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Automated Report

Technical Report for

Anderson, Mulholland & Associates

BMSMC, Humacao, PR

SM04.00.06

SGS Accutest Job Number: FA40754

Sampling Date: 01/25/17

Report to:

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Total number of pages in report: **815**

Norm Farmer
Technical Director

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

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Sample Summary

Anderson, Mulholland & Associates

Job No: FA40754

BMSMC, Humacao, PR
Project No: SM04.00.06

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA40754-1	01/25/17	10:45	TT	01/27/17	SO	Soil	FTFSS-1
FA40754-2	01/25/17	11:05	TT	01/27/17	SO	Soil	FTFSS-2
FA40754-3	01/25/17	11:40	TT	01/27/17	SO	Soil	FTFSS-3
FA40754-4	01/25/17	14:35	TT	01/27/17	SO	Soil	B5SS-1
FA40754-5	01/25/17	15:25	TT	01/27/17	SO	Soil	B5SS-2
FA40754-6	01/25/17	09:18	TT	01/27/17	AQ	Equipment Blank	EB-012517
FA40754-7	01/25/17	14:56	TT	01/27/17	AQ	Field Blank Soil	FB-012517

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Anderson, Mulholland & Associates **Job No:** FA40754

Site: BMSMC, Humacao, PR **Report Date:** 2/13/2017 9:32:45

6 Sample(s) and 1 Field Blank(s) were collected on 01/25/2017 and were received at SGS Accutest Southeast (SASE) on 01/27/2017 properly preserved, at 4.2 Deg. C and intact. These Samples received an SASE job number of FA40754. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GC By Method MADEP VPH REV 1.1

Matrix: AQ **Batch ID:** GUV4141

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA40908-6DUP were used as the QC samples indicated.

GUV4141-MB for BFB: Surrogate recoveries corrected for actual spike amount.

GUV4141-BS for BFB: Surrogate recoveries corrected for actual spike amount.

GUV4141-BSD for BFB: Surrogate recoveries corrected for actual spike amount.

FA40908-6DUP for BFB: Surrogate recoveries corrected for actual spike amount.

FA40754-7 for BFB: Surrogate recoveries corrected for actual spike amount.

Matrix: SO **Batch ID:** GUV4134

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA40754-2DUP were used as the QC samples indicated.

Matrix: SO **Batch ID:** GUV4135

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA40755-3DUP, FA40755-4MS, FA40755-4MSD were used as the QC samples indicated.

Matrix Spike/Matrix Spike Duplicate Recovery(s) for C5- C8 Aliphatics (Unadj.), C9- C10 Aromatics (Unadj.), C9- C12 Aliphatics (Unadj.) are outside control limits. Probable cause is due to matrix interference. % RPD was within control limits in MS/MSD.

Extractables by GC By Method MADEP EPH REV 1.1

Matrix: AQ **Batch ID:** OP63636

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA40651-1DUP were used as the QC samples indicated.

Matrix: SO **Batch ID:** OP63645

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA40754-1DUP, FA40755-4MS, FA40755-4MSD were used as the QC samples indicated.

Matrix Spike Duplicate Recovery(s) for C9-C18 Aliphatics are outside control limits. Probable cause is due to matrix interference. % RPD was within control limits in MS/MSD.

Wet Chemistry By Method SM19 2540G

Matrix: SO **Batch ID:** GN73867

Sample(s) FA40719-8DUP were used as the QC samples for Solids, Percent.

Matrix: SO **Batch ID:** GN73889

Sample(s) FA40754-3DUP were used as the QC samples for Solids, Percent.

SGS Accutest (SASE) certifies that this report meets the project requirements for analytical data produced for the samples as received at SASE and as stated on the COC. SASE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SASE Quality Manual except as noted above. This report is to be used in its entirety. SASE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date February 13, 2017

Kim Benham, Client Services (signature on file)

Manual Integration Summary

Lab Sample ID	Analysis Type	File ID	Manual Integrations
FA40908-6DUP	GCVOA	UV077879.D	C5- C8 Aliphatics
GNN825-IC825	GCSEMI	NN016513.D	Benzo(g,h,i)perylene
GNN825-IC825	GCSEMI	NN016518.D	Benzo(k)fluoranthene
GNN825-IC825	GCSEMI	NN016519.D	Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene
GNN877-CC825	GCSEMI	NN017365.D	Dibenzo(a,h)anthracene
GNN877-CC825	GCSEMI	NN017377.D	Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene
GNN877-ECC825	GCSEMI	NN017382.D	Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene
GNN879-ECC825	GCSEMI	NN017410.D	Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene
GUV4115-IC4115	GCVOA	UV077464.D	1,2,4-Trimethylbenzene, 2-Methylpentane, Benzene, BFB, Decane, Methyl Tert Butyl Ether, Naphthalene, Pentane, Toluene
GUV4115-IC4115	GCVOA	UV077465.D	Naphthalene
OP63636-DUP	GCSEMI	NN017287.D	C11-C22 Aromatics
OP63636-MB	GCSEMI	NN017281.D	C11-C22 Aromatics
OP63645-MS	GCSEMI	NN017407.D	C11-C22 Aromatics
OP63645-MSD	GCSEMI	NN017408.D	C11-C22 Aromatics

14 Manual Integrations were found for FA40754

Summary of Hits

Job Number: FA40754
Account: Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR
Collected: 01/25/17

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Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA40754-1	**FTFSS-1**					
No hits reported in this sample.						
FA40754-2	**FTFSS-2**					
C11-C22 Aromatics (Unadj.)		10200 J	11000	8400	ug/kg	MADEP EPH REV 1.1
C19-C36 Aliphatics		19100	11000	5600	ug/kg	MADEP EPH REV 1.1
FA40754-3	**FTFSS-3**					
C11-C22 Aromatics (Unadj.)		13600	10000	7800	ug/kg	MADEP EPH REV 1.1
FA40754-4	**B5SS-1**					
No hits reported in this sample.						
FA40754-5	**B5SS-2**					
No hits reported in this sample.						
FA40754-6	**EB-012517**					
No hits reported in this sample.						
FA40754-7	**FB-012517**					
No hits reported in this sample.						

Sample Results

Report of Analysis

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Report of Analysis

Client Sample ID:	FTFSS-1		
Lab Sample ID:	FA40754-1	**Date Sampled:**	01/25/17
Matrix:	SO - Soil	**Date Received:**	01/27/17
Method:	MADEP VPH REV 1.1	**Percent Solids:**	93.3
Project:	BMSMC, Humacao, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV077759.D	1	01/31/17	AJC	n/a	n/a	GUV4134
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.76 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	6100	2100	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	6100	2100	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	6100	2100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	102%		70-130%
460-00-4	BFB	97%		70-130%

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

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

SGS Accutest

Report of Analysis

Client Sample ID:	FTFSS-1		
Lab Sample ID:	FA40754-1	**Date Sampled:**	01/25/17
Matrix:	SO - Soil	**Date Received:**	01/27/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	93.3
Project:	BMSMC, Humacao, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN017358.D	1	02/08/17	MG	02/01/17	OP63645	GNN877
Run #2							

	Initial Weight	Final Volume
Run #1	19.7 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	11000	8200	ug/kg	
	C9-C18 Aliphatics	ND	11000	5400	ug/kg	
	C19-C36 Aliphatics	ND	11000	5400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	61%		40-140%
580-13-2	2-Bromonaphthalene	78%		40-140%
84-15-1	o-Terphenyl	65%		40-140%
321-60-8	2-Fluorobiphenyl	87%		40-140%

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

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

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Report of Analysis

Client Sample ID:	FTFSS-2		
Lab Sample ID:	FA40754-2	**Date Sampled:**	01/25/17
Matrix:	SO - Soil	**Date Received:**	01/27/17
Method:	MADEP VPH REV 1.1	**Percent Solids:**	88.9
Project:	BMSMC, Humacao, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV077760.D	1	01/31/17	AJC	n/a	n/a	GUV4134
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.87 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	6500	2300	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	6500	2300	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	6500	2300	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	98%		70-130%
460-00-4	BFB	93%		70-130%

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

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

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Report of Analysis

Client Sample ID:	FTFSS-2		
Lab Sample ID:	FA40754-2	**Date Sampled:**	01/25/17
Matrix:	SO - Soil	**Date Received:**	01/27/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	88.9
Project:	BMSMC, Humacao, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN017405.D	1	02/10/17	MG	02/01/17	OP63645	GNN879
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	10200	11000	8400	ug/kg	J
	C9-C18 Aliphatics	ND	11000	5600	ug/kg	
	C19-C36 Aliphatics	19100	11000	5600	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	50%		40-140%
580-13-2	2-Bromonaphthalene	67%		40-140%
84-15-1	o-Terphenyl	52%		40-140%
321-60-8	2-Fluorobiphenyl	71%		40-140%

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

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

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Report of Analysis

Client Sample ID:	FTFSS-3		
Lab Sample ID:	FA40754-3	**Date Sampled:**	01/25/17
Matrix:	SO - Soil	**Date Received:**	01/27/17
Method:	MADEP VPH REV 1.1	**Percent Solids:**	94.9
Project:	BMSMC, Humacao, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV077768.D	1	02/01/17	AJC	n/a	n/a	GUV4135
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	3.07 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	9000	3200	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	9000	3200	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	9000	3200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	94%		70-130%
460-00-4	BFB	89%		70-130%

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

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

SGS Accutest

Report of Analysis

Client Sample ID:	FTFSS-3		
Lab Sample ID:	FA40754-3	**Date Sampled:**	01/25/17
Matrix:	SO - Soil	**Date Received:**	01/27/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	94.9
Project:	BMSMC, Humacao, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN017361.D	1	02/08/17	MG	02/01/17	OP63645	GNN877
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	13600	10000	7800	ug/kg	
	C9-C18 Aliphatics	ND	10000	5200	ug/kg	
	C19-C36 Aliphatics	ND	10000	5200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	67%		40-140%
580-13-2	2-Bromonaphthalene	80%		40-140%
84-15-1	o-Terphenyl	68%		40-140%
321-60-8	2-Fluorobiphenyl	86%		40-140%

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

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

SGS Accutest

Report of Analysis

Client Sample ID:	B5SS-1		
Lab Sample ID:	FA40754-4	**Date Sampled:**	01/25/17
Matrix:	SO - Soil	**Date Received:**	01/27/17
Method:	MADEP VPH REV 1.1	**Percent Solids:**	93.5
Project:	BMSMC, Humacao, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV077769.D	1	02/01/17	AJC	n/a	n/a	GUV4135
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.03 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	5800	2000	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5800	2000	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	5800	2000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	99%		70-130%
460-00-4	BFB	94%		70-130%

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

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

SGS Accutest

Report of Analysis

Client Sample ID:	B5SS-1		
Lab Sample ID:	FA40754-4	**Date Sampled:**	01/25/17
Matrix:	SO - Soil	**Date Received:**	01/27/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	93.5
Project:	BMSMC, Humacao, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN017362.D	1	02/08/17	MG	02/01/17	OP63645	GNN877
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	11000	8000	ug/kg	
	C9-C18 Aliphatics	ND	11000	5300	ug/kg	
	C19-C36 Aliphatics	ND	11000	5300	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	68%		40-140%
580-13-2	2-Bromonaphthalene	74%		40-140%
84-15-1	o-Terphenyl	67%		40-140%
321-60-8	2-Fluorobiphenyl	80%		40-140%

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

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

SGS Accutest

Report of Analysis

Client Sample ID:	B5SS-2		
Lab Sample ID:	FA40754-5	**Date Sampled:**	01/25/17
Matrix:	SO - Soil	**Date Received:**	01/27/17
Method:	MADEP VPH REV 1.1	**Percent Solids:**	94.6
Project:	BMSMC, Humacao, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV077770.D	1	02/01/17	AJC	n/a	n/a	GUV4135
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.06 g	5.1 ml	100 ul
Run #2			

MADEP VPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	6900	2400	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	6900	2400	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	6900	2400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	96%		70-130%
460-00-4	BFB	91%		70-130%

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

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

SGS Accutest

Report of Analysis

Client Sample ID:	B5SS-2		
Lab Sample ID:	FA40754-5	**Date Sampled:**	01/25/17
Matrix:	SO - Soil	**Date Received:**	01/27/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	94.6
Project:	BMSMC, Humacao, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN017363.D	1	02/08/17	MG	02/01/17	OP63645	GNN877
Run #2							

	Initial Weight	Final Volume
Run #1	20.7 g	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	10000	7700	ug/kg	
	C9-C18 Aliphatics	ND	10000	5100	ug/kg	
	C19-C36 Aliphatics	ND	10000	5100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	67%		40-140%
580-13-2	2-Bromonaphthalene	73%		40-140%
84-15-1	o-Terphenyl	58%		40-140%
321-60-8	2-Fluorobiphenyl	80%		40-140%

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

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

SGS Accutest

Report of Analysis

Client Sample ID:	EB-012517		
Lab Sample ID:	FA40754-6	**Date Sampled:**	01/25/17
Matrix:	AQ - Equipment Blank	**Date Received:**	01/27/17
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	BMSMC, Humacao, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN017292.D	1	02/03/17	MG	01/31/17	OP63636	GNN873
Run #2							

	Initial Volume	Final Volume
Run #1	800 ml	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	250	190	ug/l	
	C9-C18 Aliphatics	ND	250	130	ug/l	
	C19-C36 Aliphatics	ND	250	130	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	47%		40-140%
580-13-2	2-Bromonaphthalene	82%		40-140%
84-15-1	o-Terphenyl	74%		40-140%
321-60-8	2-Fluorobiphenyl	87%		40-140%

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

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

SGS Accutest

Report of Analysis

Client Sample ID:	FB-012517		
Lab Sample ID:	FA40754-7	**Date Sampled:**	01/25/17
Matrix:	AQ - Field Blank Soil	**Date Received:**	01/27/17
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	BMSMC, Humacao, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	UV077880.D	1	02/07/17	AJC	n/a	n/a	GUV4141
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

MADEP VPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	100	35	ug/l	
	C9- C12 Aliphatics (Unadj.)	ND	100	35	ug/l	
	C9- C10 Aromatics (Unadj.)	ND	100	35	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	BFB	92% [a]		70-130%
460-00-4	BFB	86% [a]		70-130%

(a) Surrogate recoveries corrected for actual spike amount.

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

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

SGS Accutest

Report of Analysis

Client Sample ID:	FB-012517		
Lab Sample ID:	FA40754-7	**Date Sampled:**	01/25/17
Matrix:	AQ - Field Blank Soil	**Date Received:**	01/27/17
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	BMSMC, Humacao, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN017293.D	1	02/03/17	MG	01/31/17	OP63636	GNN873
Run #2							

	Initial Volume	Final Volume
Run #1	800 ml	2.0 ml
Run #2		

MAEPH List

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	250	190	ug/l	
	C9-C18 Aliphatics	ND	250	130	ug/l	
	C19-C36 Aliphatics	ND	250	130	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	45%		40-140%
580-13-2	2-Bromonaphthalene	77%		40-140%
84-15-1	o-Terphenyl	68%		40-140%
321-60-8	2-Fluorobiphenyl	83%		40-140%

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

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

ACCUTEST LABORATORIES

FL

CHAIN OF CUSTODY

FA40754 PAGE 1 OF 1

4405 Vineland Road, Suite C-15, Orlando, Florida 32811
TEL. 407-425-6700 FAX: 407-425-0707
www.accutest.com

FED-EX Tracking # 7782 8350 6710
Bottle Order Control #
Accutest Quote #
Accutest Job #

Client / Reporting Information

Company Name: Anderson Mulholland & Associates
Street Address: 2700 Westchester Avenue, Suite 417
City: Purchase State: NY Zip: 10577
Project Contact: Terry Taylor E-mail:
Phone #: 914-251-0400 Fax #:
Sampler(s) Name(s): Phone #:

Project Information

Project Name: Bristol-Myers Squibb Manufacturing Co., Surface Soil Sampling
Street:
City: Humacao State: PR
Project #:
Client Purchase Order #:
Project Manager: Terry Taylor
Billing Information (if different from Report to)
Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

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

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	VMAVPH R	BMAEPH R	LAB USE ONLY
1	FTFSS-1		1/25/17	1045	TT	SO	3					1		2		X	X	
2	FTFSS-2		1/25/17	1105	TT	SO	3					1		2		X	X	
3	FTFSS-3		1/25/17	1140	TT	SO	3					1		2		X	X	
4	B5SS-1		1/25/17	1435	TT	SO	3					1		2		X	X	
5	B5SS-2		1/25/17	1525	TT	SO	3					1		2		X	X	
6	EB-012517		1/25/17	0918	TT	EB	~~2~~ 2	~~2~~ 2								X	X	
7	FB-012517		1/25/17	1456	TT	FB	~~2~~ 2	~~2~~ 2								X	X	

Turnaround Time (Business days)

- [X] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [X] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

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

Comments / Special Instructions

Only report Aliphatic and Aromatic fractions. Do not report individual PAHs

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

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	1/26/17 1700	1 FedEX	2 Fx		2 01/27/17
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice
5		5	642, 279, 280 [ ] Intact [ ] Not intact	[ ]	[ ] (2) Cooler Temp. 4.0 4.2

5.1 5

SGS ACCUTEST - ORLANDO SAMPLE RECEIPT CONFIRMATION

SGS ACCUTEST'S JOB NUMBER: FA40754 CLIENT: Anderson Mulholland PROJECT: Bristal-Myers

DATE/TIME RECEIVED: 01/27/17 945 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 2

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER DELIVERY OTHER:

AIRBILL NUMBERS: 7782 8350 6710

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? 5

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR +0.8
- [ ] OBSERVED TEMPS: 3.2 3.4
- [ ] CORRECTED TEMPS: 4.0 4.2 (USED FOR LIMS)

SAMPLE INFORMATION

- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [ ] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT LOT#_____

{APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

TEST STRIP LOT#s pH 0-3 230315 pH 10-12 219813A OTHER (specify) _____

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE 01/27/17 REVIEWER SIGNATURE/DATE KD 01-27-17

NF 02/16 receipt confirmation 020116.xls

5.1

5

FA40754: Chain of Custody

Page 2 of 3

ORIGIN ID:FAJA (787) 487-4290
DAVID LINDSTRAND
ANDERSON MULHOLLAND & ASSOC
IN CARE OF BRISTOL-MYERS SQUIBB
STATE RD #3, KM 77.5
HUMACAO, PR 00791
UNITED STATES US

SHIP DATE: 26JAN17
TOTWGT: 150.00 LB
CAD: 4502055/INET3850
DIMS: 24x15x15 IN

BILL THIRD PARTY
NO EEI 30.37(a)

TO SAMPLE RECEIVING
SGS ACCUTEST
4405 VINELAND RD
STE C15
ORLANDO FL 32811 (US)
(407) 424-6700 REF: BMS SURF SOIL
INV:
PO: DEPT:

546J/1997/53C1

FedEx Express

J17197196530ur

1 of 3

FRI - 27 JAN 10:30A
INTL PRIORITY

TRK# 0430 7782 8350 6710

MASTER

XH ORLA

32811
FL-US MCO

After printing this label:
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

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Email address located at www.fedex.com.

FA40754: Chain of Custody
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GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV4134-MB	UV077736.D	1	01/31/17	AJC	n/a	n/a	GUV4134

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA40754-1, FA40754-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	5100	1800	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5100	1800	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	5100	1800	ug/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	BFB	100%	70-130%
460-00-4	BFB	96%	70-130%

Method Blank Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV4135-MB	UV077767.D	1	02/01/17	AJC	n/a	n/a	GUV4135

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA40754-3, FA40754-4, FA40754-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	5100	1800	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5100	1800	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	5100	1800	ug/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	BFB	95%	70-130%
460-00-4	BFB	92%	70-130%

Method Blank Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV4141-MB	UV077866.D	1	02/07/17	AJC	n/a	n/a	GUV4141

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA40754-7

CAS No.	Compound	Result	RL	MDL	Units	Q
	C5- C8 Aliphatics (Unadj.)	ND	100	35	ug/l	
	C9- C12 Aliphatics (Unadj.)	ND	100	35	ug/l	
	C9- C10 Aromatics (Unadj.)	ND	100	35	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	BFB	99% [a]	70-130%
460-00-4	BFB	92% [a]	70-130%

(a) Surrogate recoveries corrected for actual spike amount.

Blank Spike/Blank Spike Duplicate Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV4134-BS	UV077734.D	1	01/31/17	AJC	n/a	n/a	GUV4134
GUV4134-BSD	UV077735.D	1	01/31/17	AJC	n/a	n/a	GUV4134

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA40754-1, FA40754-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
	C5- C8 Aliphatics (Unadj.)	12500	15800	127	14900	119	6	70-130/25
	C9- C12 Aliphatics (Unadj.)	8320	9120	110	8620	104	6	70-130/25
	C9- C10 Aromatics (Unadj.)	4160	3790	91	4190	101	10	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	BFB	99%	96%	70-130%
460-00-4	BFB	94%	91%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV4135-BS	UV077765.D	1	02/01/17	AJC	n/a	n/a	GUV4135
GUV4135-BSD	UV077766.D	1	02/01/17	AJC	n/a	n/a	GUV4135

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA40754-3, FA40754-4, FA40754-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
	C5- C8 Aliphatics (Unadj.)	12500	15500	124	14900	119	4	70-130/25
	C9- C12 Aliphatics (Unadj.)	8320	7150	86	7910	95	10	70-130/25
	C9- C10 Aromatics (Unadj.)	4160	3420	82	4100	99	18	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	BFB	92%	97%	70-130%
460-00-4	BFB	87%	91%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV4141-BS	UV077864.D	1	02/06/17	AJC	n/a	n/a	GUV4141
GUV4141-BSD	UV077865.D	1	02/07/17	AJC	n/a	n/a	GUV4141

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA40754-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	C5- C8 Aliphatics (Unadj.)	240	308	128	304	127	1	70-130/25
	C9- C12 Aliphatics (Unadj.)	160	164	103	163	102	1	70-130/25
	C9- C10 Aromatics (Unadj.)	80	69.4	87	72.2	90	4	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	BFB	92% [a]	96% [a]	70-130%
460-00-4	BFB	85% [a]	88% [a]	70-130%

(a) Surrogate recoveries corrected for actual spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA40755-4MS	UV077777.D	1	02/01/17	AJC	n/a	n/a	GUV4135
FA40755-4MSD	UV077778.D	1	02/01/17	AJC	n/a	n/a	GUV4135
FA40755-4	UV077774.D	1	02/01/17	AJC	n/a	n/a	GUV4135

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA40754-3, FA40754-4, FA40754-5

CAS No.	Compound	FA40755-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
	C5- C8 Aliphatics (Unadj.)	ND		36100	21000	58*	36100	20800	58*	1	70-130/50
	C9- C12 Aliphatics (Unadj.)	ND		30100	10000	33*	30100	9970	33*	0	70-130/50
	C9- C10 Aromatics (Unadj.)	ND		18100	5490	30*	18100	5080	28*	8	70-130/50

CAS No.	Surrogate Recoveries	MS	MSD	FA40755-4	Limits
460-00-4	BFB	94%	89%	100%	70-130%
460-00-4	BFB	88%	84%	95%	70-130%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA40754-2DUP	UV077761.D	1	02/01/17	AJC	n/a	n/a	GUV4134
FA40754-2	UV077760.D	1	01/31/17	AJC	n/a	n/a	GUV4134

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA40754-1, FA40754-2

CAS No.	Compound	FA40754-2 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
	C5- C8 Aliphatics (Unadj.)	ND		ND		nc	50
	C9- C12 Aliphatics (Unadj.)	ND		ND		nc	50
	C9- C10 Aromatics (Unadj.)	ND		ND		nc	50

CAS No.	Surrogate Recoveries	DUP	FA40754-2	Limits
460-00-4	BFB	98%	98%	70-130%
460-00-4	BFB	94%	93%	70-130%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA40755-3DUP	UV077779.D	1	02/01/17	AJC	n/a	n/a	GUV4135
FA40755-3	UV077773.D	1	02/01/17	AJC	n/a	n/a	GUV4135

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA40754-3, FA40754-4, FA40754-5

CAS No.	Compound	FA40755-3 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
	C5- C8 Aliphatics (Unadj.)	ND		ND		nc	50
	C9- C12 Aliphatics (Unadj.)	ND		ND		nc	50
	C9- C10 Aromatics (Unadj.)	ND		ND		nc	50

CAS No.	Surrogate Recoveries	DUP	FA40755-3	Limits
460-00-4	BFB	99%	106%	70-130%
460-00-4	BFB	95%	100%	70-130%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA40908-6DUP	UV077879.D	1	02/07/17	AJC	n/a	n/a	GUV4141
FA40908-6	UV077878.D	1	02/07/17	AJC	n/a	n/a	GUV4141

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

FA40754-7

CAS No.	Compound	FA40908-6 ug/l	Q	DUP ug/l	Q	RPD	Limits
	C5- C8 Aliphatics (Unadj.)	ND		ND		nc	50
	C9- C12 Aliphatics (Unadj.)	ND		ND		nc	50
	C9- C10 Aromatics (Unadj.)	ND		ND		nc	50

CAS No.	Surrogate Recoveries	DUP	FA40908-6	Limits
460-00-4	BFB	95% [a]	96% [a]	70-130%
460-00-4	BFB	89% [a]	90% [a]	70-130%

(a) Surrogate recoveries corrected for actual spike amount.

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Method: MADEP VPH REV 1.1 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
FA40754-7	UV077880.D	92 [c]	86 [c]
FA40908-6DUP	UV077879.D	95 [c]	89 [c]
GUV4141-BS	UV077864.D	92 [c]	85 [c]
GUV4141-BSD	UV077865.D	96 [c]	88 [c]
GUV4141-MB	UV077866.D	99 [c]	92 [c]

Surrogate Compounds	Recovery Limits
S1 = BFB	70-130%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1
(c) Surrogate recoveries corrected for actual spike amount.

Volatile Surrogate Recovery Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Method: MADEP VPH REV 1.1 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
FA40754-1	UV077759.D	102	97
FA40754-2	UV077760.D	98	93
FA40754-3	UV077768.D	94	89
FA40754-4	UV077769.D	99	94
FA40754-5	UV077770.D	96	91
FA40754-2DUP	UV077761.D	98	94
FA40755-3DUP	UV077779.D	99	95
FA40755-4MS	UV077777.D	94	88
FA40755-4MSD	UV077778.D	89	84
GUV4134-BS	UV077734.D	99	94
GUV4134-BSD	UV077735.D	96	91
GUV4134-MB	UV077736.D	100	96
GUV4135-BS	UV077765.D	92	87
GUV4135-BSD	UV077766.D	97	91
GUV4135-MB	UV077767.D	95	92

Surrogate Compounds	Recovery Limits
S1 = BFB	70-130%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Check Std:	GUV4134-CC4115	**Injection Date:**	01/31/17
Lab File ID:	UV077733.D	**Injection Time:**	09:58
Instrument ID:	GCUV	**Method:**	MADEP VPH REV 1.1

	S1 [a] RT	S1 [b] RT
Check Std	13.96	13.96

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
GUV4134-BS	UV077734.D	01/31/17	10:28	13.96	13.96
GUV4134-BSD	UV077735.D	01/31/17	10:59	13.97	13.96
GUV4134-MB	UV077736.D	01/31/17	11:29	13.97	13.96
ZZZZZZ	UV077737.D	01/31/17	12:00	13.97	13.96
ZZZZZZ	UV077738.D	01/31/17	12:31	13.97	13.96
ZZZZZZ	UV077739.D	01/31/17	13:02	13.97	13.97
ZZZZZZ	UV077740.D	01/31/17	13:33	13.97	13.97
ZZZZZZ	UV077741.D	01/31/17	14:03	13.97	13.97
ZZZZZZ	UV077742.D	01/31/17	14:34	13.97	13.97
ZZZZZZ	UV077743.D	01/31/17	15:04	13.97	13.97

Surrogate Compounds

S1 = BFB

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Check Std:	GUV4134-CC4115	**Injection Date:**	01/31/17
Lab File ID:	UV077755.D	**Injection Time:**	21:11
Instrument ID:	GCUV	**Method:**	MADEP VPH REV 1.1

	S1 [a] RT	S1 [b] RT
Check Std	13.96	13.96

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	UV077757.D	01/31/17	22:13	13.96	13.96
ZZZZZZ	UV077758.D	01/31/17	22:44	13.97	13.96
FA40754-1	UV077759.D	01/31/17	23:14	13.96	13.96
FA40754-2	UV077760.D	01/31/17	23:45	13.97	13.96
FA40754-2DUP	UV077761.D	02/01/17	00:15	13.96	13.96
GUV4134-ECC4115	UV077762.D	02/01/17	00:46	13.97	13.96

Surrogate Compounds

S1 = BFB

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Check Std:	GUV4135-CC4115	**Injection Date:**	02/01/17
Lab File ID:	UV077764.D	**Injection Time:**	01:47
Instrument ID:	GCUV	**Method:**	MADEP VPH REV 1.1

	S1 [a] RT	S1 [b] RT
Check Std	13.96	13.96

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
GUV4135-BS	UV077765.D	02/01/17	02:18	13.96	13.96
GUV4135-BSD	UV077766.D	02/01/17	02:49	13.96	13.96
GUV4135-MB	UV077767.D	02/01/17	03:20	13.96	13.96
FA40754-3	UV077768.D	02/01/17	03:50	13.96	13.96
FA40754-4	UV077769.D	02/01/17	04:21	13.96	13.96
FA40754-5	UV077770.D	02/01/17	04:52	13.97	13.96
ZZZZZZ	UV077771.D	02/01/17	05:22	13.96	13.96
ZZZZZZ	UV077772.D	02/01/17	05:53	13.96	13.96
FA40755-3	UV077773.D	02/01/17	06:24	13.97	13.96
FA40755-4	UV077774.D	02/01/17	06:55	13.96	13.96

Surrogate Compounds

S1 = BFB

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Check Std:	GUV4135-CC4115	**Injection Date:**	02/01/17
Lab File ID:	UV077775.D	**Injection Time:**	07:26
Instrument ID:	GCUV	**Method:**	MADEP VPH REV 1.1

	S1 [a] RT	S1 [b] RT
Check Std	13.96	13.96

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
FA40755-4MS	UV077777.D	02/01/17	08:27	13.97	13.96
FA40755-4MSD	UV077778.D	02/01/17	08:58	13.97	13.96
FA40755-3DUP	UV077779.D	02/01/17	09:28	13.97	13.96
ZZZZZZ	UV077781.D	02/01/17	10:29	13.96	13.96
GUV4135-ECC4115	UV077782.D	02/01/17	11:00	13.96	13.96

Surrogate Compounds

S1 = BFB

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Check Std:	GUV4141-CC4115	**Injection Date:**	02/06/17
Lab File ID:	UV077863.D	**Injection Time:**	23:02
Instrument ID:	GCUV	**Method:**	MADEP VPH REV 1.1

	S1 [a] RT	S1 [b] RT
Check Std	13.97	13.96

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
GUV4141-BS	UV077864.D	02/06/17	23:33	13.97	13.96
GUV4141-BSD	UV077865.D	02/07/17	00:04	13.97	13.97
GUV4141-MB	UV077866.D	02/07/17	00:35	13.97	13.96

Surrogate Compounds

S1 = BFB

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Check Std:	GUV4141-CC4115	**Injection Date:**	02/07/17
Lab File ID:	UV077874.D	**Injection Time:**	04:42
Instrument ID:	GCUV	**Method:**	MADEP VPH REV 1.1

	S1 [a] RT	S1 [b] RT
Check Std	13.97	13.97

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	UV077876.D	02/07/17	05:44	13.97	13.96
ZZZZZZ	UV077877.D	02/07/17	06:14	13.97	13.97
FA40908-6	UV077878.D	02/07/17	06:45	13.97	13.97
FA40908-6DUP	UV077879.D	02/07/17	07:15	13.97	13.97
FA40754-7	UV077880.D	02/07/17	07:46	13.97	13.97
ZZZZZZ	UV077881.D	02/07/17	08:17	13.97	13.97
ZZZZZZ	UV077882.D	02/07/17	08:48	13.97	13.97
ZZZZZZ	UV077883.D	02/07/17	09:19	13.97	13.97
GUV4141-ECC4115	UV077885.D	02/07/17	10:21	13.97	13.97

Surrogate Compounds

S1 = BFB

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

Initial Calibration Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR
Sample: GUV4115-ICC4115
Lab FileID: UV077467.D

```
                         Response Factor Report  HP5890

  Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
  Title        : Mass. DEP VPH
  Last Update  : Thu Jan 19 13:21:03 2017
  Response via : Initial Calibration

  Calibration Files
  1   =UV077464.D  2   =UV077465.D  3   =UV077466.D  4   =UV077467.D
  5      =UV077468.D   6      =UV077469.D

        Compound              1     2     3     4     5     6     Avg    %RSD
  ---------------------------------------------------------------------------
  1) S   Alkane A                                                 0.000  -1.00
  2) S   Alkane B                                                 0.000  -1.00
  3) S   Aromatic A                                               0.000  -1.00
  4) S   Aromatic B                                               0.000  -1.00
  5) S   Aromatic C                                               0.000  -1.00
  6) S   Aromatic D                                               0.000  -1.00
  7) S   Aromatic E                                               0.000  -1.00
  8) S   Aromatic F                                               0.000  -1.00
  9) S   Aromatic G                                               0.000  -1.00
 10)     Pentane                                                  0.000  -1.00
 11)     2-Methylpentane                                          0.000  -1.00
 12)     Methyl Tert Butyl E 9.952 7.005 6.228 5.596 5.587 5.294 6.610 E3  26.44
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9989
               Response Ratio = 0.00000 + 5395.20575 *A

 13)     2,2,4-Trimethylpent                                      0.000  -1.00
 14)     Benzene             2.940 2.403 2.243 2.289 2.127 2.310 2.385 E4  12.01
 15)     Toluene             2.657 2.182 2.048 2.090 1.949 2.105 2.172 E4  11.49
 16)     Nonane                                                   0.000  -1.00
 17)     Ethylbenzene        1.878 1.906 1.815 1.825 1.707 1.835 1.828 E4   3.75
 18)     m,p-Xylene          2.223 2.312 2.215 2.239 2.076 2.206 2.212 E4   3.46
 19)     o-Xylene            2.139 1.960 1.859 1.869 1.764 1.882 1.912 E4   6.67
 20) S   BFB                 3.651 1.954 1.824 1.811 1.768 1.863 2.145 E4  34.51
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
               Response Ratio = 0.00000 + 18355.52984 *A

 21)     Decane                                                   0.000  -1.00
 22)     1,2,4-Trimethylbenz 2.229 2.050 1.970 1.942 1.848 1.961 2.000 E4   6.47
 23)     Butylcyclohexane                                         0.000  -1.00
 24)     Naphthalene         1.893 1.337 1.289 1.271 1.247 1.230 1.378 E4  18.53
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9999
               Response Ratio = 0.00000 + 12368.92878 *A

 25) H   C9- C10 Aromatics (       5.058 2.815 2.301 1.996 2.108 2.856 E4  44.50
             ---- Linear regression ----  Coefficient =  0.9970
               Response Ratio = 300691.85741 + 19917.03532 *A

 26) H   C5- C8 Aliphatics (                                      0.000  -1.00
 27) H   C9- C12 Aliphatics                                       0.000  -1.00

Signal #2

  1) S   Alkane A                                                 0.000  -1.00
  2) S   Alkane B                                                 0.000  -1.00
  3) S   Aromatic A                                               0.000  -1.00
  4) S   Aromatic B                                               0.000  -1.00
  5) S   Aromatic C                                               0.000  -1.00
```

Initial Calibration Summary

Job Number: FA40754 **Sample:** GUV4115-ICC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077467.D
Project: BMSMC, Humacao, PR

```
 6) S   Aromatic D                                                0.000  -1.00
 7) S   Aromatic E                                                0.000  -1.00
 8) S   Aromatic F                                                0.000  -1.00
 9) S   Aromatic G                                                0.000  -1.00
10)     Pentane             0.654 1.476 1.392 1.416 1.274 1.406 1.270 E4  24.32
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9966
              Response Ratio = 0.00000 + 13715.07166 *A

11)     2-Methylpentane     1.231 1.709 1.578 1.556 1.422 1.519 1.503 E4  10.79
12)     Methyl Tert Butyl E 6.838 7.091 7.119 6.271 6.148 5.773 6.540 E3   8.49
13)     2,2,4-Trimethylpent 1.752 1.726 1.536 1.187 0.928 0.768 1.316 E4  31.75
            ---- Quadratic regression ----  Coefficient =  0.9970
              Response Ratio = 72229.40323 + 12222.58394 *A + -11.94140 *A^2

14)     Benzene             2.685 2.239 2.077 2.091 1.943 2.101 2.189 E4  11.88
15)     Toluene             2.117 2.173 2.036 2.058 1.916 2.067 2.061 E4   4.19
16)     Nonane              2.033 2.027 1.898 1.891 1.825 1.898 1.929 E4   4.31
17)     Ethylbenzene        1.939 2.060 1.945 1.958 1.839 1.985 1.954 E4   3.67
18)     m,p-Xylene          2.083 2.196 2.062 2.061 1.942 2.082 2.071 E4   3.90
19)     o-Xylene            2.235 2.192 2.043 2.039 1.939 2.077 2.087 E4   5.21
20) S   BFB                 1.826 0.998 0.926 0.913 0.880 0.915 1.076 E4  34.33
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9994
              Response Ratio = 0.00000 + 9057.99472 *A

21)     Decane              1.915 1.923 1.812 1.804 1.711 1.638 1.801 E4   6.21
22)     1,2,4-Trimethylbenz 2.167 2.160 1.969 1.961 1.858 1.985 2.017 E4   6.05
23)     Butylcyclohexane    2.520 2.169 1.985 1.964 1.904 1.977 2.086 E4  11.03
24)     Naphthalene         0.858 1.032 0.975 0.972 0.933 0.928 0.950 E4   6.14
25) H   C9- C10 Aromatics (                                       0.000  -1.00
26) H   C5- C8 Aliphatics (       2.173 1.645 1.481 1.266 1.279 1.569 E4  23.71
            ---- Linear regression ----  Coefficient =  0.9987
              Response Ratio = 496380.27369 + 12316.30102 *A

27) H   C9- C12 Aliphatics        2.569 2.036 2.018 1.918 1.910 2.090 E4  13.10
            ---- Linear regression ----  Coefficient =  0.9999
              Response Ratio = 256480.47629 + 18888.67872 *A

--------------------------------------------------------------------------------
(#) = Out of Range

          VPH011317.M        Thu Jan 19 13:58:35 2017
```

6.7.1

6

Initial Calibration Verification

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR
Sample: GUV4115-ICV4115
Lab FileID: UV077473.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\2\DATA\011617\UV077473.D\FID1B.CH  Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\011617\UV077473.D\FID2A.CH
Acq On    : 16-Jan-2017, 19:24:31                    Operator: ArielH
Sample    : icv4115-3                                Inst    : HP5890
Misc      : gc19571,guv4115,5.00,,100,5.1,,soil      Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E

Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Alkane A	-1.000	0.000	0.0	96	0.00	13.85-13.85
2	S	Alkane B	-1.000	0.000	0.0	90	0.00	15.01-15.01
3	S	Aromatic A		----------NA----------				
4	S	Aromatic B		----------NA----------				
5	S	Aromatic C		----------NA----------				
6	S	Aromatic D		----------NA----------				
7	S	Aromatic E		----------NA----------				
8	S	Aromatic F		----------NA----------				
9	S	Aromatic G		----------NA----------				
10		Pentane		----------NA----------				
11		2-Methylpentane	-1.000	0.000	0.0	89	-0.03	6.16- 6.36
		----------	Amount	Calc.	%Drift			----------
12		Methyl Tert Butyl Ethe	50.000	50.411	-0.8	87	-0.02	6.43- 6.83
		----------	Amount	Calc.	%Drift			----------
13		2,2,4-Trimethylpentane	-1.000	0.000	0.0	84	-0.01	8.53- 8.73
14		Benzene	50.000	44.489	11.0	95	0.00	8.95- 9.15
15		Toluene	50.000	44.740	10.5	95	0.00	10.85-11.05
16		Nonane	-1.000	0.000	0.0	93	0.00	12.16-12.36
17		Ethylbenzene	50.000	46.645	6.7	94	0.00	12.49-12.69
18		m,p-Xylene	100.000	93.272	6.7	93	0.00	12.57-12.77
19		o-Xylene	50.000	45.980	8.0	95	0.00	13.10-13.30
		----------	Amount	Calc.	%Drift			----------
20	S	BFB	50.000	58.782	-17.6	118	0.00	13.86-14.06
		----------	Amount	Calc.	%Drift			----------
21		Decane	-1.000	0.000	0.0	92	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	50.000	43.905	12.2	89	0.00	14.77-14.97
23		Butylcyclohexane	-1.000	0.000	0.0	91	0.00	14.91-15.11
		----------	Amount	Calc.	%Drift			----------
24		Naphthalene	50.000	46.645	6.7	90	0.00	19.18-19.38
25	H	C9- C10 Aromatics (una	50.000	50.651	-1.3	93	0.00	13.40-19.13
		----------	Amount	Calc.	%Drift			----------
26	H	C5- C8 Aliphatics (una	-1.000	0.000	0.0	93	0.00	5.56-14.63
27	H	C9- C12 Aliphatics (ra	-1.000	0.000	0.0	91	0.00	14.51-21.48

***** Signal #2 *****

Initial Calibration Verification

Job Number: FA40754 **Sample:** GUV4115-ICV4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077473.D
Project: BMSMC, Humacao, PR

1	S	Alkane A			----------NA----------				
2	S	Alkane B			----------NA----------				
3	S	Aromatic A	-1.000	0.000	0.0	92	-0.03	6.63- 6.63	
4	S	Aromatic B	-1.000	0.000	0.0	97	-0.01	9.05- 9.05	
5	S	Aromatic C	-1.000	0.000	0.0	96	0.00	10.96-10.96	
6	S	Aromatic D	-1.000	0.000	0.0	92	0.00	12.59-12.59	
7	S	Aromatic E	-1.000	0.000	0.0	95	0.00	12.67-12.67	
8	S	Aromatic F	-1.000	0.000	0.0	96	0.00	13.20-13.20	
9	S	Aromatic G	-1.000	0.000	0.0	93	0.00	14.87-14.87	
		----------	Amount	Calc.	%Drift	----------			
10		Pentane	50.000	55.003	-10.0	108	-0.02	5.00- 5.20	
		----------	Amount	Calc.	%Drift	----------			
11		2-Methylpentane	50.000	48.485	3.0	92	-0.02	6.16- 6.36	
12		Methyl Tert Butyl Ethe	50.000	48.636	2.7	89	-0.02	6.43- 6.83	
		----------	Amount	Calc.	%Drift	----------			
13		2,2,4-Trimethylpentane	50.000	52.462	-4.9	89	0.00	8.53- 8.73	
		----------	Amount	Calc.	%Drift	----------			
14		Benzene	50.000	45.629	8.7	96	0.00	8.95- 9.15	
15		Toluene	50.000	47.777	4.4	97	0.00	10.86-11.06	
16		Nonane	50.000	47.783	4.4	97	0.00	12.16-12.36	
17		Ethylbenzene	50.000	47.980	4.0	96	0.00	12.49-12.69	
18		m,p-Xylene	100.000	94.719	5.3	95	0.00	12.57-12.77	
19		o-Xylene	50.000	47.365	5.3	97	0.00	13.10-13.30	
		----------	Amount	Calc.	%Drift	----------			
20	S	BFB	50.000	61.555	-23.1	120	0.00	13.86-14.06	
		----------	Amount	Calc.	%Drift	----------			
21		Decane	50.000	49.011	2.0	97	0.00	13.75-13.95	
22		1,2,4-Trimethylbenzene	50.000	45.323	9.4	93	0.00	14.77-14.97	
23		Butylcyclohexane	50.000	45.388	9.2	95	0.00	14.91-15.11	
24		Naphthalene	50.000	48.124	3.8	94	0.00	19.19-19.39	
25	H	C9- C10 Aromatics (una	-1.000	0.000	0.0	100	0.00	13.81-18.87	
26	H	C5- C8 Aliphatics (una	150.000	178.938	-19.3	109	0.00	4.89-12.08	
27	H	C9- C12 Aliphatics (ra	150.000	147.901	1.4	100	0.00	12.06-19.07	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
UV077466.D VPH011317.M Thu Jan 19 13:58:03 2017

6.7.2

6

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4134-CC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077733.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077733.D\FID1B.CH  Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077733.D\FID2A.CH
Acq On    : 31-Jan-2017, 09:58:01                    Operator: antonioc
Sample    : cc4115-4                                 Inst    : HP5890
Misc      : gc19636,guv4134,5.00,,100,5.1,,soil      Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E

Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Alkane A	-1.000	0.000	0.0	93	0.00	13.85-13.85
2	S	Alkane B	-1.000	0.000	0.0	95	0.00	15.01-15.01
3	S	Aromatic A		----------NA----------				
4	S	Aromatic B		----------NA----------				
5	S	Aromatic C		----------NA----------				
6	S	Aromatic D		----------NA----------				
7	S	Aromatic E		----------NA----------				
8	S	Aromatic F		----------NA----------				
9	S	Aromatic G		----------NA----------				
10		Pentane		----------NA----------				
11		2-Methylpentane	-1.000	0.000	0.0	94	0.00	6.16- 6.36
		----------	Amount	Calc.	%Drift		----------	
12		Methyl Tert Butyl Ethe	100.000	97.375	2.6	94	-0.02	6.43- 6.83
		----------	Amount	Calc.	%Drift		----------	
13		2,2,4-Trimethylpentane	-1.000	0.000	0.0	100	0.00	8.53- 8.73
14		Benzene	100.000	90.373	9.6	94	0.00	8.95- 9.15
15		Toluene	100.000	91.432	8.6	95	0.00	10.85-11.05
16		Nonane	-1.000	0.000	0.0	95	0.00	12.16-12.36
17		Ethylbenzene	100.000	95.076	4.9	95	0.00	12.49-12.69
18		m,p-Xylene	200.000	193.653	3.2	96	0.00	12.57-12.77
19		o-Xylene	100.000	92.906	7.1	95	0.00	13.10-13.30
		----------	Amount	Calc.	%Drift		----------	
20	S	BFB	100.000	90.113	9.9	91	0.00	13.86-14.06
		----------	Amount	Calc.	%Drift		----------	
21		Decane	-1.000	0.000	0.0	97	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	93.049	7.0	96	0.00	14.77-14.97
23		Butylcyclohexane	-1.000	0.000	0.0	95	0.00	14.91-15.11
		----------	Amount	Calc.	%Drift		----------	
24		Naphthalene	100.000	91.863	8.1	89	0.00	19.18-19.38
25	H	C9- C10 Aromatics (una	100.000	94.374	5.6	95	0.00	13.40-19.13
		----------	Amount	Calc.	%Drift		----------	
26	H	C5- C8 Aliphatics (una	-1.000	0.000	0.0	95	0.00	5.56-14.63
27	H	C9- C12 Aliphatics (ra	-1.000	0.000	0.0	93	0.00	14.51-21.48

***** Signal #2 *****

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4134-CC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077733.D
Project: BMSMC, Humacao, PR

1	S	Alkane A			----------NA----------				
2	S	Alkane B			----------NA----------				
3	S	Aromatic A	-1.000	0.000	0.0	102	-0.01	6.63- 6.63	
4	S	Aromatic B	-1.000	0.000	0.0	102	0.00	9.05- 9.05	
5	S	Aromatic C	-1.000	0.000	0.0	103	0.00	10.96-10.96	
6	S	Aromatic D	-1.000	0.000	0.0	100	0.00	12.59-12.59	
7	S	Aromatic E	-1.000	0.000	0.0	104	0.00	12.67-12.67	
8	S	Aromatic F	-1.000	0.000	0.0	102	0.00	13.20-13.20	
9	S	Aromatic G	-1.000	0.000	0.0	103	0.00	14.87-14.87	

			Amount	Calc.	%Drift			
10		Pentane	100.000	99.097	0.9	96	0.00	5.00- 5.20

			Amount	Calc.	%Drift			
11		2-Methylpentane	100.000	102.783	-2.8	99	0.00	6.16- 6.36
12		Methyl Tert Butyl Ethe	100.000	96.885	3.1	101	-0.01	6.43- 6.83

			Amount	Calc.	%Drift			
13		2,2,4-Trimethylpentane	100.000	114.079	-14.1	110	0.00	8.53- 8.73

			Amount	Calc.	%Drift			
14		Benzene	100.000	96.709	3.3	101	0.00	8.95- 9.15
15		Toluene	100.000	102.211	-2.2	102	0.00	10.86-11.06
16		Nonane	100.000	102.151	-2.2	104	0.00	12.16-12.36
17		Ethylbenzene	100.000	103.006	-3.0	103	0.00	12.49-12.69
18		m,p-Xylene	200.000	205.496	-2.7	103	0.00	12.57-12.77
19		o-Xylene	100.000	100.546	-0.5	103	0.00	13.10-13.30

			Amount	Calc.	%Drift			
20	S	BFB	100.000	98.337	1.7	98	0.00	13.86-14.06

			Amount	Calc.	%Drift			
21		Decane	100.000	104.952	-5.0	105	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	100.015	-0.0	103	0.00	14.77-14.97
23		Butylcyclohexane	100.000	96.445	3.6	102	0.00	14.91-15.11
24		Naphthalene	100.000	97.099	2.9	95	0.00	19.19-19.39
25	H	C9- C10 Aromatics (una	-1.000	0.000	0.0	105	0.00	13.81-18.87
26	H	C5- C8 Aliphatics (una	300.000	329.239	-9.7	102	0.00	4.89-12.08
27	H	C9- C12 Aliphatics (ra	300.000	318.791	-6.3	104	0.00	12.06-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
UV077467.D VPH011317.M Fri Feb 03 15:23:30 2017

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4134-CC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077744.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077744.D\FID1B.CH  Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077744.D\FID2A.CH
Acq On    : 31-Jan-2017, 15:35:36                    Operator: antonioc
Sample    : cc4115-4                                 Inst    : HP5890
Misc      : gc19636,guv4134,5.00,,100,5.1,,soil      Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E

Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Alkane A	-1.000	0.000	0.0	94	0.00	13.85-13.85
2	S	Alkane B	-1.000	0.000	0.0	96	0.00	15.01-15.01
3	S	Aromatic A		----------NA----------				
4	S	Aromatic B		----------NA----------				
5	S	Aromatic C		----------NA----------				
6	S	Aromatic D		----------NA----------				
7	S	Aromatic E		----------NA----------				
8	S	Aromatic F		----------NA----------				
9	S	Aromatic G		----------NA----------				
10		Pentane		----------NA----------				
11		2-Methylpentane	-1.000	0.000	0.0	87	0.00	6.16- 6.36
		----------	Amount	Calc.	%Drift		----------	
12		Methyl Tert Butyl Ethe	100.000	102.407	-2.4	99	-0.01	6.43- 6.83
		----------	Amount	Calc.	%Drift		----------	
13		2,2,4-Trimethylpentane	-1.000	0.000	0.0	102	0.00	8.53- 8.73
14		Benzene	100.000	94.469	5.5	98	0.00	8.95- 9.15
15		Toluene	100.000	94.973	5.0	99	0.00	10.85-11.05
16		Nonane	-1.000	0.000	0.0	96	0.00	12.16-12.36
17		Ethylbenzene	100.000	97.694	2.3	98	0.00	12.49-12.69
18		m,p-Xylene	200.000	197.874	1.1	98	0.00	12.57-12.77
19		o-Xylene	100.000	95.257	4.7	97	0.00	13.10-13.30
		----------	Amount	Calc.	%Drift		----------	
20	S	BFB	100.000	91.623	8.4	93	0.00	13.86-14.06
		----------	Amount	Calc.	%Drift		----------	
21		Decane	-1.000	0.000	0.0	93	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	94.751	5.2	98	0.00	14.77-14.97
23		Butylcyclohexane	-1.000	0.000	0.0	96	0.00	14.91-15.11
		----------	Amount	Calc.	%Drift		----------	
24		Naphthalene	100.000	94.823	5.2	92	0.00	19.18-19.38
25	H	C9- C10 Aromatics (una	100.000	101.582	-1.6	101	0.00	13.40-19.13
		----------	Amount	Calc.	%Drift		----------	
26	H	C5- C8 Aliphatics (una	-1.000	0.000	0.0	98	0.00	5.56-14.63
27	H	C9- C12 Aliphatics (ra	-1.000	0.000	0.0	95	0.00	14.51-21.48

***** Signal #2 *****

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4134-CC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077744.D
Project: BMSMC, Humacao, PR

1	S	Alkane A			----------NA----------			
2	S	Alkane B			----------NA----------			
3	S	Aromatic A	-1.000	0.000	0.0	108	-0.01	6.63- 6.63
4	S	Aromatic B	-1.000	0.000	0.0	105	0.00	9.05- 9.05
5	S	Aromatic C	-1.000	0.000	0.0	105	0.00	10.96-10.96
6	S	Aromatic D	-1.000	0.000	0.0	102	0.00	12.59-12.59
7	S	Aromatic E	-1.000	0.000	0.0	107	0.00	12.67-12.67
8	S	Aromatic F	-1.000	0.000	0.0	104	0.00	13.20-13.20
9	S	Aromatic G	-1.000	0.000	0.0	104	0.00	14.87-14.87

			Amount	Calc.	%Drift			
10		Pentane	100.000	101.019	-1.0	98	0.00	5.00- 5.20

			Amount	Calc.	%Drift			
11		2-Methylpentane	100.000	104.949	-4.9	101	0.00	6.16- 6.36
12		Methyl Tert Butyl Ethe	100.000	100.519	-0.5	105	-0.01	6.43- 6.83

			Amount	Calc.	%Drift			
13		2,2,4-Trimethylpentane	100.000	111.674	-11.7	108	0.00	8.53- 8.73

			Amount	Calc.	%Drift			
14		Benzene	100.000	99.581	0.4	104	0.00	8.95- 9.15
15		Toluene	100.000	104.822	-4.8	105	0.00	10.86-11.06
16		Nonane	100.000	103.064	-3.1	105	0.00	12.16-12.36
17		Ethylbenzene	100.000	105.226	-5.2	105	0.00	12.49-12.69
18		m,p-Xylene	200.000	210.195	-5.1	106	0.00	12.57-12.77
19		o-Xylene	100.000	103.018	-3.0	105	0.00	13.10-13.30

			Amount	Calc.	%Drift			
20	S	BFB	100.000	99.959	0.0	99	0.00	13.86-14.06

			Amount	Calc.	%Drift			
21		Decane	100.000	103.616	-3.6	103	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	101.154	-1.2	104	0.00	14.77-14.97
23		Butylcyclohexane	100.000	98.306	1.7	104	0.00	14.91-15.11
24		Naphthalene	100.000	99.345	0.7	97	0.00	19.19-19.39
25	H	C9- C10 Aromatics (una	-1.000	0.000	0.0	104	0.00	13.81-18.87
26	H	C5- C8 Aliphatics (una	300.000	327.000	-9.0	102	0.00	4.89-12.08
27	H	C9- C12 Aliphatics (ra	300.000	314.541	-4.8	102	0.00	12.06-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
UV077467.D VPH011317.M Fri Feb 03 15:23:31 2017

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4134-CC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077755.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077755.D\FID1B.CH  Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077755.D\FID2A.CH
Acq On    : 31-Jan-2017, 21:11:37                    Operator: antonioc
Sample    : cc4115-4                                 Inst    : HP5890
Misc      : gc19636,guv4134,5.00,,100,5.1,,soil      Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E

Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Alkane A	-1.000	0.000	0.0	89	0.00	13.85-13.85
2	S	Alkane B	-1.000	0.000	0.0	96	0.00	15.01-15.01
3	S	Aromatic A		----------NA----------				
4	S	Aromatic B		----------NA----------				
5	S	Aromatic C		----------NA----------				
6	S	Aromatic D		----------NA----------				
7	S	Aromatic E		----------NA----------				
8	S	Aromatic F		----------NA----------				
9	S	Aromatic G		----------NA----------				
10		Pentane		----------NA----------				
11		2-Methylpentane	-1.000	0.000	0.0	92	0.00	6.16- 6.36
		----------	Amount	Calc.	%Drift		----------	
12		Methyl Tert Butyl Ethe	100.000	107.334	-7.3	103	-0.02	6.43- 6.83
		----------	Amount	Calc.	%Drift		----------	
13		2,2,4-Trimethylpentane	-1.000	0.000	0.0	113	0.00	8.53- 8.73
14		Benzene	100.000	93.930	6.1	98	0.00	8.95- 9.15
15		Toluene	100.000	94.540	5.5	98	0.00	10.85-11.05
16		Nonane	-1.000	0.000	0.0	94	0.00	12.16-12.36
17		Ethylbenzene	100.000	97.774	2.2	98	0.00	12.49-12.69
18		m,p-Xylene	200.000	198.891	0.6	98	0.00	12.57-12.77
19		o-Xylene	100.000	95.926	4.1	98	0.00	13.10-13.30
		----------	Amount	Calc.	%Drift		----------	
20	S	BFB	100.000	92.618	7.4	94	0.00	13.86-14.06
		----------	Amount	Calc.	%Drift		----------	
21		Decane	-1.000	0.000	0.0	92	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	94.110	5.9	97	0.00	14.77-14.97
23		Butylcyclohexane	-1.000	0.000	0.0	96	0.00	14.91-15.11
		----------	Amount	Calc.	%Drift		----------	
24		Naphthalene	100.000	95.767	4.2	93	0.00	19.18-19.38
25	H	C9- C10 Aromatics (una	100.000	94.473	5.5	95	0.00	13.40-19.13
		----------	Amount	Calc.	%Drift		----------	
26	H	C5- C8 Aliphatics (una	-1.000	0.000	0.0	99	0.00	5.56-14.63
27	H	C9- C12 Aliphatics (ra	-1.000	0.000	0.0	93	0.00	14.51-21.48

***** Signal #2 *****

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4134-CC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077755.D
Project: BMSMC, Humacao, PR

1	S	Alkane A			----------NA----------			
2	S	Alkane B			----------NA----------			
3	S	Aromatic A	-1.000	0.000	0.0	116	-0.02	6.63- 6.63
4	S	Aromatic B	-1.000	0.000	0.0	105	0.00	9.05- 9.05
5	S	Aromatic C	-1.000	0.000	0.0	106	0.00	10.96-10.96
6	S	Aromatic D	-1.000	0.000	0.0	101	0.00	12.59-12.59
7	S	Aromatic E	-1.000	0.000	0.0	105	0.00	12.67-12.67
8	S	Aromatic F	-1.000	0.000	0.0	104	0.00	13.20-13.20
9	S	Aromatic G	-1.000	0.000	0.0	102	0.00	14.87-14.87

			Amount	Calc.	%Drift			
10		Pentane	100.000	102.433	-2.4	99	0.00	5.00- 5.20

			Amount	Calc.	%Drift			
11		2-Methylpentane	100.000	107.205	-7.2	104	0.00	6.16- 6.36
12		Methyl Tert Butyl Ethe	100.000	108.333	-8.3	113	-0.01	6.43- 6.83

			Amount	Calc.	%Drift			
13		2,2,4-Trimethylpentane	100.000	134.886	-34.9#	127	0.00	8.53- 8.73

			Amount	Calc.	%Drift			
14		Benzene	100.000	100.250	-0.3	105	0.00	8.95- 9.15
15		Toluene	100.000	105.101	-5.1	105	0.00	10.86-11.06
16		Nonane	100.000	101.195	-1.2	103	0.00	12.16-12.36
17		Ethylbenzene	100.000	105.202	-5.2	105	0.00	12.49-12.69
18		m,p-Xylene	200.000	209.073	-4.5	105	0.00	12.57-12.77
19		o-Xylene	100.000	103.017	-3.0	105	0.00	13.10-13.30

			Amount	Calc.	%Drift			
20	S	BFB	100.000	99.392	0.6	99	0.00	13.86-14.06

			Amount	Calc.	%Drift			
21		Decane	100.000	99.552	0.4	99	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	99.825	0.2	103	0.00	14.77-14.97
23		Butylcyclohexane	100.000	95.498	4.5	101	0.00	14.91-15.11
24		Naphthalene	100.000	101.532	-1.5	99	0.00	19.19-19.39
25	H	C9- C10 Aromatics (una	-1.000	0.000	0.0	101	0.00	13.81-18.87
26	H	C5- C8 Aliphatics (una	300.000	350.311	-16.8	108	0.00	4.89-12.08
27	H	C9- C12 Aliphatics (ra	300.000	311.175	-3.7	101	0.00	12.06-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
UV077467.D VPH011317.M Fri Feb 03 15:23:32 2017

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4134-ECC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077762.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077762.D\FID1B.CH  Vial: 31
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077762.D\FID2A.CH
Acq On    : 01-Feb-2017, 00:46:30                    Operator: antonioc
Sample    : ecc4115-4                                Inst    : HP5890
Misc      : gc19636,guv4134,5.00,,100,5.1,,soil      Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E

Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Alkane A	-1.000	0.000	0.0	86	0.00	13.85-13.85
2	S	Alkane B	-1.000	0.000	0.0	95	0.00	15.01-15.01
3	S	Aromatic A		----------NA----------				
4	S	Aromatic B		----------NA----------				
5	S	Aromatic C		----------NA----------				
6	S	Aromatic D		----------NA----------				
7	S	Aromatic E		----------NA----------				
8	S	Aromatic F		----------NA----------				
9	S	Aromatic G		----------NA----------				
10		Pentane		----------NA----------				
11		2-Methylpentane	-1.000	0.000	0.0	101	0.00	6.16- 6.36
		----------	Amount	Calc.	%Drift			----------
12		Methyl Tert Butyl Ethe	100.000	106.002	-6.0	102	-0.01	6.43- 6.83
		----------	Amount	Calc.	%Drift			----------
13		2,2,4-Trimethylpentane	-1.000	0.000	0.0	106	0.00	8.53- 8.73
14		Benzene	100.000	95.757	4.2	100	0.00	8.95- 9.15
15		Toluene	100.000	95.712	4.3	99	0.00	10.85-11.05
16		Nonane	-1.000	0.000	0.0	93	0.00	12.16-12.36
17		Ethylbenzene	100.000	98.249	1.8	98	0.00	12.49-12.69
18		m,p-Xylene	200.000	198.391	0.8	98	0.00	12.57-12.77
19		o-Xylene	100.000	96.317	3.7	99	0.00	13.10-13.30
		----------	Amount	Calc.	%Drift			----------
20	S	BFB	100.000	91.507	8.5	93	0.00	13.86-14.06
		----------	Amount	Calc.	%Drift			----------
21		Decane	-1.000	0.000	0.0	89	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	92.918	7.1	96	0.00	14.77-14.97
23		Butylcyclohexane	-1.000	0.000	0.0	94	0.00	14.91-15.11
		----------	Amount	Calc.	%Drift			----------
24		Naphthalene	100.000	99.693	0.3	97	0.00	19.18-19.38
25	H	C9- C10 Aromatics (una	100.000	95.825	4.2	96	0.00	13.40-19.13
		----------	Amount	Calc.	%Drift			----------
26	H	C5- C8 Aliphatics (una	-1.000	0.000	0.0	99	0.00	5.56-14.63
27	H	C9- C12 Aliphatics (ra	-1.000	0.000	0.0	94	0.00	14.51-21.48

***** Signal #2 *****

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4134-ECC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077762.D
Project: BMSMC, Humacao, PR

1	S	Alkane A			----------NA----------				
2	S	Alkane B			----------NA----------				
3	S	Aromatic A	-1.000	0.000	0.0	110	-0.01	6.63- 6.63	
4	S	Aromatic B	-1.000	0.000	0.0	106	0.00	9.05- 9.05	
5	S	Aromatic C	-1.000	0.000	0.0	106	0.00	10.96-10.96	
6	S	Aromatic D	-1.000	0.000	0.0	105	0.00	12.59-12.59	
7	S	Aromatic E	-1.000	0.000	0.0	105	0.00	12.67-12.67	
8	S	Aromatic F	-1.000	0.000	0.0	105	0.00	13.20-13.20	
9	S	Aromatic G	-1.000	0.000	0.0	102	0.00	14.87-14.87	

			Amount	Calc.	%Drift			
10		Pentane	100.000	103.773	-3.8	101	0.00	5.00- 5.20

			Amount	Calc.	%Drift			
11		2-Methylpentane	100.000	107.331	-7.3	104	0.00	6.16- 6.36
12		Methyl Tert Butyl Ethe	100.000	103.805	-3.8	108	-0.01	6.43- 6.83

			Amount	Calc.	%Drift			
13		2,2,4-Trimethylpentane	100.000	118.768	-18.8	114	0.00	8.53- 8.73

			Amount	Calc.	%Drift			
14		Benzene	100.000	100.856	-0.9	106	0.00	8.95- 9.15
15		Toluene	100.000	105.731	-5.7	106	0.00	10.86-11.06
16		Nonane	100.000	100.576	-0.6	103	0.00	12.16-12.36
17		Ethylbenzene	100.000	105.528	-5.5	105	0.00	12.49-12.69
18		m,p-Xylene	200.000	209.180	-4.6	105	0.00	12.57-12.77
19		o-Xylene	100.000	103.583	-3.6	106	0.00	13.10-13.30

			Amount	Calc.	%Drift			
20	S	BFB	100.000	99.379	0.6	99	0.00	13.86-14.06

			Amount	Calc.	%Drift			
21		Decane	100.000	97.023	3.0	97	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	99.577	0.4	102	0.00	14.77-14.97
23		Butylcyclohexane	100.000	95.462	4.5	101	0.00	14.91-15.11
24		Naphthalene	100.000	105.942	-5.9	104	0.00	19.19-19.39
25	H	C9- C10 Aromatics (una	-1.000	0.000	0.0	100	0.00	13.81-18.87
26	H	C5- C8 Aliphatics (una	300.000	341.333	-13.8	106	0.00	4.89-12.08
27	H	C9- C12 Aliphatics (ra	300.000	304.444	-1.5	99	0.00	12.06-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
UV077467.D VPH011317.M Fri Feb 03 15:23:33 2017

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4135-CC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077764.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077764.D\FID1B.CH  Vial: 33
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077764.D\FID2A.CH
Acq On    : 01-Feb-2017, 01:47:42                    Operator: antonioc
Sample    : cc4115-4                                 Inst    : HP5890
Misc      : gc19636,guv4135,5.00,,100,5.1,,soil      Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E

Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Alkane A	-1.000	0.000	0.0	86	0.00	13.85-13.85
2	S	Alkane B	-1.000	0.000	0.0	95	0.00	15.01-15.01
3	S	Aromatic A		----------NA----------				
4	S	Aromatic B		----------NA----------				
5	S	Aromatic C		----------NA----------				
6	S	Aromatic D		----------NA----------				
7	S	Aromatic E		----------NA----------				
8	S	Aromatic F		----------NA----------				
9	S	Aromatic G		----------NA----------				
10		Pentane		----------NA----------				
11		2-Methylpentane	-1.000	0.000	0.0	86	0.00	6.16- 6.36
		----------	Amount	Calc.	%Drift		----------	
12		Methyl Tert Butyl Ethe	100.000	103.015	-3.0	99	-0.02	6.43- 6.83
		----------	Amount	Calc.	%Drift		----------	
13		2,2,4-Trimethylpentane	-1.000	0.000	0.0	95	0.00	8.53- 8.73
14		Benzene	100.000	94.572	5.4	99	0.00	8.95- 9.15
15		Toluene	100.000	94.740	5.3	98	0.00	10.85-11.05
16		Nonane	-1.000	0.000	0.0	93	0.00	12.16-12.36
17		Ethylbenzene	100.000	97.536	2.5	98	0.00	12.49-12.69
18		m,p-Xylene	200.000	196.594	1.7	97	0.00	12.57-12.77
19		o-Xylene	100.000	95.262	4.7	97	0.00	13.10-13.30
		----------	Amount	Calc.	%Drift		----------	
20	S	BFB	100.000	91.682	8.3	93	0.00	13.86-14.06
		----------	Amount	Calc.	%Drift		----------	
21		Decane	-1.000	0.000	0.0	88	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	92.769	7.2	96	0.00	14.77-14.97
23		Butylcyclohexane	-1.000	0.000	0.0	94	0.00	14.91-15.11
		----------	Amount	Calc.	%Drift		----------	
24		Naphthalene	100.000	98.008	2.0	95	0.00	19.18-19.38
25	H	C9- C10 Aromatics (una	100.000	94.753	5.2	95	0.00	13.40-19.13
		----------	Amount	Calc.	%Drift		----------	
26	H	C5- C8 Aliphatics (una	-1.000	0.000	0.0	98	0.00	5.56-14.63
27	H	C9- C12 Aliphatics (ra	-1.000	0.000	0.0	93	0.00	14.51-21.48

***** Signal #2 *****

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4135-CC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077764.D
Project: BMSMC, Humacao, PR

1	S	Alkane A			----------NA----------				
2	S	Alkane B			----------NA----------				
3	S	Aromatic A	-1.000	0.000	0.0	107	-0.02	6.63- 6.63	
4	S	Aromatic B	-1.000	0.000	0.0	105	0.00	9.05- 9.05	
5	S	Aromatic C	-1.000	0.000	0.0	105	0.00	10.96-10.96	
6	S	Aromatic D	-1.000	0.000	0.0	102	0.00	12.59-12.59	
7	S	Aromatic E	-1.000	0.000	0.0	105	0.00	12.67-12.67	
8	S	Aromatic F	-1.000	0.000	0.0	104	0.00	13.20-13.20	
9	S	Aromatic G	-1.000	0.000	0.0	102	0.00	14.87-14.87	

			Amount	Calc.	%Drift			
10		Pentane	100.000	100.191	-0.2	97	0.00	5.00- 5.20
			Amount	Calc.	%Drift			
11		2-Methylpentane	100.000	104.454	-4.5	101	0.00	6.16- 6.36
12		Methyl Tert Butyl Ethe	100.000	101.546	-1.5	106	-0.02	6.43- 6.83
			Amount	Calc.	%Drift			
13		2,2,4-Trimethylpentane	100.000	106.450	-6.5	104	0.00	8.53- 8.73
			Amount	Calc.	%Drift			
14		Benzene	100.000	99.854	0.1	105	0.00	8.95- 9.15
15		Toluene	100.000	104.767	-4.8	105	0.00	10.86-11.06
16		Nonane	100.000	99.910	0.1	102	0.00	12.16-12.36
17		Ethylbenzene	100.000	104.774	-4.8	105	0.00	12.49-12.69
18		m,p-Xylene	200.000	207.909	-4.0	104	0.00	12.57-12.77
19		o-Xylene	100.000	102.921	-2.9	105	0.00	13.10-13.30
			Amount	Calc.	%Drift			
20	S	BFB	100.000	99.134	0.9	98	0.00	13.86-14.06
			Amount	Calc.	%Drift			
21		Decane	100.000	97.215	2.8	97	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	99.566	0.4	102	0.00	14.77-14.97
23		Butylcyclohexane	100.000	95.899	4.1	102	0.00	14.91-15.11
24		Naphthalene	100.000	103.989	-4.0	102	0.00	19.19-19.39
25	H	C9- C10 Aromatics (una	-1.000	0.000	0.0	99	0.00	13.81-18.87
26	H	C5- C8 Aliphatics (una	300.000	324.963	-8.3	101	0.00	4.89-12.08
27	H	C9- C12 Aliphatics (ra	300.000	303.596	-1.2	99	0.00	12.06-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
UV077467.D VPH011317.M Fri Feb 03 15:23:34 2017

6.7.7

6

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4135-CC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077775.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077775.D\FID1B.CH  Vial: 44
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077775.D\FID2A.CH
Acq On    : 01-Feb-2017, 07:26:01                    Operator: antonioc
Sample    : cc4115-4                                 Inst    : HP5890
Misc      : gc19636,guv4135,5.00,,100,5.1,,soil      Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E

Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Alkane A	-1.000	0.000	0.0	79	0.00	13.85-13.85
2	S	Alkane B	-1.000	0.000	0.0	88	0.00	15.01-15.01
3	S	Aromatic A		----------NA----------				
4	S	Aromatic B		----------NA----------				
5	S	Aromatic C		----------NA----------				
6	S	Aromatic D		----------NA----------				
7	S	Aromatic E		----------NA----------				
8	S	Aromatic F		----------NA----------				
9	S	Aromatic G		----------NA----------				
10		Pentane		----------NA----------				
11		2-Methylpentane	-1.000	0.000	0.0	75	0.00	6.16- 6.36
		----------	Amount	Calc.	%Drift		----------	
12		Methyl Tert Butyl Ethe	100.000	106.090	-6.1	102	-0.01	6.43- 6.83
		----------	Amount	Calc.	%Drift		----------	
13		2,2,4-Trimethylpentane	-1.000	0.000	0.0	104	0.00	8.53- 8.73
14		Benzene	100.000	87.894	12.1	92	0.00	8.95- 9.15
15		Toluene	100.000	88.006	12.0	91	0.00	10.85-11.05
16		Nonane	-1.000	0.000	0.0	83	0.00	12.16-12.36
17		Ethylbenzene	100.000	90.582	9.4	91	0.00	12.49-12.69
18		m,p-Xylene	200.000	181.675	9.2	90	0.00	12.57-12.77
19		o-Xylene	100.000	89.231	10.8	91	0.00	13.10-13.30
		----------	Amount	Calc.	%Drift		----------	
20	S	BFB	100.000	85.550	14.5	87	0.00	13.86-14.06
		----------	Amount	Calc.	%Drift		----------	
21		Decane	-1.000	0.000	0.0	83	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	86.198	13.8	89	0.00	14.77-14.97
23		Butylcyclohexane	-1.000	0.000	0.0	87	0.00	14.91-15.11
		----------	Amount	Calc.	%Drift		----------	
24		Naphthalene	100.000	89.174	10.8	87	0.00	19.18-19.38
25	H	C9- C10 Aromatics (una	100.000	89.072	10.9	90	0.00	13.40-19.13
		----------	Amount	Calc.	%Drift		----------	
26	H	C5- C8 Aliphatics (una	-1.000	0.000	0.0	92	0.00	5.56-14.63
27	H	C9- C12 Aliphatics (ra	-1.000	0.000	0.0	87	0.00	14.51-21.48

***** Signal #2 *****

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4135-CC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077775.D
Project: BMSMC, Humacao, PR

1	S	Alkane A			----------NA----------				
2	S	Alkane B			----------NA----------				
3	S	Aromatic A	-1.000	0.000	0.0	111	-0.02	6.63- 6.63	
4	S	Aromatic B	-1.000	0.000	0.0	98	0.00	9.05- 9.05	
5	S	Aromatic C	-1.000	0.000	0.0	98	0.00	10.96-10.96	
6	S	Aromatic D	-1.000	0.000	0.0	99	0.00	12.59-12.59	
7	S	Aromatic E	-1.000	0.000	0.0	97	0.00	12.67-12.67	
8	S	Aromatic F	-1.000	0.000	0.0	97	0.00	13.20-13.20	
9	S	Aromatic G	-1.000	0.000	0.0	95	0.00	14.87-14.87	

			Amount	Calc.	%Drift			
10		Pentane	100.000	95.970	4.0	93	0.00	5.00- 5.20

			Amount	Calc.	%Drift			
11		2-Methylpentane	100.000	100.019	-0.0	97	0.00	6.16- 6.36
12		Methyl Tert Butyl Ethe	100.000	104.678	-4.7	109	-0.01	6.43- 6.83

			Amount	Calc.	%Drift			
13		2,2,4-Trimethylpentane	100.000	120.592	-20.6	116	0.00	8.53- 8.73

			Amount	Calc.	%Drift			
14		Benzene	100.000	93.366	6.6	98	0.00	8.95- 9.15
15		Toluene	100.000	97.785	2.2	98	0.00	10.86-11.06
16		Nonane	100.000	91.898	8.1	94	0.00	12.16-12.36
17		Ethylbenzene	100.000	97.594	2.4	97	0.00	12.49-12.69
18		m,p-Xylene	200.000	192.381	3.8	97	0.00	12.57-12.77
19		o-Xylene	100.000	96.239	3.8	99	0.00	13.10-13.30

			Amount	Calc.	%Drift			
20	S	BFB	100.000	91.913	8.1	91	0.00	13.86-14.06

			Amount	Calc.	%Drift			
21		Decane	100.000	87.688	12.3	88	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	91.551	8.4	94	0.00	14.77-14.97
23		Butylcyclohexane	100.000	87.484	12.5	93	0.00	14.91-15.11
24		Naphthalene	100.000	92.734	7.3	91	0.00	19.19-19.39
25	H	C9- C10 Aromatics (una	-1.000	0.000	0.0	92	0.00	13.81-18.87
26	H	C5- C8 Aliphatics (una	300.000	323.246	-7.7	101	0.00	4.89-12.08
27	H	C9- C12 Aliphatics (ra	300.000	276.558	7.8	91	0.00	12.06-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
UV077467.D VPH011317.M Fri Feb 03 15:23:35 2017

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4135-ECC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077782.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077782.D\FID1B.CH  Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077782.D\FID2A.CH
Acq On    : 01-Feb-2017, 11:00:25                    Operator: antonioc
Sample    : ecc4115-4                                Inst    : HP5890
Misc      : gc19636,guv4135,5.00,,100,5.1,,soil      Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E

Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Alkane A	-1.000	0.000	0.0	86	0.00	13.85-13.85
2	S	Alkane B	-1.000	0.000	0.0	93	0.00	15.01-15.01
3	S	Aromatic A		----------NA----------				
4	S	Aromatic B		----------NA----------				
5	S	Aromatic C		----------NA----------				
6	S	Aromatic D		----------NA----------				
7	S	Aromatic E		----------NA----------				
8	S	Aromatic F		----------NA----------				
9	S	Aromatic G		----------NA----------				
10		Pentane		----------NA----------				
11		2-Methylpentane	-1.000	0.000	0.0	85	-0.02	6.16- 6.36
		----------	Amount	Calc.	%Drift		----------	
12		Methyl Tert Butyl Ethe	100.000	108.942	-8.9	105	-0.02	6.43- 6.83
		----------	Amount	Calc.	%Drift		----------	
13		2,2,4-Trimethylpentane	-1.000	0.000	0.0	114	0.00	8.53- 8.73
14		Benzene	100.000	93.019	7.0	97	0.00	8.95- 9.15
15		Toluene	100.000	93.461	6.5	97	0.00	10.85-11.05
16		Nonane	-1.000	0.000	0.0	93	0.00	12.16-12.36
17		Ethylbenzene	100.000	96.316	3.7	96	0.00	12.49-12.69
18		m,p-Xylene	200.000	194.626	2.7	96	0.00	12.57-12.77
19		o-Xylene	100.000	94.809	5.2	97	0.00	13.10-13.30
		----------	Amount	Calc.	%Drift		----------	
20	S	BFB	100.000	91.580	8.4	93	0.00	13.86-14.06
		----------	Amount	Calc.	%Drift		----------	
21		Decane	-1.000	0.000	0.0	89	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	91.646	8.4	94	0.00	14.77-14.97
23		Butylcyclohexane	-1.000	0.000	0.0	93	0.00	14.91-15.11
		----------	Amount	Calc.	%Drift		----------	
24		Naphthalene	100.000	96.809	3.2	94	0.00	19.18-19.38
25	H	C9- C10 Aromatics (una	100.000	89.767	10.2	91	0.00	13.40-19.13
		----------	Amount	Calc.	%Drift		----------	
26	H	C5- C8 Aliphatics (una	-1.000	0.000	0.0	97	0.00	5.56-14.63
27	H	C9- C12 Aliphatics (ra	-1.000	0.000	0.0	91	0.00	14.51-21.48

***** Signal #2 *****

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4135-ECC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077782.D
Project: BMSMC, Humacao, PR

1	S	Alkane A			----------NA----------				
2	S	Alkane B			----------NA----------				
3	S	Aromatic A	-1.000	0.000	0.0	115	-0.02	6.63- 6.63	
4	S	Aromatic B	-1.000	0.000	0.0	104	0.00	9.05- 9.05	
5	S	Aromatic C	-1.000	0.000	0.0	104	0.00	10.96-10.96	
6	S	Aromatic D	-1.000	0.000	0.0	103	0.00	12.59-12.59	
7	S	Aromatic E	-1.000	0.000	0.0	104	0.00	12.67-12.67	
8	S	Aromatic F	-1.000	0.000	0.0	102	0.00	13.20-13.20	
9	S	Aromatic G	-1.000	0.000	0.0	99	0.00	14.87-14.87	

			Amount	Calc.	%Drift			
10		Pentane	100.000	101.388	-1.4	98	-0.02	5.00- 5.20

			Amount	Calc.	%Drift			
11		2-Methylpentane	100.000	105.868	-5.9	102	-0.02	6.16- 6.36
12		Methyl Tert Butyl Ethe	100.000	108.274	-8.3	113	-0.02	6.43- 6.83

			Amount	Calc.	%Drift			
13		2,2,4-Trimethylpentane	100.000	131.864	-31.9#	124	0.00	8.53- 8.73

			Amount	Calc.	%Drift			
14		Benzene	100.000	98.664	1.3	103	0.00	8.95- 9.15
15		Toluene	100.000	103.401	-3.4	104	0.00	10.86-11.06
16		Nonane	100.000	97.547	2.5	99	0.00	12.16-12.36
17		Ethylbenzene	100.000	103.047	-3.0	103	0.00	12.49-12.69
18		m,p-Xylene	200.000	203.005	-1.5	102	0.00	12.57-12.77
19		o-Xylene	100.000	100.943	-0.9	103	0.00	13.10-13.30

			Amount	Calc.	%Drift			
20	S	BFB	100.000	97.184	2.8	96	0.00	13.86-14.06

			Amount	Calc.	%Drift			
21		Decane	100.000	93.023	7.0	93	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	96.968	3.0	100	0.00	14.77-14.97
23		Butylcyclohexane	100.000	92.195	7.8	98	0.00	14.91-15.11
24		Naphthalene	100.000	100.553	-0.6	98	0.00	19.19-19.39
25	H	C9- C10 Aromatics (una	-1.000	0.000	0.0	97	0.00	13.81-18.87
26	H	C5- C8 Aliphatics (una	300.000	343.620	-14.5	106	0.00	4.89-12.08
27	H	C9- C12 Aliphatics (ra	300.000	291.934	2.7	95	0.00	12.06-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
UV077467.D VPH011317.M Fri Feb 03 15:23:36 2017

6.7.9

6

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4141-CC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077863.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\2\DATA\020617\UV077863.D\FID1B.CH  Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077863.D\FID2A.CH
Acq On    : 06-Feb-2017, 23:02:43                    Operator: antonioc
Sample    : cc4115-4                                 Inst    : HP5890
Misc      : gc19657,guv4141,,,,,                     Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E

Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Alkane A	-1.000	0.000	0.0	90	0.00	13.85-13.85
2	S	Alkane B	-1.000	0.000	0.0	95	0.00	15.01-15.01
3	S	Aromatic A		----------NA----------				
4	S	Aromatic B		----------NA----------				
5	S	Aromatic C		----------NA----------				
6	S	Aromatic D		----------NA----------				
7	S	Aromatic E		----------NA----------				
8	S	Aromatic F		----------NA----------				
9	S	Aromatic G		----------NA----------				
10		Pentane		----------NA----------				
11		2-Methylpentane	-1.000	0.000	0.0	95	-0.02	6.16- 6.36
		----------	Amount	Calc.	%Drift		----------	
12		Methyl Tert Butyl Ethe	100.000	103.242	-3.2	100	-0.02	6.43- 6.83
		----------	Amount	Calc.	%Drift		----------	
13		2,2,4-Trimethylpentane	-1.000	0.000	0.0	115	0.00	8.53- 8.73
14		Benzene	100.000	90.882	9.1	95	0.00	8.95- 9.15
15		Toluene	100.000	91.702	8.3	95	0.00	10.85-11.05
16		Nonane	-1.000	0.000	0.0	92	0.00	12.16-12.36
17		Ethylbenzene	100.000	94.667	5.3	95	0.00	12.49-12.69
18		m,p-Xylene	200.000	190.951	4.5	94	0.00	12.57-12.77
19		o-Xylene	100.000	92.271	7.7	94	0.00	13.10-13.30
		----------	Amount	Calc.	%Drift		----------	
20	S	BFB	100.000	135.818	-35.8#	138	0.00	13.86-14.06
		----------	Amount	Calc.	%Drift		----------	
21		Decane	-1.000	0.000	0.0	91	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	91.461	8.5	94	0.00	14.77-14.97
23		Butylcyclohexane	-1.000	0.000	0.0	93	0.00	14.91-15.11
		----------	Amount	Calc.	%Drift		----------	
24		Naphthalene	100.000	96.194	3.8	94	0.00	19.18-19.38
25	H	C9- C10 Aromatics (una	100.000	91.126	8.9	92	0.00	13.40-19.13
		----------	Amount	Calc.	%Drift		----------	
26	H	C5- C8 Aliphatics (una	-1.000	0.000	0.0	99	0.00	5.56-14.63
27	H	C9- C12 Aliphatics (ra	-1.000	0.000	0.0	91	0.00	14.51-21.48

***** Signal #2 *****

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4141-CC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077863.D
Project: BMSMC, Humacao, PR

1	S	Alkane A			----------NA----------			
2	S	Alkane B			----------NA----------			
3	S	Aromatic A	-1.000	0.000	0.0	110	-0.02	6.63- 6.63
4	S	Aromatic B	-1.000	0.000	0.0	102	0.00	9.05- 9.05
5	S	Aromatic C	-1.000	0.000	0.0	103	0.00	10.96-10.96
6	S	Aromatic D	-1.000	0.000	0.0	98	0.00	12.59-12.59
7	S	Aromatic E	-1.000	0.000	0.0	105	0.00	12.67-12.67
8	S	Aromatic F	-1.000	0.000	0.0	102	0.00	13.20-13.20
9	S	Aromatic G	-1.000	0.000	0.0	101	0.00	14.87-14.87

			Amount	Calc.	%Drift			
10		Pentane	100.000	100.006	-0.0	97	-0.02	5.00- 5.20

			Amount	Calc.	%Drift			
11		2-Methylpentane	100.000	103.890	-3.9	100	-0.01	6.16- 6.36
12		Methyl Tert Butyl Ethe	100.000	102.033	-2.0	106	-0.02	6.43- 6.83

			Amount	Calc.	%Drift			
13		2,2,4-Trimethylpentane	100.000	131.075	-31.1#	124	0.00	8.53- 8.73

			Amount	Calc.	%Drift			
14		Benzene	100.000	97.120	2.9	102	0.00	8.95- 9.15
15		Toluene	100.000	102.316	-2.3	102	0.00	10.86-11.06
16		Nonane	100.000	100.272	-0.3	102	0.00	12.16-12.36
17		Ethylbenzene	100.000	102.742	-2.7	103	0.00	12.49-12.69
18		m,p-Xylene	200.000	204.382	-2.2	103	0.00	12.57-12.77
19		o-Xylene	100.000	100.584	-0.6	103	0.00	13.10-13.30

			Amount	Calc.	%Drift			
20	S	BFB	100.000	145.896	-45.9#	145	0.00	13.86-14.06

			Amount	Calc.	%Drift			
21		Decane	100.000	101.046	-1.0	101	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	98.546	1.5	101	0.00	14.77-14.97
23		Butylcyclohexane	100.000	94.921	5.1	101	0.00	14.91-15.11
24		Naphthalene	100.000	102.542	-2.5	100	0.00	19.19-19.39
25	H	C9- C10 Aromatics (una	-1.000	0.000	0.0	101	0.00	13.81-18.87
26	H	C5- C8 Aliphatics (una	300.000	388.887	-29.6#	119	0.00	4.89-12.08
27	H	C9- C12 Aliphatics (ra	300.000	305.907	-2.0	100	0.00	12.06-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
UV077467.D VPH011317.M Tue Feb 07 12:59:17 2017

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4141-CC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077874.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\2\DATA\020617\UV077874.D\FID1B.CH  Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077874.D\FID2A.CH
Acq On    : 07-Feb-2017, 04:42:37                    Operator: antonioc
Sample    : cc4115-4                                 Inst    : HP5890
Misc      : gc19657,guv4141,,,,,                     Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E

Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Alkane A	-1.000	0.000	0.0	84	0.00	13.85-13.85
2	S	Alkane B	-1.000	0.000	0.0	91	0.00	15.01-15.01
3	S	Aromatic A		----------NA----------				
4	S	Aromatic B		----------NA----------				
5	S	Aromatic C		----------NA----------				
6	S	Aromatic D		----------NA----------				
7	S	Aromatic E		----------NA----------				
8	S	Aromatic F		----------NA----------				
9	S	Aromatic G		----------NA----------				
10		Pentane		----------NA----------				
11		2-Methylpentane	-1.000	0.000	0.0	76	0.00	6.16- 6.36
		----------	Amount	Calc.	%Drift		----------	
12		Methyl Tert Butyl Ethe	100.000	105.118	-5.1	101	-0.01	6.43- 6.83
		----------	Amount	Calc.	%Drift		----------	
13		2,2,4-Trimethylpentane	-1.000	0.000	0.0	104	0.00	8.53- 8.73
14		Benzene	100.000	90.680	9.3	94	0.00	8.95- 9.15
15		Toluene	100.000	90.840	9.2	94	0.00	10.85-11.05
16		Nonane	-1.000	0.000	0.0	95	0.00	12.16-12.36
17		Ethylbenzene	100.000	94.228	5.8	94	0.00	12.49-12.69
18		m,p-Xylene	200.000	188.831	5.6	93	0.00	12.57-12.77
19		o-Xylene	100.000	91.686	8.3	94	0.00	13.10-13.30
		----------	Amount	Calc.	%Drift		----------	
20	S	BFB	100.000	133.292	-33.3#	135	0.00	13.86-14.06
		----------	Amount	Calc.	%Drift		----------	
21		Decane	-1.000	0.000	0.0	85	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	88.972	11.0	92	0.00	14.77-14.97
23		Butylcyclohexane	-1.000	0.000	0.0	91	0.00	14.91-15.11
		----------	Amount	Calc.	%Drift		----------	
24		Naphthalene	100.000	90.903	9.1	88	0.00	19.18-19.38
25	H	C9- C10 Aromatics (una	100.000	94.482	5.5	95	0.00	13.40-19.13
		----------	Amount	Calc.	%Drift		----------	
26	H	C5- C8 Aliphatics (una	-1.000	0.000	0.0	97	0.00	5.56-14.63
27	H	C9- C12 Aliphatics (ra	-1.000	0.000	0.0	89	0.00	14.51-21.48

***** Signal #2 *****

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4141-CC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077874.D
Project: BMSMC, Humacao, PR

1	S	Alkane A			----------NA----------			
2	S	Alkane B			----------NA----------			
3	S	Aromatic A	-1.000	0.000	0.0	116	-0.01	6.63- 6.63
4	S	Aromatic B	-1.000	0.000	0.0	103	0.00	9.05- 9.05
5	S	Aromatic C	-1.000	0.000	0.0	103	0.00	10.96-10.96
6	S	Aromatic D	-1.000	0.000	0.0	99	0.00	12.59-12.59
7	S	Aromatic E	-1.000	0.000	0.0	103	0.00	12.67-12.67
8	S	Aromatic F	-1.000	0.000	0.0	101	0.00	13.20-13.20
9	S	Aromatic G	-1.000	0.000	0.0	99	0.00	14.87-14.87

			Amount	Calc.	%Drift			
10		Pentane	100.000	99.123	0.9	96	0.00	5.00- 5.20

			Amount	Calc.	%Drift			
11		2-Methylpentane	100.000	104.013	-4.0	100	0.00	6.16- 6.36
12		Methyl Tert Butyl Ethe	100.000	106.003	-6.0	111	-0.01	6.43- 6.83

			Amount	Calc.	%Drift			
13		2,2,4-Trimethylpentane	100.000	119.129	-19.1	114	0.00	8.53- 8.73

			Amount	Calc.	%Drift			
14		Benzene	100.000	97.972	2.0	103	0.00	8.95- 9.15
15		Toluene	100.000	102.745	-2.7	103	0.00	10.86-11.06
16		Nonane	100.000	97.526	2.5	99	0.00	12.16-12.36
17		Ethylbenzene	100.000	102.248	-2.2	102	0.00	12.49-12.69
18		m,p-Xylene	200.000	202.768	-1.4	102	0.00	12.57-12.77
19		o-Xylene	100.000	100.261	-0.3	103	0.00	13.10-13.30

			Amount	Calc.	%Drift			
20	S	BFB	100.000	144.279	-44.3#	143	0.00	13.86-14.06

			Amount	Calc.	%Drift			
21		Decane	100.000	94.766	5.2	95	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	96.283	3.7	99	0.00	14.77-14.97
23		Butylcyclohexane	100.000	92.532	7.5	98	0.00	14.91-15.11
24		Naphthalene	100.000	96.415	3.6	94	0.00	19.19-19.39
25	H	C9- C10 Aromatics (una	-1.000	0.000	0.0	98	0.00	13.81-18.87
26	H	C5- C8 Aliphatics (una	300.000	374.824	-24.9	115	0.00	4.89-12.08
27	H	C9- C12 Aliphatics (ra	300.000	298.095	0.6	97	0.00	12.06-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
UV077467.D VPH011317.M Tue Feb 07 12:59:18 2017

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4141-ECC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077885.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\HPCHEM\2\DATA\020617\UV077885.D\FID1B.CH  Vial: 35
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077885.D\FID2A.CH
Acq On    : 07-Feb-2017, 10:21:43                    Operator: antonioc
Sample    : ecc4115-4                                Inst    : HP5890
Misc      : gc19657,guv4141,,,,,                     Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E

Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	Alkane A	-1.000	0.000	0.0	82	0.00	13.85-13.85
2	S	Alkane B	-1.000	0.000	0.0	89	0.00	15.01-15.01
3	S	Aromatic A		----------NA----------				
4	S	Aromatic B		----------NA----------				
5	S	Aromatic C		----------NA----------				
6	S	Aromatic D		----------NA----------				
7	S	Aromatic E		----------NA----------				
8	S	Aromatic F		----------NA----------				
9	S	Aromatic G		----------NA----------				
10		Pentane		----------NA----------				
11		2-Methylpentane	-1.000	0.000	0.0	84	0.00	6.16- 6.36
		----------	Amount	Calc.	%Drift		----------	
12		Methyl Tert Butyl Ethe	100.000	105.647	-5.6	102	-0.01	6.43- 6.83
		----------	Amount	Calc.	%Drift		----------	
13		2,2,4-Trimethylpentane	-1.000	0.000	0.0	107	0.00	8.53- 8.73
14		Benzene	100.000	91.224	8.8	95	0.00	8.95- 9.15
15		Toluene	100.000	91.440	8.6	95	0.00	10.85-11.05
16		Nonane	-1.000	0.000	0.0	92	0.00	12.16-12.36
17		Ethylbenzene	100.000	94.002	6.0	94	0.00	12.49-12.69
18		m,p-Xylene	200.000	188.337	5.8	93	0.00	12.57-12.77
19		o-Xylene	100.000	92.043	8.0	94	0.00	13.10-13.30
		----------	Amount	Calc.	%Drift		----------	
20	S	BFB	100.000	133.442	-33.4#	135	0.00	13.86-14.06
		----------	Amount	Calc.	%Drift		----------	
21		Decane	-1.000	0.000	0.0	84	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	89.193	10.8	92	0.00	14.77-14.97
23		Butylcyclohexane	-1.000	0.000	0.0	90	0.00	14.91-15.11
		----------	Amount	Calc.	%Drift		----------	
24		Naphthalene	100.000	94.201	5.8	92	0.00	19.18-19.38
25	H	C9- C10 Aromatics (una	100.000	91.788	8.2	93	0.00	13.40-19.13
		----------	Amount	Calc.	%Drift		----------	
26	H	C5- C8 Aliphatics (una	-1.000	0.000	0.0	97	0.00	5.56-14.63
27	H	C9- C12 Aliphatics (ra	-1.000	0.000	0.0	91	0.00	14.51-21.48

***** Signal #2 *****

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GUV4141-ECC4115
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** UV077885.D
Project: BMSMC, Humacao, PR

1	S	Alkane A			----------NA----------			
2	S	Alkane B			----------NA----------			
3	S	Aromatic A	-1.000	0.000	0.0	117	-0.01	6.63- 6.63
4	S	Aromatic B	-1.000	0.000	0.0	102	0.00	9.05- 9.05
5	S	Aromatic C	-1.000	0.000	0.0	102	0.00	10.96-10.96
6	S	Aromatic D	-1.000	0.000	0.0	103	0.00	12.59-12.59
7	S	Aromatic E	-1.000	0.000	0.0	101	0.00	12.67-12.67
8	S	Aromatic F	-1.000	0.000	0.0	101	0.00	13.20-13.20
9	S	Aromatic G	-1.000	0.000	0.0	98	0.00	14.87-14.87

			Amount	Calc.	%Drift			
10		Pentane	100.000	98.197	1.8	95	0.00	5.00- 5.20

			Amount	Calc.	%Drift			
11		2-Methylpentane	100.000	102.283	-2.3	99	0.00	6.16- 6.36
12		Methyl Tert Butyl Ethe	100.000	103.651	-3.7	108	-0.01	6.43- 6.83

			Amount	Calc.	%Drift			
13		2,2,4-Trimethylpentane	100.000	118.306	-18.3	114	0.00	8.53- 8.73

			Amount	Calc.	%Drift			
14		Benzene	100.000	97.333	2.7	102	0.00	8.95- 9.15
15		Toluene	100.000	101.734	-1.7	102	0.00	10.86-11.06
16		Nonane	100.000	95.894	4.1	98	0.00	12.16-12.36
17		Ethylbenzene	100.000	101.523	-1.5	101	0.00	12.49-12.69
18		m,p-Xylene	200.000	201.245	-0.6	101	0.00	12.57-12.77
19		o-Xylene	100.000	99.808	0.2	102	0.00	13.10-13.30

			Amount	Calc.	%Drift			
20	S	BFB	100.000	143.625	-43.6#	142	0.00	13.86-14.06

			Amount	Calc.	%Drift			
21		Decane	100.000	91.933	8.1	92	0.00	13.75-13.95
22		1,2,4-Trimethylbenzene	100.000	95.435	4.6	98	0.00	14.77-14.97
23		Butylcyclohexane	100.000	90.650	9.3	96	0.00	14.91-15.11
24		Naphthalene	100.000	97.187	2.8	95	0.00	19.19-19.39
25	H	C9- C10 Aromatics (una	-1.000	0.000	0.0	95	0.00	13.81-18.87
26	H	C5- C8 Aliphatics (una	300.000	374.159	-24.7	115	0.00	4.89-12.08
27	H	C9- C12 Aliphatics (ra	300.000	287.485	4.2	94	0.00	12.06-19.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0
UV077467.D VPH011317.M Tue Feb 07 12:59:19 2017

GC Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077759.D\FID1B.CH Vial: 28
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077759.D\FID2A.CH
Acq On : 31-Jan-2017, 23:14:51 Operator: antonioc
Sample : fa40754-1 Inst : HP5890
Misc : gc19636,guv4134,4.76,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:04:02 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	0.00	0.00	0	0	N.D.	N.D.
2)	S	Alkane B	0.00	0.00	0	0	N.D.	N.D.
3)	S	Aromatic A	0.00	0.00	0	0	N.D.	N.D.
4)	S	Aromatic B	0.00	0.00	0	0	N.D.	N.D.
5)	S	Aromatic C	0.00	0.00	0	0	N.D.	N.D.
6)	S	Aromatic D	0.00	0.00	0	0	N.D.	N.D.
7)	S	Aromatic E	0.00	0.00	0	0	N.D.	N.D.
8)	S	Aromatic F	0.00	0.00	0	0	N.D.	N.D.
9)	S	Aromatic G	0.00	0.00	0	0	N.D.	N.D.
20)	S	BFB	13.96	13.96	3358153	1737421	182.950	191.811
		Spiked Amount 200.000 Range 70 - 130 Recovery =					91.47%	95.91%
		Target Compounds						
10)		Pentane	0.00	0.00	0	0	N.D.	N.D.
11)		2-Methylpentane	0.00	0.00	0	0	N.D.	N.D.
12)		Methyl Tert Buty	0.00	0.00	0	0	N.D.	N.D.
13)		2,2,4-Trimethylp	0.00	0.00	0	0	N.D.	N.D.
14)		Benzene	0.00	0.00	0	0	N.D.	N.D.
15)		Toluene	0.00	0.00	0	0	N.D.	N.D.
16)		Nonane	0.00	0.00	0	0	N.D.	N.D.
17)		Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
18)		m,p-Xylene	0.00	0.00	0	0	N.D.	N.D.
19)		o-Xylene	0.00	0.00	0	0	N.D.	N.D.
21)		Decane	0.00	0.00	0	0	N.D.	N.D.
22)		1,2,4-Trimethylb	0.00	0.00	0	0	N.D.	N.D.
23)		Butylcyclohexane	0.00	0.00	0	0	N.D.	N.D.
24)		Naphthalene	0.00	0.00	0	0	N.D.	N.D.
25)	H	C9- C10 Aromatic	15.81	15.81	421128	164765	6.047	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	329665	656836	NoCal	13.028 #
27)	H	C9- C12 Aliphati	19.92	13.00	583162	209229	NoCal	N.D.

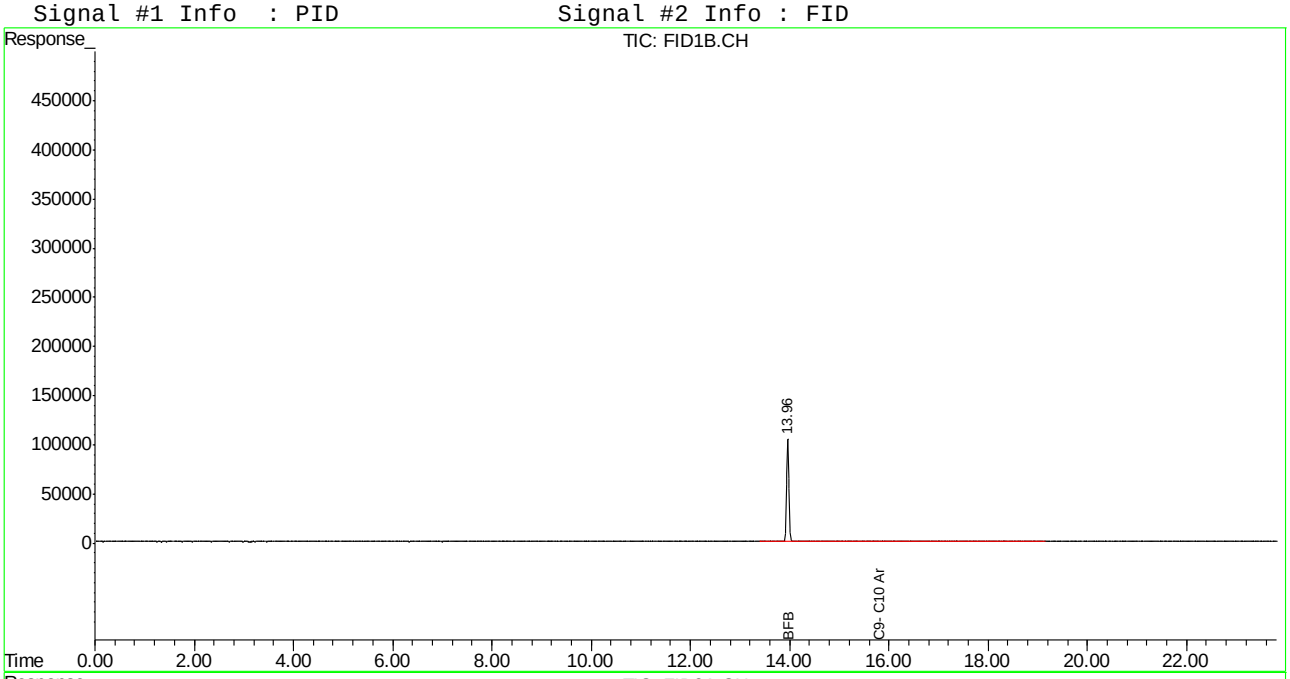
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077759.D VPH011317.M Fri Feb 03 13:18:58 2017

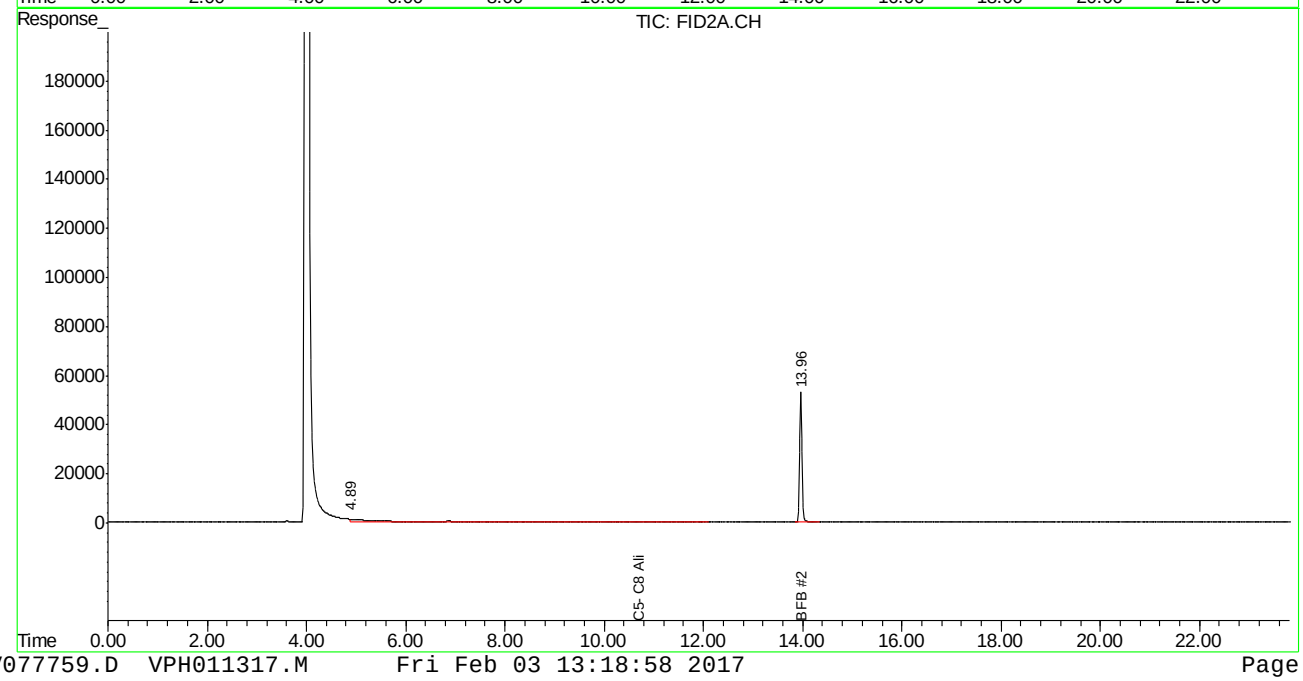
Quantitation Report (QT Reviewed)

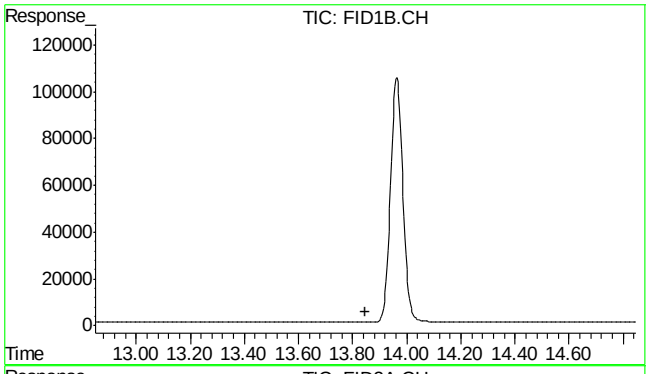
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077759.D\FID1B.CH Vial: 28
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077759.D\FID2A.CH
Acq On : 31-Jan-2017, 23:14:51 Operator: antonioc
Sample : fa40754-1 Inst : HP5890
Misc : gc19636,guv4134,4.76,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 1 8:04 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

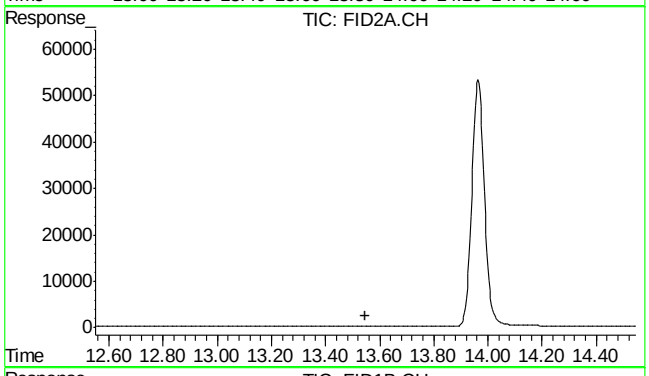






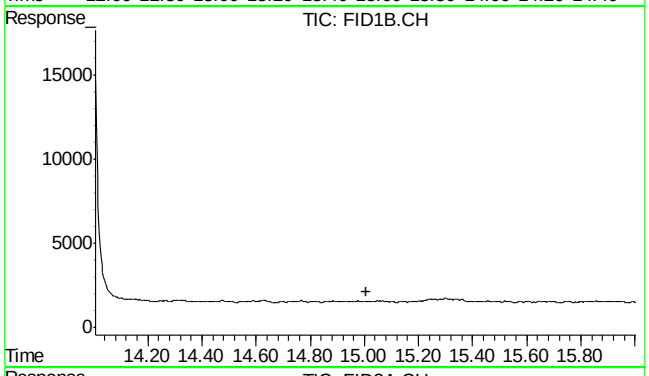
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.847 min
Response: 0
Conc: N.D.



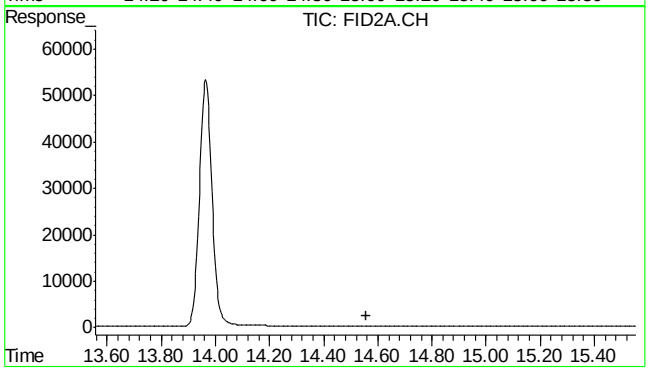
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



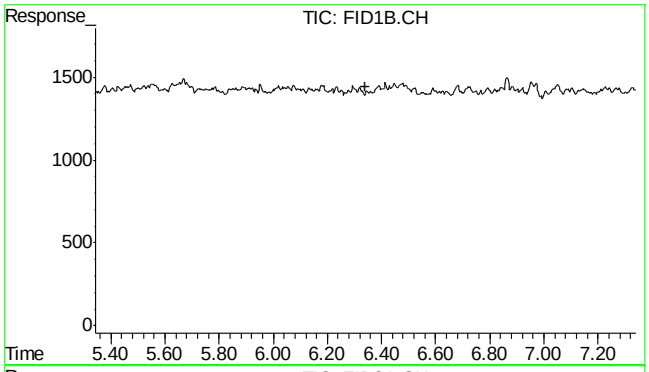
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



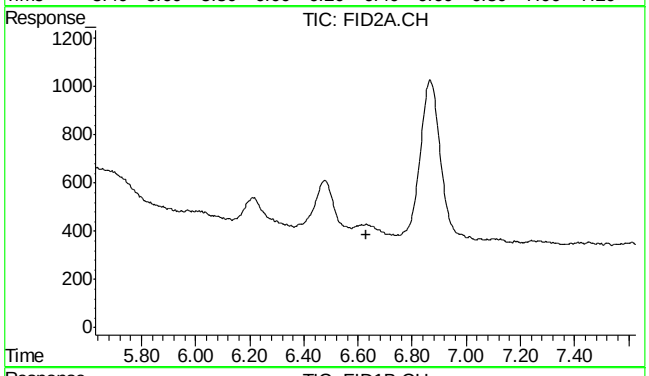
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.



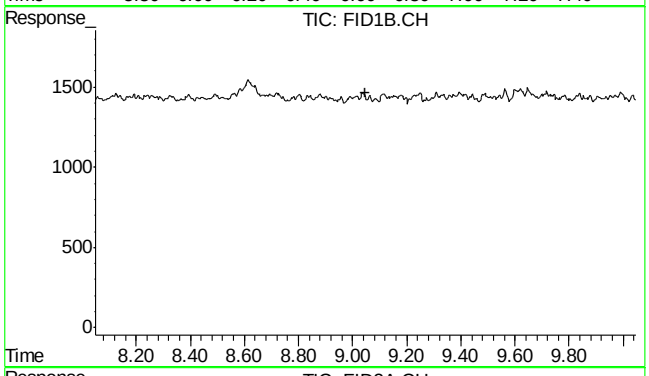
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



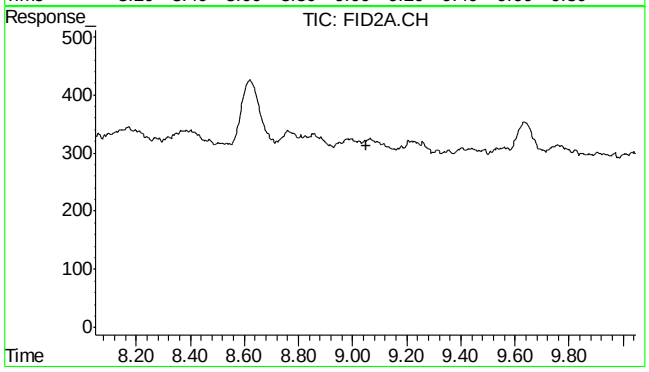
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



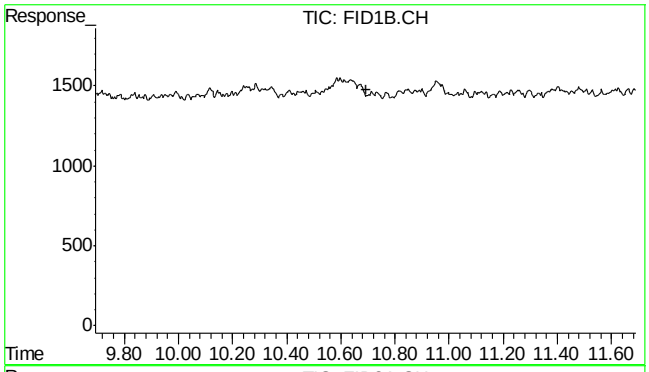
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



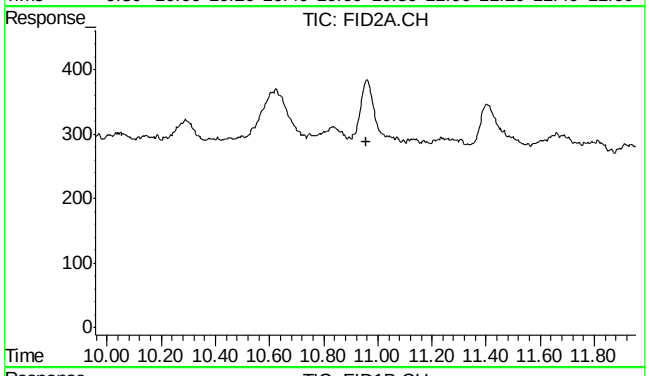
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.049 min
Response: 0
Conc: N.D.



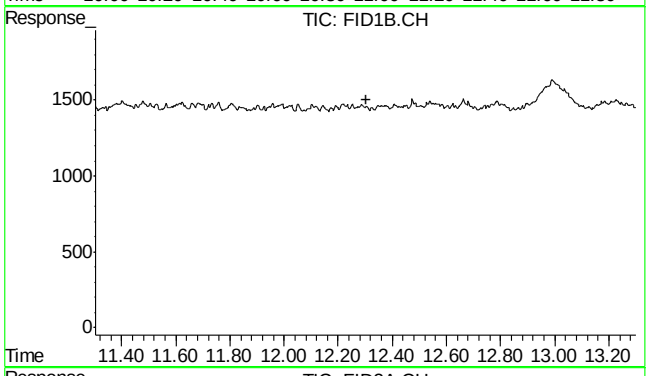
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



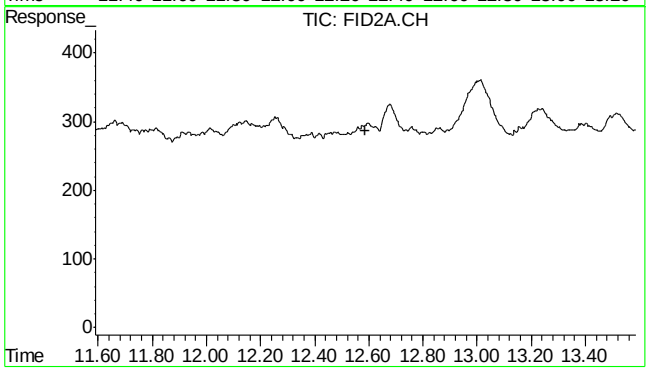
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.956 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



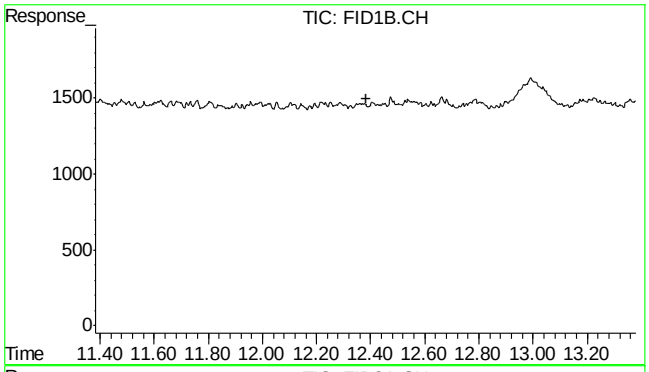
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.

7.1.1

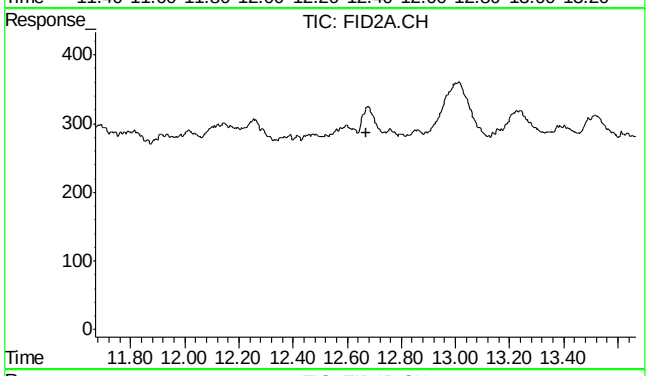
7

SGS ACCUTEST FA40754



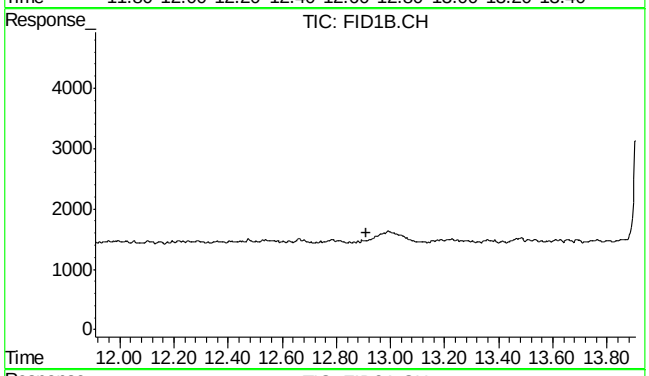
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



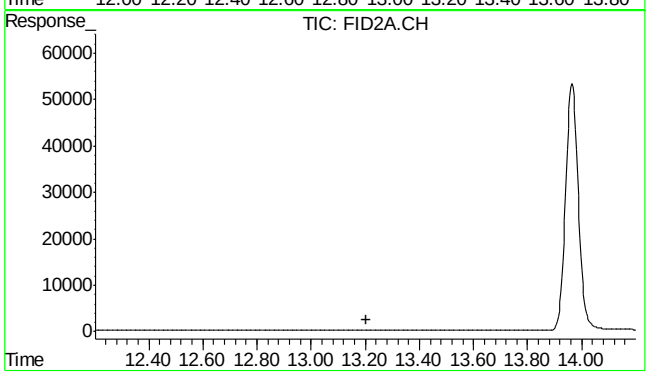
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



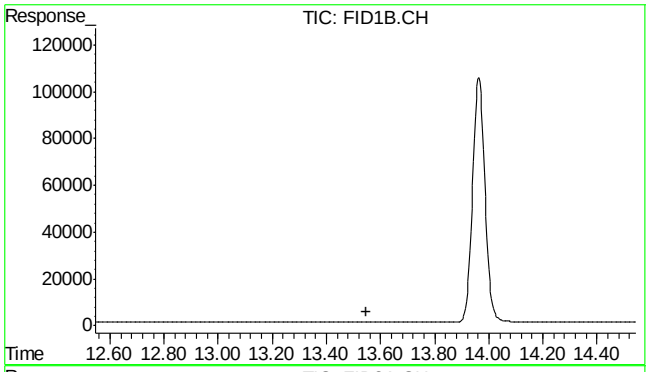
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



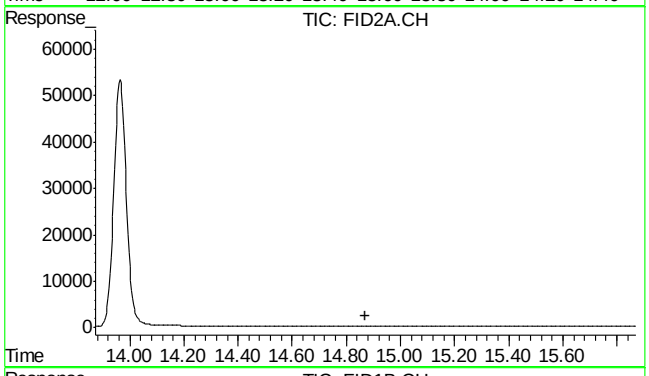
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



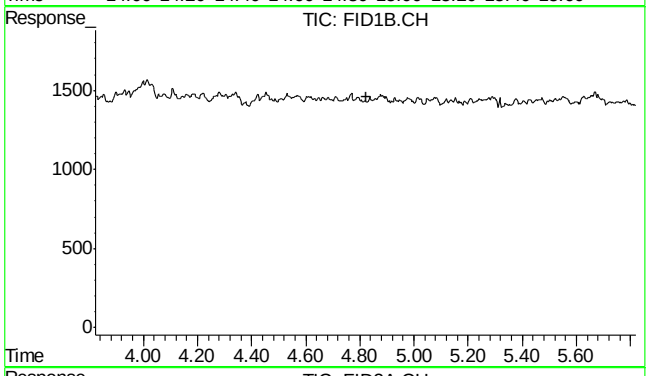
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



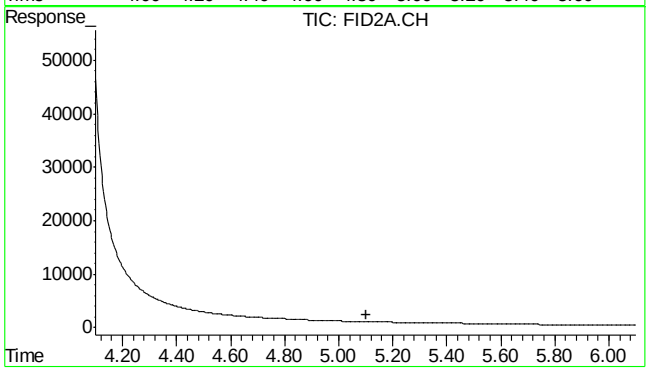
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



#10 Pentane

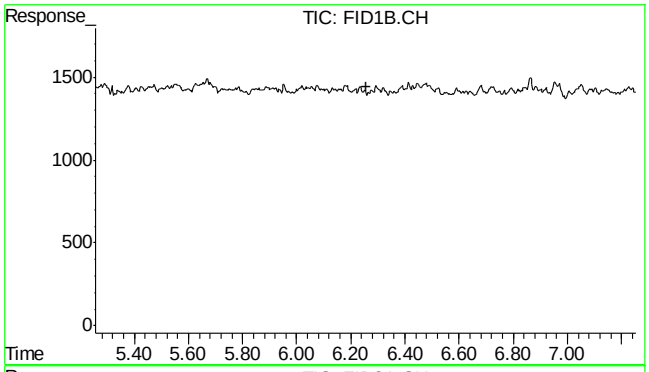
R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

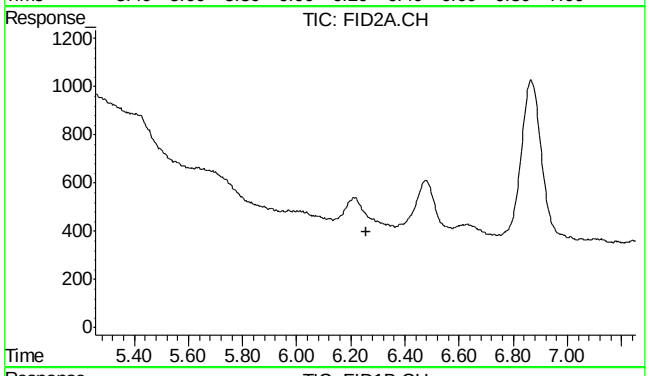
R.T.: 0.000 min
Exp R.T. : 5.100 min
Response: 0
Conc: N.D.

