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Supplemental Report 1

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

WORK ORDER NUMBER: 17-03-0638

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

Approved for release on 04/26/2017 by:
Stephen Nowak
Project Manager

ResultLink

Email your PM

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 17-03-0638

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Work Order Narrative

Work Order: 17-03-0638 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/08/17. They were assigned to Work Order 17-03-0638.

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.

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Sample Summary

Client:	Andersen Environmental	Work Order:	17-03-0638
	5261 West Imperial Highway	Project Name:	Burbank Airport / 9836002041
	Los Angeles, CA 90045-6231	PO Number:	
		Date/Time Received:	03/08/17 18:10
		Number of Containers:	4
Attn:	Brian Martasin		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
EB3-2017-03-08	17-03-0638-1	03/08/17 08:00	4	Aqueous

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Analytical Report

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0638
Los Angeles, CA 90045-6231		Preparation:	EPA 3510C
		Method:	EPA 8015B (M)
		Units:	ug/L
Project: Burbank Airport / 9836002041			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EB3-2017-03-08	**17-03-0638-1-B**	**03/08/17 08:00**	**Aqueous**	**GC 45**	**03/09/17**	**03/11/17 05:57**	**170309B10A**

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	88	68-140	

Method Blank	099-14-355-10	N/A	Aqueous	GC 45	03/09/17	03/13/17 11:29	170309B10A

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	107	68-140	

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

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Analytical Report

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

Date Received: 03/08/17
Work Order: 17-03-0638
Preparation: EPA 3010A Total
Method: EPA 6010B
Units: mg/L

Project: Burbank Airport / 9836002041

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EB3-2017-03-08	**17-03-0638-1-D**	**03/08/17 08:00**	**Aqueous**	**ICP 7300**	**03/09/17**	**03/10/17 13:54**	**170309LA4**

Parameter	Result	RL	DF	Qualifiers
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.

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Analytical Report

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0638
Los Angeles, CA 90045-6231		Preparation:	EPA 3010A Total
		Method:	EPA 6010B
		Units:	mg/L
Project: Burbank Airport / 9836002041			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-003-16364**	**N/A**	**Aqueous**	**ICP 7300**	**03/09/17**	**03/10/17 13:51**	**170309LA4**

Parameter	Result	RL	DF	Qualifiers
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.

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Analytical Report

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0638
Los Angeles, CA 90045-6231		Preparation:	EPA 7470A Total
		Method:	EPA 7470A
		Units:	mg/L
Project: Burbank Airport / 9836002041			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EB3-2017-03-08	**17-03-0638-1-D**	**03/08/17 08:00**	**Aqueous**	**Mercury 08**	**03/14/17**	**03/14/17 16:56**	**170314LA3**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-04-008-8148**	**N/A**	**Aqueous**	**Mercury 08**	**03/14/17**	**03/14/17 15:16**	**170314LA3**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.000500	1.00	

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

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Analytical Report

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

Date Received: 03/08/17
Work Order: 17-03-0638
Preparation: EPA 3510C
Method: EPA 8082
Units: ug/L

Project: Burbank Airport / 9836002041

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EB3-2017-03-08	**17-03-0638-1-A**	**03/08/17 08:00**	**Aqueous**	**GC 31**	**03/09/17**	**03/13/17 17:22**	**170309L03**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	0.95	1.00	
Aroclor-1221	ND	0.95	1.00	
Aroclor-1232	ND	0.95	1.00	
Aroclor-1242	ND	0.95	1.00	
Aroclor-1248	ND	0.95	1.00	
Aroclor-1254	ND	0.95	1.00	
Aroclor-1260	ND	0.95	1.00	
Aroclor-1262	ND	0.95	1.00	
Aroclor-1268	ND	0.95	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	90	50-135	
2,4,5,6-Tetrachloro-m-Xylene	80	50-135	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-533-1260**	**N/A**	**Aqueous**	**GC 31**	**03/09/17**	**03/13/17 16:07**	**170309L03**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	1.0	1.00	
Aroclor-1221	ND	1.0	1.00	
Aroclor-1232	ND	1.0	1.00	
Aroclor-1242	ND	1.0	1.00	
Aroclor-1248	ND	1.0	1.00	
Aroclor-1254	ND	1.0	1.00	
Aroclor-1260	ND	1.0	1.00	
Aroclor-1262	ND	1.0	1.00	
Aroclor-1268	ND	1.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	82	50-135	
2,4,5,6-Tetrachloro-m-Xylene	92	50-135	

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

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Analytical Report

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

Date Received: 03/08/17
Work Order: 17-03-0638
Preparation: EPA 3510C
Method: EPA 8270C SIM PAHs
Units: ug/L

Project: Burbank Airport / 9836002041

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EB3-2017-03-08	**17-03-0638-1-C**	**03/08/17 08:00**	**Aqueous**	**GC/MS EEE**	**03/14/17**	**03/15/17 15:41**	**170314L01**

Parameter	Result	RL	DF	Qualifiers
Naphthalene	ND	0.20	1.00	
2-Methylnaphthalene	ND	0.20	1.00	
1-Methylnaphthalene	ND	0.20	1.00	
Acenaphthylene	ND	0.20	1.00	
Acenaphthene	ND	0.20	1.00	
Fluorene	ND	0.20	1.00	
Phenanthrene	ND	0.20	1.00	
Anthracene	ND	0.20	1.00	
Fluoranthene	ND	0.20	1.00	
Pyrene	ND	0.20	1.00	
Benzo (a) Anthracene	ND	0.20	1.00	
Chrysene	ND	0.20	1.00	
Benzo (k) Fluoranthene	ND	0.20	1.00	
Benzo (b) Fluoranthene	ND	0.20	1.00	
Benzo (a) Pyrene	ND	0.20	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.20	1.00	
Dibenz (a,h) Anthracene	ND	0.20	1.00	
Benzo (g,h,i) Perylene	ND	0.20	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	82	28-139	
2-Fluorobiphenyl	73	33-144	
p-Terphenyl-d14	90	23-160	

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

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Analytical Report

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

Date Received: 03/08/17
Work Order: 17-03-0638
Preparation: EPA 3510C
Method: EPA 8270C SIM PAHs
Units: ug/L

Project: Burbank Airport / 9836002041

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-06-008-956**	**N/A**	**Aqueous**	**GC/MS EEE**	**03/14/17**	**03/15/17 14:40**	**170314L01**

Parameter	Result	RL	DF	Qualifiers
Naphthalene	ND	0.20	1.00	
2-Methylnaphthalene	ND	0.20	1.00	
1-Methylnaphthalene	ND	0.20	1.00	
Acenaphthylene	ND	0.20	1.00	
Acenaphthene	ND	0.20	1.00	
Fluorene	ND	0.20	1.00	
Phenanthrene	ND	0.20	1.00	
Anthracene	ND	0.20	1.00	
Fluoranthene	ND	0.20	1.00	
Pyrene	ND	0.20	1.00	
Benzo (a) Anthracene	ND	0.20	1.00	
Chrysene	ND	0.20	1.00	
Benzo (k) Fluoranthene	ND	0.20	1.00	
Benzo (b) Fluoranthene	ND	0.20	1.00	
Benzo (a) Pyrene	ND	0.20	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.20	1.00	
Dibenz (a,h) Anthracene	ND	0.20	1.00	
Benzo (g,h,i) Perylene	ND	0.20	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	93	28-139	
2-Fluorobiphenyl	78	33-144	
p-Terphenyl-d14	95	23-160	

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

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0638
Los Angeles, CA 90045-6231		Preparation:	EPA 3010A Total
		Method:	EPA 6010B
Project: Burbank Airport / 9836002041			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0583-1	**Sample**	**Aqueous**	**ICP 7300**	**03/09/17**	**03/10/17 13:59**	**170309SA4**
17-03-0583-1	**Matrix Spike**	**Aqueous**	**ICP 7300**	**03/09/17**	**03/10/17 13:56**	**170309SA4**
17-03-0583-1	**Matrix Spike Duplicate**	**Aqueous**	**ICP 7300**	**03/09/17**	**03/10/17 13:57**	**170309SA4**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	0.5000	0.5405	108	0.5215	104	72-132	4	0-10	
Arsenic	0.01835	0.5000	0.5737	111	0.5505	106	80-140	4	0-11	
Barium	0.1099	0.5000	0.6371	105	0.6297	104	87-123	1	0-6	
Beryllium	ND	0.5000	0.5445	109	0.5272	105	89-119	3	0-8	
Cadmium	ND	0.5000	0.5229	105	0.5057	101	82-124	3	0-7	
Chromium	ND	0.5000	0.5329	107	0.5195	104	86-122	3	0-8	
Cobalt	ND	0.5000	0.5094	102	0.4965	99	83-125	3	0-7	
Copper	ND	0.5000	0.5201	104	0.5062	101	78-126	3	0-7	
Lead	ND	0.5000	0.5193	104	0.4911	98	84-120	6	0-7	
Molybdenum	0.01932	0.5000	0.5504	106	0.5304	102	78-126	4	0-7	
Nickel	ND	0.5000	0.5065	101	0.4933	99	84-120	3	0-7	
Selenium	ND	0.5000	0.5184	104	0.5066	101	79-127	2	0-9	
Silver	ND	0.2500	0.2694	108	0.2564	103	86-128	5	0-7	
Thallium	ND	0.5000	0.4992	100	0.4924	98	79-121	1	0-8	
Vanadium	ND	0.5000	0.5287	106	0.5091	102	88-118	4	0-7	
Zinc	ND	0.5000	0.5408	108	0.5106	102	89-131	6	0-8	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0638
Los Angeles, CA 90045-6231		Preparation:	EPA 7470A Total
		Method:	EPA 7470A
Project: Burbank Airport / 9836002041			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0823-2	**Sample**	**Aqueous**	**Mercury 08**	**03/14/17**	**03/14/17 15:21**	**170314SA3**
17-03-0823-2	**Matrix Spike**	**Aqueous**	**Mercury 08**	**03/14/17**	**03/14/17 15:23**	**170314SA3**
17-03-0823-2	**Matrix Spike Duplicate**	**Aqueous**	**Mercury 08**	**03/14/17**	**03/14/17 15:25**	**170314SA3**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.01000	0.008968	90	0.007263	73	55-133	21	0-20	4

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0638
Los Angeles, CA 90045-6231		Preparation:	EPA 3510C
		Method:	EPA 8015B (M)
Project: Burbank Airport / 9836002041			Page 1 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-355-10	**LCS**	**Aqueous**	**GC 45**	**03/09/17**	**03/11/17 03:07**	**170309B10A**
099-14-355-10	**LCSD**	**Aqueous**	**GC 45**	**03/09/17**	**03/11/17 03:29**	**170309B10A**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	4000	3630	91	3848	96	51-141	6	0-11	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0638
Los Angeles, CA 90045-6231		Preparation:	EPA 3010A Total
		Method:	EPA 6010B
Project: Burbank Airport / 9836002041			Page 2 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-003-16364	**LCS**	**Aqueous**	**ICP 7300**	**03/09/17**	**03/10/17 13:53**	**170309LA4**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	0.5000	0.5120	102	80-120	73-127	
Arsenic	0.5000	0.5028	101	80-120	73-127	
Barium	0.5000	0.5380	108	80-120	73-127	
Beryllium	0.5000	0.5005	100	80-120	73-127	
Cadmium	0.5000	0.5205	104	80-120	73-127	
Chromium	0.5000	0.5281	106	80-120	73-127	
Cobalt	0.5000	0.5401	108	80-120	73-127	
Copper	0.5000	0.5375	107	80-120	73-127	
Lead	0.5000	0.5404	108	80-120	73-127	
Molybdenum	0.5000	0.5129	103	80-120	73-127	
Nickel	0.5000	0.5374	107	80-120	73-127	
Selenium	0.5000	0.4907	98	80-120	73-127	
Silver	0.2500	0.2517	101	80-120	73-127	
Thallium	0.5000	0.5169	103	80-120	73-127	
Vanadium	0.5000	0.5009	100	80-120	73-127	
Zinc	0.5000	0.5153	103	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

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0638
Los Angeles, CA 90045-6231		Preparation:	EPA 7470A Total
		Method:	EPA 7470A
Project: Burbank Airport / 9836002041			Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-04-008-8148	**LCS**	**Aqueous**	**Mercury 08**	**03/14/17**	**03/14/17 15:18**	**170314LA3**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.01000	0.009989	100	80-120	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Andersen Environmental		Date Received:	03/08/17
5261 West Imperial Highway		Work Order:	17-03-0638
Los Angeles, CA 90045-6231		Preparation:	EPA 3510C
		Method:	EPA 8082
Project: Burbank Airport / 9836002041			Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-533-1260	**LCS**	**Aqueous**	**GC 31**	**03/09/17**	**03/13/17 16:25**	**170309L03**
099-12-533-1260	**LCSD**	**Aqueous**	**GC 31**	**03/09/17**	**03/13/17 16:44**	**170309L03**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	2.000	2.520	126	2.240	112	50-135	12	0-25	
Aroclor-1260	2.000	2.220	111	1.940	97	50-135	13	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

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

Project: Burbank Airport / 9836002041

Date Received: 03/08/17
Work Order: 17-03-0638
Preparation: EPA 3510C
Method: EPA 8270C SIM PAHs
Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-06-008-956	**LCS**	**Aqueous**	**GC/MS EEE**	**03/14/17**	**03/15/17 15:01**	**170314L01**
099-06-008-956	**LCSD**	**Aqueous**	**GC/MS EEE**	**03/14/17**	**03/15/17 15:21**	**170314L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Naphthalene	2.000	1.915	96	1.943	97	21-133	2-152	1	0-25	
2-Methylnaphthalene	2.000	2.241	112	2.322	116	21-140	1-160	4	0-25	
1-Methylnaphthalene	2.000	1.971	99	2.054	103	20-140	0-160	4	0-25	
Acenaphthylene	2.000	1.665	83	1.655	83	33-145	14-164	1	0-25	
Acenaphthene	2.000	1.705	85	1.721	86	55-121	44-132	1	0-25	
Fluorene	2.000	1.716	86	1.752	88	59-121	49-131	2	0-25	
Phenanthrene	2.000	1.977	99	1.943	97	54-120	43-131	2	0-25	
Anthracene	2.000	2.048	102	2.004	100	27-133	9-151	2	0-25	
Fluoranthene	2.000	1.984	99	1.965	98	26-137	8-156	1	0-25	
Pyrene	2.000	1.975	99	1.960	98	45-129	31-143	1	0-25	
Benzo (a) Anthracene	2.000	1.850	92	1.828	91	33-143	15-161	1	0-25	
Chrysene	2.000	1.940	97	1.939	97	17-168	0-193	0	0-25	
Benzo (k) Fluoranthene	2.000	1.959	98	2.046	102	24-159	2-182	4	0-25	
Benzo (b) Fluoranthene	2.000	1.854	93	1.785	89	24-159	2-182	4	0-25	
Benzo (a) Pyrene	2.000	1.861	93	1.896	95	17-163	0-187	2	0-25	
Indeno (1,2,3-c,d) Pyrene	2.000	1.828	91	1.816	91	25-175	0-200	1	0-25	
Dibenz (a,h) Anthracene	2.000	1.879	94	1.901	95	25-175	0-200	1	0-25	
Benzo (g,h,i) Perylene	2.000	1.922	96	1.940	97	25-157	3-179	1	0-25	

Total number of LCS compounds: 18
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

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Sample Analysis Summary Report

Work Order: 17-03-0638 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 6010B	EPA 3010A Total	771	ICP 7300	1
EPA 7470A	EPA 7470A Total	868	Mercury 08	1
EPA 8015B (M)	EPA 3510C	682	GC 45	1
EPA 8082	EPA 3510C	669	GC 31	1
EPA 8270C SIM PAHs	EPA 3510C	907	GC/MS EEE	1

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Glossary of Terms and Qualifiers

Work Order: 17-03-0638 Page 1 of 1

Qualifiers	Definition
*	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.

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EFI Global

EFI Global
5261 West Imperial Highway, Los Angeles CA 90045
Tel: (310) 854-6300 Fax: (310) 854-0199 www.AndersenEnviro.com

Chain-of-Custody Record

Analytical Laboratory:	Calscience	Job # 9836002041
Project Name:	Burbank Airport	NA
Project Address:	2627 N. Hollywood Way, Burbank	
Project Manager:	B. Martasin	
Sampled by:	G. Baader	
Phone/Email:	310-854-6300, brian_martasin@efiglobal.com	
Phone/Email:	Robert Cheung, 510-529-5948, RCheung@Geosyntec.com	

17-03-0638

Number	Sample ID	Lab ID	Type: Grab	Type: Discrete	Matrix: Water	Matrix: Soil	Matrix: Vapor	Matrix: Other	Preservative: Cold (4° C)	Preservative: HNO3	Preservative: NaHSO4	Preservative: HCl	Sampling Information: Date	Sampling Information: Time	Method: OCPs, EPA Method 8081A	Method: PAHs, EPA Method 8270C SIM	Method: Metals, EPA Method 6010B/7471A	Method: Lead, EPA Method 6010B	Method: Arsenic, EPA Method 6010B	Method: STLC Lead EPA Method	Method: TCLP Lead EPA Method	Method: PCBs, EPA Method 8082	Method: TPH full chain, EPA Method 8015M	Method: TPHd, TPHmo, EPA Method 8015M	Method: Composite	Method: Hold	Container: 4- or 8-ounce Glass	Container: 250-ml Poly Bottle	Container: EZ Draw (EPA 5035)	Container: Acetate Liner	Container: 1-l Amber Bottle	Turnaround Time: 24 hours	Turnaround Time: 48 hours	Turnaround Time: Normal
1	EB3-2017-03-08		X		X	~~X~~			X	X			3/8/17	8:00		X	X					X		X				1			3			X

Relinquished by	Date	Time	Received by	Date	Time	Remarks
	3/8/17	1620		3/8/17	1620	Sample condition (circle): Chilled Intact
	3/8/17	1810		3/8/17	18:10	Hold until all D-043 received for 15+ composites. ~~Take sample from~~ ~~end of line unless otherwise indicated~~ on line

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WORK ORDER NUMBER: 17-03- 0638

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Andersen

DATE: 03 / 8 / 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): 2.0 °C (w/ CF): 2.0 °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: 1091

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: 1091

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: TM

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ 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	☐	☑	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ 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	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☐ 250AGB ☐ 250CGB ☐ 250CGB**s** ☐ 250PB ☑ 250PB**n** ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s**

☐ 500PB ☑ 1AGB (3) ☐ 1AGB**na$_2$** ☐ 1AGB**s** ☐ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

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** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 778

Reviewed by: 68.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0638

CONDITION UPON RECEIPT:

Eurofins Calscience, Inc. received (1) aqueous sample on March 8th, 2017. A total of (4) containers were received in good condition and at a temperature of 2.0°C, which was within the recommended temperature of 0°C – 6°C.

Client Sample ID	Lab Sample ID	Date & Time Sampled	Date & Time Received
EB3-2017-03-08	17-03-0638-1	03/08/17 08:00	03/08/17 18:10

DATA SUMMARY:

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

- EPA 6010B Title 22 Metals (Aqueous)
- EPA 7470A Mercury (Aqueous)
- EPA 8015B (M) Diesel and Motor Oil Ranges (Aqueous)
- EPA 8082 PCB Aroclors (Aqueous)
- EPA 8270C SIM PAHs (Aqueous)

The sample was 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.

EPA 6010B Title 22 Metals (Aqueous):

Sample -1 was analyzed for Metals by EPA 6010B. The sample was prepared on 03/09/17 and analyzed on 03/10/17 in batch #s 170309LA4 / 170309SA4 on ICP 7300.

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

All values were within acceptance criteria.

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eurofins | Calscience

Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0638

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 7470A Mercury (Aqueous):

Sample -1 was analyzed for Mercury by EPA 7470A. The sample was prepared and analyzed on 03/14/17 in batch #s 170314LA3 / 170314SA3 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:

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

Sample -1 was analyzed for Diesel and Motor Oil Ranges by EPA 8015B (M). The sample was prepared on 03/09/17 and analyzed on 03/11/17 in batch # 170309B10A on GC 45.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0638

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 12/02/16 on GC 45. 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.

EPA 8082 PCB Aroclors (Aqueous):

Sample -1 was analyzed for Polychlorinated Biphenyls Aroclors by EPA 8082. The sample was prepared on 03/09/17 and analyzed on 03/13/17 in batch # 170309L03 on GC 31.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 03/13/17 on GC 31. The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 15% D acceptance criteria for Aroclors 1016 and 1260. Single point response factors were generated for all other Aroclors.

Continuing Calibration Verification:

All values were within the 15% D acceptance criteria.

Sample and QC:

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

EPA 8270C SIM PAHs (Aqueous):

Sample -1 was analyzed for Polynuclear Aromatic Hydrocarbons by EPA 8270C SIM. The sample was prepared on 03/14/17 and analyzed on 03/15/17 in batch # 170314L01 on GC/MS EEE.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0638

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 03/13/17 on GC/MS EEE. The ICAL was within the 15% RSD acceptance criteria and the ICV was within the 20% D acceptance criteria.

Continuing Calibration Verification:

All values were within the 20% 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 surrogate and internal standard recoveries were within acceptance criteria.

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EPA 8015B (M)

Diesel + Motor Oil

RAW DATA

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EPA 8015B (M)

Diesel + Motor Oil

INITIAL CALIBRATION

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

ICAL WORK ORDER: 099-14-354-18-5901
ICAL BATCH ID: 161202I007
INSTRUMENT: GC 45

ANALYZED BY: 972
ICAL D/T ANALYZED: 2016-12-02 19:43
REVIEWED BY: 27
D/T REVIEWED: 2017-02-16 16:05

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
TPH as Diesel	C	Avg RF	69.187	81.182	81.639	84.113	83.988					80.022	0.00	8	0-20			PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2016-12-02 19:43	T:\GC_45\GC_45_data\2016\161202\16120207.d\Report.txt16120207
2	2016-12-02 20:05	T:\GC_45\GC_45_data\2016\161202\16120208.d\Report.txt16120208
3	2016-12-02 20:27	T:\GC_45\GC_45_data\2016\161202\16120209.d\Report.txt16120209
4	2016-12-02 20:48	T:\GC_45\GC_45_data\2016\161202\16120210.d\Report.txt16120210
5	2016-12-02 21:09	T:\GC_45\GC_45_data\2016\161202\16120211.d\Report.txt16120211

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: **099-14-354-18-5901**
INITIAL BATCH: 161202I007
INSTRUMENT: GC 45

DATA FILE: T:\GC_45\GC_45_data\2016\161202\16120212.d\Report.txt16120212

ANALYZED BY: 972
D/T ANALYZED:
INITIAL: 2016-12-02 19:43
ICV: 2016-12-02 21:31
REVIEWED BY: 27
D/T REVIEWED: 2017-02-16 16:05

COMPOUND NAME	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
TPH as Diesel	C	Avg Resp	0.00	80.022	82.011			-2	0-30	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 05-Dec-2016 12:22 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2016 12:03
End Cal Date : 03-DEC-2016 01:29
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Cal Date : 05-Dec-2016 12:21 uj3k
Curve Type : Average

Calibration File Names:
Level 1: /chem1/SVOA/GC_45.i/161202.b/16120219.d
Level 2: /chem1/SVOA/GC_45.i/161202.b/16120220.d
Level 3: /chem1/SVOA/GC_45.i/161202.b/16120221.d
Level 4: /chem1/SVOA/GC_45.i/161202.b/16120222.d
Level 5: /chem1/SVOA/GC_45.i/161202.b/16120223.d

	5.000	200.000	400.000	800.000	1600.000	___	
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRF	% RSD
S 1 TPH as Jet A rf	86545	105289	90515	85391	87961	91140	9
S 5 TPH as JP5 rf	69215	101437	91291	87968	106079	91198	16
S 8 TPH Gas/Diesel rf	37970	53614	55393	55706	53469	51230	15
S 15 TPH as Diesel rf	69187	81182	81639	84113	83988	80022	8

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2016 12:03
End Cal Date : 03-DEC-2016 01:29
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Cal Date : 05-Dec-2016 12:21 uj3k
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 27 Diesel Range Organics rf	66446	76346	76541	77565	77319	74844	6
S 32 Oil Range Organics rf	61212	79825	76603	79618	78958	75243	11
S 36 TPH as Motor Oil rf	61342	80625	77575	80771	80149	76092	11

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2016 12:03
End Cal Date : 03-DEC-2016 01:29
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Cal Date : 05-Dec-2016 12:21 uj3k
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 53 Crude Oil rf	46307	41013	42600	48242	48611	45355	8
S 65 Hydraulic Oil rf	70102	84275	85720	85748	86559	82481	8

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2016 12:03
End Cal Date : 03-DEC-2016 01:29
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Cal Date : 05-Dec-2016 12:21 uj3k
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 206 NWTPH_Diesel rf	54683	80240	89681	88534	88358	80299	18
S 207 NWTPH_Diesel range rf	54683	80240	89681	88534	88358	80299	18
S 209 NWTPH_Motor Oil rf	81215	73070	86473	80435	85496	81338	7
$ 93 n-Octacosane	86757	86415	85727	86538	85868	86261	1
$ 94 C28 n-Octacosane	92246	92350	96946	93190	93357	93618	2

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120212.d
Report Date: 12/05/2016 10:26

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: ICV D400 C28 50 L102516G
Sublist used: ICAL_D-DRO.sub
Method used: /chem1/SVOA/GC_45.i/161202.b/8015d.m

Injection Date and Time: 02-DEC-2016 21:31
Initial Calibration Date(s): 18-OCT-2016 03-DEC-2016
Initial Calibration Time(s): 12:03 01:29

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	82010.680	0.00	-2	15	Averaged
Diesel Range Organics	74843.538	78906.825	0.00	-5	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	86260.794	87158.300	0.00	-1	20	Averaged

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120207.d
Report Date: 05-Dec-2016 10:25

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120207.d
Lab Smp Id:
Inj Date : 02-DEC-2016 19:43
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL D5 C28 0.625 L102516B
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 00:02 Cal File: 16120219.d
Als bottle: 7 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

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 15 TPH as Diesel	0.666-8.944			345934	5.00000	4.323(a)
S 27 Diesel Range Organics	2.374-8.944			332229	5.00000	4.438(a)
$ 93 n-Octacosane	8.730	8.730	0.000	54223	0.62500	0.628

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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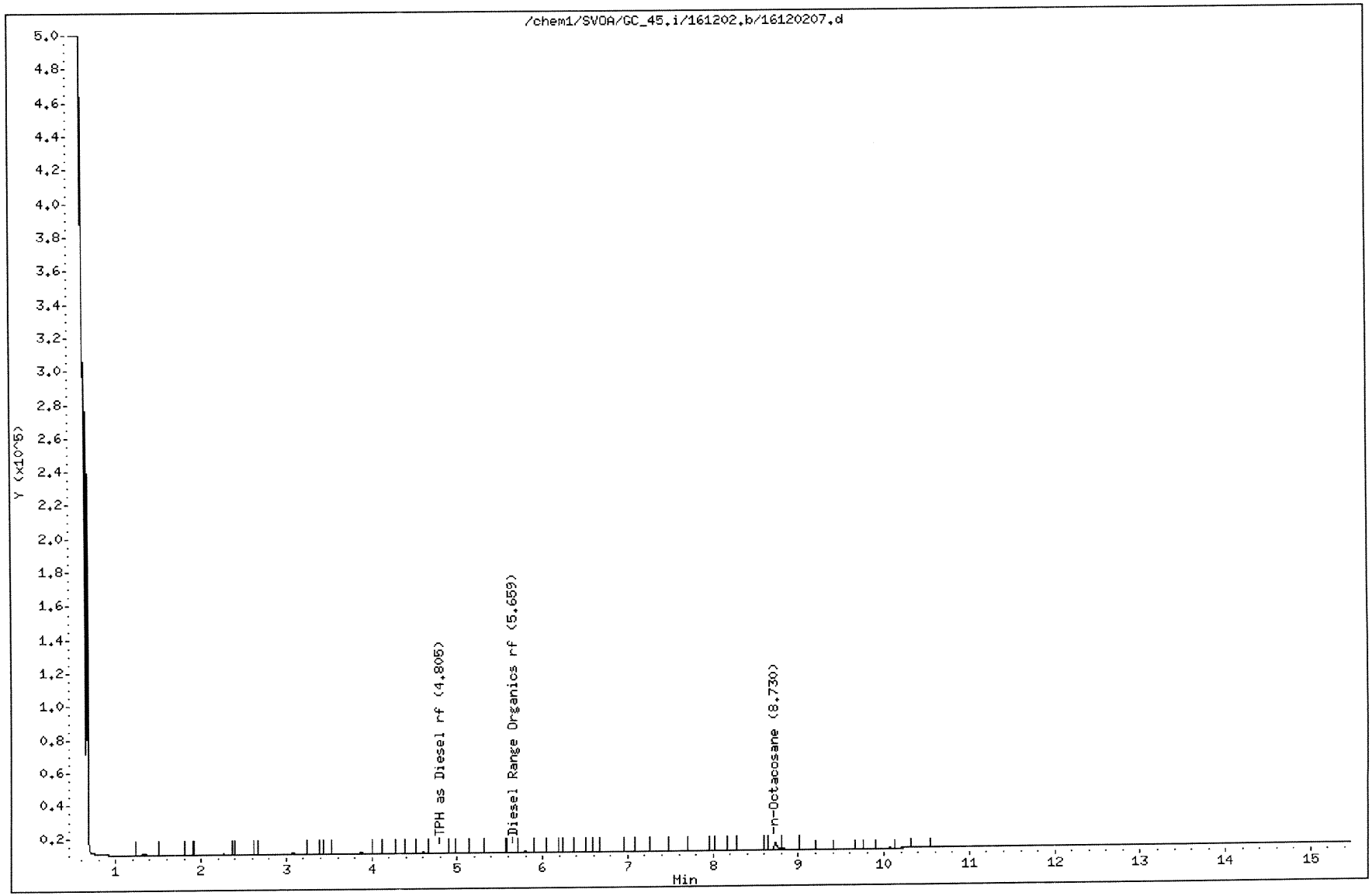
Data File: /chem1/SVOA/GC_45.i/161202.b/16120207.d
Date : 02-DEC-2016 19:43
Client ID:
Sample Info: ICAL D5 C28 0.625 L102516B

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_45.i/161202.b/16120208.d Page 1
Report Date: 05-Dec-2016 10:25

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120208.d
Lab Smp Id:
Inj Date : 02-DEC-2016 20:05
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL D200 C28 25 L102516C
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 00:23 Cal File: 16120220.d
Als bottle: 8 Calibration Sample, Level: 2
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

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 15 TPH as Diesel	0.666-8.944			16236450	200.000	202.900
S 27 Diesel Range Organics	2.374-8.944			15269183	200.000	204.014
$ 93 n-Octacosane	8.713	8.713	0.000	2160363	25.0000	25.044

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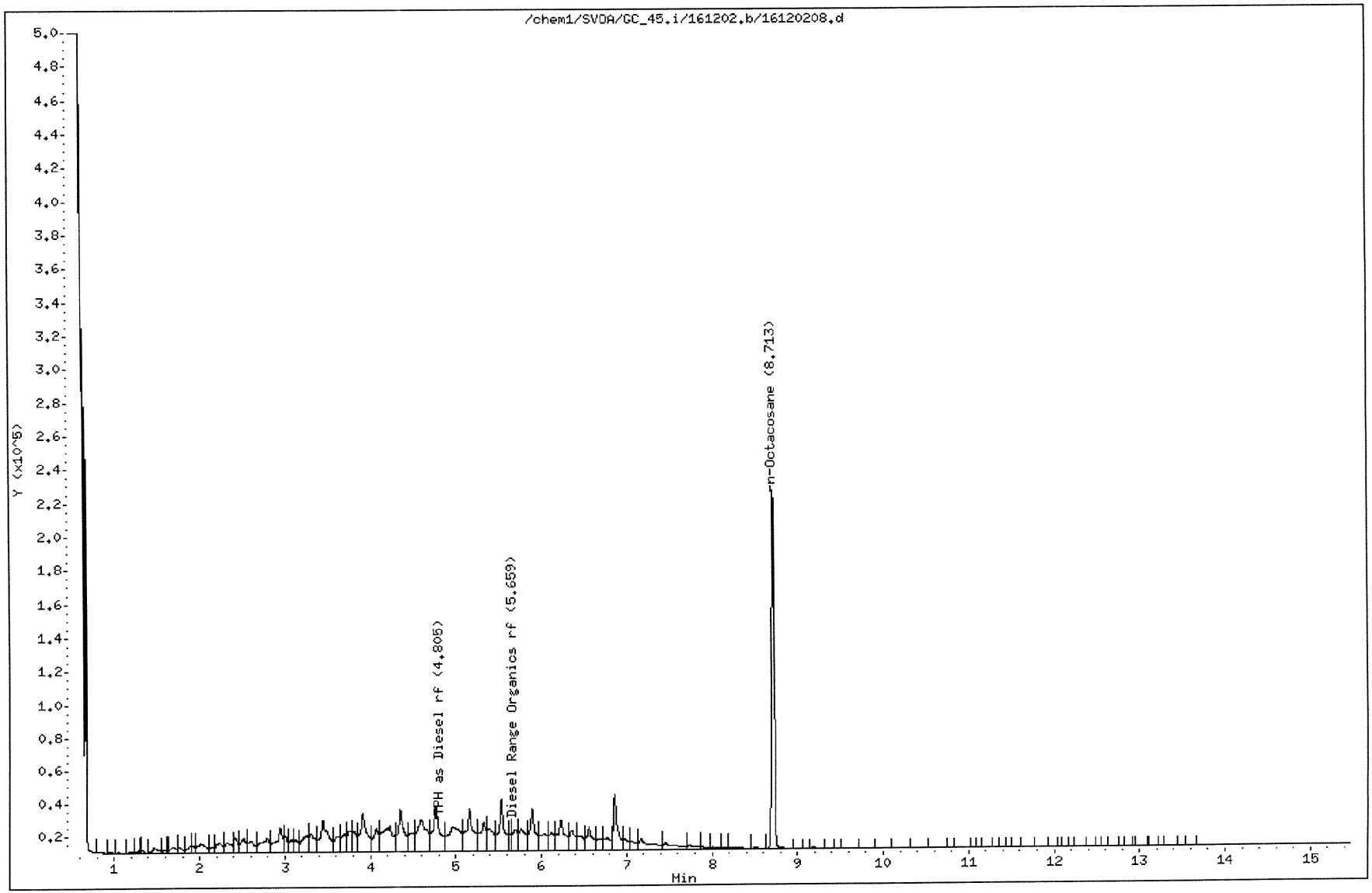
Data File: /chem1/SVOA/GC_45.i/161202.b/16120208.d
Date : 02-DEC-2016 20:05
Client ID:
Sample Info: ICAL D200 C28 25 L102516C

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_45.i/161202.b/16120209.d Page 1
Report Date: 05-Dec-2016 10:25

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120209.d
Lab Smp Id:
Inj Date : 02-DEC-2016 20:27
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 00:46 Cal File: 16120221.d
Als bottle: 9 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

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 15 TPH as Diesel	0.666-8.944			32655500	400.000	408.083
S 27 Diesel Range Organics	2.374-8.944			30616597	400.000	409.074
$ 93 n-Octacosane	8.717	8.717	0.000	4286357	50.0000	49.690

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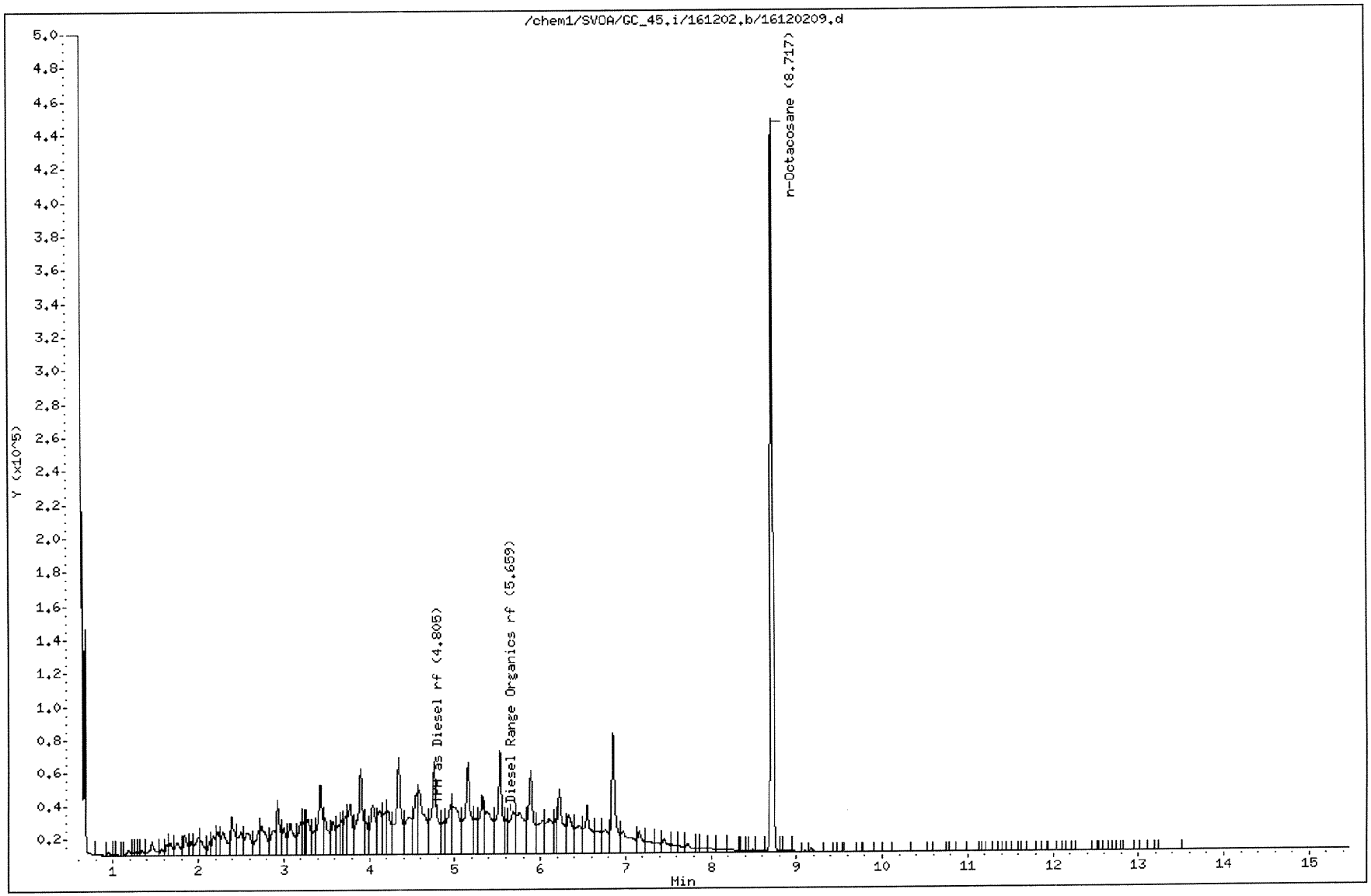
Data File: /chem1/SVOA/GC_45.i/161202.b/16120209.d
Date : 02-DEC-2016 20:27
Client ID:
Sample Info: ICAL D400 C28 50 L102516D

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_45.i/161202.b/16120210.d Page 1
Report Date: 05-Dec-2016 10:25

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120210.d
Lab Smp Id:
Inj Date : 02-DEC-2016 20:48
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL D800 C28 100 L102516E
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 01:08 Cal File: 16120222.d
Als bottle: 10 Calibration Sample, Level: 4
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

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 15 TPH as Diesel	0.666-8.944			67290511	800.000	840.903
S 27 Diesel Range Organics	2.374-8.944			62052115	800.000	829.091
$ 93 n-Octacosane	8.724	8.724	0.000	8653751	100.000	100.320

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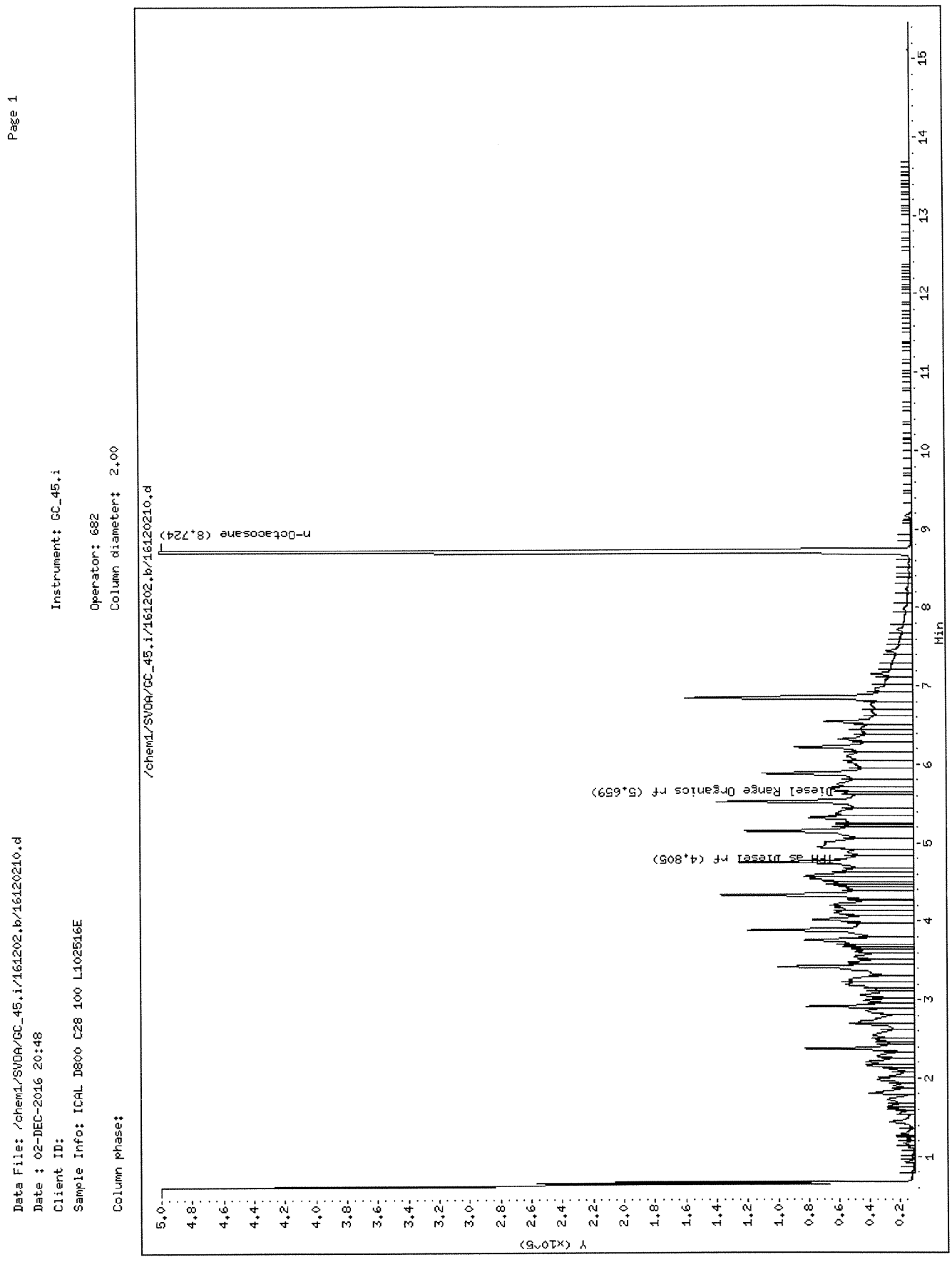

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Data File: /chem1/SVOA/GC_45.i/161202.b/16120211.d Page 1
Report Date: 05-Dec-2016 10:25

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120211.d
Lab Smp Id:
Inj Date : 02-DEC-2016 21:09
Operator : 682 Inst ID: GC_45.i
Smp Info : ICAL D1600 C28 200 L102516F
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 01:29 Cal File: 16120223.d
Als bottle: 11 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

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 15 TPH as Diesel	0.666-8.944			134380116	1600.00	1679.295(A)
S 27 Diesel Range Organics	2.374-8.944			123710939	1600.00	1652.927(A)
$ 93 n-Octacosane	8.737	8.737	0.000	17173600	200.000	199.089

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

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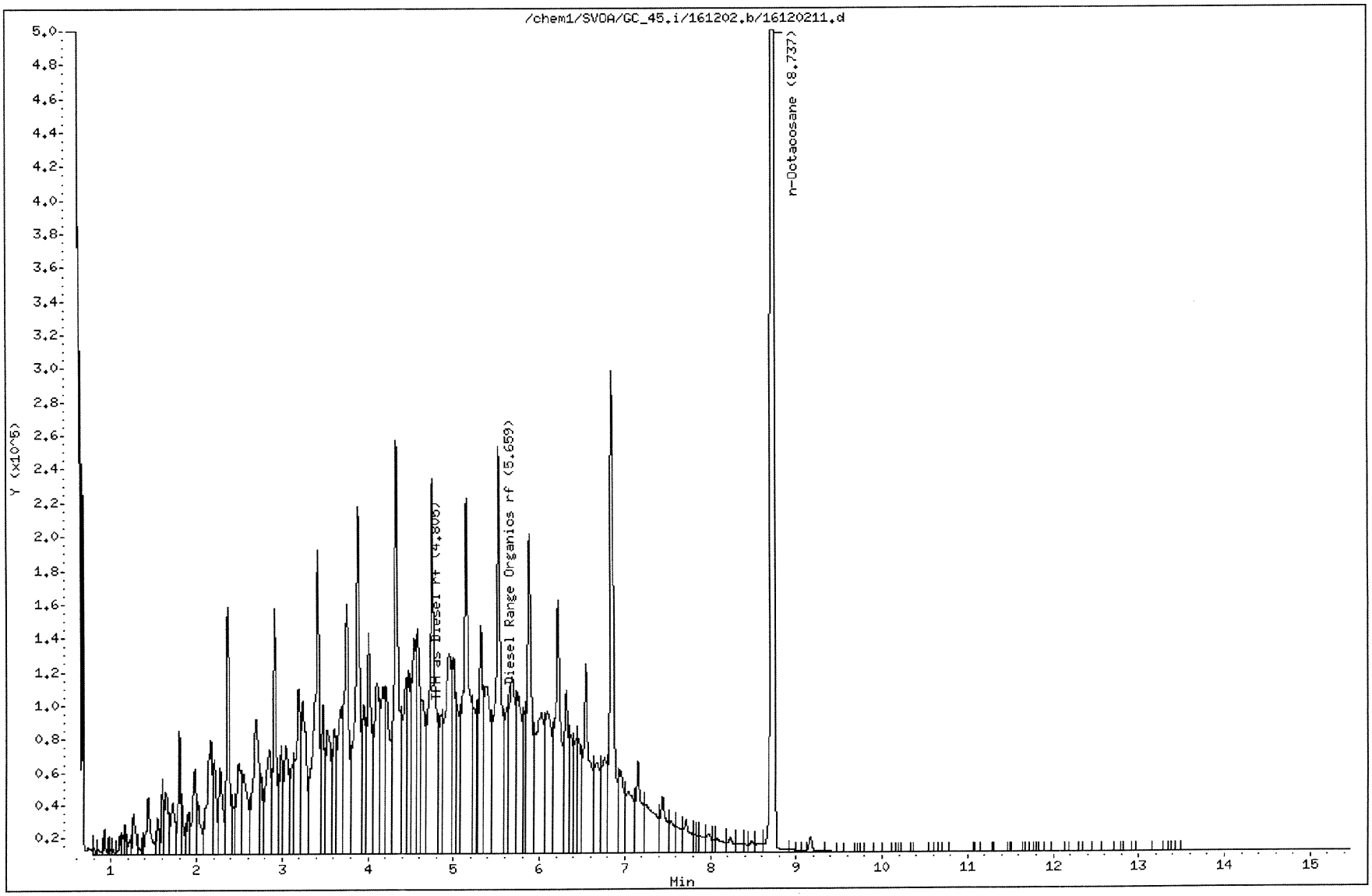
Data File: /chem1/SVOA/GC_45.i/161202.b/16120211.d
Date : 02-DEC-2016 21:09
Client ID:
Sample Info: ICAL D1600 C28 200 L102516F

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/161202.b/16120212.d
Lab Smp Id:
Inj Date : 02-DEC-2016 21:31
Operator : 682 Inst ID: GC_45.i
Smp Info : ICV D400 C28 50 L102516G
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/161202.b/8015d.m
Meth Date : 05-Dec-2016 10:25 uj3k Quant Type: ESTD
Cal Date : 03-DEC-2016 01:29 Cal File: 16120223.d
Als bottle: 12 Continuing Calibration Sample
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 15 TPH as Diesel	0.666-8.944			32804272	400.000	409.942
S 27 Diesel Range Organics	2.374-8.944			31562730	400.000	421.716
$ 93 n-Octacosane	8.717	8.717	0.000	4357915	50.0000	50.520

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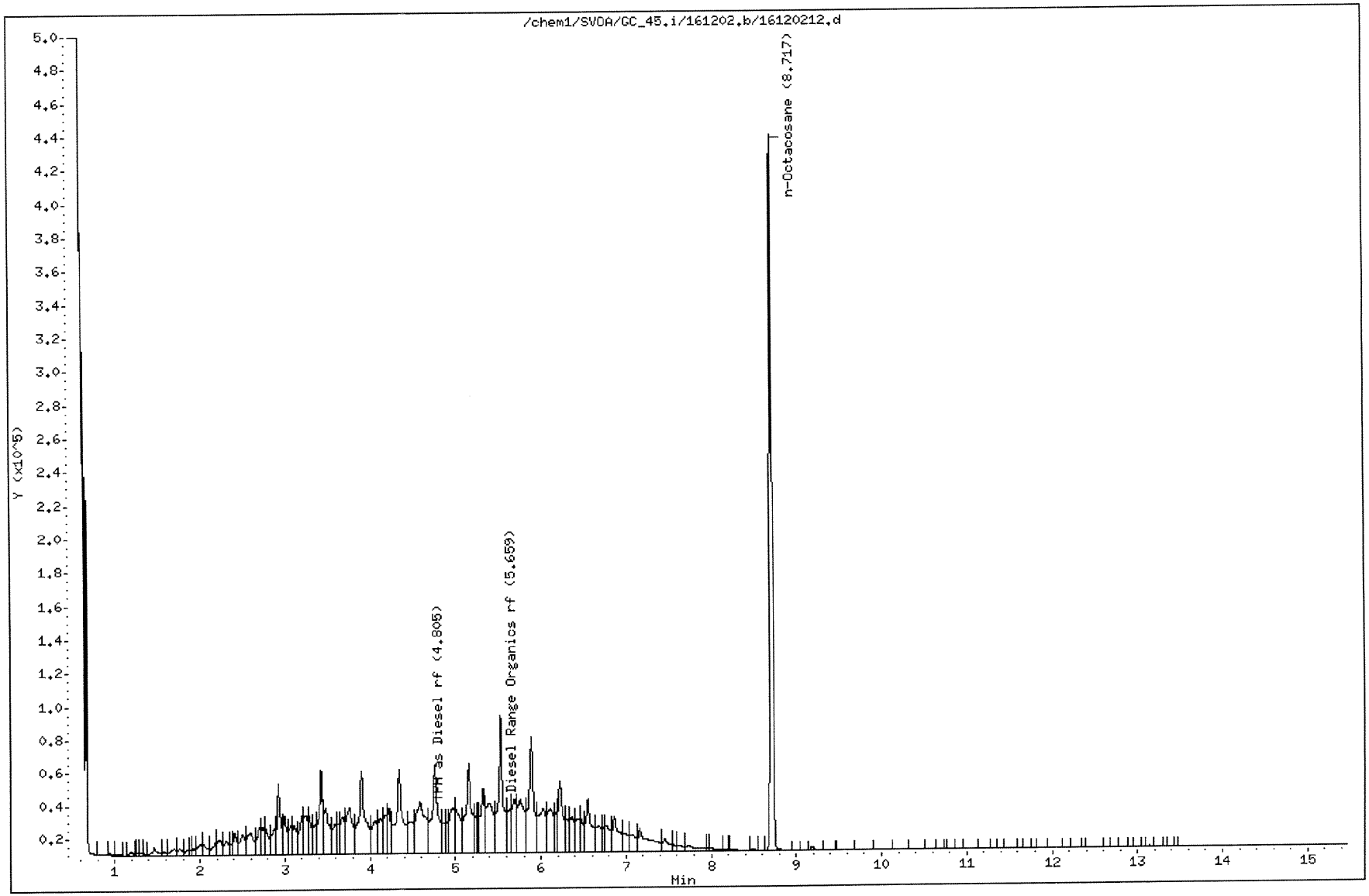
Data File: /chem1/SVOA/GC_45.i/161202.b/16120212.d
Date : 02-DEC-2016 21:31
Client ID:
Sample Info: ICV D400 C28 50 L102516G

Instrument: GC_45.i

Operator: 682
Column diameter: 2.00

Column phase:



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External Standard Report

Data File Name : /chem1/SVOA/GC_45/161202/16120202.d
Page Number :
Operator : 682
Instrument : GC 45
Sample Name : C6-C44 L110816A
Acquired on : 02 DEC 16 18:40
Report Created on: 05-DEC-16 10:26
Software Revision: Target 3.50
Vial Number : Vial 2
Injection Number : 2
Sequence Line : 0
Instrument Method: 8015d.m
Method Sublist : all

Sig. 1 in /chem1/SVOA/GC_45.i/161202.b/16120202.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.666	8.731	8.065	180018.00	0.00	C6-Hexane
0.833	8.731	7.898	363999.00	0.00	C7-Heptane
1.259	8.731	7.472	516823.00	0.00	C8-Octane
1.801	8.731	6.930	648211.00	0.00	C9-Nonane
2.374	8.731	6.357	819875.00	0.00	C10-Decane
2.915	8.731	5.816	821043.00	0.00	C11-Undecane
3.420	8.731	5.311	868861.00	0.00	C12-Dodecane
3.886	8.731	4.845	1699945.00	0.00	C13-Tridecane
4.333	8.731	4.398	1198646.00	0.00	C14-Tetradecane
4.752	8.731	3.979	1628623.00	0.00	C15-pentadecane
5.147	8.731	3.584	1935413.00	0.00	C16-Hexadecane
5.523	8.731	3.208	2181667.00	0.00	C17-Heptadecane
5.881	8.731	2.850	2092837.00	0.00	C18-Octadecane
6.221	8.731	2.510	2246859.00	0.00	C19-Nonadecane
6.547	8.731	2.184	2479179.00	0.00	C20-Eicosane
6.857	8.731	1.874	2195758.00	0.00	C21-Heneicosane
7.155	8.731	1.576	2470063.00	0.00	C22-Docosane
7.441	8.731	1.290	2524633.00	0.00	C23-Tricosane
7.716	8.731	1.015	2327237.00	0.00	C24-Tetracosane
7.979	8.731	0.752	2307901.00	0.00	C25-Pentacosane
8.233	8.731	0.498	2726070.00	0.00	C26-Hexacosane
8.479	8.731	0.252	2592723.00	0.00	C27-Heptacosane
8.716	8.731	0.015	2414138.00	1.63	n-Octacosane
8.944	8.731	-0.213	2391574.00	0.00	C29-Nonacosane
9.165	8.731	-0.434	2426307.00	0.00	C30-Triacontane
9.379	8.731	-0.648	2983404.00	0.00	C31-Hentriacontane
9.589	8.731	-0.858	2945350.00	0.00	C32-Dotricacontane
9.791	8.731	-1.060	2432008.00	0.00	C33-Tritriacontane
9.986	8.731	-1.255	2277735.00	0.00	C34-Tetratriacontane
10.177	8.731	-1.446	2179871.00	0.00	C35-Pentatriacontane
10.361	8.731	-1.630	2070018.00	0.00	C36-Hexatriacontane
10.542	8.731	-1.811	1782436.00	0.00	C37-Heptatriacontane
10.739	8.731	-2.008	1683811.00	0.00	C38-Octatriacontane
10.960	8.731	-2.229	1322621.00	0.00	C39-Nonatriacontane
11.221	8.731	-2.490	1024950.00	0.00	C40-Tetracontane
12.783	8.731	-4.052	1055033.00	0.00	C44-Tetratetracontane

End of File

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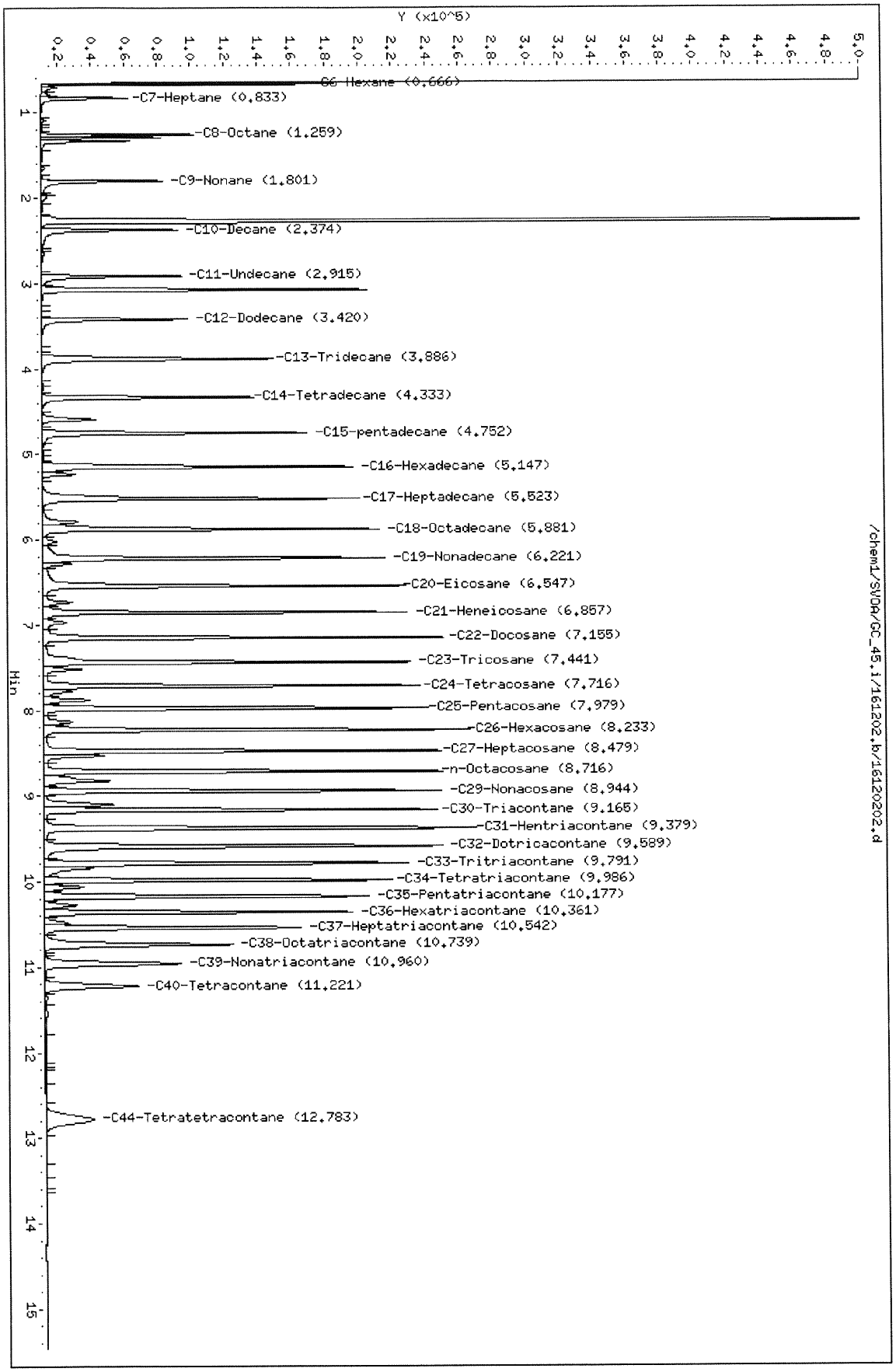

Data File: /chem1/SVOA/GC_45.i/161202.b/16120202.d
Date : 02-DEC-2016 18:40
Client ID:
Sample Info: C6-C44 L110816A
Column phase:

Instrument: GC_45.i
Operator: 682
Column diameter: 2.00

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EPA 8015B (M)

Diesel + Motor Oil

SAMPLE DATA

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

WORK ORDER:	**17-03-0638**	ANALYZED BY:	682
INSTRUMENT:	GC 45	D/T ANALYZED:	2017-03-11 05:57
EXTRACTION :	EPA 3510C	REVIEWED BY:	
D/T EXTRACTED:	2017-03-09 00:00	D/T REVIEWED:	✓1

DATA FILE: S:\GC_45\GC_45_data\2017\170310\17031047.d\Report.txt17031047

 # 1 **CLIENT SAMPLE NUMBER: EB3-2017-03-08**

LCS/MB BATCH:	170309B10A	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:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	782	1.00	ND	100	
TPH as Motor Oil	809	1.00	ND	100	

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

Data File Name    : /chem1/SVOA/GC_45/170310/17031047.d
Page Number       :
Operator          : 682                          Vial Number       : Vial 47
Instrument        : GC 45                        Injection Number  : 47
Sample Name       : 17-03-0638-1                 Sequence Line     : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 11 MAR 17  05:57
Report Created on: 13-MAR-17  17:00              Compound Sublist  : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170310.b/17031047.d
RT Range      Exp RT    DLT RT    Response           ppb               Compound
|-------------|---------|---------|------------------|---------------|--------------------|
        8.624     8.629     0.005       3783486.00        43861.02  n-Octacosane
 2.296- 8.852                             62571.20          781.93  TPH as Diesel
 5.445-12.452                             64759.15          809.27  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031047.d

Page 1

Date : 11-MAR-2017 05:57

Client ID:

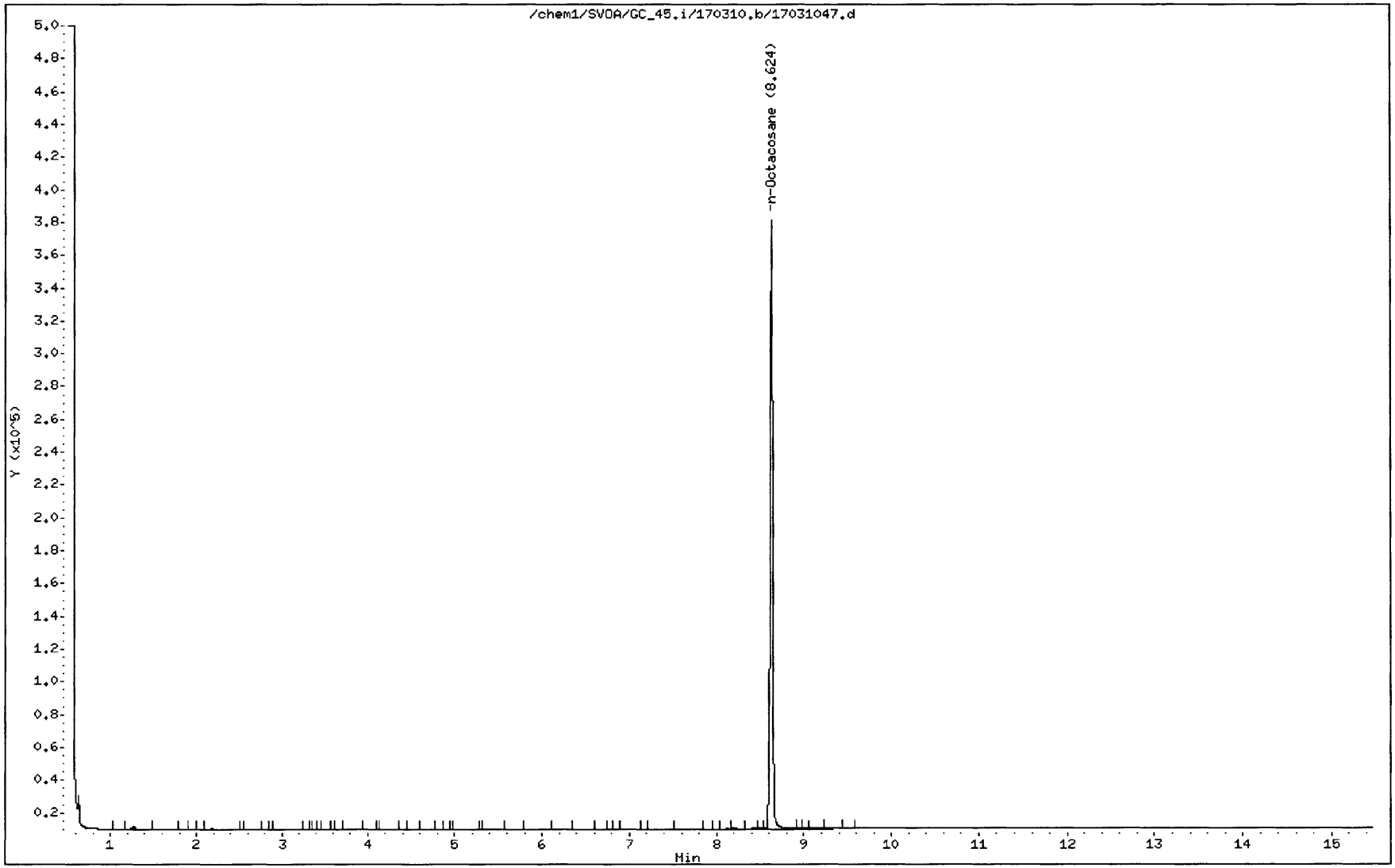
Instrument: GC_45.i

Sample Info: 17-03-0638-1

Operator: 682

Column phase:

Column diameter: 2.00



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EPA 8015B (M)

Diesel + Motor Oil

QUALITY CONTROL

Method Blank
LCS/LCSD
MS/MSD

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

MB SAMPLE ID:	**099-14-355-10**	ANALYZED BY:	682
MB BATCH ID:	170309B10A	D/T ANALYZED:	2017-03-13 11:29
INSTRUMENT:	GC 45	REVIEWED BY:	
EXTRACTION:	EPA 3510C	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-09 00:00	MATRIX:	Water

DATA FILE: S:\GC_45\GC_45_data\2017\170313\17031306.d\Report.txt17031306

CLIENT WORK ORDER: 17-03-0638

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB3-2017-03-08	2017-03-11 05:57	S:\GC_45\GC_45_data\2017\170310\17031047.d\Report.txt17031047

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

WORK ORDER:	**099-14-355**	ANALYZED BY:	682
INSTRUMENT:	GC 45	D/T ANALYZED:	2017-03-13 11:29
EXTRACTION :	EPA 3510C	REVIEWED BY:	
D/T EXTRACTED:	2017-03-09 00:00	D/T REVIEWED:	

DATA FILE: S:\GC_45\GC_45_data\2017\170313\17031306.d\Report.txt17031306

 # MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH:	170309B10A	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:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	405	1.00	ND	100	
TPH as Motor Oil	709	1.00	ND	100	

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

LCS/LCSD SAMPLE ID: **099-14-355-10**
LCS/LCSD BATCH: 170309B10A
INSTRUMENTS:
LCS: GC 45
LCSD: GC 45

EXTRACTION: EPA 3510C
D/T EXTRACTED:
LCS: 2017-03-09 00:00
LCSD: 2017-03-09 00:00

ANALYZED BY: 682
D/T ANALYZED:
LCS: 2017-03-11 03:07
LCSD: 2017-03-11 03:29
REVIEWED BY:
D/T REVIEWED: 21

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
TPH as Diesel	4000	3630	91	3848	96	51-141	6	0-11	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	17031039	S:\GC_45\GC_45_data\2017\170310\17031039.d\Report.txt
LCSD	17031040	S:\GC_45\GC_45_data\2017\170310\17031040.d\Report.txt

SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-0638
BATCH ID:
LCS/MB: 170309B10A
MS:
EXTRACTION : EPA 3510C

REVIEWED BY:
D/T REVIEWED:

 # 1 CLIENT SAMPLE NUMBER : EB3-2017-03-08

INSTRUMENT: GC 45 ANALYZED BY: 682
D/T EXTRACTED: 2017-03-09 00:00 D/T ANALYZED 2017-03-11 05:57
DATA FILE: S:\GC_45\GC_45_data\2017\170310\17031047.d\Report.txt17031047

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	88	68-140	PASS	

 # MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 45 ANALYZED BY: 682
D/T EXTRACTED: 2017-03-09 00:00 D/T ANALYZED 2017-03-13 11:29
DATA FILE: S:\GC_45\GC_45_data\2017\170313\17031306.d\Report.txt17031306

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	107	68-140	PASS	

 # LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 45 ANALYZED BY: 682
D/T EXTRACTED: 2017-03-09 00:00 D/T ANALYZED 2017-03-11 03:07
DATA FILE: S:\GC_45\GC_45_data\2017\170310\17031039.d\Report.txt17031039

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	93	68-140	PASS	

 # LCD CLIENT SAMPLE NUMBER : Lab Control Sample Duplicate

INSTRUMENT: GC 45 ANALYZED BY: 682
D/T EXTRACTED: 2017-03-09 00:00 D/T ANALYZED 2017-03-11 03:29
DATA FILE: S:\GC_45\GC_45_data\2017\170310\17031040.d\Report.txt17031040

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	91	68-140	PASS	

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

Data File Name    : /chem1/SVOA/GC_45/170313/17031306.d
Page Number       :
Operator          : 682                          Vial Number       : Vial 6
Instrument        : GC 45                        Injection Number  : 6
Sample Name       : MB 170310909/10              Sequence Line     : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 13 MAR 17  11:29
Report Created on: 14-MAR-17  11:56              Compound Sublist  : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170313.b/17031306.d
RT Range       Exp RT    DLT RT    Response            ppb               Compound
|-------------|---------|---------|-------------------|---------------|---------------------|
        8.628     8.629     0.001         4628136.00        53652.83  n-Octacosane
 2.317- 8.851                               32374.41          404.57  TPH as Diesel
 5.450-12.454                               56741.34          709.07  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_45.i/170313.b/17031306.d

Page 1

Date : 13-MAR-2017 11:29

Client ID:

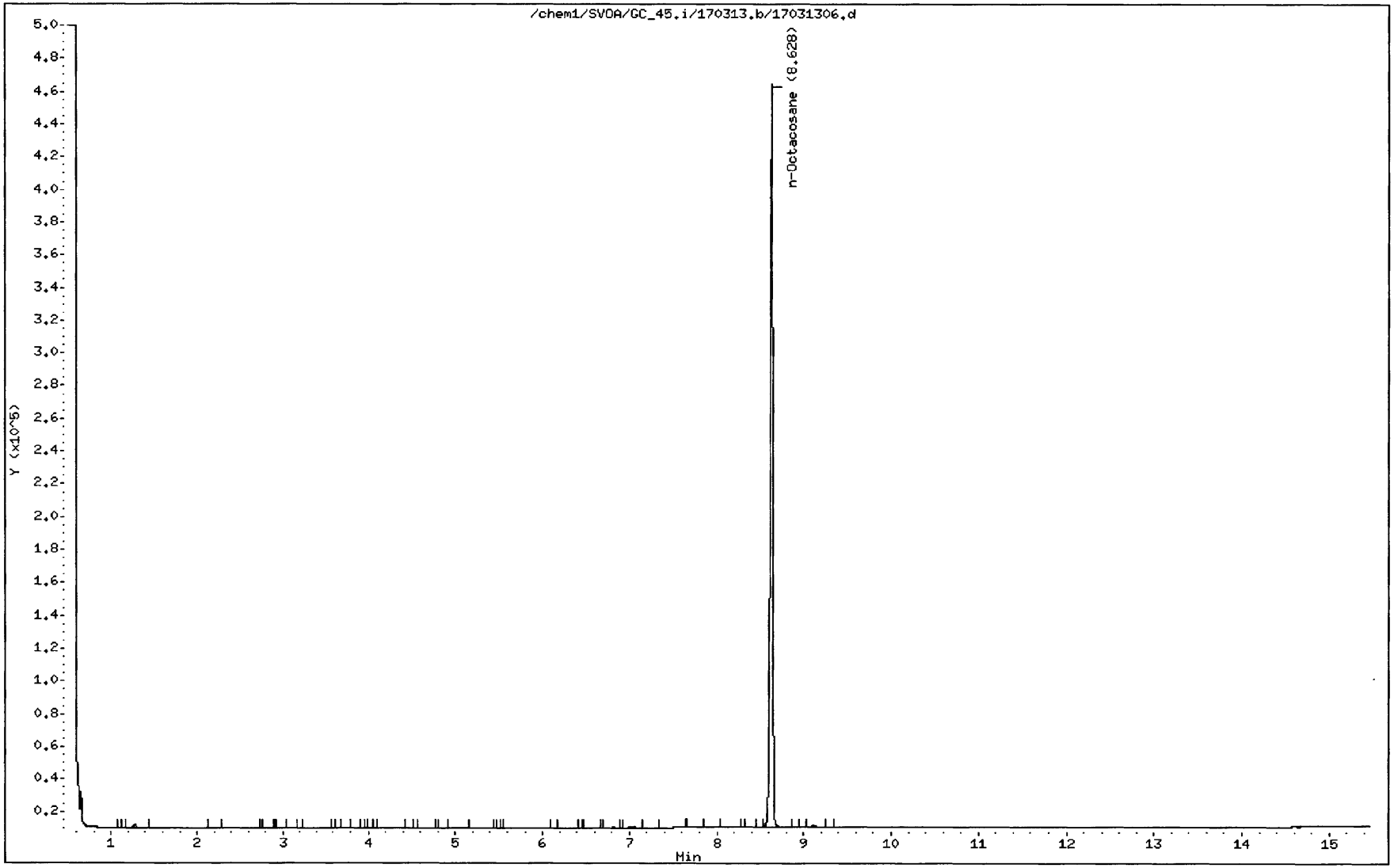
Instrument: GC_45.i

Sample Info: MB 170310909/10

Operator: 682

Column phase:

