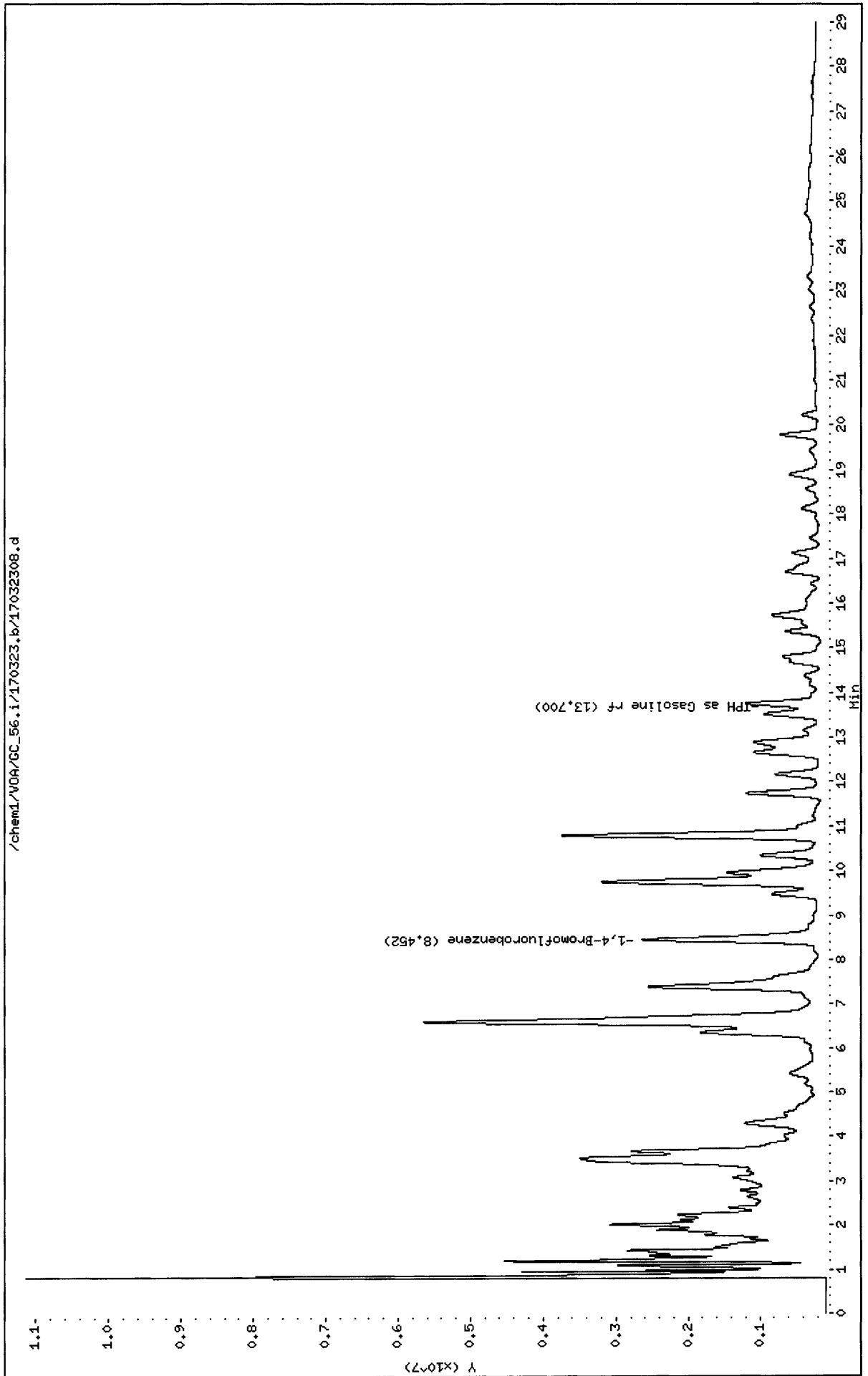
Data File: /chem1/V0A/GC_56.i/170323.b/17032308.d
Date : 23-MAR-2017 16:42
Client ID:
Sample Info: MSD 03-1236-1A 4.99 250uL

Instrument: GC_56.i

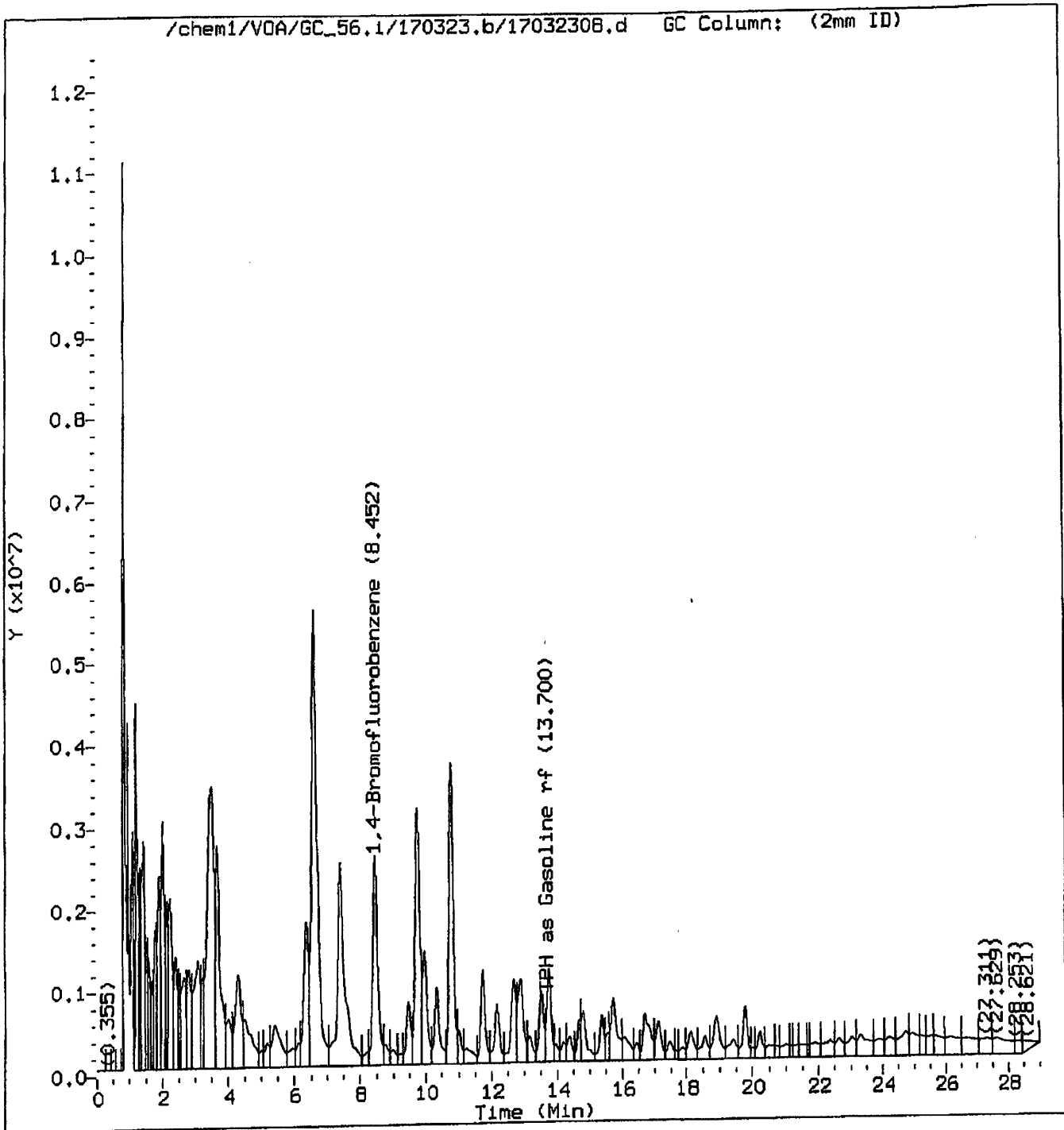
Operator: 1083

Column diameter: 2.00

Column phase:



Manually Integrated Data File

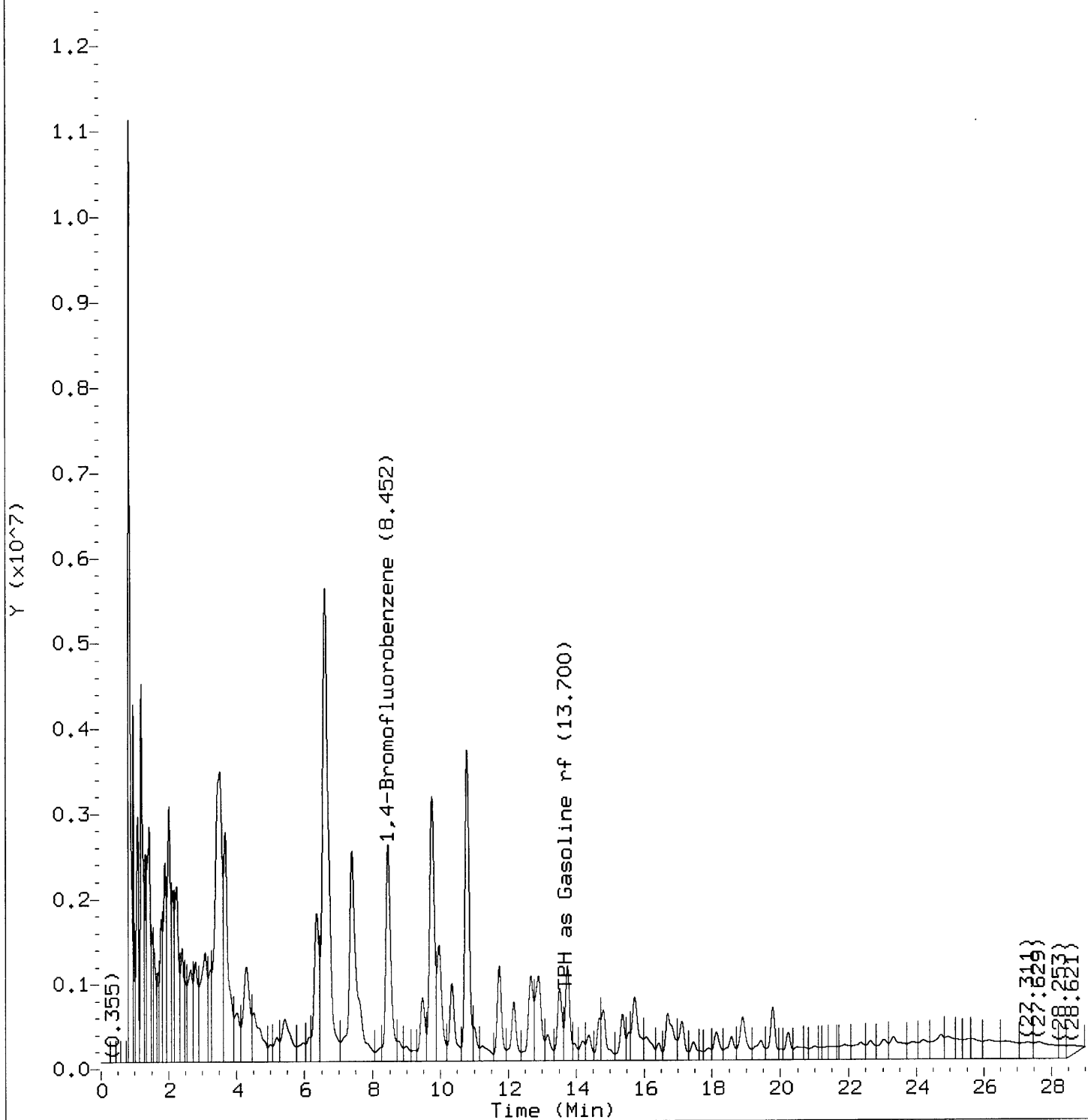


Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by
on at
Target 3.5 esignature user ID:

Audit/management approval: 607

/chem1/VOA/GC_56.i/170323.b/17032308.d GC Column: (2mm ID)



Data File: /chem1/VOA/GC_56.i/170323.b/17032306.d
 Report Date: 23-Mar-2017 16:55

Page 1

Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170323.b/17032306.d
 Lab Smp Id:
 Inj Date : 23-MAR-2017 15:38
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 03-1236-1A 4.99 250uL
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170323.b/80158021b.m
 Meth Date : 23-Mar-2017 16:46 tempam Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 6
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH-Gas_Soil.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * 0.001 * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ug/L)	FINAL (mg/Kg)
S 1 TPH as Gasoline	0.400-27.000			2290475185	340.630	0.34062(M)
\$ 25 1,4-Bromofluorobenzene - FID	8.446	8.450	-0.004	400230519	90.2642	0.09026

QC Flag Legend

M - Compound response manually integrated.



Page 1

Data File: /chem1/V0A/GC_56.i/170323.b/17032306.d

Date : 23-MAR-2017 15:38

Client ID:

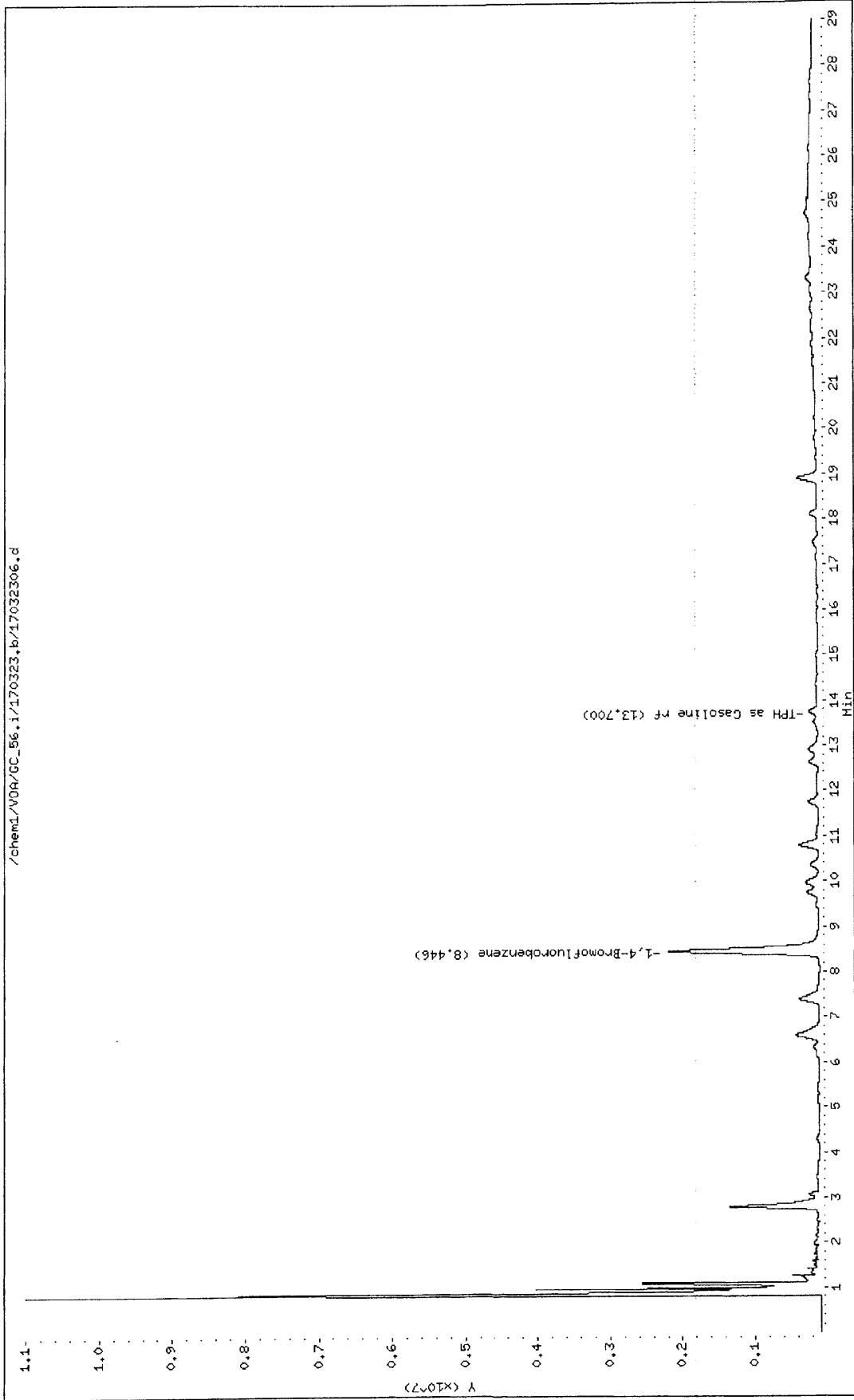
Sample Info: 03-1236-1A 4.99 250uL

Instrument: GC_56.i

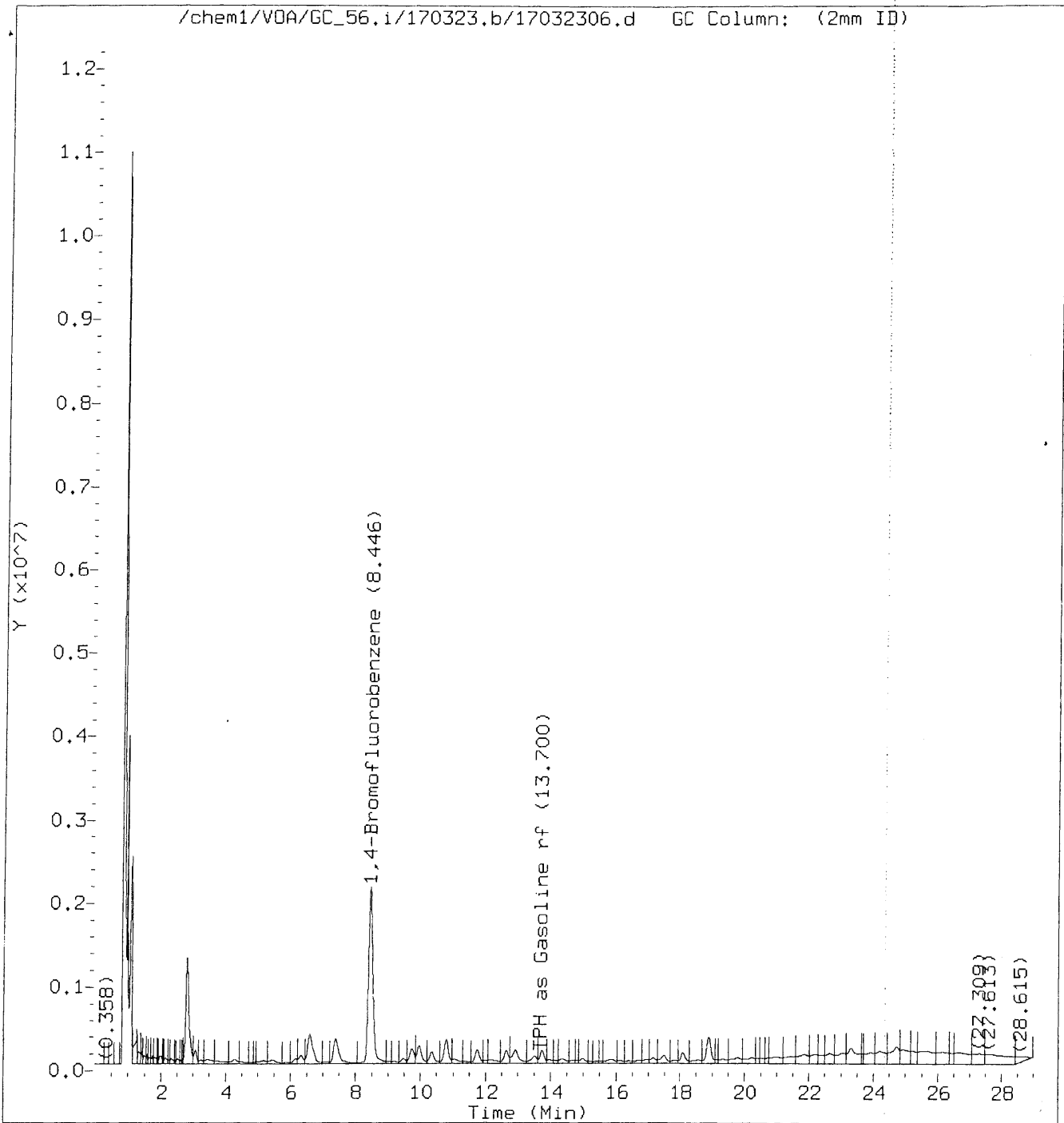
Operator: 1083

Column diameter: 2.00

Column phase:



Manually Integrated Data File

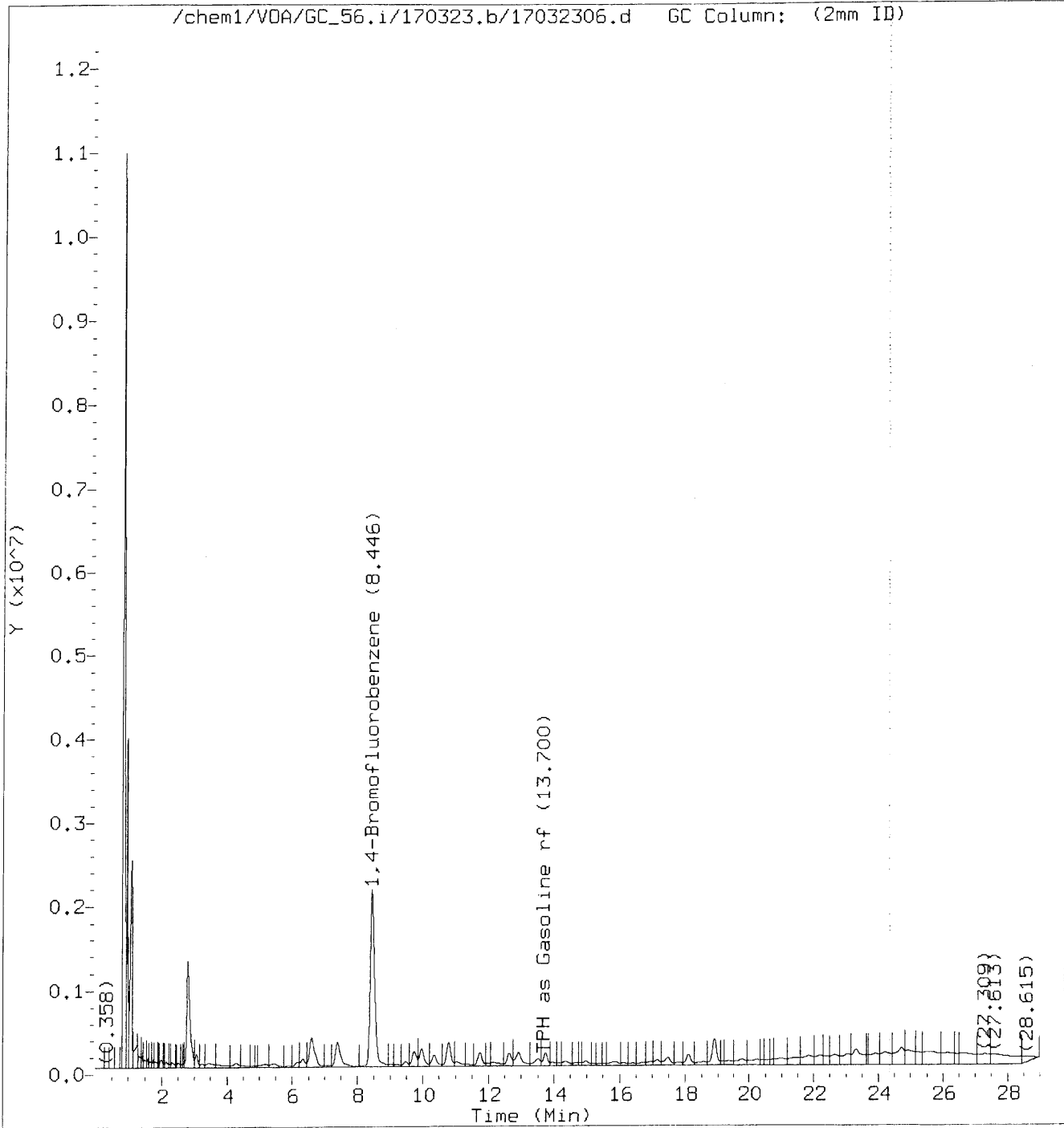


Reason for manual integration: Signal not integrated by automation

Digitally signed by
Analyst responsible for change: on at .
Target 3.5 esignature user ID:

Audit/management approval: 607

Original Data File



EPA METHOD 8015B (M)
TPH as GASOLINE

Continuing Calibration

CCV ASSOCIATION SUMMARY FOR METHOD: EPA 8015B (M)

BATCH ID: 170323A046
INSTRUMENT: GC 56

ANALYZED BY: 1,083

WORK ORDER: 099-14-570
MATRIX: Soil

REVIEWED BY: 607
D/T REVIEWED: 2017-03-24 12:33

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
2889	Daily Calibration	2017-03-23 12:54	\\Us26prvp001\luftg\GC_56\GC_56_data\2017\170323\17032302.d\Report.txt17032302

WORK ORDER: 17-03-1523
MATRIX: Soil

REVIEWED BY:
D/T REVIEWED:

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	IDW-S	2017-03-23 20:55	\\Us26prvp001\luftg\GC_56\GC_56_data\2017\170323\17032316.d\Report.txt17032316

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8015B (M)

CCV WORK ORDER: 099-14-570-2889-6010

BATCH ID:

1701181016
170323A046
GC-56

ANALYZED BY: 1083

D/T ANALYZED:

INITIAL:
CCV: 2017-01-18 19:09
2017-03-23 12:54

REVIEWED BY:

D/T REVIEWED:

DATA FILE: \\Us26prvp001\luffg\GC_56\data\2017\170323\17032302.d\Report.txt17032302

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
TPH as Gasoline	C	Avg Resp	0.00	6724239882.622	6973942488.650			-4	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/VOA/GC_56.i/170323.b/17032302.d
 Report Date: 03/23/2017 16:44

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_56.i Injection Date and Time: 23-MAR-2017 12:54
 Sample Name: 2PPM TPH CCV Initial Calibration Date(s): 18-JAN-2017 18-JAN-2017
 Sublist used: TPH_Gas.sub Initial Calibration Time(s): 18:38 21:16
 Method used: /chem1/VOA/GC_56.i/170323.b/80158021b.m

Target Compounds	ICAL RRF or Amount	CCV RRF	Min. RRF	%D / %Drift /Drift	Max%D	Curve Type
TPH as Gasoline rf	6724239.883	6973942.489	0.01	-4	15	Averaged
GRO (C4-C8)Total	5219488.155	5620287.664	0.01	-8	15	Averaged
GRO (C4-C12)	6491182.558	6818218.915	0.01	-5	15	Averaged
C4-C12 (TPH as Gas)	6491182.558	6818218.915	0.01	-5	15	Averaged
Gasoline Range Organics	5810939.854	6224620.705	0.01	-7	15	Averaged
GRO (C6-C12)	6176085.174	6572697.652	0.01	-6	15	Averaged
TPH as Gasoline	6724239.883	6973942.489	0.01	-4	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift /Drift	Max%D	Curve Type
1,4-Bromofluorobenzene	4433991.152	4641911.060	0.01	-5	30	Averaged

page 1

Data File: /chem1/VOA/GC_56.i/170323.b/17032302.d
 Report Date: 23-Mar-2017 16:43

Page 1

Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170323.b/17032302.d
 Lab Smp Id:
 Inj Date : 23-MAR-2017 12:54
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 2PPM TPH CCV
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170323.b/80158021b.m
 Meth Date : 23-Mar-2017 16:43 tempam Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 2 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			13947884977	2000.00	2074.26939
M 2 TPH as Gasoline				13947884977	2000.00	2074.26939
S 4 Gasoline Range Organics	1.193-10.893			12449241411	2000.00	2142.38001
S 5 C4-C12 (TPH as Gas)	0.400-16.931			13636437831	2000.00	2100.76325
S 6 GRO (C4-C8)Total	0.400-7.421			11240575328	2000.00	2153.57808
S 7 GRO (C6-C12)	1.212-16.931			13145395305	2000.00	2128.43491
S 8 GRO (C4-C12)	0.400-16.931			13636437831	2000.00	2100.76325
\$ 25 1,4-Bromofluorobenzene	8.453	8.450	0.003	464191106	100.000	104.68922

Page 1

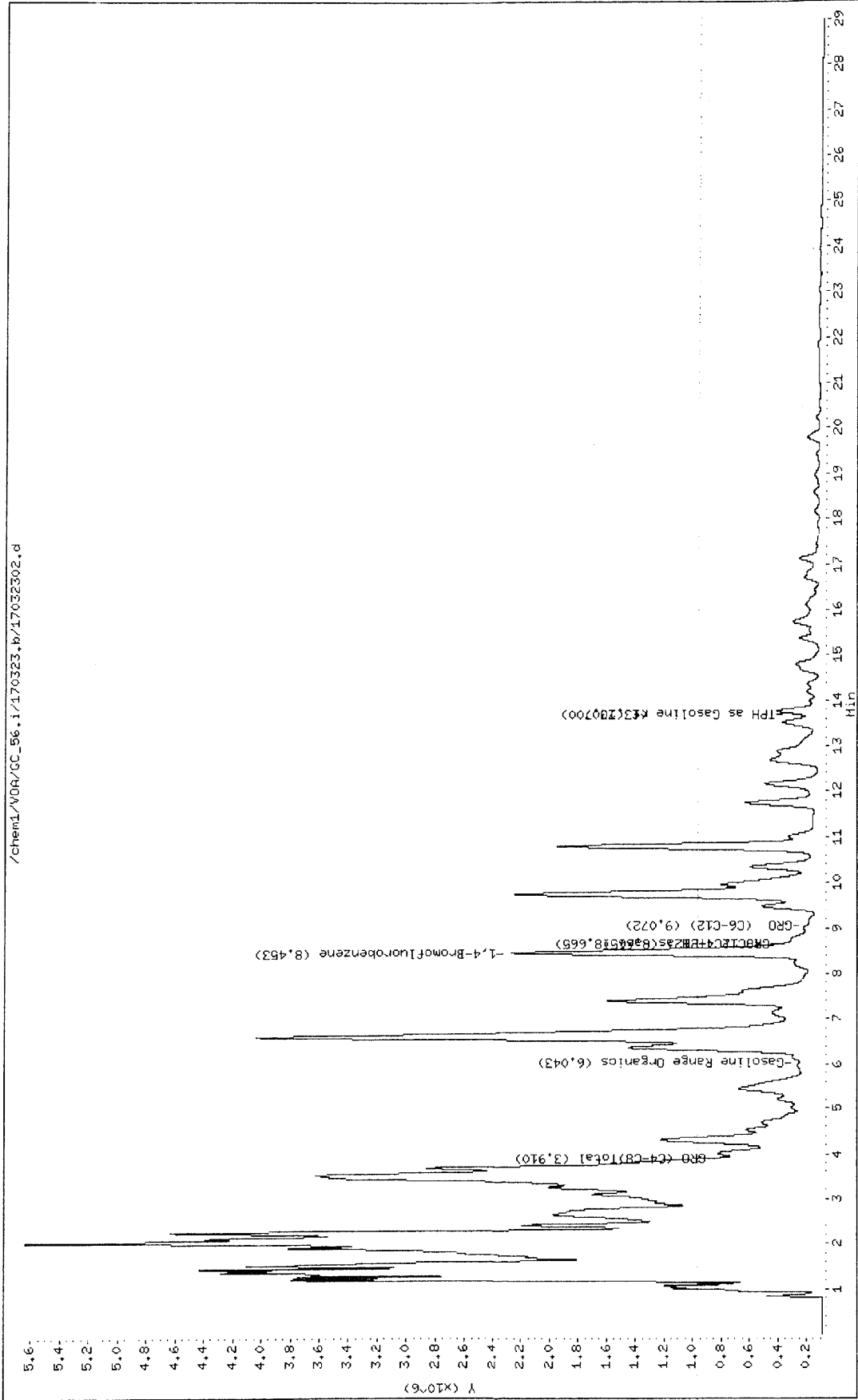
Data File: /chem1/V08/GC_56.i/170323.b/17032302.d
Date: 23-MAR-2017 12:54
Client ID:
Sample Info: 2PPH TPH CCV

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:



Data File: /chem1/VOA/GC_56.i/170323.b/17032322.d
 Report Date: 03/24/2017 11:32

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_56.i Injection Date and Time: 24-MAR-2017 00:05
 Sample Name: 2PPM TPH CCV Initial Calibration Date(s): 18-JAN-2017 18-JAN-2017
 Sublist used: TPH_Gas.sub Initial Calibration Time(s): 18:38 21:16
 Method used: /chem1/VOA/GC_56.i/170323.b/80158021b.m

Target Compounds	ICAL RRF or Amount	CCV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Gasoline rf	6724239.883	6708138.849	0.01	0	15	Averaged
GRO (C4-C8)Total	5219488.155	5534558.580	0.01	-6	15	Averaged
GRO (C4-C12)	6491182.558	6567802.106	0.01	-1	15	Averaged
C4-C12 (TPH as Gas)	6491182.558	6567802.106	0.01	-1	15	Averaged
Gasoline Range Organics	5810939.854	5999367.715	0.01	-3	15	Averaged
GRO (C6-C12)	6176085.174	6310087.448	0.01	-2	15	Averaged
TPH as Gasoline	6724239.883	6708138.849	0.01	0	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
1,4-Bromofluorobenzene	4433991.152	5246973.550	0.01	-18	30	Averaged

page 1

Data File: /chem1/VOA/GC_56.i/170323.b/17032322.d
 Report Date: 24-Mar-2017 11:31

Page 1

Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170323.b/17032322.d
 Lab Smp Id:
 Inj Date : 24-MAR-2017 00:05
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 2PPM TPH CCV
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170323.b/80158021b.m
 Meth Date : 24-Mar-2017 11:31 tempn Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 22 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			13416277697	2000.00	1995.21104
M 2 TPH as Gasoline				13416277697	2000.00	1995.21104
S 4 Gasoline Range Organics	1.193-10.893			11998735430	2000.00	2064.85280
S 5 C4-C12 (TPH as Gas)	0.400-16.931			13135604211	2000.00	2023.60726
S 6 GRO (C4-C8) Total	0.400-7.421			11069117160	2000.00	2120.72847
S 7 GRO (C6-C12)	1.212-16.931			12620174896	2000.00	2043.39392
S 8 GRO (C4-C12)	0.400-16.931			13135604211	2000.00	2023.60726
S 25 1,4-Bromofluorobenzene	8.455	8.450	0.005	524697355	100.000	118.33522



Data File: /chem1/VDA/GC_56.i/170323.b/17032322.d

Date : 24-MAR-2017 00:05

Client ID:

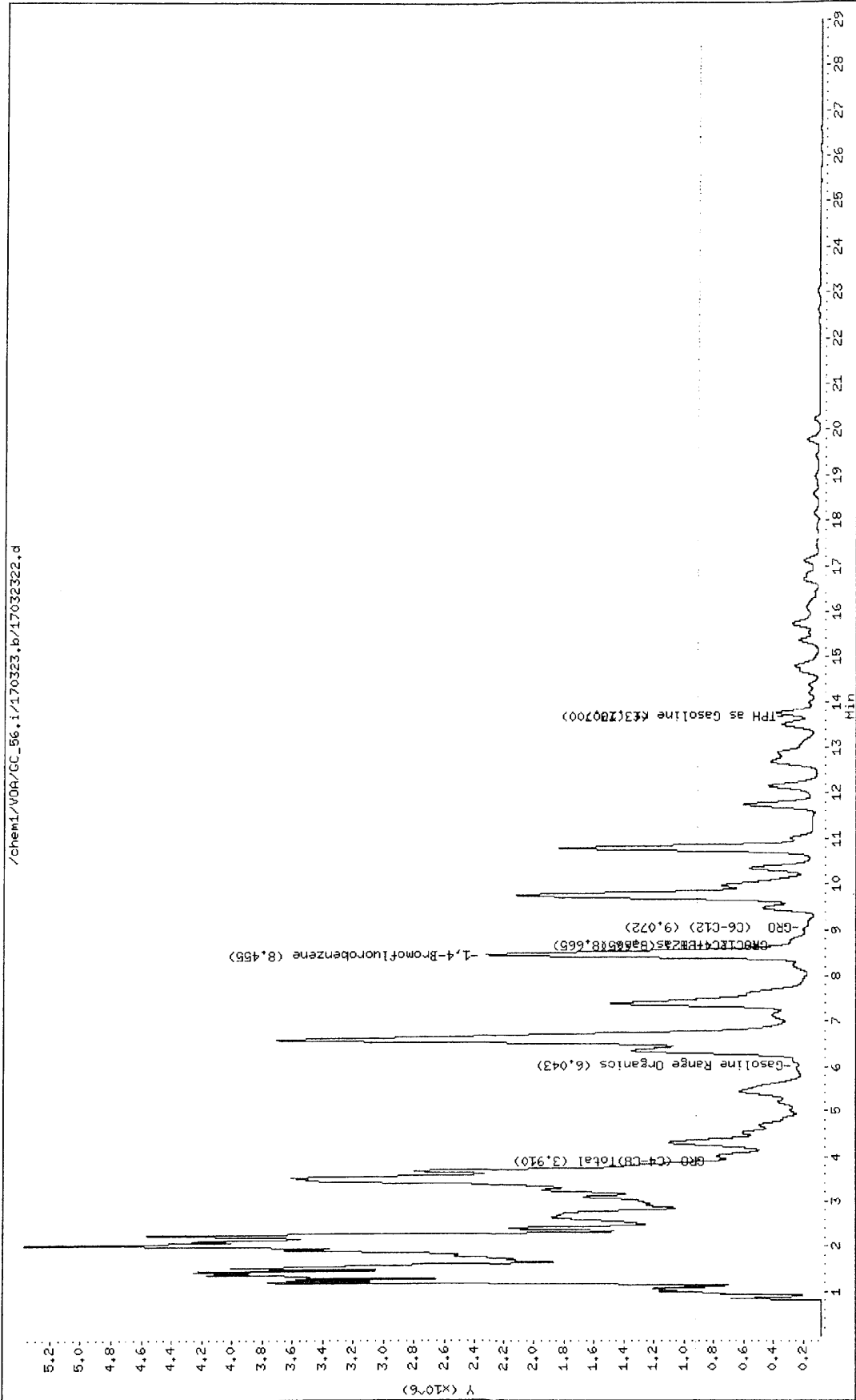
Sample Info: 2PPH TPH CCV

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:



Data File: /chem1/VOA/GC_56.i/170323.b/17032329.d
 Report Date: 03/24/2017 11:32

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GC_56.i Injection Date and Time: 24-MAR-2017 03:46
 Sample Name: 2PPM TPH CCV Initial Calibration Date(s): 18-JAN-2017 18-JAN-2017
 Sublist used: TPH_Gas.sub Initial Calibration Time(s): 18:38 21:16
 Method used: /chem1/VOA/GC_56.i/170323.b/80158021b.m

Target Compounds	ICAL RRF or Amount	CCV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Gasoline rf	6724239.883	6485591.619	0.01	4	15	Averaged
GRO (C4-C8)Total	5219488.155	5297693.167	0.01	-1	15	Averaged
GRO (C4-C12)	6491182.558	6369088.752	0.01	2	15	Averaged
C4-C12 (TPH as Gas)	6491182.558	6369088.752	0.01	2	15	Averaged
Gasoline Range Organics	5810939.854	5705010.893	0.01	2	15	Averaged
GRO (C6-C12)	6176085.174	6117352.752	0.01	1	15	Averaged
TPH as Gasoline	6724239.883	6485591.619	0.01	4	15	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
1,4-Bromofluorobenzene	4433991.152	4422283.790	0.01	0	30	Averaged



Data File: /chem1/VOA/GC_56.i/170323.b/17032329.d
 Report Date: 24-Mar-2017 11:31

Page 1

Eurofins Calscience

Data file : /chem1/VOA/GC_56.i/170323.b/17032329.d
 Lab Smp Id:
 Inj Date : 24-MAR-2017 03:46
 Operator : 1083 Inst ID: GC_56.i
 Smp Info : 2PPM TPH CCV
 Misc Info :
 Comment :
 Method : /chem1/VOA/GC_56.i/170323.b/80158021b.m
 Meth Date : 24-Mar-2017 11:31 tempn Quant Type: ESTD
 Cal Date : 18-JAN-2017 21:16 Cal File: 17011806.d
 Als bottle: 29 Continuing Calibration Sample
 Dil Factor: 1.00000
 Integrator: HP Genie Compound Sublist: TPH_Gas.sub
 Target Version: 3.50
 Processing Host: US26TAR2

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

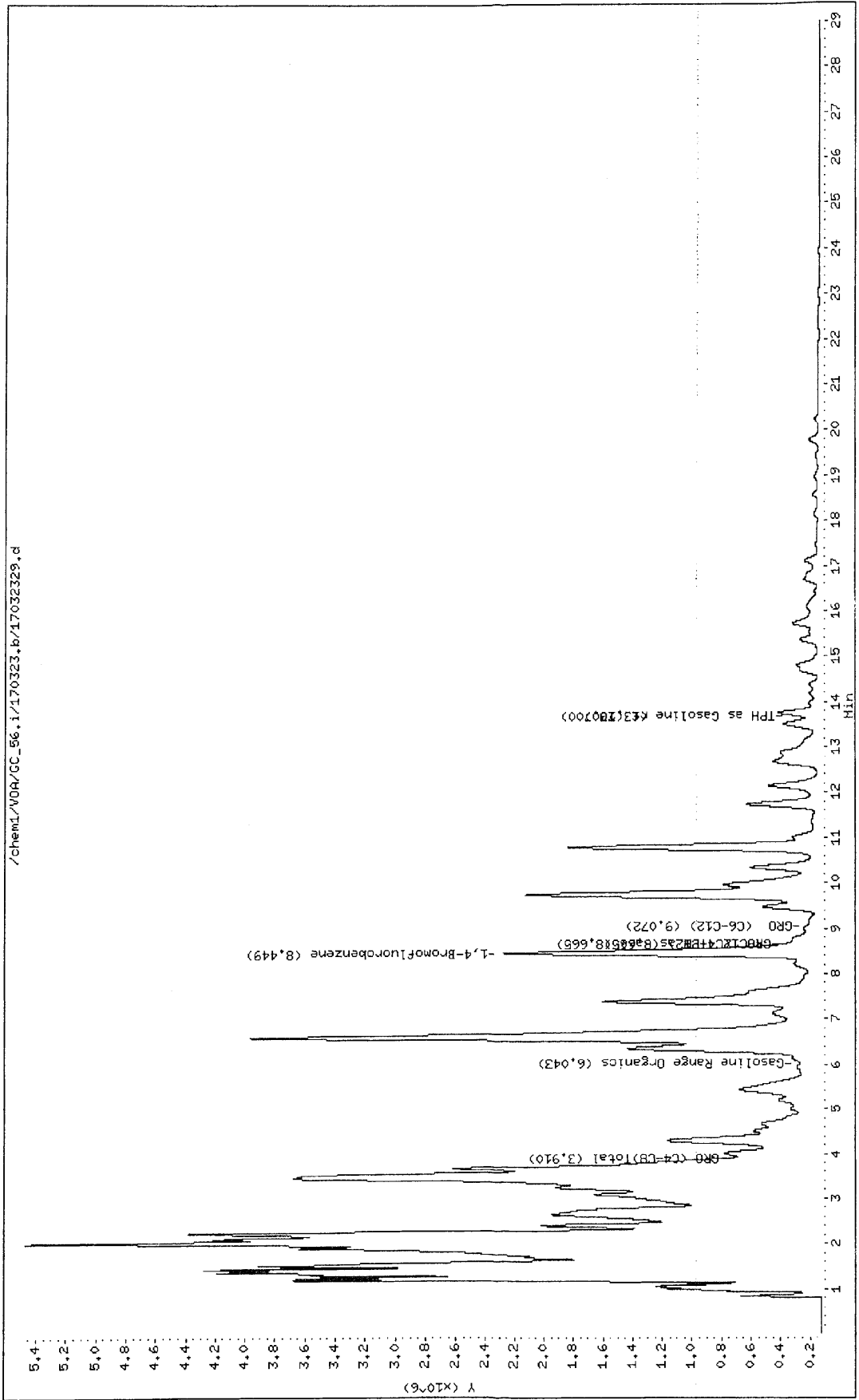
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS	
					CAL-AMT (ug/L)	ON-COL (ug/L)
S 1 TPH as Gasoline rf	0.400-27.000			12971183237	2000.00	1929.01851
M 2 TPH as Gasoline				12971183237	2000.00	1929.01851
S 4 Gasoline Range Organics	1.193-10.893			11410021786	2000.00	1963.54153
S 5 C4-C12 (TPH as Gas)	0.400-16.931			12738177504	2000.00	1962.38164
S 6 GRO (C4-C8) Total	0.400-7.421			10595386335	2000.00	2029.96654
S 7 GRO (C6-C12)	1.212-16.931			12234705505	2000.00	1980.98069
S 8 GRO (C4-C12)	0.400-16.931			12738177504	2000.00	1962.38164
S 25 1,4-Bromofluorobenzene	8.449	8.450	-0.001	442228379	100.000	99.73596



Data File: /chem1/V04/CC_56.i/17032329.d
Date: 24-MAR-2017 03:46
Client ID:
Sample Info: 2PPH TPH CCV

Instrument: GC_56.i
Operator: 1083
Column diameter: 2.00

Column phase:



=====
 External Standard Report
 =====

Data File Name : /chem1/VOA/GC_56/170323/17032301.d
 Page Number :
 Operator : 1083 Vial Number : Vial 1
 Instrument : GC 56 Injection Number : 1
 Sample Name : MARKER STD T122016B Sequence Line : 0
 Instrument Method: 80158021b.m
 Acquired on : 23 MAR 17 12:23
 Report Created on: 24-MAR-17 16:02 Analysis Method : 80158021b.m
 Software Revision: Target 3.50

Sig. 1 in /chem1/VOA/GC_56.i/170323.b/17032301.d

RT Range	Exp RT	DLT RT	Response	ug/L	Compound
0.832	8.450	7.618	43902686.00	51.91084	C4-Butane
0.992	8.450	7.458	117544476.00	31.28815	C5-Pentane
1.322	8.450	7.128	343449625.00	37.65450	C6-Hexane
2.140	8.450	6.310	443468616.00	44.72610	C7-Heptane
4.298	8.450	4.152	441241185.00	45.82452	C8-Octane
7.636	8.450	0.814	556433559.00	53.92449	C9-Nonane
11.022	8.450	-2.572	573263821.00	62.68018	C10-Decane
14.191	8.450	-5.741	525405323.00	90.67744	C11-Undecane
17.135	8.450	-8.685	645966355.00	114.07296	C12-Dodecane
19.872	8.450	-11.422	166754737.00	134.36080	C13-Tridecane

End of File

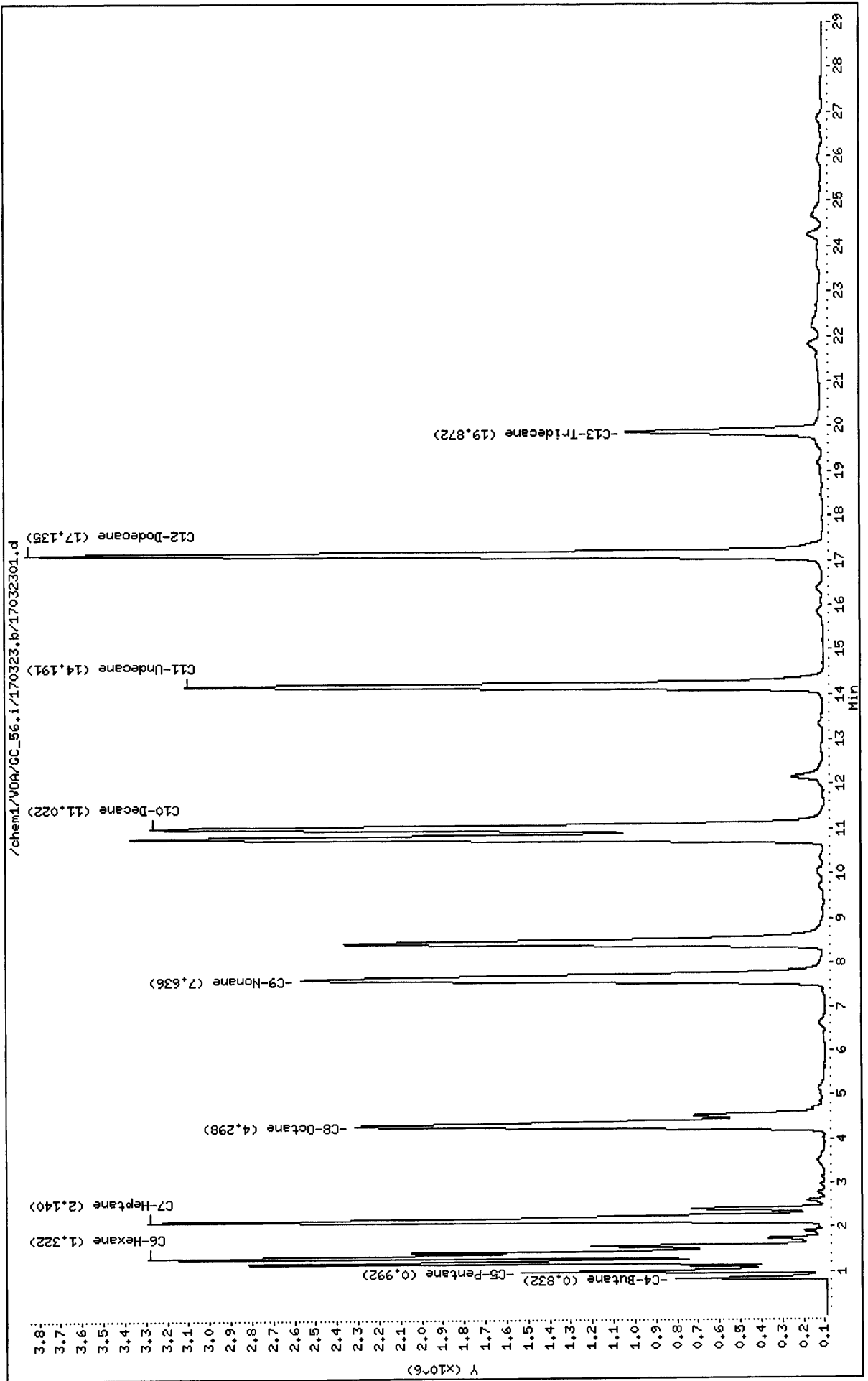
Data File: /chem1/V0A/GC_56.i/170323.b/17032301.d
Date : 23-MAR-2017 12:23
Client ID:
Sample Info: MARKER STD T122016B

Instrument: GC_56.i

Operator: 1083

Column diameter: 2.00

Column phase:



EPA METHOD 8015B (M) TPH as GASOLINE

Run Logs

Line	Vial	File	Name	Method	InjVolume	Acquired
1	1	17011801	MARKER STD T122016B	80158021B	T12216A	18-Jan-17, 18:38:03
2	2	17011802	0.05PPM TPH ICAL	80158021B	T081216A	18-Jan-17, 19:09:38
3	3	17011803	1PPM TPH ICAL	80158021B	T12216A	18-Jan-17, 19:41:16
4	4	17011804	2PPM TPH ICAL	80158021B	T12216A	18-Jan-17, 20:13:00
5	5	17011805	5PPM TPH ICAL	80158021B	T12216A	18-Jan-17, 20:44:41
6	6	17011806	10PPM TPH ICAL	80158021B	T12216A	18-Jan-17, 21:16:22
7	7	17011807	2PPM TPH ICV	80158021B	T100016A	18-Jan-17, 21:48:04

Line	Vial	File	Name	Method	InjVolume	Acquired
1	1	17032301	MARKER STD T122016B	80158021B	T122216A	23-Mar-17, 12:23:15
2	2	17032302	2PPM TPH CCV	80158021B	T122116A	23-Mar-17, 12:54:53
3	3	17032303	2PPM TPH LCS	80158021B	T011817A	23-Mar-17, 13:26:36
4	4	17032304	MB	80158021B		23-Mar-17, 13:58:27
5	5	17032305	XMB	80158021B		23-Mar-17, 15:06:59
6	6	17032306	03-1236-1A 4.99 250uL 170323035	80158021B		23-Mar-17, 15:38:43
7	7	17032307	MS 03-1236-1A 4.99 250uL 170323035	80158021B	T011817A	23-Mar-17, 16:10:18
8	8	17032308	MSD 03-1236-1A 4.99 250uL	80158021B	T011817A	23-Mar-17, 16:42:01
9	9	17032309	BLANK	80158021B		23-Mar-17, 17:13:44
10	10	17032310	03-1451-1A 1.01 170323040/170309	80158021B		23-Mar-17, 17:45:26
11	11	17032311	03-1451-2A 0.99 BFB	80158021B		23-Mar-17, 18:17:08
12	12	17032312	03-1451-3A 1.02	80158021B		23-Mar-17, 18:48:47
13	13	17032313	03-1751-1A 5.03 250uL	80158021B		23-Mar-17, 19:20:29
14	14	17032314	03-1751-2A 4.97 250uL	80158021B		23-Mar-17, 19:52:06
15	15	17032315	BLANK	80158021B		23-Mar-17, 20:23:45
16	16	17032316	03-1523-1B 0.99	80158021B		23-Mar-17, 20:55:27
17	17	17032317	03-1572-1A 1.01	80158021B		23-Mar-17, 21:27:07
18	18	17032318	03-1440-3A 1.00 250uL	80158021B		23-Mar-17, 21:58:42
19	19	17032319	03-1357-3A 5.00 25uL	80158021B		23-Mar-17, 22:30:18
20	20	17032320	BLANK	80158021B		23-Mar-17, 23:01:59
21	21	17032321	BLANK	80158021B		23-Mar-17, 23:33:34
22	22	17032322	2PPM TPH CCV	80158021B	T122116A	24-Mar-17, 00:05:14
23	23	17032323	03-1415-1A 4.96 10uL	80158021B		24-Mar-17, 00:36:53
24	24	17032324	03-1415-2A 5.05 10uL	80158021B		24-Mar-17, 01:08:31
25	25	17032325	03-1415-3A 4.95 10uL	80158021B		24-Mar-17, 01:40:11
26	26	17032326	03-1415-4A 5.03 2.5 uL	80158021B		24-Mar-17, 02:11:54
27	27	17032327	BLANK	80158021B		24-Mar-17, 02:43:31
28	28	17032328	BLANK	80158021B		24-Mar-17, 03:15:13
29	29	17032329	2PPM TPH CCV 1703230014	80158021B	T122116A	24-Mar-17, 03:46:53
30	30	17032330	2PPM TPH LCS 170323056 (Fail)	80158021B	T011817A	24-Mar-17, 04:18:36
31	31	17032331	MB	80158021B		24-Mar-17, 04:50:20
32	32	17032332	03-1254-1C 5ML<2	80158021B		24-Mar-17, 05:22:01
33	33	17032333	MS 03-1254-1C 5ML<2 170323031 BFB	80158021B	T011817A	24-Mar-17, 05:53:40
34	34	17032334	MSD 03-1254-1C 5ML<2	80158021B	T011817A	24-Mar-17, 06:25:21
35	35	17032335	BLANK	80158021B		24-Mar-17, 06:57:02
36	36	17032336	2PPM TPH CCV	80158021B	T122116A	24-Mar-17, 07:28:42

BFB: T022817A

03/24/17
80158021B
56
21
1053
11/24/17

EPA METHOD 8015B (M) TPH as GASOLINE

Sample Preparation Logs

EPA Method 5030 Purge and Trap Solid Sample Preparation Logbook

DATE (MM/DD/YY)	CEL ID #	MATRIX		METHOD		SAMPLE MASS NET (g)	BALANCE ID #	PRESERVATIVE / SOLVENT		PREPARATION END TIME (HH:MM)	CHEMIST ID #	COMMENTS
		S = SOIL O = OIL W = WIPE OTHER (SPECIFY)	S = SOIL O = OIL W = WIPE OTHER (SPECIFY)	1 = 8015 2 = 8021 3 = 8260 OTHER (SPECIFY)	1 = 8015 2 = 8021 3 = 8260 OTHER (SPECIFY)			NAME	ID #			
03/21/17	17-03-1553-2B	S	W	2	3	0.96	67			5	697	
	3B	S	W	2	3	1.03						
	4B	S	W	2	3	0.98						
	5B	S	W	2	3	1.00						
	6B	S	W	2	3	1.03						
	7B	S	W	2	3	1.04						
	8B	S	W	2	3	0.97						
	9B	S	W	2	3	1.02						
	10B	S	W	2	3	0.98						
	11B	S	W	2	3	1.00				12:35		
03/21/17	17-03-1523-1B	S	W	2	3	0.99	67			17:52	697	
03/22/17	20032217-1A	S	W	2	3	1.01	67			5	697	Season 03-22-09
	2B	S	W	2	3	0.96						
	1C	S	W	2	3	0.97						
	1D	S	W	2	3	1.04						
	17-03-1562-1B	S	W	2	3	1.00						
	1B	S	W	2	3	0.97						
	1B	S	W	2	3	0.99						
03/22/17	17-03-1567-6B	S	W	2	3	0.98	67			5	697	



EPA 6010B ICP Metals (Solid)

RAW DATA

EPA 6010B ICP Metals (Solid)

Initial Calibration

ICV/ICB
CCV/CCB
ICSA/B

Work Order No: 17-03-1523
Instrument ID: ICP 7300
Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
	True	ICV-1		Control Limit	Comment
		Observed	%D		
Silver	0.500000	0.500357	0	+/-10	
Arsenic	5.000000	4.834695	3	+/-10	
Barium	1.000000	1.005901	-1	+/-10	
Beryllium	0.500000	0.490830	2	+/-10	
Cadmium	1.500000	1.494008	0	+/-10	
Cobalt	1.000000	1.033697	-3	+/-10	
Chromium	0.400000	0.399803	0	+/-10	
Copper	1.000000	1.002841	0	+/-10	
Molybdenum	2.500000	2.416513	3	+/-10	
Nickel	0.400000	0.400544	0	+/-10	
Lead	5.000000	5.026459	-1	+/-10	
Antimony	2.000000	1.911162	4	+/-10	
Selenium	2.000000	1.935959	3	+/-10	
Thallium	2.000000	1.964579	2	+/-10	
Vanadium	1.000000	0.991621	1	+/-10	
Zinc	1.500000	1.519846	-1	+/-10	

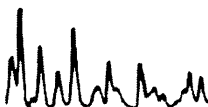
Report Time: 3/30/2017 4:55:30 PM

ICV-1 File: ICV-M072816C

Analysis Time: 3/27/2017 10:28:54 AM

Note: Note: %D= (True-Observed) / True x 100%

01/22/2014 Revision



Work Order No: 17-03-1523

Instrument ID: ICP 7300

Concentration Unit: mg/L

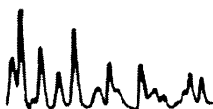
Analyte	Initial Calibration Blank		
	ICB-1	RL	Comment
Silver	-0.000044	0.005000	
Arsenic	0.004998	0.010000	
Barium	0.000400	0.010000	
Beryllium	0.000083	0.010000	
Cadmium	0.000778	0.010000	
Cobalt	0.000304	0.010000	
Chromium	-0.001059	0.010000	
Copper	0.000816	0.010000	
Molybdenum	0.002511	0.010000	
Nickel	0.000718	0.010000	
Lead	0.002367	0.010000	
Antimony	-0.004058	0.015000	
Selenium	0.002176	0.015000	
Thallium	0.008088	0.015000	
Vanadium	0.000317	0.010000	
Zinc	0.000888	0.010000	

Report Time: 3/30/2017 4:55:30 PM

ICB-1 File: ICB-R12091601

Analysis Time: 3/27/2017 10:29:52 AM

01/22/2014 Revision



Work Order No: 17-03-1523

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Interference Check						Comment
	ICS-A-1		ICS-AB-1				
	Observed	Control Limit	True	Observed	%D	Control Limit	
Silver	-0.000318	0.005000	0.300000	0.313916	-5	+/-20	
Arsenic	0.006482	0.010000	1.000000	1.039814	-4	+/-20	
Barium	0.002535	0.010000	0.300000	0.312295	-4	+/-20	
Beryllium	-0.000066	0.010000	0.100000	0.104752	-5	+/-20	
Cadmium	0.001642	0.010000	0.300000	0.302166	-1	+/-20	
Cobalt	0.000204	0.010000	0.300000	0.309391	-3	+/-20	
Chromium	-0.001434	0.010000	0.300000	0.307472	-2	+/-20	
Copper	-0.000989	0.010000	0.300000	0.316121	-5	+/-20	
Molybdenum	0.000784	0.010000	0.300000	0.306430	-2	+/-20	
Nickel	0.000938	0.010000	0.300000	0.310928	-4	+/-20	
Lead	-0.006614	0.010000	1.000000	1.001134	0	+/-20	
Antimony	-0.006608	0.015000	1.000000	0.974164	3	+/-20	
Selenium	-0.012261	0.015000	0.500000	0.524749	-5	+/-20	
Thallium	-0.011331	0.015000	1.000000	1.022944	-2	+/-20	
Vanadium	0.000617	0.010000	0.300000	0.302776	-1	+/-20	
Zinc	0.001299	0.010000	0.300000	0.309852	-3	+/-20	

Report Time: 3/30/2017 4:55:30 PM

ICS-A-1 File: ICS_A - M110116B Analysis Time: 3/27/2017 10:30:53 AM
ICS-AB-1 File: ICS_AB - M110116A Analysis Time: 3/27/2017 10:31:44 AM

01/22/2014 Revision



Work Order No: 17-03-1523

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Verification						
	True	CCV-1		CCV-2		Control Limit	Comment
		Observed	%D	Observed	%D		
Silver	0.375000	0.360686	4	0.361753	4	+/-10	
Arsenic	3.750000	3.456497	8	3.514828	6	+/-10	
Barium	7.500000	7.364745	2	7.368384	2	+/-10	
Beryllium	0.562500	0.542875	3	0.536913	5	+/-10	
Cadmium	0.750000	0.716185	5	0.715595	5	+/-10	
Cobalt	1.875000	1.824814	3	1.829645	2	+/-10	
Chromium	0.600000	0.579874	3	0.579980	3	+/-10	
Copper	0.937500	0.914106	2	0.912098	3	+/-10	
Molybdenum	0.600000	0.578555	4	0.585786	2	+/-10	
Nickel	0.600000	0.568468	5	0.578262	4	+/-10	
Lead	3.750000	3.579487	5	3.575267	5	+/-10	
Antimony	4.500000	4.219215	6	4.282683	5	+/-10	
Selenium	1.500000	1.393474	7	1.426390	5	+/-10	
Thallium	1.500000	1.435172	4	1.470187	2	+/-10	
Vanadium	1.875000	1.818270	3	1.815687	3	+/-10	
Zinc	2.500000	2.362966	5	2.345537	6	+/-10	

Report Time: 3/30/2017 4:55:30 PM

CCV-1 File: CCV= STD3x0.5

Analysis Time: 3/27/2017 10:54:30 AM

CCV-2 File: CCV= STD3x0.5

Analysis Time: 3/27/2017 11:05:40 AM

Note: Note: %D= (True-Observed) / True x 100%

01/22/2014 Revision

Work Order No: 17-03-1523

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Blank			Qualifier
	CCB-1	CCB-2	RL	
Silver	0.000346	0.000551	0.005000	
Arsenic	0.002122	-0.000239	0.010000	
Barium	0.002855	0.002591	0.010000	
Beryllium	0.000207	0.000204	0.010000	
Cadmium	0.000521	0.000666	0.010000	
Cobalt	0.001174	0.000537	0.010000	
Chromium	-0.000427	-0.000231	0.010000	
Copper	0.000850	0.001447	0.010000	
Molybdenum	0.000422	0.000027	0.010000	
Nickel	0.000864	0.000938	0.010000	
Lead	0.002686	0.002320	0.010000	
Antimony	-0.003083	0.004534	0.015000	
Selenium	0.007717	0.006429	0.015000	
Thallium	0.007041	0.001058	0.015000	
Vanadium	0.001205	0.000559	0.010000	
Zinc	0.002026	0.002075	0.010000	

Report Time: 3/30/2017 4:55:30 PM

CCB-1 File: CCB-R12091601

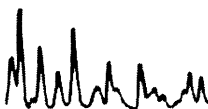
Analysis Time: 3/27/2017 10:55:23 AM

CCB-2 File: CCB-R12091601

Analysis Time: 3/27/2017 11:06:32 AM

01/22/2014 Revision

Return to Contents



Work Order No: 17-03-1523

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Verification						
	True	CCV-3		CCV-4		Control Limit	Comment
		Observed	%D	Observed	%D		
Silver	0.375000	0.362985	3	0.363845	3	+/-10	
Arsenic	3.750000	3.604740	4	3.636198	3	+/-10	
Barium	7.500000	7.479374	0	7.463737	0	+/-10	
Beryllium	0.562500	0.547782	3	0.546016	3	+/-10	
Cadmium	0.750000	0.733660	2	0.730415	3	+/-10	
Cobalt	1.875000	1.848333	1	1.858353	1	+/-10	
Chromium	0.600000	0.592817	1	0.588571	2	+/-10	
Copper	0.937500	0.918472	2	0.921422	2	+/-10	
Molybdenum	0.600000	0.594840	1	0.597818	0	+/-10	
Nickel	0.600000	0.590575	2	0.594494	1	+/-10	
Lead	3.750000	3.664942	2	3.658192	2	+/-10	
Antimony	4.500000	4.351888	3	4.365653	3	+/-10	
Selenium	1.500000	1.463731	2	1.469949	2	+/-10	
Thallium	1.500000	1.475860	2	1.497048	0	+/-10	
Vanadium	1.875000	1.836239	2	1.835921	2	+/-10	
Zinc	2.500000	2.423439	3	2.418467	3	+/-10	

Report Time: 3/30/2017 4:55:30 PM

CCV-3 File: CCV= STD3x0.5

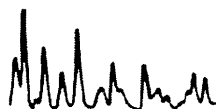
Analysis Time: 3/27/2017 12:55:50 PM

CCV-4 File: CCV= STD3x0.5

Analysis Time: 3/27/2017 1:06:20 PM

Note: Note: %D= (True-Observed) / True x 100%

01/22/2014 Revision



Work Order No: 17-03-1523

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Blank			Qualifier
	CCB-3	CCB-4	RL	
Silver	0.001411	0.000799	0.005000	
Arsenic	-0.000814	0.003434	0.010000	
Barium	0.005325	0.005243	0.010000	
Beryllium	0.000313	0.000289	0.010000	
Cadmium	0.001038	0.000802	0.010000	
Cobalt	0.001197	0.001638	0.010000	
Chromium	-0.000014	-0.001104	0.010000	
Copper	0.000662	0.001238	0.010000	
Molybdenum	0.000972	0.000290	0.010000	
Nickel	0.000213	0.001647	0.010000	
Lead	0.001630	0.003308	0.010000	
Antimony	0.000499	0.003269	0.015000	
Selenium	0.000604	0.009516	0.015000	
Thallium	0.004063	-0.000548	0.015000	
Vanadium	0.001012	0.000881	0.010000	
Zinc	0.006090	0.007415	0.010000	

Report Time: 3/30/2017 4:55:30 PM

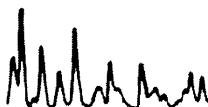
CCB-3 File: CCB-R12091601

Analysis Time: 3/27/2017 12:56:44 PM

CCB-4 File: CCB-R12091601

Analysis Time: 3/27/2017 1:07:13 PM

01/22/2014 Revision



=====
 Analysis Begun

Start Time: 3/27/2017 10:26:48 AM Plasma On Time: 3/27/2017 10:23:22 AM
 Logged In Analyst: Oscar Gomez 935 Technique: ICP Continuous
 Spectrometer: Optima 7300 DV, S/N 77c8120401 Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\
 17032701.sif

Batch ID:
 Results Data Set: 170327C 1
 Results Library: W:\pe\7300\Results\results.mdb

=====
 Sequence No.: 1 Autosampler Location: 1
 Sample ID: Cal blankR12091601_935 Date Collected: 3/27/2017 10:27:02 AM
 Analyst: Data Type: Original
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:
 Wash Time:

 Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units
Tb 384	81813.0	1234.30	1.51%	100.0 %
Tb 350	132490.7	2416.94	1.82%	100.0 %
Ag 328.068*†	-1204.5	95.00	7.89%	[0.00] mg/L
Al 308.215*†	-2124.7	17.57	0.83%	[0.00] mg/L
As 188.979†	4.3	3.02	69.57%	[0.00] mg/L
As 193.696*†	1.8	4.62	262.03%	[0.00] mg/L
B 249.677*†	-1109.7	19.70	1.77%	[0.00] mg/L
Ba 233.527*†	-374.8	0.19	0.05%	[0.00] mg/L
Be 313.042*†	-1124.4	225.51	20.06%	[0.00] mg/L
Ca 317.933*†	112.9	9.46	8.38%	[0.00] mg/L
Cd 226.502*†	2.8	8.71	306.51%	[0.00] mg/L
Cd 228.802†	-1.0	16.86	>999.9%	[0.00] mg/L
Co 228.616*†	-94.4	11.85	12.55%	[0.00] mg/L
Cr 267.716*†	549.9	292.14	53.12%	[0.00] mg/L
Cu 324.752*†	1900.6	42.57	2.24%	[0.00] mg/L
Fe 273.955*†	-411.4	13.28	3.23%	[0.00] mg/L
K 766.490*†	1063.2	301.90	28.39%	[0.00] mg/L
Mg 279.077*†	-8390.3	98.50	1.17%	[0.00] mg/L
Mn 257.610*†	-333.9	49.30	14.77%	[0.00] mg/L
Mo 202.031*†	-53.6	2.56	4.78%	[0.00] mg/L
Na 589.592*†	430.3	18.71	4.35%	[0.00] mg/L
Ni 231.604*†	-84.6	0.86	1.02%	[0.00] mg/L
P 213.617*†	-183.9	11.95	6.50%	[0.00] mg/L
P 214.914†	-41.8	7.73	18.52%	[0.00] mg/L
Pb 220.353*†	-59.1	1.53	2.59%	[0.00] mg/L
Sb 206.836†	27.0	4.94	18.33%	[0.00] mg/L
Sb 217.582*†	-4.9	5.78	117.10%	[0.00] mg/L
Se 196.026*†	-3.1	7.46	237.28%	[0.00] mg/L
Si 251.611*†	1367.3	30.73	2.25%	[0.00] mg/L
Sn 189.927*†	-127.0	10.64	8.37%	[0.00] mg/L
Sn 242.170†	-435.8	24.78	5.69%	[0.00] mg/L
Sr 407.771*†	341.9	24.93	7.29%	[0.00] mg/L
Ti 334.940†	30324.3	45.17	0.15%	[0.00] mg/L
Ti 336.121*†	-1461.3	263.87	18.06%	[0.00] mg/L
Tl 190.801*†	-0.8	1.23	154.78%	[0.00] mg/L
V 292.402*†	214.4	132.02	61.58%	[0.00] mg/L
Zn 206.200*†	-310.4	12.13	3.91%	[0.00] mg/L
Zn 213.857*†	-169.0	0.81	0.48%	[0.00] mg/L

Return to Contents

Sequence No.: 2

Sample ID: STD3-M111116A_935_ICP7300

Analyst:

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 2

Date Collected: 3/27/2017 10:28:08 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib
Tb 384	71544.9	1069.11	1.49%	87.45	%
Tb 350	118783.4	1768.57	1.49%	89.65	%
Ag 328.068*†	149764.9	158.69	0.11%	[0.75]	mg/L
Al 308.215*†	484848.9	2652.57	0.55%	[27.0]	mg/L
As 188.979†	17497.8	25.21	0.14%	[7.50]	mg/L
As 193.696*†	12071.3	45.40	0.38%	[7.50]	mg/L
B 249.677*†	404078.6	1434.93	0.36%	[7.50]	mg/L
Ba 233.527*†	2403539.6	9865.89	0.41%	[15.0]	mg/L
Be 313.042*†	4601823.8	6557.74	0.14%	[1.125]	mg/L
Ca 317.933*†	131233.9	3632.03	2.77%	[60.0]	mg/L
Cd 226.502*†	126272.6	295.33	0.23%	[1.50]	mg/L
Cd 228.802†	62069.2	71.83	0.12%	[1.50]	mg/L
Co 228.616*†	112236.4	10.27	0.01%	[3.75]	mg/L
Cr 267.716*†	144813.4	715.31	0.49%	[1.20]	mg/L
Cu 324.752*†	494167.2	605.56	0.12%	[1.875]	mg/L
Fe 273.955*†	187223.3	193.64	0.10%	[7.50]	mg/L
K 766.490*†	173880.8	4074.80	2.34%	[54.0]	mg/L
Mg 279.077*†	311224.0	890.09	0.29%	[15.0]	mg/L
Mn 257.610*†	1033577.5	2913.66	0.28%	[1.50]	mg/L
Mo 202.031*†	11648.3	39.74	0.34%	[1.20]	mg/L
Na 589.592*†	335556.7	8368.81	2.49%	[72.0]	mg/L
Ni 231.604*†	31720.4	407.34	1.28%	[1.20]	mg/L
P 213.617*†	26475.4	247.85	0.94%	[12.0]	mg/L
P 214.914†	16566.4	18.69	0.11%	[12.0]	mg/L
Pb 220.353*†	65005.8	324.59	0.50%	[7.50]	mg/L
Sb 206.836†	18354.1	102.18	0.56%	[9.0]	mg/L
Sb 217.582*†	18244.4	76.32	0.42%	[9.0]	mg/L
Se 196.026*†	7245.6	17.47	0.24%	[3.0]	mg/L
Si 251.611*†	507080.3	1921.09	0.38%	[12.0]	mg/L
Sn 189.927*†	39695.4	122.46	0.31%	[6.0]	mg/L
Sn 242.170†	11293.9	99.32	0.88%	[6.0]	mg/L
Sr 407.771*†	205542.3	5502.00	2.68%	[0.60]	mg/L
Ti 334.940†	1053293.2	1598.17	0.15%	[1.20]	mg/L
Ti 336.121*†	739330.1	1972.93	0.27%	[1.20]	mg/L
Tl 190.801*†	5867.0	47.61	0.81%	[3.0]	mg/L
V 292.402*†	537361.0	2115.10	0.39%	[3.75]	mg/L
Zn 206.200*†	227052.8	61.98	0.03%	[5.0]	mg/L
Zn 213.857*†	381553.9	1041.11	0.27%	[5.0]	mg/L

Sequence No.: 3

Autosampler Location: 10

Sample ID: ICV-M072816C

Date Collected: 3/27/2017 10:28:54 AM

Analyst: 935 icp 7300

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time: 20

Auto Dilution Factor: 1

Mean Data: ICV-M072816C

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
Tb 384	76783.0	93.85	%	0.519			0.55%
Tb 350	126785.6	95.69	%	0.136			0.14%
Ag 328.068*†	99914.5	0.5004	mg/L	0.00157	0.5004 mg/L	0.00157	0.31%
	QC value within limits for Ag 328.068* Recovery = 100.07%						
Al 308.215*†	74751.5	4.163	mg/L	0.0088	4.163 mg/L	0.0088	0.21%
	QC value within limits for Al 308.215* Recovery = 104.07%						
As 188.979†	11259.4	4.826	mg/L	0.0430	4.826 mg/L	0.0430	0.89%
	QC value within limits for As 188.979 Recovery = 96.52%						
As 193.696*†	7781.5	4.835	mg/L	0.0582	4.835 mg/L	0.0582	1.20%
	QC value within limits for As 193.696* Recovery = 96.69%						
B 249.677*†	135971.2	2.524	mg/L	0.0196	2.524 mg/L	0.0196	0.78%
	QC value within limits for B 249.677* Recovery = 100.95%						
Ba 233.527*†	161181.6	1.006	mg/L	0.0024	1.006 mg/L	0.0024	0.24%
	QC value within limits for Ba 233.527* Recovery = 100.59%						
Be 313.042*†	2007745.3	0.4908	mg/L	0.00326	0.4908 mg/L	0.00326	0.66%
	QC value within limits for Be 313.042* Recovery = 98.17%						
Ca 317.933*†	41715.2	19.07	mg/L	0.244	19.07 mg/L	0.244	1.28%
	QC value within limits for Ca 317.933* Recovery = 95.36%						
Cd 226.502*†	125768.2	1.494	mg/L	0.0036	1.494 mg/L	0.0036	0.24%
	QC value within limits for Cd 226.502* Recovery = 99.60%						
Cd 228.802†	61138.0	1.477	mg/L	0.0022	1.477 mg/L	0.0022	0.15%
Co 228.616*†	30938.3	1.034	mg/L	0.0028	1.034 mg/L	0.0028	0.27%
	QC value within limits for Co 228.616* Recovery = 103.37%						
Cr 267.716*†	48247.4	0.3998	mg/L	0.00126	0.3998 mg/L	0.00126	0.32%
	QC value within limits for Cr 267.716* Recovery = 99.95%						
Cu 324.752*†	264304.6	1.003	mg/L	0.0008	1.003 mg/L	0.0008	0.08%
	QC value within limits for Cu 324.752* Recovery = 100.28%						
Fe 273.955*†	2540048.1	101.8	mg/L	0.20	101.8 mg/L	0.20	0.19%
	QC value within limits for Fe 273.955* Recovery = 101.75%						
K 766.490*†	25623.0	7.957	mg/L	0.1168	7.957 mg/L	0.1168	1.47%
	QC value within limits for K 766.490* Recovery = 99.47%						
Mg 279.077*†	208280.1	10.04	mg/L	0.005	10.04 mg/L	0.005	0.05%
	QC value within limits for Mg 279.077* Recovery = 100.38%						
Mn 257.610*†	686099.2	0.9957	mg/L	0.00033	0.9957 mg/L	0.00033	0.03%
	QC value within limits for Mn 257.610* Recovery = 99.57%						
Mo 202.031*†	23456.9	2.417	mg/L	0.0201	2.417 mg/L	0.0201	0.83%
	QC value within limits for Mo 202.031* Recovery = 96.66%						
Na 589.592*†	248124.0	53.24	mg/L	0.135	53.24 mg/L	0.135	0.25%
	QC value within limits for Na 589.592* Recovery = 98.59%						
Ni 231.604*†	10587.8	0.4005	mg/L	0.00310	0.4005 mg/L	0.00310	0.77%
	QC value within limits for Ni 231.604* Recovery = 100.14%						
P 213.617*†	10547.3	4.781	mg/L	0.0452	4.781 mg/L	0.0452	0.94%
	QC value within limits for P 213.617* Recovery = 95.61%						
P 214.914†	6808.9	4.932	mg/L	0.0453	4.932 mg/L	0.0453	0.92%
Pb 220.353*†	43566.5	5.026	mg/L	0.0090	5.026 mg/L	0.0090	0.18%
	QC value within limits for Pb 220.353* Recovery = 100.53%						
Sb 206.836†	3888.8	1.907	mg/L	0.0066	1.907 mg/L	0.0066	0.35%
	QC value within limits for Sb 206.836 Recovery = 95.34%						
Sb 217.582*†	3874.2	1.911	mg/L	0.0201	1.911 mg/L	0.0201	1.05%
	QC value within limits for Sb 217.582* Recovery = 95.56%						
Se 196.026*†	4675.7	1.936	mg/L	0.0258	1.936 mg/L	0.0258	1.33%
	QC value within limits for Se 196.026* Recovery = 96.80%						
Si 251.611*†	404350.0	9.569	mg/L	0.0483	9.569 mg/L	0.0483	0.51%
	QC value within limits for Si 251.611* Recovery = 95.69%						
Sn 189.927*†	16319.9	2.467	mg/L	0.0304	2.467 mg/L	0.0304	1.23%
	QC value within limits for Sn 189.927* Recovery = 98.67%						
Sn 242.170†	5136.4	2.729	mg/L	0.0007	2.729 mg/L	0.0007	0.02%
Sr 407.771*†	67450.0	0.1969	mg/L	0.00207	0.1969 mg/L	0.00207	1.05%
	QC value within limits for Sr 407.771* Recovery = 98.45%						

Ti 334.940†	4186048.0	4.769 mg/L	0.0080	4.769 mg/L	0.0080	0.17%
Ti 336.121*†	2964423.7	4.812 mg/L	0.0080	4.812 mg/L	0.0080	0.17%
QC value within limits for Ti 336.121* Recovery = 96.23%						
Tl 190.801*†	3842.1	1.965 mg/L	0.0126	1.965 mg/L	0.0126	0.64%
QC value within limits for Tl 190.801* Recovery = 98.23%						
V 292.402*†	142334.7	0.9916 mg/L	0.00750	0.9916 mg/L	0.00750	0.76%
QC value within limits for V 292.402* Recovery = 99.16%						
Zn 206.200*†	69017.1	1.520 mg/L	0.0082	1.520 mg/L	0.0082	0.54%
QC value within limits for Zn 206.200* Recovery = 101.32%						
Zn 213.857*†	115634.5	1.507 mg/L	0.0047	1.507 mg/L	0.0047	0.31%
QC value within limits for Zn 213.857* Recovery = 100.46%						

All analyte(s) passed QC.

Sequence No.: 4
 Sample ID: ICB-R12091601
 Analyst: 935 icp 7300
 Initial Sample Wt:
 Dilution:
 Wash Time: 20

Autosampler Location: 1
 Date Collected: 3/27/2017 10:29:52 AM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

 Mean Data: ICB-R12091601

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
Tb 384	85719.5	104.8	%	2.98				2.85%
Tb 350	138269.7	104.4	%	2.51				2.41%
Ag 328.068*†	-8.7	-0.0000	mg/L	0.00057	-0.0000	mg/L	0.00057	>999.9%
Al 308.215*†	-56.0	-0.0031	mg/L	0.00052	-0.0031	mg/L	0.00052	16.66%
As 188.979†	12.8	0.0055	mg/L	0.00200	0.0055	mg/L	0.00200	36.54%
As 193.696*†	8.0	0.0050	mg/L	0.00297	0.0050	mg/L	0.00297	59.48%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	2027.6	0.0376	mg/L	0.00177	0.0376	mg/L	0.00177	4.71%
QC value within limits for B 249.677* Recovery = Not calculated								
Ba 233.527*†	64.0	0.0004	mg/L	0.00007	0.0004	mg/L	0.00007	17.33%
Be 313.042*†	341.2	0.0001	mg/L	0.00000	0.0001	mg/L	0.00000	2.85%
Ca 317.933*†	12.7	0.0058	mg/L	0.00059	0.0058	mg/L	0.00059	10.21%
Cd 226.502*†	65.5	0.0008	mg/L	0.00015	0.0008	mg/L	0.00015	18.72%
Cd 228.802†	33.2	0.0008	mg/L	0.00003	0.0008	mg/L	0.00003	3.58%
Co 228.616*†	9.1	0.0003	mg/L	0.00002	0.0003	mg/L	0.00002	5.77%
Cr 267.716*†	-127.7	-0.0011	mg/L	0.00143	-0.0011	mg/L	0.00143	135.50%
Cu 324.752*†	214.9	0.0008	mg/L	0.00001	0.0008	mg/L	0.00001	0.87%
Fe 273.955*†	853.7	0.0342	mg/L	0.00427	0.0342	mg/L	0.00427	12.49%
K 766.490*†	-88.0	-0.0273	mg/L	0.02079	-0.0273	mg/L	0.02079	76.11%
Mg 279.077*†	241.7	0.0116	mg/L	0.00670	0.0116	mg/L	0.00670	57.53%
Mn 257.610*†	191.7	0.0003	mg/L	0.00002	0.0003	mg/L	0.00002	8.15%
Mo 202.031*†	24.4	0.0025	mg/L	0.00109	0.0025	mg/L	0.00109	43.57%
Na 589.592*†	135.6	0.0291	mg/L	0.00247	0.0291	mg/L	0.00247	8.48%
Ni 231.604*†	19.0	0.0007	mg/L	0.00002	0.0007	mg/L	0.00002	2.66%
P 213.617*†	27.6	0.0125	mg/L	0.01026	0.0125	mg/L	0.01026	82.03%
P 214.914†	4.0	0.0029	mg/L	0.01077	0.0029	mg/L	0.01077	367.93%
Pb 220.353*†	20.5	0.0024	mg/L	0.00115	0.0024	mg/L	0.00115	48.50%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	0.3	0.0001	mg/L	0.00064	0.0001	mg/L	0.00064	439.16%
Sb 217.582*†	-8.2	-0.0041	mg/L	0.00154	-0.0041	mg/L	0.00154	37.92%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	5.3	0.0022	mg/L	0.00130	0.0022	mg/L	0.00130	59.68%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	288.1	0.0068	mg/L	0.00274	0.0068	mg/L	0.00274	40.22%
QC value within limits for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	50.4	0.0076	mg/L	0.00072	0.0076	mg/L	0.00072	9.50%
Sn 242.170†	28.6	0.0152	mg/L	0.00319	0.0152	mg/L	0.00319	21.03%
Sr 407.771*†	-23.1	-0.0001	mg/L	0.00002	-0.0001	mg/L	0.00002	29.35%
Ti 334.940†	2590.0	0.0030	mg/L	0.00015	0.0030	mg/L	0.00015	5.04%
Ti 336.121*†	1752.5	0.0028	mg/L	0.00048	0.0028	mg/L	0.00048	16.85%
Tl 190.801*†	15.8	0.0081	mg/L	0.00139	0.0081	mg/L	0.00139	17.16%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	45.5	0.0003	mg/L	0.00122	0.0003	mg/L	0.00122	383.74%
Zn 206.200*†	40.3	0.0009	mg/L	0.00027	0.0009	mg/L	0.00027	29.97%
Zn 213.857*†	91.1	0.0012	mg/L	0.00012	0.0012	mg/L	0.00012	9.83%

All analyte(s) passed QC.

Sequence No.: 5

Autosampler Location: 8

Sample ID: ICS_A - M110116B

Date Collected: 3/27/2017 10:30:53 AM

Analyst: 935 icp 7300

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time: 15

Auto Dilution Factor: 1

Mean Data: ICS_A - M110116B

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
Tb 384	72361.8	88.45	%	1.494				1.69%
Tb 350	120832.4	91.20	%	1.751				1.92%
Ag 328.068*†	-63.6	-0.0003	mg/L	0.00032	-0.0003	mg/L	0.00032	101.60%
Al 308.215*†	449893.7	25.05	mg/L	0.200	25.05	mg/L	0.200	0.80%
As 188.979†	7.4	0.0032	mg/L	0.00262	0.0032	mg/L	0.00262	82.48%
As 193.696*†	10.4	0.0065	mg/L	0.00118	0.0065	mg/L	0.00118	18.20%
B 249.677*†	950.9	0.0176	mg/L	0.00109	0.0176	mg/L	0.00109	6.17%
Ba 233.527*†	406.2	0.0025	mg/L	0.00002	0.0025	mg/L	0.00002	0.89%
Be 313.042*†	-271.8	-0.0001	mg/L	0.00000	-0.0001	mg/L	0.00000	6.80%
Ca 317.933*†	268255.7	122.6	mg/L	3.52	122.6	mg/L	3.52	2.87%
Cd 226.502*†	138.2	0.0016	mg/L	0.00007	0.0016	mg/L	0.00007	4.05%
Cd 228.802†	-1.8	-0.0000	mg/L	0.00033	-0.0000	mg/L	0.00033	734.55%
Co 228.616*†	6.1	0.0002	mg/L	0.00008	0.0002	mg/L	0.00008	39.44%
Cr 267.716*†	-173.0	-0.0014	mg/L	0.00054	-0.0014	mg/L	0.00054	37.72%
Cu 324.752*†	-260.7	-0.0010	mg/L	0.00056	-0.0010	mg/L	0.00056	56.45%
Fe 273.955*†	2434532.5	97.53	mg/L	2.130	97.53	mg/L	2.130	2.18%
K 766.490*†	447.2	0.1389	mg/L	0.06435	0.1389	mg/L	0.06435	46.33%
Mg 279.077*†	1259738.1	60.72	mg/L	1.612	60.72	mg/L	1.612	2.66%
Mn 257.610*†	-62.8	-0.0001	mg/L	0.00033	-0.0001	mg/L	0.00033	359.64%
Mo 202.031*†	7.6	0.0008	mg/L	0.00034	0.0008	mg/L	0.00034	43.82%
Na 589.592*†	104875.8	22.50	mg/L	0.547	22.50	mg/L	0.547	2.43%
Ni 231.604*†	24.8	0.0009	mg/L	0.00111	0.0009	mg/L	0.00111	117.76%
P 213.617*†	-291.6	-0.1322	mg/L	0.00554	-0.1322	mg/L	0.00554	4.19%
P 214.914†	50.7	0.0367	mg/L	0.00083	0.0367	mg/L	0.00083	2.25%
Pb 220.353*†	-57.3	-0.0066	mg/L	0.00036	-0.0066	mg/L	0.00036	5.40%
Sb 206.836†	24.5	0.0120	mg/L	0.00443	0.0120	mg/L	0.00443	36.86%
Sb 217.582*†	-13.4	-0.0066	mg/L	0.00297	-0.0066	mg/L	0.00297	44.93%
Se 196.026*†	-29.6	-0.0123	mg/L	0.00865	-0.0123	mg/L	0.00865	70.53%
Si 251.611*†	204.5	0.0048	mg/L	0.00254	0.0048	mg/L	0.00254	52.48%
Sn 189.927*†	-3.0	-0.0005	mg/L	0.00339	-0.0005	mg/L	0.00339	747.19%
Sn 242.170†	482.6	0.2564	mg/L	0.00437	0.2564	mg/L	0.00437	1.70%
Sr 407.771*†	936.3	0.0027	mg/L	0.00027	0.0027	mg/L	0.00027	9.76%
Ti 334.940†	-1679.2	-0.0019	mg/L	0.00063	-0.0019	mg/L	0.00063	32.92%
Ti 336.121*†	-688.9	-0.0011	mg/L	0.00039	-0.0011	mg/L	0.00039	35.16%
Tl 190.801*†	-22.2	-0.0113	mg/L	0.00085	-0.0113	mg/L	0.00085	7.53%
V 292.402*†	317.7	0.0006	mg/L	0.00024	0.0006	mg/L	0.00024	38.88%
Zn 206.200*†	59.0	0.0013	mg/L	0.00018	0.0013	mg/L	0.00018	13.84%
Zn 213.857*†	585.6	-0.0004	mg/L	0.00001	-0.0004	mg/L	0.00001	3.29%

Sequence No.: 6

Sample ID: ICS_AB - M110116A

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 9

Date Collected: 3/27/2017 10:31:44 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: ICS_AB - M110116A

Analyte	Mean Corrected			Std.Dev.	Sample			RSD
	Intensity	Conc.	Calib. Units		Conc.	Units	Std.Dev.	
Tb 384	72219.9	88.27	%	1.082				1.23%
Tb 350	120904.4	91.26	%	1.486				1.63%
Ag 328.068*†	62684.9	0.3139	mg/L	0.00089	0.3139	mg/L	0.00089	0.28%
Al 308.215*†	448504.0	24.98	mg/L	0.039	24.98	mg/L	0.039	0.16%
As 188.979†	2428.8	1.041	mg/L	0.0141	1.041	mg/L	0.0141	1.35%
As 193.696*†	1673.6	1.040	mg/L	0.0002	1.040	mg/L	0.0002	0.02%
B 249.677*†	27298.2	0.5067	mg/L	0.01056	0.5067	mg/L	0.01056	2.08%
Ba 233.527*†	50040.9	0.3123	mg/L	0.00084	0.3123	mg/L	0.00084	0.27%
Be 313.042*†	428489.0	0.1048	mg/L	0.00039	0.1048	mg/L	0.00039	0.37%
Ca 317.933*†	254311.2	116.3	mg/L	7.41	116.3	mg/L	7.41	6.38%
Cd 226.502*†	25436.9	0.3022	mg/L	0.00210	0.3022	mg/L	0.00210	0.69%
Cd 228.802†	12512.0	0.3024	mg/L	0.00258	0.3024	mg/L	0.00258	0.85%
Co 228.616*†	9260.0	0.3094	mg/L	0.00291	0.3094	mg/L	0.00291	0.94%
Cr 267.716*†	37105.1	0.3075	mg/L	0.00014	0.3075	mg/L	0.00014	0.05%
Cu 324.752*†	83315.5	0.3161	mg/L	0.00028	0.3161	mg/L	0.00028	0.09%
Fe 273.955*†	2426198.3	97.19	mg/L	0.397	97.19	mg/L	0.397	0.41%
K 766.490*†	69042.9	21.44	mg/L	1.089	21.44	mg/L	1.089	5.08%
Mg 279.077*†	1248264.2	60.16	mg/L	0.420	60.16	mg/L	0.420	0.70%
Mn 257.610*†	140717.3	0.2042	mg/L	0.00075	0.2042	mg/L	0.00075	0.37%
Mo 202.031*†	2974.5	0.3064	mg/L	0.00194	0.3064	mg/L	0.00194	0.63%
Na 589.592*†	98835.5	21.21	mg/L	1.079	21.21	mg/L	1.079	5.09%
Ni 231.604*†	8219.0	0.3109	mg/L	0.00221	0.3109	mg/L	0.00221	0.71%
P 213.617*†	-217.3	-0.0985	mg/L	0.00665	-0.0985	mg/L	0.00665	6.75%
P 214.914†	45.5	0.0329	mg/L	0.00685	0.0329	mg/L	0.00685	20.79%
Pb 220.353*†	8677.3	1.001	mg/L	0.0069	1.001	mg/L	0.0069	0.69%
Sb 206.836†	2061.4	1.011	mg/L	0.0088	1.011	mg/L	0.0088	0.87%
Sb 217.582*†	1974.8	0.9742	mg/L	0.01375	0.9742	mg/L	0.01375	1.41%
Se 196.026*†	1267.4	0.5247	mg/L	0.00488	0.5247	mg/L	0.00488	0.93%
Si 251.611*†	8745.3	0.2070	mg/L	0.00042	0.2070	mg/L	0.00042	0.20%
Sn 189.927*†	-44.9	-0.0068	mg/L	0.00168	-0.0068	mg/L	0.00168	24.80%
Sn 242.170†	508.5	0.2702	mg/L	0.00850	0.2702	mg/L	0.00850	3.14%
Sr 407.771*†	709.8	0.0021	mg/L	0.00028	0.0021	mg/L	0.00028	13.70%
Ti 334.940†	881994.6	1.005	mg/L	0.0011	1.005	mg/L	0.0011	0.11%
Ti 336.121*†	622374.8	1.010	mg/L	0.0009	1.010	mg/L	0.0009	0.09%
Tl 190.801*†	2000.5	1.023	mg/L	0.0050	1.023	mg/L	0.0050	0.49%
V 292.402*†	43615.1	0.3028	mg/L	0.00126	0.3028	mg/L	0.00126	0.42%
Zn 206.200*†	14070.6	0.3099	mg/L	0.00356	0.3099	mg/L	0.00356	1.15%
Zn 213.857*†	24062.2	0.3072	mg/L	0.00333	0.3072	mg/L	0.00333	1.08%

Return to Contents

Sequence No.: 11

Autosampler Location: 3

Sample ID: CCV= STD3x0.5

Date Collected: 3/27/2017 10:54:30 AM

Analyst: 935 icp 7300

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time: 15

Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
Tb 384	74248.7	90.75	%	0.491			0.54%
Tb 350	122614.9	92.55	%	0.922			1.00%
Ag 328.068*†	72024.2	0.3607	mg/L	0.00126	0.3607 mg/L	0.00126	0.35%
	QC value within limits for Ag 328.068* Recovery = 96.18%						
Al 308.215*†	240519.7	13.39	mg/L	0.036	13.39 mg/L	0.036	0.27%
	QC value within limits for Al 308.215* Recovery = 99.21%						
As 188.979†	8088.9	3.467	mg/L	0.0551	3.467 mg/L	0.0551	1.59%
	QC value within limits for As 188.979 Recovery = 92.46%						
As 193.696*†	5563.3	3.456	mg/L	0.0726	3.456 mg/L	0.0726	2.10%
	QC value within limits for As 193.696* Recovery = 92.17%						
B 249.677*†	191953.4	3.563	mg/L	0.0495	3.563 mg/L	0.0495	1.39%
	QC value within limits for B 249.677* Recovery = 95.01%						
Ba 233.527*†	1180097.1	7.365	mg/L	0.0113	7.365 mg/L	0.0113	0.15%
	QC value within limits for Ba 233.527* Recovery = 98.20%						
Be 313.042*†	2220637.3	0.5429	mg/L	0.00086	0.5429 mg/L	0.00086	0.16%
	QC value within limits for Be 313.042* Recovery = 96.51%						
Ca 317.933*†	60099.3	27.48	mg/L	0.602	27.48 mg/L	0.602	2.19%
	QC value within limits for Ca 317.933* Recovery = 91.59%						
Cd 226.502*†	60289.7	0.7162	mg/L	0.00200	0.7162 mg/L	0.00200	0.28%
	QC value within limits for Cd 226.502* Recovery = 95.49%						
Cd 228.802†	29994.8	0.7249	mg/L	0.00350	0.7249 mg/L	0.00350	0.48%
Co 228.616*†	54616.2	1.825	mg/L	0.0009	1.825 mg/L	0.0009	0.05%
	QC value within limits for Co 228.616* Recovery = 97.32%						
Cr 267.716*†	69977.9	0.5799	mg/L	0.00165	0.5799 mg/L	0.00165	0.29%
	QC value within limits for Cr 267.716* Recovery = 96.65%						
Cu 324.752*†	240918.0	0.9141	mg/L	0.00074	0.9141 mg/L	0.00074	0.08%
	QC value within limits for Cu 324.752* Recovery = 97.50%						
Fe 273.955*†	91052.5	3.647	mg/L	0.0083	3.647 mg/L	0.0083	0.23%
	QC value within limits for Fe 273.955* Recovery = 97.27%						
K 766.490*†	80565.8	25.02	mg/L	0.499	25.02 mg/L	0.499	1.99%
	QC value within limits for K 766.490* Recovery = 92.67%						
Mg 279.077*†	150775.5	7.267	mg/L	0.0156	7.267 mg/L	0.0156	0.21%
	QC value within limits for Mg 279.077* Recovery = 96.89%						
Mn 257.610*†	501772.4	0.7282	mg/L	0.00174	0.7282 mg/L	0.00174	0.24%
	QC value within limits for Mn 257.610* Recovery = 97.09%						
Mo 202.031*†	5616.0	0.5786	mg/L	0.00938	0.5786 mg/L	0.00938	1.62%
	QC value within limits for Mo 202.031* Recovery = 96.43%						
Na 589.592*†	160952.4	34.54	mg/L	0.621	34.54 mg/L	0.621	1.80%
	QC value within limits for Na 589.592* Recovery = 95.93%						
Ni 231.604*†	15026.7	0.5685	mg/L	0.00924	0.5685 mg/L	0.00924	1.63%
	QC value within limits for Ni 231.604* Recovery = 94.74%						
P 213.617*†	12068.4	5.470	mg/L	0.1103	5.470 mg/L	0.1103	2.02%
	QC value within limits for P 213.617* Recovery = 91.17%						
P 214.914†	7662.5	5.550	mg/L	0.1332	5.550 mg/L	0.1332	2.40%
Pb 220.353*†	31025.0	3.579	mg/L	0.0066	3.579 mg/L	0.0066	0.18%
	QC value within limits for Pb 220.353* Recovery = 95.45%						
Sb 206.836†	8660.2	4.247	mg/L	0.0930	4.247 mg/L	0.0930	2.19%
	QC value within limits for Sb 206.836 Recovery = 94.37%						
Sb 217.582*†	8553.0	4.219	mg/L	0.0746	4.219 mg/L	0.0746	1.77%
	QC value within limits for Sb 217.582* Recovery = 93.76%						
Se 196.026*†	3365.5	1.393	mg/L	0.0350	1.393 mg/L	0.0350	2.51%
	QC value within limits for Se 196.026* Recovery = 92.90%						
Si 251.611*†	241006.1	5.703	mg/L	0.0499	5.703 mg/L	0.0499	0.88%
	QC value within limits for Si 251.611* Recovery = 95.06%						
Sn 189.927*†	18703.2	2.827	mg/L	0.0512	2.827 mg/L	0.0512	1.81%
	QC value within limits for Sn 189.927* Recovery = 94.23%						
Sn 242.170†	5365.5	2.850	mg/L	0.0326	2.850 mg/L	0.0326	1.14%
Sr 407.771*†	97195.2	0.2837	mg/L	0.00585	0.2837 mg/L	0.00585	2.06%
	QC value within limits for Sr 407.771* Recovery = 94.57%						

Ti 334.940†	512430.1	0.5838 mg/L	0.00089	0.5838 mg/L	0.00089	0.15%
Ti 336.121*†	361183.0	0.5862 mg/L	0.00109	0.5862 mg/L	0.00109	0.19%
QC value within limits for Ti 336.121* Recovery = 97.71%						
Tl 190.801*†	2806.7	1.435 mg/L	0.0305	1.435 mg/L	0.0305	2.13%
QC value within limits for Tl 190.801* Recovery = 95.68%						
V 292.402*†	260559.8	1.818 mg/L	0.0043	1.818 mg/L	0.0043	0.24%
QC value within limits for V 292.402* Recovery = 96.97%						
Zn 206.200*†	107303.6	2.363 mg/L	0.0088	2.363 mg/L	0.0088	0.37%
QC value within limits for Zn 206.200* Recovery = 94.52%						

All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: CCB-R12091601
 Analyst: 935 icp 7300
 Initial Sample Wt:
 Dilution:
 Wash Time: 15

Autosampler Location: 1
 Date Collected: 3/27/2017 10:55:23 AM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
Tb 384	82343.1	100.6	%	0.71				0.70%
Tb 350	132623.8	100.1	%	0.72				0.72%
Ag 328.068*†	69.2	0.0003	mg/L	0.00010	0.0003	mg/L	0.00010	27.68%
Al 308.215*†	50.8	0.0028	mg/L	0.00577	0.0028	mg/L	0.00577	204.19%
As 188.979†	9.1	0.0039	mg/L	0.00088	0.0039	mg/L	0.00088	22.38%
As 193.696*†	3.4	0.0021	mg/L	0.00007	0.0021	mg/L	0.00007	3.07%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	2089.1	0.0388	mg/L	0.00285	0.0388	mg/L	0.00285	7.34%
Ba 233.527*†	457.4	0.0029	mg/L	0.00006	0.0029	mg/L	0.00006	2.20%
Be 313.042*†	846.2	0.0002	mg/L	0.00004	0.0002	mg/L	0.00004	18.45%
Ca 317.933*†	13.3	0.0061	mg/L	0.00559	0.0061	mg/L	0.00559	91.64%
Cd 226.502*†	43.9	0.0005	mg/L	0.00007	0.0005	mg/L	0.00007	13.01%
Cd 228.802†	23.3	0.0006	mg/L	0.00008	0.0006	mg/L	0.00008	14.77%
Co 228.616*†	35.1	0.0012	mg/L	0.00018	0.0012	mg/L	0.00018	15.14%
Cr 267.716*†	-51.6	-0.0004	mg/L	0.00001	-0.0004	mg/L	0.00001	1.75%
Cu 324.752*†	224.2	0.0009	mg/L	0.00034	0.0009	mg/L	0.00034	40.31%
Fe 273.955*†	47.0	0.0019	mg/L	0.00104	0.0019	mg/L	0.00104	55.53%
K 766.490*†	89.5	0.0278	mg/L	0.04087	0.0278	mg/L	0.04087	147.02%
Mg 279.077*†	312.2	0.0150	mg/L	0.00862	0.0150	mg/L	0.00862	57.29%
Mn 257.610*†	219.9	0.0003	mg/L	0.00002	0.0003	mg/L	0.00002	5.93%
Mo 202.031*†	4.1	0.0004	mg/L	0.00017	0.0004	mg/L	0.00017	39.56%
Na 589.592*†	196.8	0.0422	mg/L	0.01329	0.0422	mg/L	0.01329	31.47%
Ni 231.604*†	22.8	0.0009	mg/L	0.00015	0.0009	mg/L	0.00015	17.09%
P 213.617*†	61.2	0.0277	mg/L	0.01208	0.0277	mg/L	0.01208	43.57%
P 214.914†	10.9	0.0079	mg/L	0.00870	0.0079	mg/L	0.00870	110.56%
Pb 220.353*†	23.3	0.0027	mg/L	0.00046	0.0027	mg/L	0.00046	17.19%
Sb 206.836†	2.0	0.0010	mg/L	0.00064	0.0010	mg/L	0.00064	64.00%
Sb 217.582*†	-6.2	-0.0031	mg/L	0.00279	-0.0031	mg/L	0.00279	90.39%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	18.6	0.0077	mg/L	0.00421	0.0077	mg/L	0.00421	54.54%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	262.7	0.0062	mg/L	0.00178	0.0062	mg/L	0.00178	28.61%
Sn 189.927*†	41.5	0.0063	mg/L	0.00008	0.0063	mg/L	0.00008	1.24%
Sn 242.170†	51.5	0.0273	mg/L	0.01194	0.0273	mg/L	0.01194	43.66%
Sr 407.771*†	9.5	0.0000	mg/L	0.00001	0.0000	mg/L	0.00001	41.69%
Ti 334.940†	565.1	0.0006	mg/L	0.00050	0.0006	mg/L	0.00050	77.28%
Ti 336.121*†	360.7	0.0006	mg/L	0.00002	0.0006	mg/L	0.00002	3.27%
Tl 190.801*†	13.8	0.0070	mg/L	0.00200	0.0070	mg/L	0.00200	28.42%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	172.7	0.0012	mg/L	0.00034	0.0012	mg/L	0.00034	28.03%
Zn 206.200*†	92.0	0.0020	mg/L	0.00022	0.0020	mg/L	0.00022	10.96%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 23

Autosampler Location: 3

Sample ID: CCV= STD3x0.5

Date Collected: 3/27/2017 11:05:40 AM

Analyst: 935 icp 7300

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time: 15

Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	71714.7	87.66	%	0.414			0.47%
Tb 350	119066.1	89.87	%	0.048			0.05%
Ag 328.068*†	72237.2	0.3618	mg/L	0.00204	0.3618 mg/L	0.00204	0.56%
	QC value within limits for Ag 328.068*	Recovery = 96.47%					
Al 308.215*†	242190.3	13.49	mg/L	0.009	13.49 mg/L	0.009	0.06%
	QC value within limits for Al 308.215*	Recovery = 99.90%					
As 188.979†	8188.6	3.510	mg/L	0.0303	3.510 mg/L	0.0303	0.86%
	QC value within limits for As 188.979	Recovery = 93.60%					
As 193.696*†	5657.2	3.515	mg/L	0.0463	3.515 mg/L	0.0463	1.32%
	QC value within limits for As 193.696*	Recovery = 93.73%					
B 249.677*†	190186.8	3.530	mg/L	0.0374	3.530 mg/L	0.0374	1.06%
	QC value within limits for B 249.677*	Recovery = 94.13%					
Ba 233.527*†	1180680.2	7.368	mg/L	0.0064	7.368 mg/L	0.0064	0.09%
	QC value within limits for Ba 233.527*	Recovery = 98.25%					
Be 313.042*†	2196246.8	0.5369	mg/L	0.00301	0.5369 mg/L	0.00301	0.56%
	QC value within limits for Be 313.042*	Recovery = 95.45%					
Ca 317.933*†	61265.4	28.01	mg/L	0.063	28.01 mg/L	0.063	0.23%
	QC value within limits for Ca 317.933*	Recovery = 93.37%					
Cd 226.502*†	60240.0	0.7156	mg/L	0.00287	0.7156 mg/L	0.00287	0.40%
	QC value within limits for Cd 226.502*	Recovery = 95.41%					
Cd 228.802†	29888.1	0.7223	mg/L	0.00308	0.7223 mg/L	0.00308	0.43%
Co 228.616*†	54760.8	1.830	mg/L	0.0017	1.830 mg/L	0.0017	0.09%
	QC value within limits for Co 228.616*	Recovery = 97.58%					
Cr 267.716*†	69990.8	0.5800	mg/L	0.00094	0.5800 mg/L	0.00094	0.16%
	QC value within limits for Cr 267.716*	Recovery = 96.66%					
Cu 324.752*†	240388.8	0.9121	mg/L	0.00286	0.9121 mg/L	0.00286	0.31%
	QC value within limits for Cu 324.752*	Recovery = 97.29%					
Fe 273.955*†	91029.3	3.647	mg/L	0.0033	3.647 mg/L	0.0033	0.09%
	QC value within limits for Fe 273.955*	Recovery = 97.24%					
K 766.490*†	82683.2	25.68	mg/L	0.147	25.68 mg/L	0.147	0.57%
	QC value within limits for K 766.490*	Recovery = 95.10%					
Mg 279.077*†	149899.7	7.225	mg/L	0.0037	7.225 mg/L	0.0037	0.05%
	QC value within limits for Mg 279.077*	Recovery = 96.33%					
Mn 279.610*†	501260.6	0.7275	mg/L	0.00146	0.7275 mg/L	0.00146	0.20%
	QC value within limits for Mn 257.610*	Recovery = 97.00%					
Mo 202.031*†	5686.2	0.5858	mg/L	0.00397	0.5858 mg/L	0.00397	0.68%
	QC value within limits for Mo 202.031*	Recovery = 97.63%					
Na 589.592*†	166645.9	35.76	mg/L	0.142	35.76 mg/L	0.142	0.40%
	QC value within limits for Na 589.592*	Recovery = 99.33%					
Ni 231.604*†	15285.6	0.5783	mg/L	0.00296	0.5783 mg/L	0.00296	0.51%
	QC value within limits for Ni 231.604*	Recovery = 96.38%					
P 213.617*†	12252.3	5.553	mg/L	0.0418	5.553 mg/L	0.0418	0.75%
	QC value within limits for P 213.617*	Recovery = 92.56%					
P 214.914†	7801.0	5.651	mg/L	0.0423	5.651 mg/L	0.0423	0.75%
Pb 220.353*†	30988.4	3.575	mg/L	0.0175	3.575 mg/L	0.0175	0.49%
	QC value within limits for Pb 220.353*	Recovery = 95.34%					
Sb 206.836†	8789.4	4.310	mg/L	0.0359	4.310 mg/L	0.0359	0.83%
	QC value within limits for Sb 206.836	Recovery = 95.78%					
Sb 217.582*†	8681.7	4.283	mg/L	0.0275	4.283 mg/L	0.0275	0.64%
	QC value within limits for Sb 217.582*	Recovery = 95.17%					
Se 196.026*†	3445.0	1.426	mg/L	0.0199	1.426 mg/L	0.0199	1.39%
	QC value within limits for Se 196.026*	Recovery = 95.09%					
Si 251.611*†	239788.2	5.675	mg/L	0.0180	5.675 mg/L	0.0180	0.32%
	QC value within limits for Si 251.611*	Recovery = 94.58%					
Sn 189.927*†	19013.3	2.874	mg/L	0.0219	2.874 mg/L	0.0219	0.76%
	QC value within limits for Sn 189.927*	Recovery = 95.80%					
Sn 242.170†	5373.6	2.855	mg/L	0.0313	2.855 mg/L	0.0313	1.10%
Sr 407.771*†	100734.3	0.2941	mg/L	0.00136	0.2941 mg/L	0.00136	0.46%
	QC value within limits for Sr 407.771*	Recovery = 98.02%					

Ti 334.940†	513131.9	0.5846 mg/L	0.00018	0.5846 mg/L	0.00018	0.03%
Ti 336.121*†	362369.5	0.5882 mg/L	0.00079	0.5882 mg/L	0.00079	0.13%
QC value within limits for Ti 336.121* Recovery = 98.03%						
Tl 190.801*†	2875.2	1.470 mg/L	0.0158	1.470 mg/L	0.0158	1.07%
QC value within limits for Tl 190.801* Recovery = 98.01%						
V 292.402*†	260189.7	1.816 mg/L	0.0091	1.816 mg/L	0.0091	0.50%
QC value within limits for V 292.402* Recovery = 96.84%						
Zn 206.200*†	106512.2	2.346 mg/L	0.0082	2.346 mg/L	0.0082	0.35%
QC value within limits for Zn 206.200* Recovery = 93.82%						

All analyte(s) passed QC.

Sequence No.: 24
 Sample ID: CCB-R12091601
 Analyst: 935 icp 7300
 Initial Sample Wt:
 Dilution:
 Wash Time: 15

Autosampler Location: 1
 Date Collected: 3/27/2017 11:06:32 AM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
Tb 384	81299.1	99.37	%	1.618				1.63%
Tb 350	129913.7	98.05	%	1.578				1.61%
Ag 328.068*†	110.0	0.0006	mg/L	0.00049	0.0006	mg/L	0.00049	88.11%
Al 308.215*†	-15.0	-0.0008	mg/L	0.00251	-0.0008	mg/L	0.00251	301.08%
As 188.979†	5.6	0.0024	mg/L	0.00094	0.0024	mg/L	0.00094	39.08%
As 193.696*†	-0.4	-0.0002	mg/L	0.00186	-0.0002	mg/L	0.00186	778.50%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	2231.1	0.0414	mg/L	0.00290	0.0414	mg/L	0.00290	7.01%
Ba 233.527*†	415.2	0.0026	mg/L	0.00013	0.0026	mg/L	0.00013	5.21%
Be 313.042*†	832.6	0.0002	mg/L	0.00002	0.0002	mg/L	0.00002	8.37%
Ca 317.933*†	19.2	0.0088	mg/L	0.00273	0.0088	mg/L	0.00273	31.11%
Cd 226.502*†	56.1	0.0007	mg/L	0.00016	0.0007	mg/L	0.00016	24.44%
Cd 228.802†	18.5	0.0004	mg/L	0.00023	0.0004	mg/L	0.00023	51.08%
Co 228.616*†	16.1	0.0005	mg/L	0.00028	0.0005	mg/L	0.00028	52.84%
Cr 267.716*†	-27.8	-0.0002	mg/L	0.00068	-0.0002	mg/L	0.00068	294.51%
Cu 324.752*†	381.4	0.0014	mg/L	0.00009	0.0014	mg/L	0.00009	6.01%
Fe 273.955*†	184.6	0.0074	mg/L	0.00236	0.0074	mg/L	0.00236	31.86%
K 766.490*†	-135.7	-0.0422	mg/L	0.07252	-0.0422	mg/L	0.07252	172.03%
Mg 279.077*†	124.2	0.0060	mg/L	0.00317	0.0060	mg/L	0.00317	52.94%
Mn 257.610*†	270.0	0.0004	mg/L	0.00004	0.0004	mg/L	0.00004	11.48%
Mo 202.031*†	0.3	0.0000	mg/L	0.00066	0.0000	mg/L	0.00066	>999.9%
Na 589.592*†	139.3	0.0299	mg/L	0.01601	0.0299	mg/L	0.01601	53.56%
Ni 231.604*†	24.8	0.0009	mg/L	0.00094	0.0009	mg/L	0.00094	100.27%
P 213.617*†	18.7	0.0085	mg/L	0.00021	0.0085	mg/L	0.00021	2.51%
P 214.914†	8.2	0.0060	mg/L	0.00165	0.0060	mg/L	0.00165	27.70%
Pb 220.353*†	20.1	0.0023	mg/L	0.00104	0.0023	mg/L	0.00104	45.00%
Sb 206.836†	15.8	0.0078	mg/L	0.00441	0.0078	mg/L	0.00441	56.88%
Sb 217.582*†	9.2	0.0045	mg/L	0.00177	0.0045	mg/L	0.00177	39.08%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	15.5	0.0064	mg/L	0.00265	0.0064	mg/L	0.00265	41.15%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	236.7	0.0056	mg/L	0.00146	0.0056	mg/L	0.00146	25.99%
Sn 189.927*†	48.4	0.0073	mg/L	0.00204	0.0073	mg/L	0.00204	27.95%
Sn 242.170†	46.2	0.0245	mg/L	0.02213	0.0245	mg/L	0.02213	90.18%
Sr 407.771*†	15.3	0.0000	mg/L	0.00001	0.0000	mg/L	0.00001	14.73%
Ti 334.940†	426.9	0.0005	mg/L	0.00010	0.0005	mg/L	0.00010	19.63%
Ti 336.121*†	498.7	0.0008	mg/L	0.00047	0.0008	mg/L	0.00047	58.51%
Tl 190.801*†	2.1	0.0011	mg/L	0.00174	0.0011	mg/L	0.00174	164.03%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	80.1	0.0006	mg/L	0.00091	0.0006	mg/L	0.00091	162.41%
Zn 206.200*†	94.2	0.0021	mg/L	0.00006	0.0021	mg/L	0.00006	3.07%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.



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Sequence No.: 11
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/27/2017 12:55:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1
    
```

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	74303.4	90.82	%	1.628			1.79%
Tb 350	122791.2	92.68	%	1.008			1.09%
Ag 328.068*†	72483.3	0.3630	mg/L	0.00230	0.3630 mg/L	0.00230	0.63%
QC value within limits for Ag 328.068* Recovery = 96.80%							
Al 308.215*†	243615.2	13.57	mg/L	0.086	13.57 mg/L	0.086	0.63%
QC value within limits for Al 308.215* Recovery = 100.49%							
As 188.979†	8386.3	3.595	mg/L	0.0176	3.595 mg/L	0.0176	0.49%
QC value within limits for As 188.979 Recovery = 95.86%							
As 193.696*†	5801.9	3.605	mg/L	0.0038	3.605 mg/L	0.0038	0.11%
QC value within limits for As 193.696* Recovery = 96.13%							
B 249.677*†	195319.0	3.625	mg/L	0.1018	3.625 mg/L	0.1018	2.81%
QC value within limits for B 249.677* Recovery = 96.67%							
Ba 233.527*†	1198464.7	7.479	mg/L	0.0656	7.479 mg/L	0.0656	0.88%
QC value within limits for Ba 233.527* Recovery = 99.72%							
Be 313.042*†	2240709.3	0.5478	mg/L	0.00895	0.5478 mg/L	0.00895	1.63%
QC value within limits for Be 313.042* Recovery = 97.38%							
Ca 317.933*†	61239.8	28.00	mg/L	0.581	28.00 mg/L	0.581	2.08%
QC value within limits for Ca 317.933* Recovery = 93.33%							
Cd 226.502*†	61760.8	0.7337	mg/L	0.00773	0.7337 mg/L	0.00773	1.05%
QC value within limits for Cd 226.502* Recovery = 97.82%							
Cd 228.802†	30233.5	0.7306	mg/L	0.00380	0.7306 mg/L	0.00380	0.52%
Co 228.616*†	55320.1	1.848	mg/L	0.0140	1.848 mg/L	0.0140	0.76%
QC value within limits for Co 228.616* Recovery = 98.58%							
Cr 267.716*†	71539.8	0.5928	mg/L	0.00815	0.5928 mg/L	0.00815	1.37%
QC value within limits for Cr 267.716* Recovery = 98.80%							
Cu 324.752*†	242068.6	0.9185	mg/L	0.00780	0.9185 mg/L	0.00780	0.85%
QC value within limits for Cu 324.752* Recovery = 97.97%							
Fe 273.955*†	93288.4	3.737	mg/L	0.0345	3.737 mg/L	0.0345	0.92%
QC value within limits for Fe 273.955* Recovery = 99.65%							
K 766.490*†	82135.4	25.51	mg/L	0.426	25.51 mg/L	0.426	1.67%
QC value within limits for K 766.490* Recovery = 94.47%							
Mg 279.077*†	153455.4	7.396	mg/L	0.0671	7.396 mg/L	0.0671	0.91%
QC value within limits for Mg 279.077* Recovery = 98.61%							
Mn 257.610*†	508268.6	0.7376	mg/L	0.00704	0.7376 mg/L	0.00704	0.95%
QC value within limits for Mn 257.610* Recovery = 98.35%							
Mo 202.031*†	5774.1	0.5948	mg/L	0.00309	0.5948 mg/L	0.00309	0.52%
QC value within limits for Mo 202.031* Recovery = 99.14%							
Na 589.592*†	163690.3	35.12	mg/L	0.617	35.12 mg/L	0.617	1.76%
QC value within limits for Na 589.592* Recovery = 97.56%							
Ni 231.604*†	15611.0	0.5906	mg/L	0.00072	0.5906 mg/L	0.00072	0.12%
QC value within limits for Ni 231.604* Recovery = 98.43%							
P 213.617*†	12609.2	5.715	mg/L	0.0175	5.715 mg/L	0.0175	0.31%
QC value within limits for P 213.617* Recovery = 95.25%							
P 214.914†	7993.0	5.790	mg/L	0.0309	5.790 mg/L	0.0309	0.53%
Pb 220.353*†	31765.6	3.665	mg/L	0.0331	3.665 mg/L	0.0331	0.90%
QC value within limits for Pb 220.353* Recovery = 97.73%							
Sb 206.836†	8909.4	4.369	mg/L	0.0068	4.369 mg/L	0.0068	0.15%
QC value within limits for Sb 206.836 Recovery = 97.08%							
Sb 217.582*†	8821.9	4.352	mg/L	0.0091	4.352 mg/L	0.0091	0.21%
QC value within limits for Sb 217.582* Recovery = 96.71%							
Se 196.026*†	3535.2	1.464	mg/L	0.0033	1.464 mg/L	0.0033	0.22%
QC value within limits for Se 196.026* Recovery = 97.58%							
Si 251.611*†	249359.6	5.901	mg/L	0.0984	5.901 mg/L	0.0984	1.67%
QC value within limits for Si 251.611* Recovery = 98.35%							
Sn 189.927*†	19432.0	2.937	mg/L	0.0035	2.937 mg/L	0.0035	0.12%
QC value within limits for Sn 189.927* Recovery = 97.91%							
Sn 242.170†	5503.9	2.924	mg/L	0.0183	2.924 mg/L	0.0183	0.63%
Sr 407.771*†	98863.0	0.2886	mg/L	0.00396	0.2886 mg/L	0.00396	1.37%
QC value within limits for Sr 407.771* Recovery = 96.20%							

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Ti 334.940†	517802.3	0.5899 mg/L	0.00554	0.5899 mg/L	0.00554	0.94%
Ti 336.121*†	365133.4	0.5926 mg/L	0.00589	0.5926 mg/L	0.00589	0.99%
QC value within limits for Ti 336.121* Recovery = 98.77%						
Tl 190.801*†	2886.3	1.476 mg/L	0.0085	1.476 mg/L	0.0085	0.58%
QC value within limits for Tl 190.801* Recovery = 98.39%						
V 292.402*†	263134.9	1.836 mg/L	0.0228	1.836 mg/L	0.0228	1.24%
QC value within limits for V 292.402* Recovery = 97.93%						
Zn 206.200*†	110049.7	2.423 mg/L	0.0416	2.423 mg/L	0.0416	1.72%
QC value within limits for Zn 206.200* Recovery = 96.94%						

All analyte(s) passed QC.

Sequence No.: 12

Sample ID: CCB-R12091601

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 15

Autosampler Location: 1

Date Collected: 3/27/2017 12:56:44 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
Tb 384	82516.0	100.9	%	0.55				0.54%
Tb 350	134005.9	101.1	%	0.80				0.79%
Ag 328.068*†	281.8	0.0014	mg/L	0.00009	0.0014	mg/L	0.00009	6.72%
Al 308.215*†	228.0	0.0127	mg/L	0.00506	0.0127	mg/L	0.00506	39.82%
As 188.979†	17.6	0.0075	mg/L	0.00005	0.0075	mg/L	0.00005	0.72%
As 193.696*†	-1.3	-0.0008	mg/L	0.00013	-0.0008	mg/L	0.00013	16.41%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	2163.0	0.0401	mg/L	0.00310	0.0401	mg/L	0.00310	7.71%
Ba 233.527*†	853.2	0.0053	mg/L	0.00043	0.0053	mg/L	0.00043	8.05%
Be 313.042*†	1281.8	0.0003	mg/L	0.00003	0.0003	mg/L	0.00003	10.32%
Ca 317.933*†	38.9	0.0178	mg/L	0.00049	0.0178	mg/L	0.00049	2.78%
Cd 226.502*†	87.4	0.0010	mg/L	0.00025	0.0010	mg/L	0.00025	23.94%
Cd 228.802†	53.3	0.0013	mg/L	0.00005	0.0013	mg/L	0.00005	3.88%
Co 228.616*†	35.8	0.0012	mg/L	0.00019	0.0012	mg/L	0.00019	15.93%
Cr 267.716*†	-1.6	-0.0000	mg/L	0.00040	-0.0000	mg/L	0.00040	>999.9%
Cu 324.752*†	174.4	0.0007	mg/L	0.00031	0.0007	mg/L	0.00031	46.43%
Fe 273.955*†	589.5	0.0236	mg/L	0.00251	0.0236	mg/L	0.00251	10.64%
K 766.490*†	159.8	0.0496	mg/L	0.04209	0.0496	mg/L	0.04209	84.79%
Mg 279.077*†	303.6	0.0146	mg/L	0.00797	0.0146	mg/L	0.00797	54.49%
Mn 257.610*†	611.9	0.0009	mg/L	0.00012	0.0009	mg/L	0.00012	13.74%
Mo 202.031*†	9.4	0.0010	mg/L	0.00111	0.0010	mg/L	0.00111	114.04%
Na 589.592*†	50.9	0.0109	mg/L	0.00080	0.0109	mg/L	0.00080	7.30%
Ni 231.604*†	5.6	0.0002	mg/L	0.00092	0.0002	mg/L	0.00092	430.40%
P 213.617*†	32.2	0.0146	mg/L	0.01038	0.0146	mg/L	0.01038	71.15%
P 214.914†	-1.2	-0.0008	mg/L	0.01311	-0.0008	mg/L	0.01311	>999.9%
Pb 220.353*†	14.1	0.0016	mg/L	0.00111	0.0016	mg/L	0.00111	67.81%
Sb 206.836†	12.1	0.0059	mg/L	0.00000	0.0059	mg/L	0.00000	0.07%
Sb 217.582*†	1.0	0.0005	mg/L	0.00046	0.0005	mg/L	0.00046	91.76%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	1.5	0.0006	mg/L	0.00374	0.0006	mg/L	0.00374	619.85%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	836.0	0.0198	mg/L	0.00039	0.0198	mg/L	0.00039	2.00%
Sn 189.927*†	48.0	0.0073	mg/L	0.00012	0.0073	mg/L	0.00012	1.61%
Sn 242.170†	39.7	0.0211	mg/L	0.00669	0.0211	mg/L	0.00669	31.69%
Sr 407.771*†	64.1	0.0002	mg/L	0.00005	0.0002	mg/L	0.00005	25.19%
Ti 334.940†	1134.1	0.0013	mg/L	0.00007	0.0013	mg/L	0.00007	5.09%
Ti 336.121*†	942.5	0.0015	mg/L	0.00037	0.0015	mg/L	0.00037	24.10%
Tl 190.801*†	7.9	0.0041	mg/L	0.00247	0.0041	mg/L	0.00247	60.77%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	145.1	0.0010	mg/L	0.00000	0.0010	mg/L	0.00000	0.48%
Zn 206.200*†	276.6	0.0061	mg/L	0.00048	0.0061	mg/L	0.00048	7.87%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 23

Autosampler Location: 3

Sample ID: CCV= STD3x0.5

Date Collected: 3/27/2017 1:06:20 PM

Analyst: 935 icp 7300

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time: 15

Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	73753.7	90.15	%	0.670			0.74%
Tb 350	122517.2	92.47	%	0.198			0.21%
Ag 328.068*†	72654.9	0.3638	mg/L	0.00139	0.3638 mg/L	0.00139	0.38%
QC value within limits for Ag 328.068*			Recovery =	97.03%			
Al 308.215*†	245400.6	13.67	mg/L	0.074	13.67 mg/L	0.074	0.54%
QC value within limits for Al 308.215*			Recovery =	101.23%			
As 188.979†	8488.1	3.638	mg/L	0.0572	3.638 mg/L	0.0572	1.57%
QC value within limits for As 188.979			Recovery =	97.02%			
As 193.696*†	5852.5	3.636	mg/L	0.0560	3.636 mg/L	0.0560	1.54%
QC value within limits for As 193.696*			Recovery =	96.97%			
B 249.677*†	195807.1	3.634	mg/L	0.0109	3.634 mg/L	0.0109	0.30%
QC value within limits for B 249.677*			Recovery =	96.92%			
Ba 233.527*†	1195959.1	7.464	mg/L	0.0415	7.464 mg/L	0.0415	0.56%
QC value within limits for Ba 233.527*			Recovery =	99.52%			
Be 313.042*†	2233482.4	0.5460	mg/L	0.00131	0.5460 mg/L	0.00131	0.24%
QC value within limits for Be 313.042*			Recovery =	97.07%			
Ca 317.933*†	63688.5	29.12	mg/L	0.434	29.12 mg/L	0.434	1.49%
QC value within limits for Ca 317.933*			Recovery =	97.06%			
Cd 226.502*†	61487.6	0.7304	mg/L	0.00491	0.7304 mg/L	0.00491	0.67%
QC value within limits for Cd 226.502*			Recovery =	97.39%			
Cd 228.802†	30342.1	0.7333	mg/L	0.00176	0.7333 mg/L	0.00176	0.24%
Co 228.616*†	55620.0	1.858	mg/L	0.0134	1.858 mg/L	0.0134	0.72%
QC value within limits for Co 228.616*			Recovery =	99.11%			
Cr 267.716*†	71027.5	0.5886	mg/L	0.00177	0.5886 mg/L	0.00177	0.30%
QC value within limits for Cr 267.716*			Recovery =	98.10%			
Cu 324.752*†	242846.1	0.9214	mg/L	0.00278	0.9214 mg/L	0.00278	0.30%
QC value within limits for Cu 324.752*			Recovery =	98.28%			
Fe 273.955*†	94979.5	3.805	mg/L	0.0157	3.805 mg/L	0.0157	0.41%
QC value within limits for Fe 273.955*			Recovery =	101.46%			
K 766.490*†	84915.5	26.37	mg/L	0.437	26.37 mg/L	0.437	1.66%
QC value within limits for K 766.490*			Recovery =	97.67%			
Mg 279.077*†	153335.3	7.390	mg/L	0.0474	7.390 mg/L	0.0474	0.64%
QC value within limits for Mg 279.077*			Recovery =	98.54%			
Mn 257.610*†	510856.2	0.7414	mg/L	0.00365	0.7414 mg/L	0.00365	0.49%
QC value within limits for Mn 257.610*			Recovery =	98.85%			
Mo 202.031*†	5803.0	0.5978	mg/L	0.00819	0.5978 mg/L	0.00819	1.37%
QC value within limits for Mo 202.031*			Recovery =	99.64%			
Na 589.592*†	170087.7	36.50	mg/L	0.394	36.50 mg/L	0.394	1.08%
QC value within limits for Na 589.592*			Recovery =	101.38%			
Ni 231.604*†	15714.6	0.5945	mg/L	0.00703	0.5945 mg/L	0.00703	1.18%
QC value within limits for Ni 231.604*			Recovery =	99.08%			
P 213.617*†	12697.7	5.755	mg/L	0.0723	5.755 mg/L	0.0723	1.26%
QC value within limits for P 213.617*			Recovery =	95.92%			
P 214.914†	8101.3	5.868	mg/L	0.0798	5.868 mg/L	0.0798	1.36%
Pb 220.353*†	31707.1	3.658	mg/L	0.0309	3.658 mg/L	0.0309	0.85%
QC value within limits for Pb 220.353*			Recovery =	97.55%			
Sb 206.836†	8989.3	4.408	mg/L	0.0559	4.408 mg/L	0.0559	1.27%
QC value within limits for Sb 206.836			Recovery =	97.95%			
Sb 217.582*†	8849.8	4.366	mg/L	0.0419	4.366 mg/L	0.0419	0.96%
QC value within limits for Sb 217.582*			Recovery =	97.01%			
Se 196.026*†	3550.2	1.470	mg/L	0.0159	1.470 mg/L	0.0159	1.08%
QC value within limits for Se 196.026*			Recovery =	98.00%			
Si 251.611*†	252239.2	5.969	mg/L	0.0091	5.969 mg/L	0.0091	0.15%
QC value within limits for Si 251.611*			Recovery =	99.49%			
Sn 189.927*†	19731.8	2.982	mg/L	0.0364	2.982 mg/L	0.0364	1.22%
QC value within limits for Sn 189.927*			Recovery =	99.42%			
Sn 242.170†	5582.9	2.966	mg/L	0.0243	2.966 mg/L	0.0243	0.82%
Sr 407.771*†	101929.5	0.2975	mg/L	0.00262	0.2975 mg/L	0.00262	0.88%
QC value within limits for Sr 407.771*			Recovery =	99.18%			

Ti 334.940†	520225.9	0.5927 mg/L	0.00142	0.5927 mg/L	0.00142	0.24%
Ti 336.121*†	366553.9	0.5950 mg/L	0.00024	0.5950 mg/L	0.00024	0.04%
QC value within limits for Ti 336.121* Recovery = 99.16%						
Tl 190.801*†	2927.7	1.497 mg/L	0.0128	1.497 mg/L	0.0128	0.85%
QC value within limits for Tl 190.801* Recovery = 99.80%						
V 292.402*†	263089.5	1.836 mg/L	0.0050	1.836 mg/L	0.0050	0.27%
QC value within limits for V 292.402* Recovery = 97.92%						
Zn 206.200*†	109824.0	2.418 mg/L	0.0136	2.418 mg/L	0.0136	0.56%
QC value within limits for Zn 206.200* Recovery = 96.74%						

All analyte(s) passed QC.

Sequence No.: 24
 Sample ID: CCB-R12091601
 Analyst: 935 icp 7300
 Initial Sample Wt:
 Dilution:
 Wash Time: 15

Autosampler Location: 1
 Date Collected: 3/27/2017 1:07:13 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

 Mean Data: CCB-R12091601

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
Tb 384	83353.8	101.9	%	0.73				0.72%
Tb 350	136302.0	102.9	%	1.25				1.21%
Ag 328.068*†	159.6	0.0008	mg/L	0.00085	0.0008	mg/L	0.00085	106.94%
Al 308.215*†	134.7	0.0075	mg/L	0.00773	0.0075	mg/L	0.00773	103.07%
As 188.979†	9.9	0.0042	mg/L	0.00071	0.0042	mg/L	0.00071	16.69%
As 193.696*†	5.5	0.0034	mg/L	0.00202	0.0034	mg/L	0.00202	58.91%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1912.1	0.0355	mg/L	0.00203	0.0355	mg/L	0.00203	5.73%
Ba 233.527*†	840.1	0.0052	mg/L	0.00139	0.0052	mg/L	0.00139	26.43%
Be 313.042*†	1184.0	0.0003	mg/L	0.00002	0.0003	mg/L	0.00002	7.98%
Ca 317.933*†	36.5	0.0167	mg/L	0.00352	0.0167	mg/L	0.00352	21.10%
Cd 226.502*†	67.5	0.0008	mg/L	0.00007	0.0008	mg/L	0.00007	8.65%
Cd 228.802†	35.1	0.0008	mg/L	0.00009	0.0008	mg/L	0.00009	11.02%
Co 228.616*†	49.0	0.0016	mg/L	0.00044	0.0016	mg/L	0.00044	26.62%
Cr 267.716*†	-133.3	-0.0011	mg/L	0.00007	-0.0011	mg/L	0.00007	6.72%
Cu 324.752*†	326.2	0.0012	mg/L	0.00020	0.0012	mg/L	0.00020	16.13%
Fe 273.955*†	2987.2	0.1197	mg/L	0.14858	0.1197	mg/L	0.14858	124.16%
Saturated within auto integration window (code 4)								
K 766.490*†	66.1	0.0205	mg/L	0.03207	0.0205	mg/L	0.03207	156.14%
Mg 279.077*†	91.1	0.0044	mg/L	0.00850	0.0044	mg/L	0.00850	193.53%
Mn 257.610*†	3071.2	0.0045	mg/L	0.00507	0.0045	mg/L	0.00507	113.66%
Mo 202.031*†	2.8	0.0003	mg/L	0.00008	0.0003	mg/L	0.00008	28.54%
Na 589.592*†	62.1	0.0133	mg/L	0.00949	0.0133	mg/L	0.00949	71.22%
Ni 231.604*†	43.5	0.0016	mg/L	0.00141	0.0016	mg/L	0.00141	85.58%
P 213.617*†	94.1	0.0427	mg/L	0.00405	0.0427	mg/L	0.00405	9.50%
P 214.914†	24.0	0.0174	mg/L	0.01813	0.0174	mg/L	0.01813	104.43%
Pb 220.353*†	28.7	0.0033	mg/L	0.00162	0.0033	mg/L	0.00162	49.08%
Sb 206.836†	9.7	0.0047	mg/L	0.00220	0.0047	mg/L	0.00220	46.42%
Sb 217.582*†	6.6	0.0033	mg/L	0.00232	0.0033	mg/L	0.00232	70.97%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	23.0	0.0095	mg/L	0.00054	0.0095	mg/L	0.00054	5.67%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	2243.7	0.0531	mg/L	0.01284	0.0531	mg/L	0.01284	24.19%
Sn 189.927*†	45.1	0.0068	mg/L	0.00195	0.0068	mg/L	0.00195	28.55%
Sn 242.170†	27.8	0.0148	mg/L	0.00663	0.0148	mg/L	0.00663	44.94%
Sr 407.771*†	45.4	0.0001	mg/L	0.00006	0.0001	mg/L	0.00006	45.91%
Ti 334.940†	1047.4	0.0012	mg/L	0.00009	0.0012	mg/L	0.00009	7.42%
Ti 336.121*†	643.8	0.0010	mg/L	0.00046	0.0010	mg/L	0.00046	43.60%
Tl 190.801*†	-1.1	-0.0005	mg/L	0.00182	-0.0005	mg/L	0.00182	331.12%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	126.6	0.0009	mg/L	0.00004	0.0009	mg/L	0.00004	4.57%
Zn 206.200*†	336.7	0.0074	mg/L	0.00375	0.0074	mg/L	0.00375	50.54%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

EPA 6010B ICP Metals (Solid)

Sample Data

RAW DATA SHEET FOR METHOD: EPA 6010B

WORK ORDER: 17-03-1523
INSTRUMENT: ICP 7300
EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-27 13:01
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170327C 1\17-03-1523-1.icp

1 **CLIENT SAMPLE NUMBER:** IDW-S

LCS/MB BATCH: 170324L15 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 2.00 g / ACTUAL: 2.00 g
MS/MSD BATCH: 170324S15 **FINAL VOLUME / WEIGHT:** DEFAULT: 100.00 ml / ACTUAL: 100.00 ml
UNITS: mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Antimony	0.00289	0.971	ND	0.728	
Arsenic	0.0221	0.971	1.07	0.728	
Barium	1.24	0.971	60.2	0.485	
Beryllium	0.00293	0.971	ND	0.243	
Cadmium	0.00442	0.971	ND	0.485	
Chromium	0.109	0.971	5.31	0.243	
Cobalt	0.0954	0.971	4.63	0.243	
Copper	0.164	0.971	7.97	0.485	
Lead	0.0406	0.971	1.97	0.485	
Molybdenum	0.00330	0.971	ND	0.243	
Nickel	0.0878	0.971	4.26	0.243	
Selenium	-0.00325	0.971	ND	0.728	
Silver	0.0000726	0.971	ND	0.243	
Thallium	-0.0130	0.971	ND	0.728	
Vanadium	0.363	0.971	17.6	0.243	
Zinc	0.535	0.971	26.0	0.971	

Return to Contents

Sequence No.: 17
 Sample ID: 17-03-1523-1
 Analyst: 935 icp 7300
 Initial Sample Wt: 2.06 g
 Dilution:
 Wash Time: 15

Autosampler Location: 213
 Date Collected: 3/27/2017 1:01:12 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol: 100 mL
 Auto Dilution Factor: 1

Mean Data: 17-03-1523-1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	63221.8	77.28	%	0.775			1.00%
Tb 350	114310.9	86.28	%	0.933			1.08%
Ag 328.068*†	14.5	0.0001	mg/L	0.00160	0.0035	0.07769	>999.9%
Al 308.215*†	2073156.7	115.4	mg/L	0.18	5604	8.98	0.16%
As 188.979†	52.8	0.0226	mg/L	0.00226	1.099	0.1095	9.97%
As 193.696*†	35.6	0.0221	mg/L	0.00041	1.075	0.0198	1.85%
B 249.677*†	572.7	0.0106	mg/L	0.00178	0.5160	0.08646	16.76%
Ba 233.527*†	198717.5	1.240	mg/L	0.0013	60.20	0.064	0.11%
Be 313.042*†	12000.5	0.0029	mg/L	0.00001	0.1424	0.00049	0.34%
Ca 317.933*†	153627.4	70.24	mg/L	0.441	3410	21.42	0.63%
Cd 226.502*†	372.3	0.0044	mg/L	0.00032	0.2147	0.01557	7.25%
Cd 228.802†	22.0	0.0005	mg/L	0.00041	0.0258	0.01985	76.92%
Co 228.616*†	2854.6	0.0954	mg/L	0.00044	4.630	0.0215	0.46%
Cr 267.716*†	13203.7	0.1094	mg/L	0.00002	5.311	0.0010	0.02%
Cu 324.752*†	43260.6	0.1641	mg/L	0.00141	7.968	0.0683	0.86%
Fe 273.955*†	4681337.1	187.5	mg/L	1.72	9103	83.41	0.92%
K 766.490*†	115291.2	35.80	mg/L	0.389	1738	18.88	1.09%
Mg 279.077*†	1167379.4	56.26	mg/L	0.210	2731	10.17	0.37%
Mn 257.610*†	1960120.6	2.845	mg/L	0.0105	138.1	0.51	0.37%
Mo 202.031*†	32.0	0.0033	mg/L	0.00098	0.1600	0.04733	29.58%
Na 589.592*†	22365.5	4.799	mg/L	0.0655	233.0	3.18	1.37%
Ni 231.604*†	2320.9	0.0878	mg/L	0.00150	4.262	0.0728	1.71%
P 213.617*†	20602.3	9.338	mg/L	0.0166	453.3	0.81	0.18%
P 214.914†	13599.3	9.851	mg/L	0.0064	478.2	0.31	0.06%
Pb 220.353*†	351.8	0.0406	mg/L	0.00014	1.970	0.0068	0.34%
Sb 206.836†	8.9	0.0043	mg/L	0.00632	0.2107	0.30704	145.73%
Sb 217.582*†	5.9	0.0029	mg/L	0.00204	0.1403	0.09887	70.49%
Se 196.026*†	-7.8	-0.0032	mg/L	0.00147	-0.1576	0.07133	45.26%
Si 251.611*†	738458.7	17.48	mg/L	0.032	848.3	1.54	0.18%
Sn 189.927*†	-425.4	-0.0643	mg/L	0.00098	-3.122	0.0476	1.52%
Sn 242.170†	947.8	0.5035	mg/L	0.03056	24.44	1.484	6.07%
Sr 407.771*†	209894.1	0.6127	mg/L	0.00278	29.74	0.135	0.45%
Ti 334.940†	10199013.5	11.62	mg/L	0.049	564.1	2.38	0.42%
Ti 336.121*†	7257275.3	11.78	mg/L	0.056	571.8	2.70	0.47%
Tl 190.801*†	-25.5	-0.0130	mg/L	0.00150	-0.6332	0.07279	11.50%
V 292.402*†	52465.2	0.3631	mg/L	0.00027	17.62	0.013	0.07%
Zn 206.200*†	24285.0	0.5348	mg/L	0.00097	25.96	0.047	0.18%

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EPA 6010B ICP Metals (Solid)

Quality Control

Method Blank
LCS/LCSD
MS/MSD

**METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 6010B**

MB SAMPLE ID: 097-01-002-24506
MB BATCH ID: 170324L15
INSTRUMENT: ICP 7300
EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-27 11:00
REVIEWED BY:
D/T REVIEWED:
MATRIX: Soil

DATA FILE: W:\ICP-DATA\170327C 1\170324-b-15__28.icp

CLIENT WORK ORDER: 17-03-1523

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	IDW-S		2017-03-27 13:01	W:\ICP-DATA\170327C 1\17-03-1523-1.icp

RAW DATA SHEET FOR METHOD: EPA 6010B

WORK ORDER: 097-01-002
INSTRUMENT: ICP 7300
EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-27 11:00
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170327C 1\170324-b-15__28.icp

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170324L15 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 2.00 g / ACTUAL: 2.00 g
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 100.00 ml / ACTUAL: 100.00 ml
UNITS: mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Antimony	0.00201	0.966	ND	0.725	
Arsenic	0.00265	0.966	ND	0.725	
Barium	0.00132	0.966	ND	0.483	
Beryllium	0.000846	0.966	ND	0.242	
Cadmium	0.00112	0.966	ND	0.483	
Chromium	0.000923	0.966	ND	0.242	
Cobalt	0.000532	0.966	ND	0.242	
Copper	0.00269	0.966	ND	0.483	
Lead	0.000950	0.966	ND	0.483	
Molybdenum	0.00117	0.966	ND	0.242	
Nickel	0.00250	0.966	ND	0.242	
Selenium	-0.000836	0.966	ND	0.725	
Silver	0.000721	0.966	ND	0.242	
Thallium	-0.00225	0.966	ND	0.725	
Vanadium	0.000555	0.966	ND	0.242	
Zinc	0.0145	0.966	ND	0.966	

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LCS QUALITY CONTROL SHEET FOR METHOD: EPA 6010B

LCS SAMPLE ID: 097-01-002-24506
LCS/MB BATCH ID: 170324L15
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-27 11:01
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170327C 1\170324-L15_29.icp

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Antimony	25.00	22.59	90	80-120	73-127	PASS	
Arsenic	25.00	22.50	90	80-120	73-127	PASS	
Barium	25.00	25.47	102	80-120	73-127	PASS	
Beryllium	25.00	22.95	92	80-120	73-127	PASS	
Cadmium	25.00	23.83	95	80-120	73-127	PASS	
Chromium	25.00	24.27	97	80-120	73-127	PASS	
Cobalt	25.00	24.77	99	80-120	73-127	PASS	
Copper	25.00	24.72	99	80-120	73-127	PASS	
Lead	25.00	24.69	99	80-120	73-127	PASS	
Molybdenum	25.00	23.79	95	80-120	73-127	PASS	
Nickel	25.00	24.45	98	80-120	73-127	PASS	
Phosphorus	25.00	23.65	95	80-120	73-127	PASS	
Selenium	25.00	22.64	91	80-120	73-127	PASS	
Silver	12.50	11.96	96	80-120	73-127	PASS	
Thallium	25.00	24.10	96	80-120	73-127	PASS	
Vanadium	25.00	23.30	93	80-120	73-127	PASS	
Zinc	25.00	24.04	96	80-120	73-127	PASS	
Aluminum	25.00	24.99	100	80-120	73-127	PASS	
Calcium	25.00	21.34	85	80-120	73-127	PASS	
Iron	25.00	24.58	98	80-120	73-127	PASS	
Magnesium	25.00	23.57	94	80-120	73-127	PASS	
Manganese	25.00	23.99	96	80-120	73-127	PASS	
Potassium	250.0	225.6	90	80-120	73-127	PASS	
Sodium	250.0	243.3	97	80-120	73-127	PASS	
Strontium	25.00	24.20	97	80-120	73-127	PASS	
Tin	25.00	23.57	94	80-120	73-127	PASS	
Titanium	25.00	23.78	95	80-120	73-127	PASS	
Boron	25.00	22.68	91	80-120	73-127	PASS	
Silicon	25.00	23.76	95	80-120	73-127	PASS	

LCS QUALITY CONTROL SHEET FOR METHOD: EPA 6010B

LCS SAMPLE ID: **097-01-002-24506**
LCS/MB BATCH ID: 170324L15
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-27 11:01
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170327C 1\170324-I-15__29.icp

<u>COMPOUND</u>	<u>CONC</u>	<u>CONC REC</u>	<u>%REC</u>	<u>%REC CL</u>	<u>ME CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
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Total number of LCS compounds: 29
 Total number of ME compounds: 0
 Total number of ME compounds allowed: 1
 LCS ME CL validation result: Pass

Compounds listed in bold are required to be reported.

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 6010B

SPIKED SAMPLE ID: 17-03-1523-1
MS/MSD BATCH: 170324S15

INSTRUMENTS:

SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3050B

D/T EXTRACTED:

SAMPLE: 2017-03-24 00:00
MS: 2017-03-24 00:00
MSD: 2017-03-24 00:00

ANALYZED BY: 935

D/T ANALYZED:

SAMPLE: 2017-03-27 13:01
MS: 2017-03-27 13:02
MSD: 2017-03-27 13:02

REVIEWED BY:

D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	%MS.REC	MSD CONC	%MSD.REC	%REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Antimony	ND	0.5000	25.00	13.66	55	12.74	51	50-115	7	0-20	PASS	
Arsenic	1.075	0.5000	25.00	26.42	101	23.95	91	75-125	10	0-20	PASS	
Barium	60.20	0.5000	25.00	83.79	94	81.35	85	75-125	3	0-20	PASS	
Beryllium	ND	0.5000	25.00	26.08	104	24.17	97	75-125	8	0-20	PASS	
Cadmium	ND	0.5000	25.00	26.20	105	24.17	97	75-125	8	0-20	PASS	
Chromium	5.311	0.5000	25.00	31.03	103	30.89	102	75-125	0	0-20	PASS	
Cobalt	4.630	0.5000	25.00	30.04	102	28.07	94	75-125	7	0-20	PASS	
Copper	7.968	0.5000	25.00	33.62	103	31.70	95	75-125	6	0-20	PASS	
Lead	1.970	0.5000	25.00	27.88	104	25.81	95	75-125	8	0-20	PASS	
Molybdenum	ND	0.5000	25.00	25.56	102	24.46	98	75-125	4	0-20	PASS	
Nickel	4.262	0.5000	25.00	29.15	100	27.37	92	75-125	6	0-20	PASS	
Phosphorus	453.3	0.5000	25.00	452.3	4x	462.4	4x	75-125	4x	0-20	PASS	Q
Selenium	ND	0.5000	25.00	26.03	104	23.60	94	75-125	10	0-20	PASS	
Silver	ND	0.2500	12.50	13.02	104	12.12	97	75-125	7	0-20	PASS	
Thallium	ND	0.5000	25.00	24.65	99	22.87	91	75-125	7	0-20	PASS	
Vanadium	17.62	0.5000	25.00	40.36	91	38.52	84	75-125	5	0-20	PASS	
Zinc	25.96	0.5000	25.00	48.97	92	47.16	85	75-125	4	0-20	PASS	
Aluminum	5604	0.5000	25.00	6097	4x	5093	4x	75-125	4x	0-20	PASS	Q
Calcium	3410	0.5000	25.00	3586	4x	3149	4x	75-125	4x	0-20	PASS	Q
Iron	9103	0.5000	25.00	7841	4x	7540	4x	75-125	4x	0-20	PASS	Q
Magnesium	2731	0.5000	25.00	2615	4x	2634	4x	75-125	4x	0-20	PASS	Q
Manganese	138.1	0.5000	25.00	155.4	4x	159.3	4x	75-125	4x	0-20	PASS	Q
Potassium	1738	5.000	250.0	1870	4x	1935	4x	75-125	4x	0-20	PASS	Q
Sodium	233.0	5.000	250.0	501.3	107	431.1	79	75-125	15	0-20	PASS	
Strontium	29.74	0.5000	25.00	61.45	127	54.07	97	75-125	13	0-20	FAIL	3F
Tin	ND	0.5000	25.00	22.36	89	20.07	80	75-125	11	0-20	PASS	
Titanium	571.8	0.5000	25.00	567.4	4x	584.2	4x	75-125	4x	0-20	PASS	Q
Boron	ND	0.5000	25.00	26.16	105	24.30	97	75-125	7	0-20	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 6010B

SPIKED SAMPLE ID: 17-03-1523-1
MS/MSD BATCH: 170324S15
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED:
SAMPLE: 2017-03-24 00:00
MS: 2017-03-24 00:00
MSD: 2017-03-24 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-27 13:01
MS: 2017-03-27 13:02
MSD: 2017-03-27 13:02

REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS REC	MSD CONC	% MSD REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Silicon	848.3	0.5000	25.00	1397	4x	878.6	4x	75-125	4x	0-20	PASS	Q

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-1523-1 ms.icp	W:\ICP-DATA\170327C 1\
MSD	17-03-1523-1 msd.icp	W:\ICP-DATA\170327C 1\

Sequence No.: 17
 Sample ID: 170324-b-15
 Analyst: 935 icp 7300
 Initial Sample Wt: 2.07 g
 Dilution:
 Wash Time: 15

Autosampler Location: 121
 Date Collected: 3/27/2017 11:00:07 AM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol: 100 mL
 Auto Dilution Factor: 1

Mean Data: 170324-b-15

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
Tb 384	79557.8	97.24	%	0.525			0.54%
Tb 350	128378.3	96.90	%	0.488			0.50%
Ag 328.068*†	143.9	0.0007	mg/L	0.00217	0.0348	mg/kg	0.10486 301.21%
Al 308.215*†	-164.9	-0.0092	mg/L	0.00060	-0.4437	mg/kg	0.02915 6.57%
As 188.979†	9.2	0.0040	mg/L	0.00291	0.1908	mg/kg	0.14065 73.71%
As 193.696*†	4.3	0.0027	mg/L	0.00113	0.1282	mg/kg	0.05436 42.40%
B 249.677*†	711.1	0.0132	mg/L	0.00076	0.6376	mg/kg	0.03663 5.74%
Ba 233.527*†	211.3	0.0013	mg/L	0.00003	0.0637	mg/kg	0.00167 2.63%
Be 313.042*†	3458.6	0.0008	mg/L	0.00004	0.0408	mg/kg	0.00210 5.15%
Ca 317.933*†	113.3	0.0518	mg/L	0.00173	2.502	mg/kg	0.0834 3.33%
Cd 226.502*†	93.9	0.0011	mg/L	0.00028	0.0539	mg/kg	0.01357 25.18%
Cd 228.802†	54.0	0.0013	mg/L	0.00027	0.0631	mg/kg	0.01328 21.05%
Co 228.616*†	15.9	0.0005	mg/L	0.00006	0.0257	mg/kg	0.00303 11.78%
Cr 267.716*†	111.4	0.0009	mg/L	0.00085	0.0446	mg/kg	0.04104 92.04%
Cu 324.752*†	708.4	0.0027	mg/L	0.00010	0.1299	mg/kg	0.00488 3.76%
Fe 273.955*†	128.5	0.0051	mg/L	0.00088	0.2487	mg/kg	0.04231 17.02%
K 766.490*†	538.6	0.1673	mg/L	0.20852	8.081	mg/kg	10.0733 124.66%
Mg 279.077*†	163.1	0.0079	mg/L	0.00314	0.3798	mg/kg	0.15167 39.93%
Mn 257.610*†	1628.9	0.0024	mg/L	0.00001	0.1142	mg/kg	0.00069 0.60%
Mo 202.031*†	11.3	0.0012	mg/L	0.00117	0.0564	mg/kg	0.05630 99.79%
Na 589.592*†	538.5	0.1155	mg/L	0.03693	5.582	mg/kg	1.7839 31.96%
Ni 231.604*†	66.0	0.0025	mg/L	0.00030	0.1206	mg/kg	0.01444 11.97%
P 213.617*†	33.4	0.0151	mg/L	0.00756	0.7317	mg/kg	0.36539 49.94%
P 214.914†	5.7	0.0042	mg/L	0.00013	0.2007	mg/kg	0.00632 3.15%
Pb 220.353*†	8.2	0.0009	mg/L	0.00200	0.0459	mg/kg	0.09652 210.39%
Sb 206.836†	-3.2	-0.0016	mg/L	0.00182	-0.0756	mg/kg	0.08812 116.59%
Sb 217.582*†	4.1	0.0020	mg/L	0.00258	0.0971	mg/kg	0.12450 128.20%
Se 196.026*†	-2.0	-0.0008	mg/L	0.00470	-0.0404	mg/kg	0.22722 562.48%
Si 251.611*†	-131.6	-0.0031	mg/L	0.00124	-0.1505	mg/kg	0.05986 39.78%
Sn 189.927*†	4.6	0.0007	mg/L	0.00040	0.0337	mg/kg	0.01950 57.88%
Sn 242.170†	50.7	0.0269	mg/L	0.02008	1.300	mg/kg	0.9702 74.61%
Sr 407.771*†	244.2	0.0007	mg/L	0.00000	0.0344	mg/kg	0.00017 0.49%
Ti 334.940†	680.9	0.0008	mg/L	0.00043	0.0375	mg/kg	0.02088 55.71%
Ti 336.121*†	733.1	0.0012	mg/L	0.00043	0.0575	mg/kg	0.02058 35.80%
Tl 190.801*†	-4.4	-0.0023	mg/L	0.00217	-0.1088	mg/kg	0.10505 96.53%
V 292.402*†	79.5	0.0006	mg/L	0.00054	0.0268	mg/kg	0.02618 97.70%
Zn 206.200*†	660.7	0.0145	mg/L	0.00003	0.7029	mg/kg	0.00155 0.22%

Sequence No.: 18

Sample ID: 170324-1-15

Analyst: 935 icp 7300

Initial Sample Wt: 2.08 g

Dilution:

Wash Time: 15

Autosampler Location: 122

Date Collected: 3/27/2017 11:01:06 AM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 170324-1-15

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD	
	Intensity	Conc.			Conc.	Units		Std.Dev.
Tb 384	77325.5	94.51	%	1.528			1.62%	
Tb 350	126026.7	95.12	%	1.678			1.76%	
Ag 328.068*†	49693.7	0.2489	mg/L	0.00005	11.96	mg/kg	0.002	0.02%
Al 308.215*†	9334.2	0.5198	mg/L	0.00617	24.99	mg/kg	0.297	1.19%
As 188.979†	1101.9	0.4723	mg/L	0.00060	22.71	mg/kg	0.029	0.13%
As 193.696*†	753.3	0.4680	mg/L	0.00323	22.50	mg/kg	0.155	0.69%
B 249.677*†	25415.8	0.4717	mg/L	0.00204	22.68	mg/kg	0.098	0.43%
Ba 233.527*†	84894.6	0.5298	mg/L	0.00371	25.47	mg/kg	0.178	0.70%
Be 313.042*†	1952448.5	0.4773	mg/L	0.00554	22.95	mg/kg	0.266	1.16%
Ca 317.933*†	971.0	0.4439	mg/L	0.03163	21.34	mg/kg	1.521	7.13%
Cd 226.502*†	41731.2	0.4957	mg/L	0.00514	23.83	mg/kg	0.247	1.04%
Cd 228.802†	20430.7	0.4937	mg/L	0.00671	23.74	mg/kg	0.322	1.36%
Co 228.616*†	15418.8	0.5152	mg/L	0.00494	24.77	mg/kg	0.237	0.96%
Cr 267.716*†	60916.8	0.5048	mg/L	0.00375	24.27	mg/kg	0.180	0.74%
Cu 324.752*†	135523.8	0.5142	mg/L	0.00279	24.72	mg/kg	0.134	0.54%
Fe 273.955*†	12763.3	0.5113	mg/L	0.00494	24.58	mg/kg	0.238	0.97%
K 766.490*†	15109.8	4.692	mg/L	0.2375	225.6	mg/kg	11.42	5.06%
Mg 279.077*†	10173.3	0.4903	mg/L	0.00196	23.57	mg/kg	0.094	0.40%
Mn 257.610*†	343873.8	0.4991	mg/L	0.00413	23.99	mg/kg	0.198	0.83%
Mo 202.031*†	4803.5	0.4949	mg/L	0.00739	23.79	mg/kg	0.355	1.49%
Na 589.592*†	23585.7	5.061	mg/L	0.2737	243.3	mg/kg	13.16	5.41%
Ni 231.604*†	13444.4	0.5086	mg/L	0.00724	24.45	mg/kg	0.348	1.42%
P 213.617*†	1085.2	0.4919	mg/L	0.00962	23.65	mg/kg	0.463	1.96%
P 214.914†	624.8	0.4526	mg/L	0.00736	21.76	mg/kg	0.354	1.63%
Pb 220.353*†	4451.8	0.5136	mg/L	0.00564	24.69	mg/kg	0.271	1.10%
Sb 206.836†	978.4	0.4798	mg/L	0.00649	23.07	mg/kg	0.312	1.35%
Sb 217.582*†	952.6	0.4699	mg/L	0.00587	22.59	mg/kg	0.282	1.25%
Se 196.026*†	1137.4	0.4709	mg/L	0.00650	22.64	mg/kg	0.312	1.38%
Si 251.611*†	20882.9	0.4942	mg/L	0.00705	23.76	mg/kg	0.339	1.43%
Sn 189.927*†	3242.9	0.4902	mg/L	0.00674	23.57	mg/kg	0.324	1.37%
Sn 242.170†	919.4	0.4885	mg/L	0.01132	23.48	mg/kg	0.544	2.32%
Sr 407.771*†	172435.6	0.5034	mg/L	0.02605	24.20	mg/kg	1.252	5.17%
Ti 334.940†	430926.9	0.4909	mg/L	0.00320	23.60	mg/kg	0.154	0.65%
Ti 336.121*†	304683.5	0.4945	mg/L	0.00257	23.78	mg/kg	0.123	0.52%
Tl 190.801*†	980.1	0.5012	mg/L	0.00454	24.10	mg/kg	0.218	0.91%
V 292.402*†	69434.7	0.4845	mg/L	0.00247	23.30	mg/kg	0.119	0.51%
Zn 206.200*†	22702.5	0.4999	mg/L	0.00329	24.04	mg/kg	0.158	0.66%

Sequence No.: 18

Sample ID: 17-03-1523-1 ms

Analyst: 935 icp 7300

Initial Sample Wt: 1.94 g

Dilution:

Wash Time: 15

Autosampler Location: 214

Date Collected: 3/27/2017 1:02:03 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol: 100 mL

Auto Dilution Factor: 1

Mean Data: 17-03-1523-1 ms

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD	
	Intensity	Conc.			Conc.	Units		Std.Dev.
Tb 384	65090.1	79.56	%	0.728			0.91%	
Tb 350	117629.9	88.78	%	0.747			0.84%	
Ag 328.068*†	50442.3	0.2526	mg/L	0.00144	13.02	mg/kg	0.074	0.57%
Al 308.215*†	2123973.7	118.3	mg/L	0.49	6097	mg/kg	25.46	0.42%
As 188.979†	1205.7	0.5168	mg/L	0.00466	26.64	mg/kg	0.240	0.90%
As 193.696*†	825.1	0.5126	mg/L	0.00536	26.42	mg/kg	0.276	1.05%
B 249.677*†	27347.6	0.5076	mg/L	0.00758	26.16	mg/kg	0.391	1.49%
Ba 233.527*†	260455.0	1.625	mg/L	0.0059	83.79	mg/kg	0.303	0.36%
Be 313.042*†	2069875.1	0.5060	mg/L	0.00220	26.08	mg/kg	0.113	0.43%
Ca 317.933*†	152160.3	69.57	mg/L	0.228	3586	mg/kg	11.76	0.33%
Cd 226.502*†	42784.2	0.5082	mg/L	0.00173	26.20	mg/kg	0.089	0.34%
Cd 228.802†	20742.6	0.5013	mg/L	0.00125	25.84	mg/kg	0.065	0.25%
Co 228.616*†	17440.1	0.5827	mg/L	0.00035	30.04	mg/kg	0.018	0.06%
Cr 267.716*†	72643.4	0.6020	mg/L	0.00476	31.03	mg/kg	0.245	0.79%
Cu 324.752*†	171922.0	0.6523	mg/L	0.00439	33.62	mg/kg	0.227	0.67%
Fe 273.955*†	3797084.8	152.1	mg/L	3.49	7841	mg/kg	179.96	2.30%
K 766.490*†	116794.0	36.27	mg/L	0.239	1870	mg/kg	12.32	0.66%
Mg 279.077*†	1052654.3	50.73	mg/L	0.360	2615	mg/kg	18.58	0.71%
Mn 257.610*†	2077598.0	3.015	mg/L	0.0151	155.4	mg/kg	0.78	0.50%
Mo 202.031*†	4813.6	0.4959	mg/L	0.00188	25.56	mg/kg	0.097	0.38%
Na 589.592*†	45321.7	9.725	mg/L	0.0240	501.3	mg/kg	1.24	0.25%
Ni 231.604*†	14950.0	0.5656	mg/L	0.00191	29.15	mg/kg	0.098	0.34%
P 213.617*†	19358.3	8.774	mg/L	0.0193	452.3	mg/kg	1.00	0.22%
P 214.914†	12648.4	9.162	mg/L	0.0134	472.3	mg/kg	0.69	0.15%
Pb 220.353*†	4687.9	0.5409	mg/L	0.00349	27.88	mg/kg	0.180	0.64%
Sb 206.836†	534.7	0.2622	mg/L	0.00372	13.51	mg/kg	0.192	1.42%
Sb 217.582*†	537.3	0.2651	mg/L	0.00977	13.66	mg/kg	0.504	3.69%
Se 196.026*†	1219.6	0.5050	mg/L	0.00038	26.03	mg/kg	0.019	0.07%
Si 251.611*†	1145248.0	27.10	mg/L	0.219	1397	mg/kg	11.31	0.81%
Sn 189.927*†	2869.3	0.4337	mg/L	0.00003	22.36	mg/kg	0.002	0.01%
Sn 242.170†	1666.7	0.8855	mg/L	0.00757	45.64	mg/kg	0.390	0.85%
Sr 407.771*†	408375.6	1.192	mg/L	0.0051	61.45	mg/kg	0.262	0.43%
Ti 334.940†	9538447.8	10.87	mg/L	0.201	560.2	mg/kg	10.36	1.85%
Ti 336.121*†	6781829.7	11.01	mg/L	0.196	567.4	mg/kg	10.10	1.78%
Tl 190.801*†	935.2	0.4782	mg/L	0.00060	24.65	mg/kg	0.031	0.13%
V 292.402*†	112560.7	0.7830	mg/L	0.00233	40.36	mg/kg	0.120	0.30%
Zn 206.200*†	43141.3	0.9500	mg/L	0.01090	48.97	mg/kg	0.562	1.15%

Sequence No.: 19

Autosampler Location: 215

Sample ID: 17-03-1523-1 msd

Date Collected: 3/27/2017 1:02:55 PM

Analyst: 935 icp 7300

Data Type: Original

Initial Sample Wt: 2.1 g

Initial Sample Vol:

Dilution:

Sample Prep Vol: 100 mL

Wash Time: 15

Auto Dilution Factor: 1

Mean Data: 17-03-1523-1 msd

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	65689.8	80.29 %	0.507			0.63%
Tb 350	117730.9	88.86 %	0.218			0.25%
Ag 328.068*†	50804.1	0.2544 mg/L	0.00007	12.12 mg/kg	0.003	0.03%
Al 308.215*†	1920476.8	106.9 mg/L	0.12	5093 mg/kg	5.58	0.11%
As 188.979†	1202.0	0.5152 mg/L	0.00467	24.53 mg/kg	0.222	0.91%
As 193.696*†	809.5	0.5029 mg/L	0.01435	23.95 mg/kg	0.683	2.85%
B 249.677*†	27494.4	0.5103 mg/L	0.00413	24.30 mg/kg	0.197	0.81%
Ba 233.527*†	273734.9	1.708 mg/L	0.0002	81.35 mg/kg	0.009	0.01%
Bc 313.042*†	2075909.6	0.5075 mg/L	0.00114	24.17 mg/kg	0.054	0.22%
Ca 317.933*†	144623.5	66.12 mg/L	0.223	3149 mg/kg	10.64	0.34%
Cd 226.502*†	42732.5	0.5076 mg/L	0.00220	24.17 mg/kg	0.105	0.43%
Cd 228.802†	20740.2	0.5012 mg/L	0.00360	23.87 mg/kg	0.171	0.72%
Co 228.616*†	17640.4	0.5894 mg/L	0.00348	28.07 mg/kg	0.166	0.59%
Cr 267.716*†	78284.8	0.6487 mg/L	0.00036	30.89 mg/kg	0.017	0.06%
Cu 324.752*†	175449.5	0.6657 mg/L	0.00117	31.70 mg/kg	0.056	0.18%
Fe 273.955*†	3952452.6	158.3 mg/L	2.26	7540 mg/kg	107.82	1.43%
K 766.490*†	130841.4	40.63 mg/L	0.151	1935 mg/kg	7.19	0.37%
Mg 279.077*†	1147718.1	55.32 mg/L	0.022	2634 mg/kg	1.03	0.04%
Mn 257.610*†	2304684.4	3.345 mg/L	0.0010	159.3 mg/kg	0.05	0.03%
Mo 202.031*†	4986.7	0.5137 mg/L	0.00075	24.46 mg/kg	0.036	0.15%
Na 589.592*†	42191.9	9.053 mg/L	0.0185	431.1 mg/kg	0.88	0.20%
Ni 231.604*†	15193.2	0.5748 mg/L	0.00302	27.37 mg/kg	0.144	0.53%
P 213.617*†	21422.6	9.710 mg/L	0.0363	462.4 mg/kg	1.73	0.37%
P 214.914†	13936.6	10.10 mg/L	0.086	480.7 mg/kg	4.07	0.85%
Pb 220.353*†	4698.4	0.5421 mg/L	0.00165	25.81 mg/kg	0.078	0.30%
Sb 206.836†	552.5	0.2709 mg/L	0.00254	12.90 mg/kg	0.121	0.94%
Sb 217.582*†	542.4	0.2676 mg/L	0.00320	12.74 mg/kg	0.153	1.20%
Se 196.026*†	1196.9	0.4956 mg/L	0.01355	23.60 mg/kg	0.645	2.73%
Si 251.611*†	779671.1	18.45 mg/L	0.033	878.6 mg/kg	1.57	0.18%
Sn 189.927*†	2788.1	0.4214 mg/L	0.00494	20.07 mg/kg	0.235	1.17%
Sn 242.170†	1681.6	0.8934 mg/L	0.00662	42.54 mg/kg	0.315	0.74%
Sr 407.771*†	388971.7	1.135 mg/L	0.0023	54.07 mg/kg	0.107	0.20%
Ti 334.940†	10615484.3	12.09 mg/L	0.171	575.9 mg/kg	8.13	1.41%
Ti 336.121*†	7558888.3	12.27 mg/L	0.178	584.2 mg/kg	8.49	1.45%
Tl 190.801*†	939.2	0.4802 mg/L	0.01067	22.87 mg/kg	0.508	2.22%
V 292.402*†	116287.7	0.8089 mg/L	0.00045	38.52 mg/kg	0.022	0.06%
Zn 206.200*†	44972.6	0.9904 mg/L	0.00379	47.16 mg/kg	0.181	0.38%

EPA 6010B ICP Metals (Solid)

Run Logs

170327C 1

INT STD M120716A M006-032-05 0.050 ml
R.B. R12091602 PDS/PDSD 10 ml
M006-032-06 0.050 ml

Carrier/wash sol R12091604/R12091603

No.	File Name	Date	Time	Analyst Name	A/S	Location
1	Cal blankR12091601_935	3/27/2017	10:17:52 AM	935 icp 7300	1	
2	Cal blankR12091601_935	3/27/2017	10:19:28 AM	935 icp 7300	1	
3	Cal blankR12091601_935	3/27/2017	10:25:50 AM	935 icp 7300	1	
4	Cal blankR12091601_935	3/27/2017	10:27:02 AM	935 icp 7300	1	
5	STD3-M11116A_935_ICP7300	3/27/2017	10:28:08 AM	935 icp 7300	2	
6	ICV-M072816C	3/27/2017	10:28:54 AM	935 icp 7300	10	
7	ICB-R12091601	3/27/2017	10:29:52 AM	935 icp 7300	1	
8	ICS_A - M110116B	3/27/2017	10:30:53 AM	935 icp 7300	8	
9	ICS_AB - M110116A	3/27/2017	10:31:44 AM	935 icp 7300	9	
10	CCV= STD3x0.5	3/27/2017	10:32:35 AM	935 icp 7300	3	
11	CCB-R12091601	3/27/2017	10:33:27 AM	935 icp 7300	1	
12	LLCV-M082616A	3/27/2017	10:45:04 AM	935 icp 7300	101	
13	LLCV--M082616A	3/27/2017	10:46:10 AM	935 icp 7300	102	
14	170324-b-07	3/27/2017	10:47:09 AM	935 icp 7300	109	
15	170324-l-07	3/27/2017	10:48:10 AM	935 icp 7300	110	
16	170324-b-08	3/27/2017	10:49:01 AM	935 icp 7300	111	
17	170324-l-08	3/27/2017	10:50:00 AM	935 icp 7300	112	
18	170324-b-09	3/27/2017	10:50:51 AM	935 icp 7300	113	
19	170324-l-09	3/27/2017	10:51:50 AM	935 icp 7300	114	
20	170324-b-10	3/27/2017	10:52:40 AM	935 icp 7300	115	
21	170324-l-10	3/27/2017	10:53:39 AM	935 icp 7300	116	
22	CCV= STD3x0.5	3/27/2017	10:54:30 AM	935 icp 7300	3	
23	CCB-R12091601	3/27/2017	10:55:23 AM	935 icp 7300	1	
24	170324-b-11	3/27/2017	10:56:24 AM	935 icp 7300	117	

T/out

Reviewers Assign to Logbook Date: 3/28/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 41 Instrument ID: 1017

No.	File Name	Date	Time	Analyst Name	A/S Location
25	170324-l-11	3/27/2017	10:57:25 AM	935 icp 7300	118
26	170324-b-12	3/27/2017	10:58:17 AM	935 icp 7300	119
27	170324-l-12	3/27/2017	10:59:16 AM	935 icp 7300	120
28	170324-b-15	3/27/2017	11:00:07 AM	935 icp 7300	121
29	170324-l-15	3/27/2017	11:01:06 AM	935 icp 7300	122
30	170324-b-16	3/27/2017	11:01:58 AM	935 icp 7300	123
31	170324-l-16	3/27/2017	11:02:57 AM	935 icp 7300	124
32	170325-b-01	3/27/2017	11:03:49 AM	935 icp 7300	125
33	170325-l-01	3/27/2017	11:04:48 AM	935 icp 7300	126
34	CCV= STD3x0.5	3/27/2017	11:05:40 AM	935 icp 7300	3
35	CCB-R12091601	3/27/2017	11:06:32 AM	935 icp 7300	1
36	17-03-1799-1	3/27/2017	11:07:32 AM	935 icp 7300	127
37	17-03-1799-1 ms	3/27/2017	11:08:25 AM	935 icp 7300	128
38	17-03-1799-1 msd	3/27/2017	11:09:16 AM	935 icp 7300	129
39	17-03-1799-2	3/27/2017	11:10:07 AM	935 icp 7300	130
40	17-03-1799-3	3/27/2017	11:10:58 AM	935 icp 7300	131
41	17-03-1801-1	3/27/2017	11:11:49 AM	935 icp 7300	132
42	17-03-1804-1	3/27/2017	11:12:40 AM	935 icp 7300	133
43	17-03-1804-2	3/27/2017	11:13:31 AM	935 icp 7300	134
44	17-03-1807-1	3/27/2017	11:14:22 AM	935 icp 7300	135
45	17-03-1808-1 ms	3/27/2017	11:15:13 AM	935 icp 7300	136
46	CCV= STD3x0.5	3/27/2017	11:16:04 AM	935 icp 7300	3
47	CCB-R12091601	3/27/2017	11:16:56 AM	935 icp 7300	1
48	17-03-1808-1 msd	3/27/2017	11:17:57 AM	935 icp 7300	137
49	17-03-1808-21 ms	3/27/2017	11:18:50 AM	935 icp 7300	138
50	17-03-1808-21 msd	3/27/2017	11:19:41 AM	935 icp 7300	139
51	17-03-1808-1	3/27/2017	11:20:32 AM	935 icp 7300	140
52	17-03-1808-2	3/27/2017	11:21:23 AM	935 icp 7300	141
53	17-03-1808-3	3/27/2017	11:22:14 AM	935 icp 7300	142
54	17-03-1808-4	3/27/2017	11:23:05 AM	935 icp 7300	143
55	17-03-1808-5	3/27/2017	11:23:56 AM	935 icp 7300	144
56	17-03-1808-6	3/27/2017	11:24:47 AM	935 icp 7300	145

Reviewed/Assign to Logbook Date: 3/28/17
 Analysis: 210.7/6010 Chemist ID: 1012
 Logbook Page: 42 Instrument ID: 1087

No.	File Name	Date	Time	Analyst Name	A/S	Location
121	17-03-1380-1	3/27/2017	12:30:03 PM	935 icp 7300		338
122	17-03-1380-2	3/27/2017	12:30:54 PM	935 icp 7300		339
123	17-03-1380-3	3/27/2017	12:31:45 PM	935 icp 7300		340
124	CCV= STD3x0.5	3/27/2017	12:32:36 PM	935 icp 7300		3
125	CCB-R12091601	3/27/2017	12:33:29 PM	935 icp 7300		1
126	17-03-1380-4	3/27/2017	12:34:29 PM	935 icp 7300		341
127	17-03-1380-5	3/27/2017	12:35:22 PM	935 icp 7300		342
128	17-03-1380-6	3/27/2017	12:36:13 PM	935 icp 7300		343
129	17-03-1383-1	3/27/2017	12:37:04 PM	935 icp 7300		344
130	17-03-1383-1 msd	3/27/2017	12:37:55 PM	935 icp 7300		345
131	17-03-1383-1 msd	3/27/2017	12:38:46 PM	935 icp 7300		346
132	17-03-1383-2	3/27/2017	12:39:37 PM	935 icp 7300		347
133	17-03-1383-3	3/27/2017	12:40:28 PM	935 icp 7300		348
134	17-03-1084-1	3/27/2017	12:41:19 PM	935 icp 7300		357
135	17-03-1084-1 msd	3/27/2017	12:42:18 PM	935 icp 7300		358
136	CCV= STD3x0.5	3/27/2017	12:43:04 PM	935 icp 7300		3
137	CCB-R12091601	3/27/2017	12:44:02 PM	935 icp 7300		1
138	17-03-1084-1 msd	3/27/2017	12:46:42 PM	935 icp 7300		359
139	17-03-1084-2	3/27/2017	12:47:35 PM	935 icp 7300		360
140	17-03-1084-3	3/27/2017	12:48:31 PM	935 icp 7300		201
141	17-03-1084-4	3/27/2017	12:49:29 PM	935 icp 7300		202
142	17-03-1084-6	3/27/2017	12:50:26 PM	935 icp 7300		203
143	17-03-1084-7	3/27/2017	12:51:13 PM	935 icp 7300		204
144	17-03-1084-8	3/27/2017	12:52:11 PM	935 icp 7300		205
145	17-03-1084-9	3/27/2017	12:53:09 PM	935 icp 7300		206
146	17-03-1114-1	3/27/2017	12:54:06 PM	935 icp 7300		207
147	17-03-1114-1 msd	3/27/2017	12:54:58 PM	935 icp 7300		208
148	CCV= STD3x0.5	3/27/2017	12:55:50 PM	935 icp 7300		3
149	CCB-R12091601	3/27/2017	12:56:44 PM	935 icp 7300		1
150	17-03-1114-1 msd	3/27/2017	12:57:44 PM	935 icp 7300		209
151	17-03-1115-1	3/27/2017	12:58:40 PM	935 icp 7300		210
152	17-03-1115-1 msd	3/27/2017	12:59:30 PM	935 icp 7300		211

Reviewed/Assign to Logbook Date: 3/28/17
 Analysis: 202-116010 Chemist ID: 1012
 Logbook Page: 45 Instrument ID: 1087

No.	File Name	Date	Time	Analyst Name	A/S	Location
153	17-03-1115-1 msd	3/27/2017	1:00:21 PM	935 icp 7300		212
154	17-03-1523-1	3/27/2017	1:01:12 PM	935 icp 7300		213
155	17-03-1523-1 ms	3/27/2017	1:02:03 PM	935 icp 7300		214
156	17-03-1523-1 msd	3/27/2017	1:02:55 PM	935 icp 7300		215
157	17-03-1487-1	3/27/2017	1:03:46 PM	935 icp 7300		216
158	17-03-1490-1	3/27/2017	1:04:38 PM	935 icp 7300		217
159	17-03-1490-2	3/27/2017	1:05:29 PM	935 icp 7300		218
160	CCV= STD3x0.5	3/27/2017	1:06:20 PM	935 icp 7300		3
161	CCB-R12091601	3/27/2017	1:07:13 PM	935 icp 7300		1
162	17-03-1490-3	3/27/2017	1:08:14 PM	935 icp 7300		219
163	17-03-1490-4	3/27/2017	1:09:08 PM	935 icp 7300		220
164	17-03-1490-5	3/27/2017	1:09:59 PM	935 icp 7300		221
165	17-03-1482-5	3/27/2017	1:10:50 PM	935 icp 7300		222
166	17-03-1515-2	3/27/2017	1:11:42 PM	935 icp 7300		223
167	17-03-1104-30 MIS	3/27/2017	1:12:33 PM	935 icp 7300		349
168	17-03-1104-31 MIS	3/27/2017	1:13:19 PM	935 icp 7300		350
169	17-03-1104-32 MIS	3/27/2017	1:14:02 PM	935 icp 7300		351
170	17-03-1104-33 MIS	3/27/2017	1:14:45 PM	935 icp 7300		352
171	17-03-1105-30 MIS	3/27/2017	1:15:28 PM	935 icp 7300		353
172	CCV= STD3x0.5	3/27/2017	1:16:19 PM	935 icp 7300		3
173	CCB-R12091601	3/27/2017	1:17:12 PM	935 icp 7300		1
174	17-03-1105-31 MIS	3/27/2017	1:18:13 PM	935 icp 7300		354
175	17-03-1105-32 MIS	3/27/2017	1:19:06 PM	935 icp 7300		355
176	17-03-1105-33 MIS	3/27/2017	1:19:57 PM	935 icp 7300		356
177	CCV= STD3x0.5	3/27/2017	1:20:48 PM	935 icp 7300		3
178	CCB-R12091601	3/27/2017	1:21:41 PM	935 icp 7300		1
179	CCV= STD3x0.5	3/27/2017	1:22:32 PM	935 icp 7300		3
180	CCB-R12091601	3/27/2017	1:23:30 PM	935 icp 7300		1
181	170325-ba-1	3/27/2017	1:24:21 PM	935 icp 7300		226
182	170325-la-1	3/27/2017	1:25:34 PM	935 icp 7300		227
183	17-03-1747-st-1	3/27/2017	1:26:32 PM	935 icp 7300		228
184	17-03-1747-st-1	3/27/2017	1:27:29 PM	935 icp 7300		229

Reviewed/Assign to Logbook Date: 3/28/17
 Analysis: 200.7/60/0 Chemist ID: 1012
 Logbook Page: 46 Instrument ID: 1017

EPA 6010B ICP Metals (Solid)

Preparation Logs

Metals Sample Preparation Logbook (Solid / Other)

METHOD		MATRIX		EQUIPMENT ID #		REAGENT ID #		STANDARD ID #						
<input checked="" type="checkbox"/> EPA 3050B	<input checked="" type="checkbox"/> Solid			Thermometer	171192945 (CF 0.0 °C)	HNO ₃	R01311701	20 mL	Spike 1	M020017A				
<input type="checkbox"/> EPA 200.7	<input type="checkbox"/> Other (Specify)			Block Digester	5	HCl	R12301602	15 mL	Spike 2	M020617C				
<input type="checkbox"/> EPA 200.8				Pipetter / Dispenser	P-0721D-0271D-028	H ₂ O ₂	M006040-13	3.0 mL	Spike 3					
BATCH NUMBER		SUPPLY LOT #		BALANCE ID #		QUALITY SYSTEM MATRIX ID #			SAMPLE HANDLING					
MS/MSD 170324-515		Tube / Container 170104		65		Teflon Chip M00603515			1 = Composite 2 = Subsample 3 = Homogenize 4 = None					
(Specify)		Filter				(Specify)								
DIGESTION														
DATE	START			END			SAMPLE HANDLING	ECI ID #	ANALYTE(S)	SAMPLE		SPIKE STANDARD		
	TIME	TEMP W/O CF (°C)	PREP TECH ID #	TIME	TEMP W/O CF (°C)	PREP TECH ID #				INITIAL (g)	FINAL (mL)	1 (µL)	2 (µL)	3 (µL)
3/24/17	16:40	95	1080	18:10	95	1080	4	MS 17-03-1523-1A	Metals	1.94	100	500	500	
								MSD		2.10				
								LCS 17-0324-515		2.08				
								LCSD / MB -B15		2.07				
								17-03-1523-1A		2.06				
								17-03-1105-32A		2.05				
								-32B		2.02				
								-32C		2.06				
								-32D		2.07				
								-32E		2.05				
								-33A		2.05				
								-33B		2.01				
								-33C		2.07				
								-33D		2.05				
								-33E		2.06				

COMMENTS:



EPA 6010B ICP Metals (Aqueous)

RAW DATA

EPA 6010B ICP Metals (Aqueous)

Initial Calibration

ICV/ICB
CCV/CCB
ICSA/B

Work Order No: 17-03-1523

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
	True	ICV-1		Control Limit	Comment
		Observed	%D		
Silver	0.500000	0.498016	0	+/-10	
Arsenic	5.000000	4.874380	3	+/-10	
Barium	1.000000	0.984346	2	+/-10	
Beryllium	0.500000	0.481339	4	+/-10	
Cadmium	1.500000	1.486995	1	+/-10	
Cobalt	1.000000	1.037681	-4	+/-10	
Chromium	0.400000	0.401148	0	+/-10	
Copper	1.000000	1.012015	-1	+/-10	
Molybdenum	2.500000	2.422781	3	+/-10	
Nickel	0.400000	0.410818	-3	+/-10	
Lead	5.000000	5.058667	-1	+/-10	
Antimony	2.000000	1.937779	3	+/-10	
Selenium	2.000000	1.941849	3	+/-10	
Thallium	2.000000	1.967677	2	+/-10	
Vanadium	1.000000	0.988629	1	+/-10	
Zinc	1.500000	1.514045	-1	+/-10	

Report Time: 3/30/2017 5:04:29 PM

ICV-1 File: ICV-M072816C

Analysis Time: 3/24/2017 9:34:27 AM

Note: Note: %D= (True-Observed) / True x 100%

01/22/2014 Revision



Work Order No: 17-03-1523

Instrument ID: ICP 7300

Concentration Unit: mg/L

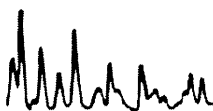
Analyte	Initial Calibration Blank		Comment
	ICB-1	RL	
Silver	-0.002463	0.005000	
Arsenic	-0.004953	0.010000	
Barium	-0.000009	0.010000	
Beryllium	-0.000048	0.010000	
Cadmium	0.000272	0.010000	
Cobalt	-0.000212	0.010000	
Chromium	0.000655	0.010000	
Copper	-0.000043	0.010000	
Molybdenum	0.000002	0.010000	
Nickel	-0.000153	0.010000	
Lead	0.000460	0.010000	
Antimony	0.003973	0.015000	
Selenium	-0.001115	0.015000	
Thallium	0.005147	0.015000	
Vanadium	0.001278	0.010000	
Zinc	0.001220	0.010000	

Report Time: 3/30/2017 5:04:29 PM

ICB-1 File: ICB-R12091601

Analysis Time: 3/24/2017 9:36:10 AM

01/22/2014 Revision



Work Order No: 17-03-1523

Instrument ID: ICP 7300

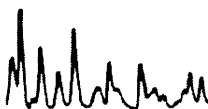
Concentration Unit: mg/L

Analyte	Interference Check						Comment
	ICS-A-1		ICS-AB-1			Control Limit	
	Observed	Control Limit	True	Observed	%D		
Silver	-0.000694	0.005000	0.300000	0.312659	-4	+/-20	
Arsenic	0.008582	0.010000	1.000000	1.022808	-2	+/-20	
Barium	0.002247	0.010000	0.300000	0.304031	-1	+/-20	
Beryllium	-0.000074	0.010000	0.100000	0.102869	-3	+/-20	
Cadmium	0.002400	0.010000	0.300000	0.300968	0	+/-20	
Cobalt	0.000794	0.010000	0.300000	0.308937	-3	+/-20	
Chromium	-0.000947	0.010000	0.300000	0.310971	-4	+/-20	
Copper	-0.001036	0.010000	0.300000	0.317918	-6	+/-20	
Molybdenum	0.001039	0.010000	0.300000	0.302546	-1	+/-20	
Nickel	0.000389	0.010000	0.300000	0.310546	-4	+/-20	
Lead	-0.007555	0.010000	1.000000	1.007653	-1	+/-20	
Antimony	-0.004167	0.015000	1.000000	0.973472	3	+/-20	
Selenium	-0.014175	0.015000	0.500000	0.515167	-3	+/-20	
Thallium	0.000689	0.015000	1.000000	1.015384	-2	+/-20	
Vanadium	0.001356	0.010000	0.300000	0.309074	-3	+/-20	
Zinc	0.000487	0.010000	0.300000	0.307340	-2	+/-20	

Report Time: 3/30/2017 5:04:29 PM

ICS-A-1 File: ICS_A - M110116B Analysis Time: 3/24/2017 9:37:13 AM
ICS-AB-1 File: ICS_AB - M110116A Analysis Time: 3/24/2017 9:38:04 AM

01/22/2014 Revision



Work Order No: 17-03-1523

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Verification						
	True	CCV-1		CCV-2		Control Limit	Comment
		Observed	%D	Observed	%D		
Silver	0.375000	0.369082	2	0.371094	1	+/-10	
Arsenic	3.750000	3.688247	2	3.708256	1	+/-10	
Barium	7.500000	7.403204	1	7.413408	1	+/-10	
Beryllium	0.562500	0.543366	3	0.549026	2	+/-10	
Cadmium	0.750000	0.748914	0	0.749801	0	+/-10	
Cobalt	1.875000	1.905219	-2	1.928577	-3	+/-10	
Chromium	0.600000	0.604157	-1	0.604646	-1	+/-10	
Copper	0.937500	0.931102	1	0.937434	0	+/-10	
Molybdenum	0.600000	0.603211	-1	0.602236	0	+/-10	
Nickel	0.600000	0.603394	-1	0.604484	-1	+/-10	
Lead	3.750000	3.792725	-1	3.799385	-1	+/-10	
Antimony	4.500000	4.484548	0	4.465069	1	+/-10	
Selenium	1.500000	1.497357	0	1.487096	1	+/-10	
Thallium	1.500000	1.525176	-2	1.530165	-2	+/-10	
Vanadium	1.875000	1.898321	-1	1.890714	-1	+/-10	
Zinc	2.500000	2.521080	-1	2.523552	-1	+/-10	

Report Time: 3/30/2017 5:04:29 PM

CCV-1 File: CCV= STD3x0.5

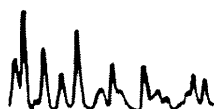
Analysis Time: 3/24/2017 12:36:34 PM

CCV-2 File: CCV= STD3x0.5

Analysis Time: 3/24/2017 12:48:00 PM

Note: Note: %D= (True-Observed) / True x 100%

01/22/2014 Revision



Work Order No: 17-03-1523

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Blank			Qualifier
	CCB-1	CCB-2	RL	
Silver	-0.001478	0.000101	0.005000	
Arsenic	0.003723	0.002063	0.010000	
Barium	0.005088	0.004886	0.010000	
Beryllium	0.000342	0.000327	0.010000	
Cadmium	0.000773	0.000903	0.010000	
Cobalt	0.001886	0.001426	0.010000	
Chromium	0.000185	-0.000025	0.010000	
Copper	0.000683	0.000735	0.010000	
Molybdenum	0.001200	0.001610	0.010000	
Nickel	0.000828	0.000884	0.010000	
Lead	0.004007	0.004289	0.010000	
Antimony	0.009911	0.004027	0.015000	
Selenium	0.001470	0.006087	0.015000	
Thallium	0.006117	0.014826	0.015000	
Vanadium	0.002353	0.003044	0.010000	
Zinc	0.003243	0.002272	0.010000	

Report Time: 3/30/2017 5:04:29 PM

CCB-1 File: CCB-R12091601

Analysis Time: 3/24/2017 12:37:32 PM

CCB-2 File: CCB-R12091601

Analysis Time: 3/24/2017 12:48:52 PM

01/22/2014 Revision

Return to Contents



Work Order No: 17-03-1523

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Verification						
	True	CCV-3				Control Limit	Comment
		Observed	%D	Observed	%D		
Silver	0.375000	0.369017	2			+/-10	
Arsenic	3.750000	3.655263	3			+/-10	
Barium	7.500000	7.409851	1			+/-10	
Beryllium	0.562500	0.542644	4			+/-10	
Cadmium	0.750000	0.749468	0			+/-10	
Cobalt	1.875000	1.905826	-2			+/-10	
Chromium	0.600000	0.605761	-1			+/-10	
Copper	0.937500	0.932151	1			+/-10	
Molybdenum	0.600000	0.599645	0			+/-10	
Nickel	0.600000	0.595002	1			+/-10	
Lead	3.750000	3.769722	-1			+/-10	
Antimony	4.500000	4.426887	2			+/-10	
Selenium	1.500000	1.487607	1			+/-10	
Thallium	1.500000	1.506146	0			+/-10	
Vanadium	1.875000	1.886200	-1			+/-10	
Zinc	2.500000	2.532213	-1			+/-10	

Report Time: 3/30/2017 5:04:29 PM

CCV-3 File: CCV= STD3x0.5

Analysis Time: 3/24/2017 12:59:09 PM

Note: Note: %D= (True-Observed) / True x 100%

01/22/2014 Revision

Return to Contents



Work Order No: 17-03-1523

Instrument ID: ICP 7300

Concentration Unit: mg/L

Continuing Calibration Blank				
Analyte	CCB-3		RL	Qualifier
Silver	-0.001386		0.005000	
Arsenic	0.002803		0.010000	
Barium	0.005435		0.010000	
Beryllium	0.000386		0.010000	
Cadmium	0.000833		0.010000	
Cobalt	0.001550		0.010000	
Chromium	0.000002		0.010000	
Copper	0.000001		0.010000	
Molybdenum	0.002034		0.010000	
Nickel	0.001601		0.010000	
Lead	0.002773		0.010000	
Antimony	0.005237		0.015000	
Selenium	0.004916		0.015000	
Thallium	0.008527		0.015000	
Vanadium	0.002256		0.010000	
Zinc	0.001646		0.010000	

Report Time: 3/30/2017 5:04:29 PM

CCB-3 File: CCB-R12091601

Analysis Time: 3/24/2017 1:00:01 PM

01/22/2014 Revision

Return to Contents 



Sequence No.: 1

Autosampler Location: 1

Sample ID: Cal blankR12091601_935

Date Collected: 3/24/2017 9:32:25 AM

Analyst:

Data Type: Reprocessed on 3/24/2017 11:49:51 AM

Logged In Analyst (Original) : Oscar Gomez 935

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected			RSD	Conc. Units	Calib
	Intensity	Std.Dev.				
Tb 384	73676.3	862.14	1.17%	100.0	%	
Tb 350	118748.8	2087.60	1.76%	100.0	%	
Ag 328.068*†	-733.4	167.73	22.87%	[0.00]	mg/L	
Al 308.215*†	-2508.1	19.83	0.79%	[0.00]	mg/L	
As 188.979†	5.6	2.85	51.33%	[0.00]	mg/L	
As 193.696*†	1.4	11.73	861.48%	[0.00]	mg/L	
B 249.677*†	-1088.5	32.57	2.99%	[0.00]	mg/L	
Ba 233.527*†	-307.3	0.39	0.13%	[0.00]	mg/L	
Be 313.042*†	-916.4	52.73	5.75%	[0.00]	mg/L	
Ca 317.933*†	3.1	2.15	69.51%	[0.00]	mg/L	
Cd 226.502*†	0.6	5.65	941.06%	[0.00]	mg/L	
Cd 228.802†	7.1	4.23	59.86%	[0.00]	mg/L	
Co 228.616*†	-83.9	0.75	0.89%	[0.00]	mg/L	
Cr 267.716*†	430.7	2.86	0.67%	[0.00]	mg/L	
Cu 324.752*†	1796.9	11.74	0.65%	[0.00]	mg/L	
Fe 273.955*†	-179.9	46.32	25.74%	[0.00]	mg/L	
K 766.490*†	1098.0	312.58	28.47%	[0.00]	mg/L	
Mg 279.077*†	-7354.1	67.62	0.92%	[0.00]	mg/L	
Mn 257.610*†	-207.8	43.90	21.12%	[0.00]	mg/L	
Mo 202.031*†	-43.2	3.26	7.55%	[0.00]	mg/L	
Na 589.592*†	558.6	234.06	41.90%	[0.00]	mg/L	
Ni 231.604*†	-60.3	2.03	3.37%	[0.00]	mg/L	
P 213.617*†	-143.4	0.03	0.02%	[0.00]	mg/L	
P 214.914†	-27.5	5.34	19.40%	[0.00]	mg/L	
Pb 220.353*†	-44.1	2.98	6.77%	[0.00]	mg/L	
Sb 206.836†	26.3	1.50	5.73%	[0.00]	mg/L	
Sb 217.582*†	-12.5	1.62	12.92%	[0.00]	mg/L	
Se 196.026*†	4.7	15.48	329.07%	[0.00]	mg/L	
Si 251.611*†	1209.3	55.92	4.62%	[0.00]	mg/L	
Sn 189.927*†	-105.9	2.45	2.31%	[0.00]	mg/L	
Sn 242.170†	-383.8	32.68	8.51%	[0.00]	mg/L	
Sr 407.771*†	83.4	0.30	0.36%	[0.00]	mg/L	
Ti 334.940†	26843.3	319.66	1.19%	[0.00]	mg/L	
Ti 336.121*†	-1122.4	306.15	27.28%	[0.00]	mg/L	
Tl 190.801*†	-13.2	4.99	37.67%	[0.00]	mg/L	
V 292.402*†	100.2	185.61	185.16%	[0.00]	mg/L	
Zn 206.200*†	-159.1	15.26	9.59%	[0.00]	mg/L	
Zn 213.857*†	76.2	18.92	24.82%	[0.00]	mg/L	

Sequence No.: 2

Autosampler Location: 2

Sample ID: STD3-M111116A_935_ICP7300

Date Collected: 3/24/2017 9:33:31 AM

Analyst:

Data Type: Reprocessed on 3/24/2017 11:49:52 AM

Logged In Analyst (Original) : Oscar Gomez 935

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time:

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected			Conc. Units
	Intensity	Std.Dev.	RSD	
Tb 384	64637.2	54.56	0.08%	87.73 %
Tb 350	107271.1	744.54	0.69%	90.33 %
Ag 328.068*†	126006.6	580.89	0.46%	[0.75] mg/L
Al 308.215*†	416644.1	788.72	0.19%	[27.0] mg/L
As 188.979†	13238.6	2.62	0.02%	[7.50] mg/L
As 193.696*†	9232.5	6.60	0.07%	[7.50] mg/L
B 249.677*†	317023.0	4466.30	1.41%	[7.50] mg/L
Ba 233.527*†	2027055.8	10816.26	0.53%	[15.0] mg/L
Be 313.042*†	3748311.9	25806.67	0.69%	[1.125] mg/L
Ca 317.933*†	99557.2	1605.02	1.61%	[60.0] mg/L
Cd 226.502*†	99814.3	233.27	0.23%	[1.50] mg/L
Cd 228.802†	51567.3	138.88	0.27%	[1.50] mg/L
Co 228.616*†	91612.8	76.48	0.08%	[3.75] mg/L
Cr 267.716*†	119582.8	612.12	0.51%	[1.20] mg/L
Cu 324.752*†	413756.7	187.20	0.05%	[1.875] mg/L
Fe 273.955*†	152547.7	240.08	0.16%	[7.50] mg/L
K 766.490*†	143372.2	1658.63	1.16%	[54.0] mg/L
Mg 279.077*†	244468.1	171.80	0.07%	[15.0] mg/L
Mn 257.610*†	856025.0	3952.73	0.46%	[1.50] mg/L
Mo 202.031*†	9774.0	30.73	0.31%	[1.20] mg/L
Na 589.592*†	285052.7	4138.41	1.45%	[72.0] mg/L
Ni 231.604*†	24353.5	74.65	0.31%	[1.20] mg/L
P 213.617*†	19045.4	38.83	0.20%	[12.0] mg/L
P 214.914†	12636.6	37.40	0.30%	[12.0] mg/L
Pb 220.353*†	50737.4	61.93	0.12%	[7.50] mg/L
Sb 206.836†	14649.1	107.61	0.73%	[9.0] mg/L
Sb 217.582*†	14698.5	56.55	0.38%	[9.0] mg/L
Se 196.026*†	5543.5	58.50	1.06%	[3.0] mg/L
Si 251.611*†	405831.7	4512.91	1.11%	[12.0] mg/L
Sn 189.927*†	30759.1	21.69	0.07%	[6.0] mg/L
Sn 242.170†	9178.5	83.32	0.91%	[6.0] mg/L
Sr 407.771*†	178193.7	2628.48	1.48%	[0.60] mg/L
Ti 334.940†	896605.6	5866.23	0.65%	[1.20] mg/L
Ti 336.121*†	625515.8	1361.70	0.22%	[1.20] mg/L
Tl 190.801*†	4827.3	63.65	1.32%	[3.0] mg/L
V 292.402*†	451429.1	2921.01	0.65%	[3.75] mg/L
Zn 206.200*†	168773.9	150.41	0.09%	[5.0] mg/L
Zn 213.857*†	307537.8	246.19	0.08%	[5.0] mg/L

Sequence No.: 3
 Sample ID: ICV-M072816C
 Analyst: 935 icp 7300
 Logged In Analyst (Original) : Oscar Gomez 935
 Initial Sample Wt:
 Dilution:
 Wash Time:

Autosampler Location: 10
 Date Collected: 3/24/2017 9:34:27 AM
 Data Type: Reprocessed on 3/24/2017 11:49:53 AM
 Initial Sample Vol:
 Sample Prep Vol:

 Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	67732.9	91.93	%	0.438			0.48%
Tb 350	112402.7	94.66	%	0.307			0.32%
Ag 328.068*†	83671.1	0.4980	mg/L	0.00013	0.4980 mg/L	0.00013	0.03%
	QC value within limits for Ag 328.068* Recovery = 99.60%						
Al 308.215*†	64417.8	4.174	mg/L	0.0087	4.174 mg/L	0.0087	0.21%
	QC value within limits for Al 308.215* Recovery = 104.36%						
As 188.979†	8624.3	4.886	mg/L	0.1152	4.886 mg/L	0.1152	2.36%
	QC value within limits for As 188.979 Recovery = 97.72%						
As 193.696*†	6000.4	4.874	mg/L	0.1270	4.874 mg/L	0.1270	2.61%
	QC value within limits for As 193.696* Recovery = 97.49%						
B 249.677*†	106978.8	2.531	mg/L	0.0200	2.531 mg/L	0.0200	0.79%
	QC value within limits for B 249.677* Recovery = 101.23%						
Ba 233.527*†	133021.7	0.9843	mg/L	0.00126	0.9843 mg/L	0.00126	0.13%
	QC value within limits for Ba 233.527* Recovery = 98.43%						
Be 313.042*†	1603740.8	0.4813	mg/L	0.00783	0.4813 mg/L	0.00783	1.63%
	QC value within limits for Be 313.042* Recovery = 96.27%						
Ca 317.933*†	32940.3	19.85	mg/L	0.923	19.85 mg/L	0.923	4.65%
	QC value within limits for Ca 317.933* Recovery = 99.26%						
Cd 226.502*†	98948.9	1.487	mg/L	0.0022	1.487 mg/L	0.0022	0.15%
	QC value within limits for Cd 226.502* Recovery = 99.13%						
Cd 228.802†	51365.9	1.494	mg/L	0.0083	1.494 mg/L	0.0083	0.55%
Co 228.616*†	25350.6	1.038	mg/L	0.0001	1.038 mg/L	0.0001	0.01%
	QC value within limits for Co 228.616* Recovery = 103.77%						
Cr 267.716*†	39975.3	0.4011	mg/L	0.00119	0.4011 mg/L	0.00119	0.30%
	QC value within limits for Cr 267.716* Recovery = 100.29%						
Cu 324.752*†	223321.6	1.012	mg/L	0.0021	1.012 mg/L	0.0021	0.20%
	QC value within limits for Cu 324.752* Recovery = 101.20%						
Fe 273.955*†	2068346.3	101.7	mg/L	2.61	101.7 mg/L	2.61	2.57%
	QC value within limits for Fe 273.955* Recovery = 101.69%						
K 766.490*†	21242.7	8.001	mg/L	0.2954	8.001 mg/L	0.2954	3.69%
	QC value within limits for K 766.490* Recovery = 100.01%						
Mg 279.077*†	162725.4	9.984	mg/L	0.0254	9.984 mg/L	0.0254	0.25%
	QC value within limits for Mg 279.077* Recovery = 99.84%						
Mn 257.610*†	559004.2	0.9795	mg/L	0.00033	0.9795 mg/L	0.00033	0.03%
	QC value within limits for Mn 257.610* Recovery = 97.95%						
Mo 202.031*†	19733.6	2.423	mg/L	0.0514	2.423 mg/L	0.0514	2.12%
	QC value within limits for Mo 202.031* Recovery = 96.91%						
Na 589.592*†	216943.9	54.80	mg/L	1.811	54.80 mg/L	1.811	3.30%
	QC value within limits for Na 589.592* Recovery = 101.48%						
Ni 231.604*†	8337.4	0.4108	mg/L	0.00850	0.4108 mg/L	0.00850	2.07%
	QC value within limits for Ni 231.604* Recovery = 102.70%						
P 213.617*†	7613.8	4.797	mg/L	0.0848	4.797 mg/L	0.0848	1.77%
	QC value within limits for P 213.617* Recovery = 95.95%						
P 214.914†	5218.3	4.955	mg/L	0.1094	4.955 mg/L	0.1094	2.21%
Pb 220.353*†	34221.8	5.059	mg/L	0.0043	5.059 mg/L	0.0043	0.09%
	QC value within limits for Pb 220.353* Recovery = 101.17%						
Sb 206.836†	3151.9	1.936	mg/L	0.0341	1.936 mg/L	0.0341	1.76%
	QC value within limits for Sb 206.836 Recovery = 96.82%						
Sb 217.582*†	3164.7	1.938	mg/L	0.0367	1.938 mg/L	0.0367	1.89%
	QC value within limits for Sb 217.582* Recovery = 96.89%						
Se 196.026*†	3588.2	1.942	mg/L	0.0275	1.942 mg/L	0.0275	1.41%
	QC value within limits for Se 196.026* Recovery = 97.09%						
Si 251.611*†	322256.8	9.529	mg/L	0.0197	9.529 mg/L	0.0197	0.21%
	QC value within limits for Si 251.611* Recovery = 95.29%						
Sn 189.927*†	12815.5	2.500	mg/L	0.0572	2.500 mg/L	0.0572	2.29%
	QC value within limits for Sn 189.927* Recovery = 99.99%						
Sn 242.170†	4273.3	2.793	mg/L	0.0402	2.793 mg/L	0.0402	1.44%
Sr 407.771*†	58925.5	0.1984	mg/L	0.00792	0.1984 mg/L	0.00792	3.99%

QC value within limits for Sr 407.771*		Recovery = 99.20%					
Ti 334.940†	3517663.5	4.708 mg/L	0.0964	4.708 mg/L	0.0964	2.05%	
Ti 336.121*†	2518253.7	4.831 mg/L	0.0991	4.831 mg/L	0.0991	2.05%	
QC value within limits for Ti 336.121*		Recovery = 96.62%					
Tl 190.801*†	3166.2	1.968 mg/L	0.0456	1.968 mg/L	0.0456	2.32%	
QC value within limits for Tl 190.801*		Recovery = 98.38%					
V 292.402*†	119213.0	0.9886 mg/L	0.00044	0.9886 mg/L	0.00044	0.04%	
QC value within limits for V 292.402*		Recovery = 98.86%					
Zn 206.200*†	51124.6	1.515 mg/L	0.0041	1.515 mg/L	0.0041	0.27%	
QC value within limits for Zn 206.200*		Recovery = 100.97%					
Zn 213.857*†	93645.3	1.514 mg/L	0.0005	1.514 mg/L	0.0005	0.04%	
QC value within limits for Zn 213.857*		Recovery = 100.94%					

All analyte(s) passed QC.

Sequence No.: 4
 Sample ID: ICB-R12091601
 Analyst: 935 icp 7300
 Logged In Analyst (Original) : Oscar Gomez 935
 Initial Sample Wt:
 Dilution:
 Wash Time:

Autosampler Location: 1
 Date Collected: 3/24/2017 9:36:10 AM
 Data Type: Reprocessed on 3/24/2017 11:49:55 AM
 Initial Sample Vol:
 Sample Prep Vol:

Mean Data: ICB-R12091601

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
Tb 384	70869.9	96.19	%	0.953				0.99%
Tb 350	114074.5	96.06	%	0.177				0.18%
Ag 328.068*†	-413.8	-0.0025	mg/L	0.00033	-0.0025	mg/L	0.00033	13.38%
Al 308.215*†	14.6	0.0009	mg/L	0.00012	0.0009	mg/L	0.00012	12.34%
As 188.979†	1.6	0.0009	mg/L	0.00174	0.0009	mg/L	0.00174	189.39%
As 193.696*†	-6.1	-0.0050	mg/L	0.00674	-0.0050	mg/L	0.00674	136.11%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1535.6	0.0363	mg/L	0.00092	0.0363	mg/L	0.00092	2.54%
QC value within limits for B 249.677* Recovery = Not calculated								
Ba 233.527*†	-1.3	-0.0000	mg/L	0.00005	-0.0000	mg/L	0.00005	579.35%
Be 313.042*†	-159.6	-0.0000	mg/L	0.00004	-0.0000	mg/L	0.00004	83.33%
Ca 317.933*†	4.2	0.0025	mg/L	0.00014	0.0025	mg/L	0.00014	5.59%
Cd 226.502*†	18.1	0.0003	mg/L	0.00010	0.0003	mg/L	0.00010	36.26%
Cd 228.802†	-1.2	-0.0000	mg/L	0.00016	-0.0000	mg/L	0.00016	430.87%
Co 228.616*†	-5.2	-0.0002	mg/L	0.00043	-0.0002	mg/L	0.00043	203.65%
Cr 267.716*†	65.2	0.0007	mg/L	0.00022	0.0007	mg/L	0.00022	33.57%
Cu 324.752*†	-9.4	-0.0000	mg/L	0.00011	-0.0000	mg/L	0.00011	254.91%
Fe 273.955*†	21.2	0.0010	mg/L	0.00013	0.0010	mg/L	0.00013	12.95%
K 766.490*†	147.5	0.0555	mg/L	0.18214	0.0555	mg/L	0.18214	327.93%
Mg 279.077*†	-351.9	-0.0216	mg/L	0.00395	-0.0216	mg/L	0.00395	18.31%
Mn 257.610*†	35.1	0.0001	mg/L	0.00004	0.0001	mg/L	0.00004	72.14%
Mo 202.031*†	0.0	0.0000	mg/L	0.00048	0.0000	mg/L	0.00048	>999.9%
Na 589.592*†	-41.7	-0.0105	mg/L	0.01186	-0.0105	mg/L	0.01186	112.49%
Ni 231.604*†	-3.1	-0.0002	mg/L	0.00084	-0.0002	mg/L	0.00084	548.23%
P 213.617*†	3.4	0.0021	mg/L	0.00504	0.0021	mg/L	0.00504	238.05%
P 214.914†	-11.1	-0.0106	mg/L	0.02139	-0.0106	mg/L	0.02139	202.23%
Pb 220.353*†	3.1	0.0005	mg/L	0.00116	0.0005	mg/L	0.00116	252.41%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	0.2	0.0001	mg/L	0.00185	0.0001	mg/L	0.00185	>999.9%
Sb 217.582*†	6.5	0.0040	mg/L	0.00254	0.0040	mg/L	0.00254	63.94%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-2.1	-0.0011	mg/L	0.00461	-0.0011	mg/L	0.00461	413.51%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	125.6	0.0037	mg/L	0.00132	0.0037	mg/L	0.00132	35.62%
QC value within limits for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	21.9	0.0043	mg/L	0.00101	0.0043	mg/L	0.00101	23.65%
Sn 242.170†	0.7	0.0004	mg/L	0.02107	0.0004	mg/L	0.02107	>999.9%
Sr 407.771*†	-30.0	-0.0001	mg/L	0.00000	-0.0001	mg/L	0.00000	0.55%
Ti 334.940†	640.4	0.0009	mg/L	0.00006	0.0009	mg/L	0.00006	6.86%
Ti 336.121*†	174.5	0.0003	mg/L	0.00034	0.0003	mg/L	0.00034	100.82%
Tl 190.801*†	8.3	0.0051	mg/L	0.00080	0.0051	mg/L	0.00080	15.54%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	153.8	0.0013	mg/L	0.00266	0.0013	mg/L	0.00266	207.93%
Zn 206.200*†	21.7	0.0006	mg/L	0.00006	0.0006	mg/L	0.00006	9.70%
Zn 213.857*†	75.1	0.0012	mg/L	0.00032	0.0012	mg/L	0.00032	25.92%

All analyte(s) passed QC.

Sequence No.: 1
 Sample ID: ICS_A - M110116B
 Analyst: 935 icp 7300
 Logged In Analyst (Original) : Oscar Gomez 935
 Initial Sample Wt:
 Dilution:
 Wash Time:

Autosampler Location: 8
 Date Collected: 3/24/2017 9:37:13 AM
 Data Type: Reprocessed on 3/24/2017 11:50:23 AM
 Initial Sample Vol:
 Sample Prep Vol:

Mean Data: ICS_A - M110116B

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
Tb 384	62036.7	84.20	%	0.506				0.60%
Tb 350	104064.9	87.63	%	1.081				1.23%
Ag 328.068*†	-116.5	-0.0007	mg/L	0.00104	-0.0007	mg/L	0.00104	149.74%
Al 308.215*†	385481.4	24.98	mg/L	0.075	24.98	mg/L	0.075	0.30%
As 188.979†	16.3	0.0093	mg/L	0.00016	0.0093	mg/L	0.00016	1.70%
As 193.696*†	10.6	0.0086	mg/L	0.00601	0.0086	mg/L	0.00601	69.98%
B 249.677*†	1142.6	0.0270	mg/L	0.00282	0.0270	mg/L	0.00282	10.44%
Ba 233.527*†	303.7	0.0022	mg/L	0.00034	0.0022	mg/L	0.00034	15.34%
Be 313.042*†	-248.3	-0.0001	mg/L	0.00003	-0.0001	mg/L	0.00003	40.74%
Ca 317.933*†	205359.5	123.8	mg/L	3.71	123.8	mg/L	3.71	3.00%
Cd 226.502*†	159.7	0.0024	mg/L	0.00009	0.0024	mg/L	0.00009	3.59%
Cd 228.802†	-4.8	-0.0001	mg/L	0.00006	-0.0001	mg/L	0.00006	43.73%
Co 228.616*†	19.4	0.0008	mg/L	0.00013	0.0008	mg/L	0.00013	16.48%
Cr 267.716*†	-94.4	-0.0009	mg/L	0.00012	-0.0009	mg/L	0.00012	12.17%
Cu 324.752*†	-228.7	-0.0010	mg/L	0.00181	-0.0010	mg/L	0.00181	175.05%
Fe 273.955*†	1968912.4	96.80	mg/L	0.177	96.80	mg/L	0.177	0.18%
K 766.490*†	421.3	0.1587	mg/L	0.00286	0.1587	mg/L	0.00286	1.81%
Mg 279.077*†	976214.9	59.90	mg/L	0.261	59.90	mg/L	0.261	0.43%
Mn 257.610*†	70.4	0.0001	mg/L	0.00053	0.0001	mg/L	0.00053	426.72%
Mo 202.031*†	8.5	0.0010	mg/L	0.00184	0.0010	mg/L	0.00184	176.69%
Na 589.592*†	87015.9	21.98	mg/L	0.590	21.98	mg/L	0.590	2.68%
Ni 231.604*†	7.9	0.0004	mg/L	0.00008	0.0004	mg/L	0.00008	20.63%
P 213.617*†	-296.8	-0.1870	mg/L	0.00935	-0.1870	mg/L	0.00935	5.00%
P 214.914†	44.2	0.0419	mg/L	0.00688	0.0419	mg/L	0.00688	16.41%
Pb 220.353*†	-51.1	-0.0076	mg/L	0.00150	-0.0076	mg/L	0.00150	19.83%
Sb 206.836†	11.4	0.0070	mg/L	0.00119	0.0070	mg/L	0.00119	16.92%
Sb 217.582*†	-6.8	-0.0042	mg/L	0.00723	-0.0042	mg/L	0.00723	173.45%
Se 196.026*†	-26.8	-0.0142	mg/L	0.01471	-0.0142	mg/L	0.01471	103.76%
Si 251.611*†	182.4	0.0054	mg/L	0.00069	0.0054	mg/L	0.00069	12.71%
Sn 189.927*†	-7.5	-0.0015	mg/L	0.00154	-0.0015	mg/L	0.00154	104.61%
Sn 242.170†	395.5	0.2586	mg/L	0.02485	0.2586	mg/L	0.02485	9.61%
Sr 407.771*†	1028.8	0.0035	mg/L	0.00010	0.0035	mg/L	0.00010	2.84%
Ti 334.940†	-1502.2	-0.0020	mg/L	0.00006	-0.0020	mg/L	0.00006	3.01%
Ti 336.121*†	-502.2	-0.0010	mg/L	0.00009	-0.0010	mg/L	0.00009	9.48%
Tl 190.801*†	1.1	0.0007	mg/L	0.00455	0.0007	mg/L	0.00455	660.86%
V 292.402*†	354.4	0.0014	mg/L	0.00012	0.0014	mg/L	0.00012	9.15%
Zn 206.200*†	61.1	0.0018	mg/L	0.00029	0.0018	mg/L	0.00029	16.28%
Zn 213.857*†	525.0	0.0005	mg/L	0.00039	0.0005	mg/L	0.00039	79.32%

Sequence No.: 1
 Sample ID: ICS_AB - M110116A
 Analyst: 935 icp 7300
 Logged In Analyst (Original) : Oscar Gomez 935
 Initial Sample Wt:
 Dilution:
 Wash Time:

Autosampler Location: 9
 Date Collected: 3/24/2017 9:38:04 AM
 Data Type: Reprocessed on 3/24/2017 11:50:49 AM
 Initial Sample Vol:
 Sample Prep Vol:

Mean Data: ICS_AB - M110116A

Analyte	Mean Corrected		Calib.		Sample		RSD
	Intensity	Conc.	Units	Std.Dev.	Conc. Units	Std.Dev.	
Tb 384	62996.5	85.50	%	1.182			1.38%
Tb 350	105005.6	88.43	%	1.205			1.36%
Ag 328.068*†	52529.5	0.3127	mg/L	0.00039	0.3127	mg/L	0.00039 0.13%
Al 308.215*†	385406.3	24.98	mg/L	0.065	24.98	mg/L	0.065 0.26%
As 188.979†	1819.5	1.031	mg/L	0.0270	1.031	mg/L	0.0270 2.62%
As 193.696*†	1259.1	1.023	mg/L	0.0188	1.023	mg/L	0.0188 1.84%
B 249.677*†	21385.4	0.5059	mg/L	0.00988	0.5059	mg/L	0.00988 1.95%
Ba 233.527*†	41085.8	0.3040	mg/L	0.00212	0.3040	mg/L	0.00212 0.70%
Be 313.042*†	342742.1	0.1029	mg/L	0.00066	0.1029	mg/L	0.00066 0.65%
Ca 317.933*†	200324.4	120.7	mg/L	2.38	120.7	mg/L	2.38 1.97%
Cd 226.502*†	20027.3	0.3010	mg/L	0.00460	0.3010	mg/L	0.00460 1.53%
Cd 228.802†	10432.4	0.3035	mg/L	0.00550	0.3035	mg/L	0.00550 1.81%
Co 228.616*†	7547.4	0.3089	mg/L	0.00579	0.3089	mg/L	0.00579 1.88%
Cr 267.716*†	30989.0	0.3110	mg/L	0.00252	0.3110	mg/L	0.00252 0.81%
Cu 324.752*†	70155.0	0.3179	mg/L	0.00019	0.3179	mg/L	0.00019 0.06%
Fe 273.955*†	1975152.8	97.11	mg/L	0.613	97.11	mg/L	0.613 0.63%
K 766.490*†	57334.5	21.59	mg/L	0.151	21.59	mg/L	0.151 0.70%
Mg 279.077*†	975081.4	59.83	mg/L	0.679	59.83	mg/L	0.679 1.14%
Mn 257.610*†	114217.7	0.2001	mg/L	0.00173	0.2001	mg/L	0.00173 0.87%
Mo 202.031*†	2464.2	0.3025	mg/L	0.00616	0.3025	mg/L	0.00616 2.04%
Na 589.592*†	83891.1	21.19	mg/L	0.279	21.19	mg/L	0.279 1.32%
Ni 231.604*†	6302.4	0.3105	mg/L	0.00472	0.3105	mg/L	0.00472 1.52%
P 213.617*†	-235.1	-0.1481	mg/L	0.01513	-0.1481	mg/L	0.01513 10.21%
P 214.914†	31.3	0.0297	mg/L	0.00991	0.0297	mg/L	0.00991 33.35%
Pb 220.353*†	6816.8	1.008	mg/L	0.0210	1.008	mg/L	0.0210 2.08%
Sb 206.836†	1602.9	0.9848	mg/L	0.02346	0.9848	mg/L	0.02346 2.38%
Sb 217.582*†	1589.8	0.9735	mg/L	0.02022	0.9735	mg/L	0.02022 2.08%
Se 196.026*†	951.9	0.5152	mg/L	0.01377	0.5152	mg/L	0.01377 2.67%
Si 251.611*†	7086.3	0.2095	mg/L	0.00111	0.2095	mg/L	0.00111 0.53%
Sn 189.927*†	-27.2	-0.0053	mg/L	0.00122	-0.0053	mg/L	0.00122 23.06%
Sn 242.170†	380.4	0.2487	mg/L	0.00429	0.2487	mg/L	0.00429 1.73%
Sr 407.771*†	768.5	0.0026	mg/L	0.00005	0.0026	mg/L	0.00005 2.02%
Ti 334.940†	740047.7	0.9905	mg/L	0.00365	0.9905	mg/L	0.00365 0.37%
Ti 336.121*†	528834.9	1.015	mg/L	0.0047	1.015	mg/L	0.0047 0.46%
Tl 190.801*†	1633.9	1.015	mg/L	0.0160	1.015	mg/L	0.0160 1.57%
V 292.402*†	37398.4	0.3091	mg/L	0.00001	0.3091	mg/L	0.00001 0.00%
Zn 206.200*†	10478.4	0.3104	mg/L	0.00558	0.3104	mg/L	0.00558 1.80%
Zn 213.857*†	19400.3	0.3073	mg/L	0.00518	0.3073	mg/L	0.00518 1.68%

Sequence No.: 1
 Sample ID: CCV= STD3x0.5
 Analyst: 935 icp 7300
 Initial Sample Wt:
 Dilution:
 Wash Time:

Autosampler Location: 3
 Date Collected: 3/24/2017 12:36:34 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

 Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected		Calib.	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Units	Conc.		
Tb 384	68170.3	92.53	%	0.048				0.05%
Tb 350	113799.0	95.83	%	0.506				0.53%
Ag 328.068*†	62008.9	0.3691	mg/L	0.00005	0.3691	mg/L	0.00005	0.01%
	QC value within limits for Ag 328.068* Recovery = 98.42%							
Al 308.215*†	207627.3	13.45	mg/L	0.044	13.45	mg/L	0.044	0.33%
	QC value within limits for Al 308.215* Recovery = 99.67%							
As 188.979†	6518.6	3.693	mg/L	0.0441	3.693	mg/L	0.0441	1.19%
	QC value within limits for As 188.979 Recovery = 98.48%							
As 193.696*†	4540.2	3.688	mg/L	0.0418	3.688	mg/L	0.0418	1.13%
	QC value within limits for As 193.696* Recovery = 98.35%							
B 249.677*†	156875.1	3.711	mg/L	0.0534	3.711	mg/L	0.0534	1.44%
	QC value within limits for B 249.677* Recovery = 98.97%							
Ba 233.527*†	1000447.2	7.403	mg/L	0.0009	7.403	mg/L	0.0009	0.01%
	QC value within limits for Ba 233.527* Recovery = 98.71%							
Be 313.042*†	1810403.9	0.5434	mg/L	0.00112	0.5434	mg/L	0.00112	0.21%
	QC value within limits for Be 313.042* Recovery = 96.60%							
Ca 317.933*†	49133.3	29.61	mg/L	0.477	29.61	mg/L	0.477	1.61%
	QC value within limits for Ca 317.933* Recovery = 98.70%							
Cd 226.502*†	49834.9	0.7489	mg/L	0.00136	0.7489	mg/L	0.00136	0.18%
	QC value within limits for Cd 226.502* Recovery = 99.86%							
Cd 228.802†	26039.9	0.7575	mg/L	0.00065	0.7575	mg/L	0.00065	0.09%
Co 228.616*†	46544.7	1.905	mg/L	0.0019	1.905	mg/L	0.0019	0.10%
	QC value within limits for Co 228.616* Recovery = 101.61%							
Cr 267.716*†	60205.6	0.6042	mg/L	0.00128	0.6042	mg/L	0.00128	0.21%
	QC value within limits for Cr 267.716* Recovery = 100.69%							
Cu 324.752*†	205466.5	0.9311	mg/L	0.00246	0.9311	mg/L	0.00246	0.26%
	QC value within limits for Cu 324.752* Recovery = 99.32%							
Fe 273.955*†	77854.6	3.828	mg/L	0.0032	3.828	mg/L	0.0032	0.08%
	QC value within limits for Fe 273.955* Recovery = 102.07%							
K 766.490*†	71846.1	27.06	mg/L	0.568	27.06	mg/L	0.568	2.10%
	QC value within limits for K 766.490* Recovery = 100.22%							
Mg 279.077*†	124906.3	7.664	mg/L	0.0104	7.664	mg/L	0.0104	0.14%
	QC value within limits for Mg 279.077* Recovery = 102.19%							
Mn 257.610*†	419306.9	0.7347	mg/L	0.00055	0.7347	mg/L	0.00055	0.07%
	QC value within limits for Mn 257.610* Recovery = 97.97%							
Mo 202.031*†	4913.2	0.6032	mg/L	0.00488	0.6032	mg/L	0.00488	0.81%
	QC value within limits for Mo 202.031* Recovery = 100.54%							
Na 589.592*†	146116.4	36.91	mg/L	0.493	36.91	mg/L	0.493	1.34%
	QC value within limits for Na 589.592* Recovery = 102.52%							
Ni 231.604*†	12245.6	0.6034	mg/L	0.00503	0.6034	mg/L	0.00503	0.83%
	QC value within limits for Ni 231.604* Recovery = 100.57%							
P 213.617*†	8996.0	5.668	mg/L	0.0435	5.668	mg/L	0.0435	0.77%
	QC value within limits for P 213.617* Recovery = 94.47%							
P 214.914†	6209.4	5.897	mg/L	0.0845	5.897	mg/L	0.0845	1.43%
Pb 220.353*†	25657.7	3.793	mg/L	0.0068	3.793	mg/L	0.0068	0.18%
	QC value within limits for Pb 220.353* Recovery = 101.14%							
Sb 206.836†	7271.7	4.468	mg/L	0.0483	4.468	mg/L	0.0483	1.08%
	QC value within limits for Sb 206.836 Recovery = 99.28%							
Sb 217.582*†	7324.0	4.485	mg/L	0.0578	4.485	mg/L	0.0578	1.29%
	QC value within limits for Sb 217.582* Recovery = 99.66%							
Se 196.026*†	2766.9	1.497	mg/L	0.0224	1.497	mg/L	0.0224	1.50%
	QC value within limits for Se 196.026* Recovery = 99.82%							
Si 251.611*†	196491.0	5.810	mg/L	0.0328	5.810	mg/L	0.0328	0.57%
	QC value within limits for Si 251.611* Recovery = 96.83%							
Sn 189.927*†	15483.7	3.020	mg/L	0.0300	3.020	mg/L	0.0300	0.99%
	QC value within limits for Sn 189.927* Recovery = 100.68%							
Sn 242.170†	4594.7	3.004	mg/L	0.0054	3.004	mg/L	0.0054	0.18%
Sr 407.771*†	89655.9	0.3019	mg/L	0.00464	0.3019	mg/L	0.00464	1.54%
	QC value within limits for Sr 407.771* Recovery = 100.63%							

Ti 334.940†	435257.6	0.5825 mg/L	0.00019	0.5825 mg/L	0.00019	0.03%
Ti 336.121*†	312358.6	0.5992 mg/L	0.00138	0.5992 mg/L	0.00138	0.23%
QC value within limits for Ti 336.121* Recovery = 99.87%						
Tl 190.801*†	2454.2	1.525 mg/L	0.0108	1.525 mg/L	0.0108	0.71%
QC value within limits for Tl 190.801* Recovery = 101.68%						
V 292.402*†	228529.6	1.898 mg/L	0.0040	1.898 mg/L	0.0040	0.21%
QC value within limits for V 292.402* Recovery = 101.24%						
Zn 206.200*†	82899.6	2.456 mg/L	0.0059	2.456 mg/L	0.0059	0.24%
QC value within limits for Zn 206.200* Recovery = 98.24%						
Zn 213.857*†	155085.1	2.521 mg/L	0.0068	2.521 mg/L	0.0068	0.27%
QC value within limits for Zn 213.857* Recovery = 100.84%						

All analyte(s) passed QC.

Sequence No.: 2
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/24/2017 12:37:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Table with 9 columns: Analyte, Mean Corrected Intensity, Conc., Calib. Units, Std.Dev., Sample Conc. Units, Std.Dev., RSD. Lists various elements like Tb, Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Si, Sn, Sr, Ti, Tl, V, Zn with their respective values and recovery percentages.

All analyte(s) passed QC.

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Sequence No.: 11
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 3
Date Collected: 3/24/2017 12:48:00 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	71251.4	96.71	%	1.502			1.55%
Tb 350	117511.9	98.96	%	1.092			1.10%
Ag 328.068*†	62347.0	0.3711	mg/L	0.00014	0.3711 mg/L	0.00014	0.04%
							QC value within limits for Ag 328.068* Recovery = 98.96%
Al 308.215*†	207289.8	13.43	mg/L	0.086	13.43 mg/L	0.086	0.64%
							QC value within limits for Al 308.215* Recovery = 99.50%
As 188.979†	6554.2	3.713	mg/L	0.0130	3.713 mg/L	0.0130	0.35%
							QC value within limits for As 188.979 Recovery = 99.02%
As 193.696*†	4564.9	3.708	mg/L	0.0127	3.708 mg/L	0.0127	0.34%
							QC value within limits for As 193.696* Recovery = 98.89%
B 249.677*†	160997.2	3.809	mg/L	0.0001	3.809 mg/L	0.0001	0.00%
							QC value within limits for B 249.677* Recovery = 101.57%
Ba 233.527*†	1001826.0	7.413	mg/L	0.0502	7.413 mg/L	0.0502	0.68%
							QC value within limits for Ba 233.527* Recovery = 98.85%
Be 313.042*†	1829262.1	0.5490	mg/L	0.00409	0.5490 mg/L	0.00409	0.75%
							QC value within limits for Be 313.042* Recovery = 97.60%
Ca 317.933*†	50144.8	30.22	mg/L	0.011	30.22 mg/L	0.011	0.04%
							QC value within limits for Ca 317.933* Recovery = 100.74%
Cd 226.502*†	49893.9	0.7498	mg/L	0.00900	0.7498 mg/L	0.00900	1.20%
							QC value within limits for Cd 226.502* Recovery = 99.97%
Cd 228.802†	26007.4	0.7565	mg/L	0.01061	0.7565 mg/L	0.01061	1.40%
Co 228.616*†	47115.3	1.929	mg/L	0.0161	1.929 mg/L	0.0161	0.83%
							QC value within limits for Co 228.616* Recovery = 102.86%
Cr 267.716*†	60254.4	0.6046	mg/L	0.00534	0.6046 mg/L	0.00534	0.88%
							QC value within limits for Cr 267.716* Recovery = 100.77%
Cu 324.752*†	206863.7	0.9374	mg/L	0.00220	0.9374 mg/L	0.00220	0.23%
							QC value within limits for Cu 324.752* Recovery = 99.99%
Fe 273.955*†	77434.2	3.807	mg/L	0.0266	3.807 mg/L	0.0266	0.70%
							QC value within limits for Fe 273.955* Recovery = 101.52%
K 766.490*†	72966.4	27.48	mg/L	0.103	27.48 mg/L	0.103	0.37%
							QC value within limits for K 766.490* Recovery = 101.79%
Mg 279.077*†	125990.4	7.730	mg/L	0.0740	7.730 mg/L	0.0740	0.96%
							QC value within limits for Mg 279.077* Recovery = 103.07%
Mn 257.610*†	420143.3	0.7362	mg/L	0.00492	0.7362 mg/L	0.00492	0.67%
							QC value within limits for Mn 257.610* Recovery = 98.16%
Mo 202.031*†	4905.2	0.6022	mg/L	0.00166	0.6022 mg/L	0.00166	0.28%
							QC value within limits for Mo 202.031* Recovery = 100.37%
Na 589.592*†	149430.3	37.74	mg/L	0.011	37.74 mg/L	0.011	0.03%
							QC value within limits for Na 589.592* Recovery = 104.84%
Ni 231.604*†	12267.8	0.6045	mg/L	0.00094	0.6045 mg/L	0.00094	0.16%
							QC value within limits for Ni 231.604* Recovery = 100.75%
P 213.617*†	9043.3	5.698	mg/L	0.0053	5.698 mg/L	0.0053	0.09%
							QC value within limits for P 213.617* Recovery = 94.97%
P 214.914†	6256.7	5.942	mg/L	0.0234	5.942 mg/L	0.0234	0.39%
Pb 220.353*†	25702.8	3.799	mg/L	0.0666	3.799 mg/L	0.0666	1.75%
							QC value within limits for Pb 220.353* Recovery = 101.32%
Sb 206.836†	7264.3	4.463	mg/L	0.0256	4.463 mg/L	0.0256	0.57%
							QC value within limits for Sb 206.836 Recovery = 99.18%
Sb 217.582*†	7292.2	4.465	mg/L	0.0128	4.465 mg/L	0.0128	0.29%
							QC value within limits for Sb 217.582* Recovery = 99.22%
Se 196.026*†	2747.9	1.487	mg/L	0.0111	1.487 mg/L	0.0111	0.74%
							QC value within limits for Se 196.026* Recovery = 99.14%
Si 251.611*†	198001.3	5.855	mg/L	0.0310	5.855 mg/L	0.0310	0.53%
							QC value within limits for Si 251.611* Recovery = 97.58%
Sn 189.927*†	15423.3	3.009	mg/L	0.0225	3.009 mg/L	0.0225	0.75%
							QC value within limits for Sn 189.927* Recovery = 100.28%
Sn 242.170†	4632.1	3.028	mg/L	0.0060	3.028 mg/L	0.0060	0.20%
Sr 407.771*†	90036.2	0.3032	mg/L	0.00007	0.3032 mg/L	0.00007	0.02%
							QC value within limits for Sr 407.771* Recovery = 101.05%

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Ti 334.940†	435838.3	0.5833 mg/L	0.00304	0.5833 mg/L	0.00304	0.52%
Ti 336.121*†	312402.0	0.5993 mg/L	0.00213	0.5993 mg/L	0.00213	0.36%
QC value within limits for Ti 336.121* Recovery = 99.89%						
Tl 190.801*†	2462.2	1.530 mg/L	0.0127	1.530 mg/L	0.0127	0.83%
QC value within limits for Tl 190.801* Recovery = 102.01%						
V 292.402*†	227613.8	1.891 mg/L	0.0071	1.891 mg/L	0.0071	0.37%
QC value within limits for V 292.402* Recovery = 100.84%						
Zn 206.200*†	83800.4	2.483 mg/L	0.0389	2.483 mg/L	0.0389	1.57%
QC value within limits for Zn 206.200* Recovery = 99.30%						
Zn 213.857*†	155237.0	2.524 mg/L	0.0144	2.524 mg/L	0.0144	0.57%
QC value within limits for Zn 213.857* Recovery = 100.94%						

All analyte(s) passed QC.

Sequence No.: 12

Autosampler Location: 1

Sample ID: CCB-R12091601

Date Collected: 3/24/2017 12:48:52 PM

Analyst: 935 icp 7300

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Wash Time: 15

Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
Tb 384	78374.4	106.4	%	2.02				1.90%
Tb 350	127594.3	107.4	%	1.17				1.09%
Ag 328.068*†	17.0	0.0001	mg/L	0.00003	0.0001	mg/L	0.00003	32.44%
QC value within limits for Ag 328.068* Recovery = Not calculated								
Al 308.215*†	-59.3	-0.0038	mg/L	0.00749	-0.0038	mg/L	0.00749	194.89%
As 188.979†	-5.4	-0.0031	mg/L	0.00305	-0.0031	mg/L	0.00305	99.35%
As 193.696*†	2.5	0.0021	mg/L	0.00378	0.0021	mg/L	0.00378	183.23%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	2802.3	0.0663	mg/L	0.00306	0.0663	mg/L	0.00306	4.62%
Ba 233.527*†	660.3	0.0049	mg/L	0.00038	0.0049	mg/L	0.00038	7.85%
Be 313.042*†	1090.9	0.0003	mg/L	0.00002	0.0003	mg/L	0.00002	6.41%
Ca 317.933*†	41.8	0.0252	mg/L	0.00516	0.0252	mg/L	0.00516	20.52%
Cd 226.502*†	60.1	0.0009	mg/L	0.00007	0.0009	mg/L	0.00007	8.00%
Cd 228.802†	27.8	0.0008	mg/L	0.00000	0.0008	mg/L	0.00000	0.40%
Co 228.616*†	34.8	0.0014	mg/L	0.00056	0.0014	mg/L	0.00056	38.93%
Cr 267.716*†	-2.5	-0.0000	mg/L	0.00051	-0.0000	mg/L	0.00051	>999.9%
Cu 324.752*†	162.2	0.0007	mg/L	0.00015	0.0007	mg/L	0.00015	20.31%
Fe 273.955*†	253.7	0.0125	mg/L	0.00212	0.0125	mg/L	0.00212	17.02%
K 766.490*†	244.5	0.0921	mg/L	0.07593	0.0921	mg/L	0.07593	82.45%
Mg 279.077*†	482.2	0.0296	mg/L	0.00614	0.0296	mg/L	0.00614	20.74%
Mn 257.610*†	463.6	0.0008	mg/L	0.00000	0.0008	mg/L	0.00000	0.12%
Mo 202.031*†	13.1	0.0016	mg/L	0.00180	0.0016	mg/L	0.00180	111.69%
Na 589.592*†	614.2	0.1551	mg/L	0.01707	0.1551	mg/L	0.01707	11.00%
Ni 231.604*†	17.9	0.0009	mg/L	0.00039	0.0009	mg/L	0.00039	43.60%
P 213.617*†	40.8	0.0257	mg/L	0.00001	0.0257	mg/L	0.00001	0.04%
P 214.914†	-5.5	-0.0052	mg/L	0.00820	-0.0052	mg/L	0.00820	156.33%
Pb 220.353*†	29.0	0.0043	mg/L	0.00008	0.0043	mg/L	0.00008	1.84%
Sb 206.836†	-1.8	-0.0011	mg/L	0.00295	-0.0011	mg/L	0.00295	271.02%
Sb 217.582*†	6.6	0.0040	mg/L	0.00209	0.0040	mg/L	0.00209	51.92%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	11.2	0.0061	mg/L	0.00223	0.0061	mg/L	0.00223	36.64%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	829.6	0.0245	mg/L	0.00021	0.0245	mg/L	0.00021	0.85%
Sn 189.927*†	40.8	0.0079	mg/L	0.00081	0.0079	mg/L	0.00081	10.23%
Sn 242.170†	16.1	0.0105	mg/L	0.01139	0.0105	mg/L	0.01139	108.53%
Sr 407.771*†	50.7	0.0002	mg/L	0.00005	0.0002	mg/L	0.00005	29.10%
Ti 334.940†	326.2	0.0004	mg/L	0.00019	0.0004	mg/L	0.00019	44.11%
Ti 336.121*†	641.2	0.0012	mg/L	0.00008	0.0012	mg/L	0.00008	6.40%
Tl 190.801*†	23.9	0.0148	mg/L	0.00123	0.0148	mg/L	0.00123	8.28%
V 292.402*†	366.5	0.0030	mg/L	0.00002	0.0030	mg/L	0.00002	0.70%
Zn 206.200*†	66.9	0.0020	mg/L	0.00033	0.0020	mg/L	0.00033	16.56%
QC value within limits for Zn 206.200* Recovery = Not calculated								
Zn 213.857*†	139.8	0.0023	mg/L	0.00022	0.0023	mg/L	0.00022	9.85%
QC value within limits for Zn 213.857* Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 23
 Sample ID: CCV= STD3x0.5
 Analyst: 935 icp 7300
 Initial Sample Wt:
 Dilution:
 Wash Time: 20

Autosampler Location: 3
 Date Collected: 3/24/2017 12:59:09 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	70347.1	95.48	%	2.426			2.54%
Tb 350	117728.1	99.14	%	2.248			2.27%
Ag 328.068*†	61998.0	0.3690	mg/L	0.00003	0.3690 mg/L	0.00003	0.01%
QC value within limits for Ag 328.068* Recovery = 98.40%							
Al 308.215*†	207487.6	13.45	mg/L	0.026	13.45 mg/L	0.026	0.19%
QC value within limits for Al 308.215* Recovery = 99.60%							
As 188.979†	6478.7	3.670	mg/L	0.0514	3.670 mg/L	0.0514	1.40%
QC value within limits for As 188.979 Recovery = 97.88%							
As 193.696*†	4499.6	3.655	mg/L	0.0561	3.655 mg/L	0.0561	1.54%
QC value within limits for As 193.696* Recovery = 97.47%							
B 249.677*†	158845.0	3.758	mg/L	0.0100	3.758 mg/L	0.0100	0.27%
QC value within limits for B 249.677* Recovery = 100.21%							
Ba 233.527*†	1001345.4	7.410	mg/L	0.0048	7.410 mg/L	0.0048	0.06%
QC value within limits for Ba 233.527* Recovery = 98.80%							
Be 313.042*†	1807998.6	0.5426	mg/L	0.00195	0.5426 mg/L	0.00195	0.36%
QC value within limits for Be 313.042* Recovery = 96.47%							
Ca 317.933*†	48813.2	29.42	mg/L	0.229	29.42 mg/L	0.229	0.78%
QC value within limits for Ca 317.933* Recovery = 98.06%							
Cd 226.502*†	49871.7	0.7495	mg/L	0.00512	0.7495 mg/L	0.00512	0.68%
QC value within limits for Cd 226.502* Recovery = 99.93%							
Cd 228.802†	26092.5	0.7590	mg/L	0.00081	0.7590 mg/L	0.00081	0.11%
Co 228.616*†	46559.5	1.906	mg/L	0.0062	1.906 mg/L	0.0062	0.33%
QC value within limits for Co 228.616* Recovery = 101.64%							
Cr 267.716*†	60365.4	0.6058	mg/L	0.00007	0.6058 mg/L	0.00007	0.01%
QC value within limits for Cr 267.716* Recovery = 100.96%							
Cu 324.752*†	205697.9	0.9322	mg/L	0.00251	0.9322 mg/L	0.00251	0.27%
QC value within limits for Cu 324.752* Recovery = 99.43%							
Fe 273.955*†	77687.8	3.820	mg/L	0.0074	3.820 mg/L	0.0074	0.19%
QC value within limits for Fe 273.955* Recovery = 101.85%							
K 766.490*†	71452.8	26.91	mg/L	0.123	26.91 mg/L	0.123	0.46%
QC value within limits for K 766.490* Recovery = 99.67%							
Mg 279.077*†	124829.0	7.659	mg/L	0.0156	7.659 mg/L	0.0156	0.20%
QC value within limits for Mg 279.077* Recovery = 102.12%							
Mn 257.610*†	419532.7	0.7351	mg/L	0.00042	0.7351 mg/L	0.00042	0.06%
QC value within limits for Mn 257.610* Recovery = 98.02%							
Mo 202.031*†	4884.1	0.5996	mg/L	0.00906	0.5996 mg/L	0.00906	1.51%
QC value within limits for Mo 202.031* Recovery = 99.94%							
Na 589.592*†	146369.7	36.97	mg/L	0.318	36.97 mg/L	0.318	0.86%
QC value within limits for Na 589.592* Recovery = 102.70%							
Ni 231.604*†	12075.3	0.5950	mg/L	0.00783	0.5950 mg/L	0.00783	1.32%
QC value within limits for Ni 231.604* Recovery = 99.17%							
P 213.617*†	9018.7	5.682	mg/L	0.0783	5.682 mg/L	0.0783	1.38%
QC value within limits for P 213.617* Recovery = 94.71%							
P 214.914†	6173.3	5.862	mg/L	0.1016	5.862 mg/L	0.1016	1.73%
Pb 220.353*†	25502.1	3.770	mg/L	0.0079	3.770 mg/L	0.0079	0.21%
QC value within limits for Pb 220.353* Recovery = 100.53%							
Sb 206.836†	7192.9	4.419	mg/L	0.0724	4.419 mg/L	0.0724	1.64%
QC value within limits for Sb 206.836 Recovery = 98.20%							
Sb 217.582*†	7229.9	4.427	mg/L	0.0763	4.427 mg/L	0.0763	1.72%
QC value within limits for Sb 217.582* Recovery = 98.38%							
Se 196.026*†	2748.8	1.488	mg/L	0.0330	1.488 mg/L	0.0330	2.22%
QC value within limits for Se 196.026* Recovery = 99.17%							
Si 251.611*†	196790.1	5.819	mg/L	0.0054	5.819 mg/L	0.0054	0.09%
QC value within limits for Si 251.611* Recovery = 96.98%							
Sn 189.927*†	15440.4	3.012	mg/L	0.0695	3.012 mg/L	0.0695	2.31%
QC value within limits for Sn 189.927* Recovery = 100.40%							
Sn 242.170†	4584.2	2.997	mg/L	0.0675	2.997 mg/L	0.0675	2.25%
Sr 407.771*†	88312.9	0.2974	mg/L	0.00362	0.2974 mg/L	0.00362	1.22%
QC value within limits for Sr 407.771* Recovery = 99.12%							

Ti 334.940†	435198.5	0.5825 mg/L	0.00060	0.5825 mg/L	0.00060	0.10%
Ti 336.121*†	313011.0	0.6005 mg/L	0.00027	0.6005 mg/L	0.00027	0.05%
QC value within limits for Ti 336.121* Recovery = 100.08%						
Tl 190.801*†	2423.6	1.506 mg/L	0.0217	1.506 mg/L	0.0217	1.44%
QC value within limits for Tl 190.801* Recovery = 100.41%						
V 292.402*†	227070.3	1.886 mg/L	0.0038	1.886 mg/L	0.0038	0.20%
QC value within limits for V 292.402* Recovery = 100.60%						
Zn 206.200*†	83898.5	2.486 mg/L	0.0119	2.486 mg/L	0.0119	0.48%
QC value within limits for Zn 206.200* Recovery = 99.42%						
Zn 213.857*†	155769.8	2.532 mg/L	0.0058	2.532 mg/L	0.0058	0.23%
QC value within limits for Zn 213.857* Recovery = 101.29%						

All analyte(s) passed QC.

Sequence No.: 24
 Sample ID: CCB-R12091601
 Analyst: 935 icp 7300
 Initial Sample Wt:
 Dilution:
 Wash Time: 15

Autosampler Location: 1
 Date Collected: 3/24/2017 1:00:01 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

 Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Tb 384	79043.7	107.3	%	1.70			1.58%
Tb 350	128681.6	108.4	%	2.22			2.05%
Ag 328.068*†	-232.9	-0.0014	mg/L	0.00057	-0.0014 mg/L	0.00057	41.09%
QC value within limits for Ag 328.068* Recovery = Not calculated							
Al 308.215*†	-48.7	-0.0032	mg/L	0.00060	-0.0032 mg/L	0.00060	18.97%
As 188.979†	6.0	0.0034	mg/L	0.00397	0.0034 mg/L	0.00397	117.72%
As 193.696*†	3.5	0.0028	mg/L	0.00577	0.0028 mg/L	0.00577	205.97%
QC value within limits for As 193.696* Recovery = Not calculated							
B 249.677*†	2427.6	0.0574	mg/L	0.00250	0.0574 mg/L	0.00250	4.35%
Ba 233.527*†	734.4	0.0054	mg/L	0.00032	0.0054 mg/L	0.00032	5.97%
Be 313.042*†	1287.0	0.0004	mg/L	0.00002	0.0004 mg/L	0.00002	4.16%
Ca 317.933*†	39.6	0.0239	mg/L	0.00234	0.0239 mg/L	0.00234	9.80%
Cd 226.502*†	55.4	0.0008	mg/L	0.00014	0.0008 mg/L	0.00014	16.84%
Cd 228.802†	29.2	0.0008	mg/L	0.00012	0.0008 mg/L	0.00012	13.62%
Co 228.616*†	37.9	0.0016	mg/L	0.00077	0.0016 mg/L	0.00077	49.44%
Cr 267.716*†	0.2	0.0000	mg/L	0.00009	0.0000 mg/L	0.00009	>999.9%
Cu 324.752*†	0.3	0.0000	mg/L	0.00141	0.0000 mg/L	0.00141	>999.9%
Fe 273.955*†	41.6	0.0020	mg/L	0.00034	0.0020 mg/L	0.00034	16.38%
K 766.490*†	9.3	0.0035	mg/L	0.12553	0.0035 mg/L	0.12553	>999.9%
Mg 279.077*†	478.4	0.0294	mg/L	0.00615	0.0294 mg/L	0.00615	20.94%
Mn 257.610*†	443.4	0.0008	mg/L	0.00000	0.0008 mg/L	0.00000	0.41%
Mo 202.031*†	16.6	0.0020	mg/L	0.00030	0.0020 mg/L	0.00030	14.97%
Na 589.592*†	1185.4	0.2994	mg/L	0.04279	0.2994 mg/L	0.04279	14.29%
Ni 231.604*†	32.5	0.0016	mg/L	0.00100	0.0016 mg/L	0.00100	62.39%
P 213.617*†	28.0	0.0177	mg/L	0.00229	0.0177 mg/L	0.00229	12.97%
P 214.914†	-4.2	-0.0040	mg/L	0.00411	-0.0040 mg/L	0.00411	102.88%
Pb 220.353*†	18.8	0.0028	mg/L	0.00090	0.0028 mg/L	0.00090	32.31%
Sb 206.836†	4.4	0.0027	mg/L	0.00091	0.0027 mg/L	0.00091	33.47%
Sb 217.582*†	8.6	0.0052	mg/L	0.00377	0.0052 mg/L	0.00377	71.97%
QC value within limits for Sb 217.582* Recovery = Not calculated							
Se 196.026*†	9.1	0.0049	mg/L	0.00098	0.0049 mg/L	0.00098	19.90%
QC value within limits for Se 196.026* Recovery = Not calculated							
Si 251.611*†	743.4	0.0220	mg/L	0.00223	0.0220 mg/L	0.00223	10.15%
Sn 189.927*†	84.0	0.0164	mg/L	0.00282	0.0164 mg/L	0.00282	17.22%
Sn 242.170†	22.7	0.0148	mg/L	0.01860	0.0148 mg/L	0.01860	125.35%
Sr 407.771*†	58.3	0.0002	mg/L	0.00005	0.0002 mg/L	0.00005	24.64%
Ti 334.940†	566.9	0.0008	mg/L	0.00031	0.0008 mg/L	0.00031	41.16%
Ti 336.121*†	433.5	0.0008	mg/L	0.00021	0.0008 mg/L	0.00021	25.37%
Tl 190.801*†	13.7	0.0085	mg/L	0.00393	0.0085 mg/L	0.00393	46.14%
V 292.402*†	271.6	0.0023	mg/L	0.00103	0.0023 mg/L	0.00103	45.54%
Zn 206.200*†	63.7	0.0019	mg/L	0.00017	0.0019 mg/L	0.00017	9.27%
QC value within limits for Zn 206.200* Recovery = Not calculated							
Zn 213.857*†	101.3	0.0016	mg/L	0.00007	0.0016 mg/L	0.00007	3.96%
QC value within limits for Zn 213.857* Recovery = Not calculated							

All analyte(s) passed QC.

EPA 6010B ICP Metals (Aqueous)

Sample Data

RAW DATA SHEET FOR METHOD: EPA 6010B

WORK ORDER: 17-03-1523
INSTRUMENT: ICP 7300
EXTRACTION: EPA 3010A Total
D/T EXTRACTED: 2017-03-23 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-24 12:44
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170324C 1\17-03-1523-2.icp

2 **CLIENT SAMPLE NUMBER:** IDW-W

LCS/MB BATCH: 170323LA5 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
MS/MSD BATCH: 170323SA5 **FINAL VOLUME / WEIGHT:** DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
UNITS: mg/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Antimony	0.0226	1.00	0.0226	0.0150	
Arsenic	0.00944	1.00	ND	0.0100	
Barium	0.160	1.00	0.160	0.0100	
Beryllium	0.000298	1.00	ND	0.0100	
Cadmium	0.00207	1.00	ND	0.0100	
Chromium	0.104	1.00	0.104	0.0100	
Cobalt	0.00687	1.00	ND	0.0100	
Copper	0.0602	1.00	0.0602	0.0100	
Lead	0.00759	1.00	ND	0.0100	
Molybdenum	0.0412	1.00	0.0412	0.0100	
Nickel	0.0258	1.00	0.0258	0.0100	
Selenium	-0.00824	1.00	ND	0.0150	
Silver	-0.000388	1.00	ND	0.00500	
Thallium	-0.000669	1.00	ND	0.0150	
Vanadium	0.0235	1.00	0.0235	0.0100	
Zinc	0.539	1.00	0.539	0.0100	

Return to Contents

Sequence No.: 7
 Sample ID: 17-03-1523-2
 Analyst: 935 icp 7300
 Initial Sample Wt:
 Dilution:
 Wash Time: 15

Autosampler Location: 336
 Date Collected: 3/24/2017 12:44:20 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

Mean Data: 17-03-1523-2

Analyte	Mean Corrected		Calib.		Sample		RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	
Tb 384	66281.7	89.96	%	0.010			0.01%
Tb 350	112162.0	94.45	%	0.307			0.33%
Ag 328.068*†	-65.2	-0.0004	mg/L	0.00019	-0.0004	mg/L	0.00019 48.46%
Al 308.215*†	138954.2	9.005	mg/L	0.0135	9.005	mg/L	0.0135 0.15%
As 188.979†	18.8	0.0107	mg/L	0.00053	0.0107	mg/L	0.00053 4.98%
As 193.696*†	11.6	0.0094	mg/L	0.00275	0.0094	mg/L	0.00275 29.14%
B 249.677*†	6470.3	0.1531	mg/L	0.00072	0.1531	mg/L	0.00072 0.47%
Ba 233.527*†	21647.1	0.1602	mg/L	0.00119	0.1602	mg/L	0.00119 0.75%
Be 313.042*†	994.4	0.0003	mg/L	0.00000	0.0003	mg/L	0.00000 0.42%
Ca 317.933*†	137907.8	83.11	mg/L	1.137	83.11	mg/L	1.137 1.37%
Cd 226.502*†	137.6	0.0021	mg/L	0.00001	0.0021	mg/L	0.00001 0.45%
Cd 228.802†	23.4	0.0007	mg/L	0.00020	0.0007	mg/L	0.00020 29.06%
Co 228.616*†	167.9	0.0069	mg/L	0.00055	0.0069	mg/L	0.00055 8.00%
Cr 267.716*†	10379.2	0.1042	mg/L	0.00190	0.1042	mg/L	0.00190 1.82%
Cu 324.752*†	13282.1	0.0602	mg/L	0.00044	0.0602	mg/L	0.00044 0.73%
Fe 273.955*†	340532.4	16.74	mg/L	0.014	16.74	mg/L	0.014 0.08%
K 766.490*†	108636.4	40.92	mg/L	0.673	40.92	mg/L	0.673 1.64%
Mg 279.077*†	262292.7	16.09	mg/L	0.037	16.09	mg/L	0.037 0.23%
Mn 257.610*†	161914.4	0.2837	mg/L	0.00080	0.2837	mg/L	0.00080 0.28%
Mo 202.031*†	336.0	0.0412	mg/L	0.00090	0.0412	mg/L	0.00090 2.18%
Na 589.592*†	533138.1	134.7	mg/L	1.57	134.7	mg/L	1.57 1.17%
Ni 231.604*†	524.6	0.0258	mg/L	0.00055	0.0258	mg/L	0.00055 2.14%
P 213.617*†	654.5	0.4124	mg/L	0.00095	0.4124	mg/L	0.00095 0.23%
P 214.914†	489.7	0.4651	mg/L	0.00313	0.4651	mg/L	0.00313 0.67%
Pb 220.353*†	51.3	0.0076	mg/L	0.00374	0.0076	mg/L	0.00374 49.23%
Sb 206.836†	34.2	0.0210	mg/L	0.00503	0.0210	mg/L	0.00503 23.98%
Sb 217.582*†	36.9	0.0226	mg/L	0.00734	0.0226	mg/L	0.00734 32.48%
Se 196.026*†	-15.2	-0.0082	mg/L	0.00123	-0.0082	mg/L	0.00123 14.93%
Si 251.611*†	890692.4	26.34	mg/L	0.040	26.34	mg/L	0.040 0.15%
Sn 189.927*†	35.6	0.0069	mg/L	0.00354	0.0069	mg/L	0.00354 51.02%
Sn 242.170†	89.0	0.0582	mg/L	0.01432	0.0582	mg/L	0.01432 24.61%
Sr 407.771*†	183899.3	0.6192	mg/L	0.00748	0.6192	mg/L	0.00748 1.21%
Ti 334.940†	475805.0	0.6368	mg/L	0.00420	0.6368	mg/L	0.00420 0.66%
Ti 336.121*†	344941.4	0.6617	mg/L	0.00205	0.6617	mg/L	0.00205 0.31%
Tl 190.801*†	-1.1	-0.0007	mg/L	0.00332	-0.0007	mg/L	0.00332 496.14%
V 292.402*†	2859.6	0.0235	mg/L	0.00184	0.0235	mg/L	0.00184 7.83%
Zn 206.200*†	17636.6	0.5225	mg/L	0.00162	0.5225	mg/L	0.00162 0.31%
Zn 213.857*†	33230.6	0.5389	mg/L	0.00202	0.5389	mg/L	0.00202 0.37%

EPA 6010B ICP Metals (Aqueous)

Quality Control

Method Blank
LCS/LCSD
MS/MSD

**METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 6010B**

MB SAMPLE ID: 097-01-003-16377
MB BATCH ID: 170323LA5
INSTRUMENT: ICP 7300
EXTRACTION: EPA 3010A Total
D/T EXTRACTED: 2017-03-23 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-24 12:38
REVIEWED BY: 309
D/T REVIEWED: 2017-03-24 16:37
MATRIX: Water

DATA FILE: W:\ICP-DATA\170324C 1\170323-ba-5__139.icp

CLIENT WORK ORDER: 17-03-1523

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
2	IDW-W		2017-03-24 12:44	W:\ICP-DATA\170324C 1\17-03-1523-2.icp



RAW DATA SHEET FOR METHOD: EPA 6010B

WORK ORDER: 097-01-003
INSTRUMENT: ICP 7300
EXTRACTION: EPA 3010A Total
D/T EXTRACTED: 2017-03-23 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-24 12:38
REVIEWED BY: 309
D/T REVIEWED: 2017-03-24 16:37

DATA FILE: W:\ICP-DATA\170324C 1\170323-ba-5__139.icp

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170323LA5 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
UNITS: mg/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Antimony	0.0000834	1.00	ND	0.0150	
Arsenic	-0.00242	1.00	ND	0.0100	
Barium	0.000279	1.00	ND	0.0100	
Beryllium	-0.00000867	1.00	ND	0.0100	
Cadmium	0.000350	1.00	ND	0.0100	
Chromium	0.0000597	1.00	ND	0.0100	
Cobalt	0.0000553	1.00	ND	0.0100	
Copper	0.000275	1.00	ND	0.0100	
Lead	0.00116	1.00	ND	0.0100	
Molybdenum	-0.000133	1.00	ND	0.0100	
Nickel	0.000275	1.00	ND	0.0100	
Selenium	0.00147	1.00	ND	0.0150	
Silver	-0.00168	1.00	ND	0.00500	
Thallium	0.0101	1.00	ND	0.0150	
Vanadium	0.00140	1.00	ND	0.0100	
Boron	0.0333	1.00	ND	0.0400	
Zinc	0.00171	1.00	ND	0.0100	

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LCS QUALITY CONTROL SHEET FOR METHOD: EPA 6010B

LCS SAMPLE ID: 097-01-003-16377
LCS/MB BATCH ID: 170323LA5
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3010A Total
D/T EXTRACTED: 2017-03-23 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-24 12:39
REVIEWED BY: 309
D/T REVIEWED: 2017-03-24 16:37

DATA FILE: W:\ICP-DATA\170324C 1170323-la-5__140.icp

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Antimony	0.5000	0.4219	84	80-120	73-127	PASS	
Arsenic	0.5000	0.4927	99	80-120	73-127	PASS	
Barium	0.5000	0.5354	107	80-120	73-127	PASS	
Beryllium	0.5000	0.5139	103	80-120	73-127	PASS	
Cadmium	0.5000	0.5453	109	80-120	73-127	PASS	
Chromium	0.5000	0.5540	111	80-120	73-127	PASS	
Cobalt	0.5000	0.5688	114	80-120	73-127	PASS	
Copper	0.5000	0.5581	112	80-120	73-127	PASS	
Lead	0.5000	0.5651	113	80-120	73-127	PASS	
Molybdenum	0.5000	0.5161	103	80-120	73-127	PASS	
Nickel	0.5000	0.5490	110	80-120	73-127	PASS	
Phosphorus	0.5000	0.5196	104	80-120	73-127	PASS	
Selenium	0.5000	0.5041	101	80-120	73-127	PASS	
Silver	0.2500	0.2662	106	80-120	73-127	PASS	
Thallium	0.5000	0.5526	111	80-120	73-127	PASS	
Vanadium	0.5000	0.5328	107	80-120	73-127	PASS	
Aluminum	0.5000	0.5440	109	80-120	73-127	PASS	
Calcium	0.5000	0.5345	107	80-120	73-127	PASS	
Iron	0.5000	0.5388	108	80-120	73-127	PASS	
Magnesium	0.5000	0.5973	119	80-120	73-127	PASS	
Manganese	0.5000	0.5268	105	80-120	73-127	PASS	
Potassium	5.000	5.242	105	80-120	73-127	PASS	
Sodium	5.000	5.399	108	80-120	73-127	PASS	
Strontium	0.5000	0.5649	113	80-120	73-127	PASS	
Tin	0.5000	0.5258	105	80-120	73-127	PASS	
Titanium	0.5000	0.5281	106	80-120	73-127	PASS	
Boron	0.5000	0.5087	102	80-120	73-127	PASS	
Silicon	0.5000	0.5106	102	80-120	73-127	PASS	
Zinc	0.5000	0.5687	114	80-120	73-127	PASS	

LCS QUALITY CONTROL SHEET FOR METHOD: EPA 6010B

LCS SAMPLE ID: **097-01-003-16377**
LCS/MB BATCH ID: 170323LA5
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3010A Total
D/T EXTRACTED: 2017-03-23 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-24 12:39
REVIEWED BY: 309
D/T REVIEWED: 2017-03-24 16:37

DATA FILE: W:\ICP-DATA\170324C\1170323-la-5__140.icp

<u>COMPOUND</u>	<u>CONC</u>	<u>CONC REC</u>	<u>%REC</u>	<u>%REC CL</u>	<u>ME CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
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Total number of LCS compounds: 29
 Total number of ME compounds: 0
 Total number of ME compounds allowed: 1
 LCS ME CL validation result: Pass

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 6010B

SPIKED SAMPLE ID: 17-03-1614-1
MS/MSD BATCH: 170323SA5
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3010A Total
D/T EXTRACTED:
SAMPLE: 2017-03-23 00:00
MS: 2017-03-23 00:00
MSD: 2017-03-23 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-24 12:51
MS: 2017-03-24 12:52
MSD: 2017-03-24 12:53
REVIEWED BY: 309
D/T REVIEWED: 2017-03-24 16:38

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Antimony	ND	0.5000	0.5000	0.4801	96	0.4962	99	72-132	3	0-10	PASS	
Arsenic	0.01171	0.5000	0.5000	0.4935	96	0.5282	103	80-140	7	0-11	PASS	
Barium	0.1240	0.5000	0.5000	0.6010	95	0.6555	106	87-123	9	0-6	FAIL	4
Beryllium	ND	0.5000	0.5000	0.4743	95	0.5122	102	89-119	8	0-8	PASS	
Cadmium	ND	0.5000	0.5000	0.4831	97	0.5235	105	82-124	8	0-7	FAIL	4
Chromium	ND	0.5000	0.5000	0.4952	99	0.5329	107	86-122	7	0-8	PASS	
Cobalt	ND	0.5000	0.5000	0.4905	98	0.5079	102	83-125	3	0-7	PASS	
Copper	0.02312	0.5000	0.5000	0.5037	96	0.5417	104	78-126	7	0-7	PASS	
Lead	0.1053	0.5000	0.5000	0.6002	99	0.6253	104	84-120	4	0-7	PASS	
Molybdenum	ND	0.5000	0.5000	0.4932	99	0.5094	102	78-126	3	0-7	PASS	
Nickel	ND	0.5000	0.5000	0.4691	94	0.4854	97	84-120	3	0-7	PASS	
Phosphorus	ND	0.5000	0.5000	0.5604	112	0.5764	115	80-140	3	0-6	PASS	
Selenium	ND	0.5000	0.5000	0.4765	95	0.4923	98	79-127	3	0-9	PASS	
Silver	ND	0.2500	0.2500	0.2424	97	0.2628	105	86-128	8	0-7	FAIL	4
Thallium	ND	0.5000	0.5000	0.4875	98	0.4915	98	79-121	1	0-8	PASS	
Vanadium	ND	0.5000	0.5000	0.4912	98	0.5306	106	88-118	8	0-7	FAIL	4
Aluminum	0.1198	0.5000	0.5000	0.6308	102	0.6901	114	73-145	9	0-16	PASS	
Calcium	79.13	0.5000	0.5000	79.01	4x	83.63	4x	77-113	4x	0-11	PASS	Q
Iron	0.3400	0.5000	0.5000	0.8194	96	0.8872	109	65-149	8	0-21	PASS	
Magnesium	24.36	0.5000	0.5000	23.99	4x	26.42	4x	56-140	4x	0-11	PASS	Q
Manganese	0.01397	0.5000	0.5000	0.4804	93	0.5178	101	86-116	7	0-7	PASS	
Potassium	6.093	5.0000	5.0000	11.20	102	11.55	109	83-131	3	0-7	PASS	
Sodium	89.71	5.0000	5.0000	94.72	4x	99.41	4x	73-127	4x	0-9	PASS	Q
Strontium	0.9092	0.5000	0.5000	1.430	104	1.495	117	81-123	4	0-6	PASS	
Tin	ND	0.5000	0.5000	0.4990	100	0.5147	103	49-151	3	0-5	PASS	
Titanium	ND	0.5000	0.5000	0.4876	98	0.5249	105	92-128	7	0-5	FAIL	4
Boron	0.2801	0.5000	0.5000	0.7588	96	0.8308	110	81-135	9	0-7	FAIL	4
Silicon	12.41	0.5000	0.5000	12.48	4x	13.75	4x	24-180	4x	0-15	PASS	Q

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 6010B

SPIKED SAMPLE ID: 17-03-1614-1
MS/MSD BATCH: 170323SA5
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3010A Total
D/T EXTRACTED:
SAMPLE: 2017-03-23 00:00
MS: 2017-03-23 00:00
MSD: 2017-03-23 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-24 12:51
MS: 2017-03-24 12:52
MSD: 2017-03-24 12:53
REVIEWED BY: 309
D/T REVIEWED: 2017-03-24 16:38

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	%MS.REC	MSD CONC	%MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Zinc	0.5233	0.5000	0.5000	1.047	105	1.139	123	89-131	8	0-8	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-1614-1 ms.icp	W:\ICP-DATA\170324C 1\
MSD	17-03-1614-1 msd.icp	W:\ICP-DATA\170324C 1\



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Sequence No.: 1
Sample ID: 170323-ba-5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 330
Date Collected: 3/24/2017 12:38:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 170323-ba-5

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
Tb 384	76757.1	104.2	%	1.38				1.32%
Tb 350	125304.3	105.5	%	2.05				1.94%
Ag 328.068*†	-282.4	-0.0017	mg/L	0.00015	-0.0017	mg/L	0.00015	8.73%
Al 308.215*†	-299.2	-0.0194	mg/L	0.00632	-0.0194	mg/L	0.00632	137.88%
As 188.979†	-6.2	-0.0035	mg/L	0.00480	-0.0035	mg/L	0.00480	93.23%
As 193.696*†	-3.0	-0.0024	mg/L	0.00226	-0.0024	mg/L	0.00226	3.13%
B 249.677*†	1406.3	0.0333	mg/L	0.00104	0.0333	mg/L	0.00104	63.32%
Ba 233.527*†	37.7	0.0003	mg/L	0.00018	0.0003	mg/L	0.00018	73.08%
Be 313.042*†	-28.9	-0.0000	mg/L	0.00001	-0.0000	mg/L	0.00001	30.22%
Ca 317.933*†	9.6	0.0058	mg/L	0.00175	0.0058	mg/L	0.00175	23.89%
Cd 226.502*†	23.3	0.0003	mg/L	0.00008	0.0003	mg/L	0.00008	>999.9%
Cd 228.802†	1.3	0.0000	mg/L	0.00038	0.0000	mg/L	0.00038	260.86%
Co 228.616*†	1.4	0.0001	mg/L	0.00014	0.0001	mg/L	0.00014	315.08%
Cr 267.716*†	6.0	0.0001	mg/L	0.00019	0.0001	mg/L	0.00019	47.64%
Cu 324.752*†	60.8	0.0003	mg/L	0.00013	0.0003	mg/L	0.00013	20.06%
Fe 273.955*†	-75.4	-0.0037	mg/L	0.00074	-0.0037	mg/L	0.00074	>999.9%
K 766.490*†	-9.8	-0.0037	mg/L	0.08295	-0.0037	mg/L	0.08295	63.44%
Mg 279.077*†	272.7	0.0167	mg/L	0.01061	0.0167	mg/L	0.01061	34.95%
Mn 257.610*†	139.9	0.0002	mg/L	0.00009	0.0002	mg/L	0.00009	170.24%
Mo 202.031*†	-1.1	-0.0001	mg/L	0.00023	-0.0001	mg/L	0.00023	90.56%
Na 589.592*†	-51.4	-0.0130	mg/L	0.01177	-0.0130	mg/L	0.01177	145.12%
Ni 231.604*†	5.6	0.0003	mg/L	0.00040	0.0003	mg/L	0.00040	9.99%
P 213.617*†	23.7	0.0149	mg/L	0.00149	0.0149	mg/L	0.00149	122.95%
P 214.914†	-14.4	-0.0137	mg/L	0.01684	-0.0137	mg/L	0.01684	3.28%
Pb 220.353*†	7.9	0.0012	mg/L	0.00004	0.0012	mg/L	0.00004	149.89%
Sb 206.836†	-5.9	-0.0036	mg/L	0.00540	-0.0036	mg/L	0.00540	>999.9%
Sb 217.582*†	0.1	0.0001	mg/L	0.00427	0.0001	mg/L	0.00427	30.23%
Se 196.026*†	2.7	0.0015	mg/L	0.00044	0.0015	mg/L	0.00044	119.63%
Si 251.611*†	55.4	0.0016	mg/L	0.00196	0.0016	mg/L	0.00196	58.23%
Sn 189.927*†	17.4	0.0034	mg/L	0.00197	0.0034	mg/L	0.00197	121.09%
Sn 242.170†	39.2	0.0256	mg/L	0.03102	0.0256	mg/L	0.03102	23.51%
Sr 407.771*†	14.5	0.0000	mg/L	0.00001	0.0000	mg/L	0.00001	147.12%
Ti 334.940†	101.7	0.0001	mg/L	0.00020	0.0001	mg/L	0.00020	182.99%
Ti 336.121*†	50.6	0.0001	mg/L	0.00018	0.0001	mg/L	0.00018	45.41%
Tl 190.801*†	16.2	0.0101	mg/L	0.00457	0.0101	mg/L	0.00457	48.60%
V 292.402*†	169.0	0.0014	mg/L	0.00068	0.0014	mg/L	0.00068	3.51%
Zn 206.200*†	49.4	0.0015	mg/L	0.00005	0.0015	mg/L	0.00005	4.96%
Zn 213.857*†	105.2	0.0017	mg/L	0.00008	0.0017	mg/L	0.00008	

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Sequence No.: 2
Sample ID: 170323-la-5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 331
Date Collected: 3/24/2017 12:39:29 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 170323-la-5

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
Tb 384	78379.5	106.4	%	0.05				0.04%
Tb 350	128463.8	108.2	%	0.54				0.50%
Ag 328.068*†	44725.3	0.2662	mg/L	0.00130	0.2662	mg/L	0.00130	0.49%
Al 308.215*†	8395.1	0.5440	mg/L	0.00165	0.5440	mg/L	0.00165	0.30%
As 188.979†	862.1	0.4884	mg/L	0.00409	0.4884	mg/L	0.00409	0.84%
As 193.696*†	606.6	0.4927	mg/L	0.00242	0.4927	mg/L	0.00242	0.49%
B 249.677*†	21500.7	0.5087	mg/L	0.00534	0.5087	mg/L	0.00534	1.05%
Ba 233.527*†	72346.4	0.5354	mg/L	0.00060	0.5354	mg/L	0.00060	0.11%
Be 313.042*†	1712265.8	0.5139	mg/L	0.00688	0.5139	mg/L	0.00688	1.34%
Ca 317.933*†	886.9	0.5345	mg/L	0.00298	0.5345	mg/L	0.00298	0.56%
Cd 226.502*†	36287.6	0.5453	mg/L	0.00030	0.5453	mg/L	0.00030	0.05%
Cd 228.802†	18840.9	0.5480	mg/L	0.00101	0.5480	mg/L	0.00101	0.18%
Co 228.616*†	13895.2	0.5688	mg/L	0.00026	0.5688	mg/L	0.00026	0.05%
Cr 267.716*†	55203.2	0.5540	mg/L	0.00038	0.5540	mg/L	0.00038	0.07%
Cu 324.752*†	123145.6	0.5581	mg/L	0.00234	0.5581	mg/L	0.00234	0.42%
Fe 273.955*†	10958.9	0.5388	mg/L	0.00057	0.5388	mg/L	0.00057	0.11%
K 766.490*†	13916.8	5.242	mg/L	0.0213	5.242	mg/L	0.0213	0.41%
Mg 279.077*†	9735.3	0.5973	mg/L	0.00194	0.5973	mg/L	0.00194	0.32%
Mn 257.610*†	300607.6	0.5268	mg/L	0.00187	0.5268	mg/L	0.00187	0.35%
Mo 202.031*†	4203.6	0.5161	mg/L	0.00657	0.5161	mg/L	0.00657	1.27%
Na 589.592*†	21376.5	5.399	mg/L	0.0102	5.399	mg/L	0.0102	0.19%
Ni 231.604*†	11141.1	0.5490	mg/L	0.00131	0.5490	mg/L	0.00131	0.24%
P 213.617*†	824.7	0.5196	mg/L	0.01900	0.5196	mg/L	0.01900	3.66%
P 214.914†	504.1	0.4787	mg/L	0.00880	0.4787	mg/L	0.00880	1.84%
Pb 220.353*†	3823.1	0.5651	mg/L	0.00184	0.5651	mg/L	0.00184	0.33%
Sb 206.836†	680.0	0.4178	mg/L	0.00442	0.4178	mg/L	0.00442	1.06%
Sb 217.582*†	689.0	0.4219	mg/L	0.00293	0.4219	mg/L	0.00293	0.69%
Se 196.026*†	931.5	0.5041	mg/L	0.00005	0.5041	mg/L	0.00005	0.01%
Si 251.611*†	17268.2	0.5106	mg/L	0.00186	0.5106	mg/L	0.00186	0.36%
Sn 189.927*†	2695.5	0.5258	mg/L	0.01641	0.5258	mg/L	0.01641	3.12%
Sn 242.170†	861.9	0.5634	mg/L	0.00876	0.5634	mg/L	0.00876	1.55%
Sr 407.771*†	167776.5	0.5649	mg/L	0.00252	0.5649	mg/L	0.00252	0.45%
Ti 334.940†	388020.7	0.5193	mg/L	0.00660	0.5193	mg/L	0.00660	1.27%
Ti 336.121*†	275294.5	0.5281	mg/L	0.00076	0.5281	mg/L	0.00076	0.14%
Tl 190.801*†	889.2	0.5526	mg/L	0.00020	0.5526	mg/L	0.00020	0.04%
V 292.402*†	64141.3	0.5328	mg/L	0.00336	0.5328	mg/L	0.00336	0.63%
Zn 206.200*†	18514.8	0.5485	mg/L	0.00527	0.5485	mg/L	0.00527	0.96%
Zn 213.857*†	34984.9	0.5687	mg/L	0.00128	0.5687	mg/L	0.00128	0.23%

Sequence No.: 16

Sample ID: 17-03-1614-1 ms

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 343

Date Collected: 3/24/2017 12:52:43 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: 17-03-1614-1 ms

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD	
	Intensity				Conc. Units	Std.Dev.		
Tb 384	71480.2		97.02 %	1.209			1.25%	
Tb 350	119577.3		100.7 %	0.08			0.08%	
Ag 328.068*†	40723.1	0.2424	mg/L	0.00230	0.2424	mg/L	0.00230	0.95%
Al 308.215*†	9733.5	0.6308	mg/L	0.00292	0.6308	mg/L	0.00292	0.46%
As 188.979†	883.6	0.5006	mg/L	0.00646	0.5006	mg/L	0.00646	1.29%
As 193.696*†	607.5	0.4935	mg/L	0.00181	0.4935	mg/L	0.00181	0.37%
B 249.677*†	32073.0	0.7588	mg/L	0.00819	0.7588	mg/L	0.00819	1.08%
Ba 233.527*†	81212.8	0.6010	mg/L	0.00093	0.6010	mg/L	0.00093	0.15%
Be 313.042*†	1580309.4	0.4743	mg/L	0.00531	0.4743	mg/L	0.00531	1.12%
Ca 317.933*†	131103.6	79.01	mg/L	1.073	79.01	mg/L	1.073	1.36%
Cd 226.502*†	32147.0	0.4831	mg/L	0.00425	0.4831	mg/L	0.00425	0.88%
Cd 228.802†	17132.3	0.4983	mg/L	0.00156	0.4983	mg/L	0.00156	0.31%
Co 228.616*†	11982.8	0.4905	mg/L	0.00242	0.4905	mg/L	0.00242	0.49%
Cr 267.716*†	49351.8	0.4952	mg/L	0.00222	0.4952	mg/L	0.00222	0.45%
Cu 324.752*†	111147.2	0.5037	mg/L	0.00203	0.5037	mg/L	0.00203	0.40%
Fe 273.955*†	16666.8	0.8194	mg/L	0.00414	0.8194	mg/L	0.00414	0.51%
K 766.490*†	29731.0	11.20	mg/L	0.211	11.20	mg/L	0.211	1.88%
Mg 279.077*†	390987.0	23.99	mg/L	0.170	23.99	mg/L	0.170	0.71%
Mn 257.610*†	274163.3	0.4804	mg/L	0.00205	0.4804	mg/L	0.00205	0.43%
Mo 202.031*†	4016.8	0.4932	mg/L	0.00000	0.4932	mg/L	0.00000	0.00%
Na 589.592*†	374991.9	94.72	mg/L	1.172	94.72	mg/L	1.172	1.24%
Ni 231.604*†	9520.3	0.4691	mg/L	0.00155	0.4691	mg/L	0.00155	0.33%
P 213.617*†	889.5	0.5604	mg/L	0.00916	0.5604	mg/L	0.00916	1.63%
P 214.914†	571.8	0.5430	mg/L	0.01226	0.5430	mg/L	0.01226	2.26%
Pb 220.353*†	4060.6	0.6002	mg/L	0.00086	0.6002	mg/L	0.00086	0.14%
Sb 206.836†	771.5	0.4740	mg/L	0.00479	0.4740	mg/L	0.00479	1.01%
Sb 217.582*†	784.2	0.4801	mg/L	0.00174	0.4801	mg/L	0.00174	0.36%
Se 196.026*†	880.6	0.4765	mg/L	0.00496	0.4765	mg/L	0.00496	1.04%
Si 251.611*†	422034.4	12.48	mg/L	0.044	12.48	mg/L	0.044	0.35%
Sn 189.927*†	2558.2	0.4990	mg/L	0.00714	0.4990	mg/L	0.00714	1.43%
Sn 242.170†	823.2	0.5381	mg/L	0.01391	0.5381	mg/L	0.01391	2.59%
Sr 407.771*†	424651.0	1.430	mg/L	0.0190	1.430	mg/L	0.0190	1.33%
Ti 334.940†	351973.1	0.4711	mg/L	0.00064	0.4711	mg/L	0.00064	0.14%
Ti 336.121*†	254163.5	0.4876	mg/L	0.00089	0.4876	mg/L	0.00089	0.18%
Tl 190.801*†	784.5	0.4875	mg/L	0.00635	0.4875	mg/L	0.00635	1.30%
V 292.402*†	59135.9	0.4912	mg/L	0.00297	0.4912	mg/L	0.00297	0.61%
Zn 206.200*†	34292.5	1.016	mg/L	0.0001	1.016	mg/L	0.0001	0.01%
Zn 213.857*†	64414.6	1.047	mg/L	0.0067	1.047	mg/L	0.0067	0.64%

Sequence No.: 17

Sample ID: 17-03-1614-1 msd

Analyst: 935 icp 7300

Initial Sample Wt:

Dilution:

Wash Time: 20

Autosampler Location: 344

Date Collected: 3/24/2017 12:53:38 PM

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Auto Dilution Factor: 1

Mean Data: 17-03-1614-1 msd

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
Tb 384	73151.1	99.29	%	0.564				0.57%
Tb 350	122588.4	103.2	%	0.11				0.11%
Ag 328.068*†	44161.0	0.2628	mg/L	0.00172	0.2628	mg/L	0.00172	0.66%
Al 308.215*†	10649.3	0.6901	mg/L	0.00451	0.6901	mg/L	0.00451	0.65%
As 188.979†	920.1	0.5213	mg/L	0.00641	0.5213	mg/L	0.00641	1.23%
As 193.696*†	650.2	0.5282	mg/L	0.00136	0.5282	mg/L	0.00136	0.26%
B 249.677*†	35116.1	0.8308	mg/L	0.01753	0.8308	mg/L	0.01753	2.11%
Ba 233.527*†	88576.7	0.6555	mg/L	0.00420	0.6555	mg/L	0.00420	0.64%
Be 313.042*†	1706640.6	0.5122	mg/L	0.00418	0.5122	mg/L	0.00418	0.82%
Ca 317.933*†	138768.6	83.63	mg/L	1.354	83.63	mg/L	1.354	1.62%
Cd 226.502*†	34837.9	0.5235	mg/L	0.00417	0.5235	mg/L	0.00417	0.80%
Cd 228.802†	17717.3	0.5154	mg/L	0.00578	0.5154	mg/L	0.00578	1.12%
Co 228.616*†	12407.9	0.5079	mg/L	0.00405	0.5079	mg/L	0.00405	0.80%
Cr 267.716*†	53101.3	0.5329	mg/L	0.00232	0.5329	mg/L	0.00232	0.44%
Cu 324.752*†	119527.2	0.5417	mg/L	0.00282	0.5417	mg/L	0.00282	0.52%
Fe 273.955*†	18044.5	0.8872	mg/L	0.01520	0.8872	mg/L	0.01520	1.71%
K 766.490*†	30671.6	11.55	mg/L	0.160	11.55	mg/L	0.160	1.38%
Mg 279.077*†	430650.8	26.42	mg/L	0.383	26.42	mg/L	0.383	1.45%
Mn 257.610*†	295486.1	0.5178	mg/L	0.00533	0.5178	mg/L	0.00533	1.03%
Mo 202.031*†	4149.2	0.5094	mg/L	0.00838	0.5094	mg/L	0.00838	1.65%
Na 589.592*†	393579.0	99.41	mg/L	1.345	99.41	mg/L	1.345	1.35%
Ni 231.604*†	9851.2	0.4854	mg/L	0.00536	0.4854	mg/L	0.00536	1.10%
P 213.617*†	914.8	0.5764	mg/L	0.01309	0.5764	mg/L	0.01309	2.27%
P 214.914†	594.4	0.5644	mg/L	0.02295	0.5644	mg/L	0.02295	4.07%
Pb 220.353*†	4229.9	0.6253	mg/L	0.00472	0.6253	mg/L	0.00472	0.75%
Sb 206.836†	809.8	0.4975	mg/L	0.00800	0.4975	mg/L	0.00800	1.61%
Sb 217.582*†	810.4	0.4962	mg/L	0.00212	0.4962	mg/L	0.00212	0.43%
Se 196.026*†	909.7	0.4923	mg/L	0.00784	0.4923	mg/L	0.00784	1.59%
Si 251.611*†	465055.9	13.75	mg/L	0.157	13.75	mg/L	0.157	1.14%
Sn 189.927*†	2638.6	0.5147	mg/L	0.00719	0.5147	mg/L	0.00719	1.40%
Sn 242.170†	838.6	0.5482	mg/L	0.02368	0.5482	mg/L	0.02368	4.32%
Sr 407.771*†	443865.6	1.495	mg/L	0.0230	1.495	mg/L	0.0230	1.54%
Ti 334.940†	379230.4	0.5076	mg/L	0.00381	0.5076	mg/L	0.00381	0.75%
Ti 336.121*†	273588.9	0.5249	mg/L	0.00477	0.5249	mg/L	0.00477	0.91%
Tl 190.801*†	790.8	0.4915	mg/L	0.00487	0.4915	mg/L	0.00487	0.99%
V 292.402*†	63878.5	0.5306	mg/L	0.00398	0.5306	mg/L	0.00398	0.75%
Zn 206.200*†	37174.5	1.101	mg/L	0.0162	1.101	mg/L	0.0162	1.47%
Zn 213.857*†	70057.2	1.139	mg/L	0.0091	1.139	mg/L	0.0091	0.80%

Sequence No.: 15
Sample ID: 17-03-1614-1
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 342
Date Collected: 3/24/2017 12:51:51 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 17-03-1614-1

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc. Units	Std.Dev.	Conc. Units	Std.Dev.	RSD		
Tb 384	73075.6	99.18 %	1.123					1.13%
Tb 350	121112.4	102.0 %	1.43					1.41%
Ag 328.068*†	-196.1	-0.0012 mg/L	0.00198	-0.0012 mg/L	0.00198	169.61%		
Al 308.215*†	1848.8	0.1198 mg/L	0.00000	0.1198 mg/L	0.00000	0.00%		
As 188.979†	13.4	0.0076 mg/L	0.00056	0.0076 mg/L	0.00056	7.34%		
As 193.696*†	14.4	0.0117 mg/L	0.00002	0.0117 mg/L	0.00002	0.18%		
B 249.677*†	11837.8	0.2801 mg/L	0.00355	0.2801 mg/L	0.00355	1.27%		
Ba 233.527*†	16752.6	0.1240 mg/L	0.00045	0.1240 mg/L	0.00045	0.36%		
Be 313.042*†	-14.0	-0.0000 mg/L	0.00002	-0.0000 mg/L	0.00002	481.25%		
Ca 317.933*†	131294.0	79.13 mg/L	1.627	79.13 mg/L	1.627	2.06%		
Cd 226.502*†	145.5	0.0022 mg/L	0.00011	0.0022 mg/L	0.00011	5.24%		
Cd 228.802†	38.2	0.0011 mg/L	0.00002	0.0011 mg/L	0.00002	1.99%		
Co 228.616*†	17.4	0.0007 mg/L	0.00051	0.0007 mg/L	0.00051	71.26%		
Cr 267.716*†	79.6	0.0008 mg/L	0.00002	0.0008 mg/L	0.00002	1.95%		
Cu 324.752*†	5102.4	0.0231 mg/L	0.00050	0.0231 mg/L	0.00050	2.18%		
Fe 273.955*†	6915.8	0.3400 mg/L	0.00361	0.3400 mg/L	0.00361	1.06%		
K 766.490*†	16176.2	6.093 mg/L	0.1315	6.093 mg/L	0.1315	2.16%		
Mg 279.077*†	397054.6	24.36 mg/L	0.154	24.36 mg/L	0.154	0.63%		
Mn 257.610*†	7972.0	0.0140 mg/L	0.00029	0.0140 mg/L	0.00029	2.10%		
Mo 202.031*†	71.4	0.0088 mg/L	0.00001	0.0088 mg/L	0.00001	0.08%		
Na 589.592*†	355185.8	89.71 mg/L	1.869	89.71 mg/L	1.869	2.08%		
Ni 231.604*†	25.4	0.0012 mg/L	0.00049	0.0012 mg/L	0.00049	39.62%		
P 213.617*†	83.8	0.0528 mg/L	0.00224	0.0528 mg/L	0.00224	4.24%		
P 214.914†	64.8	0.0615 mg/L	0.00858	0.0615 mg/L	0.00858	13.95%		
Pb 220.353*†	712.2	0.1053 mg/L	0.00303	0.1053 mg/L	0.00303	2.88%		
Sb 206.836†	16.7	0.0103 mg/L	0.00771	0.0103 mg/L	0.00771	75.14%		
Sb 217.582*†	13.4	0.0082 mg/L	0.00115	0.0082 mg/L	0.00115	14.07%		
Se 196.026*†	-21.1	-0.0114 mg/L	0.00130	-0.0114 mg/L	0.00130	11.37%		
Si 251.611*†	419704.1	12.41 mg/L	0.022	12.41 mg/L	0.022	0.17%		
Sn 189.927*†	11.0	0.0021 mg/L	0.00061	0.0021 mg/L	0.00061	28.66%		
Sn 242.170†	28.5	0.0186 mg/L	0.00165	0.0186 mg/L	0.00165	8.88%		
Sr 407.771*†	270009.5	0.9092 mg/L	0.01963	0.9092 mg/L	0.01963	2.16%		
Ti 334.940†	4388.3	0.0059 mg/L	0.00008	0.0059 mg/L	0.00008	1.37%		
Ti 336.121*†	3956.1	0.0076 mg/L	0.00002	0.0076 mg/L	0.00002	0.31%		
Tl 190.801*†	3.7	0.0023 mg/L	0.00176	0.0023 mg/L	0.00176	76.50%		
V 292.402*†	311.7	0.0026 mg/L	0.00068	0.0026 mg/L	0.00068	26.27%		
Zn 206.200*†	17062.4	0.5055 mg/L	0.00162	0.5055 mg/L	0.00162	0.32%		
Zn 213.857*†	32187.0	0.5233 mg/L	0.00379	0.5233 mg/L	0.00379	0.72%		

EPA 6010B ICP Metals (Aqueous)

Run Logs

170324C 1

M006-032-05 0.050 ml

10 ml

INT STD M120716A

PDS/PDSD

R.B. R12091602

M006-032-06 0.050 ml

Carrier/wash sol R12091604/R12091603

No.	File Name	Date	Time	Analyst Name	A/S	Location
1	Cal blankR12091601_935	3/24/2017	9:32:25 AM	935 icp 7300	1	
2	STD3-M111116A_935_ICP7300	3/24/2017	9:33:31 AM	935 icp 7300	2	
3	ICV-M072816C	3/24/2017	9:34:27 AM	935 icp 7300	10	
4	ICB-R12091601	3/24/2017	9:36:10 AM	935 icp 7300	1	
5	ICS_A - M110116B	3/24/2017	9:37:13 AM	935 icp 7300	8	
6	ICS_AB - M110116A	3/24/2017	9:38:04 AM	935 icp 7300	9	
7	CCV= STD3x0.5	3/24/2017	9:38:54 AM	935 icp 7300	3	
8	CCB-R12091601	3/24/2017	9:39:45 AM	935 icp 7300	1	
9	CCB2-R12091601	3/24/2017	9:45:45 AM	935 icp 7300	5	
10	LLCV-M082616A	3/24/2017	9:46:51 AM	935 icp 7300	101	
11	LLCV--M082616A	3/24/2017	9:47:52 AM	935 icp 7300	102	
12	CCV= STD3x0.5	3/24/2017	9:48:52 AM	935 icp 7300	3	
13	CCB-R12091601	3/24/2017	9:50:30 AM	935 icp 7300	1	
14	170321-ba-1	3/24/2017	10:25:33 AM	935 icp 7300	103	
15	170321-la-1	3/24/2017	10:26:38 AM	935 icp 7300	104	
16	170321-la-2	3/24/2017	10:28:28 AM	935 icp 7300	106	
17	170321-la-3	3/24/2017	10:30:18 AM	935 icp 7300	108	
18	170323-la-4	3/24/2017	10:32:08 AM	935 icp 7300	110	
19	170323-la-6	3/24/2017	10:33:58 AM	935 icp 7300	112	
20	CCV= STD3x0.5	3/24/2017	10:34:49 AM	935 icp 7300	3	
21	CCB-R12091601	3/24/2017	10:36:36 AM	935 icp 7300	1	
22	170321-ba-2	3/24/2017	10:38:53 AM	935 icp 7300	105	
23	170321-ba-3	3/24/2017	10:39:58 AM	935 icp 7300	107	
24	170323-ba-4	3/24/2017	10:40:59 AM	935 icp 7300	109	

B > RL

Sub int, AS and TI out

Reviewed/Assign to Logbook Date: 3/27/17
 Analysis: 2007/600 Chemist ID: 1012
 Logbook Page: 29 Instrument ID: 1017

No.	File Name	Date	Time	Analyst Name	A/S	Location
121	17-03-1294-1	3/24/2017	12:21:53 PM	935 icp 7300		321
122	17-03-1293-1	3/24/2017	12:22:36 PM	935 icp 7300		322
123	17-03-1292-1	3/24/2017	12:23:28 PM	935 icp 7300		323
124	17-03-1129-1	3/24/2017	12:24:21 PM	935 icp 7300		324
125	17-03-1303-5	3/24/2017	12:25:09 PM	935 icp 7300		325
126	17-03-1337-1	3/24/2017	12:25:59 PM	935 icp 7300		326
127	17-03-1754-1	3/24/2017	12:26:50 PM	935 icp 7300		327
128	CCV= STD3x0.5	3/24/2017	12:27:41 PM	935 icp 7300		3
129	CCB-R12091601	3/24/2017	12:28:33 PM	935 icp 7300		1
130	17-03-1754-2	3/24/2017	12:29:33 PM	935 icp 7300		328
131	17-03-1754-3	3/24/2017	12:30:26 PM	935 icp 7300		329
132	17-03-1792-1	3/24/2017	12:32:07 PM	935 icp 7300		207
133	17-03-1792-2	3/24/2017	12:33:03 PM	935 icp 7300		208
134	17-03-1792-3	3/24/2017	12:33:55 PM	935 icp 7300		209
135	CCV= STD3x0.5	3/24/2017	12:34:48 PM	935 icp 7300		3
136	CCB-R12091601	3/24/2017	12:35:42 PM	935 icp 7300		1
137	CCV= STD3x0.5	3/24/2017	12:36:34 PM	935 icp 7300		3
138	CCB-R12091601	3/24/2017	12:37:32 PM	935 icp 7300		1
139	170323-ba-5	3/24/2017	12:38:23 PM	935 icp 7300		330
140	170323-la-5	3/24/2017	12:39:29 PM	935 icp 7300		331
141	170323-ba-7	3/24/2017	12:40:20 PM	935 icp 7300		332
142	170323-la-7	3/24/2017	12:41:19 PM	935 icp 7300		333
143	170323-ba-8	3/24/2017	12:42:20 PM	935 icp 7300		334
144	170323-la-8	3/24/2017	12:43:19 PM	935 icp 7300		335
145	17-03-1523-2	3/24/2017	12:44:20 PM	935 icp 7300		336
146	17-03-1522-1	3/24/2017	12:45:13 PM	935 icp 7300		337
147	17-03-1522-2	3/24/2017	12:46:08 PM	935 icp 7300		338
148	17-03-1550-8	3/24/2017	12:47:02 PM	935 icp 7300		339
149	CCV= STD3x0.5	3/24/2017	12:48:00 PM	935 icp 7300		3
150	CCB-R12091601	3/24/2017	12:48:52 PM	935 icp 7300		1
151	17-03-1678-8	3/24/2017	12:49:53 PM	935 icp 7300		340
152	17-03-1678-9	3/24/2017	12:50:53 PM	935 icp 7300		341

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Reviewed/Assign to Logbook Date: 3/27/17
 Analysis: 202.776010 Chemist ID: 1012-
 Logbook Page: 33 Instrument ID: 1012

Reviewed/Assign to Logbook Date: 3/27/17
 Analysis: 200-1/6010 Chemist ID: 1012
 Logbook Page: 34 Instrument ID: 1017

No.	File Name	Date	Time	Analyst Name	A/S	Location
153	17-03-1614-1	3/24/2017	12:51:51 PM	935 icp 7300		342
154	17-03-1614-1 msd	3/24/2017	12:52:43 PM	935 icp 7300		343
155	17-03-1614-1 msd	3/24/2017	12:53:38 PM	935 icp 7300		344
156	17-03-1614-2	3/24/2017	12:54:33 PM	935 icp 7300		345
157	17-03-1420-4	3/24/2017	12:55:20 PM	935 icp 7300		346
158	17-03-1420-4 msd	3/24/2017	12:56:17 PM	935 icp 7300		347
159	17-03-1420-4 msd	3/24/2017	12:57:15 PM	935 icp 7300		348
160	17-03-1420-5	3/24/2017	12:58:12 PM	935 icp 7300		349
161	CCV= STD3x0.5	3/24/2017	12:59:09 PM	935 icp 7300		3
162	CCB-R12091601	3/24/2017	1:00:01 PM	935 icp 7300		1
163	17-03-1420-6	3/24/2017	1:01:01 PM	935 icp 7300		350
164	17-03-1420-7	3/24/2017	1:01:59 PM	935 icp 7300		351
165	17-03-1420-8	3/24/2017	1:02:55 PM	935 icp 7300		352
166	17-03-1420-9	3/24/2017	1:03:51 PM	935 icp 7300		353
167	17-03-1420-10	3/24/2017	1:04:44 PM	935 icp 7300		354
168	17-03-1450-1	3/24/2017	1:05:39 PM	935 icp 7300		355
169	17-03-1450-2	3/24/2017	1:06:31 PM	935 icp 7300		356
170	17-03-1450-3	3/24/2017	1:07:23 PM	935 icp 7300		357
171	17-03-1539-1	3/24/2017	1:08:15 PM	935 icp 7300		358
172	17-03-1537-1	3/24/2017	1:09:10 PM	935 icp 7300		359
173	CCV= STD3x0.5	3/24/2017	1:10:00 PM	935 icp 7300		3
174	CCB-R12091601	3/24/2017	1:10:53 PM	935 icp 7300		1
175	17-03-1636-1	3/24/2017	1:11:53 PM	935 icp 7300		360
176	17-03-1637-1	3/24/2017	1:12:49 PM	935 icp 7300		201
177	17-03-1538-1	3/24/2017	1:13:45 PM	935 icp 7300		202
178	17-03-1538-2	3/24/2017	1:14:32 PM	935 icp 7300		203
179	17-03-1654x10-1	3/24/2017	1:15:31 PM	935 icp 7300		204
180	17-03-1654x10-1 msd	3/24/2017	1:16:19 PM	935 icp 7300		205
181	17-03-1654x10-1 msd	3/24/2017	1:17:07 PM	935 icp 7300		206
182	CCV= STD3x0.5	3/24/2017	1:17:55 PM	935 icp 7300		3
183	CCB-R12091601	3/24/2017	1:18:48 PM	935 icp 7300		1
184	CCV= STD3x0.5	3/24/2017	2:47:06 PM	935 icp 7300		3

B > RL

Time gap

EPA 6010B ICP Metals (Aqueous)

Preparation Logs

Metals Sample Preparation Logbook (Aqueous)

METHOD		MATRIX	EQUIPMENT ID #		REAGENT ID #		STANDARD ID #							
<input type="checkbox"/> EPA 3005A <input type="checkbox"/> EPA 200.7 <input checked="" type="checkbox"/> EPA 3010A <input type="checkbox"/> EPA 200.8 <input type="checkbox"/> EPA 3020A <input type="checkbox"/> 5% HNO ₃		Aqueous	Thermometer	H11-18	(CF+2.0 °C)	HNO ₃	M166-041-11	3.0 mL	Spike 1	M122019A				
			Block Digester	#2		HCl	M166-1238-08	25 mL	Spike 2	M122019C				
			Pipettor / Dispenser	P-97/D030/D012		(Specify)			Spike 3					
BATCH NUMBER		SUPPLY LOT #		ACID PRESERVATION AND FILTRATION			TURBIDITY ANALYSIS							
MS/MSD 170323 SAS		Digestion Tube 160613		<input checked="" type="checkbox"/> None <input type="checkbox"/> Lab Filtered <input type="checkbox"/> Lab Preserved			<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A							
(Specify)		Filter		Book # _____ Page # _____			Book # _____ Page # _____							
DIGESTION														
DATE	START			END			INITIAL pH	ECL ID #	ANALYTE(S)	SAMPLE		SPIKE STANDARD		
	TIME	TEMP W/O CF (°C)	PREP TECH ID #	TIME	TEMP W/O CF (°C)	PREP TECH ID #				INITIAL (mL)	FINAL (mL)	1 (µL)	2 (µL)	3 (µL)
03/23/17	16:00	95	1058	16:30	96	1050	L2	MS 17-03-1614-1B	Metals	50	50	250	250	
							L2	MSD 1						
							72	LCS 170323LAS						
							52	LCSD/MB 170323BAS						
							L2	17-03-1614-1B						
							L2	1 2B						
							L2	17-03-1678-8F						
							L2	1 9F						
							L2	17-03-1552-2H						
							L2	17-03-1550-8F						
							L2	17-03-1522-1C						
							L2	1 2C						
							L2	17-03-1523-2F						

COMMENTS: *oil* and stinky sample

EPA 7470A Mercury (Aqueous)

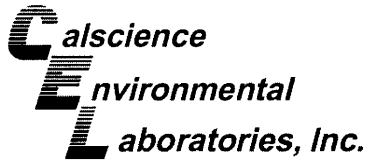
RAW DATA

EPA 7470A Mercury (Aqueous)

Initial Calibration
ICV/ICB
CCV/CCB

Sample Data

Quality Control
Method Blank
LCS/LCSD
MS/MSD



**EPA Method 7470A
Initial Calibration Verification**



Work Order No.: 17-03-1523

Instrument ID: HG 7 (G)

Concentration Unit: µg/L

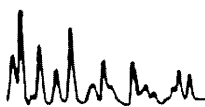
Test Method: EPA 7470A

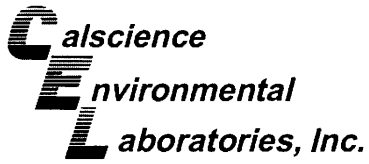
Analyte	Initial Calibration Verification			
	True	ICV-1		Control Limit
		Observed	%D	
Mercury	5.000000	5.050302	1	0 - 10

03/28/2017 13:31

ICV-1 File: ICV M030617B 03/27/2017 12:23:10 PM

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**EPA Method 7470A
Continuing Calibration Verification**



Work Order No.: 17-03-1523

Instrument ID: HG 7 (G)

Concentration Unit: µg/L

Test Method: EPA 7470A

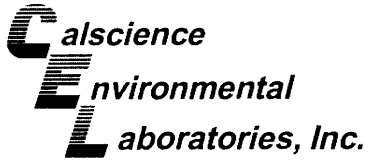
Analyte	Continuing Calibration Verification									
	True	CCV-1		CCV-2		CCV-3		CCV-4		Control Limit
		Observed	%D	Observed	%D	Observed	%D	Observed	%D	
Mercury	2.000000	2.032626	2	2.144005	7	2.111390	6	2.062174	3	0 - 20

03/28/2017 13:33

- CCV-1 File: CCV 0.2x10ppb 03/27/2017 02:55:34 PM
- CCV-2 File: CCV 0.2x10ppb 03/27/2017 03:23:27 PM
- CCV-3 File: CCV 0.2x10ppb 03/27/2017 05:58:12 PM
- CCV-4 File: CCV 0.2x10ppb 03/27/2017 06:25:34 PM

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**EPA Method 7470A
Initial and Continuing Calibration Blanks**



Work Order No.: 17-03-1523

Instrument ID: HG 7 (G)

Concentration Unit: µg/L

Test Method: EPA 7470A

Analyte	Initial and Continuing Calibration Blanks					
	ICB-1	CCB-1	CCB-2	CCB-3	CCB-4	RL (No PF)
Mercury	-0.021033	-0.019010	-0.024230	-0.016227	-0.022103	0.250000

03/28/2017 13:34

ICB-1 File: ICB 03/27/2017 12:25:27 PM

CCB-1 File: CCB 03/27/2017 02:57:52 PM

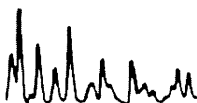
CCB-2 File: CCB 03/27/2017 03:25:45 PM

CCB-3 File: CCB 03/27/2017 06:00:30 PM

CCB-4 File: CCB 03/27/2017 06:27:51 PM

Note: Preparation factor (PF) = 2 L/L

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**RAW DATA SHEET
FOR METHOD: EPA 7470A**

WORK ORDER: 17-03-1523
INSTRUMENT: Mercury 07
EXTRACTION: EPA 7470A Total
D/T EXTRACTED: 2017-03-27 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-27 18:02
REVIEWED BY: 309
D/T REVIEWED: 2017-03-28 12:39

DATA FILE: W:\MERCURY_DATA\FINAL\170327G1\17-03-1523-2.icp

2 **CLIENT SAMPLE NUMBER: IDW-W**

LCS/MB BATCH: 170327LA2 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
MS/MSD BATCH: 170327SA2 **FINAL VOLUME / WEIGHT:** DEFAULT: 100.00 ml
UNITS: mg/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Mercury	-0.0000105	1.00	ND	0.000500	

METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 7470A

MB SAMPLE ID: 099-04-008-8158
MB BATCH ID: 170327LA2
INSTRUMENT: Mercury 07
EXTRACTION: EPA 7470A Total
D/T EXTRACTED: 2017-03-27 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-27 15:11
REVIEWED BY: 309
D/T REVIEWED: 2017-03-27 15:44
MATRIX: Water

DATA FILE: W:\MERCURY_DATA\FINAL\170327G1\170327-B-A2.icp

CLIENT WORK ORDER: 17-03-1523

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
2	IDW-W		2017-03-27 18:02	W:\MERCURY_DATA\FINAL\170327G1\17-03-1523-2.icp

**RAW DATA SHEET
FOR METHOD: EPA 7470A**

WORK ORDER: 099-04-008
INSTRUMENT: Mercury 07
EXTRACTION: EPA 7470A Total
D/T EXTRACTED: 2017-03-27 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-27 15:11
REVIEWED BY: 309
D/T REVIEWED: 2017-03-27 15:44

DATA FILE: W:\MERCURY_DATA\FINAL\170327G1\170327-B-A2.icp

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170327LA2 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 100.00 ml
UNITS: mg/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Mercury	-0.0000129	1.00	ND	0.000500	

LCS QUALITY CONTROL SHEET FOR METHOD: EPA 7470A

LCS SAMPLE ID: 099-04-008-8158
LCS/MB BATCH ID: 170327LA2
INSTRUMENT: Mercury 07

EXTRACTION: EPA 7470A Total
D/T EXTRACTED: 2017-03-27 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-27 15:14
REVIEWED BY: 309
D/T REVIEWED: 2017-03-27 15:44

DATA FILE: W:\MERCURY_DATA\FINAL\170327G1\170327-L-A2.icp

<u>COMPOUND NAME</u>	<u>CONC ADDED</u>	<u>CONC REC</u>	<u>%RECOVERY</u>	<u>%REC CONTROL LIMIT</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
Mercury	0.01000	0.01110	111	80-120	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 7470A

SPIKED SAMPLE ID: 17-03-1870-1
MS/MSD BATCH: 170327SA2
INSTRUMENTS:
 SAMPLE: Mercury 07
 MS: Mercury 07
 MSD: Mercury 07

EXTRACTION: EPA 7470A Total
D/T EXTRACTED:
 SAMPLE: 2017-03-27 00:00
 MS: 2017-03-27 00:00
 MSD: 2017-03-27 00:00

ANALYZED BY: 868
D/T ANALYZED:
 SAMPLE: 2017-03-27 15:16
 MS: 2017-03-27 15:18
 MSD: 2017-03-27 15:21
REVIEWED BY: 309
D/T REVIEWED: 2017-03-27 15:44

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Mercury	ND	0.005000	0.01000	0.01092	109	0.01084	108	55-133	1	0-20	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-1870-1 MS.icp	W:\MERCURY_DATA\FINAL\170327G1\
MSD	17-03-1870-1 MSD.icp	W:\MERCURY_DATA\FINAL\170327G1\

=====
Analysis Begun

Logged In Analyst: US26_SVC_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170327G1.sifx

Batch ID:
Results Data Set: 170327G1
Results Library: U:\MERCURY_7\Data\Results\results.mdb

=====
Sequence No.: 1
Sample ID: Calib blank_868
Analyst: *868*
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 3/27/2017 11:58:49 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: Calib blank_868
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height Stored
1 [0.00] 0.0000 -0.0001 0.0000 11:59:54 AM Yes
2 [0.00] -0.0000 -0.0015 -0.0000 12:00:40 PM Yes
Mean: [0.00] 0.0000
SD: 0.0000 0.0000
%RSD: 0.00% 285.51
Auto-zero performed.

=====
Sequence No.: 2
Sample ID: 0.025ppb 0.005x5ppb
Analyst: *868*
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 2
Date Collected: 3/27/2017 12:01:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 0.025ppb 0.005x5ppb
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height Stored
1 [0.025] 0.0002 -0.0000 0.0002 12:02:10 PM Yes
2 [0.025] 0.0002 0.0003 0.0002 12:02:55 PM Yes
Mean: [0.025] 0.0002
SD: 0.00000 0.0000
%RSD: 0.00% 2.12
Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.00753 Intercept: 0.00000

=====
Sequence No.: 3
Sample ID: 0.10ppb M030617AX0.0001
Analyst: *868*
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 3
Date Collected: 3/27/2017 12:03:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 0.10ppb M030617AX0.0001
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height Stored
1 [0.100] 0.0008 0.0024 0.0009 12:04:26 PM Yes
2 [0.100] 0.0008 0.0007 0.0008 12:05:11 PM Yes
Mean: [0.100] 0.0008
SD: 0.00000 0.0001
%RSD: 0.00% 7.17
Standard number 2 applied. [0.100]
Correlation Coef.: 0.999886 Slope: 0.00802 Intercept: -0.00001