SGS ACCUTEST FA40754



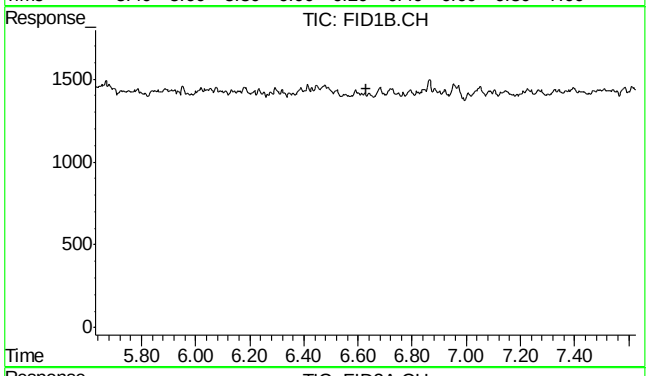
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



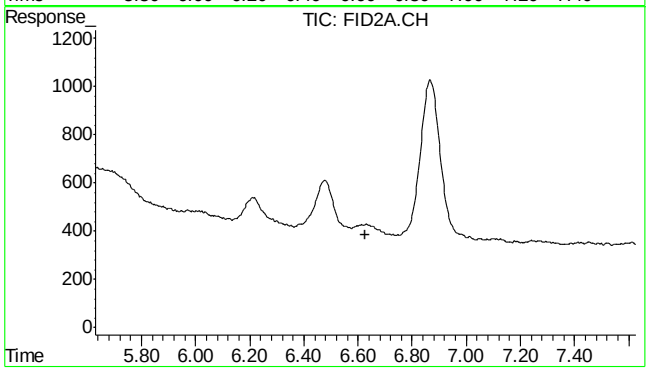
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



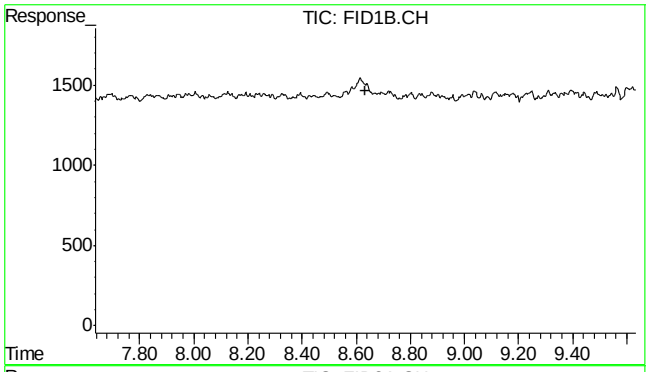
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



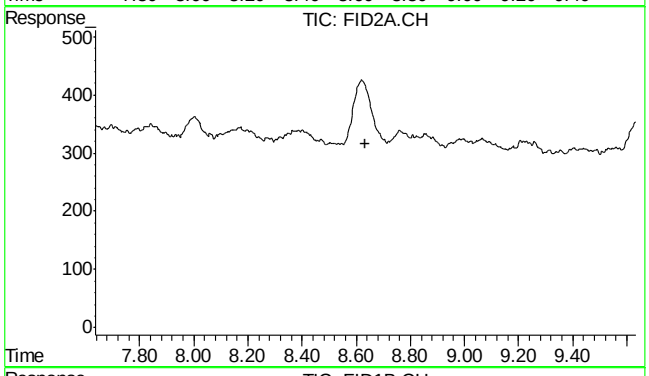
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.628 min
Response: 0
Conc: N.D.



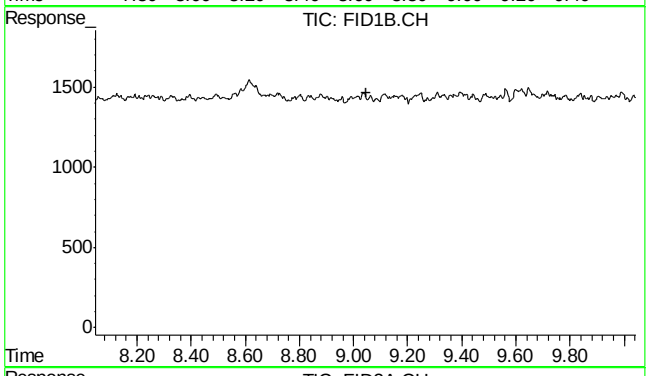
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



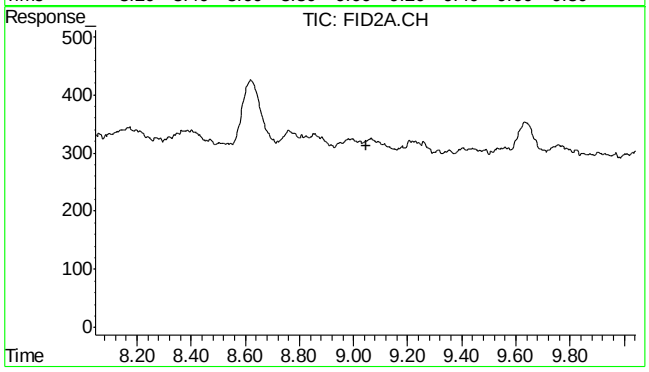
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



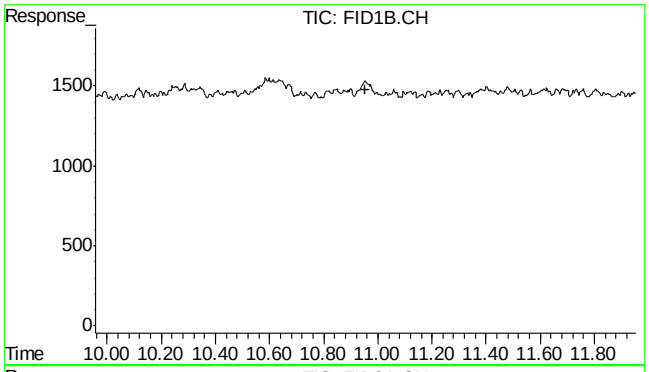
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



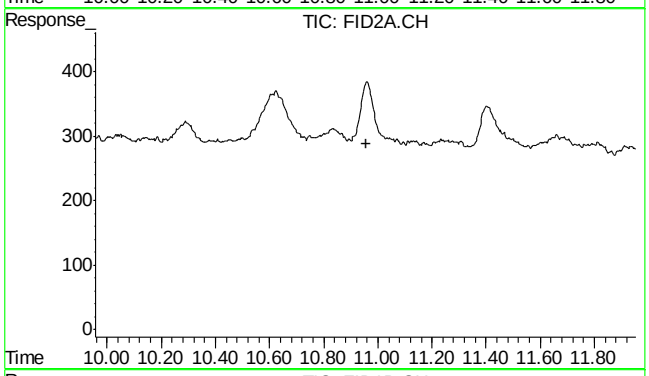
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



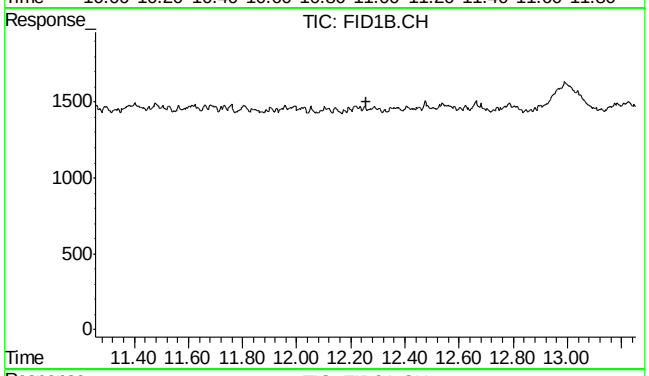
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



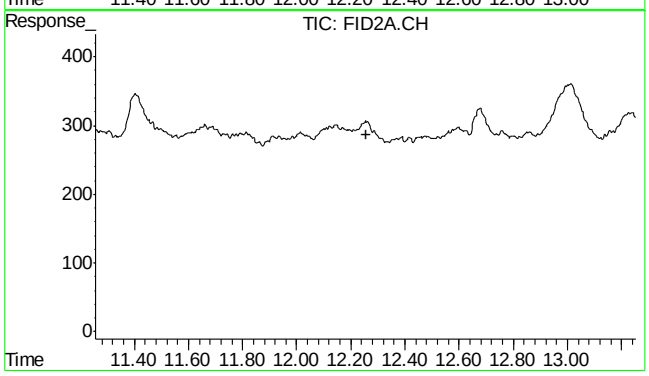
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



#16 Nonane

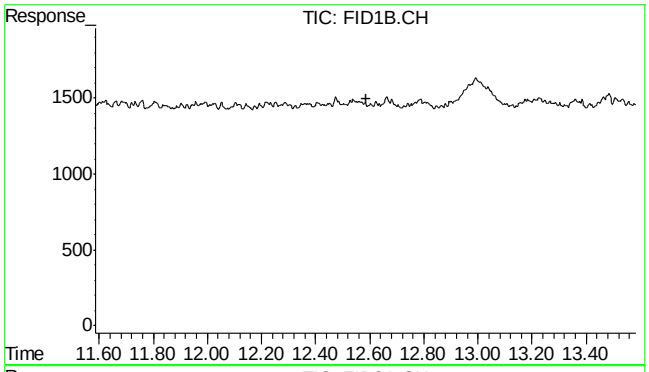
R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



#16 Nonane

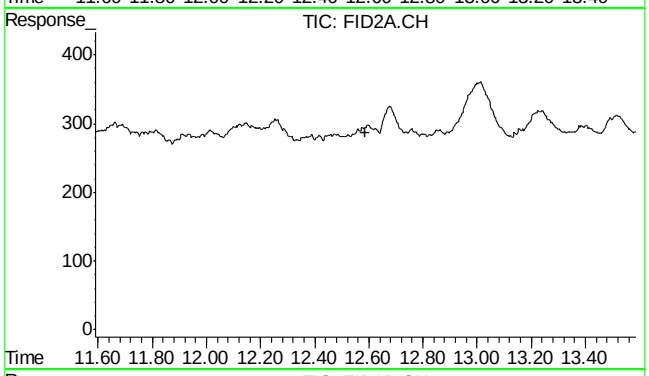
R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.

SGS ACCUTEST FA40754



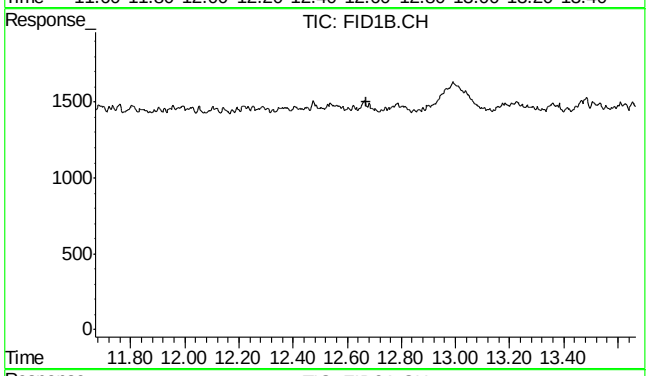
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.586 min
Response: 0
Conc: N.D.



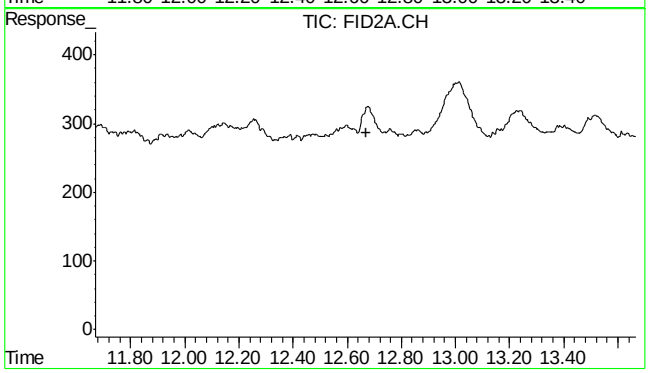
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



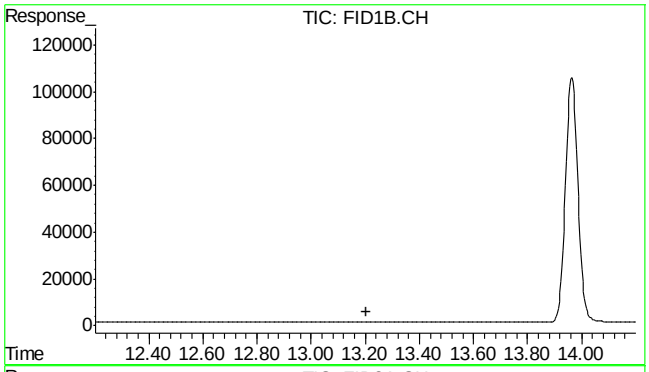
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



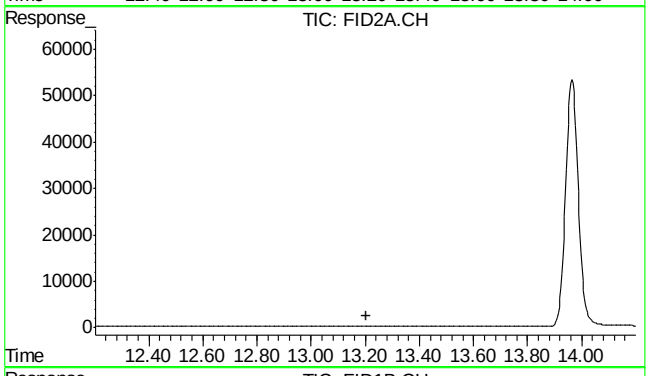
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



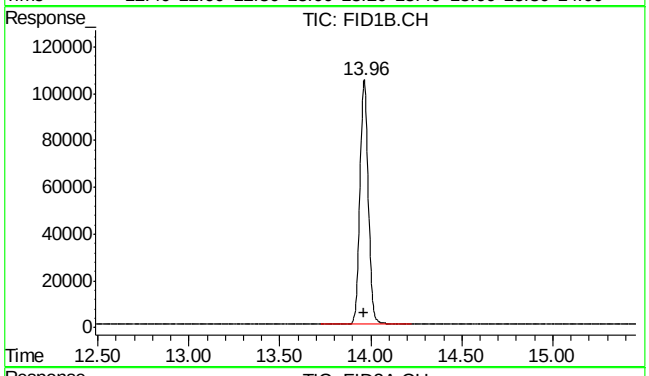
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



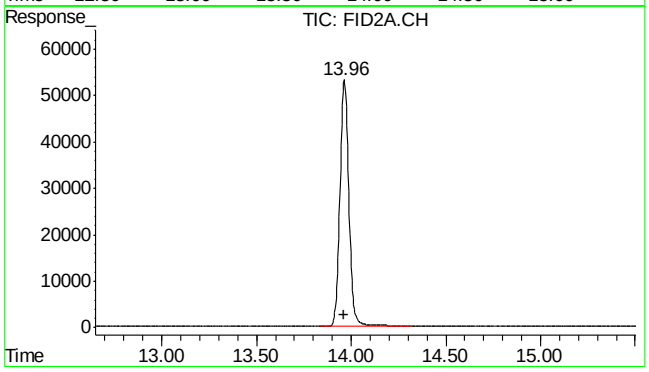
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



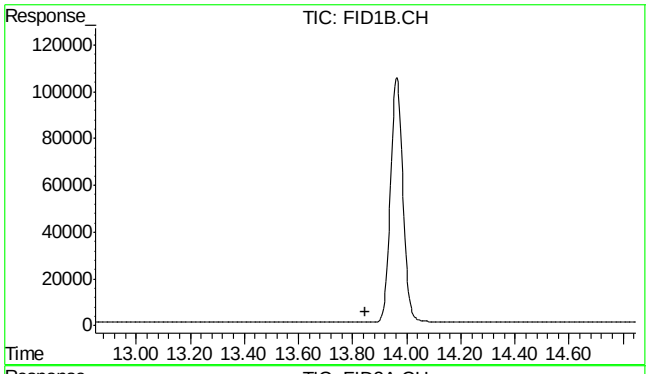
#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 3358153
Conc: 182.95 ug/L



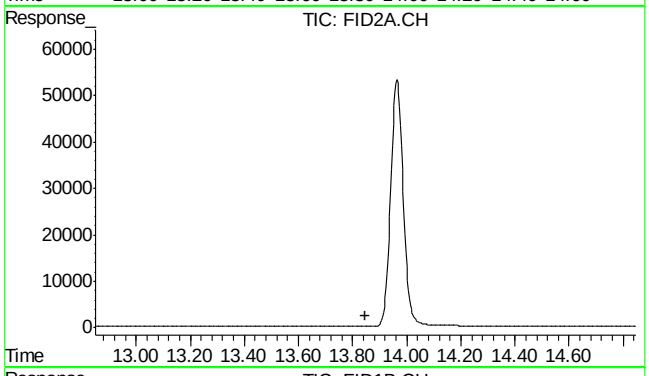
#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 1737421
Conc: 191.81 ug/L



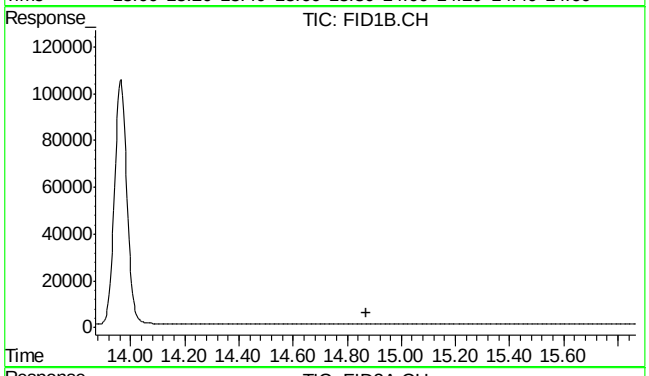
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



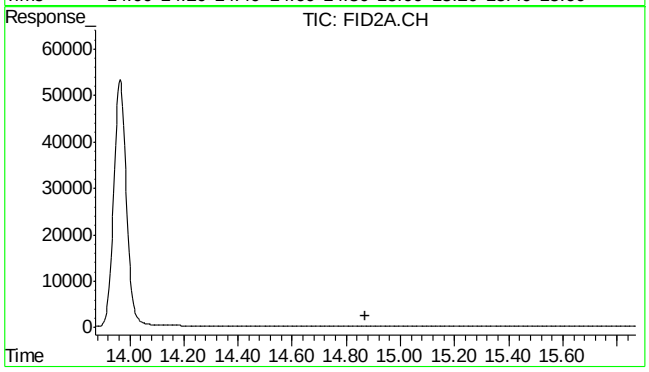
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

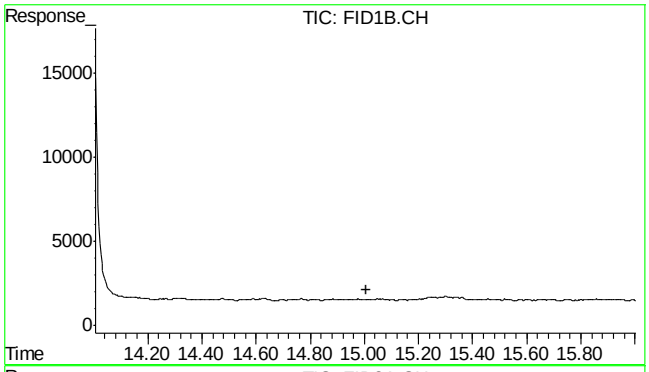
R.T.: 0.000 min
Exp R.T. : 14.870 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

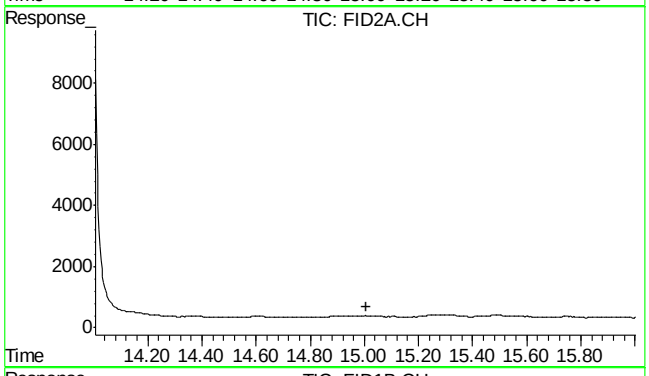
R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.

SGS ACCUTEST FA40754



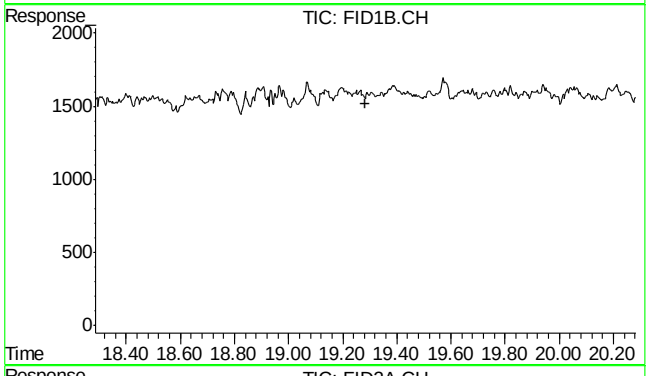
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



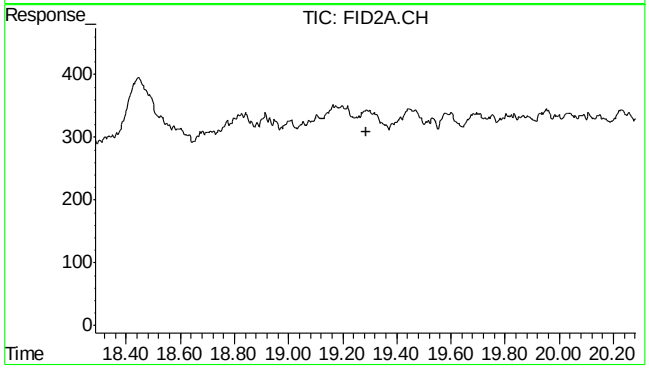
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



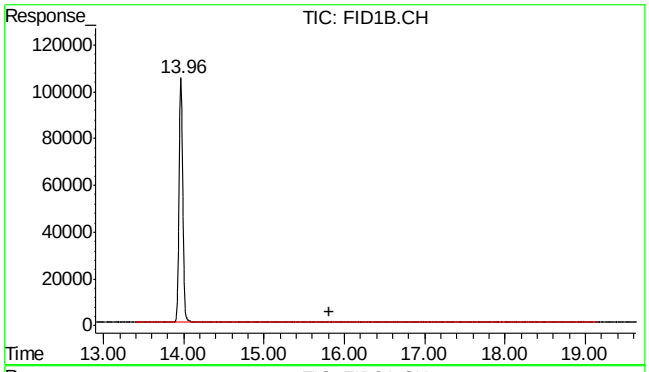
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.284 min
Response: 0
Conc: N.D.



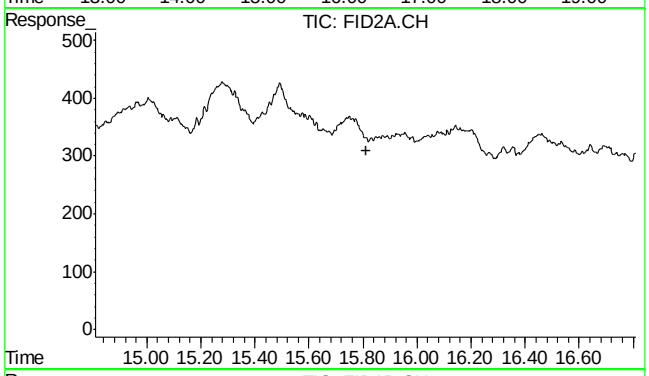
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.286 min
Response: 0
Conc: N.D.



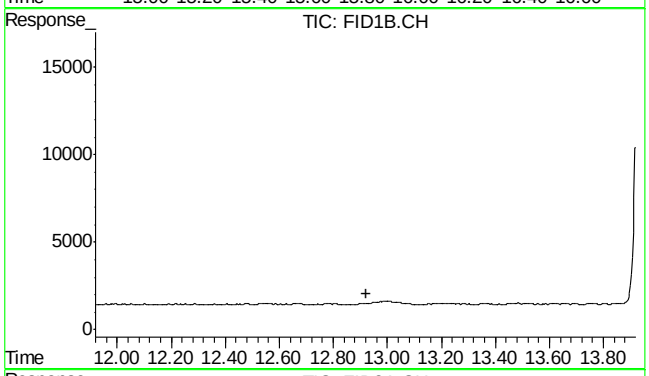
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 421128
Conc: 6.05 ug/L m



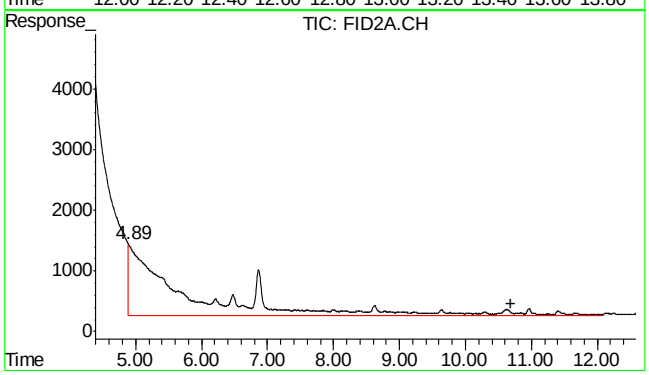
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 164765
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

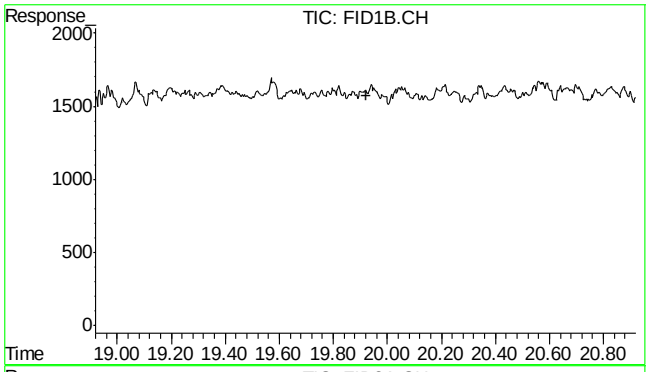
R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 329665
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

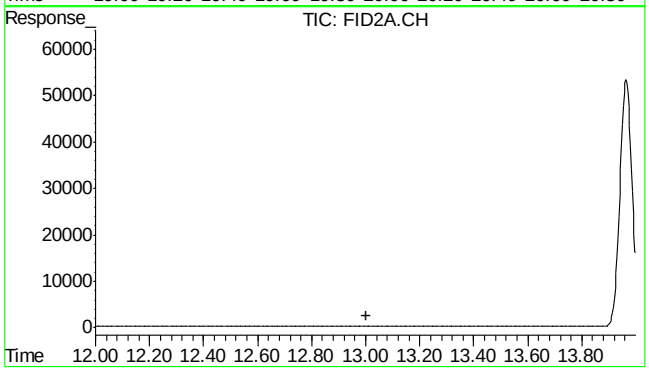
R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 656836
Conc: 13.03 ug/L m

SGS ACCUTEST FA40754



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 583162
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 209229
Conc: N.D.

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077760.D\FID1B.CH Vial: 29
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077760.D\FID2A.CH
Acq On : 31-Jan-2017, 23:45:34 Operator: antonioc
Sample : fa40754-2 Inst : HP5890
Misc : gc19636,guv4134,4.87,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:04:05 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	0.00	0.00	0	0	N.D.	N.D.
2)	S	Alkane B	0.00	0.00	0	0	N.D.	N.D.
3)	S	Aromatic A	0.00	0.00	0	0	N.D.	N.D.
4)	S	Aromatic B	0.00	0.00	0	0	N.D.	N.D.
5)	S	Aromatic C	0.00	0.00	0	0	N.D.	N.D.
6)	S	Aromatic D	0.00	0.00	0	0	N.D.	N.D.
7)	S	Aromatic E	0.00	0.00	0	0	N.D.	N.D.
8)	S	Aromatic F	0.00	0.00	0	0	N.D.	N.D.
9)	S	Aromatic G	0.00	0.00	0	0	N.D.	N.D.
20)	S	BFB	13.96	13.97	3096048	1599716	168.671	176.608
		Spiked Amount 200.000 Range 70 - 130 Recovery =					84.34%	88.30%
		Target Compounds						
10)		Pentane	0.00	0.00	0	0	N.D.	N.D.
11)		2-Methylpentane	0.00	0.00	0	0	N.D.	N.D.
12)		Methyl Tert Buty	0.00	0.00	0	0	N.D.	N.D.
13)		2,2,4-Trimethylp	0.00	0.00	0	0	N.D.	N.D.
14)		Benzene	0.00	0.00	0	0	N.D.	N.D.
15)		Toluene	0.00	0.00	0	0	N.D.	N.D.
16)		Nonane	0.00	0.00	0	0	N.D.	N.D.
17)		Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
18)		m,p-Xylene	0.00	0.00	0	0	N.D.	N.D.
19)		o-Xylene	0.00	0.00	0	0	N.D.	N.D.
21)		Decane	0.00	0.00	0	0	N.D.	N.D.
22)		1,2,4-Trimethylb	0.00	0.00	0	0	N.D.	N.D.
23)		Butylcyclohexane	0.00	0.00	0	0	N.D.	N.D.
24)		Naphthalene	0.00	0.00	0	0	N.D.	N.D.
25)	H	C9- C10 Aromatic	15.81	15.81	300362	127481	N.D.	NoCal
26)	H	C5- C8 Aliphatic	12.92	10.70	484553	565011	NoCal	5.572 #
27)	H	C9- C12 Aliphati	19.92	13.00	426722	145177	NoCal	N.D.

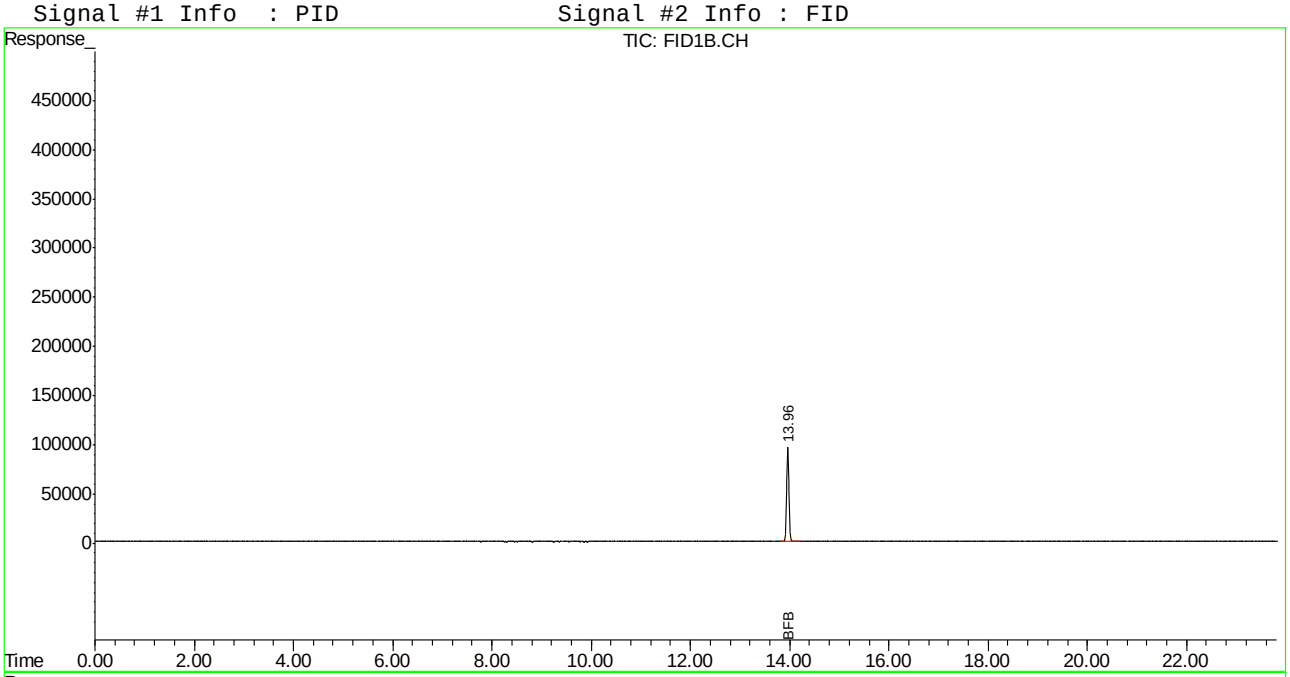
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077760.D VPH011317.M Fri Feb 03 13:19:01 2017

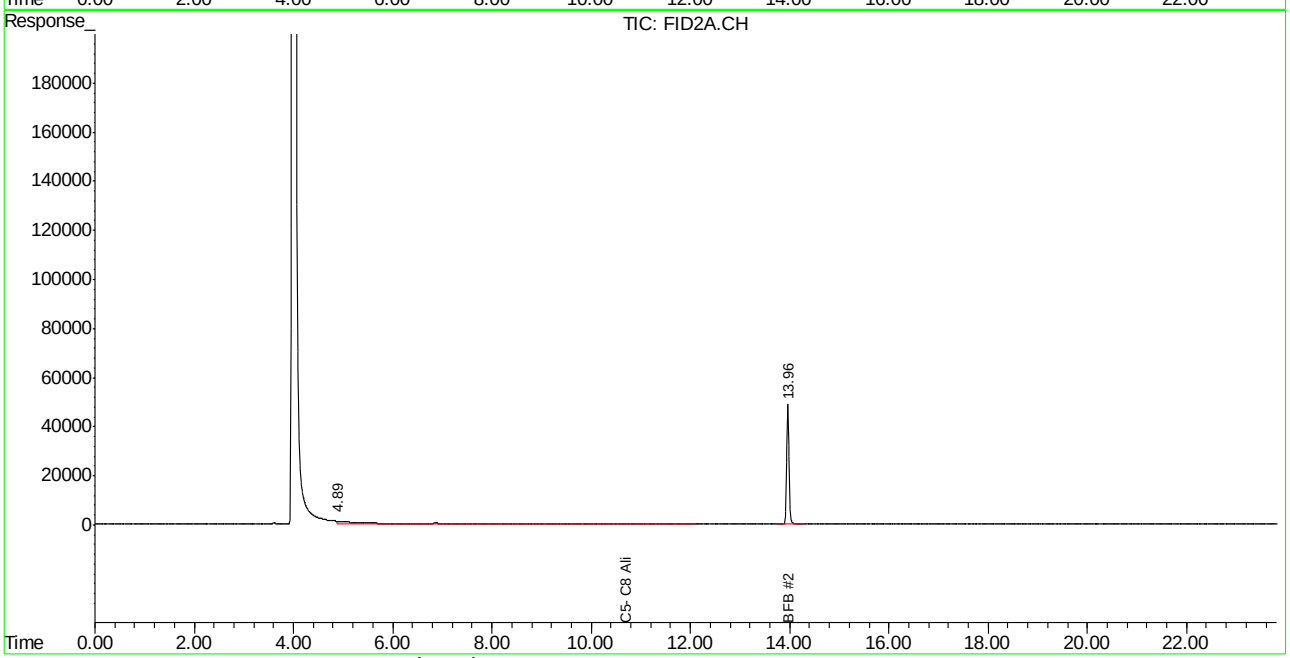
Quantitation Report (QT Reviewed)

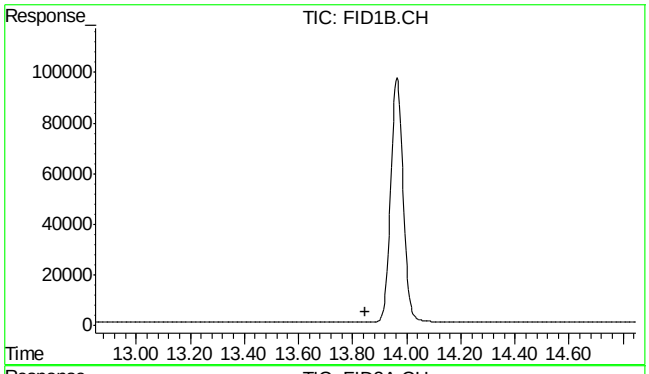
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077760.D\FID1B.CH Vial: 29
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077760.D\FID2A.CH
Acq On : 31-Jan-2017, 23:45:34 Operator: antonioc
Sample : fa40754-2 Inst : HP5890
Misc : gc19636,guv4134,4.87,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 1 8:04 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

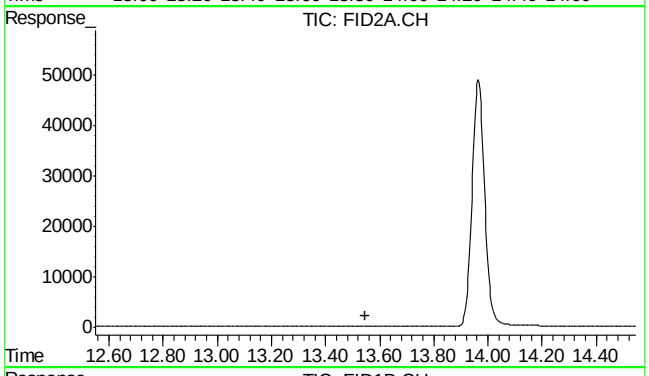






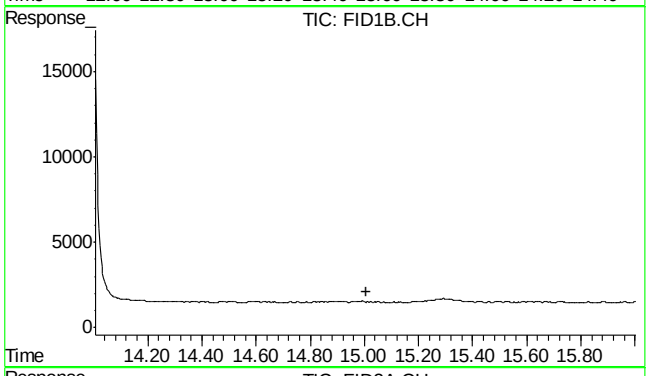
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.847 min
Response: 0
Conc: N.D.



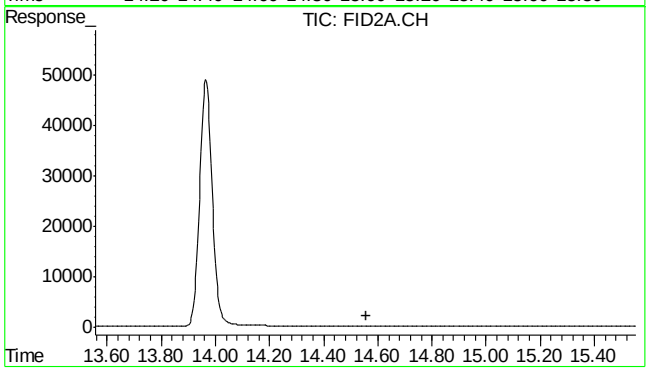
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



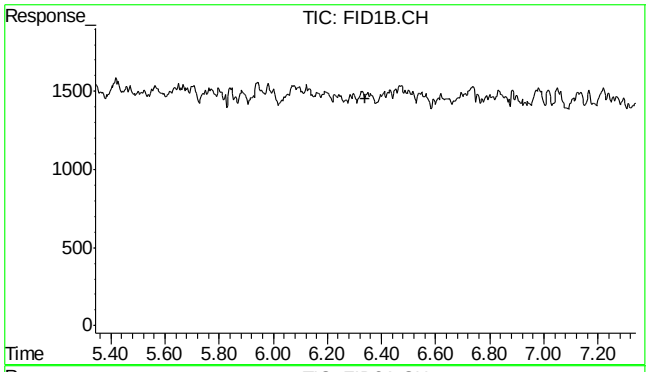
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



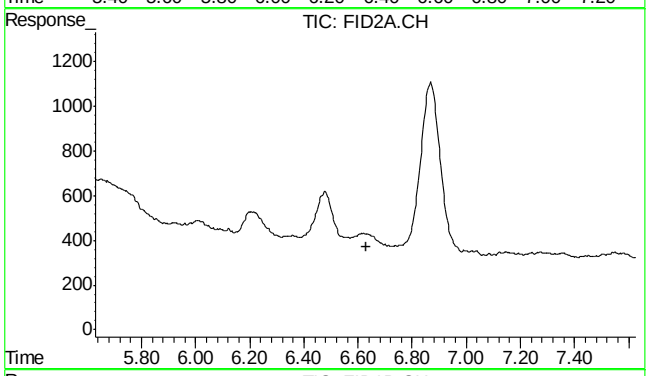
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.



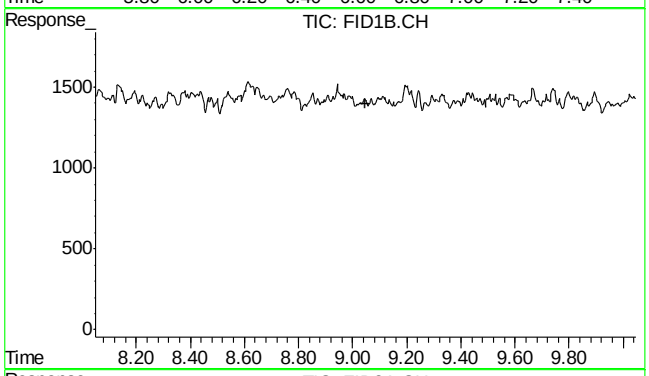
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



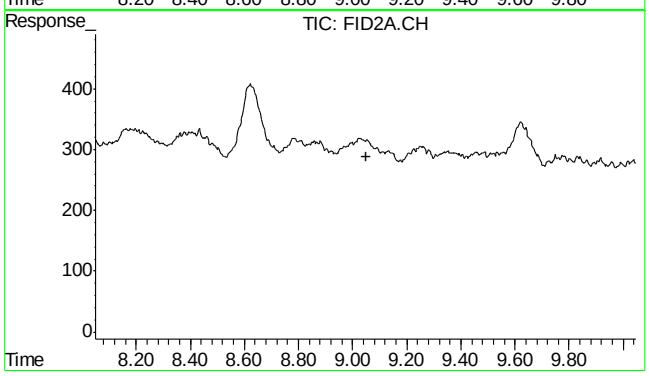
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



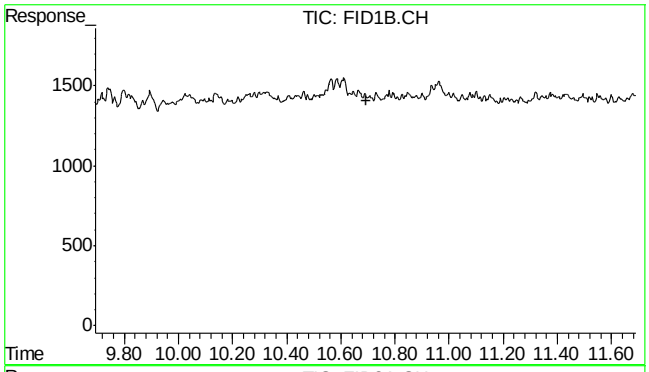
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



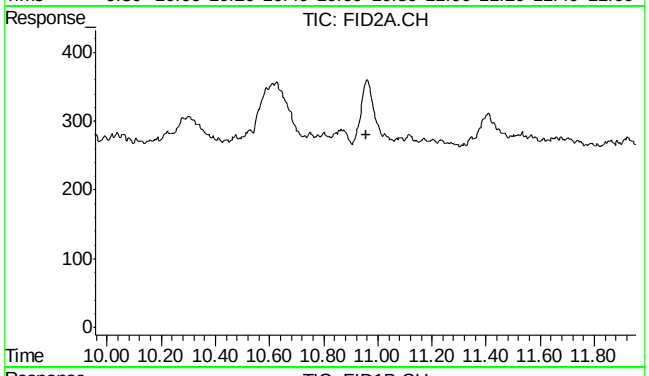
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.049 min
Response: 0
Conc: N.D.



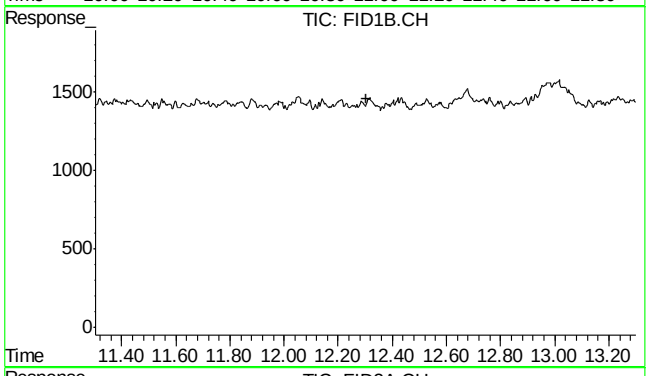
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



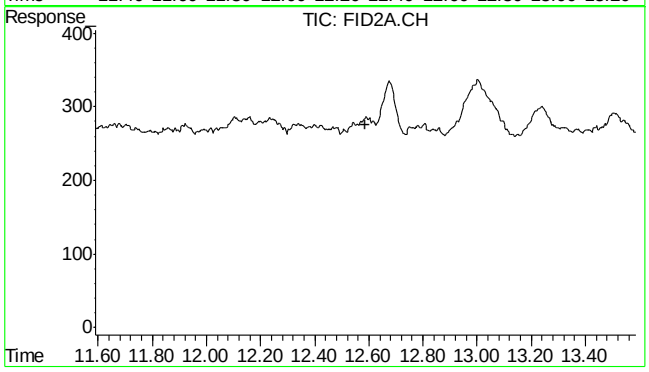
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.956 min
Response: 0
Conc: N.D.



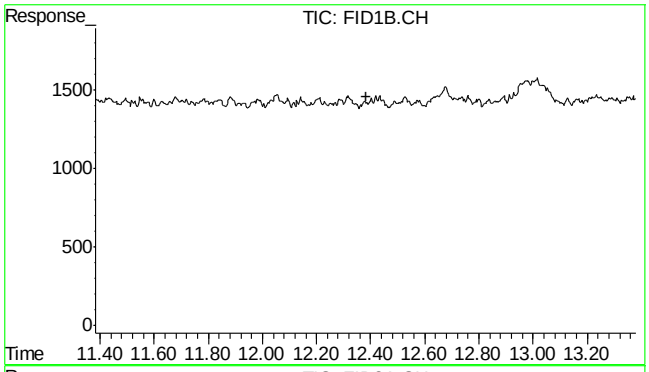
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



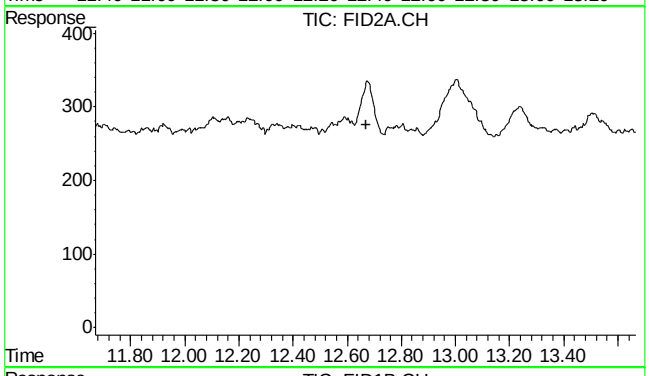
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



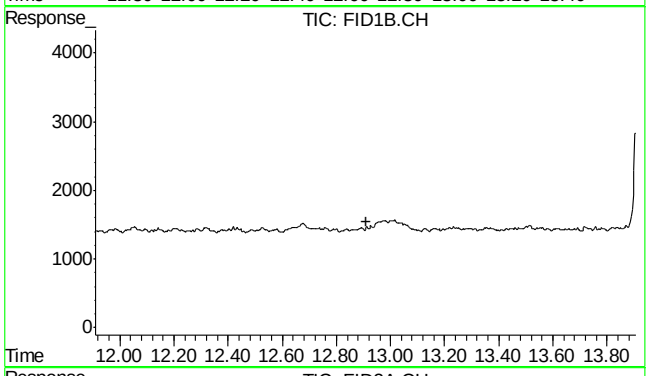
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



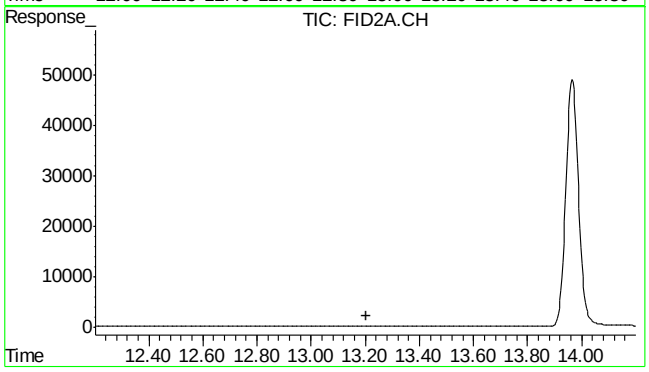
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



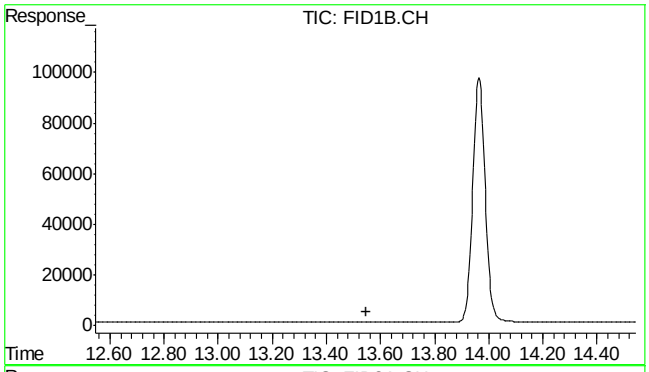
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



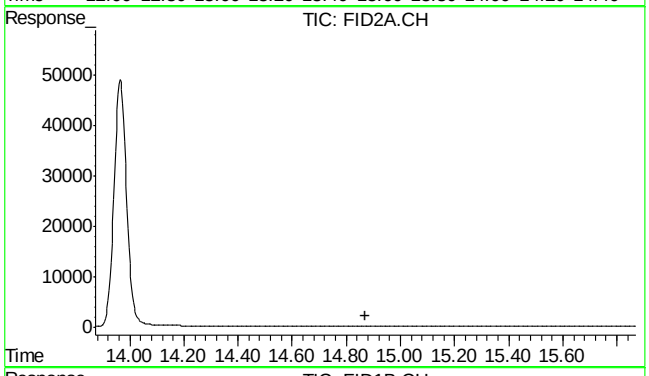
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



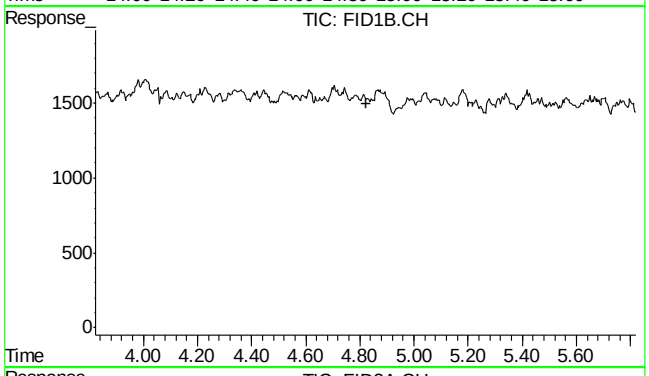
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



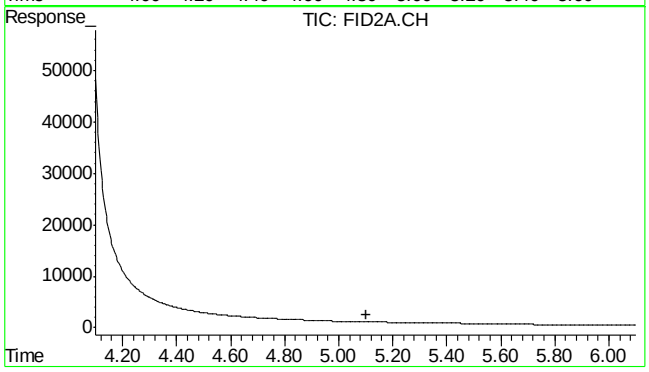
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



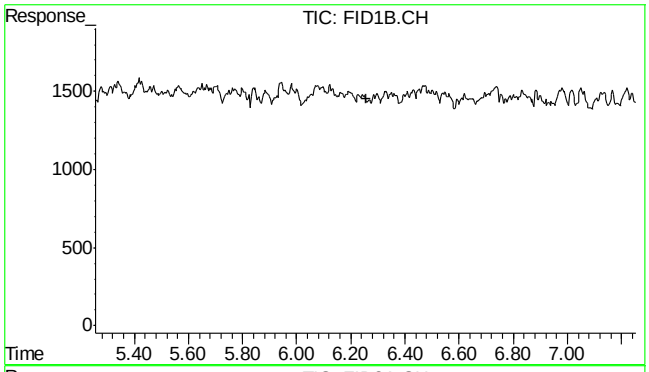
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



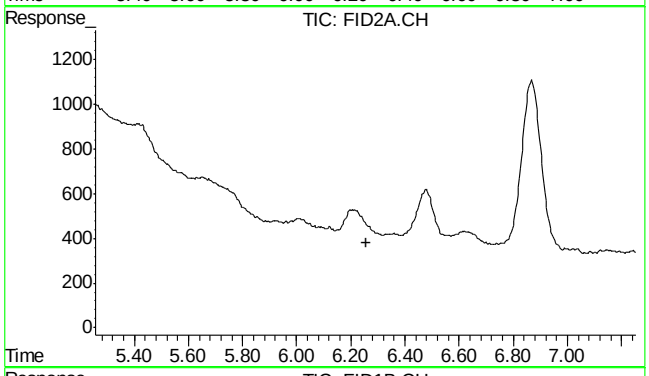
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 5.100 min
Response: 0
Conc: N.D.



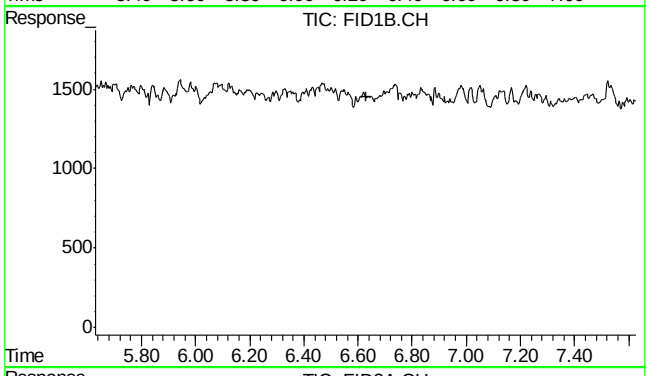
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



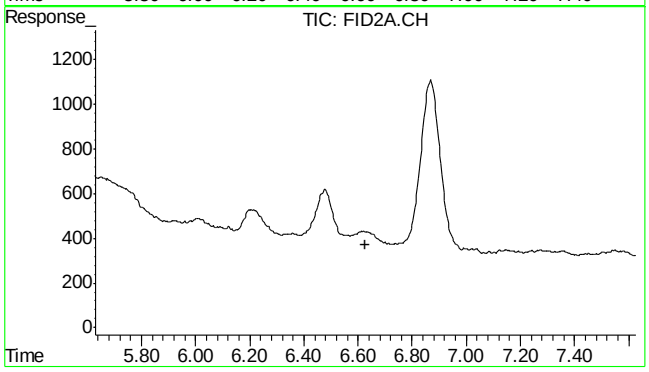
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



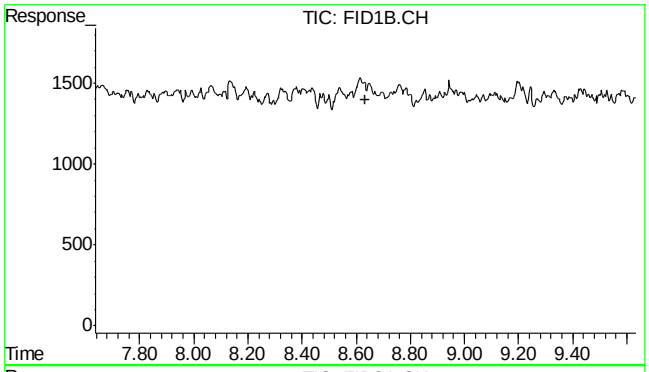
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



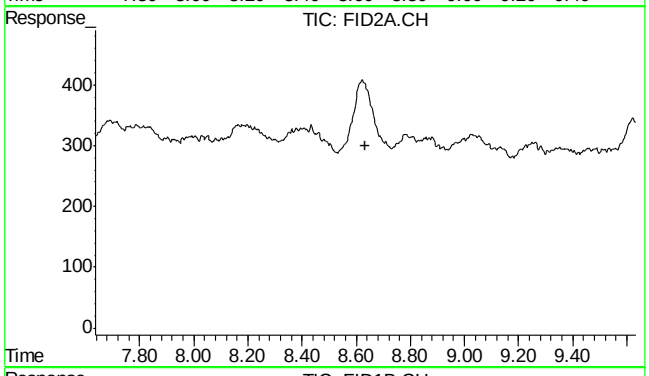
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.628 min
Response: 0
Conc: N.D.



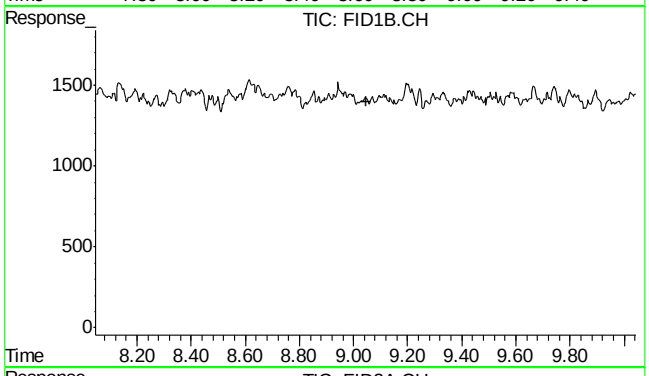
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



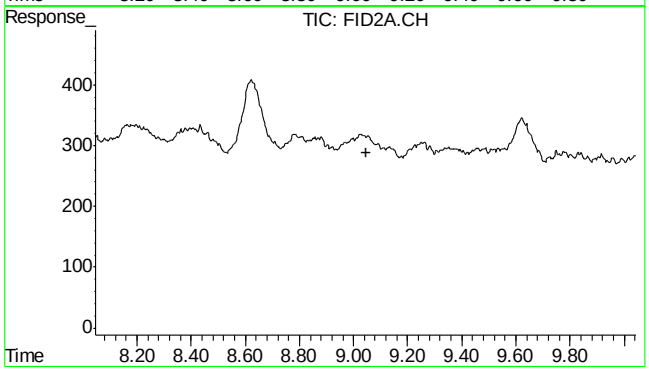
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



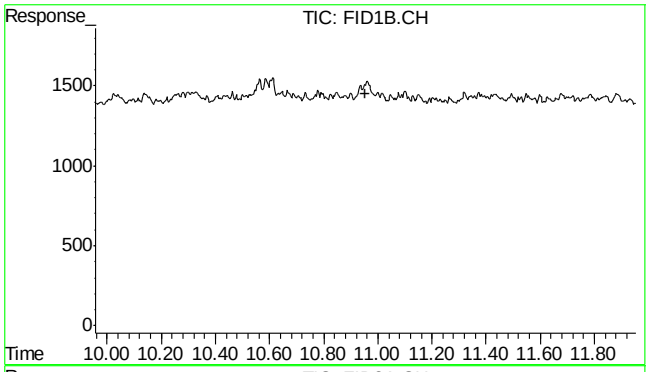
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



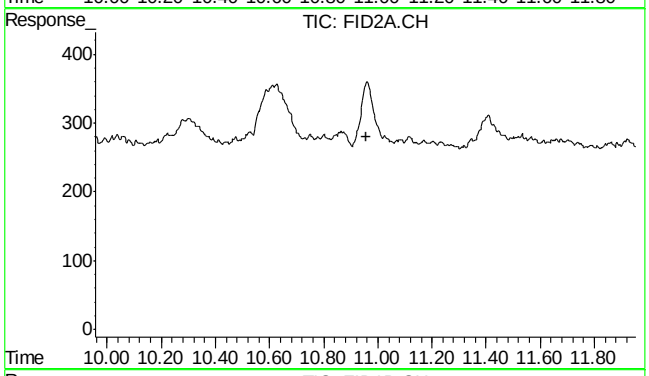
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



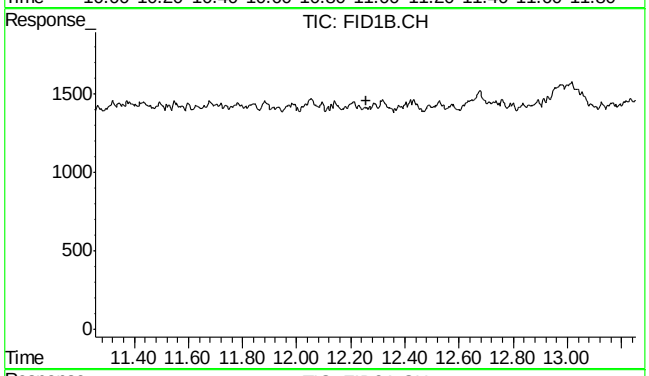
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



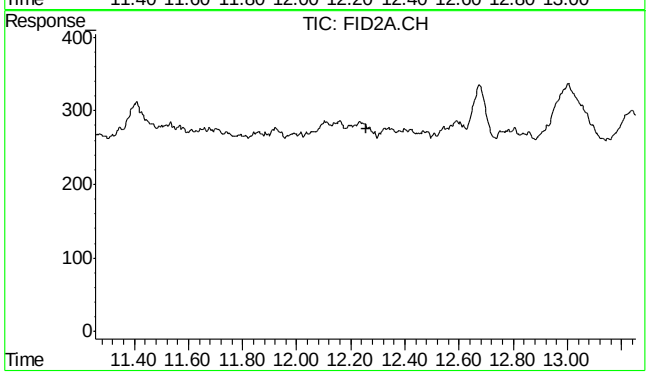
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.

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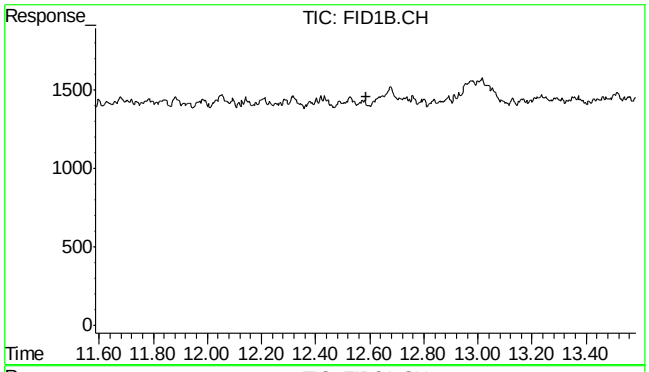
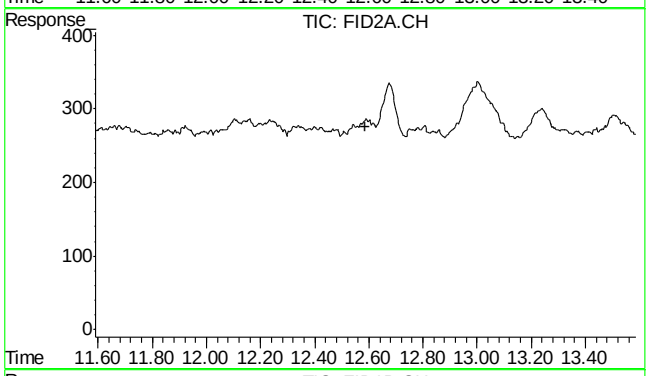


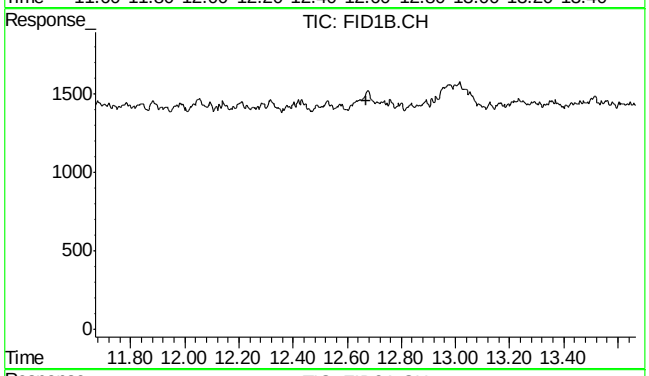
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.586 min
Response: 0
Conc: N.D.



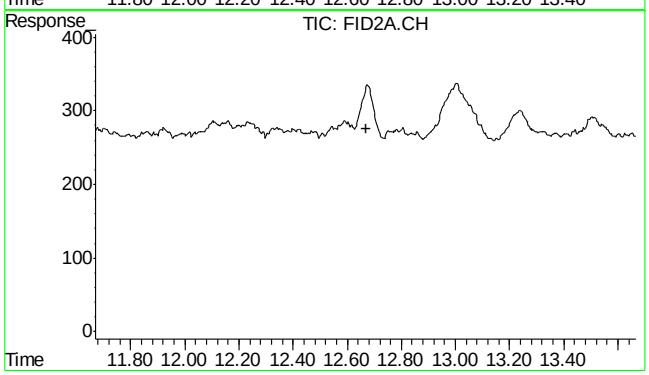
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.

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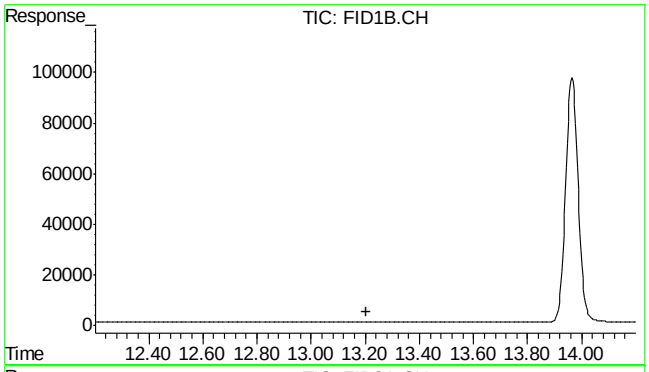
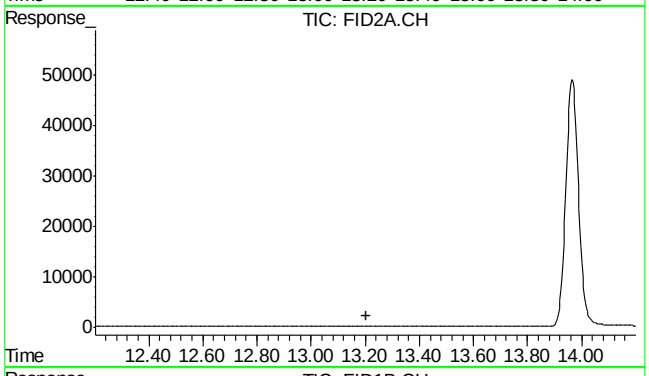


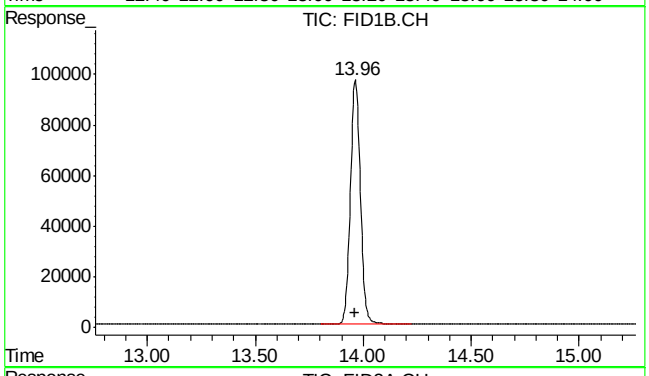
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



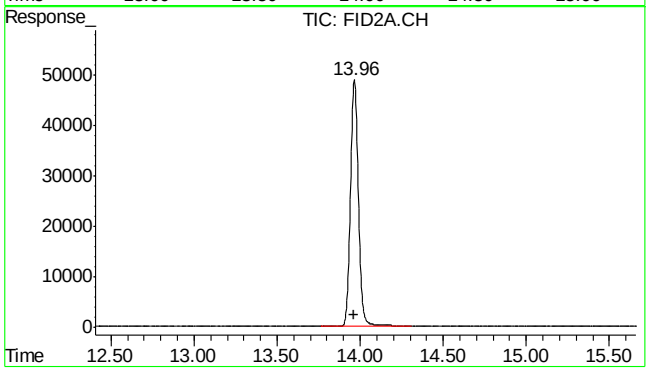
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



#20 BFB

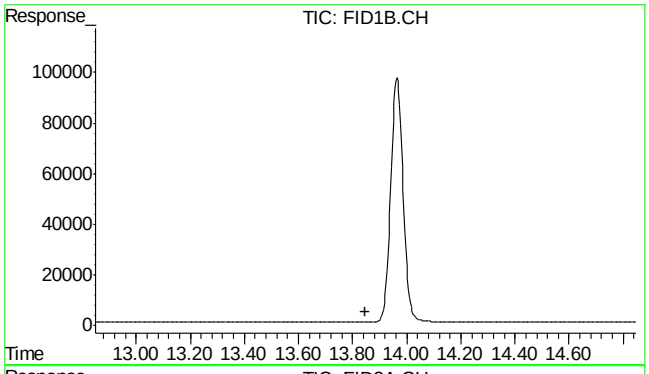
R.T.: 13.965 min
Delta R.T.: 0.004 min
Response: 3096048
Conc: 168.67 ug/L



#20 BFB

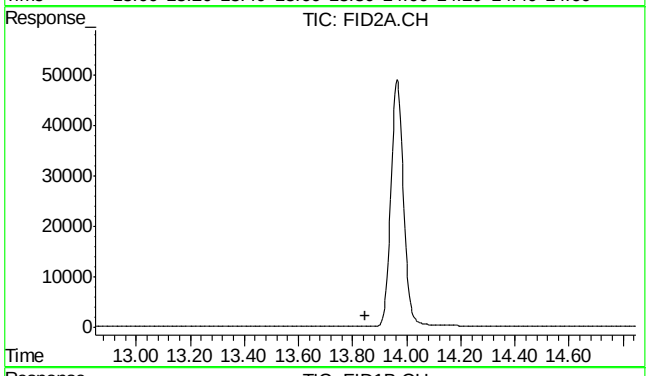
R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 1599716
Conc: 176.61 ug/L

SGS ACCUTEST FA40754



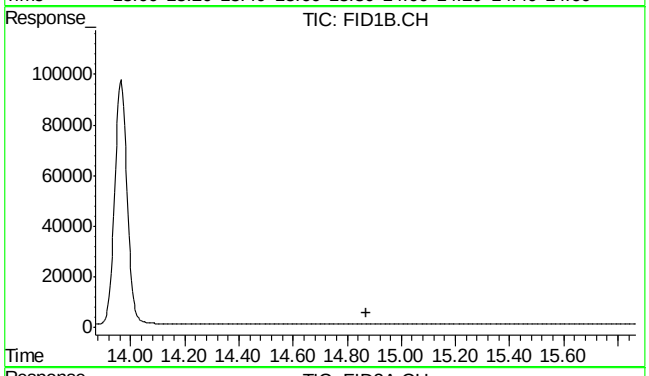
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



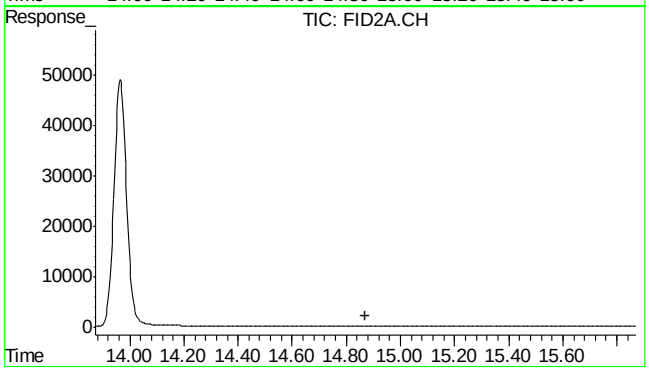
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

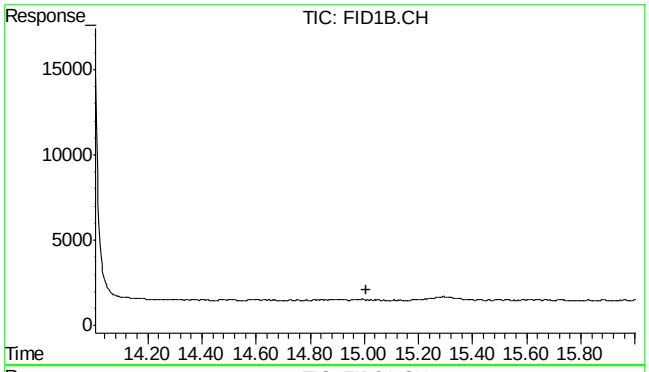
R.T.: 0.000 min
Exp R.T. : 14.870 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

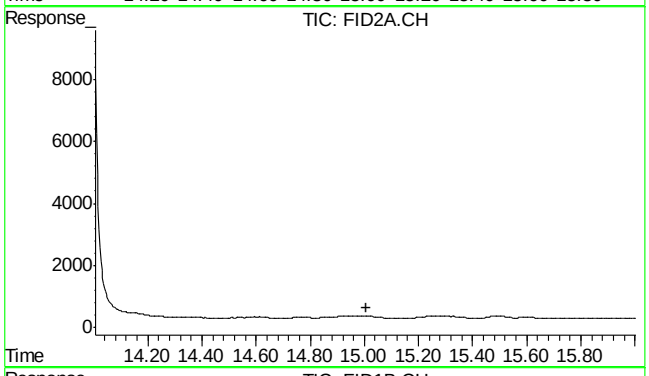
R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.

SGS ACCUTEST FA40754



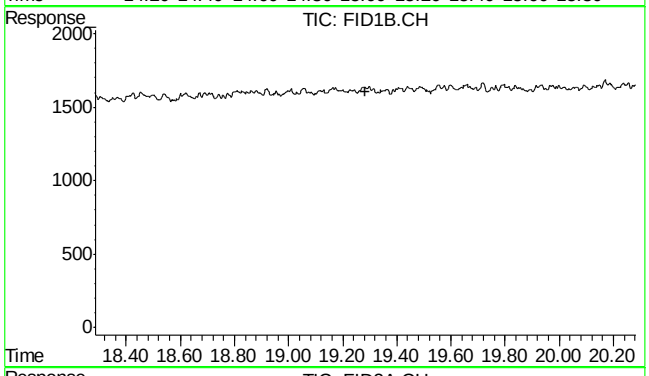
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



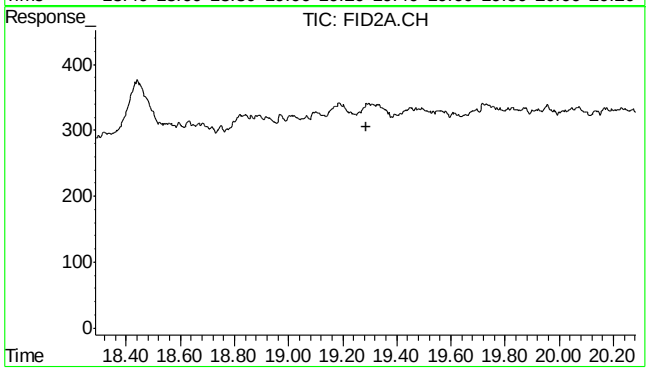
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.284 min
Response: 0
Conc: N.D.



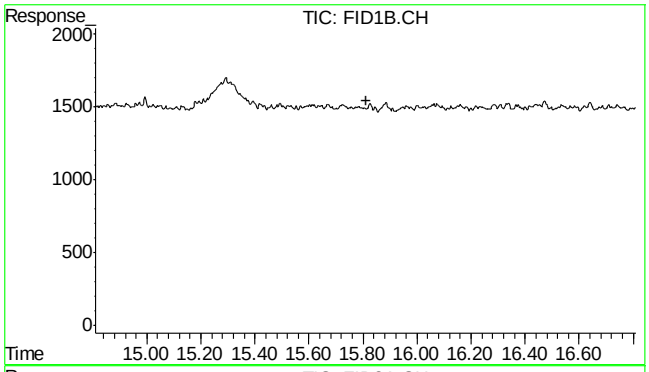
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.286 min
Response: 0
Conc: N.D.

7.1.2

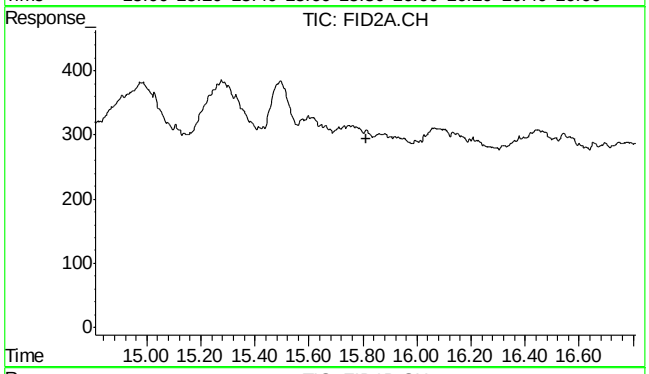
7

SGS ACCUTEST FA40754



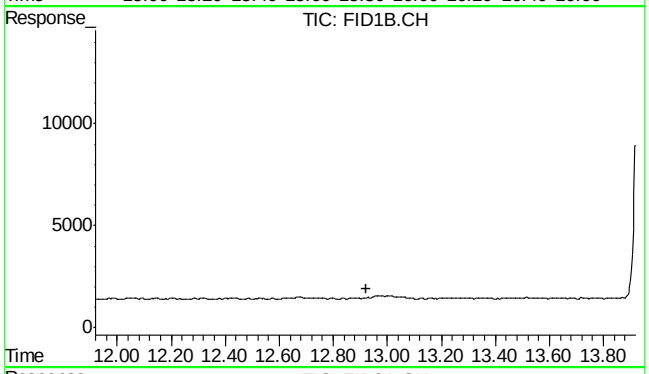
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 300362
Conc: N.D.



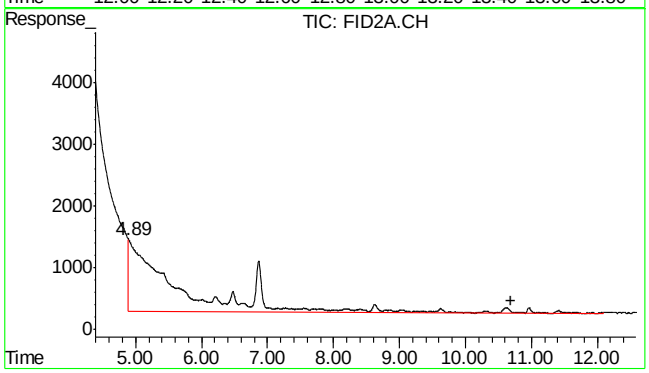
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 127481
Conc: N.D.



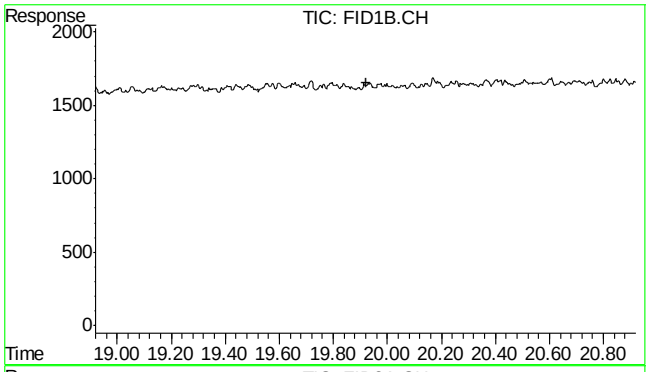
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 484553
Conc: N.D.



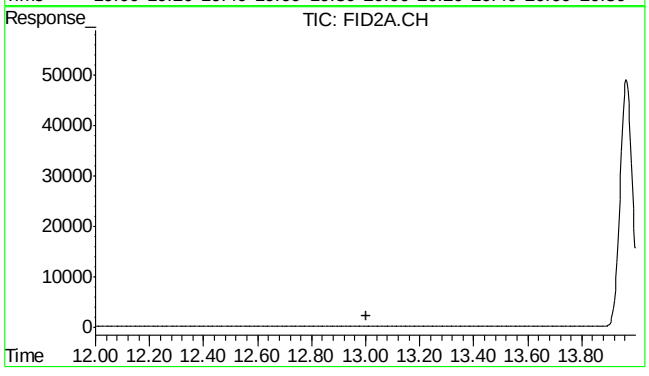
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 565011
Conc: 5.57 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 426722
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 145177
Conc: N.D.

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
02/03/17 16:33

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077768.D\FID1B.CH Vial: 37
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077768.D\FID2A.CH
Acq On : 01-Feb-2017, 03:50:59 Operator: antonioc
Sample : fa40754-3 Inst : HP5890
Misc : gc19636,guv4135,3.07,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:04:29 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	0.00	0.00	0	0	N.D.	N.D.
2)	S	Alkane B	0.00	0.00	0	0	N.D.	N.D.
3)	S	Aromatic A	0.00	0.00	0	0	N.D.	N.D.
4)	S	Aromatic B	0.00	0.00	0	0	N.D.	N.D.
5)	S	Aromatic C	0.00	0.00	0	0	N.D.	N.D.
6)	S	Aromatic D	0.00	0.00	0	0	N.D.	N.D.
7)	S	Aromatic E	0.00	0.00	0	0	N.D.	N.D.
8)	S	Aromatic F	0.00	0.00	0	0	N.D.	N.D.
9)	S	Aromatic G	0.00	0.00	0	0	N.D.	N.D.
20)	S	BFB	13.96	13.96	3182563	1651578	173.384	182.334
		Spiked Amount 200.000 Range 70 - 130 Recovery =					86.69%	91.17%
		Target Compounds						
10)		Pentane	0.00	0.00	0	0	N.D.	N.D.
11)		2-Methylpentane	0.00	0.00	0	0	N.D.	N.D.
12)		Methyl Tert Buty	0.00	0.00	0	0	N.D. d	N.D. d
13)		2,2,4-Trimethylp	0.00	0.00	0	0	N.D.	N.D.
14)		Benzene	0.00	0.00	0	0	N.D.	N.D.
15)		Toluene	0.00	0.00	0	0	N.D.	N.D.
16)		Nonane	12.26	12.26	8786	84347	NoCal m	4.373m#
17)		Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
18)		m,p-Xylene	0.00	0.00	0	0	N.D.	N.D.
19)		o-Xylene	0.00	0.00	0	0	N.D.	N.D.
21)		Decane	0.00	0.00	0	0	N.D.	N.D.
22)		1,2,4-Trimethylb	0.00	0.00	0	0	N.D.	N.D.
23)		Butylcyclohexane	0.00	0.00	0	0	N.D.	N.D.
24)		Naphthalene	0.00	0.00	0	0	N.D.	N.D.
25)	H	C9- C10 Aromatic	15.81	15.81	493490	161171	9.680	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	319236	641462	NoCal	11.780 #
27)	H	C9- C12 Aliphati	19.92	13.00	485322	270780	NoCal	0.757 #

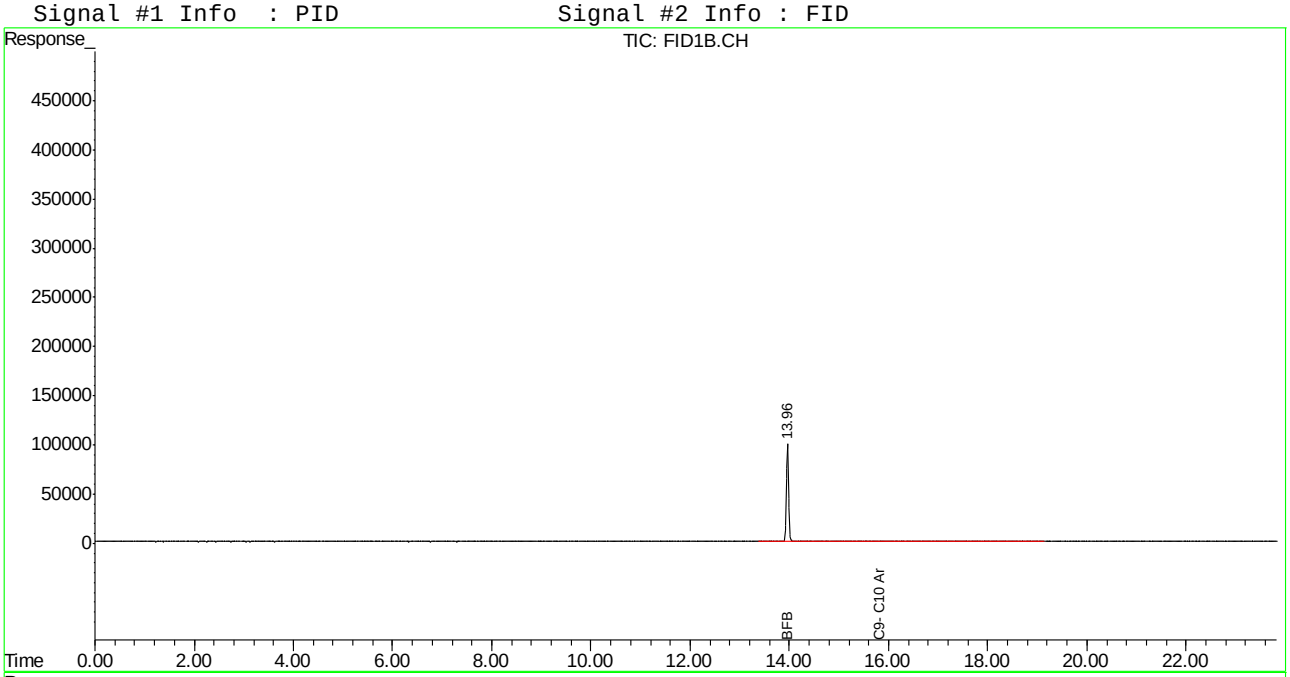
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077768.D VPH011317.M Fri Feb 03 13:19:23 2017

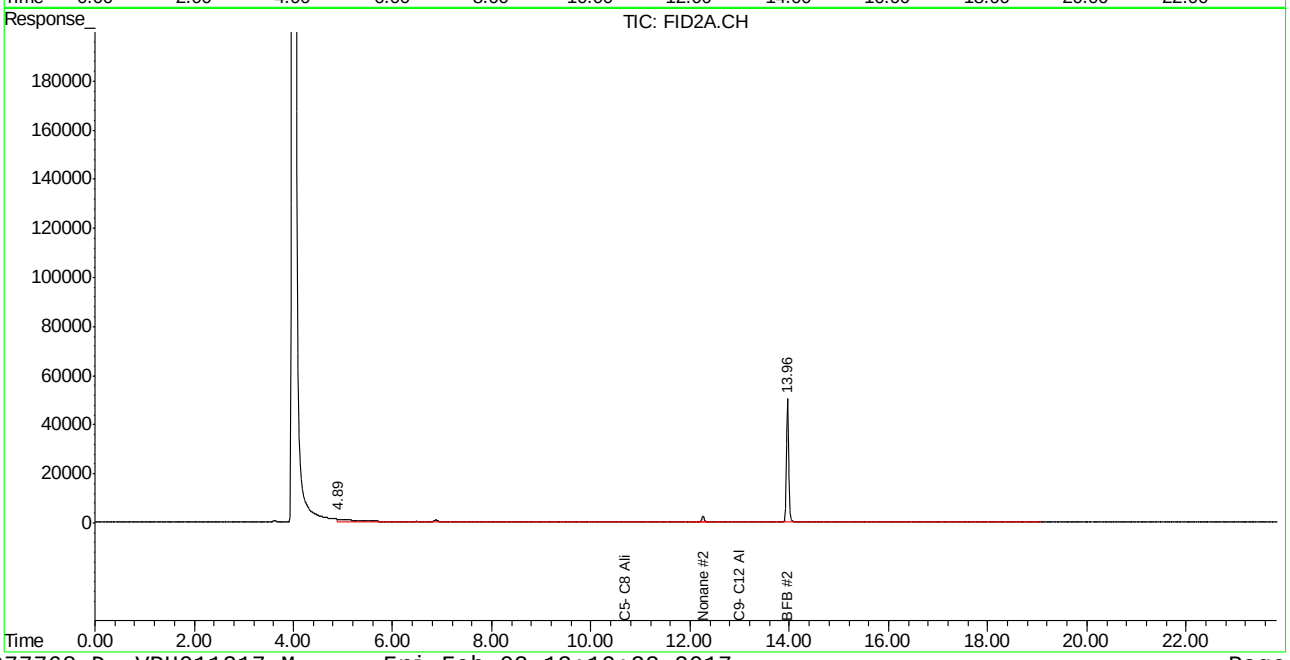
Quantitation Report (QT Reviewed)

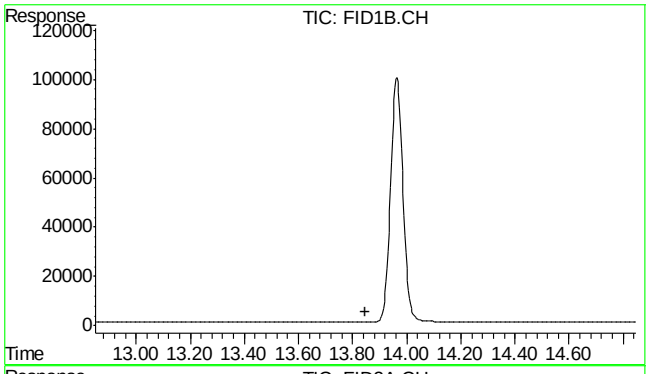
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077768.D\FID1B.CH Vial: 37
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077768.D\FID2A.CH
Acq On : 01-Feb-2017, 03:50:59 Operator: antonioc
Sample : fa40754-3 Inst : HP5890
Misc : gc19636,guv4135,3.07,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 3 12:07 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

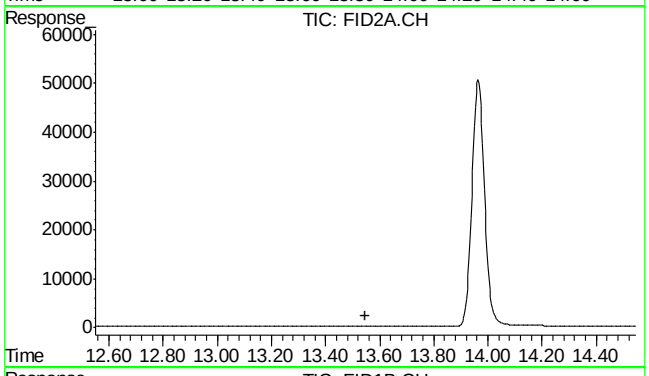






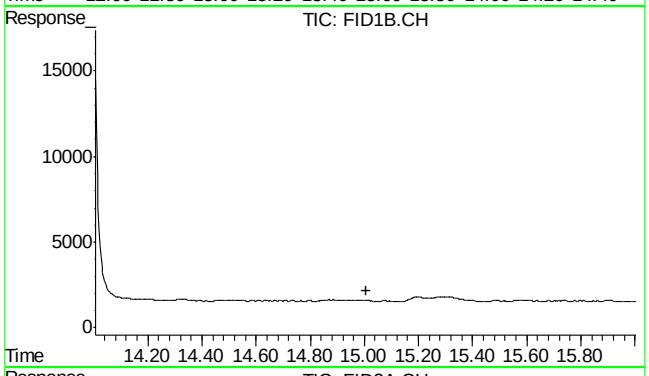
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.847 min
Response: 0
Conc: N.D.



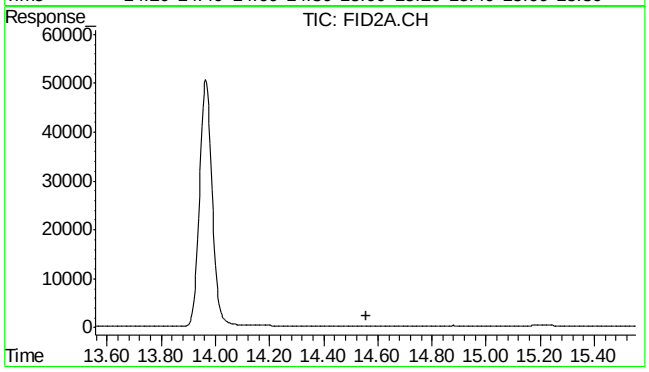
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



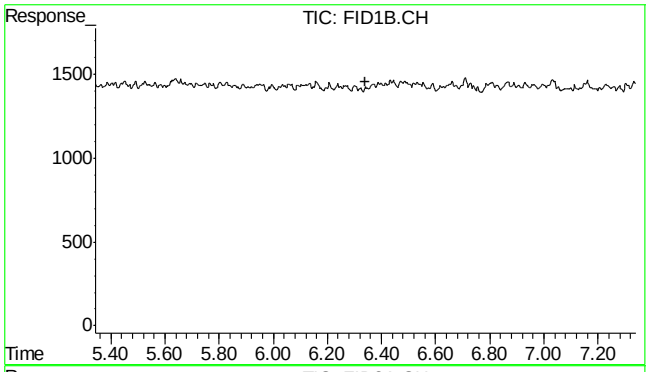
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



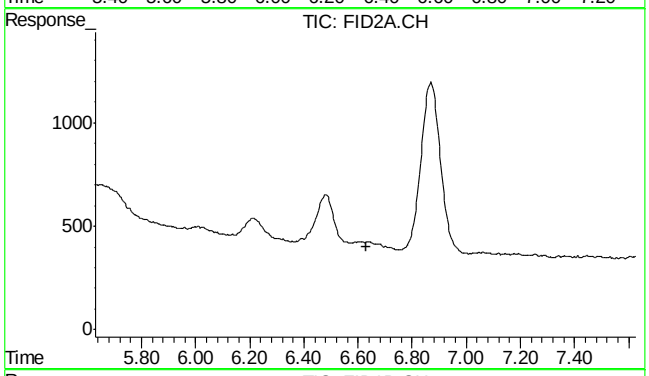
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.



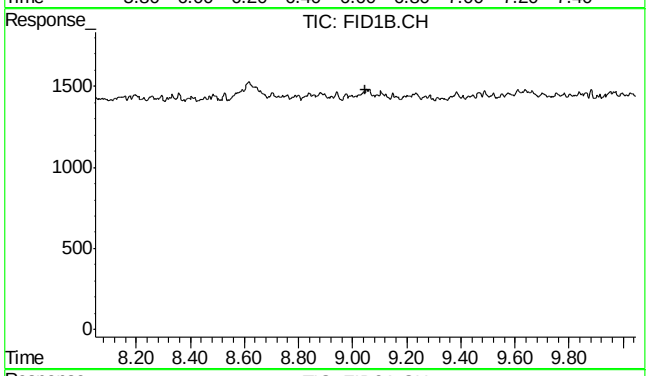
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



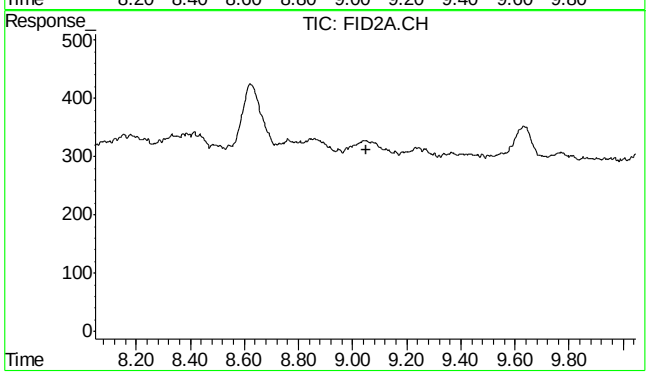
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



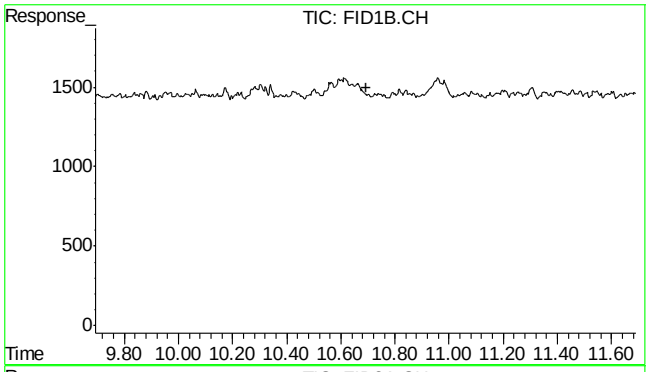
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



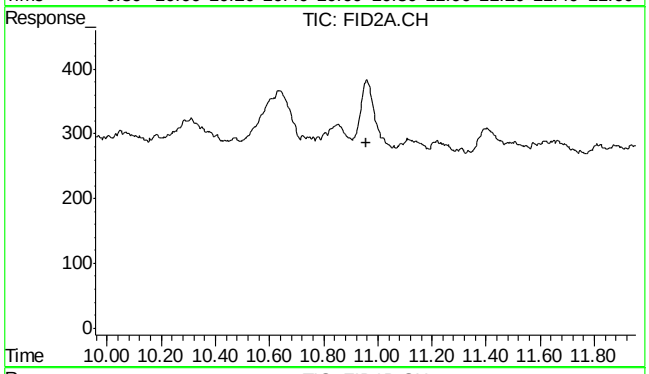
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.049 min
Response: 0
Conc: N.D.



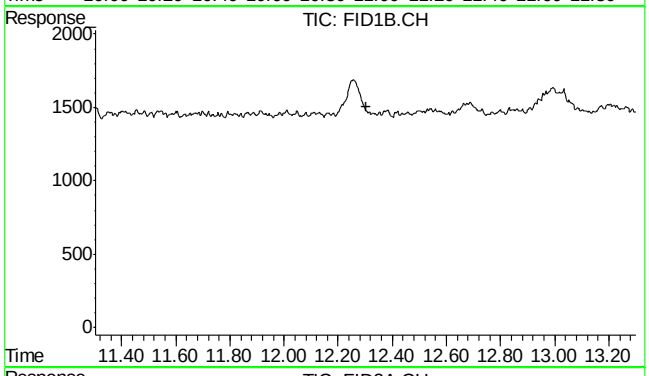
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



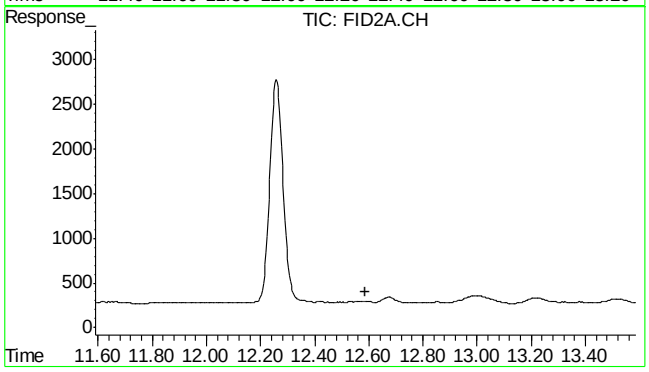
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.956 min
Response: 0
Conc: N.D.



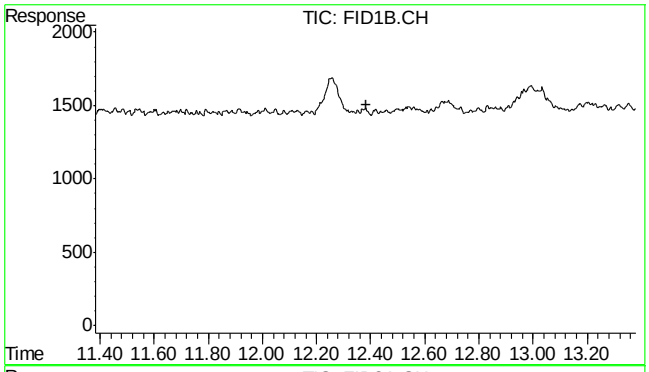
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



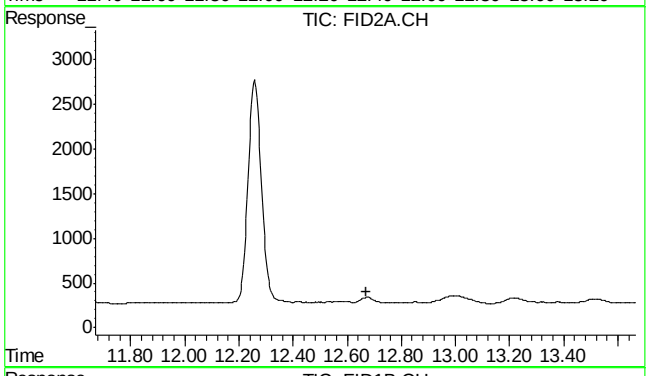
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



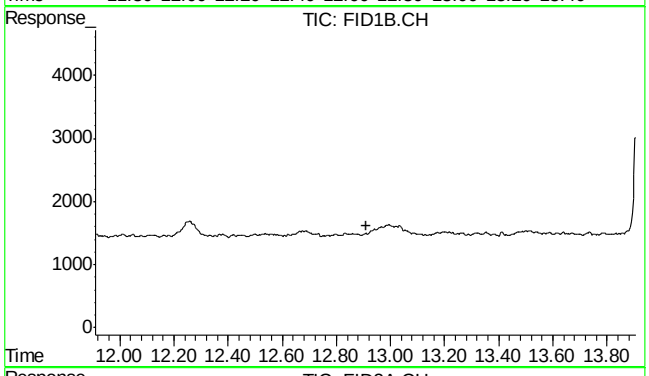
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



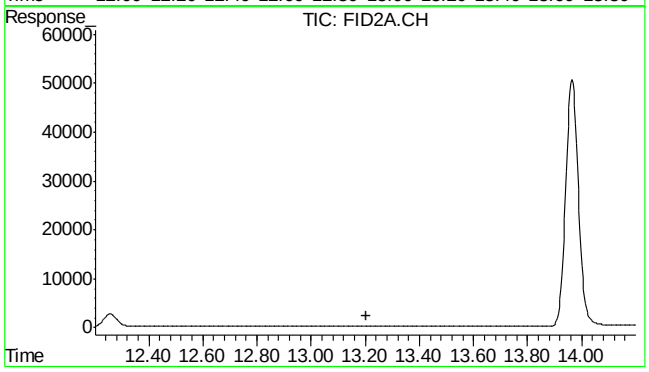
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



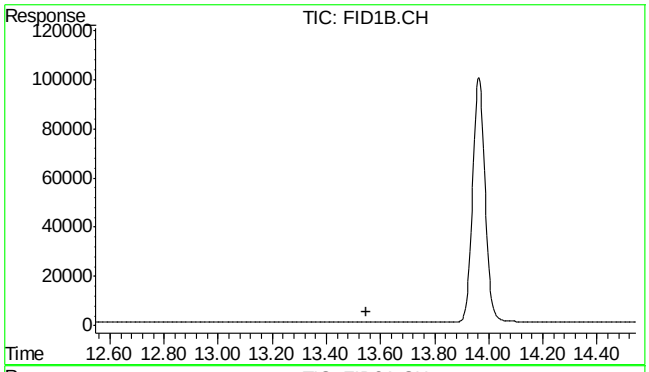
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



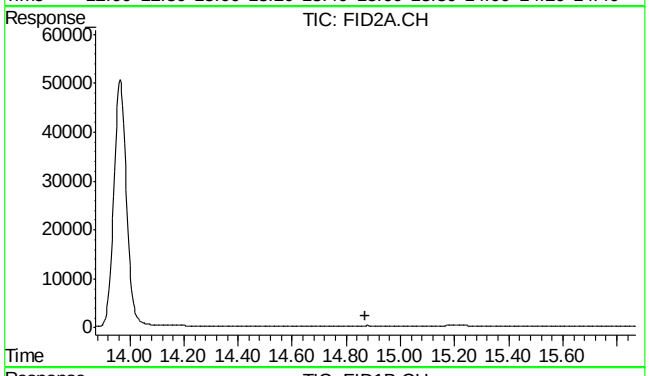
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



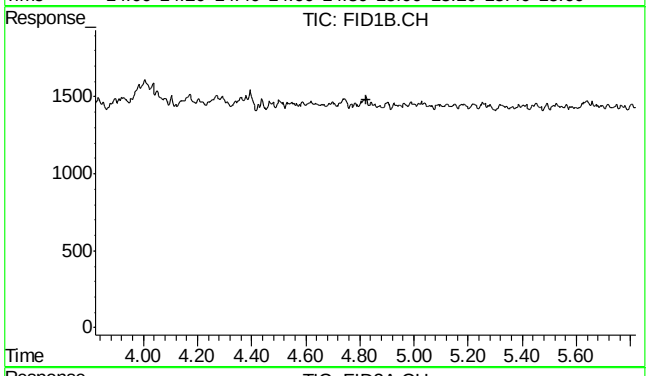
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



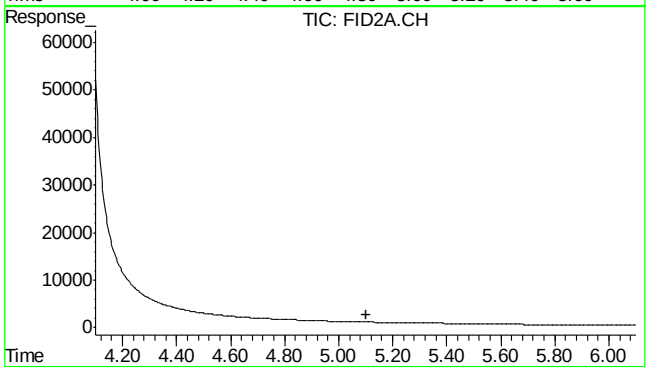
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



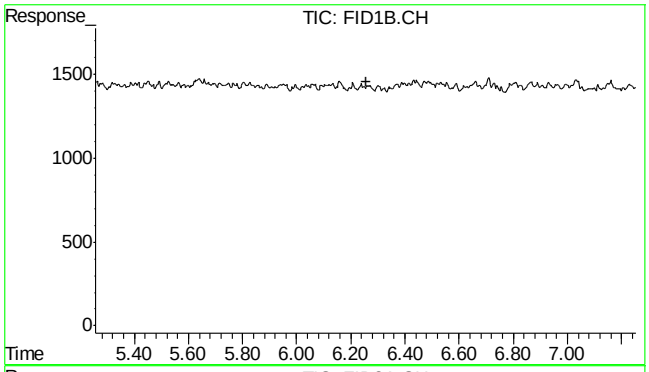
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



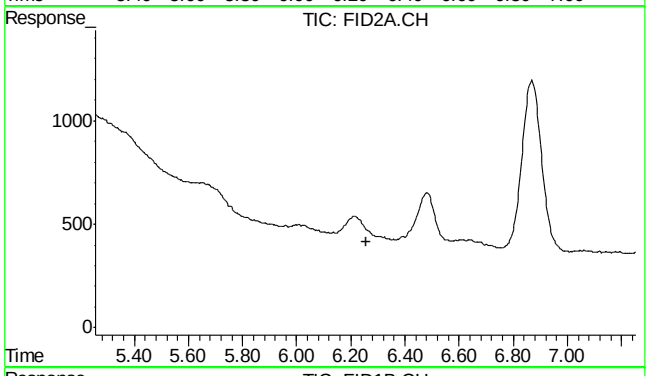
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 5.100 min
Response: 0
Conc: N.D.



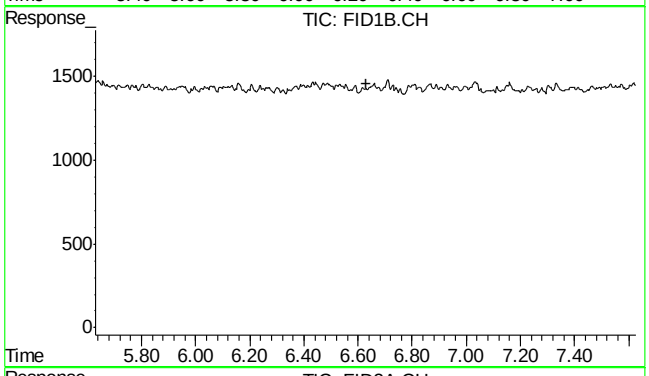
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



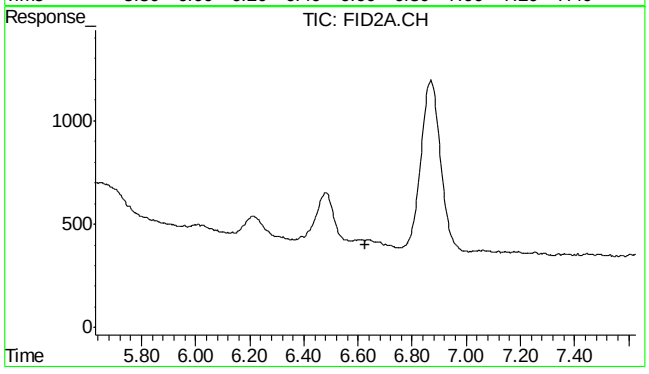
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



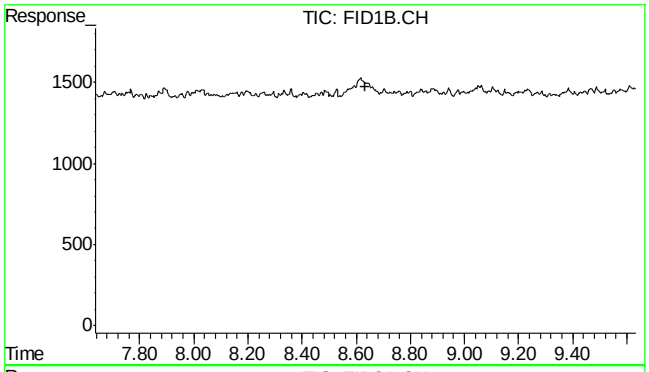
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



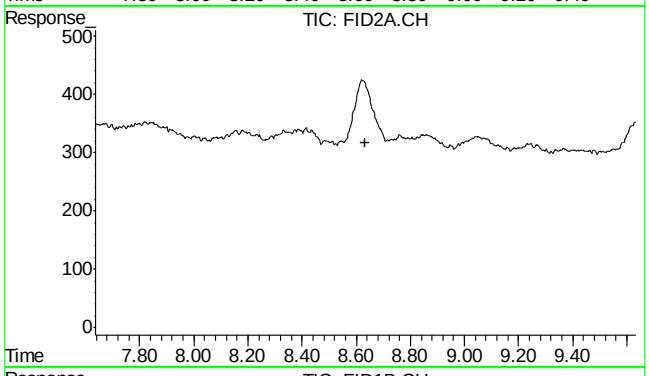
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.628 min
Response: 0
Conc: N.D.



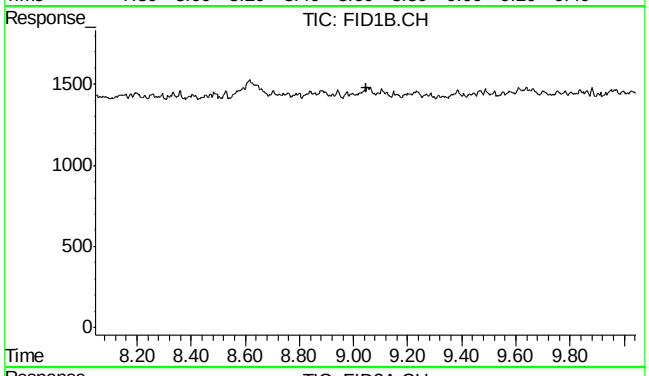
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



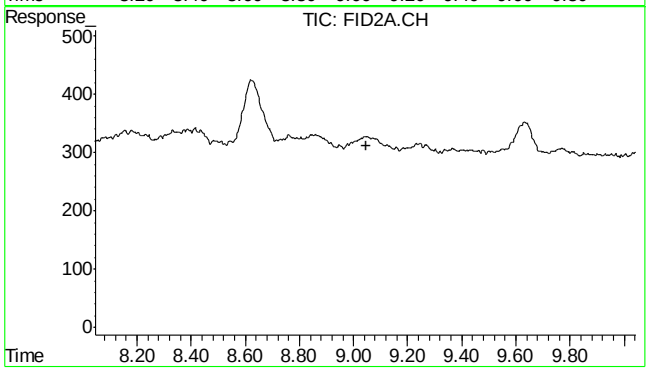
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



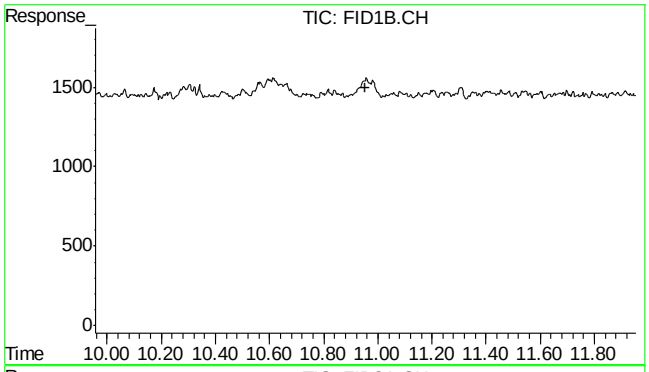
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



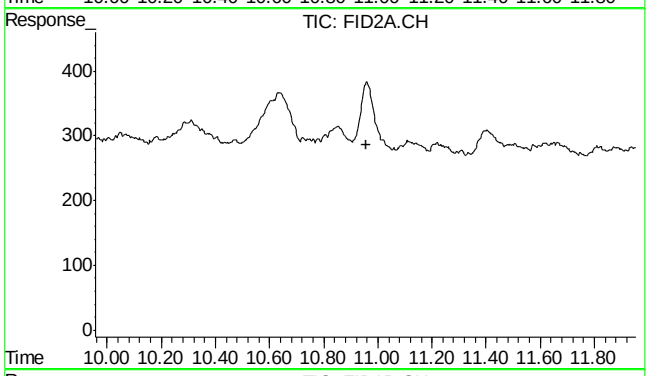
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



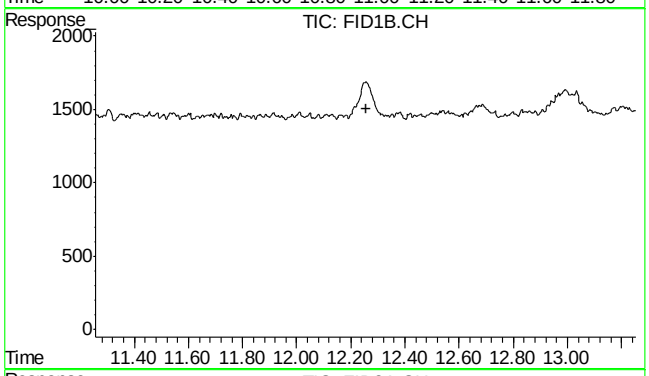
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



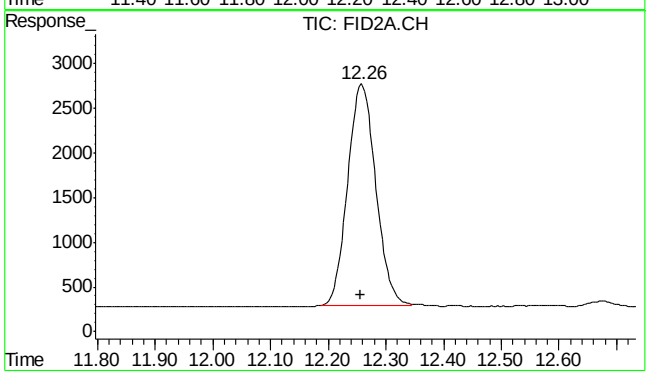
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



#16 Nonane

R.T.: 12.257 min
Delta R.T.: 0.001 min
Response: 8786
Conc: N.D.



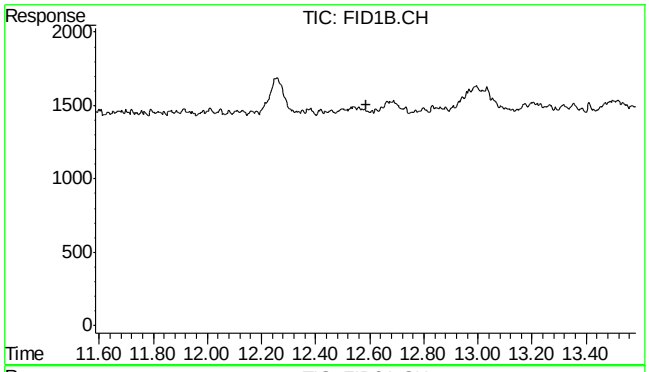
#16 Nonane

R.T.: 12.257 min
Delta R.T.: 0.001 min
Response: 84347
Conc: 4.37 ug/L m

7.1.3

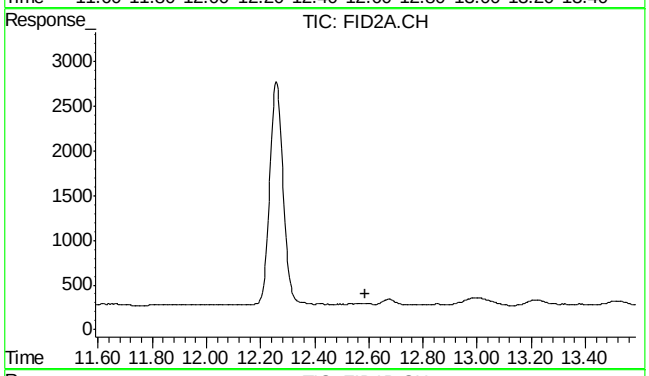
7

SGS ACCUTEST FA40754



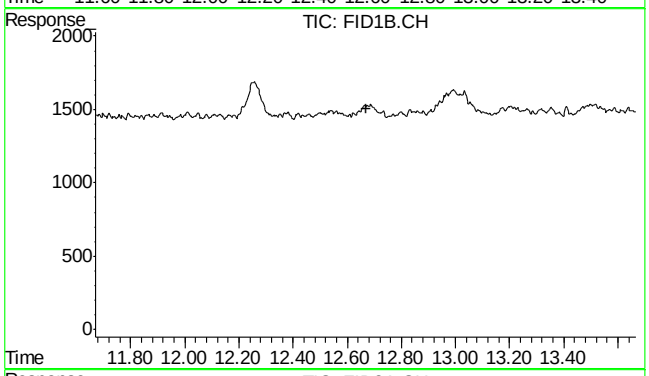
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.586 min
Response: 0
Conc: N.D.