Column diameter: 2.00



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

Data File Name    : /chem1/SVOA/GC_45/170310/17031039.d
Page Number       :
Operator          : 682                          Vial Number       : Vial 39
Instrument        : GC 45                        Injection Number  : 39
Sample Name       : LCS 17030909/10              Sequence Line     : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 11 MAR 17  03:07
Report Created on: 13-MAR-17  13:07              Compound Sublist  : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170310.b/17031039.d
```

RT Range	Exp RT	DLT RT	Response	ppb	Compound
8.626	8.629	0.004	4002281.00	46397.45	n-Octacosane
0.626- 8.852			29044927.98	362963.14	TPH as Diesel
2.296- 8.852			28202995.37	376826.06	Diesel Range Organics

End of File

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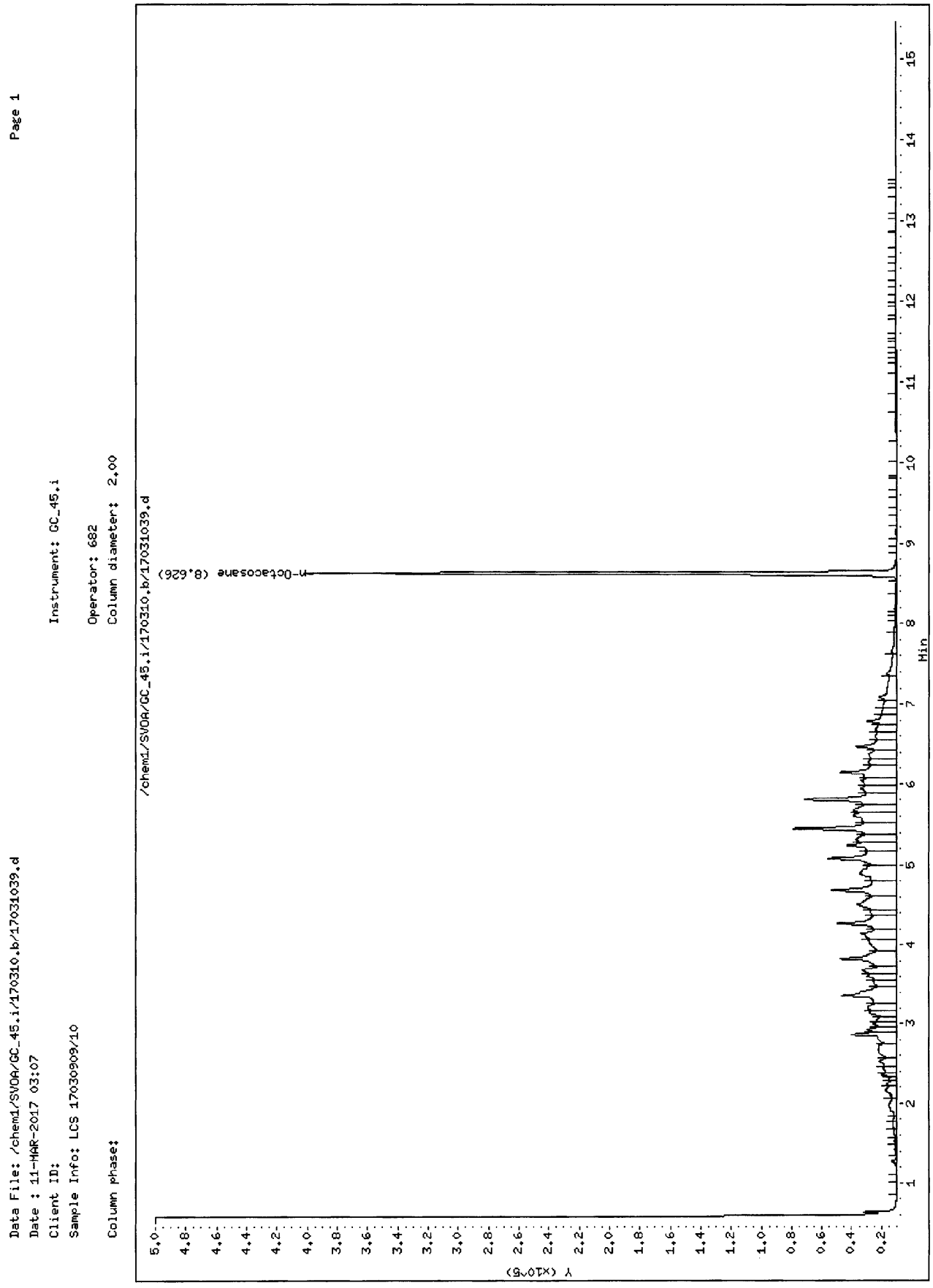

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================================================================================
                          External Standard Report
================================================================================

Data File Name    : /chem1/SVOA/GC_45/170310/17031040.d
Page Number       :
Operator          : 682                          Vial Number       : Vial 40
Instrument        : GC 45                        Injection Number  : 40
Sample Name       : LCSD 17030909/10             Sequence Line     : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 11 MAR 17  03:29
Report Created on: 13-MAR-17  13:07              Compound Sublist  : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_45.i/170310.b/17031040.d
RT Range      Exp RT    DLT RT    Response           ppb               Compound
|-------------|---------|---------|------------------|---------------|--------------------|
        8.626     8.629     0.003         3918622.00        45427.62  n-Octacosane
 0.626- 8.852                           30796256.73       384848.81  TPH as Diesel
 2.296- 8.852                           29947993.04       400141.33  Diesel Range Organics
End of File
```

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031040.d

Page 1

Date : 11-MAR-2017 03:29

Client ID:

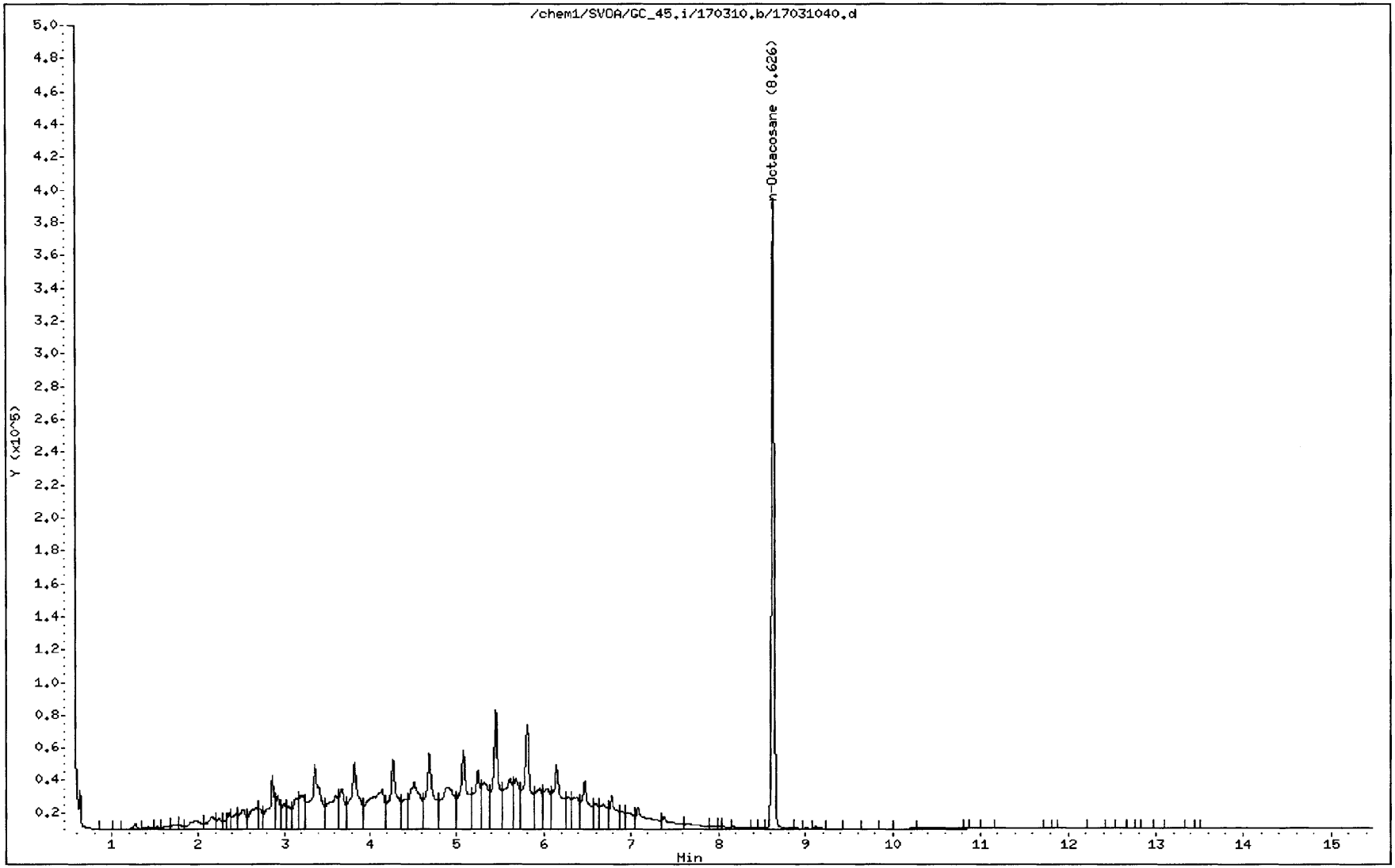
Instrument: GC_45.i

Sample Info: LCSD 17030909/10

Operator: 682

Column phase:

Column diameter: 2.00



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EPA 8015B (M)

Diesel + Motor Oil

CONTINUING CALIBRATION

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

BATCH ID: **170310A054** ANALYZED BY: 682
INSTRUMENT: GC 45

WORK ORDER: **099-14-354** REVIEWED BY: 27
MATRIX: Water D/T REVIEWED: 2017-03-14 17:42

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
28	Daily Calibration	2017-03-11 02:03	S:\GC_45\GC_45_data\2017\170310\17031036.d\Report.txt17031036

WORK ORDER: **17-03-0638** REVIEWED BY: 27
MATRIX: Water D/T REVIEWED: 2017-03-14 17:42

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1	EB3-2017-03-08	2017-03-11 05:57	S:\GC_45\GC_45_data\2017\170310\17031047.d\Report.txt17031047

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

CCV WORK ORDER: **099-14-354-28-5901**
BATCH ID:
INITIAL: 161202I007
CCV: 170310A054
INSTRUMENT: GC 45

DATA FILE: S:\GC_45\GC_45_data\2017\170310\17031036.d\Report.txt17031036

ANALYZED BY: 682
D/T ANALYZED:
INITIAL: 2016-12-02 19:43
CCV: 2017-03-11 02:03
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
TPH as Diesel	C	Avg Resp	0.00	80.022	78.205			2	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_45.i/170310.b/17031036.d
Report Date: 03/13/2017 13:06

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_45.i/170310.b/8015d.m

Injection Date and Time: 11-MAR-2017 02:03
Initial Calibration Date(s): 18-OCT-2016 07-MAR-2017
Initial Calibration Time(s): 12:03 13:58

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	78205.340	0.00	2	15	Averaged
Diesel Range Organics	74843.538	73421.125	0.00	2	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	86260.794	79267.020	0.00	8	20	Averaged

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031036.d Page 1
Report Date: 13-Mar-2017 13:06

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170310.b/17031036.d
Lab Smp Id:
Inj Date : 11-MAR-2017 02:03
Operator : 682 Inst ID: GC_45.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/170310.b/8015d.m
Meth Date : 13-Mar-2017 13:06 umd6 Quant Type: ESTD
Cal Date : 28-DEC-2016 19:01 Cal File: 16122828.d
Als bottle: 36 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

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 15 TPH as Diesel	0.626-8.852			31282136	400.000	390.920
S 27 Diesel Range Organics	2.296-8.852			29368450	400.000	392.397
$ 93 n-Octacosane	8.625	8.625	0.000	3963351	50.0000	45.946

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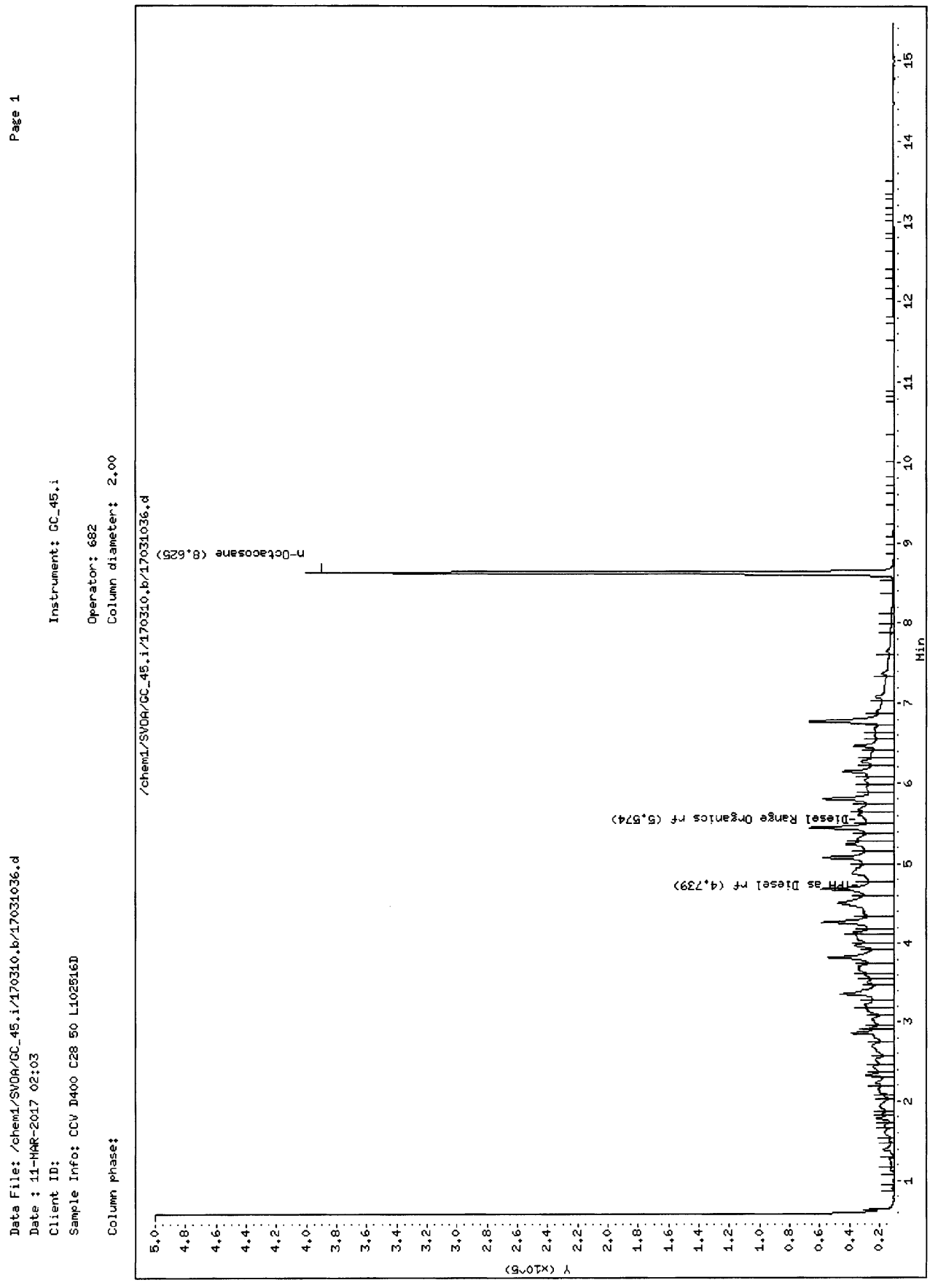

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031049.d
Report Date: 03/14/2017 09:52

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_45.i/170310.b/8015d.m

Injection Date and Time: 11-MAR-2017 06:39
Initial Calibration Date(s): 18-OCT-2016 07-MAR-2017
Initial Calibration Time(s): 12:03 13:58

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	78850.060	0.00	1	15	Averaged
Diesel Range Organics	74843.538	74015.530	0.00	1	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
n-Octacosane	86260.794	78231.280	0.00	9	20	Averaged

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031049.d Page 1
Report Date: 13-Mar-2017 17:08

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170310.b/17031049.d
Lab Smp Id:
Inj Date : 11-MAR-2017 06:39
Operator : 682 Inst ID: GC_45.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/170310.b/8015d.m
Meth Date : 13-Mar-2017 17:08 umd6 Quant Type: ESTD
Cal Date : 28-DEC-2016 19:01 Cal File: 16122828.d
Als bottle: 49 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

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 15 TPH as Diesel	0.626-8.852			31540024	400.000	394.143
S 27 Diesel Range Organics	2.296-8.852			29606212	400.000	395.574
$ 93 n-Octacosane	8.624	8.624	0.000	3911564	50.0000	45.345

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Data File: /chem1/SVOA/GC_45.i/170310.b/17031049.d

Page 1

Date : 11-MAR-2017 06:39

Client ID:

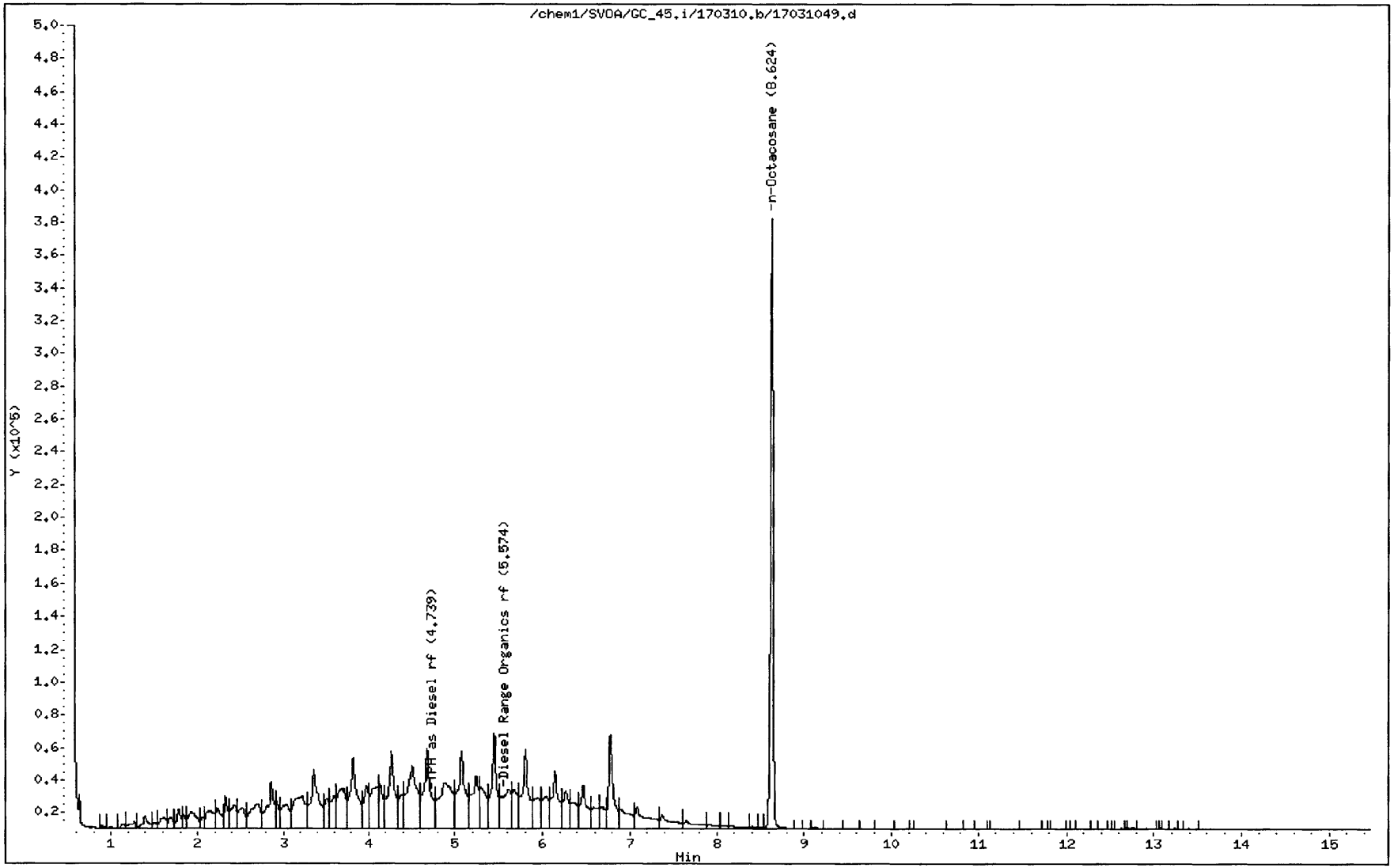
Instrument: GC_45.i

Sample Info: CCV D400 C28 50 L102516D

Operator: 682

Column phase:

Column diameter: 2.00



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External Standard Report

Data File Name : /chem1/SVOA/GC_45/170310/1703100201.d
Page Number :
Operator : 682
Instrument : GC 45
Sample Name : C6-C44 L110816A
Acquired on : 11 MAR 17 01:42
Report Created on: 13-MAR-17 13:03
Software Revision: Target 3.50
Vial Number : Vial 2
Injection Number : 2
Sequence Line : 0
Instrument Method: 8015d.m
Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_45.i/170310.b/1703100201.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.626	8.629	8.003	115198.00	0.00	C6-Hexane
0.780	8.629	7.849	292223.00	0.00	C7-Heptane
1.192	8.629	7.438	826805.00	0.00	C8-Octane
1.725	8.629	6.905	1232265.00	0.00	C9-Nonane
2.296	8.629	6.333	1446020.00	0.00	C10-Decane
2.839	8.629	5.791	1434692.00	0.00	C11-Undecane
3.344	8.629	5.285	1496907.00	0.00	C12-Dodecane
3.815	8.629	4.814	1686682.00	0.00	C13-Tridecane
4.257	8.629	4.372	1487669.00	0.00	C14-Tetradecane
4.675	8.629	3.954	1501700.00	0.00	C15-pentadecane
5.071	8.629	3.558	1529463.00	0.00	C16-Hexadecane
5.445	8.629	3.184	1520845.00	0.00	C17-Heptadecane
5.801	8.629	2.828	1517495.00	0.00	C18-Octadecane
6.139	8.629	2.490	1574049.00	0.00	C19-Nonadecane
6.463	8.629	2.166	1545204.00	0.00	C20-Eicosane
6.772	8.629	1.857	1548726.00	0.00	C21-Heneicosane
7.069	8.629	1.560	1599436.00	0.00	C22-Docosane
7.354	8.629	1.275	1578284.00	0.00	C23-Tricosane
7.627	8.629	1.002	1586443.00	0.00	C24-Tetracosane
7.889	8.629	0.741	1562453.00	0.00	C25-Pentacosane
8.144	8.629	0.486	1641506.00	0.00	C26-Hexacosane
8.387	8.629	0.242	1574125.00	0.00	C27-Heptacosane
8.623	8.629	0.006	1560327.00	18.09	n-Octacosane
8.852	8.629	-0.222	1520565.00	0.00	C29-Nonacosane
9.073	8.629	-0.443	1476656.00	0.00	C30-Triacontane
9.287	8.629	-0.657	1433083.00	0.00	C31-Hentriacontane
9.494	8.629	-0.865	1361754.00	0.00	C32-Dotricacontane
9.694	8.629	-1.065	1239227.00	0.00	C33-Tritriacontane
9.890	8.629	-1.260	1043908.00	0.00	C34-Tetratriacontane
10.080	8.629	-1.451	828653.00	0.00	C35-Pentatriacontane
10.263	8.629	-1.634	665937.00	0.00	C36-Hexatriacontane
10.443	8.629	-1.814	463601.00	0.00	C37-Heptatriacontane
10.626	8.629	-1.996	337214.00	0.00	C38-Octatriacontane
10.829	8.629	-2.200	218428.00	0.00	C39-Nonatriacontane
11.067	8.629	-2.437	146851.00	0.00	C40-Tetracontane
12.452	8.629	-3.822	206503.00	0.00	C44-Tetratetracontane

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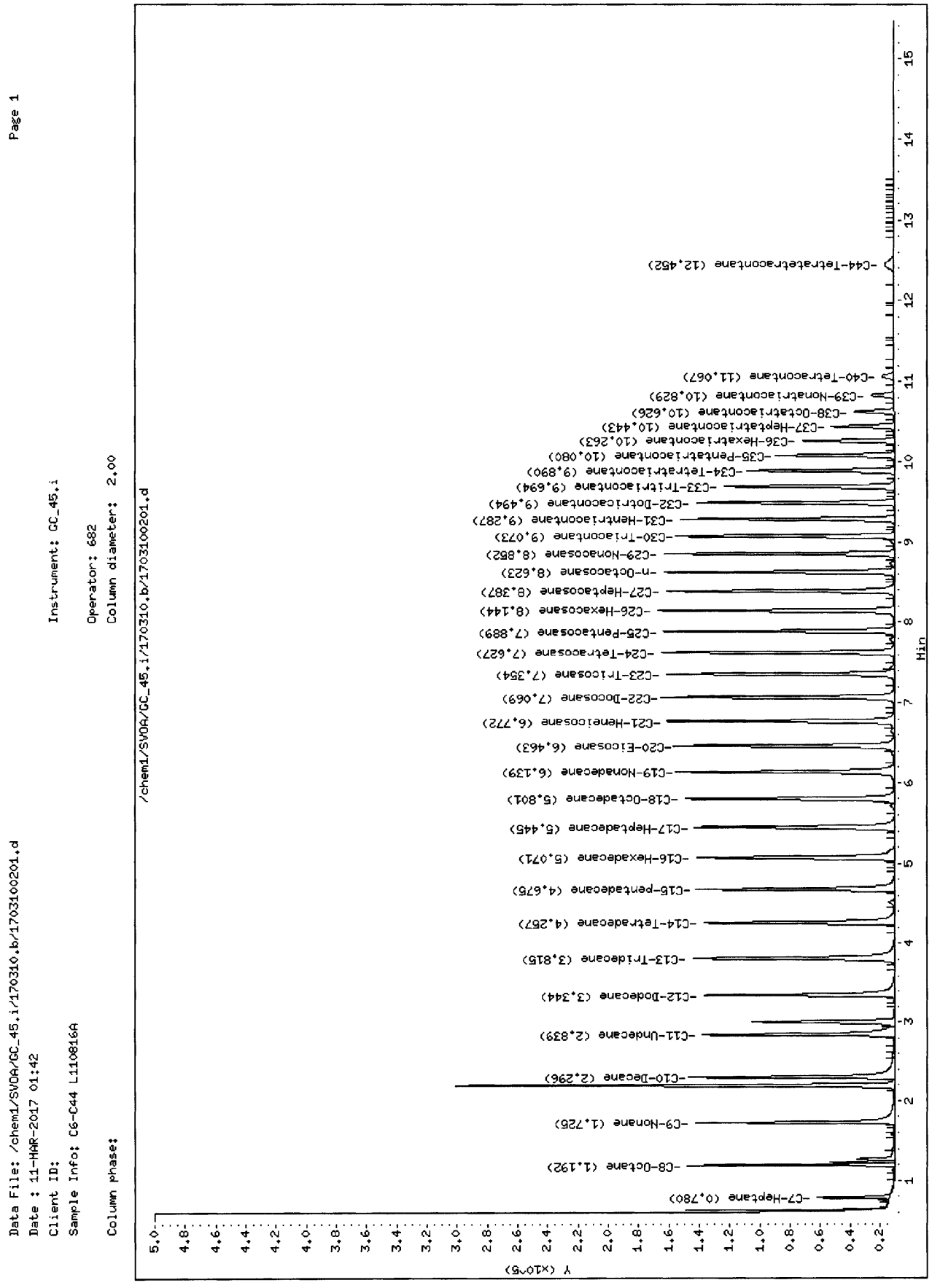

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8015B (M)

CCV WORK ORDER: **099-14-354-29-5901**

BATCH ID:
- INITIAL: 161202I007
- CCV: 170313A023

INSTRUMENT: GC 45

DATA FILE: S:\GC_45\GC_45_data\2017\170313\17031303.d\Report.txt17031303

ANALYZED BY: 682

D/T ANALYZED:
- INITIAL: 2016-12-02 19:43
- CCV: 2017-03-13 10:45

REVIEWED BY:

D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
TPH as Diesel	C	Avg Resp	0.00	80.022	79.102			1	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_45.i/170313.b/17031303.d
Report Date: 03/13/2017 13:27

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_45.i/170313.b/8015d.m

Injection Date and Time: 13-MAR-2017 10:45
Initial Calibration Date(s): 18-OCT-2016 07-MAR-2017
Initial Calibration Time(s): 12:03 13:58

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	79101.558	0.00	1	15	Averaged
Diesel Range Organics	74843.538	73720.935	0.00	1	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	86260.794	91586.220	0.00	-6	20	Averaged

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Data File: /chem1/SVOA/GC_45.i/170313.b/17031303.d Page 1
Report Date: 13-Mar-2017 13:27

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170313.b/17031303.d
Lab Smp Id:
Inj Date : 13-MAR-2017 10:45
Operator : 682 Inst ID: GC_45.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/170313.b/8015d.m
Meth Date : 13-Mar-2017 13:27 umd6 Quant Type: ESTD
Cal Date : 28-DEC-2016 19:01 Cal File: 16122828.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)	AMOUNTS ON-COL (ppm)
S 15 TPH as Diesel	0.633-8.851			31640623	400.000	395.400
S 27 Diesel Range Organics	2.317-8.851			29488374	400.000	394.000
$ 93 n-Octacosane	8.626	8.626	0.000	4579311	50.0000	53.086

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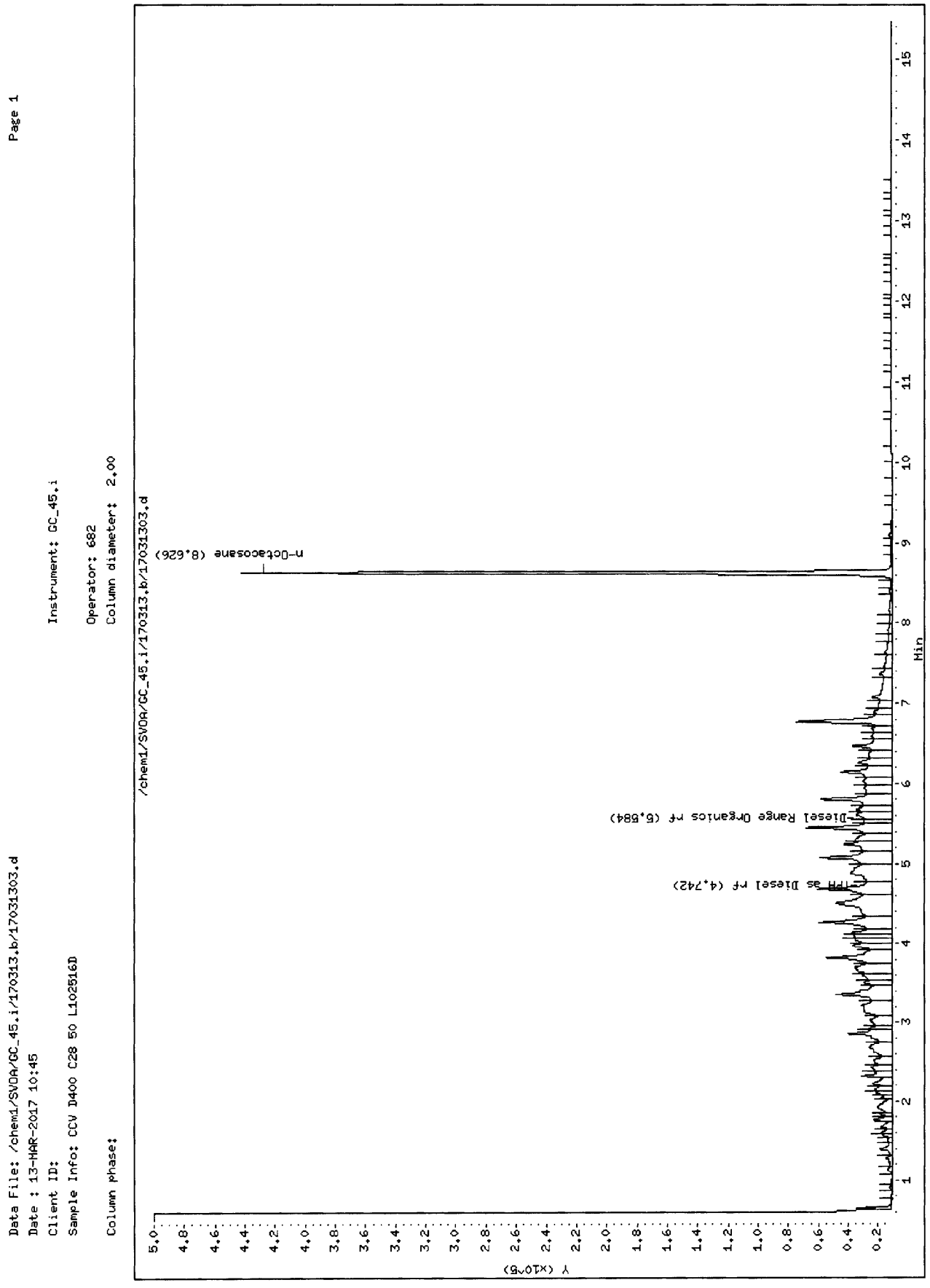

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Data File: /chem1/SVOA/GC_45.i/170313.b/17031321.d
Report Date: 03/14/2017 10:20

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_45.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_45.i/170313.b/8015d.m

Injection Date and Time: 13-MAR-2017 16:50
Initial Calibration Date(s): 18-OCT-2016 07-MAR-2017
Initial Calibration Time(s): 12:03 13:58

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
TPH as Diesel	80021.702	80644.720	0.00	-1	15	Averaged
Diesel Range Organics	74843.538	75511.623	0.00	-1	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	86260.794	92753.360	0.00	-8	20	Averaged

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Data File: /chem1/SVOA/GC_45.i/170313.b/17031321.d Page 1
Report Date: 14-Mar-2017 10:06

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_45.i/170313.b/17031321.d
Lab Smp Id:
Inj Date : 13-MAR-2017 16:50
Operator : 682 Inst ID: GC_45.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_45.i/170313.b/8015d.m
Meth Date : 14-Mar-2017 10:06 umd6 Quant Type: ESTD
Cal Date : 28-DEC-2016 19:01 Cal File: 16122828.d
Als bottle: 21 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

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 15 TPH as Diesel	0.633-8.851			32257888	400.000	403.114
S 27 Diesel Range Organics	2.317-8.851			30204649	400.000	403.570
$ 93 n-Octacosane	8.627	8.627	0.000	4637668	50.0000	53.763

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Data File: /chem1/SVOA/GC_45.i/170313.b/17031321.d

Page 1

Date : 13-MAR-2017 16:50

Client ID:

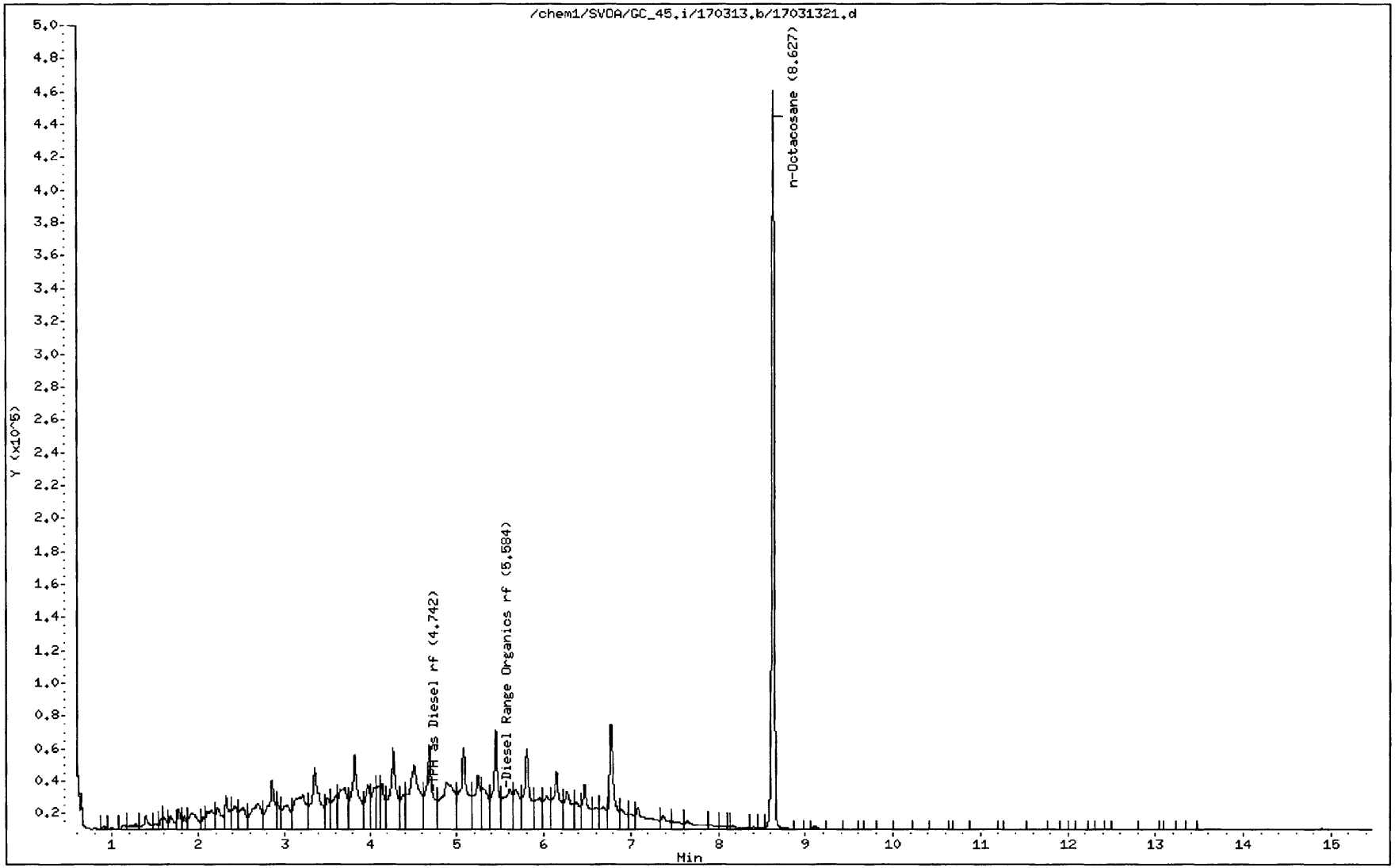
Instrument: GC_45.i

Sample Info: CCV D400 C28 50 L102516D

Operator: 682

Column phase:

Column diameter: 2.00



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External Standard Report

Data File Name : /chem1/SVOA/GC_45/170313/17031302.d
Page Number :
Operator : 682
Instrument : GC 45
Sample Name : C6-C44 L110816A
Acquired on : 13 MAR 17 10:24
Report Created on: 13-MAR-17 13:29
Software Revision: Target 3.50
Vial Number : Vial 2
Injection Number : 2
Sequence Line : 0
Instrument Method: 8015d.m
Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_45.i/170313.b/17031302.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.633	8.629	7.996	136970.00	0.00	C6-Hexane
0.790	8.629	7.840	225605.00	0.00	C7-Heptane
1.201	8.629	7.428	343016.00	0.00	C8-Octane
1.734	8.629	6.895	487213.00	0.00	C9-Nonane
2.317	8.629	6.312	508710.00	0.00	C10-Decane
2.863	8.629	5.766	443447.00	0.00	C11-Undecane
3.366	8.629	5.263	515910.00	0.00	C12-Dodecane
3.834	8.629	4.796	557518.00	0.00	C13-Tridecane
4.271	8.629	4.359	604298.00	0.00	C14-Tetradecane
4.684	8.629	3.946	707853.00	0.00	C15-pentadecane
5.076	8.629	3.553	761259.00	0.00	C16-Hexadecane
5.450	8.629	3.179	777108.00	0.00	C17-Heptadecane
5.804	8.629	2.825	785544.00	0.00	C18-Octadecane
6.143	8.629	2.486	803991.00	0.00	C19-Nonadecane
6.465	8.629	2.165	806826.00	0.00	C20-Eicosane
6.773	8.629	1.856	809135.00	0.00	C21-Heneicosane
7.071	8.629	1.559	829209.00	0.00	C22-Docosane
7.354	8.629	1.275	827169.00	0.00	C23-Tricosane
7.627	8.629	1.003	839940.00	0.00	C24-Tetracosane
7.891	8.629	0.739	847005.00	0.00	C25-Pentacosane
8.143	8.629	0.487	887938.00	0.00	C26-Hexacosane
8.387	8.629	0.243	879500.00	0.00	C27-Heptacosane
8.623	8.629	0.006	903594.00	10.47	n-Octacosane
8.851	8.629	-0.222	914605.00	0.00	C29-Nonacosane
9.073	8.629	-0.444	929157.00	0.00	C30-Triacontane
9.286	8.629	-0.656	944501.00	0.00	C31-Hentriacontane
9.492	8.629	-0.863	952168.00	0.00	C32-Dotricacontane
9.693	8.629	-1.064	923479.00	0.00	C33-Tritriacontane
9.889	8.629	-1.259	826439.00	0.00	C34-Tetratriacontane
10.079	8.629	-1.450	688772.00	0.00	C35-Pentatriacontane
10.266	8.629	-1.636	566545.00	0.00	C36-Hexatriacontane
10.443	8.629	-1.814	391993.00	0.00	C37-Heptatriacontane
10.625	8.629	-1.996	269604.00	0.00	C38-Octatriacontane
10.830	8.629	-2.200	156321.00	0.00	C39-Nonatriacontane
11.066	8.629	-2.436	89435.00	0.00	C40-Tetracontane
12.454	8.629	-3.825	66936.00	0.00	C44-Tetratetracontane

End of File

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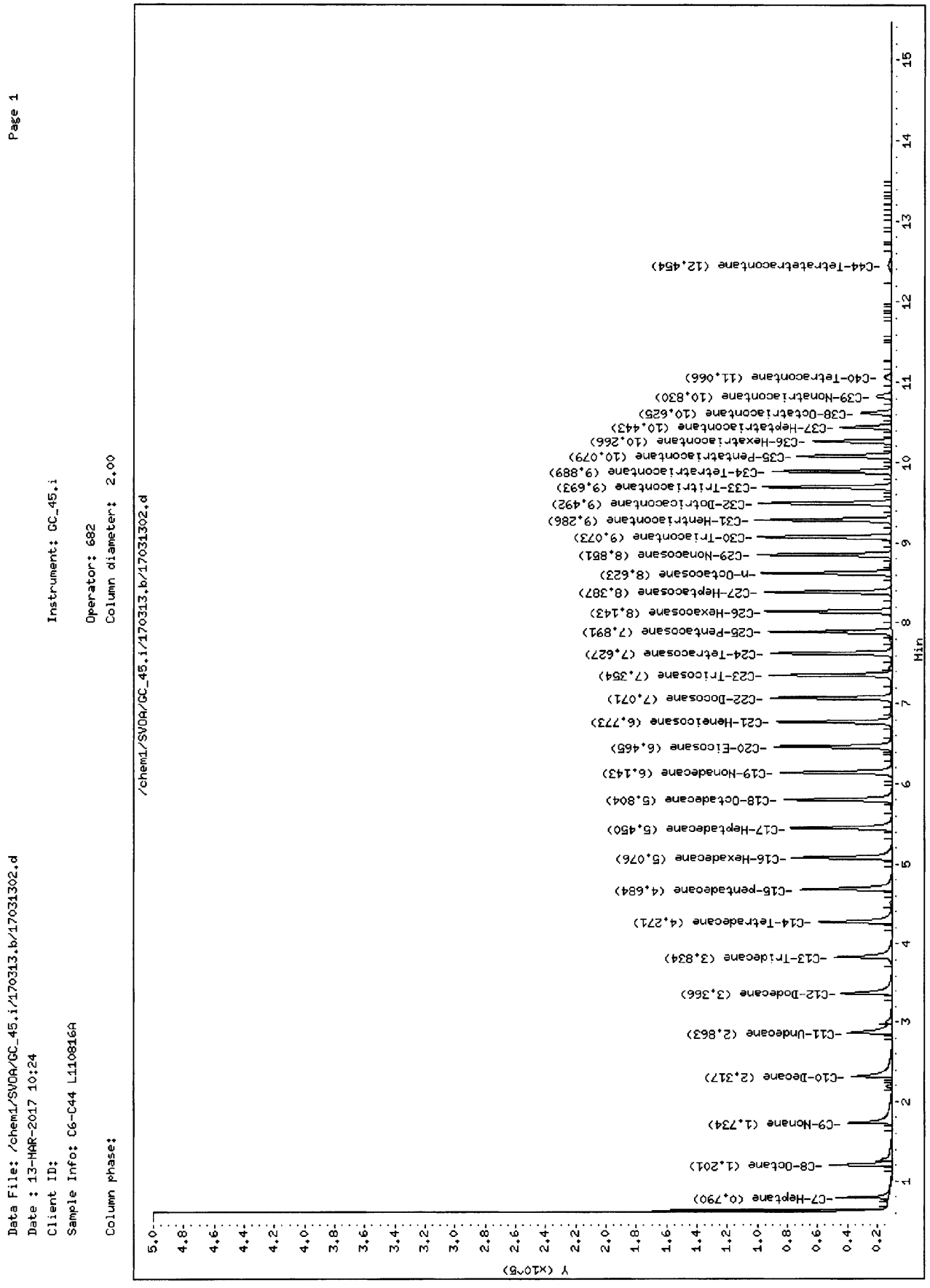

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EPA 8015B (M)

Diesel + Motor Oil

RUN LOGS

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Sequence: C:\CHEM32\1\SEQUENCE\161202.S
Table: Front DataPath: W:\GC_45\2016\161202\

Line	Vial	File	Name	Method	Acquired
1	1	16120201	BLANK	8015D	02-Dec-16, 17:34:02
2	1	1612020102	BLANK	8015D	02-Dec-16, 17:55:52
3	1	1612020103	BLANK	8015D	02-Dec-16, 18:17:52
4	2	16120202	C6-C44 L110816A	8015D	02-Dec-16, 18:40:02
5	5	16120205	CCV D400 C28 50 L102516D	8015D	02-Dec-16, 19:00:47
6	6	16120206	CCV MO400 L090716D	8015D	02-Dec-16, 19:21:33
7	7	16120207	ICAL D5 C28 0.625 L102516B	8015D	02-Dec-16, 19:43:29
8	8	16120208	ICAL D200 C28 25 L102516C	8015D	02-Dec-16, 20:05:44
9	9	16120209	ICAL D400 C28 50 L102516D	8015D	02-Dec-16, 20:27:44
10	10	16120210	ICAL D800 C28 100 L102516E	8015D	02-Dec-16, 20:48:51
11	11	16120211	ICAL D1600 C28 200 L102516F	8015D	02-Dec-16, 21:09:46
12	12	16120212	ICV D400 C28 50 L102516G	8015D	02-Dec-16, 21:31:10
13	13	16120213	ICAL CO200 L111516C	8015D	02-Dec-16, 21:52:20
14	14	16120214	ICAL CO400 L111516D	8015D	02-Dec-16, 22:14:41
15	15	16120215	ICAL CO20 L111516B	8015D	02-Dec-16, 22:36:25
16	16	16120216	ICAL CO600 L111516E	8015D	02-Dec-16, 22:58:04
17	17	16120217	ICAL CO800 L111516F	8015D	02-Dec-16, 23:19:13
18	18	16120218	ICV CO400 L111516G	8015D	02-Dec-16, 23:40:58
19	19	16120219	ICAL GD5 L091416A	8015D	03-Dec-16, 00:02:10
20	20	16120220	ICAL GD200 L091416B	8015D	03-Dec-16, 00:23:54
21	21	16120221	ICAL GD400 L091416C	8015D	03-Dec-16, 00:46:08
22	22	16120222	ICAL GD800 L091416D	8015D	03-Dec-16, 01:08:26
23	23	16120223	ICAL GD1600 L091416E	8015D	03-Dec-16, 01:29:41
24	24	16120224	ICV GD400 L091416F	8015D	03-Dec-16, 01:50:38
25	2	16120225	C6-C44 L110816A	8015D	03-Dec-16, 02:11:22
26	26	16120226	CCV D400 C28 50 L102516D	8015D	03-Dec-16, 02:32:10
27	27	16120227	CCV GD400 L091416C	8015D	03-Dec-16, 02:53:05
28	28	16120228	MB 16120213	8015D	03-Dec-16, 03:13:44
29	29	16120229	GDLCS 16120213	8015D	03-Dec-16, 03:34:30
30	30	16120230	GDMS 16-12-0003-17	8015D	03-Dec-16, 03:55:45
31	31	16120231	GDMSD 16-12-0003-17	8015D	03-Dec-16, 04:17:45
32	32	16120232	16-12-0003-13	8015D	03-Dec-16, 04:39:44
33	33	16120233	16-12-0003-17	8015D	03-Dec-16, 05:02:19
34	34	16120234	16-12-0003-21	8015D	03-Dec-16, 05:24:56
35	35	16120235	CCV D400 C28 50 L102516D	8015D	03-Dec-16, 05:47:26
36	36	16120236	CCV GD400 L091416C	8015D	03-Dec-16, 06:09:53
37	37	16120237	MB 16120104	8015D	03-Dec-16, 06:31:28
38	38	16120238	LCS 16120104	8015D	03-Dec-16, 06:54:20
39	39	16120239	LCSD 16120104	8015D	03-Dec-16, 07:16:51
40	40	16120240	16-11-2665-1	8015D	03-Dec-16, 07:39:49
41	41	16120241	16-11-2665-2	8015D	03-Dec-16, 08:02:28
42	42	16120242	16-11-2665-3	8015D	03-Dec-16, 08:23:23
43	43	16120243	16-11-2665-4	8015D	03-Dec-16, 08:44:14
44	44	16120244	16-11-2665-5	8015D	03-Dec-16, 09:05:55
45	45	16120245	16-11-2665-6	8015D	03-Dec-16, 09:28:11
46	46	16120246	16-11-2665-7	8015D	03-Dec-16, 09:49:18
47	47	16120247	16-11-2665-8	8015D	03-Dec-16, 10:10:09
48	48	16120248	16-11-2665-9	8015D	03-Dec-16, 10:32:03
49	49	16120249	16-11-2606-1	8015D	03-Dec-16, 10:54:08
50	50	16120250	CCV D400 C28 50 L102516D	8015D	03-Dec-16, 11:16:34
51	51	16120251	16-11-2607-1	8015D	03-Dec-16, 11:38:13
52	52	16120252	16-11-2608-1	8015D	03-Dec-16, 11:59:20
53	2	16120253	C6-C44 L110816A	8015D	03-Dec-16, 12:21:29
54	54	16120254	CCV D400 C28 50 L102516D	8015D	03-Dec-16, 12:43:37
55	55	16120255	MB 16113008	8015D	03-Dec-16, 13:04:44
56	56	16120256	LCS 16113008	8015D	03-Dec-16, 13:25:48
57	57	16120257	LCSD 16113008	8015D	03-Dec-16, 13:48:06
58	58	16120258	16-11-2371-1	8015D	03-Dec-16, 14:10:26
59	59	16120259	16-11-2371-2	8015D	03-Dec-16, 14:33:03

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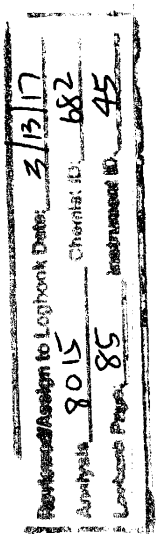
1	1	17031001	BLANK	8015D	10-Mar-17, 13:03:15
2	2	17031002	C6-C44 L110816A	8015D	10-Mar-17, 13:24:10
3	3	17031003	CCV D400 C28 50 L102516D A051	8015D	10-Mar-17, 13:45:04
4	4	17031004	CCV GD400 L091416C	8015D	10-Mar-17, 14:05:59
5	5	17031005	MB 17030809	8015D	10-Mar-17, 14:37:15
6	6	17031006	GDLCS 17030809	8015D	10-Mar-17, 14:58:44
7	7	17031007	GDMS 17-03-0414-14	8015D	10-Mar-17, 15:20:10
8	8	17031008	GDMSD 17-03-0414-14	8015D	10-Mar-17, 15:41:07
9	9	17031009	17-03-0414-2	8015D	10-Mar-17, 16:03:08
10	10	17031010	17-03-0414-4 5X	8015D	10-Mar-17, 16:24:29
11	11	17031011	17-03-0414-8	8015D	10-Mar-17, 16:45:25
12	12	17031012	17-03-0414-12	8015D	10-Mar-17, 17:06:58
13	13	17031013	17-03-0414-14	8015D	10-Mar-17, 17:28:47
14	14	17031014	17-03-0414-18	8015D	10-Mar-17, 17:49:47
15	15	17031015	CCV D400 C28 50 L102516D A052	8015D	10-Mar-17, 18:10:43
16	16	17031016	CCV GD400 L091416C	8015D	10-Mar-17, 18:32:55
17	17	17031017	MB 17030209	8015D	10-Mar-17, 18:54:15
18	18	17031018	LCS 17030209	8015D	10-Mar-17, 19:15:09
19	19	17031019	LCSD 17030209	8015D	10-Mar-17, 19:36:44
20	20	17031020	17-03-0018-1	8015D	10-Mar-17, 19:58:35
21	21	17031021	17-03-0018-2	8015D	10-Mar-17, 20:19:39
22	22	17031022	17-03-0018-3@1.5	8015D	10-Mar-17, 20:40:40
23	23	17031023	17-03-0018-4	8015D	10-Mar-17, 21:02:53
24	24	17031024	17-03-0018-5	8015D	10-Mar-17, 21:24:01
25	25	17031025	17-03-0018-6	8015D	10-Mar-17, 21:44:59
26	26	17031026	17-03-0018-7	8015D	10-Mar-17, 22:06:20
27	27	17031027	17-03-0018-8@wrong vial	8015D	10-Mar-17, 22:28:25
28	28	17031028	17-03-0018-9	8015D	10-Mar-17, 22:49:30
29	29	17031029	17-03-0018-10	8015D	10-Mar-17, 23:10:53
30	30	17031030	CCV D400 C28 50 L102516D A053	8015D	10-Mar-17, 23:32:12
31	31	17031031	17-03-0018-11	8015D	10-Mar-17, 23:54:08
32	32	17031032	17-03-0018-12	8015D	11-Mar-17, 00:16:17
33	33	17031033	17-03-0018-13	8015D	11-Mar-17, 00:38:36
34	34	17031034	17-03-0018-14	8015D	11-Mar-17, 00:59:45
35	35	17031035	TEST BLANK	8015D	11-Mar-17, 01:20:40
36	2	1703100201	C6-C44 L110816A	8015D	11-Mar-17, 01:42:00
37	36	17031036	CCV D400 C28 50 L102516D A054	8015D	11-Mar-17, 02:03:56
38	37	17031037	CCV MO400 L030317D	8015D	11-Mar-17, 02:24:57
39	38	17031038	MB 17030909/10 @contamination	8015D	11-Mar-17, 02:45:53
40	39	17031039	LCS 17030909/10	8015D	11-Mar-17, 03:07:25
41	40	17031040	LCSD 17030909/10	8015D	11-Mar-17, 03:29:27
42	41	17031041	17-03-0630-2	8015D	11-Mar-17, 03:50:59
43	42	17031042	17-03-0630-3	8015D	11-Mar-17, 04:11:58
44	43	17031043	17-03-0583-1	8015D	11-Mar-17, 04:32:59
45	44	17031044	17-03-0583-2	8015D	11-Mar-17, 04:54:02
46	45	17031045	17-03-0583-3	8015D	11-Mar-17, 05:15:12
47	46	17031046	17-03-0583-4	8015D	11-Mar-17, 05:36:14
48	47	17031047	17-03-0638-1	8015D	11-Mar-17, 05:57:13
49	48	17031048	17-03-0738-1	8015D	11-Mar-17, 06:18:08
50	49	17031049	CCV D400 C28 50 L102516D A055	8015D	11-Mar-17, 06:39:08
51	50	17031050	CCV MO400 L030317D	8015D	11-Mar-17, 07:00:28
52	51	17031051	MB 17030912	8015D	11-Mar-17, 07:21:44
53	52	17031052	LCS 17030912	8015D	11-Mar-17, 07:42:49
54	53	17031053	MS 17-03-0590-25	8015D	11-Mar-17, 08:03:45
55	54	17031054	MSD 17-03-0590-25	8015D	11-Mar-17, 08:24:50
56	55	17031055	17-03-0590-25	8015D	11-Mar-17, 08:46:08
57	56	17031056	17-03-0590-26	8015D	11-Mar-17, 09:08:01
58	57	17031057	17-03-0590-27	8015D	11-Mar-17, 09:30:19
59	58	17031058	17-03-0641-26	8015D	11-Mar-17, 09:52:21
60	59	17031059	17-03-0641-27	8015D	11-Mar-17, 10:13:42



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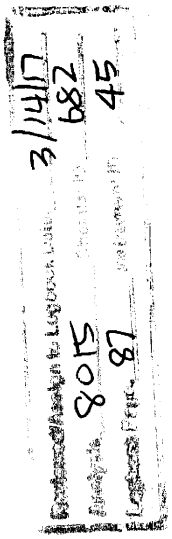
1	1	17031300	BLANK	8015D	13-Mar-17, 09:42:36
2	1	17031301	BLANK	8015D	13-Mar-17, 10:03:54
3	2	17031302	C6-C44 L110816A	8015D	13-Mar-17, 10:24:54
4	3	17031303	CCV D400 C28 50 L102516D A023	8015D	13-Mar-17, 10:45:54
5	4	17031304	CCV MO400 L030317D	8015D	13-Mar-17, 11:07:32
6	6	17031306	MB 17030909/10	8015D	13-Mar-17, 11:29:42
7	7	17031307	TEST-1	8015D	13-Mar-17, 11:50:48
8	8	17031308	TEST-2	8015D	13-Mar-17, 12:11:50
9	9	17031309	MB 17031306/07	8015D	13-Mar-17, 12:33:22
10	17	17031317	17-03-0018-8 RB	8015D	13-Mar-17, 12:55:19
11	10	17031310	LCS 17031306	8015D	13-Mar-17, 13:16:29
12	18	17031318	BLK	8015D	13-Mar-17, 13:37:25
13	20	17031320	17-03-0018-3 RB	8015D	13-Mar-17, 13:58:39
14	11	17031311	MOLCS 17031307 @ syringe problem	8015D	13-Mar-17, 14:20:29
15	12	17031312	MS 17-03-0797-1	8015D	13-Mar-17, 14:41:38
16	13	17031313	MSD 17-03-0797-1	8015D	13-Mar-17, 15:02:31
17	14	17031314	MOMS 17-03-0797-1	8015D	13-Mar-17, 15:23:51
18	15	17031315	MOMSD 17-03-0797-1	8015D	13-Mar-17, 15:45:40
19	16	17031316	17-03-0797-1	8015D	13-Mar-17, 16:06:47
20	19	17031319	17-03-0893-1	8015D	13-Mar-17, 16:28:15
21	21	17031321	CCV D400 C28 50 L102516D A042	8015D	13-Mar-17, 16:50:22
22	22	17031322	CCV MO400 L030317D	8015D	13-Mar-17, 17:11:25
23	26	17031326	MS 17-03-0722-1 5X	8015D	13-Mar-17, 17:32:27
24	27	17031327	MSD 17-03-0722-1 5X	8015D	13-Mar-17, 17:54:22
25	28	17031328	MOMS 17-03-0722-1 5X	8015D	13-Mar-17, 18:15:25
26	29	17031329	MOMSD 17-03-0722-1 5X	8015D	13-Mar-17, 18:36:18
27	23	17031323	MB 17031303/04	8015D	13-Mar-17, 18:58:00
28	24	17031324	LCS 17031303	8015D	13-Mar-17, 19:19:16
29	25	17031325	MOLCS 17031304	8015D	13-Mar-17, 19:40:13
30	30	17031330	17-03-0722-1 5X	8015D	13-Mar-17, 20:01:26
31	31	17031331	17-03-0722-2 5X	8015D	13-Mar-17, 20:23:10
32	32	17031332	17-03-0722-3 5X	8015D	13-Mar-17, 20:44:24
33	33	17031333	CCV D400 C28 50 L102516D A043	8015D	13-Mar-17, 21:05:24
34	34	17031334	CCV MO400 L030317D	8015D	13-Mar-17, 21:26:51
35	35	17031335	17-03-0899-1 50X	8015D	13-Mar-17, 21:48:59
36	36	17031336	17-03-0899-2 25X	8015D	13-Mar-17, 22:10:03
37	37	17031337	17-03-0882-1	8015D	13-Mar-17, 22:31:07
38	38	17031338	17-03-0883-1	8015D	13-Mar-17, 22:52:51
39	39	17031339	17-03-0884-1 10X	8015D	13-Mar-17, 23:14:47
40	42	17031342	MOLCS 17031307 RB	8015D	13-Mar-17, 23:36:51
41	40	17031340	CCV D400 C28 50 L102516D	8015D	13-Mar-17, 23:58:07
42	41	17031341	CCV MO400 L030317D	8015D	14-Mar-17, 00:18:58



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EPA 8015B (M)

Diesel + Motor Oil

PREPARATION LOGS

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Analysis Method (EPA Method): ☒ TPH 8015 ☐ NWTPH 8015

Extraction Method (EPA Method): ☒ 3510 ☐ 3511 ☐ 3550

Analyst ID#: Measuring Sample- 889 Start Extraction- 605 Blow Down- 605 Clean Up-

Matrix: ☐ Solid ☒ Aqueous ☐ Oil ☐ Wipe / Filter | Balance ID#: | Sand or Filter ID#:

Extraction Start Date & Time: 03-09-17 15:30 | Extractions End Date & Time: 3/9/17 20:00

Drying Agent & ID#: ☒ Na_2SO_4 L6-23-20 | Spike Added to: ☒ LCS ☒ LCSD ☐ MS ☐ MSD

Surrogate Std ID# & Volume Added (mL): L011717A 0.125

Spike Std ID# & Volume Added (mL): ☒ D: L1024163 0.05 | ☐ MO: | ☐ | ☐ | ☐

Extraction Solvent & ID#: ☒ $MeCl_2$ 507-55-01 | Elution Solvent ID# & Volume (mL): 25x3

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 #: 1703090 9/10 Cel ID#:	Test Analyte	Sample W (g) / V (mL) Initial	 Final	SCG Clean Up	Comments
MB	CC/D/MO	5.00	2.50	☐ NA ☐ 1 ☐ 2 ☐ 3	
LCS	↓	5.00	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
LCSD	↓	5.00	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0630-2 J	CC	5.00	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ -3 J	↓	5.00	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0583-1 H	D	5.50	5.00	☐ NA ☐ 1 ☐ 2 ☐ 3	C28: 0.25 mL (10)
↓ -2 ↓	↓	5.50	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	↓
-3	↓	5.50	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
↓ -4 ↓	↓	5.50	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0658-1 B	D+MO	5.00	↓	☐ NA ☐ 1 ☐ 2 ☐ 3	↓
17-03-0738-1 A	↓	5.00	5.0	☐ NA ☐ 1 ☐ 2 ☐ 3	↓
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	

Peer Reviewed by: 972 Peer Reviewed Date: 3/9/17 Revision Date: 10/24/16

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EPA 6010B ICP Metals

(Aqueous)

RAW DATA

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EPA 6010B ICP Metals

(Aqueous)

Initial Calibration

ICV/ICB
CCV/CCB
ICSA/B

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Verification

ACCREDITED IN ACCORDANCE WITH ilac

Work Order No: 17-03-0638

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
	True	ICV-1		Control Limit	Comment
		Observed	%D		
Silver	0.500000	0.487894	2	+/-10	
Arsenic	5.000000	5.060136	-1	+/-10	
Barium	1.000000	0.990799	1	+/-10	
Beryllium	0.500000	0.489386	2	+/-10	
Cadmium	1.500000	1.451200	3	+/-10	
Cobalt	1.000000	1.030699	-3	+/-10	
Chromium	0.400000	0.389593	3	+/-10	
Copper	1.000000	0.978362	2	+/-10	
Molybdenum	2.500000	2.505211	0	+/-10	
Nickel	0.400000	0.422622	-6	+/-10	
Lead	5.000000	4.878334	2	+/-10	
Antimony	2.000000	1.997865	0	+/-10	
Selenium	2.000000	2.026030	-1	+/-10	
Thallium	2.000000	2.025303	-1	+/-10	
Vanadium	1.000000	0.964884	4	+/-10	
Zinc	1.500000	1.475168	2	+/-10	

Report Time: 3/13/2017 5:45:45 PM

ICV-1 File: ICV-M072816C Analysis Time: 3/10/2017 9:44:59 AM

Note: Note: %D= (True-Observed) / True x 100%

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Blank

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0638

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-1	RL	Comment
Silver	-0.000490	0.005000	
Arsenic	-0.002446	0.010000	
Barium	0.000342	0.010000	
Beryllium	0.000105	0.010000	
Cadmium	0.000810	0.010000	
Cobalt	-0.000395	0.010000	
Chromium	0.000036	0.010000	
Copper	0.000440	0.010000	
Molybdenum	0.003356	0.010000	
Nickel	0.001080	0.010000	
Lead	0.000581	0.010000	
Antimony	0.000071	0.015000	
Selenium	-0.001999	0.015000	
Thallium	0.006256	0.015000	
Vanadium	-0.001191	0.010000	
Zinc	0.000245	0.010000	

Report Time: 3/13/2017 5:45:45 PM

ICB-1 File: ICB-R12091601 Analysis Time: 3/10/2017 9:46:06 AM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Interference Check

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0638

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Interference Check						
	ICS-A-1		ICS-AB-1				
	Observed	Control Limit	True	Observed	%D	Control Limit	Comment
Silver	0.000196	0.005000	0.300000	0.299818	0	+/-20	
Arsenic	0.007893	0.010000	1.000000	1.003800	0	+/-20	
Barium	0.002687	0.010000	0.300000	0.299486	0	+/-20	
Beryllium	-0.000027	0.010000	0.100000	0.102412	-2	+/-20	
Cadmium	0.002560	0.010000	0.300000	0.285245	5	+/-20	
Cobalt	-0.000859	0.010000	0.300000	0.291953	3	+/-20	
Chromium	-0.002451	0.010000	0.300000	0.294596	2	+/-20	
Copper	-0.000923	0.010000	0.300000	0.303233	-1	+/-20	
Molybdenum	0.001785	0.010000	0.300000	0.300470	0	+/-20	
Nickel	0.001382	0.010000	0.300000	0.306464	-2	+/-20	
Lead	-0.003314	0.010000	1.000000	0.948435	5	+/-20	
Antimony	-0.006464	0.015000	1.000000	0.961717	4	+/-20	
Selenium	-0.011826	0.015000	0.500000	0.479212	4	+/-20	
Thallium	-0.008526	0.015000	1.000000	0.995702	0	+/-20	
Vanadium	0.001313	0.010000	0.300000	0.292510	2	+/-20	
Zinc	-0.002995	0.010000	0.300000	0.285178	5	+/-20	

Report Time: 3/13/2017 5:45:45 PM

ICS-A-1 File: ICS_A - M110116B Analysis Time: 3/10/2017 9:49:16 AM

ICS-AB-1 File: ICS_AB - M110116A Analysis Time: 3/10/2017 9:50:39 AM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Verification

Work Order No: 17-03-0638

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
		ICV-2		Control	
	True	Observed	%D	Limit	Comment
Silver	0.500000	0.521195	-4	+/-10	
Arsenic	5.000000	5.085613	-2	+/-10	
Barium	1.000000	1.054442	-5	+/-10	
Beryllium	0.500000	0.519825	-4	+/-10	
Cadmium	1.500000	1.560567	-4	+/-10	
Cobalt	1.000000	1.084921	-8	+/-10	
Chromium	0.400000	0.418282	-5	+/-10	
Copper	1.000000	1.047697	-5	+/-10	
Molybdenum	2.500000	2.532132	-1	+/-10	
Nickel	0.400000	0.426416	-7	+/-10	
Lead	5.000000	5.265657	-5	+/-10	
Antimony	2.000000	2.071523	-4	+/-10	
Selenium	2.000000	2.033440	-2	+/-10	
Thallium	2.000000	2.026945	-1	+/-10	
Vanadium	1.000000	1.034503	-3	+/-10	
Zinc	1.500000	1.569147	-5	+/-10	

Report Time: 3/13/2017 5:45:45 PM

ICV-2 File: ICV-M072816C Analysis Time: 3/10/2017 12:59:55 PM

Note: Note: %D= (True-Observed) / True x 100%

01/22/2014 Revision

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Blank

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0638

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-2	RL	Comment
Silver	-0.000814	0.005000	
Arsenic	-0.004288	0.010000	
Barium	0.000189	0.010000	
Beryllium	0.000022	0.010000	
Cadmium	0.000425	0.010000	
Cobalt	-0.000165	0.010000	
Chromium	0.000431	0.010000	
Copper	-0.000015	0.010000	
Molybdenum	0.001213	0.010000	
Nickel	-0.000961	0.010000	
Lead	-0.001275	0.010000	
Antimony	0.002380	0.015000	
Selenium	-0.002185	0.015000	
Thallium	-0.000472	0.015000	
Vanadium	-0.000180	0.010000	
Zinc	-0.001626	0.010000	

Report Time: 3/13/2017 5:51:26 PM

ICB-2 File: ICB-R12091601 Analysis Time: 3/10/2017 1:02:24 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

ACCREDITED IN ACCORDANCE WITH ilac

Work Order No: 17-03-0638

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	0.378063	-1	0.378985	-1	+/-10	
Arsenic	3.750000	3.808247	-2	3.758227	0	+/-10	
Barium	7.500000	7.784505	-4	7.820663	-4	+/-10	
Beryllium	0.562500	0.579344	-3	0.584789	-4	+/-10	
Cadmium	0.750000	0.765569	-2	0.773251	-3	+/-10	
Cobalt	1.875000	1.919169	-2	1.923080	-3	+/-10	
Chromium	0.600000	0.610871	-2	0.614415	-2	+/-10	
Copper	0.937500	0.950257	-1	0.953841	-2	+/-10	
Molybdenum	0.600000	0.618160	-3	0.602683	0	+/-10	
Nickel	0.600000	0.626885	-4	0.617285	-3	+/-10	
Lead	3.750000	3.880905	-3	3.816466	-2	+/-10	
Antimony	4.500000	4.622283	-3	4.528779	-1	+/-10	
Selenium	1.500000	1.524451	-2	1.503311	0	+/-10	
Thallium	1.500000	1.553163	-4	1.527172	-2	+/-10	
Vanadium	1.875000	1.903487	-2	1.907892	-2	+/-10	
Zinc	2.500000	2.525350	-1	2.535324	-1	+/-10	

Report Time: 3/13/2017 5:45:45 PM

CCV-1 File: CCV= STD3x0.5 Analysis Time: 3/10/2017 1:46:09 PM

CCV-2 File: CCV= STD3x0.5 Analysis Time: 3/10/2017 2:03:34 PM

Note: Note: %D= (True-Observed) / True x 100%

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Blank

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0638

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-1	CCB-2	RL	Qualifier
Silver	-0.001479	-0.001106	0.005000	
Arsenic	0.004779	0.004604	0.010000	
Barium	-0.000428	0.000474	0.010000	
Beryllium	-0.000054	0.000019	0.010000	
Cadmium	0.000088	0.000132	0.010000	
Cobalt	0.000150	0.000086	0.010000	
Chromium	0.000696	0.000626	0.010000	
Copper	-0.000331	0.000334	0.010000	
Molybdenum	0.001410	0.001377	0.010000	
Nickel	-0.000493	-0.000729	0.010000	
Lead	-0.001882	-0.005937	0.010000	
Antimony	0.002054	0.004081	0.015000	
Selenium	0.004034	0.000155	0.015000	
Thallium	0.000124	-0.005271	0.015000	
Vanadium	0.000440	0.000417	0.010000	
Zinc	-0.006219	-0.006974	0.010000	

Report Time: 3/13/2017 5:45:45 PM

CCB-1 File: CCB-R12091601 Analysis Time: 3/10/2017 1:47:14 PM

CCB-2 File: CCB-R12091601 Analysis Time: 3/10/2017 2:04:40 PM

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Analysis Begun

Start Time: 3/10/2017 9:41:51 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401
Plasma On Time: 3/10/2017 9:34:34 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17031001.sif
Batch ID:
Results Data Set: 170310C1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 1
Sample ID: Cal blankR12091601_935
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 1
Date Collected: 3/10/2017 9:42:03 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

User canceled analysis.

Analysis Begun

Start Time: 3/10/2017 9:42:29 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401
Plasma On Time: 3/10/2017 9:34:34 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17031001.sif
Batch ID:
Results Data Set: 170310C1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 1
Sample ID: Cal blankR12091601_935
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 1
Date Collected: 3/10/2017 9:42:38 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	58437.4	144.59	0.25%	100.0	%
Tb 350	91072.2	65.47	0.07%	100.0	%
Ag 328.068*†	-759.8	141.42	18.61%	[0.00]	mg/L
Al 308.215*†	-1577.2	21.57	1.37%	[0.00]	mg/L
As 188.979†	-1.4	1.47	108.67%	[0.00]	mg/L
As 193.696*†	3.3	2.01	61.47%	[0.00]	mg/L
B 249.677*†	-903.3	31.49	3.49%	[0.00]	mg/L
Ba 233.527*†	-283.5	9.68	3.42%	[0.00]	mg/L
Be 313.042*†	-656.7	108.42	16.51%	[0.00]	mg/L
Ca 317.933*†	3.9	7.09	182.83%	[0.00]	mg/L
Cd 226.502*†	-11.2	7.43	66.42%	[0.00]	mg/L
Cd 228.802†	0.9	3.04	325.31%	[0.00]	mg/L
Co 228.616*†	-67.1	7.72	11.49%	[0.00]	mg/L
Cr 267.716*†	378.4	4.95	1.31%	[0.00]	mg/L
Cu 324.752*†	1567.1	167.99	10.72%	[0.00]	mg/L
Fe 273.955*†	-282.8	23.45	8.29%	[0.00]	mg/L
K 766.490*†	756.5	13.99	1.85%	[0.00]	mg/L
Mg 279.077*†	-6751.4	175.46	2.60%	[0.00]	mg/L
Mn 257.610*†	-149.4	24.08	16.11%	[0.00]	mg/L
Mo 202.031*†	-36.5	1.98	5.43%	[0.00]	mg/L
Na 589.592*†	664.4	82.25	12.38%	[0.00]	mg/L
Ni 231.604*†	-72.1	16.79	23.27%	[0.00]	mg/L
P 213.617*†	-135.7	29.49	21.74%	[0.00]	mg/L
P 214.914†	-32.7	2.01	6.15%	[0.00]	mg/L

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Pb 220.353*†	-29.9	2.43	8.13%	[0.00]	mg/L
Sb 206.836†	21.4	11.12	52.00%	[0.00]	mg/L
Sb 217.582*†	-7.2	1.43	19.77%	[0.00]	mg/L
Se 196.026*†	8.8	5.37	61.00%	[0.00]	mg/L
Si 251.611*†	1579.5	25.45	1.61%	[0.00]	mg/L
Sn 189.927*†	-87.6	3.58	4.08%	[0.00]	mg/L
Sn 242.170†	-366.9	1.37	0.37%	[0.00]	mg/L
Sr 407.771*†	72.5	3.11	4.30%	[0.00]	mg/L
Ti 334.940†	20185.1	270.84	1.34%	[0.00]	mg/L
Ti 336.121*†	-933.0	109.06	11.69%	[0.00]	mg/L
Tl 190.801*†	-11.4	5.52	48.22%	[0.00]	mg/L
V 292.402*†	235.8	5.29	2.24%	[0.00]	mg/L
Zn 206.200*†	-63.6	8.33	13.09%	[0.00]	mg/L
Zn 213.857*†	182.5	0.59	0.33%	[0.00]	mg/L

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User canceled analysis.