```

=====
Sequence No.: 4                               Autosampler Location: 4
Sample ID: 1.00ppb M030617AX0.0001          Date Collected: 3/27/2017 12:05:37 PM
Analyst: 868                                 Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 1.00ppb M030617AX0.0001      Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height  Time  Stored
1      [1.000]    [1.000]  0.0089   0.0305 0.0089  12:06:43 PM  Yes
2      [1.000]    [1.000]  0.0087   0.0292 0.0087  12:07:29 PM  Yes
Mean:  [1.000]    0.0088
SD:     0.00000    0.0001
%RSD:  0.00%      1.32
Standard number 3 applied. [1.000]
Correlation Coef.: 0.999965  Slope: 0.00884  Intercept: -0.00004
=====

```

```

=====
Sequence No.: 5                               Autosampler Location: 5
Sample ID: 2.00ppb M030617AX0.002          Date Collected: 3/27/2017 12:07:55 PM
Analyst: 868                                 Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 2.00ppb M030617AX0.002      Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height  Time  Stored
1      [2.000]    [2.000]  0.0175   0.0602 0.0175  12:09:00 PM  Yes
2      [2.000]    [2.000]  0.0175   0.0608 0.0176  12:09:45 PM  Yes
Mean:  [2.000]    0.0175
SD:     0.00000    0.0000
%RSD:  0.00%      0.25
Standard number 4 applied. [2.000]
Correlation Coef.: 0.999986  Slope: 0.00878  Intercept: -0.00003
=====

```

```

=====
Sequence No.: 6                               Autosampler Location: 6
Sample ID: 5.00ppb M030617AX0.005          Date Collected: 3/27/2017 12:10:12 PM
Analyst: 868                                 Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 5.00ppb M030617AX0.005      Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height  Time  Stored
1      [5.000]    [5.000]  0.0430   0.1497 0.0430  12:11:16 PM  Yes
2      [5.000]    [5.000]  0.0437   0.1504 0.0437  12:12:01 PM  Yes
Mean:  [5.000]    0.0433
SD:     0.00000    0.0005
%RSD:  0.00%      1.11
Standard number 5 applied. [5.000]
Correlation Coef.: 0.999985  Slope: 0.00868  Intercept: 0.00002
=====

```

```

=====
Sequence No.: 7                               Autosampler Location: 7
Sample ID: 10.0ppb M030617AX0.01           Date Collected: 3/27/2017 12:12:27 PM
Analyst: 868                                 Data Type: Original
Initial Sample Wt:                           Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

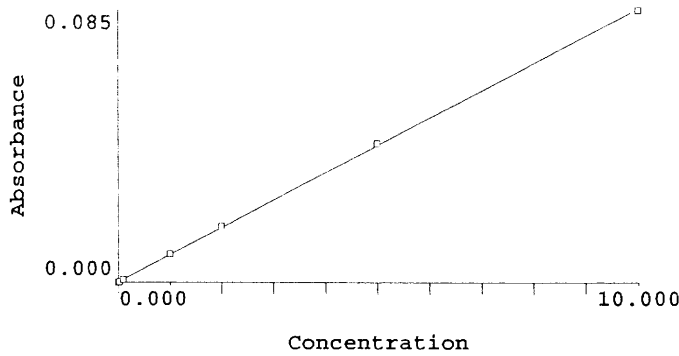
```

```

-----
Replicate Data: 10.0ppb M030617AX0.01       Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height  Time  Stored
=====

```

1 [10.00] 0.0850 0.2953 0.0850 12:13:31 PM Yes
 2 [10.00] 0.0846 0.2951 0.0847 12:14:16 PM Yes
 Mean: [10.00] 0.0848
 SD: 0.0000 0.0003
 %RSD: 0.00% 0.32
 Standard number 6 applied. [10.00]
 Correlation Coef.: 0.999933 Slope: 0.00850 Intercept: 0.00019



 Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib blank_868	0.0000	0	-0.022900	0.00	285.51
0.025ppb 0.005x5ppb	0.0002	0.025	-0.000769	0.00	2.12
0.10ppb M030617AX0.0001	0.0008	0.100	0.070961	0.00	7.17
1.00ppb M030617AX0.0001	0.0088	1.000	1.012442	0.00	1.32
2.00ppb M030617AX0.002	0.0175	2.000	2.036205	0.00	0.25
5.00ppb M030617AX0.005	0.0433	5.000	5.074382	0.00	1.11
10.0ppb M030617AX0.01	0.0848	10.00	9.954679	0.00	0.32

Correlation Coef.: 0.999933 Slope: 0.00850 Intercept: 0.00019

=====
Analysis Begun

Logged In Analyst: US26_SVC_INSTRUMENT Technique: AA FIMS-MHS
Spectrometer: FIMS-400, S/N B050-9560 Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170327G1.sifx

Batch ID:
Results Data Set: 170327G1
Results Library: U:\MERCURY_7\Data\Results\results.mdb

=====
Sequence No.: 1 Autosampler Location: 8
Sample ID: ICV M030617B Date Collected: 3/27/2017 12:21:19 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ICV M030617B Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00505	5.05	0.0432	0.1499	0.0432	12:22:24 PM	Yes
2	0.00505	5.05	0.0431	0.1491	0.0431	12:23:10 PM	Yes
Mean:	0.00505	5.05	0.0431				
SD:	0.000003	0.003	0.0000				
%RSD:	0.06%	0.06%	0.06				

QC value within limits for Hg 253.7 Recovery = 101.01%
All analyte(s) passed QC.

=====
Sequence No.: 2 Autosampler Location: 1
Sample ID: ICB Date Collected: 3/27/2017 12:23:36 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ICB Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000021	-0.0208	0.0000	-0.0010	0.0000	12:24:41 PM	Yes
2	-0.000021	-0.0213	0.0000	-0.0012	0.0000	12:25:27 PM	Yes
Mean:	-0.000021	-0.0210	0.0000				
SD:	0.0000003	0.00032	0.0000				
%RSD:	1.50%	1.50%	16.90				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3 Autosampler Location: 9
Sample ID: CRQL 0.25 Date Collected: 3/27/2017 12:25:52 PM
Analyst: 868 HG-7 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: 2X Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: CRQL 0.25 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000443	0.221	0.0021	0.0056	0.0021	12:26:57 PM	Yes
2	0.000457	0.228	0.0021	0.0062	0.0021	12:27:43 PM	Yes
Mean:	0.000450	0.225	0.0021				
SD:	0.0000099	0.0050	0.0000				
%RSD:	2.20%	2.20%	2.00				

=====

=====
Analysis Begun

Logged In Analyst: US26_SVC_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170327G1.sifx

Batch ID:
Results Data Set: 170327G1
Results Library: U:\MERCURY_7\Data\Results\results.mdb

=====
Sequence No.: 1
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/27/2017 2:53:42 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00204	2.04	0.0176	0.0629	0.0176	2:54:48 PM	Yes
2	0.00202	2.02	0.0174	0.0636	0.0174	2:55:34 PM	Yes
Mean:	0.00203	2.03	0.0175				
SD:	0.000016	0.016	0.0001				
%RSD:	0.77%	0.77%	0.76				

QC value within limits for Hg 253.7 Recovery = 101.63%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: CCB
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/27/2017 2:56:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCB

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000024	-0.0243	-0.0000	-0.0007	0.0000	2:57:05 PM	Yes
2	-0.000014	-0.0138	0.0001	0.0010	0.0001	2:57:52 PM	Yes
Mean:	-0.000019	-0.0190	0.0000				
SD:	0.0000074	0.00744	0.0001				
%RSD:	39.13%	39.13%	191.23				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: 170327-B-A1
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 10X
Wash Time (before sample): 0

Autosampler Location: 133
Date Collected: 3/27/2017 2:58:17 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 170327-B-A1

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000128	-0.0128	0.0001	-0.0002	0.0001	2:59:24 PM	Yes
2	-0.000087	-0.00866	0.0001	0.0007	0.0001	3:00:10 PM	Yes
Mean:	-0.000107	-0.0107	0.0001				
SD:	0.0000295	0.00295	0.0000				
%RSD:	27.44%	27.44%	24.27				

Sequence No.: 8
Sample ID: 170327-B-A2
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 138
Date Collected: 3/27/2017 3:09:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 170327-B-A2

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000026	-0.0128	0.0001	-0.0005	0.0001	3:11:03 PM	Yes
2	-0.000026	-0.0131	0.0001	-0.0009	0.0001	3:11:48 PM	Yes
Mean:	-0.000026	-0.0129	0.0001				
SD:	0.0000004	0.00019	0.0000				
%RSD:	1.51%	1.51%	1.95				

Sequence No.: 9
Sample ID: 170327-L-A2
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 139
Date Collected: 3/27/2017 3:12:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 170327-L-A2

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0112	5.58	0.0477	0.1650	0.0477	3:13:22 PM	Yes
2	0.0110	5.52	0.0471	0.1640	0.0471	3:14:08 PM	Yes
Mean:	0.0111	5.55	0.0474				
SD:	0.00009	0.045	0.0004				
%RSD:	0.81%	0.81%	0.81				

Sequence No.: 10
Sample ID: 17-03-1870-1
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 140
Date Collected: 3/27/2017 3:14:35 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-1870-1

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000103	0.0514	0.0006	-0.0000	0.0006	3:15:42 PM	Yes
2	0.000120	0.0599	0.0007	0.0016	0.0007	3:16:27 PM	Yes
Mean:	0.000111	0.0556	0.0007				
SD:	0.0000121	0.00604	0.0001				
%RSD:	10.86%	10.86%	7.70				

Sequence No.: 11
Sample ID: 17-03-1870-1 MS
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 141
Date Collected: 3/27/2017 3:16:55 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-1870-1 MS

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0109	5.44	0.0464	0.1635	0.0464	3:18:01 PM	Yes
2	0.0110	5.48	0.0468	0.1656	0.0468	3:18:47 PM	Yes
Mean:	0.0109	5.46	0.0466				
SD:	0.00006	0.031	0.0003				
%RSD:	0.57%	0.57%	0.57				

Sequence No.: 12
Sample ID: 17-03-1870-1 MSD
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 142
Date Collected: 3/27/2017 3:19:15 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-1870-1 MSD

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0109	5.44	0.0464	0.1615	0.0465	3:20:21 PM	Yes
2	0.0108	5.40	0.0461	0.1611	0.0461	3:21:07 PM	Yes
Mean:	0.0108	5.42	0.0463				
SD:	0.00006	0.030	0.0003				
%RSD:	0.54%	0.54%	0.54				

Sequence No.: 13
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/27/2017 3:21:35 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00214	2.14	0.0184	0.0630	0.0184	3:22:41 PM	Yes
2	0.00215	2.15	0.0185	0.0635	0.0185	3:23:27 PM	Yes
Mean:	0.00214	2.14	0.0184				
SD:	0.000011	0.011	0.0001				
%RSD:	0.51%	0.51%	0.51				

QC value within limits for Hg 253.7 Recovery = 107.20%

All analyte(s) passed QC.

Sequence No.: 14
Sample ID: CCB
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/27/2017 3:23:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCB

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000024	-0.0244	-0.0000	-0.0011	0.0000	3:24:59 PM	Yes
2	-0.000024	-0.0241	-0.0000	-0.0015	0.0000	3:25:45 PM	Yes
Mean:	-0.000024	-0.0242	-0.0000				
SD:	0.0000002	0.00019	0.0000				
%RSD:	0.79%	0.79%	14.44				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 15
Sample ID: 17-03-1005-16
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 143
Date Collected: 3/27/2017 3:26:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-1005-16

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000050	-0.0249	-0.0000	-0.0020	-0.0000	3:27:17 PM	Yes
2	-0.000047	-0.0237	-0.0000	-0.0019	0.0000	3:28:02 PM	Yes
Mean:	-0.000049	-0.0243	-0.0000				

Return to Contents

=====
Analysis Begun

Logged In Analyst: US26_SVC_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170327G1.sifx

Batch ID:
Results Data Set: 170327G1
Results Library: U:\MERCURY_7\Data\Results\results.mdb

=====
Sequence No.: 1
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 3/27/2017 5:56:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height Stored
1 0.00211 2.11 0.0181 0.0682 0.0182 5:57:26 PM Yes
2 0.00211 2.11 0.0181 0.0654 0.0182 5:58:12 PM Yes
Mean: 0.00211 2.11 0.0181
SD: 0.000000 0.000 0.0000
%RSD: 0.01% 0.01% 0.01
QC value within limits for Hg 253.7 Recovery = 105.57%
All analyte(s) passed QC.

=====
Sequence No.: 2
Sample ID: CCB
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 3/27/2017 5:58:39 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCB
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height Stored
1 -0.000014 -0.0135 0.0001 0.0010 0.0001 5:59:43 PM Yes
2 -0.000019 -0.0189 0.0000 0.0003 0.0000 6:00:30 PM Yes
Mean: -0.000016 -0.0162 0.0001
SD: 0.0000038 0.00380 0.0000
%RSD: 23.41% 23.41% 56.93
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: 17-03-1523-2
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 10
Date Collected: 3/27/2017 6:00:55 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-1523-2
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height Stored
1 -0.000019 -0.00966 0.0001 0.0004 0.0001 6:02:00 PM Yes
2 -0.000023 -0.0114 0.0001 0.0003 0.0001 6:02:46 PM Yes
Mean: -0.000021 -0.0105 0.0001
SD: 0.0000025 0.00124 0.0000
%RSD: 11.81% 11.81% 10.07
=====

Return to Contents

Sequence No.: 4
 Sample ID: 17-03-1555-3
 Analyst: 868 HG-7
 Initial Sample Wt:
 Dilution: 2X
 Wash Time (before sample): 0

Autosampler Location: 11
 Date Collected: 3/27/2017 6:03:12 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

 Replicate Data: 17-03-1555-3
 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000043	-0.0214	0.0000	-0.0006	0.0000	6:04:17 PM	Yes
2	-0.000038	-0.0191	0.0000	-0.0004	0.0000	6:05:03 PM	Yes
Mean:	-0.000041	-0.0203	0.0000				
SD:	0.0000032	0.00159	0.0000				
%RSD:	7.84%	7.84%	60.33				

=====
 Sequence No.: 5
 Sample ID: 17-03-1555-4
 Analyst: 868 HG-7
 Initial Sample Wt:
 Dilution: 2X
 Wash Time (before sample): 0

Autosampler Location: 12
 Date Collected: 3/27/2017 6:05:29 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

 Replicate Data: 17-03-1555-4
 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000035	-0.0175	0.0000	-0.0003	0.0001	6:06:34 PM	Yes
2	-0.000035	-0.0174	0.0000	-0.0002	0.0001	6:07:20 PM	Yes
Mean:	-0.000035	-0.0175	0.0000				
SD:	0.0000002	0.00008	0.0000				
%RSD:	0.43%	0.43%	1.39				

=====
 Sequence No.: 6
 Sample ID: 170327-B-A3
 Analyst: 868 HG-7
 Initial Sample Wt:
 Dilution: 2X
 Wash Time (before sample): 0

Autosampler Location: 13
 Date Collected: 3/27/2017 6:07:47 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

 Replicate Data: 170327-B-A3
 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000040	-0.0201	0.0000	-0.0008	0.0000	6:08:52 PM	Yes
2	-0.000041	-0.0203	0.0000	-0.0010	0.0000	6:09:37 PM	Yes
Mean:	-0.000040	-0.0202	0.0000				
SD:	0.0000003	0.00016	0.0000				
%RSD:	0.79%	0.79%	5.96				

=====
 Sequence No.: 7
 Sample ID: 170327-L-A3
 Analyst: 868 HG-7
 Initial Sample Wt:
 Dilution: 2X
 Wash Time (before sample): 0

Autosampler Location: 14
 Date Collected: 3/27/2017 6:10:04 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1

 Replicate Data: 170327-L-A3
 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0105	5.23	0.0447	0.1569	0.0447	6:11:08 PM	Yes
2	0.0105	5.25	0.0449	0.1564	0.0449	6:11:54 PM	Yes
Mean:	0.0105	5.24	0.0448				
SD:	0.00003	0.015	0.0001				
%RSD:	0.29%	0.29%	0.29				

=====

Sequence No.: 12
Sample ID: 17-03-1532-F-5
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 19
Date Collected: 3/27/2017 6:21:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-1532-F-5

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

Sequence No.: 13
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/27/2017 6:23:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

QC value within limits for Hg 253.7 Recovery = 103.11%

All analyte(s) passed QC.

Sequence No.: 14
Sample ID: CCB
Analyst: 868 HG-7
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/27/2017 6:26:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCB

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean, SD, %RSD).

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 15
Sample ID: 17-03-1532-F-6
Analyst: 868 HG-7
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 20
Date Collected: 3/27/2017 6:28:17 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-1532-F-6

Analyte: Hg 253.7

Table with 8 columns: Repl #, SampleConc mg/L, StndConc ug/L, BlnkCorr Signal, Peak Area, Peak Height, Time, Peak Stored. Contains 2 replicate rows and summary statistics (Mean).



EPA 7470A Mercury (Aqueous) Run Logs

170327G1

Carrier solution R07141602

Reducing Agent R07141603

Sample ID	Analyst Name	Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
Calib blank_868	868 HG-7		Hg 253.7	3/27/2017	12:00:40 PM	ug/L		mg/L		
0.025ppb 0.005x5ppb	868 HG-7		Hg 253.7	3/27/2017	12:02:55 PM	ug/L		mg/L		
0.10ppb M030617AX0.0001	868 HG-7		Hg 253.7	3/27/2017	12:05:11 PM	ug/L		mg/L		
1.00ppb M030617AX0.0001	868 HG-7		Hg 253.7	3/27/2017	12:07:29 PM	ug/L		mg/L		
2.00ppb M030617AX0.002	868 HG-7		Hg 253.7	3/27/2017	12:09:45 PM	ug/L		mg/L		
5.00ppb M030617AX0.005	868 HG-7		Hg 253.7	3/27/2017	12:12:01 PM	ug/L		mg/L		
10.0ppb M030617AX0.01	868 HG-7		Hg 253.7	3/27/2017	12:14:16 PM	ug/L		mg/L		
ICV M030617B	868 HG-7		Hg 253.7	3/27/2017	12:23:10 PM	5.050302 ug/L		0.00505 mg/L		0.999933
ICB	868 HG-7		Hg 253.7	3/27/2017	12:25:27 PM	-0.02103 ug/L		-2.10E-05 mg/L		0.999933
CRQL 0.25	868 HG-7		Hg 253.7	3/27/2017	12:27:43 PM	0.224873 ug/L		0.00045 mg/L		0.999933
17-03-0879-1 PDS	868 HG-7	0.63	Hg 253.7	3/27/2017	12:30:01 PM	10.99074 ug/L		1.744561 mg/kg		0.999933
17-03-0879-1 PDS	868 HG-7	0.63	Hg 253.7	3/27/2017	12:32:19 PM	12.36559 ug/L		1.962791 mg/kg		0.999933
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/27/2017	12:34:39 PM	2.016764 ug/L		0.002017 mg/L		0.999933
CCB	868 HG-7		Hg 253.7	3/27/2017	12:36:56 PM	0.052328 ug/L		5.23E-05 mg/L		0.999933
CCV 0.2x10ppb *	868 HG-7		Hg 253.7	3/27/2017	2:55:34 PM	2.032626 ug/L		0.002033 mg/L		0.999933
CCB	868 HG-7		Hg 253.7	3/27/2017	2:57:52 PM	-0.01901 ug/L		-1.90E-05 mg/L		0.999933
170327-B-A1	868 HG-7		Hg 253.7	3/27/2017	3:00:10 PM	-0.01075 ug/L		-0.00011 mg/L		0.999933
170327-L-A1	868 HG-7		Hg 253.7	3/27/2017	3:02:30 PM	5.244535 ug/L		0.052445 mg/L		0.999933
17-03-1747-1	868 HG-7		Hg 253.7	3/27/2017	3:04:50 PM	-0.01322 ug/L		-0.00013 mg/L		0.999933
17-03-1747-ST-1	868 HG-7		Hg 253.7	3/27/2017	3:07:10 PM	4.787262 ug/L		0.047873 mg/L		0.999933
17-03-1747-ST-1	868 HG-7		Hg 253.7	3/27/2017	3:09:29 PM	4.658505 ug/L		0.046585 mg/L		0.999933
170327-B-A2	868 HG-7		Hg 253.7	3/27/2017	3:11:48 PM	-0.01292 ug/L		-2.58E-05 mg/L		0.999933
170327-L-A2	868 HG-7		Hg 253.7	3/27/2017	3:14:08 PM	5.550149 ug/L		0.0111 mg/L		0.999933
17-03-1870-1	868 HG-7		Hg 253.7	3/27/2017	3:16:27 PM	0.055643 ug/L		0.000111 mg/L		0.999933
17-03-1870-1 MS	868 HG-7		Hg 253.7	3/27/2017	3:18:47 PM	5.459382 ug/L		0.010919 mg/L		0.999933

time gap

Reviewed/Assign to Logbook Date: 03-28-17
 Analysis Hg Chemist ID: 309
 Logbook Page: 11 Instrument ID: Hg-7

Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
17-03-1870-1 MSD	868 HG-7		Hg 253.7	3/27/2017	3:21:07 PM	5.418416 ug/L		0.010837 mg/L		0.999933
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/27/2017	3:23:27 PM	2.144005 ug/L		0.002144 mg/L		0.999933
CCB	868 HG-7		Hg 253.7	3/27/2017	3:25:45 PM	-0.02423 ug/L		-2.42E-05 mg/L		0.999933
17-03-1005-16	868 HG-7		Hg 253.7	3/27/2017	3:28:02 PM	-0.02432 ug/L		-4.86E-05 mg/L		0.999933
17-03-1084-11	868 HG-7		Hg 253.7	3/27/2017	3:30:22 PM	-0.02271 ug/L		-4.54E-05 mg/L		0.999933
17-03-1820-1	868 HG-7		Hg 253.7	3/27/2017	3:32:42 PM	-0.01922 ug/L		-3.84E-05 mg/L		0.999933
17-03-1820-2	868 HG-7		Hg 253.7	3/27/2017	3:35:01 PM	-0.01187 ug/L		-2.37E-05 mg/L		0.999933
17-03-1817-1	868 HG-7	0.6	Hg 253.7	3/27/2017	3:37:22 PM	1.96771 ug/L		0.327952 mg/kg		0.999933
17-03-1817-2	868 HG-7	0.62	Hg 253.7	3/27/2017	3:39:42 PM	0.525749 ug/L		0.084798 mg/kg		0.999933
17-03-1817-3	868 HG-7	0.6	Hg 253.7	3/27/2017	3:42:02 PM	0.716849 ug/L		0.119475 mg/kg		0.999933
17-03-1464-1	868 HG-7		Hg 253.7	3/27/2017	3:44:22 PM	-0.02012 ug/L		-4.02E-05 mg/L		0.999933
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/27/2017	3:46:41 PM	2.182736 ug/L		0.002183 mg/L		0.999933
CCB	868 HG-7		Hg 253.7	3/27/2017	3:48:58 PM	-0.02307 ug/L		-2.31E-05 mg/L		0.999933
CCV 0.2x10ppb *	868 HG-7		Hg 253.7	3/27/2017	5:58:12 PM	2.11139 ug/L		0.002111 mg/L		0.999933
CCB	868 HG-7		Hg 253.7	3/27/2017	6:00:30 PM	-0.01623 ug/L		-1.62E-05 mg/L		0.999933
17-03-1523-2	868 HG-7		Hg 253.7	3/27/2017	6:02:46 PM	-0.01054 ug/L		-2.11E-05 mg/L		0.999933
17-03-1555-3	868 HG-7		Hg 253.7	3/27/2017	6:05:03 PM	-0.02027 ug/L		-4.05E-05 mg/L		0.999933
17-03-1555-4	868 HG-7		Hg 253.7	3/27/2017	6:07:20 PM	-0.01746 ug/L		-3.49E-05 mg/L		0.999933
170327-B-A3	868 HG-7		Hg 253.7	3/27/2017	6:09:37 PM	-0.02023 ug/L		-4.05E-05 mg/L		0.999933
170327-L-A3	868 HG-7		Hg 253.7	3/27/2017	6:11:54 PM	5.241069 ug/L		0.010482 mg/L		0.999933
17-03-1532-F-4	868 HG-7		Hg 253.7	3/27/2017	6:14:10 PM	-0.02341 ug/L		-4.68E-05 mg/L		0.999933
17-03-1532-F-4 MS	868 HG-7		Hg 253.7	3/27/2017	6:16:26 PM	4.743838 ug/L		0.009488 mg/L		0.999933
17-03-1532-F-4 MSD	868 HG-7		Hg 253.7	3/27/2017	6:18:43 PM	4.683005 ug/L		0.009366 mg/L		0.999933
17-03-1532-F-3	868 HG-7		Hg 253.7	3/27/2017	6:21:00 PM	-0.02409 ug/L		-4.82E-05 mg/L		0.999933
17-03-1532-F-5	868 HG-7		Hg 253.7	3/27/2017	6:23:17 PM	-0.0209 ug/L		-4.18E-05 mg/L		0.999933
CCV 0.2x10ppb	868 HG-7		Hg 253.7	3/27/2017	6:25:34 PM	2.062174 ug/L		0.002062 mg/L		0.999933
CCB	868 HG-7		Hg 253.7	3/27/2017	6:27:51 PM	-0.0221 ug/L		-2.21E-05 mg/L		0.999933
17-03-1532-F-6	868 HG-7		Hg 253.7	3/27/2017	6:30:07 PM	-0.02354 ug/L		-4.71E-05 mg/L		0.999933
17-03-1532-F-7	868 HG-7		Hg 253.7	3/27/2017	6:32:24 PM	-0.02229 ug/L		-4.46E-05 mg/L		0.999933

Reviewed/Assign to Logbook Date: 03-28-17
 Analysis: Hg Chemist ID: 309
 Logbook Page: 12 Instrument ID: Hg-7

* time gap

EPA 7470A Mercury (Aqueous)

Preparation Log

Mercury Sample Preparation Logbook (Aqueous)

METHOD	MATRIX	EQUIPMENT ID #	REAGENT ID #	REAGENT / STANDARD ID #								
<input type="checkbox"/> EPA 7470A <input type="checkbox"/> EPA 245.1	Aqueous	Thermometer <i>GT-04</i> (CF-2.0°C) Block Digester <i>3</i> Pipetter / Dispenser <i>PO71/XX</i>	HNO ₃ <i>M006-40-04</i> 1.25 mL H ₂ SO ₄ <i>M006-35-26</i> 2.5 mL 5% KMnO ₄ <i>R10261601</i>	5% K ₂ S ₂ O ₈ <i>R12131602</i> 4 mL NaCl-H ₃ NO-HCl <i>R10061601/3</i> mL Spike <i>M030617A</i>								
BATCH NUMBER <i>i10327-SA1</i>		SUPPLY LOT # <i>166975</i>	ACID PRESERVATION AND FILTRATION <input checked="" type="checkbox"/> None <input type="checkbox"/> Lab Filtered <input type="checkbox"/> Lab Preserved									
MS/MSD (Specify)	Digestion Tube Filter	Book # _____	Page # _____	STANDARD ID # IC <i>M030617A</i> ICV <i>1 B</i>								
DIGESTION							INITIAL pH	ECI ID #	SAMPLE		5% KMNO ₄ V (mL)	SPIKE OR IC/ICV V (µL)
DATE	TIME	START TEMP W/O CF (°C)	PREP TECH ID #	END TEMP W/O CF (°C)	PREP TECH ID #	INITIAL (mL)			FINAL (mL)			
<i>3/27/17</i>	<i>11:00</i>	<i>95</i>	<i>868</i>	<i>13:00</i>	<i>95</i>	<i>868</i>	<i>22</i>	<i>MS 17-03-1870-1J</i>	<i>50</i>	<i>100</i>	<i>7.5</i>	<i>500</i>
							<i>22</i>	<i>MSD 1</i>				
							<i>22</i>	<i>LCS 17-03-21-LA-2</i>				
							<i>72</i>	<i>LCSD/MB 17-03-27-BA-2</i>				
							<i>22</i>	<i>17-03-1876-1J</i>				
							<i>22</i>	<i>17-03-1065-16A</i>				
							<i>22</i>	<i>17-03-1084-11A</i>				
							<i>22</i>	<i>17-03-1820-1B</i>				
							<i>22</i>	<i>1 2B</i>				
							<i>22</i>	<i>17-03-1464-1A</i>				
	<i>14:00</i>			<i>16:00</i>			<i>22</i>	<i>17-03-1523-2F</i>				
							<i>22</i>	<i>17-03-1555-3B</i>				
							<i>22</i>	<i>1 4B</i>				
							<i>22</i>	<i>17-03-1652-2H*</i>	<i>10</i>	<i>100</i>		

COMMENTS:

+ Sample was very thick and smelly.



EPA 7471A Mercury (Solid)

RAW DATA

EPA 7471A Mercury (Solid)

Initial Calibration

ICV/ICB

CCV/CCB

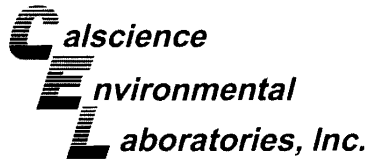
Sample Data

Quality Control

Method Blank

LCS/LCSD

MS/MSD



**EPA Method 7471A
Initial Calibration Verification**

Work Order No.: 17-03-1523

Instrument ID: HG 8 (H)

Concentration Unit: µg/L

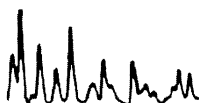
Test Method: EPA 7471A

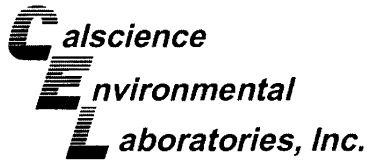
Analyte	Initial Calibration Verification			
	True	ICV-1		Control Limit
		Observed	%D	
Mercury	5.000000	5.248996	5	0 - 10

03/25/2017 11:51

ICV-1 File: ICV M030617B 03/24/2017 01:20:14 PM

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**EPA Method 7471A
Continuing Calibration Verification**



Work Order No.: 17-03-1523

Instrument ID: HG 8 (H)

Concentration Unit: µg/L

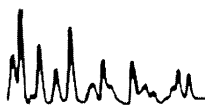
Test Method: EPA 7471A

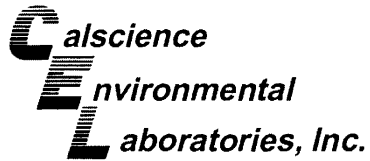
Analyte	Continuing Calibration Verification									
	True	CCV-1		CCV-2		CCV-3		CCV-4		Control Limit
		Observed	%D	Observed	%D	Observed	%D	Observed	%D	
Mercury	2.000000	2.094703	5	2.092168	5	2.073556	4	2.088906	4	0 - 20

03/25/2017 11:52

- CCV-1 File: CCV 0.2x10ppb 03/24/2017 07:31:59 PM
- CCV-2 File: CCV 0.2x10ppb 03/24/2017 07:59:17 PM
- CCV-3 File: CCV 0.2x10ppb 03/24/2017 08:12:56 PM
- CCV-4 File: CCV 0.2x10ppb 03/24/2017 08:50:53 PM

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EPA Method 7471A
Initial and Continuing Calibration Blanks

Work Order No.: 17-03-1523Instrument ID: HG 8 (H)Concentration Unit: µg/LTest Method: EPA 7471A

Analyte	Initial and Continuing Calibration Blanks					
	ICB-1	CCB-1	CCB-2	CCB-3	CCB-4	RL (No PF)
Mercury	-0.015976	-0.007739	-0.000427	-0.005687	-0.006423	0.500000

03/25/2017 11:53

ICB-1 File: ICB 03/24/2017 01:22:28 PM

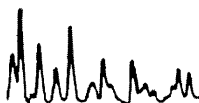
CCB-1 File: CCB 03/24/2017 07:34:16 PM

CCB-2 File: CCB 03/24/2017 08:01:33 PM

CCB-3 File: CCB 03/24/2017 08:15:12 PM

CCB-4 File: CCB 03/24/2017 08:53:10 PM

Note: Preparation factor (PF) = 167 L/kg



**RAW DATA SHEET
FOR METHOD: EPA 7471A**

WORK ORDER: 17-03-1523
INSTRUMENT: Mercury 08
EXTRACTION : EPA 7471A Total
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-24 20:48
REVIEWED BY: 309
D/T REVIEWED: 2017-03-25 11:50

DATA FILE: W:\MERCURY_DATA\FINAL\170324H1\17-03-1523-1.icp

1 **CLIENT SAMPLE NUMBER:** IDW-S

LCS/MB BATCH: 170324L04 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 0.60 g / ACTUAL: 0.63 g
MS/MSD BATCH: 170324S04 **FINAL VOLUME / WEIGHT:** DEFAULT: 100.00 ml
UNITS: mg/kg **ADJUSTMENT RATIO TO PF:** 0.95

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Mercury	0.0000550	1.00	ND	0.0794	

METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 7471A

MB SAMPLE ID: 099-16-272-2901
MB BATCH ID: 170324L04
INSTRUMENT: Mercury 08
EXTRACTION: EPA 7471A Total
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-24 19:38
REVIEWED BY: 309
D/T REVIEWED: 2017-03-25 11:45
MATRIX: Soil

DATA FILE: W:\MERCURY_DATA\FINAL\170324H1\170324-B-04.icp

CLIENT WORK ORDER: 17-03-1523

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	IDW-S		2017-03-24 20:48	W:\MERCURY_DATA\FINAL\170324H1\17-03-1523-1.icp

**RAW DATA SHEET
FOR METHOD: EPA 7471A**

WORK ORDER: 099-16-272
INSTRUMENT: Mercury 08
EXTRACTION: EPA 7471A Total
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-24 19:38
REVIEWED BY: 309
D/T REVIEWED: 2017-03-25 11:45

DATA FILE: W:\MERCURY_DATA\FINAL\170324H1\170324-B-04.icp

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170324L04 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 0.60 g / ACTUAL: 0.60 g
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 100.00 ml
UNITS: mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Mercury	-0.00000992	1.00	ND	0.0833	

LCS QUALITY CONTROL SHEET FOR METHOD: EPA 7471A

LCS SAMPLE ID: 099-16-272- 2901
LCS/MB BATCH ID: 170324L04
INSTRUMENT: Mercury 08

EXTRACTION: EPA 7471A Total
D/T EXTRACTED: 2017-03-24 00:00

ANALYZED BY: 868
D/T ANALYZED: 2017-03-24 19:41
REVIEWED BY: 309
D/T REVIEWED: 2017-03-25 11:45

DATA FILE: W:\MERCURY_DATA\FINAL\170324H1\170324-L-04.icp

<u>COMPOUND NAME</u>	<u>CONC ADDED</u>	<u>CONC REC</u>	<u>%RECOVERY</u>	<u>%REC CONTROL LIMIT</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
Mercury	0.8350	0.9045	108	85-121	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 7471A

SPIKED SAMPLE ID: 17-03-1383-1
MS/MSD BATCH: 170324S04
INSTRUMENTS:
 SAMPLE: Mercury 08
 MS: Mercury 08
 MSD: Mercury 08

EXTRACTION: EPA 7471A Total
D/T EXTRACTED:
 SAMPLE: 2017-03-24 00:00
 MS: 2017-03-24 00:00
 MSD: 2017-03-24 00:00

ANALYZED BY: 868
D/T ANALYZED:
 SAMPLE: 2017-03-24 19:43
 MS: 2017-03-24 19:45
 MSD: 2017-03-24 19:47
REVIEWED BY: 309
D/T REVIEWED: 2017-03-25 11:43

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Mercury	ND	0.005000	0.8350	0.8098	97	0.7868	94	71-137	3	0-14	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-1383-1 MS.icp	W:\MERCURY_DATA\FINAL\170324H1\
MSD	17-03-1383-1 MSD.icp	W:\MERCURY_DATA\FINAL\170324H1\

=====
Analysis BegunLogged In Analyst: US26_SVC_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170324H1.sifx

Batch ID:

Results Data Set: 170324H1

Results Library: U:\MERCURY_8\Data\Results\results.mdb

=====
Sequence No.: 1
Sample ID: Calib blank_868
Analyst: *268*
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 3/24/2017 1:00:20 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1-----
Replicate Data: Calib blank_868

Repl #	Sample Conc mg/L	Std Conc ug/L	Blk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	0.0007	0.0001	1:01:23 PM	Yes
2		[0.00]	0.0002	0.0008	0.0002	1:02:08 PM	Yes
Mean:		[0.00]	0.0002				
SD:		0.0000	0.0000				
%RSD:		0.00%	17.99				

Auto-zero performed.

=====
Sequence No.: 2
Sample ID: 0.025ppb 0.005x5ppb
Analyst: *268*
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 2
Date Collected: 3/24/2017 1:02:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1-----
Replicate Data: 0.025ppb 0.005x5ppb

Repl #	Sample Conc mg/L	Std Conc ug/L	Blk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0004	0.0041	0.0006	1:03:37 PM	Yes
2		[0.025]	0.0004	0.0048	0.0005	1:04:22 PM	Yes
Mean:		[0.025]	0.0004				
SD:		0.00000	0.0000				
%RSD:		0.00%	12.43				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.01548 Intercept: 0.00000

=====
Sequence No.: 3
Sample ID: 0.10ppb M030617AX0.0001
Analyst: *268*
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 3
Date Collected: 3/24/2017 1:04:48 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1-----
Replicate Data: 0.10ppb M030617AX0.0001

Repl #	Sample Conc mg/L	Std Conc ug/L	Blk Corr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0011	0.0044	0.0013	1:05:52 PM	Yes
2		[0.100]	0.0011	0.0082	0.0012	1:06:36 PM	Yes
Mean:		[0.100]	0.0011				
SD:		0.00000	0.0000				
%RSD:		0.00%	2.51				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.993954 Slope: 0.01070 Intercept: 0.00005

```

=====
Sequence No.: 4                               Autosampler Location: 4
Sample ID: 1.00ppb M030617AX0.001           Date Collected: 3/24/2017 1:07:03 PM
Analyst: 868                                  Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 1.00ppb M030617AX0.001      Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time    Peak
#      mg/L        ug/L      Signal   Area   Height  Time    Stored
1      [1.000]     0.0106   0.0323  0.0108 1:08:08 PM Yes
2      [1.000]     0.0095   0.0207  0.0097 1:08:53 PM Yes
Mean:  [1.000]     0.0101
SD:     0.00000    0.0008
%RSD:   0.00%     7.77
Standard number 3 applied. [1.000]
Correlation Coef.: 0.999925  Slope: 0.00998  Intercept: 0.00008
=====

```

```

=====
Sequence No.: 5                               Autosampler Location: 5
Sample ID: 2.00ppb M030617AX0.002           Date Collected: 3/24/2017 1:09:20 PM
Analyst: 868                                  Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 2.00ppb M030617AX0.002      Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time    Peak
#      mg/L        ug/L      Signal   Area   Height  Time    Stored
1      [2.000]     0.0210   0.0608  0.0211 1:10:25 PM Yes
2      [2.000]     0.0191   0.0507  0.0192 1:11:10 PM Yes
Mean:  [2.000]     0.0200
SD:     0.00000    0.0013
%RSD:   0.00%     6.67
Standard number 4 applied. [2.000]
Correlation Coef.: 0.999983  Slope: 0.00997  Intercept: 0.00008
=====

```

```

=====
Sequence No.: 6                               Autosampler Location: 6
Sample ID: 5.00ppb M030617AX0.005           Date Collected: 3/24/2017 1:11:37 PM
Analyst: 868                                  Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 5.00ppb M030617AX0.005      Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time    Peak
#      mg/L        ug/L      Signal   Area   Height  Time    Stored
1      [5.000]     0.0523   0.1577  0.0524 1:12:40 PM Yes
2      [5.000]     0.0476   0.1288  0.0477 1:13:25 PM Yes
Mean:  [5.000]     0.0499
SD:     0.00000    0.0033
%RSD:   0.00%     6.67
Standard number 5 applied. [5.000]
Correlation Coef.: 0.999997  Slope: 0.00997  Intercept: 0.00008
=====

```

```

=====
Sequence No.: 7                               Autosampler Location: 7
Sample ID: 10.0ppb M030617AX0.01            Date Collected: 3/24/2017 1:13:51 PM
Analyst: 868                                  Data Type: Original
Initial Sample Wt:                            Initial Sample Vol:
Dilution:                                    Sample Prep Vol:
Wash Time (before sample): 0                 Auto Dilution Factor: 1
=====

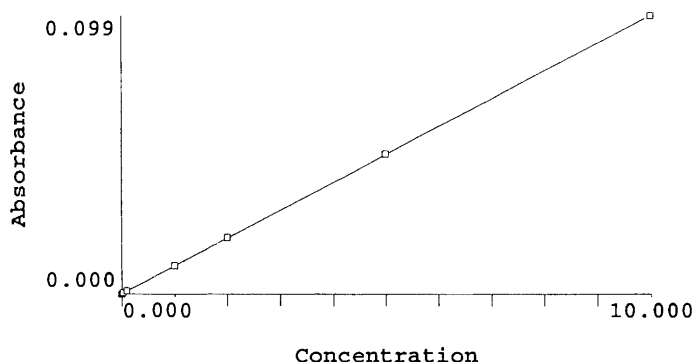
```

```

-----
Replicate Data: 10.0ppb M030617AX0.01      Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak    Peak    Time    Peak
#      mg/L        ug/L      Signal   Area   Height  Time    Stored
=====

```

1 [10.00] 0.1041 0.3242 0.1042 1:14:54 PM Yes
 2 [10.00] 0.0945 0.2624 0.0947 1:15:40 PM Yes
 Mean: [10.00] 0.0993
 SD: 0.0000 0.0068
 %RSD: 0.00% 6.80
 Standard number 6 applied. [10.00]
 Correlation Coef.: 0.999997 Slope: 0.00993 Intercept: 0.00012



Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib blank_868	0.0000	0	-0.012174	0.00	17.99
0.025ppb 0.005x5ppb	0.0004	0.025	0.026805	0.00	12.43
0.10ppb M030617AX0.0001	0.0011	0.100	0.099055	0.00	2.51
1.00ppb M030617AX0.001	0.0101	1.000	1.000543	0.00	7.77
2.00ppb M030617AX0.002	0.0200	2.000	2.003810	0.00	6.67
5.00ppb M030617AX0.005	0.0499	5.000	5.015545	0.00	6.67
10.0ppb M030617AX0.01	0.0993	10.00	9.991416	0.01	6.80
Correlation Coef.: 0.999997		Slope: 0.00993		Intercept: 0.00012	

=====
Analysis BegunLogged In Analyst: US26_SVC_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560Technique: AA FIMS-MHS
Autosampler: S10Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170324H1.sifx

Batch ID:

Results Data Set: 170324H1

Results Library: U:\MERCURY_8\Data\Results\results.mdb

=====
Sequence No.: 1
Sample ID: ICV M030617B
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 8
Date Collected: 3/24/2017 1:18:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000-----
Replicate Data: ICV M030617B
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height Height Stored
1 0.00548 5.48 0.0545 0.1689 0.0547 1:19:29 PM Yes
2 0.00502 5.02 0.0499 0.1376 0.0501 1:20:14 PM Yes
Mean: 0.00525 5.25 0.0522
SD: 0.000329 0.329 0.0033
%RSD: 6.27% 6.27% 6.26
QC value within limits for Hg 253.7 Recovery = 104.98%
All analyte(s) passed QC.=====
Sequence No.: 2
Sample ID: ICB
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 1
Date Collected: 3/24/2017 1:20:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000-----
Replicate Data: ICB
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/L ug/L Signal Area Height Height Stored
1 -0.000016 -0.0164 -0.0000 -0.0010 0.0001 1:21:44 PM Yes
2 -0.000016 -0.0155 -0.0000 0.0005 0.0001 1:22:28 PM Yes
Mean: -0.000016 -0.0160 -0.0000
SD: 0.0000006 0.00064 0.0000
%RSD: 3.98% 3.98% 16.73
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.=====
Sequence No.: 3
Sample ID: CRQL 0.25
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 9
Date Collected: 3/24/2017 1:22:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1-----
Replicate Data: CRQL 0.25
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/kg ug/L Signal Area Height Height Stored
1 0.0489 0.293 0.0030 0.0097 0.0032 1:23:59 PM Yes
2 0.0424 0.254 0.0026 0.0055 0.0028 1:24:43 PM Yes
Mean: 0.0456 0.274 0.0028
SD: 0.00459 0.0276 0.0003
%RSD: 10.07% 10.07% 9.64
=====

SD: 0.0076 0.0465 0.0005
%RSD: 7.04% 7.04% 6.92

Sequence No.: 20 Autosampler Location: 35
Sample ID: 17-03-1353-2 Date Collected: 3/24/2017 7:22:06 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.62 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-1353-2 Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/kg ug/L Signal Area Height Stored
1 0.0960 0.595 0.0060 0.0193 0.0062 7:23:11 PM Yes
2 0.0869 0.539 0.0055 0.0169 0.0056 7:23:56 PM Yes
Mean: 0.0915 0.567 0.0058
SD: 0.00645 0.0400 0.0004
%RSD: 7.05% 7.05% 6.91
User canceled analysis.

Analysis Begun

Logged In Analyst: US26 SVC INSTRUMENT Technique: AA FIMS-MHS
Spectrometer: FIMS-400, S/N B050-9560 Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170324H1.sifx

Batch ID:
Results Data Set: 170324H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 21 Autosampler Location: 36
Sample ID: 17-03-1353-3 Date Collected: 3/24/2017 7:25:32 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.6 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-1353-3 Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/kg ug/L Signal Area Height Stored
1 0.0205 0.123 0.0013 0.0036 0.0015 7:26:38 PM Yes
2 0.0191 0.114 0.0013 0.0047 0.0014 7:27:22 PM Yes
Mean: 0.0198 0.119 0.0013
SD: 0.00098 0.0059 0.0001
%RSD: 4.97% 4.97% 4.51

Sequence No.: 22 Autosampler Location: 37
Sample ID: 17-03-1353-4 Date Collected: 3/24/2017 7:27:49 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.6 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-1353-4 Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
mg/kg ug/L Signal Area Height Stored
1 0.0923 0.554 0.0056 0.0136 0.0058 7:28:55 PM Yes
2 0.0852 0.511 0.0052 0.0140 0.0053 7:29:40 PM Yes
Mean: 0.0888 0.533 0.0054
SD: 0.00504 0.0302 0.0003
%RSD: 5.68% 5.68% 5.55

Sequence No.: 23 Autosampler Location: 5



Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 3/24/2017 7:30:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00216	2.16	0.0216	0.0633	0.0217	7:31:13 PM	Yes
2	0.00203	2.03	0.0203	0.0588	0.0204	7:31:59 PM	Yes
Mean:	0.00209	2.09	0.0209				
SD:	0.000094	0.094	0.0009				
%RSD:	4.48%	4.48%	4.45				

QC value within limits for Hg 253.7 Recovery = 104.74%
All analyte(s) passed QC.

=====

Sequence No.: 24

Autosampler Location: 1

Sample ID: CCB
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 3/24/2017 7:32:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCB

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000012	-0.0118	0.0000	-0.0069	0.0002	7:33:30 PM	Yes
2	-0.000004	-0.00371	0.0001	0.0018	0.0002	7:34:16 PM	Yes
Mean:	-0.000008	-0.00774	0.0000				
SD:	0.0000057	0.005692	0.0001				
%RSD:	73.56%	73.56%	128.35				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====

Sequence No.: 25

Autosampler Location: 38

Sample ID: 17-03-1353-5
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Date Collected: 3/24/2017 7:34:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1353-5

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.116	0.718	0.0072	0.0226	0.0074	7:35:46 PM	Yes
2	0.103	0.637	0.0064	0.0165	0.0066	7:36:32 PM	Yes
Mean:	0.109	0.678	0.0068				
SD:	0.0092	0.0571	0.0006				
%RSD:	8.42%	8.42%	8.28				

=====

Sequence No.: 26

Autosampler Location: 39

Sample ID: 170324-B-034
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Date Collected: 3/24/2017 7:36:58 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 170324-B-034

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.00477	-0.0286	-0.0002	-0.0045	-0.0000	7:38:03 PM	Yes
2	0.00146	0.00877	0.0002	0.0043	0.0004	7:38:48 PM	Yes
Mean:	-0.00165	-0.00992	0.0000				
SD:	0.004406	0.026435	0.0003				

509
03/24/17

%RSD: 266.54% 266.54% >999.9%

Sequence No.: 27
 Sample ID: 170324-L-03¹
 Analyst: 868 HG-8
 Initial Sample Wt: 0.6 g
 Dilution:
 Wash Time (before sample): 0

309
03/24/17

Autosampler Location: 40
 Date Collected: 3/24/2017 7:39:14 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol: 100 mL
 Auto Dilution Factor: 1

Replicate Data: 170324-L-03¹
 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.944	5.66	0.0563	0.1716	0.0565	7:40:20 PM	Yes
2	0.865	5.19	0.0517	0.1460	0.0518	7:41:05 PM	Yes
Mean:	0.904	5.43	0.0540				
SD:	0.0556	0.334	0.0033				
%RSD:	6.15%	6.15%	6.13				

Sequence No.: 28
 Sample ID: 17-03-1383-1
 Analyst: 868 HG-8
 Initial Sample Wt: 0.61 g
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 41
 Date Collected: 3/24/2017 7:41:31 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol: 100 mL
 Auto Dilution Factor: 1

Replicate Data: 17-03-1383-1
 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0216	0.132	0.0014	0.0043	0.0016	7:42:36 PM	Yes
2	0.0208	0.127	0.0014	0.0045	0.0015	7:43:21 PM	Yes
Mean:	0.0212	0.129	0.0014				
SD:	0.00055	0.0034	0.0000				
%RSD:	2.60%	2.60%	2.37				

Sequence No.: 29
 Sample ID: 17-03-1383-1 MS
 Analyst: 868 HG-8
 Initial Sample Wt: 0.61 g
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 42
 Date Collected: 3/24/2017 7:43:47 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol: 100 mL
 Auto Dilution Factor: 1

Replicate Data: 17-03-1383-1 MS
 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.845	5.15	0.0513	0.1583	0.0514	7:44:52 PM	Yes
2	0.775	4.73	0.0471	0.1359	0.0472	7:45:38 PM	Yes
Mean:	0.810	4.94	0.0492				
SD:	0.0492	0.300	0.0030				
%RSD:	6.08%	6.08%	6.06				

Sequence No.: 30
 Sample ID: 17-03-1383-1 MSD
 Analyst: 868 HG-8
 Initial Sample Wt: 0.62 g
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 43
 Date Collected: 3/24/2017 7:46:04 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol: 100 mL
 Auto Dilution Factor: 1

Replicate Data: 17-03-1383-1 MSD
 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.817	5.06	0.0504	0.1512	0.0505	7:47:09 PM	Yes
2	0.757	4.69	0.0467	0.1328	0.0469	7:47:55 PM	Yes
Mean:	0.787	4.88	0.0485				
SD:	0.0424	0.263	0.0026				



%RSD: 5.39% 5.39% 5.37

```

=====
Sequence No.: 31
Sample ID: 17-03-1383-2
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 44
Date Collected: 3/24/2017 7:48:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1383-2
Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/kg      ug/L      Signal   Area  Height
1      0.0192      0.115    0.0013   0.0031 0.0014  7:49:26 PM  Yes
2      0.0247      0.148    0.0016   0.0141 0.0017  7:50:11 PM  Yes
Mean:  0.0219      0.132    0.0014
SD:    0.00389      0.0234   0.0002
%RSD:  17.74%     17.74%  16.23
=====

```

```

=====
Sequence No.: 32
Sample ID: 17-03-1383-3
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 45
Date Collected: 3/24/2017 7:50:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1383-3
Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/kg      ug/L      Signal   Area  Height
1      0.0114      0.0694   0.0008   0.0026 0.0010  7:51:43 PM  Yes
2      0.0107      0.0654   0.0008   0.0024 0.0009  7:52:27 PM  Yes
Mean:  0.0110      0.0674   0.0008
SD:    0.00047      0.00286  0.0000
%RSD:  4.25%     4.25%   3.60
=====

```

```

=====
Sequence No.: 33
Sample ID: 17-03-1274-1
Analyst: 868 HG-8
Initial Sample Wt: 0.59 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 46
Date Collected: 3/24/2017 7:52:54 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1274-1
Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/kg      ug/L      Signal   Area  Height
1      0.0917      0.541    0.0055   0.0169 0.0056  7:53:59 PM  Yes
2      0.0843      0.498    0.0051   0.0152 0.0052  7:54:43 PM  Yes
Mean:  0.0880      0.519    0.0053
SD:    0.00522      0.0308   0.0003
%RSD:  5.93%     5.93%   5.80
=====

```

```

=====
Sequence No.: 34
Sample ID: 17-03-1274-2
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 47
Date Collected: 3/24/2017 7:55:10 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1274-2
Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/kg      ug/L      Signal   Area  Height
1      0.0392      0.235    0.0025   0.0097 0.0026  7:56:14 PM  Yes
2      0.0357      0.214    0.0022   0.0072 0.0024  7:57:00 PM  Yes
Mean:  0.0375      0.225    0.0024
SD:    0.00249      0.0149   0.0001
=====

```

%RSD: 6.65% 6.65% 6.31

```

=====
Sequence No.: 35                               Autosampler Location: 5
Sample ID: CCV 0.2x10ppb                       Date Collected: 3/24/2017 7:57:27 PM
Analyst: 868 HG-8                              Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

Replicate Data: CCV 0.2x10ppb                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.00217     2.17     0.0217   0.0661 0.0218  7:58:32 PM  Yes
2      0.00202     2.02     0.0201   0.0590 0.0203  7:59:17 PM  Yes
Mean:  0.00209     2.09     0.0209
SD:     0.000109    0.109    0.0011
%RSD:   5.21%     5.21%    5.18

```

QC value within limits for Hg 253.7 Recovery = 104.61%
All analyte(s) passed QC.

```

=====
Sequence No.: 36                               Autosampler Location: 1
Sample ID: CCB                                 Date Collected: 3/24/2017 7:59:44 PM
Analyst: 868 HG-8                              Data Type: Original
Initial Sample Wt:                             Initial Sample Vol:
Dilution:                                     Sample Prep Vol:
Wash Time (before sample): 0                  Auto Dilution Factor: 1.0000
=====

```

```

Replicate Data: CCB                           Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      0.000002     0.00182  0.0001   0.0028 0.0003  8:00:48 PM  Yes
2      -0.000003    -0.00268 0.0001   0.0020 0.0002  8:01:33 PM  Yes
Mean:  -0.000000    -0.000427 0.0001
SD:     0.0000032    0.0031797 0.0000
%RSD:   744.44%     744.44%   27.07

```

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

```

=====
Sequence No.: 37                               Autosampler Location: 48
Sample ID: 17-03-1274-3                       Date Collected: 3/24/2017 8:01:58 PM
Analyst: 868 HG-8                              Data Type: Original
Initial Sample Wt: 0.59 g                      Initial Sample Vol:
Dilution:                                     Sample Prep Vol: 100 mL
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

Replicate Data: 17-03-1274-3                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/kg      ug/L      Signal   Area  Height
1      0.00544     0.0321   0.0004   0.0008 0.0006  8:03:03 PM  Yes
2      0.00700     0.0413   0.0005   0.0027 0.0007  8:03:48 PM  Yes
Mean:  0.00622     0.0367   0.0005
SD:     0.001105    0.00652   0.0001
%RSD:   17.76%     17.76%   13.33

```

```

=====
Sequence No.: 38                               Autosampler Location: 49
Sample ID: 17-03-1274-4                       Date Collected: 3/24/2017 8:04:15 PM
Analyst: 868 HG-8                              Data Type: Original
Initial Sample Wt: 0.58 g                      Initial Sample Vol:
Dilution:                                     Sample Prep Vol: 100 mL
Wash Time (before sample): 0                  Auto Dilution Factor: 1
=====

```

```

Replicate Data: 17-03-1274-4                 Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/kg      ug/L      Signal   Area  Height

```

1	0.0889	0.516	0.0052	0.0206	0.0054	8:05:20 PM	Yes
2	0.0789	0.457	0.0047	0.0146	0.0048	8:06:05 PM	Yes
Mean:	0.0839	0.487	0.0050				
SD:	0.00712	0.0413	0.0004				
%RSD:	8.49%	8.49%	8.28				

```

=====
Sequence No.: 39
Sample ID: 17-03-1274-5
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 50
Date Collected: 3/24/2017 8:06:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1274-5
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/kg ug/L Signal Area Height Stored
1 0.364 2.22 0.0222 0.0692 0.0223 8:07:38 PM Yes
2 0.331 2.02 0.0202 0.0599 0.0203 8:08:22 PM Yes
Mean: 0.348 2.12 0.0212
SD: 0.0236 0.144 0.0014
%RSD: 6.80% 6.80% 6.76
-----

```

```

=====
Sequence No.: 40
Sample ID: 17-03-1274-6
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 51
Date Collected: 3/24/2017 8:08:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1274-6
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/kg ug/L Signal Area Height Stored
1 0.221 1.33 0.0133 0.0393 0.0135 8:09:54 PM Yes
2 0.205 1.23 0.0124 0.0359 0.0125 8:10:38 PM Yes
Mean: 0.213 1.28 0.0128
SD: 0.0113 0.068 0.0007
%RSD: 5.29% 5.29% 5.24
-----

```

```

=====
Sequence No.: 41
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 5
Date Collected: 3/24/2017 8:11:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: CCV 0.2x10ppb
Analyte: Hg 253.7
Repl SampleConc StndConc BlnkCorr Peak Peak Time Peak
# mg/L ug/L Signal Area Height Stored
1 0.00216 2.16 0.0215 0.0651 0.0217 8:12:11 PM Yes
2 0.00199 1.99 0.0199 0.0578 0.0200 8:12:56 PM Yes
Mean: 0.00207 2.07 0.0207
SD: 0.000119 0.119 0.0012
%RSD: 5.72% 5.72% 5.68
-----

```

QC value within limits for Hg 253.7 Recovery = 103.68%
All analyte(s) passed QC.

```

=====
Sequence No.: 42
Sample ID: CCB
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/24/2017 8:13:23 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: CCB
Analyte: Hg 253.7
-----

```

Repl #	SampleConc mg/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000000	0.000018	0.0001	0.0005	0.0003	8:14:27 PM	Yes
2	-0.000011	-0.0114	0.0000	-0.0002	0.0002	8:15:12 PM	Yes
Mean:	-0.000006	-0.00569	0.0001				
SD:	0.0000081	0.008069	0.0001				
%RSD:	141.87%	141.87%	124.39				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====
Analysis Begun

Logged In Analyst: US26_SVC_INSTRUMENT
 Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
 Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
 170324H1.sifx

Batch ID:
 Results Data Set: 170324H1
 Results Library: U:\MERCURY_8\Data\Results\results.mdb

=====
Sequence No.: 1 Autosampler Location: 52
 Sample ID: 17-03-1380-1 Date Collected: 3/24/2017 8:26:18 PM
 Analyst: 868 HG-8 Data Type: Original
 Initial Sample Wt: 0.61 g Initial Sample Vol:
 Dilution: Sample Prep Vol: 100 mL
 Wash Time (before sample): 0 Auto Dilution Factor: 1

=====
 Replicate Data: 17-03-1380-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0468	0.286	0.0030	0.0149	0.0031	8:27:23 PM	Yes
2	0.0375	0.229	0.0024	0.0084	0.0025	8:28:09 PM	Yes
Mean:	0.0422	0.257	0.0027				
SD:	0.00658	0.0401	0.0004				
%RSD:	15.59%	15.59%	14.89				

=====
Sequence No.: 2 Autosampler Location: 53
 Sample ID: 17-03-1380-2 Date Collected: 3/24/2017 8:28:35 PM
 Analyst: 868 HG-8 Data Type: Original
 Initial Sample Wt: 0.6 g Initial Sample Vol:
 Dilution: Sample Prep Vol: 100 mL
 Wash Time (before sample): 0 Auto Dilution Factor: 1

=====
 Replicate Data: 17-03-1380-2 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0996	0.598	0.0061	0.0173	0.0062	8:29:40 PM	Yes
2	0.0929	0.557	0.0057	0.0157	0.0058	8:30:25 PM	Yes
Mean:	0.0963	0.578	0.0059				
SD:	0.00478	0.0287	0.0003				
%RSD:	4.96%	4.96%	4.86				

=====
Sequence No.: 3 Autosampler Location: 54
 Sample ID: 17-03-1380-3 Date Collected: 3/24/2017 8:30:51 PM
 Analyst: 868 HG-8 Data Type: Original
 Initial Sample Wt: 0.6 g Initial Sample Vol:
 Dilution: Sample Prep Vol: 100 mL
 Wash Time (before sample): 0 Auto Dilution Factor: 1

=====
 Replicate Data: 17-03-1380-3 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0417	0.250	0.0026	0.0106	0.0028	8:31:56 PM	Yes
2	0.0345	0.207	0.0022	0.0068	0.0023	8:32:41 PM	Yes
Mean:	0.0381	0.229	0.0024				
SD:	0.00512	0.0307	0.0003				
%RSD:	13.43%	13.43%	12.75				

=====
Sequence No.: 4 Autosampler Location: 55
 Sample ID: 17-03-1380-4 Date Collected: 3/24/2017 8:33:08 PM
 Analyst: 868 HG-8 Data Type: Original
 Initial Sample Wt: 0.61 g Initial Sample Vol:

Dilution:
Wash Time (before sample): 0

Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1380-4

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0508	0.310	0.0032	0.0109	0.0033	8:34:12 PM	Yes
2	0.0479	0.292	0.0030	0.0131	0.0032	8:34:57 PM	Yes
Mean:	0.0493	0.301	0.0031				
SD:	0.00206	0.0125	0.0001				
%RSD:	4.17%	4.17%	4.01				

=====

Sequence No.: 5

Autosampler Location: 56

Sample ID: 17-03-1380-5
Analyst: 868 HG-8
Initial Sample Wt: 0.58 g
Dilution:
Wash Time (before sample): 0

Date Collected: 3/24/2017 8:35:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1380-5

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0130	0.0757	0.0009	0.0035	0.0010	8:36:28 PM	Yes
2	0.0113	0.0657	0.0008	0.0045	0.0009	8:37:13 PM	Yes
Mean:	0.0122	0.0707	0.0008				
SD:	0.00122	0.00708	0.0001				
%RSD:	10.02%	10.02%	8.55				

=====

Sequence No.: 6

Autosampler Location: 57

Sample ID: 17-03-1380-6
Analyst: 868 HG-8
Initial Sample Wt: 0.59 g
Dilution:
Wash Time (before sample): 0

Date Collected: 3/24/2017 8:37:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1380-6

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0301	0.178	0.0019	0.0063	0.0020	8:38:45 PM	Yes
2	0.0289	0.171	0.0018	0.0073	0.0020	8:39:29 PM	Yes
Mean:	0.0295	0.174	0.0019				
SD:	0.00087	0.0051	0.0001				
%RSD:	2.95%	2.95%	2.76				

=====

Sequence No.: 7

Autosampler Location: 58

Sample ID: 17-03-1393-1
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Date Collected: 3/24/2017 8:39:56 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-1393-1

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.08	18.8	0.1866	0.5767	0.1867	8:41:01 PM	Yes
Sample concentration is greater than that of the highest standard.							
2	2.84	17.4	0.1724	0.5017	0.1725	8:41:45 PM	Yes
Sample concentration is greater than that of the highest standard.							
Mean:	2.96	18.1	0.1795				
SD:	0.166	1.01	0.0100				
%RSD:	5.60%	5.60%	5.59				
Sample concentration is greater than that of the highest standard.							

=====

Sequence No.: 8

Autosampler Location: 59

Sample ID: 17-03-1114-1
 Analyst: 868 HG-8
 Initial Sample Wt: 0.62 g
 Dilution:
 Wash Time (before sample): 0

Date Collected: 3/24/2017 8:42:12 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol: 100 mL
 Auto Dilution Factor: 1

Replicate Data: 17-03-1114-1

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0180	0.111	0.0012	0.0053	0.0014	8:43:17 PM	Yes
2	0.0142	0.0882	0.0010	0.0044	0.0011	8:44:02 PM	Yes
Mean:	0.0161	0.0998	0.0011				
SD:	0.00263	0.01632	0.0002				
%RSD:	16.36%	16.36%	14.58				

=====

Sequence No.: 9
 Sample ID: 17-03-1115-1
 Analyst: 868 HG-8
 Initial Sample Wt: 0.6 g
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 60
 Date Collected: 3/24/2017 8:44:29 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol: 100 mL
 Auto Dilution Factor: 1

Replicate Data: 17-03-1115-1

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.00236	-0.0142	-0.0000	0.0003	0.0001	8:45:34 PM	Yes
2	-0.00217	-0.0130	-0.0000	0.0018	0.0001	8:46:19 PM	Yes
Mean:	-0.00226	-0.0136	-0.0000				
SD:	0.000138	0.00083	0.0000				
%RSD:	6.08%	6.08%	58.44				

=====

Sequence No.: 10
 Sample ID: 17-03-1523-1
 Analyst: 868 HG-8
 Initial Sample Wt: 0.63 g
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 61
 Date Collected: 3/24/2017 8:46:46 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol: 100 mL
 Auto Dilution Factor: 1

Replicate Data: 17-03-1523-1

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00883	0.0556	0.0007	0.0016	0.0008	8:47:51 PM	Yes
2	0.00864	0.0544	0.0007	0.0039	0.0008	8:48:36 PM	Yes
Mean:	0.00874	0.0550	0.0007				
SD:	0.000137	0.00086	0.0000				
%RSD:	1.56%	1.56%	1.28				

=====

Sequence No.: 11
 Sample ID: CCV 0.2x10ppb
 Analyst: 868 HG-8
 Initial Sample Wt:
 Dilution:
 Wash Time (before sample): 0

Autosampler Location: 5
 Date Collected: 3/24/2017 8:49:03 PM
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:
 Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00219	2.19	0.0218	0.0675	0.0220	8:50:08 PM	Yes
2	0.00199	1.99	0.0199	0.0576	0.0200	8:50:53 PM	Yes
Mean:	0.00209	2.09	0.0209				
SD:	0.000138	0.138	0.0014				
%RSD:	6.59%	6.59%	6.55				

QC value within limits for Hg 253.7 Recovery = 104.45%
 All analyte(s) passed QC.

```

=====
Sequence No.: 12
Sample ID: CCB
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/24/2017 8:51:21 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000
=====

```

```

-----
Replicate Data: CCB
Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/L        ug/L      Signal   Area  Height
1      -0.000004    -0.00400  0.0001   0.0004 0.0002  8:52:25 PM  Yes
2      -0.000009    -0.00884  0.0000   0.0000 0.0002  8:53:10 PM  Yes
Mean:  -0.000006    -0.00642  0.0001
SD:     0.0000034    0.003422  0.0000
%RSD:   53.27%      53.27%   59.50
QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.
=====

```

```

=====
Sequence No.: 13
Sample ID: 17-03-1005-7 10X
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution: 10X
Wash Time (before sample): 0

Autosampler Location: 27
Date Collected: 3/24/2017 8:53:35 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1005-7 10X
Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/kg      ug/L      Signal   Area  Height
1      2.13         1.32     0.0132   0.0387 0.0134  8:54:40 PM  Yes
2      2.02         1.25     0.0126   0.0376 0.0127  8:55:25 PM  Yes
Mean:  2.08         1.29     0.0129
SD:     0.075         0.047    0.0005
%RSD:   3.63%      3.63%   3.59
=====

```

```

=====
Sequence No.: 14
Sample ID: 17-03-1005-15 10X
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution: 10X
Wash Time (before sample): 0

Autosampler Location: 33
Date Collected: 3/24/2017 8:55:51 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1005-15 10X
Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/kg      ug/L      Signal   Area  Height
1      7.67         4.68     0.0466   0.1447 0.0467  8:56:55 PM  Yes
2      7.26         4.43     0.0441   0.1278 0.0443  8:57:41 PM  Yes
Mean:  7.47         4.55     0.0453
SD:     0.287         0.175    0.0017
%RSD:   3.85%      3.85%   3.84
=====

```

```

=====
Sequence No.: 15
Sample ID: 17-03-1393-1 10X
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution: 10X
Wash Time (before sample): 0

Autosampler Location: 58
Date Collected: 3/24/2017 8:58:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1
=====

```