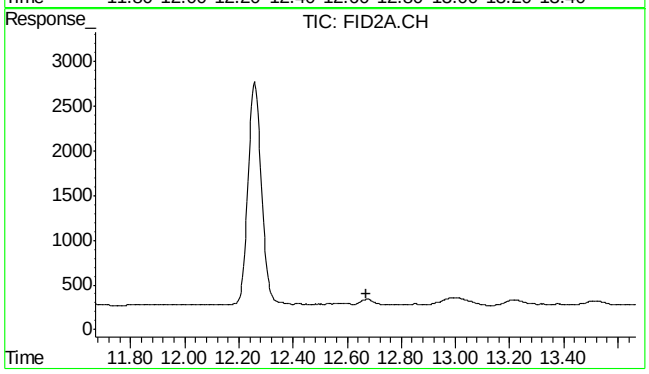
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



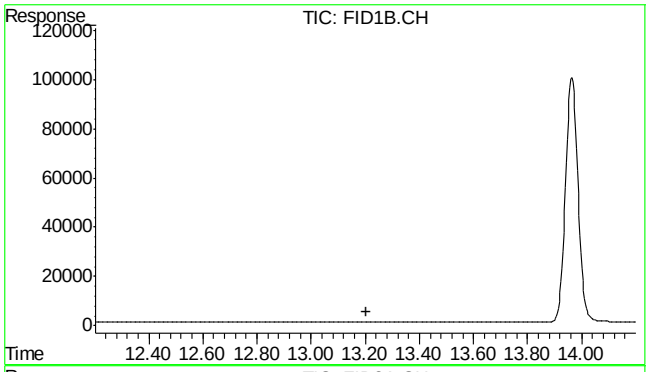
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



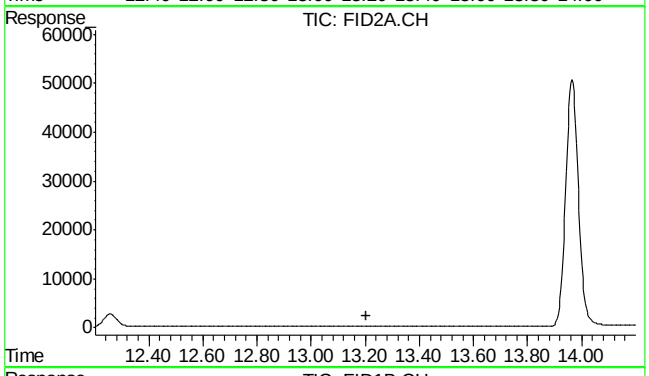
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



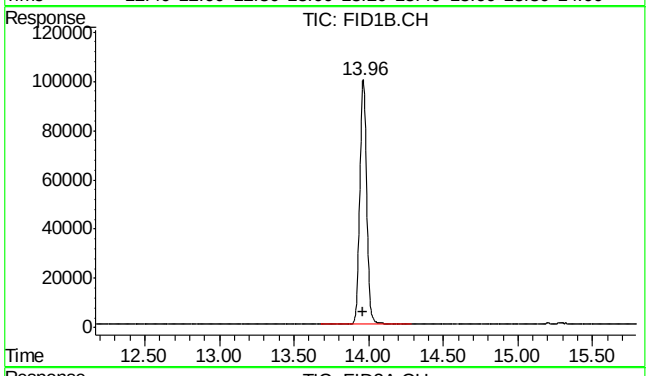
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



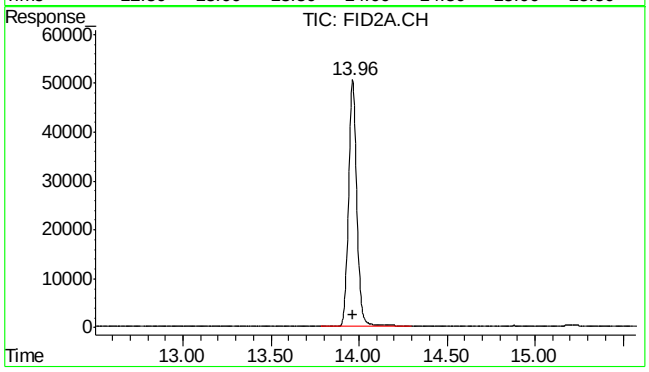
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 3182563
Conc: 173.38 ug/L



#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 1651578
Conc: 182.33 ug/L

7.1.3

7

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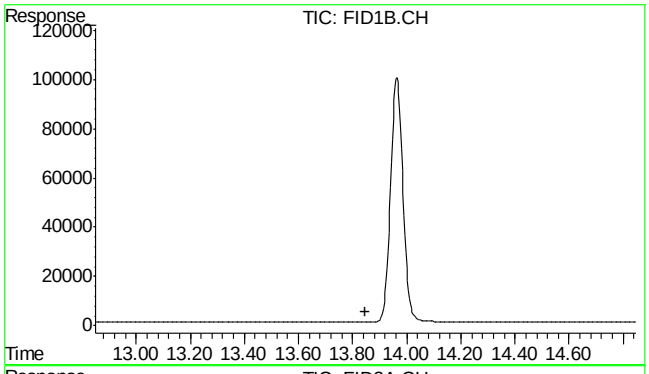
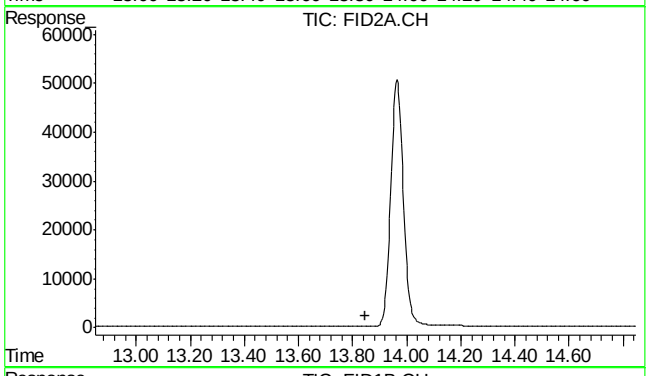


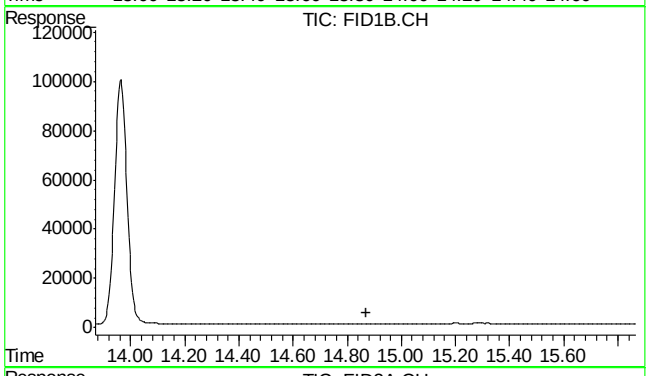
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



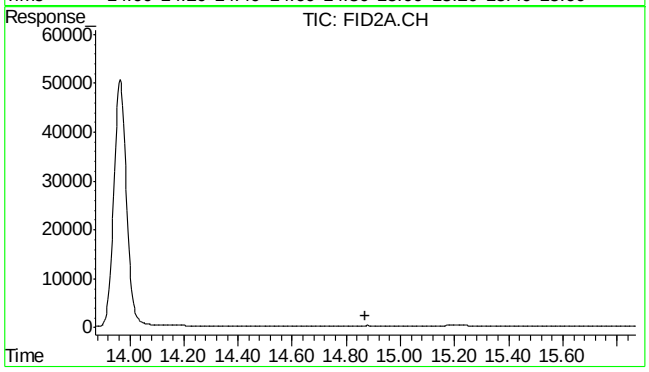
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

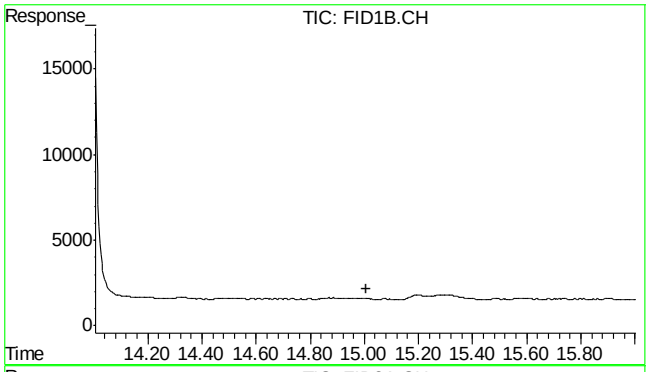
R.T.: 0.000 min
Exp R.T. : 14.870 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

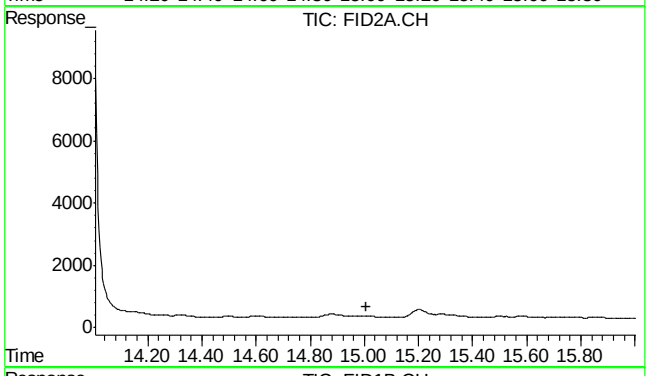
R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.

SGS ACCUTEST FA40754



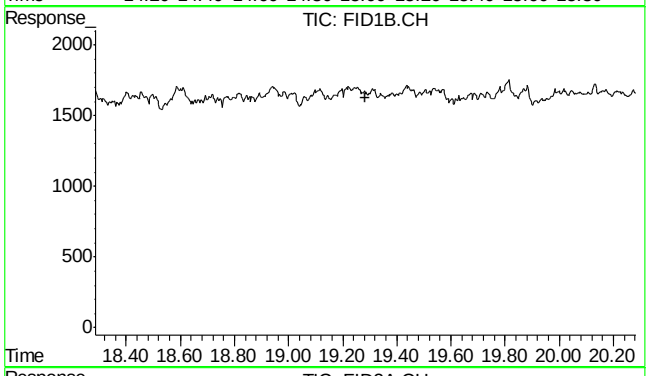
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



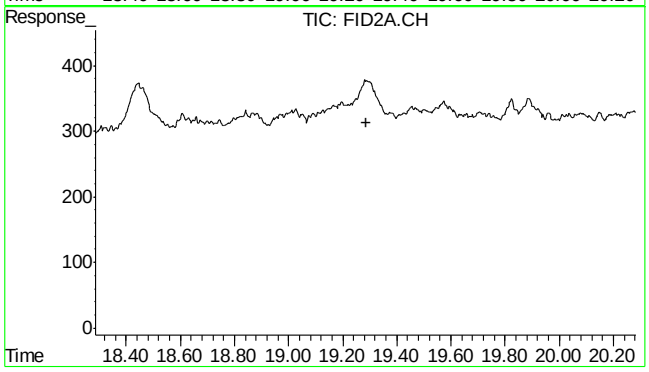
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



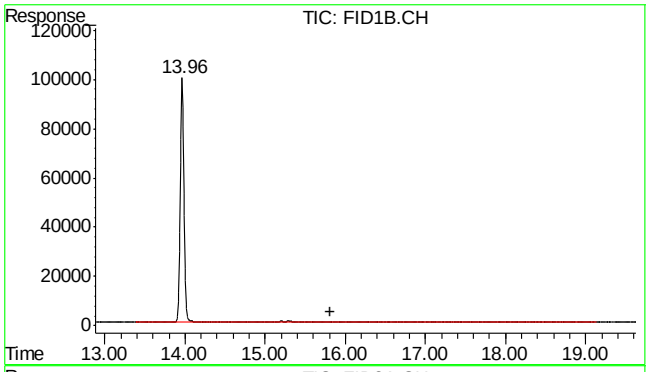
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.284 min
Response: 0
Conc: N.D.



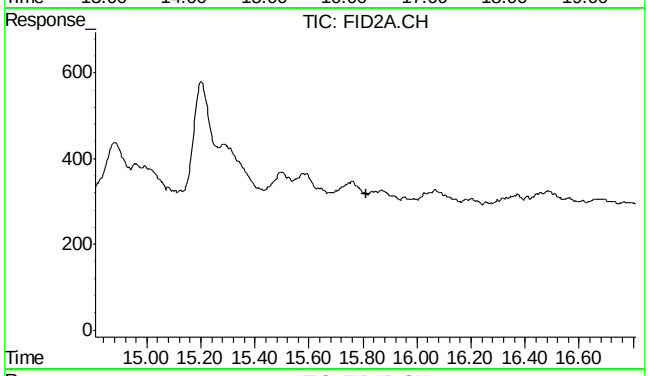
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.286 min
Response: 0
Conc: N.D.



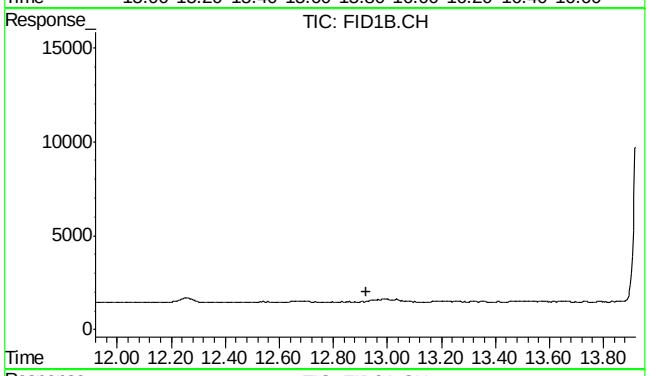
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 493490
Conc: 9.68 ug/L m



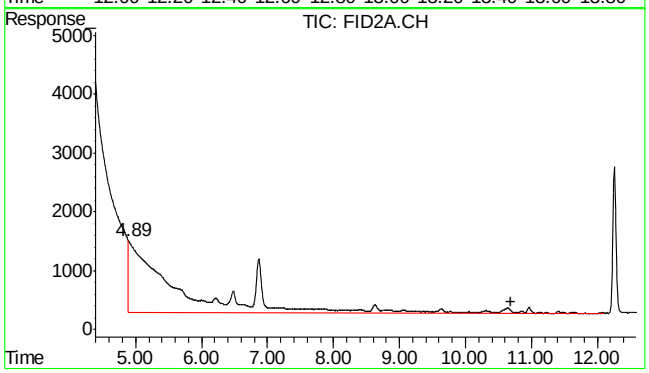
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 161171
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 319236
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 641462
Conc: 11.78 ug/L m

7.1.3

7

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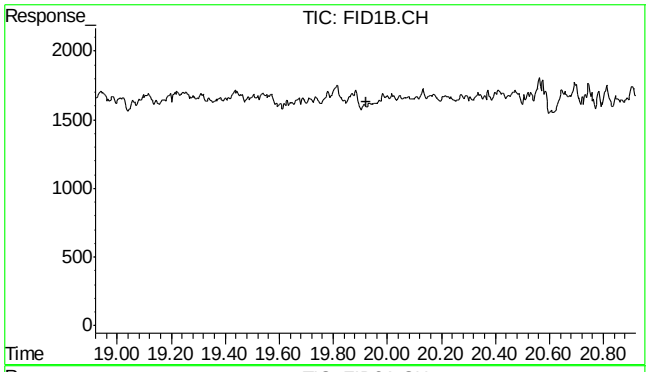
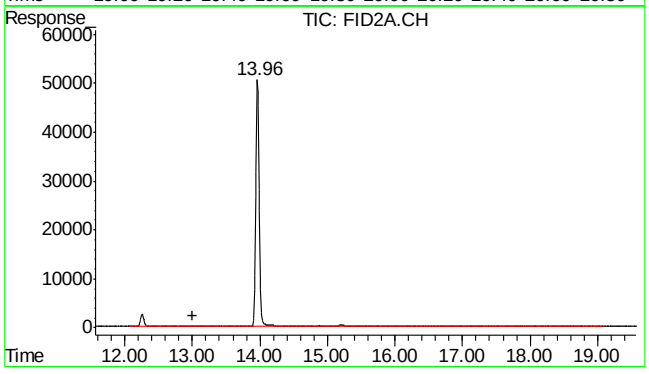


#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 485322
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 270780
Conc: 0.76 ug/L m

7.1.3

7

SGS ACCUTEST FA40754

Manual Integration Approval Summary

Sample Number:	FA40754-3	**Method:**	MADEP VPH REV 1.1
Lab FileID:	UV077768.D	**Analyst approved:**	02/03/17 15:32 Antonio Chardon
Injection Time:	02/01/17 03:50	**Supervisor approved:**	02/03/17 16:33 Juan Garcia

Parameter	CAS	Sig#	R.T. (min.)	Reason
Nonane	111-84-2	2	12.26	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Juan Garcia
02/03/17 15:54

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077769.D\FID1B.CH Vial: 38
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077769.D\FID2A.CH
Acq On : 01-Feb-2017, 04:21:42 Operator: antonioc
Sample : fa40754-4 Inst : HP5890
Misc : gc19636,guv4135,5.03,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:04:32 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	0.00	0.00	0	0	N.D.	N.D.
2)	S	Alkane B	0.00	0.00	0	0	N.D.	N.D.
3)	S	Aromatic A	0.00	0.00	0	0	N.D.	N.D.
4)	S	Aromatic B	0.00	0.00	0	0	N.D.	N.D.
5)	S	Aromatic C	0.00	0.00	0	0	N.D.	N.D.
6)	S	Aromatic D	0.00	0.00	0	0	N.D.	N.D.
7)	S	Aromatic E	0.00	0.00	0	0	N.D.	N.D.
8)	S	Aromatic F	0.00	0.00	0	0	N.D.	N.D.
9)	S	Aromatic G	0.00	0.00	0	0	N.D.	N.D.
20)	S	BFB	13.96	13.96	3251521	1678990	177.141	185.360
		Spiked Amount 200.000 Range 70 - 130 Recovery =					88.57%	92.68%
		Target Compounds						
10)		Pentane	0.00	0.00	0	0	N.D.	N.D.
11)		2-Methylpentane	0.00	0.00	0	0	N.D.	N.D.
12)		Methyl Tert Buty	0.00	0.00	0	0	N.D. d	N.D. d
13)		2,2,4-Trimethylp	0.00	0.00	0	0	N.D.	N.D.
14)		Benzene	0.00	0.00	0	0	N.D.	N.D.
15)		Toluene	0.00	0.00	0	0	N.D.	N.D.
16)		Nonane	0.00	0.00	0	0	N.D.	N.D.
17)		Ethylbenzene	12.58	12.60	889	654	0.049m	0.033m
18)		m,p-Xylene	12.67	0.00	12977	0	0.587	N.D. #
19)		o-Xylene	0.00	0.00	0	0	N.D.	N.D.
21)		Decane	0.00	0.00	0	0	N.D.	N.D.
22)		1,2,4-Trimethylb	0.00	0.00	0	0	N.D.	N.D.
23)		Butylcyclohexane	0.00	0.00	0	0	N.D.	N.D.
24)		Naphthalene	0.00	0.00	0	0	N.D.	N.D.
25)	H	C9- C10 Aromatic	15.81	15.81	376343	166870	3.798	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	636173	681763	NoCal	15.052 #
27)	H	C9- C12 Aliphati	19.92	13.00	487385	209158	NoCal	N.D.

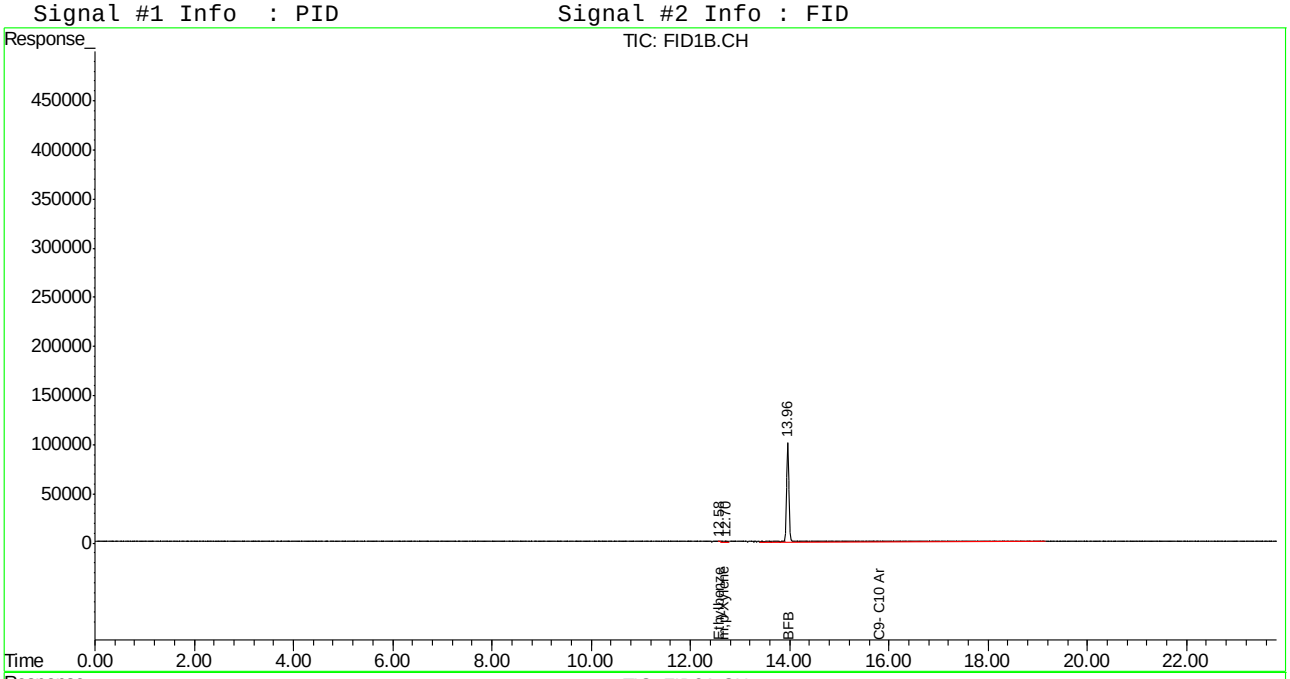
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077769.D VPH011317.M Fri Feb 03 13:19:26 2017

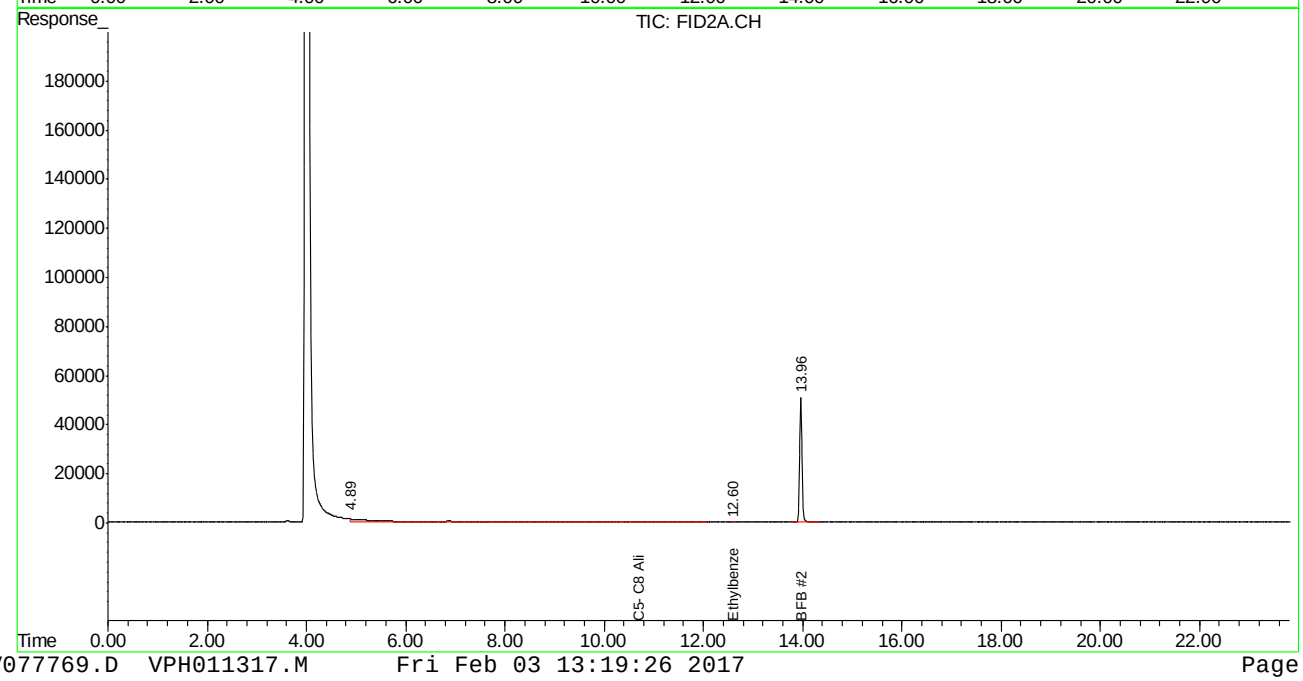
Quantitation Report (QT Reviewed)

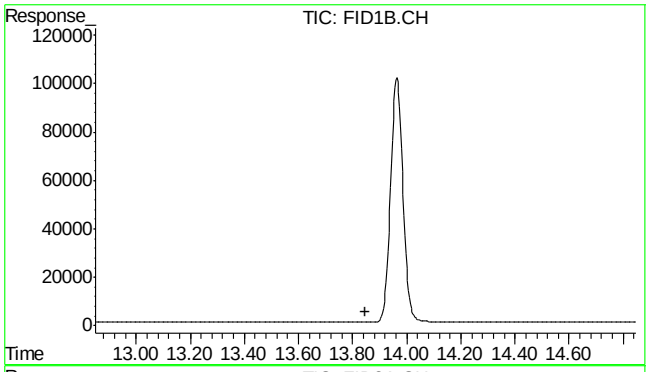
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077769.D\FID1B.CH Vial: 38
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077769.D\FID2A.CH
Acq On : 01-Feb-2017, 04:21:42 Operator: antonioc
Sample : fa40754-4 Inst : HP5890
Misc : gc19636,guv4135,5.03,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 3 12:08 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

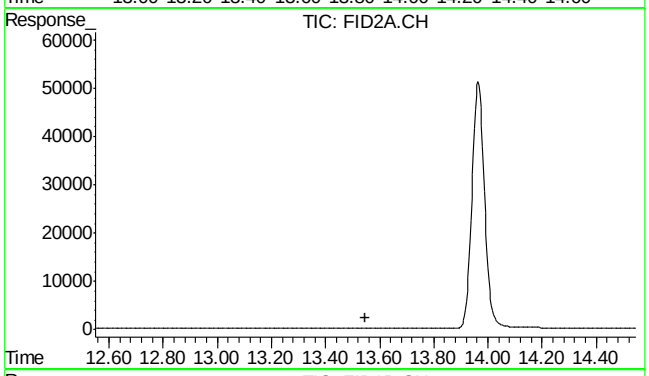






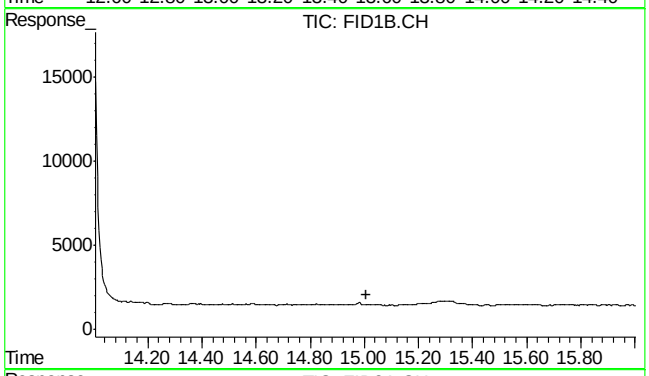
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.847 min
Response: 0
Conc: N.D.



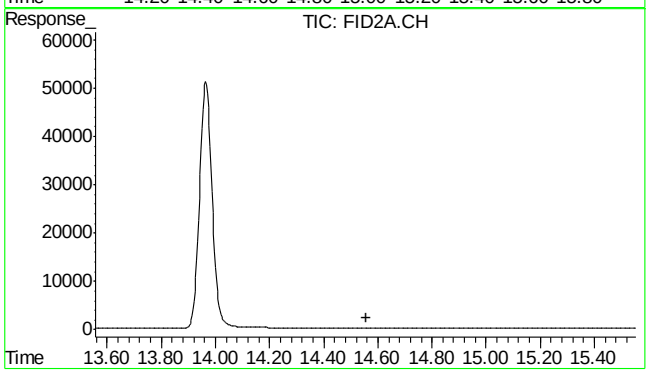
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



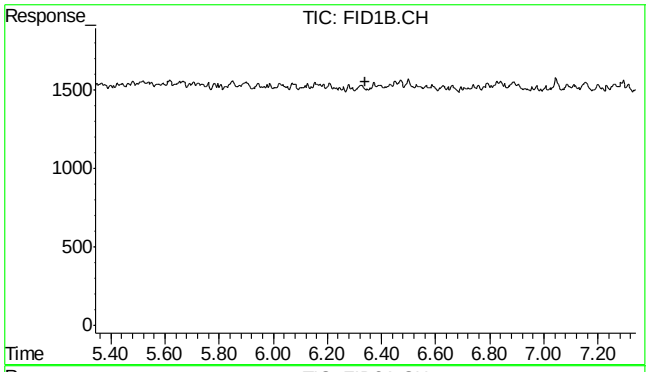
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



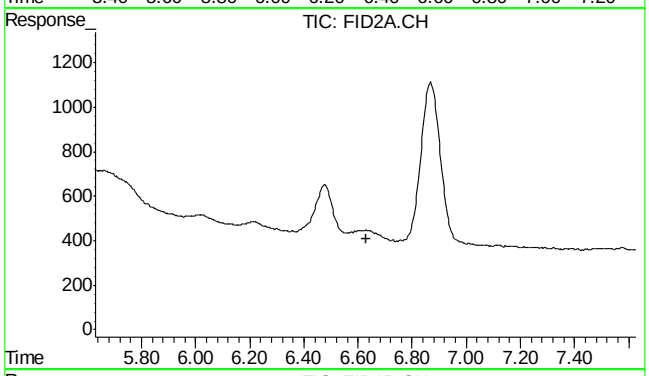
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.



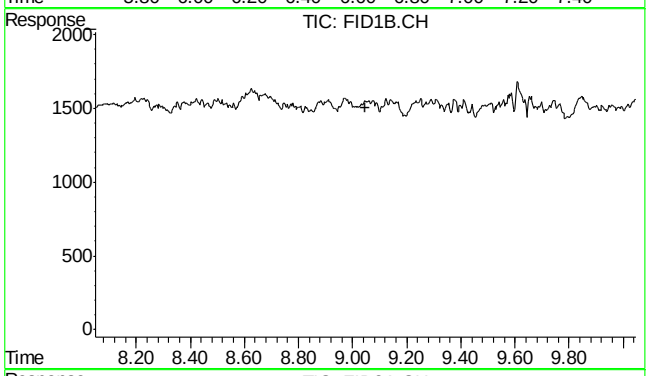
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



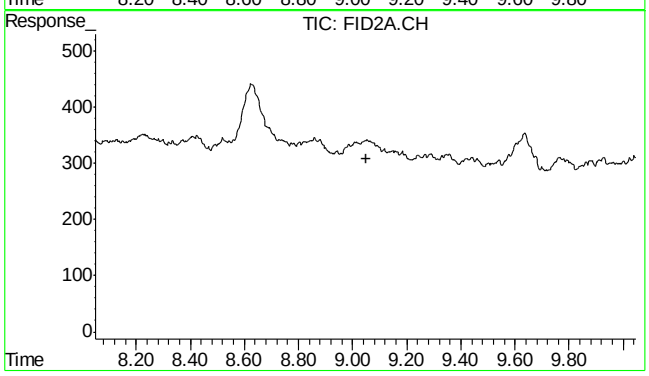
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



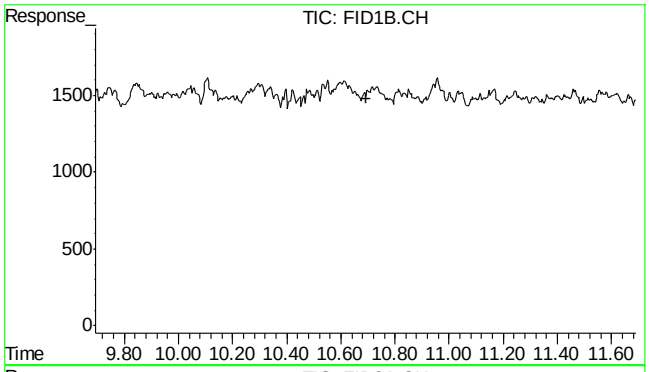
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



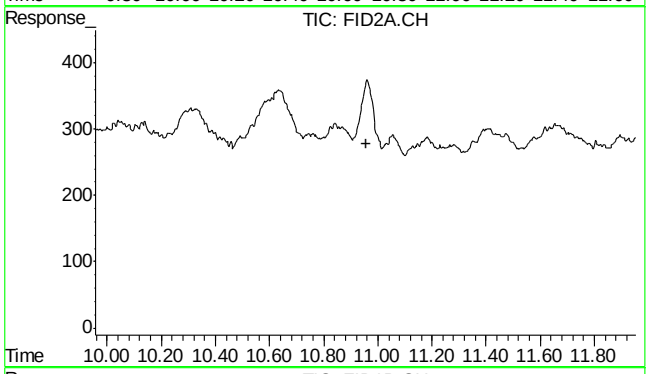
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.049 min
Response: 0
Conc: N.D.



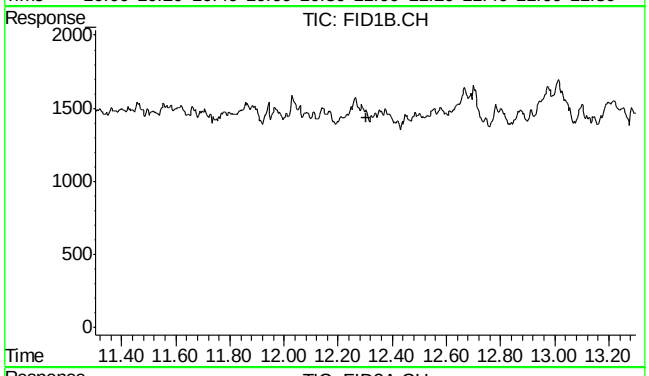
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



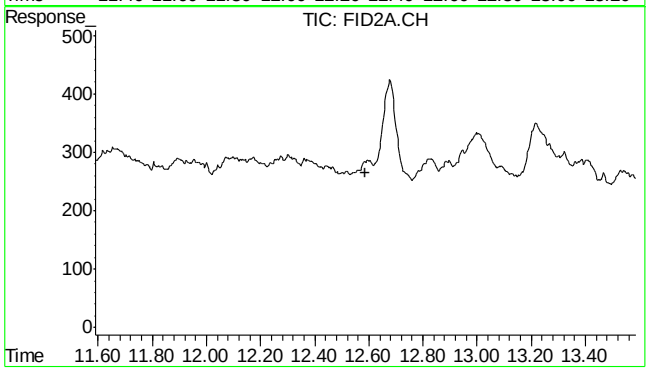
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.956 min
Response: 0
Conc: N.D.



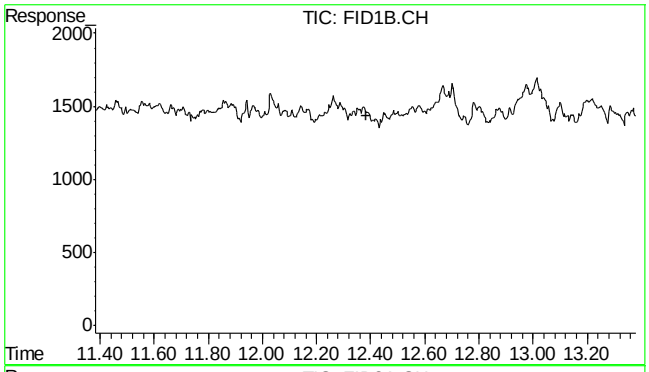
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



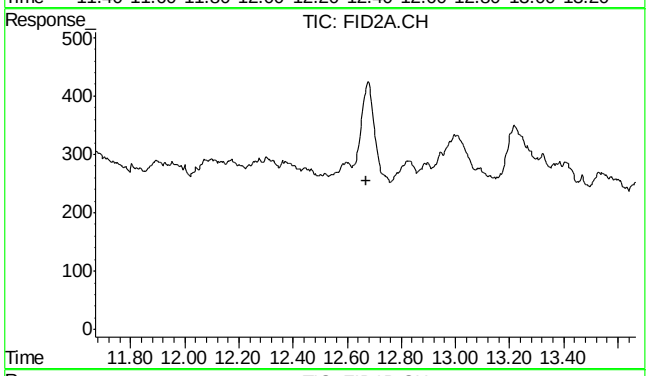
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



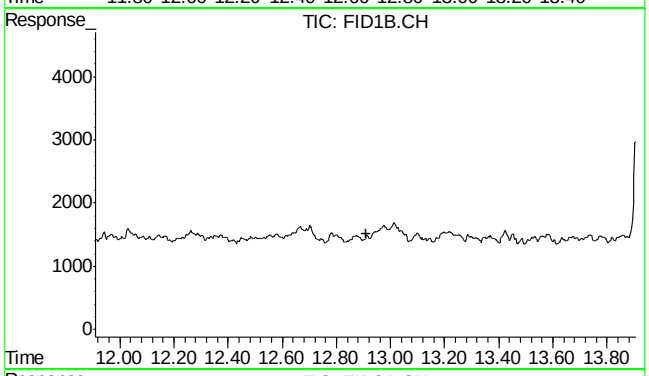
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



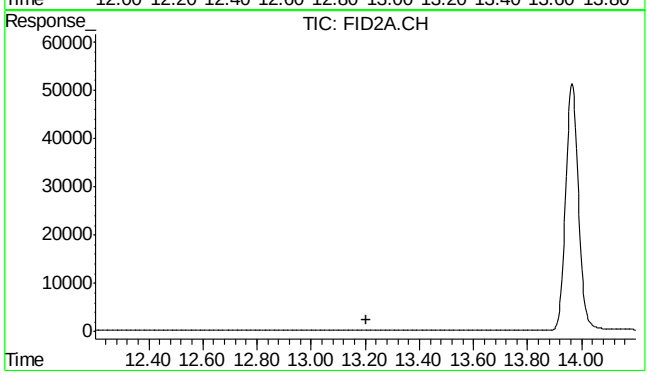
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



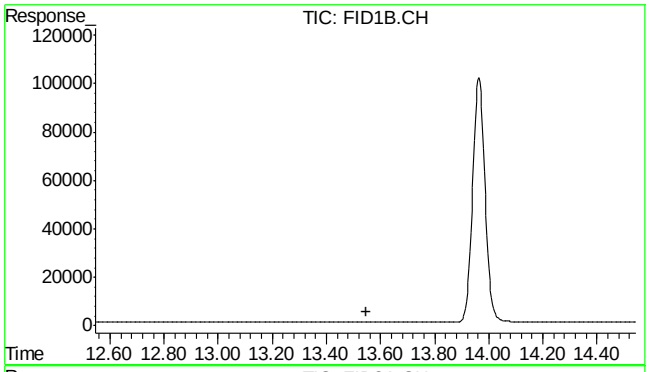
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



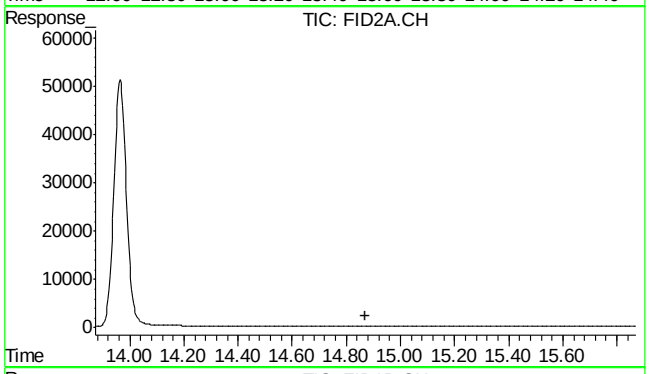
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



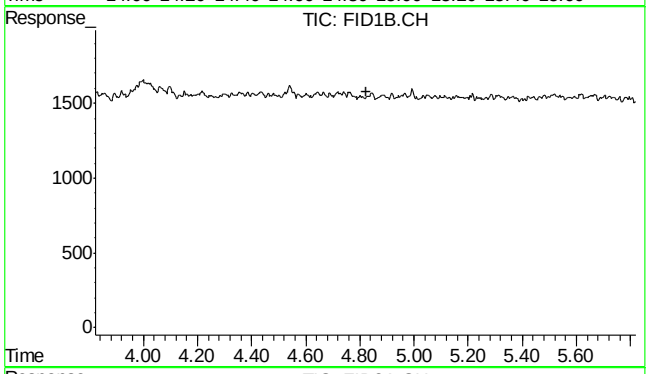
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



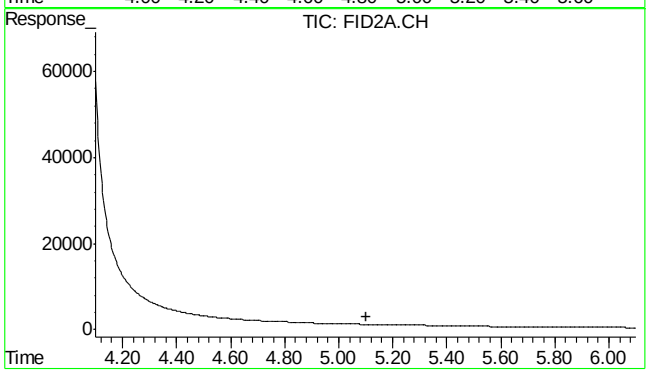
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



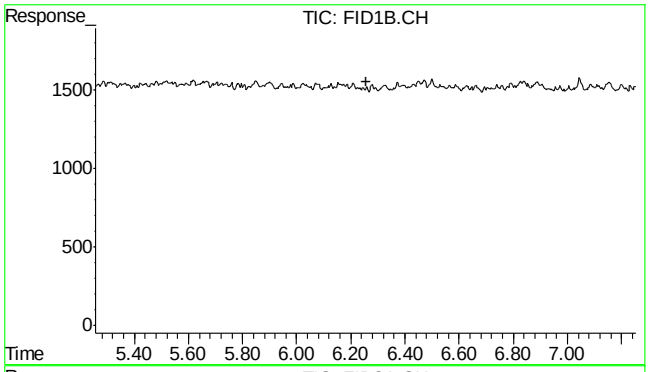
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 5.100 min
Response: 0
Conc: N.D.

7.1.4

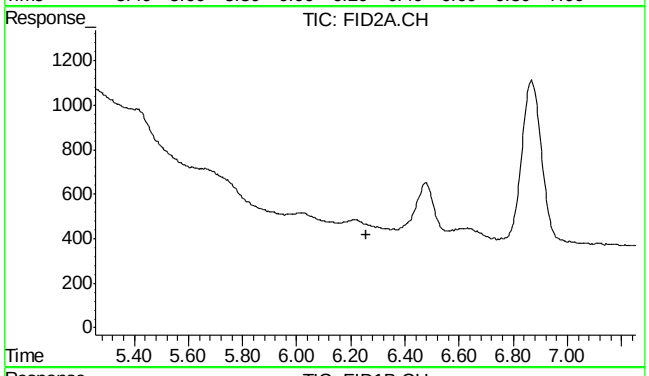
7

SGS ACCUTEST FA40754



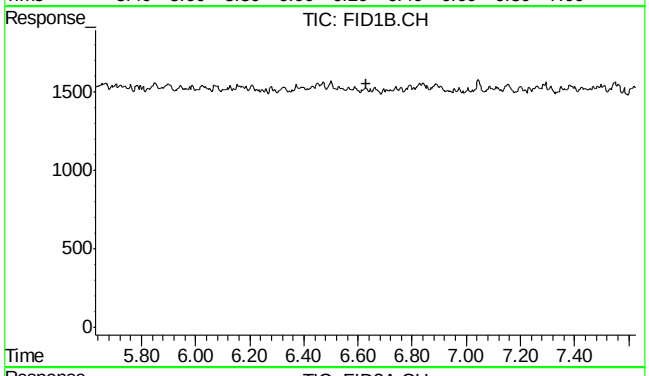
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



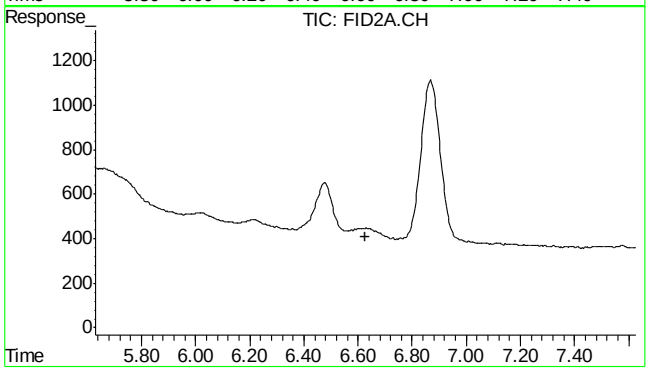
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



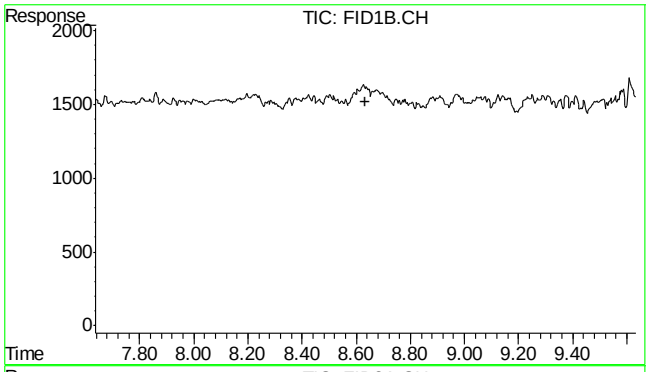
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



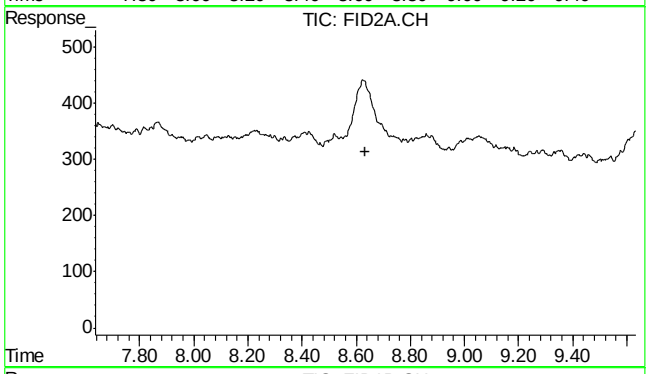
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.628 min
Response: 0
Conc: N.D.



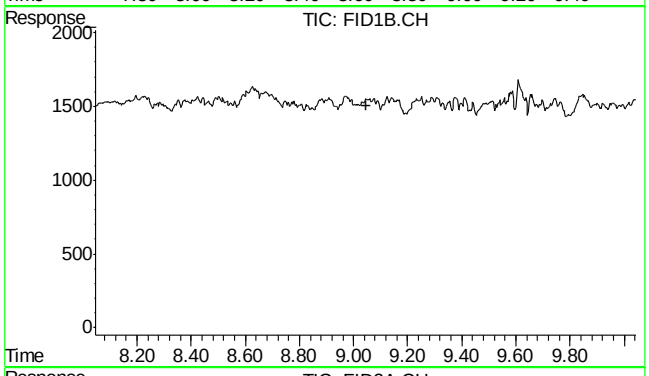
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



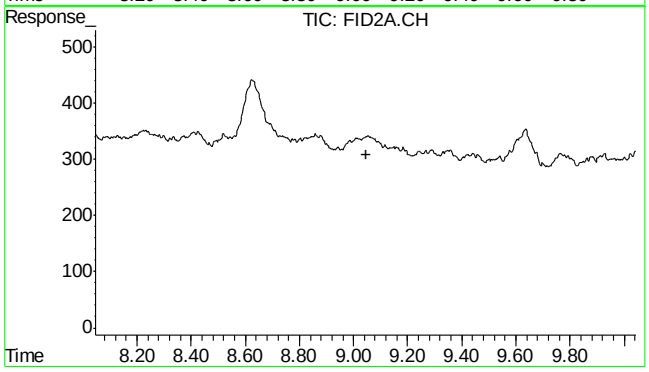
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



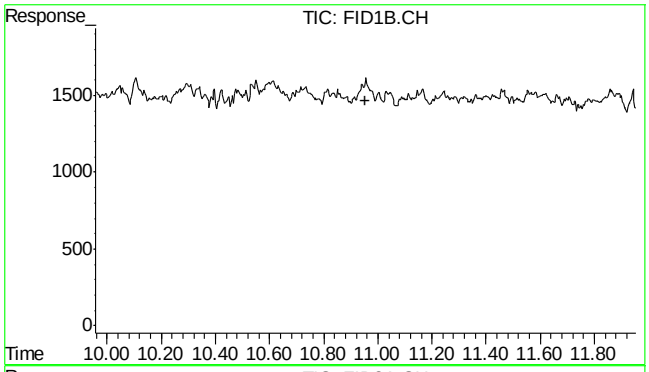
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



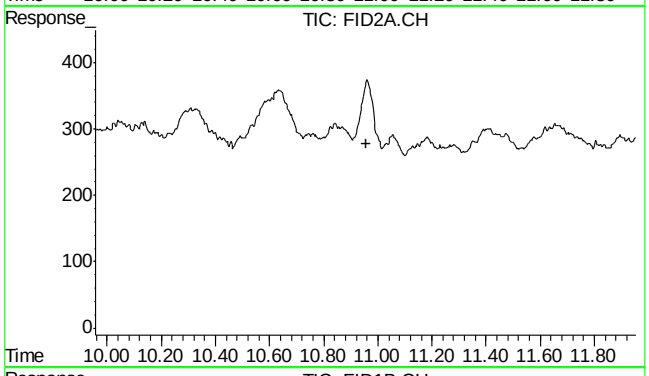
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



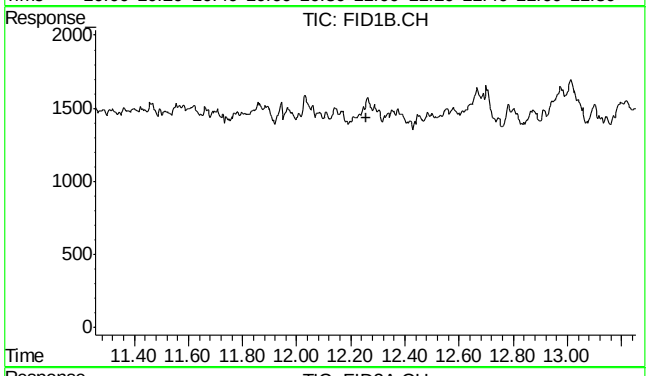
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



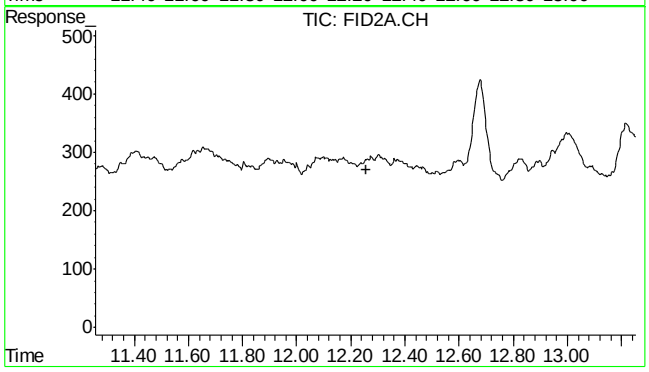
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



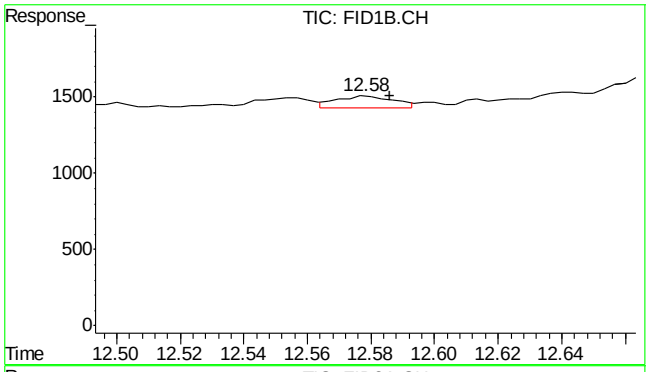
#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



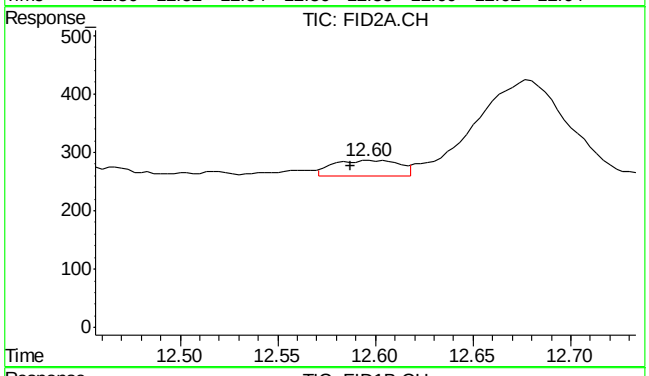
#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



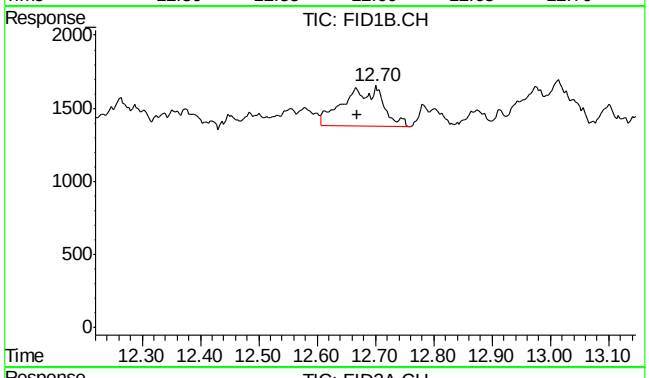
#17 Ethylbenzene

R.T.: 12.578 min
Delta R.T.: -0.008 min
Response: 889
Conc: 0.05 ug/L m



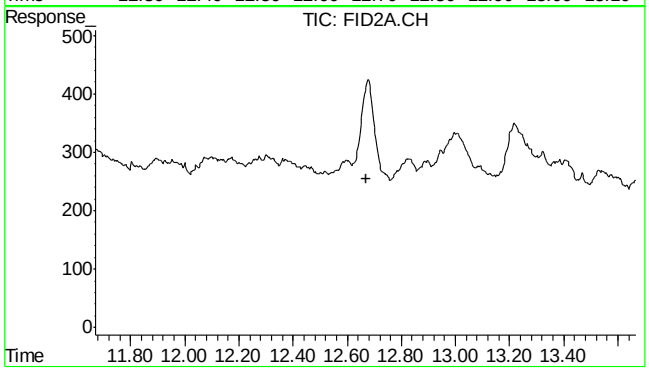
#17 Ethylbenzene

R.T.: 12.595 min
Delta R.T.: 0.008 min
Response: 654
Conc: 0.03 ug/L m



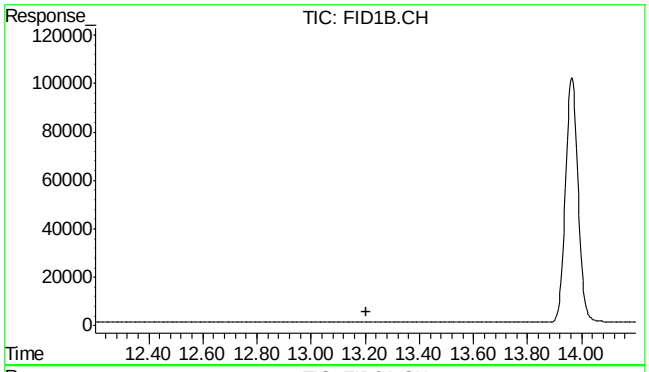
#18 m,p-Xylene

R.T.: 12.668 min
Delta R.T.: 0.000 min
Response: 12977
Conc: 0.59 ug/L



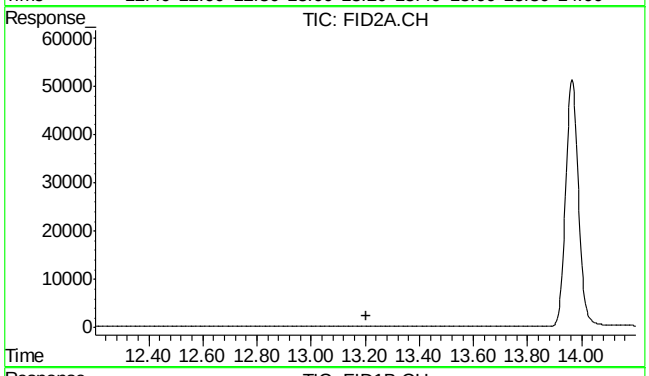
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



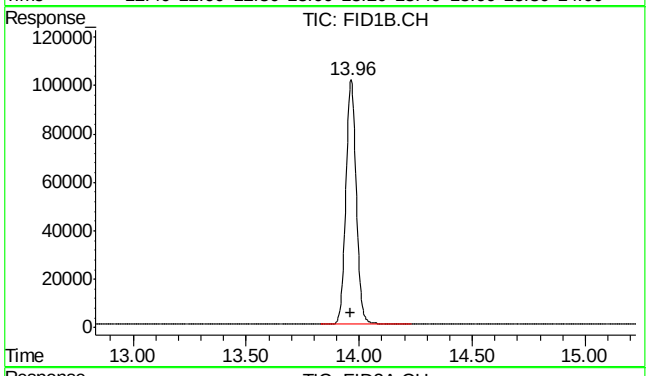
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



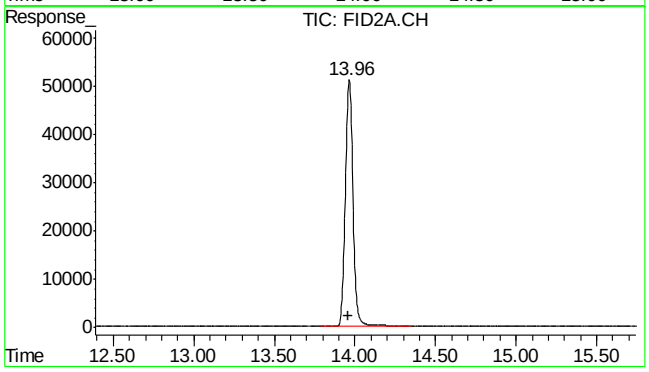
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 3251521
Conc: 177.14 ug/L



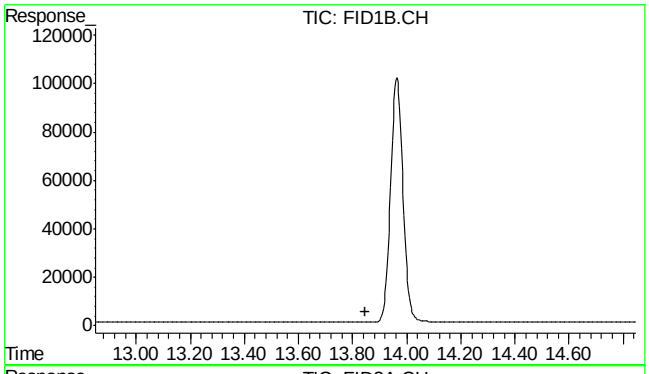
#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 1678990
Conc: 185.36 ug/L

7.1.4

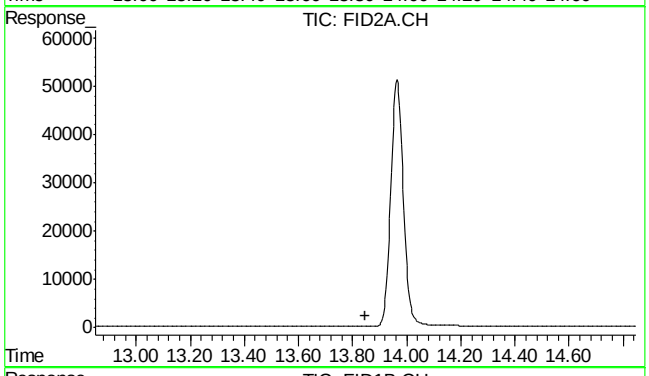
7

SGS ACCUTEST FA40754



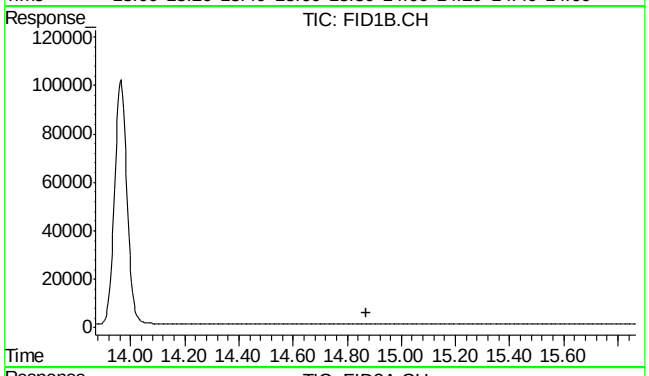
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



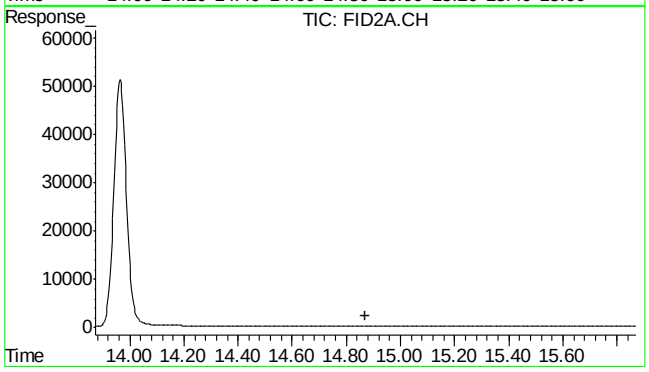
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



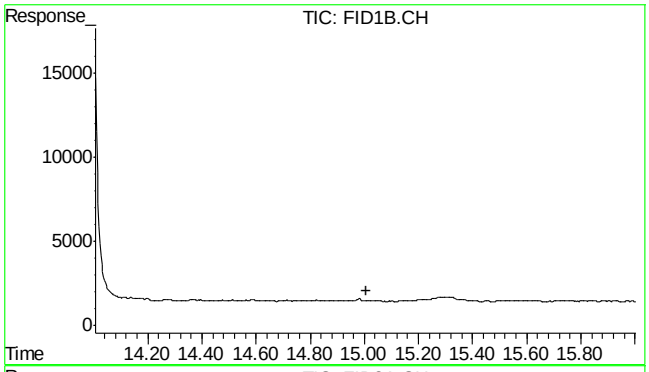
#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.870 min
Response: 0
Conc: N.D.



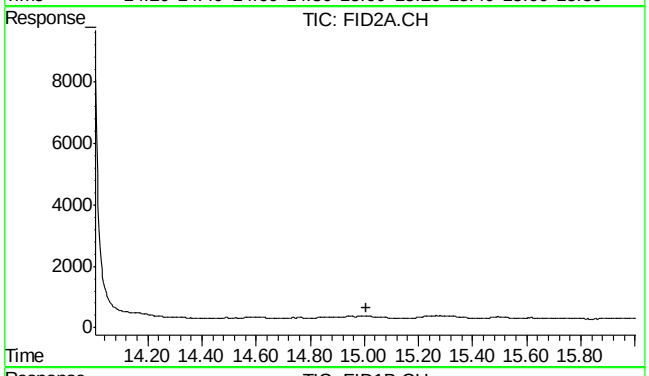
#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



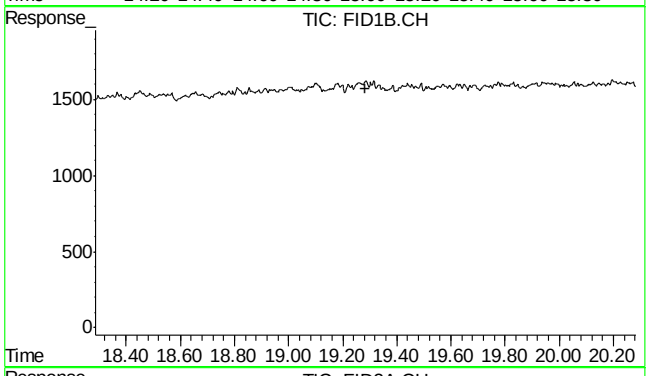
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



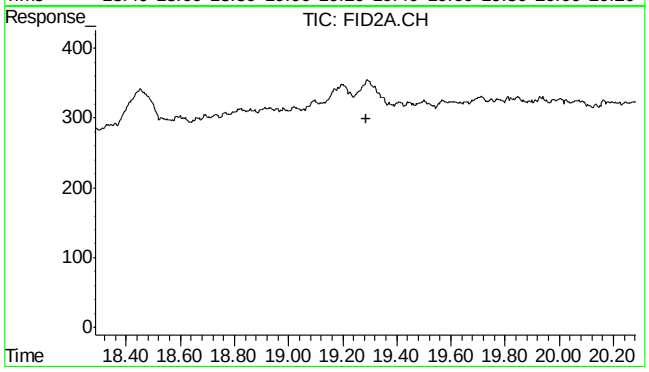
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



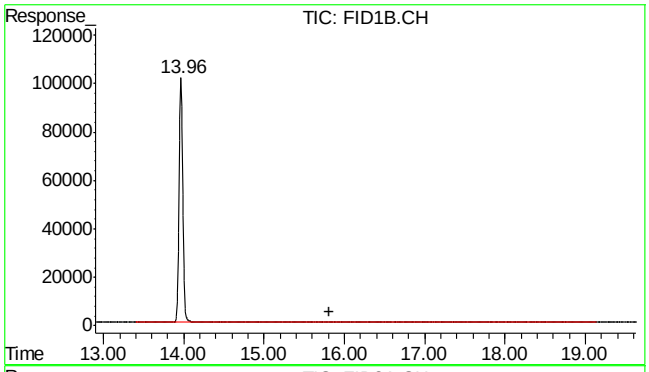
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.284 min
Response: 0
Conc: N.D.



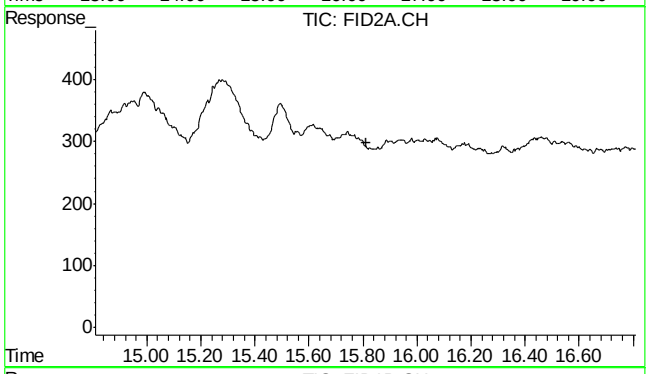
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.286 min
Response: 0
Conc: N.D.



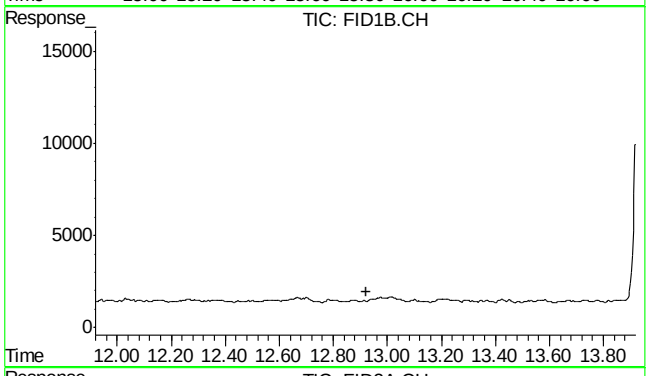
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 376343
Conc: 3.80 ug/L m



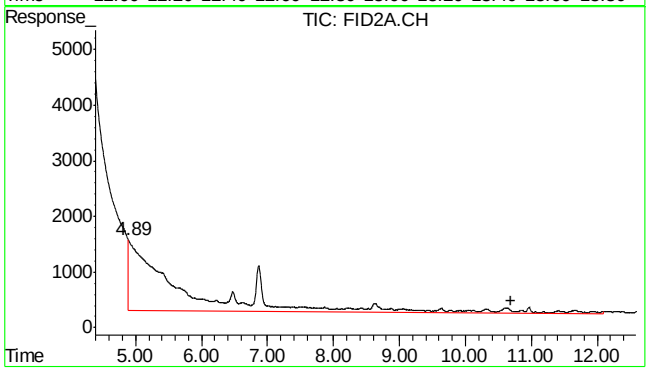
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 166870
Conc: N.D.



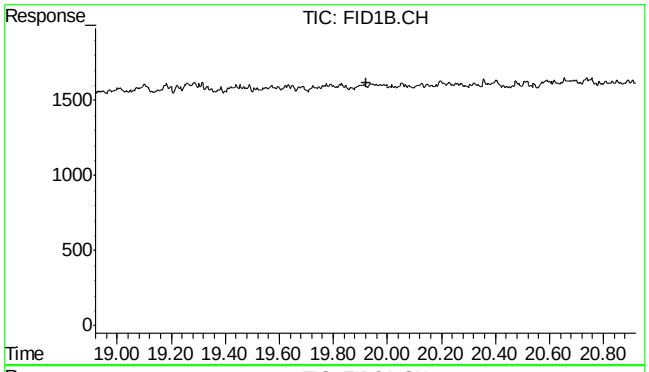
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 636173
Conc: N.D.



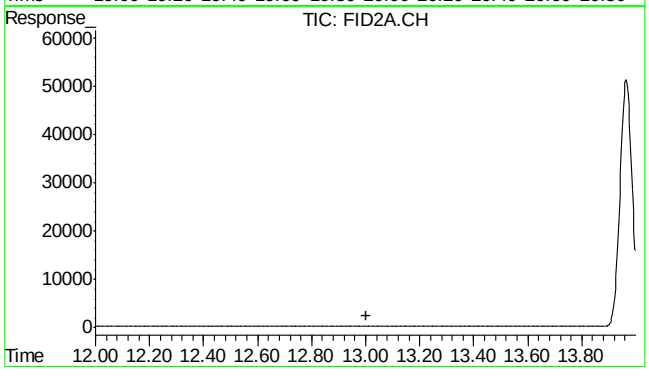
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 681763
Conc: 15.05 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 487385
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 209158
Conc: N.D.

7.1.4

7

SGS ACCUTEST FA40754

Manual Integration Approval Summary

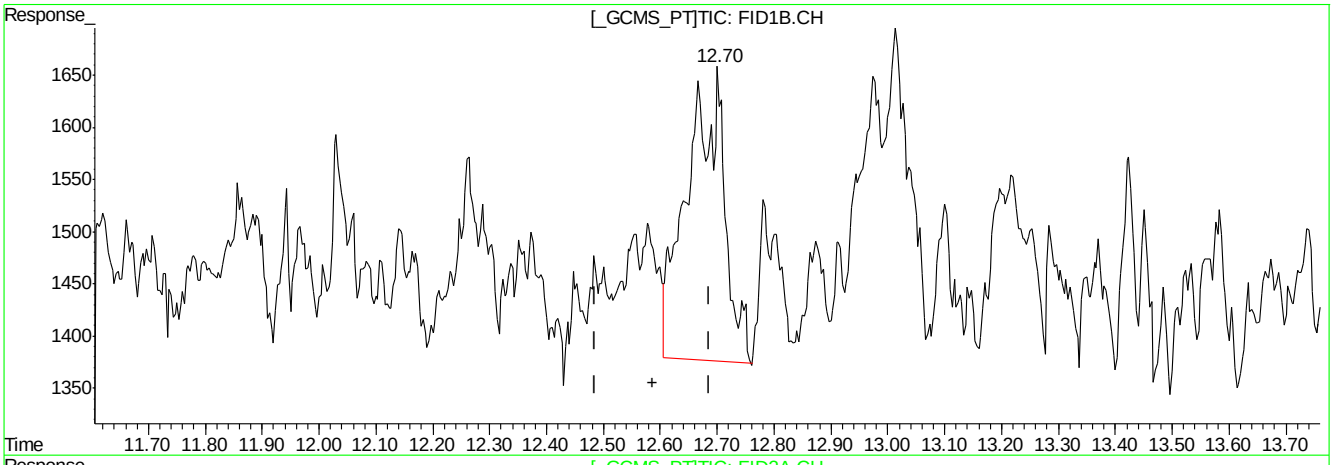
Sample Number:	FA40754-4	**Method:**	MADEP VPH REV 1.1
Lab FileID:	UV077769.D	**Analyst approved:**	02/03/17 15:32 Antonio Chardon
Injection Time:	02/01/17 04:21	**Supervisor approved:**	02/03/17 15:54 Juan Garcia

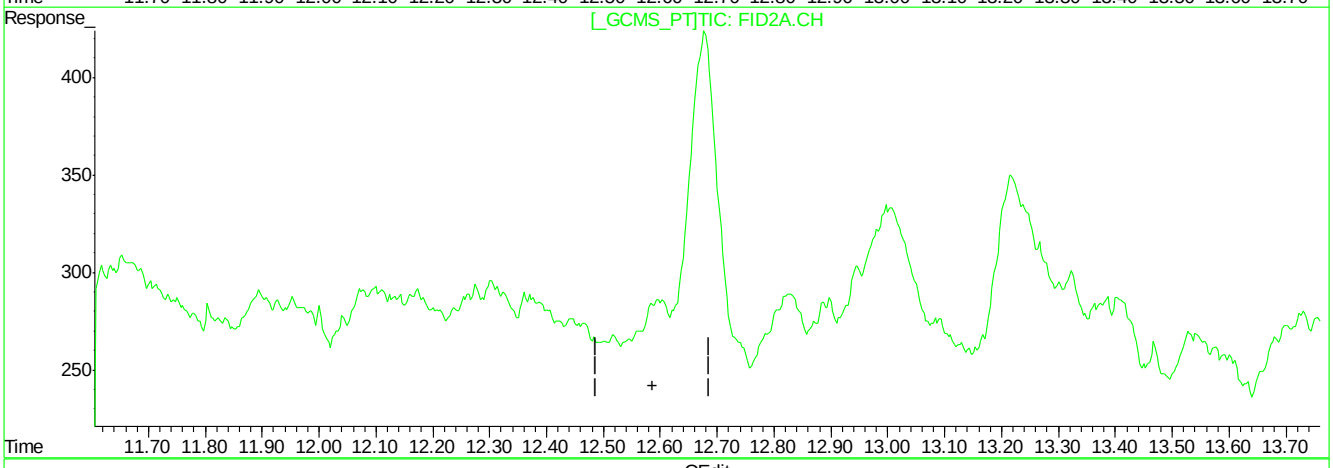
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethylbenzene	100-41-4	1	12.58	Poor instrument integration
Ethylbenzene	100-41-4	2	12.60	Poor instrument integration

Quantitation Report (Qedit)

```
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077769.D\FID1B.CH  Vial: 38
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077769.D\FID2A.CH
Acq On    : 01-Feb-2017, 04:21:42                        Operator: antonioc
Sample    : fa40754-4                                    Inst    : HP5890
Misc      : gc19636,guv4135,5.03,,100,5.1,,soil          Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E
Quant Time: Feb  1  8:04 2017  Quant Results File: VPH011317.RES


Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Multiple Level Calibration
```





QEdit

(17) Ethylbenzene

12.67min 0.710ug/L

response 12977

(17) Ethylbenzene #2

0.00min 0.000ug/L

response 0

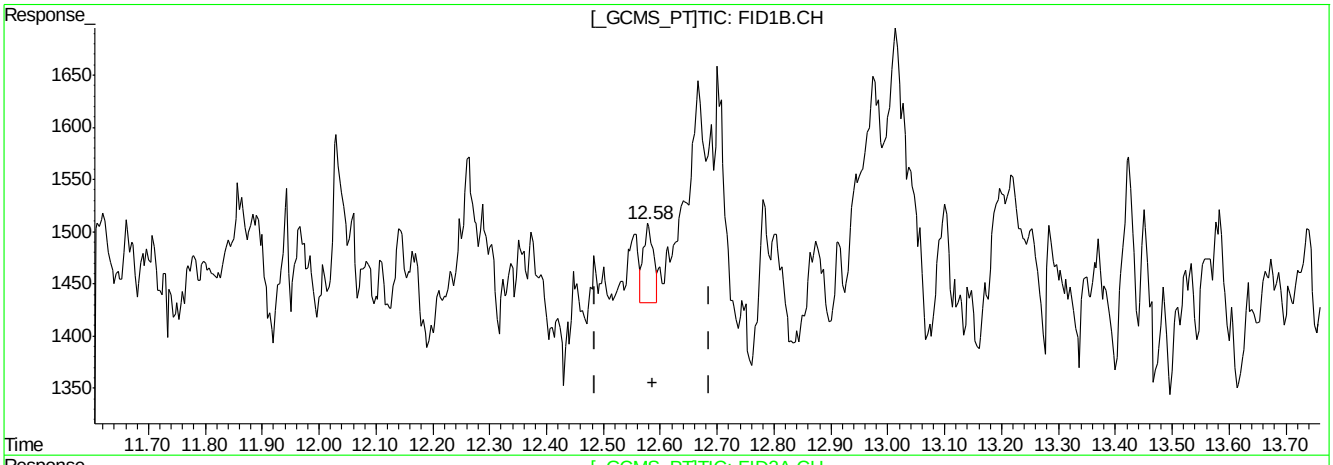
(+) = Expected Retention Time

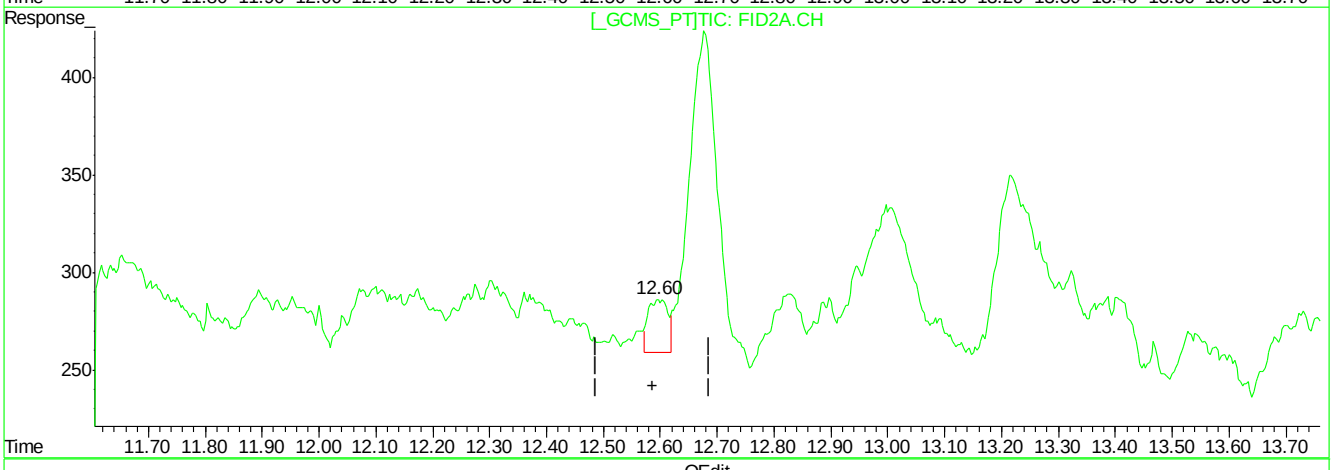
UV077769.D VPH011317.M Fri Feb 03 12:08:23 2017

Quantitation Report (Qedit)

```
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077769.D\FID1B.CH  Vial: 38
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077769.D\FID2A.CH
Acq On    : 01-Feb-2017, 04:21:42                        Operator: antonioc
Sample    : fa40754-4                                    Inst    : HP5890
Misc      : gc19636,guv4135,5.03,,100,5.1,,soil          Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E
Quant Time: Feb  1  8:04 2017  Quant Results File: VPH011317.RES


Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Multiple Level Calibration
```





QEdit

(17) Ethylbenzene

12.58min 0.049ug/L m

response 889

(17) Ethylbenzene #2

12.60min 0.033ug/L m

response 654

(+) = Expected Retention Time

UV077769.D VPH011317.M Fri Feb 03 12:08:57 2017

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077770.D\FID1B.CH Vial: 39
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077770.D\FID2A.CH
Acq On : 01-Feb-2017, 04:52:19 Operator: antonioc
Sample : fa40754-5 Inst : HP5890
Misc : gc19636,guv4135,4.06,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:04:35 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	0.00	0.00	0	0	N.D.	N.D.
2)	S	Alkane B	0.00	0.00	0	0	N.D.	N.D.
3)	S	Aromatic A	0.00	0.00	0	0	N.D.	N.D.
4)	S	Aromatic B	0.00	0.00	0	0	N.D.	N.D.
5)	S	Aromatic C	0.00	0.00	0	0	N.D.	N.D.
6)	S	Aromatic D	0.00	0.00	0	0	N.D.	N.D.
7)	S	Aromatic E	0.00	0.00	0	0	N.D.	N.D.
8)	S	Aromatic F	0.00	0.00	0	0	N.D.	N.D.
9)	S	Aromatic G	0.00	0.00	0	0	N.D.	N.D.
20)	S	BFB	13.96	13.97	3207475	1675507	174.742	184.976
		Spiked Amount 200.000 Range 70 - 130 Recovery =					87.37%	92.49%
		Target Compounds						
10)		Pentane	0.00	0.00	0	0	N.D.	N.D.
11)		2-Methylpentane	0.00	0.00	0	0	N.D.	N.D.
12)		Methyl Tert Buty	0.00	0.00	0	0	N.D. d	N.D. d
13)		2,2,4-Trimethylp	0.00	0.00	0	0	N.D.	N.D.
14)		Benzene	0.00	0.00	0	0	N.D.	N.D.
15)		Toluene	0.00	0.00	0	0	N.D.	N.D.
16)		Nonane	0.00	0.00	0	0	N.D.	N.D.
17)		Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
18)		m,p-Xylene	0.00	0.00	0	0	N.D.	N.D.
19)		o-Xylene	0.00	0.00	0	0	N.D.	N.D.
21)		Decane	0.00	0.00	0	0	N.D.	N.D.
22)		1,2,4-Trimethylb	0.00	0.00	0	0	N.D.	N.D.
23)		Butylcyclohexane	0.00	0.00	0	0	N.D.	N.D.
24)		Naphthalene	0.00	0.00	0	0	N.D.	N.D.
25)	H	C9- C10 Aromatic	15.81	15.81	399990	152753	4.986	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	471251	603497	NoCal	8.697 #
27)	H	C9- C12 Aliphati	19.92	13.00	495261	212728	NoCal	N.D.

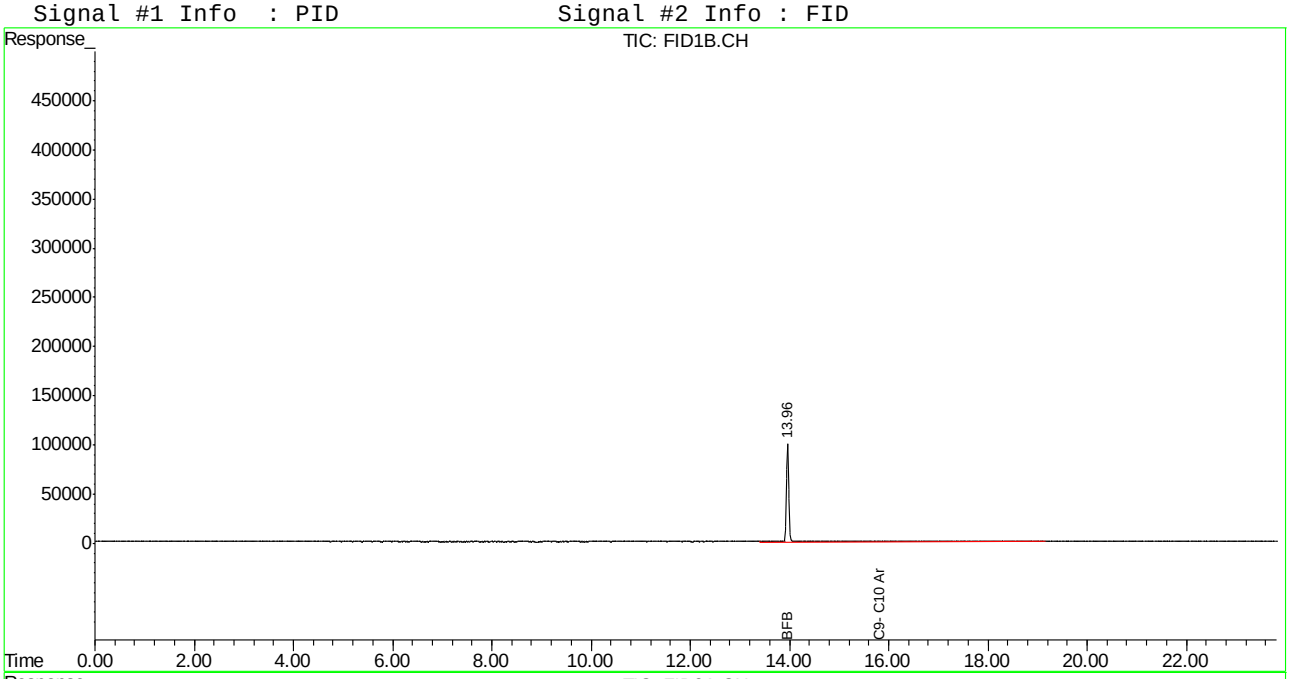
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077770.D VPH011317.M Fri Feb 03 13:19:29 2017

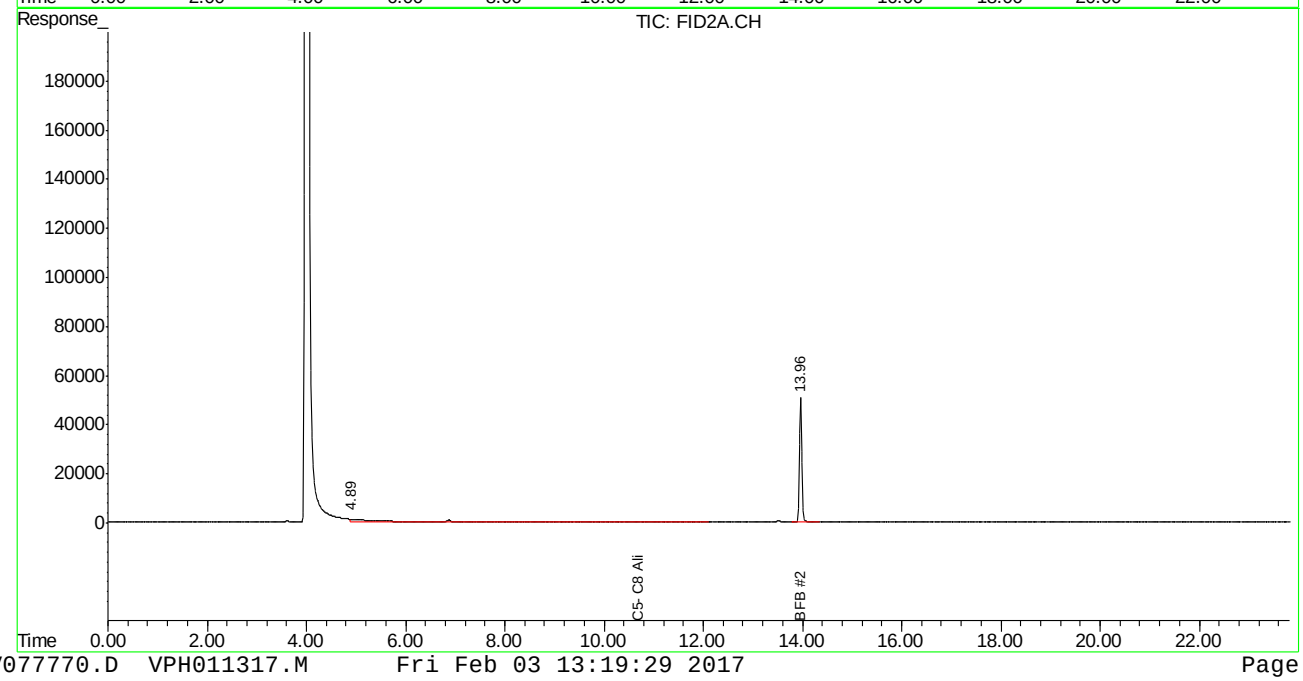
Quantitation Report (QT Reviewed)

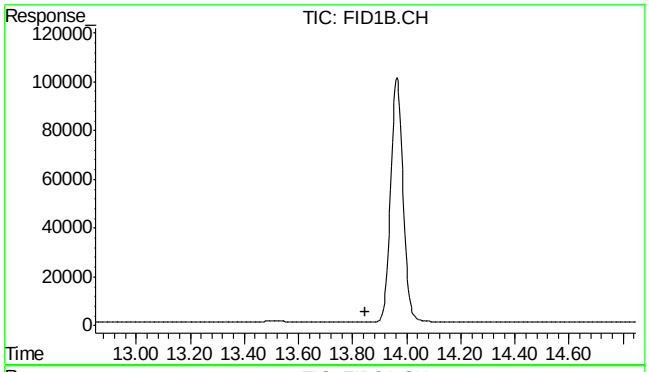
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077770.D\FID1B.CH Vial: 39
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077770.D\FID2A.CH
Acq On : 01-Feb-2017, 04:52:19 Operator: antonioc
Sample : fa40754-5 Inst : HP5890
Misc : gc19636,guv4135,4.06,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 3 12:10 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

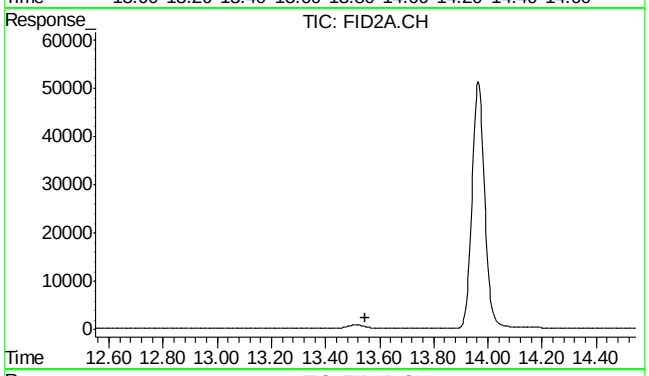






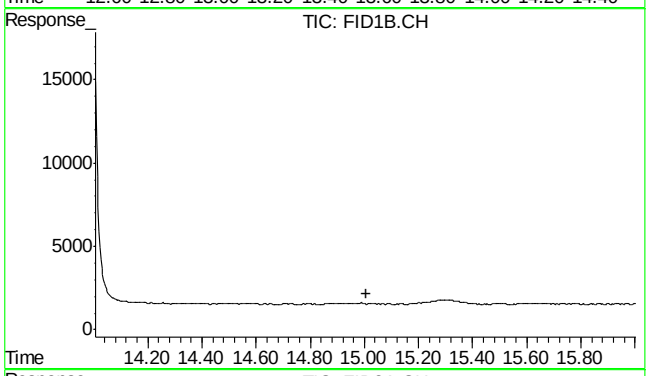
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.847 min
Response: 0
Conc: N.D.



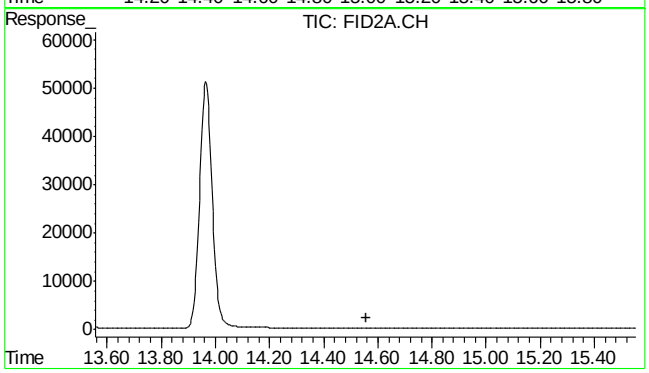
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



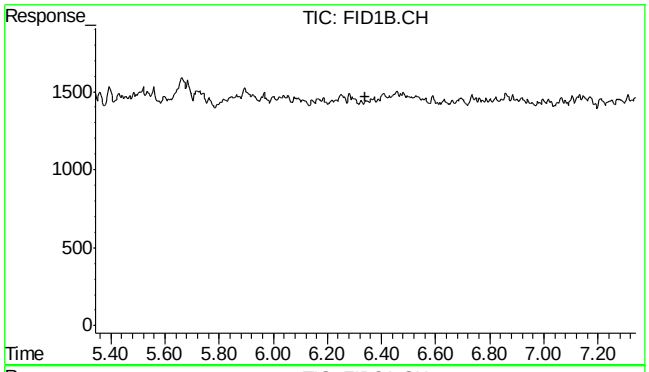
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



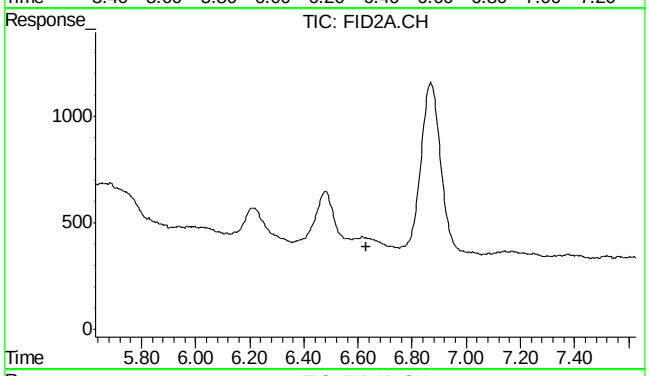
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.



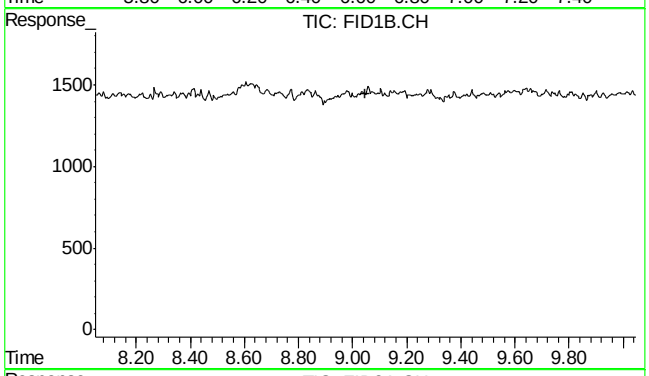
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



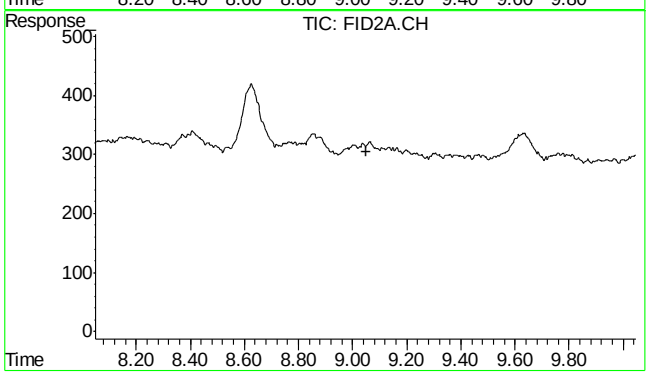
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



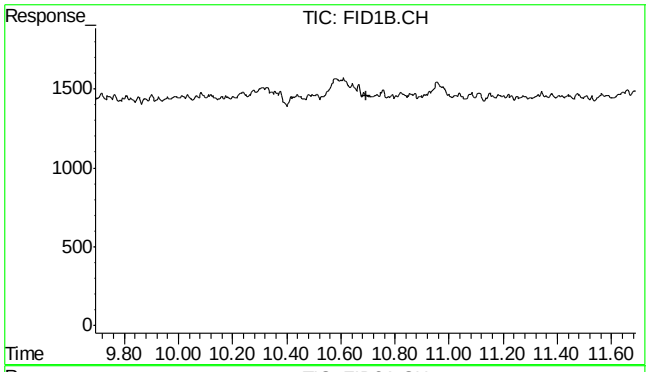
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.049 min
Response: 0
Conc: N.D.

7.1.5

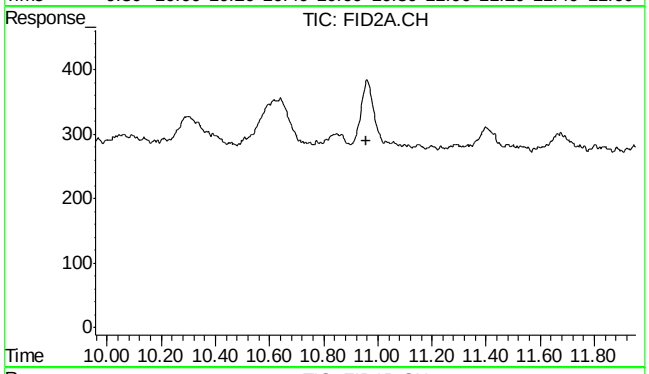
7

SGS ACCUTEST FA40754



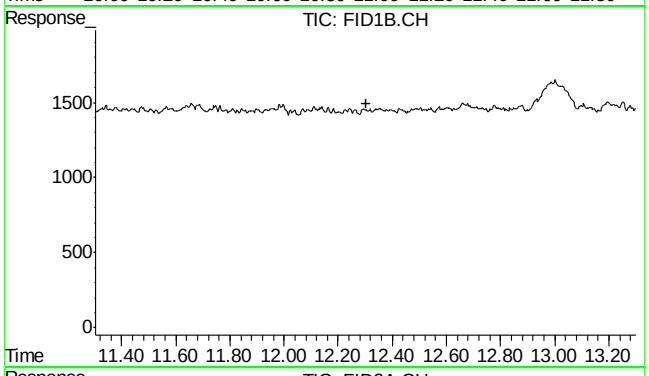
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



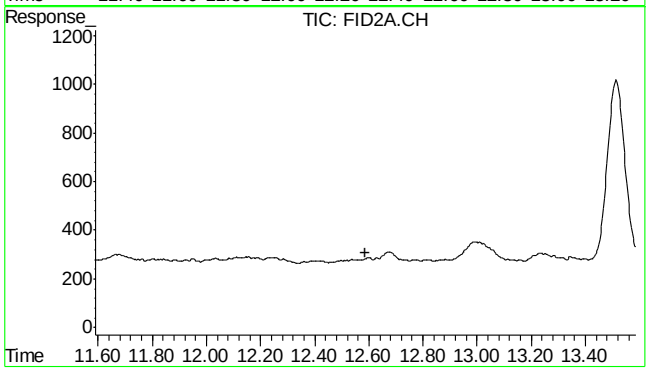
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.956 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



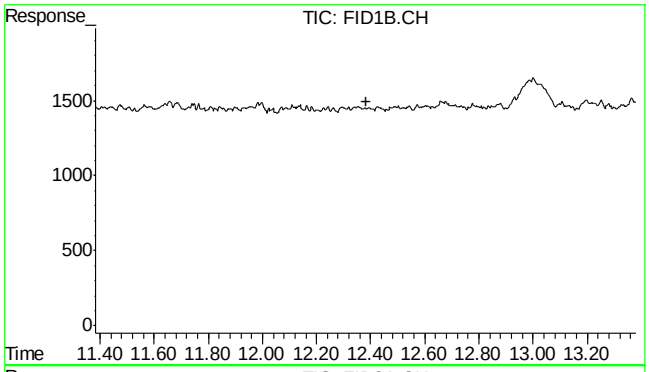
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.

7.1.5

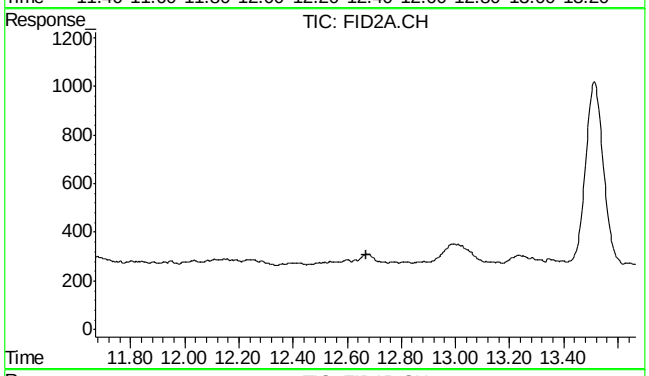
7

SGS ACCUTEST FA40754



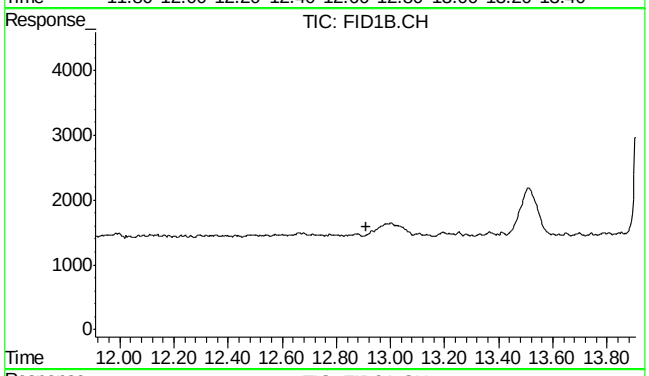
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



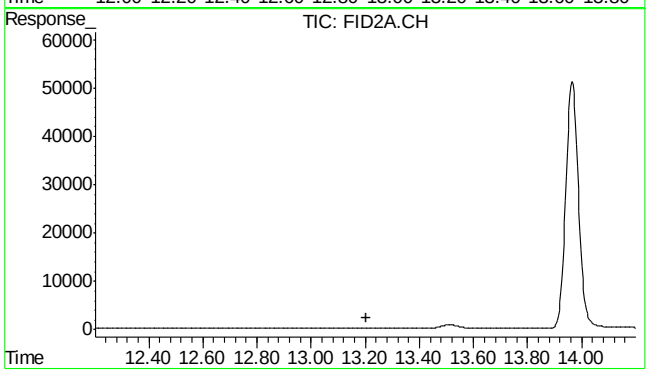
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



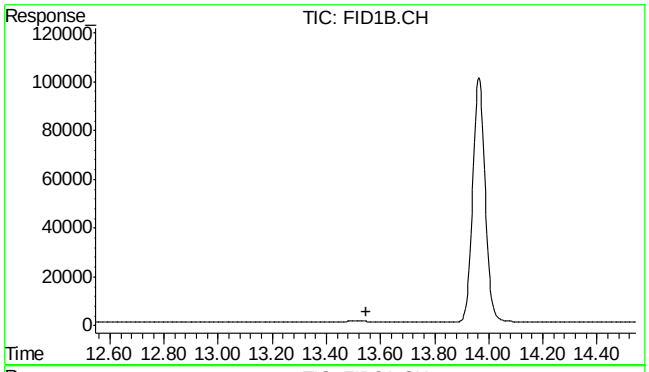
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



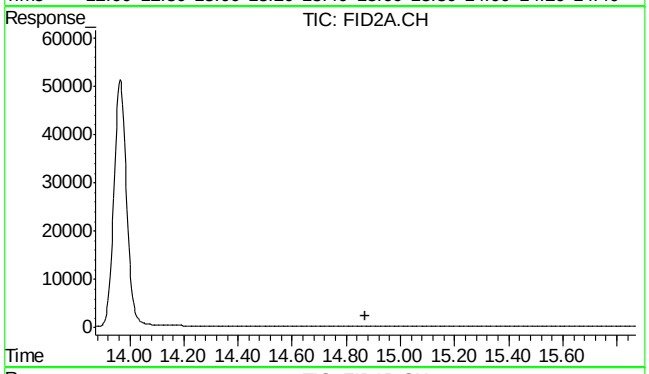
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



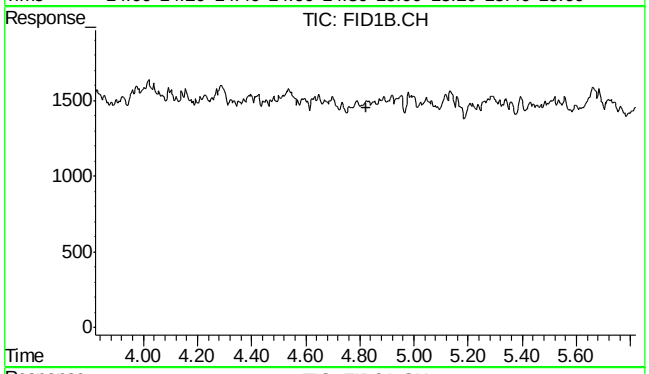
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



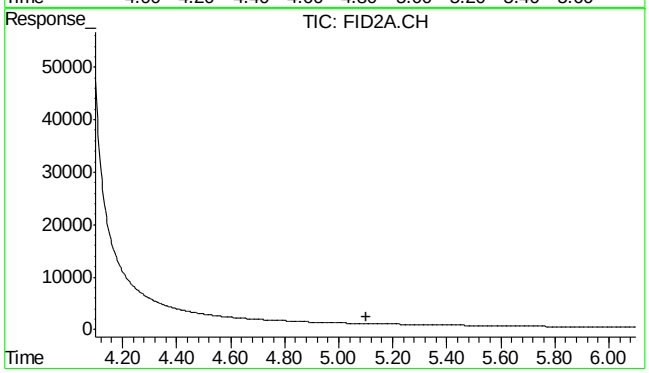
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



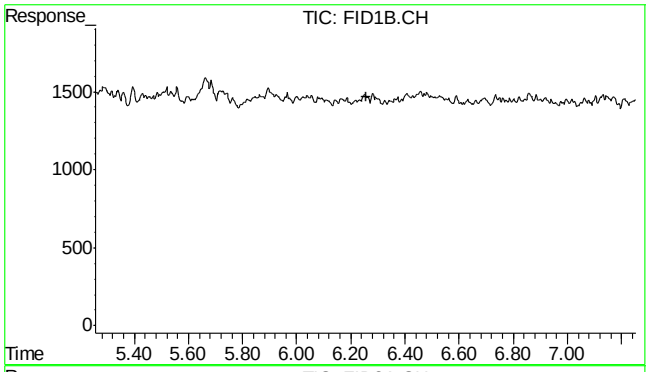
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



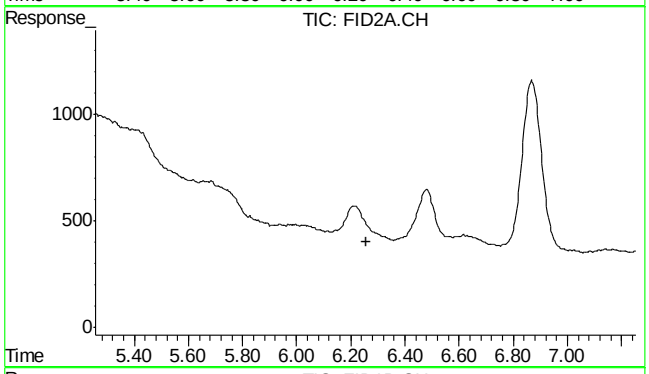
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 5.100 min
Response: 0
Conc: N.D.



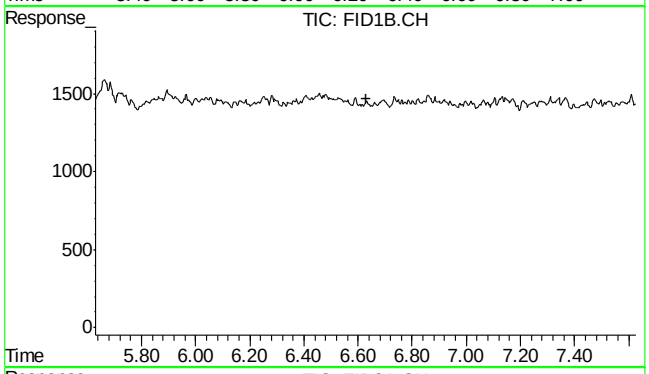
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



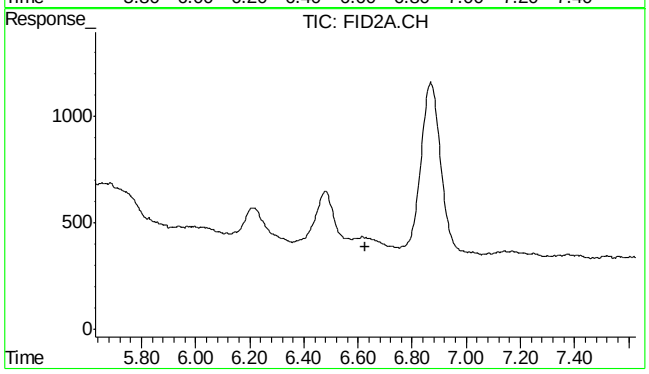
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



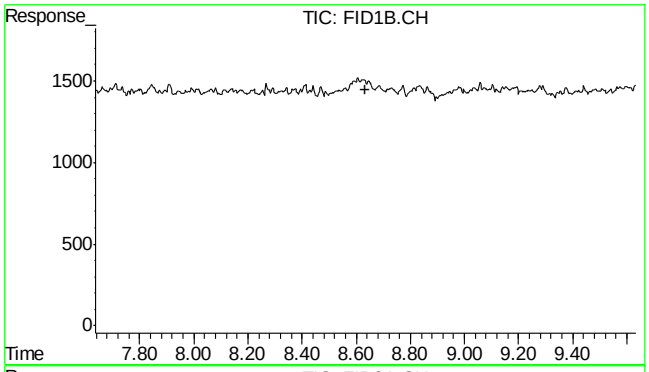
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



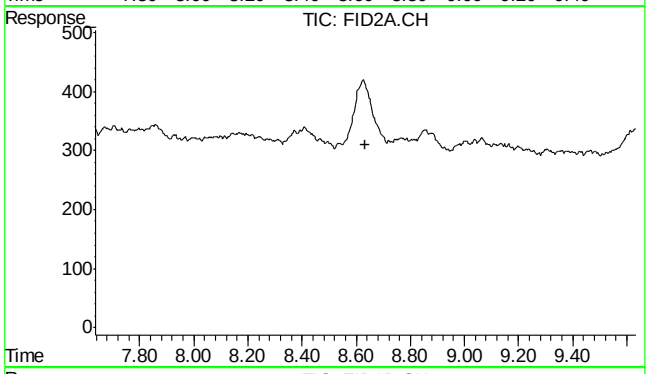
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.628 min
Response: 0
Conc: N.D.



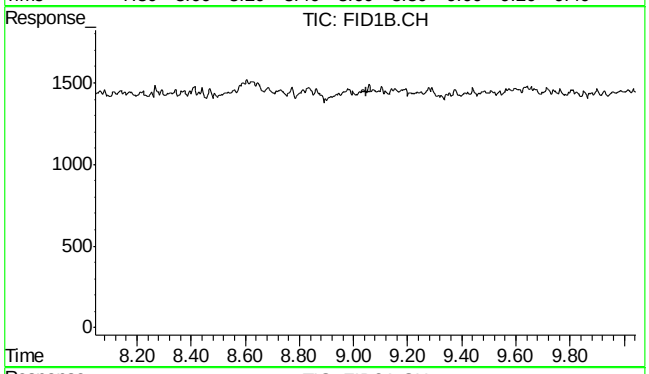
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



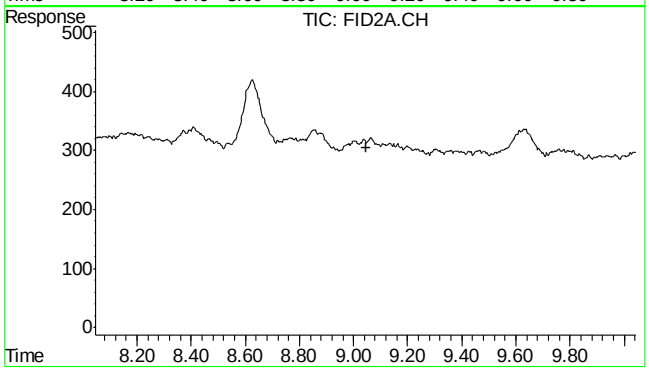
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



#14 Benzene

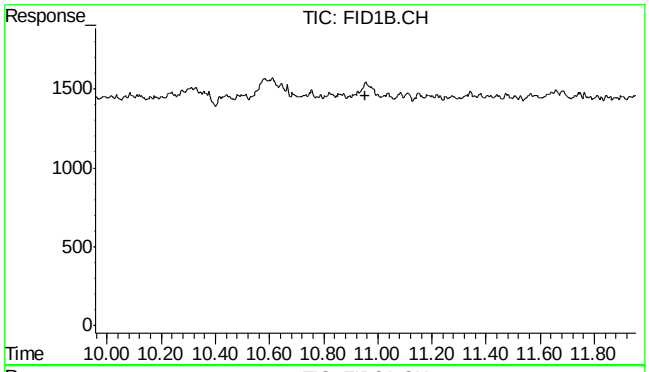
R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



#14 Benzene

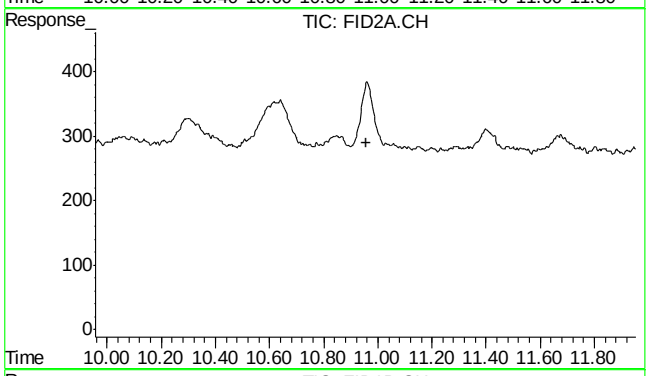
R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.

SGS ACCUTEST FA40754



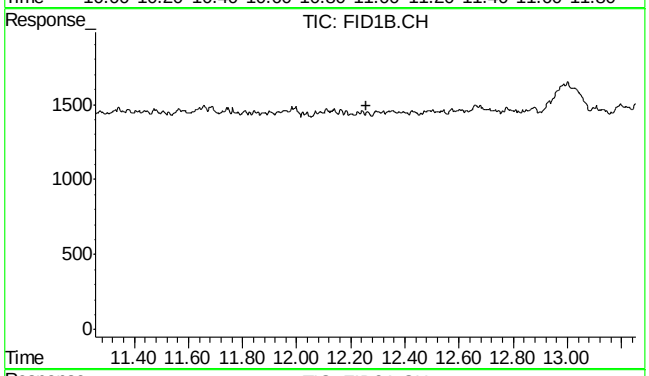
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



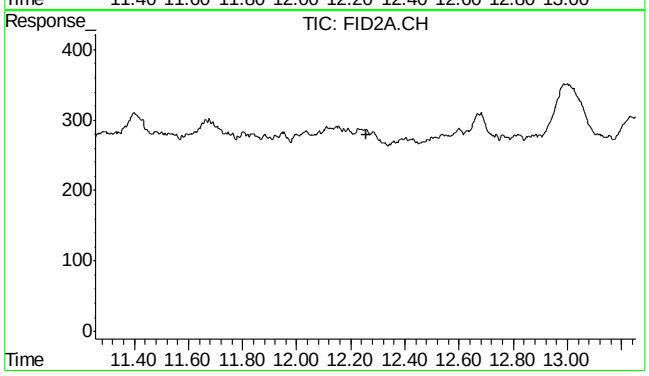
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



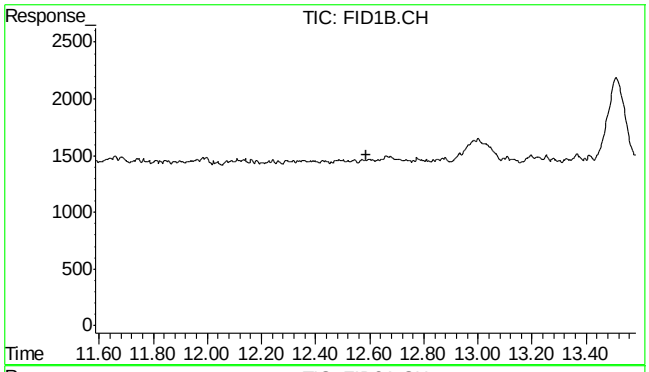
#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



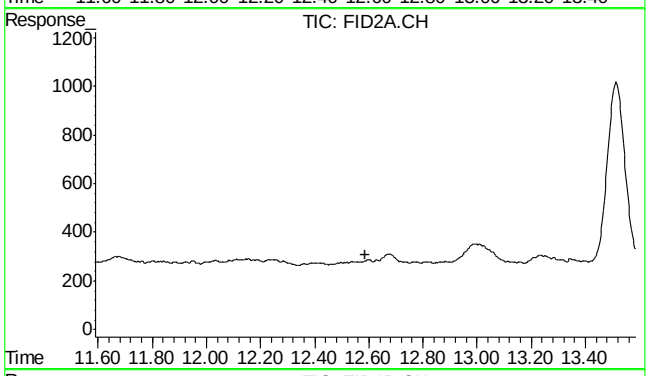
#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



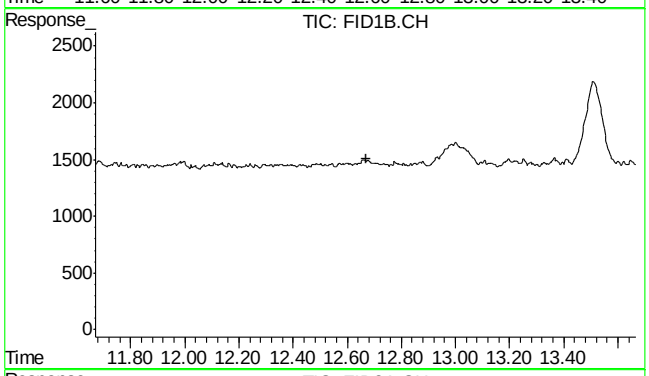
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.586 min
Response: 0
Conc: N.D.



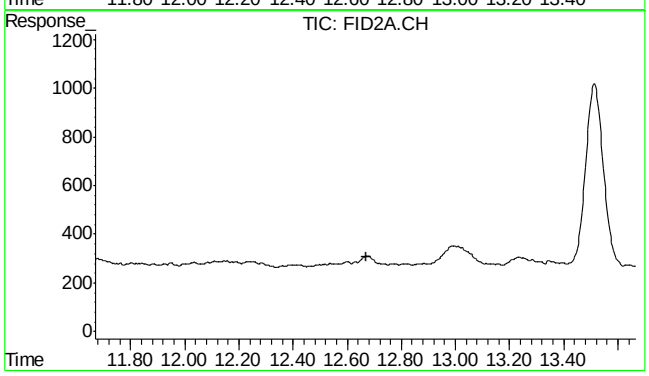
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



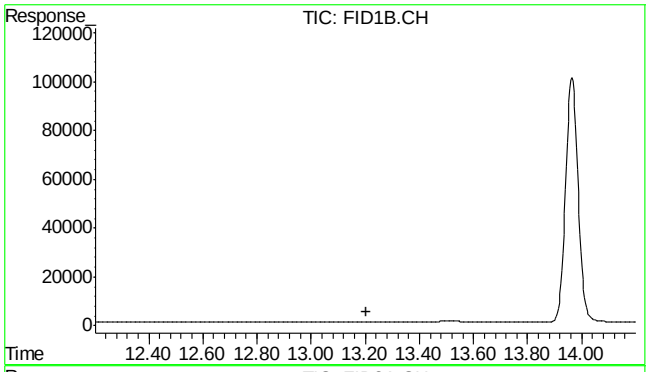
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



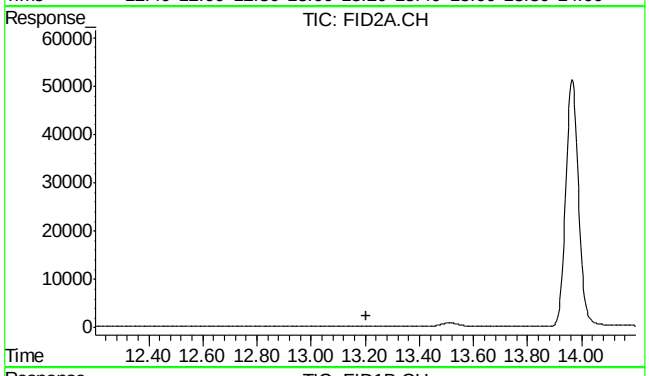
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



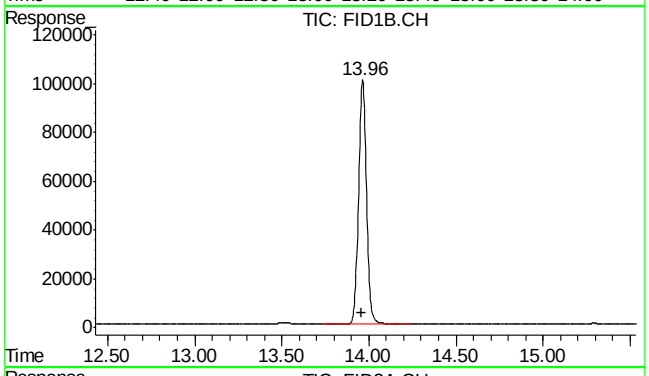
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



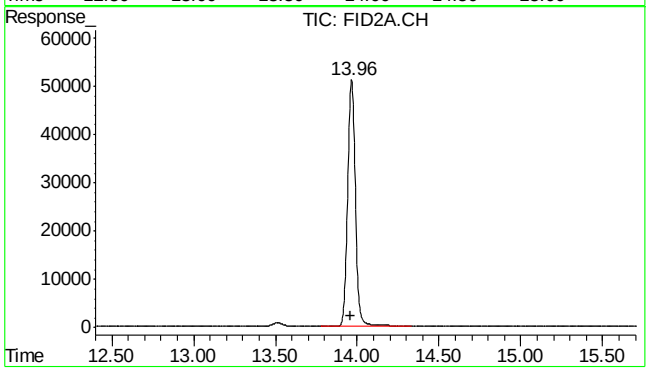
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



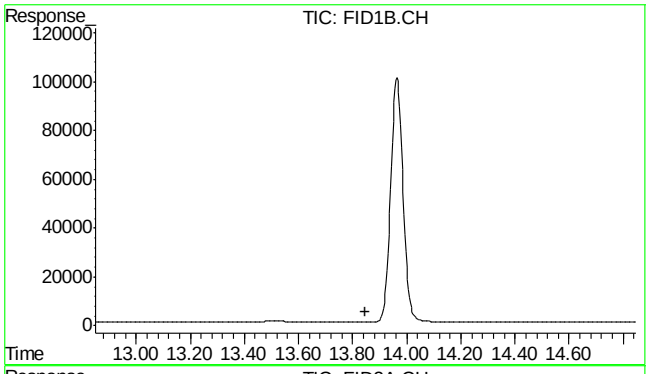
#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 3207475
Conc: 174.74 ug/L



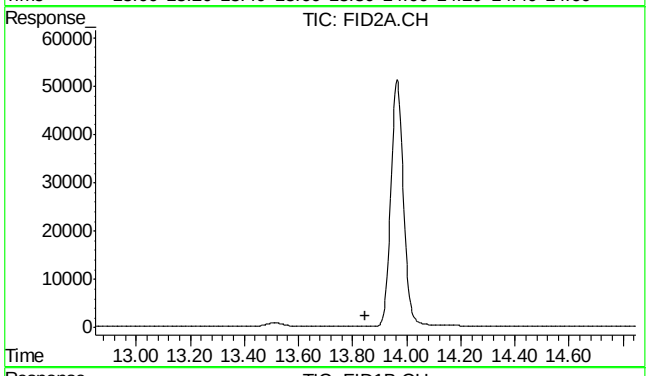
#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 1675507
Conc: 184.98 ug/L



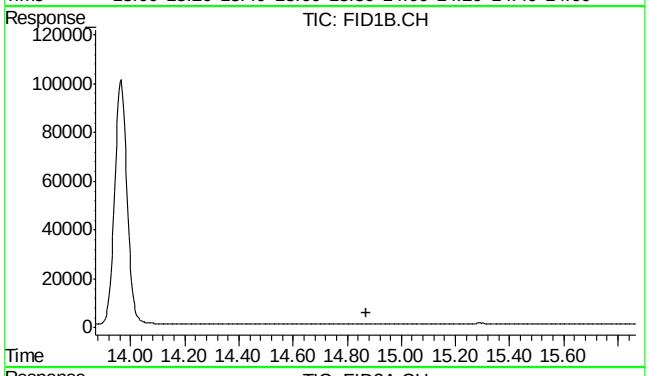
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



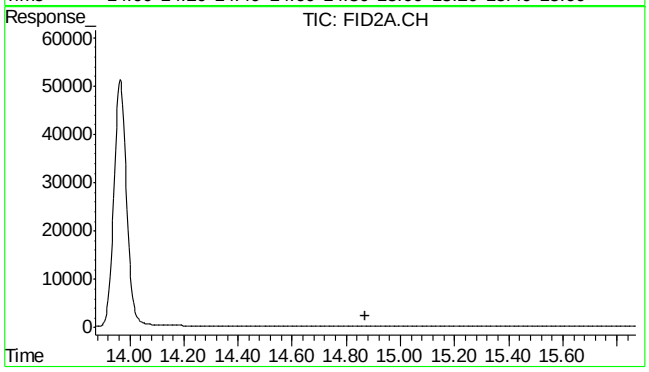
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



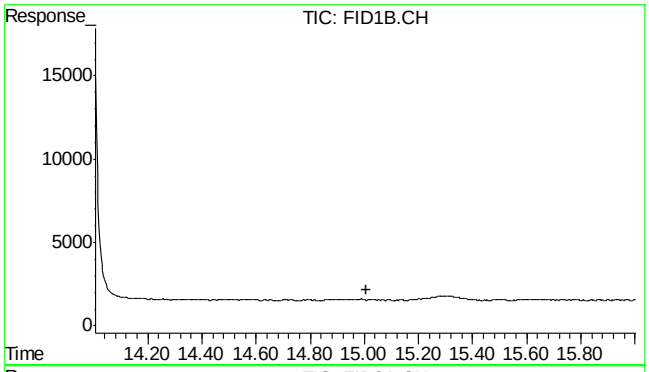
#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.870 min
Response: 0
Conc: N.D.