Analysis Begun

Start Time: 3/10/2017 9:43:48 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401
Plasma On Time: 3/10/2017 9:34:34 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17031001.sif
Batch ID:
Results Data Set: 170310C1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 2
Sample ID: STD3-M111116A_935_ICP7300
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 2
Date Collected: 3/10/2017 9:43:52 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	52180.0	355.27	0.68%	89.29	%
Tb 350	83933.7	285.41	0.34%	92.16	%
Ag 328.068*†	109233.0	492.92	0.45%	[0.75]	mg/L
Al 308.215*†	369232.5	380.66	0.10%	[27.0]	mg/L
As 188.979†	10851.1	84.33	0.78%	[7.50]	mg/L
As 193.696*†	7573.5	53.18	0.70%	[7.50]	mg/L
B 249.677*†	279901.1	1618.43	0.58%	[7.50]	mg/L
Ba 233.527*†	1684515.8	25600.43	1.52%	[15.0]	mg/L
Be 313.042*†	3101658.4	30164.67	0.97%	[1.125]	mg/L
Ca 317.933*†	80825.2	2197.22	2.72%	[60.0]	mg/L
Cd 226.502*†	82963.0	247.49	0.30%	[1.50]	mg/L
Cd 228.802†	42672.9	314.98	0.74%	[1.50]	mg/L
Co 228.616*†	75982.6	164.26	0.22%	[3.75]	mg/L
Cr 267.716*†	101102.9	174.14	0.17%	[1.20]	mg/L
Cu 324.752*†	364247.1	1180.88	0.32%	[1.875]	mg/L
Fe 273.955*†	130735.2	78.83	0.06%	[7.50]	mg/L
K 766.490*†	118286.6	2159.98	1.83%	[54.0]	mg/L
Mg 279.077*†	205260.3	399.60	0.19%	[15.0]	mg/L
Mn 257.610*†	722715.6	711.28	0.10%	[1.50]	mg/L
Mo 202.031*†	8151.7	19.22	0.24%	[1.20]	mg/L
Na 589.592*†	231444.0	2892.13	1.25%	[72.0]	mg/L
Ni 231.604*†	20986.4	140.16	0.67%	[1.20]	mg/L
P 213.617*†	16710.9	90.02	0.54%	[12.0]	mg/L
P 214.914†	10423.1	71.26	0.68%	[12.0]	mg/L
Pb 220.353*†	42953.8	57.36	0.13%	[7.50]	mg/L
Sb 206.836†	12234.1	63.96	0.52%	[9.0]	mg/L
Sb 217.582*†	12338.7	127.72	1.04%	[9.0]	mg/L
Se 196.026*†	4466.3	26.73	0.60%	[3.0]	mg/L
Si 251.611*†	369241.4	4782.38	1.30%	[12.0]	mg/L
Sn 189.927*†	25338.4	130.04	0.51%	[6.0]	mg/L
Sn 242.170†	7675.2	2.18	0.03%	[6.0]	mg/L
Sr 407.771*†	140616.6	1891.24	1.34%	[0.60]	mg/L
Ti 334.940†	757481.0	10827.32	1.43%	[1.20]	mg/L
Ti 336.121*†	539428.5	166.49	0.03%	[1.20]	mg/L
Tl 190.801*†	3925.1	32.21	0.82%	[3.0]	mg/L
V 292.402*†	388788.9	1434.94	0.37%	[3.75]	mg/L
Zn 206.200*†	146812.9	44.44	0.03%	[5.0]	mg/L
Zn 213.857*†	259746.9	69.51	0.03%	[5.0]	mg/L

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Sequence No.: 3
Sample ID: ICV-M072816C
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 10
Date Collected: 3/10/2017 9:44:59 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	51043.6	87.35	%	1.341				1.54%
Tb 350	81304.4	89.27	%	0.750				0.84%
Ag 328.068*†	71058.8	0.4879	mg/L	0.00250	0.4879	mg/L	0.00250	0.51%
QC value within limits for Ag 328.068* Recovery = 97.58%								
Al 308.215*†	55423.2	4.053	mg/L	0.0131	4.053	mg/L	0.0131	0.32%
QC value within limits for Al 308.215* Recovery = 101.32%								
As 188.979†	7345.2	5.077	mg/L	0.0302	5.077	mg/L	0.0302	0.60%
QC value within limits for As 188.979 Recovery = 101.54%								
As 193.696*†	5109.7	5.060	mg/L	0.0361	5.060	mg/L	0.0361	0.71%
QC value within limits for As 193.696* Recovery = 101.20%								
B 249.677*†	89184.4	2.390	mg/L	0.0233	2.390	mg/L	0.0233	0.97%
QC value within limits for B 249.677* Recovery = 95.59%								
Ba 233.527*†	111267.8	0.9908	mg/L	0.00052	0.9908	mg/L	0.00052	0.05%
QC value within limits for Ba 233.527* Recovery = 99.08%								
Be 313.042*†	1349253.0	0.4894	mg/L	0.00188	0.4894	mg/L	0.00188	0.38%
QC value within limits for Be 313.042* Recovery = 97.88%								
Ca 317.933*†	26120.0	19.39	mg/L	0.251	19.39	mg/L	0.251	1.29%
QC value within limits for Ca 317.933* Recovery = 96.95%								
Cd 226.502*†	80263.9	1.451	mg/L	0.0020	1.451	mg/L	0.0020	0.14%
QC value within limits for Cd 226.502* Recovery = 96.75%								
Cd 228.802†	41701.1	1.466	mg/L	0.0049	1.466	mg/L	0.0049	0.33%
Co 228.616*†	20884.0	1.031	mg/L	0.0052	1.031	mg/L	0.0052	0.51%
QC value within limits for Co 228.616* Recovery = 103.07%								
Cr 267.716*†	32824.2	0.3896	mg/L	0.00016	0.3896	mg/L	0.00016	0.04%
QC value within limits for Cr 267.716* Recovery = 97.40%								
Cu 324.752*†	190061.6	0.9784	mg/L	0.00304	0.9784	mg/L	0.00304	0.31%
QC value within limits for Cu 324.752* Recovery = 97.84%								
Fe 273.955*†	1724010.0	98.90	mg/L	0.079	98.90	mg/L	0.079	0.08%
QC value within limits for Fe 273.955* Recovery = 98.90%								
K 766.490*†	17525.0	8.000	mg/L	0.1967	8.000	mg/L	0.1967	2.46%
QC value within limits for K 766.490* Recovery = 100.01%								
Mg 279.077*†	131064.8	9.578	mg/L	0.0208	9.578	mg/L	0.0208	0.22%
QC value within limits for Mg 279.077* Recovery = 95.78%								
Mn 257.610*†	471110.7	0.9778	mg/L	0.00028	0.9778	mg/L	0.00028	0.03%
QC value within limits for Mn 257.610* Recovery = 97.78%								
Mo 202.031*†	17018.2	2.505	mg/L	0.0134	2.505	mg/L	0.0134	0.54%
QC value within limits for Mo 202.031* Recovery = 100.21%								
Na 589.592*†	176748.7	54.98	mg/L	0.606	54.98	mg/L	0.606	1.10%
QC value within limits for Na 589.592* Recovery = 101.82%								
Ni 231.604*†	7391.1	0.4226	mg/L	0.00044	0.4226	mg/L	0.00044	0.10%
QC value within limits for Ni 231.604* Recovery = 105.66%								
P 213.617*†	6832.0	4.906	mg/L	0.0002	4.906	mg/L	0.0002	0.00%
QC value within limits for P 213.617* Recovery = 98.12%								
P 214.914†	4416.2	5.084	mg/L	0.0373	5.084	mg/L	0.0373	0.73%
Pb 220.353*†	27939.1	4.878	mg/L	0.0097	4.878	mg/L	0.0097	0.20%
QC value within limits for Pb 220.353* Recovery = 97.57%								
Sb 206.836†	2708.8	1.993	mg/L	0.0056	1.993	mg/L	0.0056	0.28%
QC value within limits for Sb 206.836 Recovery = 99.64%								
Sb 217.582*†	2739.0	1.998	mg/L	0.0124	1.998	mg/L	0.0124	0.62%
QC value within limits for Sb 217.582* Recovery = 99.89%								
Se 196.026*†	3016.3	2.026	mg/L	0.0093	2.026	mg/L	0.0093	0.46%
QC value within limits for Se 196.026* Recovery = 101.30%								
Si 251.611*†	275233.1	8.945	mg/L	0.0887	8.945	mg/L	0.0887	0.99%
QC value less than the lower limit for Si 251.611* Recovery = 89.45%								
Sn 189.927*†	10915.2	2.585	mg/L	0.0199	2.585	mg/L	0.0199	0.77%
QC value within limits for Sn 189.927* Recovery = 103.39%								
Sn 242.170†	3643.7	2.848	mg/L	0.0145	2.848	mg/L	0.0145	0.51%
Sr 407.771*†	46418.6	0.1981	mg/L	0.00310	0.1981	mg/L	0.00310	1.56%
QC value within limits for Sr 407.771* Recovery = 99.03%								

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Ti 334.940†	3015149.1	4.777 mg/L	0.0003	4.777 mg/L	0.0003	0.01%
Ti 336.121*†	2122977.4	4.723 mg/L	0.0023	4.723 mg/L	0.0023	0.05%
QC value within limits for Ti 336.121* Recovery = 94.45%						
Tl 190.801*†	2649.9	2.025 mg/L	0.0246	2.025 mg/L	0.0246	1.21%
QC value within limits for Tl 190.801* Recovery = 101.27%						
V 292.402*†	100204.5	0.9649 mg/L	0.01011	0.9649 mg/L	0.01011	1.05%
QC value within limits for V 292.402* Recovery = 96.49%						
Zn 206.200*†	42788.6	1.457 mg/L	0.0091	1.457 mg/L	0.0091	0.63%
QC value within limits for Zn 206.200* Recovery = 97.15%						
Zn 213.857*†	77061.3	1.475 mg/L	0.0070	1.475 mg/L	0.0070	0.47%
QC value within limits for Zn 213.857* Recovery = 98.34%						

QC Failed. Continue with analysis.

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Sequence No.: 4
Sample ID: ICB-R12091601
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 1
Date Collected: 3/10/2017 9:46:06 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	57533.7	98.45	%	2.581				2.62%
Tb 350	89147.8	97.89	%	1.989				2.03%
Ag 328.068*†	-71.3	-0.0005	mg/L	0.00040	-0.0005	mg/L	0.00040	81.48%
Al 308.215*†	-54.8	-0.0040	mg/L	0.00432	-0.0040	mg/L	0.00432	107.88%
As 188.979†	7.2	0.0050	mg/L	0.00115	0.0050	mg/L	0.00115	22.97%
As 193.696*†	-2.5	-0.0024	mg/L	0.00716	-0.0024	mg/L	0.00716	292.64%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1322.9	0.0354	mg/L	0.00196	0.0354	mg/L	0.00196	5.54%
QC value greater than the upper limit for B 249.677* Recovery = Not calculated								
Ba 233.527*†	38.4	0.0003	mg/L	0.00005	0.0003	mg/L	0.00005	14.83%
Be 313.042*†	288.7	0.0001	mg/L	0.00003	0.0001	mg/L	0.00003	23.90%
Ca 317.933*†	9.4	0.0070	mg/L	0.00013	0.0070	mg/L	0.00013	1.82%
Cd 226.502*†	44.8	0.0008	mg/L	0.00002	0.0008	mg/L	0.00002	2.31%
Cd 228.802†	31.0	0.0011	mg/L	0.00008	0.0011	mg/L	0.00008	7.05%
Co 228.616*†	-8.0	-0.0004	mg/L	0.00008	-0.0004	mg/L	0.00008	19.11%
Cr 267.716*†	3.1	0.0000	mg/L	0.00090	0.0000	mg/L	0.00090	>999.9%
Cu 324.752*†	85.5	0.0004	mg/L	0.00005	0.0004	mg/L	0.00005	11.99%
Fe 273.955*†	621.3	0.0356	mg/L	0.00590	0.0356	mg/L	0.00590	16.56%
K 766.490*†	313.1	0.1430	mg/L	0.01269	0.1430	mg/L	0.01269	8.88%
Mg 279.077*†	277.2	0.0203	mg/L	0.01642	0.0203	mg/L	0.01642	81.06%
Mn 257.610*†	105.1	0.0002	mg/L	0.00003	0.0002	mg/L	0.00003	13.09%
Mo 202.031*†	22.8	0.0034	mg/L	0.00050	0.0034	mg/L	0.00050	14.99%
Na 589.592*†	60.2	0.0187	mg/L	0.02180	0.0187	mg/L	0.02180	116.31%
Ni 231.604*†	18.9	0.0011	mg/L	0.00003	0.0011	mg/L	0.00003	3.15%
P 213.617*†	10.1	0.0073	mg/L	0.02156	0.0073	mg/L	0.02156	296.40%
P 214.914†	-6.4	-0.0073	mg/L	0.00367	-0.0073	mg/L	0.00367	50.01%
Pb 220.353*†	3.3	0.0006	mg/L	0.00071	0.0006	mg/L	0.00071	122.79%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	1.8	0.0013	mg/L	0.00825	0.0013	mg/L	0.00825	618.75%
Sb 217.582*†	0.1	0.0001	mg/L	0.00011	0.0001	mg/L	0.00011	152.40%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-3.0	-0.0020	mg/L	0.00010	-0.0020	mg/L	0.00010	5.09%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	377.0	0.0123	mg/L	0.00120	0.0123	mg/L	0.00120	9.81%
QC value greater than the upper limit for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	42.5	0.0101	mg/L	0.00708	0.0101	mg/L	0.00708	70.38%
Sn 242.170†	32.6	0.0255	mg/L	0.01412	0.0255	mg/L	0.01412	55.49%
Sr 407.771*†	-3.2	-0.0000	mg/L	0.00002	-0.0000	mg/L	0.00002	147.22%
Ti 334.940†	1819.1	0.0029	mg/L	0.00044	0.0029	mg/L	0.00044	15.22%
Ti 336.121*†	1279.4	0.0028	mg/L	0.00004	0.0028	mg/L	0.00004	1.23%
Tl 190.801*†	8.2	0.0063	mg/L	0.00067	0.0063	mg/L	0.00067	10.72%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	-123.4	-0.0012	mg/L	0.00051	-0.0012	mg/L	0.00051	43.11%
Zn 206.200*†	-10.2	-0.0003	mg/L	0.00020	-0.0003	mg/L	0.00020	57.00%
Zn 213.857*†	12.9	0.0002	mg/L	0.00032	0.0002	mg/L	0.00032	132.75%

QC Failed. Retry.

Sequence No.: 5
Sample ID: ICB-R12091601
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 1
Date Collected: 3/10/2017 9:47:02 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

10'2
3/13/17

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD

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Sequence No.: 7
Sample ID: ICS_A - M110116B
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 8
Date Collected: 3/10/2017 9:49:16 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICS_A - M110116B

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	51181.9	87.58	%	1.929				2.20%
Tb 350	82044.3	90.09	%	2.258				2.51%
Ag 328.068*†	28.6	0.0002	mg/L	0.00121	0.0002	mg/L	0.00121	618.95%
Al 308.215*†	325269.9	23.79	mg/L	1.161	23.79	mg/L	1.161	4.88%
As 188.979†	22.1	0.0153	mg/L	0.00190	0.0153	mg/L	0.00190	12.48%
As 193.696*†	8.0	0.0079	mg/L	0.00888	0.0079	mg/L	0.00888	112.52%
B 249.677*†	405.1	0.0109	mg/L	0.00048	0.0109	mg/L	0.00048	4.40%
Ba 233.527*†	301.8	0.0027	mg/L	0.00018	0.0027	mg/L	0.00018	6.68%
Be 313.042*†	-75.4	-0.0000	mg/L	0.00005	-0.0000	mg/L	0.00005	191.65%
Ca 317.933*†	159354.2	118.3	mg/L	1.30	118.3	mg/L	1.30	1.10%
Cd 226.502*†	141.6	0.0026	mg/L	0.00001	0.0026	mg/L	0.00001	0.49%
Cd 228.802†	1.1	0.0000	mg/L	0.00020	0.0000	mg/L	0.00020	491.91%
Co 228.616*†	-17.4	-0.0009	mg/L	0.00045	-0.0009	mg/L	0.00045	52.53%
Cr 267.716*†	-206.5	-0.0025	mg/L	0.00173	-0.0025	mg/L	0.00173	70.46%
Cu 324.752*†	-179.3	-0.0009	mg/L	0.00112	-0.0009	mg/L	0.00112	120.94%
Fe 273.955*†	1585124.3	90.94	mg/L	4.686	90.94	mg/L	4.686	5.15%
K 766.490*†	228.3	0.1042	mg/L	0.09762	0.1042	mg/L	0.09762	93.66%
Mg 279.077*†	765127.5	55.91	mg/L	3.119	55.91	mg/L	3.119	5.58%
Mn 257.610*†	87.6	0.0002	mg/L	0.00014	0.0002	mg/L	0.00014	74.76%
Mo 202.031*†	12.1	0.0018	mg/L	0.00010	0.0018	mg/L	0.00010	5.37%
Na 589.592*†	67139.7	20.89	mg/L	0.245	20.89	mg/L	0.245	1.17%
Ni 231.604*†	24.2	0.0014	mg/L	0.00031	0.0014	mg/L	0.00031	22.32%
P 213.617*†	-190.4	-0.1367	mg/L	0.01064	-0.1367	mg/L	0.01064	7.78%
P 214.914†	32.1	0.0370	mg/L	0.00542	0.0370	mg/L	0.00542	14.66%
Pb 220.353*†	-19.0	-0.0033	mg/L	0.00010	-0.0033	mg/L	0.00010	3.03%
Sb 206.836†	7.3	0.0054	mg/L	0.00157	0.0054	mg/L	0.00157	29.39%
Sb 217.582*†	-8.9	-0.0065	mg/L	0.00874	-0.0065	mg/L	0.00874	135.21%
Se 196.026*†	-17.6	-0.0118	mg/L	0.00032	-0.0118	mg/L	0.00032	2.70%
Si 251.611*†	340.5	0.0111	mg/L	0.00004	0.0111	mg/L	0.00004	0.34%
Sn 189.927*†	22.6	0.0054	mg/L	0.00476	0.0054	mg/L	0.00476	88.92%
Sn 242.170†	314.4	0.2458	mg/L	0.01497	0.2458	mg/L	0.01497	6.09%
Sr 407.771*†	782.1	0.0033	mg/L	0.00003	0.0033	mg/L	0.00003	0.97%
Ti 334.940†	-1512.3	-0.0024	mg/L	0.00013	-0.0024	mg/L	0.00013	5.29%
Ti 336.121*†	-713.7	-0.0016	mg/L	0.00033	-0.0016	mg/L	0.00033	20.62%
Tl 190.801*†	-11.2	-0.0085	mg/L	0.02272	-0.0085	mg/L	0.02272	266.52%
V 292.402*†	290.7	0.0013	mg/L	0.00058	0.0013	mg/L	0.00058	44.47%
Zn 206.200*†	-1.0	-0.0000	mg/L	0.00076	-0.0000	mg/L	0.00076	>999.9%
Zn 213.857*†	237.2	-0.0030	mg/L	0.00007	-0.0030	mg/L	0.00007	2.39%

Return to Contents

User canceled analysis.

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Analysis Begun

Start Time: 3/10/2017 9:50:36 AM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401

Plasma On Time: 3/10/2017 9:34:34 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17031001.sif
Batch ID:
Results Data Set: 170310C1
Results Library: W:\pe\7300\Results\results.mdb

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Sequence No.: 8
Sample ID: ICS_AB - M110116A
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 9
Date Collected: 3/10/2017 9:50:39 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICS_AB - M110116A

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	50495.2	86.41	%	0.696				0.81%
Tb 350	80969.0	88.91	%	0.913				1.03%
Ag 328.068*†	43666.7	0.2998	mg/L	0.00090	0.2998	mg/L	0.00090	0.30%
Al 308.215*†	327872.5	23.98	mg/L	0.173	23.98	mg/L	0.173	0.72%
As 188.979†	1466.6	1.014	mg/L	0.0070	1.014	mg/L	0.0070	0.69%
As 193.696*†	1013.6	1.004	mg/L	0.0102	1.004	mg/L	0.0102	1.02%
B 249.677*†	17238.6	0.4619	mg/L	0.00314	0.4619	mg/L	0.00314	0.68%
Ba 233.527*†	33632.6	0.2995	mg/L	0.00277	0.2995	mg/L	0.00277	0.92%
Be 313.042*†	282352.7	0.1024	mg/L	0.00057	0.1024	mg/L	0.00057	0.56%
Ca 317.933*†	162882.0	120.9	mg/L	3.24	120.9	mg/L	3.24	2.68%
Cd 226.502*†	15776.5	0.2852	mg/L	0.00278	0.2852	mg/L	0.00278	0.97%
Cd 228.802†	8213.9	0.2887	mg/L	0.00298	0.2887	mg/L	0.00298	1.03%
Co 228.616*†	5915.5	0.2920	mg/L	0.00299	0.2920	mg/L	0.00299	1.03%
Cr 267.716*†	24820.4	0.2946	mg/L	0.00350	0.2946	mg/L	0.00350	1.19%
Cu 324.752*†	58907.6	0.3032	mg/L	0.00010	0.3032	mg/L	0.00010	0.03%
Fe 273.955*†	1600554.8	91.82	mg/L	0.763	91.82	mg/L	0.763	0.83%
K 766.490*†	47789.7	21.82	mg/L	0.713	21.82	mg/L	0.713	3.27%
Mg 279.077*†	766560.2	56.02	mg/L	0.772	56.02	mg/L	0.772	1.38%
Mn 257.610*†	94373.4	0.1959	mg/L	0.00162	0.1959	mg/L	0.00162	0.83%
Mo 202.031*†	2041.1	0.3005	mg/L	0.00326	0.3005	mg/L	0.00326	1.09%
Na 589.592*†	68439.6	21.29	mg/L	0.557	21.29	mg/L	0.557	2.61%
Ni 231.604*†	5359.6	0.3065	mg/L	0.00352	0.3065	mg/L	0.00352	1.15%
P 213.617*†	-137.4	-0.0987	mg/L	0.01484	-0.0987	mg/L	0.01484	15.04%
P 214.914†	46.2	0.0532	mg/L	0.00138	0.0532	mg/L	0.00138	2.59%
Pb 220.353*†	5431.9	0.9484	mg/L	0.01086	0.9484	mg/L	0.01086	1.14%
Sb 206.836†	1307.9	0.9622	mg/L	0.00321	0.9622	mg/L	0.00321	0.33%
Sb 217.582*†	1318.5	0.9617	mg/L	0.00338	0.9617	mg/L	0.00338	0.35%
Se 196.026*†	713.4	0.4792	mg/L	0.00022	0.4792	mg/L	0.00022	0.05%
Si 251.611*†	6134.4	0.1994	mg/L	0.00413	0.1994	mg/L	0.00413	2.07%
Sn 189.927*†	-1.9	-0.0004	mg/L	0.00196	-0.0004	mg/L	0.00196	439.22%
Sn 242.170†	359.6	0.2811	mg/L	0.00856	0.2811	mg/L	0.00856	3.04%
Sr 407.771*†	590.7	0.0025	mg/L	0.00004	0.0025	mg/L	0.00004	1.62%
Ti 334.940†	623686.9	0.9880	mg/L	0.00657	0.9880	mg/L	0.00657	0.67%
Ti 336.121*†	437259.4	0.9727	mg/L	0.00291	0.9727	mg/L	0.00291	0.30%
Tl 190.801*†	1302.8	0.9957	mg/L	0.02486	0.9957	mg/L	0.02486	2.50%
V 292.402*†	30482.7	0.2925	mg/L	0.00183	0.2925	mg/L	0.00183	0.62%
Zn 206.200*†	8350.7	0.2844	mg/L	0.00101	0.2844	mg/L	0.00101	0.35%
Zn 213.857*†	15211.4	0.2852	mg/L	0.00275	0.2852	mg/L	0.00275	0.96%

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Analysis Begun

Start Time: 3/10/2017 12:57:05 PM
Logged In Analyst: Oscar Gomez 935
Spectrometer: Optima 7300 DV, S/N 77c8120401
Plasma On Time: 3/10/2017 10:23:43 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\17031001.sif
Batch ID:
Results Data Set: 170310C1
Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 1
Sample ID: Cal blankR12091601_935
Analyst:
Initial Sample Wt:
Dilution:
Wash Time:
Autosampler Location: 1
Date Collected: 3/10/2017 12:57:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	59176.0	964.36	1.63%	100.0	%
Tb 350	92323.2	2108.33	2.28%	100.0	%
Ag 328.068*†	-693.0	99.59	14.37%	[0.00]	mg/L
Al 308.215*†	-1534.0	29.71	1.94%	[0.00]	mg/L
As 188.979†	4.3	1.30	30.60%	[0.00]	mg/L
As 193.696*†	-2.8	4.97	177.61%	[0.00]	mg/L
B 249.677*†	-376.9	0.90	0.24%	[0.00]	mg/L
Ba 233.527*†	66.2	8.77	13.25%	[0.00]	mg/L
Be 313.042*†	-101.2	27.05	26.73%	[0.00]	mg/L
Ca 317.933*†	40.9	2.02	4.94%	[0.00]	mg/L
Cd 226.502*†	19.8	4.43	22.32%	[0.00]	mg/L
Cd 228.802†	20.0	1.81	9.05%	[0.00]	mg/L
Co 228.616*†	-57.1	4.33	7.59%	[0.00]	mg/L
Cr 267.716*†	335.6	21.31	6.35%	[0.00]	mg/L
Cu 324.752*†	2063.7	19.46	0.94%	[0.00]	mg/L
Fe 273.955*†	351.3	132.57	37.73%	[0.00]	mg/L
K 766.490*†	1180.2	304.37	25.79%	[0.00]	mg/L
Mg 279.077*†	-6137.8	43.94	0.72%	[0.00]	mg/L
Mn 257.610*†	239.6	74.89	31.26%	[0.00]	mg/L
Mo 202.031*†	-35.1	0.01	0.01%	[0.00]	mg/L
Na 589.592*†	510.6	71.04	13.91%	[0.00]	mg/L
Ni 231.604*†	-39.0	10.32	26.42%	[0.00]	mg/L
P 213.617*†	-116.9	28.98	24.78%	[0.00]	mg/L
P 214.914†	-28.1	11.93	42.44%	[0.00]	mg/L
Pb 220.353*†	7.8	3.34	42.77%	[0.00]	mg/L
Sb 206.836†	24.4	6.05	24.76%	[0.00]	mg/L
Sb 217.582*†	-1.6	3.79	240.68%	[0.00]	mg/L
Se 196.026*†	7.2	4.60	63.66%	[0.00]	mg/L
Si 251.611*†	1475.1	158.01	10.71%	[0.00]	mg/L
Sn 189.927*†	-68.7	9.15	13.32%	[0.00]	mg/L
Sn 242.170†	-337.6	2.96	0.88%	[0.00]	mg/L
Sr 407.771*†	89.3	10.84	12.14%	[0.00]	mg/L
Ti 334.940†	21751.9	195.28	0.90%	[0.00]	mg/L
Ti 336.121*†	189.2	39.13	20.68%	[0.00]	mg/L
Tl 190.801*†	-4.4	2.83	63.92%	[0.00]	mg/L
V 292.402*†	218.4	77.51	35.49%	[0.00]	mg/L
Zn 206.200*†	325.4	14.40	4.42%	[0.00]	mg/L
Zn 213.857*†	864.5	20.24	2.34%	[0.00]	mg/L

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Sequence No.: 2
Sample ID: STD3-M111116A_935_ICP7300
Analyst:
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 2
Date Collected: 3/10/2017 12:58:46 PM
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.	Calib Units
Tb 384	52786.2	124.74	0.24%	89.20	%
Tb 350	85438.7	118.30	0.14%	92.54	%
Ag 328.068*†	103766.5	320.14	0.31%	[0.75]	mg/L
Al 308.215*†	344476.9	2193.25	0.64%	[27.0]	mg/L
As 188.979†	10236.2	14.05	0.14%	[7.50]	mg/L
As 193.696*†	7166.1	7.04	0.10%	[7.50]	mg/L
B 249.677*†	252020.7	2039.47	0.81%	[7.50]	mg/L
Ba 233.527*†	1585951.3	22822.81	1.44%	[15.0]	mg/L
Be 313.042*†	2906614.7	57646.55	1.98%	[1.125]	mg/L
Ca 317.933*†	75583.1	108.00	0.14%	[60.0]	mg/L
Cd 226.502*†	77033.2	66.35	0.09%	[1.50]	mg/L
Cd 228.802†	41119.0	175.15	0.43%	[1.50]	mg/L
Co 228.616*†	71471.9	414.87	0.58%	[3.75]	mg/L
Cr 267.716*†	96485.7	355.31	0.37%	[1.20]	mg/L
Cu 324.752*†	341624.6	1383.31	0.40%	[1.875]	mg/L
Fe 273.955*†	121312.6	1032.41	0.85%	[7.50]	mg/L
K 766.490*†	117293.9	1033.38	0.88%	[54.0]	mg/L
Mg 279.077*†	188345.0	739.79	0.39%	[15.0]	mg/L
Mn 257.610*†	677561.7	3446.69	0.51%	[1.50]	mg/L
Mo 202.031*†	7950.4	2.96	0.04%	[1.20]	mg/L
Na 589.592*†	238738.5	375.97	0.16%	[72.0]	mg/L
Ni 231.604*†	19661.0	21.86	0.11%	[1.20]	mg/L
P 213.617*†	14924.9	10.61	0.07%	[12.0]	mg/L
P 214.914†	9749.9	18.26	0.19%	[12.0]	mg/L
Pb 220.353*†	39518.2	41.95	0.11%	[7.50]	mg/L
Sb 206.836†	11457.6	4.66	0.04%	[9.0]	mg/L
Sb 217.582*†	11598.4	6.94	0.06%	[9.0]	mg/L
Se 196.026*†	4218.6	8.97	0.21%	[3.0]	mg/L
Si 251.611*†	326230.7	1496.20	0.46%	[12.0]	mg/L
Sn 189.927*†	23789.9	2.47	0.01%	[6.0]	mg/L
Sn 242.170†	7385.8	6.97	0.09%	[6.0]	mg/L
Sr 407.771*†	141332.4	477.45	0.34%	[0.60]	mg/L
Ti 334.940†	714363.8	11022.10	1.54%	[1.20]	mg/L
Ti 336.121*†	510178.1	4145.86	0.81%	[1.20]	mg/L
Tl 190.801*†	3801.0	6.93	0.18%	[3.0]	mg/L
V 292.402*†	371964.3	1858.58	0.50%	[3.75]	mg/L
Zn 206.200*†	130939.9	388.31	0.30%	[5.0]	mg/L
Zn 213.857*†	243995.6	1178.99	0.48%	[5.0]	mg/L

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Sequence No.: 3
Sample ID: ICV-M072816C
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 10
Date Collected: 3/10/2017 12:59:55 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	53456.4	90.33	%	2.457				2.72%
Tb 350	85320.3	92.41	%	2.135				2.31%
Ag 328.068*†	72110.1	0.5212	mg/L	0.00613	0.5212	mg/L	0.00613	1.18%
QC value within limits for Ag 328.068* Recovery = 104.24%								
Al 308.215*†	54513.0	4.273	mg/L	0.0667	4.273	mg/L	0.0667	1.56%
QC value within limits for Al 308.215* Recovery = 106.82%								
As 188.979†	6930.0	5.078	mg/L	0.1165	5.078	mg/L	0.1165	2.29%
QC value within limits for As 188.979 Recovery = 101.55%								
As 193.696*†	4859.2	5.086	mg/L	0.0813	5.086	mg/L	0.0813	1.60%
QC value within limits for As 193.696* Recovery = 101.71%								
B 249.677*†	88658.6	2.638	mg/L	0.0356	2.638	mg/L	0.0356	1.35%
QC value within limits for B 249.677* Recovery = 105.54%								
Ba 233.527*†	111486.3	1.054	mg/L	0.0178	1.054	mg/L	0.0178	1.69%
QC value within limits for Ba 233.527* Recovery = 105.44%								
Be 313.042*†	1343049.4	0.5198	mg/L	0.00446	0.5198	mg/L	0.00446	0.86%
QC value within limits for Be 313.042* Recovery = 103.96%								
Ca 317.933*†	25627.5	20.34	mg/L	0.591	20.34	mg/L	0.591	2.91%
QC value within limits for Ca 317.933* Recovery = 101.72%								
Cd 226.502*†	80143.6	1.561	mg/L	0.0174	1.561	mg/L	0.0174	1.11%
QC value within limits for Cd 226.502* Recovery = 104.04%								
Cd 228.802†	42176.4	1.539	mg/L	0.0265	1.539	mg/L	0.0265	1.72%
Co 228.616*†	20677.7	1.085	mg/L	0.0214	1.085	mg/L	0.0214	1.97%
QC value within limits for Co 228.616* Recovery = 108.49%								
Cr 267.716*†	33631.8	0.4183	mg/L	0.00500	0.4183	mg/L	0.00500	1.19%
QC value within limits for Cr 267.716* Recovery = 104.57%								
Cu 324.752*†	190890.1	1.048	mg/L	0.0152	1.048	mg/L	0.0152	1.45%
QC value within limits for Cu 324.752* Recovery = 104.77%								
Fe 273.955*†	1722217.4	106.5	mg/L	1.56	106.5	mg/L	1.56	1.46%
QC value within limits for Fe 273.955* Recovery = 106.47%								
K 766.490*†	17539.5	8.075	mg/L	0.2896	8.075	mg/L	0.2896	3.59%
QC value within limits for K 766.490* Recovery = 100.94%								
Mg 279.077*†	128928.1	10.27	mg/L	0.126	10.27	mg/L	0.126	1.23%
QC value within limits for Mg 279.077* Recovery = 102.68%								
Mn 257.610*†	468277.3	1.037	mg/L	0.0155	1.037	mg/L	0.0155	1.49%
QC value within limits for Mn 257.610* Recovery = 103.67%								
Mo 202.031*†	16776.3	2.532	mg/L	0.0519	2.532	mg/L	0.0519	2.05%
QC value within limits for Mo 202.031* Recovery = 101.29%								
Na 589.592*†	187276.6	56.48	mg/L	1.646	56.48	mg/L	1.646	2.91%
QC value within limits for Na 589.592* Recovery = 104.59%								
Ni 231.604*†	6986.5	0.4264	mg/L	0.00846	0.4264	mg/L	0.00846	1.98%
QC value within limits for Ni 231.604* Recovery = 106.60%								
P 213.617*†	6189.3	4.976	mg/L	0.0985	4.976	mg/L	0.0985	1.98%
QC value within limits for P 213.617* Recovery = 99.53%								
P 214.914†	4191.3	5.159	mg/L	0.1220	5.159	mg/L	0.1220	2.37%
Pb 220.353*†	27745.3	5.266	mg/L	0.0935	5.266	mg/L	0.0935	1.78%
QC value within limits for Pb 220.353* Recovery = 105.31%								
Sb 206.836†	2603.6	2.045	mg/L	0.0521	2.045	mg/L	0.0521	2.55%
QC value within limits for Sb 206.836 Recovery = 102.26%								
Sb 217.582*†	2669.6	2.072	mg/L	0.0381	2.072	mg/L	0.0381	1.84%
QC value within limits for Sb 217.582* Recovery = 103.58%								
Se 196.026*†	2859.4	2.033	mg/L	0.0391	2.033	mg/L	0.0391	1.92%
QC value within limits for Se 196.026* Recovery = 101.67%								
Si 251.611*†	270592.5	9.953	mg/L	0.0509	9.953	mg/L	0.0509	0.51%
QC value within limits for Si 251.611* Recovery = 99.53%								
Sn 189.927*†	10359.8	2.613	mg/L	0.0620	2.613	mg/L	0.0620	2.37%
QC value within limits for Sn 189.927* Recovery = 104.51%								
Sn 242.170†	3560.5	2.892	mg/L	0.0801	2.892	mg/L	0.0801	2.77%
Sr 407.771*†	48709.5	0.2068	mg/L	0.00733	0.2068	mg/L	0.00733	3.55%
QC value within limits for Sr 407.771* Recovery = 103.39%								

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Ti 334.940†	3019752.5	5.073 mg/L	0.0691	5.073 mg/L	0.0691	1.36%
Ti 336.121*†	2143309.7	5.041 mg/L	0.0751	5.041 mg/L	0.0751	1.49%
QC value within limits for Ti 336.121* Recovery = 100.83%						
Tl 190.801*†	2568.1	2.027 mg/L	0.0460	2.027 mg/L	0.0460	2.27%
QC value within limits for Tl 190.801* Recovery = 101.35%						
V 292.402*†	102786.1	1.035 mg/L	0.0159	1.035 mg/L	0.0159	1.54%
QC value within limits for V 292.402* Recovery = 103.45%						
Zn 206.200*†	41597.1	1.588 mg/L	0.0324	1.588 mg/L	0.0324	2.04%
QC value within limits for Zn 206.200* Recovery = 105.89%						
Zn 213.857*†	77005.0	1.569 mg/L	0.0194	1.569 mg/L	0.0194	1.24%
QC value within limits for Zn 213.857* Recovery = 104.61%						

All analyte(s) passed QC.

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Results Library: W:\pe\7300\Results\results.mdb

Sequence No.: 4
Sample ID: ICB-R12091601
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 1
Date Collected: 3/10/2017 1:02:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	59925.3	101.3	%	2.49				2.46%
Tb 350	93129.3	100.9	%	1.08				1.07%
Ag 328.068*†	-112.7	-0.0008	mg/L	0.00159	-0.0008	mg/L	0.00159	195.64%
Al 308.215*†	-115.6	-0.0091	mg/L	0.00600	-0.0091	mg/L	0.00600	66.21%
As 188.979†	-1.7	-0.0012	mg/L	0.00554	-0.0012	mg/L	0.00554	456.57%
As 193.696*†	-4.1	-0.0043	mg/L	0.00837	-0.0043	mg/L	0.00837	195.17%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	980.5	0.0292	mg/L	0.00008	0.0292	mg/L	0.00008	0.27%
QC value greater than the upper limit for B 249.677* Recovery = Not calculated								
Ba 233.527*†	20.0	0.0002	mg/L	0.00013	0.0002	mg/L	0.00013	69.74%
Be 313.042*†	56.4	0.0000	mg/L	0.00000	0.0000	mg/L	0.00000	1.30%
Ca 317.933*†	-3.5	-0.0028	mg/L	0.01105	-0.0028	mg/L	0.01105	400.76%
Cd 226.502*†	21.8	0.0004	mg/L	0.00027	0.0004	mg/L	0.00027	63.14%
Cd 228.802†	12.2	0.0004	mg/L	0.00003	0.0004	mg/L	0.00003	6.64%
Co 228.616*†	-3.1	-0.0002	mg/L	0.00034	-0.0002	mg/L	0.00034	205.73%
Cr 267.716*†	34.7	0.0004	mg/L	0.00014	0.0004	mg/L	0.00014	31.56%
Cu 324.752*†	-2.8	-0.0000	mg/L	0.00010	-0.0000	mg/L	0.00010	634.04%
Fe 273.955*†	-415.2	-0.0257	mg/L	0.00053	-0.0257	mg/L	0.00053	2.07%
K 766.490*†	-107.0	-0.0493	mg/L	0.02357	-0.0493	mg/L	0.02357	47.86%
Mg 279.077*†	-175.6	-0.0140	mg/L	0.00671	-0.0140	mg/L	0.00671	48.02%
Mn 257.610*†	-167.5	-0.0004	mg/L	0.00008	-0.0004	mg/L	0.00008	20.84%
Mo 202.031*†	8.0	0.0012	mg/L	0.00024	0.0012	mg/L	0.00024	19.88%
Na 589.592*†	85.7	0.0259	mg/L	0.02263	0.0259	mg/L	0.02263	87.51%
Ni 231.604*†	-15.7	-0.0010	mg/L	0.00073	-0.0010	mg/L	0.00073	75.77%
P 213.617*†	-0.3	-0.0002	mg/L	0.00326	-0.0002	mg/L	0.00326	>999.9%
P 214.914†	5.2	0.0064	mg/L	0.01843	0.0064	mg/L	0.01843	286.89%
Pb 220.353*†	-6.7	-0.0013	mg/L	0.00027	-0.0013	mg/L	0.00027	21.25%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	-2.4	-0.0019	mg/L	0.00257	-0.0019	mg/L	0.00257	135.56%
Sb 217.582*†	3.1	0.0024	mg/L	0.00022	0.0024	mg/L	0.00022	9.29%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-3.1	-0.0022	mg/L	0.00329	-0.0022	mg/L	0.00329	150.74%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	-136.4	-0.0050	mg/L	0.00138	-0.0050	mg/L	0.00138	27.53%
QC value within limits for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	2.3	0.0006	mg/L	0.00105	0.0006	mg/L	0.00105	182.82%
Sn 242.170†	8.0	0.0065	mg/L	0.05205	0.0065	mg/L	0.05205	800.34%
Sr 407.771*†	9.9	0.0000	mg/L	0.00002	0.0000	mg/L	0.00002	45.88%
Ti 334.940†	-475.9	-0.0008	mg/L	0.00060	-0.0008	mg/L	0.00060	75.25%
Ti 336.121*†	-471.4	-0.0011	mg/L	0.00020	-0.0011	mg/L	0.00020	18.41%
Tl 190.801*†	-0.6	-0.0005	mg/L	0.00294	-0.0005	mg/L	0.00294	623.57%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	-17.9	-0.0002	mg/L	0.00118	-0.0002	mg/L	0.00118	654.13%
Zn 206.200*†	-62.4	-0.0024	mg/L	0.00019	-0.0024	mg/L	0.00019	8.01%
Zn 213.857*†	-79.5	-0.0016	mg/L	0.00044	-0.0016	mg/L	0.00044	27.35%

QC Failed. Retry.

Sequence No.: 5
Sample ID: ICB-R12091601
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

1012
3/13/17

Autosampler Location: 1
Date Collected: 3/10/2017 1:03:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD

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Sequence No.: 6
Sample ID: CCV= STD3x0.5
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/10/2017 1:46:09 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	53556.7	90.50	%	0.134				0.15%
Tb 350	86127.1	93.29	%	0.417				0.45%
Ag 328.068*†	52307.1	0.3781	mg/L	0.00064	0.3781	mg/L	0.00064	0.17%
QC value within limits for Ag 328.068* Recovery = 100.82%								
Al 308.215*†	183192.7	14.36	mg/L	0.056	14.36	mg/L	0.056	0.39%
QC value within limits for Al 308.215* Recovery = 106.36%								
As 188.979†	5214.1	3.820	mg/L	0.0452	3.820	mg/L	0.0452	1.18%
QC value within limits for As 188.979 Recovery = 101.88%								
As 193.696*†	3638.7	3.808	mg/L	0.0293	3.808	mg/L	0.0293	0.77%
QC value within limits for As 193.696* Recovery = 101.55%								
B 249.677*†	125423.4	3.733	mg/L	0.0510	3.733	mg/L	0.0510	1.37%
QC value within limits for B 249.677* Recovery = 99.53%								
Ba 233.527*†	823056.4	7.785	mg/L	0.0098	7.785	mg/L	0.0098	0.13%
QC value within limits for Ba 233.527* Recovery = 103.79%								
Be 313.042*†	1496827.2	0.5793	mg/L	0.00024	0.5793	mg/L	0.00024	0.04%
QC value within limits for Be 313.042* Recovery = 102.99%								
Ca 317.933*†	40400.4	32.07	mg/L	0.642	32.07	mg/L	0.642	2.00%
QC value within limits for Ca 317.933* Recovery = 106.90%								
Cd 226.502*†	39316.1	0.7656	mg/L	0.00395	0.7656	mg/L	0.00395	0.52%
QC value within limits for Cd 226.502* Recovery = 102.08%								
Cd 228.802†	21075.2	0.7688	mg/L	0.00196	0.7688	mg/L	0.00196	0.26%
Co 228.616*†	36577.8	1.919	mg/L	0.0018	1.919	mg/L	0.0018	0.10%
QC value within limits for Co 228.616* Recovery = 102.36%								
Cr 267.716*†	49116.9	0.6109	mg/L	0.00114	0.6109	mg/L	0.00114	0.19%
QC value within limits for Cr 267.716* Recovery = 101.81%								
Cu 324.752*†	173136.6	0.9503	mg/L	0.00088	0.9503	mg/L	0.00088	0.09%
QC value within limits for Cu 324.752* Recovery = 101.36%								
Fe 273.955*†	64246.0	3.972	mg/L	0.0031	3.972	mg/L	0.0031	0.08%
QC value within limits for Fe 273.955* Recovery = 105.92%								
K 766.490*†	61561.5	28.34	mg/L	0.226	28.34	mg/L	0.226	0.80%
QC value within limits for K 766.490* Recovery = 104.97%								
Mg 279.077*†	96806.2	7.710	mg/L	0.0104	7.710	mg/L	0.0104	0.14%
QC value within limits for Mg 279.077* Recovery = 102.80%								
Mn 257.610*†	346491.5	0.7671	mg/L	0.00037	0.7671	mg/L	0.00037	0.05%
QC value within limits for Mn 257.610* Recovery = 102.28%								
Mo 202.031*†	4095.5	0.6182	mg/L	0.00169	0.6182	mg/L	0.00169	0.27%
QC value within limits for Mo 202.031* Recovery = 103.03%								
Na 589.592*†	126395.0	38.12	mg/L	0.585	38.12	mg/L	0.585	1.54%
QC value within limits for Na 589.592* Recovery = 105.89%								
Ni 231.604*†	10271.0	0.6269	mg/L	0.00029	0.6269	mg/L	0.00029	0.05%
QC value within limits for Ni 231.604* Recovery = 104.48%								
P 213.617*†	7562.3	6.080	mg/L	0.0193	6.080	mg/L	0.0193	0.32%
QC value within limits for P 213.617* Recovery = 101.34%								
P 214.914†	4966.0	6.112	mg/L	0.0396	6.112	mg/L	0.0396	0.65%
Pb 220.353*†	20448.9	3.881	mg/L	0.0091	3.881	mg/L	0.0091	0.23%
QC value within limits for Pb 220.353* Recovery = 103.49%								
Sb 206.836†	5884.0	4.622	mg/L	0.0171	4.622	mg/L	0.0171	0.37%
QC value within limits for Sb 206.836 Recovery = 102.71%								
Sb 217.582*†	5956.8	4.622	mg/L	0.0068	4.622	mg/L	0.0068	0.15%
QC value within limits for Sb 217.582* Recovery = 102.72%								
Se 196.026*†	2143.7	1.524	mg/L	0.0085	1.524	mg/L	0.0085	0.56%
QC value within limits for Se 196.026* Recovery = 101.63%								
Si 251.611*†	168535.6	6.199	mg/L	0.0529	6.199	mg/L	0.0529	0.85%
QC value within limits for Si 251.611* Recovery = 103.32%								
Sn 189.927*†	12271.2	3.095	mg/L	0.0321	3.095	mg/L	0.0321	1.04%
QC value within limits for Sn 189.927* Recovery = 103.16%								
Sn 242.170†	3749.4	3.046	mg/L	0.0231	3.046	mg/L	0.0231	0.76%
Sr 407.771*†	75378.8	0.3200	mg/L	0.00649	0.3200	mg/L	0.00649	2.03%
QC value within limits for Sr 407.771* Recovery = 106.67%								

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Ti 334.940†	371042.8	0.6233	mg/L	0.00073	0.6233	mg/L	0.00073	0.12%
Ti 336.121*†	261151.2	0.6143	mg/L	0.00073	0.6143	mg/L	0.00073	0.12%
QC value within limits for Ti 336.121* Recovery = 102.38%								
Tl 190.801*†	1967.9	1.553	mg/L	0.0206	1.553	mg/L	0.0206	1.33%
QC value within limits for Tl 190.801* Recovery = 103.54%								
V 292.402*†	188814.2	1.903	mg/L	0.0016	1.903	mg/L	0.0016	0.08%
QC value within limits for V 292.402* Recovery = 101.52%								
Zn 206.200*†	66357.2	2.534	mg/L	0.0132	2.534	mg/L	0.0132	0.52%
QC value within limits for Zn 206.200* Recovery = 101.36%								
Zn 213.857*†	123251.0	2.525	mg/L	0.0042	2.525	mg/L	0.0042	0.17%
QC value within limits for Zn 213.857* Recovery = 101.01%								

All analyte(s) passed QC.

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Sequence No.: 7
Sample ID: CCB-R12091601
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/10/2017 1:47:14 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.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	59906.7	101.2	%	2.34				2.31%
Tb 350	93009.5	100.7	%	3.20				3.18%
Ag 328.068*†	-204.6	-0.0015	mg/L	0.00166	-0.0015	mg/L	0.00166	111.98%
QC value within limits for Ag 328.068* Recovery = Not calculated								
Al 308.215*†	-215.8	-0.0169	mg/L	0.00228	-0.0169	mg/L	0.00228	13.47%
As 188.979†	4.4	0.0033	mg/L	0.00131	0.0033	mg/L	0.00131	40.36%
As 193.696*†	4.6	0.0048	mg/L	0.00640	0.0048	mg/L	0.00640	133.89%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1329.9	0.0396	mg/L	0.00218	0.0396	mg/L	0.00218	5.50%
QC value greater than the upper limit for B 249.677* Recovery = Not calculated								
Ba 233.527*†	-45.2	-0.0004	mg/L	0.00056	-0.0004	mg/L	0.00056	132.07%
Be 313.042*†	-140.7	-0.0001	mg/L	0.00001	-0.0001	mg/L	0.00001	14.56%
Ca 317.933*†	-21.9	-0.0174	mg/L	0.00471	-0.0174	mg/L	0.00471	27.08%
Cd 226.502*†	4.5	0.0001	mg/L	0.00010	0.0001	mg/L	0.00010	118.79%
Cd 228.802†	1.4	0.0000	mg/L	0.00002	0.0000	mg/L	0.00002	32.73%
Co 228.616*†	2.9	0.0001	mg/L	0.00000	0.0001	mg/L	0.00000	1.39%
Cr 267.716*†	56.0	0.0007	mg/L	0.00021	0.0007	mg/L	0.00021	29.66%
Cu 324.752*†	-60.4	-0.0003	mg/L	0.00004	-0.0003	mg/L	0.00004	11.64%
Fe 273.955*†	-537.6	-0.0332	mg/L	0.00124	-0.0332	mg/L	0.00124	3.73%
K 766.490*†	-183.1	-0.0843	mg/L	0.14534	-0.0843	mg/L	0.14534	172.43%
Mg 279.077*†	-200.9	-0.0160	mg/L	0.00730	-0.0160	mg/L	0.00730	45.66%
Mn 257.610*†	-281.2	-0.0006	mg/L	0.00006	-0.0006	mg/L	0.00006	10.35%
Mo 202.031*†	9.3	0.0014	mg/L	0.00167	0.0014	mg/L	0.00167	118.49%
Na 589.592*†	16.7	0.0050	mg/L	0.00830	0.0050	mg/L	0.00830	164.79%
Ni 231.604*†	-8.1	-0.0005	mg/L	0.00051	-0.0005	mg/L	0.00051	102.47%
P 213.617*†	-5.0	-0.0040	mg/L	0.00690	-0.0040	mg/L	0.00690	171.46%
P 214.914†	4.5	0.0055	mg/L	0.00641	0.0055	mg/L	0.00641	116.62%
Pb 220.353*†	-9.9	-0.0019	mg/L	0.00567	-0.0019	mg/L	0.00567	301.20%
Sb 206.836†	1.1	0.0009	mg/L	0.00075	0.0009	mg/L	0.00075	84.81%
Sb 217.582*†	2.6	0.0021	mg/L	0.01216	0.0021	mg/L	0.01216	591.81%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	5.7	0.0040	mg/L	0.00028	0.0040	mg/L	0.00028	6.97%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	-140.1	-0.0052	mg/L	0.00162	-0.0052	mg/L	0.00162	31.51%
Sn 189.927*†	14.2	0.0036	mg/L	0.00082	0.0036	mg/L	0.00082	22.87%
Sn 242.170†	7.4	0.0060	mg/L	0.00540	0.0060	mg/L	0.00540	89.91%
Sr 407.771*†	-7.5	-0.0000	mg/L	0.00006	-0.0000	mg/L	0.00006	195.26%
Ti 334.940†	-1012.3	-0.0017	mg/L	0.00021	-0.0017	mg/L	0.00021	12.43%
Ti 336.121*†	-870.2	-0.0020	mg/L	0.00051	-0.0020	mg/L	0.00051	24.88%
Tl 190.801*†	0.2	0.0001	mg/L	0.00118	0.0001	mg/L	0.00118	955.60%
V 292.402*†	43.6	0.0004	mg/L	0.00014	0.0004	mg/L	0.00014	30.77%
Zn 206.200*†	-181.3	-0.0069	mg/L	0.00092	-0.0069	mg/L	0.00092	13.33%
QC value within limits for Zn 206.200* Recovery = Not calculated								
Zn 213.857*†	-303.6	-0.0062	mg/L	0.00043	-0.0062	mg/L	0.00043	6.85%
QC value within limits for Zn 213.857* Recovery = Not calculated								

QC Failed. Retry.

Sequence No.: 8
Sample ID: CCB-R12091601
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

1012
3/13/17

Autosampler Location: 1
Date Collected: 3/10/2017 1:48:12 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.	Conc.	Sample Units	Std.Dev.	RSD

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Sequence No.: 12
Sample ID: CCV= STD3x0.5
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/10/2017 2:03:34 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	54389.5	91.91	%	0.003				0.00%
Tb 350	85799.7	92.93	%	1.296				1.39%
Ag 328.068*†	52434.6	0.3790	mg/L	0.00175	0.3790	mg/L	0.00175	0.46%
QC value within limits for Ag 328.068* Recovery = 101.06%								
Al 308.215*†	176678.5	13.85	mg/L	0.032	13.85	mg/L	0.032	0.23%
QC value within limits for Al 308.215* Recovery = 102.58%								
As 188.979†	5128.9	3.758	mg/L	0.0028	3.758	mg/L	0.0028	0.07%
QC value within limits for As 188.979 Recovery = 100.21%								
As 193.696*†	3590.9	3.758	mg/L	0.0034	3.758	mg/L	0.0034	0.09%
QC value within limits for As 193.696* Recovery = 100.22%								
B 249.677*†	127339.5	3.790	mg/L	0.0389	3.790	mg/L	0.0389	1.03%
QC value within limits for B 249.677* Recovery = 101.05%								
Ba 233.527*†	826879.4	7.821	mg/L	0.0057	7.821	mg/L	0.0057	0.07%
QC value within limits for Ba 233.527* Recovery = 104.28%								
Be 313.042*†	1510893.3	0.5848	mg/L	0.00369	0.5848	mg/L	0.00369	0.63%
QC value within limits for Be 313.042* Recovery = 103.96%								
Ca 317.933*†	39460.0	31.32	mg/L	0.302	31.32	mg/L	0.302	0.96%
QC value within limits for Ca 317.933* Recovery = 104.41%								
Cd 226.502*†	39710.6	0.7733	mg/L	0.00273	0.7733	mg/L	0.00273	0.35%
QC value within limits for Cd 226.502* Recovery = 103.10%								
Cd 228.802†	20693.8	0.7549	mg/L	0.00556	0.7549	mg/L	0.00556	0.74%
Co 228.616*†	36652.3	1.923	mg/L	0.0011	1.923	mg/L	0.0011	0.06%
QC value within limits for Co 228.616* Recovery = 102.56%								
Cr 267.716*†	49401.8	0.6144	mg/L	0.00370	0.6144	mg/L	0.00370	0.60%
QC value within limits for Cr 267.716* Recovery = 102.40%								
Cu 324.752*†	173789.6	0.9538	mg/L	0.00497	0.9538	mg/L	0.00497	0.52%
QC value within limits for Cu 324.752* Recovery = 101.74%								
Fe 273.955*†	61621.9	3.810	mg/L	0.0022	3.810	mg/L	0.0022	0.06%
QC value within limits for Fe 273.955* Recovery = 101.59%								
K 766.490*†	60276.6	27.75	mg/L	0.473	27.75	mg/L	0.473	1.70%
QC value within limits for K 766.490* Recovery = 102.78%								
Mg 279.077*†	97144.5	7.737	mg/L	0.0154	7.737	mg/L	0.0154	0.20%
QC value within limits for Mg 279.077* Recovery = 103.16%								
Mn 257.610*†	349265.5	0.7732	mg/L	0.00180	0.7732	mg/L	0.00180	0.23%
QC value within limits for Mn 257.610* Recovery = 103.09%								
Mo 202.031*†	3993.0	0.6027	mg/L	0.00606	0.6027	mg/L	0.00606	1.01%
QC value within limits for Mo 202.031* Recovery = 100.45%								
Na 589.592*†	123890.9	37.36	mg/L	0.327	37.36	mg/L	0.327	0.88%
QC value within limits for Na 589.592* Recovery = 103.79%								
Ni 231.604*†	10113.7	0.6173	mg/L	0.00399	0.6173	mg/L	0.00399	0.65%
QC value within limits for Ni 231.604* Recovery = 102.88%								
P 213.617*†	7530.4	6.055	mg/L	0.0041	6.055	mg/L	0.0041	0.07%
QC value within limits for P 213.617* Recovery = 100.91%								
P 214.914†	4903.0	6.035	mg/L	0.0180	6.035	mg/L	0.0180	0.30%
Pb 220.353*†	20109.3	3.816	mg/L	0.0205	3.816	mg/L	0.0205	0.54%
QC value within limits for Pb 220.353* Recovery = 101.77%								
Sb 206.836†	5774.0	4.536	mg/L	0.0174	4.536	mg/L	0.0174	0.38%
QC value within limits for Sb 206.836 Recovery = 100.79%								
Sb 217.582*†	5836.3	4.529	mg/L	0.0097	4.529	mg/L	0.0097	0.21%
QC value within limits for Sb 217.582* Recovery = 100.64%								
Se 196.026*†	2114.0	1.503	mg/L	0.0136	1.503	mg/L	0.0136	0.90%
QC value within limits for Se 196.026* Recovery = 100.22%								
Si 251.611*†	167719.4	6.169	mg/L	0.0669	6.169	mg/L	0.0669	1.08%
QC value within limits for Si 251.611* Recovery = 102.82%								
Sn 189.927*†	12065.9	3.043	mg/L	0.0084	3.043	mg/L	0.0084	0.28%
QC value within limits for Sn 189.927* Recovery = 101.44%								
Sn 242.170†	3688.8	2.997	mg/L	0.0007	2.997	mg/L	0.0007	0.02%
Sr 407.771*†	73352.5	0.3114	mg/L	0.00361	0.3114	mg/L	0.00361	1.16%
QC value within limits for Sr 407.771* Recovery = 103.80%								

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Ti 334.940†	367843.0	0.6179	mg/L	0.00077	0.6179	mg/L	0.00077	0.12%
Ti 336.121*†	258414.1	0.6078	mg/L	0.00068	0.6078	mg/L	0.00068	0.11%
QC value within limits for Ti 336.121* Recovery = 101.30%								
Tl 190.801*†	1934.9	1.527	mg/L	0.0068	1.527	mg/L	0.0068	0.44%
QC value within limits for Tl 190.801* Recovery = 101.81%								
V 292.402*†	189250.9	1.908	mg/L	0.0054	1.908	mg/L	0.0054	0.28%
QC value within limits for V 292.402* Recovery = 101.75%								
Zn 206.200*†	67486.7	2.577	mg/L	0.0058	2.577	mg/L	0.0058	0.22%
QC value within limits for Zn 206.200* Recovery = 103.08%								
Zn 213.857*†	123737.0	2.535	mg/L	0.0036	2.535	mg/L	0.0036	0.14%
QC value within limits for Zn 213.857* Recovery = 101.41%								

All analyte(s) passed QC.

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Sequence No.: 13
Sample ID: CCB-R12091601
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/10/2017 2:04:40 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.	Conc.	Sample Units	Std.Dev.	RSD
Tb 384	58525.8	98.90	%	0.048				0.05%
Tb 350	91187.6	98.77	%	0.191				0.19%
Ag 328.068*†	-153.1	-0.0011	mg/L	0.00041	-0.0011	mg/L	0.00041	37.20%
QC value within limits for Ag 328.068* Recovery = Not calculated								
Al 308.215*†	-181.6	-0.0142	mg/L	0.00208	-0.0142	mg/L	0.00208	14.64%
As 188.979†	0.1	0.0001	mg/L	0.00036	0.0001	mg/L	0.00036	534.47%
As 193.696*†	4.4	0.0046	mg/L	0.00512	0.0046	mg/L	0.00512	111.16%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1389.4	0.0413	mg/L	0.00195	0.0413	mg/L	0.00195	4.72%
QC value greater than the upper limit for B 249.677* Recovery = Not calculated								
Ba 233.527*†	50.2	0.0005	mg/L	0.00056	0.0005	mg/L	0.00056	117.96%
Be 313.042*†	48.1	0.0000	mg/L	0.00006	0.0000	mg/L	0.00006	298.94%
Ca 317.933*†	-15.5	-0.0123	mg/L	0.00457	-0.0123	mg/L	0.00457	37.06%
Cd 226.502*†	6.8	0.0001	mg/L	0.00007	0.0001	mg/L	0.00007	52.51%
Cd 228.802†	-7.8	-0.0003	mg/L	0.00035	-0.0003	mg/L	0.00035	124.54%
Co 228.616*†	1.6	0.0001	mg/L	0.00054	0.0001	mg/L	0.00054	629.41%
Cr 267.716*†	50.4	0.0006	mg/L	0.00033	0.0006	mg/L	0.00033	52.37%
Cu 324.752*†	60.9	0.0003	mg/L	0.00063	0.0003	mg/L	0.00063	188.73%
Fe 273.955*†	-536.7	-0.0332	mg/L	0.00059	-0.0332	mg/L	0.00059	1.77%
K 766.490*†	-228.3	-0.1051	mg/L	0.04691	-0.1051	mg/L	0.04691	44.64%
Mg 279.077*†	-275.4	-0.0219	mg/L	0.00337	-0.0219	mg/L	0.00337	15.37%
Mn 257.610*†	-218.0	-0.0005	mg/L	0.00004	-0.0005	mg/L	0.00004	8.76%
Mo 202.031*†	9.1	0.0014	mg/L	0.00075	0.0014	mg/L	0.00075	54.16%
Na 589.592*†	96.2	0.0290	mg/L	0.01422	0.0290	mg/L	0.01422	49.03%
Ni 231.604*†	-11.9	-0.0007	mg/L	0.00070	-0.0007	mg/L	0.00070	95.88%
P 213.617*†	-1.7	-0.0013	mg/L	0.00089	-0.0013	mg/L	0.00089	66.35%
P 214.914†	-0.0	-0.0000	mg/L	0.00420	-0.0000	mg/L	0.00420	>999.9%
Pb 220.353*†	-31.3	-0.0059	mg/L	0.00049	-0.0059	mg/L	0.00049	8.26%
Sb 206.836†	6.3	0.0050	mg/L	0.00762	0.0050	mg/L	0.00762	153.17%
Sb 217.582*†	5.3	0.0041	mg/L	0.00119	0.0041	mg/L	0.00119	29.13%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	0.2	0.0002	mg/L	0.00445	0.0002	mg/L	0.00445	>999.9%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	-65.5	-0.0024	mg/L	0.00086	-0.0024	mg/L	0.00086	35.77%
Sn 189.927*†	2.0	0.0005	mg/L	0.00106	0.0005	mg/L	0.00106	215.16%
Sn 242.170†	24.3	0.0197	mg/L	0.01642	0.0197	mg/L	0.01642	83.21%
Sr 407.771*†	-7.8	-0.0000	mg/L	0.00003	-0.0000	mg/L	0.00003	94.55%
Ti 334.940†	-821.5	-0.0014	mg/L	0.00012	-0.0014	mg/L	0.00012	8.88%
Ti 336.121*†	-936.4	-0.0022	mg/L	0.00037	-0.0022	mg/L	0.00037	16.79%
Tl 190.801*†	-6.7	-0.0053	mg/L	0.00086	-0.0053	mg/L	0.00086	16.24%
V 292.402*†	41.3	0.0004	mg/L	0.00125	0.0004	mg/L	0.00125	300.73%
Zn 206.200*†	-197.2	-0.0075	mg/L	0.00031	-0.0075	mg/L	0.00031	4.09%
QC value within limits for Zn 206.200* Recovery = Not calculated								
Zn 213.857*†	-340.5	-0.0070	mg/L	0.00052	-0.0070	mg/L	0.00052	7.40%
QC value within limits for Zn 213.857* Recovery = Not calculated								

QC Failed. Retry.

Sequence No.: 14
Sample ID: CCB-R12091601
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

1012
3/13/17

Autosampler Location: 1
Date Collected: 3/10/2017 2:05:38 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.	Conc.	Sample Units	Std.Dev.	RSD

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EPA 6010B ICP Metals

(Aqueous)

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER: **17-03-0638**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3010A Total
D/T EXTRACTED: 2017-03-09 00:00

ANALYZED BY: 771
D/T ANALYZED: 2017-03-10 13:54
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170310C1\17-03-0638-1 eb.icp

 # 1 **CLIENT SAMPLE NUMBER: EB3-2017-03-08**

LCS/MB BATCH: 170309LA4
MS/MSD BATCH: 170309SA4
UNITS: mg/L

SAMPLE VOLUME / WEIGHT: DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Antimony	-0.00303	1.00	ND	0.0150	
Arsenic	0.00701	1.00	ND	0.0100	
Barium	-0.00241	1.00	ND	0.0100	
Beryllium	-0.0000174	1.00	ND	0.0100	
Cadmium	0.0000693	1.00	ND	0.0100	
Chromium	0.000438	1.00	ND	0.0100	
Cobalt	-0.000215	1.00	ND	0.0100	
Copper	-0.00200	1.00	ND	0.0100	
Lead	-0.00568	1.00	ND	0.0100	
Molybdenum	0.00131	1.00	ND	0.0100	
Nickel	-0.000140	1.00	ND	0.0100	
Selenium	0.000341	1.00	ND	0.0150	
Silver	-0.000822	1.00	ND	0.00500	
Thallium	0.00213	1.00	ND	0.0150	
Vanadium	-0.000896	1.00	ND	0.0100	
Zinc	-0.0102	1.00	ND	0.0100	

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Sequence No.: 4
Sample ID: 17-03-0638-1 eb
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 219
Date Collected: 3/10/2017 1:54:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 17-03-0638-1 eb

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	61981.9	104.7	%	1.03				0.98%
Tb 350	96294.8	104.3	%	2.11				2.02%
Ag 328.068*†	-113.8	-0.0008	mg/L	0.00147	-0.0008	mg/L	0.00147	178.94%
Al 308.215*†	-261.7	-0.0205	mg/L	0.00169	-0.0205	mg/L	0.00169	8.25%
As 188.979†	6.6	0.0048	mg/L	0.00217	0.0048	mg/L	0.00217	44.88%
As 193.696*†	6.7	0.0070	mg/L	0.00367	0.0070	mg/L	0.00367	52.34%
B 249.677*†	191.4	0.0057	mg/L	0.00160	0.0057	mg/L	0.00160	28.15%
Ba 233.527*†	-255.2	-0.0024	mg/L	0.00025	-0.0024	mg/L	0.00025	10.52%
Be 313.042*†	-44.9	-0.0000	mg/L	0.00003	-0.0000	mg/L	0.00003	173.63%
Ca 317.933*†	-5.5	-0.0044	mg/L	0.00718	-0.0044	mg/L	0.00718	164.62%
Cd 226.502*†	3.6	0.0001	mg/L	0.00009	0.0001	mg/L	0.00009	135.77%
Cd 228.802†	-7.7	-0.0003	mg/L	0.00038	-0.0003	mg/L	0.00038	137.51%
Co 228.616*†	-4.1	-0.0002	mg/L	0.00059	-0.0002	mg/L	0.00059	272.92%
Cr 267.716*†	35.2	0.0004	mg/L	0.00036	0.0004	mg/L	0.00036	82.31%
Cu 324.752*†	-364.2	-0.0020	mg/L	0.00062	-0.0020	mg/L	0.00062	31.12%
Fe 273.955*†	18.5	0.0011	mg/L	0.00102	0.0011	mg/L	0.00102	89.13%
K 766.490*†	-377.7	-0.1739	mg/L	0.01568	-0.1739	mg/L	0.01568	9.02%
Mg 279.077*†	232.9	0.0185	mg/L	0.00424	0.0185	mg/L	0.00424	22.88%
Mn 257.610*†	-178.0	-0.0004	mg/L	0.00004	-0.0004	mg/L	0.00004	10.73%
Mo 202.031*†	8.7	0.0013	mg/L	0.00001	0.0013	mg/L	0.00001	0.71%
Na 589.592*†	52.5	0.0158	mg/L	0.01536	0.0158	mg/L	0.01536	97.05%
Ni 231.604*†	-2.3	-0.0001	mg/L	0.00043	-0.0001	mg/L	0.00043	306.77%
P 213.617*†	12.1	0.0098	mg/L	0.01276	0.0098	mg/L	0.01276	130.61%
P 214.914†	3.0	0.0037	mg/L	0.00806	0.0037	mg/L	0.00806	217.77%
Pb 220.353*†	-29.9	-0.0057	mg/L	0.00035	-0.0057	mg/L	0.00035	6.11%
Sb 206.836†	-2.4	-0.0019	mg/L	0.00300	-0.0019	mg/L	0.00300	159.78%
Sb 217.582*†	-3.9	-0.0030	mg/L	0.00166	-0.0030	mg/L	0.00166	54.60%
Se 196.026*†	0.5	0.0003	mg/L	0.00239	0.0003	mg/L	0.00239	700.59%
Si 251.611*†	-483.2	-0.0178	mg/L	0.00224	-0.0178	mg/L	0.00224	12.59%
Sn 189.927*†	-11.8	-0.0030	mg/L	0.00499	-0.0030	mg/L	0.00499	167.44%
Sn 242.170†	26.5	0.0215	mg/L	0.01863	0.0215	mg/L	0.01863	86.48%
Sr 407.771*†	32.7	0.0001	mg/L	0.00008	0.0001	mg/L	0.00008	60.21%
Ti 334.940†	-776.1	-0.0013	mg/L	0.00040	-0.0013	mg/L	0.00040	31.06%
Ti 336.121*†	-580.3	-0.0014	mg/L	0.00003	-0.0014	mg/L	0.00003	2.47%
Tl 190.801*†	2.7	0.0021	mg/L	0.00493	0.0021	mg/L	0.00493	231.79%
V 292.402*†	-88.9	-0.0009	mg/L	0.00027	-0.0009	mg/L	0.00027	30.65%
Zn 206.200*†	-264.9	-0.0101	mg/L	0.00026	-0.0101	mg/L	0.00026	2.59%
Zn 213.857*†	-495.4	-0.0102	mg/L	0.00074	-0.0102	mg/L	0.00074	7.26%

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EPA 6010B ICP Metals

(Aqueous)

Quality Control

Method Blank
LCS/LCSD
MS/MSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 6010B

MB SAMPLE ID:	**097-01-003-16364**	ANALYZED BY:	771
MB BATCH ID:	170309LA4	D/T ANALYZED:	2017-03-10 13:51
INSTRUMENT:	ICP 7300	REVIEWED BY:	309
EXTRACTION:	EPA 3010A Total	D/T REVIEWED:	2017-03-10 17:48
D/T EXTRACTED:	2017-03-09 00:00	MATRIX:	Water

DATA FILE: W:\ICP-DATA\170310C1\170309-ba-4__130.icp

CLIENT WORK ORDER: 17-03-0638

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB3-2017-03-08	2017-03-10 13:54	W:\ICP-DATA\170310C1\17-03-0638-1 eb.icp

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RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER:	**097-01-003**	ANALYZED BY:	771
INSTRUMENT:	ICP 7300	D/T ANALYZED:	2017-03-10 13:51
EXTRACTION :	EPA 3010A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-09 00:00	D/T REVIEWED:	2017-03-10 17:48

DATA FILE: W:\ICP-DATA\170310C1\170309-ba-4__130.icp

 # MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH:	170309LA4	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:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Antimony	-0.00323	1.00	ND	0.0150	
Arsenic	0.00636	1.00	ND	0.0100	
Barium	-0.00266	1.00	ND	0.0100	
Beryllium	-0.000217	1.00	ND	0.0100	
Cadmium	-0.000143	1.00	ND	0.0100	
Chromium	0.0000124	1.00	ND	0.0100	
Cobalt	-0.000990	1.00	ND	0.0100	
Copper	-0.00195	1.00	ND	0.0100	
Lead	-0.00558	1.00	ND	0.0100	
Molybdenum	-0.000249	1.00	ND	0.0100	
Nickel	-0.000473	1.00	ND	0.0100	
Selenium	-0.00484	1.00	ND	0.0150	
Silver	-0.000490	1.00	ND	0.00500	
Thallium	-0.00236	1.00	ND	0.0150	
Vanadium	-0.000304	1.00	ND	0.0100	
Boron	-0.000333	1.00	ND	0.0200	
Zinc	-0.00974	1.00	ND	0.0100	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID: **097-01-003-16364**
LCS/MB BATCH ID: 170309LA4
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3010A Total
D/T EXTRACTED: 2017-03-09 00:00

ANALYZED BY: 771
D/T ANALYZED: 2017-03-10 13:53
REVIEWED BY: 309
D/T REVIEWED: 2017-03-10 17:48

DATA FILE: W:\ICP-DATA\170310C1\170309-la-4__131.icp

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Antimony	0.5000	0.5120	102	80-120	73-127	PASS	
Arsenic	0.5000	0.5028	101	80-120	73-127	PASS	
Barium	0.5000	0.5380	108	80-120	73-127	PASS	
Beryllium	0.5000	0.5005	100	80-120	73-127	PASS	
Cadmium	0.5000	0.5205	104	80-120	73-127	PASS	
Chromium	0.5000	0.5281	106	80-120	73-127	PASS	
Cobalt	0.5000	0.5401	108	80-120	73-127	PASS	
Copper	0.5000	0.5375	107	80-120	73-127	PASS	
Lead	0.5000	0.5404	108	80-120	73-127	PASS	
Molybdenum	0.5000	0.5129	103	80-120	73-127	PASS	
Nickel	0.5000	0.5374	107	80-120	73-127	PASS	
Phosphorus	0.5000	0.5060	101	80-120	73-127	PASS	
Selenium	0.5000	0.4907	98	80-120	73-127	PASS	
Silver	0.2500	0.2517	101	80-120	73-127	PASS	
Thallium	0.5000	0.5169	103	80-120	73-127	PASS	
Vanadium	0.5000	0.5009	100	80-120	73-127	PASS	
Aluminum	0.5000	0.5275	106	80-120	73-127	PASS	
Calcium	0.5000	0.5263	105	80-120	73-127	PASS	
Iron	0.5000	0.5086	102	80-120	73-127	PASS	
Magnesium	0.5000	0.4919	98	80-120	73-127	PASS	
Manganese	0.5000	0.5242	105	80-120	73-127	PASS	
Potassium	5.000	4.665	93	80-120	73-127	PASS	
Sodium	5.000	4.923	98	80-120	73-127	PASS	
Strontium	0.5000	0.5078	102	80-120	73-127	PASS	
Tin	0.5000	0.5198	104	80-120	73-127	PASS	
Titanium	0.5000	0.5067	101	80-120	73-127	PASS	
Boron	0.5000	0.4709	94	80-120	73-127	PASS	
Silicon	0.5000	0.5172	103	80-120	73-127	PASS	
Zinc	0.5000	0.5153	103	80-120	73-127	PASS	

Compounds listed in bold are required to be reported.

LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID:	**097-01-003-16364**	EXTRACTION:	EPA 3010A Total	ANALYZED BY:	771
LCS/MB BATCH ID:	170309LA4	D/T EXTRACTED:	2017-03-09 00:00	D/T ANALYZED:	2017-03-10 13:53
INSTRUMENT:	ICP 7300			REVIEWED BY:	309
				D/T REVIEWED:	2017-03-10 17:48

DATA FILE: W:\ICP-DATA\170310C1\170309-la-4__131.icp

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS

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: **17-03-0583-1**
MS/MSD BATCH: 170309SA4
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3010A Total
D/T EXTRACTED:
SAMPLE: 2017-03-09 00:00
MS: 2017-03-09 00:00
MSD: 2017-03-09 00:00

ANALYZED BY: 771
D/T ANALYZED:
SAMPLE: 2017-03-10 13:59
MS: 2017-03-10 13:56
MSD: 2017-03-10 13:57
REVIEWED BY: 309
D/T REVIEWED: 2017-03-10 17:48

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	0.5405	108	0.5215	104	72-132	4	0-10	PASS	
Arsenic	0.01835	0.5000	0.5000	0.5737	111	0.5505	106	80-140	4	0-11	PASS	
Barium	0.1099	0.5000	0.5000	0.6371	105	0.6297	104	87-123	1	0-6	PASS	
Beryllium	ND	0.5000	0.5000	0.5445	109	0.5272	105	89-119	3	0-8	PASS	
Cadmium	ND	0.5000	0.5000	0.5229	105	0.5057	101	82-124	3	0-7	PASS	
Chromium	ND	0.5000	0.5000	0.5329	107	0.5195	104	86-122	3	0-8	PASS	
Cobalt	ND	0.5000	0.5000	0.5094	102	0.4965	99	83-125	3	0-7	PASS	
Copper	ND	0.5000	0.5000	0.5201	104	0.5062	101	78-126	3	0-7	PASS	
Lead	ND	0.5000	0.5000	0.5193	104	0.4911	98	84-120	6	0-7	PASS	
Molybdenum	0.01932	0.5000	0.5000	0.5504	106	0.5304	102	78-126	4	0-7	PASS	
Nickel	ND	0.5000	0.5000	0.5065	101	0.4933	99	84-120	3	0-7	PASS	
Phosphorus	**ND**	**0.5000**	**0.5000**	**0.6421**	**128**	**0.5952**	**119**	**80-140**	**8**	**0-6**	**FAIL**	**4**
Selenium	ND	0.5000	0.5000	0.5184	104	0.5066	101	79-127	2	0-9	PASS	
Silver	ND	0.2500	0.2500	0.2694	108	0.2564	103	86-128	5	0-7	PASS	
Thallium	ND	0.5000	0.5000	0.4992	100	0.4924	98	79-121	1	0-8	PASS	
Vanadium	ND	0.5000	0.5000	0.5287	106	0.5091	102	88-118	4	0-7	PASS	
Aluminum	0.2947	0.5000	0.5000	0.7677	95	0.7900	99	73-145	3	0-16	PASS	
Calcium	116.2	0.5000	0.5000	109.1	4x	107.0	4x	77-113	4x	0-11	PASS	Q
Iron	0.3237	0.5000	0.5000	0.7159	78	0.7308	81	65-149	2	0-21	PASS	
Magnesium	33.44	0.5000	0.5000	31.61	4x	32.29	4x	56-140	4x	0-11	PASS	Q
Manganese	0.02473	0.5000	0.5000	0.5337	102	0.5221	99	86-116	2	0-7	PASS	
Potassium	6.107	5.000	5.000	11.17	101	10.85	95	83-131	3	0-7	PASS	
Sodium	149.9	5.000	5.000	144.4	4x	144.5	4x	73-127	4x	0-9	PASS	Q
Strontium	0.8204	0.5000	0.5000	1.322	100	1.300	96	81-123	2	0-6	PASS	
Tin	ND	0.5000	0.5000	0.5510	110	0.5280	106	49-151	4	0-5	PASS	
Titanium	ND	0.5000	0.5000	0.5276	106	0.5139	103	92-128	3	0-5	PASS	
Boron	0.5095	0.5000	0.5000	1.006	99	1.017	102	81-135	1	0-7	PASS	
Silicon	11.78	0.5000	0.5000	11.51	4x	11.70	4x	24-180	4x	0-15	PASS	Q

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

SPIKED SAMPLE ID: **17-03-0583-1**
MS/MSD BATCH: 170309SA4
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3010A Total
D/T EXTRACTED:
SAMPLE: 2017-03-09 00:00
MS: 2017-03-09 00:00
MSD: 2017-03-09 00:00

ANALYZED BY: 771
D/T ANALYZED:
SAMPLE: 2017-03-10 13:59
MS: 2017-03-10 13:56
MSD: 2017-03-10 13:57
REVIEWED BY: 309
D/T REVIEWED: 2017-03-10 17:48

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Zinc	ND	0.5000	0.5000	0.5408	108	0.5106	102	89-131	6	0-8	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-0583-1 ms.icp	W:\ICP-DATA\170310C1\
MSD	17-03-0583-1 msd.icp	W:\ICP-DATA\170310C1\

Sequence No.: 2
Sample ID: 170309-ba-4
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 217
Date Collected: 3/10/2017 1:51:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 170309-ba-4

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	60227.7	101.8	%	0.09				0.09%
Tb 350	93666.9	101.5	%	0.25				0.24%
Ag 328.068*†	-67.8	-0.0005	mg/L	0.00089	-0.0005	mg/L	0.00089	180.93%
Al 308.215*†	-287.6	-0.0225	mg/L	0.00062	-0.0225	mg/L	0.00062	2.73%
As 188.979†	-8.1	-0.0059	mg/L	0.00009	-0.0059	mg/L	0.00009	1.59%
As 193.696*†	6.1	0.0064	mg/L	0.00103	0.0064	mg/L	0.00103	16.21%
B 249.677*†	-11.2	-0.0003	mg/L	0.00064	-0.0003	mg/L	0.00064	192.85%
Ba 233.527*†	-281.2	-0.0027	mg/L	0.00016	-0.0027	mg/L	0.00016	5.83%
Be 313.042*†	-561.2	-0.0002	mg/L	0.00003	-0.0002	mg/L	0.00003	13.28%
Ca 317.933*†	-27.2	-0.0216	mg/L	0.00392	-0.0216	mg/L	0.00392	18.13%
Cd 226.502*†	-7.3	-0.0001	mg/L	0.00001	-0.0001	mg/L	0.00001	9.98%
Cd 228.802†	-5.7	-0.0002	mg/L	0.00019	-0.0002	mg/L	0.00019	89.45%
Co 228.616*†	-18.9	-0.0010	mg/L	0.00039	-0.0010	mg/L	0.00039	39.63%
Cr 267.716*†	1.0	0.0000	mg/L	0.00032	0.0000	mg/L	0.00032	>999.9%
Cu 324.752*†	-355.9	-0.0020	mg/L	0.00041	-0.0020	mg/L	0.00041	20.82%
Fe 273.955*†	-618.5	-0.0382	mg/L	0.00330	-0.0382	mg/L	0.00330	8.63%
K 766.490*†	-36.6	-0.0168	mg/L	0.04369	-0.0168	mg/L	0.04369	259.33%
Mg 279.077*†	137.4	0.0109	mg/L	0.00115	0.0109	mg/L	0.00115	10.55%
Mn 257.610*†	-421.1	-0.0009	mg/L	0.00006	-0.0009	mg/L	0.00006	6.29%
Mo 202.031*†	-1.7	-0.0002	mg/L	0.00120	-0.0002	mg/L	0.00120	480.46%
Na 589.592*†	76.7	0.0231	mg/L	0.00968	0.0231	mg/L	0.00968	41.85%
Ni 231.604*†	-7.8	-0.0005	mg/L	0.00046	-0.0005	mg/L	0.00046	97.86%
P 213.617*†	-9.0	-0.0072	mg/L	0.00441	-0.0072	mg/L	0.00441	60.78%
P 214.914†	-9.3	-0.0114	mg/L	0.00236	-0.0114	mg/L	0.00236	20.69%
Pb 220.353*†	-29.4	-0.0056	mg/L	0.00062	-0.0056	mg/L	0.00062	11.04%
Sb 206.836†	-10.7	-0.0084	mg/L	0.00316	-0.0084	mg/L	0.00316	37.58%
Sb 217.582*†	-4.2	-0.0032	mg/L	0.00299	-0.0032	mg/L	0.00299	92.54%
Se 196.026*†	-6.8	-0.0048	mg/L	0.00268	-0.0048	mg/L	0.00268	55.28%
Si 251.611*†	-86.1	-0.0032	mg/L	0.00575	-0.0032	mg/L	0.00575	181.69%
Sn 189.927*†	-19.1	-0.0048	mg/L	0.00424	-0.0048	mg/L	0.00424	87.81%
Sn 242.170†	6.2	0.0050	mg/L	0.01174	0.0050	mg/L	0.01174	232.57%
Sr 407.771*†	-18.0	-0.0001	mg/L	0.00010	-0.0001	mg/L	0.00010	125.51%
Ti 334.940†	-1364.9	-0.0023	mg/L	0.00040	-0.0023	mg/L	0.00040	17.56%
Ti 336.121*†	-972.6	-0.0023	mg/L	0.00001	-0.0023	mg/L	0.00001	0.38%
Tl 190.801*†	-3.0	-0.0024	mg/L	0.00404	-0.0024	mg/L	0.00404	170.79%
V 292.402*†	-30.3	-0.0003	mg/L	0.00020	-0.0003	mg/L	0.00020	66.59%
Zn 206.200*†	-267.0	-0.0102	mg/L	0.00043	-0.0102	mg/L	0.00043	4.18%
Zn 213.857*†	-475.6	-0.0097	mg/L	0.00052	-0.0097	mg/L	0.00052	5.34%

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Sequence No.: 3
Sample ID: 170309-1a-4
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 218
Date Collected: 3/10/2017 1:53:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 170309-1a-4

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	56940.2	96.22	%	1.620				1.68%
Tb 350	90417.5	97.94	%	1.168				1.19%
Ag 328.068*†	34827.9	0.2517	mg/L	0.00096	0.2517	mg/L	0.00096	0.38%
Al 308.215*†	6730.3	0.5275	mg/L	0.00635	0.5275	mg/L	0.00635	1.20%
As 188.979†	686.7	0.5032	mg/L	0.01322	0.5032	mg/L	0.01322	2.63%
As 193.696*†	480.4	0.5028	mg/L	0.01213	0.5028	mg/L	0.01213	2.41%
B 249.677*†	15822.2	0.4709	mg/L	0.00161	0.4709	mg/L	0.00161	0.34%
Ba 233.527*†	56885.5	0.5380	mg/L	0.00250	0.5380	mg/L	0.00250	0.47%
Be 313.042*†	1293012.8	0.5005	mg/L	0.01218	0.5005	mg/L	0.01218	2.43%
Ca 317.933*†	663.0	0.5263	mg/L	0.00140	0.5263	mg/L	0.00140	0.27%
Cd 226.502*†	26729.3	0.5205	mg/L	0.00408	0.5205	mg/L	0.00408	0.78%
Cd 228.802†	13927.5	0.5081	mg/L	0.00012	0.5081	mg/L	0.00012	0.02%
Co 228.616*†	10293.3	0.5401	mg/L	0.01003	0.5401	mg/L	0.01003	1.86%
Cr 267.716*†	42463.0	0.5281	mg/L	0.00271	0.5281	mg/L	0.00271	0.51%
Cu 324.752*†	97925.8	0.5375	mg/L	0.00061	0.5375	mg/L	0.00061	0.11%
Fe 273.955*†	8226.9	0.5086	mg/L	0.01064	0.5086	mg/L	0.01064	2.09%
K 766.490*†	10132.3	4.665	mg/L	0.2047	4.665	mg/L	0.2047	4.39%
Mg 279.077*†	6176.0	0.4919	mg/L	0.00218	0.4919	mg/L	0.00218	0.44%
Mn 257.610*†	236801.4	0.5242	mg/L	0.00317	0.5242	mg/L	0.00317	0.61%
Mo 202.031*†	3398.0	0.5129	mg/L	0.00117	0.5129	mg/L	0.00117	0.23%
Na 589.592*†	16325.3	4.923	mg/L	0.1308	4.923	mg/L	0.1308	2.66%
Ni 231.604*†	8805.5	0.5374	mg/L	0.00172	0.5374	mg/L	0.00172	0.32%
P 213.617*†	629.3	0.5060	mg/L	0.02058	0.5060	mg/L	0.02058	4.07%
P 214.914†	386.6	0.4758	mg/L	0.00964	0.4758	mg/L	0.00964	2.02%
Pb 220.353*†	2847.6	0.5404	mg/L	0.00204	0.5404	mg/L	0.00204	0.38%
Sb 206.836†	646.7	0.5080	mg/L	0.00633	0.5080	mg/L	0.00633	1.25%
Sb 217.582*†	659.8	0.5120	mg/L	0.00145	0.5120	mg/L	0.00145	0.28%
Se 196.026*†	690.0	0.4907	mg/L	0.00409	0.4907	mg/L	0.00409	0.83%
Si 251.611*†	14061.1	0.5172	mg/L	0.00935	0.5172	mg/L	0.00935	1.81%
Sn 189.927*†	2061.2	0.5198	mg/L	0.00263	0.5198	mg/L	0.00263	0.51%
Sn 242.170†	608.3	0.4942	mg/L	0.01309	0.4942	mg/L	0.01309	2.65%
Sr 407.771*†	119604.6	0.5078	mg/L	0.02091	0.5078	mg/L	0.02091	4.12%
Ti 334.940†	303714.3	0.5102	mg/L	0.00208	0.5102	mg/L	0.00208	0.41%
Ti 336.121*†	215402.2	0.5067	mg/L	0.00089	0.5067	mg/L	0.00089	0.18%
Tl 190.801*†	655.0	0.5169	mg/L	0.00325	0.5169	mg/L	0.00325	0.63%
V 292.402*†	49684.8	0.5009	mg/L	0.00314	0.5009	mg/L	0.00314	0.63%
Zn 206.200*†	13961.3	0.5331	mg/L	0.00223	0.5331	mg/L	0.00223	0.42%
Zn 213.857*†	25149.3	0.5153	mg/L	0.00182	0.5153	mg/L	0.00182	0.35%

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Sequence No.: 6
Sample ID: 17-03-0583-1 ms
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 221
Date Collected: 3/10/2017 1:56:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 17-03-0583-1 ms

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	52419.7	88.58	%	0.205				0.23%
Tb 350	84333.0	91.35	%	1.345				1.47%
Ag 328.068*†	37273.3	0.2694	mg/L	0.00009	0.2694	mg/L	0.00009	0.03%
Al 308.215*†	9794.7	0.7677	mg/L	0.00052	0.7677	mg/L	0.00052	0.07%
As 188.979†	766.0	0.5612	mg/L	0.00333	0.5612	mg/L	0.00333	0.59%
As 193.696*†	548.2	0.5737	mg/L	0.00714	0.5737	mg/L	0.00714	1.25%
B 249.677*†	33790.4	1.006	mg/L	0.0153	1.006	mg/L	0.0153	1.52%
Ba 233.527*†	67358.0	0.6371	mg/L	0.00547	0.6371	mg/L	0.00547	0.86%
Be 313.042*†	1406896.8	0.5445	mg/L	0.01451	0.5445	mg/L	0.01451	2.67%
Ca 317.933*†	137454.6	109.1	mg/L	0.55	109.1	mg/L	0.55	0.51%
Cd 226.502*†	26854.9	0.5229	mg/L	0.00672	0.5229	mg/L	0.00672	1.29%
Cd 228.802†	14321.4	0.5224	mg/L	0.00288	0.5224	mg/L	0.00288	0.55%
Co 228.616*†	9708.1	0.5094	mg/L	0.00672	0.5094	mg/L	0.00672	1.32%
Cr 267.716*†	42847.9	0.5329	mg/L	0.00292	0.5329	mg/L	0.00292	0.55%
Cu 324.752*†	94758.7	0.5201	mg/L	0.00373	0.5201	mg/L	0.00373	0.72%
Fe 273.955*†	11579.6	0.7159	mg/L	0.00329	0.7159	mg/L	0.00329	0.46%
K 766.490*†	24254.9	11.17	mg/L	0.014	11.17	mg/L	0.014	0.12%
Mg 279.077*†	396875.2	31.61	mg/L	0.243	31.61	mg/L	0.243	0.77%
Mn 257.610*†	241072.3	0.5337	mg/L	0.00258	0.5337	mg/L	0.00258	0.48%
Mo 202.031*†	3646.5	0.5504	mg/L	0.00025	0.5504	mg/L	0.00025	0.05%
Na 589.592*†	478835.0	144.4	mg/L	0.99	144.4	mg/L	0.99	0.69%
Ni 231.604*†	8297.9	0.5065	mg/L	0.00530	0.5065	mg/L	0.00530	1.05%
P 213.617*†	798.6	0.6421	mg/L	0.00147	0.6421	mg/L	0.00147	0.23%
P 214.914†	506.7	0.6237	mg/L	0.00730	0.6237	mg/L	0.00730	1.17%
Pb 220.353*†	2736.3	0.5193	mg/L	0.00371	0.5193	mg/L	0.00371	0.71%
Sb 206.836†	704.4	0.5533	mg/L	0.00900	0.5533	mg/L	0.00900	1.63%
Sb 217.582*†	696.6	0.5405	mg/L	0.00289	0.5405	mg/L	0.00289	0.54%
Se 196.026*†	729.0	0.5184	mg/L	0.01690	0.5184	mg/L	0.01690	3.26%
Si 251.611*†	312885.8	11.51	mg/L	0.088	11.51	mg/L	0.088	0.77%
Sn 189.927*†	2184.7	0.5510	mg/L	0.00349	0.5510	mg/L	0.00349	0.63%
Sn 242.170†	665.4	0.5405	mg/L	0.00764	0.5405	mg/L	0.00764	1.41%
Sr 407.771*†	311513.8	1.322	mg/L	0.0120	1.322	mg/L	0.0120	0.90%
Ti 334.940†	315931.9	0.5307	mg/L	0.00223	0.5307	mg/L	0.00223	0.42%
Ti 336.121*†	224325.6	0.5276	mg/L	0.00226	0.5276	mg/L	0.00226	0.43%
Tl 190.801*†	632.5	0.4992	mg/L	0.00152	0.4992	mg/L	0.00152	0.30%
V 292.402*†	52442.7	0.5287	mg/L	0.00212	0.5287	mg/L	0.00212	0.40%
Zn 206.200*†	14081.3	0.5377	mg/L	0.00141	0.5377	mg/L	0.00141	0.26%
Zn 213.857*†	26392.8	0.5408	mg/L	0.00652	0.5408	mg/L	0.00652	1.21%

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Sequence No.: 7
Sample ID: 17-03-0583-1 msd
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 222
Date Collected: 3/10/2017 1:57:56 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 17-03-0583-1 msd

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	53569.5	90.53	%	1.008				1.11%
Tb 350	86233.2	93.40	%	1.706				1.83%
Ag 328.068*†	35481.1	0.2564	mg/L	0.00037	0.2564	mg/L	0.00037	0.14%
Al 308.215*†	10079.2	0.7900	mg/L	0.00310	0.7900	mg/L	0.00310	0.39%
As 188.979†	731.0	0.5356	mg/L	0.00020	0.5356	mg/L	0.00020	0.04%
As 193.696*†	526.0	0.5505	mg/L	0.01508	0.5505	mg/L	0.01508	2.74%
B 249.677*†	34188.8	1.017	mg/L	0.0016	1.017	mg/L	0.0016	0.16%
Ba 233.527*†	66573.2	0.6297	mg/L	0.00181	0.6297	mg/L	0.00181	0.29%
Be 313.042*†	1362061.2	0.5272	mg/L	0.01933	0.5272	mg/L	0.01933	3.67%
Ca 317.933*†	134807.3	107.0	mg/L	4.32	107.0	mg/L	4.32	4.04%
Cd 226.502*†	25972.1	0.5057	mg/L	0.00019	0.5057	mg/L	0.00019	0.04%
Cd 228.802†	13905.4	0.5073	mg/L	0.00153	0.5073	mg/L	0.00153	0.30%
Co 228.616*†	9463.2	0.4965	mg/L	0.00251	0.4965	mg/L	0.00251	0.50%
Cr 267.716*†	41768.8	0.5195	mg/L	0.00128	0.5195	mg/L	0.00128	0.25%
Cu 324.752*†	92236.5	0.5062	mg/L	0.00081	0.5062	mg/L	0.00081	0.16%
Fe 273.955*†	11821.4	0.7308	mg/L	0.00208	0.7308	mg/L	0.00208	0.28%
K 766.490*†	23572.8	10.85	mg/L	0.607	10.85	mg/L	0.607	5.59%
Mg 279.077*†	405500.3	32.29	mg/L	0.125	32.29	mg/L	0.125	0.39%
Mn 257.610*†	235827.9	0.5221	mg/L	0.00161	0.5221	mg/L	0.00161	0.31%
Mo 202.031*†	3514.3	0.5304	mg/L	0.01192	0.5304	mg/L	0.01192	2.25%
Na 589.592*†	479194.8	144.5	mg/L	5.35	144.5	mg/L	5.35	3.70%
Ni 231.604*†	8082.4	0.4933	mg/L	0.00280	0.4933	mg/L	0.00280	0.57%
P 213.617*†	740.3	0.5952	mg/L	0.01430	0.5952	mg/L	0.01430	2.40%
P 214.914†	483.5	0.5951	mg/L	0.03556	0.5951	mg/L	0.03556	5.98%
Pb 220.353*†	2587.8	0.4911	mg/L	0.01238	0.4911	mg/L	0.01238	2.52%
Sb 206.836†	674.8	0.5301	mg/L	0.00999	0.5301	mg/L	0.00999	1.89%
Sb 217.582*†	672.1	0.5215	mg/L	0.00999	0.5215	mg/L	0.00999	1.92%
Se 196.026*†	712.4	0.5066	mg/L	0.02270	0.5066	mg/L	0.02270	4.48%
Si 251.611*†	318121.6	11.70	mg/L	0.033	11.70	mg/L	0.033	0.28%
Sn 189.927*†	2093.6	0.5280	mg/L	0.01441	0.5280	mg/L	0.01441	2.73%
Sn 242.170†	651.0	0.5288	mg/L	0.01803	0.5288	mg/L	0.01803	3.41%
Sr 407.771*†	306116.5	1.300	mg/L	0.0490	1.300	mg/L	0.0490	3.77%
Ti 334.940†	307788.3	0.5170	mg/L	0.00051	0.5170	mg/L	0.00051	0.10%
Ti 336.121*†	218477.4	0.5139	mg/L	0.00045	0.5139	mg/L	0.00045	0.09%
Tl 190.801*†	623.9	0.4924	mg/L	0.01258	0.4924	mg/L	0.01258	2.55%
V 292.402*†	50496.5	0.5091	mg/L	0.00094	0.5091	mg/L	0.00094	0.18%
Zn 206.200*†	13276.9	0.5070	mg/L	0.01153	0.5070	mg/L	0.01153	2.27%
Zn 213.857*†	24918.6	0.5106	mg/L	0.00039	0.5106	mg/L	0.00039	0.08%

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Sequence No.: 8
Sample ID: 17-03-0583-1
Analyst: 771 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 223
Date Collected: 3/10/2017 1:59:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: 17-03-0583-1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	53112.6	89.75	%	1.586				1.77%
Tb 350	85805.6	92.94	%	1.303				1.40%
Ag 328.068*†	-98.1	-0.0007	mg/L	0.00003	-0.0007	mg/L	0.00003	4.12%
Al 308.215*†	3760.2	0.2947	mg/L	0.01449	0.2947	mg/L	0.01449	4.92%
As 188.979†	15.5	0.0113	mg/L	0.00459	0.0113	mg/L	0.00459	40.47%
As 193.696*†	17.5	0.0184	mg/L	0.00930	0.0184	mg/L	0.00930	50.68%
B 249.677*†	17121.5	0.5095	mg/L	0.00159	0.5095	mg/L	0.00159	0.31%
Ba 233.527*†	11615.2	0.1099	mg/L	0.00233	0.1099	mg/L	0.00233	2.12%
Be 313.042*†	-23.2	-0.0000	mg/L	0.00005	-0.0000	mg/L	0.00005	506.89%
Ca 317.933*†	146420.2	116.2	mg/L	2.94	116.2	mg/L	2.94	2.53%
Cd 226.502*†	69.9	0.0014	mg/L	0.00003	0.0014	mg/L	0.00003	1.93%
Cd 228.802†	-11.4	-0.0004	mg/L	0.00051	-0.0004	mg/L	0.00051	122.15%
Co 228.616*†	20.4	0.0011	mg/L	0.00002	0.0011	mg/L	0.00002	1.50%
Cr 267.716*†	430.2	0.0054	mg/L	0.00001	0.0054	mg/L	0.00001	0.17%
Cu 324.752*†	558.5	0.0031	mg/L	0.00169	0.0031	mg/L	0.00169	55.21%
Fe 273.955*†	5235.1	0.3237	mg/L	0.00426	0.3237	mg/L	0.00426	1.32%
K 766.490*†	13265.5	6.107	mg/L	0.2699	6.107	mg/L	0.2699	4.42%
Mg 279.077*†	419895.0	33.44	mg/L	0.168	33.44	mg/L	0.168	0.50%
Mn 257.610*†	11171.2	0.0247	mg/L	0.00004	0.0247	mg/L	0.00004	0.16%
Mo 202.031*†	128.0	0.0193	mg/L	0.00069	0.0193	mg/L	0.00069	3.58%
Na 589.592*†	496896.5	149.9	mg/L	2.34	149.9	mg/L	2.34	1.56%
Ni 231.604*†	63.2	0.0039	mg/L	0.00100	0.0039	mg/L	0.00100	25.88%
P 213.617*†	54.4	0.0437	mg/L	0.01990	0.0437	mg/L	0.01990	45.51%
P 214.914†	54.5	0.0670	mg/L	0.01844	0.0670	mg/L	0.01844	27.51%
Pb 220.353*†	-60.9	-0.0116	mg/L	0.00156	-0.0116	mg/L	0.00156	13.52%
Sb 206.836†	-5.3	-0.0041	mg/L	0.01056	-0.0041	mg/L	0.01056	254.89%
Sb 217.582*†	-15.2	-0.0118	mg/L	0.00870	-0.0118	mg/L	0.00870	73.87%
Se 196.026*†	-2.5	-0.0018	mg/L	0.00517	-0.0018	mg/L	0.00517	292.17%
Si 251.611*†	320313.3	11.78	mg/L	0.050	11.78	mg/L	0.050	0.42%
Sn 189.927*†	-23.9	-0.0060	mg/L	0.00077	-0.0060	mg/L	0.00077	12.74%
Sn 242.170†	10.7	0.0087	mg/L	0.00079	0.0087	mg/L	0.00079	9.03%
Sr 407.771*†	193256.1	0.8204	mg/L	0.01645	0.8204	mg/L	0.01645	2.00%
Ti 334.940†	9714.3	0.0163	mg/L	0.00063	0.0163	mg/L	0.00063	3.88%
Ti 336.121*†	7663.1	0.0180	mg/L	0.00103	0.0180	mg/L	0.00103	5.70%
Tl 190.801*†	0.5	0.0004	mg/L	0.00351	0.0004	mg/L	0.00351	845.20%
V 292.402*†	249.6	0.0025	mg/L	0.00164	0.0025	mg/L	0.00164	65.13%
Zn 206.200*†	152.5	0.0058	mg/L	0.00048	0.0058	mg/L	0.00048	8.20%
Zn 213.857*†	135.0	0.0027	mg/L	0.00020	0.0027	mg/L	0.00020	7.40%

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EPA 6010B ICP Metals (Aqueous)

Run Logs

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170310C1

M006-032-05 0.050 ml

INT STD M120716A PDS/PDSD 10 ml

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	3/10/2017	9:42:38 AM	771 icp 7300	1	
2	STD3-M111116A_935_ICP7300	3/10/2017	9:43:52 AM	771 icp 7300	2	
3	ICV-M072816C	3/10/2017	9:44:59 AM	771 icp 7300	10	
4	ICB-R12091601	3/10/2017	9:46:06 AM	771 icp 7300	1	4 * B 7RL
5	ICB-R12091601 4 *	3/10/2017	9:47:02 AM	771 icp 7300	1	
6	ICB-R12091601	3/10/2017	9:48:01 AM	771 icp 7300	1	
7	ICS_A - M110116B	3/10/2017	9:49:16 AM	771 icp 7300	8	
8	ICS_AB - M110116A	3/10/2017	9:50:39 AM	771 icp 7300	9	
9	CCV= STD3x0.5	3/10/2017	9:51:40 AM	771 icp 7300	3	
10	CCB-R12091601	3/10/2017	9:52:42 AM	771 icp 7300	1	
11	LLCV	3/10/2017	10:16:25 AM	771 icp 7300	101	Cd, Cu, K, Mg, Na, Pb, Sb, Sn, Tl, Zn out
12	LLCV	3/10/2017	10:20:16 AM	771 icp 7300	102	
13	17-03-0627-10x-4	3/10/2017	10:26:43 AM	771 icp 7300	301	
14	blank	3/10/2017	10:27:53 AM	771 icp 7300	6	
15	blank	3/10/2017	10:29:07 AM	771 icp 7300	7	
16	CCV= STD3x0.5	3/10/2017	10:30:21 AM	771 icp 7300	3	
17	CCB-R12091601	3/10/2017	10:31:24 AM	771 icp 7300	1	B, Cu, Pb, Zn 7RL
18	CCB-R12091601	3/10/2017	10:32:23 AM	771 icp 7300	1	
19	Cal blankR12091601_935	3/10/2017	11:09:00 AM	771 icp 7300	1	
20	STD3-M111116A_935_ICP7300	3/10/2017	11:10:21 AM	771 icp 7300	2	
21	ICV-M072816C	3/10/2017	11:11:31 AM	771 icp 7300	10	
22	ICB-R12091601	3/10/2017	11:12:41 AM	771 icp 7300	1	
23	ICB-R12091601 4 *	3/10/2017	11:13:40 AM	771 icp 7300	1	
24	ICB-R12091601	3/10/2017	11:14:41 AM	771 icp 7300	1	

Reviewed/Assign to Logbook Date: 3/10/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 25 Instrument ID: ICP7

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No.	File Name	Date	Time	Analyst Name	A/S Location	
89	CCV= STD3x0.5	3/10/2017	12:50:08 PM	771 icp 7300	3	
90	CCB-R12091601	3/10/2017	12:51:21 PM	771 icp 7300	1	
91	CCB-R12091601	3/10/2017	12:52:19 PM	771 icp 7300	1	
92	Cal blankR12091601_935	3/10/2017	12:57:24 PM	771 icp 7300	1	
93	STD3-M111116A_935_ICP7300	3/10/2017	12:58:46 PM	771 icp 7300	2	
94	ICV-M072816C	3/10/2017	12:59:55 PM	771 icp 7300	10	
95	ICB-R12091601	3/10/2017	1:01:05 PM	771 icp 7300	1	As, B > RL
96	ICB-R12091601	3/10/2017	1:02:24 PM	771 icp 7300	1	B > RL
97	ICB-R12091601	3/10/2017	1:03:22 PM	771 icp 7300	1	
98	LLCV	3/10/2017	1:06:21 PM	771 icp 7300	101	Tl out
99	LLCV	3/10/2017	1:07:41 PM	771 icp 7300	102	
100	CCV= STD3x0.5	3/10/2017	1:08:54 PM	771 icp 7300	3	
101	CCB-R12091601	3/10/2017	1:09:59 PM	771 icp 7300	1	
102	170309B03	3/10/2017	1:10:58 PM	771 icp 7300	103	
103	170309L03	3/10/2017	1:12:38 PM	771 icp 7300	104	
104	17-03-0631-5X-1	3/10/2017	1:13:57 PM	771 icp 7300	105	
105	17-03-0631-1	3/10/2017	1:14:58 PM	771 icp 7300	106	
106	17-03-0631-1 ms	3/10/2017	1:16:02 PM	771 icp 7300	107	
107	17-03-0631-1 msd	3/10/2017	1:17:06 PM	771 icp 7300	108	
108	17-03-0631-1 pds	3/10/2017	1:18:10 PM	771 icp 7300	109	
109	17-03-0631-2	3/10/2017	1:19:15 PM	771 icp 7300	110	
110	17-03-0631-3	3/10/2017	1:20:20 PM	771 icp 7300	111	
111	17-03-0631-4	3/10/2017	1:21:24 PM	771 icp 7300	112	
112	CCV= STD3x0.5	3/10/2017	1:22:29 PM	771 icp 7300	3	
113	CCB-R12091601	3/10/2017	1:23:34 PM	771 icp 7300	1	
114	17-03-0631-5	3/10/2017	1:24:48 PM	771 icp 7300	113	
115	17-03-0631-6	3/10/2017	1:25:52 PM	771 icp 7300	114	
116	17-03-0631-7	3/10/2017	1:26:57 PM	771 icp 7300	115	
117	17-03-0631-8	3/10/2017	1:28:02 PM	771 icp 7300	116	
118	CCV= STD3x0.5	3/10/2017	1:29:07 PM	771 icp 7300	3	
119	CCB-R12091601	3/10/2017	1:30:12 PM	771 icp 7300	1	B, Ca, Mg, P, As > RL
120	CCB2-R12091601	3/10/2017	1:40:23 PM	771 icp 7300	5	

Reviewed/Assign to Logbook Date: 3/13/17
Analysis: 200.7/6010 Chemist ID: 1012
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No.	File Name	Date	Time	Analyst Name	A/S Location	
121	CCB2-R12091601	3/10/2017	1:41:29 PM	771 icp 7300	5	
122	LLCV	3/10/2017	1:42:47 PM	771 icp 7300	101	
123	ICS_A - M110116B	3/10/2017	1:44:02 PM	771 icp 7300	8	
124	ICS_AB - M110116A	3/10/2017	1:45:05 PM	771 icp 7300	9	
125	CCV= STD3x0.5	3/10/2017	1:46:09 PM	771 icp 7300	3	
126	CCB-R12091601	3/10/2017	1:47:14 PM	771 icp 7300	1	B > RL
127	CCB-R12091601	3/10/2017	1:48:12 PM	771 icp 7300	1	B > RL
128	CCB2-R12091601	3/10/2017	1:49:27 PM	771 icp 7300	5	
129	CCB2-R12091601	3/10/2017	1:50:32 PM	771 icp 7300	5	
130	170309-ba-4	3/10/2017	1:51:52 PM	771 icp 7300	217	
131	170309-la-4	3/10/2017	1:53:07 PM	771 icp 7300	218	
132	17-03-0638-1 eb	3/10/2017	1:54:22 PM	771 icp 7300	219	
133	17-03-0618-1 eb	3/10/2017	1:55:36 PM	771 icp 7300	220	
134	17-03-0583-1 ms	3/10/2017	1:56:49 PM	771 icp 7300	221	
135	17-03-0583-1 msd	3/10/2017	1:57:56 PM	771 icp 7300	222	
136	17-03-0583-1	3/10/2017	1:59:03 PM	771 icp 7300	223	
137	17-03-0583-2	3/10/2017	2:00:09 PM	771 icp 7300	224	
138	17-03-0583-3	3/10/2017	2:01:15 PM	771 icp 7300	225	
139	17-03-0583-4	3/10/2017	2:02:21 PM	771 icp 7300	226	
140	CCV= STD3x0.5	3/10/2017	2:03:34 PM	771 icp 7300	3	
141	CCB-R12091601	3/10/2017	2:04:40 PM	771 icp 7300	1	
142	CCB-R12091601	3/10/2017	2:05:38 PM	771 icp 7300	1	
143	CCB2-R12091601	3/10/2017	2:06:55 PM	771 icp 7300	5	
144	17-03-0650-4	3/10/2017	2:08:09 PM	771 icp 7300	227	
145	17-03-0620-2	3/10/2017	2:09:18 PM	771 icp 7300	228	
146	17-03-0620-3	3/10/2017	2:10:31 PM	771 icp 7300	229	
147	17-03-0620-5	3/10/2017	2:11:43 PM	771 icp 7300	230	
148	17-03-0620-6	3/10/2017	2:12:52 PM	771 icp 7300	231	
149	17-03-0620-7	3/10/2017	2:14:04 PM	771 icp 7300	232	
150	17-03-0632-1	3/10/2017	2:15:13 PM	771 icp 7300	233	
151	17-03-0632-2	3/10/2017	2:16:19 PM	771 icp 7300	234	
152	CCV= STD3x0.5	3/10/2017	2:17:25 PM	771 icp 7300	3	

Reviewed/Assign to Logbook Date: 3/13/17
Analysis: 200.7/6010 Chemist ID: 1012
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EPA 6010B ICP Metals

(Aqueous)

Preparation Logs

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Metals Sample Preparation Logbook (Aqueous)

METHOD	MATRIX	EQUIPMENT ID #	REAGENT ID #	STANDARD ID #
☐ EPA 3005A ☐ EPA 200.7	Aqueous	Thermometer Hp-18 (CF+2.0 °C)	HNO_3 M06-033-19 3.0 mL	Spike 1 M022017A
☒ EPA 3010A ☐ EPA 200.8		Block Digester #2	HCl M06-038-08 2.5 mL	Spike 2 M020617C
☐ EPA 3020A ☐ 5% HNO_3		Pipetter / Dispenser P092/P030/P012	(Specify)	Spike 3

BATCH NUMBER	SUPPLY LOT #	ACID PRESERVATION AND FILTRATION	TURBIDITY ANALYSIS
MS/MSD 170309SA4	Digestion Tube 160613	☒ None ☐ Lab Filtered ☐ Lab Preserved	☐ Yes ☐ No ☒ N/A
(Specify)	Filter	Book # _____ Page # _____	Book # _____ Page # _____

DIGESTION														
	START			END							SAMPLE		SPIKE STANDARD		
DATE	TIME	TEMP W/O CF (°C)	PREP TECH ID #	TIME	TEMP W/O CF (°C)	PREP TECH ID #	INITIAL pH	ECI ID #	ANALYTE(S)		INITIAL (mL)	FINAL (mL)	1 (µL)	2 (µL)	3 (µL)
03/09/17	10:00	95	1058	12:30	96	1058	<2	MS 17-03-0583-1G	Metals		50	50	250	250	
							<2	MSD "							
							>2	LCS 170309LA4							
							>2	LCSD / MB 170309BA4							
							<2	17-03-0583-1G							
							<2	" 2G							
							<2	" 3G							
							<2	" 4G							
							<2	17-03-0650-4H							
							<2	17-03-0638-1D							
							<2	17-03-0618-1A							
							<2	17-03-0620-3L							
							<2	" 5L							
							<2	" 6J							
							<2	" 7L							
							<2	17-03-0632-1A							
							<2	" 2A							
3/10/17	8:05	96	1058	10:35	95	1058	<2	17-03-0761-1D"							
								~~17-03-0033~~ 1058 03/09/17							
							<2	17-03-0620-2L							

COMMENTS:

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EPA 7470A Mercury

(Aqueous)

RAW DATA

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EPA 7470A Mercury

(Aqueous)

Initial Calibration
ICV/ICB
CCV/CCB

Sample Data

Quality Control
Method Blank
LCS/LCSD
MS/MSD

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Calscience Environmental Laboratories, Inc.

EPA Method 7470A
Initial Calibration Verification

Work Order No.: 17-03-0638

Instrument ID: HG 8 (H)

Concentration Unit: µg/L Test Method: EPA 7470A

	Initial Calibration Verification			
		ICV-1		Control
Analyte	True	Observed	%D	Limit
Mercury	5.000000	4.971729	1	0 - 10

03/15/2017 12:56

ICV-1 File: ICV M030617B 03/14/2017 12:07:55 PM

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7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL:(714) 895-5494 • FAX:(714) 894-7501

Calscience Environmental Laboratories, Inc.

EPA Method 7470A
Continuing Calibration Verification

Work Order No.: 17-03-0638
Instrument ID: HG 8 (H)
Concentration Unit: µg/L
Test Method: EPA 7470A

	Continuing Calibration Verification									
		CCV-1		CCV-2		CCV-3		CCV-4		Control
Analyte	True	Observed	%D	Observed	%D	Observed	%D	Observed	%D	Limit
Mercury	2.000000	1.899124	5	1.990674	0	2.024582	1	2.024624	1	0 – 20

03/15/2017 12:57

CCV-1 File: CCV 0.2x10ppb 03/14/2017 03:12:11 PM
CCV-2 File: CCV 0.2x10ppb 03/14/2017 03:39:23 PM
CCV-3 File: CCV 0.2x10ppb 03/14/2017 04:33:56 PM
CCV-4 File: CCV 0.2x10ppb 03/14/2017 04:58:57 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 7470A
Initial and Continuing Calibration Blanks

Work Order No.: 17-03-0638
Instrument ID: HG 8 (H)
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	-0.000132	-0.006984	-0.004998	-0.003444	-0.004017	0.250000

03/15/2017 12:58

ICB-1 File: ICB 03/14/2017 12:10:09 PM
CCB-1 File: CCB 03/14/2017 03:14:27 PM
CCB-2 File: CCB 03/14/2017 03:41:39 PM
CCB-3 File: CCB 03/14/2017 04:36:12 PM
CCB-4 File: CCB 03/14/2017 05:01:12 PM
Note: Preparation factor (PF) = 2 L/L

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RAW DATA SHEET
FOR METHOD: EPA 7470A

WORK ORDER:	**17-03-0638**	ANALYZED BY:	868
INSTRUMENT:	Mercury 08	D/T ANALYZED:	2017-03-14 16:56
EXTRACTION :	EPA 7470A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-14 00:00	D/T REVIEWED:	2017-03-15 12:48

DATA FILE: W:\MERCURY_DATA\FINAL\170314H1\17-03-0638-1.icp

 # 1 **CLIENT SAMPLE NUMBER: EB3-2017-03-08**

LCS/MB BATCH:	170314LA3	SAMPLE VOLUME / WEIGHT:	DEFAULT: 50.00 ml / ACTUAL: 50.00 ml
MS/MSD BATCH:	170314SA3	FINAL VOLUME / WEIGHT:	DEFAULT: 100.00 ml
UNITS:	mg/L	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	-0.00000815	1.00	ND	0.000500	

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 7470A

MB SAMPLE ID:	**099-04-008-8148**	ANALYZED BY:	868
MB BATCH ID:	170314LA3	D/T ANALYZED:	2017-03-14 15:16
INSTRUMENT:	Mercury 08	REVIEWED BY:	771
EXTRACTION:	EPA 7470A Total	D/T REVIEWED:	2017-03-14 18:09
D/T EXTRACTED:	2017-03-14 00:00	MATRIX:	Water

DATA FILE: W:\MERCURY_DATA\FINAL\170314H1\170314-B-A3.icp

CLIENT WORK ORDER: 17-03-0638

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB3-2017-03-08	2017-03-14 16:56	W:\MERCURY_DATA\FINAL\170314H1\17-03-0638-1.icp

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RAW DATA SHEET
FOR METHOD: EPA 7470A

WORK ORDER:	**099-04-008**	ANALYZED BY:	868
INSTRUMENT:	Mercury 08	D/T ANALYZED:	2017-03-14 15:16
EXTRACTION :	EPA 7470A Total	REVIEWED BY:	771
D/T EXTRACTED:	2017-03-14 00:00	D/T REVIEWED:	2017-03-14 18:09

DATA FILE: W:\MERCURY_DATA\FINAL\170314H1\170314-B-A3.icp

 # MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH:	170314LA3	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:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	-0.0000138	1.00	ND	0.000500	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 7470A

LCS SAMPLE ID:	**099-04-008- 8148**	EXTRACTION :	EPA 7470A Total	ANALYZED BY:	868
LCS/MB BATCH ID:	170314LA3	D/T EXTRACTED:	2017-03-14 00:00	D/T ANALYZED:	2017-03-14 15:18
INSTRUMENT:	Mercury 08			REVIEWED BY:	771
				D/T REVIEWED:	2017-03-14 18:09

DATA FILE: W:\MERCURY_DATA\FINAL\170314H1\170314-L-A3.icp

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Mercury	0.01000	0.009989	100	80-120	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 7470A

SPIKED SAMPLE ID: **17-03-0823-2**
MS/MSD BATCH: 170314SA3
INSTRUMENTS:
SAMPLE: Mercury 08
MS: Mercury 08
MSD: Mercury 08

EXTRACTION: EPA 7470A Total
D/T EXTRACTED:
SAMPLE: 2017-03-14 00:00
MS: 2017-03-14 00:00
MSD: 2017-03-14 00:00

ANALYZED BY: 868
D/T ANALYZED:
SAMPLE: 2017-03-14 15:21
MS: 2017-03-14 15:23
MSD: 2017-03-14 15:25
REVIEWED BY: 771
D/T REVIEWED: 2017-03-14 18:10

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**	**0.008968**	**90**	**0.007263**	**73**	**55-133**	**21**	**0-20**	**FAIL**	**4**

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-0823-2 MS.icp	W:\MERCURY_DATA\FINAL\170314H1\
MSD	17-03-0823-2 MSD.icp	W:\MERCURY_DATA\FINAL\170314H1\

==========

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\
170314H1.sifx
Batch ID:
Results Data Set: 170314H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

==========

Sequence No.: 1 Autosampler Location: 1
Sample ID: Calib blank_868 Date Collected: 3/14/2017 11:48:32 AM
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: Calib blank_868 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	-0.0009	0.0001	11:49:35 AM	Yes
2		[0.00]	0.0001	-0.0003	0.0001	11:50:20 AM	Yes
Mean:		[0.00]	0.0001				
SD:		0.0000	0.0000				
%RSD:		0.00%	22.01				

Auto-zero performed.

==========

Sequence No.: 2 Autosampler Location: 2
Sample ID: 0.025ppb 0.005x5ppb Date Collected: 3/14/2017 11:50:46 AM
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: 0.025ppb 0.005x5ppb Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0003	0.0004	0.0004	11:51:50 AM	Yes
2		[0.025]	0.0003	0.0009	0.0004	11:52:34 AM	Yes
Mean:		[0.025]	0.0003				
SD:		0.00000	0.0000				
%RSD:		0.00%	3.40				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.01150 Intercept: 0.00000

==========

Sequence No.: 3 Autosampler Location: 3
Sample ID: 0.10ppb M030617AX0.0001 Date Collected: 3/14/2017 11:53:01 AM
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: 0.10ppb M030617AX0.0001 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0011	0.0030	0.0012	11:54:05 AM	Yes
2		[0.100]	0.0010	0.0023	0.0011	11:54:50 AM	Yes
Mean:		[0.100]	0.0011				
SD:		0.00000	0.0001				
%RSD:		0.00%	6.37				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.999767 Slope: 0.01057 Intercept: 0.00001

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Sequence No.: 4 Autosampler Location: 4
Sample ID: 1.00ppb M030617AX0.001 Date Collected: 3/14/2017 11:55:17 AM
Analyst: SGS 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 mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0109	0.0311	0.0110	11:56:22 AM	Yes
2		[1.000]	0.0101	0.0262	0.0102	11:57:06 AM	Yes
Mean:		[1.000]	0.0105				
SD:		0.00000	0.0006				
%RSD:		0.00%	5.52				

Standard number 3 applied. [1.000]
Correlation Coef.: 0.999998 Slope: 0.01048 Intercept: 0.00001

Sequence No.: 5 Autosampler Location: 5
Sample ID: 2.00ppb M030617AX0.002 Date Collected: 3/14/2017 11:57:33 AM
Analyst: SGS 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 mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0208	0.0597	0.0209	11:58:38 AM	Yes
2		[2.000]	0.0194	0.0506	0.0194	11:59:23 AM	Yes
Mean:		[2.000]	0.0201				
SD:		0.00000	0.0010				
%RSD:		0.00%	5.15				

Standard number 4 applied. [2.000]
Correlation Coef.: 0.999780 Slope: 0.01009 Intercept: 0.00008

Sequence No.: 6 Autosampler Location: 6
Sample ID: 5.00ppb M030617AX0.005 Date Collected: 3/14/2017 11:59:50 AM
Analyst: SGS 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 mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0524	0.1543	0.0525	12:00:54 PM	Yes
2		[5.000]	0.0480	0.1269	0.0481	12:01:39 PM	Yes
Mean:		[5.000]	0.0502				
SD:		0.00000	0.0031				
%RSD:		0.00%	6.19				

Standard number 5 applied. [5.000]
Correlation Coef.: 0.999962 Slope: 0.01004 Intercept: 0.00011

Sequence No.: 7 Autosampler Location: 7
Sample ID: 10.0ppb M030617AX0.01 Date Collected: 3/14/2017 12:02:04 PM
Analyst: SGS 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 mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

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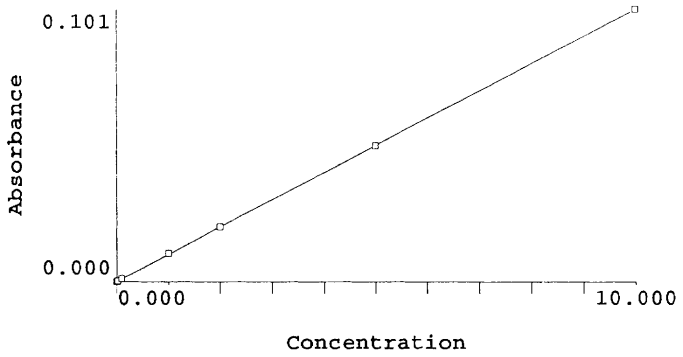
1	[10.00]	0.1054	0.3058	0.1054	12:03:08 PM	Yes
2	[10.00]	0.0965	0.2517	0.0966	12:03:53 PM	Yes
Mean:	[10.00]	0.1009				
SD:	0.0000	0.0063				
%RSD:	0.00%	6.21				

Standard number 6 applied. [10.00]
Correlation Coef.: 0.999989 Slope: 0.01008 Intercept: 0.00007



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	-0.006742	0.00	22.01
0.025ppb 0.005x5ppb	0.0003	0.025	0.021778	0.00	3.40
0.10ppb M030617AX0.0001	0.0011	0.100	0.098840	0.00	6.37
1.00ppb M030617AX0.001	0.0105	1.000	1.034327	0.00	5.52
2.00ppb M030617AX0.002	0.0201	2.000	1.988118	0.00	5.15
5.00ppb M030617AX0.005	0.0502	5.000	4.979432	0.00	6.19
10.0ppb M030617AX0.01	0.1009	10.00	10.009247	0.01	6.21

Correlation Coef.: 0.999989 Slope: 0.01008 Intercept: 0.00007

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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\170314H1.sifx
Batch ID:
Results Data Set: 170314H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1
Autosampler Location: 8
Sample ID: ICV M030617B
Date Collected: 3/14/2017 12:06:07 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: ICV M030617B
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00516	5.16	0.0521	0.1528	0.0521	12:07:10 PM	Yes
2	0.00478	4.78	0.0483	0.1267	0.0484	12:07:55 PM	Yes
Mean:	0.00497	4.97	0.0502				
SD:	0.000266	0.266	0.0027				
%RSD:	5.34%	5.34%	5.34				

QC value within limits for Hg 253.7 Recovery = 99.43%
All analyte(s) passed QC.

Sequence No.: 2
Autosampler Location: 1
Sample ID: ICB
Date Collected: 3/14/2017 12:08:21 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: ICB
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000002	0.00183	0.0001	0.0012	0.0002	12:09:25 PM	Yes
2	-0.000002	-0.00210	0.0000	0.0005	0.0001	12:10:09 PM	Yes
Mean:	-0.000000	-0.000132	0.0001				
SD:	0.0000028	0.0027778	0.0000				
%RSD:	>999.9%	>999.9%	42.02				

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: 3/14/2017 12:10:35 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: CRQL 0.25
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0505	0.303	0.0031	0.0099	0.0032	12:11:39 PM	Yes
2	0.0464	0.279	0.0029	0.0082	0.0029	12:12:24 PM	Yes
Mean:	0.0485	0.291	0.0030				
SD:	0.00290	0.0174	0.0002				
%RSD:	5.98%	5.98%	5.85				

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Dilution: 2X
Wash Time (before sample): 0
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0885-F-2 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000011	-0.00544	0.0000	-0.0004	0.0001	3:04:40 PM	Yes
2	-0.000018	-0.00893	-0.0000	-0.0000	0.0001	3:05:25 PM	Yes
Mean:	-0.000014	-0.00718	-0.0000				
SD:	0.0000049	0.002465	0.0000				
%RSD:	34.31%	34.31%	557.24				

==========

Sequence No.: 9
Sample ID: 17-03-0885-F-3
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 42
Date Collected: 3/14/2017 3:05:51 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0885-F-3 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000014	-0.00722	-0.0000	-0.0009	0.0001	3:06:55 PM	Yes
2	-0.000006	-0.00300	0.0000	-0.0008	0.0001	3:07:40 PM	Yes
Mean:	-0.000010	-0.00511	0.0000				
SD:	0.0000060	0.002985	0.0000				
%RSD:	58.37%	58.37%	183.36				

==========

Sequence No.: 10
Sample ID: 17-03-0885-F-4
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0
Autosampler Location: 43
Date Collected: 3/14/2017 3:08:06 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0885-F-4 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000007	-0.00354	0.0000	-0.0014	0.0001	3:09:10 PM	Yes
2	-0.000004	-0.00207	0.0000	-0.0010	0.0001	3:09:55 PM	Yes
Mean:	-0.000006	-0.00281	0.0000				
SD:	0.0000021	0.001041	0.0000				
%RSD:	37.09%	37.09%	26.43				

==========

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: 3/14/2017 3:10:21 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 mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00198	1.98	0.0200	0.0581	0.0201	3:11:26 PM	Yes
2	0.00182	1.82	0.0184	0.0496	0.0185	3:12:11 PM	Yes
Mean:	0.00190	1.90	0.0192				
SD:	0.000110	0.110	0.0011				
%RSD:	5.78%	5.78%	5.76				

QC value within limits for Hg 253.7 Recovery = 94.96%
All analyte(s) passed QC.

==========

Sequence No.: 12
Sample ID: CCB
Autosampler Location: 1
Date Collected: 3/14/2017 3:12:38 PM

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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 mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000008	-0.00759	-0.0000	-0.0011	0.0001	3:13:42 PM	Yes
2	-0.000006	-0.00638	0.0000	-0.0008	0.0001	3:14:27 PM	Yes
Mean:	-0.000007	-0.00698	-0.0000				
SD:	0.0000009	0.000851	0.0000				
%RSD:	12.18%	12.18%	350.96				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 13 Autosampler Location: 44
Sample ID: 170314-B-A23 Date Collected: 3/14/2017 3:14:52 PM
Analyst: 868 HG-8 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: 170314-B-A23 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000027	-0.0137	-0.0001	-0.0013	0.0000	3:15:57 PM	Yes
2	-0.000028	-0.0139	-0.0001	-0.0017	0.0000	3:16:42 PM	Yes
Mean:	-0.000028	-0.0138	-0.0001				
SD:	0.0000003	0.00013	0.0000				
%RSD:	0.94%	0.94%	1.84				

==========

Sequence No.: 14 Autosampler Location: 45
Sample ID: 170314-L-A23 Date Collected: 3/14/2017 3:17:08 PM
Analyst: 868 HG-8 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: 170314-L-A23 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0104	5.21	0.0525	0.1527	0.0526	3:18:13 PM	Yes
2	0.00956	4.78	0.0483	0.1299	0.0483	3:18:58 PM	Yes
Mean:	0.00999	4.99	0.0504				
SD:	0.000602	0.301	0.0030				
%RSD:	6.03%	6.03%	6.02				

==========

Sequence No.: 15 Autosampler Location: 46
Sample ID: 17-03-0823-2 Date Collected: 3/14/2017 3:19:24 PM
Analyst: 868 HG-8 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: 17-03-0823-2 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000021	-0.0104	-0.0000	-0.0016	0.0000	3:20:29 PM	Yes
2	-0.000021	-0.0103	-0.0000	-0.0013	0.0000	3:21:14 PM	Yes
Mean:	-0.000021	-0.0104	-0.0000				
SD:	0.0000002	0.00009	0.0000				
%RSD:	0.84%	0.84%	2.39				

==========

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Sequence No.: 16
Sample ID: 17-03-0823-2 MS
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 47
Date Collected: 3/14/2017 3:21:40 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0823-2 MS
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00933	4.67	0.0471	0.1379	0.0472	3:22:45 PM	Yes
2	0.00860	4.30	0.0434	0.1177	0.0435	3:23:30 PM	Yes
Mean:	0.00897	4.48	0.0453				
SD:	0.000518	0.259	0.0026				
%RSD:	5.77%	5.77%	5.76				

Sequence No.: 17
Sample ID: 17-03-0823-2 MSD
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 48
Date Collected: 3/14/2017 3:23:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0823-2 MSD
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00759	3.79	0.0383	0.1121	0.0384	3:25:02 PM	Yes
2	0.00694	3.47	0.0350	0.0945	0.0351	3:25:47 PM	Yes
Mean:	0.00726	3.63	0.0367				
SD:	0.000457	0.229	0.0023				
%RSD:	6.30%	6.30%	6.29				

Sequence No.: 18
Sample ID: 17-03-0823-1
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 49
Date Collected: 3/14/2017 3:26:14 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0823-1
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000017	-0.00837	-0.0000	-0.0018	0.0001	3:27:19 PM	Yes
2	-0.000013	-0.00629	0.0000	-0.0020	0.0001	3:28:03 PM	Yes
Mean:	-0.000015	-0.00733	-0.0000				
SD:	0.0000029	0.001468	0.0000				
%RSD:	20.03%	20.03%	250.13				

Sequence No.: 19
Sample ID: 17-03-0563-2
Analyst: 868 HG-8
Initial Sample Wt:
Dilution: 2X
Wash Time (before sample): 0

Autosampler Location: 50
Date Collected: 3/14/2017 3:28:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Replicate Data: 17-03-0563-2
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000007	-0.00340	0.0000	-0.0010	0.0001	3:29:35 PM	Yes
2	-0.000004	-0.00190	0.0000	-0.0008	0.0001	3:30:20 PM	Yes
Mean:	-0.000005	-0.00265	0.0000				
SD:	0.0000021	0.001065	0.0000				
%RSD:	40.18%	40.18%	26.02				

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Sequence No.: 20 Autosampler Location: 51
Sample ID: 17-03-0563-3 Date Collected: 3/14/2017 3:30:46 PM
Analyst: 868 HG-8 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: 17-03-0563-3 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000015	-0.00771	-0.0000	-0.0014	0.0001	3:31:51 PM	Yes
2	-0.000015	-0.00758	-0.0000	-0.0014	0.0001	3:32:36 PM	Yes
Mean:	-0.000015	-0.00764	-0.0000				
SD:	0.0000002	0.000091	0.0000				
%RSD:	1.19%	1.19%	10.05				

Sequence No.: 21 Autosampler Location: 52
Sample ID: 17-03-0563-F-2 Date Collected: 3/14/2017 3:33:02 PM
Analyst: 868 HG-8 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: 17-03-0563-F-2 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000090	0.0448	0.0005	0.0034	0.0006	3:34:07 PM	Yes
2	-0.000019	-0.00965	-0.0000	-0.0019	0.0000	3:34:52 PM	Yes
Mean:	0.000035	0.0176	0.0002				
SD:	0.0000771	0.03853	0.0004				
%RSD:	219.02%	219.02%	158.34				

Sequence No.: 22 Autosampler Location: 53
Sample ID: 17-03-0563-F-3 Date Collected: 3/14/2017 3:35:18 PM
Analyst: 868 HG-8 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: 17-03-0563-F-3 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000016	-0.00822	-0.0000	-0.0016	0.0001	3:36:23 PM	Yes
2	-0.000014	-0.00705	-0.0000	-0.0012	0.0001	3:37:07 PM	Yes
Mean:	-0.000015	-0.00764	-0.0000				
SD:	0.0000017	0.000829	0.0000				
%RSD:	10.85%	10.85%	92.42				

Sequence No.: 23 Autosampler Location: 5
Sample ID: CCV 0.2x10ppb Date Collected: 3/14/2017 3:37:33 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 mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00208	2.08	0.0210	0.0612	0.0211	3:38:39 PM	Yes
2	0.00190	1.90	0.0192	0.0501	0.0193	3:39:23 PM	Yes
Mean:	0.00199	1.99	0.0201				
SD:	0.000127	0.127	0.0013				
%RSD:	6.36%	6.36%	6.33				

QC value within limits for Hg 253.7 Recovery = 99.53%
All analyte(s) passed QC.

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Sequence No.: 24 Autosampler Location: 1
Sample ID: CCB Date Collected: 3/14/2017 3:39:51 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 mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000003	-0.00261	0.0000	0.0007	0.0001	3:40:55 PM	Yes
2	-0.000007	-0.00739	-0.0000	0.0000	0.0001	3:41:39 PM	Yes
Mean:	-0.000005	-0.00500	0.0000				
SD:	0.0000034	0.003380	0.0000				
%RSD:	67.61%	67.61%	193.82				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 25 Autosampler Location: 54
Sample ID: 17-03-0885-1 Date Collected: 3/14/2017 3:42:05 PM
Analyst: 868 HG-8 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: 17-03-0885-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000005	0.00249	0.0001	-0.0004	0.0002	3:43:10 PM	Yes
2	0.000044	0.0221	0.0003	0.0010	0.0004	3:43:54 PM	Yes
Mean:	0.000025	0.0123	0.0002				
SD:	0.0000277	0.01387	0.0001				
%RSD:	112.80%	112.80%	72.86				

Sequence No.: 26 Autosampler Location: 55
Sample ID: 17-03-0885-2 Date Collected: 3/14/2017 3:44:21 PM
Analyst: 868 HG-8 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: 17-03-0885-2 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000010	-0.00510	0.0000	0.0009	0.0001	3:45:25 PM	Yes
2	-0.000015	-0.00726	-0.0000	0.0001	0.0001	3:46:10 PM	Yes
Mean:	-0.000012	-0.00618	0.0000				
SD:	0.0000031	0.001530	0.0000				
%RSD:	24.75%	24.75%	272.97				

Sequence No.: 27 Autosampler Location: 56
Sample ID: 17-03-0885-3 Date Collected: 3/14/2017 3:46:36 PM
Analyst: 868 HG-8 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: 17-03-0885-3 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000007	0.00325	0.0001	0.0009	0.0002	3:47:41 PM	Yes
2	-0.000002	-0.000773	0.0001	0.0002	0.0001	3:48:26 PM	Yes
Mean:	0.000002	0.00124	0.0001				

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#	mg/kg	ug/L	Signal	Area	Height		Stored
1	0.0462	0.291	0.0030	0.0085	0.0031	4:24:03 PM	Yes
2	0.0430	0.271	0.0028	0.0084	0.0029	4:24:49 PM	Yes
Mean:	0.0446	0.281	0.0029				
SD:	0.00228	0.0144	0.0001				
%RSD:	5.11%	5.11%	4.99				

Sequence No.: 44
Sample ID: 17-03-0642-26
Analyst: 868 HG-8
Initial Sample Wt: 0.63 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 71
Date Collected: 3/14/2017 4:25:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0642-26 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0939	0.592	0.0060	0.0184	0.0061	4:26:21 PM	Yes
2	0.0840	0.529	0.0054	0.0157	0.0055	4:27:05 PM	Yes
Mean:	0.0890	0.560	0.0057				
SD:	0.00703	0.0443	0.0004				
%RSD:	7.91%	7.91%	7.81				

Sequence No.: 45
Sample ID: 17-03-0642-27
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 72
Date Collected: 3/14/2017 4:27:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0642-27 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0707	0.431	0.0044	0.0129	0.0045	4:28:38 PM	Yes
2	0.0632	0.385	0.0040	0.0120	0.0040	4:29:22 PM	Yes
Mean:	0.0669	0.408	0.0042				
SD:	0.00533	0.0325	0.0003				
%RSD:	7.96%	7.96%	7.83				

Sequence No.: 46
Sample ID: 17-03-0642-28
Analyst: 868 HG-8
Initial Sample Wt: 0.63 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 73
Date Collected: 3/14/2017 4:29:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0642-28 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0562	0.354	0.0036	0.0105	0.0037	4:30:54 PM	Yes
2	0.0523	0.330	0.0034	0.0104	0.0035	4:31:39 PM	Yes
Mean:	0.0543	0.342	0.0035				
SD:	0.00276	0.0174	0.0002				
%RSD:	5.09%	5.09%	4.99				

Sequence No.: 47
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 3/14/2017 4:32:06 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

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#	mg/L	ug/L	Signal	Area	Height		Stored
1	0.00211	2.11	0.0213	0.0628	0.0214	4:33:11 PM	Yes
2	0.00194	1.94	0.0196	0.0539	0.0197	4:33:56 PM	Yes
Mean:	0.00202	2.02	0.0205				
SD:	0.000123	0.123	0.0012				
%RSD:	6.05%	6.05%	6.03				

QC value within limits for Hg 253.7 Recovery = 101.23%
All analyte(s) passed QC.

Sequence No.: 48 Autosampler Location: 1
Sample ID: CCB Date Collected: 3/14/2017 4:34:24 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 mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000004	-0.00436	0.0000	0.0000	0.0001	4:35:27 PM	Yes
2	-0.000003	-0.00253	0.0000	0.0010	0.0001	4:36:12 PM	Yes
Mean:	-0.000003	-0.00344	0.0000				
SD:	0.0000013	0.001296	0.0000				
%RSD:	37.63%	37.63%	39.29				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 49 Autosampler Location: 74
Sample ID: 17-03-0642-29 Date Collected: 3/14/2017 4:36:38 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: 17-03-0642-29 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0184	0.114	0.0012	0.0035	0.0013	4:37:42 PM	Yes
2	0.0169	0.105	0.0011	0.0036	0.0012	4:38:27 PM	Yes
Mean:	0.0176	0.109	0.0012				
SD:	0.00110	0.0068	0.0001				
%RSD:	6.22%	6.22%	5.86				

Sequence No.: 50 3 Autosampler Location: 75
Sample ID: 17-03-0662-1 Date Collected: 3/14/2017 4:38:54 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: 17-03-0662-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.665	4.06	0.0410	0.1201	0.0410	4:39:59 PM	Yes
2	0.599	3.65	0.0369	0.1017	0.0370	4:40:44 PM	Yes
Mean:	0.632	3.86	0.0389				
SD:	0.0466	0.285	0.0029				
%RSD:	7.38%	7.38%	7.37				

Sequence No.: 51 3 Autosampler Location: 76
Sample ID: 17-03-0662-2 Date Collected: 3/14/2017 4:41:11 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

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Replicate Data: 17-06-0662-2 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.656	3.94	0.0398	0.1165	0.0398	4:42:16 PM	Yes
2	0.604	3.62	0.0366	0.1013	0.0366	4:43:01 PM	Yes
Mean:	0.630	3.78	0.0382				
SD:	0.0373	0.224	0.0023				
%RSD:	5.93%	5.93%	5.92				

Sequence No.: 52 Autosampler Location: 77
Sample ID: 17-03-0679-1 Date Collected: 3/14/2017 4:43:28 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: 17-03-0679-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0423	0.254	0.0026	0.0064	0.0027	4:44:32 PM	Yes
2	0.0394	0.236	0.0024	0.0073	0.0025	4:45:18 PM	Yes
Mean:	0.0409	0.245	0.0025				
SD:	0.00206	0.0124	0.0001				
%RSD:	5.05%	5.05%	4.92				

Sequence No.: 53 Autosampler Location: 78
Sample ID: 17-03-0680-1 Date Collected: 3/14/2017 4:45:44 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: 17-03-0680-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.570	3.37	0.0340	0.0995	0.0341	4:46:49 PM	Yes
2	0.523	3.08	0.0312	0.0862	0.0312	4:47:34 PM	Yes
Mean:	0.547	3.22	0.0326				
SD:	0.0336	0.198	0.0020				
%RSD:	6.15%	6.15%	6.14				

Sequence No.: 54 Autosampler Location: 79
Sample ID: 17-03-0694-1 Date Collected: 3/14/2017 4:48:00 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: 17-03-0694-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0469	0.272	0.0028	0.0076	0.0029	4:49:05 PM	Yes
2	0.0440	0.255	0.0026	0.0081	0.0027	4:49:50 PM	Yes
Mean:	0.0454	0.264	0.0027				
SD:	0.00201	0.0117	0.0001				
%RSD:	4.43%	4.43%	4.32				

Sequence No.: 55 Autosampler Location: 80
Sample ID: 17-03-0708-1 Date Collected: 3/14/2017 4:50:17 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

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Replicate Data: 17-03-0708-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00427	0.0261	0.0003	0.0009	0.0004	4:51:22 PM	Yes
2	0.00357	0.0218	0.0003	0.0015	0.0004	4:52:07 PM	Yes
Mean:	0.00392	0.0239	0.0003				
SD:	0.000493	0.00301	0.0000				
%RSD:	12.58%	12.58%	9.81				

Sequence No.: 56 Autosampler Location: 81
Sample ID: 17-02-2225-1 Date Collected: 3/14/2017 4:52:33 PM
Analyst: 868 HG-8 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: 17-02-2225-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000013	-0.00666	0.0000	-0.0002	0.0001	4:53:39 PM	Yes
2	-0.000007	-0.00368	0.0000	0.0009	0.0001	4:54:24 PM	Yes
Mean:	-0.000010	-0.00517	0.0000				
SD:	0.0000042	0.002104	0.0000				
%RSD:	40.68%	40.68%	133.92				

Sequence No.: 57 Autosampler Location: 82
Sample ID: 17-03-0638-1 Date Collected: 3/14/2017 4:54:51 PM
Analyst: 868 HG-8 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: 17-03-0638-1 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000022	-0.0112	-0.0000	-0.0004	0.0000	4:55:55 PM	Yes
2	-0.000010	-0.00509	0.0000	0.0009	0.0001	4:56:40 PM	Yes
Mean:	-0.000016	-0.00815	-0.0000				
SD:	0.0000086	0.004315	0.0000				
%RSD:	52.97%	52.97%	307.48				

Sequence No.: 58 Autosampler Location: 5
Sample ID: CCV 0.2x10ppb Date Collected: 3/14/2017 4:57:07 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 mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00210	2.10	0.0212	0.0614	0.0213	4:58:12 PM	Yes
2	0.00195	1.95	0.0197	0.0534	0.0198	4:58:57 PM	Yes
Mean:	0.00202	2.02	0.0205				
SD:	0.000103	0.103	0.0010				
%RSD:	5.11%	5.11%	5.09				

QC value within limits for Hg 253.7 Recovery = 101.23%
All analyte(s) passed QC.