```

-----
Replicate Data: 17-03-1393-1 10X
Analyte: Hg 253.7
Repl  SampleConc  StndConc  BlnkCorr  Peak  Peak  Time  Peak
#      mg/kg      ug/L      Signal   Area  Height
1      3.51         2.14     0.0214   0.0672 0.0215  8:59:11 PM  Yes
2      3.26         1.99     0.0199   0.0580 0.0200  8:59:56 PM  Yes
Mean:  3.39         2.07     0.0206
SD:     0.176         0.107    0.0011
=====

```


EPA 7471A Mercury (Solid)

Run Logs

170324H1

Carrier solution R07141602

Reducing Agent R07141603

Sample ID	Analyst Name	Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
Calib blank_868	868 HG-8		Hg 253.7	3/24/2017	1:02:08 PM		ug/L		mg/L	
0.025ppb 0.005x5ppb	868 HG-8		Hg 253.7	3/24/2017	1:04:22 PM		ug/L		mg/L	
0.10ppb M030617AX0.0001	868 HG-8		Hg 253.7	3/24/2017	1:06:36 PM		ug/L		mg/L	
1.00ppb M030617AX0.001	868 HG-8		Hg 253.7	3/24/2017	1:08:53 PM		ug/L		mg/L	
2.00ppb M030617AX0.002	868 HG-8		Hg 253.7	3/24/2017	1:11:10 PM		ug/L		mg/L	
5.00ppb M030617AX0.005	868 HG-8		Hg 253.7	3/24/2017	1:13:25 PM		ug/L		mg/L	
10.0ppb M030617AX0.01	868 HG-8		Hg 253.7	3/24/2017	1:15:40 PM		ug/L		mg/L	
ICV M030617B } *	868 HG-8		Hg 253.7	3/24/2017	1:18:07 PM	2.879011	ug/L	0.002879	mg/L	0.999997
ICV M030617B }	868 HG-8		Hg 253.7	3/24/2017	1:20:14 PM	5.248996	ug/L	0.005249	mg/L	0.999997
ICB	868 HG-8		Hg 253.7	3/24/2017	1:22:28 PM	-0.01598	ug/L	-1.60E-05	mg/L	0.999997
CRQL 0.25	868 HG-8	0.6	Hg 253.7	3/24/2017	1:24:43 PM	0.273765	ug/L	0.045628	mg/kg	0.999997
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/24/2017	1:27:00 PM	2.055905	ug/L	0.002056	mg/L	0.999997
CCB	868 HG-8		Hg 253.7	3/24/2017	1:29:16 PM	-0.00807	ug/L	-8.07E-06	mg/L	0.999997
17-03-1723-1	868 HG-8	0.61	Hg 253.7	3/24/2017	2:25:25 PM	0.393879	ug/L	0.06457	mg/kg	0.999997
17-03-1723-2	868 HG-8	0.6	Hg 253.7	3/24/2017	2:27:43 PM	1.525546	ug/L	0.254258	mg/kg	0.999997
17-03-1724-1	868 HG-8	0.6	Hg 253.7	3/24/2017	2:30:01 PM	1.140785	ug/L	0.190131	mg/kg	0.999997
17-03-1732-1	868 HG-8	0.6	Hg 253.7	3/24/2017	2:32:19 PM	1.035963	ug/L	0.172661	mg/kg	0.999997
17-03-1751-1	868 HG-8	0.58	Hg 253.7	3/24/2017	2:34:38 PM	0.660985	ug/L	0.113963	mg/kg	0.999997
17-03-1751-2	868 HG-8	0.61	Hg 253.7	3/24/2017	2:36:56 PM	0.626727	ug/L	0.102742	mg/kg	0.999997
17-03-1701-1	868 HG-8	0.61	Hg 253.7	3/24/2017	2:39:13 PM	0.79128	ug/L	0.129718	mg/kg	0.999997
170324-B-01	868 HG-8	0.6	Hg 253.7	3/24/2017	2:41:32 PM	-0.02249	ug/L	-0.00375	mg/kg	0.999997
170324-L-01	868 HG-8	0.6	Hg 253.7	3/24/2017	2:43:50 PM	5.384723	ug/L	0.897454	mg/kg	0.999997
17-03-0865-1	868 HG-8	0.6	Hg 253.7	3/24/2017	2:46:08 PM	0.096697	ug/L	0.016116	mg/kg	0.999997
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/24/2017	2:48:26 PM	2.07908	ug/L	0.002079	mg/L	0.999997
CCB	868 HG-8		Hg 253.7	3/24/2017	2:50:42 PM	-0.00964	ug/L	-9.64E-06	mg/L	0.999997

* ICV folder, renon - passed

Reviewed/Assign to Logbook Date:	03-25-17
Analyst:	Hg
Chemist ID:	309
Logbook Page:	73
Instrument ID:	Ag 8

Sample ID	Analyst Name	Sample Name	Wt	Initial	Sample Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
17-03-0865-1 MS	868 HG-8	Hg 253.7	0.62	Hg 253.7	3/24/2017	2:52:57 PM	5.005211 ug/L	0.807292 mg/kg	0.999997			
17-03-0865-1 MSD	868 HG-8	Hg 253.7	0.63	Hg 253.7	3/24/2017	2:55:16 PM	5.033914 ug/L	0.799034 mg/kg	0.999997			
17-03-1236-1	868 HG-8	Hg 253.7	0.61	Hg 253.7	3/24/2017	2:57:33 PM	0.787566 ug/L	0.129109 mg/kg	0.999997			
17-03-1031-6	868 HG-8	Hg 253.7	0.61	Hg 253.7	3/24/2017	2:59:52 PM	0.494462 ug/L	0.081059 mg/kg	0.999997			
17-03-1031-8	868 HG-8	Hg 253.7	0.6	Hg 253.7	3/24/2017	3:02:11 PM	0.287975 ug/L	0.047996 mg/kg	0.999997			
17-03-0865-2	868 HG-8	Hg 253.7	0.62	Hg 253.7	3/24/2017	3:04:29 PM	0.005063 ug/L	0.000817 mg/kg	0.999997			
17-03-0865-3	868 HG-8	Hg 253.7	0.6	Hg 253.7	3/24/2017	3:06:47 PM	0.042386 ug/L	0.007064 mg/kg	0.999997			
17-03-0865-4	868 HG-8	Hg 253.7	0.6	Hg 253.7	3/24/2017	3:09:06 PM	0.001397 ug/L	0.000233 mg/kg	0.999997			
17-03-0865-5	868 HG-8	Hg 253.7	0.61	Hg 253.7	3/24/2017	3:11:24 PM	-0.00065 ug/L	-0.00011 mg/kg	0.999997			
17-03-0865-6	868 HG-8	Hg 253.7	0.62	Hg 253.7	3/24/2017	3:13:43 PM	-0.00598 ug/L	-0.00096 mg/kg	0.999997			
CCV 0.2x10ppb	868 HG-8	Hg 253.7		Hg 253.7	3/24/2017	3:16:00 PM	2.082654 ug/L	0.002083 mg/L	0.999997			
CCB	868 HG-8	Hg 253.7		Hg 253.7	3/24/2017	3:18:16 PM	-0.00971 ug/L	-9.71E-06 mg/L	0.999997			
17-03-0865-7	868 HG-8	Hg 253.7	0.62	Hg 253.7	3/24/2017	3:20:32 PM	-0.00066 ug/L	-0.00011 mg/kg	0.999997			
17-03-0865-8	868 HG-8	Hg 253.7	0.62	Hg 253.7	3/24/2017	3:22:50 PM	0.000161 ug/L	2.60E-05 mg/kg	0.999997			
17-03-0865-9	868 HG-8	Hg 253.7	0.61	Hg 253.7	3/24/2017	3:25:08 PM	0.029506 ug/L	0.004837 mg/kg	0.999997			
17-03-0865-10	868 HG-8	Hg 253.7	0.62	Hg 253.7	3/24/2017	3:27:27 PM	-0.00858 ug/L	-0.00138 mg/kg	0.999997			
17-03-0865-11	868 HG-8	Hg 253.7	0.6	Hg 253.7	3/24/2017	3:29:45 PM	0.013484 ug/L	0.002247 mg/kg	0.999997			
17-03-0865-12	868 HG-8	Hg 253.7	0.62	Hg 253.7	3/24/2017	3:32:04 PM	0.012277 ug/L	0.00198 mg/kg	0.999997			
17-03-0865-13	868 HG-8	Hg 253.7	0.6	Hg 253.7	3/24/2017	3:34:21 PM	0.009739 ug/L	0.001623 mg/kg	0.999997			
17-03-0865-14	868 HG-8	Hg 253.7	0.62	Hg 253.7	3/24/2017	3:36:40 PM	0.000865 ug/L	0.00014 mg/kg	0.999997			
17-03-0865-15	868 HG-8	Hg 253.7	0.61	Hg 253.7	3/24/2017	3:38:59 PM	-0.00343 ug/L	-0.00056 mg/kg	0.999997			
17-03-0865-16	868 HG-8	Hg 253.7	0.61	Hg 253.7	3/24/2017	3:41:18 PM	0.007082 ug/L	0.001161 mg/kg	0.999997			
CCV 0.2x10ppb	868 HG-8	Hg 253.7		Hg 253.7	3/24/2017	3:43:36 PM	2.048166 ug/L	0.002048 mg/L	0.999997			
CCB	868 HG-8	Hg 253.7		Hg 253.7	3/24/2017	3:45:52 PM	-0.00957 ug/L	-9.57E-06 mg/L	0.999997			
17-03-0865-17	868 HG-8	Hg 253.7	0.6	Hg 253.7	3/24/2017	3:48:09 PM	-0.001 ug/L	-0.00017 mg/kg	0.999997			
CCV 0.2x10ppb	868 HG-8	Hg 253.7		Hg 253.7	3/24/2017	3:50:27 PM	2.060531 ug/L	0.002061 mg/L	0.999997			
CCB	868 HG-8	Hg 253.7		Hg 253.7	3/24/2017	3:52:44 PM	-0.0104 ug/L	-1.04E-05 mg/L	0.999997			
CCV 0.2x10ppb *	868 HG-8	Hg 253.7		Hg 253.7	3/24/2017	6:02:41 PM	2.085405 ug/L	0.002085 mg/L	0.999997			
CCB	868 HG-8	Hg 253.7		Hg 253.7	3/24/2017	6:04:57 PM	-0.00427 ug/L	-4.27E-06 mg/L	0.999997			

Reviewed/Assign to Logbook Date: 03-25-17
 Analysis Hg Chemist ID: 309
 Logbook Page: 74 Instrument ID: Hg-8

* time gap

Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc		Units		Corr Coef
						(Calib)	(Samp)	(Calib)	(Samp)	
17-03-1549-ST-1	868 HG-8		Hg 253.7	3/24/2017	6:07:11 PM	-0.0211 ug/L	-0.00021 mg/L	ug/L	mg/L	0.999997
17-03-1549-ST-2	868 HG-8		Hg 253.7	3/24/2017	6:09:25 PM	0.065286 ug/L	0.000653 mg/L	ug/L	mg/L	0.999997
170324-B-A1	868 HG-8		Hg 253.7	3/24/2017	6:11:41 PM	-0.02224 ug/L	-0.00022 mg/L	ug/L	mg/L	0.999997
170324-L-A1	868 HG-8		Hg 253.7	3/24/2017	6:13:57 PM	5.246835 ug/L	0.052468 mg/L	ug/L	mg/L	0.999997
17-03-0838-ST-1	868 HG-8		Hg 253.7	3/24/2017	6:16:14 PM	0.882771 ug/L	0.008828 mg/L	ug/L	mg/L	0.999997
17-03-0838-ST-1 MS	868 HG-8		Hg 253.7	3/24/2017	6:18:31 PM	5.04749 ug/L	0.050475 mg/L	ug/L	mg/L	0.999997
17-03-0838-ST-1 MSD	868 HG-8		Hg 253.7	3/24/2017	6:20:47 PM	4.823451 ug/L	0.048235 mg/L	ug/L	mg/L	0.999997
17-03-1515-ST-1	868 HG-8		Hg 253.7	3/24/2017	6:23:02 PM	-0.01155 ug/L	-0.00012 mg/L	ug/L	mg/L	0.999997
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/24/2017	6:25:17 PM	2.055938 ug/L	0.002056 mg/L	ug/L	mg/L	0.999997
CCB	868 HG-8		Hg 253.7	3/24/2017	6:27:33 PM	-0.01449 ug/L	-1.45E-05 mg/L	ug/L	mg/L	0.999997
170324-B-03	868 HG-8	0.6	Hg 253.7	3/24/2017	6:40:52 PM	-0.0239 ug/L	-0.00398 mg/kg	ug/L	mg/kg	0.999997
170324-L-03	868 HG-8	0.6	Hg 253.7	3/24/2017	6:43:07 PM	5.281252 ug/L	0.880209 mg/kg	ug/L	mg/kg	0.999997
17-03-1005-1	868 HG-8	0.6	Hg 253.7	3/24/2017	6:45:23 PM	2.347858 ug/L	0.39131 mg/kg	ug/L	mg/kg	0.999997
17-03-1005-1 MS	868 HG-8	0.61	Hg 253.7	3/24/2017	6:47:39 PM	6.421637 ug/L	1.052727 mg/kg	ug/L	mg/kg	0.999997
17-03-1005-1 MSD	868 HG-8	0.57	Hg 253.7	3/24/2017	6:49:55 PM	6.211207 ug/L	1.089685 mg/kg	ug/L	mg/kg	0.999997
17-03-1005-2	868 HG-8	0.61	Hg 253.7	3/24/2017	6:52:12 PM	2.616198 ug/L	0.428885 mg/kg	ug/L	mg/kg	0.999997
17-03-1005-3	868 HG-8	0.63	Hg 253.7	3/24/2017	6:54:29 PM	1.624717 ug/L	0.257892 mg/kg	ug/L	mg/kg	0.999997
17-03-1005-4	868 HG-8	0.63	Hg 253.7	3/24/2017	6:56:47 PM	1.517249 ug/L	0.240833 mg/kg	ug/L	mg/kg	0.999997
17-03-1005-6	868 HG-8	0.64	Hg 253.7	3/24/2017	6:59:04 PM	6.523271 ug/L	1.019261 mg/kg	ug/L	mg/kg	0.999997
17-03-1005-7	868 HG-8	0.62	Hg 253.7	3/24/2017	7:01:19 PM	10.72028 ug/L	1.729078 mg/kg	ug/L	mg/kg	0.999997
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/24/2017	7:03:35 PM	2.104173 ug/L	0.002104 mg/L	ug/L	mg/L	0.999997
CCB	868 HG-8		Hg 253.7	3/24/2017	7:05:51 PM	-0.01143 ug/L	-1.14E-05 mg/L	ug/L	mg/L	0.999997
17-03-1005-8	868 HG-8	0.58	Hg 253.7	3/24/2017	7:08:06 PM	4.418118 ug/L	0.761744 mg/kg	ug/L	mg/kg	0.999997
17-03-1005-10	868 HG-8	0.62	Hg 253.7	3/24/2017	7:10:20 PM	3.358445 ug/L	0.541685 mg/kg	ug/L	mg/kg	0.999997
17-03-1005-11	868 HG-8	0.58	Hg 253.7	3/24/2017	7:12:36 PM	2.370596 ug/L	0.408723 mg/kg	ug/L	mg/kg	0.999997
17-03-1005-12	868 HG-8	0.59	Hg 253.7	3/24/2017	7:14:51 PM	0.800009 ug/L	0.135595 mg/kg	ug/L	mg/kg	0.999997
17-03-1005-13	868 HG-8	0.59	Hg 253.7	3/24/2017	7:17:07 PM	0.238097 ug/L	0.040355 mg/kg	ug/L	mg/kg	0.999997
17-03-1005-15	868 HG-8	0.61	Hg 253.7	3/24/2017	7:19:23 PM	35.37742 ug/L	5.799578 mg/kg	ug/L	mg/kg	0.999997
17-03-1353-1	868 HG-8	0.61	Hg 253.7	3/24/2017	7:21:39 PM	0.66096 ug/L	0.108354 mg/kg	ug/L	mg/kg	0.999997

Reviewed/Assign to Logbook Date: 03-25-17
 Analysis: Hg Chemist ID: 309
 Logbook Page: 75 Instrument ID: Hg-8

Sample ID	Analyst Name	Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
17-03-1353-2	868 HG-8	0.62	Hg 253.7	3/24/2017	7:23:56 PM	0.567108	ug/L	0.091469	mg/kg	0.999997
17-03-1353-3	868 HG-8	0.6	Hg 253.7	3/24/2017	7:27:22 PM	0.118645	ug/L	0.019774	mg/kg	0.999997
17-03-1353-4	868 HG-8	0.6	Hg 253.7	3/24/2017	7:29:40 PM	0.532653	ug/L	0.088775	mg/kg	0.999997
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/24/2017	7:31:59 PM	2.094703	ug/L	0.002095	mg/L	0.999997
CCB	868 HG-8		Hg 253.7	3/24/2017	7:34:16 PM	-0.00774	ug/L	-7.74E-06	mg/L	0.999997
17-03-1353-5	868 HG-8	0.62	Hg 253.7	3/24/2017	7:36:32 PM	0.677562	ug/L	0.109284	mg/kg	0.999997
170324-B-04	868 HG-8	0.6	Hg 253.7	3/24/2017	7:38:48 PM	-0.00992	ug/L	-0.00165	mg/kg	0.999997
170324-L-04	868 HG-8	0.6	Hg 253.7	3/24/2017	7:41:05 PM	5.426961	ug/L	0.904493	mg/kg	0.999997
17-03-1383-1	868 HG-8	0.61	Hg 253.7	3/24/2017	7:43:21 PM	0.129354	ug/L	0.021205	mg/kg	0.999997
17-03-1383-1 MSD	868 HG-8	0.61	Hg 253.7	3/24/2017	7:45:38 PM	4.93987	ug/L	0.809815	mg/kg	0.999997
17-03-1383-2	868 HG-8	0.62	Hg 253.7	3/24/2017	7:47:55 PM	4.878057	ug/L	0.786783	mg/kg	0.999997
17-03-1383-3	868 HG-8	0.6	Hg 253.7	3/24/2017	7:50:11 PM	0.131691	ug/L	0.021949	mg/kg	0.999997
17-03-1274-1	868 HG-8	0.61	Hg 253.7	3/24/2017	7:52:27 PM	0.067402	ug/L	0.011049	mg/kg	0.999997
17-03-1274-2	868 HG-8	0.59	Hg 253.7	3/24/2017	7:54:43 PM	0.519343	ug/L	0.088024	mg/kg	0.999997
CCV 0.2x10ppb	868 HG-8	0.6	Hg 253.7	3/24/2017	7:57:00 PM	0.224824	ug/L	0.037471	mg/kg	0.999997
CCB	868 HG-8		Hg 253.7	3/24/2017	7:59:17 PM	2.092168	ug/L	0.002092	mg/L	0.999997
17-03-1274-3	868 HG-8		Hg 253.7	3/24/2017	8:01:33 PM	-0.00043	ug/L	-4.27E-07	mg/L	0.999997
17-03-1274-4	868 HG-8	0.59	Hg 253.7	3/24/2017	8:03:48 PM	0.036697	ug/L	0.00622	mg/kg	0.999997
17-03-1274-5	868 HG-8	0.58	Hg 253.7	3/24/2017	8:06:05 PM	0.486632	ug/L	0.083902	mg/kg	0.999997
17-03-1274-6	868 HG-8	0.61	Hg 253.7	3/24/2017	8:08:22 PM	2.120518	ug/L	0.347626	mg/kg	0.999997
CCV 0.2x10ppb	868 HG-8	0.6	Hg 253.7	3/24/2017	8:10:38 PM	1.28036	ug/L	0.213393	mg/kg	0.999997
CCB	868 HG-8		Hg 253.7	3/24/2017	8:12:56 PM	2.073556	ug/L	0.002074	mg/L	0.999997
17-03-1380-1	868 HG-8		Hg 253.7	3/24/2017	8:15:12 PM	-0.00569	ug/L	-5.69E-06	mg/L	0.999997
17-03-1380-2	868 HG-8	0.61	Hg 253.7	3/24/2017	8:28:09 PM	0.257367	ug/L	0.042191	mg/kg	0.999997
17-03-1380-3	868 HG-8	0.6	Hg 253.7	3/24/2017	8:30:25 PM	0.577592	ug/L	0.096265	mg/kg	0.999997
17-03-1380-4	868 HG-8	0.6	Hg 253.7	3/24/2017	8:32:41 PM	0.228758	ug/L	0.038126	mg/kg	0.999997
17-03-1380-5	868 HG-8	0.61	Hg 253.7	3/24/2017	8:34:57 PM	0.300793	ug/L	0.04931	mg/kg	0.999997
17-03-1380-6	868 HG-8	0.58	Hg 253.7	3/24/2017	8:37:13 PM	0.070669	ug/L	0.012184	mg/kg	0.999997
17-03-1380-6	868 HG-8	0.59	Hg 253.7	3/24/2017	8:39:29 PM	0.174215	ug/L	0.029528	mg/kg	0.999997

Reviewed/Assign to Logbook Date: 03-25-17
 Analysis Hg Chemist ID: 309
 Logbook Page: 76 Instrument ID: Hg-8

Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc		Units		Corr Coef
						(Calib)	(Samp)	(Calib)	(Samp)	
17-03-1393-1	868 HG-8	0.61	Hg 253.7	3/24/2017	8:41:45 PM	18.06735	2.961861	ug/L	mg/kg	0.999997
17-03-1114-1	868 HG-8	0.62	Hg 253.7	3/24/2017	8:44:02 PM	0.099779	0.016093	ug/L	mg/kg	0.999997
17-03-1115-1	868 HG-8	0.6	Hg 253.7	3/24/2017	8:46:19 PM	-0.01359	-0.00226	ug/L	mg/kg	0.999997
17-03-1523-1	868 HG-8	0.63	Hg 253.7	3/24/2017	8:48:36 PM	0.055035	0.008736	ug/L	mg/kg	0.999997
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/24/2017	8:50:53 PM	2.088906	0.002089	ug/L	mg/L	0.999997
CCB	868 HG-8		Hg 253.7	3/24/2017	8:53:10 PM	-0.00642	-6.42E-06	ug/L	mg/L	0.999997
17-03-1005-7 10X	868 HG-8	0.62	Hg 253.7	3/24/2017	8:55:25 PM	1.286579	2.075127	ug/L	mg/kg	0.999997
17-03-1005-15 10X	868 HG-8	0.61	Hg 253.7	3/24/2017	8:57:41 PM	4.55388	7.465378	ug/L	mg/kg	0.999997
17-03-1393-1 10X	868 HG-8	0.61	Hg 253.7	3/24/2017	8:59:56 PM	2.065182	3.385545	ug/L	mg/kg	0.999997
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/24/2017	9:02:13 PM	2.098017	0.002098	ug/L	mg/L	0.999997
CCB	868 HG-8		Hg 253.7	3/24/2017	9:04:29 PM	-0.00303	-3.03E-06	ug/L	mg/L	0.999997

Reviewed/Assign to Logbook Date: 03-25-17
 Analysis: Hg Chemist ID: 309
 Logbook Page: 77 Instrument ID: Hg-8

EPA 7471A Mercury (Solid)

Preparation Logs

Mercury Sample Preparation Logbook (Solid / Other)

METHOD		MATRIX		EQUIPMENT ID #		REAGENT ID #		STANDARD ID #				
<input type="checkbox"/> EPA 7471A	<input checked="" type="checkbox"/> Solid			Thermometer	6T-4 (CF-2.0 °C)	Aqua Regia	R04291601 10 mL	Spike	M030617 A			
<input type="checkbox"/> EPA 7471B	<input type="checkbox"/> Other (Specify) 268			Block Digester	3	5% KMnO ₄	R10061601	IC	A			
				Pipetter / Dispenser	P071/*	NaCl-H ₂ NO-HCl	R10261601 6 mL	ICV	B			
BATCH NUMBER		SUPPLY LOT #		BALANCE ID #		QUALITY SYSTEM MATRIX ID #		SAMPLE HANDLING				
MS/MSD 170324-5034		Tube / Container 160975		36		Teflon Chip M006-35-15		1 = Composite 2 = Subsample				
(Specify)		Filter				(Specify)		3 = Homogenize 4 = None				
DIGESTION												
DATE	START			END			SAMPLE HANDLING	ECI ID #	SAMPLE		5% KMNO ₄ V (mL)	SPIKE OR IC/ICV V (µL)
	TIME	TEMP W/O CF (°C)	PREP TECH ID #	TIME	TEMP W/O CF (°C)	PREP TECH ID #			INITIAL (g)	FINAL (mL)		
3/24/17	13:30	95	868	14:15	95	868	4	MS 17-03-1383-1A	0.61	100	15	500
								MSD 1 0.62				
								LCS 170324-L034 0.60				
								LCS/MB 170324-B034 0.60				
								17-03-1383-1A 0.61				
								2 0.60				
								3 0.61				
								17-03-1274-1A 0.59				
								2 0.60				
								3 0.59				
								4 0.58				
								5 0.61				
								6 0.60				
								17-03-1380-1A 0.61				
								2 0.60				
								3 0.60				
								4 0.61				
								5 0.58				
								6 0.59				
								17-03-1393-1A 0.61				
								17-03-1114-1A 0.62				
								17-03-1115-1A 0.60				
								17-03-15237A 0.63				
								IC				
								ICV				
								CB				

COMMENTS: * P003/M0043/D008

EPA 8270C
Semi-Volatile Organics
(Aqueous)

RAW DATA

EPA 8270C Semi-Volatile Organics (Aqueous)

Initial Calibration

INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8270C

ICAL WORK ORDER: 095-01-001-13196-596
ICAL BATCH ID: 1701311002
INSTRUMENT: GC/MS SS

ANALYZED BY: 923
ICAL D/T ANALYZED: 2017-01-31 13:44
REVIEWED BY: 262
D/T REVIEWED: 2017-02-03 15:23

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD CL	%RSD CL	R of R ² CL	R of R ² CL	STATUS
N-Nitrosodimethylamine		Avg RF	0.929	0.880	0.895	0.888	0.879	0.896	0.873	0.891	0.00	2	0-15	2.107				PASS
Aniline		Avg RF	2.424	2.399	2.587	2.496	2.581	2.584	2.479	2.507	0.00	3	0-15	3.148				PASS
Phenol	C	Avg RF	1.945	1.904	1.968	2.003	2.007	1.991	2.006	1.975	0.00	2	0-30	1.961				PASS
Bis(2-Chloroethyl) Ether		Avg RF	1.640	1.566	1.589	1.558	1.539	1.550	1.504	1.564	0.00	3	0-15	2.705				PASS
2-Chlorophenol		Avg RF	1.447	1.439	1.459	1.388	1.427	1.478	1.451	1.441	0.00	2	0-15	1.966				PASS
1,3-Dichlorobenzene		Avg RF	1.604	1.618	1.641	1.563	1.581	1.610	1.579	1.599	0.00	2	0-15	1.658				PASS
1,4-Dichlorobenzene	C	Avg RF	1.855	1.728	1.697	1.684	1.618	1.655	1.623	1.694	0.00	5	0-30	4.796				PASS
Benzyl Alcohol		Avg RF	1.558	1.625	1.721	1.736	1.769	1.752	1.715	1.697	0.00	5	0-15	4.509				PASS
1,2-Dichlorobenzene		Avg RF	1.715	1.632	1.597	1.561	1.555	1.584	1.553	1.600	0.00	4	0-15	3.628				PASS
2-Methylphenol		Avg RF	1.450	1.364	1.442	1.430	1.423	1.451	1.425	1.426	0.00	2	0-15	2.094				PASS
Bis(2-Chloroisopropyl) Ether		Avg RF	2.597	2.529	2.517	2.413	2.317	2.294	2.195	2.409	0.00	6	0-15	6.094				PASS
3/4-Methylphenol		Avg RF	1.470	1.596	1.627	1.713	1.677	1.696	1.664	1.643	0.00	5	0-15	4.861				PASS
N-Nitroso-di-n-propylamine	S	Avg RF	1.457	1.407	1.471	1.442	1.426	1.425	1.392	1.431	0.05	2	0-15	1.906				PASS
Hexachloroethane		Avg RF	0.685	0.672	0.693	0.668	0.663	0.669	0.670	0.675	0.00	2	0-15	1.578				PASS
Nitrobenzene		Avg RF	0.515	0.500	0.495	0.490	0.485	0.450	0.466	0.486	0.00	4	0-15	4.470				PASS
Isophorone		Avg RF	0.952	0.900	0.908	0.907	0.924	0.876	0.889	0.908	0.00	3	0-15	2.709				PASS
2-Nitrophenol	C	Avg RF	0.136	0.149	0.167	0.184	0.185	0.185	0.185	0.170	0.00	12	0-30	11.890				PASS
2,4-Dimethylphenol		Avg RF	0.393	0.406	0.415	0.428	0.432	0.407	0.411	0.413	0.00	3	0-15	3.214				PASS
Benzoic Acid	LR - E		0.107	0.161	0.247	0.291	0.302	0.316		0.332	0.00	1	0-15	0.999	r ² >=0.990			PASS
Bis(2-Chloroethoxy) Methane		Avg RF	0.508	0.489	0.469	0.468	0.474	0.451	0.462	0.475	0.00	4	0-15	3.944				PASS
2,4-Dichlorophenol	C	Avg RF	0.308	0.307	0.316	0.326	0.332	0.323	0.334	0.321	0.00	3	0-30	3.417				PASS
Carbazole		Avg RF	1.149	1.075	1.089	1.085	1.061	1.062	1.082	1.086	0.00	3	0-15	2.726				PASS

LR - E: Linear Regression (Equal Weight)
LR - IC: Linear Regression (Inverse Concentration Weight)
LR - ISC: Linear Regression (Inverse Square Concentration Weight)
Avg RF: Average Response Factor
QR - E: Quadratic Regression (Equal Weight)



INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8270C

ICAL WORK ORDER: 095-01-001-13196-596
ICAL BATCH ID: 1701311002
INSTRUMENT: GC/MS SS

ANALYZED BY: 923
ICAL D/T ANALYZED: 2017-01-31 13:44
REVIEWED BY: 262
D/T REVIEWED: 2017-02-03 15:23

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD CL	R or R ² CL	R or R ² CL	STATUS
Naphthalene		Avg RF	1.182	1.043	1.070	1.074	1.066	1.018	1.046	1.071	0.00	5	0.15	4.915		PASS	
4-Chloroaniline		Avg RF	0.465	0.462	0.474	0.485	0.490	0.470	0.492	0.477	0.00	3	0.15	2.563		PASS	
Hexachloro-1,3-Butadiene	C	Avg RF	0.236	0.235	0.228	0.217	0.227	0.218	0.225	0.227	0.00	3	0.30	3.223		PASS	
4-Chloro-3-Methylpheno	C	Avg RF	0.387	0.353	0.385	0.396	0.402	0.390	0.403	0.388	0.00	4	0.30	4.326		PASS	
2-Methylnaphthalene		Avg RF	0.730	0.704	0.693	0.703	0.721	0.680	0.710	0.706	0.00	2	0.15	2.357		PASS	
Hexachlorocyclopentadiene	S	Avg RF	0.296	0.360	0.360	0.375	0.397	0.408	0.410	0.374	0.05	11	0.15	11.470		PASS	
2,4,6-Trichlorophenol	C	Avg RF	0.333	0.331	0.363	0.375	0.375	0.386	0.387	0.364	0.00	6	0.30	6.455		PASS	
2,4,5-Trichlorophenol		Avg RF	0.365	0.386	0.414	0.425	0.410	0.433	0.432	0.409	0.00	6	0.15	6.201		PASS	
2-Chloronaphthalene		Avg RF	1.199	1.110	1.109	1.105	1.085	1.087	1.090	1.112	0.00	4	0.15	3.565		PASS	
2-Nitroaniline		Avg RF	0.368	0.390	0.434	0.461	0.449	0.438	0.453	0.428	0.00	8	0.15	8.166		PASS	
Dimethyl Phthalate		Avg RF	1.484	1.437	1.447	1.456	1.418	1.453	1.458	1.451	0.00	1	0.15	1.391		PASS	
Acenaphthylene		Avg RF	1.908	1.803	1.822	1.831	1.769	1.772	1.811	1.817	0.00	3	0.15	2.567		PASS	
3-Nitroaniline		Avg RF	0.280	0.289	0.324	0.338	0.332	0.340	0.345	0.321	0.00	8	0.15	8.127		PASS	
Acenaphthene	C	Avg RF	1.080	1.112	1.102	1.081	1.056	1.047	1.062	1.077	0.00	2	0.30	2.209		PASS	
2,4-Dinitrophenol	S	LR - E	0.066	0.106	0.106	0.150	0.174	0.196	0.200	0.212	0.05	1	0.15	0.999	r ² >=0.990	PASS	
4-Nitrophenol	S	Avg RF	0.321	0.346	0.391	0.385	0.385	0.394	0.396	0.374	0.05	8	0.15	7.769		PASS	
Dibenzofuran		Avg RF	1.783	1.665	1.687	1.652	1.626	1.666	1.655	1.676	0.00	3	0.15	3.018		PASS	
2,4-Dinitrotoluene		Avg RF	0.417	0.394	0.430	0.438	0.439	0.454	0.456	0.433	0.00	5	0.15	5.033		PASS	
2,6-Dinitrotoluene		Avg RF	0.275	0.294	0.310	0.304	0.302	0.304	0.306	0.299	0.00	4	0.15	3.862		PASS	
Diethyl Phthalate		Avg RF	1.537	1.518	1.519	1.562	1.528	1.533	1.554	1.536	0.00	1	0.15	1.083		PASS	
4-Chlorophenyl-Phenyl Ether		Avg RF	0.742	0.738	0.725	0.733	0.722	0.746	0.749	0.736	0.00	1	0.15	1.410		PASS	
Fluorene		Avg RF	1.409	1.372	1.381	1.374	1.355	1.403	1.407	1.386	0.00	2	0.15	1.509		PASS	

LR - E: Linear Regression (Equal Weight)
LR - IC: Linear Regression (Inverse Concentration Weight)
LR - ISC: Linear Regression (Inverse Square Concentration Weight)
Avg RF: Average Response Factor
QR - E: Quadratic Regression (Equal Weight)



INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8270C

ICAL WORK ORDER: 095-01-001-13196-596
ICAL BATCH ID: 1701311002
INSTRUMENT: GC/MS SS

ANALYZED BY: 923
ICAL D/T ANALYZED: 2017-01-31 13:44
REVIEWED BY: 262
D/T REVIEWED: 2017-02-03 15:23

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD CL	%RSD CL	R of R ² CL	R of R ² CL	STATUS
4-Nitroaniline		Avg RF	0.309	0.312	0.345	0.361	0.357	0.371	0.376	0.376	0.00	0.347	0.00	8	0-15	7.815	0.999	PASS
Azobenzene		Avg RF	0.958	0.877	0.893	0.845	0.820	0.786	0.777	0.777	0.00	0.851	0.00	8	0-15	7.530	0.999	PASS
4,6-Dinitro-2-Methylpiperidine		LR - E	0.066	0.089	0.119	0.131	0.137	0.144			0.00	0.149	0.00	1	0-15	0.999	r ² >=0.990	PASS
N-Nitrosodiphenylamine	C	Avg RF	0.557	0.522	0.546	0.532	0.526	0.521	0.536	0.536	0.05	0.534	0.05	2	0-30	2.466	0.999	PASS
4-Bromophenyl-Phenyl Ether		Avg RF	0.247	0.221	0.225	0.229	0.226	0.227	0.230	0.230	0.00	0.229	0.00	4	0-15	3.698	0.999	PASS
Hexachlorobenzene		Avg RF	0.117	0.104	0.101	0.096	0.092	0.090	0.090	0.090	0.00	0.099	0.00	10	0-15	9.945	0.999	PASS
Pentachlorophenol	C	LR - E	0.109	0.153	0.163	0.163	0.166	0.175	0.183	0.183	0.00	0.186	0.00	1	0-30	0.999	r ² >=0.990	PASS
Phenanthrene		Avg RF	1.151	1.095	1.120	1.098	1.078	1.079	1.105	1.105	0.00	1.104	0.00	2	0-15	2.293	0.999	PASS
Anthracene		Avg RF	1.212	1.138	1.158	1.163	1.133	1.142	1.155	1.155	0.00	1.157	0.00	2	0-15	2.290	0.999	PASS
Di-n-Butyl Phthalate		Avg RF	1.282	1.319	1.413	1.423	1.413	1.412	1.425	1.425	0.00	1.384	0.00	4	0-15	4.210	0.999	PASS
Fluoranthene	C	Avg RF	1.439	1.335	1.372	1.377	1.357	1.387	1.407	1.407	0.00	1.382	0.00	2	0-30	2.451	0.999	PASS
Benzidine		Avg RF	0.353	0.491	0.508	0.487	0.503	0.481	0.481	0.481	0.00	0.471	0.00	12	0-15	12.412	0.999	PASS
Pyrene		Avg RF	1.100	1.034	1.083	1.079	1.088	1.076	1.092	1.092	0.00	1.079	0.00	2	0-15	1.984	0.999	PASS
Pyridine		Avg RF	1.337	1.229	1.310	1.268	1.232	1.275	1.236	1.236	0.00	1.270	0.00	3	0-15	3.286	0.999	PASS
Butyl Benzyl Phthalate		LR - E	0.329	0.390	0.482	0.515	0.526	0.525	0.522	0.522	0.00	0.531	0.00	1	0-15	1.000	r ² >=0.990	PASS
3,3'-Dichlorobenzidine		LR - E	0.280	0.361	0.420	0.420	0.449	0.468	0.494	0.494	0.00	0.505	0.00	1	0-15	0.999	r ² >=0.990	PASS
Benzo (a) Anthracene		Avg RF	1.159	1.107	1.153	1.173	1.183	1.187	1.232	1.232	0.00	1.171	0.00	3	0-15	3.251	0.999	PASS
Bis(2-Ethylhexyl) Phthalate		LR - E	0.394	0.494	0.644	0.702	0.722	0.710	0.717	0.717	0.00	0.729	0.00	1	0-15	1.000	r ² >=0.990	PASS
Chrysene		Avg RF	1.132	1.084	1.103	1.117	1.099	1.114	1.145	1.145	0.00	1.113	0.00	2	0-15	1.829	0.999	PASS
Di-n-Octyl Phthalate	C	LR - E	0.516	0.733	1.040	1.245	1.303	1.329	1.349	1.349	0.00	1.383	0.00	1	0-30	1.000	r ² >=0.990	PASS
Benzo (k) Fluoranthene		Avg RF	1.261	1.245	1.247	1.299	1.317	1.295	1.352	1.352	0.00	1.288	0.00	3	0-15	3.043	0.999	PASS
Benzo (b) Fluoranthene		Avg RF	1.111	1.128	1.238	1.238	1.251	1.360	1.443	1.443	0.00	1.253	0.00	9	0-15	9.430	0.999	PASS

LR - E: Linear Regression (Equal Weight) LR - IC: Linear Regression (Inverse Concentration Weight) LR - ISC: Linear Regression (Inverse Square Concentration Weight)
 Avg RF: Average Response Factor QR - E: Quadratic Regression (Equal Weight)



INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8270C

ICAL WORK ORDER: 095-01-001-13196-596
ICAL BATCH ID: 170131002
INSTRUMENT: GC/MS SS

ANALYZED BY: 923
ICAL D/T ANALYZED: 2017-01-31 13:44
REVIEWED BY: 262
D/T REVIEWED: 2017-02-03 15:23

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD	%RSD CL	R of R ² CL	R of R ² CL	STATUS
Benzo (a) Pyrene	C	Avg RF	1.051	1.082	1.169	1.220	1.244	1.297	1.336	1.336	1.336	1.200	0.00	9	0-30	8.833	8.833	PASS
Benzo (g,h,i) Perylene		Avg RF	0.906	0.961	0.997	1.077	1.086	0.974	0.937	0.937	0.937	0.991	0.00	7	0-15	6.870	6.870	PASS
Indeno (1,2,3-c,d) Pyrene		Avg RF	1.108	1.154	1.246	1.340	1.365	1.248	1.210	1.210	1.210	1.239	0.00	7	0-15	7.464	7.464	PASS
Dibenz (a,h) Anthracene		Avg RF	0.847	0.959	1.016	1.091	1.141	1.066	1.060	1.060	1.060	1.026	0.00	9	0-15	9.479	9.479	PASS
1-Methylnaphthalene		Avg RF	0.727	0.708	0.715	0.705	0.705	0.683	0.712	0.712	0.712	0.708	0.00	2	0-15	1.892	1.892	PASS
1,2,4-Trichlorobenzene		Avg RF	0.370	0.342	0.352	0.353	0.358	0.342	0.356	0.356	0.356	0.353	0.00	3	0-15	2.822	2.822	PASS
2,6-Dichlorophenol		Avg RF	0.317	0.318	0.326	0.328	0.334	0.321	0.337	0.337	0.337	0.326	0.00	2	0-15	2.365	2.365	PASS

Data Files:

LEVEL #	D/T ANALYZED	DATA FILE
1	2017-01-31 13:44	Y:\GCMS_SS\GCMS_SS_data\2017\170131\31jan009.d\31jan009.rr
2	2017-01-31 13:19	Y:\GCMS_SS\GCMS_SS_data\2017\170131\31jan008.d\31jan008.rr
3	2017-01-31 13:00	Y:\GCMS_SS\GCMS_SS_data\2017\170131\31jan007.d\31jan007.rr
4	2017-01-31 12:40	Y:\GCMS_SS\GCMS_SS_data\2017\170131\31jan006.d\31jan006.rr
5	2017-01-31 12:21	Y:\GCMS_SS\GCMS_SS_data\2017\170131\31jan005.d\31jan005.rr
6	2017-01-31 12:02	Y:\GCMS_SS\GCMS_SS_data\2017\170131\31jan004.d\31jan004.rr
7	2017-01-31 11:43	Y:\GCMS_SS\GCMS_SS_data\2017\170131\31jan003.d\31jan003.rr
8	2017-01-31 11:18	Y:\GCMS_SS\GCMS_SS_data\2017\170131\31jan002.d\31jan002.rr

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor

LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)

LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

ICV WORK ORDER: 095-01-001-13196-596

INITIAL BATCH ID: 1701311002

INSTRUMENT: GC/MS SS

ANALYZED BY: 923

D/T ANALYZED:

INITIAL: 2017-01-31 13:44

ICV: 2017-01-31 15:06

REVIEWED BY: 262

D/T REVIEWED: 2017-02-03 15:23

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170131\31jan011.d\31jan011.rr

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
N-Nitrosodimethylamine		Avg Resp	0.00	0.891	0.917			-3	0-20	PASS
Aniline		Avg Resp	0.00	2.507	2.555			-2	0-20	PASS
Phenol	C	Avg Resp	0.00	1.975	2.059			-4	0-20	PASS
Bis(2-Chloroethyl) Ether		Avg Resp	0.00	1.564	1.563			0	0-20	PASS
2-Chlorophenol		Avg Resp	0.00	1.441	1.477			-2	0-20	PASS
1,3-Dichlorobenzene		Avg Resp	0.00	1.599	1.628			-2	0-20	PASS
1,4-Dichlorobenzene	C	Avg Resp	0.00	1.694	1.708			-1	0-20	PASS
Benzyl Alcohol		Avg Resp	0.00	1.697	1.747			-3	0-20	PASS
1,2-Dichlorobenzene		Avg Resp	0.00	1.600	1.606			0	0-20	PASS
2-Methylphenol		Avg Resp	0.00	1.426	1.466			-3	0-20	PASS
Bis(2-Chloroisopropyl) Ether		Avg Resp	0.00	2.409	2.437			-1	0-20	PASS
3/4-Methylphenol		Avg Resp	0.00	1.643	1.715			-4	0-20	PASS
N-Nitroso-di-n-propylamine	S	Avg Resp	0.05	1.431	1.449			-1	0-20	PASS
Hexachloroethane		Avg Resp	0.00	0.675	0.682			-1	0-20	PASS
Nitrobenzene		Avg Resp	0.00	0.486	0.505			-4	0-20	PASS
Isophorone		Avg Resp	0.00	0.908	0.945			-4	0-20	PASS
2-Nitrophenol	C	Avg Resp	0.00	0.170	0.191			-12	0-20	PASS
2,4-Dimethylphenol		Avg Resp	0.00	0.413	0.447			-8	0-20	PASS
Benzoic Acid		LR - Equal				80.00	76.887	4	0-20	PASS
Bis(2-Chloroethoxy) Methane		Avg Resp	0.00	0.475	0.493			-4	0-20	PASS
2,4-Dichlorophenol	C	Avg Resp	0.00	0.321	0.337			-5	0-20	PASS
Carbazole		Avg Resp	0.00	1.086	1.106			-2	0-20	PASS
Naphthalene		Avg Resp	0.00	1.071	1.096			-2	0-20	PASS
4-Chloroaniline		Avg Resp	0.00	0.477	0.494			-4	0-20	PASS
Hexachloro-1,3-Butadiene	C	Avg Resp	0.00	0.227	0.230			-1	0-20	PASS
4-Chloro-3-Methylphenol	C	Avg Resp	0.00	0.388	0.412			-6	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.706	0.733			-4	0-20	PASS
Hexachlorocyclopentadiene	S	Avg Resp	0.05	0.374	0.389			-4	0-20	PASS
2,4,6-Trichlorophenol	C	Avg Resp	0.00	0.364	0.390			-7	0-20	PASS
2,4,5-Trichlorophenol		Avg Resp	0.00	0.409	0.438			-7	0-20	PASS

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

ICV WORK ORDER: 095-01-001-13196-596

INITIAL BATCH ID: 1701311002

INSTRUMENT: GC/MS SS

ANALYZED BY: 923

D/T ANALYZED:

INITIAL:

ICV:

REVIEWED BY: 262

D/T REVIEWED: 2017-02-03 15:23

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170131\31jan011.d\31jan011.rr

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
2-Chloronaphthalene	Avg Resp		0.00	1.112	1.123		-1	0-20	0-20	PASS
2-Nitroaniline	Avg Resp		0.00	0.428	0.478		-12	0-20	0-20	PASS
Dimethyl Phthalate	Avg Resp		0.00	1.451	1.485		-2	0-20	0-20	PASS
Acenaphthylene	Avg Resp		0.00	1.817	1.848		-2	0-20	0-20	PASS
3-Nitroaniline	Avg Resp		0.00	0.321	0.346		-8	0-20	0-20	PASS
Acenaphthene	Avg Resp		0.00	1.077	1.103		-2	0-20	0-20	PASS
2,4-Dinitrophenol	LR - Equal					80.00	78.501	2	0-20	PASS
4-Nitrophenol	Avg Resp		0.05	0.374	0.407		-9	0-20	0-20	PASS
Dibenzofuran	Avg Resp		0.00	1.676	1.721		-3	0-20	0-20	PASS
2,4-Dinitrotoluene	Avg Resp		0.00	0.433	0.468		-8	0-20	0-20	PASS
2,6-Dinitrotoluene	Avg Resp		0.00	0.299	0.317		-6	0-20	0-20	PASS
Diethyl Phthalate	Avg Resp		0.00	1.536	1.596		-4	0-20	0-20	PASS
4-Chlorophenyl-Phenyl Ether	Avg Resp		0.00	0.736	0.757		-3	0-20	0-20	PASS
Fluorene	Avg Resp		0.00	1.386	1.436		-4	0-20	0-20	PASS
4-Nitroaniline	Avg Resp		0.00	0.347	0.371		-7	0-20	0-20	PASS
Azobenzene	Avg Resp		0.00	0.851	0.870		-2	0-20	0-20	PASS
4,6-Dinitro-2-Methylphenol	LR - Equal					80.00	79.898	0	0-20	PASS
N-Nitrosodiphenylamine	Avg Resp		0.05	0.534	0.546		-2	0-20	0-20	PASS
4-Bromophenyl-Phenyl Ether	Avg Resp		0.00	0.229	0.236		-3	0-20	0-20	PASS
Hexachlorobenzene	Avg Resp		0.00	0.099	0.094		5	0-20	0-20	PASS
Pentachlorophenol	LR - Equal					80.00	80.402	-1	0-20	PASS
Phenanthrene	Avg Resp		0.00	1.104	1.137		-3	0-20	0-20	PASS
Anthracene	Avg Resp		0.00	1.157	1.183		-2	0-20	0-20	PASS
Di-n-Butyl Phthalate	Avg Resp		0.00	1.384	1.471		-6	0-20	0-20	PASS
Fluoranthene	Avg Resp		0.00	1.382	1.399		-1	0-20	0-20	PASS
Benzidine	Avg Resp		0.00	0.471	0.528		-12	0-20	0-20	PASS
Pyrene	Avg Resp		0.00	1.079	1.115		-3	0-20	0-20	PASS
Pyridine	Avg Resp		0.00	1.270	1.335		-5	0-20	0-20	PASS
Butyl Benzyl Phthalate	LR - Equal					80.00	80.775	-1	0-20	PASS
3,3'-Dichlorobenzidine	LR - Equal					80.00	75.843	5	0-20	PASS

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

ICV WORK ORDER: 095-01-001-13196-596
 INITIAL BATCH ID: 170131I002
 INSTRUMENT: GC/MS SS

ANALYZED BY: 923
 D/T ANALYZED: 2017-01-31 13:44
 INITIAL: 2017-01-31 15:06
 ICV: 262
 REVIEWED BY: 2017-02-03 15:23
 D/T REVIEWED:

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\20171170131\31jan011.d\31jan011.r

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
Benzo (a) Anthracene	Avg Resp		0.00	1.171	1.202	80.00	80.607	-3	0-20	PASS
Bis(2-Ethylhexyl) Phthalate	LR - Equal									
Chrysene	Avg Resp		0.00	1.113	1.132			-2	0-20	PASS
Di-n-Octyl Phthalate	C LR - Equal					80.00	76.933	4	0-20	PASS
Benzo (k) Fluoranthene	Avg Resp		0.00	1.288	1.303			-1	0-20	PASS
Benzo (b) Fluoranthene	Avg Resp		0.00	1.253	1.280			-2	0-20	PASS
Benzo (a) Pyrene	Avg Resp	C	0.00	1.200	1.230			-3	0-20	PASS
Benzo (g,h,i) Perylene	Avg Resp		0.00	0.991	0.943			5	0-20	PASS
Indeno (1,2,3-c,d) Pyrene	Avg Resp		0.00	1.239	1.226			1	0-20	PASS
Dibenz (a,h) Anthracene	Avg Resp		0.00	1.026	1.047			-2	0-20	PASS
1-Methylnaphthalene	Avg Resp		0.00	0.708	0.729			-3	0-20	PASS
1,2,4-Trichlorobenzene	Avg Resp		0.00	0.353	0.368			-4	0-20	PASS
2,6-Dichlorophenol	Avg Resp		0.00	0.326	0.337			-3	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 31-Jan-2017 16:38

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
 End Cal Date : 31-JAN-2017 13:44
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS_SS.i/170131.b/svoa.m
 Cal Date : 31-Jan-2017 16:25 n8cz

Calibration File Names:

- Level 1: /chem/SVOA/GCMS_SS.i/170131.b/31jan009.d
- Level 2: /chem/SVOA/GCMS_SS.i/170131.b/31jan008.d
- Level 3: /chem/SVOA/GCMS_SS.i/170131.b/31jan007.d
- Level 4: /chem/SVOA/GCMS_SS.i/170131.b/31jan006.d
- Level 5: /chem/SVOA/GCMS_SS.i/170131.b/31jan005.d
- Level 6: /chem/SVOA/GCMS_SS.i/170131.b/31jan004.d
- Level 7: /chem/SVOA/GCMS_SS.i/170131.b/31jan003.d
- Level 8: /chem/SVOA/GCMS_SS.i/170131.b/31jan002.d

Compound	Levels								Coefficients		RSD or R ²
	3 Level 1	5 Level 2	10 Level 3	20 Level 4	50 Level 5	80 Level 6	Curve	b	m1	m2	
1 N-Nitrosodimethylamine	+++ 0.89626	0.92899 0.87252	0.87966	0.89482	0.89780	0.87669	AVRG		0.89125		2
2 Pyridine	+++ 1.27492	1.33725 1.23608	1.22887	1.30991	1.26783	1.23182	AVRG		1.26953		3
5 Phenol	+++ 1.99058	1.94540 2.00586	1.90374	1.96775	2.00281	2.00701	AVRG		1.97474		2

Report Date : 31-Jan-2017 16:38

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
 End Cal Date : 31-JAN-2017 13:44
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS SS.i/170131.b/svoa.m
 Cal Date : 31-Jan-2017 16:25 n8cz

Compound	Level								Coefficients			RSD or R^2
	3	5	10	20	50	80	Curve	b	m1	m2		
120	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						
	Level 7	Level 8										
6 Aniline	++++	2.42380	2.39855	2.58682	2.49619	2.58086	AVRG		2.50711			3
	2.58426	2.47927										
7 bis(2-Chloroethyl) Ether	++++	1.63954	1.56600	1.58888	1.55823	1.53920	AVRG		1.56371			3
	1.54971	1.50439										
8 2-Chlorophenol	++++	1.44738	1.43948	1.45858	1.38822	1.42728	AVRG		1.44149			2
	1.47829	1.45118										
9 1,3-Dichlorobenzene	++++	1.60371	1.61808	1.64064	1.56348	1.58131	AVRG		1.59949			2
	1.61026	1.57899										
11 1,4-Dichlorobenzene	++++	1.85535	1.72797	1.69679	1.68402	1.61795	AVRG		1.69431			5
	1.65498	1.62311										
12 Benzyl alcohol	++++	1.55796	1.62513	1.72065	1.73582	1.76871	AVRG		1.69655			5
	1.75244	1.71517										
13 1,2-Dichlorobenzene	++++	1.71508	1.63156	1.59685	1.56142	1.55528	AVRG		1.59957			4
	1.58389	1.55292										

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INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
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 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS SS.i/170131.b/svoa.m
 Cal Date : 31-Jan-2017 16:25 n8cz

Compound	3		5		10		20		50		80		Coefficients m1	b	Curve	m2	RSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8									
120		160															
Level 7	Level 8																
14 2-Methylphenol	++++	1.44951	1.36362	1.44175	1.43022	1.42287							1.42635		AVRG		2
	1.45121	1.42523															
15 bis(2-Chloroisopropyl) Ether	++++	2.59718	2.52923	2.51747	2.41278	2.31708							2.40888		AVRG		6
	2.29368	2.19473															
16 3/4-Methylphenol	1.47020	1.59573	1.62743	1.71287	1.67677	1.69571							1.64258		AVRG		5
	1.69840	1.66355															
17 N-Nitroso-di-n-propylamine	++++	1.45650	1.40748	1.47062	1.44214	1.42635							1.43141		AVRG		2
	1.42459	1.39220															
18 Hexachloroethane	++++	0.68518	0.67227	0.69318	0.66815	0.66324							0.67452		AVRG		2
	0.66931	0.67031															
20 Nitrobenzene	++++	0.51525	0.49978	0.49491	0.49018	0.48533							0.48596		AVRG		4
	0.44990	0.46638															
21 Isophorone	++++	0.95162	0.90020	0.90788	0.90717	0.92433							0.90801		AVRG		3
	0.87570	0.88915															

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 Cal Date : 31-Jan-2017 16:25 n8cz

Compound	3	5	10	20	50	80	Curve	b	ml	Coefficients	m2	RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						or R^2
120	Level 7	Level 8										
22 2-Nitrophenol	++++	0.13610	0.14925	0.16680	0.18404	0.18504	AVRG		0.17014			12
	0.18501	0.18473										
23 2,4-Dimethylphenol	++++	0.39347	0.40577	0.41466	0.42815	0.43188	AVRG		0.41317			3
	0.40745	0.41085										
24 bis(2-Chloroethoxy) Methane	++++	0.50795	0.48909	0.46846	0.46843	0.47442	AVRG		0.47464			4
	0.45088	0.46223										
25 Benzoic acid	++++	++++	15545	54366	201347	401278	LINR	0.24822	0.33282			1
	643206	837571										
26 2,4-Dichlorophenol	++++	0.30774	0.30675	0.31555	0.32554	0.33211	AVRG		0.32064			3
	0.32294	0.33384										
27 1,2,4-Trichlorobenzene	++++	0.37049	0.34168	0.35181	0.35286	0.35774	AVRG		0.35318			3
	0.34164	0.35604										
29 Naphthalene	++++	1.18213	1.04328	1.06997	1.07411	1.06578	AVRG		1.07124			5
	1.01777	1.04582										

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 Method file : /chem/SVOA/GCMS SS.i/170131.b/svoa.m
 Cal Date : 31-Jan-2017 16:25 n8cz

Compound	Level								Curve	Coefficients		%RSD or R ²
	3	5	10	20	50	80	m1	m2				
30 4-Chloroaniline	++++ 0.46978	0.46543 0.49229	0.46190 0.49036	0.47407	0.48483	0.49036	AVRG	0.47695		3		
31 2,6-Dichlorophenol	++++ 0.32083	0.31666 0.33706	0.31819	0.32619	0.32758	0.33355	AVRG	0.32572		2		
32 Hexachloro-1,3-Butadiene	++++ 0.21828	0.23581 0.22512	0.23507	0.22834	0.21716	0.22669	AVRG	0.22667		3		
33 4-Chloro-3-methylphenol	++++ 0.39034	0.38705 0.40261	0.35340	0.38500	0.39579	0.40231	AVRG	0.38807		4		
34 2-Methylnaphthalene	++++ 0.68000	0.72966 0.71037	0.70424	0.69257	0.70260	0.72052	AVRG	0.70571		2		
35 1-Methylnaphthalene	++++ 0.68317	0.72721 0.71248	0.70804	0.71539	0.70535	0.70488	AVRG	0.70808		2		
36 Hexachlorocyclopentadiene	++++ 0.40783	++++ 0.41047	0.29630	0.36033	0.37477	0.39688	AVRG	0.37443		11		

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 Cal Date : 31-Jan-2017 16:25 n8cz

Compound	Level								Curve	Coefficients		%RSD or R ²
	3	5	10	20	50	80	m1	m2				
37 2,4,6-Trichlorophenol	Level 1 120 Level 7	Level 2 160 Level 8	Level 3 0.33074	Level 4 0.36325	Level 5 0.37526	Level 6 0.37515	AVRG	0.36439			6	
38 2,4,5-Trichlorophenol	Level 1 0.43339	Level 2 0.36504 0.43193	Level 3 0.38603	Level 4 0.41432	Level 5 0.42505	Level 6 0.40986	AVRG	0.40938			6	
40 2-Chloronaphthalene	Level 1 1.08707	Level 2 1.19903 1.09045	Level 3 1.10994	Level 4 1.10920	Level 5 1.10499	Level 6 1.08534	AVRG	1.11229			4	
41 2-Nitroaniline	Level 1 0.43811	Level 2 0.36797 0.45282	Level 3 0.39002	Level 4 0.43402	Level 5 0.46063	Level 6 0.44920	AVRG	0.42754			8	
42 Dimethyl Phthalate	Level 1 1.45344	Level 2 1.48387 1.45785	Level 3 1.43741	Level 4 1.44738	Level 5 1.45589	Level 6 1.41799	AVRG	1.45055			1	
43 2,6-Dinitrotoluene	Level 1 0.30425	Level 2 0.27543 0.30633	Level 3 0.29419	Level 4 0.30953	Level 5 0.30356	Level 6 0.30239	AVRG	0.29938			4	
44 Acenaphthylene	Level 1 1.77180	Level 2 1.90771 1.81126	Level 3 1.80323	Level 4 1.82209	Level 5 1.83134	Level 6 1.76879	AVRG	1.81660			3	

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 Cal Date : 31-Jan-2017 16:25 n8cz

Compound	Level								Curve	Coefficients		BRSD or R^2
	3	5	10	20	50	80	Level 6	b		m1	m2	
45 3-Nitroaniline	++++ 0.33960	0.28003 0.34513	0.28860	0.32410	0.33819	0.33215	AVRG	0.32111			8	
47 Acenaphthene	++++ 1.04705	1.08046 1.06154	1.11163	1.10177	1.08078	1.05643	AVRG	1.07710			2	
48 2,4-Dinitrophenol	++++ 283451	++++ 389900	6815	25308	86644	178405	LNLR	0.27027	0.21236		1	
49 4-Nitrophenol	++++ 0.39418	0.32070 0.39612	0.34556	0.39107	0.38461	0.38458	AVRG	0.37383			8	
50 Dibenzofuran	++++ 1.66608	1.78299 1.65456	1.66453	1.68655	1.65213	1.62563	AVRG	1.67607			3	
51 2,4-Dinitrotoluene	++++ 0.45432	0.41663 0.45624	0.39408	0.43008	0.43796	0.43857	AVRG	0.43255			5	
52 Diethyl Phthalate	++++ 1.53317	1.53717 1.55417	1.51798	1.51946	1.56166	1.52800	AVRG	1.53594			1	

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Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 8	Level 10	Level 20	Level 50	Level 80	Curve	b	m1	m2	%RSD or R^2	
53 Fluorene	++++ 1.40315	1.40904 1.40705	1.37159	1.35087	1.37437	1.35457	AVRG	AVRG	1.38581								2
54 4-Chlorophenyl-phenyl Ether	++++ 0.74551	0.74156 0.74924	0.73821	0.72473	0.73297	0.72152	AVRG	AVRG	0.73625								1
55 4-Nitroaniline	++++ 0.37133	0.30855 0.37555	0.31207	0.34452	0.36130	0.35702	AVRG	AVRG	0.34719								8
56 4,6-Dinitro-2-methylphenol	++++ 414731	++++ 574934	134114	41183	135380	265500	AVRG	AVRG	0.20663	0.14918							1
57 N-Nitrosodiphenylamine	++++ 0.52111	0.55659 0.53574	0.52208	0.54621	0.53162	0.52591	AVRG	AVRG	0.53418								2
58 Azobenzene	++++ 0.78575	0.95780 0.77709	0.87699	0.89349	0.84521	0.81952	AVRG	AVRG	0.85084								8
60 4-Bromophenyl-phenyl Ether	++++ 0.22707	0.24724 0.23026	0.22064	0.22523	0.22949	0.22577	AVRG	AVRG	0.22938								4

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Compound	Level								Curve	Coefficients			RSD or R ²
	3	5	10	20	50	80	Level 6	b		m1	m2		
61 Hexachlorobenzene	++++ 0.09004	0.11748 0.09038	0.10440 0.10051	0.10051	0.09629	0.09235	AVRG	0.09878			10		
62 Pentachlorophenol	++++ 532669	++++ 732528	22247	70377	185762	335994	LINR	0.13681	0.18639		1		
64 Phenanthrene	++++ 1.07911	1.15052 1.10498	1.09480	1.11987	1.09809	1.07775	AVRG	1.10359			2		
65 Anthracene	++++ 1.14189	1.21174 1.15541	1.13773	1.15838	1.16274	1.13291	AVRG	1.15726			2		
66 Carbazole	++++ 1.06227	1.14871 1.08175	1.07454	1.08917	1.08528	1.06137	AVRG	1.08616			3		
67 Di-n-butyl Phthalate	++++ 1.41203	1.28180 1.42496	1.31891	1.41294	1.42346	1.41278	AVRG	1.38384			4		
68 Fluoranthene	++++ 1.38738	1.43888 1.40734	1.33462	1.37151	1.37729	1.35747	AVRG	1.38207			2		

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Compound	Level								Curve	Coefficients			RSD or R^2
	3	5	10	20	50	80	Level 6	b		m1	m2		
69 Benzidine	++++ 0.50328	++++ 0.48136	0.35317	0.49089	0.50325	0.48652	AVRG	0.47058			12		
70 Pyrene	++++ 1.07557	1.10014 1.09200	1.03402	1.08290	1.07904	1.08809	AVRG	1.07882			2		
72 Butyl Benzyl Phthalate	++++ 2128793	50750 2822286	109110	295542	786673	1382400	LINR	0.04584	0.53108		1		
73 3,3'-Dichlorobenzidine	++++ 1897361	++++ 2671439	78215	221035	641524	1179434	LINR	0.16972	0.50615		1		
74 Benzo (a) Anthracene	++++ 1.18705	1.15891 1.23180	1.10684	1.15308	1.17287	1.18306	AVRG	1.17052			3		
76 Chrysene	++++ 1.11448	1.13185 1.14480	1.08443	1.10346	1.11653	1.09878	AVRG	1.11348			2		
77 bis(2-Ethylhexyl) Phthalate	++++ 2877324	60744 3879187	136047	394519	1072189	1897453	LINR	0.05800	0.72895		1		

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Compound	3 Level 1	5 Level 2	10 Level 3	20 Level 4	50 Level 5	80 Level 6	Curve	b	ml	m2	%RSD or R^2
78 Di-n-octyl Phthalate	++++ 5386783	79449 7297225	204984	637650	1902697	3426471	LINR	0.11092	1.38325		1
79 Benzo (b) Fluoranthene	++++ 1.36029	1.11135 1.44329	1.12828	1.23840	1.23812	1.25143	AVRG		1.25302		9
80 Benzo (k) Fluoranthene	++++ 1.29485	1.26137 1.35151	1.24513	1.24739	1.29873	1.31666	AVRG		1.28795		3
81 Benzo (a) Pyrene	++++ 1.29737	1.05143 1.33637	1.08195	1.16880	1.21978	1.24415	AVRG		1.19998		9
83 Indeno (1,2,3-c,d) Pyrene	++++ 1.24797	1.10805 1.20960	1.15426	1.24598	1.34006	1.36451	AVRG		1.23863		7
84 Dibenz (a,h) Anthracene	++++ 1.06594	0.84738 1.06018	0.95868	1.01587	1.09143	1.14060	AVRG		1.02572		9
85 Benzo (g,h,i) Perylene	++++ 0.97441	0.90585 0.93734	0.96084	0.99663	1.07682	1.08646	AVRG		0.99119		7

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Compound	Levels								Coefficients			RSD or R ²
	3 Level 1	5 Level 2	10 Level 3	20 Level 4	50 Level 5	80 Level 6	Curve	b	m1	m2		
	120 Level 7	160 Level 8										
\$ 3 2-Fluorophenol	++++ 1.35084	1.17473 1.32592	1.18962	1.27356	1.24926	1.28896	AVRG		1.26470			5
\$ 4 Phenol-d6	++++ 1.99775	1.81292 1.98140	1.93588	1.90405	1.94974	1.98789	AVRG		1.93852			3
\$ 19 Nitrobenzene-d5	++++ 0.51500	0.56179 0.52188	0.52764	0.52684	0.53890	0.54317	AVRG		0.53360			3
\$ 39 2-Fluorobiphenyl	++++ 1.31223	1.41269 1.30942	1.31849	1.36172	1.35258	1.29788	AVRG		1.33786			3
\$ 59 2,4,6-Tribromophenol	++++ 0.10259	++++ 0.10636	0.08139	0.09641	0.09915	0.09920	AVRG		0.09752			9
\$ 71 p-Terphenyl-d14	++++ 0.86008	0.86825 0.90206	0.79877	0.84500	0.85935	0.88305	AVRG		0.86237			4

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Average %RSD Results.	
Calculated Average %RSD =	4.38650
Maximum Average %RSD =	15.00000
* Passed Average %RSD Test.	

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan011.d
 Report Date: 01/31/2017 16:38

Euofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_SS.i Injection Date and Time: 31-JAN-2017 15:06
 Sample Name: ICV 80 PPM S110816N 8270 Initial Calibration Date(s): 22-MAR-2016 31-JAN-2017
 Sublist used: all.sub Initial Calibration Time(s): 10:03 13:44
 Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m

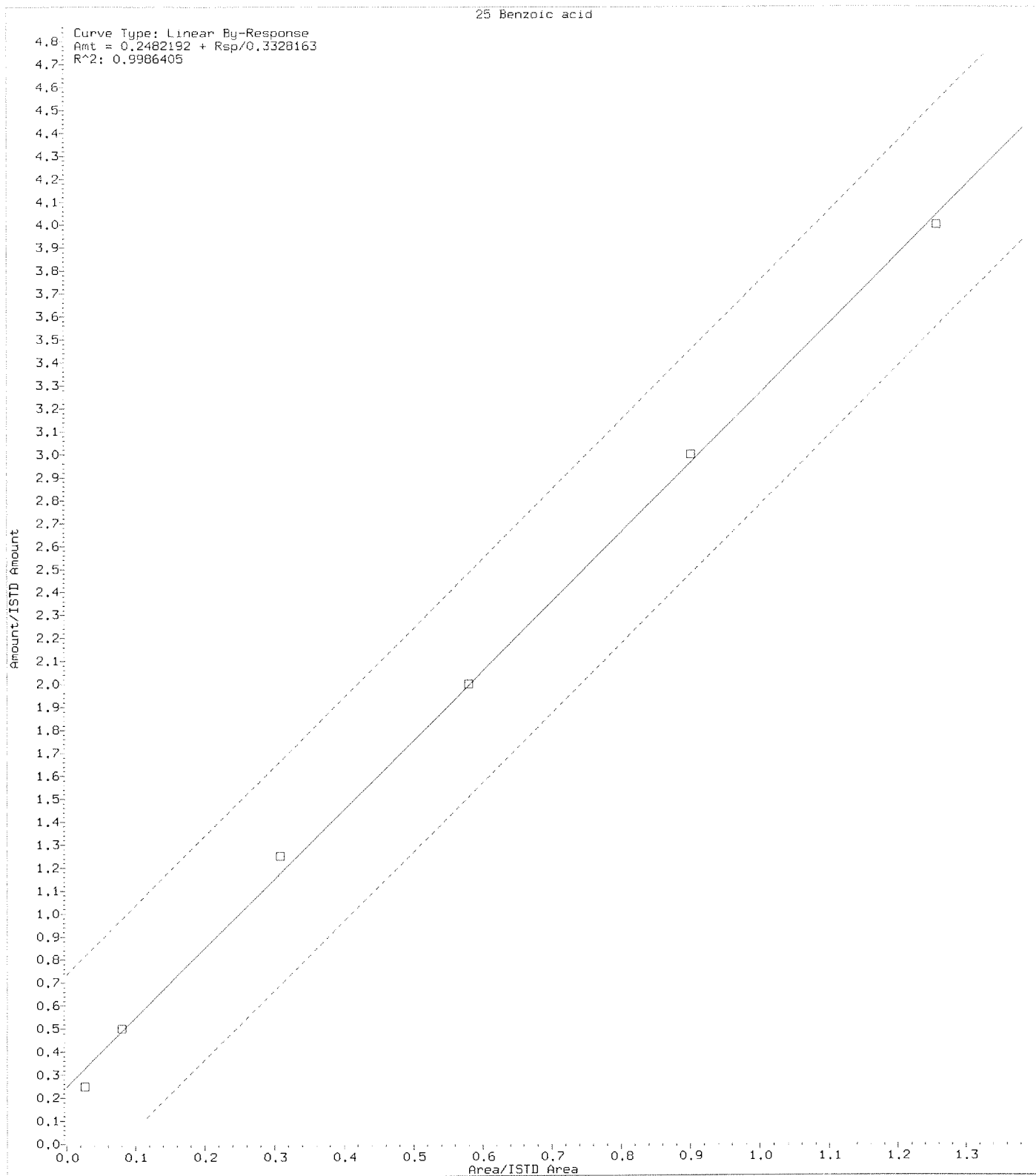
Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
N-Nitrosodimethylamine	0.891	0.917	0.00	-3	20	Averaged
Pyridine	1.270	1.335	0.00	-5	20	Averaged
Phenol	1.975	2.059	0.00	-4	20	Averaged
Aniline	2.507	2.555	0.00	-2	20	Averaged
bis(2-Chloroethyl) Ether	1.564	1.563	0.00	0	20	Averaged
2-Chlorophenol	1.441	1.477	0.00	-2	20	Averaged
1,3-Dichlorobenzene	1.599	1.628	0.00	-2	20	Averaged
1,4-Dichlorobenzene	1.694	1.708	0.00	-1	20	Averaged
Benzyl alcohol	1.697	1.747	0.00	-3	20	Averaged
1,2-Dichlorobenzene	1.600	1.606	0.00	0	20	Averaged
2-Methylphenol	1.426	1.466	0.00	-3	20	Averaged
bis(2-Chloroisopropyl) Ether	2.409	2.437	0.00	-1	20	Averaged
3/4-Methylphenol	1.643	1.715	0.00	-4	20	Averaged
N-Nitroso-di-n-propylamine	1.431	1.449	0.05	-1	20	Averaged
Hexachloroethane	0.675	0.682	0.00	-1	20	Averaged
Nitrobenzene	0.486	0.505	0.00	-4	20	Averaged
Isophorone	0.908	0.945	0.00	-4	20	Averaged
2-Nitrophenol	0.170	0.191	0.00	-12	20	Averaged
2,4-Dimethylphenol	0.413	0.447	0.00	-8	20	Averaged
bis(2-Chloroethoxy) Methane	0.475	0.493	0.00	-4	20	Averaged
Benzoic acid	80.000	76.887	0.00	4	20	Linear
2,4-Dichlorophenol	0.321	0.337	0.00	-5	20	Averaged
1,2,4-Trichlorobenzene	0.353	0.368	0.00	-4	20	Averaged
Naphthalene	1.071	1.096	0.00	-2	20	Averaged
4-Chloroaniline	0.477	0.494	0.00	-4	20	Averaged
2,6-Dichlorophenol	0.326	0.337	0.00	-3	20	Averaged
Hexachloro-1,3-Butadiene	0.227	0.230	0.00	-1	20	Averaged
4-Chloro-3-methylphenol	0.388	0.412	0.00	-6	20	Averaged
2-Methylnaphthalene	0.706	0.733	0.00	-4	20	Averaged
1-Methylnaphthalene	0.708	0.729	0.00	-3	20	Averaged
Hexachlorocyclopentadiene	0.374	0.389	0.05	-4	20	Averaged
2,4,6-Trichlorophenol	0.364	0.390	0.00	-7	20	Averaged
2,4,5-Trichlorophenol	0.409	0.438	0.00	-7	20	Averaged
2-Chloronaphthalene	1.112	1.123	0.00	-1	20	Averaged
2-Nitroaniline	0.428	0.478	0.00	-12	20	Averaged
Dimethyl Phthalate	1.451	1.485	0.00	-2	20	Averaged
Acenaphthylene	1.817	1.848	0.00	-2	20	Averaged
2,6-Dinitrotoluene	0.299	0.317	0.00	-6	20	Averaged
3-Nitroaniline	0.321	0.346	0.00	-8	20	Averaged
Acenaphthene	1.077	1.103	0.00	-2	20	Averaged
2,4-Dinitrophenol	80.000	78.501	0.05	2	20	Linear
4-Nitrophenol	0.374	0.407	0.05	-9	20	Averaged
Dibenzofuran	1.676	1.721	0.00	-3	20	Averaged
2,4-Dinitrotoluene	0.433	0.468	0.00	-8	20	Averaged
Diethyl Phthalate	1.536	1.596	0.00	-4	20	Averaged
Fluorene	1.386	1.436	0.00	-4	20	Averaged
4-Chlorophenyl-phenyl Ether	0.736	0.757	0.00	-3	20	Averaged
4-Nitroaniline	0.347	0.371	0.00	-7	20	Averaged

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan011.d
 Report Date: 01/31/2017 16:38

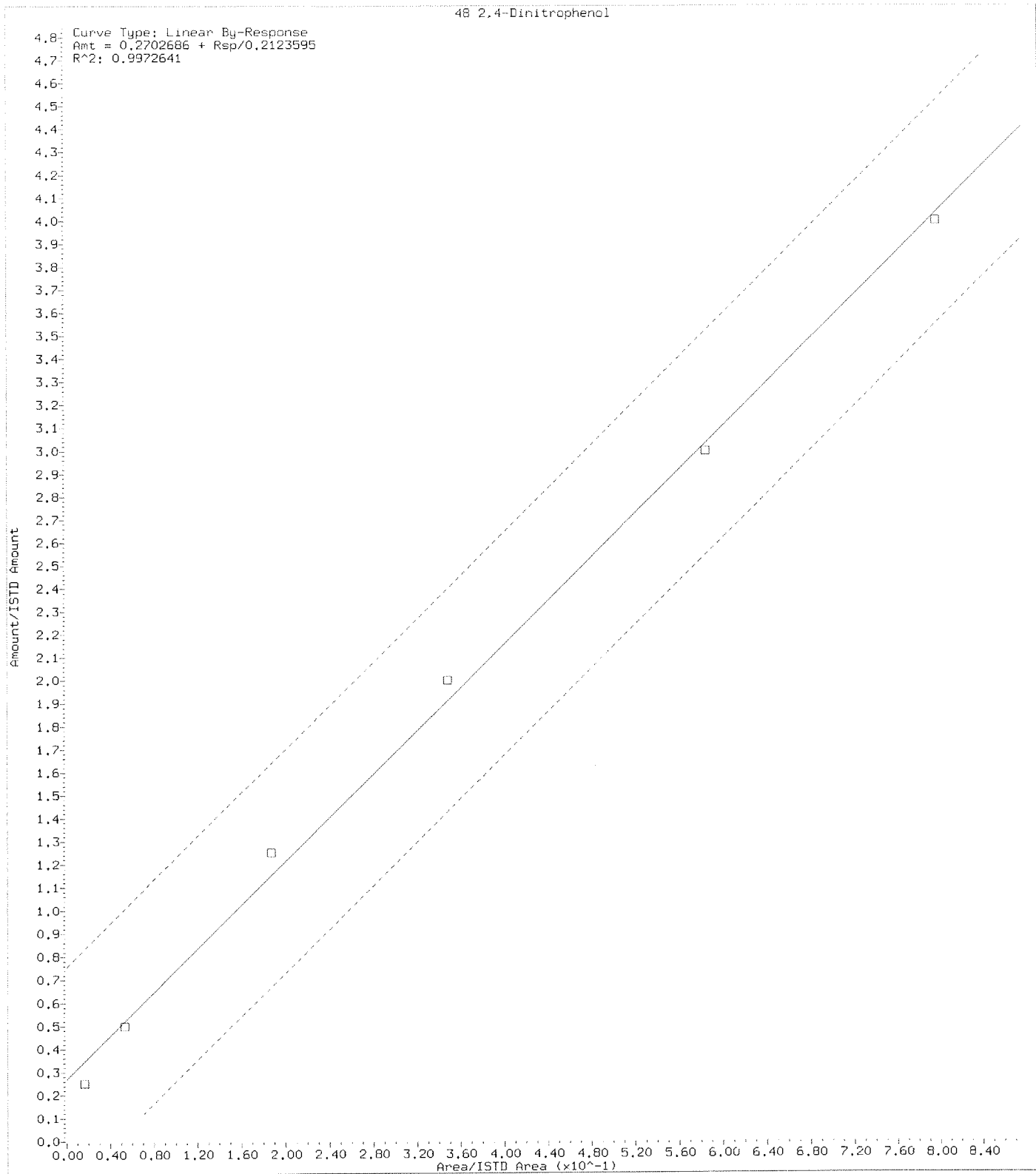
Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_SS.i Injection Date and Time: 31-JAN-2017 15:06
 Sample Name: ICV 80 PPM S110816N 8270 Initial Calibration Date(s): 22-MAR-2016 31-JAN-2017
 Sublist used: all.sub Initial Calibration Time(s): 10:03 13:44
 Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m

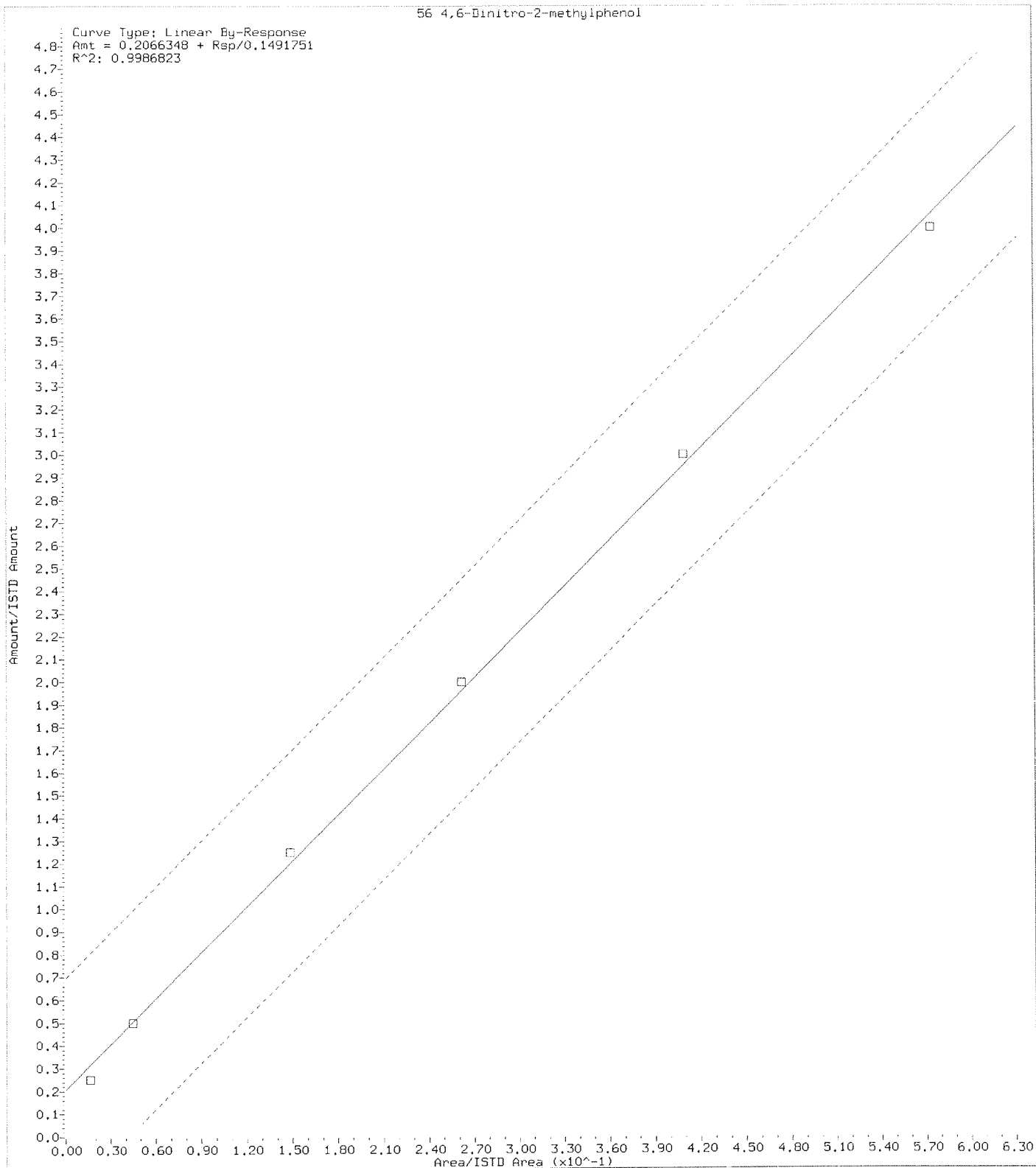
Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
4,6-Dinitro-2-methylphenol	80.000	79.898	0.00	0	20	Linear
N-Nitrosodiphenylamine	0.534	0.546	0.00	-2	20	Averaged
Azobenzene	0.851	0.870	0.00	-2	20	Averaged
4-Bromophenyl-phenyl Ether	0.229	0.236	0.00	-3	20	Averaged
Hexachlorobenzene	0.099	0.094	0.00	5	20	Averaged
Pentachlorophenol	80.000	80.402	0.00	-1	20	Linear
Phenanthrene	1.104	1.137	0.00	-3	20	Averaged
Anthracene	1.157	1.183	0.00	-2	20	Averaged
Carbazole	1.086	1.106	0.00	-2	20	Averaged
Di-n-butyl Phthalate	1.384	1.471	0.00	-6	20	Averaged
Fluoranthene	1.382	1.399	0.00	-1	20	Averaged
Benzidine	0.471	0.528	0.00	-12	20	Averaged
Pyrene	1.079	1.115	0.00	-3	20	Averaged
Butyl Benzyl Phthalate	80.000	80.775	0.00	-1	20	Linear
3,3'-Dichlorobenzidine	80.000	75.843	0.00	5	20	Linear
Benzo (a) Anthracene	1.171	1.202	0.00	-3	20	Averaged
Chrysene	1.113	1.132	0.00	-2	20	Averaged
bis(2-Ethylhexyl) Phthalate	80.000	80.607	0.00	-1	20	Linear
Di-n-octyl Phthalate	80.000	76.933	0.00	4	20	Linear
Benzo (b) Fluoranthene	1.253	1.280	0.00	-2	20	Averaged
Benzo (k) Fluoranthene	1.288	1.303	0.00	-1	20	Averaged
Benzo (a) Pyrene	1.200	1.230	0.00	-3	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.239	1.226	0.00	1	20	Averaged
Dibenz (a,h) Anthracene	1.026	1.047	0.00	-2	20	Averaged
Benzo (g,h,i) Perylene	0.991	0.943	0.00	5	20	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2-Fluorophenol	1.265	1.353	0.00	-7	20	Averaged
Phenol-d6	1.939	2.042	0.00	-5	20	Averaged
Nitrobenzene-d5	0.534	0.565	0.00	-6	20	Averaged
2-Fluorobiphenyl	1.338	1.383	0.00	-3	20	Averaged
2,4,6-Tribromophenol	0.098	0.105	0.00	-7	20	Averaged
p-Terphenyl-d14	0.862	0.894	0.00	-4	20	Averaged



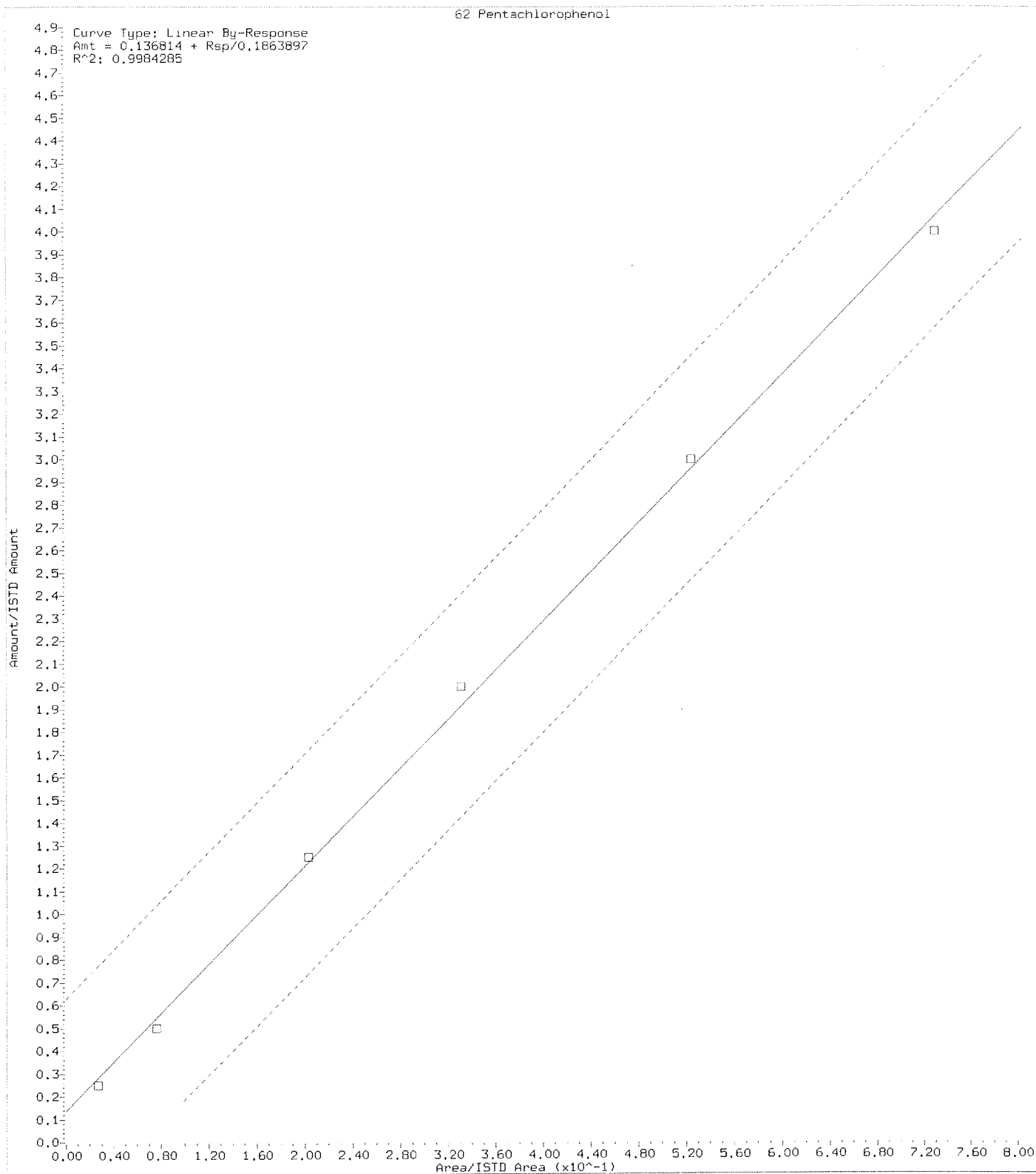
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Target 3.5 esignature user ID: n8cz



Digitally signed by Qi Mo on 01/31/2017 at 16:38.
Target 3.5 esignature user ID: n8cz

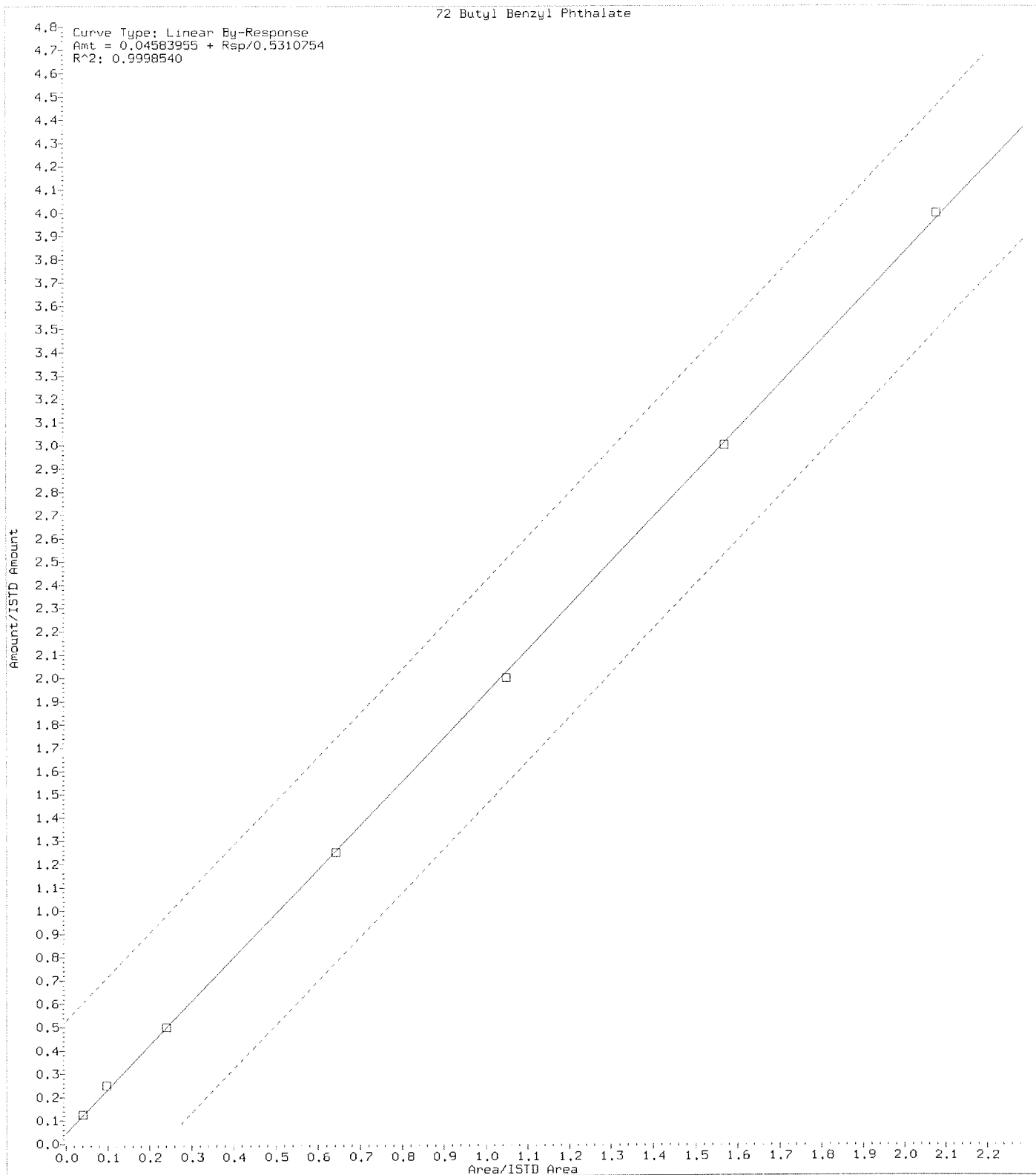


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Target 3.5 esignature user ID: n8cz

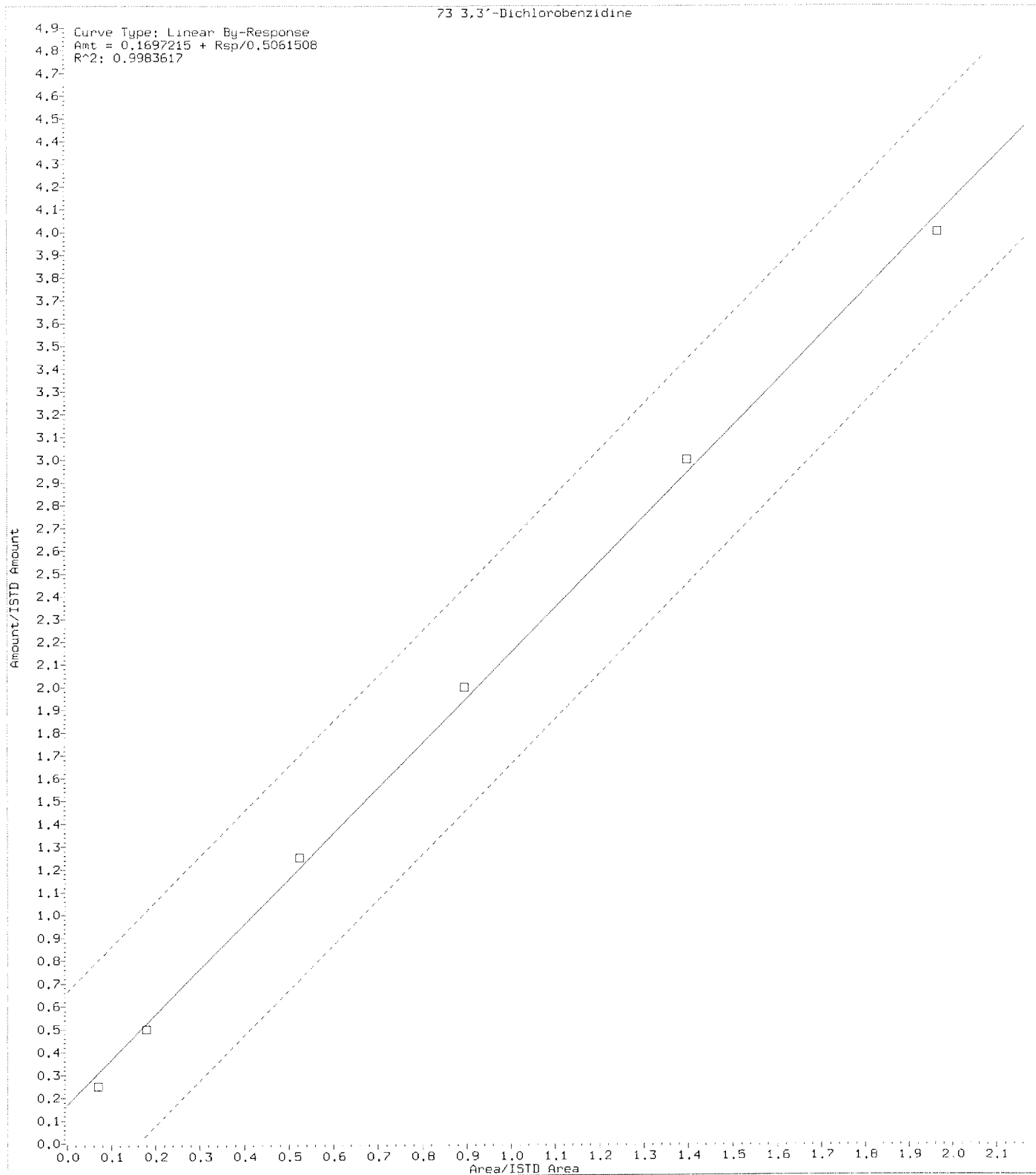



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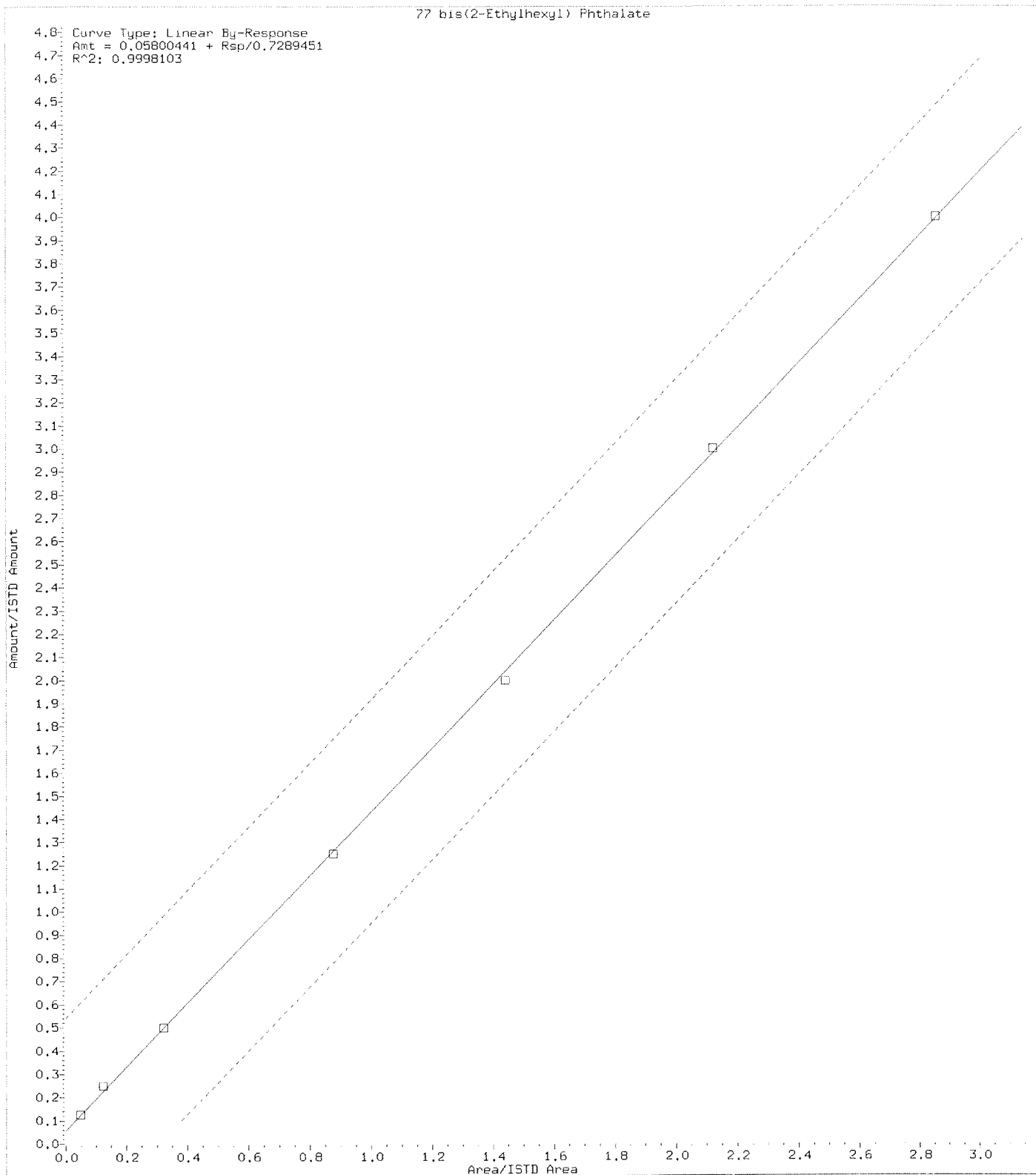
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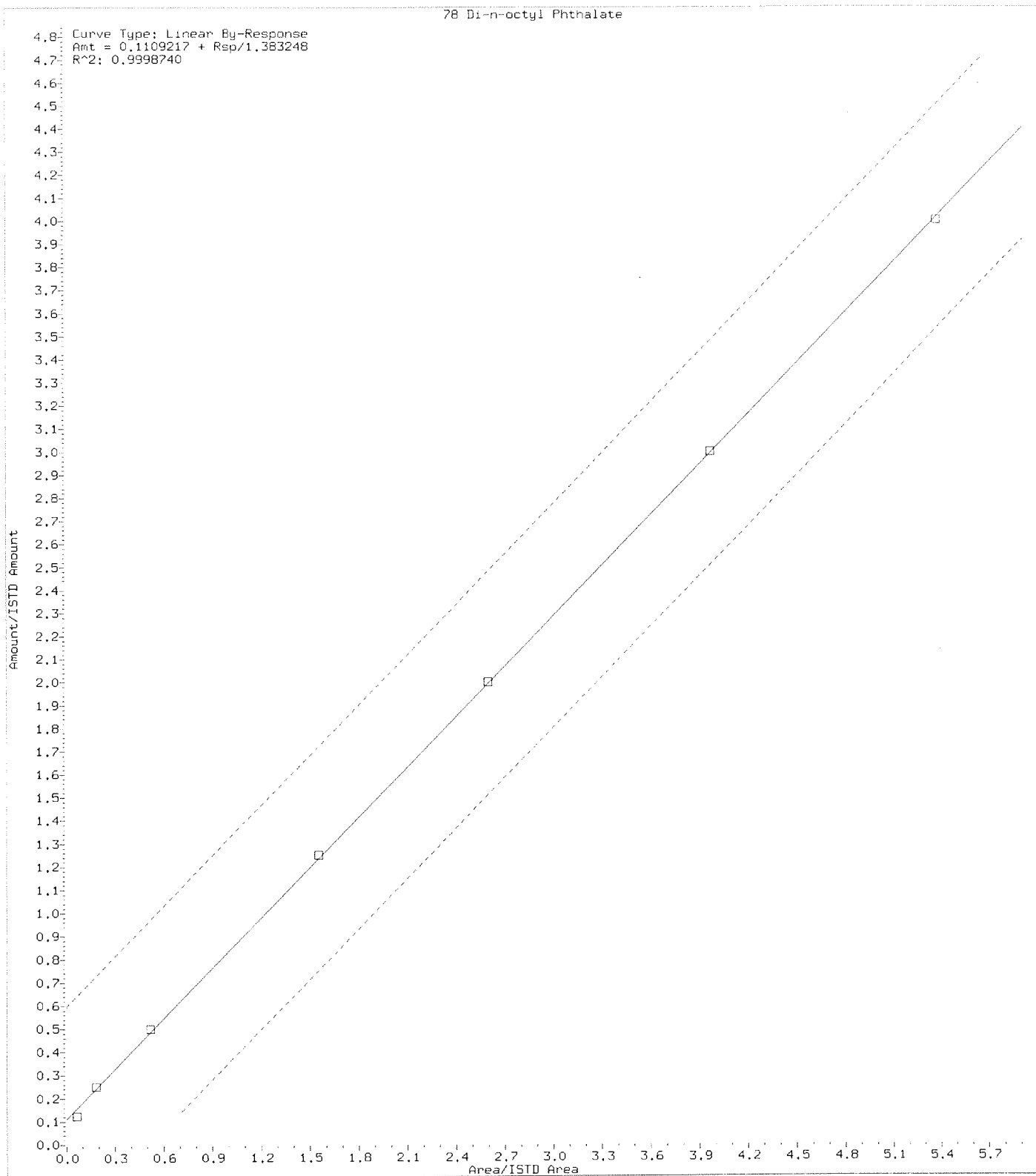


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Target 3.5 esignature user ID: n8cz



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Target 3.5 esignature user ID: n8cz

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan002.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 11:18 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:23
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:23 n8cz

Sample Name: ICAL-1 160 PPM S110816M 8270 Misc Info: 170131I002
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	
	Ref.	RT			Amount (ug/L)	DEV(Min)
=====						
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.357	152	151779	40.000	0.00
28)*Naphthalene-d8	(2)	4.620	136	663253	40.000	0.00
46)*Acenaphthene-d10	(3)	6.395	164	487873	40.000	0.00
63)*Phenanthrene-d10	(4)	7.850	188	1000051	40.000	0.00
75)*Chrysene-d12	(5)	10.556	240	1352370	40.000	0.00
82)*Perylene-d12	(6)	12.380	264	1524831	40.000	-0.01
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.304	112	804985	174.244	0.00
SpikedAmount 160.000	Recovery =		0.000			
4)\$Phenol-d6	(1)	3.020	99	1202939	170.619	-0.01
SpikedAmount 160.000	Recovery =		0.000			
19)\$Nitrobenzene-d5	(2)	3.924	82	1384549	169.014	-0.01
SpikedAmount 160.000	Recovery =		0.000			
39)\$2-Fluorobiphenyl	(3)	5.732	172	2555329	152.613	0.00
SpikedAmount 160.000	Recovery =		0.000			
59)\$2,4,6-Tribromophenol	(4)	7.192	330	425456	174.338	-0.01
SpikedAmount 160.000	Recovery =		0.000			
71)\$p-Terphenyl-d14	(5)	9.439	244	4879687	170.577	0.00
SpikedAmount 160.000	Recovery =		0.000			
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.651	74	529720	162.035	98
2) Pyridine	(1)	1.672	52	750444	185.642	97
5) Phenol	(1)	3.031	94	1217789	283.126	98
6) Aniline	(1)	3.090	93	1505204	162.557	99
7) bis(2-Chloroethyl) Ether	(1)	3.133	93	913342	165.623	98
8) 2-Chlorophenol	(1)	3.191	128	881033	164.687	99
9) 1,3-Dichlorobenzene	(1)	3.330	146	958629	159.227	99
11) 1,4-Dichlorobenzene	(1)	3.373	146	985416	155.719	100
12) Benzyl alcohol	(1)	3.496	79	1041305	163.000	99
13) 1,2-Dichlorobenzene	(1)	3.555	146	942805	157.813	99
14) 2-Methylphenol	(1)	3.603	108	865280	162.898	100
15) bis(2-Chloroisopropyl) Ether	(1)	3.651	45	1332455	183.164	97
16) 3/4-Methylphenol	(1)	3.748	107	2019933	326.650	100
17) N-Nitroso-di-n-propylamine	(1)	3.801	70	845225	161.276	98
18) Hexachloroethane	(1)	3.849	117	406954	165.081	99
20) Nitrobenzene	(2)	3.940	77	1237325	161.925	99

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan002.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 11:18 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:23
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:23 n8cz

Sample Name: ICAL-1 160 PPM S110816M 8270 Misc Info: 170131I002
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.170	82	2358930	166.994	100
22) 2-Nitrophenol	(2)	4.256	139	490102	168.756	98
23) 2,4-Dimethylphenol	(2)	4.288	107	1089988	162.612	98
24) bis(2-Chloroethoxy) Methane	(2)	4.395	93	1226310	170.203	99
25) Benzoic acid	(2)	4.454	105	837571	215.443	54
26) 2,4-Dichlorophenol	(2)	4.486	162	885676	166.649	98
27) 1,2,4-Trichlorobenzene	(2)	4.577	180	944587	158.533	99
29) Naphthalene	(2)	4.641	128	2774041	159.166	99
30) 4-Chloroaniline	(2)	4.716	127	1306058	164.961	97
31) 2,6-Dichlorophenol	(2)	4.721	162	894225	165.678	97
32) Hexachloro-1,3-Butadiene	(2)	4.828	225	597258	151.118	99
33) 4-Chloro-3-methylphenol	(2)	5.202	107	1068140	172.160	100
34) 2-Methylnaphthalene	(2)	5.336	142	1884608	157.261	100
35) 1-Methylnaphthalene	(2)	5.449	142	1890230	158.073	99
36) Hexachlorocyclopentadiene	(3)	5.572	237	801030	167.970	98
37) 2,4,6-Trichlorophenol	(3)	5.646	196	755166	163.582	99
38) 2,4,5-Trichlorophenol	(3)	5.679	196	842902	163.381	98
40) 2-Chloronaphthalene	(3)	5.828	162	2128006	154.990	98
41) 2-Nitroaniline	(3)	5.962	65	883674	177.520	99
42) Dimethyl Phthalate	(3)	6.187	163	2844978	159.696	100
44) Acenaphthylene	(3)	6.245	152	3534666	156.363	99
43) 2,6-Dinitrotoluene	(3)	6.251	165	597802	159.889	94
45) 3-Nitroaniline	(3)	6.385	138	673524	164.367	97
47) Acenaphthene	(3)	6.433	153	2071581	150.812	100
48) 2,4-Dinitrophenol	(3)	6.481	184	389900	204.163	96
49) 4-Nitrophenol	(3)	6.540	65	773023	183.739	100
50) Dibenzofuran	(3)	6.593	168	3228856	151.436	98
51) 2,4-Dinitrotoluene	(3)	6.636	165	890354	164.788	98
52) Diethyl Phthalate	(3)	6.893	149	3032944	160.288	99
53) Fluorene	(3)	6.930	166	2745843	153.330	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.935	204	1462136	154.425	96
55) 4-Nitroaniline	(3)	7.010	138	732881	169.347	99
56) 4,6-Dinitro-2-methylphenol	(4)	7.042	198	574934	193.339	97
57) N-Nitrosodiphenylamine	(4)	7.064	169	2143075	164.376	99
58) Azobenzene	(4)	7.091	77	3108519	160.300	97
60) 4-Bromophenyl-phenyl Ether	(4)	7.411	248	921091	163.038	98
61) Hexachlorobenzene	(4)	7.556	142	361526	152.600	96

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan002.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 11:18 Analyst ID: 923

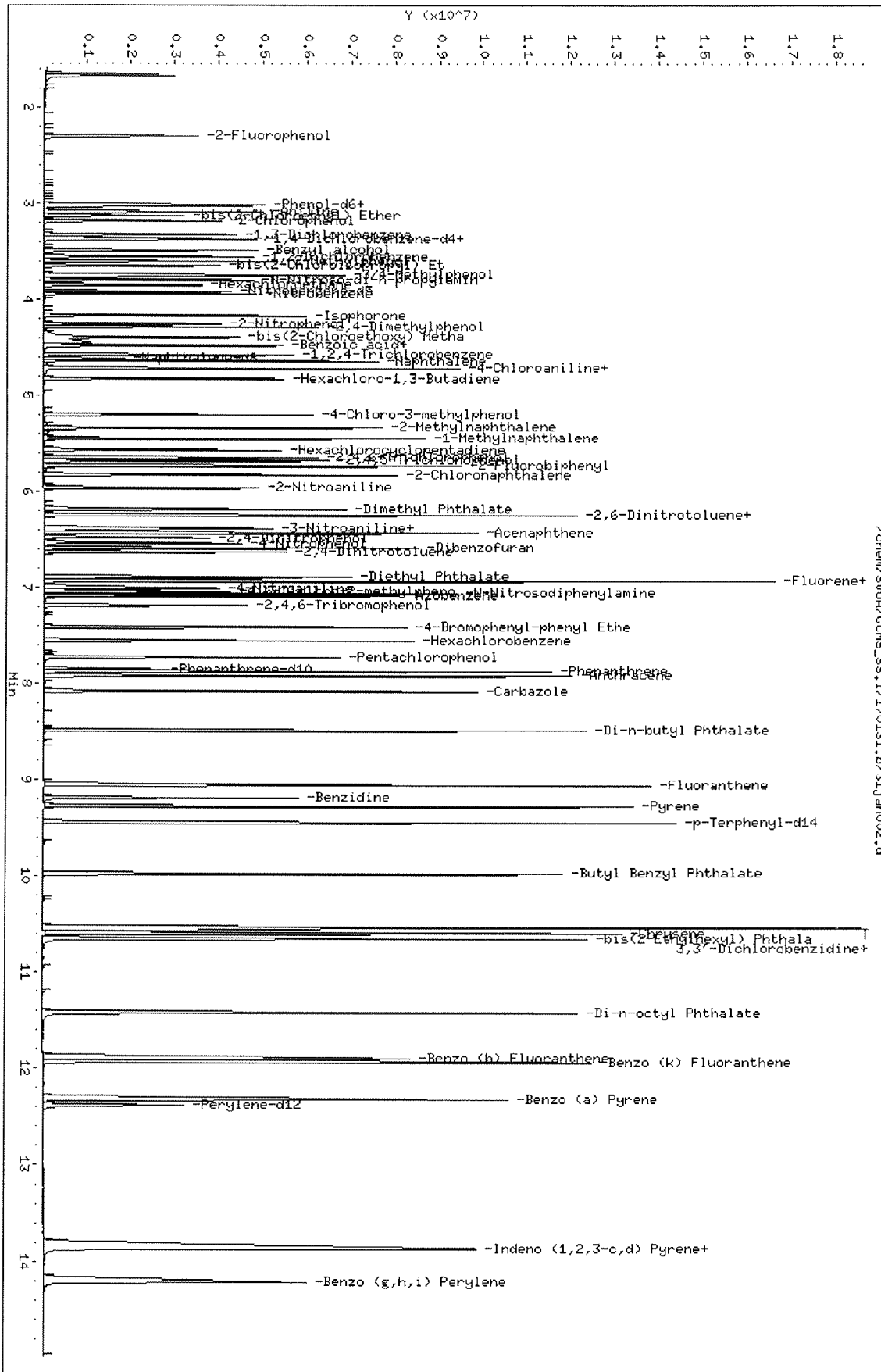
Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:23
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:23 n8cz

Sample Name: ICAL-1 160 PPM S110816M 8270 Misc Info: 170131I002
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.727	266	732528	183.617	99
64) Phenanthrene	(4)	7.877	178	4420134	163.616	99
65) Anthracene	(4)	7.920	178	4621894	162.647	100
66) Carbazole	(4)	8.080	167	4327233	164.483	99
67) Di-n-butyl Phthalate	(4)	8.487	149	5700138	171.320	99
68) Fluoranthene	(4)	9.054	202	5629664	161.890	100
69) Benzidine	(4)	9.182	184	1925536	147.338	97
70) Pyrene	(5)	9.273	202	5907143	160.891	99
72) Butyl Benzyl Phthalate	(5)	9.973	149	2822286	179.338	97
73) 3,3'-Dichlorobenzidine	(5)	10.530	252	2671439	183.513	98
74) Benzo (a) Anthracene	(5)	10.540	228	6663409	164.628	99
76) Chrysene	(5)	10.594	228	6192788	162.900	100
77) bis(2-Ethylhexyl) Phthalate	(5)	10.653	149	3879187	181.514	98
78) Di-n-octyl Phthalate	(5)	11.418	149	7297225	192.769	98
79) Benzo (b) Fluoranthene	(5)	11.894	252	7807469	181.097	100
80) Benzo (k) Fluoranthene	(5)	11.931	252	7310983	165.975	100
81) Benzo (a) Pyrene	(5)	12.322	252	7229084	173.167	99
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.835	276	7377751	150.501	100
84) Dibenz (a,h) Anthracene	(6)	13.873	278	6466359	157.776	99
85) Benzo (g,h,i) Perylene	(6)	14.220	276	5717137	147.414	99

Data File: /chem/SW08/GCHS_SS.1/170131.b/31jan002.d
Date: 31-JAN-2017 11:18
Client ID:
Sample Info: ICAL-1 160 PPH S110816H 8270
Column phase:

Instrument: GCHS_SS.i
Operator: 923
Column diameter: 0.00
/chem/SW08/GCHS_SS.1/170131.b/31jan002.d



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan003.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 11:43 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:23
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:27 n8cz

Sample Name: ICAL-2 120 PPM S110816K 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.357	152	157150	40.000	0.00
28)*Naphthalene-d8	(2)	4.619	136	710791	40.000	0.00
46)*Acenaphthene-d10	(3)	6.395	164	500263	40.000	0.00
63)*Phenanthrene-d10	(4)	7.845	188	1012164	40.000	0.01
75)*Chrysene-d12	(5)	10.551	240	1350656	40.000	0.01
82)*Perylene-d12	(6)	12.375	264	1490593	40.000	0.00
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.303	112	636855	131.074	0.00
SpikedAmount 120.000	Recovery =		0.000			
4)\$Phenol-d6	(1)	3.015	99	941838	125.697	0.00
SpikedAmount 120.000	Recovery =		0.000			
19)\$Nitrobenzene-d5	(2)	3.919	82	1098163	120.597	0.00
SpikedAmount 120.000	Recovery =		0.000			
39)\$2-Fluorobiphenyl	(3)	5.732	172	1969384	116.878	0.00
SpikedAmount 120.000	Recovery =		0.000			
59)\$2,4,6-Tribromophenol	(4)	7.187	330	311513	126.244	0.00
SpikedAmount 120.000	Recovery =		0.000			
71)\$p-Terphenyl-d14	(5)	9.439	244	3566051	124.277	0.00
SpikedAmount 120.000	Recovery =		0.000			
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.651	74	422541	123.162	95
2) Pyridine	(1)	1.672	52	601060	132.547	98
5) Phenol	(1)	3.026	94	938461	123.179	98
6) Aniline	(1)	3.090	93	1218348	125.164	99
7) bis(2-Chloroethyl) Ether	(1)	3.132	93	730612	123.883	99
8) 2-Chlorophenol	(1)	3.186	128	696938	124.673	98
9) 1,3-Dichlorobenzene	(1)	3.330	146	759159	121.070	99
11) 1,4-Dichlorobenzene	(1)	3.373	146	780242	117.944	99
12) Benzyl alcohol	(1)	3.491	79	826189	124.057	98
13) 1,2-Dichlorobenzene	(1)	3.555	146	746727	120.090	100
14) 2-Methylphenol	(1)	3.603	108	684172	124.461	99
15) bis(2-Chloroisopropyl) Ether	(1)	3.651	45	1081354	127.230	98
16) 3/4-Methylphenol	(1)	3.748	107	1601417	250.364	100
17) N-Nitroso-di-n-propylamine	(1)	3.796	70	671621	121.636	99
18) Hexachloroethane	(1)	3.849	117	315546	120.974	98
20) Nitrobenzene	(2)	3.935	77	959346	114.271	98

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan003.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 11:43 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:23
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:27 n8cz

Sample Name: ICAL-2 120 PPM S110816K 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.165	82	1867319	120.259	100
22) 2-Nitrophenol	(2)	4.256	139	394518	128.089	98
23) 2,4-Dimethylphenol	(2)	4.282	107	868828	119.512	99
24) bis(2-Chloroethoxy) Methane	(2)	4.395	93	961444	119.544	98
25) Benzoic acid	(2)	4.438	105	643206M	152.627	77
26) 2,4-Dichlorophenol	(2)	4.480	162	688618	120.924	98
27) 1,2,4-Trichlorobenzene	(2)	4.577	180	728504	115.340	99
29) Naphthalene	(2)	4.635	128	2170258	116.140	100
30) 4-Chloroaniline	(2)	4.716	127	1001751	117.726	98
31) 2,6-Dichlorophenol	(2)	4.721	162	684126	118.001	99
32) Hexachloro-1,3-Butadiene	(2)	4.823	225	465447	112.007	99
33) 4-Chloro-3-methylphenol	(2)	5.197	107	832358	123.936	99
34) 2-Methylnaphthalene	(2)	5.336	142	1450018	114.887	100
35) 1-Methylnaphthalene	(2)	5.443	142	1456782	114.617	100
36) Hexachlorocyclopentadiene	(3)	5.566	237	612069	130.705	98
37) 2,4,6-Trichlorophenol	(3)	5.646	196	579498	125.592	99
38) 2,4,5-Trichlorophenol	(3)	5.678	196	650432	125.655	98
40) 2-Chloronaphthalene	(3)	5.823	162	1631458	117.339	98
41) 2-Nitroaniline	(3)	5.962	65	657516	126.112	98
42) Dimethyl Phthalate	(3)	6.181	163	2181310	120.047	99
44) Acenaphthylene	(3)	6.245	152	2659104	116.123	99
43) 2,6-Dinitrotoluene	(3)	6.245	165	456611	120.960	96
45) 3-Nitroaniline	(3)	6.379	138	509667	123.414	98
47) Acenaphthene	(3)	6.427	153	1571406	113.522	100
48) 2,4-Dinitrophenol	(3)	6.475	184	293451	157.844	97
49) 4-Nitrophenol	(3)	6.534	65	591579	131.212	99
50) Dibenzofuran	(3)	6.588	168	2500429	116.989	99
51) 2,4-Dinitrotoluene	(3)	6.630	165	681835	125.272	98
52) Diethyl Phthalate	(3)	6.887	149	2300971	118.985	100
53) Fluorene	(3)	6.930	166	2105827	117.806	99
54) 4-Chlorophenyl-phenyl Ether	(3)	6.930	204	1118855	118.035	98
55) 4-Nitroaniline	(3)	7.000	138	557290	126.958	99
56) 4,6-Dinitro-2-methylphenol	(4)	7.037	198	414731	143.593	97
57) N-Nitrosodiphenylamine	(4)	7.058	169	1582337	119.047	100
58) Azobenzene	(4)	7.085	77	2385934	117.286	98
60) 4-Bromophenyl-phenyl Ether	(4)	7.411	248	689511	120.503	99
61) Hexachlorobenzene	(4)	7.550	142	273401	112.674	98

M = Compound was manually integrated.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan003.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 11:43 Analyst ID: 923

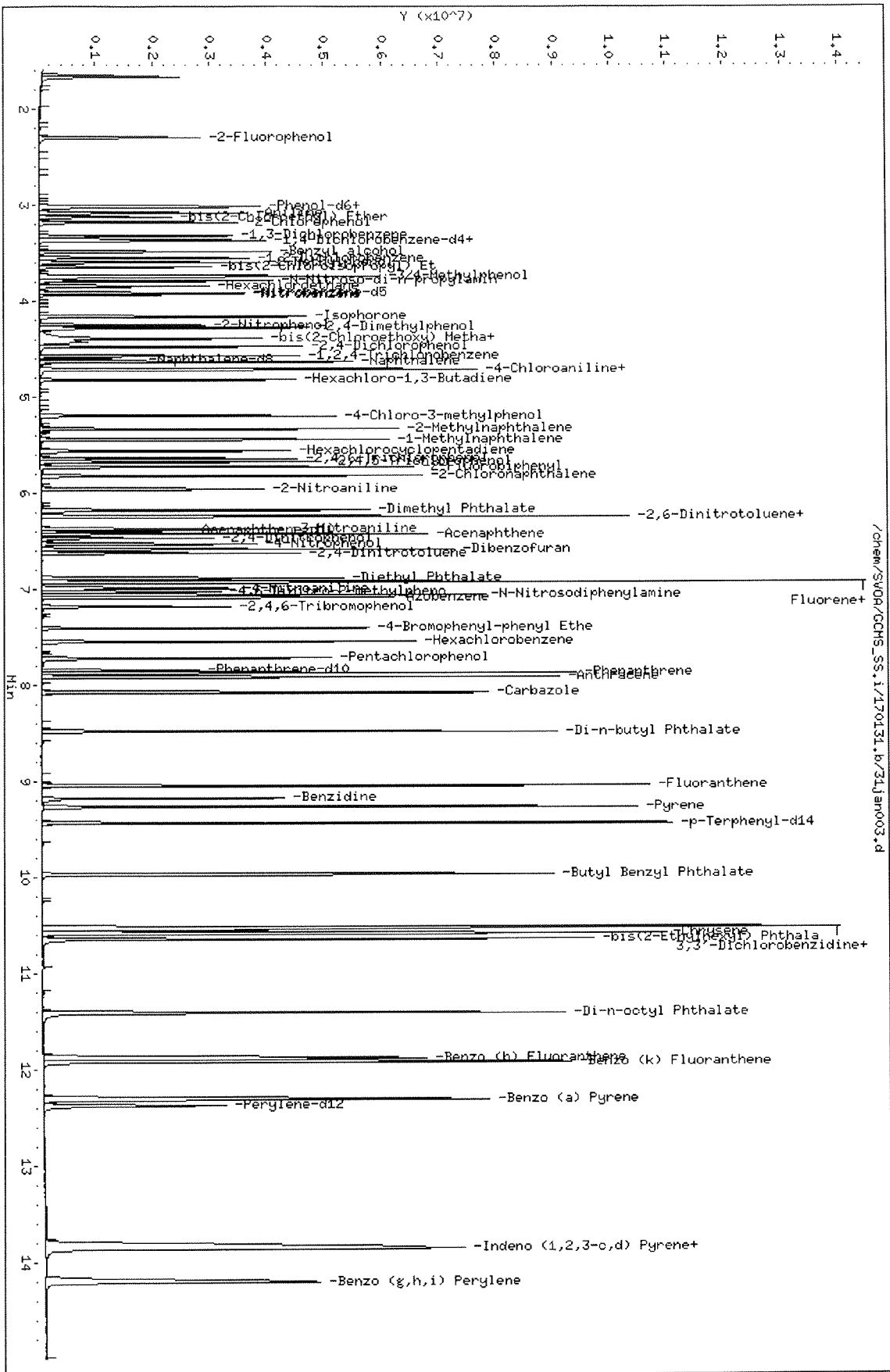
Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:23
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:27 n8cz

Sample Name: ICAL-2 120 PPM S110816K 8270 Misc Info:
 Response via Initial Calibration

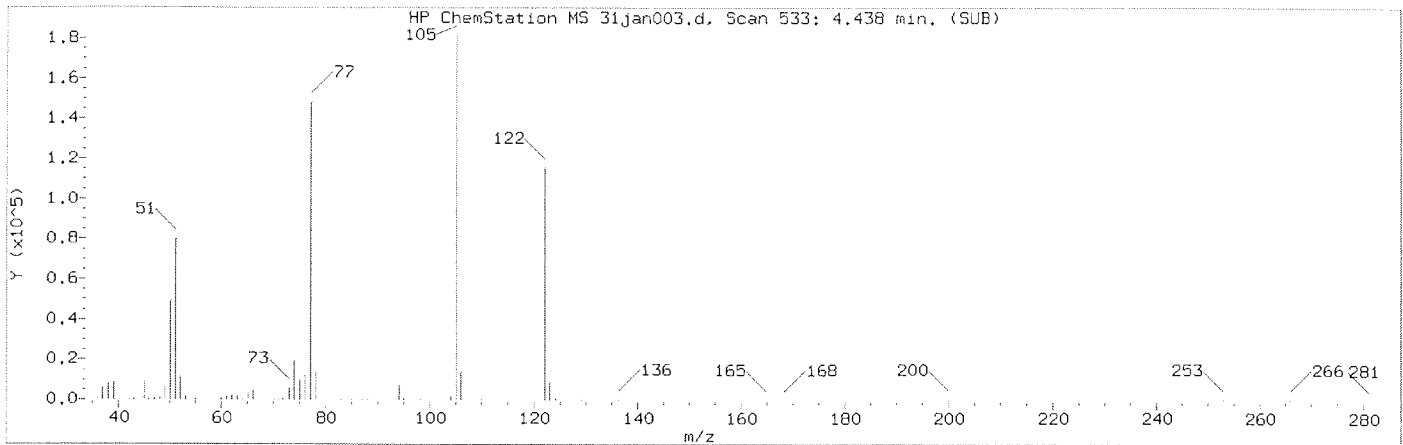
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.722	266	532669	133.159	99
64) Phenanthrene	(4)	7.871	178	3276709	118.737	99
65) Anthracene	(4)	7.914	178	3467339	120.059	99
66) Carbazole	(4)	8.075	167	3225579	119.720	99
67) Di-n-butyl Phthalate	(4)	8.481	149	4287613	124.705	99
68) Fluoranthene	(4)	9.048	202	4212772	120.459	99
69) Benzidine	(4)	9.176	184	1528206	128.339	98
70) Pyrene	(5)	9.267	202	4358190	119.932	99
72) Butyl Benzyl Phthalate	(5)	9.968	149	2128793	134.001	98
73) 3,3'-Dichlorobenzidine	(5)	10.524	252	1897361	136.449	98
74) Benzo (a) Anthracene	(5)	10.535	228	4809900	120.634	100
76) Chrysene	(5)	10.588	228	4515821	119.989	99
77) bis(2-Ethylhexyl) Phthalate	(5)	10.647	149	2877324	134.943	99
78) Di-n-octyl Phthalate	(5)	11.407	149	5386783	144.194	98
79) Benzo (b) Fluoranthene	(5)	11.883	252	5511848	129.068	99
80) Benzo (k) Fluoranthene	(5)	11.920	252	5246709	120.111	99
81) Benzo (a) Pyrene	(5)	12.311	252	5256884	127.496	99
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.830	276	5580663	118.325	99
84) Dibenz (a,h) Anthracene	(6)	13.857	278	4766658	121.100	99
85) Benzo (g,h,i) Perylene	(6)	14.204	276	4357365	115.778	100

Data File: /chem/SV09/GCHS_SS.1/170131.b/31jan003.d
Date: 31-JAN-2017 11:43
Client ID:
Sample Info: ICAL-2 120 PPM S110816K 8270
Column phases:

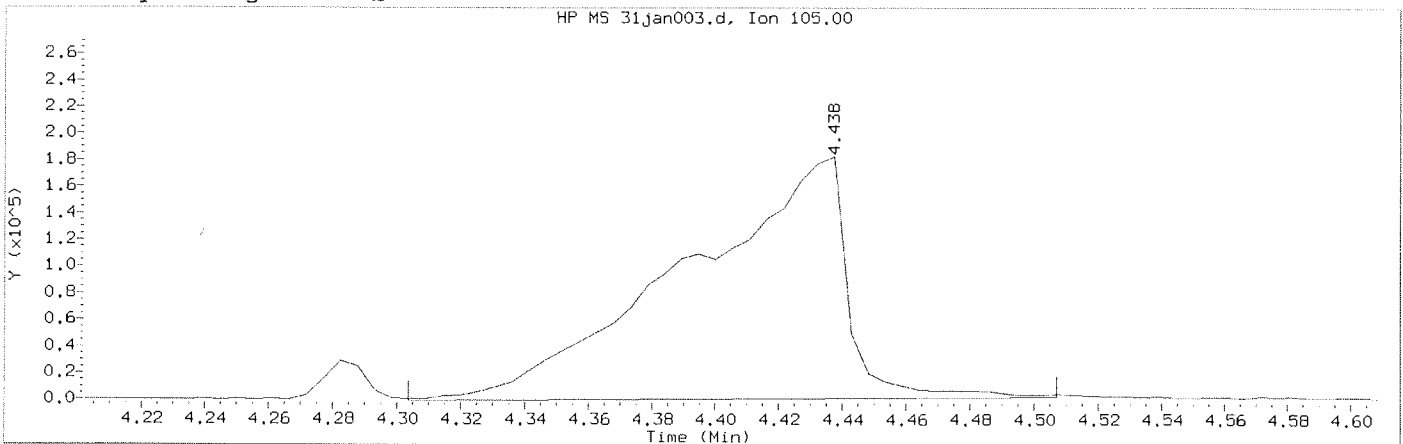
Instrument: GCHS_SS.1
Operator: 923
Column diameter: 0.00



Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan003.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 11:43 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:23
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:27 n8cz

Sample Name: ICAL-2 120 PPM S110816K 8270

Compound Number : 25
 Compound Name : Benzoic acid
 Scan Number : 533
 Retention Time (minutes): 4.438
 Quant Ion : 105.00
 Area (flag) : 643206M
 On-Column Amount (ug/L) : 152.6275
 Integration start scan : 507 Integration stop scan: 545
 Y at integration start : -729 Y at integration end: 2541

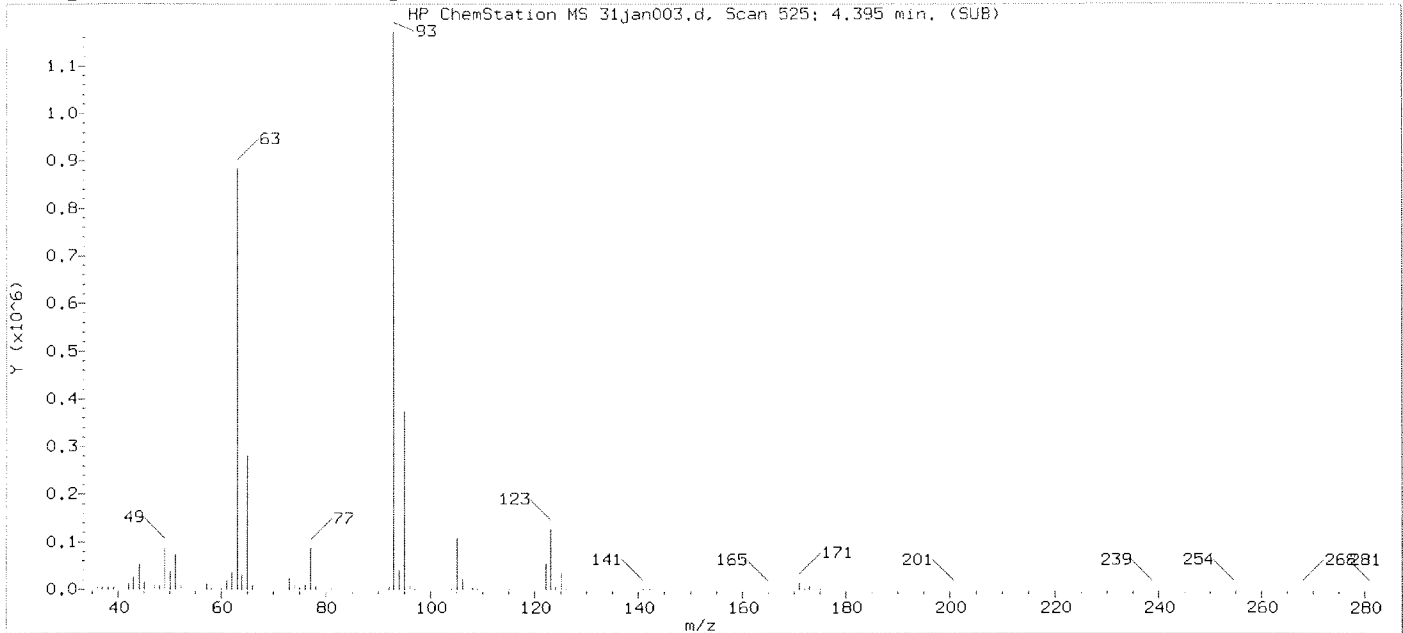
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Qi Mo
 on 01/31/2017 at 16:38.
 Target 3.5 esignature user ID: n8cz

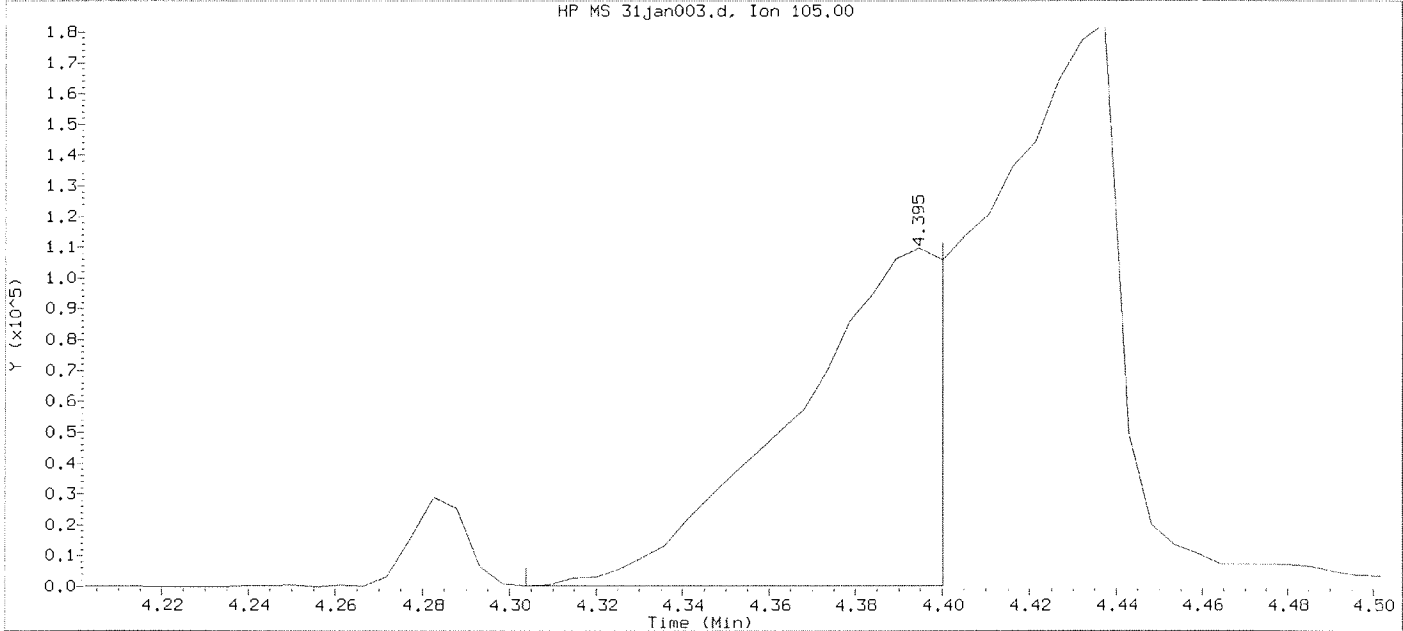
GC/MS audit/management approval: _____

Qi Mo 2/3/17

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan003.d
 Injection date and time: 31-JAN-2017 11:43

Instrument ID: GCMS_SS.i
 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m
 Calibration date and time: 31-JAN-2017 13:23

Sublist used: all

Date, time and analyst ID of latest file update: 31-Jan-2017 13:24 n8cz

Sample Name: ICAL-2 120 PPM S110816K 8270

Compound Number	: 25	
Compound Name	: Benzoic acid	
Scan Number	: 525	
Retention Time (minutes)	: 4.395	
Quant Ion	: 105.00	
Area	: 270262	
On-column Amount (ug/L)	: 73.6481	
Integration start scan	: 507	Integration stop scan: 525
Y at integration start	: 475	Y at integration end: 475

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan004.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 12:02 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:24
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:24 n8cz

Sample Name: ICAL-3 80 PPM S110816J 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.357	152	163067	40.000	0.00
28)*Naphthalene-d8	(2)	4.614	136	690111	40.000	0.01
46)*Acenaphthene-d10	(3)	6.390	164	511464	40.000	0.01
63)*Phenanthrene-d10	(4)	7.839	188	1013507	40.000	0.01
75)*Chrysene-d12	(5)	10.546	240	1314669	40.000	0.01
82)*Perylene-d12	(6)	12.364	264	1426516	40.000	0.01
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.303	112	420374	84.693	0.00
SpikedAmount 80.000	Recovery =		0.000			
4)\$Phenol-d6	(1)	3.009	99	648320	85.589	0.01
SpikedAmount 80.000	Recovery =		0.000			
19)\$Nitrobenzene-d5	(2)	3.913	82	749695	87.393	0.01
SpikedAmount 80.000	Recovery =		0.000			
39)\$2-Fluorobiphenyl	(3)	5.727	172	1327633	75.633	0.01
SpikedAmount 80.000	Recovery =		0.000			
59)\$2,4,6-Tribromophenol	(4)	7.181	330	201075	81.300	0.01
SpikedAmount 80.000	Recovery =		0.000			
71)\$p-Terphenyl-d14	(5)	9.428	244	2321838	83.491	0.01
SpikedAmount 80.000	Recovery =		0.000			
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.651	74	286570	81.590	100
2) Pyridine	(1)	1.672	52	401738	92.501	100
5) Phenol	(1)	3.020	94	654555	115.261	100
6) Aniline	(1)	3.084	93	841707	84.609	100
7) bis(2-Chloroethyl) Ether	(1)	3.127	93	501985	84.727	100
8) 2-Chlorophenol	(1)	3.186	128	465484	80.987	100
9) 1,3-Dichlorobenzene	(1)	3.325	146	515719	79.731	100
11) 1,4-Dichlorobenzene	(1)	3.373	146	527667	77.611	100
12) Benzyl alcohol	(1)	3.485	79	576835	84.044	100
13) 1,2-Dichlorobenzene	(1)	3.550	146	507231	79.026	100
14) 2-Methylphenol	(1)	3.598	108	464045	81.314	100
15) bis(2-Chloroisopropyl) Ether	(1)	3.646	45	755680	96.682	100
16) 3/4-Methylphenol	(1)	3.742	107	1106055	166.482	100
17) N-Nitroso-di-n-propylamine	(1)	3.790	70	465180	82.611	100
18) Hexachloroethane	(1)	3.849	117	216306	81.671	100
20) Nitrobenzene	(2)	3.929	77	669861	84.251	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan004.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 12:02 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:24
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:24 n8cz

Sample Name: ICAL-3 80 PPM S110816J 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.159	82	1275774	86.800	100
22) 2-Nitrophenol	(2)	4.250	139	255400	84.519	100
23) 2,4-Dimethylphenol	(2)	4.277	107	596091	85.468	100
24) bis(2-Chloroethoxy) Methane	(2)	4.389	93	654806	87.295	100
25) Benzoic acid	(2)	4.405	105	401278	112.627	100
26) 2,4-Dichlorophenol	(2)	4.475	162	458385	82.893	100
27) 1,2,4-Trichlorobenzene	(2)	4.571	180	493767	79.645	100
29) Naphthalene	(2)	4.635	128	1471007	81.117	100
30) 4-Chloroaniline	(2)	4.710	127	676812	82.158	100
31) 2,6-Dichlorophenol	(2)	4.716	162	460367	81.975	100
32) Hexachloro-1,3-Butadiene	(2)	4.823	225	313158	76.151	100
33) 4-Chloro-3-methylphenol	(2)	5.192	107	555271	86.014	100
34) 2-Methylnaphthalene	(2)	5.331	142	994471	79.754	100
35) 1-Methylnaphthalene	(2)	5.443	142	972896	78.193	100
36) Hexachlorocyclopentadiene	(3)	5.561	237	405979	81.204	100
37) 2,4,6-Trichlorophenol	(3)	5.641	196	383754	79.293	100
38) 2,4,5-Trichlorophenol	(3)	5.673	196	419260	77.518	100
40) 2-Chloronaphthalene	(3)	5.817	162	1110224	77.132	100
41) 2-Nitroaniline	(3)	5.957	65	459498	88.063	100
42) Dimethyl Phthalate	(3)	6.176	163	1450503	77.665	100
44) Acenaphthylene	(3)	6.240	152	1809346	76.348	100
43) 2,6-Dinitrotoluene	(3)	6.240	165	309327	78.917	100
45) 3-Nitroaniline	(3)	6.368	138	339764	79.091	100
47) Acenaphthene	(3)	6.422	153	1080653	75.043	100
48) 2,4-Dinitrophenol	(3)	6.470	184	178405	89.109	100
49) 4-Nitrophenol	(3)	6.524	65	393395	89.193	100
50) Dibenzofuran	(3)	6.582	168	1662902	74.394	100
51) 2,4-Dinitrotoluene	(3)	6.625	165	448629	79.203	100
52) Diethyl Phthalate	(3)	6.882	149	1563030	78.794	100
53) Fluorene	(3)	6.925	166	1385623	73.806	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.925	204	738067	74.356	100
55) 4-Nitroaniline	(3)	6.989	138	365204	80.495	100
56) 4,6-Dinitro-2-methylphenol	(4)	7.026	198	265500	88.097	100
57) N-Nitrosodiphenylamine	(4)	7.053	169	1066020	80.679	100
58) Azobenzene	(4)	7.080	77	1661186	84.525	100
60) 4-Bromophenyl-phenyl Ether	(4)	7.406	248	457643	79.930	100
61) Hexachlorobenzene	(4)	7.545	142	187192	77.964	100

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan004.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 12:02 Analyst ID: 923

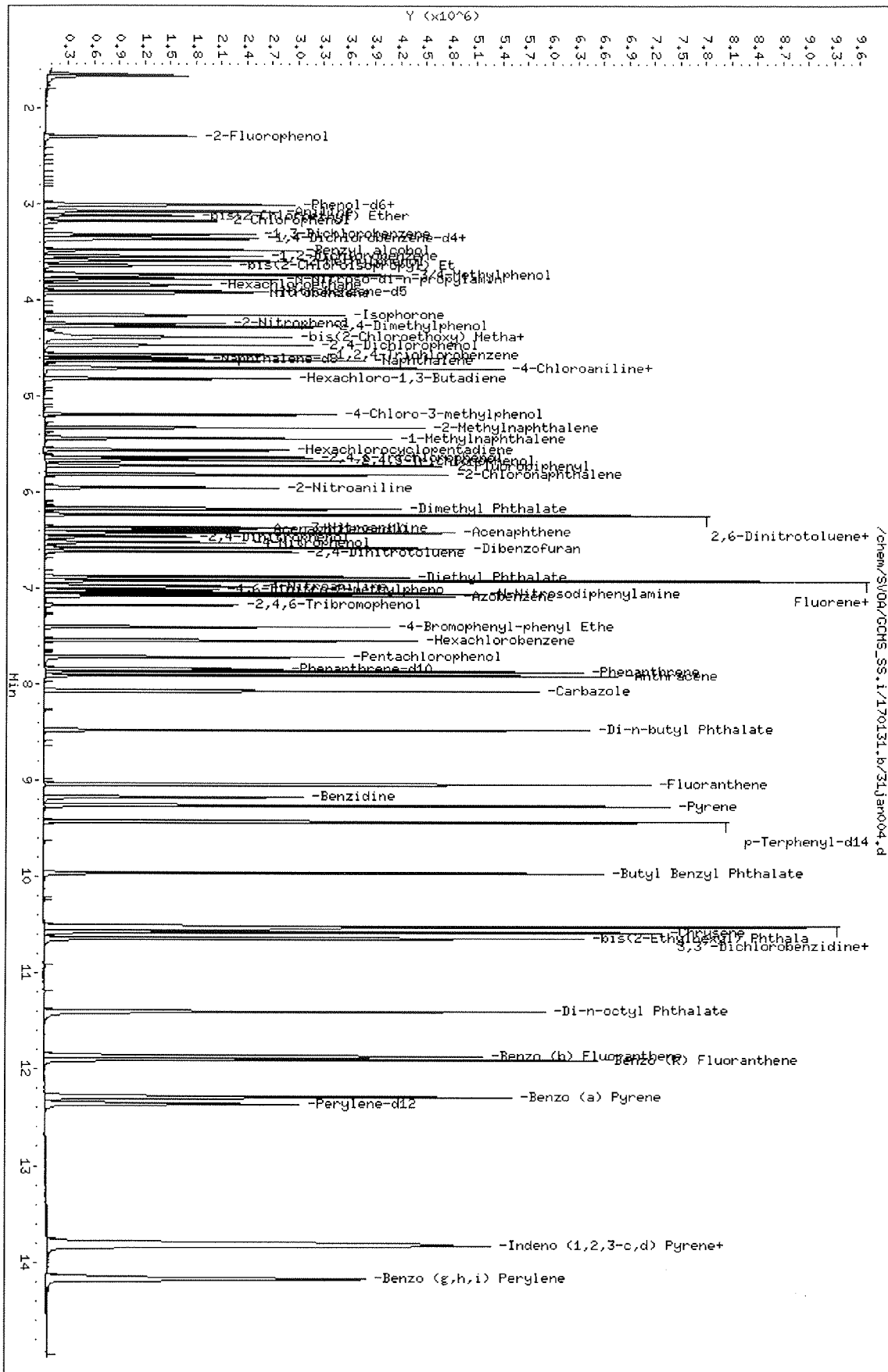
Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:24
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:24 n8cz

Sample Name: ICAL-3 80 PPM S110816J 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.716	266	335994	83.039	100
64) Phenanthrene	(4)	7.866	178	2184613	79.792	100
65) Anthracene	(4)	7.909	178	2296423	79.739	100
66) Carbazole	(4)	8.069	167	2151417	80.692	100
67) Di-n-butyl Phthalate	(4)	8.476	149	2863732	84.928	100
68) Fluoranthene	(4)	9.043	202	2751609	78.076	100
69) Benzidine	(4)	9.171	184	986191	74.375	100
70) Pyrene	(5)	9.262	202	2860968	80.158	100
72) Butyl Benzyl Phthalate	(5)	9.963	149	1382400	90.361	100
73) 3,3'-Dichlorobenzidine	(5)	10.514	252	1179434	83.344	100
74) Benzo (a) Anthracene	(5)	10.524	228	3110661	79.057	100
76) Chrysene	(5)	10.578	228	2889069	78.176	100
77) bis(2-Ethylhexyl) Phthalate	(5)	10.642	149	1897453	91.331	100
78) Di-n-octyl Phthalate	(5)	11.401	149	3426471	93.112	100
79) Benzo (b) Fluoranthene	(5)	11.867	252	3290423	78.511	100
80) Benzo (k) Fluoranthene	(5)	11.904	252	3461945	80.847	100
81) Benzo (a) Pyrene	(5)	12.295	252	3271284	80.608	100
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.814	276	3892977	84.887	100
84) Dibenz (a,h) Anthracene	(6)	13.840	278	3254162	84.872	100
85) Benzo (g,h,i) Perylene	(6)	14.188	276	3099699	85.433	100

Data File: /chem/SV09/CCHS_SS.1/170131.b/31jan004.d
Date: 31-JAN-2017 12:02
Client ID:
Sample Info: ICAL-3 80 PPH S110816J 8270
Column phase:

Instrument: CCHS_SS.1
Operator: 923
Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan005.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 12:21 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:24
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:24 n8cz

Sample Name: ICAL-4 50 PPM S110816I 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.357	152	152685	40.000	0.00
28)*Naphthalene-d8	(2)	4.614	136	651476	40.000	0.01
46)*Acenaphthene-d10	(3)	6.390	164	462409	40.000	0.01
63)*Phenanthrene-d10	(4)	7.839	188	912753	40.000	0.01
75)*Chrysene-d12	(5)	10.540	240	1222709	40.000	0.02
82)*Perylene-d12	(6)	12.359	264	1304385	40.000	0.02
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.303	112	238429	51.303	0.00
SpikedAmount 50.000	Recovery =		0.000			
4)\$Phenol-d6	(1)	3.009	99	372121	52.467	0.01
SpikedAmount 50.000	Recovery =		0.000			
19)\$Nitrobenzene-d5	(2)	3.913	82	438849	54.165	0.01
SpikedAmount 50.000	Recovery =		0.000			
39)\$2-Fluorobiphenyl	(3)	5.721	172	781805	49.263	0.01
SpikedAmount 50.000	Recovery =		0.000			
59)\$2,4,6-Tribromophenol	(4)	7.176	330	113129	50.790	0.01
SpikedAmount 50.000	Recovery =		0.000			
71)\$p-Terphenyl-d14	(5)	9.428	244	1313413	50.781	0.01
SpikedAmount 50.000	Recovery =		0.000			
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.651	74	169443	51.523	98
2) Pyridine	(1)	1.672	52	241974	59.503	99
5) Phenol	(1)	3.020	94	382248	60.562	98
6) Aniline	(1)	3.084	93	476413	51.146	99
7) bis(2-Chloroethyl) Ether	(1)	3.127	93	297397	53.609	98
8) 2-Chlorophenol	(1)	3.181	128	264950	49.232	98
9) 1,3-Dichlorobenzene	(1)	3.325	146	298399	49.270	99
11) 1,4-Dichlorobenzene	(1)	3.368	146	321406	50.488	99
12) Benzyl alcohol	(1)	3.485	79	331293	51.551	98
13) 1,2-Dichlorobenzene	(1)	3.550	146	298007	49.586	100
14) 2-Methylphenol	(1)	3.592	108	272967	51.084	99
15) bis(2-Chloroisopropyl) Ether	(1)	3.646	45	460494	62.915	100
16) 3/4-Methylphenol	(1)	3.737	107	640045	102.890	99
17) N-Nitroso-di-n-propylamine	(1)	3.785	70	275242	52.204	99
18) Hexachloroethane	(1)	3.849	117	127521	51.422	99
20) Nitrobenzene	(2)	3.929	77	399179	53.184	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan005.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 12:21 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:24
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:24 n8cz

Sample Name: ICAL-4 50 PPM S110816I 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.159	82	738750	53.243	99
22) 2-Nitrophenol	(2)	4.250	139	149873	52.538	97
23) 2,4-Dimethylphenol	(2)	4.277	107	348663	52.956	100
24) bis(2-Chloroethoxy) Methane	(2)	4.389	93	381466	53.866	98
25) Benzoic acid	(2)	4.379	105	201347	59.991	55
26) 2,4-Dichlorophenol	(2)	4.475	162	265098	50.783	99
27) 1,2,4-Trichlorobenzene	(2)	4.571	180	287351	49.099	100
29) Naphthalene	(2)	4.630	128	874700	51.095	99
30) 4-Chloroaniline	(2)	4.705	127	394820	50.769	100
31) 2,6-Dichlorophenol	(2)	4.710	162	266766	50.318	99
32) Hexachloro-1,3-Butadiene	(2)	4.823	225	176841	45.553	99
33) 4-Chloro-3-methylphenol	(2)	5.192	107	322306	52.888	99
34) 2-Methylnaphthalene	(2)	5.331	142	572157	48.607	99
35) 1-Methylnaphthalene	(2)	5.438	142	574398	48.903	98
36) Hexachlorocyclopentadiene	(3)	5.561	237	216622	47.925	98
37) 2,4,6-Trichlorophenol	(3)	5.636	196	216903	49.572	99
38) 2,4,5-Trichlorophenol	(3)	5.668	196	245681	50.243	99
40) 2-Chloronaphthalene	(3)	5.817	162	638694	49.080	99
41) 2-Nitroaniline	(3)	5.951	65	266252	56.499	99
42) Dimethyl Phthalate	(3)	6.170	163	841522	49.838	100
44) Acenaphthylene	(3)	6.235	152	1058536	49.405	99
43) 2,6-Dinitrotoluene	(3)	6.240	165	175461	49.513	96
45) 3-Nitroaniline	(3)	6.368	138	195479	50.332	99
47) Acenaphthene	(3)	6.422	153	624702	47.983	99
48) 2,4-Dinitrophenol	(3)	6.465	184	86644	47.868	98
49) 4-Nitrophenol	(3)	6.524	65	222307	55.750	100
50) Dibenzofuran	(3)	6.577	168	954947	47.254	99
51) 2,4-Dinitrotoluene	(3)	6.620	165	253148	49.433	99
52) Diethyl Phthalate	(3)	6.877	149	902655	50.331	99
53) Fluorene	(3)	6.919	166	794404	46.803	99
54) 4-Chlorophenyl-phenyl Ether	(3)	6.925	204	423664	47.210	97
55) 4-Nitroaniline	(3)	6.978	138	208834	50.912	99
56) 4,6-Dinitro-2-methylphenol	(4)	7.016	198	135380	49.880	98
57) N-Nitrosodiphenylamine	(4)	7.048	169	606550	50.973	99
58) Azobenzene	(4)	7.080	77	964331	54.484	99
60) 4-Bromophenyl-phenyl Ether	(4)	7.401	248	261831	50.778	98
61) Hexachlorobenzene	(4)	7.540	142	109859	50.807	98

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan005.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 12:21 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:24
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:24 n8cz

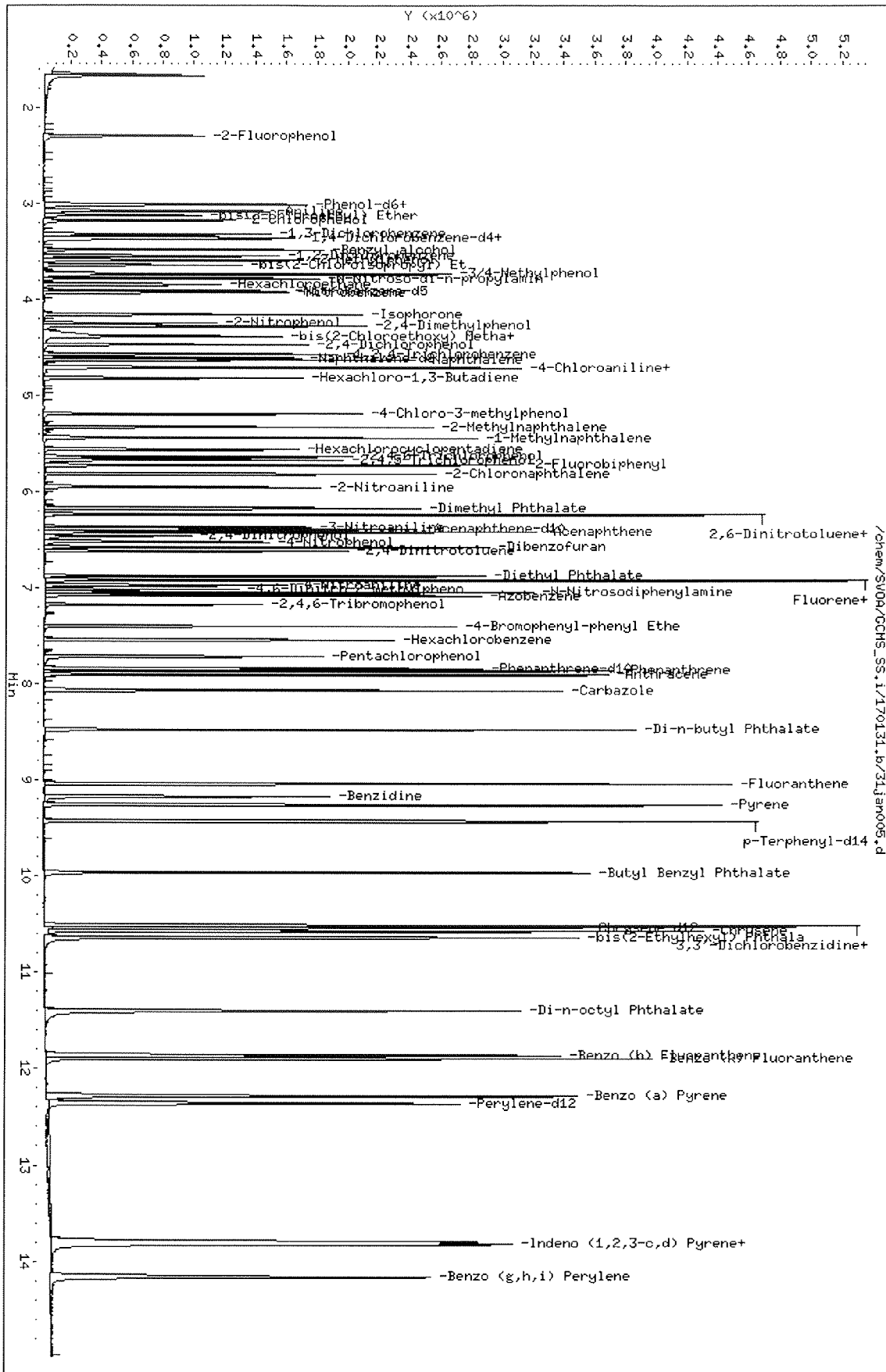
Sample Name: ICAL-4 50 PPM S110816I 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.716	266	185762	50.830	98
64) Phenanthrene	(4)	7.861	178	1252853	50.811	100
65) Anthracene	(4)	7.903	178	1326621	51.150	99
66) Carbazole	(4)	8.069	167	1238238	51.568	100
67) Di-n-butyl Phthalate	(4)	8.476	149	1624082	53.481	99
68) Fluoranthene	(4)	9.037	202	1571405	49.510	100
69) Benzidine	(4)	9.171	184	579881	48.440	99
70) Pyrene	(5)	9.257	202	1649185	49.682	100
72) Butyl Benzyl Phthalate	(5)	9.963	149	786673	55.289	99
73) 3,3'-Dichlorobenzidine	(5)	10.508	252	641524	48.742	99
74) Benzo (a) Anthracene	(5)	10.519	228	1792600	48.985	99
76) Chrysene	(5)	10.572	228	1706485	49.649	100
77) bis(2-Ethylhexyl) Phthalate	(5)	10.642	149	1072189	55.490	100
78) Di-n-octyl Phthalate	(5)	11.396	149	1902697	55.593	99
79) Benzo (b) Fluoranthene	(5)	11.861	252	1892331	48.548	100
80) Benzo (k) Fluoranthene	(5)	11.894	252	1984967	49.842	99
81) Benzo (a) Pyrene	(5)	12.284	252	1864298	49.393	100
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.798	276	2184943	52.104	98
84) Dibenz (a,h) Anthracene	(6)	13.824	278	1779563	50.759	99
85) Benzo (g,h,i) Perylene	(6)	14.172	276	1755738	52.922	99

page 3 of 3

Data File: /chem/SV09/CCHS_SS.1/170131.b/31jan005.d
 Date : 31-JAN-2017 12:21
 Client ID:
 Sample Info: ICAL-4 50 PPH S1108161 8270
 Column phase:

Instrument: CCHS_SS.i
 Operator: 923
 Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan006.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 12:40 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:24
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:24 n8cz

Sample Name: ICAL-5 20 PPM S110816H 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV (Min)
=====						
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.352	152	153678	40.000	0.01
28)*Naphthalene-d8	(2)	4.609	136	677240	40.000	0.01
46)*Acenaphthene-d10	(3)	6.390	164	476506	40.000	0.01
63)*Phenanthrene-d10	(4)	7.839	188	922645	40.000	0.01
75)*Chrysene-d12	(5)	10.540	240	1225720	40.000	0.02
82)*Perylene-d12	(6)	12.359	264	1282385	40.000	0.02
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.304	112	97859	20.920	0.00
SpikedAmount 20.000	Recovery =		0.000			
4)\$Phenol-d6	(1)	3.010	99	146305	20.495	0.01
SpikedAmount 20.000	Recovery =		0.000			
19)\$Nitrobenzene-d5	(2)	3.908	82	178399	21.182	0.01
SpikedAmount 20.000	Recovery =		0.000			
39)\$2-Fluorobiphenyl	(3)	5.721	172	324433	19.838	0.01
SpikedAmount 20.000	Recovery =		0.000			
59)\$2,4,6-Tribromophenol	(4)	7.176	330	44474	19.753	0.01
SpikedAmount 20.000	Recovery =		0.000			
71)\$p-Terphenyl-d14	(5)	9.423	244	517869	19.973	0.02
SpikedAmount 20.000	Recovery =		0.000			
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.651	74	68757	20.772	99
2) Pyridine	(1)	1.672	52	100652	24.591	97
5) Phenol	(1)	3.020	94	151200	20.604	99
6) Aniline	(1)	3.079	93	198769	21.201	99
7) bis(2-Chloroethyl) Ether	(1)	3.127	93	122088	21.866	100
8) 2-Chlorophenol	(1)	3.181	128	112076	20.691	99
9) 1,3-Dichlorobenzene	(1)	3.325	146	126065	20.681	99
11) 1,4-Dichlorobenzene	(1)	3.368	146	130380	20.349	97
12) Benzyl alcohol	(1)	3.486	79	132213	20.440	99
13) 1,2-Dichlorobenzene	(1)	3.550	146	122700	20.285	99
14) 2-Methylphenol	(1)	3.593	108	110783	20.598	97
15) bis(2-Chloroisopropyl) Ether	(1)	3.646	45	193440	26.251	99
16) 3/4-Methylphenol	(1)	3.737	107	263231	42.042	99
17) N-Nitroso-di-n-propylamine	(1)	3.780	70	113001	21.294	97
18) Hexachloroethane	(1)	3.844	117	53263	21.339	98
20) Nitrobenzene	(2)	3.929	77	167587	21.479	93

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan006.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 12:40 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:24
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:24 n8cz

Sample Name: ICAL-5 20 PPM S110816H 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.154	82	307425	21.314	98
22) 2-Nitrophenol	(2)	4.250	139	56483	19.047	100
23) 2,4-Dimethylphenol	(2)	4.277	107	140411	20.515	98
24) bis(2-Chloroethoxy) Methane	(2)	4.384	93	158969	21.572	99
25) Benzoic acid	(2)	4.352	105	54366	15.738	53
26) 2,4-Dichlorophenol	(2)	4.470	162	106851	19.690	98
27) 1,2,4-Trichlorobenzene	(2)	4.571	180	119131	19.581	99
29) Naphthalene	(2)	4.630	128	362314	20.359	98
30) 4-Chloroaniline	(2)	4.705	127	160528	19.857	100
31) 2,6-Dichlorophenol	(2)	4.710	162	110455	20.042	99
32) Hexachloro-1,3-Butadiene	(2)	4.817	225	77322	19.160	99
33) 4-Chloro-3-methylphenol	(2)	5.192	107	130368	20.578	99
34) 2-Methylnaphthalene	(2)	5.325	142	234519	19.165	98
35) 1-Methylnaphthalene	(2)	5.438	142	242247	19.840	100
36) Hexachlorocyclopentadiene	(3)	5.561	237	85850	18.431	95
37) 2,4,6-Trichlorophenol	(3)	5.636	196	86545	19.194	100
38) 2,4,5-Trichlorophenol	(3)	5.668	196	98714	19.590	99
40) 2-Chloronaphthalene	(3)	5.812	162	264271	19.707	99
41) 2-Nitroaniline	(3)	5.946	65	103407	21.339	98
42) Dimethyl Phthalate	(3)	6.171	163	344843	19.819	98
44) Acenaphthylene	(3)	6.235	152	434119	19.652	98
43) 2,6-Dinitrotoluene	(3)	6.235	165	73746	20.195	96
45) 3-Nitroaniline	(3)	6.363	138	77218	19.294	99
47) Acenaphthene	(3)	6.422	153	262501	19.566	99
48) 2,4-Dinitrophenol	(3)	6.465	184	25308	13.568	96
49) 4-Nitrophenol	(3)	6.518	65	93174	22.675	97
50) Dibenzofuran	(3)	6.577	168	401825	19.295	97
51) 2,4-Dinitrotoluene	(3)	6.614	165	102468	19.418	98
52) Diethyl Phthalate	(3)	6.871	149	362017	19.589	99
53) Fluorene	(3)	6.919	166	328997	18.810	98
54) 4-Chlorophenyl-phenyl Ether	(3)	6.925	204	172670	18.672	93
55) 4-Nitroaniline	(3)	6.968	138	82083	19.419	96
56) 4,6-Dinitro-2-methylphenol	(4)	7.010	198	41183	15.011	94
57) N-Nitrosodiphenylamine	(4)	7.042	169	251980	20.949	99
58) Azobenzene	(4)	7.074	77	412188	23.039	100
60) 4-Bromophenyl-phenyl Ether	(4)	7.401	248	103902	19.934	96
61) Hexachlorobenzene	(4)	7.540	142	46368	21.214	95

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan006.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 12:40 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:24
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:24 n8cz

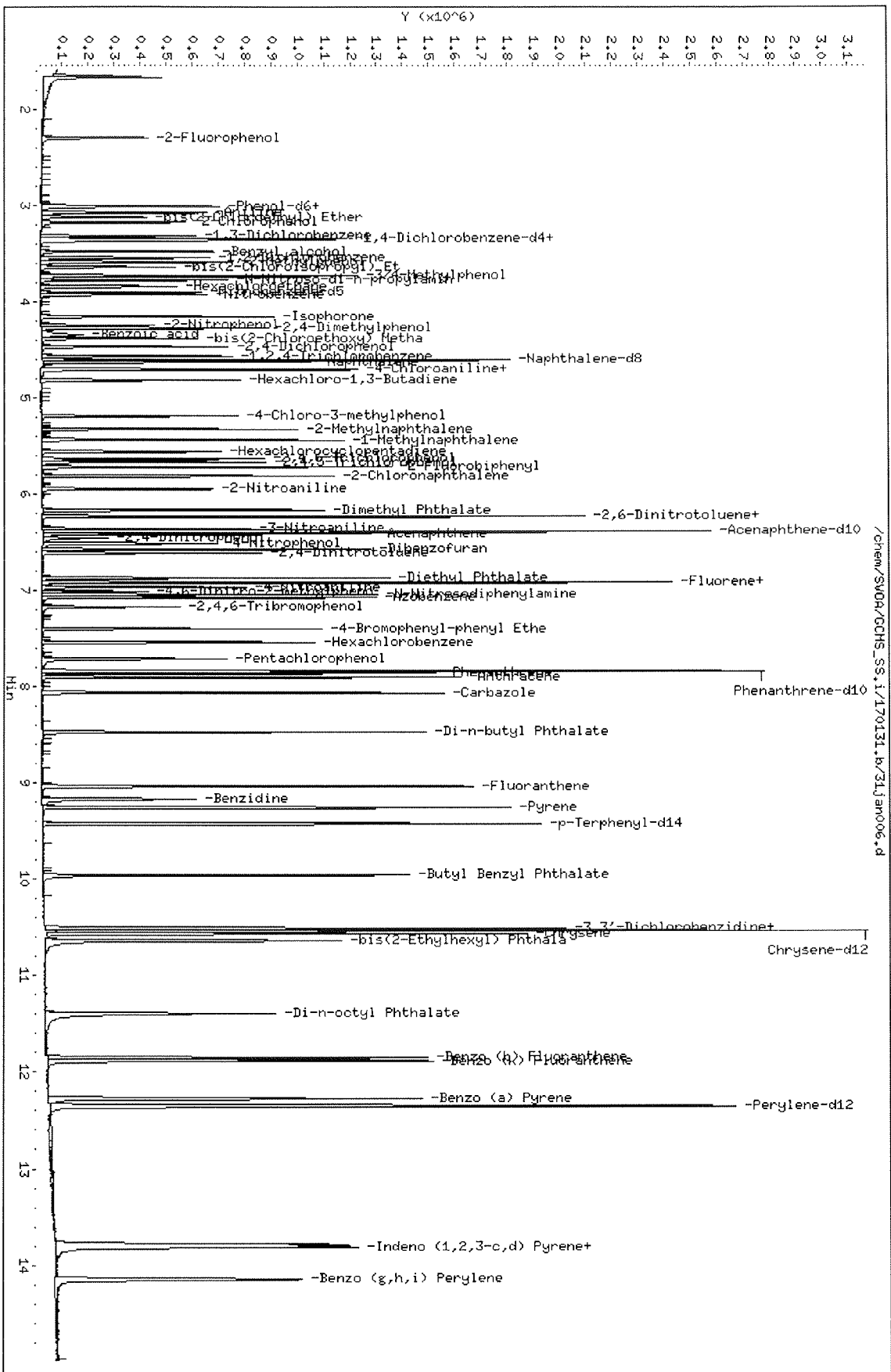
Sample Name: ICAL-5 20 PPM S110816H 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.711	266	70377	19.046	94
64) Phenanthrene	(4)	7.861	178	516620	20.728	100
65) Anthracene	(4)	7.904	178	534385	20.383	99
66) Carbazole	(4)	8.064	167	502459	20.701	99
67) Di-n-butyl Phthalate	(4)	8.470	149	651821	21.234	97
68) Fluoranthene	(4)	9.037	202	632708	19.721	98
69) Benzidine	(4)	9.171	184	226459	18.859	99
70) Pyrene	(5)	9.257	202	663666	19.944	100
72) Butyl Benzyl Phthalate	(5)	9.957	149	295542	20.720	99
73) 3,3'-Dichlorobenzidine	(5)	10.508	252	221035	16.753	100
74) Benzo (a) Anthracene	(5)	10.514	228	706675	19.263	99
76) Chrysene	(5)	10.567	228	676265	19.627	100
77) bis(2-Ethylhexyl) Phthalate	(5)	10.642	149	394519	20.368	99
78) Di-n-octyl Phthalate	(5)	11.396	149	637650	18.585	99
79) Benzo (b) Fluoranthene	(5)	11.856	252	758967	19.424	96
80) Benzo (k) Fluoranthene	(5)	11.888	252	764477	19.149	95
81) Benzo (a) Pyrene	(5)	12.279	252	716313	18.932	100
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.787	276	798913	19.376	99
84) Dibenz (a,h) Anthracene	(6)	13.814	278	651369	18.898	99
85) Benzo (g,h,i) Perylene	(6)	14.151	276	639030	19.592	99

page 3 of 3

Data File: /chem/SV09/GCHS_SS.1/170131.L/31Jan006.d
 Date : 31-JAN-2017 12:40
 Client ID:
 Sample Info: ICAL-5 20 PPH S110816H 8270
 Column phase:

Instrument: GCHS_SS.1
 Operator: 923
 Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan007.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 13:00 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:24
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:24 n8cz

Sample Name: ICAL-6 10 PPM S110816G 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
Internal Standards						
10) *1,4-Dichlorobenzene-d4	(1)	3.352	152	135630	40.000	0.01
28) *Naphthalene-d8	(2)	4.609	136	580789	40.000	0.01
46) *Acenaphthene-d10	(3)	6.390	164	412695	40.000	0.01
63) *Phenanthrene-d10	(4)	7.839	188	817541	40.000	0.01
75) *Chrysene-d12	(5)	10.535	240	1118214	40.000	0.02
82) *Perylene-d12	(6)	12.354	264	1167834	40.000	0.02
System Monitoring Compounds						
3) \$2-Fluorophenol	(1)	2.304	112	40337	9.619	0.00
SpikedAmount 10.000			Recovery =	0.000		
4) \$Phenol-d6	(1)	3.004	99	65641	10.150	0.01
SpikedAmount 10.000			Recovery =	0.000		
19) \$Nitrobenzene-d5	(2)	3.908	82	76612	10.296	0.01
SpikedAmount 10.000			Recovery =	0.000		
39) \$2-Fluorobiphenyl	(3)	5.721	172	136034	9.786	0.01
SpikedAmount 10.000			Recovery =	0.000		
59) \$2,4,6-Tribromophenol	(4)	7.176	330	16635	8.347	0.01
SpikedAmount 10.000			Recovery =	0.000		
71) \$p-Terphenyl-d14	(5)	9.423	244	223300	9.400	0.02
SpikedAmount 10.000			Recovery =	0.000		
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.651	74	29827	10.074	93
2) Pyridine	(1)	1.672	52	41668	10.647	98
5) Phenol	(1)	3.020	94	64551	9.817	96
6) Aniline	(1)	3.079	93	81329	9.681	98
7) bis(2-Chloroethyl) Ether	(1)	3.127	93	53099	10.432	99
8) 2-Chlorophenol	(1)	3.181	128	48809	10.117	97
9) 1,3-Dichlorobenzene	(1)	3.325	146	54865	10.138	98
11) 1,4-Dichlorobenzene	(1)	3.368	146	58591	10.262	97
12) Benzyl alcohol	(1)	3.480	79	55104	9.587	99
13) 1,2-Dichlorobenzene	(1)	3.550	146	55322	10.309	99
14) 2-Methylphenol	(1)	3.593	108	46237	9.746	99
15) bis(2-Chloroisopropyl) Ether	(1)	3.646	45	85760	11.691	99
16) 3/4-Methylphenol	(1)	3.737	107	110364	19.992	99
17) N-Nitroso-di-n-propylamine	(1)	3.780	70	47724	10.015	94
18) Hexachloroethane	(1)	3.844	117	22795	10.126	99
20) Nitrobenzene	(2)	3.930	77	72567	10.578	97

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan007.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 13:00 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:24
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:24 n8cz

Sample Name: ICAL-6 10 PPM S110816G 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.154	82	130707	10.302	98
22) 2-Nitrophenol	(2)	4.245	139	21671	8.611	100
23) 2,4-Dimethylphenol	(2)	4.277	107	58916	9.918	99
24) bis(2-Chloroethoxy) Methane	(2)	4.384	93	71014	10.806	97
25) Benzoic acid	(2)	4.336	105	15545	5.147	61
26) 2,4-Dichlorophenol	(2)	4.470	162	44539	9.572	98
27) 1,2,4-Trichlorobenzene	(2)	4.571	180	49611	9.613	95
29) Naphthalene	(2)	4.630	128	151482	9.921	97
30) 4-Chloroaniline	(2)	4.705	127	67066	9.646	99
31) 2,6-Dichlorophenol	(2)	4.711	162	46201	9.753	97
32) Hexachloro-1,3-Butadiene	(2)	4.817	225	34132	10.052	96
33) 4-Chloro-3-methylphenol	(2)	5.187	107	51313	9.351	99
34) 2-Methylnaphthalene	(2)	5.326	142	102253	9.915	98
35) 1-Methylnaphthalene	(2)	5.438	142	102805	9.899	99
36) Hexachlorocyclopentadiene	(3)	5.561	237	30570	7.913	98
37) 2,4,6-Trichlorophenol	(3)	5.636	196	34124	8.965	99
38) 2,4,5-Trichlorophenol	(3)	5.668	196	39828	9.327	96
40) 2-Chloronaphthalene	(3)	5.812	162	114517	9.984	100
41) 2-Nitroaniline	(3)	5.946	65	40240	9.356	98
42) Dimethyl Phthalate	(3)	6.171	163	148303	9.894	99
44) Acenaphthylene	(3)	6.235	152	186046	9.849	98
43) 2,6-Dinitrotoluene	(3)	6.235	165	30353	9.747	94
45) 3-Nitroaniline	(3)	6.363	138	29776	8.740	96
47) Acenaphthene	(3)	6.417	153	114691	10.044	97
48) 2,4-Dinitrophenol	(3)	6.460	184	6815	4.444	97
49) 4-Nitrophenol	(3)	6.513	65	35653	9.586	98
50) Dibenzofuran	(3)	6.577	168	171736	9.740	99
51) 2,4-Dinitrotoluene	(3)	6.615	165	40654	9.054	98
52) Diethyl Phthalate	(3)	6.871	149	156616	9.817	99
53) Fluorene	(3)	6.920	166	141512	9.596	98
54) 4-Chlorophenyl-phenyl Ether	(3)	6.925	204	76164	9.740	93
55) 4-Nitroaniline	(3)	6.968	138	32197	8.891	91
56) 4,6-Dinitro-2-methylphenol	(4)	7.010	198	13414	5.750	96
57) N-Nitrosodiphenylamine	(4)	7.043	169	106706	9.939	99
58) Azobenzene	(4)	7.075	77	179243	10.909	99
60) 4-Bromophenyl-phenyl Ether	(4)	7.401	248	45095	9.757	94
61) Hexachlorobenzene	(4)	7.540	142	21338	10.888	92

Quant Report

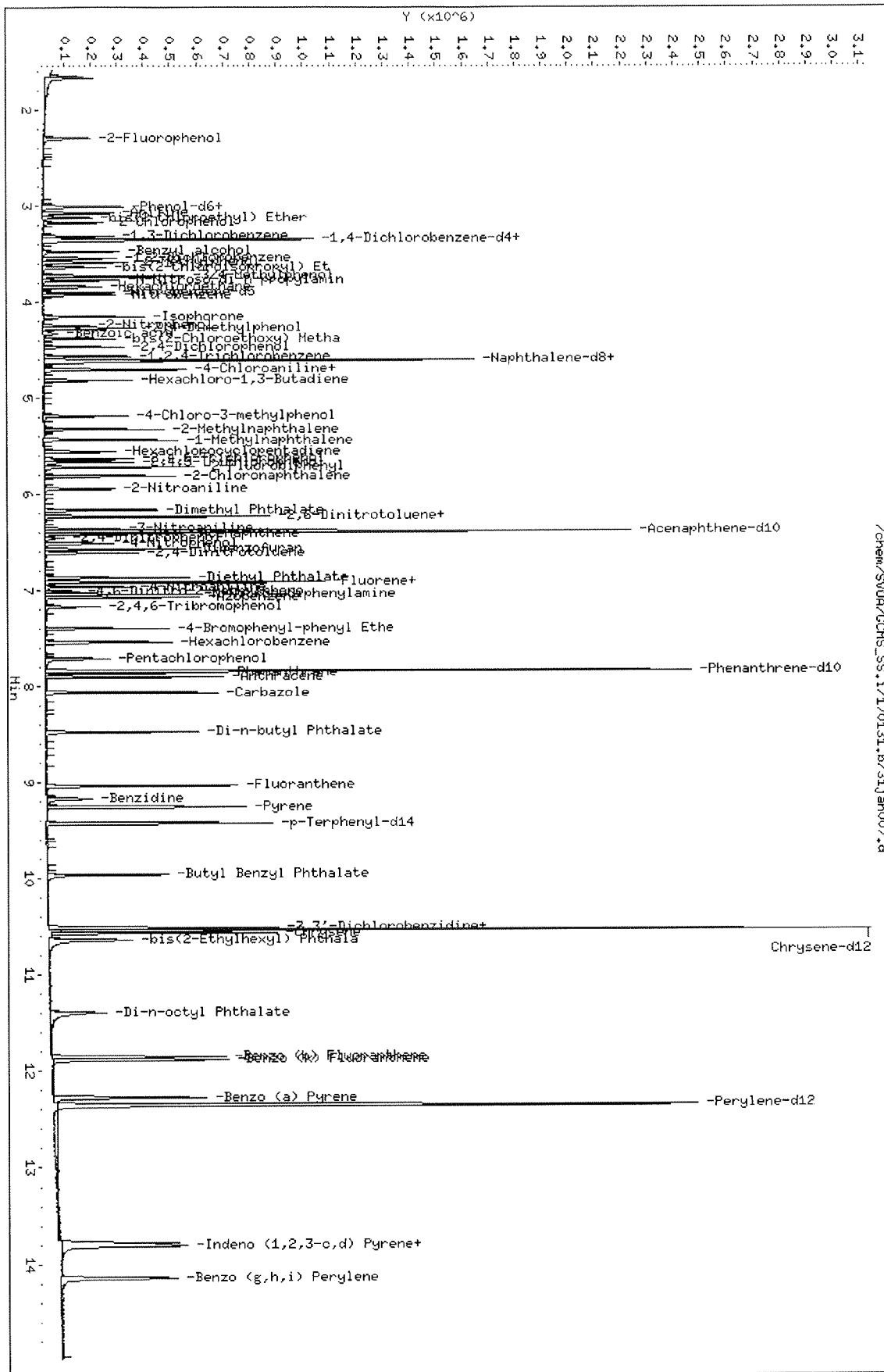
Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan007.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 13:00 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:24
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:24 n8cz

Sample Name: ICAL-6 10 PPM S110816G 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.711	266	22247	6.885	96
64) Phenanthrene	(4)	7.861	178	223760	10.039	100
65) Anthracene	(4)	7.904	178	232536	9.968	99
66) Carbazole	(4)	8.064	167	219620	10.092	98
67) Di-n-butyl Phthalate	(4)	8.476	149	269566	9.707	98
68) Fluoranthene	(4)	9.032	202	272777	9.657	97
69) Benzidine	(4)	9.171	184	72182	7.505	90
70) Pyrene	(5)	9.257	202	289064	9.608	100
72) Butyl Benzyl Phthalate	(5)	9.958	149	109110	8.296	98
73) 3,3'-Dichlorobenzidine	(5)	10.503	252	78215	6.794	97
74) Benzo (a) Anthracene	(5)	10.514	228	309420	9.374	100
76) Chrysene	(5)	10.562	228	303156	9.729	99
77) bis(2-Ethylhexyl) Phthalate	(5)	10.637	149	138047	7.820	95
78) Di-n-octyl Phthalate	(5)	11.396	149	204984	6.628	95
79) Benzo (b) Fluoranthene	(5)	11.851	252	315415	8.921	98
80) Benzo (k) Fluoranthene	(5)	11.883	252	348080	9.625	99
81) Benzo (a) Pyrene	(5)	12.273	252	302462	8.860	99
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.782	276	336996	9.120	99
84) Dibenz (a,h) Anthracene	(6)	13.809	278	279894	9.076	97
85) Benzo (g,h,i) Perylene	(6)	14.146	276	280525	9.514	98



Data File: /chem/SV04/GCMS_SS.i/170131.b/31jan007.d
 Date : 31-JAN-2017 13:00
 Client ID:
 Sample Info: ICAL-6-10 PPH S110916G 8270
 Column phase:

/chem/SV04/GCMS_SS.i/170131.b/31jan007.d
 Instrument: GCMS_SS.i
 Operator: 923
 Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan008.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 13:19 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:41
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:42 n8cz

Sample Name: ICAL-7 5 PPM S110816F 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV (Min)
=====						
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.357	152	161406	40.000	0.00
28)*Naphthalene-d8	(2)	4.609	136	676084	40.000	0.01
46)*Acenaphthene-d10	(3)	6.390	164	480468	40.000	0.01
63)*Phenanthrene-d10	(4)	7.839	188	925755	40.000	0.01
75)*Chrysene-d12	(5)	10.535	240	1232676	40.000	0.02
82)*Perylene-d12	(6)	12.359	264	1257747	40.000	0.02
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.304	112	23701	4.644	0.00
SpikedAmount 5.000			Recovery =	0.000		
4)\$Phenol-d6	(1)	3.010	99	36577	4.676	0.01
SpikedAmount 5.000			Recovery =	0.000		
19)\$Nitrobenzene-d5	(2)	3.908	82	47477	5.264	0.01
SpikedAmount 5.000			Recovery =	0.000		
39)\$2-Fluorobiphenyl	(3)	5.721	172	84844	5.280	0.01
SpikedAmount 5.000			Recovery =	0.000		
59)\$2,4,6-Tribromophenol	(4)	7.176	330	9670M	4.285	0.01
SpikedAmount 5.000			Recovery =	0.000		
71)\$p-Terphenyl-d14	(5)	9.423	244	133784	5.034	0.02
SpikedAmount 5.000			Recovery =	0.000		
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.656	74	18743	5.212	97
2) Pyridine	(1)	1.678	52	26980	5.267	98
5) Phenol	(1)	3.020	94	39250	4.926	97
6) Aniline	(1)	3.079	93	48902	4.834	99
7) bis(2-Chloroethyl) Ether	(1)	3.127	93	33079	5.242	100
8) 2-Chlorophenol	(1)	3.186	128	29202	5.020	96
9) 1,3-Dichlorobenzene	(1)	3.325	146	32356	5.013	96
11) 1,4-Dichlorobenzene	(1)	3.368	146	37433	5.475	94
12) Benzyl alcohol	(1)	3.480	79	31433	4.592	96
13) 1,2-Dichlorobenzene	(1)	3.550	146	34603	5.361	97
14) 2-Methylphenol	(1)	3.593	108	29245	5.081	98
15) bis(2-Chloroisopropyl) Ether	(1)	3.646	45	52400	5.391	97
16) 3/4-Methylphenol	(1)	3.737	107	64390	9.742	97
17) N-Nitroso-di-n-propylamine	(1)	3.780	70	29386	5.088	97
18) Hexachloroethane	(1)	3.844	117	13824	5.079	98
20) Nitrobenzene	(2)	3.929	77	43544	5.301	98

M = Compound was manually integrated.
 * = Compound is an internal standard.
 \$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan008.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 13:19 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:41
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:42 n8cz

Sample Name: ICAL-7 5 PPM S110816F 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.154	82	80422	5.240	98
22) 2-Nitrophenol	(2)	4.245	139	11502	4.000	97
23) 2,4-Dimethylphenol	(2)	4.277	107	33252	4.762	94
24) bis(2-Chloroethoxy) Methane	(2)	4.384	93	42927	5.351	98
25) Benzoic acid	(2)	4.325	105	6653	1.660	57
26) 2,4-Dichlorophenol	(2)	4.475	162	26007	4.799	98
27) 1,2,4-Trichlorobenzene	(2)	4.571	180	31310	5.245	97
29) Naphthalene	(2)	4.630	128	99902	5.518	98
30) 4-Chloroaniline	(2)	4.705	127	39334	4.879	98
31) 2,6-Dichlorophenol	(2)	4.710	162	26761	4.861	96
32) Hexachloro-1,3-Butadiene	(2)	4.817	225	19928	5.202	99
33) 4-Chloro-3-methylphenol	(2)	5.186	107	32710	4.987	99
34) 2-Methylnaphthalene	(2)	5.325	142	61664	5.170	98
35) 1-Methylnaphthalene	(2)	5.438	142	61457	5.135	98
36) Hexachlorocyclopentadiene	(3)	5.561	237	17048	3.791	90
37) 2,4,6-Trichlorophenol	(3)	5.636	196	20014	4.573	96
38) 2,4,5-Trichlorophenol	(3)	5.668	196	21924	4.459	95
40) 2-Chloronaphthalene	(3)	5.812	162	72012	5.390	97
41) 2-Nitroaniline	(3)	5.946	65	22100	4.303	96
42) Dimethyl Phthalate	(3)	6.165	163	89119	5.115	99
44) Acenaphthylene	(3)	6.235	152	114574	5.251	99
43) 2,6-Dinitrotoluene	(3)	6.235	165	16542	4.600	85
45) 3-Nitroaniline	(3)	6.363	138	16818	4.360	96
47) Acenaphthene	(3)	6.417	153	64891	5.016	97
48) 2,4-Dinitrophenol	(3)	6.459	184	2972	1.664	75
49) 4-Nitrophenol	(3)	6.513	65	19261	4.289	96
50) Dibenzofuran	(3)	6.577	168	107084	5.319	100
51) 2,4-Dinitrotoluene	(3)	6.614	165	25022	4.816	59
52) Diethyl Phthalate	(3)	6.871	149	92320	5.004	98
53) Fluorene	(3)	6.919	166	84625	5.084	98
54) 4-Chlorophenyl-phenyl Ether	(3)	6.925	204	44537	5.036	92
55) 4-Nitroaniline	(3)	6.968	138	18531	4.444	96
56) 4,6-Dinitro-2-methylphenol	(4)	7.010	198	5417	2.051	79
57) N-Nitrosodiphenylamine	(4)	7.042	169	64408	5.210	99
58) Azobenzene	(4)	7.074	77	110836	5.629	99
60) 4-Bromophenyl-phenyl Ether	(4)	7.401	248	28610	5.389	99
61) Hexachlorobenzene	(4)	7.540	142	13595	5.947	89

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan008.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 13:19 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:41
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:42 n8cz

Sample Name: ICAL-7 5 PPM S110816F 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.716	266	11987	3.276	98
64) Phenanthrene	(4)	7.861	178	133137	5.213	97
65) Anthracene	(4)	7.904	178	140222	5.235	99
66) Carbazole	(4)	8.064	167	132928	5.288	98
67) Di-n-butyl Phthalate	(4)	8.476	149	148329	4.631	95
68) Fluoranthene	(4)	9.032	202	166506	5.206	98
69) Benzidine	(4)	9.171	184	34197	3.140	91
70) Pyrene	(5)	9.251	202	169515	5.099	99
72) Butyl Benzyl Phthalate	(5)	9.957	149	50750	3.504	97
73) 3,3'-Dichlorobenzidine	(5)	10.503	252	34571	2.724	98
74) Benzo (a) Anthracene	(5)	10.514	228	178570	4.950	98
76) Chrysene	(5)	10.562	228	174401	5.083	98
77) bis(2-Ethylhexyl) Phthalate	(5)	10.637	149	60744	3.149	95
78) Di-n-octyl Phthalate	(5)	11.391	149	79449M	2.401	59
79) Benzo (b) Fluoranthene	(5)	11.851	252	171242	4.435	100
80) Benzo (k) Fluoranthene	(5)	11.883	252	194357	4.897	99
81) Benzo (a) Pyrene	(5)	12.273	252	162009	4.381	98
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.782	276	174206	4.473	89
84) Dibenz (a,h) Anthracene	(6)	13.808	278	133223	4.131	98
85) Benzo (g,h,i) Perylene	(6)	14.140	276	142416	4.569	98

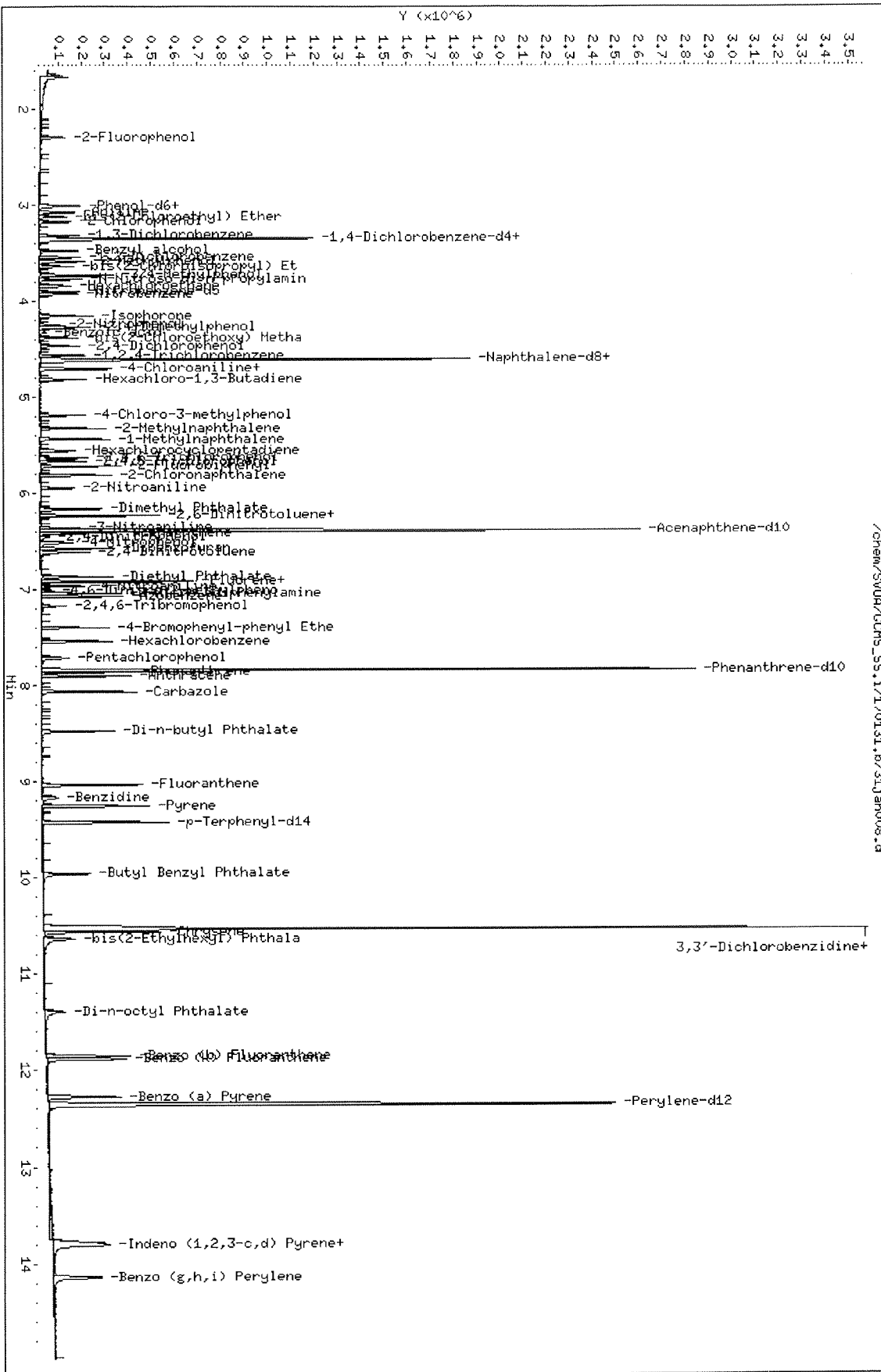
M = Compound was manually integrated.

Data File: /chem/SV04/GCHS_SS.i/170131.b/31jan08.d
Date : 31-Jan-2017 13:19
Client ID:
Sample Info: ICAL-7 5 PPM S110816F 8270

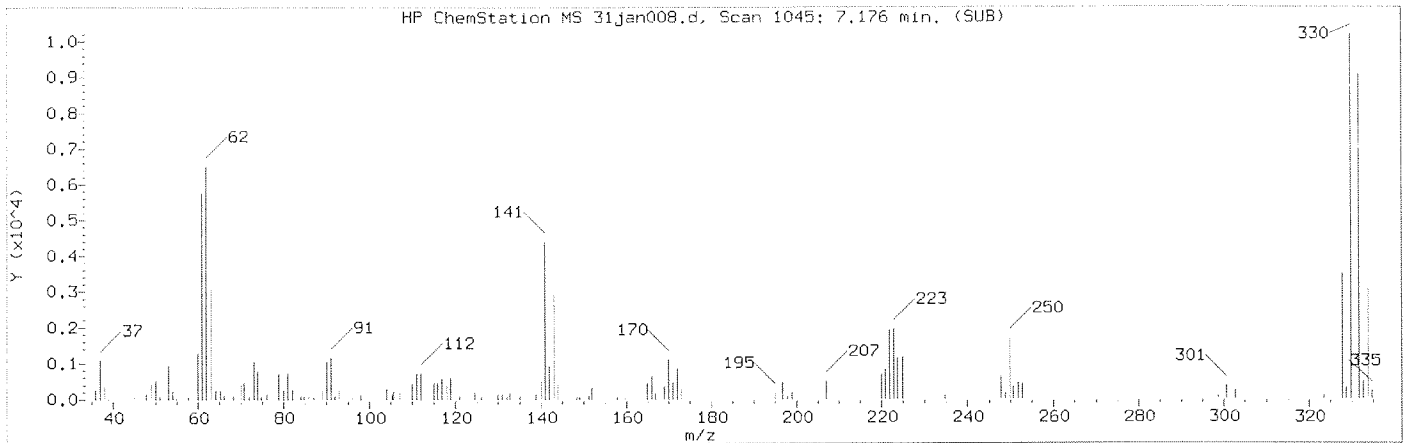
Column phase:

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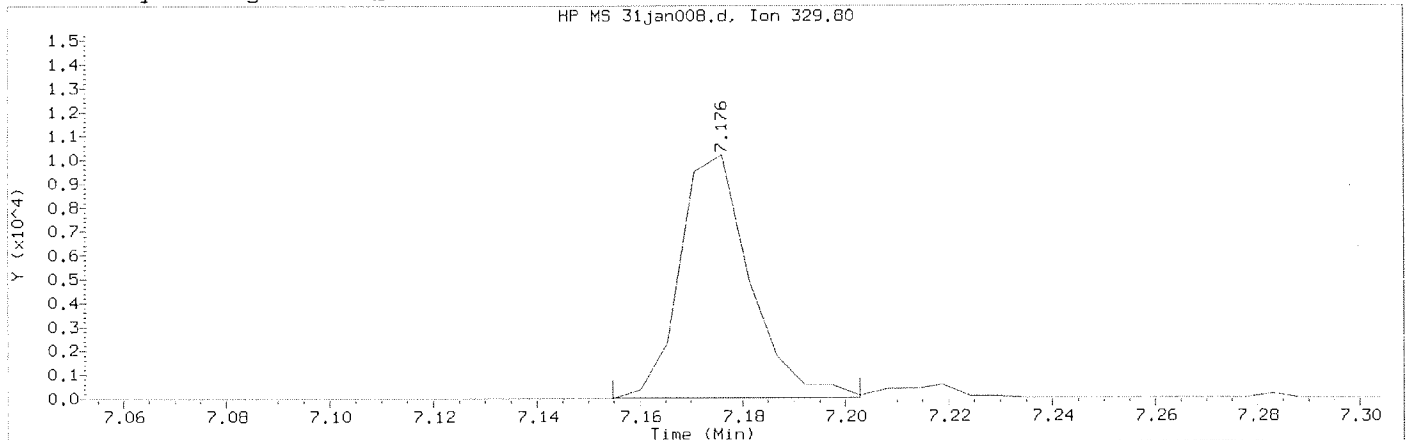
Instrument: GCHS_SS.i
Operator: 923
Column diameter: 0.00



Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan008.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 13:19 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:41
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:42 n8cz

Sample Name: ICAL-7 5 PPM S110816F 8270

Compound Number : 59
 Compound Name : 2,4,6-Tribromophenol
 Scan Number : 1045
 Retention Time (minutes): 7.176
 Quant Ion : 330.00
 Area (flag) : 9670M
 On-Column Amount (ug/L) : 4.2849
 Integration start scan : 1040 Integration stop scan: 1049
 Y at integration start : 20 Y at integration end: 20

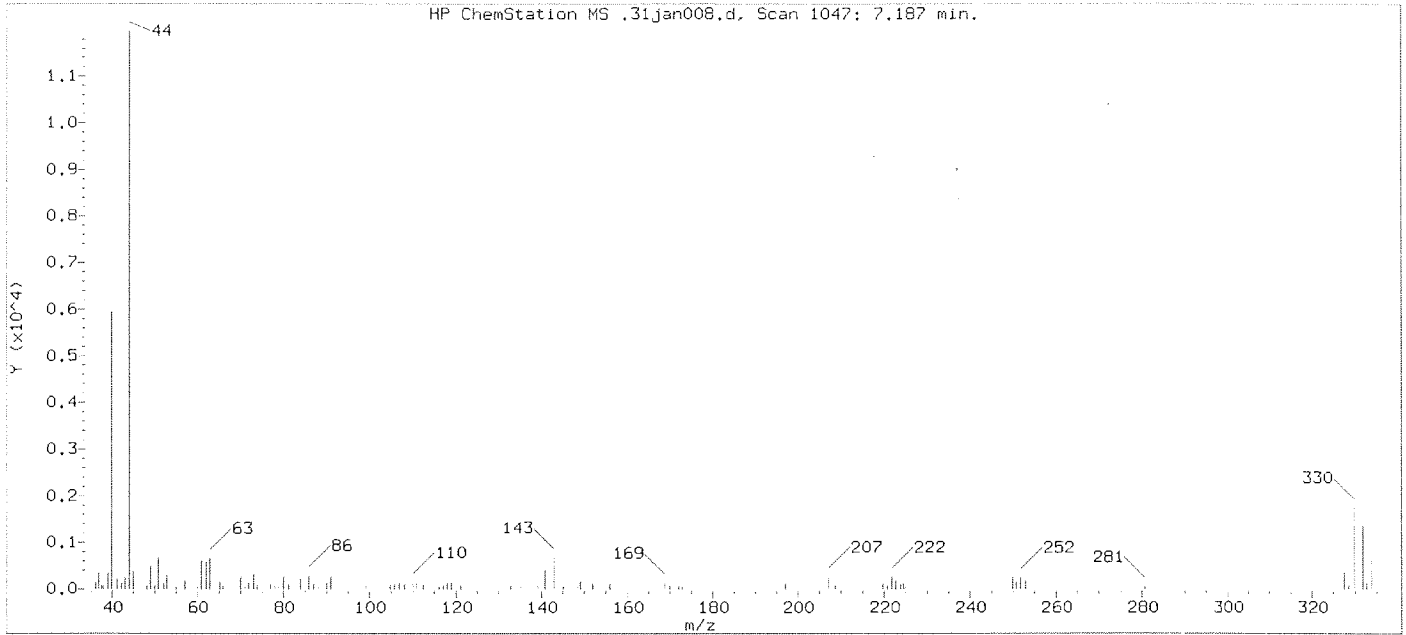
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Qi Mo
 on 01/31/2017 at 16:38.
 Target 3.5 esignature user ID: n8cz

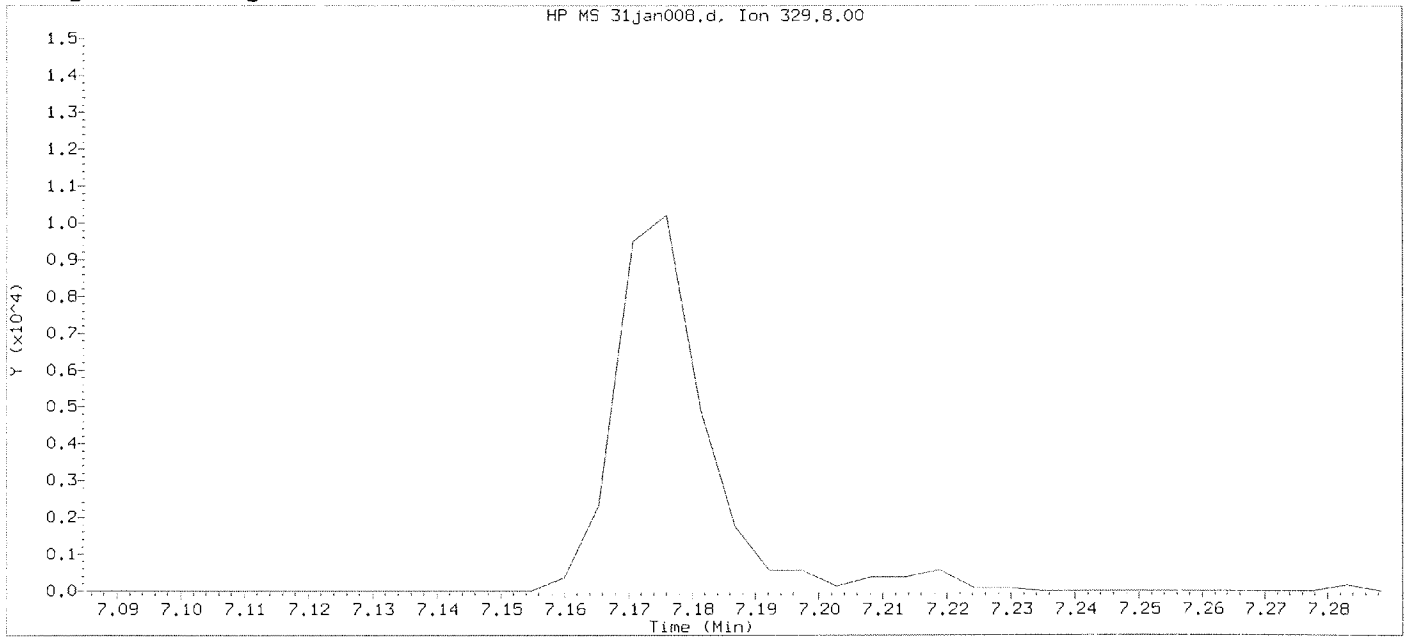
GC/MS audit/management approval: _____

zh 2/3/17

Sample Spectrum



Original Integration of Quant Ion



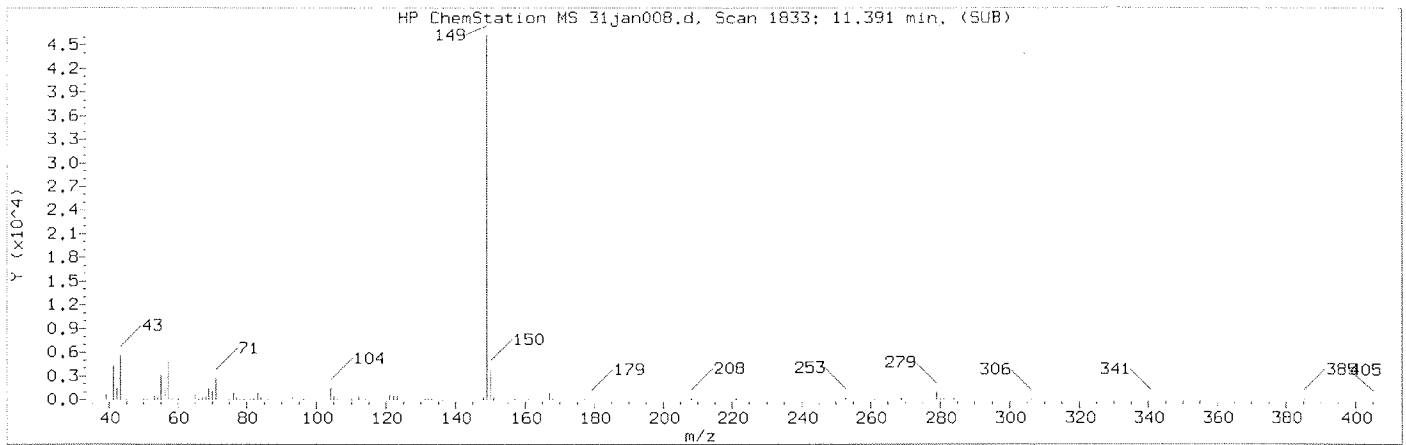
Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan008.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 13:19 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:41
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:41 n8cz

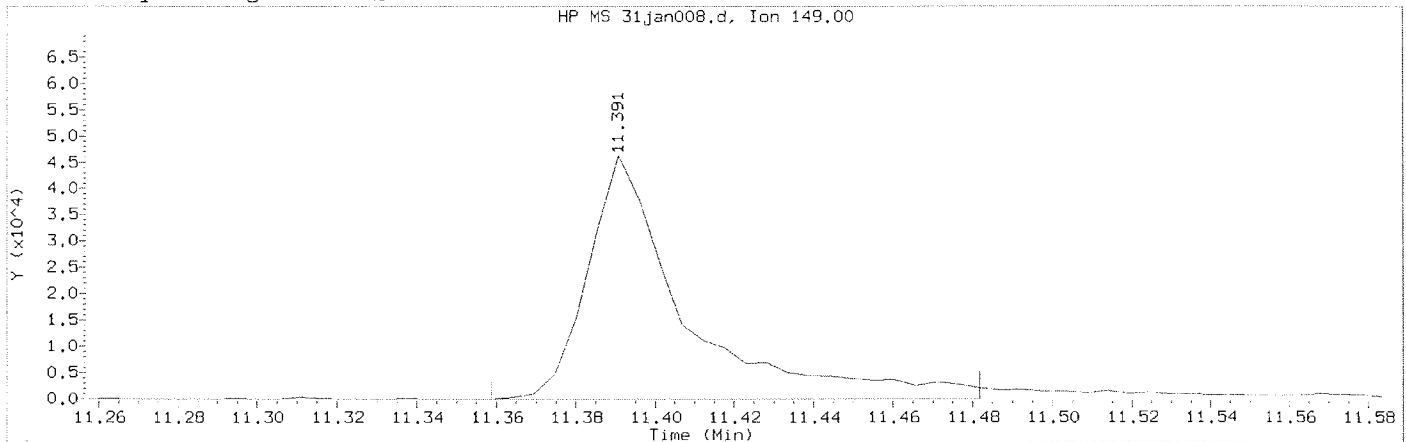
Sample Name: ICAL-7 5 PPM S110816F 8270

Compound Number : 59
 Compound Name : 2,4,6-Tribromophenol
 Expected RT (minutes) : 7.187
 Quant Ion : 330.00

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan008.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 13:19 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:41
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:42 n8cz

Sample Name: ICAL-7 5 PPM S110816F 8270

Compound Number : 78
 Compound Name : Di-n-octyl Phthalate
 Scan Number : 1833
 Retention Time (minutes): 11.391
 Quant Ion : 149.00
 Area (flag) : 79449M
 On-Column Amount (ug/L) : 2.4012
 Integration start scan : 1826 Integration stop scan: 1849
 Y at integration start : 0 Y at integration end: 0

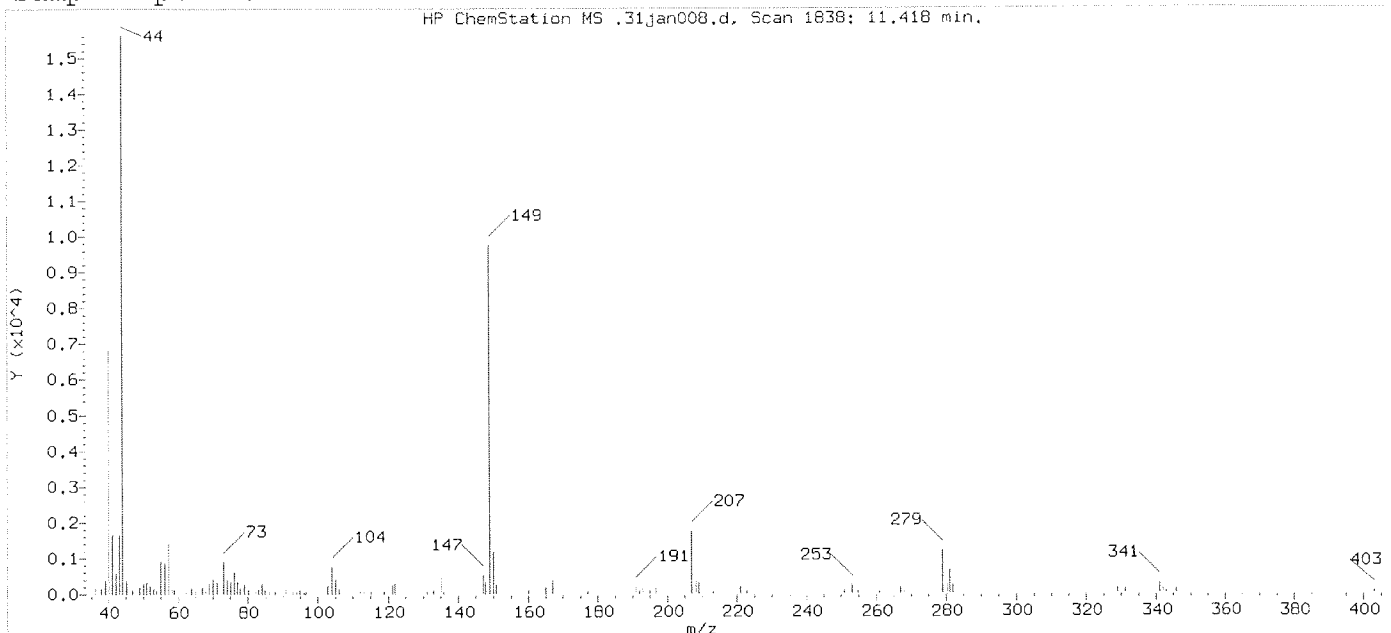
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Qi Mo
 on 01/31/2017 at 16:38.
 Target 3.5 esignature user ID: n8cz

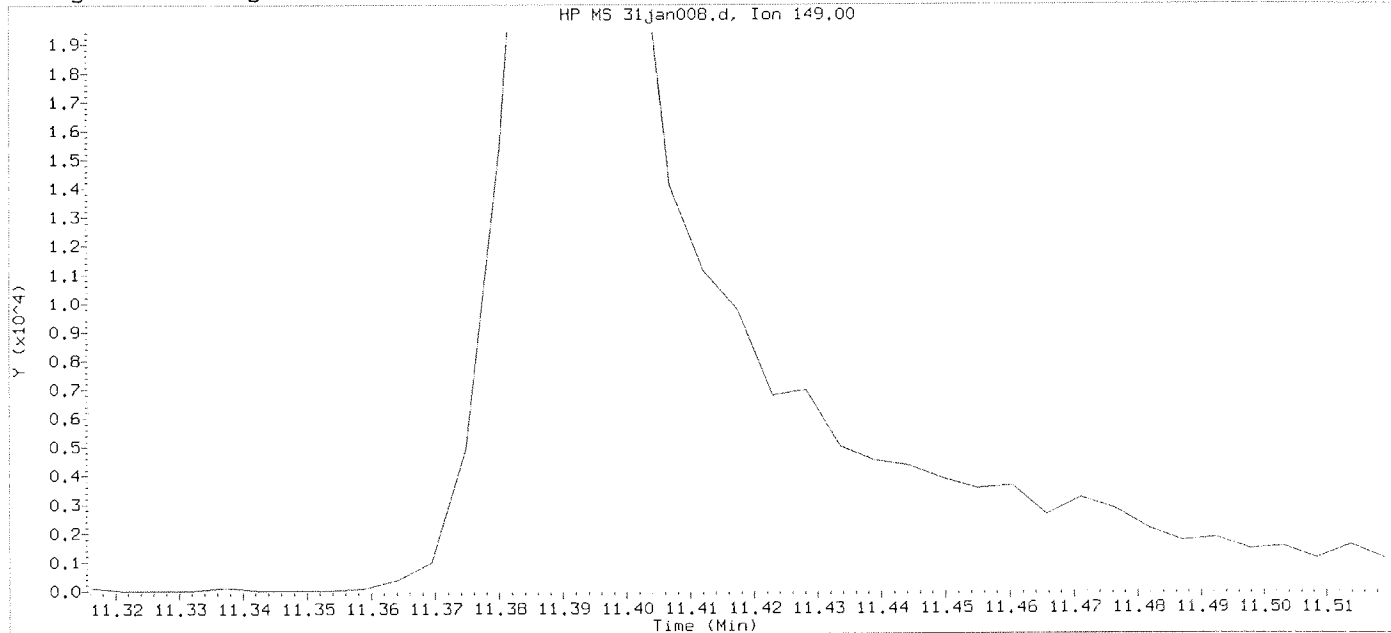
GC/MS audit/management approval: _____

Qi Mo 2/1/17

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan008.d
 Injection date and time: 31-JAN-2017 13:19

Instrument ID: GCMS_SS.i
 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 13:41
 Date, time and analyst ID of latest file update: 31-Jan-2017 13:41 n8cz

Sample Name: ICAL-7 5 PPM S110816F 8270

Compound Number : 78
 Compound Name : Di-n-octyl Phthalate
 Expected RT (minutes) : 11.418
 Quant Ion : 149.00

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan009.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 13:44 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 14:08
 Date, time and analyst ID of latest file update: 31-Jan-2017 14:08 n8cz

Sample Name: ICAL-8 2.5 PPM S110816E 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV (Min)
=====						
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.357	152	154091	40.000	0.00
28)*Naphthalene-d8	(2)	4.614	136	666012	40.000	0.01
46)*Acenaphthene-d10	(3)	6.390	164	456089	40.000	0.01
63)*Phenanthrene-d10	(4)	7.839	188	900582	40.000	0.01
75)*Chrysene-d12	(5)	10.540	240	1210828	40.000	0.02
82)*Perylene-d12	(6)	12.364	264	1233663	40.000	0.01
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.303	112	11611	2.383	0.00
SpikedAmount 2.500			Recovery =	0.000		
4)\$Phenol-d6	(1)	3.009	99	16546	2.216	0.01
SpikedAmount 2.500			Recovery =	0.000		
19)\$Nitrobenzene-d5	(2)	3.913	82	21029	2.367	0.01
SpikedAmount 2.500			Recovery =	0.000		
39)\$2-Fluorobiphenyl	(3)	5.721	172	39567	2.594	0.01
SpikedAmount 2.500			Recovery =	0.000		
71)\$p-Terphenyl-d14	(5)	9.428	244	56926	2.181	0.01
SpikedAmount 2.500			Recovery =	0.000		
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.656	74	8918	2.598	14
2) Pyridine	(1)	1.678	52	13532	2.767	91
5) Phenol	(1)	3.020	94	17942	2.359	98
6) Aniline	(1)	3.084	93	22297	2.309	98
7) bis(2-Chloroethyl) Ether	(1)	3.127	93	15171	2.519	99
8) 2-Chlorophenol	(1)	3.186	128	11934	2.149	98
9) 1,3-Dichlorobenzene	(1)	3.325	146	15712	2.550	97
11) 1,4-Dichlorobenzene	(1)	3.373	146	15945	2.443	85
12) Benzyl alcohol	(1)	3.485	79	13733	2.101	95
13) 1,2-Dichlorobenzene	(1)	3.555	146	17190	2.790	89
14) 2-Methylphenol	(1)	3.598	108	12004	2.185	94
15) bis(2-Chloroisopropyl) Ether	(1)	3.646	45	24858	2.679	94
16) 3/4-Methylphenol	(1)	3.737	107	28318	4.475	98
17) N-Nitroso-di-n-propylamine	(1)	3.780	70	12312	2.233	89
18) Hexachloroethane	(1)	3.849	117	6969	2.682	94
20) Nitrobenzene	(2)	3.929	77	18846	2.329	96
21) Isophorone	(2)	4.159	82	34166	2.260	98
22) 2-Nitrophenol	(2)	4.250	139	4785	1.689	64

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan009.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 13:44 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 14:08
 Date, time and analyst ID of latest file update: 31-Jan-2017 14:08 n8cz

Sample Name: ICAL-8 2.5 PPM S110816E 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
23) 2,4-Dimethylphenol	(2)	4.277	107	14639	2.128	97
24) bis(2-Chloroethoxy) Methane	(2)	4.389	93	19465	2.463	96
25) Benzoic acid	(2)	4.320	105	2243	10.334	1
26) 2,4-Dichlorophenol	(2)	4.475	162	10856	2.034	99
27) 1,2,4-Trichlorobenzene	(2)	4.571	180	14290	2.430	98
29) Naphthalene	(2)	4.630	128	44409	2.490	98
30) 4-Chloroaniline	(2)	4.705	127	17538	2.209	98
31) 2,6-Dichlorophenol	(2)	4.716	162	11169	2.060	98
32) Hexachloro-1,3-Butadiene	(2)	4.823	225	8793	2.330	97
33) 4-Chloro-3-methylphenol	(2)	5.192	107	12048	1.865	92
34) 2-Methylnaphthalene	(2)	5.331	142	27611	2.350	99
35) 1-Methylnaphthalene	(2)	5.443	142	27932	2.369	98
36) Hexachlorocyclopentadiene	(3)	5.566	237	7156	1.676	87
37) 2,4,6-Trichlorophenol	(3)	5.641	196	7556	1.819	96
38) 2,4,5-Trichlorophenol	(3)	5.673	196	8801	1.886	95
40) 2-Chloronaphthalene	(3)	5.817	162	31289	2.467	97
41) 2-Nitroaniline	(3)	5.951	65	7557	1.550	94
42) Dimethyl Phthalate	(3)	6.170	163	38960	2.356	87
44) Acenaphthylene	(3)	6.235	152	49197	2.375	98
43) 2,6-Dinitrotoluene	(3)	6.235	165	6877	2.015	80
45) 3-Nitroaniline	(3)	6.363	138	6120	1.672	41
47) Acenaphthene	(3)	6.422	153	32109	2.615	95
48) 2,4-Dinitrophenol	(3)	0.000		0	N.D.	
49) 4-Nitrophenol	(3)	6.518	65	7100	1.666	86
50) Dibenzofuran	(3)	6.577	168	44559	2.332	93
51) 2,4-Dinitrotoluene	(3)	6.620	165	7592	1.539	83
52) Diethyl Phthalate	(3)	6.871	149	40193	2.295	98
53) Fluorene	(3)	6.919	166	35635	2.255	94
54) 4-Chlorophenyl-phenyl Ether	(3)	6.925	204	20859	2.485	94
55) 4-Nitroaniline	(3)	6.973	138	6469	1.634	85
56) 4,6-Dinitro-2-methylphenol	(4)	0.000		0	N.D.	
57) N-Nitrosodiphenylamine	(4)	7.048	169	26666	2.217	97
58) Azobenzene	(4)	7.074	77	49763	2.598	97
60) 4-Bromophenyl-phenyl Ether	(4)	7.406	248	11875	2.299	97
61) Hexachlorobenzene	(4)	7.545	142	6051	2.721	91
62) Pentachlorophenol	(4)	7.716	266	3986	6.422	86
64) Phenanthrene	(4)	7.861	178	60905	2.451	96

Quant Report

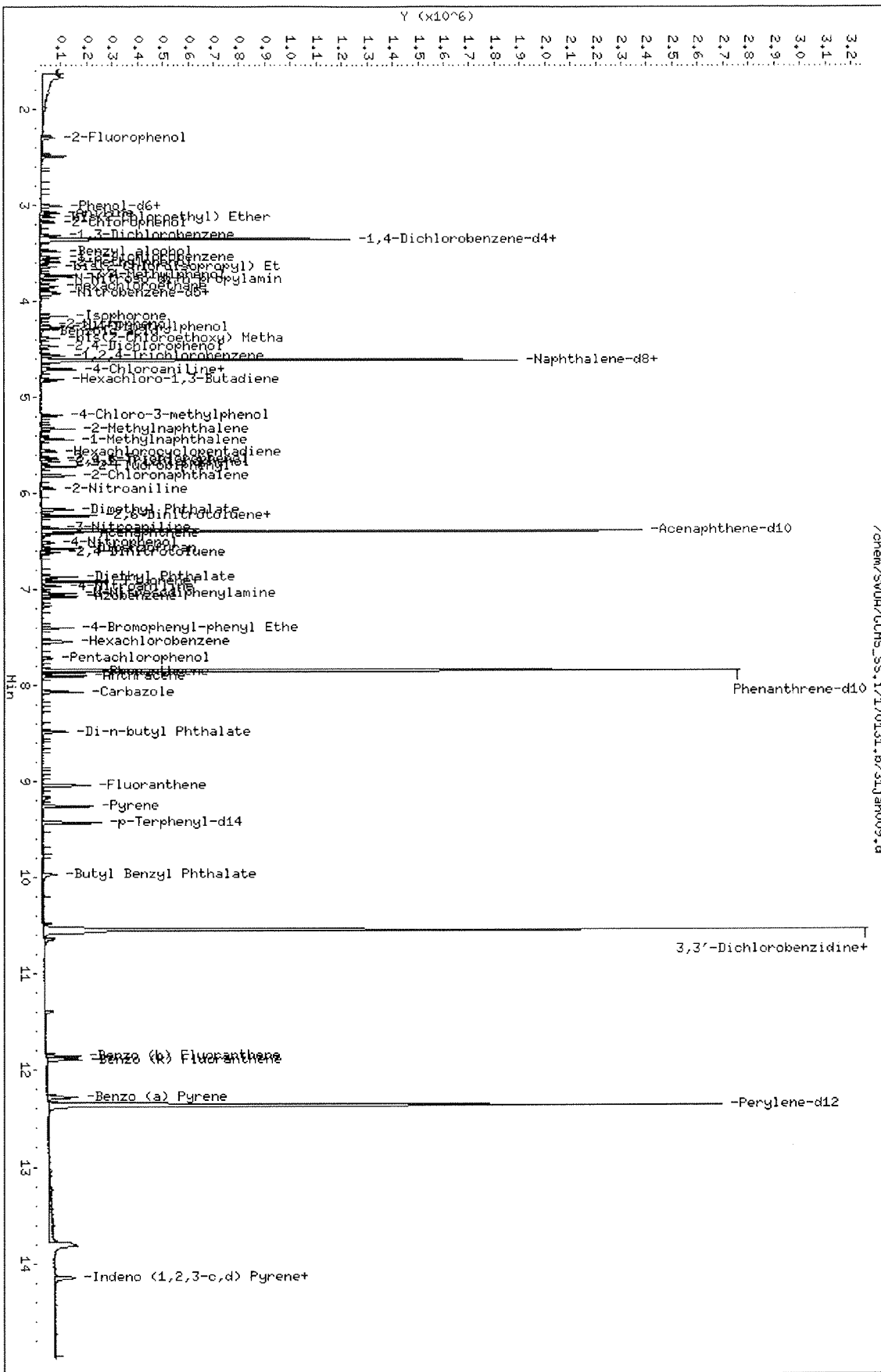
Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan009.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 13:44 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 14:08
 Date, time and analyst ID of latest file update: 31-Jan-2017 14:08 n8cz

Sample Name: ICAL-8 2.5 PPM S110816E 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
65) Anthracene	(4)	7.903	178	60929	2.338	95
66) Carbazole	(4)	8.069	167	56610	2.315	98
67) Di-n-butyl Phthalate	(4)	8.481	149	54944	1.764	95
68) Fluoranthene	(4)	9.043	202	67605	2.173	99
69) Benzidine	(4)	0.000		0	N.D.	
70) Pyrene	(5)	9.257	202	73858	2.262	98
72) Butyl Benzyl Phthalate	(5)	9.963	149	15411	2.792	93
73) 3,3'-Dichlorobenzidine	(5)	10.514	252	9278	7.394	91
74) Benzo (a) Anthracene	(5)	10.524	228	78326	2.211	96
76) Chrysene	(5)	10.572	228	77915	2.312	99
77) bis(2-Ethylhexyl) Phthalate	(5)	0.000		0	N.D.	
78) Di-n-octyl Phthalate	(5)	0.000		0	N.D.	
79) Benzo (b) Fluoranthene	(5)	11.856	252	67984	1.792	95
80) Benzo (k) Fluoranthene	(5)	11.888	252	82662	2.120	96
81) Benzo (a) Pyrene	(5)	12.279	252	62028	1.708	96
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.787	276	65265	1.708	88
84) Dibenz (a,h) Anthracene	(6)	13.814	278	51869	1.640	97
85) Benzo (g,h,i) Perylene	(6)	14.151	276	57469	1.880	99



Data File: /chem/SV04/COHS_SS.1/170131.b/31jan009.d
Date : 31-JAN-2017 13:44
Client ID:
Sample Info: ICAL-8 2.5 PPH S110816E 8270
Column Phase:

/chem/SV04/COHS_SS.1/170131.b/31jan009.d
Instrument: COHS_SS.1
Operator: 923
Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan011.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 15:06 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 16:25
 Date, time and analyst ID of latest file update: 31-Jan-2017 16:28 n8cz

Sample Name: ICV 80 PPM S110816N 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
=====						
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.357	152	192138	40.000	0.00
28)*Naphthalene-d8	(2)	4.620	136	810698	40.000	0.00
46)*Acenaphthene-d10	(3)	6.395	164	581030	40.000	0.00
63)*Phenanthrene-d10	(4)	7.850	188	1146737	40.000	0.00
75)*Chrysene-d12	(5)	10.556	240	1520907	40.000	0.00
82)*Perylene-d12	(6)	12.375	264	1569285	40.000	0.00
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.304	112	519919	85.585	0.00
SpikedAmount 80.000	Recovery =		0.000			
4)\$Phenol-d6	(1)	3.015	99	784790	84.281	0.00
SpikedAmount 80.000	Recovery =		0.000			
19)\$Nitrobenzene-d5	(2)	3.919	82	915897	84.690	0.00
SpikedAmount 80.000	Recovery =		0.000			
39)\$2-Fluorobiphenyl	(3)	5.732	172	1606849	82.685	0.00
SpikedAmount 80.000	Recovery =		0.000			
59)\$2,4,6-Tribromophenol	(4)	7.187	330	240166	85.508	0.00
SpikedAmount 80.000	Recovery =		0.000			
71)\$p-Terphenyl-d14	(5)	9.439	244	2720026	82.954	0.00
SpikedAmount 80.000	Recovery =		0.000			
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.656	74	352259	82.283	100
2) Pyridine	(1)	1.672	52	513022	84.128	100
5) Phenol	(1)	3.026	94	791232	83.414	100
6) Aniline	(1)	3.090	93	981787	81.525	100
7) bis(2-Chloroethyl) Ether	(1)	3.133	93	600737	79.979	100
8) 2-Chlorophenol	(1)	3.186	128	567721	81.992	100
9) 1,3-Dichlorobenzene	(1)	3.330	146	625570	81.422	100
11) 1,4-Dichlorobenzene	(1)	3.373	146	656237	80.633	100
12) Benzyl alcohol	(1)	3.491	79	671379	82.385	100
13) 1,2-Dichlorobenzene	(1)	3.555	146	617161	80.323	100
14) 2-Methylphenol	(1)	3.603	108	563430	82.236	100
15) bis(2-Chloroisopropyl) Ether	(1)	3.651	45	936627	80.947	100
16) 3/4-Methylphenol	(1)	3.748	107	1318075	167.055	100
17) N-Nitroso-di-n-propylamine	(1)	3.796	70	556873	80.991	100
18) Hexachloroethane	(1)	3.849	117	262049	80.879	100
20) Nitrobenzene	(2)	3.935	77	818206	83.073	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan011.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 15:06 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 16:25
 Date, time and analyst ID of latest file update: 31-Jan-2017 16:28 n8cz

Sample Name: ICV 80 PPM S110816N 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.165	82	1532946	83.299	100
22) 2-Nitrophenol	(2)	4.256	139	309961	89.887	100
23) 2,4-Dimethylphenol	(2)	4.283	107	724963	86.573	100
24) bis(2-Chloroethoxy) Methane	(2)	4.395	93	798539	83.011	100
25) Benzoic acid	(2)	4.427	105	451656M	76.887	100
26) 2,4-Dichlorophenol	(2)	4.480	162	546507	84.098	100
27) 1,2,4-Trichlorobenzene	(2)	4.577	180	596534	83.337	100
29) Naphthalene	(2)	4.641	128	1776439	81.821	100
30) 4-Chloroaniline	(2)	4.716	127	801750	82.940	100
31) 2,6-Dichlorophenol	(2)	4.721	162	546837	82.834	100
32) Hexachloro-1,3-Butadiene	(2)	4.828	225	372370	81.056	100
33) 4-Chloro-3-methylphenol	(2)	5.197	107	668747	85.026	100
34) 2-Methylnaphthalene	(2)	5.336	142	1188725	83.111	100
35) 1-Methylnaphthalene	(2)	5.449	142	1182116	82.372	100
36) Hexachlorocyclopentadiene	(3)	5.566	237	452293	83.159	100
37) 2,4,6-Trichlorophenol	(3)	5.646	196	452639	85.516	100
38) 2,4,5-Trichlorophenol	(3)	5.679	196	508519	85.516	100
40) 2-Chloronaphthalene	(3)	5.823	162	1305049	80.774	100
41) 2-Nitroaniline	(3)	5.962	65	555719	89.483	100
42) Dimethyl Phthalate	(3)	6.181	163	1725230	81.880	100
44) Acenaphthylene	(3)	6.245	152	2147484	81.383	100
43) 2,6-Dinitrotoluene	(3)	6.251	165	368367	84.706	100
45) 3-Nitroaniline	(3)	6.379	138	401761	86.133	100
47) Acenaphthene	(3)	6.433	153	1281880	81.932	100
48) 2,4-Dinitrophenol	(3)	6.475	184	208804	78.501	100
49) 4-Nitrophenol	(3)	6.534	65	473365	87.173	100
50) Dibenzofuran	(3)	6.588	168	2000233	82.158	100
51) 2,4-Dinitrotoluene	(3)	6.631	165	543720	86.537	100
52) Diethyl Phthalate	(3)	6.887	149	1854291	83.112	100
53) Fluorene	(3)	6.930	166	1668772	82.900	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.935	204	880106	82.295	100
55) 4-Nitroaniline	(3)	6.994	138	431463	85.553	100
56) 4,6-Dinitro-2-methylphenol	(4)	7.032	198	306343	79.898	100
57) N-Nitrosodiphenylamine	(4)	7.058	169	1251209	81.703	100
58) Azobenzene	(4)	7.091	77	1996071	81.833	100
60) 4-Bromophenyl-phenyl Ether	(4)	7.412	248	542105	82.436	100
61) Hexachlorobenzene	(4)	7.551	142	216583	76.482	100

M = Compound was manually integrated.

Quant Report

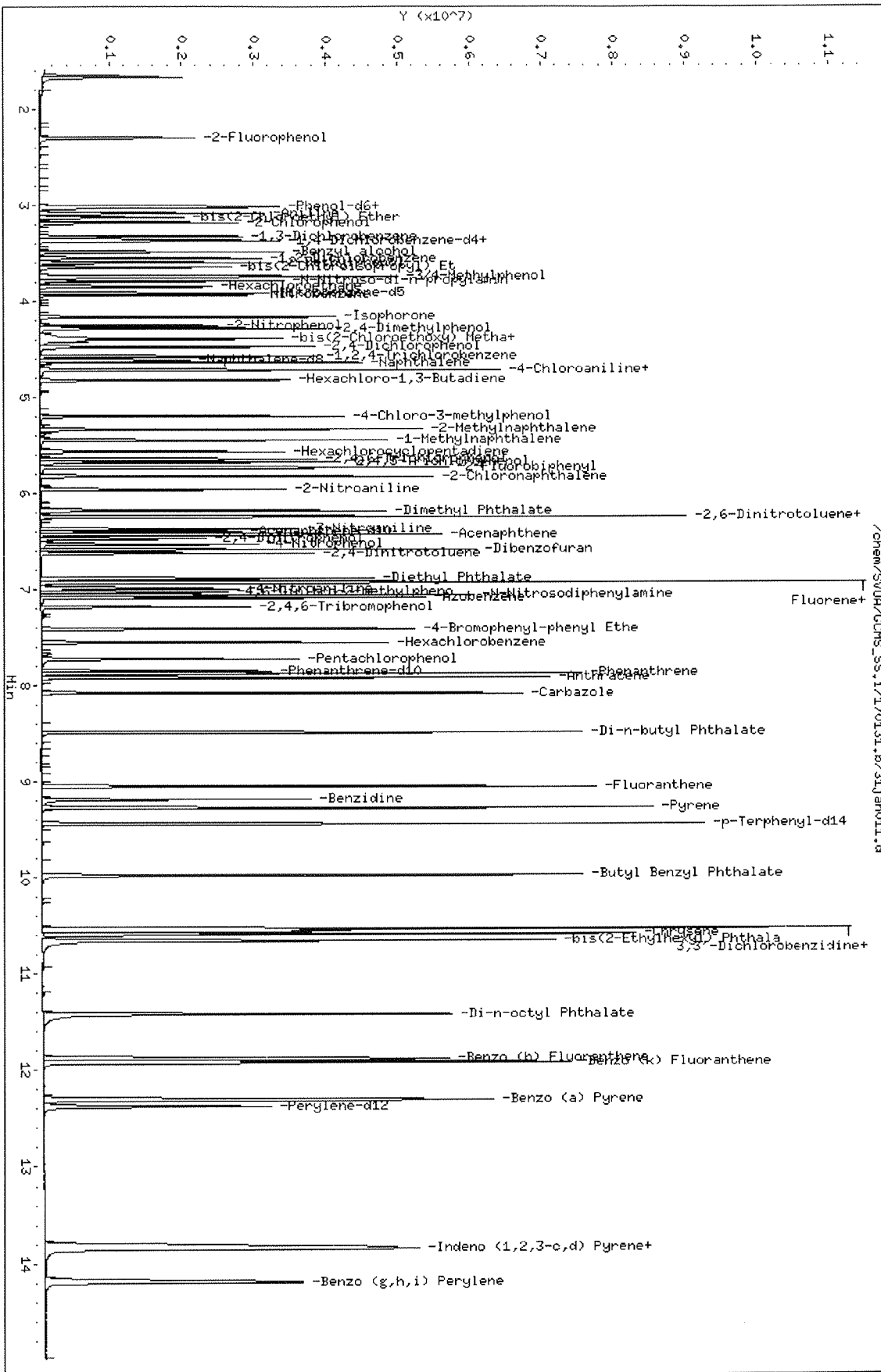
Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan011.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 15:06 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 16:25
 Date, time and analyst ID of latest file update: 31-Jan-2017 16:28 n8cz

Sample Name: ICV 80 PPM S110816N 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.727	266	400385	80.402	100
64) Phenanthrene	(4)	7.871	178	2608560	82.450	100
65) Anthracene	(4)	7.920	178	2712574	81.761	100
66) Carbazole	(4)	8.080	167	2535511	81.427	100
67) Di-n-butyl Phthalate	(4)	8.487	149	3372887	85.018	100
68) Fluoranthene	(4)	9.048	202	3209281	80.998	100
69) Benzidine	(4)	9.182	184	1211626	89.812	100
70) Pyrene	(5)	9.273	202	3392153	82.696	100
72) Butyl Benzyl Phthalate	(5)	9.973	149	1594050	80.775	100
73) 3,3'-Dichlorobenzidine	(5)	10.530	252	1328957	75.843	100
74) Benzo (a) Anthracene	(5)	10.535	228	3657254	82.174	100
76) Chrysene	(5)	10.589	228	3444077	81.349	100
77) bis(2-Ethylhexyl) Phthalate	(5)	10.653	149	2169838	80.607	100
78) Di-n-octyl Phthalate	(5)	11.418	149	3812917	76.933	100
79) Benzo (b) Fluoranthene	(5)	11.883	252	3893149	81.714	100
80) Benzo (k) Fluoranthene	(5)	11.920	252	3962990	80.925	100
81) Benzo (a) Pyrene	(5)	12.311	252	3741499	82.003	100
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.825	276	3847784	79.182	100
84) Dibenz (a,h) Anthracene	(6)	13.851	278	3287483	81.694	100
85) Benzo (g,h,i) Perylene	(6)	14.199	276	2960073	76.121	100



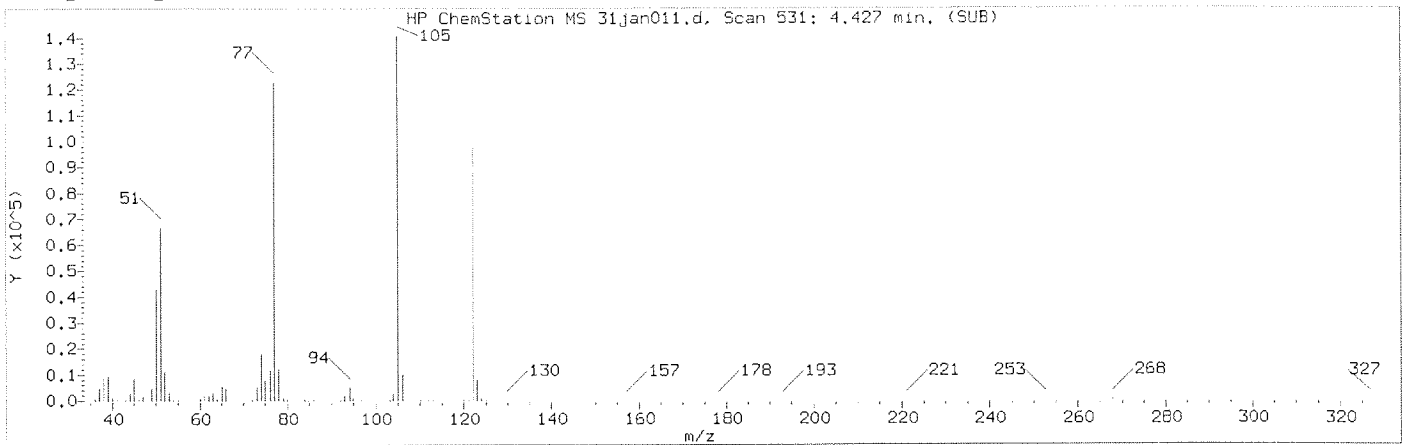
Data File: /chem/SV04/COHS_SS.1/170131.b/31jan011.d
 Date: 31-JAN-2017 15:06
 Client ID:
 Sample Info: ICV 80 PPH S110816N 8270
 Column phase:

/chem/SV04/COHS_SS.1/170131.b/31jan011.d

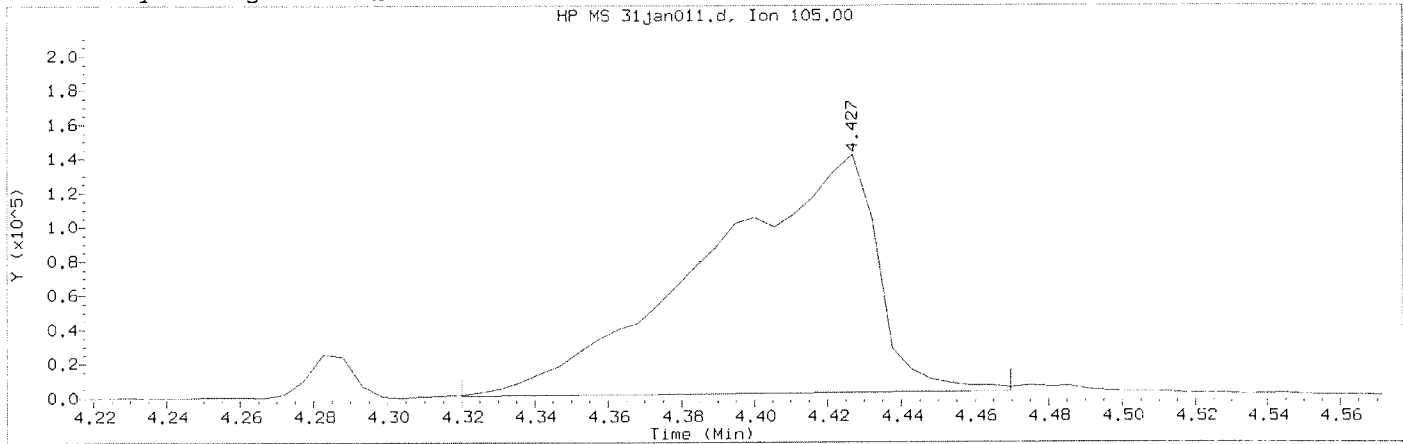
Instrument: COHS_SS.1
 Operator: 923
 Column diameter: 0.00



Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan011.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 15:06 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 16:25
 Date, time and analyst ID of latest file update: 31-Jan-2017 16:28 n8cz

Sample Name: ICV 80 PPM S110816N 8270

Compound Number : 25
 Compound Name : Benzoic acid
 Scan Number : 531
 Retention Time (minutes): 4.427
 Quant Ion : 105.00
 Area (flag) : 451656M
 On-Column Amount (ug/L) : 76.8871
 Integration start scan : 510 Integration stop scan: 538
 Y at integration start : 1480 Y at integration end: 3673

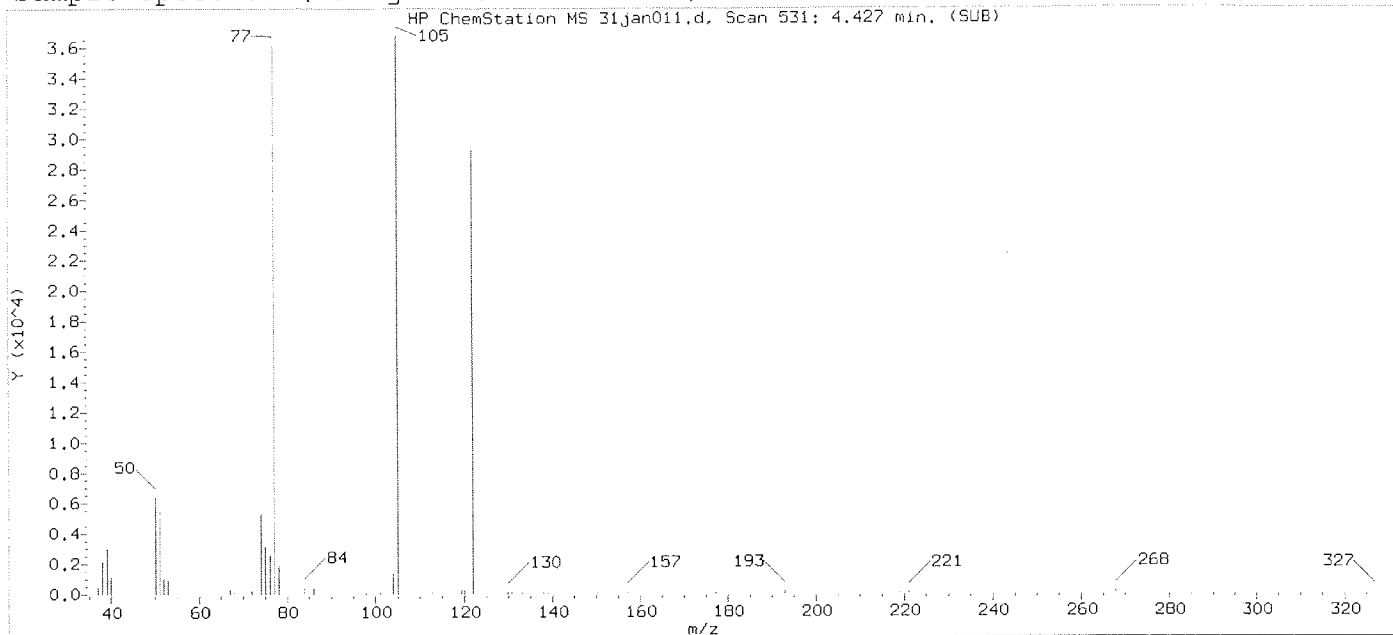
Reason for manual integration: improper integration

Digitally signed by Qi Mo
 Analyst responsible for change: on 01/31/2017 at 16:38.
 Target 3.5 esignature user ID: n8cz

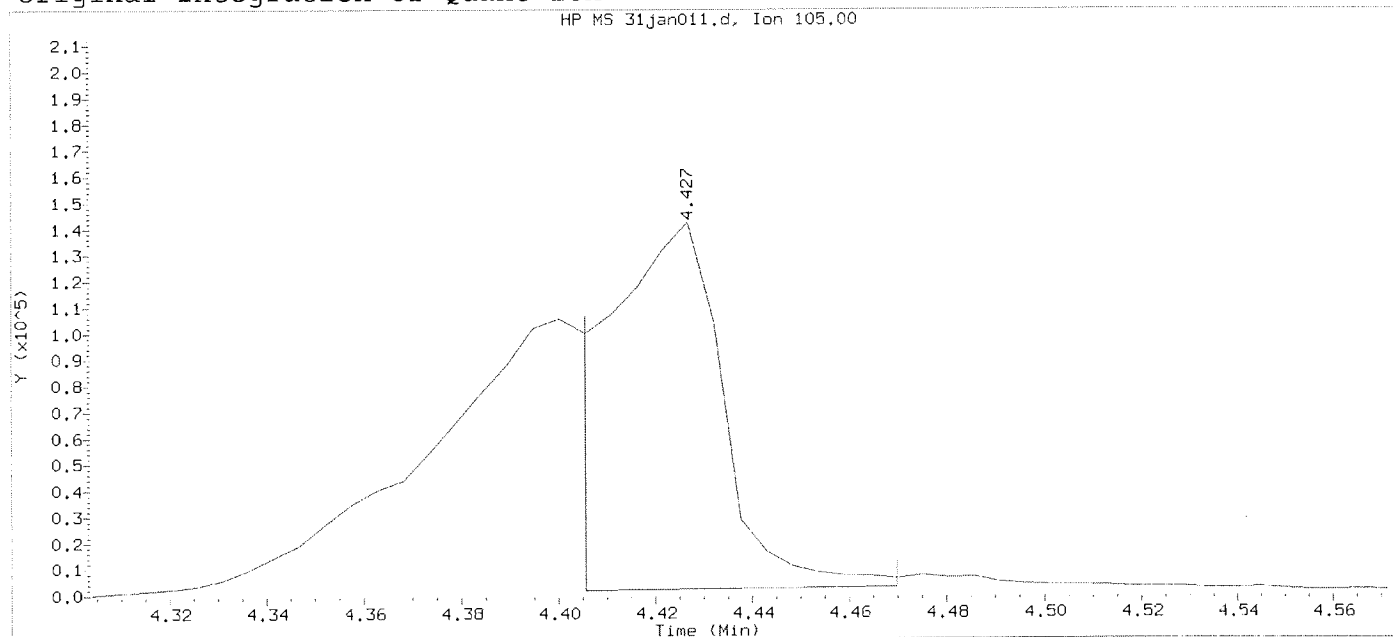
GC/MS audit/management approval: _____

Qi Mo 2/3/17

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/SVOA/GCMS_SS.i/170131.b/31jan011.d Instrument ID: GCMS_SS.i
 Injection date and time: 31-JAN-2017 15:06 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170131.b/svoa.m Sublist used: all
 Calibration date and time: 31-JAN-2017 16:25
 Date, time and analyst ID of latest file update: 31-Jan-2017 16:25 n8cz

Sample Name: ICV 80 PPM S110816N 8270

Compound Number	: 25	
Compound Name	: Benzoic acid	
Scan Number	: 531	
Retention Time (minutes)	: 4.427	
Quant Ion	: 105.00	
Area	: 243311	
On-column Amount (ug/L)	: 45.9998	
Integration start scan	: 526	Integration stop scan: 538
Y at integration start	: 1890	Y at integration end: 2878

EPA 8270C Semi-Volatile Organics (Aqueous)

Sample Data

RAW DATA SHEET FOR METHOD: EPA 8270C

WORK ORDER: 17-03-1523
INSTRUMENT: GC/MS SS
EXTRACTION : EPA 3510C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 923
D/T ANALYZED: 2017-03-23 16:01
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar016.d\23mar016.rr

2 **CLIENT SAMPLE NUMBER: IDW-W**

LCS/MB BATCH: 170322L01 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 1,000.00 ml / ACTUAL: 1,000.00 ml
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Carbazole	0.000	1.00	ND	10	
Acenaphthene	0.000	1.00	ND	10	
Acenaphthylene	0.000	1.00	ND	10	
Aniline	0.000	1.00	ND	10	
Anthracene	0.000	1.00	ND	10	
Azobenzene	0.000	1.00	ND	10	
Benzidine	0.000	1.00	ND	50	
Benzo (a) Anthracene	0.000	1.00	ND	10	
Benzo (a) Pyrene	0.000	1.00	ND	10	
Benzo (b) Fluoranthene	0.000	1.00	ND	10	
Benzo (g,h,i) Perylene	0.000	1.00	ND	10	
Benzo (k) Fluoranthene	0.000	1.00	ND	10	
Benzoic Acid	0.000	1.00	ND	50	
Benzyl Alcohol	0.000	1.00	ND	10	
Bis(2-Chloroethoxy) Methane	0.000	1.00	ND	10	
Bis(2-Chloroethyl) Ether	0.000	1.00	ND	25	
Bis(2-Chloroisopropyl) Ether	0.000	1.00	ND	10	
Bis(2-Ethylhexyl) Phthalate	8.17	1.00	16.3	10	
4-Bromophenyl-Phenyl Ether	0.000	1.00	ND	10	
Butyl Benzyl Phthalate	0.000	1.00	ND	10	
4-Chloro-3-Methylphenol	0.000	1.00	ND	10	
4-Chloroaniline	0.000	1.00	ND	10	
2-Chloronaphthalene	0.000	1.00	ND	10	
2-Chlorophenol	0.000	1.00	ND	10	
4-Chlorophenyl-Phenyl Ether	0.000	1.00	ND	10	
Chrysene	0.000	1.00	ND	10	
Di-n-Butyl Phthalate	0.000	1.00	ND	10	
Di-n-Octyl Phthalate	0.000	1.00	ND	10	
Dibenz (a,h) Anthracene	0.000	1.00	ND	10	
Dibenzofuran	0.000	1.00	ND	10	
1,2-Dichlorobenzene	0.000	1.00	ND	10	
1,3-Dichlorobenzene	0.000	1.00	ND	10	
1,4-Dichlorobenzene	0.000	1.00	ND	10	
3,3'-Dichlorobenzidine	0.000	1.00	ND	25	
2,4-Dichlorophenol	0.000	1.00	ND	10	
Diethyl Phthalate	0.000	1.00	ND	10	
Dimethyl Phthalate	0.000	1.00	ND	10	
2,4-Dimethylphenol	8.11	1.00	16.2	10	
4,6-Dinitro-2-Methylphenol	0.000	1.00	ND	50	
2,4-Dinitrophenol	0.000	1.00	ND	50	

Return to Contents

RAW DATA SHEET FOR METHOD: EPA 8270C

WORK ORDER: 17-03-1523
INSTRUMENT: GC/MS SS
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 923
D/T ANALYZED: 2017-03-23 16:01
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar016.d\23mar016.rr

2 **CLIENT SAMPLE NUMBER:** IDW-W

LCS/MB BATCH: 170322L01 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 1,000.00 ml / ACTUAL: 1,000.00 ml
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
2,4-Dinitrotoluene	0.000	1.00	ND	10	
2,6-Dinitrotoluene	0.000	1.00	ND	10	
Fluoranthene	0.000	1.00	ND	10	
Fluorene	0.000	1.00	ND	10	
Hexachloro-1,3-Butadiene	0.000	1.00	ND	10	
Hexachlorobenzene	0.000	1.00	ND	10	
Hexachlorocyclopentadiene	0.000	1.00	ND	25	
Hexachloroethane	0.000	1.00	ND	10	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	10	
Isophorone	0.000	1.00	ND	10	
2-Methylnaphthalene	0.000	1.00	ND	10	
1-Methylnaphthalene	0.000	1.00	ND	10	
2-Methylphenol	0.000	1.00	ND	10	
3/4-Methylphenol	0.000	1.00	ND	10	
N-Nitroso-di-n-propylamine	0.000	1.00	ND	10	
N-Nitrosodimethylamine	0.000	1.00	ND	10	
N-Nitrosodiphenylamine	0.000	1.00	ND	10	
Naphthalene	0.000	1.00	ND	10	
4-Nitroaniline	0.000	1.00	ND	10	
3-Nitroaniline	0.000	1.00	ND	10	
2-Nitroaniline	0.000	1.00	ND	10	
Nitrobenzene	0.000	1.00	ND	25	
4-Nitrophenol	0.000	1.00	ND	10	
2-Nitrophenol	0.000	1.00	ND	10	
Pentachlorophenol	0.000	1.00	ND	10	
Phenanthrene	0.000	1.00	ND	10	
Phenol	6.24	1.00	12.5	10	
Pyrene	0.000	1.00	ND	10	
Pyridine	0.000	1.00	ND	10	
1,2,4-Trichlorobenzene	0.000	1.00	ND	10	
2,4,6-Trichlorophenol	0.000	1.00	ND	10	
2,4,5-Trichlorophenol	0.000	1.00	ND	10	
2,6-Dichlorophenol	0.000	1.00	ND	10	

Return to Contents

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar016.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 16:01 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 12:37
 Date, time and analyst ID of latest file update: 24-Mar-2017 16:00 n8cz

Sample Name: 17-03-1523-2 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV (Min)
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.291	152	245462	40.000	0.01
28)*Naphthalene-d8	(2)	4.543	136	1084864	40.000	0.01
46)*Acenaphthene-d10	(3)	6.318	164	619777	40.000	0.01
63)*Phenanthrene-d10	(4)	7.773	188	1353874	40.000	0.01
75)*Chrysene-d12	(5)	10.480	240	1874506	40.000	0.00
82)*Perylene-d12	(6)	12.298	264	1892578	40.000	-0.02
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.291	112	237080	30.548	0.00
SpikedAmount 100.000	Recovery =		30.548			
4)\$Phenol-d6	(1)	3.018	99	253264	21.290	0.01
SpikedAmount 100.000	Recovery =		21.290			
19)\$Nitrobenzene-d5	(2)	3.847	82	956692	66.106	0.01
SpikedAmount 100.000	Recovery =		66.106			
39)\$2-Fluorobiphenyl	(3)	5.655	172	1782932	86.010	0.01
SpikedAmount 100.000	Recovery =		86.010			
59)\$2,4,6-Tribromophenol	(4)	7.126	330	134241	40.672	0.00
SpikedAmount 100.000	Recovery =		40.672			
71)\$p-Terphenyl-d14	(5)	9.367	244	2953859	73.092	0.01
SpikedAmount 100.000	Recovery =		73.092			
Target Compounds						
1) N-Nitrosodimethylamine	(1)	0.000		0	N.D.	
2) Pyridine	(1)	0.000		0	N.D.	
5) Phenol	(1)	3.029	94	75575	6.237	82
6) Aniline	(1)	0.000		0	N.D.	
7) bis(2-Chloroethyl) Ether	(1)	0.000		0	N.D.	
8) 2-Chlorophenol	(1)	0.000		0	N.D.	
9) 1,3-Dichlorobenzene	(1)	0.000		0	N.D.	
11) 1,4-Dichlorobenzene	(1)	0.000		0	N.D.	
12) Benzyl alcohol	(1)	0.000		0	N.D.	
13) 1,2-Dichlorobenzene	(1)	0.000		0	N.D.	
14) 2-Methylphenol	(1)	0.000		0	N.D.	
15) bis(2-Chloroisopropyl) Ether	(1)	0.000		0	N.D.	
16) 3/4-Methylphenol	(1)	0.000		0D	N.D.	
17) N-Nitroso-di-n-propylamine	(1)	0.000		0	N.D.	
18) Hexachloroethane	(1)	0.000		0	N.D.	
20) Nitrobenzene	(2)	0.000		0	N.D.	

D = Compound was deleted.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar016.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 16:01 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 12:37
 Date, time and analyst ID of latest file update: 24-Mar-2017 16:00 n8cz

Sample Name: 17-03-1523-2 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	0.000		0	N.D.	
22) 2-Nitrophenol	(2)	0.000		0	N.D.	
23) 2,4-Dimethylphenol	(2)	4.249	107	90875	8.110	98
24) bis(2-Chloroethoxy) Methane	(2)	0.000		0	N.D.	
25) Benzoic acid	(2)	0.000		0	N.D.	
26) 2,4-Dichlorophenol	(2)	0.000		0	N.D.	
27) 1,2,4-Trichlorobenzene	(2)	0.000		0	N.D.	
29) Naphthalene	(2)	0.000		0	N.D.	
30) 4-Chloroaniline	(2)	0.000		0	N.D.	
31) 2,6-Dichlorophenol	(2)	0.000		0	N.D.	
32) Hexachloro-1,3-Butadiene	(2)	0.000		0	N.D.	
33) 4-Chloro-3-methylphenol	(2)	0.000		0	N.D.	
34) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
35) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
36) Hexachlorocyclopentadiene	(3)	0.000		0	N.D.	
37) 2,4,6-Trichlorophenol	(3)	0.000		0	N.D.	
38) 2,4,5-Trichlorophenol	(3)	0.000		0	N.D.	
40) 2-Chloronaphthalene	(3)	0.000		0	N.D.	
41) 2-Nitroaniline	(3)	0.000		0	N.D.	
42) Dimethyl Phthalate	(3)	0.000		0	N.D.	
44) Acenaphthylene	(3)	0.000		0	N.D.	
43) 2,6-Dinitrotoluene	(3)	0.000		0	N.D.	
45) 3-Nitroaniline	(3)	0.000		0	N.D.	
47) Acenaphthene	(3)	0.000		0	N.D.	
48) 2,4-Dinitrophenol	(3)	0.000		0D	N.D.	
49) 4-Nitrophenol	(3)	0.000		0	N.D.	
50) Dibenzofuran	(3)	0.000		0	N.D.	
51) 2,4-Dinitrotoluene	(3)	0.000		0	N.D.	
52) Diethyl Phthalate	(3)	0.000		0	N.D.	
53) Fluorene	(3)	0.000		0	N.D.	
54) 4-Chlorophenyl-phenyl Ether	(3)	0.000		0	N.D.	
55) 4-Nitroaniline	(3)	0.000		0	N.D.	
56) 4,6-Dinitro-2-methylphenol	(4)	0.000		0	N.D.	
57) N-Nitrosodiphenylamine	(4)	0.000		0	N.D.	
58) Azobenzene	(4)	0.000		0	N.D.	
60) 4-Bromophenyl-phenyl Ether	(4)	0.000		0	N.D.	
61) Hexachlorobenzene	(4)	0.000		0	N.D.	

D = Compound was deleted.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar016.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 16:01 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 12:37
 Date, time and analyst ID of latest file update: 24-Mar-2017 16:00 n8cz

Sample Name: 17-03-1523-2 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

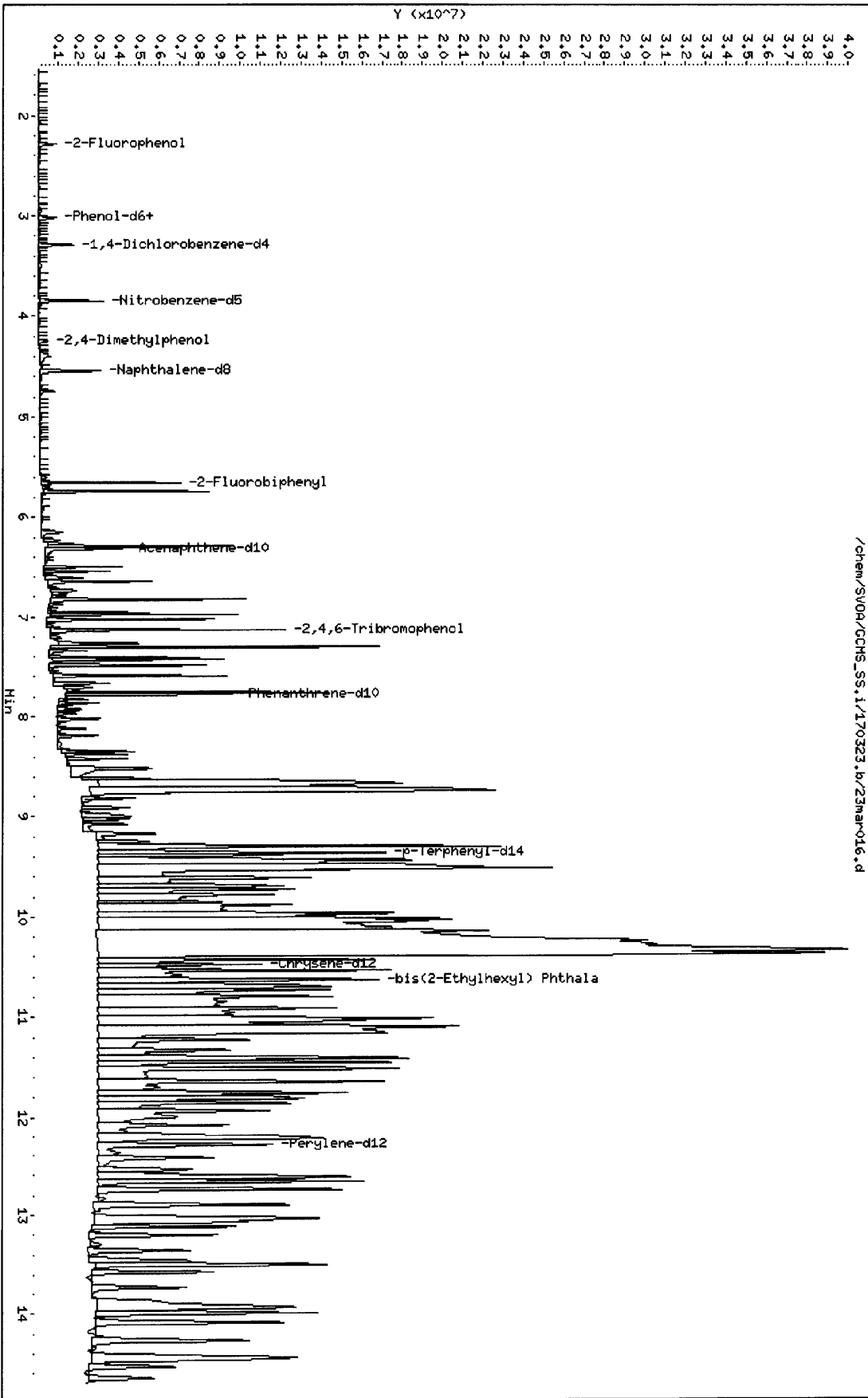
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	0.000		0	N.D.	
64) Phenanthrene	(4)	0.000		0	N.D.	
65) Anthracene	(4)	0.000		0	N.D.	
66) Carbazole	(4)	0.000		0	N.D.	
67) Di-n-butyl Phthalate	(4)	0.000		0	N.D.	
68) Fluoranthene	(4)	0.000		0	N.D.	
69) Benzidine	(4)	0.000		0	N.D.	
70) Pyrene	(5)	0.000		0D	N.D.	
72) Butyl Benzyl Phthalate	(5)	0.000		0D	N.D.	
73) 3,3'-Dichlorobenzidine	(5)	0.000		0D	N.D.	
74) Benzo (a) Anthracene	(5)	0.000		0	N.D.	
76) Chrysene	(5)	0.000		0	N.D.	
77) bis(2-Ethylhexyl) Phthalate	(5)	10.587	149	199882	8.171	96
78) Di-n-octyl Phthalate	(5)	0.000		0D	N.D.	
79) Benzo (b) Fluoranthene	(5)	0.000		0	N.D.	
80) Benzo (k) Fluoranthene	(5)	0.000		0	N.D.	
81) Benzo (a) Pyrene	(5)	0.000		0	N.D.	
83) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
84) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
85) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	

D = Compound was deleted.

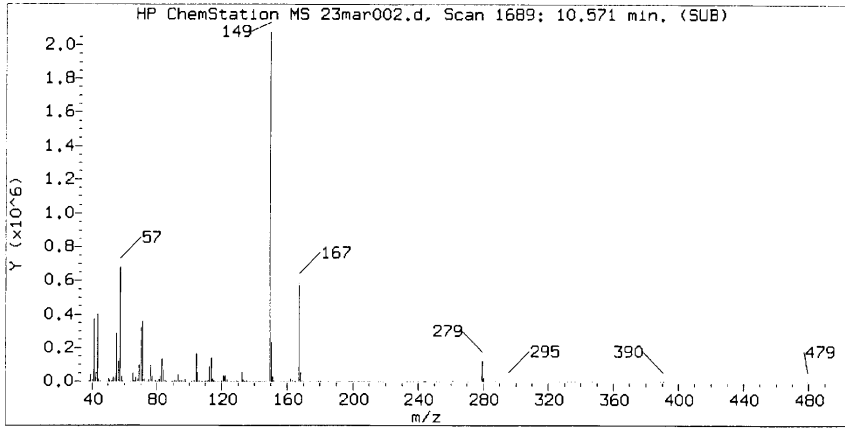
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Date: 23-MAR-2017 16:01
Client ID:
Sample Info: 17-03-1523-2
Column phase:

Instrument: CCHS_SS.i
Operator: 923
Column diameter: 0.00

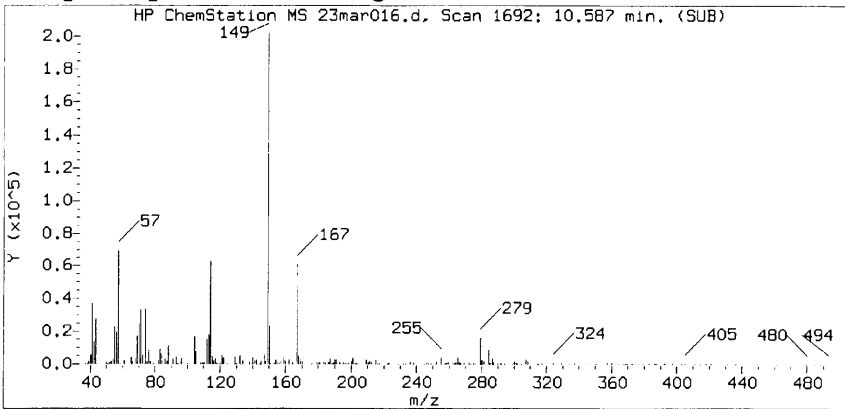
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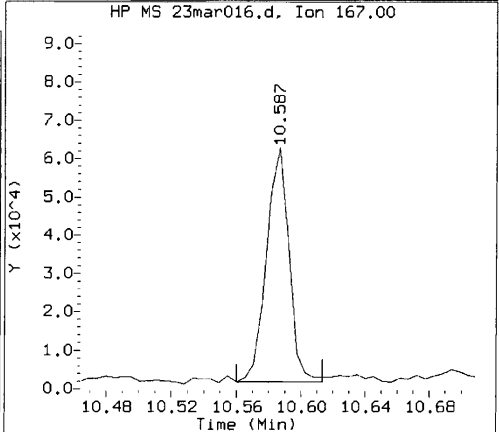
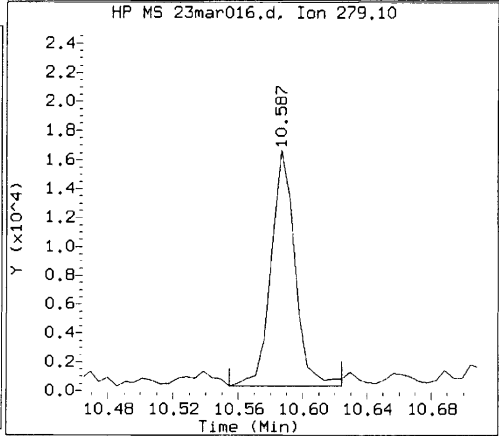
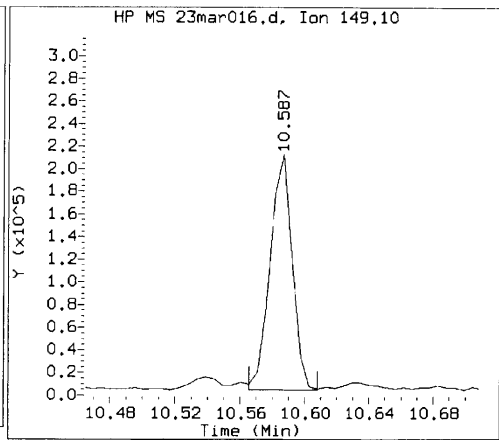
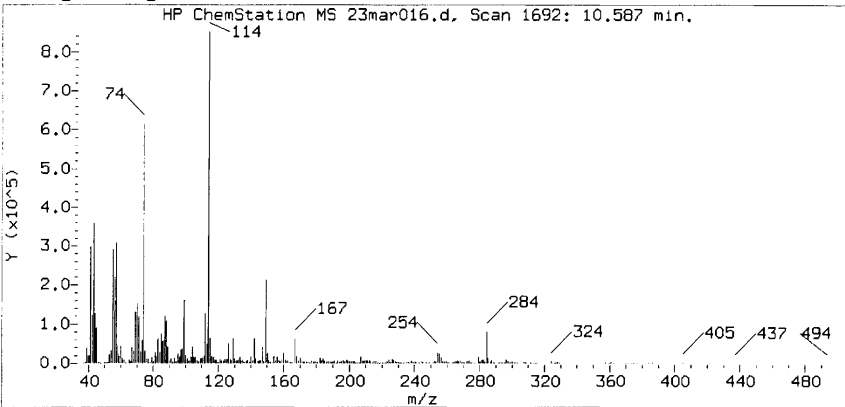
Reference Standard Spectrum for bis(2-Ethylhexyl) Phthalate



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar016.d
 Injection date and time: 23-MAR-2017 16:01

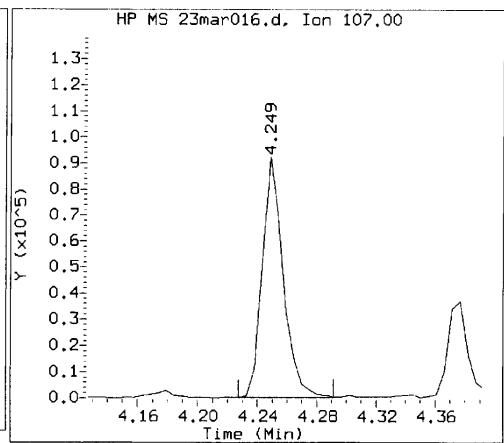
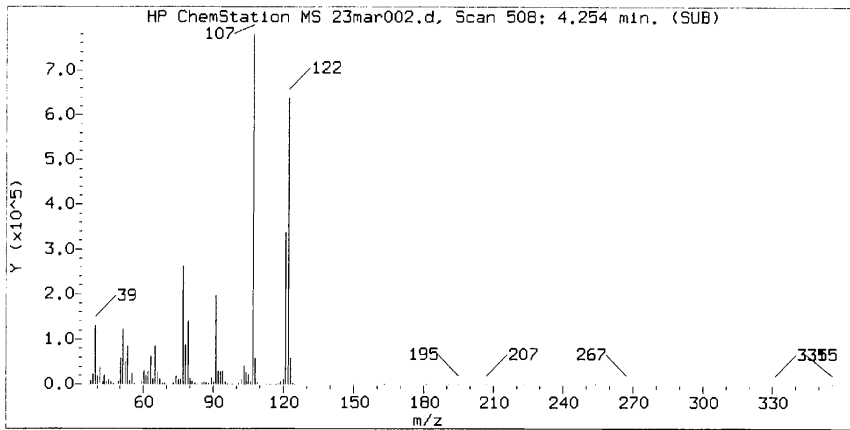
Instrument ID: GCMS_SS.i
 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m
 Calibration date and time: 23-MAR-2017 12:37
 Date, time and analyst ID of latest file update: 24-Mar-2017 16:00 n8cz

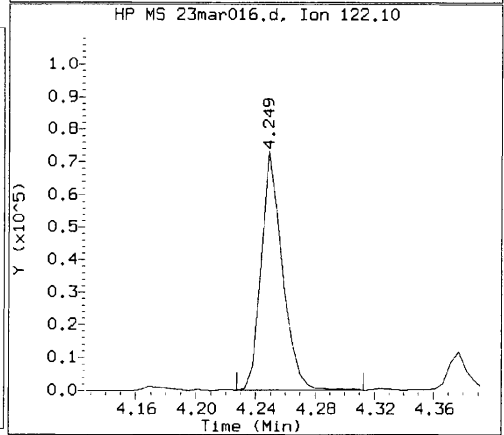
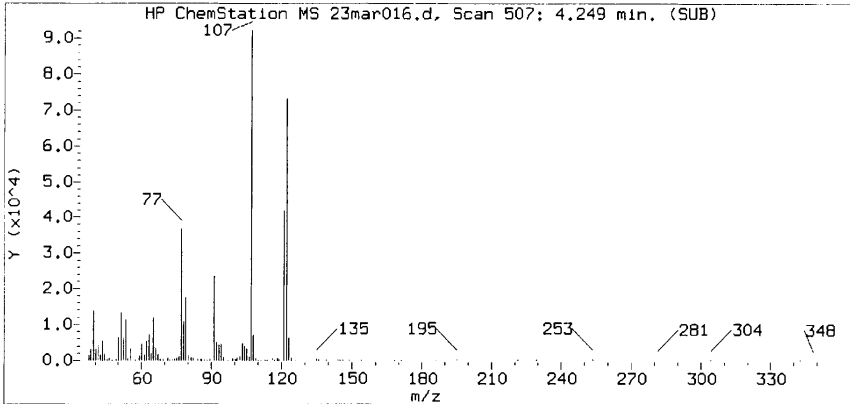
Sample Name: 17-03-1523-2

Compound Number : 77
 Compound Name : bis(2-Ethylhexyl) Phthalate
 Scan Number : 1692
 Retention Time (minutes): 10.587
 Relative Retention Time : -0.00153
 Quant Ion : 149.00
 Area (flag) : 199882
 On-Column Amount (ug/L) : 8.1715

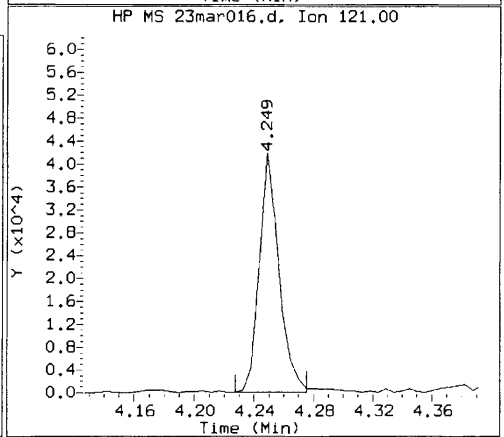
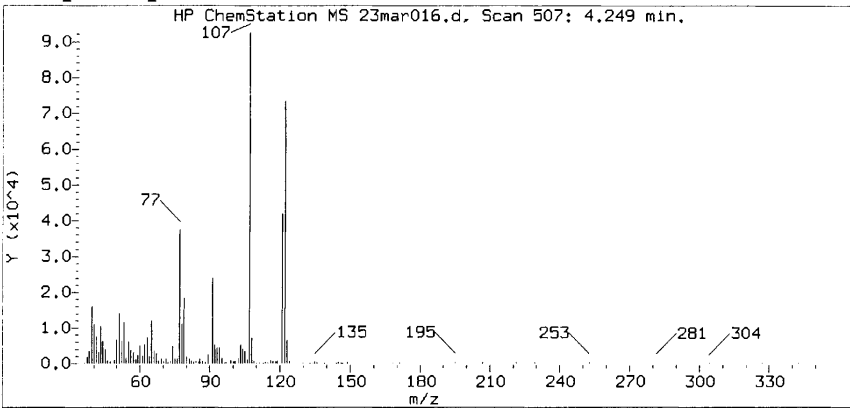
Reference Standard Spectrum for 2,4-Dimethylphenol



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar016.d
 Injection date and time: 23-MAR-2017 16:01

Instrument ID: GCMS_SS.i
 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m
 Calibration date and time: 23-MAR-2017 12:37

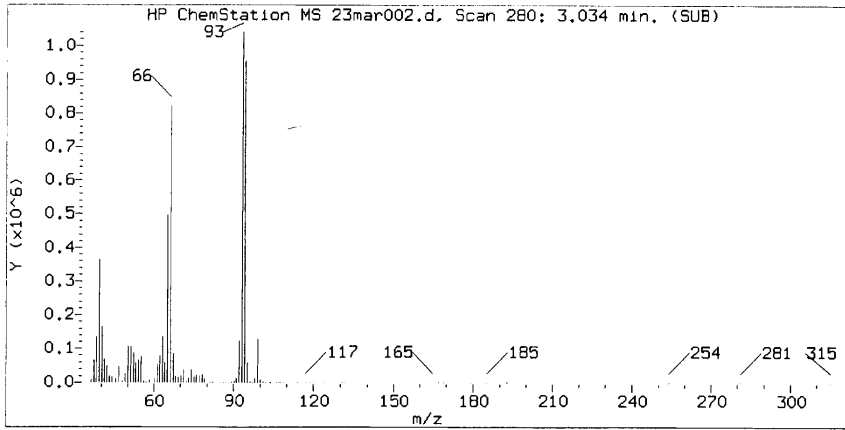
Sublist used: all

Date, time and analyst ID of latest file update: 24-Mar-2017 16:00 n8cz

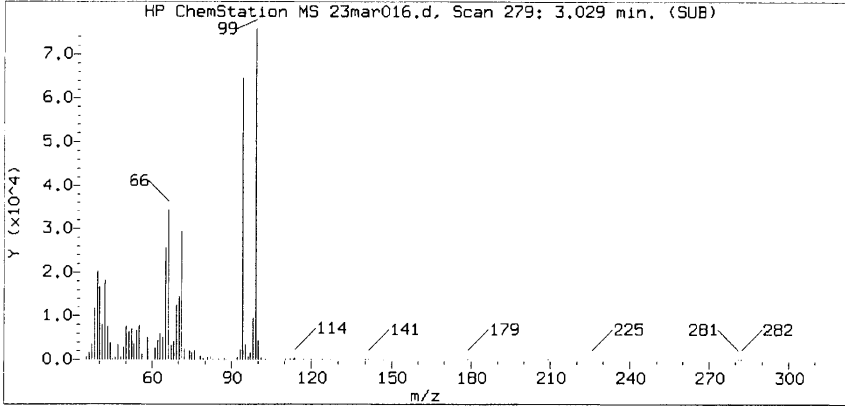
Sample Name: 17-03-1523-2

Compound Number : 23
 Compound Name : 2,4-Dimethylphenol
 Scan Number : 507
 Retention Time (minutes): 4.249
 Relative Retention Time : -0.00102
 Quant Ion : 107.00
 Area (flag) : 90875
 On-Column Amount (ug/L) : 8.1095

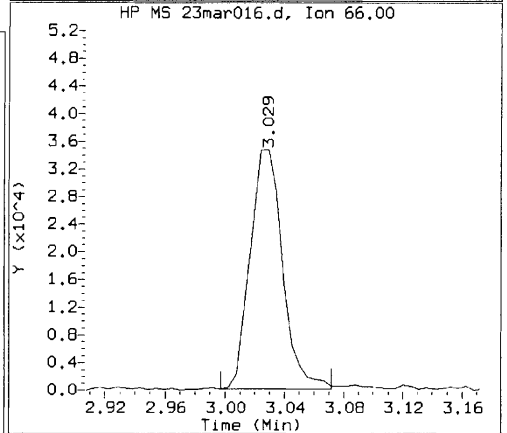
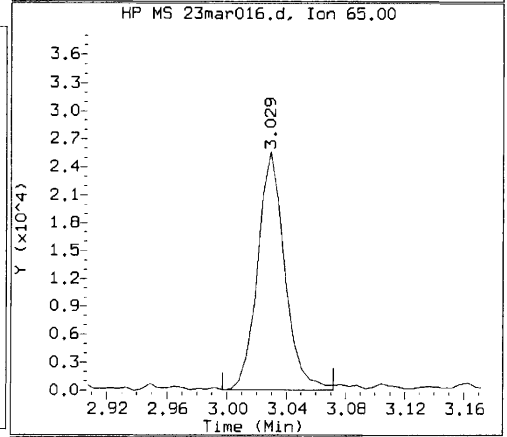
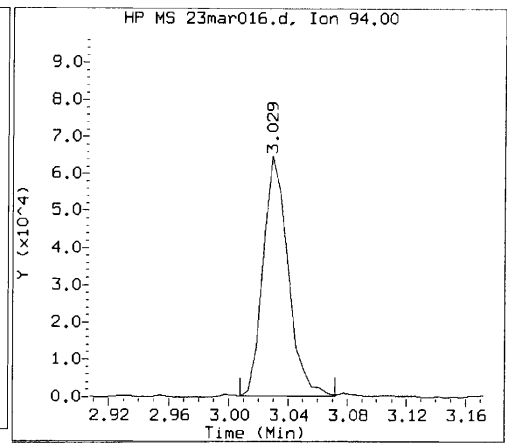
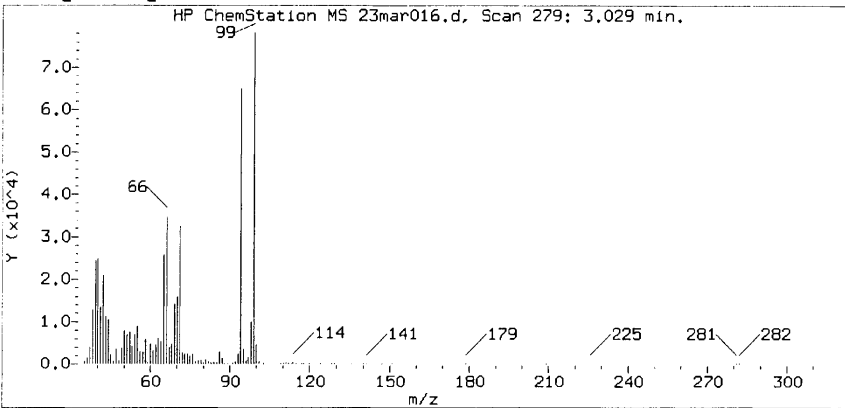
Reference Standard Spectrum for Phenol



Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)



Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar016.d
 Injection date and time: 23-MAR-2017 16:01

Instrument ID: GCMS_SS.i
 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m

Sublist used: all

Calibration date and time: 23-MAR-2017 12:37

Date, time and analyst ID of latest file update: 24-Mar-2017 16:00 n8cz

Sample Name: 17-03-1523-2

Compound Number : 5
 Compound Name : Phenol
 Scan Number : 279
 Retention Time (minutes): 3.029
 Relative Retention Time : 0.00013
 Quant Ion : 94.00
 Area (flag) : 75575
 On-Column Amount (ug/L) : 6.2366

EPA 8270C
Semi-Volatile Organics
(Aqueous)

Quality Control

Method Blank

LCS/LCSD

MS/MSD

**METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C**

MB SAMPLE ID: 095-01-003-4349
MB BATCH ID: 170322L01
INSTRUMENT: GC/MS SS
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 923
D/T ANALYZED: 2017-03-23 12:50
REVIEWED BY:
D/T REVIEWED:
MATRIX: Water

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar006.d\23mar006.rr

CLIENT WORK ORDER: 17-03-1523

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
2	IDW-W		2017-03-23 16:01	Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar016.d\23mar016.rr

RAW DATA SHEET FOR METHOD: EPA 8270C

WORK ORDER: 095-01-003
INSTRUMENT: GC/MS SS
EXTRACTION: EPA 3510C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 923
D/T ANALYZED: 2017-03-23 12:50
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar006.d\23mar006.rr

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170322L01 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 1,000.00 ml / ACTUAL: 1,000.00 ml
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Carbazole	0.000	1.00	ND	10	
Acenaphthene	0.000	1.00	ND	10	
Acenaphthylene	0.000	1.00	ND	10	
Aniline	0.000	1.00	ND	10	
Anthracene	0.000	1.00	ND	10	
Azobenzene	0.000	1.00	ND	10	
Benzidine	0.000	1.00	ND	50	
Benzo (a) Anthracene	0.000	1.00	ND	10	
Benzo (a) Pyrene	0.000	1.00	ND	10	
Benzo (b) Fluoranthene	0.000	1.00	ND	10	
Benzo (g,h,i) Perylene	0.000	1.00	ND	10	
Benzo (k) Fluoranthene	0.000	1.00	ND	10	
Benzoic Acid	0.000	1.00	ND	50	
Benzyl Alcohol	0.000	1.00	ND	10	
Bis(2-Chloroethoxy) Methane	0.000	1.00	ND	10	
Bis(2-Chloroethyl) Ether	0.000	1.00	ND	25	
Bis(2-Chloroisopropyl) Ether	0.000	1.00	ND	10	
Bis(2-Ethylhexyl) Phthalate	0.000	1.00	ND	10	
4-Bromophenyl-Phenyl Ether	0.000	1.00	ND	10	
Butyl Benzyl Phthalate	0.000	1.00	ND	10	
4-Chloro-3-Methylphenol	0.000	1.00	ND	10	
4-Chloroaniline	0.000	1.00	ND	10	
2-Chloronaphthalene	0.000	1.00	ND	10	
2-Chlorophenol	0.000	1.00	ND	10	
4-Chlorophenyl-Phenyl Ether	0.000	1.00	ND	10	
Chrysene	0.000	1.00	ND	10	
Di-n-Butyl Phthalate	0.000	1.00	ND	10	
Di-n-Octyl Phthalate	0.000	1.00	ND	10	
Dibenz (a,h) Anthracene	0.000	1.00	ND	10	
Dibenzofuran	0.000	1.00	ND	10	
1,2-Dichlorobenzene	0.000	1.00	ND	10	
1,3-Dichlorobenzene	0.000	1.00	ND	10	
1,4-Dichlorobenzene	0.000	1.00	ND	10	
3,3'-Dichlorobenzidine	0.000	1.00	ND	25	
2,4-Dichlorophenol	0.000	1.00	ND	10	
Diethyl Phthalate	0.000	1.00	ND	10	
Dimethyl Phthalate	0.000	1.00	ND	10	
2,4-Dimethylphenol	0.000	1.00	ND	10	
4,6-Dinitro-2-Methylphenol	0.000	1.00	ND	50	
2,4-Dinitrophenol	0.000	1.00	ND	50	

Return to Contents

RAW DATA SHEET FOR METHOD: EPA 8270C

WORK ORDER: 095-01-003
INSTRUMENT: GC/MS SS
EXTRACTION : EPA 3510C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 923
D/T ANALYZED: 2017-03-23 12:50
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar006.d\23mar006.rr

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170322L01 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 1,000.00 ml / ACTUAL: 1,000.00 ml
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
2,4-Dinitrotoluene	0.000	1.00	ND	10	
2,6-Dinitrotoluene	0.000	1.00	ND	10	
Fluoranthene	0.000	1.00	ND	10	
Fluorene	0.000	1.00	ND	10	
Hexachloro-1,3-Butadiene	0.000	1.00	ND	10	
Hexachlorobenzene	0.000	1.00	ND	10	
Hexachlorocyclopentadiene	0.000	1.00	ND	25	
Hexachloroethane	0.000	1.00	ND	10	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	10	
Isophorone	0.000	1.00	ND	10	
2-Methylnaphthalene	0.000	1.00	ND	10	
1-Methylnaphthalene	0.000	1.00	ND	10	
2-Methylphenol	0.000	1.00	ND	10	
3/4-Methylphenol	0.000	1.00	ND	10	
N-Nitroso-di-n-propylamine	0.000	1.00	ND	10	
N-Nitrosodimethylamine	0.000	1.00	ND	10	
N-Nitrosodiphenylamine	0.000	1.00	ND	10	
Naphthalene	0.000	1.00	ND	10	
4-Nitroaniline	0.000	1.00	ND	10	
3-Nitroaniline	0.000	1.00	ND	10	
2-Nitroaniline	0.000	1.00	ND	10	
Nitrobenzene	0.000	1.00	ND	25	
4-Nitrophenol	0.000	1.00	ND	10	
2-Nitrophenol	0.000	1.00	ND	10	
Pentachlorophenol	0.000	1.00	ND	10	
Phenanthrene	0.000	1.00	ND	10	
Phenol	0.000	1.00	ND	10	
Pyrene	0.000	1.00	ND	10	
Pyridine	0.000	1.00	ND	10	
1,2,4-Trichlorobenzene	0.000	1.00	ND	10	
2,4,6-Trichlorophenol	0.000	1.00	ND	10	
2,4,5-Trichlorophenol	0.000	1.00	ND	10	
2,6-Dichlorophenol	0.000	1.00	ND	10	

Return to Contents

LCS / LCSD QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

LCS/LCSD SAMPLE ID: 095-01-003-4349
LCS/LCSD BATCH: 170322L01

INSTRUMENTS:
LCS: GC/MS SS
LCSD: GC/MS SS

EXTRACTION: EPA 3510C
D/T EXTRACTED:

LCS: 2017-03-22 00:00
LCSD: 2017-03-22 00:00

ANALYZED BY: 923

D/T ANALYZED:

LCS: 2017-03-23 12:13
LCSD: 2017-03-23 12:31

REVIEWED BY:

D/T REVIEWED:

COMMENT:

COMPOUND	ADDED	LCS_CONC	LCS%REC	LCSD_CON	LCSD%REC	% REC_CL	ME CL	RPD	RPD CL	STATUS	QUALIFIERS
Phenol	200.0	76.68	38	76.48	38	17-120	0-137	0	0-20	PASS	
2-Chlorophenol	200.0	167.4	84	170.7	85	47-120	35-132	2	0-20	PASS	
1,4-Dichlorobenzene	200.0	132.4	66	134.6	67	36-120	22-134	2	0-20	PASS	