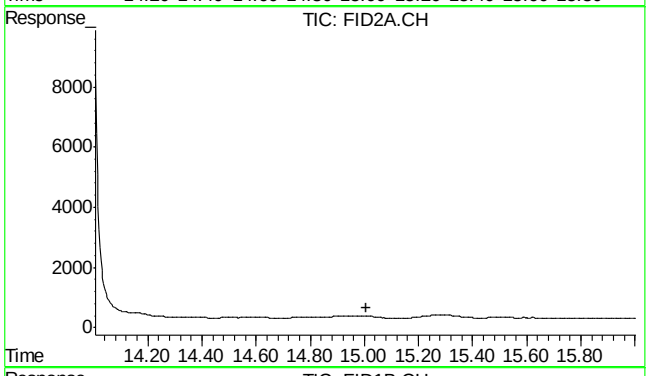
#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



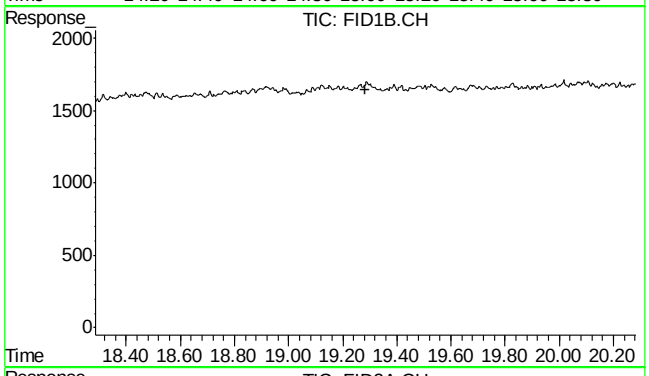
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



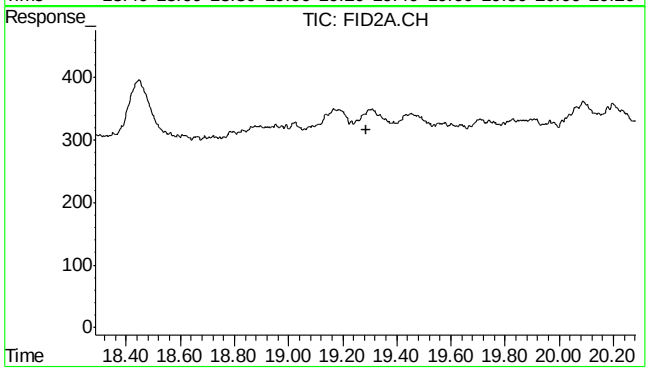
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



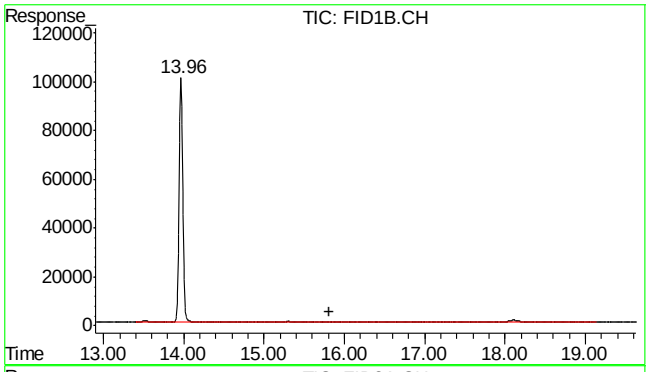
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.284 min
Response: 0
Conc: N.D.



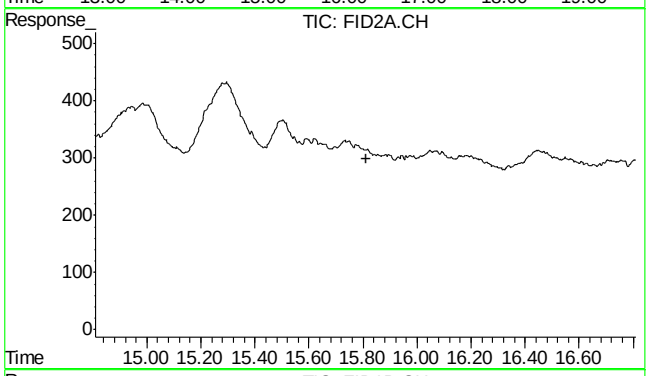
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.286 min
Response: 0
Conc: N.D.



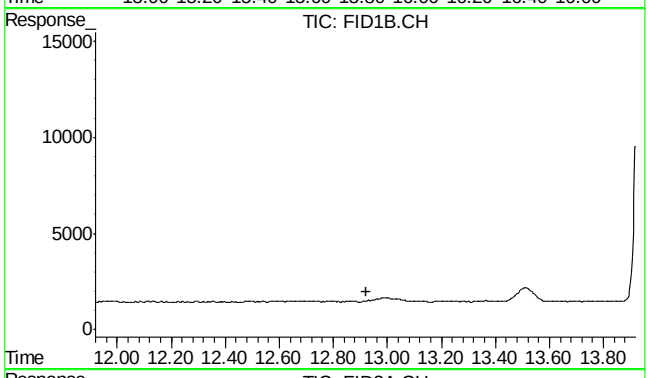
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 399990
Conc: 4.99 ug/L m



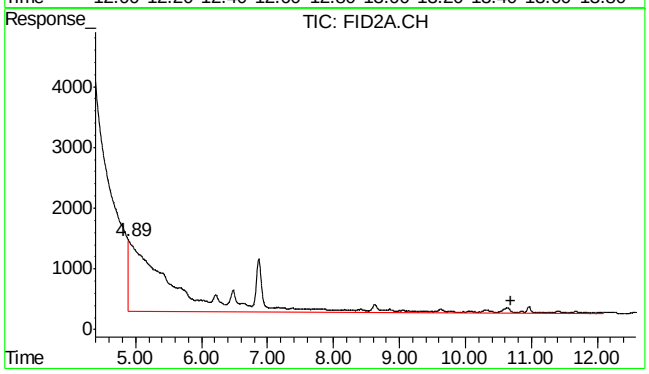
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 152753
Conc: N.D.



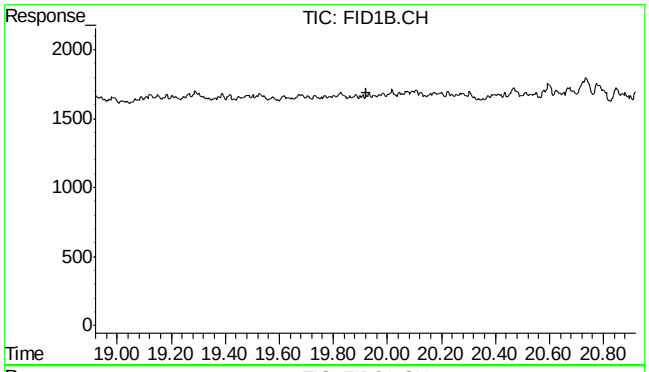
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 471251
Conc: N.D.



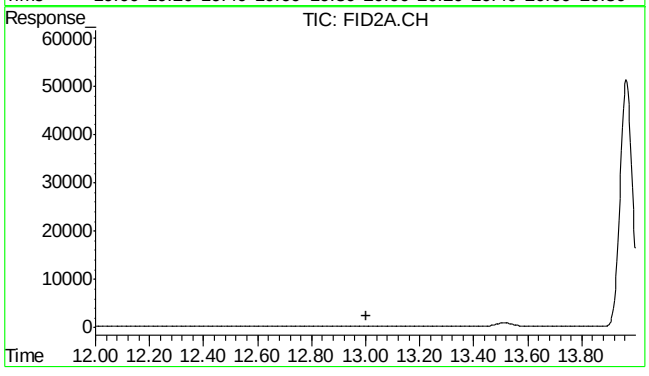
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 603497
Conc: 8.70 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 495261
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 212728
Conc: N.D.

7.1.5

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\020617\UV077880.D\FID1B.CH Vial: 30
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077880.D\FID2A.CH
Acq On : 07-Feb-2017, 07:46:44 Operator: antonioc
Sample : fa40754-7 Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 07 10:02:59 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	0.00	0.00	0	0	N.D.	N.D.
2)	S	Alkane B	0.00	0.00	0	0	N.D.	N.D.
3)	S	Aromatic A	0.00	0.00	0	0	N.D.	N.D.
4)	S	Aromatic B	0.00	0.00	0	0	N.D.	N.D.
5)	S	Aromatic C	0.00	0.00	0	0	N.D.	N.D.
6)	S	Aromatic D	0.00	0.00	0	0	N.D.	N.D.
7)	S	Aromatic E	0.00	0.00	0	0	N.D.	N.D.
8)	S	Aromatic F	0.00	0.00	0	0	N.D.	N.D.
9)	S	Aromatic G	0.00	0.00	0	0	N.D.	N.D.
20)	S	BFB	13.97	13.97	1413542	750593	77.009	82.865
		Spiked Amount 40.000 Range 70 - 130 Recovery = 192.52%# 207.16%#						
		Target Compounds						
10)		Pentane	0.00	0.00	0	0	N.D.	N.D.
11)		2-Methylpentane	0.00	0.00	0	0	N.D.	N.D.
12)		Methyl Tert Buty	0.00	0.00	0	0	N.D. d	N.D. d
13)		2,2,4-Trimethylp	0.00	0.00	0	0	N.D.	N.D.
14)		Benzene	0.00	0.00	0	0	N.D.	N.D.
15)		Toluene	0.00	0.00	0	0	N.D.	N.D.
16)		Nonane	0.00	0.00	0	0	N.D.	N.D.
17)		Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
18)		m,p-Xylene	0.00	0.00	0	0	N.D.	N.D.
19)		o-Xylene	0.00	0.00	0	0	N.D.	N.D.
21)		Decane	0.00	0.00	0	0	N.D.	N.D.
22)		1,2,4-Trimethylb	0.00	0.00	0	0	N.D.	N.D.
23)		Butylcyclohexane	0.00	0.00	0	0	N.D.	N.D.
24)		Naphthalene	0.00	0.00	0	0	N.D.	N.D.
25)	H	C9- C10 Aromatic	15.81	15.81	344747	109995	2.212	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	792008	822094	NoCal	26.446 #
27)	H	C9- C12 Aliphati	19.92	13.00	433814	146271	NoCal	N.D.

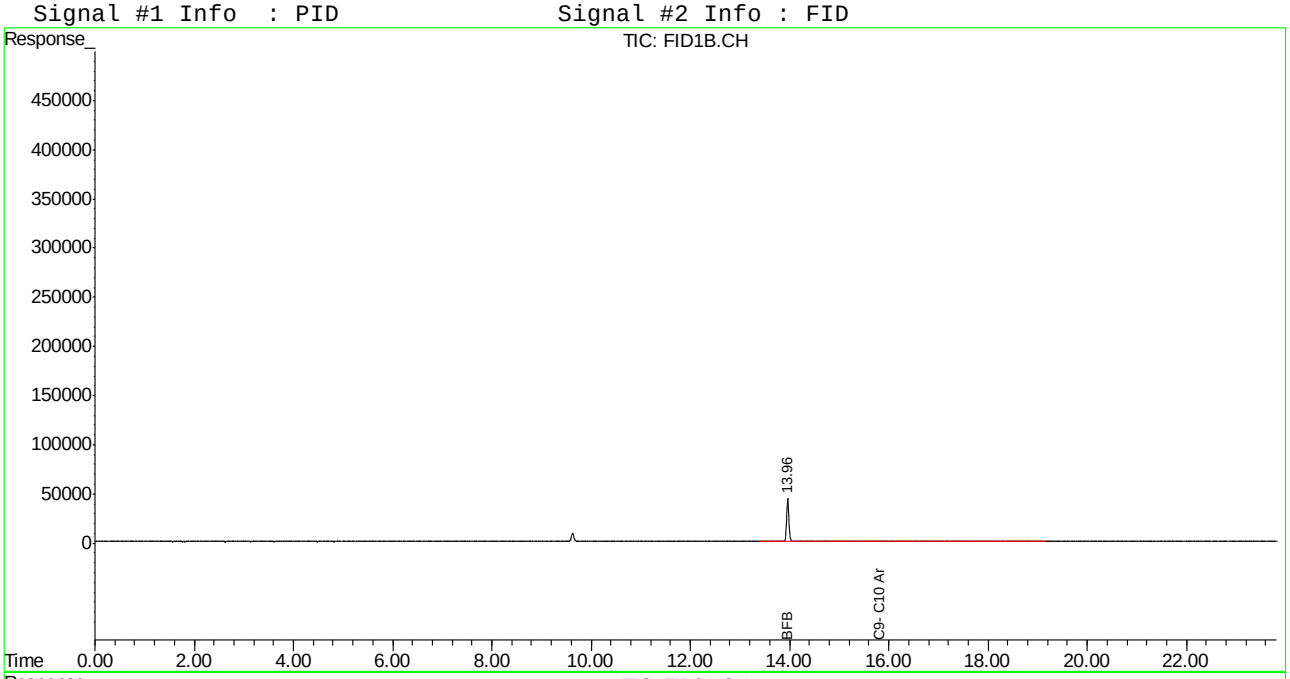
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077880.D VPH011317.M Tue Feb 07 12:55:46 2017

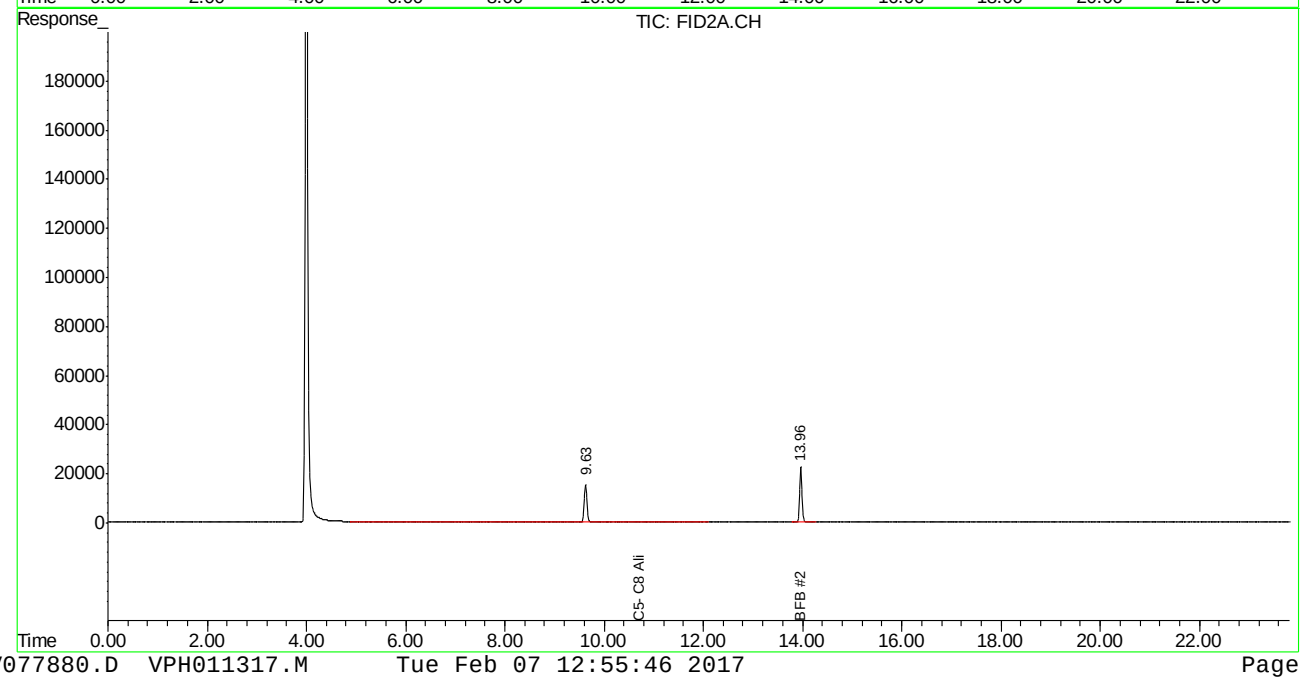
Quantitation Report (QT Reviewed)

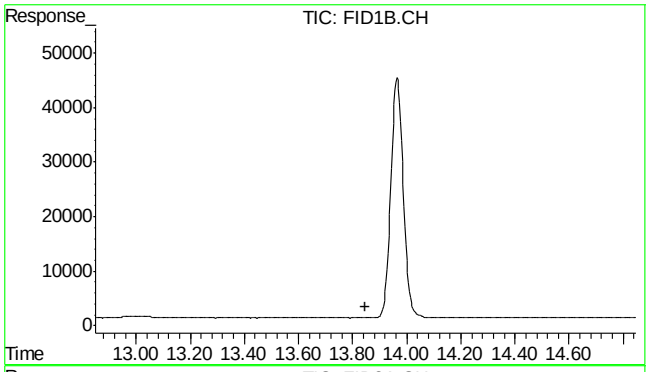
Signal #1 : C:\HPCHEM\2\DATA\020617\UV077880.D\FID1B.CH Vial: 30
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077880.D\FID2A.CH
Acq On : 07-Feb-2017, 07:46:44 Operator: antonioc
Sample : fa40754-7 Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 7 11:34 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

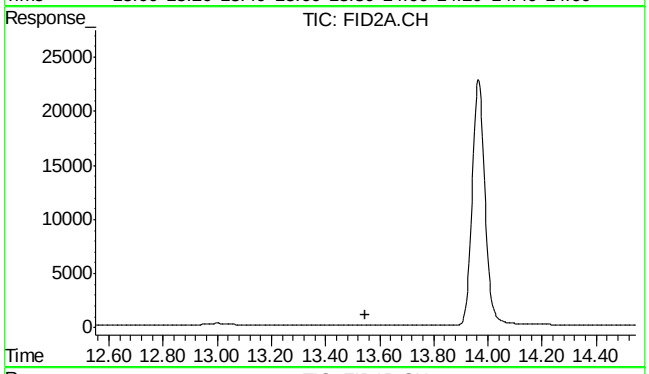






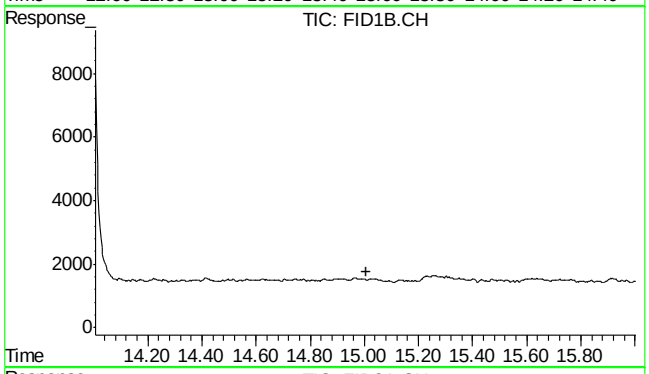
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.847 min
Response: 0
Conc: N.D.



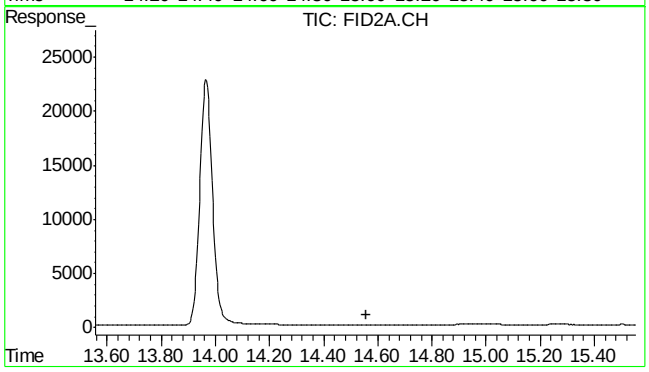
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



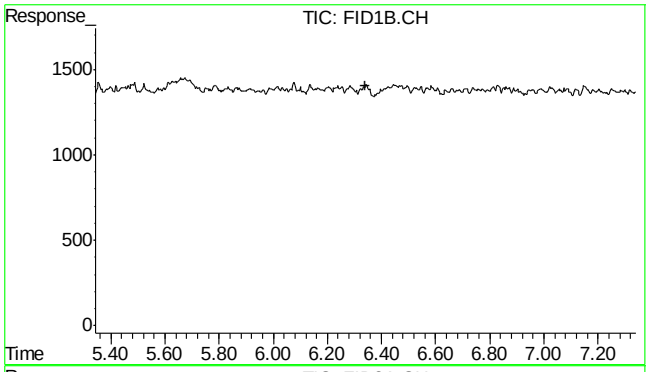
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



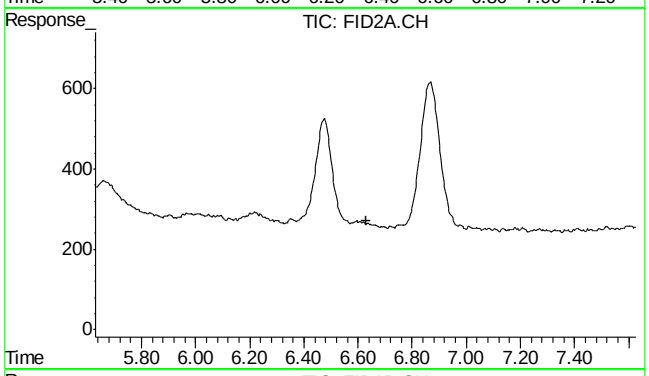
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.



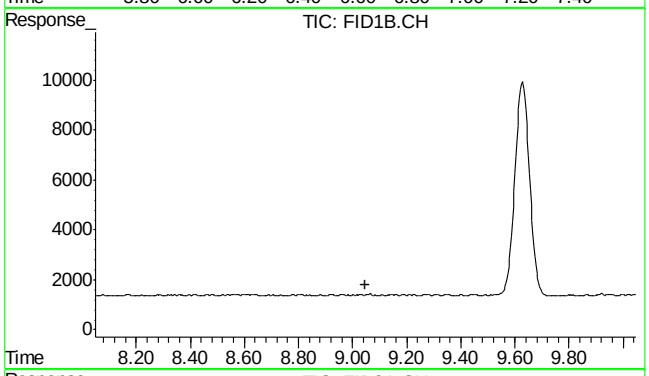
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



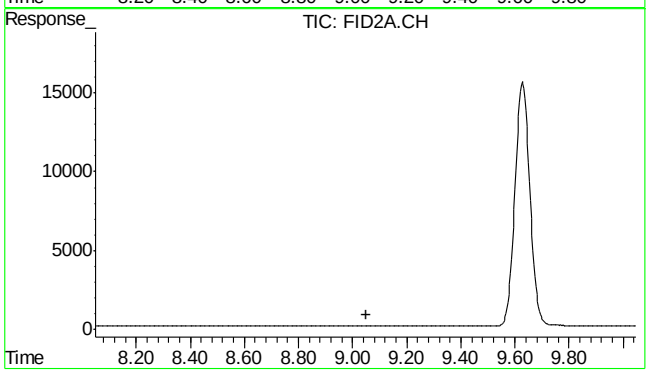
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



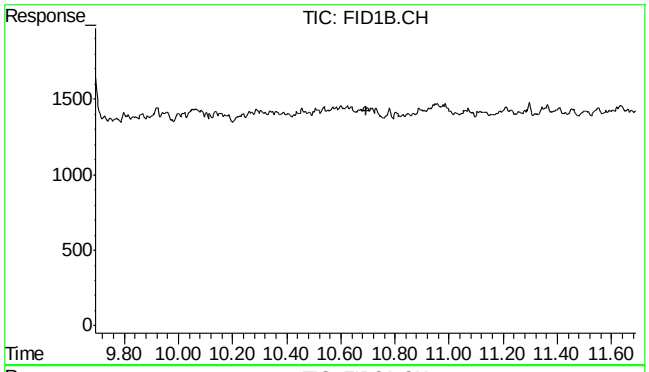
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



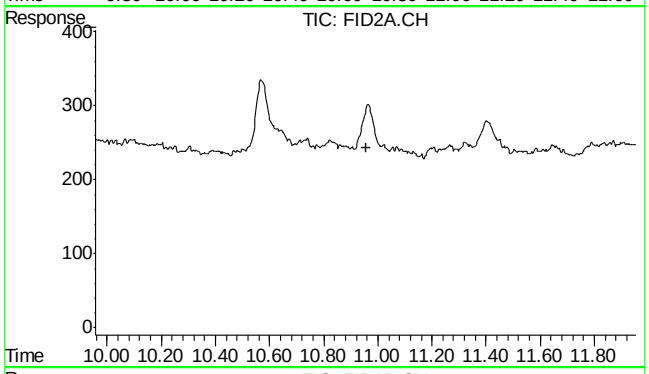
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.049 min
Response: 0
Conc: N.D.



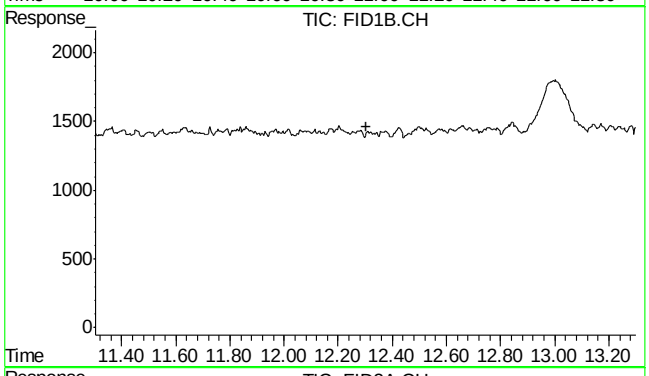
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



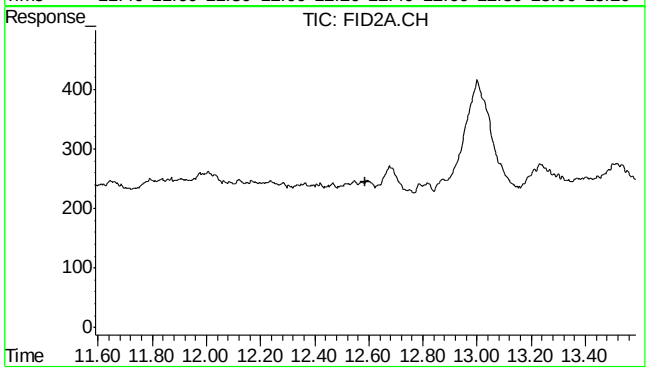
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.956 min
Response: 0
Conc: N.D.



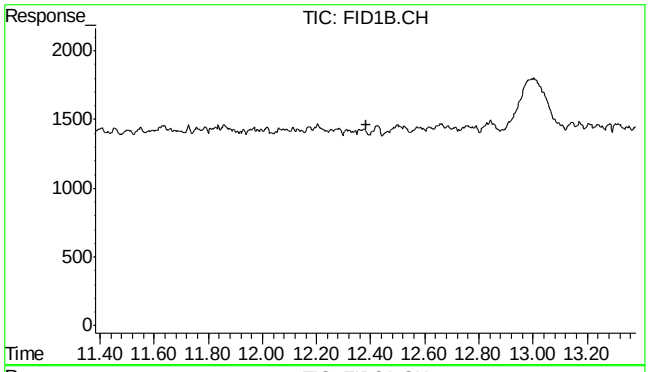
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



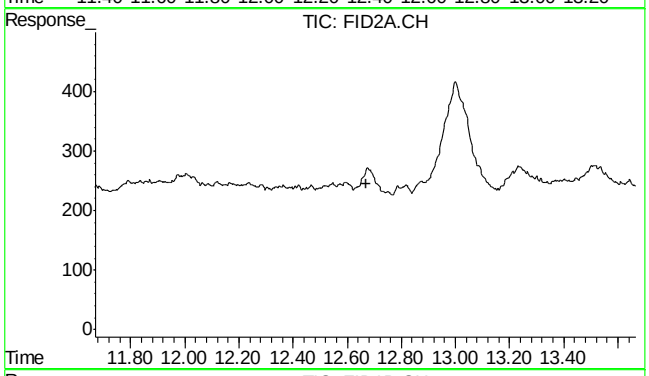
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



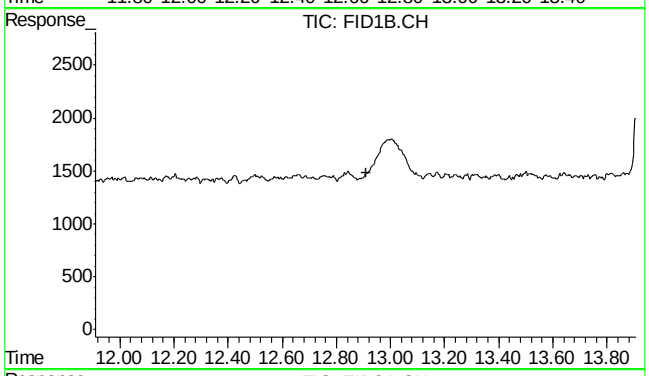
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



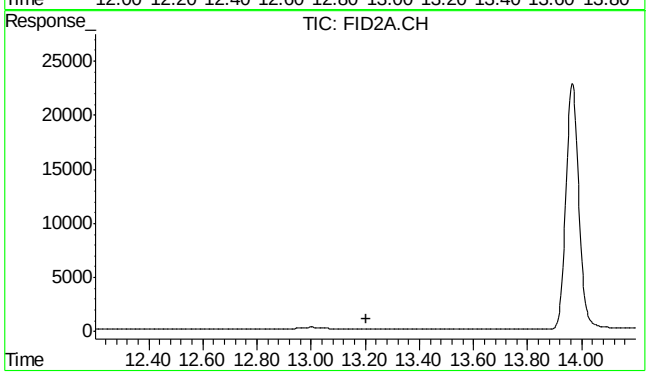
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



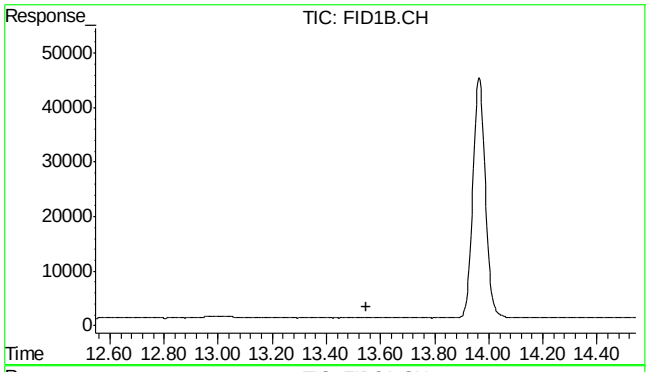
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



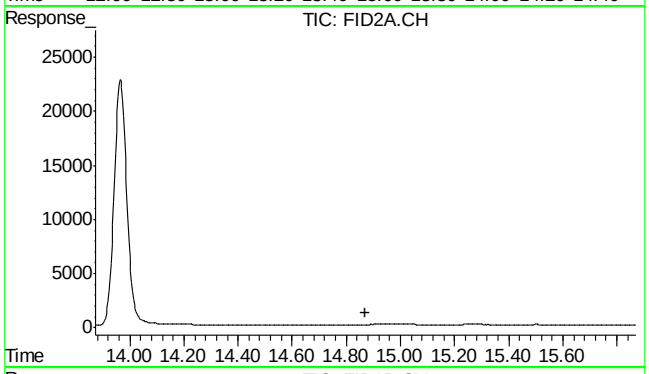
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



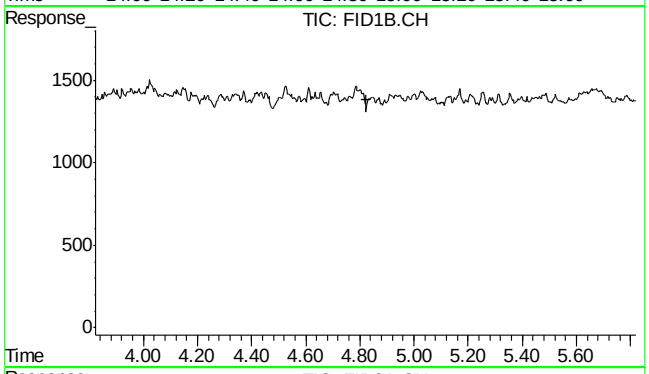
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



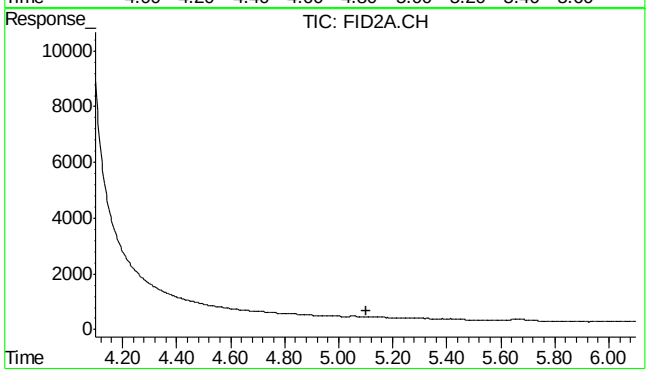
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



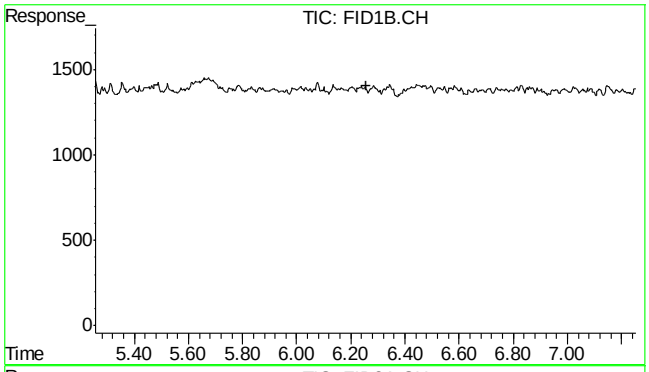
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



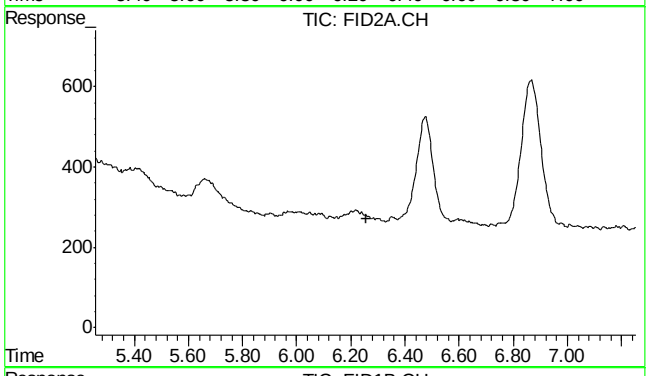
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 5.100 min
Response: 0
Conc: N.D.



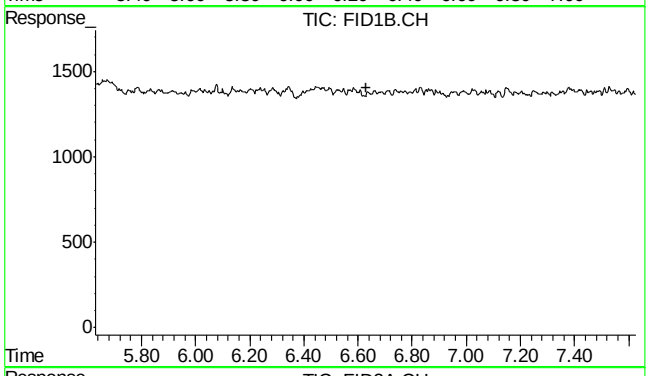
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



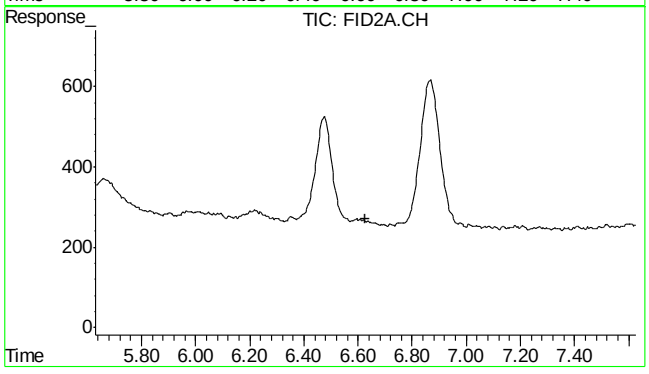
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



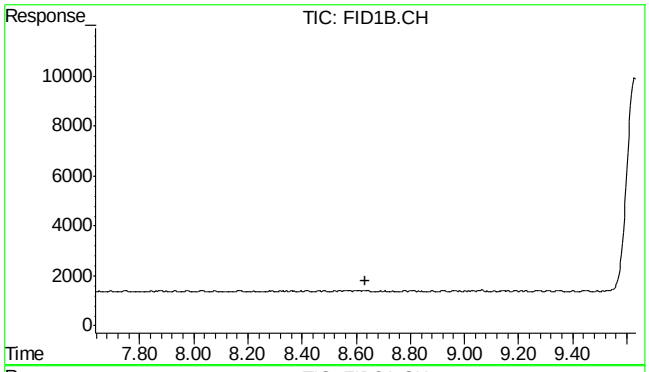
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



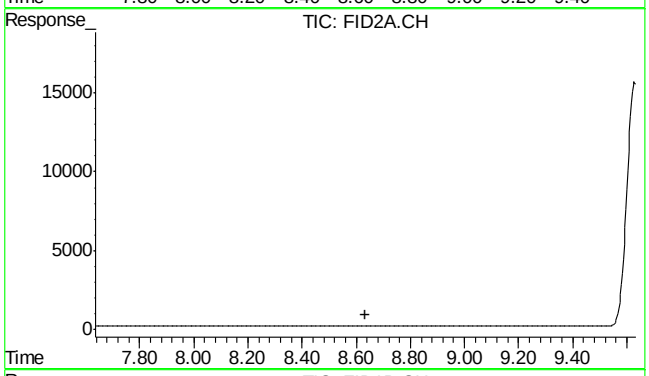
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.628 min
Response: 0
Conc: N.D.



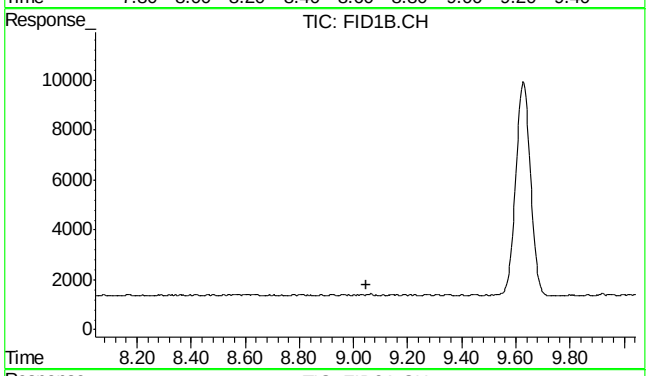
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



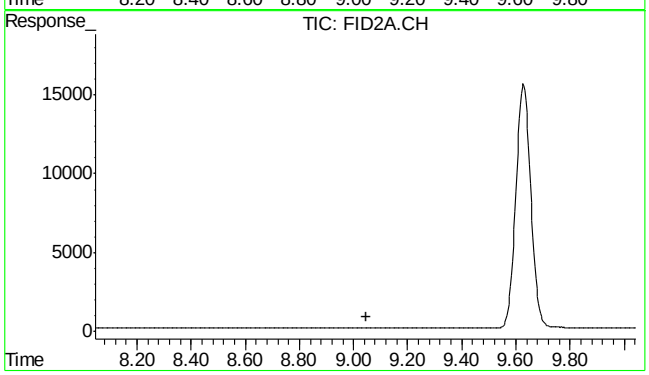
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



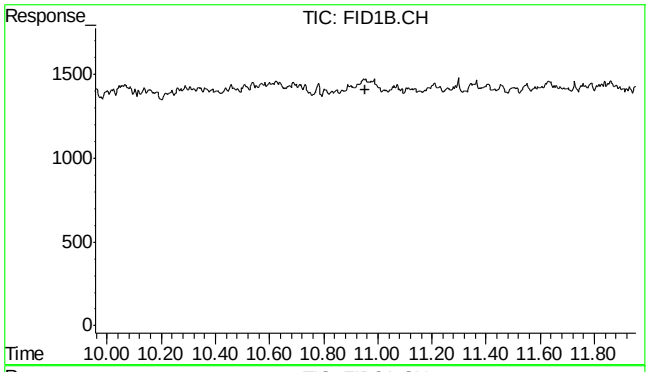
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



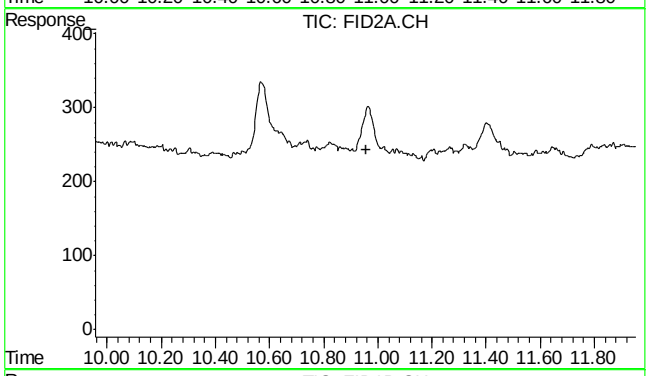
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



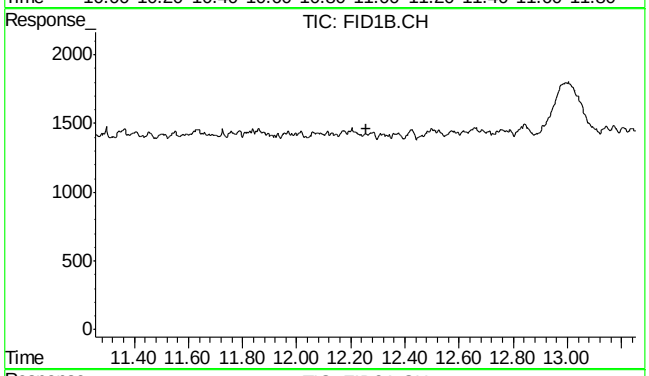
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



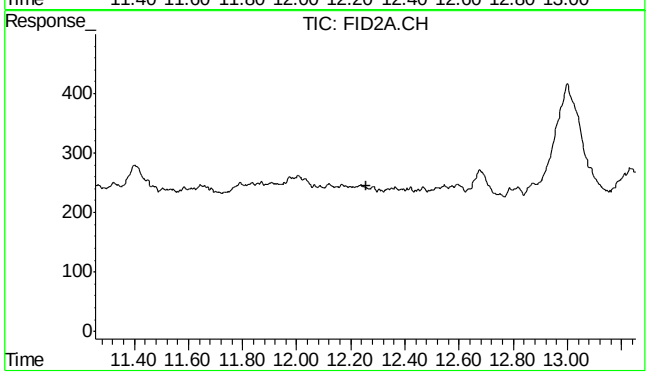
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



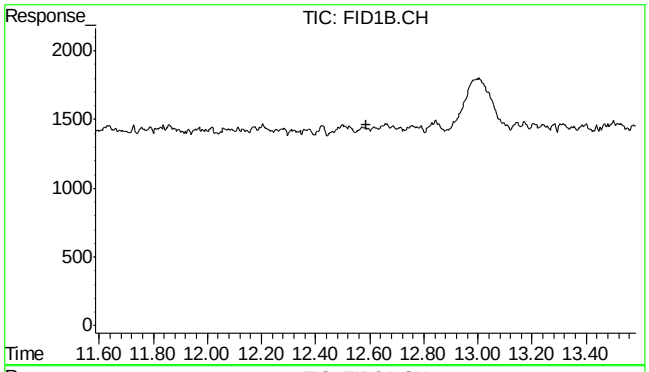
#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



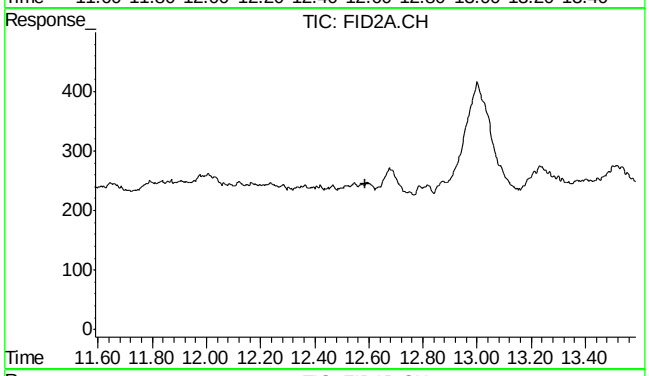
#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



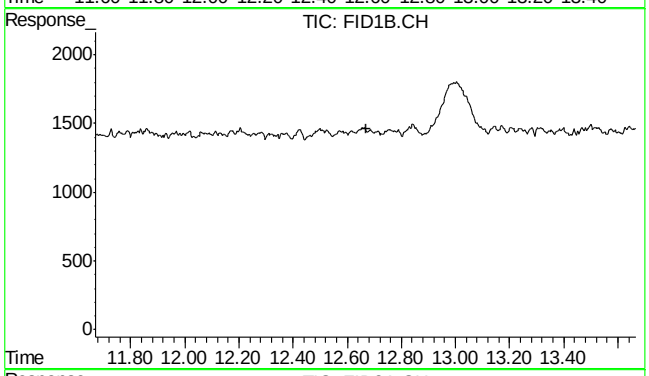
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.586 min
Response: 0
Conc: N.D.



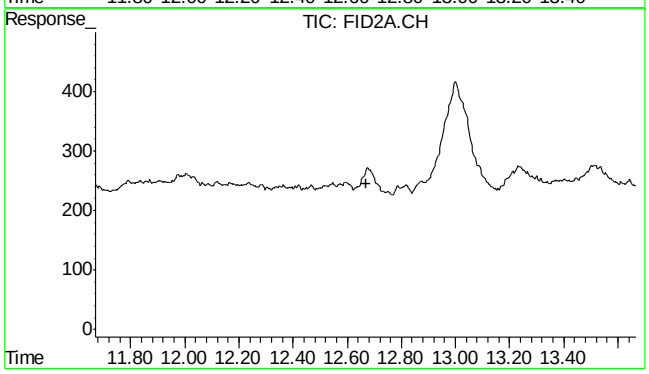
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



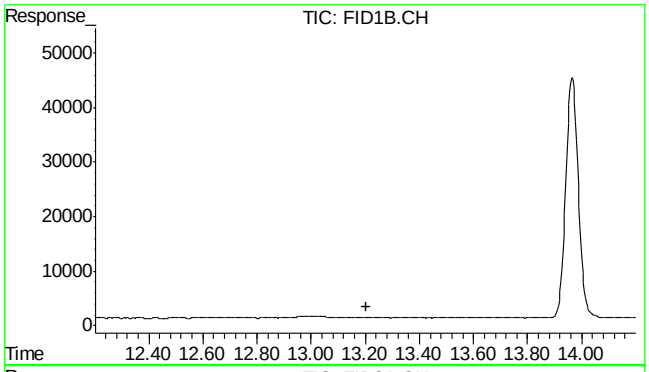
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



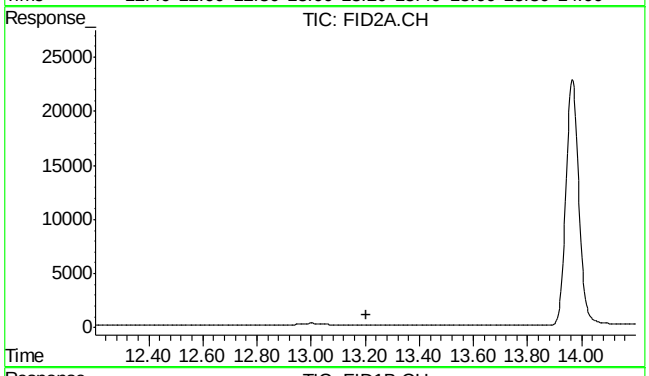
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



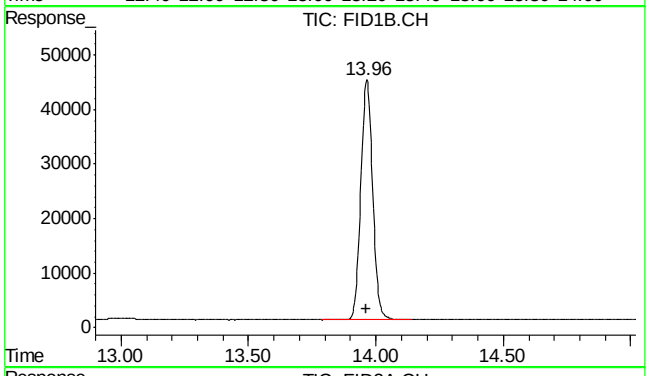
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



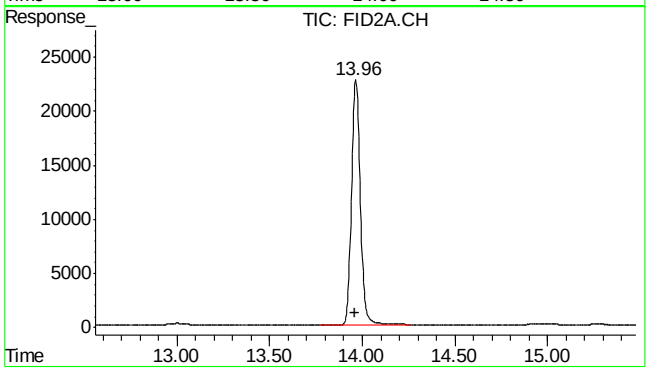
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



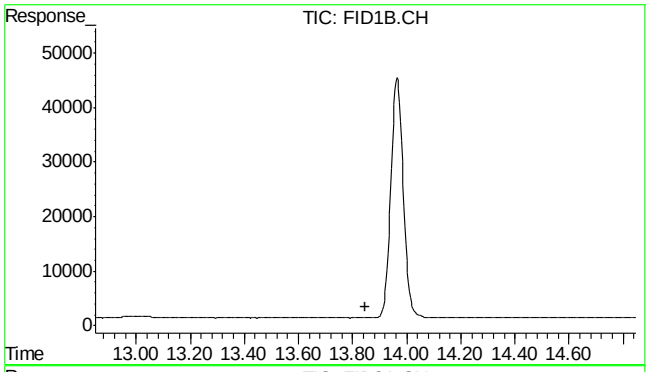
#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.004 min
Response: 1413542
Conc: 77.01 ug/L



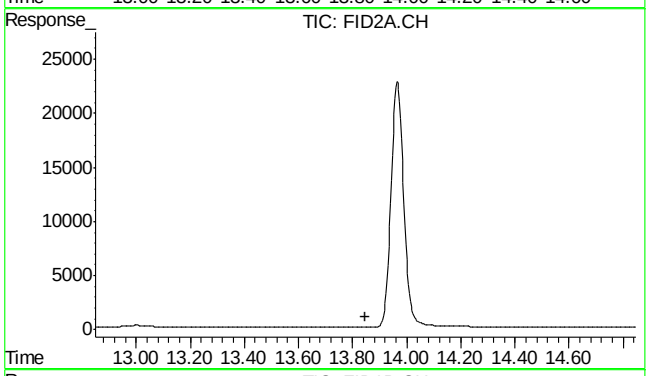
#20 BFB

R.T.: 13.966 min
Delta R.T.: 0.004 min
Response: 750593
Conc: 82.87 ug/L



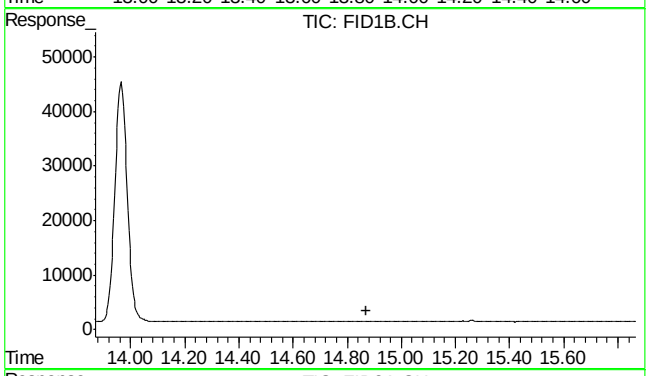
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



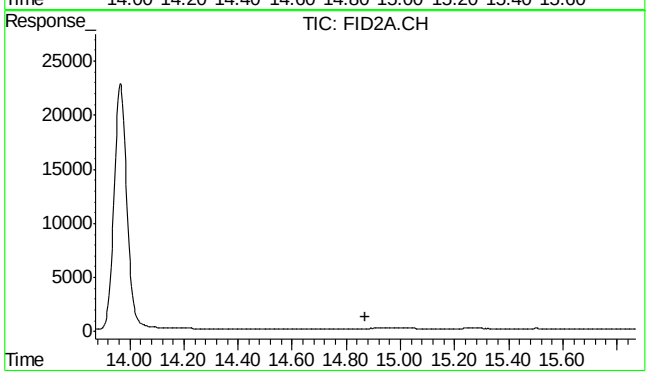
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



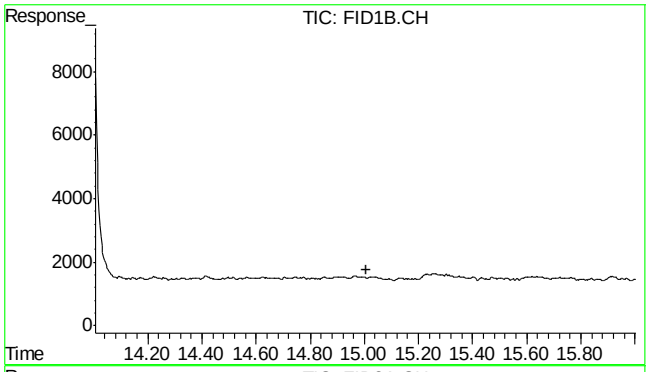
#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.870 min
Response: 0
Conc: N.D.



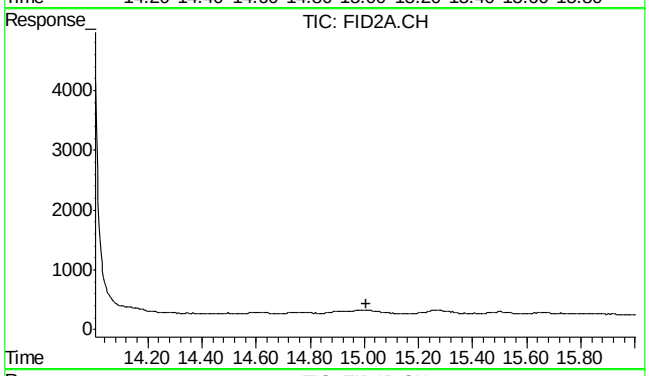
#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



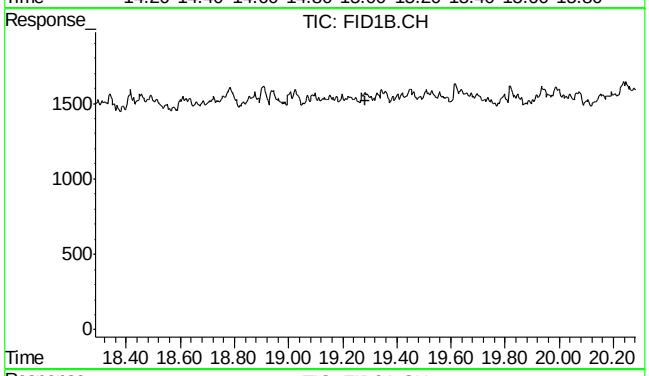
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



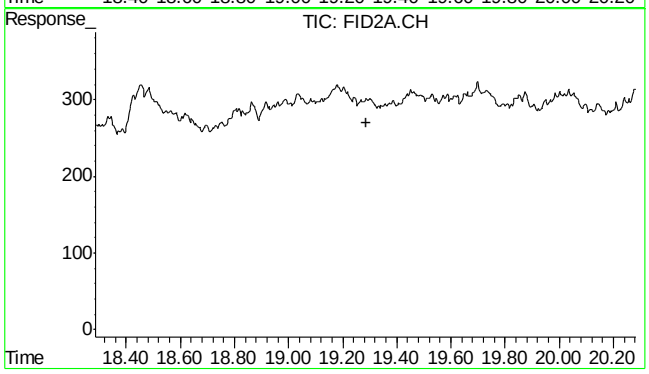
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



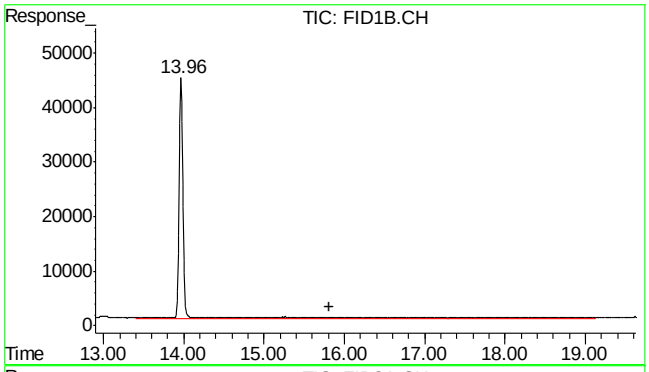
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.284 min
Response: 0
Conc: N.D.



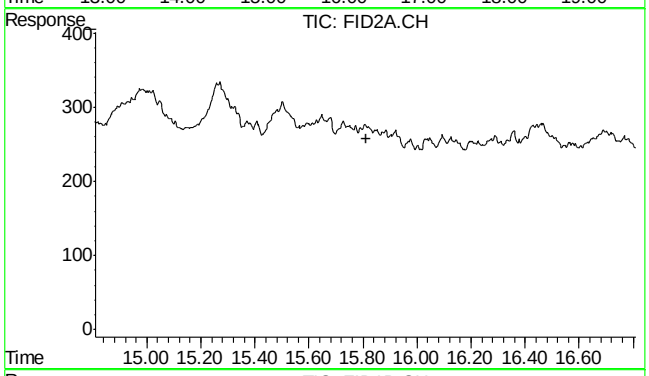
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.286 min
Response: 0
Conc: N.D.



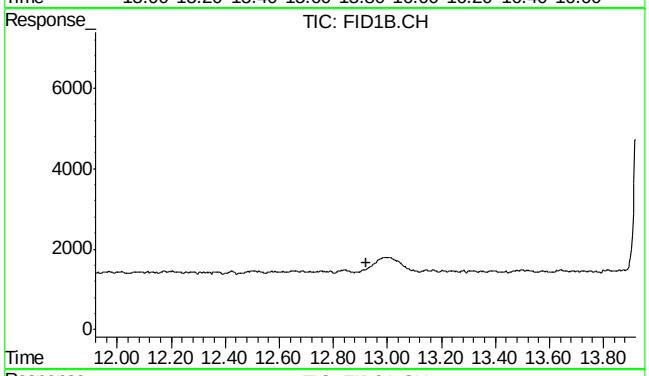
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 344747
Conc: 2.21 ug/L m



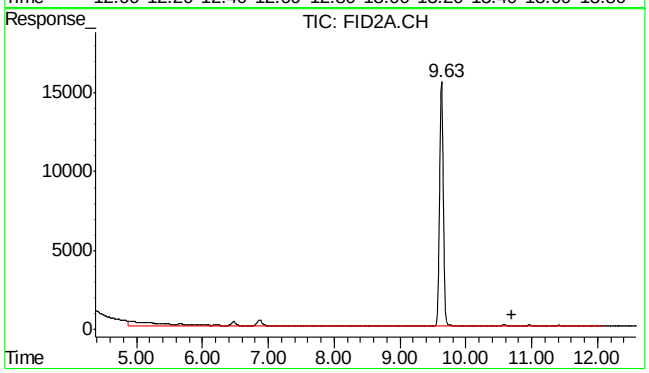
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 109995
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

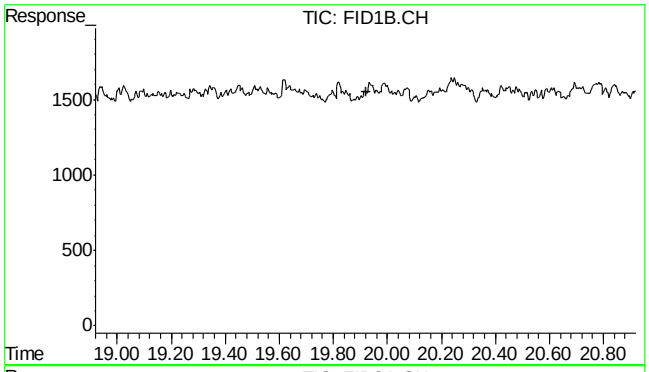
R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 792008
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

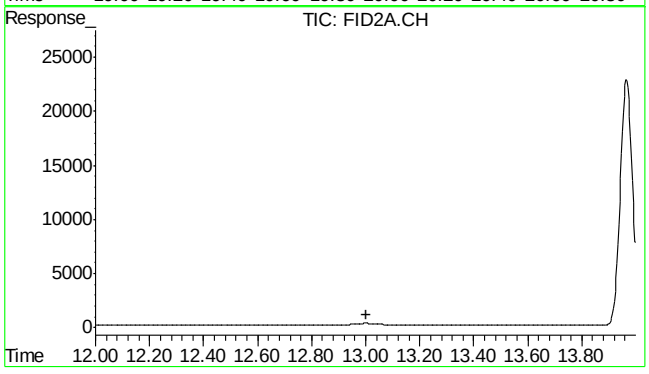
R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 822094
Conc: 26.45 ug/L m

SGS ACCUTEST FA40754



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 433814
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 146271
Conc: N.D.

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077736.D\FID1B.CH Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077736.D\FID2A.CH
Acq On : 31-Jan-2017, 11:29:47 Operator: antonioc
Sample : mb Inst : HP5890
Misc : gc19636,guv4134,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:02:54 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	0.00	0.00	0	0	N.D.	N.D.
2)	S	Alkane B	0.00	0.00	0	0	N.D.	N.D.
3)	S	Aromatic A	0.00	0.00	0	0	N.D.	N.D.
4)	S	Aromatic B	0.00	0.00	0	0	N.D.	N.D.
5)	S	Aromatic C	0.00	0.00	0	0	N.D.	N.D.
6)	S	Aromatic D	0.00	0.00	0	0	N.D.	N.D.
7)	S	Aromatic E	0.00	0.00	0	0	N.D.	N.D.
8)	S	Aromatic F	0.00	0.00	0	0	N.D.	N.D.
9)	S	Aromatic G	0.00	0.00	0	0	N.D.	N.D.
20)	S	BFB	13.96	13.97	3508420	1812537	191.137	200.104
		Spiked Amount 200.000 Range 70 - 130 Recovery =					95.57%	100.05%
		Target Compounds						
10)		Pentane	0.00	0.00	0	0	N.D.	N.D.
11)		2-Methylpentane	0.00	0.00	0	0	N.D.	N.D.
12)		Methyl Tert Buty	0.00	0.00	0	0	N.D.	N.D.
13)		2,2,4-Trimethylp	0.00	0.00	0	0	N.D.	N.D.
14)		Benzene	0.00	0.00	0	0	N.D.	N.D.
15)		Toluene	0.00	0.00	0	0	N.D.	N.D.
16)		Nonane	0.00	0.00	0	0	N.D.	N.D.
17)		Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
18)		m,p-Xylene	0.00	0.00	0	0	N.D.	N.D.
19)		o-Xylene	0.00	0.00	0	0	N.D.	N.D.
21)		Decane	0.00	0.00	0	0	N.D.	N.D.
22)		1,2,4-Trimethylb	0.00	0.00	0	0	N.D.	N.D.
23)		Butylcyclohexane	0.00	0.00	0	0	N.D.	N.D.
24)		Naphthalene	19.29	19.30	15326	9869	1.239	1.039
25)	H	C9- C10 Aromatic	15.81	15.81	450551	139904	7.524	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	397526	697206	NoCal	16.306 #
27)	H	C9- C12 Aliphati	19.92	13.00	588829	180582	NoCal	N.D.

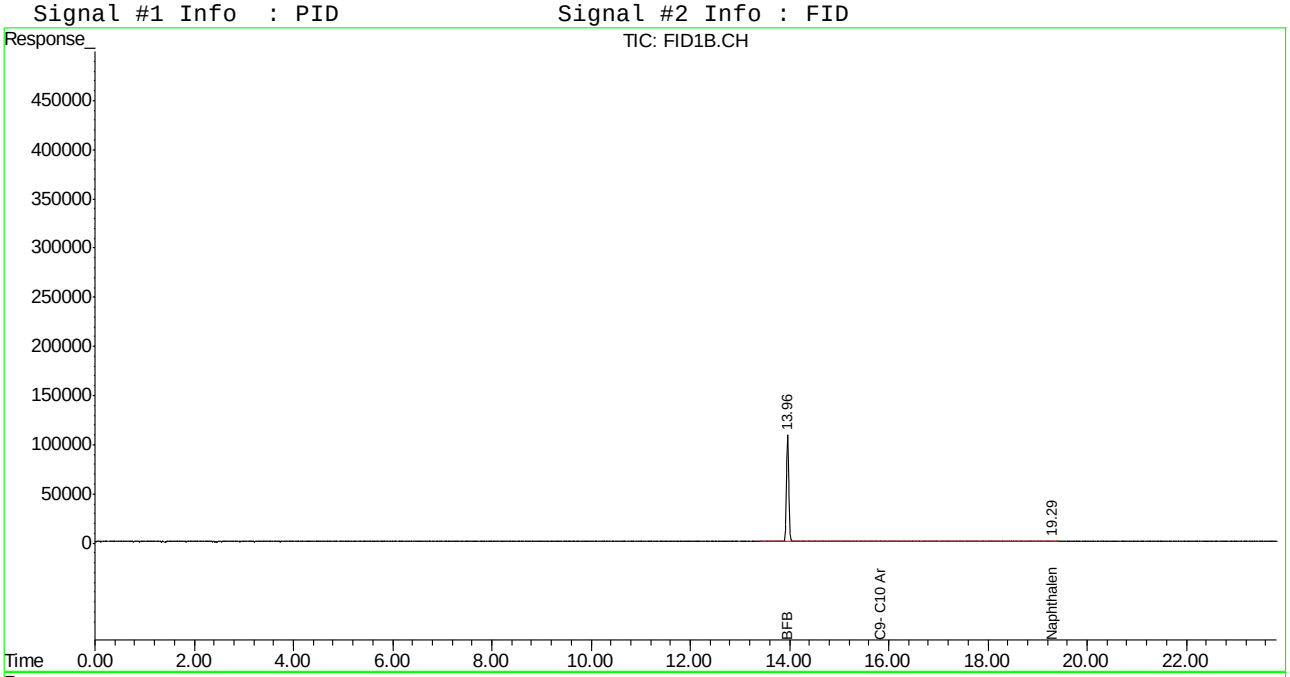
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077736.D VPH011317.M Fri Feb 03 13:17:59 2017

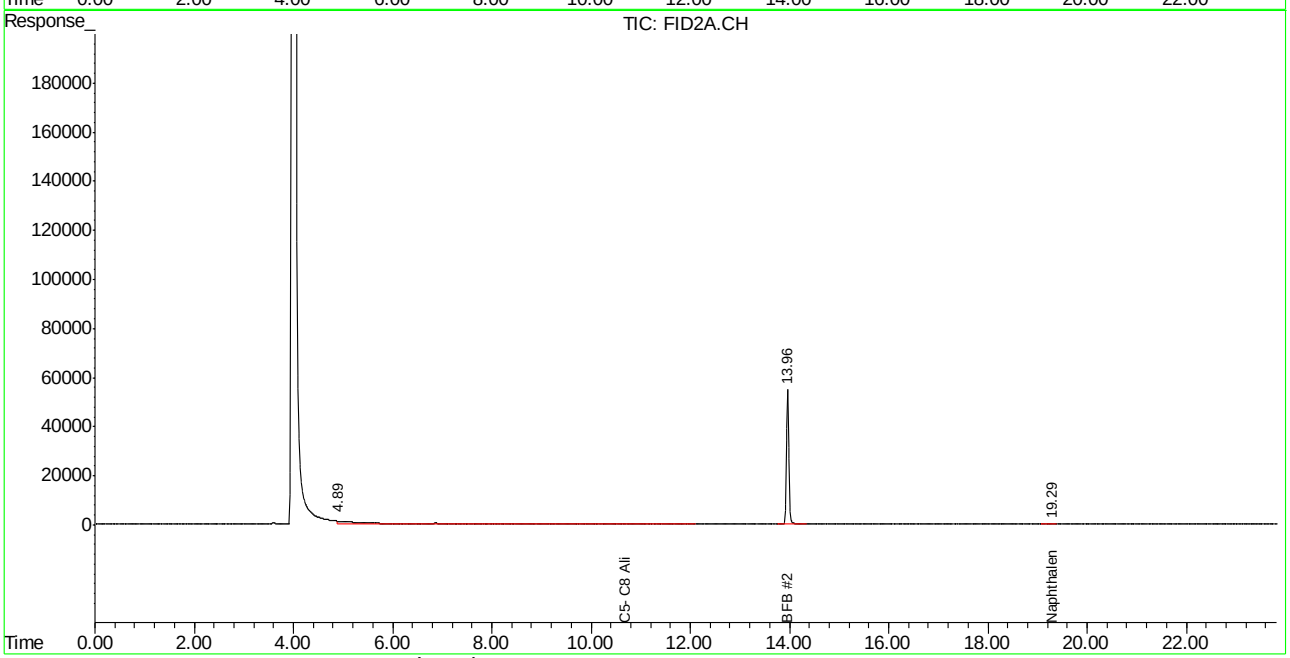
Quantitation Report (QT Reviewed)

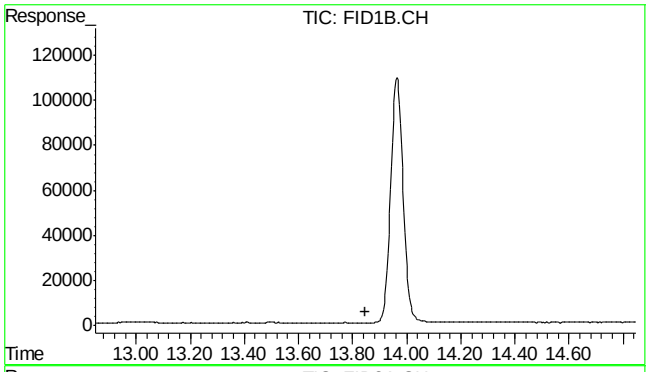
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077736.D\FID1B.CH Vial: 5
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077736.D\FID2A.CH
Acq On : 31-Jan-2017, 11:29:47 Operator: antonioc
Sample : mb Inst : HP5890
Misc : gc19636,guv4134,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 1 8:02 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

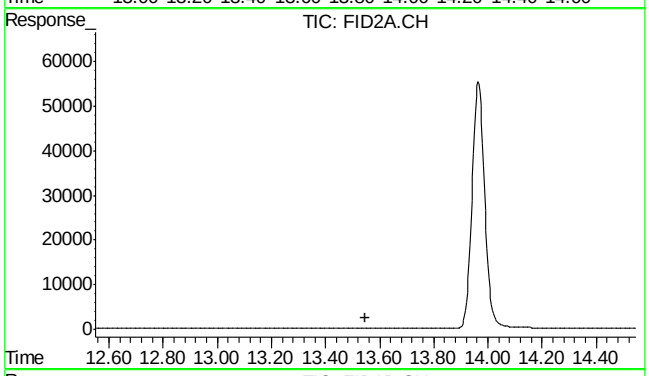






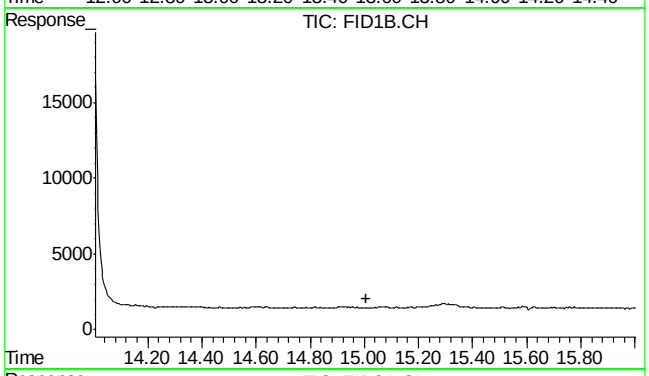
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.847 min
Response: 0
Conc: N.D.



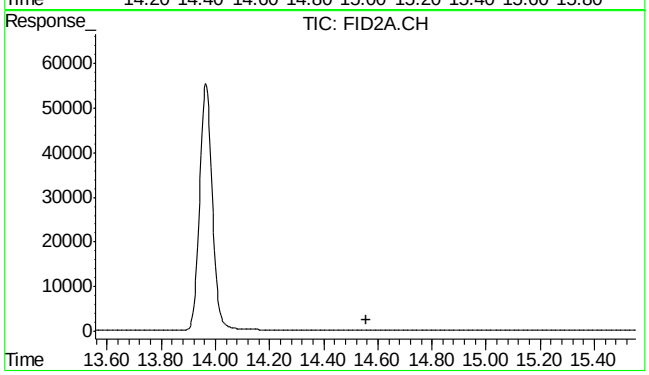
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.2.1

7

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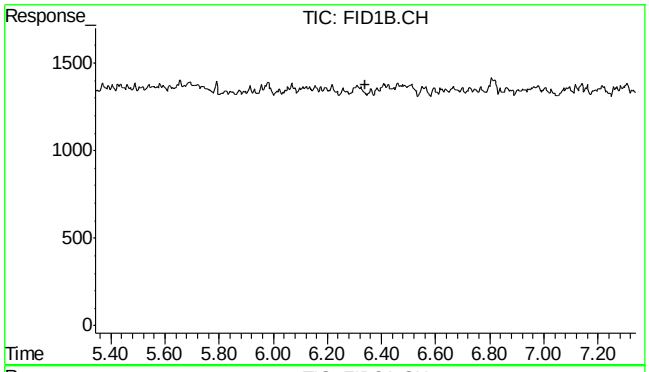
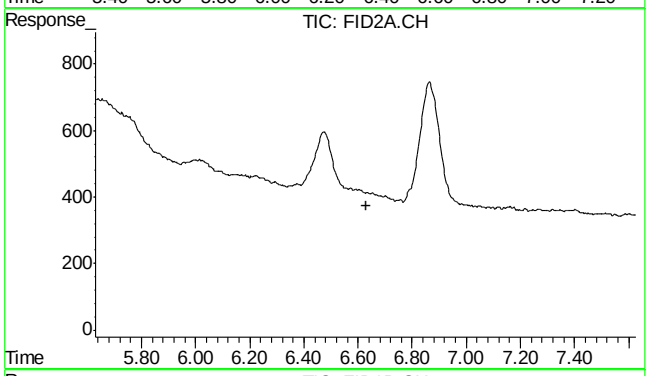


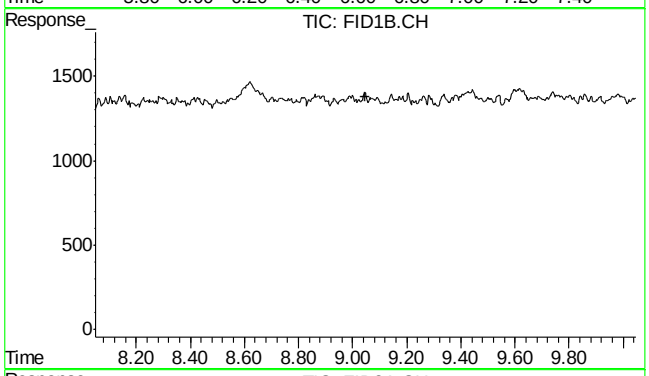
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



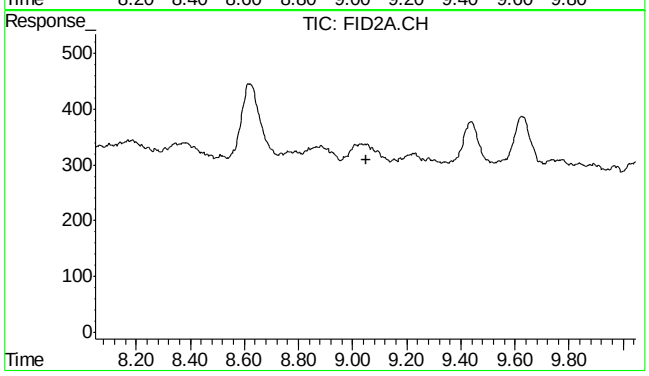
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



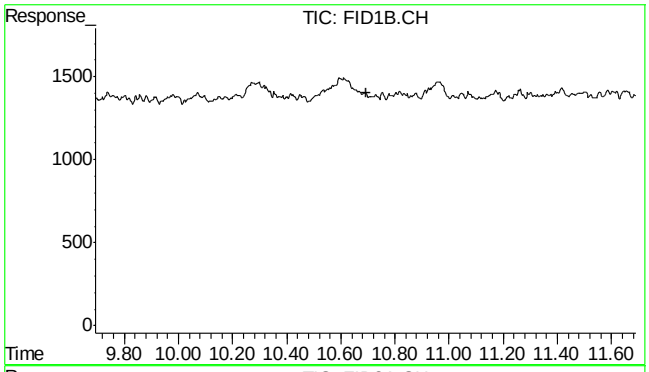
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



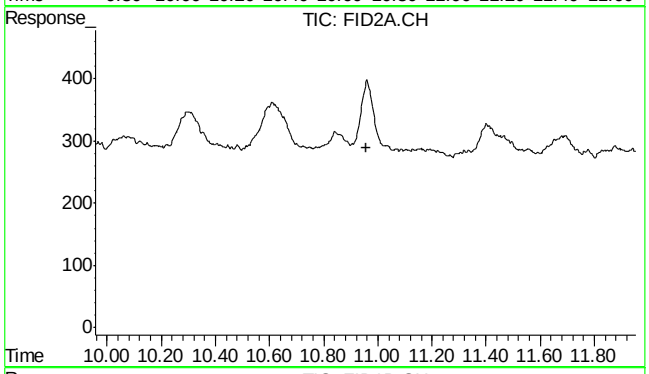
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.049 min
Response: 0
Conc: N.D.



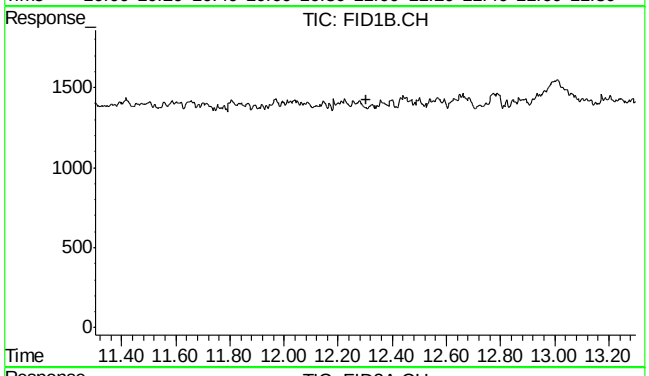
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



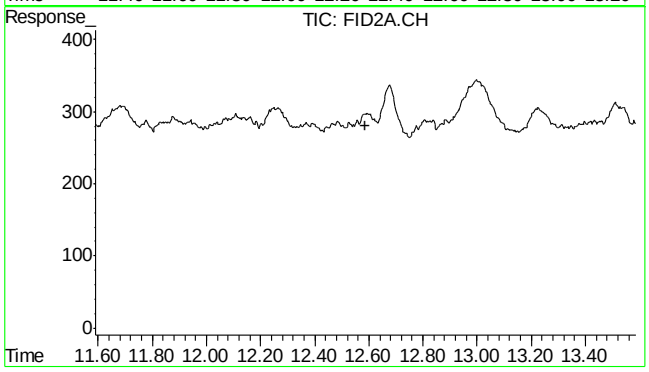
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.956 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.

7.2.1

7

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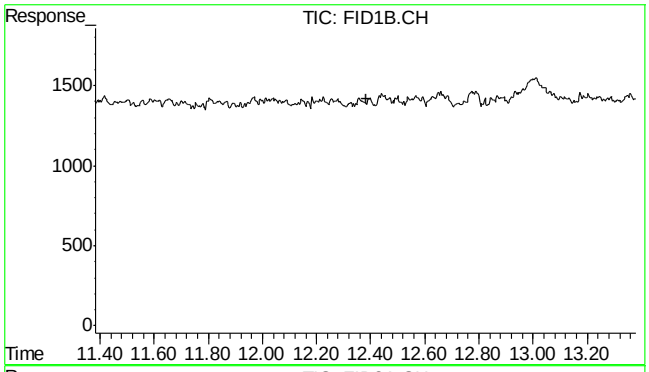
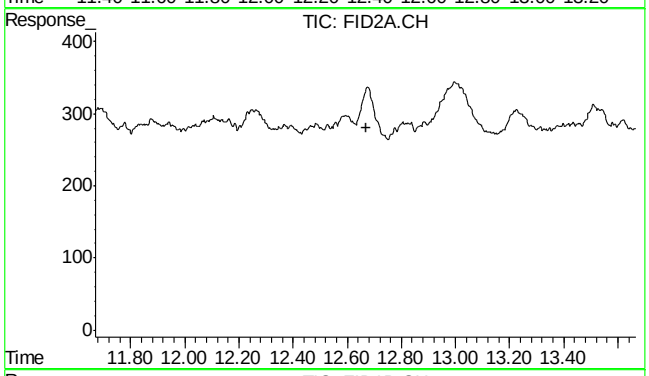


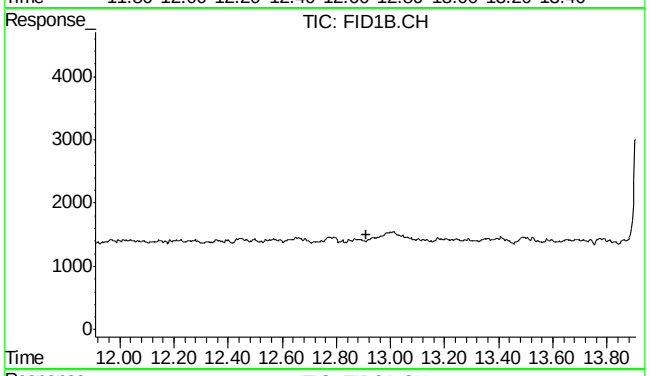
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



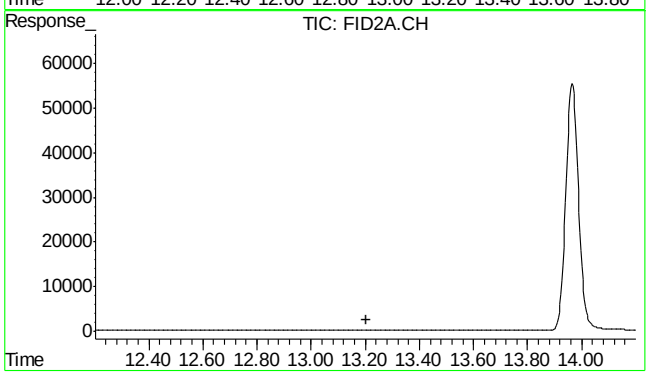
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



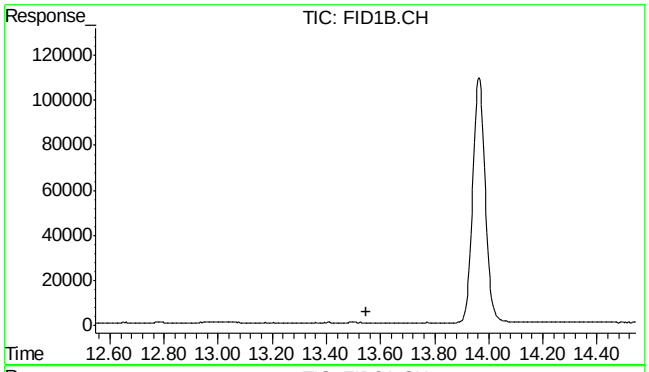
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



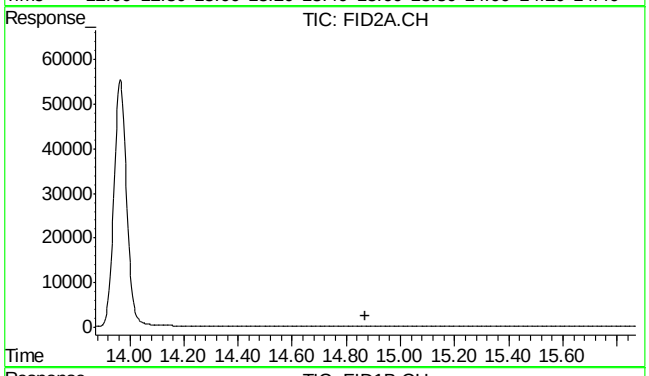
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



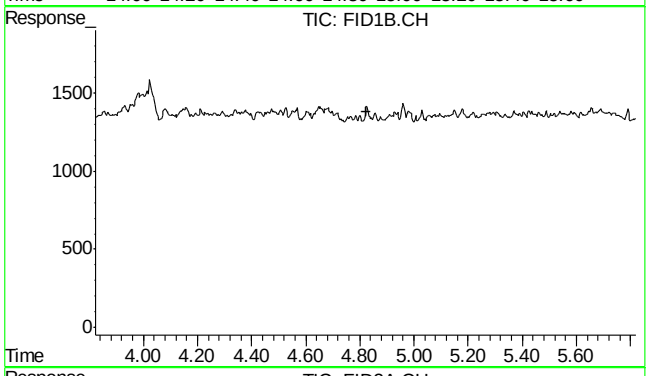
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



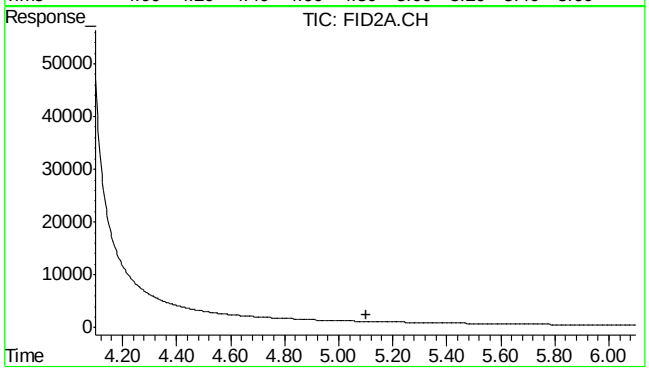
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



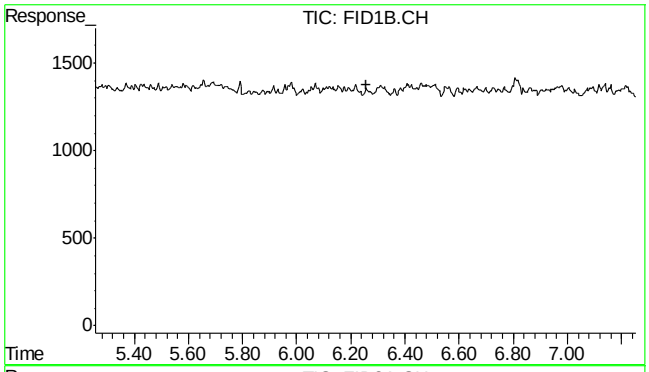
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



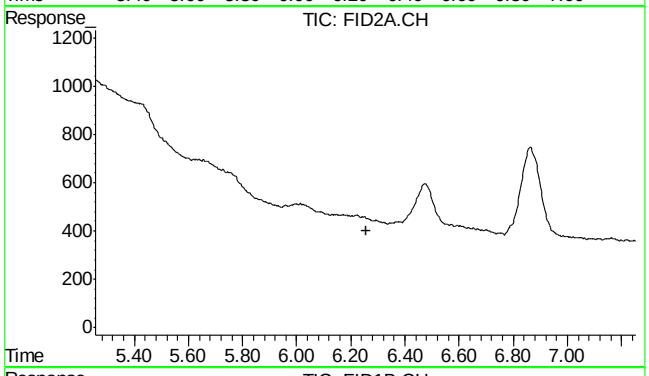
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 5.100 min
Response: 0
Conc: N.D.



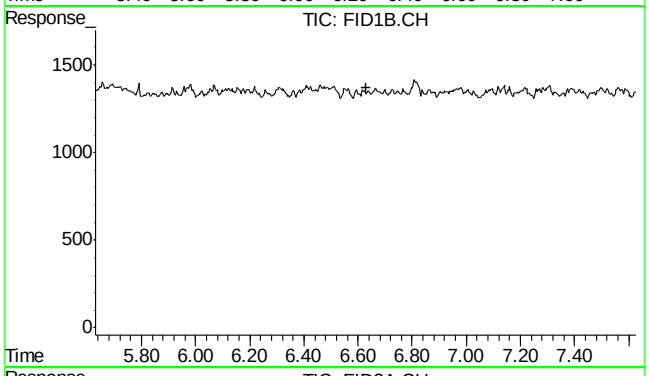
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



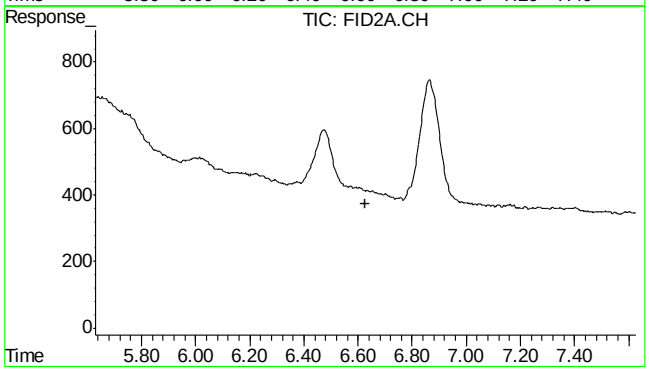
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.628 min
Response: 0
Conc: N.D.

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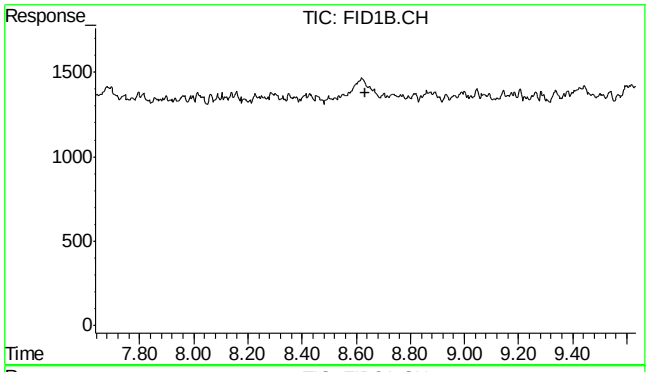
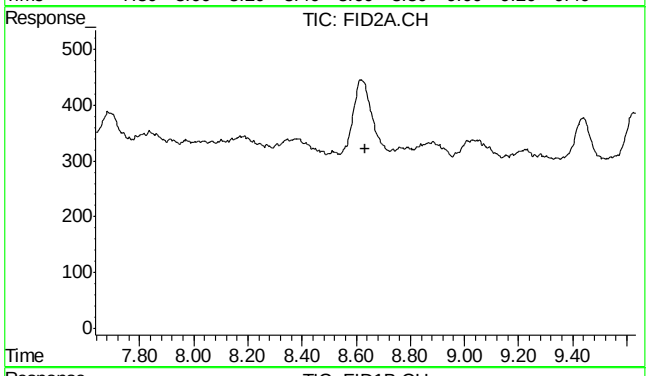


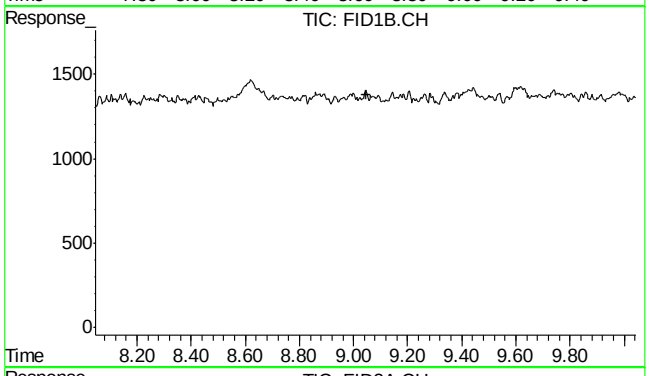
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



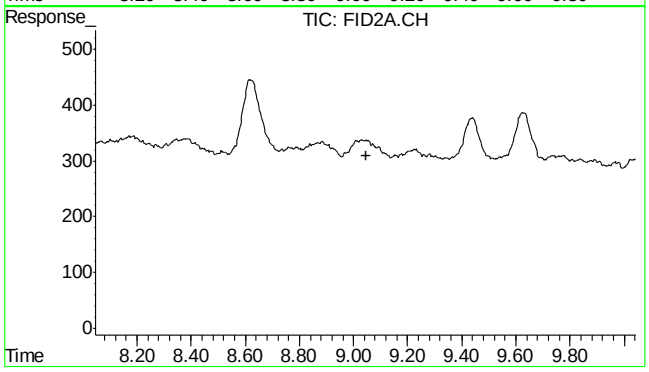
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



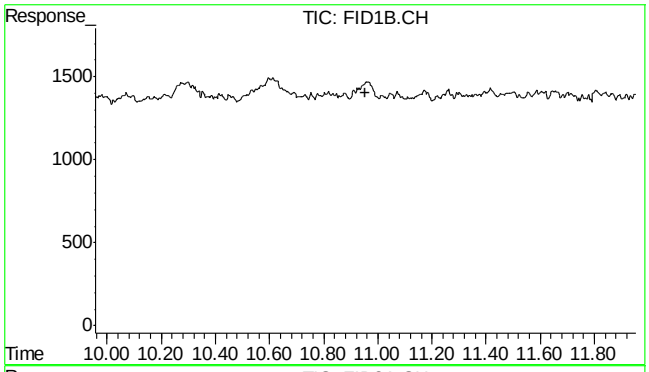
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



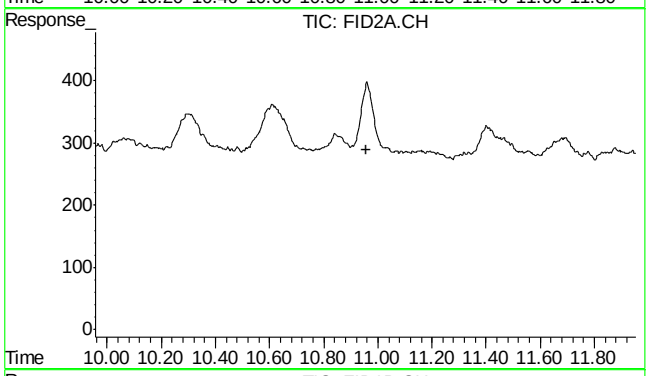
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



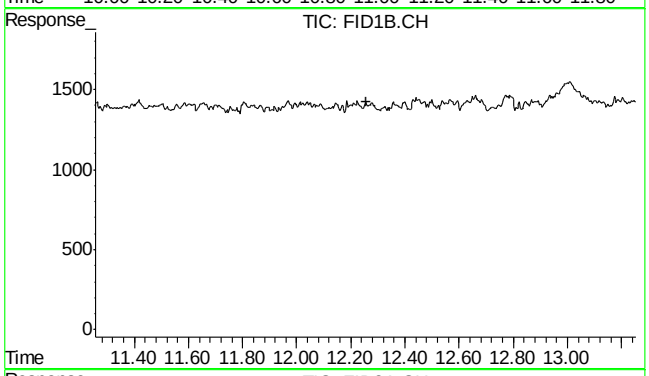
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



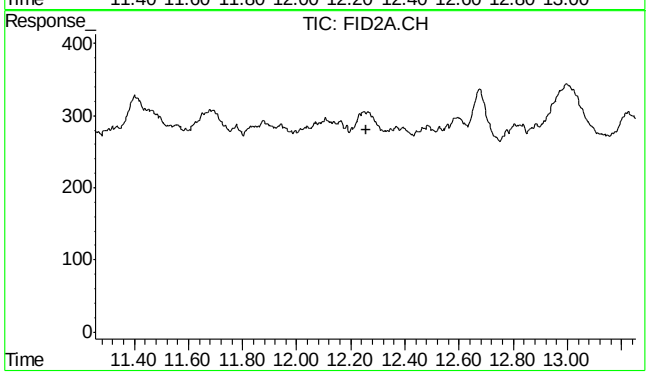
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.

7.2.1

7

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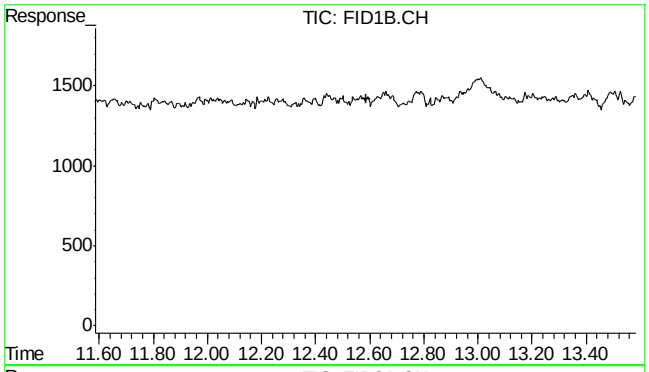
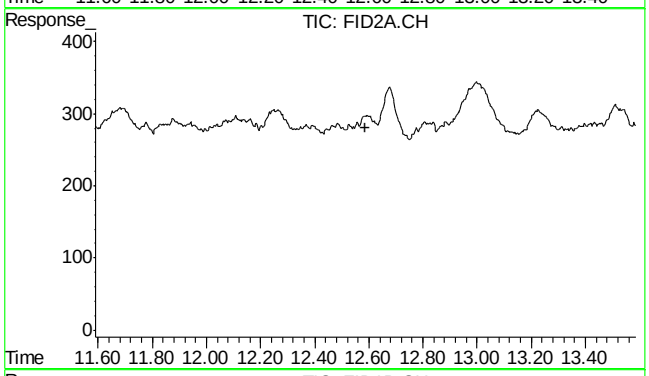


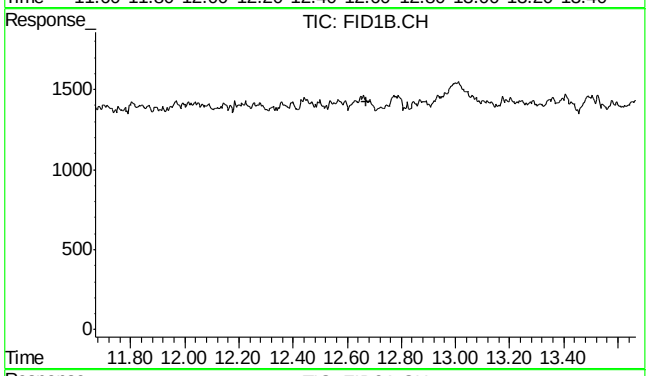
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.586 min
Response: 0
Conc: N.D.



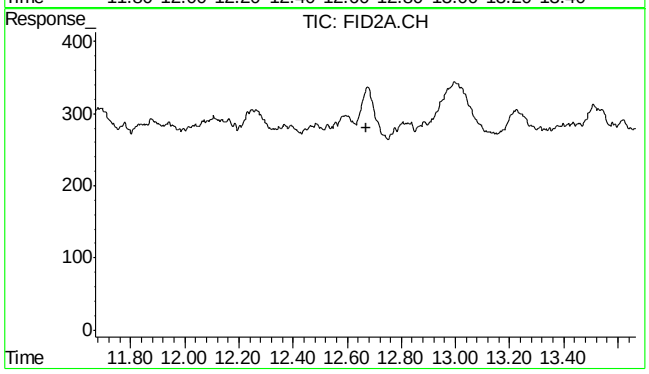
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



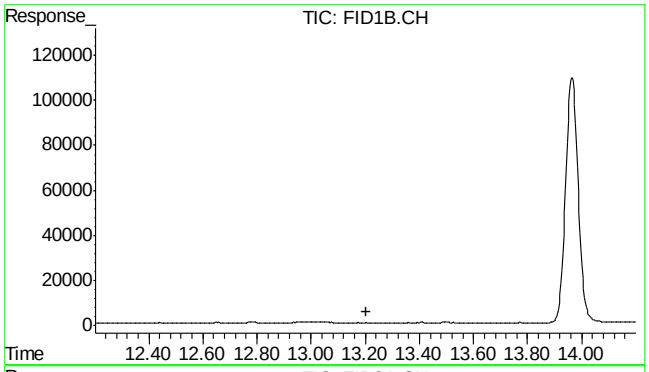
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



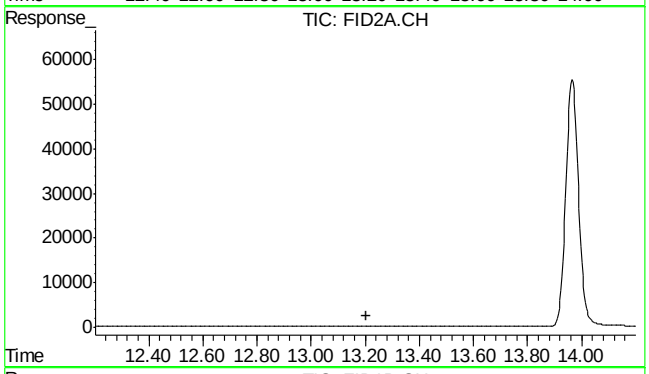
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



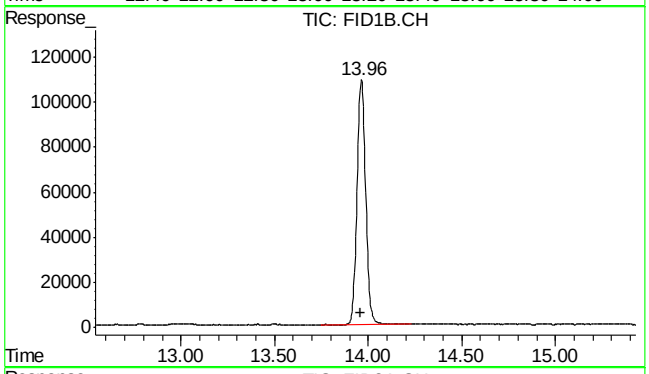
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



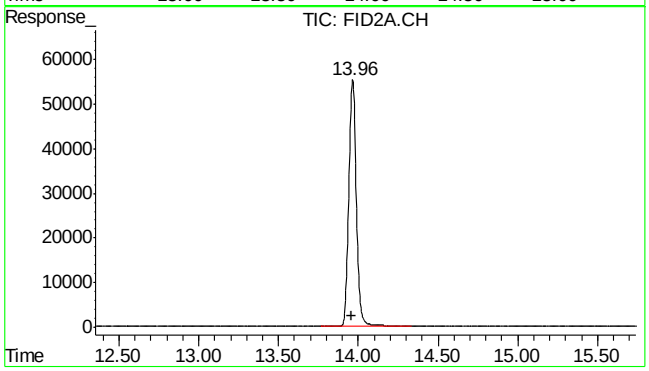
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.004 min
Response: 3508420
Conc: 191.14 ug/L



#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 1812537
Conc: 200.10 ug/L

7.2.1

7

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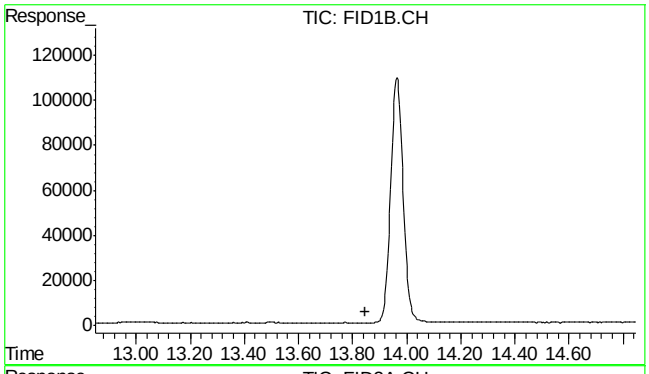
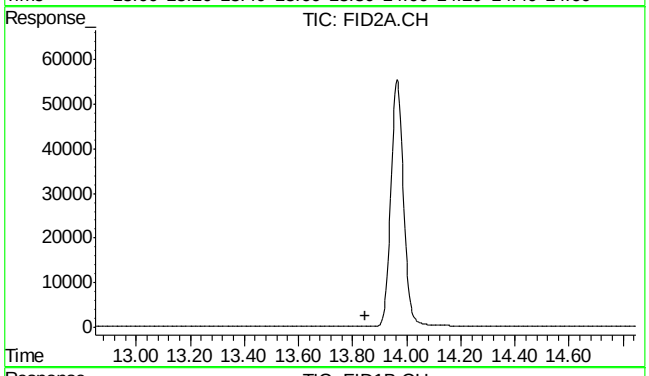


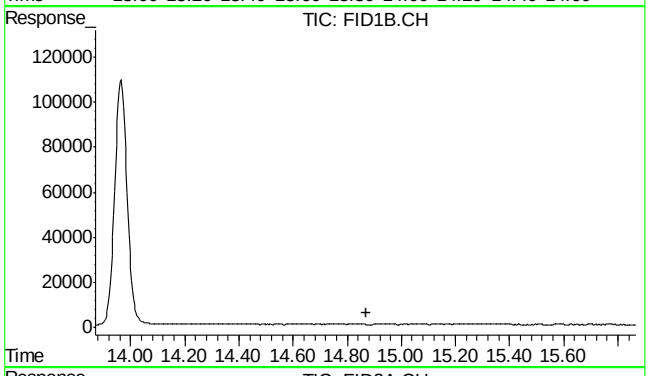
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



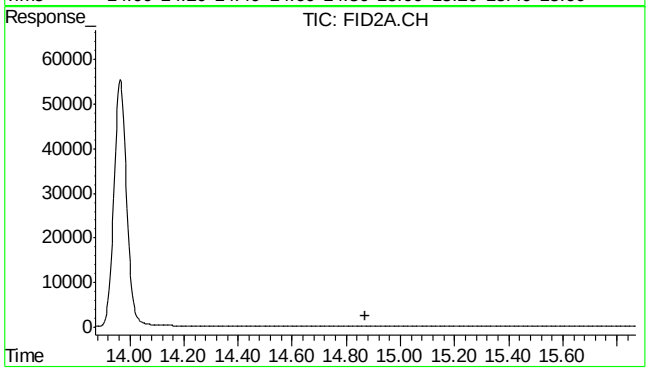
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.870 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.

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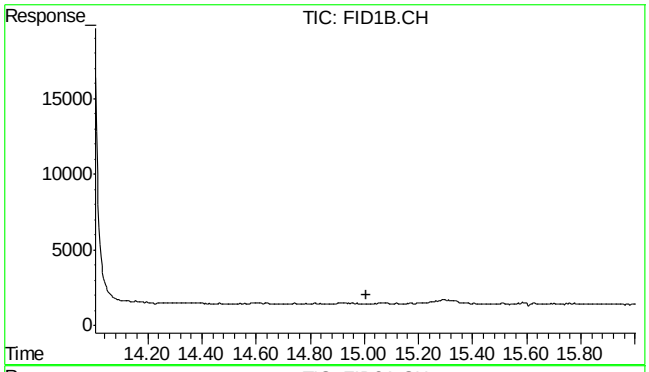
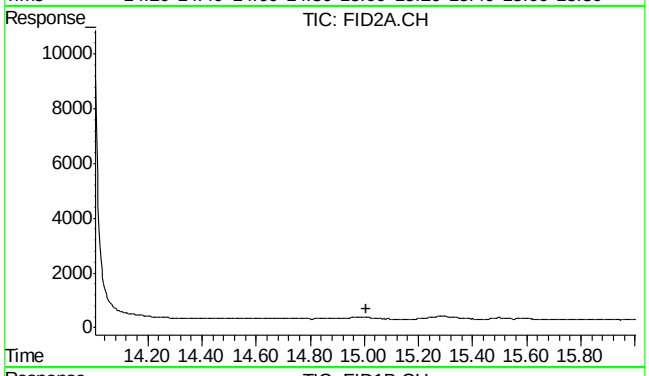


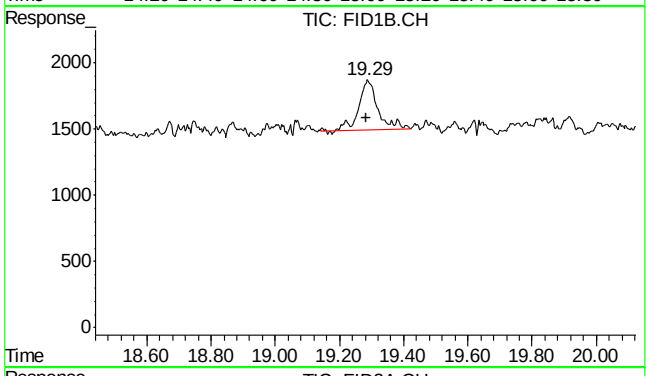
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



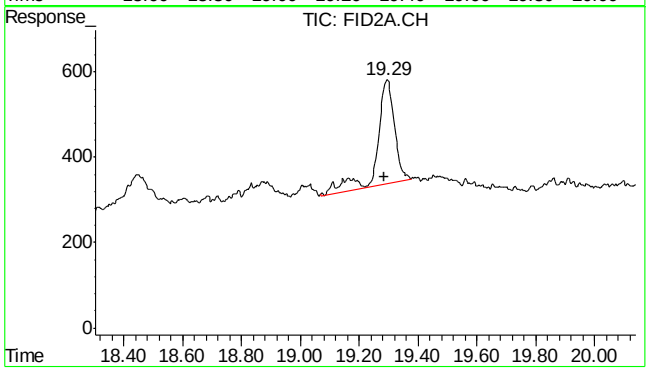
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



#24 Naphthalene

R.T.: 19.289 min
Delta R.T.: 0.005 min
Response: 15326
Conc: 1.24 ug/L



#24 Naphthalene

R.T.: 19.295 min
Delta R.T.: 0.009 min
Response: 9869
Conc: 1.04 ug/L

7.2.1

7

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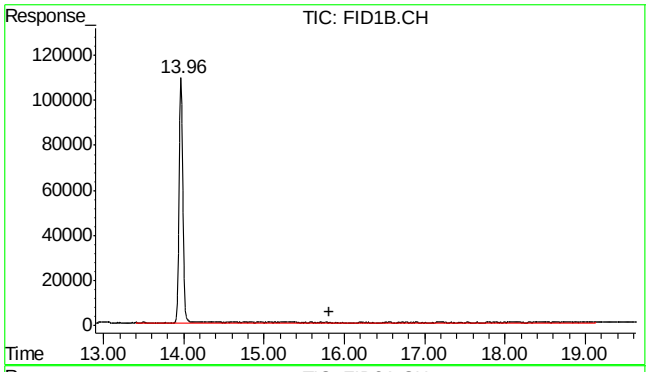
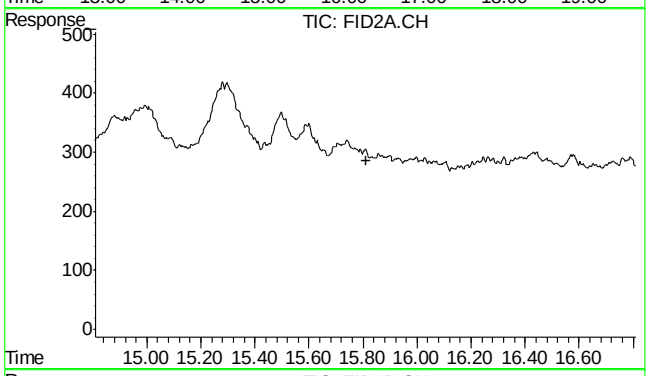


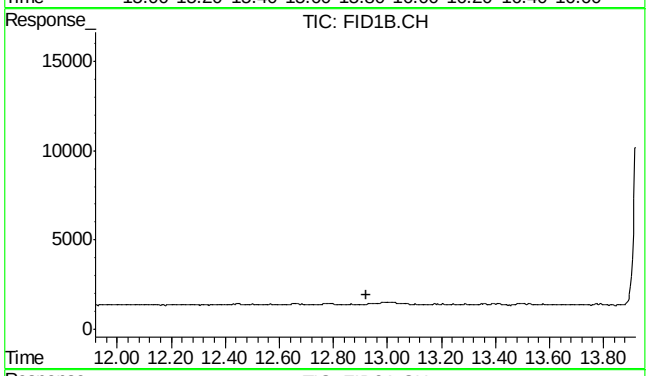
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 450551
Conc: 7.52 ug/L m



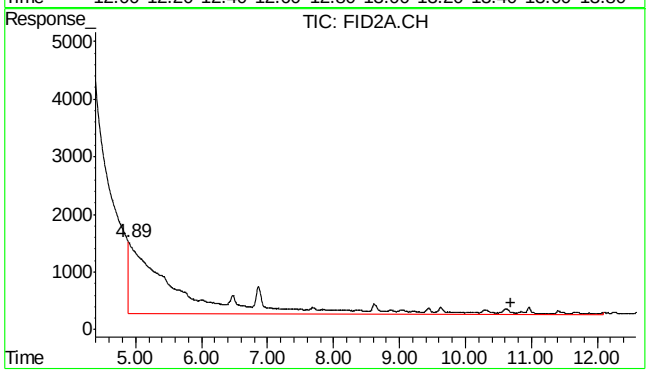
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 139904
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 397526
Conc: N.D.

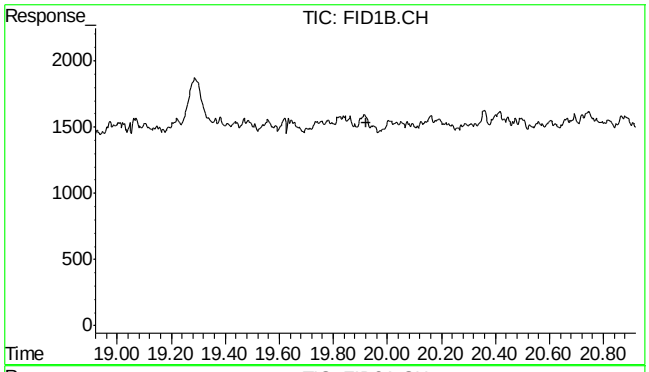


#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 697206
Conc: 16.31 ug/L m

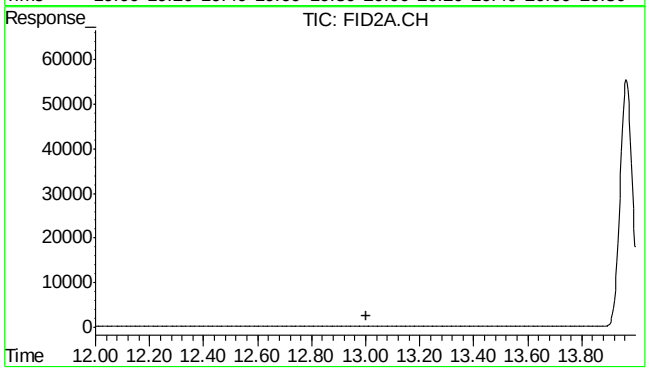
7.2.1

7



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 588829
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 180582
Conc: N.D.

7.2.1

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077767.D\FID1B.CH Vial: 36
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077767.D\FID2A.CH
Acq On : 01-Feb-2017, 03:20:14 Operator: antonioc
Sample : mb Inst : HP5890
Misc : gc19636,guv4135,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:04:26 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	0.00	0.00	0	0	N.D.	N.D.
2)	S	Alkane B	0.00	0.00	0	0	N.D.	N.D.
3)	S	Aromatic A	0.00	0.00	0	0	N.D.	N.D.
4)	S	Aromatic B	0.00	0.00	0	0	N.D.	N.D.
5)	S	Aromatic C	0.00	0.00	0	0	N.D.	N.D.
6)	S	Aromatic D	0.00	0.00	0	0	N.D.	N.D.
7)	S	Aromatic E	0.00	0.00	0	0	N.D.	N.D.
8)	S	Aromatic F	0.00	0.00	0	0	N.D.	N.D.
9)	S	Aromatic G	0.00	0.00	0	0	N.D.	N.D.
20)	S	BFB	13.96	13.96	3364037	1716197	183.271	189.468
		Spiked Amount 200.000 Range 70 - 130 Recovery =					91.64%	94.73%
		Target Compounds						
10)		Pentane	0.00	0.00	0	0	N.D.	N.D.
11)		2-Methylpentane	0.00	0.00	0	0	N.D.	N.D.
12)		Methyl Tert Buty	0.00	0.00	0	0	N.D. d	N.D. d
13)		2,2,4-Trimethylp	0.00	0.00	0	0	N.D.	N.D.
14)		Benzene	0.00	0.00	0	0	N.D.	N.D.
15)		Toluene	0.00	0.00	0	0	N.D.	N.D.
16)		Nonane	0.00	0.00	0	0	N.D.	N.D.
17)		Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
18)		m,p-Xylene	0.00	0.00	0	0	N.D.	N.D.
19)		o-Xylene	0.00	0.00	0	0	N.D.	N.D.
21)		Decane	0.00	0.00	0	0	N.D.	N.D.
22)		1,2,4-Trimethylb	0.00	0.00	0	0	N.D.	N.D.
23)		Butylcyclohexane	0.00	0.00	0	0	N.D.	N.D.
24)		Naphthalene	19.29	19.29	12042	10161	0.974	1.070
25)	H	C9- C10 Aromatic	15.81	15.81	368459	142840	3.402	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	600876	897581	NoCal	32.575 #
27)	H	C9- C12 Aliphati	19.92	13.00	465848	183912	NoCal	N.D.

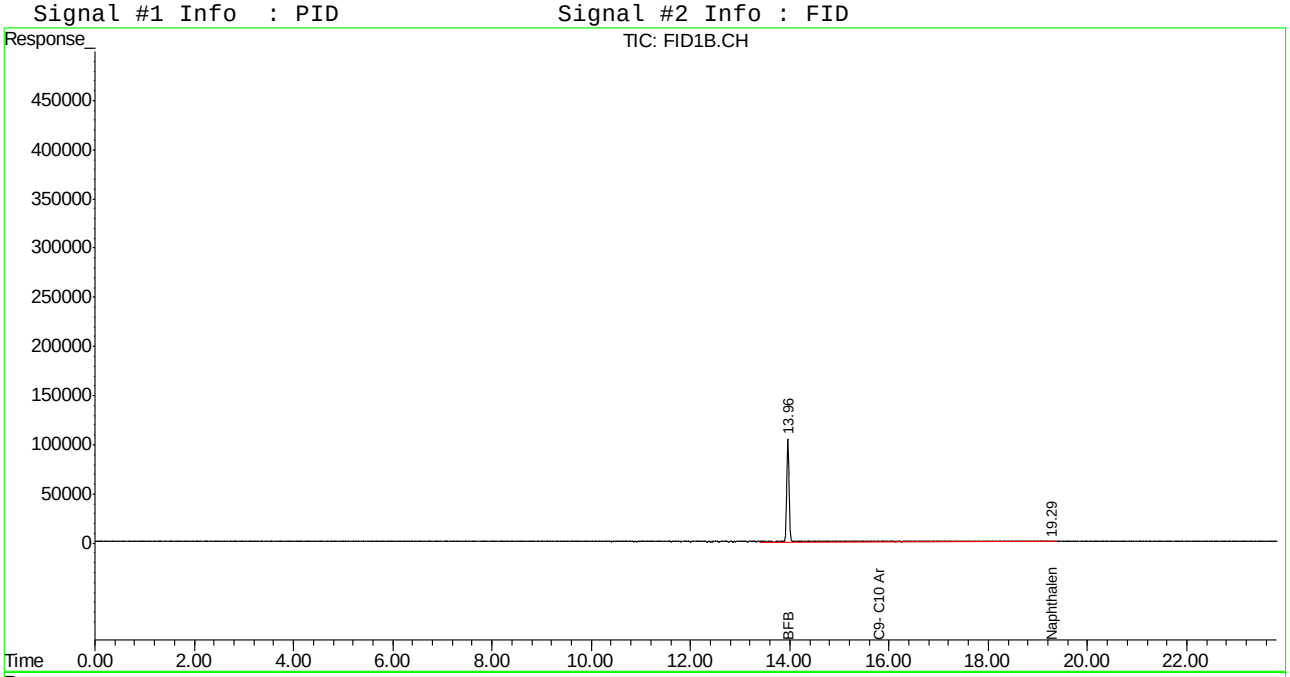
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077767.D VPH011317.M Fri Feb 03 13:19:20 2017

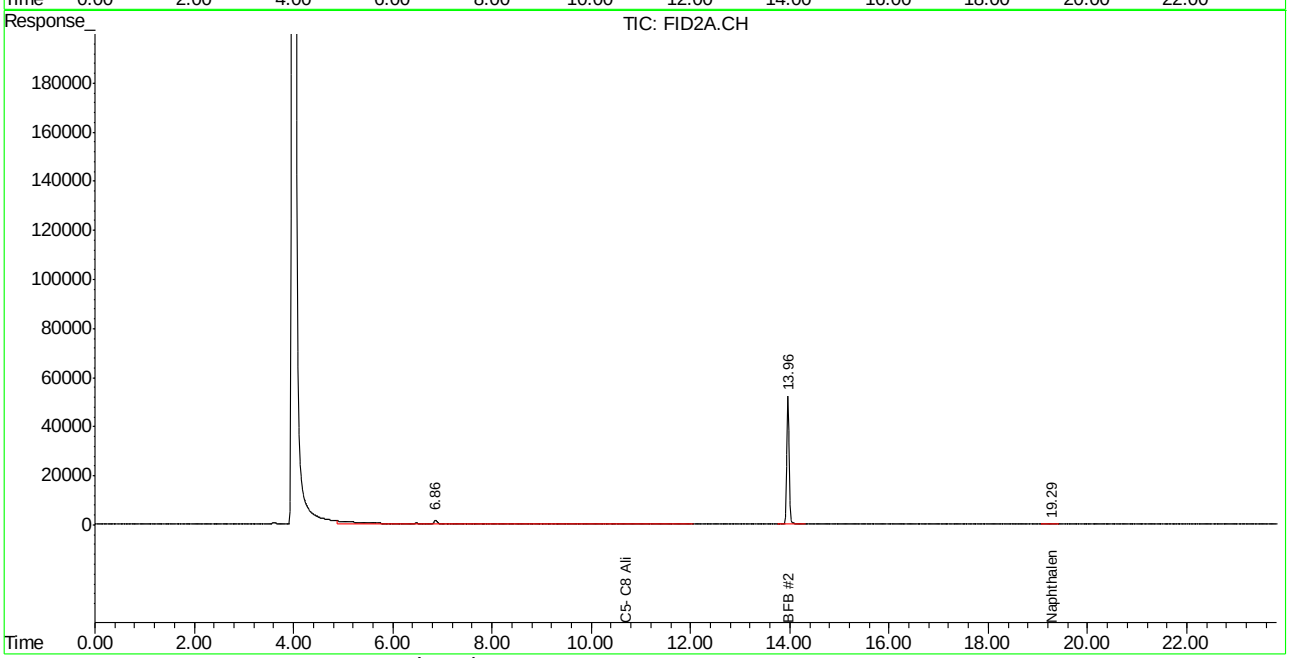
Quantitation Report (QT Reviewed)

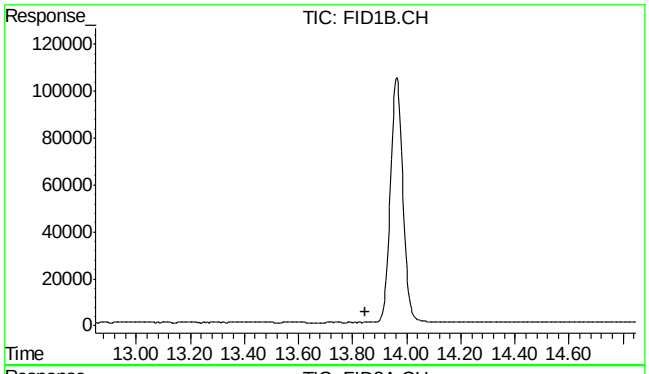
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077767.D\FID1B.CH Vial: 36
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077767.D\FID2A.CH
Acq On : 01-Feb-2017, 03:20:14 Operator: antonioc
Sample : mb Inst : HP5890
Misc : gc19636,guv4135,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 3 12:06 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

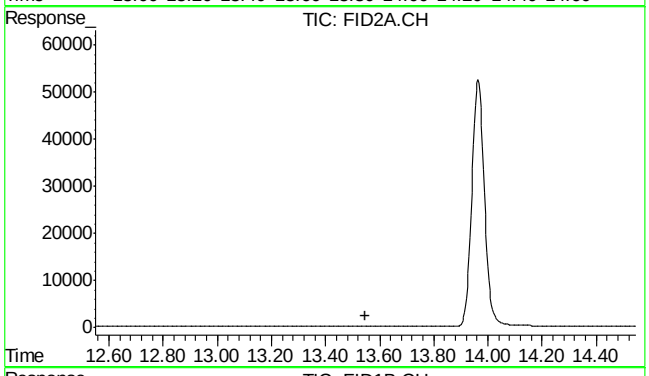






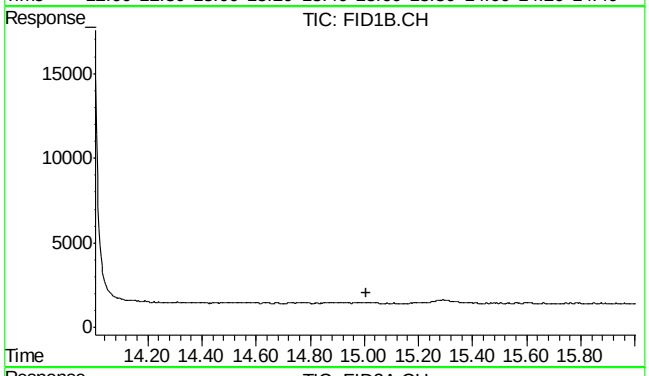
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.847 min
Response: 0
Conc: N.D.