Sequence No.: 59 Autosampler Location: 1
Sample ID: CCB Date Collected: 3/14/2017 4:59:24 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:

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Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: CCB Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000004	-0.00388	0.0000	-0.0004	0.0001	5:00:28 PM	Yes
2	-0.000004	-0.00415	0.0000	0.0006	0.0001	5:01:12 PM	Yes
Mean:	-0.000004	-0.00402	0.0000				
SD:	0.0000002	0.000195	0.0000				
%RSD:	4.85%	4.85%	7.14				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

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EPA 7470A Mercury (Aqueous)

Run Logs

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170314H1

Carrier solution R07141602 **Reducing Agent R07141603**

Sample ID	Analyst Name	Initial 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	3/14/2017	11:50:20 AM		ug/L		mg/L	
0.025ppb 0.005x5ppb	868 HG-8		Hg 253.7	3/14/2017	11:52:34 AM		ug/L		mg/L	
0.10ppb M030617AX0.0001	868 HG-8		Hg 253.7	3/14/2017	11:54:50 AM		ug/L		mg/L	
1.00ppb M030617AX0.001	868 HG-8		Hg 253.7	3/14/2017	11:57:06 AM		ug/L		mg/L	
2.00ppb M030617AX0.002	868 HG-8		Hg 253.7	3/14/2017	11:59:23 AM		ug/L		mg/L	
5.00ppb M030617AX0.005	868 HG-8		Hg 253.7	3/14/2017	12:01:39 PM		ug/L		mg/L	
10.0ppb M030617AX0.01	868 HG-8		Hg 253.7	3/14/2017	12:03:53 PM		ug/L		mg/L	
ICV M030617B	868 HG-8		Hg 253.7	3/14/2017	12:07:55 PM	4.971729	ug/L	0.004972	mg/L	0.999989
ICB	868 HG-8		Hg 253.7	3/14/2017	12:10:09 PM	-0.00013	ug/L	-1.32E-07	mg/L	0.999989
CRQL 0.25	868 HG-8	0.6	Hg 253.7	3/14/2017	12:12:24 PM	0.290855	ug/L	0.048476	mg/kg	0.999989
17-03-0016-3	868 HG-8	0.61	Hg 253.7	3/14/2017	12:14:41 PM	0.09376	ug/L	0.015371	mg/kg	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	12:16:58 PM	1.950028	ug/L	0.00195	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	12:19:14 PM	-0.00456	ug/L	-4.56E-06	mg/L	0.999989
170314-B-A2	868 HG-8		Hg 253.7	3/14/2017	12:33:52 PM	-0.00831	ug/L	-1.66E-05	mg/L	0.999989
170314-L-A2	868 HG-8		Hg 253.7	3/14/2017	12:36:09 PM	4.920221	ug/L	0.00984	mg/L	0.999989
17-03-0658-3	868 HG-8		Hg 253.7	3/14/2017	12:38:26 PM	-0.00477	ug/L	-9.55E-06	mg/L	0.999989
17-03-0658-3 MS	868 HG-8		Hg 253.7	3/14/2017	12:40:43 PM	4.604289	ug/L	0.009209	mg/L	0.999989
17-03-0658-3 MSD	868 HG-8		Hg 253.7	3/14/2017	12:42:59 PM	4.611896	ug/L	0.009224	mg/L	0.999989
17-03-0658-2	868 HG-8		Hg 253.7	3/14/2017	12:45:13 PM	-0.0036	ug/L	-7.21E-06	mg/L	0.999989
17-03-0658-4	868 HG-8		Hg 253.7	3/14/2017	12:47:27 PM	-0.00666	ug/L	-1.33E-05	mg/L	0.999989
17-03-0658-5	868 HG-8		Hg 253.7	3/14/2017	12:49:41 PM	-0.00575	ug/L	-1.15E-05	mg/L	0.999989
17-03-0658-6	868 HG-8		Hg 253.7	3/14/2017	12:51:56 PM	0.003206	ug/L	6.41E-06	mg/L	0.999989
17-03-0658-7	868 HG-8		Hg 253.7	3/14/2017	12:54:11 PM	-0.00613	ug/L	-1.23E-05	mg/L	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	12:56:27 PM	1.902197	ug/L	0.001902	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	12:58:43 PM	-0.00403	ug/L	-4.03E-06	mg/L	0.999989

Reviewed/Assign to Logbook Date: 03/14/17
Analysis Hg Chemist ID: 721
Logbook Page: 29 Instrument ID: Hg 8

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Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
17-03-0658-8	868 HG-8		Hg 253.7	3/14/2017	1:00:57 PM	-0.00792	ug/L	-1.58E-05	mg/L	0.999989
17-03-0658-9	868 HG-8		Hg 253.7	3/14/2017	1:03:12 PM	-0.00675	ug/L	-1.35E-05	mg/L	0.999989
17-03-0658-F-2	868 HG-8		Hg 253.7	3/14/2017	1:05:28 PM	-0.0079	ug/L	-1.58E-05	mg/L	0.999989
17-03-0658-F-3	868 HG-8		Hg 253.7	3/14/2017	1:07:45 PM	-0.00766	ug/L	-1.53E-05	mg/L	0.999989
17-03-0658-F-4	868 HG-8		Hg 253.7	3/14/2017	1:10:02 PM	-0.00986	ug/L	-1.97E-05	mg/L	0.999989
17-03-0658-F-5	868 HG-8		Hg 253.7	3/14/2017	1:12:19 PM	-0.00931	ug/L	-1.86E-05	mg/L	0.999989
17-03-0658-F-6	868 HG-8		Hg 253.7	3/14/2017	1:14:35 PM	-0.00776	ug/L	-1.55E-05	mg/L	0.999989
17-03-0658-F-7	868 HG-8		Hg 253.7	3/14/2017	1:16:49 PM	-0.00826	ug/L	-1.65E-05	mg/L	0.999989
17-03-0658-F-8	868 HG-8		Hg 253.7	3/14/2017	1:19:05 PM	-0.00485	ug/L	-9.71E-06	mg/L	0.999989
17-03-0658-F-9	868 HG-8		Hg 253.7	3/14/2017	1:21:19 PM	-0.00313	ug/L	-6.26E-06	mg/L	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	1:23:35 PM	1.89743	ug/L	0.001897	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	1:25:51 PM	-0.00041	ug/L	-4.07E-07	mg/L	0.999989
17-03-0886-1	868 HG-8		Hg 253.7	3/14/2017	1:28:05 PM	-0.00052	ug/L	-1.03E-06	mg/L	0.999989
17-03-0886-2	868 HG-8		Hg 253.7	3/14/2017	1:30:20 PM	0.000444	ug/L	8.89E-07	mg/L	0.999989
17-03-466-1 MS	868 HG-8		Hg 253.7	3/14/2017	1:32:36 PM	4.257966	ug/L	0.008516	mg/L	0.999989
17-03-466-1 MSD	868 HG-8		Hg 253.7	3/14/2017	1:34:51 PM	4.001711	ug/L	0.008003	mg/L	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	1:37:07 PM	1.895087	ug/L	0.001895	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	1:39:23 PM	-0.00172	ug/L	-1.72E-06	mg/L	0.999989
170314-B-A1	868 HG-8		Hg 253.7	3/14/2017	2:49:31 PM	6.28E-05	ug/L	1.26E-07	mg/L	0.999989
170314-L-A1	868 HG-8		Hg 253.7	3/14/2017	2:51:48 PM	3.837774	ug/L	0.007676	mg/L	0.999989
17-03-0886-F-1	868 HG-8		Hg 253.7	3/14/2017	2:54:04 PM	0.027471	ug/L	5.49E-05	mg/L	0.999989
17-03-0886-F-1 MS	868 HG-8		Hg 253.7	3/14/2017	2:56:22 PM	3.106795	ug/L	0.006214	mg/L	0.999989
17-03-0886-F-1 MSD	868 HG-8		Hg 253.7	3/14/2017	2:58:37 PM	3.142739	ug/L	0.006285	mg/L	0.999989
17-03-0886-F-2	868 HG-8		Hg 253.7	3/14/2017	3:00:53 PM	-0.00441	ug/L	-8.81E-06	mg/L	0.999989
17-03-0885-F-1	868 HG-8		Hg 253.7	3/14/2017	3:03:08 PM	-0.00132	ug/L	-2.64E-06	mg/L	0.999989
17-03-0885-F-2	868 HG-8		Hg 253.7	3/14/2017	3:05:25 PM	-0.00718	ug/L	-1.44E-05	mg/L	0.999989
17-03-0885-F-3	868 HG-8		Hg 253.7	3/14/2017	3:07:40 PM	-0.00511	ug/L	-1.02E-05	mg/L	0.999989
17-03-0885-F-4	868 HG-8		Hg 253.7	3/14/2017	3:09:55 PM	-0.00281	ug/L	-5.61E-06	mg/L	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	3:12:11 PM	1.899124	ug/L	0.001899	mg/L	0.999989

Reviewed/Assign to Logbook Date: 03/14/17
Analysis Hg **Chemist ID:** 721
Logbook Page: 30 **Instrument ID:** Hg 8

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Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
CCB	868 HG-8		Hg 253.7	3/14/2017	3:14:27 PM	-0.00698	ug/L	-6.98E-06	mg/L	0.999989
170314-B-A3	868 HG-8		Hg 253.7	3/14/2017	3:16:42 PM	-0.0138	ug/L	-2.76E-05	mg/L	0.999989
170314-L-A3	868 HG-8		Hg 253.7	3/14/2017	3:18:58 PM	4.994373	ug/L	0.009989	mg/L	0.999989
17-03-0823-2	868 HG-8		Hg 253.7	3/14/2017	3:21:14 PM	-0.01037	ug/L	-2.07E-05	mg/L	0.999989
17-03-0823-2 MS	868 HG-8		Hg 253.7	3/14/2017	3:23:30 PM	4.484028	ug/L	0.008968	mg/L	0.999989
17-03-0823-2 MSD	868 HG-8		Hg 253.7	3/14/2017	3:25:47 PM	3.631351	ug/L	0.007263	mg/L	0.999989
17-03-0823-1	868 HG-8		Hg 253.7	3/14/2017	3:28:03 PM	-0.00733	ug/L	-1.47E-05	mg/L	0.999989
17-03-0563-2	868 HG-8		Hg 253.7	3/14/2017	3:30:20 PM	-0.00265	ug/L	-5.30E-06	mg/L	0.999989
17-03-0563-3	868 HG-8		Hg 253.7	3/14/2017	3:32:36 PM	-0.00764	ug/L	-1.53E-05	mg/L	0.999989
17-03-0563-F-2	868 HG-8		Hg 253.7	3/14/2017	3:34:52 PM	0.017591	ug/L	3.52E-05	mg/L	0.999989
17-03-0563-F-3	868 HG-8		Hg 253.7	3/14/2017	3:37:07 PM	-0.00764	ug/L	-1.53E-05	mg/L	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	3:39:23 PM	1.990674	ug/L	0.001991	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	3:41:39 PM	-0.005	ug/L	-5.00E-06	mg/L	0.999989
17-03-0885-1	868 HG-8		Hg 253.7	3/14/2017	3:43:54 PM	0.012298	ug/L	2.46E-05	mg/L	0.999989
17-03-0885-2	868 HG-8		Hg 253.7	3/14/2017	3:46:10 PM	-0.00618	ug/L	-1.24E-05	mg/L	0.999989
17-03-0885-3	868 HG-8		Hg 253.7	3/14/2017	3:48:26 PM	0.001239	ug/L	2.48E-06	mg/L	0.999989
17-03-0885-4	868 HG-8		Hg 253.7	3/14/2017	3:50:41 PM	0.006116	ug/L	1.22E-05	mg/L	0.999989
170314-B-01	868 HG-8	0.6	Hg 253.7	3/14/2017	3:52:58 PM	-0.01279	ug/L	-0.00213	mg/kg	0.999989
170314-L-01	868 HG-8	0.6	Hg 253.7	3/14/2017	3:55:14 PM	4.83028	ug/L	0.805047	mg/kg	0.999989
17-03-0566-1	868 HG-8	0.62	Hg 253.7	3/14/2017	3:57:31 PM	0.840386	ug/L	0.135546	mg/kg	0.999989
17-03-0566-1 MS	868 HG-8	0.61	Hg 253.7	3/14/2017	3:59:48 PM	5.240598	ug/L	0.859114	mg/kg	0.999989
17-03-0566-1 MSD	868 HG-8	0.62	Hg 253.7	3/14/2017	4:02:05 PM	5.216161	ug/L	0.841316	mg/kg	0.999989
17-03-0927-1	868 HG-8	0.61	Hg 253.7	3/14/2017	4:04:21 PM	0.210778	ug/L	0.034554	mg/kg	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	4:06:37 PM	1.987254	ug/L	0.001987	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	4:08:53 PM	-0.00517	ug/L	-5.17E-06	mg/L	0.999989
17-03-0996-1	868 HG-8	0.61	Hg 253.7	3/14/2017	4:11:08 PM	0.029416	ug/L	0.004822	mg/kg	0.999989
17-03-0981-1	868 HG-8	0.6	Hg 253.7	3/14/2017	4:13:24 PM	2.049648	ug/L	0.341608	mg/kg	0.999989
17-03-0981-2	868 HG-8	0.58	Hg 253.7	3/14/2017	4:15:41 PM	3.870803	ug/L	0.66738	mg/kg	0.999989
17-03-0641-26	868 HG-8	0.61	Hg 253.7	3/14/2017	4:17:58 PM	0.196259	ug/L	0.032174	mg/kg	0.999989

Reviewed/Assign to Logbook Date: 03/14/17
Analysis Hg Chemist ID: 721
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Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
17-03-0641-27	868 HG-8	0.63	Hg 253.7	3/14/2017	4:20:15 PM	0.189804	ug/L	0.030128	mg/kg	0.999989
17-03-0641-28	868 HG-8	0.62	Hg 253.7	3/14/2017	4:22:31 PM	0.26978	ug/L	0.043513	mg/kg	0.999989
17-03-0641-29	868 HG-8	0.63	Hg 253.7	3/14/2017	4:24:49 PM	0.281137	ug/L	0.044625	mg/kg	0.999989
17-03-0642-26	868 HG-8	0.63	Hg 253.7	3/14/2017	4:27:05 PM	0.560421	ug/L	0.088956	mg/kg	0.999989
17-03-0642-27	868 HG-8	0.61	Hg 253.7	3/14/2017	4:29:22 PM	0.408369	ug/L	0.066946	mg/kg	0.999989
17-03-0642-28	868 HG-8	0.63	Hg 253.7	3/14/2017	4:31:39 PM	0.341956	ug/L	0.054279	mg/kg	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	4:33:56 PM	2.024582	ug/L	0.002025	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	4:36:12 PM	-0.00344	ug/L	-3.44E-06	mg/L	0.999989
17-03-0642-29	868 HG-8	0.62	Hg 253.7	3/14/2017	4:38:27 PM	0.109328	ug/L	0.017634	mg/kg	0.999989
17-03-0662-1	868 HG-8	0.61	Hg 253.7	3/14/2017	4:40:44 PM	3.855704	ug/L	0.632083	mg/kg	0.999989
17-03-0662-2	868 HG-8	0.6	Hg 253.7	3/14/2017	4:43:01 PM	3.779421	ug/L	0.629903	mg/kg	0.999989
17-03-0679-1	868 HG-8	0.6	Hg 253.7	3/14/2017	4:45:18 PM	0.245123	ug/L	0.040854	mg/kg	0.999989
17-03-0680-1	868 HG-8	0.59	Hg 253.7	3/14/2017	4:47:34 PM	3.224879	ug/L	0.54659	mg/kg	0.999989
17-03-0694-1	868 HG-8	0.58	Hg 253.7	3/14/2017	4:49:50 PM	0.263531	ug/L	0.045436	mg/kg	0.999989
17-03-0708-1	868 HG-8	0.61	Hg 253.7	3/14/2017	4:52:07 PM	0.023933	ug/L	0.003924	mg/kg	0.999989
17-02-2225-1	868 HG-8		Hg 253.7	3/14/2017	4:54:24 PM	-0.00517	ug/L	-1.03E-05	mg/L	0.999989
17-03-0638-1	868 HG-8		Hg 253.7	3/14/2017	4:56:40 PM	-0.00815	ug/L	-1.63E-05	mg/L	0.999989
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/14/2017	4:58:57 PM	2.024624	ug/L	0.002025	mg/L	0.999989
CCB	868 HG-8		Hg 253.7	3/14/2017	5:01:12 PM	-0.00402	ug/L	-4.02E-06	mg/L	0.999989
170314-L-A1	868 HG-8		Hg 253.7	3/14/2017	5:33:32 PM	4.287217	ug/L	0.008574	mg/L	0.999989
17-03-0632-1	868 HG-8		Hg 253.7	3/14/2017	5:35:49 PM	-0.00493	ug/L	-9.86E-06	mg/L	0.999989
17-03-0632-2	868 HG-8		Hg 253.7	3/14/2017	5:38:06 PM	-0.00201	ug/L	-4.02E-06	mg/L	0.999989
170314-B-A4	868 HG-8		Hg 253.7	3/14/2017	5:40:23 PM	-0.0062	ug/L	-1.24E-05	mg/L	0.999989
170314-L-A4	868 HG-8		Hg 253.7	3/14/2017	5:42:40 PM	4.841172	ug/L	0.009682	mg/L	0.999989
17-03-0617-1	868 HG-8		Hg 253.7	3/14/2017	5:44:57 PM	0.009179	ug/L	1.84E-05	mg/L	0.999989
17-03-0617-1 MS	868 HG-8		Hg 253.7	3/14/2017	5:47:14 PM	4.986659	ug/L	0.009973	mg/L	0.999989
17-03-0617-1 MSD	868 HG-8		Hg 253.7	3/14/2017	5:49:30 PM	5.165295	ug/L	0.010331	mg/L	0.999989
17-03-0634-1	868 HG-8		Hg 253.7	3/14/2017	5:51:47 PM	0.003818	ug/L	7.64E-06	mg/L	0.999989
17-03-0847-1	868 HG-8		Hg 253.7	3/14/2017	5:54:04 PM	-0.00312	ug/L	-6.24E-06	mg/L	0.999989

Reviewed/Assign to Logbook Date: 03/14/17
Analysis Hg Chemist ID: ZH
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EPA 7470A Mercury (Aqueous)

Preparation Log

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Mercury Sample Preparation Logbook (Aqueous)

METHOD	MATRIX	EQUIPMENT ID #	REAGENT ID #	REAGENT / STANDARD ID #
☑ EPA 7470A ☐ EPA 245.1	Aqueous	Thermometer 67-04 (CF -1.0°C) Block Digester 3 Pipetter / Dispenser P671 / **	HNO_3 MBS-46-04 1.25 mL H_2SO_4 M006-3526 2.5 mL 5% $KMnO_4$ R1026161	5% $K_2S_2O_8$ R1213162 4 mL NaCl-H_3NO-HCl R1606166 3 mL Spike M030617A

BATCH NUMBER	SUPPLY LOT #	ACID PRESERVATION AND FILTRATION	STANDARD ID #
MS/MSD 170314-SA3	Digestion Tube 160975	☑ None ☐ Lab Filtered ☐ Lab Preserved	IC M030617A
(Specify)	Filter	Book # _____ Page # _____	ICV B

DIGESTION									SAMPLE		5% $KMnO_4$	SPIKE OR IC/ICV
	START			END					INITIAL	FINAL	V	V
DATE	TIME	TEMP W/O CF (°C)	PREP TECH ID #	TIME	TEMP W/O CF (°C)	PREP TECH ID #	INITIAL pH	ECI ID #	(mL)	(mL)	(mL)	(µL)
3/14/17	12:00	95	868	14:06	95	868	✓2	MS 17-03-0823-2B	50	106	7.5	500
							✓2	MSD "	"	"	"	"
							✓2	LCS 170314-LA3				
							✓2	LCSD / MB 170314-BA3				
							✓2	17-03-0823-1B				
							✓2	" 2B				
							✓2	17-03-0563-2F				
							✓2	" 3F				
							✓2	" 2G				
							✓2	" 3G*				
							✓2	17-03-0885-1B				
							✓2	" 2				
							✓2	" 3				
							✓2	" 4				
							✓2	17-03-0632-1A				
							✓2	" 2A				
							✓2	17-03-0638-1D				
	16:00			18:06			✓2	17-03-1004-1A				
							✓2	" 2A				
							✓2	17-03-0305-1C				
							✓2	" 2				
							✓2	" 3				
								IC				
								ICV				
								CB				

COMMENTS: * FE ; ** D048 / D047 / D043 / MD 024 / D058

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EPA METHOD 8082
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EPA METHOD 8082
PCB

Initial Calibration

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA 8082

ICAL WORK ORDER: 099-12-532-9416-5154
ICAL BATCH ID: 170313I003
INSTRUMENT: GC 31

ANALYZED BY: 669
ICAL D/T ANALYZED: 2017-03-13 12:39
REVIEWED BY: 27
D/T REVIEWED: 2017-03-13 17:29

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
Aroclor-1016	C	Avg RF	18,292,523	17,778,102	16,243,290	16,504,265	14,622,954					16,688,227	0.00	9	0-20			PASS
Aroclor-1260	C	Avg RF	25,160,469	24,687,464	23,440,911	24,890,345	22,391,301					24,114,098	0.00	5	0-20			PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2017-03-13 12:39	/chem1/SVOA/GC_31/170313/b1703130117031301
2	2017-03-13 12:58	/chem1/SVOA/GC_31/170313/b1703130217031302
3	2017-03-13 13:17	/chem1/SVOA/GC_31/170313/b1703130317031303
4	2017-03-13 13:36	/chem1/SVOA/GC_31/170313/b1703130417031304
5	2017-03-13 13:55	/chem1/SVOA/GC_31/170313/b1703130517031305

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 8082

ICV WORK ORDER: **099-12-532-9416-5154**
INITIAL BATCH: 170313I003
INSTRUMENT: GC 31

DATA FILE: /chem1/SVOA/GC_31/170313/b1703130617031306

ANALYZED BY: 669
D/T ANALYZED:
INITIAL: 2017-03-13 12:39
ICV: 2017-03-13 14:14
REVIEWED BY: 27
D/T REVIEWED: 2017-03-13 17:29

COMPOUND NAME	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	16688226.948	17213206.574			-3	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	24114098.005	25301236.682			-5	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 13-Mar-2017 17:05 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 20-FEB-2017 15:04
End Cal Date : 13-MAR-2017 15:30
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Cal Date : 13-Mar-2017 17:04 uhhn
Curve Type : Average

Calibration File Names:
Level 1: /chem1/SVOA/GC_31.i/170313.b/b17031301.d
Level 2: /chem1/SVOA/GC_31.i/170313.b/b17031302.d
Level 3: /chem1/SVOA/GC_31.i/170313.b/b17031310.d
Level 4: /chem1/SVOA/GC_31.i/170313.b/b17031304.d
Level 5: /chem1/SVOA/GC_31.i/170313.b/b17031305.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	750.000 Level 4	2000.000 Level 5	___ RRF	% RSD
M 2 Aroclor-1016	18292523	17778102	16243290	16504265	14622954	16688227	9
3 Aroclor 1016 (1)	1914845	1817119	1625137	1632158	1403670	1678586	12
4 Aroclor 1016 (2)	3473273	3296612	2974415	2981884	2581476	3061532	11
5 Aroclor 1016 (3)	7533994	7426497	6862046	7033552	6338175	7038853	7
6 Aroclor 1016 (4)	3333016	3234762	2942585	2980479	2619212	3022011	9
7 Aroclor 1016 (5)	2037396	2003113	1839107	1876191	1680421	1887246	8
M 8 Aroclor-1260	25160469	24687464	23440911	24890345	22391301	24114098	5
9 Aroclor 1260 (1)	8489120	8389711	7926918	8405109	7587003	8159572	5
10 Aroclor 1260 (2)	6632064	6324937	6012964	6380423	5746660	6219410	6
11 Aroclor 1260 (3)	5363202	5166181	4894579	5192149	4641728	5051568	6
12 Aroclor 1260 (4)	1544050	1606986	1541708	1595660	1471536	1551988	3
13 Aroclor 1260 (5)	3132032	3199649	3064743	3317003	2944374	3131560	4
M 14 Aroclor-1221	+++++	+++++	5440081	+++++	+++++	5440081	0
15 Aroclor 1221 (1)	+++++	+++++	578903	+++++	+++++	578903	0
16 Aroclor 1221 (2)	+++++	+++++	1122781	+++++	+++++	1122781	0
17 Aroclor 1221 (3)	+++++	+++++	684458	+++++	+++++	684458	0
18 Aroclor 1221 (4)	+++++	+++++	2678543	+++++	+++++	2678543	0
19 Aroclor 1221 (5)	+++++	+++++	375396	+++++	+++++	375396	0
M 20 Aroclor-1232	+++++	+++++	9188299	+++++	+++++	9188299	0
21 Aroclor 1232 (1)	+++++	+++++	1867251	+++++	+++++	1867251	0
22 Aroclor 1232 (2)	+++++	+++++	1516096	+++++	+++++	1516096	0
23 Aroclor 1232 (3)	+++++	+++++	3403650	+++++	+++++	3403650	0

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 20-FEB-2017 15:04
End Cal Date : 13-MAR-2017 15:30
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Cal Date : 13-Mar-2017 17:04 uhhn
Curve Type : Average

	100.000	250.000	500.000	750.000	2000.000		
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRF	% RSD
24 Aroclor 1232 (4)	+++++	+++++	1467493	+++++	+++++	1467493	0
25 Aroclor 1232 (5)	+++++	+++++	933809	+++++	+++++	933809	0
M 26 Aroclor-1242	+++++	+++++	13596828	+++++	+++++	13596828	0
27 Aroclor 1242 (1)	+++++	+++++	1344961	+++++	+++++	1344961	0
28 Aroclor 1242 (2)	+++++	+++++	2515846	+++++	+++++	2515846	0
29 Aroclor 1242 (3)	+++++	+++++	5720639	+++++	+++++	5720639	0
30 Aroclor 1242 (4)	+++++	+++++	2476638	+++++	+++++	2476638	0
31 Aroclor 1242 (5)	+++++	+++++	1538744	+++++	+++++	1538744	0
M 32 Aroclor-1248	+++++	+++++	12061895	+++++	+++++	12061895	0
33 Aroclor 1248 (1)	+++++	+++++	3823128	+++++	+++++	3823128	0
34 Arcolor 1248 (2)	+++++	+++++	1501154	+++++	+++++	1501154	0
35 Aroclor 1248 (3)	+++++	+++++	856962	+++++	+++++	856962	0
36 Aroclor 1248 (4)	+++++	+++++	3800525	+++++	+++++	3800525	0
37 Aroclor 1248 (5)	+++++	+++++	2080127	+++++	+++++	2080127	0
M 38 Aroclor-1254	+++++	+++++	26995879	+++++	+++++	26995879	0
39 Aroclor 1254 (1)	+++++	+++++	3302423	+++++	+++++	3302423	0
40 Aroclor 1254 (2)	+++++	+++++	6756396	+++++	+++++	6756396	0
41 Arcolor 1254 (3)	+++++	+++++	7146412	+++++	+++++	7146412	0
42 Aroclor 1254 (4)	+++++	+++++	5634357	+++++	+++++	5634357	0
43 Aroclor 1254 (5)	+++++	+++++	4156291	+++++	+++++	4156291	0
M 44 Aroclor-1262	+++++	+++++	29816974	+++++	+++++	29816974	0
45 Aroclor 1262 (1)	+++++	+++++	6121774	+++++	+++++	6121774	0
46 Aroclor 1262 (2)	+++++	+++++	9397109	+++++	+++++	9397109	0
47 Aroclor 1262 (3)	+++++	+++++	6708745	+++++	+++++	6708745	0
48 Aroclor 1262 (4)	+++++	+++++	2314400	+++++	+++++	2314400	0
49 Aroclor 1262 (5)	+++++	+++++	5274946	+++++	+++++	5274946	0
M 50 Aroclor-1268	+++++	+++++	103449224	+++++	+++++	103449224	0
51 Aroclor 1268 (1)	+++++	+++++	20163889	+++++	+++++	20163889	0
52 Aroclor 1268 (2)	+++++	+++++	17351725	+++++	+++++	17351725	0

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 20-FEB-2017 15:04
End Cal Date : 13-MAR-2017 15:30
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Cal Date : 13-Mar-2017 17:04 uhhn
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	750.000 Level 4	2000.000 Level 5	RRF	% RSD
53 Aroclor 1268 (3)	+++++	+++++	15033949	+++++	+++++	15033949	0
54 Aroclor 1268 (4)	+++++	+++++	6001280	+++++	+++++	6001280	0
55 Aroclor 1268 (5)	+++++	+++++	44898381	+++++	+++++	44898381	0
$ 1 2,4,5,6-Tetrachloro-m-xylene	116924964	120590704	114445115	119426169	112542020	116785794	3
$ 56 Decachlorobiphenyl	119587249	121791033	115763025	126865453	112353635	119272079	5

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Report Date : 13-Mar-2017 17:05 Page 4

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 20-FEB-2017 15:04
End Cal Date : 13-MAR-2017 15:30
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Cal Date : 13-Mar-2017 17:04 uhhn
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 6.52751
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031306.d
Report Date: 03/13/2017 17:05

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_31.i
Sample Name: ICV 500 P021517H
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m

Injection Date and Time: 13-MAR-2017 14:14
Initial Calibration Date(s): 20-FEB-2017 13-MAR-2017
Initial Calibration Time(s): 15:04 15:30

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Aroclor-1016	16688226.948	17213206.575	0.01	-3	15	Averaged
Aroclor 1016 (1)	1678585.818	1843627.654	0.01	-10	15	Averaged
Aroclor 1016 (2)	3061531.914	3089053.074	0.01	-1	15	Averaged
Aroclor 1016 (3)	7038852.768	7239374.715	0.01	-3	15	Averaged
Aroclor 1016 (4)	3022010.657	3095864.984	0.01	-2	15	Averaged
Aroclor 1016 (5)	1887245.791	1945286.148	0.01	-3	15	Averaged
Aroclor 1260 (4)	1551988.057	1600076.250	0.01	-3	15	Averaged
Aroclor-1260	24114098.004	25301236.681	0.01	-5	15	Averaged
Aroclor 1260 (5)	3131560.155	3283729.462	0.01	-5	15	Averaged
Aroclor 1260 (1)	8159572.295	8979597.700	0.01	-10	15	Averaged
Aroclor 1260 (2)	6219409.574	6309414.158	0.01	-1	15	Averaged
Aroclor 1260 (3)	5051567.924	5128419.112	0.01	-2	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,4,5,6-Tetrachloro-m-xylene	116785794.271	100127080.227	0.01	14	15	Averaged
Decachlorobiphenyl	119272079.193	105434037.862	0.01	12	15	Averaged

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031301.d Page 1
Report Date: 13-Mar-2017 17:03

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031301.d
Lab Smp Id:
Inj Date : 13-MAR-2017 12:39
Operator : 669 Inst ID: GC_31.i
Smp Info : ICAL-1 P021517F
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:03 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 12:39 Cal File: b17031301.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.011	5.011	0.000	2338499275	20.0000	20.0
M	2 Aroclor-1016				1829252334	100.000	110
	3 Aroclor 1016 (1)	5.542	5.542	0.000	191484525	100.000	114
	4 Aroclor 1016 (2)	6.029	6.029	0.000	347327280	100.000	113
	5 Aroclor 1016 (3)	6.638	6.638	0.000	753399375	100.000	107
	6 Aroclor 1016 (4)	6.808	6.808	0.000	333301554	100.000	110
	7 Aroclor 1016 (5)	6.886	6.886	0.000	203739600	100.000	108
M	8 Aroclor-1260				2516046862	100.000	104
	9 Aroclor 1260 (1)	9.069	9.069	0.000	848911999	100.000	104
	10 Aroclor 1260 (2)	9.515	9.515	0.000	663206393	100.000	107
	11 Aroclor 1260 (3)	9.797	9.797	0.000	536320213	100.000	106
	12 Aroclor 1260 (4)	10.869	10.869	0.000	154405021	100.000	99.5(a)
	13 Aroclor 1260 (5)	11.155	11.155	0.000	313203236	100.000	100
$	56 Decachlorobiphenyl	11.682	11.682	0.000	2391744987	20.0000	20.0

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QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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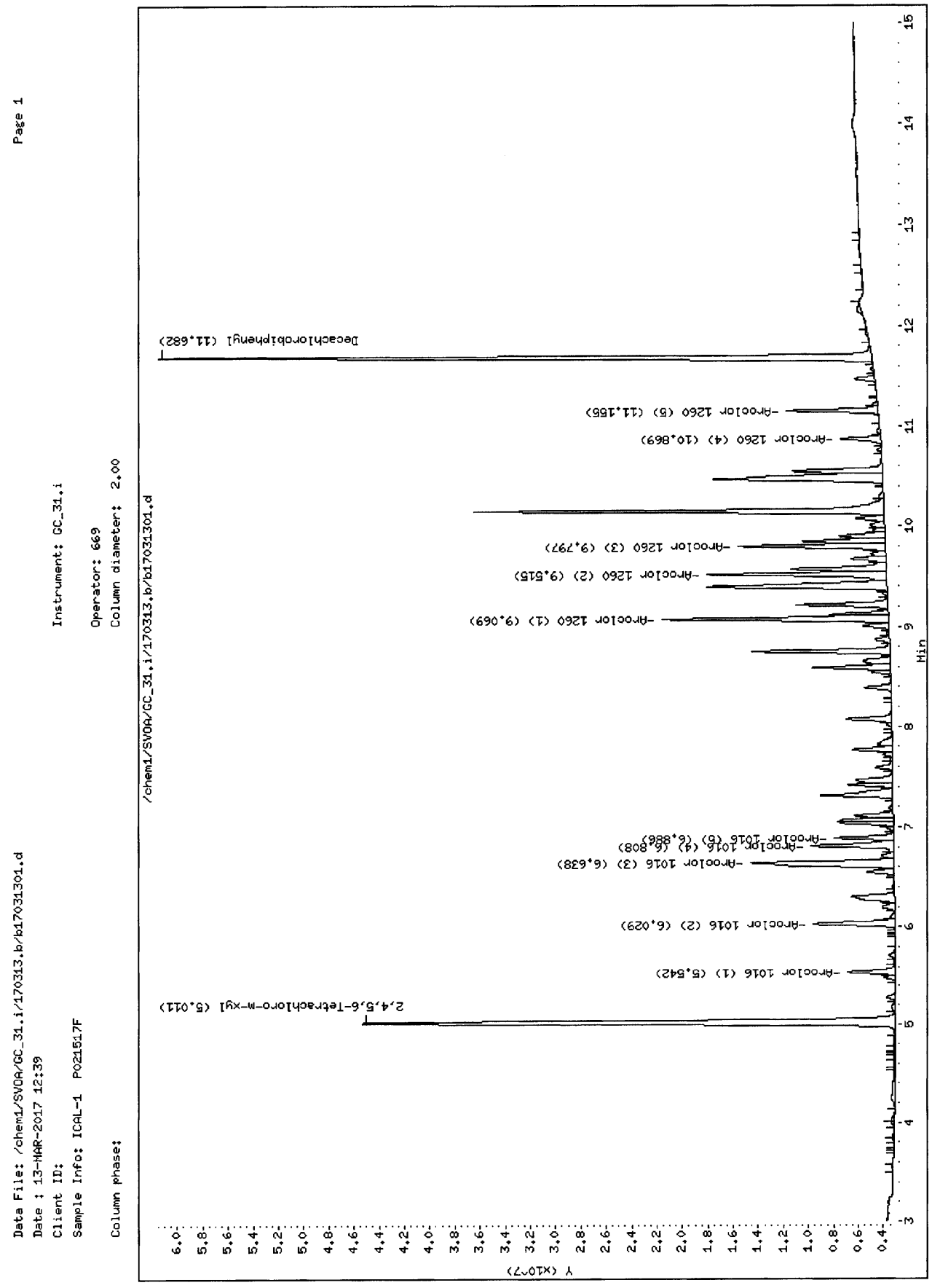

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031302.d Page 1
Report Date: 13-Mar-2017 17:03

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031302.d
Lab Smp Id:
Inj Date : 13-MAR-2017 12:58
Operator : 669 Inst ID: GC_31.i
Smp Info : ICAL-2 P021517E
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:03 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 12:58 Cal File: b17031302.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.015	5.015	0.000	6029535214	50.0000	51.6
M	2 Aroclor-1016				4444525559	250.000	266
	3 Aroclor 1016 (1)	5.545	5.545	0.000	454279627	250.000	271
	4 Aroclor 1016 (2)	6.032	6.032	0.000	824152930	250.000	269
	5 Aroclor 1016 (3)	6.641	6.641	0.000	1856624261	250.000	264
	6 Aroclor 1016 (4)	6.811	6.811	0.000	808690468	250.000	268
	7 Aroclor 1016 (5)	6.889	6.889	0.000	500778273	250.000	265
M	8 Aroclor-1260				6171866092	250.000	256
	9 Aroclor 1260 (1)	9.070	9.070	0.000	2097427840	250.000	257
	10 Aroclor 1260 (2)	9.515	9.515	0.000	1581234138	250.000	254
	11 Aroclor 1260 (3)	9.797	9.797	0.000	1291545358	250.000	256
	12 Aroclor 1260 (4)	10.870	10.870	0.000	401746480	250.000	259
	13 Aroclor 1260 (5)	11.155	11.155	0.000	799912276	250.000	255
$	56 Decachlorobiphenyl	11.680	11.680	0.000	6089551672	50.0000	51.0

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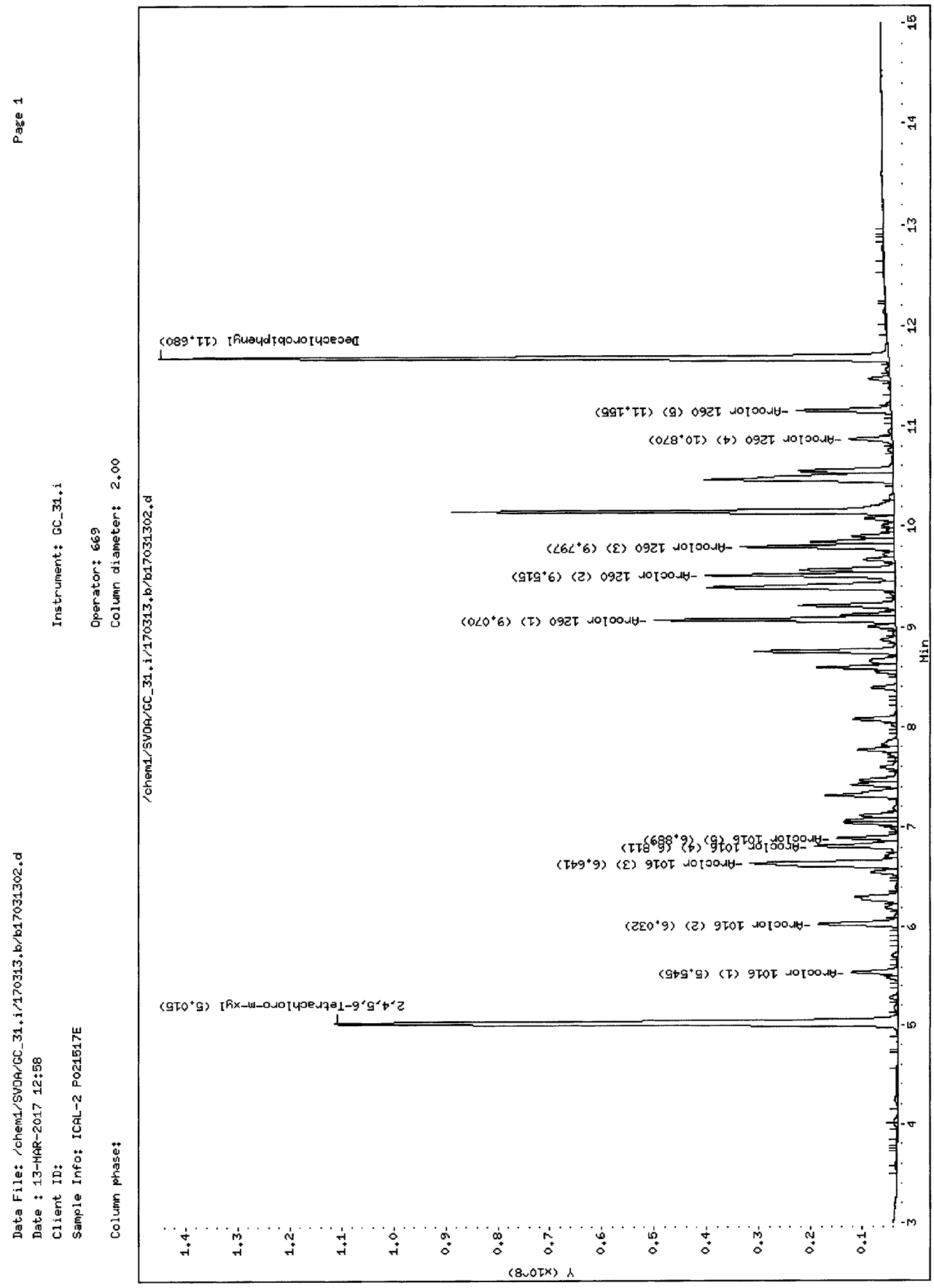

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031303.d Page 1
Report Date: 13-Mar-2017 17:03

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031303.d
Lab Smp Id:
Inj Date : 13-MAR-2017 13:17
Operator : 669 Inst ID: GC_31.i
Smp Info : ICAL-3 P021517D
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:03 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 15:30 Cal File: b17031310.d
Als bottle: 3 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.018	5.018	0.000	11444511457	100.000	98.0
M	2 Aroclor-1016				8121644982	500.000	487
	3 Aroclor 1016 (1)	5.547	5.547	0.000	812568629	500.000	484
	4 Aroclor 1016 (2)	6.034	6.034	0.000	1487207399	500.000	486
	5 Aroclor 1016 (3)	6.642	6.642	0.000	3431022837	500.000	487
	6 Aroclor 1016 (4)	6.811	6.811	0.000	1471292433	500.000	487
	7 Aroclor 1016 (5)	6.890	6.890	0.000	919553684	500.000	487
M	8 Aroclor-1260				11720455641	500.000	486
	9 Aroclor 1260 (1)	9.069	9.069	0.000	3963458856	500.000	486
	10 Aroclor 1260 (2)	9.516	9.516	0.000	3006482137	500.000	483
	11 Aroclor 1260 (3)	9.796	9.796	0.000	2447289306	500.000	484
	12 Aroclor 1260 (4)	10.870	10.870	0.000	770853936	500.000	497
	13 Aroclor 1260 (5)	11.155	11.155	0.000	1532371406	500.000	489
$	56 Decachlorobiphenyl	11.681	11.681	0.000	11576302489	100.000	97.0

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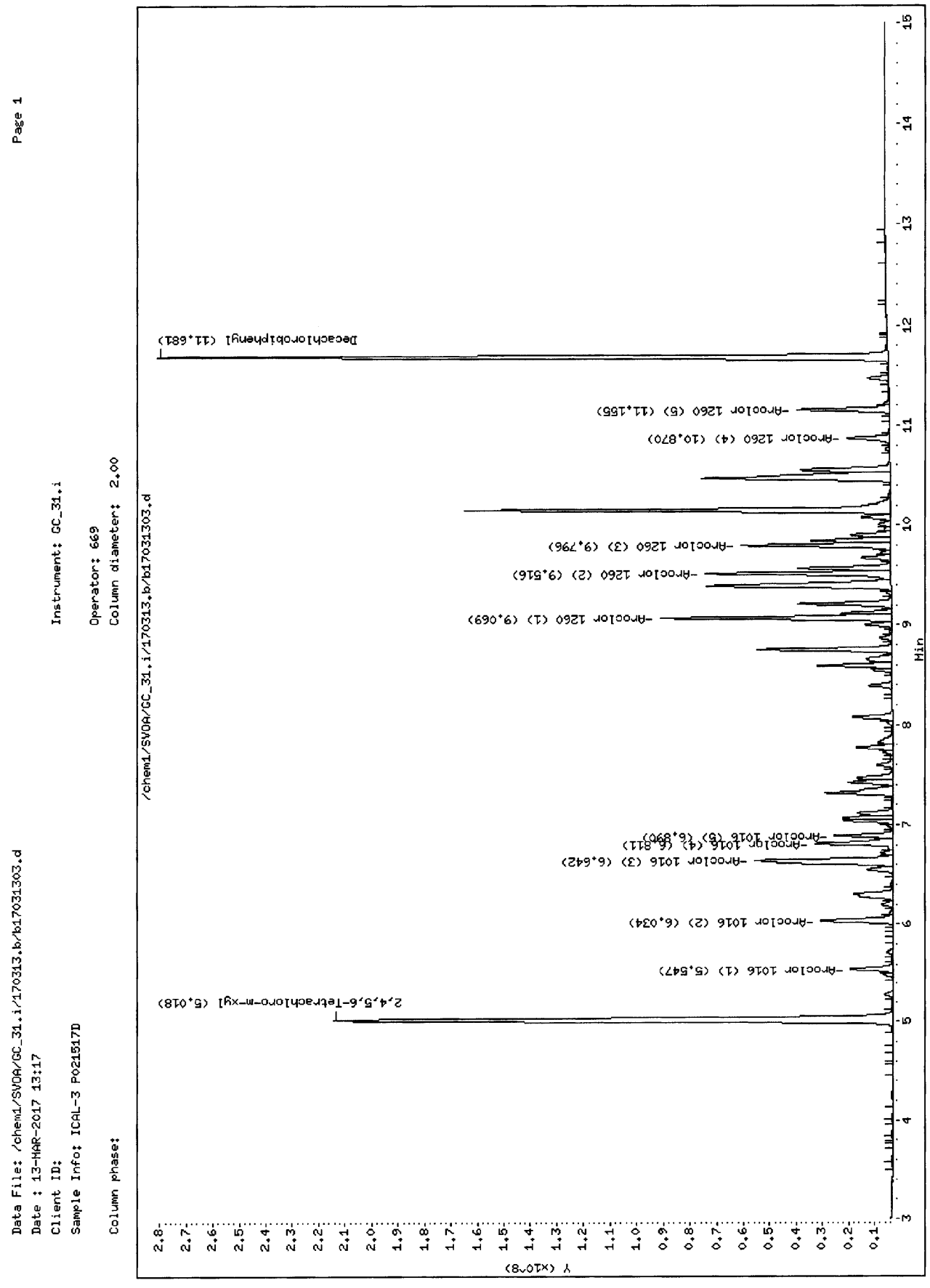

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031304.d Page 1
Report Date: 13-Mar-2017 17:04

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031304.d
Lab Smp Id:
Inj Date : 13-MAR-2017 13:36
Operator : 669 Inst ID: GC_31.i
Smp Info : ICAL-4 P021517C
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:03 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 13:36 Cal File: b17031304.d
Als bottle: 4 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.017	5.017	0.000	17913925378	150.000	153
M	2 Aroclor-1016				12378198550	750.000	742
	3 Aroclor 1016 (1)	5.546	5.546	0.000	1224118570	750.000	729
	4 Aroclor 1016 (2)	6.033	6.033	0.000	2236413256	750.000	730
	5 Aroclor 1016 (3)	6.641	6.641	0.000	5275163960	750.000	749
	6 Aroclor 1016 (4)	6.810	6.810	0.000	2235359484	750.000	740
	7 Aroclor 1016 (5)	6.889	6.889	0.000	1407143280	750.000	746
M	8 Aroclor-1260				18667758574	750.000	774
	9 Aroclor 1260 (1)	9.068	9.068	0.000	6303831958	750.000	772
	10 Aroclor 1260 (2)	9.515	9.515	0.000	4785317240	750.000	769
	11 Aroclor 1260 (3)	9.796	9.796	0.000	3894112102	750.000	771
	12 Aroclor 1260 (4)	10.868	10.868	0.000	1196745229	750.000	771
	13 Aroclor 1260 (5)	11.153	11.153	0.000	2487752045	750.000	794
$	56 Decachlorobiphenyl	11.680	11.680	0.000	19029818017	150.000	160

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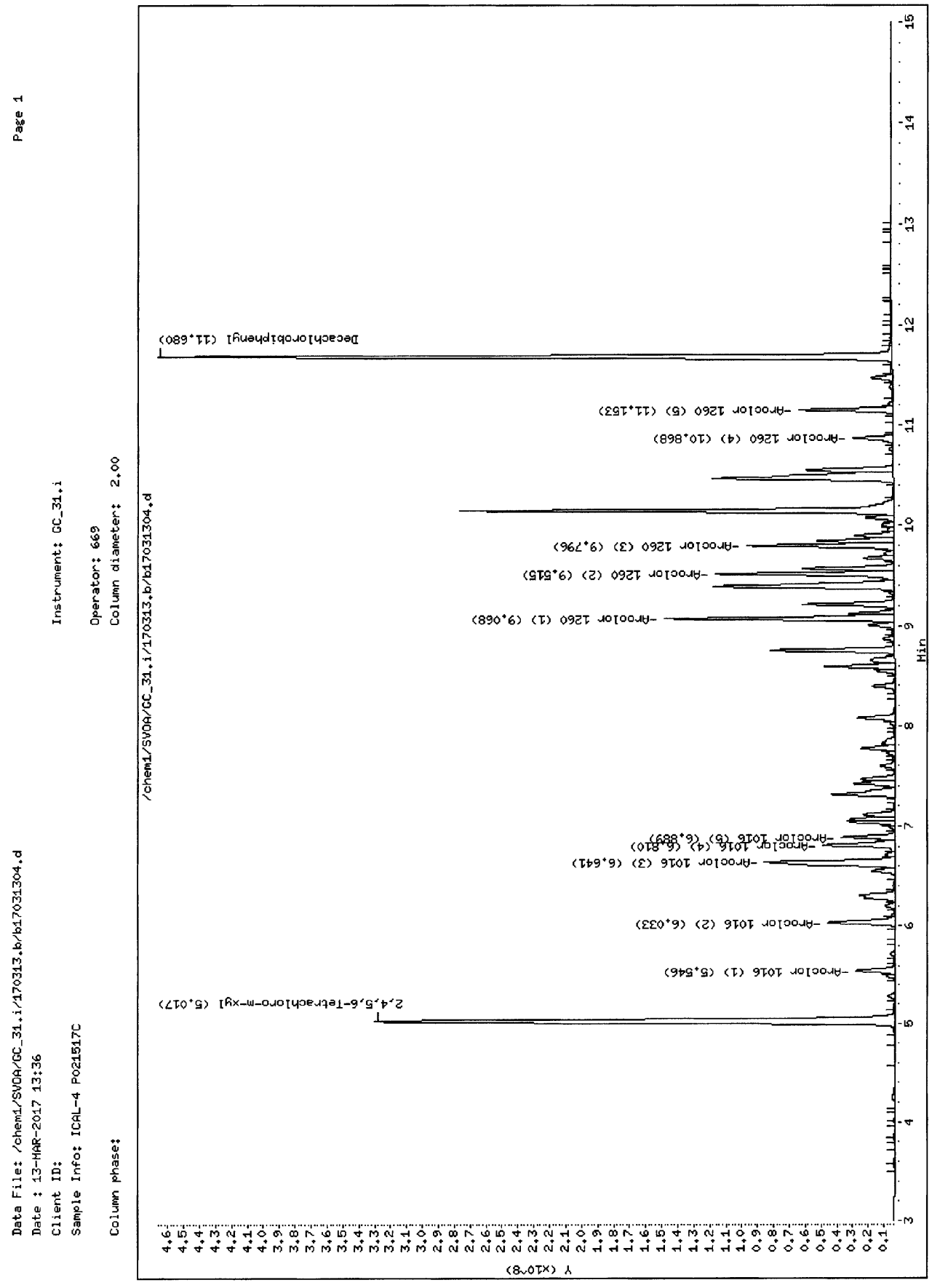

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031305.d Page 1
Report Date: 13-Mar-2017 17:04

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031305.d
Lab Smp Id:
Inj Date : 13-MAR-2017 13:55
Operator : 669 Inst ID: GC_31.i
Smp Info : ICAL-5 P021517B
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:04 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 13:55 Cal File: b17031305.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

							AMOUNTS	
							CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE		(ppb)	(ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.020	5.020	0.000	45016807818		400.000	385
M	2 Aroclor-1016				29245908934		2000.00	1750
	3 Aroclor 1016 (1)	5.548	5.548	0.000	2807339960		2000.00	1670
	4 Aroclor 1016 (2)	6.035	6.035	0.000	5162951818		2000.00	1690
	5 Aroclor 1016 (3)	6.641	6.641	0.000	12676350855		2000.00	1800
	6 Aroclor 1016 (4)	6.811	6.811	0.000	5238423388		2000.00	1730
	7 Aroclor 1016 (5)	6.889	6.889	0.000	3360842914		2000.00	1780
M	8 Aroclor-1260				44782601975		2000.00	1860
	9 Aroclor 1260 (1)	9.067	9.067	0.000	15174006271		2000.00	1860
	10 Aroclor 1260 (2)	9.514	9.514	0.000	11493320257		2000.00	1850
	11 Aroclor 1260 (3)	9.796	9.796	0.000	9283455949		2000.00	1840
	12 Aroclor 1260 (4)	10.869	10.869	0.000	2943071958		2000.00	1900
	13 Aroclor 1260 (5)	11.154	11.154	0.000	5888747540		2000.00	1880
$	56 Decachlorobiphenyl	11.681	11.681	0.000	44941453934		400.000	377

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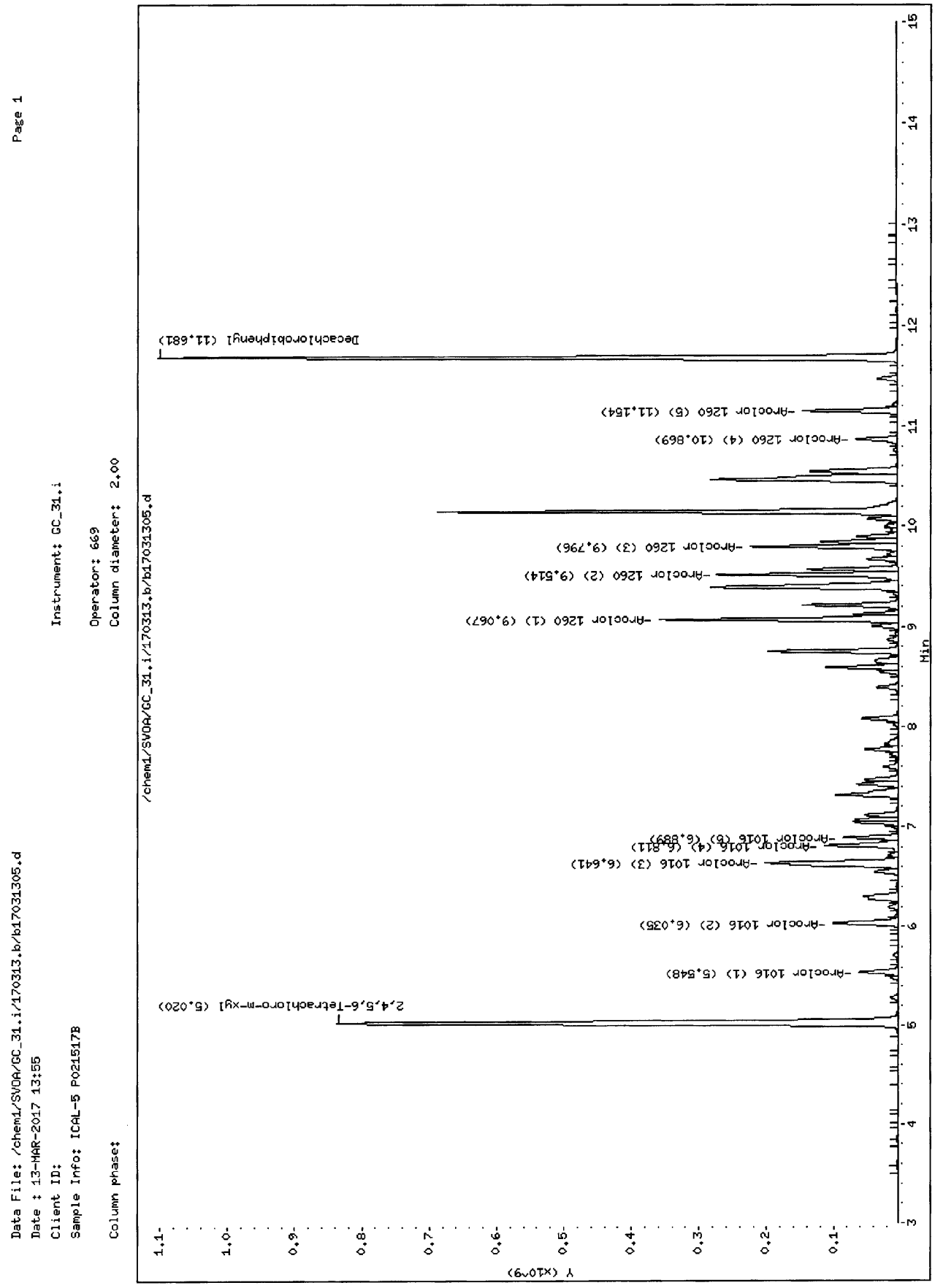

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031306.d Page 1
Report Date: 13-Mar-2017 17:04

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031306.d
Lab Smp Id:
Inj Date : 13-MAR-2017 14:14
Operator : 669 Inst ID: GC_31.i
Smp Info : ICV 500 P021517H
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:04 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 13:55 Cal File: b17031305.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.014	5.014	0.000	10012708023	100.000	85.7
M	2 Aroclor-1016				8606603287	500.000	516
	3 Aroclor 1016 (1)	5.546	5.546	0.000	921813827	500.000	549
	4 Aroclor 1016 (2)	6.033	6.033	0.000	1544526537	500.000	504
	5 Aroclor 1016 (3)	6.641	6.641	0.000	3619687357	500.000	514
	6 Aroclor 1016 (4)	6.811	6.811	0.000	1547932492	500.000	512
	7 Aroclor 1016 (5)	6.889	6.889	0.000	972643074	500.000	515
M	8 Aroclor-1260				12650618341	500.000	525
	9 Aroclor 1260 (1)	9.069	9.069	0.000	4489798850	500.000	550
	10 Aroclor 1260 (2)	9.515	9.515	0.000	3154707079	500.000	507
	11 Aroclor 1260 (3)	9.797	9.797	0.000	2564209556	500.000	508
	12 Aroclor 1260 (4)	10.870	10.870	0.000	800038125	500.000	515
	13 Aroclor 1260 (5)	11.155	11.155	0.000	1641864731	500.000	524
$	56 Decachlorobiphenyl	11.682	11.682	0.000	10543403786	100.000	88.4

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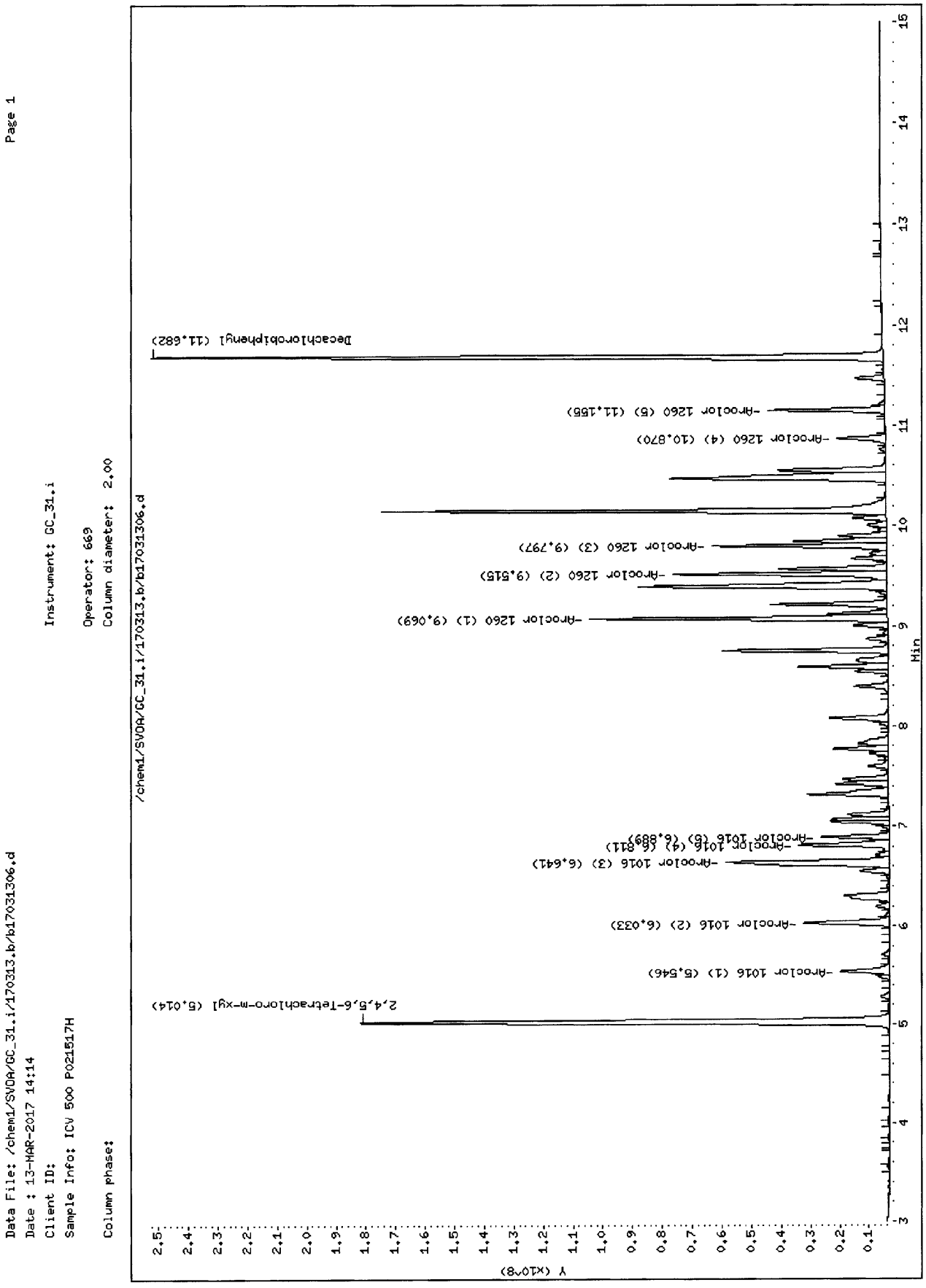

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031307.d Page 1
Report Date: 13-Mar-2017 17:04

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031307.d
Lab Smp Id:
Inj Date : 13-MAR-2017 14:33
Operator : 669 Inst ID: GC_31.i
Smp Info : 1221/54 P120616M
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:04 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 15:30 Cal File: b17031310.d
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1221_1254.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE		(ppb)	(ppb)
M 14 Aroclor-1221				2720040299		500.000	500
15 Aroclor 1221 (1)	4.225	4.225	0.000	289451476		500.000	500
16 Aroclor 1221 (2)	5.276	5.276	0.000	561390552		500.000	500
17 Aroclor 1221 (3)	5.488	5.488	0.000	342228802		500.000	500
18 Aroclor 1221 (4)	5.546	5.546	0.000	1339271466		500.000	500
19 Aroclor 1221 (5)	6.204	6.204	0.000	187698003		500.000	500
M 38 Aroclor-1254				13497939576		500.000	500
39 Aroclor 1254 (1)	7.771	7.771	0.000	1651211551		500.000	500
40 Aroclor 1254 (2)	8.077	8.077	0.000	3378198230		500.000	500
41 Arcolor 1254 (3)	8.545	8.545	0.000	3573205857		500.000	500
42 Aroclor 1254 (4)	8.865	8.865	0.000	2817178432		500.000	500
43 Aroclor 1254 (5)	9.189	9.189	0.000	2078145506		500.000	500

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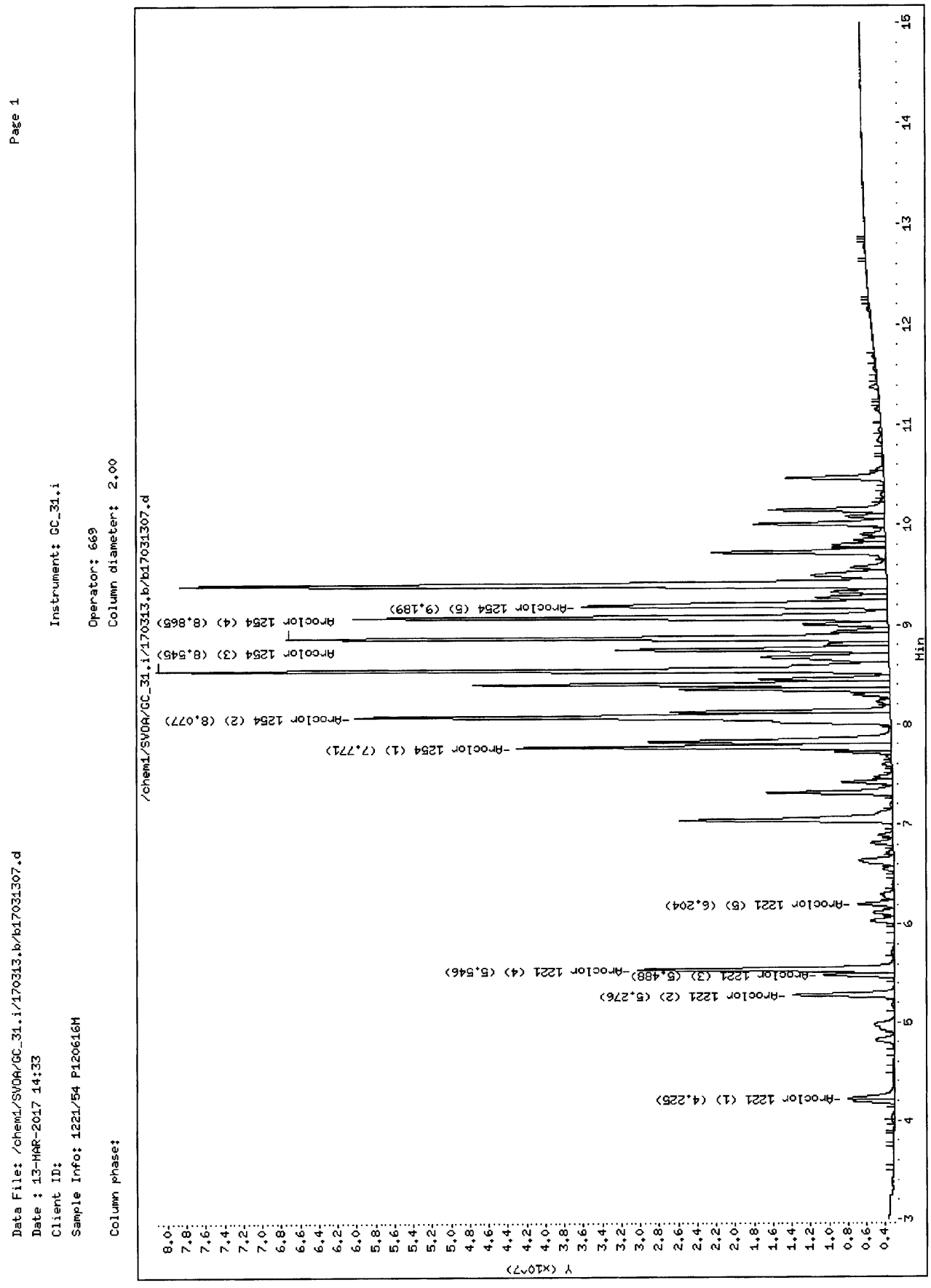

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031308.d Page 1
Report Date: 13-Mar-2017 17:04

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031308.d
Lab Smp Id:
Inj Date : 13-MAR-2017 14:52
Operator : 669 Inst ID: GC_31.i
Smp Info : 1232/62 P120616N
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:04 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 15:30 Cal File: b17031310.d
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1232_1262.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE		(ppb)	(ppb)
M 20 Aroclor-1232				4594149572		500.000	500
21 Aroclor 1232 (1)	5.545	5.545	0.000	933625479		500.000	500
22 Aroclor 1232 (2)	6.034	6.034	0.000	758047813		500.000	500
23 Aroclor 1232 (3)	6.641	6.641	0.000	1701825021		500.000	500
24 Aroclor 1232 (4)	6.810	6.810	0.000	733746727		500.000	500
25 Aroclor 1232 (5)	6.889	6.889	0.000	466904532		500.000	500
M 44 Aroclor-1262				14908486980		500.000	500
45 Aroclor 1262 (1)	9.068	9.068	0.000	3060886818		500.000	500
46 Aroclor 1262 (2)	9.515	9.515	0.000	4698554658		500.000	500
47 Aroclor 1262 (3)	9.796	9.796	0.000	3354372545		500.000	500
48 Aroclor 1262 (4)	10.870	10.870	0.000	1157199955		500.000	500
49 Aroclor 1262 (5)	11.155	11.155	0.000	2637473004		500.000	500

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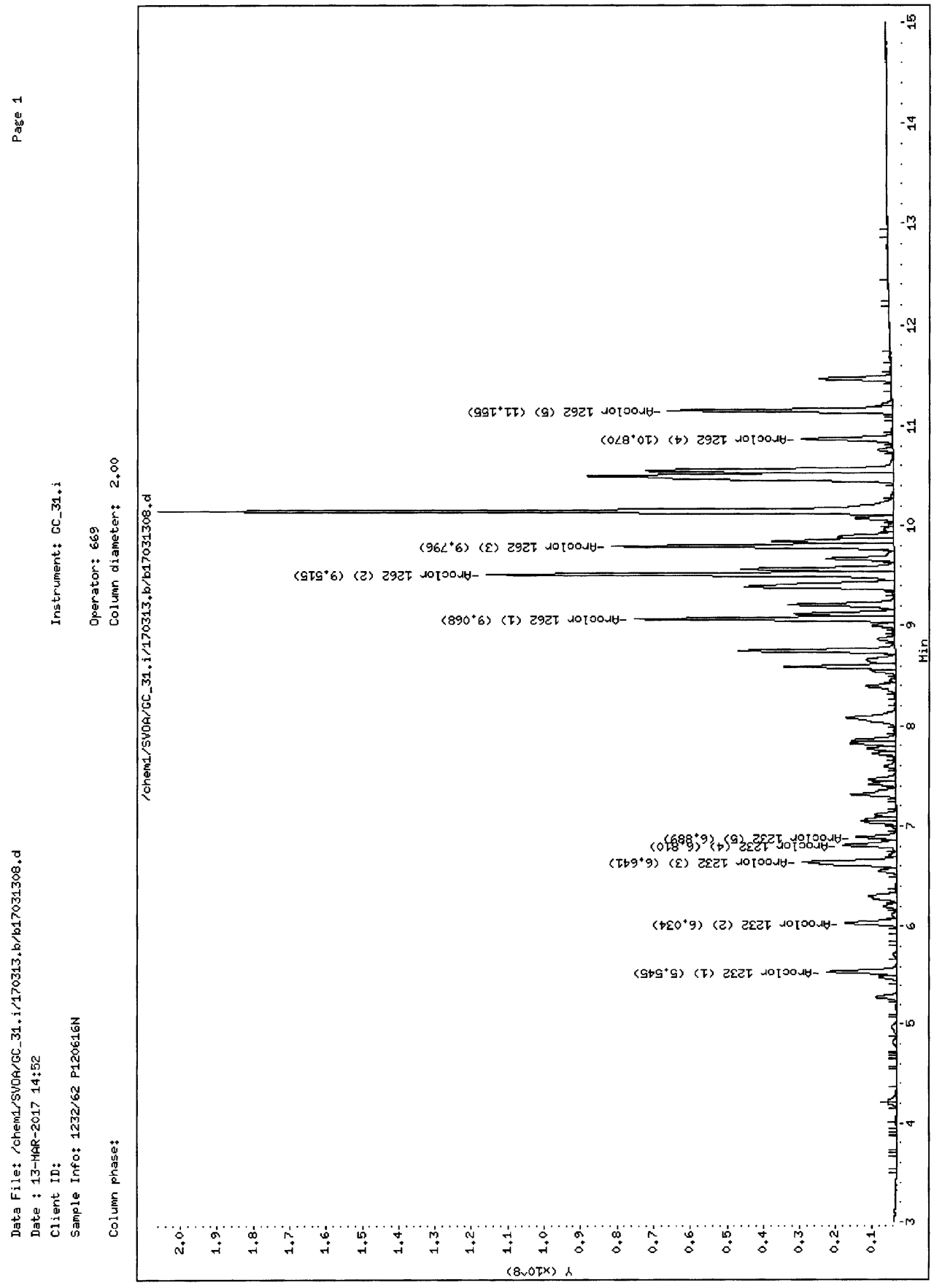

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031309.d Page 1
Report Date: 13-Mar-2017 17:04

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031309.d
Lab Smp Id:
Inj Date : 13-MAR-2017 15:11
Operator : 669 Inst ID: GC_31.i
Smp Info : 1248/68 P120616O
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:04 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 15:30 Cal File: b17031310.d
Als bottle: 9 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1248_1268.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
M 32 Aroclor-1248				6030947357	500.000	500
33 Aroclor 1248 (1)	6.639	6.639	0.000	1911564157	500.000	500
34 Arcolor 1248 (2)	6.812	6.812	0.000	750576752	500.000	500
35 Aroclor 1248 (3)	6.889	6.889	0.000	428480818	500.000	500
36 Aroclor 1248 (4)	7.314	7.314	0.000	1900262304	500.000	500
37 Aroclor 1248 (5)	7.419	7.419	0.000	1040063326	500.000	500
M 50 Aroclor-1268				51724611955	500.000	500
51 Aroclor 1268 (1)	10.498	10.498	0.000	10081944554	500.000	500
52 Aroclor 1268 (2)	10.543	10.543	0.000	8675862715	500.000	500
53 Aroclor 1268 (3)	10.758	10.758	0.000	7516974399	500.000	500
54 Aroclor 1268 (4)	11.153	11.153	0.000	3000639760	500.000	500
55 Aroclor 1268 (5)	11.471	11.471	0.000	22449190525	500.000	500

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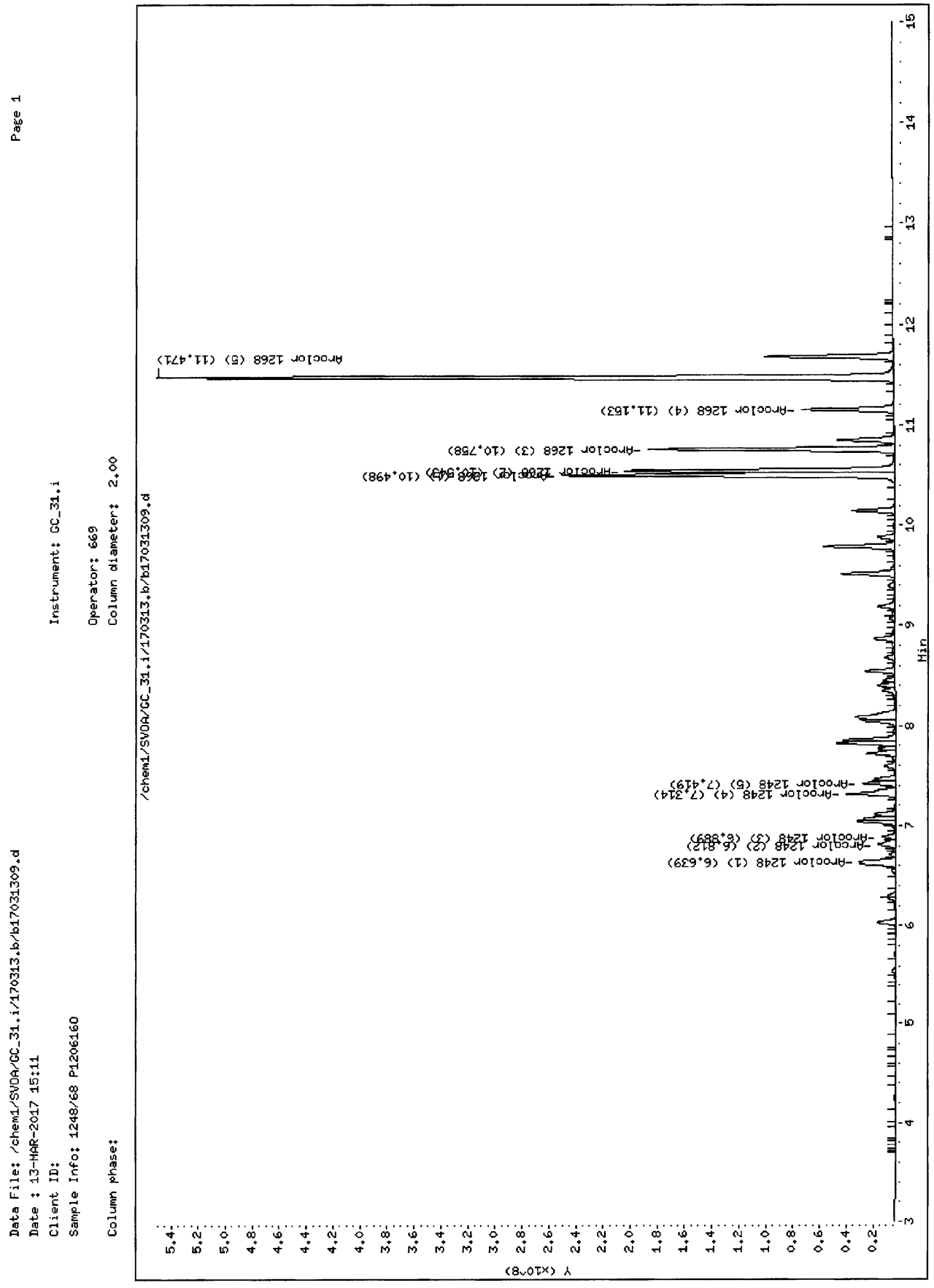
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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031310.d Page 1
Report Date: 13-Mar-2017 17:04

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031310.d
Lab Smp Id:
Inj Date : 13-MAR-2017 15:30
Operator : 669 Inst ID: GC_31.i
Smp Info : 1242 P120616P
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:04 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 15:30 Cal File: b17031310.d
Als bottle: 10 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1242.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
M 26 Aroclor-1242				6798413887	500.000	500
27 Aroclor 1242 (1)	5.545	5.545	0.000	672480543	500.000	500
28 Aroclor 1242 (2)	6.033	6.033	0.000	1257922812	500.000	500
29 Aroclor 1242 (3)	6.640	6.640	0.000	2860319556	500.000	500
30 Aroclor 1242 (4)	6.810	6.810	0.000	1238318997	500.000	500
31 Aroclor 1242 (5)	6.888	6.888	0.000	769371979	500.000	500

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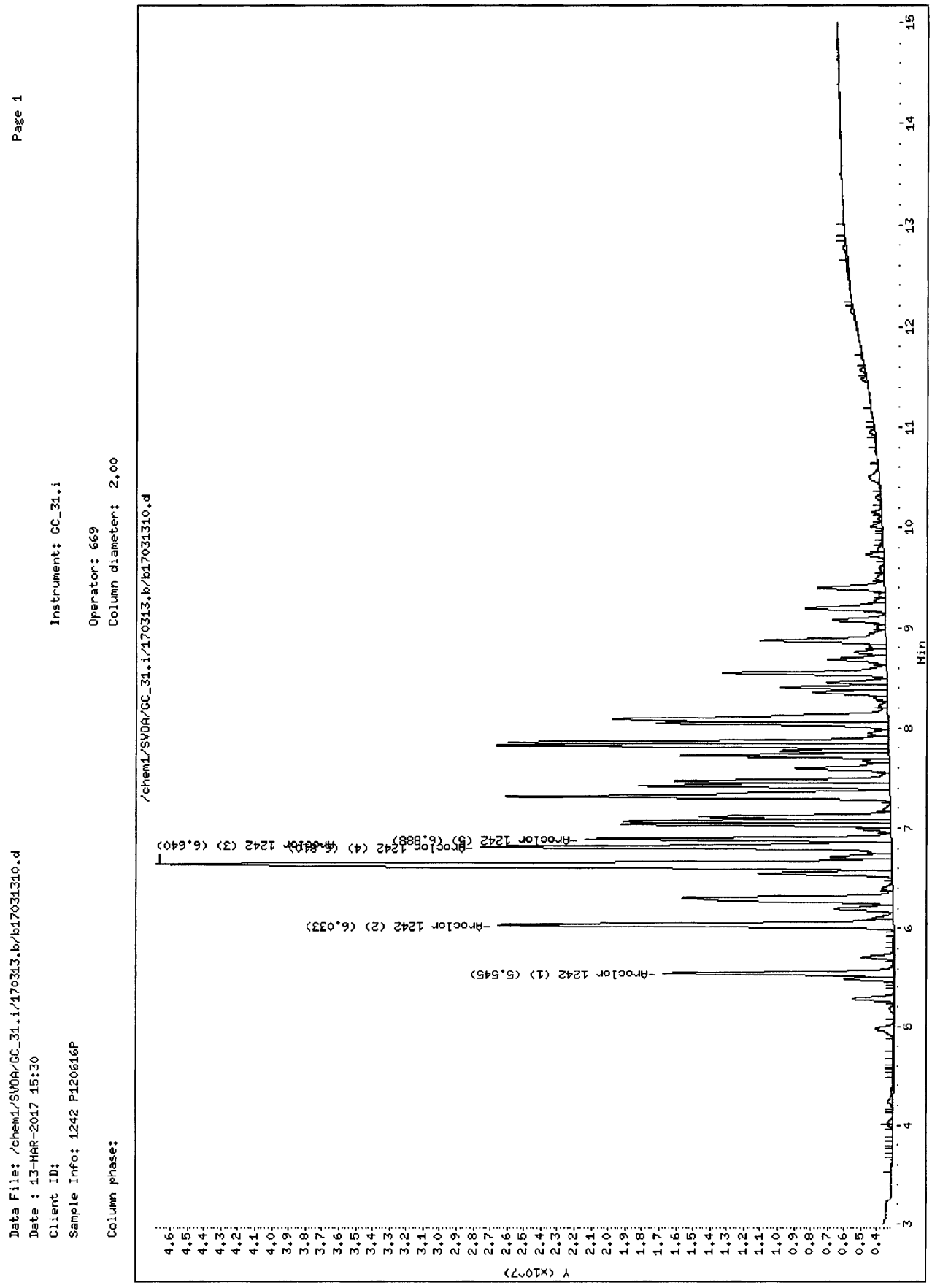

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EPA METHOD 8082
PCB

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **17-03-0638**
INSTRUMENT: GC 31
EXTRACTION : EPA 3510C
D/T EXTRACTED: 2017-03-09 00:00

ANALYZED BY: 669
D/T ANALYZED: 2017-03-13 17:22
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_31/170313/b1703131617031316

 # 1 **CLIENT SAMPLE NUMBER: EB3-2017-03-08**

LCS/MB BATCH: 170309L03
MS/MSD BATCH:
UNITS: ug/L

SAMPLE VOLUME / WEIGHT: DEFAULT: 1,000.00 ml / ACTUAL: 1,050.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
ADJUSTMENT RATIO TO PF: 0.95

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Aroclor-1016	0.000	1.00	ND	0.95	
Aroclor-1221	0.000	1.00	ND	0.95	
Aroclor-1232	0.000	1.00	ND	0.95	
Aroclor-1242	0.000	1.00	ND	0.95	
Aroclor-1248	0.000	1.00	ND	0.95	
Aroclor-1254	0.000	1.00	ND	0.95	
Aroclor-1260	0.000	1.00	ND	0.95	
Aroclor-1262	0.000	1.00	ND	0.95	
Aroclor-1268	0.000	1.00	ND	0.95	

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031316.d Page 1
Report Date: 13-Mar-2017 17:46

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031316.d
Lab Smp Id:
Inj Date : 13-MAR-2017 17:22
Operator : 669 Inst ID: GC_31.i
Smp Info : 17-03-0638-1
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:23 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 15:30 Cal File: b17031310.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (uG)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.022	5.019	0.003	9337047417	79.9502	80.0
M	2 Aroclor-1016	Compound Not Detected.					
	3 Aroclor 1016 (1)	Compound Not Detected.					
	4 Aroclor 1016 (2)	Compound Not Detected.					
	5 Aroclor 1016 (3)	Compound Not Detected.					
	6 Aroclor 1016 (4)	Compound Not Detected.					
	7 Aroclor 1016 (5)	Compound Not Detected.					
M	8 Aroclor-1260	Compound Not Detected.					
	9 Aroclor 1260 (1)	Compound Not Detected.					
	10 Aroclor 1260 (2)	Compound Not Detected.					
	11 Aroclor 1260 (3)	Compound Not Detected.					
	12 Aroclor 1260 (4)	Compound Not Detected.					
	13 Aroclor 1260 (5)	Compound Not Detected.					
M	14 Aroclor-1221	Compound Not Detected.					
	15 Aroclor 1221 (1)	Compound Not Detected.					