N-Nitroso-di-n-propylamine	200.0	151.3	76	153.0	77	39-123	25-137	1	0-20	PASS	
Naphthalene	200.0	154.9	77	154.8	77	54-120	43-131	0	0-20	PASS	
4-Chloro-3-Methylphenol	200.0	162.5	81	158.5	79	52-120	41-131	3	0-20	PASS	
Dimethyl Phthalate	200.0	183.6	92	184.2	92	60-120	50-130	0	0-20	PASS	
Acenaphthylene	200.0	187.7	94	186.9	93	55-120	44-131	0	0-20	PASS	
Acenaphthene	200.0	184.4	92	188.3	94	61-120	51-130	2	0-20	PASS	
4-Nitrophenol	200.0	97.71	49	90.16	45	14-120	0-138	8	0-20	PASS	
2,4-Dinitrotoluene	200.0	202.6	101	196.4	98	61-121	51-131	3	0-20	PASS	
Fluorene	200.0	191.2	96	186.8	93	67-120	58-129	2	0-20	PASS	
Pentachlorophenol	200.0	131.4	66	129.5	65	31-127	15-143	1	0-20	PASS	
Pyrene	200.0	177.5	89	177.3	89	58-124	47-135	0	0-20	PASS	
Butyl Benzyl Phthalate	200.0	161.5	81	161.6	81	56-122	45-133	0	0-20	PASS	
1,2,4-Trichlorobenzene	200.0	144.4	72	147.9	74	49-120	37-132	2	0-20	PASS	

Total number of LCS compounds: 16
 Total number of ME compounds: 0
 Total number of ME compounds allowed: 1
 LCS ME CL validation result: Pass

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	23mar004.rr	Y:\GCMS_SS\GCMS_SS_data\20171170323\23mar004.d\
LCSD	23mar005.rr	Y:\GCMS_SS\GCMS_SS_data\20171170323\23mar005.d\

SURROGATE RECOVERIES FOR METHOD: EPA 8270C

WORK ORDER: 17-03-1523

BATCH ID:

LCS/MB: **170322L01****MS:**

EXTRACTION: EPA 3510C

REVIEWED BY:

D/T REVIEWED:

2 **CLIENT SAMPLE NUMBER : IDW-W**

INSTRUMENT: GC/MS SS

ANALYZED BY: 923

D/T EXTRACTED: 2017-03-22 00:00

D/T ANALYZED 2017-03-23 16:01

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar016.d\23mar016.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
2-Fluorophenol	31	24-120	PASS	
Phenol-d6	21	16-120	PASS	
Nitrobenzene-d5	66	38-120	PASS	
2-Fluorobiphenyl	86	33-120	PASS	
2,4,6-Tribromophenol	41	27-159	PASS	
p-Terphenyl-d14	73	41-137	PASS	

MB **CLIENT SAMPLE NUMBER : Method Blank**

INSTRUMENT: GC/MS SS

ANALYZED BY: 923

D/T EXTRACTED: 2017-03-22 00:00

D/T ANALYZED 2017-03-23 12:50

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar006.d\23mar006.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
2-Fluorophenol	66	24-120	PASS	
Phenol-d6	39	16-120	PASS	
Nitrobenzene-d5	89	38-120	PASS	
2-Fluorobiphenyl	92	33-120	PASS	
2,4,6-Tribromophenol	109	27-159	PASS	
p-Terphenyl-d14	97	41-137	PASS	

LCS **CLIENT SAMPLE NUMBER : Lab Control Sample**

INSTRUMENT: GC/MS SS

ANALYZED BY: 923

D/T EXTRACTED: 2017-03-22 00:00

D/T ANALYZED 2017-03-23 12:13

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar004.d\23mar004.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
2-Fluorophenol	68	24-120	PASS	
Phenol-d6	41	16-120	PASS	
Nitrobenzene-d5	87	38-120	PASS	
2-Fluorobiphenyl	91	33-120	PASS	
2,4,6-Tribromophenol	109	27-159	PASS	
p-Terphenyl-d14	92	41-137	PASS	

**SURROGATE RECOVERIES
FOR METHOD: EPA 8270C**

WORK ORDER: 17-03-1523

BATCH ID:

LCS/MB: **170322L01**

MS:

EXTRACTION: EPA 3510C

REVIEWED BY:

D/T REVIEWED:

LCD **CLIENT SAMPLE NUMBER : Lab Control Sample Duplicate**

INSTRUMENT: GC/MS SS

ANALYZED BY: 923

D/T EXTRACTED: 2017-03-22 00:00

D/T ANALYZED 2017-03-23 12:31

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar005.d\23mar005.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
2-Fluorophenol	67	24-120	PASS	
Phenol-d6	41	16-120	PASS	
Nitrobenzene-d5	89	38-120	PASS	
2-Fluorobiphenyl	92	33-120	PASS	
2,4,6-Tribromophenol	108	27-159	PASS	
p-Terphenyl-d14	92	41-137	PASS	

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar006.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 12:50 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 12:37
 Date, time and analyst ID of latest file update: 23-Mar-2017 13:12 Unknown

Sample Name: MB 170322L01 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.286	152	170847	40.000	0.01
28)*Naphthalene-d8	(2)	4.543	136	689776	40.000	0.01
46)*Acenaphthene-d10	(3)	6.318	164	405865	40.000	0.01
63)*Phenanthrene-d10	(4)	7.768	188	912715	40.000	0.01
75)*Chrysene-d12	(5)	10.458	240	1241536	40.000	0.02
82)*Perylene-d12	(6)	12.261	264	1288124	40.000	0.02
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.286	112	353947	65.524	0.01
SpikedAmount 100.000				Recovery = 65.524		
4)\$Phenol-d6	(1)	3.013	99	321600	38.842	0.01
SpikedAmount 100.000				Recovery = 38.842		
19)\$Nitrobenzene-d5	(2)	3.847	82	819338	89.043	0.01
SpikedAmount 100.000				Recovery = 89.043		
39)\$2-Fluorobiphenyl	(3)	5.655	172	1252366	92.257	0.01
SpikedAmount 100.000				Recovery = 92.257		
59)\$2,4,6-Tribromophenol	(4)	7.115	330	241445	108.509	0.01
SpikedAmount 100.000				Recovery = 108.509		
71)\$p-Terphenyl-d14	(5)	9.362	244	2599172	97.105	0.01
SpikedAmount 100.000				Recovery = 97.105		

Target Compounds					QValue
1) N-Nitrosodimethylamine	(1)	0.000		0	N.D.
2) Pyridine	(1)	0.000		0	N.D.
5) Phenol	(1)	0.000		0	N.D.
6) Aniline	(1)	0.000		0	N.D.
7) bis(2-Chloroethyl) Ether	(1)	0.000		0	N.D.
8) 2-Chlorophenol	(1)	0.000		0	N.D.
9) 1,3-Dichlorobenzene	(1)	0.000		0	N.D.
11) 1,4-Dichlorobenzene	(1)	0.000		0	N.D.
12) Benzyl alcohol	(1)	0.000		0	N.D.
13) 1,2-Dichlorobenzene	(1)	0.000		0	N.D.
14) 2-Methylphenol	(1)	0.000		0	N.D.
15) bis(2-Chloroisopropyl) Ether	(1)	0.000		0	N.D.
16) 3/4-Methylphenol	(1)	0.000		0	N.D.
17) N-Nitroso-di-n-propylamine	(1)	0.000		0	N.D.
18) Hexachloroethane	(1)	0.000		0	N.D.
20) Nitrobenzene	(2)	0.000		0	N.D.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar006.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 12:50 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 12:37
 Date, time and analyst ID of latest file update: 23-Mar-2017 13:12 Unknown

Sample Name: MB 170322L01 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	0.000		0	N.D.	
22) 2-Nitrophenol	(2)	0.000		0	N.D.	
23) 2,4-Dimethylphenol	(2)	0.000		0	N.D.	
24) bis(2-Chloroethoxy) Methane	(2)	0.000		0	N.D.	
25) Benzoic acid	(2)	0.000		0	N.D.	
26) 2,4-Dichlorophenol	(2)	0.000		0	N.D.	
27) 1,2,4-Trichlorobenzene	(2)	0.000		0	N.D.	
29) Naphthalene	(2)	0.000		0	N.D.	
30) 4-Chloroaniline	(2)	0.000		0	N.D.	
31) 2,6-Dichlorophenol	(2)	0.000		0	N.D.	
32) Hexachloro-1,3-Butadiene	(2)	0.000		0	N.D.	
33) 4-Chloro-3-methylphenol	(2)	0.000		0	N.D.	
34) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
35) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
36) Hexachlorocyclopentadiene	(3)	0.000		0	N.D.	
37) 2,4,6-Trichlorophenol	(3)	0.000		0	N.D.	
38) 2,4,5-Trichlorophenol	(3)	0.000		0	N.D.	
40) 2-Chloronaphthalene	(3)	0.000		0	N.D.	
41) 2-Nitroaniline	(3)	0.000		0	N.D.	
42) Dimethyl Phthalate	(3)	0.000		0	N.D.	
44) Acenaphthylene	(3)	0.000		0	N.D.	
43) 2,6-Dinitrotoluene	(3)	0.000		0	N.D.	
45) 3-Nitroaniline	(3)	0.000		0	N.D.	
47) Acenaphthene	(3)	0.000		0	N.D.	
48) 2,4-Dinitrophenol	(3)	0.000		0	N.D.	
49) 4-Nitrophenol	(3)	0.000		0	N.D.	
50) Dibenzofuran	(3)	0.000		0	N.D.	
51) 2,4-Dinitrotoluene	(3)	0.000		0	N.D.	
52) Diethyl Phthalate	(3)	0.000		0	N.D.	
53) Fluorene	(3)	0.000		0	N.D.	
54) 4-Chlorophenyl-phenyl Ether	(3)	0.000		0	N.D.	
55) 4-Nitroaniline	(3)	0.000		0	N.D.	
56) 4,6-Dinitro-2-methylphenol	(4)	0.000		0	N.D.	
57) N-Nitrosodiphenylamine	(4)	0.000		0	N.D.	
58) Azobenzene	(4)	0.000		0	N.D.	
60) 4-Bromophenyl-phenyl Ether	(4)	0.000		0	N.D.	
61) Hexachlorobenzene	(4)	0.000		0	N.D.	

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar006.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 12:50 Analyst ID: 923

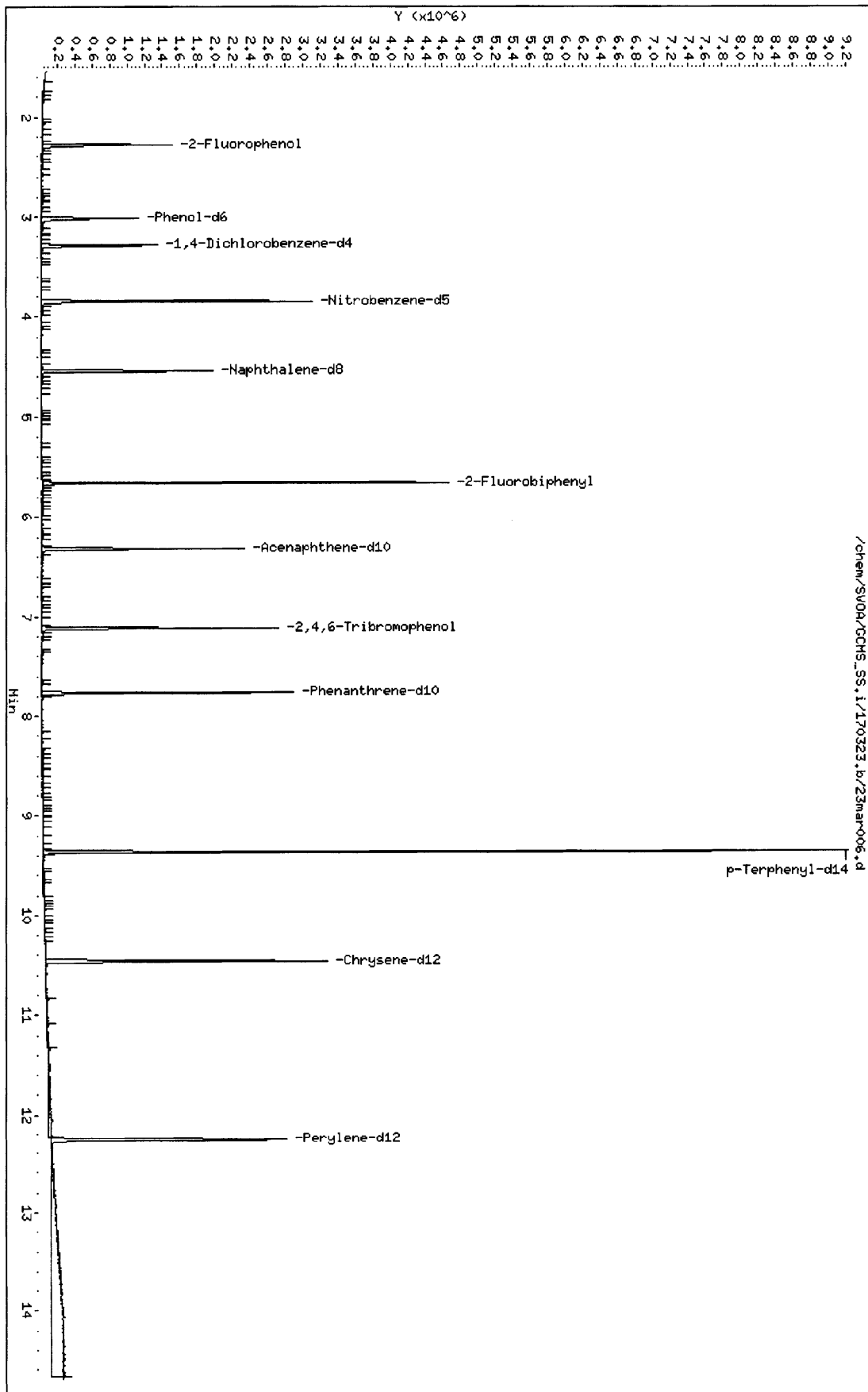
Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 12:37
 Date, time and analyst ID of latest file update: 23-Mar-2017 13:12 Unknown

Sample Name: MB 170322L01 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	0.000		0	N.D.	
64) Phenanthrene	(4)	0.000		0	N.D.	
65) Anthracene	(4)	0.000		0	N.D.	
66) Carbazole	(4)	0.000		0	N.D.	
67) Di-n-butyl Phthalate	(4)	0.000		0	N.D.	
68) Fluoranthene	(4)	0.000		0	N.D.	
69) Benzidine	(4)	0.000		0	N.D.	
70) Pyrene	(5)	0.000		0	N.D.	
72) Butyl Benzyl Phthalate	(5)	0.000		0	N.D.	
73) 3,3'-Dichlorobenzidine	(5)	0.000		0	N.D.	
74) Benzo (a) Anthracene	(5)	0.000		0	N.D.	
76) Chrysene	(5)	0.000		0	N.D.	
77) bis(2-Ethylhexyl) Phthalate	(5)	0.000		0	N.D.	
78) Di-n-octyl Phthalate	(5)	0.000		0	N.D.	
79) Benzo (b) Fluoranthene	(5)	0.000		0	N.D.	
80) Benzo (k) Fluoranthene	(5)	0.000		0	N.D.	
81) Benzo (a) Pyrene	(5)	0.000		0	N.D.	
83) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
84) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
85) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	

Data File: /chem/SV09/GCHS_SS.1/170323.b/23mar006.d
Date : 23-MAR-2017 12:50
Client ID:
Sample Info: MB 170322L01
Column phase:

Instrument: GCHS_SS.1
Operator: 923
Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar004.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 12:13 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 11:51
 Date, time and analyst ID of latest file update: 23-Mar-2017 12:36 n8cz

Sample Name: LCS 170322L01 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.291	152	182590	40.000	0.01
28)*Naphthalene-d8	(2)	4.543	136	752710	40.000	0.01
46)*Acenaphthene-d10	(3)	6.324	164	449252	40.000	0.01
63)*Phenanthrene-d10	(4)	7.773	188	1016464	40.000	0.01
75)*Chrysene-d12	(5)	10.464	240	1366425	40.000	0.02
82)*Perylene-d12	(6)	12.266	264	1378477	40.000	0.02
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.286	112	393313	68.129	0.01
SpikedAmount 100.000	Recovery =		68.129			
4)\$Phenol-d6	(1)	3.018	99	358473	40.511	0.01
SpikedAmount 100.000	Recovery =		40.511			
19)\$Nitrobenzene-d5	(2)	3.847	82	875895	87.230	0.01
SpikedAmount 100.000	Recovery =		87.230			
39)\$2-Fluorobiphenyl	(3)	5.655	172	1369523	91.144	0.01
SpikedAmount 100.000	Recovery =		91.144			
59)\$2,4,6-Tribromophenol	(4)	7.115	330	270504	109.161	0.01
SpikedAmount 100.000	Recovery =		109.161			
71)\$p-Terphenyl-d14	(5)	9.367	244	2715938	92.194	0.01
SpikedAmount 100.000	Recovery =		92.194			
Target Compounds						QValue
1) N-Nitrosodimethylamine	(1)	0.000		0	N.D.	
2) Pyridine	(1)	0.000		0	N.D.	
5) Phenol	(1)	3.029	94	345604	38.340	70
6) Aniline	(1)	0.000		0	N.D.	
7) bis(2-Chloroethyl) Ether	(1)	0.000		0	N.D.	
8) 2-Chlorophenol	(1)	3.141	128	550648	83.685	98
9) 1,3-Dichlorobenzene	(1)	0.000		0D	N.D.	
11) 1,4-Dichlorobenzene	(1)	3.307	146	512081	66.211	98
12) Benzyl alcohol	(1)	0.000		0	N.D.	
13) 1,2-Dichlorobenzene	(1)	0.000		0	N.D.	
14) 2-Methylphenol	(1)	0.000		0	N.D.	
15) bis(2-Chloroisopropyl) Ether	(1)	0.000		0	N.D.	
16) 3/4-Methylphenol	(1)	0.000		0	N.D.	
17) N-Nitroso-di-n-propylamine	(1)	3.714	70	494277	75.647	99
18) Hexachloroethane	(1)	0.000		0	N.D.	
20) Nitrobenzene	(2)	0.000		0	N.D.	

D = Compound was deleted.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar004.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 12:13 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 11:51
 Date, time and analyst ID of latest file update: 23-Mar-2017 12:36 n8cz

Sample Name: LCS 170322L01 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	0.000		0	N.D.	
22) 2-Nitrophenol	(2)	0.000		0	N.D.	
23) 2,4-Dimethylphenol	(2)	0.000		0	N.D.	
24) bis(2-Chloroethoxy) Methane	(2)	0.000		0	N.D.	
25) Benzoic acid	(2)	0.000		0	N.D.	
26) 2,4-Dichlorophenol	(2)	0.000		0	N.D.	
27) 1,2,4-Trichlorobenzene	(2)	4.505	180	479698	72.178	100
29) Naphthalene	(2)	4.564	128	1560799	77.427	100
30) 4-Chloroaniline	(2)	0.000		0	N.D.	
31) 2,6-Dichlorophenol	(2)	0.000		0	N.D.	
32) Hexachloro-1,3-Butadiene	(2)	0.000		0	N.D.	
33) 4-Chloro-3-methylphenol	(2)	5.185	107	593401	81.258	97
34) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
35) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
36) Hexachlorocyclopentadiene	(3)	0.000		0	N.D.	
37) 2,4,6-Trichlorophenol	(3)	0.000		0	N.D.	
38) 2,4,5-Trichlorophenol	(3)	0.000		0	N.D.	
40) 2-Chloronaphthalene	(3)	0.000		0	N.D.	
41) 2-Nitroaniline	(3)	0.000		0	N.D.	
42) Dimethyl Phthalate	(3)	6.110	163	1495783	91.813	99
44) Acenaphthylene	(3)	6.169	152	1915178	93.868	99
43) 2,6-Dinitrotoluene	(3)	0.000		0D	N.D.	
45) 3-Nitroaniline	(3)	0.000		0	N.D.	
47) Acenaphthene	(3)	6.356	153	1115161	92.184	99
48) 2,4-Dinitrophenol	(3)	0.000		0	N.D.	
49) 4-Nitrophenol	(3)	6.565	65	205131	48.857	90
50) Dibenzofuran	(3)	0.000		0	N.D.	
51) 2,4-Dinitrotoluene	(3)	6.565	165	492246	101.325	98
52) Diethyl Phthalate	(3)	0.000		0	N.D.	
53) Fluorene	(3)	6.853	166	1488010	95.603	99
54) 4-Chlorophenyl-phenyl Ether	(3)	0.000		0	N.D.	
55) 4-Nitroaniline	(3)	0.000		0	N.D.	
56) 4,6-Dinitro-2-methylphenol	(4)	0.000		0	N.D.	
57) N-Nitrosodiphenylamine	(4)	0.000		0D	N.D.	
58) Azobenzene	(4)	0.000		0	N.D.	
60) 4-Bromophenyl-phenyl Ether	(4)	0.000		0	N.D.	
61) Hexachlorobenzene	(4)	0.000		0	N.D.	

D = Compound was deleted.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar004.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 12:13 Analyst ID: 923

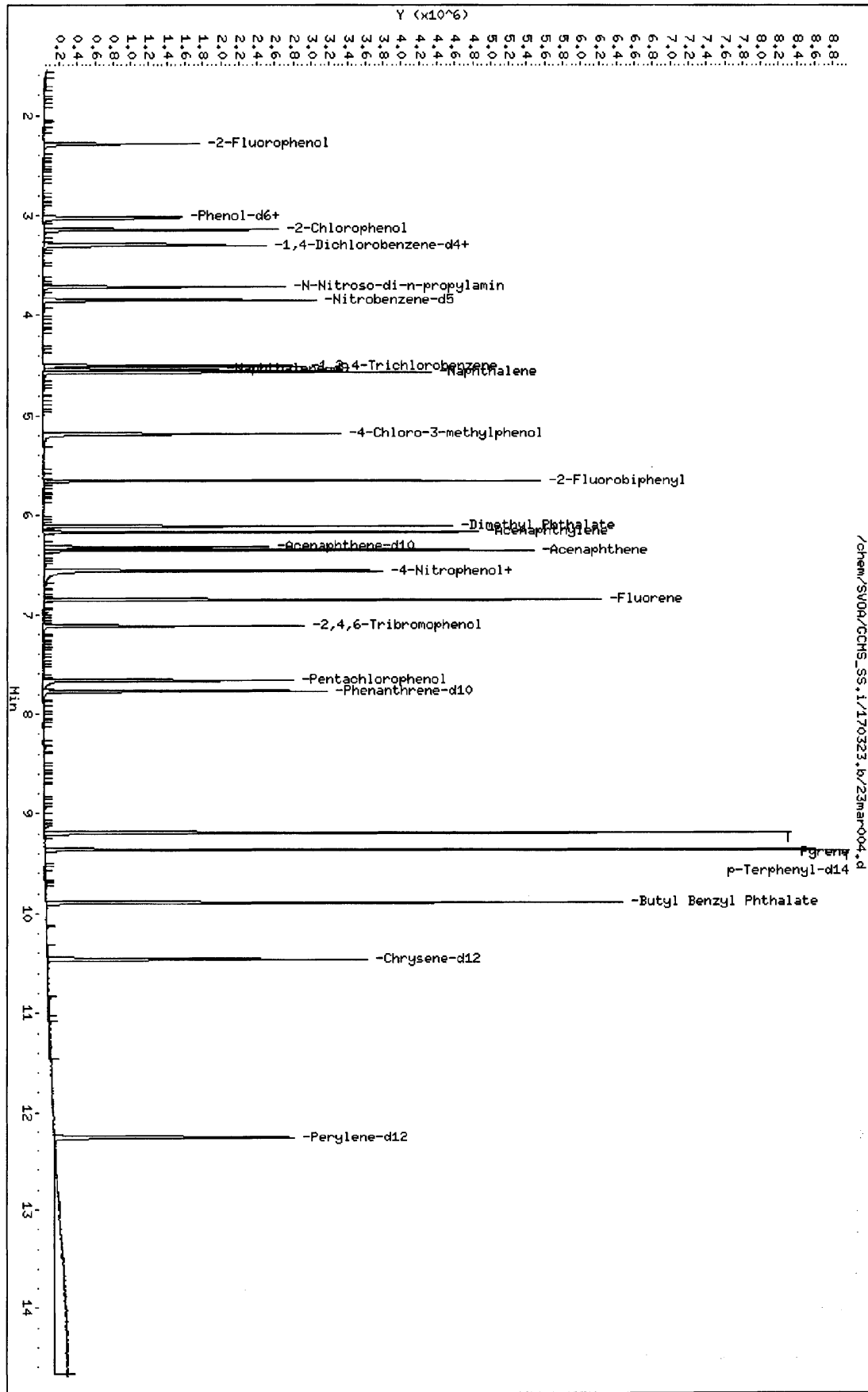
Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 11:51
 Date, time and analyst ID of latest file update: 23-Mar-2017 12:36 n8cz

Sample Name: LCS 170322L01 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.666	266	285262	65.699	99
64) Phenanthrene	(4)	0.000		0	N.D.	
65) Anthracene	(4)	0.000		0	N.D.	
66) Carbazole	(4)	0.000		0	N.D.	
67) Di-n-butyl Phthalate	(4)	0.000		0	N.D.	
68) Fluoranthene	(4)	0.000		0	N.D.	
69) Benzidine	(4)	0.000		0	N.D.	
70) Pyrene	(5)	9.196	202	3270258	88.737	99
72) Butyl Benzyl Phthalate	(5)	9.897	149	1431673	80.749	99
73) 3,3'-Dichlorobenzidine	(5)	0.000		0	N.D.	
74) Benzo (a) Anthracene	(5)	0.000		0	N.D.	
76) Chrysene	(5)	0.000		0	N.D.	
77) bis(2-Ethylhexyl) Phthalate	(5)	0.000		0	N.D.	
78) Di-n-octyl Phthalate	(5)	0.000		0	N.D.	
79) Benzo (b) Fluoranthene	(5)	0.000		0	N.D.	
80) Benzo (k) Fluoranthene	(5)	0.000		0	N.D.	
81) Benzo (a) Pyrene	(5)	0.000		0	N.D.	
83) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
84) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
85) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	

Data File: /chem/SV08/CCHS_SS.1/170323.b/23mar004.d
Date: 23-MAR-2017 12:13
Client ID:
Sample Info: LCS 170322L01
Column phase:

Instrument: CCHS_SS.1
Operator: 923
Column diameter: 0.00



/chem/SV08/CCHS_SS.1/170323.b/23mar004.d

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar005.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 12:31 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 12:37
 Date, time and analyst ID of latest file update: 23-Mar-2017 12:53 Unknown

Sample Name: LCSD 170322L01 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.286	152	178084	40.000	0.01
28)*Naphthalene-d8	(2)	4.543	136	727950	40.000	0.01
46)*Acenaphthene-d10	(3)	6.318	164	430899	40.000	0.01
63)*Phenanthrene-d10	(4)	7.773	188	981869	40.000	0.01
75)*Chrysene-d12	(5)	10.464	240	1305278	40.000	0.02
82)*Perylene-d12	(6)	12.261	264	1329528	40.000	0.02

System Monitoring Compounds

3)\$2-Fluorophenol	(1)	2.286	112	377697	67.080	0.01
SpikedAmount 100.000	Recovery =		67.080			
4)\$Phenol-d6	(1)	3.013	99	354662	41.094	0.01
SpikedAmount 100.000	Recovery =		41.094			
19)\$Nitrobenzene-d5	(2)	3.847	82	860171	88.578	0.01
SpikedAmount 100.000	Recovery =		88.578			
39)\$2-Fluorobiphenyl	(3)	5.655	172	1323156	91.809	0.01
SpikedAmount 100.000	Recovery =		91.809			
59)\$2,4,6-Tribromophenol	(4)	7.115	330	259210	108.289	0.01
SpikedAmount 100.000	Recovery =		108.289			
71)\$p-Terphenyl-d14	(5)	9.362	244	2587127	91.935	0.01
SpikedAmount 100.000	Recovery =		91.935			

Target Compounds

Target Compounds	I.S. Ref.	RT	QIon	Area	QValue
1) N-Nitrosodimethylamine	(1)	0.000		0	N.D.
2) Pyridine	(1)	0.000		0	N.D.
5) Phenol	(1)	3.024	94	336203	38.241 71
6) Aniline	(1)	0.000		0	N.D.
7) bis(2-Chloroethyl) Ether	(1)	0.000		0	N.D.
8) 2-Chlorophenol	(1)	3.141	128	547758	85.352 100
9) 1,3-Dichlorobenzene	(1)	3.302	146	507483	71.264 99
11) 1,4-Dichlorobenzene	(1)	3.302	146	507483	67.276 100
12) Benzyl alcohol	(1)	0.000		0	N.D.
13) 1,2-Dichlorobenzene	(1)	0.000		0	N.D.
14) 2-Methylphenol	(1)	0.000		0	N.D.
15) bis(2-Chloroisopropyl) Ether	(1)	0.000		0	N.D.
16) 3/4-Methylphenol	(1)	0.000		0	N.D.
17) N-Nitroso-di-n-propylamine	(1)	3.714	70	487615	76.515 99
18) Hexachloroethane	(1)	0.000		0	N.D.
20) Nitrobenzene	(2)	0.000		0	N.D.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar005.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 12:31 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 12:37
 Date, time and analyst ID of latest file update: 23-Mar-2017 12:53 Unknown

Sample Name: LCSD 170322L01 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	0.000		0	N.D.	
22) 2-Nitrophenol	(2)	0.000		0	N.D.	
23) 2,4-Dimethylphenol	(2)	0.000		0	N.D.	
24) bis(2-Chloroethoxy) Methane	(2)	0.000		0	N.D.	
25) Benzoic acid	(2)	0.000		0	N.D.	
26) 2,4-Dichlorophenol	(2)	0.000		0	N.D.	
27) 1,2,4-Trichlorobenzene	(2)	4.500	180	475176	73.929	99
29) Naphthalene	(2)	4.564	128	1509411	77.425	99
30) 4-Chloroaniline	(2)	0.000		0	N.D.	
31) 2,6-Dichlorophenol	(2)	0.000		0	N.D.	
32) Hexachloro-1,3-Butadiene	(2)	0.000		0	N.D.	
33) 4-Chloro-3-methylphenol	(2)	5.185	107	559642	79.242	98
34) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
35) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
36) Hexachlorocyclopentadiene	(3)	0.000		0	N.D.	
37) 2,4,6-Trichlorophenol	(3)	0.000		0	N.D.	
38) 2,4,5-Trichlorophenol	(3)	0.000		0	N.D.	
40) 2-Chloronaphthalene	(3)	0.000		0	N.D.	
41) 2-Nitroaniline	(3)	0.000		0	N.D.	
42) Dimethyl Phthalate	(3)	6.110	163	1439310	92.110	99
44) Acenaphthylene	(3)	6.169	152	1829016	93.463	99
43) 2,6-Dinitrotoluene	(3)	6.110	165	15515	4.811	43
45) 3-Nitroaniline	(3)	0.000		0	N.D.	
47) Acenaphthene	(3)	6.356	153	1092674	94.172	99
48) 2,4-Dinitrophenol	(3)	0.000		0	N.D.	
49) 4-Nitrophenol	(3)	6.559	65	181534	45.078	96
50) Dibenzofuran	(3)	0.000		0	N.D.	
51) 2,4-Dinitrotoluene	(3)	6.559	165	457577	98.200	95
52) Diethyl Phthalate	(3)	0.000		0	N.D.	
53) Fluorene	(3)	6.853	166	1394535	93.414	99
54) 4-Chlorophenyl-phenyl Ether	(3)	0.000		0	N.D.	
55) 4-Nitroaniline	(3)	0.000		0	N.D.	
56) 4,6-Dinitro-2-methylphenol	(4)	0.000		0	N.D.	
57) N-Nitrosodiphenylamine	(4)	0.000		0	N.D.	
58) Azobenzene	(4)	0.000		0	N.D.	
60) 4-Bromophenyl-phenyl Ether	(4)	0.000		0	N.D.	
61) Hexachlorobenzene	(4)	0.000		0	N.D.	

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar005.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 12:31 Analyst ID: 923

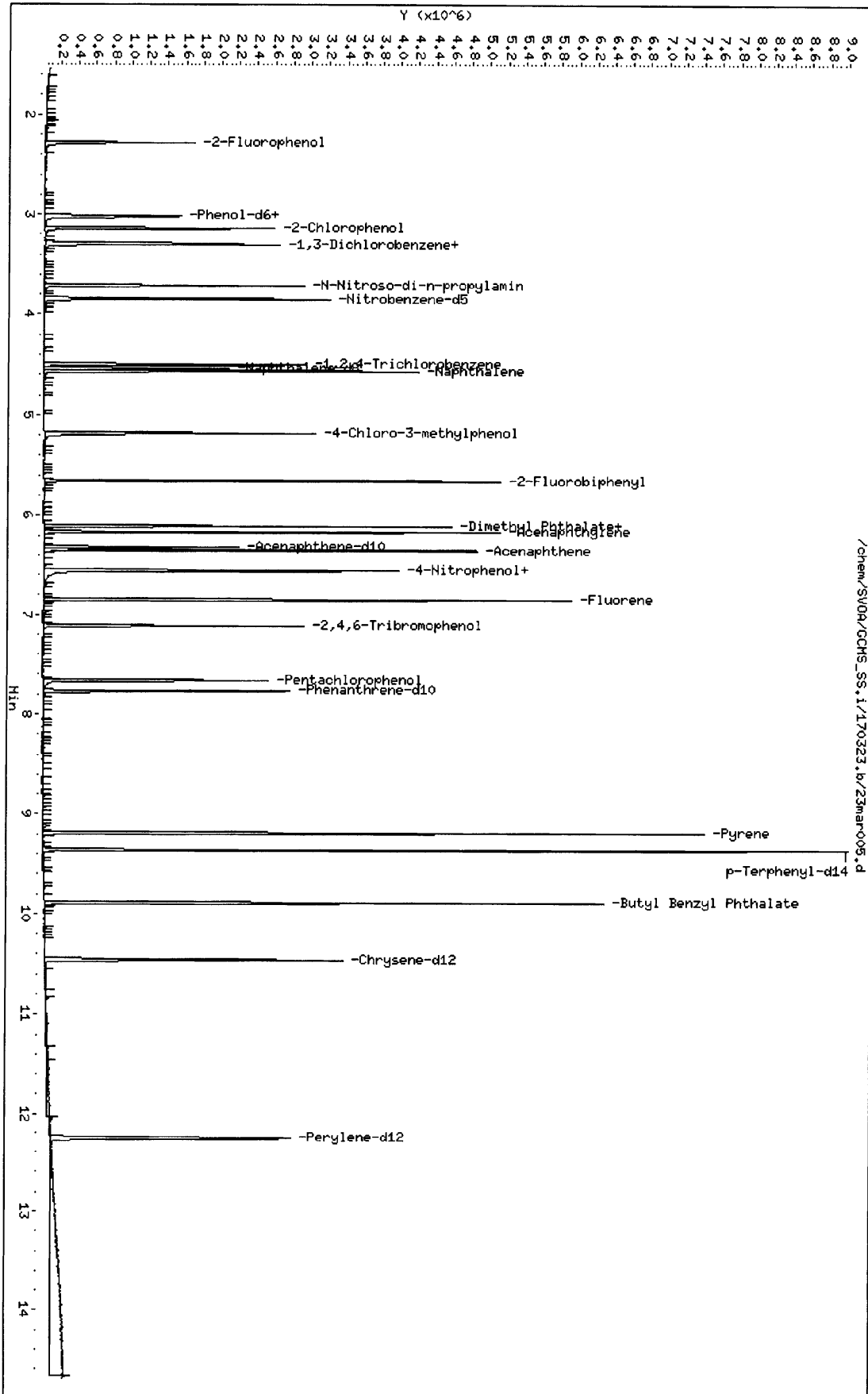
Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 12:37
 Date, time and analyst ID of latest file update: 23-Mar-2017 12:53 Unknown

Sample Name: LCSD 170322L01 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.666	266	271233	64.755	98
64) Phenanthrene	(4)	0.000		0	N.D.	
65) Anthracene	(4)	0.000		0	N.D.	
66) Carbazole	(4)	0.000		0	N.D.	
67) Di-n-butyl Phthalate	(4)	0.000		0	N.D.	
68) Fluoranthene	(4)	0.000		0	N.D.	
69) Benzidine	(4)	0.000		0	N.D.	
70) Pyrene	(5)	9.191	202	3121213	88.660	99
72) Butyl Benzyl Phthalate	(5)	9.891	149	1368387	80.794	99
73) 3,3'-Dichlorobenzidine	(5)	0.000		0	N.D.	
74) Benzo (a) Anthracene	(5)	0.000		0	N.D.	
76) Chrysene	(5)	0.000		0	N.D.	
77) bis(2-Ethylhexyl) Phthalate	(5)	0.000		0	N.D.	
78) Di-n-octyl Phthalate	(5)	0.000		0	N.D.	
79) Benzo (b) Fluoranthene	(5)	0.000		0	N.D.	
80) Benzo (k) Fluoranthene	(5)	0.000		0	N.D.	
81) Benzo (a) Pyrene	(5)	0.000		0	N.D.	
83) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
84) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
85) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	

Data File: /chem/SV08/GCHS_SS,1/170323,b/23mar-005.d
 Date : 23-MAR-2017 12:31
 Client ID:
 Sample Info: LCS01 170322L01
 Column phase:

Instrument: GCHS_SS,1
 Operator: 923
 Column diameter: 0.00



EPA 8270C Semi-Volatile Organics (Aqueous)

Continuing Calibration

CCV ASSOCIATION SUMMARY FOR METHOD: EPA 8270C

BATCH ID: 170323A027
INSTRUMENT: GC/MS SS

ANALYZED BY: 923

WORK ORDER: 095-01-001
MATRIX: Water

REVIEWED BY: 262
D/T REVIEWED: 2017-03-23 16:55

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
13270	Daily Calibration	2017-03-23 11:26	Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar002.d\23mar002.rr

WORK ORDER: 17-03-1523
MATRIX: Water

REVIEWED BY:
D/T REVIEWED:

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
2	IDW-W	2017-03-23 16:01	Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar016.d\23mar016.rr

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

CCV WORK ORDER: 095-01-001-13270-596
INSTRUMENT: GC/MS SS
BATCH ID: 1701311002
INITIAL: 170323A027
CCV:

ANALYZED BY: 923
D/T ANALYZED: 2017-01-31 13:44
INITIAL:
CCV: 2017-03-23 11:26
REVIEWED BY: 262
D/T REVIEWED: 2017-03-23 16:55

Data File: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar002.d\23mar002.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
N-Nitrosodimethylamine	Avg Resp		0.00	0.891	0.772			13	0-20	PASS
Aniline	Avg Resp		0.00	2.507	2.526			-1	0-20	PASS
Phenol	Avg Resp	C	0.00	1.975	2.236			-13	0-20	PASS
Bis(2-Chloroethyl) Ether	Avg Resp		0.00	1.564	1.516			3	0-20	PASS
2-Chlorophenol	Avg Resp		0.00	1.441	1.450			-1	0-20	PASS
1,3-Dichlorobenzene	Avg Resp		0.00	1.599	1.610			-1	0-20	PASS
1,4-Dichlorobenzene	Avg Resp	C	0.00	1.694	1.662			2	0-20	PASS
Benzyl Alcohol	Avg Resp		0.00	1.697	1.611			5	0-20	PASS
1,2-Dichlorobenzene	Avg Resp		0.00	1.600	1.595			0	0-20	PASS
2-Methylphenol	Avg Resp		0.00	1.426	1.420			0	0-20	PASS
Bis(2-Chloroisopropyl) Ether	Avg Resp		0.00	2.409	2.398			0	0-20	PASS
3/4-Methylphenol	Avg Resp		0.00	1.643	1.644			0	0-20	PASS
N-Nitroso-di-n-propylamine	Avg Resp	S	0.05	1.431	1.345			6	0-20	PASS
Hexachloroethane	Avg Resp		0.00	0.675	0.634			6	0-20	PASS
Nitrobenzene	Avg Resp		0.00	0.486	0.466			4	0-20	PASS
Isophorone	Avg Resp		0.00	0.908	0.852			6	0-20	PASS
2-Nitrophenol	Avg Resp	C	0.00	0.170	0.201			-18	0-20	PASS
2,4-Dimethylphenol	Avg Resp		0.00	0.413	0.407			1	0-20	PASS
Benzoic Acid	LR - Equal					80.00	85.161	-6	0-20	PASS
Bis(2-Chloroethoxy) Methane	Avg Resp		0.00	0.475	0.467			2	0-20	PASS
2,4-Dichlorophenol	Avg Resp	C	0.00	0.321	0.335			-4	0-20	PASS
Carbazole	Avg Resp		0.00	1.086	1.062			2	0-20	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

CCV WORK ORDER: 095-01-001-13270-596
INSTRUMENT: GC/MS SS
BATCH ID: 170131I002
INITIAL: 170323A027
CCV:

ANALYZED BY: 923
D/T ANALYZED: 2017-01-31 13:44
INITIAL: 2017-03-23 11:26
CCV: 262
REVIEWED BY: 2017-03-23 16:55
D/T REVIEWED:

Data File: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar002.d\23mar002.r

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Naphthalene	Avg Resp		0.00	1.071	1.093			-2	0-20	PASS
4-Chloroaniline	Avg Resp		0.00	0.477	0.473			1	0-20	PASS
Hexachloro-1,3-Butadiene	C		0.00	0.227	0.213			6	0-20	PASS
4-Chloro-3-Methylphenol	C		0.00	0.388	0.376			3	0-20	PASS
2-Methylnaphthalene	Avg Resp		0.00	0.706	0.714			-1	0-20	PASS
Hexachlorocyclopentadiene	S		0.05	0.374	0.379			-1	0-20	PASS
2,4,6-Trichlorophenol	C		0.00	0.364	0.386			-6	0-20	PASS
2,4,5-Trichlorophenol	Avg Resp		0.00	0.409	0.423			-3	0-20	PASS
2-Chloronaphthalene	Avg Resp		0.00	1.112	1.105			1	0-20	PASS
2-Nitroaniline	Avg Resp		0.00	0.428	0.440			-3	0-20	PASS
Dimethyl Phthalate	Avg Resp		0.00	1.451	1.349			7	0-20	PASS
Acenaphthylene	Avg Resp		0.00	1.817	1.799			1	0-20	PASS
3-Nitroaniline	Avg Resp		0.00	0.321	0.341			-6	0-20	PASS
Acenaphthene	C		0.00	1.077	1.034			4	0-20	PASS
2,4-Dinitrophenol	S	LR - Equal				80.00	75.532	6	0-20	PASS
4-Nitrophenol	S	Avg Resp	0.05	0.374	0.367			2	0-20	PASS
Dibenzofuran	Avg Resp		0.00	1.676	1.648			2	0-20	PASS
2,4-Dinitrotoluene	Avg Resp		0.00	0.433	0.438			-1	0-20	PASS
2,6-Dinitrotoluene	Avg Resp		0.00	0.299	0.302			-1	0-20	PASS
Diethyl Phthalate	Avg Resp		0.00	1.536	1.406			8	0-20	PASS
4-Chlorophenyl-Phenyl Ether	Avg Resp		0.00	0.736	0.720			2	0-20	PASS
Fluorene	Avg Resp		0.00	1.386	1.374			1	0-20	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

CCV WORK ORDER: 095-01-001-13270-596
INSTRUMENT: GC/MS SS
BATCH ID: 1701311002
INITIAL: 170323A027
CCV:

ANALYZED BY: 923
D/T ANALYZED: 2017-01-31 13:44
INITIAL: 2017-03-23 11:26
CCV: 262
REVIEWED BY: 2017-03-23 16:55
D/T REVIEWED:

Data File: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar002.d\23mar002.ir

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
4-Nitroaniline	Avg Resp		0.00	0.347	0.361			-4	0-20	PASS
Azobenzene	Avg Resp		0.00	0.851	0.775			9	0-20	PASS
4,6-Dinitro-2-Methylphenol	LR - Equal					80.00	89.438	-12	0-20	PASS
N-Nitrosodiphenylamine	C Avg Resp		0.05	0.534	0.533			0	0-20	PASS
4-Bromophenyl-Phenyl Ether	Avg Resp		0.00	0.229	0.230			0	0-20	PASS
Hexachlorobenzene	Avg Resp		0.00	0.099	0.084			15	0-20	PASS
Pentachlorophenol	C LR - Equal					80.00	65.040	19	0-20	PASS
Phenanthrene	Avg Resp		0.00	1.104	1.103			0	0-20	PASS
Anthracene	Avg Resp		0.00	1.157	1.171			-1	0-20	PASS
Di-n-Butyl Phthalate	Avg Resp		0.00	1.384	1.333			4	0-20	PASS
Fluoranthene	C Avg Resp		0.00	1.382	1.407			-2	0-20	PASS
Benzidine	Avg Resp		0.00	0.471	0.474			-1	0-20	PASS
Pyrene	Avg Resp		0.00	1.079	1.137			-5	0-20	PASS
Pyridine	Avg Resp		0.00	1.270	1.158			9	0-20	PASS
Butyl Benzyl Phthalate	LR - Equal					80.00	80.156	0	0-20	PASS
3,3'-Dichlorobenzidine	LR - Equal					80.00	83.120	-4	0-20	PASS
Benzo (a) Anthracene	Avg Resp		0.00	1.171	1.220			-4	0-20	PASS
Bis(2-Ethylhexyl) Phthalate	LR - Equal					80.00	78.127	2	0-20	PASS
Chrysene	Avg Resp		0.00	1.113	1.104			1	0-20	PASS
Di-n-Octyl Phthalate	C LR - Equal					80.00	78.198	2	0-20	PASS
Benzo (k) Fluoranthene	Avg Resp		0.00	1.288	1.213			6	0-20	PASS
Benzo (b) Fluoranthene	Avg Resp		0.00	1.253	1.162			7	0-20	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

CCV WORK ORDER: 095-01-001-13270-596
INSTRUMENT: GC/MS SS
BATCH ID: 170131002
INITIAL: 170323A027
CCV:

ANALYZED BY: 923
D/T ANALYZED: 2017-01-31 13:44
INITIAL: 2017-03-23 11:26
CCV: 262
REVIEWED BY: 2017-03-23 16:55
D/T REVIEWED:

Data File: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar002.d\23mar002.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.200	1.094			9	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	0.991	1.013			-2	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.239	1.256			-1	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.026	1.072			-4	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.708	0.719			-2	0-20	PASS
1,2,4-Trichlorobenzene		Avg Resp	0.00	0.353	0.359			-2	0-20	PASS
2,6-Dichlorophenol		Avg Resp	0.00	0.326	0.335			-3	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

INTERNAL STANDARD COMPOUNDS AREA REPORT
FOR METHOD: EPA 8270C

ICAL BATCH ID: 170131I002

CCV BATCH ID: 170323A027

ICAL MIDPOINT

SAMPLE ID: 095-01-001-13196

D/T ANALYZED: 2017-01-31 12:02

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170131\31jan004.d\31jan004.rr

COMPOUND	AREA	RETENTION TIME
1,4-Dichlorobenzene-d4	163067	3.36
Naphthalene-d8	690111	4.61
Acenaphthene-d10	511464	6.39
Phenanthrene-d10	1013507	7.84
Chrysene-d12	1314669	10.55
Perylene-d12	1426516	12.36

ICV

SAMPLE ID 095-01-001-13196

D/T ANALYZED: 2017-01-31 15:06

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170131\31jan011.d\31jan011.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	192138	81534	326134	3.36	PASS
Naphthalene-d8	810698	345056	1380222	4.62	PASS
Acenaphthene-d10	581030	255732	1022928	6.40	PASS
Phenanthrene-d10	1146737	506754	2027014	7.85	PASS
Chrysene-d12	1520907	657334	2629338	10.56	PASS
Perylene-d12	1569285	713258	2853032	12.38	PASS

CCV

SAMPLE ID 095-01-001-13270

D/T ANALYZED: 2017-03-23 11:26

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar002.d\23mar002.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	204482	81534	326134	3.30	PASS
Naphthalene-d8	847765	345056	1380222	4.55	PASS
Acenaphthene-d10	599311	255732	1022928	6.33	PASS
Phenanthrene-d10	1162714	506754	2027014	7.78	PASS
Chrysene-d12	1469606	657334	2629338	10.48	PASS
Perylene-d12	1384585	713258	2853032	12.28	PASS

LCS

SAMPLE ID 095-01-003-4349

D/T ANALYZED: 2017-03-23 12:13

DATA FILE: Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar004.d\23mar004.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	182590	102241	408964	3.29	PASS
Naphthalene-d8	752710	423882	1695530	4.54	PASS
Acenaphthene-d10	449252	299656	1198622	6.32	PASS
Phenanthrene-d10	1016464	581357	2325428	7.77	PASS
Chrysene-d12	1366425	734803	2939212	10.46	PASS
Perylene-d12	1378477	692292	2769170	12.27	PASS

LCD**SAMPLE ID** 095-01-003-4349**D/T ANALYZED:** 2017-03-23 12:31**DATA FILE:** Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar005.d\23mar005.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	178084	102241	408964	3.29	PASS
Naphthalene-d8	727950	423882	1695530	4.54	PASS
Acenaphthene-d10	430899	299656	1198622	6.32	PASS
Phenanthrene-d10	981869	581357	2325428	7.77	PASS
Chrysene-d12	1305278	734803	2939212	10.46	PASS
Perylene-d12	1329528	692292	2769170	12.26	PASS

MB**SAMPLE ID** 095-01-003-4349**D/T ANALYZED:** 2017-03-23 12:50**DATA FILE:** Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar006.d\23mar006.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	170847	102241	408964	3.29	PASS
Naphthalene-d8	689776	423882	1695530	4.54	PASS
Acenaphthene-d10	405865	299656	1198622	6.32	PASS
Phenanthrene-d10	912715	581357	2325428	7.77	PASS
Chrysene-d12	1241536	734803	2939212	10.46	PASS
Perylene-d12	1288124	692292	2769170	12.26	PASS

CS**SAMPLE ID** 17-03-1523-2**D/T ANALYZED:** 2017-03-23 16:01**DATA FILE:** Y:\GCMS_SS\GCMS_SS_data\2017\170323\23mar016.d\23mar016.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	245462	102241	408964	3.29	PASS
Naphthalene-d8	1084864	423882	1695530	4.54	PASS
Acenaphthene-d10	619777	299656	1198622	6.32	PASS
Phenanthrene-d10	1353874	581357	2325428	7.77	PASS
Chrysene-d12	1874506	734803	2939212	10.48	PASS
Perylene-d12	1892578	692292	2769170	12.30	PASS

Notes:

For all samples including QC, all internal standard area responses must be within 50% to 200% of the mean area response in the initial calibration.

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar002.d
 Report Date: 03/23/2017 12:20

Euofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_SS.i Injection Date and Time: 23-MAR-2017 11:26
 Sample Name: CCV S110816J 80 PPM 8270 Initial Calibration Date(s): 22-MAR-2016 31-JAN-2017
 Sublist used: all.sub Initial Calibration Time(s): 10:03 13:44
 Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift/Drift	Max%D	Curve Type
N-Nitrosodimethylamine	0.891	0.772	0.00	13	20	Averaged
Pyridine	1.270	1.158	0.00	9	20	Averaged
Phenol	1.975	2.236	0.00	-13	20	Averaged
Aniline	2.507	2.526	0.00	-1	20	Averaged
bis(2-Chloroethyl) Ether	1.564	1.516	0.00	3	20	Averaged
2-Chlorophenol	1.441	1.450	0.00	-1	20	Averaged
1,3-Dichlorobenzene	1.599	1.610	0.00	-1	20	Averaged
1,4-Dichlorobenzene	1.694	1.662	0.00	2	20	Averaged
Benzyl alcohol	1.697	1.611	0.00	5	20	Averaged
1,2-Dichlorobenzene	1.600	1.595	0.00	0	20	Averaged
2-Methylphenol	1.426	1.420	0.00	0	20	Averaged
bis(2-Chloroisopropyl) Ether	2.409	2.398	0.00	0	20	Averaged
3/4-Methylphenol	1.643	1.644	0.00	0	20	Averaged
N-Nitroso-di-n-propylamine	1.431	1.345	0.05	6	20	Averaged
Hexachloroethane	0.675	0.634	0.00	6	20	Averaged
Nitrobenzene	0.486	0.466	0.00	4	20	Averaged
Isophorone	0.908	0.852	0.00	6	20	Averaged
2-Nitrophenol	0.170	0.201	0.00	-18	20	Averaged
2,4-Dimethylphenol	0.413	0.407	0.00	1	20	Averaged
bis(2-Chloroethoxy) Methane	0.475	0.467	0.00	2	20	Averaged
Benzoic acid	80.000	85.161	0.00	-6	20	Linear
2,4-Dichlorophenol	0.321	0.335	0.00	-4	20	Averaged
1,2,4-Trichlorobenzene	0.353	0.359	0.00	-2	20	Averaged
Naphthalene	1.071	1.093	0.00	-2	20	Averaged
4-Chloroaniline	0.477	0.473	0.00	1	20	Averaged
2,6-Dichlorophenol	0.326	0.335	0.00	-3	20	Averaged
Hexachloro-1,3-Butadiene	0.227	0.213	0.00	6	20	Averaged
4-Chloro-3-methylphenol	0.388	0.376	0.00	3	20	Averaged
2-Methylnaphthalene	0.706	0.714	0.00	-1	20	Averaged
1-Methylnaphthalene	0.708	0.719	0.00	-2	20	Averaged
Hexachlorocyclopentadiene	0.374	0.379	0.05	-1	20	Averaged
2,4,6-Trichlorophenol	0.364	0.386	0.00	-6	20	Averaged
2,4,5-Trichlorophenol	0.409	0.423	0.00	-3	20	Averaged
2-Chloronaphthalene	1.112	1.105	0.00	1	20	Averaged
2-Nitroaniline	0.428	0.440	0.00	-3	20	Averaged
Dimethyl Phthalate	1.451	1.349	0.00	7	20	Averaged
Acenaphthylene	1.817	1.799	0.00	1	20	Averaged
2,6-Dinitrotoluene	0.299	0.302	0.00	-1	20	Averaged
3-Nitroaniline	0.321	0.341	0.00	-6	20	Averaged
Acenaphthene	1.077	1.034	0.00	4	20	Averaged
2,4-Dinitrophenol	80.000	75.532	0.05	6	20	Linear
4-Nitrophenol	0.374	0.367	0.05	2	20	Averaged
Dibenzofuran	1.676	1.648	0.00	2	20	Averaged
2,4-Dinitrotoluene	0.433	0.438	0.00	-1	20	Averaged
Diethyl Phthalate	1.536	1.406	0.00	8	20	Averaged
Fluorene	1.386	1.374	0.00	1	20	Averaged
4-Chlorophenyl-phenyl Ether	0.736	0.720	0.00	2	20	Averaged
4-Nitroaniline	0.347	0.361	0.00	-4	20	Averaged

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar002.d
 Report Date: 03/23/2017 12:20

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_SS.i Injection Date and Time: 23-MAR-2017 11:26
 Sample Name: CCV S110816J 80 PPM 8270 Initial Calibration Date(s): 22-MAR-2016 31-JAN-2017
 Sublist used: all.sub Initial Calibration Time(s): 10:03 13:44
 Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
4,6-Dinitro-2-methylphenol	80.000	89.438	0.00	-12	20	Linear
N-Nitrosodiphenylamine	0.534	0.533	0.00	0	20	Averaged
Azobenzene	0.851	0.775	0.00	9	20	Averaged
4-Bromophenyl-phenyl Ether	0.229	0.230	0.00	0	20	Averaged
Hexachlorobenzene	0.099	0.084	0.00	15	20	Averaged
Pentachlorophenol	80.000	65.040	0.00	19	20	Linear
Phenanthrene	1.104	1.103	0.00	0	20	Averaged
Anthracene	1.157	1.171	0.00	-1	20	Averaged
Carbazole	1.086	1.062	0.00	2	20	Averaged
Di-n-butyl Phthalate	1.384	1.333	0.00	4	20	Averaged
Fluoranthene	1.382	1.407	0.00	-2	20	Averaged
Benzidine	0.471	0.474	0.00	-1	20	Averaged
Pyrene	1.079	1.137	0.00	-5	20	Averaged
Butyl Benzyl Phthalate	80.000	80.156	0.00	0	20	Linear
3,3'-Dichlorobenzidine	80.000	83.120	0.00	-4	20	Linear
Benzo (a) Anthracene	1.171	1.220	0.00	-4	20	Averaged
Chrysene	1.113	1.104	0.00	1	20	Averaged
bis(2-Ethylhexyl) Phthalate	80.000	78.127	0.00	2	20	Linear
Di-n-octyl Phthalate	80.000	78.198	0.00	2	20	Linear
Benzo (b) Fluoranthene	1.253	1.162	0.00	7	20	Averaged
Benzo (k) Fluoranthene	1.288	1.213	0.00	6	20	Averaged
Benzo (a) Pyrene	1.200	1.094	0.00	9	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.239	1.256	0.00	-1	20	Averaged
Dibenz (a,h) Anthracene	1.026	1.072	0.00	-4	20	Averaged
Benzo (g,h,i) Perylene	0.991	1.013	0.00	-2	20	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2-Fluorophenol	1.265	1.313	0.00	-4	20	Averaged
Phenol-d6	1.939	1.983	0.00	-2	20	Averaged
Nitrobenzene-d5	0.534	0.523	0.00	2	20	Averaged
2-Fluorobiphenyl	1.338	1.374	0.00	-3	20	Averaged
2,4,6-Tribromophenol	0.098	0.109	0.00	-11	20	Averaged
p-Terphenyl-d14	0.862	0.927	0.00	-8	20	Averaged

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar002.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 11:26 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 11:51
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:51 n8cz

Sample Name: CCV S110816J 80 PPM 8270 Misc Info: 170323A027
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column Amount	
	Ref.	RT			(ug/L)	DEV(Min)
=====						
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.296	152	204482	40.000	0.00
28)*Naphthalene-d8	(2)	4.553	136	847765	40.000	0.00
46)*Acenaphthene-d10	(3)	6.329	164	599311	40.000	0.00
63)*Phenanthrene-d10	(4)	7.779	188	1162714	40.000	0.00
75)*Chrysene-d12	(5)	10.480	240	1469606	40.000	0.00
82)*Perylene-d12	(6)	12.282	264	1384585	40.000	0.00
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.291	112	537010	83.062	0.00
SpikedAmount 80.000			Recovery =	0.000		
4)\$Phenol-d6	(1)	3.024	99	811073	81.845	0.00
SpikedAmount 80.000			Recovery =	0.000		
19)\$Nitrobenzene-d5	(2)	3.858	82	886892	78.422	0.00
SpikedAmount 80.000			Recovery =	0.000		
39)\$2-Fluorobiphenyl	(3)	5.666	172	1646705	82.151	0.00
SpikedAmount 80.000			Recovery =	0.000		
59)\$2,4,6-Tribromophenol	(4)	7.126	330	253236	89.338	0.00
SpikedAmount 80.000			Recovery =	0.000		
71)\$p-Terphenyl-d14	(5)	9.373	244	2724088	85.978	0.00
SpikedAmount 80.000			Recovery =	0.000		
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.612	74	315628	69.276	100
2) Pyridine	(1)	1.633	52	473493	72.959	100
5) Phenol	(1)	3.034	94	914641	90.604	100
6) Aniline	(1)	3.034	93	1033181	80.613	100
7) bis(2-Chloroethyl) Ether	(1)	3.072	93	619796	77.535	100
8) 2-Chlorophenol	(1)	3.147	128	593067	80.482	100
9) 1,3-Dichlorobenzene	(1)	3.264	146	658404	80.522	100
11) 1,4-Dichlorobenzene	(1)	3.307	146	679566	78.459	100
12) Benzyl alcohol	(1)	3.446	79	658728	75.953	100
13) 1,2-Dichlorobenzene	(1)	3.489	146	652477	79.793	100
14) 2-Methylphenol	(1)	3.585	108	580701	79.640	100
15) bis(2-Chloroisopropyl) Ether	(1)	3.585	45	980717	79.640	100
16) 3/4-Methylphenol	(1)	3.735	107	1344379	160.103	100
17) N-Nitroso-di-n-propylamine	(1)	3.724	70	550078	75.173	100
18) Hexachloroethane	(1)	3.778	117	259291	75.196	100
20) Nitrobenzene	(2)	3.874	77	790430	76.744	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar002.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 11:26 Analyst ID: 923

Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 11:51
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:51 n8cz

Sample Name: CCV S110816J 80 PPM 8270 Misc Info: 170323A027
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.099	82	1444057	75.038	100
22) 2-Nitrophenol	(2)	4.190	139	341104	94.594	100
23) 2,4-Dimethylphenol	(2)	4.254	107	690816	78.889	100
24) bis(2-Chloroethoxy) Methane	(2)	4.334	93	791202	78.652	100
25) Benzoic acid	(2)	4.430	105	530668	85.161	100
26) 2,4-Dichlorophenol	(2)	4.671	162	567550	83.517	100
27) 1,2,4-Trichlorobenzene	(2)	4.511	180	608167	81.247	100
29) Naphthalene	(2)	4.569	128	1853756	81.649	100
30) 4-Chloroaniline	(2)	4.660	127	801469	79.286	100
31) 2,6-Dichlorophenol	(2)	4.671	162	567550	82.213	100
32) Hexachloro-1,3-Butadiene	(2)	4.751	225	361935	75.340	100
33) 4-Chloro-3-methylphenol	(2)	5.190	107	638074	77.579	100
34) 2-Methylnaphthalene	(2)	5.270	142	1210203	80.913	100
35) 1-Methylnaphthalene	(2)	5.377	142	1219220	81.243	100
36) Hexachlorocyclopentadiene	(3)	5.495	237	454445	81.006	100
37) 2,4,6-Trichlorophenol	(3)	5.596	196	463243	84.849	100
38) 2,4,5-Trichlorophenol	(3)	5.661	196	507206	82.694	100
40) 2-Chloronaphthalene	(3)	5.757	162	1324763	79.493	100
41) 2-Nitroaniline	(3)	5.907	65	527291	82.315	100
42) Dimethyl Phthalate	(3)	6.121	163	1616599	74.384	100
44) Acenaphthylene	(3)	6.179	152	2156441	79.229	100
43) 2,6-Dinitrotoluene	(3)	6.185	165	361477	80.586	100
45) 3-Nitroaniline	(3)	6.329	138	408966	85.003	100
47) Acenaphthene	(3)	6.361	153	1239399	76.801	100
48) 2,4-Dinitrophenol	(3)	6.425	184	205925	75.532	100
49) 4-Nitrophenol	(3)	6.570	65	439308	78.433	100
50) Dibenzofuran	(3)	6.522	168	1975744	78.677	100
51) 2,4-Dinitrotoluene	(3)	6.570	165	524774	80.974	100
52) Diethyl Phthalate	(3)	6.821	149	1684935	73.218	100
53) Fluorene	(3)	6.864	166	1647188	79.332	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.864	204	863246	78.256	100
55) 4-Nitroaniline	(3)	6.950	138	432933	83.227	100
56) 4,6-Dinitro-2-methylphenol	(4)	6.971	198	351979	89.438	100
57) N-Nitrosodiphenylamine	(4)	6.998	169	1239966	79.856	100
58) Azobenzene	(4)	7.019	77	1801264	72.831	100
60) 4-Bromophenyl-phenyl Ether	(4)	7.345	248	534318	80.135	100
61) Hexachlorobenzene	(4)	7.479	142	194575	67.766	100

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_SS.i/170323.b/23mar002.d Instrument ID: GCMS_SS.i
 Injection date and time: 23-MAR-2017 11:26 Analyst ID: 923

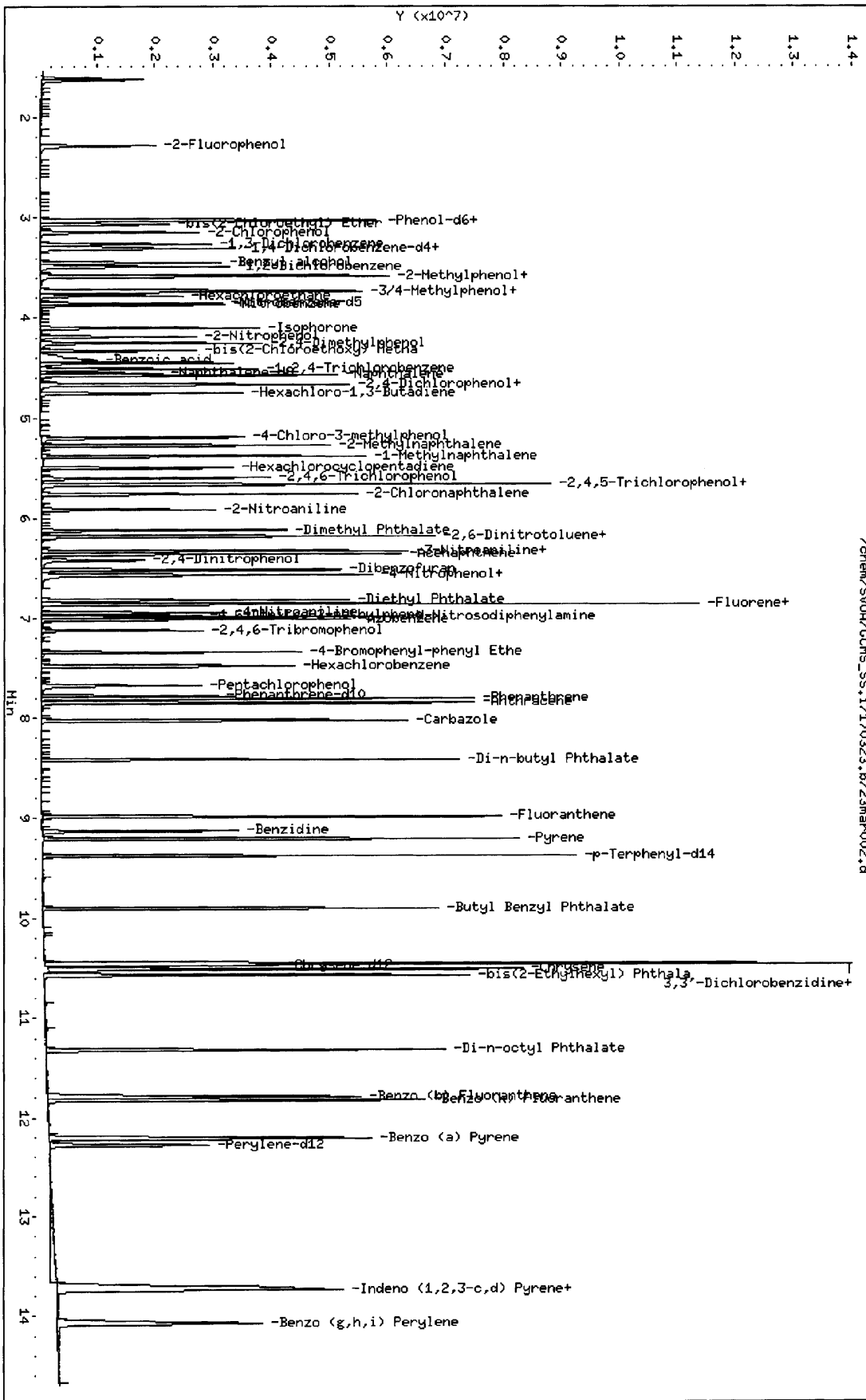
Method used: /chem/SVOA/GCMS_SS.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 11:51
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:51 n8cz

Sample Name: CCV S110816J 80 PPM 8270 Misc Info: 170323A027
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.677	266	322732	65.040	100
64) Phenanthrene	(4)	7.805	178	2564861	79.955	100
65) Anthracene	(4)	7.848	178	2723032	80.949	100
66) Carbazole	(4)	8.025	167	2469267	78.210	100
67) Di-n-butyl Phthalate	(4)	8.420	149	3100936	77.089	100
68) Fluoranthene	(4)	8.982	202	3272014	81.446	100
69) Benzidine	(4)	9.127	184	1101186	80.504	100
70) Pyrene	(5)	9.207	202	3341067	84.293	100
72) Butyl Benzyl Phthalate	(5)	9.907	149	1528207	80.156	100
73) 3,3'-Dichlorobenzidine	(5)	10.458	252	1419454	83.120	100
74) Benzo (a) Anthracene	(5)	10.458	228	3586673	83.401	100
76) Chrysene	(5)	10.512	228	3246204	79.351	100
77) bis(2-Ethylhexyl) Phthalate	(5)	10.571	149	2030225	78.127	100
78) Di-n-octyl Phthalate	(5)	11.325	149	3748620	78.198	100
79) Benzo (b) Fluoranthene	(5)	11.790	252	3416246	74.208	100
80) Benzo (k) Fluoranthene	(5)	11.828	252	3565293	75.345	100
81) Benzo (a) Pyrene	(5)	12.213	252	3216201	72.951	100
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.716	276	3478324	81.127	100
84) Dibenz (a,h) Anthracene	(6)	13.742	278	2967893	83.591	100
85) Benzo (g,h,i) Perylene	(6)	14.079	276	2805875	81.781	100

Date File: /chem/SV09/GCHS_SS.1/170323.b/23mar002.d
Date : 23-MAR-2017 11:26
Client ID:
Sample Info: CCV S110816J 80 PPM 8270
Column phase:

Instrument: GCHS_SS.1
Operator: 923
Column diameter: 0.00



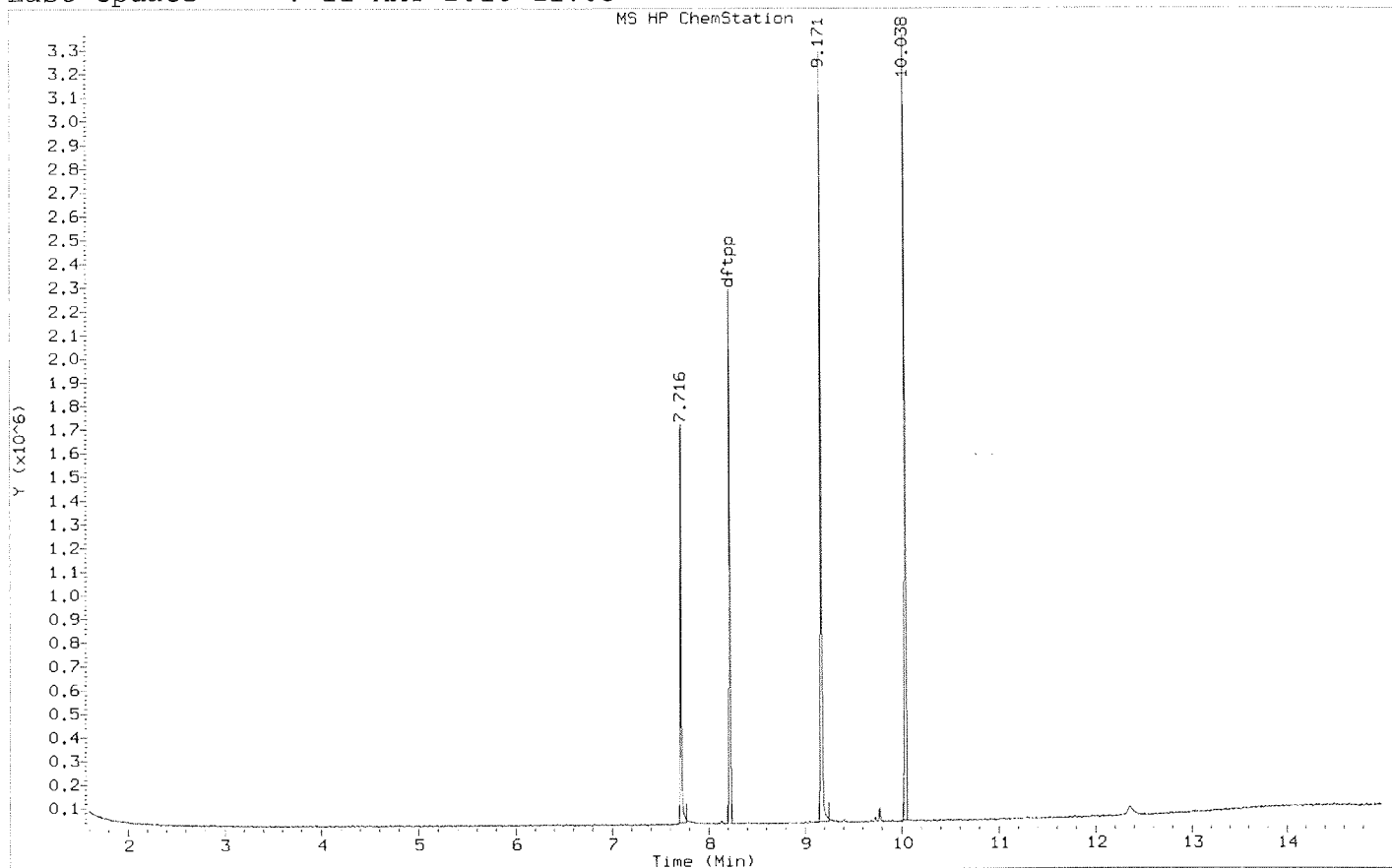
EPA 8270C
Semi-Volatile Organics
(Aqueous)

Tuning Reports

DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Tue Jan 31 11:01:19 2017

Data File : /chem/SVOA/GCMS_SS.i/170131.b/31jan001.d
 ALS Vial : 1
 Acq on : 31-JAN-2017 10:41 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_SS
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Last Update : 11-MAY-2016 11:05

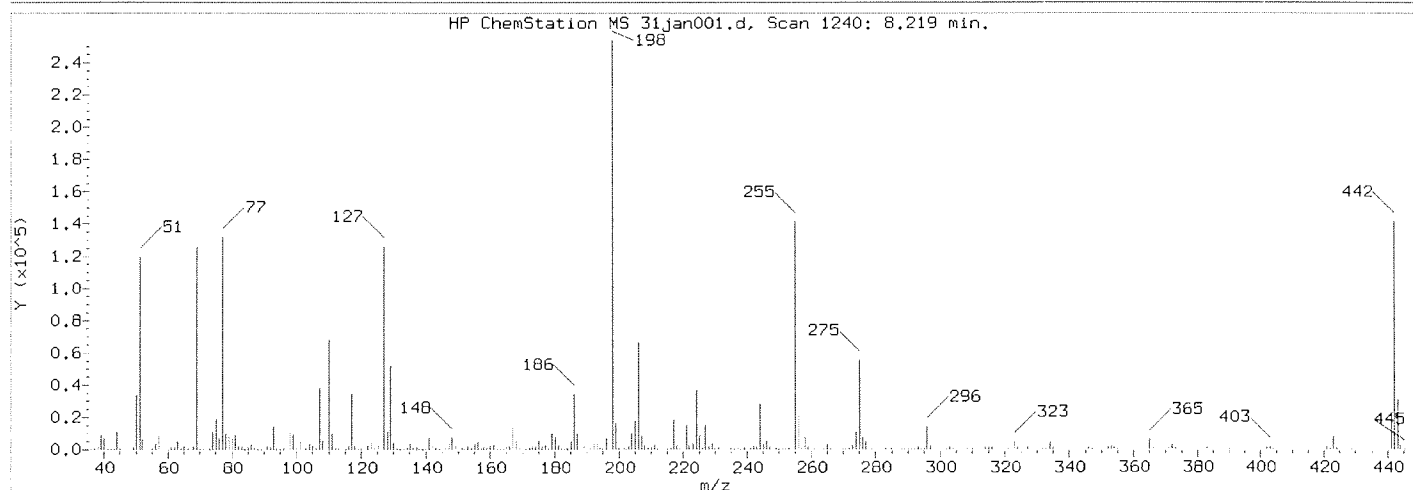
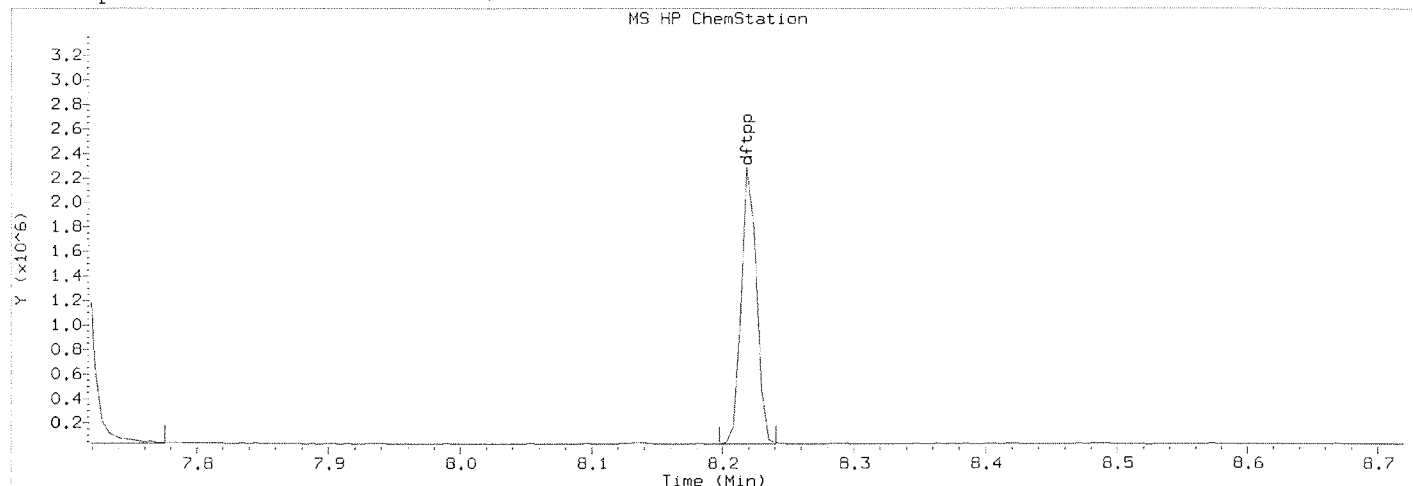


Tune *** PASSED ***
 Pentachlorophenol Tailing *** PASSED ***
 Benzidine Tailing *** PASSED ***
 DDT degradation *** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_SS.i/170131.b/31jan001.d ,*** PASSED ***

Report Generated Time Tue Jan 31 11:01:19 2017

Data File : /chem/SVOA/GCMS_SS.i/170131.b/31jan001.d
 ALS Vial : 1
 Acq on : 31-JAN-2017 10:41 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_SS
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_SS.i/170131.b/dftpptune.m
 Last Update : 11-MAY-2016 11:05



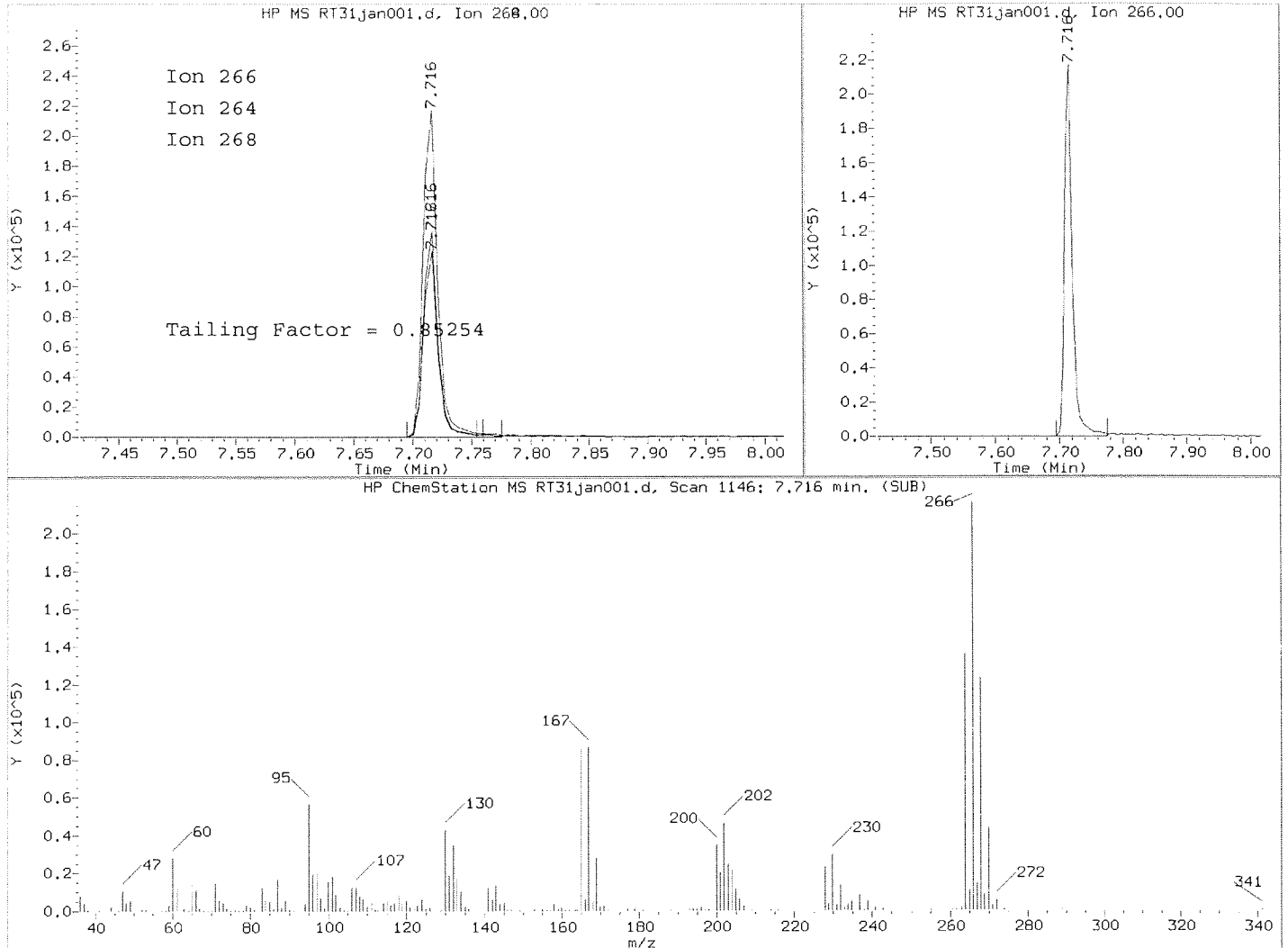
Spectrum: Avg. Scans 1239-1241 (8.22), Background Scan 1235

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	185858	PASS
51	30 - 60% of mass 198	45.65	84850	PASS
68	Less than 2% of mass 198	1.71	1576	PASS
69	Less than mass 198	49.52	92045	PASS
70	Less than 2% of mass 198	0.38	354	PASS
127	40 - 60% of mass 198	48.84	90773	PASS
197	0 - 1% of mass 198	0.34	634	PASS
199	5 - 9% of mass 198	6.93	12872	PASS
275	10 - 30% of mass 198	21.56	40077	PASS
365	1 - 100% of mass 198	2.74	5084	PASS
441	Present, but less than mass 443	77.54	18927	PASS
442	40 - 200% of mass 198	67.90	126189	PASS
443	17 - 23% of mass 442	19.34	24409	PASS

Report Generated Time Tue Jan 31 11:01:19 2017

Data File : /chem/SVOA/GCMS_SS.i/170131.b/31jan001.d
 ALS Vial : 3
 Acq on : 31-JAN-2017 10:41 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_SS
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_SS.i/170131.b/31jan001.d/resolut.m
 Last Update : 31-JAN-2017 11:01



Pentachlorophenol

=====
 Exp. RT = 7.716
 Found RT = 7.716

Mass	Area	Ratio
266	186948	100.00
264	114642	61.32
268	104043	55.65

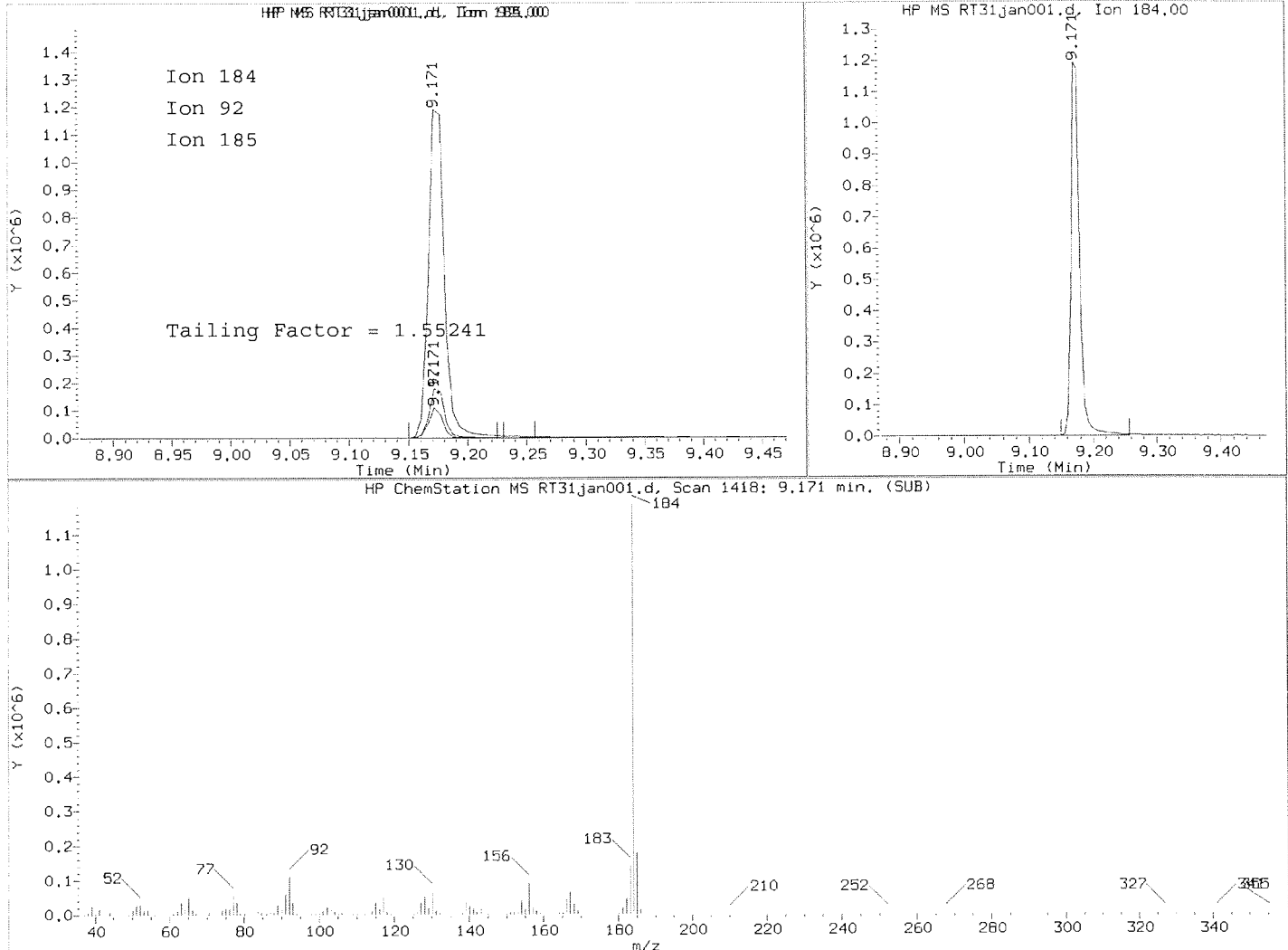
Peak baseline front width (sec) : 0.807
 Peak baseline tail width (sec) : 0.688
 Tail Factor = 0.688 / 0.807

Tailing factor for Pentachlorophenol OK

Tail Factor = 0.853 Maximum Allowed = 3.0

Report Generated Time Tue Jan 31 11:01:19 2017

Data File : /chem/SVOA/GCMS_SS.i/170131.b/31jan001.d
 ALS Vial : 3
 Acq on : 31-JAN-2017 10:41 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_SS
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_SS.i/170131.b/31jan001.d/resolut.m
 Last Update : 31-JAN-2017 11:01



Benzidine

=====
 Exp. RT = 9.171
 Found RT = 9.171

Mass	Area	Ratio
184	1126135	100.00
92	92340	8.20
185	162027	14.39

Peak baseline front width (sec) : 0.601
 Peak baseline tail width (sec) : 0.933
 Tail Factor = 0.933 / 0.601

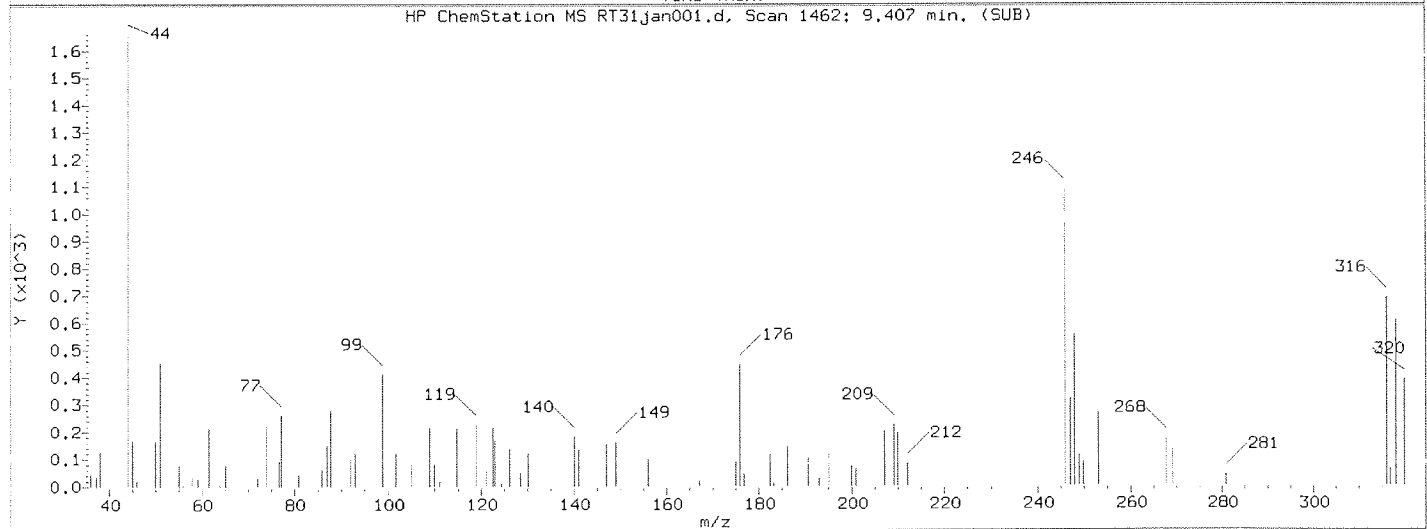
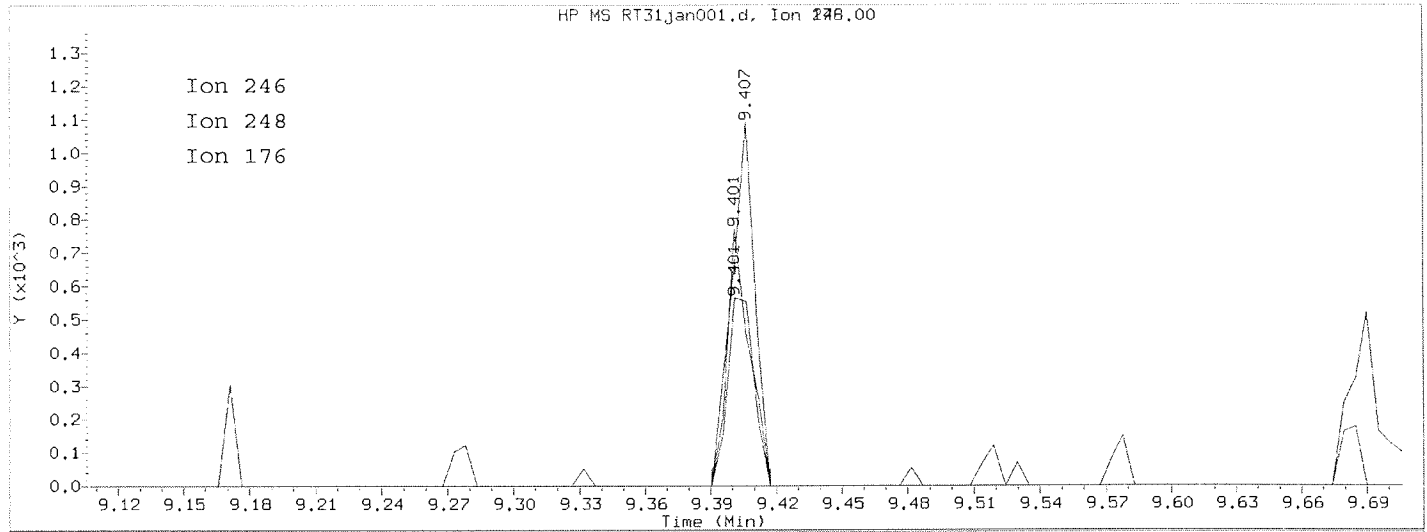
Tailing factor for Benzidine OK

Tail Factor = 1.552 Maximum Allowed = 3.0



Report Generated Time Tue Jan 31 11:01:19 2017

Data File : /chem/SVOA/GCMS_SS.i/170131.b/31jan001.d
 ALS Vial : 3
 Acq on : 31-JAN-2017 10:41 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_SS
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_SS.i/170131.b/31jan001.d/resolut.m
 Last Update : 31-JAN-2017 11:01



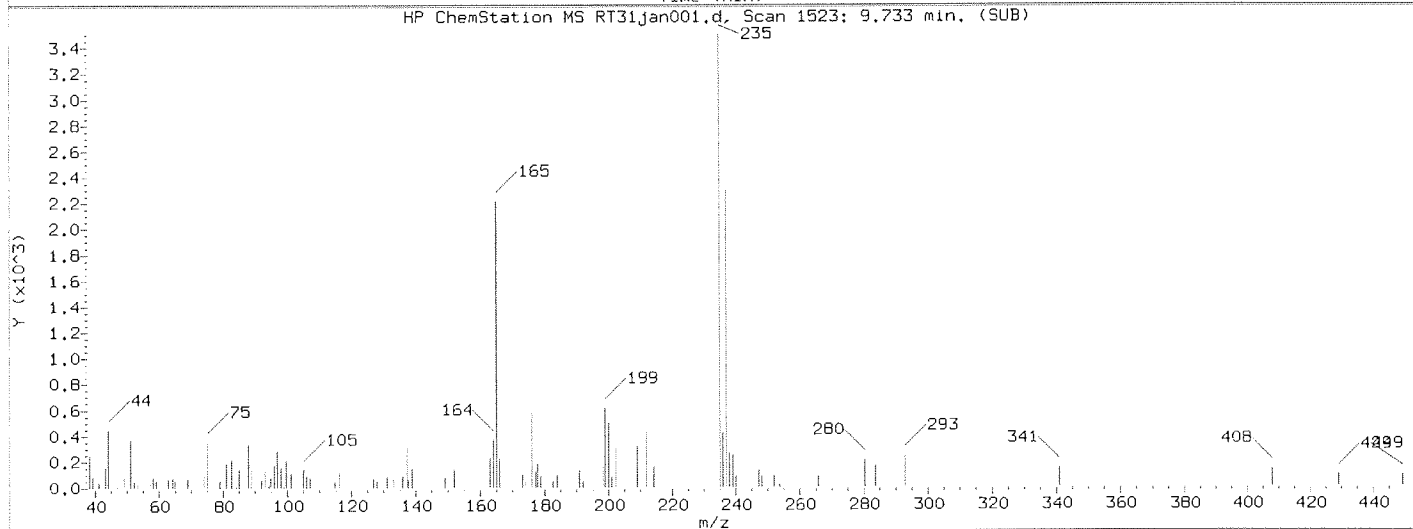
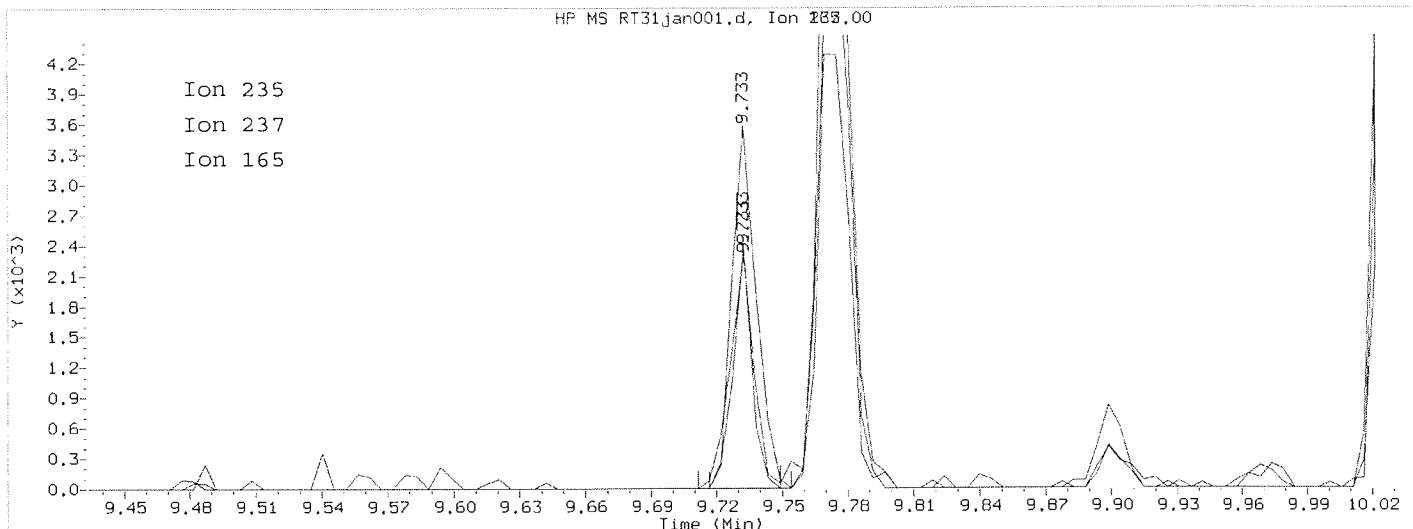
4,4'-DDE

=====
 Exp. RT = 9.407
 Found RT = 9.407

Mass	Area	Ratio
246	809	100.00
248	471	58.33
176	546	67.61

Report Generated Time Tue Jan 31 11:01:19 2017

Data File : /chem/SVOA/GCMS_SS.i/170131.b/31jan001.d
 ALS Vial : 3
 Acq on : 31-JAN-2017 10:41 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_SS
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_SS.i/170131.b/31jan001.d/resolut.m
 Last Update : 31-JAN-2017 11:01



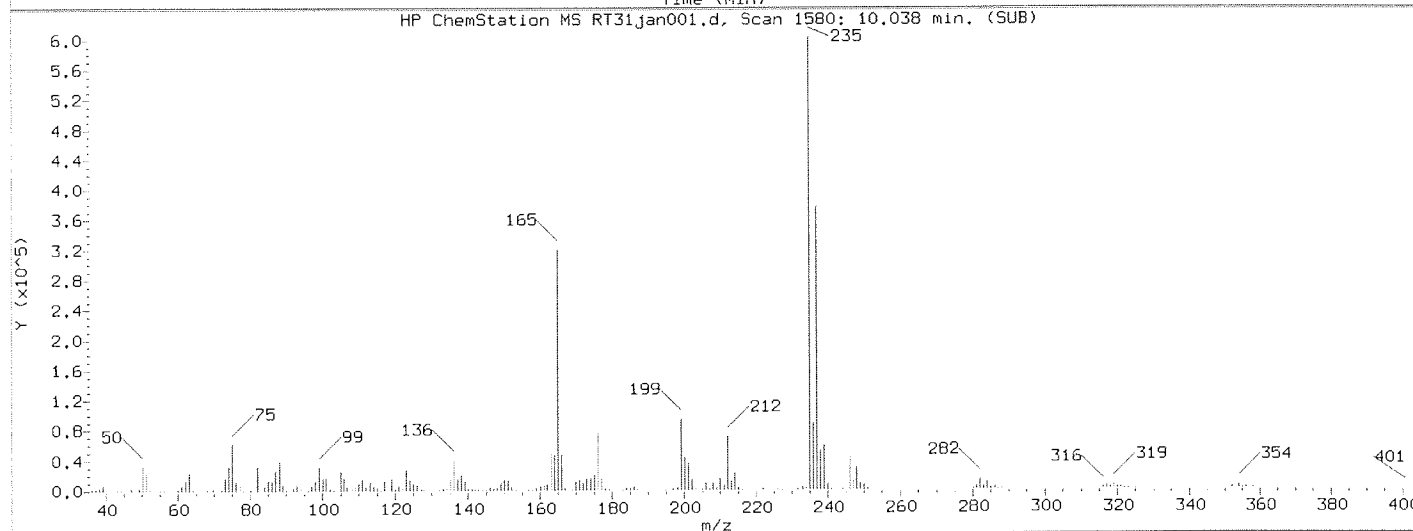
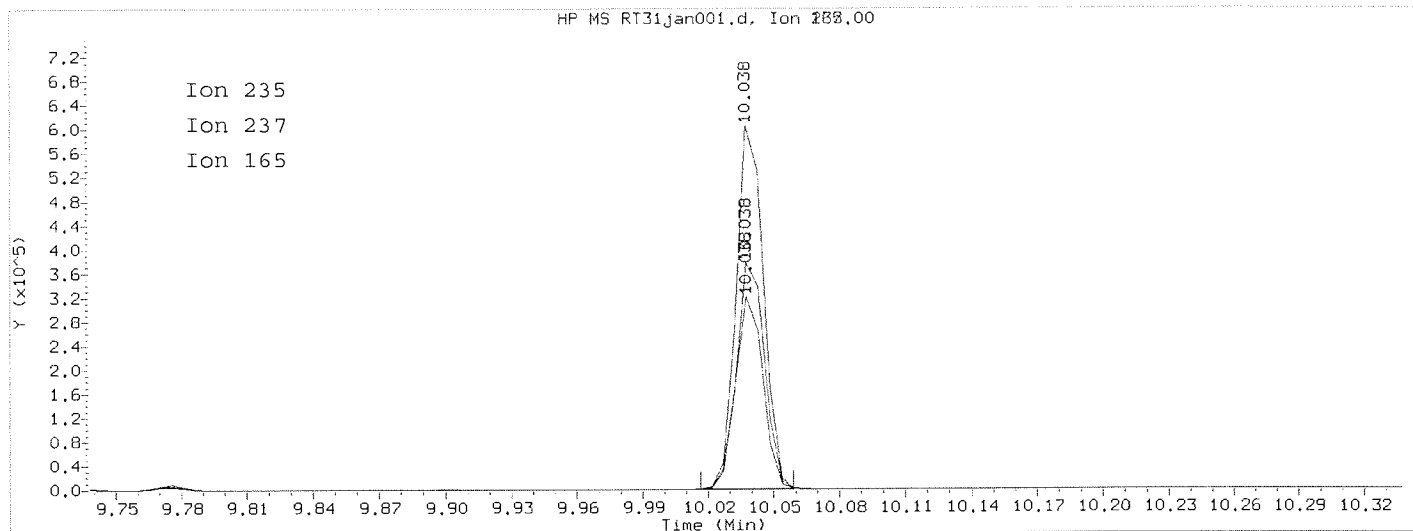
4,4'-DDD
 =====
 Exp. RT = 9.733
 Found RT = 9.733

Mass	Area	Ratio
235	2764	100.00
237	1423	51.51
165	1750	63.33



Report Generated Time Tue Jan 31 11:01:19 2017

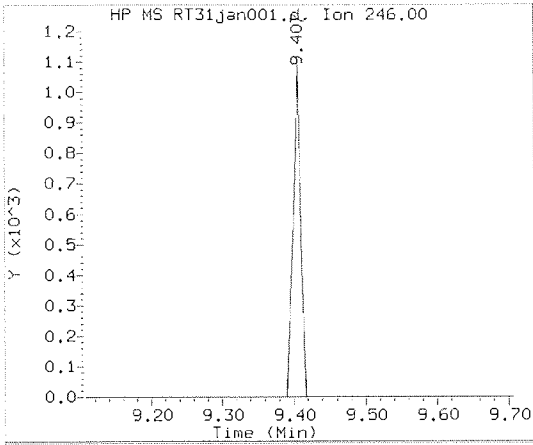
Data File : /chem/SVOA/GCMS_SS.i/170131.b/31jan001.d
 ALS Vial : 3
 Acq on : 31-JAN-2017 10:41 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_SS
 Misc : Multiplier : 1⁻
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_SS.i/170131.b/31jan001.d/resolut.m
 Last Update : 31-JAN-2017 11:01



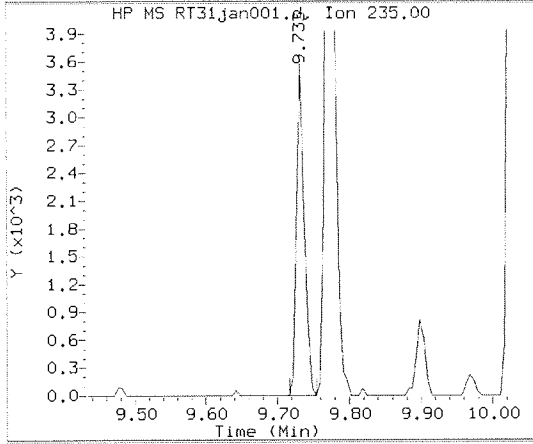
4,4'-DDT

=====
 Exp. RT = 10.038
 Found RT = 10.038

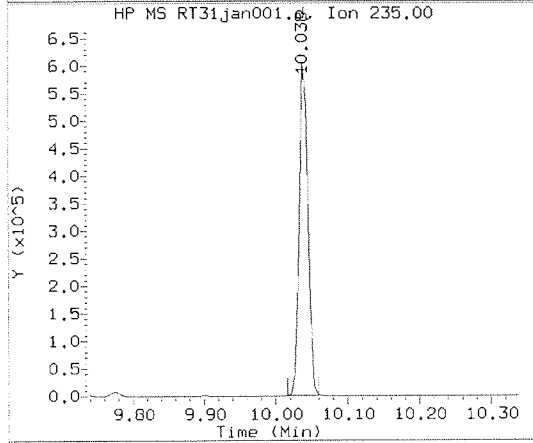
Mass	Area	Ratio
235	524820	100.00
237	334830	63.80
165	280672	53.48



Compound: 4,4'-DDE
 Quant Mass: 246
 RT: 9.407
 Area: 809



Compound: 4,4'-DDD
 Quant Mass: 235
 RT: 9.733
 Area: 2764



Compound: 4,4'-DDT
 Quant Mass: 235
 RT: 10.038
 Area: 524820

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

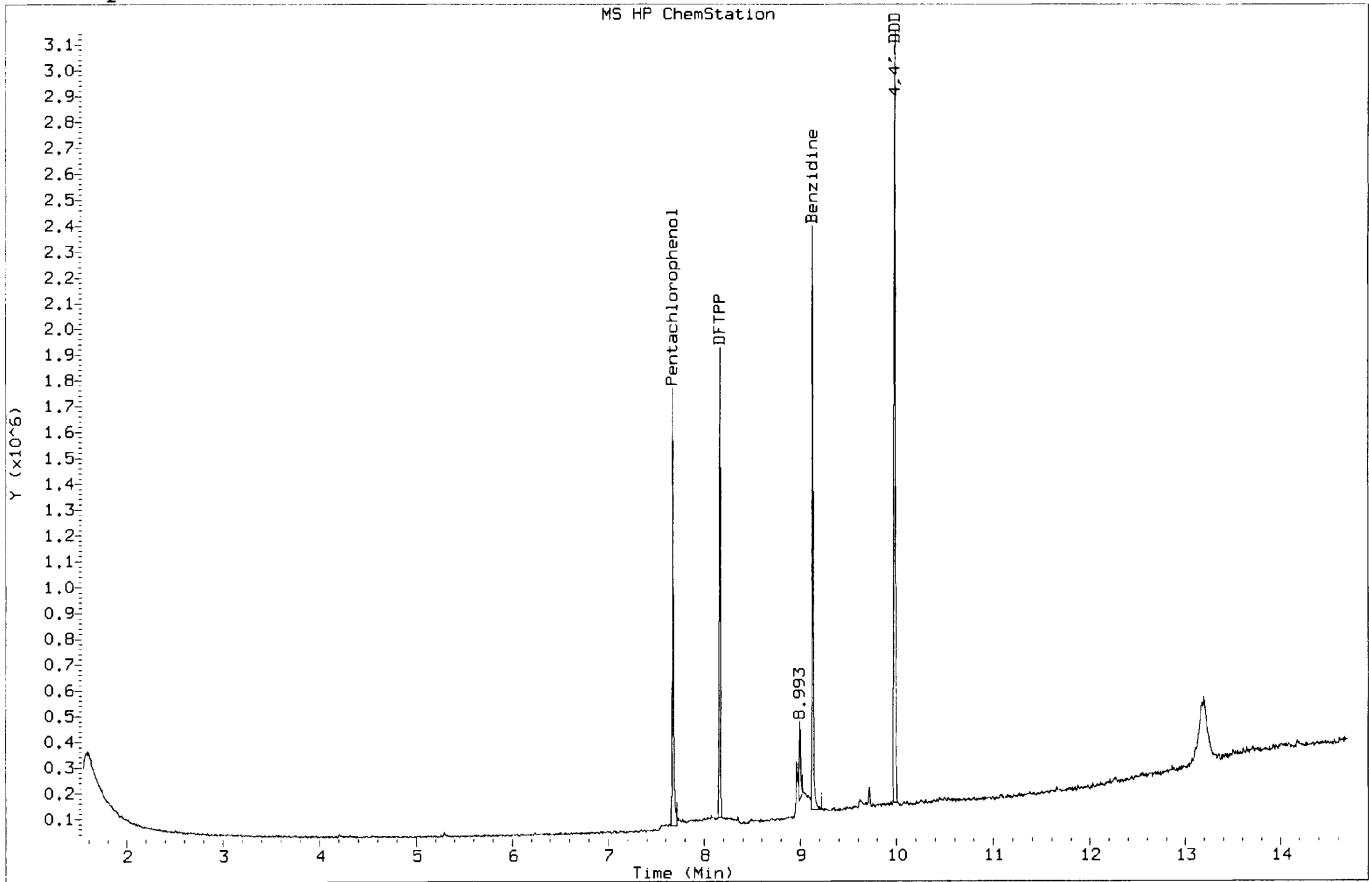
Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	524820			N/A
4,4-DDE	809	0.15	20.0	PASS
4,4-DDD	2764	0.52	20.0	PASS
4,4-DDD + DDE	3573	0.7	20.0	PASS

 TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST

DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Thu Mar 23 11:29:40 2017

Data File : /chem/SVOA/GCMS_SS.i/170323.b/23mar001.d
 ALS Vial : 1
 Acq on : 23-MAR-2017 10:59 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_SS
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Last Update : 15-MAR-2017 10:23

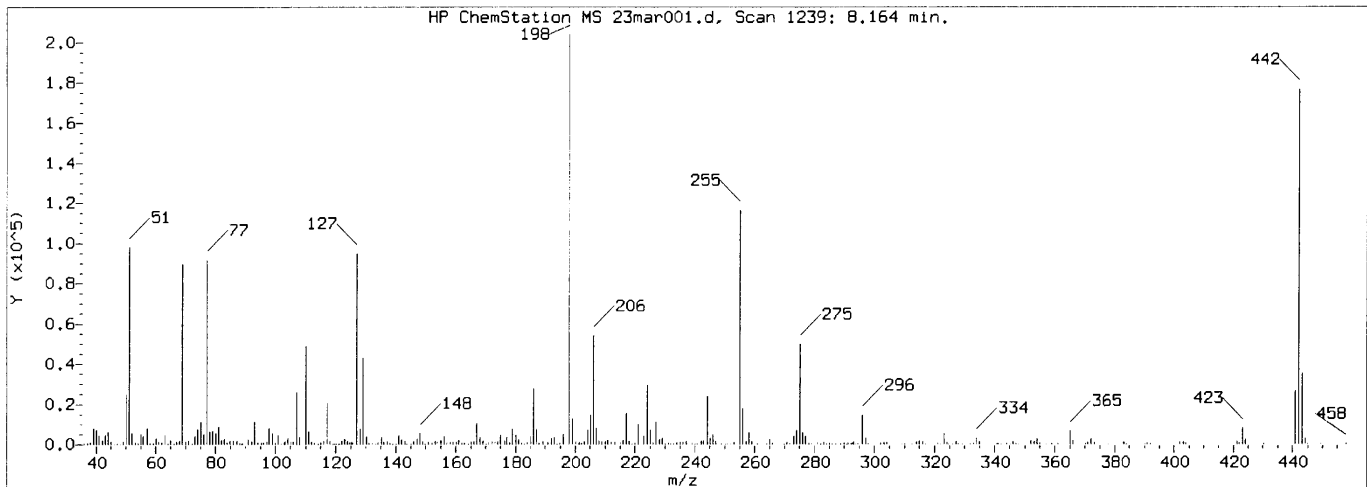
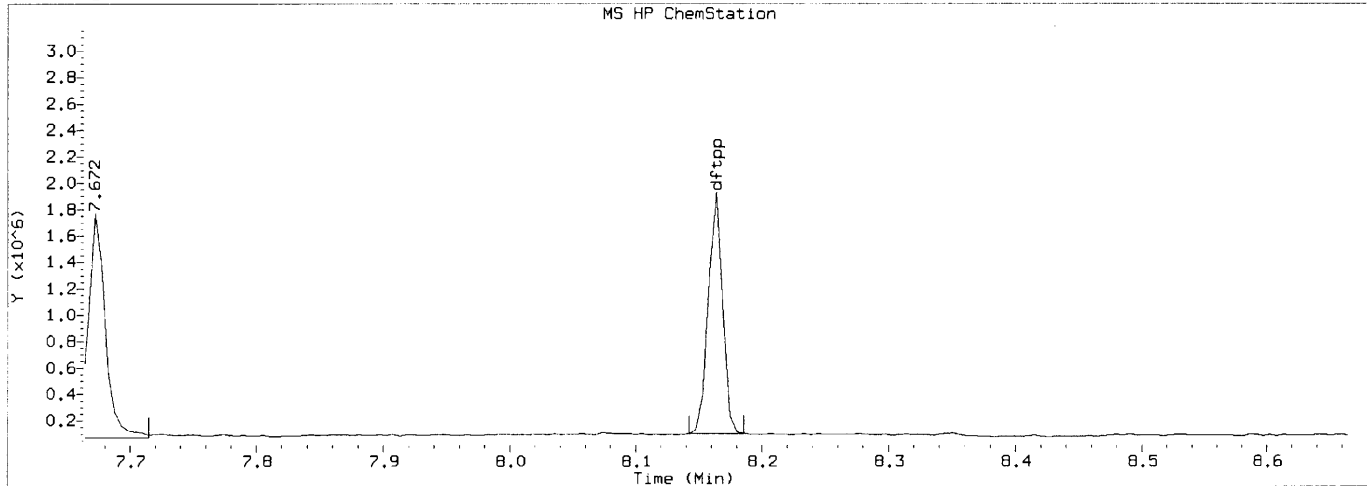


Tune *** PASSED ***
 Pentachlorophenol Tailing *** PASSED ***
 Benzidine Tailing *** PASSED ***
 DDT degradation *** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_SS.i/170323.b/23mar001.d ,*** PASSED ***

Report Generated Time Thu Mar 23 11:29:40 2017

Data File : /chem/SVOA/GCMS_SS.i/170323.b/23mar001.d
 ALS Vial : 1
 Acq on : 23-MAR-2017 10:59 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_SS
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_SS.i/170323.b/dftpptune.m
 Last Update : 15-MAR-2017 10:23



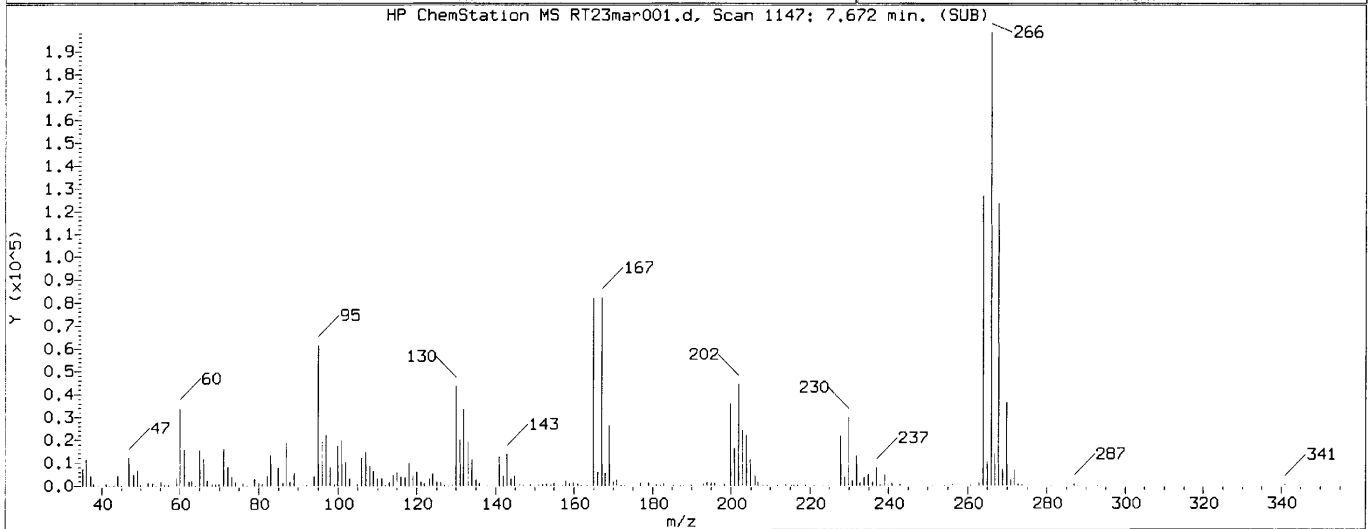
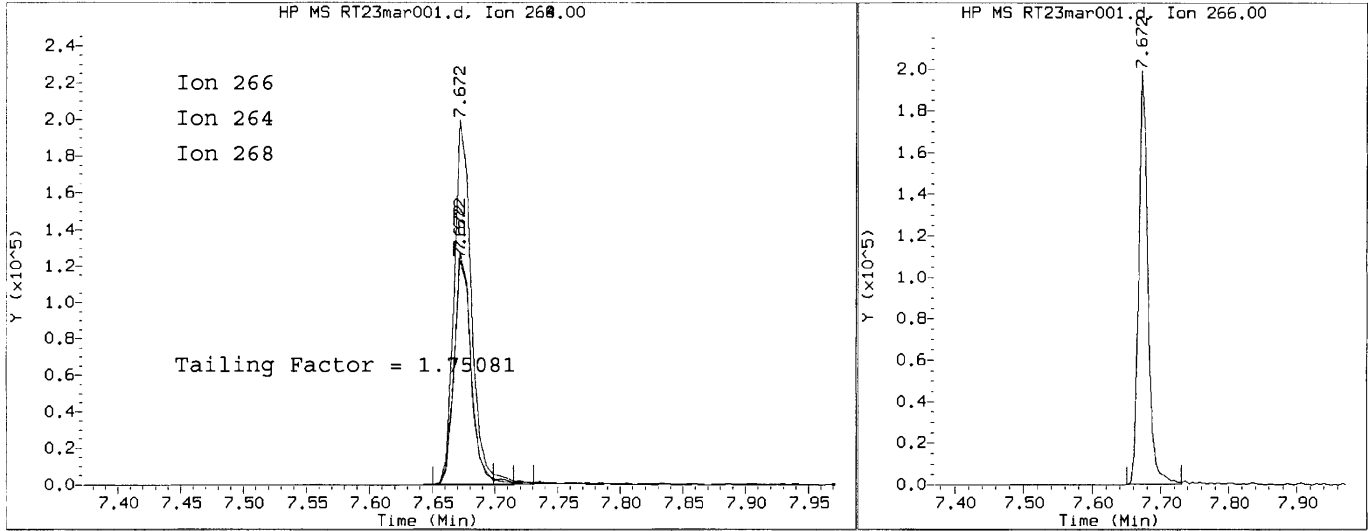
Spectrum: Avg. Scans 1238-1240 (8.16), Background Scan 1234

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	142360	PASS
51	30 - 60% of mass 198	48.92	69638	PASS
68	Less than 2% of mass 69	1.14	747	PASS
69	Less than mass 198	45.98	65459	PASS
70	Less than 2% of mass 69	0.54	351	PASS
127	40 - 60% of mass 198	47.95	68263	PASS
197	0 - 1% of mass 198	0.21	294	PASS
199	5 - 9% of mass 198	6.74	9593	PASS
275	10 - 30% of mass 198	23.41	33333	PASS
365	1 - 100% of mass 198	3.26	4636	PASS
441	Present, but less than mass 443	74.03	19332	PASS
442	40 - 200% of mass 198	88.66	126221	PASS
443	17 - 23% of mass 442	20.69	26112	PASS

Report Generated Time Thu Mar 23 11:29:40 2017

Data File : /chem/SVOA/GCMS_SS.i/170323.b/23mar001.d
 ALS Vial : 3
 Acq on : 23-MAR-2017 10:59 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_SS
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_SS.i/170323.b/23mar001.d/resolut.m
 Last Update : 23-MAR-2017 11:29



Pentachlorophenol

=====
 Exp. RT = 7.672
 Found RT = 7.672

Mass	Area	Ratio
266	192053	100.00
264	118629	61.77
268	115628	60.21

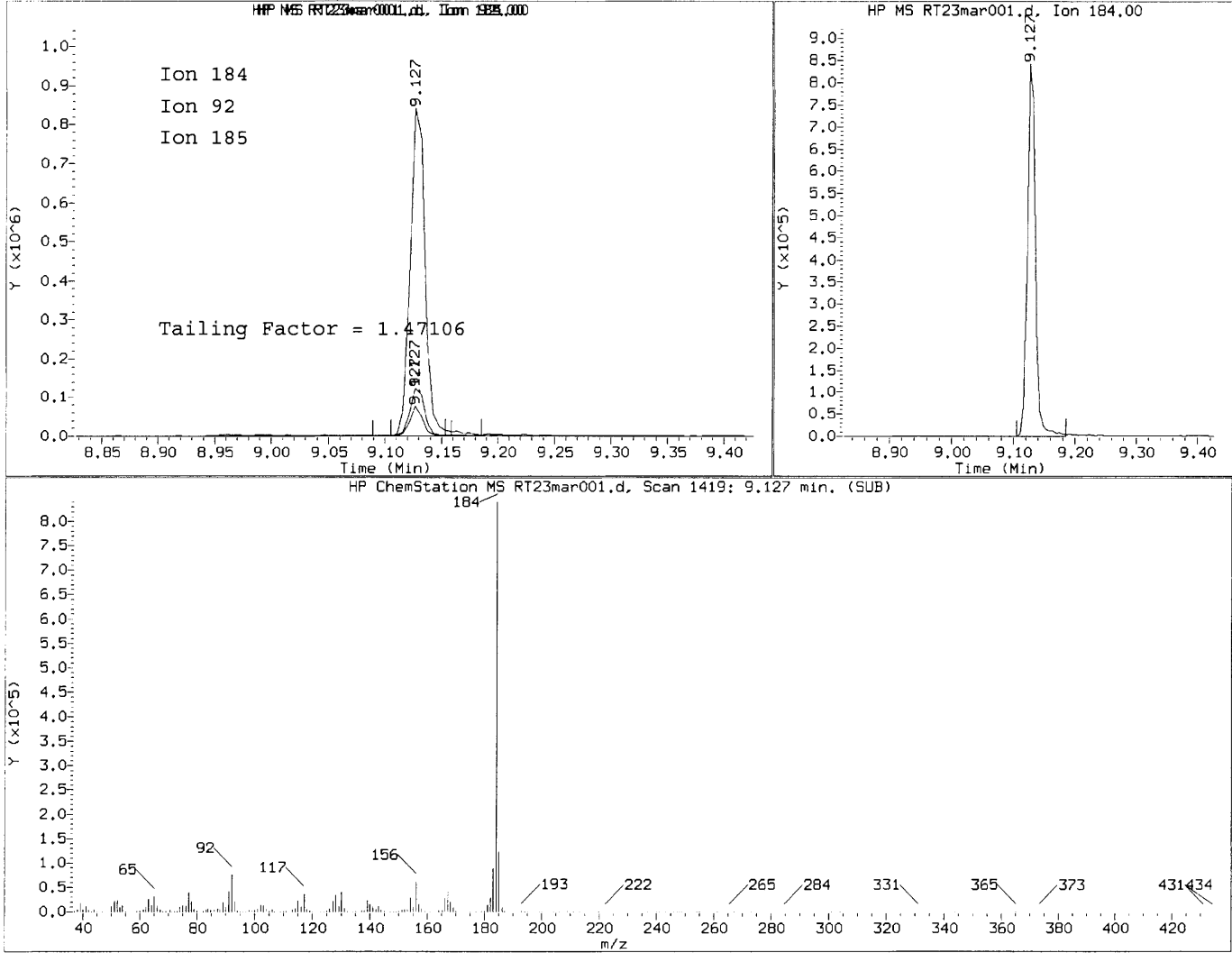
Peak baseline front width (sec) : 0.614
 Peak baseline tail width (sec) : 1.075
 Tail Factor = 1.075 / 0.614

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.751 Maximum Allowed = 3.0

Report Generated Time Thu Mar 23 11:29:40 2017

Data File : /chem/SVOA/GCMS_SS.i/170323.b/23mar001.d
 ALS Vial : 3
 Acq on : 23-MAR-2017 10:59 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_SS
 Misc : Multiplier : 1⁻
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_SS.i/170323.b/23mar001.d/resolut.m
 Last Update : 23-MAR-2017 11:29



Benzidine

=====
 Exp. RT = 9.127
 Found RT = 9.127

Mass	Area	Ratio
184	778500	100.00
92	61780	7.94
185	110052	14.14

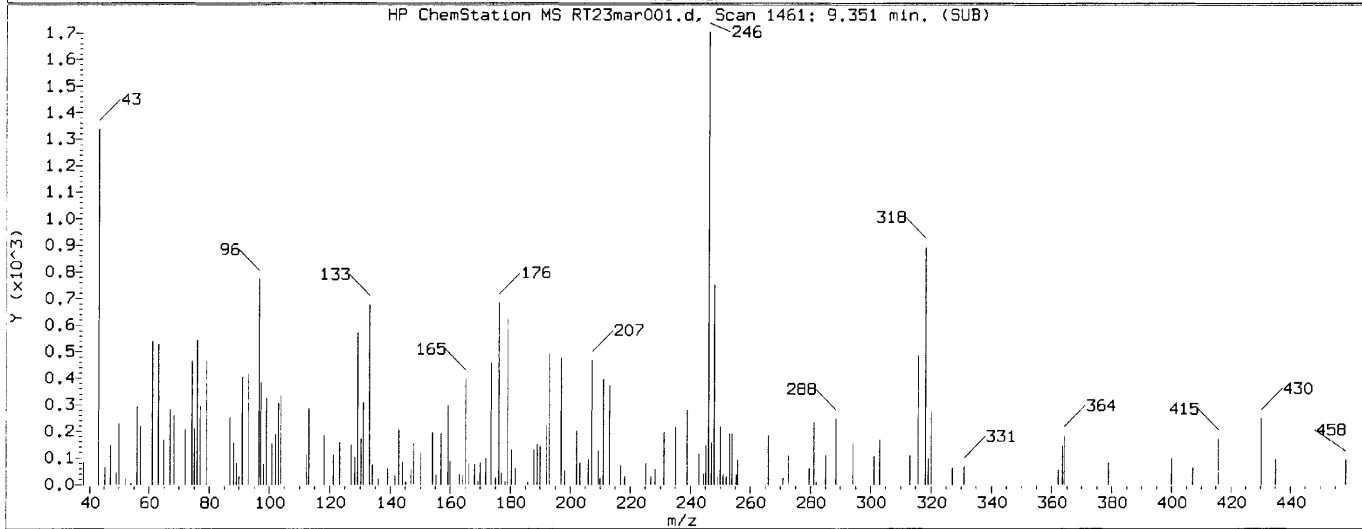
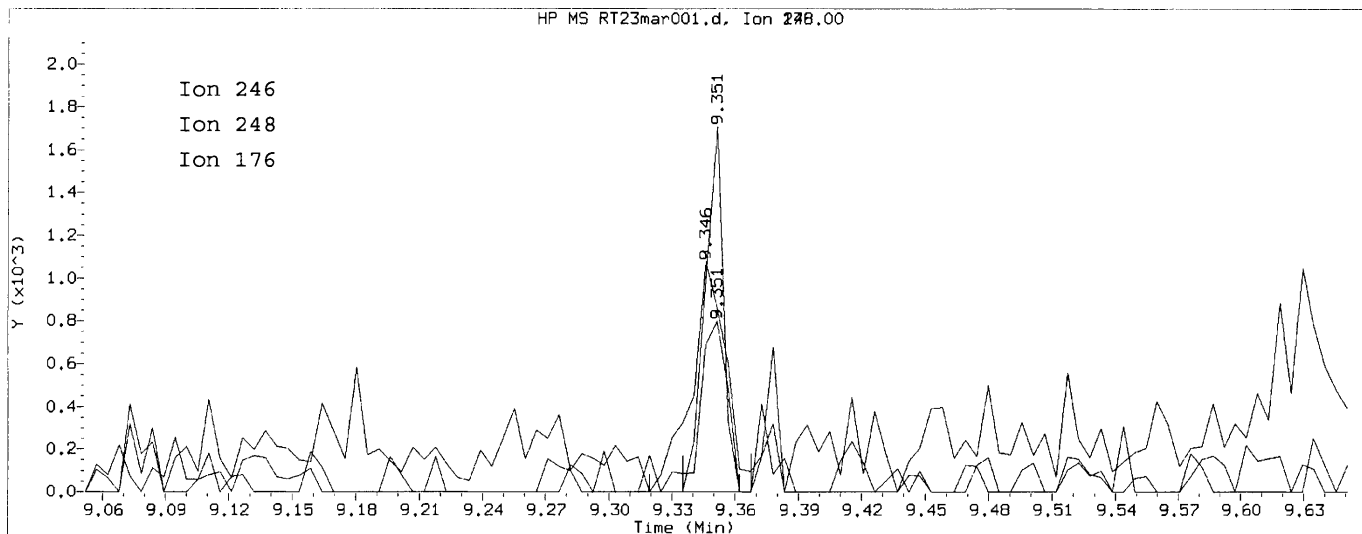
Peak baseline front width (sec) : 0.622
 Peak baseline tail width (sec) : 0.915
 Tail Factor = 0.915 / 0.622

Tailing factor for Benzidine OK

Tail Factor = 1.471 Maximum Allowed = 3.0

Report Generated Time Thu Mar 23 11:29:40 2017

Data File : /chem/SVOA/GCMS_SS.i/170323.b/23mar001.d
 ALS Vial : 3
 Acq on : 23-MAR-2017 10:59 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_SS
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_SS.i/170323.b/23mar001.d/resolut.m
 Last Update : 23-MAR-2017 11:29



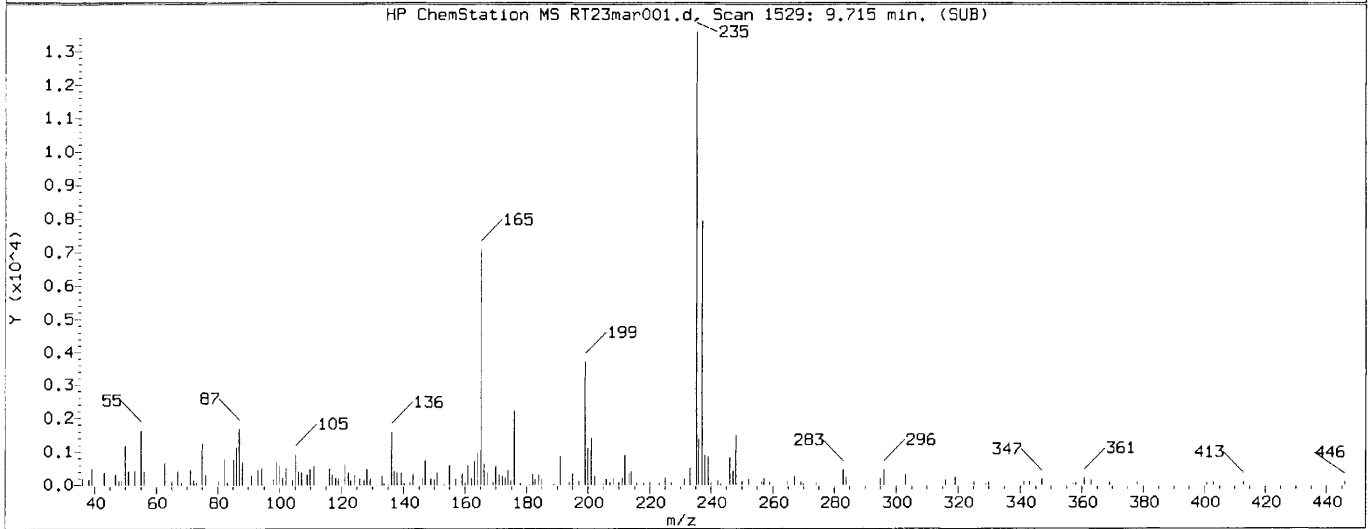
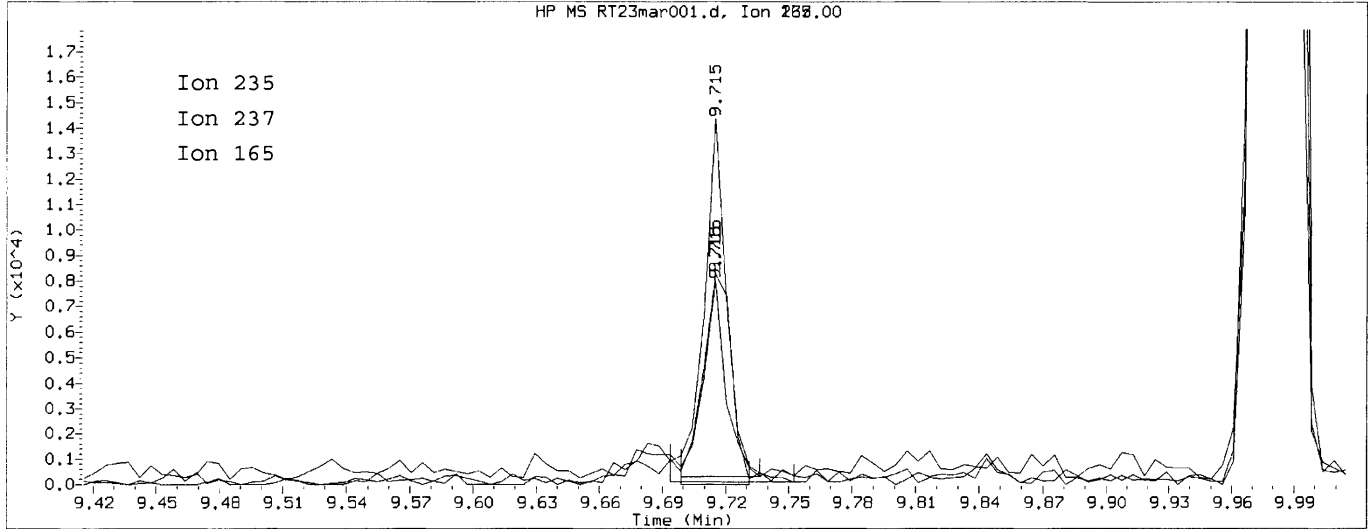
4,4'-DDE

=====
 Exp. RT = 9.351
 Found RT = 9.351

Mass	Area	Ratio
246	1049	100.00
248	684	65.19
176	1235	117.71

Report Generated Time Thu Mar 23 11:29:40 2017

Data File : /chem/SVOA/GCMS_SS.i/170323.b/23mar001.d
 ALS Vial : 3
 Acq on : 23-MAR-2017 10:59 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_SS
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_SS.i/170323.b/23mar001.d/resolut.m
 Last Update : 23-MAR-2017 11:29



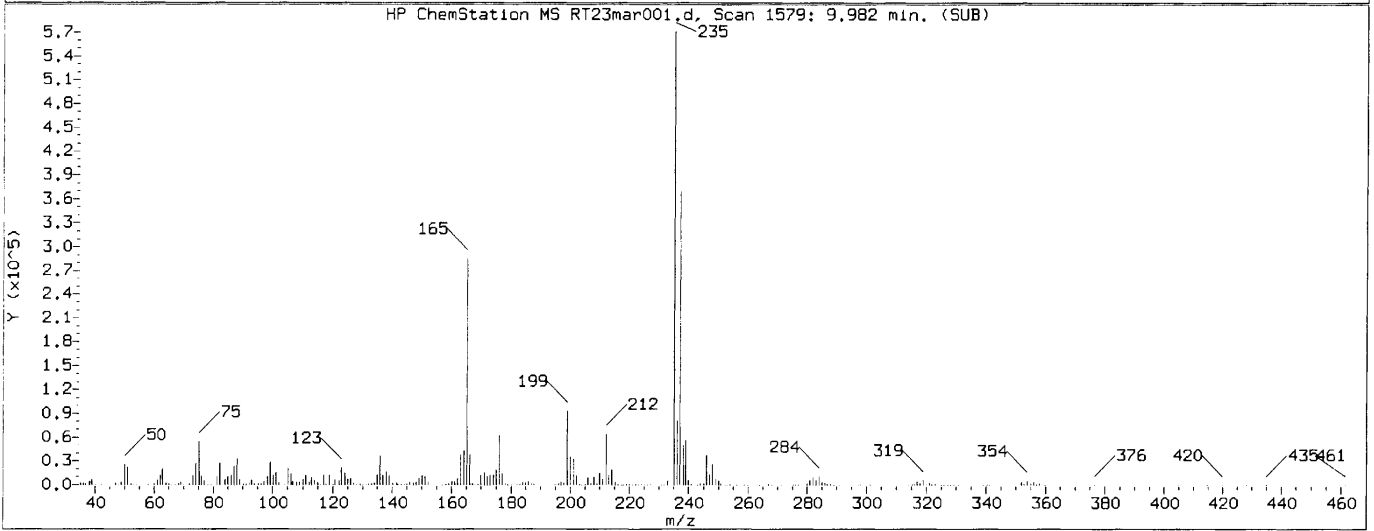
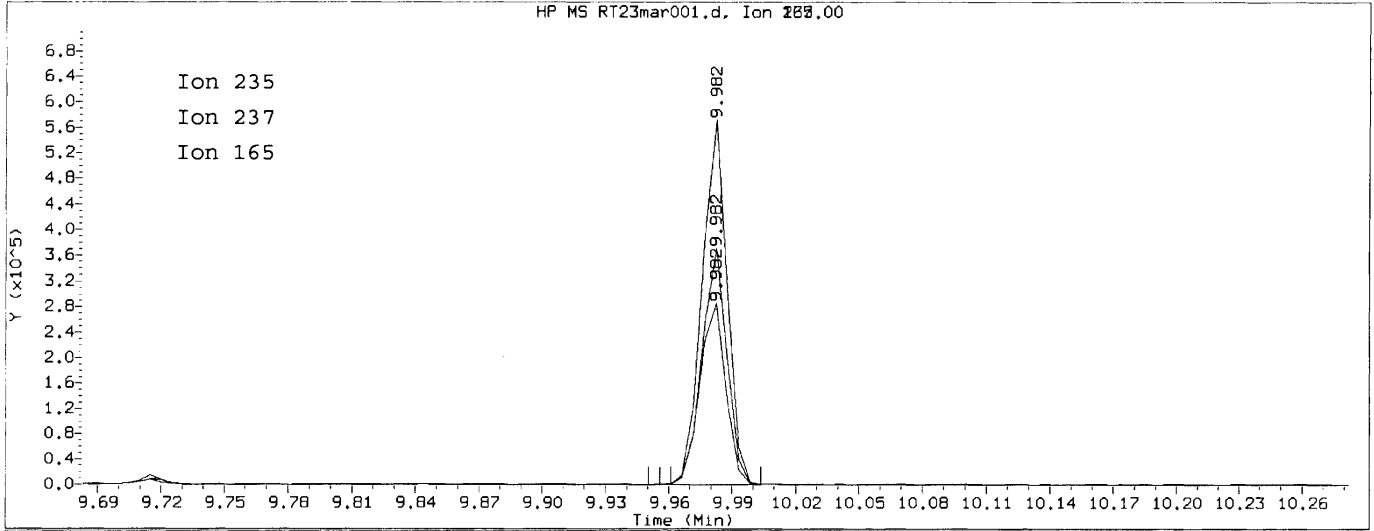
4,4'-DDD

=====
 Exp. RT = 9.715
 Found RT = 9.715

Mass	Area	Ratio
235	11284	100.00
237	7886	69.89
165	5746	50.92

Report Generated Time Thu Mar 23 11:29:40 2017

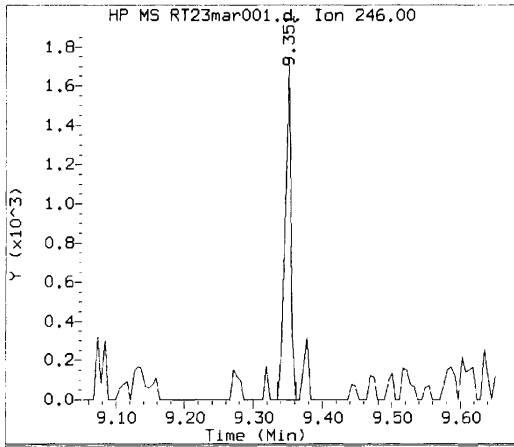
Data File : /chem/SVOA/GCMS_SS.i/170323.b/23mar001.d
 ALS Vial : 3
 Acq on : 23-MAR-2017 10:59 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_SS
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_SS.i/170323.b/23mar001.d/resolut.m
 Last Update : 23-MAR-2017 11:29



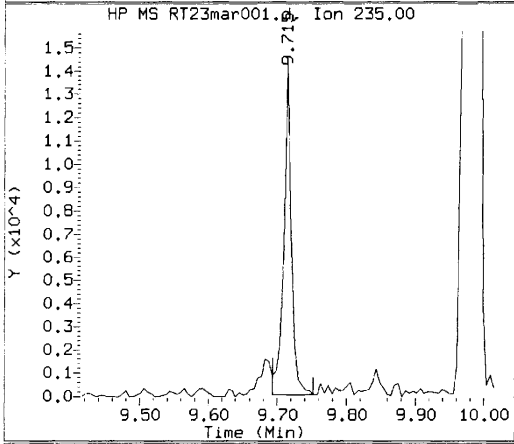
4,4'-DDT

=====
 Exp. RT = 9.982
 Found RT = 9.982

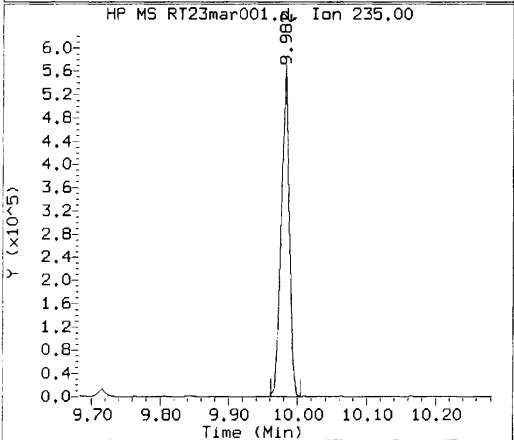
Mass	Area	Ratio
235	468819	100.00
237	305092	65.08
165	244615	52.18



Compound: 4,4'-DDE
 Quant Mass: 246
 RT: 9.351
 Area: 1049



Compound: 4,4'-DDD
 Quant Mass: 235
 RT: 9.715
 Area: 11284



Compound: 4,4'-DDT
 Quant Mass: 235
 RT: 9.982
 Area: 468819

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	468819			N/A
4,4-DDE	1049	0.22	20.0	PASS
4,4-DDD	11284	2.35	20.0	PASS
4,4-DDD + DDE	12333	2.6	20.0	PASS

 TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST

EPA 8270C Semi-Volatile Organics (Aqueous)

Run Logs

Injection Log

Directory: W:\GCMS_SS\GCMS_SS_DATA\2017\170131

Page 642 of 1084

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	31jan001.d	1.	TUNE S101716A DFTPP		31 Jan 2017 10:41
2	2	31jan002.d	1.	ICAL-1 160 PPM S110816M 8270	170131I002	31 Jan 2017 11:18
3	3	31jan003.d	1.	ICAL-2 120 PPM S110816K 8270	170131I003 625CA	31 Jan 2017 11:43
4	4	31jan004.d	1.	ICAL-3 80 PPM S110816J 8270		31 Jan 2017 12:02
5	5	31jan005.d	1.	ICAL-4 50 PPM S110816I 8270		31 Jan 2017 12:21
6	6	31jan006.d	1.	ICAL-5 20 PPM S110816H 8270		31 Jan 2017 12:40
7	7	31jan007.d	1.	ICAL-6 10 PPM S110816G 8270		31 Jan 2017 13:00
8	8	31jan008.d	1.	ICAL-7 5 PPM S110816F 8270		31 Jan 2017 13:19
9	9	31jan009.d	1.	ICAL-8 2.5 PPM S110816E 8270		31 Jan 2017 13:44
10	10	31jan010.d	1.	ICAL-9 0.25 PPM S110816D 8270		31 Jan 2017 14:03
11	11	31jan011.d	1.	ICV 80 PPM S110816N 8270		31 Jan 2017 15:06
12	12	31jan012.d	1.	ICAL-1 5 PPM S081816B 625	170131I004	31 Jan 2017 15:25
13	13	31jan013.d	1.	ICAL-2 10 PPM S081816C 625		31 Jan 2017 15:44
14	14	31jan014.d	1.	ICAL-3 20 PPM S081816D 625		31 Jan 2017 16:03
15	15	31jan015.d	1.	ICAL-4 40 PPM S081816E 625		31 Jan 2017 16:22
16	16	31jan016.d	1.	ICAL-5 80 PPM S081816F 625		31 Jan 2017 16:42
17	17	31jan017.d	1.	ICV 20 PPM S081816G 625		31 Jan 2017 17:14



Injection Log

Directory: W:\GCMS_SS\GCMS_SS_DATA\2017\170323

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Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	23mar001.d	1.	TUNE S101716A DFTPP		23 Mar 2017 10:59
2	2	23mar002.d	1.	CCV S110816J 80 PPM 8270	170323A027	23 Mar 2017 11:26
3	3	23mar003.d	1.	LCS 170322L13	10UL S7-53-19	23 Mar 2017 11:53
4	4	23mar004.d	1.	LCS 170322L01	10UL S7-53-19	23 Mar 2017 12:13
5	5	23mar005.d	1.	LCSD 170322L01	10UL S7-53-19	23 Mar 2017 12:31
6	6	23mar006.d	1.	MB 170322L01	10UL S7-53-19	23 Mar 2017 12:50
7	7	23mar007.d	1.	MB 170322L13	10UL S7-53-19	23 Mar 2017 13:09
8	8	23mar008.d	1.	17-03-1592-14	10UL S7-53-19	23 Mar 2017 13:28
9	9	23mar009.d	1.	17-03-1592-23	10UL S7-53-19	23 Mar 2017 13:47
10	10	23mar010.d	1.	17-03-1562-1	10UL S7-53-19	23 Mar 2017 14:06
11	11	23mar011.d	1.	17-03-1562-1 MS	10UL S7-53-19	23 Mar 2017 14:24
12	12	23mar012.d	1.	17-03-1562-1 MSD	10UL S7-53-19	23 Mar 2017 14:43
13	13	23mar013.d	1.	17-03-1564-1	10UL S7-53-19	23 Mar 2017 15:04
14	14	23mar014.d	1.	17-03-1567-6	10UL S7-53-19	23 Mar 2017 15:23
15	15	23mar015.d	1.	17-03-1479-1	10UL S7-53-19	23 Mar 2017 15:42
16	16	23mar016.d	1.	17-03-1523-2	10UL S7-53-19	23 Mar 2017 16:01
17	17	23mar017.d	1.	17-03-1545-1	10UL S7-53-19	23 Mar 2017 16:19
18	18	23mar018.d	1.	17-03-1545-2	10UL S7-53-19	23 Mar 2017 16:38
19	19	23mar019.d	1.	17-03-1497-1	10UL S7-53-19	23 Mar 2017 16:57
20	20	23mar020.d	1.	17-03-1497-2	10UL S7-53-19	23 Mar 2017 17:16
21	21	23mar021.d	1.	17-03-1497-3	10UL S7-53-19	23 Mar 2017 17:35
22	22	23mar022.d	1.	17-03-1497-4	10UL S7-53-19	23 Mar 2017 17:53
23	23	23mar023.d	1.	17-03-1497-5	10UL S7-53-19	23 Mar 2017 18:12
24	24	23mar024.d	1.	17-03-1497-6	10UL S7-53-19	23 Mar 2017 18:31
25	25	23mar025.d	1.	17-03-1497-7	10UL S7-53-19	23 Mar 2017 18:50
26	26	23mar026.d	1.	17-03-1497-8	10UL S7-53-19	23 Mar 2017 19:09
27	27	23mar027.d	1.	17-03-1497-9	10UL S7-53-19	23 Mar 2017 19:28
28	28	23mar028.d	1.	17-03-1497-10	10UL S7-53-19	23 Mar 2017 19:47
29	29	23mar029.d	1.	17-03-1497-11	10UL S7-53-19	23 Mar 2017 20:05
30	30	23mar030.d	1.	17-03-1497-12	10UL S7-53-19	23 Mar 2017 20:24
31	31	23mar031.d	1.	17-03-1497-13	10UL S7-53-19	23 Mar 2017 20:43
32	32	23mar032.d	1.	17-03-1497-14	10UL S7-53-19	23 Mar 2017 21:02

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EPA 8270C Semi-Volatile Organics (Aqueous)

Preparation Logs

Analysis Method (EPA Method- Aqueous only): <input type="checkbox"/> 625 (<input type="checkbox"/> SIM FL) <input type="checkbox"/> 1625			Extraction Method (EPA Method):				
<input checked="" type="checkbox"/> 8270 (<input type="checkbox"/> PAH <input type="checkbox"/> SIM PAH <input type="checkbox"/> SIM Pest <input type="checkbox"/> SIM PCB Cong. <input type="checkbox"/> SIM SUPER <input type="checkbox"/> SIM FL)			<input checked="" type="checkbox"/> 3510 <input type="checkbox"/> 3520				
Analyst ID#: Measuring Sample- 1109		Start Extraction- 1109/2/2022 Blow Down- 1109/10/24 Clean Up-					
Balance ID#:	Filter ID#:	Orbit Shaker ID#: 1, 4, & 3					
Extraction Start Date & Time: 03/22/17 - 9:00		Extractions End Date & Time: 3/22/17 - 14:30					
First pH adjusted date: 3/22/17		1:1 H ₂ SO ₄ ID#: E022817-2					
Surrogate Std ID# & Volume Added (mL): 5012617A - 5mL							
Spike Std ID# & Volume Added (mL): S113016B - 1mL		Spike Added to: <input checked="" type="checkbox"/> LCS <input checked="" type="checkbox"/> LCSD <input type="checkbox"/> MS <input type="checkbox"/> MSD					
Extraction Solvent: <input checked="" type="checkbox"/> MeCl ₂		Extraction Solvent ID#: S07-55-01					
Second pH adjusted date: 3/22/17		10 N NaOH ID#: E092416-1					
Drying Agent: <input checked="" type="checkbox"/> Na ₂ SO ₄		Drying Agent ID#: S07-44-18					
Exchange Solvent: <input type="checkbox"/> Hexane		Exchange Solvent ID#:					
Clean Up Start Date & Time:			Clean Up End Date & Time:				
Clean Up: <input type="checkbox"/> 3660 Sulfur		Clean Up Reagent ID#:					
MB/LCS/MS Batch #: 170322 LOI		Sample W (g) / V (mL)		Initial pH	First Adjusted pH < 2 ?	Second Adjusted pH > 11 ?	Comments
Cell ID#:	Initial	Final					
MB	1000	2	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
LCS	1000	2	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
LCSD	1000	2	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
MS	N/A	N/A	-	<input type="checkbox"/>	<input type="checkbox"/>		
MSD	N/A	N/A	-	<input type="checkbox"/>	<input type="checkbox"/>		
17-03-1497-1A	900	2	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
-2A	900	2	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
-3A	900	2	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
-4A	900	2	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
-5A	900	2	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
-6A	900	2	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
-7A	900	2	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
-8A	900	2	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
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-10A	900	2	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
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-13A	900	2	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
✓ -14A	900	2	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
17-03-1523-2I	1000	2	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
17-03-1545-1J	1000	2	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
17-03-1545-2J	1000	2	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
				<input type="checkbox"/>	<input type="checkbox"/>		
				<input type="checkbox"/>	<input type="checkbox"/>		
				<input type="checkbox"/>	<input type="checkbox"/>		

Peer Reviewed by: 762

Peer Reviewed Date: 3/24/17

Revision Date: 10/20/16

EPA 8270C
Semi-Volatile Organics
(Solid)

RAW DATA

EPA 8270C Semi-Volatile Organics (Solid)

Initial Calibration

INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8270C

ICAL WORK ORDER: 095-01-001-13198-596
ICAL BATCH ID: 170201001
INSTRUMENT: GC/MS CCC

ANALYZED BY: 923
ICAL D/T ANALYZED: 2017-02-01 11:46
REVIEWED BY: 262
D/T REVIEWED: 2017-02-03 16:39

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD CL	%R SD CL	R of R ² CL	R of R ² CL	STATUS
N-Nitrosodimethylamine		Avg RF	0.869	0.798	0.798	0.815	0.806	0.797	0.788	0.825	0.814	0.00	0.00	3	0-15	3.345		PASS
Aniline		Avg RF	2.242	2.099	2.099	2.114	2.084	2.019	1.988	1.998	2.078	0.00	0.00	4	0-15	4.246		PASS
Phenol	C	Avg RF	1.769	1.668	1.668	1.682	1.662	1.621	1.607	1.651	1.666	0.00	0.00	3	0-30	3.152		PASS
Bis(2-Chloroethyl) Ether		Avg RF	1.395	1.310	1.310	1.317	1.274	1.241	1.210	1.232	1.282	0.00	0.00	5	0-15	4.947		PASS
2-Chlorophenol		Avg RF	1.402	1.329	1.329	1.333	1.338	1.318	1.299	1.316	1.334	0.00	0.00	2	0-15	2.471		PASS
1,3-Dichlorobenzene		Avg RF	1.679	1.578	1.578	1.586	1.538	1.526	1.495	1.504	1.558	0.00	0.00	4	0-15	4.070		PASS
1,4-Dichlorobenzene	C	Avg RF	1.726	1.557	1.557	1.619	1.579	1.536	1.527	1.501	1.578	0.00	0.00	5	0-30	4.791		PASS
Benzyl Alcohol		Avg RF	1.267	1.200	1.200	1.227	1.212	1.188	1.140	1.196	1.204	0.00	0.00	3	0-15	3.218		PASS
1,2-Dichlorobenzene		Avg RF	1.657	1.538	1.538	1.533	1.486	1.477	1.439	1.439	1.510	0.00	0.00	5	0-15	5.033		PASS
2-Methylphenol		Avg RF	1.303	1.211	1.211	1.212	1.205	1.185	1.146	1.170	1.205	0.00	0.00	4	0-15	4.128		PASS
Bis(2-Chloroisopropyl) Ether		Avg RF	1.877	1.742	1.742	1.742	1.682	1.610	1.559	1.551	1.680	0.00	0.00	7	0-15	6.983		PASS
3/4-Methylphenol		Avg RF	1.429	1.554	1.465	1.470	1.449	1.402	1.365	1.391	1.441	0.00	0.00	4	0-15	4.085		PASS
N-Nitroso-di-n-propylamine	S	Avg RF	1.143	1.039	1.039	1.049	1.004	0.976	0.932	0.964	1.016	0.05	0.05	7	0-15	6.878		PASS
Hexachloroethane		Avg RF	0.622	0.585	0.585	0.600	0.585	0.579	0.568	0.571	0.587	0.00	0.00	3	0-15	3.180		PASS
Nitrobenzene		Avg RF	0.409	0.387	0.387	0.398	0.385	0.377	0.374	0.376	0.387	0.00	0.00	3	0-15	3.291		PASS
Isophorone		Avg RF	0.806	0.746	0.746	0.745	0.726	0.707	0.687	0.705	0.732	0.00	0.00	5	0-15	5.377		PASS
2-Nitrophenol	C	Avg RF	0.146	0.144	0.144	0.163	0.172	0.173	0.174	0.171	0.163	0.00	0.00	8	0-30	7.964		PASS
2,4-Dimethylphenol		Avg RF	0.352	0.337	0.337	0.356	0.363	0.361	0.350	0.359	0.354	0.00	0.00	2	0-15	2.487		PASS
Benzoic Acid	LR - E		0.164	0.226	0.164	0.226	0.259	0.277	0.275	0.284	0.291	0.00	0.00	1	0-15	1.000	r ² >=0.990	PASS
Bis(2-Chloroethoxy) Methane		Avg RF	0.480	0.458	0.458	0.453	0.436	0.430	0.423	0.418	0.442	0.00	0.00	5	0-15	4.991		PASS
2,4-Dichlorophenol	C	Avg RF	0.340	0.327	0.327	0.329	0.324	0.323	0.317	0.318	0.325	0.00	0.00	2	0-30	2.338		PASS
Naphthalene		Avg RF	1.113	1.049	1.049	1.057	1.033	1.016	0.991	0.994	1.036	0.00	0.00	4	0-15	4.089		PASS



INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8270C

ICAL WORK ORDER: 095-01-001-13198-596
ICAL BATCH ID: 170201001
INSTRUMENT: GC/MS CCC

ANALYZED BY: 923
ICAL D/T ANALYZED: 2017-02-01 11:46
REVIEWED BY: 262
D/T REVIEWED: 2017-02-03 16:39

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	MIN. RF	%RSD CL	%R SD CL	R or R ² CL	R or R ² CL	STATUS
4-Chloroaniline		Avg RF	0.503	0.468	0.467	0.460	0.442	0.428	0.438			0.458	0.00	5	0-15	5.449		PASS
Hexachloro-1,3-Butadie ne	C	Avg RF	0.255	0.243	0.241	0.239	0.237	0.232	0.233			0.240	0.00	3	0-30	3.265		PASS
4-Chloro-3-Methylpheno C		Avg RF	0.347	0.330	0.328	0.325	0.313	0.307	0.320			0.324	0.00	4	0-30	4.002		PASS
2-Methylnaphthalene		Avg RF	0.746	0.698	0.693	0.684	0.666	0.653	0.660			0.686	0.00	5	0-15	4.573		PASS
Hexachlorocyclopentadi ene	S	Avg RF	0.311	0.311	0.370	0.408	0.436	0.463	0.431			0.403	0.05	14	0-15	13.650		PASS
2,4,6-Trichlorophenol C		Avg RF	0.444	0.411	0.432	0.429	0.426	0.435	0.423			0.429	0.00	2	0-30	2.428		PASS
2,4,5-Trichlorophenol		Avg RF	0.477	0.461	0.477	0.475	0.483	0.465	0.453			0.470	0.00	2	0-15	2.300		PASS
2-Chloronaphthalene		Avg RF	1.258	1.146	1.170	1.140	1.130	1.136	1.104			1.155	0.00	4	0-15	4.293		PASS
2-Nitroaniline		Avg RF	0.298	0.300	0.323	0.333	0.329	0.324	0.332			0.320	0.00	5	0-15	4.653		PASS
Dimethyl Phthalate		Avg RF	1.558	1.451	1.467	1.441	1.399	1.360	1.397			1.439	0.00	4	0-15	4.453		PASS
Acenaphthylene		Avg RF	1.998	1.917	1.948	1.899	1.850	1.815	1.784			1.887	0.00	4	0-15	3.998		PASS
3-Nitroaniline		Avg RF	0.289	0.293	0.313	0.321	0.315	0.308	0.321			0.309	0.00	4	0-15	4.186		PASS
Acenaphthene C		Avg RF	1.264	1.178	1.183	1.170	1.143	1.125	1.118			1.169	0.00	4	0-30	4.208		PASS
2,4-Dinitrophenol S		LR - E	0.069	0.094	0.069	0.132	0.142	0.146	0.157			0.162	0.05	1	0-15	0.999	r ² >=0.990	PASS
4-Nitrophenol S		Avg RF	0.238	0.252	0.258	0.270	0.264	0.254	0.274			0.259	0.05	5	0-15	4.725		PASS
Dibenzofuran		Avg RF	1.827	1.712	1.736	1.689	1.660	1.622	1.628			1.696	0.00	4	0-15	4.197		PASS
2,4-Dinitrotoluene		Avg RF	0.337	0.345	0.367	0.388	0.383	0.372	0.391			0.369	0.00	6	0-15	5.714		PASS
2,6-Dinitrotoluene		Avg RF	0.252	0.255	0.273	0.282	0.274	0.271	0.274			0.269	0.00	4	0-15	4.151		PASS
Diethyl Phthalate		Avg RF	1.537	1.465	1.445	1.445	1.397	1.343	1.412			1.435	0.00	4	0-15	4.216		PASS
4-Chlorophenyl-Phenyl Ether		Avg RF	0.782	0.715	0.716	0.713	0.694	0.676	0.676			0.710	0.00	5	0-15	5.061		PASS
Fluorene		Avg RF	1.460	1.374	1.370	1.358	1.309	1.266	1.265			1.343	0.00	5	0-15	5.153		PASS
4-Nitroaniline		Avg RF	0.285	0.298	0.313	0.320	0.313	0.297	0.326			0.307	0.00	5	0-15	4.695		PASS

LR - E: Linear Regression (Equal Weight)
LR - IC: Linear Regression (Inverse Concentration Weight)
LR - ISC: Linear Regression (Inverse Square Concentration Weight)
Avg RF: Average Response Factor
QR - E: Quadratic Regression (Equal Weight)



INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8270C

ICAL WORK ORDER: 095-01-001-13198-596
ICAL BATCH ID: 170201001
INSTRUMENT: GC/MS CCC

ANALYZED BY: 923
ICAL D/T ANALYZED: 2017-02-01 11:46
REVIEWED BY: 262
D/T REVIEWED: 2017-02-03 16:39

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	MIN. RF	%RSD CL	%RSD CL	R _{or} R ² CL	R _{or} R ² CL	STATUS
Azobenzene		Avg RF	0.774	0.698	0.703	0.670	0.657	0.640	0.624	0.624	0.624	0.681	0.00	7	0-15	7.336	7.336	PASS
4,6-Dinitro-2-Methylpiperidine		LR - E	0.061	0.083	0.103	0.109	0.109	0.109	0.113	0.113	0.113	0.116	0.00	1	0-15	1.000	r ² >=0.990	PASS
N-Nitrosodiphenylamine	C	Avg RF	0.568	0.533	0.540	0.518	0.505	0.494	0.485	0.485	0.485	0.520	0.05	6	0-30	5.518	5.518	PASS
4-Bromophenyl-Phenyl Ether		Avg RF	0.241	0.225	0.232	0.230	0.225	0.225	0.221	0.221	0.221	0.228	0.00	3	0-15	2.864	2.864	PASS
Hexachlorobenzene		Avg RF	0.097	0.088	0.087	0.081	0.080	0.079	0.079	0.079	0.079	0.084	0.00	8	0-15	8.036	8.036	PASS
Pentachlorophenol	C	Avg RF	0.155	0.164	0.164	0.173	0.175	0.170	0.176	0.176	0.176	0.169	0.00	5	0-30	4.789	4.789	PASS
Phenanthrene		Avg RF	1.105	1.056	1.053	1.025	0.998	0.957	0.976	0.976	0.976	1.024	0.00	5	0-15	5.004	5.004	PASS
Anthracene		Avg RF	1.140	1.098	1.091	1.057	1.035	0.990	0.988	0.988	0.988	1.057	0.00	5	0-15	5.373	5.373	PASS
Di-n-Butyl Phthalate		Avg RF	1.257	1.231	1.222	1.222	1.205	1.138	1.206	1.206	1.206	1.211	0.00	3	0-15	3.035	3.035	PASS
Fluoranthene	C	Avg RF	1.286	1.289	1.282	1.252	1.208	1.144	1.209	1.209	1.209	1.239	0.00	4	0-30	4.377	4.377	PASS
Benzidine		Avg RF	0.484	0.481	0.481	0.434	0.393	0.369	0.363	0.363	0.363	0.421	0.00	13	0-15	12.877	12.877	PASS
Pyrene		Avg RF	1.383	1.208	1.226	1.189	1.154	1.147	1.081	1.081	1.081	1.198	0.00	8	0-15	7.890	7.890	PASS
Pyridine		Avg RF	0.923	0.916	0.906	0.907	0.893	0.876	0.924	0.924	0.924	0.906	0.00	2	0-15	1.881	1.881	PASS
Butyl Benzyl Phthalate		Avg RF	0.480	0.456	0.480	0.488	0.483	0.476	0.478	0.478	0.478	0.477	0.00	2	0-15	2.158	2.158	PASS
3,3'-Dichlorobenzidine		Avg RF	0.421	0.442	0.442	0.454	0.459	0.449	0.451	0.451	0.451	0.446	0.00	3	0-15	3.033	3.033	PASS
Benzo (a) Anthracene		Avg RF	1.265	1.174	1.173	1.167	1.161	1.141	1.134	1.134	1.134	1.174	0.00	4	0-15	3.668	3.668	PASS
Bis(2-Ethylhexyl) Phthalate		Avg RF	0.706	0.674	0.699	0.707	0.697	0.686	0.679	0.679	0.679	0.692	0.00	2	0-15	1.872	1.872	PASS
Chrysene		Avg RF	1.195	1.136	1.140	1.121	1.102	1.088	1.052	1.052	1.052	1.119	0.00	4	0-15	4.029	4.029	PASS
Di-n-Octyl Phthalate	C	Avg RF	1.093	1.107	1.198	1.234	1.231	1.215	1.224	1.224	1.224	1.186	0.00	5	0-30	5.059	5.059	PASS
Benzo (k) Fluoranthene		Avg RF	1.173	1.131	1.193	1.154	1.158	1.154	1.112	1.112	1.112	1.154	0.00	2	0-15	2.293	2.293	PASS
Benzo (b) Fluoranthene		Avg RF	1.106	1.118	1.095	1.138	1.131	1.118	1.245	1.245	1.245	1.136	0.00	4	0-15	4.406	4.406	PASS
Benzo (a) Pyrene	C	Avg RF	1.015	1.034	1.064	1.071	1.066	1.057	1.097	1.097	1.097	1.058	0.00	3	0-30	2.512	2.512	PASS

LR - E: Linear Regression (Equal Weight) LR - IC: Linear Regression (Inverse Concentration Weight) LR - ISC: Linear Regression (Inverse Square Concentration Weight)
Avg RF: Average Response Factor QR - E: Quadratic Regression (Equal Weight)

INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8270C

ICAL WORK ORDER: 095-01-001-13198-596
ICAL BATCH ID: 1702011001
INSTRUMENT: GC/MS CCC

ANALYZED BY: 923
ICAL D/T ANALYZED: 2017-02-01 11:46
REVIEWED BY: 262
D/T REVIEWED: 2017-02-03 16:39

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD CL	%R SD CL	R of R^2 CL	R or R^2 CL	STATUS
Benzo (g,h,i) Perylene	Avg RF		1.049	1.042	1.081	1.083	1.105	1.089	1.100	1.100	1.100	1.078	0.00	2	0-15	2.223		PASS
Indeno (1,2,3-c,d) Pyrene	Avg RF		1.317	1.306	1.364	1.381	1.388	1.373	1.397	1.397	1.397	1.361	0.00	3	0-15	2.592		PASS
Dibenz (a,h) Anthracene	Avg RF		1.093	1.084	1.134	1.138	1.145	1.128	1.146	1.146	1.146	1.124	0.00	2	0-15	2.216		PASS
1-Methylnaphthalene	Avg RF		0.742	0.699	0.694	0.680	0.666	0.648	0.651	0.651	0.651	0.683	0.00	5	0-15	4.779		PASS
1,2,4-Trichlorobenzene	Avg RF		0.403	0.379	0.385	0.371	0.374	0.366	0.361	0.361	0.361	0.377	0.00	4	0-15	3.732		PASS
2,6-Dichlorophenol	Avg RF		0.339	0.326	0.333	0.327	0.320	0.313	0.317	0.317	0.317	0.325	0.00	3	0-15	2.833		PASS

Data Files:

LEVEL #	D/T ANALYZED	DATA FILE
1	2017-02-01 11:46	Y:\GCMS_CCC\GCMS_CCC_data\2017\170201\01feb009.d\01feb009.rr
2	2017-02-01 11:27	Y:\GCMS_CCC\GCMS_CCC_data\2017\170201\01feb008.d\01feb008.rr
3	2017-02-01 11:07	Y:\GCMS_CCC\GCMS_CCC_data\2017\170201\01feb007.d\01feb007.rr
4	2017-02-01 10:48	Y:\GCMS_CCC\GCMS_CCC_data\2017\170201\01feb006.d\01feb006.rr
5	2017-02-01 10:30	Y:\GCMS_CCC\GCMS_CCC_data\2017\170201\01feb005.d\01feb005.rr
6	2017-02-01 10:11	Y:\GCMS_CCC\GCMS_CCC_data\2017\170201\01feb004.d\01feb004.rr
7	2017-02-01 09:53	Y:\GCMS_CCC\GCMS_CCC_data\2017\170201\01feb003.d\01feb003.rr
8	2017-02-01 09:35	Y:\GCMS_CCC\GCMS_CCC_data\2017\170201\01feb002.d\01feb002.rr

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor

LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)

LR - ISC: Linear Regression (Inverse Square Concentration Weight)



INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

ICV WORK ORDER: 095-01-001-13198-596

INITIAL BATCH ID: 170201I001

INSTRUMENT: GC/MS CCC

ANALYZED BY: 923

D/T ANALYZED:

INITIAL: 2017-02-01 11:46

ICV: 2017-02-01 12:11

REVIEWED BY: 262

D/T REVIEWED: 2017-02-03 16:39

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170201\01feb010.d\01feb010.ir

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
N-Nitrosodimethylamine		Avg Resp	0.00	0.814	0.831			-2	0-20	PASS
Aniline		Avg Resp	0.00	2.078	2.074			0	0-20	PASS
Phenol	C	Avg Resp	0.00	1.666	1.696			-2	0-20	PASS
Bis(2-Chloroethyl) Ether		Avg Resp	0.00	1.282	1.301			-1	0-20	PASS
2-Chlorophenol		Avg Resp	0.00	1.334	1.375			-3	0-20	PASS
1,3-Dichlorobenzene		Avg Resp	0.00	1.558	1.593			-2	0-20	PASS
1,4-Dichlorobenzene	C	Avg Resp	0.00	1.578	1.609			-2	0-20	PASS
Benzyl Alcohol		Avg Resp	0.00	1.204	1.220			-1	0-20	PASS
1,2-Dichlorobenzene		Avg Resp	0.00	1.510	1.526			-1	0-20	PASS
2-Methylphenol		Avg Resp	0.00	1.205	1.200			0	0-20	PASS
Bis(2-Chloroisopropyl) Ether		Avg Resp	0.00	1.680	1.644			2	0-20	PASS
3/4-Methylphenol		Avg Resp	0.00	1.441	1.434			0	0-20	PASS
N-Nitroso-di-n-propylamine	S	Avg Resp	0.05	1.016	0.991			2	0-20	PASS
Hexachloroethane		Avg Resp	0.00	0.587	0.601			-2	0-20	PASS
Nitrobenzene		Avg Resp	0.00	0.387	0.397			-3	0-20	PASS
Isophorone		Avg Resp	0.00	0.732	0.731			0	0-20	PASS
2-Nitrophenol	C	Avg Resp	0.00	0.163	0.179			-10	0-20	PASS
2,4-Dimethylphenol		Avg Resp	0.00	0.354	0.367			-4	0-20	PASS
Benzoic Acid		LR - Equal				80.00		82.962	0-20	PASS
Bis(2-Chloroethoxy) Methane		Avg Resp	0.00	0.442	0.446			-1	0-20	PASS
2,4-Dichlorophenol	C	Avg Resp	0.00	0.325	0.336			-3	0-20	PASS
Naphthalene		Avg Resp	0.00	1.036	1.055			-2	0-20	PASS
4-Chloroaniline		Avg Resp	0.00	0.458	0.454			1	0-20	PASS
Hexachloro-1,3-Butadiene	C	Avg Resp	0.00	0.240	0.251			-5	0-20	PASS
4-Chloro-3-Methylphenol	C	Avg Resp	0.00	0.324	0.325			0	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.686	0.687			0	0-20	PASS
Hexachlorocyclopentadiene	S	Avg Resp	0.05	0.403	0.415			-3	0-20	PASS
2,4,6-Trichlorophenol	C	Avg Resp	0.00	0.429	0.445			-4	0-20	PASS
2,4,5-Trichlorophenol		Avg Resp	0.00	0.470	0.479			-2	0-20	PASS
2-Chloronaphthalene		Avg Resp	0.00	1.155	1.164			-1	0-20	PASS

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

ICV WORK ORDER: 095-01-001-13198-596

INITIAL BATCH ID: 170201001

INSTRUMENT: GC/MS CCC

ANALYZED BY: 923

D/T ANALYZED:

INITIAL: 2017-02-01 11:46

ICV: 2017-02-01 12:11

REVIEWED BY: 262

D/T REVIEWED: 2017-02-03 16:39

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017170201\01feb010.d\01feb010.r

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
2-Nitroaniline	Avg Resp		0.00	0.320	0.339		-6	0-20	0-20	PASS
Dimethyl Phthalate	Avg Resp		0.00	1.439	1.441		0	0-20	0-20	PASS
Acenaphthylene	Avg Resp		0.00	1.887	1.902		-1	0-20	0-20	PASS
3-Nitroaniline	Avg Resp		0.00	0.309	0.326		-6	0-20	0-20	PASS
Acenaphthene	Avg Resp	C	0.00	1.169	1.168		0	0-20	0-20	PASS
2,4-Dinitrophenol	LR - Equal	S				80.00	80.095	0	0-20	PASS
4-Nitrophenol	Avg Resp	S	0.05	0.259	0.273		-5	0-20	0-20	PASS
Dibenzofuran	Avg Resp		0.00	1.696	1.706		-1	0-20	0-20	PASS
2,4-Dinitrotoluene	Avg Resp		0.00	0.369	0.392		-6	0-20	0-20	PASS
2,6-Dinitrotoluene	Avg Resp		0.00	0.269	0.285		-6	0-20	0-20	PASS
Diethyl Phthalate	Avg Resp		0.00	1.435	1.434		0	0-20	0-20	PASS
4-Chlorophenyl-Phenyl Ether	Avg Resp		0.00	0.710	0.706		1	0-20	0-20	PASS
Fluorene	Avg Resp		0.00	1.343	1.333		1	0-20	0-20	PASS
4-Nitroaniline	Avg Resp		0.00	0.307	0.322		-5	0-20	0-20	PASS
Azobenzene	Avg Resp		0.00	0.681	0.674		1	0-20	0-20	PASS
4,6-Dinitro-2-Methylphenol	LR - Equal					80.00	82.929	-4	0-20	PASS
N-Nitrosodiphenylamine	Avg Resp	C	0.05	0.520	0.518		0	0-20	0-20	PASS
4-Bromophenyl-Phenyl Ether	Avg Resp		0.00	0.228	0.237		-4	0-20	0-20	PASS
Hexachlorobenzene	Avg Resp		0.00	0.084	0.083		1	0-20	0-20	PASS
Pentachlorophenol	Avg Resp	C	0.00	0.169	0.178		-5	0-20	0-20	PASS
Phenanthrene	Avg Resp		0.00	1.024	1.025		0	0-20	0-20	PASS
Anthracene	Avg Resp		0.00	1.057	1.061		0	0-20	0-20	PASS
Di-n-Butyl Phthalate	Avg Resp		0.00	1.211	1.231		-2	0-20	0-20	PASS
Fluoranthene	Avg Resp	C	0.00	1.239	1.258		-2	0-20	0-20	PASS
Benzidine	Avg Resp		0.00	0.421	0.435		-3	0-20	0-20	PASS
Pyrene	Avg Resp		0.00	1.198	1.181		1	0-20	0-20	PASS
Pyridine	Avg Resp		0.00	0.906	0.943		-4	0-20	0-20	PASS
Butyl Benzyl Phthalate	Avg Resp		0.00	0.477	0.498		-4	0-20	0-20	PASS
3,3'-Dichlorobenzidine	Avg Resp		0.00	0.446	0.472		-6	0-20	0-20	PASS
Benzo (a) Anthracene	Avg Resp		0.00	1.174	1.195		-2	0-20	0-20	PASS

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

ICV WORK ORDER: 095-01-001-13198-596
INITIAL BATCH ID: 1702011001
INSTRUMENT: GC/MS CCC

ANALYZED BY: 923
D/T ANALYZED: 2017-02-01 11:46
INITIAL ICV: 2017-02-01 12:11
REVIEWED BY: 262
D/T REVIEWED: 2017-02-03 16:39

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\20171170201101feb010.d\01feb010.r

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
Bis(2-Ethylhexyl) Phthalate	Avg Resp		0.00	0.692	0.709			-2	0-20	PASS
Chrysene	Avg Resp		0.00	1.119	1.133			-1	0-20	PASS
Di-n-Octyl Phthalate	Avg Resp	C	0.00	1.186	1.265			-7	0-20	PASS
Benzo (k) Fluoranthene	Avg Resp		0.00	1.154	1.168			-1	0-20	PASS
Benzo (b) Fluoranthene	Avg Resp		0.00	1.136	1.217			-7	0-20	PASS
Benzo (a) Pyrene	Avg Resp	C	0.00	1.058	1.126			-6	0-20	PASS
Benzo (g,h,i) Perylene	Avg Resp		0.00	1.078	1.149			-7	0-20	PASS
Indeno (1,2,3-c,d) Pyrene	Avg Resp		0.00	1.361	1.457			-7	0-20	PASS
Dibenz (a,h) Anthracene	Avg Resp		0.00	1.124	1.198			-7	0-20	PASS
1-Methylnaphthalene	Avg Resp		0.00	0.683	0.690			-1	0-20	PASS
1,2,4-Trichlorobenzene	Avg Resp		0.00	0.377	0.389			-3	0-20	PASS
2,6-Dichlorophenol	Avg Resp		0.00	0.325	0.330			-2	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 01-Feb-2017 12:41

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
 End Cal Date : 01-FEB-2017 11:46
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS CCC.i/170201.b/svoa.m
 Cal Date : 01-Feb-2017 12:33 n8cz

Calibration File Names:
 Level 1: /chem/SVOA/GCMS CCC.i/170201.b/01feb009.d
 Level 2: /chem/SVOA/GCMS CCC.i/170201.b/01feb008.d
 Level 3: /chem/SVOA/GCMS CCC.i/170201.b/01feb007.d
 Level 4: /chem/SVOA/GCMS CCC.i/170201.b/01feb006.d
 Level 5: /chem/SVOA/GCMS CCC.i/170201.b/01feb005.d
 Level 6: /chem/SVOA/GCMS CCC.i/170201.b/01feb004.d
 Level 7: /chem/SVOA/GCMS CCC.i/170201.b/01feb003.d
 Level 8: /chem/SVOA/GCMS CCC.i/170201.b/01feb002.d

Compound	Level								Curve	Coefficients			RSD or R^2
	3	5	10	20	50	80	Level 6	b		m1	m2		
1 N-Nitrosodimethylamine	Level 1 ++++ 0.78815	Level 2 160 Level 8 0.86931 0.82536	Level 3 0.79785	Level 4 0.81533	Level 5 0.80630	Level 6 0.79750	AVRG	AVRG	0.81426			3	
2 Pyridine	Level 1 ++++ 0.87639	Level 2 0.92278 0.92392	Level 3 0.91571	Level 4 0.90568	Level 5 0.90727	Level 6 0.89299	AVRG	AVRG	0.90639			2	
5 Phenol	Level 1 ++++ 1.60732	Level 2 1.76904 1.65128	Level 3 1.66793	Level 4 1.68165	Level 5 1.66155	Level 6 1.62137	AVRG	AVRG	1.66574			3	

Report Date : 01-Feb-2017 12:41

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
 End Cal Date : 01-FEB-2017 11:46
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS CCC.i/170201.b/svoa.m
 Cal Date : 01-Feb-2017 12:33 n8cz

Compound	3	5	10	20	50	80	Curve	b	ml	m2	%RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					of R ²
	120	160									
	Level 7	Level 8									
6 Aniline	++++	2.24215	2.09874	2.11403	2.08448	2.01911	AVRG	2.07777			4
	1.98766	1.99824									
7 bis(2-Chloroethyl) Ether	++++	1.39472	1.30953	1.31650	1.27352	1.24087	AVRG	1.28241			5
	1.20955	1.23215									
8 2-Chlorophenol	++++	1.40244	1.32930	1.33277	1.33756	1.31777	AVRG	1.33360			2
	1.29912	1.31627									
9 1,3-Dichlorobenzene	++++	1.67905	1.57780	1.58641	1.53768	1.52580	AVRG	1.55804			4
	1.49507	1.50450									
11 1,4-Dichlorobenzene	++++	1.72612	1.55662	1.61912	1.57874	1.53584	AVRG	1.57789			5
	1.52738	1.50140									
12 Benzyl alcohol	++++	1.26707	1.20027	1.22737	1.21170	1.18761	AVRG	1.20427			3
	1.14014	1.19570									
13 1,2-Dichlorobenzene	++++	1.65705	1.53780	1.53295	1.48598	1.47692	AVRG	1.50984			5
	1.43949	1.43867									

Report Date : 01-Feb-2017 12:41

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
 End Cal Date : 01-FEB-2017 11:46
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS CCC.i/l70201.b/svoa.m
 Cal Date : 01-Feb-2017 12:33 n8cz

Compound	Level								Curve	Coefficients		%RSD or R ²
	3	5	10	20	50	80	m1	m2				
14 2-Methylphenol	Level 1 1.14570	Level 2 1.16985	Level 3 1.21110	Level 4 1.21222	Level 5 1.20506	Level 6 1.18509	1.20457		AVRG		4	
15 bis(2-Chloroisopropyl) Ether	Level 1 1.55916	Level 2 1.87660	Level 3 1.74182	Level 4 1.74233	Level 5 1.68167	Level 6 1.60999	1.68031		AVRG		7	
16 3/4-Methylphenol	Level 1 1.36479	Level 2 1.39118	Level 3 1.46499	Level 4 1.47013	Level 5 1.44894	Level 6 1.40194	1.44068		AVRG		4	
17 N-Nitroso-di-n-propylamine	Level 1 0.93242	Level 2 0.96427	Level 3 1.03927	Level 4 1.04901	Level 5 1.00383	Level 6 0.97628	1.01551		AVRG		7	
18 Hexachloroethane	Level 1 0.56781	Level 2 0.57089	Level 3 0.58530	Level 4 0.60029	Level 5 0.58506	Level 6 0.57935	0.58724		AVRG		3	
20 Nitrobenzene	Level 1 0.37398	Level 2 0.37621	Level 3 0.38670	Level 4 0.39760	Level 5 0.38506	Level 6 0.37741	0.38655		AVRG		3	
21 Isophorone	Level 1 0.68653	Level 2 0.70490	Level 3 0.74645	Level 4 0.74476	Level 5 0.72646	Level 6 0.70743	0.73179		AVRG		5	

Report Date : 01-Feb-2017 12:41

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
 End Cal Date : 01-FEB-2017 11:46
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS CCC.i/170201.b/svoa.m
 Cal Date : 01-Feb-2017 12:33 n8CZ

Compound	Levels								Coefficients		RSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 8	b	m ²		
22 2-Nitrophenol	++++ 0.17406	0.14628 0.17145	0.14398	0.16277	0.17185	0.17316	AVRG	0.16336		8	
23 2,4-Dimethylphenol	++++ 0.35040	0.35236 0.35948	0.33733	0.35637	0.36318	0.36129	AVRG	0.35435		2	
24 bis(2-Chloroethoxy) Methane	++++ 0.42265	0.47974 0.41804	0.45797	0.45253	0.43635	0.42951	AVRG	0.44240		5	
25 Benzoic acid	++++ 692547	++++ 803582	30894	97842	265847	473317	LNLR	0.11910	0.29126	1	
26 2,4-Dichlorophenol	++++ 0.31690	0.33956 0.31814	0.32681	0.32904	0.32383	0.32345	AVRG	0.32539		2	
27 1,2,4-Trichlorobenzene	++++ 0.36563	0.40323 0.36074	0.37852	0.38499	0.37089	0.37437	AVRG	0.37694		4	
29 Naphthalene	++++ 0.99073	1.11268 0.99358	1.04904	1.05713	1.03274	1.01575	AVRG	1.03595		4	

Report Date : 01-Feb-2017 12:41

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
 End Cal Date : 01-FEB-2017 11:46
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS CCC.i/170201.b/svoa.m
 Cal Date : 01-Feb-2017 12:33 n8CZ

Compound	Levels								Coefficients		RSD or R^2	
	3 Level 1	5 Level 2	10 Level 3	20 Level 4	50 Level 5	80 Level 6	Curve	b	m1	m2		
120	Level 7	160										
30 4-Chloroaniline	++++ 0.42812	0.50264 0.43835	0.46829 0.46829	0.46715 0.46715	0.45974 0.45974	0.44153 0.44153	AVRG		0.45797		5	
31 2,6-Dichlorophenol	++++ 0.31282	0.33915 0.31694	0.32607 0.32607	0.33340 0.33340	0.32690 0.32690	0.32049 0.32049	AVRG		0.32511		3	
32 Hexachloro-1,3-Butadiene	++++ 0.23207	0.25527 0.23277	0.24306 0.24306	0.24068 0.24068	0.23851 0.23851	0.23718 0.23718	AVRG		0.23994		3	
33 4-Chloro-3-methylphenol	++++ 0.30700	0.34734 0.32006	0.32966 0.32966	0.32752 0.32752	0.32456 0.32456	0.31321 0.31321	AVRG		0.32419		4	
34 2-Methylnaphthalene	++++ 0.65325	0.74554 0.66023	0.69825 0.69825	0.69326 0.69326	0.68404 0.68404	0.66571 0.66571	AVRG		0.68576		5	
35 1-Methylnaphthalene	++++ 0.64784	0.74195 0.65125	0.69947 0.69947	0.69392 0.69392	0.67999 0.67999	0.66646 0.66646	AVRG		0.68298		5	
36 Hexachlorocyclopentadiene	++++ 0.46299	++++ 0.43140	0.31063 0.31063	0.37016 0.37016	0.40764 0.40764	0.43627 0.43627	AVRG		0.40318		14	

Report Date : 01-Feb-2017 12:41

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
 End Cal Date : 01-FEB-2017 11:46
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS CCC.i/170201.b/svoa.m
 Cal Date : 01-Feb-2017 12:33 n8CZ

Compound	Level								Curve	Coefficients		%RSD or R ²
	3	5	10	20	50	80	m1	m2				
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						
	120	160										
	Level 7	Level 8										
37 2,4,6-Trichlorophenol	++++	0.4440	0.4109	0.4318	0.4294	0.4262					2	
	0.4353	0.4232					AVRG		0.4288			
38 2,4,5-Trichlorophenol	++++	0.4750	0.4607	0.4769	0.4745	0.4827					2	
	0.4651	0.4525					AVRG		0.4700			
40 2-Chloronaphthalene	++++	1.2360	1.1458	1.1698	1.1396	1.1297					4	
	1.1359	1.1041					AVRG		1.1547			
41 2-Nitroaniline	++++	0.2975	0.2999	0.3232	0.3331	0.3290					5	
	0.3240	0.3316					AVRG		0.3198			
42 Dimethyl Phthalate	++++	1.5578	1.4510	1.4672	1.4407	1.3907					4	
	1.3603	1.3967					AVRG		1.4390			
43 2,6-Dinitrotoluene	++++	0.2515	0.2546	0.2735	0.2820	0.2737					4	
	0.2706	0.2735					AVRG		0.2685			
44 Acenaphthylene	++++	1.9982	1.9168	1.9472	1.8985	1.8496					4	
	1.8152	1.7843					AVRG		1.8872			

Report Date : 01-Feb-2017 12:41

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
 End Cal Date : 01-FEB-2017 11:46
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS CCC.i/170201.b/svoa.m
 Cal Date : 01-Feb-2017 12:33 n8cz

Compound	Level								Curve	Coefficients		SRSD or R^2
	3	5	10	20	50	80	m1	m2				
45 3-Nitroaniline	Level 1 120 Level 7	Level 2 160 Level 8	Level 3 0.28937 0.29254	Level 4 0.31346	Level 5 0.32111	Level 6 0.31543			AVRG	0.30873		4
47 Acenaphthene	Level 1 1.12494	Level 2 1.26374 1.11776	Level 3 1.17792	Level 4 1.18330	Level 5 1.16972	Level 6 1.14283			AVRG	1.16860		4
48 2,4-Dinitrophenol	Level 1 222434	Level 2 ++++ 285775	Level 3 8520	Level 4 25717	Level 5 86342	Level 6 152223			LNLR	0.16249		1
49 4-Nitrophenol	Level 1 ++++ 0.25357	Level 2 0.23792 0.27425	Level 3 0.25243	Level 4 0.25821	Level 5 0.27005	Level 6 0.26395			AVRG	0.25863		5
50 Dibenzofuran	Level 1 1.62163	Level 2 1.82677 1.62843	Level 3 1.71224	Level 4 1.73602	Level 5 1.68864	Level 6 1.66000			AVRG	1.69625		4
51 2,4-Dinitrotoluene	Level 1 ++++ 0.37160	Level 2 0.33657 0.39120	Level 3 0.34515	Level 4 0.36710	Level 5 0.38794	Level 6 0.38255			AVRG	0.36887		6
52 Diethyl Phthalate	Level 1 1.34326	Level 2 1.53742 1.41233	Level 3 1.46502	Level 4 1.44489	Level 5 1.44505	Level 6 1.39704			AVRG	1.43500		4

Report Date : 01-Feb-2017 12:41

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
 End Cal Date : 01-FEB-2017 11:46
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS CCC.i/170201.b/svoa.m
 Cal Date : 01-Feb-2017 12:33 n8cz

Compound	Level								Curve	Coefficients			%RSD of R ²
	3	5	10	20	50	80	m1	m2					
53 Fluorene	Level 1 120 Level 7	Level 2 160 Level 8	Level 3 1.37373	Level 4 1.36962	Level 5 1.35756	Level 6 1.30902	AVRG	1.34287				5	
54 4-Chlorophenyl-phenyl Ether	Level 1 0.67595	Level 2 0.78169 0.67634	Level 3 0.71549	Level 4 0.71647	Level 5 0.71260	Level 6 0.69431	AVRG	0.71041				5	
55 4-Nitroaniline	Level 1 0.29707	Level 2 0.28547 0.32609	Level 3 0.29778	Level 4 0.31272	Level 5 0.32021	Level 6 0.31270	AVRG	0.30743				5	
56 4,6-Dinitro-2-methylphenol	Level 1 321760	Level 2 ++++ 420855	Level 3 14944	Level 4 44414	Level 5 135536	Level 6 228285	LNRR	0.13831	0.11616			1	
57 N-Nitrosodiphenylamine	Level 1 0.49401	Level 2 0.56765 0.48532	Level 3 0.53265	Level 4 0.54036	Level 5 0.51828	Level 6 0.50504	AVRG	0.52047				6	
58 Azobenzene	Level 1 0.63973	Level 2 0.77396 0.62442	Level 3 0.69768	Level 4 0.70251	Level 5 0.67015	Level 6 0.65726	AVRG	0.68081				7	
60 4-Bromophenyl-phenyl Ether	Level 1 0.22470	Level 2 0.24088 0.22097	Level 3 0.22511	Level 4 0.23166	Level 5 0.22967	Level 6 0.22531	AVRG	0.22832				3	

Report Date : 01-Feb-2017 12:41

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
 End Cal Date : 01-FEB-2017 11:46
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS CCC.i/170201.b/svoa.m
 Cal Date : 01-Feb-2017 12:33 n8cz

Compound	3	5	10	20	50	80	Coefficients		8RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	b	m2	or R ²
120	160								
	Level 7	Level 8							
61 Hexachlorobenzene	++++	0.09732	0.08775	0.08677	0.08149	0.07961			
	0.07871	0.07907					AVRG	0.08439	8
62 Pentachlorophenol	++++	++++	0.15502	0.16417	0.17291	0.17507			
	0.17022	0.17642					AVRG	0.16897	5
64 Phenanthrene	++++	1.10462	1.05581	1.05251	1.02451	0.99814			
	0.95705	0.97619					AVRG	1.02412	5
65 Anthracene	++++	1.13982	1.09777	1.09143	1.05732	1.03502			
	0.99014	0.98848					AVRG	1.05714	5
66 Carbazole	++++	1.06913	1.03124	1.01159	0.97419	0.95883			
	0.90632	0.94239					AVRG	0.98481	6
67 Di-n-butyl Phthalate	++++	1.25669	1.23104	1.22173	1.22194	1.20453			
	1.13806	1.20615					AVRG	1.21145	3
68 Fluoranthene	++++	1.28539	1.28908	1.28196	1.25159	1.20840			
	1.14372	1.20891					AVRG	1.23851	4

Report Date : 01-Feb-2017 12:41

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INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
 End Cal Date : 01-FEB-2017 11:46
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS CCC.i/170201.b/svoa.m
 Cal Date : 01-Feb-2017 12:33 n8cz

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2	%RSD or R^2
69 Benzidine	++++ 0.36874	++++ 0.36320	0.48438	0.48143	0.43378	0.39315	AVRG		0.42078		13
70 Pyrene	++++ 1.14653	1.38347 1.08092	1.20832	1.22593	1.18899	1.15429	AVRG		1.19835		8
72 Butyl Benzyl Phthalate	++++ 0.47564	0.47973 0.47798	0.45567	0.48018	0.48812	0.49317	AVRG		0.47721		2
73 3,3'-Dichlorobenzidine	++++ 0.44863	++++ 0.45069	0.42077	0.44178	0.45422	0.45879	AVRG		0.44581		3
74 Benzo (a) Anthracene	++++ 1.14112	1.26483 1.13443	1.17431	1.17296	1.16713	1.16085	AVRG		1.17366		4
76 Chrysene	++++ 1.08838	1.19488 1.05193	1.13557	1.13958	1.12095	1.10169	AVRG		1.11900		4
77 bis(2-Ethylhexyl) Phthalate	++++ 0.68556	0.70580 0.67942	0.67387	0.69939	0.70665	0.69660	AVRG		0.69247		2

Report Date : 01-Feb-2017 12:41

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INITIAL CALIBRATION DATA

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 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS CCC.i/170201.b/svoa.m
 Cal Date : 01-Feb-2017 12:33 n8cz

Compound	3	5	10	20	50	80	Curve	b	m1	m2	SRSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
120	Level 7	Level 8									
78 Di-n-octyl Phthalate	++++	1.09331	1.10694	1.19841	1.23356	1.23084	AVRG		1.18612		5
	1.21550	1.22425									
79 Benzo (b) Fluoranthene	++++	1.10631	1.11773	1.09543	1.13778	1.13060	AVRG		1.13582		4
	1.11819	1.24470									
80 Benzo (k) Fluoranthene	++++	1.17281	1.13081	1.19292	1.15441	1.15626	AVRG		1.15359		2
	1.15406	1.11188									
81 Benzo (a) Pyrene	++++	1.01471	1.03443	1.06406	1.07150	1.06642	AVRG		1.05793		3
	1.05740	1.09698									
83 Indeno (1,2,3-c,d) Pyrene	++++	1.31733	1.30632	1.36401	1.38107	1.38774	AVRG		1.36097		3
	1.37342	1.39688									
84 Dibenz (a,h) Anthracene	++++	1.09343	1.08435	1.13352	1.13829	1.14486	AVRG		1.12399		2
	1.12777	1.14573									
85 Benzo (g,h,i) Pezylene	++++	1.04944	1.04199	1.08128	1.08332	1.10456	AVRG		1.07846		2
	1.08888	1.09978									

Report Date : 01-Feb-2017 12:41

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INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
 End Cal Date : 01-FEB-2017 11:46
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS CCC.i/170201.b/svoa.m
 Cal Date : 01-Feb-2017 12:33 n8cz

Compound	3	5	10	20	50	80	Curve	b	m1	m2	SRSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
	120	160									
	Level 7	Level 8									
\$ 3 2-Fluorophenol	++++	1.21868	1.15836	1.19922	1.19305	1.17943					
	1.19291	1.22341					AVRG		1.19501		2
\$ 4 Phenol-d6	++++	1.71785	1.62616	1.63796	1.63282	1.60281					
	1.58506	1.63880					AVRG		1.63449		3
\$ 19 Nitrobenzene-d5	++++	0.44061	0.42209	0.43824	0.42958	0.42648					
	0.42065	0.42123					AVRG		0.42841		2
\$ 39 2-Fluorobiphenyl	++++	1.59307	1.48124	1.50932	1.47802	1.44767					
	1.45976	1.39613					AVRG		1.48074		4
\$ 59 2,4,6-Tribromophenol	++++	0.11241	0.10114	0.10778	0.10928	0.11360					
	0.11241	0.11321					AVRG		0.10957		4
\$ 71 p-Terphenyl-d14	++++	1.00343	0.90301	0.91727	0.90388	0.90456					
	0.89507	0.85586					AVRG		0.91187		5

Report Date : 01-Feb-2017 12:41

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-2016 10:03
 End Cal Date : 01-FEB-2017 11:46
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem/SVOA/GCMS CCC.i/170201.b/svoa.m
 Cal Date : 01-Feb-2017 12:33 n8cz

Average %RSD Results.	
Calculated Average %RSD =	4.37045
Maximum Average %RSD =	15.00000
* Passed Average %RSD Test.	

Curve	Formula	Units
Averaged	Ant = Rsp/ml	Response
Linear	Ant = b + Rsp/ml	Response

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb010.d
 Report Date: 02/01/2017 12:41

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_CCC.i Injection Date and Time: 01-FEB-2017 12:11
 Sample Name: ICV 80 PPM S110816N 8270 Initial Calibration Date(s): 22-MAR-2016 01-FEB-2017
 Sublist used: all.sub Initial Calibration Time(s): 10:03 11:46
 Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m

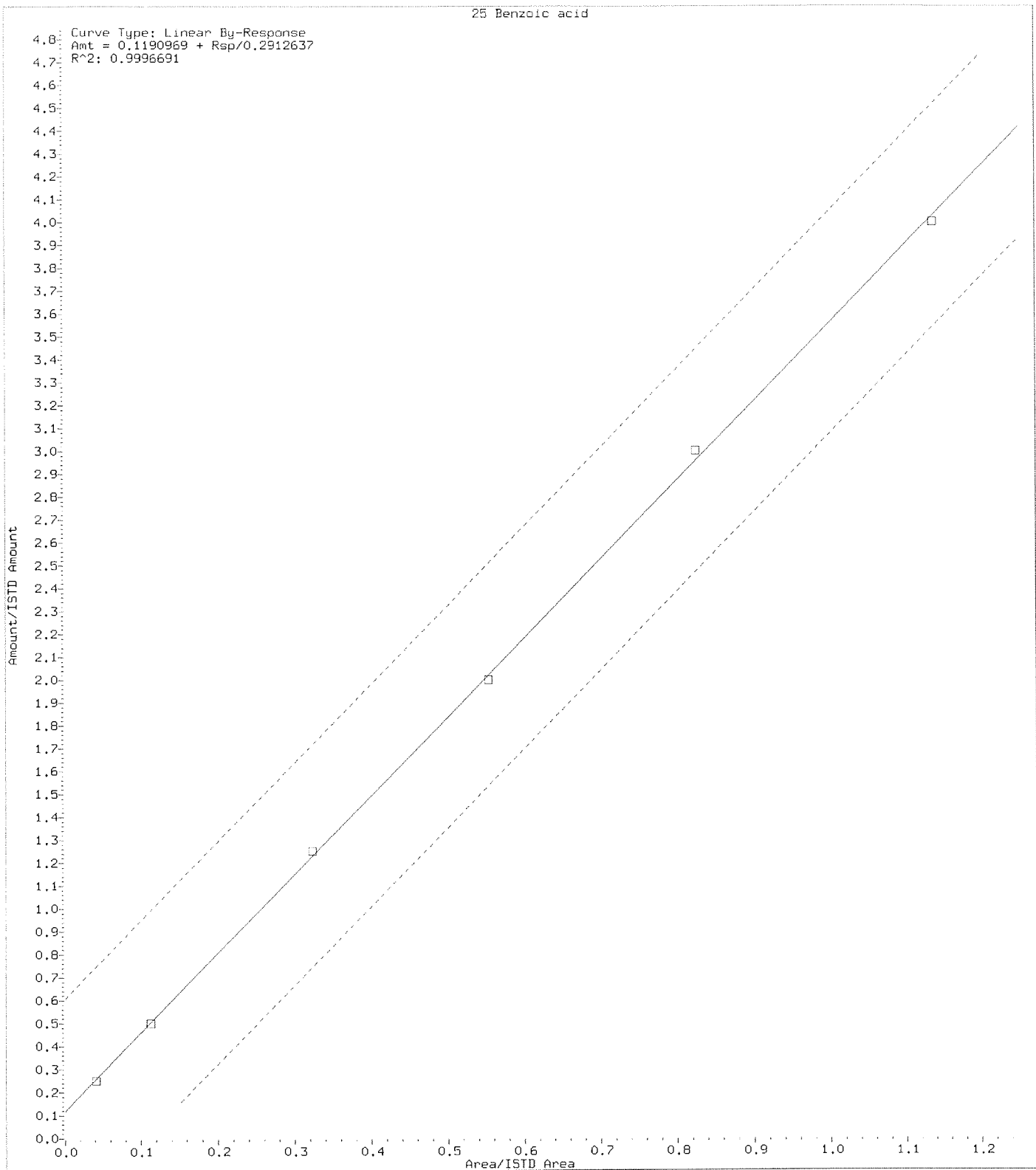
Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
N-Nitrosodimethylamine	0.814	0.831	0.00	-2	20	Averaged
Pyridine	0.906	0.943	0.00	-4	20	Averaged
Phenol	1.666	1.696	0.00	-2	20	Averaged
Aniline	2.078	2.074	0.00	0	20	Averaged
bis(2-Chloroethyl) Ether	1.282	1.301	0.00	-1	20	Averaged
2-Chlorophenol	1.334	1.375	0.00	-3	20	Averaged
1,3-Dichlorobenzene	1.558	1.593	0.00	-2	20	Averaged
1,4-Dichlorobenzene	1.578	1.609	0.00	-2	20	Averaged
Benzyl alcohol	1.204	1.220	0.00	-1	20	Averaged
1,2-Dichlorobenzene	1.510	1.526	0.00	-1	20	Averaged
2-Methylphenol	1.205	1.200	0.00	0	20	Averaged
bis(2-Chloroisopropyl) Ether	1.680	1.644	0.00	2	20	Averaged
3/4-Methylphenol	1.441	1.434	0.00	0	20	Averaged
N-Nitroso-di-n-propylamine	1.016	0.991	0.05	2	20	Averaged
Hexachloroethane	0.587	0.601	0.00	-2	20	Averaged
Nitrobenzene	0.387	0.397	0.00	-3	20	Averaged
Isophorone	0.732	0.731	0.00	0	20	Averaged
2-Nitrophenol	0.163	0.179	0.00	-10	20	Averaged
2,4-Dimethylphenol	0.354	0.367	0.00	-4	20	Averaged
bis(2-Chloroethoxy) Methane	0.442	0.446	0.00	-1	20	Averaged
Benzoic acid	80.000	82.962	0.00	-4	20	Linear
2,4-Dichlorophenol	0.325	0.336	0.00	-3	20	Averaged
1,2,4-Trichlorobenzene	0.377	0.389	0.00	-3	20	Averaged
Naphthalene	1.036	1.055	0.00	-2	20	Averaged
4-Chloroaniline	0.458	0.454	0.00	1	20	Averaged
2,6-Dichlorophenol	0.325	0.330	0.00	-2	20	Averaged
Hexachloro-1,3-Butadiene	0.240	0.251	0.00	-5	20	Averaged
4-Chloro-3-methylphenol	0.324	0.325	0.00	0	20	Averaged
2-Methylnaphthalene	0.686	0.687	0.00	0	20	Averaged
1-Methylnaphthalene	0.683	0.690	0.00	-1	20	Averaged
Hexachlorocyclopentadiene	0.403	0.415	0.05	-3	20	Averaged
2,4,6-Trichlorophenol	0.429	0.445	0.00	-4	20	Averaged
2,4,5-Trichlorophenol	0.470	0.479	0.00	-2	20	Averaged
2-Chloronaphthalene	1.155	1.164	0.00	-1	20	Averaged
2-Nitroaniline	0.320	0.339	0.00	-6	20	Averaged
Dimethyl Phthalate	1.439	1.441	0.00	0	20	Averaged
Acenaphthylene	1.887	1.902	0.00	-1	20	Averaged
2,6-Dinitrotoluene	0.269	0.285	0.00	-6	20	Averaged
3-Nitroaniline	0.309	0.326	0.00	-6	20	Averaged
Acenaphthene	1.169	1.168	0.00	0	20	Averaged
2,4-Dinitrophenol	80.000	80.095	0.05	0	20	Linear
4-Nitrophenol	0.259	0.273	0.05	-5	20	Averaged
Dibenzofuran	1.696	1.706	0.00	-1	20	Averaged
2,4-Dinitrotoluene	0.369	0.392	0.00	-6	20	Averaged
Diethyl Phthalate	1.435	1.434	0.00	0	20	Averaged
Fluorene	1.343	1.333	0.00	1	20	Averaged
4-Chlorophenyl-phenyl Ether	0.710	0.706	0.00	1	20	Averaged
4-Nitroaniline	0.307	0.322	0.00	-5	20	Averaged

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb010.d
 Report Date: 02/01/2017 12:41

Eurofins CalScience
 Calibration Verification Report

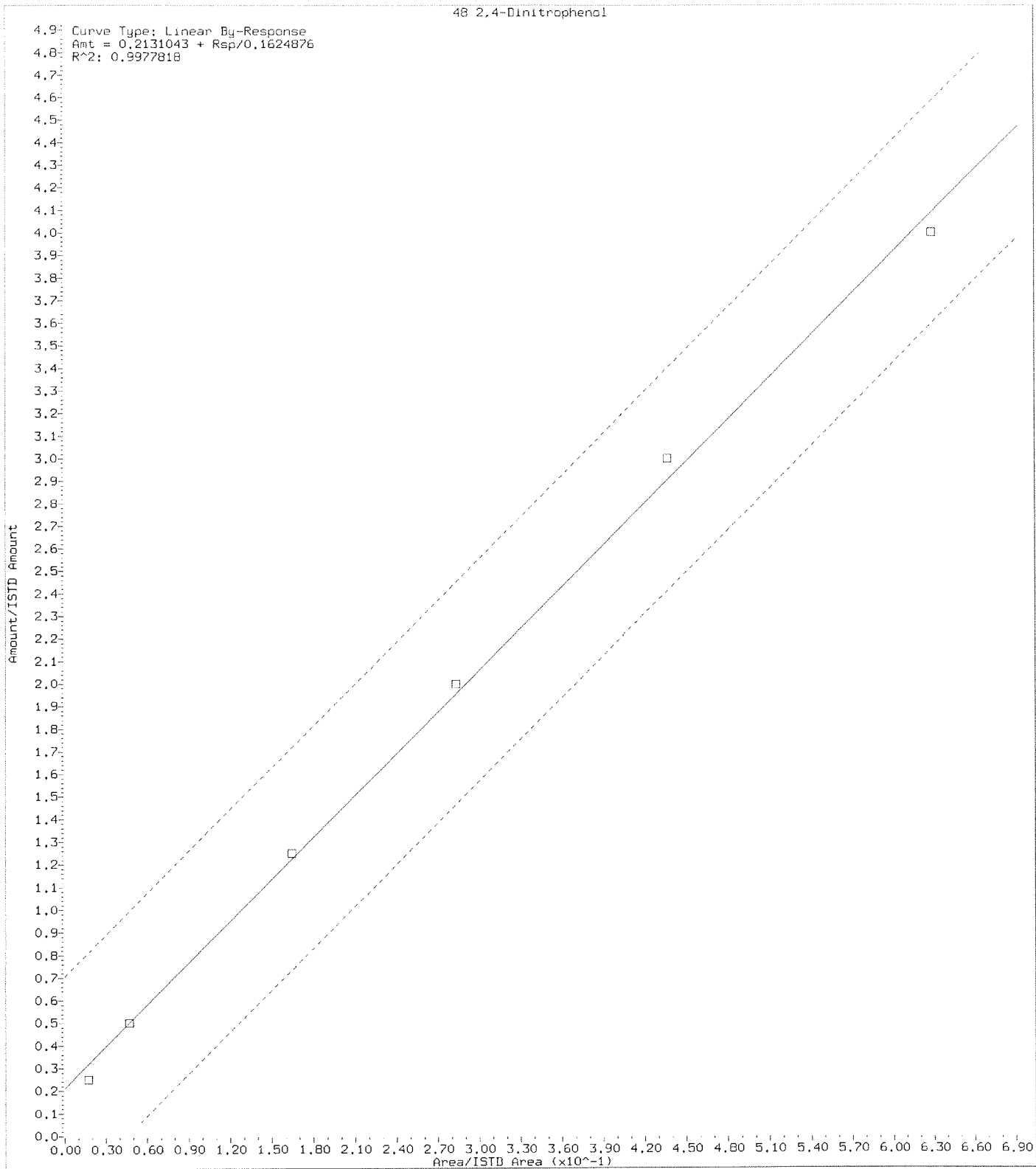
Instrument ID: GCMS_CCC.i Injection Date and Time: 01-FEB-2017 12:11
 Sample Name: ICV 80 PPM S110816N 8270 Initial Calibration Date(s): 22-MAR-2016 01-FEB-2017
 Sublist used: all.sub Initial Calibration Time(s): 10:03 11:46
 Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
4,6-Dinitro-2-methylphenol	80.000	82.929	0.00	-4	20	Linear
N-Nitrosodiphenylamine	0.520	0.518	0.00	0	20	Averaged
Azobenzene	0.681	0.674	0.00	1	20	Averaged
4-Bromophenyl-phenyl Ether	0.228	0.237	0.00	-4	20	Averaged
Hexachlorobenzene	0.084	0.083	0.00	1	20	Averaged
Pentachlorophenol	0.169	0.178	0.00	-5	20	Averaged
Phenanthrene	1.024	1.025	0.00	0	20	Averaged
Anthracene	1.057	1.061	0.00	0	20	Averaged
Carbazole	0.985	0.982	0.00	0	20	Averaged
Di-n-butyl Phthalate	1.211	1.231	0.00	-2	20	Averaged
Fluoranthene	1.239	1.258	0.00	-2	20	Averaged
Benzidine	0.421	0.435	0.00	-3	20	Averaged
Pyrene	1.198	1.181	0.00	1	20	Averaged
Butyl Benzyl Phthalate	0.477	0.498	0.00	-4	20	Averaged
3,3'-Dichlorobenzidine	0.446	0.472	0.00	-6	20	Averaged
Benzo (a) Anthracene	1.174	1.195	0.00	-2	20	Averaged
Chrysene	1.119	1.133	0.00	-1	20	Averaged
bis(2-Ethylhexyl) Phthalate	0.692	0.709	0.00	-2	20	Averaged
Di-n-octyl Phthalate	1.186	1.265	0.00	-7	20	Averaged
Benzo (b) Fluoranthene	1.136	1.217	0.00	-7	20	Averaged
Benzo (k) Fluoranthene	1.154	1.168	0.00	-1	20	Averaged
Benzo (a) Pyrene	1.058	1.126	0.00	-6	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.361	1.457	0.00	-7	20	Averaged
Dibenz (a,h) Anthracene	1.124	1.198	0.00	-7	20	Averaged
Benzo (g,h,i) Perylene	1.078	1.149	0.00	-7	20	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
2-Fluorophenol	1.195	1.256	0.00	-5	20	Averaged
Phenol-d6	1.634	1.678	0.00	-3	20	Averaged
Nitrobenzene-d5	0.428	0.443	0.00	-4	20	Averaged
2-Fluorobiphenyl	1.481	1.507	0.00	-2	20	Averaged
2,4,6-Tribromophenol	0.110	0.117	0.00	-6	20	Averaged
p-Terphenyl-d14	0.912	0.917	0.00	-1	20	Averaged



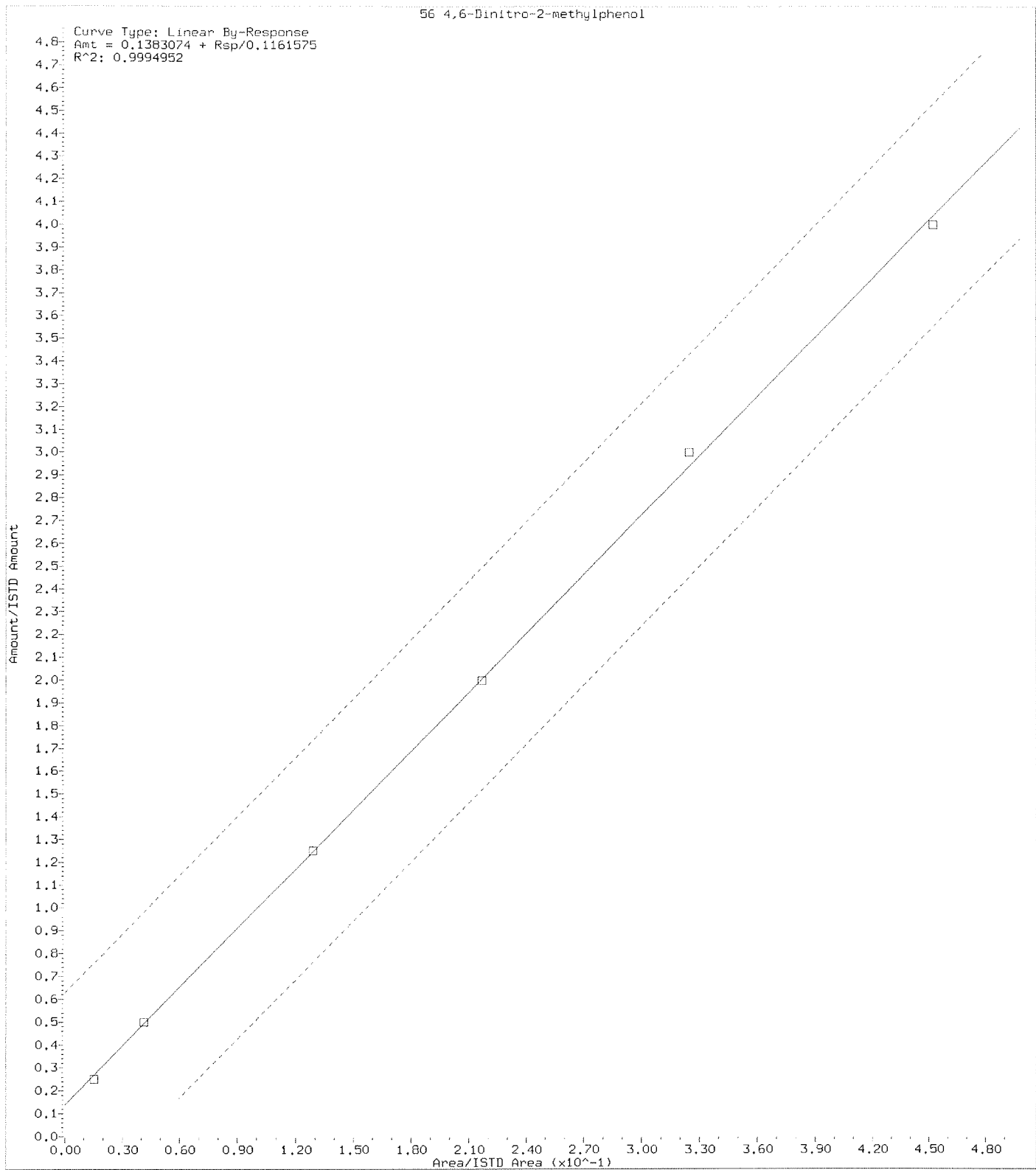

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Target 3.5 esignature user ID: n8cz



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Target 3.5 esignature user ID: n8cz




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Target 3.5 esignature user ID: n8cz

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb002.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 09:35 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

Sample Name: ICAL-1 160 PPM S110816M 8270 Misc Info: 170201I001
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.345	152	191227	40.000	0.00
28)*Naphthalene-d8	(2)	4.596	136	706181	40.000	0.00
46)*Acenaphthene-d10	(3)	6.367	164	453848	40.000	-0.01
63)*Phenanthrene-d10	(4)	7.805	188	928793	40.000	0.00
75)*Chrysene-d12	(5)	10.485	240	1074104	40.000	-0.01
82)*Perylene-d12	(6)	12.277	264	1041973	40.000	-0.01
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.312	112	935795	161.914	-0.01
SpikedAmount 160.000	Recovery =		0.000			
4)\$Phenol-d6	(1)	3.008	99	1253529	156.039	0.00
SpikedAmount 160.000	Recovery =		0.000			
19)\$Nitrobenzene-d5	(2)	3.906	82	1189863	158.529	-0.01
SpikedAmount 160.000	Recovery =		0.000			
39)\$2-Fluorobiphenyl	(3)	5.703	172	2534525	152.370	0.00
SpikedAmount 160.000	Recovery =		0.000			
59)\$2,4,6-Tribromophenol	(4)	7.153	330	420611	161.401	-0.01
SpikedAmount 160.000	Recovery =		0.000			
71)\$p-Terphenyl-d14	(5)	9.389	244	3677139	149.183	-0.01
SpikedAmount 160.000	Recovery =		0.000			
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.670	74	631323	162.589	100
2) Pyridine	(1)	1.692	52	706711	164.961	99
5) Phenol	(1)	3.024	94	1263078	154.555	100
6) Aniline	(1)	3.083	93	1528467	148.295	100
7) bis(2-Chloroethyl) Ether	(1)	3.120	93	942480	150.283	99
8) 2-Chlorophenol	(1)	3.179	128	1006829	152.291	99
9) 1,3-Dichlorobenzene	(1)	3.318	146	1150801	153.776	99
11) 1,4-Dichlorobenzene	(1)	3.361	146	1148436	151.881	99
12) Benzyl alcohol	(1)	3.478	79	914602	152.159	100
13) 1,2-Dichlorobenzene	(1)	3.542	146	1100450	150.130	99
14) 2-Methylphenol	(1)	3.591	108	894826	148.662	100
15) bis(2-Chloroisopropyl) Ether	(1)	3.633	45	1186067	146.963	100
16) 3/4-Methylphenol	(1)	3.735	107	2128254	302.810	100
17) N-Nitroso-di-n-propylamine	(1)	3.783	70	737576	144.978	99
18) Hexachloroethane	(1)	3.831	117	436680	153.700	98
20) Nitrobenzene	(2)	3.922	77	1062677	157.820	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb002.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 09:35 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

Sample Name: ICAL-1 160 PPM S110816M 8270 Misc Info: 170201I001
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.152	82	1991144	149.795	99
22) 2-Nitrophenol	(2)	4.238	139	484289	165.180	100
23) 2,4-Dimethylphenol	(2)	4.270	107	1015437	155.952	99
24) bis(2-Chloroethoxy) Methane	(2)	4.377	93	1180852	147.580	97
25) Benzoic acid	(2)	4.436	105	803582	179.661	97
26) 2,4-Dichlorophenol	(2)	4.462	162	898647	151.987	99
27) 1,2,4-Trichlorobenzene	(2)	4.553	180	1019003	152.880	100
29) Naphthalene	(2)	4.618	128	2806591	152.916	99
30) 4-Chloroaniline	(2)	4.692	127	1238213	148.939	100
31) 2,6-Dichlorophenol	(2)	4.698	162	895255	152.213	100
32) Hexachloro-1,3-Butadiene	(2)	4.805	225	657520	157.137	100
33) 4-Chloro-3-methylphenol	(2)	5.174	107	904081	149.848	100
34) 2-Methylnaphthalene	(2)	5.313	142	1864971	151.147	100
35) 1-Methylnaphthalene	(2)	5.420	142	1839611	149.145	100
36) Hexachlorocyclopentadiene	(3)	5.543	237	783165	174.247	100
37) 2,4,6-Trichlorophenol	(3)	5.618	196	768310	156.394	100
38) 2,4,5-Trichlorophenol	(3)	5.650	196	821554	153.616	99
40) 2-Chloronaphthalene	(3)	5.794	162	2004399	152.525	100
41) 2-Nitroaniline	(3)	5.933	65	602029	170.519	100
42) Dimethyl Phthalate	(3)	6.153	163	2535652	152.282	100
44) Acenaphthylene	(3)	6.211	152	3239336	149.560	100
43) 2,6-Dinitrotoluene	(3)	6.222	165	496618	170.613	100
45) 3-Nitroaniline	(3)	6.351	138	582263	166.788	99
47) Acenaphthene	(3)	6.399	153	2029178	153.526	100
48) 2,4-Dinitrophenol	(3)	6.447	184	285775	220.955	100
49) 4-Nitrophenol	(3)	6.506	65	497873	166.977	99
50) Dibenzofuran	(3)	6.559	168	2956244	152.758	99
51) 2,4-Dinitrotoluene	(3)	6.602	165	710183	173.623	99
52) Diethyl Phthalate	(3)	6.859	149	2563927	151.683	100
53) Fluorene	(3)	6.896	166	2296266	149.392	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.901	204	1227815	152.630	100
55) 4-Nitroaniline	(3)	6.971	138	591974	168.703	99
56) 4,6-Dinitro-2-methylphenol	(4)	7.003	198	420855	199.323	100
57) N-Nitrosodiphenylamine	(4)	7.030	169	1803032	146.979	99
58) Azobenzene	(4)	7.057	77	2319836	146.276	100
60) 4-Bromophenyl-phenyl Ether	(4)	7.372	248	820935	153.990	99
61) Hexachlorobenzene	(4)	7.517	142	293751	147.317	100

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb002.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 09:35 Analyst ID: 923

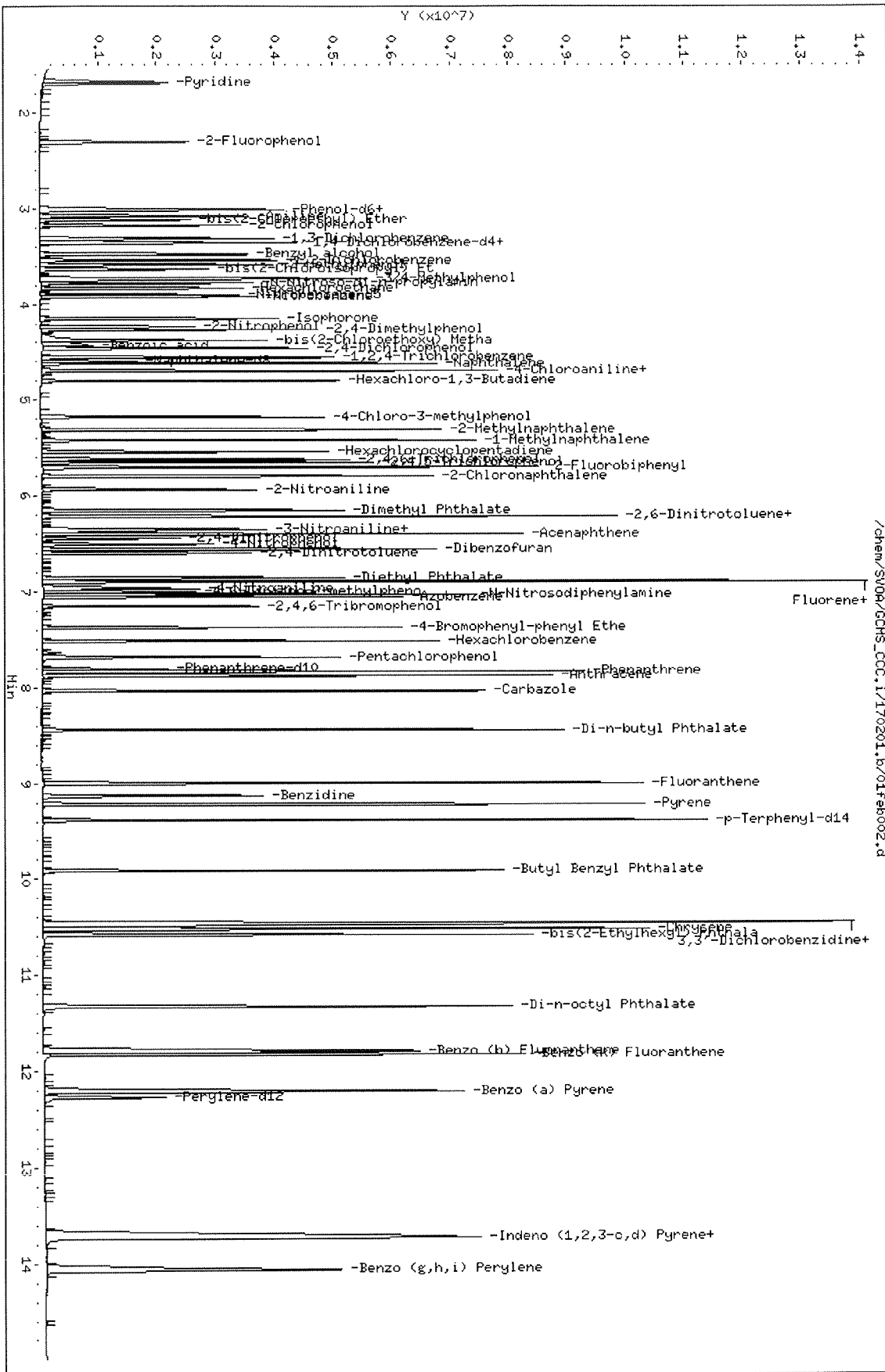
Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

Sample Name: ICAL-1 160 PPM S110816M 8270 Misc Info: 170201I001
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	QValue
	Ref.	RT			Amount	
=====	=====	=====	=====	=====	=====	=====
62) Pentachlorophenol	(4)	7.688	266	655425	163.409	100
64) Phenanthrene	(4)	7.832	178	3626726	152.737	99
65) Anthracene	(4)	7.880	178	3672388	147.791	99
66) Carbazole	(4)	8.041	167	3501151	148.510	100
67) Di-n-butyl Phthalate	(4)	8.442	149	4481062	151.496	100
68) Fluoranthene	(4)	9.003	202	4491318	153.253	99
69) Benzidine	(4)	9.132	184	1349350	120.441	99
70) Pyrene	(5)	9.223	202	4644066	144.197	100
72) Butyl Benzyl Phthalate	(5)	9.913	149	2053616	151.123	99
73) 3,3'-Dichlorobenzidine	(5)	10.458	252	1936347	158.831	99
74) Benzo (a) Anthracene	(5)	10.469	228	4873976	153.588	100
76) Chrysene	(5)	10.522	228	4519539	149.881	97
77) bis(2-Ethylhexyl) Phthalate	(5)	10.581	149	2919078	148.021	100
78) Di-n-octyl Phthalate	(5)	11.330	149	5259887	153.841	99
79) Benzo (b) Fluoranthene	(5)	11.795	252	5347751	166.652	100
80) Benzo (k) Fluoranthene	(5)	11.833	252	4777080	157.323	100
81) Benzo (a) Pyrene	(5)	12.213	252	4713064	163.175	99
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.705	276	5822052	167.683	99
84) Dibenz (a,h) Anthracene	(6)	13.737	278	4775274	167.652	100
85) Benzo (g,h,i) Perylene	(6)	14.074	276	4583784	167.151	100

Data File: /chem/SV09/GCHS_CCC.i/170201.b/01feb002.d
Date : 01-FEB-2017 09:35
Client ID:
Sample Info: ICAL-1 160 PPH S110916H 8270
Column phase:

Instrument: GCHS_CCC.i
Operator: 923
Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb003.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 09:53 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

Sample Name: ICAL-2 120 PPM S110816K 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV (Min)
=====						
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.345	152	230708	40.000	0.00
28)*Naphthalene-d8	(2)	4.596	136	837955	40.000	0.00
46)*Acenaphthene-d10	(3)	6.361	164	508377	40.000	0.00
63)*Phenanthrene-d10	(4)	7.805	188	988155	40.000	0.00
75)*Chrysene-d12	(5)	10.480	240	1012398	40.000	0.00
82)*Perylene-d12	(6)	12.271	264	950893	40.000	0.00
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.307	112	825645	118.265	0.00
SpikedAmount 120.000	Recovery =		0.000			
4)\$Phenol-d6	(1)	3.008	99	1097055	113.398	0.00
SpikedAmount 120.000	Recovery =		0.000			
19)\$Nitrobenzene-d5	(2)	3.901	82	1057451	118.104	0.00
SpikedAmount 120.000	Recovery =		0.000			
39)\$2-Fluorobiphenyl	(3)	5.703	172	2226326	118.893	0.00
SpikedAmount 120.000	Recovery =		0.000			
59)\$2,4,6-Tribromophenol	(4)	7.147	330	333234	121.133	0.00
SpikedAmount 120.000	Recovery =		0.000			
71)\$p-Terphenyl-d14	(5)	9.383	244	2718498	117.373	0.00
SpikedAmount 120.000	Recovery =		0.000			
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.665	74	545495	116.374	100
2) Pyridine	(1)	1.687	52	606568	116.864	100
5) Phenol	(1)	3.018	94	1112468	113.003	99
6) Aniline	(1)	3.077	93	1375707	110.891	100
7) bis(2-Chloroethyl) Ether	(1)	3.120	93	837161	110.665	100
8) 2-Chlorophenol	(1)	3.173	128	899151	113.065	100
9) 1,3-Dichlorobenzene	(1)	3.312	146	1034774	114.557	100
11) 1,4-Dichlorobenzene	(1)	3.361	146	1057136	115.636	100
12) Benzyl alcohol	(1)	3.478	79	789120	109.091	100
13) 1,2-Dichlorobenzene	(1)	3.537	146	996308	112.706	100
14) 2-Methylphenol	(1)	3.585	108	792968	109.612	100
15) bis(2-Chloroisopropyl) Ether	(1)	3.633	45	1079135	109.863	100
16) 3/4-Methylphenol	(1)	3.730	107	1889209	223.474	100
17) N-Nitroso-di-n-propylamine	(1)	3.783	70	645352	105.410	99
18) Hexachloroethane	(1)	3.831	117	392992	114.588	99
20) Nitrobenzene	(2)	3.922	77	940146	117.026	99

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb003.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 09:53 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

Sample Name: ICAL-2 120 PPM S110816K 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.147	82	1725842	109.034	100
22) 2-Nitrophenol	(2)	4.232	139	437565	125.903	99
23) 2,4-Dimethylphenol	(2)	4.265	107	880852	114.185	100
24) bis(2-Chloroethoxy) Methane	(2)	4.377	93	1062474	111.627	99
25) Benzoic acid	(2)	4.425	105	692547	129.509	96
26) 2,4-Dichlorophenol	(2)	4.457	162	796636	113.509	100
27) 1,2,4-Trichlorobenzene	(2)	4.553	180	919652	115.968	100
29) Naphthalene	(2)	4.618	128	2490557	114.248	100
30) 4-Chloroaniline	(2)	4.692	127	1076229	109.196	99
31) 2,6-Dichlorophenol	(2)	4.698	162	786387	112.845	100
32) Hexachloro-1,3-Butadiene	(2)	4.799	225	583401	117.370	99
33) 4-Chloro-3-methylphenol	(2)	5.174	107	771758	107.882	100
34) 2-Methylnaphthalene	(2)	5.308	142	1642181	112.007	99
35) 1-Methylnaphthalene	(2)	5.420	142	1628578	111.065	100
36) Hexachlorocyclopentadiene	(3)	5.538	237	706120	139.687	100
37) 2,4,6-Trichlorophenol	(3)	5.618	196	663947	120.336	100
38) 2,4,5-Trichlorophenol	(3)	5.650	196	709458	118.057	100
40) 2-Chloronaphthalene	(3)	5.794	162	1732480	117.387	100
41) 2-Nitroaniline	(3)	5.928	65	494254	123.560	100
42) Dimethyl Phthalate	(3)	6.153	163	2074761	110.654	100
44) Acenaphthylene	(3)	6.211	152	2768517	113.560	100
43) 2,6-Dinitrotoluene	(3)	6.217	165	412699	125.025	99
45) 3-Nitroaniline	(3)	6.345	138	470391	119.279	100
47) Acenaphthene	(3)	6.399	153	1715685	115.426	100
48) 2,4-Dinitrophenol	(3)	6.441	184	222434	149.813	100
49) 4-Nitrophenol	(3)	6.500	65	386721	114.220	100
50) Dibenzofuran	(3)	6.554	168	2473204	113.414	100
51) 2,4-Dinitrotoluene	(3)	6.597	165	566741	122.414	100
52) Diethyl Phthalate	(3)	6.853	149	2048651	107.761	100
53) Fluorene	(3)	6.891	166	1930160	111.110	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.896	204	1030917	113.473	100
55) 4-Nitroaniline	(3)	6.960	138	453070	114.089	99
56) 4,6-Dinitro-2-methylphenol	(4)	6.998	198	321760	141.860	100
57) N-Nitrosodiphenylamine	(4)	7.024	169	1464485	112.539	100
58) Azobenzene	(4)	7.051	77	1896443	112.493	100
60) 4-Bromophenyl-phenyl Ether	(4)	7.372	248	666107	118.029	99
61) Hexachlorobenzene	(4)	7.511	142	233343	110.266	99

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb003.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 09:53 Analyst ID: 923

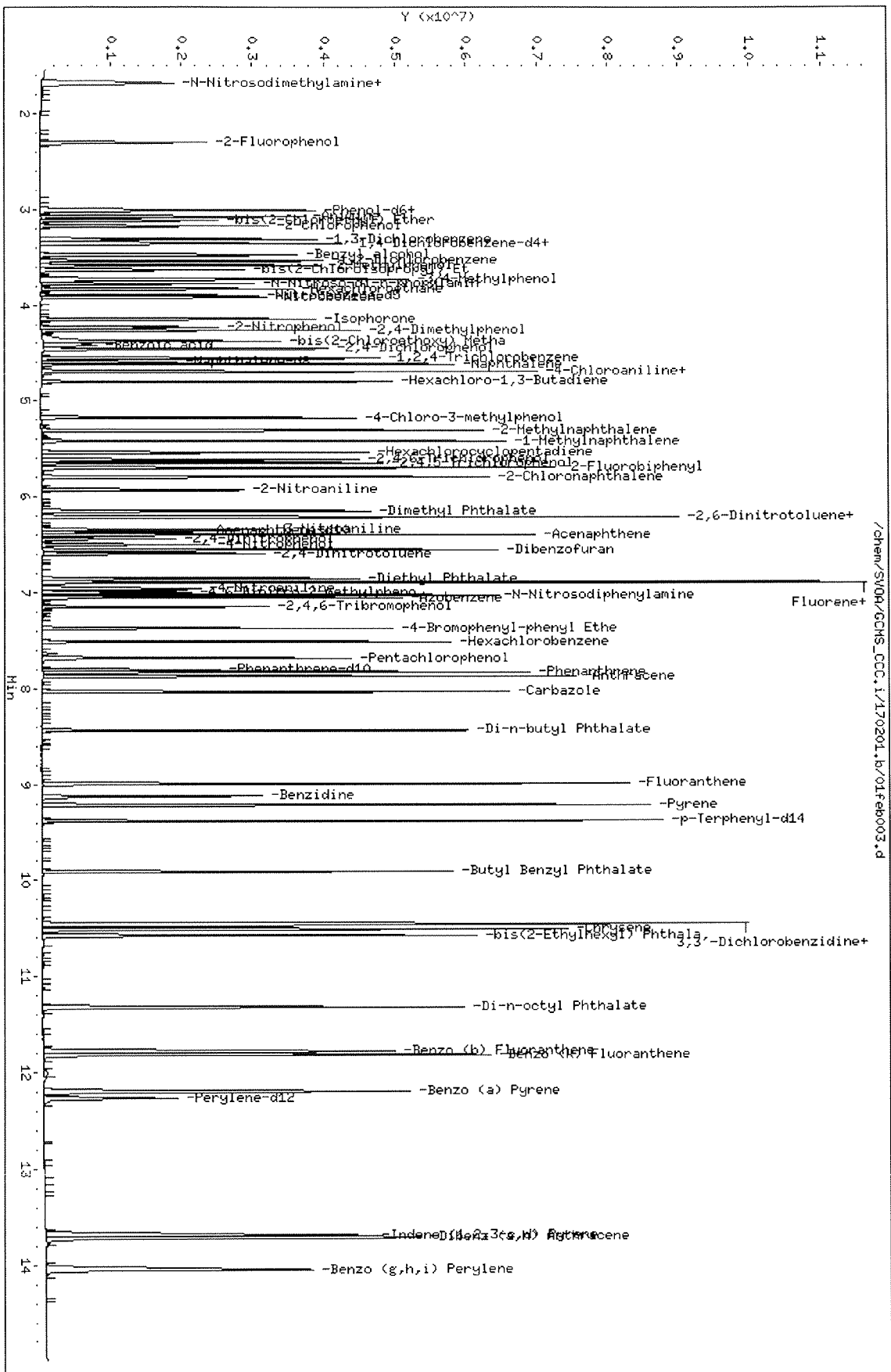
Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

Sample Name: ICAL-2 120 PPM S110816K 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.682	266	504623	118.742	100
64) Phenanthrene	(4)	7.832	178	2837142	112.267	100
65) Anthracene	(4)	7.875	178	2935243	111.017	100
66) Carbazole	(4)	8.035	167	2686756	106.978	100
67) Di-n-butyl Phthalate	(4)	8.442	149	3373730	107.305	100
68) Fluoranthene	(4)	8.998	202	3390509	107.850	100
69) Benzidine	(4)	9.126	184	1093118	91.929	99
70) Pyrene	(5)	9.217	202	3482223	114.938	100
72) Butyl Benzyl Phthalate	(5)	9.913	149	1444611	113.624	99
73) 3,3'-Dichlorobenzidine	(5)	10.453	252	1362579	118.283	100
74) Benzo (a) Anthracene	(5)	10.464	228	3465814	115.558	100
76) Chrysene	(5)	10.517	228	3305616	116.124	99
77) bis(2-Ethylhexyl) Phthalate	(5)	10.576	149	2082190	112.862	100
78) Di-n-octyl Phthalate	(5)	11.325	149	3691701	114.841	100
79) Benzo (b) Fluoranthene	(5)	11.785	252	3396154	112.422	99
80) Benzo (k) Fluoranthene	(5)	11.822	252	3505111	121.221	99
81) Benzo (a) Pyrene	(5)	12.207	252	3211522	117.520	100
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.694	276	3917914	123.410	100
84) Dibenz (a,h) Anthracene	(6)	13.721	278	3217174	123.451	100
85) Benzo (g,h,i) Perylene	(6)	14.058	276	3106214	124.034	100

Data File: /chem/SV09/GCHS_CCC.i/170201.b/01feb003.d
 Date : 01-FEB-2017 09:53
 Client ID:
 Sample Info: ICAL-2 120 PPH S110516K 8270
 Column phase:

Instrument: GCHS_CCC.i
 Operator: 923
 Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb004.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 10:11 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

Sample Name: ICAL-3 80 PPM S110816J 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV (Min)
Internal Standards						
10) *1,4-Dichlorobenzene-d4	(1)	3.345	152	232941	40.000	0.00
28) *Naphthalene-d8	(2)	4.596	136	854406	40.000	0.00
46) *Acenaphthene-d10	(3)	6.361	164	536701	40.000	0.00
63) *Phenanthrene-d10	(4)	7.806	188	1051974	40.000	0.00
75) *Chrysene-d12	(5)	10.480	240	1134459	40.000	0.00
82) *Perylene-d12	(6)	12.266	264	1065620	40.000	0.01
System Monitoring Compounds						
3) \$2-Fluorophenol	(1)	2.307	112	549477	77.979	0.00
SpikedAmount 80.000	Recovery =		0.000			
4) \$Phenol-d6	(1)	3.002	99	746719	76.538	0.01
SpikedAmount 80.000	Recovery =		0.000			
19) \$Nitrobenzene-d5	(2)	3.901	82	728772	79.474	0.00
SpikedAmount 80.000	Recovery =		0.000			
39) \$2-Fluorobiphenyl	(3)	5.698	172	1553932	78.314	0.01
SpikedAmount 80.000	Recovery =		0.000			
59) \$2,4,6-Tribromophenol	(4)	7.148	330	238998	81.294	0.00
SpikedAmount 80.000	Recovery =		0.000			
71) \$p-Terphenyl-d14	(5)	9.383	244	2052370	78.809	0.00
SpikedAmount 80.000	Recovery =		0.000			
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.665	74	371539	78.286	100
2) Pyridine	(1)	1.687	52	416026	78.933	100
5) Phenol	(1)	3.019	94	755367	76.115	100
6) Aniline	(1)	3.077	93	940669	75.215	100
7) bis(2-Chloroethyl) Ether	(1)	3.120	93	578099	75.662	100
8) 2-Chlorophenol	(1)	3.174	128	613923	76.617	100
9) 1,3-Dichlorobenzene	(1)	3.313	146	710844	77.861	100
11) 1,4-Dichlorobenzene	(1)	3.361	146	715522	77.592	100
12) Benzyl alcohol	(1)	3.478	79	553285	75.979	100
13) 1,2-Dichlorobenzene	(1)	3.537	146	688071	77.110	100
14) 2-Methylphenol	(1)	3.585	108	552111	75.755	100
15) bis(2-Chloroisopropyl) Ether	(1)	3.634	45	750066	75.351	100
16) 3/4-Methylphenol	(1)	3.730	107	1306278	153.615	100
17) N-Nitroso-di-n-propylamine	(1)	3.778	70	454829	73.897	100
18) Hexachloroethane	(1)	3.832	117	269908	77.859	100
20) Nitrobenzene	(2)	3.917	77	644929	78.501	100

* = Compound is an internal standard.
 \$ = Compound is a surrogate standard.



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb004.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 10:11 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

Sample Name: ICAL-3 80 PPM S110816J 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.147	82	1208861	74.920	100
22) 2-Nitrophenol	(2)	4.233	139	295895	83.403	100
23) 2,4-Dimethylphenol	(2)	4.265	107	617374	78.617	100
24) bis(2-Chloroethoxy) Methane	(2)	4.372	93	733952	75.679	100
25) Benzoic acid	(2)	4.398	105	473317	87.233	100
26) 2,4-Dichlorophenol	(2)	4.457	162	552714	77.296	100
27) 1,2,4-Trichlorobenzene	(2)	4.554	180	639724	78.782	100
29) Naphthalene	(2)	4.612	128	1735733	78.072	100
30) 4-Chloroaniline	(2)	4.693	127	754493	75.288	100
31) 2,6-Dichlorophenol	(2)	4.698	162	547662	77.254	100
32) Hexachloro-1,3-Butadiene	(2)	4.800	225	405288	79.589	100
33) 4-Chloro-3-methylphenol	(2)	5.174	107	535211	74.013	100
34) 2-Methylnaphthalene	(2)	5.308	142	1137580	76.253	100
35) 1-Methylnaphthalene	(2)	5.415	142	1138856	76.353	100
36) Hexachlorocyclopentadiene	(3)	5.538	237	468289	86.633	100
37) 2,4,6-Trichlorophenol	(3)	5.613	196	457570	78.391	100
38) 2,4,5-Trichlorophenol	(3)	5.650	196	518174	81.406	100
40) 2-Chloronaphthalene	(3)	5.794	162	1212716	77.635	100
41) 2-Nitroaniline	(3)	5.928	65	353222	83.048	100
42) Dimethyl Phthalate	(3)	6.147	163	1501761	76.088	100
44) Acenaphthylene	(3)	6.212	152	1985443	77.067	100
43) 2,6-Dinitrotoluene	(3)	6.217	165	293876	83.879	100
45) 3-Nitroaniline	(3)	6.340	138	338586	81.516	100
47) Acenaphthene	(3)	6.394	153	1226714	77.957	100
48) 2,4-Dinitrophenol	(3)	6.442	184	152223	95.170	100
49) 4-Nitrophenol	(3)	6.495	65	283328	79.386	100
50) Dibenzofuran	(3)	6.554	168	1781849	77.332	100
51) 2,4-Dinitrotoluene	(3)	6.591	165	410632	83.996	100
52) Diethyl Phthalate	(3)	6.854	149	1499586	75.090	100
53) Fluorene	(3)	6.891	166	1405104	76.562	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.896	204	745270	77.439	100
55) 4-Nitroaniline	(3)	6.955	138	335654	80.323	100
56) 4,6-Dinitro-2-methylphenol	(4)	6.993	198	228285	92.845	100
57) N-Nitrosodiphenylamine	(4)	7.019	169	1062577	76.507	100
58) Azobenzene	(4)	7.051	77	1382840	76.620	100
60) 4-Bromophenyl-phenyl Ether	(4)	7.372	248	474051	78.626	100
61) Hexachlorobenzene	(4)	7.511	142	167485	74.463	100

Quant Report

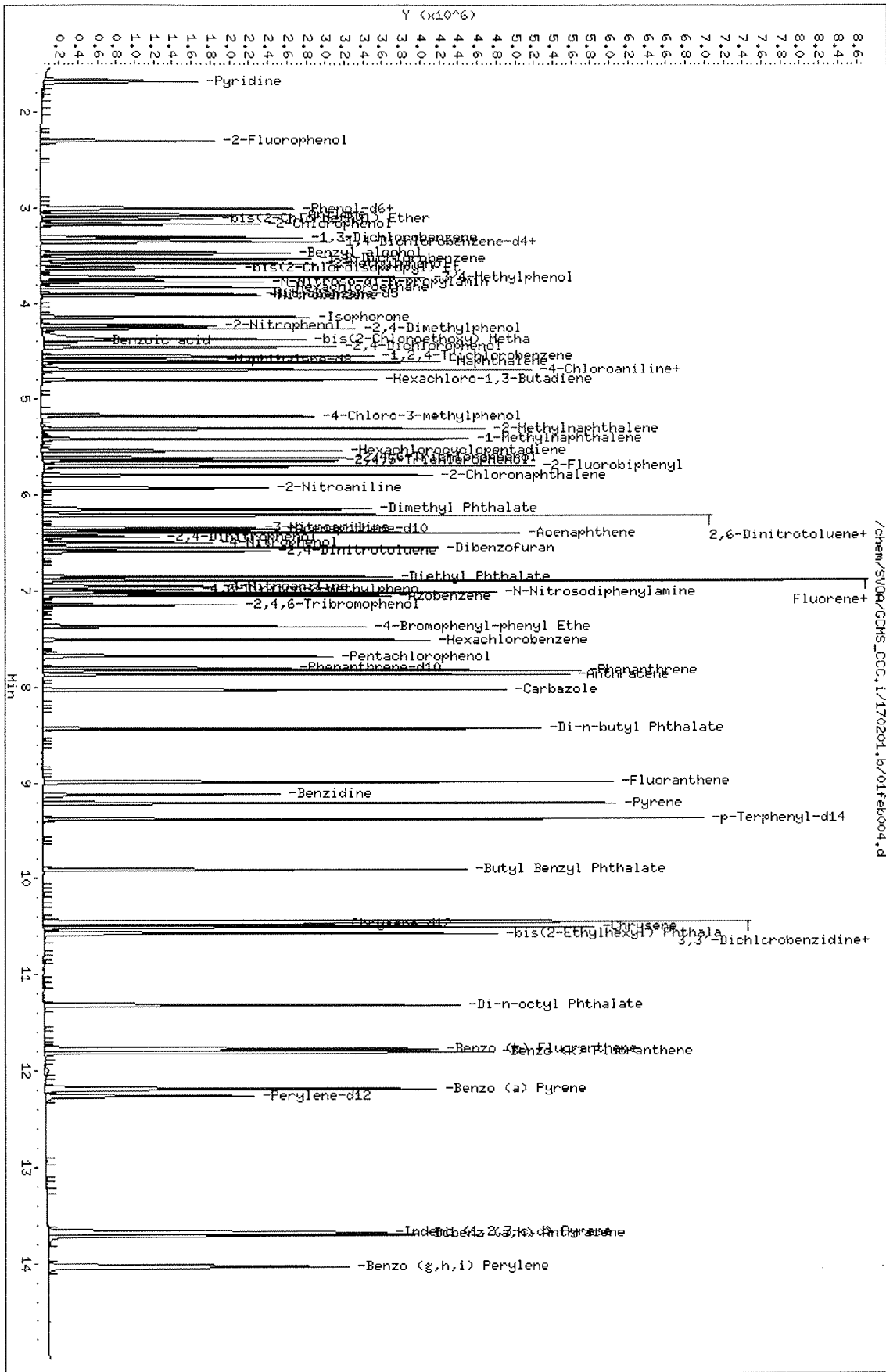
Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb004.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 10:11 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

Sample Name: ICAL-3 80 PPM S110816J 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.683	266	368330	81.370	100
64) Phenanthrene	(4)	7.827	178	2100040	77.948	100
65) Anthracene	(4)	7.870	178	2177623	77.248	100
66) Carbazole	(4)	8.030	167	2017337	75.478	100
67) Di-n-butyl Phthalate	(4)	8.437	149	2534264	75.976	100
68) Fluoranthene	(4)	8.998	202	2542419	76.025	100
69) Benzidine	(4)	9.127	184	827169	66.588	100
70) Pyrene	(5)	9.218	202	2618983	77.035	100
72) Butyl Benzyl Phthalate	(5)	9.908	149	1096273	77.358	100
73) 3,3'-Dichlorobenzidine	(5)	10.448	252	1040952	80.584	100
74) Benzo (a) Anthracene	(5)	10.458	228	2633880	78.222	100
76) Chrysene	(5)	10.512	228	2499645	78.316	100
77) bis(2-Ethylhexyl) Phthalate	(5)	10.576	149	1580531	76.749	100
78) Di-n-octyl Phthalate	(5)	11.320	149	2792680	77.990	100
79) Benzo (b) Fluoranthene	(5)	11.780	252	2565236	76.408	100
80) Benzo (k) Fluoranthene	(5)	11.817	252	2628006	80.671	100
81) Benzo (a) Pyrene	(5)	12.197	252	2419619	79.264	100
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.689	276	2957607	82.824	100
84) Dibenz (a,h) Anthracene	(6)	13.716	278	2439970	83.061	100
85) Benzo (g,h,i) Perylene	(6)	14.047	276	2354088	83.653	100



Data File: /chem/SV09/GCHS_CCC.i/170201.b/01Feb004.d
 Date : 01-FEB-2017 10:11
 Client ID:
 Sample Info: ICAL-3 80 PPH S110816J 8270
 Column phases:

Instrument: GCHS_CCC.i
 Operator: 923
 Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb005.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 10:30 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

Sample Name: ICAL-4 50 PPM S110816I 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV (Min)
=====						
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.345	152	219766	40.000	0.00
28)*Naphthalene-d8	(2)	4.591	136	821711	40.000	0.01
46)*Acenaphthene-d10	(3)	6.361	164	524655	40.000	0.00
63)*Phenanthrene-d10	(4)	7.805	188	1051397	40.000	0.00
75)*Chrysene-d12	(5)	10.474	240	1139056	40.000	0.01
82)*Perylene-d12	(6)	12.266	264	1071132	40.000	0.01
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.307	112	327740	49.353	0.00
SpikedAmount 50.000			Recovery =	0.000		
4)\$Phenol-d6	(1)	3.002	99	448549	49.109	0.01
SpikedAmount 50.000			Recovery =	0.000		
19)\$Nitrobenzene-d5	(2)	3.896	82	441238	49.900	0.01
SpikedAmount 50.000			Recovery =	0.000		
39)\$2-Fluorobiphenyl	(3)	5.698	172	969313	49.587	0.01
SpikedAmount 50.000			Recovery =	0.000		
59)\$2,4,6-Tribromophenol	(4)	7.142	330	143621	49.136	0.01
SpikedAmount 50.000			Recovery =	0.000		
71)\$p-Terphenyl-d14	(5)	9.378	244	1286966	48.856	0.01
SpikedAmount 50.000			Recovery =	0.000		
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.665	74	221496	49.644	99
2) Pyridine	(1)	1.687	52	249233	50.090	100
5) Phenol	(1)	3.013	94	456439	49.096	99
6) Aniline	(1)	3.072	93	572622	48.919	100
7) bis(2-Chloroethyl) Ether	(1)	3.115	93	349845	48.731	99
8) 2-Chlorophenol	(1)	3.174	128	367439	48.867	99
9) 1,3-Dichlorobenzene	(1)	3.313	146	422412	49.096	99
11) 1,4-Dichlorobenzene	(1)	3.361	146	433693	49.825	100
12) Benzyl alcohol	(1)	3.473	79	332863	48.976	100
13) 1,2-Dichlorobenzene	(1)	3.537	146	408211	48.731	100
14) 2-Methylphenol	(1)	3.585	108	331040	48.642	100
15) bis(2-Chloroisopropyl) Ether	(1)	3.634	45	461967	49.211	99
16) 3/4-Methylphenol	(1)	3.724	107	796071	100.129	99
17) N-Nitroso-di-n-propylamine	(1)	3.773	70	275759	48.063	99
18) Hexachloroethane	(1)	3.831	117	160721	49.128	100
20) Nitrobenzene	(2)	3.917	77	395514	49.943	99

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb005.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 10:30 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

Sample Name: ICAL-4 50 PPM S110816I 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.142	82	746176	48.290	100
22) 2-Nitrophenol	(2)	4.233	139	176515	51.737	99
23) 2,4-Dimethylphenol	(2)	4.259	107	373036	49.624	99
24) bis(2-Chloroethoxy) Methane	(2)	4.372	93	448187	48.146	99
25) Benzoic acid	(2)	4.372	105	265847	51.559	97
26) 2,4-Dichlorophenol	(2)	4.457	162	332615	48.633	99
27) 1,2,4-Trichlorobenzene	(2)	4.553	180	380958	48.726	99
29) Naphthalene	(2)	4.612	128	1060769	49.573	100
30) 4-Chloroaniline	(2)	4.687	127	472220	49.133	100
31) 2,6-Dichlorophenol	(2)	4.693	162	335770	49.277	100
32) Hexachloro-1,3-Butadiene	(2)	4.800	225	244987	49.749	100
33) 4-Chloro-3-methylphenol	(2)	5.169	107	333367	48.426	100
34) 2-Methylnaphthalene	(2)	5.308	142	702605	49.103	99
35) 1-Methylnaphthalene	(2)	5.415	142	698440	48.857	99
36) Hexachlorocyclopentadiene	(3)	5.538	237	267336	50.023	100
37) 2,4,6-Trichlorophenol	(3)	5.613	196	281655	49.259	100
38) 2,4,5-Trichlorophenol	(3)	5.645	196	311211	50.065	100
40) 2-Chloronaphthalene	(3)	5.789	162	747430	48.770	100
41) 2-Nitroaniline	(3)	5.923	65	218594	52.425	99
42) Dimethyl Phthalate	(3)	6.147	163	944848	49.200	100
44) Acenaphthylene	(3)	6.206	152	1245121	49.327	100
43) 2,6-Dinitrotoluene	(3)	6.212	165	184982	53.633	99
45) 3-Nitroaniline	(3)	6.340	138	210592	52.335	99
47) Acenaphthene	(3)	6.393	153	767122	49.730	99
48) 2,4-Dinitrophenol	(3)	6.436	184	86342	54.541	99
49) 4-Nitrophenol	(3)	6.495	65	177106	51.291	100
50) Dibenzofuran	(3)	6.549	168	1107443	49.109	100
51) 2,4-Dinitrotoluene	(3)	6.591	165	254417	53.602	99
52) Diethyl Phthalate	(3)	6.848	149	947693	48.889	99
53) Fluorene	(3)	6.891	166	890313	49.660	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.896	204	467336	49.500	99
55) 4-Nitroaniline	(3)	6.944	138	210001	51.975	99
56) 4,6-Dinitro-2-methylphenol	(4)	6.987	198	135536	54.571	98
57) N-Nitrosodiphenylamine	(4)	7.019	169	681153	48.955	99
58) Azobenzene	(4)	7.046	77	880737	48.417	99
60) 4-Bromophenyl-phenyl Ether	(4)	7.367	248	301842	49.732	100
61) Hexachlorobenzene	(4)	7.506	142	107098	47.714	97

Quant Report

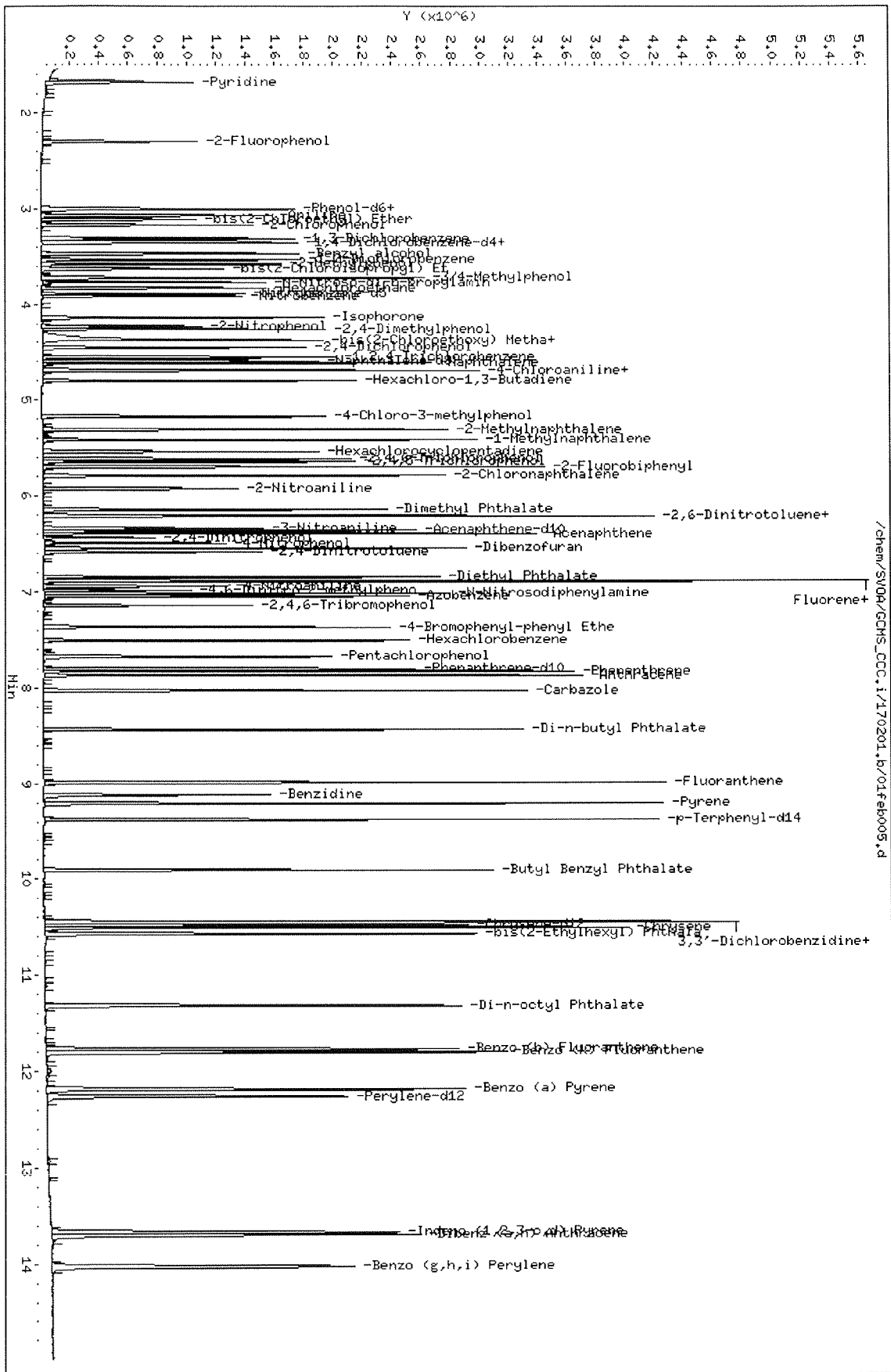
Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb005.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 10:30 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

Sample Name: ICAL-4 50 PPM S110816I 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.677	266	227240	50.528	99
64) Phenanthrene	(4)	7.827	178	1346453	49.870	100
65) Anthracene	(4)	7.870	178	1389583	49.372	99
66) Carbazole	(4)	8.030	167	1280326	48.204	99
67) Di-n-butyl Phthalate	(4)	8.437	149	1605936	48.528	100
68) Fluoranthene	(4)	8.993	202	1644891	49.482	100
69) Benzidine	(4)	9.121	184	570093	48.273	99
70) Pyrene	(5)	9.212	202	1692908	49.145	99
72) Butyl Benzyl Phthalate	(5)	9.907	149	694993	48.964	99
73) 3,3'-Dichlorobenzidine	(5)	10.442	252	646729	50.173	100
74) Benzo (a) Anthracene	(5)	10.453	228	1661787	49.121	100
76) Chrysene	(5)	10.507	228	1596031	49.850	100
77) bis(2-Ethylhexyl) Phthalate	(5)	10.576	149	1006142	48.657	100
78) Di-n-octyl Phthalate	(5)	11.320	149	1756367	49.274	100
79) Benzo (b) Fluoranthene	(5)	11.774	252	1619993	48.929	99
80) Benzo (k) Fluoranthene	(5)	11.806	252	1643673	50.410	99
81) Benzo (a) Pyrene	(5)	12.191	252	1525617	50.362	100
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.678	276	1849132	51.152	99
84) Dibenz (a,h) Anthracene	(6)	13.705	278	1524071	51.209	99
85) Benzo (g,h,i) Perylene	(6)	14.031	276	1450474	50.800	99



Data File: /chem/SW04/GCHS_CCC.i/170201.b/01feb005.d
 Date : 01-FEB-2017 10:30
 Client ID:
 Sample Info: ICAL-4 50 PPM S11081&I 8270
 Column phases:

/chem/SW04/GCHS_CCC.i/170201.b/01feb005.d
 Instrument: GCHS_CCC.i
 Operator: 923
 Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb006.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 10:48 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

Sample Name: ICAL-5 20 PPM S110816J 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV (Min)
=====						
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.345	152	232186	40.000	0.00
28)*Naphthalene-d8	(2)	4.591	136	866971	40.000	0.01
46)*Acenaphthene-d10	(3)	6.361	164	547767	40.000	0.00
63)*Phenanthrene-d10	(4)	7.800	188	1071553	40.000	0.01
75)*Chrysene-d12	(5)	10.469	240	1164053	40.000	0.01
82)*Perylene-d12	(6)	12.261	264	1090752	40.000	0.01
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.302	112	139221	19.790	0.01
SpikedAmount 20.000	Recovery =		0.000			
4)\$Phenol-d6	(1)	3.002	99	190156	19.825	0.01
SpikedAmount 20.000	Recovery =		0.000			
19)\$Nitrobenzene-d5	(2)	3.896	82	189971	20.398	0.01
SpikedAmount 20.000	Recovery =		0.000			
39)\$2-Fluorobiphenyl	(3)	5.698	172	413379	20.190	0.01
SpikedAmount 20.000	Recovery =		0.000			
59)\$2,4,6-Tribromophenol	(4)	7.142	330	57747	19.491	0.01
SpikedAmount 20.000	Recovery =		0.000			
71)\$p-Terphenyl-d14	(5)	9.378	244	533873	19.988	0.01
SpikedAmount 20.000	Recovery =		0.000			
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.665	74	94654	20.090	99
2) Pyridine	(1)	1.687	52	105143	19.977	100
5) Phenol	(1)	3.013	94	195228	19.974	100
6) Aniline	(1)	3.072	93	245424	20.034	99
7) bis(2-Chloroethyl) Ether	(1)	3.115	93	152837	20.302	99
8) 2-Chlorophenol	(1)	3.174	128	154725	19.681	99
9) 1,3-Dichlorobenzene	(1)	3.313	146	184171	20.309	100
11) 1,4-Dichlorobenzene	(1)	3.355	146	187968	20.443	99
12) Benzyl alcohol	(1)	3.473	79	142489	20.053	99
13) 1,2-Dichlorobenzene	(1)	3.537	146	177965	20.206	100
14) 2-Methylphenol	(1)	3.580	108	140730	19.815	100
15) bis(2-Chloroisopropyl) Ether	(1)	3.628	45	202272	20.584	98
16) 3/4-Methylphenol	(1)	3.724	107	341343	41.007	100
17) N-Nitroso-di-n-propylamine	(1)	3.767	70	121783	20.424	99
18) Hexachloroethane	(1)	3.831	117	69689	20.265	100
20) Nitrobenzene	(2)	3.912	77	172352	20.642	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb006.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 10:48 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

Sample Name: ICAL-5 20 PPM S110816J 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.142	82	322843	19.983	99
22) 2-Nitrophenol	(2)	4.233	139	70560	19.729	99
23) 2,4-Dimethylphenol	(2)	4.259	107	154483	19.634	99
24) bis(2-Chloroethoxy) Methane	(2)	4.366	93	196165	20.131	94
25) Benzoic acid	(2)	4.340	105	97842	18.057	98
26) 2,4-Dichlorophenol	(2)	4.452	162	142633	19.972	100
27) 1,2,4-Trichlorobenzene	(2)	4.548	180	166886	20.273	99
29) Naphthalene	(2)	4.612	128	458251	20.307	100
30) 4-Chloroaniline	(2)	4.687	127	202501	20.118	99
31) 2,6-Dichlorophenol	(2)	4.693	162	144523	20.179	100
32) Hexachloro-1,3-Butadiene	(2)	4.800	225	104332	20.087	99
33) 4-Chloro-3-methylphenol	(2)	5.169	107	141975	19.788	100
34) 2-Methylnaphthalene	(2)	5.308	142	300520	20.048	100
35) 1-Methylnaphthalene	(2)	5.415	142	300805	20.101	100
36) Hexachlorocyclopentadiene	(3)	5.538	237	101380	18.172	100
37) 2,4,6-Trichlorophenol	(3)	5.613	196	118285	19.917	99
38) 2,4,5-Trichlorophenol	(3)	5.645	196	130630	20.214	100
40) 2-Chloronaphthalene	(3)	5.789	162	320406	20.038	99
41) 2-Nitroaniline	(3)	5.923	65	88496	20.388	99
42) Dimethyl Phthalate	(3)	6.142	163	401858	20.198	100
44) Acenaphthylene	(3)	6.206	152	533448	20.286	100
43) 2,6-Dinitrotoluene	(3)	6.206	165	74907	20.739	95
45) 3-Nitroaniline	(3)	6.335	138	85851	20.599	98
47) Acenaphthene	(3)	6.393	153	324087	20.133	99
48) 2,4-Dinitrophenol	(3)	6.431	184	25717	15.476	97
49) 4-Nitrophenol	(3)	6.490	65	70720	19.859	99
50) Dibenzofuran	(3)	6.549	168	475467	20.253	100
51) 2,4-Dinitrotoluene	(3)	6.586	165	100542	20.471	97
52) Diethyl Phthalate	(3)	6.843	149	395728	19.829	100
53) Fluorene	(3)	6.886	166	375115	20.169	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.891	204	196230	20.001	99
55) 4-Nitroaniline	(3)	6.939	138	85650	20.544	98
56) 4,6-Dinitro-2-methylphenol	(4)	6.982	198	44414	17.424	97
57) N-Nitrosodiphenylamine	(4)	7.014	169	289512	20.444	99
58) Azobenzene	(4)	7.041	77	376386	20.331	99
60) 4-Bromophenyl-phenyl Ether	(4)	7.367	248	124117	20.083	98
61) Hexachlorobenzene	(4)	7.506	142	46489	20.413	95

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb006.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 10:48 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:16
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:16 n8cz

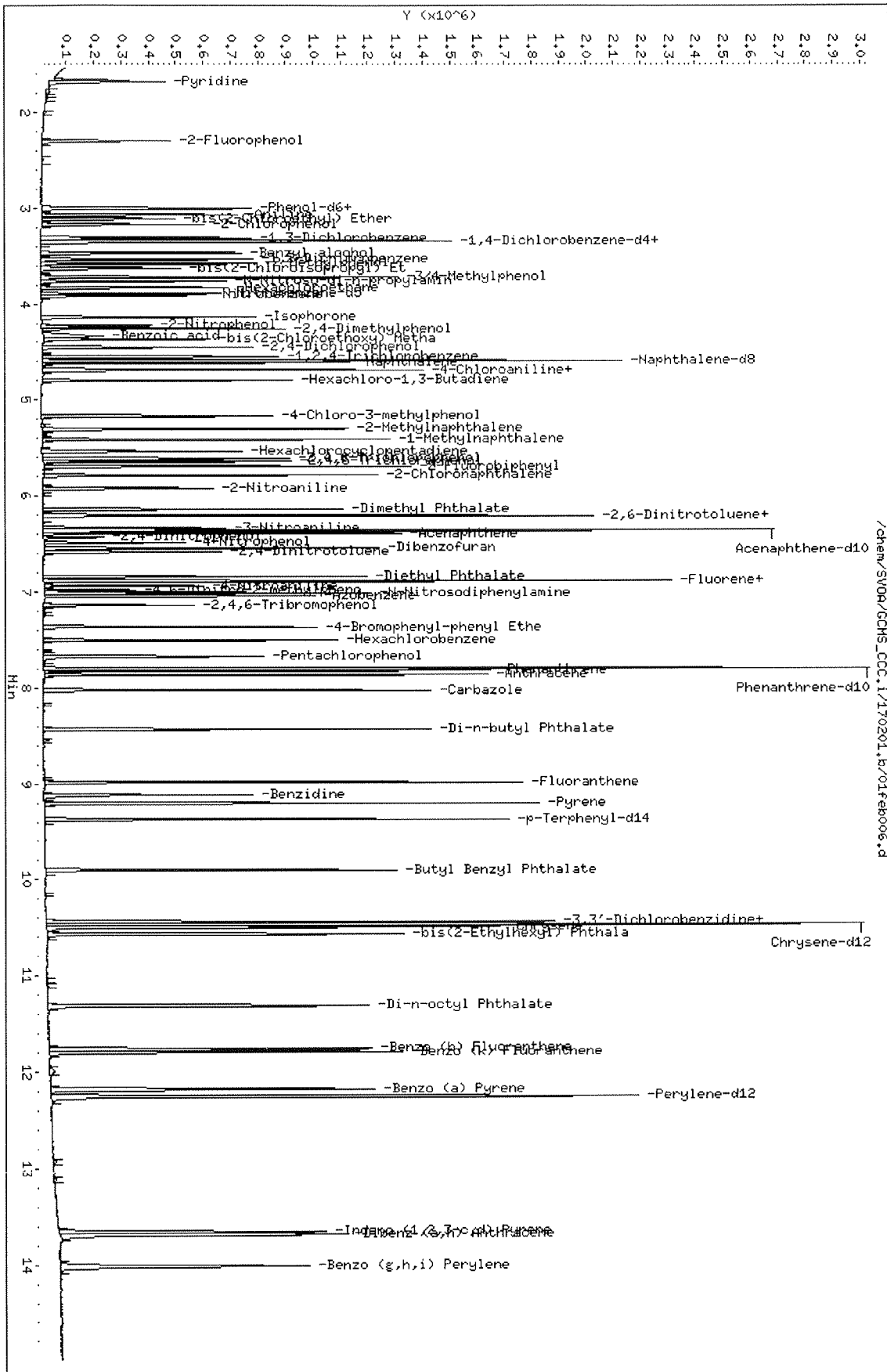
Sample Name: ICAL-5 20 PPM S110816J 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.677	266	87960	19.376	100
64) Phenanthrene	(4)	7.822	178	563910	20.515	100
65) Anthracene	(4)	7.864	178	584763	20.451	99
66) Carbazole	(4)	8.025	167	541988	20.192	100
67) Di-n-butyl Phthalate	(4)	8.431	149	654575	19.719	100
68) Fluoranthene	(4)	8.988	202	686843	20.419	100
69) Benzidine	(4)	9.121	184	257937	22.353	99
70) Pyrene	(5)	9.207	202	713524	20.327	99
72) Butyl Benzyl Phthalate	(5)	9.902	149	279476	19.643	99
73) 3,3'-Dichlorobenzidine	(5)	10.437	252	257129	19.685	99
74) Benzo (a) Anthracene	(5)	10.448	228	682693	19.853	100
76) Chrysene	(5)	10.496	228	663267	20.308	100
77) bis(2-Ethylhexyl) Phthalate	(5)	10.571	149	407063	19.599	100
78) Di-n-octyl Phthalate	(5)	11.314	149	697505	19.475	100
79) Benzo (b) Fluoranthene	(5)	11.769	252	637569	18.893	98
80) Benzo (k) Fluoranthene	(5)	11.796	252	694310	20.520	99
81) Benzo (a) Pyrene	(5)	12.181	252	619311	19.776	99
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.668	276	743897	19.895	99
84) Dibenz (a,h) Anthracene	(6)	13.694	278	618194	20.096	99
85) Benzo (g,h,i) Perylene	(6)	14.021	276	589704	19.939	98

page 3 of 3

Data File: /chem/SV09/GCHS_CCC.i/170201.b/01Feb006.d
Date : 01-FEB-2017 10:48
Client ID:
Sample Info: ICAL-5 20 PPM S110816J 8270
Column phase:

Instrument: GCHS_CCC.i
Operator: 923
Column diameter: 0.09



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb007.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 11:07 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:27
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:27 n8cz

Sample Name: ICAL-6 10 PPM S110816G 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
=====						
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.345	152	199828	40.000	0.00
28)*Naphthalene-d8	(2)	4.591	136	753250	40.000	0.01
46)*Acenaphthene-d10	(3)	6.361	164	493947	40.000	0.00
63)*Phenanthrene-d10	(4)	7.800	188	980702	40.000	0.01
75)*Chrysene-d12	(5)	10.469	240	1089634	40.000	0.01
82)*Perylene-d12	(6)	12.261	264	1031253	40.000	0.01
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.307	112	57868	9.607	0.00
SpikedAmount 10.000	Recovery =		0.000			
4)\$Phenol-d6	(1)	3.002	99	81238	9.921	0.01
SpikedAmount 10.000	Recovery =		0.000			
19)\$Nitrobenzene-d5	(2)	3.896	82	79485	9.858	0.01
SpikedAmount 10.000	Recovery =		0.000			
39)\$2-Fluorobiphenyl	(3)	5.693	172	182913	9.953	0.01
SpikedAmount 10.000	Recovery =		0.000			
59)\$2,4,6-Tribromophenol	(4)	7.142	330	24798	9.231	0.01
SpikedAmount 10.000	Recovery =		0.000			
71)\$p-Terphenyl-d14	(5)	9.373	244	245988	9.984	0.01
SpikedAmount 10.000	Recovery =		0.000			
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.665	74	39858	9.827	98
2) Pyridine	(1)	1.687	52	45746	10.037	98
5) Phenol	(1)	3.013	94	83325	9.971	100
6) Aniline	(1)	3.072	93	104847	10.049	99
7) bis(2-Chloroethyl) Ether	(1)	3.115	93	65420	10.174	99
8) 2-Chlorophenol	(1)	3.174	128	66408	9.913	99
9) 1,3-Dichlorobenzene	(1)	3.313	146	78822	10.135	100
11) 1,4-Dichlorobenzene	(1)	3.361	146	77764	9.886	96
12) Benzyl alcohol	(1)	3.473	79	59962	9.923	100
13) 1,2-Dichlorobenzene	(1)	3.537	146	76824	10.191	100
14) 2-Methylphenol	(1)	3.580	108	60503	10.044	100
15) bis(2-Chloroisopropyl) Ether	(1)	3.634	45	87016	10.381	98
16) 3/4-Methylphenol	(1)	3.724	107	146373	20.597	99
17) N-Nitroso-di-n-propylamine	(1)	3.767	70	51919	10.286	99
18) Hexachloroethane	(1)	3.831	117	29240	9.915	99
20) Nitrobenzene	(2)	3.912	77	72820	10.060	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb007.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 11:07 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:27
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:27 n8cz

Sample Name: ICAL-6 10 PPM S110816G 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.142	82	140566	10.135	100
22) 2-Nitrophenol	(2)	4.233	139	27113	8.830	98
23) 2,4-Dimethylphenol	(2)	4.259	107	63523	9.431	99
24) bis(2-Chloroethoxy) Methane	(2)	4.366	93	86241	10.247	94