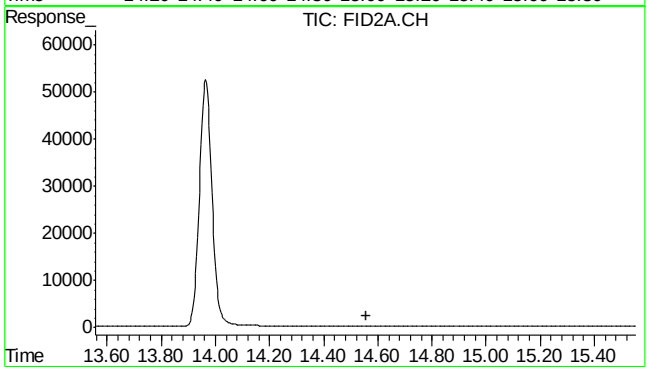
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



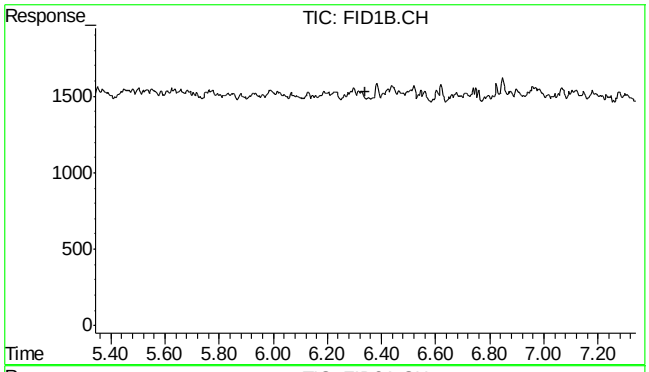
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



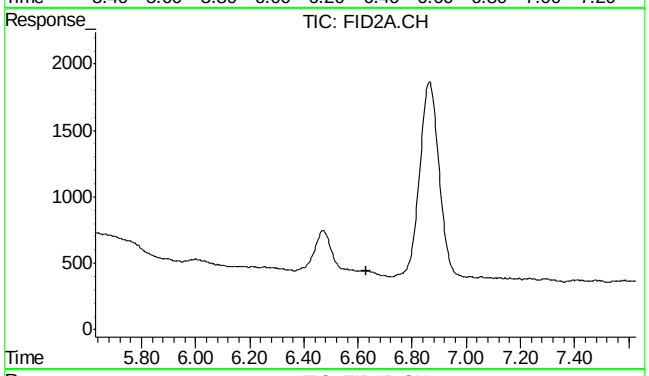
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.



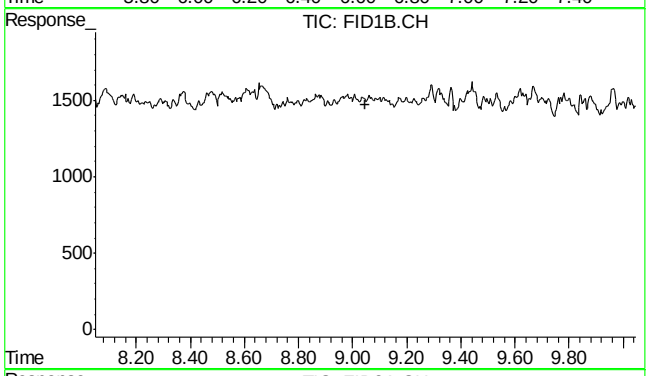
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



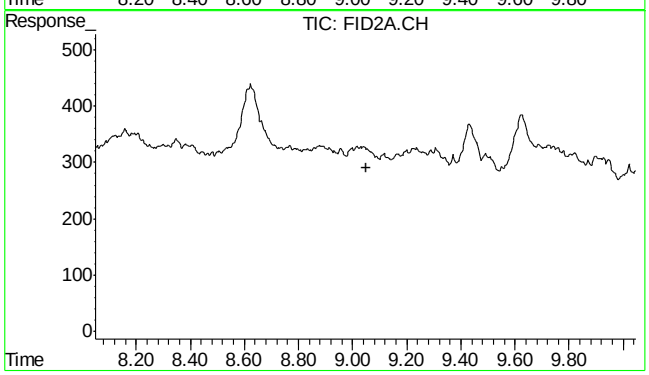
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.049 min
Response: 0
Conc: N.D.

7.2.2

7

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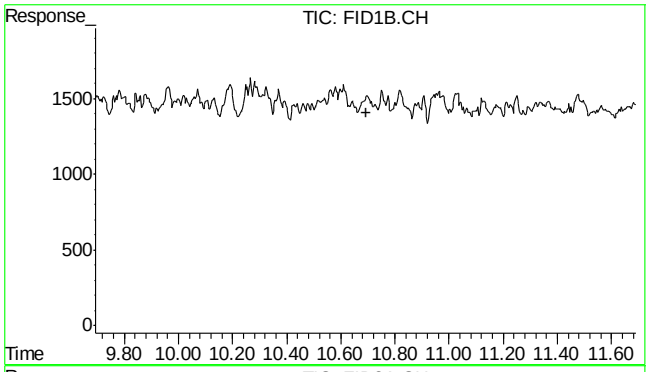
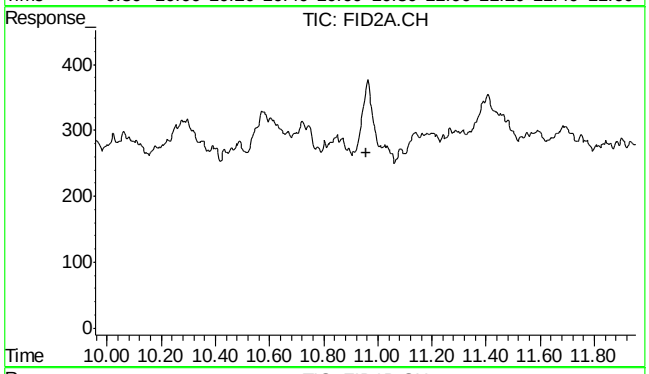


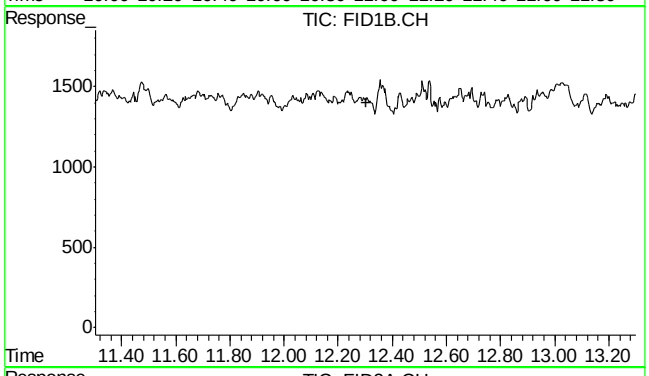
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



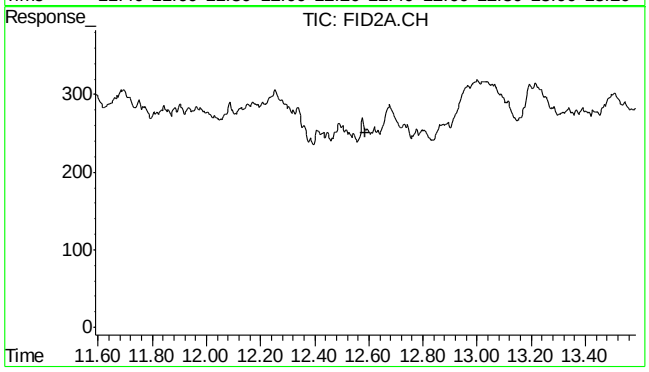
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.956 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.

7.2.2

7

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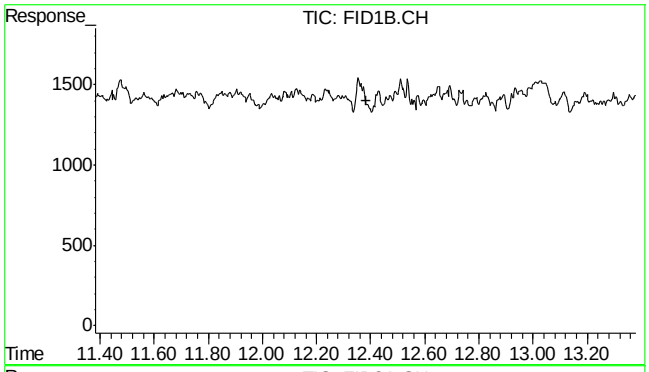
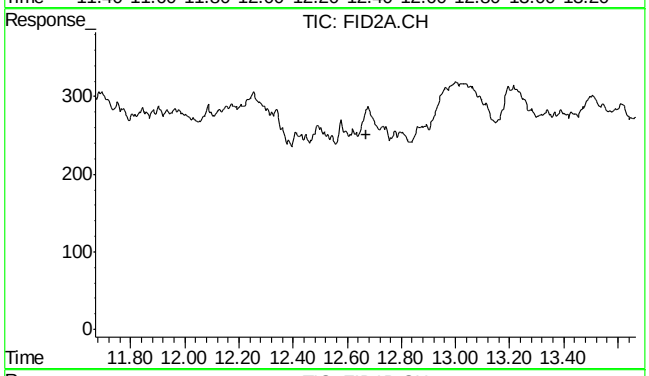


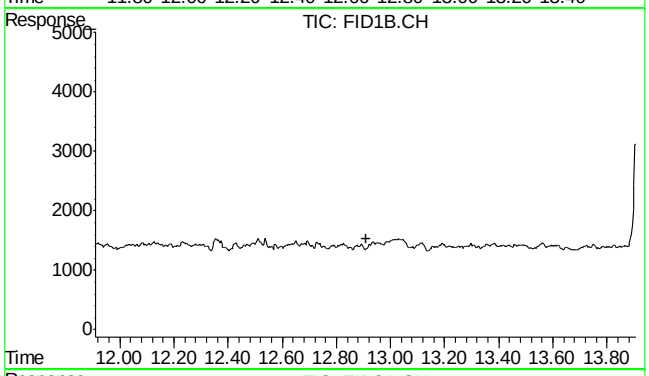
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



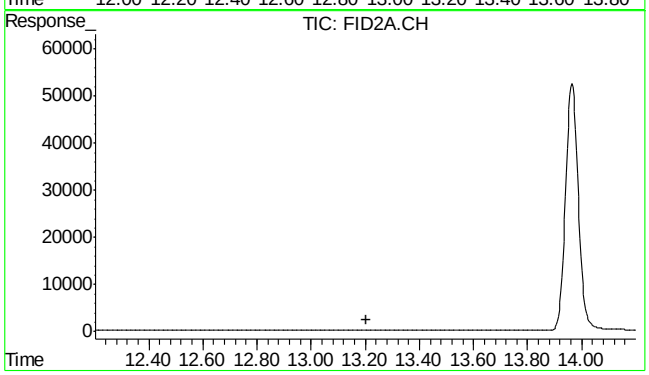
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



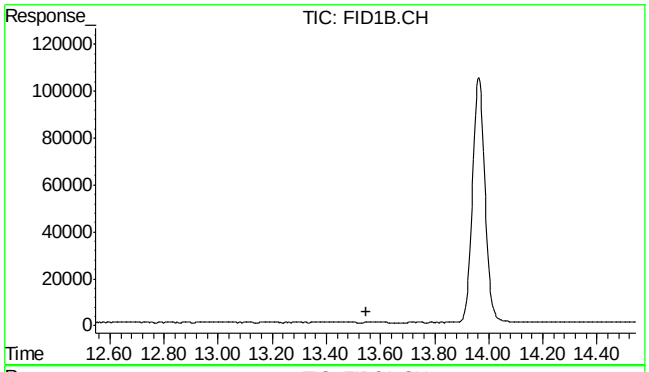
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



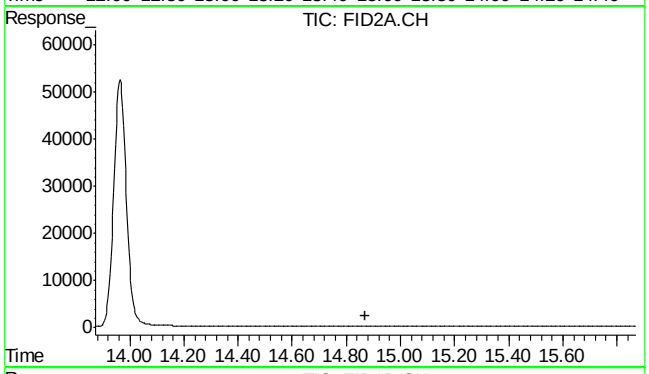
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



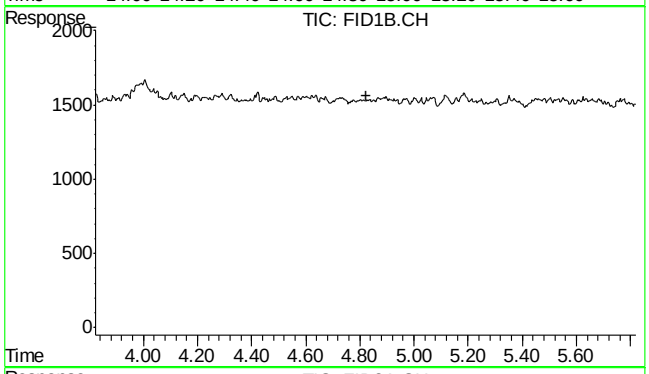
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



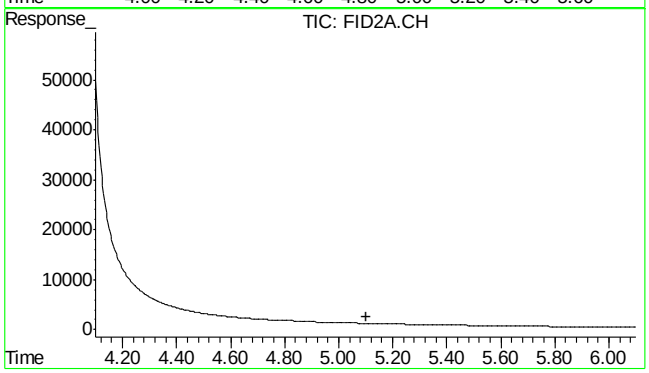
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 5.100 min
Response: 0
Conc: N.D.

7.2.2

7

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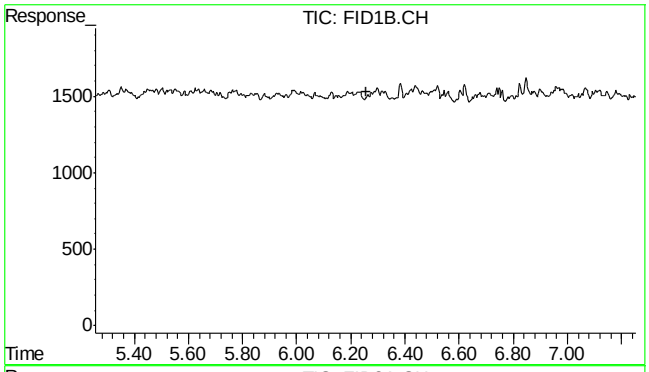
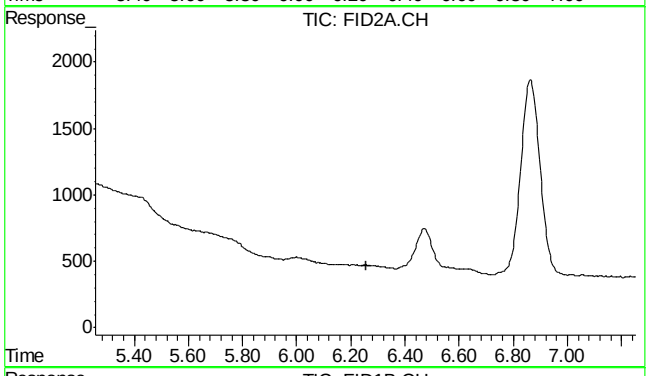


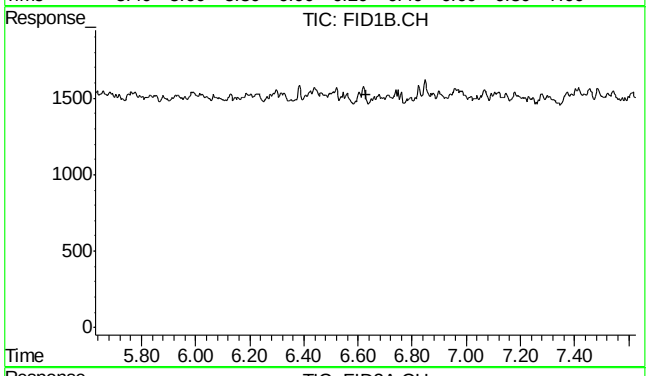
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



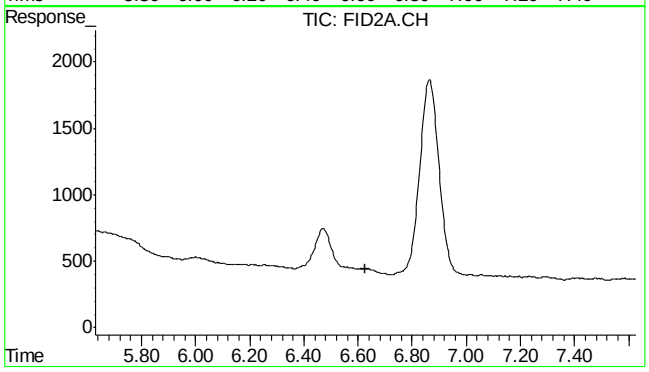
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



#12 Methyl Tert Butyl Ether

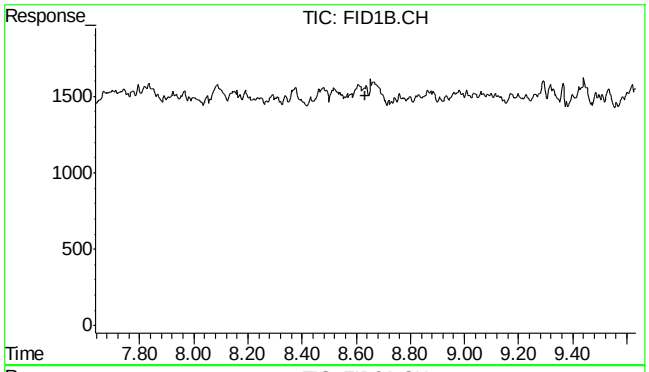
R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



#12 Methyl Tert Butyl Ether

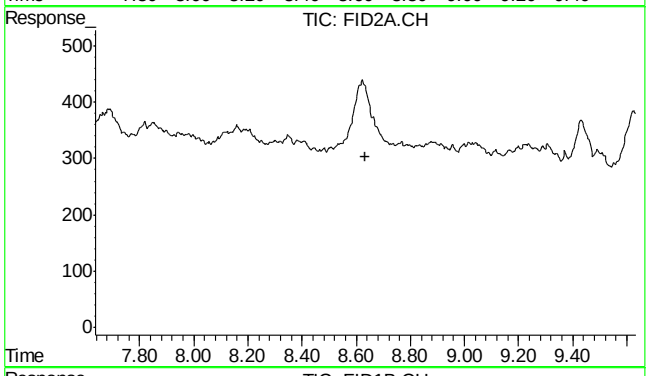
R.T.: 0.000 min
Exp R.T. : 6.628 min
Response: 0
Conc: N.D.

SGS ACCUTEST FA40754



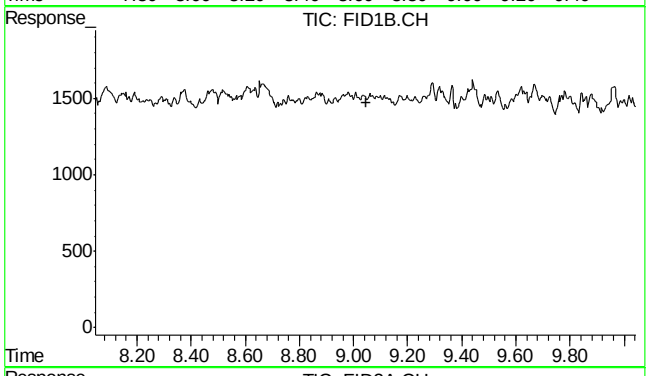
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



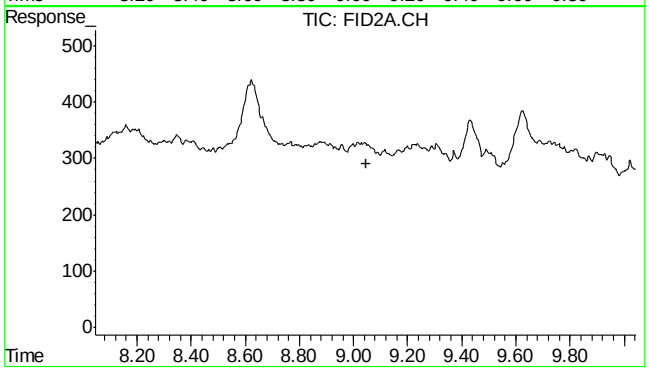
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



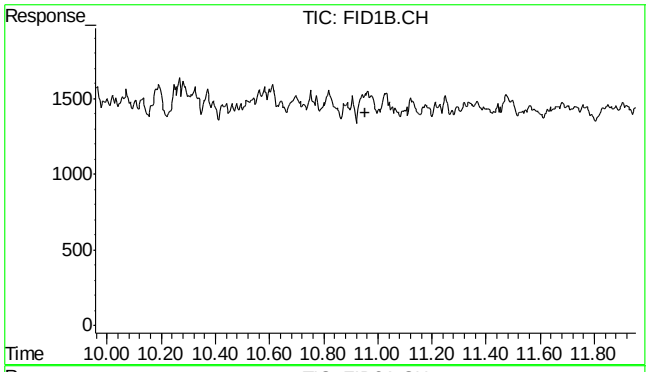
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



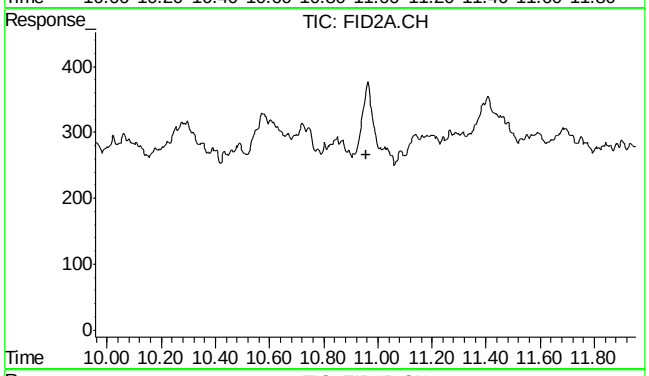
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



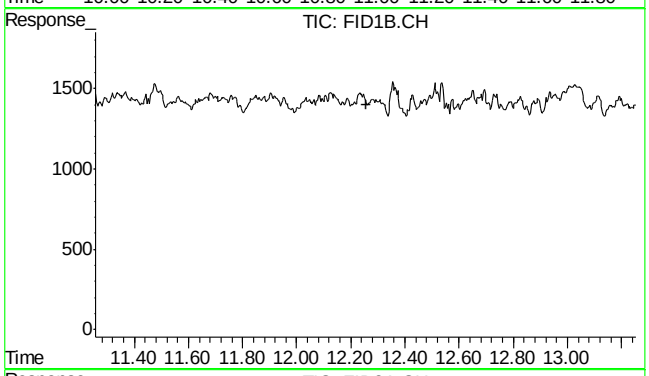
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



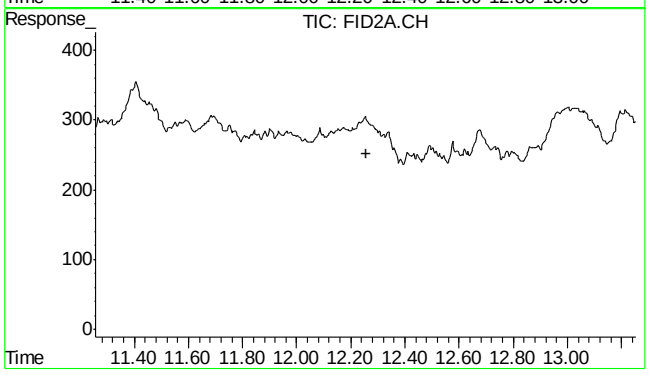
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



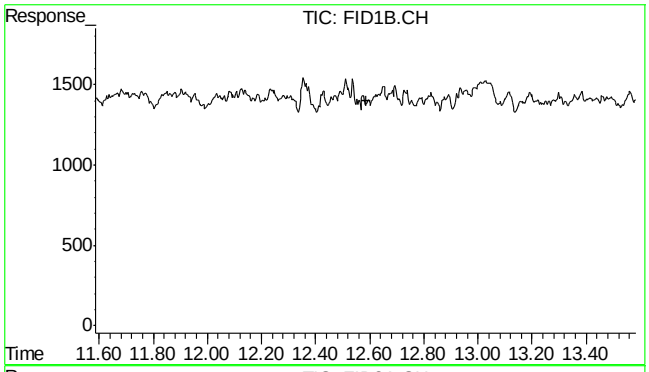
#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



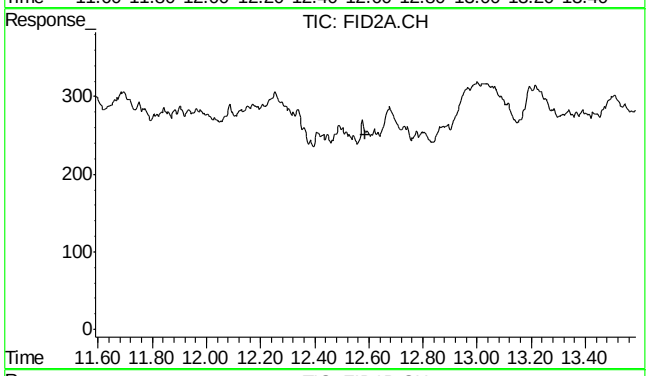
#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



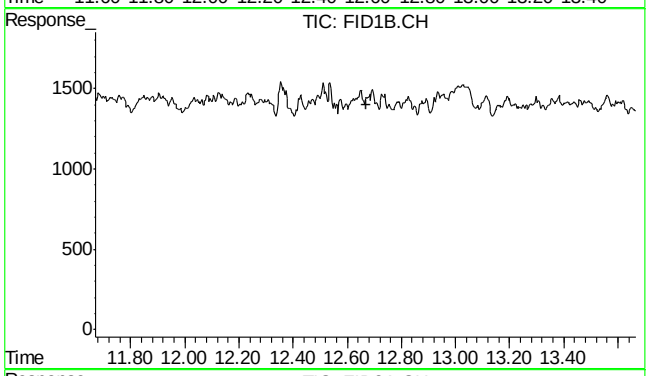
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.586 min
Response: 0
Conc: N.D.



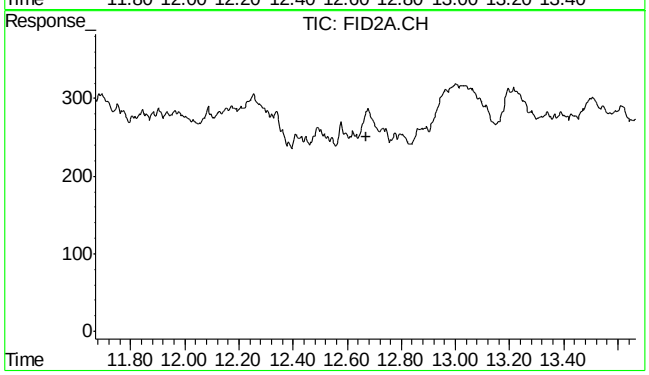
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.

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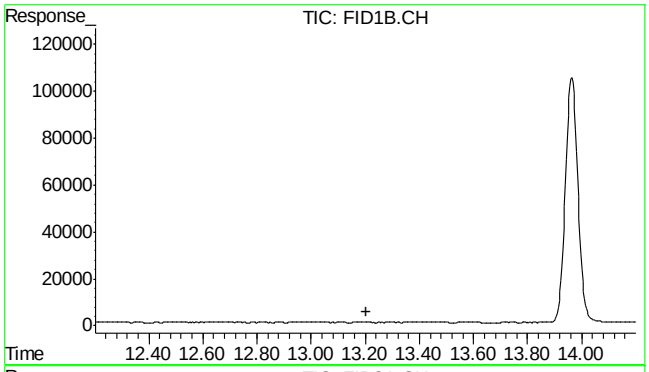
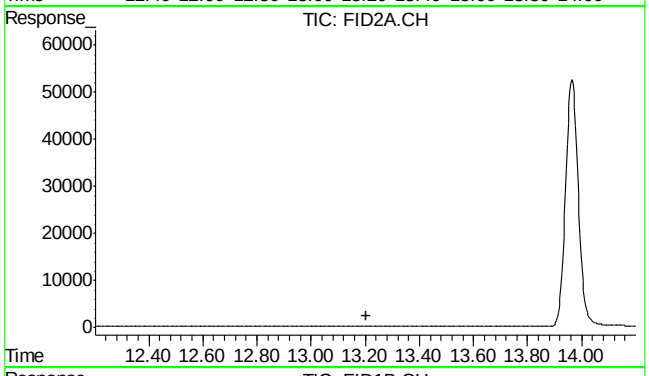


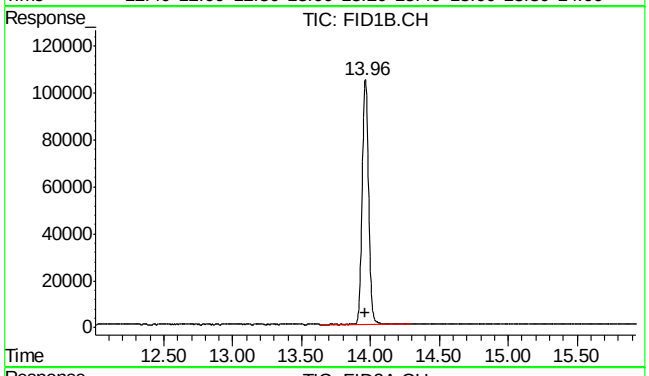
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



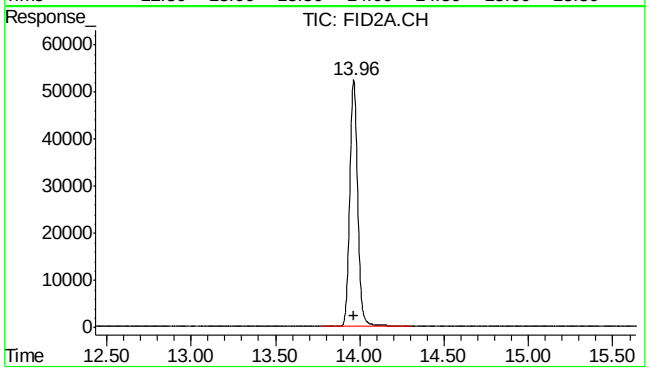
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 3364037
Conc: 183.27 ug/L



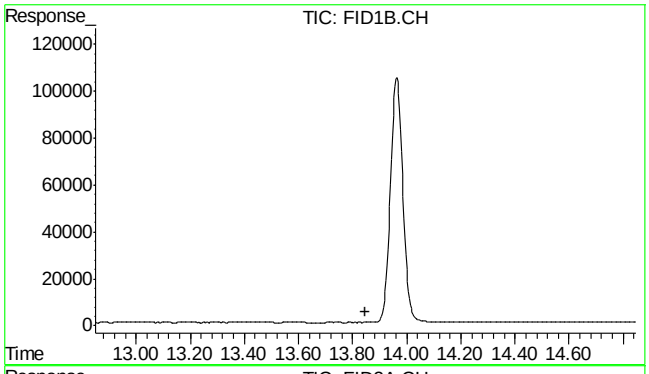
#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.002 min
Response: 1716197
Conc: 189.47 ug/L

7.2.2

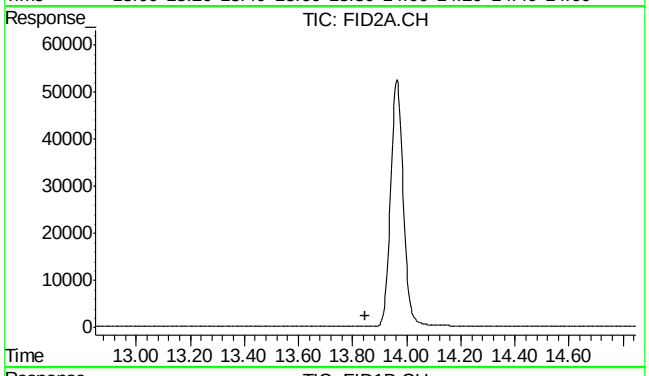
7

SGS ACCUTEST FA40754



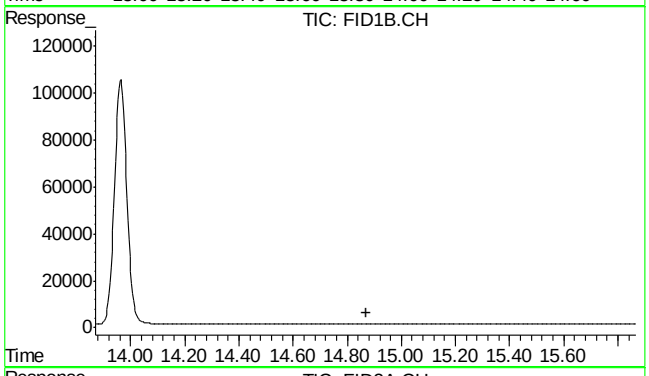
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



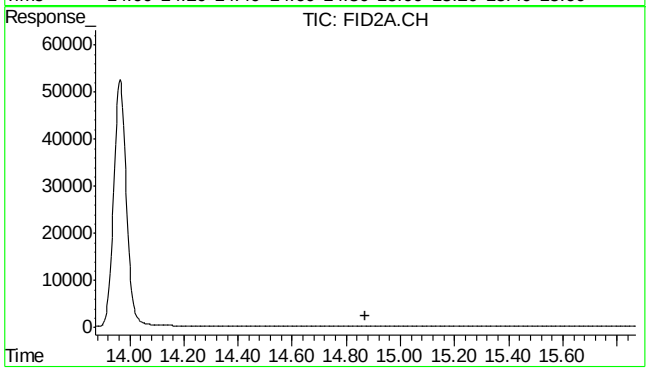
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

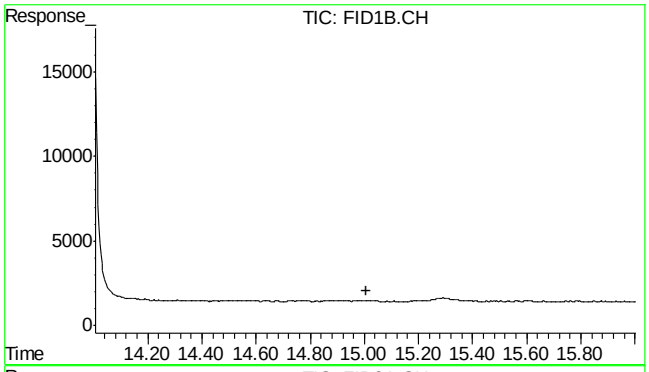
R.T.: 0.000 min
Exp R.T. : 14.870 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

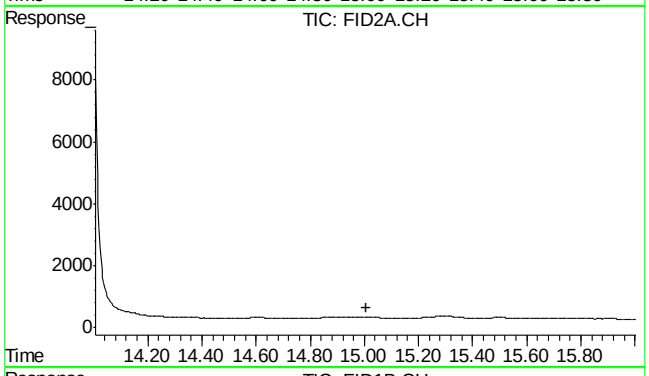
R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.

SGS ACCUTEST FA40754



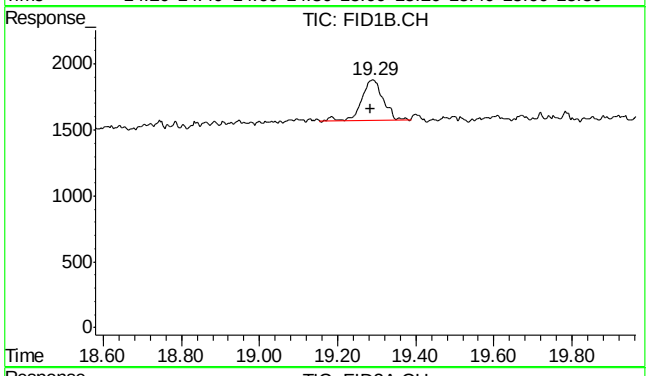
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



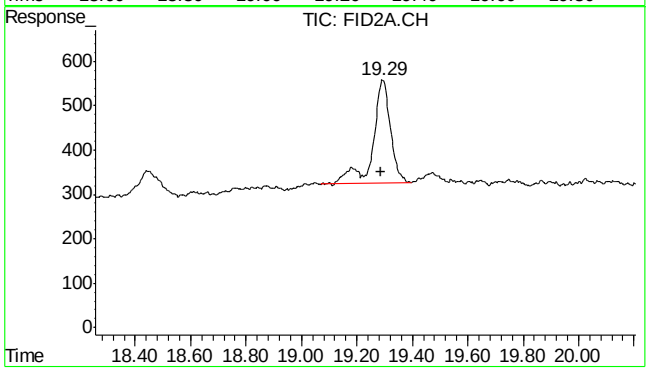
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



#24 Naphthalene

R.T.: 19.290 min
Delta R.T.: 0.006 min
Response: 12042
Conc: 0.97 ug/L



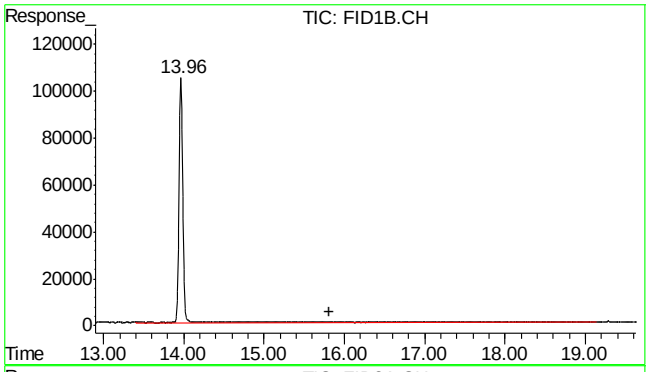
#24 Naphthalene

R.T.: 19.294 min
Delta R.T.: 0.008 min
Response: 10161
Conc: 1.07 ug/L

7.2.2

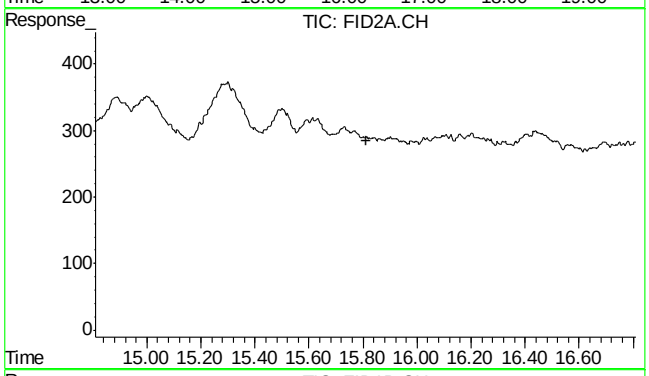
7

SGS ACCUTEST FA40754



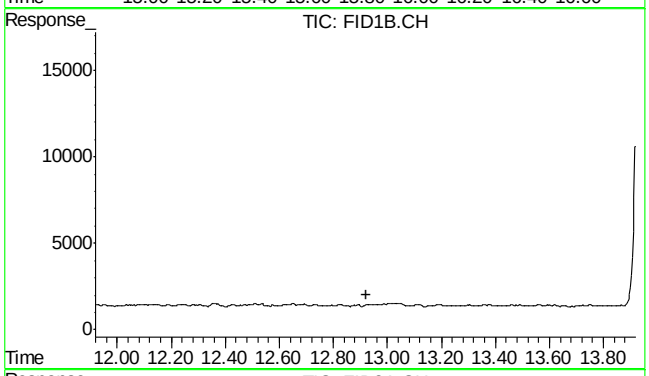
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 368459
Conc: 3.40 ug/L m



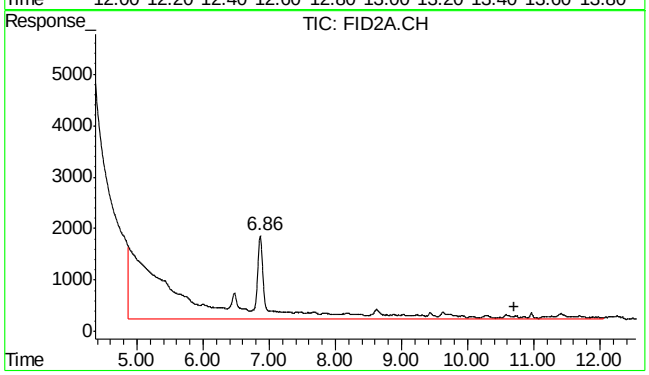
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 142840
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 600876
Conc: N.D.



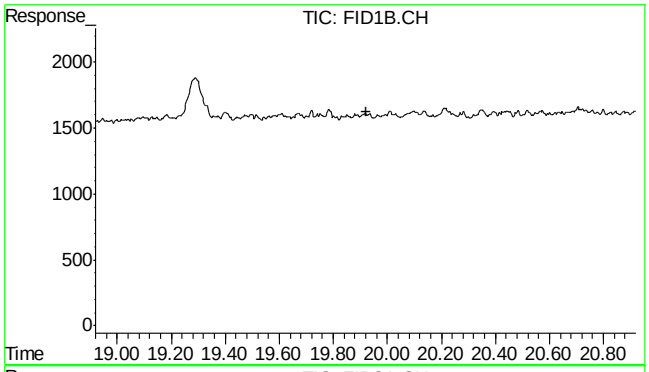
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 897581
Conc: 32.57 ug/L m

7.2.2

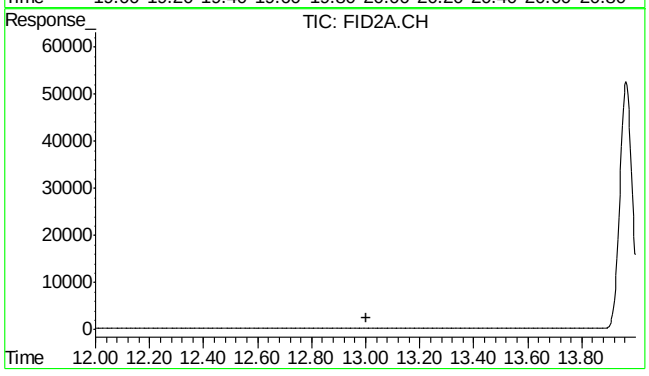
7

SGS ACCUTEST FA40754



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 465848
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 183912
Conc: N.D.

7.2.2

7

SGS ACCUTEST FA40754

Quantitation Report (Not Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\020617\UV077866.D\FID1B.CH Vial: 16
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077866.D\FID2A.CH
Acq On : 07-Feb-2017, 00:35:24 Operator: antonioc
Sample : mb Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 07 14:03:40 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	0.00	0.00	0	0	N.D.	N.D.
2)	S	Alkane B	0.00	0.00	0	0	N.D.	N.D.
3)	S	Aromatic A	0.00	0.00	0	0	N.D.	N.D.
4)	S	Aromatic B	0.00	0.00	0	0	N.D.	N.D.
5)	S	Aromatic C	0.00	0.00	0	0	N.D.	N.D.
6)	S	Aromatic D	0.00	0.00	0	0	N.D.	N.D.
7)	S	Aromatic E	0.00	0.00	0	0	N.D.	N.D.
8)	S	Aromatic F	0.00	0.00	0	0	N.D.	N.D.
9)	S	Aromatic G	0.00	0.00	0	0	N.D.	N.D.
20)	S	BFB	13.96	13.97	1521699	802781	82.901	88.627
		Spiked Amount 40.000 Range 70 - 130 Recovery = 207.25%# 221.57%#						
		Target Compounds						
10)		Pentane	0.00	0.00	0	0	N.D.	N.D.
11)		2-Methylpentane	0.00	0.00	0	0	N.D.	N.D.
12)		Methyl Tert Buty	0.00	6.47f	0	16386	N.D.	2.505 #
13)		2,2,4-Trimethylp	0.00	0.00	0	0	N.D.	N.D.
14)		Benzene	0.00	0.00	0	0	N.D.	N.D.
15)		Toluene	0.00	0.00	0	0	N.D.	N.D.
16)		Nonane	0.00	0.00	0	0	N.D.	N.D.
17)		Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
18)		m,p-Xylene	0.00	0.00	0	0	N.D.	N.D.
19)		o-Xylene	0.00	0.00	0	0	N.D.	N.D.
21)		Decane	0.00	0.00	0	0	N.D.	N.D.
22)		1,2,4-Trimethylb	0.00	0.00	0	0	N.D.	N.D.
23)		Butylcyclohexane	0.00	0.00	0	0	N.D.	N.D.
24)		Naphthalene	19.29	19.29	10775	9166	0.871	0.965
25)	H	C9- C10 Aromatic	15.81	15.81	297789	108560	N.D.	NoCal
26)	H	C5- C8 Aliphatic	12.92	10.70	912827	856587	NoCal	29.246 #
27)	H	C9- C12 Aliphati	19.92	13.00	496671	152271	NoCal	N.D.

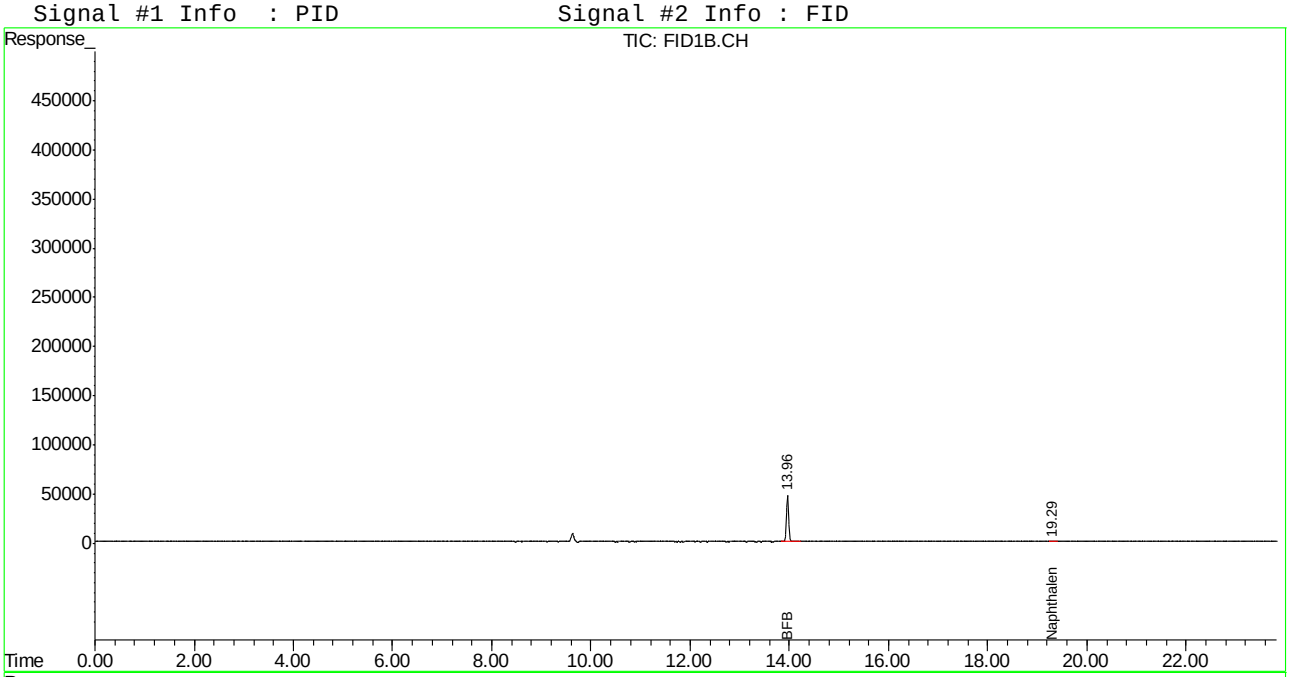
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077866.D VPH011317.M Tue Feb 07 14:03:40 2017

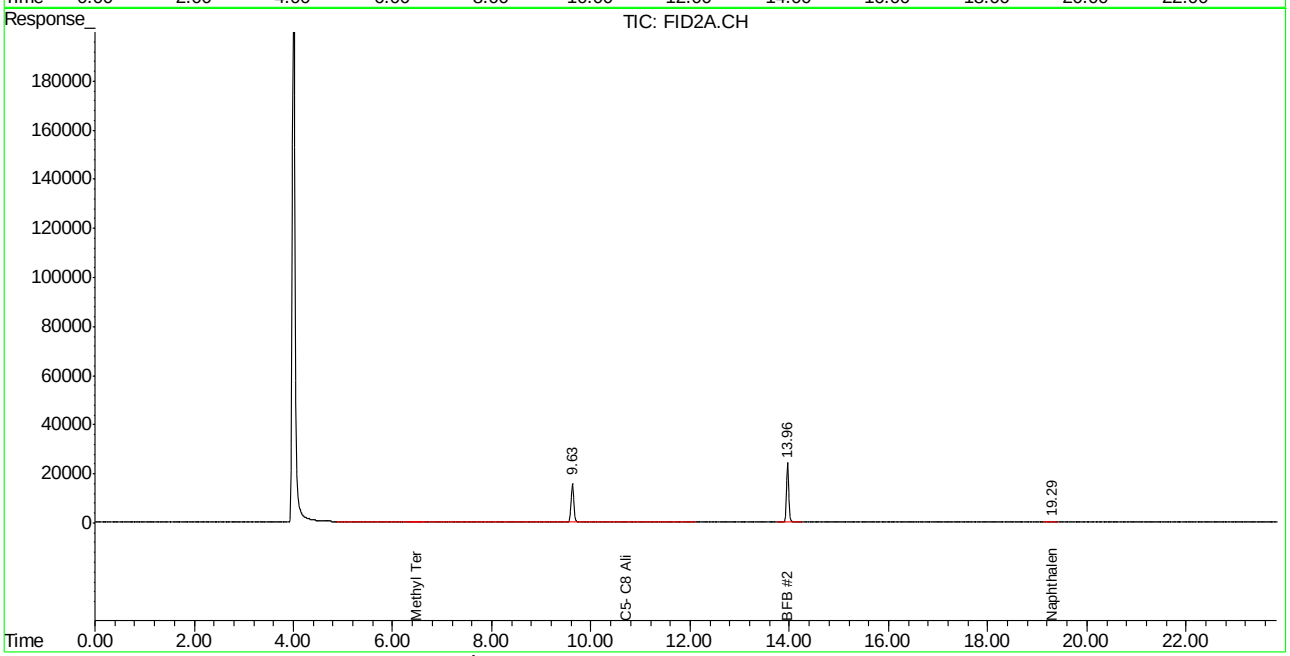
Quantitation Report (Not Reviewed)

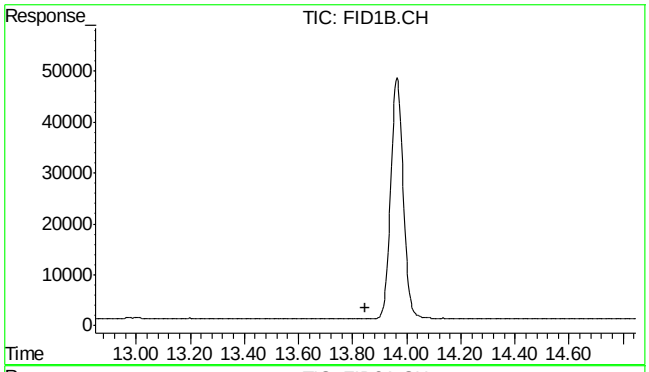
Signal #1 : C:\HPCHEM\2\DATA\020617\UV077866.D\FID1B.CH Vial: 16
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077866.D\FID2A.CH
Acq On : 07-Feb-2017, 00:35:24 Operator: antonioc
Sample : mb Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 7 14:03 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

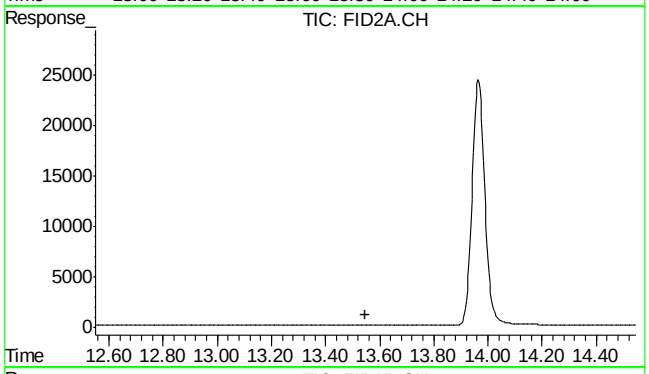






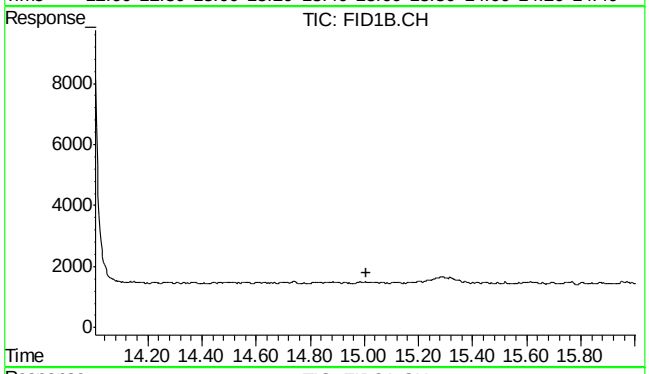
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.847 min
Response: 0
Conc: N.D.



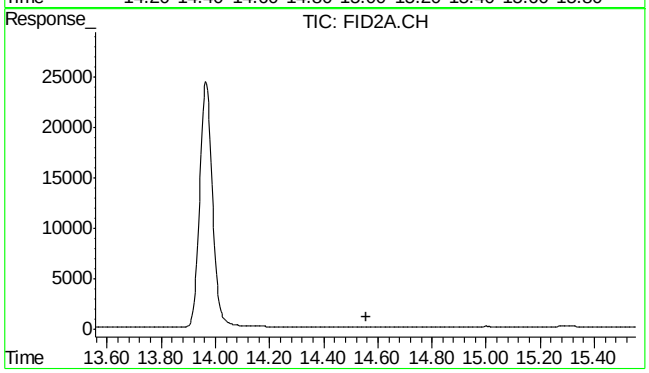
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.2.3

7

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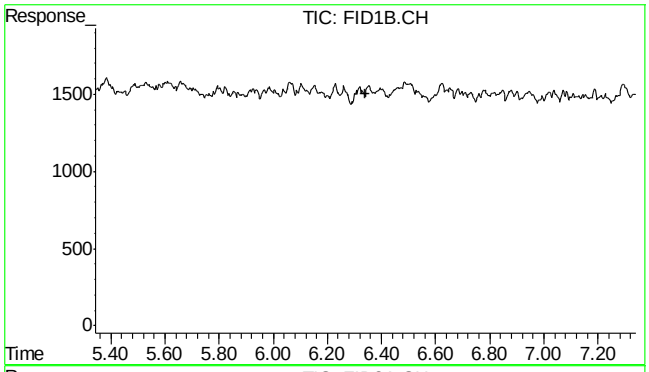
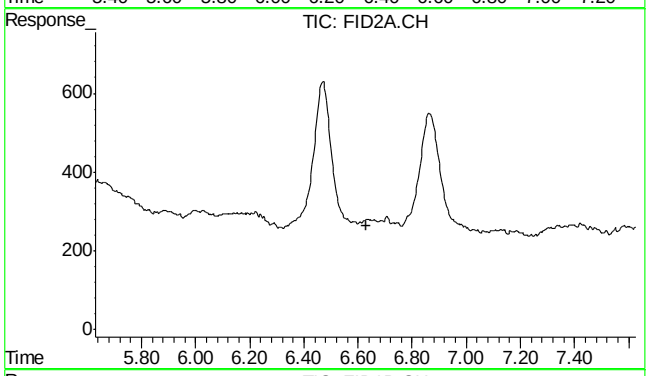


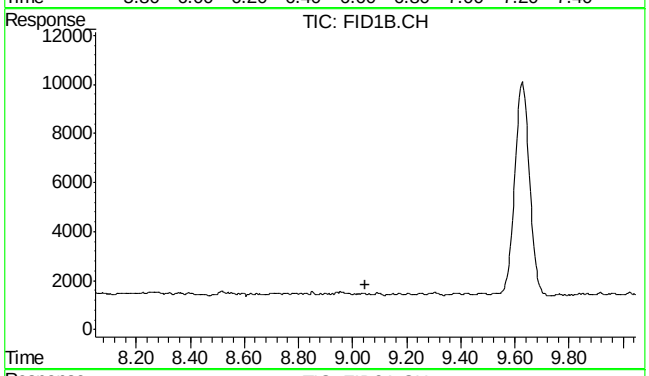
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



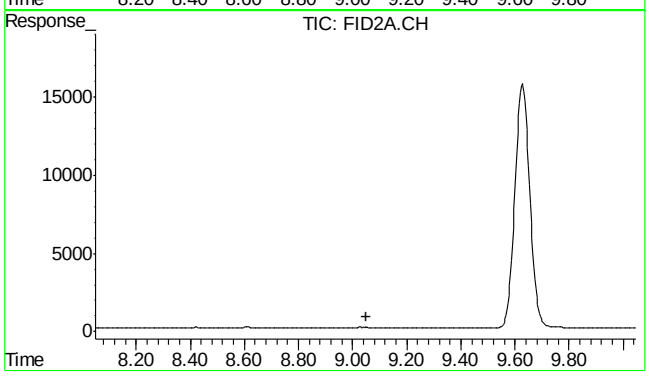
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



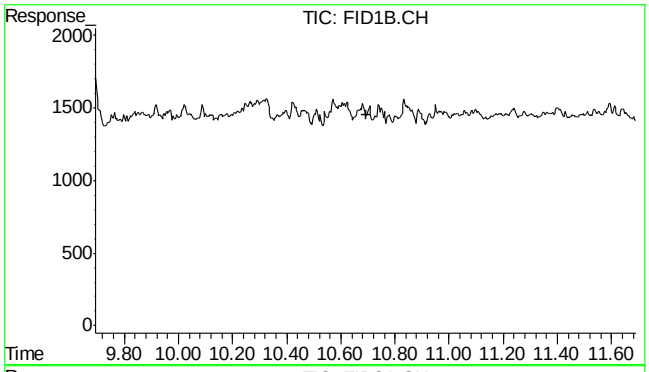
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



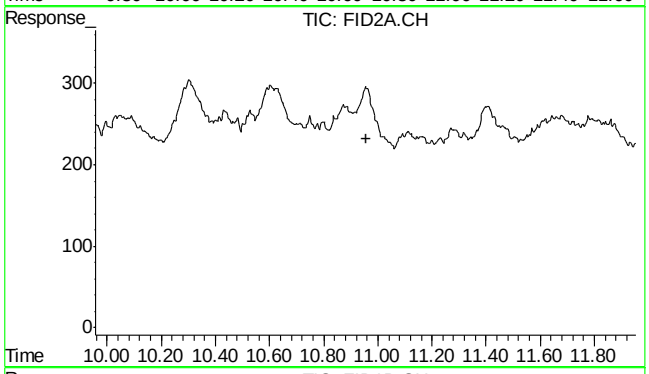
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.049 min
Response: 0
Conc: N.D.



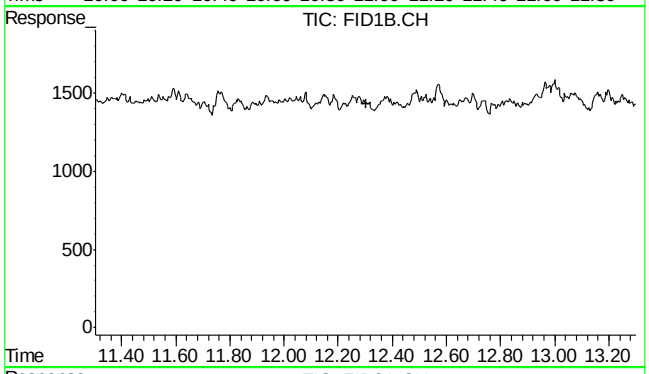
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



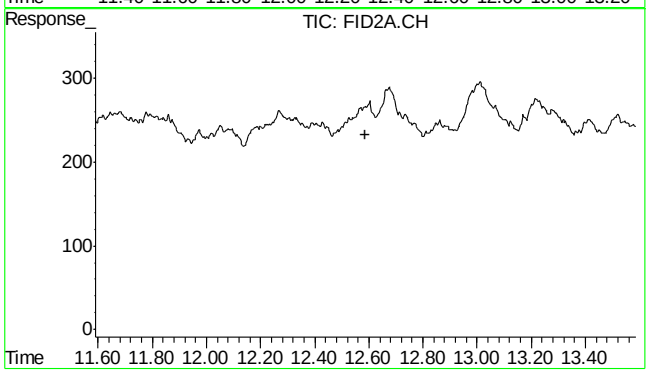
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.956 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.

7.2.3

7

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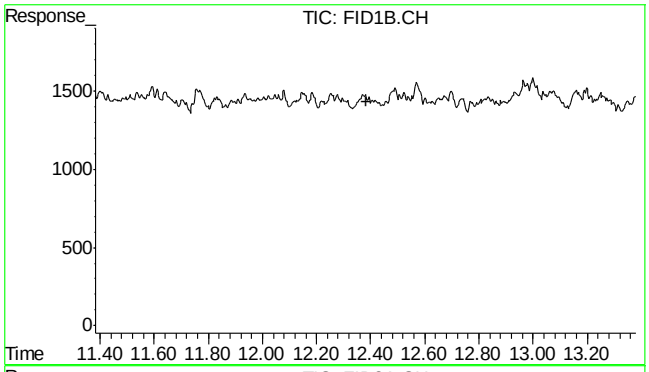
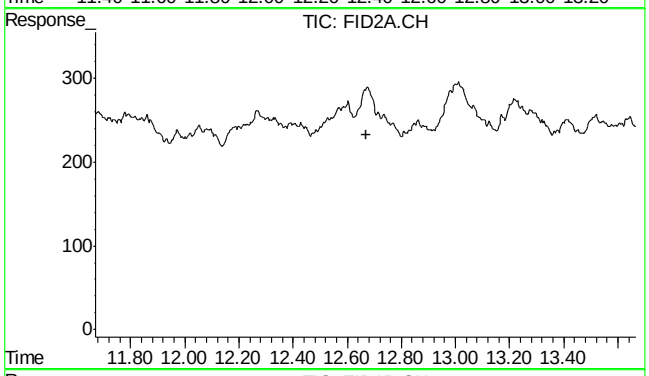


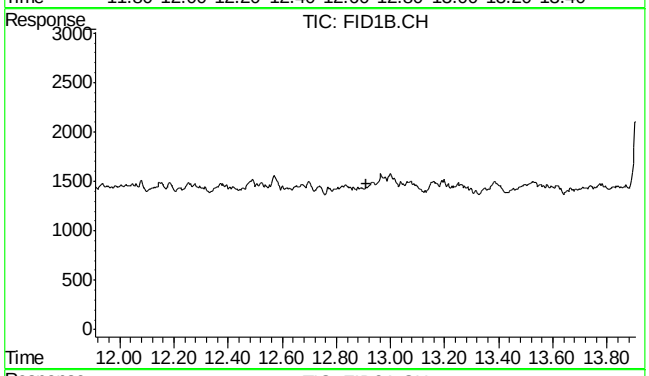
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



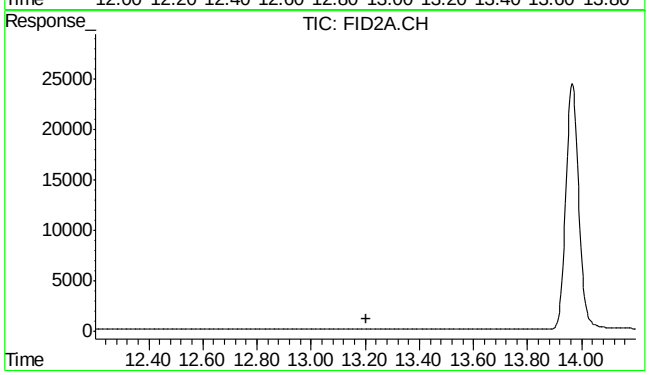
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



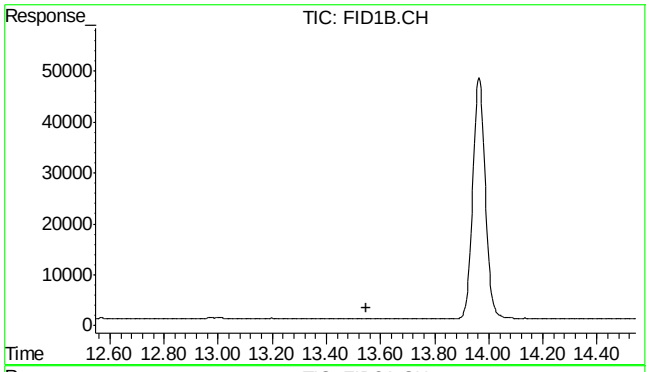
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.

7.2.3

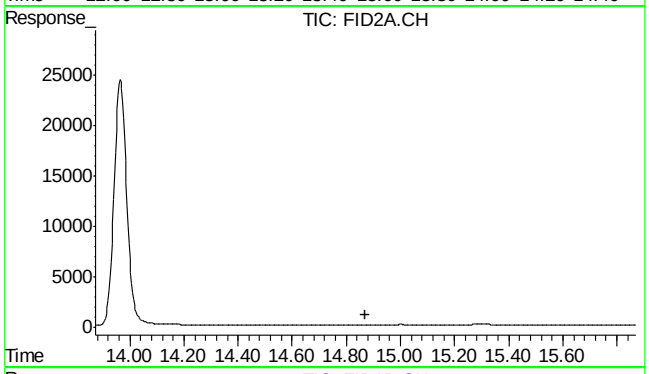
7

SGS ACCUTEST FA40754



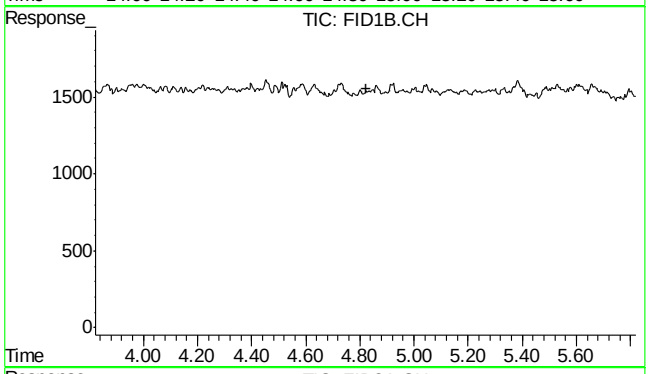
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



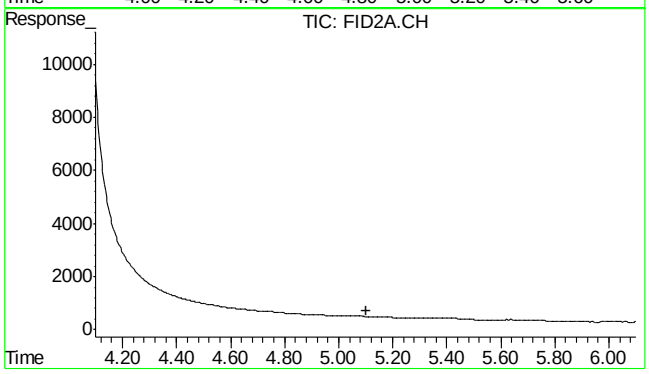
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 5.100 min
Response: 0
Conc: N.D.

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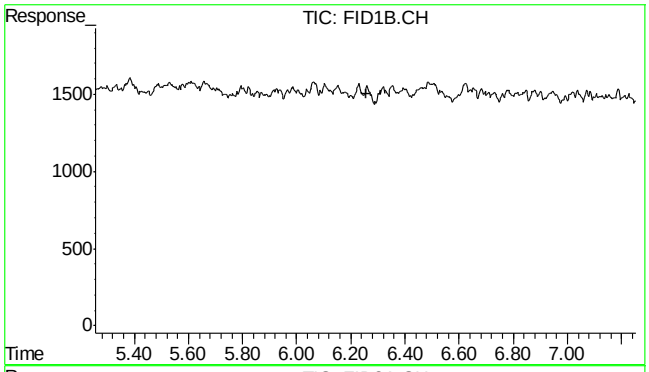
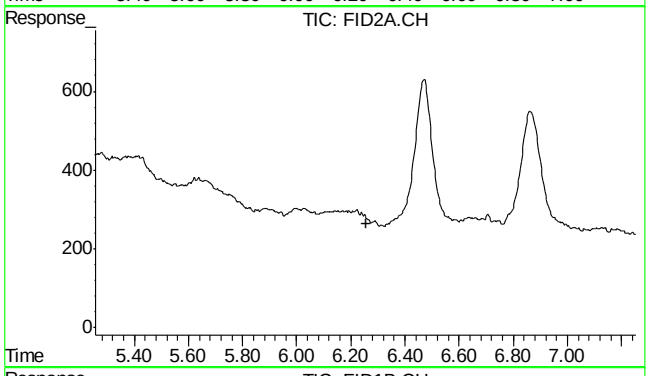


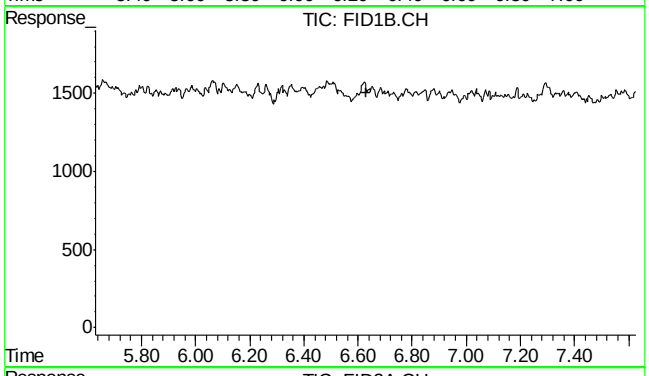
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



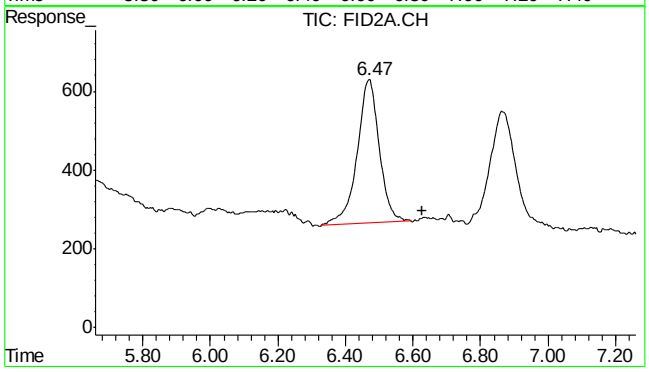
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



#12 Methyl Tert Butyl Ether

R.T.: 6.471 min
Delta R.T.: -0.157 min
Response: 16386
Conc: 2.51 ug/L

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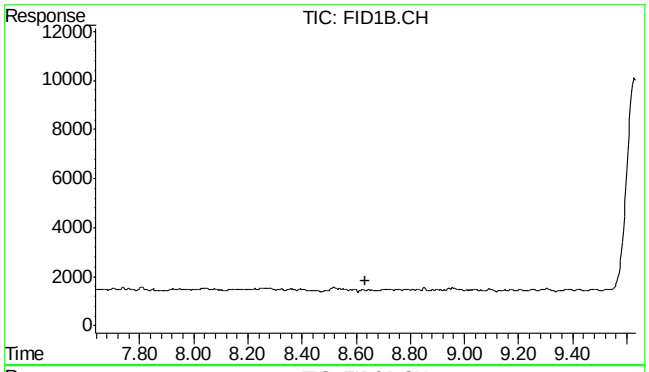
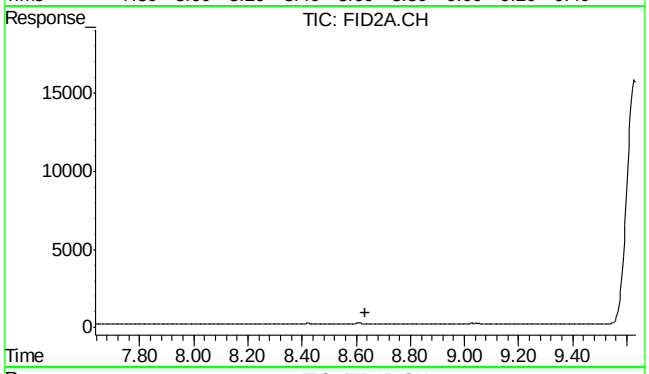


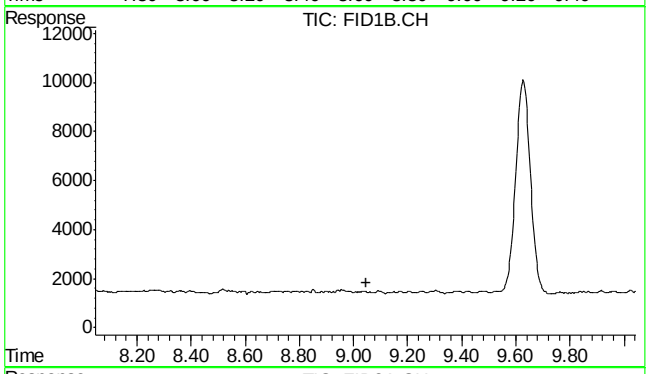
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



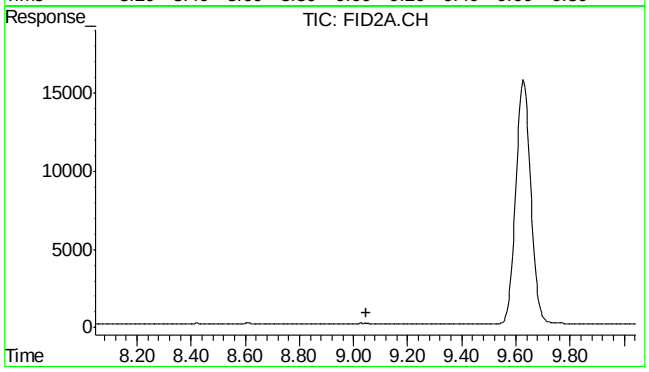
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



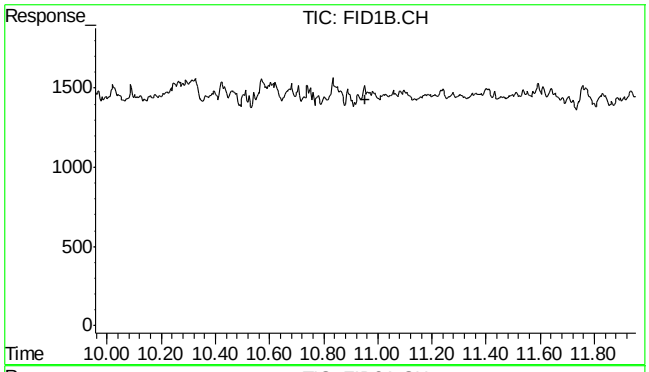
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



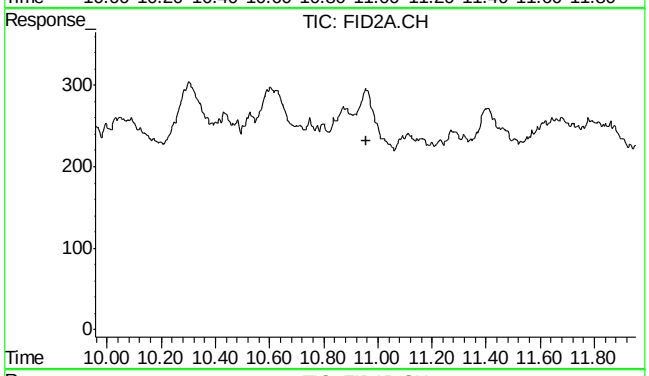
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



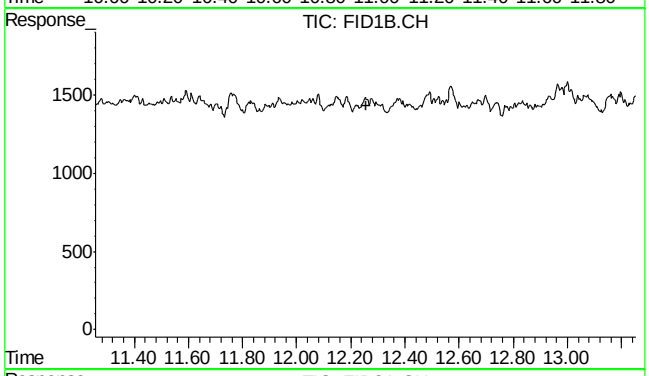
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



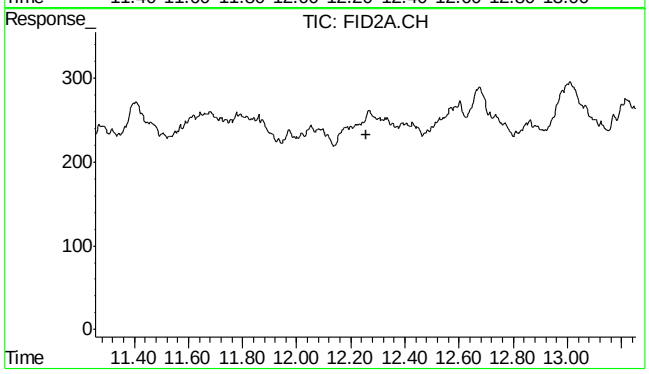
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.

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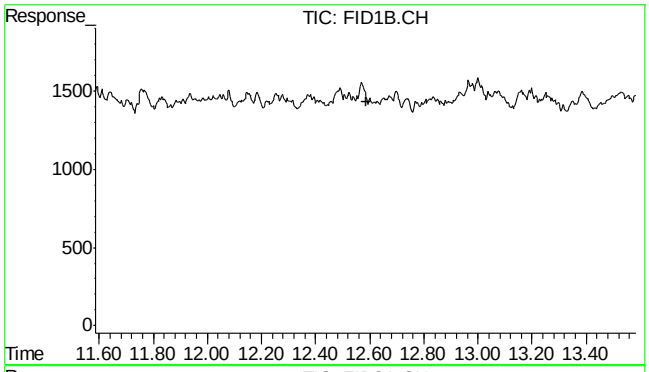
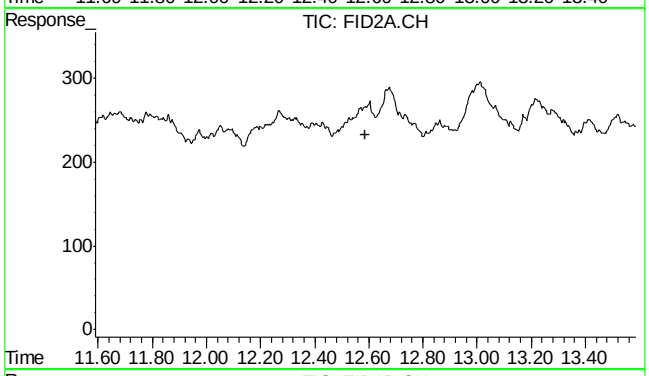


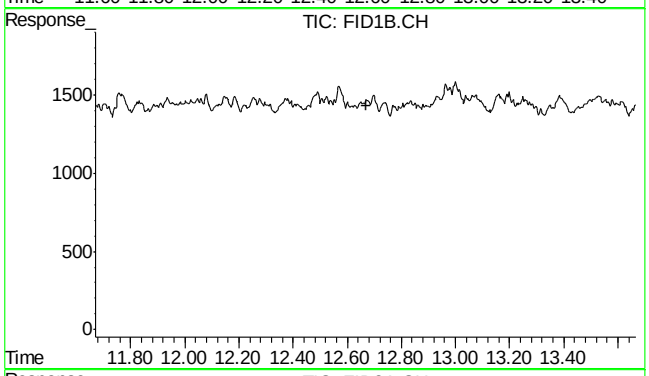
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.586 min
Response: 0
Conc: N.D.



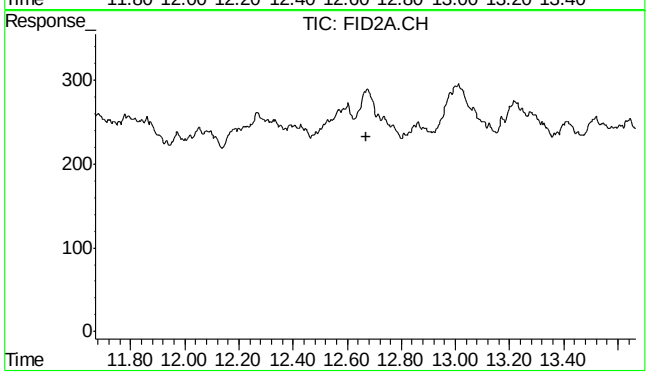
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



#18 m,p-Xylene

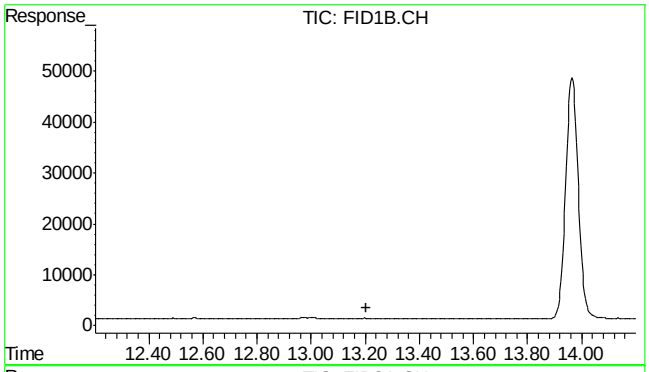
R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



#18 m,p-Xylene

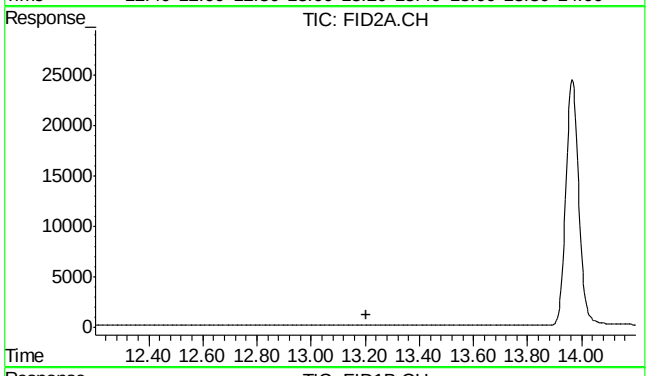
R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.

SGS ACCUTEST FA40754



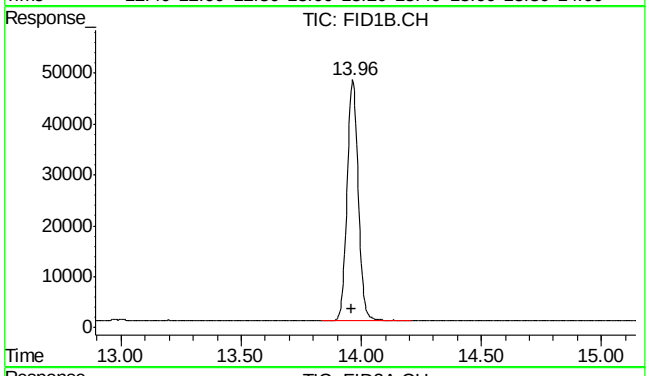
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



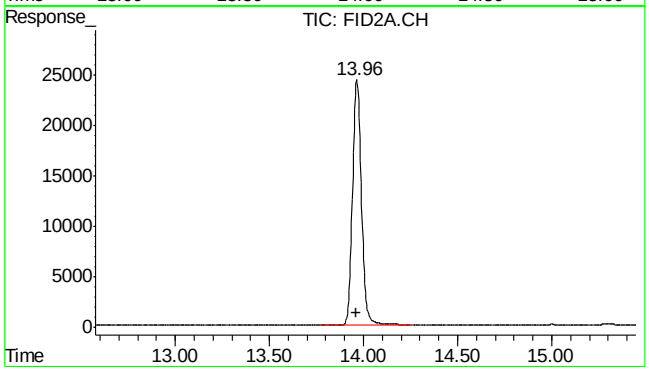
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



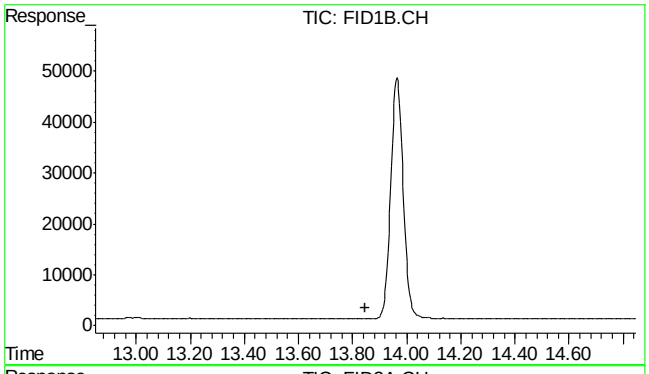
#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.004 min
Response: 1521699
Conc: 82.90 ug/L



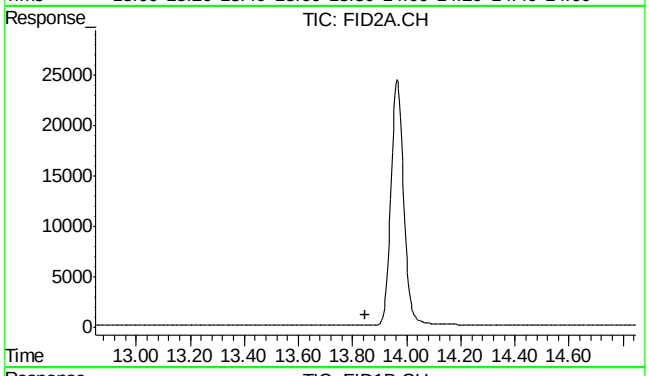
#20 BFB

R.T.: 13.966 min
Delta R.T.: 0.004 min
Response: 802781
Conc: 88.63 ug/L



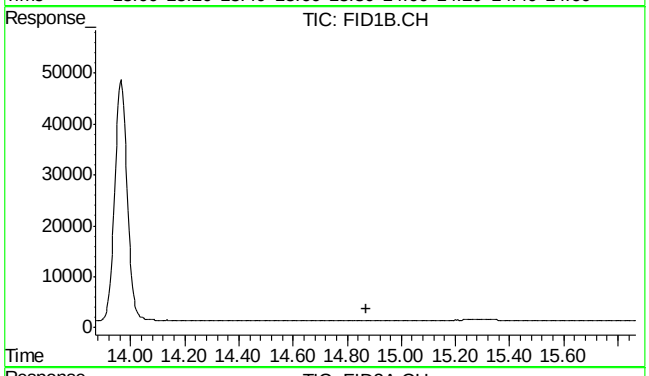
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



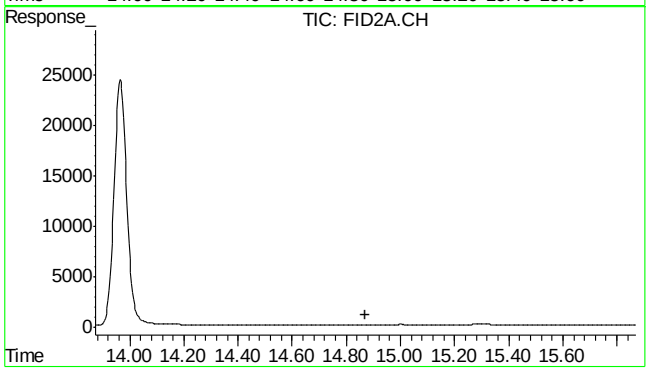
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.870 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.

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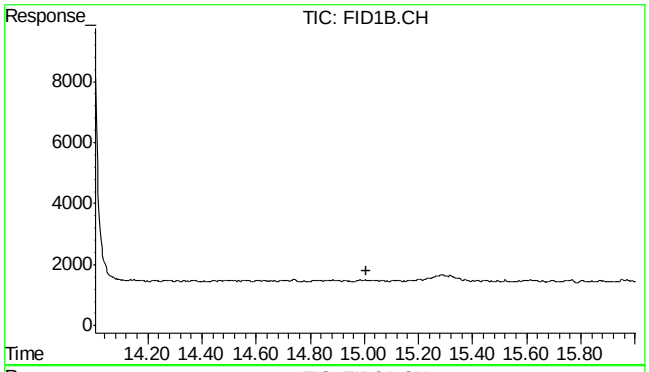
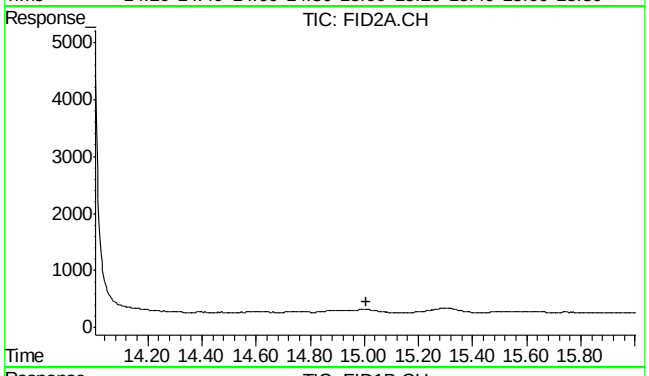


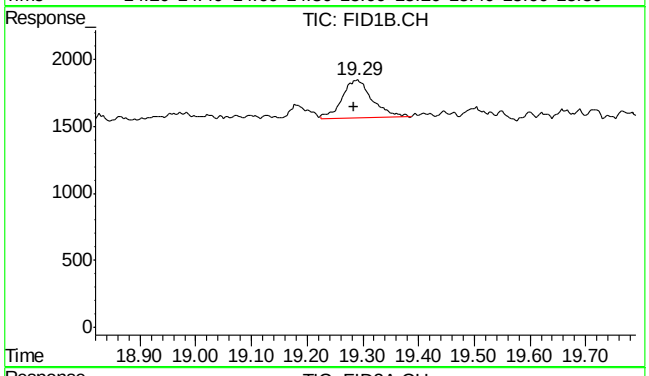
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



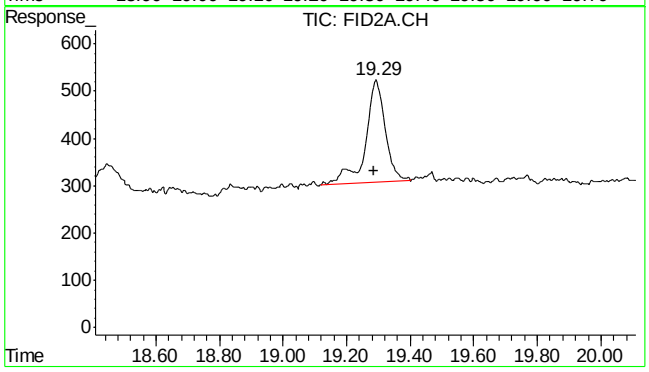
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



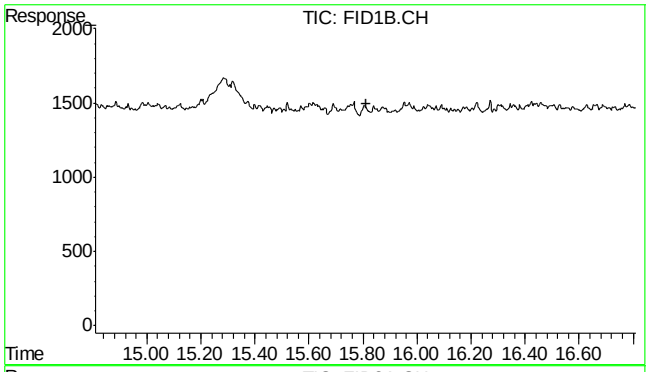
#24 Naphthalene

R.T.: 19.290 min
Delta R.T.: 0.006 min
Response: 10775
Conc: 0.87 ug/L



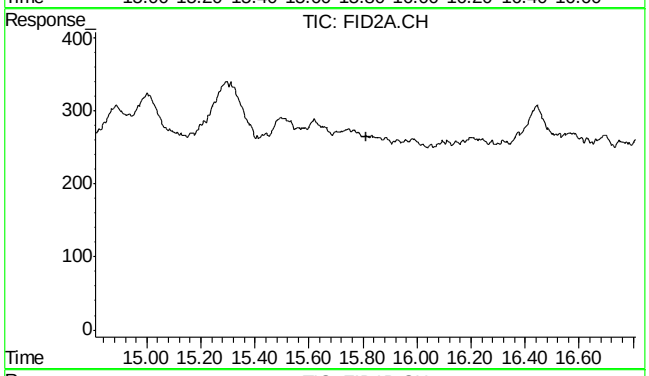
#24 Naphthalene

R.T.: 19.293 min
Delta R.T.: 0.007 min
Response: 9166
Conc: 0.97 ug/L



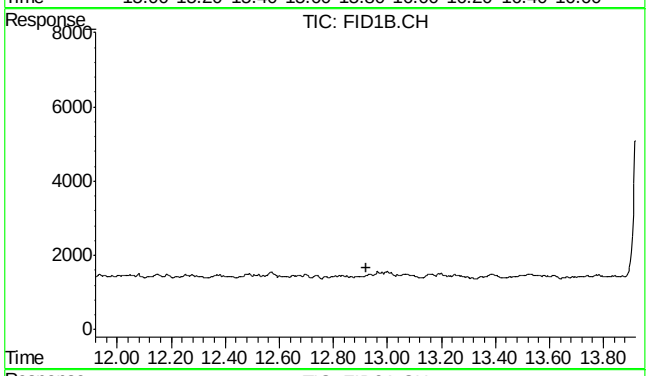
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 297789
Conc: N.D.



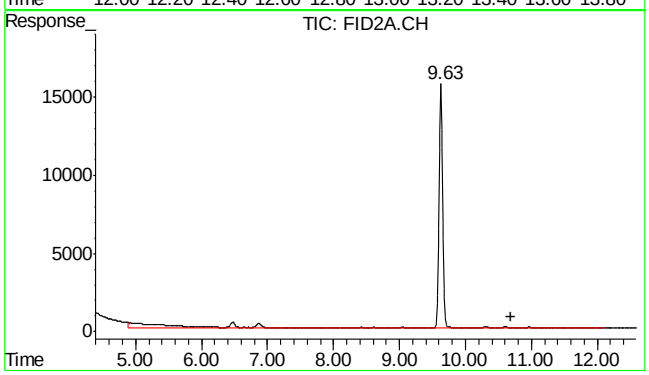
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 108560
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 912827
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 856587
Conc: 29.25 ug/L m

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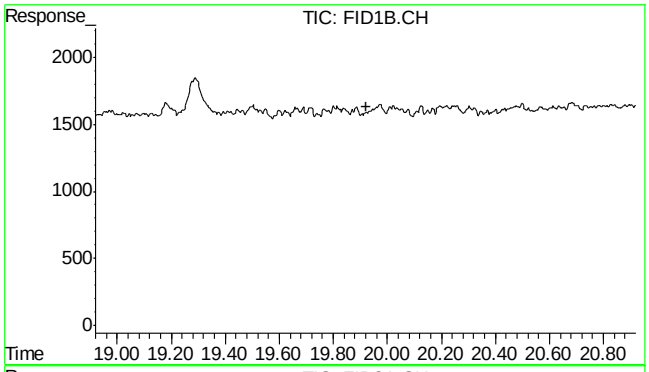
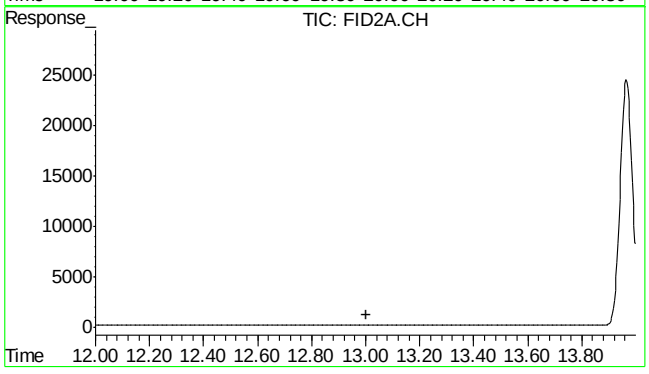


#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 496671
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 152271
Conc: N.D.

7.2.3

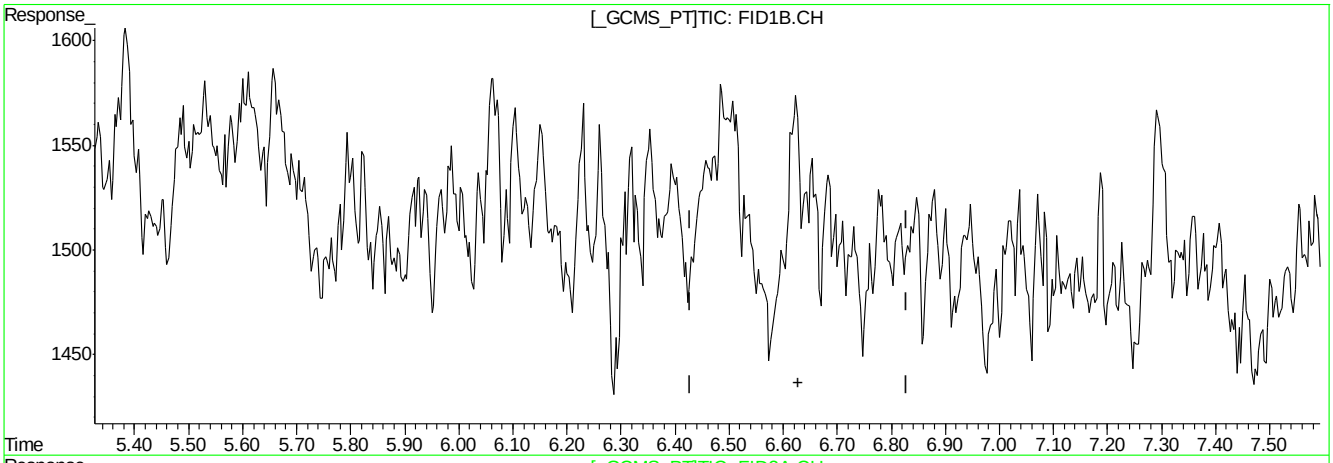
7

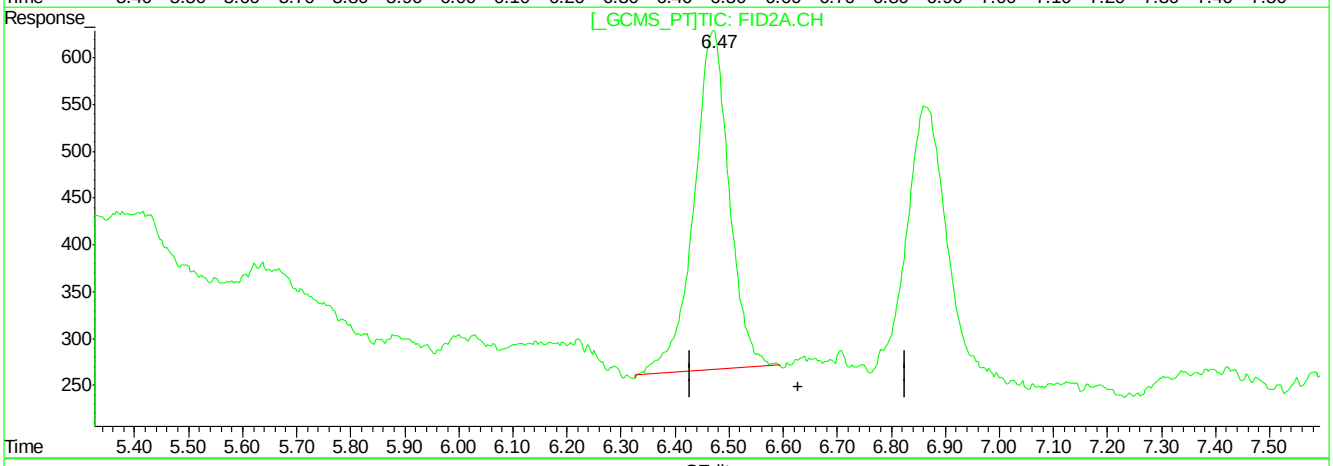
SGS ACCUTEST FA40754

Quantitation Report (Qedit)

```
Signal #1 : C:\HPCHEM\2\DATA\020617\UV077866.D\FID1B.CH  Vial: 16
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077866.D\FID2A.CH
Acq On    : 07-Feb-2017, 00:35:24                        Operator: antonioc
Sample    : mb                                           Inst    : HP5890
Misc      :                                              Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E
Quant Time: Feb  7 10:02 2017  Quant Results File: VPH011317.RES


Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Multiple Level Calibration
```





QEdit

(12) Methyl Tert Butyl Ether

0.00min 0.000ug/L

response 0

(12) Methyl Tert Butyl Ether #2

6.47min 2.505ug/L

response 16386

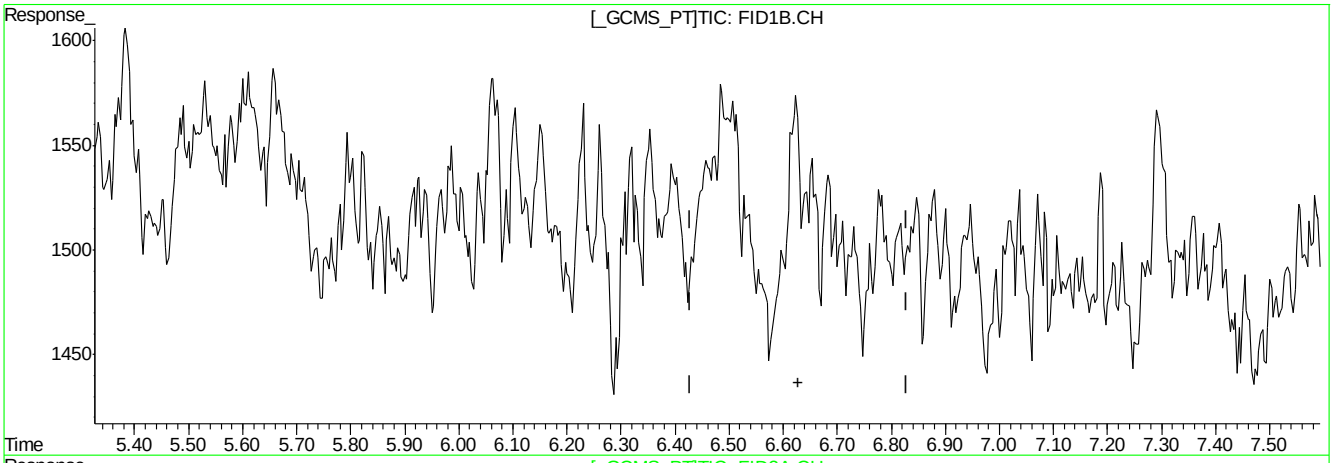
(+) = Expected Retention Time

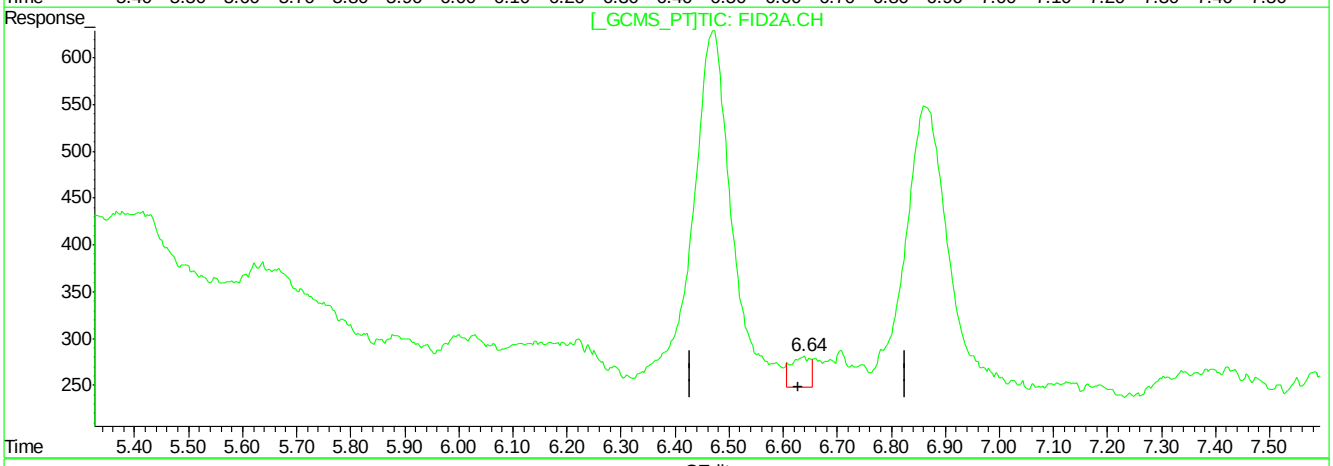
UV077866.D VPH011317.M Tue Feb 07 10:18:29 2017

Quantitation Report (Qedit)

```
Signal #1 : C:\HPCHEM\2\DATA\020617\UV077866.D\FID1B.CH  Vial: 16
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077866.D\FID2A.CH
Acq On    : 07-Feb-2017, 00:35:24                        Operator: antonioc
Sample    : mb                                           Inst    : HP5890
Misc      :                                              Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E
Quant Time: Feb  7 10:02 2017  Quant Results File: VPH011317.RES


Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Multiple Level Calibration
```





QEdit

(12) Methyl Tert Butyl Ether

0.00min 0.000ug/L

response 0

(12) Methyl Tert Butyl Ether #2

6.64min 0.115ug/L m

response 751

(+) = Expected Retention Time

UV077866.D VPH011317.M Tue Feb 07 10:18:35 2017

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077734.D\FID1B.CH Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077734.D\FID2A.CH
Acq On : 31-Jan-2017, 10:28:48 Operator: antonioc
Sample : bs Inst : HP5890
Misc : gc19636,guv4134,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 31 11:05:08 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	181862	0	NoCal m	N.D.
2)	S	Alkane B	15.01f	0.00	838287	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.61f	0	505443	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	1734919	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.95f	0	1735102	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	1705380	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	3373158	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	1725609	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	1604538	N.D.	NoCal m
20)	S	BFB	13.96	13.96	3451974	1791563	188.062	197.788
		Spiked Amount 200.000 Range 70 - 130 Recovery =					94.03%	98.89%
		Target Compounds						
10)		Pentane	0.00	5.09	0	1223554	N.D.	89.212 #
11)		2-Methylpentane	6.25	6.25	54112	1283775	NoCal	85.443 #
12)		Methyl Tert Buty	6.61	6.61	434004	513222	80.443	78.471
13)		2,2,4-Trimethylp	8.63	8.63	206112	1199679	NoCal	102.510 #
14)		Benzene	9.04	9.04	1786993	1738938	74.923	79.422
15)		Toluene	10.95	10.96	1643043	1728948	75.662	83.885
16)		Nonane	12.26	12.26	154319	1602324	NoCal	83.075 #
17)		Ethylbenzene	12.59	12.59	1438658	1651539	78.720	84.500
18)		m,p-Xylene	12.67	12.67	3480209	3445774	157.339	166.361
19)		o-Xylene	13.20	13.20	1469532	1718842	76.859	82.346
21)		Decane	13.85	13.85	193893	1520568	NoCal	84.449 #
22)		1,2,4-Trimethylb	14.87	14.87	1480557	1594129	74.027	79.052
23)		Butylcyclohexane	15.01	15.01	800223	1633724	NoCal	78.305 #
24)		Naphthalene	19.29	19.29	912303	750487	73.758	79.026
25)	H	C9- C10 Aromatic	15.81	15.81	1781031	3230297	74.325	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	11083928	4308174	NoCal	309.492 #
27)	H	C9- C12 Aliphati	19.92	13.00	2814529	5037468	NoCal	253.114 #

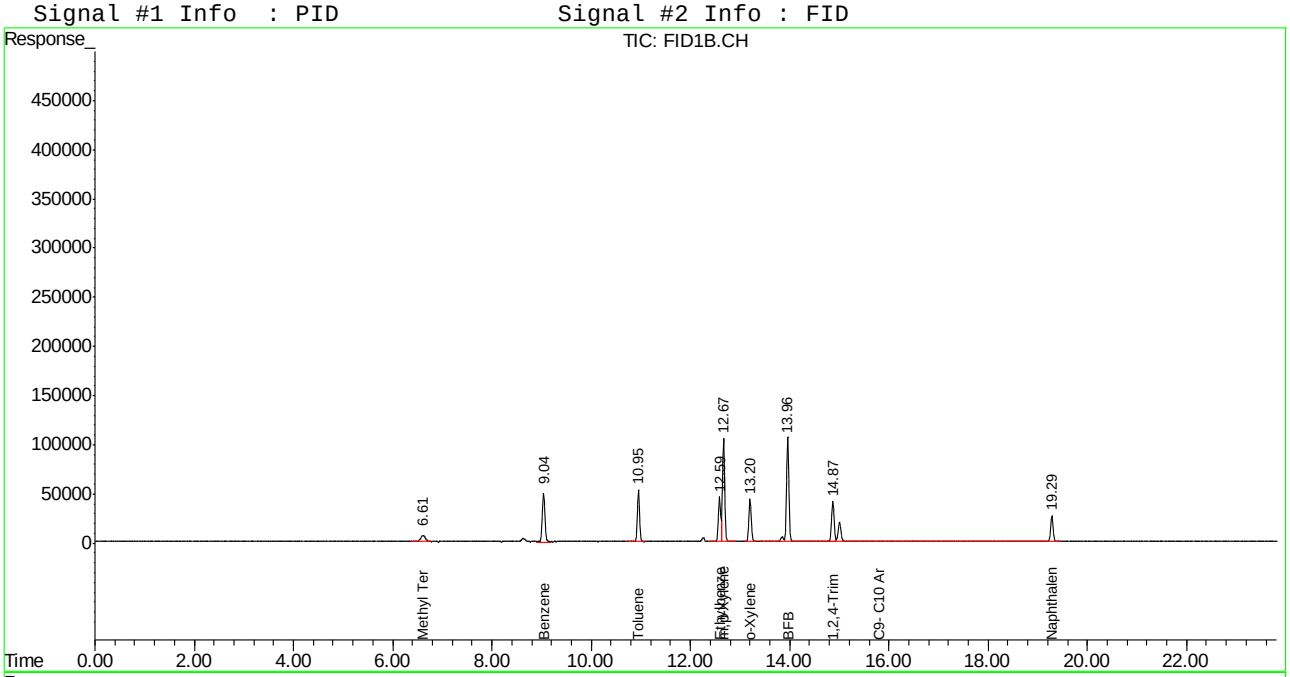
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077734.D VPH011317.M Fri Feb 03 13:17:53 2017

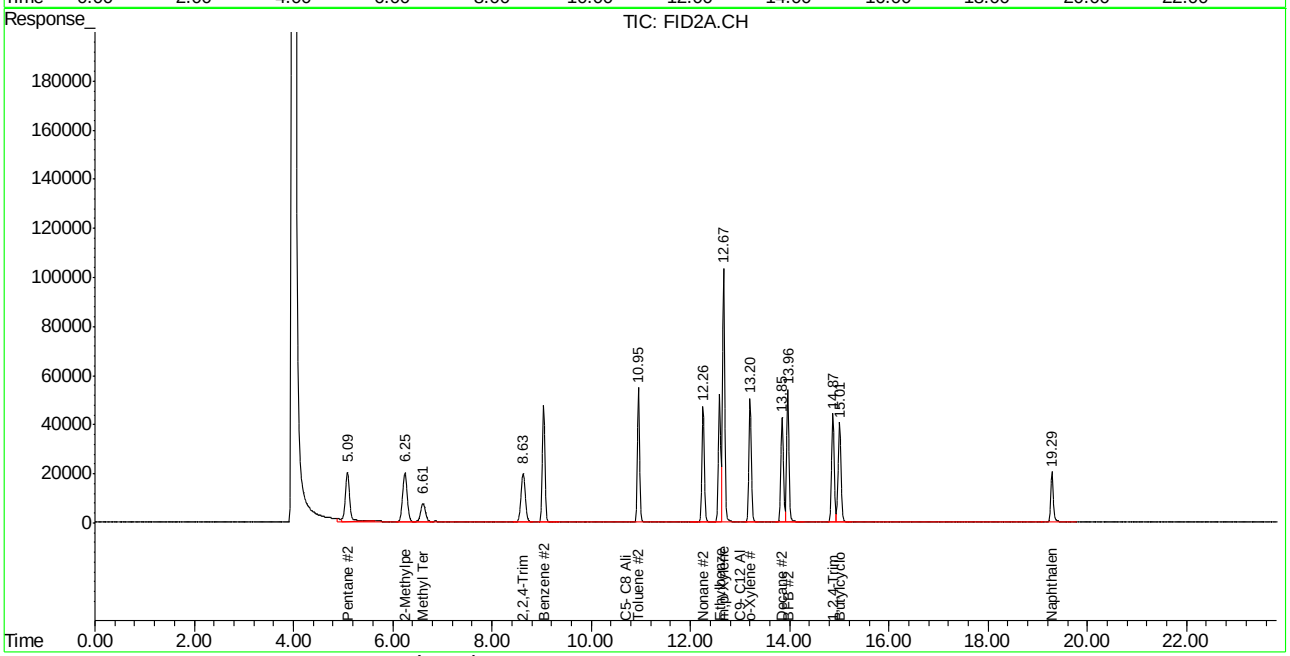
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077734.D\FID1B.CH Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077734.D\FID2A.CH
Acq On : 31-Jan-2017, 10:28:48 Operator: antonioc
Sample : bs Inst : HP5890
Misc : gc19636,guv4134,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 31 11:08 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID





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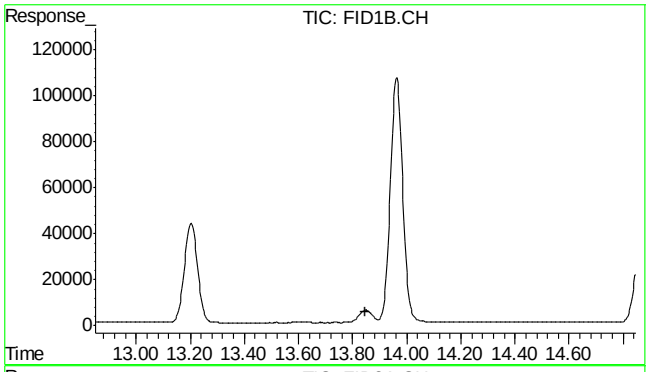
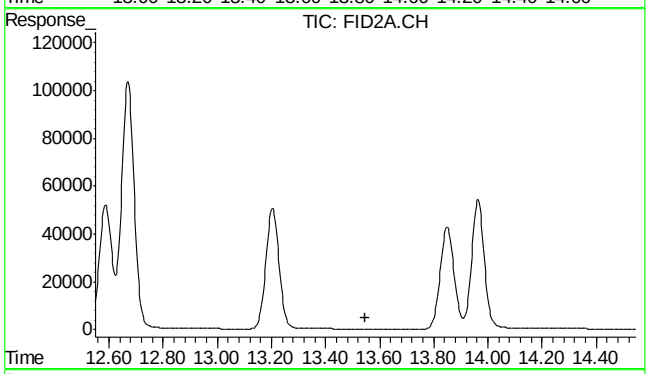


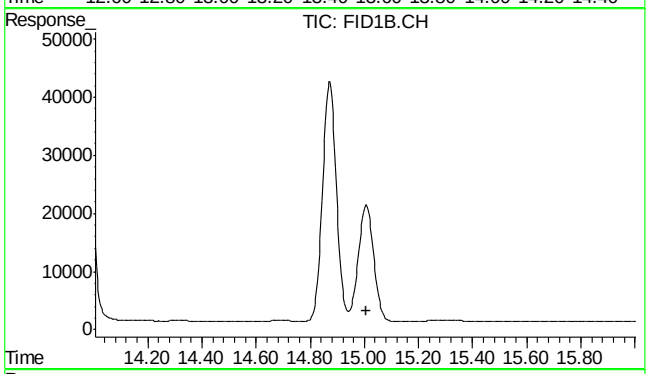
#1 Alkane A

R.T.: 13.848 min
Delta R.T.: 0.000 min
Response: 181862
Conc: N.D.



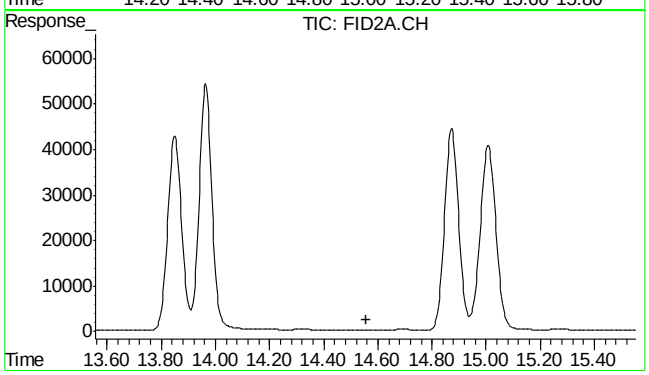
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.006 min
Delta R.T.: 0.000 min
Response: 838287
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.3.1

7

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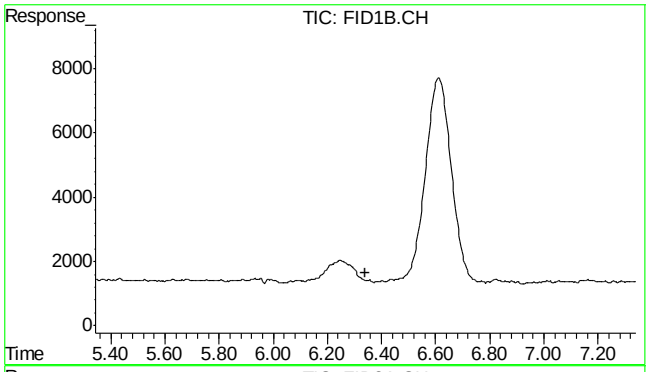
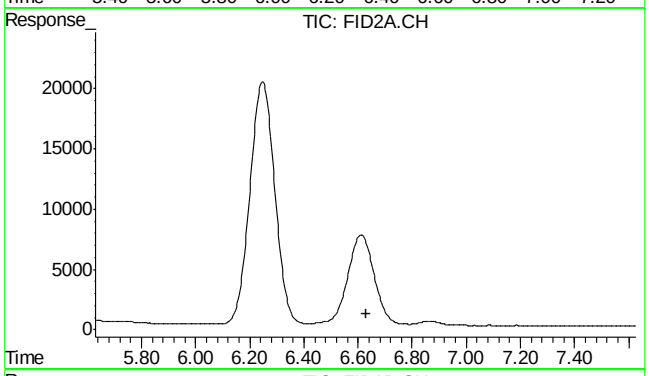


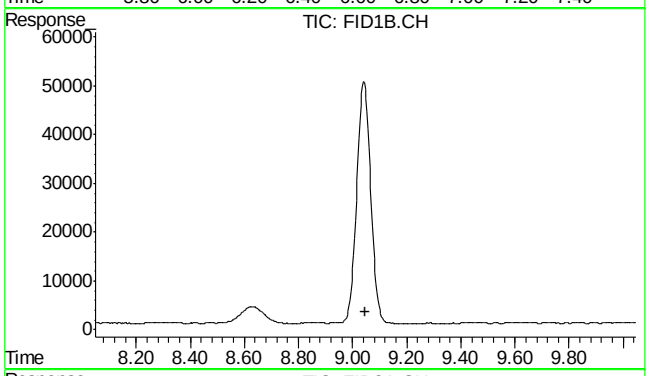
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



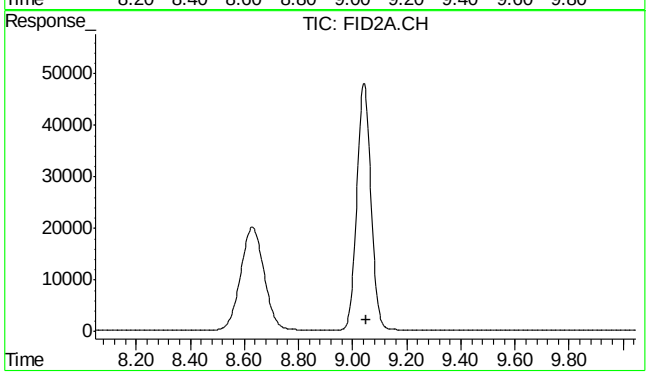
#3 Aromatic A

R.T.: 6.612 min
Delta R.T.: -0.017 min
Response: 505443
Conc: N.D.



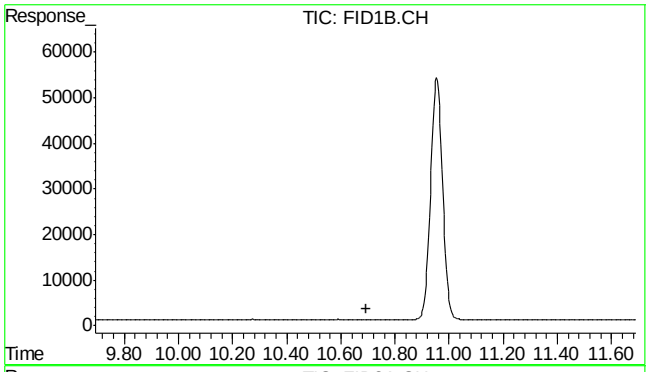
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



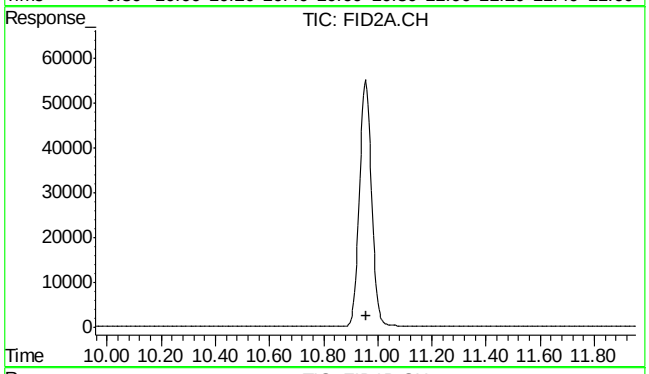
#4 Aromatic B

R.T.: 9.041 min
Delta R.T.: -0.007 min
Response: 1734919
Conc: N.D.