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031316.d Page 2
Report Date: 13-Mar-2017 17:46

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (uG)
	16 Aroclor 1221 (2)	Compound Not Detected.					
	17 Aroclor 1221 (3)	Compound Not Detected.					
	18 Aroclor 1221 (4)	Compound Not Detected.					
	19 Aroclor 1221 (5)	Compound Not Detected.					
M	20 Aroclor-1232	Compound Not Detected.					
	21 Aroclor 1232 (1)	Compound Not Detected.					
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
$	56 Decachlorobiphenyl	11.680	11.679	0.001	10678268365	89.5287	89.5

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031316.d

Page 1

Date : 13-MAR-2017 17:22

Client ID:

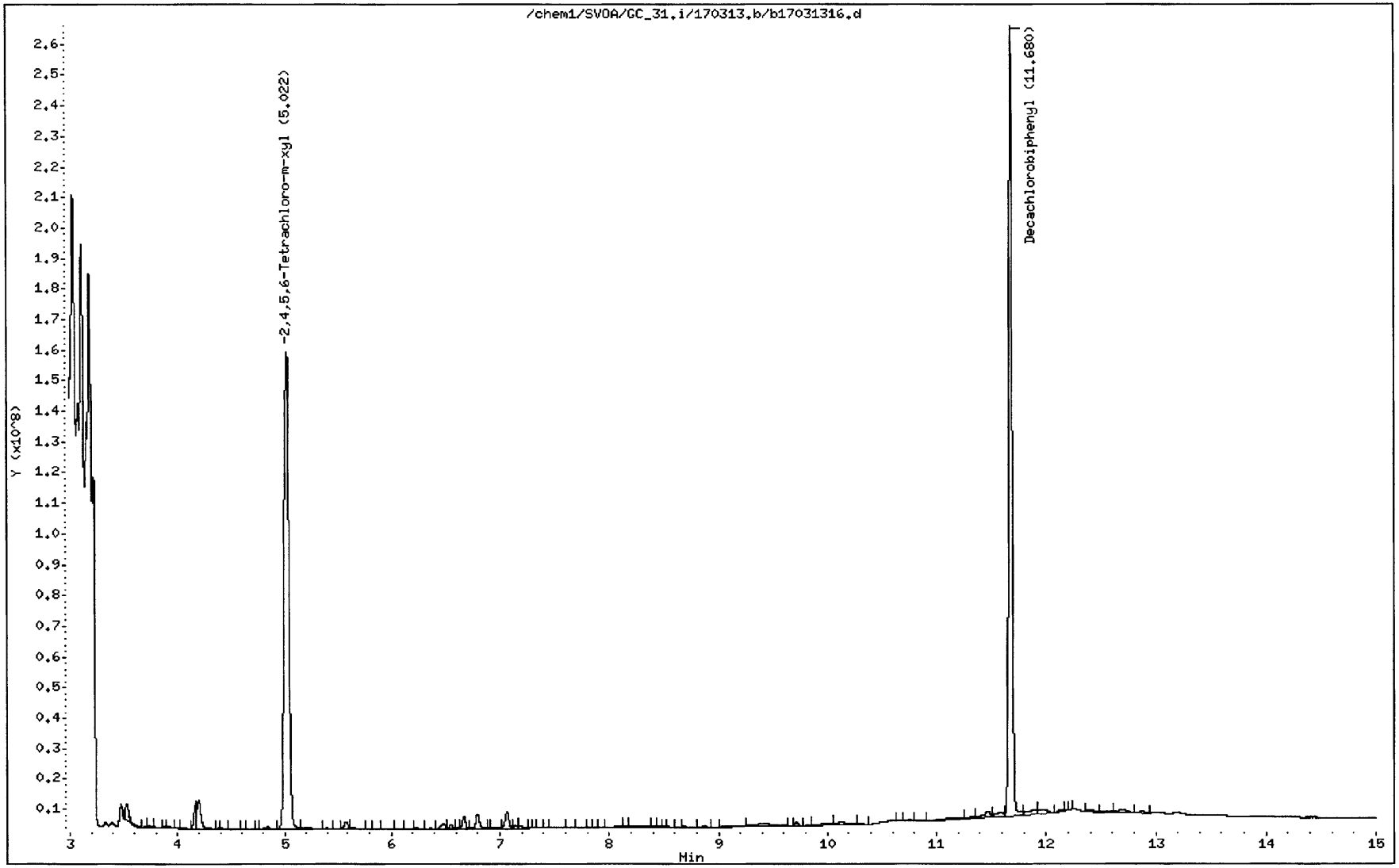
Instrument: GC_31.i

Sample Info: 17-03-0638-1

Operator: 669

Column phase:

Column diameter: 2.00



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EPA METHOD 8082
PCB

Quality Control

Method Blank
LCS/LCSD
MS/MSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

MB SAMPLE ID:	**099-12-533-1260**	ANALYZED BY:	669
MB BATCH ID:	170309L03	D/T ANALYZED:	2017-03-13 16:07
INSTRUMENT:	GC 31	REVIEWED BY:	27
EXTRACTION:	EPA 3510C	D/T REVIEWED:	2017-03-13 17:29
D/T EXTRACTED:	2017-03-09 00:00	MATRIX:	Water

DATA FILE: /chem1/SVOA/GC_31/170313/b1703131217031312

CLIENT WORK ORDER: 17-03-0638

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB3-2017-03-08	2017-03-13 17:22	/chem1/SVOA/GC_31/170313/b1703131617031316

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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER:	**099-12-533**	ANALYZED BY:	669
INSTRUMENT:	GC 31	D/T ANALYZED:	2017-03-13 16:07
EXTRACTION :	EPA 3510C	REVIEWED BY:	27
D/T EXTRACTED:	2017-03-09 00:00	D/T REVIEWED:	2017-03-13 17:29

DATA FILE: /chem1/SVOA/GC_31/170313/b1703131217031312

 # MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH:	170309L03	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 / ACTUAL: 1.00
MS/MSD BATCH:		FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
UNITS:	ug/L	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Aroclor-1016	0.000	1.00	ND	1.0	
Aroclor-1221	0.000	1.00	ND	1.0	
Aroclor-1232	0.000	1.00	ND	1.0	
Aroclor-1242	0.000	1.00	ND	1.0	
Aroclor-1248	0.000	1.00	ND	1.0	
Aroclor-1254	0.000	1.00	ND	1.0	
Aroclor-1260	0.000	1.00	ND	1.0	
Aroclor-1262	0.000	1.00	ND	1.0	
Aroclor-1268	0.000	1.00	ND	1.0	

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LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

LCS/LCSD SAMPLE ID: 099-12-533-1260
LCS/LCSD BATCH: 170309L03
INSTRUMENTS:
LCS: GC 31
LCSD: GC 31

EXTRACTION: EPA 3510C
D/T EXTRACTED:
LCS: 2017-03-09 00:00
LCSD: 2017-03-09 00:00

ANALYZED BY: 669
D/T ANALYZED:
LCS: 2017-03-13 16:25
LCSD: 2017-03-13 16:44
REVIEWED BY: 27
D/T REVIEWED: 2017-03-13 17:29

COMMENT:

COMPOUND	ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Aroclor-1016	2.000	2.520	126	2.240	112	50-135	12	0-25	PASS	
Aroclor-1260	2.000	2.220	111	1.940	97	50-135	13	0-25	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
LCS	17031313	/chem1/SVOA/GC_31/170313/b17031313
LCSD	17031314	/chem1/SVOA/GC_31/170313/b17031314

SURROGATE RECOVERIES
FOR METHOD: EPA 8082

WORK ORDER: 17-03-0638
BATCH ID:
LCS/MB: 170309L03
MS:
EXTRACTION : EPA 3510C

REVIEWED BY: M
D/T REVIEWED:

1 CLIENT SAMPLE NUMBER : EB3-2017-03-08

INSTRUMENT: GC 31
D/T EXTRACTED: 2017-03-09 00:00
DATA FILE: /chem1/SVOA/GC_31/170313/b1703131617031316

ANALYZED BY: 669
D/T ANALYZED 2017-03-13 17:22

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	90	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	80	50-135	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 31
D/T EXTRACTED: 2017-03-09 00:00
DATA FILE: /chem1/SVOA/GC_31/170313/b1703131217031312

ANALYZED BY: 669
D/T ANALYZED 2017-03-13 16:07

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	82	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	92	50-135	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 31
D/T EXTRACTED: 2017-03-09 00:00
DATA FILE: /chem1/SVOA/GC_31/170313/b1703131317031313

ANALYZED BY: 669
D/T ANALYZED 2017-03-13 16:25

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	77	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	75	50-135	PASS	

LCD CLIENT SAMPLE NUMBER : Lab Control Sample Duplicate

INSTRUMENT: GC 31
D/T EXTRACTED: 2017-03-09 00:00
DATA FILE: /chem1/SVOA/GC_31/170313/b1703131417031314

ANALYZED BY: 669
D/T ANALYZED 2017-03-13 16:44

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	72	50-135	PASS	
2,4,5,6-Tetrachloro-m-Xylene	70	50-135	PASS	

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031312.d Page 1
Report Date: 13-Mar-2017 17:23

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031312.d
Lab Smp Id:
Inj Date : 13-MAR-2017 16:07
Operator : 669 Inst ID: GC_31.i
Smp Info : MB 170309L03
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:23 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 15:30 Cal File: b17031310.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

		Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (uG)
$	1	2,4,5,6-Tetrachloro-m-xylene	5.020	5.019	0.001	10687475899	91.5135	91.5
M	2	Aroclor-1016	Compound Not Detected.					
	3	Aroclor 1016 (1)	Compound Not Detected.					
	4	Aroclor 1016 (2)	Compound Not Detected.					
	5	Aroclor 1016 (3)	Compound Not Detected.					
	6	Aroclor 1016 (4)	Compound Not Detected.					
	7	Aroclor 1016 (5)	Compound Not Detected.					
M	8	Aroclor-1260	Compound Not Detected.					
	9	Aroclor 1260 (1)	Compound Not Detected.					
	10	Aroclor 1260 (2)	Compound Not Detected.					
	11	Aroclor 1260 (3)	Compound Not Detected.					
	12	Aroclor 1260 (4)	Compound Not Detected.					
	13	Aroclor 1260 (5)	Compound Not Detected.					
M	14	Aroclor-1221	Compound Not Detected.					
	15	Aroclor 1221 (1)	Compound Not Detected.					

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031312.d Page 2
Report Date: 13-Mar-2017 17:23

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (uG)
	16 Aroclor 1221 (2)	Compound Not Detected.					
	17 Aroclor 1221 (3)	Compound Not Detected.					
	18 Aroclor 1221 (4)	Compound Not Detected.					
	19 Aroclor 1221 (5)	Compound Not Detected.					
M	20 Aroclor-1232	Compound Not Detected.					
	21 Aroclor 1232 (1)	Compound Not Detected.					
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
$	56 Decachlorobiphenyl	11.680	11.679	0.001	9814255675	82.2846	82.3

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031312.d

Page 1

Date : 13-MAR-2017 16:07

Client ID:

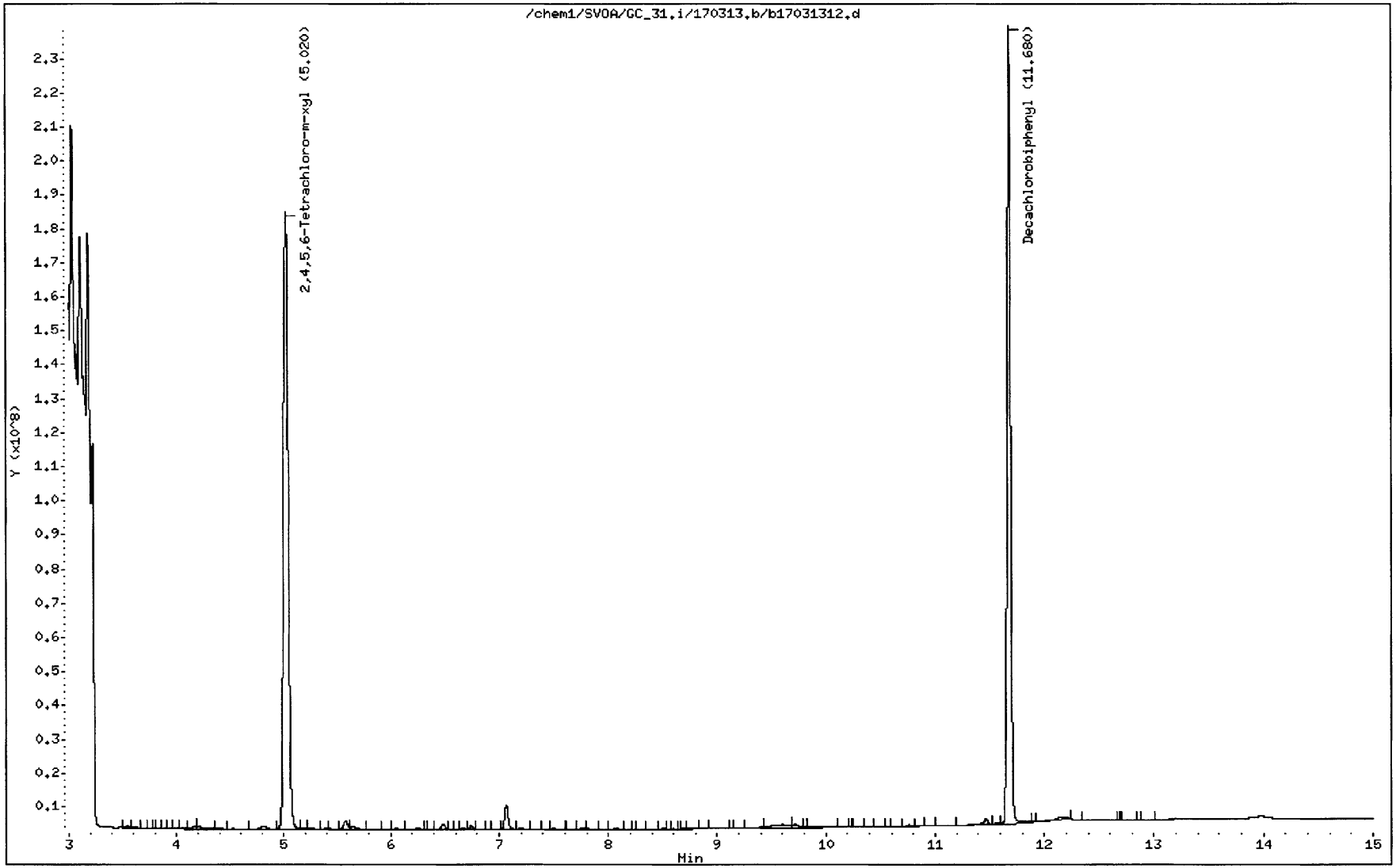
Instrument: GC_31.i

Sample Info: MB 170309L03

Operator: 669

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031313.d Page 1
Report Date: 13-Mar-2017 17:23

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031313.d
Lab Smp Id:
Inj Date : 13-MAR-2017 16:25
Operator : 669 Inst ID: GC_31.i
Smp Info : LCS 170309L03
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:23 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 15:30 Cal File: b17031310.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (uG)
$ 1	2,4,5,6-Tetrachloro-m-xylene	5.022	5.019	0.003	8754177364	74.9593	75.0
M 2	Aroclor-1016				4200476708	251.703	252
3	Aroclor 1016 (1)	5.554	5.548	0.006	715356219	426.166	426
4	Aroclor 1016 (2)	6.036	6.035	0.001	762747502	249.139	249
5	Aroclor 1016 (3)	6.643	6.642	0.001	1559477825	221.553	222
6	Aroclor 1016 (4)	6.812	6.812	0.000	670317718	221.812	222
7	Aroclor 1016 (5)	6.890	6.890	0.000	492577444	261.003	261
M 8	Aroclor-1260				5355568646	222.093	222
9	Aroclor 1260 (1)	9.068	9.069	-0.001	2006737708	245.937	246
10	Aroclor 1260 (2)	9.514	9.515	-0.001	1391884611	223.797	224
11	Aroclor 1260 (3)	9.796	9.796	0.000	828789498	164.066	164
12	Aroclor 1260 (4)	10.867	10.868	-0.001	354117280	228.170	228
13	Aroclor 1260 (5)	11.152	11.153	-0.001	774039549	247.174	247
$ 56	Decachlorobiphenyl	11.681	11.679	0.002	9166345055	76.8524	76.8

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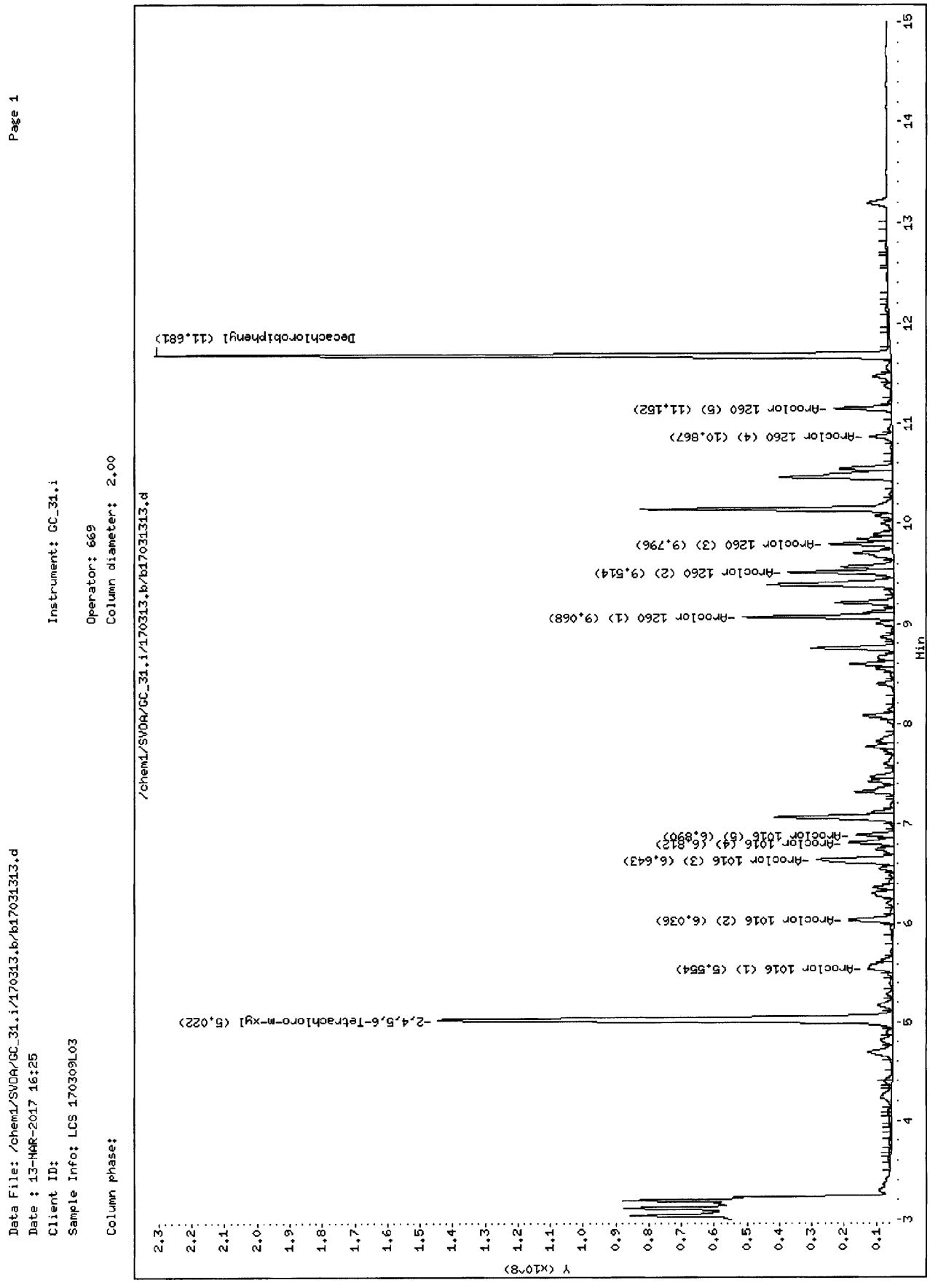

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031314.d Page 1
Report Date: 13-Mar-2017 17:23

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031314.d
Lab Smp Id:
Inj Date : 13-MAR-2017 16:44
Operator : 669 Inst ID: GC_31.i
Smp Info : LCSD 170309L03
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:23 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 15:30 Cal File: b17031310.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(uG)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.016	5.019	-0.003	8177493838	70.0213	70.0
M	2 Aroclor-1016				3734719827	223.794	224
	3 Aroclor 1016 (1)	5.547	5.548	-0.001	535670723	319.120	319
	4 Aroclor 1016 (2)	6.033	6.035	-0.002	710584537	232.101	232
	5 Aroclor 1016 (3)	6.641	6.642	-0.001	1418090131	201.466	201
	6 Aroclor 1016 (4)	6.810	6.812	-0.002	610117970	201.891	202
	7 Aroclor 1016 (5)	6.888	6.890	-0.002	460256466	243.877	244
M	8 Aroclor-1260				4692151071	194.581	194
	9 Aroclor 1260 (1)	9.067	9.069	-0.002	1778908153	218.015	218
	10 Aroclor 1260 (2)	9.514	9.515	-0.001	1209810920	194.522	194
	11 Aroclor 1260 (3)	9.795	9.796	-0.001	723119935	143.148	143
	12 Aroclor 1260 (4)	10.867	10.868	-0.001	307173057	197.922	198
	13 Aroclor 1260 (5)	11.151	11.153	-0.002	673139006	214.953	215
$	56 Decachlorobiphenyl	11.680	11.679	0.001	8647243499	72.5001	72.5

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031314.d

Page 1

Date : 13-MAR-2017 16:44

Client ID:

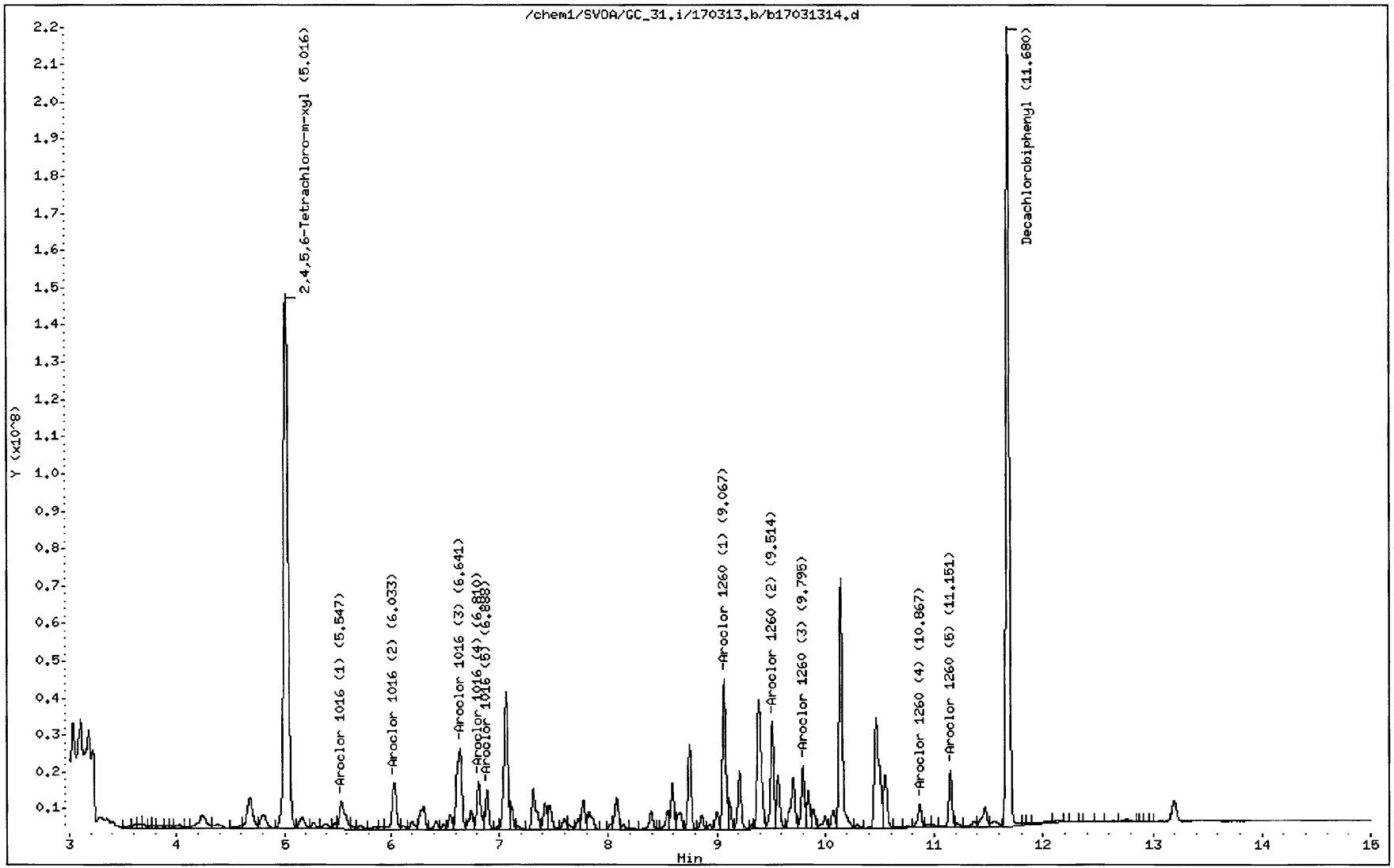
Instrument: GC_31.i

Sample Info: LCSD 170309L03

Operator: 669

Column phase:

Column diameter: 2.00



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EPA METHOD 8082
PCB

Continuing Calibration

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

BATCH ID: **170313A032** ANALYZED BY: 669
INSTRUMENT: GC 31

WORK ORDER: **099-12-532** REVIEWED BY: 27
MATRIX: Water D/T REVIEWED: 2017-03-13 17:29

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
9417	Daily Calibration	2017-03-13 15:48	/chem1/SVOA/GC_31/170313/b1703131117031311

WORK ORDER: **17-03-0638** REVIEWED BY:
MATRIX: Water D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1	EB3-2017-03-08	2017-03-13 17:22	/chem1/SVOA/GC_31/170313/b1703131617031316

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: **099-12-532-9417-5154**
BATCH ID:
INITIAL: 170313I003
CCV: 170313A032
INSTRUMENT: GC 31

DATA FILE: /chem1/SVOA/GC_31/170313/b1703131117031311

ANALYZED BY: 669
D/T ANALYZED:
INITIAL: 2017-03-13 12:39
CCV: 2017-03-13 15:48
REVIEWED BY: 27
D/T REVIEWED: 2017-03-13 17:29

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	16688226.948	15866585.200			5	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	24114098.005	23013477.166			5	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_31.i/170313.b/b17031311.d
Report Date: 03/13/2017 17:23

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_31.i
Sample Name: PCB-CCV P021517I
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m

Injection Date and Time: 13-MAR-2017 15:48
Initial Calibration Date(s): 20-FEB-2017 13-MAR-2017
Initial Calibration Time(s): 15:04 15:30

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Aroclor-1016	16688226.948	15866585.200	0.01	5	15	Averaged
Aroclor 1016 (1)	1678585.818	1610368.628	0.01	4	15	Averaged
Aroclor 1016 (2)	3061531.914	2937885.438	0.01	4	15	Averaged
Aroclor 1016 (3)	7038852.768	6674112.824	0.01	5	15	Averaged
Aroclor 1016 (4)	3022010.657	2856934.630	0.01	5	15	Averaged
Aroclor 1016 (5)	1887245.791	1787283.680	0.01	5	15	Averaged
Aroclor 1260 (4)	1551988.057	1620775.310	0.01	-4	15	Averaged
Aroclor-1260	24114098.004	23013477.167	0.01	5	15	Averaged
Aroclor 1260 (5)	3131560.155	3083029.038	0.01	2	15	Averaged
Aroclor 1260 (1)	8159572.295	7691163.929	0.01	6	15	Averaged
Aroclor 1260 (2)	6219409.574	5814564.356	0.01	7	15	Averaged
Aroclor 1260 (3)	5051567.924	4803944.534	0.01	5	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,4,5,6-Tetrachloro-m-xylene	116785794.271	112155735.695	0.01	4	15	Averaged
Decachlorobiphenyl	119272079.193	108162432.144	0.01	9	15	Averaged

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031311.d Page 1
Report Date: 13-Mar-2017 17:23

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031311.d
Lab Smp Id:
Inj Date : 13-MAR-2017 15:48
Operator : 669 Inst ID: GC_31.i
Smp Info : PCB-CCV P021517I
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 17:23 uhhn Quant Type: ESTD
Cal Date : 13-MAR-2017 15:30 Cal File: b17031310.d
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
$ 1	2,4,5,6-Tetrachloro-m-xylene	5.019	5.019	0.000	11215573570	100.000	96.0
M 2	Aroclor-1016				7933292600	500.000	475
3	Aroclor 1016 (1)	5.548	5.548	0.000	805184314	500.000	480
4	Aroclor 1016 (2)	6.035	6.035	0.000	1468942719	500.000	480
5	Aroclor 1016 (3)	6.642	6.642	0.000	3337056412	500.000	474
6	Aroclor 1016 (4)	6.812	6.812	0.000	1428467315	500.000	473
7	Aroclor 1016 (5)	6.890	6.890	0.000	893641840	500.000	474
M 8	Aroclor-1260				11506738583	500.000	477
9	Aroclor 1260 (1)	9.069	9.069	0.000	3845581965	500.000	471
10	Aroclor 1260 (2)	9.515	9.515	0.000	2907282178	500.000	467
11	Aroclor 1260 (3)	9.796	9.796	0.000	2401972267	500.000	475
12	Aroclor 1260 (4)	10.868	10.868	0.000	810387655	500.000	522
13	Aroclor 1260 (5)	11.153	11.153	0.000	1541514519	500.000	492
$ 56	Decachlorobiphenyl	11.679	11.679	0.000	10816243214	100.000	90.7

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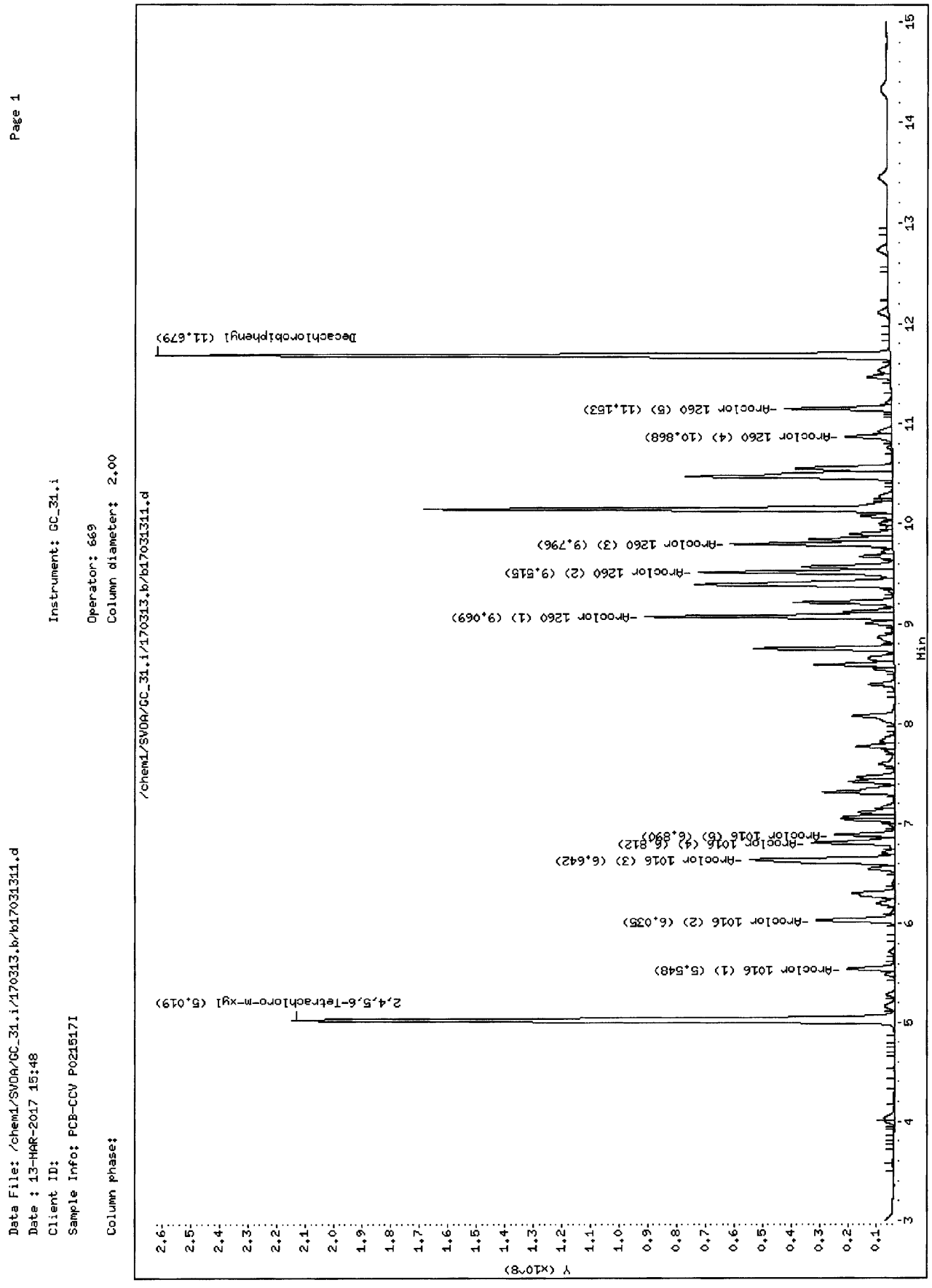

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: 099-12-532-9418-5154

BATCH ID:
INITIAL: 170313I003
CCV: 170313A033
INSTRUMENT: GC 31

DATA FILE: /chem1/SVOA/GC_31/170313/b1703131717031317

ANALYZED BY: 1028
D/T ANALYZED:
INITIAL: 2017-03-13 12:39
CCV: 2017-03-13 17:41
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	16688226.948	16029823.250			4	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	24114098.005	23315738.852			3	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_31.i/170313.b/b17031317.d
Report Date: 03/13/2017 18:07

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_31.i
Sample Name: PCB-CCV P021517I
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m

Injection Date and Time: 13-MAR-2017 17:41
Initial Calibration Date(s): 20-FEB-2017 13-MAR-2017
Initial Calibration Time(s): 15:04 15:30

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Aroclor-1016	16688226.948	16029823.249	0.01	4	15	Averaged
Aroclor 1016 (1)	1678585.818	1624218.262	0.01	3	15	Averaged
Aroclor 1016 (2)	3061531.914	2954483.460	0.01	3	15	Averaged
Aroclor 1016 (3)	7038852.768	6744693.103	0.01	4	15	Averaged
Aroclor 1016 (4)	3022010.657	2896183.932	0.01	4	15	Averaged
Aroclor 1016 (5)	1887245.791	1810244.490	0.01	4	15	Averaged
Aroclor 1260 (4)	1551988.057	1627649.222	0.01	-5	15	Averaged
Aroclor-1260	24114098.004	23315738.852	0.01	3	15	Averaged
Aroclor 1260 (5)	3131560.155	3066390.308	0.01	2	15	Averaged
Aroclor 1260 (1)	8159572.295	7866591.675	0.01	4	15	Averaged
Aroclor 1260 (2)	6219409.574	5908575.332	0.01	5	15	Averaged
Aroclor 1260 (3)	5051567.924	4846532.313	0.01	4	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,4,5,6-Tetrachloro-m-xylene	116785794.271	112448298.819	0.01	4	15	Averaged
Decachlorobiphenyl	119272079.193	103995389.962	0.01	13	15	Averaged

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Data File: /chem1/SVOA/GC_31.i/170313.b/b17031317.d Page 1
Report Date: 13-Mar-2017 18:06

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170313.b/b17031317.d
Lab Smp Id:
Inj Date : 13-MAR-2017 17:41
Operator : 669 Inst ID: GC_31.i
Smp Info : PCB-CCV P021517I
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170313.b/b8082-n2.m
Meth Date : 13-Mar-2017 18:06 i9h5 Quant Type: ESTD
Cal Date : 13-MAR-2017 15:30 Cal File: b17031310.d
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.018	5.018	0.000	11244829882	100.000	96.3
M	2 Aroclor-1016				8014911625	500.000	480
	3 Aroclor 1016 (1)	5.546	5.546	0.000	812109131	500.000	484
	4 Aroclor 1016 (2)	6.033	6.033	0.000	1477241730	500.000	482
	5 Aroclor 1016 (3)	6.641	6.641	0.000	3372346551	500.000	479
	6 Aroclor 1016 (4)	6.810	6.810	0.000	1448091966	500.000	479
	7 Aroclor 1016 (5)	6.889	6.889	0.000	905122245	500.000	480
M	8 Aroclor-1260				11657869426	500.000	483
	9 Aroclor 1260 (1)	9.067	9.067	0.000	3933295837	500.000	482
	10 Aroclor 1260 (2)	9.513	9.513	0.000	2954287666	500.000	475
	11 Aroclor 1260 (3)	9.794	9.794	0.000	2423266156	500.000	480
	12 Aroclor 1260 (4)	10.867	10.867	0.000	813824611	500.000	524
	13 Aroclor 1260 (5)	11.151	11.151	0.000	1533195154	500.000	490
$	56 Decachlorobiphenyl	11.679	11.679	0.000	10399538996	100.000	87.2

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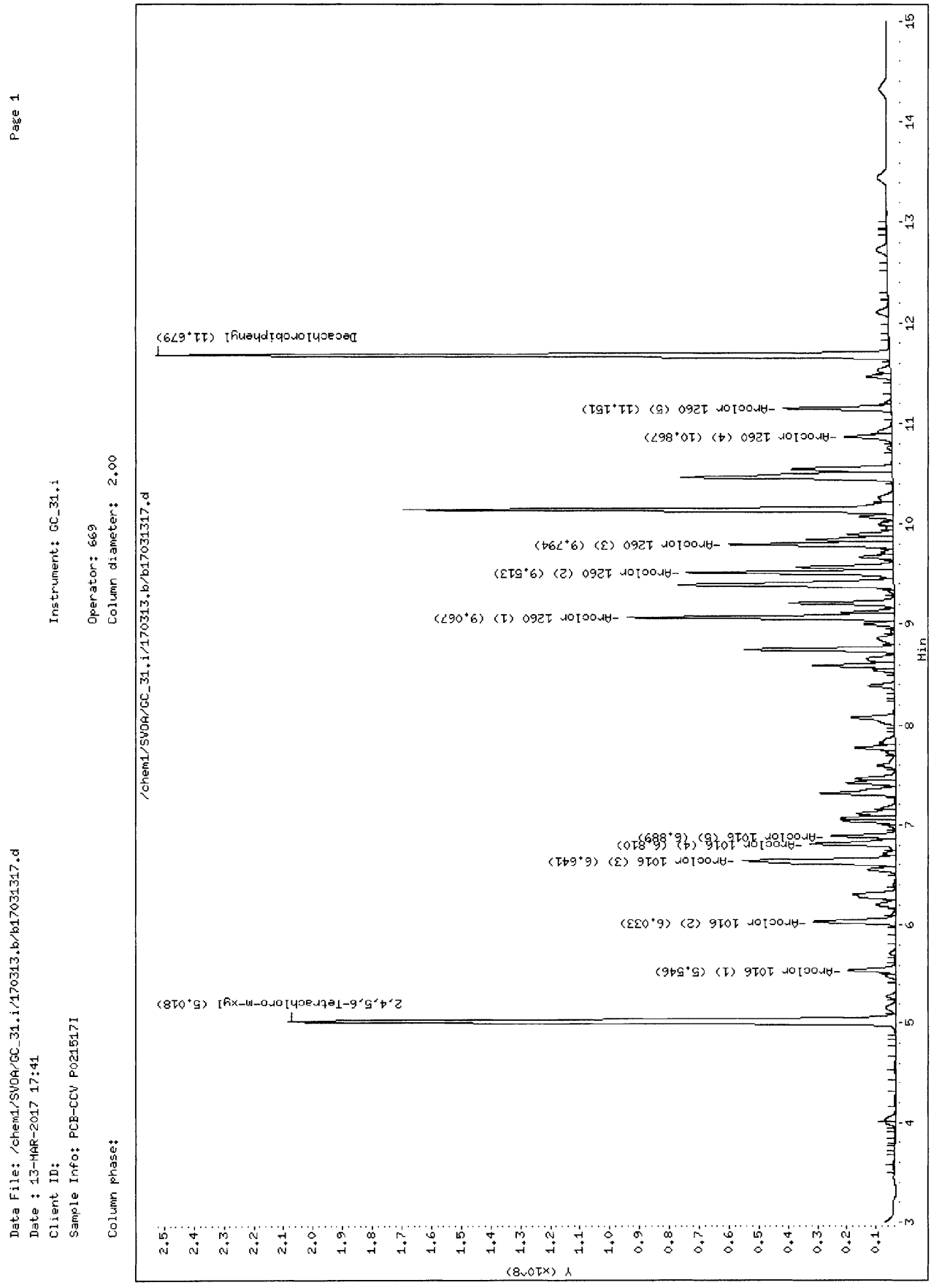

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EPA METHOD 8082
PCB

Run Logs

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Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 1	ICAL-1 P021517F	8082-N2	1	Sample		17031301
2	Vial 2	ICAL-2 P021517E	8082-N2	1	Sample		17031302
3	Vial 3	ICAL-3 P021517D	8082-N2	1	Sample		17031303
4	Vial 4	ICAL-4 P021517C	8082-N2	1	Sample		17031304
5	Vial 5	ICAL-5 P021517B	8082-N2	1	Sample		17031305
6	Vial 6	ICV 500 P021517H	8082-N2	1	Sample		17031306
7	Vial 7	1221/54 P120616M	8082-N2	1	Sample		17031307
8	Vial 8	1232/62 P120616N	8082-N2	1	Sample		17031308
9	Vial 9	1248/68 P120616O	8082-N2	1	Sample		17031309
10	Vial 10	1242 P120616P	8082-N2	1	Sample		17031310
11	Vial 11	PCB-CCV P021517I	8082-N2	1	Sample		17031311
12	Vial 12	MB 170309L03	8082-N2	1	Sample		17031312
13	Vial 13	LCS 170309L03	8082-N2	1	Sample		17031313
14	Vial 14	LCSD 170309L03	8082-N2	1	Sample		17031314
15	Vial 15	17-03-0707-1 10X	8082-N2	1	Sample		17031315
16	Vial 16	17-03-0638-1	8082-N2	1	Sample		17031316
17	Vial 11	PCB-CCV P021517I	8082-N2	1	Sample		17031317
18	Vial 17	17-03-0572-1 608	8082-N2	1	Sample		17031318
19	Vial 18	17-03-0550-14	8082-N2	1	Sample		17031319
20	Vial 19	17-03-0634-1	8082-N2	1	Sample		17031320
21	Vial 20	MB 170310L02	8082-N2	1	Sample		17031321
22	Vial 21	LCS 170310L02	8082-N2	1	Sample		17031322
23	Vial 22	LCSD 170310L02	8082-N2	1	Sample		17031323
24	Vial 23	17-03-0683-19	8082-N2	1	Sample		17031324
25	Vial 24	TEST 1	8082-N2	1	Sample		17031325
26	Vial 25	TEST 2	8082-N2	1	Sample		17031326
27	Vial 26	TEST 3	8082-N2	1	Sample		17031327
28	Vial 27	TEST 4	8082-N2	1	Sample		17031328
29	Vial 28	TEST 5	8082-N2	1	Sample		17031329
30	Vial 29	TEST 6	8082-N2	1	Sample		17031330
31	Vial 11	PCB-CCV P021517I	8082-N2	1	Sample		17031331

Sequence Table (Back Injector):

No entries - empty table!

EPA METHOD 8082
PCB

Preparation Logs

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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- 107 Start Extraction- 107/787 Blow Down- 116 / 1084 Clean Up- 1084

Matrix: ☐ Soil ☑ Aqueous ☐ Oil ☐ Wipe ☐ Filter ☐ Tissue ☐ Air

Balance ID#: Filter ID#: ASE ID#: Soxtherm ID#: Orbit Shaker ID#: | Sonicator ID#:

Ext. Start Date/Time: 03/09/17 09:05 Ext. End Date/Time: 03/09/17 10:30

Sand or Wipe ID#:

Drying Agent: ☑ Na_2SO_4 ☐ Diatomaceous Earth

Drying Agent(s) ID#: 507-44-18

Surrogate Std ID# & Volume Added (mL): S101316A 0.1 mL

Spike Std ID# & Volume Added (mL): S101516B / 0.1 mL / S020217A 0.1 mL

Spike Added to: ☑ LCS ☑ LCSD ☐ MS ☐ MSD

Extraction Solvent: ☑ $MeCl_2$ ☐ 1:1 Hexane-Acetone ☐ 1:1 $MeCl_2$-Acetone ☐ 9:1 Hexane-Diethyl-ether ☐ Acetonitrile

Extraction Solvent ID#: 507-55-01

Exchange Solvent (☑ Hexane ☐ Acetonitrile) ID#: 107-44-07

Clean Up Start Date & Time: 3/10/17 19:00 Clean Up End Date & Time: 3/10/17 21:00

Clean Up: ☐ 3620 Florisil ☐ 3630 SGC ☐ 3660 Sulfur ☐ 3665 Acid ☐ Other

Cartridge ID#:

Clean Up Reagent ID#: 507-52-12

Cartridge Conditioning Column Pre-Elution Reagent ID#:

MB/LCS/MS Batch #: 170309L03

Cel ID#:	Sample W (g) / V (mL) Initial	Final	Clean Up Performed	Comments
MB	1000	2	☐	608 LL. ph-6
LCS (pest)	1000	2	☐	ph-6
LCSD (pest)	1000	2	☐	ph-6
~~MS~~ LCS (PCB)	1000	2	☐	ph-6
~~MSD~~ LCSD (PCB)	1000	2	☐	ph-6
17-03-0522-1 W	1040	2	☐	ph-6
17-03-0634-1 G	1000	10	☐	Sur. 0.5mL / Thick emmolsion / ph-6
17-03-0638-1 A	1050	10	☑	Sur. 0.5mL / ph-6
17-03-0550-14 B	1030	10	☑	Sur. 0.5mL / ph-6
17-03-0707-1 A	1050	10	☑	ph-7 / Sur. 0.5mL
			☐	
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Peer Reviewed by: 785 Peer Reviewed Date: 3-9-17 Revision Date: 10/20/16

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EPA METHOD 8270C
PAHSIM

RAW DATA

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EPA METHOD 8270C
PAHSIM

Initial Calibration

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

ICAL WORK ORDER: 099-06-009-4979-4741
ICAL BATCH ID: 170313I001
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907
ICAL D/T ANALYZED: 2017-03-13 14:13
REVIEWED BY: 262
D/T REVIEWED: 2017-03-14 12:54

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD	%R SD CL	R or R^2	R or R^2 CL	STATUS
Naphthalene		Avg RF	1.116	1.006	1.100	1.129	1.071					1.085	0.00	4	0-15	4.487		PASS
2-Methylnaphthalene		Avg RF	0.652	0.598	0.675	0.704	0.679					0.661	0.00	6	0-15	6.043		PASS
1-Methylnaphthalene		Avg RF	0.707	0.604	0.670	0.683	0.650					0.663	0.00	6	0-15	5.855		PASS
Acenaphthylene		Avg RF	2.585	2.328	2.575	2.640	2.513					2.528	0.00	5	0-15	4.766		PASS
Acenaphthene	C	Avg RF	1.539	1.413	1.552	1.581	1.501					1.517	0.00	4	0-15	4.263		PASS
Fluorene		Avg RF	1.678	1.586	1.751	1.767	1.664					1.689	0.00	4	0-15	4.314		PASS
Phenanthrene		Avg RF	1.080	0.981	1.087	1.105	1.053					1.061	0.00	5	0-15	4.587		PASS
Anthracene		Avg RF	1.036	0.984	0.969	1.116	1.083					1.037	0.00	6	0-15	6.047		PASS
Fluoranthene	C	Avg RF	1.376	1.262	1.391	1.425	1.371					1.365	0.00	4	0-15	4.487		PASS
Pyrene		Avg RF	1.387	1.261	1.393	1.422	1.344					1.362	0.00	5	0-15	4.620		PASS
Benzo (a) Anthracene		Avg RF	1.432	1.208	1.306	1.343	1.298					1.317	0.00	6	0-15	6.146		PASS
Chrysene		Avg RF	1.217	1.108	1.220	1.253	1.186					1.197	0.00	5	0-15	4.604		PASS
Benzo (k) Fluoranthene		Avg RF	1.363	1.261	1.425	1.424	1.358					1.366	0.00	5	0-15	4.922		PASS
Benzo (b) Fluoranthene		Avg RF	1.221	1.183	1.395	1.380	1.336					1.303	0.00	7	0-15	7.367		PASS
Benzo (a) Pyrene	C	Avg RF	1.253	1.166	1.268	1.329	1.265					1.256	0.00	5	0-15	4.648		PASS
Indeno (1,2,3-c,d) Pyrene		Avg RF	1.472	1.337	1.583	1.587	1.530					1.502	0.00	7	0-15	6.876		PASS
Dibenz (a,h) Anthracene		Avg RF	1.022	1.057	1.229	1.228	1.159					1.139	0.00	8	0-15	8.436		PASS
Benzo (g,h,i) Perylene		Avg RF	1.197	1.089	1.261	1.263	1.221					1.207	0.00	6	0-15	5.902		PASS
Dibenzothiophene		Avg RF	4.729	4.275	4.719	4.802	4.587					4.622	0.00	5	0-15	4.518		PASS

Data Files:

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 8270C SIM PAHs

ICAL WORK ORDER:	099-06-009-4979-4741	ANALYZED BY:	907
ICAL BATCH ID:	170313I001	ICAL D/T ANALYZED:	2017-03-13 14:13
INSTRUMENT:	GC/MS EEE	REVIEWED BY:	262
		D/T REVIEWED:	2017-03-14 12:54

LEVEL #	D/T ANALYZED	DATA FILE
1	2017-03-13 14:13	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar010.d\13mar010.rr
2	2017-03-13 13:53	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar009.d\13mar009.rr
3	2017-03-13 13:33	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar008.d\13mar008.rr
4	2017-03-13 13:13	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar007.d\13mar007.rr
5	2017-03-13 12:52	Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar006.d\13mar006.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 SIM PAHs

ICV WORK ORDER: **099-06-009-4979-4741**
INITIAL BATCH ID: 170313I001
INSTRUMENT: GC/MS EEE

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar011.d\13mar011.rr

ANALYZED BY: 907
D/T ANALYZED:
INITIAL: 2017-03-13 14:13
ICV: 2017-03-13 14:34
REVIEWED BY: 262
D/T REVIEWED: 2017-03-14 12:54

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
Naphthalene		Avg Resp	0.00	1.085	1.135			-5	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.661	0.783			-18	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.663	0.698			-5	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.528	2.579			-2	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.517	1.642			-8	0-20	PASS
Fluorene		Avg Resp	0.00	1.689	1.833			-9	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.061	1.203			-13	0-20	PASS
Anthracene		Avg Resp	0.00	1.037	1.123			-8	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.365	1.484			-9	0-20	PASS
Pyrene		Avg Resp	0.00	1.362	1.480			-9	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.317	1.360			-3	0-20	PASS
Chrysene		Avg Resp	0.00	1.197	1.249			-4	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.366	1.424			-4	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.303	1.418			-9	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.256	1.318			-5	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.502	1.570			-5	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.139	1.243			-9	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.207	1.334			-11	0-20	PASS
Dibenzothiophene		Avg Resp	0.00	4.622	4.193			9	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 13-Mar-2017 15:04 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 13-MAR-2017 14:13
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m
Cal Date : 13-Mar-2017 14:59 ev7p
Curve Type : Average

Calibration File Names:
Level 1: /chem/SVOA/GCMS_EEE.i/170313.b/13mar010.d
Level 2: /chem/SVOA/GCMS_EEE.i/170313.b/13mar009.d
Level 3: /chem/SVOA/GCMS_EEE.i/170313.b/13mar008.d
Level 4: /chem/SVOA/GCMS_EEE.i/170313.b/13mar007.d
Level 5: /chem/SVOA/GCMS_EEE.i/170313.b/13mar006.d

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	5.000 Level 5	___ RRF	% RSD
4 Naphthalene	1.11581	1.00634	1.10029	1.12879	1.07133	1.08451	4
5 2-Methylnaphthalene	0.65197	0.59811	0.67457	0.70415	0.67863	0.66149	6
6 1-Methylnaphthalene	0.70747	0.60440	0.67039	0.68304	0.65028	0.66312	6
8 Biphenyl	2.35823	2.11929	2.30021	2.29717	2.12271	2.23952	5
9 2,6-Dimethylnaphthalene	1.61703	1.47875	1.60729	1.63394	1.52299	1.57200	4
10 Acenaphthylene	2.58512	2.32846	2.57549	2.63987	2.51288	2.52836	5
12 Acenaphthene	1.53912	1.41348	1.55163	1.58080	1.50094	1.51719	4
13 Dibenzofuran	2.16158	2.04374	2.26236	2.30541	2.19584	2.19379	5
14 1,6,7-Trimethylnaphthalene	1.63669	1.46201	1.59794	1.62883	1.52745	1.57058	5
15 Fluorene	1.67753	1.58594	1.75075	1.76676	1.66409	1.68901	4
16 Dibenzothiophene	4.72855	4.27529	4.71886	4.80185	4.58747	4.62241	5
18 Phenanthrene	1.07962	0.98082	1.08700	1.10520	1.05266	1.06106	5
19 Anthracene	1.03555	0.98375	0.96886	1.11560	1.08257	1.03727	6
20 1-Methylphenanthrene	0.97116	0.92998	1.02072	1.05271	1.00870	0.99665	5
21 Fluoranthene	1.37602	1.26225	1.39052	1.42534	1.37085	1.36500	4
22 Pyrene	1.38699	1.26059	1.39347	1.42216	1.34443	1.36153	5
24 Benzo (a) Anthracene	1.43152	1.20758	1.30623	1.34262	1.29815	1.31722	6
26 Chrysene	1.21702	1.10798	1.22017	1.25314	1.18561	1.19678	5
27 Benzo (b) Fluoranthene	1.22069	1.18251	1.39522	1.38038	1.33563	1.30289	7
28 Benzo (k) Fluoranthene	1.36330	1.26057	1.42543	1.42402	1.35775	1.36621	5
29 Benzo (e) pyrene	1.59986	1.40940	1.63930	1.60515	1.53257	1.55726	6
30 Benzo (a) Pyrene	1.25298	1.16587	1.26774	1.32867	1.26501	1.25606	5

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Report Date : 13-Mar-2017 15:04 Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 13-MAR-2017 14:13
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m
Cal Date : 13-Mar-2017 14:59 ev7p
Curve Type : Average

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	5.000 Level 5	___ RRF	% RSD
32 Perylene	1.53641	1.41079	1.50876	1.54399	1.46685	1.49336	4
33 Indeno (1,2,3-c,d) Pyrene	1.47205	1.33679	1.58268	1.58673	1.52950	1.50155	7
34 Dibenz (a,h) Anthracene	1.02180	1.05709	1.22915	1.22831	1.15856	1.13898	8
35 Benzo (g,h,i) Perylene	1.19737	1.08929	1.26132	1.26340	1.22141	1.20656	6
$ 2 Nitrobenzene-d5	0.30130	0.29496	0.33923	0.35910	0.36136	0.33119	10
$ 7 2-Fluorobiphenyl	1.88477	1.69943	1.88233	1.85964	1.69885	1.80500	5
$ 23 p-Terphenyl-d14	0.78803	0.71467	0.79649	0.80490	0.77019	0.77486	5

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 13-MAR-2017 14:13
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m
Cal Date : 13-Mar-2017 14:59 ev7p
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 5.35528
Maximun Average %RSD = 15.00000
* Passed Average %RSD Test.

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Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar011.d
Report Date: 03/13/2017 15:04

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_EEE.i
Sample Name: ICV S010317I 1PPM
Sublist used: all.sub
Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m

Injection Date and Time: 13-MAR-2017 14:34
Initial Calibration Date(s): 03-JAN-2017 13-MAR-2017
Initial Calibration Time(s): 11:59 14:13

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D/Drift	Curve Type
Naphthalene	1.085	1.135	0.00	-5	20	Averaged
2-Methylnaphthalene	0.661	0.783	0.00	-18	20	Averaged
1-Methylnaphthalene	0.663	0.698	0.00	-5	20	Averaged
Acenaphthylene	2.528	2.579	0.00	-2	20	Averaged
Acenaphthene	1.517	1.642	0.00	-8	20	Averaged
Fluorene	1.689	1.833	0.00	-9	20	Averaged
Phenanthrene	1.061	1.203	0.00	-13	20	Averaged
Anthracene	1.037	1.123	0.00	-8	20	Averaged
Fluoranthene	1.365	1.484	0.00	-9	20	Averaged
Pyrene	1.362	1.480	0.00	-9	20	Averaged
Benzo (a) Anthracene	1.317	1.360	0.00	-3	20	Averaged
Chrysene	1.197	1.249	0.00	-4	20	Averaged
Benzo (b) Fluoranthene	1.303	1.418	0.00	-9	20	Averaged
Benzo (k) Fluoranthene	1.366	1.424	0.00	-4	20	Averaged
Benzo (a) Pyrene	1.256	1.318	0.00	-5	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.502	1.570	0.00	-5	20	Averaged
Dibenz (a,h) Anthracene	1.139	1.243	0.00	-9	20	Averaged
Benzo (g,h,i) Perylene	1.207	1.334	0.00	-11	20	Averaged
Biphenyl	2.240	2.047	0.00	9	20	Averaged
2,6-Dimethylnaphthalene	1.572	1.418	0.00	10	20	Averaged
1,6,7-Trimethylnaphthalene	1.571	1.354	0.00	14	20	Averaged
Dibenzothiophene	4.622	4.193	0.00	9	20	Averaged
1-Methylphenanthrene	0.997	0.912	0.00	9	20	Averaged
Benzo (e) pyrene	1.557	1.395	0.00	10	20	Averaged
Perylene	1.493	1.264	0.00	15	20	Averaged
Dibenzofuran	2.194	2.418	0.00	-10	20	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D/Drift	Curve Type
Nitrobenzene-d5	0.331	0.397	0.00	-20	20	Averaged
2-Fluorobiphenyl	1.805	2.154	0.00	-19	20	Averaged
p-Terphenyl-d14	0.775	0.898	0.00	-16	20	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar006.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 12:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: 170313I001
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.415	152	39443	5.000	0.00
3)*Naphthalene-d8	(2)	4.657	136	113690	5.000	0.00
11)*Acenaphthene-d10	(3)	6.542	164	52246	5.000	0.00
17)*Phenanthrene-d10	(4)	8.138	188	176924	5.000	0.00
31)*Perylene-d12	(6)	12.826	264	181619	5.000	0.00
25)*Chrysene-d12	(5)	11.060	240	185442	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.966	82	41083	5.455	0.00
SpikedAmount 5.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.833	172	88758	4.706	0.00
SpikedAmount 5.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.934	244	142825	4.970	0.00
SpikedAmount 5.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.677	128	121800	4.939	99
5) 2-Methylnaphthalene	(2)	5.405	142	77154	5.130	98
6) 1-Methylnaphthalene	(2)	5.518	142	73930	4.903	100
10) Acenaphthylene	(3)	6.373	152	131288	4.969	99
12) Acenaphthene	(3)	6.575	153	78418	4.946	99
15) Fluorene	(3)	7.125	166	86942	4.926	100
18) Phenanthrene	(4)	8.163	178	186241	4.960	100
19) Anthracene	(4)	8.211	178	191533	5.218	100
21) Fluoranthene	(4)	9.471	202	242537	5.021	99
22) Pyrene	(5)	9.711	202	249314	4.937	99
24) Benzo (a) Anthracene	(5)	11.042	228	240732	4.928	100
26) Chrysene	(5)	11.088	228	219861	4.953	99
27) Benzo (b) Fluoranthene	(6)	12.366	252	242576	5.126	99
28) Benzo (k) Fluoranthene	(6)	12.396	252	246593	4.969	99
30) Benzo (a) Pyrene	(6)	12.757	252	229750	5.036	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.070	276	277787	5.093	92
34) Dibenz (a,h) Anthracene	(6)	14.094	278	210417	5.086	98
35) Benzo (g,h,i) Perylene	(6)	14.348	276	221831	5.062	99
8) Biphenyl	(3)	5.922	154	110903	4.739	99
9) 2,6-Dimethylnaphthalene	(3)	6.084	156	79570	4.844	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.006	170	79803	4.863	99
16) Dibenzothiophene	(3)	8.027	184	239677	4.962	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar006.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 12:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: 170313I001
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.852	192	187056	5.060	98
29) Benzo (e) pyrene	(6)	12.697	252	278344	4.921	97
32) Perylene	(6)	12.859	252	266407	4.911	98
13) Dibenzofuran	(3)	6.749	168	114724	5.005	99

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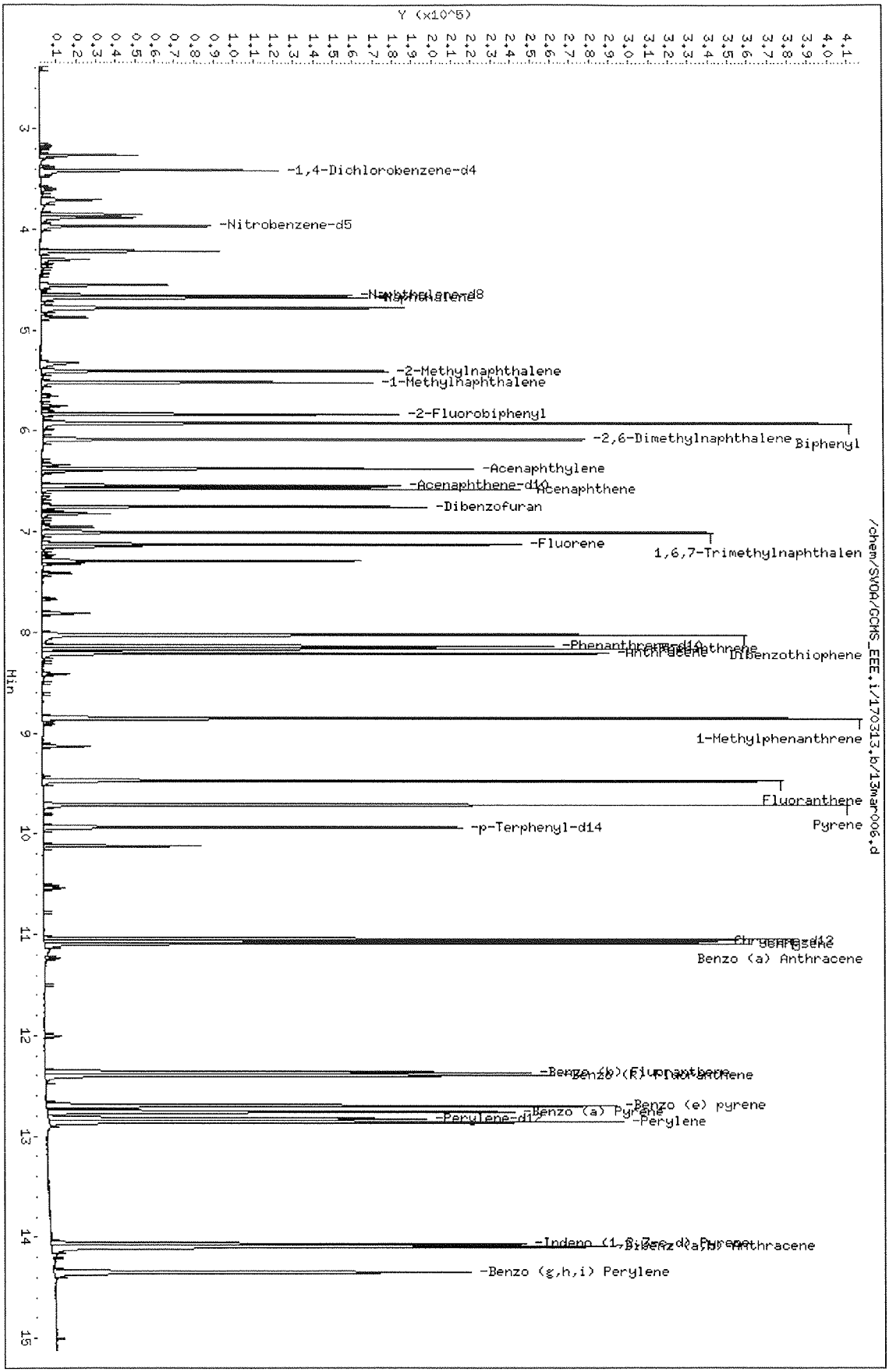

Data File: /chem/SWOA/GCMS_EEE.i/170313.b/13mar006.d
Date : 13-MAR-2017 12:52
Client ID:
Sample Info: ICAL-1 S0103170 5PPM
Column phase: J&W DB-5MS

/chem/SWOA/GCMS_EEE.i/170313.b/13mar006.d

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar007.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-2 S010317E 2PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.415	152	43537	5.000	0.00
3)*Naphthalene-d8	(2)	4.656	136	128027	5.000	0.00
11)*Acenaphthene-d10	(3)	6.541	164	58252	5.000	0.00
17)*Phenanthrene-d10	(4)	8.138	188	195969	5.000	0.00
31)*Perylene-d12	(6)	12.826	264	200691	5.000	0.00
25)*Chrysene-d12	(5)	11.058	240	204739	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.965	82	18390	2.169	0.00
SpikedAmount 2.000	Recovery = 204.796					
7)$2-Fluorobiphenyl	(3)	5.832	172	43331	2.061	0.00
SpikedAmount 2.000	Recovery = 201.236					
23)$p-Terphenyl-d14	(5)	9.931	244	65918	2.078	0.00
SpikedAmount 2.000	Recovery = 204.185					
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	57806	2.082	99
5) 2-Methylnaphthalene	(2)	5.404	142	36060	2.129	97
6) 1-Methylnaphthalene	(2)	5.518	142	34979	2.060	99
10) Acenaphthylene	(3)	6.371	152	61511	2.088	99
12) Acenaphthene	(3)	6.574	153	36834	2.084	99
15) Fluorene	(3)	7.123	166	41167	2.092	100
18) Phenanthrene	(4)	8.161	178	86634	2.083	100
19) Anthracene	(4)	8.209	178	87449	2.151	99
21) Fluoranthene	(4)	9.469	202	111729	2.088	99
22) Pyrene	(5)	9.708	202	116469	2.089	100
24) Benzo (a) Anthracene	(5)	11.039	228	109955	2.039	100
26) Chrysene	(5)	11.085	228	102627	2.094	99
27) Benzo (b) Fluoranthene	(6)	12.363	252	110812	2.119	100
28) Benzo (k) Fluoranthene	(6)	12.391	252	114315	2.085	99
30) Benzo (a) Pyrene	(6)	12.752	252	106661	2.116	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.066	276	127377	2.113	91
34) Dibenz (a,h) Anthracene	(6)	14.093	278	98604	2.157	98
35) Benzo (g,h,i) Perylene	(6)	14.343	276	101421	2.094	100
8) Biphenyl	(3)	5.921	154	53526	2.051	99
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	38072	2.079	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.004	170	37953	2.074	99
16) Dibenzothiophene	(3)	8.024	184	111887	2.078	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar007.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-2 S010317E 2PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	86212	2.112	99
29) Benzo (e) pyrene	(6)	12.694	252	128856	2.062	98
32) Perylene	(6)	12.855	252	123946	2.068	99
13) Dibenzofuran	(3)	6.749	168	53718	2.102	99

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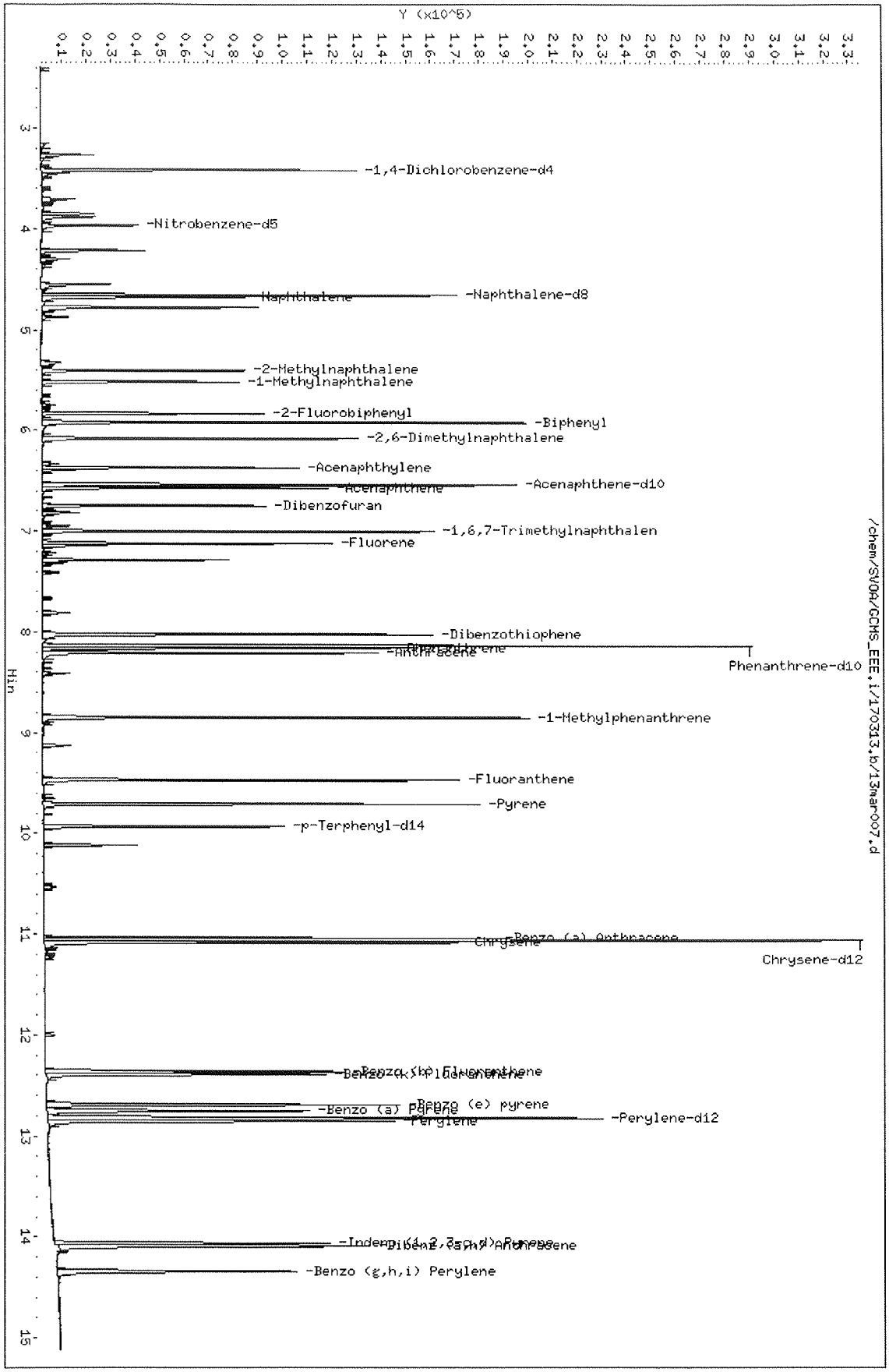

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar007.d
Date : 13-MAR-2017 13:13
Client ID:
Sample Info: ICAL-2 S010317E 2PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar008.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-3 S010317F 1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.414	152	46489	5.000	0.01
3)*Naphthalene-d8	(2)	4.656	136	140022	5.000	0.00
11)*Acenaphthene-d10	(3)	6.541	164	63153	5.000	0.00
17)*Phenanthrene-d10	(4)	8.136	188	210133	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	208071	5.000	0.00
25)*Chrysene-d12	(5)	11.056	240	220711	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.966	82	9500	1.024	0.00
SpikedAmount 1.000	Recovery = 97.033					
7)$2-Fluorobiphenyl	(3)	5.833	172	23775	1.043	0.00
SpikedAmount 1.000	Recovery = 100.830					
23)$p-Terphenyl-d14	(5)	9.932	244	35159	1.028	0.00
SpikedAmount 1.000	Recovery = 101.689					
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	30813	1.015	100
5) 2-Methylnaphthalene	(2)	5.404	142	18891	1.020	100
6) 1-Methylnaphthalene	(2)	5.517	142	18774	1.011	100
10) Acenaphthylene	(3)	6.371	152	32530	1.019	100
12) Acenaphthene	(3)	6.574	153	19598	1.023	100
15) Fluorene	(3)	7.123	166	22113	1.037	100
18) Phenanthrene	(4)	8.159	178	45683	1.024	100
19) Anthracene	(4)	8.211	178	40718	0.934	100
21) Fluoranthene	(4)	9.470	202	58439	1.019	100
22) Pyrene	(5)	9.707	202	61511	1.023	100
24) Benzo (a) Anthracene	(5)	11.040	228	57660	0.992	100
26) Chrysene	(5)	11.084	228	53861	1.020	100
27) Benzo (b) Fluoranthene	(6)	12.362	252	58061	1.071	100
28) Benzo (k) Fluoranthene	(6)	12.391	252	59318	1.043	100
30) Benzo (a) Pyrene	(6)	12.750	252	52756	1.009	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.064	276	65862	1.054	100
34) Dibenz (a,h) Anthracene	(6)	14.094	278	51150	1.079	100
35) Benzo (g,h,i) Perylene	(6)	14.342	276	52489	1.045	100
8) Biphenyl	(3)	5.922	154	29053	1.027	100
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	20301	1.022	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.003	170	20183	1.017	100
16) Dibenzothiophene	(3)	8.024	184	59602	1.021	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar008.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-3 S010317F 1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	45057	1.024	100
29) Benzo (e) pyrene	(6)	12.690	252	68218	1.053	100
32) Perylene	(6)	12.854	252	62786	1.010	100
13) Dibenzofuran	(3)	6.749	168	28575	1.031	100