25) Benzoic acid	(2)	4.318	105	30894	6.626	92
26) 2,4-Dichlorophenol	(2)	4.452	162	61543	9.990	99
27) 1,2,4-Trichlorobenzene	(2)	4.548	180	71280	10.014	99
29) Naphthalene	(2)	4.612	128	197548	10.095	99
30) 4-Chloroaniline	(2)	4.687	127	88185	10.191	99
31) 2,6-Dichlorophenol	(2)	4.693	162	61403	9.938	99
32) Hexachloro-1,3-Butadiene	(2)	4.800	225	45772	10.135	99
33) 4-Chloro-3-methylphenol	(2)	5.169	107	62079	10.075	99
34) 2-Methylnaphthalene	(2)	5.302	142	131490	10.163	99
35) 1-Methylnaphthalene	(2)	5.415	142	131719	10.195	100
36) Hexachlorocyclopentadiene	(3)	5.538	237	38359	7.705	99
37) 2,4,6-Trichlorophenol	(3)	5.613	196	50752	9.542	100
38) 2,4,5-Trichlorophenol	(3)	5.645	196	56893	9.772	99
40) 2-Chloronaphthalene	(3)	5.789	162	141491	9.879	98
41) 2-Nitroaniline	(3)	5.923	65	37034	9.445	96
42) Dimethyl Phthalate	(3)	6.142	163	179186	10.039	100
44) Acenaphthylene	(3)	6.206	152	236710	10.033	99
43) 2,6-Dinitrotoluene	(3)	6.206	165	31448	9.577	94
45) 3-Nitroaniline	(3)	6.335	138	36125	9.583	96
47) Acenaphthene	(3)	6.388	153	145458	10.028	100
48) 2,4-Dinitrophenol	(3)	6.431	184	8520	5.597	95
49) 4-Nitrophenol	(3)	6.484	65	31172	9.650	99
50) Dibenzofuran	(3)	6.543	168	211439	10.014	100
51) 2,4-Dinitrotoluene	(3)	6.586	165	42622	9.528	96
52) Diethyl Phthalate	(3)	6.837	149	180911	10.094	99
53) Fluorene	(3)	6.886	166	169638	10.143	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.891	204	88354	10.015	99
55) 4-Nitroaniline	(3)	6.934	138	36772	9.695	95
56) 4,6-Dinitro-2-methylphenol	(4)	6.976	198	14944	6.335	96
57) N-Nitrosodiphenylamine	(4)	7.009	169	130593	10.173	99
58) Azobenzene	(4)	7.041	77	171055	10.223	99
60) 4-Bromophenyl-phenyl Ether	(4)	7.367	248	55191	9.830	98
61) Hexachlorobenzene	(4)	7.501	142	21515	10.392	95

Quant Report

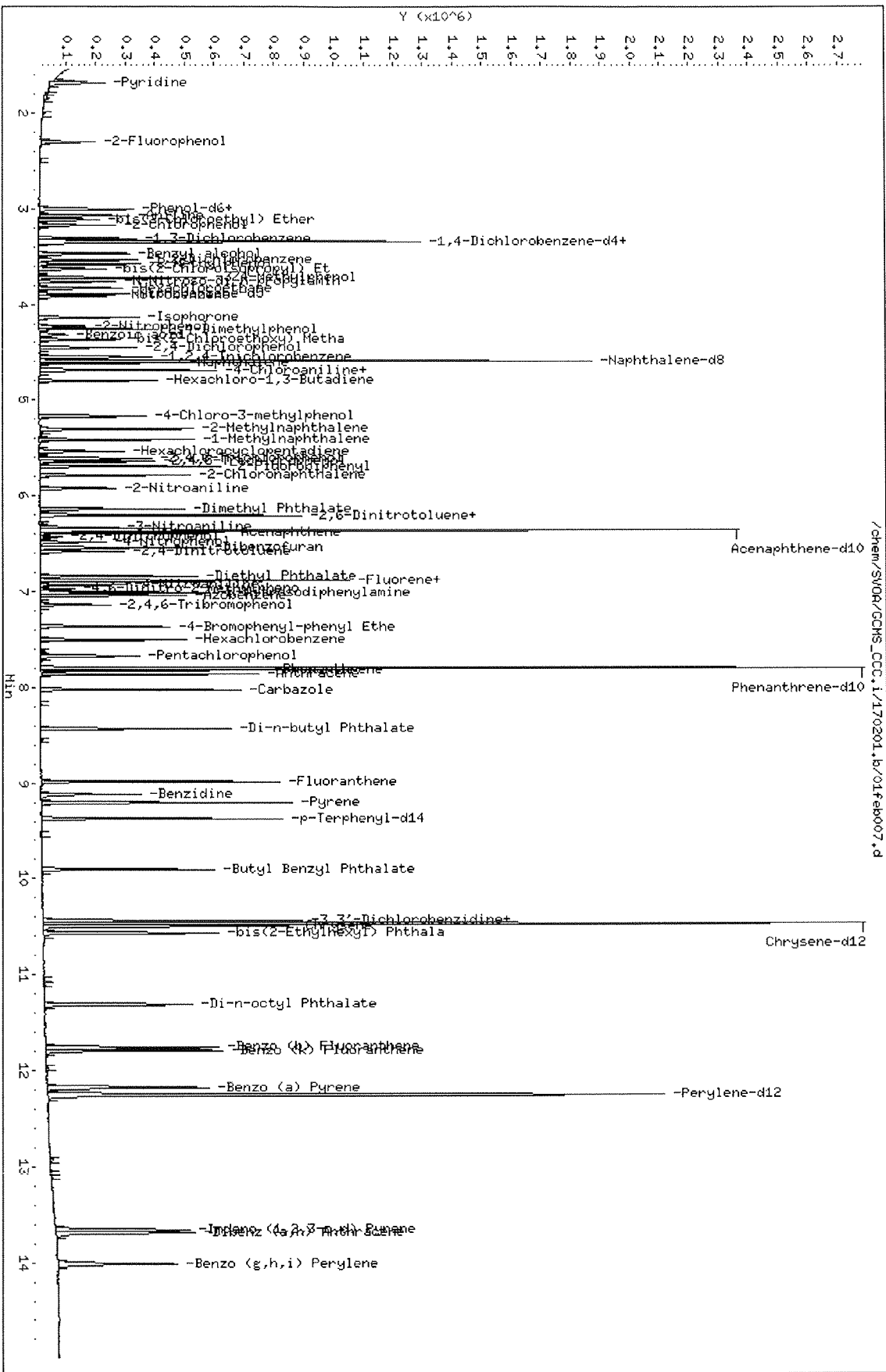
Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb007.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 11:07 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 11:27
 Date, time and analyst ID of latest file update: 01-Feb-2017 11:27 n8cz

Sample Name: ICAL-6 10 PPM S110816G 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.677	266	38007	9.175	99
64) Phenanthrene	(4)	7.822	178	258858	10.281	99
65) Anthracene	(4)	7.864	178	269147	10.325	99
66) Carbazole	(4)	8.025	167	252834	10.302	100
67) Di-n-butyl Phthalate	(4)	8.431	149	301820	10.002	99
68) Fluoranthene	(4)	8.988	202	316051	10.229	100
69) Benzidine	(4)	9.121	184	118758	11.512	98
70) Pyrene	(5)	9.207	202	329156	10.219	99
72) Butyl Benzyl Phthalate	(5)	9.902	149	124129	9.496	99
73) 3,3'-Dichlorobenzidine	(5)	10.437	252	114621	9.438	99
74) Benzo (a) Anthracene	(5)	10.448	228	319891	9.982	100
76) Chrysene	(5)	10.496	228	309340	10.121	100
77) bis(2-Ethylhexyl) Phthalate	(5)	10.571	149	183567	9.622	99
78) Di-n-octyl Phthalate	(5)	11.314	149	301541	9.160	99
79) Benzo (b) Fluoranthene	(5)	11.763	252	304478	9.615	97
80) Benzo (k) Fluoranthene	(5)	11.796	252	308043	9.710	100
81) Benzo (a) Pyrene	(5)	12.181	252	281788	9.590	99
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.662	276	336786	9.505	99
84) Dibenz (a,h) Anthracene	(6)	13.689	278	279561	9.578	100
85) Benzo (g,h,i) Perylene	(6)	14.015	276	268638	9.577	99



Data File: /chem/SW09/GCHS_CCC.i/170201.b/01Feb007.d
 Date : 01-FEB-2017 11:07
 Client ID:
 Sample Info: ICAL-6 10 PPH S110816G 8270
 Column phase:

Instrument: GCHS_CCC.i
 Operator: 923
 Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb008.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 11:27 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 12:09
 Date, time and analyst ID of latest file update: 01-Feb-2017 12:09 n8cz

Sample Name: ICAL-7 5 PPM S110816F 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV (Min)
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.345	152	273798	40.000	0.00
28)*Naphthalene-d8	(2)	4.591	136	1049541	40.000	0.01
46)*Acenaphthene-d10	(3)	6.361	164	678942	40.000	0.00
63)*Phenanthrene-d10	(4)	7.800	188	1324819	40.000	0.01
75)*Chrysene-d12	(5)	10.474	240	1278444	40.000	0.01
82)*Perylene-d12	(6)	12.261	264	1147496	40.000	0.01
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.302	112	41709	5.099	0.01
SpikedAmount		5.000		Recovery =	0.000	
4)\$Phenol-d6	(1)	2.997	99	58793	5.255	0.01
SpikedAmount		5.000		Recovery =	0.000	
19)\$Nitrobenzene-d5	(2)	3.896	82	57805	5.142	0.01
SpikedAmount		5.000		Recovery =	0.000	
39)\$2-Fluorobiphenyl	(3)	5.698	172	135200	5.379	0.01
SpikedAmount		5.000		Recovery =	0.000	
59)\$2,4,6-Tribromophenol	(4)	7.142	330	17533	4.831	0.01
SpikedAmount		5.000		Recovery =	0.000	
71)\$p-Terphenyl-d14	(5)	9.378	244	160353	5.502	0.01
SpikedAmount		5.000		Recovery =	0.000	
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.665	74	29752	5.338	97
2) Pyridine	(1)	1.687	52	31582	5.090	99
5) Phenol	(1)	3.008	94	60545	5.310	99
6) Aniline	(1)	3.072	93	76737	5.396	100
7) bis(2-Chloroethyl) Ether	(1)	3.115	93	47734	5.438	99
8) 2-Chlorophenol	(1)	3.174	128	47998	5.258	98
9) 1,3-Dichlorobenzene	(1)	3.313	146	57465	5.388	100
11) 1,4-Dichlorobenzene	(1)	3.355	146	59076	5.470	97
12) Benzyl alcohol	(1)	3.468	79	43365	5.261	99
13) 1,2-Dichlorobenzene	(1)	3.537	146	56712	5.487	99
14) 2-Methylphenol	(1)	3.580	108	44594	5.409	99
15) bis(2-Chloroisopropyl) Ether	(1)	3.628	45	64226	5.584	98
16) 3/4-Methylphenol	(1)	3.719	107	106381	10.956	99
17) N-Nitroso-di-n-propylamine	(1)	3.762	70	39136	5.630	98
18) Hexachloroethane	(1)	3.831	117	21287	5.296	100
20) Nitrobenzene	(2)	3.912	77	53642	5.289	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb008.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 11:27 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 12:09
 Date, time and analyst ID of latest file update: 01-Feb-2017 12:09 n8cz

Sample Name: ICAL-7 5 PPM S110816F 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.136	82	105746	5.507	99
22) 2-Nitrophenol	(2)	4.233	139	19191	4.477	98
23) 2,4-Dimethylphenol	(2)	4.259	107	46230	4.972	98
24) bis(2-Chloroethoxy) Methane	(2)	4.366	93	62938	5.422	96
25) Benzoic acid	(2)	4.313	105	18462	7.180	90
26) 2,4-Dichlorophenol	(2)	4.452	162	44548	5.218	99
27) 1,2,4-Trichlorobenzene	(2)	4.548	180	52901	5.349	99
29) Naphthalene	(2)	4.612	128	145976	5.370	98
30) 4-Chloroaniline	(2)	4.687	127	65943	5.488	99
31) 2,6-Dichlorophenol	(2)	4.693	162	44494	5.216	98
32) Hexachloro-1,3-Butadiene	(2)	4.800	225	33489	5.319	99
33) 4-Chloro-3-methylphenol	(2)	5.169	107	45568	5.357	99
34) 2-Methylnaphthalene	(2)	5.302	142	97810	5.436	99
35) 1-Methylnaphthalene	(2)	5.415	142	97339	5.432	99
36) Hexachlorocyclopentadiene	(3)	5.538	237	26653	3.895	99
37) 2,4,6-Trichlorophenol	(3)	5.612	196	37715	5.182	98
38) 2,4,5-Trichlorophenol	(3)	5.645	196	40524	5.079	98
40) 2-Chloronaphthalene	(3)	5.789	162	106768	5.447	99
41) 2-Nitroaniline	(3)	5.923	65	25252	4.652	97
42) Dimethyl Phthalate	(3)	6.142	163	132211	5.413	99
44) Acenaphthylene	(3)	6.206	152	169585	5.294	100
43) 2,6-Dinitrotoluene	(3)	6.206	165	21348	4.684	89
45) 3-Nitroaniline	(3)	6.335	138	24558	4.687	93
47) Acenaphthene	(3)	6.388	153	107251	5.407	99
48) 2,4-Dinitrophenol	(3)	6.431	184	4739	10.243	98
49) 4-Nitrophenol	(3)	6.484	65	20192	4.600	98
50) Dibenzofuran	(3)	6.548	168	155034	5.385	99
51) 2,4-Dinitrotoluene	(3)	6.586	165	28564	4.562	93
52) Diethyl Phthalate	(3)	6.837	149	130477	5.357	99
53) Fluorene	(3)	6.885	166	123879	5.435	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.891	204	66340	5.502	98
55) 4-Nitroaniline	(3)	6.934	138	24227	4.643	95
56) 4,6-Dinitro-2-methylphenol	(4)	6.982	198	8606	7.769	92
57) N-Nitrosodiphenylamine	(4)	7.014	169	94005	5.453	99
58) Azobenzene	(4)	7.041	77	128169	5.684	100
60) 4-Bromophenyl-phenyl Ether	(4)	7.367	248	39886	5.274	97
61) Hexachlorobenzene	(4)	7.506	142	16116	5.766	92

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb008.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 11:27 Analyst ID: 923

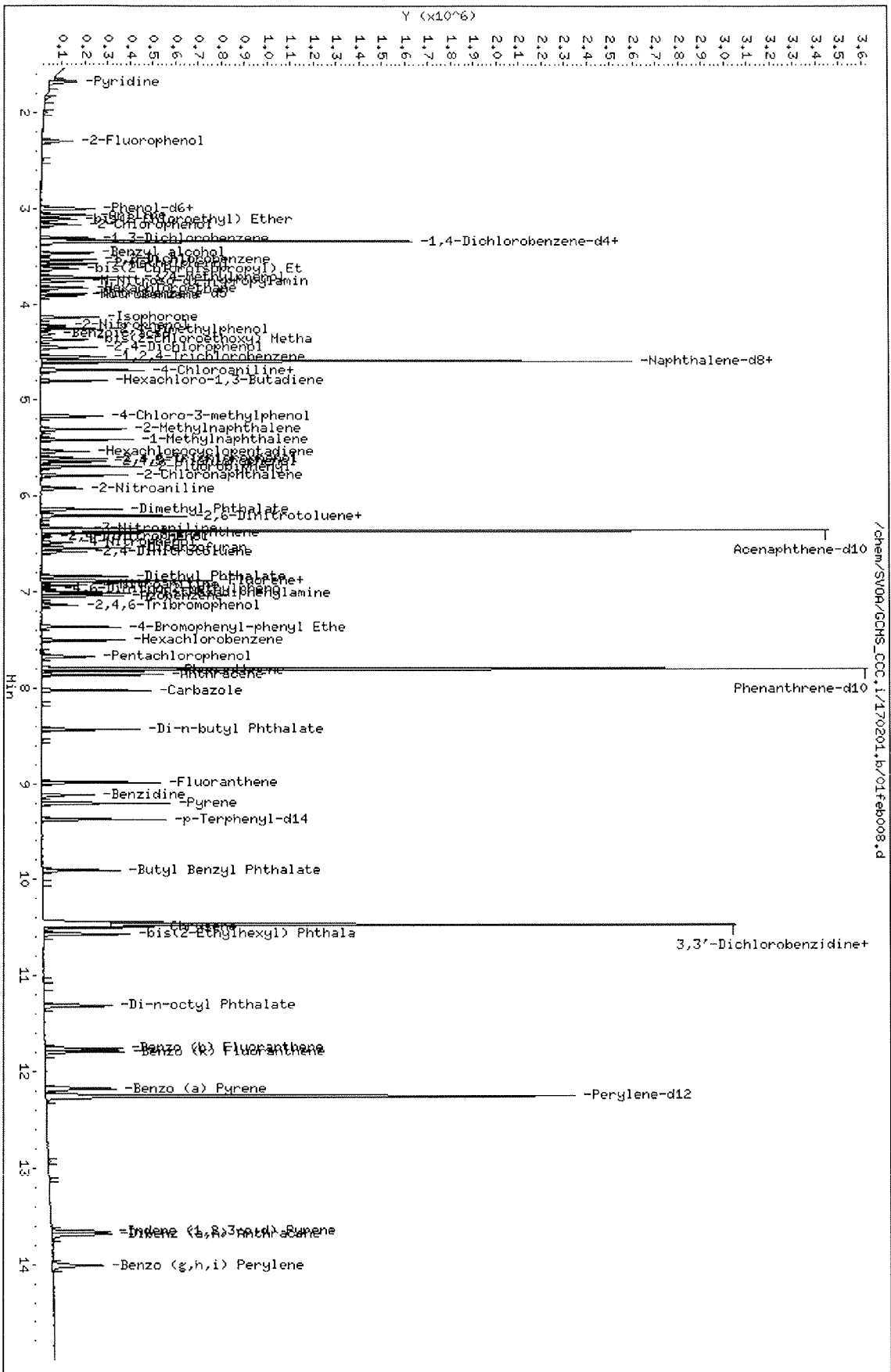
Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 12:09
 Date, time and analyst ID of latest file update: 01-Feb-2017 12:09 n8cz

Sample Name: ICAL-7 5 PPM S110816F 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.677	266	24997	4.467	99
64) Phenanthrene	(4)	7.821	178	182927	5.393	99
65) Anthracene	(4)	7.864	178	188757	5.391	100
66) Carbazole	(4)	8.025	167	177051	5.428	100
67) Di-n-butyl Phthalate	(4)	8.431	149	208111	5.187	99
68) Fluoranthene	(4)	8.987	202	212946	5.191	99
69) Benzidine	(4)	9.121	184	77186	5.538	98
70) Pyrene	(5)	9.207	202	221086	5.772	98
72) Butyl Benzyl Phthalate	(5)	9.902	149	76663	5.026	98
73) 3,3'-Dichlorobenzidine	(5)	10.442	252	66190	4.645	97
74) Benzo (a) Anthracene	(5)	10.453	228	202127	5.388	99
76) Chrysene	(5)	10.501	228	190949	5.339	100
77) bis(2-Ethylhexyl) Phthalate	(5)	10.571	149	112791	5.096	99
78) Di-n-octyl Phthalate	(5)	11.314	149	174717	4.609	99
79) Benzo (b) Fluoranthene	(5)	11.763	252	176795	4.870	98
80) Benzo (k) Fluoranthene	(5)	11.796	252	187422	5.083	100
81) Benzo (a) Pyrene	(5)	12.181	252	162157	4.796	98
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.662	276	188954	4.840	98
84) Dibenz (a,h) Anthracene	(6)	13.689	278	156839	4.864	98
85) Benzo (g,h,i) Perylene	(6)	14.015	276	150528	4.865	99

Data File: /chem/SV09/GCHS_CCC.i/170201.b/01feb008.d
 Date : 01-FEB-2017 11:27
 Client ID:
 Sample Info: ICAL-7 5 PPH S110815F 8270
 Column phase:

Instrument: GCHS_CCC.i
 Operator: 923
 Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb009.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 11:46 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 12:09
 Date, time and analyst ID of latest file update: 01-Feb-2017 12:09 n8cz

Sample Name: ICAL-8 2.5 PPM S110816E 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
=====						
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.345	152	199655	40.000	0.00
28)*Naphthalene-d8	(2)	4.591	136	749997	40.000	0.01
46)*Acenaphthene-d10	(3)	6.361	164	488692	40.000	0.00
63)*Phenanthrene-d10	(4)	7.800	188	997189	40.000	0.01
75)*Chrysene-d12	(5)	10.469	240	1125490	40.000	0.01
82)*Perylene-d12	(6)	12.261	264	1097844	40.000	0.01
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.307	112	14437	2.420	0.00
SpikedAmount 2.500	Recovery =		0.000			
4)\$Phenol-d6	(1)	3.002	99	18805	2.305	0.01
SpikedAmount 2.500	Recovery =		0.000			
19)\$Nitrobenzene-d5	(2)	3.896	82	19021	2.368	0.01
SpikedAmount 2.500	Recovery =		0.000			
39)\$2-Fluorobiphenyl	(3)	5.693	172	45440	2.512	0.01
SpikedAmount 2.500	Recovery =		0.000			
71)\$p-Terphenyl-d14	(5)	9.373	244	59540	2.321	0.01
SpikedAmount 2.500	Recovery =		0.000			
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.671	74	10224	2.516	97
2) Pyridine	(1)	1.692	52	10961	2.423	97
5) Phenol	(1)	3.013	94	19920	2.396	98
6) Aniline	(1)	3.072	93	26244	2.531	99
7) bis(2-Chloroethyl) Ether	(1)	3.115	93	16299	2.546	99
8) 2-Chlorophenol	(1)	3.174	128	15982	2.401	97
9) 1,3-Dichlorobenzene	(1)	3.313	146	19347	2.488	98
11) 1,4-Dichlorobenzene	(1)	3.361	146	19899	2.527	89
12) Benzyl alcohol	(1)	3.473	79	14376	2.392	97
13) 1,2-Dichlorobenzene	(1)	3.537	146	19349	2.568	99
14) 2-Methylphenol	(1)	3.580	108	14828	2.466	99
15) bis(2-Chloroisopropyl) Ether	(1)	3.634	45	22365	2.667	99
16) 3/4-Methylphenol	(1)	3.719	107	35671	4.961	98
17) N-Nitroso-di-n-propylamine	(1)	3.767	70	12620	2.490	92
18) Hexachloroethane	(1)	3.831	117	7223	2.464	97
20) Nitrobenzene	(2)	3.912	77	17319	2.390	96
21) Isophorone	(2)	4.142	82	34273	2.498	98
22) 2-Nitrophenol	(2)	4.233	139	5518	1.802	62

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb009.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 11:46 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 12:09
 Date, time and analyst ID of latest file update: 01-Feb-2017 12:09 n8cz

Sample Name: ICAL-8 2.5 PPM S110816E 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
23) 2,4-Dimethylphenol	(2)	4.259	107	14887	2.241	96
24) bis(2-Chloroethoxy) Methane	(2)	4.366	93	21590	2.603	79
25) Benzoic acid	(2)	4.297	105	3512	5.407	93
26) 2,4-Dichlorophenol	(2)	4.452	162	14186	2.325	99
27) 1,2,4-Trichlorobenzene	(2)	4.548	180	18052	2.554	99
29) Naphthalene	(2)	4.612	128	49962	2.572	99
30) 4-Chloroaniline	(2)	4.682	127	21350	2.486	98
31) 2,6-Dichlorophenol	(2)	4.693	162	14756	2.421	97
32) Hexachloro-1,3-Butadiene	(2)	4.800	225	11326	2.518	100
33) 4-Chloro-3-methylphenol	(2)	5.169	107	14310	2.354	99
34) 2-Methylnaphthalene	(2)	5.302	142	32770	2.549	98
35) 1-Methylnaphthalene	(2)	5.415	142	32525	2.540	99
36) Hexachlorocyclopentadiene	(3)	5.538	237	8329	1.691	91
37) 2,4,6-Trichlorophenol	(3)	5.613	196	11608	2.216	97
38) 2,4,5-Trichlorophenol	(3)	5.645	196	12262	2.135	96
40) 2-Chloronaphthalene	(3)	5.789	162	36035	2.554	99
41) 2-Nitroaniline	(3)	5.923	65	7520	1.925	95
42) Dimethyl Phthalate	(3)	6.142	163	44086	2.508	92
44) Acenaphthylene	(3)	6.206	152	56498	2.450	99
43) 2,6-Dinitrotoluene	(3)	6.206	165	6068	1.850	79
45) 3-Nitroaniline	(3)	6.329	138	7019	1.861	48
47) Acenaphthene	(3)	6.388	153	35875	2.513	99
48) 2,4-Dinitrophenol	(3)	0.000		0	N.D.	
49) 4-Nitrophenol	(3)	6.484	65	6049	1.915	98
50) Dibenzofuran	(3)	6.543	168	53664	2.590	99
51) 2,4-Dinitrotoluene	(3)	6.586	165	7723	1.714	88
52) Diethyl Phthalate	(3)	6.837	149	43422	2.477	99
53) Fluorene	(3)	6.886	166	41508	2.530	99
54) 4-Chlorophenyl-phenyl Ether	(3)	6.891	204	22349	2.575	97
55) 4-Nitroaniline	(3)	6.934	138	7609	2.026	92
56) 4,6-Dinitro-2-methylphenol	(4)	6.976	198	2163	6.280	1
57) N-Nitrosodiphenylamine	(4)	7.009	169	31246	2.408	99
58) Azobenzene	(4)	7.041	77	42496	2.504	98
60) 4-Bromophenyl-phenyl Ether	(4)	7.367	248	13710	2.409	97
61) Hexachlorobenzene	(4)	7.501	142	5470	2.601	92
62) Pentachlorophenol	(4)	7.677	266	7607	1.806	97
64) Phenanthrene	(4)	7.822	178	64677	2.533	99

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb009.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 11:46 Analyst ID: 923

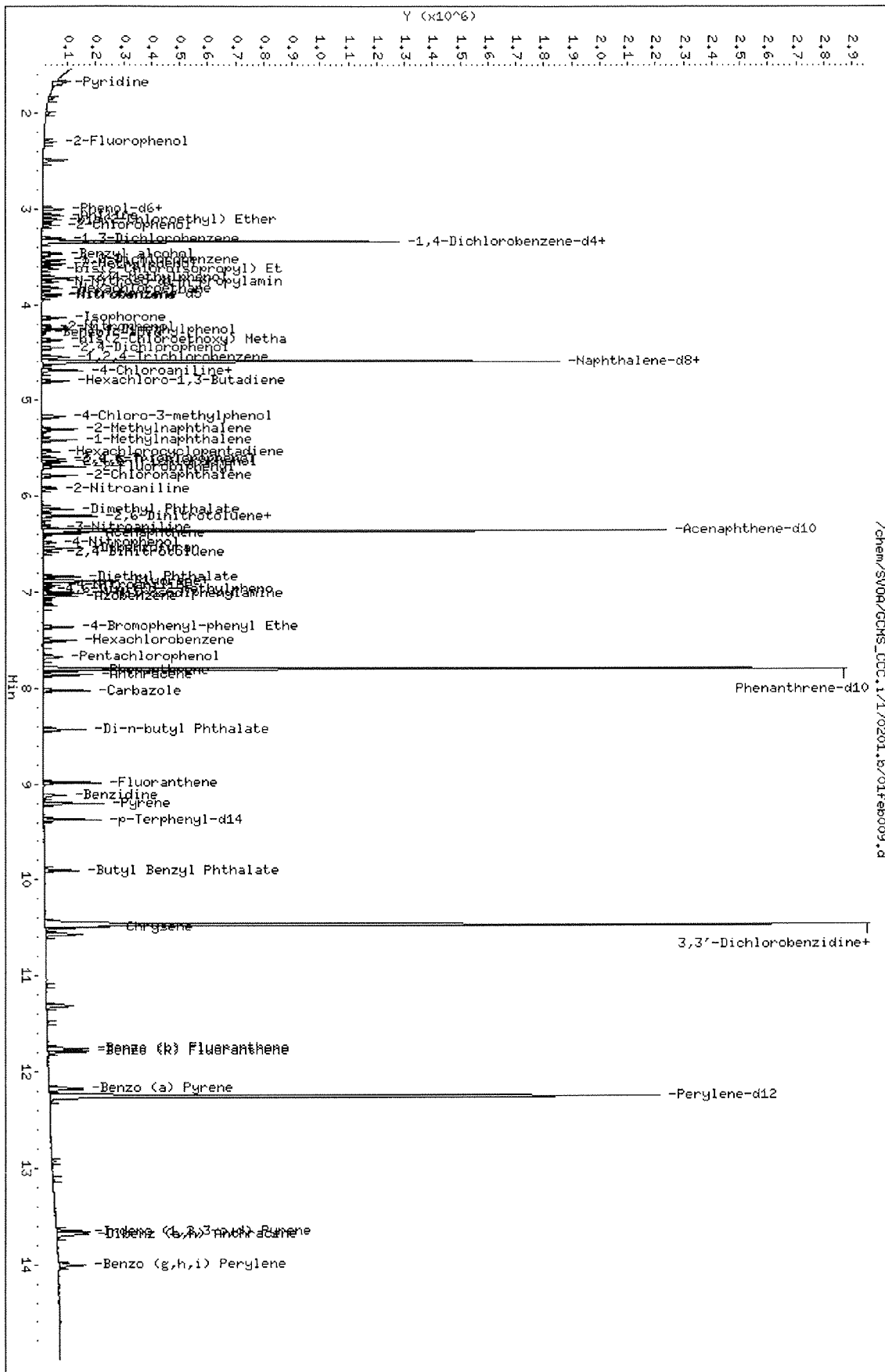
Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 12:09
 Date, time and analyst ID of latest file update: 01-Feb-2017 12:09 n8cz

Sample Name: ICAL-8 2.5 PPM S110816E 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
65) Anthracene	(4)	7.864	178	65263	2.476	99
66) Carbazole	(4)	8.025	167	62107	2.530	100
67) Di-n-butyl Phthalate	(4)	8.431	149	69685	2.307	98
68) Fluoranthene	(4)	8.988	202	78362	2.538	100
69) Benzidine	(4)	9.121	184	28096	2.678	100
70) Pyrene	(5)	9.207	202	82132	2.436	98
72) Butyl Benzyl Phthalate	(5)	9.902	149	25812	1.922	97
73) 3,3'-Dichlorobenzidine	(5)	10.437	252	24890	1.984	99
74) Benzo (a) Anthracene	(5)	10.448	228	80946	2.451	99
76) Chrysene	(5)	10.496	228	81034	2.574	99
77) bis(2-Ethylhexyl) Phthalate	(5)	0.000		0	N.D.	
78) Di-n-octyl Phthalate	(5)	0.000		0	N.D.	
79) Benzo (b) Fluoranthene	(5)	11.764	252	77207	2.416	99
80) Benzo (k) Fluoranthene	(5)	11.790	252	74790	2.304	98
81) Benzo (a) Pyrene	(5)	12.181	252	67990	2.284	97
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.657	276	82066	2.197	91
84) Dibenz (a,h) Anthracene	(6)	13.684	278	68646	2.225	98
85) Benzo (g,h,i) Perylene	(6)	14.010	276	66836	2.258	98

Data File: /chem/SV09/GCHS_CCC.i/170201.b/01Feb009.d
Date: 01-FEB-2017 11:46
Client ID:
Sample Info: ICAL-8 2.5 PPM S110816E 8270
Column phase:

Instrument: GCHS_CCC.i
Operator: 923
Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb010.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 12:11 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 12:33
 Date, time and analyst ID of latest file update: 01-Feb-2017 12:33 n8cz

Sample Name: ICV 80 PPM S110816N 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
Internal Standards						
10) *1,4-Dichlorobenzene-d4	(1)	3.345	152	255130	40.000	0.00
28) *Naphthalene-d8	(2)	4.596	136	928361	40.000	0.00
46) *Acenaphthene-d10	(3)	6.361	164	582516	40.000	0.00
63) *Phenanthrene-d10	(4)	7.805	188	1147693	40.000	0.00
75) *Chrysene-d12	(5)	10.480	240	1246285	40.000	0.00
82) *Perylene-d12	(6)	12.271	264	1175229	40.000	0.00
System Monitoring Compounds						
3) \$2-Fluorophenol	(1)	2.307	112	640954	84.092	0.00
SpikedAmount 80.000	Recovery =		0.000			
4) \$Phenol-d6	(1)	3.008	99	856278	82.135	0.00
SpikedAmount 80.000	Recovery =		0.000			
19) \$Nitrobenzene-d5	(2)	3.901	82	823043	82.776	0.00
SpikedAmount 80.000	Recovery =		0.000			
39) \$2-Fluorobiphenyl	(3)	5.703	172	1755172	81.394	0.00
SpikedAmount 80.000	Recovery =		0.000			
59) \$2,4,6-Tribromophenol	(4)	7.147	330	269305	85.661	0.00
SpikedAmount 80.000	Recovery =		0.000			
71) \$p-Terphenyl-d14	(5)	9.383	244	2285467	80.442	0.00
SpikedAmount 80.000	Recovery =		0.000			
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.670	74	424215	81.681	100
2) Pyridine	(1)	1.687	52	481139	83.225	100
5) Phenol	(1)	3.018	94	865514	81.464	100
6) Aniline	(1)	3.077	93	1058222	79.850	100
7) bis(2-Chloroethyl) Ether	(1)	3.120	93	663679	81.139	100
8) 2-Chlorophenol	(1)	3.173	128	701731	82.498	100
9) 1,3-Dichlorobenzene	(1)	3.312	146	812941	81.804	100
11) 1,4-Dichlorobenzene	(1)	3.361	146	821116	81.588	100
12) Benzyl alcohol	(1)	3.478	79	622434	81.034	100
13) 1,2-Dichlorobenzene	(1)	3.537	146	778500	80.840	100
14) 2-Methylphenol	(1)	3.585	108	612316	79.697	100
15) bis(2-Chloroisopropyl) Ether	(1)	3.633	45	838871	78.271	100
16) 3/4-Methylphenol	(1)	3.730	107	1463518	159.268	100
17) N-Nitroso-di-n-propylamine	(1)	3.778	70	505607	78.059	100
18) Hexachloroethane	(1)	3.831	117	306660	81.873	100
20) Nitrobenzene	(2)	3.917	77	736475	82.091	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb010.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 12:11 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 12:33
 Date, time and analyst ID of latest file update: 01-Feb-2017 12:33 n8cz

Sample Name: ICV 80 PPM S110816N 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.147	82	1356805	79.886	100
22) 2-Nitrophenol	(2)	4.232	139	331649	87.471	100
23) 2,4-Dimethylphenol	(2)	4.265	107	681173	82.827	100
24) bis(2-Chloroethoxy) Methane	(2)	4.372	93	828632	80.704	100
25) Benzoic acid	(2)	4.404	105	528616	82.962	100
26) 2,4-Dichlorophenol	(2)	4.457	162	624393	82.680	100
27) 1,2,4-Trichlorobenzene	(2)	4.553	180	723147	82.661	100
29) Naphthalene	(2)	4.618	128	1959224	81.487	100
30) 4-Chloroaniline	(2)	4.692	127	843071	79.317	100
31) 2,6-Dichlorophenol	(2)	4.698	162	613248	81.274	100
32) Hexachloro-1,3-Butadiene	(2)	4.799	225	466047	83.691	100
33) 4-Chloro-3-methylphenol	(2)	5.174	107	604336	80.319	100
34) 2-Methylnaphthalene	(2)	5.308	142	1276072	80.177	100
35) 1-Methylnaphthalene	(2)	5.420	142	1280606	80.788	100
36) Hexachlorocyclopentadiene	(3)	5.538	237	483172	82.291	100
37) 2,4,6-Trichlorophenol	(3)	5.618	196	518643	83.056	100
38) 2,4,5-Trichlorophenol	(3)	5.650	196	558255	81.557	100
40) 2-Chloronaphthalene	(3)	5.794	162	1355903	80.629	100
41) 2-Nitroaniline	(3)	5.928	65	395441	84.908	100
42) Dimethyl Phthalate	(3)	6.153	163	1678238	80.083	100
44) Acenaphthylene	(3)	6.211	152	2215542	80.613	100
43) 2,6-Dinitrotoluene	(3)	6.217	165	331509	84.772	100
45) 3-Nitroaniline	(3)	6.345	138	379739	84.463	100
47) Acenaphthene	(3)	6.399	153	1360205	79.926	100
48) 2,4-Dinitrophenol	(3)	6.441	184	169358	80.095	100
49) 4-Nitrophenol	(3)	6.500	65	317515	84.303	100
50) Dibenzofuran	(3)	6.554	168	1987672	80.465	100
51) 2,4-Dinitrotoluene	(3)	6.597	165	456793	85.034	100
52) Diethyl Phthalate	(3)	6.853	149	1671063	79.964	100
53) Fluorene	(3)	6.891	166	1552933	79.409	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.896	204	822705	79.522	100
55) 4-Nitroaniline	(3)	6.960	138	374732	83.699	100
56) 4,6-Dinitro-2-methylphenol	(4)	6.998	198	257950	82.929	100
57) N-Nitrosodiphenylamine	(4)	7.024	169	1187992	79.552	100
58) Azobenzene	(4)	7.051	77	1545981	79.142	100
60) 4-Bromophenyl-phenyl Ether	(4)	7.372	248	543128	82.906	100
61) Hexachlorobenzene	(4)	7.511	142	190344	78.613	100

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170201.b/01feb010.d Instrument ID: GCMS_CCC.i
 Injection date and time: 01-FEB-2017 12:11 Analyst ID: 923

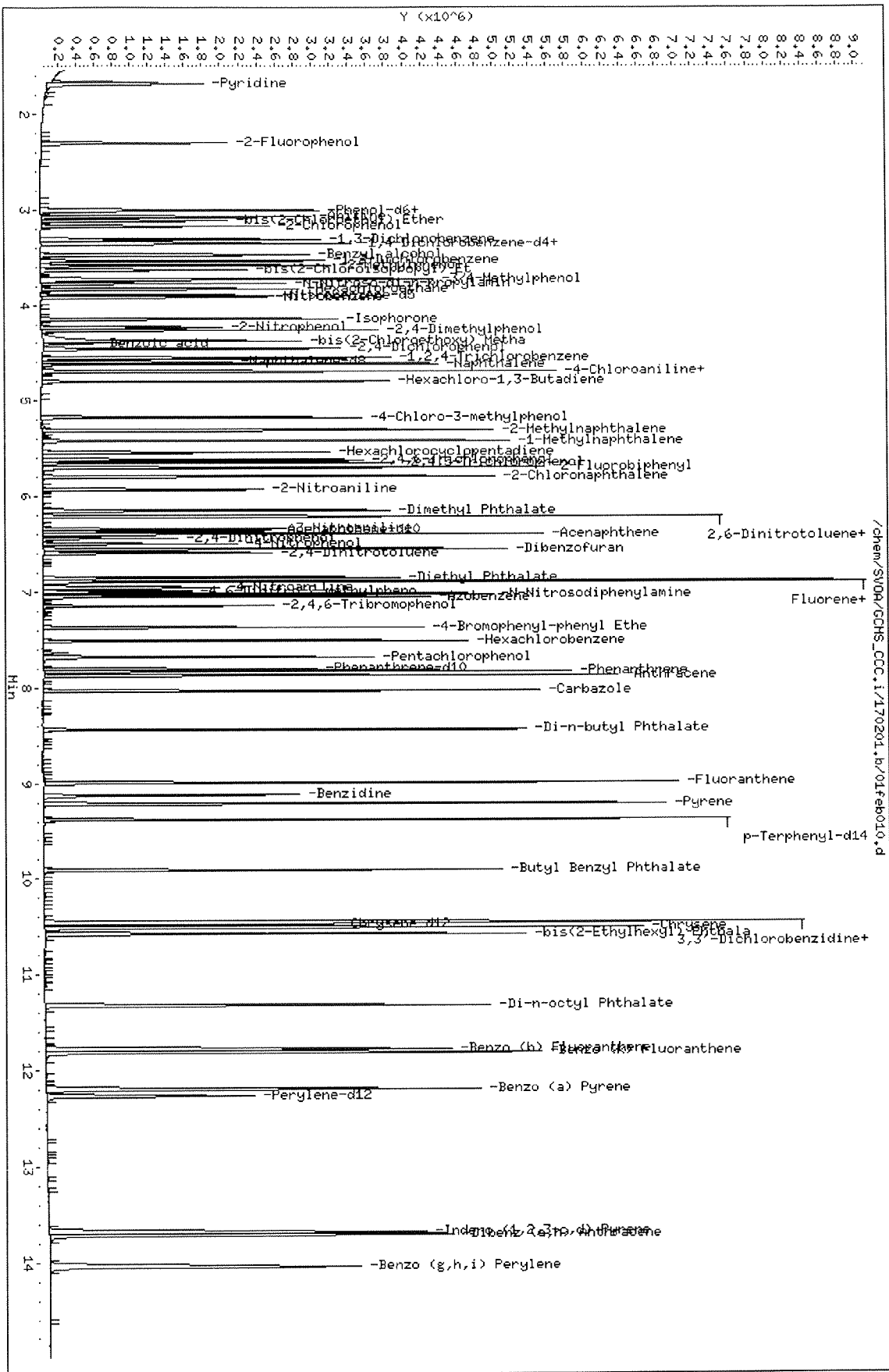
Method used: /chem/SVOA/GCMS_CCC.i/170201.b/svoa.m Sublist used: all
 Calibration date and time: 01-FEB-2017 12:33
 Date, time and analyst ID of latest file update: 01-Feb-2017 12:33 n8cz

Sample Name: ICV 80 PPM S110816N 8270 Misc Info:
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.682	266	407753	84.106	100
64) Phenanthrene	(4)	7.832	178	2352501	80.060	100
65) Anthracene	(4)	7.875	178	2435943	80.310	100
66) Carbazole	(4)	8.035	167	2253223	79.741	100
67) Di-n-butyl Phthalate	(4)	8.436	149	2826084	81.304	100
68) Fluoranthene	(4)	8.998	202	2888384	81.281	100
69) Benzidine	(4)	9.126	184	997553	82.626	100
70) Pyrene	(5)	9.217	202	2942676	78.814	100
72) Butyl Benzyl Phthalate	(5)	9.913	149	1240476	83.429	100
73) 3,3'-Dichlorobenzidine	(5)	10.453	252	1175829	84.651	100
74) Benzo (a) Anthracene	(5)	10.458	228	2977728	81.430	100
76) Chrysene	(5)	10.512	228	2824915	81.025	100
77) bis(2-Ethylhexyl) Phthalate	(5)	10.576	149	1766995	81.899	100
78) Di-n-octyl Phthalate	(5)	11.325	149	3153254	85.325	100
79) Benzo (b) Fluoranthene	(5)	11.785	252	3033482	85.719	100
80) Benzo (k) Fluoranthene	(5)	11.817	252	2910202	80.968	100
81) Benzo (a) Pyrene	(5)	12.202	252	2807139	85.163	100
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.689	276	3425362	85.664	100
84) Dibenz (a,h) Anthracene	(6)	13.716	278	2816546	85.288	100
85) Benzo (g,h,i) Perylene	(6)	14.053	276	2699902	85.208	100

Data File: /chem/SW09/GCHS_CCC.i/170201.b/01Feb010.d
 Date : 01-FEB-2017 12:11
 Client ID:
 Sample Info: ICV 80 PPH S110816N 8270
 Column phases:

Instrument: GCHS_CCC.i
 Operator: 923
 Column diameter: 0.09



EPA 8270C Semi-Volatile Organics (Solid)

Sample Data

RAW DATA SHEET FOR METHOD: EPA 8270C

WORK ORDER: 17-03-1523
INSTRUMENT: GC/MS CCC
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 923
D/T ANALYZED: 2017-03-23 15:21
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar019.d\23mar019.rr

1 **CLIENT SAMPLE NUMBER: IDW-S**

LCS/MB BATCH: 170322L02A **SAMPLE VOLUME / WEIGHT:** DEFAULT: 20.00 g / ACTUAL: 20.00 g
MS/MSD BATCH: 170322S02 **FINAL VOLUME / WEIGHT:** DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS: mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Acenaphthene	0.000	1.00	ND	0.50	
Acenaphthylene	0.000	1.00	ND	0.50	
Aniline	0.000	1.00	ND	0.50	
Anthracene	0.000	1.00	ND	0.50	
Azobenzene	0.000	1.00	ND	0.50	
Benzidine	0.000	1.00	ND	10	
Benzo (a) Anthracene	0.000	1.00	ND	0.50	
Benzo (a) Pyrene	0.000	1.00	ND	0.50	
Benzo (b) Fluoranthene	0.000	1.00	ND	0.50	
Benzo (g,h,i) Perylene	0.000	1.00	ND	0.50	
Benzo (k) Fluoranthene	0.000	1.00	ND	0.50	
Benzoic Acid	0.000	1.00	ND	2.5	
Benzyl Alcohol	0.000	1.00	ND	0.50	
Bis(2-Chloroethoxy) Methane	0.000	1.00	ND	0.50	
Bis(2-Chloroethyl) Ether	0.000	1.00	ND	2.5	
Bis(2-Chloroisopropyl) Ether	0.000	1.00	ND	0.50	
Bis(2-Ethylhexyl) Phthalate	0.000	1.00	ND	0.50	
4-Bromophenyl-Phenyl Ether	0.000	1.00	ND	0.50	
Butyl Benzyl Phthalate	0.000	1.00	ND	0.50	
4-Chloro-3-Methylphenol	0.000	1.00	ND	0.50	
4-Chloroaniline	0.000	1.00	ND	0.50	
2-Chloronaphthalene	0.000	1.00	ND	0.50	
2-Chlorophenol	0.000	1.00	ND	0.50	
4-Chlorophenyl-Phenyl Ether	0.000	1.00	ND	0.50	
Chrysene	0.000	1.00	ND	0.50	
Di-n-Butyl Phthalate	0.000	1.00	ND	0.50	
Di-n-Octyl Phthalate	0.000	1.00	ND	0.50	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.50	
Dibenzofuran	0.000	1.00	ND	0.50	
1,2-Dichlorobenzene	0.000	1.00	ND	0.50	
1,3-Dichlorobenzene	0.000	1.00	ND	0.50	
1,4-Dichlorobenzene	0.000	1.00	ND	0.50	
3,3'-Dichlorobenzidine	0.000	1.00	ND	10	
2,4-Dichlorophenol	0.000	1.00	ND	0.50	
Diethyl Phthalate	0.000	1.00	ND	0.50	
Dimethyl Phthalate	1.80	1.00	ND	0.50	
2,4-Dimethylphenol	0.000	1.00	ND	0.50	
4,6-Dinitro-2-Methylphenol	0.000	1.00	ND	2.5	
2,4-Dinitrophenol	0.000	1.00	ND	2.5	
2,4-Dinitrotoluene	0.000	1.00	ND	0.50	

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RAW DATA SHEET FOR METHOD: EPA 8270C

WORK ORDER: 17-03-1523
INSTRUMENT: GC/MS CCC
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 923
D/T ANALYZED: 2017-03-23 15:21
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar019.d\23mar019.rr

1 **CLIENT SAMPLE NUMBER:** IDW-S

LCS/MB BATCH: 170322L02A **SAMPLE VOLUME / WEIGHT:** DEFAULT: 20.00 g / ACTUAL: 20.00 g
MS/MSD BATCH: 170322S02 **FINAL VOLUME / WEIGHT:** DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS: mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
2,6-Dichlorophenol	0.000	1.00	ND	0.50	
2,6-Dinitrotoluene	0.000	1.00	ND	0.50	
Fluoranthene	0.000	1.00	ND	0.50	
Fluorene	0.000	1.00	ND	0.50	
Hexachloro-1,3-Butadiene	0.000	1.00	ND	0.50	
Hexachlorobenzene	0.000	1.00	ND	0.50	
Hexachlorocyclopentadiene	0.000	1.00	ND	2.5	
Hexachloroethane	0.000	1.00	ND	0.50	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	0.50	
Isophorone	0.000	1.00	ND	0.50	
2-Methylnaphthalene	0.000	1.00	ND	0.50	
1-Methylnaphthalene	0.000	1.00	ND	0.50	
2-Methylphenol	0.000	1.00	ND	0.50	
3/4-Methylphenol	0.000	1.00	ND	0.50	
N-Nitroso-di-n-propylamine	0.000	1.00	ND	0.50	
N-Nitrosodimethylamine	0.000	1.00	ND	0.50	
N-Nitrosodiphenylamine	0.000	1.00	ND	0.50	
Naphthalene	0.000	1.00	ND	0.50	
4-Nitroaniline	0.000	1.00	ND	0.50	
3-Nitroaniline	0.000	1.00	ND	0.50	
2-Nitroaniline	0.000	1.00	ND	0.50	
Nitrobenzene	0.000	1.00	ND	2.5	
4-Nitrophenol	0.000	1.00	ND	0.50	
2-Nitrophenol	0.000	1.00	ND	0.50	
Pentachlorophenol	0.000	1.00	ND	2.5	
Phenanthrene	0.000	1.00	ND	0.50	
Phenol	0.000	1.00	ND	0.50	
Pyrene	0.000	1.00	ND	0.50	
Pyridine	0.000	1.00	ND	0.50	
1,2,4-Trichlorobenzene	0.000	1.00	ND	0.50	
2,4,6-Trichlorophenol	0.000	1.00	ND	0.50	
2,4,5-Trichlorophenol	0.000	1.00	ND	0.50	

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Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar019.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 15:21 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 15:41 Unknown

Sample Name: 17-03-1523-1 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.280	152	310469	40.000	-0.01
28)*Naphthalene-d8	(2)	4.516	136	1231559	40.000	0.00
46)*Acenaphthene-d10	(3)	6.281	164	728160	40.000	0.00
63)*Phenanthrene-d10	(4)	7.725	188	1672554	40.000	0.00
75)*Chrysene-d12	(5)	10.389	240	1799819	40.000	0.01
82)*Perylene-d12	(6)	12.165	264	1773934	40.000	0.00
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.270	112	579286	62.454	-0.02
SpikedAmount 100.000				Recovery = 62.454		
4)\$Phenol-d6	(1)	2.970	99	811618	63.975	-0.02
SpikedAmount 100.000				Recovery = 63.975		
19)\$Nitrobenzene-d5	(2)	3.826	82	703928	53.367	-0.01
SpikedAmount 100.000				Recovery = 53.367		
39)\$2-Fluorobiphenyl	(3)	5.618	172	1887374	70.018	0.00
SpikedAmount 100.000				Recovery = 70.018		
59)\$2,4,6-Tribromophenol	(4)	7.067	330	412558	90.047	0.00
SpikedAmount 100.000				Recovery = 90.047		
71)\$p-Terphenyl-d14	(5)	9.303	244	2904884	70.799	0.01
SpikedAmount 100.000				Recovery = 70.799		

Target Compounds				QValue
1) N-Nitrosodimethylamine	(1)	0.000	0	N.D.
2) Pyridine	(1)	0.000	0	N.D.
5) Phenol	(1)	0.000	0	N.D.
6) Aniline	(1)	0.000	0	N.D.
7) bis(2-Chloroethyl) Ether	(1)	0.000	0	N.D.
8) 2-Chlorophenol	(1)	0.000	0	N.D.
9) 1,3-Dichlorobenzene	(1)	0.000	0	N.D.
11) 1,4-Dichlorobenzene	(1)	0.000	0	N.D.
12) Benzyl alcohol	(1)	0.000	0	N.D.
13) 1,2-Dichlorobenzene	(1)	0.000	0	N.D.
14) 2-Methylphenol	(1)	0.000	0	N.D.
15) bis(2-Chloroisopropyl) Ether	(1)	0.000	0	N.D.
16) 3/4-Methylphenol	(1)	0.000	0	N.D.
17) N-Nitroso-di-n-propylamine	(1)	0.000	0	N.D.
18) Hexachloroethane	(1)	0.000	0	N.D.
20) Nitrobenzene	(2)	0.000	0	N.D.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar019.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 15:21 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 15:41 Unknown

Sample Name: 17-03-1523-1 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	0.000		0	N.D.	
22) 2-Nitrophenol	(2)	0.000		0	N.D.	
23) 2,4-Dimethylphenol	(2)	0.000		0	N.D.	
24) bis(2-Chloroethoxy) Methane	(2)	0.000		0	N.D.	
25) Benzoic acid	(2)	0.000		0	N.D.	
26) 2,4-Dichlorophenol	(2)	0.000		0	N.D.	
27) 1,2,4-Trichlorobenzene	(2)	0.000		0	N.D.	
29) Naphthalene	(2)	0.000		0	N.D.	
30) 4-Chloroaniline	(2)	0.000		0	N.D.	
31) 2,6-Dichlorophenol	(2)	0.000		0	N.D.	
32) Hexachloro-1,3-Butadiene	(2)	0.000		0	N.D.	
33) 4-Chloro-3-methylphenol	(2)	0.000		0	N.D.	
34) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
35) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
36) Hexachlorocyclopentadiene	(3)	0.000		0	N.D.	
37) 2,4,6-Trichlorophenol	(3)	0.000		0	N.D.	
38) 2,4,5-Trichlorophenol	(3)	0.000		0	N.D.	
40) 2-Chloronaphthalene	(3)	0.000		0	N.D.	
41) 2-Nitroaniline	(3)	0.000		0	N.D.	
42) Dimethyl Phthalate	(3)	6.062	163	47131	1.799	91
44) Acenaphthylene	(3)	0.000		0	N.D.	
43) 2,6-Dinitrotoluene	(3)	0.000		0	N.D.	
45) 3-Nitroaniline	(3)	0.000		0	N.D.	
47) Acenaphthene	(3)	0.000		0	N.D.	
48) 2,4-Dinitrophenol	(3)	0.000		0	N.D.	
49) 4-Nitrophenol	(3)	0.000		0	N.D.	
50) Dibenzofuran	(3)	0.000		0	N.D.	
51) 2,4-Dinitrotoluene	(3)	0.000		0	N.D.	
52) Diethyl Phthalate	(3)	0.000		0	N.D.	
53) Fluorene	(3)	0.000		0	N.D.	
54) 4-Chlorophenyl-phenyl Ether	(3)	0.000		0	N.D.	
55) 4-Nitroaniline	(3)	0.000		0	N.D.	
56) 4,6-Dinitro-2-methylphenol	(4)	0.000		0	N.D.	
57) N-Nitrosodiphenylamine	(4)	0.000		0	N.D.	
58) Azobenzene	(4)	0.000		0	N.D.	
60) 4-Bromophenyl-phenyl Ether	(4)	0.000		0	N.D.	
61) Hexachlorobenzene	(4)	0.000		0	N.D.	

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar019.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 15:21 Analyst ID: 923

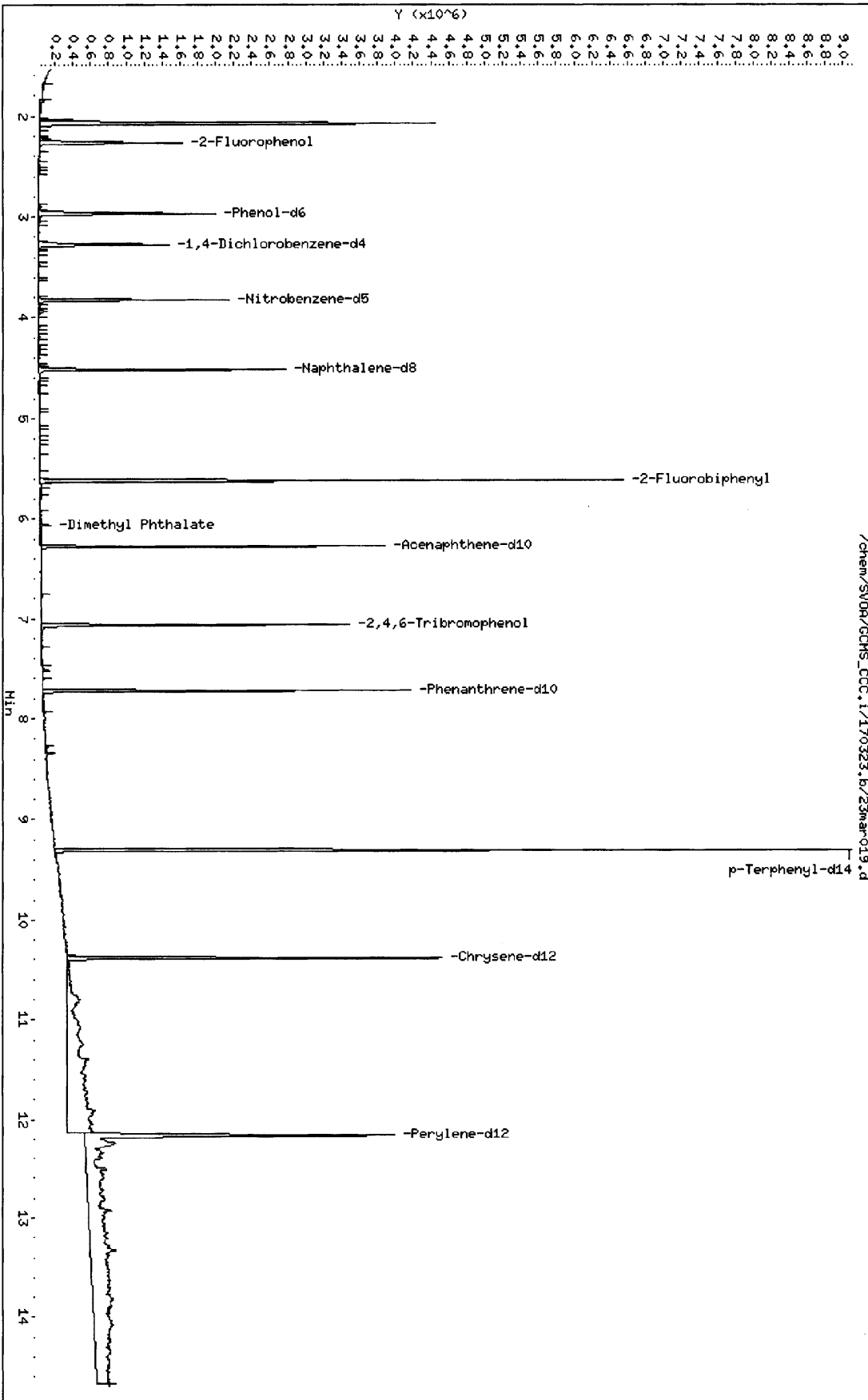
Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 15:41 Unknown

Sample Name: 17-03-1523-1 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	0.000		0	N.D.	
64) Phenanthrene	(4)	0.000		0	N.D.	
65) Anthracene	(4)	0.000		0	N.D.	
66) Carbazole	(4)	0.000		0	N.D.	
67) Di-n-butyl Phthalate	(4)	0.000		0	N.D.	
68) Fluoranthene	(4)	0.000		0	N.D.	
69) Benzidine	(4)	0.000		0	N.D.	
70) Pyrene	(5)	0.000		0	N.D.	
72) Butyl Benzyl Phthalate	(5)	0.000		0	N.D.	
73) 3,3'-Dichlorobenzidine	(5)	0.000		0	N.D.	
74) Benzo (a) Anthracene	(5)	0.000		0	N.D.	
76) Chrysene	(5)	0.000		0	N.D.	
77) bis(2-Ethylhexyl) Phthalate	(5)	0.000		0	N.D.	
78) Di-n-octyl Phthalate	(5)	0.000		0	N.D.	
79) Benzo (b) Fluoranthene	(5)	0.000		0	N.D.	
80) Benzo (k) Fluoranthene	(5)	0.000		0	N.D.	
81) Benzo (a) Pyrene	(5)	0.000		0	N.D.	
83) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
84) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
85) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	

Data File: /chem/SV04/GCMS_CCC.i/170323.b/23mar019.d
Date: 23-Mar-2017 15:21
Client ID:
Sample Info: 17-03-1523-1
Column Phase:

Instrument: GCMS_CCC.1
Operator: 923
Column diameter: 0.00



EPA 8270C
Semi-Volatile Organics
(Solid)

Quality Control

Method Blank

LCS/LCSD

MS/MSD

METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C

MB SAMPLE ID: 099-12-549-3830
MB BATCH ID: 170322L02A
INSTRUMENT: GC/MS CCC
EXTRACTION: EPA 3545
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 923
D/T ANALYZED: 2017-03-23 10:24
REVIEWED BY:
D/T REVIEWED:
MATRIX: Soil

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar003.d\23mar003.rr

CLIENT WORK ORDER: 17-03-1523

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	IDW-S		2017-03-23 15:21	Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar019.d\23mar019.rr

RAW DATA SHEET FOR METHOD: EPA 8270C

WORK ORDER: 099-12-549
INSTRUMENT: GC/MS CCC
EXTRACTION: EPA 3545
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 923
D/T ANALYZED: 2017-03-23 10:24
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar003.d\23mar003.rr

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 170322L02A **SAMPLE VOLUME / WEIGHT:** DEFAULT: 20.00 g / ACTUAL: 20.00 g
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS: mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Acenaphthene	0.000	1.00	ND	0.50	
Acenaphthylene	0.000	1.00	ND	0.50	
Aniline	0.000	1.00	ND	0.50	
Anthracene	0.000	1.00	ND	0.50	
Azobenzene	0.000	1.00	ND	0.50	
Benzidine	0.000	1.00	ND	10	
Benzo (a) Anthracene	0.000	1.00	ND	0.50	
Benzo (a) Pyrene	0.000	1.00	ND	0.50	
Benzo (b) Fluoranthene	0.000	1.00	ND	0.50	
Benzo (g,h,i) Perylene	0.000	1.00	ND	0.50	
Benzo (k) Fluoranthene	0.000	1.00	ND	0.50	
Benzoic Acid	0.000	1.00	ND	2.5	
Benzyl Alcohol	0.000	1.00	ND	0.50	
Bis(2-Chloroethoxy) Methane	0.000	1.00	ND	0.50	
Bis(2-Chloroethyl) Ether	0.000	1.00	ND	2.5	
Bis(2-Chloroisopropyl) Ether	0.000	1.00	ND	0.50	
Bis(2-Ethylhexyl) Phthalate	0.000	1.00	ND	0.50	
4-Bromophenyl-Phenyl Ether	0.000	1.00	ND	0.50	
Butyl Benzyl Phthalate	0.000	1.00	ND	0.50	
4-Chloro-3-Methylphenol	0.000	1.00	ND	0.50	
4-Chloroaniline	0.000	1.00	ND	0.50	
2-Chloronaphthalene	0.000	1.00	ND	0.50	
2-Chlorophenol	0.000	1.00	ND	0.50	
4-Chlorophenyl-Phenyl Ether	0.000	1.00	ND	0.50	
Chrysene	0.000	1.00	ND	0.50	
Di-n-Butyl Phthalate	0.000	1.00	ND	0.50	
Di-n-Octyl Phthalate	0.000	1.00	ND	0.50	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.50	
Dibenzofuran	0.000	1.00	ND	0.50	
1,2-Dichlorobenzene	0.000	1.00	ND	0.50	
1,3-Dichlorobenzene	0.000	1.00	ND	0.50	
1,4-Dichlorobenzene	0.000	1.00	ND	0.50	
3,3'-Dichlorobenzidine	0.000	1.00	ND	10	
2,4-Dichlorophenol	0.000	1.00	ND	0.50	
Diethyl Phthalate	0.000	1.00	ND	0.50	
Dimethyl Phthalate	0.000	1.00	ND	0.50	
2,4-Dimethylphenol	0.000	1.00	ND	0.50	
4,6-Dinitro-2-Methylphenol	0.000	1.00	ND	2.5	
2,4-Dinitrophenol	0.000	1.00	ND	2.5	
2,4-Dinitrotoluene	0.000	1.00	ND	0.50	

Return to Contents

RAW DATA SHEET FOR METHOD: EPA 8270C

WORK ORDER: 099-12-549
INSTRUMENT: GC/MS CCC
EXTRACTION: EPA 3545
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 923
D/T ANALYZED: 2017-03-23 10:24
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar003.d\23mar003.rr

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 170322L02A **SAMPLE VOLUME / WEIGHT:** DEFAULT: 20.00 g / ACTUAL: 20.00 g
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS: mg/kg **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
2,6-Dichlorophenol	0.000	1.00	ND	0.50	
2,6-Dinitrotoluene	0.000	1.00	ND	0.50	
Fluoranthene	0.000	1.00	ND	0.50	
Fluorene	0.000	1.00	ND	0.50	
Hexachloro-1,3-Butadiene	0.000	1.00	ND	0.50	
Hexachlorobenzene	0.000	1.00	ND	0.50	
Hexachlorocyclopentadiene	0.000	1.00	ND	2.5	
Hexachloroethane	0.000	1.00	ND	0.50	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	0.50	
Isophorone	3.97	1.00	ND	0.50	
2-Methylnaphthalene	0.000	1.00	ND	0.50	
1-Methylnaphthalene	0.000	1.00	ND	0.50	
2-Methylphenol	0.000	1.00	ND	0.50	
3/4-Methylphenol	0.000	1.00	ND	0.50	
N-Nitroso-di-n-propylamine	0.000	1.00	ND	0.50	
N-Nitrosodimethylamine	0.000	1.00	ND	0.50	
N-Nitrosodiphenylamine	0.000	1.00	ND	0.50	
Naphthalene	0.000	1.00	ND	0.50	
4-Nitroaniline	0.000	1.00	ND	0.50	
3-Nitroaniline	0.000	1.00	ND	0.50	
2-Nitroaniline	0.000	1.00	ND	0.50	
Nitrobenzene	0.000	1.00	ND	2.5	
4-Nitrophenol	0.000	1.00	ND	0.50	
2-Nitrophenol	0.000	1.00	ND	0.50	
Pentachlorophenol	0.000	1.00	ND	2.5	
Phenanthrene	0.000	1.00	ND	0.50	
Phenol	0.000	1.00	ND	0.50	
Pyrene	0.000	1.00	ND	0.50	
Pyridine	0.000	1.00	ND	0.50	
1,2,4-Trichlorobenzene	0.000	1.00	ND	0.50	
2,4,6-Trichlorophenol	0.000	1.00	ND	0.50	
2,4,5-Trichlorophenol	0.000	1.00	ND	0.50	

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LCS QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

LCS SAMPLE ID: 099-12-549-3830
LCS/MB BATCH ID: 170322L02A
INSTRUMENT: GC/MS CCC

EXTRACTION: EPA 3545
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 923
D/T ANALYZED: 2017-03-23 10:44
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\20171170323\23mar004.d\23mar004.r

<u>COMPOUND</u>	<u>CONC</u>	<u>CONC REC</u>	<u>%REC</u>	<u>%REC CL</u>	<u>ME CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
Phenol	5.000	4.007	80	40-130	25-145	PASS	
2-Chlorophenol	5.000	4.284	86	58-124	47-135	PASS	
1,4-Dichlorobenzene	5.000	3.982	80	42-132	27-147	PASS	
N-Nitroso-di-n-propylamine	5.000	3.665	73	40-136	24-152	PASS	
1,2,4-Trichlorobenzene	5.000	4.339	87	45-129	31-143	PASS	
Naphthalene	5.000	4.058	81	32-146	13-165	PASS	
4-Chloro-3-Methylphenol	5.000	4.281	86	55-121	44-132	PASS	
Dimethyl Phthalate	5.000	4.793	96	51-123	39-135	PASS	
Acenaphthylene	5.000	4.667	93	52-120	41-131	PASS	
Acenaphthene	5.000	4.888	98	51-123	39-135	PASS	
4-Nitrophenol	5.000	4.644	93	24-126	7-143	PASS	
2,4-Dinitrotoluene	5.000	5.839	117	51-129	38-142	PASS	
Fluorene	5.000	5.154	103	54-126	42-138	PASS	
Pentachlorophenol	5.000	2.988	60	23-131	5-149	PASS	
Pyrene	5.000	4.497	90	47-143	31-159	PASS	
Butyl Benzyl Phthalate	5.000	4.494	90	43-139	27-155	PASS	

Total number of LCS compounds: 16
 Total number of ME compounds: 0
 Total number of ME compounds allowed: 1
 LCS ME CL validation result: Pass

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

SPIKED SAMPLE ID: 17-03-1546-22
MS/MSD BATCH: 170322S02
INSTRUMENTS:
 SAMPLE: GC/MS CCC
 MS: GC/MS CCC
 MSD: GC/MS CCC

EXTRACTION: EPA 3545
D/T EXTRACTED:
 SAMPLE: 2017-03-22 00:00
 MS: 2017-03-22 00:00
 MSD: 2017-03-22 00:00

ANALYZED BY: 923
D/T ANALYZED:
 SAMPLE: 2017-03-23 13:12
 MS: 2017-03-23 11:05
 MSD: 2017-03-23 11:23

REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	%MS.REC	MSD CONC	%MSD.REC	%REC CL	RPD	RPD_CL	STATUS	QUALIFIERS
N-Nitrosodimethylamine	ND	100.0	5.000	2.669	53	2.533	51	50-130	5	0-20	PASS	
Aniline	ND	100.0	5.000	2.762	55	2.637	53	50-130	5	0-20	PASS	
Phenol	ND	100.0	5.000	3.817	76	3.702	74	22-124	3	0-20	PASS	
Bis(2-Chloroethyl) Ether	ND	100.0	5.000	3.339	67	3.224	64	10-160	3	0-20	PASS	
2-Chlorophenol	ND	100.0	5.000	3.910	78	3.812	76	53-120	3	0-20	PASS	
1,3-Dichlorobenzene	ND	100.0	5.000	3.314	66	3.229	65	20-130	3	0-20	PASS	
1,4-Dichlorobenzene	ND	100.0	5.000	3.431	69	3.292	66	43-120	4	0-26	PASS	
Benzyl Alcohol	ND	100.0	5.000	3.340	67	3.154	63	50-130	6	0-20	PASS	
1,2-Dichlorobenzene	ND	100.0	5.000	3.492	70	3.382	68	32-129	3	0-20	PASS	
2-Methylphenol	ND	100.0	5.000	3.985	80	3.806	76	50-130	5	0-20	PASS	
Bis(2-Chloroisopropyl) Ether	ND	100.0	5.000	2.787	56	2.704	54	35-170	3	0-20	PASS	
3/4-Methylphenol	ND	200.0	10.00	7.713	77	7.342	73	50-130	5	0-20	PASS	
N-Nitroso-di-n-propylamine	ND	100.0	5.000	3.295	66	3.219	64	38-140	2	0-20	PASS	
Hexachloroethane	ND	100.0	5.000	3.197	64	3.156	63	40-115	1	0-20	PASS	
Nitrobenzene	ND	100.0	5.000	3.415	68	3.289	66	35-180	4	0-20	PASS	
Isophorone	ND	100.0	5.000	3.312	66	3.165	63	20-196	5	0-20	PASS	
2-Nitrophenol	ND	100.0	5.000	4.359	87	4.331	87	25-185	1	0-20	PASS	
2,4-Dimethylphenol	ND	100.0	5.000	3.742	75	3.626	73	32-119	3	0-20	PASS	
Benzoic Acid	ND	100.0	5.000	2.788	56	2.583	52	50-130	8	0-20	PASS	
Bis(2-Chloroethoxy) Methane	ND	100.0	5.000	3.504	70	3.349	67	30-185	5	0-20	PASS	
2,4-Dichlorophenol	ND	100.0	5.000	4.222	84	4.052	81	39-135	4	0-20	PASS	
1,2,4-Trichlorobenzene	ND	100.0	5.000	3.811	76	3.757	75	40-130	1	0-20	PASS	
Naphthalene	ND	100.0	5.000	3.688	74	3.587	72	20-140	3	0-20	PASS	
4-Chloroaniline	ND	100.0	5.000	3.567	71	3.439	69	50-130	4	0-20	PASS	
Hexachloro-1,3-Butadiene	ND	100.0	5.000	3.744	75	3.626	73	20-120	3	0-20	PASS	
4-Chloro-3-Methylphenol	ND	100.0	5.000	3.997	80	3.865	77	50-125	3	0-20	PASS	
2-Methylnaphthalene	ND	100.0	5.000	4.100	82	4.013	80	20-145	2	0-20	PASS	
1-Methylnaphthalene	ND	100.0	5.000	3.755	75	3.606	72	20-180	4	0-20	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

SPIKED SAMPLE ID: 17-03-1546-22
MS/MSD BATCH: 170322S02
INSTRUMENTS:
 SAMPLE: GC/MS CCC
 MS: GC/MS CCC
 MSD: GC/MS CCC

EXTRACTION: EPA 3545
D/T EXTRACTED:
 SAMPLE: 2017-03-22 00:00
 MS: 2017-03-22 00:00
 MSD: 2017-03-22 00:00

ANALYZED BY: 923
D/T ANALYZED:
 SAMPLE: 2017-03-23 13:12
 MS: 2017-03-23 11:05
 MSD: 2017-03-23 11:23

REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC.CL	RPD	RPD.CL	STATUS	QUALIFIERS
Hexachlorocyclopentadiene	ND	100.0	5.000	4.853	97	4.695	94	50-130	3	0-20	PASS	
2,4,5-Trichlorophenol	ND	100.0	5.000	4.282	86	4.307	86	50-130	1	0-20	PASS	
2-Chloronaphthalene	ND	100.0	5.000	4.219	84	4.085	82	60-120	3	0-20	PASS	
2-Nitroaniline	ND	100.0	5.000	4.396	88	4.344	87	50-130	1	0-20	PASS	
Dimethyl Phthalate	ND	100.0	5.000	4.762	95	4.680	94	50-125	2	0-20	PASS	
Acenaphthylene	ND	100.0	5.000	4.313	86	4.241	85	50-125	2	0-20	PASS	
3-Nitroaniline	ND	100.0	5.000	4.983	100	4.892	98	50-130	2	0-20	PASS	
Acenaphthene	ND	100.0	5.000	4.434	89	4.395	88	34-148	1	0-20	PASS	
2,4-Dinitrophenol	ND	100.0	5.000	5.137	103	4.911	98	20-180	5	0-20	PASS	
4-Nitrophenol	ND	100.0	5.000	5.010	100	4.687	94	14-128	7	0-59	PASS	
Dibenzofuran	ND	100.0	5.000	4.485	90	4.517	90	50-130	1	0-20	PASS	
2,4-Dinitrotoluene	ND	100.0	5.000	5.553	111	5.466	109	51-129	2	0-20	PASS	
2,6-Dichlorophenol	ND	100.0	5.000	4.096	82	3.905	78	75-125	5	0-20	PASS	
2,6-Dinitrotoluene	ND	100.0	5.000	5.273	105	5.140	103	50-158	3	0-20	PASS	
Diethyl Phthalate	ND	100.0	5.000	4.526	91	4.471	89	20-145	1	0-20	PASS	
4-Chlorophenyl-Phenyl Ether	ND	100.0	5.000	4.597	92	4.574	91	20-160	1	0-20	PASS	
Fluorene	ND	100.0	5.000	4.665	93	4.660	93	50-130	0	0-20	PASS	
4-Nitroaniline	ND	100.0	5.000	5.411	108	5.278	106	50-130	2	0-20	PASS	
Azobenzene	ND	100.0	5.000	3.199	64	3.094	62	50-130	3	0-20	PASS	
4,6-Dinitro-2-Methylphenol	ND	100.0	5.000	5.308	106	5.066	101	20-180	5	0-20	PASS	
N-Nitrosodiphenylamine	ND	100.0	5.000	4.562	91	4.542	91	50-130	0	0-20	PASS	
2,4,6-Trichlorophenol	ND	100.0	5.000	4.549	91	4.498	90	37-144	1	0-20	PASS	
4-Bromophenyl-Phenyl Ether	ND	100.0	5.000	4.219	84	4.123	82	50-130	2	0-20	PASS	
Hexachlorobenzene	ND	100.0	5.000	3.903	78	3.836	77	20-150	2	0-20	PASS	
Pentachlorophenol	ND	100.0	5.000	3.872	77	3.700	74	10-124	5	0-20	PASS	
Phenanthrene	ND	100.0	5.000	4.494	90	4.404	88	50-125	2	0-20	PASS	
Anthracene	ND	100.0	5.000	4.428	89	4.268	85	25-140	4	0-20	PASS	
Di-n-Butyl Phthalate	ND	100.0	5.000	4.506	90	4.323	86	20-120	4	0-20	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

SPIKED SAMPLE ID: 17-03-1546-22
MS/MSD BATCH: 170322S02
INSTRUMENTS:
 SAMPLE: GC/MS CCC
 MS: GC/MS CCC
 MSD: GC/MS CCC

EXTRACTION: EPA 3545
D/T EXTRACTED:
 SAMPLE: 2017-03-22 00:00
 MS: 2017-03-22 00:00
 MSD: 2017-03-22 00:00

ANALYZED BY: 923
D/T ANALYZED:
 SAMPLE: 2017-03-23 13:12
 MS: 2017-03-23 11:05
 MSD: 2017-03-23 11:23

REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS_CONC	% MS_REC	MSD_CONC	% MSD_REC	% REC_CL	RPD	RPD_CL	STATUS	QUALIFIERS
Fluoranthene	ND	100.0	5.000	4.971	99	4.806	96	25-140	3	0-20	PASS	
Benzo(a) Pyrene	ND	100.0	5.000	1.530	31	1.431	29	50-130	7	0-20	FAIL	3G
Pyrene	ND	100.0	5.000	4.701	94	4.542	91	31-169	3	0-20	PASS	
Pyridine	ND	100.0	5.000	1.876	38	1.801	36	50-130	4	0-20	FAIL	3G
Butyl Benzyl Phthalate	ND	100.0	5.000	4.767	95	4.619	92	40-140	3	0-20	PASS	
3,3'-Dichlorobenzidine	ND	100.0	5.000	5.054	101	4.828	97	20-180	5	0-20	PASS	
Benzo (a) Anthracene	ND	100.0	5.000	4.900	98	4.721	94	30-145	4	0-20	PASS	
Bis(2-Ethylhexyl) Phthalate	ND	100.0	5.000	4.546	91	4.374	87	20-165	4	0-20	PASS	
Chrysene	ND	100.0	5.000	4.547	91	4.387	88	15-170	4	0-20	PASS	
Di-n-Octyl Phthalate	ND	100.0	5.000	4.754	95	4.535	91	20-150	5	0-20	PASS	
Benzo (k) Fluoranthene	ND	100.0	5.000	4.978	100	4.760	95	20-160	4	0-20	PASS	
Benzo (b) Fluoranthene	ND	100.0	5.000	5.207	104	5.083	102	20-160	2	0-20	PASS	
Benzo (a) Pyrene	ND	100.0	5.000	5.205	104	4.957	99	15-165	5	0-20	PASS	
Indeno (1,2,3-c,d) Pyrene	ND	100.0	5.000	4.563	91	4.539	91	20-180	1	0-20	PASS	
Dibenz (a,h) Anthracene	ND	100.0	5.000	4.666	93	4.609	92	20-180	1	0-20	PASS	
Benzo (g,h,i) Perylene	ND	100.0	5.000	4.771	95	4.750	95	20-180	0	0-20	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	23mar005.rr	Y:\GCMS_CCC\GCMS_CCC_data\20171170323\23mar005.d\
MSD	23mar006.rr	Y:\GCMS_CCC\GCMS_CCC_data\20171170323\23mar006.d\

SURROGATE RECOVERIES FOR METHOD: EPA 8270C

WORK ORDER: 17-03-1523

BATCH ID:

REVIEWED BY:

D/T REVIEWED:

LCS/MB: 170322L02A**MS:** 170322S02

EXTRACTION: EPA 3545

1 **CLIENT SAMPLE NUMBER : IDW-S**

INSTRUMENT: GC/MS CCC

D/T EXTRACTED: 2017-03-22 00:00

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar019.d\23mar019.rr

ANALYZED BY: 923

D/T ANALYZED 2017-03-23 15:21

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorophenol	62	25-120	PASS	
Phenol-d6	64	26-122	PASS	
Nitrobenzene-d5	53	33-123	PASS	
2-Fluorobiphenyl	70	27-120	PASS	
2,4,6-Tribromophenol	90	18-138	PASS	
p-Terphenyl-d14	71	27-159	PASS	

MB **CLIENT SAMPLE NUMBER : Method Blank**

INSTRUMENT: GC/MS CCC

D/T EXTRACTED: 2017-03-22 00:00

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar003.d\23mar003.rr

ANALYZED BY: 923

D/T ANALYZED 2017-03-23 10:24

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorophenol	79	25-120	PASS	
Phenol-d6	81	26-122	PASS	
Nitrobenzene-d5	78	33-123	PASS	
2-Fluorobiphenyl	94	27-120	PASS	
2,4,6-Tribromophenol	89	18-138	PASS	
p-Terphenyl-d14	87	27-159	PASS	

LCS **CLIENT SAMPLE NUMBER : Lab Control Sample**

INSTRUMENT: GC/MS CCC

D/T EXTRACTED: 2017-03-22 00:00

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar004.d\23mar004.rr

ANALYZED BY: 923

D/T ANALYZED 2017-03-23 10:44

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorophenol	80	25-120	PASS	
Phenol-d6	80	26-122	PASS	
Nitrobenzene-d5	71	33-123	PASS	
2-Fluorobiphenyl	87	27-120	PASS	
2,4,6-Tribromophenol	98	18-138	PASS	
p-Terphenyl-d14	88	27-159	PASS	

**SURROGATE RECOVERIES
FOR METHOD: EPA 8270C**

WORK ORDER: 17-03-1523

BATCH ID:

LCS/MB:

MS: **170322S02**

EXTRACTION: EPA 3545

REVIEWED BY:

D/T REVIEWED:

MS CLIENT SAMPLE NUMBER : **Matrix Spike**

INSTRUMENT: GC/MS CCC

ANALYZED BY: 923

D/T EXTRACTED: 2017-03-22 00:00

D/T ANALYZED 2017-03-23 11:05

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar005.d\23mar005.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
2-Fluorophenol	73	25-120	PASS	
Phenol-d6	74	26-122	PASS	
Nitrobenzene-d5	64	33-123	PASS	
2-Fluorobiphenyl	78	27-120	PASS	
2,4,6-Tribromophenol	97	18-138	PASS	
p-Terphenyl-d14	91	27-159	PASS	

MSD CLIENT SAMPLE NUMBER : **Matrix Spike Duplicate**

INSTRUMENT: GC/MS CCC

ANALYZED BY: 923

D/T EXTRACTED: 2017-03-22 00:00

D/T ANALYZED 2017-03-23 11:23

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar006.d\23mar006.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
2-Fluorophenol	71	25-120	PASS	
Phenol-d6	72	26-122	PASS	
Nitrobenzene-d5	62	33-123	PASS	
2-Fluorobiphenyl	77	27-120	PASS	
2,4,6-Tribromophenol	96	18-138	PASS	
p-Terphenyl-d14	87	27-159	PASS	

Return to Contents 

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar003.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 10:24 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 10:46 n8cz

Sample Name: MB 170322L02 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.265	152	266248	40.000	0.01
28)*Naphthalene-d8	(2)	4.511	136	1009242	40.000	0.01
46)*Acenaphthene-d10	(3)	6.281	164	585310	40.000	0.00
63)*Phenanthrene-d10	(4)	7.725	188	1399415	40.000	0.00
75)*Chrysene-d12	(5)	10.389	240	1733509	40.000	0.01
82)*Perylene-d12	(6)	12.159	264	1788542	40.000	0.01
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.248	112	628987	79.076	0.01
SpikedAmount 100.000				Recovery = 79.076		
4)\$Phenol-d6	(1)	2.954	99	884586	81.307	0.00
SpikedAmount 100.000				Recovery = 81.307		
19)\$Nitrobenzene-d5	(2)	3.815	82	838491	77.571	0.01
SpikedAmount 100.000				Recovery = 77.571		
39)\$2-Fluorobiphenyl	(3)	5.618	172	2028654	93.627	0.00
SpikedAmount 100.000				Recovery = 93.627		
59)\$2,4,6-Tribromophenol	(4)	7.067	330	341810	89.167	0.00
SpikedAmount 100.000				Recovery = 89.167		
71)\$p-Terphenyl-d14	(5)	9.309	244	3441955	87.098	0.00
SpikedAmount 100.000				Recovery = 87.098		

Target Compounds				QValue
1) N-Nitrosodimethylamine	(1)	0.000	0	N.D.
2) Pyridine	(1)	0.000	0	N.D.
5) Phenol	(1)	0.000	0	N.D.
6) Aniline	(1)	0.000	0	N.D.
7) bis(2-Chloroethyl) Ether	(1)	0.000	0	N.D.
8) 2-Chlorophenol	(1)	0.000	0	N.D.
9) 1,3-Dichlorobenzene	(1)	0.000	0	N.D.
11) 1,4-Dichlorobenzene	(1)	0.000	0	N.D.
12) Benzyl alcohol	(1)	0.000	0	N.D.
13) 1,2-Dichlorobenzene	(1)	0.000	0	N.D.
14) 2-Methylphenol	(1)	0.000	0	N.D.
15) bis(2-Chloroisopropyl) Ether	(1)	0.000	0	N.D.
16) 3/4-Methylphenol	(1)	0.000	0	N.D.
17) N-Nitroso-di-n-propylamine	(1)	0.000	0	N.D.
18) Hexachloroethane	(1)	0.000	0	N.D.
20) Nitrobenzene	(2)	0.000	0	N.D.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar003.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 10:24 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 10:46 n8cz

Sample Name: MB 170322L02 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.062	82	73279	3.969	98
22) 2-Nitrophenol	(2)	0.000		0	N.D.	
23) 2,4-Dimethylphenol	(2)	0.000		0	N.D.	
24) bis(2-Chloroethoxy) Methane	(2)	0.000		0	N.D.	
25) Benzoic acid	(2)	0.000		0	N.D.	
26) 2,4-Dichlorophenol	(2)	0.000		0	N.D.	
27) 1,2,4-Trichlorobenzene	(2)	0.000		0	N.D.	
29) Naphthalene	(2)	0.000		0	N.D.	
30) 4-Chloroaniline	(2)	0.000		0	N.D.	
31) 2,6-Dichlorophenol	(2)	0.000		0	N.D.	
32) Hexachloro-1,3-Butadiene	(2)	0.000		0	N.D.	
33) 4-Chloro-3-methylphenol	(2)	0.000		0	N.D.	
34) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
35) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
36) Hexachlorocyclopentadiene	(3)	0.000		0	N.D.	
37) 2,4,6-Trichlorophenol	(3)	0.000		0	N.D.	
38) 2,4,5-Trichlorophenol	(3)	0.000		0	N.D.	
40) 2-Chloronaphthalene	(3)	0.000		0	N.D.	
41) 2-Nitroaniline	(3)	0.000		0	N.D.	
42) Dimethyl Phthalate	(3)	0.000		0	N.D.	
44) Acenaphthylene	(3)	0.000		0	N.D.	
43) 2,6-Dinitrotoluene	(3)	0.000		0	N.D.	
45) 3-Nitroaniline	(3)	0.000		0	N.D.	
47) Acenaphthene	(3)	0.000		0	N.D.	
48) 2,4-Dinitrophenol	(3)	0.000		0	N.D.	
49) 4-Nitrophenol	(3)	0.000		0	N.D.	
50) Dibenzofuran	(3)	0.000		0	N.D.	
51) 2,4-Dinitrotoluene	(3)	0.000		0	N.D.	
52) Diethyl Phthalate	(3)	0.000		0	N.D.	
53) Fluorene	(3)	0.000		0	N.D.	
54) 4-Chlorophenyl-phenyl Ether	(3)	0.000		0	N.D.	
55) 4-Nitroaniline	(3)	0.000		0	N.D.	
56) 4,6-Dinitro-2-methylphenol	(4)	0.000		0	N.D.	
57) N-Nitrosodiphenylamine	(4)	0.000		0	N.D.	
58) Azobenzene	(4)	0.000		0	N.D.	
60) 4-Bromophenyl-phenyl Ether	(4)	0.000		0	N.D.	
61) Hexachlorobenzene	(4)	0.000		0	N.D.	

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar003.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 10:24 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 10:46 n8cz

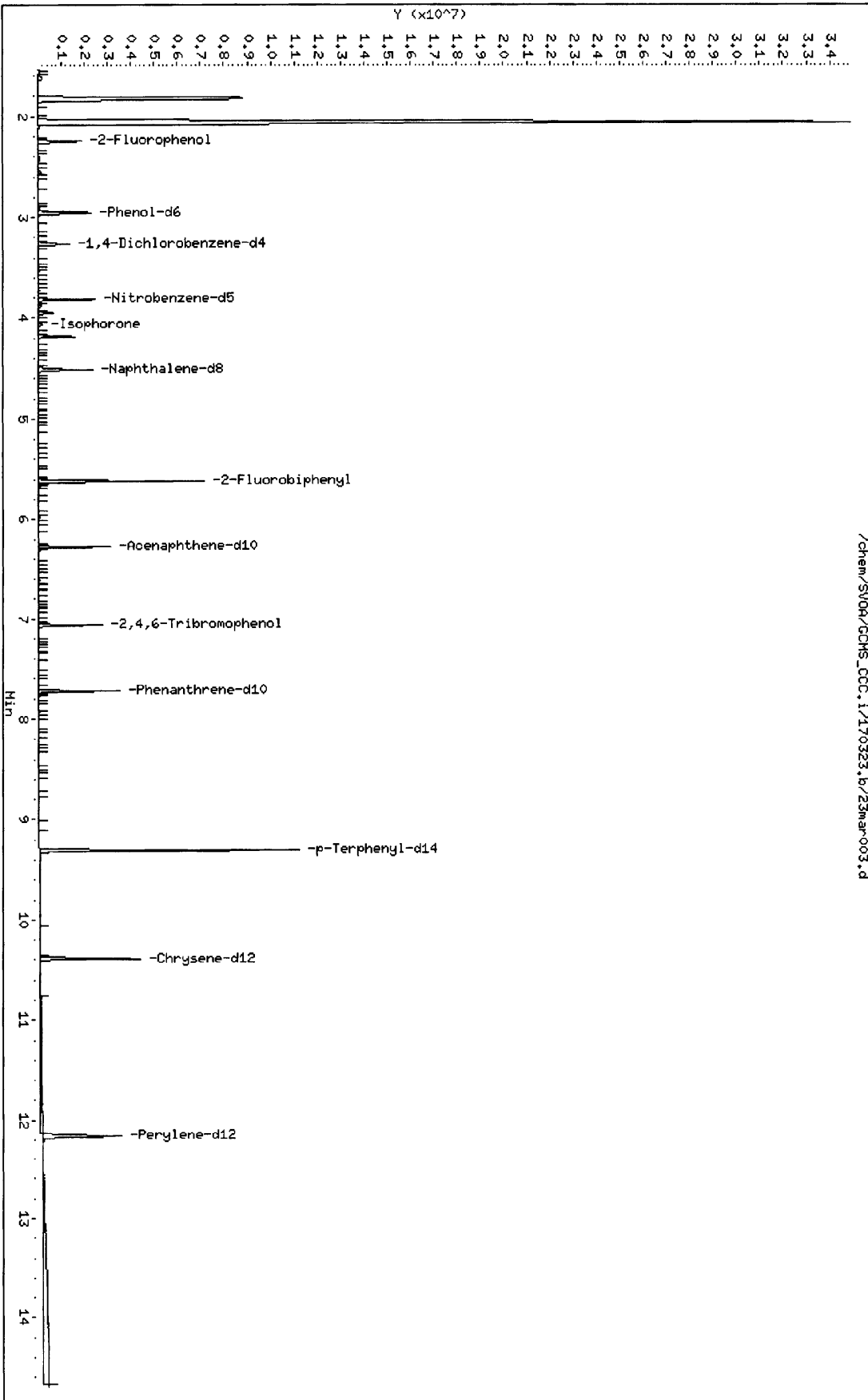
Sample Name: MB 170322L02 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	0.000		0	N.D.	
64) Phenanthrene	(4)	0.000		0	N.D.	
65) Anthracene	(4)	0.000		0	N.D.	
66) Carbazole	(4)	0.000		0	N.D.	
67) Di-n-butyl Phthalate	(4)	0.000		0	N.D.	
68) Fluoranthene	(4)	0.000		0	N.D.	
69) Benzidine	(4)	0.000		0	N.D.	
70) Pyrene	(5)	0.000		0	N.D.	
72) Butyl Benzyl Phthalate	(5)	0.000		0	N.D.	
73) 3,3'-Dichlorobenzidine	(5)	0.000		0	N.D.	
74) Benzo (a) Anthracene	(5)	0.000		0	N.D.	
76) Chrysene	(5)	0.000		0	N.D.	
77) bis(2-Ethylhexyl) Phthalate	(5)	0.000		0	N.D.	
78) Di-n-octyl Phthalate	(5)	0.000		0	N.D.	
79) Benzo (b) Fluoranthene	(5)	0.000		0	N.D.	
80) Benzo (k) Fluoranthene	(5)	0.000		0	N.D.	
81) Benzo (a) Pyrene	(5)	0.000		0	N.D.	
83) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
84) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
85) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	

Data File: /chem/SV04/GCHS_CCC.i/170323.lv/23mar003.d
Date : 23-MAR-2017 10:24
Client ID:
Sample Info: MB 170322L02
Column phase:

Instrument: GCHS_CCC.i
Operator: 923
Column diameter: 0.100

/chem/SV04/GCHS_CCC.i/170323.lv/23mar003.d



Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar004.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 10:44 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:05 n8cz

Sample Name: LCS 170322L02 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column	DEV (Min)
					Amount (ug/L)	
=====						
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.270	152	224555	40.000	0.00
28)*Naphthalene-d8	(2)	4.511	136	869004	40.000	0.01
46)*Acenaphthene-d10	(3)	6.281	164	523899	40.000	0.00
63)*Phenanthrene-d10	(4)	7.725	188	1285889	40.000	0.00
75)*Chrysene-d12	(5)	10.389	240	1436048	40.000	0.01
82)*Perylene-d12	(6)	12.165	264	1436621	40.000	0.00
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.254	112	535731	79.857	0.00
SpikedAmount 100.000				Recovery = 79.857		
4)\$Phenol-d6	(1)	2.954	99	733103	79.895	0.00
SpikedAmount 100.000				Recovery = 79.895		
19)\$Nitrobenzene-d5	(2)	3.821	82	663661	71.306	0.00
SpikedAmount 100.000				Recovery = 71.306		
39)\$2-Fluorobiphenyl	(3)	5.618	172	1695114	87.404	0.00
SpikedAmount 100.000				Recovery = 87.404		
59)\$2,4,6-Tribromophenol	(4)	7.067	330	344649	97.845	0.00
SpikedAmount 100.000				Recovery = 97.845		
71)\$p-Terphenyl-d14	(5)	9.308	244	2895245	88.439	0.00
SpikedAmount 100.000				Recovery = 88.439		
Target Compounds						QValue
1) N-Nitrosodimethylamine	(1)	1.612	74	136708	29.907	98
2) Pyridine	(1)	1.633	52	108354	21.295	99
5) Phenol	(1)	2.965	94	374719	40.072	97
6) Aniline	(1)	3.002	93	394968	33.861	98
7) bis(2-Chloroethyl) Ether	(1)	3.045	93	263442	36.593	99
8) 2-Chlorophenol	(1)	3.109	128	320737	42.841	99
9) 1,3-Dichlorobenzene	(1)	3.238	146	341745	39.071	99
11) 1,4-Dichlorobenzene	(1)	3.281	146	352732	39.820	100
12) Benzyl alcohol	(1)	3.404	79	243819	36.065	99
13) 1,2-Dichlorobenzene	(1)	3.462	146	341505	40.291	100
14) 2-Methylphenol	(1)	3.527	108	291563	43.116	99
15) bis(2-Chloroisopropyl) Ether	(1)	3.553	45	303556	32.180	99
16) 3/4-Methylphenol	(1)	3.671	107	672913	83.201	100
17) N-Nitroso-di-n-propylamine	(1)	3.692	70	208940	36.650	98
18) Hexachloroethane	(1)	3.751	117	128436	38.959	98
20) Nitrobenzene	(2)	3.837	77	312291	37.187	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar004.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 10:44 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:05 n8cz

Sample Name: LCS 170322L02 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.061	82	587510	36.954	99
22) 2-Nitrophenol	(2)	4.152	139	159123	44.835	98
23) 2,4-Dimethylphenol	(2)	4.200	107	322777	41.929	99
24) bis(2-Chloroethoxy) Methane	(2)	4.291	93	367824	38.271	97
25) Benzoic acid	(2)	4.275	105	28625	9.288	96
26) 2,4-Dichlorophenol	(2)	4.388	162	312689	44.233	98
27) 1,2,4-Trichlorobenzene	(2)	4.473	180	355321	43.390	99
29) Naphthalene	(2)	4.532	128	913282	40.579	99
30) 4-Chloroaniline	(2)	4.612	127	396457	39.847	99
31) 2,6-Dichlorophenol	(2)	4.618	162	307686	43.563	100
32) Hexachloro-1,3-Butadiene	(2)	4.719	225	223778	42.930	100
33) 4-Chloro-3-methylphenol	(2)	5.115	107	301541	42.814	99
34) 2-Methylnaphthalene	(2)	5.227	142	684674	45.957	100
35) 1-Methylnaphthalene	(2)	5.334	142	620829	41.841	100
36) Hexachlorocyclopentadiene	(3)	5.457	237	281707	53.347	99
37) 2,4,6-Trichlorophenol	(3)	5.543	196	265166	47.215	99
38) 2,4,5-Trichlorophenol	(3)	5.580	196	266766	43.333	99
40) 2-Chloronaphthalene	(3)	5.709	162	694857	45.943	99
41) 2-Nitroaniline	(3)	5.853	65	194375	46.405	99
42) Dimethyl Phthalate	(3)	6.067	163	903282	47.926	99
44) Acenaphthylene	(3)	6.126	152	1153519	46.667	100
43) 2,6-Dinitrotoluene	(3)	6.131	165	191977	54.584	99
45) 3-Nitroaniline	(3)	6.265	138	217197	53.715	99
47) Acenaphthene	(3)	6.313	153	748220	48.885	100
48) 2,4-Dinitrophenol	(3)	6.367	184	23549	19.590	96
49) 4-Nitrophenol	(3)	6.447	65	157319M	46.443	2
50) Dibenzofuran	(3)	6.468	168	1084581	48.819	88
51) 2,4-Dinitrotoluene	(3)	6.511	165	282077	58.385	98
52) Diethyl Phthalate	(3)	6.768	149	907198	48.268	100
53) Fluorene	(3)	6.811	166	906513	51.541	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.816	204	464791	49.953	99
55) 4-Nitroaniline	(3)	6.869	138	221188	54.931	99
56) 4,6-Dinitro-2-methylphenol	(4)	6.912	198	117278	36.939	98
57) N-Nitrosodiphenylamine	(4)	6.939	169	812585	48.565	100
58) Azobenzene	(4)	6.966	77	716364	32.731	99
60) 4-Bromophenyl-phenyl Ether	(4)	7.287	248	323543	44.079	99
61) Hexachlorobenzene	(4)	7.426	142	109909M	40.514	13

M = Compound was manually integrated.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar004.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 10:44 Analyst ID: 923

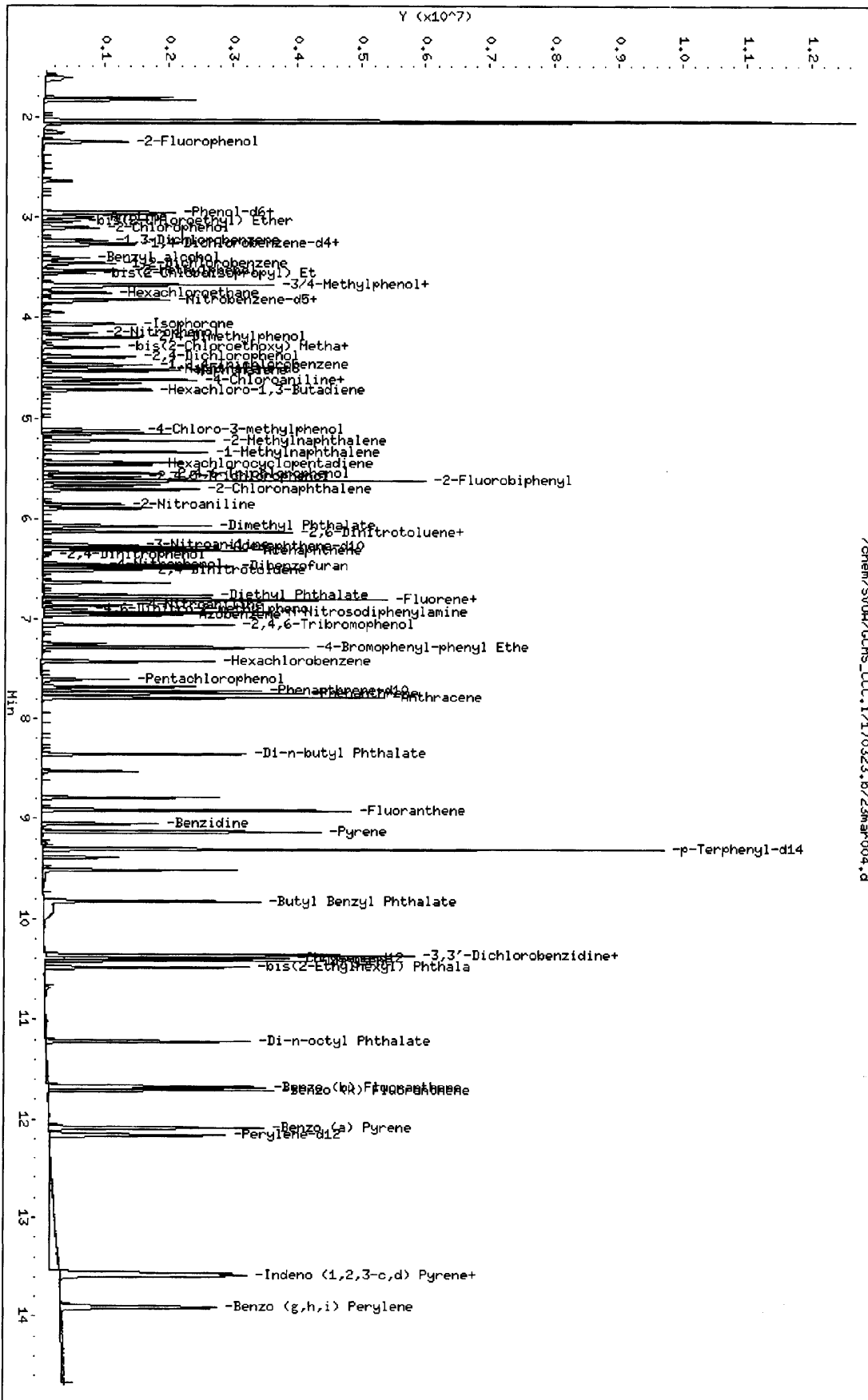
Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:05 n8cz

Sample Name: LCS 170322L02 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

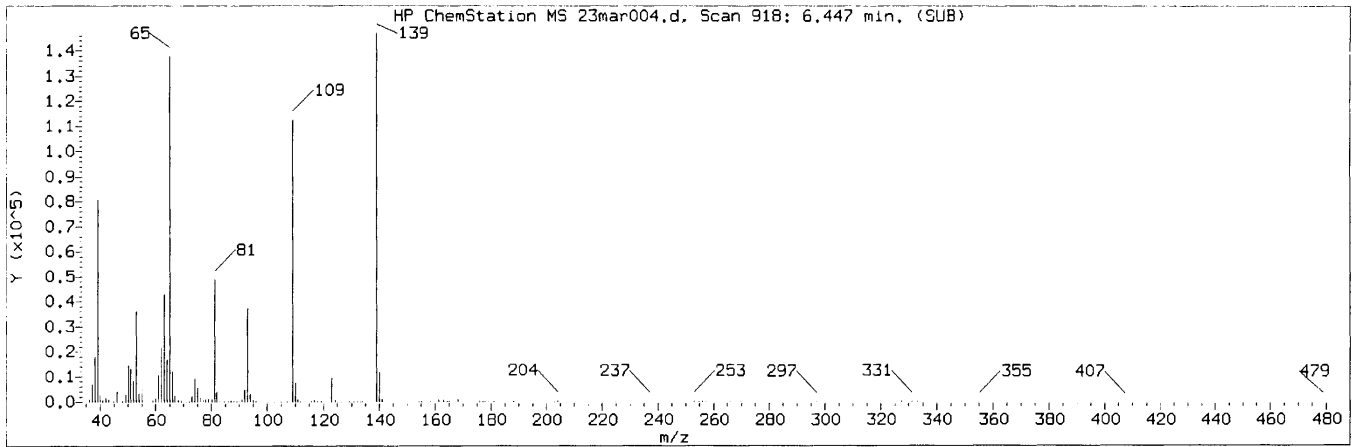
Compounds	I.S. Ref.	RT	QIon	Area	On-Column	
					Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.608	266	162305	29.880	97
64) Phenanthrene	(4)	7.747	178	1518121	46.112	100
65) Anthracene	(4)	7.789	178	1529461	45.005	99
66) Carbazole	(4)	0.000		0	N.D.	
67) Di-n-butyl Phthalate	(4)	8.356	149	1706157	43.810	100
68) Fluoranthene	(4)	8.918	202	1912779	48.042	100
69) Benzidine	(4)	9.052	184	668343	49.408	99
70) Pyrene	(5)	9.137	202	1934898	44.974	99
72) Butyl Benzyl Phthalate	(5)	9.827	149	769971	44.942	100
73) 3,3'-Dichlorobenzidine	(5)	10.362	252	746125	46.618	99
74) Benzo (a) Anthracene	(5)	10.367	228	1939538	46.031	100
76) Chrysene	(5)	10.416	228	1716449	42.726	99
77) bis(2-Ethylhexyl) Phthalate	(5)	10.485	149	1048221	42.164	99
78) Di-n-octyl Phthalate	(5)	11.223	149	1874808	44.027	100
79) Benzo (b) Fluoranthene	(5)	11.678	252	2042980	50.101	97
80) Benzo (k) Fluoranthene	(5)	11.710	252	1877377	45.330	96
81) Benzo (a) Pyrene	(5)	12.090	252	1853997	48.814	99
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.566	276	2104987	43.065	100
84) Dibenz (a,h) Anthracene	(6)	13.593	278	1769733	43.839	100
85) Benzo (g,h,i) Perylene	(6)	13.914	276	1756618	45.351	100

Data File: /chem/SV09/GHS_CCC.i/170323.b/23mar004.d
Date : 23-MAR-2017 10:44
Client ID:
Sample Info: LCS 170322L02
Column phase:

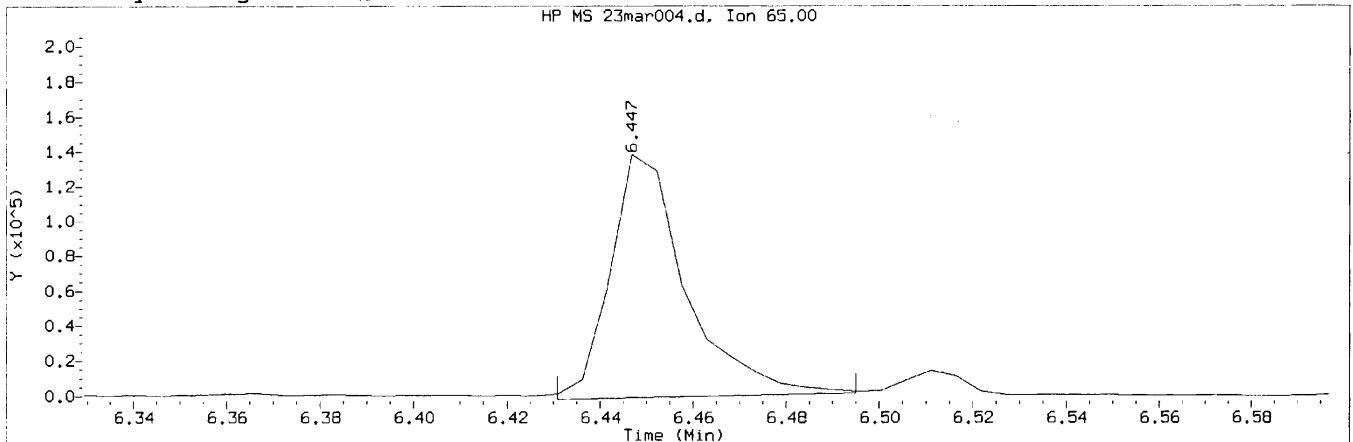
Instrument: GHS_CCC.1
Operator: 923
Column diameter: 0.00
/chem/SV09/GHS_CCC.i/170323.b/23mar004.d



Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar004.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 10:44 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:05 n8cz

Sample Name: LCS 170322L02

Compound Number : 49
 Compound Name : 4-Nitrophenol
 Scan Number : 918
 Retention Time (minutes): 6.447
 Quant Ion : 65.00
 Area (flag) : 157319M
 On-Column Amount (ug/L) : 46.4432
 Integration start scan : 914 Integration stop scan: 926
 Y at integration start : -1813 Y at integration end: 1786

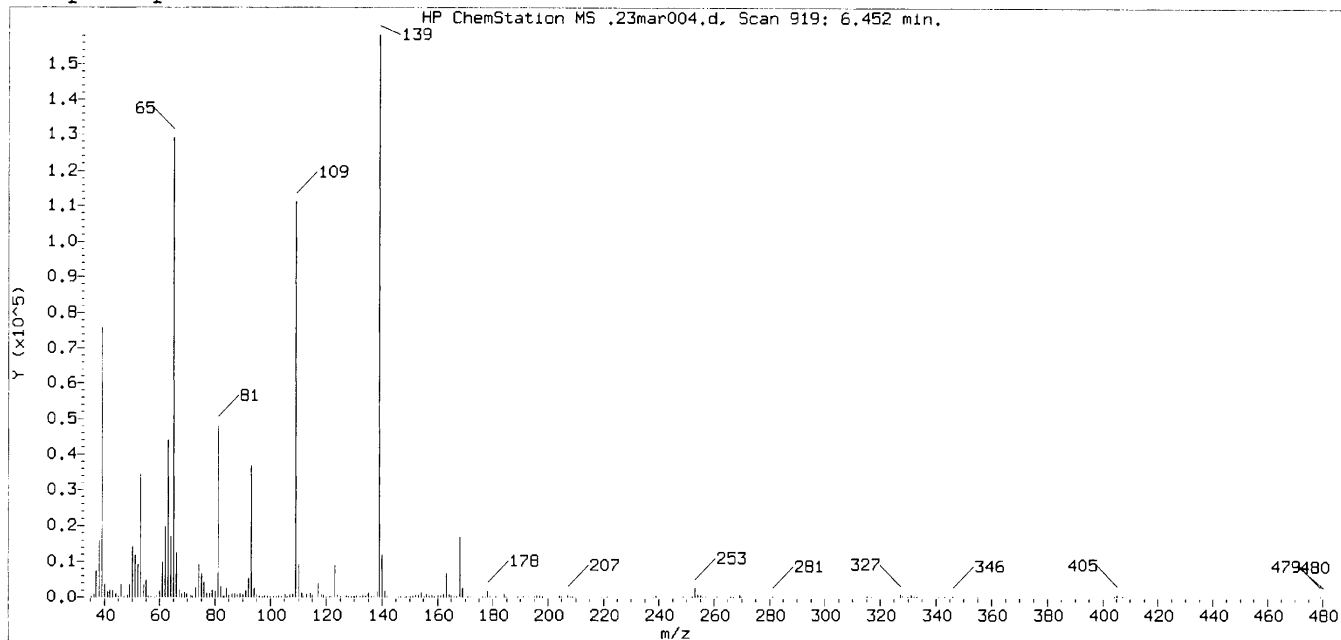
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Qi Mo
 on 03/23/2017 at 11:06.
 Target 3.5 esignature user ID: n8cz

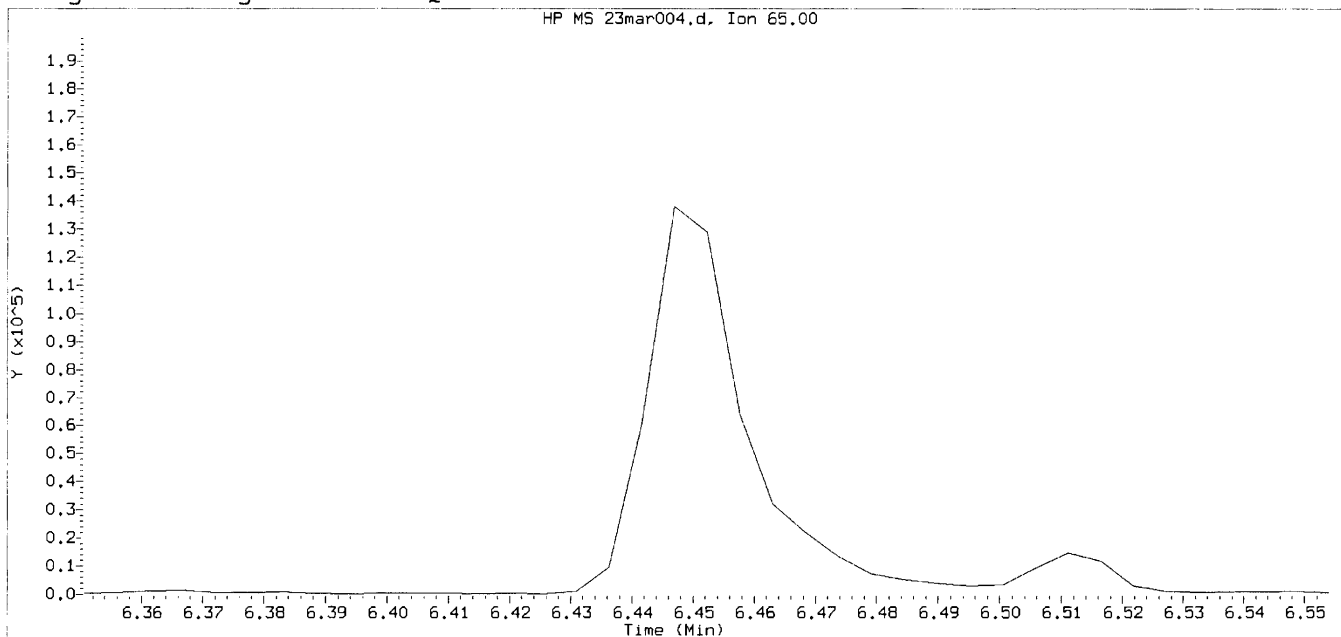
Qi Mo 3/24/17

GC/MS audit/management approval: _____

Sample Spectrum



Original Integration of Quant Ion



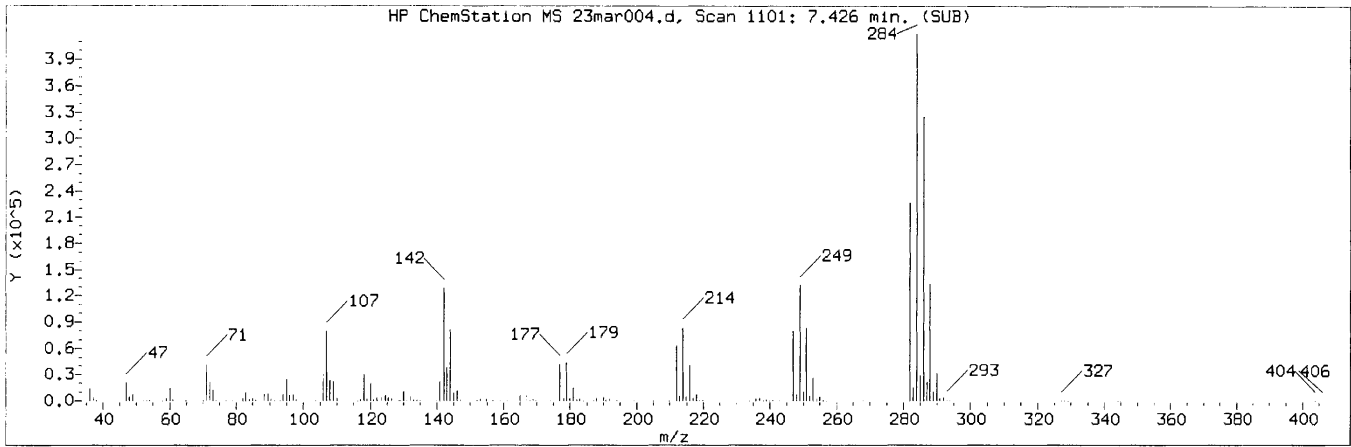
Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar004.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 10:44 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:04 Unknown

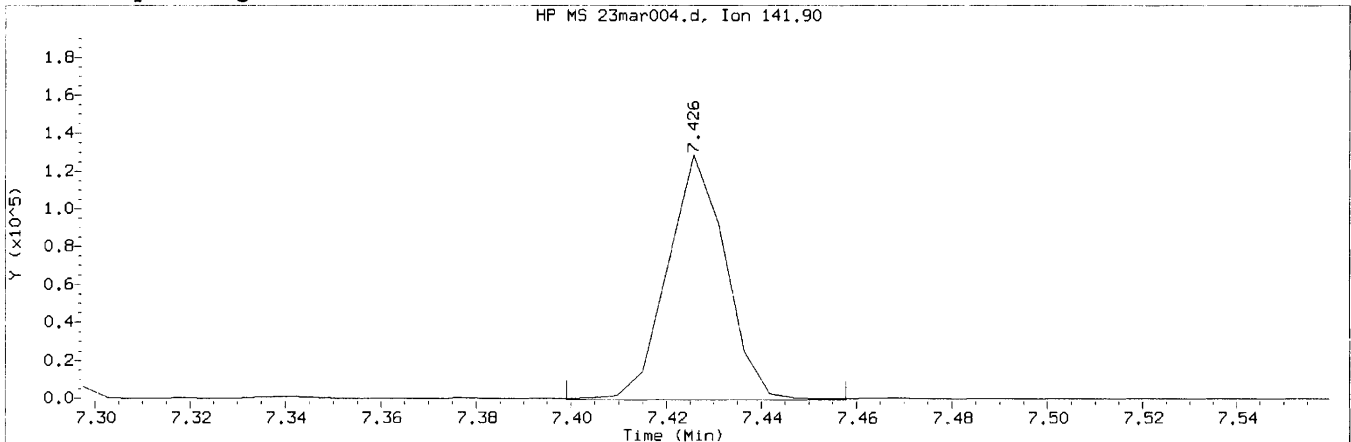
Sample Name: LCS 170322L02

Compound Number : 49
 Compound Name : 4-Nitrophenol
 Expected RT (minutes) : 6.452
 Quant Ion : 65.00

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar004.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 10:44 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:05 n8cz

Sample Name: LCS 170322L02

Compound Number : 61
 Compound Name : Hexachlorobenzene
 Scan Number : 1101
 Retention Time (minutes): 7.426
 Quant Ion : 142.00
 Area (flag) : 109909M
 On-Column Amount (ug/L) : 40.5143
 Integration start scan : 1095 Integration stop scan: 1106
 Y at integration start : -560 Y at integration end: -560

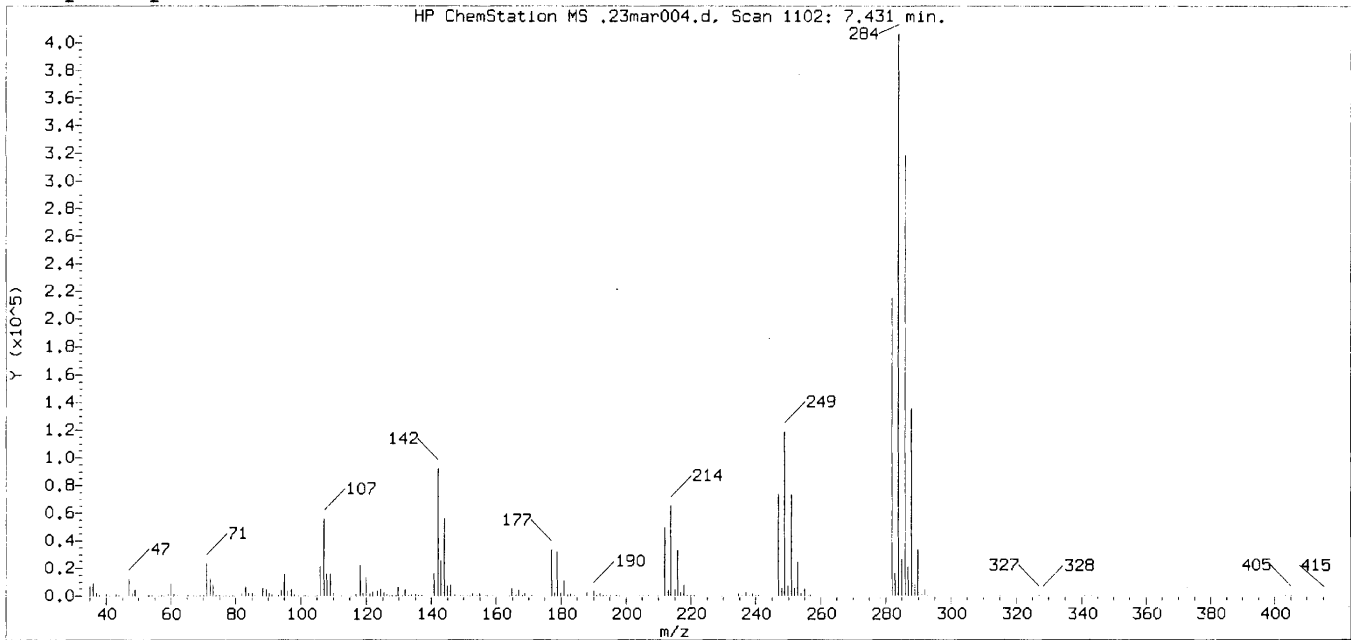
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Qi Mo
 on 03/23/2017 at 11:06.
 Target 3.5 esignature user ID: n8cz

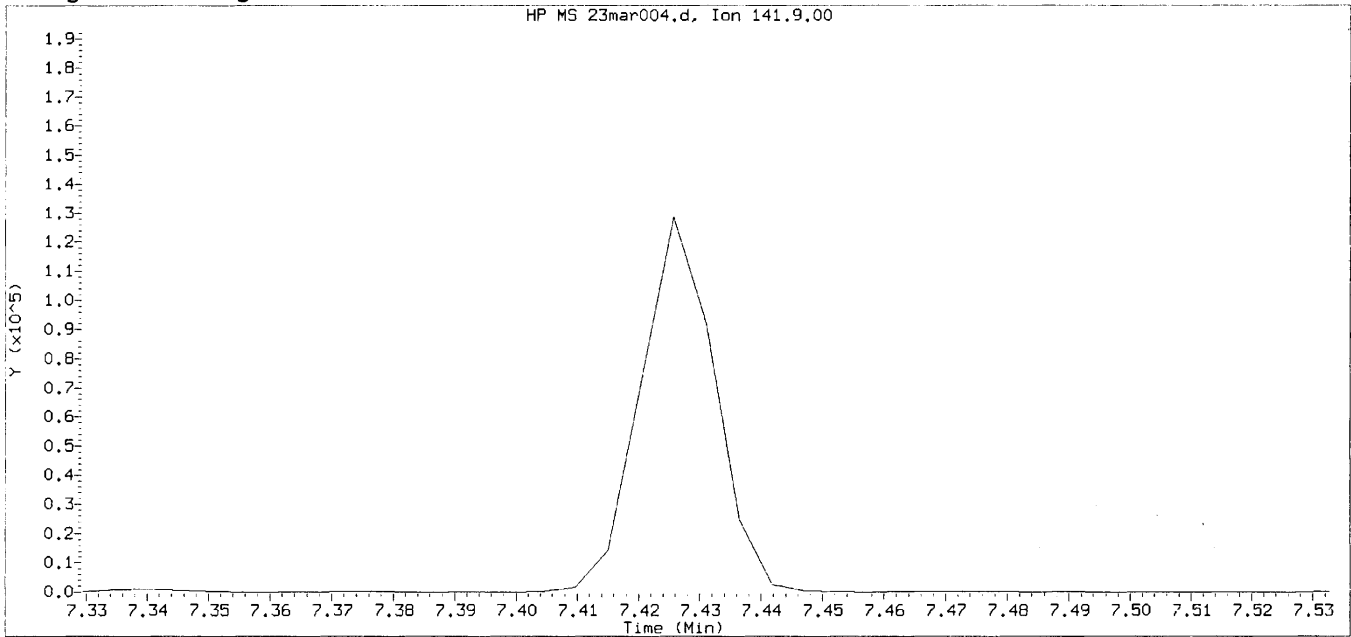
GC/MS audit/management approval: _____

Qi Mo 3/24/17

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar004.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 10:44 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:04 Unknown

Sample Name: LCS 170322L02

Compound Number : 61
 Compound Name : Hexachlorobenzene
 Expected RT (minutes) : 7.431
 Quant Ion : 142.00

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar005.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 11:05 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:46 n8cz

Sample Name: 17-03-1546-22 MS Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column	
					Amount (ug/L)	DEV(Min)
=====						
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.270	152	294792	40.000	0.00
28)*Naphthalene-d8	(2)	4.511	136	1129266	40.000	0.01
46)*Acenaphthene-d10	(3)	6.281	164	674442	40.000	0.00
63)*Phenanthrene-d10	(4)	7.725	188	1604558	40.000	0.00
75)*Chrysene-d12	(5)	10.389	240	1796563	40.000	0.01
82)*Perylene-d12	(6)	12.165	264	1822350	40.000	0.00
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.259	112	645339	73.276	-0.01
SpikedAmount 100.000				Recovery = 73.276		
4)\$Phenol-d6	(1)	2.960	99	890745	73.946	-0.01
SpikedAmount 100.000				Recovery = 73.946		
19)\$Nitrobenzene-d5	(2)	3.821	82	778706	64.384	0.00
SpikedAmount 100.000				Recovery = 64.384		
39)\$2-Fluorobiphenyl	(3)	5.618	172	1936831	77.576	0.00
SpikedAmount 100.000				Recovery = 77.576		
59)\$2,4,6-Tribromophenol	(4)	7.067	330	426616	97.061	0.00
SpikedAmount 100.000				Recovery = 97.061		
71)\$p-Terphenyl-d14	(5)	9.308	244	3745404	91.450	0.00
SpikedAmount 100.000				Recovery = 91.450		
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.617	74	160186	26.694	98
2) Pyridine	(1)	1.638	52	125307	18.759	100
5) Phenol	(1)	2.970	94	468538	38.167	96
6) Aniline	(1)	3.008	93	422946	27.620	99
7) bis(2-Chloroethyl) Ether	(1)	3.045	93	315556	33.388	99
8) 2-Chlorophenol	(1)	3.109	128	384292	39.100	99
9) 1,3-Dichlorobenzene	(1)	3.243	146	380524	33.140	99
11) 1,4-Dichlorobenzene	(1)	3.286	146	398988	34.311	100
12) Benzyl alcohol	(1)	3.409	79	296402	33.397	100
13) 1,2-Dichlorobenzene	(1)	3.462	146	388538	34.918	100
14) 2-Methylphenol	(1)	3.527	108	353805	39.854	99
15) bis(2-Chloroisopropyl) Ether	(1)	3.559	45	345141	27.871	99
16) 3/4-Methylphenol	(1)	3.671	107	818956	77.132	100
17) N-Nitroso-di-n-propylamine	(1)	3.692	70	246572	32.946	97
18) Hexachloroethane	(1)	3.751	117	138380	31.974	97
20) Nitrobenzene	(2)	3.837	77	372710	34.153	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar005.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 11:05 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:46 n8cz

Sample Name: 17-03-1546-22 MS Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.067	82	684318	33.123	99
22) 2-Nitrophenol	(2)	4.152	139	201024	43.587	99
23) 2,4-Dimethylphenol	(2)	4.200	107	374345	37.420	100
24) bis(2-Chloroethoxy) Methane	(2)	4.291	93	437637	35.040	99
25) Benzoic acid	(2)	4.302	105	190069	27.879	98
26) 2,4-Dichlorophenol	(2)	4.393	162	387818	42.217	99
27) 1,2,4-Trichlorobenzene	(2)	4.473	180	405562	38.111	100
29) Naphthalene	(2)	4.532	128	1078723	36.884	99
30) 4-Chloroaniline	(2)	4.612	127	461252	35.675	100
31) 2,6-Dichlorophenol	(2)	4.623	162	375967	40.962	100
32) Hexachloro-1,3-Butadiene	(2)	4.719	225	253585	37.436	99
33) 4-Chloro-3-methylphenol	(2)	5.115	107	365846	39.972	98
34) 2-Methylnaphthalene	(2)	5.227	142	793804	41.002	99
35) 1-Methylnaphthalene	(2)	5.334	142	724040	37.551	100
36) Hexachlorocyclopentadiene	(3)	5.457	237	329933	48.533	99
37) 2,4,6-Trichlorophenol	(3)	5.543	196	328858	45.485	99
38) 2,4,5-Trichlorophenol	(3)	5.580	196	339364	42.821	99
40) 2-Chloronaphthalene	(3)	5.709	162	821492	42.192	99
41) 2-Nitroaniline	(3)	5.853	65	237037	43.959	100
42) Dimethyl Phthalate	(3)	6.067	163	1155476	47.623	99
44) Acenaphthylene	(3)	6.131	152	1372560	43.134	100
43) 2,6-Dinitrotoluene	(3)	6.131	165	238761	52.733	97
45) 3-Nitroaniline	(3)	6.265	138	259385	49.830	99
47) Acenaphthene	(3)	6.313	153	873732	44.343	100
48) 2,4-Dinitrophenol	(3)	6.361	184	117385	51.370	98
49) 4-Nitrophenol	(3)	6.452	65	218493M	50.105	2
50) Dibenzofuran	(3)	6.468	168	1282712	44.849	89
51) 2,4-Dinitrotoluene	(3)	6.516	165	345369	55.529	99
52) Diethyl Phthalate	(3)	6.768	149	1095153	45.262	100
53) Fluorene	(3)	6.811	166	1056261	46.650	99
54) 4-Chlorophenyl-phenyl Ether	(3)	6.816	204	550594	45.966	99
55) 4-Nitroaniline	(3)	6.875	138	280471	54.107	99
56) 4,6-Dinitro-2-methylphenol	(4)	6.912	198	221543	53.078	98
57) N-Nitrosodiphenylamine	(4)	6.939	169	952536	45.623	100
58) Azobenzene	(4)	6.966	77	873715	31.992	99
60) 4-Bromophenyl-phenyl Ether	(4)	7.292	248	386398	42.188	99
61) Hexachlorobenzene	(4)	7.426	142	132121M	39.030	13

M = Compound was manually integrated.

Quant Report

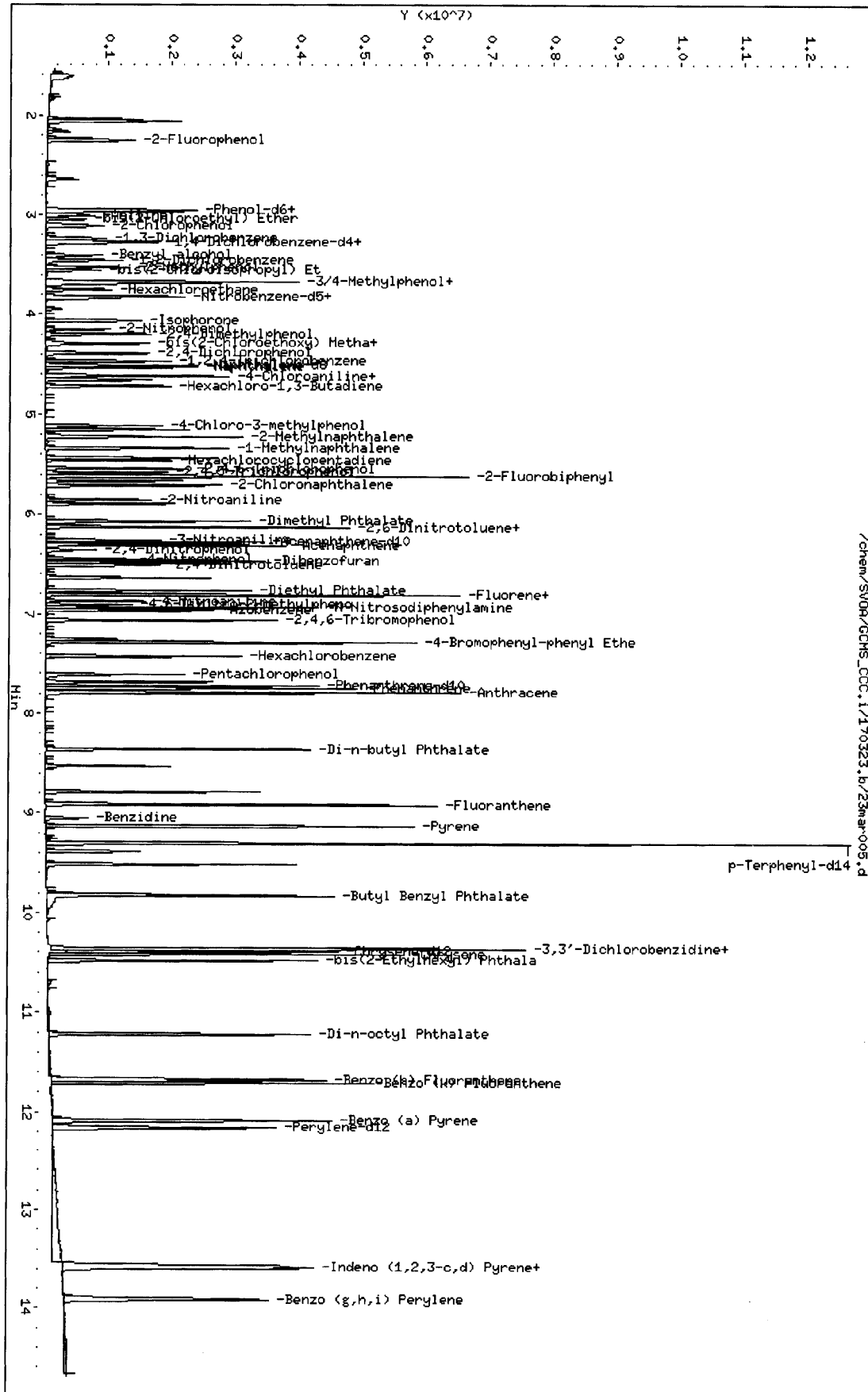
Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar005.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 11:05 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:46 n8cz

Sample Name: 17-03-1546-22 MS Misc Info: 10UL S7-53-19
 Response via Initial Calibration

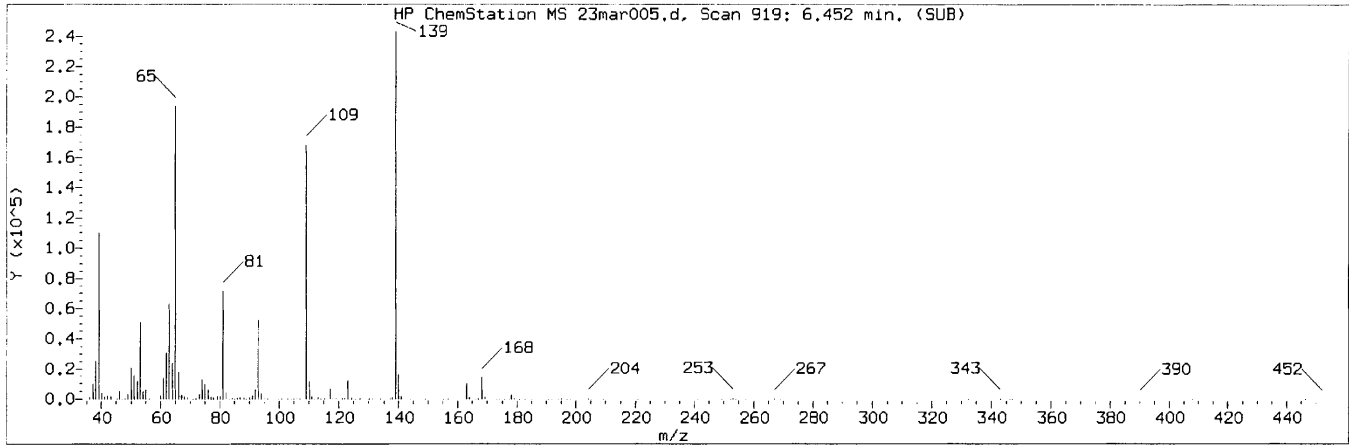
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.608	266	262470	38.724	99
64) Phenanthrene	(4)	7.747	178	1846356	44.944	99
65) Anthracene	(4)	7.789	178	1877764	44.280	99
66) Carbazole	(4)	0.000		0	N.D.	
67) Di-n-butyl Phthalate	(4)	8.362	149	2189506	45.055	99
68) Fluoranthene	(4)	8.918	202	2469823	49.713	100
69) Benzidine	(4)	9.052	184	258175	15.296	98
70) Pyrene	(5)	9.137	202	2530061	47.007	100
72) Butyl Benzyl Phthalate	(5)	9.827	149	1021781	47.672	100
73) 3,3'-Dichlorobenzidine	(5)	10.362	252	1011967	50.539	99
74) Benzo (a) Anthracene	(5)	10.373	228	2582831	48.997	100
76) Chrysene	(5)	10.421	228	2285076	45.466	99
77) bis(2-Ethylhexyl) Phthalate	(5)	10.485	149	1413812	45.458	100
78) Di-n-octyl Phthalate	(5)	11.223	149	2532739	47.542	100
79) Benzo (b) Fluoranthene	(5)	11.678	252	2656408	52.072	95
80) Benzo (k) Fluoranthene	(5)	11.710	252	2578989	49.775	95
81) Benzo (a) Pyrene	(5)	12.090	252	2473196	52.050	99
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.571	276	2829313	45.631	100
84) Dibenz (a,h) Anthracene	(6)	13.593	278	2389378	46.660	100
85) Benzo (g,h,i) Perylene	(6)	13.919	276	2344333	47.714	100



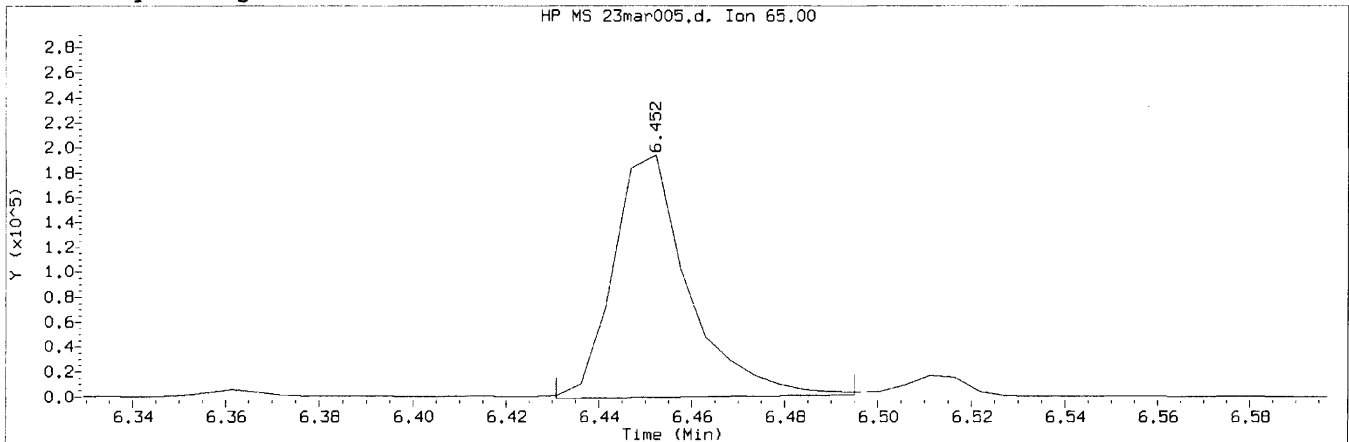
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 Date : 23-MAR-2017 11:05
 Client ID:
 Sample Info: 17-03-1546-22 HS
 Column phase:

Instrument: GCHS_OCC.i
 Operator: 923
 Column diameter: 0.00

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar005.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 11:05 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:46 n8cz

Sample Name: 17-03-1546-22 MS

Compound Number : 49
 Compound Name : 4-Nitrophenol
 Scan Number : 919
 Retention Time (minutes): 6.452
 Quant Ion : 65.00
 Area (flag) : 218493M
 On-Column Amount (ug/L) : 50.1048
 Integration start scan : 914 Integration stop scan: 926
 Y at integration start : -1129 Y at integration end: 1531

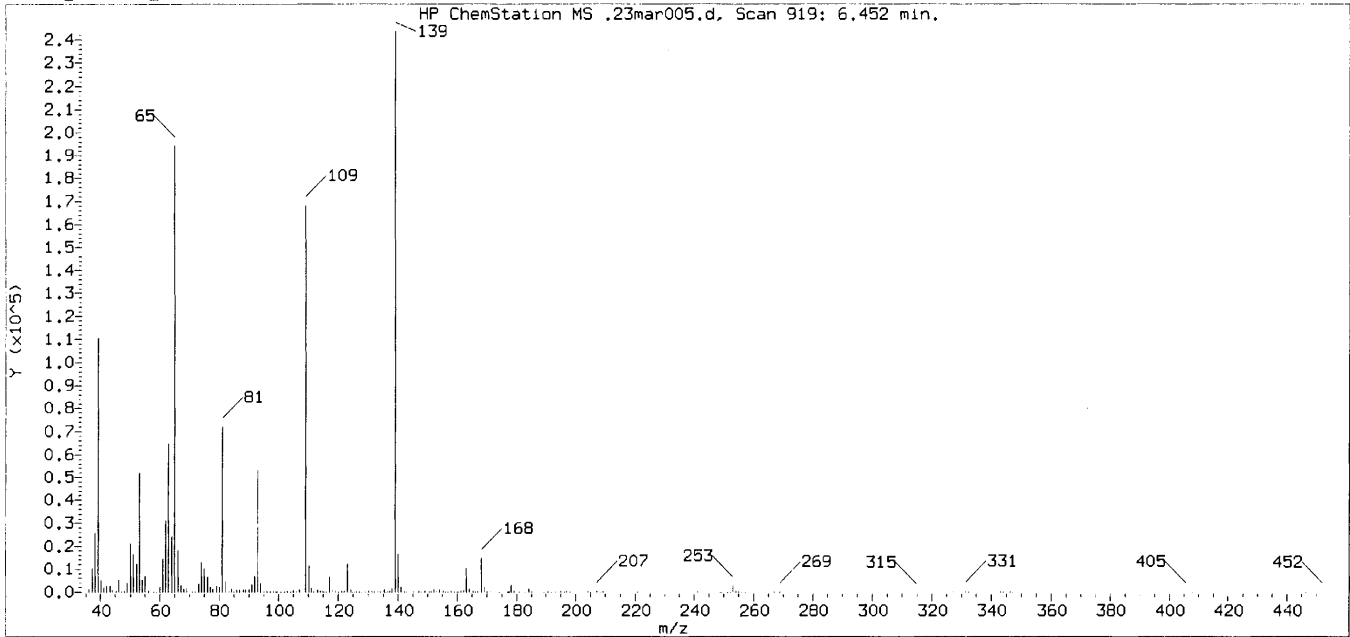
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Qi Mo
 on 03/23/2017 at 11:47.
 Target 3.5 esignature user ID: n8cz

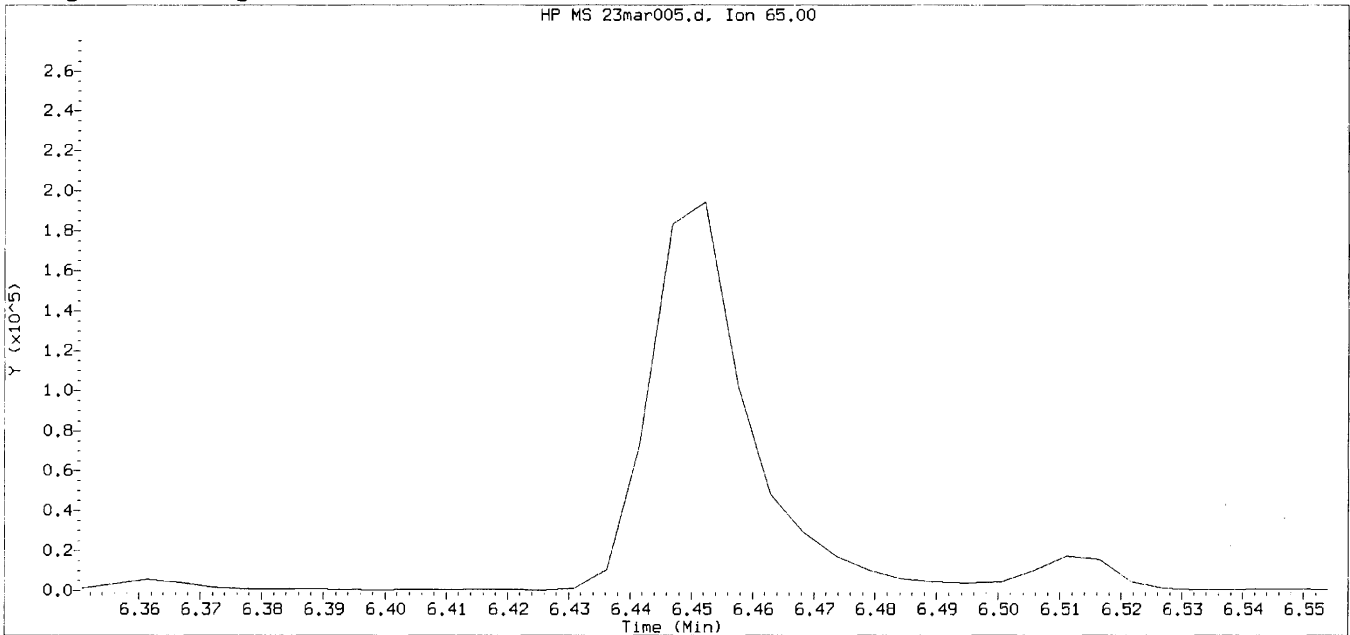
GC/MS audit/management approval: _____

Qi Mo 3/24/17

Sample Spectrum



Original Integration of Quant Ion



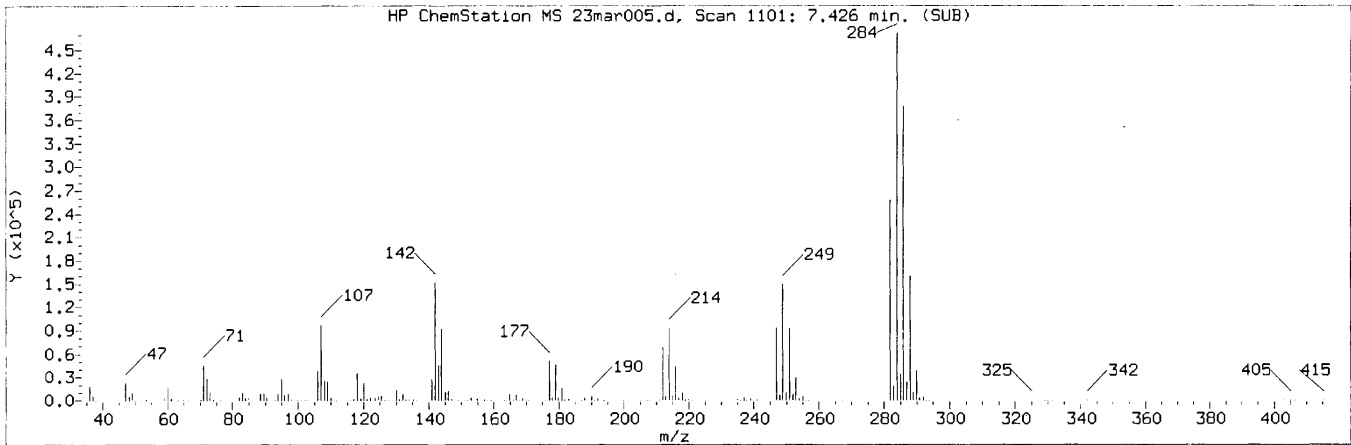
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 Injection date and time: 23-MAR-2017 11:05 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
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 Date, time and analyst ID of latest file update: 23-Mar-2017 11:25 Unknown

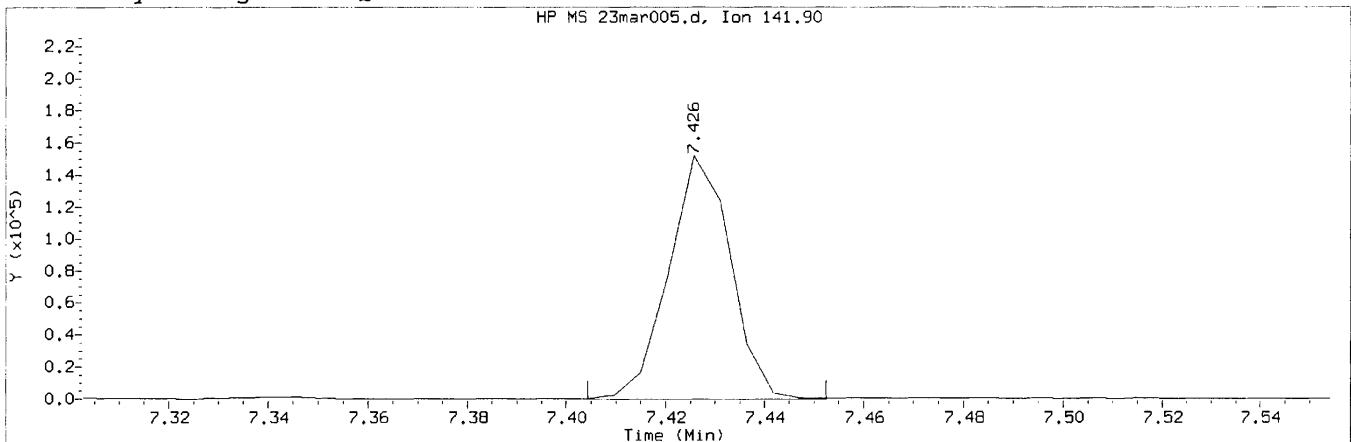
Sample Name: 17-03-1546-22 MS

Compound Number : 49
 Compound Name : 4-Nitrophenol
 Expected RT (minutes) : 6.452
 Quant Ion : 65.00

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar005.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 11:05 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:46 n8cz

Sample Name: 17-03-1546-22 MS

Compound Number : 61
 Compound Name : Hexachlorobenzene
 Scan Number : 1101
 Retention Time (minutes): 7.426
 Quant Ion : 142.00
 Area (flag) : 132121M
 On-Column Amount (ug/L) : 39.0297
 Integration start scan : 1096 Integration stop scan: 1105
 Y at integration start : -386 Y at integration end: -386

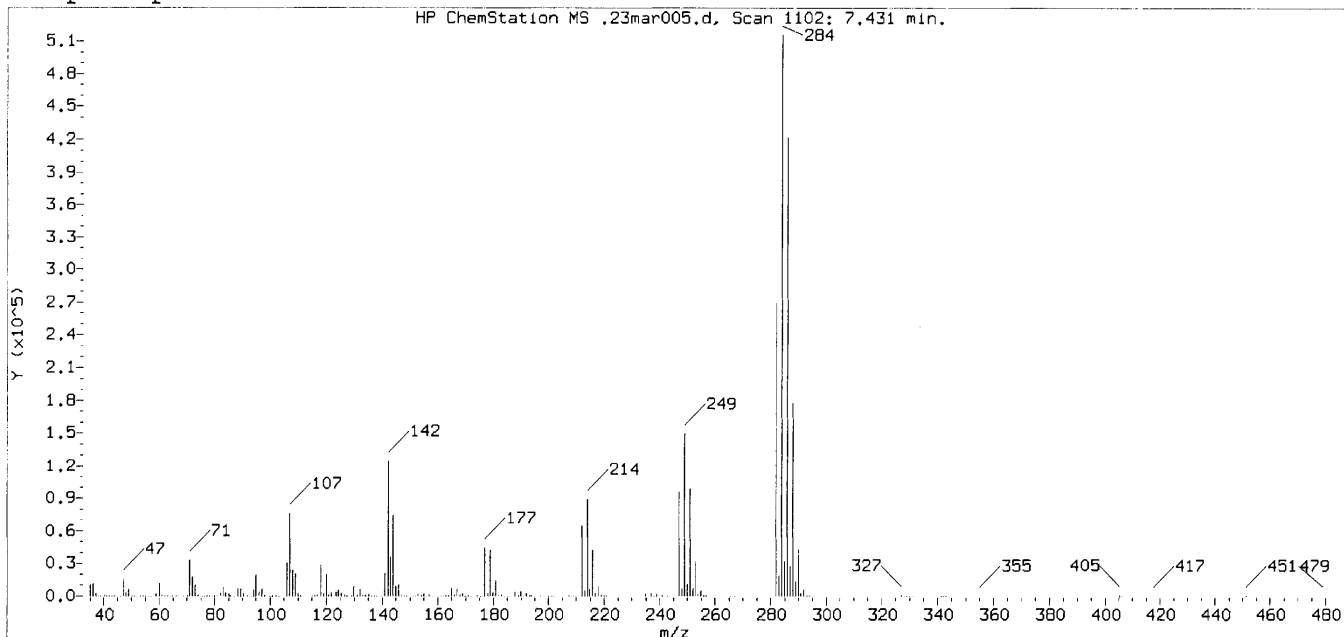
Reason for manual integration: missed peak

Digitally signed by Qi Mo
 Analyst responsible for change: on 03/23/2017 at 11:47.
 Target 3.5 esignature user ID: n8cz

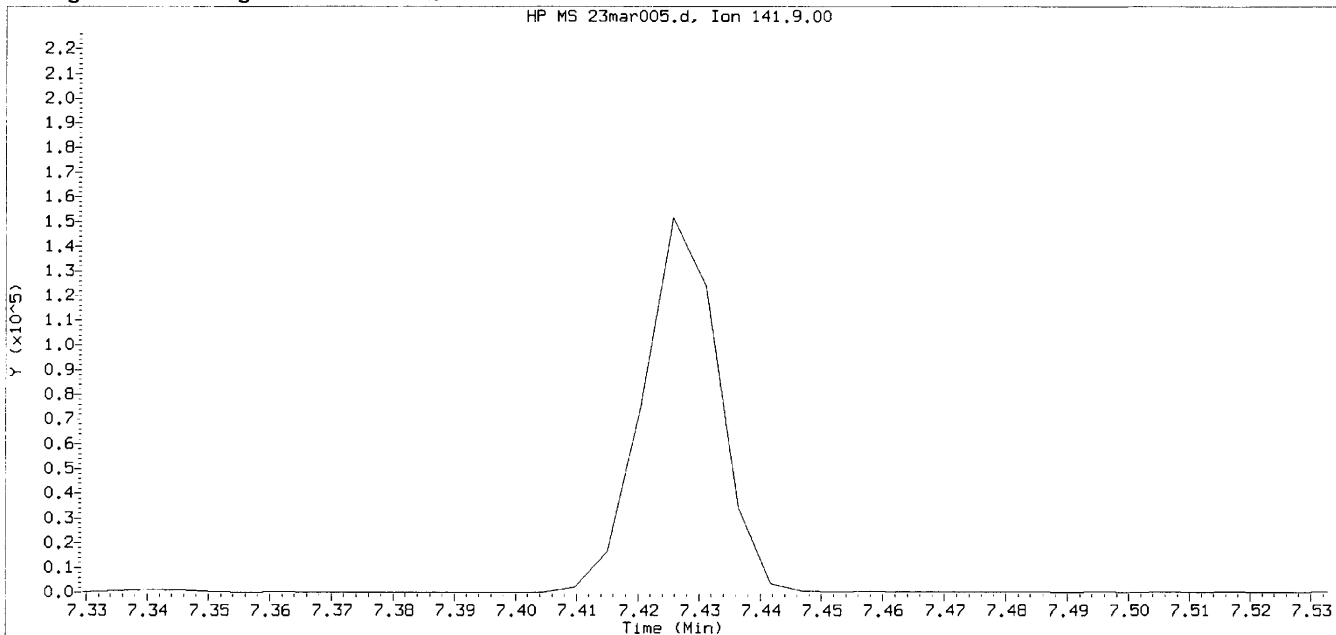
GC/MS audit/management approval: _____

Qi Mo 3/24/17

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar005.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 11:05 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:25 Unknown

Sample Name: 17-03-1546-22 MS

Compound Number : 61
 Compound Name : Hexachlorobenzene
 Expected RT (minutes) : 7.431
 Quant Ion : 142.00

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar006.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 11:23 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:47 n8cz

Sample Name: 17-03-1546-22 MSD Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.270	152	257096	40.000	0.00
28)*Naphthalene-d8	(2)	4.511	136	981762	40.000	0.01
46)*Acenaphthene-d10	(3)	6.281	164	574152	40.000	0.00
63)*Phenanthrene-d10	(4)	7.725	188	1366618	40.000	0.00
75)*Chrysene-d12	(5)	10.383	240	1537927	40.000	0.01
82)*Perylene-d12	(6)	12.159	264	1506963	40.000	0.01
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.259	112	548372	71.395	-0.01
SpikedAmount 100.000				Recovery = 71.395		
4)\$Phenol-d6	(1)	2.960	99	754921	71.859	-0.01
SpikedAmount 100.000				Recovery = 71.859		
19)\$Nitrobenzene-d5	(2)	3.821	82	653268	62.128	0.00
SpikedAmount 100.000				Recovery = 62.128		
39)\$2-Fluorobiphenyl	(3)	5.618	172	1630874	76.731	0.00
SpikedAmount 100.000				Recovery = 76.731		
59)\$2,4,6-Tribromophenol	(4)	7.067	330	357748	95.564	0.00
SpikedAmount 100.000				Recovery = 95.564		
71)\$p-Terphenyl-d14	(5)	9.303	244	3058796	87.245	0.01
SpikedAmount 100.000				Recovery = 87.245		
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.617	74	132549	25.327	99
2) Pyridine	(1)	1.638	52	104901	18.007	99
5) Phenol	(1)	2.970	94	396377	37.023	99
6) Aniline	(1)	3.008	93	352170	26.371	99
7) bis(2-Chloroethyl) Ether	(1)	3.045	93	265773	32.244	99
8) 2-Chlorophenol	(1)	3.109	128	326787	38.124	99
9) 1,3-Dichlorobenzene	(1)	3.238	146	323310	32.285	99
11) 1,4-Dichlorobenzene	(1)	3.286	146	333838	32.917	100
12) Benzyl alcohol	(1)	3.409	79	244130	31.540	99
13) 1,2-Dichlorobenzene	(1)	3.462	146	328203	33.820	99
14) 2-Methylphenol	(1)	3.527	108	294688	38.062	98
15) bis(2-Chloroisopropyl) Ether	(1)	3.553	45	291979	27.035	98
16) 3/4-Methylphenol	(1)	3.671	107	679848	73.419	100
17) N-Nitroso-di-n-propylamine	(1)	3.692	70	210076	52.185	97
18) Hexachloroethane	(1)	3.751	117	119130	31.562	99
20) Nitrobenzene	(2)	3.837	77	312034	32.889	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar006.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 11:23 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:47 n8cz

Sample Name: 17-03-1546-22 MSD Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.061	82	568493	31.651	99
22) 2-Nitrophenol	(2)	4.152	139	173637	43.305	99
23) 2,4-Dimethylphenol	(2)	4.195	107	315399	36.265	100
24) bis(2-Chloroethoxy) Methane	(2)	4.291	93	363664	33.492	99
25) Benzoic acid	(2)	4.297	105	150618	25.833	97
26) 2,4-Dichlorophenol	(2)	4.388	162	323643	40.524	99
27) 1,2,4-Trichlorobenzene	(2)	4.473	180	347566	37.568	99
29) Naphthalene	(2)	4.532	128	912085	35.871	100
30) 4-Chloroaniline	(2)	4.612	127	386577	34.391	99
31) 2,6-Dichlorophenol	(2)	4.618	162	311624	39.053	99
32) Hexachloro-1,3-Butadiene	(2)	4.719	225	213550	36.263	99
33) 4-Chloro-3-methylphenol	(2)	5.115	107	307573	38.655	99
34) 2-Methylnaphthalene	(2)	5.227	142	675485	40.133	99
35) 1-Methylnaphthalene	(2)	5.334	142	604481	36.060	98
36) Hexachlorocyclopentadiene	(3)	5.457	237	271700	46.949	99
37) 2,4,6-Trichlorophenol	(3)	5.543	196	276864	44.983	99
38) 2,4,5-Trichlorophenol	(3)	5.580	196	290609	43.075	98
40) 2-Chloronaphthalene	(3)	5.709	162	677162	40.854	100
41) 2-Nitroaniline	(3)	5.848	65	199417	43.442	99
42) Dimethyl Phthalate	(3)	6.067	163	966584	46.796	100
44) Acenaphthylene	(3)	6.126	152	1148949	42.414	99
43) 2,6-Dinitrotoluene	(3)	6.131	165	198125	51.402	97
45) 3-Nitroaniline	(3)	6.265	138	216803	48.924	99
47) Acenaphthene	(3)	6.313	153	737169	43.947	99
48) 2,4-Dinitrophenol	(3)	6.361	184	94656	49.109	98
49) 4-Nitrophenol	(3)	6.447	65	173983M	46.867	2
50) Dibenzofuran	(3)	6.468	168	1099717	45.167	87
51) 2,4-Dinitrotoluene	(3)	6.511	165	289435	54.665	95
52) Diethyl Phthalate	(3)	6.768	149	920968	44.712	100
53) Fluorene	(3)	6.805	166	898145	46.596	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.811	204	466366	45.735	100
55) 4-Nitroaniline	(3)	6.869	138	232918	52.782	99
56) 4,6-Dinitro-2-methylphenol	(4)	6.907	198	179083	50.658	99
57) N-Nitrosodiphenylamine	(4)	6.939	169	807685	45.421	100
58) Azobenzene	(4)	6.966	77	719747	30.943	99
60) 4-Bromophenyl-phenyl Ether	(4)	7.287	248	321598	41.226	99
61) Hexachlorobenzene	(4)	7.426	142	110606M	38.363	13

M = Compound was manually integrated.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar006.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 11:23 Analyst ID: 923

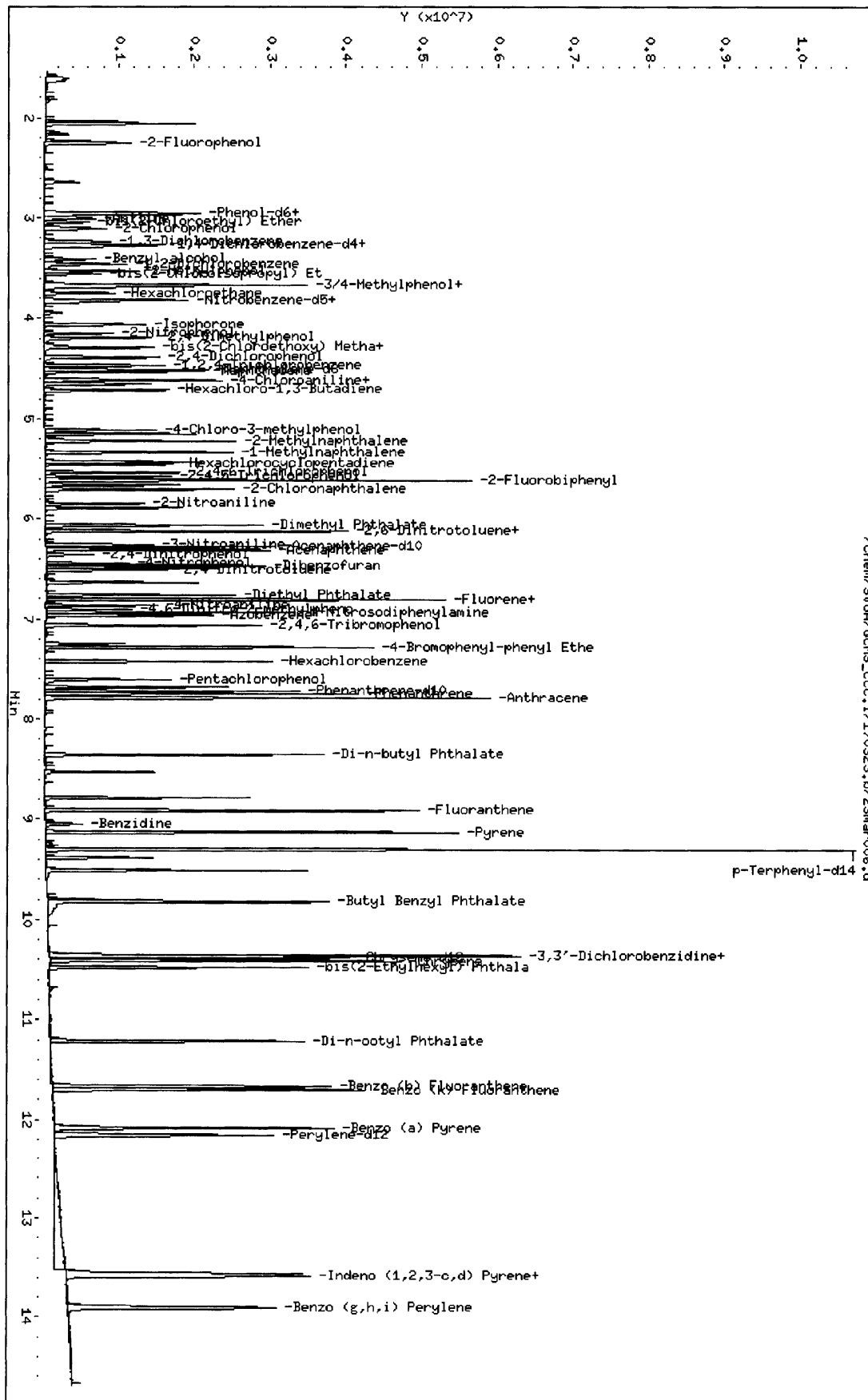
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 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:47 n8cz

Sample Name: 17-03-1546-22 MSD Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.608	266	213604	37.001	98
64) Phenanthrene	(4)	7.747	178	1541006	44.042	100
65) Anthracene	(4)	7.789	178	1541495	42.680	99
66) Carbazole	(4)	0.000		0	N.D.	
67) Di-n-butyl Phthalate	(4)	8.356	149	1789389	43.233	99
68) Fluoranthene	(4)	8.913	202	2033715	48.062	100
69) Benzidine	(4)	9.046	184	205675	14.307	99
70) Pyrene	(5)	9.132	202	2092699	45.420	100
72) Butyl Benzyl Phthalate	(5)	9.822	149	847414	46.186	99
73) 3,3'-Dichlorobenzidine	(5)	10.357	252	827517	48.278	100
74) Benzo (a) Anthracene	(5)	10.367	228	2130175	47.206	100
76) Chrysene	(5)	10.416	228	1887556	43.873	100
77) bis(2-Ethylhexyl) Phthalate	(5)	10.480	149	1164417	43.735	100
78) Di-n-octyl Phthalate	(5)	11.218	149	2068206	45.351	99
79) Benzo (b) Fluoranthene	(5)	11.672	252	2219940	50.834	96
80) Benzo (k) Fluoranthene	(5)	11.705	252	2111193	47.599	96
81) Benzo (a) Pyrene	(5)	12.084	252	2016403	49.573	100
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.566	276	2327312	45.390	100
84) Dibenz (a,h) Anthracene	(6)	13.587	278	1951881	46.094	100
85) Benzo (g,h,i) Perylene	(6)	13.908	276	1929729	47.495	99

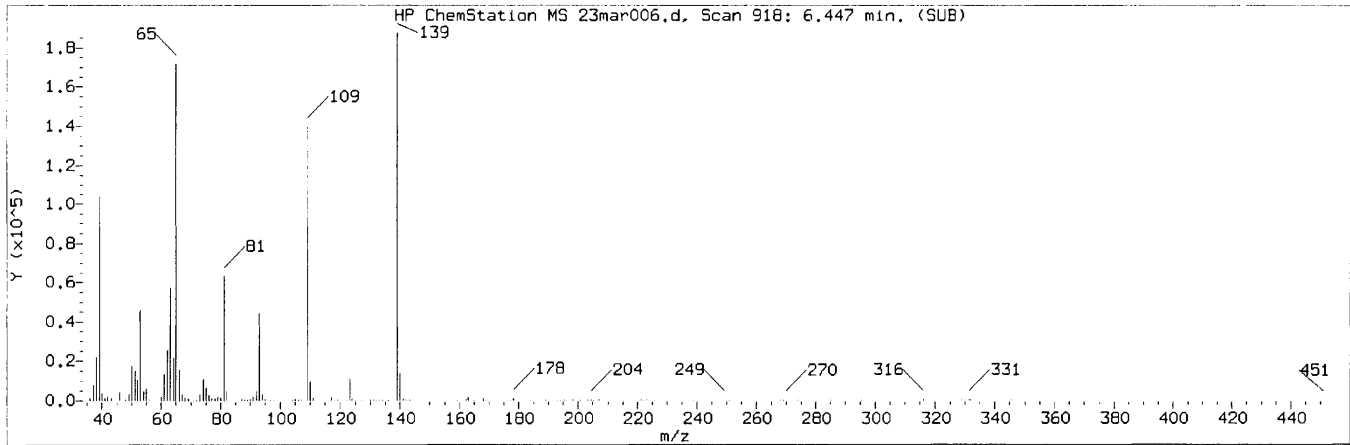
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Date: 23-MAR-2017 11:23
Client ID:
Sample Info: 17-03-1546-22 MSD
Column phase:

/chem/SV08/CCHS_CCC.1/170323.16/23mar006.d
Instrument: CCHS_CCC.1
Operator: 923
Column diameter: 0.00

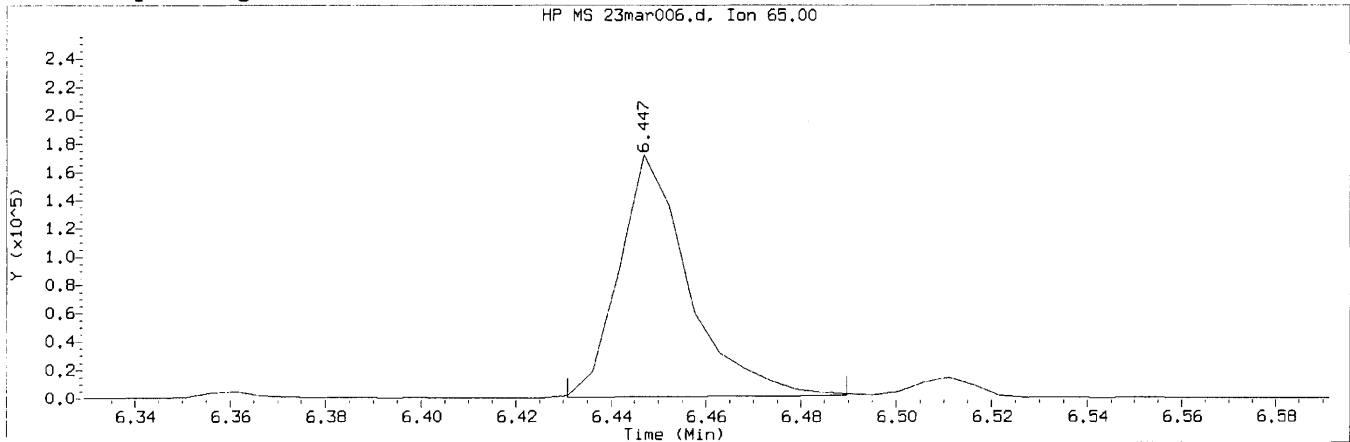


Return to Contents

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar006.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 11:23 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:47 n8cz

Sample Name: 17-03-1546-22 MSD

Compound Number : 49
 Compound Name : 4-Nitrophenol
 Scan Number : 918
 Retention Time (minutes): 6.447
 Quant Ion : 65.00
 Area (flag) : 173983M
 On-Column Amount (ug/L) : 46.8669
 Integration start scan : 914 Integration stop scan: 925
 Y at integration start : 869 Y at integration end: 1910

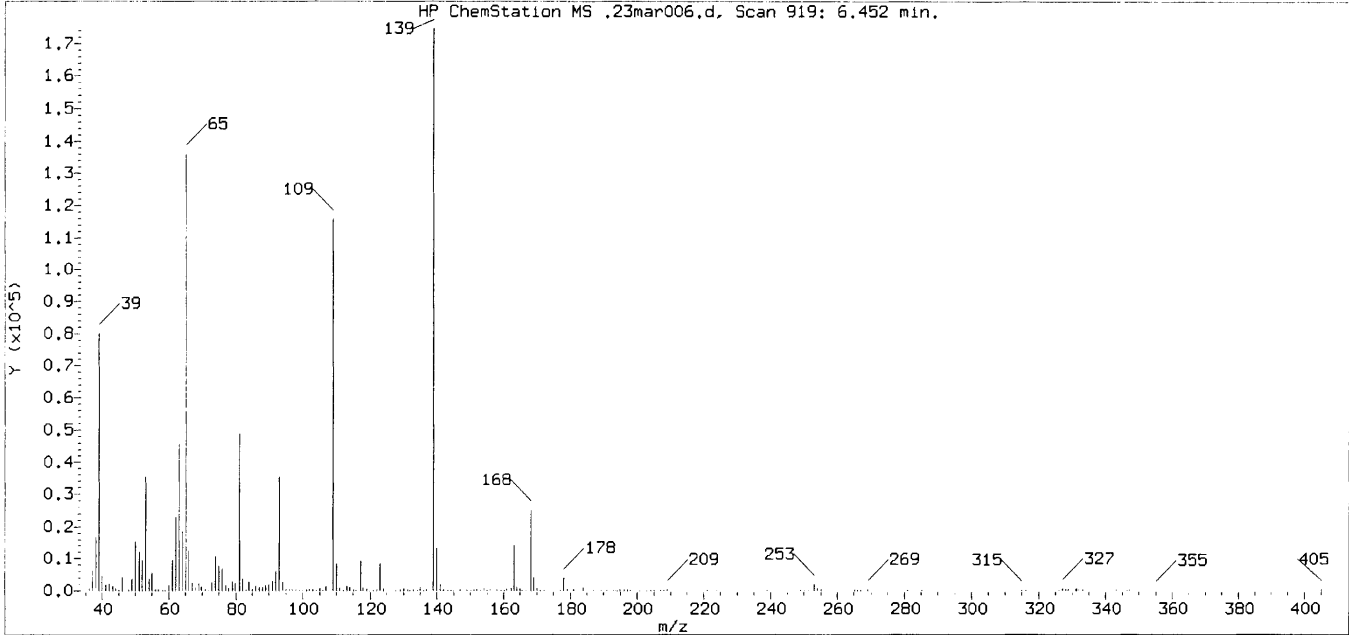
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Qi Mo
 on 03/23/2017 at 11:47.
 Target 3.5 esignature user ID: n8cz

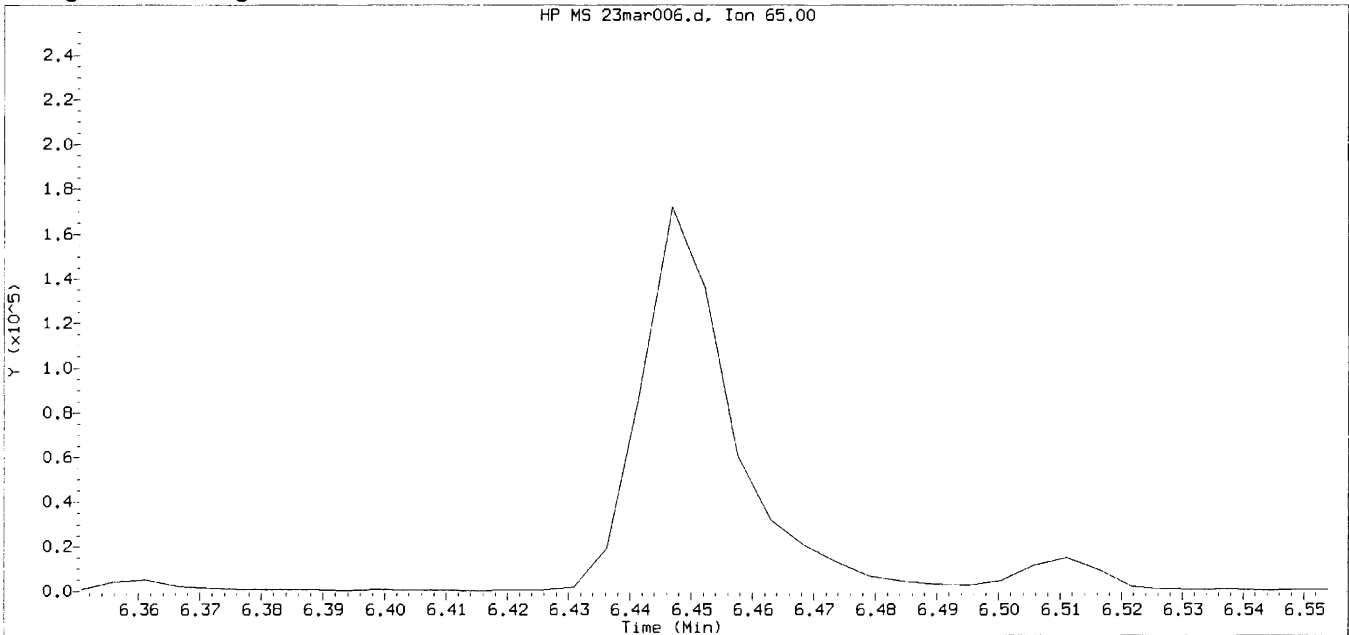
GC/MS audit/management approval: _____

Qi Mo 3/24/17

Sample Spectrum



Original Integration of Quant Ion



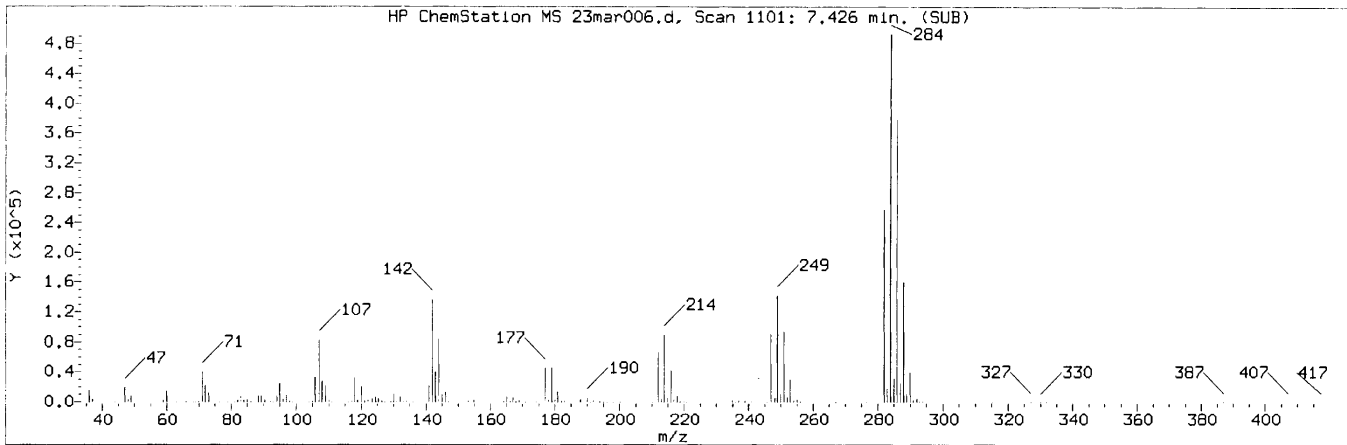
Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar006.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 11:23 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:44 Unknown

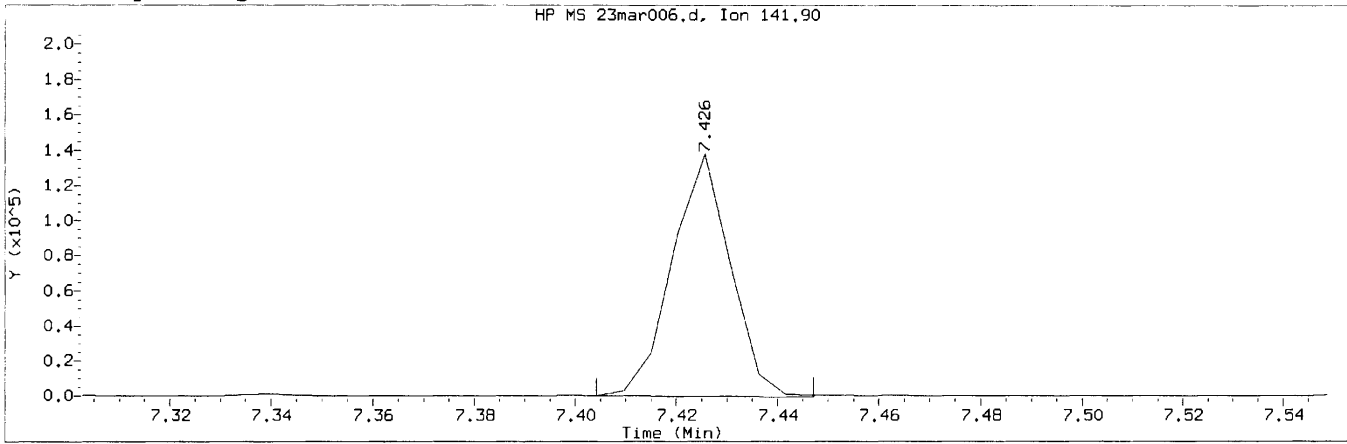
Sample Name: 17-03-1546-22 MSD

Compound Number : 49
 Compound Name : 4-Nitrophenol
 Expected RT (minutes) : 6.452
 Quant Ion : 65.00

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar006.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 11:23 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:47 n8cz

Sample Name: 17-03-1546-22 MSD

Compound Number	: 61	
Compound Name	: Hexachlorobenzene	
Scan Number	: 1101	
Retention Time (minutes)	: 7.426	
Quant Ion	: 142.00	
Area (flag)	: 110606M	
On-Column Amount (ug/L)	: 38.3629	
Integration start scan	: 1096	Integration stop scan: 1104
Y at integration start	: 102	Y at integration end: -542

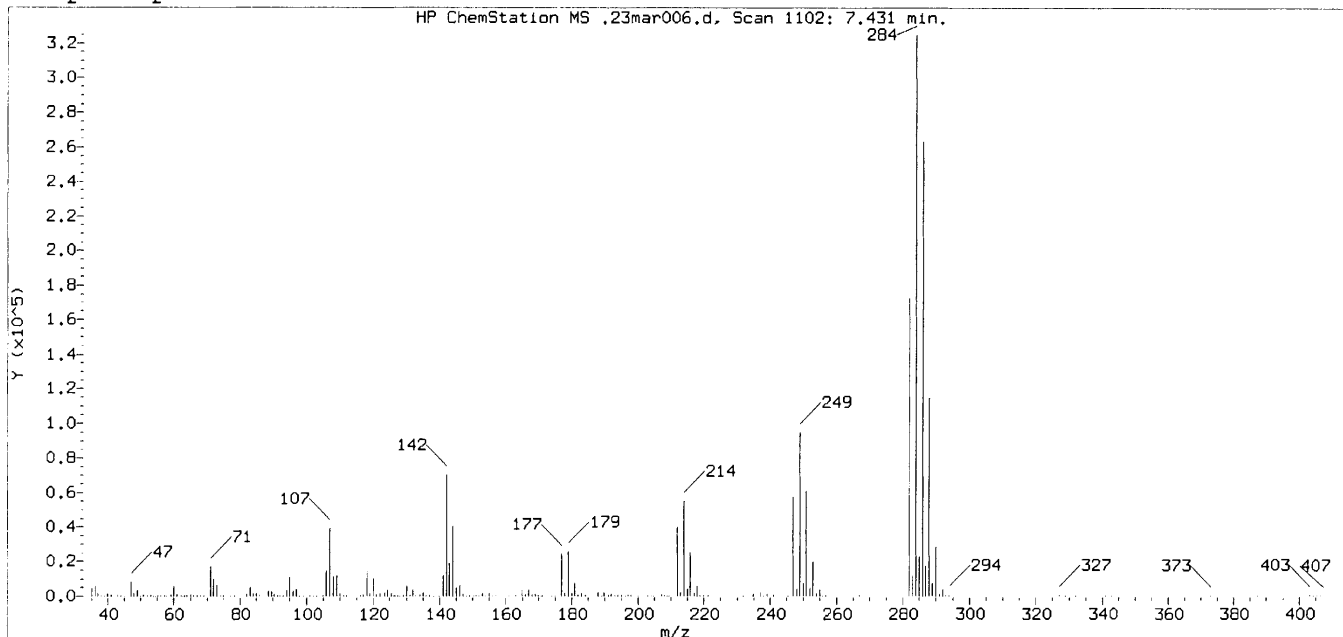
Reason for manual integration: missed peak

Digitally signed by Qi Mo
 Analyst responsible for change: on 03/23/2017 at 11:47.
 Target 3.5 esignature user ID: n8cz

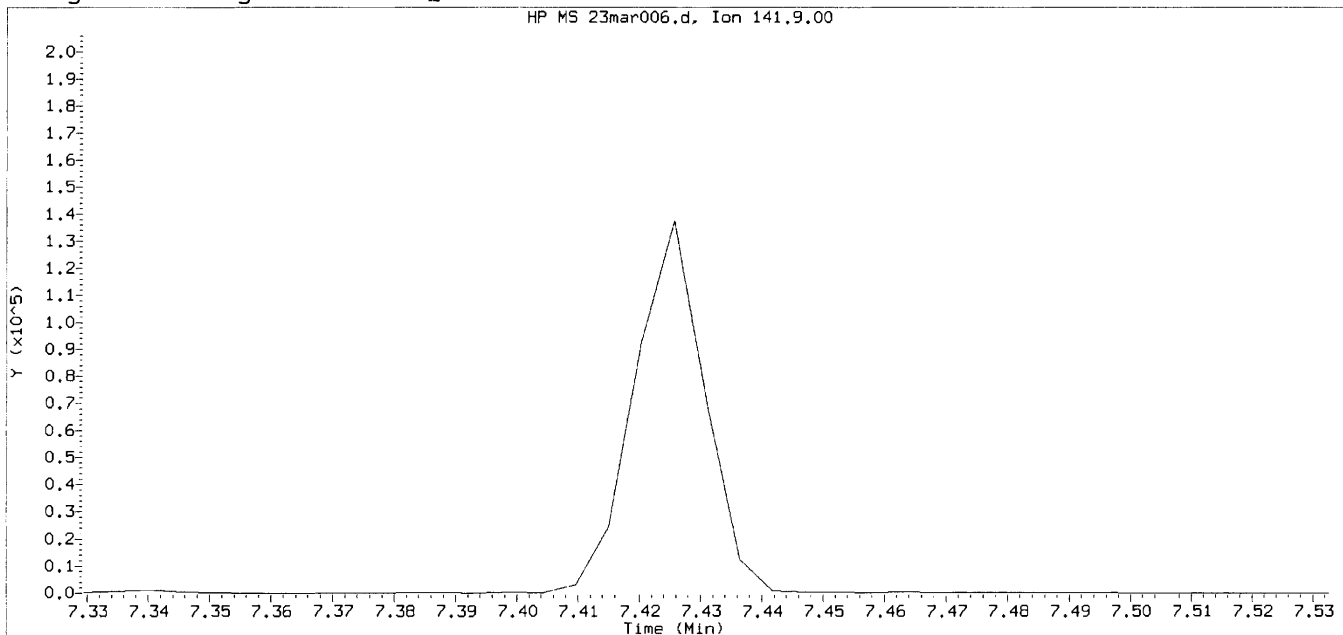
GC/MS audit/management approval: _____

Qi Mo 3/24/17

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar006.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 11:23 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 11:44 Unknown

Sample Name: 17-03-1546-22 MSD

Compound Number : 61
 Compound Name : Hexachlorobenzene
 Expected RT (minutes) : 7.431
 Quant Ion : 142.00

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar012.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 13:12 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 13:32 Unknown

Sample Name: 17-03-1546-22 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.265	152	250750	40.000	0.01
28)*Naphthalene-d8	(2)	4.511	136	969071	40.000	0.01
46)*Acenaphthene-d10	(3)	6.276	164	569692	40.000	0.01
63)*Phenanthrene-d10	(4)	7.720	188	1280005	40.000	0.01
75)*Chrysene-d12	(5)	10.384	240	1436773	40.000	0.01
82)*Perylene-d12	(6)	12.159	264	1423132	40.000	0.01
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.254	112	529361	70.664	0.00
SpikedAmount 100.000				Recovery = 70.664		
4)\$Phenol-d6	(1)	2.954	99	761007	74.272	0.00
SpikedAmount 100.000				Recovery = 74.272		
19)\$Nitrobenzene-d5	(2)	3.815	82	649003	62.530	0.01
SpikedAmount 100.000				Recovery = 62.530		
39)\$2-Fluorobiphenyl	(3)	5.618	172	1677313	79.534	0.00
SpikedAmount 100.000				Recovery = 79.534		
59)\$2,4,6-Tribromophenol	(4)	7.062	330	335625	95.721	0.01
SpikedAmount 100.000				Recovery = 95.721		
71)\$p-Terphenyl-d14	(5)	9.303	244	2802825	85.573	0.01
SpikedAmount 100.000				Recovery = 85.573		

Target Compounds				QValue
1) N-Nitrosodimethylamine	(1)	0.000	0	N.D.
2) Pyridine	(1)	0.000	0	N.D.
5) Phenol	(1)	0.000	0	N.D.
6) Aniline	(1)	0.000	0	N.D.
7) bis(2-Chloroethyl) Ether	(1)	0.000	0	N.D.
8) 2-Chlorophenol	(1)	0.000	0	N.D.
9) 1,3-Dichlorobenzene	(1)	0.000	0	N.D.
11) 1,4-Dichlorobenzene	(1)	0.000	0	N.D.
12) Benzyl alcohol	(1)	0.000	0	N.D.
13) 1,2-Dichlorobenzene	(1)	0.000	0	N.D.
14) 2-Methylphenol	(1)	0.000	0	N.D.
15) bis(2-Chloroisopropyl) Ether	(1)	0.000	0	N.D.
16) 3/4-Methylphenol	(1)	0.000	0	N.D.
17) N-Nitroso-di-n-propylamine	(1)	0.000	0	N.D.
18) Hexachloroethane	(1)	0.000	0	N.D.
20) Nitrobenzene	(2)	0.000	0	N.D.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar012.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 13:12 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 13:32 Unknown

Sample Name: 17-03-1546-22 Misc Info: 10UL S7-53-19

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	0.000		0	N.D.	
22) 2-Nitrophenol	(2)	0.000		0	N.D.	
23) 2,4-Dimethylphenol	(2)	0.000		0	N.D.	
24) bis(2-Chloroethoxy) Methane	(2)	0.000		0	N.D.	
25) Benzoic acid	(2)	0.000		0	N.D.	
26) 2,4-Dichlorophenol	(2)	0.000		0	N.D.	
27) 1,2,4-Trichlorobenzene	(2)	0.000		0	N.D.	
29) Naphthalene	(2)	0.000		0	N.D.	
30) 4-Chloroaniline	(2)	0.000		0	N.D.	
31) 2,6-Dichlorophenol	(2)	0.000		0	N.D.	
32) Hexachloro-1,3-Butadiene	(2)	0.000		0	N.D.	
33) 4-Chloro-3-methylphenol	(2)	0.000		0	N.D.	
34) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
35) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
36) Hexachlorocyclopentadiene	(3)	0.000		0	N.D.	
37) 2,4,6-Trichlorophenol	(3)	0.000		0	N.D.	
38) 2,4,5-Trichlorophenol	(3)	0.000		0	N.D.	
40) 2-Chloronaphthalene	(3)	0.000		0	N.D.	
41) 2-Nitroaniline	(3)	0.000		0	N.D.	
42) Dimethyl Phthalate	(3)	6.062	163	38504	1.879	89
44) Acenaphthylene	(3)	0.000		0	N.D.	
43) 2,6-Dinitrotoluene	(3)	0.000		0	N.D.	
45) 3-Nitroaniline	(3)	0.000		0	N.D.	
47) Acenaphthene	(3)	0.000		0	N.D.	
48) 2,4-Dinitrophenol	(3)	0.000		0	N.D.	
49) 4-Nitrophenol	(3)	0.000		0	N.D.	
50) Dibenzofuran	(3)	0.000		0	N.D.	
51) 2,4-Dinitrotoluene	(3)	0.000		0	N.D.	
52) Diethyl Phthalate	(3)	0.000		0	N.D.	
53) Fluorene	(3)	0.000		0	N.D.	
54) 4-Chlorophenyl-phenyl Ether	(3)	0.000		0	N.D.	
55) 4-Nitroaniline	(3)	0.000		0	N.D.	
56) 4,6-Dinitro-2-methylphenol	(4)	0.000		0	N.D.	
57) N-Nitrosodiphenylamine	(4)	0.000		0	N.D.	
58) Azobenzene	(4)	0.000		0	N.D.	
60) 4-Bromophenyl-phenyl Ether	(4)	0.000		0	N.D.	
61) Hexachlorobenzene	(4)	0.000		0	N.D.	

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar012.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 13:12 Analyst ID: 923

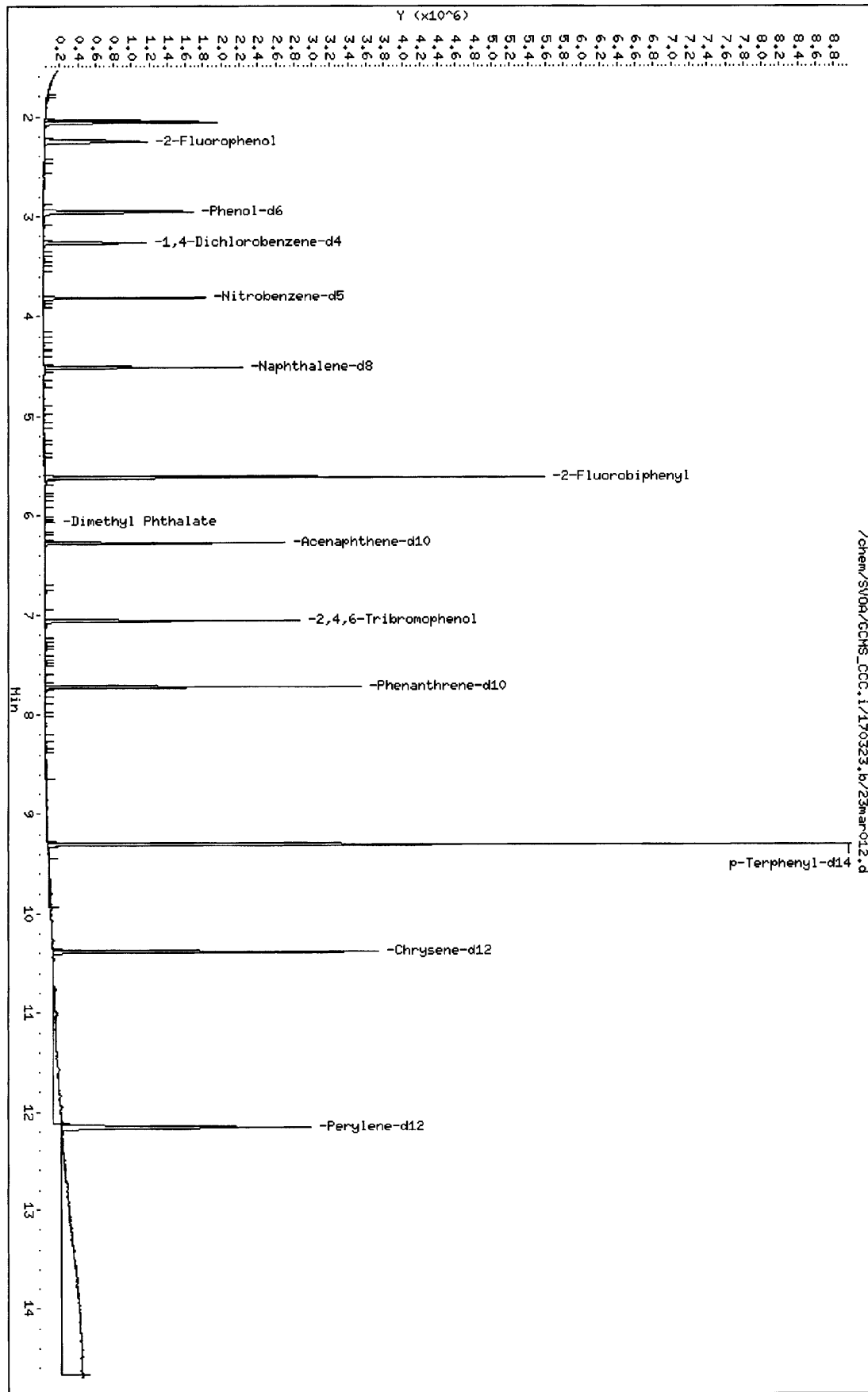
Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 13:32 Unknown

Sample Name: 17-03-1546-22 Misc Info: 10UL S7-53-19
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	0.000		0	N.D.	
64) Phenanthrene	(4)	0.000		0	N.D.	
65) Anthracene	(4)	0.000		0	N.D.	
66) Carbazole	(4)	0.000		0	N.D.	
67) Di-n-butyl Phthalate	(4)	0.000		0	N.D.	
68) Fluoranthene	(4)	0.000		0	N.D.	
69) Benzidine	(4)	0.000		0	N.D.	
70) Pyrene	(5)	0.000		0	N.D.	
72) Butyl Benzyl Phthalate	(5)	0.000		0	N.D.	
73) 3,3'-Dichlorobenzidine	(5)	0.000		0	N.D.	
74) Benzo (a) Anthracene	(5)	0.000		0	N.D.	
76) Chrysene	(5)	0.000		0	N.D.	
77) bis(2-Ethylhexyl) Phthalate	(5)	0.000		0	N.D.	
78) Di-n-octyl Phthalate	(5)	0.000		0	N.D.	
79) Benzo (b) Fluoranthene	(5)	0.000		0	N.D.	
80) Benzo (k) Fluoranthene	(5)	0.000		0	N.D.	
81) Benzo (a) Pyrene	(5)	0.000		0	N.D.	
83) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
84) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
85) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	

Data File: /chem/SV0A/GCHS_CCC.i/170323.b/23mar012.d
Date : 23-MAR-2017 13:12
Client ID:
Sample Info: 17-03-1546-22
Column phase:

Instrument: GCHS_CCC.i
Operator: 923
Column diameter: 0.00



EPA 8270C
Semi-Volatile Organics
(Solid)

Continuing Calibration

CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C

BATCH ID: 170323A011
INSTRUMENT: GC/MS CCC

ANALYZED BY: 923

WORK ORDER: 095-01-001
MATRIX: Water

REVIEWED BY:
D/T REVIEWED:

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
13271	Daily Calibration	2017-03-23 09:58	Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar002.d\23mar002.

WORK ORDER: 17-03-1523
MATRIX: Soil

REVIEWED BY:
D/T REVIEWED:

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	IDW-S	2017-03-23 15:21	Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar019.d\23mar019.

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

CCV WORK ORDER: 095-01-001-13271-596
INSTRUMENT: GC/MS CCC
BATCH ID: 1702011001
INITIAL: 170323A011
CCV:

ANALYZED BY: 923
D/T ANALYZED:
INITIAL: 2017-02-01 11:46
CCV: 2017-03-23 09:58
REVIEWED BY:
D/T REVIEWED:

Data File: Y:\GCMS_CCC\GCMS_CCC_data\2017170323\23mar002.d\23mar002.ir

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
N-Nitrosodimethylamine				0.814	0.620			24	0-20	FAIL
Aniline	Avg Resp		0.00	2.078	1.843			11	0-20	PASS
Phenol	Avg Resp	C	0.00	1.666	1.505			10	0-20	PASS
Bis(2-Chloroethyl) Ether	Avg Resp		0.00	1.282	1.132			12	0-20	PASS
2-Chlorophenol	Avg Resp		0.00	1.334	1.293			3	0-20	PASS
1,3-Dichlorobenzene	Avg Resp		0.00	1.558	1.520			2	0-20	PASS
1,4-Dichlorobenzene	Avg Resp	C	0.00	1.578	1.555			1	0-20	PASS
Benzyl Alcohol	Avg Resp		0.00	1.204	1.009			16	0-20	PASS
1,2-Dichlorobenzene	Avg Resp		0.00	1.510	1.464			3	0-20	PASS
2-Methylphenol	Avg Resp		0.00	1.205	1.153			4	0-20	PASS
Bis(2-Chloroisopropyl) Ether	Avg Resp		0.00	1.680	1.262			25	0-20	FAIL
3/4-Methylphenol	Avg Resp		0.00	1.441	1.325			8	0-20	PASS
N-Nitroso-di-n-propylamine	Avg Resp	S	0.05	1.016	0.854			16	0-20	PASS
Hexachloroethane	Avg Resp		0.00	0.587	0.563			4	0-20	PASS
Nitrobenzene	Avg Resp		0.00	0.387	0.350			10	0-20	PASS
Isophorone	Avg Resp		0.00	0.732	0.641			12	0-20	PASS
2-Nitrophenol	Avg Resp	C	0.00	0.163	0.193			-18	0-20	PASS
2,4-Dimethylphenol	Avg Resp		0.00	0.354	0.356			-1	0-20	PASS
Benzoic Acid	LR - Equal					80.00	72.633	9	0-20	PASS
Bis(2-Chloroethoxy) Methane	Avg Resp		0.00	0.442	0.400			10	0-20	PASS
2,4-Dichlorophenol	Avg Resp	C	0.00	0.325	0.336			-3	0-20	PASS
Naphthalene	Avg Resp		0.00	1.036	1.016			2	0-20	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

CCV WORK ORDER: 095-01-001-13271-596
INSTRUMENT: GC/MS CCC
BATCH ID: 170201I001
INITIAL: 170323A011
CCV:

ANALYZED BY: 923
D/T ANALYZED: 2017-02-01 11:46
INITIAL: 2017-03-23 09:58
CCV:
REVIEWED BY:
D/T REVIEWED:

Data File: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar002.d\23mar002.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
4-Chloroaniline		Avg Resp	0.00	0.458	0.458			0	0-20	PASS
Hexachloro-1,3-Butadiene	C	Avg Resp	0.00	0.240	0.245			-2	0-20	PASS
4-Chloro-3-Methylphenol	C	Avg Resp	0.00	0.324	0.312			4	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.686	0.694			-1	0-20	PASS
Hexachlorocyclopentadiene	S	Avg Resp	0.05	0.403	0.489			-21	0-20	FAIL
2,4,6-Trichlorophenol	C	Avg Resp	0.00	0.429	0.443			-3	0-20	PASS
2,4,5-Trichlorophenol		Avg Resp	0.00	0.470	0.484			-3	0-20	PASS
2-Chloronaphthalene		Avg Resp	0.00	1.155	1.158			0	0-20	PASS
2-Nitroaniline		Avg Resp	0.00	0.320	0.306			4	0-20	PASS
Dimethyl Phthalate		Avg Resp	0.00	1.439	1.439			0	0-20	PASS
Acenaphthylene		Avg Resp	0.00	1.887	1.907			-1	0-20	PASS
3-Nitroaniline		Avg Resp	0.00	0.309	0.330			-7	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.169	1.170			0	0-20	PASS
2,4-Dinitrophenol	S	LR - Equal				80.00	106.070	-33	0-20	FAIL
4-Nitrophenol	S	Avg Resp	0.05	0.259	0.241			7	0-20	PASS
Dibenzofuran		Avg Resp	0.00	1.696	1.744			-3	0-20	PASS
2,4-Dinitrotoluene		Avg Resp	0.00	0.369	0.426			-15	0-20	PASS
2,6-Dinitrotoluene		Avg Resp	0.00	0.269	0.300			-12	0-20	PASS
Diethyl Phthalate		Avg Resp	0.00	1.435	1.418			1	0-20	PASS
4-Chlorophenyl-Phenyl Ether		Avg Resp	0.00	0.710	0.727			-2	0-20	PASS
Fluorene		Avg Resp	0.00	1.343	1.391			-4	0-20	PASS
4-Nitroaniline		Avg Resp	0.00	0.307	0.327			-7	0-20	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

CCV WORK ORDER: 095-01-001-13271-596
INSTRUMENT: GC/MS CCC
BATCH ID: 170201001
INITIAL: 170323A011
CCV:

ANALYZED BY: 923
D/T ANALYZED:
INITIAL: 2017-02-01 11:46
CCV: 2017-03-23 09:58
REVIEWED BY:
D/T REVIEWED:

Data File: Y:\GCMS_CCC\GCMS_CCC_data\2017170323\23mar002.d\23mar002.tr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Azobenzene		Avg Resp	0.00	0.681	0.555	80.00	95.992	19	0-20	PASS
4,6-Dinitro-2-Methylphenol		LR - Equal								
N-Nitrosodiphenylamine	C	Avg Resp	0.05	0.520	0.495			-20	0-20	PASS
4-Bromophenyl-Phenyl Ether		Avg Resp	0.00	0.228	0.237			5	0-20	PASS
Hexachlorobenzene		Avg Resp	0.00	0.084	0.077			-4	0-20	PASS
Pentachlorophenol	C	Avg Resp	0.00	0.169	0.150			8	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.024	1.008			11	0-20	PASS
Anthracene		Avg Resp	0.00	1.057	1.038			2	0-20	PASS
Di-n-Butyl Phthalate		Avg Resp	0.00	1.211	1.188			2	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.239	1.273			-3	0-20	PASS
Benzidine		Avg Resp	0.00	0.421	0.426			-1	0-20	PASS
Pyrene		Avg Resp	0.00	1.198	1.165			3	0-20	PASS
Pyridine		Avg Resp	0.00	0.906	0.681			25	0-20	FAIL
Butyl Benzyl Phthalate		Avg Resp	0.00	0.477	0.472			1	0-20	PASS
3,3'-Dichlorobenzidine		Avg Resp	0.00	0.446	0.480			-8	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.174	1.168			1	0-20	PASS
Bis(2-Ethylhexyl) Phthalate		Avg Resp	0.00	0.692	0.663			4	0-20	PASS
Chrysene		Avg Resp	0.00	1.119	1.085			3	0-20	PASS
Di-n-Octyl Phthalate	C	Avg Resp	0.00	1.186	1.200			-1	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.154	1.134			2	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.136	1.243			-9	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.058	1.112			-5	0-20	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8270C

CCV WORK ORDER: 095-01-001-13271-596
INSTRUMENT: GC/MS CCC
BATCH ID: 1702011001
INITIAL: 170323A011
CCV:

ANALYZED BY: 923
D/T ANALYZED: 2017-02-01 11:46
INITIAL: 2017-03-23 09:58
CCV:
REVIEWED BY:
D/T REVIEWED:

Data File: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar002.d\23mar002.r

<u>COMPOUND</u>	<u>TYPE</u>	<u>CALIB MODEL</u>	<u>MIN RF</u>	<u>AVG RF</u>	<u>CCV RF</u>	<u>AMOUNT</u>	<u>CCV CONC</u>	<u>CCV %D</u>	<u>CCV %D CL</u>	<u>STATUS</u>
Benzo (g,h,i) Perylene	Avg Resp		0.00	1.078	1.084			-1	0-20	PASS
Indeno (1,2,3-c,d) Pyrene	Avg Resp		0.00	1.361	1.351			1	0-20	PASS
Dibenz (a,h) Anthracene	Avg Resp		0.00	1.124	1.126			0	0-20	PASS
1-Methylnaphthalene	Avg Resp		0.00	0.683	0.688			-1	0-20	PASS
1,2,4-Trichlorobenzene	Avg Resp		0.00	0.377	0.388			-3	0-20	PASS
2,6-Dichlorophenol	Avg Resp		0.00	0.325	0.337			-4	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

INTERNAL STANDARD COMPOUNDS AREA REPORT FOR METHOD: EPA 8270C

ICAL BATCH ID: 1702011001

CCV BATCH ID: 170323A011

ICAL MIDPOINT

SAMPLE ID: 095-01-001-13198

D/T ANALYZED: 2017-02-01 10:11

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170201\01feb004.d\01feb004.rr

COMPOUND	AREA	RETENTION TIME
1,4-Dichlorobenzene-d4	232941	3.34
Naphthalene-d8	854406	4.60
Acenaphthene-d10	536701	6.36
Phenanthrene-d10	1051974	7.81
Chrysene-d12	1134459	10.48
Perylene-d12	1065620	12.27

ICV

SAMPLE ID 095-01-001-13198

D/T ANALYZED: 2017-02-01 12:11

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170201\01feb010.d\01feb010.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	255130	116470	465882	3.34	PASS
Naphthalene-d8	928361	427203	1708812	4.60	PASS
Acenaphthene-d10	582516	268350	1073402	6.36	PASS
Phenanthrene-d10	1147693	525987	2103948	7.81	PASS
Chrysene-d12	1246285	567230	2268918	10.48	PASS
Perylene-d12	1175229	532810	2131240	12.27	PASS

CCV

SAMPLE ID 095-01-001-13271

D/T ANALYZED: 2017-03-23 09:58

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar002.d\23mar002.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	279015	116470	465882	3.27	PASS
Naphthalene-d8	1007900	427203	1708812	4.52	PASS
Acenaphthene-d10	644696	268350	1073402	6.28	PASS
Phenanthrene-d10	1341980	525987	2103948	7.73	PASS
Chrysene-d12	1491735	567230	2268918	10.39	PASS
Perylene-d12	1454414	532810	2131240	12.16	PASS

MB

SAMPLE ID 099-12-549-3830

D/T ANALYZED: 2017-03-23 10:24

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar003.d\23mar003.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	266248	139508	558030	3.26	PASS
Naphthalene-d8	1009242	503950	2015800	4.51	PASS
Acenaphthene-d10	585310	322348	1289392	6.28	PASS
Phenanthrene-d10	1399415	670990	2683960	7.73	PASS
Chrysene-d12	1733509	745868	2983470	10.39	PASS
Perylene-d12	1788542	727207	2908828	12.16	PASS

LCS

SAMPLE ID 099-12-549-3830

D/T ANALYZED: 2017-03-23 10:44

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar004.d\23mar004.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	224555	139508	558030	3.27	PASS
Naphthalene-d8	869004	503950	2015800	4.51	PASS
Acenaphthene-d10	523899	322348	1289392	6.28	PASS
Phenanthrene-d10	1285889	670990	2683960	7.73	PASS
Chrysene-d12	1436048	745868	2983470	10.39	PASS
Perylene-d12	1436621	727207	2908828	12.16	PASS

CS

SAMPLE ID 17-03-1523-1

D/T ANALYZED: 2017-03-23 15:21

DATA FILE: Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar019.d\23mar019.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	310469	139508	558030	3.28	PASS
Naphthalene-d8	1231559	503950	2015800	4.52	PASS
Acenaphthene-d10	728160	322348	1289392	6.28	PASS
Phenanthrene-d10	1672554	670990	2683960	7.73	PASS
Chrysene-d12	1799819	745868	2983470	10.39	PASS
Perylene-d12	1773934	727207	2908828	12.16	PASS

Notes:

For all samples including QC, all internal standard area responses must be within 50% to 200% of the mean area response in the initial calibration.

LCS**SAMPLE ID** 099-16-462-109**D/T ANALYZED:** 2017-03-23 10:44**DATA FILE:** Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar004.d\23mar004.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	224555	139508	558030	3.27	PASS
Naphthalene-d8	869004	503950	2015800	4.51	PASS
Acenaphthene-d10	523899	322348	1289392	6.28	PASS
Phenanthrene-d10	1285889	670990	2683960	7.73	PASS
Chrysene-d12	1436048	745868	2983470	10.39	PASS
Perylene-d12	1436621	727207	2908828	12.16	PASS

MS**SAMPLE ID** 17-03-1546-22**D/T ANALYZED:** 2017-03-23 11:05**DATA FILE:** Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar005.d\23mar005.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	294792	139508	558030	3.27	PASS
Naphthalene-d8	1129266	503950	2015800	4.51	PASS
Acenaphthene-d10	674442	322348	1289392	6.28	PASS
Phenanthrene-d10	1604558	670990	2683960	7.73	PASS
Chrysene-d12	1796563	745868	2983470	10.39	PASS
Perylene-d12	1822350	727207	2908828	12.16	PASS

MSD**SAMPLE ID** 17-03-1546-22**D/T ANALYZED:** 2017-03-23 11:23**DATA FILE:** Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar006.d\23mar006.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	257096	139508	558030	3.27	PASS
Naphthalene-d8	981762	503950	2015800	4.51	PASS
Acenaphthene-d10	574152	322348	1289392	6.28	PASS
Phenanthrene-d10	1366618	670990	2683960	7.73	PASS
Chrysene-d12	1537927	745868	2983470	10.38	PASS
Perylene-d12	1506963	727207	2908828	12.16	PASS

CS**SAMPLE ID** 17-03-1546-17**D/T ANALYZED:** 2017-03-23 11:42**DATA FILE:** Y:\GCMS_CCC\GCMS_CCC_data\2017\170323\23mar007.d\23mar007.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	322728	139508	558030	3.27	PASS
Naphthalene-d8	1260023	503950	2015800	4.51	PASS
Acenaphthene-d10	743557	322348	1289392	6.28	PASS
Phenanthrene-d10	1742393	670990	2683960	7.72	PASS
Chrysene-d12	2093647	745868	2983470	10.38	PASS
Perylene-d12	2037354	727207	2908828	12.16	PASS

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar002.d
 Report Date: 03/23/2017 10:36

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_CCC.i Injection Date and Time: 23-MAR-2017 09:58
 Sample Name: CCV 80 PPM S110816J 8270 Initial Calibration Date(s): 22-MAR-2016 01-FEB-2017
 Sublist used: all.sub Initial Calibration Time(s): 10:03 11:46
 Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type	
N-Nitrosodimethylamine	0.814	0.620	0.00	24	20	Averaged	<-Failed
Pyridine	0.906	0.681	0.00	25	20	Averaged	<-Failed
Phenol	1.666	1.505	0.00	10	20	Averaged	
Aniline	2.078	1.843	0.00	11	20	Averaged	
bis(2-Chloroethyl) Ether	1.282	1.132	0.00	12	20	Averaged	
2-Chlorophenol	1.334	1.293	0.00	3	20	Averaged	
1,3-Dichlorobenzene	1.558	1.520	0.00	2	20	Averaged	
1,4-Dichlorobenzene	1.578	1.555	0.00	1	20	Averaged	
Benzyl alcohol	1.204	1.009	0.00	16	20	Averaged	
1,2-Dichlorobenzene	1.510	1.464	0.00	3	20	Averaged	
2-Methylphenol	1.205	1.153	0.00	4	20	Averaged	
bis(2-Chloroisopropyl) Ether	1.680	1.262	0.00	25	20	Averaged	<-Failed
3/4-Methylphenol	1.441	1.325	0.00	8	20	Averaged	
N-Nitroso-di-n-propylamine	1.016	0.854	0.05	16	20	Averaged	
Hexachloroethane	0.587	0.563	0.00	4	20	Averaged	
Nitrobenzene	0.387	0.350	0.00	10	20	Averaged	
Isophorone	0.732	0.641	0.00	12	20	Averaged	
2-Nitrophenol	0.163	0.193	0.00	-18	20	Averaged	
2,4-Dimethylphenol	0.354	0.356	0.00	-1	20	Averaged	
bis(2-Chloroethoxy) Methane	0.442	0.400	0.00	10	20	Averaged	
Benzoic acid	80.000	72.633	0.00	9	20	Linear	
2,4-Dichlorophenol	0.325	0.336	0.00	-3	20	Averaged	
1,2,4-Trichlorobenzene	0.377	0.388	0.00	-3	20	Averaged	
Naphthalene	1.036	1.016	0.00	2	20	Averaged	
4-Chloroaniline	0.458	0.458	0.00	0	20	Averaged	
2,6-Dichlorophenol	0.325	0.337	0.00	-4	20	Averaged	
Hexachloro-1,3-Butadiene	0.240	0.245	0.00	-2	20	Averaged	
4-Chloro-3-methylphenol	0.324	0.312	0.00	4	20	Averaged	
2-Methylnaphthalene	0.686	0.694	0.00	-1	20	Averaged	
1-Methylnaphthalene	0.683	0.688	0.00	-1	20	Averaged	
Hexachlorocyclopentadiene	0.403	0.489	0.05	-21	20	Averaged	<-Failed
2,4,6-Trichlorophenol	0.429	0.443	0.00	-3	20	Averaged	
2,4,5-Trichlorophenol	0.470	0.484	0.00	-3	20	Averaged	
2-Chloronaphthalene	1.155	1.158	0.00	0	20	Averaged	
2-Nitroaniline	0.320	0.306	0.00	4	20	Averaged	
Dimethyl Phthalate	1.439	1.439	0.00	0	20	Averaged	
Acenaphthylene	1.887	1.907	0.00	-1	20	Averaged	
2,6-Dinitrotoluene	0.269	0.300	0.00	-12	20	Averaged	
3-Nitroaniline	0.309	0.330	0.00	-7	20	Averaged	
Acenaphthene	1.169	1.170	0.00	0	20	Averaged	
2,4-Dinitrophenol	80.000	106.070	0.05	-33	20	Linear	<-Failed
4-Nitrophenol	0.259	0.241	0.05	7	20	Averaged	
Dibenzofuran	1.696	1.744	0.00	-3	20	Averaged	
2,4-Dinitrotoluene	0.369	0.426	0.00	-15	20	Averaged	
Diethyl Phthalate	1.435	1.418	0.00	1	20	Averaged	
Fluorene	1.343	1.391	0.00	-4	20	Averaged	
4-Chlorophenyl-phenyl Ether	0.710	0.727	0.00	-2	20	Averaged	
4-Nitroaniline	0.307	0.327	0.00	-7	20	Averaged	

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar002.d
 Report Date: 03/23/2017 10:36

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_CCC.i Injection Date and Time: 23-MAR-2017 09:58
 Sample Name: CCV 80 PPM S110816J 8270 Initial Calibration Date(s): 22-MAR-2016 01-FEB-2017
 Sublist used: all.sub Initial Calibration Time(s): 10:03 11:46
 Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
4,6-Dinitro-2-methylphenol	80.000	95.992	0.00	-20	20	Linear
N-Nitrosodiphenylamine	0.520	0.495	0.00	5	20	Averaged
Azobenzene	0.681	0.555	0.00	19	20	Averaged
4-Bromophenyl-phenyl Ether	0.228	0.237	0.00	-4	20	Averaged
Hexachlorobenzene	0.084	0.077	0.00	8	20	Averaged
Pentachlorophenol	0.169	0.150	0.00	11	20	Averaged
Phenanthrene	1.024	1.008	0.00	2	20	Averaged
Anthracene	1.057	1.038	0.00	2	20	Averaged
Carbazole	0.985	0.969	0.00	2	20	Averaged
Di-n-butyl Phthalate	1.211	1.188	0.00	2	20	Averaged
Fluoranthene	1.239	1.273	0.00	-3	20	Averaged
Benzidine	0.421	0.426	0.00	-1	20	Averaged
Pyrene	1.198	1.165	0.00	3	20	Averaged
Butyl Benzyl Phthalate	0.477	0.472	0.00	1	20	Averaged
3,3'-Dichlorobenzidine	0.446	0.480	0.00	-8	20	Averaged
Benzo (a) Anthracene	1.174	1.168	0.00	1	20	Averaged
Chrysene	1.119	1.085	0.00	3	20	Averaged
bis(2-Ethylhexyl) Phthalate	0.692	0.663	0.00	4	20	Averaged
Di-n-octyl Phthalate	1.186	1.200	0.00	-1	20	Averaged
Benzo (b) Fluoranthene	1.136	1.243	0.00	-9	20	Averaged
Benzo (k) Fluoranthene	1.154	1.134	0.00	2	20	Averaged
Benzo (a) Pyrene	1.058	1.112	0.00	-5	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.361	1.351	0.00	1	20	Averaged
Dibenz (a,h) Anthracene	1.124	1.126	0.00	0	20	Averaged
Benzo (g,h,i) Perylene	1.078	1.084	0.00	-1	20	Averaged
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D / Drift	Curve Type
2-Fluorophenol	1.195	1.111	0.00	7	20	Averaged
Phenol-d6	1.634	1.484	0.00	9	20	Averaged
Nitrobenzene-d5	0.428	0.398	0.00	7	20	Averaged
2-Fluorobiphenyl	1.481	1.501	0.00	-1	20	Averaged
2,4,6-Tribromophenol	0.110	0.124	0.00	-13	20	Averaged
p-Terphenyl-d14	0.912	0.928	0.00	-2	20	Averaged

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar002.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 09:58 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 10:23 n8cz

Sample Name: CCV 80 PPM S110816J 8270 Misc Info: 170323A011
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	DEV(Min)
Internal Standards						
10)*1,4-Dichlorobenzene-d4	(1)	3.270	152	279015	40.000	0.00
28)*Naphthalene-d8	(2)	4.516	136	1007900	40.000	0.00
46)*Acenaphthene-d10	(3)	6.281	164	644696	40.000	0.00
63)*Phenanthrene-d10	(4)	7.725	188	1341980	40.000	0.00
75)*Chrysene-d12	(5)	10.394	240	1491735	40.000	0.00
82)*Perylene-d12	(6)	12.164	264	1454414	40.000	0.00
System Monitoring Compounds						
3)\$2-Fluorophenol	(1)	2.253	112	619869	74.364	0.00
SpikedAmount 80.000				Recovery = 0.000		
4)\$Phenol-d6	(1)	2.954	99	827847	72.610	0.00
SpikedAmount 80.000				Recovery = 0.000		
19)\$Nitrobenzene-d5	(2)	3.821	82	803218	74.407	0.00
SpikedAmount 80.000				Recovery = 0.000		
39)\$2-Fluorobiphenyl	(3)	5.618	172	1934851	81.072	0.00
SpikedAmount 80.000				Recovery = 0.000		
59)\$2,4,6-Tribromophenol	(4)	7.067	330	333735	90.786	0.00
SpikedAmount 80.000				Recovery = 0.000		
71)\$p-Terphenyl-d14	(5)	9.308	244	2769252	81.433	0.00
SpikedAmount 80.000				Recovery = 0.000		
Target Compounds						
1) N-Nitrosodimethylamine	(1)	1.617	74	346232	60.959	100
2) Pyridine	(1)	1.638	52	379952	60.096	100
5) Phenol	(1)	2.970	94	839866	72.283	100
6) Aniline	(1)	3.008	93	1028383	70.956	100
7) bis(2-Chloroethyl) Ether	(1)	3.045	93	631557	70.602	100
8) 2-Chlorophenol	(1)	3.109	128	721269	77.536	100
9) 1,3-Dichlorobenzene	(1)	3.238	146	848326	78.057	100
11) 1,4-Dichlorobenzene	(1)	3.280	146	867655	78.832	100
12) Benzyl alcohol	(1)	3.409	79	562981	67.020	100
13) 1,2-Dichlorobenzene	(1)	3.462	146	816850	77.561	100
14) 2-Methylphenol	(1)	3.526	108	643470	76.582	100
15) bis(2-Chloroisopropyl) Ether	(1)	3.553	45	704194	60.081	100
16) 3/4-Methylphenol	(1)	3.676	107	1478243	147.099	100
17) N-Nitroso-di-n-propylamine	(1)	3.698	70	476728	67.300	100
18) Hexachloroethane	(1)	3.751	117	314374	76.747	100
20) Nitrobenzene	(2)	3.837	77	706047	72.489	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar002.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 09:58 Analyst ID: 923

Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 10:23 n8cz

Sample Name: CCV 80 PPM S110816J 8270 Misc Info: 170323A011
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
21) Isophorone	(2)	4.067	82	1292059	70.071	100
22) 2-Nitrophenol	(2)	4.152	139	389550	94.634	100
23) 2,4-Dimethylphenol	(2)	4.200	107	717833	80.396	100
24) bis(2-Chloroethoxy) Methane	(2)	4.291	93	807053	72.399	100
25) Benzoic acid	(2)	4.334	105	498102	72.633	100
26) 2,4-Dichlorophenol	(2)	4.393	162	676652	82.529	100
27) 1,2,4-Trichlorobenzene	(2)	4.473	180	781265	82.256	100
29) Naphthalene	(2)	4.532	128	2047112	78.423	100
30) 4-Chloroaniline	(2)	4.618	127	922730	79.961	100
31) 2,6-Dichlorophenol	(2)	4.623	162	680090	83.019	100
32) Hexachloro-1,3-Butadiene	(2)	4.719	225	493455	81.620	100
33) 4-Chloro-3-methylphenol	(2)	5.115	107	629603	77.074	100
34) 2-Methylnaphthalene	(2)	5.227	142	1398573	80.939	100
35) 1-Methylnaphthalene	(2)	5.334	142	1385965	80.535	100
36) Hexachlorocyclopentadiene	(3)	5.457	237	630501	97.027	100
37) 2,4,6-Trichlorophenol	(3)	5.543	196	571000	82.621	100
38) 2,4,5-Trichlorophenol	(3)	5.586	196	623671	82.326	100
40) 2-Chloronaphthalene	(3)	5.714	162	1492839	80.210	100
41) 2-Nitroaniline	(3)	5.853	65	394620	76.559	100
42) Dimethyl Phthalate	(3)	6.072	163	1856023	80.025	100
44) Acenaphthylene	(3)	6.131	152	2459273	80.851	100
43) 2,6-Dinitrotoluene	(3)	6.137	165	387397	89.509	100
45) 3-Nitroaniline	(3)	6.270	138	425172	85.447	100
47) Acenaphthene	(3)	6.313	153	1508332	80.082	100
48) 2,4-Dinitrophenol	(3)	6.367	184	255461	106.070	100
49) 4-Nitrophenol	(3)	6.452	65	310789	74.558	100
50) Dibenzofuran	(3)	6.474	168	2248764	82.254	100
51) 2,4-Dinitrotoluene	(3)	6.516	165	549124	92.363	100
52) Diethyl Phthalate	(3)	6.773	149	1827928	79.034	100
53) Fluorene	(3)	6.810	166	1793058	82.845	100
54) 4-Chlorophenyl-phenyl Ether	(3)	6.816	204	936983	81.833	100
55) 4-Nitroaniline	(3)	6.880	138	421031	84.970	100
56) 4,6-Dinitro-2-methylphenol	(4)	6.917	198	352522	95.992	100
57) N-Nitrosodiphenylamine	(4)	6.939	169	1328224	76.065	100
58) Azobenzene	(4)	6.971	77	1490373	65.250	100
60) 4-Bromophenyl-phenyl Ether	(4)	7.292	248	634832	82.875	100
61) Hexachlorobenzene	(4)	7.431	142	206145	72.813	100

Quant Report

Target Revision 3.5

Data File: /chem/SVOA/GCMS_CCC.i/170323.b/23mar002.d Instrument ID: GCMS_CCC.i
 Injection date and time: 23-MAR-2017 09:58 Analyst ID: 923

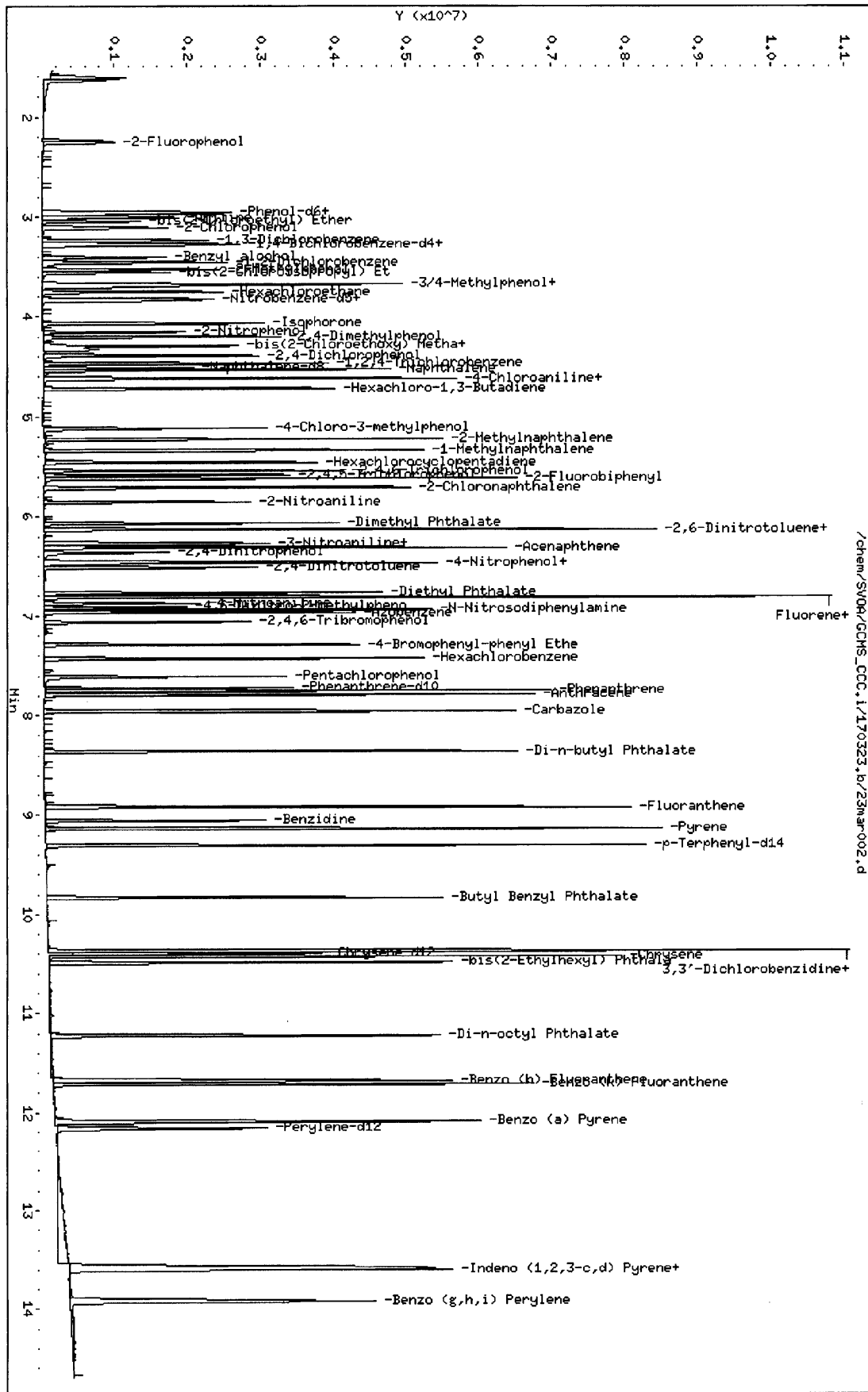
Method used: /chem/SVOA/GCMS_CCC.i/170323.b/svoa.m Sublist used: all
 Calibration date and time: 23-MAR-2017 10:23
 Date, time and analyst ID of latest file update: 23-Mar-2017 10:23 n8cz

Sample Name: CCV 80 PPM S110816J 8270 Misc Info: 170323A011
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/L)	QValue
62) Pentachlorophenol	(4)	7.607	266	401891	70.896	100
64) Phenanthrene	(4)	7.747	178	2705217	78.735	100
65) Anthracene	(4)	7.795	178	2786517	78.567	100
66) Carbazole	(4)	7.960	167	2601262	78.731	100
67) Di-n-butyl Phthalate	(4)	8.362	149	3187906	78.436	100
68) Fluoranthene	(4)	8.918	202	3416242	82.218	100
69) Benzidine	(4)	9.052	184	1143697	81.016	100
70) Pyrene	(5)	9.137	202	3475023	77.758	100
72) Butyl Benzyl Phthalate	(5)	9.832	149	1408767	79.158	100
73) 3,3'-Dichlorobenzidine	(5)	10.367	252	1433320	86.210	100
74) Benzo (a) Anthracene	(5)	10.373	228	3484126	79.601	100
76) Chrysene	(5)	10.421	228	3235943	77.542	100
77) bis(2-Ethylhexyl) Phthalate	(5)	10.485	149	1976949	76.553	100
78) Di-n-octyl Phthalate	(5)	11.223	149	3579181	80.914	100
79) Benzo (b) Fluoranthene	(5)	11.683	252	3707447	87.525	100
80) Benzo (k) Fluoranthene	(5)	11.715	252	3382359	78.620	100
81) Benzo (a) Pyrene	(5)	12.095	252	3316644	84.064	100
83) Indeno (1,2,3-c,d) Pyrene	(6)	13.577	276	3928924	79.396	100
84) Dibenz (a,h) Anthracene	(6)	13.598	278	3274744	80.128	100
85) Benzo (g,h,i) Perylene	(6)	13.924	276	3152084	80.383	100

Data File: /chem/SV0A/GCHS_CCC.i/170323.b/23mar002.d
 Date : 23-MAR-2017 09:58
 Client ID:
 Sample Info: CCV 80 PPM S110816J 8270

Instrument: GCHS_CCC.i
 Operator: 923
 Column diameter: 0.100



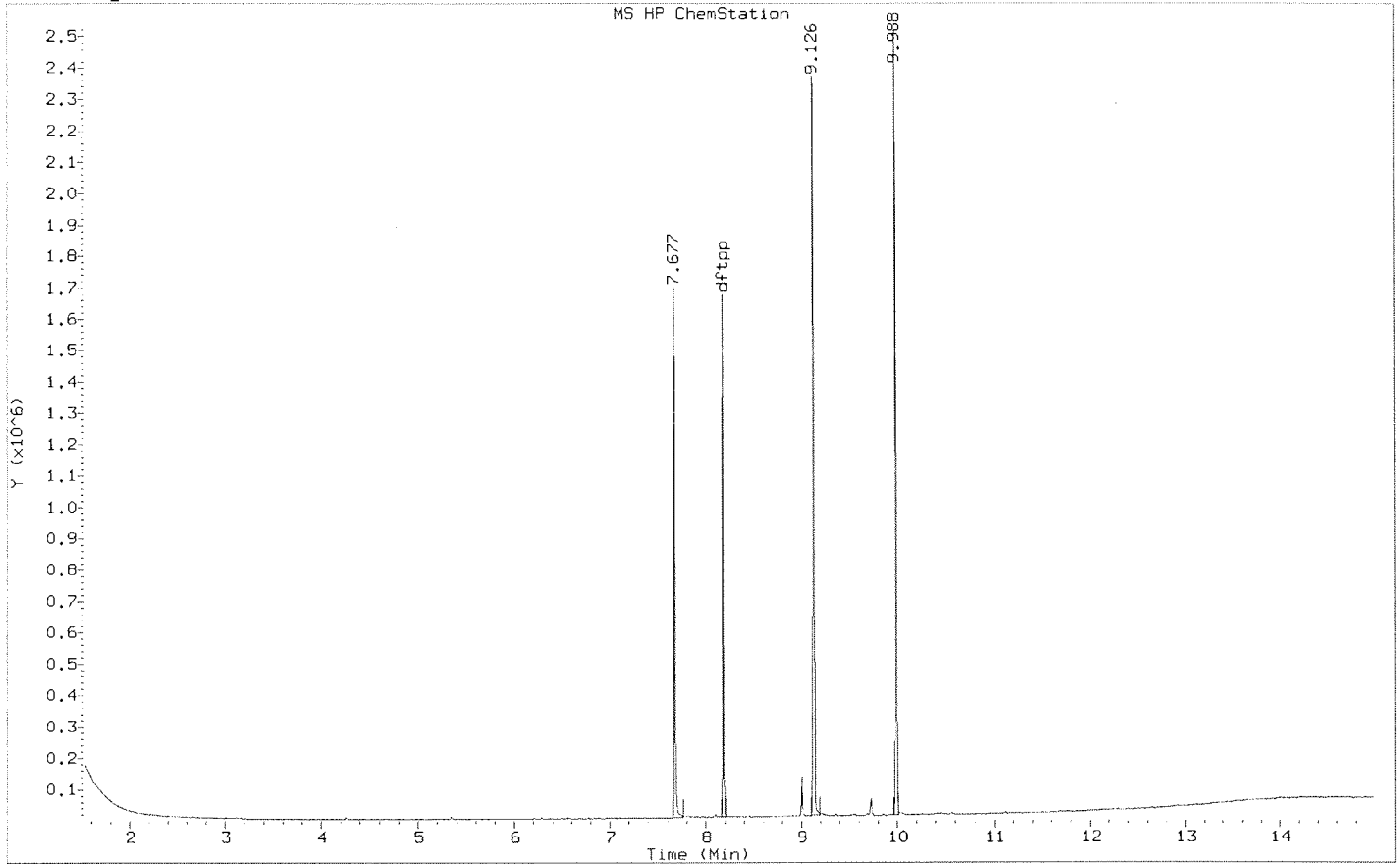
EPA 8270C
Semi-Volatile Organics
(Solid)

Tuning Reports

DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Wed Feb 1 09:32:26 2017

Data File : /chem/SVOA/GCMS_CCC.i/170201.b/01feb001.d
 ALS Vial : 1
 Acq on : 01-FEB-2017 09:13 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_CCC
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Last Update : 20-MAY-2016 11:00

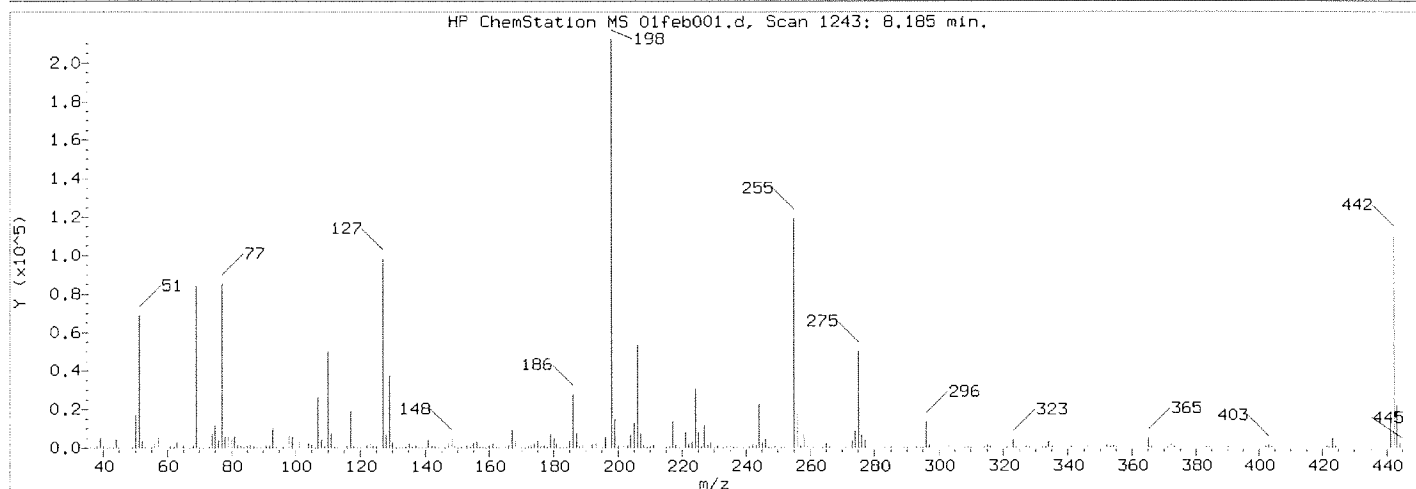
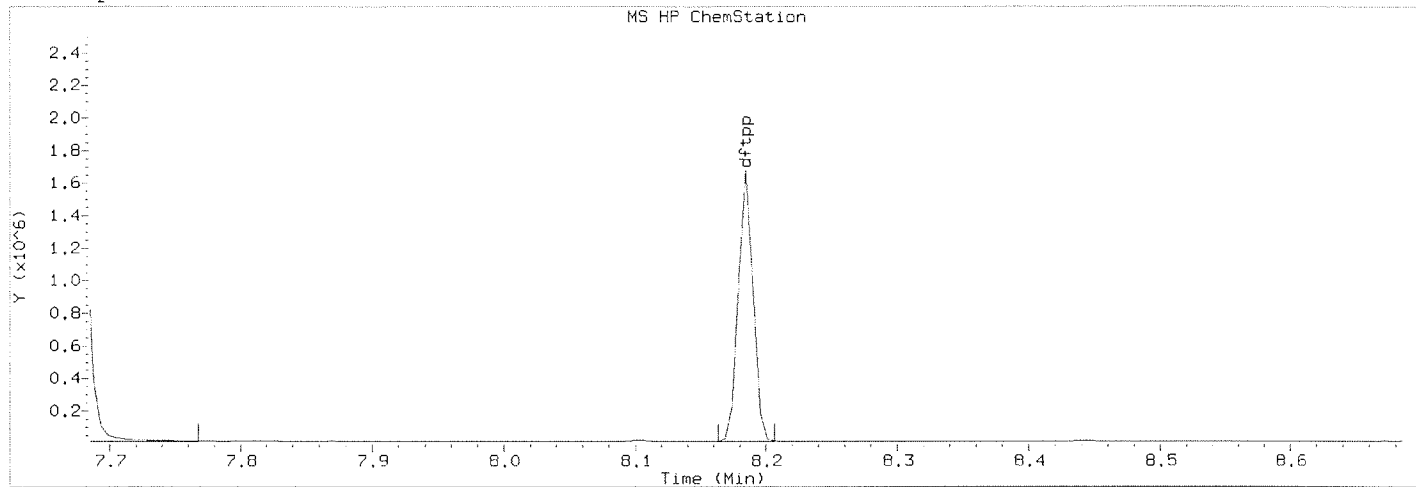


Tune *** PASSED ***
 Pentachlorophenol Tailing *** PASSED ***
 Benzidine Tailing *** PASSED ***
 DDT degradation *** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_CCC.i/170201.b/01feb001.d ,*** PASSED ***

Report Generated Time Wed Feb 1 09:32:26 2017

Data File : /chem/SVOA/GCMS_CCC.i/170201.b/01feb001.d
 ALS Vial : 1
 Acq on : 01-FEB-2017 09:13 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_CCC
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_CCC.i/170201.b/dftpptune.m
 Last Update : 20-MAY-2016 11:00



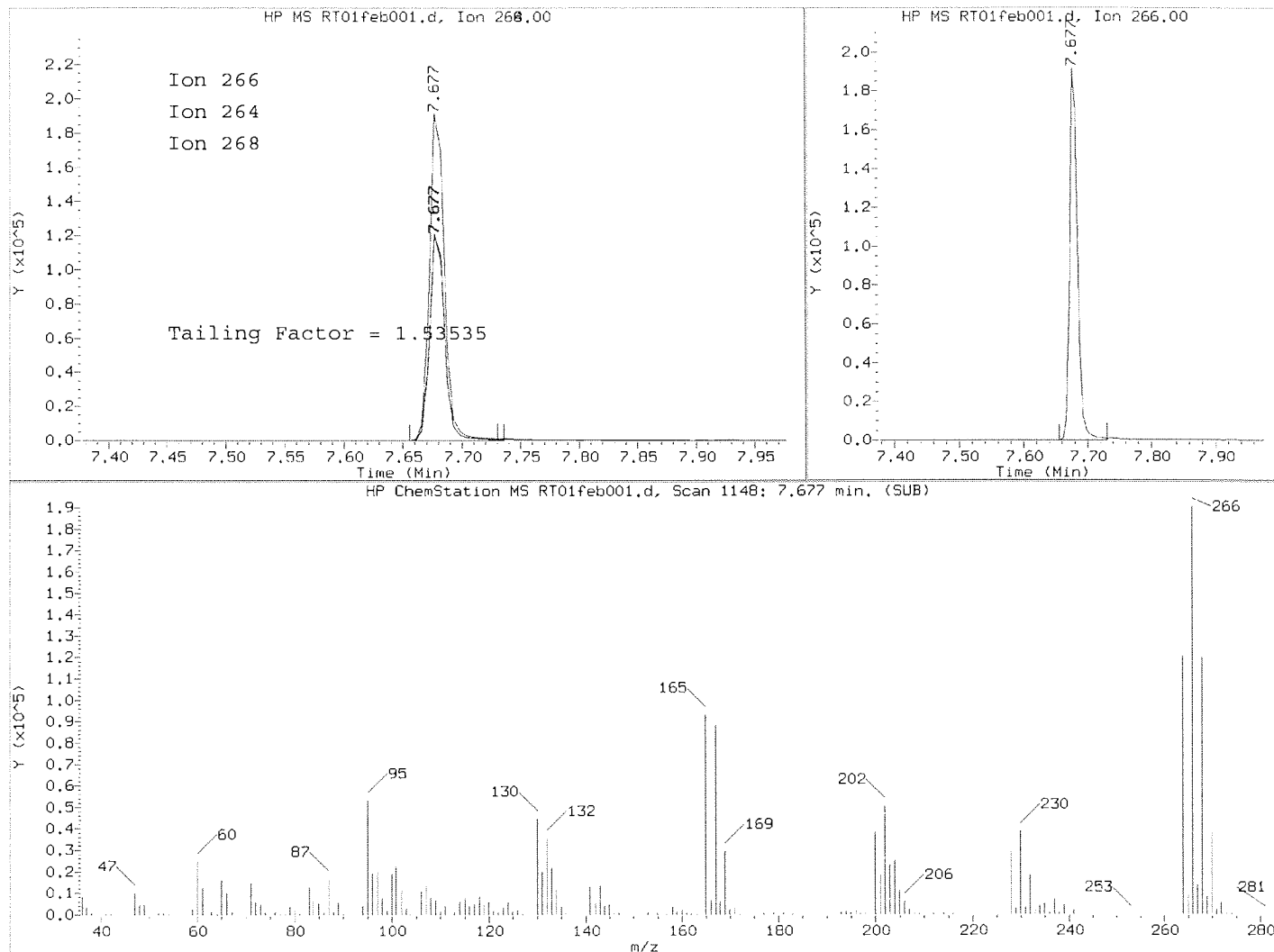
Spectrum: Avg. Scans 1242-1244 (8.19), Background Scan 1238

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	148920	PASS
51	30 - 60% of mass 198	33.91	50504	PASS
68	Less than 2% of mass 69	1.62	1006	PASS
69	Less than mass 198	41.61	61965	PASS
70	Less than 2% of mass 69	0.42	260	PASS
127	40 - 60% of mass 198	47.00	69994	PASS
197	0 - 1% of mass 198	0.28	421	PASS
199	5 - 9% of mass 198	7.00	10429	PASS
275	10 - 30% of mass 198	24.40	36336	PASS
365	1 - 100% of mass 198	2.49	3705	PASS
441	Present, but less than mass 443	79.47	13066	PASS
442	40 - 200% of mass 198	55.99	83373	PASS
443	17 - 23% of mass 442	19.72	16441	PASS

Report Generated Time Wed Feb 1 09:32:26 2017

Data File : /chem/SVOA/GCMS_CCC.i/170201.b/01feb001.d
 ALS Vial : 3
 Acq on : 01-FEB-2017 09:13 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_CCC
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_CCC.i/170201.b/01feb001.d/resolut.m
 Last Update : 01-FEB-2017 09:32



Pentachlorophenol

=====
 Exp. RT = 7.597
 Found RT = 7.677

Mass	Area	Ratio
266	168562	100.00
264	107413	63.72
268	105466	62.57

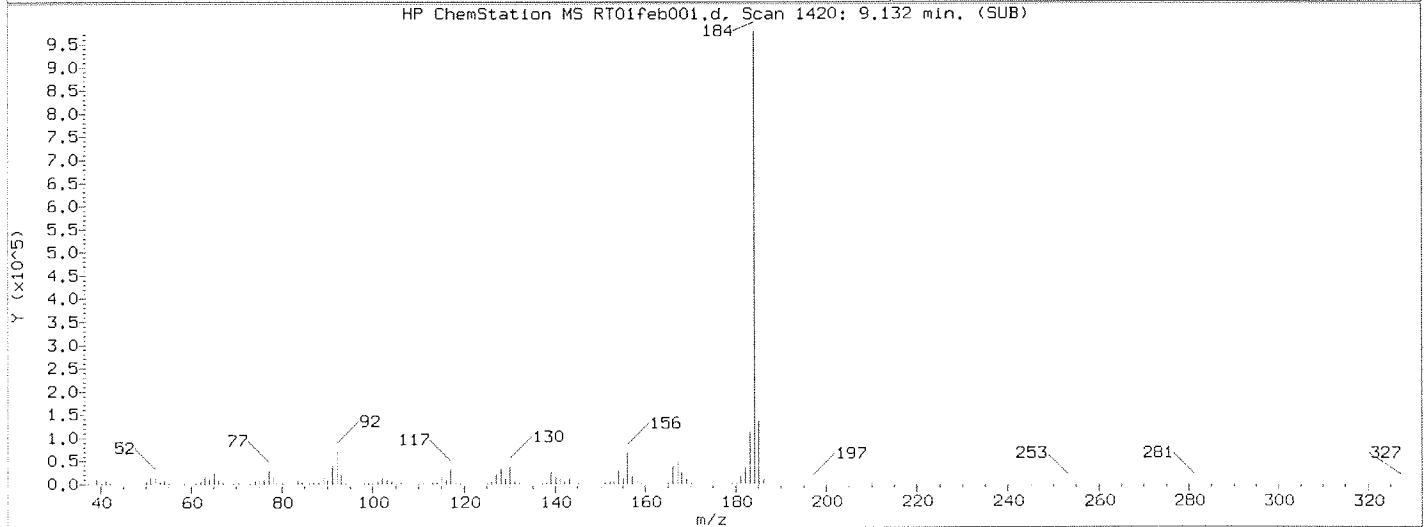
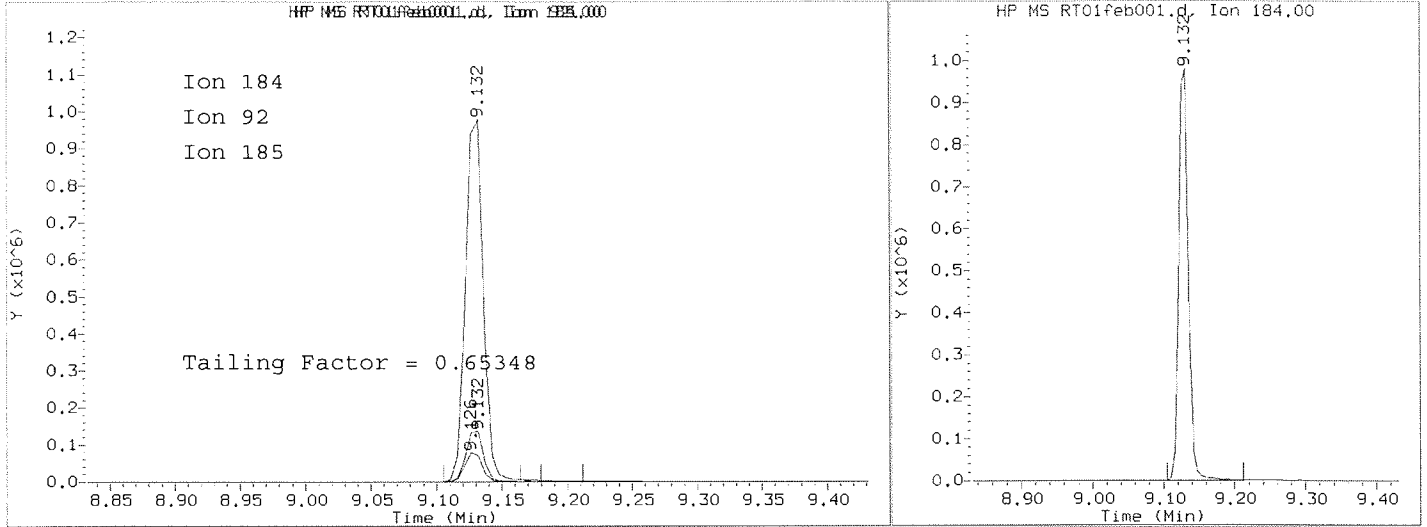
Peak baseline front width (sec) : 0.594
 Peak baseline tail width (sec) : 0.912
 Tail Factor = 0.912/ 0.594

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.535 Maximum Allowed = 3.0

Report Generated Time Wed Feb 1 09:32:26 2017

Data File : /chem/SVOA/GCMS_CCC.i/170201.b/01feb001.d
 ALS Vial : 3
 Acq on : 01-FEB-2017 09:13 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_CCC
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_CCC.i/170201.b/01feb001.d/resolut.m
 Last Update : 01-FEB-2017 09:32



Benzidine

=====
 Exp. RT = 9.132
 Found RT = 9.132

Mass	Area	Ratio
184	930238	100.00
92	74027	7.96
185	130345	14.01

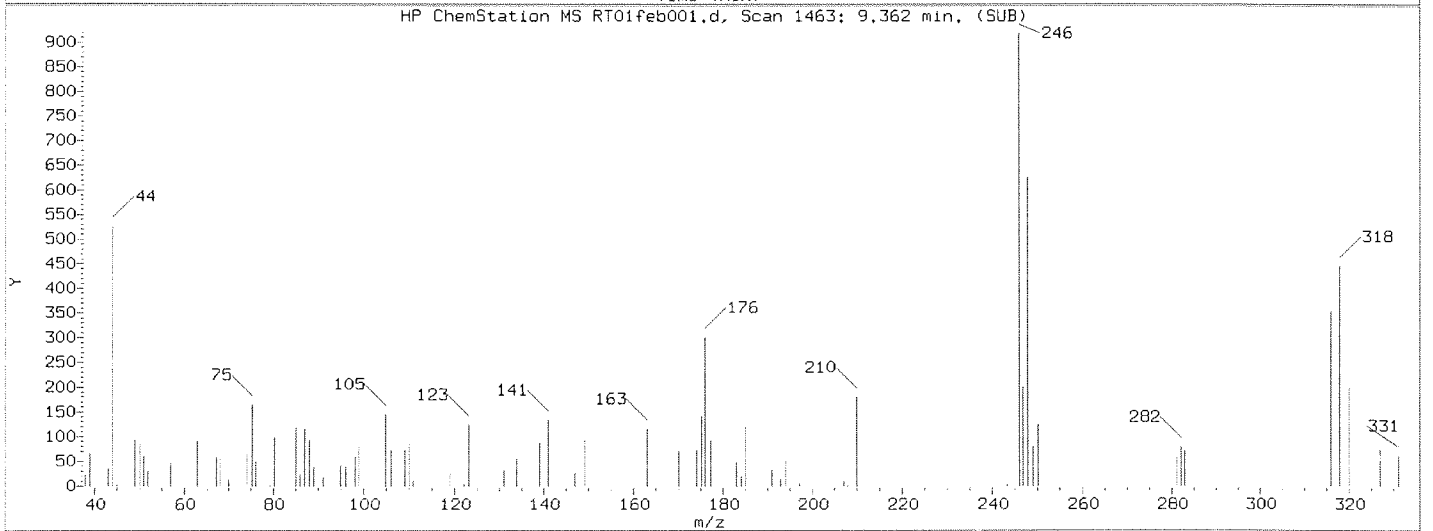
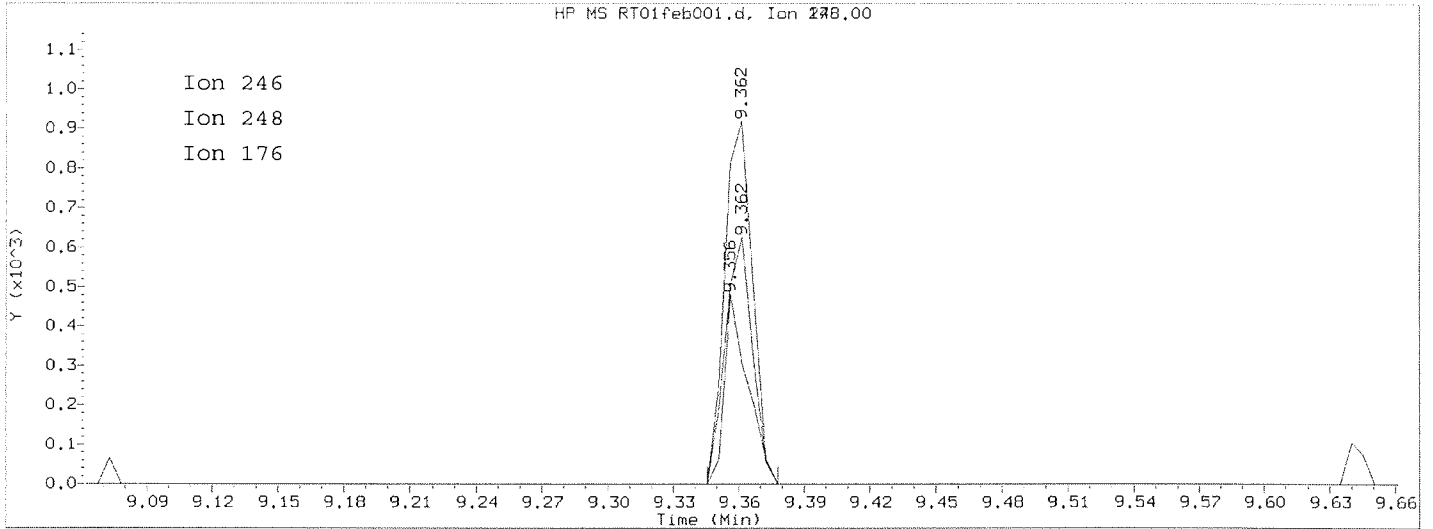
Peak baseline front width (sec) : 0.935
 Peak baseline tail width (sec) : 0.611
 Tail Factor = 0.611/ 0.935

Tailing factor for Benzidine OK

Tail Factor = 0.653 Maximum Allowed = 3.0

Report Generated Time Wed Feb 1 09:32:26 2017

Data File : /chem/SVOA/GCMS_CCC.i/170201.b/01feb001.d
 ALS Vial : 3
 Acq on : 01-FEB-2017 09:13 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_CCC
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_CCC.i/170201.b/01feb001.d/resolut.m
 Last Update : 01-FEB-2017 09:32



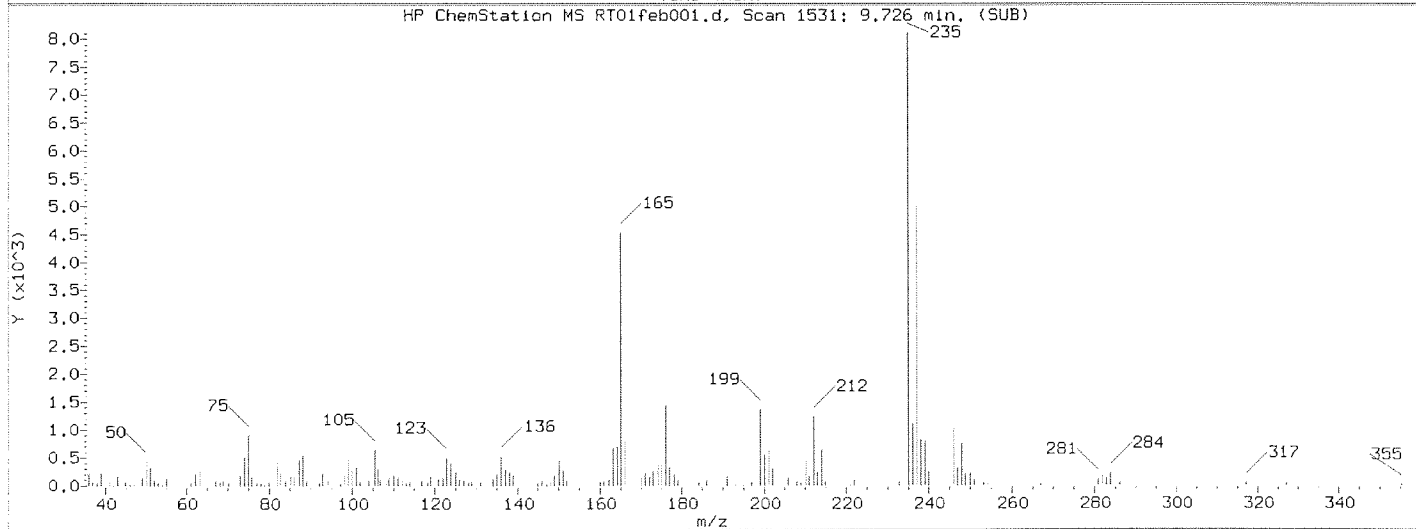
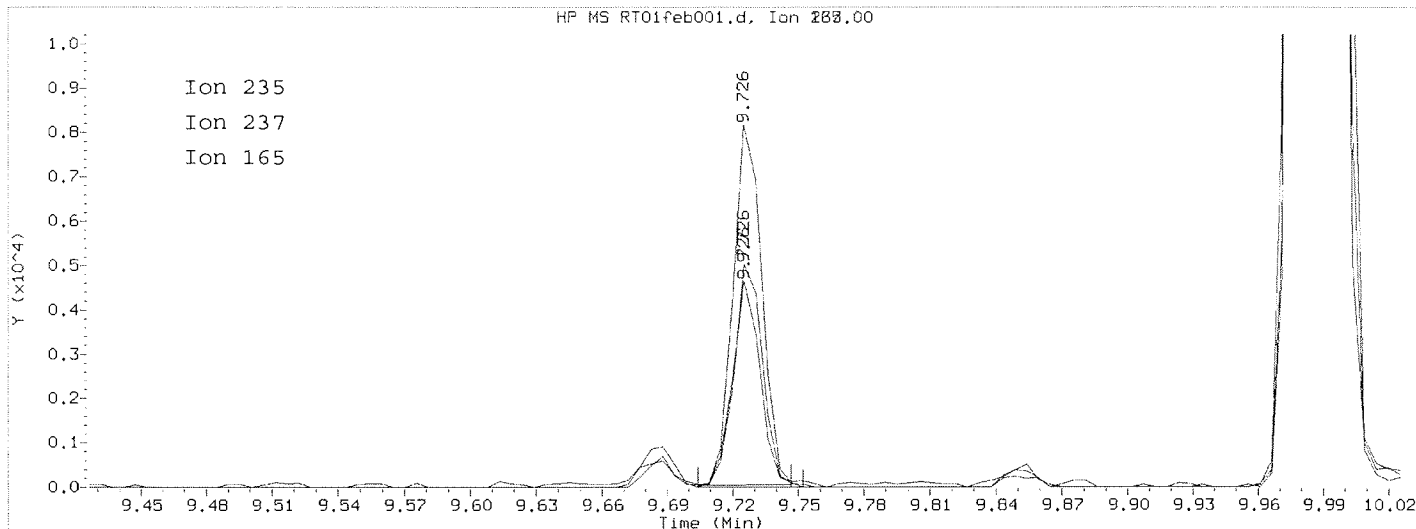
4,4'-DDE

=====
 Exp. RT = 9.357
 Found RT = 9.362

Mass	Area	Ratio
246	810	100.00
248	540	66.73
176	356	43.96

Report Generated Time Wed Feb 1 09:32:26 2017

Data File : /chem/SVOA/GCMS_CCC.i/170201.b/01feb001.d
 ALS Vial : 3
 Acq on : 01-FEB-2017 09:13 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_CCC
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_CCC.i/170201.b/01feb001.d/resolut.m
 Last Update : 01-FEB-2017 09:32



4,4'-DDD

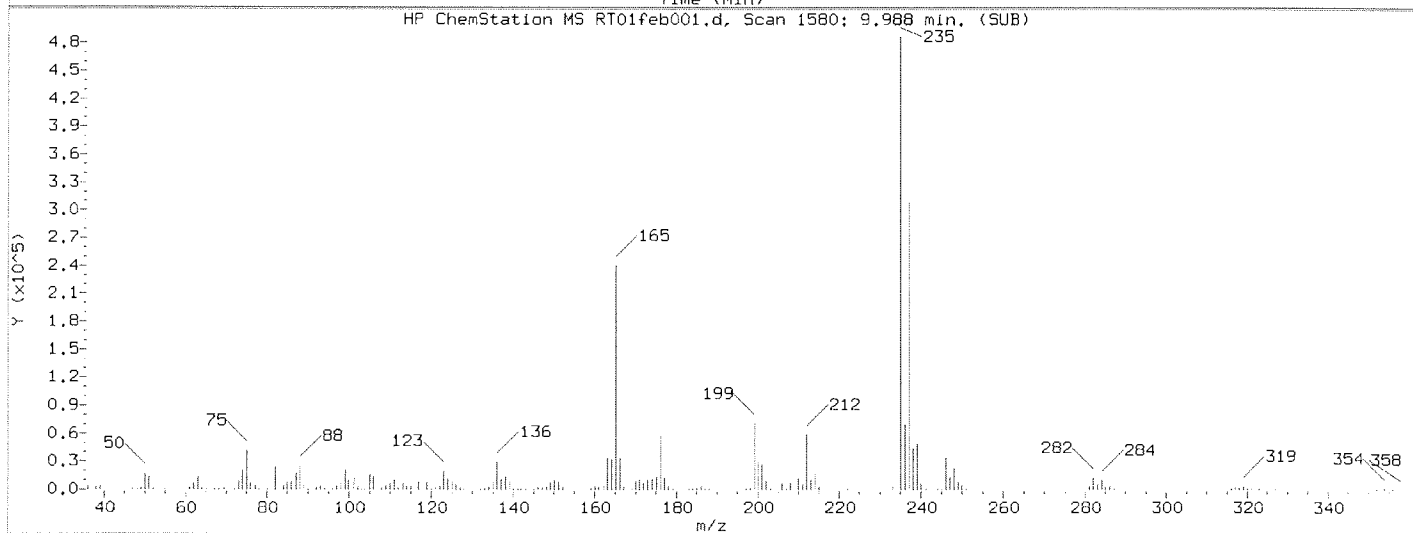
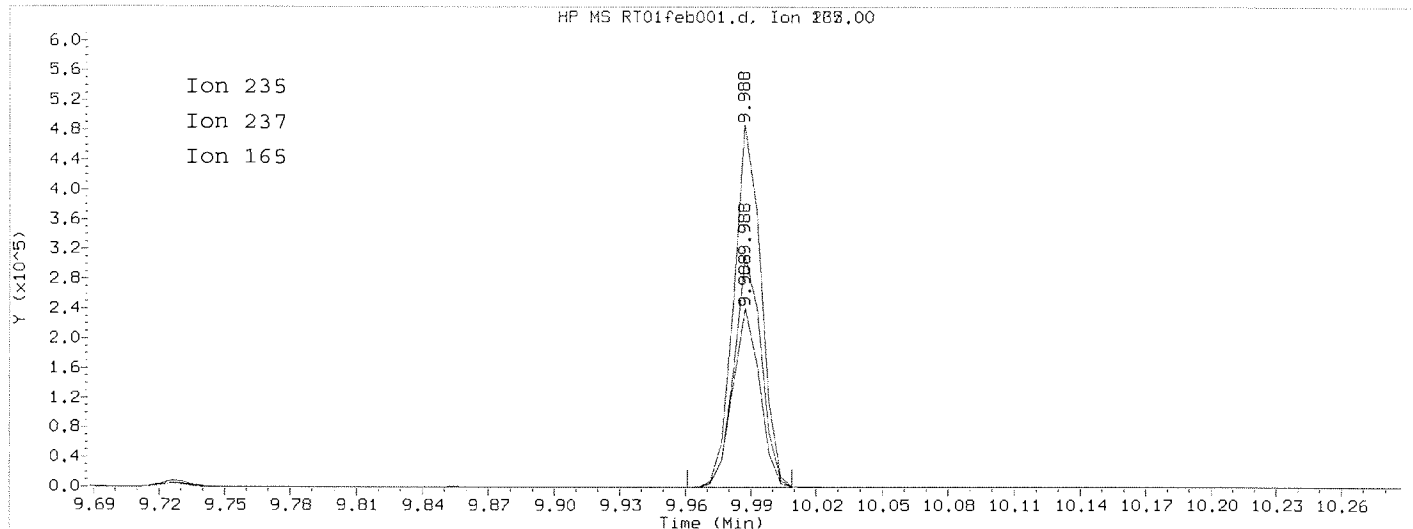
=====
 Exp. RT = 9.726
 Found RT = 9.726

Mass	Area	Ratio
235	7498	100.00
237	4443	59.26
165	4119	54.93

Return to Contents

Report Generated Time Wed Feb 1 09:32:26 2017

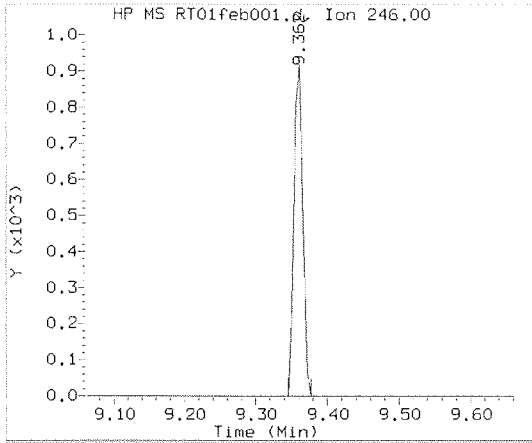
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 Sample : TUNE S101716A DFTPP Inst : GCMS_CCC
 Misc : Multiplier : 1
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 Method : /chem/SVOA/GCMS_CCC.i/170201.b/01feb001.d/resolut.m
 Last Update : 01-FEB-2017 09:32



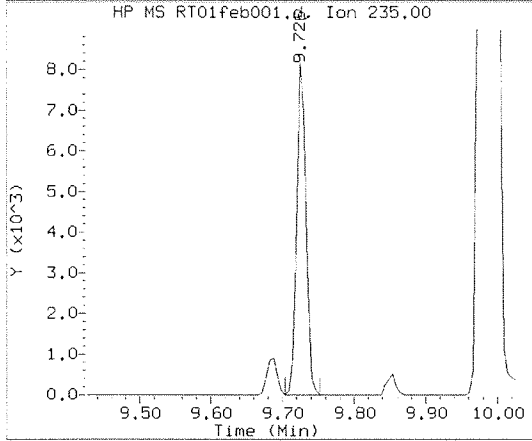
4,4'-DDT

=====
 Exp. RT = 9.988
 Found RT = 9.988

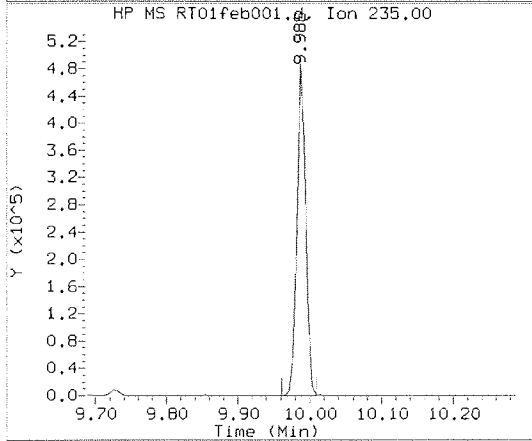
Mass	Area	Ratio
235	419854	100.00
237	268438	63.94
165	205799	49.02



Compound: 4,4'-DDE
 Quant Mass: 246
 RT: 9.362
 Area: 810



Compound: 4,4'-DDD
 Quant Mass: 235
 RT: 9.726
 Area: 7498



Compound: 4,4'-DDT
 Quant Mass: 235
 RT: 9.988
 Area: 419854

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

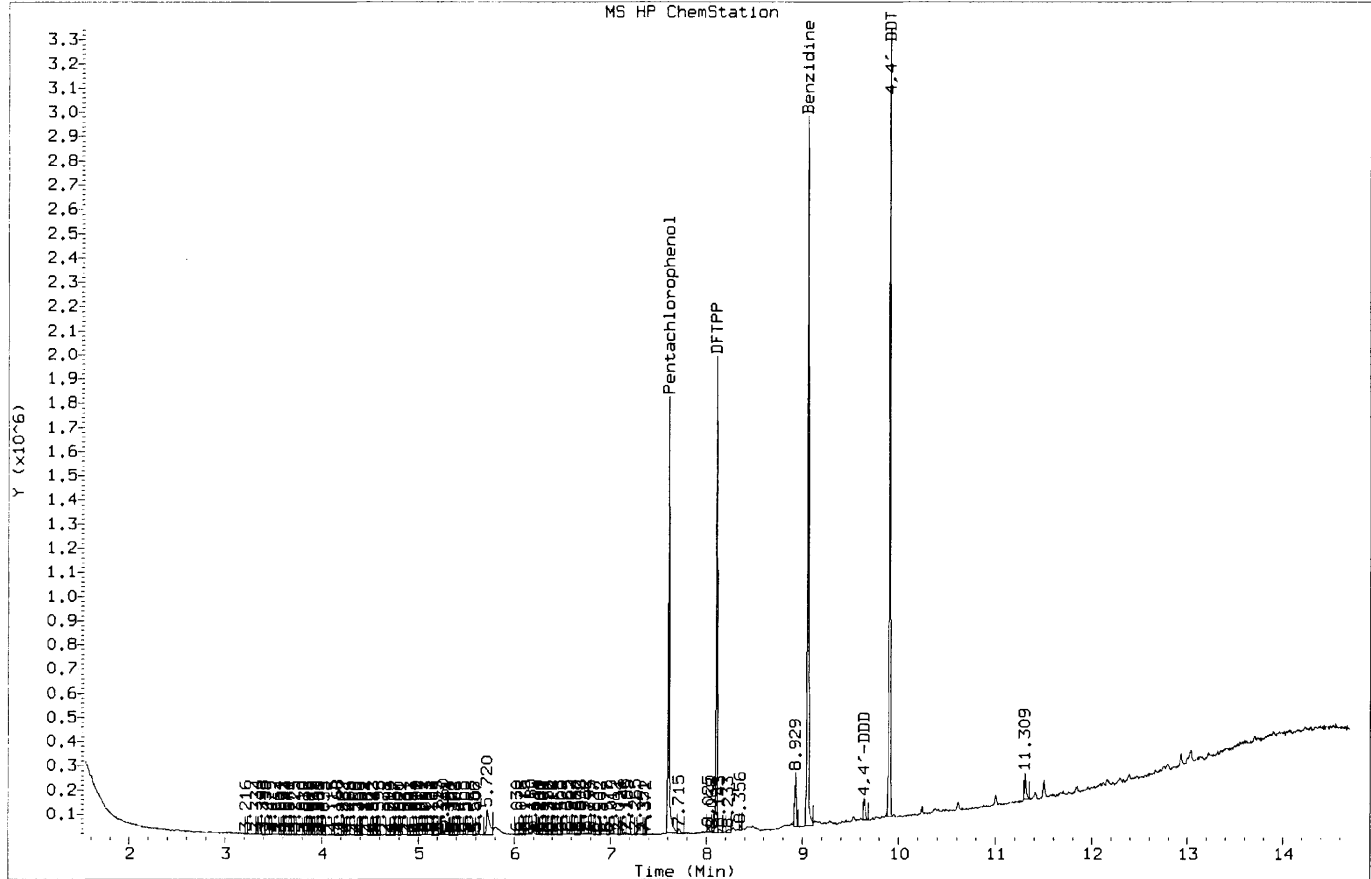
Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	419854			N/A
4,4-DDE	810	0.19	20.0	PASS
4,4-DDD	7498	1.75	20.0	PASS
4,4-DDD + DDE	8308	1.9	20.0	PASS

TUNE SAMPLE *****
 *** PASSED *** DDT BREAKDOWN TEST

DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Thu Mar 23 10:00:21 2017

Data File : /chem/SVOA/GCMS_CCC.i/170323.b/23mar001.d
 ALS Vial : 1
 Acq on : 23-MAR-2017 09:36 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_CCC
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Last Update : 17-MAR-2017 10:29

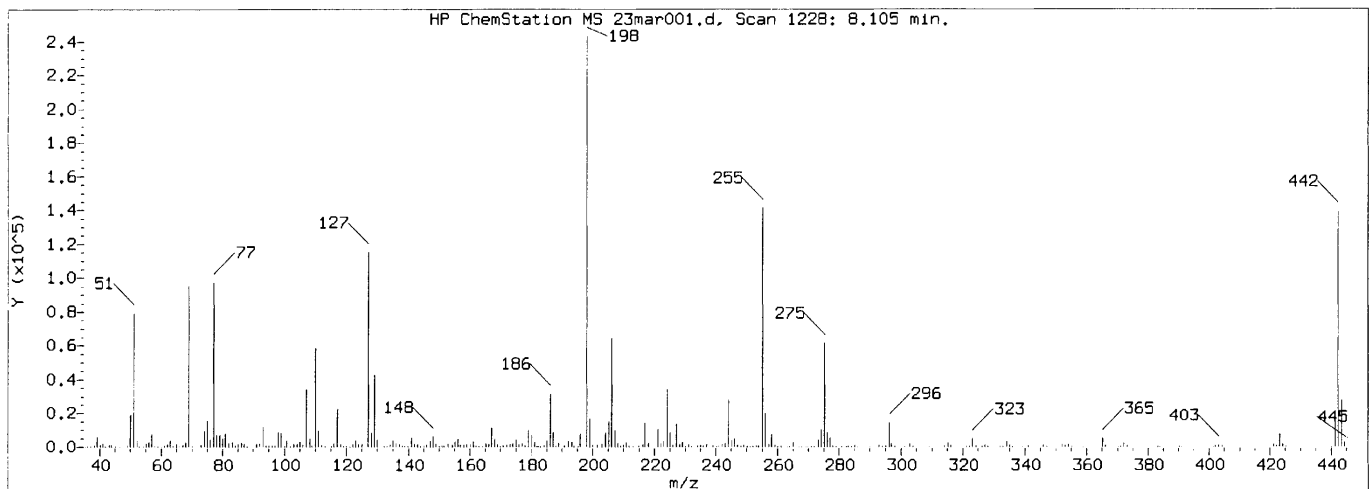
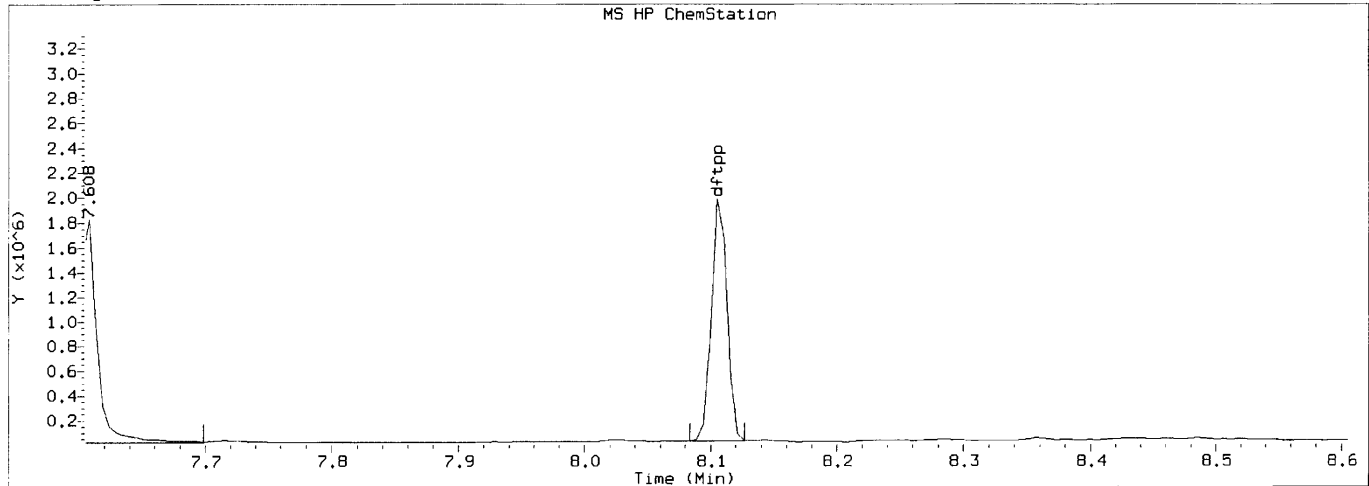


Tune *** PASSED ***
 Pentachlorophenol Tailing *** PASSED ***
 Benzidine Tailing *** PASSED ***
 DDT degradation *** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_CCC.i/170323.b/23mar001.d ,*** PASSED ***

Report Generated Time Thu Mar 23 10:00:21 2017

Data File : /chem/SVOA/GCMS_CCC.i/170323.b/23mar001.d
 ALS Vial : 1
 Acq on : 23-MAR-2017 09:36 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_CCC
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_CCC.i/170323.b/dftpptune.m
 Last Update : 17-MAR-2017 10:29



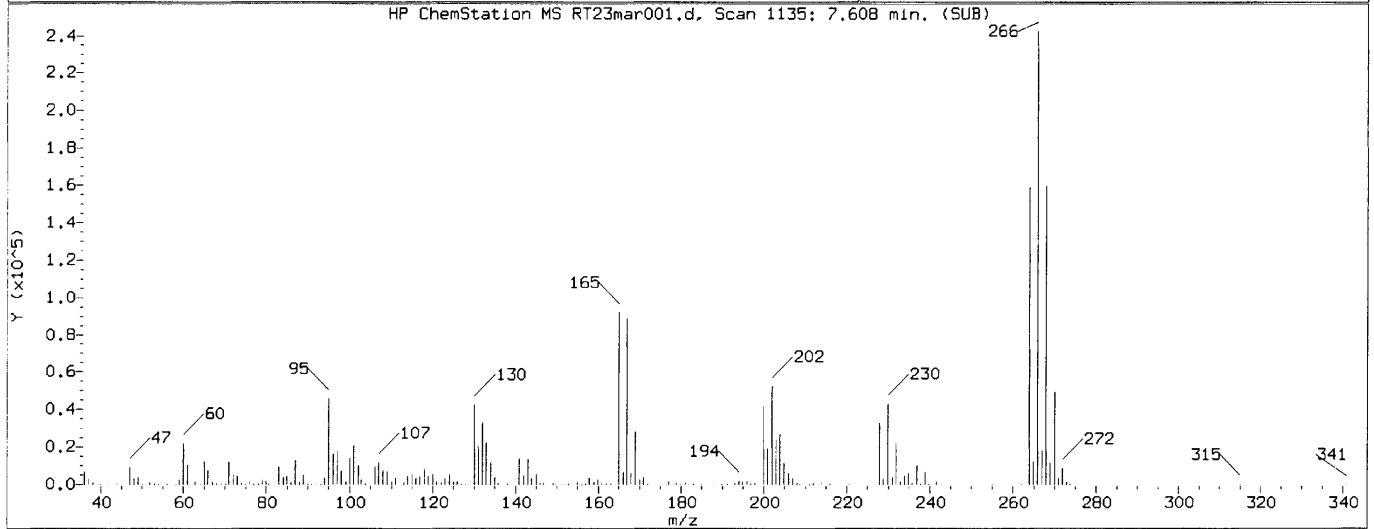
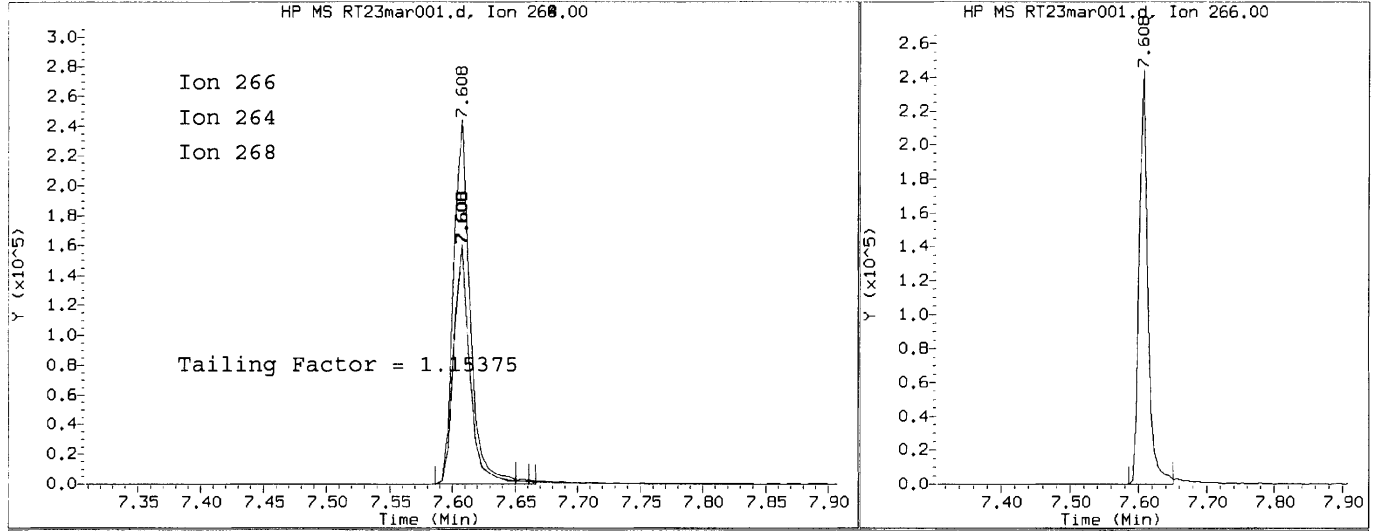
Spectrum: Avg. Scans 1227-1229 (8.11), Background Scan 1223

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	185253	PASS
51	30 - 60% of mass 198	31.47	58300	PASS
68	Less than 2% of mass 69	1.91	1321	PASS
69	Less than mass 198	37.31	69112	PASS
70	Less than 2% of mass 69	0.45	314	PASS
127	40 - 60% of mass 198	45.01	83376	PASS
197	0 - 1% of mass 198	0.29	530	PASS
199	5 - 9% of mass 198	6.54	12108	PASS
275	10 - 30% of mass 198	26.17	48482	PASS
365	1 - 100% of mass 198	2.56	4751	PASS
441	Present, but less than mass 443	77.11	18472	PASS
442	40 - 200% of mass 198	66.19	122626	PASS
443	17 - 23% of mass 442	19.54	23955	PASS

Report Generated Time Thu Mar 23 10:00:21 2017

Data File : /chem/SVOA/GCMS_CCC.i/170323.b/23mar001.d
 ALS Vial : 3
 Acq on : 23-MAR-2017 09:36 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_CCC
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_CCC.i/170323.b/23mar001.d/resolut.m
 Last Update : 23-MAR-2017 10:00



Pentachlorophenol

=====
 Exp. RT = 7.608
 Found RT = 7.608

Mass	Area	Ratio
266	222209	100.00
264	143439	64.55
268	142378	64.07

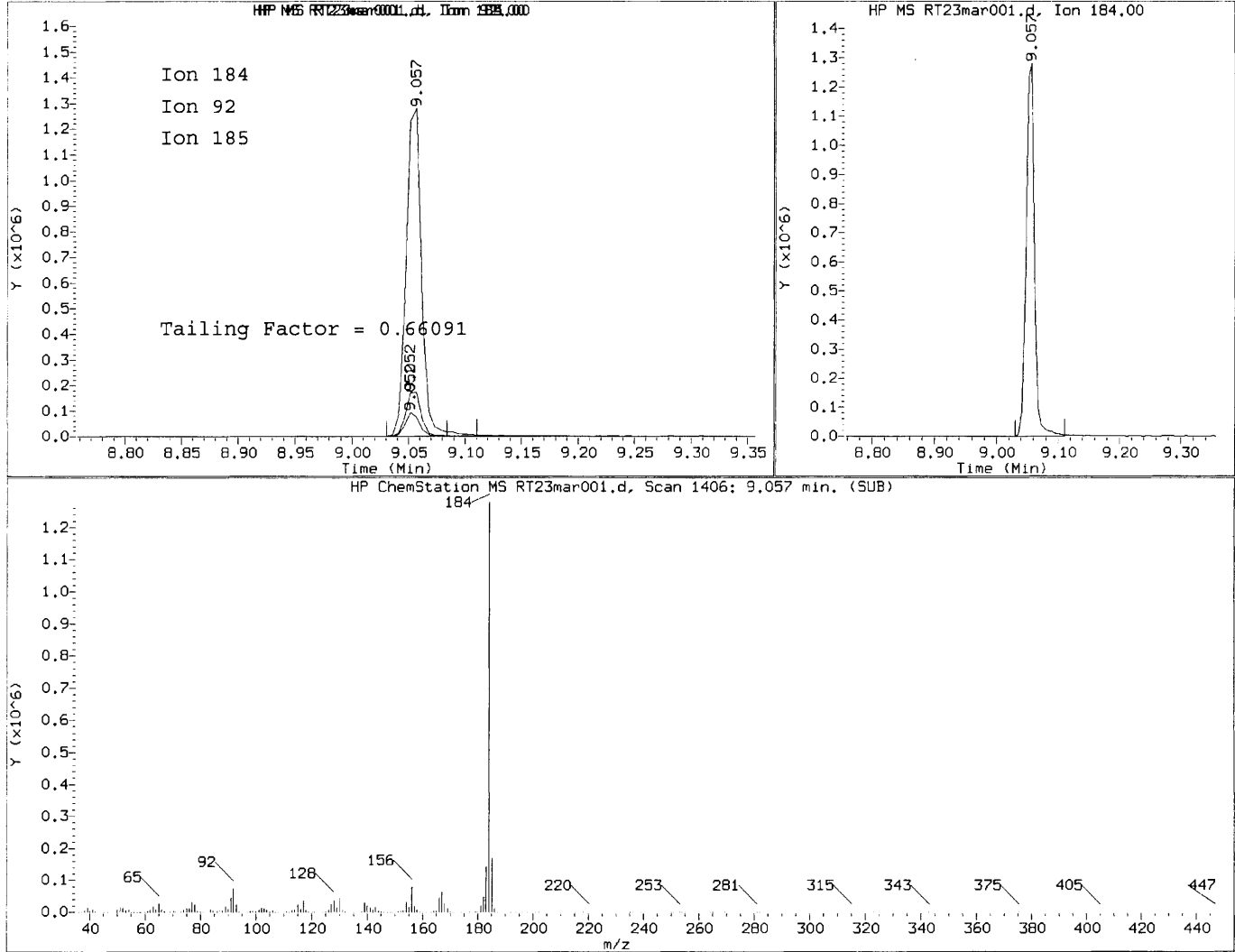
Peak baseline front width (sec) : 0.761
 Peak baseline tail width (sec) : 0.878
 Tail Factor = 0.878 / 0.761

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.154 Maximum Allowed = 3.0

Report Generated Time Thu Mar 23 10:00:21 2017

Data File : /chem/SVOA/GCMS_CCC.i/170323.b/23mar001.d
 ALS Vial : 3
 Acq on : 23-MAR-2017 09:36 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_CCC
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_CCC.i/170323.b/23mar001.d/resolut.m
 Last Update : 23-MAR-2017 10:00



Benzidine

=====
 Exp. RT = 9.057
 Found RT = 9.057

Mass	Area	Ratio
184	1209281	100.00
92	80786	6.68
185	164530	13.61

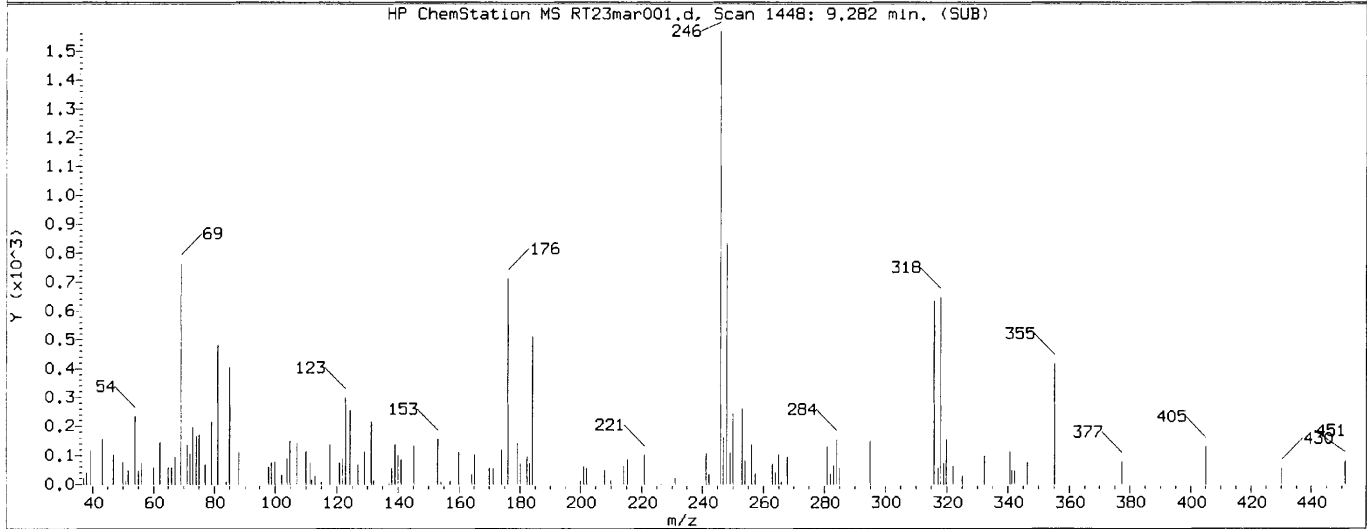
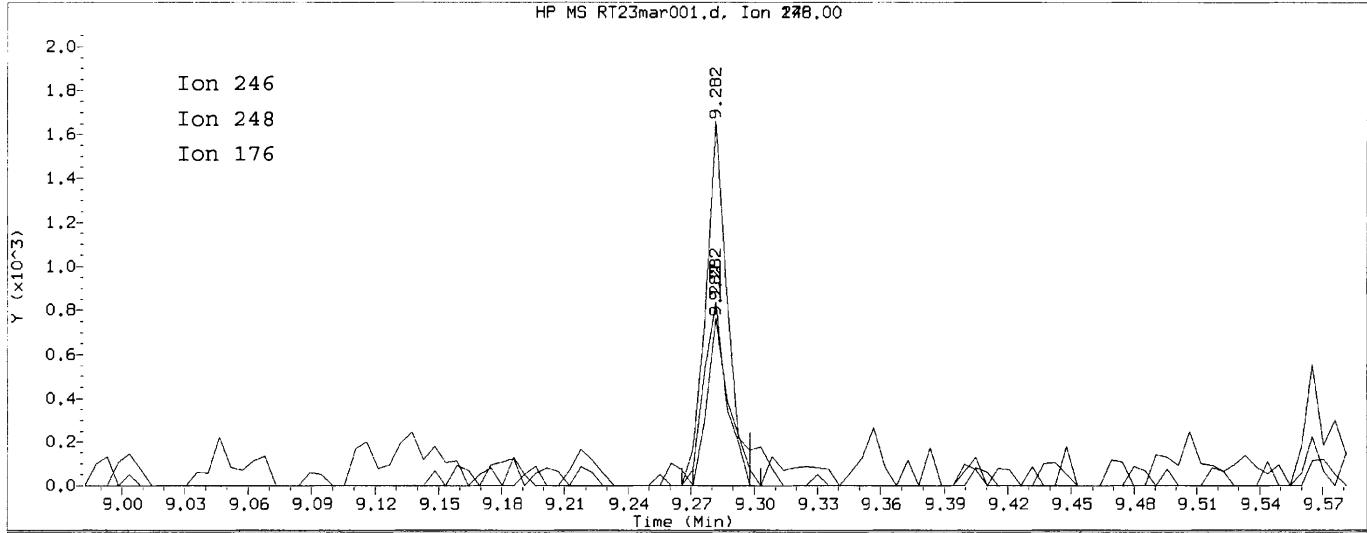
Peak baseline front width (sec) : 0.926
 Peak baseline tail width (sec) : 0.612
 Tail Factor = 0.612 / 0.926

Tailing factor for Benzidine OK

Tail Factor = 0.661 Maximum Allowed = 3.0

Report Generated Time Thu Mar 23 10:00:21 2017

Data File : /chem/SVOA/GCMS_CCC.i/170323.b/23mar001.d
 ALS Vial : 3
 Acq on : 23-MAR-2017 09:36 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_CCC
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_CCC.i/170323.b/23mar001.d/resolut.m
 Last Update : 23-MAR-2017 10:00



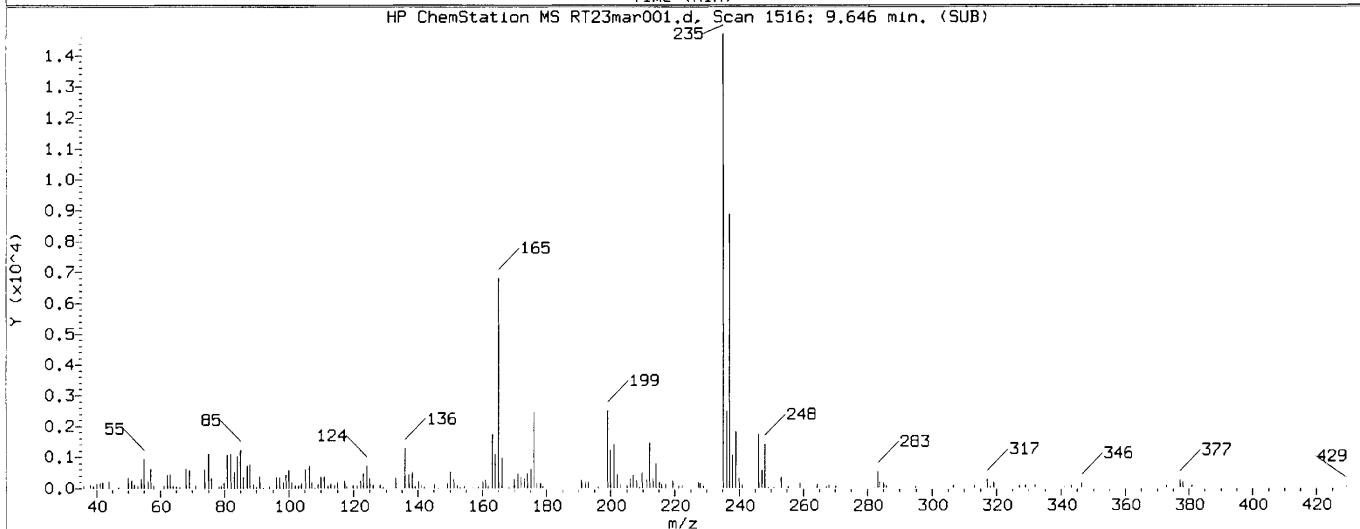
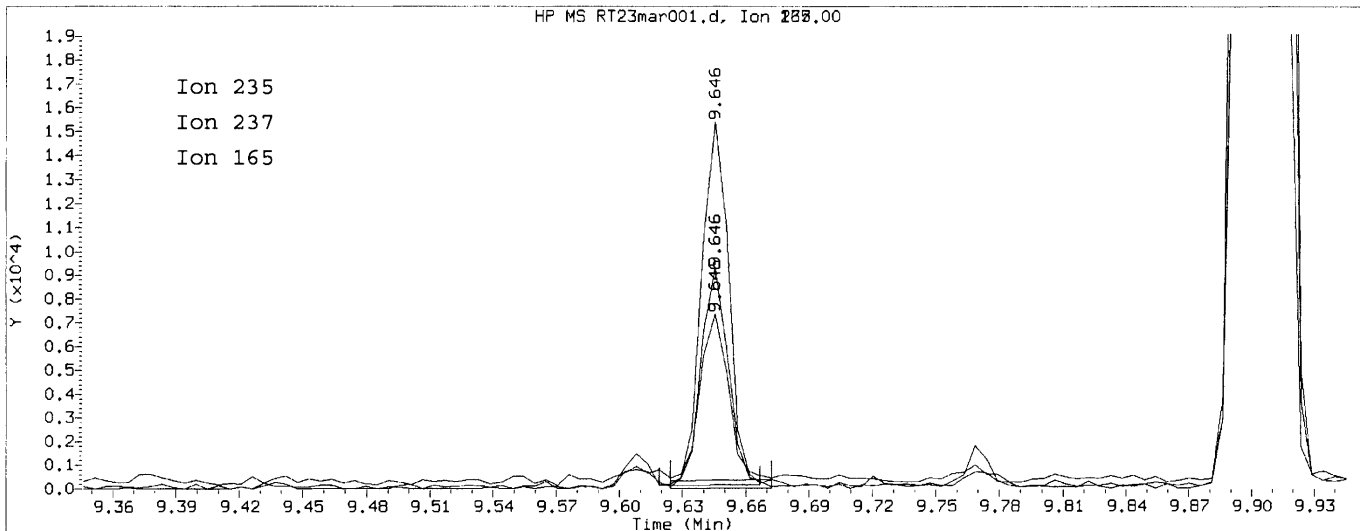
4,4'-DDE

=====
 Exp. RT = 9.287
 Found RT = 9.282

Mass	Area	Ratio
246	1214	100.00
248	633	52.22
176	561	46.22

Report Generated Time Thu Mar 23 10:00:21 2017

Data File : /chem/SVOA/GCMS_CCC.i/170323.b/23mar001.d
 ALS Vial : 3
 Acq on : 23-MAR-2017 09:36 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_CCC
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_CCC.i/170323.b/23mar001.d/resolut.m
 Last Update : 23-MAR-2017 10:00



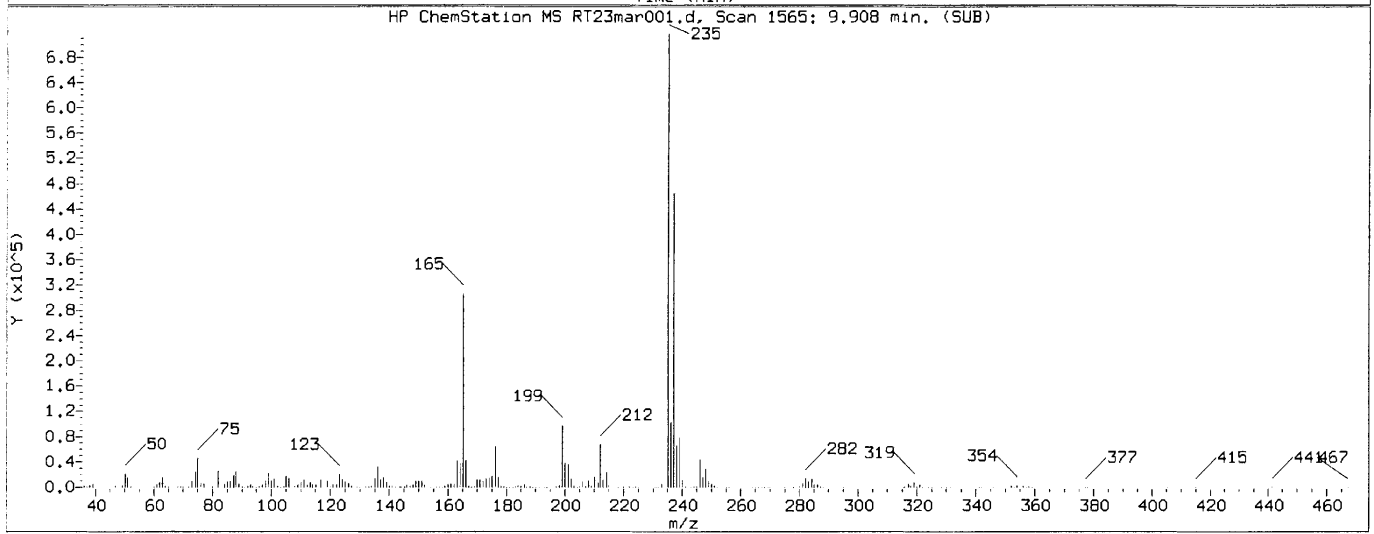
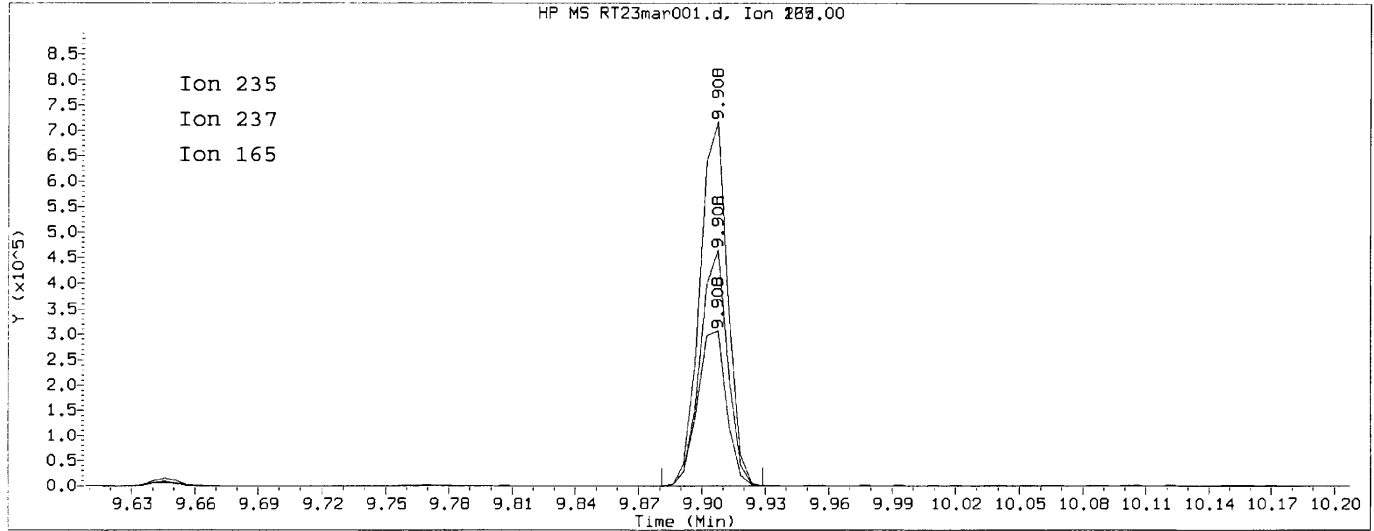
4,4'-DDD

=====
 Exp. RT = 9.646
 Found RT = 9.646

Mass	Area	Ratio
235	13614	100.00
237	8566	62.92
165	6515	47.86

Report Generated Time Thu Mar 23 10:00:21 2017

Data File : /chem/SVOA/GCMS_CCC.i/170323.b/23mar001.d
 ALS Vial : 3
 Acq on : 23-MAR-2017 09:36 Operator : 923
 Sample : TUNE S101716A DFTPP Inst : GCMS_CCC
 Misc : Multiplier : 1
 Integrator Type : HP RTE
 Method : /chem/SVOA/GCMS_CCC.i/170323.b/23mar001.d/resolut.m
 Last Update : 23-MAR-2017 10:00

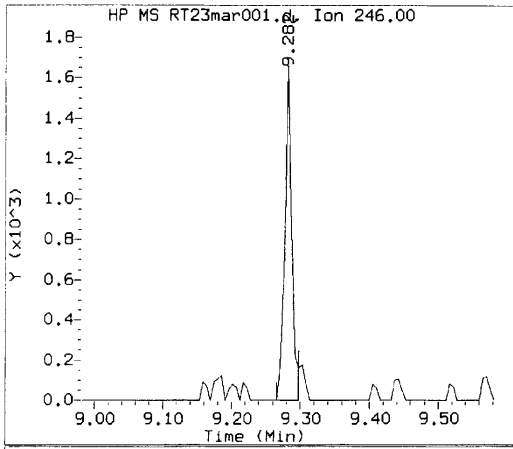


4,4'-DDT

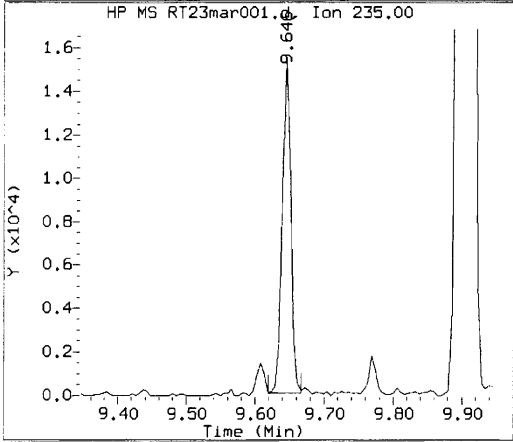
=====

Exp. RT = 9.908
 Found RT = 9.908

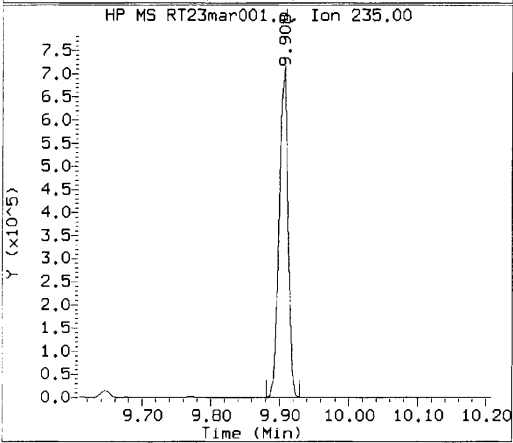
Mass	Area	Ratio
235	654797	100.00
237	419438	64.06
165	292471	44.67



Compound: 4,4'-DDE
 Quant Mass: 246
 RT: 9.282
 Area: 1214



Compound: 4,4'-DDD
 Quant Mass: 235
 RT: 9.646
 Area: 13614



Compound: 4,4'-DDT
 Quant Mass: 235
 RT: 9.908
 Area: 654797

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	654797			N/A
4,4-DDE	1214	0.19	20.0	PASS
4,4-DDD	13614	2.04	20.0	PASS
4,4-DDD + DDE	14828	2.2	20.0	PASS

TUNE SAMPLE *****
 *** PASSED *** DDT BREAKDOWN TEST

EPA 8270C Semi-Volatile Organics (Solid)

Run Logs

Injection Log

Directory: W:\GCMS_CCC\GCMS_CCC_DATA\2017\170201

Page 791 of 1084

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	01feb001.d	1.	TUNE S101716A DFTPP		1 Feb 2017 09:13
2	2	01feb002.d	1.	ICAL-1 160 PPM S110816M 8270	1702011001	1 Feb 2017 09:35
3	3	01feb003.d	1.	ICAL-2 120 PPM S110816K 8270		1 Feb 2017 09:53
4	4	01feb004.d	1.	ICAL-3 80 PPM S110816J 8270		1 Feb 2017 10:11
5	5	01feb005.d	1.	ICAL-4 50 PPM S110816I 8270		1 Feb 2017 10:30
6	6	01feb006.d	1.	ICAL-5 20 PPM S110816J 8270		1 Feb 2017 10:48
7	7	01feb007.d	1.	ICAL-6 10 PPM S110816G 8270		1 Feb 2017 11:07
8	8	01feb008.d	1.	ICAL-7 5 PPM S110816F 8270		1 Feb 2017 11:27
9	9	01feb009.d	1.	ICAL-8 2.5 PPM S110816E 8270		1 Feb 2017 11:46
10	10	01feb010.d	1.	ICV 80 PPM S110816N 8270		1 Feb 2017 12:11



Injection Log

Directory: W:\GCMS_CCC\GCMS_CCC_DATA\2017\170323

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Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	23mar001.d	1.	TUNE S101716A DFTPP		23 Mar 2017 09:36
2	2	23mar002.d	1.	CCV 80 PPM S110816J 8270	170323A011	23 Mar 2017 09:58
3	3	23mar003.d	1.	MB 170322L02	10UL S7-53-19	23 Mar 2017 10:24
4	4	23mar004.d	1.	LCS 170322L02	10UL S7-53-19	23 Mar 2017 10:44
5	5	23mar005.d	1.	17-03-1546-22 MS	10UL S7-53-19	23 Mar 2017 11:05
6	6	23mar006.d	1.	17-03-1546-22 MSD	10UL S7-53-19	23 Mar 2017 11:23
7	7	23mar007.d	1.	17-03-1546-17	10UL S7-53-19	23 Mar 2017 11:42
8	8	23mar008.d	1.	17-03-1546-18	10UL S7-53-19	23 Mar 2017 12:00
9	9	23mar009.d	1.	17-03-1546-19	10UL S7-53-19	23 Mar 2017 12:18
10	10	23mar010.d	1.	17-03-1546-20	10UL S7-53-19	23 Mar 2017 12:36
11	11	23mar011.d	1.	17-03-1546-21	10UL S7-53-19	23 Mar 2017 12:54
12	12	23mar012.d	1.	17-03-1546-22	10UL S7-53-19	23 Mar 2017 13:12
13	13	23mar013.d	1.	17-03-1546-23	10UL S7-53-19	23 Mar 2017 13:31
14	14	23mar014.d	1.	17-03-1546-24	10UL S7-53-19	23 Mar 2017 13:49
15	15	23mar015.d	1.	17-03-1546-25	10UL S7-53-19	23 Mar 2017 14:07
16	16	23mar016.d	1.	17-03-1546-15	10UL S7-53-19	23 Mar 2017 14:25
17	17	23mar017.d	1.	17-03-1546-11	10UL S7-53-19	23 Mar 2017 14:43
18	18	23mar018.d	1.	17-03-1482-5 <i>Sum</i>	10UL S7-53-19	23 Mar 2017 15:03
19	19	23mar019.d	1.	17-03-1523-1	10UL S7-53-19	23 Mar 2017 15:21
20	20	23mar020.d	1.	17-03-1515-1	10UL S7-53-19	23 Mar 2017 15:39
21		23mar021.d	1.	No MS or GC data present		


[Return to Contents](#)

EPA 8270C Semi-Volatile Organics (Solid)

Preparation Logs

Analysis Method (EPA Method): 608 8081 8082 8141 8310 TO-13 TO-4
 8270 (Soil Soil SIM SUPER PAH SIM PAH SIM Pest SIM PCB cong. SIM FL)

Extraction Method (EPA Method): 3510 3520 3540 3541 3545 3550 3580

Analyst ID#: Measuring Sample- 1101/1107/1096 Start Extraction- 1090/262 Blow Down- 1084 Clean Up-

Matrix: Soil Aqueous Oil Wipe Filter Tissue Air

Balance ID#: 57/70 Filter ID#: S07-17-17 ASE ID#: 10 Soxtherm ID#: Orbit Shaker ID#: Sonicator ID#:

Ext. Start Date/Time: 03/22/17 9:30 Ext. End Date/Time: 03/22/17

Sand or Wipe ID#: S07-19-19 Drying Agent: Na₂SO₄ Diatomaceous Earth
 Drying Agent(s) ID#: S07-44-18 | S07-22-03

Surrogate Std ID# & Volume Added (mL): S110116A 0.5mL

Spike Std ID# & Volume Added (mL): S013017A 1.0mL Spike Added to: LCS LCSD MS MSD

Extraction Solvent: MeCl₂ 1:1 Hexane-Acetone 1:1 MeCl₂-Acetone 9:1 Hexane-Diethyl-ether Acetonitrile

Extraction Solvent ID#: S07-55-01 | S07-44-08 Exchange Solvent (Hexane Acetonitrile) ID#:

Clean Up Start Date & Time: Clean Up End Date & Time:

Clean Up: 3620 Florisil 3630 SGC 3660 Sulfur 3665 Acid Other Cartridge ID#:

Clean Up Reagent ID#: Cartridge Conditioning Column Pre-Elution Reagent ID#:

MB/LCS/MS Batch #: <u>17032202</u>	Sample <u>W</u> (g) / V (mL)		Clean Up Performed	Comments
	Initial	Final		
Cel ID#:				
MB	20.0	2	<input type="checkbox"/>	
LCS	20.0	2	<input type="checkbox"/>	
LCSD <u>N/A</u>	—	—	<input type="checkbox"/>	
MS <u>17-03-1546-22AA</u>	20.0	2	<input type="checkbox"/>	<u>UTC; FQC</u>
MSD <u>17-03-1546-22AA</u>	20.0	2	<input type="checkbox"/>	<u>↓</u>
<u>17-03-1546-11AA</u>	20.1	2	<input type="checkbox"/>	
<u>-15AA</u>	20.0	2	<input type="checkbox"/>	
<u>-17AA</u>	20.0	2	<input type="checkbox"/>	
<u>-18AA</u>	20.0	2	<input type="checkbox"/>	
<u>-19AA</u>	20.0	2	<input type="checkbox"/>	
<u>-20AA</u>	20.0	2	<input type="checkbox"/>	
<u>-21AA</u>	20.1	2	<input type="checkbox"/>	
<u>-22AA</u>	20.0	2	<input type="checkbox"/>	
<u>-23AA</u>	20.0	2	<input type="checkbox"/>	
<u>-24AA</u>	20.0	2	<input type="checkbox"/>	
<u>-25AA</u>	20.0	2	<input type="checkbox"/>	<u>↓</u>
<u>17-03-1552-2A</u>	20.3	2	<input type="checkbox"/>	
<u>-6A</u>	20.0	2	<input type="checkbox"/>	
<u>-11A</u>	20.0	2	<input type="checkbox"/>	
<u>-21A</u>	20.0	2	<input type="checkbox"/>	
<u>-27A</u>	20.1	2	<input type="checkbox"/>	
<u>-30A</u>	20.1	2	<input type="checkbox"/>	
<u>17-03-1523-1A</u>	20.0	2	<input type="checkbox"/>	
<u>17-03-1515-1A</u>	20.0	2	<input type="checkbox"/>	
<u>17-03-1482-5A</u>	20.0	2	<input type="checkbox"/>	

Peer Reviewed by: 262

Peer Reviewed Date: 3/22/17

Revision Date: 10/20/16

EPA 8260B
Volatile Organics
(Aqueous)

RAW DATA

EPA 8260B
Volatile Organics
(Aqueous)
Initial Calibration

INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

ICAL WORK ORDER: 099-15-001-31116-4410
ICAL BATCH ID: 1703071001
INSTRUMENT: GC/MS V V

ANALYZED BY: 1,073
ICAL D/T ANALYZED: 2017-03-07 15:16
REVIEWED BY: 131
D/T REVIEWED: 2017-03-08 21:42

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD CL	%RSD CL	R or R ² CL	R or R ² CL	STATUS
Acetone		Avg RF	0.075	0.076	0.078	0.074	0.072					0.075	0.00	3	0-15	3.165		PASS
Benzene		Avg RF	1.654	1.714	1.648	1.635	1.700	1.682	1.664			1.671	0.00	2	0-15	1.723		PASS
Bromobenzene		Avg RF	0.529	0.536	0.538	0.557	0.549	0.542				0.542	0.00	2	0-15	1.849		PASS
Bromochloromethane		Avg RF	0.425	0.411	0.418	0.433	0.438	0.429				0.426	0.00	2	0-15	2.351		PASS
Bromodichloromethane		Avg RF	0.546	0.525	0.541	0.550	0.551	0.553				0.544	0.00	2	0-15	1.925		PASS
Bromoform	S	Avg RF	0.535	0.519	0.508	0.549	0.564	0.600				0.546	0.10	6	0-15	6.120		PASS
Bromomethane		Avg RF	0.426	0.393	0.385	0.405	0.314					0.385	0.00	11	0-15	11.035		PASS
2-Butanone		Avg RF	0.411	0.370	0.364	0.370	0.365					0.376	0.00	5	0-15	5.284		PASS
n-Butylbenzene		Avg RF	2.725	2.734	2.827	2.967	2.985	2.993				2.872	0.00	4	0-15	4.387		PASS
sec-Butylbenzene		Avg RF	3.705	3.830	3.891	4.017	4.006	4.030				3.913	0.00	3	0-15	3.308		PASS
tert-Butylbenzene		Avg RF	0.704	0.719	0.734	0.763	0.758	0.759				0.740	0.00	3	0-15	3.317		PASS
Diethyl Ether		Avg RF	0.512	0.576	0.574	0.592	0.596	0.590				0.573	0.00	5	0-15	5.448		PASS
Carbon Disulfide		Avg RF	1.853	1.732	1.716	1.785	1.784	1.744				1.769	0.00	3	0-15	2.805		PASS
Carbon Tetrachloride		Avg RF	0.574	0.661	0.701	0.698	0.741	0.745	0.752			0.696	0.00	9	0-15	9.029		PASS
Chlorobenzene	S	Avg RF	1.258	1.247	1.241	1.290	1.275	1.269				1.263	0.30	1	0-15	1.444		PASS
Chloroethane		Avg RF	0.355	0.352	0.440	0.418	0.419	0.407				0.398	0.00	9	0-15	9.168		PASS
2-Chloroethyl Vinyl Ether		Avg RF	0.277	0.289	0.298	0.308	0.308					0.296	0.00	4	0-15	4.450		PASS
Chloroform	C	Avg RF	1.181	1.160	1.144	1.173	1.171	1.155				1.164	0.00	1	0-30	1.141		PASS
Chloromethane	S	Avg RF	0.672	0.680	0.725	0.727	0.743	0.693				0.707	0.10	4	0-15	4.080		PASS
2-Chlorotoluene		Avg RF	1.454	1.473	1.449	1.510	1.503	1.492				1.480	0.00	2	0-15	1.725		PASS
4-Chlorotoluene		Avg RF	3.394	3.293	3.301	3.400	3.336	3.348				3.345	0.00	1	0-15	1.344		PASS
Dibromochloromethane		Avg RF	0.408	0.431	0.429	0.445	0.449	0.461				0.437	0.00	4	0-15	4.253		PASS
1,2-Dibromo-3-Chloropropane		Avg RF	0.228	0.217	0.225	0.230	0.229					0.226	0.00	2	0-15	2.204		PASS

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor

LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)

LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

ICAL WORK ORDER: 099-15-001-311116-4410
ICAL BATCH ID: 1703071001
INSTRUMENT: GC/MS V V

ANALYZED BY: 1,073
ICAL D/T ANALYZED: 2017-03-07 15:16
REVIEWED BY: 131
D/T REVIEWED: 2017-03-08 21:42

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	Z	S	Avg. RF	MIN. RF	%RSD CL	%RSD CL	R or R ² CL	R or R ² CL	STATUS
1,2-Dibromoethane		Avg RF	0.439	0.450	0.441	0.454	0.455	0.450			0.448	0.00	1	0-15	1.467		PASS
Dibromomethane		Avg RF	0.261	0.263	0.260	0.264	0.265	0.259			0.262	0.00	1	0-15	0.866		PASS
1,2-Dichlorobenzene		Avg RF	1.960	1.905	1.926	1.962	1.955	1.917			1.937	0.00	1	0-15	1.256		PASS
1,3-Dichlorobenzene		Avg RF	1.994	1.915	1.957	1.990	1.977	1.970			1.967	0.00	1	0-15	1.460		PASS
1,4-Dichlorobenzene		Avg RF	2.040	1.987	1.985	2.052	2.016	2.010			2.015	0.00	1	0-15	1.346		PASS
Dichlorodifluoromethane		Avg RF	0.564	0.600	0.550	0.686	0.679	0.656			0.623	0.00	10	0-15	9.505		PASS
1,1-Dichloroethane	S	Avg RF	1.085	1.097	1.104	1.140	1.142	1.123			1.115	0.10	2	0-15	2.074		PASS
1,2-Dichloroethane		Avg RF	0.571	0.591	0.599	0.605	0.599	0.583			0.592	0.00	2	0-15	1.938		PASS
1,1-Dichloroethene	C	Avg RF	0.857	0.848	0.846	0.860	0.855	0.839			0.851	0.00	1	0-30	0.901		PASS
c-1,2-Dichloroethene		Avg RF	0.709	0.717	0.709	0.730	0.731	0.720			0.719	0.00	1	0-15	1.326		PASS
t-1,2-Dichloroethene		Avg RF	0.658	0.620	0.608	0.624	0.627	0.615			0.625	0.00	3	0-15	2.750		PASS
Acetonitrile		Avg RF	0.546	0.551	0.551	0.570	0.562	0.533			0.553	0.00	3	0-15	2.586		PASS
1,2-Dichloropropane	C	Avg RF	0.397	0.413	0.412	0.425	0.422	0.417			0.414	0.00	2	0-30	2.371		PASS
Acrolein		Avg RF	0.140	0.134	0.134	0.132	0.137	0.132			0.135	0.00	3	0-15	2.611		PASS
Acrylonitrile		Avg RF	0.300	0.301	0.301	0.304	0.306	0.304			0.303	0.00	1	0-15	0.796		PASS
1,3-Dichloropropane		Avg RF	0.756	0.737	0.746	0.768	0.752	0.744			0.751	0.00	1	0-15	1.447		PASS
2,2-Dichloropropane		Avg RF	0.980	0.913	0.894	0.906	0.892	0.863			0.908	0.00	4	0-15	4.326		PASS
1,1-Dichloropropene		Avg RF	0.788	0.811	0.811	0.856	0.851	0.842			0.827	0.00	3	0-15	3.300		PASS
c-1,3-Dichloropropene		Avg RF	0.642	0.683	0.676	0.695	0.716	0.710			0.691	0.00	4	0-15	3.895		PASS
t-1,3-Dichloropropene		Avg RF	0.619	0.696	0.692	0.685	0.727	0.726			0.696	0.00	5	0-15	5.470		PASS
Ethylbenzene	C	Avg RF	2.158	2.076	2.089	2.175	2.150	2.144			2.132	0.00	2	0-30	1.872		PASS
2-Hexanone		Avg RF	0.386	0.376	0.376	0.378	0.376	0.377			0.379	0.00	1	0-15	1.100		PASS
Isopropylbenzene		Avg RF	2.013	2.036	2.053	2.140	2.127	2.123			2.082	0.00	3	0-15	2.621		PASS

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor

LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)

LR - ISC: Linear Regression (Inverse Square Concentration Weight)



INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

ICAL WORK ORDER: 099-15-001-311116-4410
ICAL BATCH ID: 1703071001
INSTRUMENT: GC/MS V V

ANALYZED BY: 1,073
ICAL D/T ANALYZED: 2017-03-07 15:16
REVIEWED BY: 131
D/T REVIEWED: 2017-03-08 21:42

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	MIN. RF	%RSD	%RSD CL	R ²	R ² CL	R ²	R ² CL	STATUS
p-Isopropyltoluene	Avg RF		3.410	3.328	3.286	3.328	3.443	3.429	3.453			3.392	0.00	2	0-15	2.013				PASS
Methylene Chloride	Avg RF			0.689	0.677	0.677	0.680	0.672	0.651			0.674	0.00	2	0-15	2.151				PASS
4-Methyl-2-Pentanone	Avg RF			0.197	0.199	0.199	0.206	0.207	0.207			0.203	0.00	2	0-15	2.314				PASS
Naphthalene	Avg RF		2.773	2.991	2.773	2.991	3.281	3.470	3.502			3.203	0.00	10	0-15	9.829				PASS
n-Propylbenzene	Avg RF		2.344	2.345	2.335	2.335	2.467	2.464	2.438			2.399	0.00	3	0-15	2.666				PASS
Styrene	Avg RF		1.378	1.428	1.446	1.446	1.527	1.517	1.503			1.467	0.00	4	0-15	4.014				PASS
2-Methyl-2-Butanol (TAA)	Avg RF			0.049	0.045	0.045	0.047	0.047	0.048			0.047	0.00	3	0-15	3.445				PASS
1,1,1,2-Tetrachloroethane	Avg RF		0.413	0.402	0.402	0.402	0.420	0.417	0.421			0.413	0.00	2	0-15	2.096				PASS
1,1,2,2-Tetrachloroethane	Avg RF	S	1.034	1.108	1.108	1.113	1.147	1.110	1.129			1.107	0.30	3	0-15	3.489				PASS
Tetrachloroethene	Avg RF		0.674	0.600	0.600	0.571	0.570	0.554	0.528			0.583	0.00	9	0-15	8.663				PASS
Toluene	Avg RF	C	1.838	1.745	1.745	1.762	1.803	1.797	1.789			1.789	0.00	2	0-30	1.819				PASS
1,2,3-Trichlorobenzene	Avg RF		1.031	1.053	1.053	1.113	1.176	1.195	1.188			1.126	0.00	6	0-15	6.371				PASS
1,2,4-Trichlorobenzene	Avg RF		1.119	1.145	1.145	1.219	1.285	1.311	1.298			1.229	0.00	7	0-15	6.702				PASS
1,1,1-Trichloroethane	Avg RF		0.922	0.963	0.963	0.935	0.974	0.967	0.967			0.955	0.00	2	0-15	2.200				PASS
Hexachloro-1,3-Butadiene	Avg RF		0.434	0.388	0.388	0.393	0.403	0.403	0.396			0.403	0.00	4	0-15	4.111				PASS
1,1,2-Trichloro-1,2,2-Tri-fluoroethane	Avg RF		0.417	0.451	0.451	0.467	0.504	0.485	0.464			0.465	0.00	6	0-15	6.408				PASS
1,1,2-Trichloroethane	Avg RF		0.334	0.371	0.371	0.363	0.373	0.366	0.366			0.362	0.00	4	0-15	3.939				PASS