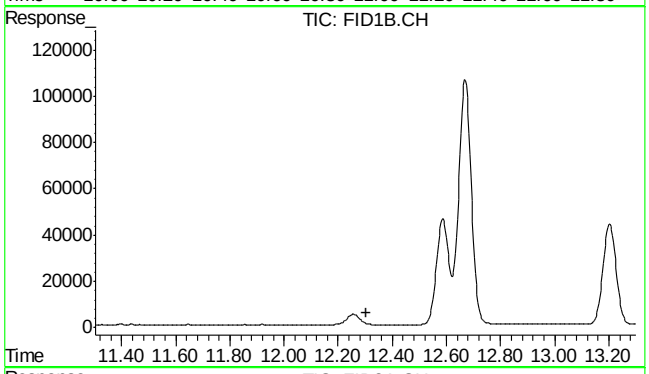
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



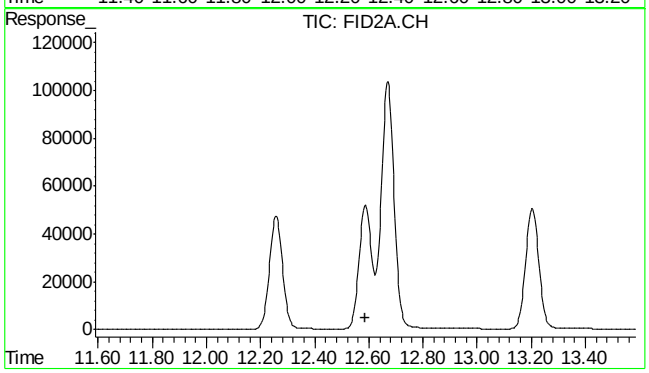
#5 Aromatic C

R.T.: 10.954 min
Delta R.T.: -0.002 min
Response: 1735102
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 12.587 min
Delta R.T.: 0.000 min
Response: 1705380
Conc: N.D.

7.3.1

7

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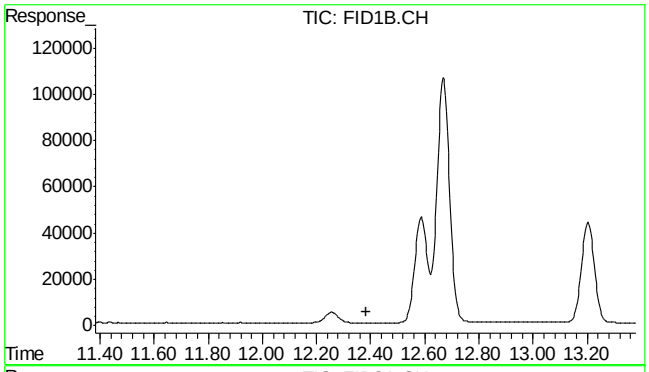
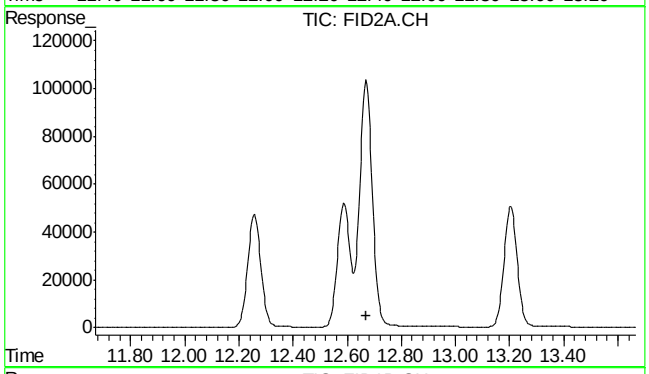


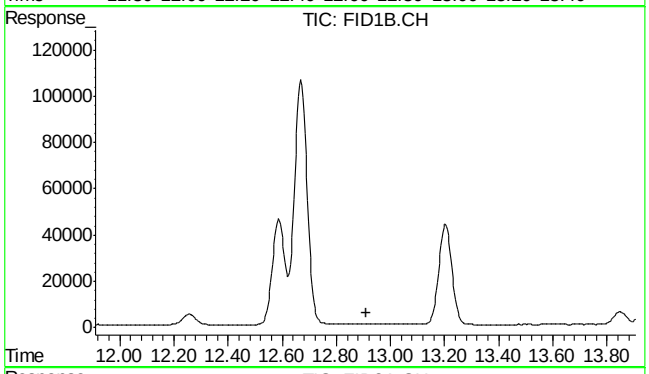
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



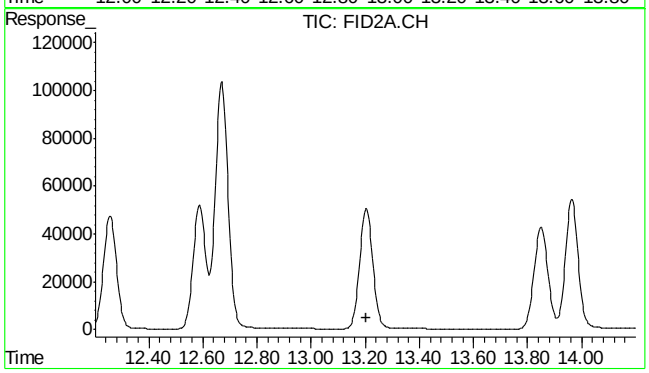
#7 Aromatic E

R.T.: 12.669 min
Delta R.T.: 0.000 min
Response: 3373158
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



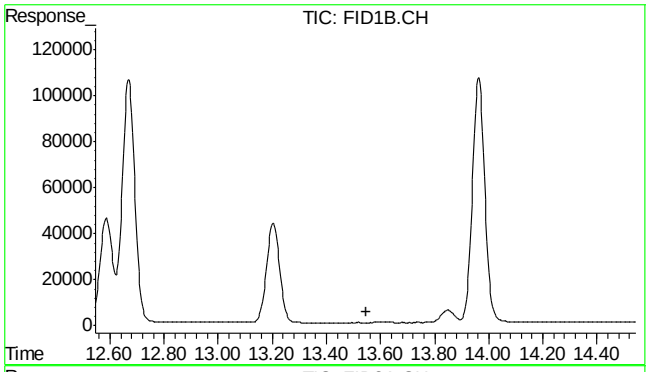
#8 Aromatic F

R.T.: 13.203 min
Delta R.T.: 0.000 min
Response: 1725609
Conc: N.D.

7.3.1

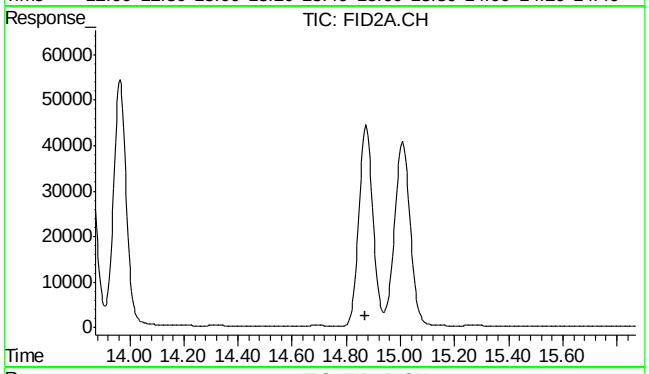
7

SGS ACCUTEST FA40754



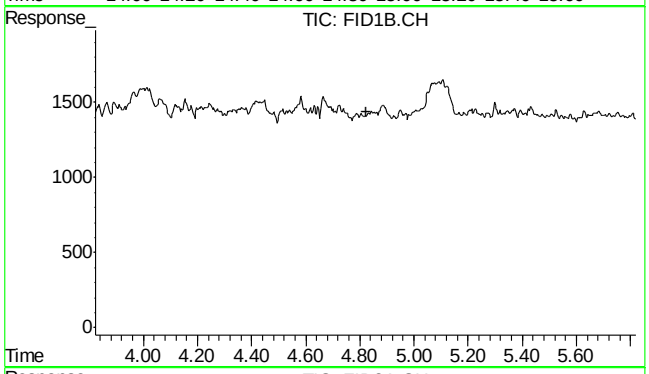
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



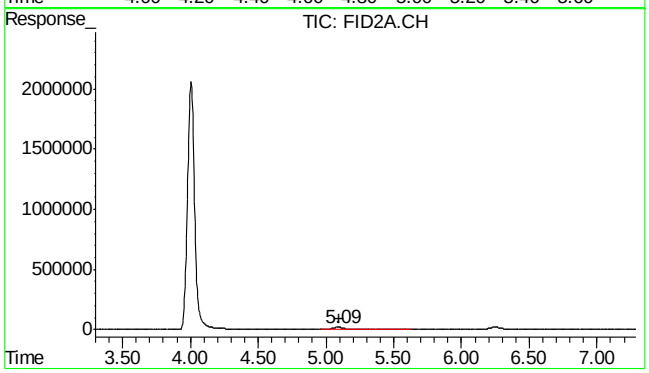
#9 Aromatic G

R.T.: 14.872 min
Delta R.T.: 0.000 min
Response: 1604538
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



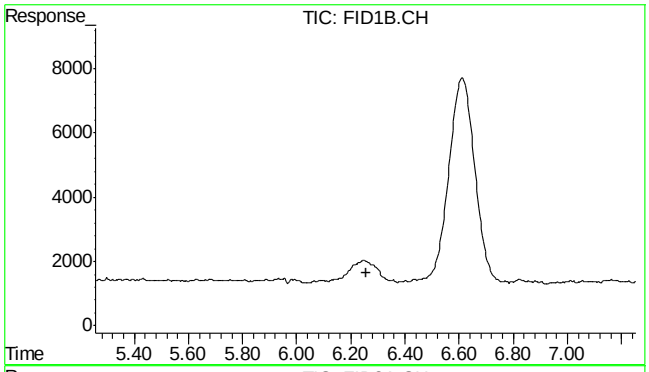
#10 Pentane

R.T.: 5.090 min
Delta R.T.: -0.010 min
Response: 1223554
Conc: 89.21 ug/L

7.3.1

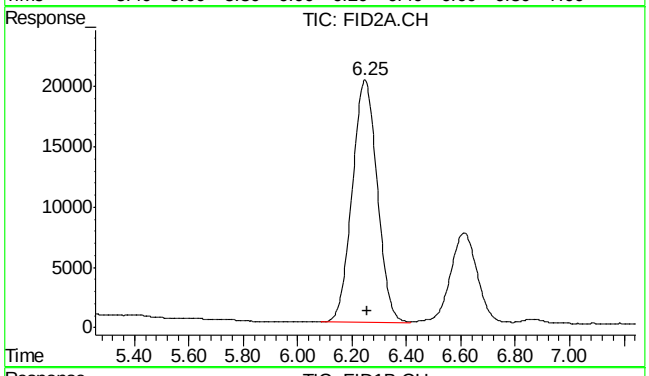
7

SGS ACCUTEST FA40754



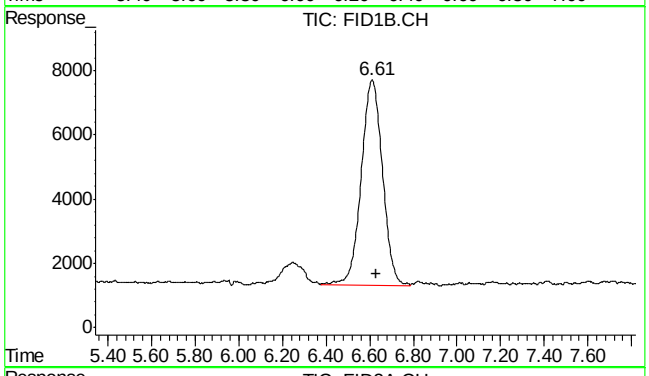
#11 2-Methylpentane

R.T.: 6.249 min
Delta R.T.: -0.007 min
Response: 54112
Conc: N.D.



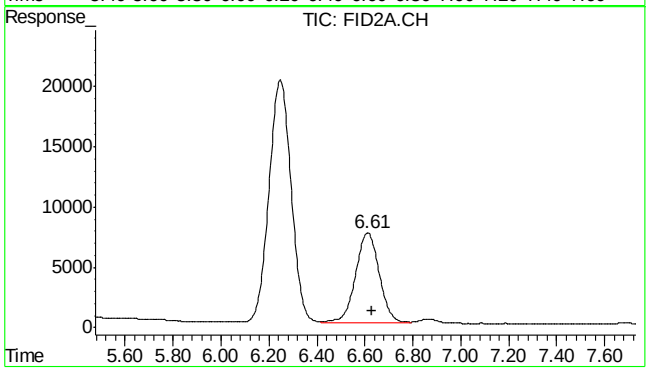
#11 2-Methylpentane

R.T.: 6.248 min
Delta R.T.: -0.008 min
Response: 1283775
Conc: 85.44 ug/L



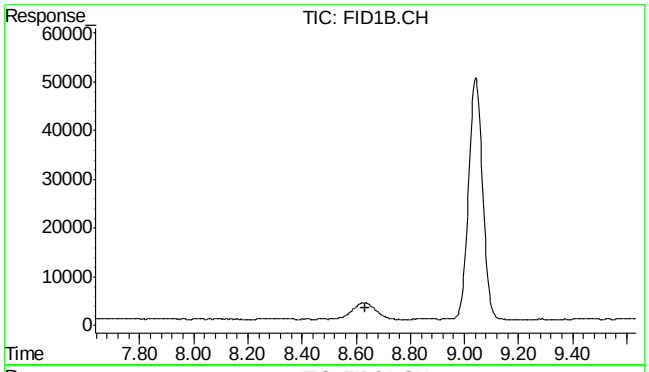
#12 Methyl Tert Butyl Ether

R.T.: 6.612 min
Delta R.T.: -0.017 min
Response: 434004
Conc: 80.44 ug/L



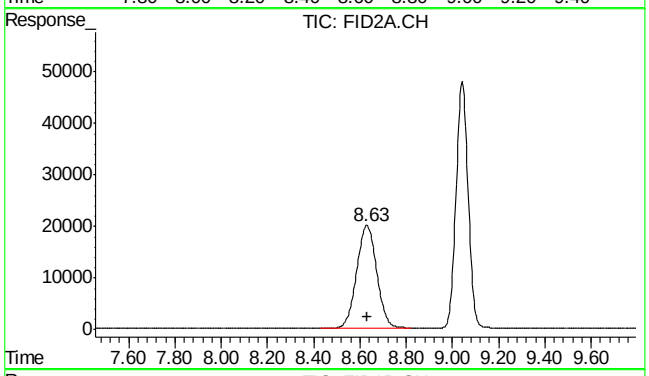
#12 Methyl Tert Butyl Ether

R.T.: 6.612 min
Delta R.T.: -0.016 min
Response: 513222
Conc: 78.47 ug/L



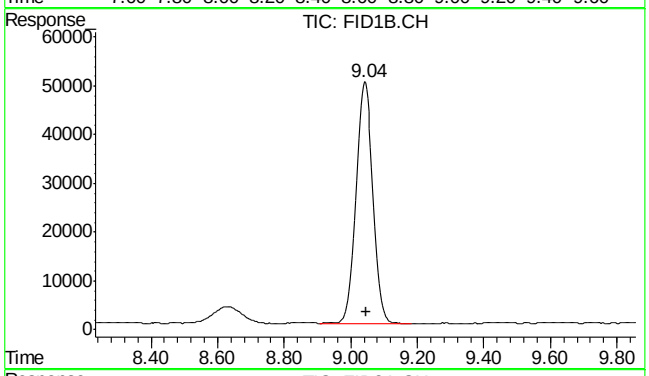
#13 2,2,4-Trimethylpentane

R.T.: 8.628 min
Delta R.T.: -0.006 min
Response: 206112
Conc: N.D.



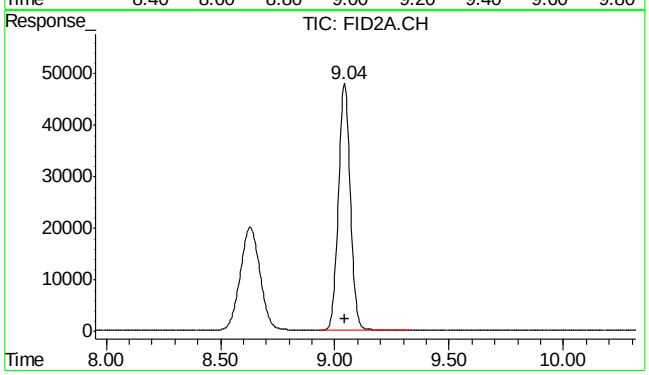
#13 2,2,4-Trimethylpentane

R.T.: 8.630 min
Delta R.T.: -0.004 min
Response: 1199679
Conc: 102.51 ug/L



#14 Benzene

R.T.: 9.042 min
Delta R.T.: -0.004 min
Response: 1786993
Conc: 74.92 ug/L



#14 Benzene

R.T.: 9.043 min
Delta R.T.: -0.003 min
Response: 1738938
Conc: 79.42 ug/L

7.3.1

7

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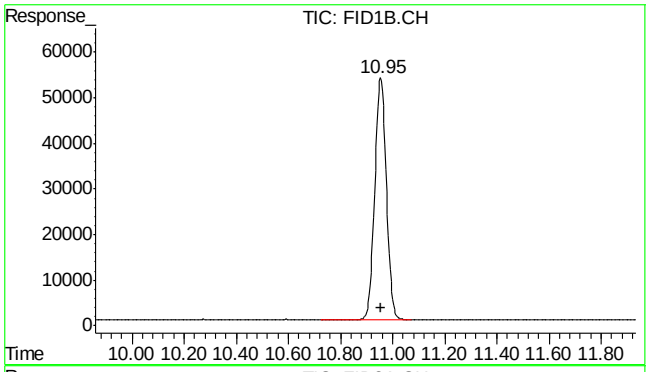
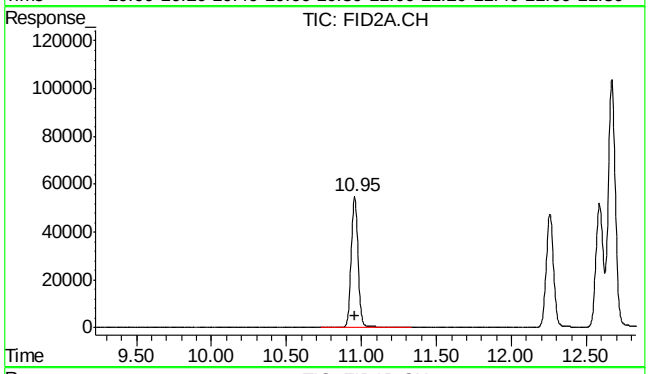


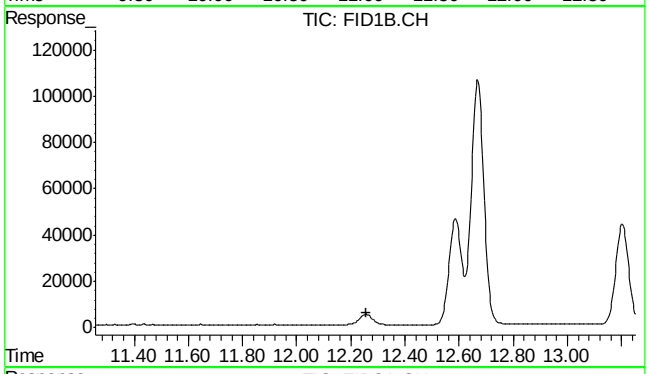
#15 Toluene

R.T.: 10.955 min
Delta R.T.: 0.000 min
Response: 1643043
Conc: 75.66 ug/L



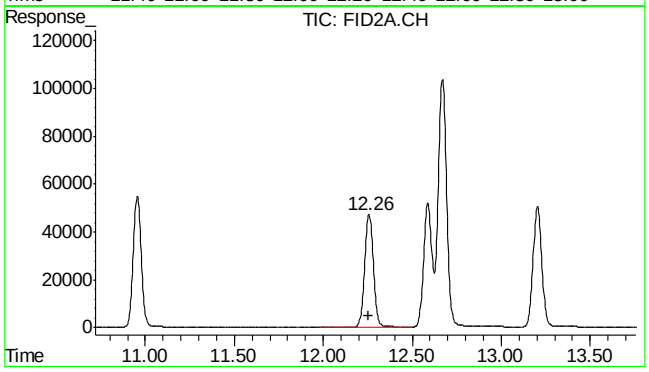
#15 Toluene

R.T.: 10.955 min
Delta R.T.: 0.000 min
Response: 1728948
Conc: 83.89 ug/L



#16 Nonane

R.T.: 12.257 min
Delta R.T.: 0.002 min
Response: 154319
Conc: N.D.



#16 Nonane

R.T.: 12.258 min
Delta R.T.: 0.002 min
Response: 1602324
Conc: 83.07 ug/L

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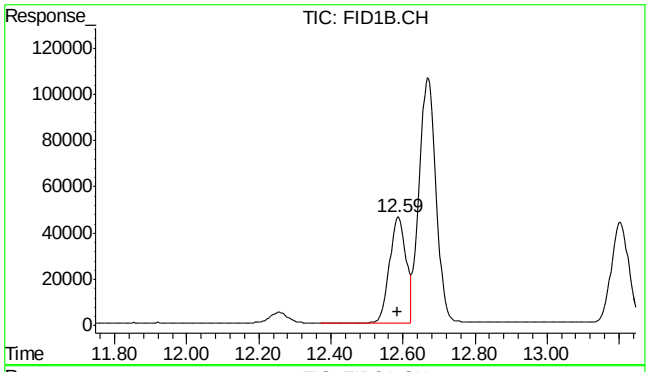
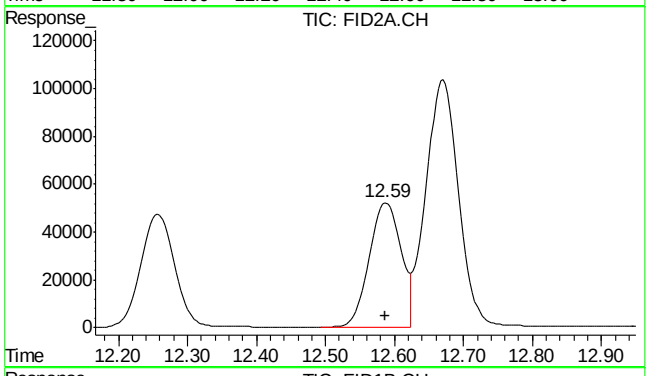


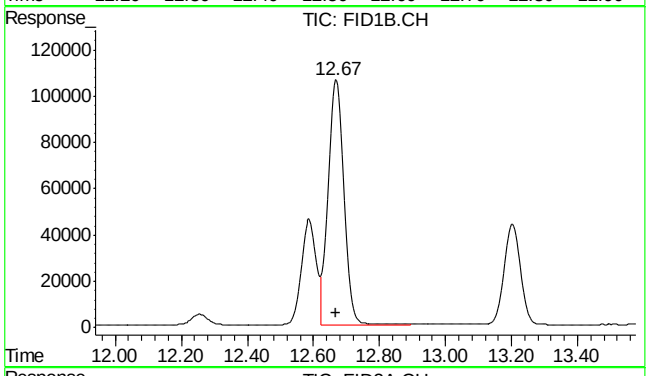
#17 Ethylbenzene

R.T.: 12.588 min
Delta R.T.: 0.002 min
Response: 1438658
Conc: 78.72 ug/L



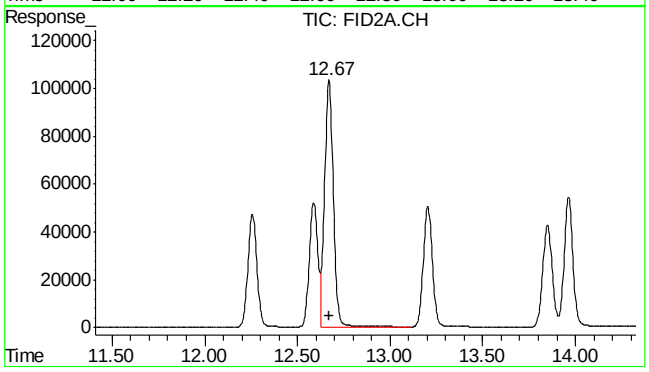
#17 Ethylbenzene

R.T.: 12.588 min
Delta R.T.: 0.001 min
Response: 1651539
Conc: 84.50 ug/L



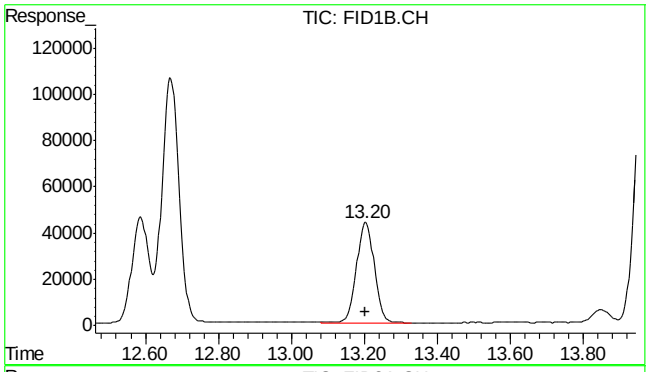
#18 m,p-Xylene

R.T.: 12.670 min
Delta R.T.: 0.001 min
Response: 3480209
Conc: 157.34 ug/L



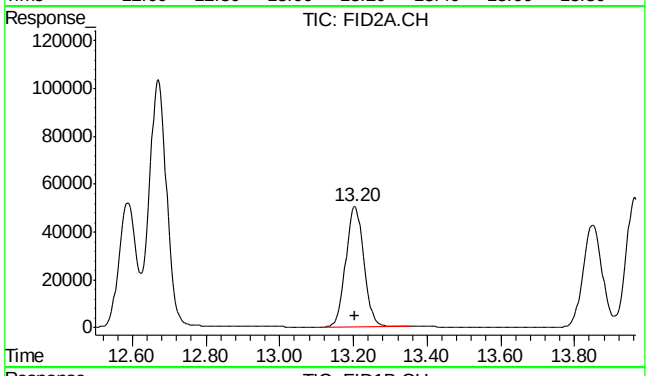
#18 m,p-Xylene

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 3445774
Conc: 166.36 ug/L



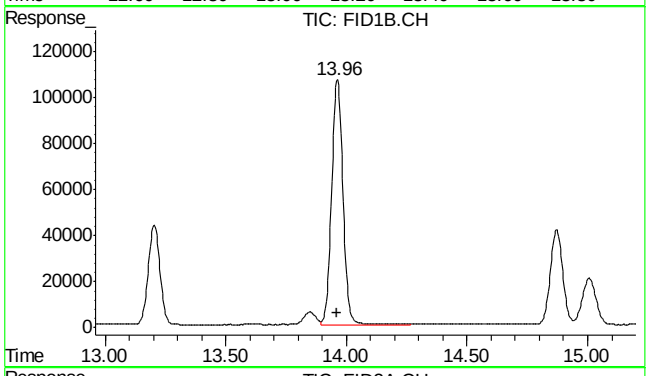
#19 o-Xylene

R.T.: 13.204 min
Delta R.T.: 0.001 min
Response: 1469532
Conc: 76.86 ug/L



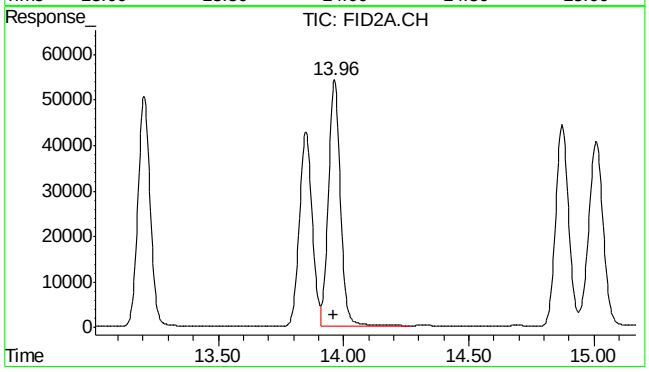
#19 o-Xylene

R.T.: 13.205 min
Delta R.T.: 0.002 min
Response: 1718842
Conc: 82.35 ug/L



#20 BFB

R.T.: 13.963 min
Delta R.T.: 0.002 min
Response: 3451974
Conc: 188.06 ug/L



#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.002 min
Response: 1791563
Conc: 197.79 ug/L

7.3.1

7

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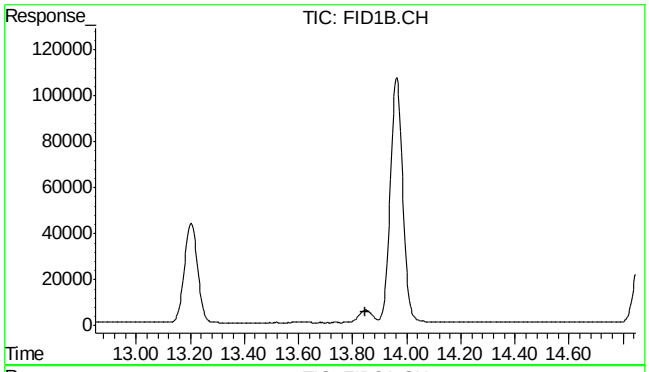
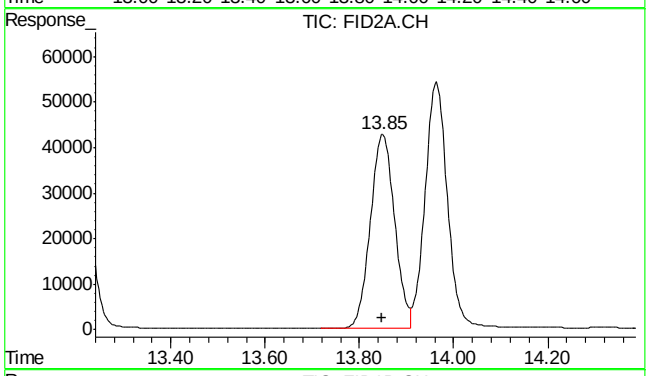


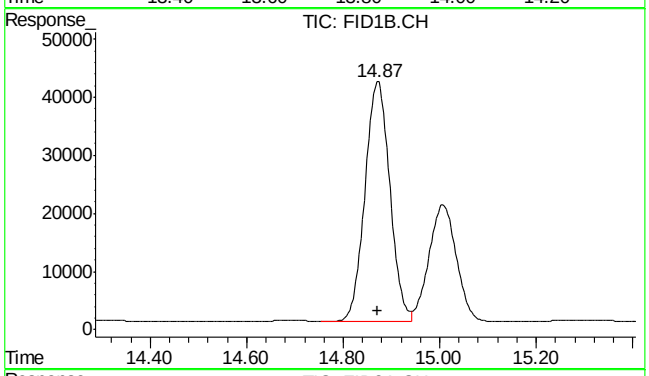
#21 Decane

R.T.: 13.849 min
Delta R.T.: 0.001 min
Response: 193893
Conc: N.D.



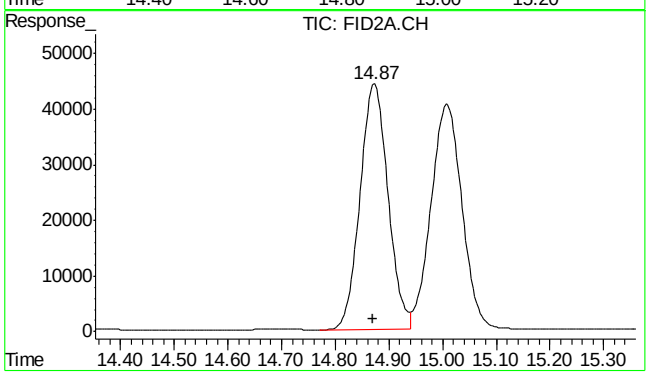
#21 Decane

R.T.: 13.850 min
Delta R.T.: 0.002 min
Response: 1520568
Conc: 84.45 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.872 min
Delta R.T.: 0.002 min
Response: 1480557
Conc: 74.03 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.873 min
Delta R.T.: 0.002 min
Response: 1594129
Conc: 79.05 ug/L

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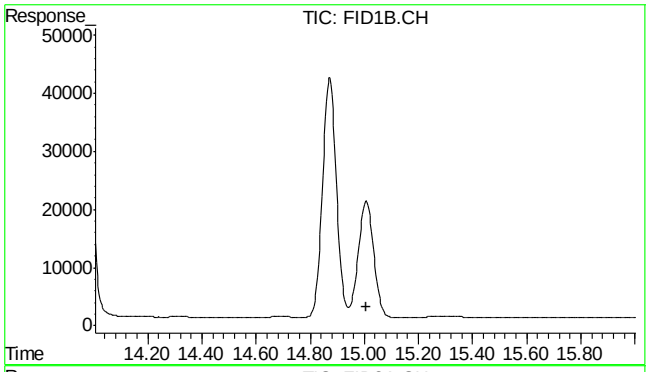
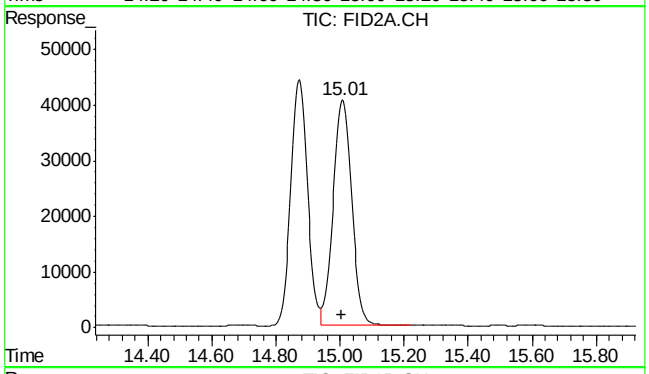


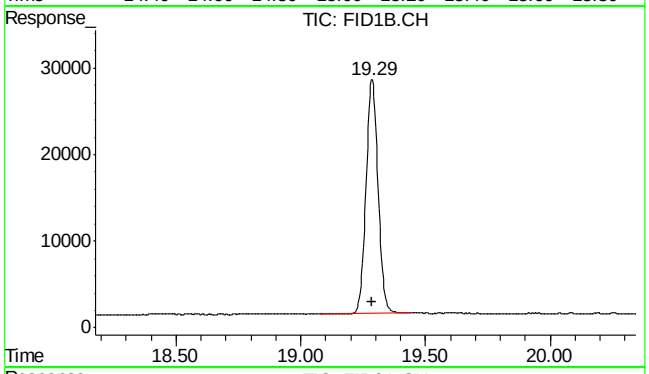
#23 Butylcyclohexane

R.T.: 15.007 min
Delta R.T.: 0.002 min
Response: 800223
Conc: N.D.



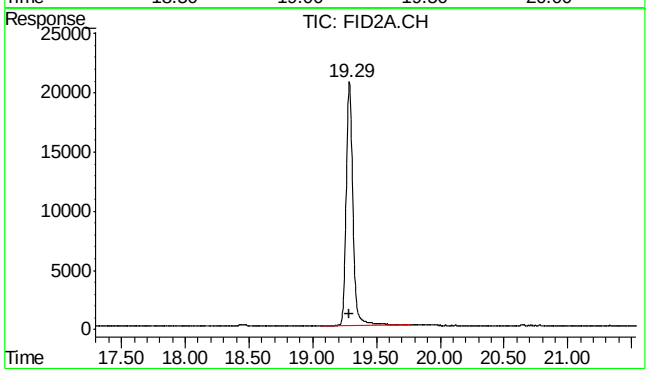
#23 Butylcyclohexane

R.T.: 15.009 min
Delta R.T.: 0.003 min
Response: 1633724
Conc: 78.30 ug/L



#24 Naphthalene

R.T.: 19.286 min
Delta R.T.: 0.002 min
Response: 912303
Conc: 73.76 ug/L



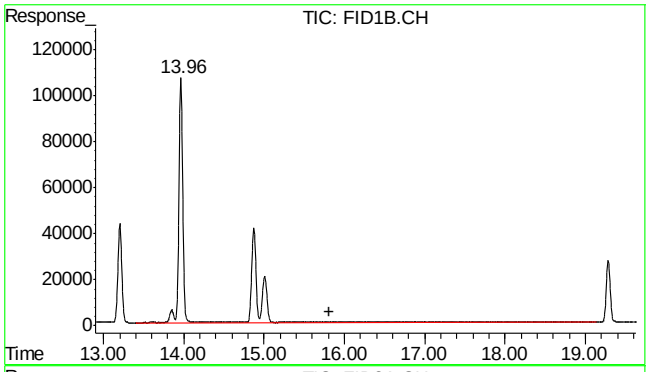
#24 Naphthalene

R.T.: 19.288 min
Delta R.T.: 0.002 min
Response: 750487
Conc: 79.03 ug/L

7.3.1

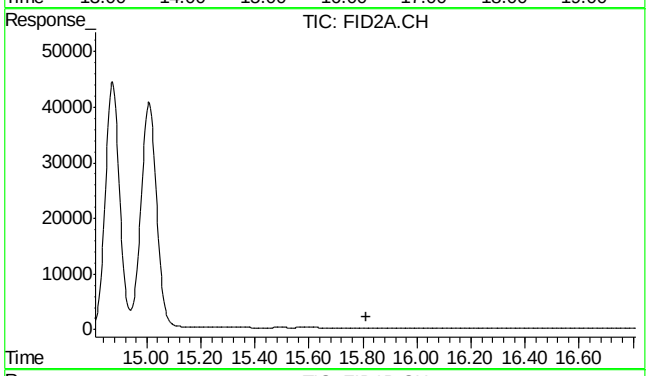
7

SGS ACCUTEST FA40754



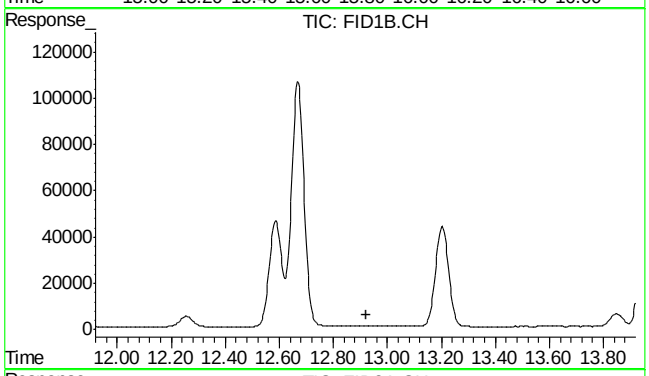
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 1781031
Conc: 74.33 ug/L m



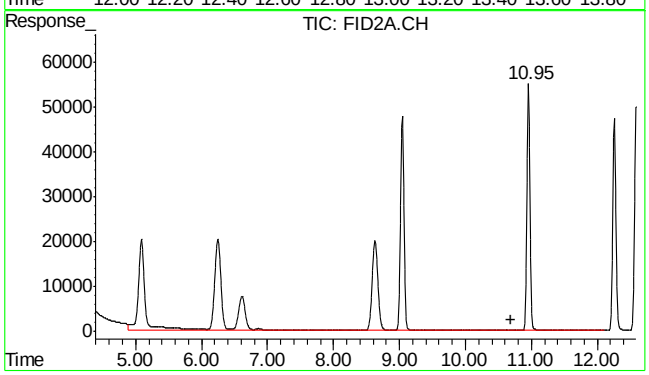
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 3230297
Conc: N.D.



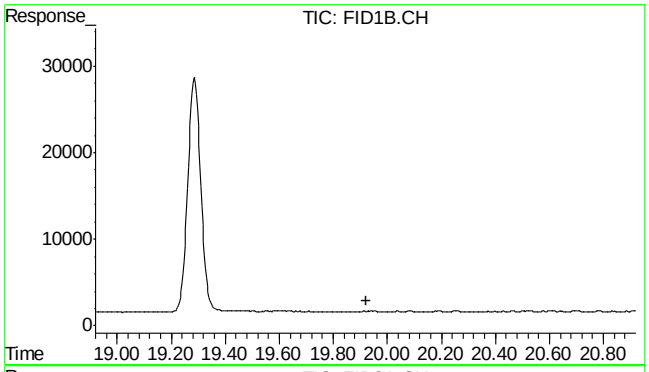
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 11083928
Conc: N.D.



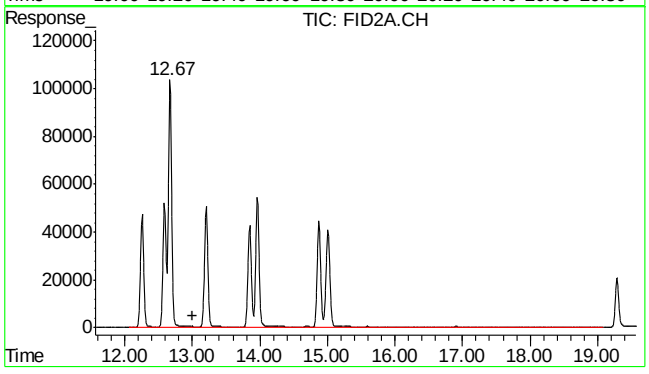
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 4308174
Conc: 309.49 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 2814529
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 5037468
Conc: 253.11 ug/L m

7.3.1

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077735.D\FID1B.CH Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077735.D\FID2A.CH
Acq On : 31-Jan-2017, 10:59:09 Operator: antonioc
Sample : bsd Inst : HP5890
Misc : gc19636,guv4134,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 31 11:32:49 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	190687	0	NoCal m	N.D.
2)	S	Alkane B	15.01f	0.00	798341	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.62f	0	532835	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.05f	0	1738743	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.96f	0	1731471	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	1668791	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	3398240	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	1727048	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	1591928	N.D.	NoCal m
20)	S	BFB	13.96	13.97	3348168	1738125	182.406	191.889
		Spiked Amount 200.000 Range 70 - 130 Recovery =					91.20%	95.94%
		Target Compounds						
10)		Pentane	0.00	5.10	0	1197566	N.D.	87.318 #
11)		2-Methylpentane	6.25	6.25	42232	1274998	NoCal	84.858 #
12)		Methyl Tert Buty	6.62	6.62	441234	532483	81.783	81.416
13)		2,2,4-Trimethylp	8.63	8.63	198738	1177049	NoCal	100.201 #
14)		Benzene	9.05	9.05	1782226	1740326	74.723	79.486
15)		Toluene	10.96	10.96	1637660	1728649	75.414	83.871
16)		Nonane	12.26	12.26	158399	1599589	NoCal	82.933 #
17)		Ethylbenzene	12.59	12.59	1437935	1648681	78.680	84.354
18)		m,p-Xylene	12.67	12.67	3465467	3436430	156.673	165.910
19)		o-Xylene	13.21	13.21	1465607	1712892	76.654	82.061
21)		Decane	13.85	13.85	191237	1506382	NoCal	83.661 #
22)		1,2,4-Trimethylb	14.87	14.87	1479306	1581035	73.965	78.403
23)		Butylcyclohexane	15.01	15.01	800336	1624426	NoCal	77.859 #
24)		Naphthalene	19.29	19.29	912359	733897	73.762	77.279
25)	H	C9- C10 Aromatic	15.81	15.81	1937202	3212192	82.166	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	11103826	4095859	NoCal	292.253 #
27)	H	C9- C12 Aliphati	19.92	13.00	2957975	4999655	NoCal	251.112 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077735.D VPH011317.M Fri Feb 03 13:17:56 2017

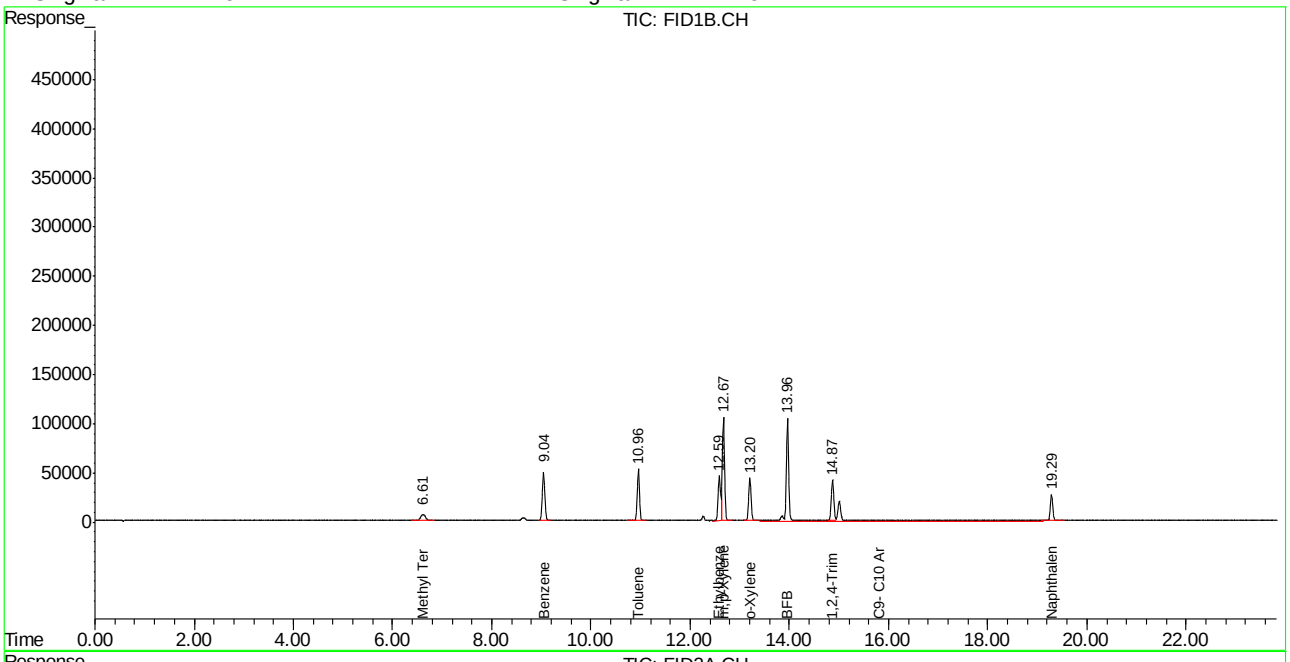
SGS ACCUTEST FA40754

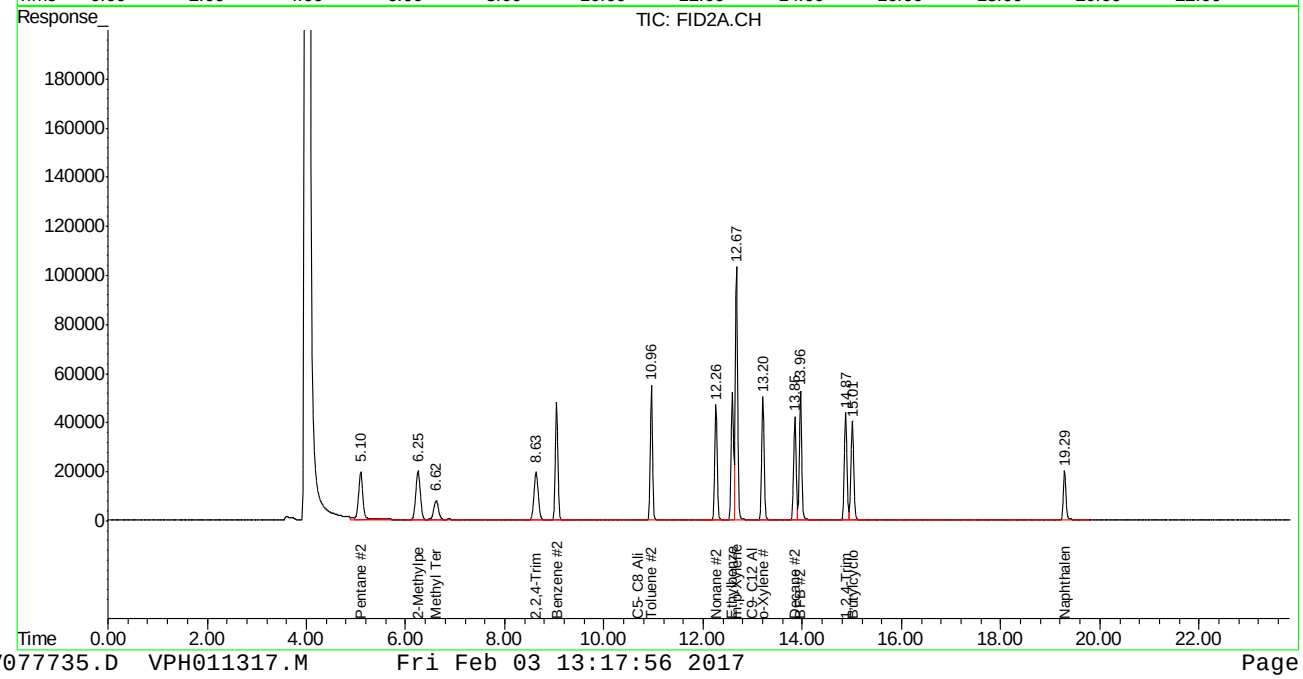
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077735.D\FID1B.CH Vial: 4
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077735.D\FID2A.CH
Acq On : 31-Jan-2017, 10:59:09 Operator: antonioc
Sample : bsd Inst : HP5890
Misc : gc19636,guv4134,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 31 11:38 2017 Quant Results File: VPH011317.RES

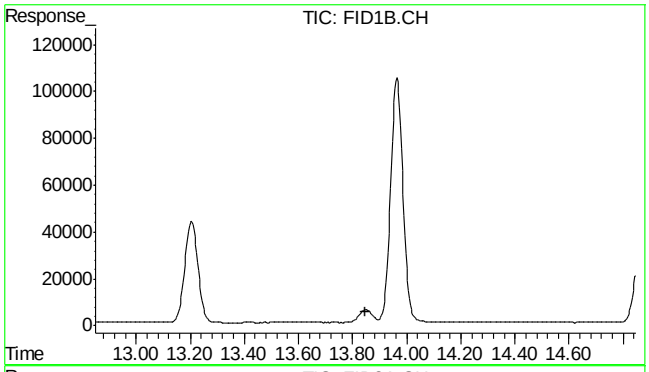
Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID



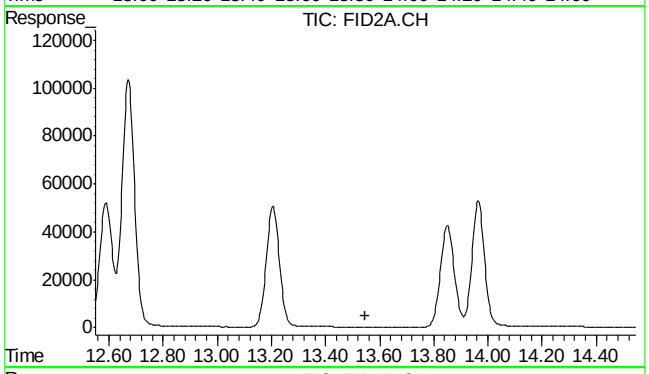


SGS ACCUTEST FA40754



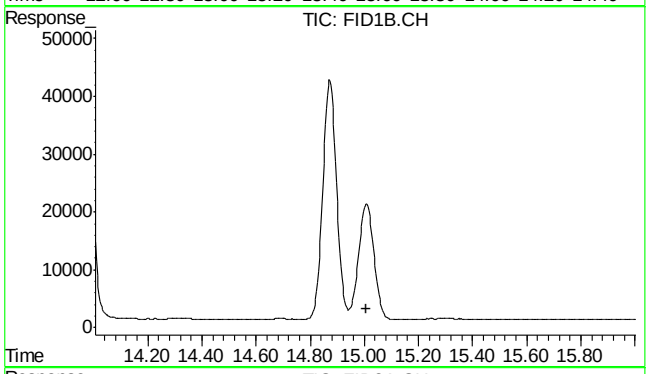
#1 Alkane A

R.T.: 13.848 min
Delta R.T.: 0.000 min
Response: 190687
Conc: N.D.



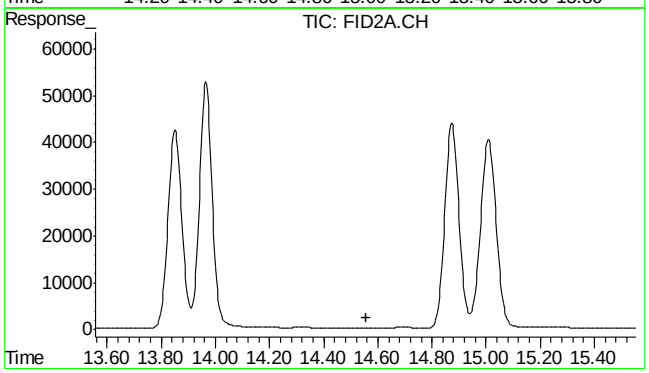
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.007 min
Delta R.T.: 0.002 min
Response: 798341
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.3.2

7

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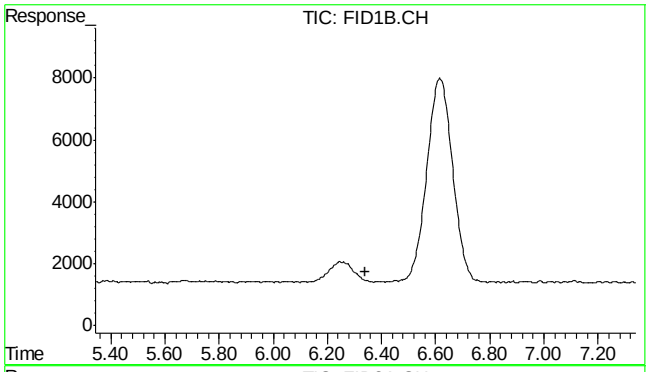
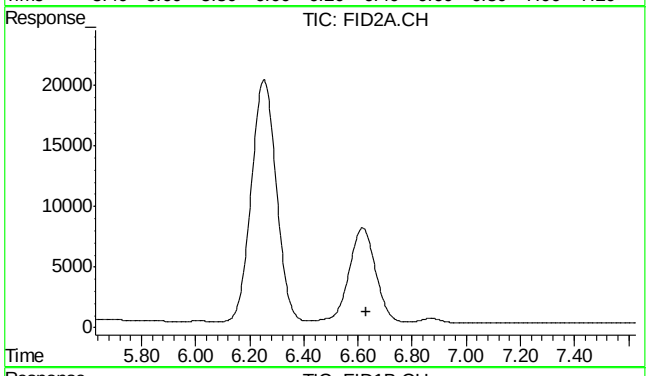


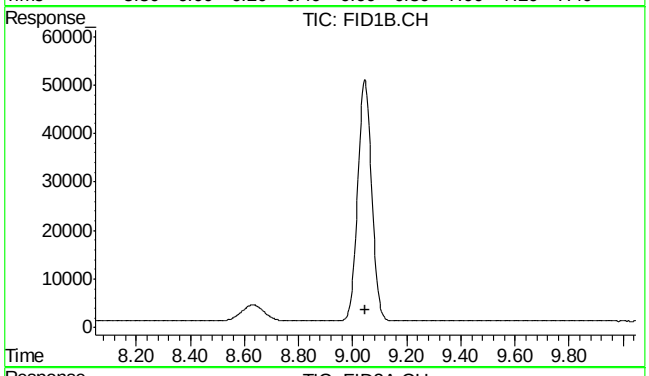
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



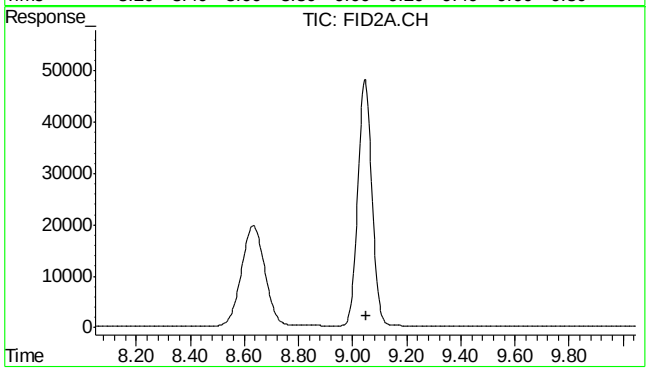
#3 Aromatic A

R.T.: 6.615 min
Delta R.T.: -0.014 min
Response: 532835
Conc: N.D.



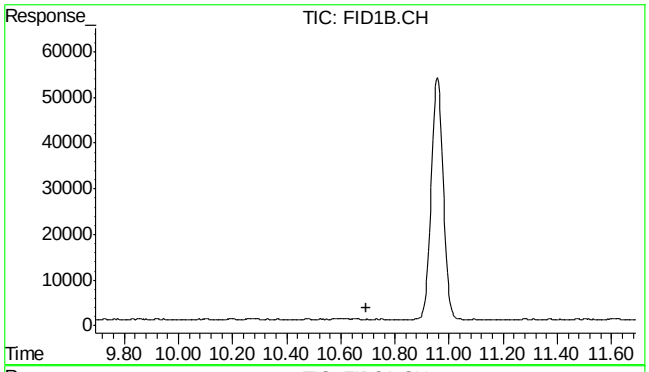
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



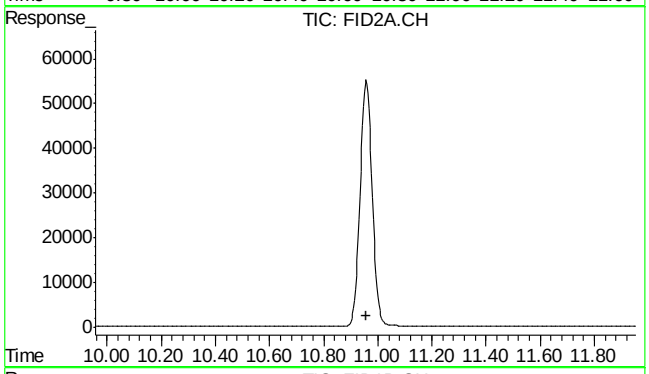
#4 Aromatic B

R.T.: 9.045 min
Delta R.T.: -0.003 min
Response: 1738743
Conc: N.D.



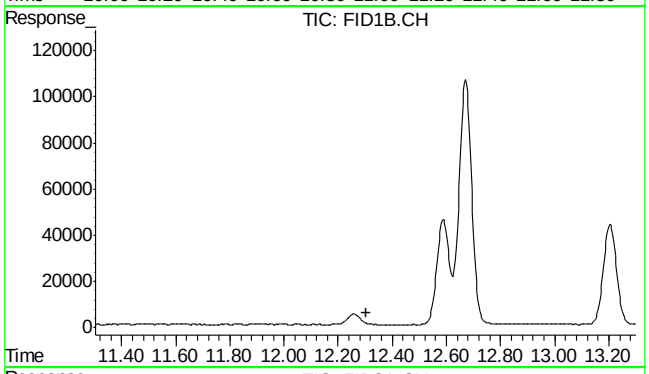
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



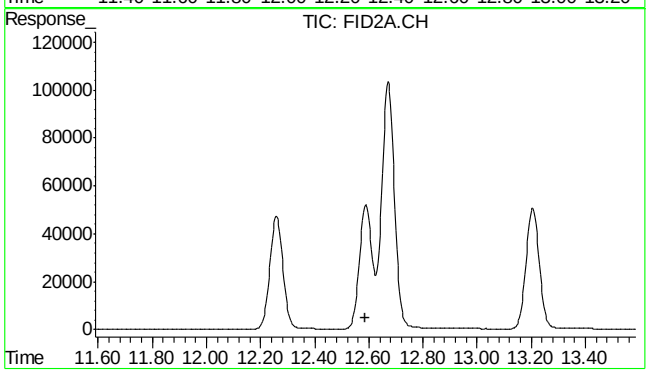
#5 Aromatic C

R.T.: 10.956 min
Delta R.T.: 0.000 min
Response: 1731471
Conc: N.D.



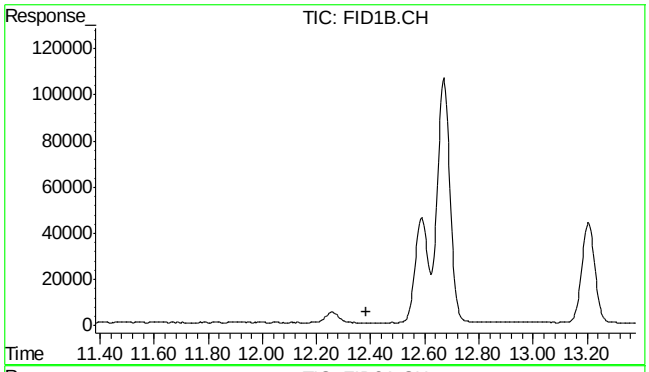
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



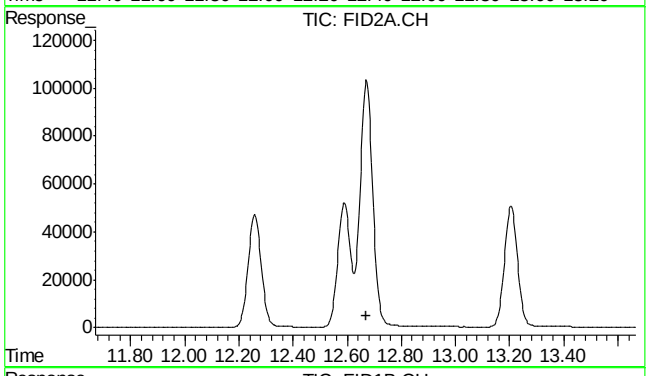
#6 Aromatic D

R.T.: 12.588 min
Delta R.T.: 0.001 min
Response: 1668791
Conc: N.D.



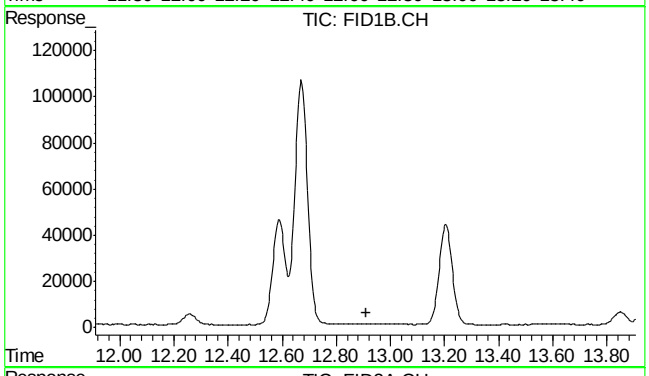
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



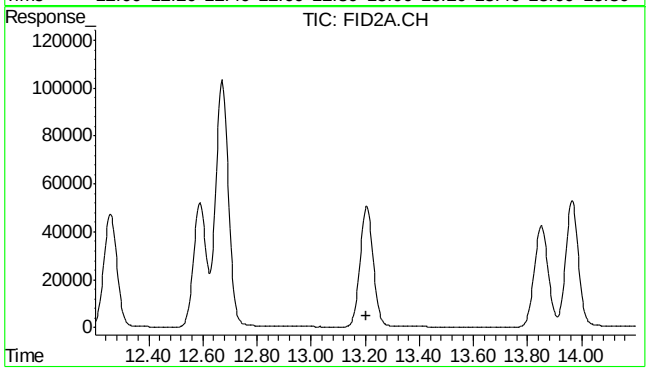
#7 Aromatic E

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 3398240
Conc: N.D.



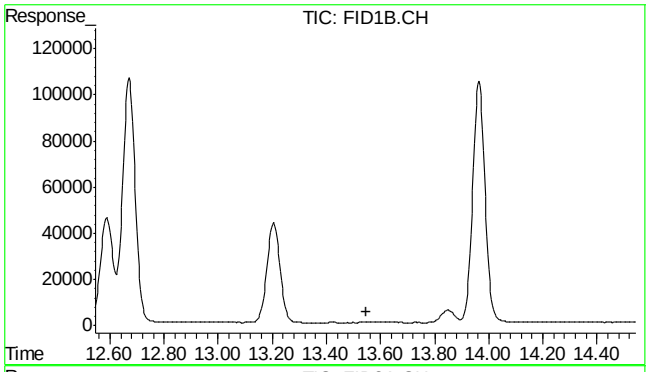
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



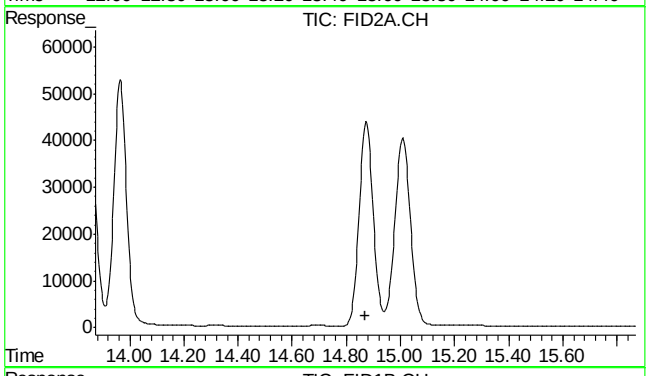
#8 Aromatic F

R.T.: 13.205 min
Delta R.T.: 0.002 min
Response: 1727048
Conc: N.D.



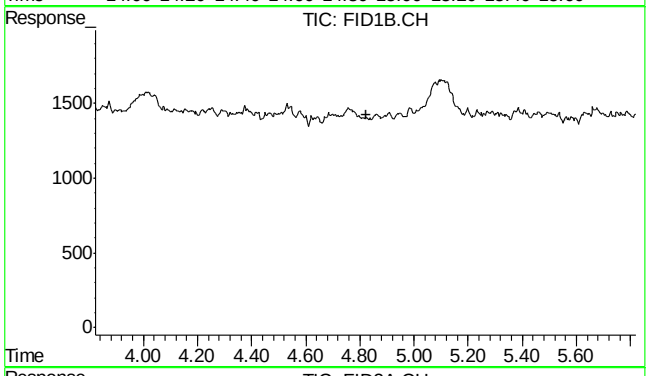
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



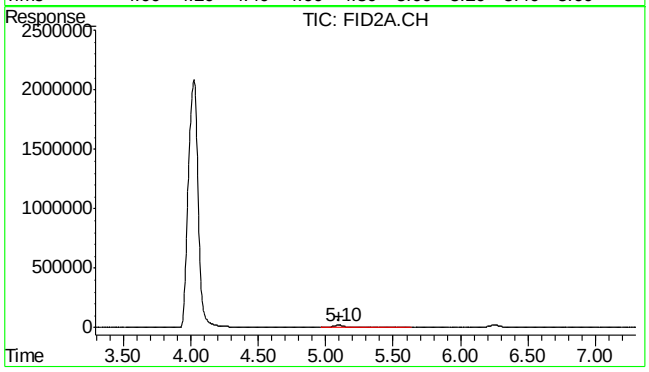
#9 Aromatic G

R.T.: 14.873 min
Delta R.T.: 0.002 min
Response: 1591928
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 5.098 min
Delta R.T.: -0.002 min
Response: 1197566
Conc: 87.32 ug/L

7.3.2

7

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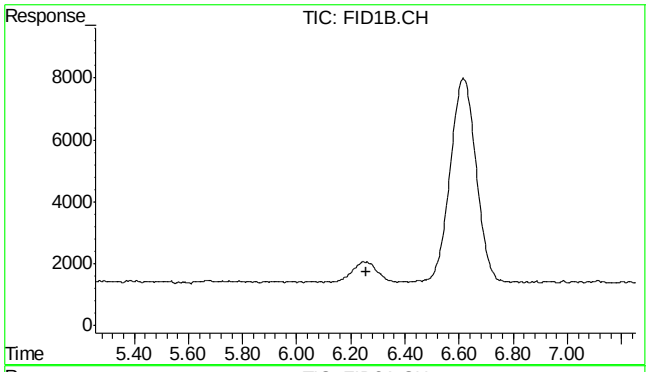
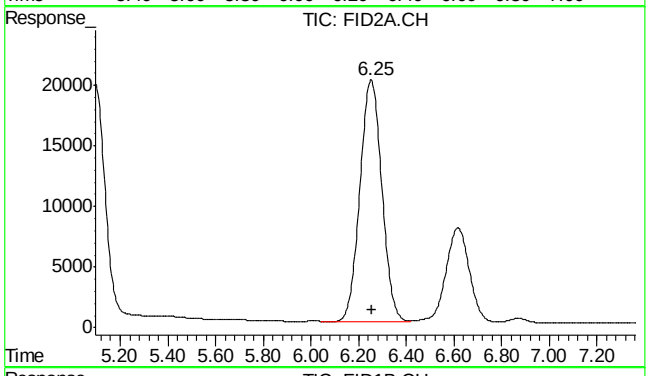


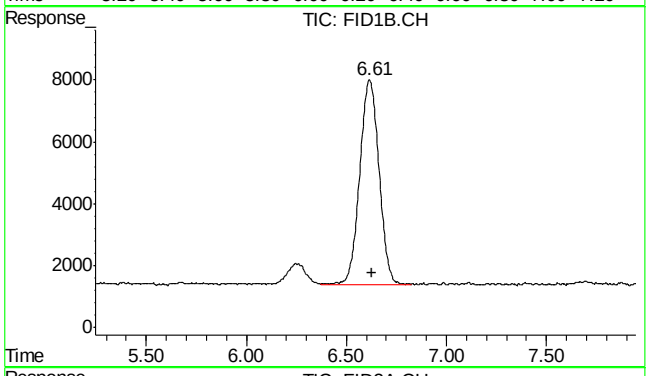
#11 2-Methylpentane

R.T.: 6.250 min
Delta R.T.: -0.006 min
Response: 42232
Conc: N.D.



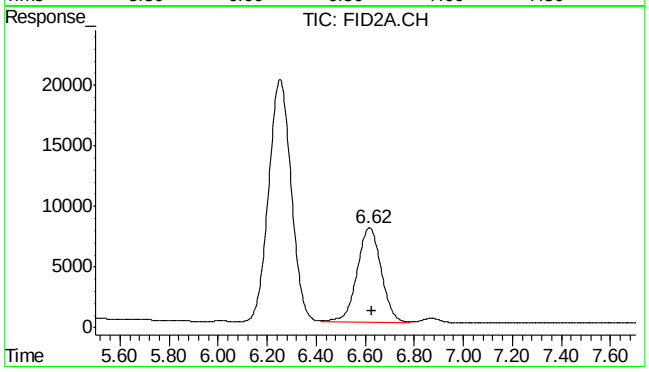
#11 2-Methylpentane

R.T.: 6.253 min
Delta R.T.: -0.003 min
Response: 1274998
Conc: 84.86 ug/L



#12 Methyl Tert Butyl Ether

R.T.: 6.616 min
Delta R.T.: -0.013 min
Response: 441234
Conc: 81.78 ug/L



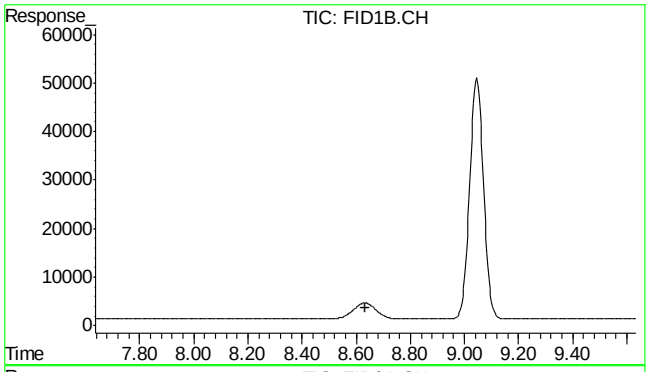
#12 Methyl Tert Butyl Ether

R.T.: 6.617 min
Delta R.T.: -0.011 min
Response: 532483
Conc: 81.42 ug/L

7.3.2

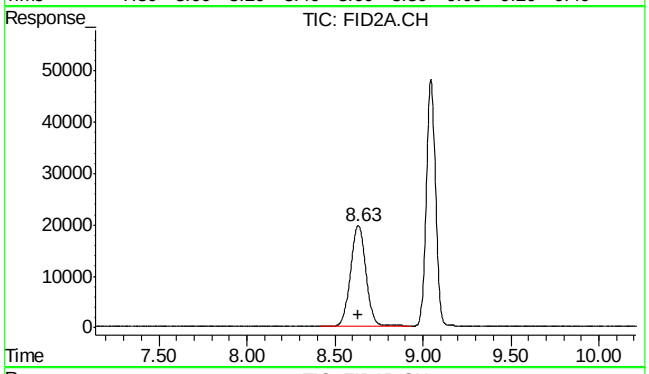
7

SGS ACCUTEST FA40754



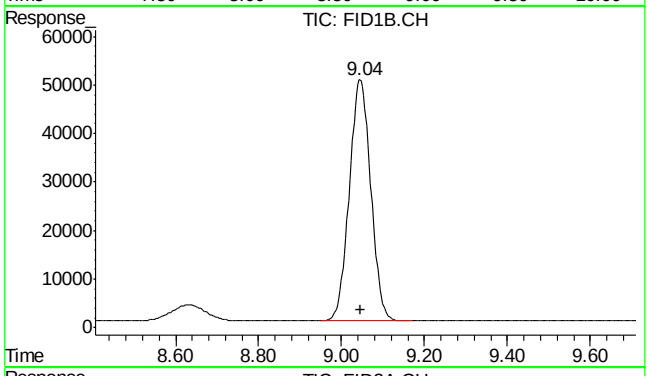
#13 2,2,4-Trimethylpentane

R.T.: 8.633 min
Delta R.T.: -0.001 min
Response: 198738
Conc: N.D.



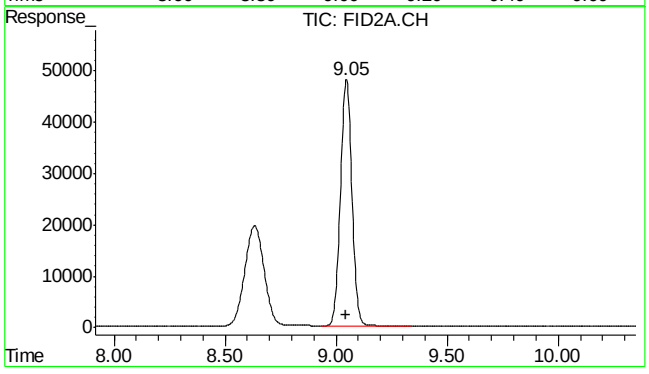
#13 2,2,4-Trimethylpentane

R.T.: 8.633 min
Delta R.T.: 0.000 min
Response: 1177049
Conc: 100.20 ug/L



#14 Benzene

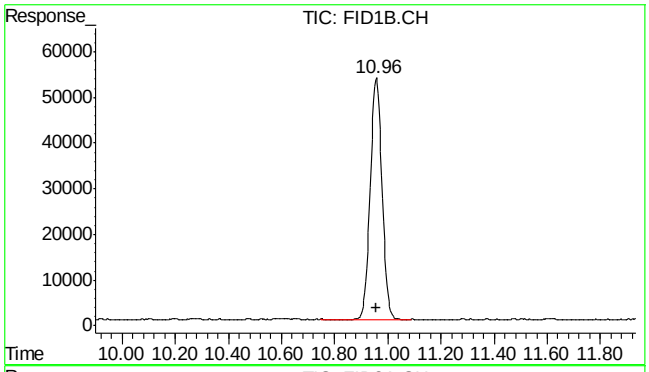
R.T.: 9.046 min
Delta R.T.: 0.000 min
Response: 1782226
Conc: 74.72 ug/L



#14 Benzene

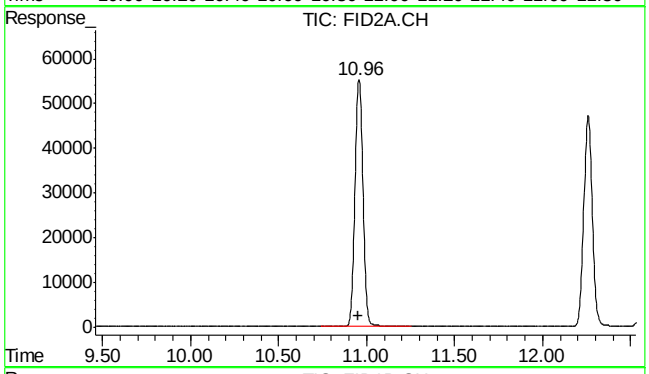
R.T.: 9.047 min
Delta R.T.: 0.000 min
Response: 1740326
Conc: 79.49 ug/L

SGS ACCUTEST FA40754



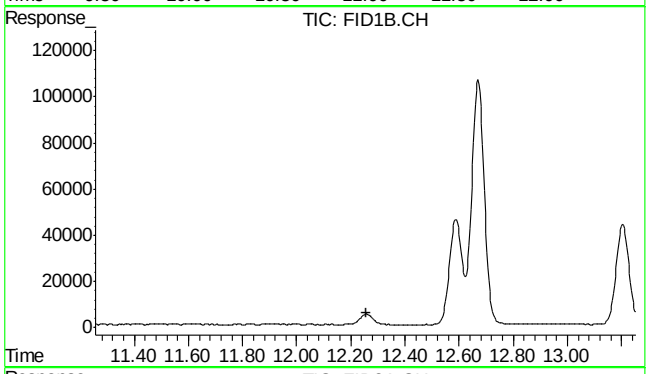
#15 Toluene

R.T.: 10.957 min
Delta R.T.: 0.002 min
Response: 1637660
Conc: 75.41 ug/L



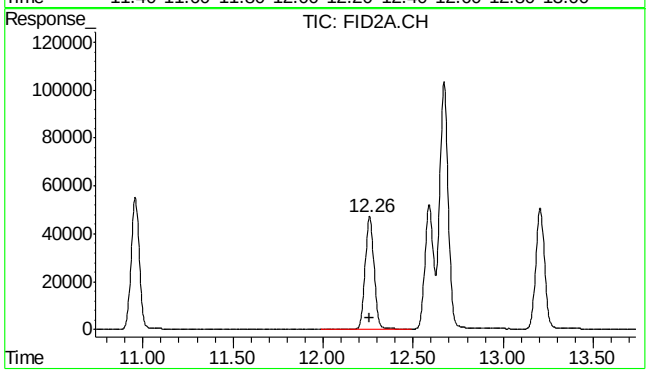
#15 Toluene

R.T.: 10.958 min
Delta R.T.: 0.003 min
Response: 1728649
Conc: 83.87 ug/L



#16 Nonane

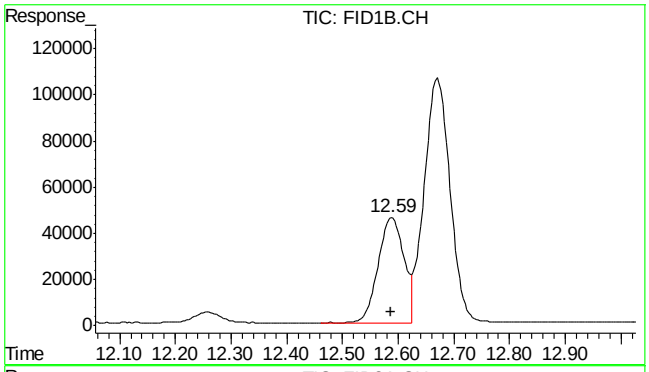
R.T.: 12.259 min
Delta R.T.: 0.003 min
Response: 158399
Conc: N.D.



#16 Nonane

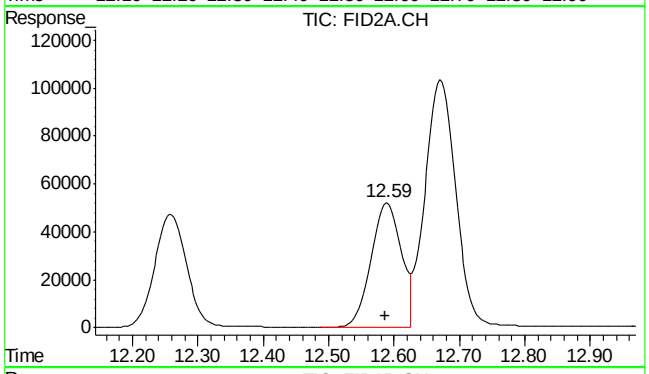
R.T.: 12.259 min
Delta R.T.: 0.003 min
Response: 1599589
Conc: 82.93 ug/L

SGS ACCUTEST FA40754



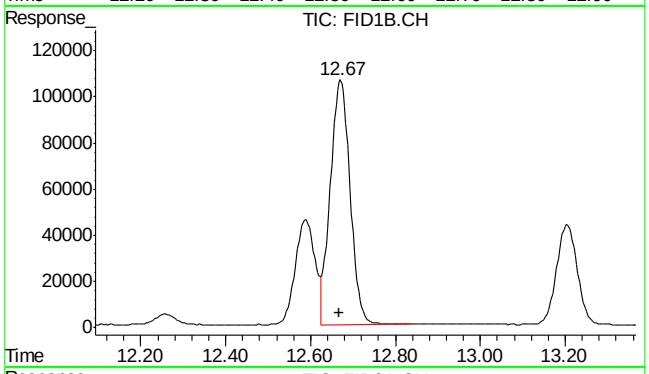
#17 Ethylbenzene

R.T.: 12.589 min
Delta R.T.: 0.003 min
Response: 1437935
Conc: 78.68 ug/L



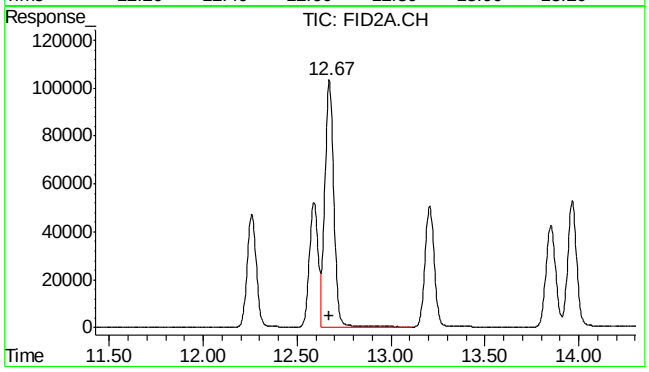
#17 Ethylbenzene

R.T.: 12.590 min
Delta R.T.: 0.003 min
Response: 1648681
Conc: 84.35 ug/L



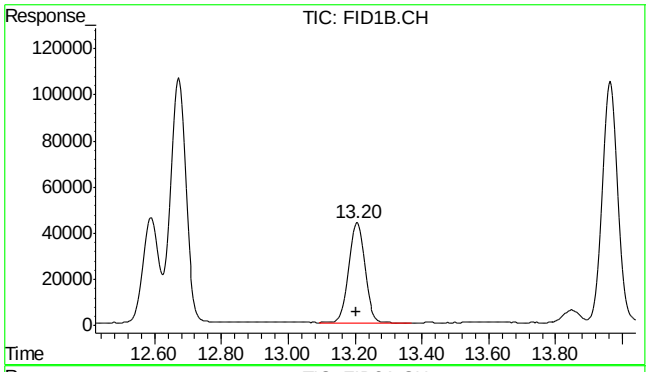
#18 m,p-Xylene

R.T.: 12.671 min
Delta R.T.: 0.003 min
Response: 3465467
Conc: 156.67 ug/L



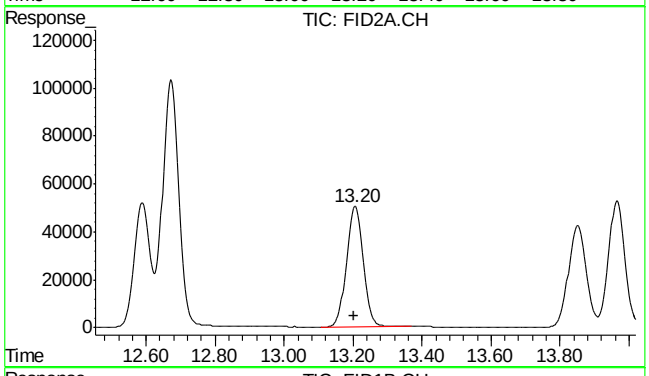
#18 m,p-Xylene

R.T.: 12.672 min
Delta R.T.: 0.003 min
Response: 3436430
Conc: 165.91 ug/L



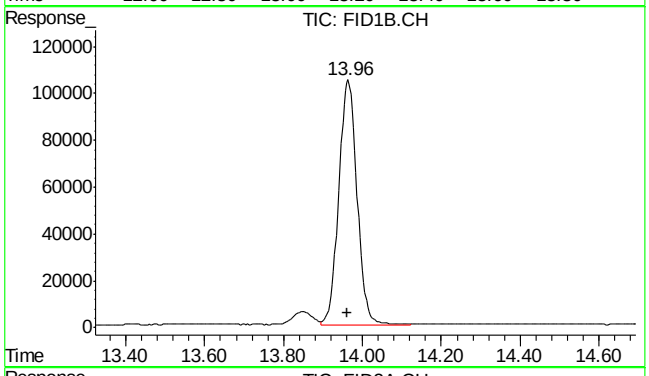
#19 o-Xylene

R.T.: 13.205 min
Delta R.T.: 0.003 min
Response: 1465607
Conc: 76.65 ug/L



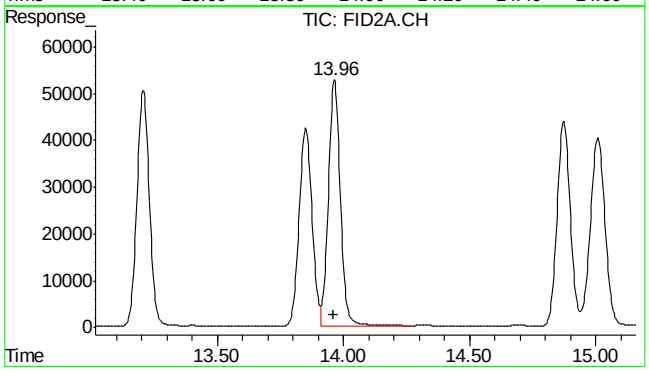
#19 o-Xylene

R.T.: 13.206 min
Delta R.T.: 0.003 min
Response: 1712892
Conc: 82.06 ug/L



#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 3348168
Conc: 182.41 ug/L



#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 1738125
Conc: 191.89 ug/L

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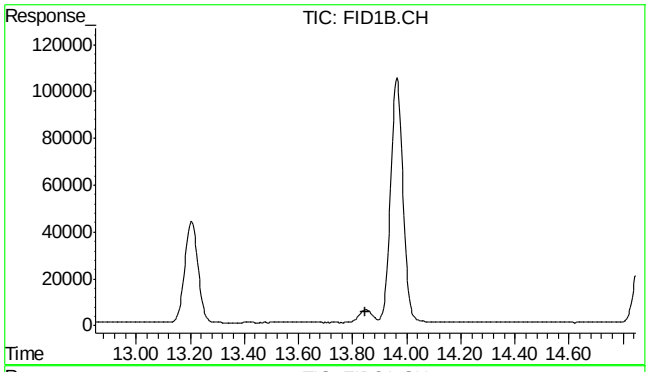
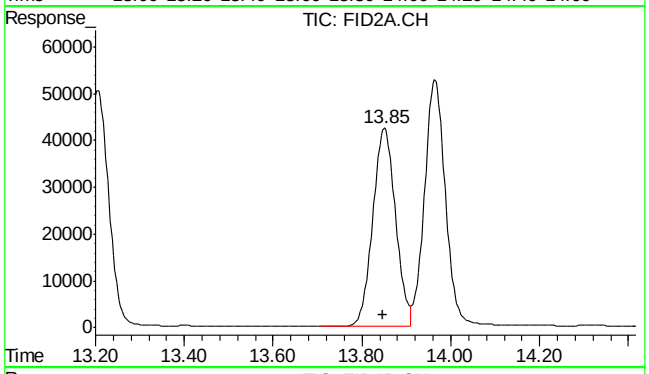


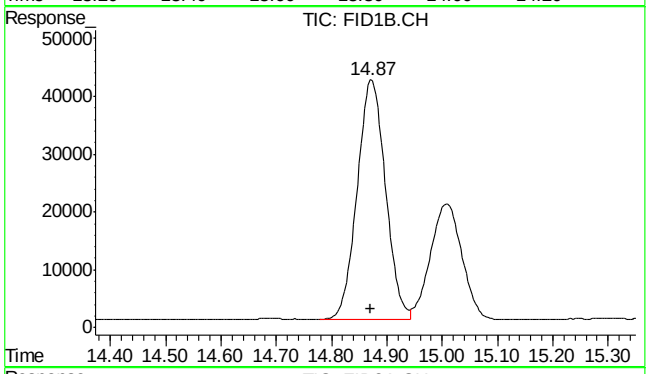
#21 Decane

R.T.: 13.849 min
Delta R.T.: 0.002 min
Response: 191237
Conc: N.D.



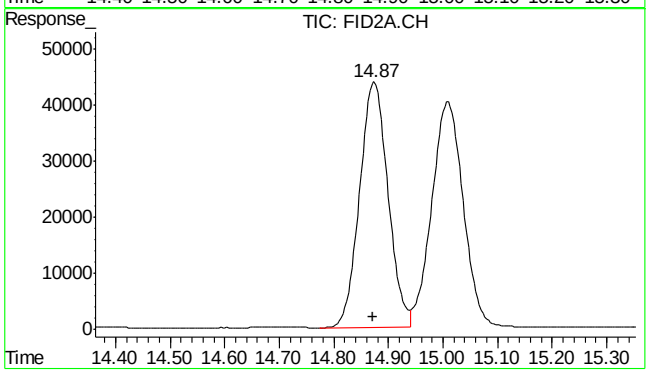
#21 Decane

R.T.: 13.851 min
Delta R.T.: 0.003 min
Response: 1506382
Conc: 83.66 ug/L



#22 1,2,4-Trimethylbenzene

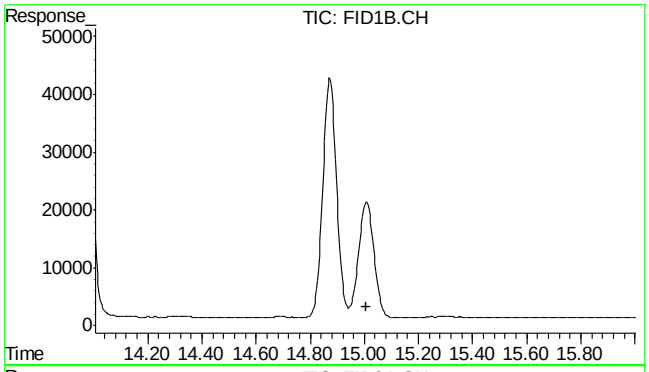
R.T.: 14.873 min
Delta R.T.: 0.003 min
Response: 1479306
Conc: 73.96 ug/L



#22 1,2,4-Trimethylbenzene

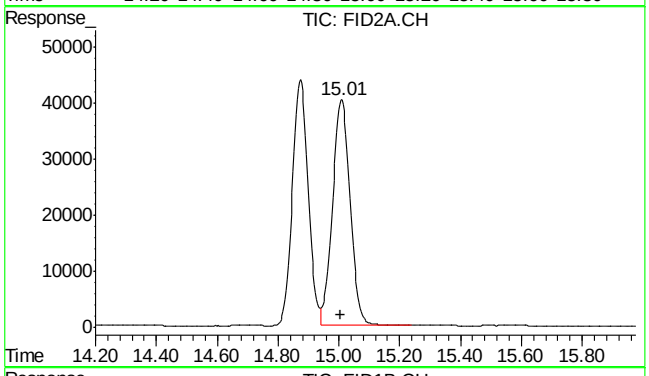
R.T.: 14.874 min
Delta R.T.: 0.003 min
Response: 1581035
Conc: 78.40 ug/L

SGS ACCUTEST FA40754



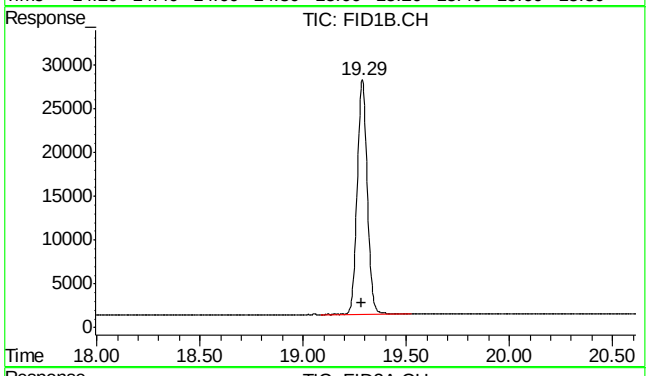
#23 Butylcyclohexane

R.T.: 15.009 min
Delta R.T.: 0.003 min
Response: 800336
Conc: N.D.



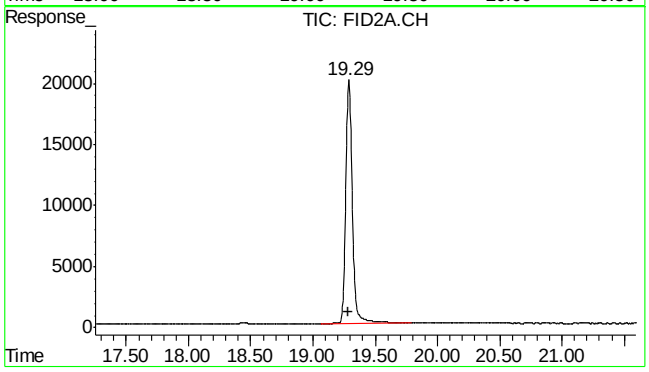
#23 Butylcyclohexane

R.T.: 15.010 min
Delta R.T.: 0.004 min
Response: 1624426
Conc: 77.86 ug/L



#24 Naphthalene

R.T.: 19.287 min
Delta R.T.: 0.003 min
Response: 912359
Conc: 73.76 ug/L



#24 Naphthalene

R.T.: 19.289 min
Delta R.T.: 0.003 min
Response: 733897
Conc: 77.28 ug/L

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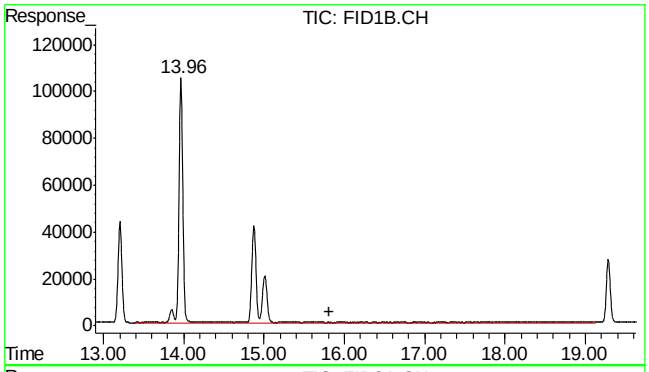
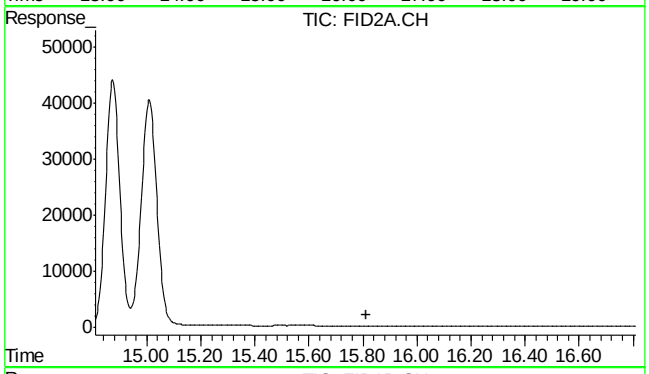


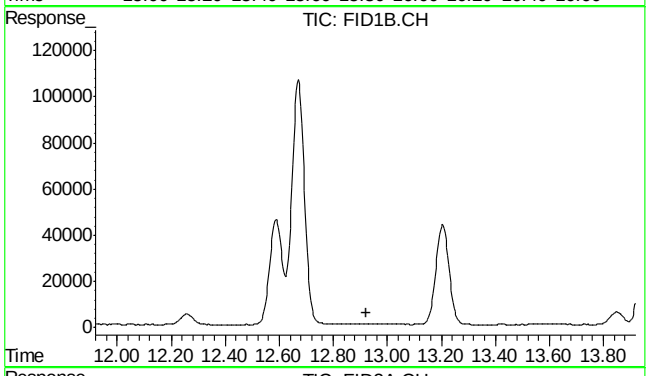
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 1937202
Conc: 82.17 ug/L m



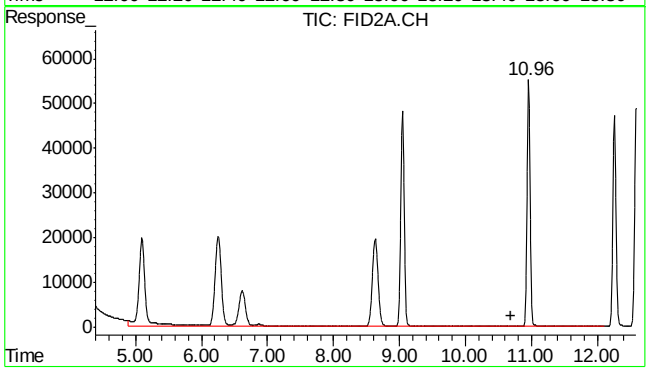
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 3212192
Conc: N.D.



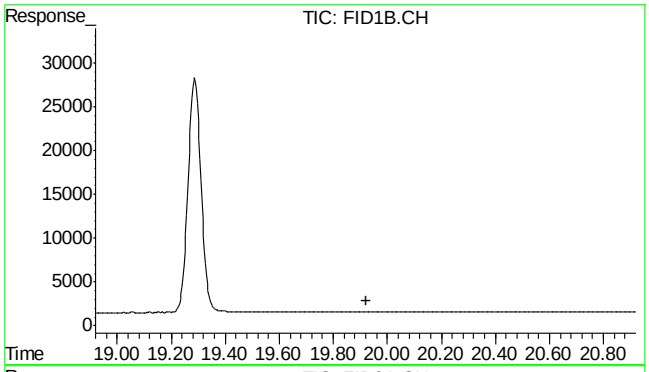
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 11103826
Conc: N.D.



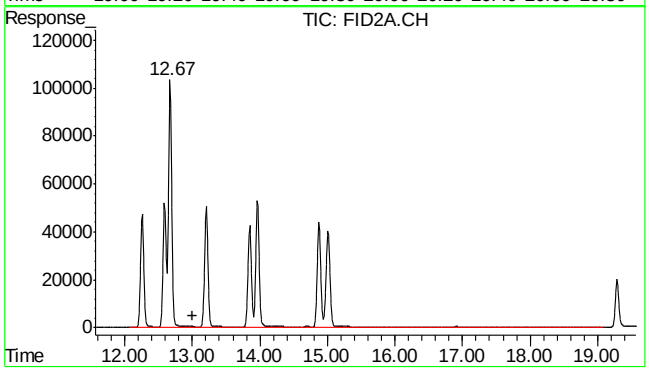
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 4095859
Conc: 292.25 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 2957975
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 4999655
Conc: 251.11 ug/L m

7.3.2

7

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Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077765.D\FID1B.CH Vial: 34
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077765.D\FID2A.CH
Acq On : 01-Feb-2017, 02:18:26 Operator: antonioc
Sample : bs Inst : HP5890
Misc : gc19636,guv4135,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:04:20 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		System Monitoring Compounds							
1)	S	Alkane A	13.85f	0.00	150349	0	NoCal m	N.D.	
2)	S	Alkane B	15.01f	0.00	702018	0	NoCal m	N.D.	
3)	S	Aromatic A	0.00	6.62f	0	512051	N.D.	NoCal m	
4)	S	Aromatic B	0.00	9.04f	0	1621321	N.D.	NoCal m	
5)	S	Aromatic C	0.00	10.96f	0	1577343	N.D.	NoCal m	
6)	S	Aromatic D	0.00	12.59f	0	1524229	N.D.	NoCal m	
7)	S	Aromatic E	0.00	12.67f	0	3056124	N.D.	NoCal m	
8)	S	Aromatic F	0.00	13.20f	0	1559977	N.D.	NoCal m	
9)	S	Aromatic G	0.00	14.87f	0	1391252	N.D.	NoCal m	
20)	S	BFB	13.96	13.96	3212105	1663379	174.994	183.637	
		Spiked Amount 200.000 Range 70 - 130 Recovery =					87.50%	91.82%	
		Target Compounds							
10)		Pentane	0.00	5.10	0	1157279	N.D.	84.380	#
11)		2-Methylpentane	6.25	6.25	39766	1192205	NoCal	79.348	#
12)		Methyl Tert Buty	6.61	6.62	418872	512151	77.638	78.308	
13)		2,2,4-Trimethylp	8.63	8.63	200378	1152422	NoCal	97.703	#
14)		Benzene	9.04	9.04	1660493	1621014	69.620	74.037	
15)		Toluene	10.96	10.96	1506811	1583311	69.388	76.819	
16)		Nonane	12.26	12.26	135371	1363388	NoCal	70.687	#
17)		Ethylbenzene	12.59	12.59	1295651	1479785	70.895	75.713	
18)		m,p-Xylene	12.67	12.67	3109513	3044577	140.580	146.992	
19)		o-Xylene	13.20	13.21	1329676	1541594	69.544	73.854	
21)		Decane	13.85	13.85	147840	1203152	NoCal	66.820	#
22)		1,2,4-Trimethylb	14.87	14.87	1287350	1382301	64.367	68.548	
23)		Butylcyclohexane	15.01	15.01	680107	1381326	NoCal	66.207	#
24)		Naphthalene	19.29	19.29	842177	685517	68.088	72.185	
25)	H	C9- C10 Aromatic	15.81	15.81	1634446	2658488	66.965	NoCal	#
26)	H	C5- C8 Aliphatic	12.92	10.70	10245637	4237175	NoCal	303.727	#
27)	H	C9- C12 Aliphati	19.92	13.00	2487778	4169721	NoCal	207.174	#

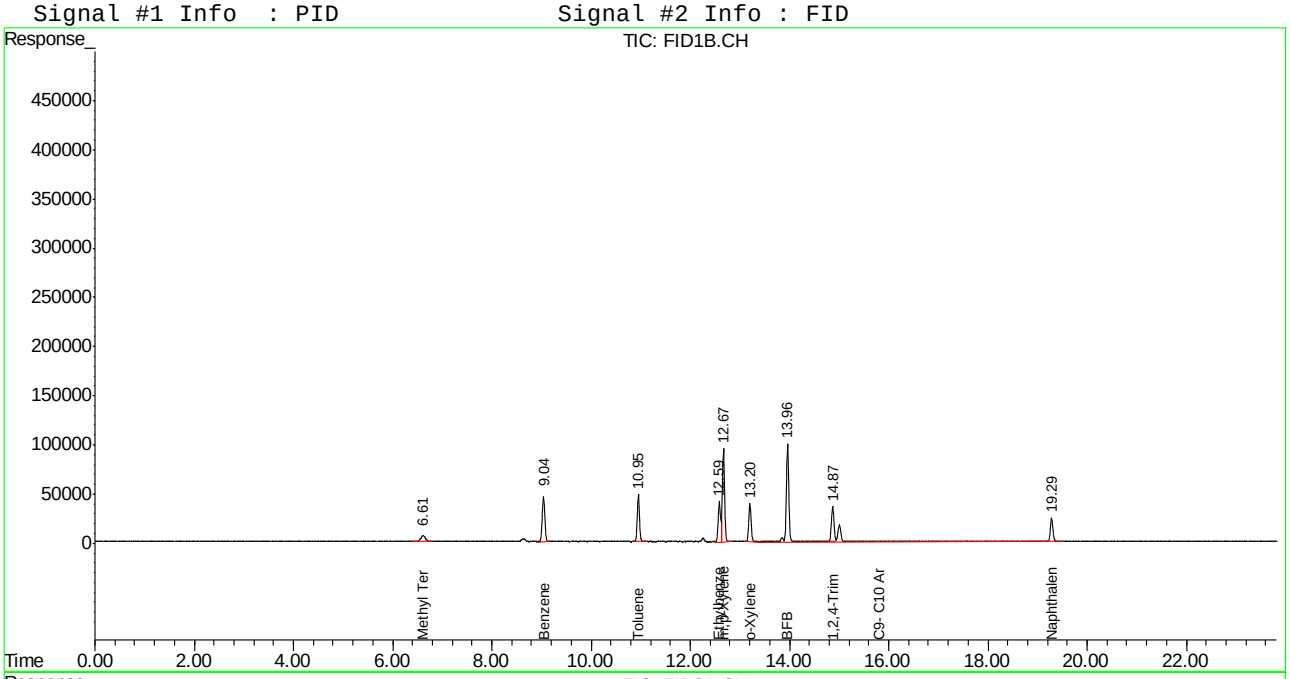
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077765.D VPH011317.M Fri Feb 03 13:19:14 2017

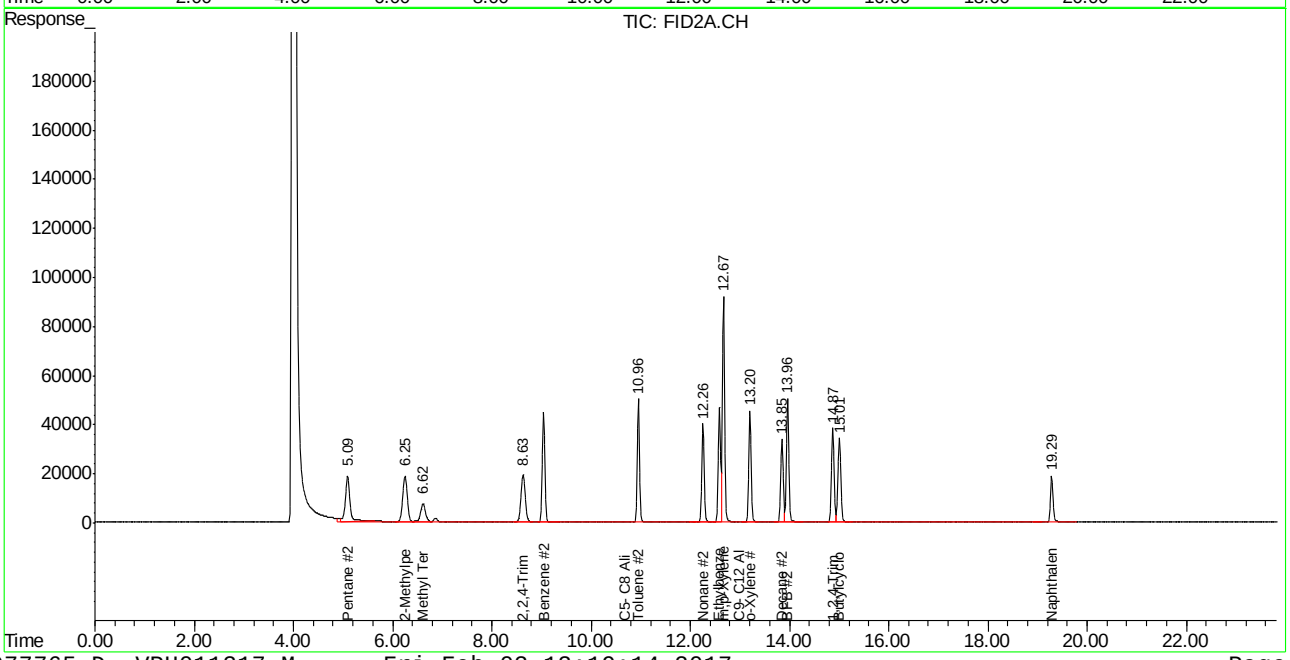
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077765.D\FID1B.CH Vial: 34
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077765.D\FID2A.CH
Acq On : 01-Feb-2017, 02:18:26 Operator: antonioc
Sample : bs Inst : HP5890
Misc : gc19636,guv4135,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 1 8:22 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID





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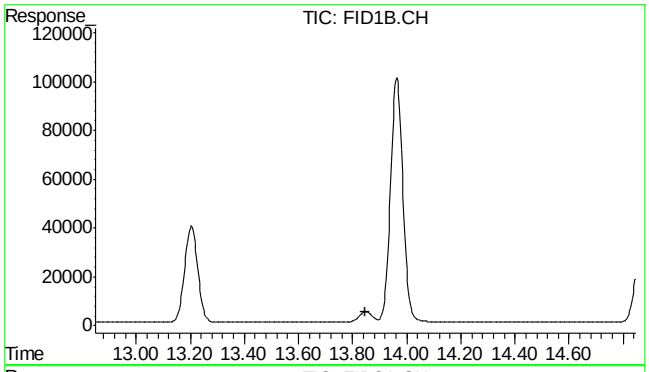
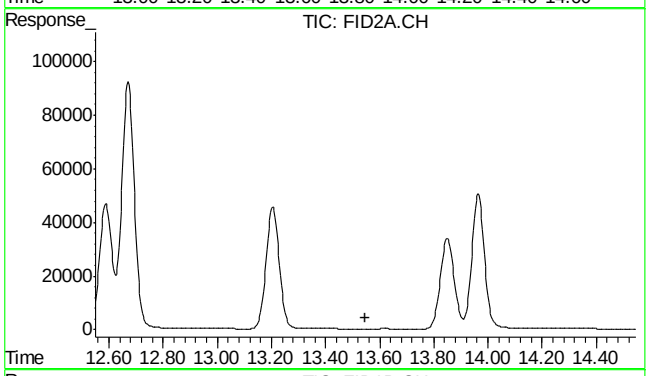


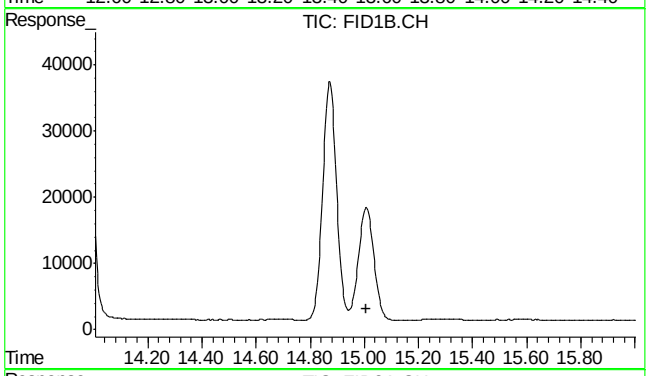
#1 Alkane A

R.T.: 13.849 min
Delta R.T.: 0.002 min
Response: 150349
Conc: N.D.



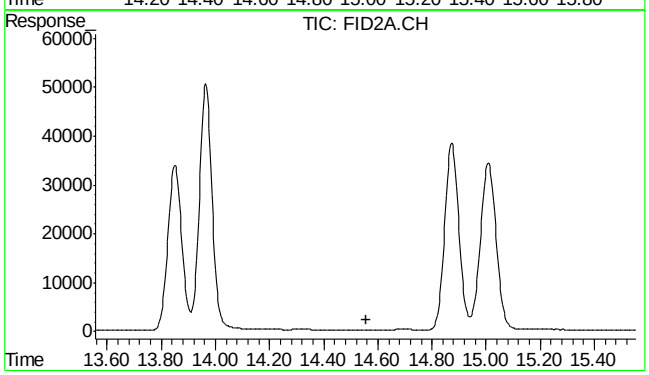
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.007 min
Delta R.T.: 0.000 min
Response: 702018
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.3.3

7

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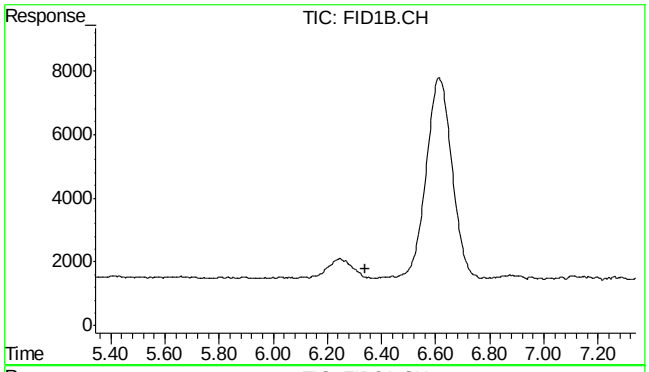
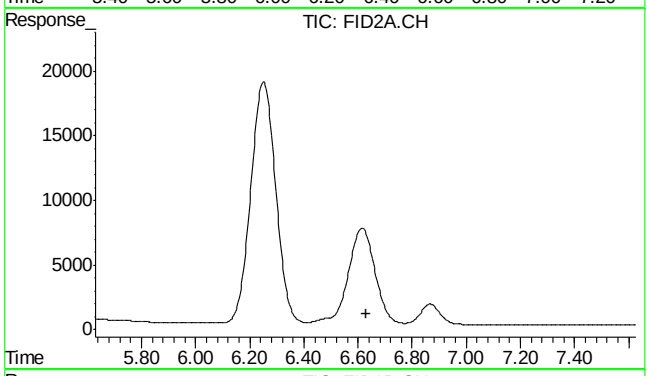


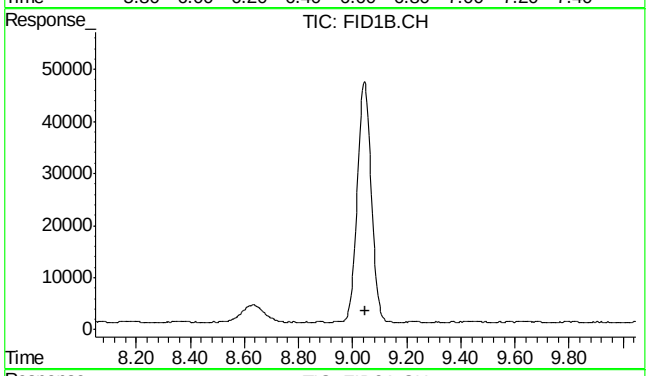
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



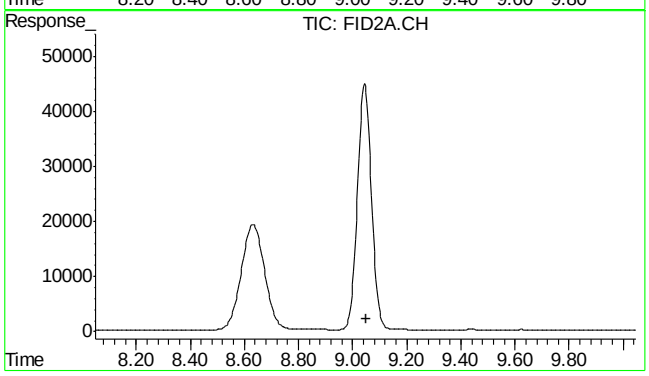
#3 Aromatic A

R.T.: 6.615 min
Delta R.T.: -0.014 min
Response: 512051
Conc: N.D.



#4 Aromatic B

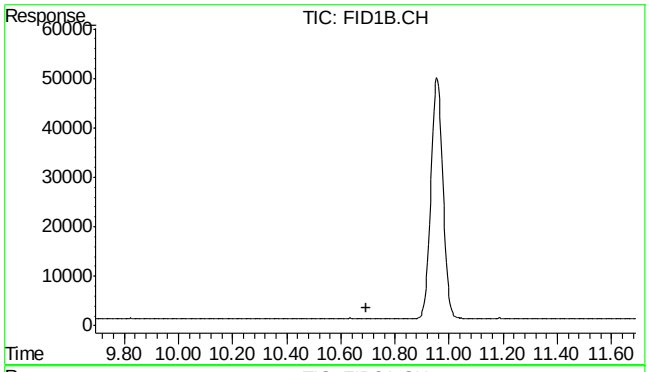
R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

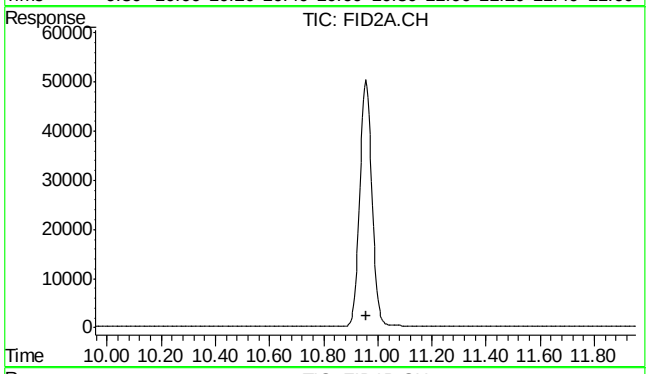
R.T.: 9.043 min
Delta R.T.: -0.005 min
Response: 1621321
Conc: N.D.

SGS ACCUTEST FA40754



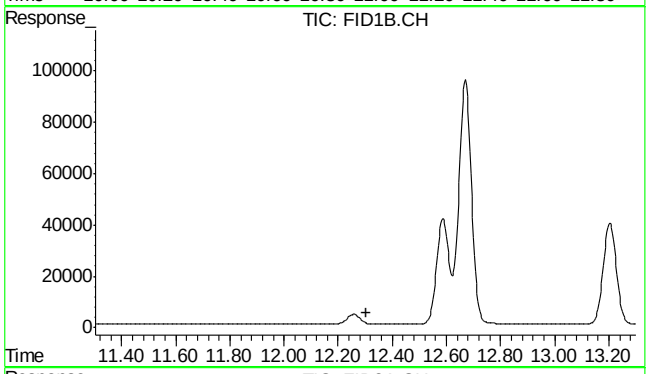
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



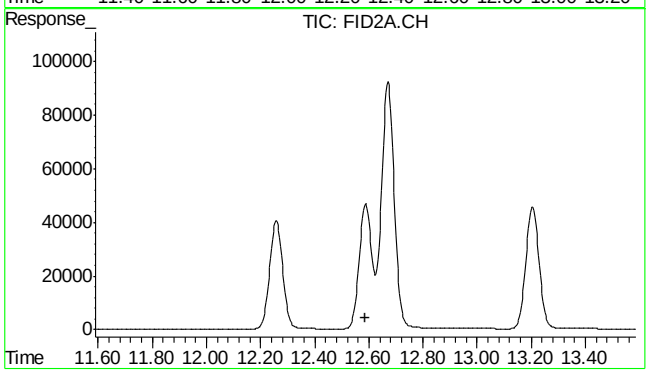
#5 Aromatic C

R.T.: 10.955 min
Delta R.T.: 0.000 min
Response: 1577343
Conc: N.D.



#6 Aromatic D

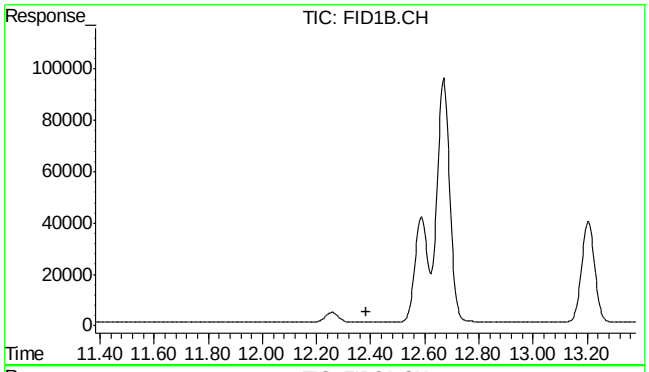
R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

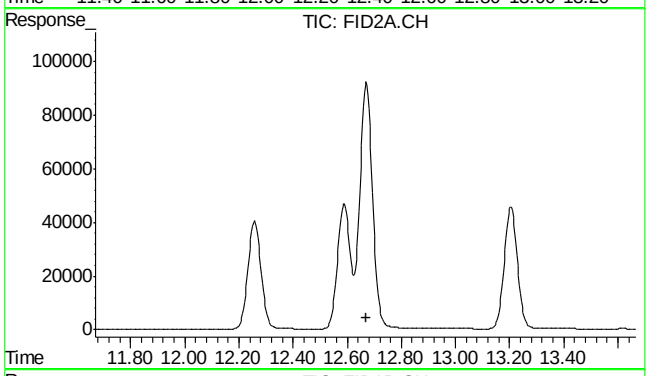
R.T.: 12.587 min
Delta R.T.: 0.000 min
Response: 1524229
Conc: N.D.

SGS ACCUTEST FA40754



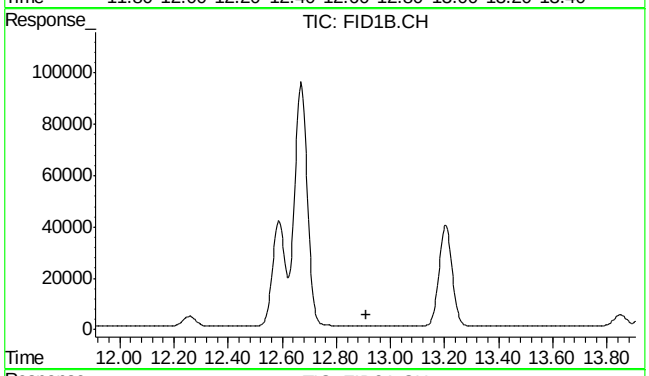
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



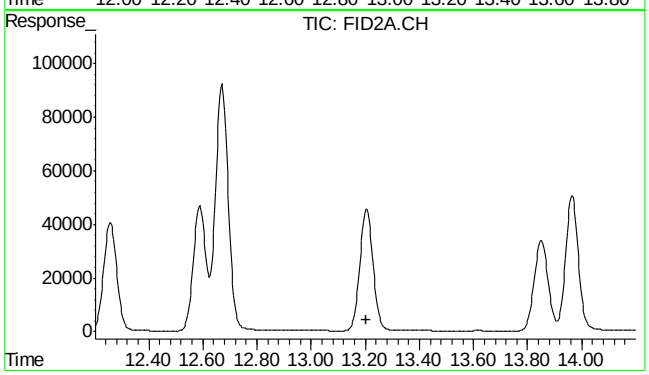
#7 Aromatic E

R.T.: 12.670 min
Delta R.T.: 0.000 min
Response: 3056124
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

R.T.: 13.204 min
Delta R.T.: 0.000 min
Response: 1559977
Conc: N.D.