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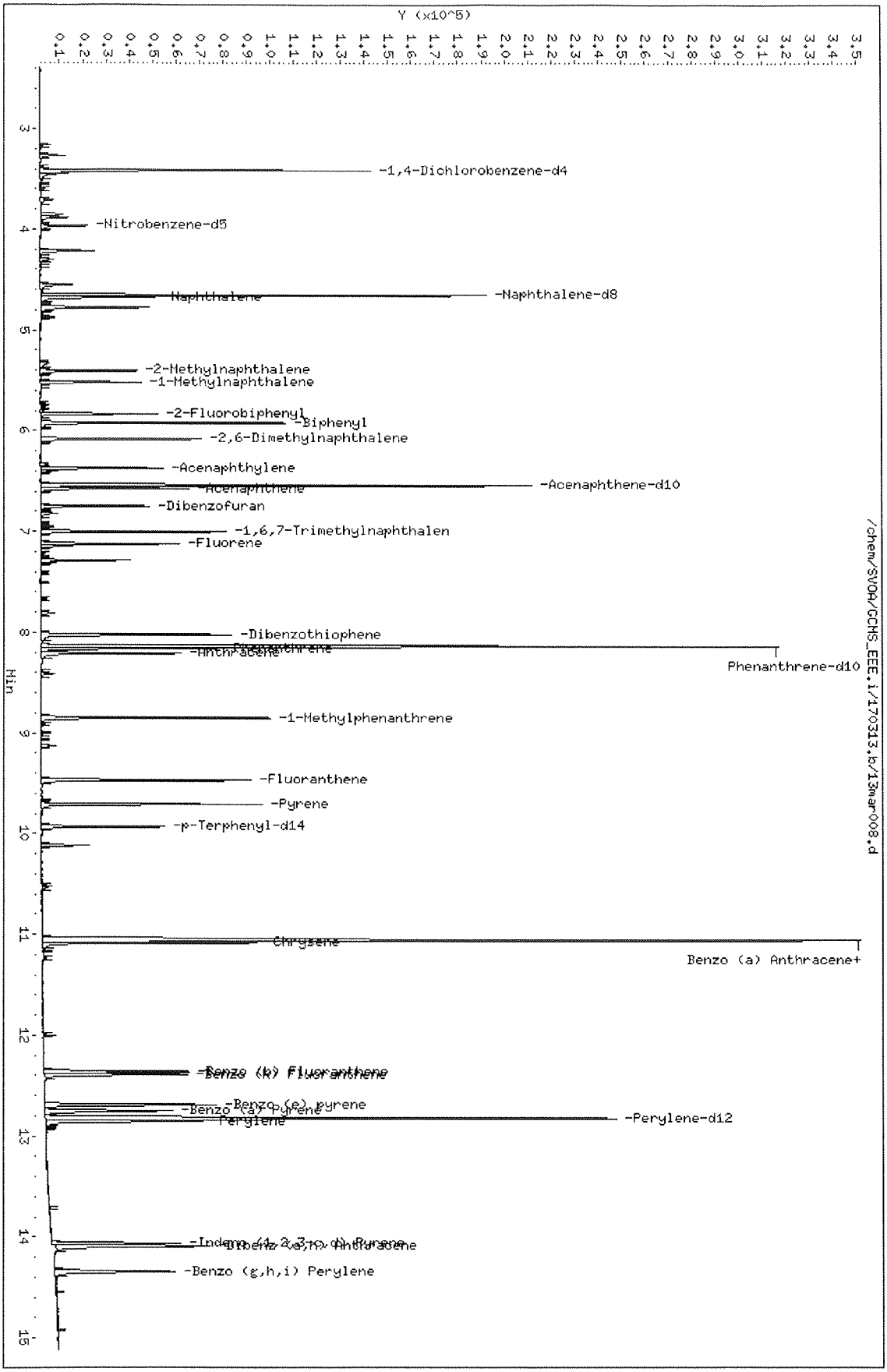

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar008.d
Date : 13-MAR-2017 13:33
Client ID:
Sample Info: ICAL-3 S010317F 1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar009.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:53 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-4 S010317G 0.5PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.414	152	46816	5.000	0.01
3)*Naphthalene-d8	(2)	4.654	136	141612	5.000	0.00
11)*Acenaphthene-d10	(3)	6.540	164	65116	5.000	0.00
17)*Phenanthrene-d10	(4)	8.136	188	215147	5.000	0.00
31)*Perylene-d12	(6)	12.825	264	224201	5.000	0.00
25)*Chrysene-d12	(5)	11.057	240	226005	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.967	82	4177	0.445	0.00
SpikedAmount 0.500	Recovery = 43.133					
7)$2-Fluorobiphenyl	(3)	5.831	172	11066	0.471	0.00
SpikedAmount 0.500	Recovery = 45.627					
23)$p-Terphenyl-d14	(5)	9.931	244	16152	0.461	0.00
SpikedAmount 0.500	Recovery = 45.890					
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	14251	0.464	98
5) 2-Methylnaphthalene	(2)	5.404	142	8470	0.452	96
6) 1-Methylnaphthalene	(2)	5.516	142	8559	0.456	99
10) Acenaphthylene	(3)	6.371	152	15162	0.460	99
12) Acenaphthene	(3)	6.574	153	9204	0.466	99
15) Fluorene	(3)	7.123	166	10327	0.469	99
18) Phenanthrene	(4)	8.160	178	21102	0.462	99
19) Anthracene	(4)	8.209	178	21165	0.474	99
21) Fluoranthene	(4)	9.469	202	27157	0.462	99
22) Pyrene	(5)	9.707	202	28490	0.463	99
24) Benzo (a) Anthracene	(5)	11.040	228	27292	0.458	99
26) Chrysene	(5)	11.085	228	25041	0.463	99
27) Benzo (b) Fluoranthene	(6)	12.361	252	26512	0.454	99
28) Benzo (k) Fluoranthene	(6)	12.393	252	28262	0.461	98
30) Benzo (a) Pyrene	(6)	12.752	252	26139	0.464	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.065	276	29971	0.445	92
34) Dibenz (a,h) Anthracene	(6)	14.093	278	23700	0.464	99
35) Benzo (g,h,i) Perylene	(6)	14.344	276	24422	0.451	100
8) Biphenyl	(3)	5.921	154	13800	0.473	100
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	9629	0.470	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.001	170	9520	0.465	99
16) Dibenzothiophene	(3)	8.024	184	27839	0.462	99

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar009.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 13:53 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-4 S010317G 0.5PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	21018	0.467	99
29) Benzo (e) pyrene	(6)	12.691	252	31599	0.453	99
32) Perylene	(6)	12.853	252	31630	0.472	100
13) Dibenzofuran	(3)	6.749	168	13308	0.466	100

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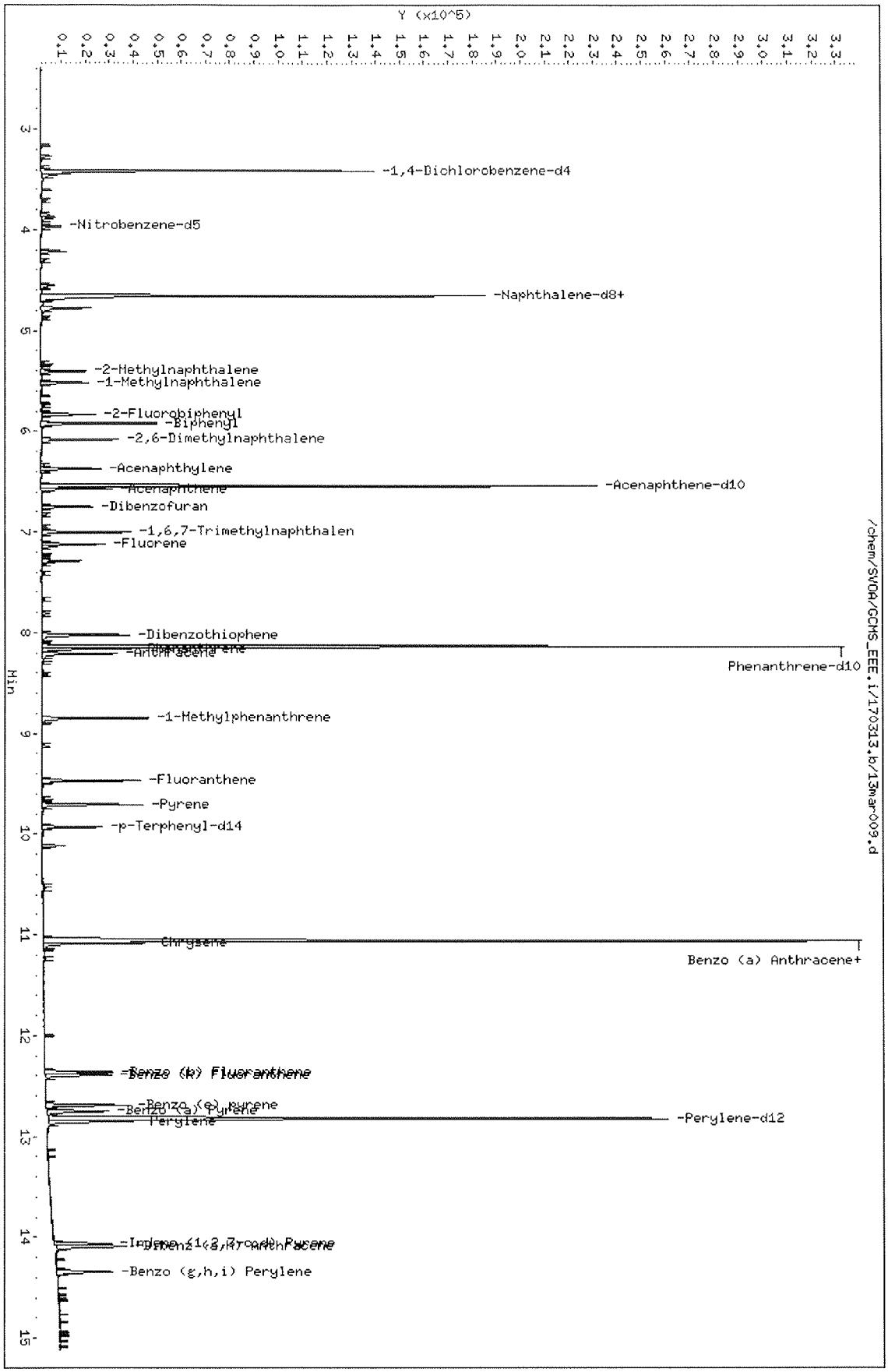

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar009.d
Date : 13-MAR-2017 13:53
Client ID:
Sample Info: ICAL-4 S010317C 0.5PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar010.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-5 S010317H 0.1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.414	152	46155	5.000	0.01
3)*Naphthalene-d8	(2)	4.655	136	138733	5.000	0.00
11)*Acenaphthene-d10	(3)	6.539	164	66109	5.000	0.00
17)*Phenanthrene-d10	(4)	8.135	188	215586	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	222988	5.000	0.00
25)*Chrysene-d12	(5)	11.057	240	227975	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.971	82	836	0.091	-0.01
SpikedAmount 0.100	Recovery =	8.992				
7)$2-Fluorobiphenyl	(3)	5.833	172	2492	0.104	0.00
SpikedAmount 0.100	Recovery =	10.221				
23)$p-Terphenyl-d14	(5)	9.933	244	3593	0.102	0.00
SpikedAmount 0.100	Recovery =	10.183				
Target Compounds						QValue
4) Naphthalene	(2)	4.676	128	3096	0.103	100
5) 2-Methylnaphthalene	(2)	5.404	142	1809	0.099	97
6) 1-Methylnaphthalene	(2)	5.517	142	1963	0.107	96
10) Acenaphthylene	(3)	6.371	152	3418	0.102	99
12) Acenaphthene	(3)	6.571	153	2035	0.101	97
15) Fluorene	(3)	7.124	166	2218	0.099	99
18) Phenanthrene	(4)	8.162	178	4655	0.102	98
19) Anthracene	(4)	8.211	178	4465	0.100	100
21) Fluoranthene	(4)	9.471	202	5933	0.101	100
22) Pyrene	(5)	9.708	202	6324	0.102	99
24) Benzo (a) Anthracene	(5)	11.039	228	6527	0.109	97
26) Chrysene	(5)	11.084	228	5549	0.102	99
27) Benzo (b) Fluoranthene	(6)	12.361	252	5444	0.094	93
28) Benzo (k) Fluoranthene	(6)	12.393	252	6080	0.100	91
30) Benzo (a) Pyrene	(6)	12.752	252	5588	0.100	93
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.068	276	6565	0.098	81
34) Dibenz (a,h) Anthracene	(6)	14.096	278	4557	0.090	91
35) Benzo (g,h,i) Perylene	(6)	14.346	276	5340	0.099	97
8) Biphenyl	(3)	5.922	154	3118	0.105	90
9) 2,6-Dimethylnaphthalene	(3)	6.081	156	2138	0.103	99
14) 1,6,7-Trimethylnaphthalene	(3)	7.003	170	2164	0.104	100
16) Dibenzothiophene	(3)	8.024	184	6252	0.102	98

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar010.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICAL-5 S010317H 0.1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.850	192	4428	0.097	98
29) Benzo (e) pyrene	(6)	12.691	252	7135	0.103	99
32) Perylene	(6)	12.853	252	6852	0.103	98
13) Dibenzofuran	(3)	6.748	168	2858	0.099	98

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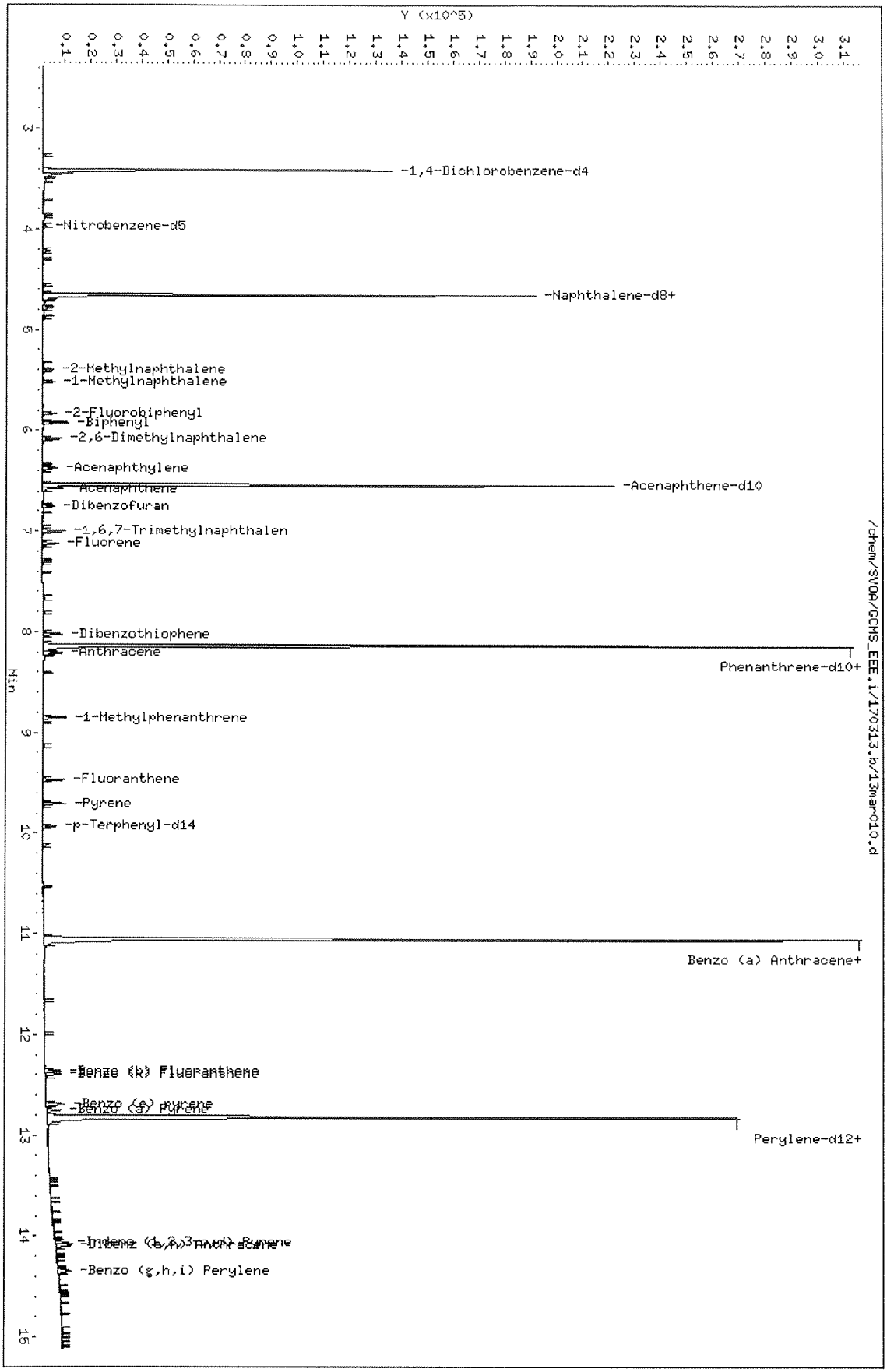

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar010.d
Date : 13-MAR-2017 14:13
Client ID:
Sample Info: ICAL-5 S010317H 0.1PPM
Column Phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar011.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:34 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICV S010317I 1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.419	152	44664	5.000	0.00
3)*Naphthalene-d8	(2)	4.653	136	134376	5.000	0.00
11)*Acenaphthene-d10	(3)	6.538	164	61082	5.000	0.00
17)*Phenanthrene-d10	(4)	8.136	188	200519	5.000	0.00
31)*Perylene-d12	(6)	12.823	264	200860	5.000	0.00
25)*Chrysene-d12	(5)	11.055	240	207148	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.965	82	10658	1.197	0.00
SpikedAmount 1.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.831	172	26320	1.194	0.00
SpikedAmount 1.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.929	244	37191	1.159	0.00
SpikedAmount 1.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.673	128	30493	1.046	100
5) 2-Methylnaphthalene	(2)	5.402	142	21043	1.184	100
6) 1-Methylnaphthalene	(2)	5.516	142	18763	1.053	100
10) Acenaphthylene	(3)	6.370	152	31506	1.020	100
12) Acenaphthene	(3)	6.572	153	20057	1.082	100
15) Fluorene	(3)	7.122	166	22387	1.085	100
18) Phenanthrene	(4)	8.160	178	48240	1.134	100
19) Anthracene	(4)	8.209	178	45040	1.083	100
21) Fluoranthene	(4)	9.469	202	59504	1.087	100
22) Pyrene	(5)	9.707	202	61311	1.087	100
24) Benzo (a) Anthracene	(5)	11.038	228	56357	1.033	100
26) Chrysene	(5)	11.083	228	51734	1.043	100
27) Benzo (b) Fluoranthene	(6)	12.360	252	56960	1.088	100
28) Benzo (k) Fluoranthene	(6)	12.391	252	57224	1.043	100
30) Benzo (a) Pyrene	(6)	12.752	252	52949	1.049	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.065	276	63053	1.045	100
34) Dibenz (a,h) Anthracene	(6)	14.091	278	49952	1.092	100
35) Benzo (g,h,i) Perylene	(6)	14.339	276	53577	1.105	100
8) Biphenyl	(3)	5.919	154	25012	0.914	100
9) 2,6-Dimethylnaphthalene	(3)	6.079	156	17327	0.902	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.001	170	16542	0.862	100
16) Dibenzothiophene	(3)	8.024	184	51223	0.907	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar011.d Instrument ID: GCMS_EEE.i
Injection date and time: 13-MAR-2017 14:34 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170313.b/simpah-extra.m Sublist used: all
Calibration date and time: 13-MAR-2017 14:59
Date, time and analyst ID of latest file update: 13-Mar-2017 14:59 ev7p

Sample Name: ICV S010317I 1PPM Misc Info:
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.848	192	37778	0.915	100
29) Benzo (e) pyrene	(6)	12.691	252	56048	0.896	100
32) Perylene	(6)	12.851	252	50780	0.846	100
13) Dibenzofuran	(3)	6.748	168	29537	1.102	100

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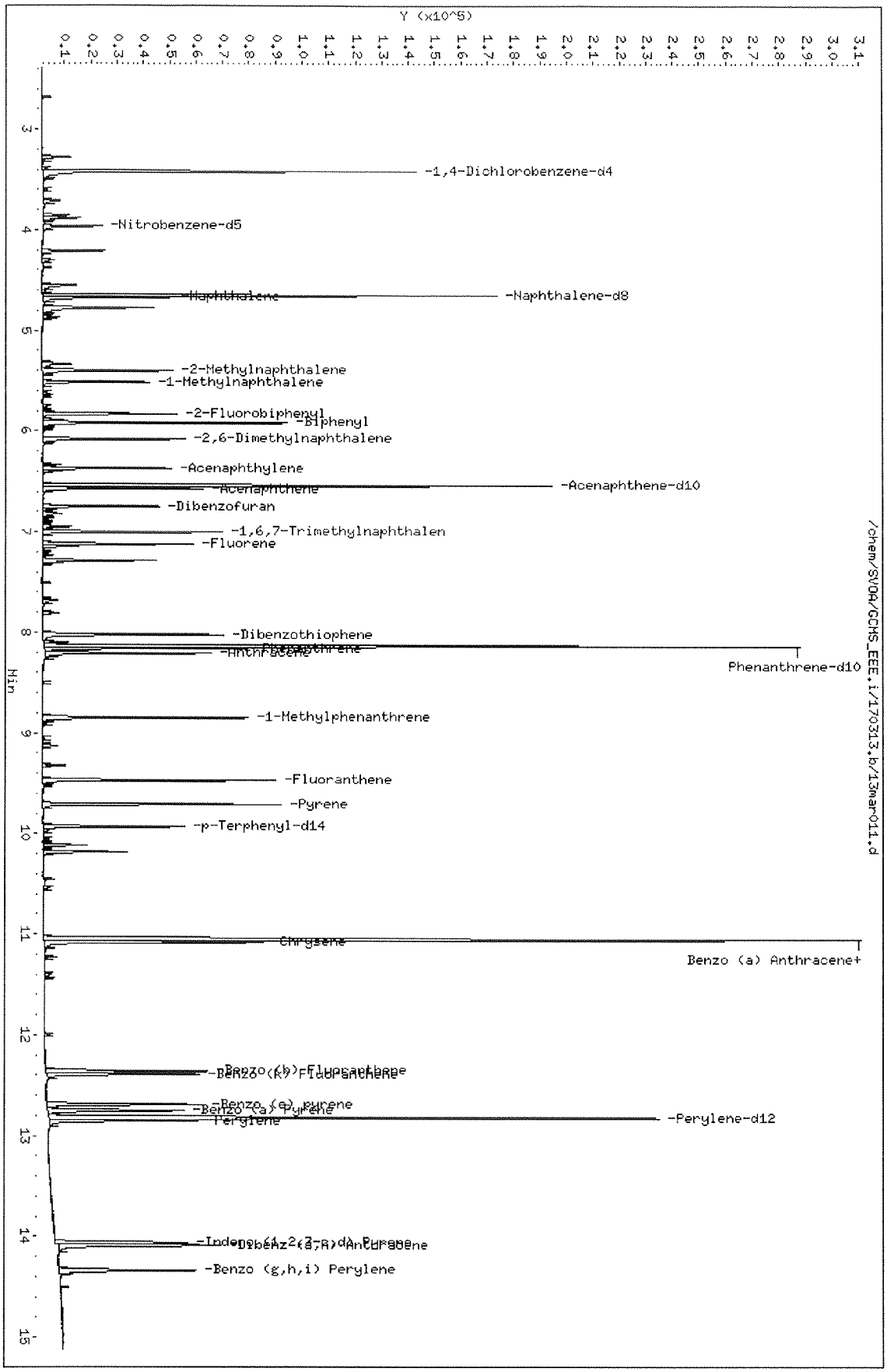

Data File: /chem/SVOA/GCMS_EEE.i/170313.b/13mar011.d
Date : 13-MAR-2017 14:34
Client ID:
Sample Info: ICV S0103171 1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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EPA METHOD 8270C
PAHSIM

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: **17-03-0638**
INSTRUMENT: GC/MS EEE
EXTRACTION : EPA 3510C
D/T EXTRACTED: 2017-03-14 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-15 15:41
REVIEWED BY:
D/T REVIEWED:

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar014.d\15mar014.rr

 # 1 **CLIENT SAMPLE NUMBER: EB3-2017-03-08**

LCS/MB BATCH: 170314L01
MS/MSD BATCH:
UNITS: ug/L

SAMPLE VOLUME / WEIGHT: DEFAULT: 1,000.00 ml / ACTUAL: 1,000.00 ml
FINAL VOLUME / WEIGHT: DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Dibenzothiophene	0.000	1.00	ND	0.20	
Naphthalene	0.000	1.00	ND	0.20	
2-Methylnaphthalene	0.000	1.00	ND	0.20	
1-Methylnaphthalene	0.000	1.00	ND	0.20	
Acenaphthylene	0.000	1.00	ND	0.20	
Acenaphthene	0.000	1.00	ND	0.20	
Fluorene	0.000	1.00	ND	0.20	
Phenanthrene	0.000	1.00	ND	0.20	
Anthracene	0.000	1.00	ND	0.20	
Fluoranthene	0.000	1.00	ND	0.20	
Pyrene	0.000	1.00	ND	0.20	
Benzo (a) Anthracene	0.000	1.00	ND	0.20	
Chrysene	0.000	1.00	ND	0.20	
Benzo (k) Fluoranthene	0.000	1.00	ND	0.20	
Benzo (b) Fluoranthene	0.000	1.00	ND	0.20	
Benzo (a) Pyrene	0.000	1.00	ND	0.20	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	0.20	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.20	
Benzo (g,h,i) Perylene	0.000	1.00	ND	0.20	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar014.d Instrument ID: GCMS_EEE.i
Injection date and time: 15-MAR-2017 15:41 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170315.b/simpah-extra.m Sublist used: all
Calibration date and time: 15-MAR-2017 12:25
Date, time and analyst ID of latest file update: 15-Mar-2017 16:03 Unknown

Sample Name: 17-03-0638-1 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.392	152	55345	5.000	0.00
3)*Naphthalene-d8	(2)	4.633	136	158462	5.000	0.00
11)*Acenaphthene-d10	(3)	6.518	164	85273	5.000	0.00
17)*Phenanthrene-d10	(4)	8.118	188	248602	5.000	0.00
31)*Perylene-d12	(6)	12.800	264	242198	5.000	0.00
25)*Chrysene-d12	(5)	11.037	240	257483	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.948	82	8652	0.824	0.00
SpikedAmount 1.000	Recovery = 82.434					
7)$2-Fluorobiphenyl	(3)	5.817	172	22452	0.729	-0.01
SpikedAmount 1.000	Recovery = 72.937					
23)$p-Terphenyl-d14	(5)	9.913	244	35904	0.900	0.00
SpikedAmount 1.000	Recovery = 89.979					
Target Compounds						QValue
4) Naphthalene	(2)	0.000		0	N.D.	
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	0.000		0	N.D.	
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0	N.D.	
26) Chrysene	(5)	0.000		0	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0	N.D.	
33) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
34) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
35) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0	N.D.	

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar014.d Instrument ID: GCMS_EEE.i
Injection date and time: 15-MAR-2017 15:41 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170315.b/simpah-extra.m Sublist used: all
Calibration date and time: 15-MAR-2017 12:25
Date, time and analyst ID of latest file update: 15-Mar-2017 16:03 Unknown

Sample Name: 17-03-0638-1 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0	N.D.	
32) Perylene	(6)	0.000		0	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

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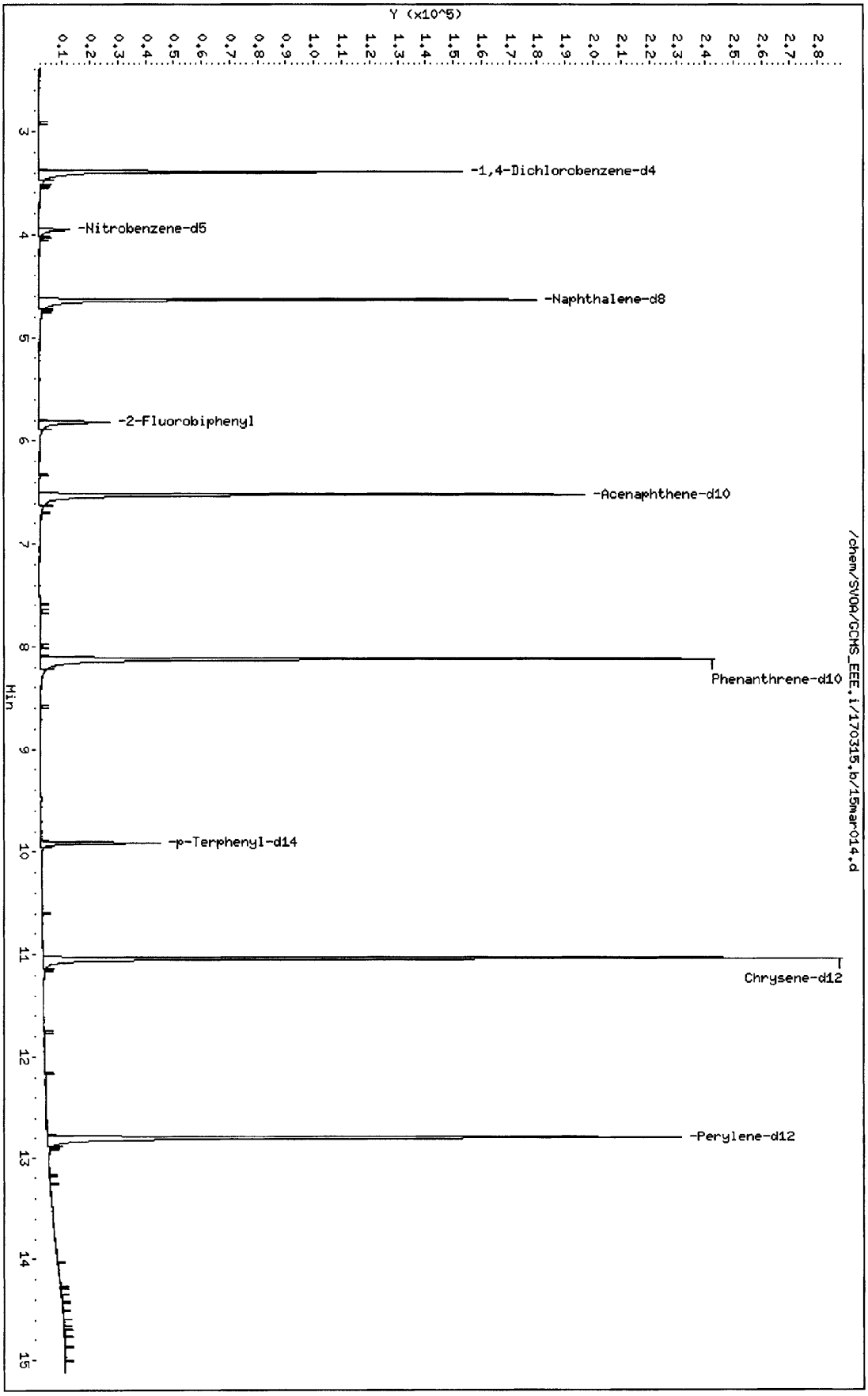

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar014.d
Date : 15-MAR-2017 15:41
Client ID:
Sample Info: 17-03-0638-1
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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EPA METHOD 8270C
PAHSIM

Quality Control

Method Blank
LCS/LCSD
MS/MSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

MB SAMPLE ID:	**099-06-008-956**	ANALYZED BY:	907
MB BATCH ID:	170314L01	D/T ANALYZED:	2017-03-15 14:40
INSTRUMENT:	GC/MS EEE	REVIEWED BY:	
EXTRACTION:	EPA 3510C	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-14 00:00	MATRIX:	Water

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar011.d\15mar011.rr

CLIENT WORK ORDER: 17-03-0638

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1		EB3-2017-03-08	2017-03-15 15:41	Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar014.d\15mar014.rr

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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER:	**099-06-008**	ANALYZED BY:	907
INSTRUMENT:	GC/MS EEE	D/T ANALYZED:	2017-03-15 14:40
EXTRACTION :	EPA 3510C	REVIEWED BY:	
D/T EXTRACTED:	2017-03-14 00:00	D/T REVIEWED:	

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar011.d\15mar011.rr

 # MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH:	170314L01	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:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Dibenzothiophene	0.000	1.00	ND	0.20	
Naphthalene	0.000	1.00	ND	0.20	
2-Methylnaphthalene	0.000	1.00	ND	0.20	
1-Methylnaphthalene	0.000	1.00	ND	0.20	
Acenaphthylene	0.000	1.00	ND	0.20	
Acenaphthene	0.000	1.00	ND	0.20	
Fluorene	0.000	1.00	ND	0.20	
Phenanthrene	0.000	1.00	ND	0.20	
Anthracene	0.000	1.00	ND	0.20	
Fluoranthene	0.000	1.00	ND	0.20	
Pyrene	0.000	1.00	ND	0.20	
Benzo (a) Anthracene	0.000	1.00	ND	0.20	
Chrysene	0.000	1.00	ND	0.20	
Benzo (k) Fluoranthene	0.000	1.00	ND	0.20	
Benzo (b) Fluoranthene	0.000	1.00	ND	0.20	
Benzo (a) Pyrene	0.000	1.00	ND	0.20	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	0.20	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.20	
Benzo (g,h,i) Perylene	0.000	1.00	ND	0.20	

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LCS / LCSD QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

LCS/LCSD SAMPLE ID: 099-06-008-956
LCS/LCSD BATCH: 170314L01
INSTRUMENTS:
LCS: GC/MS EEE
LCSD: GC/MS EEE

EXTRACTION: EPA 3510C
D/T EXTRACTED:
LCS: 2017-03-14 00:00
LCSD: 2017-03-14 00:00

ANALYZED BY: 907
D/T ANALYZED:
LCS: 2017-03-15 15:01
LCSD: 2017-03-15 15:21
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
Naphthalene	2.000	1.915	96	1.943	97	21-133	2-152	1	0-25	PASS	
2-Methylnaphthalene	2.000	2.241	112	2.322	116	21-140	1-160	4	0-25	PASS	
1-Methylnaphthalene	2.000	1.971	99	2.054	103	20-140	0-160	4	0-25	PASS	
Acenaphthylene	2.000	1.665	83	1.655	83	33-145	14-164	1	0-25	PASS	
Acenaphthene	2.000	1.705	85	1.721	86	55-121	44-132	1	0-25	PASS	
Fluorene	2.000	1.716	86	1.752	88	59-121	49-131	2	0-25	PASS	
Phenanthrene	2.000	1.977	99	1.943	97	54-120	43-131	2	0-25	PASS	
Anthracene	2.000	2.048	102	2.004	100	27-133	9-151	2	0-25	PASS	
Fluoranthene	2.000	1.984	99	1.965	98	26-137	8-156	1	0-25	PASS	
Pyrene	2.000	1.975	99	1.960	98	45-129	31-143	1	0-25	PASS	
Benzo (a) Anthracene	2.000	1.850	92	1.828	91	33-143	15-161	1	0-25	PASS	
Chrysene	2.000	1.940	97	1.939	97	17-168	0-193	0	0-25	PASS	
Benzo (k) Fluoranthene	2.000	1.959	98	2.046	102	24-159	2-182	4	0-25	PASS	
Benzo (b) Fluoranthene	2.000	1.854	93	1.785	89	24-159	2-182	4	0-25	PASS	
Benzo (a) Pyrene	2.000	1.861	93	1.896	95	17-163	0-187	2	0-25	PASS	
Indeno (1,2,3-c,d) Pyrene	2.000	1.828	91	1.816	91	25-175	0-200	1	0-25	PASS	
Dibenz (a,h) Anthracene	2.000	1.879	94	1.901	95	25-175	0-200	1	0-25	PASS	
Benzo (g,h,i) Perylene	2.000	1.922	96	1.940	97	25-157	3-179	1	0-25	PASS	

Total number of LCS compounds: 18
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	15mar012.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar012.d\
LCSD	15mar013.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar013.d\

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SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-0638
BATCH ID:
LCS/MB: 170314L01
MS:
EXTRACTION : EPA 3510C

REVIEWED BY:
D/T REVIEWED:

1 CLIENT SAMPLE NUMBER : EB3-2017-03-08

INSTRUMENT: GC/MS EEE
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-14 00:00
D/T ANALYZED 2017-03-15 15:41
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar014.d\15mar014.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	73	33-144	PASS	
Nitrobenzene-d5	82	28-139	PASS	
p-Terphenyl-d14	90	23-160	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC/MS EEE
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-14 00:00
D/T ANALYZED 2017-03-15 14:40
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar011.d\15mar011.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	78	33-144	PASS	
Nitrobenzene-d5	93	28-139	PASS	
p-Terphenyl-d14	95	23-160	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC/MS EEE
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-14 00:00
D/T ANALYZED 2017-03-15 15:01
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar012.d\15mar012.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Nitrobenzene-d5	104	28-139	PASS	
p-Terphenyl-d14	95	23-160	PASS	
2-Fluorobiphenyl	81	33-144	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-0638
BATCH ID:
LCS/MB: 170314L01
MS:
EXTRACTION : EPA 3510C

REVIEWED BY:
D/T REVIEWED:

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

INSTRUMENT: GC/MS EEE
ANALYZED BY: 907
D/T EXTRACTED: 2017-03-14 00:00
D/T ANALYZED 2017-03-15 15:21
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar013.d\15mar013.rr

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Nitrobenzene-d5	104	28-139	PASS	
p-Terphenyl-d14	92	23-160	PASS	
2-Fluorobiphenyl	82	33-144	PASS	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar011.d Instrument ID: GCMS_EEE.i
Injection date and time: 15-MAR-2017 14:40 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170315.b/simpah-extra.m Sublist used: all
Calibration date and time: 15-MAR-2017 12:25
Date, time and analyst ID of latest file update: 15-Mar-2017 16:18 ev7p

Sample Name: MB 170314 L01 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.391	152	56741	5.000	0.00
3)*Naphthalene-d8	(2)	4.632	136	166062	5.000	0.00
11)*Acenaphthene-d10	(3)	6.519	164	89990	5.000	0.00
17)*Phenanthrene-d10	(4)	8.117	188	269013	5.000	0.00
31)*Perylene-d12	(6)	12.802	264	254423	5.000	0.00
25)*Chrysene-d12	(5)	11.037	240	267116	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.947	82	10232	0.930	0.00
SpikedAmount 1.000	Recovery = 93.021					
7)$2-Fluorobiphenyl	(3)	5.815	172	25501	0.785	0.00
SpikedAmount 1.000	Recovery = 78.497					
23)$p-Terphenyl-d14	(5)	9.915	244	39426	0.952	0.00
SpikedAmount 1.000	Recovery = 95.243					
Target Compounds						QValue
4) Naphthalene	(2)	0.000		0	N.D.	
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	0.000		0	N.D.	
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0	N.D.	
26) Chrysene	(5)	0.000		0D	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0	N.D.	
33) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
34) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
35) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0	N.D.	

D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar011.d Instrument ID: GCMS_EEE.i
Injection date and time: 15-MAR-2017 14:40 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170315.b/simpah-extra.m Sublist used: all
Calibration date and time: 15-MAR-2017 12:25
Date, time and analyst ID of latest file update: 15-Mar-2017 16:18 ev7p

Sample Name: MB 170314 L01 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

D = Compound was deleted.

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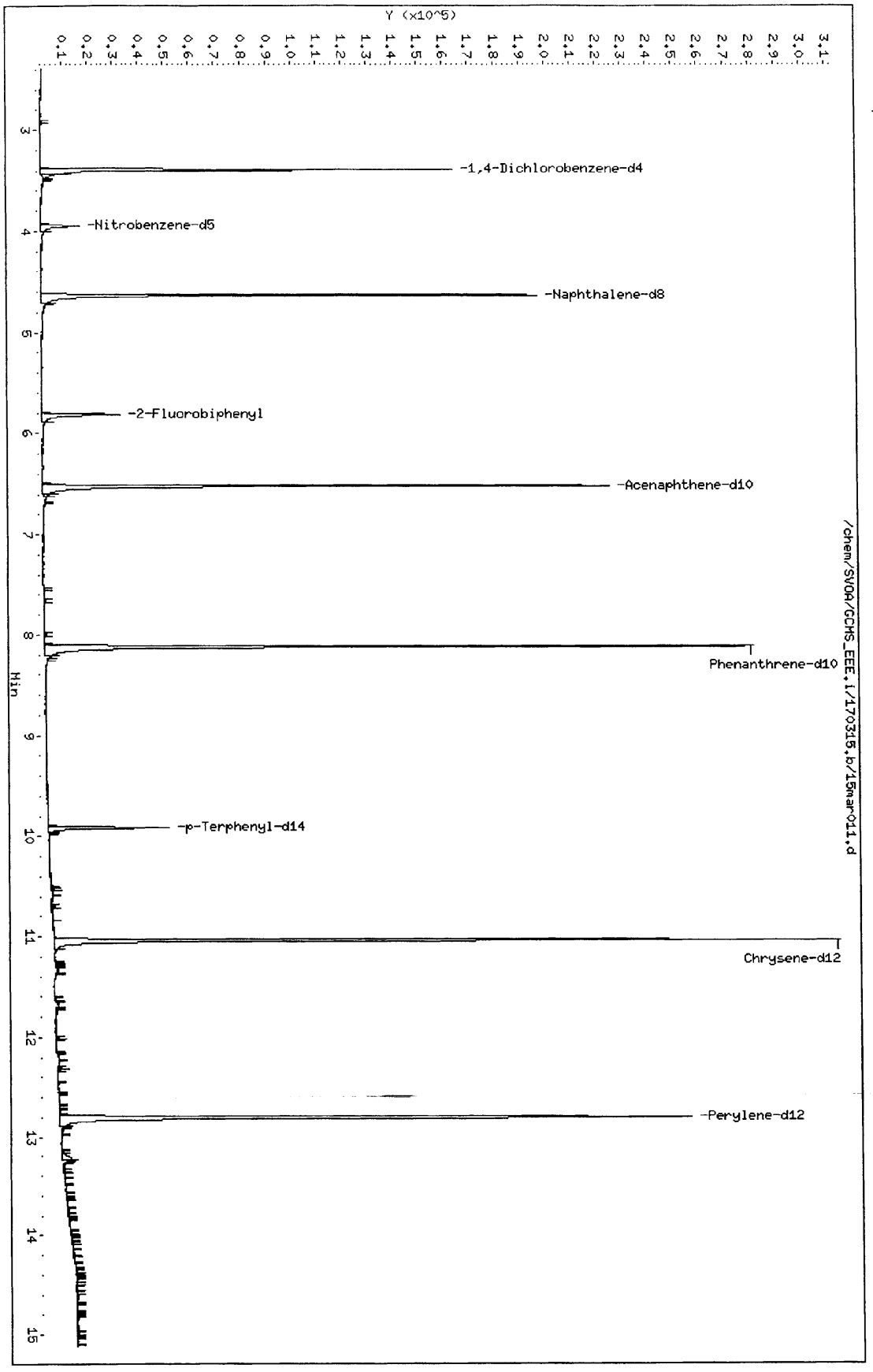

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar011.d
Date : 15-MAR-2017 14:40
Client ID:
Sample Info: MB 170314 L01
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar012.d Instrument ID: GCMS_EEE.i
Injection date and time: 15-MAR-2017 15:01 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170315.b/simpah-extra.m Sublist used: all
Calibration date and time: 15-MAR-2017 12:25
Date, time and analyst ID of latest file update: 15-Mar-2017 15:23 Unknown

Sample Name: LCS 170314 L01 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.393	152	53271	5.000	0.00
3)*Naphthalene-d8	(2)	4.632	136	153770	5.000	0.00
11)*Acenaphthene-d10	(3)	6.517	164	83182	5.000	0.00
17)*Phenanthrene-d10	(4)	8.115	188	237327	5.000	0.00
31)*Perylene-d12	(6)	12.802	264	240257	5.000	0.00
25)*Chrysene-d12	(5)	11.039	240	248813	5.000	-0.01
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.945	82	10591	1.040	0.00
SpikedAmount 1.000	Recovery = 103.986					
7)$2-Fluorobiphenyl	(3)	5.812	172	24327	0.810	0.00
SpikedAmount 1.000	Recovery = 81.016					
23)$p-Terphenyl-d14	(5)	9.915	244	36586	0.949	0.00
SpikedAmount 1.000	Recovery = 94.885					
Target Compounds						QValue
4) Naphthalene	(2)	4.652	128	31932	0.957	98
5) 2-Methylnaphthalene	(2)	5.384	142	22799	1.121	94
6) 1-Methylnaphthalene	(2)	5.497	142	20094	0.985	98
10) Acenaphthylene	(3)	6.350	152	35010	0.832	99
12) Acenaphthene	(3)	6.551	153	21519	0.853	99
15) Fluorene	(3)	7.104	166	24113	0.858	99
18) Phenanthrene	(4)	8.142	178	49774	0.988	99
19) Anthracene	(4)	8.193	178	50425	1.024	97
21) Fluoranthene	(4)	9.451	202	64264	0.992	100
22) Pyrene	(5)	9.690	202	66916	0.988	100
24) Benzo (a) Anthracene	(5)	11.021	228	60618	0.925	100
26) Chrysene	(5)	11.065	228	57777	0.970	99
27) Benzo (b) Fluoranthene	(6)	12.342	252	58047	0.927	100
28) Benzo (k) Fluoranthene	(6)	12.370	252	64304	0.980	96
30) Benzo (a) Pyrene	(6)	12.732	252	56168	0.931	97
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.048	276	65952	0.914	99
34) Dibenz (a,h) Anthracene	(6)	14.073	278	51412	0.939	99
35) Benzo (g,h,i) Perylene	(6)	14.328	276	55701	0.961	98
8) Biphenyl	(3)	5.901	154	29948	0.804	99
9) 2,6-Dimethylnaphthalene	(3)	6.061	156	20812	0.796	99
14) 1,6,7-Trimethylnaphthalene	(3)	6.982	170	21059	0.806	97
16) Dibenzothiophene	(3)	8.003	184	60768	0.790	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar012.d Instrument ID: GCMS_EEE.i
Injection date and time: 15-MAR-2017 15:01 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170315.b/simpah-extra.m Sublist used: all
Calibration date and time: 15-MAR-2017 12:25
Date, time and analyst ID of latest file update: 15-Mar-2017 15:23 Unknown

Sample Name: LCS 170314 L01 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.832	192	46679	0.941	100
29) Benzo (e) pyrene	(6)	12.668	252	66524	0.889	100
32) Perylene	(6)	12.830	252	61492	0.857	99
13) Dibenzofuran	(3)	6.730	168	31247	0.856	98

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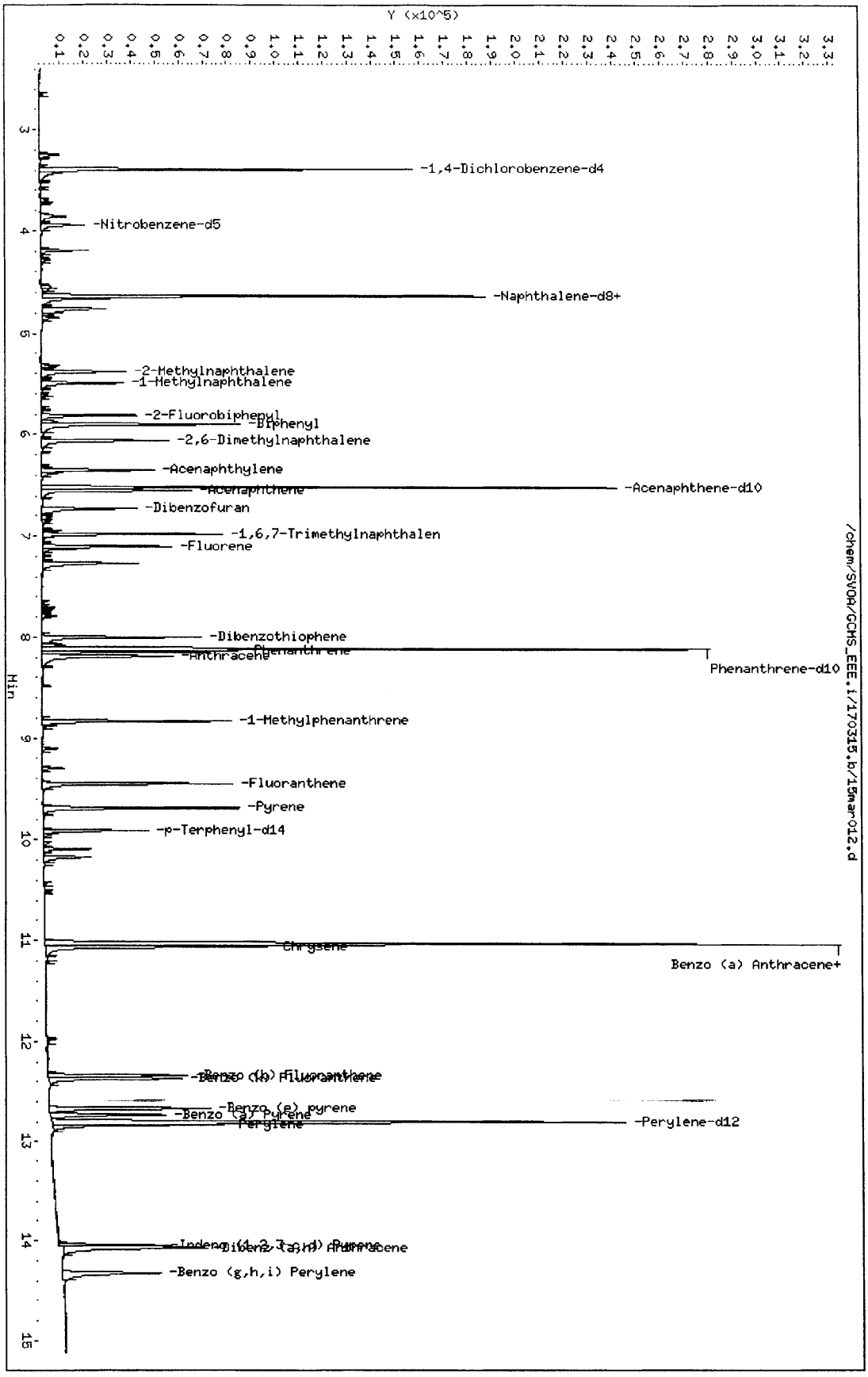

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar012.d
Date : 15-MAR-2017 15:01
Client ID:
Sample Info: LCS 170314 L01
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar013.d Instrument ID: GCMS_EEE.i
Injection date and time: 15-MAR-2017 15:21 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170315.b/simpah-extra.m Sublist used: all
Calibration date and time: 15-MAR-2017 12:25
Date, time and analyst ID of latest file update: 15-Mar-2017 15:43 Unknown

Sample Name: LCSD 170314 L01 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.393	152	59213	5.000	0.00
3)*Naphthalene-d8	(2)	4.632	136	169336	5.000	0.00
11)*Acenaphthene-d10	(3)	6.519	164	89998	5.000	0.00
17)*Phenanthrene-d10	(4)	8.115	188	259148	5.000	0.00
31)*Perylene-d12	(6)	12.800	264	257216	5.000	0.00
25)*Chrysene-d12	(5)	11.037	240	268568	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.945	82	11639	1.038	0.00
SpikedAmount 1.000	Recovery = 103.773					
7)$2-Fluorobiphenyl	(3)	5.812	172	26631	0.820	0.00
SpikedAmount 1.000	Recovery = 81.971					
23)$p-Terphenyl-d14	(5)	9.913	244	38459	0.924	0.00
SpikedAmount 1.000	Recovery = 92.406					
Target Compounds						QValue
4) Naphthalene	(2)	4.652	128	35683	0.972	99
5) 2-Methylnaphthalene	(2)	5.386	142	26014	1.161	92
6) 1-Methylnaphthalene	(2)	5.496	142	23068	1.027	98
10) Acenaphthylene	(3)	6.350	152	37661	0.828	99
12) Acenaphthene	(3)	6.551	153	23501	0.861	99
15) Fluorene	(3)	7.104	166	26630	0.876	99
18) Phenanthrene	(4)	8.140	178	53436	0.972	100
19) Anthracene	(4)	8.191	178	53863	1.002	98
21) Fluoranthene	(4)	9.453	202	69509	0.983	100
22) Pyrene	(5)	9.691	202	71656	0.980	100
24) Benzo (a) Anthracene	(5)	11.021	228	64661	0.914	100
26) Chrysene	(5)	11.065	228	62336	0.970	99
27) Benzo (b) Fluoranthene	(6)	12.340	252	59806	0.892	100
28) Benzo (k) Fluoranthene	(6)	12.370	252	71903	1.023	97
30) Benzo (a) Pyrene	(6)	12.731	252	61244	0.948	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.047	276	70126	0.908	99
34) Dibenz (a,h) Anthracene	(6)	14.075	278	55683	0.950	98
35) Benzo (g,h,i) Perylene	(6)	14.325	276	60192	0.970	99
8) Biphenyl	(3)	5.901	154	32913	0.816	100
9) 2,6-Dimethylnaphthalene	(3)	6.061	156	22670	0.801	98
14) 1,6,7-Trimethylnaphthalene	(3)	6.982	170	23361	0.826	96
16) Dibenzothiophene	(3)	8.003	184	65668	0.789	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar013.d Instrument ID: GCMS_EEE.i
Injection date and time: 15-MAR-2017 15:21 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170315.b/simpah-extra.m Sublist used: all
Calibration date and time: 15-MAR-2017 12:25
Date, time and analyst ID of latest file update: 15-Mar-2017 15:43 Unknown

Sample Name: LCSD 170314 L01 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.832	192	50396	0.941	98
29) Benzo (e) pyrene	(6)	12.666	252	71849	0.897	100
32) Perylene	(6)	12.830	252	66852	0.870	99
13) Dibenzofuran	(3)	6.730	168	35034	0.887	99

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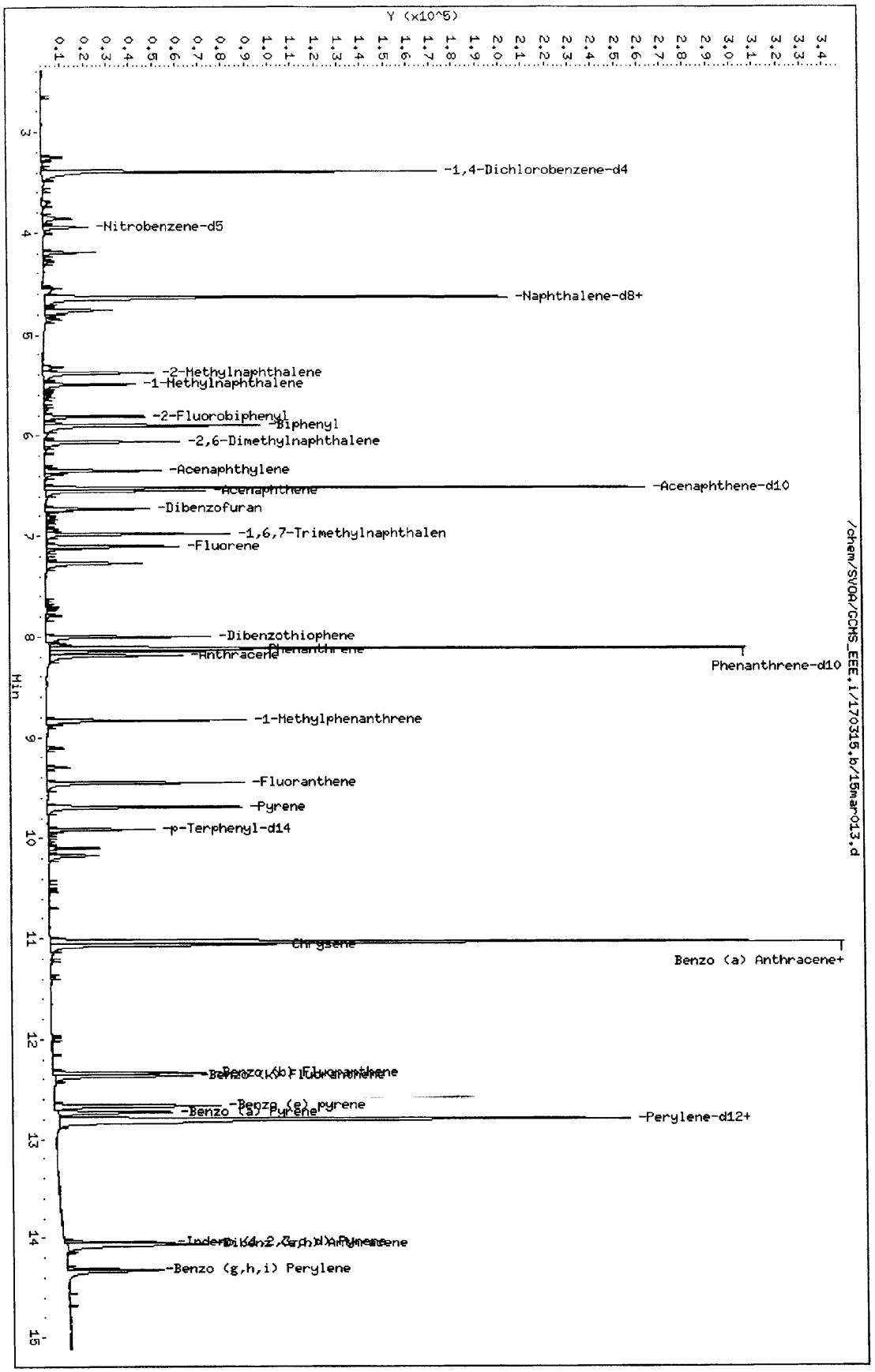

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar013.d
Date : 15-MAR-2017 15:21
Client ID:
Sample Info: LCSD 170314 Lo1
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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EPA METHOD 8270C
PAHSIM

Continuing Calibration

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

BATCH ID: **170315A013** ANALYZED BY: 907
INSTRUMENT: GC/MS EEE

WORK ORDER: **099-06-009** REVIEWED BY:
MATRIX: Water D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
4983	Daily Calibration	2017-03-15 11:38	Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar002.d\15mar002.r

WORK ORDER: **17-03-0638** REVIEWED BY:
MATRIX: Water D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
1	EB3-2017-03-08	2017-03-15 15:41	Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar014.d\15mar014.r

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

CCV WORK ORDER: **099-06-009-4983-4741**
INSTRUMENT: GC/MS EEE
BATCH ID:
INITIAL: 170313I001
CCV: 170315A013

ANALYZED BY: 907
D/T ANALYZED:
INITIAL: 2017-03-13 14:13
CCV: 2017-03-15 11:38
REVIEWED BY:
D/T REVIEWED:

Data File: Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar002.d\15mar002.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Naphthalene		Avg Resp	0.00	1.085	1.205			-11	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.661	0.786			-19	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.663	0.721			-9	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.528	2.630			-4	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.517	1.625			-7	0-20	PASS
Fluorene		Avg Resp	0.00	1.689	1.796			-6	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.061	1.099			-4	0-20	PASS
Anthracene		Avg Resp	0.00	1.037	1.015			2	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.365	1.407			-3	0-20	PASS
Pyrene		Avg Resp	0.00	1.362	1.483			-9	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.317	1.286			2	0-20	PASS
Chrysene		Avg Resp	0.00	1.197	1.347			-13	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.366	1.610			-18	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.303	1.356			-4	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.256	1.323			-5	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.502	1.603			-7	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.139	1.242			-9	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.207	1.292			-7	0-20	PASS
Dibenzothiophene		Avg Resp	0.00	4.622	4.626			0	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

INTERNAL STANDARD COMPOUNDS AREA REPORT
FOR METHOD: EPA 8270C SIM PAHs

ICAL BATCH ID: 170313I001 **CCV BATCH ID:** 170315A013

ICAL MIDPOINT

SAMPLE ID: 099-06-009-4979 D/T ANALYZED: 2017-03-13 13:33

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar008.d\13mar008.rr

COMPOUND	AREA	RETENTION TIME
1,4-Dichlorobenzene-d4	46489	3.41
Naphthalene-d8	140022	4.66
Acenaphthene-d10	63153	6.54
Phenanthrene-d10	210133	8.14
Chrysene-d12	220711	11.06
Perylene-d12	208071	12.82

ICV

SAMPLE ID 099-06-009-4979 D/T ANALYZED: 2017-03-13 14:34

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170313\13mar011.d\13mar011.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	44664	23244	92978	3.42	PASS
Naphthalene-d8	134376	70011	280044	4.65	PASS
Acenaphthene-d10	61082	31576	126306	6.54	PASS
Phenanthrene-d10	200519	105066	420266	8.14	PASS
Chrysene-d12	207148	110356	441422	11.06	PASS
Perylene-d12	200860	104036	416142	12.82	PASS

CCV

SAMPLE ID 099-06-009-4983 D/T ANALYZED: 2017-03-15 11:38

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar002.d\15mar002.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	50320	23244	92978	3.39	PASS
Naphthalene-d8	142956	70011	280044	4.63	PASS
Acenaphthene-d10	64832	31576	126306	6.52	PASS
Phenanthrene-d10	202222	105066	420266	8.11	PASS
Chrysene-d12	199579	110356	441422	11.04	PASS
Perylene-d12	179707	104036	416142	12.80	PASS

MB

SAMPLE ID 099-06-008-956 D/T ANALYZED: 2017-03-15 14:40

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar011.d\15mar011.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	56741	25160	100640	3.39	PASS
Naphthalene-d8	166062	71478	285912	4.63	PASS
Acenaphthene-d10	89990	32416	129664	6.52	PASS
Phenanthrene-d10	269013	101111	404444	8.12	PASS
Chrysene-d12	267116	99790	399158	11.04	PASS
Perylene-d12	254423	89854	359414	12.80	PASS

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LCS

SAMPLE ID **099-06-008-956** D/T ANALYZED: 2017-03-15 15:01

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar012.d\15mar012.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	53271	25160	100640	3.39	PASS
Naphthalene-d8	153770	71478	285912	4.63	PASS
Acenaphthene-d10	83182	32416	129664	6.52	PASS
Phenanthrene-d10	237327	101111	404444	8.12	PASS
Chrysene-d12	248813	99790	399158	11.04	PASS
Perylene-d12	240257	89854	359414	12.80	PASS

LCD

SAMPLE ID **099-06-008-956** D/T ANALYZED: 2017-03-15 15:21

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar013.d\15mar013.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	59213	25160	100640	3.39	PASS
Naphthalene-d8	169336	71478	285912	4.63	PASS
Acenaphthene-d10	89998	32416	129664	6.52	PASS
Phenanthrene-d10	259148	101111	404444	8.12	PASS
Chrysene-d12	268568	99790	399158	11.04	PASS
Perylene-d12	257216	89854	359414	12.80	PASS

CS

SAMPLE ID **17-03-0638-1** D/T ANALYZED: 2017-03-15 15:41

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170315\15mar014.d\15mar014.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	55345	25160	100640	3.39	PASS
Naphthalene-d8	158462	71478	285912	4.63	PASS
Acenaphthene-d10	85273	32416	129664	6.52	PASS
Phenanthrene-d10	248602	101111	404444	8.12	PASS
Chrysene-d12	257483	99790	399158	11.04	PASS
Perylene-d12	242198	89854	359414	12.80	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.