Iodomethane	Avg RF			0.617	0.617	0.754	0.864	0.846	0.829			0.782	0.00	13	0-15	12.974				PASS
Trichloroethene	Avg RF		0.461	0.429	0.429	0.430	0.438	0.438	0.430			0.438	0.00	3	0-15	2.792				PASS
Trichlorofluoromethane	Avg RF		0.741	0.687	0.687	0.699	0.780	0.777	0.771			0.742	0.00	5	0-15	5.487				PASS
Isobutyl Alcohol	Avg RF			0.065	0.065	0.064	0.065	0.064	0.064			0.064	0.00	1	0-15	0.868				PASS

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor

LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)

LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

ICAL WORK ORDER: 099-15-001-311116-4410
ICAL BATCH ID: 1703071001
INSTRUMENT: GC/MS V V

ANALYZED BY: 1,073
ICAL D/T ANALYZED: 2017-03-07 15:16
REVIEWED BY: 131
D/T REVIEWED: 2017-03-08 21:42

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	MIN. RF	%RSD CL	%R SD CL	R or R ²	R or R ² CL	STATUS
1,2,3-Trichloropropane		Avg RF	0.782	0.768	0.752	0.789	0.785	0.777				0.775	0.00	2	0-15	1.739		PASS
1,2,4-Trimethylbenzene		Avg RF	3.450	3.414	3.465	3.571	3.529	3.529				3.493	0.00	2	0-15	1.697		PASS
1,3,5-Trimethylbenzene		Avg RF	1.681	1.687	1.706	1.787	1.795	1.769				1.738	0.00	3	0-15	2.988		PASS
Vinyl Acetate		Avg RF	2.356	2.388	2.443	2.448	2.442					2.415	0.00	2	0-15	1.706		PASS
Vinyl Chloride	C	Avg RF	0.633	0.666	0.674	0.695	0.710	0.724	0.710			0.687	0.00	5	0-30	4.602		PASS
p/m-Xylene		Avg RF	1.621	1.654	1.650	1.647	1.706	1.689	1.684			1.665	0.00	2	0-15	1.761		PASS
o-Xylene		Avg RF	1.793	1.719	1.700	1.706	1.776	1.768	1.748			1.744	0.00	2	0-15	2.099		PASS
Methyl-t-Butyl Ether (MTBE)		Avg RF	2.126	2.198	2.168	2.214	2.207	2.170				2.180	0.00	2	0-15	1.507		PASS
t-1,4-Dichloro-2-Butene		Avg RF	0.172	0.172	0.172	0.179	0.178	0.173				0.175	0.00	2	0-15	2.031		PASS
Tetrahydrofuran		Avg RF	0.265	0.239	0.239	0.244	0.243	0.237				0.246	0.00	4	0-15	4.480		PASS
Tert-Butyl Alcohol (TBA)		Avg RF	1.296	1.426	1.434	1.533	1.496	1.507				1.448	0.00	6	0-15	5.924		PASS
Diisopropyl Ether (DIPE)		Avg RF	2.158	2.073	2.065	2.127	2.126	2.103				2.109	0.00	2	0-15	1.691		PASS
Ethyl-t-Butyl Ether (ETBE)		Avg RF	2.128	2.160	2.160	2.225	2.217	2.212				2.184	0.00	2	0-15	1.804		PASS
Tert-Amyl-Methyl Ether (TAME)		Avg RF	1.301	1.335	1.333	1.384	1.348	1.347				1.341	0.00	2	0-15	2.021		PASS
Cyclohexanone		Avg RF	0.058	0.051	0.051	0.055	0.053	0.050				0.053	0.00	6	0-15	6.425		PASS
Ethanol		Avg RF	0.177	0.158	0.158	0.142	0.155	0.138				0.154	0.00	10	0-15	10.149		PASS
Cyclohexane		Avg RF	0.905	0.832	0.832	0.849	0.808	0.776				0.834	0.00	6	0-15	5.787		PASS
Thiophene		Avg RF	0.876	0.873	0.872	0.898	0.885	0.882				0.881	0.00	1	0-15	1.105		PASS
1,4-Dioxane		Avg RF	0.007	0.007	0.007	0.007	0.007	0.007				0.007	0.00	2	0-15	2.031		PASS
Hexane		Avg RF	0.664	0.594	0.570	0.602	0.594	0.556				0.596	0.00	6	0-15	6.275		PASS
1,3-Butadiene		Avg RF	0.578	0.528	0.511	0.537	0.525	0.512				0.532	0.00	5	0-15	4.666		PASS

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor

LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)

LR - ISC: Linear Regression (Inverse Square Concentration Weight)



INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

ICAL WORK ORDER: 099-15-001-311116-4410
ICAL BATCH ID: 1703071001
INSTRUMENT: GC/MS V V

ANALYZED BY: 1,073
ICAL D/T ANALYZED: 2017-03-07 15:16
REVIEWED BY: 131
D/T REVIEWED: 2017-03-08 21:42

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RE	MIN. RE	%RSD	%RSD CL	R ²	R ² CL	R ²	R ² CL	STATUS
Isopropanol					0.054	0.048	0.050	0.053	0.052			0.051	0.00	4	0-15	4.409				PASS

Data Files:

LEVEL #	D/T ANALYZED	DATA FILE
1	2017-03-07 15:16	Z:\GCMS_VV\GCMS_VV_data\2017\170307\07mar004.d\07mar004.ir
2	2017-03-07 15:43	Z:\GCMS_VV\GCMS_VV_data\2017\170307\07mar005.d\07mar005.ir
3	2017-03-07 16:10	Z:\GCMS_VV\GCMS_VV_data\2017\170307\07mar006.d\07mar006.ir
4	2017-03-07 16:37	Z:\GCMS_VV\GCMS_VV_data\2017\170307\07mar007.d\07mar007.ir
5	2017-03-07 17:04	Z:\GCMS_VV\GCMS_VV_data\2017\170307\07mar008.d\07mar008.ir
6	2017-03-07 17:31	Z:\GCMS_VV\GCMS_VV_data\2017\170307\07mar009.d\07mar009.ir
7	2017-03-07 17:58	Z:\GCMS_VV\GCMS_VV_data\2017\170307\07mar010.d\07mar010.ir

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor

LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)

LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

ICV WORK ORDER: 099-15-001-31116-4410

INITIAL BATCH ID: 1703071001

INSTRUMENT: GC/MS V V

ANALYZED BY: 1073

D/T ANALYZED:

INITIAL: 2017-03-07 15:16

ICV: 2017-03-07 18:51

REVIEWED BY: 131

D/T REVIEWED: 2017-03-08 21:42

DATA FILE: Z:\GCMS_VV\GCMS_VV_data\20171170307\07mar012.d\07mar012.rr

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
Acetone	Avg Resp		0.00	0.075	0.078		-4	0-50	0-50	PASS
Benzene	Avg Resp		0.00	1.671	1.659		1	0-50	0-50	PASS
Bromobenzene	Avg Resp		0.00	0.542	0.564		-4	0-50	0-50	PASS
Bromochloromethane	Avg Resp		0.00	0.426	0.447		-5	0-50	0-50	PASS
Bromodichloromethane	Avg Resp		0.00	0.544	0.556		-2	0-50	0-50	PASS
Bromoform	Avg Resp	S	0.10	0.546	0.563		-3	0-50	0-50	PASS
Bromomethane	Avg Resp		0.00	0.385	0.379		2	0-50	0-50	PASS
2-Butanone	Avg Resp		0.00	0.376	0.368		2	0-50	0-50	PASS
n-Butylbenzene	Avg Resp		0.00	2.872	2.913		-1	0-50	0-50	PASS
sec-Butylbenzene	Avg Resp		0.00	3.913	3.982		-2	0-50	0-50	PASS
tert-Butylbenzene	Avg Resp		0.00	0.740	0.755		-2	0-50	0-50	PASS
Diethyl Ether	Avg Resp		0.00	0.573	0.594		-4	0-50	0-50	PASS
Carbon Disulfide	Avg Resp		0.00	1.769	1.680		5	0-50	0-50	PASS
Carbon Tetrachloride	Avg Resp		0.00	0.696	0.741		-6	0-50	0-50	PASS
Chlorobenzene	Avg Resp	S	0.30	1.263	1.283		-2	0-50	0-50	PASS
Chloroethane	Avg Resp		0.00	0.398	0.432		-9	0-50	0-50	PASS
2-Chloroethyl Vinyl Ether	Avg Resp		0.00	0.296	0.298		-1	0-50	0-50	PASS
Chloroform	Avg Resp	C	0.00	1.164	1.146		2	0-20	0-20	PASS
Chloromethane	Avg Resp	S	0.10	0.707	0.751		-6	0-50	0-50	PASS
2-Chlorotoluene	Avg Resp		0.00	1.480	1.499		-1	0-50	0-50	PASS
4-Chlorotoluene	Avg Resp		0.00	3.345	3.361		0	0-50	0-50	PASS
Dibromochloromethane	Avg Resp		0.00	0.437	0.451		-3	0-50	0-50	PASS
1,2-Dibromo-3-Chloropropane	Avg Resp		0.00	0.226	0.244		-8	0-50	0-50	PASS
1,2-Dibromoethane	Avg Resp		0.00	0.448	0.457		-2	0-50	0-50	PASS
Dibromomethane	Avg Resp		0.00	0.262	0.261		0	0-50	0-50	PASS
1,2-Dichlorobenzene	Avg Resp		0.00	1.937	1.975		-2	0-50	0-50	PASS
1,3-Dichlorobenzene	Avg Resp		0.00	1.967	1.981		-1	0-50	0-50	PASS
1,4-Dichlorobenzene	Avg Resp		0.00	2.015	2.039		-1	0-50	0-50	PASS
Dichlorodifluoromethane	Avg Resp		0.00	0.623	0.662		-6	0-50	0-50	PASS

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

ICV WORK ORDER: 099-15-001-31116-4410

INITIAL BATCH ID: 1703071001

INSTRUMENT: GC/MS V V

ANALYZED BY: 1073

D/T ANALYZED:

INITIAL: 2017-03-07 15:16

ICV: 2017-03-07 18:51

REVIEWED BY: 131

D/T REVIEWED: 2017-03-08 21:42

DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170307\07mar012.d\07mar012.rr

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
1,1-Dichloroethane	S	Avg Resp	0.10	1.115	1.151		-3	0-50	0-50	PASS
1,2-Dichloroethane		Avg Resp	0.00	0.592	0.605		-2	0-50	0-50	PASS
1,1-Dichloroethene	C	Avg Resp	0.00	0.851	0.837		2	0-20	0-20	PASS
c-1,2-Dichloroethene		Avg Resp	0.00	0.719	0.719		0	0-50	0-50	PASS
t-1,2-Dichloroethene		Avg Resp	0.00	0.625	0.616		1	0-50	0-50	PASS
Acetonitrile		Avg Resp	0.00	0.553	0.546		1	0-50	0-50	PASS
1,2-Dichloropropane	C	Avg Resp	0.00	0.414	0.430		-4	0-20	0-20	PASS
Acrolein		Avg Resp	0.00	0.135	0.123		9	0-50	0-50	PASS
Acrylonitrile		Avg Resp	0.00	0.303	0.303		0	0-50	0-50	PASS
1,3-Dichloropropane		Avg Resp	0.00	0.751	0.765		-2	0-50	0-50	PASS
2,2-Dichloropropane		Avg Resp	0.00	0.908	0.814		10	0-50	0-50	PASS
1,1-Dichloropropene		Avg Resp	0.00	0.827	0.843		-2	0-50	0-50	PASS
c-1,3-Dichloropropene		Avg Resp	0.00	0.691	0.697		-1	0-50	0-50	PASS
t-1,3-Dichloropropene		Avg Resp	0.00	0.696	0.730		-5	0-50	0-50	PASS
Ethylbenzene	C	Avg Resp	0.00	2.132	2.136		0	0-20	0-20	PASS
2-Hexanone		Avg Resp	0.00	0.379	0.382		-1	0-50	0-50	PASS
Isopropylbenzene		Avg Resp	0.00	2.082	2.142		-3	0-50	0-50	PASS
p-Isopropyltoluene		Avg Resp	0.00	3.392	3.451		-2	0-50	0-50	PASS
Methylene Chloride		Avg Resp	0.00	0.674	0.660		2	0-50	0-50	PASS
4-Methyl-2-Pentanone		Avg Resp	0.00	0.203	0.208		-2	0-50	0-50	PASS
Naphthalene		Avg Resp	0.00	3.203	3.408		-6	0-50	0-50	PASS
n-Propylbenzene		Avg Resp	0.00	2.399	2.430		-1	0-50	0-50	PASS
Styrene		Avg Resp	0.00	1.467	1.513		-3	0-50	0-50	PASS
2-Methyl-2-Butanol (TAA)		Avg Resp	0.00	0.047	0.048		-2	0-50	0-50	PASS
1,1,1,2-Tetrachloroethane		Avg Resp	0.00	0.413	0.438		-6	0-50	0-50	PASS
1,1,2,2-Tetrachloroethane	S	Avg Resp	0.30	1.107	1.152		-4	0-50	0-50	PASS
Tetrachloroethene		Avg Resp	0.00	0.583	0.558		4	0-50	0-50	PASS
Toluene	C	Avg Resp	0.00	1.789	1.780		1	0-20	0-20	PASS
1,2,3-Trichlorobenzene		Avg Resp	0.00	1.126	1.165		-3	0-50	0-50	PASS

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

ICV WORK ORDER: 099-15-001-31116-4410

INITIAL BATCH ID: 1703071001

INSTRUMENT: GC/MS V V

ANALYZED BY: 1073

D/T ANALYZED:

INITIAL: 2017-03-07 15:16

ICV: 2017-03-07 18:51

REVIEWED BY: 131

D/T REVIEWED: 2017-03-08 21:42

DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170307\07mar012.d\07mar012.rr

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
1,2,4-Trichlorobenzene	Avg Resp		0.00	1.229	1.289		-5	0-50	0-50	PASS
1,1,1-Trichloroethane	Avg Resp		0.00	0.955	0.942		1	0-50	0-50	PASS
Hexachloro-1,3-Butadiene	Avg Resp		0.00	0.403	0.407		-1	0-50	0-50	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp		0.00	0.465	0.462		1	0-50	0-50	PASS
1,1,2-Trichloroethane	Avg Resp		0.00	0.362	0.368		-2	0-50	0-50	PASS
Iodomethane	Avg Resp		0.00	0.782	0.789		-1	0-50	0-50	PASS
Trichloroethene	Avg Resp		0.00	0.438	0.428		2	0-50	0-50	PASS
Trichlorofluoromethane	Avg Resp		0.00	0.742	0.807		-9	0-50	0-50	PASS
Isobutyl Alcohol	Avg Resp		0.00	0.064	0.065		-2	0-50	0-50	PASS
1,2,3-Trichloropropane	Avg Resp		0.00	0.775	0.802		-3	0-50	0-50	PASS
1,2,4-Trimethylbenzene	Avg Resp		0.00	3.493	3.475		1	0-50	0-50	PASS
1,3,5-Trimethylbenzene	Avg Resp		0.00	1.738	1.760		-1	0-50	0-50	PASS
Vinyl Acetate	Avg Resp		0.00	2.415	2.411		0	0-50	0-50	PASS
Vinyl Chloride	Avg Resp		0.00	0.687	0.750		-9	0-20	0-20	PASS
p/m-Xylene	Avg Resp		0.00	1.665	1.683		-1	0-50	0-50	PASS
o-Xylene	Avg Resp		0.00	1.744	1.762		-1	0-50	0-50	PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp		0.00	2.180	2.241		-3	0-50	0-50	PASS
t-1,4-Dichloro-2-Butene	Avg Resp		0.00	0.175	0.185		-6	0-50	0-50	PASS
Tetrahydrofuran	Avg Resp		0.00	0.246	0.248		-1	0-50	0-50	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp		0.00	1.448	1.593		-10	0-50	0-50	PASS
Diisopropyl Ether (DIPE)	Avg Resp		0.00	2.109	2.171		-3	0-50	0-50	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp		0.00	2.184	2.219		-2	0-50	0-50	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp		0.00	1.341	1.356		-1	0-50	0-50	PASS
Cyclohexanone	Avg Resp		0.00	0.053	0.060		-13	0-50	0-50	PASS
Ethanol	Avg Resp		0.00	0.154	0.164		-6	0-50	0-50	PASS
Cyclohexane	Avg Resp		0.00	0.834	0.771		8	0-50	0-50	PASS
Thiophene	Avg Resp		0.00	0.881	0.886		-1	0-50	0-50	PASS
1,4-Dioxane	Avg Resp		0.00	0.007	0.007		0	0-50	0-50	PASS
Hexane	Avg Resp		0.00	0.596	0.519		13	0-50	0-50	PASS

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

ICV WORK ORDER: 099-15-001-31116-4410
INITIAL BATCH ID: 1703071001
INSTRUMENT: GC/MS V V

ANALYZED BY: 1073
D/T ANALYZED: 2017-03-07 15:16
INITIAL: 2017-03-07 18:51
ICV: 131
REVIEWED BY: 131
D/T REVIEWED: 2017-03-08 21:42

DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170307\07mar012.d\07mar012.rr

<u>COMPOUND</u>	<u>COMP TYPE</u>	<u>CALIB MODEL</u>	<u>MIN RF</u>	<u>AVG RF</u>	<u>ICV RF</u>	<u>AMOUNT</u>	<u>ICV</u>	<u>ICV %D</u>	<u>ICV %D CL</u>	<u>STATUS</u>
1,3-Butadiene	Avg Resp		0.00	0.532	0.493		7		0-50	PASS
Isopropanol	Avg Resp		0.00	0.051	0.055		-8		0-50	PASS

MIN RF: Method Specified Minimum Response Factor

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAR-2017 15:16
 End Cal Date : 07-MAR-2017 17:58
 Calibration Date: 07-Mar-2017 19:13 zz9h
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 3.50
 Integrator : HP RTE
 Method : /chem/VOA/GCMS_VV.i/170307.b/8260.m
 Instrument : GCMS_VV.i
 Curve Type : Average

Level	Acq Time	Data File
1	07-MAR-2017 15:16	/chem/VOA/GCMS_VV.i/170307.b/07mar004.d
2	07-MAR-2017 15:43	/chem/VOA/GCMS_VV.i/170307.b/07mar005.d
3	07-MAR-2017 16:10	/chem/VOA/GCMS_VV.i/170307.b/07mar006.d
4	07-MAR-2017 16:37	/chem/VOA/GCMS_VV.i/170307.b/07mar007.d
5	07-MAR-2017 17:04	/chem/VOA/GCMS_VV.i/170307.b/07mar008.d
6	07-MAR-2017 17:31	/chem/VOA/GCMS_VV.i/170307.b/07mar009.d
7	07-MAR-2017 17:58	/chem/VOA/GCMS_VV.i/170307.b/07mar010.d

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Avg	RSD
1) I 1 Tert-Butyl Alcohol-d9									
2) T 1 Ethanol		0.177	0.158	0.142	0.155	0.138	0.154	10	
3) T 1 Tert-Butyl Alcohol (TBA)		1.296	1.426	1.434	1.533	1.496	1.507	1.448	6
4) I 2 Pentafluorobenzene									
5) T 2 Dichlorodifluoromethane		0.564	0.600	0.550	0.686	0.679	0.656	0.623	10
6) T 2 Chloromethane	S	0.672	0.680	0.725	0.727	0.743	0.693	0.707	4

Page 2

7) T	2	Vinyl Chloride	C	0.633	0.666	0.674	0.695	0.710	0.724	0.710	0.687	5
8) T	2	Bromomethane			0.426	0.393	0.385	0.405	0.314	0.385	11	
9) T	2	Chloroethane		0.355	0.352	0.440	0.418	0.419	0.407	0.398	9	
10) T	2	1,3-Butadiene		0.578	0.528	0.511	0.537	0.525	0.512	0.532	5	
11) T	2	Trichlorofluoromethane		0.741	0.687	0.699	0.780	0.777	0.771	0.742	5	
12) T	2	Diethyl Ether		0.512	0.576	0.574	0.592	0.596	0.590	0.573	5	
13) T	2	Acetone		0.075	0.075	0.076	0.078	0.074	0.072	0.075	3	
14) T	2	Iodomethane		0.617	0.754	0.864	0.846	0.829	0.782	13		
15) T	2	1,1-Dichloroethene	C	0.857	0.848	0.846	0.860	0.855	0.839	0.851	1	
16) T	2	1,1,2-Trichloro-1,2-Trifluoro		0.417	0.451	0.467	0.504	0.485	0.464	0.465	6	
17) T	2	Isoopropanol		0.054	0.048	0.050	0.053	0.052	0.051	4		
18) T	2	Carbon Disulfide		1.853	1.732	1.716	1.785	1.784	1.744	1.769	3	
19) T	2	Acetonitrile		0.546	0.551	0.570	0.562	0.533	0.553	3		
20) T	2	Acrylonitrile		0.300	0.301	0.304	0.306	0.304	0.303	1		
21) T	2	Allyl Chloride		0.361	0.347	0.341	0.357	0.353	0.337	0.349	3	
22) T	2	Acrolein		0.140	0.134	0.132	0.137	0.132	0.135	3		
23) T	2	Methylene Chloride		0.689	0.677	0.680	0.672	0.651	0.674	2		
24) T	2	t-1,2-Dichloroethene		0.658	0.620	0.608	0.624	0.627	0.615	0.625	3	
25) T	2	Isobutyl Alcohol		0.065	0.064	0.065	0.064	0.064	0.064	0.064	1	

26)	T 2 Methyl-t-Butyl Ether (MTBE)	2.126	2.198	2.168	2.214	2.207	2.170	2.180	2	
27)	T 2 Hexane	0.664	0.594	0.570	0.602	0.594	0.556	0.596	6	
28)	T 2 1,1-Dichloroethane	S	1.085	1.097	1.104	1.140	1.142	1.123	1.115	2
29)	T 2 Vinyl Acetate		2.356	2.388	2.443	2.448	2.442	2.415	2	
30)	T 2 Diisopropyl Ether (DIPE)		2.158	2.073	2.065	2.127	2.126	2.103	2.109	2
31)	T 2 Chloroprene		0.936	0.985	1.014	1.019	0.996	1.002	1	
32)	T 2 Ethyl-t-Butyl Ether (ETBE)		2.128	2.160	2.160	2.225	2.217	2.212	2.184	2
33)	T 2 c-1,2-Dichloroethene		0.709	0.717	0.709	0.730	0.731	0.720	0.719	1
34)	T 2 2,2-Dichloropropane		0.980	0.913	0.894	0.906	0.892	0.863	0.908	4
35)	T 2 2-Butanone		0.411	0.370	0.364	0.370	0.365	0.376	5	
36)	T 2 Propionitrile		0.120	0.115	0.115	0.116	0.114	0.116	2	
37)	T 2 Methacrylonitrile		0.489	0.477	0.468	0.478	0.470	0.476	2	
38)	T 2 Bromochloromethane		0.425	0.411	0.418	0.433	0.438	0.429	0.426	2
39)	T 2 Tetrahydrofuran		0.265	0.239	0.244	0.243	0.237	0.246	4	
40)	T 2 Chloroform	C	1.181	1.160	1.144	1.173	1.171	1.155	1.164	1
42)	T 2 1,1,1-Trichloroethane		0.922	0.963	0.935	0.974	0.967	0.967	0.955	2
43)	T 2 Cyclohexane		0.905	0.832	0.849	0.808	0.776	0.834	6	
44)	T 2 1,1-Dichloropropene		0.788	0.811	0.811	0.856	0.851	0.842	0.827	3
45)	T 2 Carbon Tetrachloride		0.574	0.661	0.701	0.698	0.741	0.745	0.696	9

67) T 4 Ethyl Methacrylate	0.697	0.704	0.735	0.737	0.747	0.724	3
68) T 4 1,1,2-Trichloroethane	0.334	0.371	0.363	0.373	0.366	0.366	4
69) T 4 Tetrachloroethene	0.674	0.600	0.571	0.570	0.554	0.528	9
70) T 4 1,3-Dichloropropane	0.756	0.737	0.746	0.768	0.752	0.744	1
71) T 4 2-Hexanone	0.386	0.376	0.378	0.376	0.377	0.379	1
72) T 4 Dibromochloromethane	0.408	0.431	0.429	0.445	0.449	0.461	4
73) T 4 1,2-Dibromoethane	0.439	0.450	0.441	0.454	0.455	0.450	1
74) T 4 Chlorobenzene	1.258	1.247	1.241	1.290	1.275	1.269	1
75) T 4 1,1,1,2-Tetrachloroethane	0.413	0.402	0.402	0.420	0.417	0.421	2
76) T 4 Ethylbenzene	2.158	2.076	2.089	2.175	2.150	2.144	2
77) T 4 p/m-Xylene	1.621	1.654	1.650	1.647	1.706	1.689	2
78) T 4 o-Xylene	1.793	1.719	1.700	1.706	1.776	1.748	2
79) T 4 Styrene	1.378	1.428	1.446	1.527	1.517	1.503	4
80) T 4 Isopropylbenzene	2.013	2.036	2.053	2.140	2.127	2.123	3
82) T 4 1,2,3-Trichloropropane	0.782	0.768	0.752	0.789	0.785	0.777	2
83) T 4 Bromobenzene	0.529	0.536	0.538	0.557	0.549	0.542	2
84) T 4 n-Propylbenzene	2.344	2.345	2.335	2.467	2.464	2.438	3
85) T 4 t-1,4-Dichloro-2-Butene	0.172	0.172	0.172	0.179	0.178	0.173	2
86) T 4 2-Chlorotoluene	1.454	1.473	1.449	1.510	1.503	1.492	2

97) T	4	1,3,5-Trimethylbenzene	1.681	1.687	1.706	1.787	1.795	1.769	1.738	3	
98) I	5	1,4-Dichlorobenzene-d4									
99) T	5	Bromoform	S	0.535	0.519	0.508	0.549	0.564	0.600	0.546	6
100) T	5	1,1,2,2-Tetrachloroethane	S	1.034	1.108	1.113	1.147	1.110	1.129	1.107	3
101) T	5	4-Chlorotoluene		3.394	3.293	3.301	3.400	3.336	3.348	3.345	1
102) T	5	Cyclohexanone		0.058	0.051	0.055	0.053	0.050	0.050	0.053	6
103) T	5	1,2,4-Trimethylbenzene		3.450	3.414	3.465	3.571	3.529	3.529	3.493	2
104) T	5	tert-Butylbenzene		0.704	0.719	0.734	0.763	0.758	0.759	0.740	3
105) T	5	p-Isopropyltoluene		3.410	3.286	3.328	3.443	3.429	3.453	3.392	2
106) T	5	sec-Butylbenzene		3.705	3.830	3.891	4.017	4.006	4.030	3.913	3
107) T	5	1,3-Dichlorobenzene		1.994	1.915	1.957	1.990	1.977	1.970	1.967	1
108) T	5	1,4-Dichlorobenzene		2.040	1.987	1.985	2.052	2.016	2.010	2.015	1
109) T	5	1,2-Dichlorobenzene		1.960	1.905	1.926	1.962	1.955	1.917	1.937	1
110) T	5	n-Butylbenzene		2.725	2.734	2.827	2.967	2.985	2.993	2.872	4
111) T	5	1,2-Dibromo-3-Chloropropane		0.228	0.217	0.217	0.225	0.230	0.229	0.226	2
112) T	5	1,2,4-Trichlorobenzene		1.119	1.145	1.219	1.285	1.311	1.298	1.229	7
113) T	5	Hexachloro-1,3-Butadiene		0.434	0.388	0.393	0.403	0.403	0.396	0.403	4
114) T	5	Naphthalene		2.773	2.991	3.281	3.470	3.502	3.502	3.203	10
115) T	5	1,2,3-Trichlorobenzene		1.031	1.053	1.113	1.176	1.195	1.188	1.126	6

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---SURROGATES---
41) S 2 Dibromofluoromethane      0.436  0.438  0.439  0.440  0.441  0.444  0.447  0.441  1
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46) S 2 1,2-Dichloroethane-d4     0.573  0.581  0.584  0.583  0.581  0.588  0.585  0.582  1
-----
62) S 3 Toluene-d8                1.190  1.195  1.189  1.198  1.199  1.192  1.193  1.194  0
-----
81) S 4 1,4-Bromofluorobenzene    0.499  0.483  0.485  0.487  0.495  0.497  0.497  0.492  1
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Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar012.d
 Report Date: 03/07/2017 19:14

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_VV.i Injection Date and Time: 07-MAR-2017 18:51
 Sample Name: ICV V022117B/V030317B Initial Calibration Date(s): 07-MAR-2017 07-MAR-2017
 Sublist used: all.sub Initial Calibration Time(s): 15:16 17:58
 Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D Drift	Curve Type
Ethanol	0.154	0.164	0.00	-6	20	Averaged
Tert-Butyl Alcohol (TBA)	1.448	1.593	0.00	-10	20	Averaged
Dichlorodifluoromethane	0.623	0.662	0.00	-6	20	Averaged
Chloromethane	0.707	0.751	0.10	-6	20	Averaged
Vinyl Chloride	0.687	0.750	0.00	-9	20	Averaged
Bromomethane	0.385	0.379	0.00	2	20	Averaged
Chloroethane	0.398	0.432	0.00	-9	20	Averaged
1,3-Butadiene	0.532	0.493	0.00	7	20	Averaged
Trichlorofluoromethane	0.742	0.807	0.00	-9	20	Averaged
Diethyl Ether	0.573	0.594	0.00	-4	20	Averaged
Acetone	0.075	0.078	0.00	-4	20	Averaged
Iodomethane	0.782	0.789	0.00	-1	20	Averaged
1,1-Dichloroethene	0.851	0.837	0.00	2	20	Averaged
1,1,2-Trichloro-1,2,2-Trifluo	0.465	0.462	0.00	1	20	Averaged
Isopropanol	0.051	0.055	0.00	-8	20	Averaged
Carbon Disulfide	1.769	1.680	0.00	5	20	Averaged
Acetonitrile	0.553	0.546	0.00	1	20	Averaged
Acrylonitrile	0.303	0.303	0.00	0	20	Averaged
Allyl Chloride	0.349	0.339	0.00	3	20	Averaged
Acrolein	0.135	0.123	0.00	9	20	Averaged
Methylene Chloride	0.674	0.660	0.00	2	20	Averaged
t-1,2-Dichloroethene	0.625	0.616	0.00	1	20	Averaged
Isobutyl Alcohol	0.064	0.065	0.00	-2	20	Averaged
Methyl-t-Butyl Ether (MTBE)	2.180	2.241	0.00	-3	20	Averaged
Hexane	0.596	0.519	0.00	13	20	Averaged
1,1-Dichloroethane	1.115	1.151	0.10	-3	20	Averaged
Vinyl Acetate	2.415	2.411	0.00	0	20	Averaged
Diisopropyl Ether (DIPE)	2.109	2.171	0.00	-3	20	Averaged
Chloroprene	1.002	0.989	0.00	1	20	Averaged
Ethyl-t-Butyl Ether (ETBE)	2.184	2.219	0.00	-2	20	Averaged
c-1,2-Dichloroethene	0.719	0.719	0.00	0	20	Averaged
2,2-Dichloropropane	0.908	0.814	0.00	10	20	Averaged
2-Butanone	0.376	0.368	0.00	2	20	Averaged
Propionitrile	0.116	0.114	0.00	2	20	Averaged
Methacrylonitrile	0.476	0.480	0.00	-1	20	Averaged
Bromochloromethane	0.426	0.447	0.00	-5	20	Averaged
Tetrahydrofuran	0.246	0.248	0.00	-1	20	Averaged
Chloroform	1.164	1.146	0.00	2	20	Averaged
1,1,1-Trichloroethane	0.955	0.942	0.00	1	20	Averaged
Cyclohexane	0.834	0.771	0.00	8	20	Averaged
1,1-Dichloropropene	0.827	0.843	0.00	-2	20	Averaged
Carbon Tetrachloride	0.696	0.741	0.00	-6	20	Averaged
Benzene	1.671	1.659	0.00	1	20	Averaged
1,2-Dichloroethane	0.592	0.605	0.00	-2	20	Averaged
2-Methyl-2-Butanol (TAA)	0.047	0.048	0.00	-2	20	Averaged
Tert-Amyl-Methyl Ether (TAME)	1.341	1.356	0.00	-1	20	Averaged
Thiophene	0.881	0.886	0.00	-1	20	Averaged
2,2,4-Trimethyl Pentane	0.785	0.704	0.00	10	20	Averaged

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar012.d
 Report Date: 03/07/2017 19:14

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_VV.i Injection Date and Time: 07-MAR-2017 18:51
 Sample Name: ICV V022117B/V030317B Initial Calibration Date(s): 07-MAR-2017 07-MAR-2017
 Sublist used: all.sub Initial Calibration Time(s): 15:16 17:58
 Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D Drift	Curve Type
Trichloroethene	0.438	0.428	0.00	2	20	Averaged
1,2-Dichloropropane	0.414	0.430	0.00	-4	20	Averaged
Dibromomethane	0.262	0.261	0.00	0	20	Averaged
Methyl Methacrylate	0.369	0.366	0.00	1	20	Averaged
1,4-Dioxane	0.007	0.007	0.00	0	20	Averaged
Bromodichloromethane	0.544	0.556	0.00	-2	20	Averaged
2-Chloroethyl Vinyl Ether	0.296	0.298	0.00	-1	20	Averaged
c-1,3-Dichloropropene	0.691	0.697	0.00	-1	20	Averaged
Toluene	1.789	1.780	0.00	1	20	Averaged
4-Methyl-2-Pentanone	0.203	0.208	0.00	-2	20	Averaged
t-1,3-Dichloropropene	0.696	0.730	0.00	-5	20	Averaged
Ethyl Methacrylate	0.724	0.733	0.00	-1	20	Averaged
1,1,2-Trichloroethane	0.362	0.368	0.00	-2	20	Averaged
Tetrachloroethene	0.583	0.558	0.00	4	20	Averaged
1,3-Dichloropropane	0.751	0.765	0.00	-2	20	Averaged
2-Hexanone	0.379	0.382	0.00	-1	20	Averaged
Dibromochloromethane	0.437	0.451	0.00	-3	20	Averaged
1,2-Dibromoethane	0.448	0.457	0.00	-2	20	Averaged
Chlorobenzene	1.263	1.283	0.30	-2	20	Averaged
1,1,1,2-Tetrachloroethane	0.413	0.438	0.00	-6	20	Averaged
Ethylbenzene	2.132	2.136	0.00	0	20	Averaged
p/m-Xylene	1.665	1.683	0.00	-1	20	Averaged
o-Xylene	1.744	1.762	0.00	-1	20	Averaged
Styrene	1.467	1.513	0.00	-3	20	Averaged
Isopropylbenzene	2.082	2.142	0.00	-3	20	Averaged
1,2,3-Trichloropropane	0.775	0.802	0.00	-3	20	Averaged
Bromobenzene	0.542	0.564	0.00	-4	20	Averaged
n-Propylbenzene	2.399	2.430	0.00	-1	20	Averaged
t-1,4-Dichloro-2-Butene	0.175	0.185	0.00	-6	20	Averaged
2-Chlorotoluene	1.480	1.499	0.00	-1	20	Averaged
1,3,5-Trimethylbenzene	1.738	1.760	0.00	-1	20	Averaged
Bromoform	0.546	0.563	0.10	-3	20	Averaged
1,1,2,2-Tetrachloroethane	1.107	1.152	0.30	-4	20	Averaged
4-Chlorotoluene	3.345	3.361	0.00	0	20	Averaged
Cyclohexanone	0.053	0.060	0.00	-13	20	Averaged
1,2,4-Trimethylbenzene	3.493	3.475	0.00	1	20	Averaged
tert-Butylbenzene	0.740	0.755	0.00	-2	20	Averaged
p-Isopropyltoluene	3.392	3.451	0.00	-2	20	Averaged
sec-Butylbenzene	3.913	3.982	0.00	-2	20	Averaged
1,3-Dichlorobenzene	1.967	1.981	0.00	-1	20	Averaged
1,4-Dichlorobenzene	2.015	2.039	0.00	-1	20	Averaged
1,2-Dichlorobenzene	1.937	1.975	0.00	-2	20	Averaged
n-Butylbenzene	2.872	2.913	0.00	-1	20	Averaged
1,2-Dibromo-3-Chloropropane	0.226	0.244	0.00	-8	20	Averaged
1,2,4-Trichlorobenzene	1.229	1.289	0.00	-5	20	Averaged
Hexachloro-1,3-Butadiene	0.403	0.407	0.00	-1	20	Averaged
Naphthalene	3.203	3.408	0.00	-6	20	Averaged
1,2,3-Trichlorobenzene	1.126	1.165	0.00	-3	20	Averaged

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar012.d
 Report Date: 03/07/2017 19:14

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_VV.i Injection Date and Time: 07-MAR-2017 18:51
 Sample Name: ICV V022117B/V030317B Initial Calibration Date(s): 07-MAR-2017 07-MAR-2017
 Sublist used: all.sub Initial Calibration Time(s): 15:16 17:58
 Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
=====						
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
=====						
Dibromofluoromethane	0.441	0.448	0.00	-2	20	Averaged
1,2-Dichloroethane-d4	0.582	0.580	0.00	0	20	Averaged
Toluene-d8	1.194	1.186	0.00	1	20	Averaged
1,4-Bromofluorobenzene	0.492	0.493	0.00	0	20	Averaged

page 3

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar004.d
 Injection date and time: 07-MAR-2017 15:16

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m

Sublist used: all

Calibration date and time: 07-MAR-2017 19:09

Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: BFB/IC 0.5 PPB V030717A

Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV(Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.773	65	110254	250.000	0.01
4)*Pentafluorobenzene	(2)	7.211	168	346055	50.000	0.00
47)*1,4-Difluorobenzene	(3)	8.134	114	546764	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.715	117	502727	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.599	152	260888	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	7.138	113	150951	49.724	0.01
SpikedAmount 50.000	Recovery =		0.000			
46)\$1,2-Dichloroethane-d4	(2)	7.573	65	198356	49.646	0.00
SpikedAmount 50.000	Recovery =		0.000			
62)\$Toluene-d8	(3)	9.954	98	650814	49.820	0.00
SpikedAmount 50.000	Recovery =		0.000			
81)\$1,4-Bromofluorobenzene	(4)	13.157	95	250682	50.182	0.00
SpikedAmount 50.000	Recovery =		0.000			
Target Compounds						
2) Ethanol	(1)	3.457	45	1108	17.742	1
3) Tert-Butyl Alcohol (TBA)	(1)	4.899	59	1171	1.733	1
5) Dichlorodifluoromethane	(2)	1.916	85	1240	0.261	78
6) Chloromethane	(2)	2.168	50	3690	0.734	88
7) Vinyl Chloride	(2)	2.262	62	2191	0.472	1
8) Bromomethane	(2)	2.676	94	3703	1.389	85
9) Chloroethane	(2)	2.813	64	1661	0.575	52
10) 1,3-Butadiene	(2)	2.309	54	1818	0.489	58
11) Trichlorofluoromethane	(2)	3.153	101	2499	0.463	35
12) Diethyl Ether	(2)	3.594	59	1880	0.459	66
13) Acetone	(2)	4.024	58	67	0.125	1
14) Iodomethane	(2)	4.139	142	567	0.0949	39
15) 1,1-Dichloroethene	(2)	3.919	61	2667	0.448	91
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.935	101	1398	0.401	88
17) Isopropanol	(2)	4.281	45	685	1.979	79
18) Carbon Disulfide	(2)	4.239	76	6415	0.519	74
19) Acetonitrile	(2)	4.490	41	2763	0.700	10
20) Acrylonitrile	(2)	5.057	53	328	0.157	1
21) Allyl Chloride	(2)	4.480	76	1129	0.457	86
22) Acrolein	(2)	3.782	56	819	0.894	59
23) Methylene Chloride	(2)	4.674	84	4135	0.878	90

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar004.d
 Injection date and time: 07-MAR-2017 15:16

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: BFB/IC 0.5 PPB V030717A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	5.093	96	2230	0.517	89
25) Isobutyl Alcohol	(2)	0.000		0	N.D.	
26) Methyl-t-Butyl Ether (MTBE)	(2)	5.109	73	6667	0.435	89
27) Hexane	(2)	5.502	57	2738	0.657	32
28) 1,1-Dichloroethane	(2)	5.707	63	3826	0.485	85
29) Vinyl Acetate	(2)	5.785	43	939	0.0556	47
30) Diisopropyl Ether (DIPE)	(2)	5.827	45	7624	0.518	83
31) Chloroprene	(2)	5.822	53	3330	0.475	89
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.325	59	6656	0.432	93
33) c-1,2-Dichloroethene	(2)	6.514	96	2824	0.559	87
34) 2,2-Dichloropropane	(2)	6.498	77	3788	0.604	88
35) 2-Butanone	(2)	6.567	43	2727	1.083	1
36) Propionitrile	(2)	0.000		0	N.D.	
37) Methacrylonitrile	(2)	6.813	41	2824	0.871	48
38) Bromochloromethane	(2)	6.829	130	1062	0.355	79
39) Tetrahydrofuran	(2)	6.897	42	667	0.396	1
40) Chloroform	(2)	6.934	83	4129	0.509	42
42) 1,1,1-Trichloroethane	(2)	7.175	97	3298	0.489	1
43) Cyclohexane	(2)	7.217	84	12034	2.048	74
44) 1,1-Dichloropropene	(2)	7.384	75	2763	0.467	86
45) Carbon Tetrachloride	(2)	7.395	117	1986	0.436	91
48) Benzene	(3)	7.652	78	9046	0.493	1
49) 1,2-Dichloroethane	(3)	7.668	62	3124	0.486	1
50) 2-Methyl-2-Butanol (TAA)	(3)	7.683	59	619	1.210	66
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.809	73	7141	0.472	92
52) Thiophene	(3)	7.909	84	2526	0.257	40
53) 2,2,4-Trimethyl Pentane	(3)	7.762	57	5339	0.616	64
54) Trichloroethene	(3)	8.464	95	2567	0.536	96
55) 1,2-Dichloropropane	(3)	8.737	63	2346	0.505	86
56) Dibromomethane	(3)	8.879	93	1315	0.455	95
57) Methyl Methacrylate	(3)	8.884	69	1954	0.477	78
58) 1,4-Dioxane	(3)	8.900	88	82	1.045	1
59) Bromodichloromethane	(3)	9.078	83	2662	0.443	92
60) 2-Chloroethyl Vinyl Ether	(3)	9.455	63	1406	0.432	60
61) c-1,3-Dichloropropene	(3)	9.623	75	3508	0.473	84
63) Toluene	(3)	10.032	91	10186	0.517	95
64) 4-Methyl-2-Pentanone	(3)	9.812	58	1139	0.505	1

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar004.d
 Injection date and time: 07-MAR-2017 15:16

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: BFB/IC 0.5 PPB V030717A Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.294	75	3111	0.460	85
67) Ethyl Methacrylate	(4)	10.415	69	3272	0.443	58
68) 1,1,2-Trichloroethane	(4)	10.525	83	1668	0.445	94
69) Tetrachloroethene	(4)	10.703	166	3169	0.553	94
70) 1,3-Dichloropropane	(4)	10.724	76	3778	0.489	84
71) 2-Hexanone	(4)	10.829	43	1456	0.383	83
72) Dibromochloromethane	(4)	11.007	129	2226	0.497	80
73) 1,2-Dibromoethane	(4)	11.144	107	1964	0.430	98
74) Chlorobenzene	(4)	11.752	112	6335	0.488	33
75) 1,1,1,2-Tetrachloroethane	(4)	11.841	131	2026	0.479	1
76) Ethylbenzene	(4)	11.883	91	11275	0.516	98
77) p/m-Xylene	(4)	12.025	91	16302	0.975	98
78) o-Xylene	(4)	12.512	91	9016	0.502	95
79) Styrene	(4)	12.528	104	6809	0.444	98
80) Isopropylbenzene	(4)	12.968	105	10104	0.470	98
82) 1,2,3-Trichloropropane	(4)	13.388	75	3665	0.462	94
83) Bromobenzene	(4)	13.356	156	2629	0.470	87
84) n-Propylbenzene	(4)	13.477	91	11947	0.482	99
85) t-1,4-Dichloro-2-Butene	(4)	13.388	53	728	0.405	1
86) 2-Chlorotoluene	(4)	13.592	91	7558	0.498	95
87) 1,3,5-Trimethylbenzene	(4)	13.692	105	8781	0.489	100
89) Bromoform	(5)	12.764	173	1092	0.382	67
90) 1,1,2,2-Tetrachloroethane	(5)	13.330	83	2649	0.443	94
91) 4-Chlorotoluene	(5)	13.718	91	9007	0.508	92
92) Cyclohexanone	(5)	13.073	55	476	1.660	1
93) 1,2,4-Trimethylbenzene	(5)	14.164	105	9223	0.495	51
94) tert-Butylbenzene	(5)	14.101	134	1868	0.469	92
95) p-Isopropyltoluene	(5)	14.557	119	8871	0.494	92
96) sec-Butylbenzene	(5)	14.384	105	9894	0.472	94
97) 1,3-Dichlorobenzene	(5)	14.515	146	4702	0.453	98
98) 1,4-Dichlorobenzene	(5)	14.630	146	5302	0.495	49
99) 1,2-Dichlorobenzene	(5)	15.092	146	4722	0.461	96
100) n-Butylbenzene	(5)	15.071	91	7906	0.511	93
101) 1,2-Dibromo-3-Chloropropane	(5)	16.062	75	319	0.271	73
102) 1,2,4-Trichlorobenzene	(5)	17.116	180	2774	0.414	96
103) Hexachloro-1,3-Butadiene	(5)	17.325	225	944	0.449	95
104) Naphthalene	(5)	17.420	128	4794	0.280	92

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar004.d
Injection date and time: 07-MAR-2017 15:16

Instrument ID: GCMS_VV.i
Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m
Calibration date and time: 07-MAR-2017 19:09

Sublist used: all

Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: BFB/IC 0.5 PPB V030717A

Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	17.697	180	2259	0.368	92

page 4 of 4

Data File: /chem/v08a/GCHS_VV.1/170307.b/07mar004.d

Date : 07-MAR-2017 15:16

Client ID:

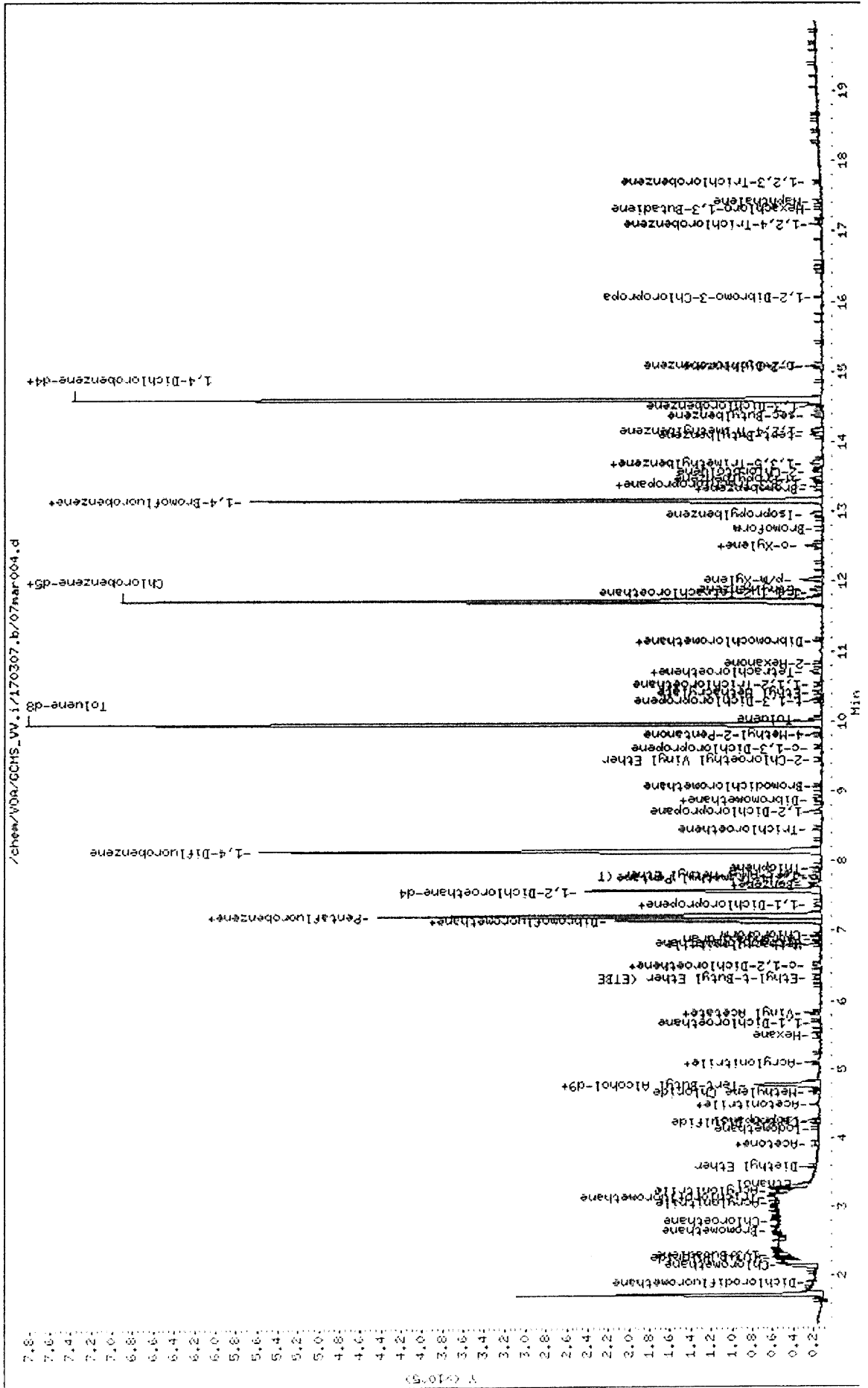
Sample Info: BFB/IC 0.5 PPB V030717A

Instrument: GCHS_VV.1

Operator: 1073

Column diameter: 0.00

Column phase:



Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar005.d
 Injection date and time: 07-MAR-2017 15:43

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m

Sublist used: all

Calibration date and time: 07-MAR-2017 19:09

Date, time and analyst ID of latest file update: 07-Mar-2017 19:13 zz9h

Sample Name: IC 1 PPB V030717A

Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV(Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.779	65	105619	250.000	0.00
4)*Pentafluorobenzene	(2)	7.211	168	343619	50.000	0.00
47)*1,4-Difluorobenzene	(3)	8.134	114	540019	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.715	117	501654	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.599	152	256631	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	7.143	113	150665	49.720	0.00
SpikedAmount 50.000	Recovery =		0.000			
46)\$1,2-Dichloroethane-d4	(2)	7.573	65	199725	49.929	0.00
SpikedAmount 50.000	Recovery =		0.000			
62)\$Toluene-d8	(3)	9.954	98	645479	50.058	0.00
SpikedAmount 50.000	Recovery =		0.000			
81)\$1,4-Bromofluorobenzene	(4)	13.157	95	242390	49.118	0.00
SpikedAmount 50.000	Recovery =		0.000			
Target Compounds						
2) Ethanol	(1)	3.457	45	874	13.446	1
3) Tert-Butyl Alcohol (TBA)	(1)	4.899	59	2737M	4.473	81
5) Dichlorodifluoromethane	(2)	1.916	85	3877	0.906	70
6) Chloromethane	(2)	2.157	50	4618M	0.951	14
7) Vinyl Chloride	(2)	2.257	62	4574	0.968	80
8) Bromomethane	(2)	2.676	94	5538	2.095	95
9) Chloroethane	(2)	2.823	64	2438	0.890	93
10) 1,3-Butadiene	(2)	2.309	54	3974M	1.087	95
11) Trichlorofluoromethane	(2)	3.159	101	5089	0.998	56
12) Diethyl Ether	(2)	3.589	59	3519	0.893	83
13) Acetone	(2)	4.050	58	773	1.501	1
14) Iodomethane	(2)	4.150	142	2387	0.444	63
15) 1,1-Dichloroethene	(2)	3.908	61	5890	1.007	97
16) 1,1,2-Trichloro-1,2,2-Trifluoro	(2)	3.914	101	2864	0.897	71
17) Isopropanol	(2)	4.286	45	1394	3.953	88
18) Carbon Disulfide	(2)	4.239	76	12734	1.047	90
19) Acetonitrile	(2)	4.490	41	7693	2.026	1
20) Acrylonitrile	(2)	5.067	53	2160	1.038	1
21) Allyl Chloride	(2)	4.490	76	2479	1.032	96
22) Acrolein	(2)	3.777	56	1886	2.031	92
23) Methylene Chloride	(2)	4.663	84	6224	1.344	95

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar005.d
 Injection date and time: 07-MAR-2017 15:43

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:13 zz9h

Sample Name: IC 1 PPB V030717A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	
	Ref.	RT			Amount	QValue
					(ug/l)	
24) t-1,2-Dichloroethene	(2)	5.098	96	4520	1.052	91
25) Isobutyl Alcohol	(2)	7.673	43	924	2.086	18
26) Methyl-t-Butyl Ether (MTBE)	(2)	5.104	73	14610	0.975	77
27) Hexane	(2)	5.507	57	4564	1.114	85
28) 1,1-Dichloroethane	(2)	5.701	63	7459	0.973	95
29) Vinyl Acetate	(2)	5.812	43	17044	1.027	91
30) Diisopropyl Ether (DIPE)	(2)	5.827	45	14833	1.024	95
31) Chloroprene	(2)	5.833	53	7247	1.052	87
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.325	59	14627	0.975	95
33) c-1,2-Dichloroethene	(2)	6.514	96	4872	0.986	97
34) 2,2-Dichloropropane	(2)	6.504	77	6736	1.080	93
35) 2-Butanone	(2)	6.556	43	3005	1.163	1
36) Propionitrile	(2)	6.614	54	215	0.270	1
37) Methacrylonitrile	(2)	6.818	41	3173	0.969	91
38) Bromochloromethane	(2)	6.813	130	2921	0.998	96
39) Tetrahydrofuran	(2)	6.913	42	1389	0.823	53
40) Chloroform	(2)	6.939	83	8114	1.014	93
42) 1,1,1-Trichloroethane	(2)	7.170	97	6337	0.966	1
43) Cyclohexane	(2)	7.211	84	15472	2.700	79
44) 1,1-Dichloropropene	(2)	7.390	75	5414	0.953	99
45) Carbon Tetrachloride	(2)	7.379	117	4543	0.950	94
48) Benzene	(3)	7.647	78	18512	1.026	1
49) 1,2-Dichloroethane	(3)	7.678	62	6378	0.998	93
50) 2-Methyl-2-Butanol (TAA)	(3)	7.678	59	2236	4.389	80
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.804	73	14047	0.970	94
52) Thiophene	(3)	7.914	84	9459	0.994	95
53) 2,2,4-Trimethyl Pentane	(3)	7.757	57	9116	1.075	86
54) Trichloroethene	(3)	8.465	95	4982	1.053	96
55) 1,2-Dichloropropane	(3)	8.732	63	4290	0.959	92
56) Dibromomethane	(3)	8.873	93	2823	0.997	96
57) Methyl Methacrylate	(3)	8.894	69	4154	1.043	83
58) 1,4-Dioxane	(3)	8.910	88	761	9.872	22
59) Bromodichloromethane	(3)	9.073	83	5901	1.004	91
60) 2-Chloroethyl Vinyl Ether	(3)	9.440	63	2841	0.889	85
61) c-1,3-Dichloropropene	(3)	9.618	75	7377	0.988	91
63) Toluene	(3)	10.037	91	19848	1.027	97
64) 4-Methyl-2-Pentanone	(3)	9.812	58	2282	1.039	1

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar005.d
 Injection date and time: 07-MAR-2017 15:43

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m
 Calibration date and time: 07-MAR-2017 19:09

Sublist used: all

Date, time and analyst ID of latest file update: 07-Mar-2017 19:13 zz9h

Sample Name: IC 1 PPB V030717A
 Response via Initial Calibration

Misc Info: V020817D

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.294	75	6984	1.001	95
67) Ethyl Methacrylate	(4)	10.404	69	6872	0.946	88
68) 1,1,2-Trichloroethane	(4)	10.515	83	3350	0.922	96
69) Tetrachloroethene	(4)	10.709	166	6762	1.156	98
70) 1,3-Dichloropropane	(4)	10.730	76	7580	1.007	93
71) 2-Hexanone	(4)	10.824	43	4480	1.180	84
72) Dibromochloromethane	(4)	11.002	129	4094	0.933	94
73) 1,2-Dibromoethane	(4)	11.149	107	4407	0.980	95
74) Chlorobenzene	(4)	11.752	112	12626	0.996	98
75) 1,1,1,2-Tetrachloroethane	(4)	11.852	131	4144	1.001	95
76) Ethylbenzene	(4)	11.883	91	21650	1.012	97
77) p/m-Xylene	(4)	12.025	91	33196	1.988	98
78) o-Xylene	(4)	12.512	91	17246	0.985	99
79) Styrene	(4)	12.528	104	13823	0.939	98
80) Isopropylbenzene	(4)	12.963	105	20196	0.967	95
82) 1,2,3-Trichloropropane	(4)	13.388	75	7844	1.008	96
83) Bromobenzene	(4)	13.351	156	5308	0.976	93
84) n-Propylbenzene	(4)	13.477	91	23516	0.977	98
85) t-1,4-Dichloro-2-Butene	(4)	13.393	53	1696	0.967	90
86) 2-Chlorotoluene	(4)	13.587	91	14585	0.982	97
87) 1,3,5-Trimethylbenzene	(4)	13.692	105	16869	0.968	99
89) Bromoform	(5)	12.753	173	2746	0.980	87
90) 1,1,2,2-Tetrachloroethane	(5)	13.330	83	5308	0.934	90
91) 4-Chlorotoluene	(5)	13.718	91	17419	1.015	93
92) Cyclohexanone	(5)	13.073	55	1619	5.908	68
93) 1,2,4-Trimethylbenzene	(5)	14.164	105	17708	0.988	96
94) tert-Butylbenzene	(5)	14.106	134	3614	0.952	96
95) p-Isopropyltoluene	(5)	14.557	119	17503	1.005	95
96) sec-Butylbenzene	(5)	14.379	105	19018	0.947	95
97) 1,3-Dichlorobenzene	(5)	14.515	146	10232	1.013	98
98) 1,4-Dichlorobenzene	(5)	14.625	146	10468	1.012	78
99) 1,2-Dichlorobenzene	(5)	15.102	146	10058	1.011	99
100) n-Butylbenzene	(5)	15.071	91	13985	0.949	98
101) 1,2-Dibromo-3-Chloropropane	(5)	16.062	75	753	0.650	73
102) 1,2,4-Trichlorobenzene	(5)	17.116	180	5743	0.910	95
103) Hexachloro-1,3-Butadiene	(5)	17.331	225	2229	1.078	96
104) Naphthalene	(5)	17.425	128	11006	0.669	94

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar005.d
Injection date and time: 07-MAR-2017 15:43

Instrument ID: GCMS_VV.i
Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m
Calibration date and time: 07-MAR-2017 19:09

Sublist used: all

Date, time and analyst ID of latest file update: 07-Mar-2017 19:13 zz9h

Sample Name: IC 1 PPB V030717A

Misc Info: V020817D

Response via Initial Calibration

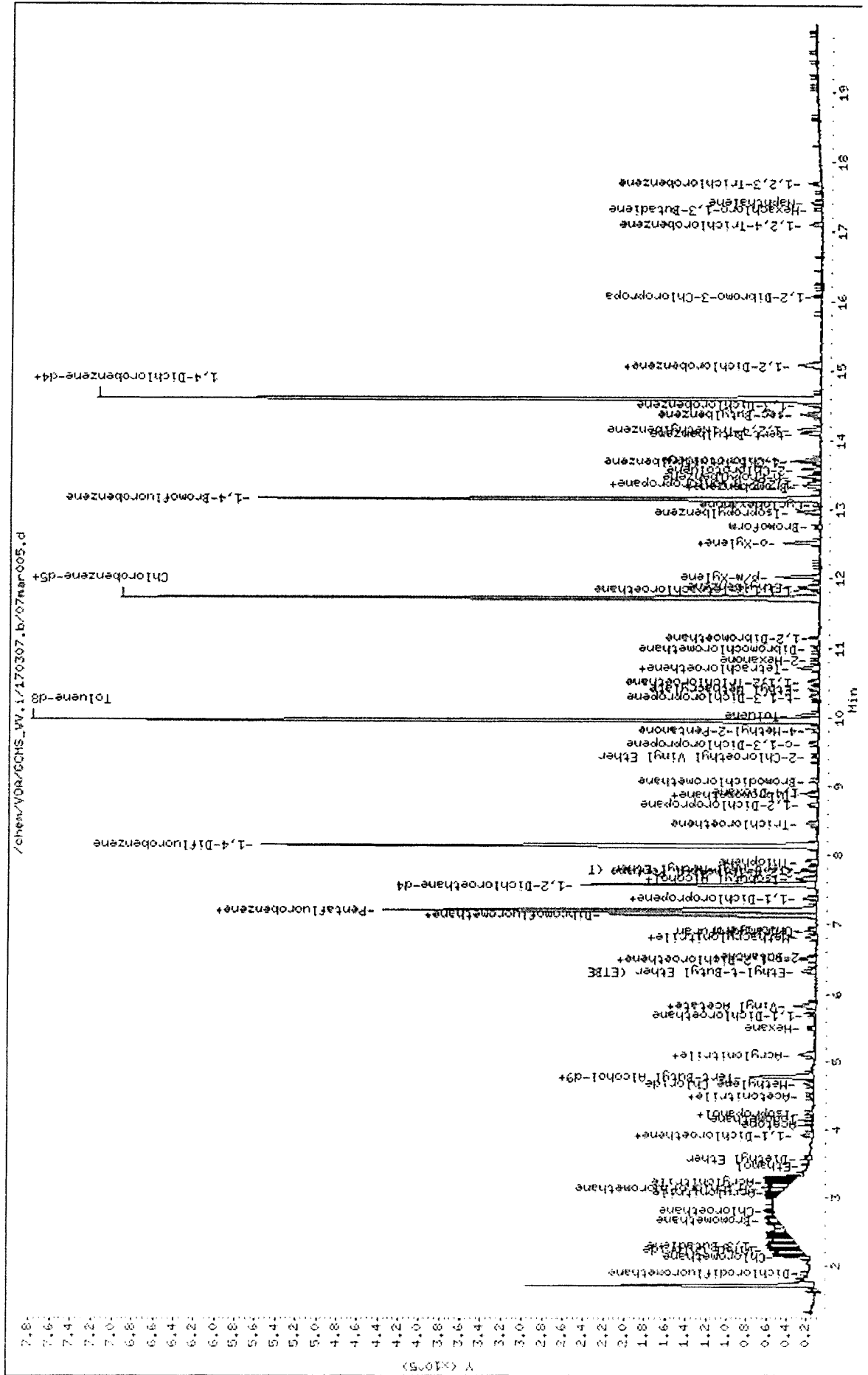
Compounds	I.S.		QIon	Area	On-Column	QValue
	Ref.	RT			Amount	
=====	=====	=====	=====	=====	=====	=====
105) 1,2,3-Trichlorobenzene	(5)	17.692	180	5292	0.916	97

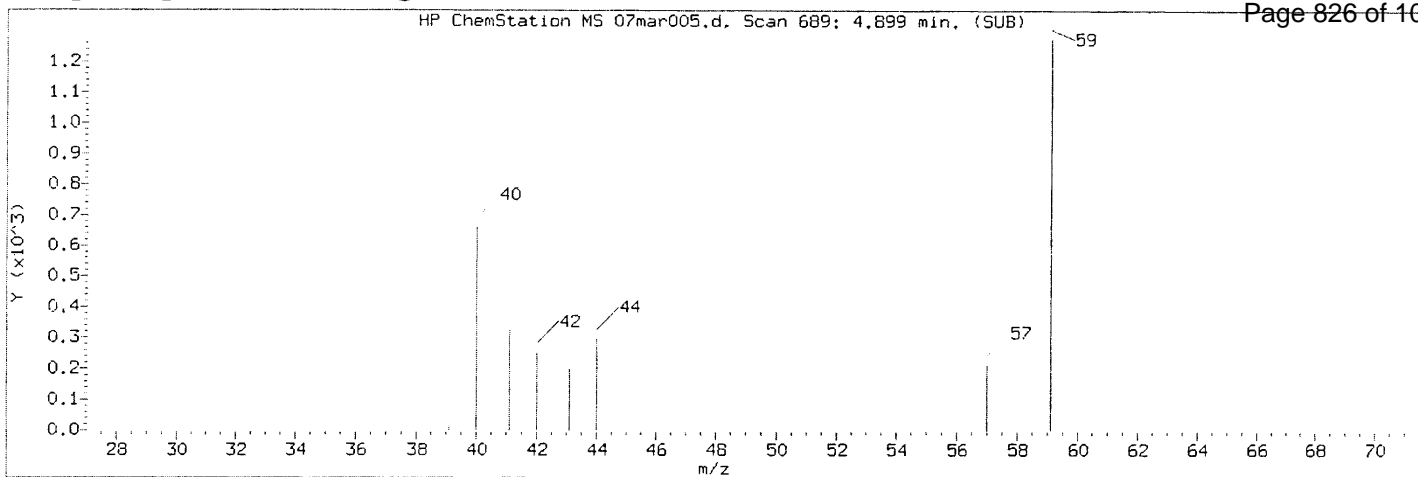
page 4 of 4

Data File: /chem/V08/GCHS_VV.1/170307.b/07mar005.d
 Date : 07-MAR-2017 15:43
 Client ID:
 Sample info: IC 1.PPB V630717H

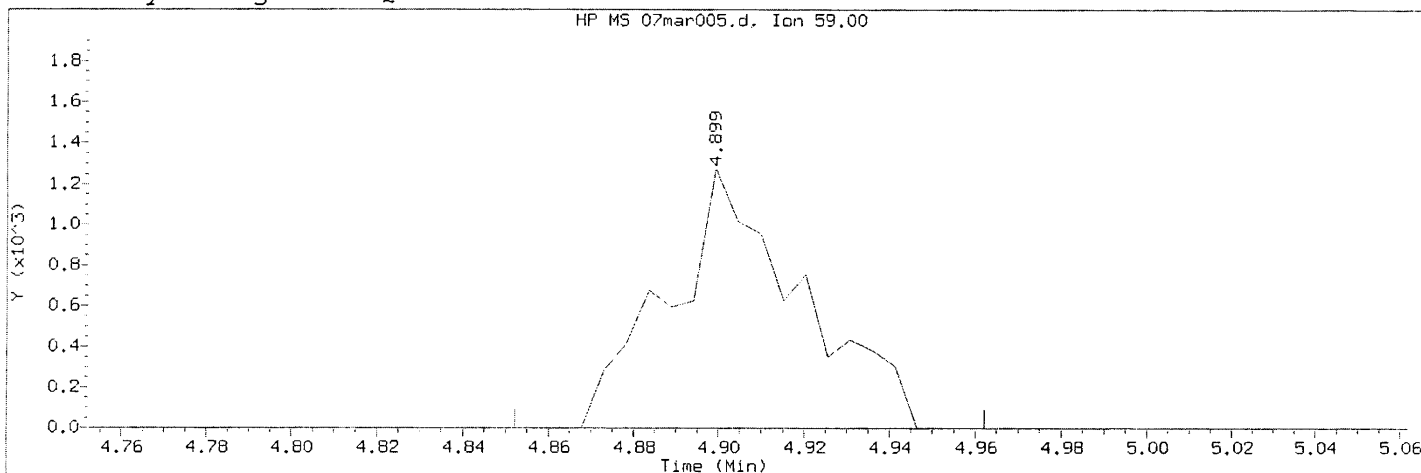
Instrument: GCHS_VV.1
 Operator: 1073
 Column diameter: 0.00

Column phase:





Manually Integrated Quant Ion



Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar005.d

Instrument ID: GCMS_VV.i

Injection date and time: 07-MAR-2017 15:43

Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m

Sublist used: all

Calibration date and time: 07-MAR-2017 19:09

Date, time and analyst ID of latest file update: 07-Mar-2017 19:13 zz9h

Sample Name: IC 1 PPB V030717A

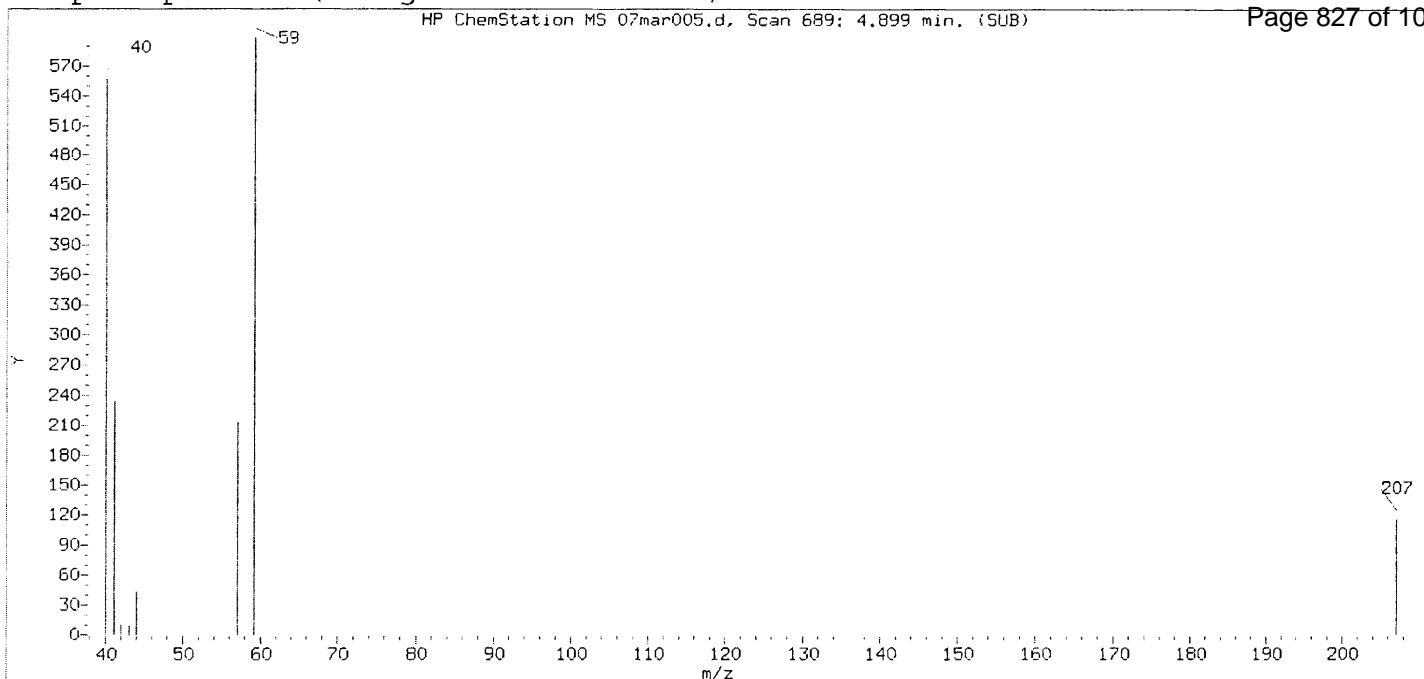
Compound Number : 3
Compound Name : Tert-Butyl Alcohol (TBA)
Scan Number : 689
Retention Time (minutes): 4.899
Quant Ion : 59.00
Area (flag) : 2737M
On-Column Amount (ug/l) : 4.4726
Integration start scan : 679 Integration stop scan: 700
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

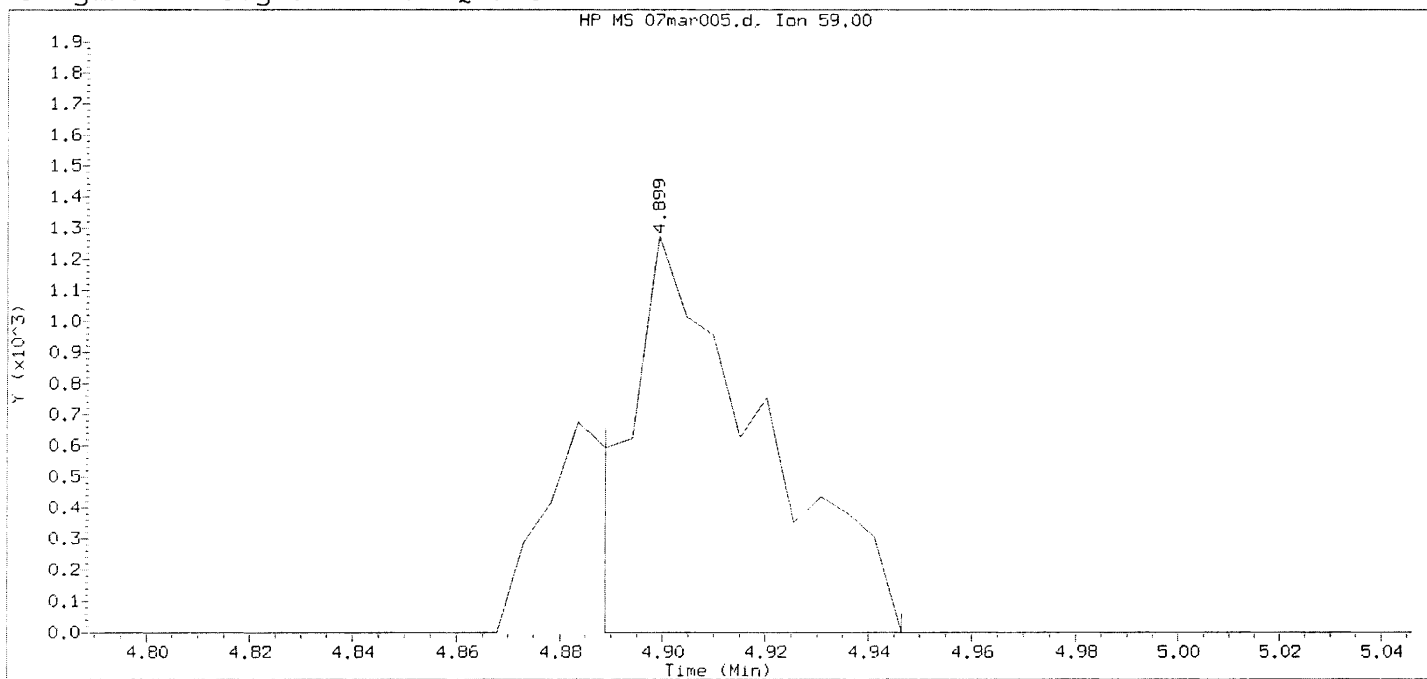
Digitally signed by John Elliott
Analyst responsible for change: on 03/07/2017 at 19:14.
Target 3.5 esignature user ID: zz9h

GC/MS audit/management approval: _____

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Original Integration of Quant Ion

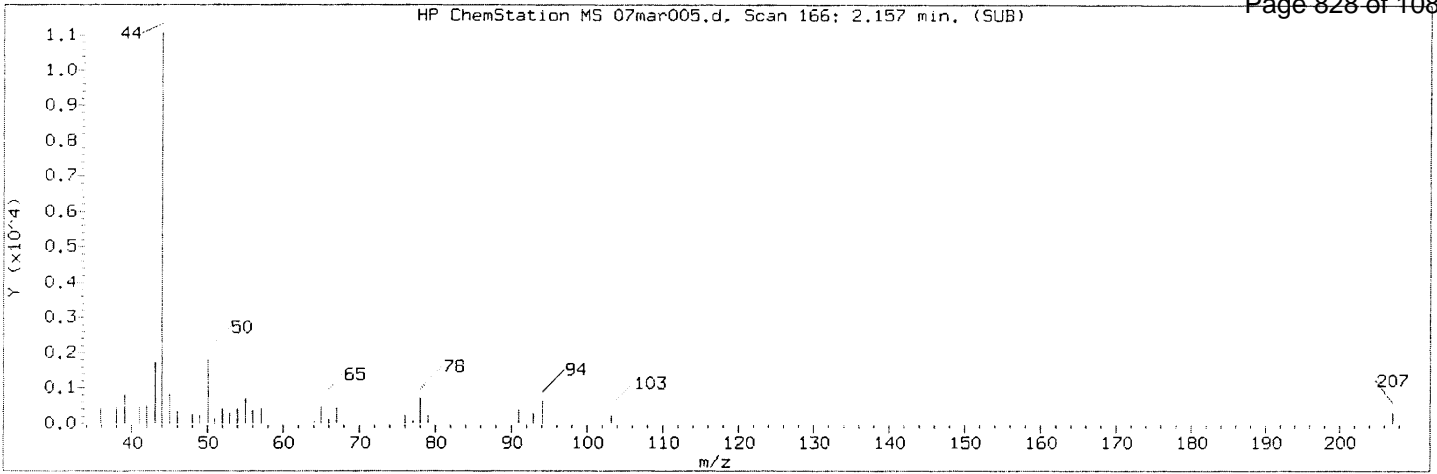


Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar005.d Instrument ID: GCMS_VV.i
 Injection date and time: 07-MAR-2017 15:43 Analyst ID: 1073

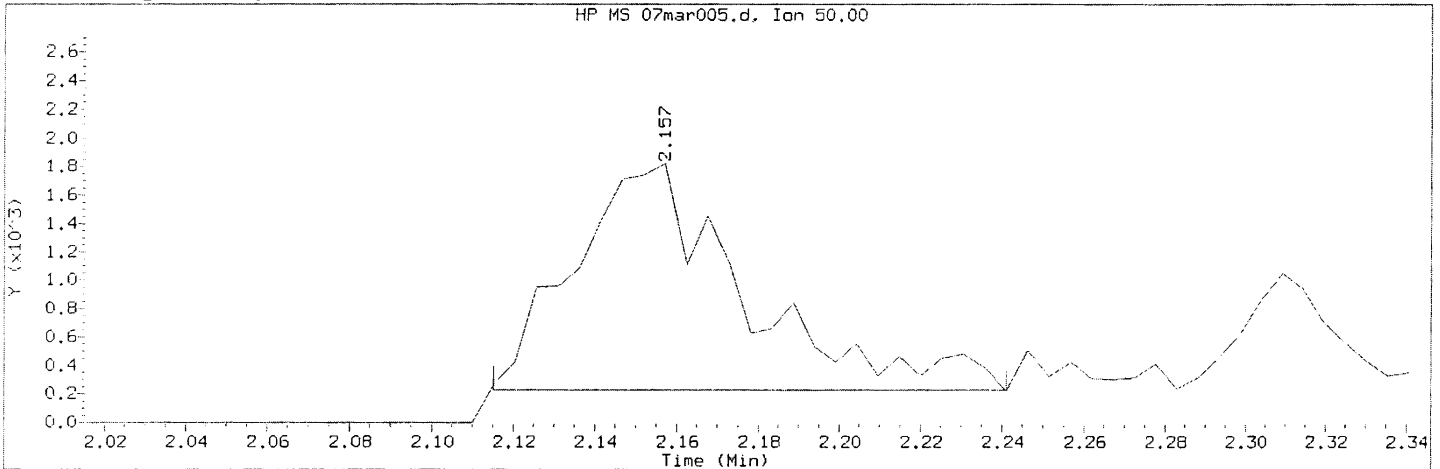
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 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 1 PPB V030717A

Compound Number : 3
 Compound Name : Tert-Butyl Alcohol (TBA)
 Scan Number : 689
 Retention Time (minutes): 4.899
 Quant Ion : 59.00
 Area : 2303
 On-column Amount (ug/l) : 4.1571
 Integration start scan : 686 Integration stop scan: 697
 Y at integration start : 0 Y at integration end: 0



Manually Integrated Quant Ion



Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar005.d Instrument ID: GCMS_VV.i
 Injection date and time: 07-MAR-2017 15:43 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:13 zz9h

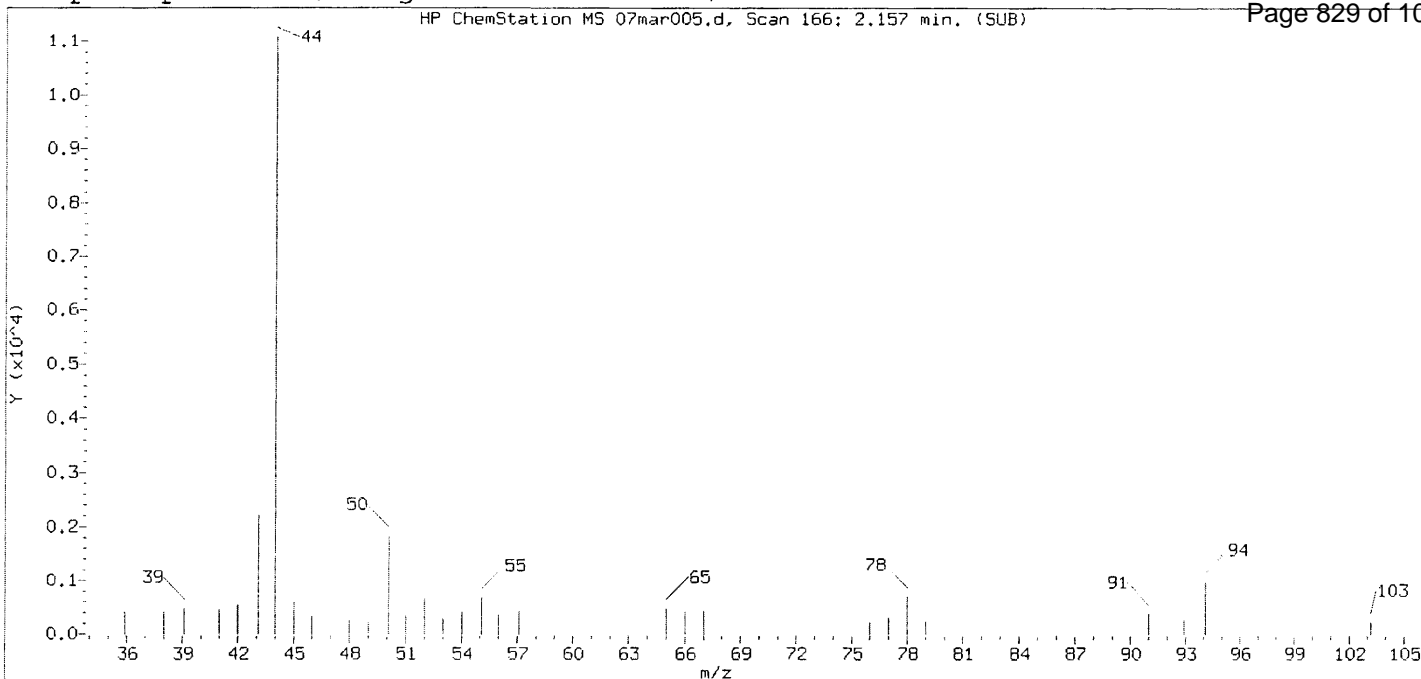
Sample Name: IC 1 PPB V030717A

Compound Number : 6
 Compound Name : Chloromethane
 Scan Number : 166
 Retention Time (minutes): 2.157
 Quant Ion : 50.00
 Area (flag) : 4618M
 On-Column Amount (ug/l) : 0.9510
 Integration start scan : 157 Integration stop scan: 181
 Y at integration start : 228 Y at integration end: 228

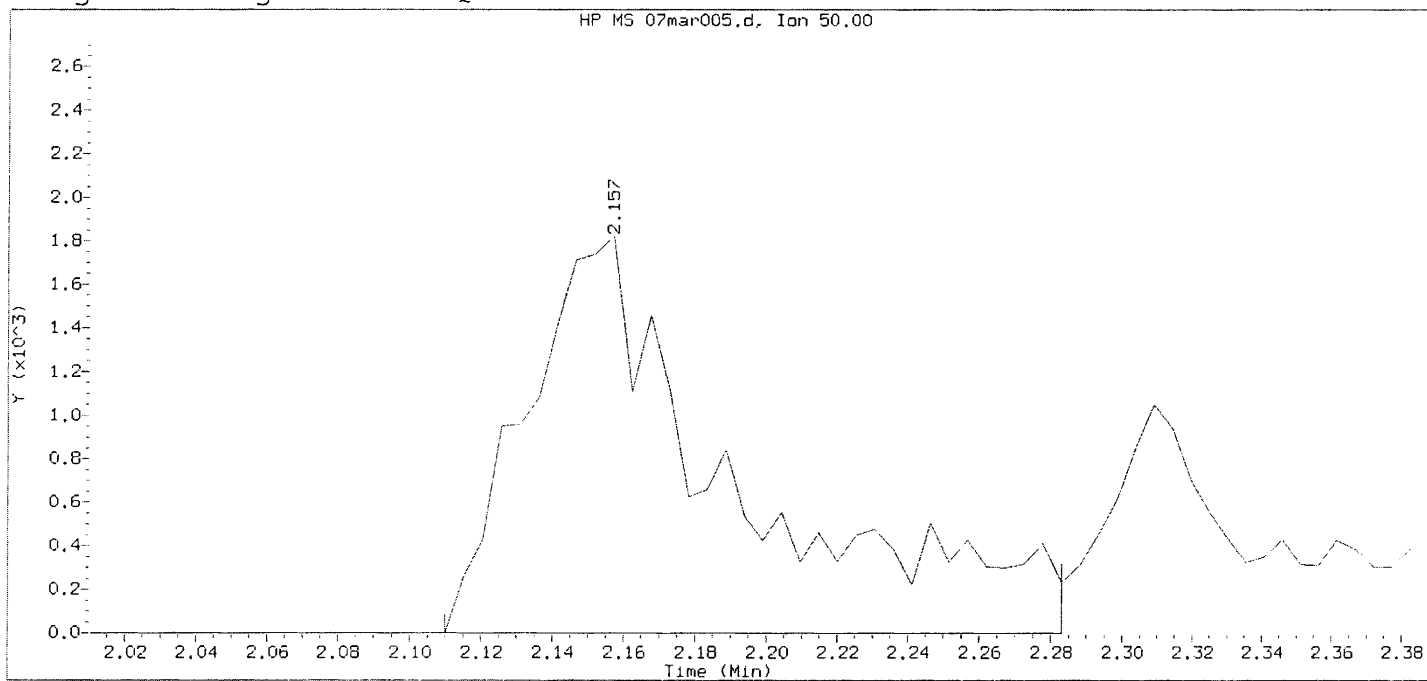
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by John Elliott
 on 03/07/2017 at 19:14.
 Target 3.5 esignature user ID: zz9h

GC/MS audit/management approval: _____ 131



Original Integration of Quant Ion



Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar005.d Instrument ID: GCMS_VV.i
 Injection date and time: 07-MAR-2017 15:43 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 1 PPB V030717A

Compound Number	: 6		
Compound Name	: Chloromethane		
Scan Number	: 166		
Retention Time (minutes)	: 2.157		
Quant Ion	: 50.00		
Area	: 7301		
On-column Amount (ug/l)	: 1.1878		
Integration start scan	: 156	Integration stop scan:	189
Y at integration start	: 0	Y at integration end:	0

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar006.d
 Injection date and time: 07-MAR-2017 16:10

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m
 Calibration date and time: 07-MAR-2017 19:09

Sublist used: all

Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 10 PPB V022017A/V030317A Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV(Min)	QValue
Internal Standards							
1)*Tert-Butyl Alcohol-d9	(1)	4.774	65	112927	250.000	0.01	
4)*Pentafluorobenzene	(2)	7.212	168	339666	50.000	0.00	
47)*1,4-Difluorobenzene	(3)	8.134	114	538662	50.000	0.00	
65)*Chlorobenzene-d5	(4)	11.710	117	499813	50.000	0.01	
88)*1,4-Dichlorobenzene-d4	(5)	14.599	152	259159	50.000	0.00	
System Monitoring Compounds							
41)\$Dibromofluoromethane	(2)	7.143	113	149247	50.070	0.00	
SpikedAmount		50.000					
Recovery =			0.000				
46)\$1,2-Dichloroethane-d4	(2)	7.573	65	198257	50.329	0.00	
SpikedAmount		50.000					
Recovery =			0.000				
62)\$Toluene-d8	(3)	9.954	98	640385	49.812	0.00	
SpikedAmount		50.000					
Recovery =			0.000				
81)\$1,4-Bromofluorobenzene	(4)	13.157	95	242377	49.438	0.00	
SpikedAmount		50.000					
Recovery =			0.000				
Target Compounds							
2) Ethanol	(1)	3.468	45	8004	111.135	77	
3) Tert-Butyl Alcohol (TBA)	(1)	4.899	59	32204	52.827	92	
5) Dichlorodifluoromethane	(2)	1.911	85	40793	9.735	98	
6) Chloromethane	(2)	2.157	50	46177	8.260	93	
7) Vinyl Chloride	(2)	2.262	62	45772	10.048	92	
8) Bromomethane	(2)	2.682	94	28944	10.503	97	
9) Chloroethane	(2)	2.813	64	23902	9.389	88	
10) 1,3-Butadiene	(2)	2.309	54	35879	8.646	97	
11) Trichlorofluoromethane	(2)	3.153	101	46701	9.343	94	
12) Diethyl Ether	(2)	3.589	59	39111	10.281	98	
13) Acetone	(2)	4.029	58	5115	9.829	51	
14) Iodomethane	(2)	4.144	142	83804	16.659	99	
15) 1,1-Dichloroethene	(2)	3.914	61	57583	9.917	99	
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.929	101	30646	9.865	99	
17) Isopropanol	(2)	4.291	45	18193	51.705	92	
18) Carbon Disulfide	(2)	4.239	76	117676	9.678	99	
19) Acetonitrile	(2)	4.485	41	74222	19.570	96	
20) Acrylonitrile	(2)	5.057	53	20385	9.942	87	
21) Allyl Chloride	(2)	4.485	76	23554	9.769	97	
22) Acrolein	(2)	3.777	56	19084	20.590	94	
23) Methylene Chloride	(2)	4.674	84	46826	10.065	99	

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar006.d
 Injection date and time: 07-MAR-2017 16:10

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 10 PPB V022017A/V030317A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	5.088	96	42105	9.780	97
25) Isobutyl Alcohol	(2)	7.673	43	8856	20.059	94
26) Methyl-t-Butyl Ether (MTBE)	(2)	5.109	73	149319	10.086	98
27) Hexane	(2)	5.508	57	40321	9.577	97
28) 1,1-Dichloroethane	(2)	5.696	63	74555	9.909	98
29) Vinyl Acetate	(2)	5.801	43	160051	9.820	100
30) Diisopropyl Ether (DIPE)	(2)	5.827	45	140823	9.780	99
31) Chloroprene	(2)	5.827	53	67651	9.910	99
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.331	59	146746	9.950	99
33) c-1,2-Dichloroethene	(2)	6.504	96	48692	9.976	100
34) 2,2-Dichloropropane	(2)	6.504	77	62038	9.788	99
35) 2-Butanone	(2)	6.540	43	27940	10.610	93
36) Propionitrile	(2)	6.619	54	8134	10.218	92
37) Methacrylonitrile	(2)	6.813	41	33189	10.212	98
38) Bromochloromethane	(2)	6.818	130	27913	9.715	95
39) Tetrahydrofuran	(2)	6.897	42	17970	10.411	96
40) Chloroform	(2)	6.934	83	78779	9.902	99
42) 1,1,1-Trichloroethane	(2)	7.170	97	65439	10.106	89
43) Cyclohexane	(2)	7.238	84	61463	10.317	96
44) 1,1-Dichloropropene	(2)	7.385	75	55096	9.912	99
45) Carbon Tetrachloride	(2)	7.390	117	47639	10.477	100
48) Benzene	(3)	7.652	78	177548	9.815	100
49) 1,2-Dichloroethane	(3)	7.668	62	64513	10.124	99
50) 2-Methyl-2-Butanol (TAA)	(3)	7.673	59	26365	51.120	95
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.804	73	143785	9.962	99
52) Thiophene	(3)	7.914	84	94010	9.894	99
53) 2,2,4-Trimethyl Pentane	(3)	7.762	57	84246	9.701	99
54) Trichloroethene	(3)	8.459	95	46244	9.690	99
55) 1,2-Dichloropropane	(3)	8.737	63	44448	10.022	98
56) Dibromomethane	(3)	8.879	93	28312	9.999	99
57) Methyl Methacrylate	(3)	8.884	69	40433	10.013	99
58) 1,4-Dioxane	(3)	8.905	88	7689	99.488	91
59) Bromodichloromethane	(3)	9.073	83	56518	9.709	99
60) 2-Chloroethyl Vinyl Ether	(3)	9.445	63	29868	9.647	99
61) c-1,3-Dichloropropene	(3)	9.623	75	72818	9.953	99
63) Toluene	(3)	10.032	91	187990	9.720	100
64) 4-Methyl-2-Pentanone	(3)	9.812	58	21250	9.777	98

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar006.d
 Injection date and time: 07-MAR-2017 16:10

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 10 PPB V022017A/V030317A Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.300	75	69202	10.129	98
67) Ethyl Methacrylate	(4)	10.410	69	69673	9.738	97
68) 1,1,2-Trichloroethane	(4)	10.520	83	37075	10.325	99
69) Tetrachloroethene	(4)	10.703	166	59967	9.759	99
70) 1,3-Dichloropropane	(4)	10.724	76	73678	9.780	98
71) 2-Hexanone	(4)	10.824	43	38567	10.100	96
72) Dibromochloromethane	(4)	11.002	129	43116	10.072	99
73) 1,2-Dibromoethane	(4)	11.149	107	45015	10.054	98
74) Chlorobenzene	(4)	11.747	112	124674	9.858	98
75) 1,1,1,2-Tetrachloroethane	(4)	11.841	131	40198	9.764	99
76) Ethylbenzene	(4)	11.883	91	207565	9.720	99
77) p/m-Xylene	(4)	12.025	91	329920	19.906	99
78) o-Xylene	(4)	12.512	91	169955	9.731	99
79) Styrene	(4)	12.528	104	142738	9.887	99
80) Isopropylbenzene	(4)	12.968	105	203518	9.868	99
82) 1,2,3-Trichloropropane	(4)	13.388	75	76731	9.849	98
83) Bromobenzene	(4)	13.351	156	53542	9.909	99
84) n-Propylbenzene	(4)	13.477	91	234404	9.831	99
85) t-1,4-Dichloro-2-Butene	(4)	13.393	53	17160	9.793	96
86) 2-Chlorotoluene	(4)	13.587	91	147250	9.961	99
87) 1,3,5-Trimethylbenzene	(4)	13.692	105	168614	9.816	99
89) Bromoform	(5)	12.753	173	26899	9.715	98
90) 1,1,2,2-Tetrachloroethane	(5)	13.325	83	57422	10.105	100
91) 4-Chlorotoluene	(5)	13.718	91	170672	9.794	99
92) Cyclohexanone	(5)	13.084	55	15143	51.524	92
93) 1,2,4-Trimethylbenzene	(5)	14.159	105	176961	9.815	99
94) tert-Butylbenzene	(5)	14.106	134	37246	9.861	99
95) p-Isopropyltoluene	(5)	14.552	119	170313	9.722	99
96) sec-Butylbenzene	(5)	14.379	105	198509	9.946	100
97) 1,3-Dichlorobenzene	(5)	14.515	146	99260	9.740	100
98) 1,4-Dichlorobenzene	(5)	14.625	146	102995	9.807	98
99) 1,2-Dichlorobenzene	(5)	15.092	146	98765	9.811	99
100) n-Butylbenzene	(5)	15.066	91	141697	9.734	99
101) 1,2-Dibromo-3-Chloropropane	(5)	16.062	75	11793	10.045	99
102) 1,2,4-Trichlorobenzene	(5)	17.110	180	59345	9.679	99
103) Hexachloro-1,3-Butadiene	(5)	17.325	225	20095	9.495	98
104) Naphthalene	(5)	17.420	128	143719	9.161	99

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar006.d Instrument ID: GCMS_VV.i
 Injection date and time: 07-MAR-2017 16:10 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 10 PPB V022017A/V030317A Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
=====	=====	=====	=====	=====	=====	=====
105) 1,2,3-Trichlorobenzene	(5)	17.698	180	54569	9.689	99

page 4 of 4

Data File: /chem/V08/CCHS_VW.1/170307.b/07mar006.d

Date: 07-Mar-2017 16:10

Client ID:

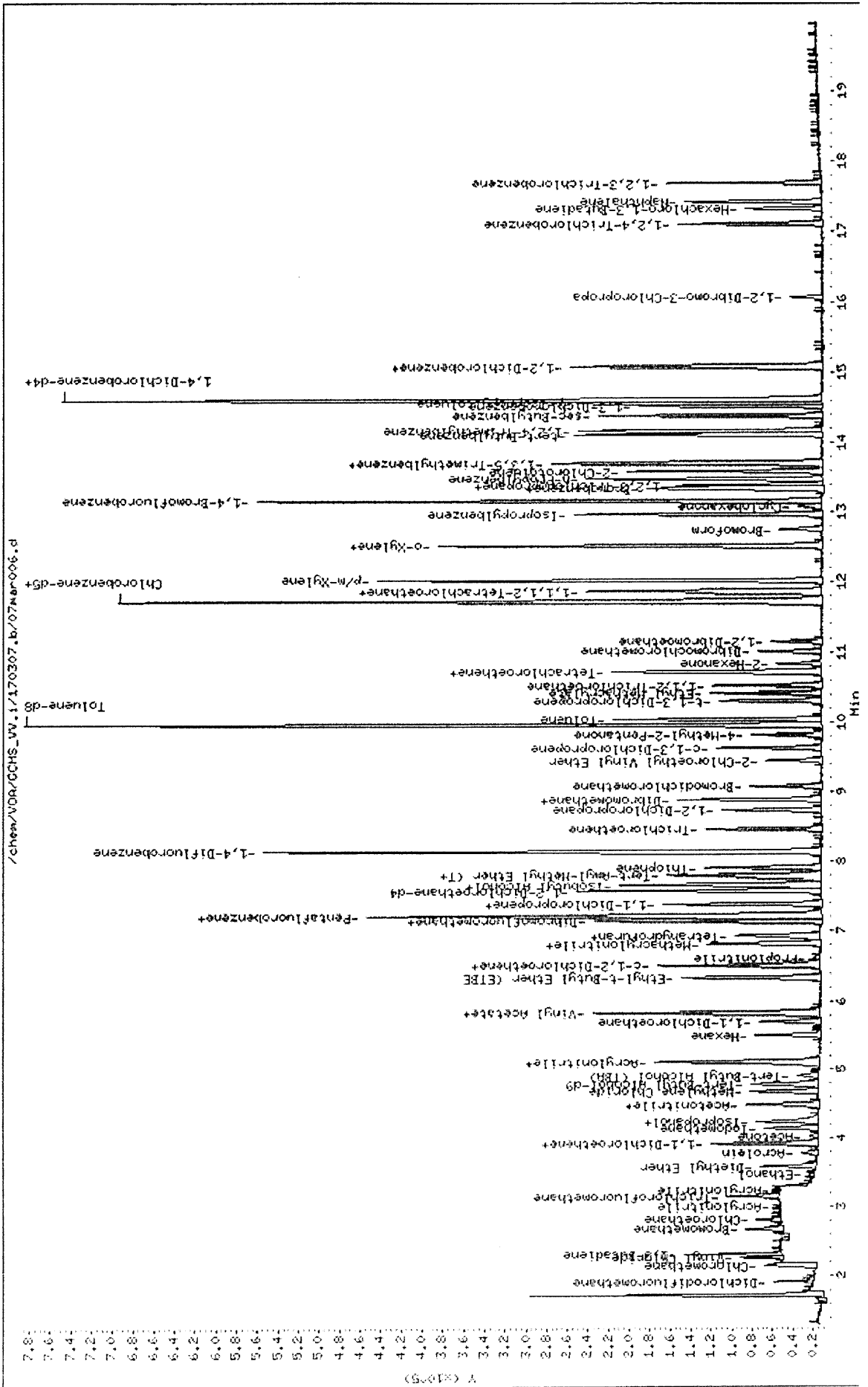
Sample Info: IC 10 PPE V022017A/V030317A

Instrument: CCHS_VW.1

Operator: 1073

Column diameter: 0.00

Column phase:



Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar007.d
 Injection date and time: 07-MAR-2017 16:37

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 20 PPB V022017A/V030317A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	DEV (Min)
	Ref.	RT			Amount	
===== Internal Standards	===== Ref.	===== RT	===== QIon	===== Area	===== Amount (ug/l)	===== DEV (Min)
1)*Tert-Butyl Alcohol-d9	(1)	4.779	65	108958	250.000	0.00
4)*Pentafluorobenzene	(2)	7.211	168	340173	50.000	0.00
47)*1,4-Difluorobenzene	(3)	8.139	114	538755	50.000	-0.01
65)*Chlorobenzene-d5	(4)	11.715	117	504784	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.599	152	261284	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	7.143	113	149754	50.132	0.00
SpikedAmount 50.000	Recovery =		0.000			
46)\$1,2-Dichloroethane-d4	(2)	7.573	65	198236	50.199	0.00
SpikedAmount 50.000	Recovery =		0.000			
62)\$Toluene-d8	(3)	9.954	98	645686	50.172	0.00
SpikedAmount 50.000	Recovery =		0.000			
81)\$1,4-Bromofluorobenzene	(4)	13.157	95	245809	49.715	0.00
SpikedAmount 50.000	Recovery =		0.000			
Target Compounds					QValue	
2) Ethanol	(1)	3.463	45	13735	198.433	93
3) Tert-Butyl Alcohol (TBA)	(1)	4.899	59	62488	104.607	97
5) Dichlorodifluoromethane	(2)	1.916	85	74865	18.334	98
6) Chloromethane	(2)	2.157	50	98626	18.158	99
7) Vinyl Chloride	(2)	2.262	62	94526	20.572	98
8) Bromomethane	(2)	2.676	94	53477	19.580	99
9) Chloroethane	(2)	2.813	64	59854	22.498	97
10) 1,3-Butadiene	(2)	2.309	54	69466	17.430	96
11) Trichlorofluoromethane	(2)	3.153	101	95047	19.229	98
12) Diethyl Ether	(2)	3.583	59	78078	20.367	98
13) Acetone	(2)	4.029	58	10337	19.889	94
14) Iodomethane	(2)	4.144	142	205059	40.465	100
15) 1,1-Dichloroethene	(2)	3.914	61	115173	19.854	99
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.935	101	63587	20.327	98
17) Isopropanol	(2)	4.281	45	32652	94.983	85
18) Carbon Disulfide	(2)	4.239	76	233510	19.375	100
19) Acetonitrile	(2)	4.490	41	149899	39.642	98
20) Acrylonitrile	(2)	5.057	53	40923	19.952	90
21) Allyl Chloride	(2)	4.485	76	46412	19.410	100
22) Acrolein	(2)	3.777	56	36580	39.604	98
23) Methylene Chloride	(2)	4.674	84	92180	19.855	98

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar007.d
 Injection date and time: 07-MAR-2017 16:37

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 20 PPB V022017A/V030317A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	5.093	96	82782	19.394	98
25) Isobutyl Alcohol	(2)	7.673	43	17384	39.541	91
26) Methyl-t-Butyl Ether (MTBE)	(2)	5.109	73	295002	19.922	98
27) Hexane	(2)	5.502	57	77523	18.764	99
28) 1,1-Dichloroethane	(2)	5.701	63	150276	19.958	99
29) Vinyl Acetate	(2)	5.801	43	324936	19.937	99
30) Diisopropyl Ether (DIPE)	(2)	5.827	45	280951	19.610	99
31) Chloroprene	(2)	5.832	53	134012	19.733	98
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.325	59	293874	19.922	99
33) c-1,2-Dichloroethene	(2)	6.504	96	96487	19.804	99
34) 2,2-Dichloropropane	(2)	6.504	77	121584	19.359	100
35) 2-Butanone	(2)	6.540	43	50383	19.394	97
36) Propionitrile	(2)	6.619	54	15597	19.708	97
37) Methacrylonitrile	(2)	6.813	41	64912	19.962	98
38) Bromochloromethane	(2)	6.823	130	56867	19.822	96
39) Tetrahydrofuran	(2)	6.892	42	32459	19.168	99
40) Chloroform	(2)	6.934	83	155720	19.657	100
42) 1,1,1-Trichloroethane	(2)	7.169	97	127218	19.712	96
43) Cyclohexane	(2)	7.243	84	113231	19.307	99
44) 1,1-Dichloropropene	(2)	7.384	75	110307	19.861	99
45) Carbon Tetrachloride	(2)	7.390	117	94985	20.681	100
48) Benzene	(3)	7.647	78	352341	19.577	99
49) 1,2-Dichloroethane	(3)	7.668	62	127797	20.041	99
50) 2-Methyl-2-Butanol (TAA)	(3)	7.678	59	48086	95.375	97
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.804	73	287194	19.921	98
52) Thiophene	(3)	7.914	84	187839	19.824	99
53) 2,2,4-Trimethyl Pentane	(3)	7.762	57	166829	19.399	98
54) Trichloroethene	(3)	8.459	95	92658	19.556	99
55) 1,2-Dichloropropane	(3)	8.737	63	88725	20.001	100
56) Dibromomethane	(3)	8.879	93	55978	19.824	100
57) Methyl Methacrylate	(3)	8.884	69	77386	19.433	97
58) 1,4-Dioxane	(3)	8.905	88	15062	196.546	93
59) Bromodichloromethane	(3)	9.073	83	116688	20.031	98
60) 2-Chloroethyl Vinyl Ether	(3)	9.445	63	62281	20.075	99
61) c-1,3-Dichloropropene	(3)	9.618	75	149846	20.381	99
63) Toluene	(3)	10.037	91	379769	19.723	100
64) 4-Methyl-2-Pentanone	(3)	9.812	58	42944	19.836	99

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar007.d
 Injection date and time: 07-MAR-2017 16:37

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 20 PPB V022017A/V030317A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.294	75	138384	20.045	99
67) Ethyl Methacrylate	(4)	10.410	69	142165	19.781	98
68) 1,1,2-Trichloroethane	(4)	10.520	83	73334	20.167	99
69) Tetrachloroethene	(4)	10.709	166	115233	18.907	100
70) 1,3-Dichloropropane	(4)	10.724	76	150561	19.840	99
71) 2-Hexanone	(4)	10.824	43	75838	19.776	97
72) Dibromochloromethane	(4)	11.002	129	86619	20.027	98
73) 1,2-Dibromoethane	(4)	11.149	107	89068	19.773	99
74) Chlorobenzene	(4)	11.752	112	250525	19.708	98
75) 1,1,1,2-Tetrachloroethane	(4)	11.846	131	81145	19.634	99
76) Ethylbenzene	(4)	11.883	91	421707	19.663	100
77) p/m-Xylene	(4)	12.025	91	665263	39.795	99
78) o-Xylene	(4)	12.512	91	344447	19.621	99
79) Styrene	(4)	12.528	104	292037	20.022	99
80) Isopropylbenzene	(4)	12.968	105	414596	19.929	99
82) 1,2,3-Trichloropropane	(4)	13.388	75	151870	19.472	99
83) Bromobenzene	(4)	13.351	156	108625	19.928	99
84) n-Propylbenzene	(4)	13.477	91	471402	19.680	99
85) t-1,4-Dichloro-2-Butene	(4)	13.398	53	34660	19.722	98
86) 2-Chlorotoluene	(4)	13.587	91	292543	19.695	100
87) 1,3,5-Trimethylbenzene	(4)	13.692	105	344484	19.893	99
89) Bromoform	(5)	12.753	173	53074	19.250	99
90) 1,1,2,2-Tetrachloroethane	(5)	13.325	83	116321	20.227	100
91) 4-Chlorotoluene	(5)	13.723	91	344983	19.726	100
92) Cyclohexanone	(5)	13.084	55	26551	92.822	98
93) 1,2,4-Trimethylbenzene	(5)	14.158	105	362182	19.944	97
94) tert-Butylbenzene	(5)	14.101	134	76753	20.116	99
95) p-Isopropyltoluene	(5)	14.557	119	347869	19.771	99
96) sec-Butylbenzene	(5)	14.379	105	406658	20.156	99
97) 1,3-Dichlorobenzene	(5)	14.515	146	204580	19.934	99
98) 1,4-Dichlorobenzene	(5)	14.625	146	207437	19.692	99
99) 1,2-Dichlorobenzene	(5)	15.097	146	201253	19.871	99
100) n-Butylbenzene	(5)	15.065	91	295420	20.096	99
101) 1,2-Dibromo-3-Chloropropane	(5)	16.067	75	22704	19.447	98
102) 1,2,4-Trichlorobenzene	(5)	17.110	180	127352	20.448	98
103) Hexachloro-1,3-Butadiene	(5)	17.325	225	41041	19.420	98
104) Naphthalene	(5)	17.420	128	312644	19.844	99

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar007.d
Injection date and time: 07-MAR-2017 16:37

Instrument ID: GCMS_VV.i
Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m
Calibration date and time: 07-MAR-2017 19:09

Sublist used: all

Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 20 PPB V022017A/V030317A Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	17.697	180	116318	20.361	99

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Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar008.d
 Injection date and time: 07-MAR-2017 17:04

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m
 Calibration date and time: 07-MAR-2017 19:09

Sublist used: all

Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 50 PPB V022017A/V030317A Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV(Min)
=====						
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.774	65	101844	250.000	0.01
4)*Pentafluorobenzene	(2)	7.212	168	336068	50.000	0.00
47)*1,4-Difluorobenzene	(3)	8.134	114	535493	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.715	117	499182	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.594	152	262345	50.000	0.01
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	7.143	113	148222	50.225	0.00
SpikedAmount 50.000	Recovery =		0.000			
46)\$1,2-Dichloroethane-d4	(2)	7.573	65	195378	50.079	0.00
SpikedAmount 50.000	Recovery =		0.000			
62)\$Toluene-d8	(3)	9.954	98	642016	50.191	0.00
SpikedAmount 50.000	Recovery =		0.000			
81)\$1,4-Bromofluorobenzene	(4)	13.157	95	247105	50.538	0.00
SpikedAmount 50.000	Recovery =		0.000			
Target Compounds						
						QValue
2) Ethanol	(1)	3.468	45	28861	446.085	100
3) Tert-Butyl Alcohol (TBA)	(1)	4.899	59	156088	279.548	100
5) Dichlorodifluoromethane	(2)	1.916	85	230529	57.145	100
6) Chloromethane	(2)	2.157	50	244178	45.503	100
7) Vinyl Chloride	(2)	2.262	62	238545	52.548	100
8) Bromomethane	(2)	2.671	94	129464	47.982	100
9) Chloroethane	(2)	2.807	64	140364	53.405	100
10) 1,3-Butadiene	(2)	2.309	54	180404	45.819	100
11) Trichlorofluoromethane	(2)	3.153	101	261990	53.652	100
12) Diethyl Ether	(2)	3.589	59	199048	52.557	100
13) Acetone	(2)	4.024	58	26189	51.002	100
14) Iodomethane	(2)	4.144	142	580876	116.027	100
15) 1,1-Dichloroethene	(2)	3.914	61	288870	50.404	100
16) 1,1,2-Trichloro-1,2,2-Trifluoro	(2)	3.929	101	169379	54.807	100
17) Isopropanol	(2)	4.275	45	84068	247.537	100
18) Carbon Disulfide	(2)	4.239	76	599779	50.373	100
19) Acetonitrile	(2)	4.485	41	383307	102.606	100
20) Acrylonitrile	(2)	5.051	53	102027	50.352	100
21) Allyl Chloride	(2)	4.490	76	120084	50.833	100
22) Acrolein	(2)	3.772	56	88997	97.530	100
23) Methylene Chloride	(2)	4.674	84	228684	49.858	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar008.d
 Injection date and time: 07-MAR-2017 17:04

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m
 Calibration date and time: 07-MAR-2017 19:09

Sublist used: all

Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 50 PPB V022017A/V030317A Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	5.088	96	209618	49.708	100
25) Isobutyl Alcohol	(2)	7.668	43	43558	100.284	100
26) Methyl-t-Butyl Ether (MTBE)	(2)	5.109	73	744141	50.866	100
27) Hexane	(2)	5.502	57	202223	49.543	100
28) 1,1-Dichloroethane	(2)	5.702	63	383020	51.490	100
29) Vinyl Acetate	(2)	5.796	43	820871	50.982	100
30) Diisopropyl Ether (DIPE)	(2)	5.827	45	714905	50.509	100
31) Chloroprene	(2)	5.833	53	340730	50.785	100
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.331	59	747600	51.299	100
33) c-1,2-Dichloroethene	(2)	6.509	96	245245	50.951	100
34) 2,2-Dichloropropane	(2)	6.498	77	304333	49.049	100
35) 2-Butanone	(2)	6.540	43	122323	47.661	100
36) Propionitrile	(2)	6.614	54	38522	49.268	100
37) Methacrylonitrile	(2)	6.813	41	157380	48.988	100
38) Bromochloromethane	(2)	6.818	130	145482	51.329	100
39) Tetrahydrofuran	(2)	6.892	42	81876	48.941	100
40) Chloroform	(2)	6.934	83	394182	50.365	100
42) 1,1,1-Trichloroethane	(2)	7.170	97	327391	51.347	100
43) Cyclohexane	(2)	7.243	84	285361	49.252	100
44) 1,1-Dichloropropene	(2)	7.385	75	287613	52.419	100
45) Carbon Tetrachloride	(2)	7.385	117	249062	54.891	100
48) Benzene	(3)	7.652	78	910337	50.889	100
49) 1,2-Dichloroethane	(3)	7.668	62	324108	51.137	100
50) 2-Methyl-2-Butanol (TAA)	(3)	7.673	59	125312	250.059	100
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.804	73	741053	51.716	100
52) Thiophene	(3)	7.914	84	480606	51.030	100
53) 2,2,4-Trimethyl Pentane	(3)	7.762	57	424298	49.638	100
54) Trichloroethene	(3)	8.459	95	234792	49.855	100
55) 1,2-Dichloropropane	(3)	8.737	63	227731	51.649	100
56) Dibromomethane	(3)	8.879	93	141533	50.428	100
57) Methyl Methacrylate	(3)	8.884	69	200439	50.641	100
58) 1,4-Dioxane	(3)	8.905	88	38613	506.918	100
59) Bromodichloromethane	(3)	9.073	83	294565	50.874	100
60) 2-Chloroethyl Vinyl Ether	(3)	9.445	63	159323	51.667	100
61) c-1,3-Dichloropropene	(3)	9.623	75	383345	52.456	100
63) Toluene	(3)	10.037	91	965624	50.453	100
64) 4-Methyl-2-Pentanone	(3)	9.812	58	110441	51.324	100

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar008.d
 Injection date and time: 07-MAR-2017 17:04

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 50 PPB V022017A/V030317A Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.294	75	362709	53.127	100
67) Ethyl Methacrylate	(4)	10.405	69	366681	51.593	100
68) 1,1,2-Trichloroethane	(4)	10.520	83	186100	51.751	100
69) Tetrachloroethene	(4)	10.709	166	284653	47.229	100
70) 1,3-Dichloropropane	(4)	10.724	76	383593	51.116	100
71) 2-Hexanone	(4)	10.824	43	188773	49.777	100
72) Dibromochloromethane	(4)	11.002	129	222290	51.971	100
73) 1,2-Dibromoethane	(4)	11.144	107	226673	50.885	100
74) Chlorobenzene	(4)	11.747	112	643971	51.229	100
75) 1,1,1,2-Tetrachloroethane	(4)	11.846	131	209877	51.352	100
76) Ethylbenzene	(4)	11.883	91	1085569	51.184	100
77) p/m-Xylene	(4)	12.025	91	1703348	103.035	100
78) o-Xylene	(4)	12.512	91	886509	51.065	100
79) Styrene	(4)	12.528	104	762234	52.846	100
80) Isopropylbenzene	(4)	12.968	105	1068454	51.935	100
82) 1,2,3-Trichloropropane	(4)	13.388	75	393683	51.042	100
83) Bromobenzene	(4)	13.351	156	278054	51.584	100
84) n-Propylbenzene	(4)	13.477	91	1231521	51.990	100
85) t-1,4-Dichloro-2-Butene	(4)	13.398	53	89315	51.391	100
86) 2-Chlorotoluene	(4)	13.587	91	753591	51.303	100
87) 1,3,5-Trimethylbenzene	(4)	13.692	105	892006	52.089	100
89) Bromoform	(5)	12.753	173	143927	51.991	100
90) 1,1,2,2-Tetrachloroethane	(5)	13.325	83	300909	52.113	100
91) 4-Chlorotoluene	(5)	13.718	91	891852	50.789	100
92) Cyclohexanone	(5)	13.078	55	72112	251.082	100
93) 1,2,4-Trimethylbenzene	(5)	14.164	105	936895	51.381	100
94) tert-Butylbenzene	(5)	14.106	134	200293	52.282	100
95) p-Isopropyltoluene	(5)	14.557	119	903362	51.135	100
96) sec-Butylbenzene	(5)	14.373	105	1053853	52.023	100
97) 1,3-Dichlorobenzene	(5)	14.515	146	521996	50.657	100
98) 1,4-Dichlorobenzene	(5)	14.625	146	538319	50.896	100
99) 1,2-Dichlorobenzene	(5)	15.097	146	514635	50.608	100
100) n-Butylbenzene	(5)	15.066	91	778469	52.741	100
101) 1,2-Dibromo-3-Chloropropane	(5)	16.062	75	59154	50.463	100
102) 1,2,4-Trichlorobenzene	(5)	17.110	180	337098	53.906	100
103) Hexachloro-1,3-Butadiene	(5)	17.325	225	105714	49.821	100
104) Naphthalene	(5)	17.420	128	860697	54.408	100

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar008.d Instrument ID: GCMS_VV.i
Injection date and time: 07-MAR-2017 17:04 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
Calibration date and time: 07-MAR-2017 19:09
Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 50 PPB V022017A/V030317A Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	QValue
	Ref.	RT			Amount	
=====	=====	=====	=====	=====	=====	=====
105) 1,2,3-Trichlorobenzene	(5)	17.698	180	308545	53.790	100

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Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar009.d
 Injection date and time: 07-MAR-2017 17:31

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 100/60 PPB V022017A/V030317AMisc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV(Min)
=====						
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.774	65	103652	250.000	0.01
4)*Pentafluorobenzene	(2)	7.212	168	330762	50.000	0.00
47)*1,4-Difluorobenzene	(3)	8.134	114	532022	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.715	117	500606	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.599	152	265802	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	7.138	113	146960	50.496	0.01
SpikedAmount 50.000			Recovery =	0.000		
46)\$1,2-Dichloroethane-d4	(2)	7.573	65	194373	50.516	0.00
SpikedAmount 50.000			Recovery =	0.000		
62)\$Toluene-d8	(3)	9.954	98	634260	49.923	0.00
SpikedAmount 50.000			Recovery =	0.000		
81)\$1,4-Bromofluorobenzene	(4)	13.157	95	249051	50.658	0.00
SpikedAmount 50.000			Recovery =	0.000		
Target Compounds						
						QValue
2) Ethanol	(1)	3.468	45	64391	983.316	97
3) Tert-Butyl Alcohol (TBA)	(1)	4.899	59	310161	535.979	98
5) Dichlorodifluoromethane	(2)	1.916	85	269681	66.175	99
6) Chloromethane	(2)	2.162	50	294916	56.625	100
7) Vinyl Chloride	(2)	2.262	62	287390	63.560	98
8) Bromomethane	(2)	2.666	94	160647	60.369	99
9) Chloroethane	(2)	2.807	64	166378	63.406	96
10) 1,3-Butadiene	(2)	2.309	54	347284	91.518	99
11) Trichlorofluoromethane	(2)	3.153	101	308245	63.265	100
12) Diethyl Ether	(2)	3.589	59	393964	104.502	100
13) Acetone	(2)	4.024	58	48897	97.545	88
14) Iodomethane	(2)	4.144	142	1118867	219.640	99
15) 1,1-Dichloroethene	(2)	3.914	61	565368	100.185	99
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.924	101	320554	104.265	100
17) Isopropanol	(2)	4.281	45	173664	514.523	93
18) Carbon Disulfide	(2)	4.239	76	1180319	100.575	100
19) Acetonitrile	(2)	4.485	41	743685	201.696	98
20) Acrylonitrile	(2)	5.057	53	202342	101.091	79
21) Allyl Chloride	(2)	4.490	76	233550	100.361	99
22) Acrolein	(2)	3.772	56	180643	200.853	98
23) Methylene Chloride	(2)	4.674	84	444809	98.896	99

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar009.d
 Injection date and time: 07-MAR-2017 17:31

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 100/60 PPB V022017A/V030317AMisc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	5.088	96	414556	99.906	99
25) Isobutyl Alcohol	(2)	7.673	43	84589	198.402	98
26) Methyl-t-Butyl Ether (MTBE)	(2)	5.109	73	1459954	101.114	99
27) Hexane	(2)	5.502	57	392749	98.204	99
28) 1,1-Dichloroethane	(2)	5.702	63	755133	102.497	100
29) Vinyl Acetate	(2)	5.796	43	1619204	101.624	98
30) Diisopropyl Ether (DIPE)	(2)	5.827	45	1406446	100.767	99
31) Chloroprene	(2)	5.833	53	673985	101.542	100
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.325	59	1466504	101.787	100
33) c-1,2-Dichloroethene	(2)	6.504	96	483282	101.605	99
34) 2,2-Dichloropropane	(2)	6.504	77	589877	97.258	99
35) 2-Butanol	(2)	6.535	43	244565	97.595	100
36) Propionitrile	(2)	6.614	54	76517	99.574	97
37) Methacrylonitrile	(2)	6.813	41	315933	99.940	99
38) Bromochloromethane	(2)	6.824	130	289875	103.107	97
39) Tetrahydrofuran	(2)	6.892	42	161025	98.338	98
40) Chloroform	(2)	6.934	83	774464	100.433	100
42) 1,1,1-Trichloroethane	(2)	7.170	97	639466	101.514	98
43) Cyclohexane	(2)	7.243	84	534433	95.215	98
44) 1,1-Dichloropropene	(2)	7.385	75	563212	103.406	100
45) Carbon Tetrachloride	(2)	7.385	117	492851	108.488	99
48) Benzene	(3)	7.652	78	1790192	100.605	99
49) 1,2-Dichloroethane	(3)	7.668	62	637572	101.040	100
50) 2-Methyl-2-Butanol (TAA)	(3)	7.673	59	252406	505.201	100
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.804	73	1434601	100.615	100
52) Thiophene	(3)	7.914	84	941776	100.518	99
53) 2,2,4-Trimethyl Pentane	(3)	7.762	57	841526	99.271	97
54) Trichloroethene	(3)	8.459	95	466299	99.726	98
55) 1,2-Dichloropropane	(3)	8.737	63	448617	101.919	99
56) Dibromomethane	(3)	8.879	93	281691	100.815	100
57) Methyl Methacrylate	(3)	8.884	69	390273	99.433	99
58) 1,4-Dioxane	(3)	8.910	88	78085	1023.660	97
59) Bromodichloromethane	(3)	9.073	83	586087	101.500	100
60) 2-Chloroethyl Vinyl Ether	(3)	9.445	63	327392	105.061	99
61) c-1,3-Dichloropropene	(3)	9.623	75	761505	104.037	100
63) Toluene	(3)	10.037	91	1912295	100.454	100
64) 4-Methyl-2-Pentanone	(3)	9.812	58	220259	102.253	100

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar009.d
 Injection date and time: 07-MAR-2017 17:31

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 100/60 PPB V022017A/V030317AMisc Info: V020817D
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	
	Ref.	RT			Amount	QValue
					(ug/l)	
66) t-1,3-Dichloropropene	(4)	10.294	75	724282	104.776	100
67) Ethyl Methacrylate	(4)	10.405	69	737771	102.611	98
68) 1,1,2-Trichloroethane	(4)	10.520	83	366304	101.254	100
69) Tetrachloroethene	(4)	10.703	166	555105	93.363	100
70) 1,3-Dichloropropane	(4)	10.724	76	752893	100.033	100
71) 2-Hexanone	(4)	10.824	43	376911	99.326	100
72) Dibromochloromethane	(4)	11.002	129	449651	103.826	99
73) 1,2-Dibromoethane	(4)	11.149	107	455354	101.538	99
74) Chlorobenzene	(4)	11.752	112	1276144	100.982	100
75) 1,1,1,2-Tetrachloroethane	(4)	11.846	131	417376	101.460	99
76) Ethylbenzene	(4)	11.883	91	2153048	100.979	100
77) p/m-Xylene	(4)	12.025	91	3381228	203.278	100
78) o-Xylene	(4)	12.512	91	1769856	101.378	99
79) Styrene	(4)	12.528	104	1519252	103.984	100
80) Isopropylbenzene	(4)	12.968	105	2130003	102.575	99
82) 1,2,3-Trichloropropane	(4)	13.388	75	785766	101.265	99
83) Bromobenzene	(4)	13.351	156	549855	101.369	99
84) n-Propylbenzene	(4)	13.477	91	2466490	103.041	100
85) t-1,4-Dichloro-2-Butene	(4)	13.393	53	178403	101.759	97
86) 2-Chlorotoluene	(4)	13.587	91	1504934	101.722	100
87) 1,3,5-Trimethylbenzene	(4)	13.692	105	1797205	103.685	100
89) Bromoform	(5)	12.753	173	299601	105.381	99
90) 1,1,2,2-Tetrachloroethane	(5)	13.325	83	590148	100.699	100
91) 4-Chlorotoluene	(5)	13.718	91	1773536	99.748	100
92) Cyclohexanone	(5)	13.084	55	140372	486.677	99
93) 1,2,4-Trimethylbenzene	(5)	14.164	105	1876249	101.243	99
94) tert-Butylbenzene	(5)	14.106	134	402935	103.025	99
95) p-Isopropyltoluene	(5)	14.557	119	1822642	101.458	100
96) sec-Butylbenzene	(5)	14.379	105	2129639	102.987	99
97) 1,3-Dichlorobenzene	(5)	14.515	146	1051136	100.543	100
98) 1,4-Dichlorobenzene	(5)	14.625	146	1071894	100.020	100
99) 1,2-Dichlorobenzene	(5)	15.092	146	1039319	100.699	100
100) n-Butylbenzene	(5)	15.066	91	1586893	104.832	100
101) 1,2-Dibromo-3-Chloropropane	(5)	16.062	75	122070	102.071	96
102) 1,2,4-Trichlorobenzene	(5)	17.110	180	696870	107.834	99
103) Hexachloro-1,3-Butadiene	(5)	17.325	225	214372	99.772	99
104) Naphthalene	(5)	17.420	128	1844846	110.915	100

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar009.d Instrument ID: GCMS_VV.i
 Injection date and time: 07-MAR-2017 17:31 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 100/60 PPB V022017A/V030317AMisc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	17.698	180	635366	107.324	99

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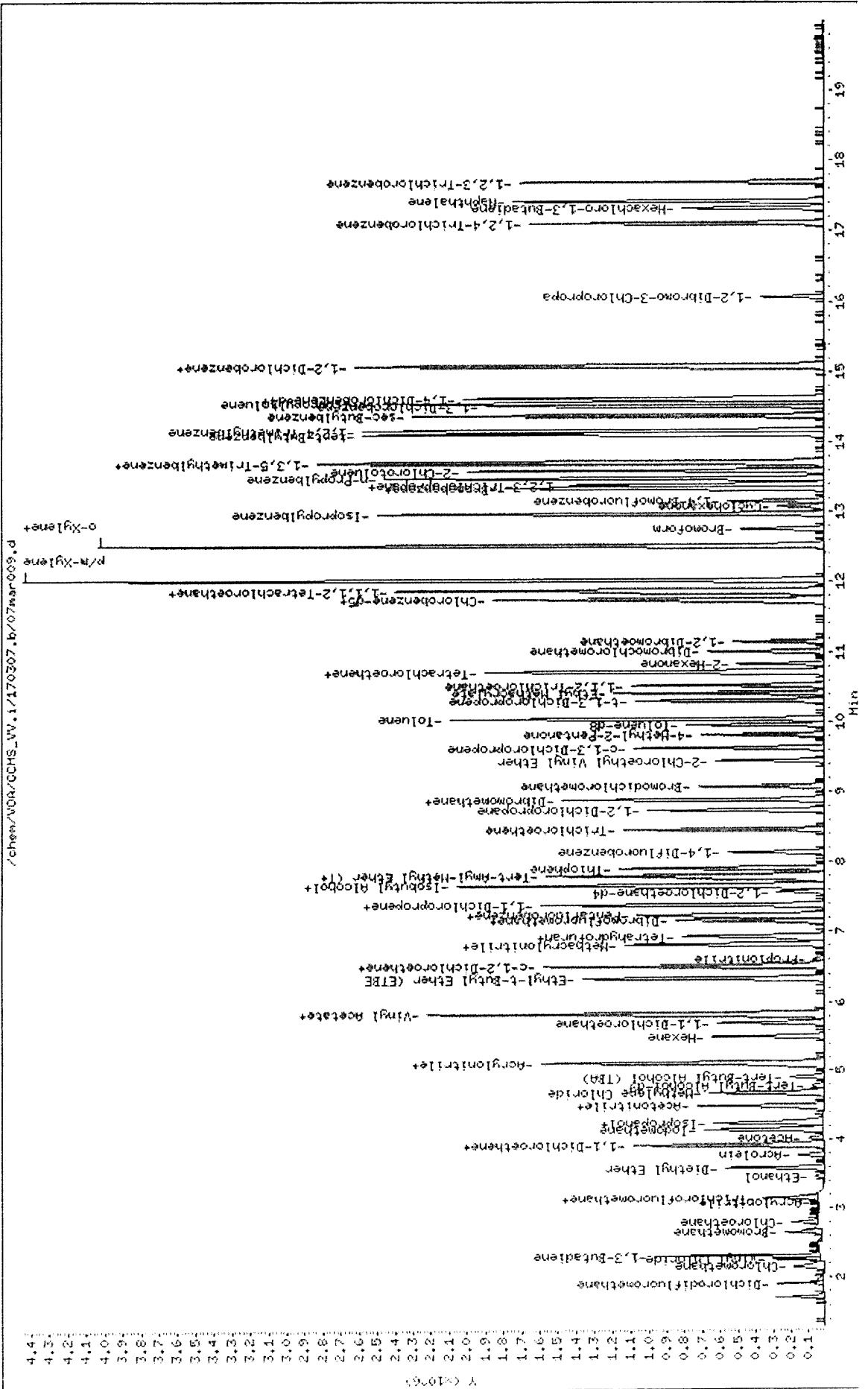
Data File: /chem/V04/CCHS_VV.1/170307_bv/07mar009.d
 Date : 07-MAR-2017 17:31
 Client ID:
 Sample Info: IC 100/60 PFR V0220174/V0303174

Instrument: CCHS_VV.1

Operator: 1073

Column diameter: 0.00

Column phase:



Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar010.d
 Injection date and time: 07-MAR-2017 17:58

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 200/80 PPB V022017A/V030317AMisc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV(Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.784	65	104739	250.000	-0.01
4)*Pentafluorobenzene	(2)	7.211	168	341627	50.000	0.00
47)*1,4-Difluorobenzene	(3)	8.134	114	551090	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.715	117	513693	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.599	152	268004	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	7.143	113	152662	50.673	0.00
SpikedAmount 50.000	Recovery =		0.000			
46)\$1,2-Dichloroethane-d4	(2)	7.573	65	199713	50.217	0.00
SpikedAmount 50.000	Recovery =		0.000			
62)\$Toluene-d8	(3)	9.953	98	657656	49.977	0.00
SpikedAmount 50.000	Recovery =		0.000			
81)\$1,4-Bromofluorobenzene	(4)	13.157	95	255171	50.497	0.00
SpikedAmount 50.000	Recovery =		0.000			
Target Compounds						
2) Ethanol	(1)	3.489	45	115233	1787.683	94
3) Tert-Butyl Alcohol (TBA)	(1)	4.904	59	631229	1065.371	99
5) Dichlorodifluoromethane	(2)	1.911	85	358625	84.288	99
6) Chloromethane	(2)	2.162	50	378979	71.881	100
7) Vinyl Chloride	(2)	2.262	62	387897	82.608	98
8) Bromomethane	(2)	2.666	94	171543	65.284	100
9) Chloroethane	(2)	2.802	64	222515	81.744	96
10) 1,3-Butadiene	(2)	2.309	54	699979	181.838	98
11) Trichlorofluoromethane	(2)	3.148	101	421198	83.058	100
12) Diethyl Ether	(2)	3.588	59	805581	205.710	99
13) Acetone	(2)	4.024	58	97803	191.022	90
14) Iodomethane	(2)	4.139	142	2266960	424.316	99
15) 1,1-Dichloroethene	(2)	3.913	61	1146813	197.289	99
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.929	101	633855	199.678	100
17) Isopropanol	(2)	4.291	45	358495	1022.553	91
18) Carbon Disulfide	(2)	4.239	76	2382851	197.146	100
19) Acetonitrile	(2)	4.485	41	1457615	386.080	97
20) Acrylonitrile	(2)	5.056	53	415481	200.779	76
21) Allyl Chloride	(2)	4.490	76	461071	193.144	98
22) Acrolein	(2)	3.772	56	360057	390.024	99
23) Methylene Chloride	(2)	4.674	84	888954	193.027	99

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar010.d
 Injection date and time: 07-MAR-2017 17:58

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 200/80 PPB V022017A/V030317AMisc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	5.088	96	840308	196.714	98
25) Isobutyl Alcohol	(2)	7.673	43	176199	400.102	94
26) Methyl-t-Butyl Ether (MTBE)	(2)	5.109	73	2964858	199.008	99
27) Hexane	(2)	5.502	57	759242	186.319	99
28) 1,1-Dichloroethane	(2)	5.701	63	1534640	201.397	100
29) Vinyl Acetate	(2)	5.796	43	3337657	202.245	97
30) Diisopropyl Ether (DIPE)	(2)	5.827	45	2873148	199.420	99
31) Chloroprene	(2)	5.832	53	1361723	198.904	99
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.325	59	3022796	202.604	100
33) c-1,2-Dichloroethene	(2)	6.504	96	984189	200.279	100
34) 2,2-Dichloropropane	(2)	6.498	77	1179680	190.169	99
35) 2-Butanone	(2)	6.540	43	498975	194.186	100
36) Propionitrile	(2)	6.614	54	156319	197.555	96
37) Methacrylonitrile	(2)	6.813	41	642156	197.330	98
38) Bromochloromethane	(2)	6.818	130	586644	201.689	98
39) Tetrahydrofuran	(2)	6.891	42	324401	193.395	97
40) Chloroform	(2)	6.933	83	1578689	198.510	100
42) 1,1,1-Trichloroethane	(2)	7.169	97	1321747	202.620	97
43) Cyclohexane	(2)	7.243	84	1060042	186.042	98
44) 1,1-Dichloropropene	(2)	7.384	75	1151150	203.844	100
45) Carbon Tetrachloride	(2)	7.384	117	1027098	215.982	99
48) Benzene	(3)	7.646	78	3667194	199.106	99
49) 1,2-Dichloroethane	(3)	7.667	62	1284472	197.005	99
50) 2-Methyl-2-Butanol (TAA)	(3)	7.678	59	529346	1018.196	99
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.804	73	2970286	200.926	99
52) Thiophene	(3)	7.914	84	1943490	200.213	100
53) 2,2,4-Trimethyl Pentane	(3)	7.762	57	1607021	185.642	97
54) Trichloroethene	(3)	8.459	95	947877	196.408	98
55) 1,2-Dichloropropane	(3)	8.737	63	918913	201.281	100
56) Dibromomethane	(3)	8.879	93	571751	197.951	99
57) Methyl Methacrylate	(3)	8.884	69	811624	199.703	98
58) 1,4-Dioxane	(3)	8.910	88	154520	1964.322	96
59) Bromodichloromethane	(3)	9.073	83	1218742	203.125	100
60) 2-Chloroethyl Vinyl Ether	(3)	9.445	63	679875	208.410	99
61) c-1,3-Dichloropropene	(3)	9.623	75	1565594	205.537	100
63) Toluene	(3)	10.037	91	3944093	200.014	100
64) 4-Methyl-2-Pentanone	(3)	9.812	58	456215	203.556	99

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar010.d
 Injection date and time: 07-MAR-2017 17:58

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:09
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 200/80 PPB V022017A/V030317AMisc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.294	75	1492300	208.831	99
67) Ethyl Methacrylate	(4)	10.410	69	1534407	206.327	97
68) 1,1,2-Trichloroethane	(4)	10.520	83	751842	202.104	99
69) Tetrachloroethene	(4)	10.703	166	1084342	181.089	100
70) 1,3-Dichloropropane	(4)	10.724	76	1529680	198.384	100
71) 2-Hexanone	(4)	10.824	43	774103	199.039	99
72) Dibromochloromethane	(4)	11.002	129	947438	210.876	100
73) 1,2-Dibromoethane	(4)	11.149	107	924649	200.775	99
74) Chlorobenzene	(4)	11.747	112	2606794	200.850	100
75) 1,1,1,2-Tetrachloroethane	(4)	11.846	131	864911	204.063	99
76) Ethylbenzene	(4)	11.883	91	4406160	201.154	100
77) p/m-Xylene	(4)	12.024	91	6920728	404.681	99
78) o-Xylene	(4)	12.512	91	3592070	200.440	99
79) Styrene	(4)	12.528	104	3087653	204.932	100
80) Isopropylbenzene	(4)	12.968	105	4362918	203.946	100
82) 1,2,3-Trichloropropane	(4)	13.388	75	1596498	200.422	99
83) Bromobenzene	(4)	13.351	156	1114420	200.180	98
84) n-Propylbenzene	(4)	13.477	91	5010244	203.303	100
85) t-1,4-Dichloro-2-Butene	(4)	13.398	53	356103	198.350	94
86) 2-Chlorotoluene	(4)	13.587	91	3064779	201.562	99
87) 1,3,5-Trimethylbenzene	(4)	13.692	105	3635600	203.655	99
89) Bromoform	(5)	12.758	173	643565	220.014	98
90) 1,1,2,2-Tetrachloroethane	(5)	13.325	83	1210831	204.075	100
91) 4-Chlorotoluene	(5)	13.723	91	3588710	200.149	99
92) Cyclohexanone	(5)	13.084	55	267504	934.819	98
93) 1,2,4-Trimethylbenzene	(5)	14.164	105	3783179	202.050	100
94) tert-Butylbenzene	(5)	14.106	134	813646	205.246	99
95) p-Isopropyltoluene	(5)	14.557	119	3701364	203.608	100
96) sec-Butylbenzene	(5)	14.379	105	4320636	205.985	99
97) 1,3-Dichlorobenzene	(5)	14.515	146	2111637	200.269	100
98) 1,4-Dichlorobenzene	(5)	14.625	146	2155173	199.541	100
99) 1,2-Dichlorobenzene	(5)	15.092	146	2055292	197.912	100
100) n-Butylbenzene	(5)	15.065	91	3208473	208.439	100
101) 1,2-Dibromo-3-Chloropropane	(5)	16.062	75	245087	202.592	95
102) 1,2,4-Trichlorobenzene	(5)	17.110	180	1391917	211.220	99
103) Hexachloro-1,3-Butadiene	(5)	17.325	225	424309	196.536	99
104) Naphthalene	(5)	17.420	128	3753855	218.622	100

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar010.d
Injection date and time: 07-MAR-2017 17:58

Instrument ID: GCMS_VV.i
Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
Calibration date and time: 07-MAR-2017 19:09
Date, time and analyst ID of latest file update: 07-Mar-2017 19:09 zz9h

Sample Name: IC 200/80 PPB V022017A/V030317AMisc Info: V020817D

Response via Initial Calibration

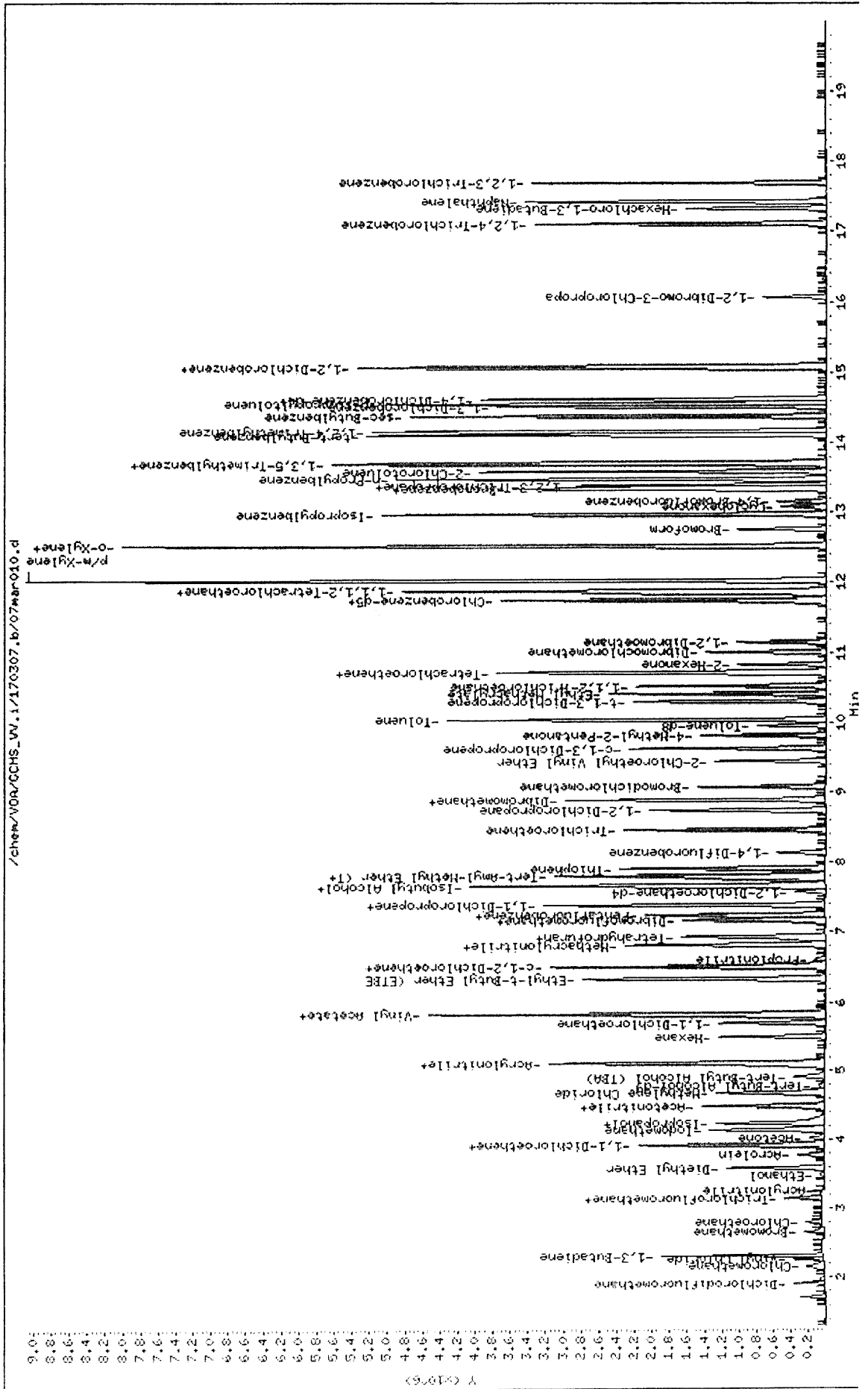
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	17.697	180	1273965	211.065	100

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Data File: /chem/V00/CCHS_VW.i/170307.b/07mar010.d
 Date : 07-Mar-2017 17:58
 Client ID:
 Sample Info: IC 200/SO PPB V022017A/V030317A

Instrument: CCHS_VW.i
 Operator: 1073
 Column diameter: 0.00

Column phase:



Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar012.d
 Injection date and time: 07-MAR-2017 18:51

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:13
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:14 zz9h

Sample Name: ICV V022117B/V030317B Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV(Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.773	65	105101	250.000	0.01
4)*Pentafluorobenzene	(2)	7.211	168	338394	50.000	0.00
47)*1,4-Difluorobenzene	(3)	8.134	114	538383	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.715	117	499077	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.599	152	261517	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	7.138	113	151698	50.834	0.01
SpikedAmount 50.000	Recovery =	0.000				
46)\$1,2-Dichloroethane-d4	(2)	7.573	65	196229	49.812	0.00
SpikedAmount 50.000	Recovery =	0.000				
62)\$Toluene-d8	(3)	9.953	98	638350	49.655	0.00
SpikedAmount 50.000	Recovery =	0.000				
81)\$1,4-Bromofluorobenzene	(4)	13.152	95	246083	50.124	0.01
SpikedAmount 50.000	Recovery =	0.000				
Target Compounds						
2) Ethanol	(1)	3.473	45	34561	534.331	100
3) Tert-Butyl Alcohol (TBA)	(1)	4.894	59	167377	274.866	100
5) Dichlorodifluoromethane	(2)	1.916	85	224016	53.154	100
6) Chloromethane	(2)	2.162	50	254154	53.148	100
7) Vinyl Chloride	(2)	2.262	62	253888	54.586	100
8) Bromomethane	(2)	2.671	94	128174	49.245	100
9) Chloroethane	(2)	2.807	64	146193	54.219	100
10) 1,3-Butadiene	(2)	2.309	54	166811	46.345	100
11) Trichlorofluoromethane	(2)	3.153	101	273149	54.378	100
12) Diethyl Ether	(2)	3.588	59	200918	51.796	100
13) Acetone	(2)	4.029	58	26410	52.075	100
14) Iodomethane	(2)	4.139	142	533910	100.889	100
15) 1,1-Dichloroethene	(2)	3.914	61	283157	49.178	100
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.929	101	156427	49.749	100
17) Isopropanol	(2)	4.286	45	92711	266.972	100
18) Carbon Disulfide	(2)	4.239	76	568453	47.481	100
19) Acetonitrile	(2)	4.490	41	369440	98.789	100
20) Acrylonitrile	(2)	5.056	53	102433	49.973	100
21) Allyl Chloride	(2)	4.490	76	114684	48.501	100
22) Acrolein	(2)	3.772	56	83575	91.396	100
23) Methylene Chloride	(2)	4.674	84	223310	48.953	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar012.d
 Injection date and time: 07-MAR-2017 18:51

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:13
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:14 zz9h

Sample Name: ICV V022117B/V030317E Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	5.088	96	208326	49.235	100
25) Isobutyl Alcohol	(2)	7.678	43	44043	100.965	100
26) Methyl-t-Butyl Ether (MTBE)	(2)	5.109	73	758489	51.398	100
27) Hexane	(2)	5.507	57	175638	43.514	100
28) 1,1-Dichloroethane	(2)	5.701	63	389438	51.596	100
29) Vinyl Acetate	(2)	5.801	43	815704	49.900	100
30) Diisopropyl Ether (DIPE)	(2)	5.827	45	734784	51.487	100
31) Chloroprene	(2)	5.832	53	334662	49.350	100
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.325	59	750830	50.806	100
33) c-1,2-Dichloroethene	(2)	6.504	96	243430	50.010	100
34) 2,2-Dichloropropane	(2)	6.504	77	275372	44.815	100
35) 2-Butanone	(2)	6.540	43	124451	48.896	100
36) Propionitrile	(2)	6.614	54	38512	49.136	100
37) Methacrylonitrile	(2)	6.813	41	162270	50.341	100
38) Bromochloromethane	(2)	6.823	130	151178	52.472	100
39) Tetrahydrofuran	(2)	6.892	42	83920	50.508	100
40) Chloroform	(2)	6.934	83	387895	49.241	100
42) 1,1,1-Trichloroethane	(2)	7.169	97	318740	49.329	100
43) Cyclohexane	(2)	7.243	84	260981	46.241	100
44) 1,1-Dichloropropene	(2)	7.384	75	285242	50.993	100
45) Carbon Tetrachloride	(2)	7.384	117	250706	53.223	100
48) Benzene	(3)	7.647	78	893255	49.643	100
49) 1,2-Dichloroethane	(3)	7.668	62	325595	51.117	100
50) 2-Methyl-2-Butanol (TAA)	(3)	7.673	59	129214	254.409	100
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.804	73	730236	50.563	100
52) Thiophene	(3)	7.914	84	477084	50.308	100
53) 2,2,4-Trimethyl Pentane	(3)	7.762	57	379282	44.849	100
54) Trichloroethene	(3)	8.459	95	230468	48.882	100
55) 1,2-Dichloropropane	(3)	8.737	63	231312	51.863	100
56) Dibromomethane	(3)	8.879	93	140762	49.885	100
57) Methyl Methacrylate	(3)	8.884	69	197023	49.623	100
58) 1,4-Dioxane	(3)	8.905	88	38486	500.799	100
59) Bromodichloromethane	(3)	9.073	83	299310	51.063	100
60) 2-Chloroethyl Vinyl Ether	(3)	9.445	63	160277	50.291	100
61) c-1,3-Dichloropropene	(3)	9.623	75	375299	50.434	100
63) Toluene	(3)	10.037	91	958579	49.759	100
64) 4-Methyl-2-Pentanone	(3)	9.812	58	111882	51.098	100

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar012.d
 Injection date and time: 07-MAR-2017 18:51

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
 Calibration date and time: 07-MAR-2017 19:13
 Date, time and analyst ID of latest file update: 07-Mar-2017 19:14 zz9h

Sample Name: ICV V022117B/V030317B Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.294	75	364573	52.512	100
67) Ethyl Methacrylate	(4)	10.410	69	365892	50.641	100
68) 1,1,2-Trichloroethane	(4)	10.520	83	183907	50.884	100
69) Tetrachloroethene	(4)	10.703	166	278302	47.839	100
70) 1,3-Dichloropropane	(4)	10.724	76	381552	50.933	100
71) 2-Hexanone	(4)	10.824	43	190854	50.510	100
72) Dibromochloromethane	(4)	11.002	129	225051	51.558	100
73) 1,2-Dibromoethane	(4)	11.149	107	228205	51.003	100
74) Chlorobenzene	(4)	11.747	112	640092	50.763	100
75) 1,1,1,2-Tetrachloroethane	(4)	11.846	131	218415	53.041	100
76) Ethylbenzene	(4)	11.883	91	1066115	50.097	100
77) p/m-Xylene	(4)	12.024	91	1680184	101.124	100
78) o-Xylene	(4)	12.512	91	879328	50.504	100
79) Styrene	(4)	12.528	104	755163	51.589	100
80) Isopropylbenzene	(4)	12.968	105	1068970	51.433	100
82) 1,2,3-Trichloropropane	(4)	13.388	75	400427	51.741	100
83) Bromobenzene	(4)	13.351	156	281462	52.039	100
84) n-Propylbenzene	(4)	13.477	91	1212656	50.648	100
85) t-1,4-Dichloro-2-Butene	(4)	13.393	53	92271	52.900	100
86) 2-Chlorotoluene	(4)	13.587	91	747896	50.628	100
87) 1,3,5-Trimethylbenzene	(4)	13.692	105	878155	50.632	100
89) Bromoform	(5)	12.759	173	147265	51.594	100
90) 1,1,2,2-Tetrachloroethane	(5)	13.325	83	301384	52.056	100
91) 4-Chlorotoluene	(5)	13.723	91	879007	50.240	100
92) Cyclohexanone	(5)	13.078	55	78339	280.556	100
93) 1,2,4-Trimethylbenzene	(5)	14.164	105	908658	49.733	100
94) tert-Butylbenzene	(5)	14.101	134	197381	51.025	100
95) p-Isopropyltoluene	(5)	14.557	119	902478	50.876	100
96) sec-Butylbenzene	(5)	14.379	105	1041444	50.882	100
97) 1,3-Dichlorobenzene	(5)	14.515	146	518135	50.359	100
98) 1,4-Dichlorobenzene	(5)	14.625	146	533198	50.592	100
99) 1,2-Dichlorobenzene	(5)	15.092	146	516611	50.980	100
100) n-Butylbenzene	(5)	15.065	91	761776	50.717	100
101) 1,2-Dibromo-3-Chloropropane	(5)	16.062	75	63798	54.045	100
102) 1,2,4-Trichlorobenzene	(5)	17.110	180	337027	52.412	100
103) Hexachloro-1,3-Butadiene	(5)	17.325	225	106444	50.527	100
104) Naphthalene	(5)	17.420	128	891307	53.197	100

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170307.b/07mar012.d
Injection date and time: 07-MAR-2017 18:51

Instrument ID: GCMS_VV.i
Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170307.b/8260.m Sublist used: all
Calibration date and time: 07-MAR-2017 19:13
Date, time and analyst ID of latest file update: 07-Mar-2017 19:14 zz9h

Sample Name: ICV V022117E/V030317B Misc Info: V020817D
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	17.697	180	304660	51.727	100

page 4 of 4

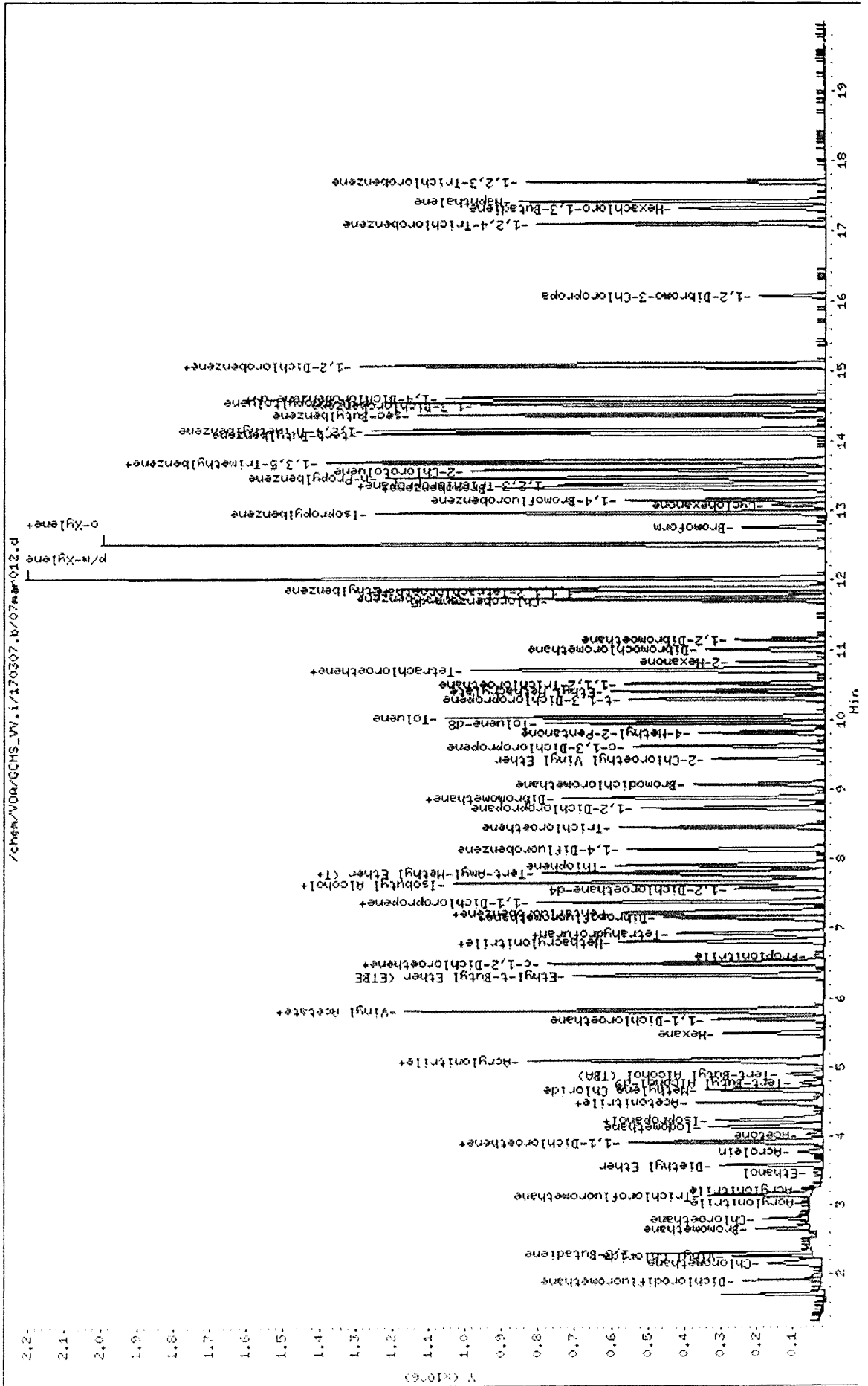
Data File: /chem/V06/CCHS_VV.1/170307.b/07mar012.d
Date : 07-MAR-2017 18:51
Client ID:
Sample Info: ICV V0221178/V030317E

Instrument: CCHS_VV.1

Operator: 1073

Column diameter: 0.00

Column phase:



EPA 8260B
Volatile Organics
(Aqueous)
Sample Data

RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER: 17-03-1523
INSTRUMENT: GC/MS V V
EXTRACTION : EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,073
D/T ANALYZED: 2017-03-22 21:20
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar018.d\22mar018.rr

2 **CLIENT SAMPLE NUMBER:** IDW-W

LCS/MB BATCH: 170322L037 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
MS/MSD BATCH: 170322S020 **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT: The reporting limit is elevated resulting from matrix interference.

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Isobutyl Alcohol	0.288	500	ND	25000	D
Cyclohexanone	0.000	500	ND	25000	D
2-Methyl-2-Butanol (TAA)	0.000	500	ND	25000	D
Acetone	0.000	500	ND	10000	D
Benzene	0.000	500	ND	250	D
Bromobenzene	0.000	500	ND	500	D
Bromochloromethane	0.000	500	ND	500	D
Bromodichloromethane	0.000	500	ND	500	D
Bromoform	0.000	500	ND	500	D
Bromomethane	0.0991	500	ND	5000	D
2-Butanone	0.000	500	ND	5000	D
n-Butylbenzene	0.0864	500	ND	500	D
sec-Butylbenzene	0.000	500	ND	500	D
tert-Butylbenzene	0.000	500	ND	500	D
Diethyl Ether	0.000	500	ND	5000	D
Carbon Disulfide	0.147	500	ND	5000	D
Carbon Tetrachloride	0.000	500	ND	250	D
Chlorobenzene	0.000	500	ND	500	D
Chloroethane	0.000	500	ND	2500	D
2-Chloroethyl Vinyl Ether	0.000	500	ND	25000	D]
Chloroform	0.000	500	ND	500	D
Chloromethane	0.000	500	ND	5000	D
2-Chlorotoluene	0.000	500	ND	500	D
4-Chlorotoluene	0.000	500	ND	500	D
Dibromochloromethane	0.000	500	ND	500	D
1,2-Dibromo-3-Chloropropane	0.000	500	ND	2500	D
1,2-Dibromoethane	0.000	500	ND	500	D
Dibromomethane	0.000	500	ND	500	D
1,2-Dichlorobenzene	0.000	500	ND	500	D
1,3-Dichlorobenzene	0.000	500	ND	500	D
1,4-Dichlorobenzene	0.160	500	ND	500	D
Dichlorodifluoromethane	0.000	500	ND	500	D
1,1-Dichloroethane	0.000	500	ND	500	D
1,2-Dichloroethane	0.000	500	ND	250	D
1,1-Dichloroethene	0.000	500	ND	500	D
c-1,2-Dichloroethene	0.000	500	ND	500	D
t-1,2-Dichloroethene	0.000	500	ND	500	D
Acetonitrile	0.000	500	ND	25000	D
1,2-Dichloropropane	0.000	500	ND	500	D

RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER: 17-03-1523
INSTRUMENT: GC/MS V V
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,073
D/T ANALYZED: 2017-03-22 21:20
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar018.d\22mar018.rr

2 **CLIENT SAMPLE NUMBER:** IDW-W

LCS/MB BATCH: 170322L037 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
MS/MSD BATCH: 170322S020 **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT: The reporting limit is elevated resulting from matrix interference.

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Acrolein	0.000	500	ND	25000	D
Acrylonitrile	0.000	500	ND	10000	D
1,3-Dichloropropane	0.000	500	ND	500	D
2,2-Dichloropropane	0.000	500	ND	500	D
1,1-Dichloropropene	0.000	500	ND	500	D
c-1,3-Dichloropropene	0.000	500	ND	250	D
t-1,3-Dichloropropene	0.000	500	ND	250	D
Ethylbenzene	0.000	500	ND	500	D
2-Hexanone	0.000	500	ND	5000	D
Isopropylbenzene	0.000	500	ND	500	D
p-Isopropyltoluene	0.000	500	ND	500	D
Methylene Chloride	0.000	500	ND	5000	D
4-Methyl-2-Pentanone	0.000	500	ND	5000	D
Naphthalene	0.288	500	ND	5000	D
n-Propylbenzene	0.000	500	ND	500	D
Styrene	0.000	500	ND	500	D
1,1,1,2-Tetrachloroethane	0.000	500	ND	500	D
1,1,2,2-Tetrachloroethane	0.000	500	ND	500	D
Tetrachloroethene	0.000	500	ND	500	D
Toluene	0.000	500	ND	500	D
1,2,3-Trichlorobenzene	0.276	500	ND	500	D
1,2,4-Trichlorobenzene	0.172	500	ND	500	D
1,1,1-Trichloroethane	0.000	500	ND	500	D
Hexachloro-1,3-Butadiene	0.335	500	ND	10000	D
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.000	500	ND	5000	D
1,1,2-Trichloroethane	0.000	500	ND	500	D
Iodomethane	0.000	500	ND	10000	D
Trichloroethene	0.130	500	ND	500	D
Trichlorofluoromethane	0.000	500	ND	5000	D
1,2,3-Trichloropropane	0.000	500	ND	2500	D
1,2,4-Trimethylbenzene	0.000	500	ND	500	D
1,3,5-Trimethylbenzene	0.000	500	ND	500	D
Vinyl Acetate	0.000	500	ND	5000	D
Vinyl Chloride	0.000	500	ND	250	D
p/m-Xylene	0.000	500	ND	500	D
o-Xylene	0.000	500	ND	500	D
Methyl-t-Butyl Ether (MTBE)	0.000	500	ND	500	D
t-1,4-Dichloro-2-Butene	0.000	500	ND	10000	D
Tetrahydrofuran	0.000	500	ND	10000	D

RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER: 17-03-1523
INSTRUMENT: GC/MS V V
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,073
D/T ANALYZED: 2017-03-22 21:20
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar018.d\22mar018.rr

2 **CLIENT SAMPLE NUMBER: IDW-W**

LCS/MB BATCH: 170322L037 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
MS/MSD BATCH: 170322S020 **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT: The reporting limit is elevated resulting from matrix interference.

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Tert-Butyl Alcohol (TBA)	0.000	500	ND	5000	D
Diisopropyl Ether (DIPE)	0.000	500	ND	1000	D
Ethyl-t-Butyl Ether (ETBE)	0.000	500	ND	1000	D
Tert-Amyl-Methyl Ether (TAME)	0.000	500	ND	1000	D
Ethanol	15.5	500	ND	50000	D
Cyclohexane	1.53	500	ND	5000	D
Thiophene	0.000	500	ND	5000	D
1,4-Dioxane	0.000	500	ND	50000	D
Hexane	0.000	500	ND	5000	D
1,3-Butadiene	0.0849	500	ND	12000	D
Isopropanol	0.000	500	ND	50000	D

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar018.d
 Injection date and time: 22-MAR-2017 21:20

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m

Sublist used: all

Calibration date and time: 22-MAR-2017 15:04

Date, time and analyst ID of latest file update: 22-Mar-2017 21:40 Unknown

Sample Name: 17-03-1523-2A 500X 10UL PH<2 Misc Info: V030717B FOAMY

Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	DEV(Min)
	Ref.	RT			Amount	
=====						
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.784	65	81998	250.000	-0.01
4)*Pentafluorobenzene	(2)	7.211	168	365604	50.000	0.00
47)*1,4-Difluorobenzene	(3)	8.134	114	579300	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.715	117	538127	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.599	152	262094	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	7.138	113	179177	55.574	0.01
SpikedAmount 50.000	Recovery = 111.148					
46)\$1,2-Dichloroethane-d4	(2)	7.568	65	200395	47.084	0.01
SpikedAmount 50.000	Recovery = 94.168					
62)\$Toluene-d8	(3)	9.954	98	683929	49.443	0.00
SpikedAmount 50.000	Recovery = 98.886					
81)\$1,4-Bromofluorobenzene	(4)	13.157	95	222079	41.952	0.00
SpikedAmount 50.000	Recovery = 83.905					
Target Compounds						
2) Ethanol	(1)	3.463	45	780	15.461	QValue 1
3) Tert-Butyl Alcohol (TBA)	(1)	0.000		0	N.D.	
5) Dichlorodifluoromethane	(2)	0.000		0	N.D.	
6) Chloromethane	(2)	0.000		0	N.D.	
7) Vinyl Chloride	(2)	0.000		0	N.D.	
8) Bromomethane	(2)	2.666	94	278	0.0991	65
9) Chloroethane	(2)	0.000		0	N.D.	
10) 1,3-Butadiene	(2)	2.325	54	330	0.0849	45
11) Trichlorofluoromethane	(2)	0.000		0	N.D.	
12) Diethyl Ether	(2)	0.000		0	N.D.	
13) Acetone	(2)	0.000		0	N.D.	
14) Iodomethane	(2)	0.000		0	N.D.	
15) 1,1-Dichloroethene	(2)	0.000		0	N.D.	
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	0.000		0	N.D.	
17) Isopropanol	(2)	0.000		0	N.D.	
18) Carbon Disulfide	(2)	4.239	76	1897	0.147	60
19) Acetonitrile	(2)	0.000		0	N.D.	
20) Acrylonitrile	(2)	0.000		0	N.D.	
21) Allyl Chloride	(2)	0.000		0	N.D.	
22) Acrolein	(2)	0.000		0	N.D.	
23) Methylene Chloride	(2)	0.000		0	N.D.	

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar018.d
 Injection date and time: 22-MAR-2017 21:20

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m

Sublist used: all

Calibration date and time: 22-MAR-2017 15:04

Date, time and analyst ID of latest file update: 22-Mar-2017 21:40 Unknown

Sample Name: 17-03-1523-2A 500X 10UL PH<2 Misc Info: V030717B FOAMY

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	0.000		0	N.D.	
25) Isobutyl Alcohol	(2)	7.652	43	135	0.287	31
26) Methyl-t-Butyl Ether (MTBE)	(2)	0.000		0	N.D.	
27) Hexane	(2)	0.000		0	N.D.	
28) 1,1-Dichloroethane	(2)	0.000		0	N.D.	
29) Vinyl Acetate	(2)	0.000		0	N.D.	
30) Diisopropyl Ether (DIPE)	(2)	0.000		0	N.D.	
31) Chloroprene	(2)	0.000		0	N.D.	
32) Ethyl-t-Butyl Ether (ETBE)	(2)	0.000		0	N.D.	
33) c-1,2-Dichloroethene	(2)	0.000		0	N.D.	
34) 2,2-Dichloropropane	(2)	0.000		0	N.D.	
35) 2-Butanone	(2)	0.000		0	N.D.	
36) Propionitrile	(2)	0.000		0	N.D.	
37) Methacrylonitrile	(2)	0.000		0	N.D.	
38) Bromochloromethane	(2)	0.000		0	N.D.	
39) Tetrahydrofuran	(2)	0.000		0	N.D.	
40) Chloroform	(2)	0.000		0	N.D.	
42) 1,1,1-Trichloroethane	(2)	0.000		0	N.D.	
43) Cyclohexane	(2)	7.211	84	9345	1.533	55
44) 1,1-Dichloropropene	(2)	0.000		0	N.D.	
45) Carbon Tetrachloride	(2)	0.000		0	N.D.	
48) Benzene	(3)	0.000		0	N.D.	
49) 1,2-Dichloroethane	(3)	0.000		0	N.D.	
50) 2-Methyl-2-Butanol (TAA)	(3)	0.000		0	N.D.	
51) Tert-Amyl-Methyl Ether (TAME)	(3)	0.000		0	N.D.	
52) Thiophene	(3)	0.000		0	N.D.	
53) 2,2,4-Trimethyl Pentane	(3)	7.762	57	1090	0.120	54
54) Trichloroethene	(3)	8.459	95	657	0.130	82
55) 1,2-Dichloropropane	(3)	0.000		0	N.D.	
56) Dibromomethane	(3)	0.000		0	N.D.	
57) Methyl Methacrylate	(3)	0.000		0	N.D.	
58) 1,4-Dioxane	(3)	0.000		0	N.D.	
59) Bromodichloromethane	(3)	0.000		0	N.D.	
60) 2-Chloroethyl Vinyl Ether	(3)	0.000		0	N.D.	
61) c-1,3-Dichloropropene	(3)	0.000		0	N.D.	
63) Toluene	(3)	0.000		0	N.D.	
64) 4-Methyl-2-Pentanone	(3)	0.000		0	N.D.	

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar018.d
 Injection date and time: 22-MAR-2017 21:20

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 15:04
 Date, time and analyst ID of latest file update: 22-Mar-2017 21:40 Unknown

Sample Name: 17-03-1523-2A 500X 10UL PH<2 Misc Info: V030717B FOAMY
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	
	Ref.	RT			Amount	QValue
=====						
66) t-1,3-Dichloropropene	(4)	0.000		0	N.D.	
67) Ethyl Methacrylate	(4)	0.000		0	N.D.	
68) 1,1,2-Trichloroethane	(4)	0.000		0	N.D.	
69) Tetrachloroethene	(4)	0.000		0	N.D.	
70) 1,3-Dichloropropane	(4)	0.000		0	N.D.	
71) 2-Hexanone	(4)	0.000		0	N.D.	
72) Dibromochloromethane	(4)	0.000		0	N.D.	
73) 1,2-Dibromoethane	(4)	0.000		0	N.D.	
74) Chlorobenzene	(4)	0.000		0	N.D.	
75) 1,1,1,2-Tetrachloroethane	(4)	0.000		0	N.D.	
76) Ethylbenzene	(4)	0.000		0	N.D.	
77) p/m-Xylene	(4)	0.000		0	N.D.	
78) o-Xylene	(4)	0.000		0	N.D.	
79) Styrene	(4)	0.000		0	N.D.	
80) Isopropylbenzene	(4)	0.000		0	N.D.	
82) 1,2,3-Trichloropropane	(4)	0.000		0	N.D.	
83) Bromobenzene	(4)	0.000		0	N.D.	
84) n-Propylbenzene	(4)	0.000		0	N.D.	
85) t-1,4-Dichloro-2-Butene	(4)	0.000		0	N.D.	
86) 2-Chlorotoluene	(4)	0.000		0	N.D.	
87) 1,3,5-Trimethylbenzene	(4)	0.000		0	N.D.	
89) Bromoform	(5)	0.000		0	N.D.	
90) 1,1,2,2-Tetrachloroethane	(5)	0.000		0	N.D.	
91) 4-Chlorotoluene	(5)	0.000		0	N.D.	
92) Cyclohexanone	(5)	0.000		0	N.D.	
93) 1,2,4-Trimethylbenzene	(5)	0.000		0	N.D.	
94) tert-Butylbenzene	(5)	0.000		0	N.D.	
95) p-Isopropyltoluene	(5)	0.000		0	N.D.	
96) sec-Butylbenzene	(5)	0.000		0	N.D.	
97) 1,3-Dichlorobenzene	(5)	0.000		0	N.D.	
98) 1,4-Dichlorobenzene	(5)	14.625	146	1688	0.160	1
99) 1,2-Dichlorobenzene	(5)	0.000		0	N.D.	
100) n-Butylbenzene	(5)	15.071	91	1301	0.0864	94
101) 1,2-Dibromo-3-Chloropropane	(5)	0.000		0	N.D.	
102) 1,2,4-Trichlorobenzene	(5)	17.116	180	1105	0.172	85
103) Hexachloro-1,3-Butadiene	(5)	17.320	225	706	0.335	74
104) Naphthalene	(5)	17.420	128	4842	0.288	63

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar018.d
Injection date and time: 22-MAR-2017 21:20

Instrument ID: GCMS_VV.i
Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 21:40 Unknown

Sample Name: 17-03-1523-2A 500X 10UL PH<2 Misc Info: V030717B FOAMY
Response via Initial Calibration

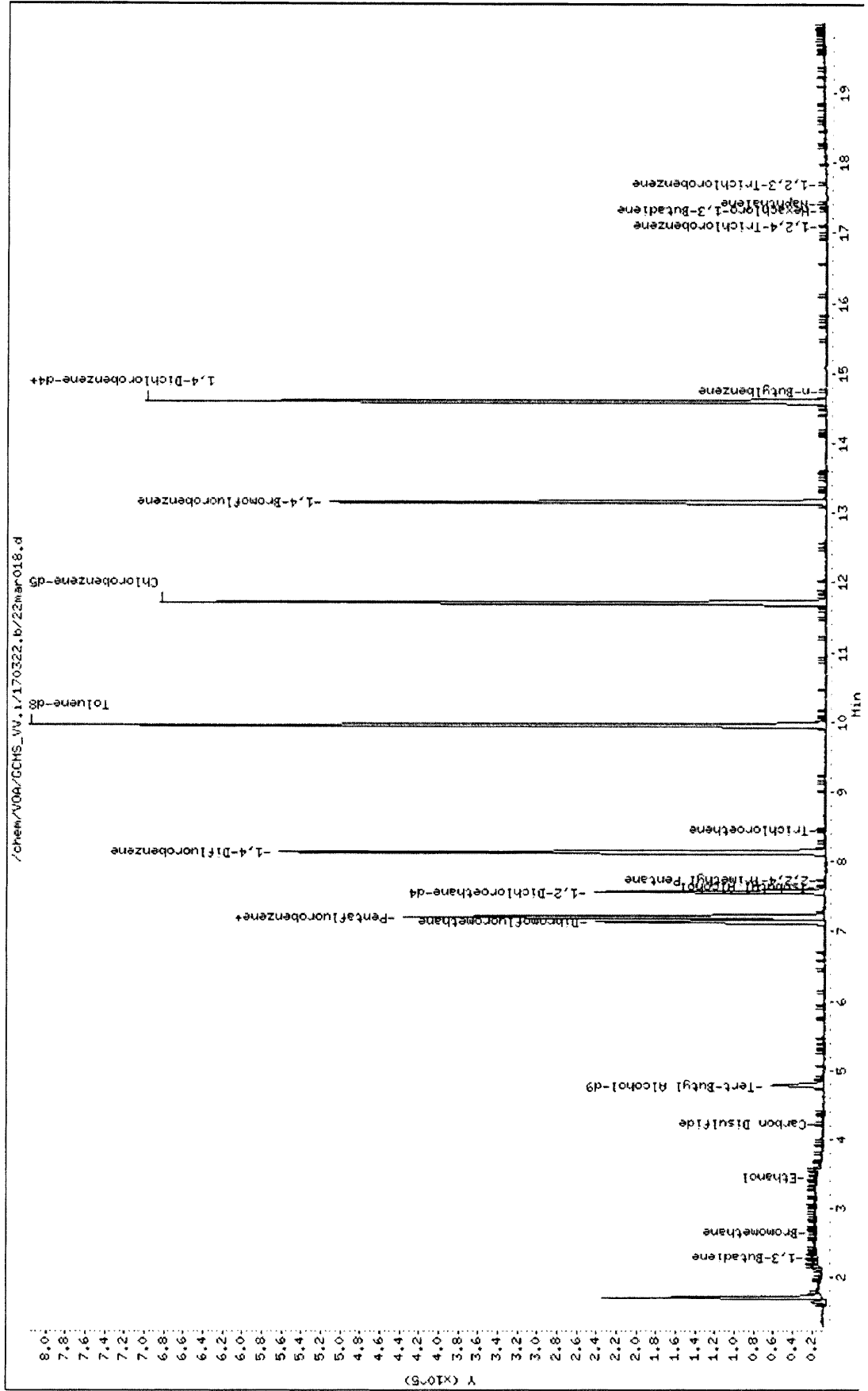
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	17.698	180	1630	0.276	95

page 4 of 4

Data File: /chem/V04/GCHS_VV.i/170322.b/22mar018.d
Date : 22-MAR-2017 21:20
Client ID:
Sample Info: 17-03-1523-2A 500X 10UL PHC2

Instrument: GCHS_VV.i
Operator: 1073
Column diameter: 0.00

Column phase:



EPA 8260B
Volatile Organics
(Aqueous)

Quality Control

Method Blank
LCS/LCSD
MS/MSD

METHOD BLANK ASSOCIATION SUMMARY FOR METHOD: EPA 8260B

MB SAMPLE ID: 099-14-001-22761
MB BATCH ID: 170322L037
INSTRUMENT: GC/MS V V
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,073
D/T ANALYZED: 2017-03-22 16:02
REVIEWED BY:
D/T REVIEWED:
MATRIX: Water

DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar006.d\22mar006.rr

CLIENT WORK ORDER: 17-03-1523

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
2	IDW-W		2017-03-22 21:20	Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar018.d\22mar018.rr

RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER: 099-14-001
INSTRUMENT: GC/MS V V
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,073
D/T ANALYZED: 2017-03-22 16:02
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar006.d\22mar006.rr

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170322L037 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Isobutyl Alcohol	0.000	1.00	ND	20	
Cyclohexanone	0.000	1.00	ND	50	
2-Methyl-2-Butanol (TAA)	0.000	1.00	ND	50	
Acetone	0.000	1.00	ND	20	
Benzene	0.000	1.00	ND	0.50	
Bromobenzene	0.000	1.00	ND	1.0	
Bromochloromethane	0.000	1.00	ND	1.0	
Bromodichloromethane	0.000	1.00	ND	1.0	
Bromoform	0.000	1.00	ND	1.0	
Bromomethane	0.0829	1.00	ND	10	
2-Butanone	0.163	1.00	ND	10	
n-Butylbenzene	0.000	1.00	ND	1.0	
sec-Butylbenzene	0.000	1.00	ND	1.0	
tert-Butylbenzene	0.000	1.00	ND	1.0	
Diethyl Ether	0.000	1.00	ND	10	
Carbon Disulfide	0.105	1.00	ND	10	
Carbon Tetrachloride	0.000	1.00	ND	0.50	
Chlorobenzene	0.000	1.00	ND	1.0	
Chloroethane	0.000	1.00	ND	5.0	
2-Chloroethyl Vinyl Ether	0.000	1.00	ND	50	
Chloroform	0.000	1.00	ND	1.0	
Chloromethane	0.000	1.00	ND	10	
2-Chlorotoluene	0.000	1.00	ND	1.0	
4-Chlorotoluene	0.000	1.00	ND	1.0	
Dibromochloromethane	0.000	1.00	ND	1.0	
1,2-Dibromo-3-Chloropropane	0.000	1.00	ND	5.0	
1,2-Dibromoethane	0.000	1.00	ND	1.0	
Dibromomethane	0.000	1.00	ND	1.0	
1,2-Dichlorobenzene	0.000	1.00	ND	1.0	
1,3-Dichlorobenzene	0.000	1.00	ND	1.0	
1,4-Dichlorobenzene	0.111	1.00	ND	1.0	
Dichlorodifluoromethane	0.000	1.00	ND	1.0	
1,1-Dichloroethane	0.000	1.00	ND	1.0	
1,2-Dichloroethane	0.000	1.00	ND	0.50	
1,1-Dichloroethene	0.000	1.00	ND	1.0	
c-1,2-Dichloroethene	0.000	1.00	ND	1.0	
t-1,2-Dichloroethene	0.000	1.00	ND	1.0	
Acetonitrile	0.177	1.00	ND	50	
1,2-Dichloropropane	0.000	1.00	ND	1.0	

RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER: 099-14-001
INSTRUMENT: GC/MS V V
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,073
D/T ANALYZED: 2017-03-22 16:02
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar006.d\22mar006.rr

MB CLIENT SAMPLE NUMBER: Method Blank

LCS/MB BATCH: 170322L037 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Acrolein	0.000	1.00	ND	50	
Acrylonitrile	0.000	1.00	ND	20	
1,3-Dichloropropane	0.000	1.00	ND	1.0	
2,2-Dichloropropane	0.000	1.00	ND	1.0	
1,1-Dichloropropene	0.000	1.00	ND	1.0	
c-1,3-Dichloropropene	0.000	1.00	ND	0.50	
t-1,3-Dichloropropene	0.000	1.00	ND	0.50	
Ethylbenzene	0.000	1.00	ND	1.0	
2-Hexanone	0.000	1.00	ND	10	
Isopropylbenzene	0.000	1.00	ND	1.0	
p-Isopropyltoluene	0.000	1.00	ND	1.0	
Methylene Chloride	0.000	1.00	ND	10	
4-Methyl-2-Pentanone	0.000	1.00	ND	10	
Naphthalene	0.216	1.00	ND	10	
n-Propylbenzene	0.000	1.00	ND	1.0	
Styrene	0.000	1.00	ND	1.0	
1,1,1,2-Tetrachloroethane	0.000	1.00	ND	1.0	
1,1,2,2-Tetrachloroethane	0.000	1.00	ND	1.0	
Tetrachloroethene	0.000	1.00	ND	1.0	
Toluene	0.000	1.00	ND	1.0	
1,2,3-Trichlorobenzene	0.204	1.00	ND	1.0	
1,2,4-Trichlorobenzene	0.139	1.00	ND	1.0	
1,1,1-Trichloroethane	0.000	1.00	ND	1.0	
Hexachloro-1,3-Butadiene	0.161	1.00	ND	20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.000	1.00	ND	10	
1,1,2-Trichloroethane	0.000	1.00	ND	1.0	
Iodomethane	0.000	1.00	ND	20	
Trichloroethene	0.000	1.00	ND	1.0	
Trichlorofluoromethane	0.000	1.00	ND	10	
1,2,3-Trichloropropane	0.000	1.00	ND	5.0	
1,2,4-Trimethylbenzene	0.000	1.00	ND	1.0	
1,3,5-Trimethylbenzene	0.000	1.00	ND	1.0	
Vinyl Acetate	0.000	1.00	ND	10	
Vinyl Chloride	0.000	1.00	ND	0.50	
p/m-Xylene	0.000	1.00	ND	1.0	
o-Xylene	0.000	1.00	ND	1.0	
Methyl-t-Butyl Ether (MTBE)	0.000	1.00	ND	1.0	
t-1,4-Dichloro-2-Butene	0.000	1.00	ND	20	
Tetrahydrofuran	0.000	1.00	ND	20	

RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER: 099-14-001
INSTRUMENT: GC/MS V V
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,073
D/T ANALYZED: 2017-03-22 16:02
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_V\GCMS_VV_data\2017\170322\22mar006.d\22mar006.rr

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170322L037 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
UNITS: ug/L **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Tert-Butyl Alcohol (TBA)	0.000	1.00	ND	10	
Diisopropyl Ether (DIPE)	0.000	1.00	ND	2.0	
Ethyl-t-Butyl Ether (ETBE)	0.000	1.00	ND	2.0	
Tert-Amyl-Methyl Ether (TAME)	0.000	1.00	ND	2.0	
Ethanol	20.0	1.00	ND	100	
Cyclohexane	1.63	1.00	ND	10	
Thiophene	0.000	1.00	ND	10	
1,4-Dioxane	0.000	1.00	ND	100	
Hexane	0.000	1.00	ND	1.0	
1,3-Butadiene	0.152	1.00	ND	25	
Isopropanol	0.000	1.00	ND	100	

LCS QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

LCS SAMPLE ID: 099-14-001-22761
LCS/MB BATCH ID: 170322L037
INSTRUMENT: GC/MS V V

EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,073
D/T ANALYZED: 2017-03-22 15:10
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_VVGCMS_VV_data\20171170322\22mar004.d\22mar004.itr

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Acetone	50.00	47.13	94	53-137	39-151	PASS	
Benzene	50.00	53.60	107	79-121	72-128	PASS	
Bromobenzene	50.00	57.77	116	80-120	73-127	PASS	
Bromochloromethane	50.00	57.25	114	80-122	73-129	PASS	
Bromodichloromethane	50.00	52.95	106	80-124	73-131	PASS	
Bromoform	50.00	60.82	122	73-127	64-136	PASS	
Bromomethane	50.00	41.32	83	50-150	33-167	PASS	
2-Butanone	50.00	41.59	83	60-126	49-137	PASS	
n-Butylbenzene	50.00	47.92	96	72-138	61-149	PASS	
sec-Butylbenzene	50.00	49.64	99	77-131	68-140	PASS	
tert-Butylbenzene	50.00	50.85	102	80-125	72-132	PASS	
Diethyl Ether	50.00	46.65	93	71-125	62-134	PASS	
Carbon Disulfide	50.00	60.62	121	50-150	33-167	PASS	
Carbon Tetrachloride	50.00	59.74	119	65-143	52-156	PASS	
Chlorobenzene	50.00	56.05	112	80-120	73-127	PASS	
Chloroethane	50.00	39.01	78	62-128	51-139	PASS	
Chloroform	50.00	49.53	99	80-120	73-127	PASS	
Chloromethane	50.00	38.21	76	43-133	28-148	PASS	
2-Chlorotoluene	50.00	52.42	105	80-121	73-128	PASS	
4-Chlorotoluene	50.00	47.54	95	80-120	73-127	PASS	
Dibromochloromethane	50.00	60.72	121	80-123	73-130	PASS	
1,2-Dibromo-3-Chloropropane	50.00	44.84	90	66-126	56-136	PASS	
1,2-Dibromoethane	50.00	53.68	107	80-120	73-127	PASS	
Dibromomethane	50.00	52.89	106	80-120	73-127	PASS	
1,2-Dichlorobenzene	50.00	53.34	107	80-120	73-127	PASS	
1,3-Dichlorobenzene	50.00	52.25	104	80-120	73-127	PASS	
1,4-Dichlorobenzene	50.00	52.77	106	80-120	73-127	PASS	
Dichlorodifluoromethane	50.00	41.17	82	50-150	33-167	PASS	
1,1-Dichloroethane	50.00	48.88	98	72-126	63-135	PASS	
1,2-Dichloroethane	50.00	47.20	94	76-120	69-127	PASS	

Compounds listed in bold are required to be reported.

LCS QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

LCS SAMPLE ID: 099-14-001-22761
LCS/MB BATCH ID: 170322L037
INSTRUMENT: GC/MS V V

EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,073
D/T ANALYZED: 2017-03-22 15:10
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar004.d\22mar004.rr

<u>COMPOUND</u>	<u>CONC</u>	<u>CONC REC</u>	<u>%REC</u>	<u>%REC CL</u>	<u>ME CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
1,1-Dichloroethene	50.00	48.42	97	66-132	55-143	PASS	
c-1,2-Dichloroethene	50.00	51.99	104	78-120	71-127	PASS	
t-1,2-Dichloroethene	50.00	55.08	110	66-132	55-143	PASS	
1,2-Dichloropropane	50.00	50.20	100	80-120	73-127	PASS	
1,3-Dichloropropane	50.00	50.56	101	80-120	73-127	PASS	
2,2-Dichloropropane	50.00	45.94	92	50-150	33-167	PASS	
1,1-Dichloropropene	50.00	51.35	103	75-123	67-131	PASS	
c-1,3-Dichloropropene	50.00	49.09	98	77-131	68-140	PASS	
t-1,3-Dichloropropene	50.00	49.19	98	76-136	66-146	PASS	
Ethylbenzene	50.00	53.06	106	80-120	73-127	PASS	
2-Hexanone	50.00	40.51	81	63-123	53-133	PASS	
Isopropylbenzene	50.00	53.94	108	80-128	72-136	PASS	
p-Isopropyltoluene	50.00	50.17	100	73-133	63-143	PASS	
Methylene Chloride	50.00	51.14	102	61-133	49-145	PASS	
4-Methyl-2-Pentanone	50.00	42.97	86	65-125	55-135	PASS	
Naphthalene	50.00	48.98	98	69-129	59-139	PASS	
n-Propylbenzene	50.00	53.94	108	80-128	72-136	PASS	
Styrene	50.00	55.28	111	80-126	72-134	PASS	
1,1,1,2-Tetrachloroethane	50.00	59.75	119	80-129	72-137	PASS	
2-Methyl-2-Butanol (TAA)	250.0	191.1	76	50-150	33-167	PASS	
1,1,2,2-Tetrachloroethane	50.00	49.34	99	74-122	66-130	PASS	
Tetrachloroethene	50.00	57.42	115	55-139	41-153	PASS	
Toluene	50.00	54.30	109	80-120	73-127	PASS	
1,2,3-Trichlorobenzene	50.00	50.99	102	72-132	62-142	PASS	
1,2,4-Trichlorobenzene	50.00	50.02	100	74-134	64-144	PASS	
1,1,1-Trichloroethane	50.00	49.00	98	76-124	68-132	PASS	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	60.48	121	54-150	38-166	PASS	
1,1,2-Trichloroethane	50.00	52.68	105	80-120	73-127	PASS	
Trichloroethene	50.00	53.27	107	79-121	72-128	PASS	
Trichlorofluoromethane	50.00	47.37	95	72-132	62-142	PASS	

Compounds listed in bold are required to be reported.

LCS QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

LCS SAMPLE ID: 099-14-001-22761
LCS/MB BATCH ID: 170322L037
INSTRUMENT: GC/MS V V

EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,073
D/T ANALYZED: 2017-03-22 15:10
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_VA\GCMS_VV_data\2017\170322\22mar004.d\22mar004.rr

<u>COMPOUND</u>	<u>CONC</u>	<u>CONC_REC</u>	<u>%REC</u>	<u>%REC_CL</u>	<u>ME CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
1,2,3-Trichloropropane	50.00	50.88	102	75-123	67-131	PASS	
1,2,4-Trimethylbenzene	50.00	48.04	96	74-128	65-137	PASS	
1,3,5-Trimethylbenzene	50.00	54.35	109	77-131	68-140	PASS	
Vinyl Acetate	50.00	38.56	77	50-150	33-167	PASS	
Vinyl Chloride	50.00	40.55	81	63-129	52-140	PASS	
p/m-Xylene	100.0	108.3	108	80-122	73-129	PASS	
o-Xylene	50.00	52.46	105	80-128	72-136	PASS	
Methyl-t-Butyl Ether (MTBE)	50.00	42.92	86	69-123	60-132	PASS	
Tert-Butyl Alcohol (TBA)	250.0	268.8	108	80-124	73-131	PASS	
Diisopropyl Ether (DIPE)	50.00	43.57	87	79-121	72-128	PASS	
Ethyl-t-Butyl Ether (ETBE)	50.00	40.06	80	71-125	62-134	PASS	
Tert-Amyl-Methyl Ether (TAME)	50.00	44.19	88	70-124	61-133	PASS	
Cyclohexanone	250.0	153.4	61	50-150	33-167	PASS	
Ethanol	500.0	419.2	84	53-149	37-165	PASS	
1,4-Dioxane	500.0	498.4	100	80-150	68-162	PASS	

Total number of LCS compounds: 75
 Total number of ME compounds: 0
 Total number of ME compounds allowed: 4
 LCS ME CL validation result: Pass

Compounds listed in bold are required to be reported.

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

SPIKED SAMPLE ID: 17-03-1540-1
MS/MSD BATCH: 170322S020
INSTRUMENTS:
SAMPLE: GC/MS V V
MS: GC/MS V V
MSD: GC/MS V V

EXTRACTION: EPA 5030C
D/T EXTRACTED:
SAMPLE: 2017-03-22 00:00
MS: 2017-03-22 00:00
MSD: 2017-03-22 00:00

ANALYZED BY: 1.073
D/T ANALYZED:
SAMPLE: 2017-03-22 16:55
MS: 2017-03-22 20:01
MSD: 2017-03-22 20:27
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC.CL	RPD	RPD CL	STATUS	QUALIFIER
Acetone	ND	50.00	5000	4844	97	4692	94	22-178	3	0-26	PASS	
Benzene	ND	50.00	5000	5838	117	5710	114	70-130	2	0-20	PASS	
Bromobenzene	ND	50.00	5000	6148	123	6029	121	70-130	2	0-20	PASS	
Bromochloromethane	ND	50.00	5000	6071	121	5892	118	70-132	3	0-20	PASS	
Bromodichloromethane	ND	50.00	5000	5674	113	5558	111	69-135	2	0-20	PASS	
Bromoform	ND	50.00	5000	6311	126	6099	122	70-133	3	0-20	PASS	
Bromomethane	ND	50.00	5000	4171	83	4497	90	11-167	8	0-32	PASS	
2-Butanone	ND	50.00	5000	4385	88	4141	83	39-159	6	0-21	PASS	
n-Butylbenzene	ND	50.00	5000	5130	103	5056	101	62-152	1	0-28	PASS	
sec-Butylbenzene	ND	50.00	5000	5331	107	5248	105	70-143	2	0-24	PASS	
tert-Butylbenzene	ND	50.00	5000	5488	110	5395	108	70-140	2	0-20	PASS	
Diethyl Ether	ND	50.00	5000	4766	95	4563	91	64-130	4	0-20	PASS	
Carbon Disulfide	ND	50.00	5000	6618	132	6475	130	54-138	2	0-23	PASS	
Carbon Tetrachloride	ND	50.00	5000	6427	129	6178	124	63-153	4	0-22	PASS	
Chlorobenzene	ND	50.00	5000	6067	121	5929	119	70-130	2	0-20	PASS	
Chloroethane	ND	50.00	5000	4330	87	4134	83	44-140	5	0-32	PASS	
2-Chloroethyl Vinyl Ether	ND	50.00	5000	663.5	13	585.8	12	10-191	12	0-40	PASS	
Chloroform	ND	50.00	5000	5317	106	5201	104	68-134	2	0-20	PASS	
Chloromethane	ND	50.00	5000	4273	85	4238	85	20-158	1	0-40	PASS	
2-Chlorotoluene	ND	50.00	5000	5699	114	5592	112	70-137	2	0-20	PASS	
4-Chlorotoluene	ND	50.00	5000	5193	104	5093	102	70-130	2	0-20	PASS	
Dibromochloromethane	ND	50.00	5000	6353	127	6209	124	70-133	2	0-20	PASS	
1,2-Dibromo-3-Chloropropane	ND	50.00	5000	4804	96	4580	92	67-133	5	0-20	PASS	
1,2-Dibromoethane	ND	50.00	5000	5665	113	5426	109	70-130	4	0-20	PASS	
Dibromomethane	ND	50.00	5000	5565	111	5426	109	70-130	3	0-20	PASS	
1,2-Dichlorobenzene	ND	50.00	5000	5670	113	5507	110	70-130	3	0-20	PASS	
1,3-Dichlorobenzene	ND	50.00	5000	5578	112	5500	110	70-130	1	0-20	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

SPIKED SAMPLE ID: 17-03-1540-1
MS/MSD BATCH: 170322S020
INSTRUMENTS:
SAMPLE: GC/MS V V
MS: GC/MS V V
MSD: GC/MS V V

EXTRACTION: EPA 5030C
D/T EXTRACTED:
SAMPLE: 2017-03-22 00:00
MS: 2017-03-22 00:00
MSD: 2017-03-22 00:00

ANALYZED BY: 1,073
D/T ANALYZED:
SAMPLE: 2017-03-22 16:55
MS: 2017-03-22 20:01
MSD: 2017-03-22 20:27
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIER
1,4-Dichlorobenzene	ND	50.00	5000	5684	114	5540	111	70-130	3	0-20	PASS	
Dichlorodifluoromethane	ND	50.00	5000	4318	86	4290	86	10-190	1	0-40	PASS	
1,1-Dichloroethane	ND	50.00	5000	5321	106	5210	104	64-130	2	0-20	PASS	
1,2-Dichloroethane	ND	50.00	5000	4980	100	4896	98	69-135	2	0-20	PASS	
1,1-Dichloroethene	195.4	50.00	5000	5370	104	5267	101	51-153	2	0-21	PASS	
c-1,2-Dichloroethene	ND	50.00	5000	5665	113	5527	111	56-146	2	0-20	PASS	
t-1,2-Dichloroethene	ND	50.00	5000	6039	121	5921	118	68-134	2	0-20	PASS	
Acetonitrile	ND	100.0	10000	9419	94	9020	90	54-132	4	0-24	PASS	
1,2-Dichloropropane	ND	50.00	5000	5425	109	5263	105	70-130	3	0-20	PASS	
Acrolein	ND	100.0	10000	10400	104	9990	100	16-184	4	0-40	PASS	
Acrylonitrile	ND	50.00	5000	4878	98	4552	91	46-142	7	0-20	PASS	
1,3-Dichloropropane	ND	50.00	5000	5448	109	5268	105	70-130	3	0-20	PASS	
2,2-Dichloropropane	ND	50.00	5000	4330	87	4115	82	37-169	5	0-23	PASS	
1,1-Dichloropropene	ND	50.00	5000	5485	110	5389	108	66-132	2	0-20	PASS	
c-1,3-Dichloropropene	ND	50.00	5000	5056	101	4957	99	67-139	2	0-20	PASS	
t-1,3-Dichloropropene	ND	50.00	5000	5056	101	4918	98	58-136	3	0-20	PASS	
Ethylbenzene	ND	50.00	5000	5781	116	5631	113	70-134	3	0-24	PASS	
2-Hexanone	ND	50.00	5000	4033	81	3863	77	59-149	4	0-20	PASS	
Isopropylbenzene	ND	50.00	5000	5818	116	5723	114	70-141	2	0-27	PASS	
p-Isopropyltoluene	ND	50.00	5000	5458	109	5299	106	65-143	3	0-39	PASS	
Methylene Chloride	ND	50.00	5000	5609	112	5490	110	69-130	2	0-21	PASS	
4-Methyl-2-Pentanone	ND	50.00	5000	4405	88	4173	83	67-139	5	0-20	PASS	
Naphthalene	ND	50.00	5000	4815	96	5009	100	61-139	4	0-20	PASS	
n-Propylbenzene	ND	50.00	5000	5849	117	5729	115	70-140	2	0-24	PASS	
Styrene	ND	50.00	5000	5957	119	5883	118	18-174	1	0-40	PASS	
1,1,1,2-Tetrachloroethane	ND	50.00	5000	6395	128	6314	126	70-135	1	0-20	PASS	
1,1,2,2-Tetrachloroethane	ND	50.00	5000	5346	107	5104	102	70-137	5	0-20	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

SPIKED SAMPLE ID: 17-03-1540-1
MS/MSD BATCH: 170322S020
INSTRUMENTS:
SAMPLE: GC/MS V V
MS: GC/MS V V
MSD: GC/MS V V

EXTRACTION: EPA 5030C
D/T EXTRACTED:
SAMPLE: 2017-03-22 00:00
MS: 2017-03-22 00:00
MSD: 2017-03-22 00:00

ANALYZED BY: 1.073
D/T ANALYZED: 2017-03-22 16:55
SAMPLE: 2017-03-22 20:01
MS: 2017-03-22 20:27
MSD:
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC.CL	RPD	RPD CL	STATUS	QUALIFIER
Tetrachloroethene	828.4	50.00	5000	6675	117	6548	114	33-147	2	0-30	PASS	
Toluene	ND	50.00	5000	5892	118	5789	116	70-130	2	0-20	PASS	
1,2,3-Trichlorobenzene	ND	50.00	5000	5332	107	5267	105	64-142	1	0-22	PASS	
1,2,4-Trichlorobenzene	ND	50.00	5000	5218	104	5210	104	60-144	0	0-24	PASS	
1,1,1-Trichloroethane	ND	50.00	5000	5259	105	5183	104	68-140	1	0-20	PASS	
Hexachloro-1,3-Butadiene	ND	50.00	5000	5536	111	5610	112	44-164	1	0-39	PASS	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	5000	6471	129	6258	125	21-190	3	0-40	PASS	
1,1,2-Trichloroethane	ND	50.00	5000	5540	111	5496	110	70-130	1	0-20	PASS	
Iodomethane	ND	100.0	10000	13280	133	13050	131	10-181	2	0-40	PASS	
Trichloroethene	9796	50.00	5000	15180	108	14920	103	42-156	2	0-20	PASS	
Trichlorofluoromethane	ND	50.00	5000	5214	104	5195	104	54-162	0	0-30	PASS	
1,2,3-Trichloropropane	ND	50.00	5000	5265	105	5054	101	67-130	4	0-20	PASS	
1,2,4-Trimethylbenzene	ND	50.00	5000	5256	105	5084	102	70-133	3	0-20	PASS	
1,3,5-Trimethylbenzene	ND	50.00	5000	5912	118	5730	115	70-139	3	0-20	PASS	
Vinyl Acetate	ND	50.00	5000	4068	81	3928	79	10-190	3	0-40	PASS	
Vinyl Chloride	ND	50.00	5000	4370	87	4440	89	59-137	2	0-20	PASS	
p/m-Xylene	ND	100.0	10000	11740	117	11470	115	67-145	2	0-28	PASS	
o-Xylene	ND	50.00	5000	5702	114	5572	111	70-142	2	0-31	PASS	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	5000	4413	88	4305	86	69-130	2	0-20	PASS	
t-1,4-Dichloro-2-Butene	ND	50.00	5000	4518	90	4277	86	11-130	5	0-20	PASS	
Tetrahydrofuran	ND	50.00	5000	4341	87	4024	80	55-139	8	0-20	PASS	
Tert-Butyl Alcohol (TBA)	ND	250.0	25000	27780	111	27360	109	70-132	2	0-20	PASS	
Diisopropyl Ether (DIPE)	ND	50.00	5000	4615	92	4477	90	56-140	3	0-25	PASS	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	5000	4080	82	4075	82	61-133	0	0-20	PASS	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	5000	4447	89	4422	88	69-130	1	0-20	PASS	
Ethanol	ND	500.0	50000	49270	99	43710	87	65-137	12	0-21	PASS	
Cyclohexane	163.1	50.00	5000	5703	111	5576	108	35-185	2	0-34	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

SPIKED SAMPLE ID: 17-03-1540-1
MS/MSD BATCH: 170322S020
INSTRUMENTS:
SAMPLE: GC/MS V V
MS: GC/MS V V
MSD: GC/MS V V

EXTRACTION: EPA 5030C
D/T EXTRACTED:
SAMPLE: 2017-03-22 00:00
MS: 2017-03-22 00:00
MSD: 2017-03-22 00:00

ANALYZED BY: 1,073
D/T ANALYZED:
SAMPLE: 2017-03-22 16:55
MS: 2017-03-22 20:01
MSD: 2017-03-22 20:27
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIER
Thiophene	ND	50.00	5000	5624	112	5576	112	70-130	1	0-20	PASS	
1,4-Dioxane	ND	500.0	50000	51950	104	49770	100	55-151	4	0-25	PASS	
Hexane	ND	50.00	5000	6046	121	5929	119	10-190	2	0-40	PASS	
1,3-Butadiene	ND	50.00	5000	4716	94	5002	100	12-174	6	0-40	PASS	
Isopropanol	ND	250.0	25000	18000	72	17840	71	19-187	1	0-32	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	22mar015.r	Z:\GCMS_VWGCMS_VV_data\20171170322\22mar015.d\
MSD	22mar016.r	Z:\GCMS_VWGCMS_VV_data\20171170322\22mar016.d\

SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER: 17-03-1523

REVIEWED BY:

BATCH ID:

D/T REVIEWED:

LCS/MB: 170322L037MS: 170322S020

EXTRACTION: EPA 5030C

2 **CLIENT SAMPLE NUMBER : IDW-W**INSTRUMENT: GC/MS V VANALYZED BY: 1,073D/T EXTRACTED: 2017-03-22 00:00D/T ANALYZED 2017-03-22 21:20DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar018.d\22mar018.rrCOMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
Dibromofluoromethane	111	80-128	PASS	
1,2-Dichloroethane-d4	94	80-129	PASS	
Toluene-d8	99	80-120	PASS	
1,4-Bromofluorobenzene	84	77-120	PASS	

MS **CLIENT SAMPLE NUMBER : Matrix Spike**INSTRUMENT: GC/MS V VANALYZED BY: 1,073D/T EXTRACTED: 2017-03-22 00:00D/T ANALYZED 2017-03-22 20:01DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar015.d\22mar015.rrCOMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
Dibromofluoromethane	104	80-128	PASS	
1,2-Dichloroethane-d4	87	80-129	PASS	
Toluene-d8	100	80-120	PASS	
1,4-Bromofluorobenzene	97	77-120	PASS	

MSD **CLIENT SAMPLE NUMBER : Matrix Spike Duplicate**INSTRUMENT: GC/MS V VANALYZED BY: 1,073D/T EXTRACTED: 2017-03-22 00:00D/T ANALYZED 2017-03-22 20:27DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar016.d\22mar016.rrCOMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
Dibromofluoromethane	103	80-128	PASS	
1,2-Dichloroethane-d4	88	80-129	PASS	
Toluene-d8	99	80-120	PASS	
1,4-Bromofluorobenzene	95	77-120	PASS	

SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER: 17-03-1523

BATCH ID:

LCS/MB: 170322L037

MS:

EXTRACTION: EPA 5030C

REVIEWED BY:

D/T REVIEWED:

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC/MS V V

ANALYZED BY: 1,073

D/T EXTRACTED: 2017-03-22 00:00

D/T ANALYZED 2017-03-22 16:02

DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar006.d\22mar006.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Dibromofluoromethane	107	80-128	PASS	
1,2-Dichloroethane-d4	93	80-129	PASS	
Toluene-d8	98	80-120	PASS	
1,4-Bromofluorobenzene	85	77-120	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC/MS V V

ANALYZED BY: 1,073

D/T EXTRACTED: 2017-03-22 00:00

D/T ANALYZED 2017-03-22 15:10

DATA FILE: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar004.d\22mar004.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Dibromofluoromethane	100	80-128	PASS	
1,2-Dichloroethane-d4	86	80-129	PASS	
Toluene-d8	99	80-120	PASS	
1,4-Bromofluorobenzene	95	77-120	PASS	

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar006.d
 Injection date and time: 22-MAR-2017 16:02

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 16:23 Unknown

Sample Name: MB

Misc Info: V030717B

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV(Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.779	65	85371	250.000	0.00
4)*Pentafluorobenzene	(2)	7.211	168	386203	50.000	0.00
47)*1,4-Difluorobenzene	(3)	8.139	114	608865	50.000	-0.01
65)*Chlorobenzene-d5	(4)	11.715	117	568669	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.599	152	279730	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	7.143	113	182570	53.606	0.00
SpikedAmount 50.000				Recovery = 107.212		
46)\$1,2-Dichloroethane-d4	(2)	7.568	65	209674	46.637	0.01
SpikedAmount 50.000				Recovery = 93.273		
62)\$Toluene-d8	(3)	9.954	98	713398	49.069	0.00
SpikedAmount 50.000				Recovery = 98.138		
81)\$1,4-Bromofluorobenzene	(4)	13.157	95	237483	42.453	0.00
SpikedAmount 50.000				Recovery = 84.906		
Target Compounds						
2) Ethanol	(1)	3.452	45	1051	20.021	1
3) Tert-Butyl Alcohol (TBA)	(1)	0.000		0	N.D.	
5) Dichlorodifluoromethane	(2)	0.000		0	N.D.	
6) Chloromethane	(2)	0.000		0	N.D.	
7) Vinyl Chloride	(2)	0.000		0	N.D.	
8) Bromomethane	(2)	2.666	94	246	0.0829	36
9) Chloroethane	(2)	0.000		0	N.D.	
10) 1,3-Butadiene	(2)	2.325	54	625	0.152	80
11) Trichlorofluoromethane	(2)	0.000		0	N.D.	
12) Diethyl Ether	(2)	0.000		0	N.D.	
13) Acetone	(2)	0.000		0	N.D.	
14) Iodomethane	(2)	0.000		0	N.D.	
15) 1,1-Dichloroethene	(2)	0.000		0	N.D.	
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	0.000		0	N.D.	
17) Isopropanol	(2)	0.000		0	N.D.	
18) Carbon Disulfide	(2)	4.239	76	1437	0.105	81
19) Acetonitrile	(2)	4.480	41	754	0.177	1
20) Acrylonitrile	(2)	0.000		0	N.D.	
21) Allyl Chloride	(2)	0.000		0	N.D.	
22) Acrolein	(2)	0.000		0	N.D.	
23) Methylene Chloride	(2)	0.000		0	N.D.	

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar006.d Instrument ID: GCMS_VV.i
 Injection date and time: 22-MAR-2017 16:02 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 15:04
 Date, time and analyst ID of latest file update: 22-Mar-2017 16:23 Unknown

Sample Name: MB Misc Info: V030717B
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	0.000		0	N.D.	
25) Isobutyl Alcohol	(2)	0.000		0	N.D.	
26) Methyl-t-Butyl Ether (MTBE)	(2)	0.000		0	N.D.	
27) Hexane	(2)	0.000		0	N.D.	
28) 1,1-Dichloroethane	(2)	0.000		0	N.D.	
29) Vinyl Acetate	(2)	0.000		0	N.D.	
30) Diisopropyl Ether (DIPE)	(2)	0.000		0	N.D.	
31) Chloroprene	(2)	0.000		0	N.D.	
32) Ethyl-t-Butyl Ether (ETBE)	(2)	0.000		0	N.D.	
33) c-1,2-Dichloroethene	(2)	0.000		0	N.D.	
34) 2,2-Dichloropropane	(2)	0.000		0	N.D.	
35) 2-Butanone	(2)	6.567	43	473	0.163	43
36) Propionitrile	(2)	0.000		0	N.D.	
37) Methacrylonitrile	(2)	0.000		0	N.D.	
38) Bromochloromethane	(2)	0.000		0	N.D.	
39) Tetrahydrofuran	(2)	0.000		0	N.D.	
40) Chloroform	(2)	0.000		0	N.D.	
42) 1,1,1-Trichloroethane	(2)	0.000		0	N.D.	
43) Cyclohexane	(2)	7.201	84	10467	1.625	53
44) 1,1-Dichloropropene	(2)	0.000		0	N.D.	
45) Carbon Tetrachloride	(2)	0.000		0	N.D.	
48) Benzene	(3)	0.000		0	N.D.	
49) 1,2-Dichloroethane	(3)	0.000		0	N.D.	
50) 2-Methyl-2-Butanol (TAA)	(3)	0.000		0	N.D.	
51) Tert-Amyl-Methyl Ether (TAME)	(3)	0.000		0	N.D.	
52) Thiophene	(3)	0.000		0	N.D.	
53) 2,2,4-Trimethyl Pentane	(3)	7.746	57	1274	0.133	52
54) Trichloroethene	(3)	0.000		0	N.D.	
55) 1,2-Dichloropropane	(3)	0.000		0	N.D.	
56) Dibromomethane	(3)	0.000		0	N.D.	
57) Methyl Methacrylate	(3)	0.000		0	N.D.	
58) 1,4-Dioxane	(3)	0.000		0	N.D.	
59) Bromodichloromethane	(3)	0.000		0	N.D.	
60) 2-Chloroethyl Vinyl Ether	(3)	0.000		0	N.D.	
61) c-1,3-Dichloropropene	(3)	0.000		0	N.D.	
63) Toluene	(3)	0.000		0	N.D.	
64) 4-Methyl-2-Pentanone	(3)	0.000		0	N.D.	

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar006.d
 Injection date and time: 22-MAR-2017 16:02

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 16:23 Unknown

Sample Name: MB

Misc Info: V030717B

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	0.000		0	N.D.	
67) Ethyl Methacrylate	(4)	0.000		0	N.D.	
68) 1,1,2-Trichloroethane	(4)	0.000		0	N.D.	
69) Tetrachloroethene	(4)	0.000		0	N.D.	
70) 1,3-Dichloropropane	(4)	0.000		0	N.D.	
71) 2-Hexanone	(4)	0.000		0	N.D.	
72) Dibromochloromethane	(4)	0.000		0	N.D.	
73) 1,2-Dibromoethane	(4)	0.000		0	N.D.	
74) Chlorobenzene	(4)	0.000		0	N.D.	
75) 1,1,1,2-Tetrachloroethane	(4)	0.000		0	N.D.	
76) Ethylbenzene	(4)	0.000		0	N.D.	
77) p/m-Xylene	(4)	0.000		0	N.D.	
78) o-Xylene	(4)	0.000		0	N.D.	
79) Styrene	(4)	0.000		0	N.D.	
80) Isopropylbenzene	(4)	0.000		0	N.D.	
82) 1,2,3-Trichloropropane	(4)	0.000		0	N.D.	
83) Bromobenzene	(4)	0.000		0	N.D.	
84) n-Propylbenzene	(4)	0.000		0	N.D.	
85) t-1,4-Dichloro-2-Butene	(4)	0.000		0	N.D.	
86) 2-Chlorotoluene	(4)	0.000		0	N.D.	
87) 1,3,5-Trimethylbenzene	(4)	0.000		0	N.D.	
89) Bromoform	(5)	0.000		0	N.D.	
90) 1,1,2,2-Tetrachloroethane	(5)	0.000		0	N.D.	
91) 4-Chlorotoluene	(5)	0.000		0	N.D.	
92) Cyclohexanone	(5)	0.000		0	N.D.	
93) 1,2,4-Trimethylbenzene	(5)	0.000		0	N.D.	
94) tert-Butylbenzene	(5)	0.000		0	N.D.	
95) p-Isopropyltoluene	(5)	0.000		0	N.D.	
96) sec-Butylbenzene	(5)	0.000		0	N.D.	
97) 1,3-Dichlorobenzene	(5)	0.000		0	N.D.	
98) 1,4-Dichlorobenzene	(5)	14.630	146	1252	0.111	52
99) 1,2-Dichlorobenzene	(5)	0.000		0	N.D.	
100) n-Butylbenzene	(5)	0.000		0	N.D.	
101) 1,2-Dibromo-3-Chloropropane	(5)	0.000		0	N.D.	
102) 1,2,4-Trichlorobenzene	(5)	17.121	180	953	0.139	72
103) Hexachloro-1,3-Butadiene	(5)	17.325	225	362	0.161	77
104) Naphthalene	(5)	17.420	128	3875	0.216	58

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar006.d
Injection date and time: 22-MAR-2017 16:02

Instrument ID: GCMS_VV.i
Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 16:23 Unknown

Sample Name: MB

Misc Info: V030717B

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
=====	=====	=====	=====	=====	=====	=====
105) 1,2,3-Trichlorobenzene	(5)	17.698	180	1286	0.204	82

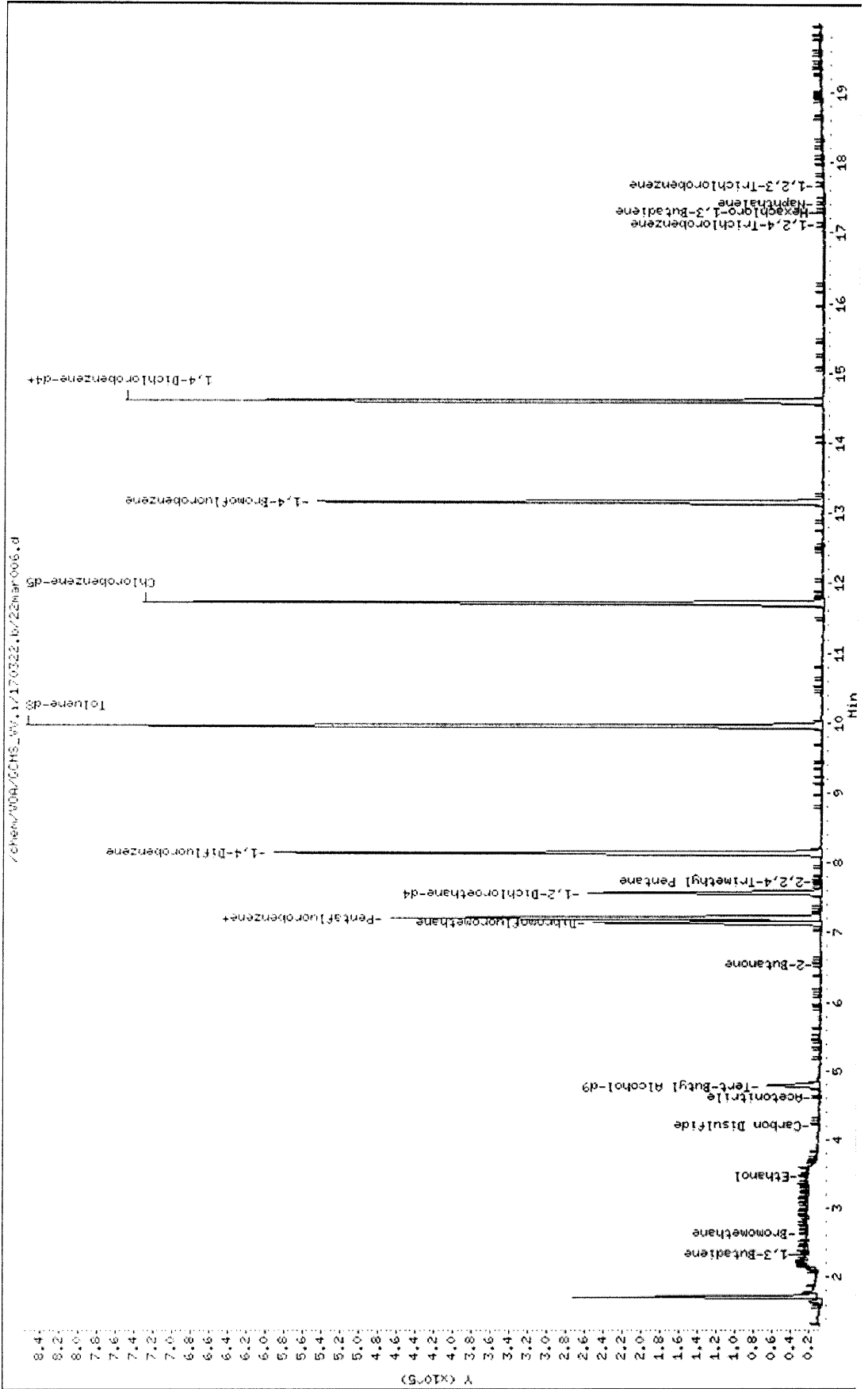
page 4 of 4

Data File: /chem/W09/GCHS_VW.1/170322.k/22mar006.d
Date : 22-Mar-2017 16:02
Client ID:
Sample Info: ME

Instrument: GCHS_VW.1

Operator: 1073

Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar004.d
 Injection date and time: 22-MAR-2017 15:10

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 15:29 Unknown

Sample Name: LCS V031617C/V031717B

Misc Info: V030717B

Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column Amount	
	Ref.	RT			(ug/l)	DEV(Min)
=====						
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.779	65	95087	250.000	0.00
4)*Pentafluorobenzene	(2)	7.211	168	419486	50.000	0.00
47)*1,4-Difluorobenzene	(3)	8.134	114	647133	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.710	117	599766	50.000	0.01
88)*1,4-Dichlorobenzene-d4	(5)	14.599	152	348222	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	7.138	113	185811	50.229	0.01
SpikedAmount 50.000	Recovery = 100.458					
46)\$1,2-Dichloroethane-d4	(2)	7.573	65	209840	42.970	0.00
SpikedAmount 50.000	Recovery = 85.941					
62)\$Toluene-d8	(3)	9.954	98	764327	49.463	0.00
SpikedAmount 50.000	Recovery = 98.927					
81)\$1,4-Bromofluorobenzene	(4)	13.157	95	279924	47.445	0.00
SpikedAmount 50.000	Recovery = 94.890					
Target Compounds						
2) Ethanol	(1)	3.473	45	24529	419.174	84
3) Tert-Butyl Alcohol (TBA)	(1)	4.904	59	148101	268.825	97
5) Dichlorodifluoromethane	(2)	1.916	85	215088	41.170	99
6) Chloromethane	(2)	2.141	50	226518	38.212	100
7) Vinyl Chloride	(2)	2.262	62	233795	40.549	99
8) Bromomethane	(2)	2.671	94	133322	41.321	100
9) Chloroethane	(2)	2.807	64	130403	39.014	100
10) 1,3-Butadiene	(2)	2.309	54	206302	46.237	99
11) Trichlorofluoromethane	(2)	3.153	101	294981	47.372	100
12) Diethyl Ether	(2)	3.583	59	224340	46.654	98
13) Acetone	(2)	4.024	58	29629	47.128	99
14) Iodomethane	(2)	4.139	142	800496	122.022	99
15) 1,1-Dichloroethene	(2)	3.908	61	345569	48.415	99
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.924	101	235737	60.479	100
17) Isopropanol	(2)	4.286	45	79479	184.626	99
18) Carbon Disulfide	(2)	4.239	76	899612	60.615	99
19) Acetonitrile	(2)	4.485	41	405175	87.400	99
20) Acrylonitrile	(2)	5.057	53	116950	46.026	70
21) Allyl Chloride	(2)	4.485	76	142415	48.585	98
22) Acrolein	(2)	3.772	56	114447	100.962	99
23) Methylene Chloride	(2)	4.669	84	289208	51.143	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar004.d
 Injection date and time: 22-MAR-2017 15:10

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 15:04
 Date, time and analyst ID of latest file update: 22-Mar-2017 15:29 Unknown

Sample Name: LCS V031617C/V031717B Misc Info: V030717B