7.3.3

7

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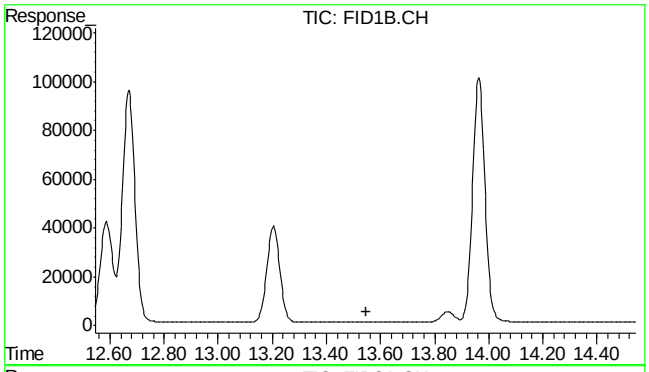
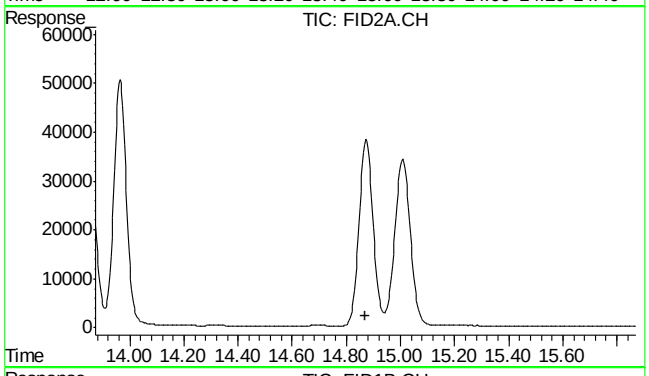


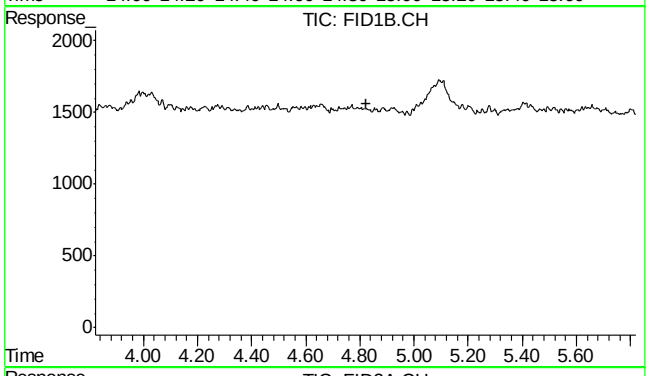
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



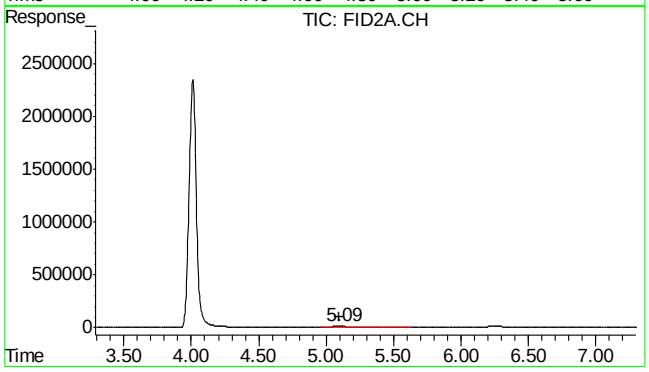
#9 Aromatic G

R.T.: 14.873 min
Delta R.T.: 0.001 min
Response: 1391252
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



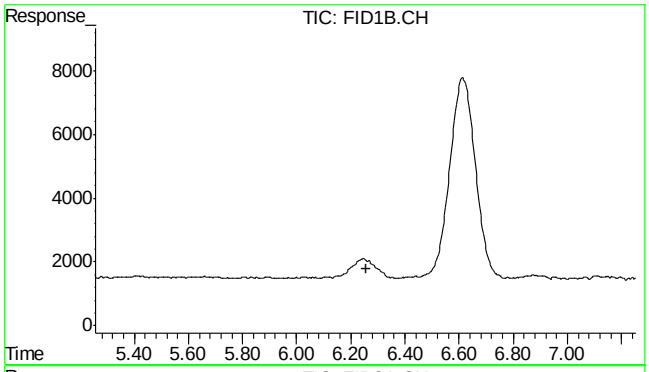
#10 Pentane

R.T.: 5.095 min
Delta R.T.: -0.005 min
Response: 1157279
Conc: 84.38 ug/L

7.3.3

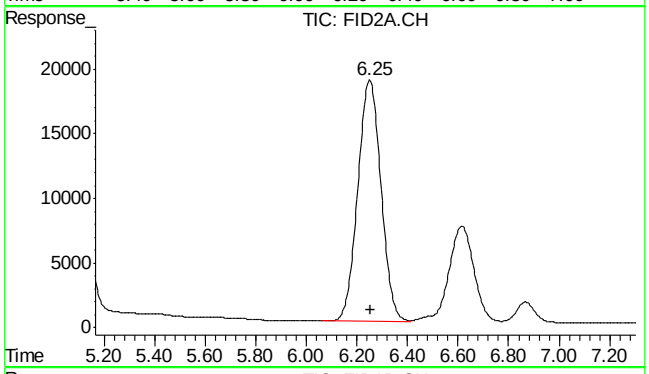
7

SGS ACCUTEST FA40754



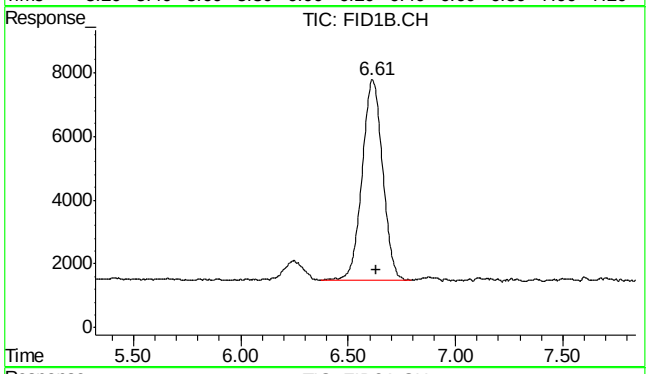
#11 2-Methylpentane

R.T.: 6.245 min
Delta R.T.: -0.011 min
Response: 39766
Conc: N.D.



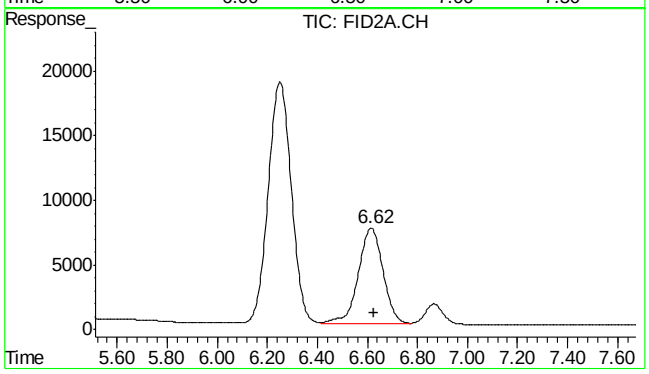
#11 2-Methylpentane

R.T.: 6.251 min
Delta R.T.: -0.005 min
Response: 1192205
Conc: 79.35 ug/L



#12 Methyl Tert Butyl Ether

R.T.: 6.613 min
Delta R.T.: -0.016 min
Response: 418872
Conc: 77.64 ug/L



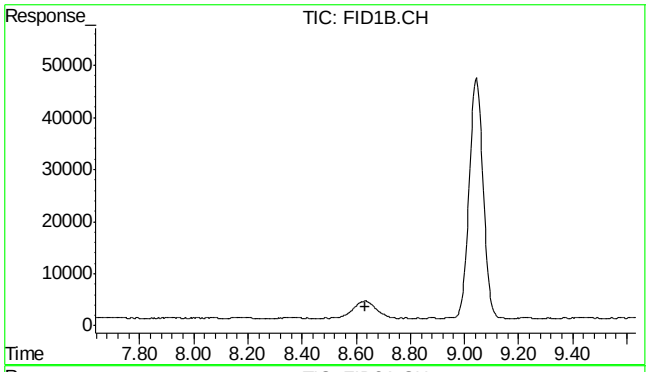
#12 Methyl Tert Butyl Ether

R.T.: 6.616 min
Delta R.T.: -0.012 min
Response: 512151
Conc: 78.31 ug/L

7.3.3

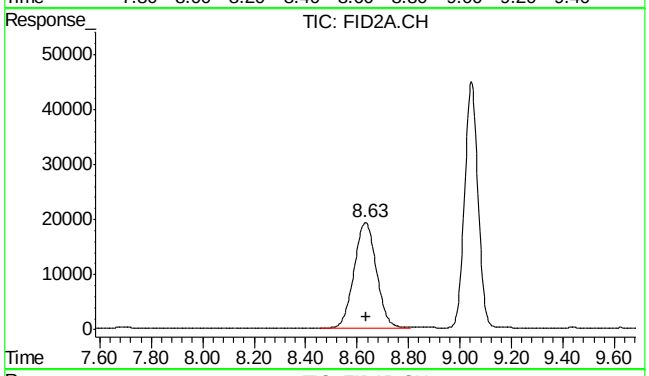
7

SGS ACCUTEST FA40754



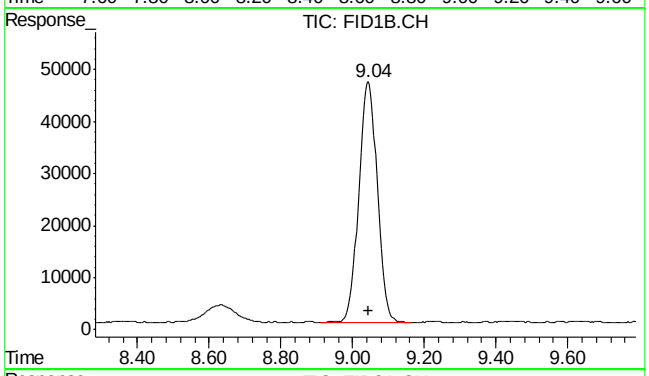
#13 2,2,4-Trimethylpentane

R.T.: 8.634 min
Delta R.T.: 0.000 min
Response: 200378
Conc: N.D.



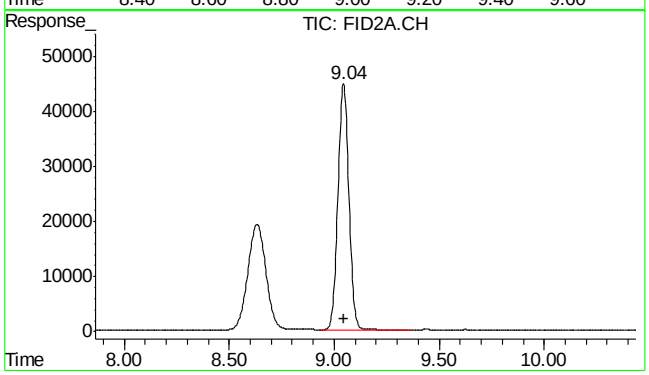
#13 2,2,4-Trimethylpentane

R.T.: 8.633 min
Delta R.T.: -0.001 min
Response: 1152422
Conc: 97.70 ug/L



#14 Benzene

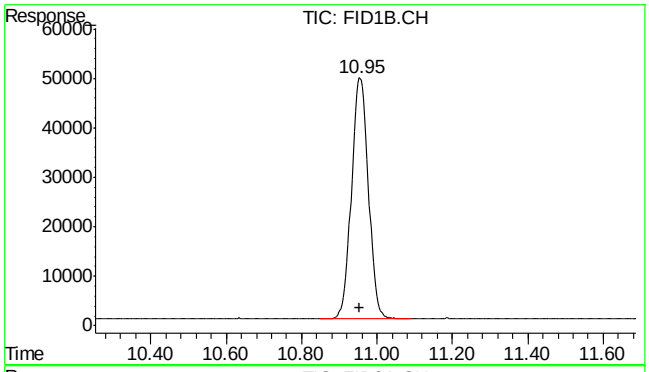
R.T.: 9.045 min
Delta R.T.: -0.001 min
Response: 1660493
Conc: 69.62 ug/L



#14 Benzene

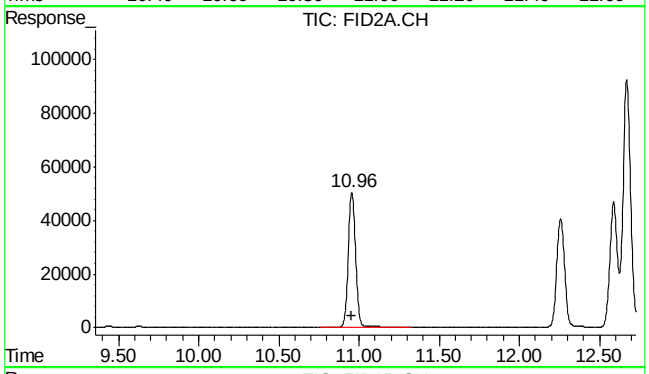
R.T.: 9.045 min
Delta R.T.: -0.001 min
Response: 1621014
Conc: 74.04 ug/L

SGS ACCUTEST FA40754



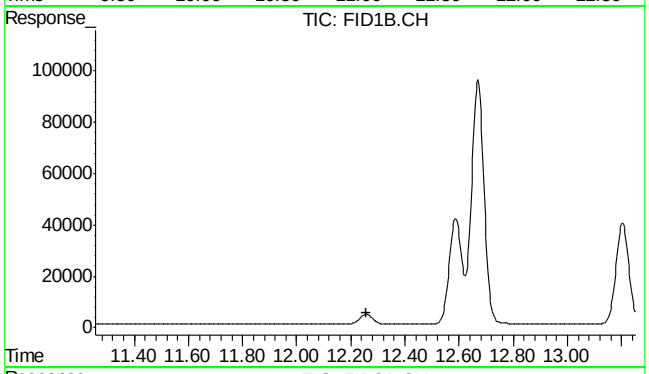
#15 Toluene

R.T.: 10.956 min
Delta R.T.: 0.000 min
Response: 1506811
Conc: 69.39 ug/L



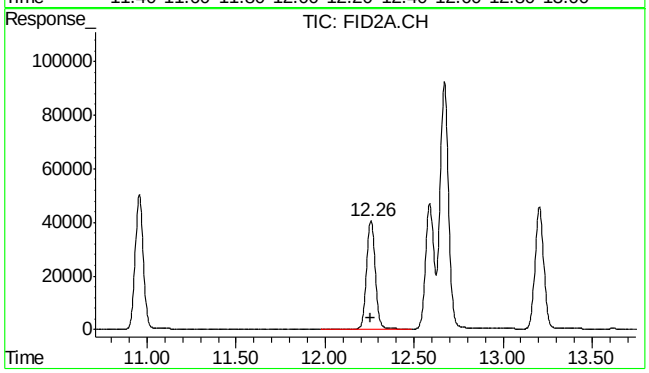
#15 Toluene

R.T.: 10.957 min
Delta R.T.: 0.002 min
Response: 1583311
Conc: 76.82 ug/L



#16 Nonane

R.T.: 12.258 min
Delta R.T.: 0.003 min
Response: 135371
Conc: N.D.



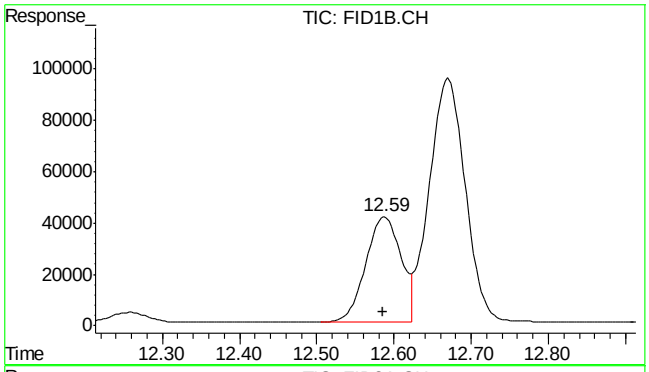
#16 Nonane

R.T.: 12.258 min
Delta R.T.: 0.002 min
Response: 1363388
Conc: 70.69 ug/L

7.3.3

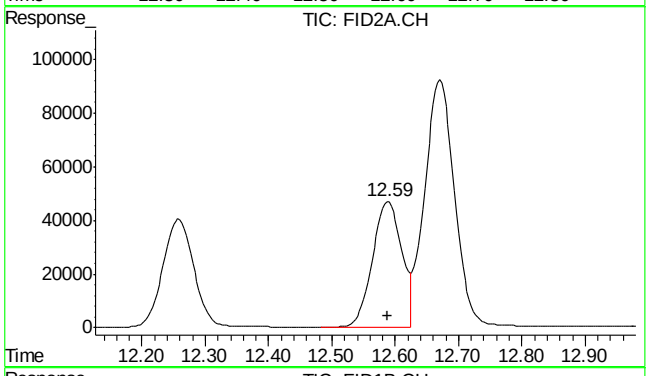
7

SGS ACCUTEST FA40754



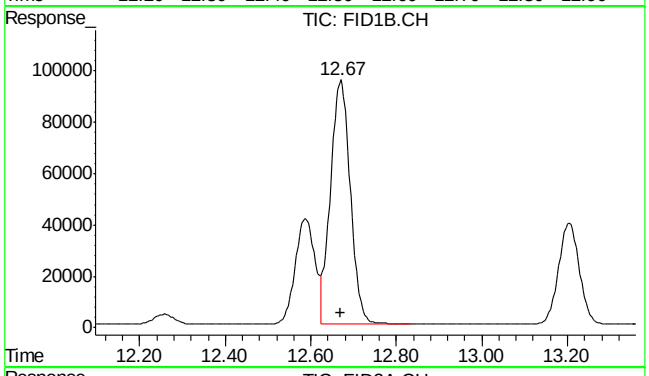
#17 Ethylbenzene

R.T.: 12.588 min
Delta R.T.: 0.002 min
Response: 1295651
Conc: 70.89 ug/L



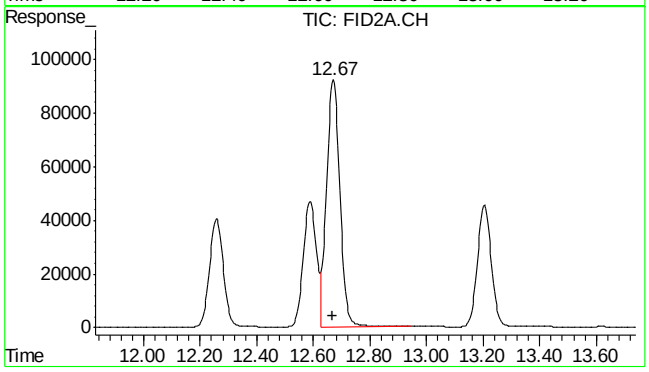
#17 Ethylbenzene

R.T.: 12.589 min
Delta R.T.: 0.002 min
Response: 1479785
Conc: 75.71 ug/L



#18 m,p-Xylene

R.T.: 12.670 min
Delta R.T.: 0.002 min
Response: 3109513
Conc: 140.58 ug/L



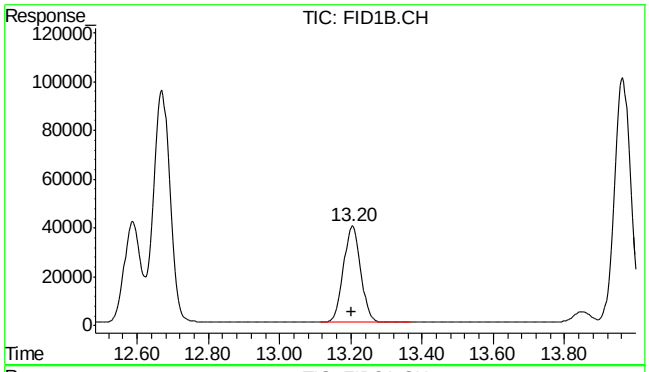
#18 m,p-Xylene

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 3044577
Conc: 146.99 ug/L

7.3.3

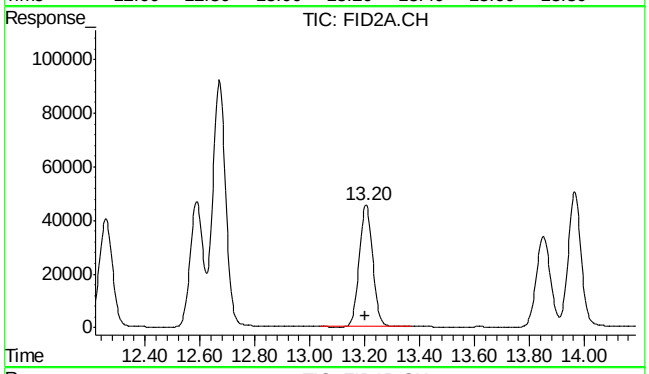
7

SGS ACCUTEST FA40754



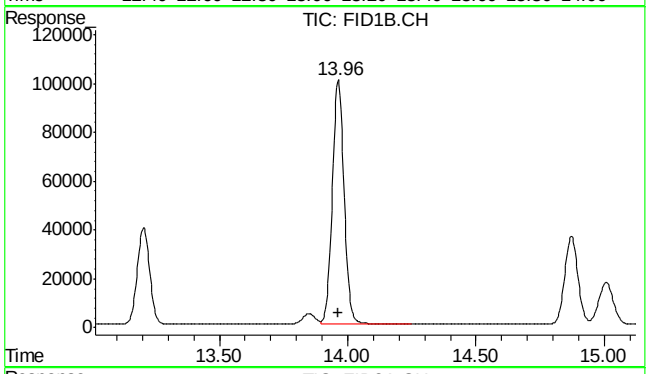
#19 o-Xylene

R.T.: 13.205 min
Delta R.T.: 0.002 min
Response: 1329676
Conc: 69.54 ug/L



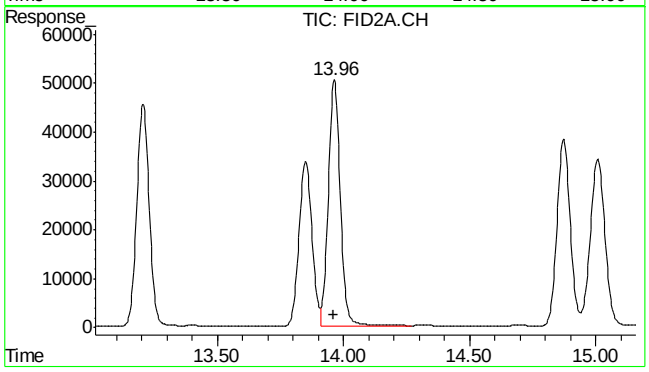
#19 o-Xylene

R.T.: 13.205 min
Delta R.T.: 0.002 min
Response: 1541594
Conc: 73.85 ug/L



#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 3212105
Conc: 174.99 ug/L



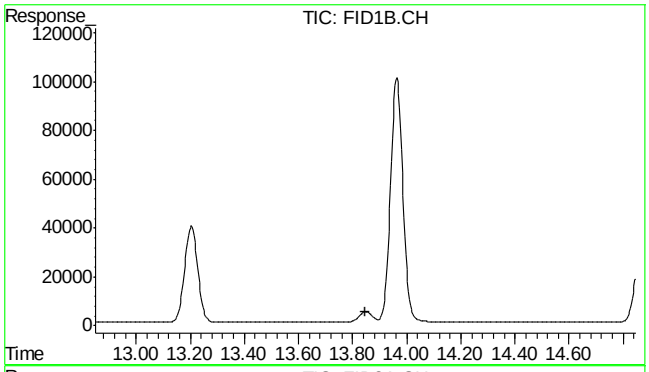
#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 1663379
Conc: 183.64 ug/L

7.3.3

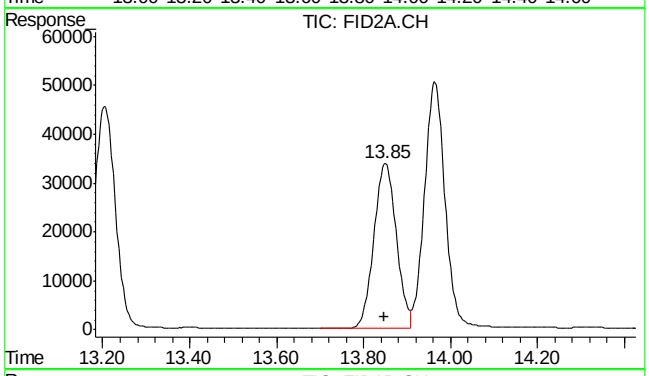
7

SGS ACCUTEST FA40754



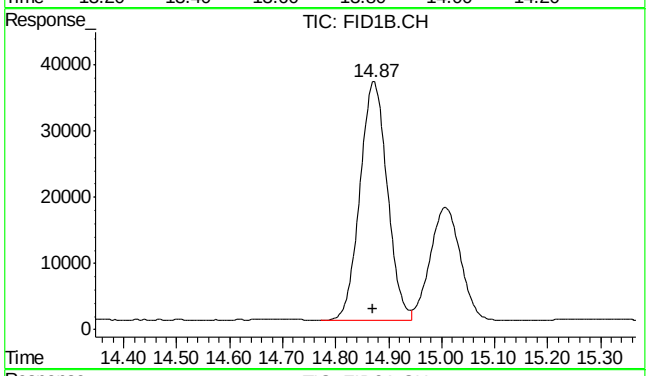
#21 Decane

R.T.: 13.850 min
Delta R.T.: 0.002 min
Response: 147840
Conc: N.D.



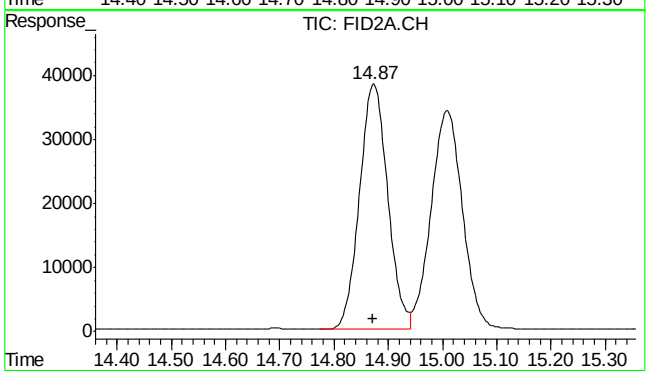
#21 Decane

R.T.: 13.851 min
Delta R.T.: 0.003 min
Response: 1203152
Conc: 66.82 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.873 min
Delta R.T.: 0.003 min
Response: 1287350
Conc: 64.37 ug/L



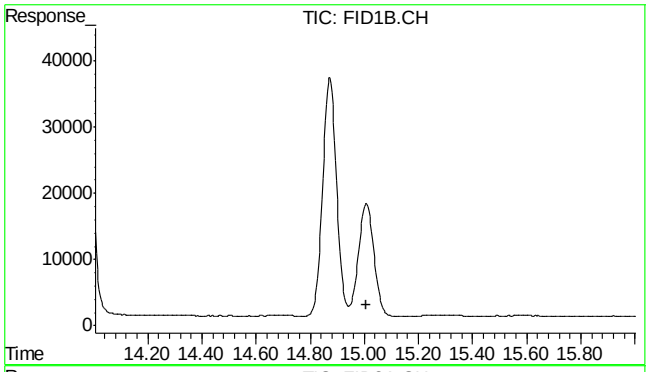
#22 1,2,4-Trimethylbenzene

R.T.: 14.874 min
Delta R.T.: 0.003 min
Response: 1382301
Conc: 68.55 ug/L

7.3.3

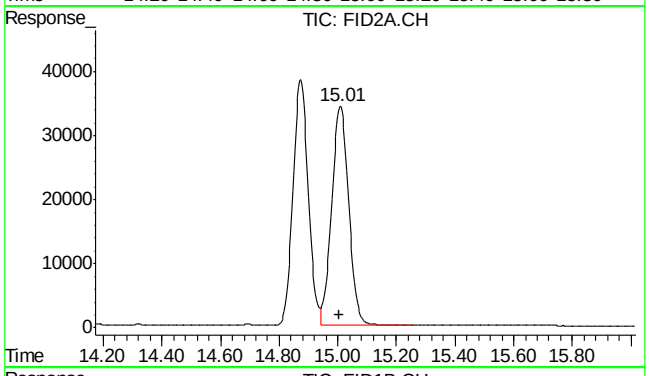
7

SGS ACCUTEST FA40754



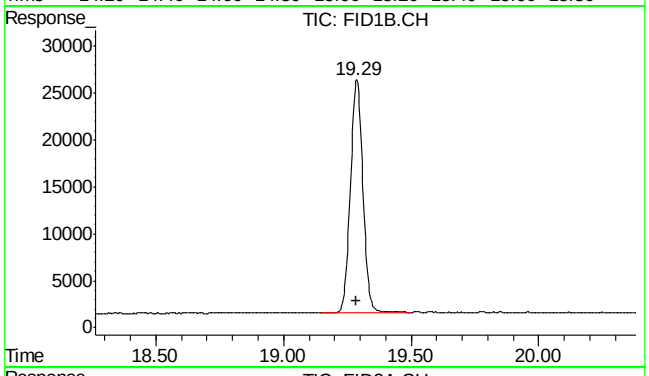
#23 Butylcyclohexane

R.T.: 15.008 min
Delta R.T.: 0.002 min
Response: 680107
Conc: N.D.



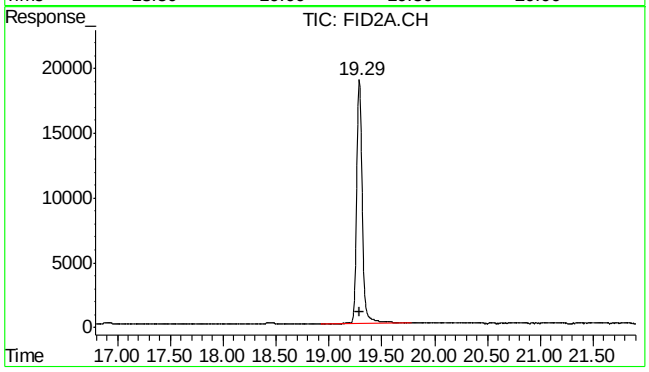
#23 Butylcyclohexane

R.T.: 15.009 min
Delta R.T.: 0.003 min
Response: 1381326
Conc: 66.21 ug/L



#24 Naphthalene

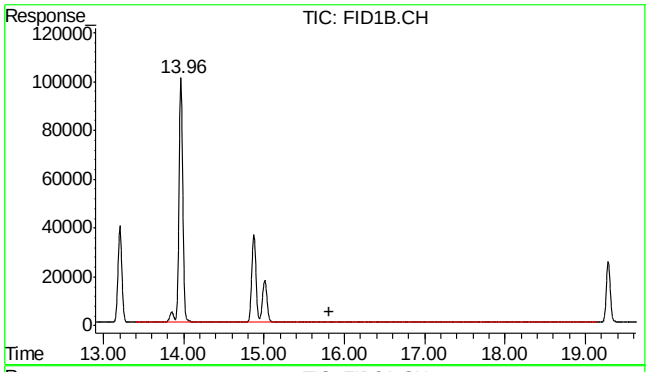
R.T.: 19.287 min
Delta R.T.: 0.003 min
Response: 842177
Conc: 68.09 ug/L



#24 Naphthalene

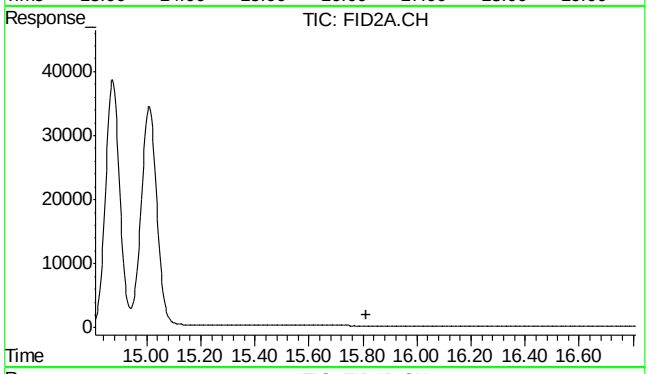
R.T.: 19.289 min
Delta R.T.: 0.003 min
Response: 685517
Conc: 72.18 ug/L

SGS ACCUTEST FA40754



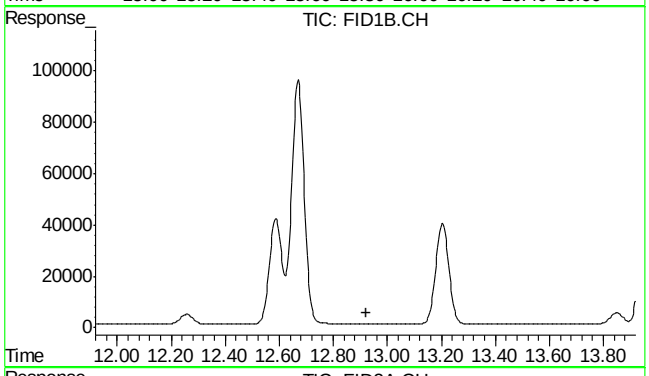
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 1634446
Conc: 66.97 ug/L m



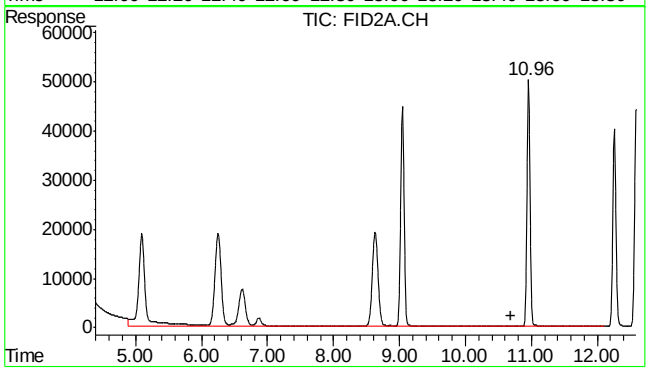
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2658488
Conc: N.D.



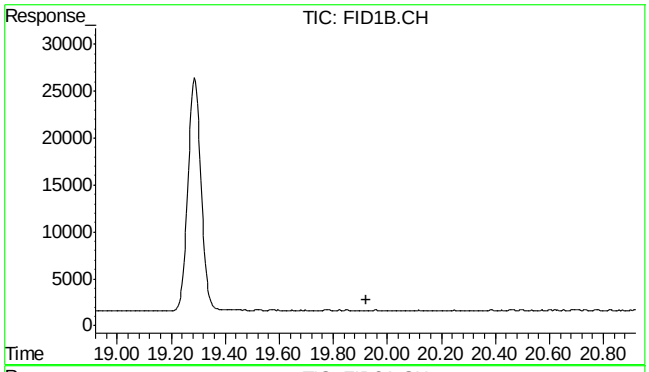
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 10245637
Conc: N.D.



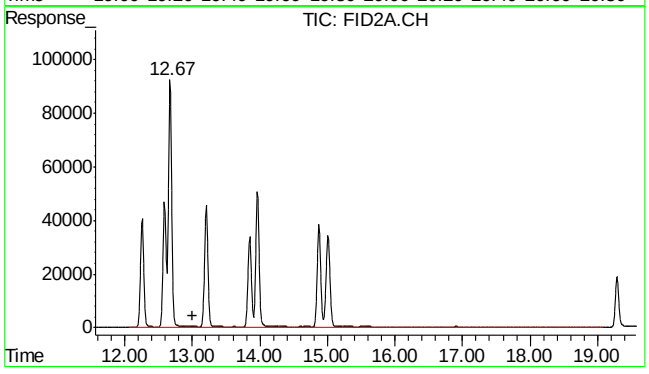
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 4237175
Conc: 303.73 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 2487778
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 4169721
Conc: 207.17 ug/L m

7.3.3

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077766.D\FID1B.CH Vial: 35
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077766.D\FID2A.CH
Acq On : 01-Feb-2017, 02:49:31 Operator: antonioc
Sample : bsd Inst : HP5890
Misc : gc19636,guv4135,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:04:23 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		System Monitoring Compounds							
1)	S	Alkane A	13.85f	0.00	164768	0	NoCal m	N.D.	
2)	S	Alkane B	15.01f	0.00	758934	0	NoCal m	N.D.	
3)	S	Aromatic A	0.00	6.61f	0	503464	N.D.	NoCal m	
4)	S	Aromatic B	0.00	9.04f	0	1747344	N.D.	NoCal m	
5)	S	Aromatic C	0.00	10.96f	0	1717639	N.D.	NoCal m	
6)	S	Aromatic D	0.00	12.59f	0	1644219	N.D.	NoCal m	
7)	S	Aromatic E	0.00	12.67f	0	3327591	N.D.	NoCal m	
8)	S	Aromatic F	0.00	13.20f	0	1700376	N.D.	NoCal m	
9)	S	Aromatic G	0.00	14.87f	0	1537348	N.D.	NoCal m	
20)	S	BFB	13.96	13.96	3347885	1751824	182.391	193.401	
		Spiked Amount 200.000 Range 70 - 130 Recovery =					91.20%	96.70%	
		Target Compounds							
10)		Pentane	0.00	5.10	0	1212355	N.D.	88.396	#
11)		2-Methylpentane	6.25	6.25	43776	1251631	NoCal	83.303	#
12)		Methyl Tert Buty	6.61	6.62	417154	500453	77.319	76.519	
13)		2,2,4-Trimethylp	8.63	8.63	164519	985217	NoCal	81.127	#
14)		Benzene	9.04	9.05	1793745	1745217	75.206	79.709	
15)		Toluene	10.96	10.96	1634944	1721902	75.289	83.543	
16)		Nonane	12.26	12.26	142645	1519766	NoCal	78.794	#
17)		Ethylbenzene	12.59	12.59	1414133	1626353	77.378	83.212	
18)		m,p-Xylene	12.67	12.67	3391086	3349004	153.310	161.689	
19)		o-Xylene	13.20	13.21	1441886	1692225	75.413	81.071	
21)		Decane	13.85	13.85	160155	1349922	NoCal	74.971	#
22)		1,2,4-Trimethylb	14.87	14.87	1408367	1528172	70.418	75.782	
23)		Butylcyclohexane	15.01	15.01	755339	1557048	NoCal	74.629	#
24)		Naphthalene	19.29	19.29	874792	709413	70.725	74.701	
25)	H	C9- C10 Aromatic	15.81	15.81	1903770	2988700	80.488	NoCal	#
26)	H	C5- C8 Aliphatic	12.92	10.70	10801060	4105139	NoCal	293.007	#
27)	H	C9- C12 Aliphati	19.92	13.00	2882911	4707638	NoCal	235.652	#

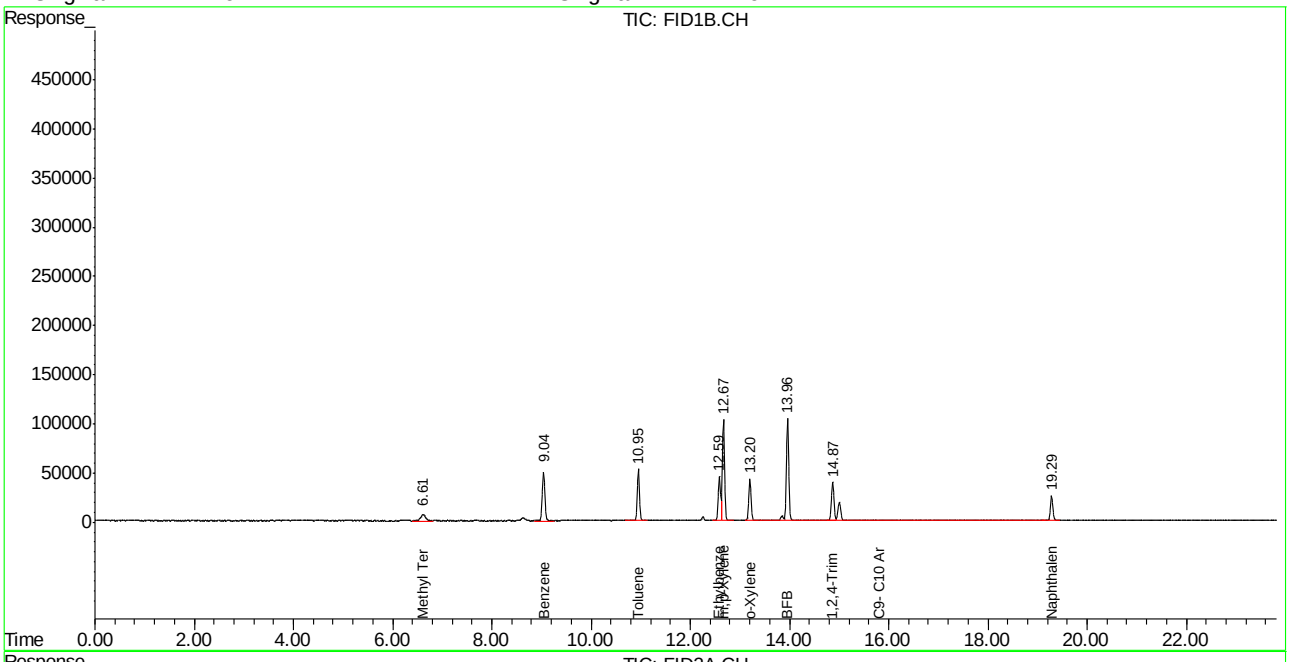
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077766.D VPH011317.M Fri Feb 03 13:19:17 2017

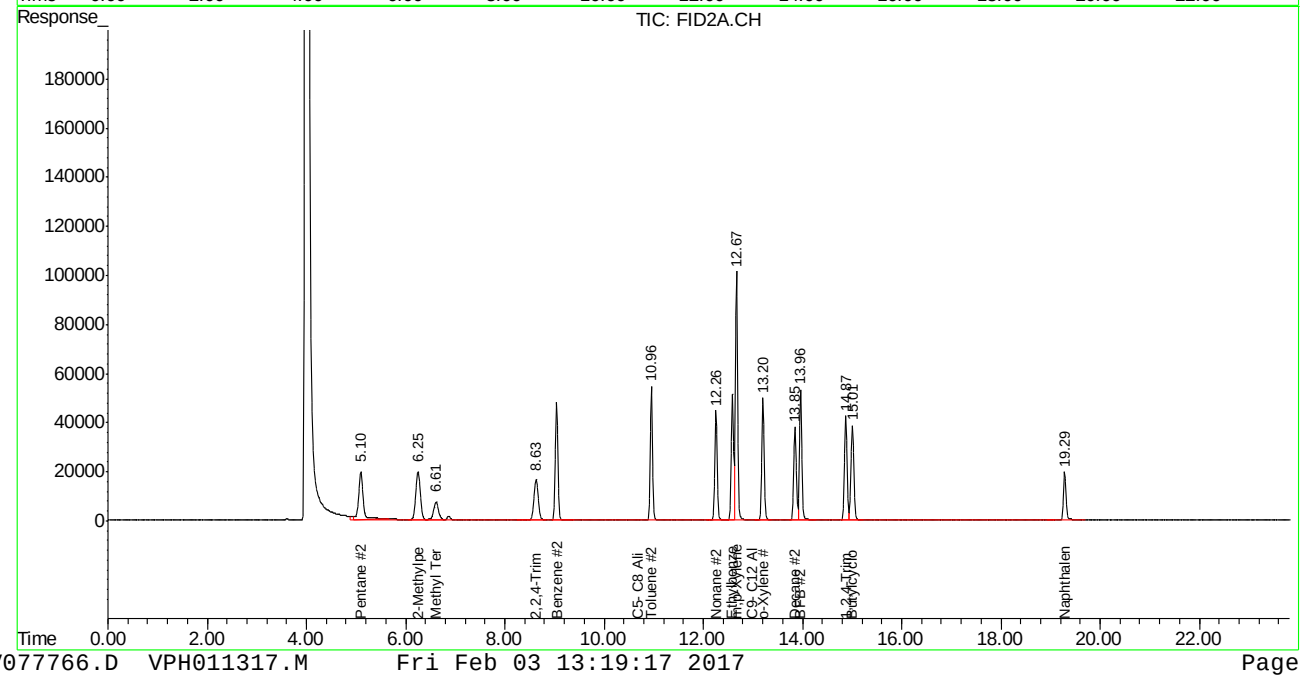
Quantitation Report (QT Reviewed)

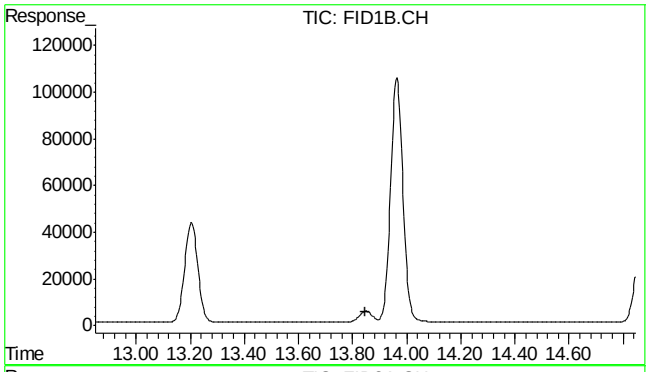
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077766.D\FID1B.CH Vial: 35
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077766.D\FID2A.CH
Acq On : 01-Feb-2017, 02:49:31 Operator: antonioc
Sample : bsd Inst : HP5890
Misc : gc19636,guv4135,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 1 8:25 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

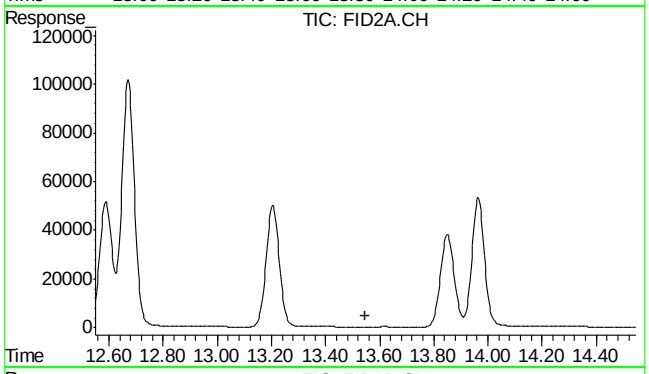






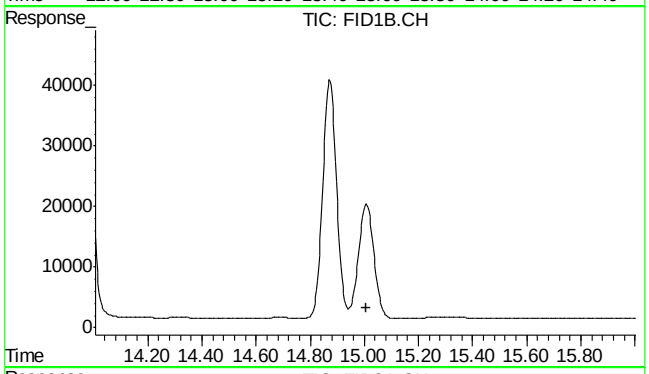
#1 Alkane A

R.T.: 13.849 min
Delta R.T.: 0.002 min
Response: 164768
Conc: N.D.



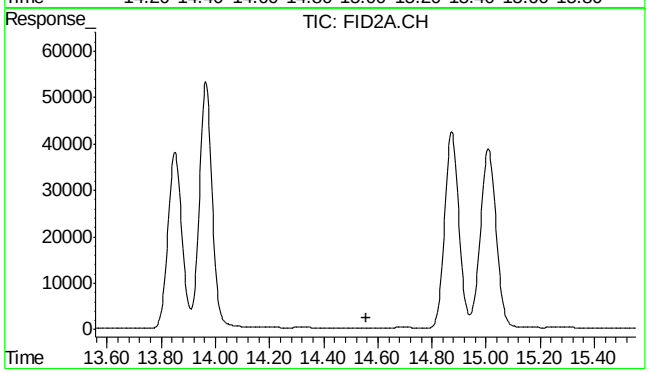
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.006 min
Delta R.T.: 0.000 min
Response: 758934
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.3.4

7

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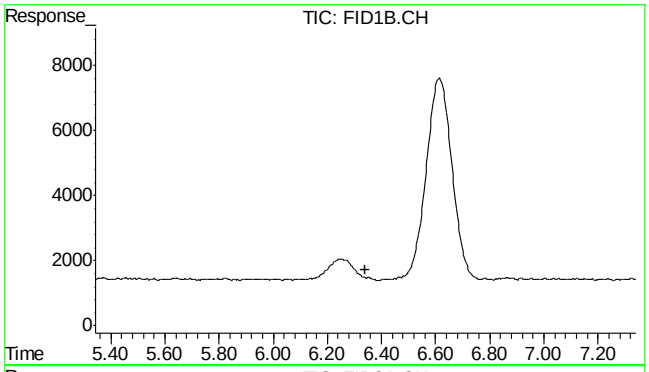
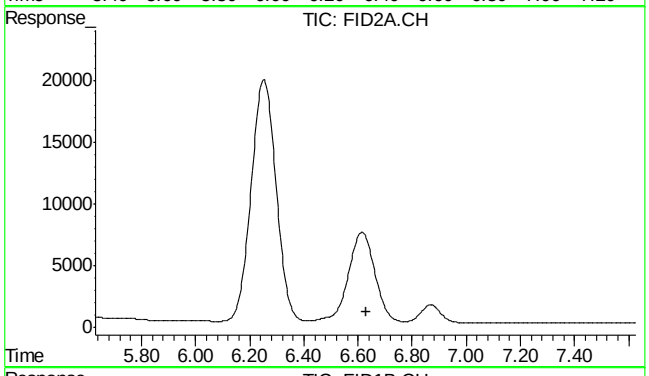


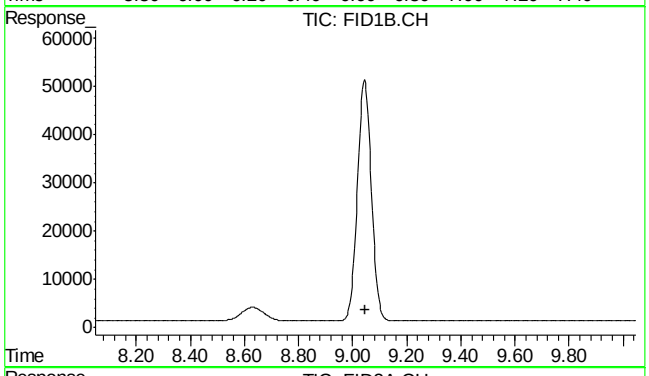
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



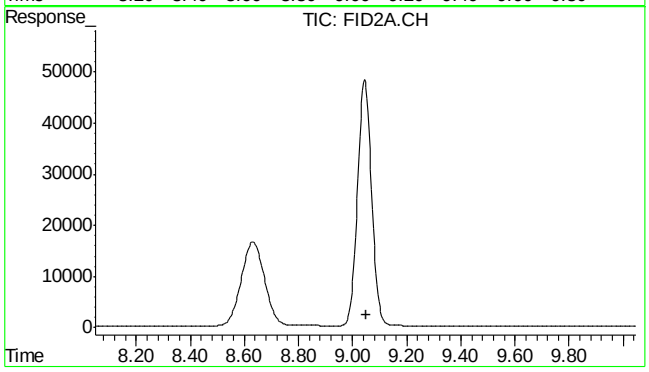
#3 Aromatic A

R.T.: 6.614 min
Delta R.T.: -0.015 min
Response: 503464
Conc: N.D.



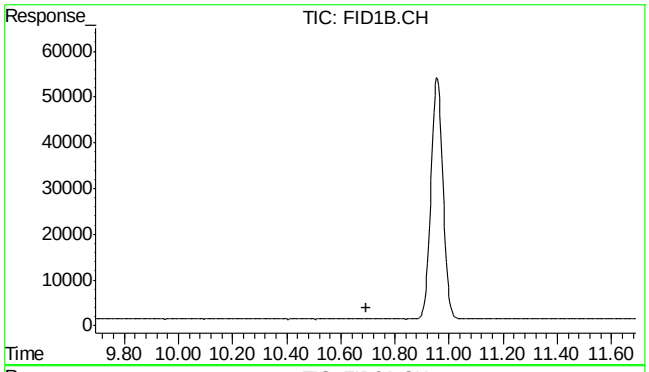
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



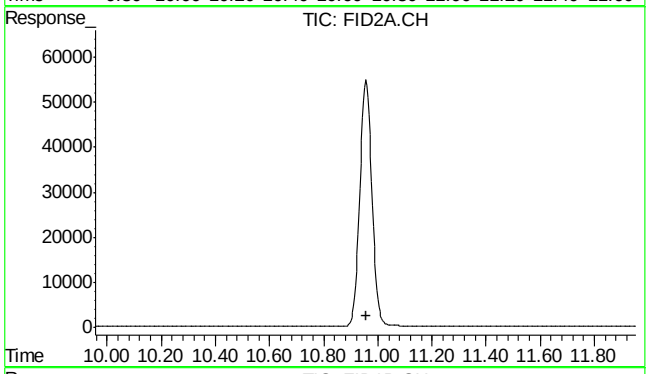
#4 Aromatic B

R.T.: 9.044 min
Delta R.T.: -0.005 min
Response: 1747344
Conc: N.D.



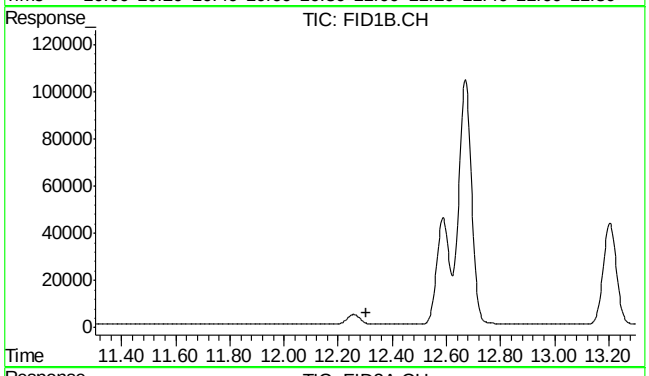
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



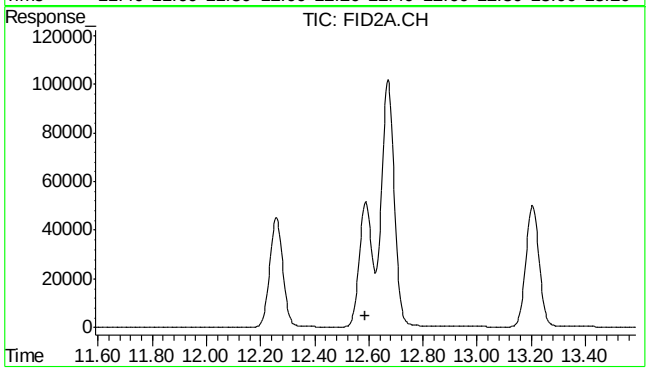
#5 Aromatic C

R.T.: 10.955 min
Delta R.T.: 0.000 min
Response: 1717639
Conc: N.D.



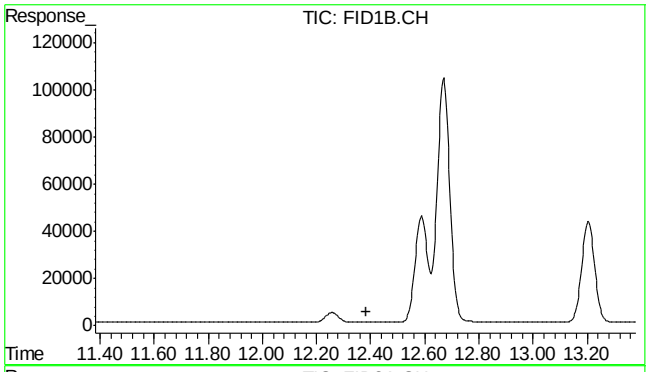
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



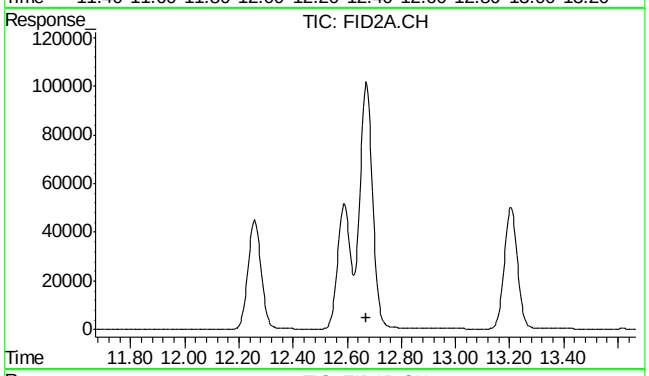
#6 Aromatic D

R.T.: 12.588 min
Delta R.T.: 0.000 min
Response: 1644219
Conc: N.D.



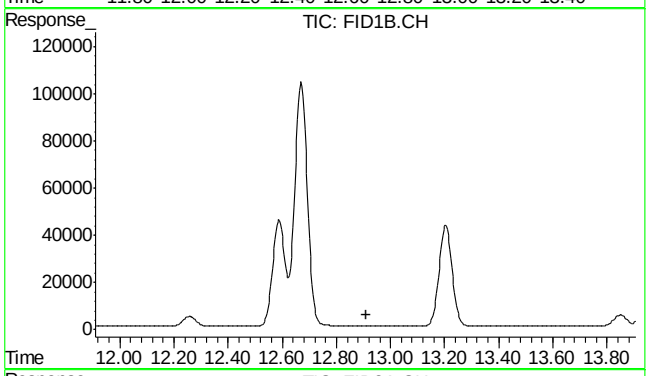
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



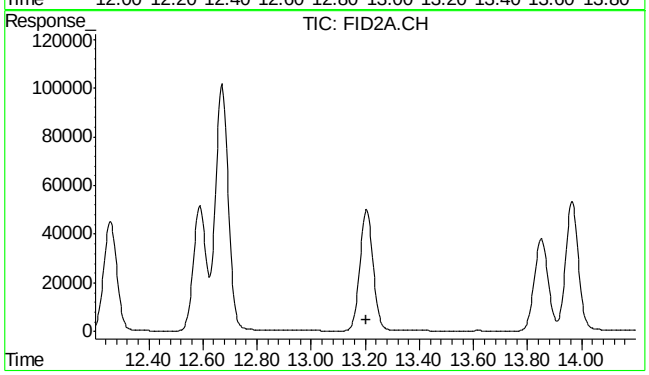
#7 Aromatic E

R.T.: 12.670 min
Delta R.T.: 0.000 min
Response: 3327591
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



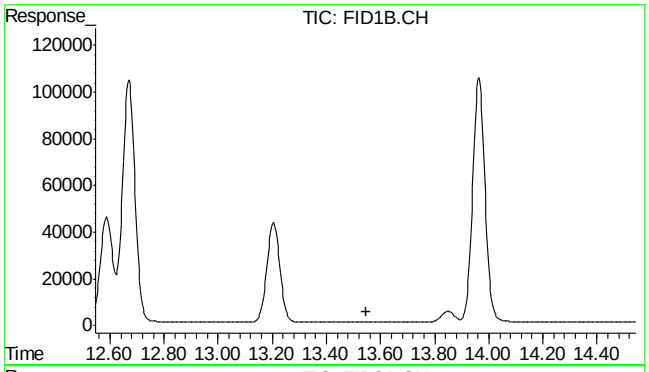
#8 Aromatic F

R.T.: 13.204 min
Delta R.T.: 0.001 min
Response: 1700376
Conc: N.D.

7.3.4

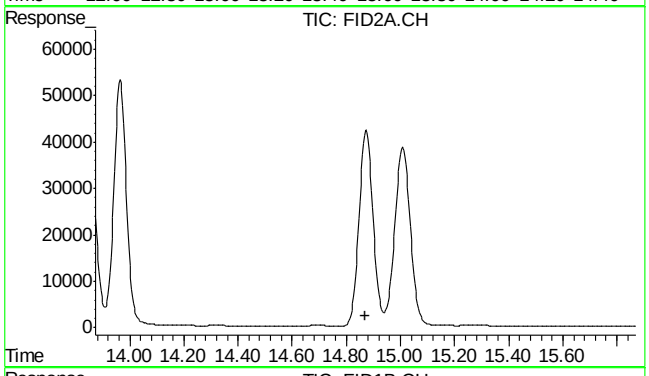
7

SGS ACCUTEST FA40754



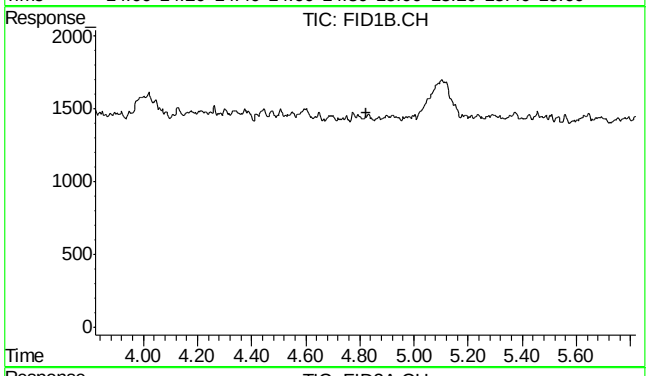
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



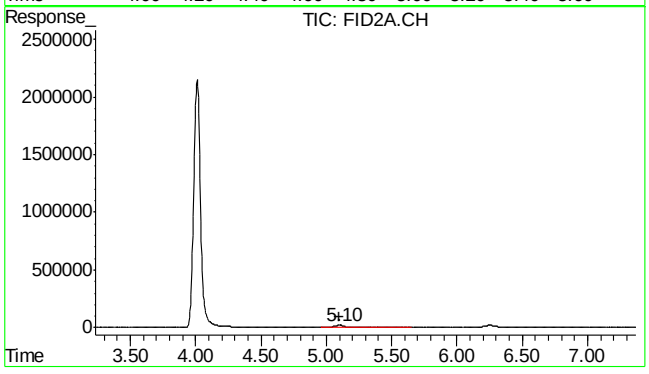
#9 Aromatic G

R.T.: 14.872 min
Delta R.T.: 0.001 min
Response: 1537348
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



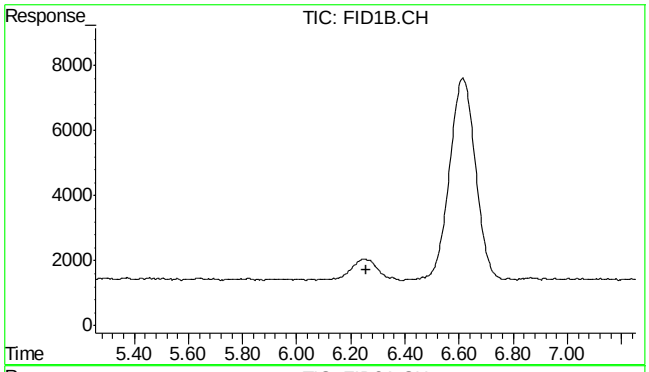
#10 Pentane

R.T.: 5.100 min
Delta R.T.: 0.000 min
Response: 1212355
Conc: 88.40 ug/L

7.3.4

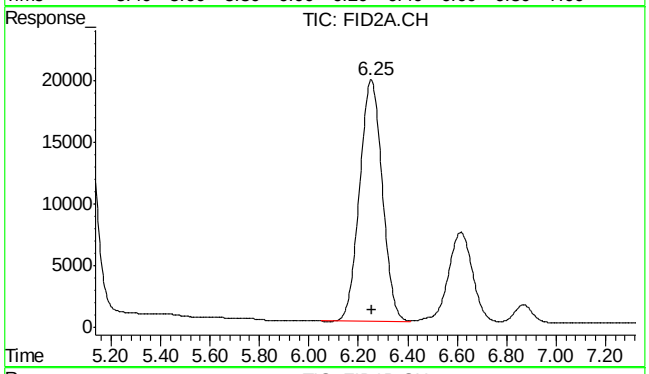
7

SGS ACCUTEST FA40754



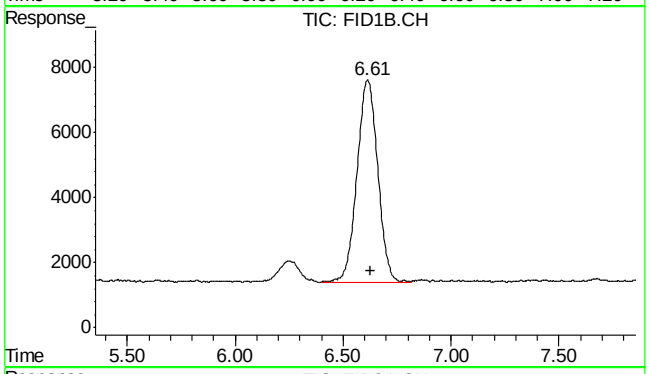
#11 2-Methylpentane

R.T.: 6.248 min
Delta R.T.: -0.008 min
Response: 43776
Conc: N.D.



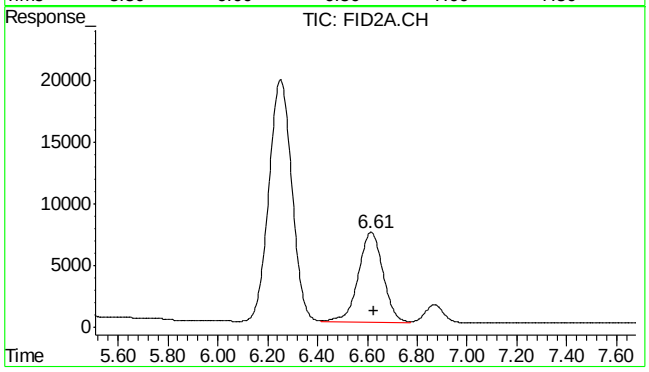
#11 2-Methylpentane

R.T.: 6.253 min
Delta R.T.: -0.003 min
Response: 1251631
Conc: 83.30 ug/L



#12 Methyl Tert Butyl Ether

R.T.: 6.614 min
Delta R.T.: -0.015 min
Response: 417154
Conc: 77.32 ug/L



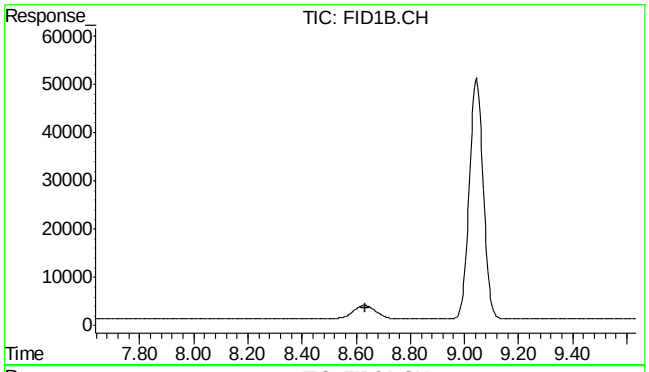
#12 Methyl Tert Butyl Ether

R.T.: 6.615 min
Delta R.T.: -0.013 min
Response: 500453
Conc: 76.52 ug/L

7.3.4

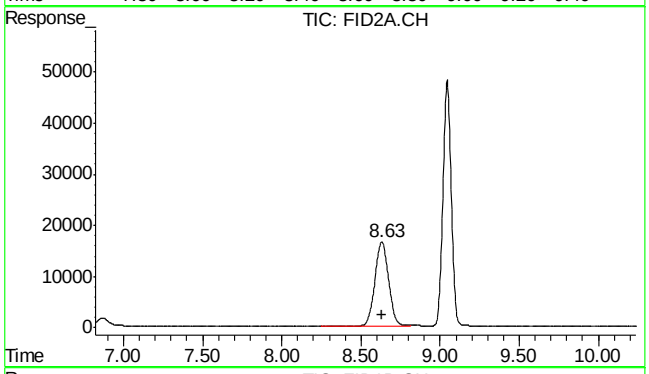
7

SGS ACCUTEST FA40754



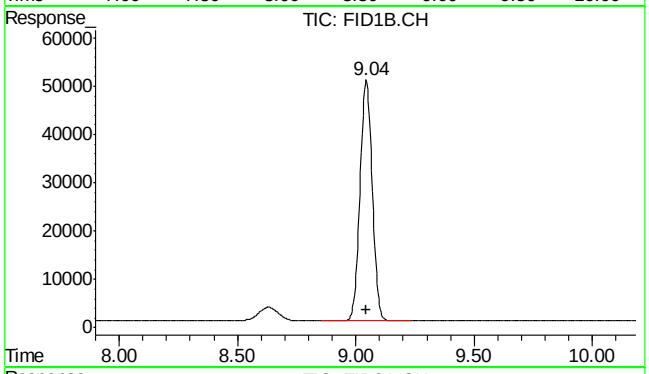
#13 2,2,4-Trimethylpentane

R.T.: 8.631 min
Delta R.T.: -0.003 min
Response: 164519
Conc: N.D.



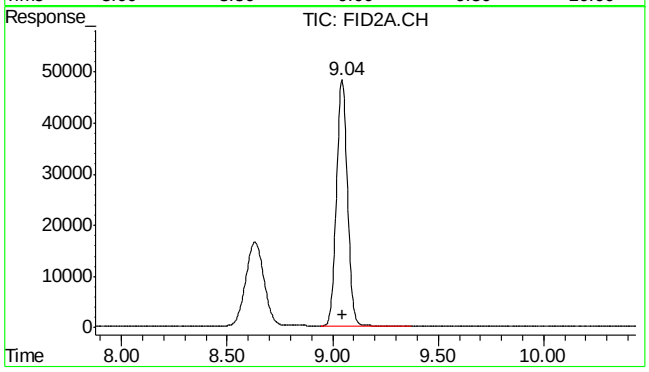
#13 2,2,4-Trimethylpentane

R.T.: 8.632 min
Delta R.T.: -0.002 min
Response: 985217
Conc: 81.13 ug/L



#14 Benzene

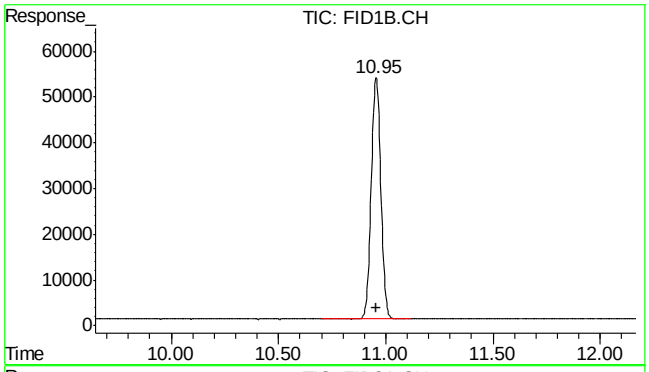
R.T.: 9.045 min
Delta R.T.: -0.001 min
Response: 1793745
Conc: 75.21 ug/L



#14 Benzene

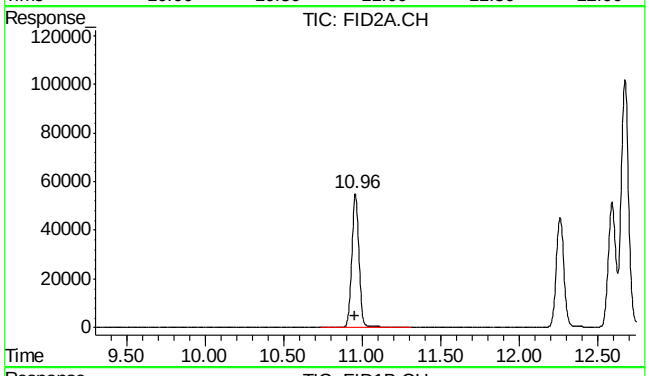
R.T.: 9.045 min
Delta R.T.: 0.000 min
Response: 1745217
Conc: 79.71 ug/L

SGS ACCUTEST FA40754



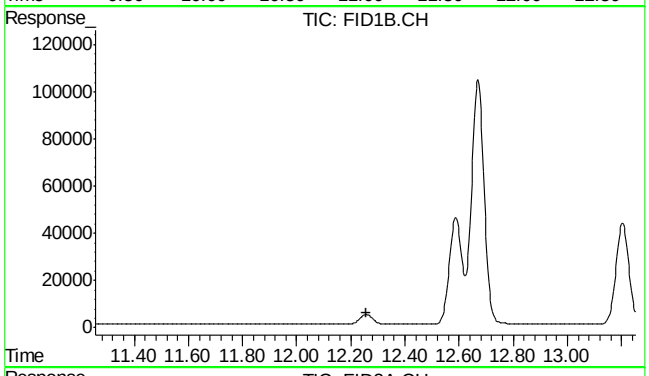
#15 Toluene

R.T.: 10.956 min
Delta R.T.: 0.001 min
Response: 1634944
Conc: 75.29 ug/L



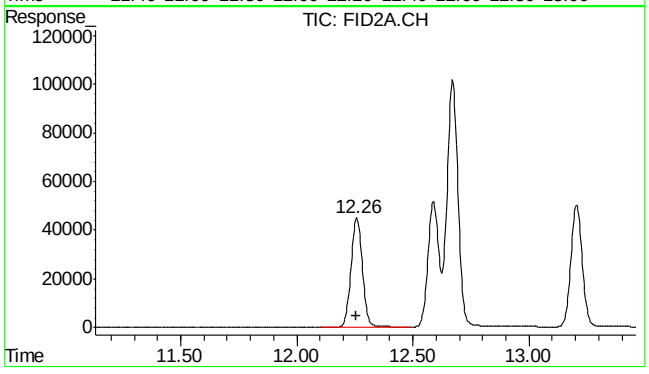
#15 Toluene

R.T.: 10.957 min
Delta R.T.: 0.002 min
Response: 1721902
Conc: 83.54 ug/L



#16 Nonane

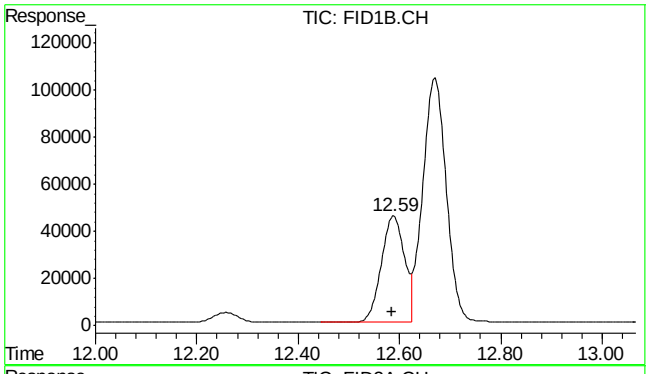
R.T.: 12.258 min
Delta R.T.: 0.002 min
Response: 142645
Conc: N.D.



#16 Nonane

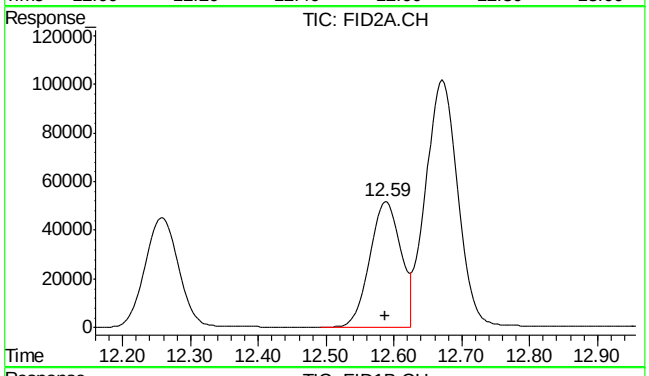
R.T.: 12.259 min
Delta R.T.: 0.003 min
Response: 1519766
Conc: 78.79 ug/L

SGS ACCUTEST FA40754



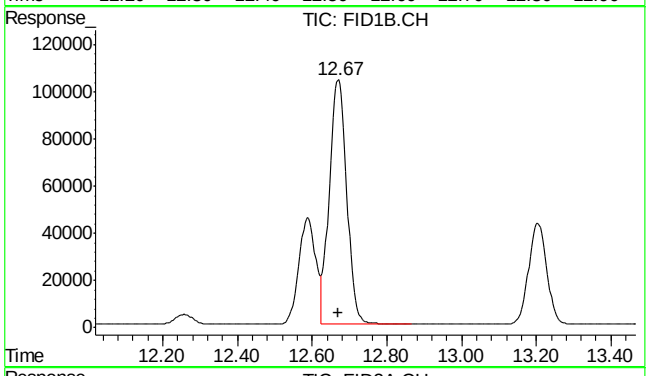
#17 Ethylbenzene

R.T.: 12.588 min
Delta R.T.: 0.002 min
Response: 1414133
Conc: 77.38 ug/L



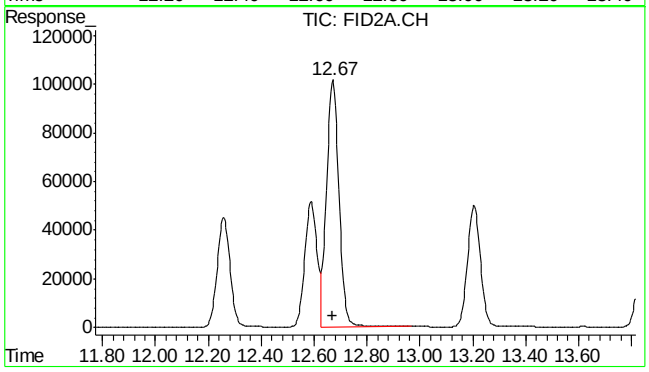
#17 Ethylbenzene

R.T.: 12.589 min
Delta R.T.: 0.002 min
Response: 1626353
Conc: 83.21 ug/L



#18 m,p-Xylene

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 3391086
Conc: 153.31 ug/L



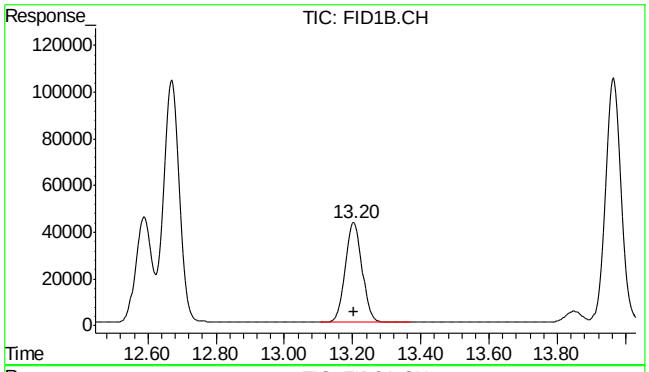
#18 m,p-Xylene

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 3349004
Conc: 161.69 ug/L

7.3.4

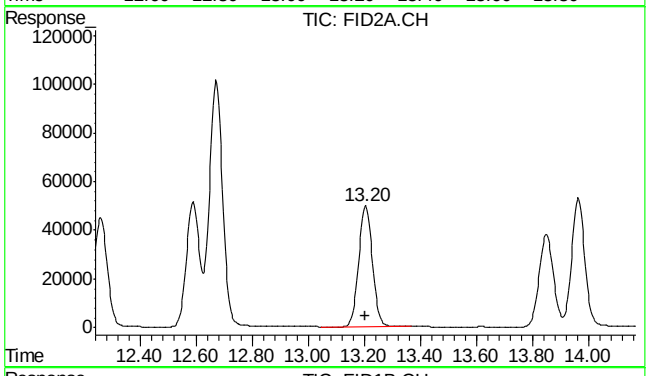
7

SGS ACCUTEST FA40754



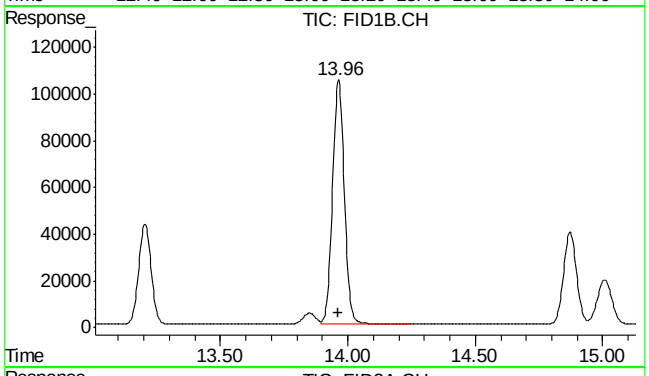
#19 o-Xylene

R.T.: 13.205 min
Delta R.T.: 0.002 min
Response: 1441886
Conc: 75.41 ug/L



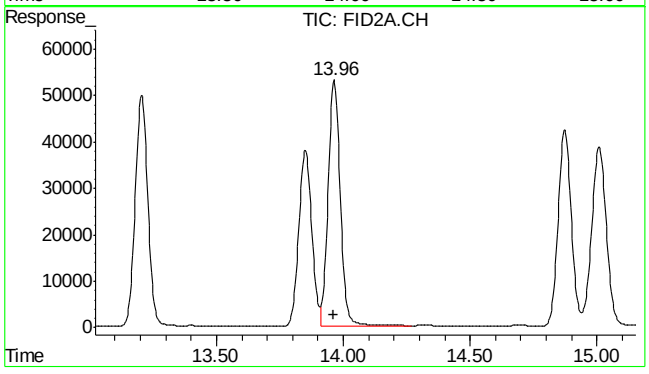
#19 o-Xylene

R.T.: 13.206 min
Delta R.T.: 0.003 min
Response: 1692225
Conc: 81.07 ug/L



#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 3347885
Conc: 182.39 ug/L



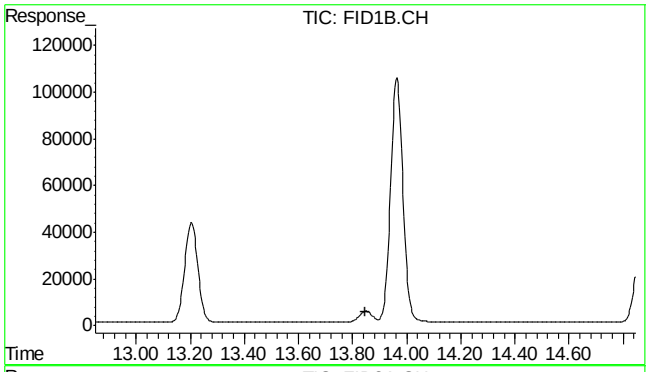
#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 1751824
Conc: 193.40 ug/L

7.3.4

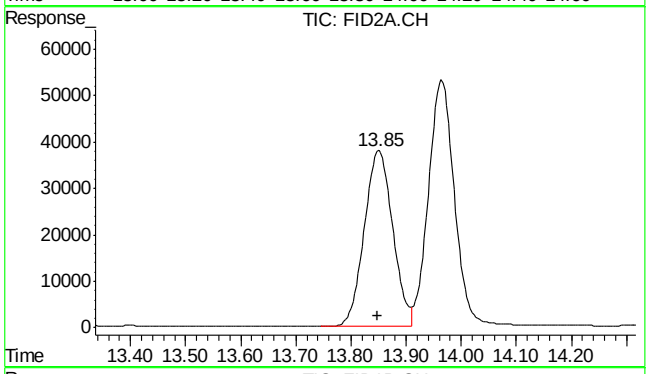
7

SGS ACCUTEST FA40754



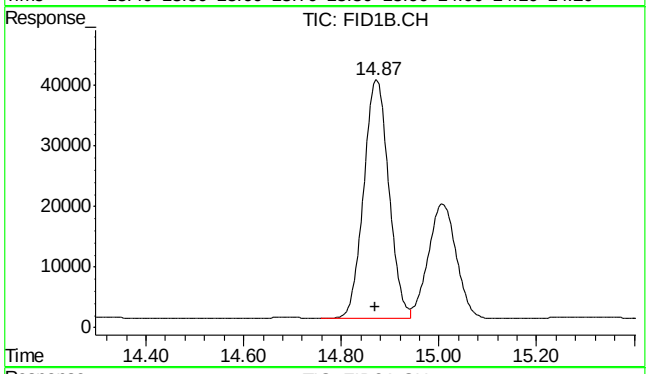
#21 Decane

R.T.: 13.850 min
Delta R.T.: 0.002 min
Response: 160155
Conc: N.D.



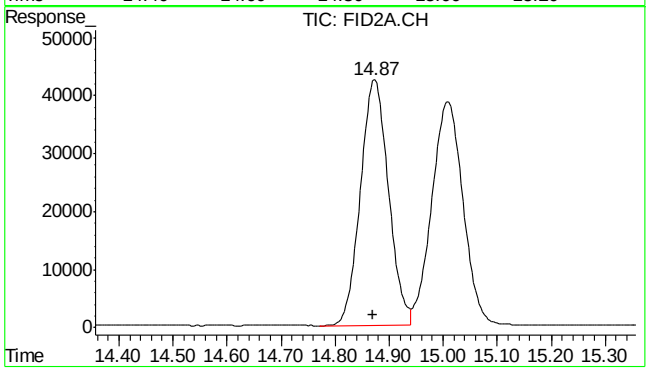
#21 Decane

R.T.: 13.851 min
Delta R.T.: 0.003 min
Response: 1349922
Conc: 74.97 ug/L



#22 1,2,4-Trimethylbenzene

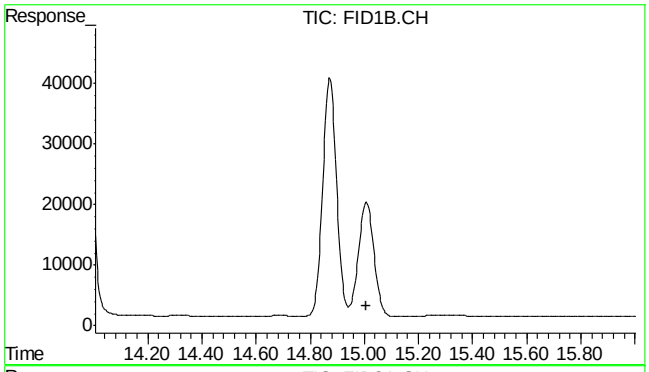
R.T.: 14.873 min
Delta R.T.: 0.003 min
Response: 1408367
Conc: 70.42 ug/L



#22 1,2,4-Trimethylbenzene

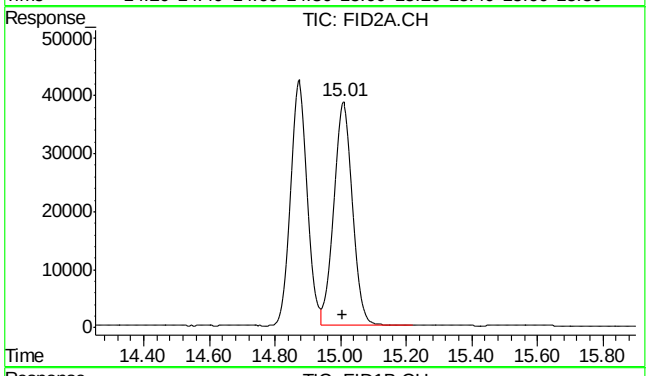
R.T.: 14.874 min
Delta R.T.: 0.003 min
Response: 1528172
Conc: 75.78 ug/L

SGS ACCUTEST FA40754



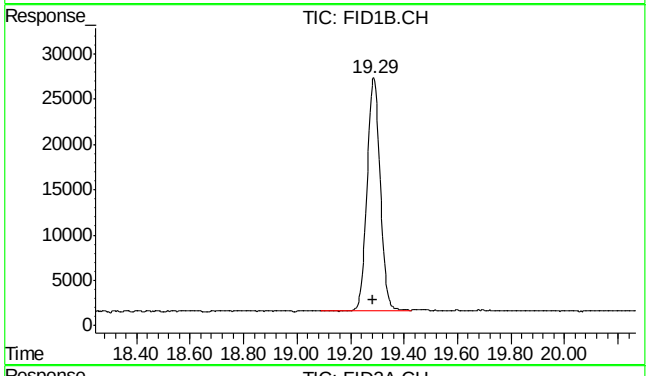
#23 Butylcyclohexane

R.T.: 15.008 min
Delta R.T.: 0.002 min
Response: 755339
Conc: N.D.



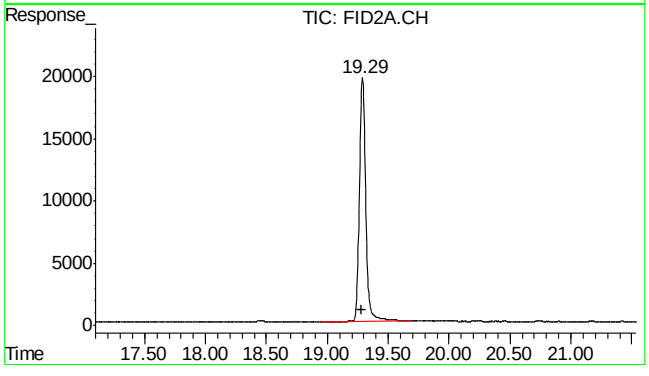
#23 Butylcyclohexane

R.T.: 15.009 min
Delta R.T.: 0.003 min
Response: 1557048
Conc: 74.63 ug/L



#24 Naphthalene

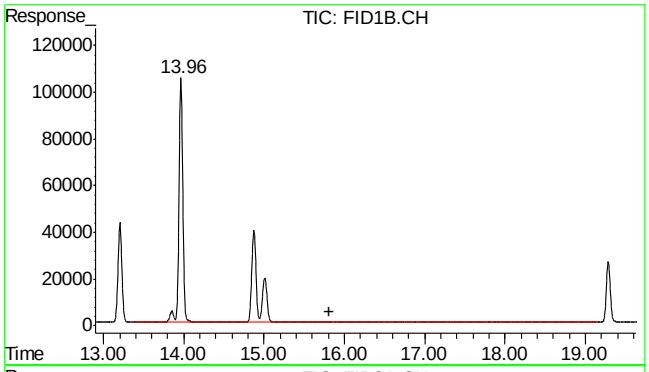
R.T.: 19.287 min
Delta R.T.: 0.003 min
Response: 874792
Conc: 70.72 ug/L



#24 Naphthalene

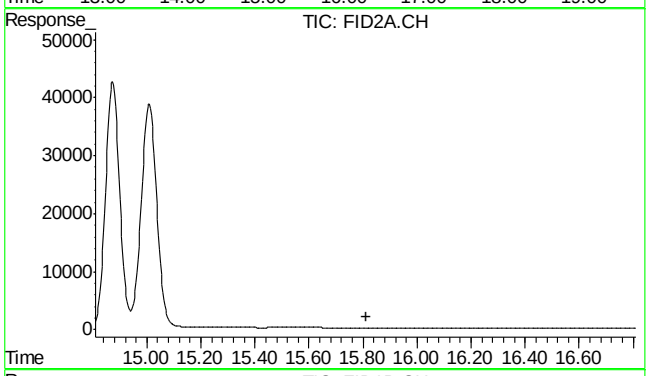
R.T.: 19.289 min
Delta R.T.: 0.003 min
Response: 709413
Conc: 74.70 ug/L

SGS ACCUTEST FA40754



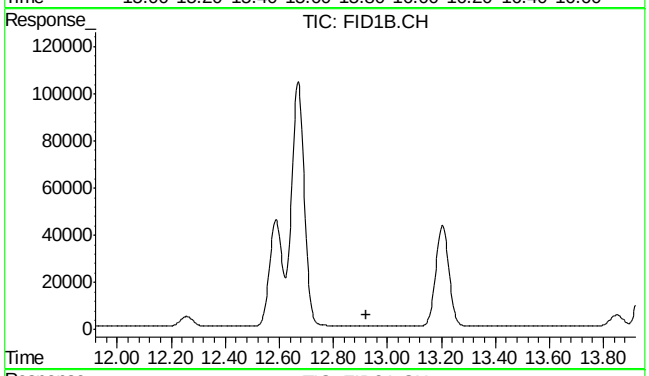
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 1903770
Conc: 80.49 ug/L m



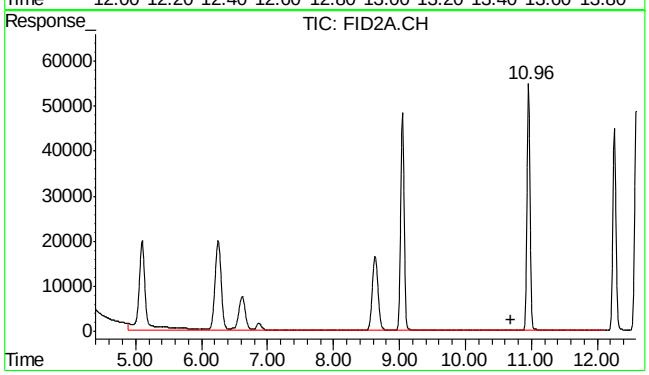
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2988700
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 10801060
Conc: N.D.

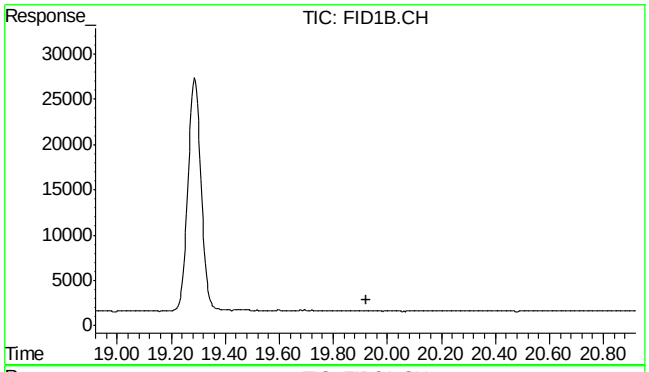


#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 4105139
Conc: 293.01 ug/L m

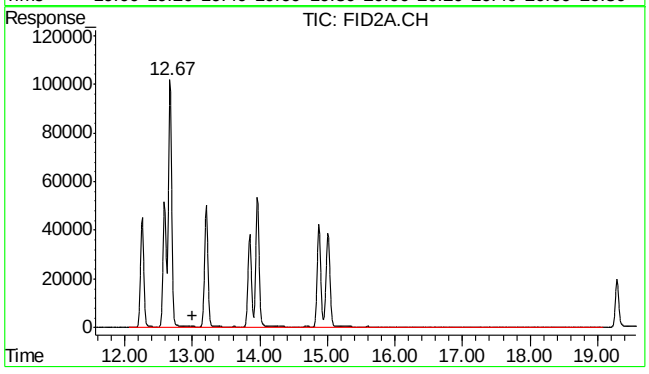
7.3.4

7



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 2882911
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 4707638
Conc: 235.65 ug/L m

7.3.4

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\020617\UV077864.D\FID1B.CH Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077864.D\FID2A.CH
Acq On : 06-Feb-2017, 23:33:52 Operator: antonioc
Sample : bs Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 07 10:02:11 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	170367	0	NoCal m	N.D.
2)	S	Alkane B	15.01f	0.00	741747	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.61f	0	519366	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	1660075	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.96f	0	1634829	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	1555399	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	3181683	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.21f	0	1637800	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	1478599	N.D.	NoCal m
20)	S	BFB	13.96	13.97	1416514	753050	77.171	83.137
		Spiked Amount 40.000 Range 70 - 130 Recovery = 192.93%# 207.84%#						
		Target Compounds						
10)		Pentane	0.00	5.10	0	1027933	N.D.	74.949 #
11)		2-Methylpentane	6.25	6.25	41538	1215977	NoCal	80.930 #
12)		Methyl Tert Buty	6.61	6.61	424029	512267	78.594	78.325
13)		2,2,4-Trimethylp	8.63	8.63	182805	1112069	NoCal	93.642 #
14)		Benzene	9.04	9.05	1679864	1662454	70.432	75.929
15)		Toluene	10.96	10.96	1535660	1637603	70.717	79.453
16)		Nonane	12.26	12.26	145221	1486913	NoCal	77.091 #
17)		Ethylbenzene	12.59	12.59	1349322	1555496	73.832	79.586
18)		m,p-Xylene	12.67	12.67	3231661	3217769	146.102	155.353
19)		o-Xylene	13.21	13.21	1373994	1618333	71.862	77.531
21)		Decane	13.85	13.85	172623	1378585	NoCal	76.563 #
22)		1,2,4-Trimethylb	14.87	14.87	1356763	1476242	67.838	73.206
23)		Butylcyclohexane	15.01	15.01	734173	1513654	NoCal	72.550 #
24)		Naphthalene	19.29	19.29	866897	709264	70.087	74.685
25)	H	C9- C10 Aromatic	15.81	15.81	1683783	2961083	69.443	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	10759570	4284571	NoCal	307.575 #
27)	H	C9- C12 Aliphati	19.92	13.00	2609105	4672605	NoCal	233.797 #

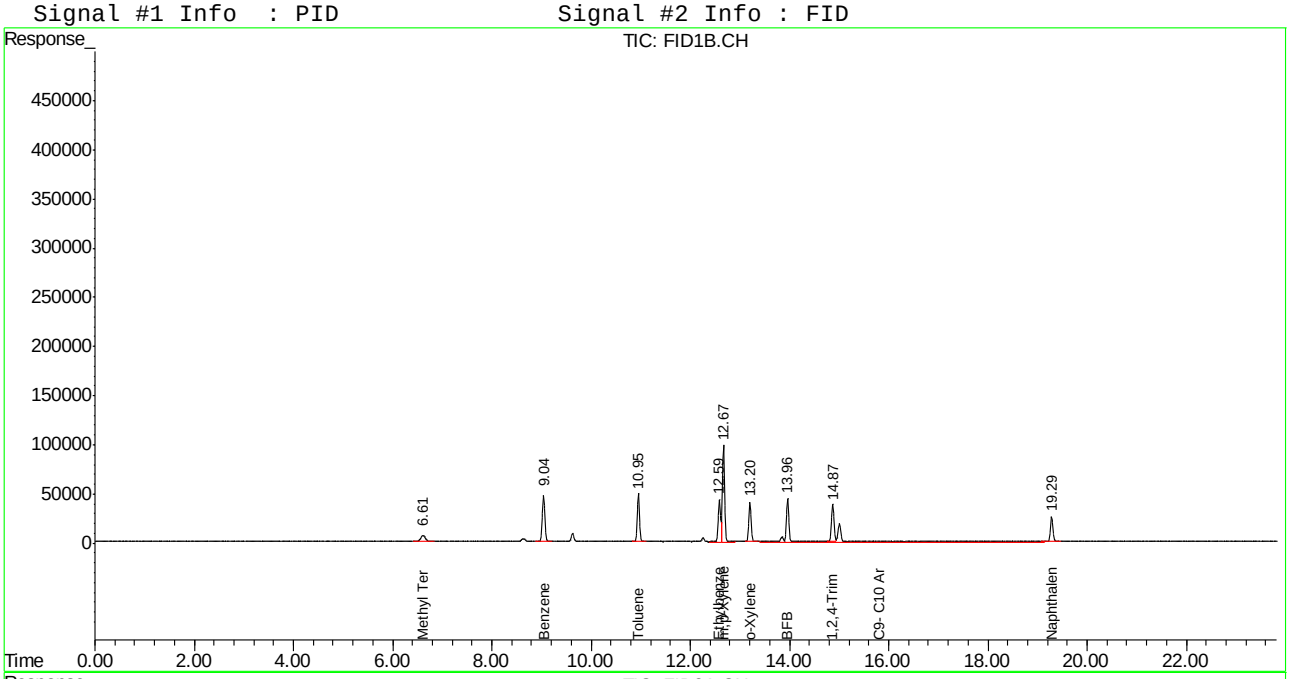
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077864.D VPH011317.M Tue Feb 07 12:55:00 2017

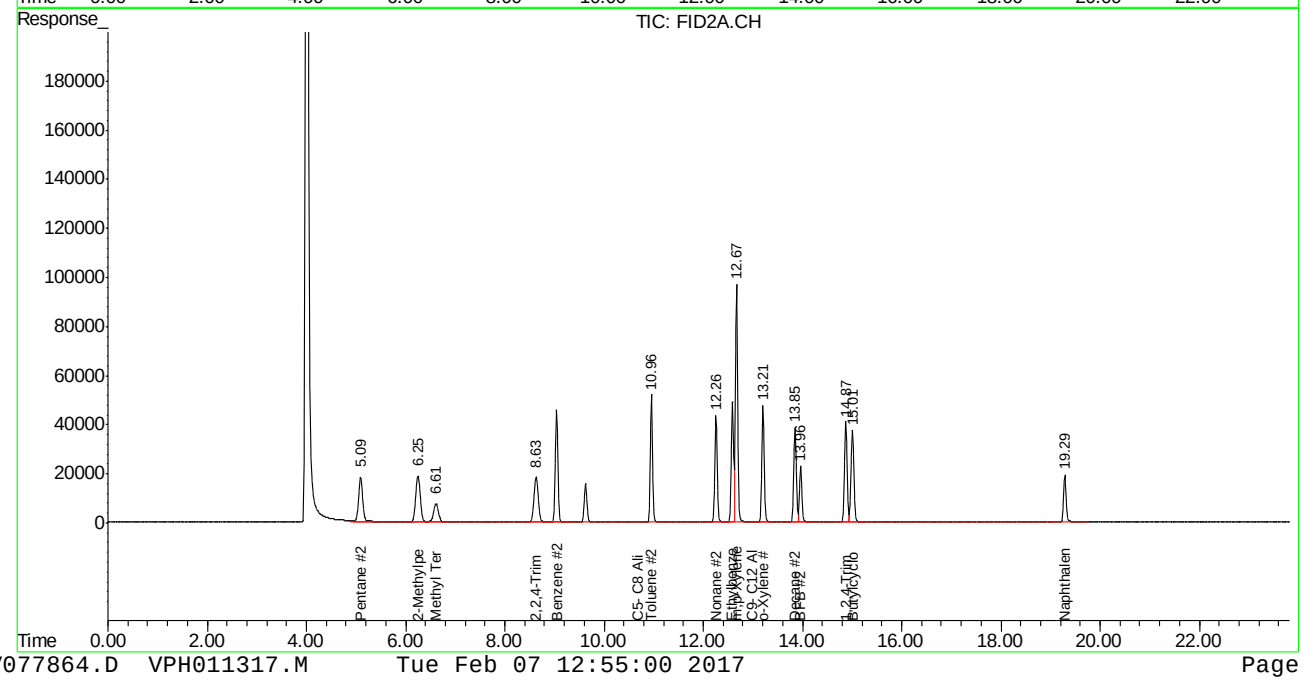
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\020617\UV077864.D\FID1B.CH Vial: 14
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077864.D\FID2A.CH
Acq On : 06-Feb-2017, 23:33:52 Operator: antonioc
Sample : bs Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 7 10:15 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID





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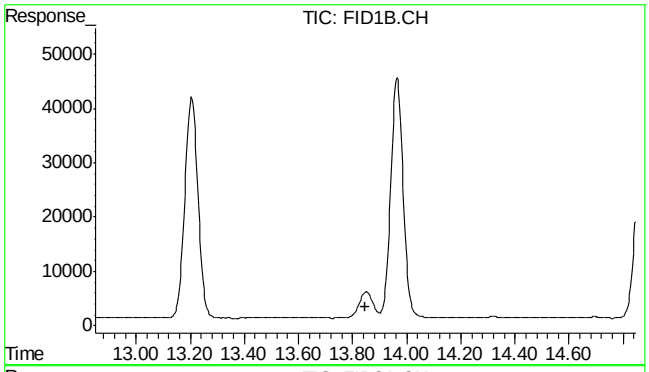
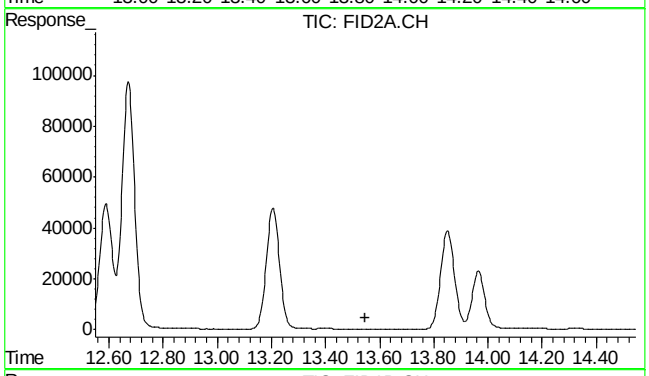


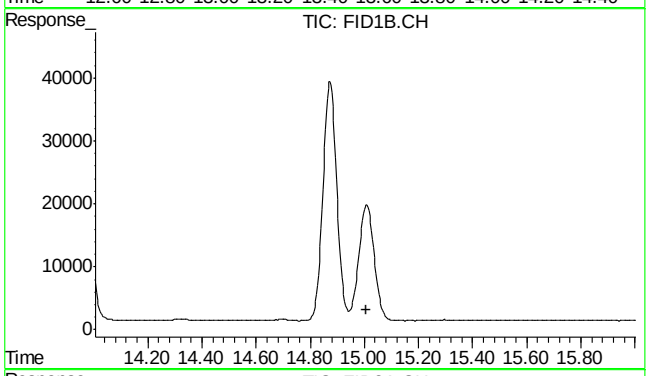
#1 Alkane A

R.T.: 13.849 min
Delta R.T.: 0.002 min
Response: 170367
Conc: N.D.



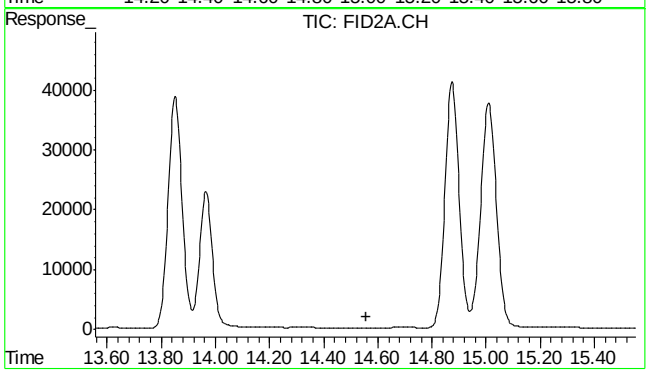
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

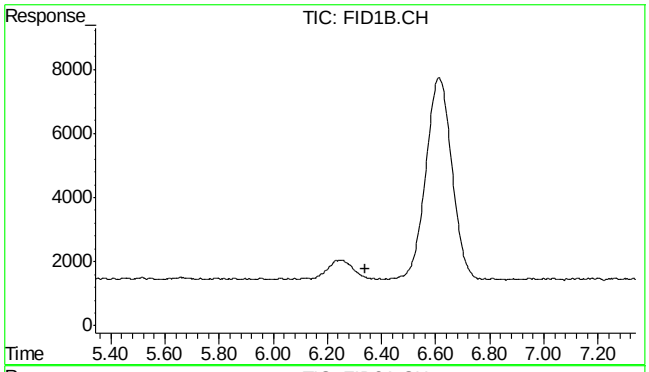
R.T.: 15.008 min
Delta R.T.: 0.002 min
Response: 741747
Conc: N.D.



#2 Alkane B

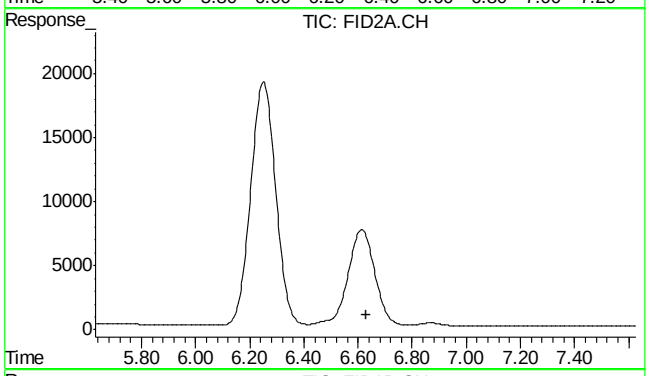
R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

SGS ACCUTEST FA40754



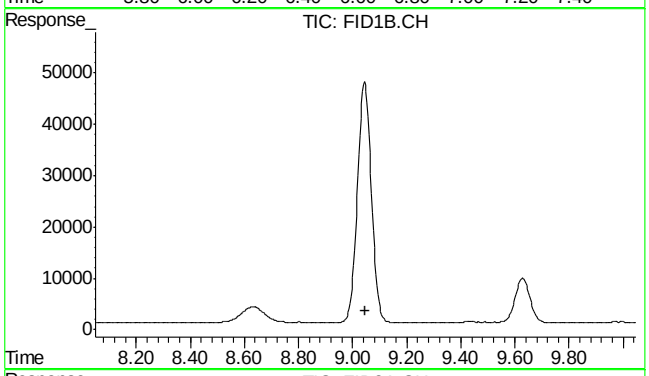
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



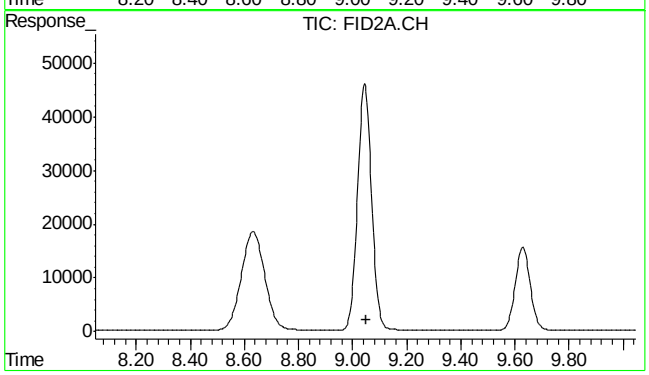
#3 Aromatic A

R.T.: 6.613 min
Delta R.T.: -0.016 min
Response: 519366
Conc: N.D.



#4 Aromatic B

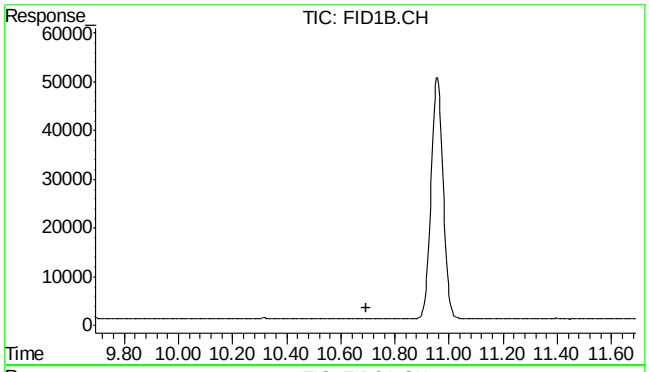
R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

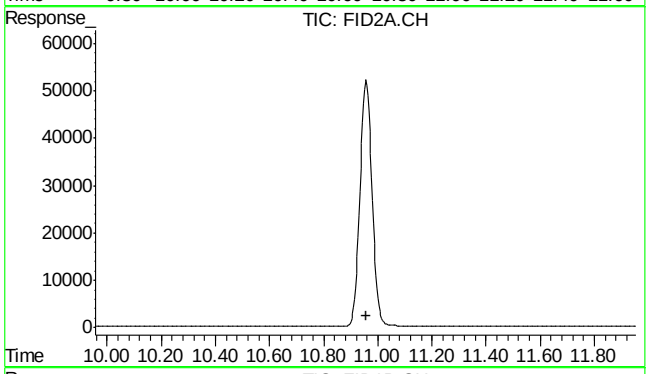
R.T.: 9.044 min
Delta R.T.: -0.005 min
Response: 1660075
Conc: N.D.

SGS ACCUTEST FA40754



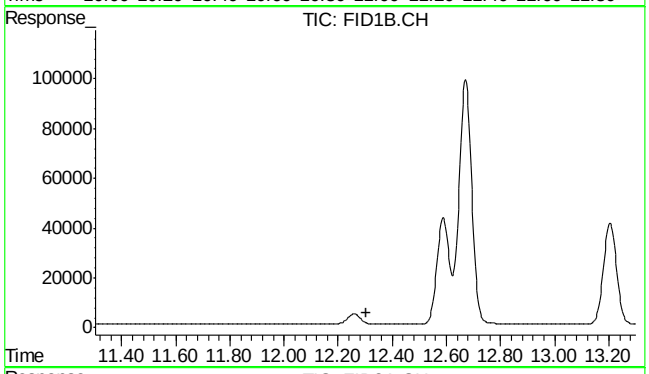
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



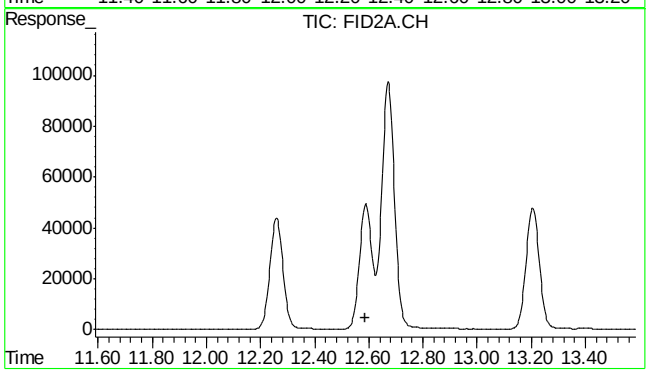
#5 Aromatic C

R.T.: 10.956 min
Delta R.T.: 0.000 min
Response: 1634829
Conc: N.D.



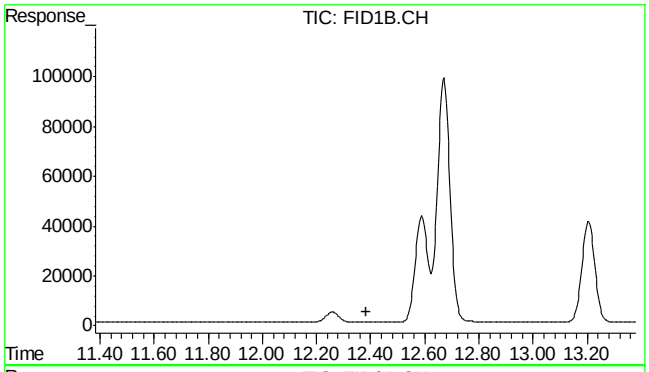
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



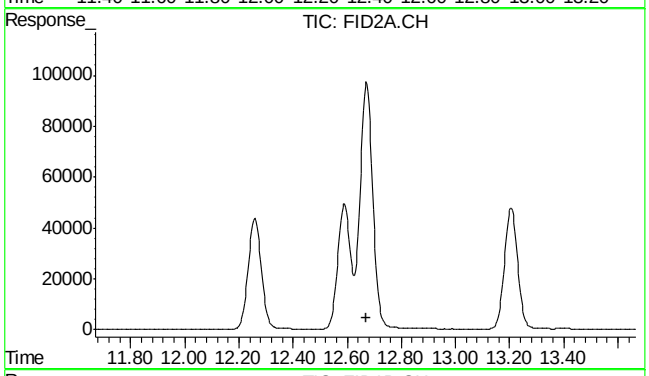
#6 Aromatic D

R.T.: 12.588 min
Delta R.T.: 0.001 min
Response: 1555399
Conc: N.D.



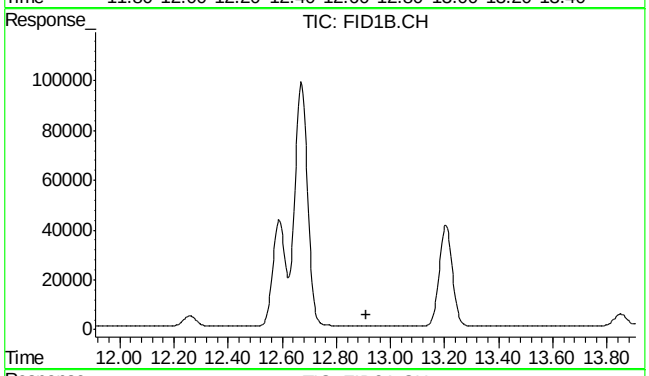
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



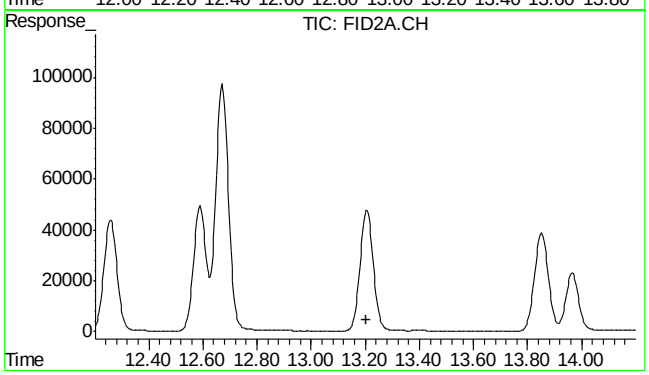
#7 Aromatic E

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 3181683
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

R.T.: 13.205 min
Delta R.T.: 0.002 min
Response: 1637800
Conc: N.D.

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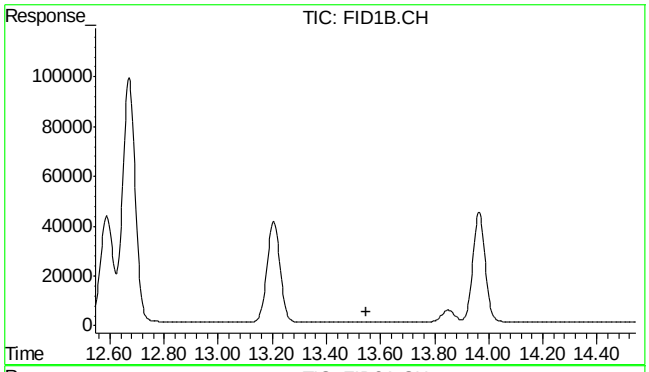
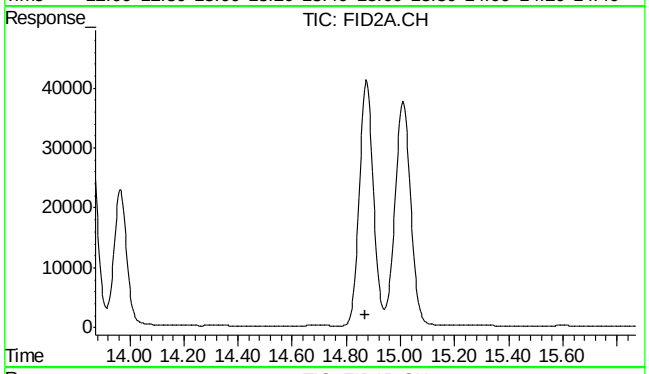


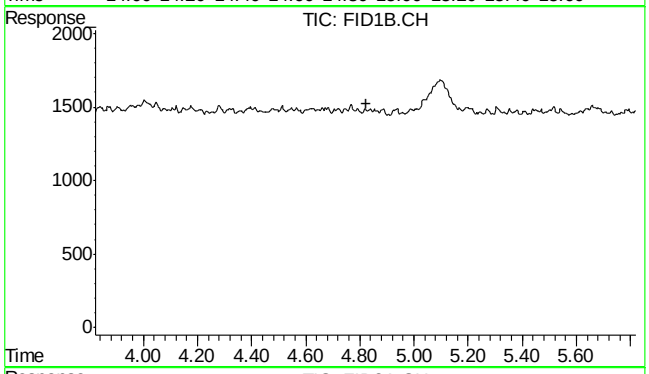
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



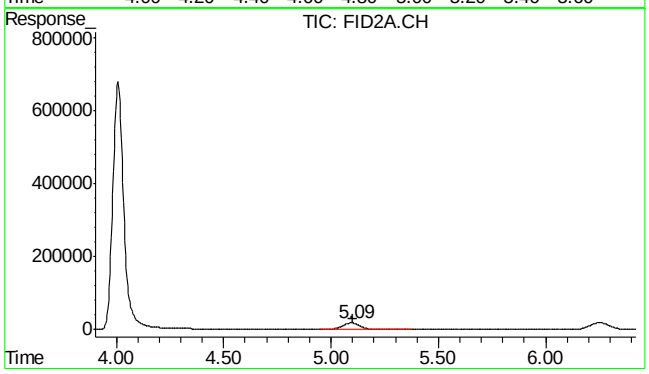
#9 Aromatic G

R.T.: 14.874 min
Delta R.T.: 0.002 min
Response: 1478599
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 5.096 min
Delta R.T.: -0.004 min
Response: 1027933
Conc: 74.95 ug/L

7.3.5

7

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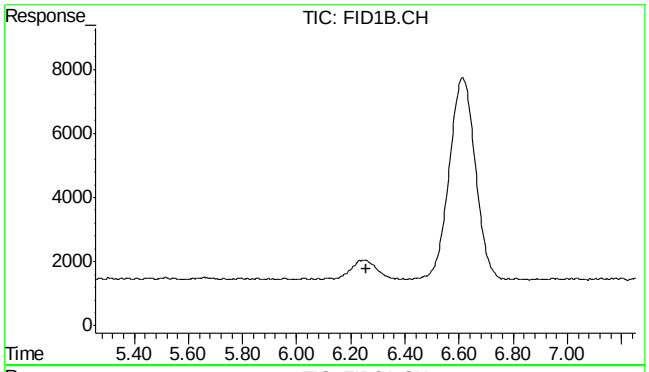
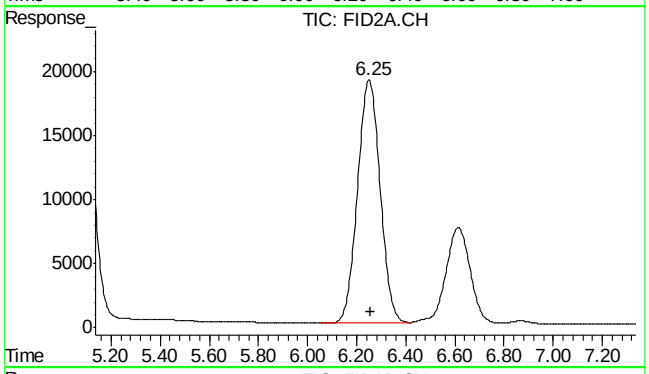


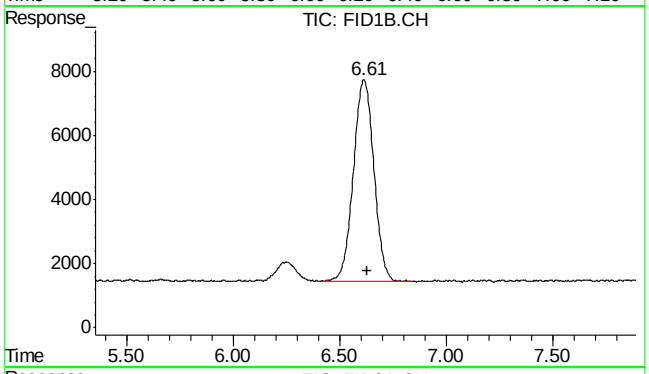
#11 2-Methylpentane

R.T.: 6.254 min
Delta R.T.: -0.002 min
Response: 41538
Conc: N.D.



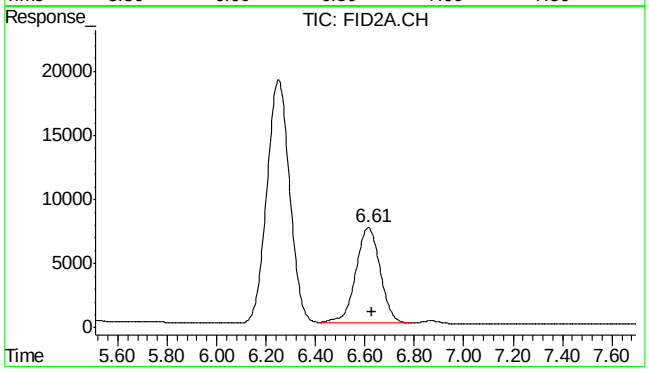
#11 2-Methylpentane

R.T.: 6.251 min
Delta R.T.: -0.005 min
Response: 1215977
Conc: 80.93 ug/L



#12 Methyl Tert Butyl Ether

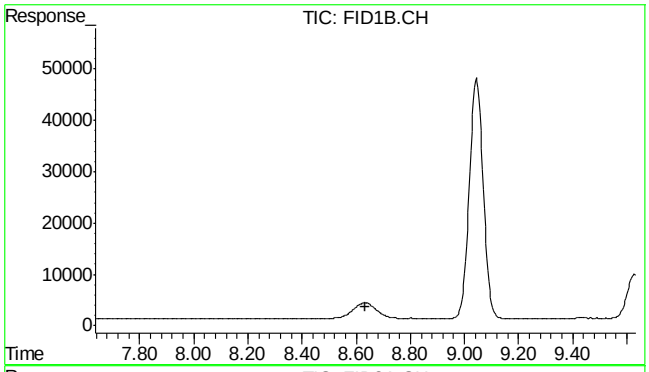
R.T.: 6.614 min
Delta R.T.: -0.015 min
Response: 424029
Conc: 78.59 ug/L



#12 Methyl Tert Butyl Ether

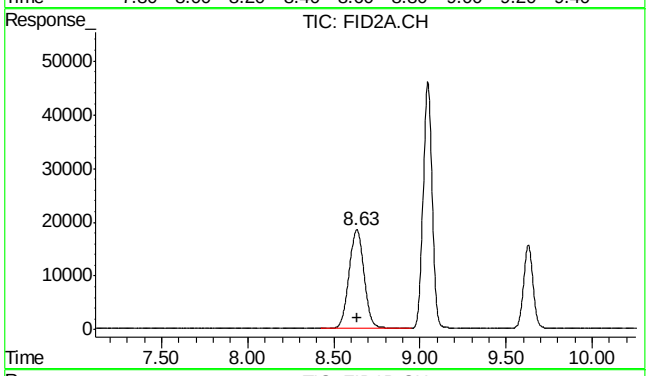
R.T.: 6.615 min
Delta R.T.: -0.013 min
Response: 512267
Conc: 78.33 ug/L

SGS ACCUTEST FA40754



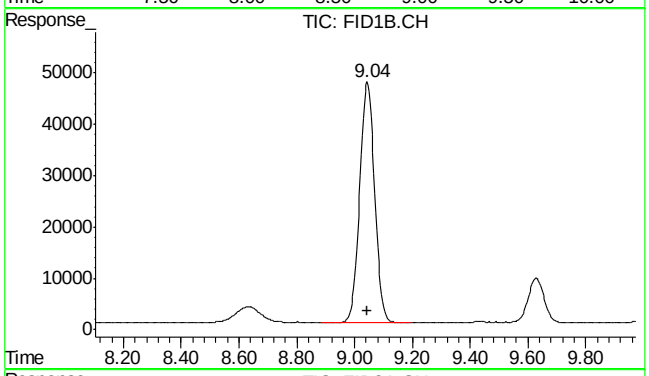
#13 2,2,4-Trimethylpentane

R.T.: 8.633 min
Delta R.T.: 0.000 min
Response: 182805
Conc: N.D.