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Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar002.d
Report Date: 03/15/2017 18:00

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_EEE.i
Sample Name: CCV S010317F 1PPM
Sublist used: all.sub
Method used: /chem/SVOA/GCMS_EEE.i/170315.b/simpah-extra.m

Injection Date and Time: 15-MAR-2017 11:38
Initial Calibration Date(s): 03-JAN-2017 13-MAR-2017
Initial Calibration Time(s): 11:59 14:13

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Naphthalene	1.085	1.205	0.00	-11	20	Averaged
2-Methylnaphthalene	0.661	0.786	0.00	-19	20	Averaged
1-Methylnaphthalene	0.663	0.721	0.00	-9	20	Averaged
Acenaphthylene	2.528	2.630	0.00	-4	20	Averaged
Acenaphthene	1.517	1.625	0.00	-7	20	Averaged
Fluorene	1.689	1.796	0.00	-6	20	Averaged
Phenanthrene	1.061	1.099	0.00	-4	20	Averaged
Anthracene	1.037	1.015	0.00	2	20	Averaged
Fluoranthene	1.365	1.407	0.00	-3	20	Averaged
Pyrene	1.362	1.483	0.00	-9	20	Averaged
Benzo (a) Anthracene	1.317	1.286	0.00	2	20	Averaged
Chrysene	1.197	1.347	0.00	-13	20	Averaged
Benzo (b) Fluoranthene	1.303	1.356	0.00	-4	20	Averaged
Benzo (k) Fluoranthene	1.366	1.610	0.00	-18	20	Averaged
Benzo (a) Pyrene	1.256	1.323	0.00	-5	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.502	1.603	0.00	-7	20	Averaged
Dibenz (a,h) Anthracene	1.139	1.242	0.00	-9	20	Averaged
Benzo (g,h,i) Perylene	1.207	1.292	0.00	-7	20	Averaged
Biphenyl	2.240	2.399	0.00	-7	20	Averaged
2,6-Dimethylnaphthalene	1.572	1.668	0.00	-6	20	Averaged
1,6,7-Trimethylnaphthalene	1.571	1.663	0.00	-6	20	Averaged
Dibenzothiophene	4.622	4.626	0.00	0	20	Averaged
1-Methylphenanthrene	0.997	1.107	0.00	-11	20	Averaged
Benzo (e) pyrene	1.557	1.702	0.00	-9	20	Averaged
Perylene	1.493	1.579	0.00	-6	20	Averaged
Dibenzofuran	2.194	2.357	0.00	-7	20	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Nitrobenzene-d5	0.331	0.391	0.00	-18	20	Averaged
2-Fluorobiphenyl	1.805	2.004	0.00	-11	20	Averaged
p-Terphenyl-d14	0.775	0.839	0.00	-8	20	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar002.d Instrument ID: GCMS_EEE.i
Injection date and time: 15-MAR-2017 11:38 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170315.b/simpah-extra.m Sublist used: all
Calibration date and time: 15-MAR-2017 12:02
Date, time and analyst ID of latest file update: 15-Mar-2017 12:02 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170315A013
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.391	152	50320	5.000	0.00
3)*Naphthalene-d8	(2)	4.633	136	142956	5.000	0.00
11)*Acenaphthene-d10	(3)	6.517	164	64832	5.000	0.00
17)*Phenanthrene-d10	(4)	8.115	188	202222	5.000	0.00
31)*Perylene-d12	(6)	12.798	264	179707	5.000	0.00
25)*Chrysene-d12	(5)	11.037	240	199579	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.946	82	11169	1.180	0.00
SpikedAmount 1.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.810	172	25983	1.110	0.00
SpikedAmount 1.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.914	244	33486	1.083	0.00
SpikedAmount 1.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.653	128	34448	1.111	100
5) 2-Methylnaphthalene	(2)	5.384	142	22463	1.188	100
6) 1-Methylnaphthalene	(2)	5.496	142	20620	1.088	100
10) Acenaphthylene	(3)	6.348	152	34101	1.040	100
12) Acenaphthene	(3)	6.551	153	21071	1.071	100
15) Fluorene	(3)	7.102	166	23289	1.063	100
18) Phenanthrene	(4)	8.140	178	44432	1.035	100
19) Anthracene	(4)	8.191	178	41065	0.979	100
21) Fluoranthene	(4)	9.451	202	56909	1.031	100
22) Pyrene	(5)	9.687	202	59212	1.090	100
24) Benzo (a) Anthracene	(5)	11.018	228	51334	0.976	100
26) Chrysene	(5)	11.063	228	53772	1.126	100
27) Benzo (b) Fluoranthene	(6)	12.338	252	48733	1.041	100
28) Benzo (k) Fluoranthene	(6)	12.366	252	57871	1.179	100
30) Benzo (a) Pyrene	(6)	12.729	252	47551	1.053	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.046	276	57601	1.067	100
34) Dibenz (a,h) Anthracene	(6)	14.073	278	44634	1.090	100
35) Benzo (g,h,i) Perylene	(6)	14.323	276	46454	1.071	100
8) Biphenyl	(3)	5.901	154	31105	1.071	100
9) 2,6-Dimethylnaphthalene	(3)	6.061	156	21626	1.061	100
14) 1,6,7-Trimethylnaphthalene	(3)	6.983	170	21562	1.059	100
16) Dibenzothiophene	(3)	8.002	184	59977	1.001	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar002.d Instrument ID: GCMS_EEE.i
Injection date and time: 15-MAR-2017 11:38 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170315.b/simpah-extra.m Sublist used: all
Calibration date and time: 15-MAR-2017 12:02
Date, time and analyst ID of latest file update: 15-Mar-2017 12:02 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170315A013
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.832	192	44184	1.111	100
29) Benzo (e) pyrene	(6)	12.666	252	61175	1.093	100
32) Perylene	(6)	12.830	252	56769	1.058	100
13) Dibenzofuran	(3)	6.729	168	30564	1.074	100

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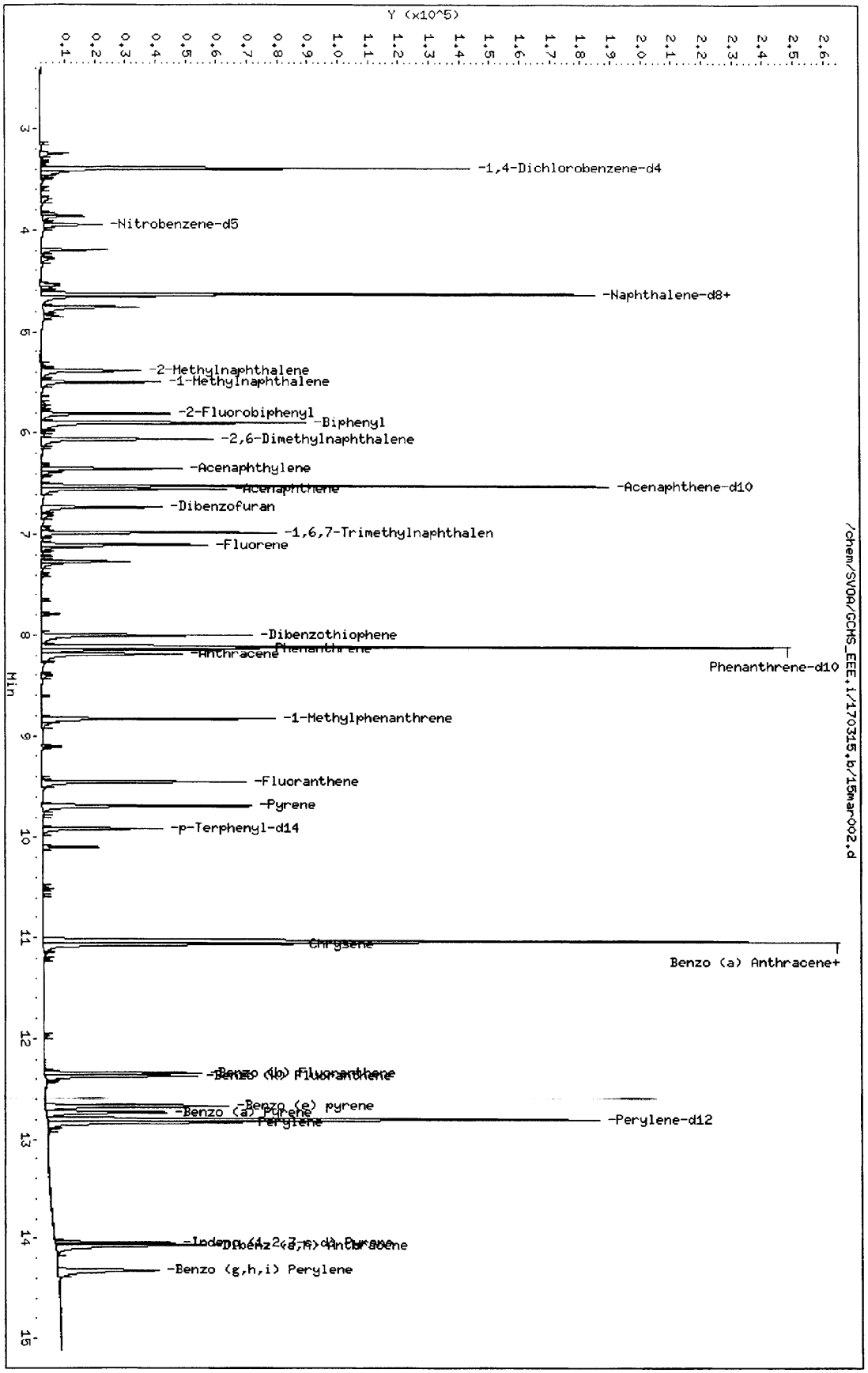

Data File: /chem/SVOA/GCMS_EEE.i/170315.b/15mar002.d
Date : 15-MAR-2017 11:38
Client ID:
Sample Info: CCV S010317F 1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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EPA METHOD 8270C
PAHSIM

Tuning Reports

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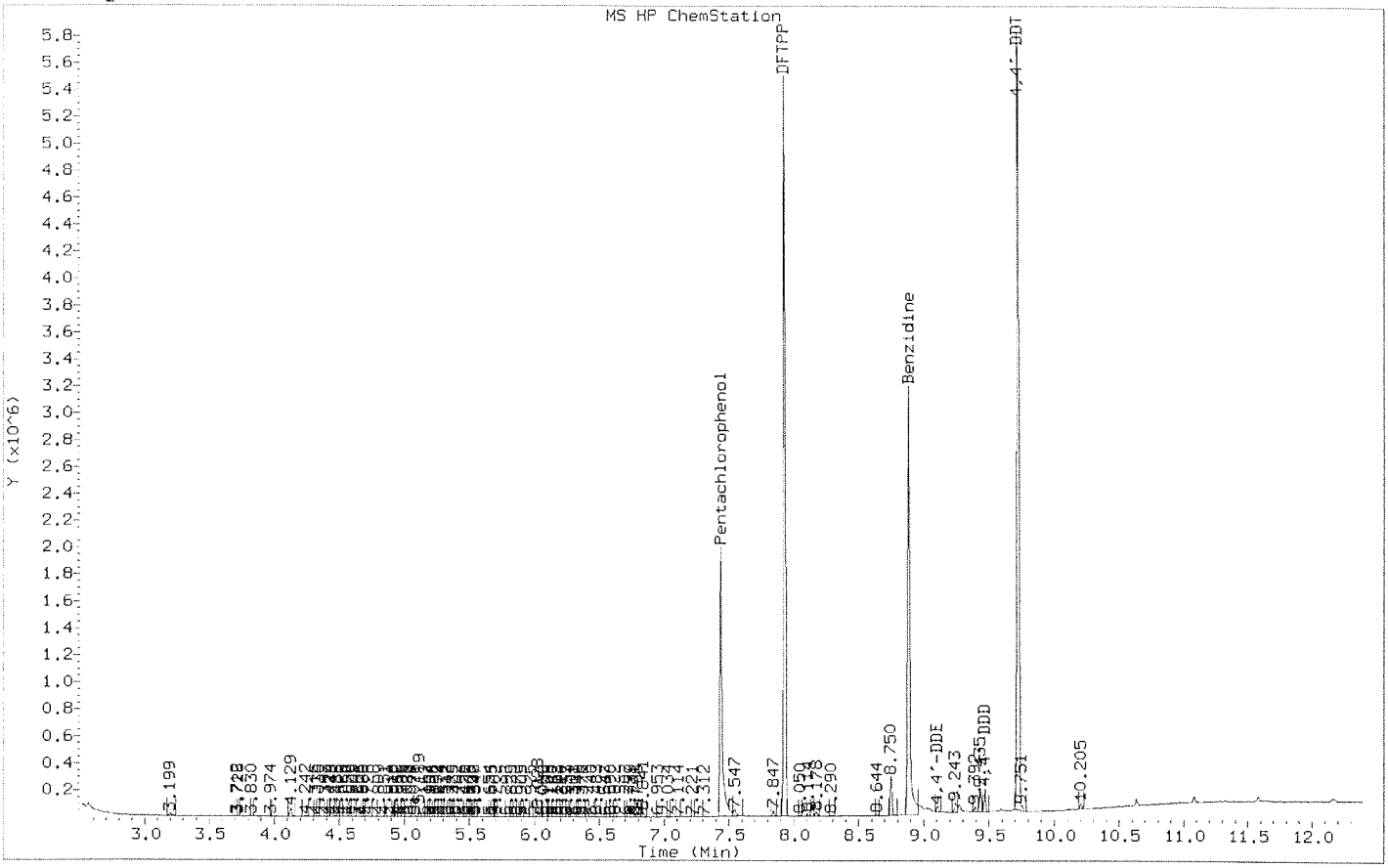
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 1
Acq on : 13-MAR-2017 11:49 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Last Update : 07-MAR-2017 10:28



Tune	*** PASSED ***
Pentachlorophenol Tailing	*** PASSED ***
Benzidine Tailing	*** PASSED ***
DDT degradation	*** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d ,* PASSED ***

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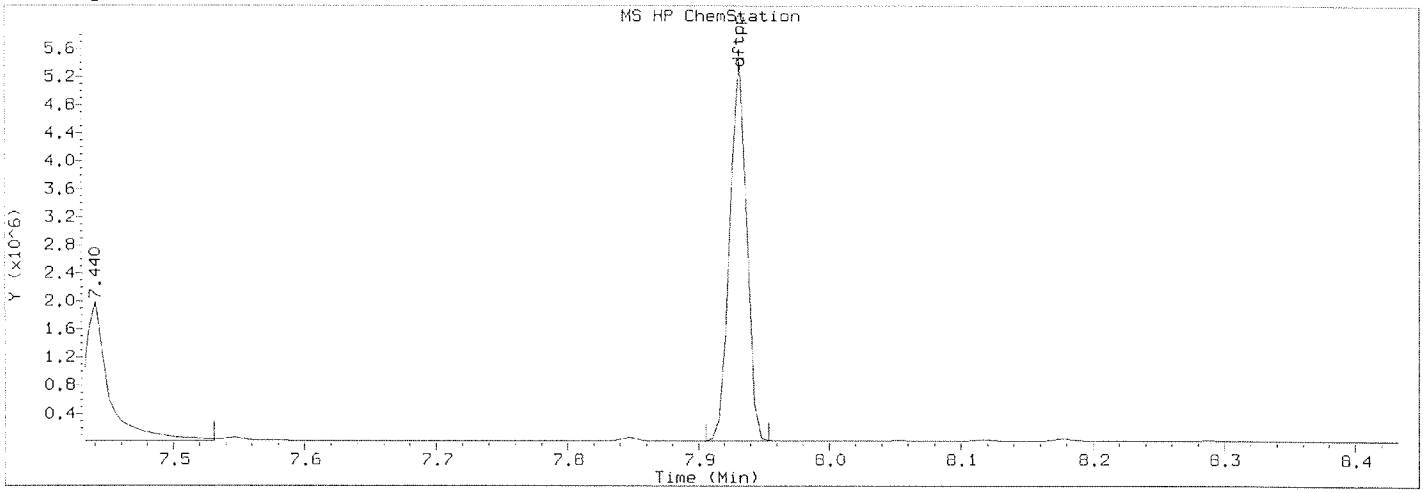
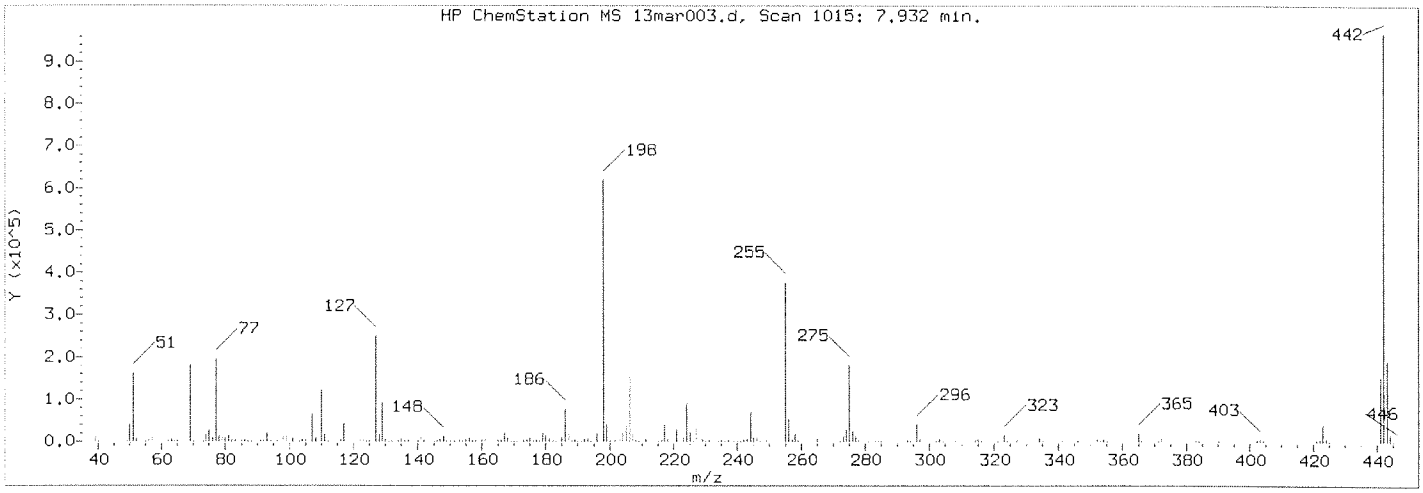
Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 1
Acq on : 13-MAR-2017 11:49 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/dftpptune.m
Last Update : 07-MAR-2017 10:28





Spectrum: Avg. Scans 1014-1016 (7.93), Background Scan 1009

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	461312	PASS
51	30 - 60% of mass 198	33.56	154816	PASS
68	Less than 2% of mass 69	0.00	0	PASS
69	Less than mass 198	36.32	167552	PASS
70	Less than 2% of mass 69	0.62	1045	PASS
127	40 - 60% of mass 198	44.77	206528	PASS
197	0 - 1% of mass 198	0.00	0	PASS
199	5 - 9% of mass 198	6.99	32256	PASS
275	10 - 30% of mass 198	25.66	118368	PASS
365	1 - 100% of mass 198	2.66	12269	PASS
441	Present, but less than mass 443	74.01	76992	PASS
442	40 - 200% of mass 198	109.96	507264	PASS
443	17 - 23% of mass 442	20.51	104024	PASS

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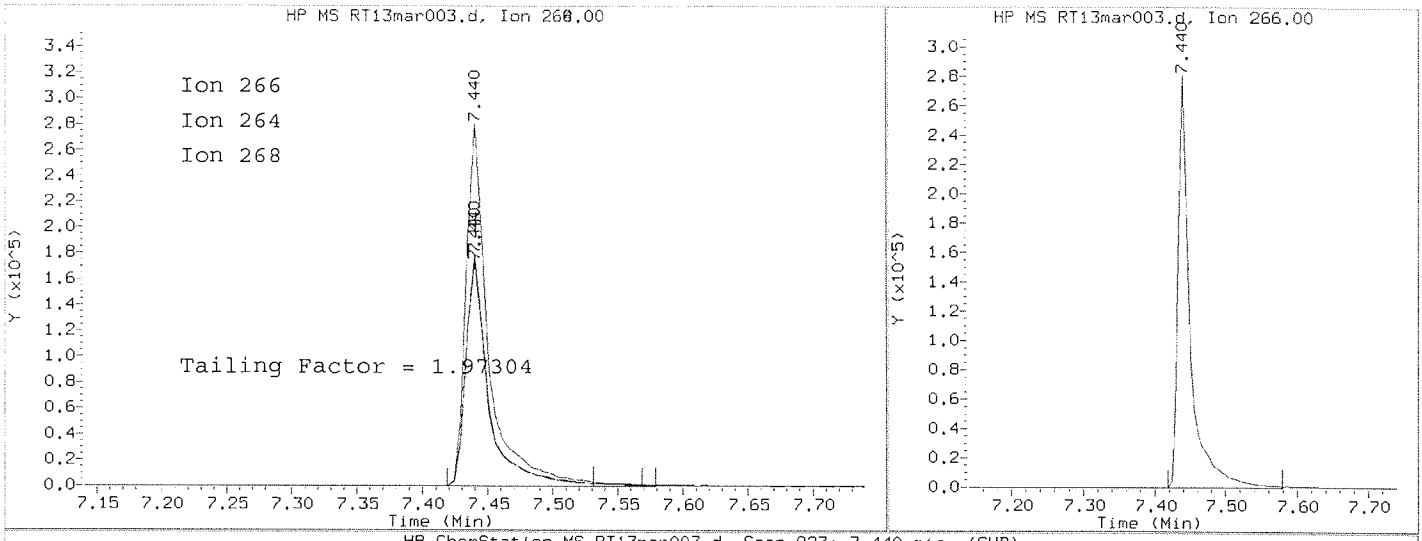
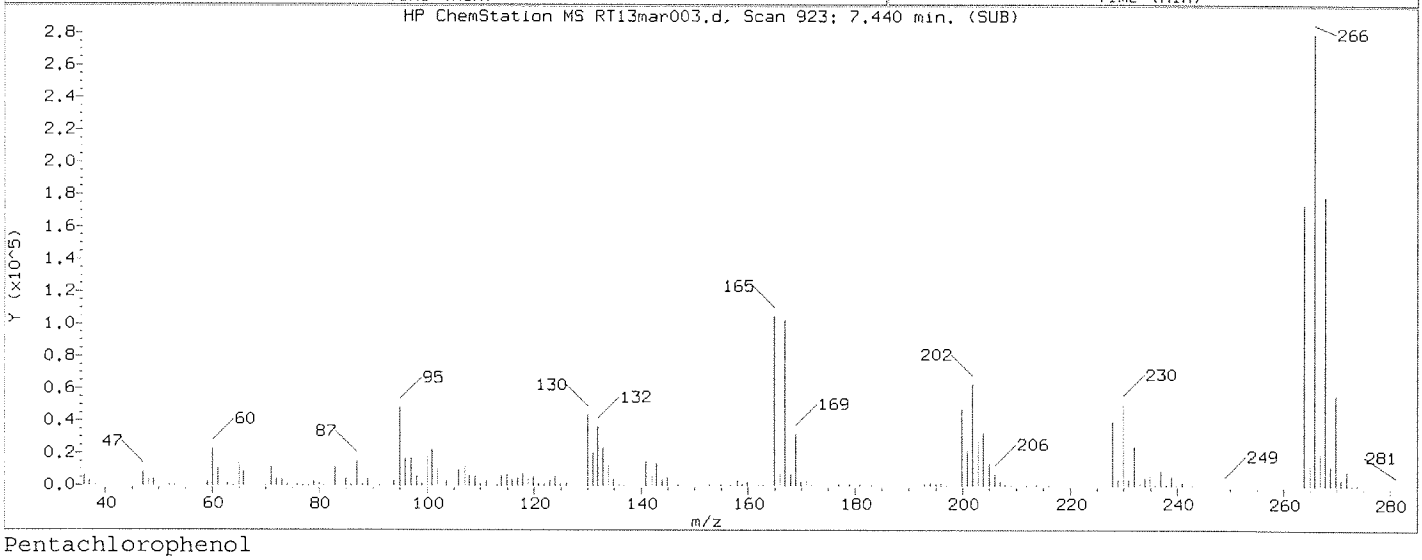
Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08





Pentachlorophenol
==========
Exp. RT = 7.467
Found RT = 7.440

Mass	Area	Ratio
266	343885	100.00
264	216440	62.94
268	218874	63.65

Peak baseline front width (sec) : 0.816
Peak baseline tail width (sec) : 1.610
Tail Factor = 1.610/ 0.816

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.973 Maximum Allowed = 3.0

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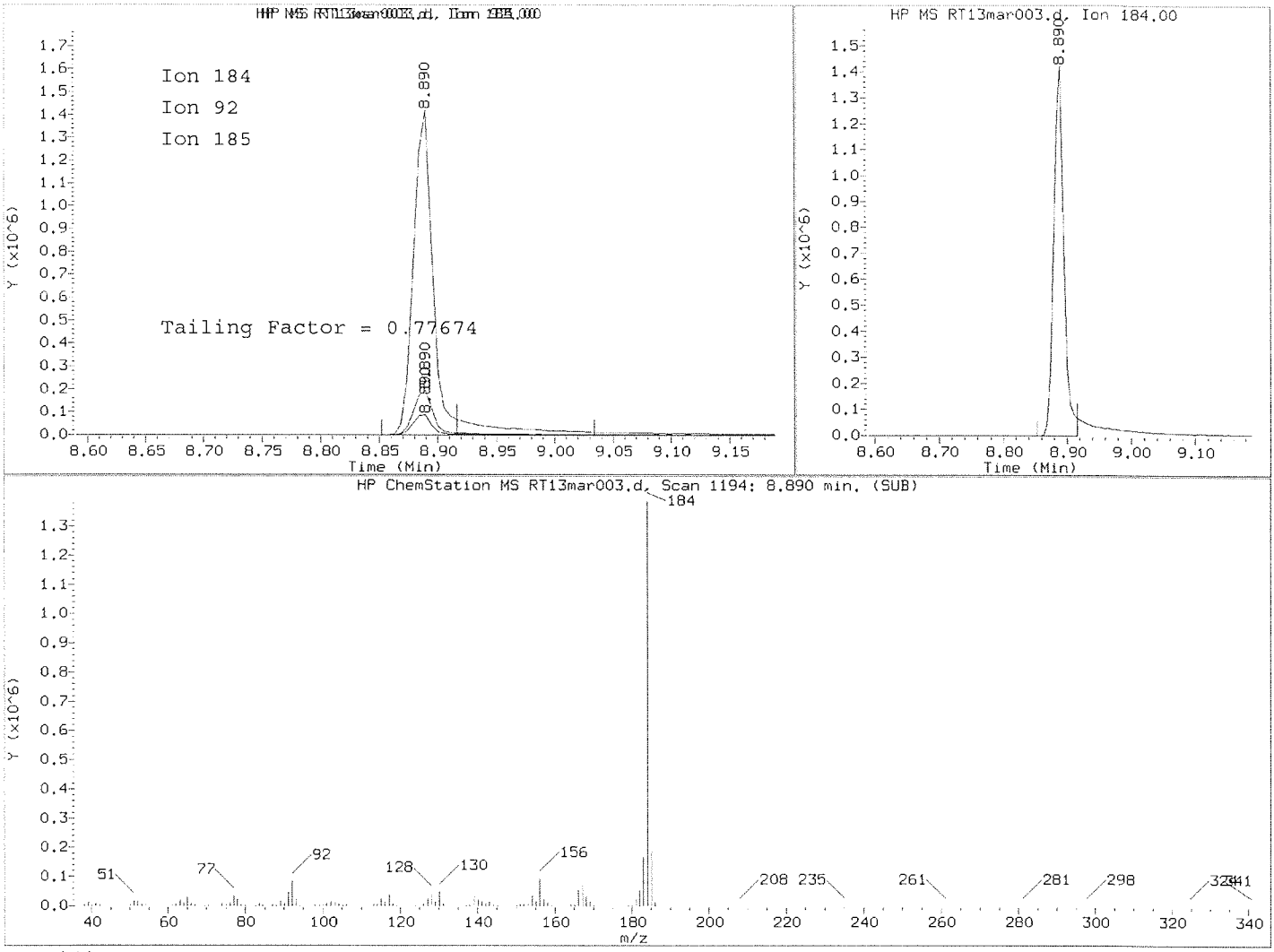
Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08



Benzidine
=========
Exp. RT = 8.911
Found RT = 8.890

Mass	Area	Ratio
184	1603178	100.00
92	113552	7.08
185	222697	13.89

Peak baseline front width (sec) : 1.066
Peak baseline tail width (sec) : 0.828
Tail Factor = 0.828/ 1.066

Tailing factor for Benzidine OK

Tail Factor = 0.777 Maximum Allowed = 3.0

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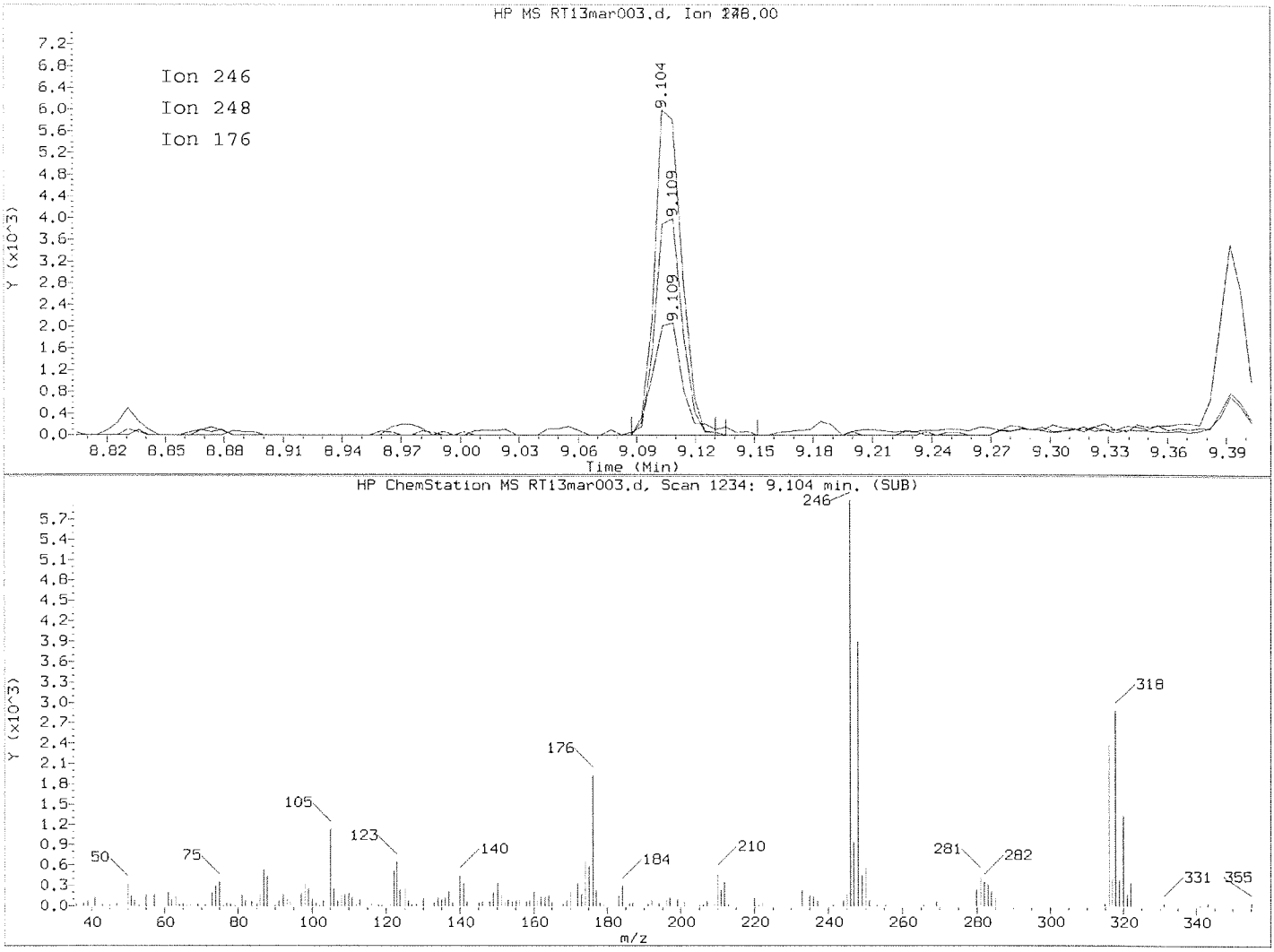
Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08



4,4'-DDE
========
Exp. RT = 9.344
Found RT = 9.104

Mass	Area	Ratio
246	5722	100.00
248	3838	67.08
176	2263	39.55

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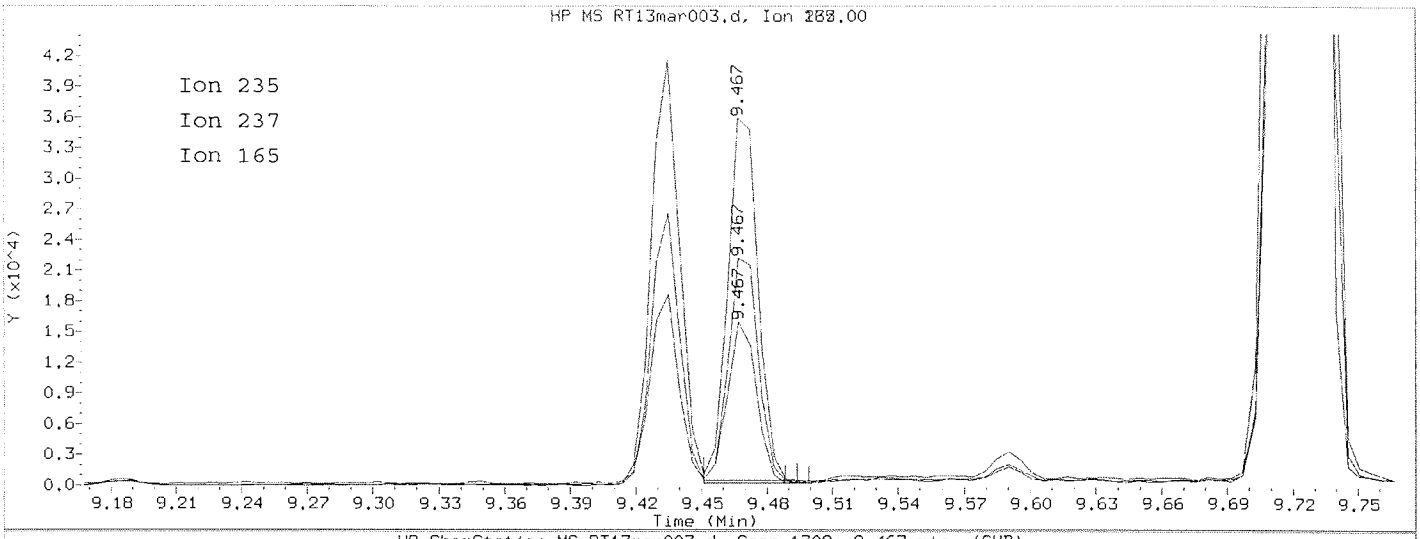
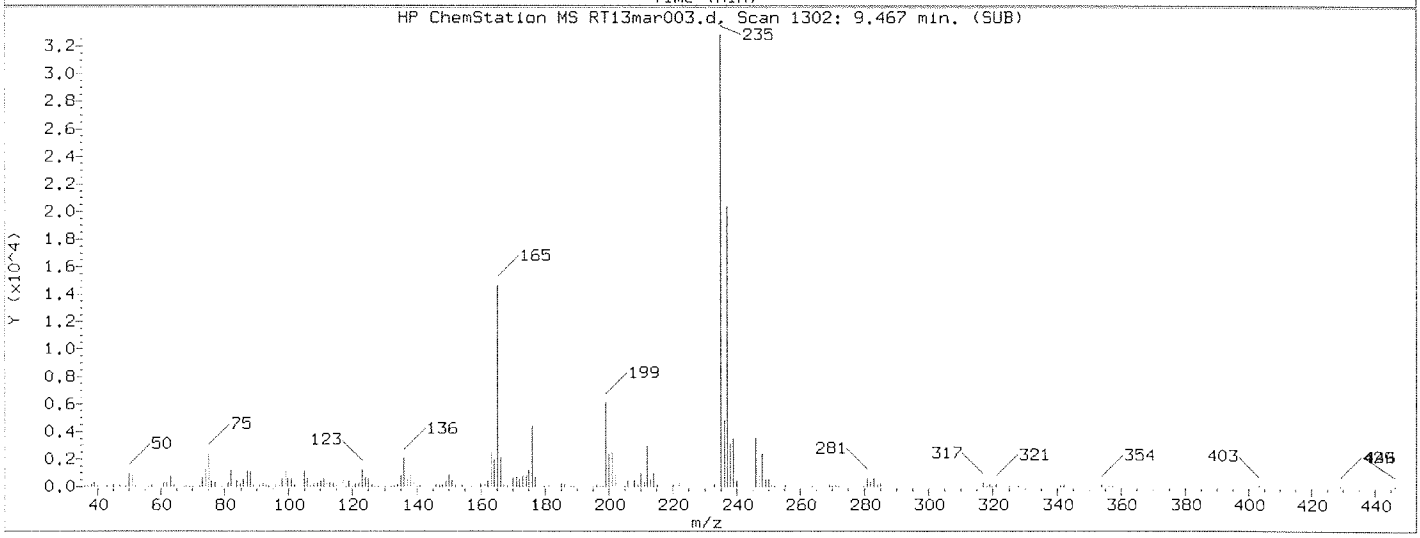
Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08





4,4'-DDD
========
Exp. RT = 9.499
Found RT = 9.467

Mass	Area	Ratio
235	34099	100.00
237	21311	62.50
165	14557	42.69

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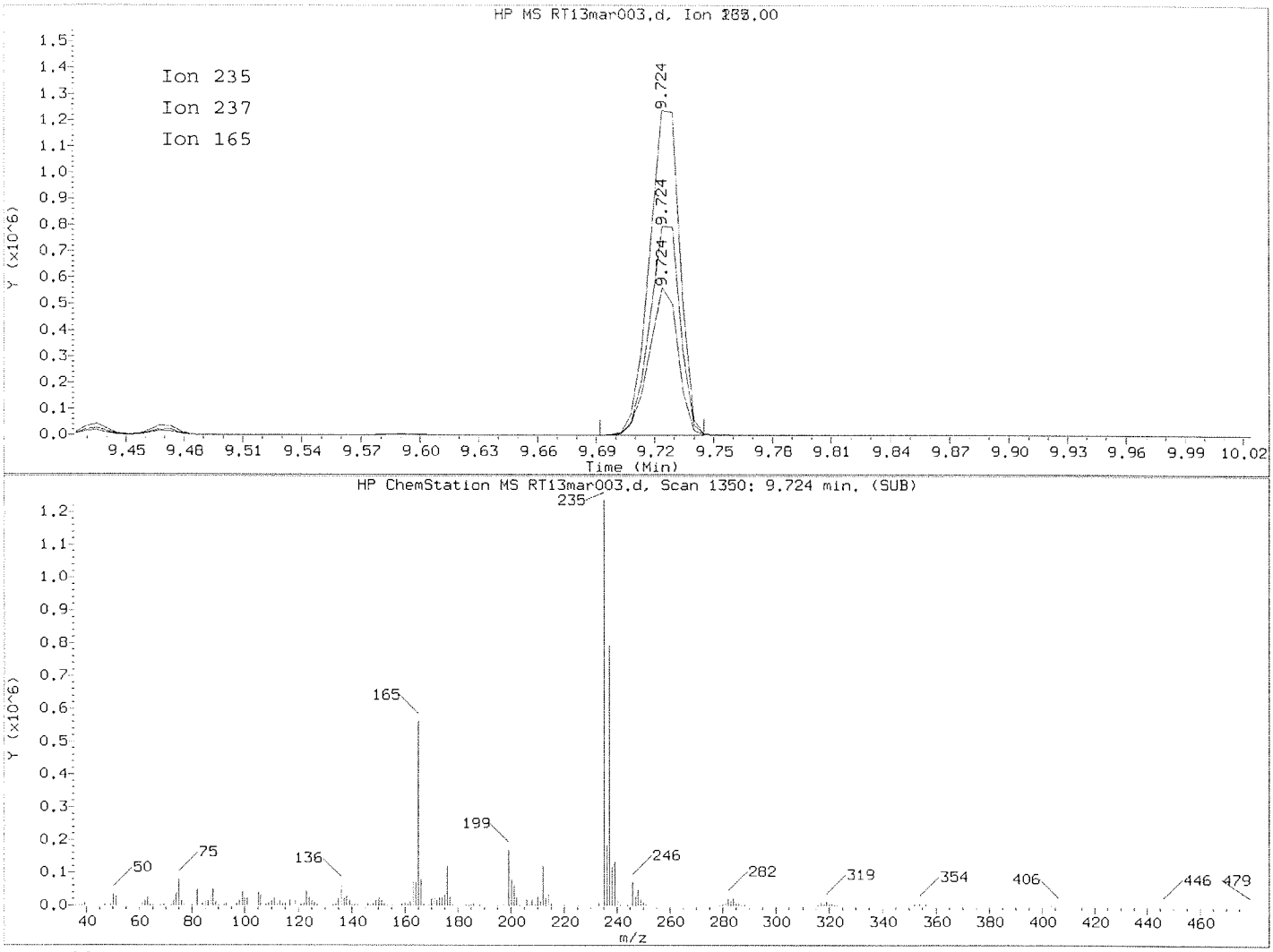
Report Generated Time Mon Mar 13 15:07:34 2017

Data File : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d
ALS Vial : 3
Acq on : 13-MAR-2017 11:49 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170313.b/13mar003.d/resolut.m
Last Update : 13-MAR-2017 12:08



4,4'-DDT
========
Exp. RT = 9.756
Found RT = 9.724

Mass	Area	Ratio
235	1352361	100.00
237	866214	64.05
165	581673	43.01

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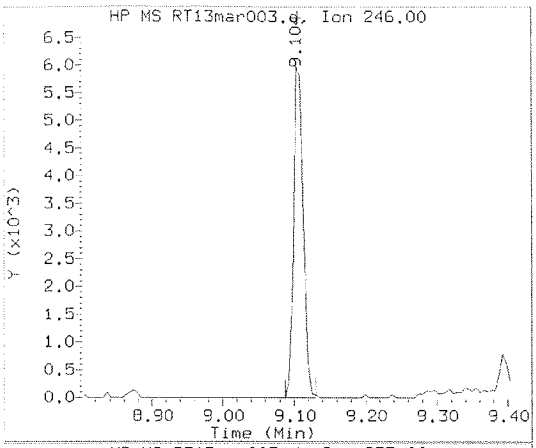
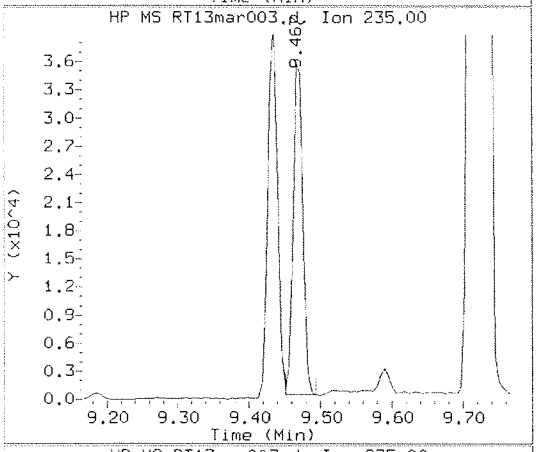
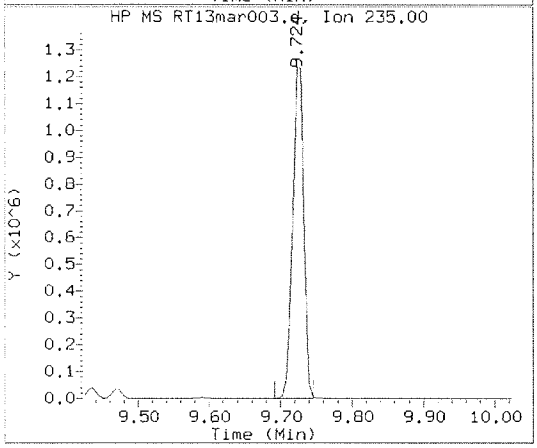


Compound: 4,4'-DDE
Quant Mass: 246
RT: 9.104
Area: 5722



Compound: 4,4'-DDD
Quant Mass: 235
RT: 9.467
Area: 34099



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.724
Area: 1352361

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1352361			N/A
4,4-DDE	5722	0.42	20.0	PASS
4,4-DDD	34099	2.46	20.0	PASS
4,4-DDD + DDE	39821	2.9	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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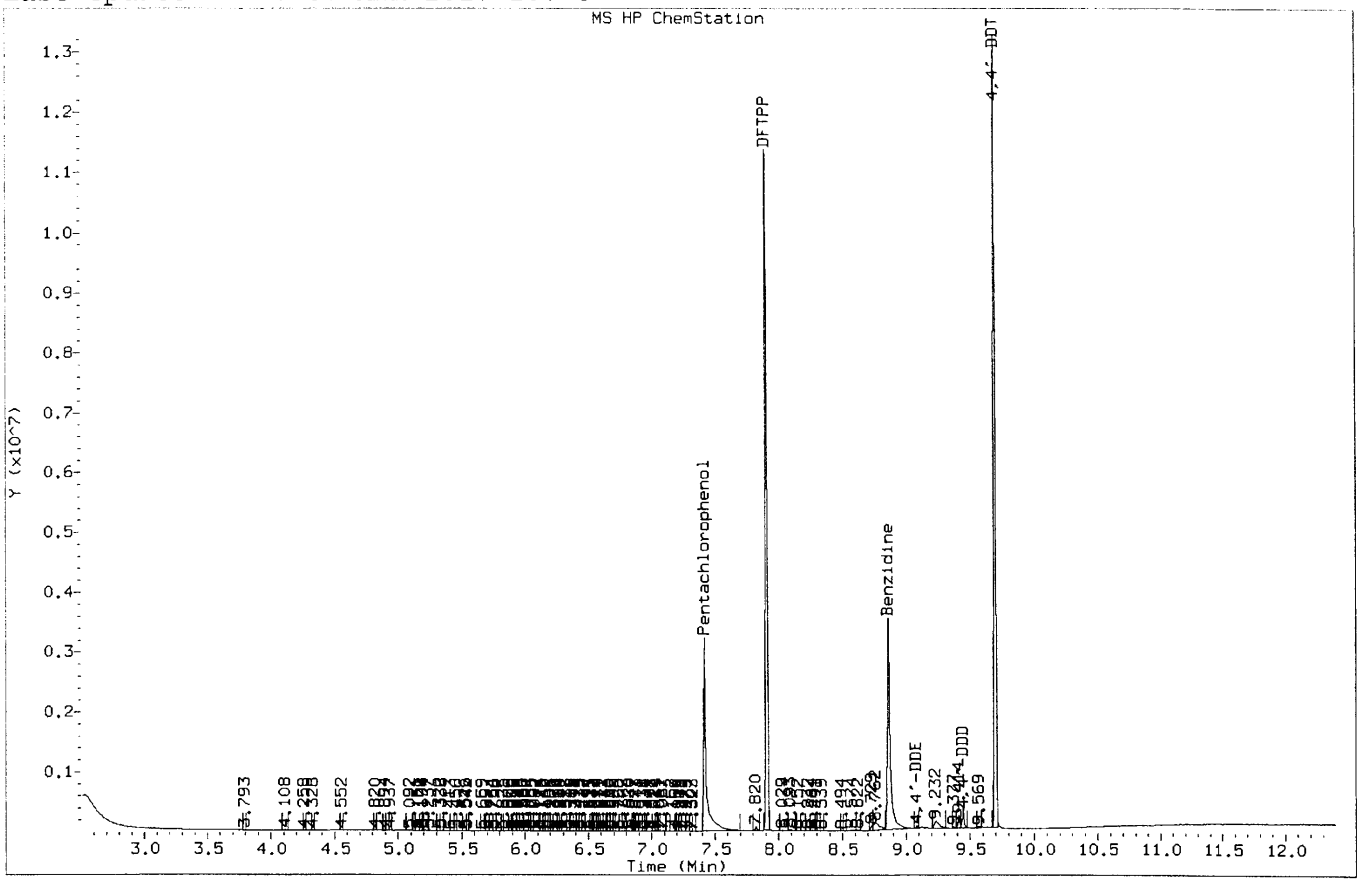
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Wed Mar 15 11:38:25 2017

Data File : /chem/SVOA/GCMS_EEE.i/170315.b/15mar001.d
ALS Vial : 61
Acq on : 15-MAR-2017 11:17 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Last Update : 07-MAR-2017 10:28



Tune	*** PASSED ***
Pentachlorophenol Tailing	*** PASSED ***
Benzidine Tailing	*** PASSED ***
DDT degradation	*** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_EEE.i/170315.b/15mar001.d ,* PASSED ***

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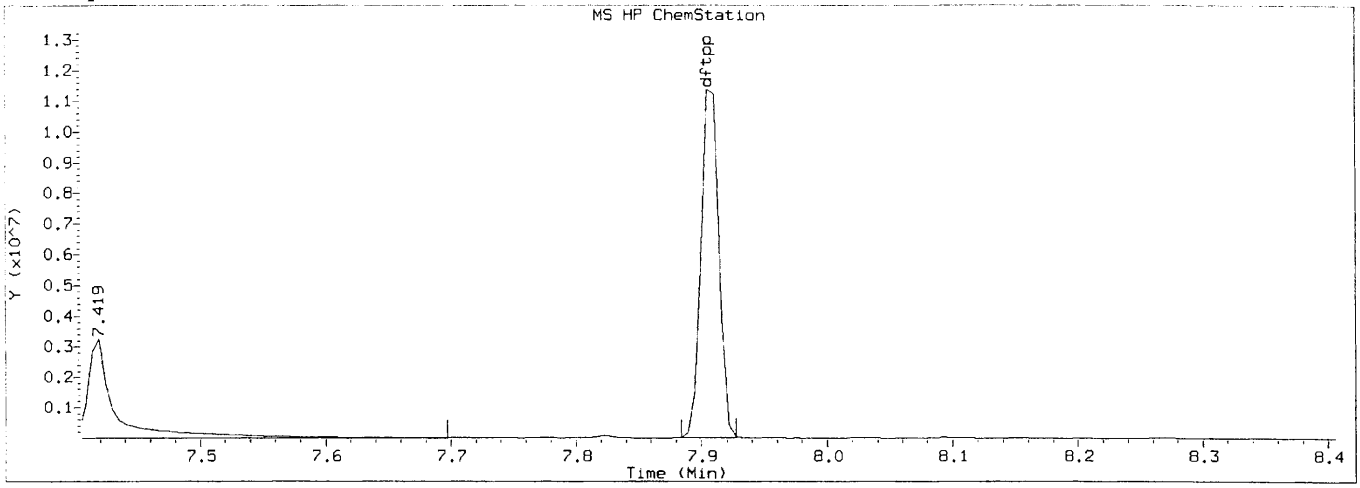
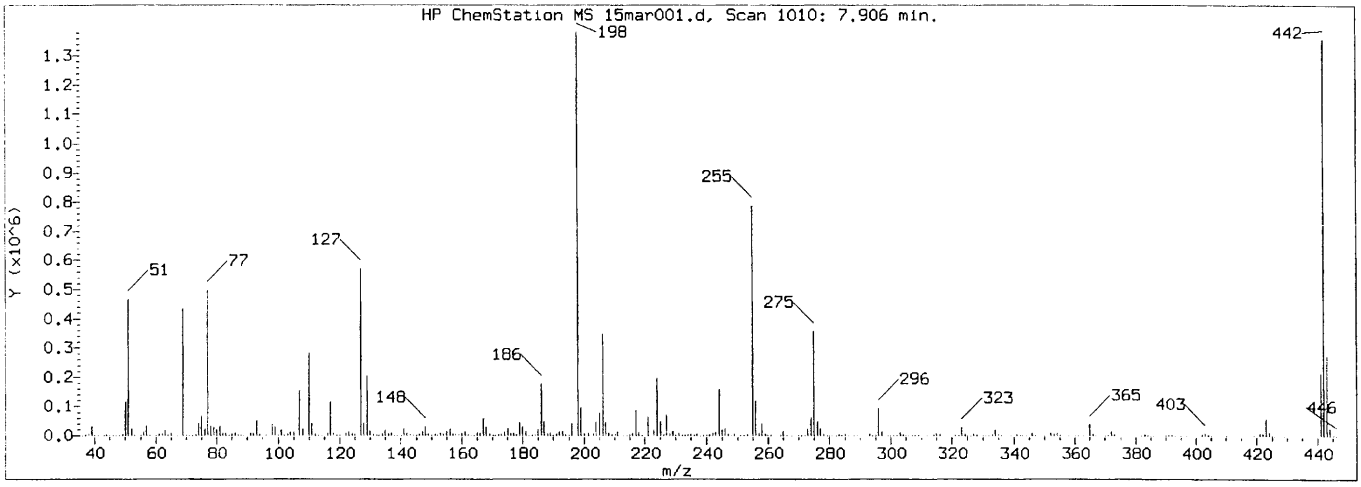
Report Generated Time Wed Mar 15 11:38:25 2017

Data File : /chem/SVOA/GCMS_EEE.i/170315.b/15mar001.d
ALS Vial : 61
Acq on : 15-MAR-2017 11:17 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170315.b/dftpptune.m
Last Update : 07-MAR-2017 10:28





Spectrum: Avg. Scans 1009-1011 (7.91), Background Scan 1005

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	1115741	PASS
51	30 - 60% of mass 198	35.51	396208	PASS
68	Less than 2% of mass 69	0.96	3414	PASS
69	Less than mass 198	31.86	355452	PASS
70	Less than 2% of mass 69	0.48	1705	PASS
127	40 - 60% of mass 198	41.36	461512	PASS
197	0 - 1% of mass 198	0.09	1008	PASS
199	5 - 9% of mass 198	6.93	77312	PASS
275	10 - 30% of mass 198	26.17	291946	PASS
365	1 - 100% of mass 198	3.02	33686	PASS
441	Present, but less than mass 443	79.19	198514	PASS
442	40 - 200% of mass 198	110.59	1233898	PASS
443	17 - 23% of mass 442	20.32	250682	PASS

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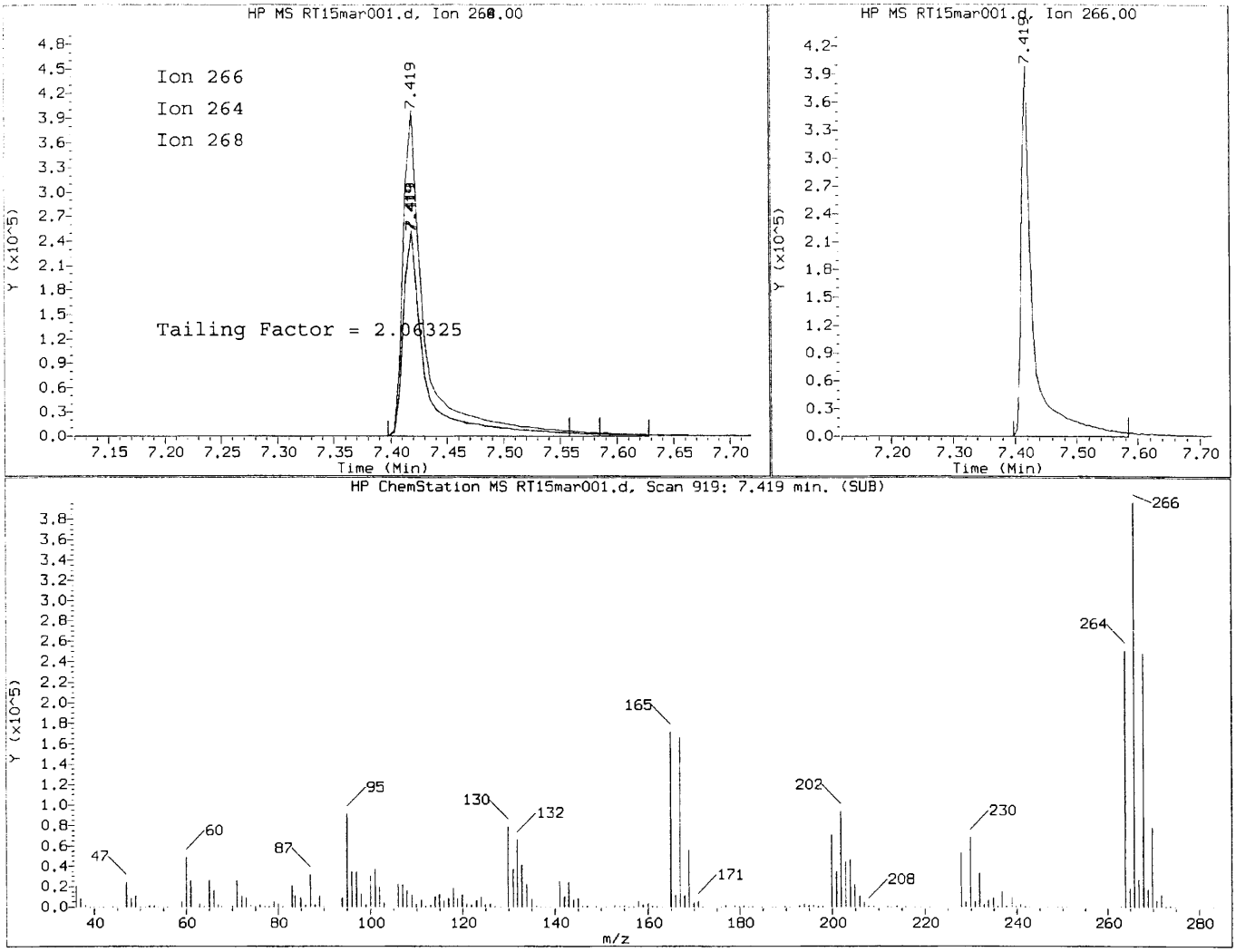
Report Generated Time Wed Mar 15 11:38:25 2017

Data File : /chem/SVOA/GCMS_EEE.i/170315.b/15mar001.d
ALS Vial : 3
Acq on : 15-MAR-2017 11:17 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170315.b/15mar001.d/resolut.m
Last Update : 15-MAR-2017 11:37



Pentachlorophenol
==========
Exp. RT = 7.467
Found RT = 7.419

Mass	Area	Ratio
266	546336	100.00
264	340579	62.34
268	350188	64.10

Peak baseline front width (sec) : 0.838
Peak baseline tail width (sec) : 1.729
Tail Factor = 1.729/ 0.838

Tailing factor for Pentachlorophenol OK

Tail Factor = 2.063 Maximum Allowed = 3.0

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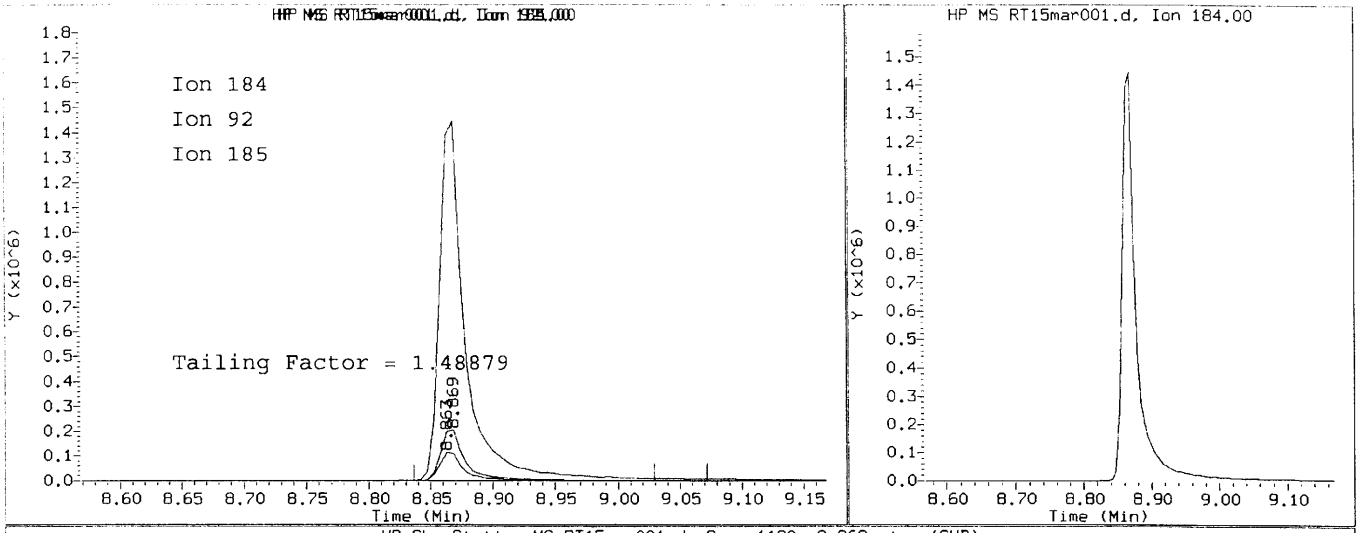
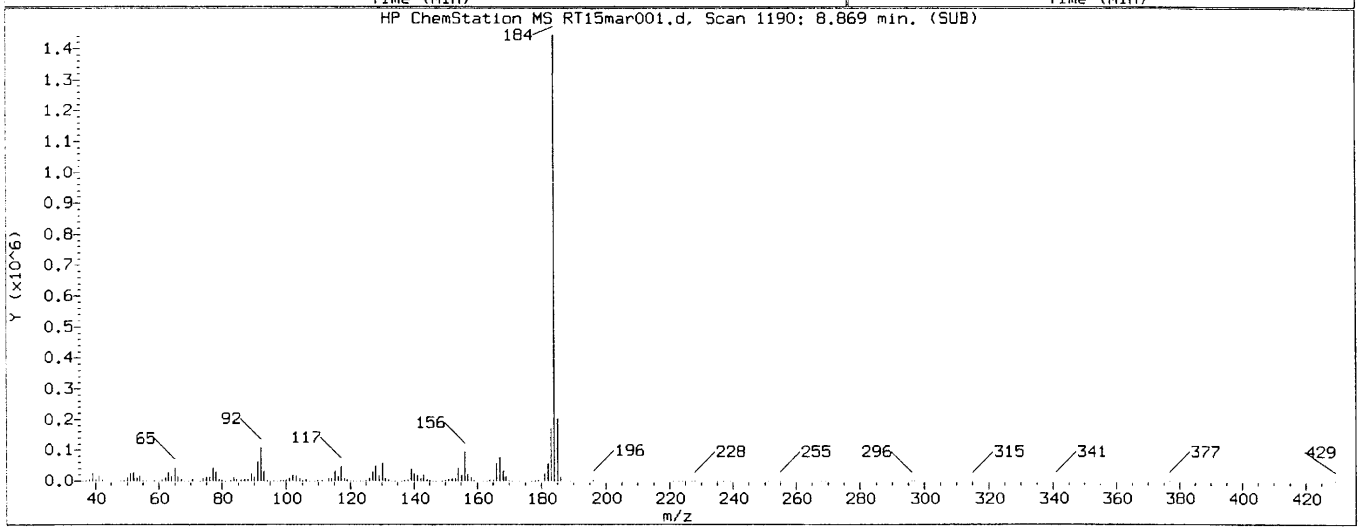
Report Generated Time Wed Mar 15 11:38:25 2017

Data File : /chem/SVOA/GCMS_EEE.i/170315.b/15mar001.d
ALS Vial : 3
Acq on : 15-MAR-2017 11:17 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170315.b/15mar001.d/resolut.m
Last Update : 15-MAR-2017 11:37





Benzidine
=========
Exp. RT = 8.911
Found RT = 8.869

Mass	Area	Ratio
184	2149546	100.00
92	166225	7.73
185	297887	13.86

Peak baseline front width (sec) : 1.115
Peak baseline tail width (sec) : 1.660
Tail Factor = 1.660/ 1.115

Tailing factor for Benzidine OK

Tail Factor = 1.489 Maximum Allowed = 3.0

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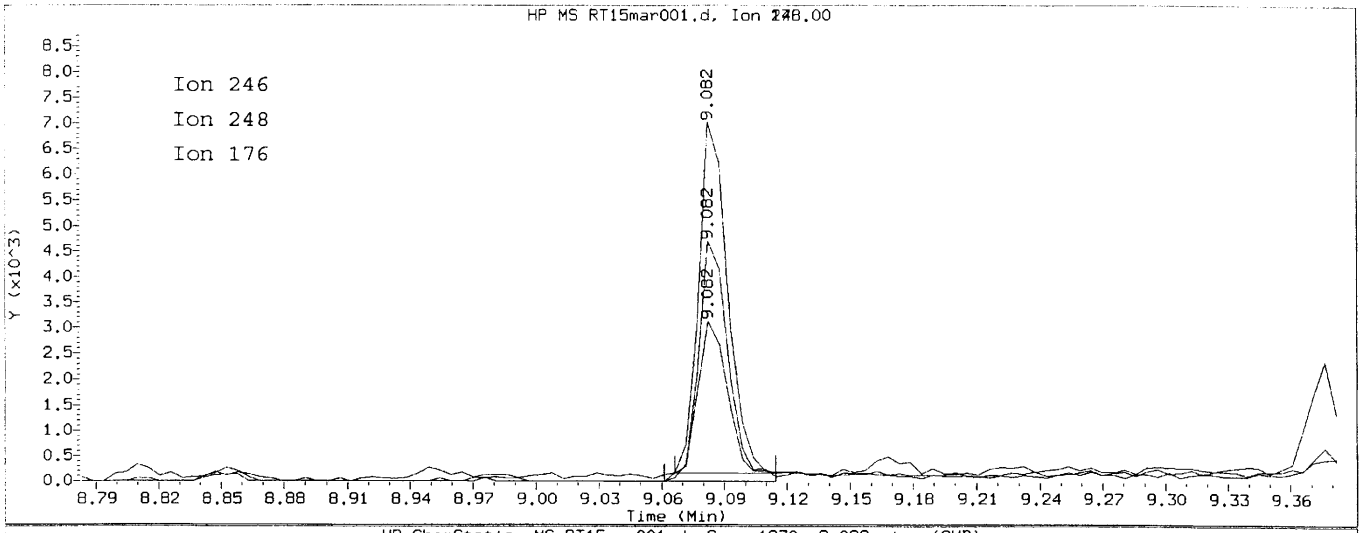
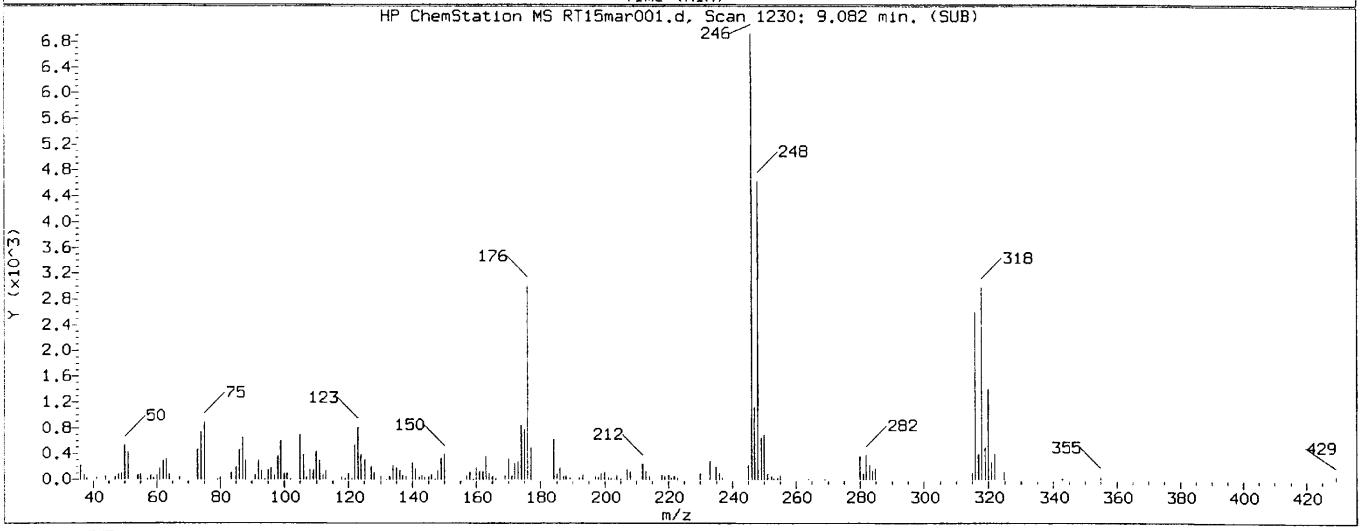
Report Generated Time Wed Mar 15 11:38:25 2017

Data File : /chem/SVOA/GCMS_EEE.i/170315.b/15mar001.d
ALS Vial : 3
Acq on : 15-MAR-2017 11:17 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170315.b/15mar001.d/resolut.m
Last Update : 15-MAR-2017 11:37





4,4'-DDE
========
Exp. RT = 9.029
Found RT = 9.082

Mass	Area	Ratio
246	7083	100.00
248	4657	65.75
176	2835	40.02

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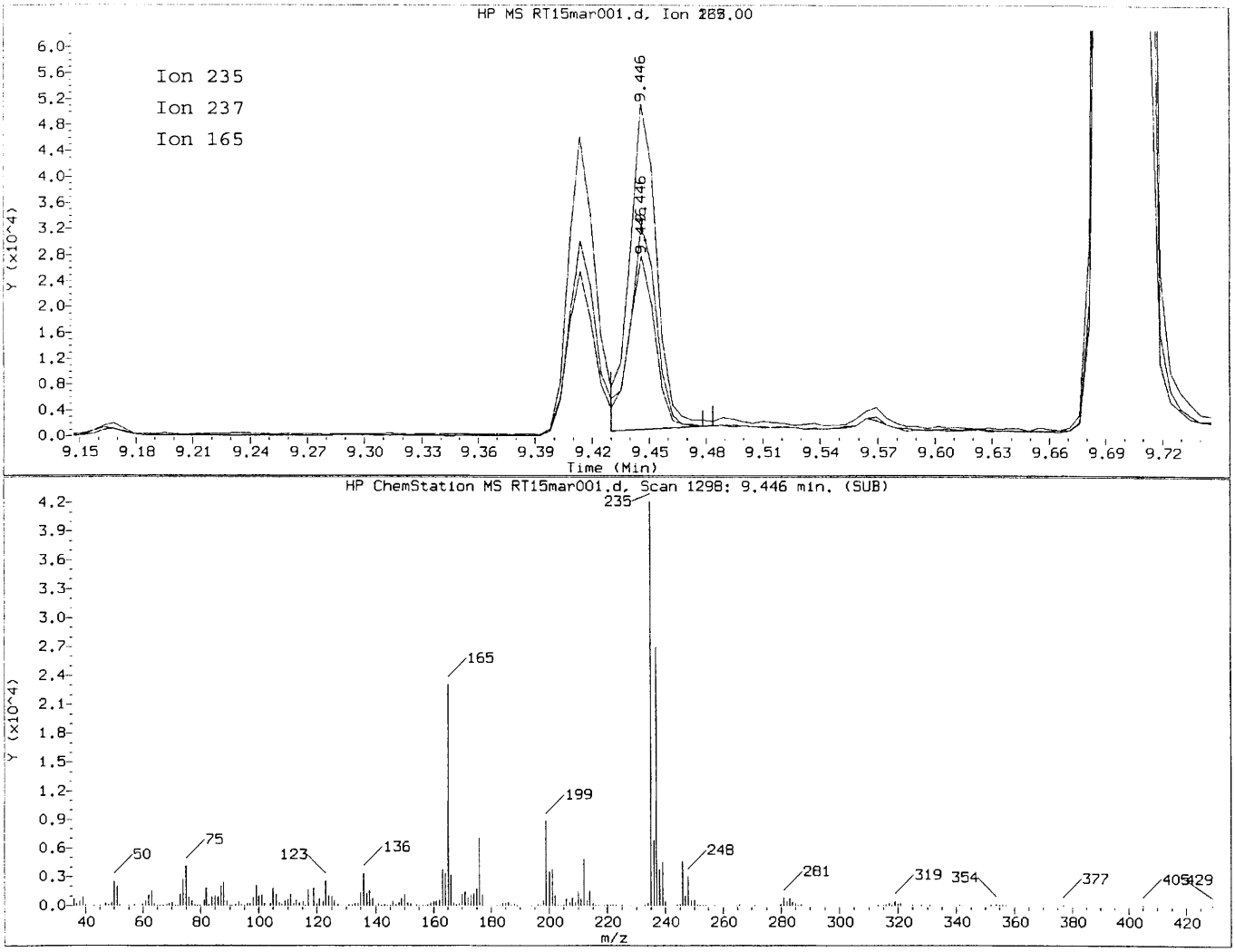
Report Generated Time Wed Mar 15 11:38:25 2017

Data File : /chem/SVOA/GCMS_EEE.i/170315.b/15mar001.d
ALS Vial : 3
Acq on : 15-MAR-2017 11:17 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170315.b/15mar001.d/resolut.m
Last Update : 15-MAR-2017 11:37



4,4'-DDD
========
Exp. RT = 9.380
Found RT = 9.446

Mass	Area	Ratio
235	50772	100.00
237	30954	60.97
165	25876	50.97

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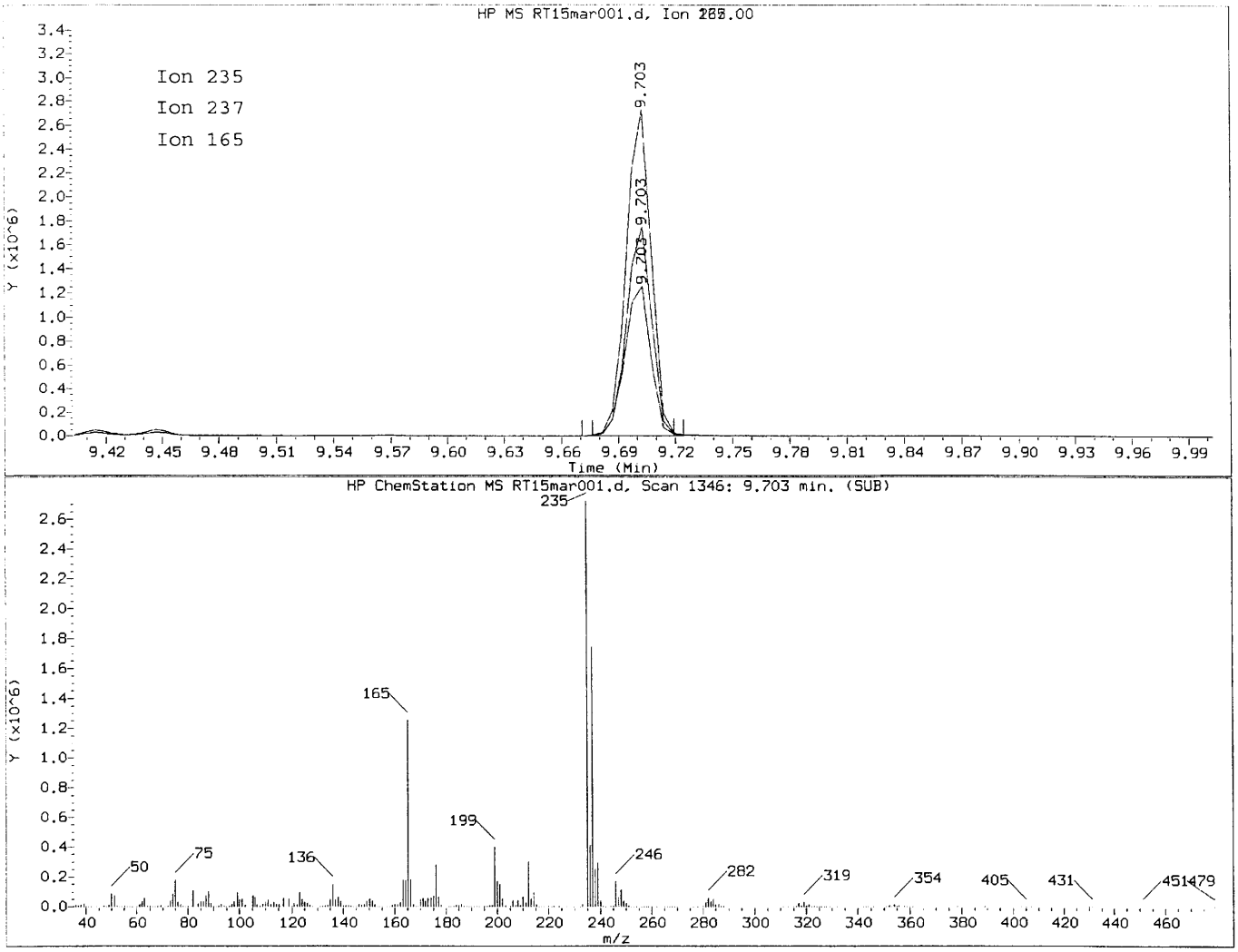
Report Generated Time Wed Mar 15 11:38:25 2017

Data File : /chem/SVOA/GCMS_EEE.i/170315.b/15mar001.d
ALS Vial : 3
Acq on : 15-MAR-2017 11:17 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170315.b/15mar001.d/resolut.m
Last Update : 15-MAR-2017 11:37



4,4'-DDT
========
Exp. RT = 9.756
Found RT = 9.703

Mass	Area	Ratio
235	2483618	100.00
237	1597483	64.32
165	1190028	47.92

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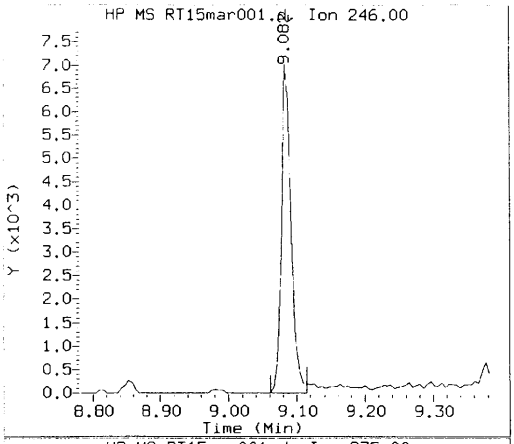
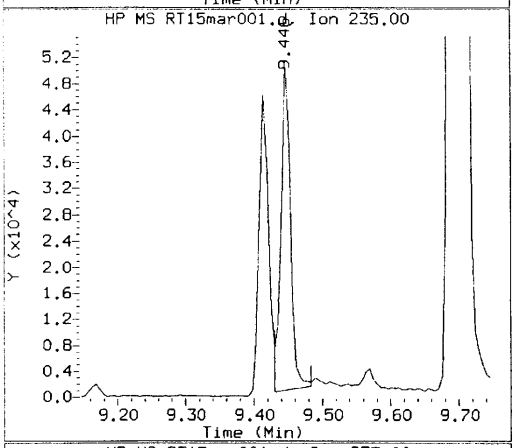
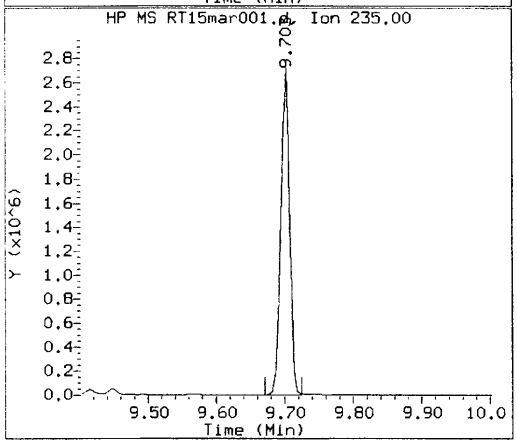


Compound: 4,4'-DDE
Quant Mass: 246
RT: 9.082
Area: 7083



Compound: 4,4'-DDD
Quant Mass: 235
RT: 9.446
Area: 50772



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.703
Area: 2483618

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2483618			N/A
4,4-DDE	7083	0.28	20.0	PASS
4,4-DDD	50772	2.00	20.0	PASS
4,4-DDD + DDE	57855	2.3	20.0	PASS

****

TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST

****

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EPA METHOD 8270C
PAHSIM

Run Logs

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Injection Log

Directory: W:\GCMS_EEE\GCMS_EEE_DATA\2017\170313

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	13mar001.d	1.	TUNE S101716A DFTPP) leaking change new column		13 Mar 2017 09:34
2	1	13mar002.d	1.	TUNE S101716A DFTPP)		13 Mar 2017 10:04
3	1	13mar003.d	1.	TUNE S101716A DFTPP		13 Mar 2017 11:49
4	2	13mar004.d	1.	CCV S010317F 1PPM ~ dev > 30%	170313A001	13 Mar 2017 12:10
5	3	13mar005.d	1.	BLANK	S101716B 10UL	13 Mar 2017 12:32
6	28	13mar006.d	1.	ICAL-1 S010317D 5PPM	170313I001	13 Mar 2017 12:52
7	29	13mar007.d	1.	ICAL-2 S010317E 2PPM		13 Mar 2017 13:13
8	30	13mar008.d	1.	ICAL-3 S010317F 1PPM		13 Mar 2017 13:33
9	31	13mar009.d	1.	ICAL-4 S010317G 0.5PPM		13 Mar 2017 13:53
10	32	13mar010.d	1.	ICAL-5 S010317H 0.1PPM		13 Mar 2017 14:13
11	33	13mar011.d	1.	ICV S010317I 1PPM		13 Mar 2017 14:34
12	1	13mar012.d	1.	TUNE S101716A DFTPP		13 Mar 2017 14:59
13	2	13mar013.d	1.	CCV S010317F 1PPM	170313A001	13 Mar 2017 15:19
14	24	13mar014.d	1.	17-03-0323-3 10X	S101716B 10UL	13 Mar 2017 15:40
15		13mar015.d	1.	No MS or GC data present		

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Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	61	15mar001.d	1.	TUNE S101716A DFTPP		15 Mar 2017 11:17
2	62	15mar002.d	1.	CCV S010317F 1PPM	170315A013	15 Mar 2017 11:38
3	63	15mar003.d	1.	1PPM TEST	S101716B 10UL	15 Mar 2017 11:58
4	64	15mar004.d	1.	MB 170314 L09	S101716B 10UL	15 Mar 2017 12:19
5	65	15mar005.d	1.	LCS 170314 L09	S101716B 10UL	15 Mar 2017 12:39
6	66	15mar006.d	1.	17-03-0486-4 MS	S101716B 10UL	15 Mar 2017 12:59
7	67	15mar007.d	1.	17-03-0486-4 MSD	S101716B 10UL	15 Mar 2017 13:19
8	68	15mar008.d	1.	17-03-0486-4	S101716B 10UL	15 Mar 2017 13:40
9	69	15mar009.d	1.	17-03-0486-5	S101716B 10UL	15 Mar 2017 14:00
10	70	15mar010.d	1.	17-03-0486-6	S101716B 10UL	15 Mar 2017 14:20
11	71	15mar011.d	1.	MB 170314 L01	S101716B 10UL	15 Mar 2017 14:40
12	72	15mar012.d	1.	LCS 170314 L01	S101716B 10UL	15 Mar 2017 15:01
13	73	15mar013.d	1.	LCSD 170314 L01	S101716B 10UL	15 Mar 2017 15:21
14	74	15mar014.d	1.	17-03-0638-1	S101716B 10UL	15 Mar 2017 15:41
15	75	15mar015.d	1.	17-03-0850-4	S101716B 10UL	15 Mar 2017 16:01
16	76	15mar016.d	1.	17-03-0850-5	S101716B 10UL	15 Mar 2017 16:22
17	77	15mar017.d	1.	17-03-0323-2 20X	S101716B 10UL	15 Mar 2017 16:42
18	78	15mar018.d	1.	17-03-0323-2 200X RB	S101716B 10UL	15 Mar 2017 17:02
19	79	15mar019.d	1.	MB 170314 L14 - contaminated	S101716B 10UL	15 Mar 2017 17:23
20	80	15mar020.d	1.	LCS 170314 L14	S101716B 10UL	15 Mar 2017 17:43
21	81	15mar021.d	1.	LCSD 170314 L14	S101716B 10UL	15 Mar 2017 18:03
22	82	15mar022.d	1.	17-03-0796-1	S101716B 10UL	15 Mar 2017 18:23
23	83	15mar023.d	1.	17-03-0796-2	S101716B 10UL	15 Mar 2017 18:44
24	84	15mar024.d	1.	17-03-0796-3	S101716B 10UL	15 Mar 2017 19:04
25	85	15mar025.d	1.	17-03-0796-4	S101716B 10UL	15 Mar 2017 19:24
26	86	15mar026.d	1.	MB 170314 L14 RB	S101716B 10UL	15 Mar 2017 19:44

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EPA METHOD 8270C
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Sample Preparation Logs

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Analysis Method (EPA Method- Aqueous only): □ 625 (□ SIM FL) □ 1625 ☑8270 (□ PAH ☑SIM PAH □ SIM Pest □ SIM PCB Cong. □ SIM SUPER □ SIM FL)	Extraction Method (EPA Method): ☑3510 □ 3520
Analyst ID#: Measuring Sample- 1109 Start Extraction- 1109/787 Blow Down- 1161/1084 Clean Up-	
Balance ID#: Filter ID#: Orbit Shaker ID#: 1	
Extraction Start Date & Time: 03/14/17 — 10:00 Extractions End Date & Time: 03/14/17 — 11:00	
First pH adjusted date: 1:1 H_2SO_4 ID#:	
Surrogate Std ID# & Volume Added (mL): S020117C — .5mL	
Spike Std ID# & Volume Added (mL): S100716A — .5mL	Spike Added to: ☑LCS ☑LCSD □ MS □ MSD
Extraction Solvent: ☑$MeCl_2$	Extraction Solvent ID#: S07-55-01
Second pH adjusted date:	10 N NaOH ID#:
Drying Agent: ☑Na_2SO_4	Drying Agent ID#: S07-44-18
Exchange Solvent: □ Hexane	Exchange Solvent ID#:
Clean Up Start Date & Time:	Clean Up End Date & Time:
Clean Up: □ 3660 Sulfur	Clean Up Reagent ID#:

MB/LCS/MS Batch #: 170314 L01	Sample W (g) / V (mL)		Initial pH	First Adjusted pH <2 ?	Second Adjusted pH>11?	Comments
Cel ID#:	Initial	Final				
MB	1000	2	6	□	□	
LCS	1000	2	6	□	□	
LCSD	1000	2	6	□	□	
MS	N/A	N/A	—	□	□	
MSD	N/A	N/A	—	□	□	
17-03-0850-4-F	1000	2	6	□	□	
17-03-0850-5-F	1000	2	6	□	□	
17-03-0638-1-C	1000	2	6	□	□	
				□	□	
				□	□	
				□	□	
				□	□	
				□	□	
				□	□	
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				□	□	
				□	□	

Peer Reviewed by: JH7 Peer Reviewed Date: 03/14/17 Revision Date: 10/20/16

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