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	5.088	96	288934	55.085	99
25) Isobutyl Alcohol	(2)	7.673	43	38925	71.984	94
26) Methyl-t-Butyl Ether (MTBE)	(2)	5.109	73	785097	42.917	99
27) Hexane	(2)	5.502	57	275304	55.020	98
28) 1,1-Dichloroethane	(2)	5.696	63	457393	48.884	99
29) Vinyl Acetate	(2)	5.801	43	781305	38.556	99
30) Diisopropyl Ether (DIPE)	(2)	5.827	45	770762	43.568	100
31) Chloroprene	(2)	5.827	53	376292	44.763	100
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.331	59	733813	40.055	99
33) c-1,2-Dichloroethene	(2)	6.504	96	313710	51.990	99
34) 2,2-Dichloropropane	(2)	6.498	77	349902	45.936	99
35) 2-Butanone	(2)	6.540	43	131232	41.593	99
36) Propionitrile	(2)	6.614	54	43477	44.748	96
37) Methacrylonitrile	(2)	6.813	41	156736	39.225	98
38) Bromochloromethane	(2)	6.818	130	204455	57.245	99
39) Tetrahydrofuran	(2)	6.892	42	83651	40.614	98
40) Chloroform	(2)	6.934	83	483628	49.526	100
42) 1,1,1-Trichloroethane	(2)	7.169	97	392452	48.995	99
43) Cyclohexane	(2)	7.243	84	380062	54.322	99
44) 1,1-Dichloropropene	(2)	7.384	75	356096	51.353	100
45) Carbon Tetrachloride	(2)	7.384	117	348829	59.738	99
48) Benzene	(3)	7.647	78	1159164	53.595	100
49) 1,2-Dichloroethane	(3)	7.668	62	361365	47.198	100
50) 2-Methyl-2-Butanol (TAA)	(3)	7.678	59	116637	191.055	99
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.804	73	767107	44.190	99
52) Thiophene	(3)	7.909	84	605009	53.076	100
53) 2,2,4-Trimethyl Pentane	(3)	7.762	57	533955	52.528	99
54) Trichloroethene	(3)	8.459	95	301864	53.266	99
55) 1,2-Dichloropropane	(3)	8.737	63	269124	50.201	99
56) Dibromomethane	(3)	8.879	93	179399	52.893	98
57) Methyl Methacrylate	(3)	8.884	69	217374	45.548	99
58) 1,4-Dioxane	(3)	8.905	88	46042	498.438	96
59) Bromodichloromethane	(3)	9.073	83	373091	52.954	99
60) 2-Chloroethyl Vinyl Ether	(3)	9.445	63	91901	23.991	99
61) c-1,3-Dichloropropene	(3)	9.623	75	439070	49.088	99
63) Toluene	(3)	10.032	91	1257263	54.296	99
64) 4-Methyl-2-Pentanone	(3)	9.812	58	113096	42.973	99

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar004.d
 Injection date and time: 22-MAR-2017 15:10

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 15:29 Unknown

Sample Name: LCS V031617C/V031717B

Misc Info: V030717B

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.294	75	410379	49.187	98
67) Ethyl Methacrylate	(4)	10.410	69	402682	46.377	99
68) 1,1,2-Trichloroethane	(4)	10.520	83	228811	52.680	99
69) Tetrachloroethene	(4)	10.703	166	401442	57.421	99
70) 1,3-Dichloropropane	(4)	10.724	76	455161	50.558	100
71) 2-Hexanone	(4)	10.819	43	183947	40.509	98
72) Dibromochloromethane	(4)	10.997	129	318522	60.721	99
73) 1,2-Dibromoethane	(4)	11.144	107	288613	53.675	99
74) Chlorobenzene	(4)	11.747	112	849411	56.054	100
75) 1,1,1,2-Tetrachloroethane	(4)	11.841	131	295665	59.747	99
76) Ethylbenzene	(4)	11.878	91	1356957	53.059	100
77) p/m-Xylene	(4)	12.025	91	2162209	108.288	100
78) o-Xylene	(4)	12.512	91	1097704	52.462	99
79) Styrene	(4)	12.528	104	972360	55.275	99
80) Isopropylbenzene	(4)	12.968	105	1347339	53.943	100
82) 1,2,3-Trichloropropane	(4)	13.388	75	473168	50.876	99
83) Bromobenzene	(4)	13.346	156	375470	57.766	99
84) n-Propylbenzene	(4)	13.477	91	1551912	53.935	100
85) t-1,4-Dichloro-2-Butene	(4)	13.393	53	90878	43.355	99
86) 2-Chlorotoluene	(4)	13.587	91	930588	52.419	99
87) 1,3,5-Trimethylbenzene	(4)	13.692	105	1132870	54.353	99
89) Bromoform	(5)	12.753	173	231162	60.822	100
90) 1,1,2,2-Tetrachloroethane	(5)	13.325	83	380405	49.344	99
91) 4-Chlorotoluene	(5)	13.718	91	1107512	47.539	100
92) Cyclohexanone	(5)	13.078	55	57046	153.431	99
93) 1,2,4-Trimethylbenzene	(5)	14.158	105	1168621	48.035	99
94) tert-Butylbenzene	(5)	14.101	134	261913	50.849	100
95) p-Isopropyltoluene	(5)	14.557	119	1185105	50.173	99
96) sec-Butylbenzene	(5)	14.379	105	1352851	49.639	99
97) 1,3-Dichlorobenzene	(5)	14.515	146	715795	52.248	100
98) 1,4-Dichlorobenzene	(5)	14.625	146	740483	52.766	99
99) 1,2-Dichlorobenzene	(5)	15.097	146	719715	53.339	99
100) n-Butylbenzene	(5)	15.071	91	958365	47.918	99
101) 1,2-Dibromo-3-Chloropropane	(5)	16.062	75	70488	44.844	96
102) 1,2,4-Trichlorobenzene	(5)	17.110	180	428268	50.018	100
103) Hexachloro-1,3-Butadiene	(5)	17.325	225	152456	54.349	99
104) Naphthalene	(5)	17.420	128	1092633	48.975	100

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar004.d
Injection date and time: 22-MAR-2017 15:10

Instrument ID: GCMS_VV.i
Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 15:29 Unknown

Sample Name: LCS V031617C/V031717B
Response via Initial Calibration

Misc Info: V030717B

Compounds	I.S.		QIon	Area	On-Column	QValue
	Ref.	RT			Amount	
=====	=====	=====	=====	=====	=====	=====
105) 1,2,3-Trichlorobenzene	(5)	17.697	180	399878	50.988	99

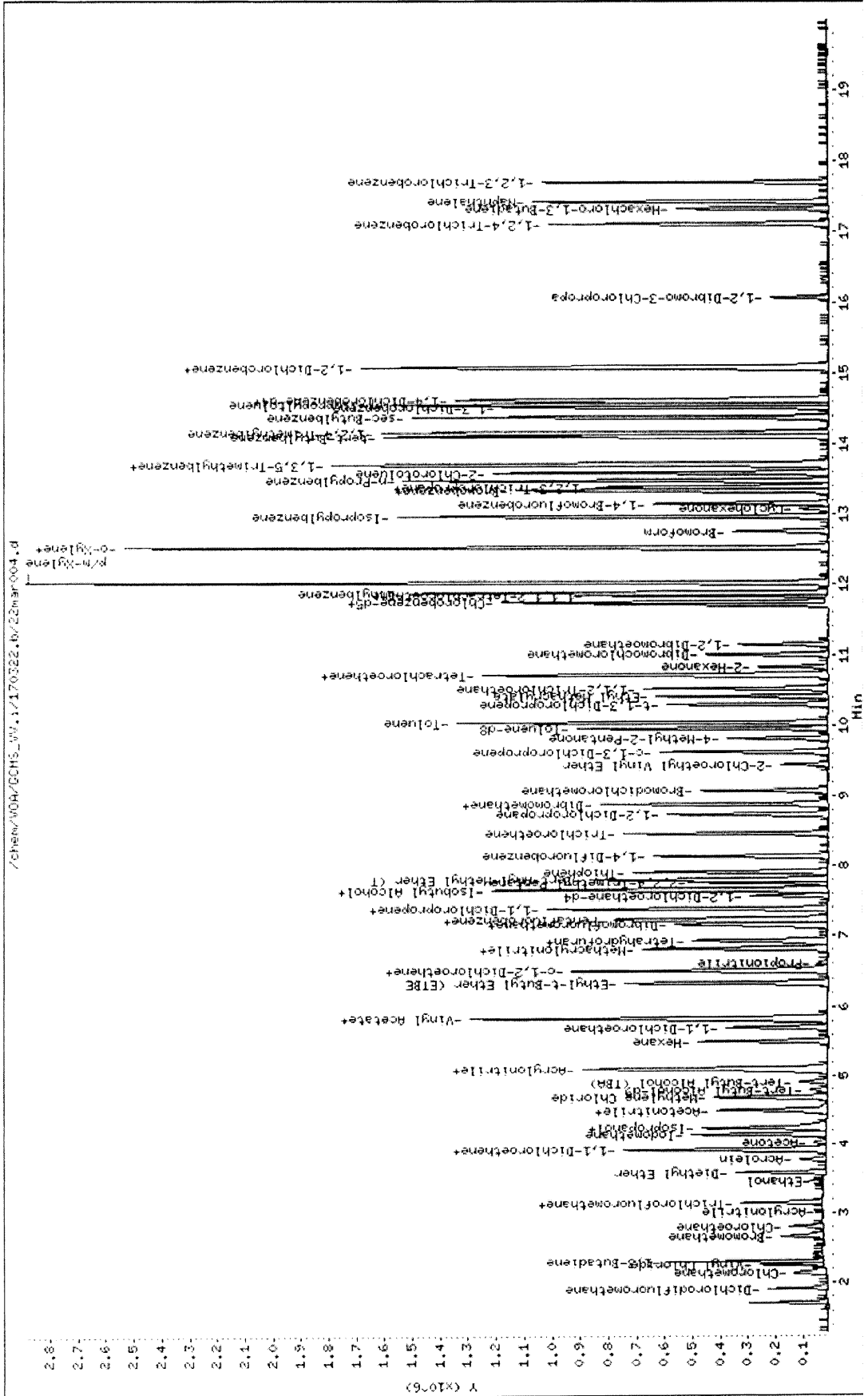
page 4 of 4

Data File: /chem/V04/CCHS_VW.1/170322.b/22mar004.d
 Date : 22-Mar-2017 15:10
 Client ID:
 Sample Info: LCS V031617C/V031717E

Instrument: CCHS_VW.1

Operator: 1073

Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar015.d
 Injection date and time: 22-MAR-2017 20:01

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m

Sublist used: all

Calibration date and time: 22-MAR-2017 15:04

Date, time and analyst ID of latest file update: 22-Mar-2017 20:21 Unknown

Sample Name: MS 1540-1A V031617C/V031717B Misc Info: V030717B 100X 50UL PH<2

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV(Min)
=====						
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.789	65	86329	250.000	-0.01
4)*Pentafluorobenzene	(2)	7.211	168	395353	50.000	0.00
47)*1,4-Difluorobenzene	(3)	8.134	114	614170	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.715	117	565770	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.599	152	327436	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	7.143	113	181888	52.170	0.00
SpikedAmount 50.000				Recovery = 104.340		
46)\$1,2-Dichloroethane-d4	(2)	7.568	65	200826	43.635	0.01
SpikedAmount 50.000				Recovery = 87.269		
62)\$Toluene-d8	(3)	9.953	98	733110	49.989	0.00
SpikedAmount 50.000				Recovery = 99.979		
81)\$1,4-Bromofluorobenzene	(4)	13.157	95	268660	48.272	0.00
SpikedAmount 50.000				Recovery = 96.545		
Target Compounds						
						QValue
2) Ethanol	(1)	3.463	45	26175	492.669	100
3) Tert-Butyl Alcohol (TBA)	(1)	4.910	59	138941	277.784	99
5) Dichlorodifluoromethane	(2)	1.916	85	212633	43.184	98
6) Chloromethane	(2)	2.131	50	238731	42.730	98
7) Vinyl Chloride	(2)	2.262	62	237455	43.698	98
8) Bromomethane	(2)	2.671	94	126840	41.712	98
9) Chloroethane	(2)	2.807	64	136406	43.301	97
10) 1,3-Butadiene	(2)	2.309	54	198323	47.162	99
11) Trichlorofluoromethane	(2)	3.153	101	305996	52.141	100
12) Diethyl Ether	(2)	3.583	59	215990	47.659	100
13) Acetone	(2)	4.024	58	28703	48.443	92
14) Iodomethane	(2)	4.139	142	820956	132.780	100
15) 1,1-Dichloroethene	(2)	3.908	61	361271	53.705	99
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.924	101	237737	64.715	99
17) Isopropanol	(2)	4.286	45	73019	179.972	94
18) Carbon Disulfide	(2)	4.233	76	925723	66.182	99
19) Acetonitrile	(2)	4.485	41	411534	94.191	96
20) Acrylonitrile	(2)	5.051	53	116815	48.779	93
21) Allyl Chloride	(2)	4.485	76	149960	54.282	98
22) Acrolein	(2)	3.772	56	111067	103.962	97
23) Methylene Chloride	(2)	4.668	84	298920	56.087	99

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar015.d
 Injection date and time: 22-MAR-2017 20:01

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 15:04
 Date, time and analyst ID of latest file update: 22-Mar-2017 20:21 Unknown

Sample Name: MS 1540-1A V031617C/V031717B Misc Info: V030717B 100X 50UL PH<2
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	5.083	96	298557	60.394	99
25) Isobutyl Alcohol	(2)	7.678	43	36885	72.375	97
26) Methyl-t-Butyl Ether (MTBE)	(2)	5.109	73	760811	44.128	98
27) Hexane	(2)	5.502	57	285095	60.455	100
28) 1,1-Dichloroethane	(2)	5.696	63	469216	53.209	99
29) Vinyl Acetate	(2)	5.796	43	776880	40.678	98
30) Diisopropyl Ether (DIPE)	(2)	5.827	45	769397	46.145	100
31) Chloroprene	(2)	5.827	53	387270	48.881	99
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.330	59	704522	40.804	99
33) c-1,2-Dichloroethene	(2)	6.503	96	322184	56.654	98
34) 2,2-Dichloropropane	(2)	6.498	77	310876	43.304	99
35) 2-Butanone	(2)	6.540	43	130386	43.847	99
36) Propionitrile	(2)	6.619	54	43903	47.945	98
37) Methacrylonitrile	(2)	6.818	41	154492	41.023	99
38) Bromochloromethane	(2)	6.818	130	204369	60.714	100
39) Tetrahydrofuran	(2)	6.891	42	84268	43.410	98
40) Chloroform	(2)	6.933	83	489307	53.166	100
42) 1,1,1-Trichloroethane	(2)	7.169	97	397014	52.591	98
43) Cyclohexane	(2)	7.243	84	376051	57.030	100
44) 1,1-Dichloropropene	(2)	7.384	75	358448	54.848	100
45) Carbon Tetrachloride	(2)	7.384	117	353722	64.274	99
48) Benzene	(3)	7.646	78	1198305	58.378	99
49) 1,2-Dichloroethane	(3)	7.667	62	361838	49.797	99
50) 2-Methyl-2-Butanol (TAA)	(3)	7.678	59	105665	182.372	95
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.804	73	732702	44.473	98
52) Thiophene	(3)	7.909	84	608421	56.240	100
53) 2,2,4-Trimethyl Pentane	(3)	7.762	57	562183	58.273	98
54) Trichloroethene	(3)	8.459	95	816411	151.793	99
55) 1,2-Dichloropropane	(3)	8.737	63	276038	54.254	100
56) Dibromomethane	(3)	8.873	93	179128	55.648	98
57) Methyl Methacrylate	(3)	8.884	69	211592	46.716	99
58) 1,4-Dioxane	(3)	8.905	88	45546	519.540	97
59) Bromodichloromethane	(3)	9.073	83	379391	56.738	98
60) 2-Chloroethyl Vinyl Ether	(3)	9.440	63	24121	6.635	99
61) c-1,3-Dichloropropene	(3)	9.623	75	429187	50.558	100
63) Toluene	(3)	10.032	91	1294941	58.925	100
64) 4-Methyl-2-Pentanone	(3)	9.812	58	110026	44.050	100

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar015.d
 Injection date and time: 22-MAR-2017 20:01

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 20:21 Unknown

Sample Name: MS 1540-1A V031617C/V031717B Misc Info: V030717B 100X 50UL PH<2
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	
	Ref.	RT			Amount	QValue
=====	=====	=====	=====	=====	=====	=====
66) t-1,3-Dichloropropene	(4)	10.294	75	397920	50.559	98
67) Ethyl Methacrylate	(4)	10.410	69	389686	47.577	100
68) 1,1,2-Trichloroethane	(4)	10.520	83	226974	55.397	99
69) Tetrachloroethene	(4)	10.703	166	440207	66.749	99
70) 1,3-Dichloropropane	(4)	10.724	76	462634	54.476	99
71) 2-Hexanone	(4)	10.824	43	172739	40.327	99
72) Dibromochloromethane	(4)	11.002	129	314358	63.528	100
73) 1,2-Dibromoethane	(4)	11.144	107	287357	56.652	99
74) Chlorobenzene	(4)	11.747	112	867265	60.671	99
75) 1,1,1,2-Tetrachloroethane	(4)	11.846	131	298518	63.948	99
76) Ethylbenzene	(4)	11.883	91	1394718	57.812	100
77) p/m-Xylene	(4)	12.024	91	2211080	117.389	100
78) o-Xylene	(4)	12.512	91	1125452	57.020	99
79) Styrene	(4)	12.523	104	988448	59.566	100
80) Isopropylbenzene	(4)	12.963	105	1370684	58.175	100
82) 1,2,3-Trichloropropane	(4)	13.382	75	461896	52.648	100
83) Bromobenzene	(4)	13.346	156	376991	61.485	99
84) n-Propylbenzene	(4)	13.477	91	1587614	58.492	99
85) t-1,4-Dichloro-2-Butene	(4)	13.398	53	89331	45.178	96
86) 2-Chlorotoluene	(4)	13.587	91	954346	56.987	100
87) 1,3,5-Trimethylbenzene	(4)	13.692	105	1162483	59.125	98
89) Bromoform	(5)	12.753	173	225536	63.109	99
90) 1,1,2,2-Tetrachloroethane	(5)	13.325	83	387513	53.457	99
91) 4-Chlorotoluene	(5)	13.718	91	1137519	51.926	100
92) Cyclohexanone	(5)	13.084	55	47608	136.175	99
93) 1,2,4-Trimethylbenzene	(5)	14.158	105	1202357	52.559	99
94) tert-Butylbenzene	(5)	14.101	134	265818	54.883	99
95) p-Isopropyltoluene	(5)	14.557	119	1212205	54.579	100
96) sec-Butylbenzene	(5)	14.379	105	1366279	53.314	99
97) 1,3-Dichlorobenzene	(5)	14.515	146	718633	55.785	100
98) 1,4-Dichlorobenzene	(5)	14.625	146	750043	56.840	100
99) 1,2-Dichlorobenzene	(5)	15.097	146	719448	56.704	99
100) n-Butylbenzene	(5)	15.071	91	964712	51.297	99
101) 1,2-Dibromo-3-Chloropropane	(5)	16.062	75	71007	48.041	99
102) 1,2,4-Trichlorobenzene	(5)	17.110	180	420094	52.177	99
103) Hexachloro-1,3-Butadiene	(5)	17.325	225	146030	55.363	100
104) Naphthalene	(5)	17.419	128	1010035	48.147	100

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar015.d
 Injection date and time: 22-MAR-2017 20:01

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 20:21 Unknown

Sample Name: MS 1540-1A V031617C/V031717B Misc Info: V030717B 100X 50UL PH<2
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	17.697	180	393234	53.324	99

page 4 of 4

Data File: /chem/V04r/CCHS_VV.1/170322.k/22mar015.d

Date : 22-Mar-2017 20:01

Client ID:

Sample Info: MS 1640-1H V031617C-V031717B

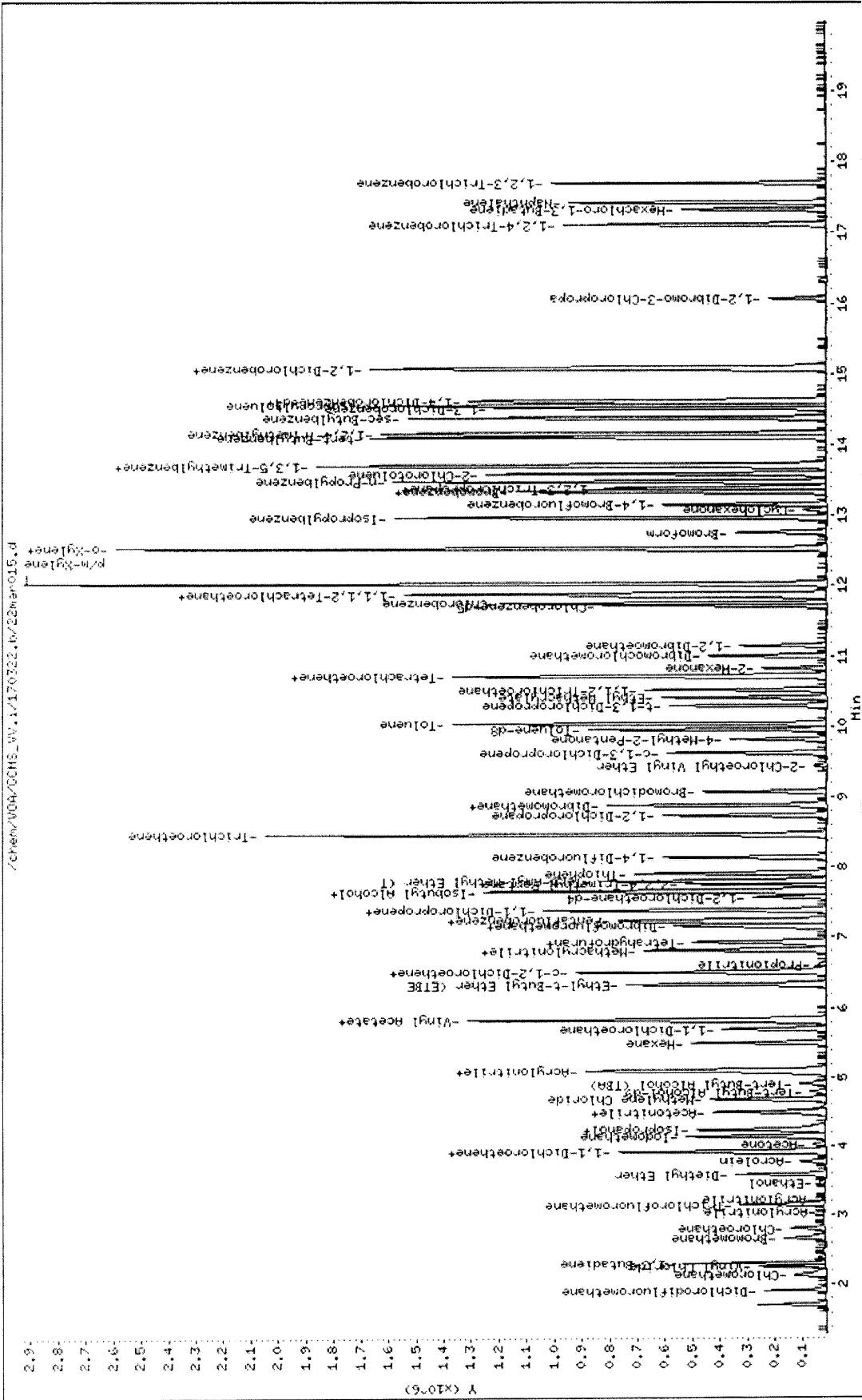
Instrument: CCHS_VV.1

Operator: 1073

Column diameter: 0.00

Column phase:

/chem/V04r/CCHS_VV.1/170322.k/22mar015.d



Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar016.d
 Injection date and time: 22-MAR-2017 20:27

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 20:47 Unknown

Sample Name: MSD 1540-1A V031617C/V031717B Misc Info: V030717B 100X 50UL PH<2
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV(Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.784	65	85836	250.000	-0.01
4)*Pentafluorobenzene	(2)	7.212	168	405088	50.000	0.00
47)*1,4-Difluorobenzene	(3)	8.134	114	623424	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.710	117	576328	50.000	0.01
88)*1,4-Dichlorobenzene-d4	(5)	14.599	152	334062	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	7.138	113	183316	51.316	0.01
SpikedAmount 50.000				Recovery = 102.632		
46)\$1,2-Dichloroethane-d4	(2)	7.568	65	206836	43.861	0.01
SpikedAmount 50.000				Recovery = 87.721		
62)\$Toluene-d8	(3)	9.954	98	733363	49.264	0.00
SpikedAmount 50.000				Recovery = 98.529		
81)\$1,4-Bromofluorobenzene	(4)	13.152	95	270584	47.727	0.01
SpikedAmount 50.000				Recovery = 95.455		
Target Compounds						
2) Ethanol	(1)	3.463	45	23089	437.073	96
3) Tert-Butyl Alcohol (TBA)	(1)	4.910	59	136061	273.586	97
5) Dichlorodifluoromethane	(2)	1.916	85	216424	42.897	100
6) Chloromethane	(2)	2.131	50	242591	42.378	98
7) Vinyl Chloride	(2)	2.262	62	247225	44.402	100
8) Bromomethane	(2)	2.666	94	140129	44.974	99
9) Chloroethane	(2)	2.807	64	133433	41.339	98
10) 1,3-Butadiene	(2)	2.309	54	215540	50.024	99
11) Trichlorofluoromethane	(2)	3.153	101	312372	51.948	100
12) Diethyl Ether	(2)	3.583	59	211884	45.630	98
13) Acetone	(2)	4.024	58	28483	46.917	96
14) Iodomethane	(2)	4.134	142	826754	130.504	100
15) 1,1-Dichloroethene	(2)	3.908	61	363018	52.667	100
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.919	101	235545	62.577	100
17) Isopropanol	(2)	4.291	45	74175	178.430	97
18) Carbon Disulfide	(2)	4.234	76	928048	64.754	100
19) Acetonitrile	(2)	4.485	41	403782	90.195	98
20) Acrylonitrile	(2)	5.057	53	111688	45.517	93
21) Allyl Chloride	(2)	4.485	76	148590	52.494	98
22) Acrolein	(2)	3.772	56	109352	99.896	98
23) Methylene Chloride	(2)	4.674	84	299808	54.902	99

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar016.d
 Injection date and time: 22-MAR-2017 20:27

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 20:47 Unknown

Sample Name: MSD 1540-1A V031617C/V031717B Misc Info: V030717B 100X 50UL PH<2
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	5.083	96	299920	59.211	100
25) Isobutyl Alcohol	(2)	7.673	43	34096	65.295	96
26) Methyl-t-Butyl Ether (MTBE)	(2)	5.109	73	760460	43.047	99
27) Hexane	(2)	5.502	57	286484	59.290	99
28) 1,1-Dichloroethane	(2)	5.696	63	470731	52.098	99
29) Vinyl Acetate	(2)	5.801	43	768680	39.281	99
30) Diisopropyl Ether (DIPE)	(2)	5.827	45	764781	44.766	100
31) Chloroprene	(2)	5.827	53	381250	46.964	99
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.331	59	720916	40.750	100
33) c-1,2-Dichloroethene	(2)	6.504	96	322076	55.274	98
34) 2,2-Dichloropropane	(2)	6.499	77	302690	41.151	99
35) 2-Butanone	(2)	6.540	43	126171	41.410	99
36) Propionitrile	(2)	6.619	54	41977	44.740	98
37) Methacrylonitrile	(2)	6.813	41	151068	39.150	99
38) Bromochloromethane	(2)	6.824	130	203213	58.920	100
39) Tetrahydrofuran	(2)	6.892	42	80039	40.241	98
40) Chloroform	(2)	6.934	83	490432	52.008	100
42) 1,1,1-Trichloroethane	(2)	7.170	97	400893	51.828	99
43) Cyclohexane	(2)	7.238	84	376697	55.755	99
44) 1,1-Dichloropropene	(2)	7.385	75	360858	53.890	100
45) Carbon Tetrachloride	(2)	7.385	117	348373	61.781	99
48) Benzene	(3)	7.647	78	1189653	57.097	99
49) 1,2-Dichloroethane	(3)	7.668	62	361134	48.962	100
50) 2-Methyl-2-Butanol (TAA)	(3)	7.673	59	104575	177.812	96
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.804	73	739447	44.216	98
52) Thiophene	(3)	7.909	84	612310	55.760	100
53) 2,2,4-Trimethyl Pentane	(3)	7.757	57	567952	57.997	97
54) Trichloroethene	(3)	8.459	95	814818	149.248	100
55) 1,2-Dichloropropane	(3)	8.737	63	271795	52.627	100
56) Dibromomethane	(3)	8.874	93	177301	54.263	99
57) Methyl Methacrylate	(3)	8.884	69	206109	44.830	99
58) 1,4-Dioxane	(3)	8.905	88	44289	497.704	98
59) Bromodichloromethane	(3)	9.073	83	377246	55.580	98
60) 2-Chloroethyl Vinyl Ether	(3)	9.445	63	21619	5.858	96
61) c-1,3-Dichloropropene	(3)	9.618	75	427154	49.572	99
63) Toluene	(3)	10.032	91	1291463	57.894	100
64) 4-Methyl-2-Pentanone	(3)	9.812	58	105804	41.731	98

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar016.d
 Injection date and time: 22-MAR-2017 20:27

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m

Sublist used: all

Calibration date and time: 22-MAR-2017 15:04

Date, time and analyst ID of latest file update: 22-Mar-2017 20:47 Unknown

Sample Name: MSD 1540-1A V031617C/V031717B Misc Info: V030717B 100X 50UL PH<2

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.294	75	394299	49.181	99
67) Ethyl Methacrylate	(4)	10.405	69	384097	46.035	99
68) 1,1,2-Trichloroethane	(4)	10.520	83	229396	54.963	99
69) Tetrachloroethene	(4)	10.703	166	439866	65.476	99
70) 1,3-Dichloropropane	(4)	10.724	76	455688	52.675	99
71) 2-Hexanone	(4)	10.824	43	168549	38.628	99
72) Dibromochloromethane	(4)	11.002	129	312986	62.092	99
73) 1,2-Dibromoethane	(4)	11.144	107	280363	54.261	100
74) Chlorobenzene	(4)	11.747	112	863314	59.288	99
75) 1,1,1,2-Tetrachloroethane	(4)	11.841	131	300255	63.142	99
76) Ethylbenzene	(4)	11.878	91	1383788	56.308	100
77) p/m-Xylene	(4)	12.019	91	2201553	114.743	99
78) o-Xylene	(4)	12.512	91	1120295	55.719	100
79) Styrene	(4)	12.528	104	994534	58.835	100
80) Isopropylbenzene	(4)	12.968	105	1373647	57.233	99
82) 1,2,3-Trichloropropane	(4)	13.383	75	451718	50.545	99
83) Bromobenzene	(4)	13.346	156	376543	60.287	99
84) n-Propylbenzene	(4)	13.477	91	1584119	57.294	100
85) t-1,4-Dichloro-2-Butene	(4)	13.393	53	86156	42.774	98
86) 2-Chlorotoluene	(4)	13.587	91	953957	55.921	100
87) 1,3,5-Trimethylbenzene	(4)	13.692	105	1147648	57.301	99
89) Bromoform	(5)	12.753	173	222365	60.987	99
90) 1,1,2,2-Tetrachloroethane	(5)	13.325	83	377492	51.042	100
91) 4-Chlorotoluene	(5)	13.718	91	1138304	50.932	99
92) Cyclohexanone	(5)	13.079	55	46486	130.329	98
93) 1,2,4-Trimethylbenzene	(5)	14.164	105	1186562	50.840	98
94) tert-Butylbenzene	(5)	14.101	134	266569	53.947	99
95) p-Isopropyltoluene	(5)	14.557	119	1200790	52.992	99
96) sec-Butylbenzene	(5)	14.379	105	1372175	52.482	99
97) 1,3-Dichlorobenzene	(5)	14.520	146	722892	55.002	100
98) 1,4-Dichlorobenzene	(5)	14.625	146	745847	55.401	99
99) 1,2-Dichlorobenzene	(5)	15.097	146	712853	55.070	99
100) n-Butylbenzene	(5)	15.066	91	970091	50.560	100
101) 1,2-Dibromo-3-Chloropropane	(5)	16.062	75	69058	45.797	97
102) 1,2,4-Trichlorobenzene	(5)	17.110	180	427939	52.098	99
103) Hexachloro-1,3-Butadiene	(5)	17.331	225	150975	56.102	99
104) Naphthalene	(5)	17.420	128	1071972	50.086	99

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar016.d
Injection date and time: 22-MAR-2017 20:27

Instrument ID: GCMS_VV.i
Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m

Sublist used: all

Calibration date and time: 22-MAR-2017 15:04

Date, time and analyst ID of latest file update: 22-Mar-2017 20:47 Unknown

Sample Name: MSD 1540-1A V031617C/V031717B Misc Info: V030717B 100X 50UL PH<2

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	17.698	180	396285	52.672	99

page 4 of 4

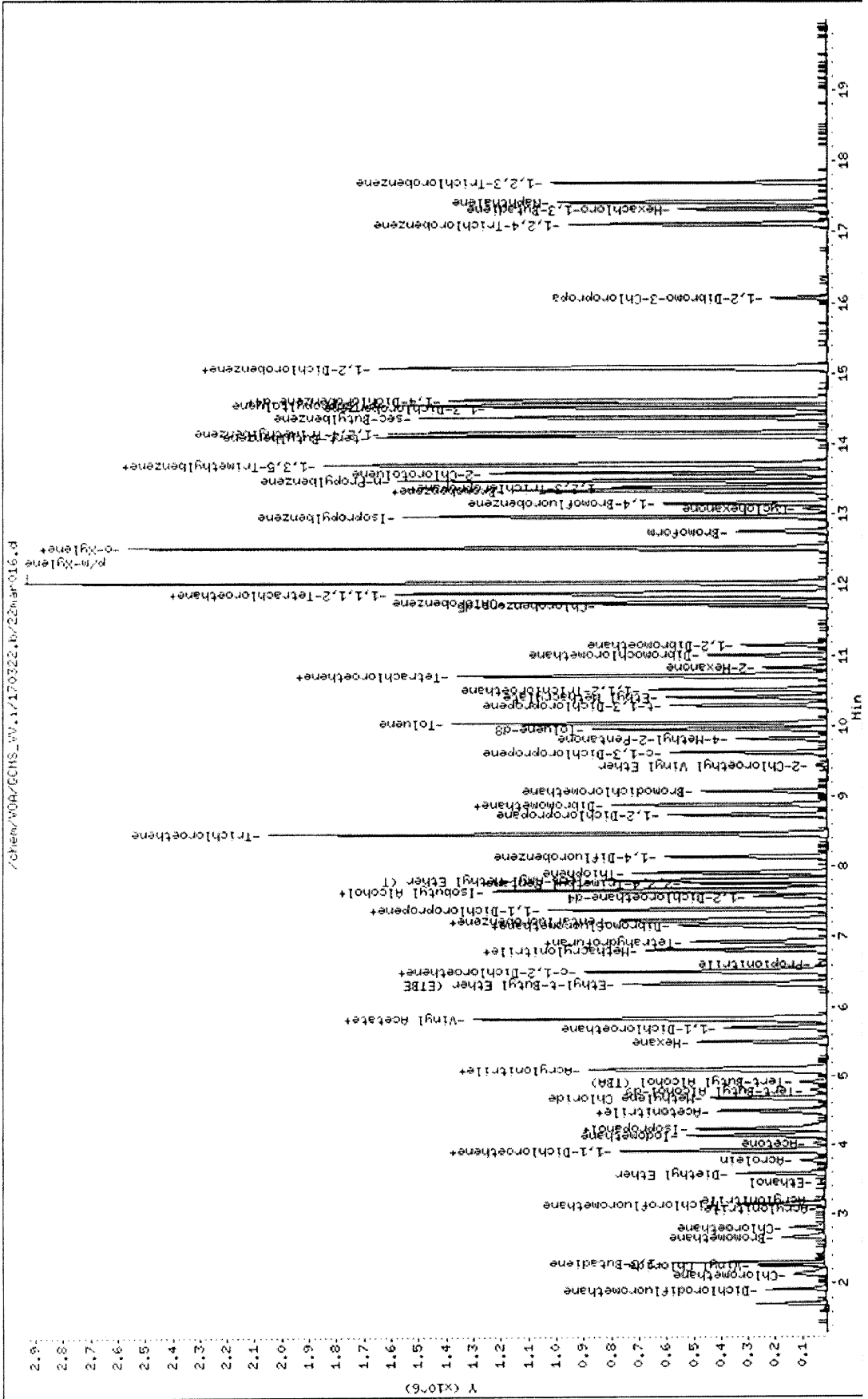
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 Date : 22-MAR-2017 20:27
 Client ID:
 Sample Info: MSD 1640-14 V031617C/V031717B

Instrument: GCMS_VV.1

Operator: 1073

Column diameter: 0.00

/chem/V04/GCHS_VV.1/170322.b/22mar016.d



Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar008.d
 Injection date and time: 22-MAR-2017 16:55

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 17:16 Unknown

Sample Name: 17-03-1540-1A 100X 50UL PH<2 Misc Info: V030717B

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV (Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.784	65	85606	250.000	-0.01
4)*Pentafluorobenzene	(2)	7.212	168	365010	50.000	0.00
47)*1,4-Difluorobenzene	(3)	8.134	114	584481	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.710	117	552725	50.000	0.01
88)*1,4-Dichlorobenzene-d4	(5)	14.599	152	267146	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	7.143	113	177736	55.217	0.00
SpikedAmount 50.000				Recovery = 110.433		
46)\$1,2-Dichloroethane-d4	(2)	7.568	65	202901	47.750	0.01
SpikedAmount 50.000				Recovery = 95.501		
62)\$Toluene-d8	(3)	9.954	98	693541	49.694	0.00
SpikedAmount 50.000				Recovery = 99.387		
81)\$1,4-Bromofluorobenzene	(4)	13.157	95	224291	41.251	0.00
SpikedAmount 50.000				Recovery = 82.503		
Target Compounds						
2) Ethanol	(1)	3.463	45	805	15.281	5
3) Tert-Butyl Alcohol (TBA)	(1)	0.000		0	N.D.	
5) Dichlorodifluoromethane	(2)	0.000		0	N.D.	
6) Chloromethane	(2)	2.178	50	993	0.193	36
7) Vinyl Chloride	(2)	0.000		0	N.D.	
8) Bromomethane	(2)	2.697	94	443	0.158	33
9) Chloroethane	(2)	0.000		0	N.D.	
10) 1,3-Butadiene	(2)	0.000		0	N.D.	
11) Trichlorofluoromethane	(2)	0.000		0	N.D.	
12) Diethyl Ether	(2)	0.000		0	N.D.	
13) Acetone	(2)	4.034	58	149	0.273	1
14) Iodomethane	(2)	0.000		0	N.D.	
15) 1,1-Dichloroethene	(2)	3.908	61	12132	1.954	94
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	0.000		0	N.D.	
17) Isopropanol	(2)	4.296	45	199	0.532	1
18) Carbon Disulfide	(2)	4.228	76	1040	0.0806	60
19) Acetonitrile	(2)	0.000		0	N.D.	
20) Acrylonitrile	(2)	0.000		0	N.D.	
21) Allyl Chloride	(2)	0.000		0	N.D.	
22) Acrolein	(2)	0.000		0	N.D.	
23) Methylene Chloride	(2)	0.000		0	N.D.	

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar008.d
 Injection date and time: 22-MAR-2017 16:55

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 17:16 Unknown

Sample Name: 17-03-1540-1A 100X 50UL PH<2 Misc Info: V030717B

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	0.000		0	N.D.	
25) Isobutyl Alcohol	(2)	0.000		0	N.D.	
26) Methyl-t-Butyl Ether (MTBE)	(2)	0.000		0	N.D.	
27) Hexane	(2)	0.000		0	N.D.	
28) 1,1-Dichloroethane	(2)	0.000		0	N.D.	
29) Vinyl Acetate	(2)	0.000		0	N.D.	
30) Diisopropyl Ether (DIPE)	(2)	0.000		0	N.D.	
31) Chloroprene	(2)	0.000		0	N.D.	
32) Ethyl-t-Butyl Ether (ETBE)	(2)	0.000		0	N.D.	
33) c-1,2-Dichloroethene	(2)	6.514	96	747	0.142	32
34) 2,2-Dichloropropane	(2)	0.000		0	N.D.	
35) 2-Butanone	(2)	6.572	43	282	0.103	43
36) Propionitrile	(2)	0.000		0	N.D.	
37) Methacrylonitrile	(2)	0.000		0	N.D.	
38) Bromochloromethane	(2)	0.000		0	N.D.	
39) Tetrahydrofuran	(2)	0.000		0	N.D.	
40) Chloroform	(2)	6.934	83	1046	0.123	1
42) 1,1,1-Trichloroethane	(2)	0.000		0	N.D.	
43) Cyclohexane	(2)	7.206	84	9926	1.631	53
44) 1,1-Dichloropropene	(2)	0.000		0	N.D.	
45) Carbon Tetrachloride	(2)	0.000		0	N.D.	
48) Benzene	(3)	0.000		0	N.D.	
49) 1,2-Dichloroethane	(3)	0.000		0	N.D.	
50) 2-Methyl-2-Butanol (TAA)	(3)	0.000		0	N.D.	
51) Tert-Amyl-Methyl Ether (TAME)	(3)	0.000		0	N.D.	
52) Thiophene	(3)	0.000		0	N.D.	
53) 2,2,4-Trimethyl Pentane	(3)	0.000		0	N.D.	
54) Trichloroethene	(3)	8.459	95	501408	97.961	100
55) 1,2-Dichloropropane	(3)	0.000		0	N.D.	
56) Dibromomethane	(3)	0.000		0	N.D.	
57) Methyl Methacrylate	(3)	0.000		0	N.D.	
58) 1,4-Dioxane	(3)	0.000		0	N.D.	
59) Bromodichloromethane	(3)	0.000		0	N.D.	
60) 2-Chloroethyl Vinyl Ether	(3)	0.000		0	N.D.	
61) c-1,3-Dichloropropene	(3)	0.000		0	N.D.	
63) Toluene	(3)	0.000		0	N.D.	
64) 4-Methyl-2-Pentanone	(3)	0.000		0	N.D.	

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar008.d
 Injection date and time: 22-MAR-2017 16:55

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 17:16 Unknown

Sample Name: 17-03-1540-1A 100X 50UL PH<2 Misc Info: V030717B

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	0.000		0	N.D.	
67) Ethyl Methacrylate	(4)	0.000		0	N.D.	
68) 1,1,2-Trichloroethane	(4)	0.000		0	N.D.	
69) Tetrachloroethene	(4)	10.703	166	53373	8.284	99
70) 1,3-Dichloropropane	(4)	0.000		0	N.D.	
71) 2-Hexanone	(4)	0.000		0	N.D.	
72) Dibromochloromethane	(4)	0.000		0	N.D.	
73) 1,2-Dibromoethane	(4)	0.000		0	N.D.	
74) Chlorobenzene	(4)	0.000		0	N.D.	
75) 1,1,1,2-Tetrachloroethane	(4)	0.000		0	N.D.	
76) Ethylbenzene	(4)	0.000		0	N.D.	
77) p/m-Xylene	(4)	0.000		0	N.D.	
78) o-Xylene	(4)	0.000		0	N.D.	
79) Styrene	(4)	0.000		0	N.D.	
80) Isopropylbenzene	(4)	0.000		0	N.D.	
82) 1,2,3-Trichloropropane	(4)	0.000		0	N.D.	
83) Bromobenzene	(4)	0.000		0	N.D.	
84) n-Propylbenzene	(4)	0.000		0	N.D.	
85) t-1,4-Dichloro-2-Butene	(4)	0.000		0	N.D.	
86) 2-Chlorotoluene	(4)	0.000		0	N.D.	
87) 1,3,5-Trimethylbenzene	(4)	0.000		0	N.D.	
89) Bromoform	(5)	0.000		0	N.D.	
90) 1,1,2,2-Tetrachloroethane	(5)	0.000		0	N.D.	
91) 4-Chlorotoluene	(5)	0.000		0	N.D.	
92) Cyclohexanone	(5)	0.000		0	N.D.	
93) 1,2,4-Trimethylbenzene	(5)	0.000		0	N.D.	
94) tert-Butylbenzene	(5)	0.000		0	N.D.	
95) p-Isopropyltoluene	(5)	0.000		0	N.D.	
96) sec-Butylbenzene	(5)	0.000		0	N.D.	
97) 1,3-Dichlorobenzene	(5)	0.000		0	N.D.	
98) 1,4-Dichlorobenzene	(5)	0.000		0	N.D.	
99) 1,2-Dichlorobenzene	(5)	0.000		0	N.D.	
100) n-Butylbenzene	(5)	0.000		0	N.D.	
101) 1,2-Dibromo-3-Chloropropane	(5)	0.000		0	N.D.	
102) 1,2,4-Trichlorobenzene	(5)	0.000		0	N.D.	
103) Hexachloro-1,3-Butadiene	(5)	0.000		0	N.D.	
104) Naphthalene	(5)	0.000		0	N.D.	

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar008.d
Injection date and time: 22-MAR-2017 16:55

Instrument ID: GCMS_VV.i
Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 17:16 Unknown

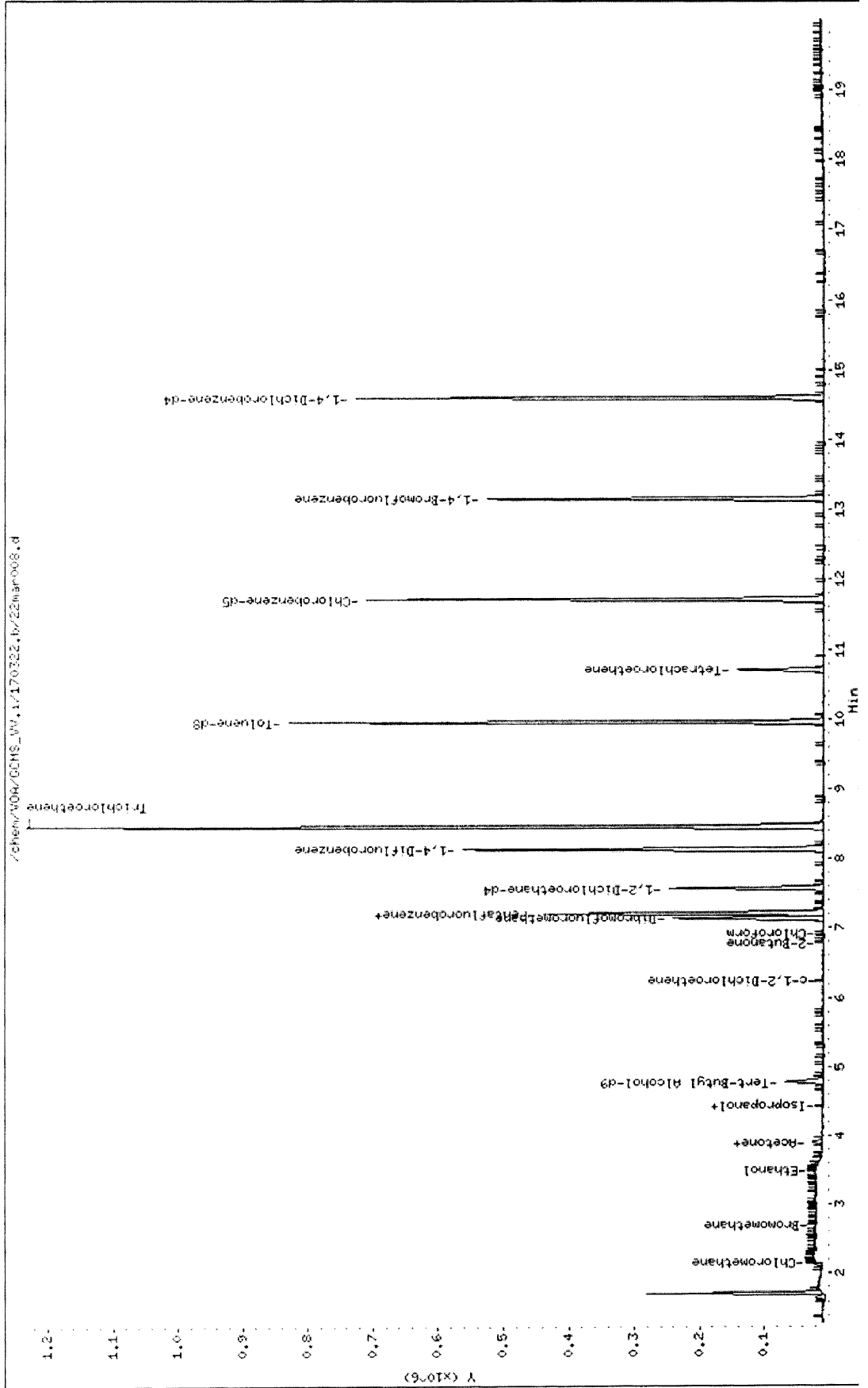
Sample Name: 17-03-1540-1A 100X 50UL PH<2 Misc Info: V030717B

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	0.000		0	N.D.	

page 4 of 4

Data File: /chem/w09/GCHS_WV.1/170322.N/22mar008.d
Date : 22-MAR-2017 16:55
Client ID:
Sample Info: 17-03-1540-14 100X 50UL PHC2
Instrument: GCHS_WV.1
Operator: 1073
Column diameter: 0.00
Column phase:



EPA 8260B
Volatile Organics
(Aqueous)
Continuing Calibration

CCV ASSOCIATION SUMMARY FOR METHOD: EPA 8260B

BATCH ID: 170322A043
INSTRUMENT: GC/MS V V

ANALYZED BY: 1,073

WORK ORDER: 099-15-001
MATRIX: Water

REVIEWED BY:
D/T REVIEWED:

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
31352	Daily Calibration	2017-03-22 14:43	Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar003.d\22mar003.rr

WORK ORDER: 17-03-1523
MATRIX: Water

REVIEWED BY:
D/T REVIEWED:

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
2	IDW-W	2017-03-22 21:20	Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar018.d\22mar018.rr

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-15-001-31352-4410
INSTRUMENT: GC/MS V V
BATCH ID: 1703071001
INITIAL: 170322A043
CCV:

ANALYZED BY: 1073
D/T ANALYZED: 2017-03-07 15:16
INITIAL:
CCV: 2017-03-22 14:43
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar003.d\22mar003.ir

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Acetone	Avg Resp		0.00	0.075	0.067			11	0-50	PASS
Benzene	Avg Resp		0.00	1.671	1.759			-5	0-50	PASS
Bromobenzene	Avg Resp		0.00	0.542	0.611			-13	0-50	PASS
Bromochloromethane	Avg Resp		0.00	0.426	0.477			-12	0-50	PASS
Bromodichloromethane	Avg Resp		0.00	0.544	0.562			-3	0-50	PASS
Bromoform	S Avg Resp		0.10	0.546	0.657			-20	0-50	PASS
Bromomethane	Avg Resp		0.00	0.385	0.337			12	0-50	PASS
2-Butanone	Avg Resp		0.00	0.376	0.307			18	0-50	PASS
n-Butylbenzene	Avg Resp		0.00	2.872	2.654			8	0-50	PASS
sec-Butylbenzene	Avg Resp		0.00	3.913	3.752			4	0-50	PASS
tert-Butylbenzene	Avg Resp		0.00	0.740	0.731			1	0-50	PASS
Diethyl Ether	Avg Resp		0.00	0.573	0.518			10	0-50	PASS
Carbon Disulfide	Avg Resp		0.00	1.769	2.015			-14	0-50	PASS
Carbon Tetrachloride	Avg Resp		0.00	0.696	0.809			-16	0-50	PASS
Chlorobenzene	S Avg Resp		0.30	1.263	1.400			-11	0-50	PASS
Chloroethane	Avg Resp		0.00	0.398	0.311			22	0-50	PASS
2-Chloroethyl Vinyl Ether	Avg Resp		0.00	0.296	0.137			54	0-50	FAIL
Chloroform	C Avg Resp		0.00	1.164	1.141			2	0-20	PASS
Chloromethane	S Avg Resp		0.10	0.707	0.602			15	0-50	PASS
2-Chlorotoluene	Avg Resp		0.00	1.480	1.531			-3	0-50	PASS
4-Chlorotoluene	Avg Resp		0.00	3.345	3.138			6	0-50	PASS
Dibromochloromethane	Avg Resp		0.00	0.437	0.523			-20	0-50	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-15-001-31352-4410
INSTRUMENT: GC/MS V V
BATCH ID: 170307I001
INITIAL: 170322A043
CCV:

ANALYZED BY: 1073
D/T ANALYZED: 2017-03-07 15:16
INITIAL:
CCV: 2017-03-22 14:43
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar003.d\22mar003.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
1,2-Dibromo-3-Chloropropane	Avg Resp		0.00	0.226	0.197			13	0-50	PASS
1,2-Dibromoethane	Avg Resp		0.00	0.448	0.472			-5	0-50	PASS
Dibromomethane	Avg Resp		0.00	0.262	0.278			-6	0-50	PASS
1,2-Dichlorobenzene	Avg Resp		0.00	1.937	2.026			-5	0-50	PASS
1,3-Dichlorobenzene	Avg Resp		0.00	1.967	2.027			-3	0-50	PASS
1,4-Dichlorobenzene	Avg Resp		0.00	2.015	2.081			-3	0-50	PASS
Dichlorodifluoromethane	Avg Resp		0.00	0.623	0.695			-12	0-50	PASS
1,1-Dichloroethane	S Avg Resp		0.10	1.115	1.069			4	0-50	PASS
1,2-Dichloroethane	Avg Resp		0.00	0.592	0.558			6	0-50	PASS
1,1-Dichloroethene	C Avg Resp		0.00	0.851	0.788			7	0-20	PASS
c-1,2-Dichloroethene	Avg Resp		0.00	0.719	0.733			-2	0-50	PASS
t-1,2-Dichloroethene	Avg Resp		0.00	0.625	0.660			-6	0-50	PASS
Acetonitrile	Avg Resp		0.00	0.553	0.480			13	0-50	PASS
1,2-Dichloropropane	C Avg Resp		0.00	0.414	0.402			3	0-20	PASS
Acrolein	Avg Resp		0.00	0.135	0.124			8	0-50	PASS
Acrylonitrile	Avg Resp		0.00	0.303	0.274			10	0-50	PASS
1,3-Dichloropropane	Avg Resp		0.00	0.751	0.769			-2	0-50	PASS
2,2-Dichloropropane	Avg Resp		0.00	0.908	0.837			8	0-50	PASS
1,1-Dichloropropene	Avg Resp		0.00	0.827	0.821			1	0-50	PASS
c-1,3-Dichloropropene	Avg Resp		0.00	0.691	0.679			2	0-50	PASS
t-1,3-Dichloropropene	Avg Resp		0.00	0.696	0.663			5	0-50	PASS
Ethylbenzene	C Avg Resp		0.00	2.132	2.212			-4	0-20	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-15-001-31352-4410
INSTRUMENT: GC/MS V V
BATCH ID: 1703071001
INITIAL: 170322A043
CCV:

ANALYZED BY: 1073
D/T ANALYZED: 2017-03-07 15:16
INITIAL:
CCV: 2017-03-22 14:43
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_VV\data\20171170322\22mar003.d\22mar003.ir

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
2-Hexanone	Avg Resp		0.00	0.379	0.292			23	0-50	PASS
Isopropylbenzene	Avg Resp		0.00	2.082	2.185			-5	0-50	PASS
p-Isopropyltoluene	Avg Resp		0.00	3.392	3.322			2	0-50	PASS
Methylene Chloride	Avg Resp		0.00	0.674	0.698			-4	0-50	PASS
4-Methyl-2-Pentanone	Avg Resp		0.00	0.203	0.169			17	0-50	PASS
Naphthalene	Avg Resp		0.00	3.203	2.890			10	0-50	PASS
n-Propylbenzene	Avg Resp		0.00	2.399	2.521			-5	0-50	PASS
Styrene	Avg Resp		0.00	1.467	1.596			-9	0-50	PASS
2-Methyl-2-Butanol (TAA)	Avg Resp		0.00	0.047	0.035			26	0-50	PASS
1,1,1,2-Tetrachloroethane	Avg Resp		0.00	0.413	0.472			-14	0-50	PASS
1,1,2,2-Tetrachloroethane	Avg Resp	S	0.30	1.107	1.056			5	0-50	PASS
Tetrachloroethene	Avg Resp		0.00	0.583	0.662			-14	0-50	PASS
Toluene	Avg Resp	C	0.00	1.789	1.898			-6	0-20	PASS
1,2,3-Trichlorobenzene	Avg Resp		0.00	1.126	1.122			0	0-50	PASS
1,2,4-Trichlorobenzene	Avg Resp		0.00	1.229	1.191			3	0-50	PASS
1,1,1-Trichloroethane	Avg Resp		0.00	0.955	0.931			3	0-50	PASS
Hexachloro-1,3-Butadiene	Avg Resp		0.00	0.403	0.400			1	0-50	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp		0.00	0.465	0.503			-8	0-50	PASS
1,1,2-Trichloroethane	Avg Resp		0.00	0.362	0.386			-7	0-50	PASS
Iodomethane	Avg Resp		0.00	0.782	0.941			-20	0-50	PASS
Trichloroethene	Avg Resp		0.00	0.438	0.457			-4	0-50	PASS
Trichlorofluoromethane	Avg Resp		0.00	0.742	0.737			1	0-50	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-15-001-31352-4410
INSTRUMENT: GC/MS V V
BATCH ID: 1703071001
INITIAL: 170322A043
CCV:

ANALYZED BY: 1073
D/T ANALYZED:
INITIAL: 2017-03-07 15:16
CCV: 2017-03-22 14:43
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_V\GCMS_VV_data\2017\170322\22mar003.d\22mar003.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Isobutyl Alcohol	Avg Resp		0.00	0.064	0.043			33	0-50	PASS
1,2,3-Trichloropropane	Avg Resp		0.00	0.775	0.762			2	0-50	PASS
1,2,4-Trimethylbenzene	Avg Resp		0.00	3.493	3.317			5	0-50	PASS
1,3,5-Trimethylbenzene	Avg Resp		0.00	1.738	1.835			-6	0-50	PASS
Vinyl Acetate	Avg Resp		0.00	2.415	1.844			24	0-50	PASS
Vinyl Chloride	C Avg Resp		0.00	0.687	0.617			10	0-20	PASS
p/m-Xylene	Avg Resp		0.00	1.665	1.774			-7	0-50	PASS
o-Xylene	Avg Resp		0.00	1.744	1.795			-3	0-50	PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp		0.00	2.180	1.831			16	0-50	PASS
t-1,4-Dichloro-2-Butene	Avg Resp		0.00	0.175	0.144			18	0-50	PASS
Tetrahydrofuran	Avg Resp		0.00	0.246	0.187			24	0-50	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp		0.00	1.448	1.514			-5	0-50	PASS
Diisopropyl Ether (DIPE)	Avg Resp		0.00	2.109	1.776			16	0-50	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp		0.00	2.184	1.728			21	0-50	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp		0.00	1.341	1.175			12	0-50	PASS
Cyclohexanone	Avg Resp		0.00	0.053	0.030			43	0-50	PASS
Ethanol	Avg Resp		0.00	0.154	0.146			5	0-50	PASS
Cyclohexane	Avg Resp		0.00	0.834	0.832			0	0-50	PASS
Thiophene	Avg Resp		0.00	0.881	0.921			-5	0-50	PASS
1,4-Dioxane	Avg Resp		0.00	0.007	0.007			0	0-50	PASS
Hexane	Avg Resp		0.00	0.596	0.580			3	0-50	PASS
1,3-Butadiene	Avg Resp		0.00	0.532	0.447			16	0-50	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-15-001-31352-4410
INSTRUMENT: GC/MS V V
BATCH ID: 1703071001
INITIAL: 170322A043
CCV:

ANALYZED BY: 1073
D/T ANALYZED: 2017-03-07 15:16
INITIAL: 2017-03-22 14:43
CCV:
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar003.d\22mar003.ir

<u>COMPOUND</u>	<u>TYPE</u>	<u>CALIB MODEL</u>	<u>MIN RF</u>	<u>AVG RF</u>	<u>CCV RF</u>	<u>AMOUNT</u>	<u>CCV CONC</u>	<u>CCV %D</u>	<u>CCV %D CL</u>	<u>STATUS</u>
Isopropanol	Avg Resp		0.00	0.051	0.036			29	0-50	PASS

MIN RF: Method Specified Minimum Response Factor

INTERNAL STANDARD COMPOUNDS AREA REPORT FOR METHOD: EPA 8260B

ICAL BATCH ID: 1703071001

CCV BATCH ID: 170322A043

ICAL MIDPOINT**SAMPLE ID:** 099-15-001-31116**D/T ANALYZED:** 2017-03-07 17:04**DATA FILE:** Z:\GCMS_VV\GCMS_VV_data\2017\170307\07mar008.d\07mar008.rr

COMPOUND	AREA	RETENTION TIME
1,4-Dichlorobenzene-d4	262345	14.59
1,4-Difluorobenzene	535493	8.13
Pentafluorobenzene	336068	7.21
Chlorobenzene-d5	499182	11.72
Tert-Butyl Alcohol-d9	101844	4.77

ICV**SAMPLE ID** 099-15-001-31116**D/T ANALYZED:** 2017-03-07 18:51**DATA FILE:** Z:\GCMS_VV\GCMS_VV_data\2017\170307\07mar012.d\07mar012.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	261517	131172	524690	14.60	PASS
1,4-Difluorobenzene	538383	267746	1070986	8.13	PASS
Pentafluorobenzene	338394	168034	672136	7.21	PASS
Chlorobenzene-d5	499077	249591	998364	11.72	PASS
Tert-Butyl Alcohol-d9	105101	50922	203688	4.77	PASS

CCV**SAMPLE ID** 099-15-001-31352**D/T ANALYZED:** 2017-03-22 14:43**DATA FILE:** Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar003.d\22mar003.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	351073	131172	524690	14.60	PASS
1,4-Difluorobenzene	649161	267746	1070986	8.13	PASS
Pentafluorobenzene	420942	168034	672136	7.21	PASS
Chlorobenzene-d5	602474	249591	998364	11.72	PASS
Tert-Butyl Alcohol-d9	91242	50922	203688	4.78	PASS

LCS**SAMPLE ID** 099-14-001-22761**D/T ANALYZED:** 2017-03-22 15:10**DATA FILE:** Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar004.d\22mar004.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	348222	175536	702146	14.60	PASS
1,4-Difluorobenzene	647133	324580	1298322	8.13	PASS
Pentafluorobenzene	419486	210471	841884	7.21	PASS
Chlorobenzene-d5	599766	301237	1204948	11.71	PASS
Tert-Butyl Alcohol-d9	95087	45621	182484	4.78	PASS

MB**SAMPLE ID** 099-14-001-22761**D/T ANALYZED:** 2017-03-22 16:02**DATA FILE:** Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar006.d\22mar006.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	279730	175536	702146	14.60	PASS
1,4-Difluorobenzene	608865	324580	1298322	8.14	PASS
Pentafluorobenzene	386203	210471	841884	7.21	PASS
Chlorobenzene-d5	568669	301237	1204948	11.72	PASS
Tert-Butyl Alcohol-d9	85371	45621	182484	4.78	PASS

MS**SAMPLE ID** 17-03-1540-1**D/T ANALYZED:** 2017-03-22 20:01**DATA FILE:** Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar015.d\22mar015.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	327436	175536	702146	14.60	PASS
1,4-Difluorobenzene	614170	324580	1298322	8.13	PASS
Pentafluorobenzene	395353	210471	841884	7.21	PASS
Chlorobenzene-d5	565770	301237	1204948	11.72	PASS
Tert-Butyl Alcohol-d9	86329	45621	182484	4.79	PASS

MSD**SAMPLE ID** 17-03-1540-1**D/T ANALYZED:** 2017-03-22 20:27**DATA FILE:** Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar016.d\22mar016.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	334062	175536	702146	14.60	PASS
1,4-Difluorobenzene	623424	324580	1298322	8.13	PASS
Pentafluorobenzene	405088	210471	841884	7.21	PASS
Chlorobenzene-d5	576328	301237	1204948	11.71	PASS
Tert-Butyl Alcohol-d9	85836	45621	182484	4.78	PASS

CS**SAMPLE ID** 17-03-1523-2**D/T ANALYZED:** 2017-03-22 21:20**DATA FILE:** Z:\GCMS_VV\GCMS_VV_data\2017\170322\22mar018.d\22mar018.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	262094	175536	702146	14.60	PASS
1,4-Difluorobenzene	579300	324580	1298322	8.13	PASS
Pentafluorobenzene	365604	210471	841884	7.21	PASS
Chlorobenzene-d5	538127	301237	1204948	11.72	PASS
Tert-Butyl Alcohol-d9	81998	45621	182484	4.78	PASS

Notes:

For all samples including QC, all internal standard area responses must be within 50% to 200% of the mean area response in the initial calibration.

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar003.d
 Report Date: 03/22/2017 15:04

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_VV.i Injection Date and Time: 22-MAR-2017 14:43
 Sample Name: BFB/CCV V031617B/V031717A Initial Calibration Date(s): 07-MAR-2017 07-MAR-2017
 Sublist used: all.sub Initial Calibration Time(s): 15:16 17:58
 Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m

Target Compounds	ICAL RRF or Amount	CCV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type	
Ethanol	0.154	0.146	0.00	5	20	Averaged	
Tert-Butyl Alcohol (TBA)	1.448	1.514	0.00	-5	20	Averaged	
Dichlorodifluoromethane	0.623	0.695	0.00	-12	20	Averaged	
Chloromethane	0.707	0.602	0.10	15	20	Averaged	
Vinyl Chloride	0.687	0.617	0.00	10	20	Averaged	
Bromomethane	0.385	0.337	0.00	12	20	Averaged	
Chloroethane	0.398	0.311	0.00	22	20	Averaged	<-Failed
1,3-Butadiene	0.532	0.447	0.00	16	20	Averaged	
Trichlorofluoromethane	0.742	0.737	0.00	1	20	Averaged	
Diethyl Ether	0.573	0.518	0.00	10	20	Averaged	
Acetone	0.075	0.067	0.00	11	20	Averaged	
Iodomethane	0.782	0.941	0.00	-20	20	Averaged	
1,1-Dichloroethene	0.851	0.788	0.00	7	20	Averaged	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.465	0.503	0.00	-8	20	Averaged	
Isopropanol	0.051	0.036	0.00	29	20	Averaged	<-Failed
Carbon Disulfide	1.769	2.015	0.00	-14	20	Averaged	
Acetonitrile	0.553	0.480	0.00	13	20	Averaged	
Acrylonitrile	0.303	0.274	0.00	10	20	Averaged	
Allyl Chloride	0.349	0.344	0.00	1	20	Averaged	
Acrolein	0.135	0.124	0.00	8	20	Averaged	
Methylene Chloride	0.674	0.698	0.00	-4	20	Averaged	
t-1,2-Dichloroethene	0.625	0.660	0.00	-6	20	Averaged	
Isobutyl Alcohol	0.064	0.043	0.00	33	20	Averaged	<-Failed
Methyl-t-Butyl Ether (MTBE)	2.180	1.831	0.00	16	20	Averaged	
Hexane	0.596	0.580	0.00	3	20	Averaged	
1,1-Dichloroethane	1.115	1.069	0.10	4	20	Averaged	
Vinyl Acetate	2.415	1.844	0.00	24	20	Averaged	<-Failed
Diisopropyl Ether (DIPE)	2.109	1.776	0.00	16	20	Averaged	
Chloroprene	1.002	0.881	0.00	12	20	Averaged	
Ethyl-t-Butyl Ether (ETBE)	2.184	1.728	0.00	21	20	Averaged	<-Failed
c-1,2-Dichloroethene	0.719	0.733	0.00	-2	20	Averaged	
2,2-Dichloropropane	0.908	0.837	0.00	8	20	Averaged	
2-Butanone	0.376	0.307	0.00	18	20	Averaged	
Propionitrile	0.116	0.106	0.00	9	20	Averaged	
Methacrylonitrile	0.476	0.375	0.00	21	20	Averaged	<-Failed
Bromochloromethane	0.426	0.477	0.00	-12	20	Averaged	
Tetrahydrofuran	0.246	0.187	0.00	24	20	Averaged	<-Failed
Chloroform	1.164	1.141	0.00	2	20	Averaged	
1,1,1-Trichloroethane	0.955	0.931	0.00	3	20	Averaged	
Cyclohexane	0.834	0.832	0.00	0	20	Averaged	
1,1-Dichloropropene	0.827	0.821	0.00	1	20	Averaged	
Carbon Tetrachloride	0.696	0.809	0.00	-16	20	Averaged	
Benzene	1.671	1.759	0.00	-5	20	Averaged	
1,2-Dichloroethane	0.592	0.558	0.00	6	20	Averaged	
2-Methyl-2-Butanol (TAA)	0.047	0.035	0.00	26	20	Averaged	<-Failed
Tert-Amyl-Methyl Ether (TAME)	1.341	1.175	0.00	12	20	Averaged	
Thiophene	0.881	0.921	0.00	-5	20	Averaged	
2,2,4-Trimethyl Pentane	0.785	0.782	0.00	0	20	Averaged	

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar003.d
 Report Date: 03/22/2017 15:04

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_VV.i Injection Date and Time: 22-MAR-2017 14:43
 Sample Name: BFB/CCV V031617B/V031717A Initial Calibration Date(s): 07-MAR-2017 07-MAR-2017
 Sublist used: all.sub Initial Calibration Time(s): 15:16 17:58
 Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m

Target Compounds	ICAL RRF or Amount	CCV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Trichloroethene	0.438	0.457	0.00	-4	20	Averaged
1,2-Dichloropropane	0.414	0.402	0.00	3	20	Averaged
Dibromomethane	0.262	0.278	0.00	-6	20	Averaged
Methyl Methacrylate	0.369	0.325	0.00	12	20	Averaged
1,4-Dioxane	0.007	0.007	0.00	0	20	Averaged
Bromodichloromethane	0.544	0.562	0.00	-3	20	Averaged
2-Chloroethyl Vinyl Ether	0.296	0.137	0.00	54	20	Averaged <-Failed
c-1,3-Dichloropropene	0.691	0.679	0.00	2	20	Averaged
Toluene	1.789	1.898	0.00	-6	20	Averaged
4-Methyl-2-Pentanone	0.203	0.169	0.00	17	20	Averaged
t-1,3-Dichloropropene	0.696	0.663	0.00	5	20	Averaged
Ethyl Methacrylate	0.724	0.650	0.00	10	20	Averaged
1,1,2-Trichloroethane	0.362	0.386	0.00	-7	20	Averaged
Tetrachloroethene	0.583	0.662	0.00	-14	20	Averaged
1,3-Dichloropropane	0.751	0.769	0.00	-2	20	Averaged
2-Hexanone	0.379	0.292	0.00	23	20	Averaged <-Failed
Dibromochloromethane	0.437	0.523	0.00	-20	20	Averaged
1,2-Dibromoethane	0.448	0.472	0.00	-5	20	Averaged
Chlorobenzene	1.263	1.400	0.30	-11	20	Averaged
1,1,1,2-Tetrachloroethane	0.413	0.472	0.00	-14	20	Averaged
Ethylbenzene	2.132	2.212	0.00	-4	20	Averaged
p/m-Xylene	1.665	1.774	0.00	-7	20	Averaged
o-Xylene	1.744	1.795	0.00	-3	20	Averaged
Styrene	1.467	1.596	0.00	-9	20	Averaged
Isopropylbenzene	2.082	2.185	0.00	-5	20	Averaged
1,2,3-Trichloropropane	0.775	0.762	0.00	2	20	Averaged
Bromobenzene	0.542	0.611	0.00	-13	20	Averaged
n-Propylbenzene	2.399	2.521	0.00	-5	20	Averaged
t-1,4-Dichloro-2-Butene	0.175	0.144	0.00	18	20	Averaged
2-Chlorotoluene	1.480	1.531	0.00	-3	20	Averaged
1,3,5-Trimethylbenzene	1.738	1.835	0.00	-6	20	Averaged
Bromoform	0.546	0.657	0.10	-20	20	Averaged
1,1,2,2-Tetrachloroethane	1.107	1.056	0.30	5	20	Averaged
4-Chlorotoluene	3.345	3.138	0.00	6	20	Averaged
Cyclohexanone	0.053	0.030	0.00	43	20	Averaged <-Failed
1,2,4-Trimethylbenzene	3.493	3.317	0.00	5	20	Averaged
tert-Butylbenzene	0.740	0.731	0.00	1	20	Averaged
p-Isopropyltoluene	3.392	3.322	0.00	2	20	Averaged
sec-Butylbenzene	3.913	3.752	0.00	4	20	Averaged
1,3-Dichlorobenzene	1.967	2.027	0.00	-3	20	Averaged
1,4-Dichlorobenzene	2.015	2.081	0.00	-3	20	Averaged
1,2-Dichlorobenzene	1.937	2.026	0.00	-5	20	Averaged
n-Butylbenzene	2.872	2.654	0.00	8	20	Averaged
1,2-Dibromo-3-Chloropropane	0.226	0.197	0.00	13	20	Averaged
1,2,4-Trichlorobenzene	1.229	1.191	0.00	3	20	Averaged
Hexachloro-1,3-Butadiene	0.403	0.400	0.00	1	20	Averaged
Naphthalene	3.203	2.890	0.00	10	20	Averaged
1,2,3-Trichlorobenzene	1.126	1.122	0.00	0	20	Averaged

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar003.d
 Report Date: 03/22/2017 15:04

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_VV.i Injection Date and Time: 22-MAR-2017 14:43
 Sample Name: BFB/CCV V031617B/V031717A Initial Calibration Date(s): 07-MAR-2017 07-MAR-2017
 Sublist used: all.sub Initial Calibration Time(s): 15:16 17:58
 Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m

Target Compounds	ICAL RRF or Amount	CCV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
=====						
Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
=====						
Dibromofluoromethane	0.441	0.449	0.00	-2	20	Averaged
1,2-Dichloroethane-d4	0.582	0.501	0.00	14	20	Averaged
Toluene-d8	1.194	1.180	0.00	1	20	Averaged
1,4-Bromofluorobenzene	0.492	0.465	0.00	5	20	Averaged

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Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar003.d
 Injection date and time: 22-MAR-2017 14:43

Instrument ID: GCMS_VV.i
 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 15:04

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 15:04 zz9h

Sample Name: BFB/CCV V031617B/V031717A Misc Info: V030717B
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV (Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.784	65	91242	250.000	-0.01
4)*Pentafluorobenzene	(2)	7.212	168	420942	50.000	0.00
47)*1,4-Difluorobenzene	(3)	8.134	114	649161	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.715	117	602474	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.599	152	351073	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	7.138	113	188906	50.889	0.01
SpikedAmount 50.000			Recovery =	0.000		
46)\$1,2-Dichloroethane-d4	(2)	7.573	65	210912	43.040	0.00
SpikedAmount 50.000			Recovery =	0.000		
62)\$Toluene-d8	(3)	9.954	98	765895	49.410	0.00
SpikedAmount 50.000			Recovery =	0.000		
81)\$1,4-Bromofluorobenzene	(4)	13.152	95	279957	47.237	0.01
SpikedAmount 50.000			Recovery =	0.000		
Target Compounds						
2) Ethanol	(1)	3.468	45	26712	475.711	100
3) Tert-Butyl Alcohol (TBA)	(1)	4.905	59	138137	261.305	100
5) Dichlorodifluoromethane	(2)	1.916	85	292449	55.783	100
6) Chloromethane	(2)	2.136	50	253381	42.595	100
7) Vinyl Chloride	(2)	2.262	62	259755	44.896	100
8) Bromomethane	(2)	2.666	94	141884	43.823	100
9) Chloroethane	(2)	2.813	64	131108	39.089	100
10) 1,3-Butadiene	(2)	2.309	54	188327	42.062	100
11) Trichlorofluoromethane	(2)	3.153	101	310334	49.665	100
12) Diethyl Ether	(2)	3.589	59	218134	45.206	100
13) Acetone	(2)	4.029	58	28072	44.498	100
14) Iodomethane	(2)	4.139	142	792528	120.390	100
15) 1,1-Dichloroethene	(2)	3.908	61	331784	46.323	100
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.924	101	211668	54.116	100
17) Isopropanol	(2)	4.291	45	76409	176.880	100
18) Carbon Disulfide	(2)	4.233	76	848288	56.959	100
19) Acetonitrile	(2)	4.485	41	403994	86.844	100
20) Acrylonitrile	(2)	5.062	53	115209	45.184	100
21) Allyl Chloride	(2)	4.485	76	144723	49.202	100
22) Acrolein	(2)	3.772	56	104720	92.062	100
23) Methylene Chloride	(2)	4.674	84	293968	51.805	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar003.d Instrument ID: GCMS_VV.i
 Injection date and time: 22-MAR-2017 14:43 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 15:04
 Date, time and analyst ID of latest file update: 22-Mar-2017 15:04 zz9h

Sample Name: BFB/CCV V031617B/V031717A Misc Info: V030717B
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	5.088	96	277960	52.809	100
25) Isobutyl Alcohol	(2)	7.673	43	36578	67.409	100
26) Methyl-t-Butyl Ether (MTBE)	(2)	5.109	73	770732	41.986	100
27) Hexane	(2)	5.502	57	244195	48.634	100
28) 1,1-Dichloroethane	(2)	5.696	63	449887	47.916	100
29) Vinyl Acetate	(2)	5.801	43	776320	38.178	100
30) Diisopropyl Ether (DIPE)	(2)	5.827	45	747566	42.111	100
31) Chloroprene	(2)	5.827	53	370792	43.956	100
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.331	59	727590	39.578	100
33) c-1,2-Dichloroethene	(2)	6.504	96	308716	50.985	100
34) 2,2-Dichloropropane	(2)	6.498	77	352477	46.114	100
35) 2-Butanone	(2)	6.540	43	129145	40.790	100
36) Propionitrile	(2)	6.614	54	44658	45.804	100
37) Methacrylonitrile	(2)	6.813	41	157869	39.372	100
38) Bromochloromethane	(2)	6.818	130	200883	56.051	100
39) Tetrahydrofuran	(2)	6.892	42	78736	38.095	100
40) Chloroform	(2)	6.934	83	480334	49.018	100
42) 1,1,1-Trichloroethane	(2)	7.170	97	392091	48.781	100
43) Cyclohexane	(2)	7.243	84	350342	49.901	100
44) 1,1-Dichloropropene	(2)	7.385	75	345518	49.656	100
45) Carbon Tetrachloride	(2)	7.385	117	340596	58.127	100
48) Benzene	(3)	7.647	78	1141854	52.630	100
49) 1,2-Dichloroethane	(3)	7.668	62	362207	47.161	100
50) 2-Methyl-2-Butanol (TAA)	(3)	7.678	59	113394	185.163	100
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.804	73	762785	43.804	100
52) Thiophene	(3)	7.909	84	598081	52.305	100
53) 2,2,4-Trimethyl Pentane	(3)	7.757	57	507490	49.768	100
54) Trichloroethene	(3)	8.459	95	296511	52.158	100
55) 1,2-Dichloropropane	(3)	8.737	63	261068	48.546	100
56) Dibromomethane	(3)	8.879	93	180651	53.096	100
57) Methyl Methacrylate	(3)	8.884	69	211223	44.121	100
58) 1,4-Dioxane	(3)	8.905	88	42693	460.739	100
59) Bromodichloromethane	(3)	9.068	83	364951	51.637	100
60) 2-Chloroethyl Vinyl Ether	(3)	9.445	63	89154	23.201	100
61) c-1,3-Dichloropropene	(3)	9.618	75	440615	49.107	100
63) Toluene	(3)	10.032	91	1232415	53.057	100
64) 4-Methyl-2-Pentanone	(3)	9.812	58	109690	41.548	100

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar003.d Instrument ID: GCMS_VV.i
 Injection date and time: 22-MAR-2017 14:43 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 15:04
 Date, time and analyst ID of latest file update: 22-Mar-2017 15:04 zz9h

Sample Name: BFB/CCV V031617B/V031717A Misc Info: V030717B
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.294	75	399596	47.679	100
67) Ethyl Methacrylate	(4)	10.405	69	391579	44.895	100
68) 1,1,2-Trichloroethane	(4)	10.520	83	232473	53.283	100
69) Tetrachloroethene	(4)	10.703	166	398944	56.807	100
70) 1,3-Dichloropropane	(4)	10.724	76	463035	51.202	100
71) 2-Hexanone	(4)	10.824	43	175835	38.549	100
72) Dibromochloromethane	(4)	11.002	129	314890	59.759	100
73) 1,2-Dibromoethane	(4)	11.144	107	284419	52.657	100
74) Chlorobenzene	(4)	11.747	112	843537	55.416	100
75) 1,1,1,2-Tetrachloroethane	(4)	11.841	131	284178	57.167	100
76) Ethylbenzene	(4)	11.878	91	1332966	51.886	100
77) p/m-Xylene	(4)	12.025	91	2137747	106.582	100
78) o-Xylene	(4)	12.512	91	1081283	51.445	100
79) Styrene	(4)	12.528	104	961498	54.412	100
80) Isopropylbenzene	(4)	12.968	105	1316201	52.460	100
82) 1,2,3-Trichloropropane	(4)	13.388	75	458938	49.124	100
83) Bromobenzene	(4)	13.346	156	367858	56.340	100
84) n-Propylbenzene	(4)	13.477	91	1519076	52.557	100
85) t-1,4-Dichloro-2-Butene	(4)	13.398	53	86862	41.253	100
86) 2-Chlorotoluene	(4)	13.587	91	922451	51.727	100
87) 1,3,5-Trimethylbenzene	(4)	13.692	105	1105456	52.799	100
89) Bromoform	(5)	12.753	173	230664	60.198	100
90) 1,1,2,2-Tetrachloroethane	(5)	13.325	83	370898	47.721	100
91) 4-Chlorotoluene	(5)	13.718	91	1101500	46.897	100
92) Cyclohexanone	(5)	13.084	55	52020	138.776	100
93) 1,2,4-Trimethylbenzene	(5)	14.159	105	1164641	47.483	100
94) tert-Butylbenzene	(5)	14.101	134	256514	49.396	100
95) p-Isopropyltoluene	(5)	14.557	119	1166417	48.981	100
96) sec-Butylbenzene	(5)	14.379	105	1317190	47.938	100
97) 1,3-Dichlorobenzene	(5)	14.520	146	711786	51.533	100
98) 1,4-Dichlorobenzene	(5)	14.625	146	730646	51.642	100
99) 1,2-Dichlorobenzene	(5)	15.097	146	711103	52.273	100
100) n-Butylbenzene	(5)	15.071	91	931726	46.208	100
101) 1,2-Dibromo-3-Chloropropane	(5)	16.062	75	69228	43.685	100
102) 1,2,4-Trichlorobenzene	(5)	17.110	180	418228	48.448	100
103) Hexachloro-1,3-Butadiene	(5)	17.325	225	140481	49.673	100
104) Naphthalene	(5)	17.420	128	1014443	45.101	100

Quant Report

Target Revision 3.5

Data File: /chem/VOA/GCMS_VV.i/170322.b/22mar003.d Instrument ID: GCMS_VV.i
Injection date and time: 22-MAR-2017 14:43 Analyst ID: 1073

Method used: /chem/VOA/GCMS_VV.i/170322.b/8260.m Sublist used: all
Calibration date and time: 22-MAR-2017 15:04
Date, time and analyst ID of latest file update: 22-Mar-2017 15:04 zz9h

Sample Name: BFB/CCV V031617B/V031717A Misc Info: V030717B
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
=====	=====	=====	=====	=====	=====	=====
105) 1,2,3-Trichlorobenzene	(5)	17.698	180	393923	49.821	100

page 4 of 4

Data File: /chem/V04/GCHS_VV.1/170322.lb/22mar003.d
 Date: 22-MAR-2017 14:43
 Client ID:
 Sample Info: BFE/CCV V031617E/V031717A

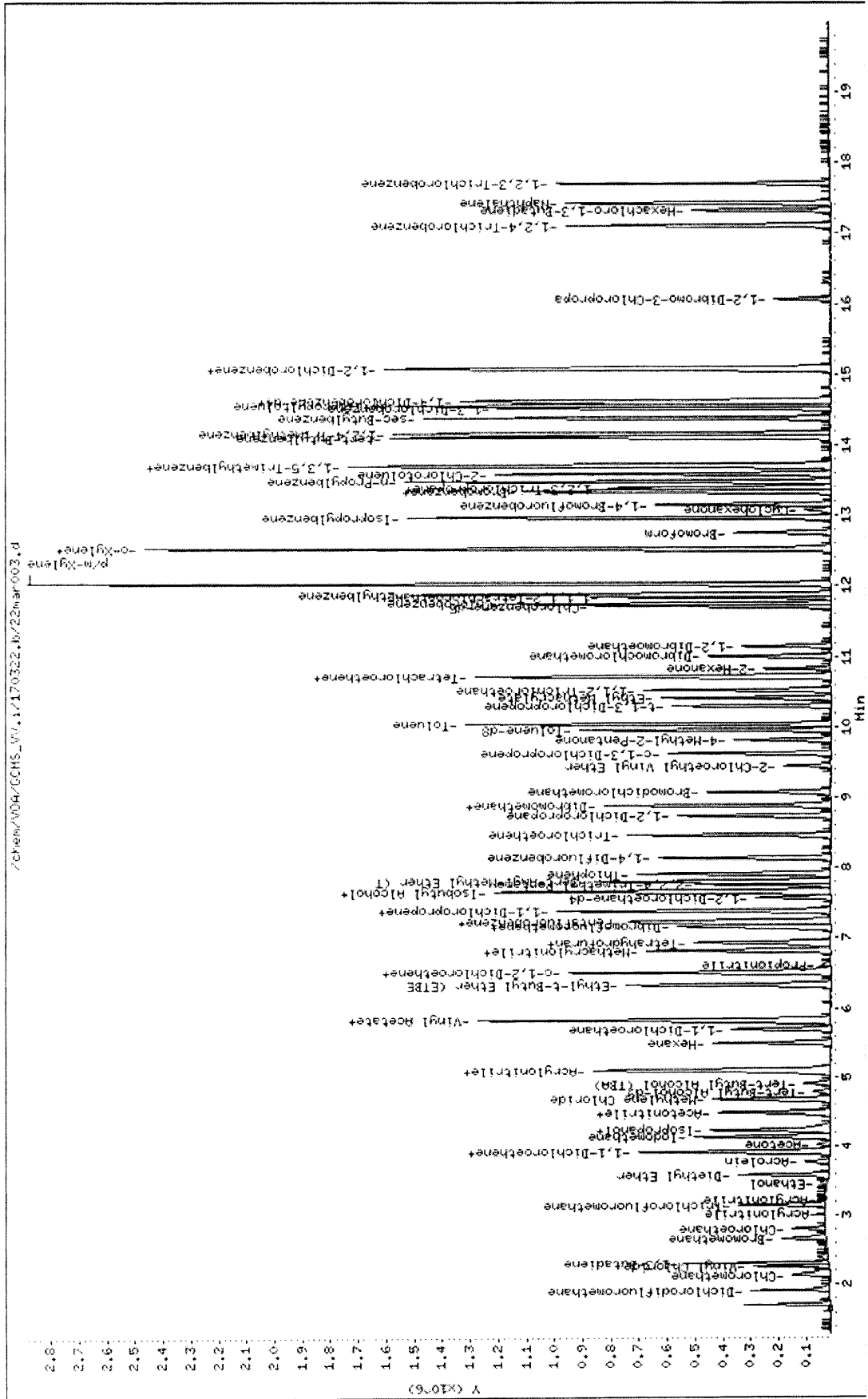
Instrument: GCHS_VV.1

Operator: 1073

Column diameter: 0.60

Column phase:

/chem/V04/GCHS_VV.1/170322.lb/22mar003.d



EPA 8260B
Volatile Organics
(Aqueous)
Tuning Report

Data File: /chem/V0A/GCHS_VV.i/170307.b/07mar004.d/07mar004.d

Page 1

Date : 07-MAR-2017 15:16

Client ID: BFB/IC 0.5 PPB V030

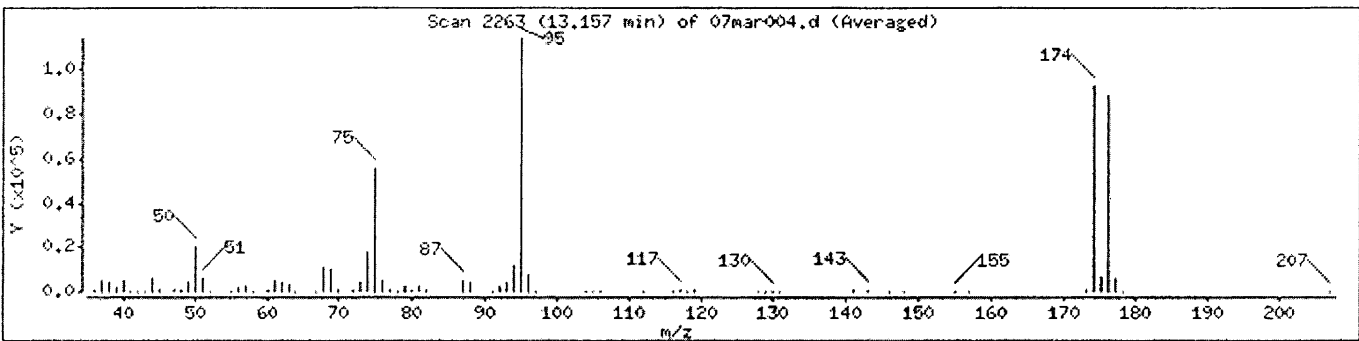
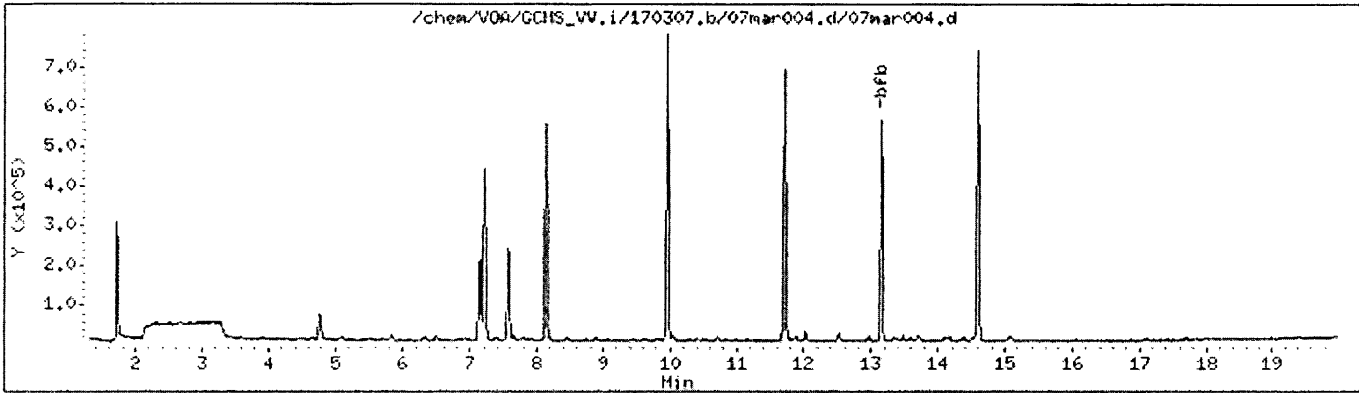
Instrument: GCHS_VV.i

Sample Info: BFB/IC 0.5 PPB V030717A

Operator: 1073

Column phase: DB-624

Column diameter: 0.25



BFB Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Response	Test
95	Base Peak, 100% relative abundance	100.0		114621	PASS
50	15 - 40% of mass 95	17.4		19986	PASS
75	30 - 60% of mass 95	48.7		55770	PASS
96	5 - 9% of mass 95	6.8		7794	PASS
173	Less than 2% of mass 174	0.5	(0.7)	607	PASS
174	50 - 100% of mass 95	80.9		92754	PASS
175	5 - 9% of mass 174	5.6	(7.0)	6466	PASS
176	95 - 101% of mass 174	77.6	(95.8)	88901	PASS
177	5 - 9% of mass 176	5.0	(6.5)	5746	PASS

Data File: /chem/VQA/GCHS_VV.1/170322.b/22mar003.d/22mar003.d

Page 1

Date : 22-MAR-2017 14:43

Client ID: BFB/CCV V031617B/V0

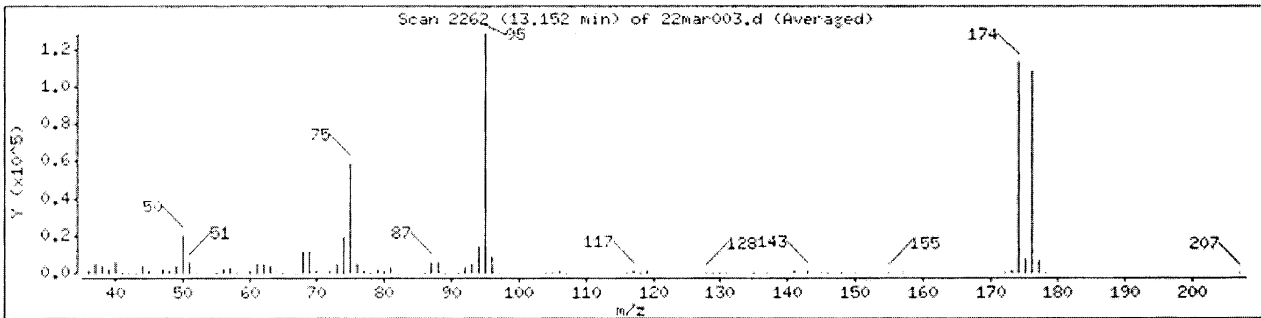
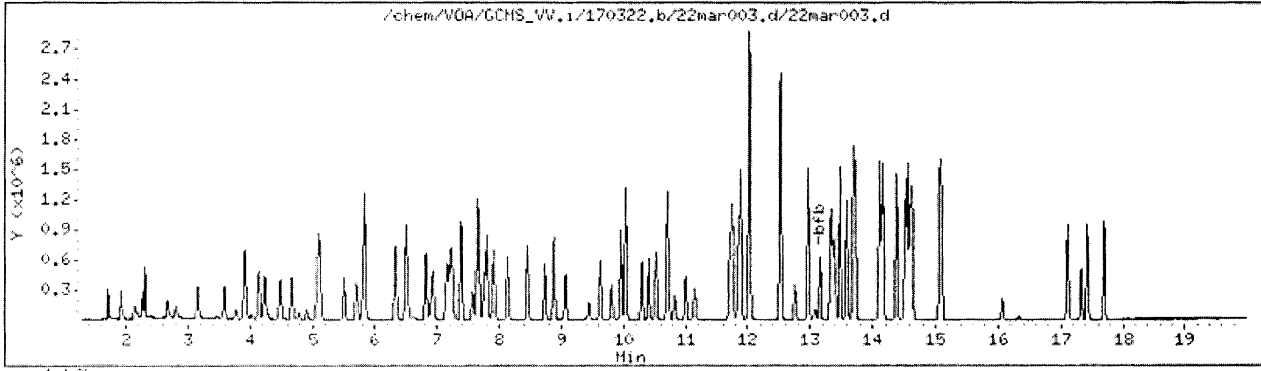
Instrument: GCHS_VV.1

Sample Info: BFB/CCV V031617B/V031717A

Operator: 1073

Column phase: DB-624

Column diameter: 0.25



BFB Ion Abundance/Ratio Criteria Chart

[Ion]	Abundance Criteria	Base Peak	Other	Response	Test
95	Base Peak, 100% relative abundance	100.0		127480	PASS
50	15 - 40% of mass 95	15.0		19153	PASS
75	30 - 60% of mass 95	45.3		57729	PASS
96	5 - 9% of mass 95	6.5		8296	PASS
173	Less than 2% of mass 174	0.6	(0.7)	775	PASS
174	50 - 100% of mass 95	88.5		112763	PASS
175	5 - 9% of mass 174	5.9	(6.7)	7541	PASS
176	95 - 101% of mass 174	85.2	(96.3)	108559	PASS
177	5 - 9% of mass 176	5.1	(6.0)	6554	PASS

EPA 8260B
Volatile Organics
(Aqueous)

Run Log

Injection Log

Directory: W:\GCMS_VV_DATA\2017\170307

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Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	07mar001.d	1.	BLANK	V020817D 'GC/MS V V'	7 Mar 2017 13:55
2	2	07mar002.d	1.	BLANK	V020817D	7 Mar 2017 14:22
3	3	07mar003.d	1.	BLANK	V020817D	7 Mar 2017 14:49
4	4	07mar004.d	1.	BFB/IC 0.5 PPB V030717A	V020817D	7 Mar 2017 15:16
5	5	07mar005.d	1.	IC 1 PPB V030717A	V020817D	7 Mar 2017 15:43
6	6	07mar006.d	1.	IC 10 PPB V022017A/V030317A	V020817D	7 Mar 2017 16:10
7	7	07mar007.d	1.	IC 20 PPB V022017A/V030317A	V020817D	7 Mar 2017 16:37
8	8	07mar008.d	1.	IC 50 PPB V022017A/V030317A	V020817D	7 Mar 2017 17:04
9	9	07mar009.d	1.	IC 100/60 PPB V022017A/V030...	V020817D	7 Mar 2017 17:31
10	10	07mar010.d	1.	IC 200/80 PPB V022017A/V030...	V020817D	7 Mar 2017 17:58
11		07mar011.d	1.	No MS or GC data present		
12	12	07mar012.d	1.	ICV V022117B/V030317B	V020817D	7 Mar 2017 18:51
13		07mar013.d	1.	No MS or GC data present		


Return to Contents

Injection Log

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	22mar001.d	1.	BLANK	V030717B 'GC/MS V V'	22 Mar 2017 13:50
2	2	22mar002.d	1.	BLANK	V030717B	22 Mar 2017 14:17
3	3	22mar003.d	1.	BFB/CCV V031617B/V031717A	V030717B	22 Mar 2017 14:43
4	4	22mar004.d	1.	LCS V031617C/V031717B	V030717B	22 Mar 2017 15:10
5	5	22mar005.d	1.	BLANK	V030717B	22 Mar 2017 15:36
6	6	22mar006.d	1.	MB	V030717B	22 Mar 2017 16:02
7	7	22mar007.d	1.	MB TCLP	V030717B	22 Mar 2017 16:29
8	8	22mar008.d	1.	17-03-1540-1A 100X 50UL PH<2	V030717B	22 Mar 2017 16:55
9	9	22mar009.d	1.	17-03-1485-3A 100X 50UL	V030717B	22 Mar 2017 17:22
10	10	22mar010.d	1.	17-03-0881-1A 100X 50UL	V030717B	22 Mar 2017 17:48
11	11	22mar011.d	1.	17-03-1129-1A 100X 50UL	V030717B	22 Mar 2017 18:15
12	12	22mar012.d	1.	MS 1485-3A V031617C/V031717B	V030717B 100X 50UL	22 Mar 2017 18:41
13	13	22mar013.d	1.	MSD 1485-3A V031617C/V031717B	V030717B 100X 50UL	22 Mar 2017 19:08
14	14	22mar014.d	1.	17-03-0881-1A 200X 25UL	V030717B E-FLAG	22 Mar 2017 19:34
15	15	22mar015.d	1.	MS 1540-1A V031617C/V031717B	V030717B 100X 50U...	22 Mar 2017 20:01
16	16	22mar016.d	1.	MSD 1540-1A V031617C/V031717B	V030717B 100X 50U...	22 Mar 2017 20:27
17	17	22mar017.d	1.	BLANK	V030717B	22 Mar 2017 20:54
18	18	22mar018.d	1.	17-03-1523-2A 500X 10UL PH<2	V030717B FOAMY	22 Mar 2017 21:20
19		22mar019.d	1.	No MS or GC data present		

EPA 8260B
Volatile Organics
(Solid)

RAW DATA

EPA 8260B
Volatile Organics
(Solid)

Initial Calibration

INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

ICAL WORK ORDER: 099-15-001-31181-4410
ICAL BATCH ID: 1703101001
INSTRUMENT: GC/MS Q

ANALYZED BY: 1,055
ICAL D/T ANALYZED: 2017-03-10 10:37
REVIEWED BY: 163
D/T REVIEWED: 2017-03-13 15:05

COMPOUND	COMP TYPE	CALIB MODEL	1	2	3	4	5	6	7	8	9	Avg RF	MIN RF	%RSD CL	%R SD CL	R or R ² CL	R or R ² CL	STATUS
Acetone		Avg RF	0.054	0.050	0.050	0.050	0.050	0.049	0.049	0.049	0.049	0.051	0.00	4	0-15	3.757	3.757	PASS
Benzene		Avg RF	1.380	1.882	1.733	1.796	1.819	1.753	1.712	1.712	1.712	1.725	0.00	9	0-15	9.425	9.425	PASS
Bromobenzene		Avg RF	0.534	0.518	0.532	0.532	0.549	0.522	0.517	0.517	0.517	0.529	0.00	2	0-15	2.290	2.290	PASS
Bromochloromethane		Avg RF	0.355	0.365	0.362	0.362	0.367	0.343	0.325	0.325	0.325	0.353	0.00	5	0-15	4.600	4.600	PASS
Bromodichloromethane		Avg RF	0.365	0.399	0.444	0.444	0.486	0.501	0.520	0.520	0.520	0.452	0.00	13	0-15	13.495	13.495	PASS
Bromoform	S	LR - E	0.129	0.183	0.218	0.218	0.281	0.353	0.427	0.427	0.427	0.432	0.10	1	0-15	0.990	r ² >=0.990	PASS
Bromomethane		Avg RF	0.566	0.513	0.473	0.473	0.548	0.548	0.548	0.548	0.548	0.529	0.00	7	0-15	6.986	6.986	PASS
2-Butanone		Avg RF	0.286	0.277	0.309	0.277	0.309	0.287	0.289	0.289	0.289	0.290	0.00	4	0-15	4.024	4.024	PASS
n-Butylbenzene		Avg RF	3.879	3.998	4.259	4.259	4.219	4.066	3.903	3.903	3.903	4.054	0.00	4	0-15	3.920	3.920	PASS
sec-Butylbenzene		Avg RF	5.073	5.071	5.261	5.261	5.276	5.069	4.910	4.910	4.910	5.110	0.00	3	0-15	2.695	2.695	PASS
tert-Butylbenzene		Avg RF	0.880	0.896	0.931	0.931	0.918	0.882	0.856	0.856	0.856	0.894	0.00	3	0-15	3.030	3.030	PASS
Diethyl Ether		Avg RF	0.540	0.578	0.578	0.578	0.614	0.583	0.581	0.581	0.581	0.579	0.00	4	0-15	4.090	4.090	PASS
Carbon Disulfide		Avg RF	1.955	2.044	2.044	2.044	2.101	2.030	2.010	2.010	2.010	2.016	0.00	3	0-15	2.779	2.779	PASS
Carbon Tetrachloride		LR - IC	0.429	0.482	0.468	0.509	0.586	0.648	0.698	0.698	0.698	0.658	0.00	1	0-15	0.992	r ² >=0.990	PASS
Chlorobenzene	S	Avg RF	1.360	1.272	1.330	1.330	1.344	1.286	1.263	1.263	1.263	1.309	0.30	3	0-15	3.103	3.103	PASS
Chloroethane		Avg RF	0.491	0.517	0.517	0.517	0.512	0.488	0.479	0.479	0.479	0.501	0.00	3	0-15	3.325	3.325	PASS
2-Chloroethyl Vinyl Ether		Avg RF	0.172	0.187	0.187	0.187	0.210	0.215	0.223	0.223	0.223	0.201	0.00	10	0-15	10.494	10.494	PASS
Chloroform	C	Avg RF	1.237	1.164	1.198	1.198	1.238	1.185	1.163	1.163	1.163	1.197	0.00	3	0-30	2.814	2.814	PASS
Chloromethane	S	Avg RF	1.432	1.169	1.128	1.128	1.064	1.043	1.135	1.135	1.135	1.162	0.10	12	0-15	12.088	12.088	PASS
2-Chlorotoluene		Avg RF	1.878	1.646	1.683	1.683	1.693	1.621	1.587	1.587	1.587	1.685	0.00	6	0-15	6.098	6.098	PASS
4-Chlorotoluene		Avg RF	4.052	3.797	3.919	3.919	3.857	3.679	3.609	3.609	3.609	3.819	0.00	4	0-15	4.224	4.224	PASS
Dibromochloromethane		LR - E	0.190	0.212	0.243	0.243	0.298	0.334	0.370	0.370	0.370	0.375	0.00	1	0-15	0.997	r ² >=0.990	PASS
1,2-Dibromo-3-Chloropropane		LR - ISC	0.089	0.107	0.107	0.107	0.133	0.147	0.162	0.162	0.162	0.154	0.00	1	0-15	0.994	r ² >=0.990	PASS

LR - E: Linear Regression (Equal Weight) LR - IC: Linear Regression (Inverse Concentration Weight) LR - ISC: Linear Regression (Inverse Square Concentration Weight)
Avg RF: Average Response Factor QR - E: Quadratic Regression (Equal Weight)



INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

ICAL WORK ORDER: 099-15-001-31181-4410
ICAL BATCH ID: 1703101001
INSTRUMENT: GC/MS Q

ANALYZED BY: 1.055
ICAL D/T ANALYZED: 2017-03-10 10:37
REVIEWED BY: 163
D/T REVIEWED: 2017-03-13 15:05

COMPOUND	COMP TYPE	CALIB MODEL	1	2	3	4	5	6	7	8	9	AVG. RE	MIN. RE	%RSD CL	%R SD CL	R or R ²	R or R ² CL	STATUS
1,2-Dibromoethane		Avg RF	0.259	0.306	0.330	0.348	0.344	0.347				0.322	0.00	11	0-15	10.748		PASS
Dibromomethane		Avg RF	0.217	0.214	0.224	0.229	0.224	0.220				0.221	0.00	2	0-15	2.347		PASS
1,2-Dichlorobenzene		Avg RF	1.925	1.925	2.004	2.020	1.955	1.921				1.958	0.00	2	0-15	2.227		PASS
1,3-Dichlorobenzene		Avg RF	2.240	2.094	2.143	2.171	2.100	2.063				2.135	0.00	3	0-15	2.997		PASS
1,4-Dichlorobenzene		Avg RF	2.198	2.067	2.146	2.155	2.095	2.049				2.118	0.00	3	0-15	2.706		PASS
Dichlorodifluoromethane		Avg RF	0.780	0.848	0.862	0.846	0.820	0.818				0.829	0.00	4	0-15	3.545		PASS
1,1-Dichloroethane	S	Avg RF	1.278	1.210	1.248	1.280	1.223	1.203				1.240	0.10	3	0-15	2.717		PASS
1,2-Dichloroethane		Avg RF	0.465	0.595	0.570	0.575	0.545	0.525				0.546	0.00	8	0-15	7.775		PASS
1,1-Dichloroethene	C	Avg RF	1.066	1.051	1.058	1.076	1.024	0.993				1.045	0.00	3	0-30	2.949		PASS
c-1,2-Dichloroethene		Avg RF	0.713	0.702	0.737	0.763	0.727	0.716				0.726	0.00	3	0-15	2.945		PASS
t-1,2-Dichloroethene		Avg RF	0.676	0.645	0.664	0.683	0.648	0.633				0.658	0.00	3	0-15	2.975		PASS
Acetonitrile		Avg RF	0.604	0.635	0.664	0.664	0.619	0.582				0.621	0.00	5	0-15	5.002		PASS
1,2-Dichloropropane	C	Avg RF	0.451	0.430	0.453	0.462	0.447	0.439				0.447	0.00	3	0-30	2.533		PASS
Acrolein		Avg RF	0.093	0.095	0.102	0.102	0.100	0.102				0.098	0.00	4	0-15	3.890		PASS
Acrylonitrile		Avg RF	0.205	0.224	0.224	0.234	0.229	0.228				0.224	0.00	5	0-15	4.996		PASS
1,3-Dichloropropane		Avg RF	0.617	0.626	0.649	0.664	0.634	0.626				0.636	0.00	3	0-15	2.741		PASS
2,2-Dichloropropane		Avg RF	0.863	0.862	0.885	0.939	0.925	0.931				0.901	0.00	4	0-15	3.867		PASS
Allyl Chloride		Avg RF	0.281	0.311	0.340	0.363	0.338	0.318				0.325	0.00	9	0-15	8.732		PASS
1,1-Dichloropropene		Avg RF	1.011	0.917	0.944	0.966	0.924	0.887				0.942	0.00	5	0-15	4.573		PASS
c-1,3-Dichloropropene	LR - ISC		0.351	0.479	0.547	0.607	0.655	0.666	0.669			0.634	0.00	1	0-15	0.996	r ² >=0.990	PASS
t-1,3-Dichloropropene	LR - IC		0.270	0.370	0.452	0.509	0.573	0.601	0.621			0.603	0.00	1	0-15	0.997	r ² >=0.990	PASS
Ethylbenzene	C	Avg RF	2.449	2.318	2.377	2.388	2.273	2.206				2.335	0.00	4	0-30	3.751		PASS
2-Hexanone		Avg RF	0.257	0.281	0.293	0.293	0.293	0.300				0.285	0.00	6	0-15	6.038		PASS

LR - E: Linear Regression (Equal Weight) LR - IC: Linear Regression (Inverse Concentration Weight) LR - ISC: Linear Regression (Inverse Square Concentration Weight)
Avg RF: Average Response Factor QR - E: Quadratic Regression (Equal Weight)

INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

ICAL WORK ORDER: 099-15-001-31181-4410
ICAL BATCH ID: 1703101001
INSTRUMENT: GC/MS Q

ANALYZED BY: 1.055
ICAL D/T ANALYZED: 2017-03-10 10:37
REVIEWED BY: 163
D/T REVIEWED: 2017-03-13 15:05

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD CL	%R. SD CL	R. or R^2 CL	R. or R^2 CL	STATUS
Isopropylbenzene		Avg RF	2.437	2.329	2.437	2.434	2.305	2.233				2.362	0.00	4	0-15	3.654		PASS
p-Isopropyltoluene		Avg RF	4.317	4.268	4.408	4.418	4.263	4.136				4.302	0.00	2	0-15	2.442		PASS
Methylene Chloride		Avg RF	0.679	0.678	0.702	0.670	0.662					0.678	0.00	2	0-15	2.209		PASS
4-Methyl-2-Pentanone		Avg RF	0.130	0.145	0.155	0.154	0.154					0.148	0.00	7	0-15	7.221		PASS
Naphthalene		Avg RF	3.011	3.177	3.270	3.183	3.218					3.172	0.00	3	0-15	3.072		PASS
n-Propylbenzene		Avg RF	2.913	2.787	2.869	2.887	2.748	2.674				2.813	0.00	3	0-15	3.298		PASS
Styrene		Avg RF	1.492	1.487	1.553	1.577	1.520	1.494				1.520	0.00	2	0-15	2.439		PASS
1,1,1,2-Tetrachloroethane		LR - IC	0.238	0.245	0.282	0.328	0.356	0.379				0.361	0.00	1	0-15	0.994	r^2>=0.990	PASS
2-Methyl-2-Butanol (TAA)		LR - IC	0.016	0.018	0.023	0.027	0.031					0.030	0.00	1	0-15	0.992	r^2>=0.990	PASS
1,1,2,2-Tetrachloroethane	S	Avg RF	0.730	0.756	0.826	0.869	0.876	0.896				0.825	0.30	8	0-15	8.305		PASS
Tetrachloroethene		Avg RF	0.627	0.579	0.600	0.590	0.561	0.530				0.581	0.00	6	0-15	5.737		PASS
Toluene	C	Avg RF	2.068	1.895	1.951	1.968	1.898	1.846				1.938	0.00	4	0-30	4.005		PASS
1,2,3-Trichlorobenzene		Avg RF	1.367	1.353	1.446	1.443	1.409	1.385				1.401	0.00	3	0-15	2.769		PASS
Ethyl Methacrylate		LR - ISC	0.381	0.439	0.514	0.546	0.573					0.563	0.00	1	0-15	0.998	r^2>=0.990	PASS
1,2,4-Trichlorobenzene		Avg RF	1.554	1.494	1.583	1.625	1.559	1.524				1.557	0.00	3	0-15	2.918		PASS
1,1,1-Trichloroethane		Avg RF	0.870	0.858	0.891	0.951	0.962	0.965				0.916	0.00	5	0-15	5.323		PASS
Hexachloro-1,3-Butadiene		Avg RF	0.891	0.855	0.905	0.890	0.858	0.833				0.872	0.00	3	0-15	3.164		PASS
1,1,2-Trichloro-1,2,2-Tri fluoroethane		Avg RF	0.635	0.600	0.619	0.622	0.594	0.572				0.607	0.00	4	0-15	3.762		PASS
1,1,2-Trichloroethane		Avg RF	0.294	0.290	0.313	0.314	0.304	0.302				0.303	0.00	3	0-15	3.185		PASS
Iodomethane		LR - ISC	0.258	0.375	0.543	0.553	0.562					0.584	0.00	1	0-15	0.997	r^2>=0.990	PASS
Trichloroethene		Avg RF	0.442	0.451	0.479	0.481	0.462	0.446				0.460	0.00	4	0-15	3.614		PASS



INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

ICAL WORK ORDER: 099-15-001-31181-4410
ICAL BATCH ID: 1703101001
INSTRUMENT: GC/MS Q

ANALYZED BY: 1,055
ICAL D/T ANALYZED: 2017-03-10 10:37
REVIEWED BY: 163
D/T REVIEWED: 2017-03-13 15:05

COMPOUND	COMP. TYPE	1	2	3	4	5	6	7	8	9	Avg. RF	MIN. RF	%RSD CL	%RSD CL	R or R ² CL	R or R ² CL	STATUS
Trichlorofluoromethane	Avg RF	0.944	0.974	0.991	0.983	0.960	0.948				0.967	0.00	2	0-15	1.978		PASS
1,2,3-Trichloropropane	Avg RF	0.444	0.381	0.498	0.520	0.469	0.540				0.475	0.00	12	0-15	12.173		PASS
1,2,4-Trimethylbenzene	Avg RF	3.915	3.949	4.121	4.104	3.951	3.867				3.984	0.00	3	0-15	2.606		PASS
Methyl Methacrylate	Avg RF	0.186	0.217	0.245	0.257	0.265					0.234	0.00	14	0-15	13.706		PASS
1,3,5-Trimethylbenzene	Avg RF	1.971	1.974	2.047	2.050	1.958	1.901				1.984	0.00	3	0-15	2.862		PASS
Vinyl Acetate	Avg RF	0.083	0.086	0.097	0.107	0.112					0.097	0.00	13	0-15	13.013		PASS
Vinyl Chloride	C Avg RF	0.842	0.902	0.882	0.862	0.833	0.835				0.861	0.00	3	0-30	3.034		PASS
p/m-Xylene	Avg RF	1.470	1.962	1.837	1.891	1.881	1.781	1.715			1.791	0.00	9	0-15	9.058		PASS
o-Xylene	Avg RF	1.430	2.053	1.889	1.951	1.951	1.856	1.800			1.847	0.00	11	0-15	10.868		PASS
Methyl-t-Butyl Ether (MTBE)	Avg RF	1.792	1.794	1.832	1.906	1.839	1.801				1.827	0.00	2	0-15	2.374		PASS
t-1,4-Dichloro-2-Butene	Avg RF	0.097	0.107	0.112	0.118	0.124					0.112	0.00	9	0-15	9.414		PASS
Tetrahydrofuran	Avg RF	0.181	0.182	0.192	0.188	0.187					0.186	0.00	2	0-15	2.461		PASS
Tert-Butyl Alcohol (TBA)	Avg RF	1.122	1.297	1.503	1.473	1.591	1.566				1.425	0.00	13	0-15	12.717		PASS
Diisopropyl Ether (DIPE)	Avg RF	2.448	2.468	2.538	2.635	2.520	2.442				2.508	0.00	3	0-15	2.919		PASS
Ethyl-t-Butyl Ether (ETBE)	Avg RF	2.145	2.101	2.196	2.309	2.261	2.235				2.208	0.00	3	0-15	3.467		PASS
Tert-Amyl-Methyl Ether (TAME)	Avg RF	1.186	1.128	1.187	1.216	1.208	1.189				1.186	0.00	3	0-15	2.607		PASS
Cyclohexanone	Avg RF	0.040	0.042	0.042	0.042	0.045	0.043				0.043	0.00	5	0-15	4.920		PASS
Ethanol	LR - E	0.304	0.322	0.256	0.244	0.209					0.202	0.00	1	0-15	0.993	r ² >=0.990	PASS
Cyclohexane	Avg RF	1.136	1.106	1.086	1.086	1.050	1.001				1.076	0.00	5	0-15	4.850		PASS
Thiophene	Avg RF	0.897	0.866	0.901	0.906	0.880	0.864				0.886	0.00	2	0-15	2.065		PASS
1,4-Dioxane	Avg RF	0.004	0.004	0.004	0.004	0.004	0.004				0.004	0.00	4	0-15	4.030		PASS

LR - E: Linear Regression (Equal Weight) LR - IC: Linear Regression (Inverse Concentration Weight)
LR - IC: Linear Regression (Inverse Concentration Weight) LR - ISC: Linear Regression (Inverse Square Concentration Weight)
Avg RF: Average Response Factor OR - E: Quadratic Regression (Equal Weight)



INITIAL CALIBRATION QUALITY CONTROL SUMMARY FOR METHOD: EPA 8260B

ICAL WORK ORDER: 099-15-001-31181-4410
ICAL BATCH ID: 1703101001
INSTRUMENT: GC/MS Q

ANALYZED BY: 1,055
ICAL D/T ANALYZED: 2017-03-10 10:37
REVIEWED BY: 163
D/T REVIEWED: 2017-03-13 15:05

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD	%RSD CL	R _{or} R ²	R _{or} R ² CL	STATUS
Hexane		Avg RF	1.176	1.190	1.209	1.264	1.211	1.174				1.204	0.00	3	0-15	2.775		PASS
1,3-Butadiene		Avg RF	0.821	0.801	0.806	0.820	0.776	0.756				0.797	0.00	3	0-15	3.252		PASS
Isopropanol		Avg RF		0.028	0.034	0.035	0.037	0.041				0.035	0.00	13	0-15	13.221		PASS

Data Files:

LEVEL #	D/T ANALYZED	DATA FILE
1	2017-03-10 10:37	Z:\GCMS_Q\GCMS_Q_data\2017\170310\10mar005.d\10mar005.rr
2	2017-03-10 11:05	Z:\GCMS_Q\GCMS_Q_data\2017\170310\10mar006.d\10mar006.rr
3	2017-03-10 11:33	Z:\GCMS_Q\GCMS_Q_data\2017\170310\10mar007.d\10mar007.rr
4	2017-03-10 12:00	Z:\GCMS_Q\GCMS_Q_data\2017\170310\10mar008.d\10mar008.rr
5	2017-03-10 12:28	Z:\GCMS_Q\GCMS_Q_data\2017\170310\10mar009.d\10mar009.rr
6	2017-03-10 12:56	Z:\GCMS_Q\GCMS_Q_data\2017\170310\10mar010.d\10mar010.rr
7	2017-03-10 13:24	Z:\GCMS_Q\GCMS_Q_data\2017\170310\10mar011.d\10mar011.rr

LR - E: Linear Regression (Equal Weight) LR - IC: Linear Regression (Inverse Concentration Weight) LR - ISC: Linear Regression (Inverse Square Concentration Weight)
Avg RF: Average Response Factor QR - E: Quadratic Regression (Equal Weight)



INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

ICV WORK ORDER: 099-15-001-31181-4410
 INITIAL BATCH ID: 170310I001
 INSTRUMENT: GC/MS Q

ANALYZED BY: 1055
 D/T ANALYZED: 2017-03-10 10:37
 INITIAL ICV: 2017-03-10 14:22
 REVIEWED BY: 163
 D/T REVIEWED: 2017-03-13 15:05

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170310\10mar013.d\10mar013.r

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
Acetone	Avg Resp		0.00	0.051	0.057			-12	0-50	PASS
Benzene	Avg Resp		0.00	1.725	1.898			-10	0-50	PASS
Bromobenzene	Avg Resp		0.00	0.529	0.557			-5	0-50	PASS
Bromochloromethane	Avg Resp		0.00	0.353	0.367			-4	0-50	PASS
Bromodichloromethane	Avg Resp		0.00	0.452	0.533			-18	0-50	PASS
Bromoform	LR - Equal					50.00	47.774	4	0-50	PASS
Bromomethane	Avg Resp		0.00	0.529	0.455			14	0-50	PASS
2-Butanone	Avg Resp		0.00	0.290	0.287			1	0-50	PASS
n-Butylbenzene	Avg Resp		0.00	4.054	4.447			-10	0-50	PASS
sec-Butylbenzene	Avg Resp		0.00	5.110	5.500			-8	0-50	PASS
tert-Butylbenzene	Avg Resp		0.00	0.894	0.958			-7	0-50	PASS
Diethyl Ether	Avg Resp		0.00	0.579	0.611			-6	0-50	PASS
Carbon Disulfide	Avg Resp		0.00	2.016	2.268			-13	0-50	PASS
Carbon Tetrachloride	LR - Inv Conc					50.00	54.457	-9	0-50	PASS
Chlorobenzene	Avg Resp		0.30	1.309	1.371			-5	0-50	PASS
Chloroethane	Avg Resp		0.00	0.501	0.532			-6	0-50	PASS
2-Chloroethyl Vinyl Ether	Avg Resp		0.00	0.201	0.206			-2	0-50	PASS
Chloroform	Avg Resp		0.00	1.197	1.241			-4	0-20	PASS
Chloromethane	Avg Resp		0.10	1.162	1.100			5	0-50	PASS
2-Chlorotoluene	Avg Resp		0.00	1.685	1.744			-4	0-50	PASS
4-Chlorotoluene	Avg Resp		0.00	3.819	4.030			-6	0-50	PASS
Dibromochloromethane	LR - Equal					50.00	51.283	-3	0-50	PASS
1,2-Dibromo-3-Chloropropane	LR - Inv Sqr Conc					50.00	52.311	-5	0-50	PASS
1,2-Dibromoethane	Avg Resp		0.00	0.322	0.352			-9	0-50	PASS
Dibromomethane	Avg Resp		0.00	0.221	0.226			-2	0-50	PASS
1,2-Dichlorobenzene	Avg Resp		0.00	1.958	2.062			-5	0-50	PASS
1,3-Dichlorobenzene	Avg Resp		0.00	2.135	2.219			-4	0-50	PASS
1,4-Dichlorobenzene	Avg Resp		0.00	2.118	2.231			-5	0-50	PASS
Dichlorodifluoromethane	Avg Resp		0.00	0.829	0.819			1	0-50	PASS



INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

ICV WORK ORDER: 099-15-001-31181-4410
 INITIAL BATCH ID: 1703101001
 INSTRUMENT: GC/MS Q

ANALYZED BY: 1055
 D/T ANALYZED: 2017-03-10 10:37
 INITIAL ICV: 2017-03-10 14:22
 REVIEWED BY: 163
 D/T REVIEWED: 2017-03-13 15:05

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170310\10mar013.d\10mar013.r

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
1,1-Dichloroethane	S	Avg Resp	0.10	1.240	1.314		-6	0-50	0-50	PASS
1,2-Dichloroethane		Avg Resp	0.00	0.546	0.579		-6	0-50	0-50	PASS
1,1-Dichloroethene	C	Avg Resp	0.00	1.045	1.130		-8	0-20	0-20	PASS
c-1,2-Dichloroethene		Avg Resp	0.00	0.726	0.765		-5	0-50	0-50	PASS
t-1,2-Dichloroethene		Avg Resp	0.00	0.658	0.722		-10	0-50	0-50	PASS
Acetonitrile		Avg Resp	0.00	0.621	0.711		-14	0-50	0-50	PASS
1,2-Dichloropropane	C	Avg Resp	0.00	0.447	0.480		-7	0-20	0-20	PASS
Acrolein		Avg Resp	0.00	0.098	0.097		1	0-50	0-50	PASS
Acrylonitrile		Avg Resp	0.00	0.224	0.229		-2	0-50	0-50	PASS
1,3-Dichloropropane		Avg Resp	0.00	0.636	0.654		-3	0-50	0-50	PASS
2,2-Dichloropropane		Avg Resp	0.00	0.901	1.050		-17	0-50	0-50	PASS
Allyl Chloride		Avg Resp	0.00	0.325	0.390		-20	0-50	0-50	PASS
1,1-Dichloropropene		Avg Resp	0.00	0.942	1.008		-7	0-50	0-50	PASS
c-1,3-Dichloropropene		LR - Inv Sqr Conc				50.00	55.660	-11	0-50	PASS
t-1,3-Dichloropropene		LR - Inv Conc				50.00	52.834	-6	0-50	PASS
Ethylbenzene	C	Avg Resp	0.00	2.335	2.476		-6	0-20	0-20	PASS
2-Hexanone		Avg Resp	0.00	0.285	0.299		-5	0-50	0-50	PASS
Isopropylbenzene		Avg Resp	0.00	2.362	2.515		-6	0-50	0-50	PASS
p-Isopropyltoluene		Avg Resp	0.00	4.302	4.665		-8	0-50	0-50	PASS
Methylene Chloride		Avg Resp	0.00	0.678	0.710		-5	0-50	0-50	PASS
4-Methyl-2-Pentanone		Avg Resp	0.00	0.148	0.151		-2	0-50	0-50	PASS
Naphthalene		Avg Resp	0.00	3.172	3.302		-4	0-50	0-50	PASS
n-Propylbenzene		Avg Resp	0.00	2.813	2.987		-6	0-50	0-50	PASS
Styrene		Avg Resp	0.00	1.520	1.613		-6	0-50	0-50	PASS
Chloroprene		Avg Resp	0.00	1.244	1.328		-7	0-50	0-50	PASS
2-Methyl-2-Butanol (TAA)		LR - Inv Conc				250.00	255.453	-2	0-50	PASS
1,1,1,2-Tetrachloroethane		LR - Inv Conc				50.00	53.543	-7	0-50	PASS
1,1,2,2-Tetrachloroethane	S	Avg Resp	0.30	0.825	0.888		-8	0-50	0-50	PASS
Tetrachloroethene		Avg Resp	0.00	0.581	0.582		0	0-50	0-50	PASS

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

ICV WORK ORDER: 099-15-001-31181-4410

INITIAL BATCH ID: 170310I001

INSTRUMENT: GC/MS Q

ANALYZED BY: 1055

D/T ANALYZED:

INITIAL: 2017-03-10 10:37

ICV: 2017-03-10 14:22

REVIEWED BY: 163

D/T REVIEWED: 2017-03-13 15:05

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170310\10mar013.d\10mar013.rr

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
Toluene	C	Avg Resp	0.00	1.938	2.057			-6	0-20	PASS
1,2,3-Trichlorobenzene		Avg Resp	0.00	1.401	1.457			-4	0-50	PASS
Ethyl Methacrylate		LR - Inv Sqr Conc				50.00	52.585	-5	0-50	PASS
1,2,4-Trichlorobenzene		Avg Resp	0.00	1.557	1.686			-8	0-50	PASS
1,1,1-Trichloroethane		Avg Resp	0.00	0.916	1.034			-13	0-50	PASS
Hexachloro-1,3-Butadiene		Avg Resp	0.00	0.872	0.939			-8	0-50	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane		Avg Resp	0.00	0.607	0.657			-8	0-50	PASS
1,1,2-Trichloroethane		Avg Resp	0.00	0.303	0.310			-2	0-50	PASS
Iodomethane		LR - Inv Sqr Conc				100.00	110.077	-10	0-50	PASS
Trichloroethene		Avg Resp	0.00	0.460	0.507			-10	0-50	PASS
Trichlorofluoromethane		Avg Resp	0.00	0.967	1.024			-6	0-50	PASS
Isobutyl Alcohol		LR - Inv Conc				100.00	103.001	-3	0-50	PASS
1,2,3-Trichloropropane		Avg Resp	0.00	0.475	0.545			-15	0-50	PASS
1,2,4-Trimethylbenzene		Avg Resp	0.00	3.984	4.216			-6	0-50	PASS
Methacrylonitrile		Avg Resp	0.00	0.365	0.377			-3	0-50	PASS
Methyl Methacrylate		Avg Resp	0.00	0.234	0.255			-9	0-50	PASS
1,3,5-Trimethylbenzene		Avg Resp	0.00	1.984	2.126			-7	0-50	PASS
Vinyl Acetate		Avg Resp	0.00	0.097	0.109			-12	0-50	PASS
Vinyl Chloride	C	Avg Resp	0.00	0.861	0.881			-2	0-20	PASS
p/m-Xylene		Avg Resp	0.00	1.791	1.950			-9	0-50	PASS
o-Xylene		Avg Resp	0.00	1.847	2.014			-9	0-50	PASS
Methyl-t-Butyl Ether (MTBE)		Avg Resp	0.00	1.827	1.892			-4	0-50	PASS
t-1,4-Dichloro-2-Butene		Avg Resp	0.00	0.112	0.125			-12	0-50	PASS
Tetrahydrofuran		Avg Resp	0.00	0.186	0.190			-2	0-50	PASS
Propionitrile		Avg Resp	0.00	0.076	0.079			-4	0-50	PASS
Tert-Butyl Alcohol (TBA)		Avg Resp	0.00	1.425	1.574			-10	0-50	PASS
Diisopropyl Ether (DIPE)		Avg Resp	0.00	2.508	2.718			-8	0-50	PASS
Ethyl-t-Butyl Ether (ETBE)		Avg Resp	0.00	2.208	2.325			-5	0-50	PASS
Tert-Amyl-Methyl Ether (TAME)		Avg Resp	0.00	1.186	1.229			-4	0-50	PASS

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

ICV WORK ORDER: 099-15-001-31181-4410
 INITIAL BATCH ID: 1703101001
 INSTRUMENT: GC/MS Q

ANALYZED BY: 1055
 D/T ANALYZED: 2017-03-10 10:37
 INITIAL: 2017-03-10 14:22
 ICV: 163
 REVIEWED BY: 2017-03-13 15:05
 D/T REVIEWED:

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170310\10mar013.d\10mar013.rr

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
Cyclohexanone	Avg Resp		0.00	0.043	0.053	500.00	418.653	-23	0-50	PASS
Ethanol	LR - Equal									PASS
Cyclohexane	Avg Resp		0.00	1.076	1.131			-5	0-50	PASS
Thiophene	Avg Resp		0.00	0.886	0.923			-4	0-50	PASS
1,4-Dioxane	Avg Resp		0.00	0.004	0.004			0	0-50	PASS
Hexane	Avg Resp		0.00	1.204	1.323			-10	0-50	PASS
2,2,4-Trimethyl Pentane	Avg Resp		0.00	2.007	2.099			-5	0-50	PASS
1,3-Butadiene	Avg Resp		0.00	0.797	0.883			-11	0-50	PASS
Isopropanol	Avg Resp		0.00	0.035	0.041			-17	0-50	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 10-Mar-2017 14:04

Eurofins Calscience
INITIAL CALIBRATION DATA

Start Cal Date : 10-MAR-2017 10:37
 End Cal Date : 10-MAR-2017 13:24
 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Cal Date : 10-Mar-2017 14:04 c7uq

Calibration File Names:
 Level 1: /chem1/VOA/GCMS_Q.i/170310.b/10mar005.d
 Level 2: /chem1/VOA/GCMS_Q.i/170310.b/10mar006.d
 Level 3: /chem1/VOA/GCMS_Q.i/170310.b/10mar007.d
 Level 4: /chem1/VOA/GCMS_Q.i/170310.b/10mar008.d
 Level 5: /chem1/VOA/GCMS_Q.i/170310.b/10mar009.d
 Level 6: /chem1/VOA/GCMS_Q.i/170310.b/10mar010.d
 Level 7: /chem1/VOA/GCMS_Q.i/170310.b/10mar011.d

Compound	Level							Coefficients			%RSD or R^2
	0.5000 Level 1	1 Level 2	10 Level 3	20 Level 4	50 Level 5	100 Level 6	Curve	b	m1	m2	
2 Ethanol	++++ 120134	++++	6764	14335	30541	62037	LINEAR	-0.44468	0.20309		1
3 Tert-Butyl Alcohol (TBA)	++++ 1.56596	1.12180	1.29657	1.50331	1.47270	1.59100	AVRG		1.42522		13
5 Dichlorodifluoromethane	++++ 0.81806	0.77974	0.84797	0.86164	0.84553	0.82046	AVRG		0.82890		4
6 Chloromethane	++++ 1.13459	1.43216	1.16945	1.12806	1.06418	1.04317	AVRG		1.16194		12

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 Quant Method : ISTD
 Target Version : 3.50
 Integrator : HP RTE
 Method file : /chem1/VOA/GCMS Q.i/170310.b/8260.m
 Cal Date : 10-Mar-2017 14:04 c7uq

Compound	Level							Coefficients			RSD or R-2
	0.5000	1	10	20	50	100	Curve	b	m1	m2	
7 Vinyl Chloride	Level 1 0.84182 0.83457	Level 2 0.90225	Level 3 0.87060	Level 4 0.88212	Level 5 0.86214	Level 6 0.83297	AVRG		0.86092		3
8 Bromomethane	++++ 0.54759	++++ 0.56579	0.51349	0.47258	0.54772	AVRG		0.52943			7
9 Chloroethane	++++ 0.47878	0.49055	0.51658	0.51706	0.51205	0.48829	AVRG		0.50055		3
10 1,3-Butadiene	++++ 0.75606	0.82144	0.80139	0.80636	0.81989	0.77570	AVRG		0.79681		3
11 Trichlorofluoromethane	++++ 0.94818	0.94434	0.97367	0.99150	0.98345	0.96016	AVRG		0.96688		2
12 Diethyl Ether	++++ 0.58055	0.53953	0.57820	0.57816	0.61396	0.58337	AVRG		0.57896		4
13 Acetone	++++ 0.04926	++++ 0.05394	0.04976	0.04992	0.05001	AVRG		0.05058			4

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Compound	0.5000		1		10		20		50		100		Coefficients		RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2					
	200														
	Level 7														
14 Iodmethane	++++	++++	38060	113830	392227	831091	MLNR	0.23415	0.58562						1
	1704400														
15 1,1-Dichloroethene	++++	1.06607	1.05130	1.05796	1.07555	1.02415	AVRG		1.04464						3
	0.99280														
16 1,1,2-Trichloro-1,2-Trifluo	++++	0.63515	0.59963	0.61929	0.62156	0.59389	AVRG		0.60692						4
	0.57200														
17 Isopropanol	++++	++++	0.02817	0.03363	0.03500	0.03679	AVRG		0.03487						13
	0.04078														
18 Carbon Disulfide	++++	1.95481	1.95498	2.04398	2.10088	2.02993	AVRG		2.01574						3
	2.00983														
19 Acetonitrile	++++	++++	0.60409	0.63486	0.66380	0.61888	AVRG		0.62067						5
	0.58173														
20 Acrylonitrile	++++	++++	0.20500	0.22401	0.23361	0.22938	AVRG		0.22407						5
	0.22835														

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Compound	0.5000 Level 1	1 Level 2	10 Level 3	20 Level 4	50 Level 5	100 Level 6	Curve	b	Coefficients ml	m2	%RSD or R^2
21 Allyl Chloride	++++ 0.31845	0.28074	0.31060	0.34025	0.36268	0.33800	AVRG		0.32512		9
22 Acrolein	++++ 0.10150	++++	0.09322	0.09530	0.10152	0.10004	AVRG		0.09832		4
23 Methylene Chloride	++++ 0.66184	++++	0.67878	0.67768	0.70194	0.67011	AVRG		0.67807		2
24 t-1,2-Dichloroethene	++++ 0.63313	0.67633	0.64454	0.66440	0.68346	0.64833	AVRG		0.65837		3
25 Isobutyl Alcohol	++++ 64056	++++	1603	3614	1112	26846	WLNLR	0.27908	0.02078		1
26 Methyl-t-Butyl Ether (MTBE)	++++ 1.80071	1.79150	1.79445	1.83187	1.90589	1.83930	AVRG		1.82729		2
27 Hexane	++++ 1.17397	1.17559	1.18990	1.20873	1.26395	1.21141	AVRG		1.20392		3

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Compound	0.5000 Level 1	1 Level 2	10 Level 3	20 Level 4	50 Level 5	100 Level 6	Curve	b	Coefficients ml	m2	RSD or R^2
28 1,1-Dichloroethane	++++ 1.20256	1.27809	1.21047	1.24771	1.26015	1.22319	AVRG		1.24036		3
29 Vinyl Acetate	++++ 0.11174	++++	0.08293	0.08587	0.09700	0.10683	AVRG		0.09687		13
30 Diisopropyl Ether (DIPE)	++++ 2.44194	2.44770	2.46783	2.53752	2.63517	2.52009	AVRG		2.50838		3
31 Chloroprene	++++ 1.18275	++++	1.23611	1.27234	1.30261	1.22847	AVRG		1.24446		4
32 Ethyl-t-Butyl Ether (ETBE)	++++ 2.23454	2.14500	2.10062	2.19622	2.30879	2.26078	AVRG		2.20766		3
33 c-1,2-Dichloroethene	++++ 0.71605	0.71322	0.70197	0.73679	0.76258	0.72686	AVRG		0.72631		3
34 2,2-Dichloropropane	++++ 0.93054	0.86314	0.86226	0.88468	0.93873	0.92485	AVRG		0.90070		4

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 Cal Date : 10-Mar-2017 14:04 c7uq

Compound	Coefficients							m2	RSD or R^2
	0.5000 Level 1	1 Level 2	10 Level 3	20 Level 4	50 Level 5	100 Level 6	AVRG		
35 2-Butanone	++++ 0.28936	++++ 0.28574	0.27719	0.30879	0.28711	AVRG	0.28964	4	
36 Propionitrile	++++ 0.07913	++++ 0.06685	0.07500	0.08084	0.07918	AVRG	0.07620	7	
37 Methacrylonitrile	++++ 0.36891	++++ 0.34169	0.35592	0.38529	0.37346	AVRG	0.36506	5	
38 Bromochloromethane	++++ 0.32496	0.35505	0.36500	0.36189	0.36728	AVRG	0.35286	5	
39 Tetrahydrofuran	++++ 0.18749	++++ 0.18107	0.18210	0.19226	0.18775	AVRG	0.18613	2	
40 Chloroform	++++ 1.16302	1.23677	1.16391	1.19799	1.23827	AVRG	1.19749	3	
42 1,1,1-Trichloroethane	++++ 0.96503	0.86990	0.85764	0.89138	0.95108	AVRG	0.91618	5	

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Compound	0.5000							100			Coefficients		%RSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2			
43 Cyclohexane	++++ 1.00072	++++ 1.13568	1.10588	1.08640	1.05033	AVRG	1.07580				5		
44 1,1-Dichloropropene	++++ 0.88729	1.01073	0.91687	0.94443	0.96610	0.92364	AVRG		0.94151		5		
45 Carbon Tetrachloride	1659 1059267	3707	34588	77335	211820	487534	WLNLR	0.00779	0.66347		1		
48 Benzene	1.37976 1.71164	1.88172	1.73292	1.79555	1.81868	1.75316	AVRG		1.72478		9		
49 1,2-Dichloroethane	0.46504 0.52492	0.59495	0.54965	0.57045	0.57463	0.54463	AVRG		0.54633		8		
50 2-Methyl-2-Butanol (TAA)	++++ 371357	++++ 9390	21496	64849	160768	WLNLR	0.66486	0.03046			1		
51 Tert-Amyl-Methyl Ether (TAME)	++++ 1.18948	1.18581	1.12766	1.18691	1.21577	1.20781	AVRG		1.18558		3		

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Compound	0.5000 Level 1	1 Level 2	10 Level 3	20 Level 4	50 Level 5	100 Level 6	Curve	b	Coefficients ml	m2	\$RSD or R^2
52 Thiophene	++++ 0.86413	0.89731	0.86637	0.90132	0.90637	0.88025	AVRG		0.88596		2
53 2,2,4-Trimethyl Pentane	++++ 1.92138	2.13841	1.97092	2.02179	2.01970	1.95840	AVRG		2.00677		4
54 Trichloroethene	++++ 0.44581	0.44236	0.45146	0.47894	0.48085	0.46219	AVRG		0.46027		4
55 1,2-Dichloropropane	++++ 0.43851	0.45146	0.43041	0.45295	0.46246	0.44741	AVRG		0.44720		3
56 Dibromomethane	++++ 0.22043	0.21714	0.21422	0.22415	0.22851	0.22393	AVRG		0.22140		2
57 Methyl Methacrylate	++++ 0.26451	++++	0.18644	0.21710	0.24502	0.25664	AVRG		0.23394		14
58 1,4-Dioxane	++++ 0.00437	++++	0.00405	0.00443	0.00449	0.00444	AVRG		0.00435		4

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Compound	0.5000 Level 1	1 Level 2	10 Level 3	20 Level 4	50 Level 5	100 Level 6	Curve	b	Coefficients ml	m2	%RSD or R ²
59 Bromodichloromethane	++++ 0.51985	0.36488	0.39874	0.44425	0.48642	0.50064	AVRG		0.45246		13
60 2-Chloroethyl Vinyl Ether	++++ 0.22263	++++	0.17191	0.18730	0.21050	0.21503	AVRG		0.20147		10
61 c-1,3-Dichloropropene	2105 1614686	5637	63490	142330	375913	794522	MLNR	0.00462	0.63684		1
63 Toluene	++++ 1.84558	2.06833	1.89491	1.95112	1.96844	1.89757	AVRG		1.93766		4
64 4-Methyl-2-Pentanone	++++ 0.15394	++++	0.11298	0.14524	0.15482	0.15443	AVRG		0.14768		7
66 t-1,3-Dichloropropene	1493 1416627	4101	48947	111914	309141	681784	MLNR	0.00868	0.60444		1
67 Ethyl Methacrylate	++++ 1309245	++++	41219	96492	277132	618629	MLNR	0.07006	0.56403		1

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Compound	0.5000 Level 1	1 Level 2	10 Level 3	20 Level 4	50 Level 5	100 Level 6	Curvel	Coefficients ml	m2	RSR or R^2
200 Level 7										
68 1,1,2-Trichloroethane	++++ 0.30214	0.29378	0.29019	0.31255	0.31410	0.30397	AVRG	0.30279		3
69 Tetrachloroethene	++++ 0.53024	0.62721	0.57880	0.59988	0.59009	0.55091	AVRG	0.58119		6
70 1,3-Dichloropropane	++++ 0.62555	0.61719	0.62623	0.64853	0.66428	0.63394	AVRG	0.63595		3
71 2-Hexanone	++++ 0.30029	++++	0.25659	0.28076	0.29268	0.29305	AVRG	0.28467		6
72 Dibromochloromethane	++++ 845632	2100	22989	53492	160713	378566	LINR	0.12107	0.37582	1
73 1,2-Dibromoethane	++++ 0.34702	0.25946	0.30593	0.32988	0.34758	0.34414	AVRG	0.32234		11
74 Chlorobenzene	++++ 1.26265	1.35982	1.27181	1.32972	1.34355	1.28638	AVRG	1.30899		3

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Compound	0.5000 Level 1	1 Level 2	10 Level 3	20 Level 4	50 Level 5	100 Level 6	Curve	b	ml Coefficients	m2	\$RSD or R^2
75 1,1,1,2-Tetrachloroethane	864152	2632	26549	62000	176812	403314	WLINR	0.01652	0.36380		1
76 Ethylbenzene	2.20841	2.44924	2.31798	2.37724	2.38807	2.27272	AVRG		2.33528		4
77 p/m-Xylene	1.71540	1.96174	1.83656	1.89055	1.88062	1.78111	AVRG		1.79088		9
78 o-Xylene	1.79988	2.05259	1.88851	1.95114	1.95116	1.85553	AVRG		1.84699		11
79 Styrene	1.49395	1.49176	1.48696	1.55283	1.57683	1.51957	AVRG		1.52032		2
80 Isopropylbenzene	2.23229	2.43732	2.32906	2.43657	2.43361	2.30494	AVRG		2.36246		4
82 1,2,3-Trichloropropane	0.54049	0.44361	0.38105	0.49829	0.52042	0.46858	AVRG		0.47541		12

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Compound	0.5000 Level 1	1 Level 2	10 Level 3	20 Level 4	50 Level 5	100 Level 6	Curve	b	Coefficients ml	m2	%RSD or R^2
200 Level 7											
83 Bromobenzene	++++ 0.51724	0.53410	0.51761	0.53219	0.54855	0.52216	AVRG		0.52864		2
84 n-Propylbenzene	++++ 2.67386	2.91335	2.78674	2.86930	2.88718	2.74792	AVRG		2.81306		3
85 t-1,4-Dichloro-2-Butene	++++ 0.12434	++++	0.09688	0.10740	0.11156	0.11837	AVRG		0.11171		9
86 2-Chloro-oluene	++++ 1.58656	1.87847	1.64592	1.68314	1.69254	1.62125	AVRG		1.68465		6
87 1,3,5-Trimethylbenzene	++++ 1.90144	1.97095	1.97441	2.04690	2.05033	1.95785	AVRG		1.98365		3
89 Bromoform	++++ 492369	749	10123	24475	77566	202752	LINR	0.19347	0.43661		1
90 1,1,2,2-Tetrachloroethane	++++ 0.89635	0.72965	0.75597	0.82566	0.86948	0.87573	AVRG		0.82547		8

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Compound	0.5000 Level 1	1 Level 2	10 Level 3	20 Level 4	50 Level 5	100 Level 6	Curve	b	Coefficients ml	m2	RSD or R^2
91 4-Chlorotoluene	++++ 3.60872	4.05204	3.79719	3.91925	3.85677	3.67886	AVRG		3.61881		4
92 Cyclohexane	++++ 0.04337	++++	0.03977	0.04198	0.04210	0.04549	AVRG		0.04254		5
93 1,2,4-Trimethylbenzene	++++ 3.86678	3.91458	3.94898	4.12072	4.10367	3.95058	AVRG		3.98422		3
94 tert-Butylbenzene	++++ 0.85846	0.88036	0.89623	0.93065	0.91782	0.88151	AVRG		0.89384		3
95 p-Isopropyltoluene	++++ 4.13594	4.31734	4.26781	4.40804	4.41794	4.26295	AVRG		4.30167		2
96 sec-Butylbenzene	++++ 4.91022	5.07314	5.07141	5.26094	5.27608	5.06889	AVRG		5.11011		3
97 1,3-Dichlorobenzene	++++ 2.06344	2.24022	2.09413	2.14305	2.17123	2.09987	AVRG		2.13532		3

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Compound	0.5000	1	10	20	50	100	Coefficients		RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	b	m1	or R=2
	200								
	Level 7								
98 1,4-Dichlorobenzene	++++	2.19789	2.06719	2.14614	2.15477	2.09488			3
	2.04878						AVRG	2.11828	
99 1,2-Dichlorobenzene	++++	1.92486	1.92458	2.00442	2.01957	1.95508			2
	1.92142						AVRG	1.95832	
100 n-Butylbenzene	++++	3.87862	3.99833	4.25935	4.21913	4.06617			4
	3.90290						AVRG	4.05408	
101 1,2-Dibromo-3-Chloropropane	++++	++++	4917	11967	36737	84483			1
	186798						MLINR	0.09425	
102 1,2,4-Trichlorobenzene	++++	1.55392	1.49411	1.58293	1.62478	1.55946			3
	1.52413						AVRG	1.55855	
103 Hexachloro-1,3-Butadiene	++++	0.89086	0.85533	0.90505	0.89020	0.85786			3
	0.83264						AVRG	0.87199	
104 Naphthalene	++++	++++	3.01058	3.17741	3.27032	3.18307			3
	3.21782						AVRG	3.17184	

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Compound	0.5000 Level 1	1 Level 2	10 Level 3	20 Level 4	50 Level 5	100 Level 6	Curve	b	ml	Coefficients	m2	SRSD or R^2
105 1,2,3-Trichlorobenzene	++++ 1.38519	1.36743	1.35281	1.44566	1.44289	1.40946	AVRG	1.40057				3
41 Dibromofluoromethane	0.41134 0.43141	0.41414	0.42226	0.40947	0.42155	0.42765	AVRG	0.41969				2
46 1,2-Dichloroethane-d4	0.52004 0.51496	0.53057	0.53878	0.51731	0.52112	0.51939	AVRG	0.52317				2
62 Toluene-d8	1.21769 1.24475	1.23196	1.22950	1.22837	1.22509	1.23273	AVRG	1.23001				1
81 1,4-Bromofluorobenzene	0.51173 0.50778	0.50959	0.51391	0.50524	0.50088	0.50338	AVRG	0.50750				1

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Average %RSD Results.

Calculated Average %RSD = 7.18303
Maximum Average %RSD = 15.00000
* Passed Average %RSD Test.

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response
Wt. Linear	Amt = b + Rsp/ml	Response

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar013.d
 Report Date: 03/10/2017 14:46

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_Q.i Injection Date and Time: 10-MAR-2017 14:22
 Sample Name: ICV V022117B/V030317B Initial Calibration Date(s): 10-MAR-2017 10-MAR-2017
 Sublist used: all.sub Initial Calibration Time(s): 10:37 13:24
 Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Ethanol	500.00	418.653	0.00	16	20	Linear
Tert-Butyl Alcohol (TBA)	1.425	1.574	0.00	-10	20	Averaged
Dichlorodifluoromethane	0.829	0.819	0.00	1	20	Averaged
Chloromethane	1.162	1.100	0.10	5	20	Averaged
Vinyl Chloride	0.861	0.881	0.00	-2	20	Averaged
Bromomethane	0.529	0.455	0.00	14	20	Averaged
Chloroethane	0.501	0.532	0.00	-6	20	Averaged
1,3-Butadiene	0.797	0.883	0.00	-11	20	Averaged
Trichlorofluoromethane	0.967	1.024	0.00	-6	20	Averaged
Diethyl Ether	0.579	0.611	0.00	-6	20	Averaged
Acetone	0.051	0.057	0.00	-12	20	Averaged
Iodomethane	100.00	110.077	0.00	-10	20	LinWt 1/(Amt)^2
1,1-Dichloroethene	1.045	1.130	0.00	-8	20	Averaged
1,1,2-Trichloro-1,2,2-Trifluo	0.607	0.657	0.00	-8	20	Averaged
Isopropanol	0.035	0.041	0.00	-17	20	Averaged
Carbon Disulfide	2.016	2.268	0.00	-12	20	Averaged
Acetonitrile	0.621	0.711	0.00	-14	20	Averaged
Acrylonitrile	0.224	0.229	0.00	-2	20	Averaged
Allyl Chloride	0.325	0.390	0.00	-20	20	Averaged
Acrolein	0.098	0.097	0.00	1	20	Averaged
Methylene Chloride	0.678	0.710	0.00	-5	20	Averaged
t-1,2-Dichloroethene	0.658	0.722	0.00	-10	20	Averaged
Isobutyl Alcohol	100.00	103.001	0.00	-3	20	LinWt 1/Amt
Methyl-t-Butyl Ether (MTBE)	1.827	1.892	0.00	-4	20	Averaged
Hexane	1.204	1.323	0.00	-10	20	Averaged
1,1-Dichloroethane	1.240	1.314	0.10	-6	20	Averaged
Vinyl Acetate	0.097	0.109	0.00	-12	20	Averaged
Diisopropyl Ether (DIPE)	2.508	2.718	0.00	-8	20	Averaged
Chloroprene	1.244	1.328	0.00	-7	20	Averaged
Ethyl-t-Butyl Ether (ETBE)	2.208	2.325	0.00	-5	20	Averaged
c-1,2-Dichloroethene	0.726	0.765	0.00	-5	20	Averaged
2,2-Dichloropropane	0.901	1.050	0.00	-17	20	Averaged
2-Butanone	0.290	0.287	0.00	1	20	Averaged
Propionitrile	0.076	0.079	0.00	-4	20	Averaged
Methacrylonitrile	0.365	0.377	0.00	-3	20	Averaged
Bromochloromethane	0.353	0.367	0.00	-4	20	Averaged
Tetrahydrofuran	0.186	0.190	0.00	-2	20	Averaged
Chloroform	1.197	1.241	0.00	-4	20	Averaged
1,1,1-Trichloroethane	0.916	1.034	0.00	-13	20	Averaged
Cyclohexane	1.076	1.131	0.00	-5	20	Averaged
1,1-Dichloropropene	0.942	1.008	0.00	-7	20	Averaged
Carbon Tetrachloride	50.00	54.457	0.00	-9	20	LinWt 1/Amt
Benzene	1.725	1.898	0.00	-10	20	Averaged
1,2-Dichloroethane	0.546	0.579	0.00	-6	20	Averaged
2-Methyl-2-Butanol (TAA)	250.00	255.453	0.00	-2	20	LinWt 1/Amt
Tert-Amyl-Methyl Ether (TAME)	1.186	1.229	0.00	-4	20	Averaged
Thiophene	0.886	0.923	0.00	-4	20	Averaged
2,2,4-Trimethyl Pentane	2.007	2.099	0.00	-5	20	Averaged

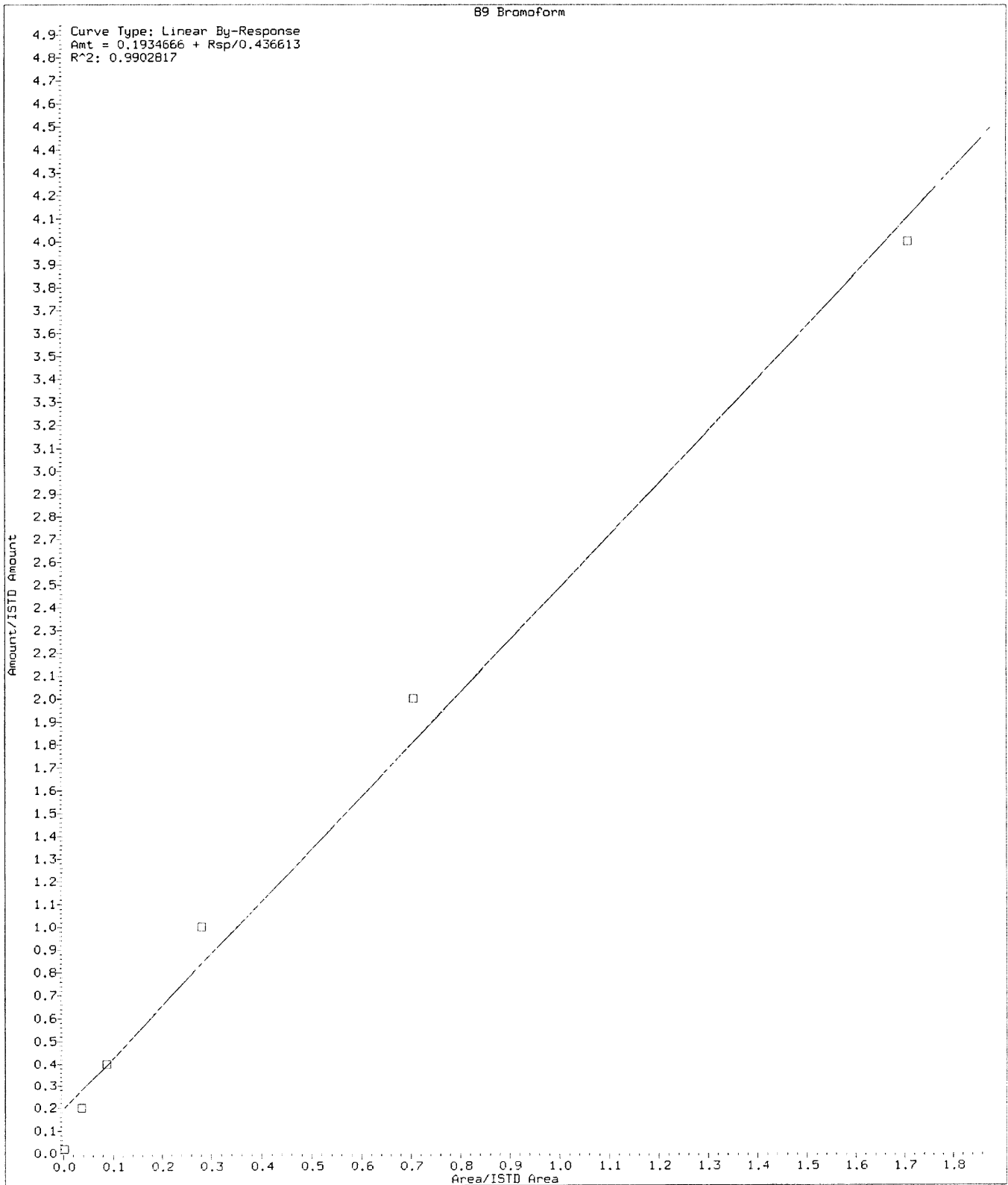
Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar013.d
 Report Date: 03/10/2017 14:46

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_Q.i Injection Date and Time: 10-MAR-2017 14:22
 Sample Name: ICV V022117B/V030317B Initial Calibration Date(s): 10-MAR-2017 10-MAR-2017
 Sublist used: all.sub Initial Calibration Time(s): 10:37 13:24
 Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m

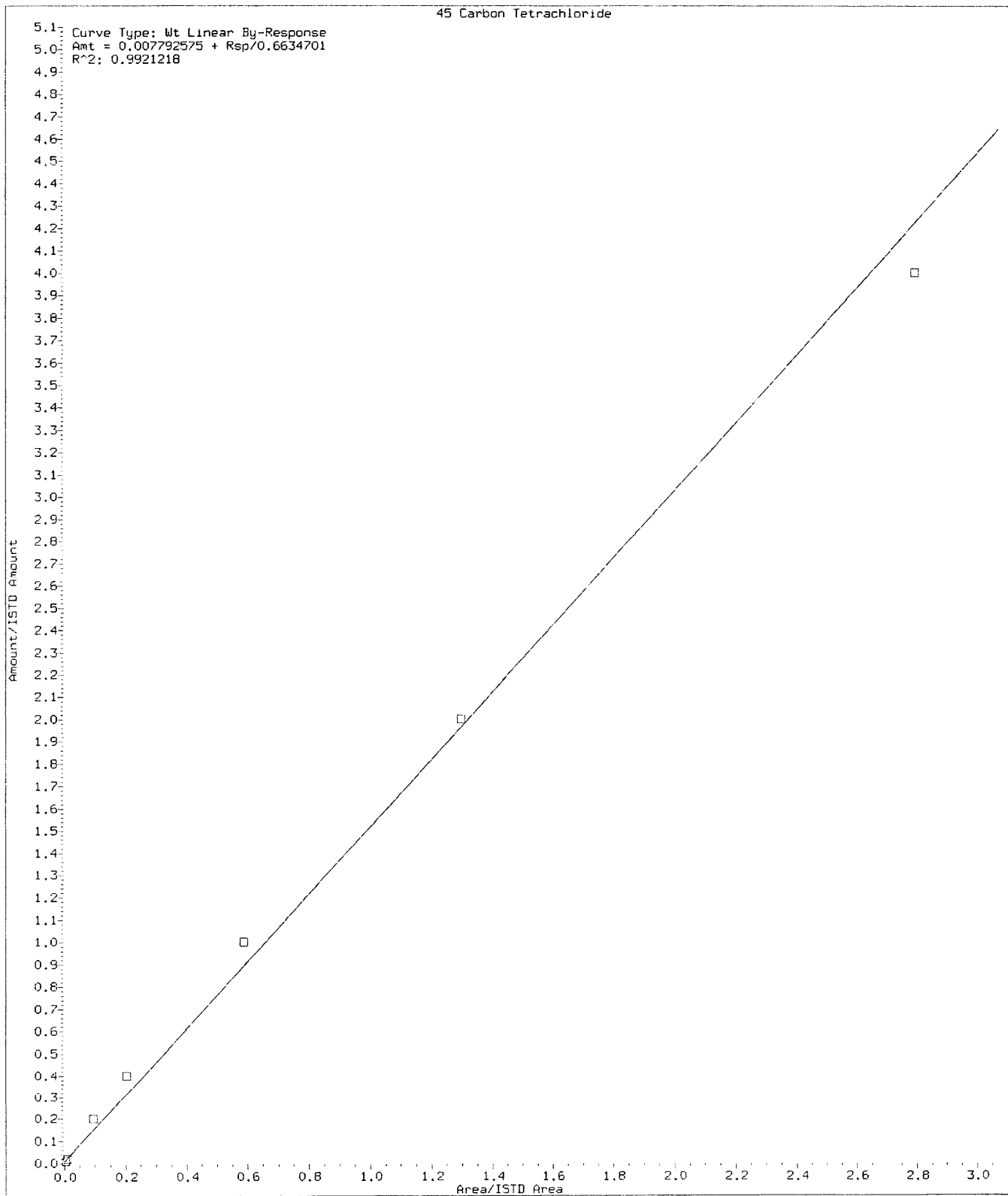
Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Trichloroethene	0.460	0.507	0.00	-10	20	Averaged
1,2-Dichloropropane	0.447	0.480	0.00	-7	20	Averaged
Dibromomethane	0.221	0.226	0.00	-2	20	Averaged
Methyl Methacrylate	0.234	0.255	0.00	-9	20	Averaged
1,4-Dioxane	0.004	0.004	0.00	0	20	Averaged
Bromodichloromethane	0.452	0.533	0.00	-18	20	Averaged
2-Chloroethyl Vinyl Ether	0.201	0.206	0.00	-2	20	Averaged
c-1,3-Dichloropropene	50.00	55.660	0.00	-11	20	LinWt 1/(Amt)^2
Toluene	1.938	2.057	0.00	-6	20	Averaged
4-Methyl-2-Pentanone	0.148	0.151	0.00	-2	20	Averaged
t-1,3-Dichloropropene	50.00	52.834	0.00	-6	20	LinWt 1/Amt
Ethyl Methacrylate	50.00	52.584	0.00	-5	20	LinWt 1/(Amt)^2
1,1,2-Trichloroethane	0.303	0.310	0.00	-2	20	Averaged
Tetrachloroethene	0.581	0.582	0.00	0	20	Averaged
1,3-Dichloropropane	0.636	0.654	0.00	-3	20	Averaged
2-Hexanone	0.285	0.299	0.00	-5	20	Averaged
Dibromochloromethane	50.00	51.283	0.00	-3	20	Linear
1,2-Dibromoethane	0.322	0.352	0.00	-9	20	Averaged
Chlorobenzene	1.309	1.371	0.30	-5	20	Averaged
1,1,1,2-Tetrachloroethane	50.00	53.543	0.00	-7	20	LinWt 1/Amt
Ethylbenzene	2.335	2.476	0.00	-6	20	Averaged
p/m-Xylene	1.791	1.950	0.00	-9	20	Averaged
o-Xylene	1.847	2.014	0.00	-9	20	Averaged
Styrene	1.520	1.613	0.00	-6	20	Averaged
Isopropylbenzene	2.362	2.515	0.00	-6	20	Averaged
1,2,3-Trichloropropane	0.475	0.545	0.00	-15	20	Averaged
Bromobenzene	0.529	0.557	0.00	-5	20	Averaged
n-Propylbenzene	2.813	2.987	0.00	-6	20	Averaged
t-1,4-Dichloro-2-Butene	0.112	0.125	0.00	-12	20	Averaged
2-Chlorotoluene	1.685	1.744	0.00	-4	20	Averaged
1,3,5-Trimethylbenzene	1.984	2.126	0.00	-7	20	Averaged
Bromoform	50.00	47.774	0.10	4	20	Linear
1,1,2,2-Tetrachloroethane	0.825	0.888	0.30	-8	20	Averaged
4-Chlorotoluene	3.819	4.030	0.00	-6	20	Averaged
Cyclohexanone	0.043	0.053	0.00	-23	20	Averaged
1,2,4-Trimethylbenzene	3.984	4.216	0.00	-6	20	Averaged
tert-Butylbenzene	0.894	0.958	0.00	-7	20	Averaged
p-Isopropyltoluene	4.302	4.665	0.00	-8	20	Averaged
sec-Butylbenzene	5.110	5.500	0.00	-8	20	Averaged
1,3-Dichlorobenzene	2.135	2.219	0.00	-4	20	Averaged
1,4-Dichlorobenzene	2.118	2.231	0.00	-5	20	Averaged
1,2-Dichlorobenzene	1.958	2.062	0.00	-5	20	Averaged
n-Butylbenzene	4.054	4.447	0.00	-10	20	Averaged
1,2-Dibromo-3-Chloropropane	50.00	52.311	0.00	-5	20	LinWt 1/(Amt)^2
1,2,4-Trichlorobenzene	1.557	1.686	0.00	-8	20	Averaged
Hexachloro-1,3-Butadiene	0.872	0.939	0.00	-8	20	Averaged
Naphthalene	3.172	3.302	0.00	-4	20	Averaged
1,2,3-Trichlorobenzene	1.401	1.457	0.00	-4	20	Averaged

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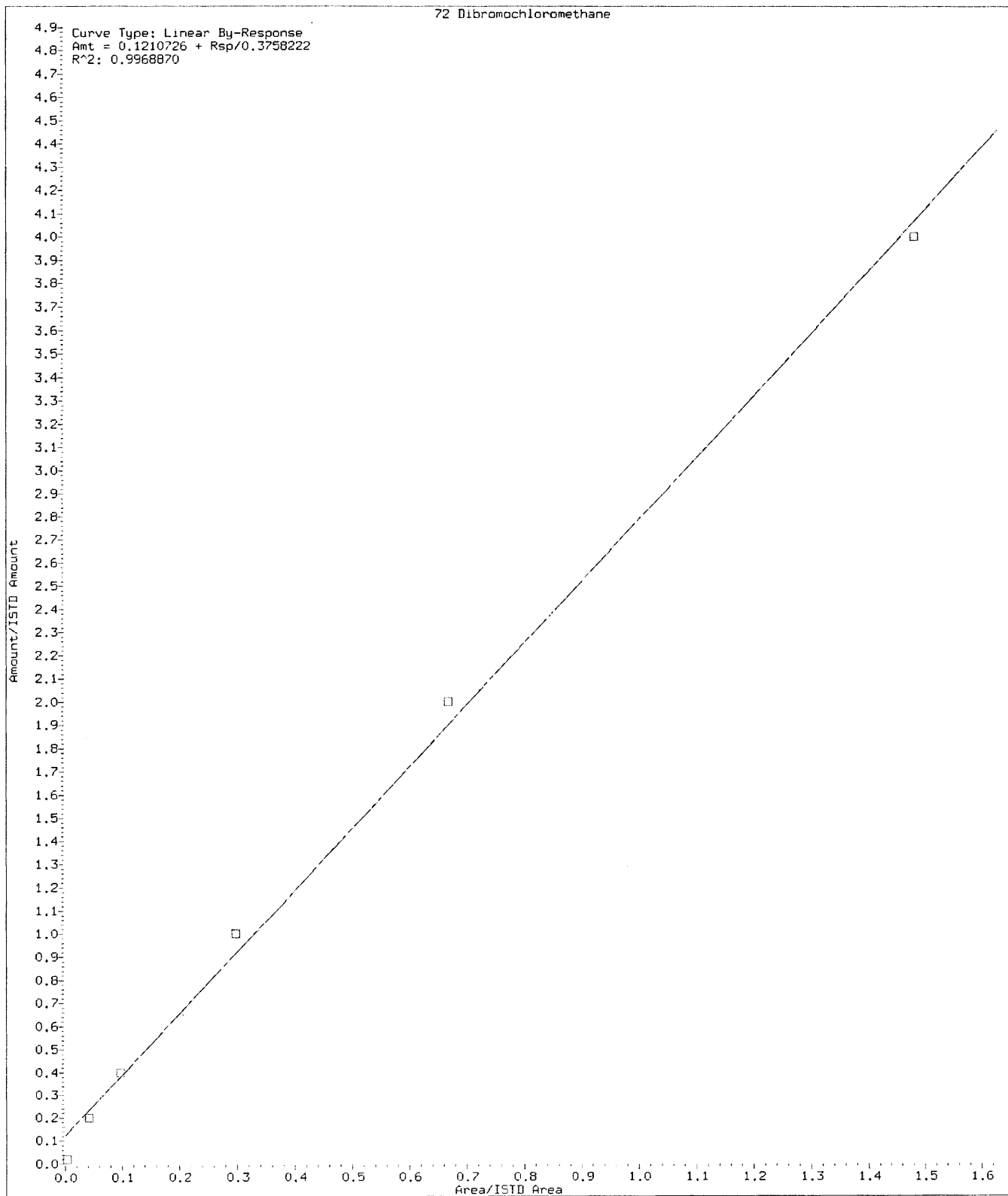
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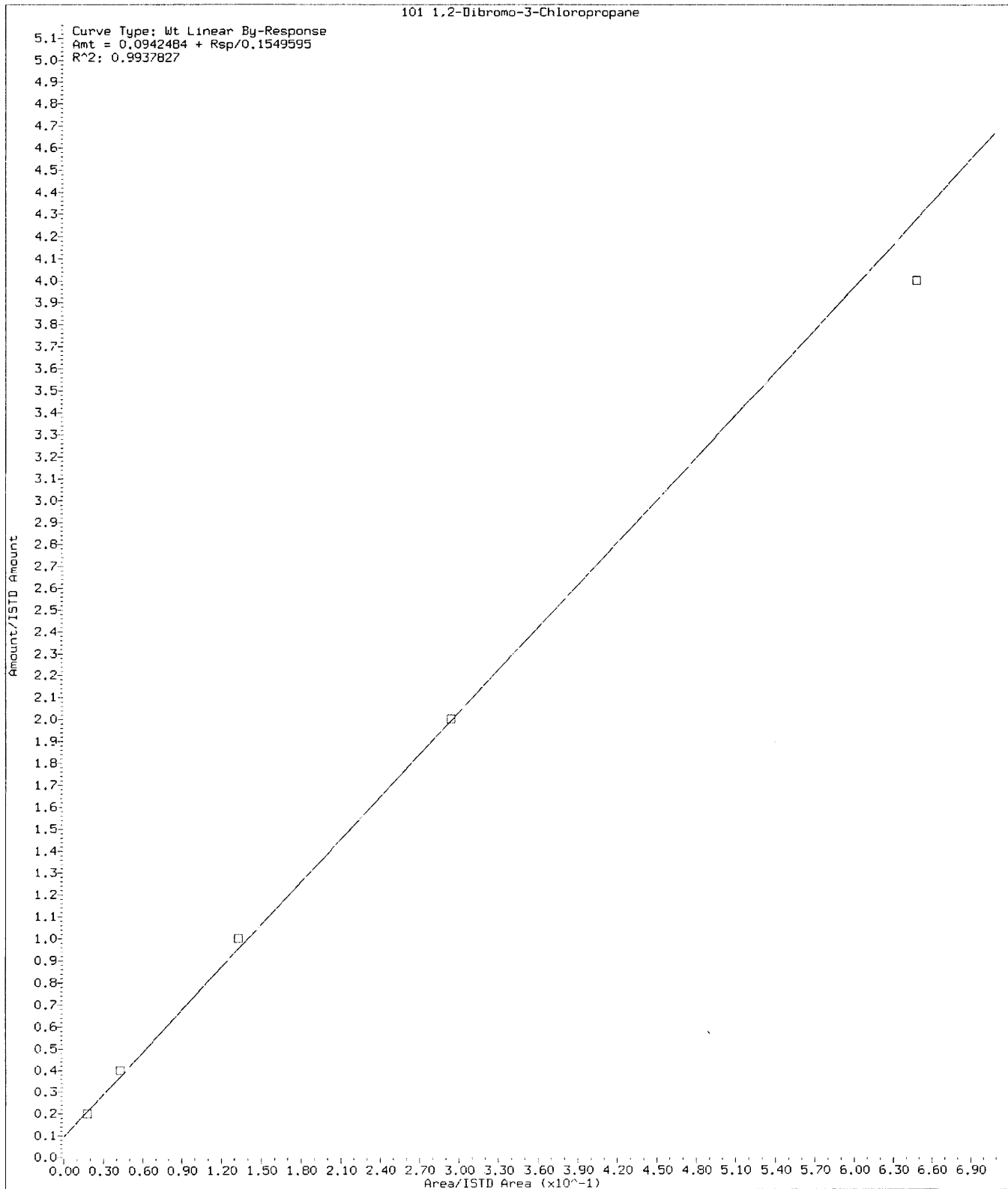


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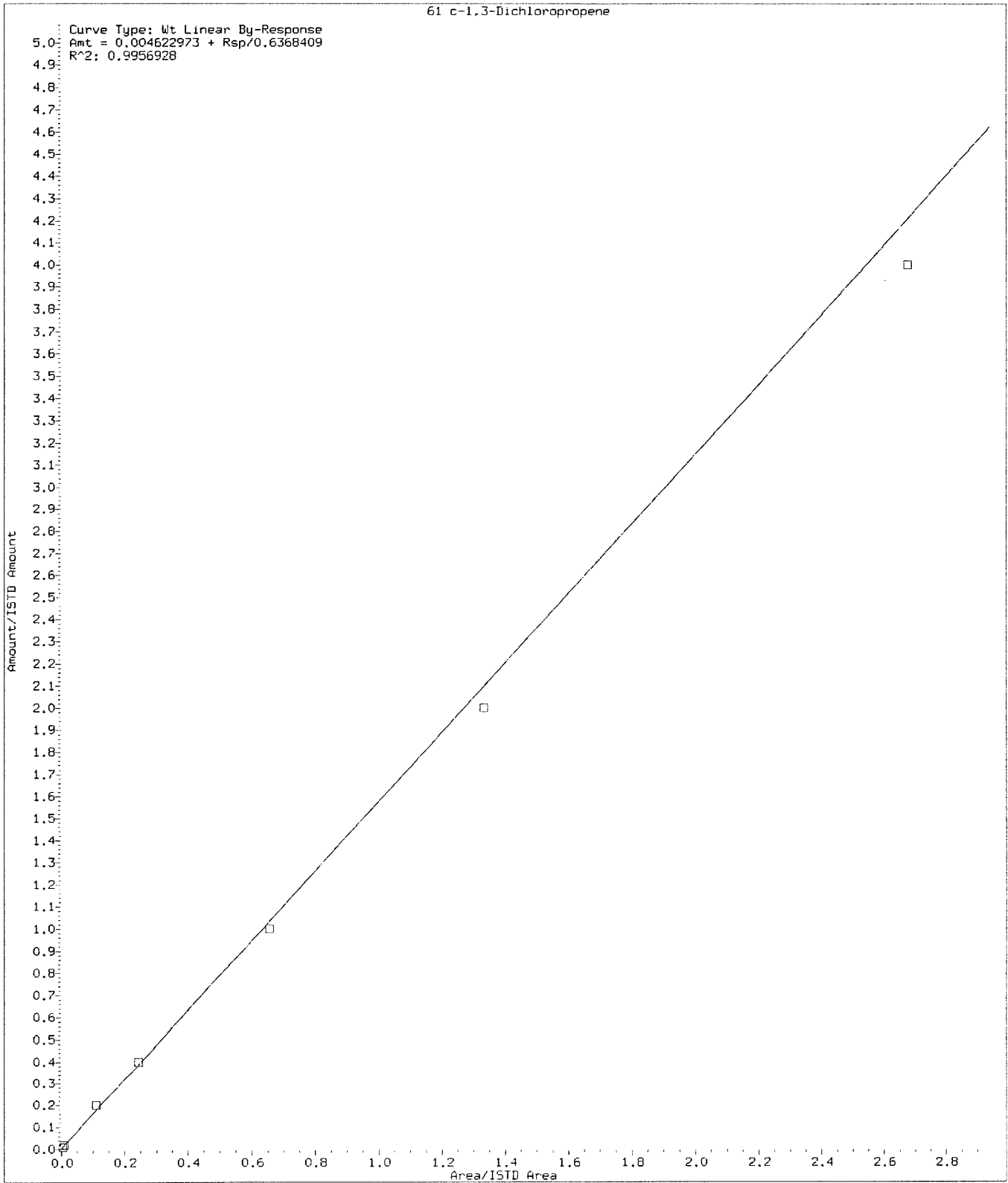
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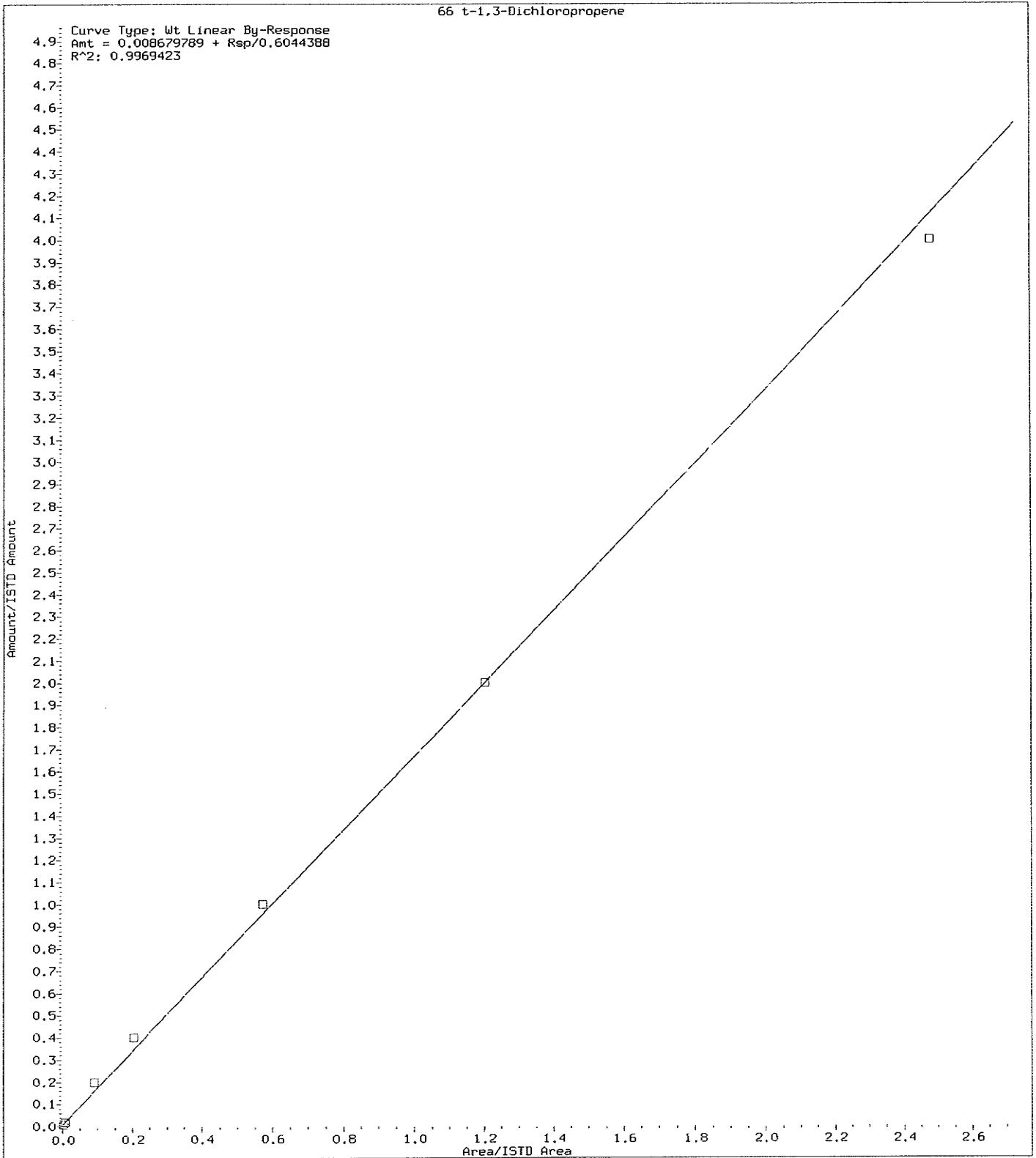


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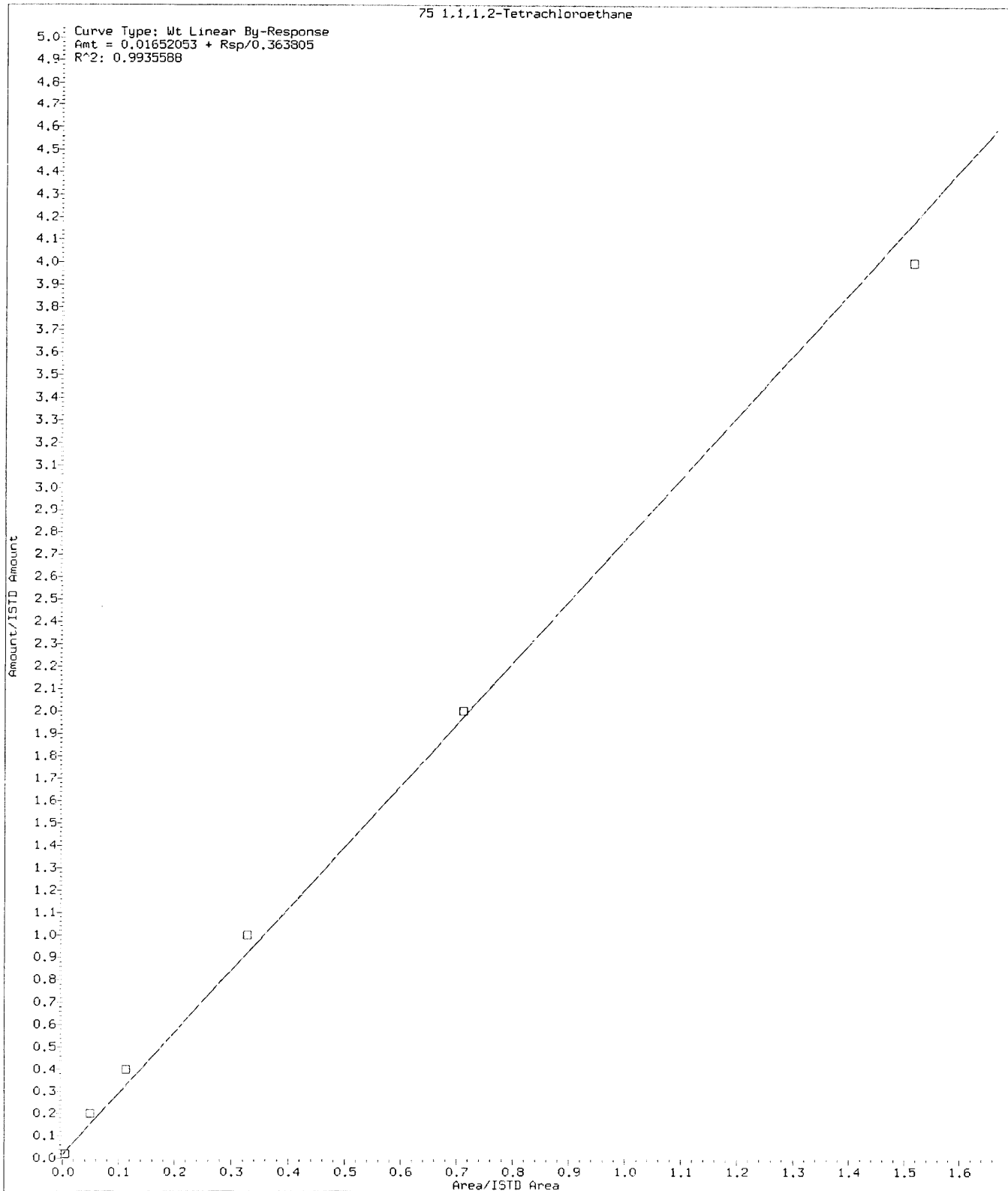
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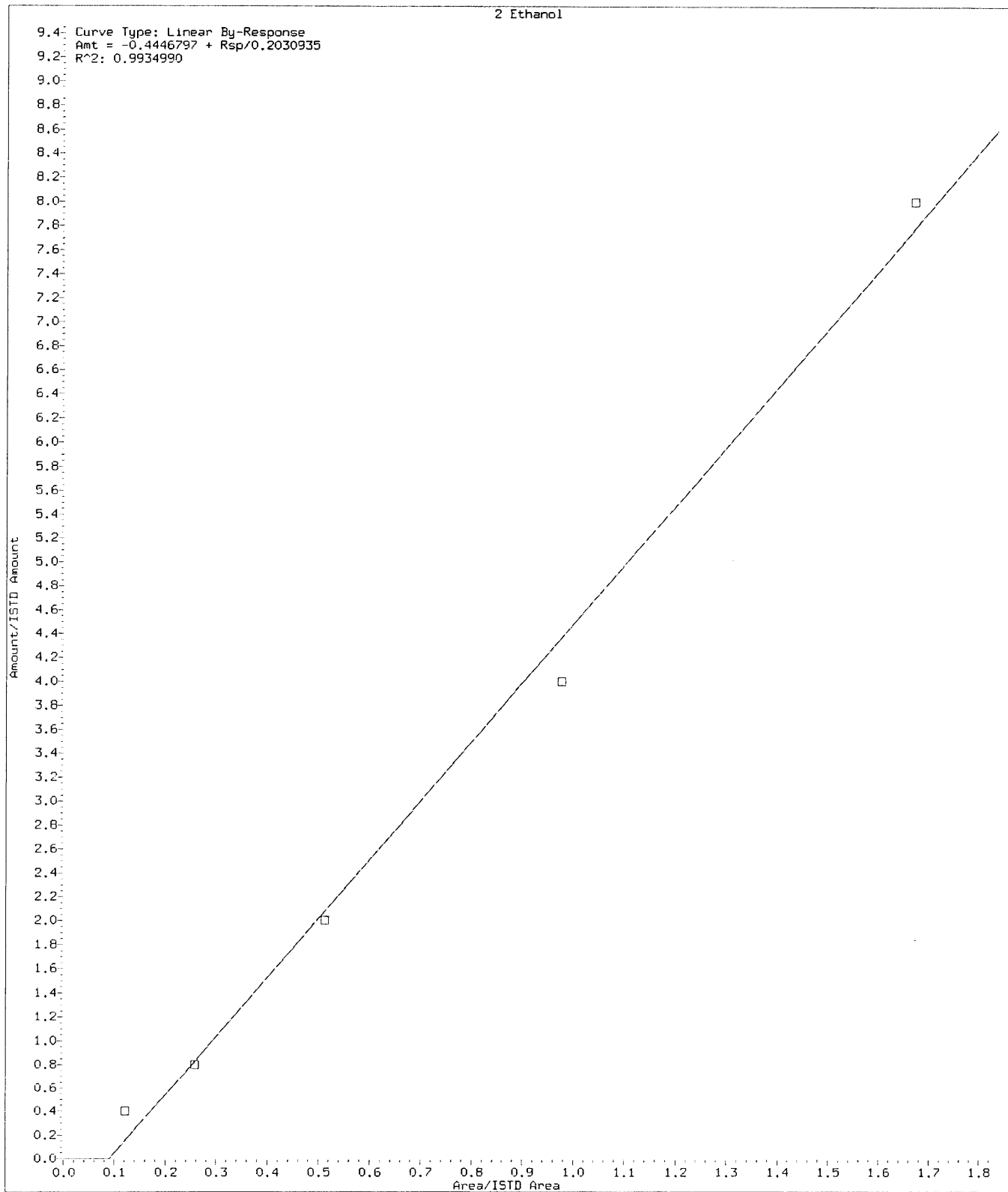
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Target 3.5 esignature user ID: c7uq



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Target 3.5 esignature user ID: c7uq

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar005.d
 Injection date and time: 10-MAR-2017 10:37

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:38
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:38 c7uq

Sample Name: BFB/IC 0.5PPB V031017C Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column Amount	
	Ref.	RT			(ug/l)	DEV(Min)
=====						
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.662	65	52359	250.000	0.00
4)*Pentafluorobenzene	(2)	7.062	168	386781	50.000	0.00
47)*1,4-Difluorobenzene	(3)	7.982	114	599090	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.553	117	553937	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.438	152	290467	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	6.992	113	159098	49.387	0.00
SpikedAmount 50.000			Recovery =	0.000		
46)\$1,2-Dichloroethane-d4	(2)	7.416	65	201140	49.948	0.00
SpikedAmount 50.000			Recovery =	0.000		
62)\$Toluene-d8	(3)	9.795	98	729503	49.848	0.00
SpikedAmount 50.000			Recovery =	0.000		
81)\$1,4-Bromofluorobenzene	(4)	13.001	95	283467	50.536	0.00
SpikedAmount 50.000			Recovery =	0.000		
Target Compounds						
2) Ethanol	(1)	3.421	45	1209	22.536	1
3) Tert-Butyl Alcohol (TBA)	(1)	4.792	59	78	0.254	1
5) Dichlorodifluoromethane	(2)	1.951	85	2745	0.420	79
6) Chloromethane	(2)	2.158	50	5733	0.696	93
7) Vinyl Chloride	(2)	2.288	62	3256	0.494	88
8) Bromomethane	(2)	2.680	94	2277	0.623	87
9) Chloroethane	(2)	2.795	64	1765	0.446	73
10) 1,3-Butadiene	(2)	2.327	54	2339	0.369	62
11) Trichlorofluoromethane	(2)	3.116	101	3903	0.513	96
12) Diethyl Ether	(2)	3.524	59	1480	0.312	94
13) Acetone	(2)	0.000		0	N.D.	
14) Iodomethane	(2)	4.047	142	1673	0.398	43
15) 1,1-Dichloroethene	(2)	3.824	61	3268	0.393	88
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.829	101	1658	0.345	89
17) Isopropanol	(2)	0.000		0	N.D.	
18) Carbon Disulfide	(2)	4.134	76	5723	0.352	72
19) Acetonitrile	(2)	4.373	41	4008	0.781	98
20) Acrylonitrile	(2)	0.000		0	N.D.	
21) Allyl Chloride	(2)	4.384	76	550	0.196	5
22) Acrolein	(2)	3.704	56	245	0.312	91
23) Methylene Chloride	(2)	4.569	84	2315	0.426	83

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar005.d
 Injection date and time: 10-MAR-2017 10:37

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Calibration date and time: 10-MAR-2017 13:38

Sublist used: all

Date, time and analyst ID of latest file update: 10-Mar-2017 13:38 c7uq

Sample Name: BFB/IC 0.5PPB V031017C
 Response via Initial Calibration

Misc Info: V020817D

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	4.961	96	1956	0.370	87
25) Isobutyl Alcohol	(2)	0.000		0	N.D.	
26) Methyl-t-Butyl Ether (MTBE)	(2)	4.967	73	4491	0.305	65
27) Hexane	(2)	5.353	57	3339	0.342	93
28) 1,1-Dichloroethane	(2)	5.565	63	3899	0.394	71
29) Vinyl Acetate	(2)	0.000		0	N.D.	
30) Diisopropyl Ether (DIPE)	(2)	5.685	45	6098	0.299	83
31) Chloroprene	(2)	5.685	53	3537	0.351	93
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.175	59	5372	0.301	94
33) c-1,2-Dichloroethene	(2)	6.371	96	2074	0.352	87
34) 2,2-Dichloropropane	(2)	6.355	77	2406	0.331	73
35) 2-Butanone	(2)	6.420	43	83	0.0349	1
36) Propionitrile	(2)	0.000		0	N.D.	
37) Methacrylonitrile	(2)	6.681	41	149	0.0503	1
38) Bromochloromethane	(2)	6.676	130	695	0.245	52
39) Tetrahydrofuran	(2)	6.758	42	333	0.224	21
40) Chloroform	(2)	6.790	83	3259	0.340	10
42) 1,1,1-Trichloroethane	(2)	7.008	97	2502	0.340	1
43) Cyclohexane	(2)	7.057	84	12737	1.516	65
44) 1,1-Dichloropropene	(2)	7.226	75	2883	0.386	85
45) Carbon Tetrachloride	(2)	7.220	117	1659	0.423	49
48) Benzene	(3)	7.492	78	8266	0.431	1
49) 1,2-Dichloroethane	(3)	7.514	62	2786	0.447	1
50) 2-Methyl-2-Butanol (TAA)	(3)	0.000		0	N.D.	
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.645	73	4499	0.309	93
52) Thiophene	(3)	7.759	84	3873	0.357	97
53) 2,2,4-Trimethyl Pentane	(3)	7.590	57	9364	0.387	98
54) Trichloroethene	(3)	8.309	95	2021	0.351	96
55) 1,2-Dichloropropane	(3)	8.581	63	1788	0.323	92
56) Dibromomethane	(3)	8.712	93	217	0.0794	1
57) Methyl Methacrylate	(3)	8.755	69	185	0.0631	55
58) 1,4-Dioxane	(3)	0.000		0	N.D.	
59) Bromodichloromethane	(3)	8.924	83	1506	0.258	90
60) 2-Chloroethyl Vinyl Ether	(3)	0.000		0	N.D.	
61) c-1,3-Dichloropropene	(3)	9.474	75	2105	0.349	60
63) Toluene	(3)	9.882	91	9796	0.415	96
64) 4-Methyl-2-Pentanone	(3)	0.000		0	N.D.	

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar005.d
 Injection date and time: 10-MAR-2017 10:37

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:38
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:38 c7uq

Sample Name: BFB/IC 0.5PPB V031017C Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column Amount	
	Ref.	RT			(ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.160	75	1493	0.320	61
67) Ethyl Methacrylate	(4)	10.290	69	831	0.146	9
68) 1,1,2-Trichloroethane	(4)	10.372	83	948	0.273	82
69) Tetrachloroethene	(4)	10.552	166	2322	0.355	94
70) 1,3-Dichloropropane	(4)	10.584	76	2399	0.326	75
71) 2-Hexanone	(4)	10.715	43	80	0.0248	35
72) Dibromochloromethane	(4)	10.857	129	525	0.159	1
73) 1,2-Dibromoethane	(4)	10.993	107	1114	0.289	98
74) Chlorobenzene	(4)	11.592	112	5966	0.401	36
75) 1,1,1,2-Tetrachloroethane	(4)	11.695	131	624	0.172	1
76) Ethylbenzene	(4)	11.733	91	9891	0.374	95
77) p/m-Xylene	(4)	11.875	91	16288	0.878	96
78) o-Xylene	(4)	12.359	91	7922	0.423	75
79) Styrene	(4)	12.381	104	5639	0.323	95
80) Isopropylbenzene	(4)	12.816	105	8829	0.327	95
82) 1,2,3-Trichloropropane	(4)	13.235	75	1720	0.298	70
83) Bromobenzene	(4)	13.197	156	2262	0.372	96
84) n-Propylbenzene	(4)	13.328	91	11536	0.361	95
85) t-1,4-Dichloro-2-Butene	(4)	0.000		0	N.D.	
86) 2-Chlorotoluene	(4)	13.431	91	7811	0.417	90
87) 1,3,5-Trimethylbenzene	(4)	13.540	105	8109	0.357	96
89) Bromoform	(5)	0.000		0	N.D.	
90) 1,1,2,2-Tetrachloroethane	(5)	13.176	83	1267	0.251	97
91) 4-Chlorotoluene	(5)	13.578	91	8536	0.381	91
92) Cyclohexanone	(5)	12.996	55	592	2.424	1
93) 1,2,4-Trimethylbenzene	(5)	14.003	105	8489	0.356	48
94) tert-Butylbenzene	(5)	13.949	134	1918	0.360	89
95) p-Isopropyltoluene	(5)	14.395	119	8211	0.320	79
96) sec-Butylbenzene	(5)	14.221	105	10565	0.345	95
97) 1,3-Dichlorobenzene	(5)	14.362	146	4319	0.342	99
98) 1,4-Dichlorobenzene	(5)	14.471	146	4969	0.397	39
99) 1,2-Dichlorobenzene	(5)	14.939	146	4154	0.354	90
100) n-Butylbenzene	(5)	14.912	91	7595	0.310	97
101) 1,2-Dibromo-3-Chloropropane	(5)	0.000		0	N.D.	
102) 1,2,4-Trichlorobenzene	(5)	16.953	180	3372	0.357	96
103) Hexachloro-1,3-Butadiene	(5)	17.155	225	1954	0.378	96
104) Naphthalene	(5)	17.264	128	6903	0.363	90

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar005.d
 Injection date and time: 10-MAR-2017 10:37

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Calibration date and time: 10-MAR-2017 13:38

Sublist used: all

Date, time and analyst ID of latest file update: 10-Mar-2017 13:38 c7uq

Sample Name: BFB/IC 0.5PPB V031017C
 Response via Initial Calibration

Misc Info: V020817D

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	17.552	180	3320	0.396	96

page 4 of 4

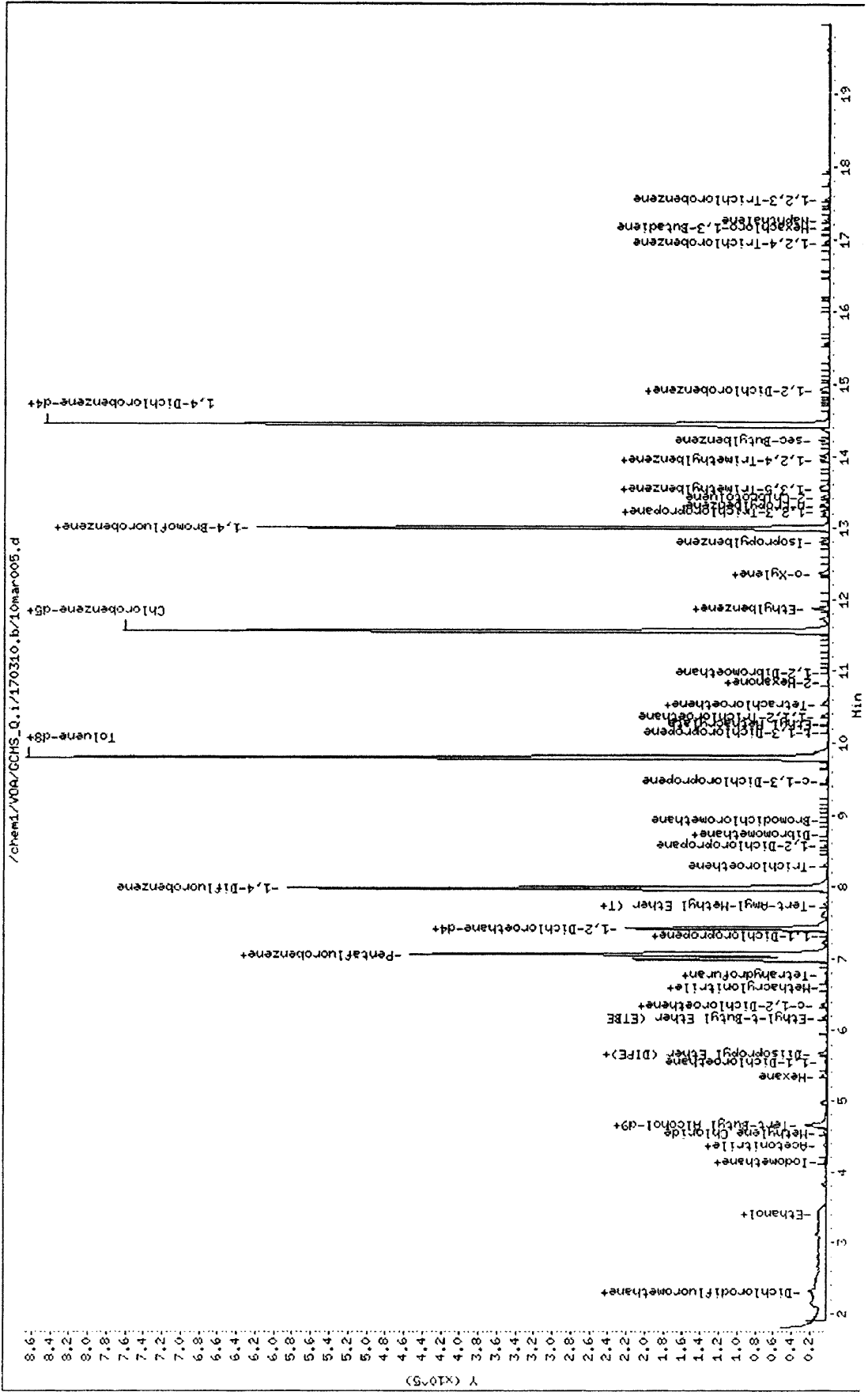
Data File: /chem1/V04/CCHS_0.i/170310.b/10mar005.d
 Date: 10-MAR-2017 10:37
 Client ID:
 Sample Info: BFER/IC 0.5PPB V031017C

Instrument: CCHS_0.i

Operator: 1055

Column diameter: 0.00

Column phase:



Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar006.d
 Injection date and time: 10-MAR-2017 11:05

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:38
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:56 c7uq

Sample Name: IC 1PPB 031017C Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV (Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.662	65	56650	250.000	0.00
4)*Pentafluorobenzene	(2)	7.063	168	384872	50.000	0.00
47)*1,4-Difluorobenzene	(3)	7.983	114	587866	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.554	117	553641	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.439	152	290619	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	6.992	113	159390	49.339	0.00
SpikedAmount 50.000			Recovery =	0.000		
46)\$1,2-Dichloroethane-d4	(2)	7.416	65	204201	50.708	0.00
SpikedAmount 50.000			Recovery =	0.000		
62)\$Toluene-d8	(3)	9.795	98	724228	50.079	0.00
SpikedAmount 50.000			Recovery =	0.000		
81)\$1,4-Bromofluorobenzene	(4)	12.996	95	282129	50.205	0.00
SpikedAmount 50.000			Recovery =	0.000		
Target Compounds						
2) Ethanol	(1)	3.388	45	1570	25.933	1
3) Tert-Butyl Alcohol (TBA)	(1)	4.776	59	1271M	3.936	1
5) Dichlorodifluoromethane	(2)	1.956	85	6002	0.941	86
6) Chloromethane	(2)	2.152	50	11024	1.233	83
7) Vinyl Chloride	(2)	2.289	62	6945	1.048	92
8) Bromomethane	(2)	2.653	94	5125	1.258	99
9) Chloroethane	(2)	2.789	64	3776	0.980	87
10) 1,3-Butadiene	(2)	2.327	54	6323	1.031	72
11) Trichlorofluoromethane	(2)	3.111	101	7269	0.977	96
12) Diethyl Ether	(2)	3.513	59	4153	0.932	94
13) Acetone	(2)	3.949	58	438	1.125	1
14) Iodomethane	(2)	4.058	142	4410	1.251	82
15) 1,1-Dichloroethene	(2)	3.824	61	8206	1.021	93
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.829	101	4889	1.047	93
17) Isopropanol	(2)	4.183	45	210	0.782	1
18) Carbon Disulfide	(2)	4.139	76	15047	0.970	87
19) Acetonitrile	(2)	4.379	41	10235	2.142	98
20) Acrylonitrile	(2)	4.967	53	965	0.559	34
21) Allyl Chloride	(2)	4.379	76	2161	0.864	72
22) Acrolein	(2)	3.704	56	1217	1.608	91
23) Methylene Chloride	(2)	4.564	84	6124	1.173	95

M = Compound was manually integrated.
 * = Compound is an internal standard.
 \$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar006.d
 Injection date and time: 10-MAR-2017 11:05

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:38
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:56 c7uq

Sample Name: IC 1PPB 031017C
 Response via Initial Calibration

Misc Info: V020817D

Compounds	I.S.		QIon	Area	On-Column	
	Ref.	RT			Amount	QValue
24) t-1,2-Dichloroethene	(2)	4.967	96	5206	1.027	99
25) Isobutyl Alcohol	(2)	0.000		0	N.D.	
26) Methyl-t-Butyl Ether (MTBE)	(2)	4.978	73	13790	0.980	99
27) Hexane	(2)	5.359	57	9049	0.976	96
28) 1,1-Dichloroethane	(2)	5.566	63	9838	1.030	88
29) Vinyl Acetate	(2)	0.000		0	N.D.	
30) Diisopropyl Ether (DIPE)	(2)	5.680	45	18841	0.976	96
31) Chloroprene	(2)	5.685	53	9729	1.016	96
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.175	59	16511	0.972	98
33) c-1,2-Dichloroethene	(2)	6.355	96	5490	0.982	96
34) 2,2-Dichloropropane	(2)	6.355	77	6644	0.958	93
35) 2-Butanone	(2)	6.404	43	350	0.157	1
36) Propionitrile	(2)	0.000		0	N.D.	
37) Methacrylonitrile	(2)	6.692	41	2464	0.877	77
38) Bromochloromethane	(2)	6.682	130	2733	1.006	98
39) Tetrahydrofuran	(2)	6.747	42	1508	1.053	27
40) Chloroform	(2)	6.790	83	9520	1.033	92
42) 1,1,1-Trichloroethane	(2)	7.008	97	6696	0.949	89
43) Cyclohexane	(2)	7.068	84	17695	2.137	77
44) 1,1-Dichloropropene	(2)	7.231	75	7780	1.074	93
45) Carbon Tetrachloride	(2)	7.226	117	3707	0.882	92
48) Benzene	(3)	7.487	78	22124	1.091	1
49) 1,2-Dichloroethane	(3)	7.525	62	6995	1.089	95
50) 2-Methyl-2-Butanol (TAA)	(3)	7.520	59	166	0.615	1
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.640	73	13942	1.000	92
52) Thiophene	(3)	7.754	84	10550	1.013	96
53) 2,2,4-Trimethyl Pentane	(3)	7.596	57	25142	1.066	99
54) Trichloroethene	(3)	8.304	95	5201	0.961	95
55) 1,2-Dichloropropane	(3)	8.581	63	5308	1.010	97
56) Dibromomethane	(3)	8.734	93	2553	0.981	94
57) Methyl Methacrylate	(3)	8.745	69	1873	0.681	85
58) 1,4-Dioxane	(3)	0.000		0	N.D.	
59) Bromodichloromethane	(3)	8.924	83	4290	0.806	93
60) 2-Chloroethyl Vinyl Ether	(3)	9.316	63	1422	0.600	60
61) c-1,3-Dichloropropene	(3)	9.480	75	5637	0.844	97
63) Toluene	(3)	9.877	91	24318	1.067	96
64) 4-Methyl-2-Pentanone	(3)	9.681	58	1285	0.740	1

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar006.d
 Injection date and time: 10-MAR-2017 11:05

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:38
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:56 c7uq

Sample Name: IC 1PPB 031017C
 Response via Initial Calibration

Misc Info: V020817D

Compounds	I.S.			Area	On-Column	QValue
	Ref.	RT	QIon		Amount	
=====	=====	=====	=====	=====	=====	=====
66) t-1,3-Dichloropropene	(4)	10.155	75	4101	0.764	93
67) Ethyl Methacrylate	(4)	10.258	69	3401	0.626	67
68) 1,1,2-Trichloroethane	(4)	10.367	83	3253	0.970	98
69) Tetrachloroethene	(4)	10.541	166	6945	1.079	97
70) 1,3-Dichloropropane	(4)	10.574	76	6834	0.970	89
71) 2-Hexanone	(4)	10.710	43	2371	0.752	54
72) Dibromochloromethane	(4)	10.851	129	2100	0.691	81
73) 1,2-Dibromoethane	(4)	10.998	107	2873	0.805	90
74) Chlorobenzene	(4)	11.586	112	15057	1.039	74
75) 1,1,1,2-Tetrachloroethane	(4)	11.695	131	2632	0.781	86
76) Ethylbenzene	(4)	11.728	91	27120	1.049	98
77) p/m-Xylene	(4)	11.869	91	43444	2.191	99
78) o-Xylene	(4)	12.359	91	22728	1.111	95
79) Styrene	(4)	12.381	104	16518	0.981	98
80) Isopropylbenzene	(4)	12.811	105	26988	1.032	98
82) 1,2,3-Trichloropropane	(4)	13.241	75	4912	0.933	97
83) Bromobenzene	(4)	13.192	156	5914	1.010	99
84) n-Propylbenzene	(4)	13.323	91	32259	1.036	98
85) t-1,4-Dichloro-2-Butene	(4)	13.246	53	799	0.646	1
86) 2-Chlorotoluene	(4)	13.426	91	20800	1.115	97
87) 1,3,5-Trimethylbenzene	(4)	13.540	105	21824	0.994	99
89) Bromoform	(5)	12.610	173	749M	0.486	1
90) 1,1,2,2-Tetrachloroethane	(5)	13.176	83	4241	0.884	85
91) 4-Chlorotoluene	(5)	13.568	91	23552	1.061	97
92) Cyclohexanone	(5)	12.963	55	79	0.319	1
93) 1,2,4-Trimethylbenzene	(5)	14.003	105	22753	0.983	98
94) tert-Butylbenzene	(5)	13.949	134	5117	0.985	91
95) p-Isopropyltoluene	(5)	14.406	119	25094	1.004	95
96) sec-Butylbenzene	(5)	14.221	105	29487	0.993	97
97) 1,3-Dichlorobenzene	(5)	14.362	146	13021	1.049	96
98) 1,4-Dichlorobenzene	(5)	14.466	146	12775	1.038	73
99) 1,2-Dichlorobenzene	(5)	14.934	146	11188	0.983	97
100) n-Butylbenzene	(5)	14.912	91	22544	0.957	97
101) 1,2-Dibromo-3-Chloropropane	(5)	0.000		0	N.D.	
102) 1,2,4-Trichlorobenzene	(5)	16.948	180	9032	0.998	97
103) Hexachloro-1,3-Butadiene	(5)	17.160	225	5178	1.022	96
104) Naphthalene	(5)	17.258	128	16788	0.911	98

M = Compound was manually integrated.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar006.d
Injection date and time: 10-MAR-2017 11:05

Instrument ID: GCMS_Q.i
Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
Calibration date and time: 10-MAR-2017 13:38

Sublist used: all

Date, time and analyst ID of latest file update: 10-Mar-2017 13:56 c7uq

Sample Name: IC 1PPB 031017C

Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	17.547	180	7948	0.976	95

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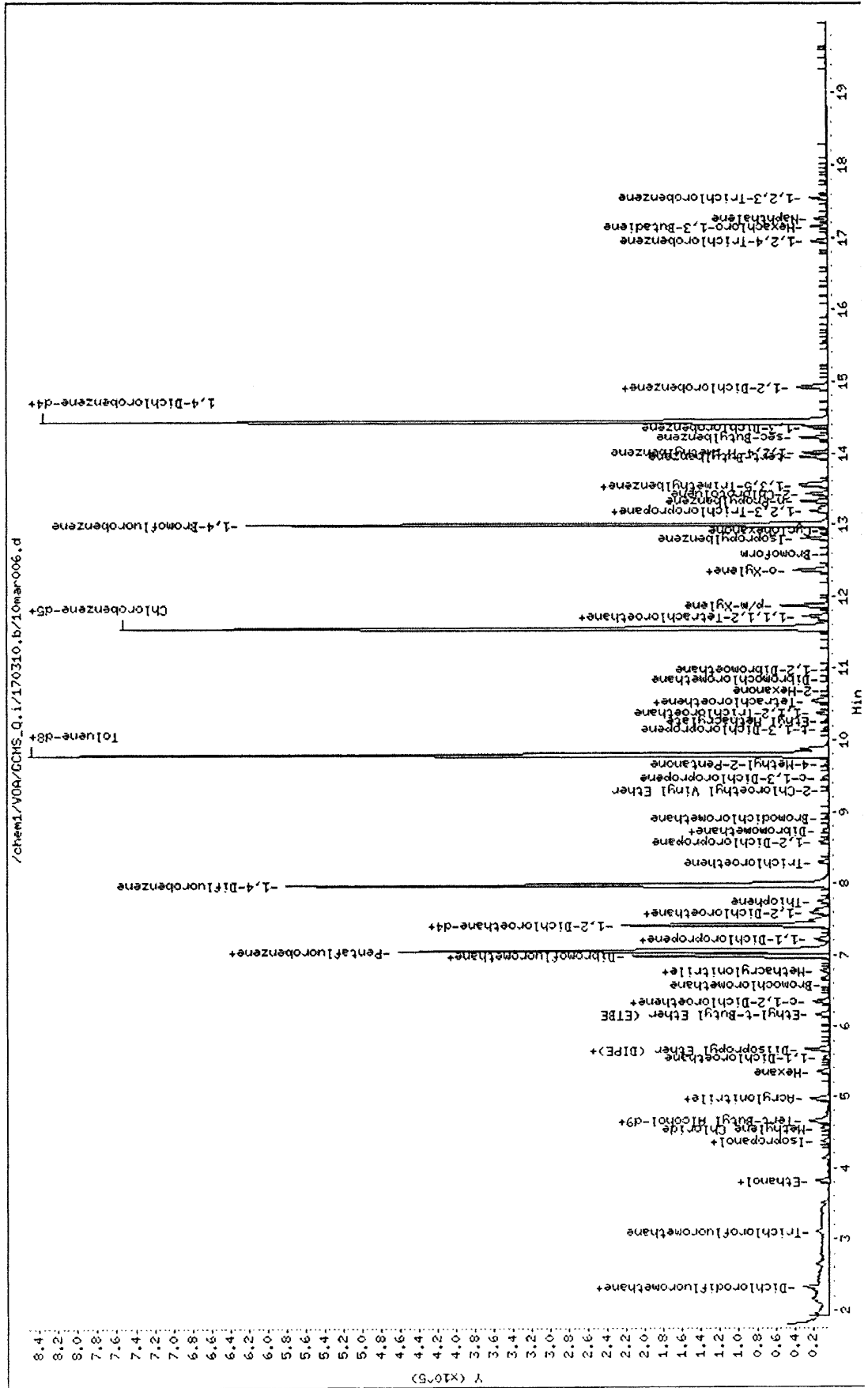
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Date: 10-MAR-2017 11:05
Client ID:
Sample Info: IC 1FPB 051017C

Instrument: CCHS_Q.i

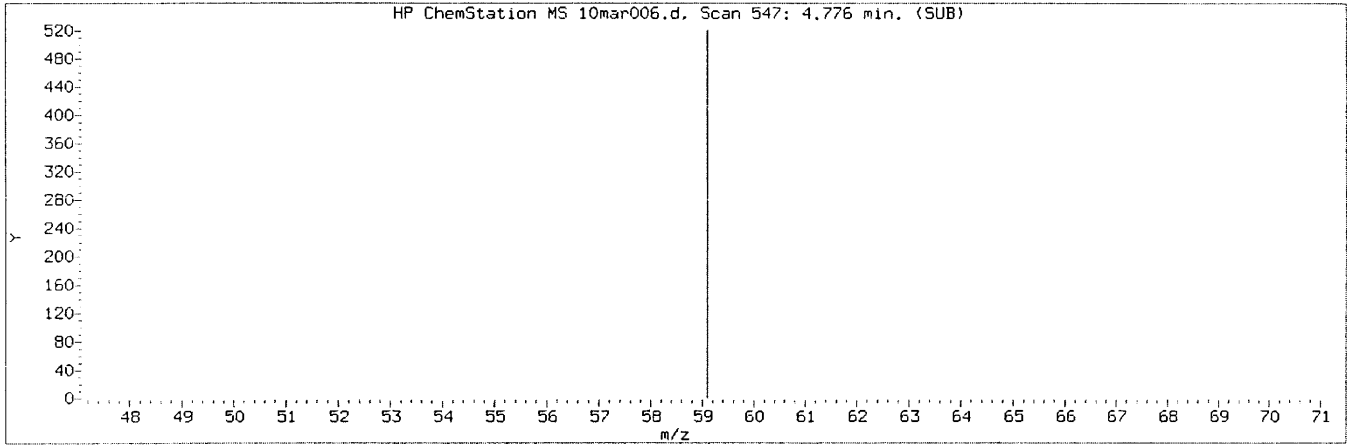
Operator: 1055

Column diameter: 0.00

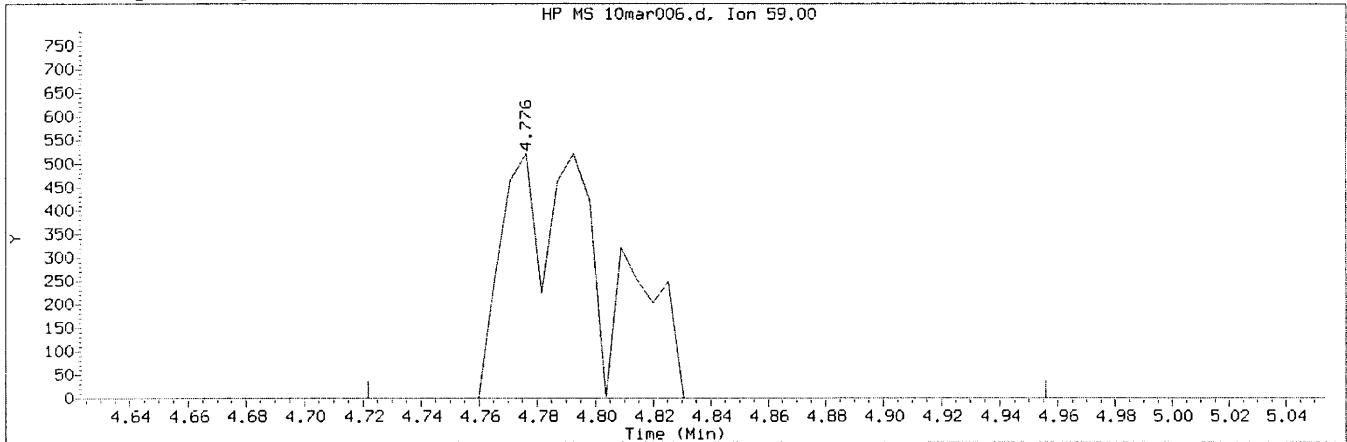
Column phase:



Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar006.d Instrument ID: GCMS_Q.i
 Injection date and time: 10-MAR-2017 11:05 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:38
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:56 c7uq

Sample Name: IC 1PPB 031017C

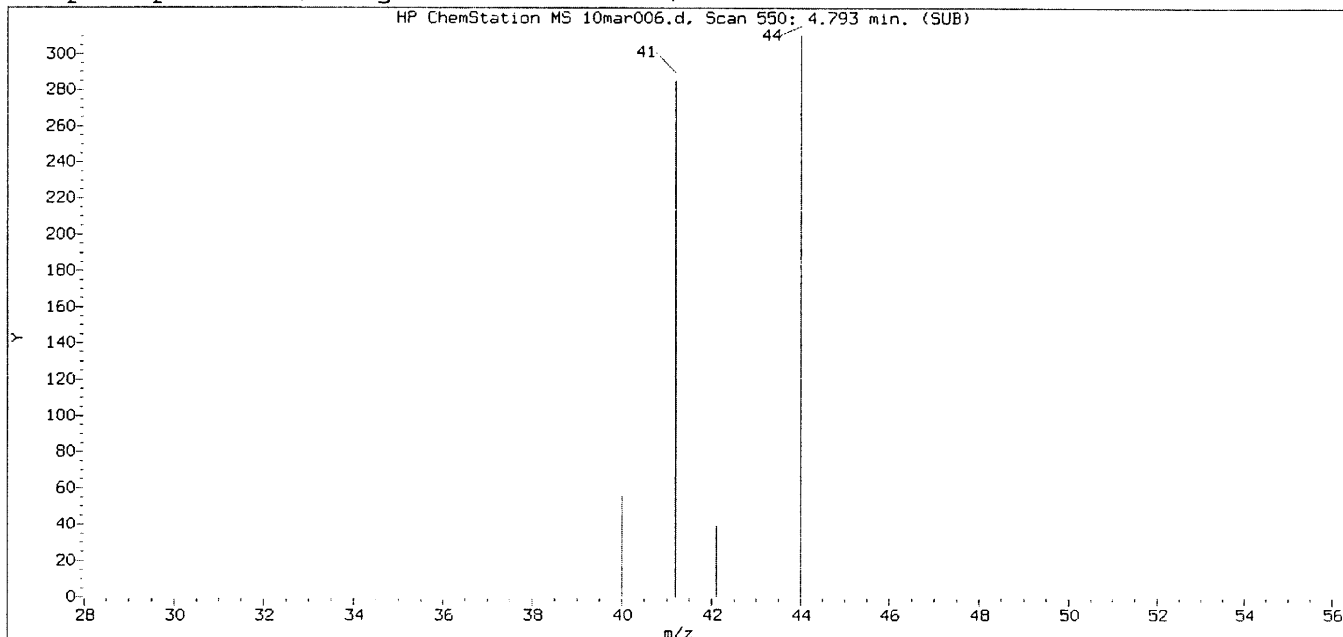
Compound Number : 3
 Compound Name : Tert-Butyl Alcohol (TBA)
 Scan Number : 547
 Retention Time (minutes): 4.776
 Quant Ion : 59.00
 Area (flag) : 1271M
 On-Column Amount (ug/l) : 3.9355
 Integration start scan : 536 Integration stop scan: 579
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

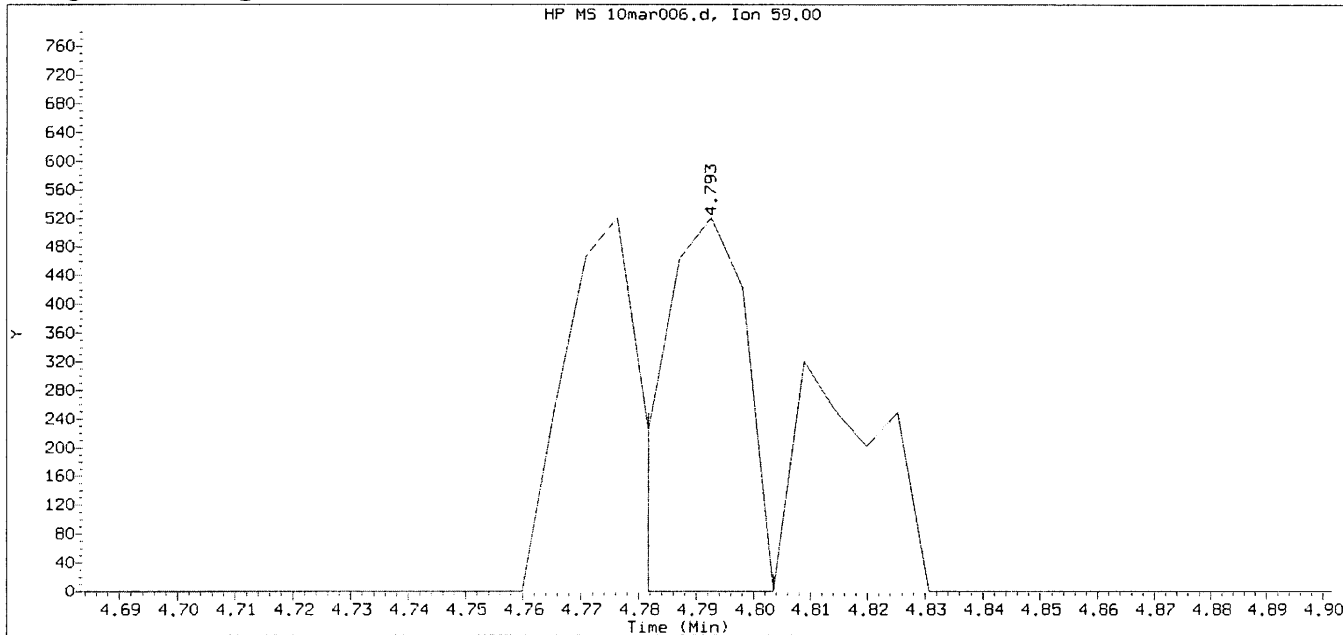
Analyst responsible for change: Digitally signed by Topacio De Leon
 on 03/10/2017 at 14:46.
 Target 3.5 esignature user ID: c7uq

GC/MS audit/management approval: _____ /31

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



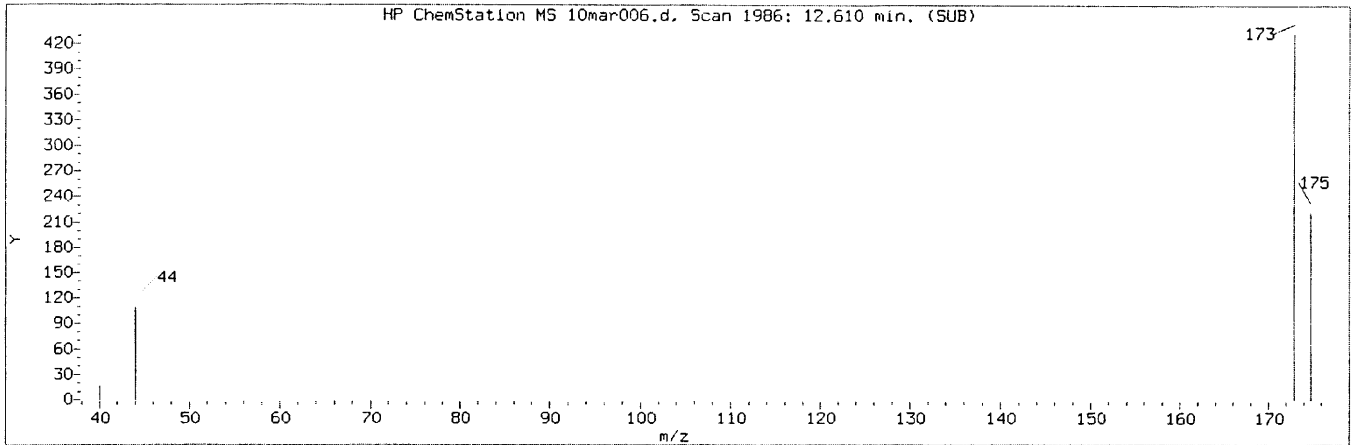
Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar006.d Instrument ID: GCMS_Q.i
 Injection date and time: 10-MAR-2017 11:05 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:38
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:39 c7uq

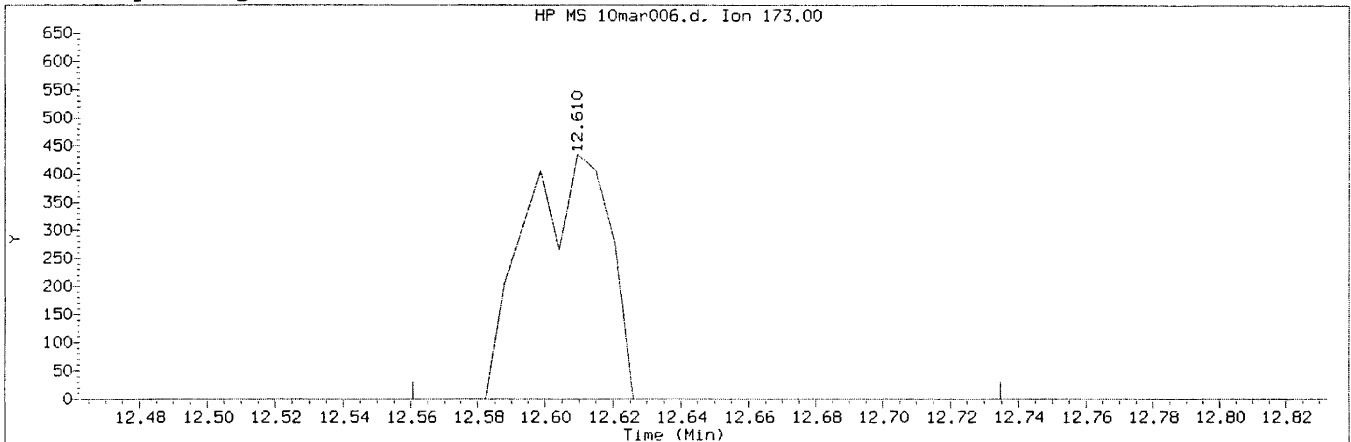
Sample Name: IC 1PPB 031017C

Compound Number	: 3	
Compound Name	: Tert-Butyl Alcohol (TBA)	
Scan Number	: 550	
Retention Time (minutes)	: 4.793	
Quant Ion	: 59.00	
Area	: 532	
On-column Amount (ug/l)	: 2.4207	
Integration start scan	: 547	Integration stop scan: 551
Y at integration start	: 0	Y at integration end: 0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar006.d
 Injection date and time: 10-MAR-2017 11:05

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Calibration date and time: 10-MAR-2017 13:38

Sublist used: all

Date, time and analyst ID of latest file update: 10-Mar-2017 13:56 c7uq

Sample Name: IC 1PPB 031017C

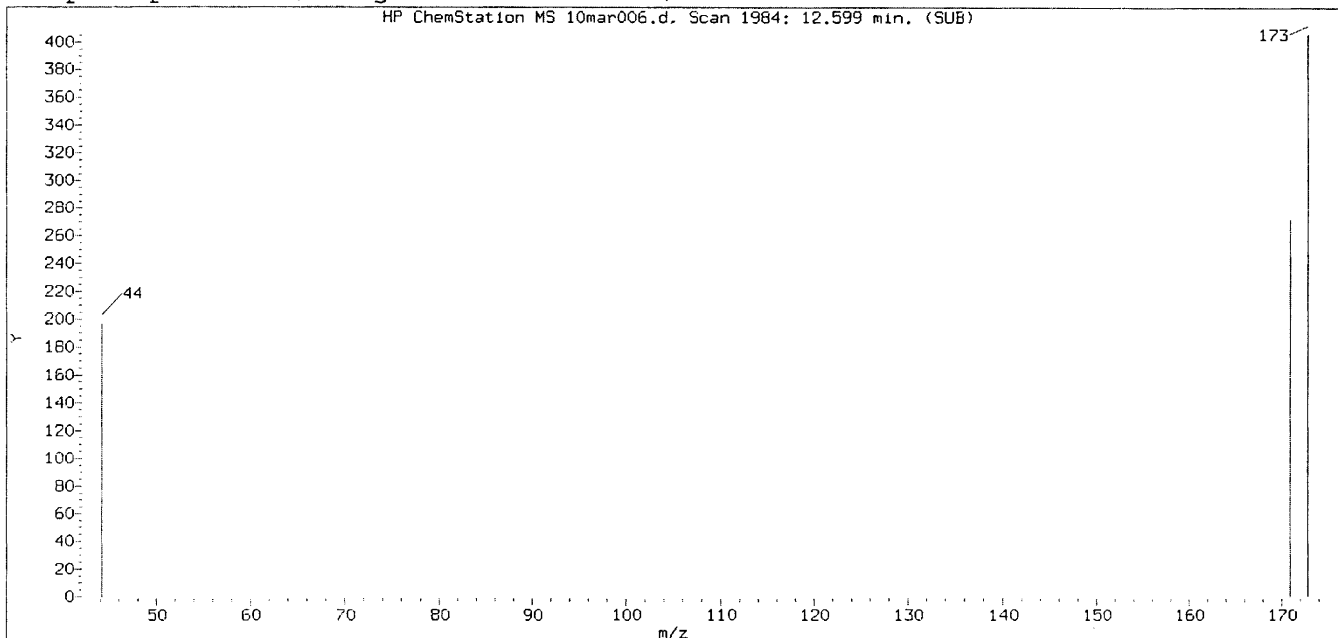
Compound Number	: 89		
Compound Name	: Bromoform		
Scan Number	: 1986		
Retention Time (minutes)	: 12.610		
Quant Ion	: 173.00		
Area (flag)	: 749M		
On-Column Amount (ug/l)	: 0.4863		
Integration start scan	: 1976	Integration stop scan:	2008
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

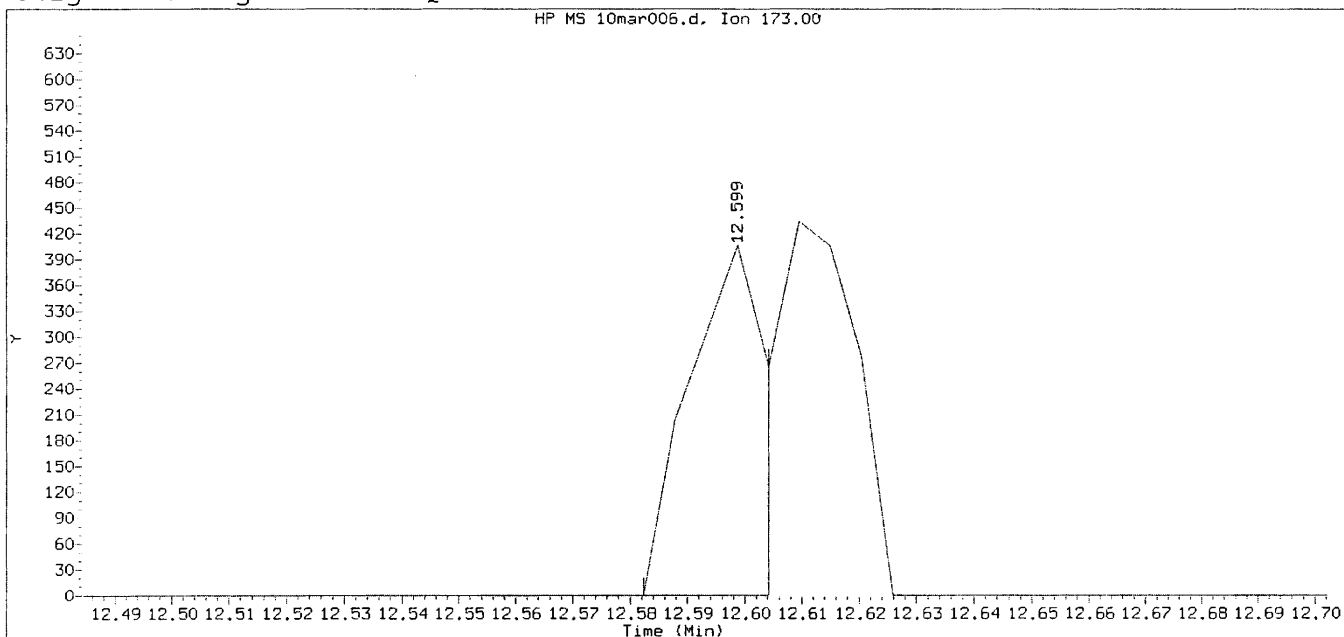
Analyst responsible for change: Digitally signed by Topacio De Leon
 on 03/10/2017 at 14:46.
 Target 3.5 esignature user ID: c7uq

GC/MS audit/management approval: _____ 131 _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar006.d
 Injection date and time: 10-MAR-2017 11:05

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m

Sublist used: all

Calibration date and time: 10-MAR-2017 13:38

Date, time and analyst ID of latest file update: 10-Mar-2017 13:39 c7uq

Sample Name: IC 1PPB 031017C

Compound Number	: 89	
Compound Name	: Bromoform	
Scan Number	: 1984	
Retention Time (minutes)	: 12.599	
Quant Ion	: 173.00	
Area	: 384	
On-column Amount (ug/l)	: 0.3818	
Integration start scan	: 1980	Integration stop scan: 1984
Y at integration start	: 0	Y at integration end: 0

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar007.d
 Injection date and time: 10-MAR-2017 11:33

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:39
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:55 c7uq

Sample Name: IC 10PPB V022017A/V030317A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column Amount	
	Ref.	RT			(ug/l)	DEV (Min)
=====						
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.662	65	55539	250.000	0.00
4)*Pentafluorobenzene	(2)	7.063	168	369413	50.000	0.00
47)*1,4-Difluorobenzene	(3)	7.983	114	579881	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.554	117	541172	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.433	152	276764	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	6.992	113	155989	50.307	0.00
SpikedAmount 50.000		Recovery =	0.000			
46)\$1,2-Dichloroethane-d4	(2)	7.422	65	199034	51.493	0.00
SpikedAmount 50.000		Recovery =	0.000			
62)\$Toluene-d8	(3)	9.795	98	712965	49.979	0.00
SpikedAmount 50.000		Recovery =	0.000			
81)\$1,4-Bromofluorobenzene	(4)	13.002	95	278112	50.631	0.00
SpikedAmount 50.000		Recovery =	0.000			
Target Compounds						
2) Ethanol	(1)	3.410	45	6764M	113.964	1
3) Tert-Butyl Alcohol (TBA)	(1)	4.787	59	14402	45.486	93
5) Dichlorodifluoromethane	(2)	1.957	85	62650	10.230	100
6) Chloromethane	(2)	2.153	50	86402	10.065	99
7) Vinyl Chloride	(2)	2.283	62	64322	10.112	99
8) Bromomethane	(2)	2.675	94	41802	10.687	98
9) Chloroethane	(2)	2.806	64	38166	10.320	96
10) 1,3-Butadiene	(2)	2.327	54	59209	10.058	98
11) Trichlorofluoromethane	(2)	3.122	101	71937	10.070	98
12) Diethyl Ether	(2)	3.519	59	42719	9.987	98
13) Acetone	(2)	3.938	58	3985	10.664	98
14) Iodomethane	(2)	4.058	142	38060	11.249	98
15) 1,1-Dichloroethene	(2)	3.829	61	77673	10.064	99
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.840	101	44302	9.880	99
17) Isopropanol	(2)	4.188	45	10406	40.390	71
18) Carbon Disulfide	(2)	4.145	76	144439	9.699	99
19) Acetonitrile	(2)	4.384	41	89263	19.466	97
20) Acrylonitrile	(2)	4.945	53	15146	9.149	94
21) Allyl Chloride	(2)	4.379	76	22948	9.553	93
22) Acrolein	(2)	3.699	56	13774	18.962	95
23) Methylene Chloride	(2)	4.569	84	50150	10.010	99

M = Compound was manually integrated.
 * = Compound is an internal standard.
 \$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar007.d
 Injection date and time: 10-MAR-2017 11:33

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:39
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:55 c7uq

Sample Name: IC 10PPB V022017A/V030317A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	4.961	96	47620	9.790	99
25) Isobutyl Alcohol	(2)	7.416	43	1603M	14.072	80
26) Methyl-t-Butyl Ether (MTBE)	(2)	4.978	73	132579	9.820	99
27) Hexane	(2)	5.359	57	87913	9.884	99
28) 1,1-Dichloroethane	(2)	5.566	63	89433	9.759	99
29) Vinyl Acetate	(2)	5.664	86	6127	8.561	93
30) Diisopropyl Ether (DIPE)	(2)	5.685	45	182330	9.838	98
31) Chloroprene	(2)	5.691	53	91327	9.933	100
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.175	59	155199	9.515	100
33) c-1,2-Dichloroethene	(2)	6.360	96	51863	9.665	97
34) 2,2-Dichloropropane	(2)	6.350	77	63706	9.573	99
35) 2-Butanone	(2)	6.404	43	21111	9.865	95
36) Propionitrile	(2)	6.491	54	4939	8.773	79
37) Methacrylonitrile	(2)	6.676	41	25245	9.360	99
38) Bromochloromethane	(2)	6.676	130	26967	10.344	99
39) Tetrahydrofuran	(2)	6.747	42	13378	9.728	98
40) Chloroform	(2)	6.785	83	85993	9.720	99
42) 1,1,1-Trichloroethane	(2)	7.014	97	63365	9.361	86
43) Cyclohexane	(2)	7.079	84	83907	10.557	96
44) 1,1-Dichloropropene	(2)	7.226	75	67741	9.738	99
45) Carbon Tetrachloride	(2)	7.221	117	34588	8.577	97
48) Benzene	(3)	7.493	78	200977	10.047	99
49) 1,2-Dichloroethane	(3)	7.520	62	63746	10.061	97
50) 2-Methyl-2-Butanol (TAA)	(3)	7.531	59	9390M	35.247	74
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.645	73	130782	9.512	98
52) Thiophene	(3)	7.754	84	100478	9.779	99
53) 2,2,4-Trimethyl Pentane	(3)	7.596	57	228580	9.821	99
54) Trichloroethene	(3)	8.298	95	52359	9.809	99
55) 1,2-Dichloropropane	(3)	8.581	63	49917	9.624	99
56) Dibromomethane	(3)	8.717	93	24845	9.676	99
57) Methyl Methacrylate	(3)	8.739	69	21623	7.970	96
58) 1,4-Dioxane	(3)	8.761	88	4697	93.011	91
59) Bromodichloromethane	(3)	8.919	83	46244	8.813	100
60) 2-Chloroethyl Vinyl Ether	(3)	9.300	63	19937	8.532	98
61) c-1,3-Dichloropropene	(3)	9.469	75	63490	9.640	99
63) Toluene	(3)	9.877	91	219765	9.779	99
64) 4-Methyl-2-Pentanone	(3)	9.665	58	15075	8.801	97

M = Compound was manually integrated.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar007.d
 Injection date and time: 10-MAR-2017 11:33

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:39
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:55 c7uq

Sample Name: IC 10PPB V022017A/V030317A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column Amount	
	Ref.	RT			(ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.149	75	48947	9.323	98
67) Ethyl Methacrylate	(4)	10.258	69	41219M	7.765	99
68) 1,1,2-Trichloroethane	(4)	10.367	83	31408	9.584	98
69) Tetrachloroethene	(4)	10.541	166	62646	9.959	100
70) 1,3-Dichloropropane	(4)	10.568	76	67780	9.847	100
71) 2-Hexanone	(4)	10.683	43	27772	9.014	98
72) Dibromochloromethane	(4)	10.846	129	22989	7.736	99
73) 1,2-Dibromoethane	(4)	10.993	107	33112	9.491	99
74) Chlorobenzene	(4)	11.592	112	137654	9.716	97
75) 1,1,1,2-Tetrachloroethane	(4)	11.684	131	26549	8.057	98
76) Ethylbenzene	(4)	11.722	91	250885	9.926	100
77) p/m-Xylene	(4)	11.869	91	397559	20.510	99
78) o-Xylene	(4)	12.354	91	204402	10.225	98
79) Styrene	(4)	12.370	104	160940	9.781	99
80) Isopropylbenzene	(4)	12.811	105	252084	9.859	99
82) 1,2,3-Trichloropropane	(4)	13.236	75	41243	8.015	83
83) Bromobenzene	(4)	13.192	156	56023	9.791	99
84) n-Propylbenzene	(4)	13.317	91	301621	9.906	99
85) t-1,4-Dichloro-2-Butene	(4)	13.247	53	10486	8.673	83
86) 2-Chlorotoluene	(4)	13.426	91	178145	9.770	99
87) 1,3,5-Trimethylbenzene	(4)	13.535	105	213699	9.953	100
89) Bromoform	(5)	12.599	173	10123	7.183	96
90) 1,1,2,2-Tetrachloroethane	(5)	13.176	83	41845	9.158	99
91) 4-Chlorotoluene	(5)	13.562	91	210185	9.943	99
92) Cyclohexanone	(5)	12.925	55	11008	46.748	97
93) 1,2,4-Trimethylbenzene	(5)	14.003	105	218587	9.912	51
94) tert-Butylbenzene	(5)	13.943	134	49609	10.027	91
95) p-Isopropyltoluene	(5)	14.395	119	236235	9.921	99
96) sec-Butylbenzene	(5)	14.216	105	280717	9.924	100
97) 1,3-Dichlorobenzene	(5)	14.357	146	115916	9.807	100
98) 1,4-Dichlorobenzene	(5)	14.466	146	114425	9.759	98
99) 1,2-Dichlorobenzene	(5)	14.934	146	106531	9.828	99
100) n-Butylbenzene	(5)	14.907	91	221319	9.862	100
101) 1,2-Dibromo-3-Chloropropane	(5)	15.908	75	4917	6.968	100
102) 1,2,4-Trichlorobenzene	(5)	16.948	180	82703	9.599	99
103) Hexachloro-1,3-Butadiene	(5)	17.160	225	47345	9.809	99
104) Naphthalene	(5)	17.258	128	166644	9.492	100

M = Compound was manually integrated.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar007.d
 Injection date and time: 10-MAR-2017 11:33

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m

Sublist used: all

Calibration date and time: 10-MAR-2017 13:39

Date, time and analyst ID of latest file update: 10-Mar-2017 13:55 c7uq

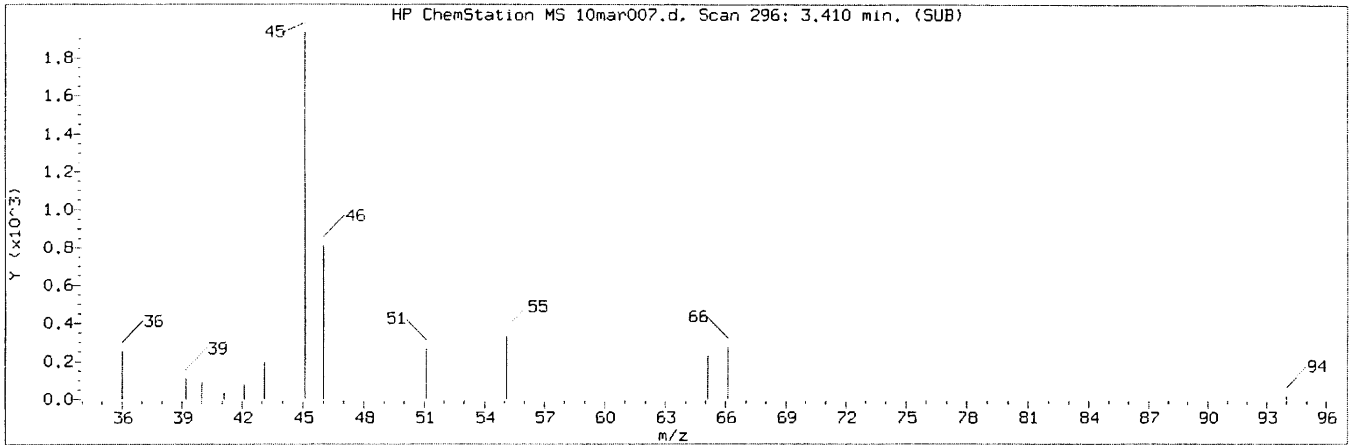
Sample Name: IC 10PPB V022017A/V030317A Misc Info: V020817D

Response via Initial Calibration

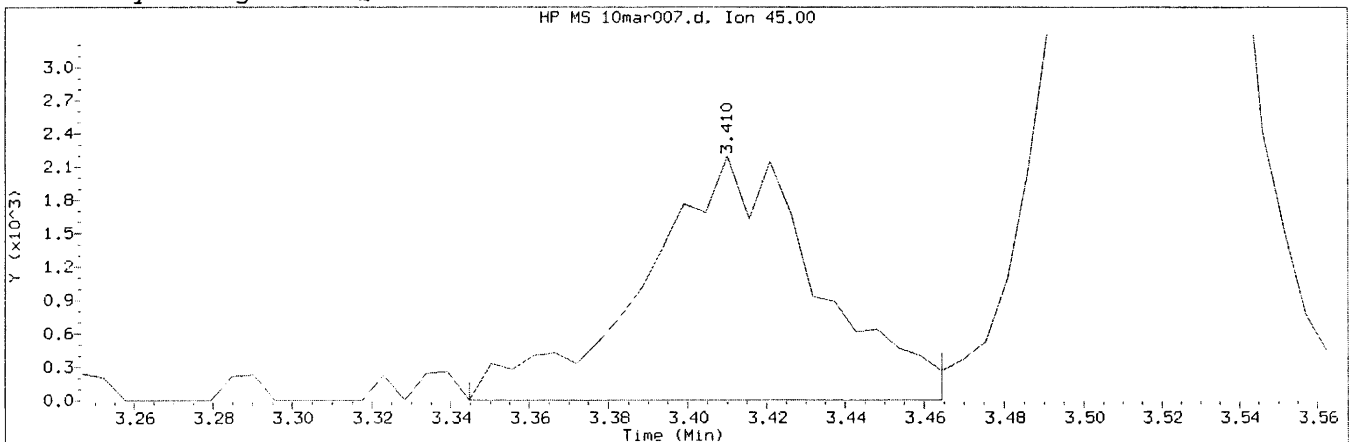
Compounds	I.S.		QIon	Area	On-Column	
	Ref.	RT			Amount (ug/l)	QValue
=====	=====	=====	=====	=====	=====	=====
105) 1,2,3-Trichlorobenzene	(5)	17.547	180	74882	9.659	99

page 4 of 4

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar007.d
 Injection date and time: 10-MAR-2017 11:33

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Calibration date and time: 10-MAR-2017 13:39
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:55 c7uq

Sublist used: all

Sample Name: IC 10PPB V022017A/V030317A

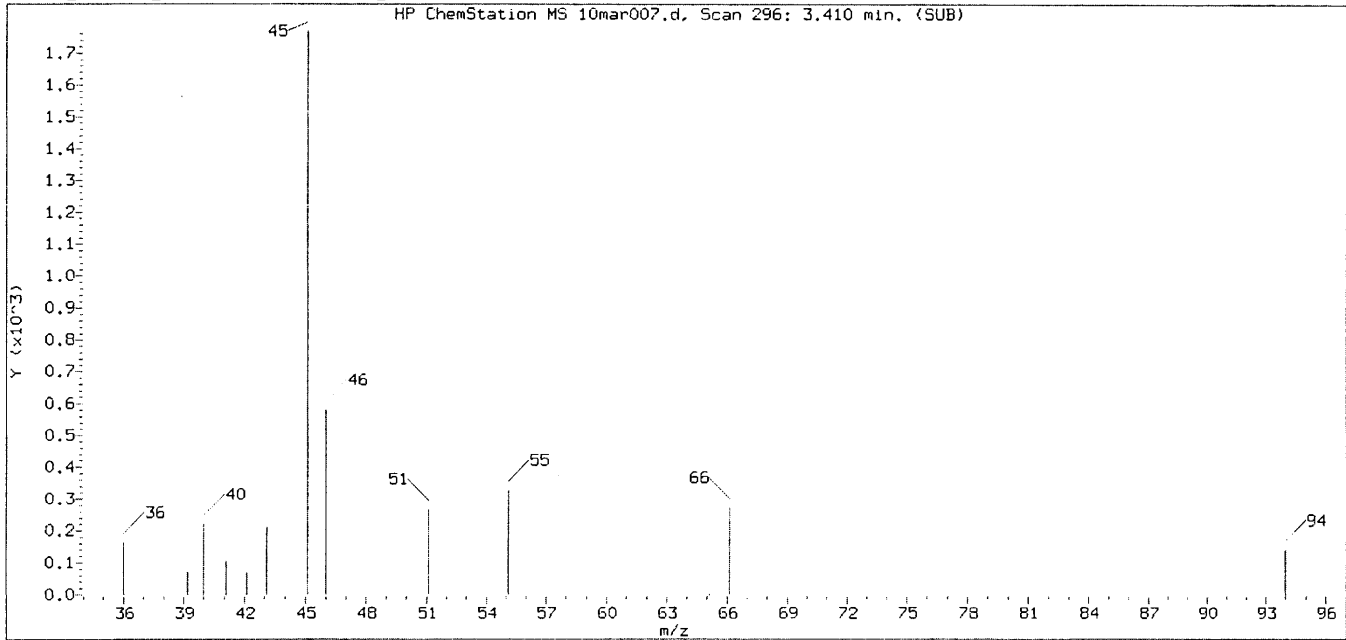
Compound Number	: 2		
Compound Name	: Ethanol		
Scan Number	: 296		
Retention Time (minutes)	: 3.410		
Quant Ion	: 45.00		
Area (flag)	: 6764M		
On-Column Amount (ug/l)	: 113.9636		
Integration start scan	: 283	Integration stop scan:	305
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

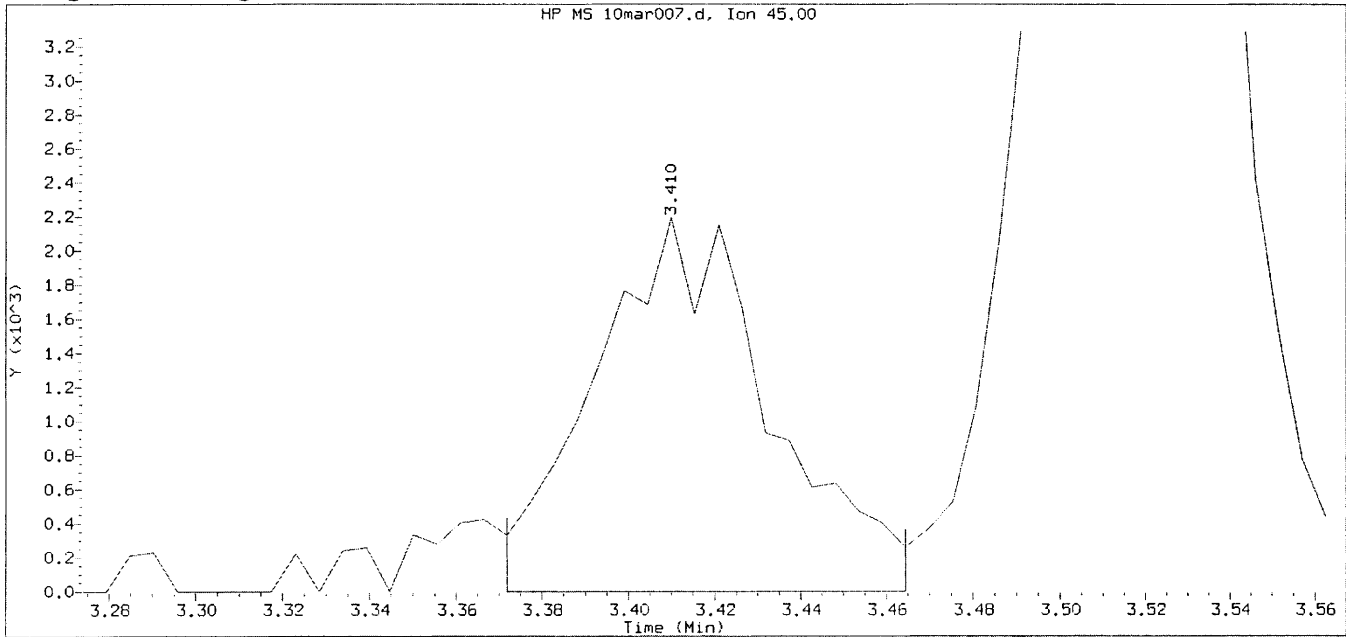
Analyst responsible for change: Digitally signed by Topacio De Leon
 on 03/10/2017 at 14:46.
 Target 3.5 esignature user ID: c7uq

GC/MS audit/management approval: _____ 131 _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar007.d
 Injection date and time: 10-MAR-2017 11:33

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Calibration date and time: 10-MAR-2017 13:39

Sublist used: all

Date, time and analyst ID of latest file update: 10-Mar-2017 13:39 c7uq

Sample Name: IC 10PPB V022017A/V030317A

Compound Number	: 2	
Compound Name	: Ethanol	
Scan Number	: 296	
Retention Time (minutes)	: 3.410	
Quant Ion	: 45.00	
Area	: 6294	
On-column Amount (ug/l)	: 105.0028	
Integration start scan	: 288	Integration stop scan: 305
Y at integration start	: 0	Y at integration end: 0

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar008.d Instrument ID: GCMS_Q.i
 Injection date and time: 10-MAR-2017 12:00 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:39
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:52 c7uq

Sample Name: IC 20PPB V022017A/V030317A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV(Min)
=====						
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.662	65	55629	250.000	0.00
4)*Pentafluorobenzene	(2)	7.063	168	379645	50.000	0.00
47)*1,4-Difluorobenzene	(3)	7.983	114	585726	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.554	117	549911	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.439	152	280414	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	6.992	113	155452	48.782	0.00
SpikedAmount 50.000	Recovery =	0.000				
46)\$1,2-Dichloroethane-d4	(2)	7.422	65	196393	49.440	0.00
SpikedAmount 50.000	Recovery =	0.000				
62)\$Toluene-d8	(3)	9.795	98	719490	49.933	0.00
SpikedAmount 50.000	Recovery =	0.000				
81)\$1,4-Bromofluorobenzene	(4)	12.996	95	277839	49.777	0.00
SpikedAmount 50.000	Recovery =	0.000				
Target Compounds						
2) Ethanol	(1)	3.410	45	14335	241.133	73
3) Tert-Butyl Alcohol (TBA)	(1)	4.787	59	33451	105.479	97
5) Dichlorodifluoromethane	(2)	1.957	85	130847	20.790	99
6) Chloromethane	(2)	2.158	50	171305	19.417	100
7) Vinyl Chloride	(2)	2.283	62	133957	20.492	99
8) Bromomethane	(2)	2.675	94	77977	19.398	99
9) Chloroethane	(2)	2.806	64	78519	20.659	98
10) 1,3-Butadiene	(2)	2.327	54	122452	20.240	99
11) Trichlorofluoromethane	(2)	3.121	101	150567	20.509	99
12) Diethyl Ether	(2)	3.513	59	87798	19.972	98
13) Acetone	(2)	3.938	58	7556	19.676	96
14) Iodomethane	(2)	4.052	142	113830	32.738	99
15) 1,1-Dichloroethene	(2)	3.824	61	160660	20.255	99
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.835	101	94044	20.408	99
17) Isopropanol	(2)	4.188	45	25532M	96.430	87
18) Carbon Disulfide	(2)	4.145	76	310395	20.280	100
19) Acetonitrile	(2)	4.379	41	192818	40.915	99
20) Acrylonitrile	(2)	4.945	53	34017	19.994	96
21) Allyl Chloride	(2)	4.379	76	51669	20.931	98
22) Acrolein	(2)	3.704	56	28945	38.774	95
23) Methylene Chloride	(2)	4.569	84	102911	19.988	98

M = Compound was manually integrated.
 * = Compound is an internal standard.
 \$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar008.d
 Injection date and time: 10-MAR-2017 12:00

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:39
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:52 c7uq

Sample Name: IC 20PPB V022017A/V030317A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	4.961	96	100895	20.183	99
25) Isobutyl Alcohol	(2)	7.416	43	3614	31.509	90
26) Methyl-t-Butyl Ether (MTBE)	(2)	4.978	73	278184	20.050	99
27) Hexane	(2)	5.359	57	183555	20.080	99
28) 1,1-Dichloroethane	(2)	5.566	63	189474	20.118	99
29) Vinyl Acetate	(2)	5.658	86	13040	17.728	94
30) Diisopropyl Ether (DIPE)	(2)	5.685	45	385342	20.232	98
31) Chloroprene	(2)	5.691	53	193215	20.448	99
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.175	59	333514	19.896	99
33) c-1,2-Dichloroethene	(2)	6.355	96	111888	20.289	99
34) 2,2-Dichloropropane	(2)	6.350	77	134346	19.644	99
35) 2-Butanone	(2)	6.399	43	42093	19.140	98
36) Propionitrile	(2)	6.480	54	11390	19.686	92
37) Methacrylonitrile	(2)	6.671	41	54049	19.499	97
38) Bromochloromethane	(2)	6.676	130	54956	20.512	99
39) Tetrahydrofuran	(2)	6.741	42	27653	19.566	99
40) Chloroform	(2)	6.785	83	181925	20.008	99
42) 1,1,1-Trichloroethane	(2)	7.014	97	135363	19.459	95
43) Cyclohexane	(2)	7.084	84	167937	20.559	99
44) 1,1-Dichloropropene	(2)	7.231	75	143420	20.062	98
45) Carbon Tetrachloride	(2)	7.226	117	77335	18.659	99
48) Benzene	(3)	7.493	78	420681	20.821	99
49) 1,2-Dichloroethane	(3)	7.514	62	133652	20.883	99
50) 2-Methyl-2-Butanol (TAA)	(3)	7.525	59	21496	80.261	88
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.645	73	278082	20.023	98
52) Thiophene	(3)	7.754	84	211170	20.347	100
53) 2,2,4-Trimethyl Pentane	(3)	7.596	57	473685	20.150	98
54) Trichloroethene	(3)	8.298	95	112212	20.811	99
55) 1,2-Dichloropropane	(3)	8.576	63	106121	20.257	99
56) Dibromomethane	(3)	8.723	93	52517	20.249	99
57) Methyl Methacrylate	(3)	8.734	69	50864	18.560	98
58) 1,4-Dioxane	(3)	8.761	88	10379	203.475	97
59) Bromodichloromethane	(3)	8.919	83	104084	19.637	99
60) 2-Chloroethyl Vinyl Ether	(3)	9.294	63	43883	18.593	97
61) c-1,3-Dichloropropene	(3)	9.469	75	142330	21.394	99
63) Toluene	(3)	9.877	91	457129	20.139	100
64) 4-Methyl-2-Pentanone	(3)	9.665	58	34029	19.669	98

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar008.d
 Injection date and time: 10-MAR-2017 12:00

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:39
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:52 c7uq

Sample Name: IC 20PPB V022017A/V030317A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.144	75	111914	20.977	99
67) Ethyl Methacrylate	(4)	10.258	69	96492	17.913	99
68) 1,1,2-Trichloroethane	(4)	10.367	83	68749	20.645	99
69) Tetrachloroethene	(4)	10.541	166	131953	20.643	99
70) 1,3-Dichloropropane	(4)	10.574	76	142654	20.396	99
71) 2-Hexanone	(4)	10.677	43	61758	19.725	98
72) Dibromochloromethane	(4)	10.846	129	53492	17.715	100
73) 1,2-Dibromoethane	(4)	10.987	107	72562	20.468	99
74) Chlorobenzene	(4)	11.592	112	292492	20.317	99
75) 1,1,1,2-Tetrachloroethane	(4)	11.690	131	62000	18.516	99
76) Ethylbenzene	(4)	11.722	91	522909	20.359	100
77) p/m-Xylene	(4)	11.864	91	831707	42.226	99
78) o-Xylene	(4)	12.354	91	429181	21.128	99
79) Styrene	(4)	12.370	104	341567	20.428	99
80) Isopropylbenzene	(4)	12.811	105	535959	20.627	100
82) 1,2,3-Trichloropropane	(4)	13.230	75	109607	20.963	98
83) Bromobenzene	(4)	13.187	156	117063	20.134	99
84) n-Propylbenzene	(4)	13.317	91	631143	20.400	100
85) t-1,4-Dichloro-2-Butene	(4)	13.247	53	23625	19.229	88
86) 2-Chlorotoluene	(4)	13.426	91	370231	19.982	100
87) 1,3,5-Trimethylbenzene	(4)	13.535	105	450245	20.638	99
89) Bromoform	(5)	12.599	173	24475	17.142	100
90) 1,1,2,2-Tetrachloroethane	(5)	13.170	83	92611	20.005	99
91) 4-Chlorotoluene	(5)	13.562	91	439605	20.526	100
92) Cyclohexanone	(5)	12.925	55	23542	98.675	97
93) 1,2,4-Trimethylbenzene	(5)	14.003	105	462203	20.685	99
94) tert-Butylbenzene	(5)	13.943	134	104387	20.824	98
95) p-Isopropyltoluene	(5)	14.395	119	494431	20.495	99
96) sec-Butylbenzene	(5)	14.215	105	590097	20.590	100
97) 1,3-Dichlorobenzene	(5)	14.357	146	240377	20.072	100
98) 1,4-Dichlorobenzene	(5)	14.466	146	240723	20.263	99
99) 1,2-Dichlorobenzene	(5)	14.934	146	224827	20.471	99
100) n-Butylbenzene	(5)	14.907	91	477753	21.013	99
101) 1,2-Dibromo-3-Chloropropane	(5)	15.903	75	11967	16.738	98
102) 1,2,4-Trichlorobenzene	(5)	16.948	180	177550	20.339	99
103) Hexachloro-1,3-Butadiene	(5)	17.160	225	101516	20.758	99
104) Naphthalene	(5)	17.258	128	356396	20.035	99

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar008.d
Injection date and time: 10-MAR-2017 12:00

Instrument ID: GCMS_Q.i
Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
Calibration date and time: 10-MAR-2017 13:39

Sublist used: all

Date, time and analyst ID of latest file update: 10-Mar-2017 13:52 c7uq

Sample Name: IC 20PPB V022017A/V030317A Misc Info: V020817D
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	17.547	180	162153	20.644	100

page 4 of 4

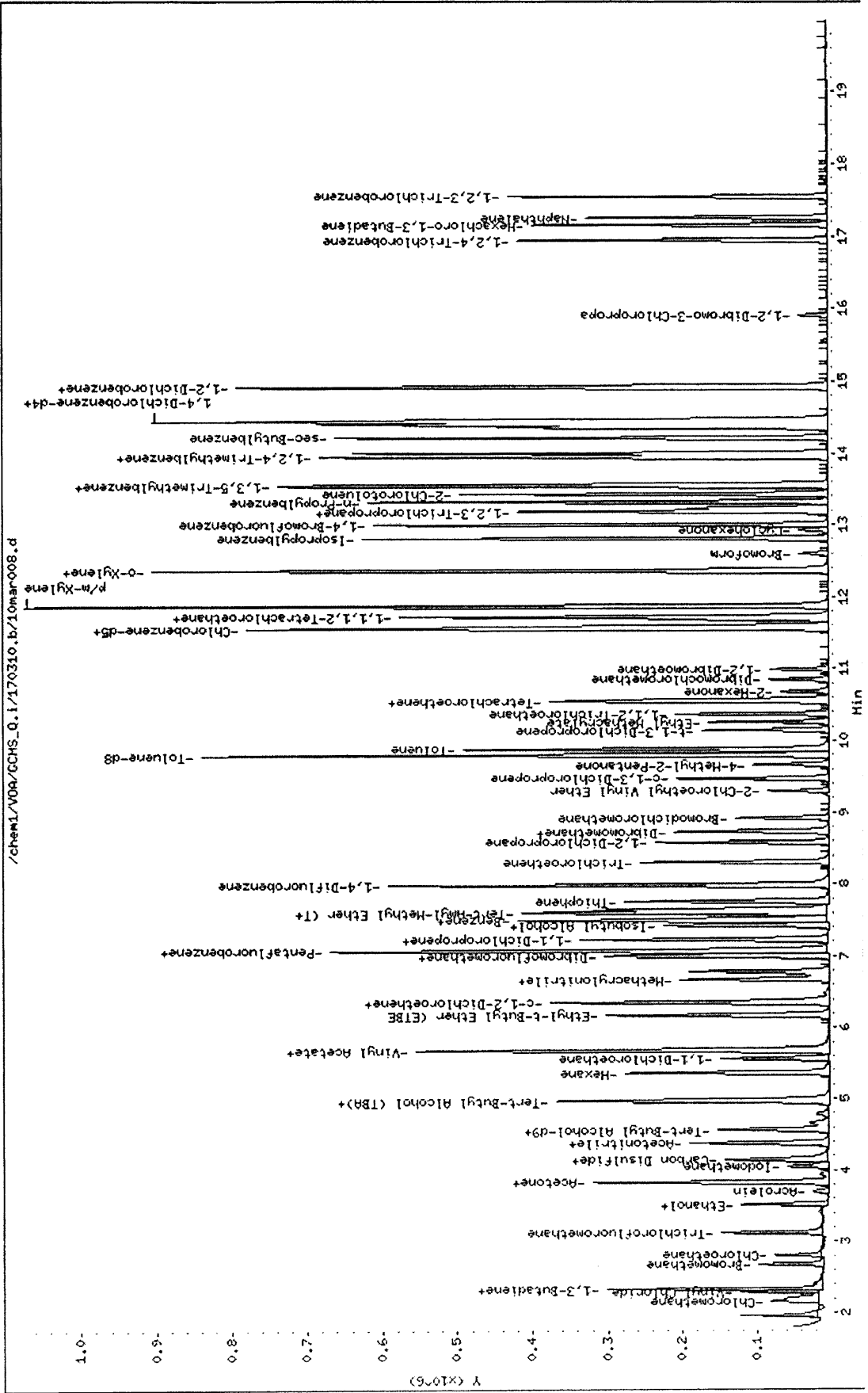
Data File: /chem1/V08/CCHS_0.i/170310.b/10mar008.d
 Date: 10-MAR-2017 12:00
 Client ID:
 Sample Info: IC 20PPB V022017A/V030317A

Instrument: CCHS_0.i

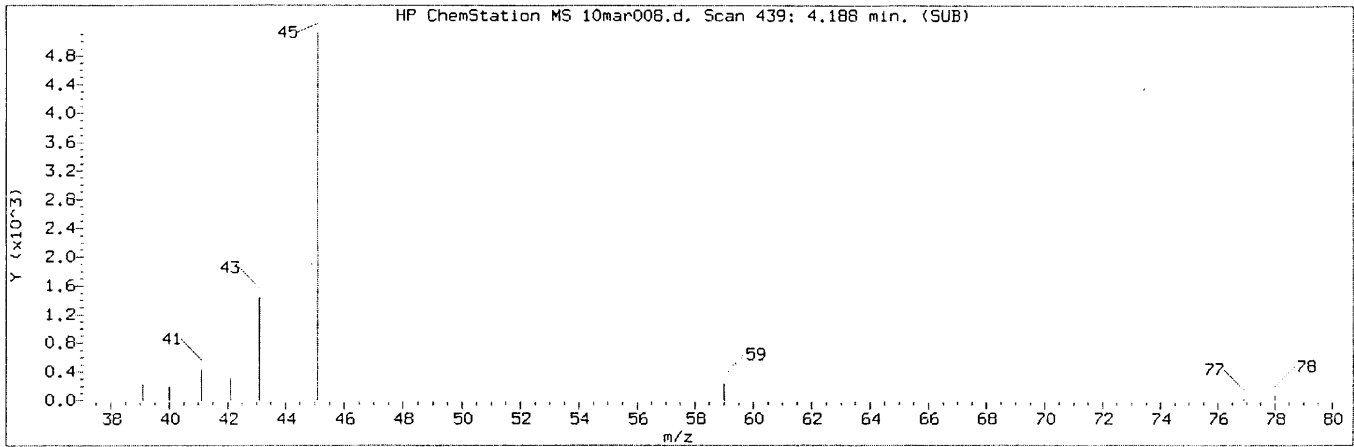
Operator: 1065

Column diameter: 0.00

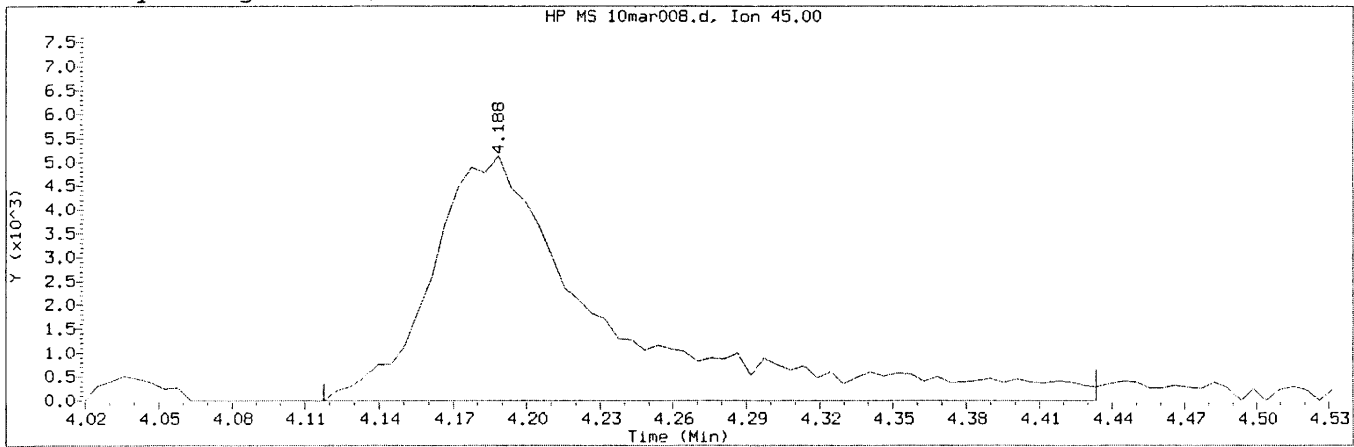
Column phase:



Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar008.d
 Injection date and time: 10-MAR-2017 12:00

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Calibration date and time: 10-MAR-2017 13:39
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:52 c7uq

Sublist used: all

Sample Name: IC 20PPB V022017A/V030317A

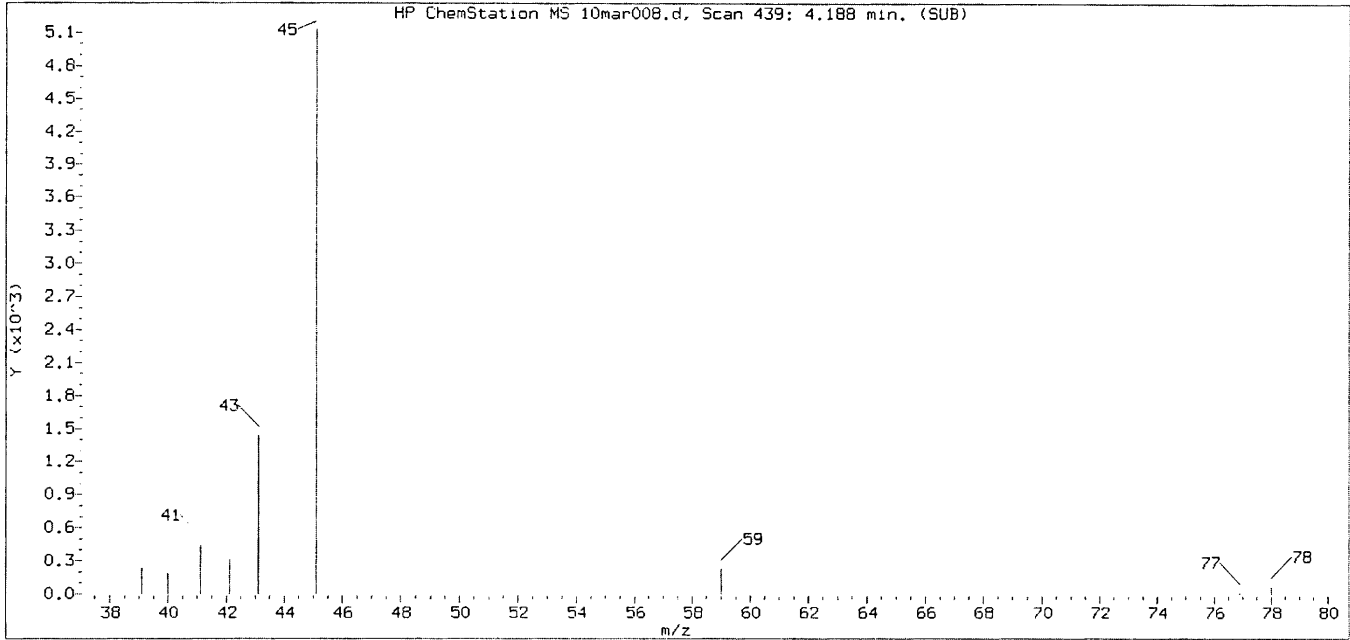
Compound Number	: 17		
Compound Name	: Isopropanol		
Scan Number	: 439		
Retention Time (minutes)	: 4.188		
Quant Ion	: 45.00		
Area (flag)	: 25532M		
On-Column Amount (ug/l)	: 96.4303		
Integration start scan	: 425	Integration stop scan:	483
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

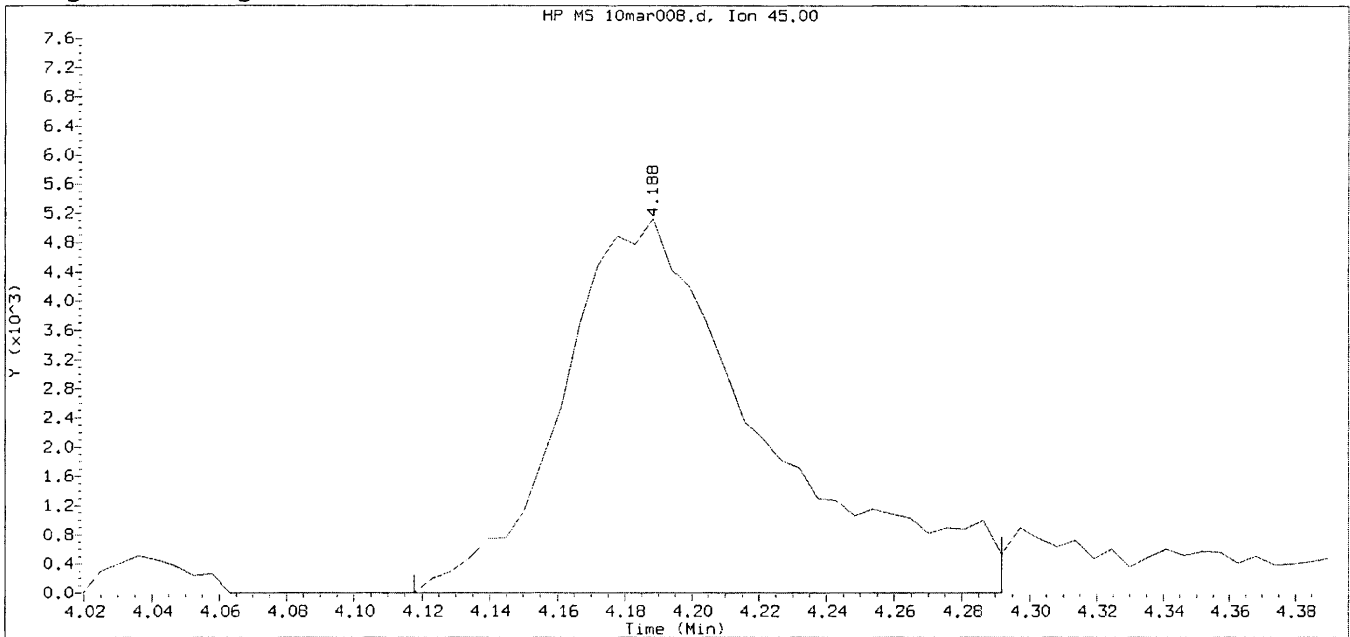
Analyst responsible for change: Digitally signed by Topacio De Leon
 on 03/10/2017 at 14:46.
 Target 3.5 esignature user ID: c7uq

GC/MS audit/management approval: _____ 131 _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar008.d
 Injection date and time: 10-MAR-2017 12:00

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m

Sublist used: all

Calibration date and time: 10-MAR-2017 13:39

Date, time and analyst ID of latest file update: 10-Mar-2017 13:39 c7uq

Sample Name: IC 20PPB V022017A/V030317A

Compound Number	: 17	
Compound Name	: Isopropanol	
Scan Number	: 439	
Retention Time (minutes)	: 4.188	
Quant Ion	: 45.00	
Area	: 21363	
On-column Amount (ug/l)	: 92.4512	
Integration start scan	: 425	Integration stop scan: 457
Y at integration start	: 0	Y at integration end: 0

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar009.d
 Injection date and time: 10-MAR-2017 12:28

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Calibration date and time: 10-MAR-2017 13:37

Sublist used: all

Date, time and analyst ID of latest file update: 10-Mar-2017 13:38 c7uq

Sample Name: IC 50PPB V022017A/V030317A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV (Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.662	65	59577	250.000	0.00
4)*Pentafluorobenzene	(2)	7.062	168	361282	50.000	0.00
47)*1,4-Difluorobenzene	(3)	7.982	114	574174	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.553	117	539653	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.438	152	276347	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	6.992	113	152300	50.000	0.00
SpikedAmount 50.000	Recovery =		0.000			
46)\$1,2-Dichloroethane-d4	(2)	7.422	65	188270	50.000	0.00
SpikedAmount 50.000	Recovery =		0.000			
62)\$Toluene-d8	(3)	9.795	98	703416	50.000	0.00
SpikedAmount 50.000	Recovery =		0.000			
81)\$1,4-Bromofluorobenzene	(4)	13.001	95	270304	50.000	0.00
SpikedAmount 50.000	Recovery =		0.000			
Target Compounds						
2) Ethanol	(1)	3.410	45	30541	500.000	100
3) Tert-Butyl Alcohol (TBA)	(1)	4.787	59	87739	250.000	100
5) Dichlorodifluoromethane	(2)	1.956	85	305476	50.000	100
6) Chloromethane	(2)	2.158	50	384468	50.000	100
7) Vinyl Chloride	(2)	2.283	62	311475	50.000	100
8) Bromomethane	(2)	2.669	94	170735	50.000	100
9) Chloroethane	(2)	2.800	64	184994	50.000	100
10) 1,3-Butadiene	(2)	2.327	54	296210	50.000	100
11) Trichlorofluoromethane	(2)	3.121	101	355301	50.000	100
12) Diethyl Ether	(2)	3.519	59	221813	50.000	100
13) Acetone	(2)	3.938	58	18036	50.000	100
14) Iodomethane	(2)	4.052	142	392227	100.000	100
15) 1,1-Dichloroethene	(2)	3.824	61	388577	50.000	100
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.834	101	224557	50.000	100
17) Isopropanol	(2)	4.188	45	63216	250.000	100
18) Carbon Disulfide	(2)	4.145	76	759011	50.000	100
19) Acetonitrile	(2)	4.379	41	479635	100.000	100
20) Acrylonitrile	(2)	4.939	53	84400	50.000	100
21) Allyl Chloride	(2)	4.379	76	131028	50.000	100
22) Acrolein	(2)	3.698	56	73358	100.000	100
23) Methylene Chloride	(2)	4.564	84	253599	50.000	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar009.d
 Injection date and time: 10-MAR-2017 12:28

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Calibration date and time: 10-MAR-2017 13:37

Sublist used: all

Date, time and analyst ID of latest file update: 10-Mar-2017 13:38 c7uq

Sample Name: IC 50PPB V022017A/V030317A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	4.961	96	246922	50.000	100
25) Isobutyl Alcohol	(2)	7.416	43	11112	100.000	100
26) Methyl-t-Butyl Ether (MTBE)	(2)	4.983	73	688563	50.000	100
27) Hexane	(2)	5.359	57	456641	50.000	100
28) 1,1-Dichloroethane	(2)	5.560	63	462496	50.000	100
29) Vinyl Acetate	(2)	5.658	86	35043	50.000	100
30) Diisopropyl Ether (DIPE)	(2)	5.685	45	952041	50.000	100
31) Chloroprene	(2)	5.691	53	470608	50.000	100
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.181	59	834123	50.000	100
33) c-1,2-Dichloroethene	(2)	6.355	96	275507	50.000	100
34) 2,2-Dichloropropane	(2)	6.349	77	339148	50.000	100
35) 2-Butanone	(2)	6.393	43	111560	50.000	100
36) Propionitrile	(2)	6.480	54	29206	50.000	100
37) Methacrylonitrile	(2)	6.671	41	139199	50.000	100
38) Bromochloromethane	(2)	6.671	130	132690	50.000	100
39) Tetrahydrofuran	(2)	6.741	42	69461	50.000	100
40) Chloroform	(2)	6.785	83	447363	50.000	100
42) 1,1,1-Trichloroethane	(2)	7.013	97	343608	50.000	100
43) Cyclohexane	(2)	7.084	84	392496	50.000	100
44) 1,1-Dichloropropene	(2)	7.226	75	349033	50.000	100
45) Carbon Tetrachloride	(2)	7.226	117	211820	50.000	100
48) Benzene	(3)	7.492	78	1044239	50.000	100
49) 1,2-Dichloroethane	(3)	7.514	62	329938	50.000	100
50) 2-Methyl-2-Butanol (TAA)	(3)	7.525	59	64849	250.000	100
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.645	73	698066	50.000	100
52) Thiophene	(3)	7.754	84	520414	50.000	100
53) 2,2,4-Trimethyl Pentane	(3)	7.596	57	1159658	50.000	100
54) Trichloroethene	(3)	8.298	95	276091	50.000	100
55) 1,2-Dichloropropane	(3)	8.581	63	265534	50.000	100
56) Dibromomethane	(3)	8.723	93	131202	50.000	100
57) Methyl Methacrylate	(3)	8.734	69	140682	50.000	100
58) 1,4-Dioxane	(3)	8.750	88	25754	500.000	100
59) Bromodichloromethane	(3)	8.919	83	279292	50.000	100
60) 2-Chloroethyl Vinyl Ether	(3)	9.294	63	120863	50.000	100
61) c-1,3-Dichloropropene	(3)	9.463	75	375913	50.000	100
63) Toluene	(3)	9.877	91	1130226	50.000	100
64) 4-Methyl-2-Pentanone	(3)	9.659	58	88896	50.000	100

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar009.d
 Injection date and time: 10-MAR-2017 12:28

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Calibration date and time: 10-MAR-2017 13:37

Sublist used: all

Date, time and analyst ID of latest file update: 10-Mar-2017 13:38 c7uq

Sample Name: IC 50PPB V022017A/V030317A Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column Amount	
	Ref.	RT			(ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.144	75	309141	50.000	100
67) Ethyl Methacrylate	(4)	10.258	69	277132	50.000	100
68) 1,1,2-Trichloroethane	(4)	10.367	83	169504	50.000	100
69) Tetrachloroethene	(4)	10.541	166	318444	50.000	100
70) 1,3-Dichloropropane	(4)	10.568	76	358480	50.000	100
71) 2-Hexanone	(4)	10.677	43	157945	50.000	100
72) Dibromochloromethane	(4)	10.846	129	160713	50.000	100
73) 1,2-Dibromoethane	(4)	10.987	107	187574	50.000	100
74) Chlorobenzene	(4)	11.591	112	725053	50.000	100
75) 1,1,1,2-Tetrachloroethane	(4)	11.689	131	176812	50.000	100
76) Ethylbenzene	(4)	11.722	91	1288731	50.000	100
77) p/m-Xylene	(4)	11.864	91	2029767	100.000	100
78) o-Xylene	(4)	12.354	91	1052952	50.000	100
79) Styrene	(4)	12.370	104	850943	50.000	100
80) Isopropylbenzene	(4)	12.811	105	1313307	50.000	100
82) 1,2,3-Trichloropropane	(4)	13.235	75	280846	50.000	100
83) Bromobenzene	(4)	13.186	156	296028	50.000	100
84) n-Propylbenzene	(4)	13.317	91	1558076	50.000	100
85) t-1,4-Dichloro-2-Butene	(4)	13.246	53	60204	50.000	100
86) 2-Chlorotoluene	(4)	13.426	91	913382	50.000	100
87) 1,3,5-Trimethylbenzene	(4)	13.535	105	1106467	50.000	100
89) Bromoform	(5)	12.599	173	77566	50.000	100
90) 1,1,2,2-Tetrachloroethane	(5)	13.170	83	240277	50.000	100
91) 4-Chlorotoluene	(5)	13.562	91	1065808	50.000	100
92) Cyclohexanone	(5)	12.925	55	58170	250.000	100
93) 1,2,4-Trimethylbenzene	(5)	14.003	105	1134036	50.000	100
94) tert-Butylbenzene	(5)	13.943	134	253636	50.000	100
95) p-Isopropyltoluene	(5)	14.395	119	1220885	50.000	100
96) sec-Butylbenzene	(5)	14.215	105	1458028	50.000	100
97) 1,3-Dichlorobenzene	(5)	14.357	146	600013	50.000	100
98) 1,4-Dichlorobenzene	(5)	14.466	146	595464	50.000	100
99) 1,2-Dichlorobenzene	(5)	14.934	146	558101	50.000	100
100) n-Butylbenzene	(5)	14.912	91	1165943	50.000	100
101) 1,2-Dibromo-3-Chloropropane	(5)	15.903	75	36737	50.000	100
102) 1,2,4-Trichlorobenzene	(5)	16.943	180	449002	50.000	100
103) Hexachloro-1,3-Butadiene	(5)	17.160	225	246004	50.000	100
104) Naphthalene	(5)	17.258	128	903743	50.000	100

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar009.d Instrument ID: GCMS_Q.i
Injection date and time: 10-MAR-2017 12:28 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
Calibration date and time: 10-MAR-2017 13:37
Date, time and analyst ID of latest file update: 10-Mar-2017 13:38 c7uq

Sample Name: IC 50PPB V022017A/V030317A Misc Info: V020817D
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
=====	=====	=====	=====	=====	=====	=====
105) 1,2,3-Trichlorobenzene	(5)	17.547	180	398737	50.000	100

page 4 of 4

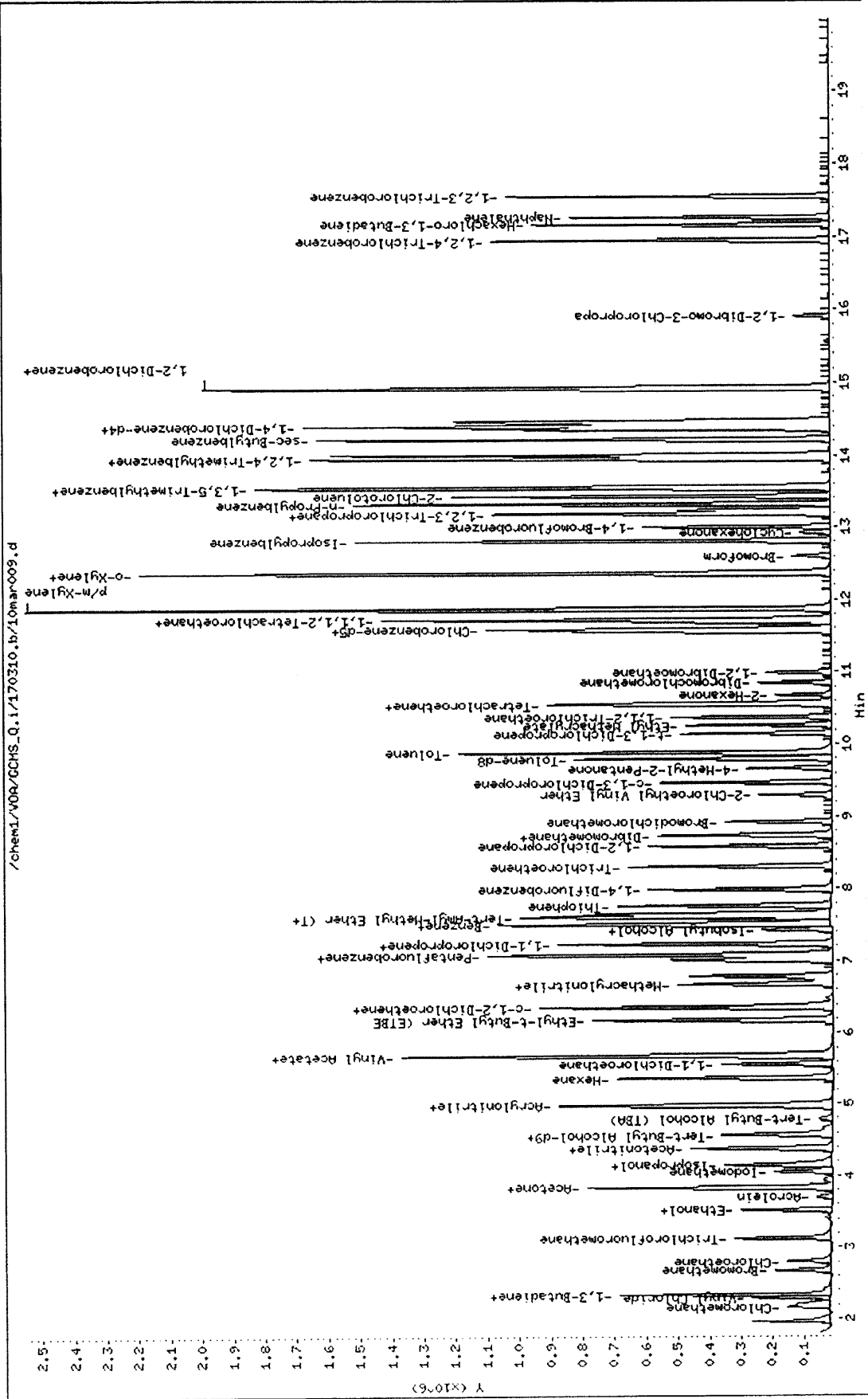
Data File: /chem1/V08/GCHS_Q.i/170310.br/10mar009.d
 Date: 10-Mar-2017 12:28
 Client ID:
 Sample Info: IC S0PPB V022017A/V030317A

Instrument: GCHS_Q.i

Operator: 1055

Column diameter: 0.00

Column phase:



Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar010.d
 Injection date and time: 10-MAR-2017 12:56

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Calibration date and time: 10-MAR-2017 13:39

Sublist used: all

Date, time and analyst ID of latest file update: 10-Mar-2017 13:39 c7uq

Sample Name: IC 100/60PPB V022017A/V030317AMisc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV(Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.662	65	63501	250.000	0.00
4)*Pentafluorobenzene	(2)	7.063	168	375998	50.000	0.00
47)*1,4-Difluorobenzene	(3)	7.983	114	596401	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.554	117	566923	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.439	152	287315	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	6.992	113	160794	51.186	0.00
SpikedAmount 50.000			Recovery =	0.000		
46)\$1,2-Dichloroethane-d4	(2)	7.422	65	195290	49.510	0.00
SpikedAmount 50.000			Recovery =	0.000		
62)\$Toluene-d8	(3)	9.795	98	735199	50.211	0.00
SpikedAmount 50.000			Recovery =	0.000		
81)\$1,4-Bromofluorobenzene	(4)	12.996	95	285379	49.599	0.00
SpikedAmount 50.000			Recovery =	0.000		
Target Compounds						
2) Ethanol	(1)	3.415	45	62037	883.331	91
3) Tert-Butyl Alcohol (TBA)	(1)	4.787	59	202060	628.045	95
5) Dichlorodifluoromethane	(2)	1.957	85	370190	59.234	100
6) Chloromethane	(2)	2.152	50	470675	53.615	100
7) Vinyl Chloride	(2)	2.283	62	375832	57.757	99
8) Bromomethane	(2)	2.659	94	247129	62.609	100
9) Chloroethane	(2)	2.795	64	220317	58.026	99
10) 1,3-Butadiene	(2)	2.327	54	583323	96.365	99
11) Trichlorofluoromethane	(2)	3.121	101	433222	59.353	100
12) Diethyl Ether	(2)	3.519	59	438694	100.817	98
13) Acetone	(2)	3.938	58	37609	98.242	95
14) Iodomethane	(2)	4.052	142	831091	255.862	99
15) 1,1-Dichloroethene	(2)	3.824	61	770160	97.076	99
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.829	101	446600	96.740	99
17) Isopropanol	(2)	4.188	45	138326	574.431	92
18) Carbon Disulfide	(2)	4.145	76	1526500	100.645	100
19) Acetonitrile	(2)	4.379	41	930793	196.344	99
20) Acrylonitrile	(2)	4.940	53	172496	102.863	98
21) Allyl Chloride	(2)	4.379	76	254172	103.536	100
22) Acrolein	(2)	3.698	56	150455	205.162	96
23) Methylene Chloride	(2)	4.564	84	503919	98.238	99

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar010.d
 Injection date and time: 10-MAR-2017 12:56

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:39
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:39 c7uq

Sample Name: IC 100/60PPB V022017A/V030317AMisc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	4.961	96	487544	97.727	100
25) Isobutyl Alcohol	(2)	7.411	43	26846	262.437	96
26) Methyl-t-Butyl Ether (MTBE)	(2)	4.983	73	1383147	100.365	98
27) Hexane	(2)	5.364	57	910973	100.123	99
28) 1,1-Dichloroethane	(2)	5.560	63	919832	98.018	100
29) Vinyl Acetate	(2)	5.658	86	80336	114.679	86
30) Diisopropyl Ether (DIPE)	(2)	5.685	45	1895097	99.938	100
31) Chloroprene	(2)	5.691	53	923808	97.507	99
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.181	59	1700094	102.656	100
33) c-1,2-Dichloroethene	(2)	6.355	96	546593	99.804	100
34) 2,2-Dichloropropane	(2)	6.349	77	695482	103.366	99
35) 2-Butanone	(2)	6.393	43	215909	99.105	97
36) Propionitrile	(2)	6.475	54	59546	104.923	95
37) Methacrylonitrile	(2)	6.671	41	280844	102.575	99
38) Bromochloromethane	(2)	6.671	130	257933	95.691	99
39) Tetrahydrofuran	(2)	6.741	42	141190	101.054	99
40) Chloroform	(2)	6.785	83	891091	98.388	99
42) 1,1,1-Trichloroethane	(2)	7.014	97	723459	106.139	97
43) Cyclohexane	(2)	7.079	84	789844	95.958	99
44) 1,1-Dichloropropene	(2)	7.226	75	694571	96.985	100
45) Carbon Tetrachloride	(2)	7.226	117	487534	124.576	99
48) Benzene	(3)	7.493	78	2091175	101.517	100
49) 1,2-Dichloroethane	(3)	7.514	62	649638	99.043	98
50) 2-Methyl-2-Butanol (TAA)	(3)	7.525	59	160768	645.291	97
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.645	73	1440674	101.942	91
52) Thiophene	(3)	7.754	84	1049965	98.869	99
53) 2,2,4-Trimethyl Pentane	(3)	7.596	57	2347907	97.260	99
54) Trichloroethene	(3)	8.298	95	551304	99.791	99
55) 1,2-Dichloropropane	(3)	8.576	63	533667	99.659	99
56) Dibromomethane	(3)	8.723	93	267102	101.055	99
57) Methyl Methacrylate	(3)	8.734	69	306122	113.408	99
58) 1,4-Dioxane	(3)	8.756	88	52973	1020.557	98
59) Bromodichloromethane	(3)	8.919	83	597165	114.045	99
60) 2-Chloroethyl Vinyl Ether	(3)	9.294	63	256491	109.607	99
61) c-1,3-Dichloropropene	(3)	9.463	75	794522	120.869	100
63) Toluene	(3)	9.877	91	2263430	97.009	100
64) 4-Methyl-2-Pentanone	(3)	9.659	58	184202	105.686	99

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar010.d
 Injection date and time: 10-MAR-2017 12:56

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Calibration date and time: 10-MAR-2017 13:39

Sublist used: all

Date, time and analyst ID of latest file update: 10-Mar-2017 13:39 c7uq

Sample Name: IC 100/60PPB V022017A/V030317AMisc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.144	75	681784	130.009	99
67) Ethyl Methacrylate	(4)	10.258	69	618629	116.366	99
68) 1,1,2-Trichloroethane	(4)	10.367	83	344654	100.348	100
69) Tetrachloroethene	(4)	10.541	166	635987	94.848	100
70) 1,3-Dichloropropane	(4)	10.568	76	718792	99.358	100
71) 2-Hexanone	(4)	10.672	43	332272	104.373	99
72) Dibromochloromethane	(4)	10.846	129	378566	130.735	100
73) 1,2-Dibromoethane	(4)	10.987	107	390200	108.425	100
74) Chlorobenzene	(4)	11.586	112	1458561	97.582	100
75) 1,1,1,2-Tetrachloroethane	(4)	11.690	131	403314	122.809	99
76) Ethylbenzene	(4)	11.722	91	2576917	96.259	100
77) p/m-Xylene	(4)	11.864	91	4039006	197.521	100
78) o-Xylene	(4)	12.354	91	2103886	100.037	100
79) Styrene	(4)	12.370	104	1722964	99.606	99
80) Isopropylbenzene	(4)	12.811	105	2613442	96.509	99
82) 1,2,3-Trichloropropane	(4)	13.236	75	531294	101.338	96
83) Bromobenzene	(4)	13.187	156	592045	98.349	99
84) n-Propylbenzene	(4)	13.317	91	3115716	96.727	100
85) t-1,4-Dichloro-2-Butene	(4)	13.241	53	134214	109.043	93
86) 2-Chlorotoluene	(4)	13.426	91	1838253	95.129	99
87) 1,3,5-Trimethylbenzene	(4)	13.535	105	2219903	97.888	100
89) Bromoform	(5)	12.599	173	202752	160.283	99
90) 1,1,2,2-Tetrachloroethane	(5)	13.170	83	503219	107.942	99
91) 4-Chlorotoluene	(5)	13.562	91	2113983	95.287	100
92) Cyclohexanone	(5)	12.925	55	130689	537.232	99
93) 1,2,4-Trimethylbenzene	(5)	14.003	105	2270119	98.574	99
94) tert-Butylbenzene	(5)	13.943	134	506543	97.803	99
95) p-Isopropyltoluene	(5)	14.395	119	2449618	98.342	100
96) sec-Butylbenzene	(5)	14.215	105	2912739	98.423	100
97) 1,3-Dichlorobenzene	(5)	14.357	146	1206647	97.682	100
98) 1,4-Dichlorobenzene	(5)	14.466	146	1203780	98.251	99
99) 1,2-Dichlorobenzene	(5)	14.934	146	1123450	99.460	99
100) n-Butylbenzene	(5)	14.907	91	2336545	99.556	100
101) 1,2-Dibromo-3-Chloropropane	(5)	15.903	75	84483	123.683	96
102) 1,2,4-Trichlorobenzene	(5)	16.943	180	896115	99.771	100
103) Hexachloro-1,3-Butadiene	(5)	17.155	225	492953	97.500	100
104) Naphthalene	(5)	17.253	128	1829089	100.719	100

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar010.d Instrument ID: GCMS_Q.i
 Injection date and time: 10-MAR-2017 12:56 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:39
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:39 c7uq

Sample Name: IC 100/60PPB V022017A/V030317AMisc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
=====	=====	=====	=====	=====	=====	=====
105) 1,2,3-Trichlorobenzene	(5)	17.547	180	809919	100.414	100

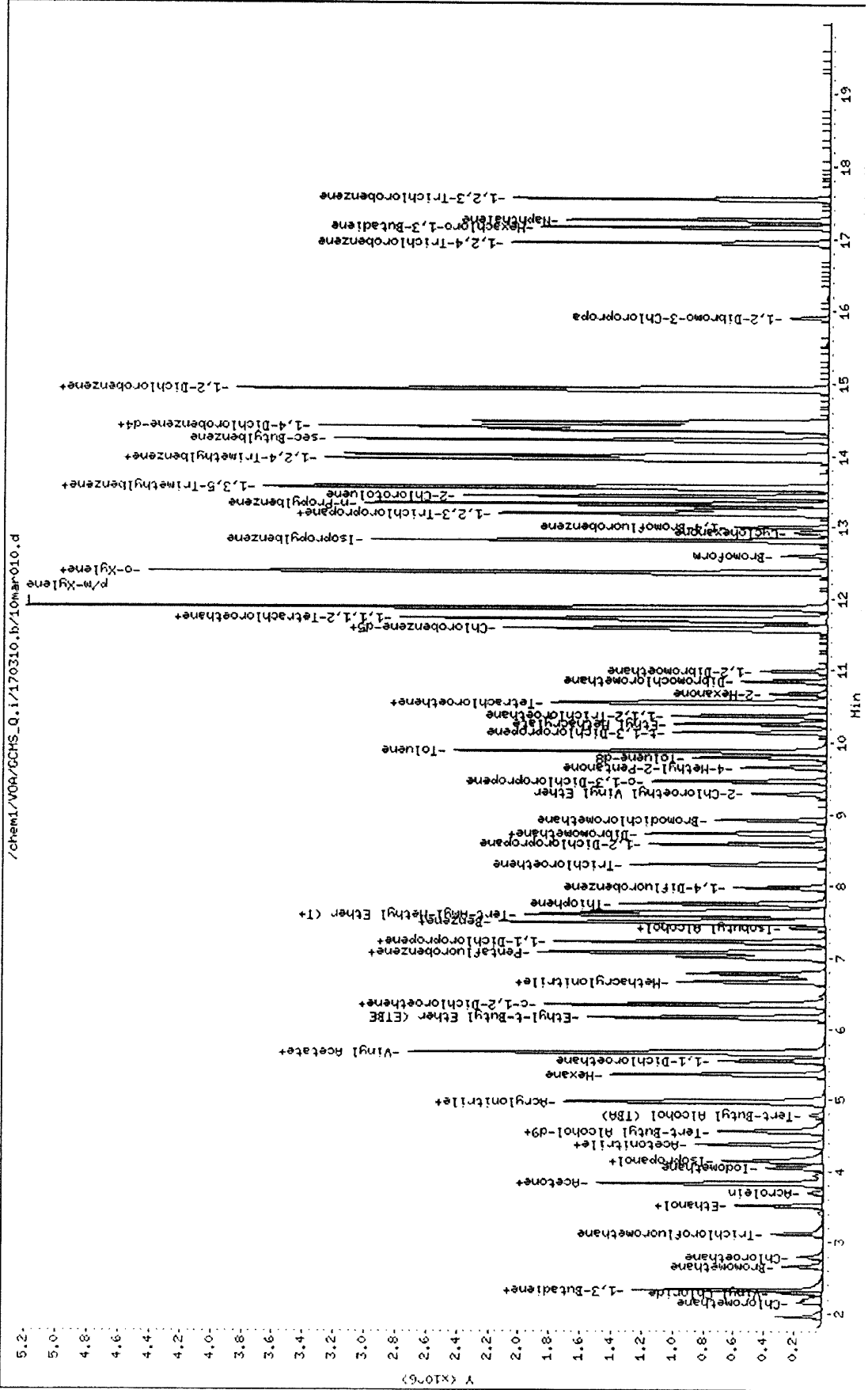
page 4 of 4

Data File: /chem1/V0A/GCHS_Q.i/170310.b/10mar010.d
 Date: 10-MAR-2017 12:56
 Client ID:
 Sample Info: IC 100/60PPE V022017A/V030317A

Instrument: GCHS_Q.i

Operator: 1055

Column diameter: 0.00



Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar011.d
 Injection date and time: 10-MAR-2017 13:24

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Calibration date and time: 10-MAR-2017 13:45

Sublist used: all

Date, time and analyst ID of latest file update: 10-Mar-2017 13:45 c7uq

Sample Name: IC 200/80PPB V022017A/V030317AMisc Info: V020817D
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	DEV (Min)
	Ref.	RT			Amount	
=====						
Internal Standards						
1) *Tert-Butyl Alcohol-d9	(1)	4.673	65	71957	250.000	-0.01
4) *Pentafluorobenzene	(2)	7.063	168	379174	50.000	0.00
47) *1,4-Difluorobenzene	(3)	7.982	114	603537	50.000	0.00
65) *Chlorobenzene-d5	(4)	11.553	117	570739	50.000	0.00
88) *1,4-Dichlorobenzene-d4	(5)	14.439	152	288378	50.000	0.00
System Monitoring Compounds						
41) \$Dibromofluoromethane	(2)	6.992	113	163579	51.396	0.00
SpikedAmount 50.000		Recovery =	0.000			
46) \$1,2-Dichloroethane-d4	(2)	7.422	65	195258	49.215	0.00
SpikedAmount 50.000		Recovery =	0.000			
62) \$Toluene-d8	(3)	9.795	98	751252	50.599	0.00
SpikedAmount 50.000		Recovery =	0.000			
81) \$1,4-Bromofluorobenzene	(4)	13.001	95	289810	50.027	0.00
SpikedAmount 50.000		Recovery =	0.000			
Target Compounds						
2) Ethanol	(1)	3.421	45	120134	1587.386	92
3) Tert-Butyl Alcohol (TBA)	(1)	4.787	59	450728	1189.467	95
5) Dichlorodifluoromethane	(2)	1.956	85	496300	78.954	100
6) Chloromethane	(2)	2.152	50	688332	78.117	99
7) Vinyl Chloride	(2)	2.288	62	506313	77.551	99
8) Bromomethane	(2)	2.648	94	332209	82.743	99
9) Chloroethane	(2)	2.789	64	290468	76.521	99
10) 1,3-Butadiene	(2)	2.332	54	1146708	189.771	98
11) Trichlorofluoromethane	(2)	3.116	101	575242	78.453	100
12) Diethyl Ether	(2)	3.513	59	880525	200.549	99
13) Acetone	(2)	3.938	58	74711	194.787	92
14) Iodomethane	(2)	4.047	142	1704400	490.797	100
15) 1,1-Dichloroethene	(2)	3.824	61	1505770	190.074	99
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.829	101	867555	188.494	100
17) Isopropanol	(2)	4.188	45	309218	1207.336	98
18) Carbon Disulfide	(2)	4.139	76	3048302	199.414	99
19) Acetonitrile	(2)	4.379	41	1764602	374.901	98
20) Acrylonitrile	(2)	4.939	53	346342	203.822	96
21) Allyl Chloride	(2)	4.379	76	482986	195.896	100
22) Acrolein	(2)	3.698	56	307893	412.958	97
23) Methylene Chloride	(2)	4.564	84	1003810	195.213	99

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar011.d
 Injection date and time: 10-MAR-2017 13:24

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Calibration date and time: 10-MAR-2017 13:45

Sublist used: all

Date, time and analyst ID of latest file update: 10-Mar-2017 13:45 c7uq

Sample Name: IC 200/80PPB V022017A/V030317AMisc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	4.961	96	960269	192.334	99
25) Isobutyl Alcohol	(2)	7.416	43	64056	559.170	94
26) Methyl-t-Butyl Ether (MTBE)	(2)	4.983	73	2731124	197.090	97
27) Hexane	(2)	5.359	57	1780550	195.023	99
28) 1,1-Dichloroethane	(2)	5.560	63	1823911	193.904	100
29) Vinyl Acetate	(2)	5.658	86	169474	230.692	81
30) Diisopropyl Ether (DIPE)	(2)	5.685	45	3703684	194.703	98
31) Chloroprene	(2)	5.685	53	1793879	190.083	98
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.181	59	3389118	202.435	100
33) c-1,2-Dichloroethene	(2)	6.355	96	1086636	197.284	99
34) 2,2-Dichloropropane	(2)	6.349	77	1411352	206.626	100
35) 2-Butanone	(2)	6.393	43	438864	199.805	95
36) Propionitrile	(2)	6.475	54	120020	207.692	97
37) Methacrylonitrile	(2)	6.671	41	559529	202.113	98
38) Bromochloromethane	(2)	6.676	130	492867	184.185	99
39) Tetrahydrofuran	(2)	6.741	42	284360	201.453	32
40) Chloroform	(2)	6.785	83	1763949	194.243	99
42) 1,1,1-Trichloroethane	(2)	7.013	97	1463657	210.663	96
43) Cyclohexane	(2)	7.079	84	1517788	186.041	100
44) 1,1-Dichloropropene	(2)	7.226	75	1345748	188.482	100
45) Carbon Tetrachloride	(2)	7.226	117	1059267	255.896	99
48) Benzene	(3)	7.493	78	4132161	198.477	99
49) 1,2-Dichloroethane	(3)	7.514	62	1267246	192.166	99
50) 2-Methyl-2-Butanol (TAA)	(3)	7.531	59	371357	1345.651	96
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.645	73	2871592	200.659	90
52) Thiophene	(3)	7.754	84	2086143	195.073	99
53) 2,2,4-Trimethyl Pentane	(3)	7.601	57	4638487	191.490	97
54) Trichloroethene	(3)	8.298	95	1076242	193.715	100
55) 1,2-Dichloropropane	(3)	8.576	63	1058634	196.115	100
56) Dibromomethane	(3)	8.723	93	532139	199.123	99
57) Methyl Methacrylate	(3)	8.734	69	638577	226.136	98
58) 1,4-Dioxane	(3)	8.755	88	105381	2004.988	96
59) Bromodichloromethane	(3)	8.919	83	1255004	229.788	99
60) 2-Chloroethyl Vinyl Ether	(3)	9.294	63	537457	221.000	99
61) c-1,3-Dichloropropene	(3)	9.469	75	1614686	235.544	100
63) Toluene	(3)	9.877	91	4455498	190.496	99
64) 4-Methyl-2-Pentanone	(3)	9.659	58	371633	208.472	99

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar011.d Instrument ID: GCMS_Q.i
 Injection date and time: 10-MAR-2017 13:24 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 13:45
 Date, time and analyst ID of latest file update: 10-Mar-2017 13:45 c7uq

Sample Name: IC 200/80PPB V022017A/V030317AMisc Info: V020817D
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	QValue
	Ref.	RT			Amount	
					(ug/l)	
66) t-1,3-Dichloropropene	(4)	10.144	75	1416627	255.842	99
67) Ethyl Methacrylate	(4)	10.258	69	1309245	234.177	98
68) 1,1,2-Trichloroethane	(4)	10.367	83	689762	199.570	100
69) Tetrachloroethene	(4)	10.541	166	1210511	182.467	100
70) 1,3-Dichloropropane	(4)	10.574	76	1428100	196.728	100
71) 2-Hexanone	(4)	10.672	43	685538	210.968	99
72) Dibromochloromethane	(4)	10.846	129	845632	269.826	100
73) 1,2-Dibromoethane	(4)	10.987	107	792237	215.317	100
74) Chlorobenzene	(4)	11.592	112	2882564	192.919	99
75) 1,1,1,2-Tetrachloroethane	(4)	11.690	131	864152	248.657	99
76) Ethylbenzene	(4)	11.722	91	5037127	188.963	99
77) p/m-Xylene	(4)	11.869	91	7832370	383.140	99
78) o-Xylene	(4)	12.354	91	4109046	194.898	99
79) Styrene	(4)	12.370	104	3410624	196.531	98
80) Isopropylbenzene	(4)	12.811	105	5098505	189.064	99
82) 1,2,3-Trichloropropane	(4)	13.236	75	1233918	227.380	96
83) Bromobenzene	(4)	13.192	156	1180840	195.687	99
84) n-Propylbenzene	(4)	13.323	91	6104296	190.103	100
85) t-1,4-Dichloro-2-Butene	(4)	13.246	53	283869	222.613	85
86) 2-Chlorotoluene	(4)	13.426	91	3622053	188.355	99
87) 1,3,5-Trimethylbenzene	(4)	13.540	105	4340911	191.712	99
89) Bromoform	(5)	12.599	173	492369	335.323	100
90) 1,1,2,2-Tetrachloroethane	(5)	13.176	83	1033955	217.173	99
91) 4-Chlorotoluene	(5)	13.562	91	4162702	188.997	99
92) Cyclohexanone	(5)	12.925	55	250120	1019.415	98
93) 1,2,4-Trimethylbenzene	(5)	14.003	105	4460380	194.105	99
94) tert-Butylbenzene	(5)	13.943	134	987937	191.636	97
95) p-Isopropyltoluene	(5)	14.400	119	4770852	192.294	100
96) sec-Butylbenzene	(5)	14.221	105	5663995	192.176	100
97) 1,3-Dichlorobenzene	(5)	14.357	146	2380207	193.267	99
98) 1,4-Dichlorobenzene	(5)	14.471	146	2363298	193.438	100
99) 1,2-Dichlorobenzene	(5)	14.934	146	2216376	196.230	99
100) n-Butylbenzene	(5)	14.912	91	4502041	192.541	99
101) 1,2-Dibromo-3-Chloropropane	(5)	15.903	75	186798	254.054	96
102) 1,2,4-Trichlorobenzene	(5)	16.948	180	1758098	195.833	99
103) Hexachloro-1,3-Butadiene	(5)	17.160	225	960460	190.974	99
104) Naphthalene	(5)	17.258	128	3711790	202.899	100

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar011.d Instrument ID: GCMS_Q.i
Injection date and time: 10-MAR-2017 13:24 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
Calibration date and time: 10-MAR-2017 13:45
Date, time and analyst ID of latest file update: 10-Mar-2017 13:45 c7uq

Sample Name: IC 200/80PPB V022017A/V030317AMisc Info: V020817D
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
=====	=====	=====	=====	=====	=====	=====
105) 1,2,3-Trichlorobenzene	(5)	17.547	180	1597838	197.804	100

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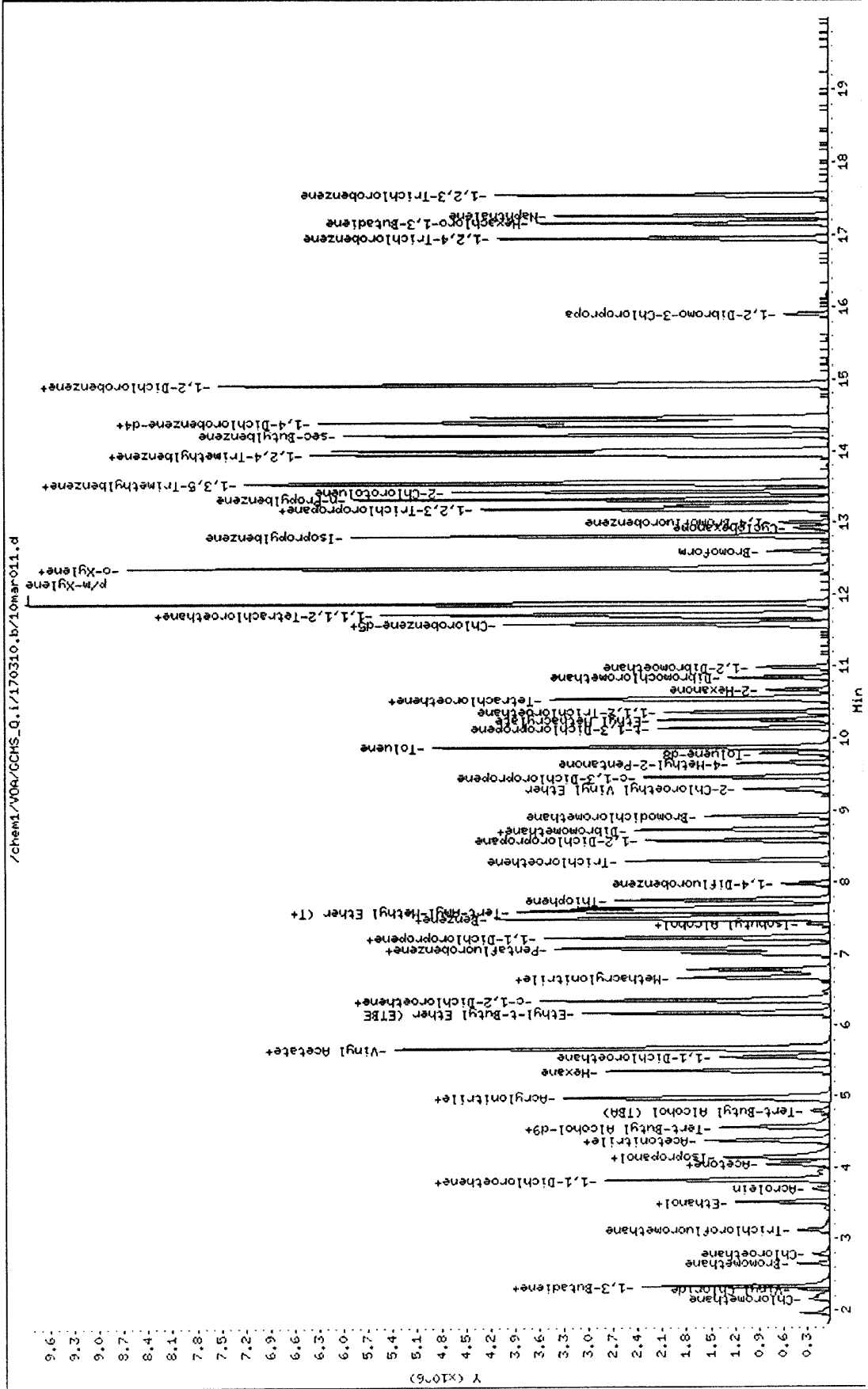
Data File: /chem1/V04/CCHS_Q.i/170310.b/10mar011.d
 Date: 10-MAR-2017 13:24
 Client ID:
 Sample Info: IC 200/80PFB V022017A/V030317A

Instrument: CCHS_Q.i

Operator: 1055

Column diameter: 0.00

Column phase:



Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar013.d
 Injection date and time: 10-MAR-2017 14:22

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m
 Calibration date and time: 10-MAR-2017 14:44

Sublist used: all

Date, time and analyst ID of latest file update: 10-Mar-2017 14:44 c7uq

Sample Name: ICV V022117B/V030317B
 Response via Initial Calibration

Misc Info: V020817D

Compounds	I.S. Ref.	RT	QIon	Area	On-Column	
					Amount (ug/l)	DEV(Min)
=====						
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.667	65	71579	250.000	0.00
4)*Pentafluorobenzene	(2)	7.063	168	372196	50.000	0.00
47)*1,4-Difluorobenzene	(3)	7.982	114	583945	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.553	117	551826	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.439	152	281096	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	6.992	113	159639	51.099	0.00
SpikedAmount 50.000			Recovery =	0.000		
46)\$1,2-Dichloroethane-d4	(2)	7.422	65	193077	49.578	0.00
SpikedAmount 50.000			Recovery =	0.000		
62)\$Toluene-d8	(3)	9.795	98	718394	50.009	0.00
SpikedAmount 50.000			Recovery =	0.000		
81)\$1,4-Bromofluorobenzene	(4)	12.996	95	278043	49.641	0.00
SpikedAmount 50.000			Recovery =	0.000		
Target Compounds					QValue	
2) Ethanol	(1)	3.415	45	30808	418.653	100
3) Tert-Butyl Alcohol (TBA)	(1)	4.787	59	112641	276.039	100
5) Dichlorodifluoromethane	(2)	1.956	85	304908	49.416	100
6) Chloromethane	(2)	2.152	50	409575	47.353	100
7) Vinyl Chloride	(2)	2.283	62	327975	51.177	100
8) Bromomethane	(2)	2.670	94	169252	42.946	100
9) Chloroethane	(2)	2.800	64	197917	53.117	100
10) 1,3-Butadiene	(2)	2.327	54	328547	55.392	100
11) Trichlorofluoromethane	(2)	3.121	101	381209	52.965	100
12) Diethyl Ether	(2)	3.519	59	227262	52.732	100
13) Acetone	(2)	3.938	58	21226	56.379	100
14) Iodomethane	(2)	4.052	142	428819	110.077	100
15) 1,1-Dichloroethene	(2)	3.824	61	420541	54.081	100
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.834	101	244569	54.134	100
17) Isopropanol	(2)	4.183	45	77180	297.333	100
18) Carbon Disulfide	(2)	4.145	76	843955	56.245	100
19) Acetonitrile	(2)	4.379	41	528985	114.493	100
20) Acrylonitrile	(2)	4.940	53	85186	51.072	100
21) Allyl Chloride	(2)	4.379	76	145177	59.987	100
22) Acrolein	(2)	3.698	56	72258	98.733	100
23) Methylene Chloride	(2)	4.564	84	264194	52.342	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar013.d Instrument ID: GCMS_Q.i
 Injection date and time: 10-MAR-2017 14:22 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 14:44
 Date, time and analyst ID of latest file update: 10-Mar-2017 14:44 c7uq

Sample Name: ICV V022117B/V030317B Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	4.961	96	268889	54.866	100
25) Isobutyl Alcohol	(2)	7.422	43	13776	103.001	100
26) Methyl-t-Butyl Ether (MTBE)	(2)	4.978	73	704076	51.762	100
27) Hexane	(2)	5.364	57	492478	54.952	100
28) 1,1-Dichloroethane	(2)	5.560	63	489207	52.984	100
29) Vinyl Acetate	(2)	5.658	86	40739	56.495	100
30) Diisopropyl Ether (DIPE)	(2)	5.685	45	1011517	54.172	100
31) Chloroprene	(2)	5.691	53	494282	53.357	100
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.181	59	865438	52.663	100
33) c-1,2-Dichloroethene	(2)	6.360	96	284572	52.634	100
34) 2,2-Dichloropropane	(2)	6.349	77	390978	58.314	100
35) 2-Butanone	(2)	6.393	43	106782	49.527	100
36) Propionitrile	(2)	6.475	54	29265	51.593	100
37) Methacrylonitrile	(2)	6.671	41	140308	51.633	100
38) Bromochloromethane	(2)	6.671	130	136549	51.986	100
39) Tetrahydrofuran	(2)	6.741	42	70843	51.129	100
40) Chloroform	(2)	6.785	83	461808	51.807	100
42) 1,1,1-Trichloroethane	(2)	7.014	97	384877	56.434	100
43) Cyclohexane	(2)	7.079	84	421081	52.581	100
44) 1,1-Dichloropropene	(2)	7.226	75	375349	53.556	100
45) Carbon Tetrachloride	(2)	7.226	117	267028	54.457	100
48) Benzene	(3)	7.493	78	1108231	55.017	100
49) 1,2-Dichloroethane	(3)	7.514	62	338105	52.991	100
50) 2-Methyl-2-Butanol (TAA)	(3)	7.525	59	79061	255.453	100
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.645	73	717688	51.833	100
52) Thiophene	(3)	7.754	84	539264	52.118	100
53) 2,2,4-Trimethyl Pentane	(3)	7.596	57	1225466	52.288	100
54) Trichloroethene	(3)	8.298	95	296177	55.098	100
55) 1,2-Dichloropropane	(3)	8.581	63	280559	53.718	100
56) Dibromomethane	(3)	8.723	93	132221	51.136	100
57) Methyl Methacrylate	(3)	8.734	69	149125	54.581	100
58) 1,4-Dioxane	(3)	8.750	88	25532	502.072	100
59) Bromodichloromethane	(3)	8.919	83	311069	58.867	100
60) 2-Chloroethyl Vinyl Ether	(3)	9.294	63	120291	51.123	100
61) c-1,3-Dichloropropene	(3)	9.469	75	412256	55.660	100
63) Toluene	(3)	9.877	91	1201251	53.083	100
64) 4-Methyl-2-Pentanone	(3)	9.659	58	88153	51.110	100

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar013.d Instrument ID: GCMS_Q.i
 Injection date and time: 10-MAR-2017 14:22 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
 Calibration date and time: 10-MAR-2017 14:44
 Date, time and analyst ID of latest file update: 10-Mar-2017 14:44 c7uq

Sample Name: ICV V022117B/V030317B Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.144	75	349557	52.834	100
67) Ethyl Methacrylate	(4)	10.258	69	305528	52.584	100
68) 1,1,2-Trichloroethane	(4)	10.367	83	171230	51.241	100
69) Tetrachloroethene	(4)	10.541	166	321421	50.110	100
70) 1,3-Dichloropropane	(4)	10.568	76	360909	51.421	100
71) 2-Hexanone	(4)	10.672	43	165106	52.551	100
72) Dibromochloromethane	(4)	10.846	129	187600	51.283	100
73) 1,2-Dibromoethane	(4)	10.987	107	194488	54.670	100
74) Chlorobenzene	(4)	11.586	112	756768	52.383	100
75) 1,1,1,2-Tetrachloroethane	(4)	11.690	131	211667	53.543	100
76) Ethylbenzene	(4)	11.722	91	1366251	53.010	100
77) p/m-Xylene	(4)	11.864	91	2152393	108.898	100
78) o-Xylene	(4)	12.354	91	1111605	54.532	100
79) Styrene	(4)	12.370	104	890163	53.052	100
80) Isopropylbenzene	(4)	12.811	105	1388035	53.236	100
82) 1,2,3-Trichloropropane	(4)	13.236	75	300690	57.309	100
83) Bromobenzene	(4)	13.192	156	307511	52.707	100
84) n-Propylbenzene	(4)	13.317	91	1648441	53.096	100
85) t-1,4-Dichloro-2-Butene	(4)	13.246	53	69117	56.060	100
86) 2-Chlorotoluene	(4)	13.426	91	962472	51.766	100
87) 1,3,5-Trimethylbenzene	(4)	13.535	105	1173043	53.582	100
89) Bromoform	(5)	12.599	173	93522	47.774	100
90) 1,1,2,2-Tetrachloroethane	(5)	13.176	83	249630	53.791	100
91) 4-Chlorotoluene	(5)	13.562	91	1132919	52.770	100
92) Cyclohexanone	(5)	12.925	55	73945	309.188	100
93) 1,2,4-Trimethylbenzene	(5)	14.003	105	1185168	52.912	100
94) tert-Butylbenzene	(5)	13.943	134	269336	53.598	100
95) p-Isopropyltoluene	(5)	14.395	119	1311290	54.222	100
96) sec-Butylbenzene	(5)	14.215	105	1545961	53.812	100
97) 1,3-Dichlorobenzene	(5)	14.357	146	623795	51.963	100
98) 1,4-Dichlorobenzene	(5)	14.466	146	627106	52.659	100
99) 1,2-Dichlorobenzene	(5)	14.934	146	579491	52.635	100
100) n-Butylbenzene	(5)	14.907	91	1249905	54.840	100
101) 1,2-Dibromo-3-Chloropropane	(5)	15.903	75	41466	52.311	100
102) 1,2,4-Trichlorobenzene	(5)	16.948	180	473944	54.160	100
103) Hexachloro-1,3-Butadiene	(5)	17.160	225	263906	53.833	100
104) Naphthalene	(5)	17.258	128	928197	52.053	100

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170310.b/10mar013.d Instrument ID: GCMS_Q.i
Injection date and time: 10-MAR-2017 14:22 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170310.b/8260.m Sublist used: all
Calibration date and time: 10-MAR-2017 14:44
Date, time and analyst ID of latest file update: 10-Mar-2017 14:44 c7uq

Sample Name: ICV V022117B/V030317B Misc Info: V020817D
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	17.547	180	409580	52.017	100

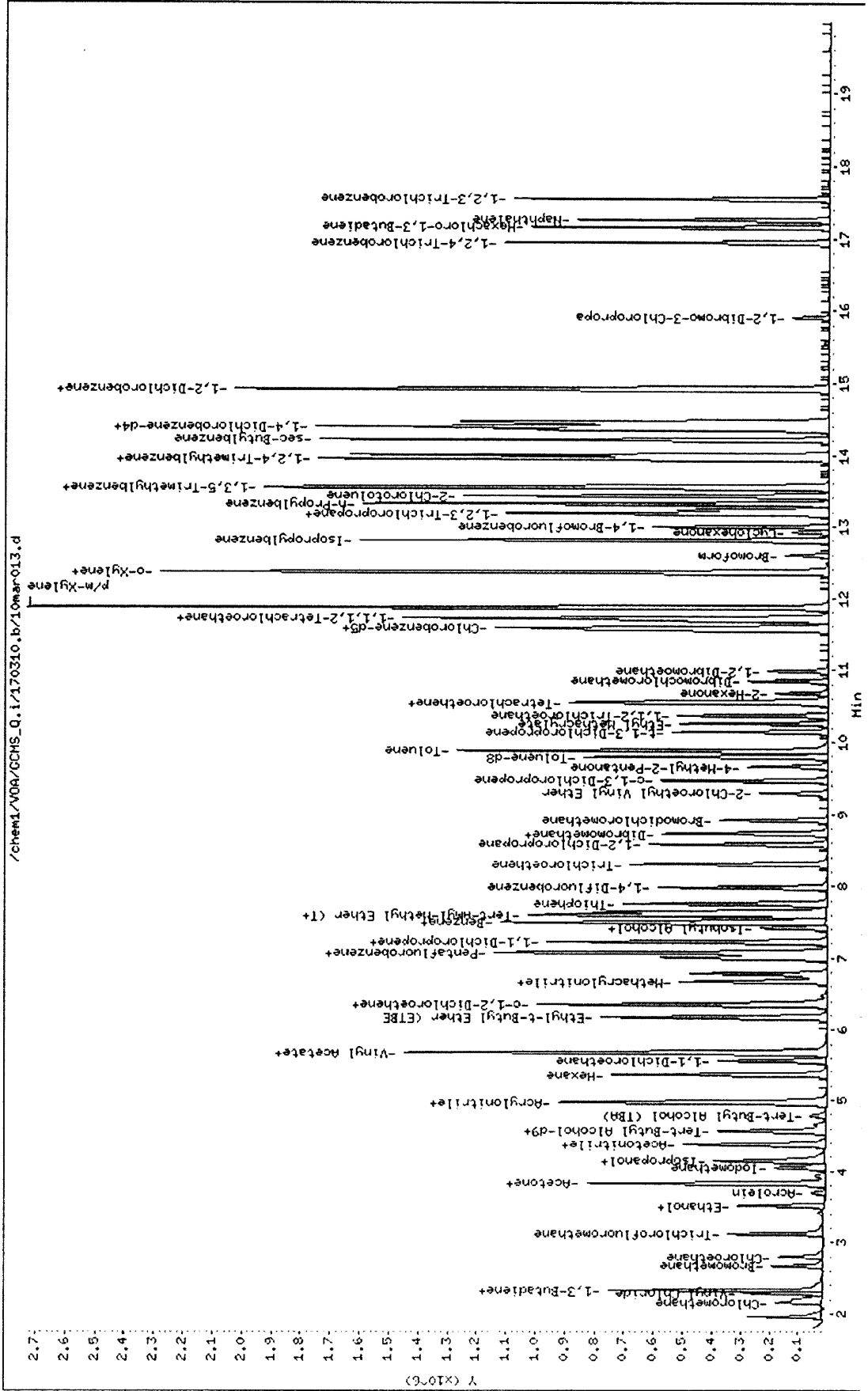
page 4 of 4

Data File: /chem1/V0A/CCHS_Q.i/170310.b/10mar013.d
 Date: 10-MAR-2017 14:22
 Client ID:
 Sample Info: ICV W022117B/W030317B

Instrument: CCHS_Q.i

Operator: 1055
 Column diameter: 0.00

Column phase:



EPA 8260B
Volatile Organics
(Solid)

Sample Data

RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER: 17-03-1523
INSTRUMENT: GC/MS Q
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-21 17:52

ANALYZED BY: 1,055
D/T ANALYZED: 2017-03-23 04:25
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar044.d\22mar044.rr

1 **CLIENT SAMPLE NUMBER: IDW-S**

LCS/MB BATCH: 170322L049 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 5.00 g / ACTUAL: 4.99 g
MS/MSD BATCH: 170322S023 **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
UNITS: ug/kg **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Cyclohexanone	0.000	1.00	ND	50	
2-Methyl-2-Butanol (TAA)	0.000	1.00	ND	50	
Acetone	1.86	1.00	ND	130	
Benzene	0.000	1.00	ND	5.0	
Bromobenzene	0.000	1.00	ND	5.0	
Bromochloromethane	0.000	1.00	ND	5.0	
Bromodichloromethane	0.000	1.00	ND	5.0	
Bromoform	0.000	1.00	ND	5.0	
Bromomethane	0.000	1.00	ND	25	
2-Butanone	0.000	1.00	ND	50	
n-Butylbenzene	0.000	1.00	ND	5.0	
sec-Butylbenzene	0.000	1.00	ND	5.0	
tert-Butylbenzene	0.000	1.00	ND	5.0	
Carbon Disulfide	0.000	1.00	ND	50	
Carbon Tetrachloride	0.000	1.00	ND	5.0	
Chlorobenzene	0.000	1.00	ND	5.0	
Chloroethane	0.000	1.00	ND	5.0	
Chloroform	0.000	1.00	ND	5.0	
Chloromethane	0.000	1.00	ND	25	
2-Chlorotoluene	0.000	1.00	ND	5.0	
4-Chlorotoluene	0.000	1.00	ND	5.0	
Dibromochloromethane	0.000	1.00	ND	5.0	
1,2-Dibromo-3-Chloropropane	0.000	1.00	ND	25	
1,2-Dibromoethane	0.000	1.00	ND	5.0	
Dibromomethane	0.000	1.00	ND	5.0	
1,2-Dichlorobenzene	0.000	1.00	ND	5.0	
2-Chloroethyl Vinyl Ether	0.000	1.00	ND	50	
1,3-Dichlorobenzene	0.000	1.00	ND	5.0	
1,4-Dichlorobenzene	0.000	1.00	ND	5.0	
Dichlorodifluoromethane	0.000	1.00	ND	5.0	
1,1-Dichloroethane	0.000	1.00	ND	5.0	
1,2-Dichloroethane	0.000	1.00	ND	2.5	
1,1-Dichloroethene	0.000	1.00	ND	5.0	
Thiophene	0.000	1.00	ND	5.0	
c-1,2-Dichloroethene	0.000	1.00	ND	5.0	
t-1,2-Dichloroethene	0.000	1.00	ND	5.0	
Acetonitrile	0.000	1.00	ND	100	
1,2-Dichloropropane	0.000	1.00	ND	5.0	
Acrolein	0.000	1.00	ND	100	

RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER: 17-03-1523
INSTRUMENT: GC/MS Q
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-21 17:52

ANALYZED BY: 1,055
D/T ANALYZED: 2017-03-23 04:25
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar044.d\22mar044.rr

1 **CLIENT SAMPLE NUMBER: IDW-S**

LCS/MB BATCH: 170322L049 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 5.00 g / ACTUAL: 4.99 g
MS/MSD BATCH: 170322S023 **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
UNITS: ug/kg **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Acrylonitrile	0.000	1.00	ND	100	
1,3-Dichloropropane	0.000	1.00	ND	5.0	
2,2-Dichloropropane	0.000	1.00	ND	5.0	
1,1-Dichloropropene	0.000	1.00	ND	5.0	
c-1,3-Dichloropropene	0.000	1.00	ND	5.0	
t-1,3-Dichloropropene	0.000	1.00	ND	5.0	
Ethylbenzene	0.000	1.00	ND	5.0	
2-Hexanone	0.000	1.00	ND	50	
Isopropylbenzene	0.000	1.00	ND	5.0	
p-Isopropyltoluene	0.000	1.00	ND	5.0	
Methylene Chloride	0.000	1.00	ND	50	
4-Methyl-2-Pentanone	0.000	1.00	ND	50	
Naphthalene	5.10	1.00	ND	50	
n-Propylbenzene	0.000	1.00	ND	5.0	
Styrene	0.000	1.00	ND	5.0	
1,4-Dioxane	0.000	1.00	ND	100	
1,1,1,2-Tetrachloroethane	0.000	1.00	ND	5.0	
Isopropanol	0.271	1.00	ND	100	
1,1,2,2-Tetrachloroethane	0.000	1.00	ND	5.0	
Tetrachloroethene	0.000	1.00	ND	5.0	
Toluene	0.000	1.00	ND	5.0	
1,2,3-Trichlorobenzene	0.000	1.00	ND	10	
1,2,4-Trichlorobenzene	0.000	1.00	ND	5.0	
1,1,1-Trichloroethane	0.000	1.00	ND	5.0	
Hexachloro-1,3-Butadiene	0.000	1.00	ND	100	
1,1,2-Trichloroethane	0.000	1.00	ND	5.0	
Iodomethane	0.000	1.00	ND	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.000	1.00	ND	50	
Trichloroethene	0.000	1.00	ND	5.0	
1,2,3-Trichloropropane	0.000	1.00	ND	5.0	
1,2,4-Trimethylbenzene	0.000	1.00	ND	5.0	
Trichlorofluoromethane	0.000	1.00	ND	50	
1,3,5-Trimethylbenzene	0.000	1.00	ND	5.0	
Vinyl Acetate	0.000	1.00	ND	50	
Vinyl Chloride	0.000	1.00	ND	5.0	
p/m-Xylene	0.000	1.00	ND	5.0	
o-Xylene	0.000	1.00	ND	5.0	
Methyl-t-Butyl Ether (MTBE)	0.000	1.00	ND	5.0	
t-1,4-Dichloro-2-Butene	0.000	1.00	ND	5.0	

RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER: 17-03-1523
INSTRUMENT: GC/MS Q
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-21 17:52

ANALYZED BY: 1,055
D/T ANALYZED: 2017-03-23 04:25
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar044.d\22mar044.rr

1 **CLIENT SAMPLE NUMBER: IDW-S**

LCS/MB BATCH: 170322L049 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 5.00 g / ACTUAL: 4.99 g
MS/MSD BATCH: 170322S023 **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
UNITS: ug/kg **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Tert-Butyl Alcohol (TBA)	0.000	1.00	ND	50	
Diisopropyl Ether (DIPE)	0.000	1.00	ND	10	
Ethyl-t-Butyl Ether (ETBE)	0.000	1.00	ND	10	
Tert-Amyl-Methyl Ether (TAME)	0.000	1.00	ND	10	
Diethyl Ether	0.000	1.00	ND	20	
Tetrahydrofuran	0.000	1.00	ND	100	
Ethanol	0.000	1.00	ND	250	
Cyclohexane	0.000	1.00	ND	50	
1,3-Butadiene	0.000	1.00	ND	5.0	
Hexane	0.000	1.00	ND	5.0	

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar044.d Instrument ID: GCMS_Q.i
 Injection date and time: 23-MAR-2017 04:25 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 23-Mar-2017 09:23 c7uq

Sample Name: 17-03-1523-1B 4.99G Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column Amount	
	Ref.	RT			(ug/l)	DEV(Min)
=====						
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.657	65	63523	250.000	0.01
4)*Pentafluorobenzene	(2)	7.057	168	454506	50.000	0.01
47)*1,4-Difluorobenzene	(3)	7.977	114	710282	50.000	0.01
65)*Chlorobenzene-d5	(4)	11.554	117	673510	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.439	152	343693	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	6.986	113	186138	48.791	0.01
SpikedAmount 50.000				Recovery = 97.582		
46)\$1,2-Dichloroethane-d4	(2)	7.417	65	214944	45.198	0.00
SpikedAmount 50.000				Recovery = 90.395		
62)\$Toluene-d8	(3)	9.790	98	877760	50.235	0.01
SpikedAmount 50.000				Recovery = 100.470		
81)\$1,4-Bromofluorobenzene	(4)	12.996	95	334312	48.903	0.00
SpikedAmount 50.000				Recovery = 97.807		
Target Compounds						
2) Ethanol	(1)	0.000		0	N.D.	QValue
3) Tert-Butyl Alcohol (TBA)	(1)	0.000		0	N.D.	
5) Dichlorodifluoromethane	(2)	0.000		0	N.D.	
6) Chloromethane	(2)	0.000		0	N.D.	
7) Vinyl Chloride	(2)	0.000		0	N.D.	
8) Bromomethane	(2)	0.000		0D	N.D.	
9) Chloroethane	(2)	0.000		0	N.D.	
10) 1,3-Butadiene	(2)	0.000		0	N.D.	
11) Trichlorofluoromethane	(2)	0.000		0	N.D.	
12) Diethyl Ether	(2)	0.000		0	N.D.	
13) Acetone	(2)	3.933	58	853	1.855	49
14) Iodomethane	(2)	0.000		0	N.D.	
15) 1,1-Dichloroethene	(2)	0.000		0	N.D.	
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	0.000		0	N.D.	
17) Isopropanol	(2)	4.199	45	86	0.271	1
18) Carbon Disulfide	(2)	0.000		0	N.D.	
19) Acetonitrile	(2)	0.000		0	N.D.	
20) Acrylonitrile	(2)	0.000		0	N.D.	
21) Allyl Chloride	(2)	0.000		0	N.D.	
22) Acrolein	(2)	0.000		0	N.D.	
23) Methylene Chloride	(2)	0.000		0	N.D.	

D = Compound was deleted.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar044.d
 Injection date and time: 23-MAR-2017 04:25

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 09:42

Sublist used: all

Date, time and analyst ID of latest file update: 23-Mar-2017 09:23 c7uq

Sample Name: 17-03-1523-1B 4.99G
 Response via Initial Calibration

Misc Info: V020817D

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	0.000		0	N.D.	
25) Isobutyl Alcohol	(2)	0.000		0	N.D.	
26) Methyl-t-Butyl Ether (MTBE)	(2)	0.000		0	N.D.	
27) Hexane	(2)	0.000		0	N.D.	
28) 1,1-Dichloroethane	(2)	0.000		0	N.D.	
29) Vinyl Acetate	(2)	0.000		0	N.D.	
30) Diisopropyl Ether (DIPE)	(2)	0.000		0	N.D.	
31) Chloroprene	(2)	0.000		0	N.D.	
32) Ethyl-t-Butyl Ether (ETBE)	(2)	0.000		0	N.D.	
33) c-1,2-Dichloroethene	(2)	0.000		0	N.D.	
34) 2,2-Dichloropropane	(2)	0.000		0	N.D.	
35) 2-Butanone	(2)	0.000		0D	N.D.	
36) Propionitrile	(2)	0.000		0	N.D.	
37) Methacrylonitrile	(2)	0.000		0	N.D.	
38) Bromochloromethane	(2)	0.000		0	N.D.	
39) Tetrahydrofuran	(2)	0.000		0	N.D.	
40) Chloroform	(2)	0.000		0	N.D.	
42) 1,1,1-Trichloroethane	(2)	0.000		0	N.D.	
43) Cyclohexane	(2)	0.000		0D	N.D.	
44) 1,1-Dichloropropene	(2)	0.000		0	N.D.	
45) Carbon Tetrachloride	(2)	0.000		0	N.D.	
48) Benzene	(3)	0.000		0	N.D.	
49) 1,2-Dichloroethane	(3)	0.000		0	N.D.	
50) 2-Methyl-2-Butanol (TAA)	(3)	0.000		0	N.D.	
51) Tert-Amyl-Methyl Ether (TAME)	(3)	0.000		0	N.D.	
52) Thiophene	(3)	0.000		0	N.D.	
53) 2,2,4-Trimethyl Pentane	(3)	0.000		0	N.D.	
54) Trichloroethene	(3)	0.000		0	N.D.	
55) 1,2-Dichloropropane	(3)	0.000		0	N.D.	
56) Dibromomethane	(3)	0.000		0	N.D.	
57) Methyl Methacrylate	(3)	0.000		0	N.D.	
58) 1,4-Dioxane	(3)	0.000		0	N.D.	
59) Bromodichloromethane	(3)	0.000		0	N.D.	
60) 2-Chloroethyl Vinyl Ether	(3)	0.000		0	N.D.	
61) c-1,3-Dichloropropene	(3)	0.000		0	N.D.	
63) Toluene	(3)	0.000		0	N.D.	
64) 4-Methyl-2-Pentanone	(3)	0.000		0	N.D.	

D = Compound was deleted.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar044.d
 Injection date and time: 23-MAR-2017 04:25

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 23-Mar-2017 09:23 c7uq

Sample Name: 17-03-1523-1B 4.99G
 Response via Initial Calibration

Misc Info: V020817D

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	0.000		0	N.D.	
67) Ethyl Methacrylate	(4)	0.000		0	N.D.	
68) 1,1,2-Trichloroethane	(4)	0.000		0	N.D.	
69) Tetrachloroethene	(4)	0.000		0	N.D.	
70) 1,3-Dichloropropane	(4)	0.000		0	N.D.	
71) 2-Hexanone	(4)	0.000		0D	N.D.	
72) Dibromochloromethane	(4)	0.000		0	N.D.	
73) 1,2-Dibromoethane	(4)	0.000		0	N.D.	
74) Chlorobenzene	(4)	0.000		0	N.D.	
75) 1,1,1,2-Tetrachloroethane	(4)	0.000		0	N.D.	
76) Ethylbenzene	(4)	0.000		0	N.D.	
77) p/m-Xylene	(4)	0.000		0	N.D.	
78) o-Xylene	(4)	0.000		0	N.D.	
79) Styrene	(4)	0.000		0	N.D.	
80) Isopropylbenzene	(4)	0.000		0	N.D.	
82) 1,2,3-Trichloropropane	(4)	0.000		0	N.D.	
83) Bromobenzene	(4)	0.000		0	N.D.	
84) n-Propylbenzene	(4)	0.000		0	N.D.	
85) t-1,4-Dichloro-2-Butene	(4)	0.000		0	N.D.	
86) 2-Chlorotoluene	(4)	0.000		0	N.D.	
87) 1,3,5-Trimethylbenzene	(4)	0.000		0	N.D.	
89) Bromoform	(5)	0.000		0	N.D.	
90) 1,1,2,2-Tetrachloroethane	(5)	0.000		0D	N.D.	
91) 4-Chlorotoluene	(5)	0.000		0	N.D.	
92) Cyclohexanone	(5)	0.000		0D	N.D.	
93) 1,2,4-Trimethylbenzene	(5)	0.000		0	N.D.	
94) tert-Butylbenzene	(5)	0.000		0	N.D.	
95) p-Isopropyltoluene	(5)	0.000		0	N.D.	
96) sec-Butylbenzene	(5)	0.000		0	N.D.	
97) 1,3-Dichlorobenzene	(5)	0.000		0	N.D.	
98) 1,4-Dichlorobenzene	(5)	0.000		0	N.D.	
99) 1,2-Dichlorobenzene	(5)	0.000		0	N.D.	
100) n-Butylbenzene	(5)	0.000		0	N.D.	
101) 1,2-Dibromo-3-Chloropropane	(5)	0.000		0	N.D.	
102) 1,2,4-Trichlorobenzene	(5)	0.000		0	N.D.	
103) Hexachloro-1,3-Butadiene	(5)	0.000		0	N.D.	
104) Naphthalene	(5)	17.258	128	111124	5.097	98

D = Compound was deleted.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar044.d Instrument ID: GCMS_Q.i
 Injection date and time: 23-MAR-2017 04:25 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 23-Mar-2017 09:23 c7uq

Sample Name: 17-03-1523-1B 4.99G Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	0.000		0	N.D.	

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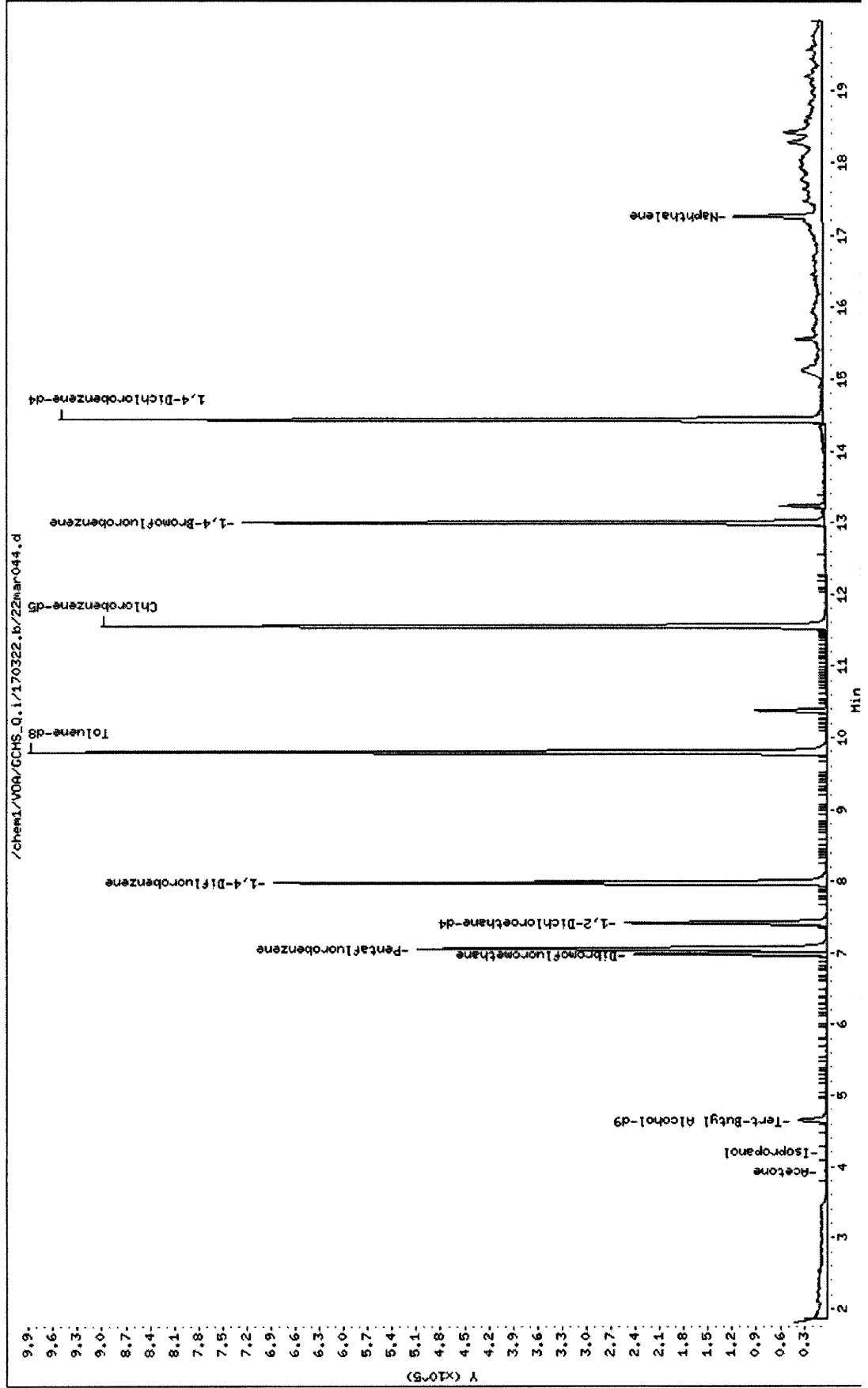
Data File: /chem1/V06/GCHS_Q.1/170322.b/22mar044.d
Date : 23-MAR-2017 04:25
Client ID:
Sample Info: 17-03-1523-1B 4.99C

Instrument: GCHS_Q.1

Operator: 1055

Column diameter: 0.00

Column phase:



EPA 8260B
Volatile Organics
(Solid)

Quality Control

Method Blank
LCS/LCSD

METHOD BLANK ASSOCIATION SUMMARY FOR METHOD: EPA 8260B

MB SAMPLE ID: 099-12-796-12486
MB BATCH ID: 170322L049
INSTRUMENT: GC/MS Q
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,055
D/T ANALYZED: 2017-03-22 22:54
REVIEWED BY:
D/T REVIEWED:
MATRIX: Soil

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar032.d\22mar032.rr

CLIENT WORK ORDER: 17-03-1523

<u>S#</u>	<u>RUN TYPE</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	IDW-S		2017-03-23 04:25	Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar044.d\22mar044.rr

RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER: 099-12-796
INSTRUMENT: GC/MS Q
EXTRACTION : EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,055
D/T ANALYZED: 2017-03-22 22:54
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar032.d\22mar032.rr

MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 170322L049 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 5.00 g / ACTUAL: 5.00 g
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
UNITS: ug/kg **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Cyclohexanone	0.000	1.00	ND	50	
2-Methyl-2-Butanol (TAA)	0.000	1.00	ND	50	
Acetone	4.17	1.00	ND	120	
Benzene	0.000	1.00	ND	5.0	
Bromobenzene	0.000	1.00	ND	5.0	
Bromochloromethane	0.000	1.00	ND	5.0	
Bromodichloromethane	0.000	1.00	ND	5.0	
Bromoform	0.000	1.00	ND	5.0	
Bromomethane	0.0825	1.00	ND	25	
2-Butanone	0.000	1.00	ND	50	
n-Butylbenzene	0.000	1.00	ND	5.0	
sec-Butylbenzene	0.000	1.00	ND	5.0	
tert-Butylbenzene	0.000	1.00	ND	5.0	
Carbon Disulfide	0.000	1.00	ND	50	
Carbon Tetrachloride	0.000	1.00	ND	5.0	
Chlorobenzene	0.000	1.00	ND	5.0	
Chloroethane	0.000	1.00	ND	5.0	
Chloroform	0.000	1.00	ND	5.0	
Chloromethane	0.000	1.00	ND	25	
2-Chlorotoluene	0.000	1.00	ND	5.0	
4-Chlorotoluene	0.000	1.00	ND	5.0	
Dibromochloromethane	0.000	1.00	ND	5.0	
1,2-Dibromo-3-Chloropropane	0.000	1.00	ND	10	
1,2-Dibromoethane	0.000	1.00	ND	5.0	
Dibromomethane	0.000	1.00	ND	5.0	
1,2-Dichlorobenzene	0.000	1.00	ND	5.0	
2-Chloroethyl Vinyl Ether	0.000	1.00	ND	50	
1,3-Dichlorobenzene	0.000	1.00	ND	5.0	
1,4-Dichlorobenzene	0.000	1.00	ND	5.0	
Dichlorodifluoromethane	0.000	1.00	ND	5.0	
1,1-Dichloroethane	0.000	1.00	ND	5.0	
1,2-Dichloroethane	0.000	1.00	ND	5.0	
1,1-Dichloroethene	0.000	1.00	ND	5.0	
Thiophene	0.000	1.00	ND	5.0	
c-1,2-Dichloroethene	0.000	1.00	ND	5.0	
t-1,2-Dichloroethene	0.000	1.00	ND	5.0	
Acetonitrile	0.000	1.00	ND	100	
1,2-Dichloropropane	0.000	1.00	ND	5.0	
Acrolein	0.000	1.00	ND	100	

Return to Contents

RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER: 099-12-796
INSTRUMENT: GC/MS Q
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,055
D/T ANALYZED: 2017-03-22 22:54
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar032.d\22mar032.rr

MB CLIENT SAMPLE NUMBER: Method Blank

LCS/MB BATCH: 170322L049 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 5.00 g / ACTUAL: 5.00 g
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
UNITS: ug/kg **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Acrylonitrile	0.000	1.00	ND	25	
1,3-Dichloropropane	0.000	1.00	ND	5.0	
2,2-Dichloropropane	0.000	1.00	ND	5.0	
1,1-Dichloropropene	0.000	1.00	ND	5.0	
c-1,3-Dichloropropene	0.000	1.00	ND	5.0	
t-1,3-Dichloropropene	0.000	1.00	ND	5.0	
Ethylbenzene	0.000	1.00	ND	5.0	
2-Hexanone	0.000	1.00	ND	50	
Isopropylbenzene	0.000	1.00	ND	5.0	
p-Isopropyltoluene	0.000	1.00	ND	5.0	
Methylene Chloride	0.000	1.00	ND	50	
4-Methyl-2-Pentanone	0.000	1.00	ND	50	
Naphthalene	0.187	1.00	ND	50	
n-Propylbenzene	0.000	1.00	ND	5.0	
Styrene	0.000	1.00	ND	5.0	
1,4-Dioxane	0.000	1.00	ND	250	
1,1,1,2-Tetrachloroethane	0.000	1.00	ND	5.0	
Isopropanol	0.697	1.00	ND	100	
1,1,2,2-Tetrachloroethane	0.000	1.00	ND	5.0	
Tetrachloroethene	0.000	1.00	ND	5.0	
Toluene	0.000	1.00	ND	5.0	
1,2,3-Trichlorobenzene	0.138	1.00	ND	10	
1,2,4-Trichlorobenzene	0.0857	1.00	ND	5.0	
1,1,1-Trichloroethane	0.000	1.00	ND	5.0	
Hexachloro-1,3-Butadiene	0.135	1.00	ND	100	
1,1,2-Trichloroethane	0.000	1.00	ND	5.0	
Iodomethane	0.000	1.00	ND	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.000	1.00	ND	50	
Trichloroethene	0.000	1.00	ND	5.0	
1,2,3-Trichloropropane	0.000	1.00	ND	5.0	
1,2,4-Trimethylbenzene	0.000	1.00	ND	5.0	
Trichlorofluoromethane	0.000	1.00	ND	50	
1,3,5-Trimethylbenzene	0.000	1.00	ND	5.0	
Vinyl Acetate	0.000	1.00	ND	50	
Vinyl Chloride	0.000	1.00	ND	5.0	
p/m-Xylene	0.000	1.00	ND	5.0	
o-Xylene	0.000	1.00	ND	5.0	
Methyl-t-Butyl Ether (MTBE)	0.000	1.00	ND	5.0	
t-1,4-Dichloro-2-Butene	0.000	1.00	ND	25	

RAW DATA SHEET FOR METHOD: EPA 8260B

WORK ORDER: 099-12-796
INSTRUMENT: GC/MS Q
EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,055
D/T ANALYZED: 2017-03-22 22:54
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar032.d\22mar032.rr

MB **CLIENT SAMPLE NUMBER:** Method Blank

LCS/MB BATCH: 170322L049 **SAMPLE VOLUME / WEIGHT:** DEFAULT: 5.00 g / ACTUAL: 5.00 g
MS/MSD BATCH: **FINAL VOLUME / WEIGHT:** DEFAULT: 5.00 mL / ACTUAL: 5.00 mL
UNITS: ug/kg **ADJUSTMENT RATIO TO PF:** 1.00

COMMENT:

<u>COMPOUND</u>	<u>ON COL CONC</u>	<u>DF</u>	<u>CONC</u>	<u>RL</u>	<u>QUAL</u>
Tert-Butyl Alcohol (TBA)	0.000	1.00	ND	50	
Diisopropyl Ether (DIPE)	0.000	1.00	ND	10	
Ethyl-t-Butyl Ether (ETBE)	0.000	1.00	ND	10	
Tert-Amyl-Methyl Ether (TAME)	0.000	1.00	ND	10	
Diethyl Ether	0.000	1.00	ND	50	
Tetrahydrofuran	0.000	1.00	ND	50	
Ethanol	0.000	1.00	ND	500	
Cyclohexane	0.000	1.00	ND	50	
1,3-Butadiene	0.000	1.00	ND	5.0	
Hexane	0.000	1.00	ND	5.0	

LCS QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

LCS SAMPLE ID: 099-12-796-12486
LCS/MB BATCH ID: 170322L049
INSTRUMENT: GC/MS Q

EXTRACTION: EPA 5030C
D/T EXTRACTED: 2017-03-22 00:00

ANALYZED BY: 1,055
D/T ANALYZED: 2017-03-22 21:59
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar030.d\22mar030.rr

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Benzene	50.00	52.90	106	80-120	73-127	PASS	
Carbon Tetrachloride	50.00	44.03	88	65-137	53-149	PASS	
Chlorobenzene	50.00	50.26	101	80-120	73-127	PASS	
1,2-Dibromoethane	50.00	53.15	106	80-120	73-127	PASS	
1,2-Dichlorobenzene	50.00	49.65	99	80-120	73-127	PASS	
1,2-Dichloroethane	50.00	47.31	95	80-120	73-127	PASS	
1,1-Dichloroethene	50.00	48.40	97	68-128	58-138	PASS	
Ethylbenzene	50.00	49.04	98	80-120	73-127	PASS	
Toluene	50.00	50.58	101	80-120	73-127	PASS	
Trichloroethene	50.00	50.98	102	80-120	73-127	PASS	
Vinyl Chloride	50.00	41.23	82	67-127	57-137	PASS	
p/m-Xylene	100.0	99.56	100	75-125	67-133	PASS	
o-Xylene	50.00	50.16	100	75-125	67-133	PASS	
Methyl-t-Butyl Ether (MTBE)	50.00	49.23	98	70-124	61-133	PASS	
Tert-Butyl Alcohol (TBA)	250.0	303.6	121	73-121	65-129	PASS	
Diisopropyl Ether (DIPE)	50.00	51.50	103	69-129	59-139	PASS	
Ethyl-t-Butyl Ether (ETBE)	50.00	49.08	98	70-124	61-133	PASS	
Tert-Amyl-Methyl Ether (TAME)	50.00	49.91	100	74-122	66-130	PASS	
Ethanol	500.0	387.8	78	51-135	37-149	PASS	

Total number of LCS compounds: 19
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Compounds listed in bold are required to be reported.

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 8260B**

SPIKED SAMPLE ID: 17-03-1591-5
MS/MSD BATCH: 170322S023

INSTRUMENTS:
SAMPLE: GC/MS Q
MS: GC/MS Q
MSD: GC/MS Q

EXTRACTION: EPA 5030C
D/T EXTRACTED:

SAMPLE: 2017-03-22 15:17
MS: 2017-03-22 15:17
MSD: 2017-03-22 15:17

ANALYZED BY: 1,055
D/T ANALYZED:

SAMPLE: 2017-03-22 23:49
MS: 2017-03-23 00:17
MSD: 2017-03-23 00:45

REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC.CL	RPD	RPD CL	STATUS	QUALIFIER
Benzene	ND	10.00	50.00	46.53	93	48.34	97	61-127	4	0-20	PASS	
Carbon Tetrachloride	ND	10.00	50.00	38.71	77	43.42	87	51-135	11	0-29	PASS	
Chlorobenzene	ND	10.00	50.00	42.86	86	44.51	89	57-123	4	0-20	PASS	
1,2-Dibromoethane	ND	10.00	50.00	45.69	91	46.16	92	64-124	1	0-20	PASS	
1,2-Dichlorobenzene	ND	10.00	50.00	41.79	84	43.20	86	35-131	3	0-25	PASS	
1,2-Dichloroethane	ND	10.00	50.00	41.13	82	42.15	84	80-120	2	0-20	PASS	
1,1-Dichloroethene	ND	10.00	50.00	43.92	88	46.13	92	47-143	5	0-25	PASS	
Ethylbenzene	ND	10.00	50.00	42.40	85	44.39	89	57-129	5	0-22	PASS	
Toluene	ND	10.00	50.00	44.33	89	46.10	92	63-123	4	0-20	PASS	
Trichloroethene	ND	10.00	50.00	45.78	92	46.99	94	44-158	3	0-20	PASS	
Vinyl Chloride	ND	10.00	50.00	38.18	76	40.12	80	49-139	5	0-47	PASS	
p/m-Xylene	ND	20.00	100.0	86.40	86	89.99	90	70-130	4	0-30	PASS	
o-Xylene	ND	10.00	50.00	43.56	87	45.33	91	70-130	4	0-30	PASS	
Methyl-t-Butyl Ether (MTBE)	ND	10.00	50.00	43.08	86	43.90	88	57-123	2	0-21	PASS	
Tert-Butyl Alcohol (TBA)	ND	50.00	250.0	264.3	106	255.4	102	30-168	3	0-34	PASS	
Diisopropyl Ether (DIPE)	ND	10.00	50.00	45.90	92	47.48	95	57-129	3	0-20	PASS	
Ethyl-t-Butyl Ether (ETBE)	ND	10.00	50.00	43.18	86	44.64	89	55-127	3	0-20	PASS	
Tert-Amyl-Methyl Ether (TAME)	ND	10.00	50.00	42.66	85	44.22	88	58-124	4	0-20	PASS	
Ethanol	ND	100.0	500.0	368.2	74	343.2	69	17-167	7	0-47	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	22mar035.ir	Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar035.d\
MSD	22mar036.ir	Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar036.d\

SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER: 17-03-1523

REVIEWED BY:

BATCH ID:

D/T REVIEWED:

LCS/MB: 170322L049

MS: 170322S023

EXTRACTION: EPA 5030C

1 CLIENT SAMPLE NUMBER: **IDW-S**

INSTRUMENT: GC/MS Q

ANALYZED BY: 1,055

D/T EXTRACTED: 2017-03-21 17:52

D/T ANALYZED 2017-03-23 04:25

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar044.d\22mar044.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
Dibromofluoromethane	98	79-133	PASS	
1,2-Dichloroethane-d4	90	71-155	PASS	
Toluene-d8	100	80-120	PASS	
1,4-Bromofluorobenzene	98	80-120	PASS	

MS CLIENT SAMPLE NUMBER: **Matrix Spike**

INSTRUMENT: GC/MS Q

ANALYZED BY: 1,055

D/T EXTRACTED: 2017-03-22 15:17

D/T ANALYZED 2017-03-23 00:17

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar035.d\22mar035.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
Dibromofluoromethane	97	79-133	PASS	
1,2-Dichloroethane-d4	88	71-155	PASS	
Toluene-d8	102	80-120	PASS	
1,4-Bromofluorobenzene	97	80-120	PASS	

MSD CLIENT SAMPLE NUMBER: **Matrix Spike Duplicate**

INSTRUMENT: GC/MS Q

ANALYZED BY: 1,055

D/T EXTRACTED: 2017-03-22 15:17

D/T ANALYZED 2017-03-23 00:45

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar036.d\22mar036.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
Dibromofluoromethane	97	79-133	PASS	
1,2-Dichloroethane-d4	87	71-155	PASS	
Toluene-d8	102	80-120	PASS	
1,4-Bromofluorobenzene	96	80-120	PASS	

SURROGATE RECOVERIES FOR METHOD: EPA 8260B

WORK ORDER: 17-03-1523

BATCH ID:

LCS/MB: **170322L049**

MS:

EXTRACTION: EPA 5030C

REVIEWED BY:

D/T REVIEWED:

MB CLIENT SAMPLE NUMBER: Method Blank

INSTRUMENT: GC/MS Q

ANALYZED BY: 1,055

D/T EXTRACTED: 2017-03-22 00:00

D/T ANALYZED 2017-03-22 22:54

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar032.d\22mar032.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
Dibromofluoromethane	95	79-133	PASS	
1,2-Dichloroethane-d4	90	71-155	PASS	
Toluene-d8	100	80-120	PASS	
1,4-Bromofluorobenzene	98	80-120	PASS	

LCS CLIENT SAMPLE NUMBER: Lab Control Sample

INSTRUMENT: GC/MS Q

ANALYZED BY: 1,055

D/T EXTRACTED: 2017-03-22 00:00

D/T ANALYZED 2017-03-22 21:59

DATA FILE: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar030.d\22mar030.rr

COMMENT:

<u>COMPOUND</u>	<u>% REC</u>	<u>% REC CL</u>	<u>STATUS</u>	<u>QUALIFIERS</u>
Dibromofluoromethane	97	79-133	PASS	
1,2-Dichloroethane-d4	87	71-155	PASS	
Toluene-d8	102	80-120	PASS	
1,4-Bromofluorobenzene	97	80-120	PASS	

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar032.d
 Injection date and time: 22-MAR-2017 22:54

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 23-Mar-2017 08:12 c7uq

Sample Name: PB 032017-5A 5.00G
 Response via Initial Calibration

Misc Info: V020817D V07-22-09

Compounds	I.S.		QIon	Area	On-Column	
	Ref.	RT			Amount (ug/l)	DEV(Min)
=====						
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.662	65	77840	250.000	0.00
4)*Pentafluorobenzene	(2)	7.057	168	454663	50.000	0.01
47)*1,4-Difluorobenzene	(3)	7.977	114	699100	50.000	0.01
65)*Chlorobenzene-d5	(4)	11.554	117	661886	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.433	152	354976	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	6.992	113	181443	47.544	0.00
SpikedAmount 50.000	Recovery =		95.088			
46)\$1,2-Dichloroethane-d4	(2)	7.416	65	214374	45.062	0.00
SpikedAmount 50.000	Recovery =		90.125			
62)\$Toluene-d8	(3)	9.790	98	856009	49.774	0.01
SpikedAmount 50.000	Recovery =		99.547			
81)\$1,4-Bromofluorobenzene	(4)	12.996	95	329825	49.094	0.00
SpikedAmount 50.000	Recovery =		98.189			
Target Compounds						
						QValue
2) Ethanol	(1)	0.000		0		N.D.
3) Tert-Butyl Alcohol (TBA)	(1)	0.000		0		N.D.
5) Dichlorodifluoromethane	(2)	0.000		0		N.D.
6) Chloromethane	(2)	0.000		0		N.D.
7) Vinyl Chloride	(2)	0.000		0		N.D.
8) Bromomethane	(2)	2.675	94	397	0.0825	50
9) Chloroethane	(2)	0.000		0		N.D.
10) 1,3-Butadiene	(2)	0.000		0		N.D.
11) Trichlorofluoromethane	(2)	0.000		0		N.D.
12) Diethyl Ether	(2)	0.000		0		N.D.
13) Acetone	(2)	3.943	58	1918	4.170	80
14) Iodomethane	(2)	0.000		0		N.D.
15) 1,1-Dichloroethene	(2)	0.000		0		N.D.
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	0.000		0		N.D.
17) Isopropanol	(2)	4.183	45	221	0.697	1
18) Carbon Disulfide	(2)	0.000		0		N.D.
19) Acetonitrile	(2)	0.000		0		N.D.
20) Acrylonitrile	(2)	0.000		0		N.D.
21) Allyl Chloride	(2)	0.000		0		N.D.
22) Acrolein	(2)	0.000		0		N.D.
23) Methylene Chloride	(2)	0.000		0		N.D.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar032.d Instrument ID: GCMS_Q.i
 Injection date and time: 22-MAR-2017 22:54 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 23-Mar-2017 08:12 c7uq

Sample Name: PB 032017-5A 5.00G Misc Info: V020817D V07-22-09
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	0.000		0	N.D.	
25) Isobutyl Alcohol	(2)	0.000		0	N.D.	
26) Methyl-t-Butyl Ether (MTBE)	(2)	0.000		0	N.D.	
27) Hexane	(2)	0.000		0	N.D.	
28) 1,1-Dichloroethane	(2)	0.000		0	N.D.	
29) Vinyl Acetate	(2)	0.000		0	N.D.	
30) Diisopropyl Ether (DIPE)	(2)	0.000		0	N.D.	
31) Chloroprene	(2)	0.000		0	N.D.	
32) Ethyl-t-Butyl Ether (ETBE)	(2)	0.000		0	N.D.	
33) c-1,2-Dichloroethene	(2)	0.000		0	N.D.	
34) 2,2-Dichloropropane	(2)	0.000		0	N.D.	
35) 2-Butanone	(2)	0.000		0D	N.D.	
36) Propionitrile	(2)	0.000		0	N.D.	
37) Methacrylonitrile	(2)	0.000		0	N.D.	
38) Bromochloromethane	(2)	0.000		0	N.D.	
39) Tetrahydrofuran	(2)	0.000		0	N.D.	
40) Chloroform	(2)	0.000		0	N.D.	
42) 1,1,1-Trichloroethane	(2)	0.000		0	N.D.	
43) Cyclohexane	(2)	0.000		0D	N.D.	
44) 1,1-Dichloropropene	(2)	0.000		0	N.D.	
45) Carbon Tetrachloride	(2)	0.000		0	N.D.	
48) Benzene	(3)	0.000		0	N.D.	
49) 1,2-Dichloroethane	(3)	0.000		0	N.D.	
50) 2-Methyl-2-Butanol (TAA)	(3)	0.000		0	N.D.	
51) Tert-Amyl-Methyl Ether (TAME)	(3)	0.000		0	N.D.	
52) Thiophene	(3)	0.000		0	N.D.	
53) 2,2,4-Trimethyl Pentane	(3)	0.000		0	N.D.	
54) Trichloroethene	(3)	0.000		0	N.D.	
55) 1,2-Dichloropropane	(3)	0.000		0	N.D.	
56) Dibromomethane	(3)	0.000		0	N.D.	
57) Methyl Methacrylate	(3)	0.000		0	N.D.	
58) 1,4-Dioxane	(3)	0.000		0	N.D.	
59) Bromodichloromethane	(3)	0.000		0	N.D.	
60) 2-Chloroethyl Vinyl Ether	(3)	0.000		0	N.D.	
61) c-1,3-Dichloropropene	(3)	0.000		0	N.D.	
63) Toluene	(3)	0.000		0	N.D.	
64) 4-Methyl-2-Pentanone	(3)	0.000		0	N.D.	

D = Compound was deleted.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar032.d Instrument ID: GCMS_Q.i
 Injection date and time: 22-MAR-2017 22:54 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 23-Mar-2017 08:12 c7uq

Sample Name: PB 032017-5A 5.00G Misc Info: V020817D V07-22-09
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	0.000		0	N.D.	
67) Ethyl Methacrylate	(4)	0.000		0	N.D.	
68) 1,1,2-Trichloroethane	(4)	0.000		0	N.D.	
69) Tetrachloroethene	(4)	0.000		0	N.D.	
70) 1,3-Dichloropropane	(4)	0.000		0	N.D.	
71) 2-Hexanone	(4)	0.000		0	N.D.	
72) Dibromochloromethane	(4)	0.000		0	N.D.	
73) 1,2-Dibromoethane	(4)	0.000		0	N.D.	
74) Chlorobenzene	(4)	0.000		0	N.D.	
75) 1,1,1,2-Tetrachloroethane	(4)	0.000		0	N.D.	
76) Ethylbenzene	(4)	0.000		0	N.D.	
77) p/m-Xylene	(4)	0.000		0	N.D.	
78) o-Xylene	(4)	0.000		0	N.D.	
79) Styrene	(4)	0.000		0	N.D.	
80) Isopropylbenzene	(4)	0.000		0	N.D.	
82) 1,2,3-Trichloropropane	(4)	0.000		0	N.D.	
83) Bromobenzene	(4)	0.000		0	N.D.	
84) n-Propylbenzene	(4)	0.000		0	N.D.	
85) t-1,4-Dichloro-2-Butene	(4)	0.000		0	N.D.	
86) 2-Chlorotoluene	(4)	0.000		0	N.D.	
87) 1,3,5-Trimethylbenzene	(4)	0.000		0	N.D.	
89) Bromoform	(5)	0.000		0	N.D.	
90) 1,1,2,2-Tetrachloroethane	(5)	0.000		0	N.D.	
91) 4-Chlorotoluene	(5)	0.000		0	N.D.	
92) Cyclohexanone	(5)	0.000		0D	N.D.	
93) 1,2,4-Trimethylbenzene	(5)	0.000		0	N.D.	
94) tert-Butylbenzene	(5)	0.000		0	N.D.	
95) p-Isopropyltoluene	(5)	0.000		0	N.D.	
96) sec-Butylbenzene	(5)	0.000		0	N.D.	
97) 1,3-Dichlorobenzene	(5)	0.000		0	N.D.	
98) 1,4-Dichlorobenzene	(5)	0.000		0	N.D.	
99) 1,2-Dichlorobenzene	(5)	0.000		0	N.D.	
100) n-Butylbenzene	(5)	0.000		0	N.D.	
101) 1,2-Dibromo-3-Chloropropane	(5)	0.000		0	N.D.	
102) 1,2,4-Trichlorobenzene	(5)	16.948	180	947	0.0857	93
103) Hexachloro-1,3-Butadiene	(5)	17.160	225	833	0.135	94
104) Naphthalene	(5)	17.264	128	4205	0.187	61

D = Compound was deleted.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar032.d Instrument ID: GCMS_Q.i
 Injection date and time: 22-MAR-2017 22:54 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 23-Mar-2017 08:12 c7uq

Sample Name: PB 032017-5A 5.00G Misc Info: V020817D V07-22-09
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
=====	=====	=====	=====	=====	=====	=====
105) 1,2,3-Trichlorobenzene	(5)	17.547	180	1371	0.138	86

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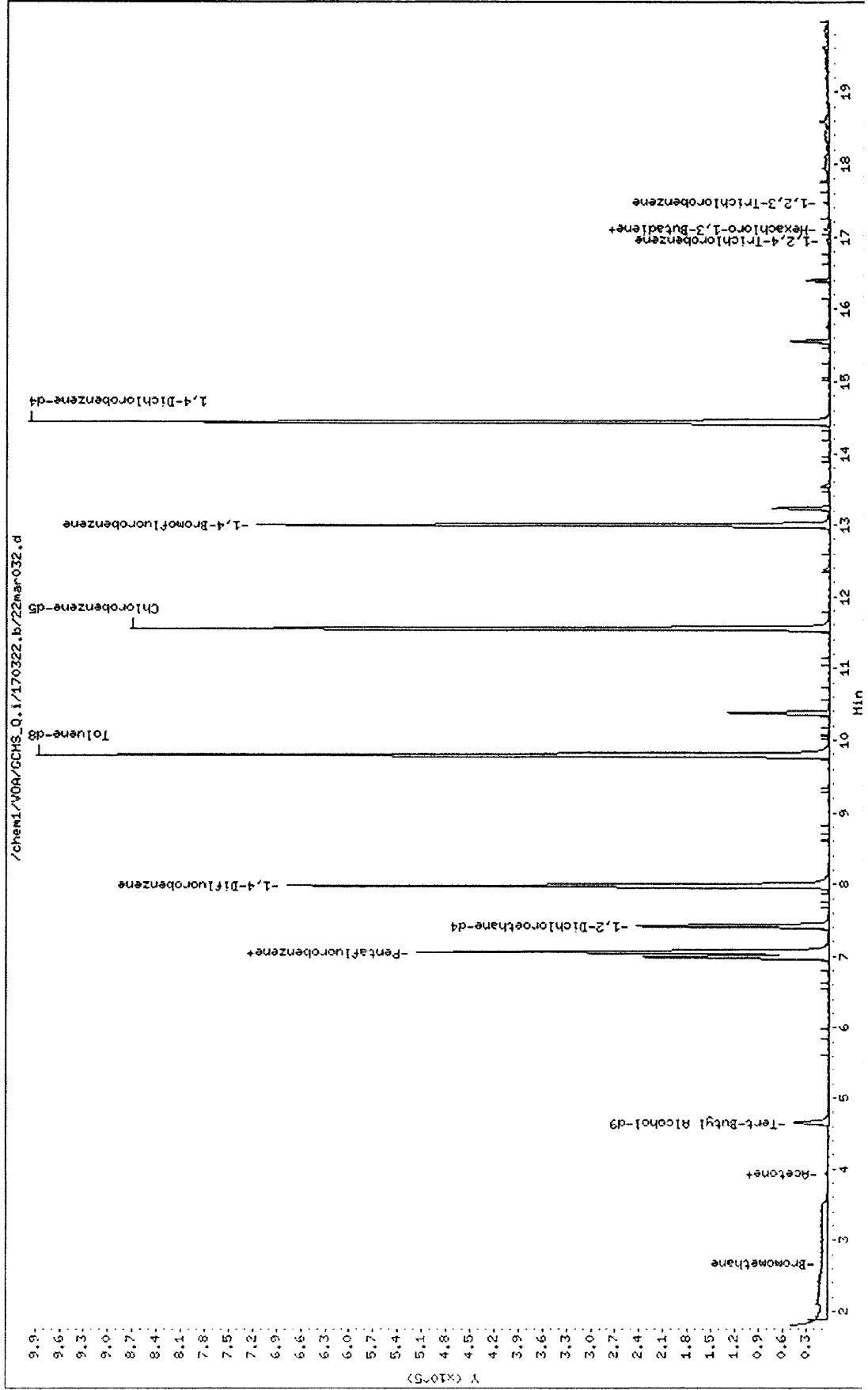
Data File: /chem1/V00A/GCHS_Q.i/170322.b/22mar032.d
Date : 22-Mar-2017 22:54
Client ID:
Sample Info: FB 032017-5A 5.00G

Instrument: GCHS_Q.i

Operator: 1055

Column diameter: 0.00

Column phase:



Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar030.d Instrument ID: GCMS_Q.i
 Injection date and time: 22-MAR-2017 21:59 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 22-Mar-2017 22:20 Unknown

Sample Name: LCS V022117B/V031017B Misc Info: V020817D V07-22-09
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV(Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.656	65	75917	250.000	0.01
4)*Pentafluorobenzene	(2)	7.063	168	444478	50.000	0.00
47)*1,4-Difluorobenzene	(3)	7.982	114	687964	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.553	117	665792	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.433	152	343823	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	6.992	113	180461	48.370	0.00
SpikedAmount 50.000				Recovery = 96.740		
46)\$1,2-Dichloroethane-d4	(2)	7.416	65	202578	43.559	0.00
SpikedAmount 50.000				Recovery = 87.117		
62)\$Toluene-d8	(3)	9.795	98	864278	51.068	0.00
SpikedAmount 50.000				Recovery = 102.136		
81)\$1,4-Bromofluorobenzene	(4)	12.996	95	326796	48.358	0.00
SpikedAmount 50.000				Recovery = 96.717		
Target Compounds						
2) Ethanol	(1)	3.410	45	30770	387.752	98
3) Tert-Butyl Alcohol (TBA)	(1)	4.782	59	131393	303.592	95
5) Dichlorodifluoromethane	(2)	1.951	85	339812	46.116	100
6) Chloromethane	(2)	2.152	50	374951	36.300	98
7) Vinyl Chloride	(2)	2.283	62	315532	41.229	100
8) Bromomethane	(2)	2.664	94	189741	40.315	98
9) Chloroethane	(2)	2.800	64	188223	42.300	99
10) 1,3-Butadiene	(2)	2.327	54	280462	39.595	99
11) Trichlorofluoromethane	(2)	3.121	101	381748	44.414	100
12) Diethyl Ether	(2)	3.513	59	267268	51.930	100
13) Acetone	(2)	3.932	58	22726	50.548	99
14) Iodomethane	(2)	4.047	142	464867	101.004	97
15) 1,1-Dichloroethene	(2)	3.824	61	449440	48.398	100
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.834	101	268269	49.723	100
17) Isopropanol	(2)	4.183	45	81219	262.010	98
18) Carbon Disulfide	(2)	4.139	76	945842	52.784	100
19) Acetonitrile	(2)	4.379	41	562408	101.932	100
20) Acrylonitrile	(2)	4.940	53	104100	52.262	97
21) Allyl Chloride	(2)	4.379	76	157653	54.548	98
22) Acrolein	(2)	3.698	56	96895	110.866	99
23) Methylene Chloride	(2)	4.564	84	306058	50.775	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar030.d Instrument ID: GCMS_Q.i
 Injection date and time: 22-MAR-2017 21:59 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 22-Mar-2017 22:20 Unknown

Sample Name: LCS V022117B/V031017B Misc Info: V020817D V07-22-09
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	4.956	96	300409	51.329	99
25) Isobutyl Alcohol	(2)	7.411	43	20372	124.217	93
26) Methyl-t-Butyl Ether (MTBE)	(2)	4.978	73	799690	49.230	100
27) Hexane	(2)	5.359	57	551254	51.508	99
28) 1,1-Dichloroethane	(2)	5.560	63	550867	49.959	100
29) Vinyl Acetate	(2)	5.653	86	41603	48.311	97
30) Diisopropyl Ether (DIPE)	(2)	5.685	45	1148384	51.501	99
31) Chloroprene	(2)	5.685	53	519363	46.947	99
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.175	59	963136	49.077	99
33) c-1,2-Dichloroethene	(2)	6.355	96	324660	50.283	100
34) 2,2-Dichloropropane	(2)	6.349	77	347666	43.421	99
35) 2-Butanone	(2)	6.393	43	129834	50.426	99
36) Propionitrile	(2)	6.475	54	36430	53.779	97
37) Methacrylonitrile	(2)	6.671	41	158754	48.920	99
38) Bromochloromethane	(2)	6.671	130	164111	52.318	100
39) Tetrahydrofuran	(2)	6.741	42	85054	51.403	100
40) Chloroform	(2)	6.785	83	499488	46.922	99
42) 1,1,1-Trichloroethane	(2)	7.014	97	388187	47.663	99
43) Cyclohexane	(2)	7.079	84	472033	49.358	100
44) 1,1-Dichloropropene	(2)	7.226	75	408504	48.808	100
45) Carbon Tetrachloride	(2)	7.226	117	257373	44.027	99
48) Benzene	(3)	7.487	78	1255518	52.905	98
49) 1,2-Dichloroethane	(3)	7.514	62	355625	47.309	100
50) 2-Methyl-2-Butanol (TAA)	(3)	7.525	59	103039	279.059	99
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.640	73	814106	49.906	100
52) Thiophene	(3)	7.754	84	633482	51.967	99
53) 2,2,4-Trimethyl Pentane	(3)	7.596	57	1388349	50.281	99
54) Trichloroethene	(3)	8.298	95	322877	50.984	100
55) 1,2-Dichloropropane	(3)	8.576	63	328381	53.368	100
56) Dibromomethane	(3)	8.723	93	150758	49.490	99
57) Methyl Methacrylate	(3)	8.728	69	180262	56.002	99
58) 1,4-Dioxane	(3)	8.755	88	32640	544.798	95
59) Bromodichloromethane	(3)	8.913	83	337232	54.169	100
60) 2-Chloroethyl Vinyl Ether	(3)	9.289	63	132537	47.811	100
61) c-1,3-Dichloropropene	(3)	9.463	75	440219	50.470	100
63) Toluene	(3)	9.871	91	1348527	50.581	99
64) 4-Methyl-2-Pentanone	(3)	9.659	58	109219	53.749	99

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar030.d
 Injection date and time: 22-MAR-2017 21:59

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 09:42

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 22:20 Unknown

Sample Name: LCS V022117B/V031017B

Misc Info: V020817D V07-22-09

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.138	75	355913	44.654	100
67) Ethyl Methacrylate	(4)	10.252	69	370263	52.802	99
68) 1,1,2-Trichloroethane	(4)	10.361	83	200988	49.850	99
69) Tetrachloroethene	(4)	10.541	166	390503	50.459	99
70) 1,3-Dichloropropane	(4)	10.568	76	422109	49.846	99
71) 2-Hexanone	(4)	10.672	43	193267	50.985	99
72) Dibromochloromethane	(4)	10.846	129	213130	48.642	100
73) 1,2-Dibromoethane	(4)	10.987	107	228131	53.150	100
74) Chlorobenzene	(4)	11.586	112	876076	50.262	100
75) 1,1,1,2-Tetrachloroethane	(4)	11.684	131	228750	48.046	100
76) Ethylbenzene	(4)	11.722	91	1524992	49.041	100
77) p/m-Xylene	(4)	11.864	91	2374155	99.557	100
78) o-Xylene	(4)	12.354	91	1233654	50.160	99
79) Styrene	(4)	12.370	104	1019742	50.372	100
80) Isopropylbenzene	(4)	12.805	105	1559944	49.588	100
82) 1,2,3-Trichloropropane	(4)	13.230	75	338787	53.517	92
83) Bromobenzene	(4)	13.187	156	359690	51.097	99
84) n-Propylbenzene	(4)	13.317	91	1816959	48.506	100
85) t-1,4-Dichloro-2-Butene	(4)	13.246	53	68858	46.290	93
86) 2-Chlorotoluene	(4)	13.426	91	1072279	47.800	100
87) 1,3,5-Trimethylbenzene	(4)	13.535	105	1302948	49.328	99
89) Bromoform	(5)	12.599	173	110347	46.427	98
90) 1,1,2,2-Tetrachloroethane	(5)	13.170	83	293917	51.779	100
91) 4-Chlorotoluene	(5)	13.557	91	1226152	46.693	100
92) Cyclohexanone	(5)	12.925	55	76241	260.628	99
93) 1,2,4-Trimethylbenzene	(5)	14.003	105	1320995	48.216	99
94) tert-Butylbenzene	(5)	13.943	134	310327	50.489	99
95) p-Isopropyltoluene	(5)	14.395	119	1453935	49.152	100
96) sec-Butylbenzene	(5)	14.215	105	1730404	49.244	100
97) 1,3-Dichlorobenzene	(5)	14.357	146	707928	48.213	100
98) 1,4-Dichlorobenzene	(5)	14.466	146	707851	48.595	100
99) 1,2-Dichlorobenzene	(5)	14.934	146	668537	49.645	99
100) n-Butylbenzene	(5)	14.907	91	1358475	48.730	100
101) 1,2-Dibromo-3-Chloropropane	(5)	15.903	75	46727	48.564	59
102) 1,2,4-Trichlorobenzene	(5)	16.943	180	531925	49.696	99
103) Hexachloro-1,3-Butadiene	(5)	17.155	225	305648	50.974	99
104) Naphthalene	(5)	17.253	128	1130844	51.847	99

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar030.d
Injection date and time: 22-MAR-2017 21:59

Instrument ID: GCMS_Q.i
Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m
Calibration date and time: 22-MAR-2017 09:42

Sublist used: all

Date, time and analyst ID of latest file update: 22-Mar-2017 22:20 Unknown

Sample Name: LCS V022117B/V031017B
Response via Initial Calibration

Misc Info: V020817D V07-22-09

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
=====	=====	=====	=====	=====	=====	=====
105) 1,2,3-Trichlorobenzene	(5)	17.547	180	474336	49.251	100

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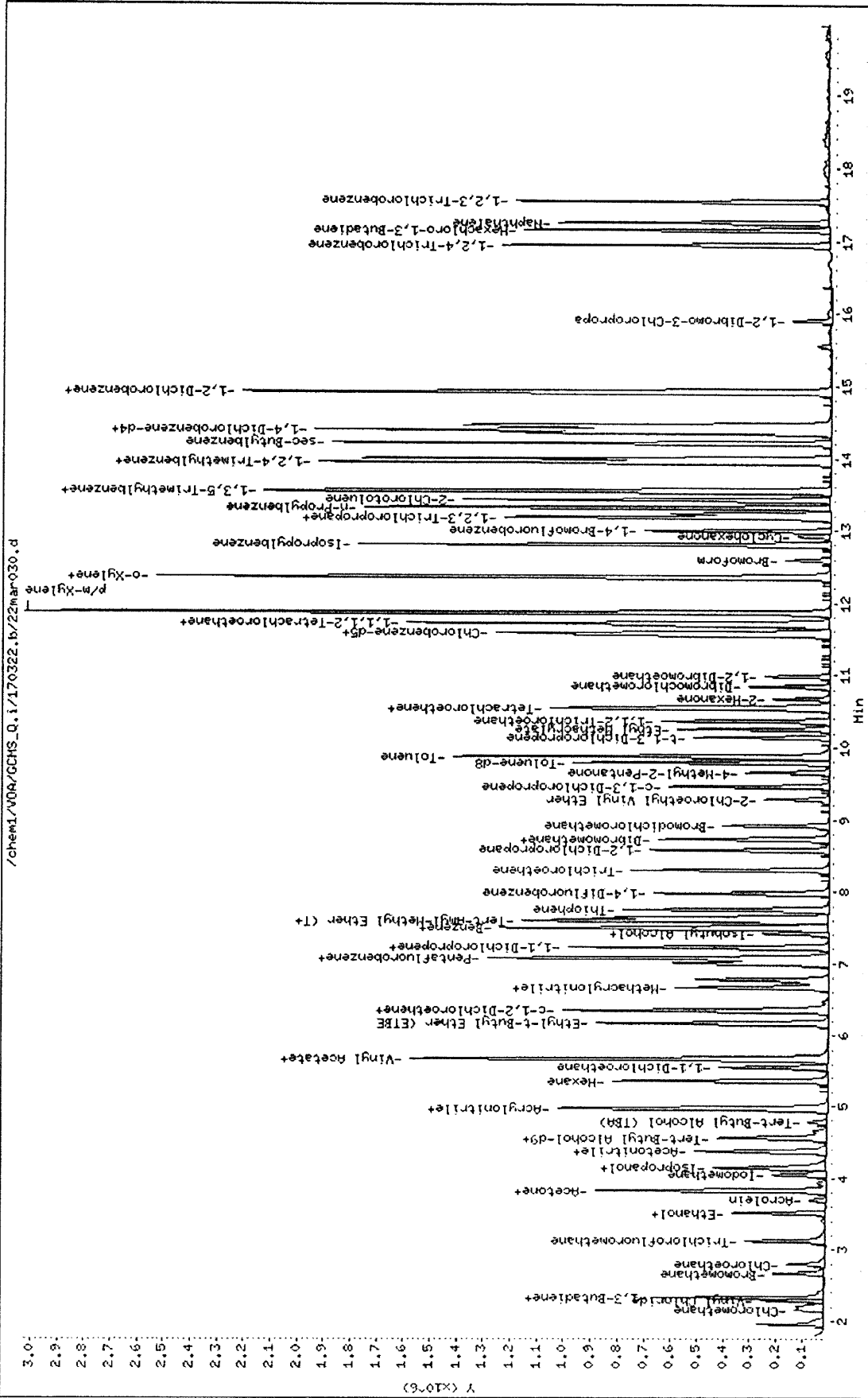
Data File: /chem1/V0A/GCHS_Q.i/170322.b/22mar030.d
 Date : 22-MAR-2017 21:59
 Client ID:
 Sample Info: LCS V022117B/V031017B

Instrument: GCHS_Q.i

Operator: 1055

Column diameter: 0.00

/chem1/V0A/GCHS_Q.i/170322.b/22mar030.d



Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar035.d
 Injection date and time: 23-MAR-2017 00:17

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 09:42

Sublist used: all

Date, time and analyst ID of latest file update: 23-Mar-2017 00:38 Unknown

Sample Name: MS 1591-5A V022117B/V031017B Misc Info: V020817D 5.11G

Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	DEV (Min)
	Ref.	RT			Amount	
=====	=====	=====	=====	=====	=====	=====
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.651	65	67741	250.000	0.01
4)*Pentafluorobenzene	(2)	7.063	168	451361	50.000	0.00
47)*1,4-Difluorobenzene	(3)	7.983	114	702806	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.554	117	681594	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.433	152	348709	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	6.986	113	184171	48.612	0.01
SpikedAmount 50.000						
			Recovery =	97.223		
46)\$1,2-Dichloroethane-d4	(2)	7.416	65	207212	43.875	0.00
SpikedAmount 50.000						
			Recovery =	87.751		
62)\$Toluene-d8	(3)	9.795	98	879373	50.863	0.00
SpikedAmount 50.000						
			Recovery =	101.725		
81)\$1,4-Bromofluorobenzene	(4)	12.996	95	335896	48.552	0.00
SpikedAmount 50.000						
			Recovery =	97.105		
Target Compounds						
						QValue
2) Ethanol	(1)	3.410	45	26826	376.316	92
3) Tert-Butyl Alcohol (TBA)	(1)	4.782	59	104312	270.110	97
5) Dichlorodifluoromethane	(2)	1.951	85	313792	41.936	99
6) Chloromethane	(2)	2.158	50	359205	34.246	98
7) Vinyl Chloride	(2)	2.283	62	303285	39.024	99
8) Bromomethane	(2)	2.670	94	180969	37.865	99
9) Chloroethane	(2)	2.800	64	180148	39.868	99
10) 1,3-Butadiene	(2)	2.327	54	280284	38.967	99
11) Trichlorofluoromethane	(2)	3.121	101	360355	41.286	100
12) Diethyl Ether	(2)	3.513	59	244801	46.839	99
13) Acetone	(2)	3.938	58	24254	53.122	98
14) Iodomethane	(2)	4.052	142	395950	86.606	98
15) 1,1-Dichloroethene	(2)	3.824	61	423274	44.885	99
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.835	101	254191	46.396	99
17) Isopropanol	(2)	4.178	45	65029	206.583	96
18) Carbon Disulfide	(2)	4.145	76	868764	47.743	100
19) Acetonitrile	(2)	4.379	41	522434	93.243	99
20) Acrylonitrile	(2)	4.940	53	84067	41.561	89
21) Allyl Chloride	(2)	4.379	76	145223	49.481	98
22) Acrolein	(2)	3.698	56	58676	66.112	99
23) Methylene Chloride	(2)	4.564	84	279382	45.643	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar035.d Instrument ID: GCMS_Q.i
 Injection date and time: 23-MAR-2017 00:17 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 23-Mar-2017 00:38 Unknown

Sample Name: MS 1591-5A V022117B/V031017B Misc Info: V020817D 5.11G
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	4.961	96	276967	46.602	99
25) Isobutyl Alcohol	(2)	7.411	43	15099	94.432	92
26) Methyl-t-Butyl Ether (MTBE)	(2)	4.978	73	726303	44.031	99
27) Hexane	(2)	5.359	57	516126	47.490	99
28) 1,1-Dichloroethane	(2)	5.560	63	506635	45.247	100
29) Vinyl Acetate	(2)	5.664	86	3102	3.548	1
30) Diisopropyl Ether (DIPE)	(2)	5.680	45	1062095	46.905	99
31) Chloroprene	(2)	5.685	53	486802	43.333	100
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.175	59	879500	44.132	99
33) c-1,2-Dichloroethene	(2)	6.355	96	298135	45.471	100
34) 2,2-Dichloropropane	(2)	6.350	77	313001	38.496	99
35) 2-Butanone	(2)	6.393	43	103147	39.450	96
36) Propionitrile	(2)	6.480	54	28866	41.964	98
37) Methacrylonitrile	(2)	6.665	41	131888	40.022	99
38) Bromochloromethane	(2)	6.671	130	150430	47.225	100
39) Tetrahydrofuran	(2)	6.736	42	75686	45.044	96
40) Chloroform	(2)	6.785	83	460176	42.570	100
42) 1,1,1-Trichloroethane	(2)	7.008	97	358700	43.371	99
43) Cyclohexane	(2)	7.079	84	445717	45.896	100
44) 1,1-Dichloropropene	(2)	7.226	75	380704	44.793	99
45) Carbon Tetrachloride	(2)	7.226	117	234642	39.567	98
48) Benzene	(3)	7.487	78	1152968	47.557	98
49) 1,2-Dichloroethane	(3)	7.514	62	322766	42.031	99
50) 2-Methyl-2-Butanol (TAA)	(3)	7.525	59	80251	220.650	97
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.640	73	726628	43.603	98
52) Thiophene	(3)	7.754	84	577495	46.373	99
53) 2,2,4-Trimethyl Pentane	(3)	7.596	57	1313941	46.581	99
54) Trichloroethene	(3)	8.298	95	302676	46.784	98
55) 1,2-Dichloropropane	(3)	8.576	63	299803	47.695	99
56) Dibromomethane	(3)	8.723	93	135725	43.614	99
57) Methyl Methacrylate	(3)	8.734	69	167204	50.848	99
58) 1,4-Dioxane	(3)	8.750	88	27827	454.661	97
59) Bromodichloromethane	(3)	8.919	83	304898	47.941	99
60) 2-Chloroethyl Vinyl Ether	(3)	9.294	63	107489	37.956	99
61) c-1,3-Dichloropropene	(3)	9.463	75	380689	42.759	100
63) Toluene	(3)	9.871	91	1233822	45.301	99
64) 4-Methyl-2-Pentanone	(3)	9.659	58	93976	45.271	99

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar035.d
 Injection date and time: 23-MAR-2017 00:17

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 23-Mar-2017 00:38 Unknown

Sample Name: MS 1591-5A V022117B/V031017B Misc Info: V020817D 5.11G
 Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	QValue
	Ref.	RT			Amount	
					(ug/l)	
66) t-1,3-Dichloropropene	(4)	10.138	75	304039	37.334	99
67) Ethyl Methacrylate	(4)	10.253	69	281585	40.126	99
68) 1,1,2-Trichloroethane	(4)	10.361	83	180053	43.622	99
69) Tetrachloroethene	(4)	10.541	166	371915	46.943	99
70) 1,3-Dichloropropane	(4)	10.568	76	382235	44.091	99
71) 2-Hexanone	(4)	10.672	43	162222	41.803	99
72) Dibromochloromethane	(4)	10.846	129	188681	42.883	99
73) 1,2-Dibromoethane	(4)	10.982	107	205199	46.699	99
74) Chlorobenzene	(4)	11.586	112	781677	43.806	99
75) 1,1,1,2-Tetrachloroethane	(4)	11.684	131	203024	41.764	100
76) Ethylbenzene	(4)	11.717	91	1379417	43.331	100
77) p/m-Xylene	(4)	11.864	91	2155674	88.300	99
78) o-Xylene	(4)	12.354	91	1120941	44.521	100
79) Styrene	(4)	12.370	104	898776	43.367	100
80) Isopropylbenzene	(4)	12.806	105	1409129	43.755	100
82) 1,2,3-Trichloropropane	(4)	13.230	75	289536	44.677	94
83) Bromobenzene	(4)	13.187	156	316663	43.942	99
84) n-Propylbenzene	(4)	13.317	91	1626083	42.404	100
85) t-1,4-Dichloro-2-Butene	(4)	13.247	53	55533	36.467	97
86) 2-Chlorotoluene	(4)	13.426	91	952688	41.484	99
87) 1,3,5-Trimethylbenzene	(4)	13.535	105	1163082	43.012	100
89) Bromoform	(5)	12.599	173	93736	40.457	99
90) 1,1,2,2-Tetrachloroethane	(5)	13.170	83	252881	43.926	100
91) 4-Chlorotoluene	(5)	13.562	91	1082532	40.646	99
92) Cyclohexanone	(5)	12.925	55	51296	172.899	99
93) 1,2,4-Trimethylbenzene	(5)	14.003	105	1167635	42.021	98
94) tert-Butylbenzene	(5)	13.943	134	274606	44.051	99
95) p-Isopropyltoluene	(5)	14.395	119	1290456	43.014	100
96) sec-Butylbenzene	(5)	14.215	105	1540101	43.214	100
97) 1,3-Dichlorobenzene	(5)	14.357	146	620790	41.686	99
98) 1,4-Dichlorobenzene	(5)	14.466	146	612734	41.476	99
99) 1,2-Dichlorobenzene	(5)	14.934	146	583345	42.712	99
100) n-Butylbenzene	(5)	14.907	91	1174479	41.539	100
101) 1,2-Dibromo-3-Chloropropane	(5)	15.903	75	38378	40.224	47
102) 1,2,4-Trichlorobenzene	(5)	16.943	180	435140	40.084	100
103) Hexachloro-1,3-Butadiene	(5)	17.155	225	262831	43.219	100
104) Naphthalene	(5)	17.253	128	919736	41.577	99

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar035.d Instrument ID: GCMS_Q.i
Injection date and time: 23-MAR-2017 00:17 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
Calibration date and time: 22-MAR-2017 09:42
Date, time and analyst ID of latest file update: 23-Mar-2017 00:38 Unknown

Sample Name: MS 1591-5A V022117B/V031017B Misc Info: V020817D 5.11G
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
=====	=====	=====	=====	=====	=====	=====
105) 1,2,3-Trichlorobenzene	(5)	17.547	180	387807	39.702	100

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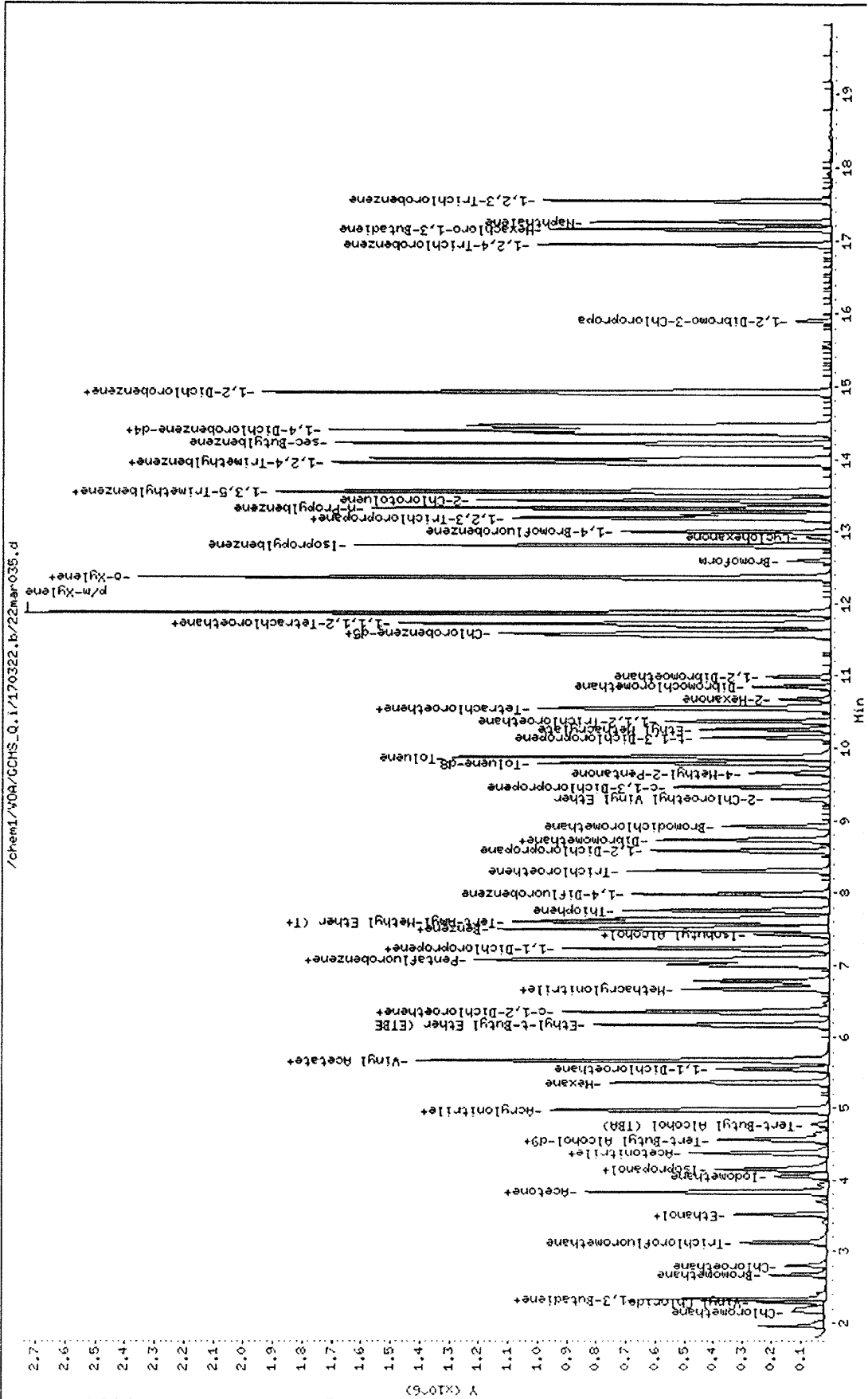
Data File: /chem1/V0A/CCHS_Q.I/170322.b/22mar035.d
 Date : 23-MAR-2017 00:17
 Client ID:
 Sample Info: MS 1591-5A V022117E/V031017B

Instrument: CCHS_Q.I

Operator: 1055

Column diameter: 0.00

Column phase:



Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar036.d
 Injection date and time: 23-MAR-2017 00:45

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 23-Mar-2017 01:06 Unknown

Sample Name: MSD 1591-5A V022117B/V031017B Misc Info: V020817D 4.96G
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV (Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.656	65	75316	250.000	0.01
4)*Pentafluorobenzene	(2)	7.062	168	451858	50.000	0.00
47)*1,4-Difluorobenzene	(3)	7.977	114	705159	50.000	0.01
65)*Chlorobenzene-d5	(4)	11.553	117	683002	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.433	152	347568	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	6.992	113	183384	48.351	0.00
SpikedAmount				50.000		Recovery = 96.702
46)\$1,2-Dichloroethane-d4	(2)	7.416	65	206178	43.609	0.00
SpikedAmount				50.000		Recovery = 87.217
62)\$Toluene-d8	(3)	9.795	98	884466	50.986	0.00
SpikedAmount				50.000		Recovery = 101.973
81)\$1,4-Bromofluorobenzene	(4)	12.996	95	334177	48.204	0.00
SpikedAmount				50.000		Recovery = 96.409
Target Compounds						
2) Ethanol	(1)	3.410	45	27632	340.451	98
3) Tert-Butyl Alcohol (TBA)	(1)	4.776	59	108783	253.355	100
5) Dichlorodifluoromethane	(2)	1.951	85	319269	42.621	100
6) Chloromethane	(2)	2.158	50	361926	34.467	98
7) Vinyl Chloride	(2)	2.283	62	309684	39.804	100
8) Bromomethane	(2)	2.670	94	184738	38.611	100
9) Chloroethane	(2)	2.800	64	181017	40.016	100
10) 1,3-Butadiene	(2)	2.327	54	281649	39.113	97
11) Trichlorofluoromethane	(2)	3.121	101	365701	41.852	99
12) Diethyl Ether	(2)	3.513	59	249835	47.750	99
13) Acetone	(2)	3.932	58	23444	51.291	93
14) Iodomethane	(2)	4.052	142	443204	95.452	96
15) 1,1-Dichloroethene	(2)	3.824	61	431980	45.758	99
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.834	101	260746	47.540	99
17) Isopropanol	(2)	4.177	45	64228	203.812	99
18) Carbon Disulfide	(2)	4.145	76	897641	49.276	100
19) Acetonitrile	(2)	4.379	41	532535	94.941	99
20) Acrylonitrile	(2)	4.939	53	82615	40.798	89
21) Allyl Chloride	(2)	4.379	76	149268	50.804	98
22) Acrolein	(2)	3.698	56	53665	60.400	98
23) Methylene Chloride	(2)	4.569	84	280857	45.833	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar036.d
 Injection date and time: 23-MAR-2017 00:45

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 09:42

Sublist used: all

Date, time and analyst ID of latest file update: 23-Mar-2017 01:06 Unknown

Sample Name: MSD 1591-5A V022117B/V031017B Misc Info: V020817D 4.96G
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	4.961	96	281980	47.394	99
25) Isobutyl Alcohol	(2)	7.416	43	16119	99.777	91
26) Methyl-t-Butyl Ether (MTBE)	(2)	4.978	73	719124	43.548	99
27) Hexane	(2)	5.359	57	528147	48.543	99
28) 1,1-Dichloroethane	(2)	5.560	63	516914	46.115	100
29) Vinyl Acetate	(2)	5.669	86	935	1.069	1
30) Diisopropyl Ether (DIPE)	(2)	5.680	45	1067593	47.096	99
31) Chloroprene	(2)	5.691	53	496434	44.142	99
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.175	59	883389	44.278	100
33) c-1,2-Dichloroethene	(2)	6.355	96	304320	46.363	99
34) 2,2-Dichloropropane	(2)	6.349	77	326586	40.122	100
35) 2-Butanone	(2)	6.398	43	96161	36.738	94
36) Propionitrile	(2)	6.475	54	28312	41.112	99
37) Methacrylonitrile	(2)	6.665	41	129671	39.305	98
38) Bromochloromethane	(2)	6.671	130	150274	47.124	100
39) Tetrahydrofuran	(2)	6.730	42	74120	44.064	96
40) Chloroform	(2)	6.779	83	468735	43.314	100
42) 1,1,1-Trichloroethane	(2)	7.013	97	372904	45.038	100
43) Cyclohexane	(2)	7.079	84	452803	46.574	99
44) 1,1-Dichloropropene	(2)	7.226	75	388142	45.618	100
45) Carbon Tetrachloride	(2)	7.226	117	255940	43.076	98
48) Benzene	(3)	7.487	78	1166409	47.951	98
49) 1,2-Dichloroethane	(3)	7.514	62	322199	41.817	99
50) 2-Methyl-2-Butanol (TAA)	(3)	7.525	59	83675	227.995	98
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.645	73	733520	43.870	99
52) Thiophene	(3)	7.754	84	580771	46.481	100
53) 2,2,4-Trimethyl Pentane	(3)	7.596	57	1312223	46.365	99
54) Trichloroethene	(3)	8.298	95	302560	46.610	99
55) 1,2-Dichloropropane	(3)	8.576	63	306274	48.562	99
56) Dibromomethane	(3)	8.717	93	136263	43.641	99
57) Methyl Methacrylate	(3)	8.734	69	169157	51.270	99
58) 1,4-Dioxane	(3)	8.750	88	26416	430.166	97
59) Bromodichloromethane	(3)	8.913	83	315469	49.438	99
60) 2-Chloroethyl Vinyl Ether	(3)	9.294	63	106577	37.509	99
61) c-1,3-Dichloropropene	(3)	9.463	75	392680	43.952	100
63) Toluene	(3)	9.877	91	1249664	45.730	99
64) 4-Methyl-2-Pentanone	(3)	9.659	58	93341	44.815	99

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar036.d
 Injection date and time: 23-MAR-2017 00:45

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m
 Calibration date and time: 22-MAR-2017 09:42

Sublist used: all

Date, time and analyst ID of latest file update: 23-Mar-2017 01:06 Unknown

Sample Name: MSD 1591-5A V022117B/V031017B Misc Info: V020817D 4.96G

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	10.138	75	312888	38.329	100
67) Ethyl Methacrylate	(4)	10.252	69	276970	39.451	98
68) 1,1,2-Trichloroethane	(4)	10.367	83	181408	43.860	99
69) Tetrachloroethene	(4)	10.541	166	370703	46.694	99
70) 1,3-Dichloropropane	(4)	10.568	76	376159	43.301	100
71) 2-Hexanone	(4)	10.672	43	161274	41.473	99
72) Dibromochloromethane	(4)	10.846	129	195752	44.184	100
73) 1,2-Dibromoethane	(4)	10.987	107	201626	45.792	100
74) Chlorobenzene	(4)	11.586	112	789459	44.151	99
75) 1,1,1,2-Tetrachloroethane	(4)	11.684	131	212044	43.494	100
76) Ethylbenzene	(4)	11.722	91	1404623	44.032	100
77) p/m-Xylene	(4)	11.864	91	2183946	89.273	100
78) o-Xylene	(4)	12.354	91	1134434	44.964	100
79) Styrene	(4)	12.370	104	908678	43.755	100
80) Isopropylbenzene	(4)	12.805	105	1441438	44.666	99
82) 1,2,3-Trichloropropane	(4)	13.230	75	287913	44.335	94
83) Bromobenzene	(4)	13.187	156	314082	43.494	99
84) n-Propylbenzene	(4)	13.317	91	1663511	43.291	100
85) t-1,4-Dichloro-2-Butene	(4)	13.246	53	56445	36.989	95
86) 2-Chlorotoluene	(4)	13.426	91	974415	42.343	99
87) 1,3,5-Trimethylbenzene	(4)	13.535	105	1186451	43.786	99
89) Bromoform	(5)	12.599	173	101608	43.152	100
90) 1,1,2,2-Tetrachloroethane	(5)	13.170	83	255330	44.497	99
91) 4-Chlorotoluene	(5)	13.557	91	1102507	41.532	99
92) Cyclohexanone	(5)	12.925	55	47619	161.030	100
93) 1,2,4-Trimethylbenzene	(5)	14.003	105	1180041	42.607	98
94) tert-Butylbenzene	(5)	13.943	134	281252	45.266	99
95) p-Isopropyltoluene	(5)	14.395	119	1315679	43.999	100
96) sec-Butylbenzene	(5)	14.215	105	1583030	44.564	99
97) 1,3-Dichlorobenzene	(5)	14.357	146	620466	41.801	100
98) 1,4-Dichlorobenzene	(5)	14.466	146	616204	41.848	100
99) 1,2-Dichlorobenzene	(5)	14.928	146	583313	42.850	99
100) n-Butylbenzene	(5)	14.907	91	1205836	42.788	100
101) 1,2-Dibromo-3-Chloropropane	(5)	15.903	75	39927	41.779	47
102) 1,2,4-Trichlorobenzene	(5)	16.943	180	439026	40.575	99
103) Hexachloro-1,3-Butadiene	(5)	17.160	225	268466	44.290	100
104) Naphthalene	(5)	17.253	128	927875	42.083	98

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar036.d
Injection date and time: 23-MAR-2017 00:45

Instrument ID: GCMS_Q.i
Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m
Calibration date and time: 22-MAR-2017 09:42

Sublist used: all

Date, time and analyst ID of latest file update: 23-Mar-2017 01:06 Unknown

Sample Name: MSD 1591-5A V022117B/V031017B Misc Info: V020817D 4.96G

Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	17.547	180	392888	40.355	99

page 4 of 4

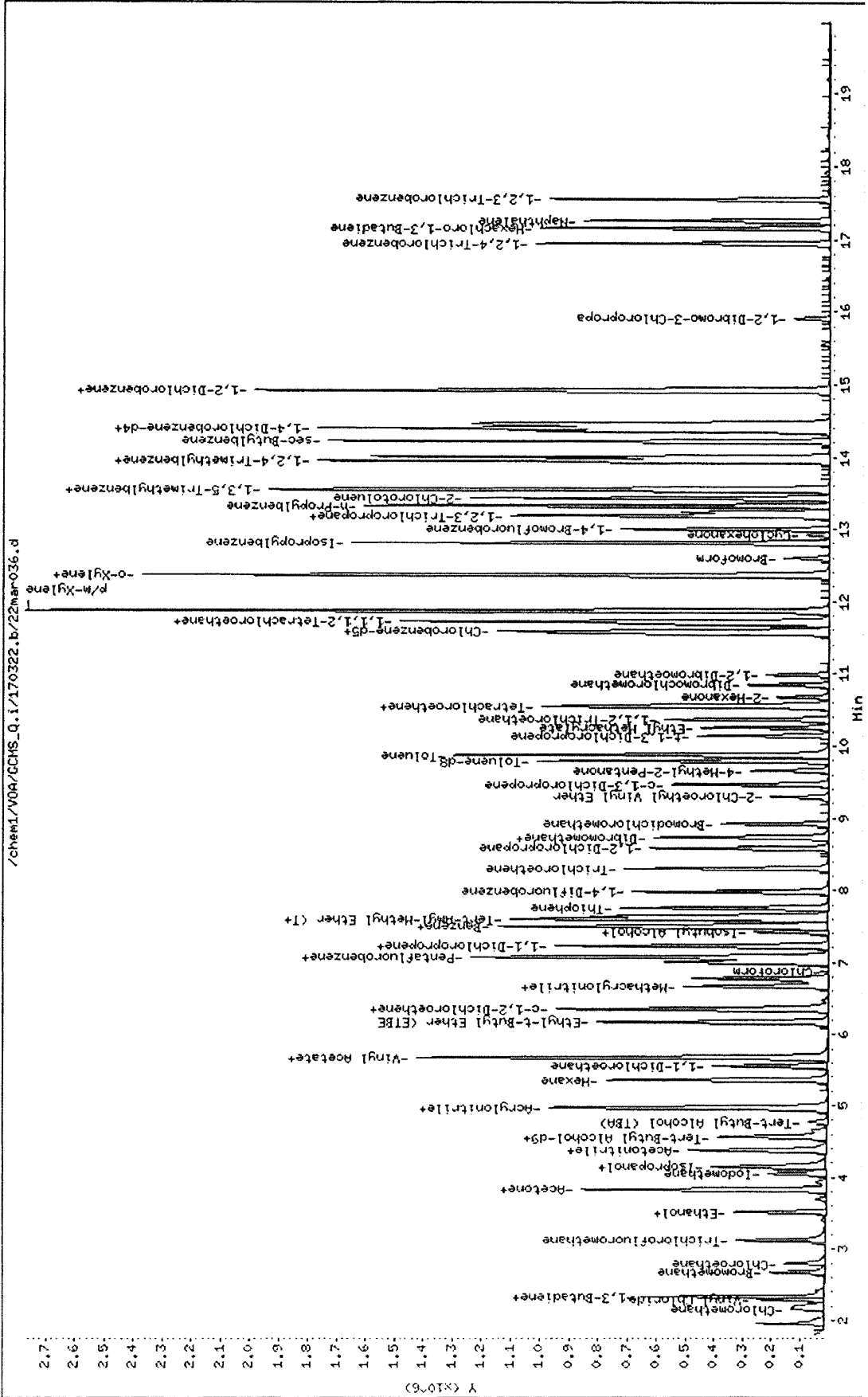
Data File: /chem1/V04/GCHS_Q.i/170322.b/22mar036.d
 Date : 23-MAR-2017 00:45
 Client ID:
 Sample Info: MSD 1591-5A U022117E/V031017B

Instrument: GCHS_Q.i

Operator: 1055

Column diameter: 0.00

Column phase:



Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar034.d Instrument ID: GCMS_Q.i
 Injection date and time: 22-MAR-2017 23:49 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 23-Mar-2017 08:13 c7uq

Sample Name: 17-03-1591-5A 4.99G Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV(Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.656	65	73135	250.000	0.01
4)*Pentafluorobenzene	(2)	7.062	168	479350	50.000	0.00
47)*1,4-Difluorobenzene	(3)	7.977	114	728077	50.000	0.01
65)*Chlorobenzene-d5	(4)	11.553	117	690757	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.433	152	365610	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	6.992	113	186329	46.310	0.00
SpikedAmount 50.000	Recovery =	92.619				
46)\$1,2-Dichloroethane-d4	(2)	7.416	65	220333	43.930	0.00
SpikedAmount 50.000	Recovery =	87.859				
62)\$Toluene-d8	(3)	9.790	98	896232	50.038	0.01
SpikedAmount 50.000	Recovery =	100.077				
81)\$1,4-Bromofluorobenzene	(4)	12.996	95	346493	49.420	0.00
SpikedAmount 50.000	Recovery =	98.840				
Target Compounds						
2) Ethanol	(1)	0.000		0	N.D.	QValue
3) Tert-Butyl Alcohol (TBA)	(1)	0.000		0	N.D.	
5) Dichlorodifluoromethane	(2)	0.000		0	N.D.	
6) Chloromethane	(2)	0.000		0	N.D.	
7) Vinyl Chloride	(2)	0.000		0	N.D.	
8) Bromomethane	(2)	0.000		0D	N.D.	
9) Chloroethane	(2)	0.000		0	N.D.	
10) 1,3-Butadiene	(2)	0.000		0	N.D.	
11) Trichlorofluoromethane	(2)	0.000		0	N.D.	
12) Diethyl Ether	(2)	0.000		0	N.D.	
13) Acetone	(2)	3.943	58	571	1.178	1
14) Iodomethane	(2)	0.000		0	N.D.	
15) 1,1-Dichloroethene	(2)	0.000		0	N.D.	
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	0.000		0	N.D.	
17) Isopropanol	(2)	4.183	45	560	1.675	93
18) Carbon Disulfide	(2)	0.000		0	N.D.	
19) Acetonitrile	(2)	0.000		0	N.D.	
20) Acrylonitrile	(2)	0.000		0	N.D.	
21) Allyl Chloride	(2)	0.000		0	N.D.	
22) Acrolein	(2)	0.000		0	N.D.	
23) Methylene Chloride	(2)	0.000		0	N.D.	

D = Compound was deleted.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar034.d Instrument ID: GCMS_Q.i
 Injection date and time: 22-MAR-2017 23:49 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 23-Mar-2017 08:13 c7uq

Sample Name: 17-03-1591-5A 4.99G Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	0.000		0	N.D.	
25) Isobutyl Alcohol	(2)	0.000		0	N.D.	
26) Methyl-t-Butyl Ether (MTBE)	(2)	0.000		0	N.D.	
27) Hexane	(2)	0.000		0	N.D.	
28) 1,1-Dichloroethane	(2)	0.000		0	N.D.	
29) Vinyl Acetate	(2)	0.000		0	N.D.	
30) Diisopropyl Ether (DIPE)	(2)	0.000		0	N.D.	
31) Chloroprene	(2)	0.000		0	N.D.	
32) Ethyl-t-Butyl Ether (ETBE)	(2)	0.000		0	N.D.	
33) c-1,2-Dichloroethene	(2)	0.000		0	N.D.	
34) 2,2-Dichloropropane	(2)	0.000		0	N.D.	
35) 2-Butanone	(2)	0.000		0	N.D.	
36) Propionitrile	(2)	0.000		0	N.D.	
37) Methacrylonitrile	(2)	0.000		0	N.D.	
38) Bromochloromethane	(2)	0.000		0	N.D.	
39) Tetrahydrofuran	(2)	0.000		0	N.D.	
40) Chloroform	(2)	0.000		0	N.D.	
42) 1,1,1-Trichloroethane	(2)	0.000		0	N.D.	
43) Cyclohexane	(2)	0.000		0D	N.D.	
44) 1,1-Dichloropropene	(2)	0.000		0	N.D.	
45) Carbon Tetrachloride	(2)	0.000		0	N.D.	
48) Benzene	(3)	0.000		0	N.D.	
49) 1,2-Dichloroethane	(3)	0.000		0	N.D.	
50) 2-Methyl-2-Butanol (TAA)	(3)	0.000		0D	N.D.	
51) Tert-Amyl-Methyl Ether (TAME)	(3)	0.000		0	N.D.	
52) Thiophene	(3)	0.000		0	N.D.	
53) 2,2,4-Trimethyl Pentane	(3)	0.000		0	N.D.	
54) Trichloroethene	(3)	0.000		0	N.D.	
55) 1,2-Dichloropropane	(3)	0.000		0	N.D.	
56) Dibromomethane	(3)	0.000		0	N.D.	
57) Methyl Methacrylate	(3)	0.000		0	N.D.	
58) 1,4-Dioxane	(3)	0.000		0	N.D.	
59) Bromodichloromethane	(3)	0.000		0	N.D.	
60) 2-Chloroethyl Vinyl Ether	(3)	0.000		0	N.D.	
61) c-1,3-Dichloropropene	(3)	0.000		0	N.D.	
63) Toluene	(3)	0.000		0	N.D.	
64) 4-Methyl-2-Pentanone	(3)	0.000		0	N.D.	

D = Compound was deleted.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar034.d
 Injection date and time: 22-MAR-2017 23:49

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 23-Mar-2017 08:13 c7uq

Sample Name: 17-03-1591-5A 4.99G
 Response via Initial Calibration

Misc Info: V020817D

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
66) t-1,3-Dichloropropene	(4)	0.000		0	N.D.	
67) Ethyl Methacrylate	(4)	0.000		0	N.D.	
68) 1,1,2-Trichloroethane	(4)	0.000		0	N.D.	
69) Tetrachloroethene	(4)	0.000		0	N.D.	
70) 1,3-Dichloropropane	(4)	0.000		0	N.D.	
71) 2-Hexanone	(4)	0.000		0	N.D.	
72) Dibromochloromethane	(4)	0.000		0	N.D.	
73) 1,2-Dibromoethane	(4)	0.000		0	N.D.	
74) Chlorobenzene	(4)	0.000		0	N.D.	
75) 1,1,1,2-Tetrachloroethane	(4)	0.000		0	N.D.	
76) Ethylbenzene	(4)	0.000		0	N.D.	
77) p/m-Xylene	(4)	0.000		0	N.D.	
78) o-Xylene	(4)	0.000		0	N.D.	
79) Styrene	(4)	0.000		0	N.D.	
80) Isopropylbenzene	(4)	0.000		0	N.D.	
82) 1,2,3-Trichloropropane	(4)	0.000		0	N.D.	
83) Bromobenzene	(4)	0.000		0	N.D.	
84) n-Propylbenzene	(4)	0.000		0	N.D.	
85) t-1,4-Dichloro-2-Butene	(4)	0.000		0	N.D.	
86) 2-Chlorotoluene	(4)	0.000		0	N.D.	
87) 1,3,5-Trimethylbenzene	(4)	0.000		0	N.D.	
89) Bromoform	(5)	0.000		0	N.D.	
90) 1,1,2,2-Tetrachloroethane	(5)	0.000		0	N.D.	
91) 4-Chlorotoluene	(5)	0.000		0	N.D.	
92) Cyclohexanone	(5)	0.000		0D	N.D.	
93) 1,2,4-Trimethylbenzene	(5)	0.000		0	N.D.	
94) tert-Butylbenzene	(5)	0.000		0	N.D.	
95) p-Isopropyltoluene	(5)	0.000		0	N.D.	
96) sec-Butylbenzene	(5)	0.000		0	N.D.	
97) 1,3-Dichlorobenzene	(5)	0.000		0	N.D.	
98) 1,4-Dichlorobenzene	(5)	0.000		0	N.D.	
99) 1,2-Dichlorobenzene	(5)	0.000		0	N.D.	
100) n-Butylbenzene	(5)	0.000		0	N.D.	
101) 1,2-Dibromo-3-Chloropropane	(5)	0.000		0	N.D.	
102) 1,2,4-Trichlorobenzene	(5)	0.000		0	N.D.	
103) Hexachloro-1,3-Butadiene	(5)	0.000		0	N.D.	
104) Naphthalene	(5)	0.000		0D	N.D.	

D = Compound was deleted.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar034.d
 Injection date and time: 22-MAR-2017 23:49

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 22-MAR-2017 09:42
 Date, time and analyst ID of latest file update: 23-Mar-2017 08:13 c7uq

Sample Name: 17-03-1591-5A 4.99G
 Response via Initial Calibration

Misc Info: V020817D

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
105) 1,2,3-Trichlorobenzene	(5)	0.000		0	N.D.	

page 4 of 4

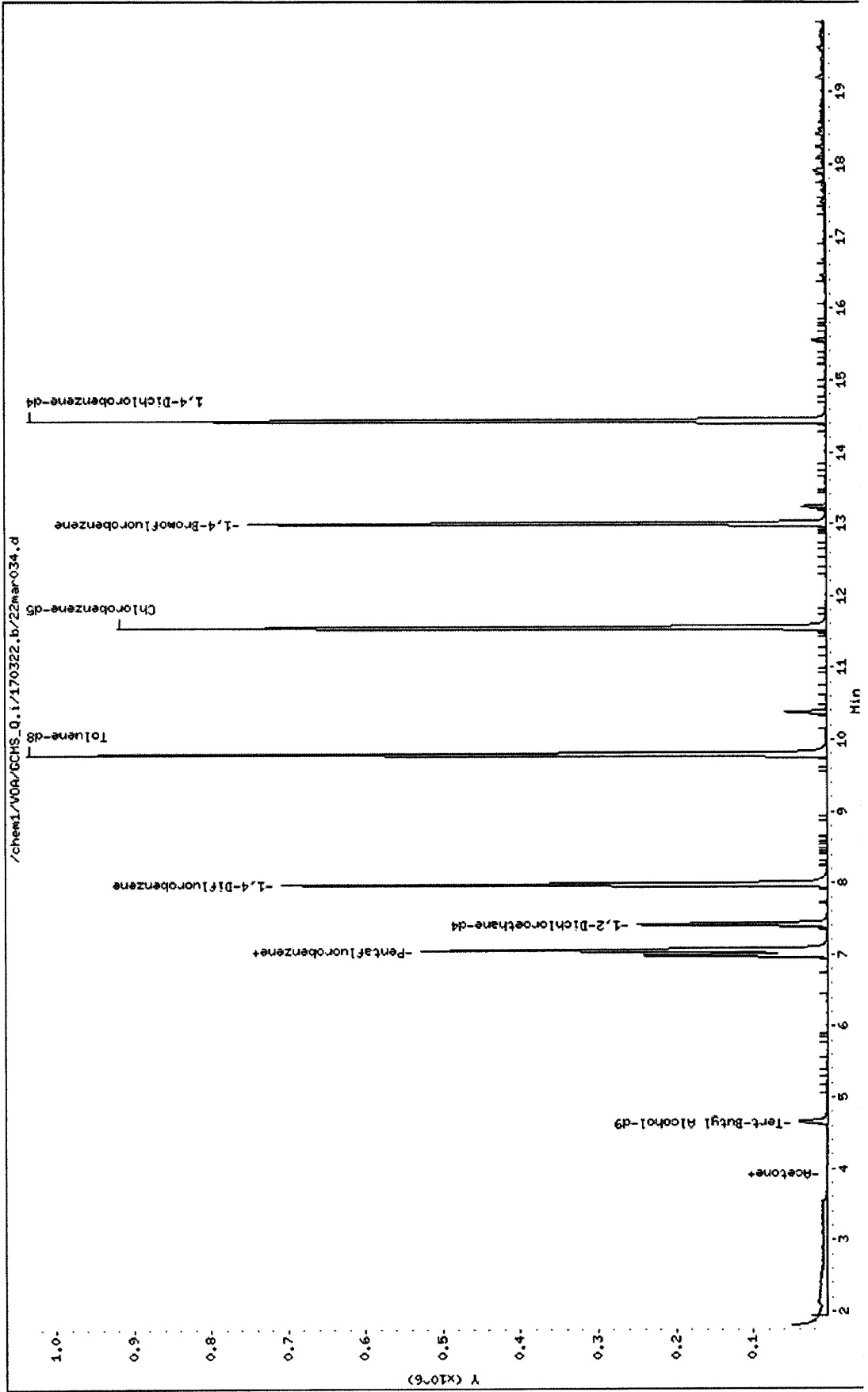
Data File: /chem1/V04/GCHS_Q.i/170322.b/22mar034.d
Date: 22-Mar-2017 23:49
Client ID:
Sample Info: 17-03-1591-5A 4.99C

Instrument: GCHS_Q.i

Operator: 1085

Column diameter: 0.00

Column phase:



EPA 8260B
Volatile Organics
(Solid)
Continuing Calibration

**CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8260B**

BATCH ID: 170322A062
INSTRUMENT: GC/MS Q

ANALYZED BY: 1,055

WORK ORDER: 099-15-001
MATRIX: Water

REVIEWED BY:
D/T REVIEWED:

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
31359	Daily Calibration	2017-03-22 21:31	Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar029.d\22mar029.rr

WORK ORDER: 17-03-1523
MATRIX: Soil

REVIEWED BY:
D/T REVIEWED:

<u>CEL SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>D/T ANALYZED</u>	<u>DATA FILE</u>
1	IDW-S	2017-03-23 04:25	Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar044.d\22mar044.rr

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-15-001-31359-4410
INSTRUMENT: GC/MS Q
BATCH ID: 1703101001
INITIAL: 170322A062
CCV:

ANALYZED BY: 1055
D/T ANALYZED: 2017-03-10 10:37
INITIAL: 2017-03-22 21:31
CCV: 163
REVIEWED BY: 2017-03-23 12:26
D/T REVIEWED:

Data File: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar029.d\22mar029.ir

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Acetone	Avg Resp		0.00	0.051	0.051			0	0-50	PASS
Benzene	Avg Resp		0.00	1.725	1.816			-5	0-50	PASS
Bromobenzene	Avg Resp		0.00	0.529	0.523			1	0-50	PASS
Bromochloromethane	Avg Resp		0.00	0.353	0.369			-5	0-50	PASS
Bromodichloromethane	Avg Resp		0.00	0.452	0.458			-1	0-50	PASS
Bromoform	S	LR - Equal				50.00	41.637	17	0-50	PASS
Bromomethane	Avg Resp		0.00	0.529	0.449			15	0-50	PASS
2-Butanone	Avg Resp		0.00	0.290	0.297			-2	0-50	PASS
n-Butylbenzene	Avg Resp		0.00	4.054	3.776			7	0-50	PASS
sec-Butylbenzene	Avg Resp		0.00	5.110	4.828			6	0-50	PASS
tert-Butylbenzene	Avg Resp		0.00	0.894	0.864			3	0-50	PASS
Diethyl Ether	Avg Resp		0.00	0.579	0.546			6	0-50	PASS
Carbon Disulfide	Avg Resp		0.00	2.016	1.989			1	0-50	PASS
Carbon Tetrachloride	LR - Inv Conc					50.00	39.522	21	0-50	PASS
Chlorobenzene	S	Avg Resp	0.30	1.309	1.310			0	0-50	PASS
Chloroethane	Avg Resp		0.00	0.501	0.432			14	0-50	PASS
2-Chloroethyl Vinyl Ether	Avg Resp		0.00	0.201	0.194			3	0-50	PASS
Chloroform	C	Avg Resp	0.00	1.197	1.136			5	0-20	PASS
Chloromethane	S	Avg Resp	0.10	1.162	0.897			23	0-50	PASS
2-Chlorotoluene	Avg Resp		0.00	1.685	1.574			7	0-50	PASS
4-Chlorotoluene	Avg Resp		0.00	3.819	3.415			11	0-50	PASS
Dibromochloromethane	LR - Equal					50.00	45.417	9	0-50	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-15-001-31359-4410
INSTRUMENT: GC/MS Q
BATCH ID: 1703101001
INITIAL: 170322A062
CCV:

ANALYZED BY: 1055
D/T ANALYZED: 2017-03-10 10:37
INITIAL: 2017-03-22 21:31
CCV: 163
REVIEWED BY: 2017-03-23 12:26
D/T REVIEWED:

Data File: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar029.d\22mar029.rtr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
1,2-Dibromo-3-Chloropropane	LR - Inv Sqr Con					50.00	42.748	15	0-50	PASS
1,2-Dibromoethane	Avg Resp		0.00	0.322	0.335			-4	0-50	PASS
Dibromomethane	Avg Resp		0.00	0.221	0.219			1	0-50	PASS
1,2-Dichlorobenzene	Avg Resp		0.00	1.958	1.853			5	0-50	PASS
1,3-Dichlorobenzene	Avg Resp		0.00	2.135	1.991			7	0-50	PASS
1,4-Dichlorobenzene	Avg Resp		0.00	2.118	1.954			8	0-50	PASS
Dichlorodifluoromethane	Avg Resp		0.00	0.829	0.919			-11	0-50	PASS
1,1-Dichloroethane	S Avg Resp		0.10	1.240	1.230			1	0-50	PASS
1,2-Dichloroethane	Avg Resp		0.00	0.546	0.514			6	0-50	PASS
1,1-Dichloroethene	C Avg Resp		0.00	1.045	1.002			4	0-20	PASS
c-1,2-Dichloroethene	Avg Resp		0.00	0.726	0.738			-2	0-50	PASS
t-1,2-Dichloroethene	Avg Resp		0.00	0.658	0.660			0	0-50	PASS
Acetonitrile	Avg Resp		0.00	0.621	0.621			0	0-50	PASS
1,2-Dichloropropane	C Avg Resp		0.00	0.447	0.472			-6	0-20	PASS
Acrolein	Avg Resp		0.00	0.098	0.098			0	0-50	PASS
Acrylonitrile	Avg Resp		0.00	0.224	0.227			-1	0-50	PASS
1,3-Dichloropropane	Avg Resp		0.00	0.636	0.628			1	0-50	PASS
2,2-Dichloropropane	Avg Resp		0.00	0.901	0.758			16	0-50	PASS
1,1-Dichloropropene	Avg Resp		0.00	0.942	0.916			3	0-50	PASS
c-1,3-Dichloropropene	LR - Inv Sqr Con					50.00	48.668	3	0-50	PASS
t-1,3-Dichloropropene	LR - Inv Conc					50.00	41.201	18	0-50	PASS
Ethylbenzene	C Avg Resp		0.00	2.335	2.275			3	0-20	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-15-001-31359-4410
INSTRUMENT: GC/MS Q
BATCH ID: 1703101001
INITIAL: 170322A062
CCV:

ANALYZED BY: 1055
D/T ANALYZED:
INITIAL: 2017-03-10 10:37
CCV: 2017-03-22 21:31
REVIEWED BY: 163
D/T REVIEWED: 2017-03-23 12:26

Data File: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar029.d\22mar029.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
2-Hexanone	Avg Resp		0.00	0.285	0.283			1	0-50	PASS
Isopropylbenzene	Avg Resp		0.00	2.362	2.305			2	0-50	PASS
p-Isopropyltoluene	Avg Resp		0.00	4.302	4.058			6	0-50	PASS
Methylene Chloride	Avg Resp		0.00	0.678	0.686			-1	0-50	PASS
4-Methyl-2-Pentanone	Avg Resp		0.00	0.148	0.153			-3	0-50	PASS
Naphthalene	Avg Resp		0.00	3.172	3.134			1	0-50	PASS
n-Propylbenzene	Avg Resp		0.00	2.813	2.692			4	0-50	PASS
Styrene	Avg Resp		0.00	1.520	1.495			2	0-50	PASS
2-Methyl-2-Butanol (TAA)	LR - Inv Conc					250.00	244.313	2	0-50	PASS
1,1,1,2-Tetrachloroethane	LR - Inv Conc					50.00	43.621	13	0-50	PASS
1,1,2,2-Tetrachloroethane	S Avg Resp		0.30	0.825	0.800			3	0-50	PASS
Tetrachloroethene	Avg Resp		0.00	0.581	0.607			-4	0-50	PASS
Toluene	Avg Resp	C	0.00	1.938	1.958			-1	0-20	PASS
1,2,3-Trichlorobenzene	Avg Resp		0.00	1.401	1.335			5	0-50	PASS
1,2,4-Trichlorobenzene	Avg Resp		0.00	1.557	1.464			6	0-50	PASS
1,1,1-Trichloroethane	Avg Resp		0.00	0.916	0.844			8	0-50	PASS
Hexachloro-1,3-Butadiene	Avg Resp		0.00	0.872	0.847			3	0-50	PASS
1,1,2-Trichloro-1,2,2-Trifluoroethane	Avg Resp		0.00	0.607	0.590			3	0-50	PASS
1,1,2-Trichloroethane	Avg Resp		0.00	0.303	0.302			0	0-50	PASS
Iodomethane	LR - Inv Sqr Con					100.00	93.218	7	0-50	PASS
Trichloroethene	Avg Resp		0.00	0.460	0.470			-2	0-50	PASS
Trichlorofluoromethane	Avg Resp		0.00	0.967	0.882			9	0-50	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-15-001-31359-4410
INSTRUMENT: GC/MS Q
BATCH ID: 170310I001
INITIAL: 170322A062
CCV:

ANALYZED BY: 1055
D/T ANALYZED:
INITIAL: 2017-03-10 10:37
CCV: 2017-03-22 21:31
REVIEWED BY: 163
D/T REVIEWED: 2017-03-23 12:26

Data File: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar029 d\22mar029.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
1,2,3-Trichloropropane	Avg Resp		0.00	0.475	0.422			11	0-50	PASS
1,2,4-Trimethylbenzene	Avg Resp		0.00	3.984	3.733			6	0-50	PASS
1,3,5-Trimethylbenzene	Avg Resp		0.00	1.984	1.931			3	0-50	PASS
Vinyl Acetate	Avg Resp		0.00	0.097	0.091			6	0-50	PASS
Vinyl Chloride	C Avg Resp		0.00	0.861	0.755			12	0-20	PASS
p/m-Xylene	Avg Resp		0.00	1.791	1.764			2	0-50	PASS
o-Xylene	Avg Resp		0.00	1.847	1.839			0	0-50	PASS
Methyl-t-Butyl Ether (MTBE)	Avg Resp		0.00	1.827	1.758			4	0-50	PASS
t-1,4-Dichloro-2-Butene	Avg Resp		0.00	0.112	0.095			15	0-50	PASS
Tetrahydrofuran	Avg Resp		0.00	0.186	0.187			-1	0-50	PASS
Tert-Butyl Alcohol (TBA)	Avg Resp		0.00	1.425	1.648			-16	0-50	PASS
Diisopropyl Ether (DIPE)	Avg Resp		0.00	2.508	2.488			1	0-50	PASS
Ethyl-t-Butyl Ether (ETBE)	Avg Resp		0.00	2.208	2.144			3	0-50	PASS
Tert-Amyl-Methyl Ether (TAME)	Avg Resp		0.00	1.186	1.181			0	0-50	PASS
Cyclohexanone	Avg Resp		0.00	0.043	0.040			7	0-50	PASS
Ethanol	LR - Equal					500.00	423.742	15	0-50	PASS
Cyclohexane	Avg Resp		0.00	1.076	1.051			2	0-50	PASS
Thiophene	Avg Resp		0.00	0.886	0.916			-3	0-50	PASS
1,4-Dioxane	Avg Resp		0.00	0.004	0.004			0	0-50	PASS
Hexane	Avg Resp		0.00	1.204	1.173			3	0-50	PASS
1,3-Butadiene	Avg Resp		0.00	0.797	0.600			25	0-50	PASS
Isopropanol	Avg Resp		0.00	0.035	0.030			14	0-50	PASS

CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET FOR METHOD: EPA 8260B

CCV WORK ORDER: 099-15-001-31359-4410
INSTRUMENT: GC/MS Q
BATCH ID: 1703101001
INITIAL: 170322A062
CCV:

ANALYZED BY: 1055
D/T ANALYZED:
INITIAL: 2017-03-10 10:37
CCV: 2017-03-22 21:31
REVIEWED BY: 163
D/T REVIEWED: 2017-03-23 12:26

Data File: Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar029.d\22mar029.rr

<u>COMPOUND</u>	<u>TYPE</u>	<u>CALIB MODEL</u>	<u>MIN RF</u>	<u>AVG RF</u>	<u>CCV RF</u>	<u>AMOUNT</u>	<u>CCV CONC</u>	<u>CCV %D</u>	<u>CCV %D CL</u>	<u>STATUS</u>
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MIN RF: Method Specified Minimum Response Factor

INTERNAL STANDARD COMPOUNDS AREA REPORT FOR METHOD: EPA 8260B

ICAL BATCH ID: 170310I001

CCV BATCH ID: 170322A062

ICAL MIDPOINT**SAMPLE ID:** 099-15-001-31181**D/T ANALYZED:** 2017-03-10 12:28**DATA FILE:** Z:\GCMS_Q\GCMS_Q_data\2017\170310\10mar009.d\10mar009.rr

COMPOUND	AREA	RETENTION TIME
1,4-Dichlorobenzene-d4	276347	14.44
1,4-Difluorobenzene	574174	7.98
Pentafluorobenzene	361282	7.06
Chlorobenzene-d5	539653	11.55
Tert-Butyl Alcohol-d9	59577	4.66

ICV**SAMPLE ID** 099-15-001-31181**D/T ANALYZED:** 2017-03-10 14:22**DATA FILE:** Z:\GCMS_Q\GCMS_Q_data\2017\170310\10mar013.d\10mar013.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	281096	138174	552694	14.44	PASS
1,4-Difluorobenzene	583945	287087	1148348	7.98	PASS
Pentafluorobenzene	372196	180641	722564	7.06	PASS
Chlorobenzene-d5	551826	269826	1079306	11.55	PASS
Tert-Butyl Alcohol-d9	71579	29788	119154	4.67	PASS

CCV**SAMPLE ID** 099-15-001-31359**D/T ANALYZED:** 2017-03-22 21:31**DATA FILE:** Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar029.d\22mar029.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	358836	138174	552694	14.43	PASS
1,4-Difluorobenzene	701459	287087	1148348	7.98	PASS
Pentafluorobenzene	455118	180641	722564	7.06	PASS
Chlorobenzene-d5	678513	269826	1079306	11.55	PASS
Tert-Butyl Alcohol-d9	68089	29788	119154	4.66	PASS

LCS**SAMPLE ID** 099-12-796-12486**D/T ANALYZED:** 2017-03-22 21:59**DATA FILE:** Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar030.d\22mar030.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	343823	179418	717672	14.43	PASS
1,4-Difluorobenzene	687964	350730	1402918	7.98	PASS
Pentafluorobenzene	444478	227559	910236	7.06	PASS
Chlorobenzene-d5	665792	339256	1357026	11.55	PASS
Tert-Butyl Alcohol-d9	75917	34044	136178	4.66	PASS

MB**SAMPLE ID** 099-12-796-12486**D/T ANALYZED:** 2017-03-22 22:54**DATA FILE:** Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar032.d\22mar032.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	354976	179418	717672	14.43	PASS
1,4-Difluorobenzene	699100	350730	1402918	7.98	PASS
Pentafluorobenzene	454663	227559	910236	7.06	PASS
Chlorobenzene-d5	661886	339256	1357026	11.55	PASS
Tert-Butyl Alcohol-d9	77840	34044	136178	4.66	PASS

MS**SAMPLE ID** 17-03-1591-5**D/T ANALYZED:** 2017-03-23 00:17**DATA FILE:** Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar035.d\22mar035.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	348709	179418	717672	14.43	PASS
1,4-Difluorobenzene	702806	350730	1402918	7.98	PASS
Pentafluorobenzene	451361	227559	910236	7.06	PASS
Chlorobenzene-d5	681594	339256	1357026	11.55	PASS
Tert-Butyl Alcohol-d9	67741	34044	136178	4.65	PASS

MSD**SAMPLE ID** 17-03-1591-5**D/T ANALYZED:** 2017-03-23 00:45**DATA FILE:** Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar036.d\22mar036.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	347568	179418	717672	14.43	PASS
1,4-Difluorobenzene	705159	350730	1402918	7.98	PASS
Pentafluorobenzene	451858	227559	910236	7.06	PASS
Chlorobenzene-d5	683002	339256	1357026	11.55	PASS
Tert-Butyl Alcohol-d9	75316	34044	136178	4.66	PASS

CS**SAMPLE ID** 17-03-1523-1**D/T ANALYZED:** 2017-03-23 04:25**DATA FILE:** Z:\GCMS_Q\GCMS_Q_data\2017\170322\22mar044.d\22mar044.rr

<u>COMPOUND</u>	<u>AREA</u>	<u>LOWER AREA LIMIT</u>	<u>UPPER AREA LIMIT</u>	<u>RETENTION TIME</u>	<u>STATUS</u>
1,4-Dichlorobenzene-d4	343693	179418	717672	14.44	PASS
1,4-Difluorobenzene	710282	350730	1402918	7.98	PASS
Pentafluorobenzene	454506	227559	910236	7.06	PASS
Chlorobenzene-d5	673510	339256	1357026	11.55	PASS
Tert-Butyl Alcohol-d9	63523	34044	136178	4.66	PASS

Notes:

For all samples including QC, all internal standard area responses must be within 50% to 200% of the mean area response in the initial calibration.

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar029.d
 Report Date: 03/23/2017 08:12

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_Q.i Injection Date and Time: 22-MAR-2017 21:31
 Sample Name: BFB/CCV V022017A/V031017A Initial Calibration Date(s): 10-MAR-2017 10-MAR-2017
 Sublist used: all.sub Initial Calibration Time(s): 10:37 13:24
 Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m

Target Compounds	ICAL RRF or Amount	CCV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type	
Ethanol	500.00	423.742	0.00	15	20	Linear	
Tert-Butyl Alcohol (TBA)	1.425	1.648	0.00	-16	20	Averaged	
Dichlorodifluoromethane	0.829	0.919	0.00	-11	20	Averaged	
Chloromethane	1.162	0.897	0.10	23	20	Averaged	<-Failed
Vinyl Chloride	0.861	0.755	0.00	12	20	Averaged	
Bromomethane	0.529	0.449	0.00	15	20	Averaged	
Chloroethane	0.501	0.432	0.00	14	20	Averaged	
1,3-Butadiene	0.797	0.600	0.00	25	20	Averaged	<-Failed
Trichlorofluoromethane	0.967	0.882	0.00	9	20	Averaged	
Diethyl Ether	0.579	0.546	0.00	6	20	Averaged	
Acetone	0.051	0.051	0.00	0	20	Averaged	
Iodomethane	100.00	93.218	0.00	7	20	LinWt 1/(Amt)^2	
1,1-Dichloroethene	1.045	1.002	0.00	4	20	Averaged	
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.607	0.590	0.00	3	20	Averaged	
Isopropanol	0.035	0.030	0.00	14	20	Averaged	
Carbon Disulfide	2.016	1.989	0.00	1	20	Averaged	
Acetonitrile	0.621	0.621	0.00	0	20	Averaged	
Acrylonitrile	0.224	0.227	0.00	-1	20	Averaged	
Allyl Chloride	0.325	0.340	0.00	-5	20	Averaged	
Acrolein	0.098	0.098	0.00	0	20	Averaged	
Methylene Chloride	0.678	0.686	0.00	-1	20	Averaged	
t-1,2-Dichloroethene	0.658	0.660	0.00	0	20	Averaged	
Isobutyl Alcohol	100.00	107.308	0.00	-7	20	LinWt 1/Amt	
Methyl-t-Butyl Ether (MTBE)	1.827	1.758	0.00	4	20	Averaged	
Hexane	1.204	1.173	0.00	3	20	Averaged	
1,1-Dichloroethane	1.240	1.230	0.10	1	20	Averaged	
Vinyl Acetate	0.097	0.091	0.00	6	20	Averaged	
Diisopropyl Ether (DIPE)	2.508	2.488	0.00	1	20	Averaged	
Chloroprene	1.244	1.175	0.00	6	20	Averaged	
Ethyl-t-Butyl Ether (ETBE)	2.208	2.144	0.00	3	20	Averaged	
c-1,2-Dichloroethene	0.726	0.738	0.00	-2	20	Averaged	
2,2-Dichloropropane	0.901	0.758	0.00	16	20	Averaged	
2-Butanone	0.290	0.297	0.00	-2	20	Averaged	
Propionitrile	0.076	0.077	0.00	-1	20	Averaged	
Methacrylonitrile	0.365	0.351	0.00	4	20	Averaged	
Bromochloromethane	0.353	0.369	0.00	-5	20	Averaged	
Tetrahydrofuran	0.186	0.187	0.00	-1	20	Averaged	
Chloroform	1.197	1.136	0.00	5	20	Averaged	
1,1,1-Trichloroethane	0.916	0.844	0.00	8	20	Averaged	
Cyclohexane	1.076	1.051	0.00	2	20	Averaged	
1,1-Dichloropropene	0.942	0.916	0.00	3	20	Averaged	
Carbon Tetrachloride	50.00	39.522	0.00	21	20	LinWt 1/Amt	<-Failed
Benzene	1.725	1.816	0.00	-5	20	Averaged	
1,2-Dichloroethane	0.546	0.514	0.00	6	20	Averaged	
2-Methyl-2-Butanol (TAA)	250.00	244.313	0.00	2	20	LinWt 1/Amt	
Tert-Amyl-Methyl Ether (TAME)	1.186	1.181	0.00	0	20	Averaged	
Thiophene	0.886	0.916	0.00	-3	20	Averaged	
2,2,4-Trimethyl Pentane	2.007	2.011	0.00	0	20	Averaged	

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar029.d
 Report Date: 03/23/2017 08:12

Eurofins CalScience
 Calibration Verification Report

Instrument ID: GCMS_Q.i Injection Date and Time: 22-MAR-2017 21:31
 Sample Name: BFB/CCV V022017A/V031017A Initial Calibration Date(s): 10-MAR-2017 10-MAR-2017
 Sublist used: all.sub Initial Calibration Time(s): 10:37 13:24
 Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m

Target Compounds	ICAL RRF or Amount	CCV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Trichloroethene	0.460	0.470	0.00	-2	20	Averaged
1,2-Dichloropropane	0.447	0.472	0.00	-6	20	Averaged
Dibromomethane	0.221	0.219	0.00	1	20	Averaged
Methyl Methacrylate	0.234	0.254	0.00	-9	20	Averaged
1,4-Dioxane	0.004	0.004	0.00	0	20	Averaged
Bromodichloromethane	0.452	0.458	0.00	-1	20	Averaged
2-Chloroethyl Vinyl Ether	0.201	0.194	0.00	3	20	Averaged
c-1,3-Dichloropropene	50.00	48.668	0.00	3	20	LinWt 1/(Amt)^2
Toluene	1.938	1.958	0.00	-1	20	Averaged
4-Methyl-2-Pentanone	0.148	0.153	0.00	-3	20	Averaged
t-1,3-Dichloropropene	50.00	41.200	0.00	18	20	LinWt 1/Amt
Ethyl Methacrylate	50.00	50.632	0.00	-1	20	LinWt 1/(Amt)^2
1,1,2-Trichloroethane	0.303	0.302	0.00	0	20	Averaged
Tetrachloroethene	0.581	0.607	0.00	-4	20	Averaged
1,3-Dichloropropane	0.636	0.628	0.00	1	20	Averaged
2-Hexanone	0.285	0.283	0.00	1	20	Averaged
Dibromochloromethane	50.00	45.417	0.00	9	20	Linear
1,2-Dibromoethane	0.322	0.335	0.00	-4	20	Averaged
Chlorobenzene	1.309	1.310	0.30	0	20	Averaged
1,1,1,2-Tetrachloroethane	50.00	43.621	0.00	13	20	LinWt 1/Amt
Ethylbenzene	2.335	2.275	0.00	3	20	Averaged
p/m-Xylene	1.791	1.764	0.00	2	20	Averaged
o-Xylene	1.847	1.839	0.00	0	20	Averaged
Styrene	1.520	1.495	0.00	2	20	Averaged
Isopropylbenzene	2.362	2.305	0.00	2	20	Averaged
1,2,3-Trichloropropane	0.475	0.422	0.00	11	20	Averaged
Bromobenzene	0.529	0.523	0.00	1	20	Averaged
n-Propylbenzene	2.813	2.692	0.00	4	20	Averaged
t-1,4-Dichloro-2-Butene	0.112	0.095	0.00	15	20	Averaged
2-Chlorotoluene	1.685	1.574	0.00	7	20	Averaged
1,3,5-Trimethylbenzene	1.984	1.931	0.00	3	20	Averaged
Bromoform	50.00	41.637	0.10	17	20	Linear
1,1,2,2-Tetrachloroethane	0.825	0.800	0.30	3	20	Averaged
4-Chlorotoluene	3.819	3.415	0.00	11	20	Averaged
Cyclohexanone	0.043	0.040	0.00	7	20	Averaged
1,2,4-Trimethylbenzene	3.984	3.733	0.00	6	20	Averaged
tert-Butylbenzene	0.894	0.864	0.00	3	20	Averaged
p-Isopropyltoluene	4.302	4.058	0.00	6	20	Averaged
sec-Butylbenzene	5.110	4.828	0.00	6	20	Averaged
1,3-Dichlorobenzene	2.135	1.991	0.00	7	20	Averaged
1,4-Dichlorobenzene	2.118	1.954	0.00	8	20	Averaged
1,2-Dichlorobenzene	1.958	1.853	0.00	5	20	Averaged
n-Butylbenzene	4.054	3.776	0.00	7	20	Averaged
1,2-Dibromo-3-Chloropropane	50.00	42.748	0.00	15	20	LinWt 1/(Amt)^2
1,2,4-Trichlorobenzene	1.557	1.464	0.00	6	20	Averaged
Hexachloro-1,3-Butadiene	0.872	0.847	0.00	3	20	Averaged
Naphthalene	3.172	3.134	0.00	1	20	Averaged
1,2,3-Trichlorobenzene	1.401	1.335	0.00	5	20	Averaged

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar029.d
 Injection date and time: 22-MAR-2017 21:31

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
 Calibration date and time: 23-MAR-2017 08:11
 Date, time and analyst ID of latest file update: 23-Mar-2017 08:11 c7uq

Sample Name: BFB/CCV V022017A/V031017A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	DEV (Min)
Internal Standards						
1)*Tert-Butyl Alcohol-d9	(1)	4.656	65	68089	250.000	0.01
4)*Pentafluorobenzene	(2)	7.063	168	455118	50.000	0.00
47)*1,4-Difluorobenzene	(3)	7.982	114	701459	50.000	0.00
65)*Chlorobenzene-d5	(4)	11.553	117	678513	50.000	0.00
88)*1,4-Dichlorobenzene-d4	(5)	14.433	152	358836	50.000	0.00
System Monitoring Compounds						
41)\$Dibromofluoromethane	(2)	6.992	113	181137	47.416	0.00
SpikedAmount 50.000			Recovery =	0.000		
46)\$1,2-Dichloroethane-d4	(2)	7.416	65	206125	43.285	0.00
SpikedAmount 50.000			Recovery =	0.000		
62)\$Toluene-d8	(3)	9.795	98	871323	50.494	0.00
SpikedAmount 50.000			Recovery =	0.000		
81)\$1,4-Bromofluorobenzene	(4)	12.996	95	330120	47.934	0.00
SpikedAmount 50.000			Recovery =	0.000		
Target Compounds						
2) Ethanol	(1)	3.404	45	29588	423.742	100
3) Tert-Butyl Alcohol (TBA)	(1)	4.782	59	112241	289.153	100
5) Dichlorodifluoromethane	(2)	1.956	85	418267	55.437	100
6) Chloromethane	(2)	2.158	50	408380	38.613	100
7) Vinyl Chloride	(2)	2.283	62	343491	43.833	100
8) Bromomethane	(2)	2.670	94	204523	42.440	100
9) Chloroethane	(2)	2.800	64	196417	43.110	100
10) 1,3-Butadiene	(2)	2.327	54	273264	37.677	100
11) Trichlorofluoromethane	(2)	3.121	101	401604	45.632	100
12) Diethyl Ether	(2)	3.519	59	248566	47.167	100
13) Acetone	(2)	3.938	58	23378	50.782	100
14) Iodomethane	(2)	4.047	142	434490	93.218	100
15) 1,1-Dichloroethene	(2)	3.824	61	456025	47.959	100
16) 1,1,2-Trichloro-1,2,2-Trifluo	(2)	3.829	101	268416	48.587	100
17) Isopropanol	(2)	4.183	45	67172	211.629	100
18) Carbon Disulfide	(2)	4.145	76	905391	49.346	100
19) Acetonitrile	(2)	4.379	41	565058	100.018	100
20) Acrylonitrile	(2)	4.940	53	103440	50.717	100
21) Allyl Chloride	(2)	4.379	76	154755	52.294	100
22) Acrolein	(2)	3.698	56	88863	99.299	100
23) Methylene Chloride	(2)	4.564	84	312045	50.558	100

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar029.d
 Injection date and time: 22-MAR-2017 21:31

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m
 Calibration date and time: 23-MAR-2017 08:11

Sublist used: all

Date, time and analyst ID of latest file update: 23-Mar-2017 08:11 c7uq

Sample Name: BFB/CCV V022017A/V031017A Misc Info: V020817D
 Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ug/l)	QValue
24) t-1,2-Dichloroethene	(2)	4.961	96	300165	50.089	100
25) Isobutyl Alcohol	(2)	7.416	43	17660	107.308	100
26) Methyl-t-Butyl Ether (MTBE)	(2)	4.978	73	799892	48.092	100
27) Hexane	(2)	5.359	57	534062	48.735	100
28) 1,1-Dichloroethane	(2)	5.560	63	559979	49.599	100
29) Vinyl Acetate	(2)	5.658	86	41600	47.178	100
30) Diisopropyl Ether (DIPE)	(2)	5.685	45	1132386	49.596	100
31) Chloroprene	(2)	5.685	53	534878	47.219	100
32) Ethyl-t-Butyl Ether (ETBE)	(2)	6.175	59	975988	48.569	100
33) c-1,2-Dichloroethene	(2)	6.355	96	336072	50.834	100
34) 2,2-Dichloropropane	(2)	6.349	77	344795	42.056	100
35) 2-Butanone	(2)	6.393	43	135150	51.264	100
36) Propionitrile	(2)	6.475	54	35181	50.722	100
37) Methacrylonitrile	(2)	6.665	41	159902	48.122	100
38) Bromochloromethane	(2)	6.671	130	167753	52.229	100
39) Tetrahydrofuran	(2)	6.741	42	84997	50.168	100
40) Chloroform	(2)	6.785	83	517196	47.449	100
42) 1,1,1-Trichloroethane	(2)	7.014	97	384241	46.075	100
43) Cyclohexane	(2)	7.079	84	478388	48.853	100
44) 1,1-Dichloropropene	(2)	7.226	75	417081	48.668	100
45) Carbon Tetrachloride	(2)	7.220	117	236328	39.522	100
48) Benzene	(3)	7.487	78	1273510	52.630	100
49) 1,2-Dichloroethane	(3)	7.514	62	360485	47.033	100
50) 2-Methyl-2-Butanol (TAA)	(3)	7.525	59	90210	244.313	100
51) Tert-Amyl-Methyl Ether (TAME)	(3)	7.640	73	828729	49.825	100
52) Thiophene	(3)	7.754	84	642815	51.718	100
53) 2,2,4-Trimethyl Pentane	(3)	7.596	57	1410332	50.095	100
54) Trichloroethene	(3)	8.298	95	329582	51.041	100
55) 1,2-Dichloropropane	(3)	8.576	63	330751	52.719	100
56) Dibromomethane	(3)	8.717	93	153818	49.523	100
57) Methyl Methacrylate	(3)	8.734	69	178383	54.352	100
58) 1,4-Dioxane	(3)	8.750	88	29997	491.062	100
59) Bromodichloromethane	(3)	8.919	83	321411	50.634	100
60) 2-Chloroethyl Vinyl Ether	(3)	9.294	63	135762	48.032	100
61) c-1,3-Dichloropropene	(3)	9.463	75	432753	48.668	100
63) Toluene	(3)	9.871	91	1373566	50.529	100
64) 4-Methyl-2-Pentanone	(3)	9.659	58	107357	51.816	100

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar029.d
 Injection date and time: 22-MAR-2017 21:31

Instrument ID: GCMS_Q.i
 Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all

Calibration date and time: 23-MAR-2017 08:11

Date, time and analyst ID of latest file update: 23-Mar-2017 08:11 c7uq

Sample Name: BFB/CCV V022017A/V031017A Misc Info: V020817D

Response via Initial Calibration

Compounds	I.S.		QIon	Area	On-Column	
	Ref.	RT			Amount	QValue
66) t-1,3-Dichloropropene	(4)	10.144	75	334383	41.200	100
67) Ethyl Methacrylate	(4)	10.252	69	360728	50.632	100
68) 1,1,2-Trichloroethane	(4)	10.361	83	204894	49.866	100
69) Tetrachloroethene	(4)	10.541	166	411942	52.231	100
70) 1,3-Dichloropropane	(4)	10.568	76	426052	49.368	100
71) 2-Hexanone	(4)	10.672	43	192328	49.786	100
72) Dibromochloromethane	(4)	10.846	129	200755	45.417	100
73) 1,2-Dibromoethane	(4)	10.987	107	227438	51.996	100
74) Chlorobenzene	(4)	11.586	112	888542	50.021	100
75) 1,1,1,2-Tetrachloroethane	(4)	11.684	131	211278	43.621	100
76) Ethylbenzene	(4)	11.722	91	1543712	48.712	100
77) p/m-Xylene	(4)	11.864	91	2394312	98.520	100
78) o-Xylene	(4)	12.354	91	1247601	49.776	100
79) Styrene	(4)	12.370	104	1014483	49.172	100
80) Isopropylbenzene	(4)	12.805	105	1564209	48.791	100
82) 1,2,3-Trichloropropane	(4)	13.230	75	286434	44.399	100
83) Bromobenzene	(4)	13.187	156	354903	49.472	100
84) n-Propylbenzene	(4)	13.317	91	1826301	47.842	100
85) t-1,4-Dichloro-2-Butene	(4)	13.246	53	64269	42.395	100
86) 2-Chlorotoluene	(4)	13.426	91	1068209	46.726	100
87) 1,3,5-Trimethylbenzene	(4)	13.535	105	1310015	48.666	100
89) Bromoform	(5)	12.599	173	100157	41.637	100
90) 1,1,2,2-Tetrachloroethane	(5)	13.170	83	287093	48.461	100
91) 4-Chlorotoluene	(5)	13.557	91	1225382	44.711	100
92) Cyclohexanone	(5)	12.925	55	72195	236.470	100
93) 1,2,4-Trimethylbenzene	(5)	14.003	105	1339533	46.847	100
94) tert-Butylbenzene	(5)	13.943	134	310047	48.333	100
95) p-Isopropyltoluene	(5)	14.395	119	1456313	47.173	100
96) sec-Butylbenzene	(5)	14.215	105	1732526	47.241	100
97) 1,3-Dichlorobenzene	(5)	14.357	146	714366	46.616	100
98) 1,4-Dichlorobenzene	(5)	14.466	146	701284	46.130	100
99) 1,2-Dichlorobenzene	(5)	14.928	146	664808	47.303	100
100) n-Butylbenzene	(5)	14.907	91	1355016	46.572	100
101) 1,2-Dibromo-3-Chloropropane	(5)	15.908	75	42299	42.748	100
102) 1,2,4-Trichlorobenzene	(5)	16.943	180	525390	47.032	100
103) Hexachloro-1,3-Butadiene	(5)	17.155	225	303789	48.544	100
104) Naphthalene	(5)	17.253	128	1124547	49.402	100

Quant Report

Target Revision 3.5

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar029.d
Injection date and time: 22-MAR-2017 21:31

Instrument ID: GCMS_Q.i
Analyst ID: 1055

Method used: /chem1/VOA/GCMS_Q.i/170322.b/8260.m Sublist used: all
Calibration date and time: 23-MAR-2017 08:11
Date, time and analyst ID of latest file update: 23-Mar-2017 08:11 c7uq

Sample Name: BFB/CCV V022017A/V031017A Misc Info: V020817D
Response via Initial Calibration

Compounds	I.S.	RT	QIon	Area	On-Column	QValue
	Ref.				Amount	
=====	=====	=====	=====	=====	=====	=====
105) 1,2,3-Trichlorobenzene	(5)	17.547	180	479202	47.675	100

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Data File: /chem1/v0a/CCHS_0.i/170322.b/22mar029.d
 Date : 22-MAR-2017 21:31
 Client ID:
 Sample Info: SFB/CCV V022017A/V031017A

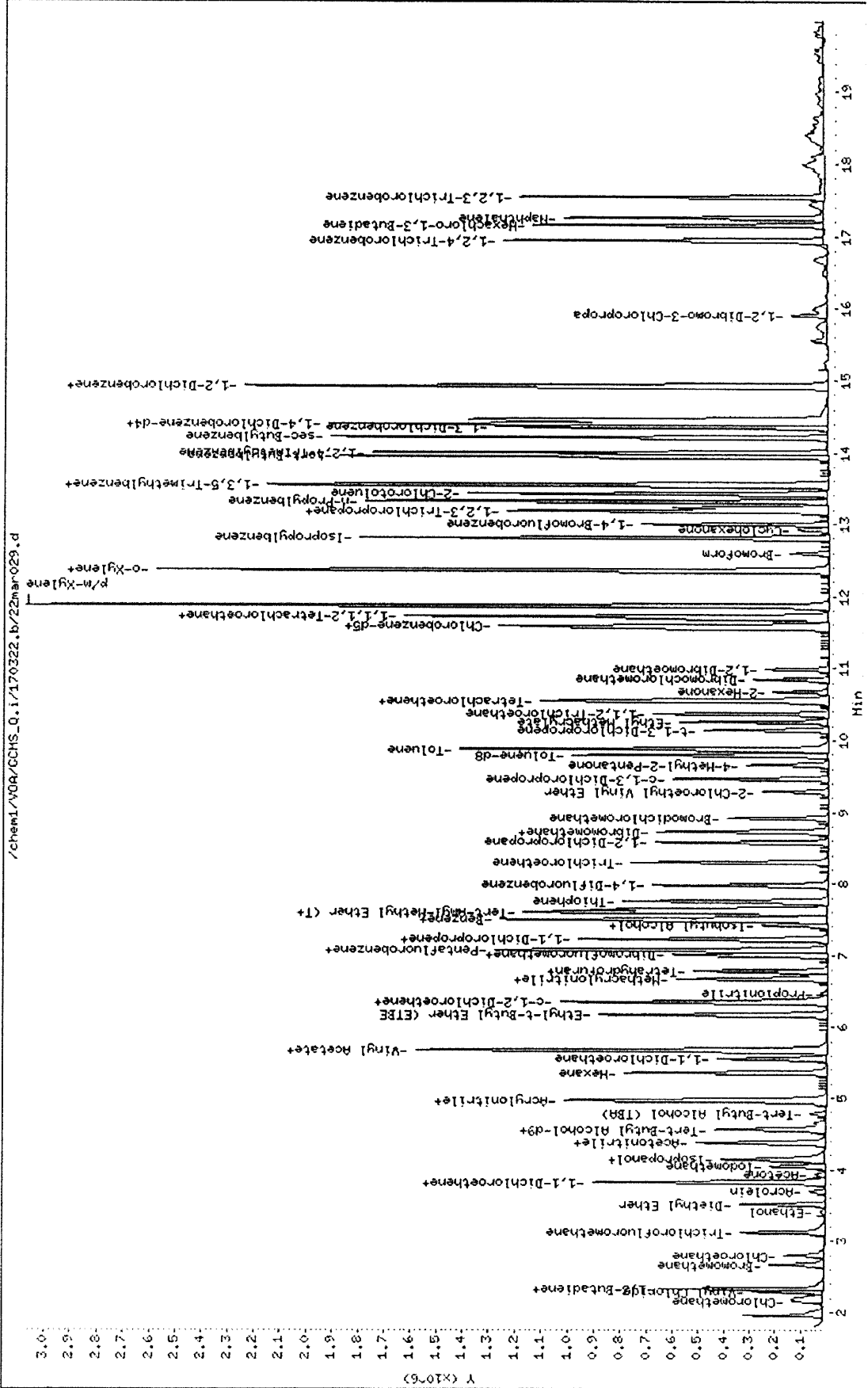
Instrument: CCHS_Q.i

Operator: 1055

Column diameter: 0.00

Column phase:

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EPA 8260B
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Tuning Report

Data File: /chem1/VOA/GCHS_Q.i/170310.b/10mar005.d/10mar005.d

Page 1

Date : 10-MAR-2017 10:37

Client ID: BFB/IC 0.5PPB V0310

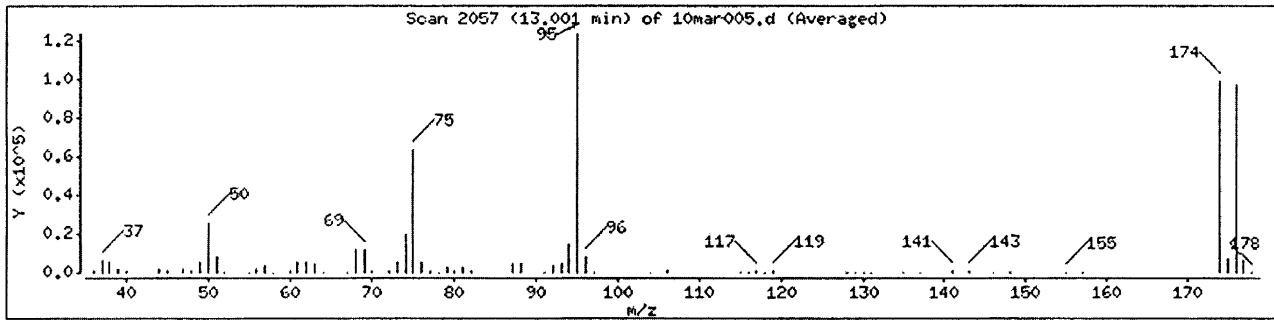
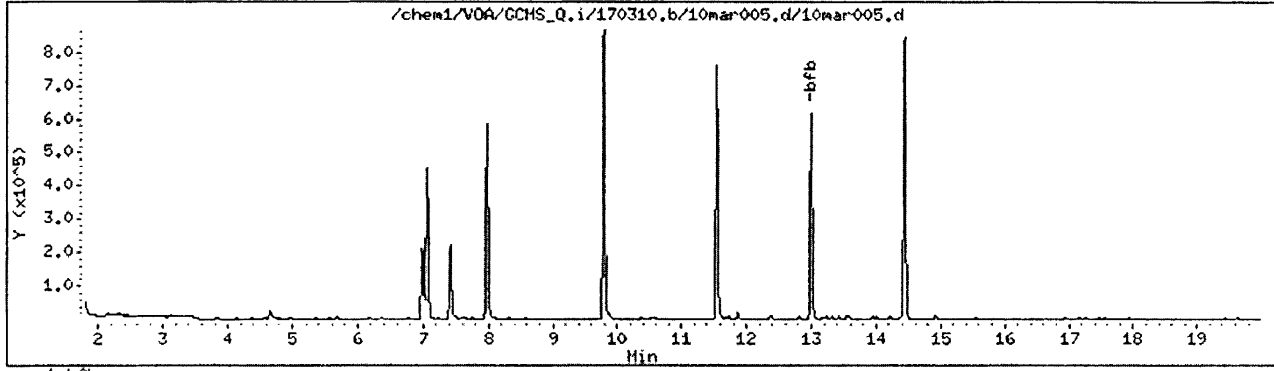
Instrument: GCHS_Q.i

Sample Info: BFB/IC 0.5PPB V031017C

Operator: 1055

Column phase: BB-624

Column diameter: 0.25



BFB Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Response	Test
95	Base Peak, 100% relative abundance	100.0		123221	PASS
50	15 - 40% of mass 95	20.6		25432	PASS
75	30 - 60% of mass 95	51.1		63000	PASS
96	5 - 9% of mass 95	6.7		8251	PASS
173	Less than 2% of mass 174	0.0	(0.0)	0	PASS
174	50 - 100% of mass 95	80.0		98608	PASS
175	5 - 9% of mass 174	5.9	(7.3)	7217	PASS
176	95 - 101% of mass 174	78.5	(98.1)	96725	PASS
177	5 - 9% of mass 176	5.1	(6.5)	6288	PASS

Data File: /chem1/VOA/GCMS_Q.i/170322.b/22mar029.d/22mar029.d

Page 1

Date : 22-MAR-2017 21:31

Client ID: BFB/CCV V022017A/V0

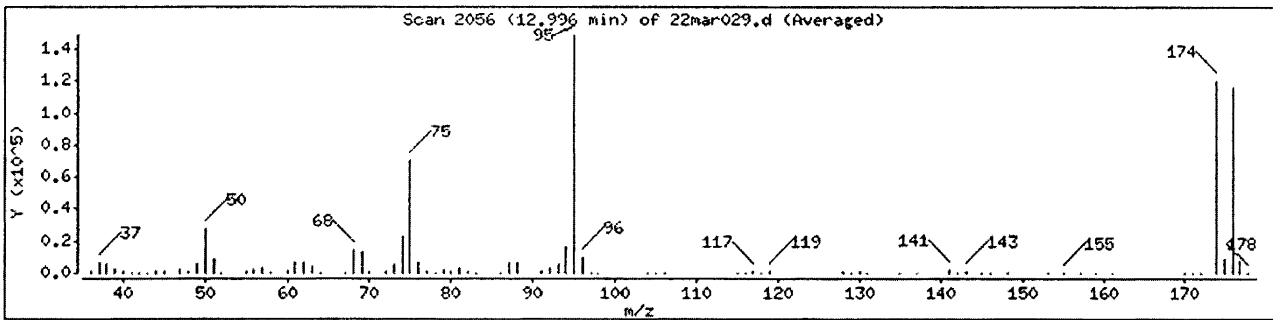
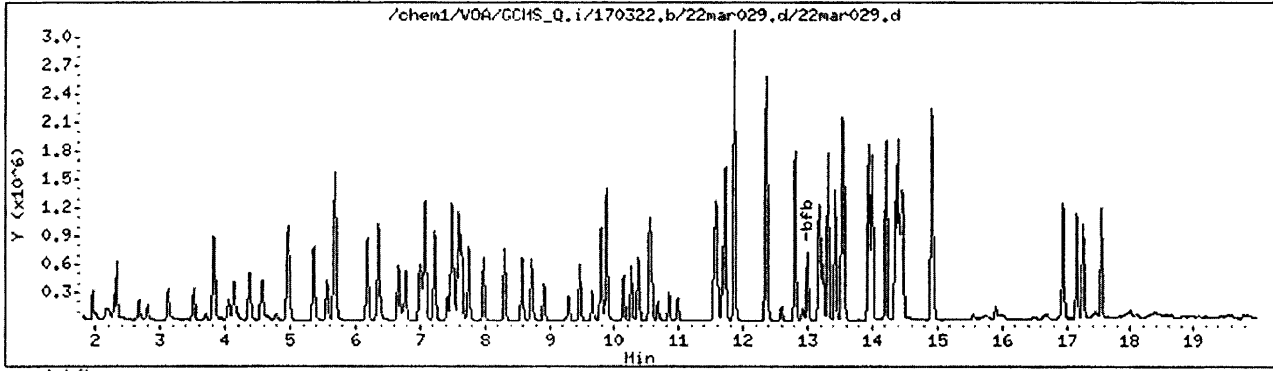
Instrument: GCMS_Q.i

Sample Info: BFB/CCV V022017A/V031017A

Operator: 1055

Column phase: DB-624

Column diameter: 0.25



BFB Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Response	Test
95	Base Peak, 100% relative abundance	100.0		148113	PASS
50	15 - 40% of mass 95	18.3		27128	PASS
75	30 - 60% of mass 95	47.3		70039	PASS
96	5 - 9% of mass 95	6.8		10046	PASS
173	Less than 2% of mass 174	0.0	(0.0)	0	PASS
174	50 - 100% of mass 95	81.0		120016	PASS
175	5 - 9% of mass 174	5.9	(7.3)	8806	PASS
176	95 - 101% of mass 174	77.7	(95.9)	115063	PASS
177	5 - 9% of mass 176	5.1	(6.6)	7626	PASS

EPA 8260B
Volatile Organics
(Solid)
Run Log

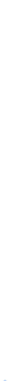
Injection Log

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	10mar001.d	1.	BLANK	V020817D 'GC/MS Q'	10 Mar 2017 08:15
2	2	10mar002.d	1.	XBFB/CCV V022017A/V030317A	V020817D NOT PASSING	10 Mar 2017 08:43
3	3	10mar003.d	1.	BLANK-TUNED	V020817D <i>Pop UTC</i>	10 Mar 2017 09:40
4	4	10mar004.d	1.	BLANK	V020817D	10 Mar 2017 10:09
5	5	10mar005.d	1.	BFB/IC 0.5PPB V031017C	V020817D	10 Mar 2017 10:37
6	6	10mar006.d	1.	IC 1PPB 031017C	V020817D	10 Mar 2017 11:05
7	7	10mar007.d	1.	IC 10PPB V022017A/V030317A	V020817D	10 Mar 2017 11:33
8	8	10mar008.d	1.	IC 20PPB V022017A/V030317A	V020817D	10 Mar 2017 12:00
9	9	10mar009.d	1.	IC 50PPB V022017A/V030317A	V020817D	10 Mar 2017 12:28
10	10	10mar010.d	1.	IC 100/60PPB V022017A/V030317A	V020817D	10 Mar 2017 12:56
11	11	10mar011.d	1.	IC 200/80PPB V022017A/V030317A	V020817D	10 Mar 2017 13:24
12	12	10mar012.d	1.	BLANK	V020817D	10 Mar 2017 13:51
13	13	10mar013.d	1.	ICV V022117B/V030317B	V020817D	10 Mar 2017 14:22
14		10mar014.d	1.	No MS or GC data present		



Injection Log

Return to Contents



Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	22mar001.d	1.	BLANK	V020817D 'GC/MS Q'	22 Mar 2017 08:16
2	2	22mar002.d	1.	BLANK	V020817D	22 Mar 2017 08:44
3	3	22mar003.d	1.	BFB/CCV V031617B/V031717A	V020817D	22 Mar 2017 09:12
4	4	22mar004.d	1.	LCS V031617C/V031717B	V020817D V07-22-09	22 Mar 2017 09:41
5	5	22mar005.d	1.	LCSD V031617C/V031717B	V020817D V07-22-09	22 Mar 2017 10:08
6	6	22mar006.d	1.	BLANK	V020817D	22 Mar 2017 10:49
7	7	22mar007.d	1.	PBT 032217-2A 4.91G	V020817D V07-22-09	22 Mar 2017 11:16
8	8	22mar008.d	1.	MB MeOH V07-20-18	V020817D	22 Mar 2017 11:44
9	9	22mar009.d	1.	17-03-1546-11E 5.52G	V020817D	22 Mar 2017 12:18
10	10	22mar010.d	1.	17-03-1546-14E 6.80G	V020817D	22 Mar 2017 12:45
11	11	22mar011.d	1.	17-03-1546-15E 5.93G	V020817D	22 Mar 2017 13:13
12	12	22mar012.d	1.	17-03-1546-16E 6.05G	V020817D	22 Mar 2017 13:41
13	13	22mar013.d	1.	17-03-1546-17E 5.49G	V020817D	22 Mar 2017 14:08
14	14	22mar014.d	1.	17-03-1546-18E 5.93G	V020817D	22 Mar 2017 14:36
15	15	22mar015.d	1.	17-03-1546-19G 6.42G	V020817D	22 Mar 2017 15:04
16	16	22mar016.d	1.	17-03-1546-20G 6.57G	V020817D	22 Mar 2017 15:31
17	17	22mar017.d	1.	17-03-1546-21G 6.61G	V020817D	22 Mar 2017 15:59
18	18	22mar018.d	1.	17-03-1546-22G 6.27G	V020817D	22 Mar 2017 16:27
19	19	22mar019.d	1.	17-03-1546-23G 7.09G	V020817D	22 Mar 2017 16:55
20	20	22mar020.d	1.	17-03-1546-25G 5.04G	V020817D	22 Mar 2017 17:22
21	21	22mar021.d	1.	17-03-1492-1C 4.72G	V020817D	22 Mar 2017 17:50
22	22	22mar022.d	1.	17-03-1546-13G 50X 100uL	V020817D 6.25G/5ML	22 Mar 2017 18:18
23	23	22mar023.d	1.	17-03-1546-24I 50X 100uL	V020817D 6.82G/5ML	22 Mar 2017 18:45
24	24	22mar024.d	1.	17-03-1492-2E 100X 100uL	V020817D 6.00G/10ML	22 Mar 2017 19:13
25	25	22mar025.d	1.	17-03-1492-3E 100X 100uL	V020817D 5.70G/10ML	22 Mar 2017 19:40
26	26	22mar026.d	1.	17-03-1492-4E 200X 50uL	V020817D 6.29G/10ML	22 Mar 2017 20:08
27	27	22mar027.d	1.	17-03-1492-5E 100X 100uL	V020817D 6.00G/10ML	22 Mar 2017 20:36
28	28	22mar028.d	1.	BLANK	V020817D	22 Mar 2017 21:04
29	29	22mar029.d	1.	BFB/CCV V022017A/V031017A	V020817D	22 Mar 2017 21:31
30	30	22mar030.d	1.	LCS V022117B/V031017B	V020817D V07-22-09	22 Mar 2017 21:59
31	31	22mar031.d	1.	BLANK	V020817D	22 Mar 2017 22:27
32	32	22mar032.d	1.	PB 032017-5A 5.00G	V020817D V07-22-09	22 Mar 2017 22:54
33	33	22mar033.d	1.	MB MeOH V07-20-19	V020817D	22 Mar 2017 23:22
34	34	22mar034.d	1.	17-03-1591-5A 4.99G	V020817D	22 Mar 2017 23:49
35	35	22mar035.d	1.	MS 1591-5A V022117B/V031017B	V020817D 5.11G	23 Mar 2017 00:17
36	36	22mar036.d	1.	MSD 1591-5A V022117B/V031017B	V020817D 4.96G	23 Mar 2017 00:45
37	37	22mar037.d	1.	BLANK	V020817D	23 Mar 2017 01:12
38	38	22mar038.d	1.	17-03-1591-2A 5.18G	V020817D	23 Mar 2017 01:40
39	39	22mar039.d	1.	17-03-1591-3A 4.99G	V020817D	23 Mar 2017 02:07
40	40	22mar040.d	1.	17-03-1591-4A 5.02G	V020817D	23 Mar 2017 02:35
41	41	22mar041.d	1.	17-03-1591-6A 5.07G	V020817D	23 Mar 2017 03:03
42	42	22mar042.d	1.	17-03-1591-7A 4.98G	V020817D	23 Mar 2017 03:30
43	43	22mar043.d	1.	17-03-1591-8A 4.93G	V020817D	23 Mar 2017 03:58
44	44	22mar044.d	1.	17-03-1523-1B 4.99G	V020817D	23 Mar 2017 04:25
45	45	22mar045.d	1.	BLANK	V020817D	23 Mar 2017 04:53

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LOW 07/17/17 1041-1049

E

11061 1049 5023

Printed on: 03/23/17
Analysis: 8260
Checklist ID: 1255
Logbook Page: 96
Instrument ID: Q

EPA 8260B
Volatile Organics
(Solid)
Preparation Log

EPA Method 5030 Purge and Trap Solid Sample Preparation Logbook

DATE (MM/DD/YY)	CEL ID #	MATRIX		METHOD		SAMPLE MASS NET (g)	BALANCE ID #	PRESERVATIVE / SOLVENT		PREPARATION END TIME (HH:MM)	CHEMIST ID #	COMMENTS
		S = SOIL O = OIL W = WIPE OTHER	(SPECIFY)	1 = 8015 2 = 8021 3 = 8260 OTHER	(SPECIFY)			NAME	ID #			
03/21/17	17-03-1502-17A	S	O W	1	2	4.96	38			5	697 1046	
	17A	S	O W	1	2	4.89		V07-20-18		10		
	18A	S	O W	1	2	5.09				5		
	18A	S	O W	1	2	4.94				↓		
	18A	S	O W	1	2	4.92		V07-20-18		10		
	19A	S	O W	1	2	5.03				5		
	19A	S	O W	1	2	4.90				↓		
	19A	S	O W	1	2	4.99	↓	V07-20-18		10	15:25	↓
03/21/17	17-03-1521-17A	S	O W	1	2	5.01	67			5	697	
	17B	S	O W	1	2	4.86				↓	697	
	17C	S	O W	1	2	4.90				↓		
	17A	S	O W	1	2	4.89		V07-20-18		10		
	17-03-1521-17B	S	O W	1	2	5.00				5		
	17B	S	O W	1	2	5.02				↓		
	17B	S	O W	1	2	5.03				↓		
	17B	S	O W	1	2	5.04				↓		
	17B	S	O W	1	2	4.99		V07-20-18		10	16:53	↓
	17-03-1523-17B	S	O W	1	2	4.99	67			5		
	17B	S	O W	1	2	5.02				↓		
	17B	S	O W	1	2	5.01	↓	V07-20-18		10	17:52	↓