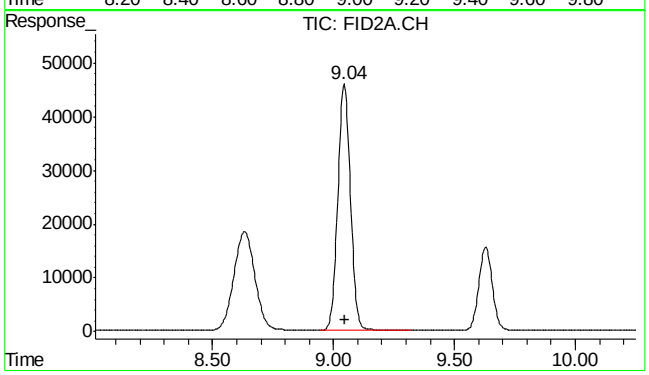
#13 2,2,4-Trimethylpentane

R.T.: 8.633 min
Delta R.T.: 0.000 min
Response: 1112069
Conc: 93.64 ug/L



#14 Benzene

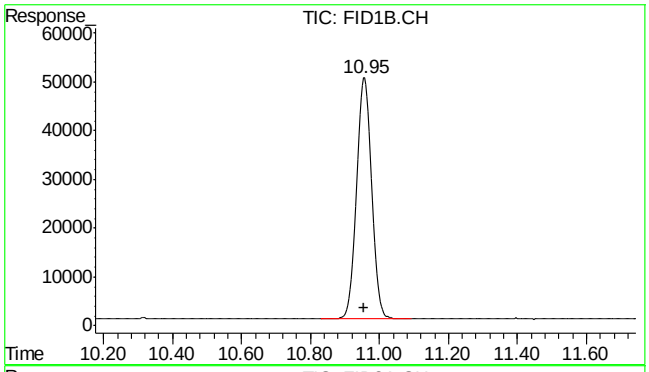
R.T.: 9.045 min
Delta R.T.: -0.001 min
Response: 1679864
Conc: 70.43 ug/L



#14 Benzene

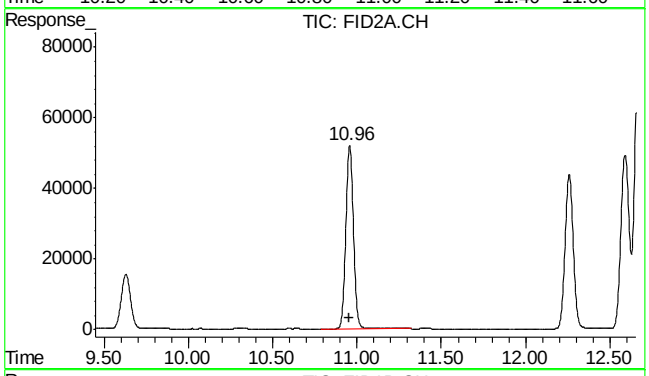
R.T.: 9.045 min
Delta R.T.: 0.000 min
Response: 1662454
Conc: 75.93 ug/L

SGS ACCUTEST FA40754



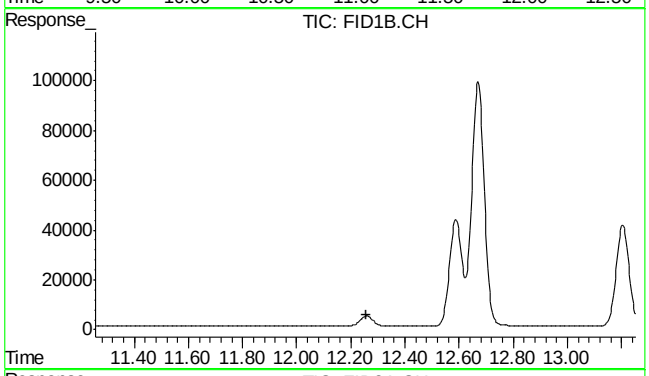
#15 Toluene

R.T.: 10.957 min
Delta R.T.: 0.002 min
Response: 1535660
Conc: 70.72 ug/L



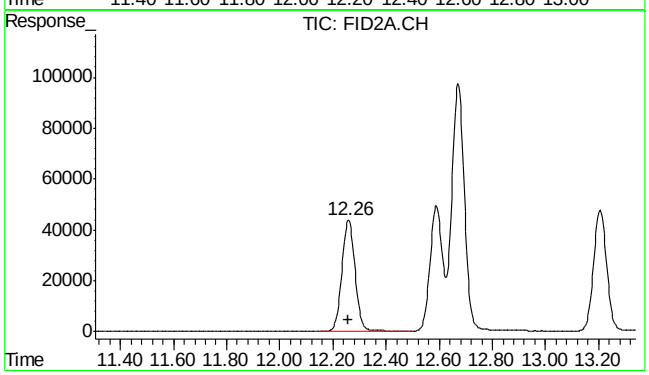
#15 Toluene

R.T.: 10.957 min
Delta R.T.: 0.002 min
Response: 1637603
Conc: 79.45 ug/L



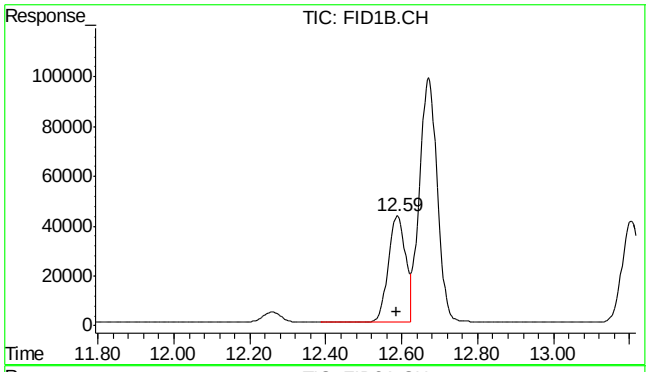
#16 Nonane

R.T.: 12.259 min
Delta R.T.: 0.003 min
Response: 145221
Conc: N.D.



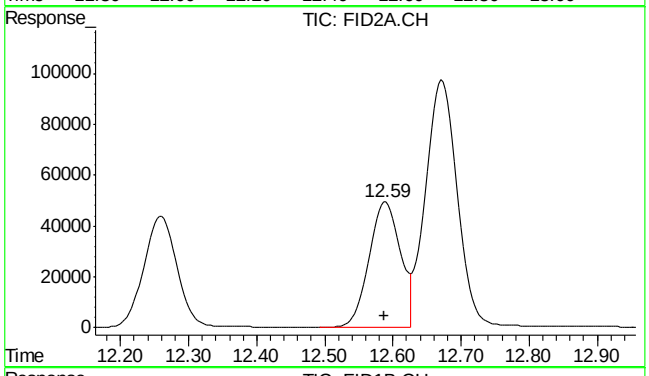
#16 Nonane

R.T.: 12.259 min
Delta R.T.: 0.003 min
Response: 1486913
Conc: 77.09 ug/L



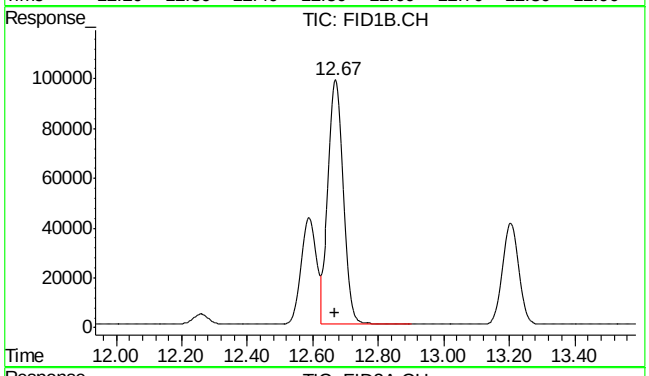
#17 Ethylbenzene

R.T.: 12.589 min
Delta R.T.: 0.003 min
Response: 1349322
Conc: 73.83 ug/L



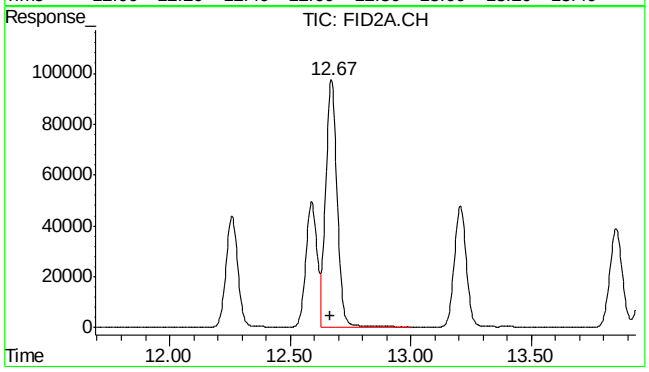
#17 Ethylbenzene

R.T.: 12.590 min
Delta R.T.: 0.003 min
Response: 1555496
Conc: 79.59 ug/L



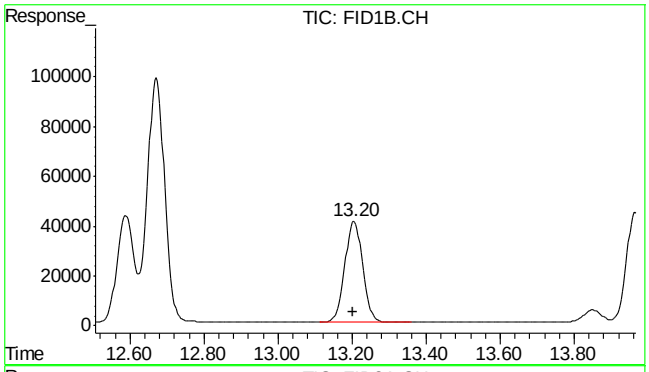
#18 m,p-Xylene

R.T.: 12.671 min
Delta R.T.: 0.003 min
Response: 3231661
Conc: 146.10 ug/L



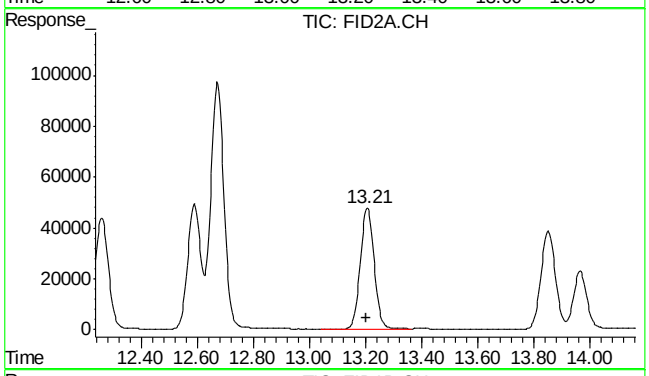
#18 m,p-Xylene

R.T.: 12.672 min
Delta R.T.: 0.003 min
Response: 3217769
Conc: 155.35 ug/L



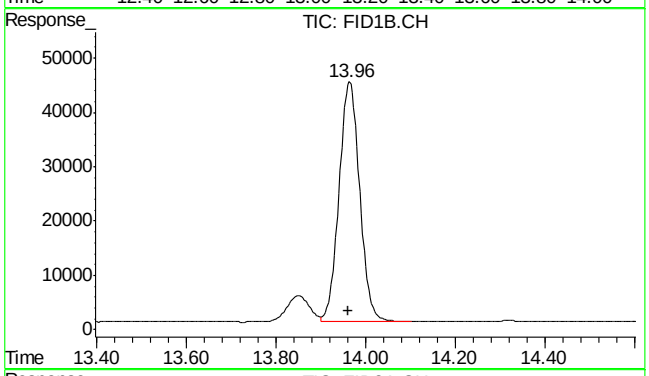
#19 o-Xylene

R.T.: 13.205 min
Delta R.T.: 0.003 min
Response: 1373994
Conc: 71.86 ug/L



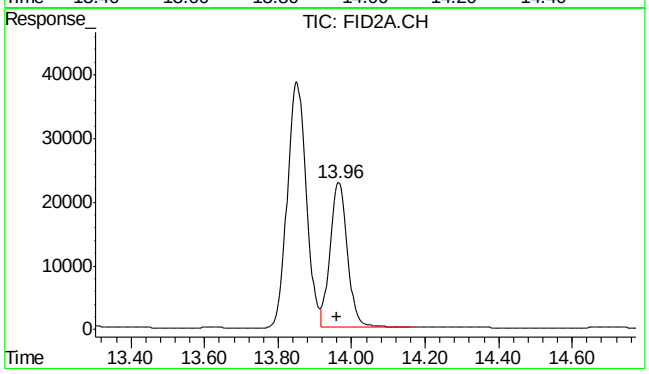
#19 o-Xylene

R.T.: 13.206 min
Delta R.T.: 0.003 min
Response: 1618333
Conc: 77.53 ug/L



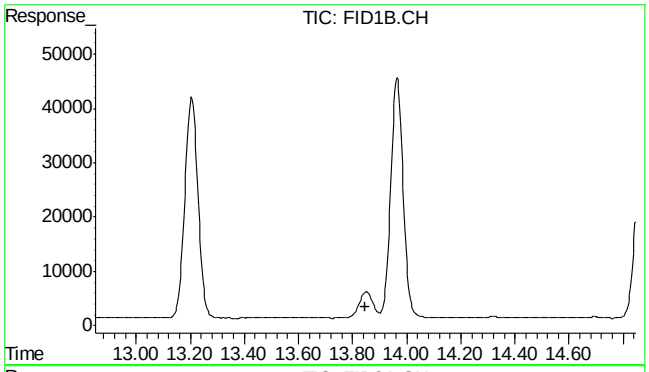
#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.004 min
Response: 1416514
Conc: 77.17 ug/L



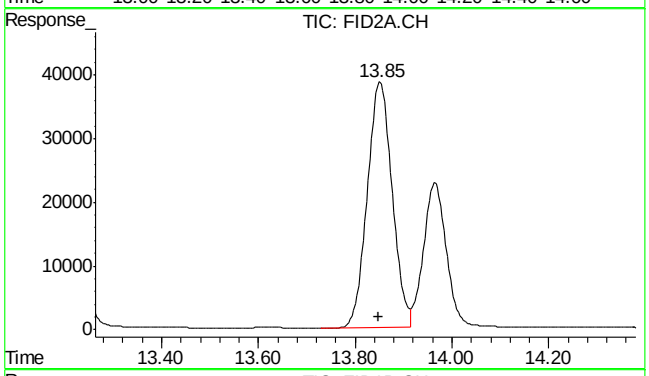
#20 BFB

R.T.: 13.966 min
Delta R.T.: 0.004 min
Response: 753050
Conc: 83.14 ug/L



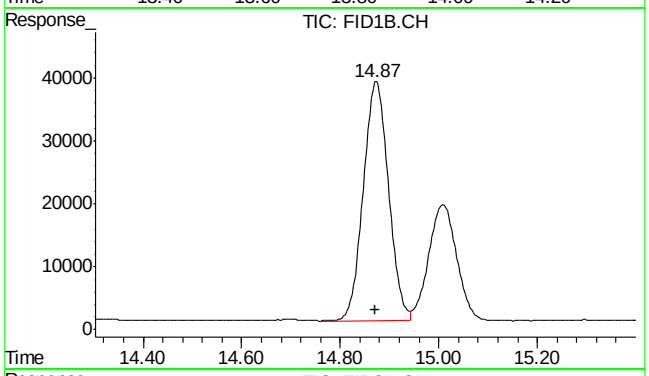
#21 Decane

R.T.: 13.851 min
Delta R.T.: 0.003 min
Response: 172623
Conc: N.D.



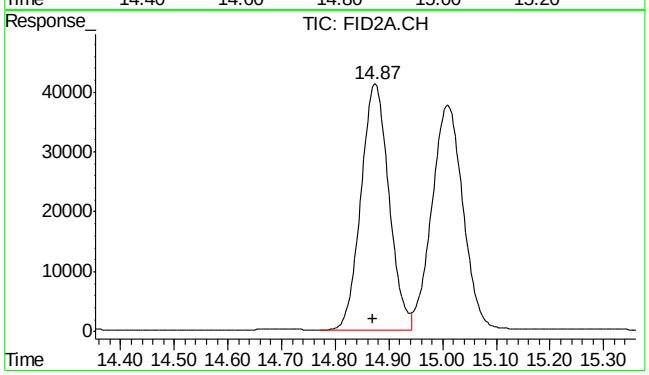
#21 Decane

R.T.: 13.852 min
Delta R.T.: 0.004 min
Response: 1378585
Conc: 76.56 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.874 min
Delta R.T.: 0.004 min
Response: 1356763
Conc: 67.84 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.875 min
Delta R.T.: 0.004 min
Response: 1476242
Conc: 73.21 ug/L

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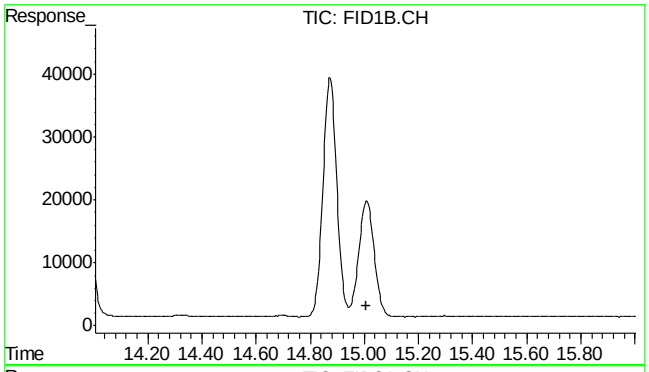
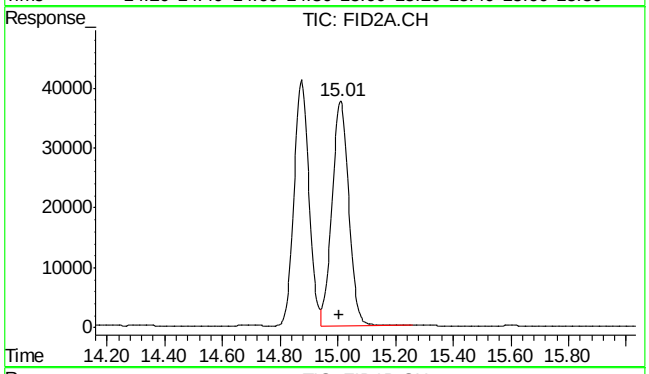


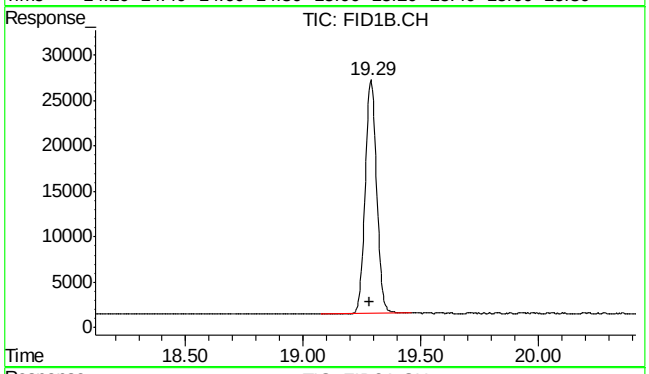
#23 Butylcyclohexane

R.T.: 15.009 min
Delta R.T.: 0.004 min
Response: 734173
Conc: N.D.



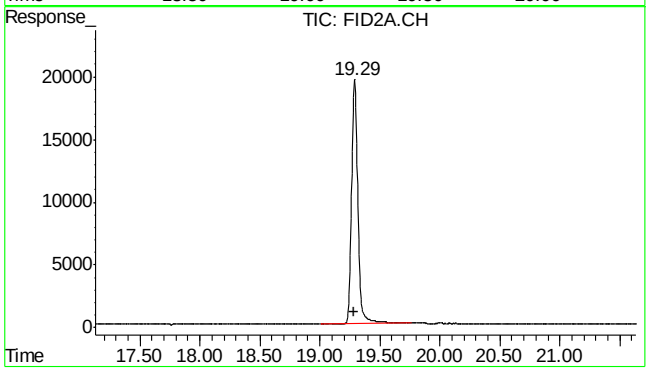
#23 Butylcyclohexane

R.T.: 15.010 min
Delta R.T.: 0.004 min
Response: 1513654
Conc: 72.55 ug/L



#24 Naphthalene

R.T.: 19.288 min
Delta R.T.: 0.004 min
Response: 866897
Conc: 70.09 ug/L



#24 Naphthalene

R.T.: 19.290 min
Delta R.T.: 0.004 min
Response: 709264
Conc: 74.69 ug/L

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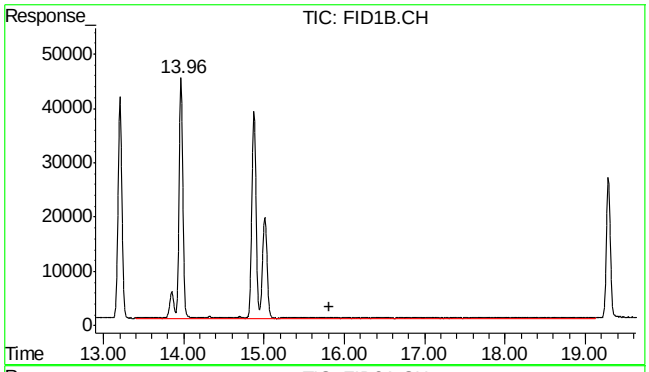
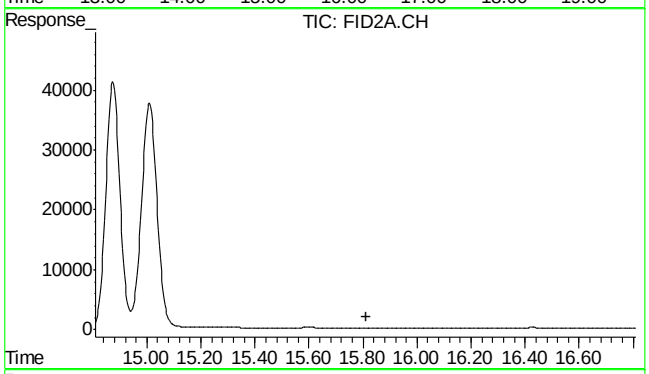


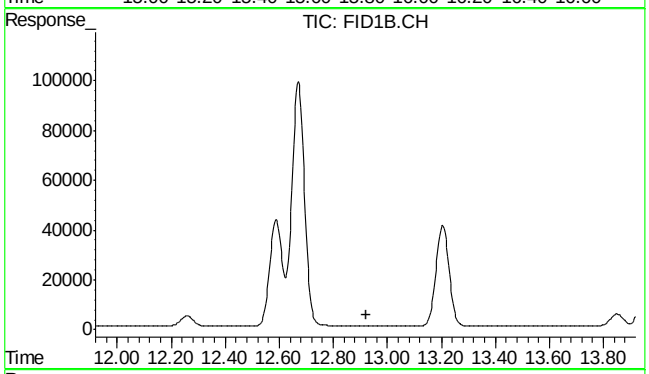
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 1683783
Conc: 69.44 ug/L m



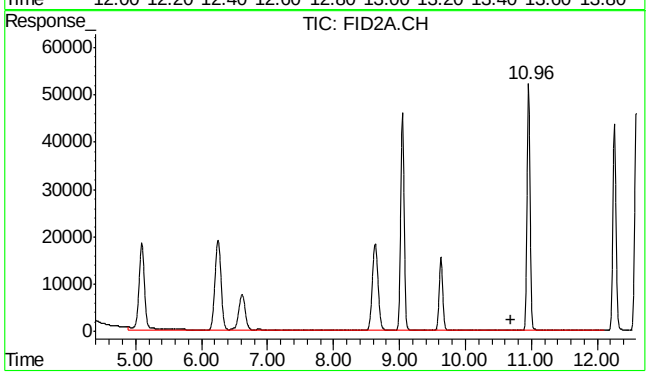
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2961083
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 10759570
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 4284571
Conc: 307.58 ug/L m

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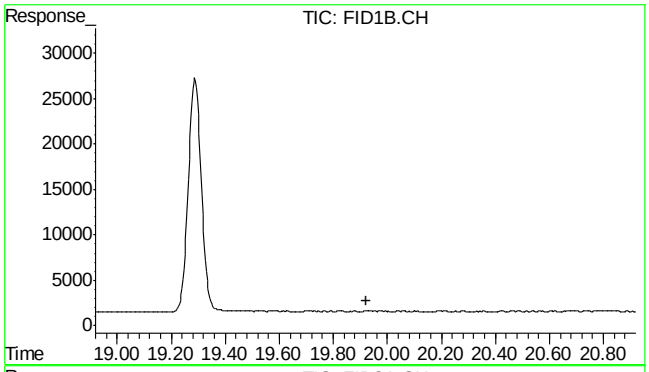
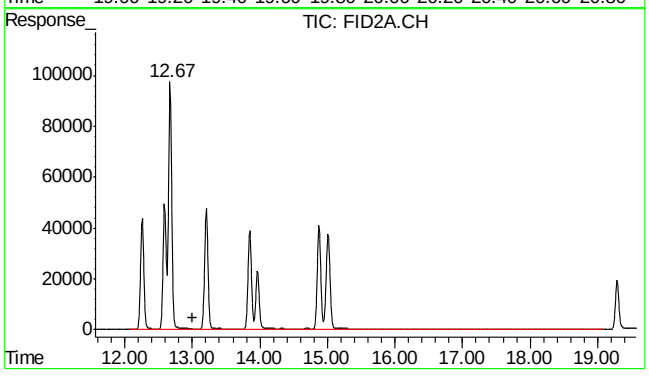


#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 2609105
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 4672605
Conc: 233.80 ug/L m

7.3.5

7

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Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\020617\UV077865.D\FID1B.CH Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077865.D\FID2A.CH
Acq On : 07-Feb-2017, 00:04:41 Operator: antonioc
Sample : bsd Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 07 10:02:14 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	175848	0	NoCal m	N.D.
2)	S	Alkane B	15.01f	0.00	765973	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.62f	0	499268	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.05f	0	1706370	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.96f	0	1685249	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	1664510	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	3328421	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.21f	0	1691591	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	1569615	N.D.	NoCal m
20)	S	BFB	13.97	13.97	1456527	782536	79.351	86.392
		Spiked Amount 40.000 Range 70 - 130 Recovery = 198.38%# 215.98%#						
		Target Compounds						
10)		Pentane	0.00	5.10	0	1051139	N.D.	76.641 #
11)		2-Methylpentane	6.26	6.26	49076	1243770	NoCal	82.780 #
12)		Methyl Tert Buty	6.62	6.62	413449	494565	76.633	75.619
13)		2,2,4-Trimethylp	8.63	8.64	183625	1104501	NoCal	92.885 #
14)		Benzene	9.05	9.05	1739774	1707065	72.944	77.967
15)		Toluene	10.96	10.96	1588750	1684665	73.161	81.737
16)		Nonane	12.26	12.26	142207	1542855	NoCal	79.991 #
17)		Ethylbenzene	12.59	12.59	1386792	1608694	75.882	82.308
18)		m,p-Xylene	12.67	12.67	3327674	3339736	150.443	161.242
19)		o-Xylene	13.21	13.21	1411702	1678378	73.834	80.407
21)		Decane	13.85	13.85	179187	1439814	NoCal	79.964 #
22)		1,2,4-Trimethylb	14.87	14.88	1418391	1551838	70.919	76.955
23)		Butylcyclohexane	15.01	15.01	757044	1571119	NoCal	75.304 #
24)		Naphthalene	19.29	19.29	908902	746806	73.483	78.639
25)	H	C9- C10 Aromatic	15.81	15.81	1739449	3056035	72.238	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	10931514	4243816	NoCal	304.266 #
27)	H	C9- C12 Aliphati	19.92	13.00	2767375	4705793	NoCal	235.554 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077865.D VPH011317.M Tue Feb 07 12:55:03 2017

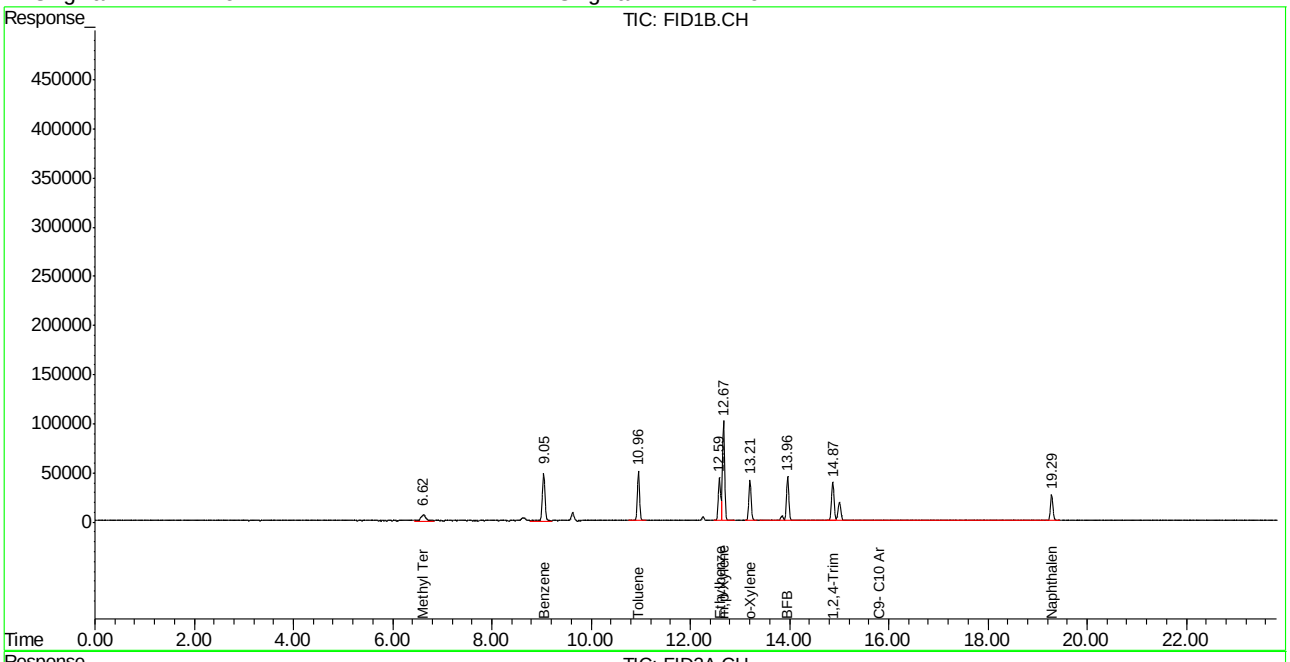
SGS ACCUTEST FA40754

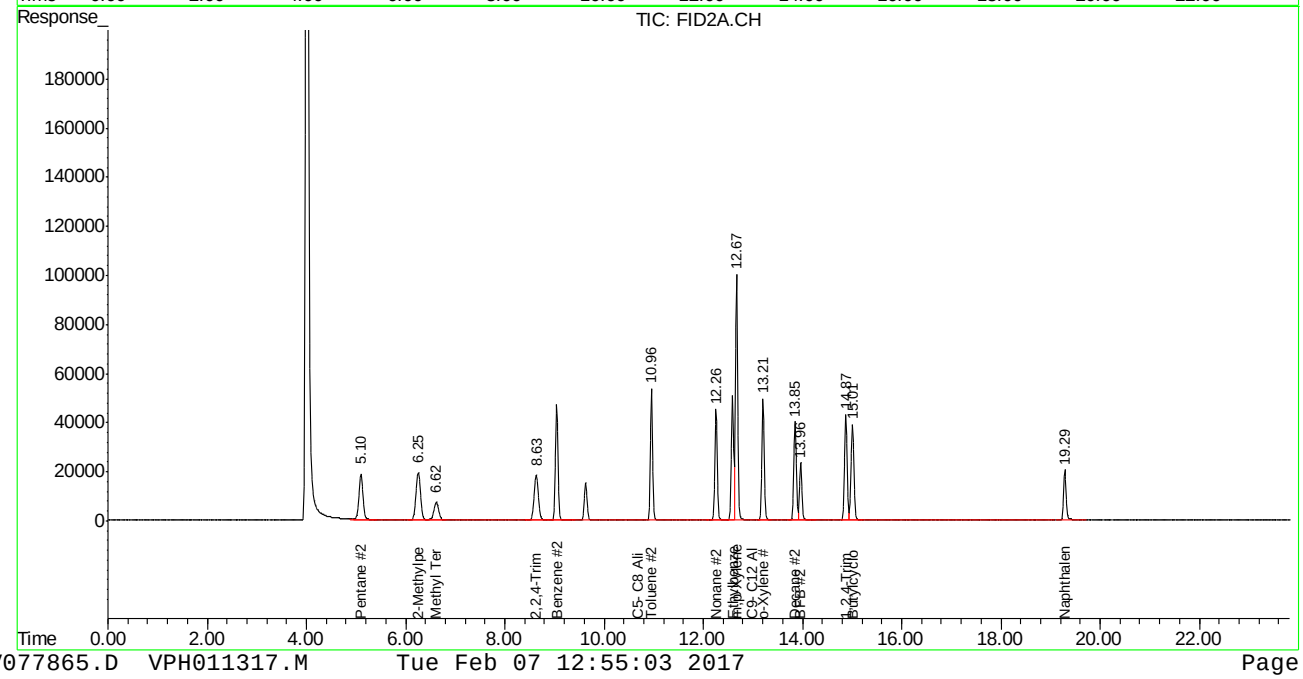
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\020617\UV077865.D\FID1B.CH Vial: 15
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077865.D\FID2A.CH
Acq On : 07-Feb-2017, 00:04:41 Operator: antonioc
Sample : bsd Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 7 10:18 2017 Quant Results File: VPH011317.RES

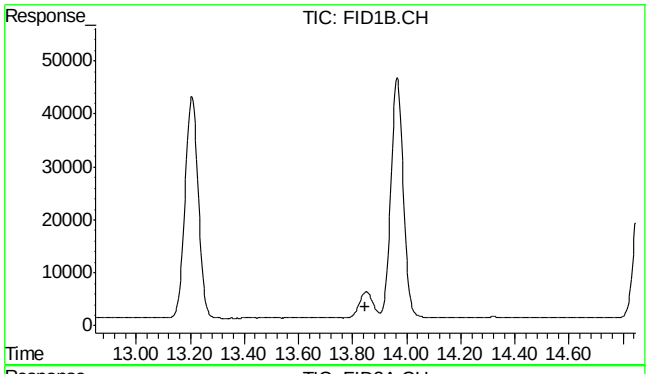
Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID



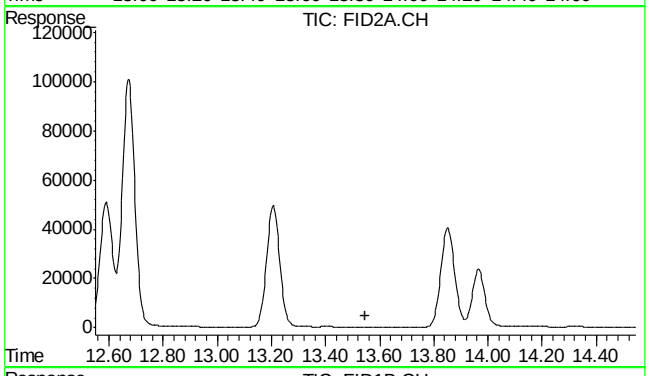


UV077865.D VPH011317.M Tue Feb 07 12:55:03 2017 Page 2



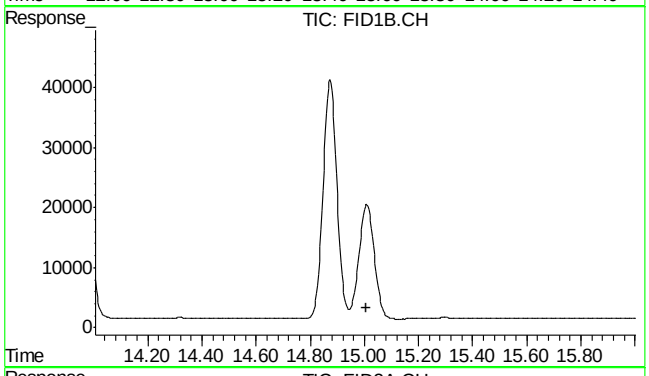
#1 Alkane A

R.T.: 13.850 min
Delta R.T.: 0.003 min
Response: 175848
Conc: N.D.



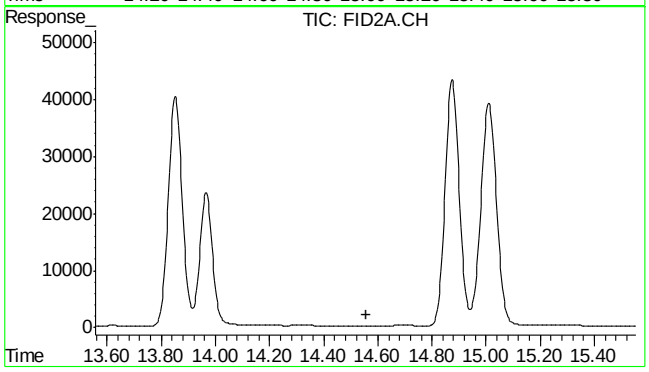
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.008 min
Delta R.T.: 0.002 min
Response: 765973
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.3.6

7

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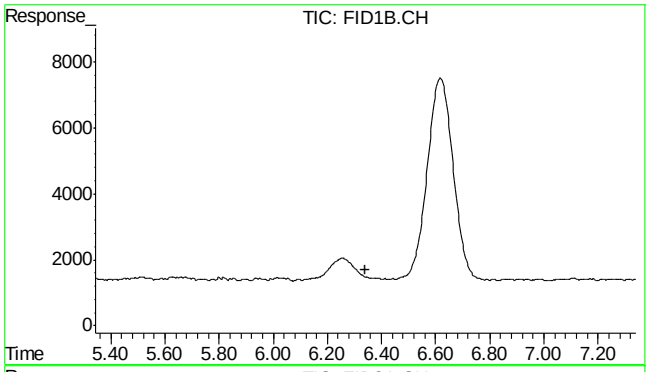
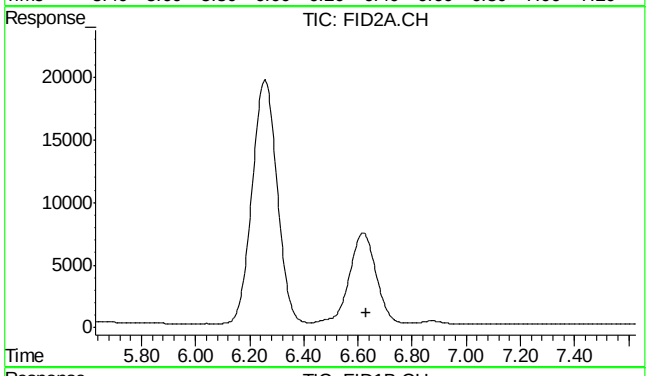


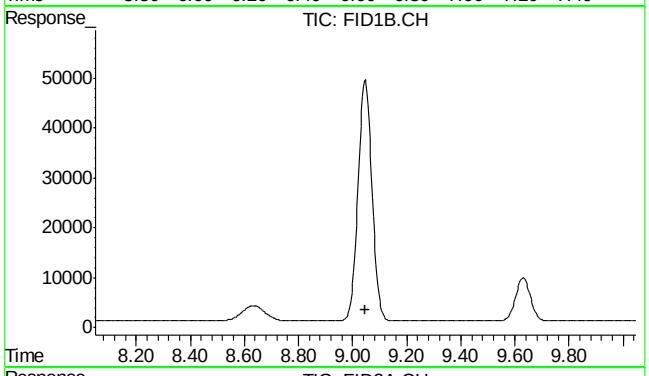
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



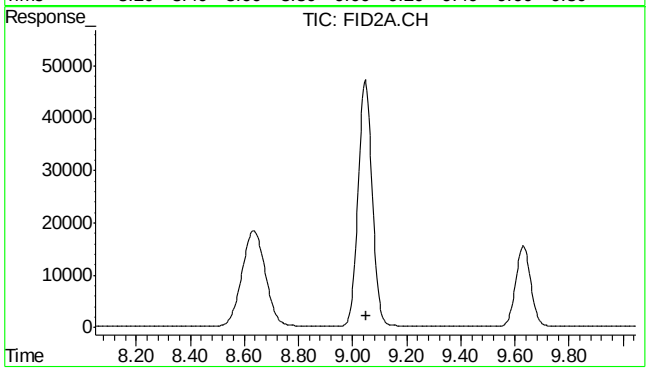
#3 Aromatic A

R.T.: 6.618 min
Delta R.T.: -0.011 min
Response: 499268
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



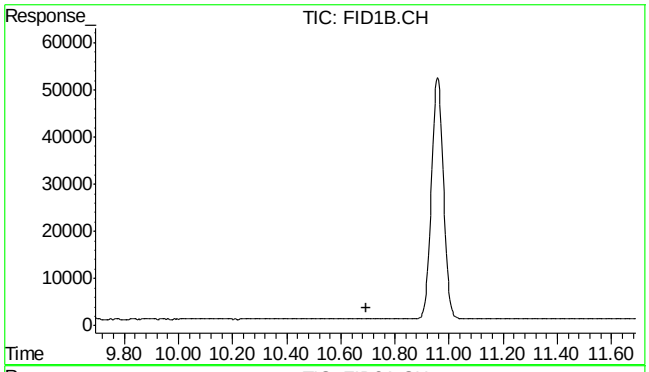
#4 Aromatic B

R.T.: 9.046 min
Delta R.T.: -0.002 min
Response: 1706370
Conc: N.D.

7.3.6

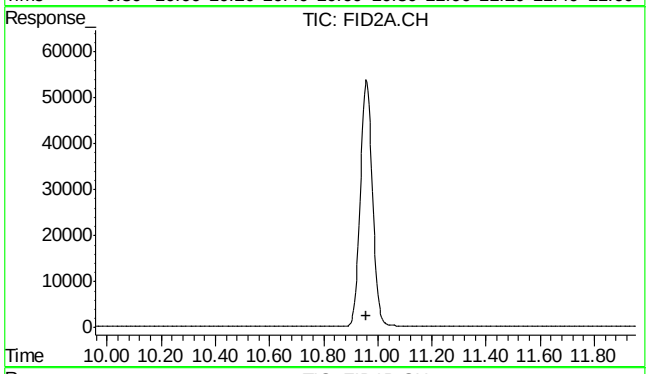
7

SGS ACCUTEST FA40754



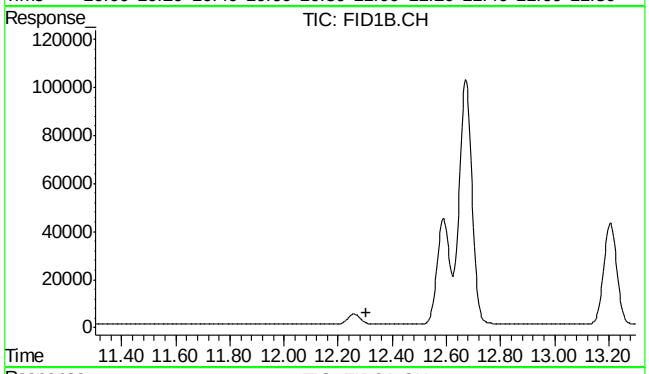
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



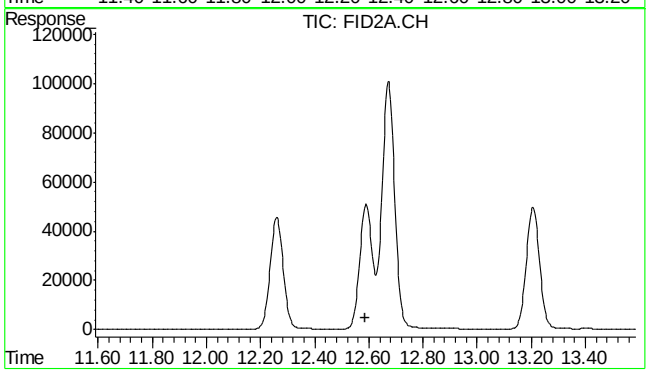
#5 Aromatic C

R.T.: 10.957 min
Delta R.T.: 0.002 min
Response: 1685249
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



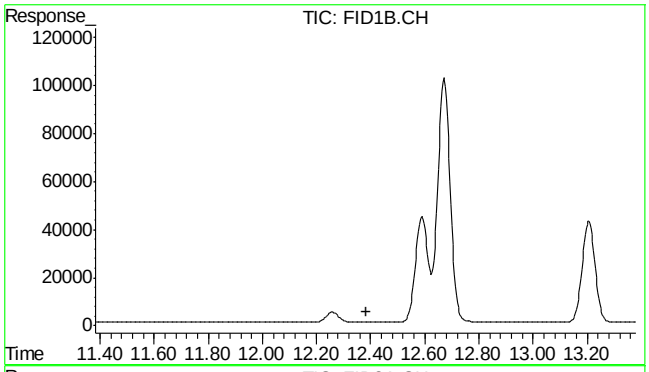
#6 Aromatic D

R.T.: 12.589 min
Delta R.T.: 0.002 min
Response: 1664510
Conc: N.D.

7.3.6

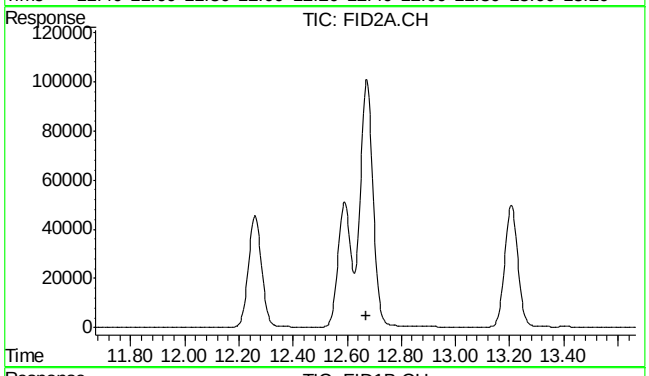
7

SGS ACCUTEST FA40754



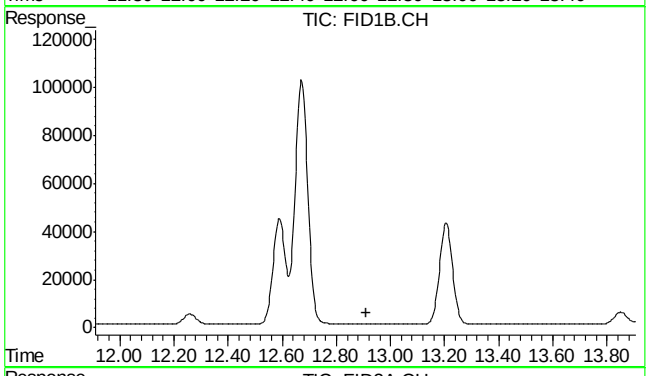
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



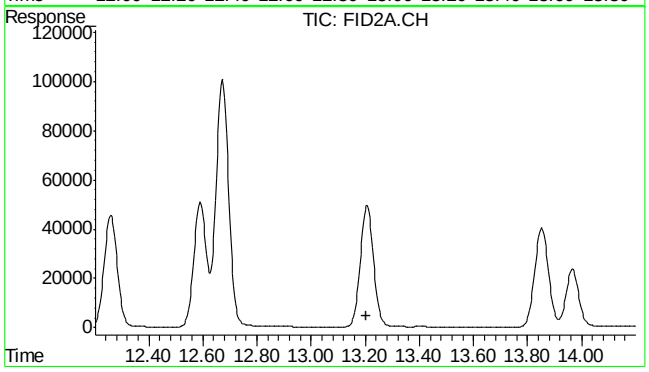
#7 Aromatic E

R.T.: 12.672 min
Delta R.T.: 0.003 min
Response: 3328421
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



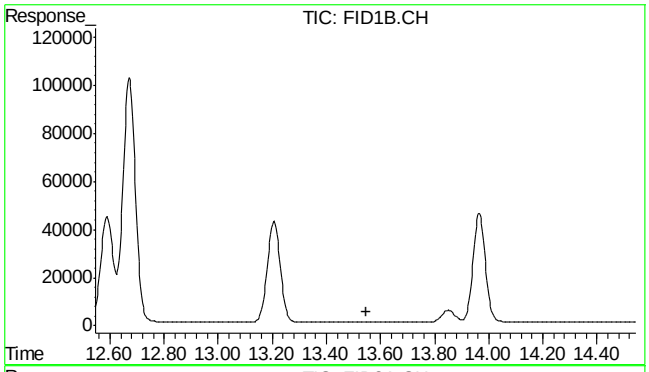
#8 Aromatic F

R.T.: 13.206 min
Delta R.T.: 0.003 min
Response: 1691591
Conc: N.D.

7.3.6

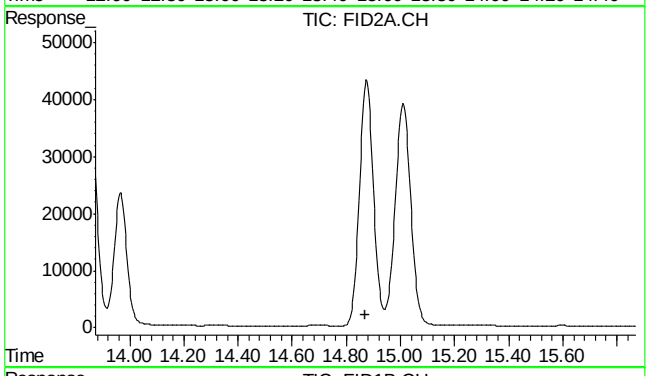
7

SGS ACCUTEST FA40754



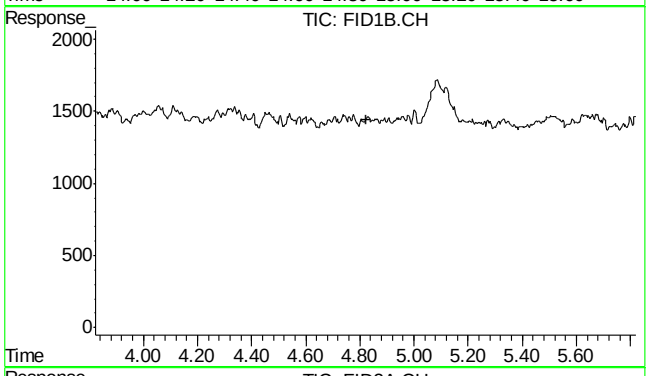
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



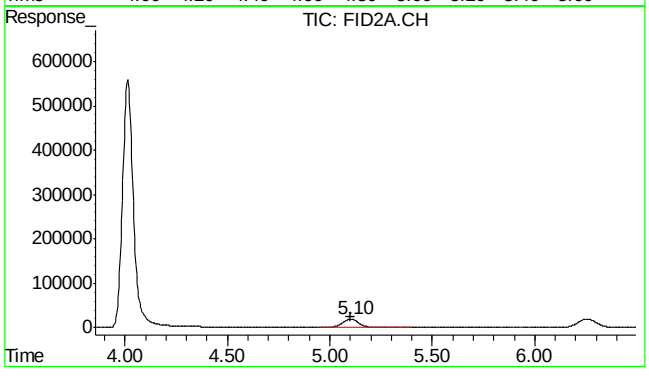
#9 Aromatic G

R.T.: 14.874 min
Delta R.T.: 0.003 min
Response: 1569615
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



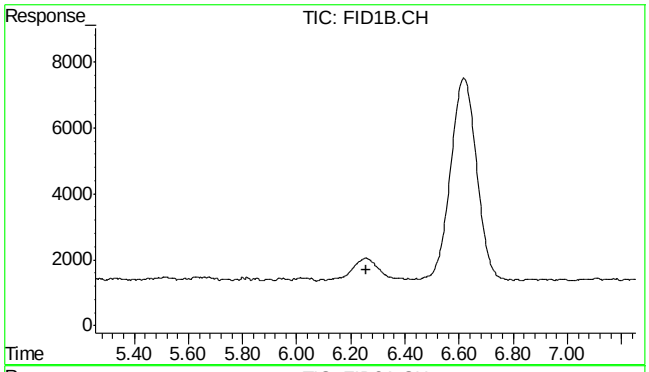
#10 Pentane

R.T.: 5.102 min
Delta R.T.: 0.002 min
Response: 1051139
Conc: 76.64 ug/L

7.3.6

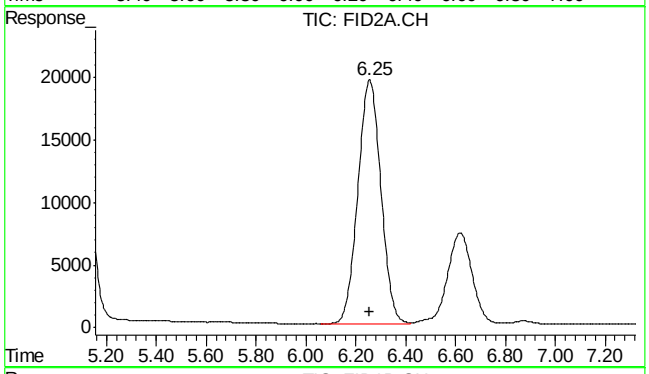
7

SGS ACCUTEST FA40754



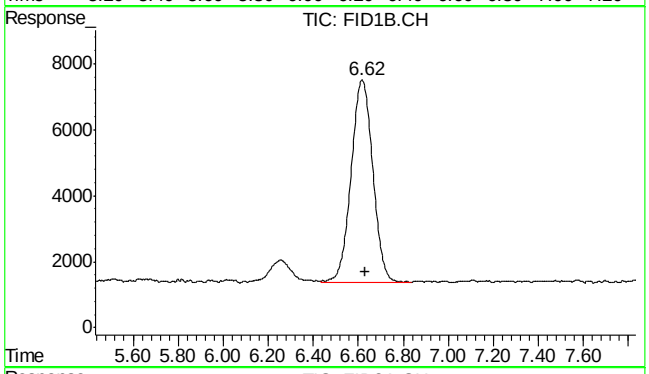
#11 2-Methylpentane

R.T.: 6.256 min
Delta R.T.: 0.000 min
Response: 49076
Conc: N.D.



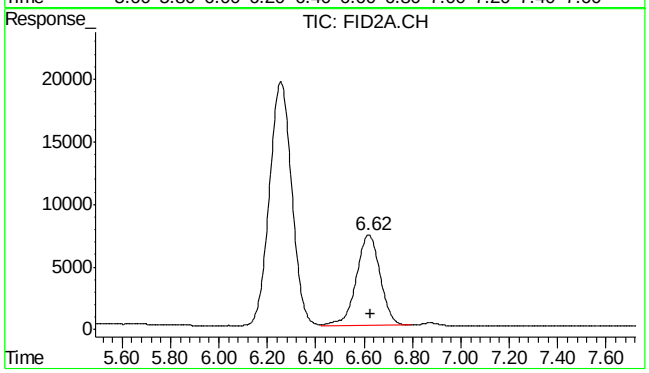
#11 2-Methylpentane

R.T.: 6.256 min
Delta R.T.: 0.000 min
Response: 1243770
Conc: 82.78 ug/L



#12 Methyl Tert Butyl Ether

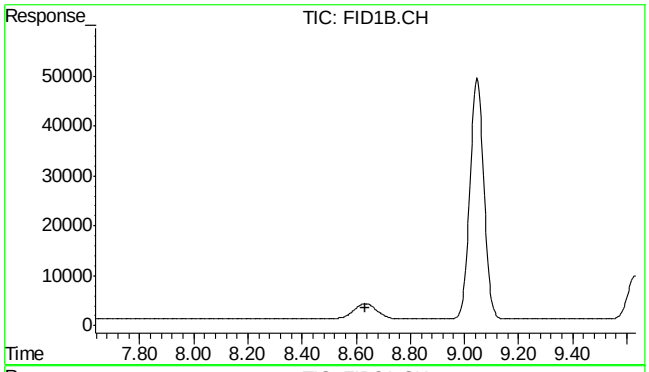
R.T.: 6.618 min
Delta R.T.: -0.011 min
Response: 413449
Conc: 76.63 ug/L



#12 Methyl Tert Butyl Ether

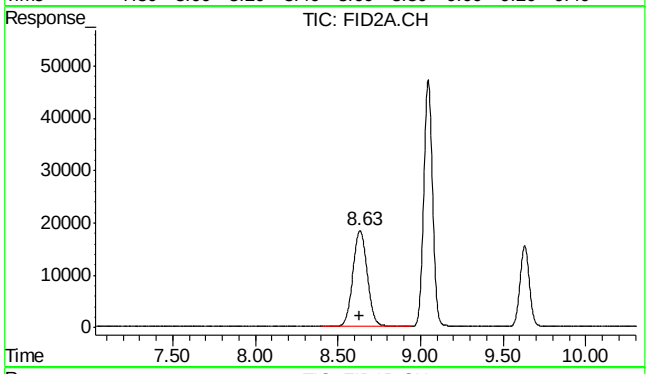
R.T.: 6.619 min
Delta R.T.: -0.009 min
Response: 494565
Conc: 75.62 ug/L

SGS ACCUTEST FA40754



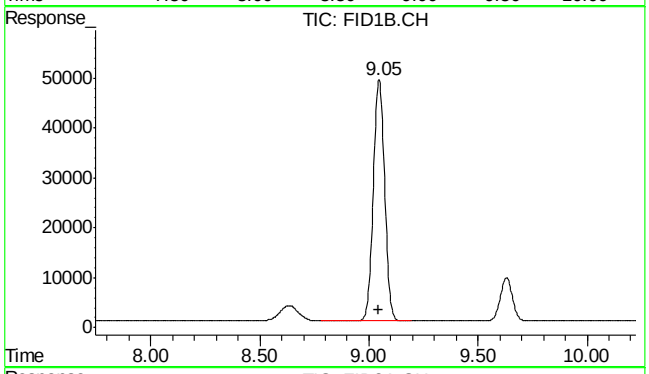
#13 2,2,4-Trimethylpentane

R.T.: 8.635 min
Delta R.T.: 0.000 min
Response: 183625
Conc: N.D.



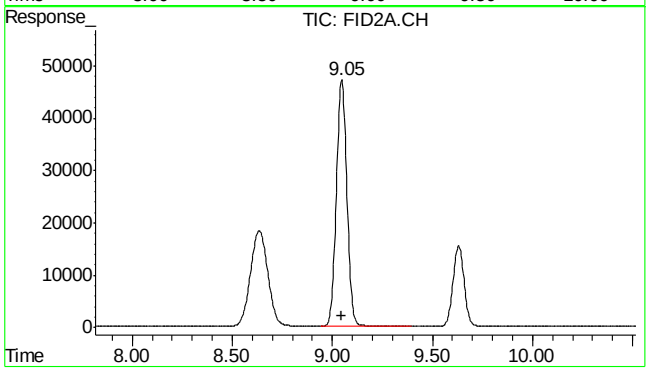
#13 2,2,4-Trimethylpentane

R.T.: 8.635 min
Delta R.T.: 0.001 min
Response: 1104501
Conc: 92.89 ug/L



#14 Benzene

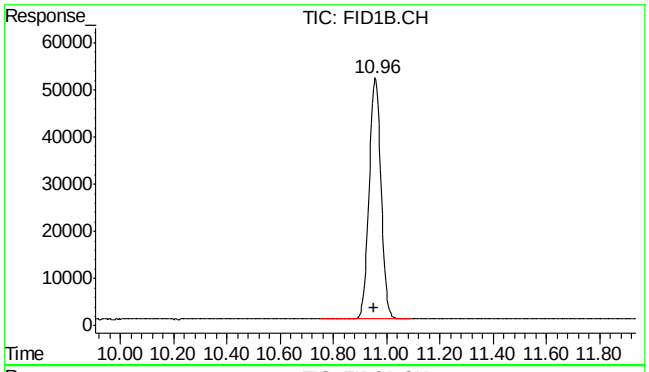
R.T.: 9.047 min
Delta R.T.: 0.001 min
Response: 1739774
Conc: 72.94 ug/L



#14 Benzene

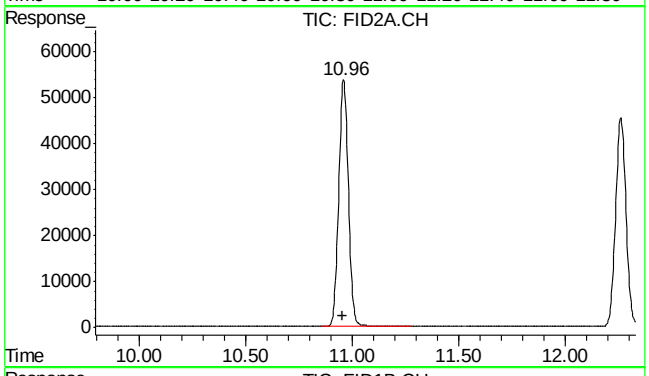
R.T.: 9.048 min
Delta R.T.: 0.002 min
Response: 1707065
Conc: 77.97 ug/L

SGS ACCUTEST FA40754



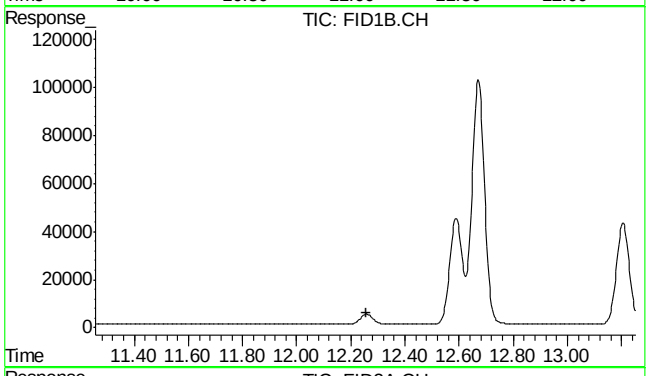
#15 Toluene

R.T.: 10.958 min
Delta R.T.: 0.003 min
Response: 1588750
Conc: 73.16 ug/L



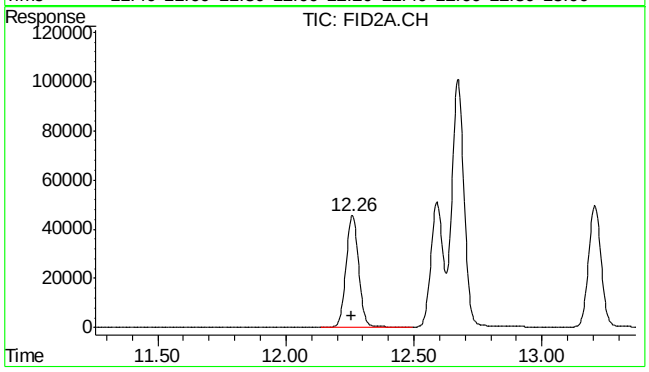
#15 Toluene

R.T.: 10.959 min
Delta R.T.: 0.004 min
Response: 1684665
Conc: 81.74 ug/L



#16 Nonane

R.T.: 12.259 min
Delta R.T.: 0.004 min
Response: 142207
Conc: N.D.



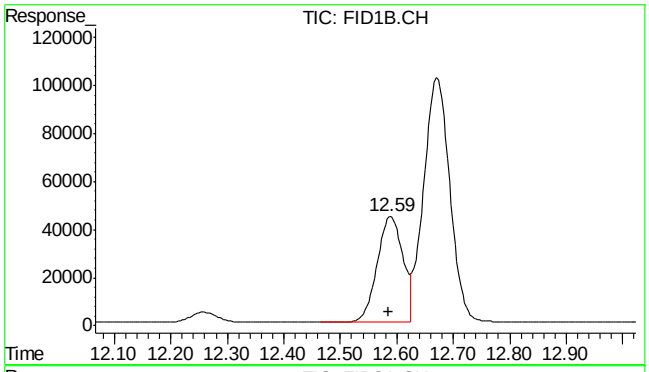
#16 Nonane

R.T.: 12.260 min
Delta R.T.: 0.004 min
Response: 1542855
Conc: 79.99 ug/L

7.3.6

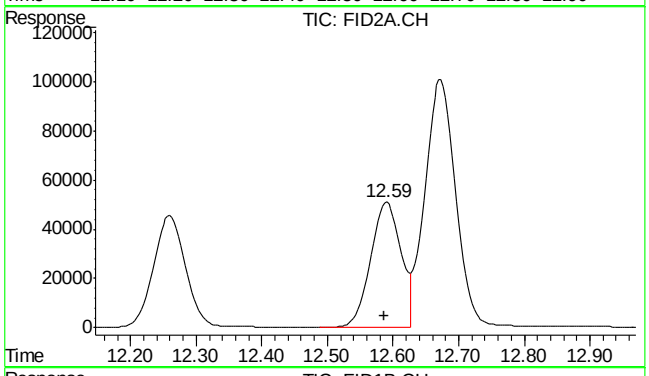
7

SGS ACCUTEST FA40754



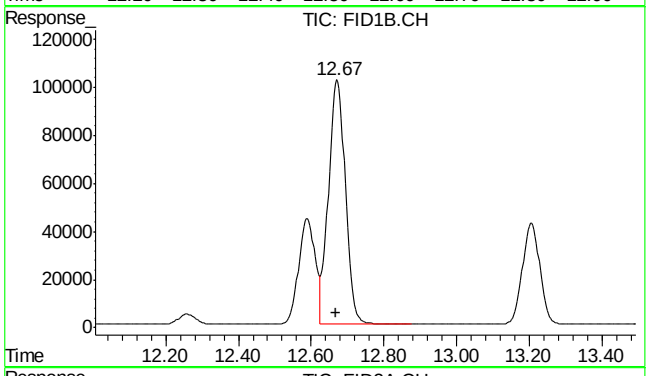
#17 Ethylbenzene

R.T.: 12.590 min
Delta R.T.: 0.004 min
Response: 1386792
Conc: 75.88 ug/L



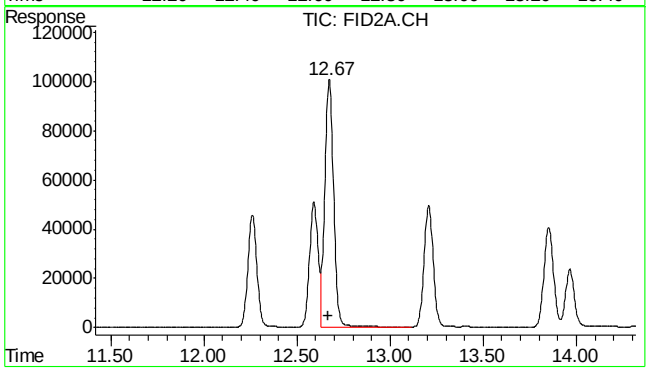
#17 Ethylbenzene

R.T.: 12.591 min
Delta R.T.: 0.004 min
Response: 1608694
Conc: 82.31 ug/L



#18 m,p-Xylene

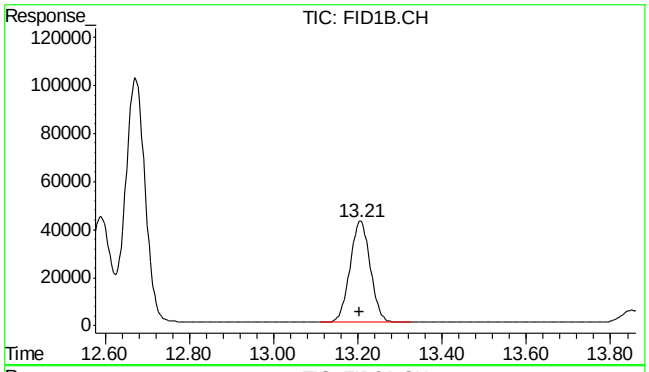
R.T.: 12.672 min
Delta R.T.: 0.004 min
Response: 3327674
Conc: 150.44 ug/L



#18 m,p-Xylene

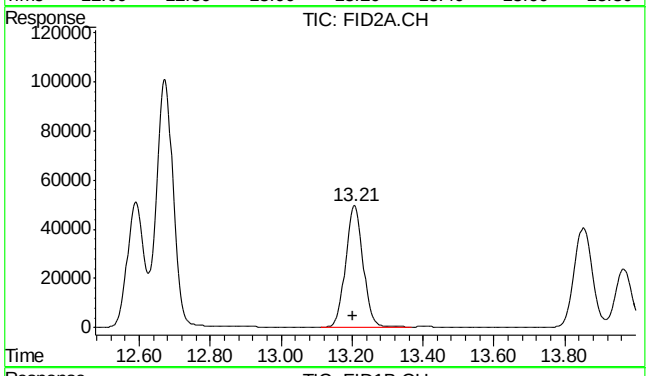
R.T.: 12.673 min
Delta R.T.: 0.004 min
Response: 3339736
Conc: 161.24 ug/L

SGS ACCUTEST FA40754



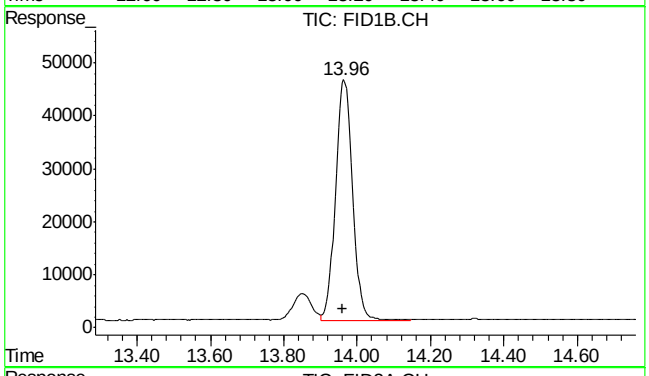
#19 o-Xylene

R.T.: 13.206 min
Delta R.T.: 0.004 min
Response: 1411702
Conc: 73.83 ug/L



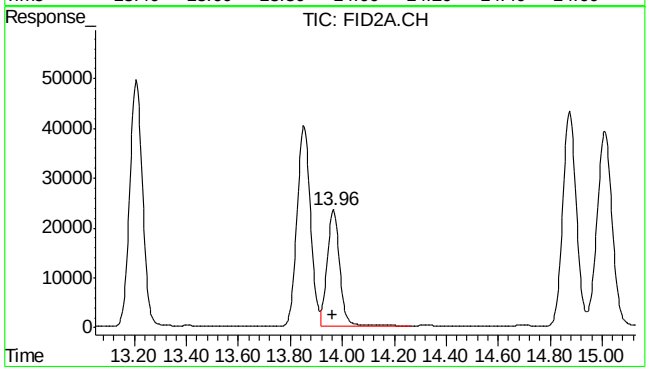
#19 o-Xylene

R.T.: 13.207 min
Delta R.T.: 0.004 min
Response: 1678378
Conc: 80.41 ug/L



#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.004 min
Response: 1456527
Conc: 79.35 ug/L



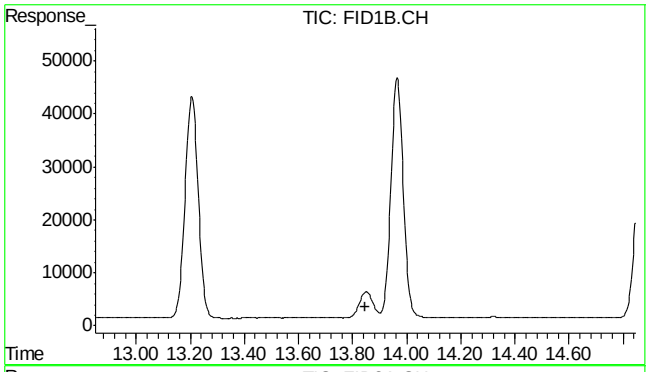
#20 BFB

R.T.: 13.966 min
Delta R.T.: 0.004 min
Response: 782536
Conc: 86.39 ug/L

7.3.6

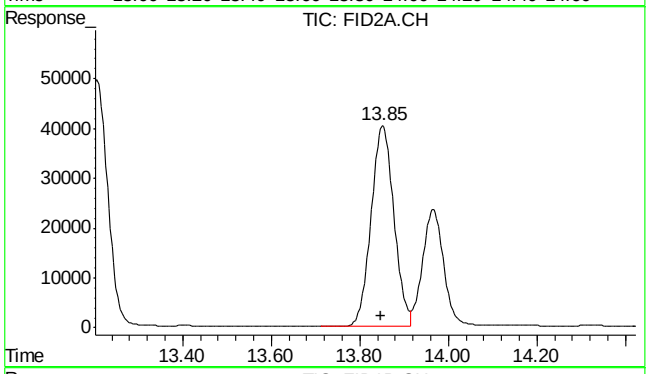
7

SGS ACCUTEST FA40754



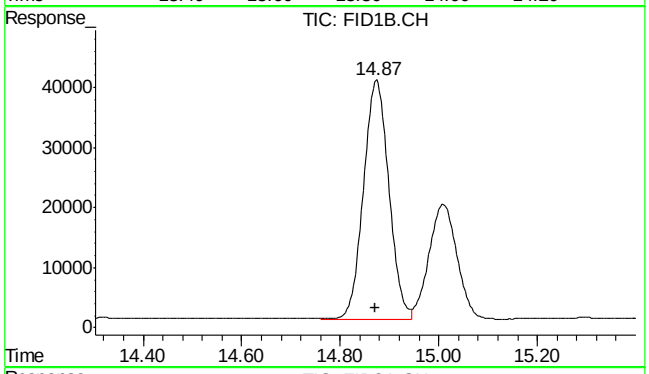
#21 Decane

R.T.: 13.852 min
Delta R.T.: 0.004 min
Response: 179187
Conc: N.D.



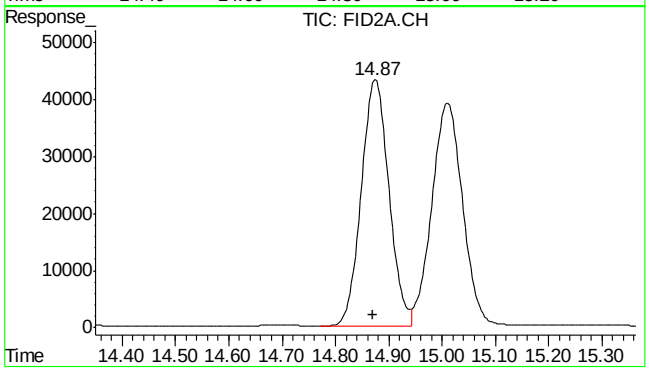
#21 Decane

R.T.: 13.852 min
Delta R.T.: 0.004 min
Response: 1439814
Conc: 79.96 ug/L



#22 1,2,4-Trimethylbenzene

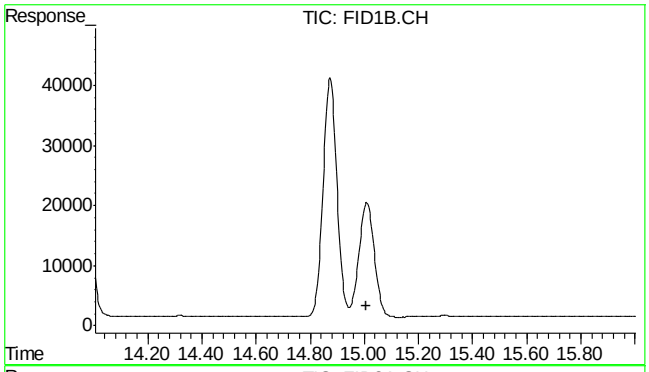
R.T.: 14.874 min
Delta R.T.: 0.004 min
Response: 1418391
Conc: 70.92 ug/L



#22 1,2,4-Trimethylbenzene

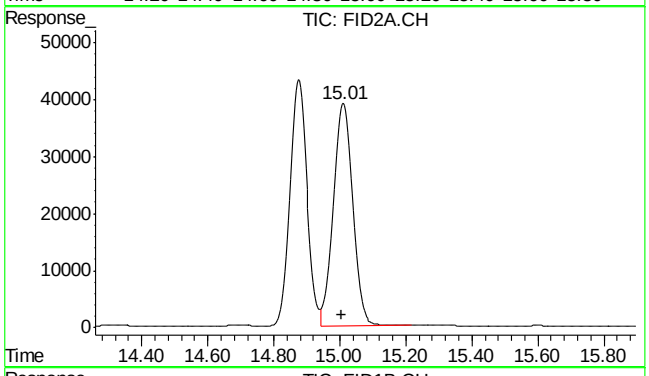
R.T.: 14.875 min
Delta R.T.: 0.004 min
Response: 1551838
Conc: 76.96 ug/L

SGS ACCUTEST FA40754



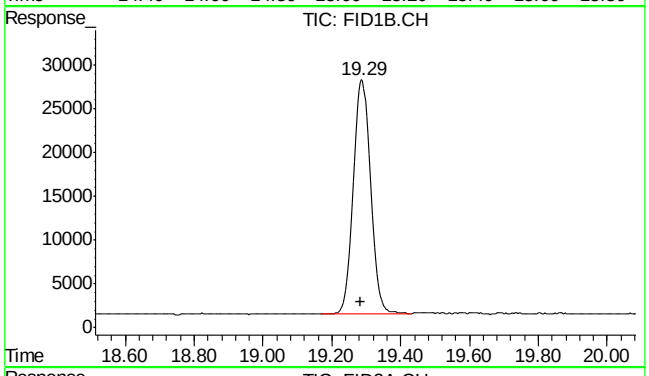
#23 Butylcyclohexane

R.T.: 15.010 min
Delta R.T.: 0.004 min
Response: 757044
Conc: N.D.



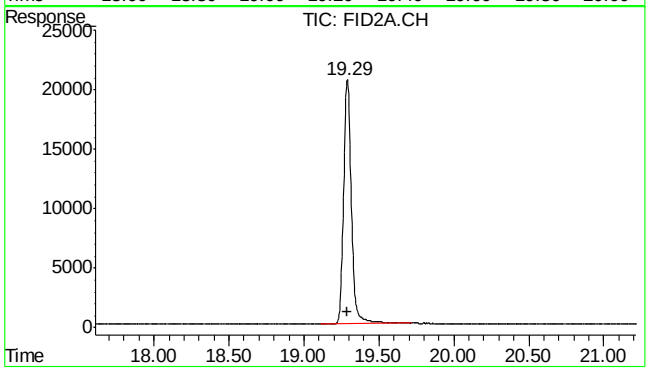
#23 Butylcyclohexane

R.T.: 15.011 min
Delta R.T.: 0.005 min
Response: 1571119
Conc: 75.30 ug/L



#24 Naphthalene

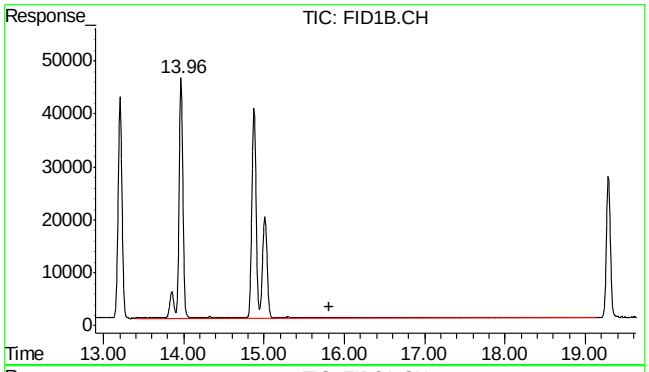
R.T.: 19.288 min
Delta R.T.: 0.005 min
Response: 908902
Conc: 73.48 ug/L



#24 Naphthalene

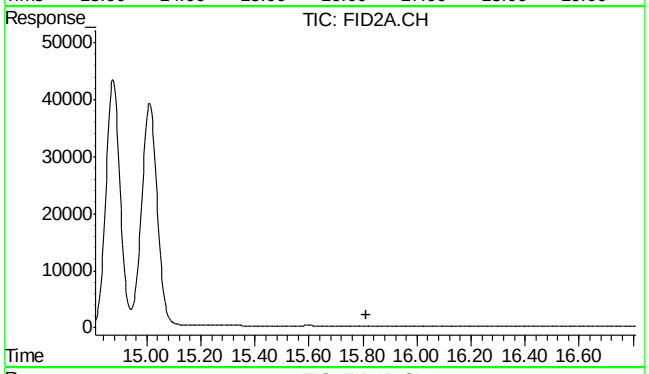
R.T.: 19.290 min
Delta R.T.: 0.004 min
Response: 746806
Conc: 78.64 ug/L

SGS ACCUTEST FA40754



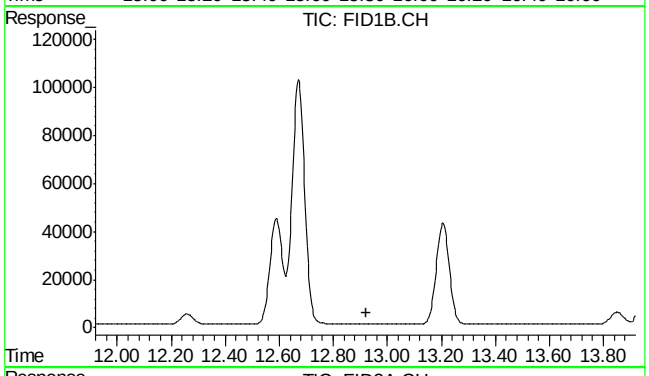
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 1739449
Conc: 72.24 ug/L m



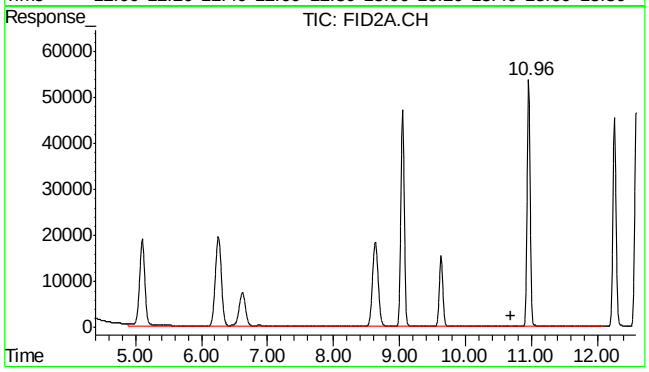
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 3056035
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 10931514
Conc: N.D.



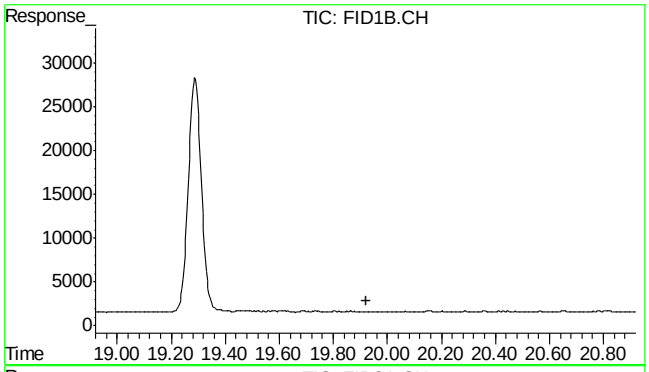
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 4243816
Conc: 304.27 ug/L m

7.3.6

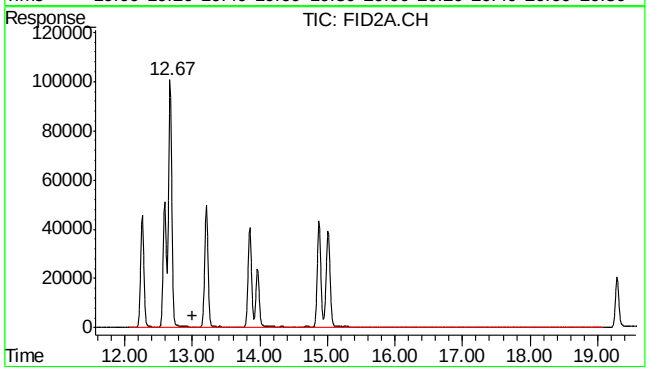
7

SGS ACCUTEST FA40754



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 2767375
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 4705793
Conc: 235.55 ug/L m

7.3.6

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077777.D\FID1B.CH Vial: 46
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077777.D\FID2A.CH
Acq On : 01-Feb-2017, 08:27:18 Operator: antonioc
Sample : fa40755-4ms Inst : HP5890
Misc : gc19636,guv4135,4.50,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 02 18:01:39 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		System Monitoring Compounds							
1)	S	Alkane A	13.85f	0.00	144866	0	NoCal m	N.D.	
2)	S	Alkane B	15.01f	0.00	712287	0	NoCal m	N.D.	
3)	S	Aromatic A	0.00	6.61f	0	518942	N.D.	NoCal m	
4)	S	Aromatic B	0.00	9.04f	0	1604483	N.D.	NoCal m	
5)	S	Aromatic C	0.00	10.96f	0	1568971	N.D.	NoCal m	
6)	S	Aromatic D	0.00	12.59f	0	1446248	N.D.	NoCal m	
7)	S	Aromatic E	0.00	12.67f	0	3097200	N.D.	NoCal m	
8)	S	Aromatic F	0.00	13.20f	0	1563225	N.D.	NoCal m	
9)	S	Aromatic G	0.00	14.87f	0	1390924	N.D.	NoCal m	
20)	S	BFB	13.96	13.97	2884126	1521070	157.126	167.926	
		Spiked Amount 200.000 Range 70 - 130 Recovery =					78.56%	83.96%	
		Target Compounds							
10)		Pentane	0.00	5.09	0	1135142	N.D.	82.766	#
11)		2-Methylpentane	6.25	6.25	40451	1184029	NoCal	78.804	#
12)		Methyl Tert Buty	6.61	6.61	424531	518155	78.687	79.226	
13)		2,2,4-Trimethylp	8.63	8.63	191269	1096062	NoCal	92.043	#
14)		Benzene	9.04	9.04	1646588	1605308	69.037	73.319	
15)		Toluene	10.96	10.96	1502307	1577676	69.181	76.546	
16)		Nonane	12.26	12.26	127864	1363253	NoCal	70.680	#
17)		Ethylbenzene	12.59	12.59	1294902	1484395	70.854	75.949	
18)		m,p-Xylene	12.67	12.67	3106066	3057188	140.424	147.600	
19)		o-Xylene	13.20	13.21	1339439	1558671	70.055	74.672	
21)		Decane	13.85	13.85	150549	1182354	NoCal	65.665	#
22)		1,2,4-Trimethylb	14.87	14.87	1289345	1384179	64.467	68.641	
23)		Butylcyclohexane	15.01	15.01	695938	1408710	NoCal	67.520	#
24)		Naphthalene	19.29	19.29	827108	659521	66.870	69.448	
25)	H	C9- C10 Aromatic	15.81	15.81	1783909	2700605	74.470	NoCal	#
26)	H	C5- C8 Aliphatic	12.92	10.70	10199133	3996166	NoCal	284.159	#
27)	H	C9- C12 Aliphati	19.92	13.00	2627627	4224508	NoCal	210.074	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077777.D VPH011317.M Fri Feb 03 13:19:47 2017

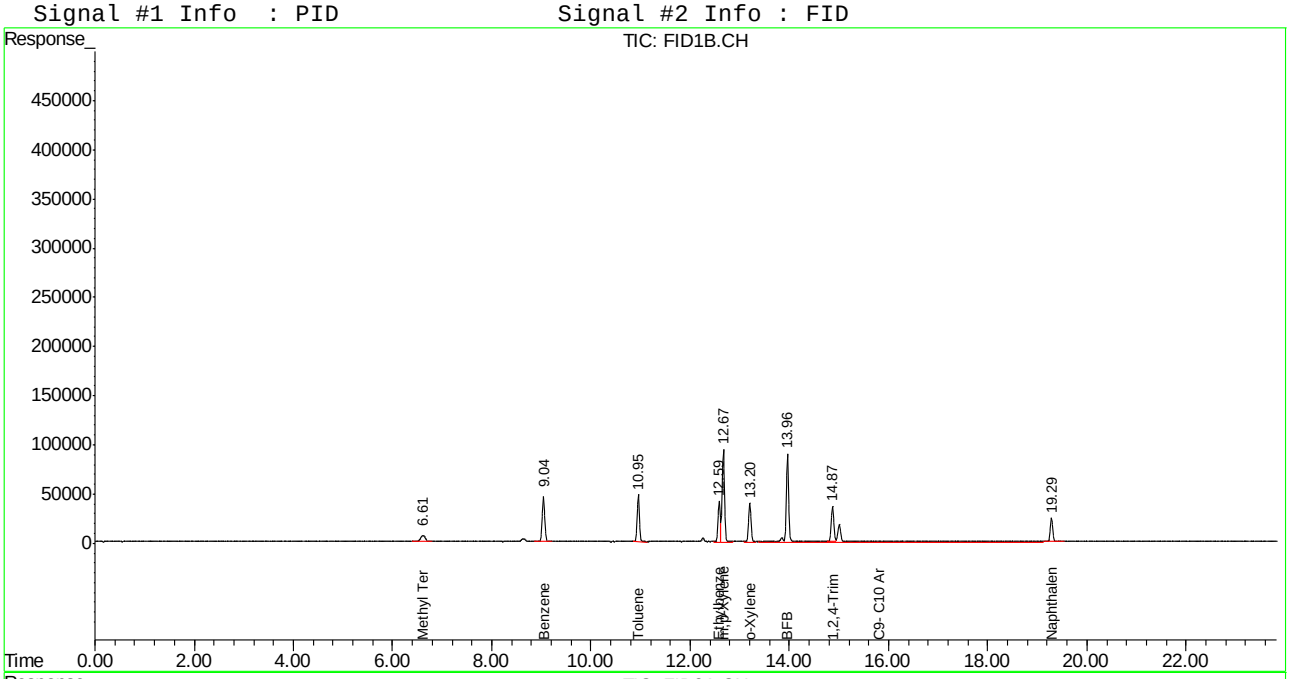
SGS ACCUTEST FA40754

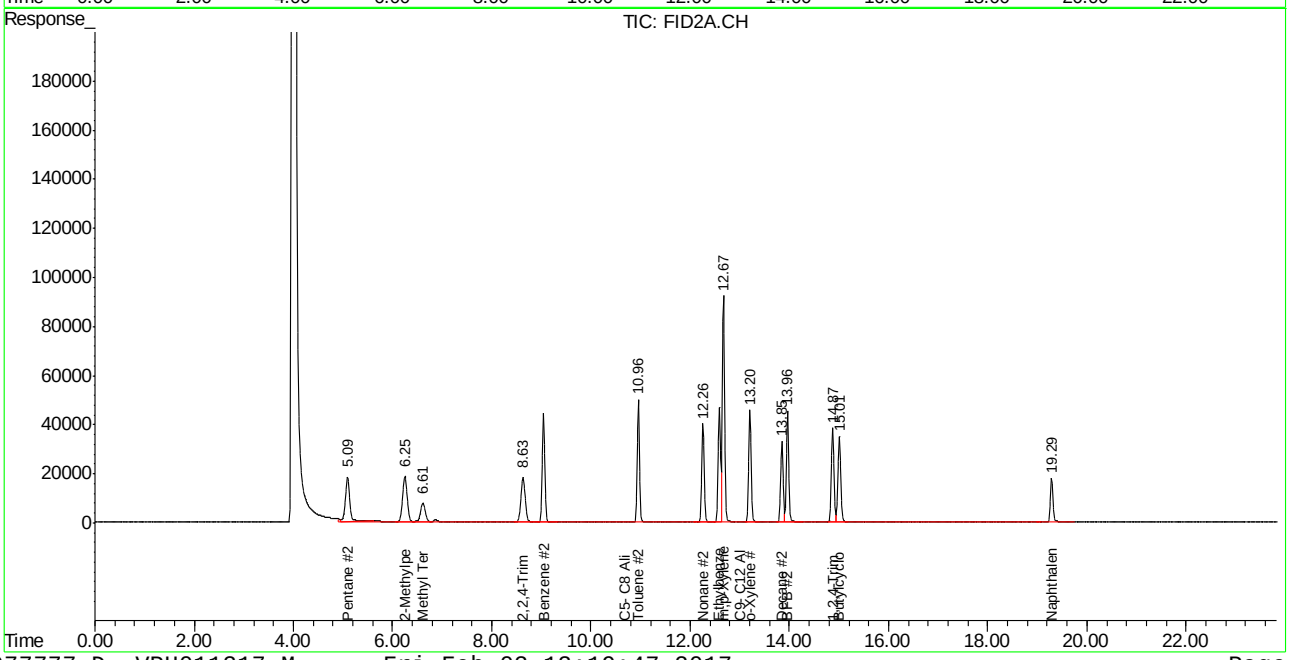
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077777.D\FID1B.CH Vial: 46
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077777.D\FID2A.CH
Acq On : 01-Feb-2017, 08:27:18 Operator: antonioc
Sample : fa40755-4ms Inst : HP5890
Misc : gc19636,guv4135,4.50,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 3 12:51 2017 Quant Results File: VPH011317.RES

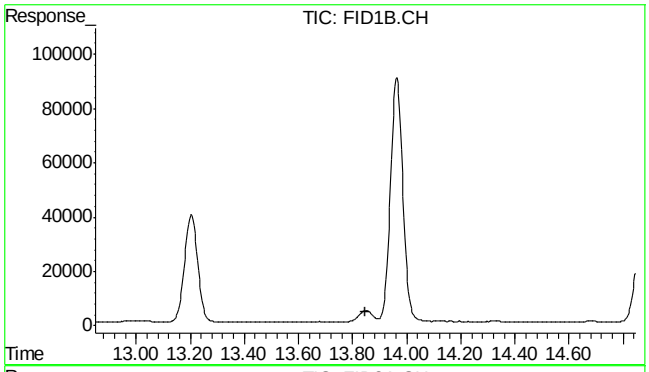
Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID



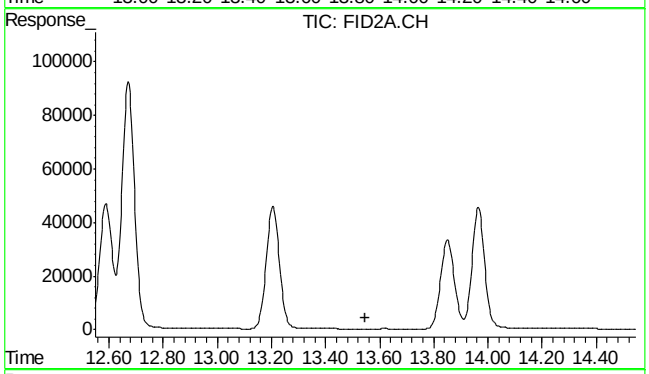


SGS ACCUTEST FA40754



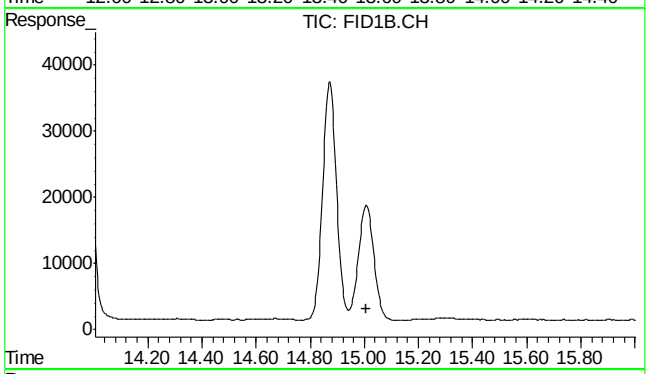
#1 Alkane A

R.T.: 13.848 min
Delta R.T.: 0.001 min
Response: 144866
Conc: N.D.



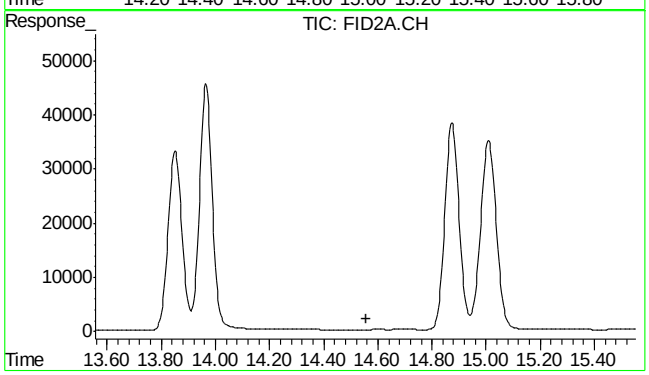
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.007 min
Delta R.T.: 0.001 min
Response: 712287
Conc: N.D.



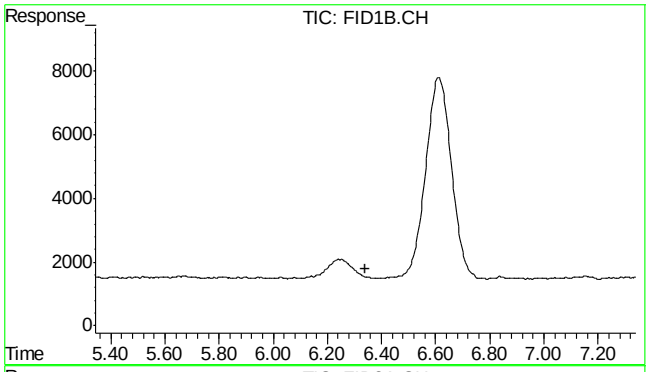
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.4.1

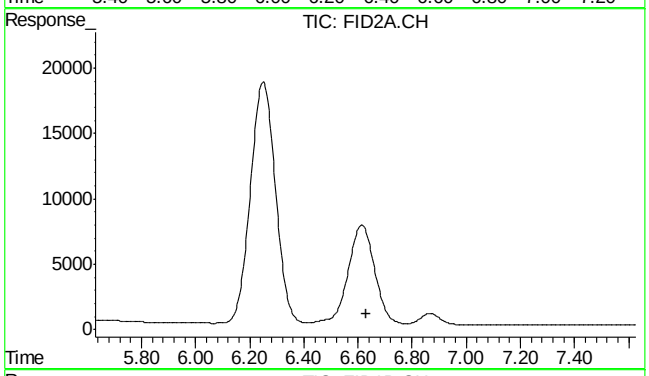
7

SGS ACCUTEST FA40754



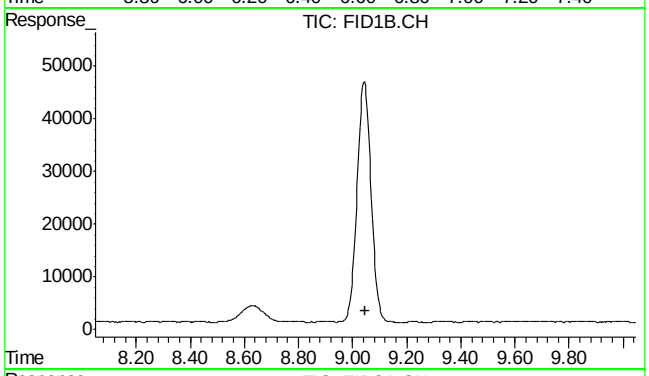
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



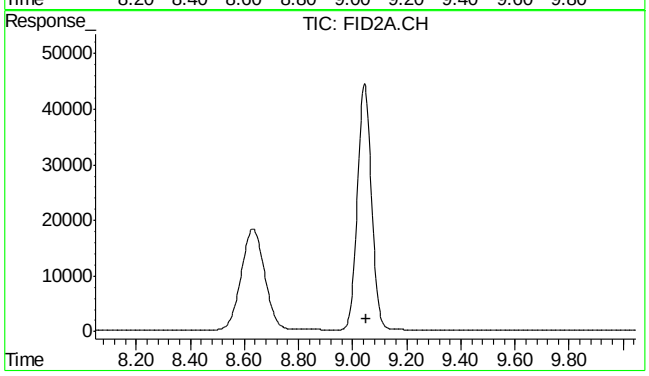
#3 Aromatic A

R.T.: 6.614 min
Delta R.T.: -0.015 min
Response: 518942
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



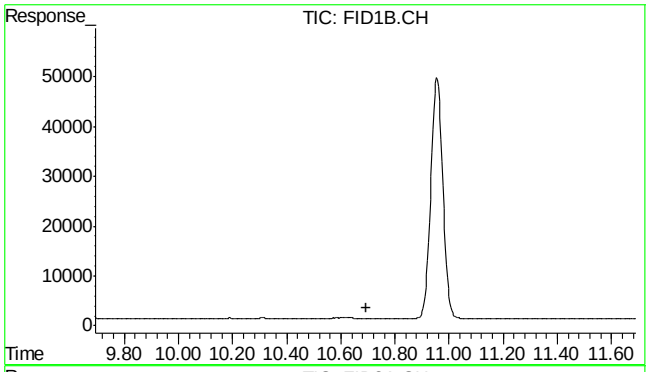
#4 Aromatic B

R.T.: 9.044 min
Delta R.T.: -0.005 min
Response: 1604483
Conc: N.D.

7.4.1

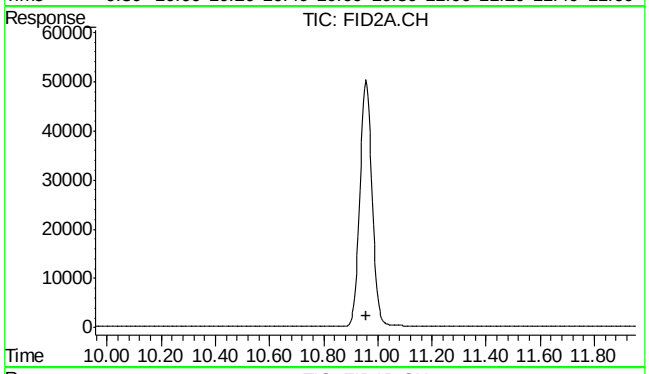
7

SGS ACCUTEST FA40754



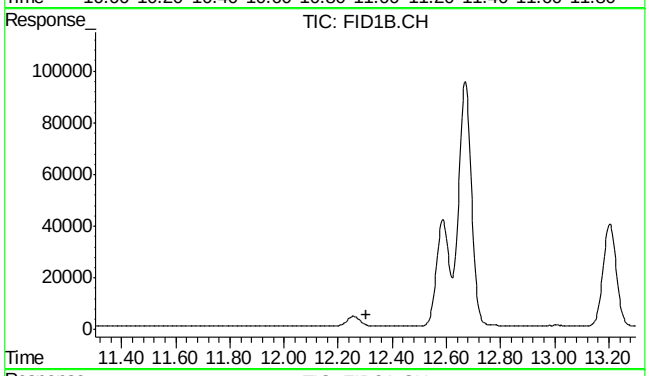
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



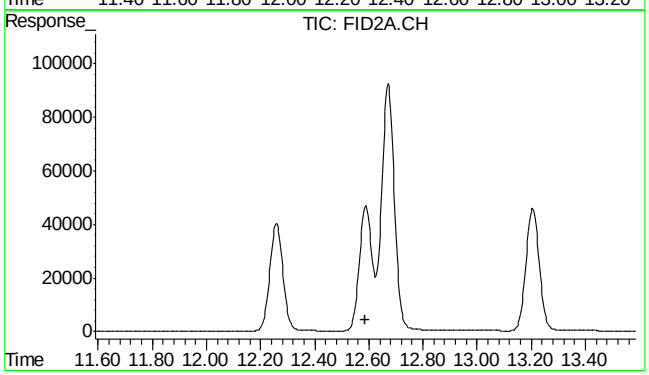
#5 Aromatic C

R.T.: 10.956 min
Delta R.T.: 0.000 min
Response: 1568971
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



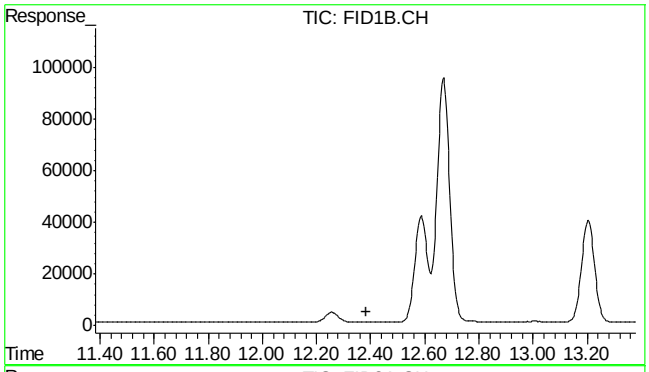
#6 Aromatic D

R.T.: 12.588 min
Delta R.T.: 0.000 min
Response: 1446248
Conc: N.D.

7.4.1

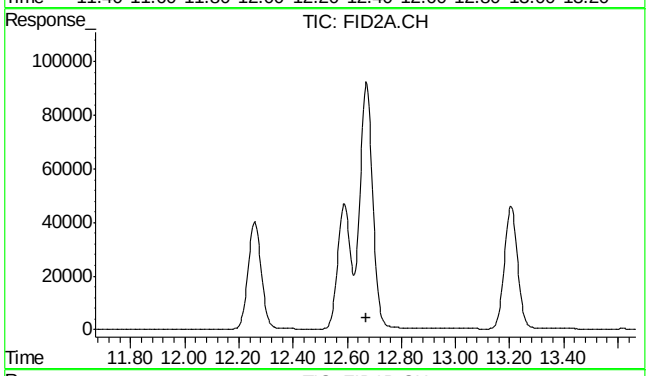
7

SGS ACCUTEST FA40754



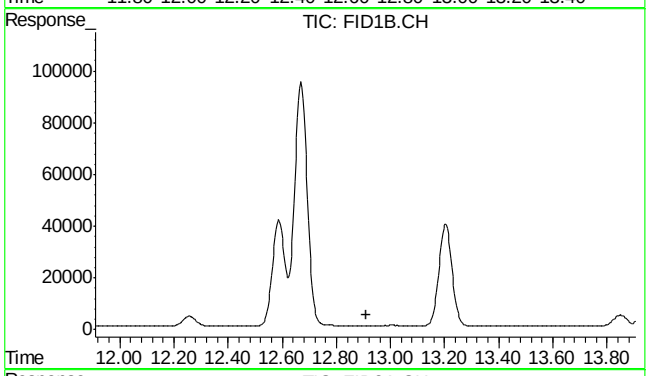
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



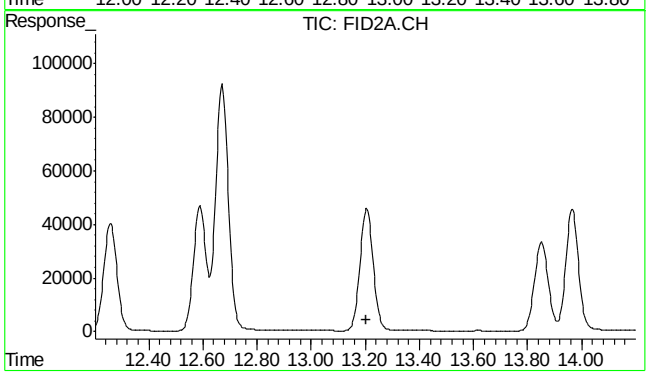
#7 Aromatic E

R.T.: 12.670 min
Delta R.T.: 0.001 min
Response: 3097200
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

R.T.: 13.205 min
Delta R.T.: 0.001 min
Response: 1563225
Conc: N.D.

7.4.1

7

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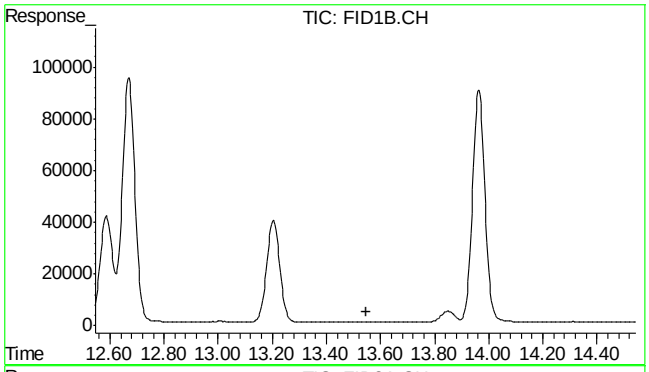
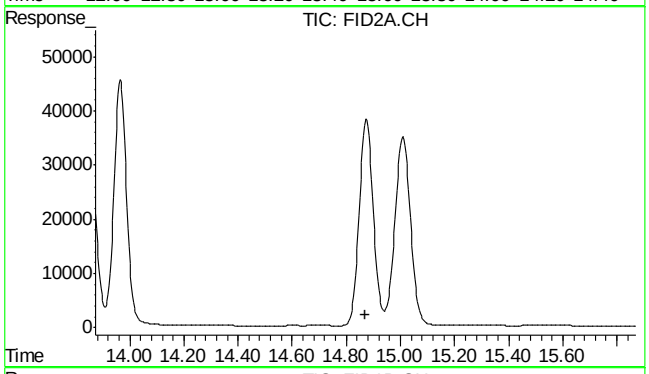


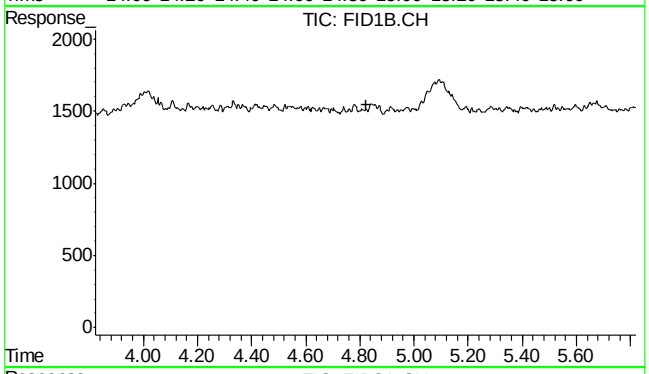
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



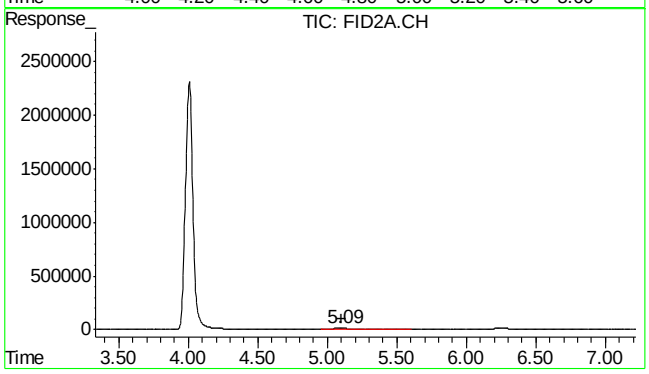
#9 Aromatic G

R.T.: 14.873 min
Delta R.T.: 0.002 min
Response: 1390924
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 5.095 min
Delta R.T.: -0.005 min
Response: 1135142
Conc: 82.77 ug/L

7.4.1

7

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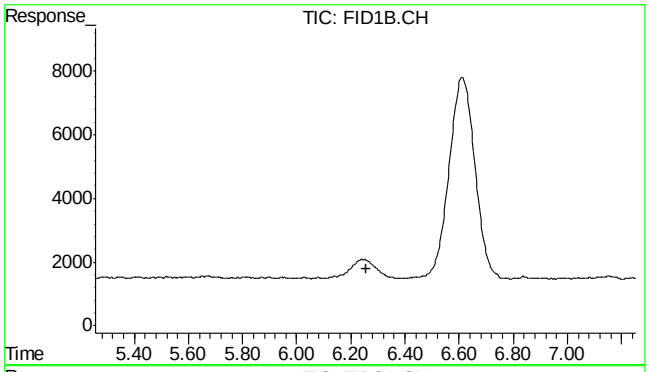
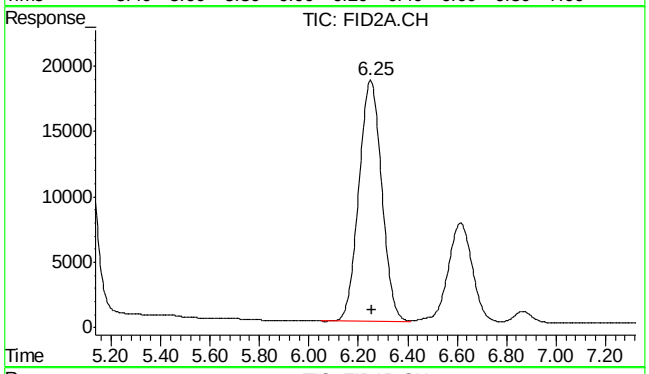


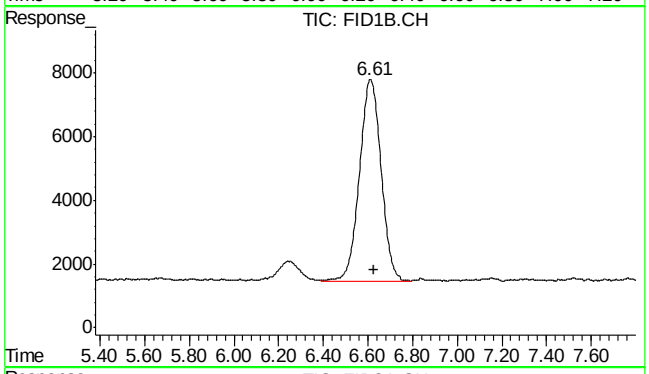
#11 2-Methylpentane

R.T.: 6.246 min
Delta R.T.: -0.010 min
Response: 40451
Conc: N.D.



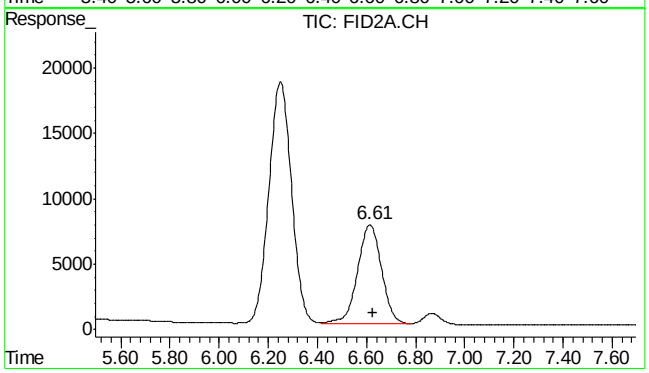
#11 2-Methylpentane

R.T.: 6.250 min
Delta R.T.: -0.006 min
Response: 1184029
Conc: 78.80 ug/L



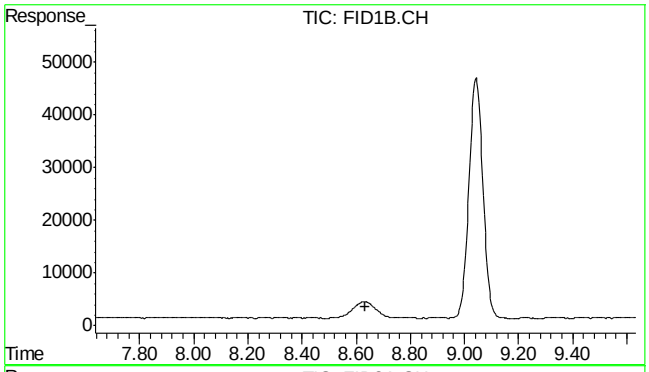
#12 Methyl Tert Butyl Ether

R.T.: 6.612 min
Delta R.T.: -0.017 min
Response: 424531
Conc: 78.69 ug/L



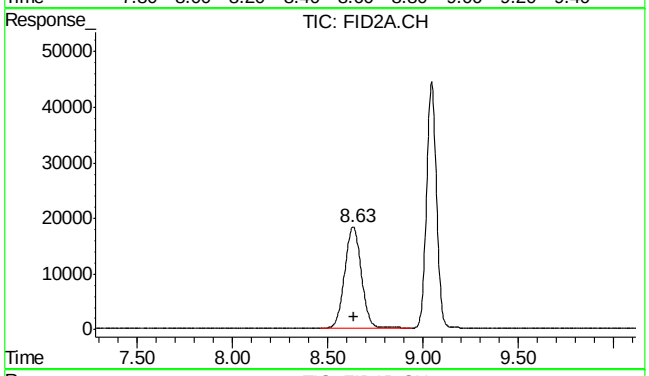
#12 Methyl Tert Butyl Ether

R.T.: 6.615 min
Delta R.T.: -0.013 min
Response: 518155
Conc: 79.23 ug/L



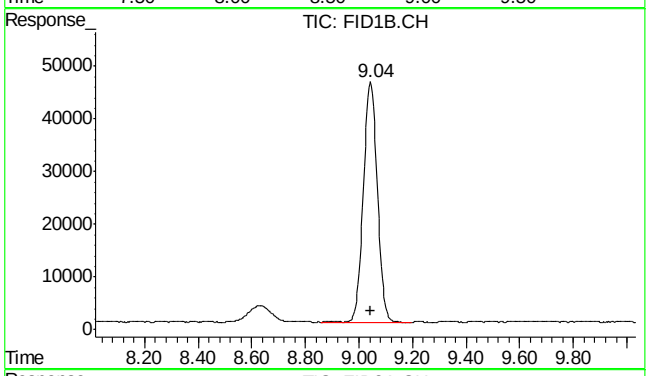
#13 2,2,4-Trimethylpentane

R.T.: 8.633 min
Delta R.T.: -0.001 min
Response: 191269
Conc: N.D.



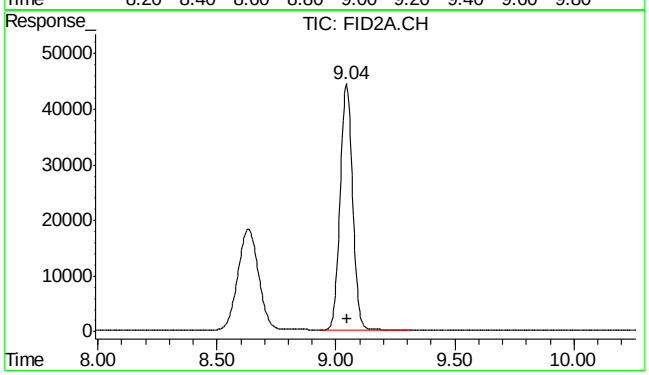
#13 2,2,4-Trimethylpentane

R.T.: 8.633 min
Delta R.T.: -0.001 min
Response: 1096062
Conc: 92.04 ug/L



#14 Benzene

R.T.: 9.043 min
Delta R.T.: -0.002 min
Response: 1646588
Conc: 69.04 ug/L



#14 Benzene

R.T.: 9.045 min
Delta R.T.: -0.001 min
Response: 1605308
Conc: 73.32 ug/L

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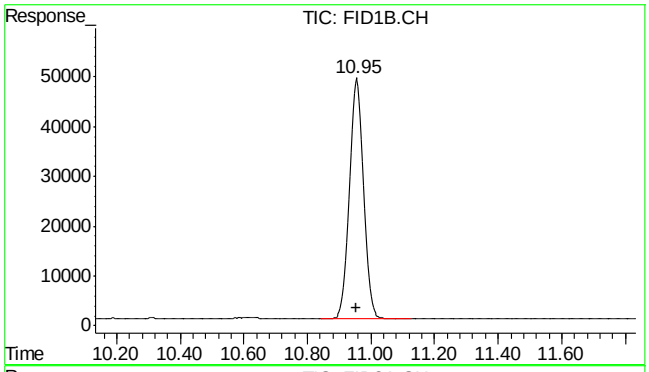
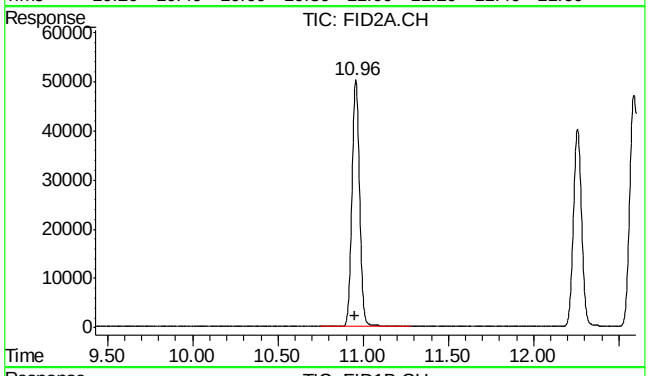


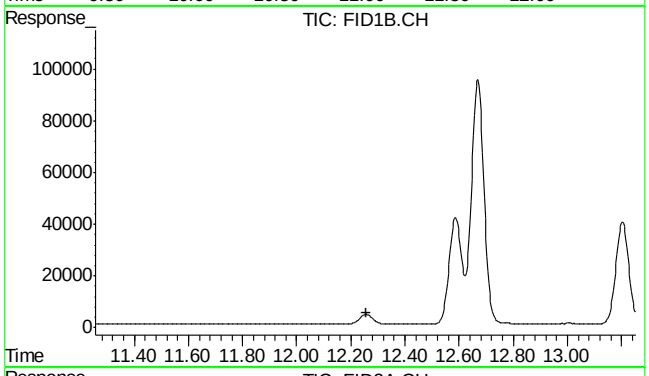
#15 Toluene

R.T.: 10.956 min
Delta R.T.: 0.000 min
Response: 1502307
Conc: 69.18 ug/L



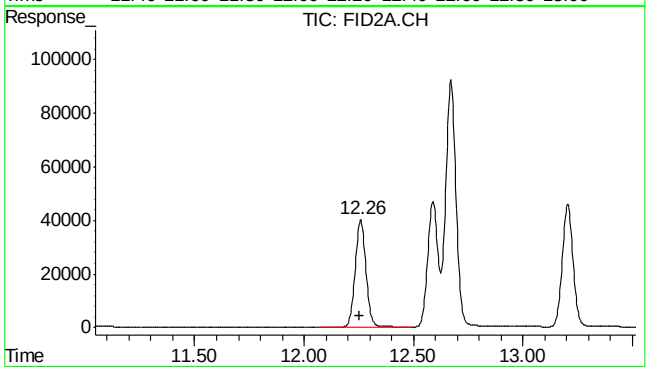
#15 Toluene

R.T.: 10.957 min
Delta R.T.: 0.002 min
Response: 1577676
Conc: 76.55 ug/L



#16 Nonane

R.T.: 12.257 min
Delta R.T.: 0.002 min
Response: 127864
Conc: N.D.



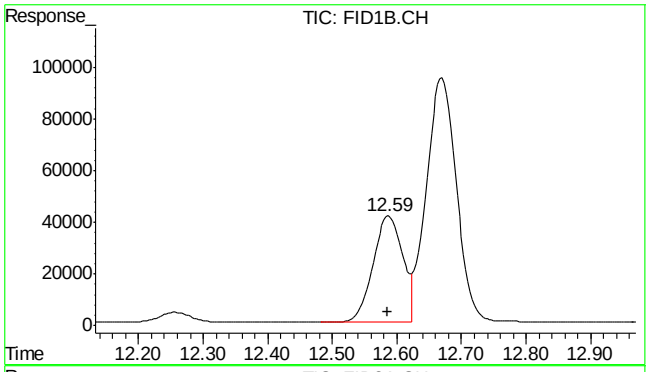
#16 Nonane

R.T.: 12.259 min
Delta R.T.: 0.003 min
Response: 1363253
Conc: 70.68 ug/L

7.4.1

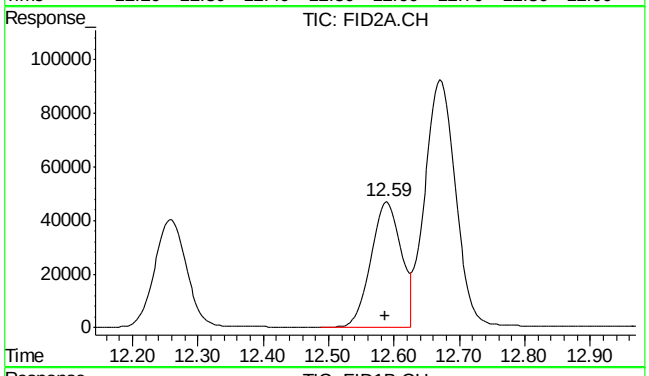
7

SGS ACCUTEST FA40754



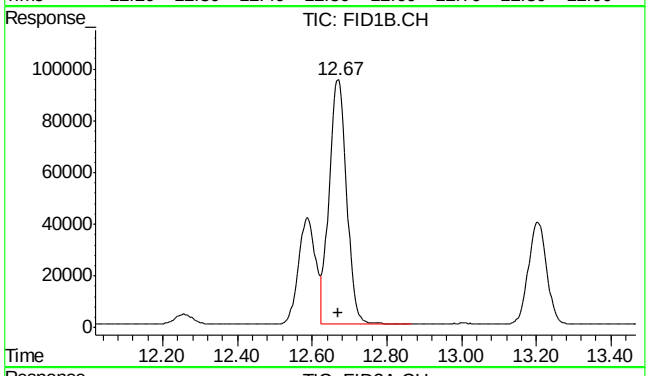
#17 Ethylbenzene

R.T.: 12.588 min
Delta R.T.: 0.002 min
Response: 1294902
Conc: 70.85 ug/L



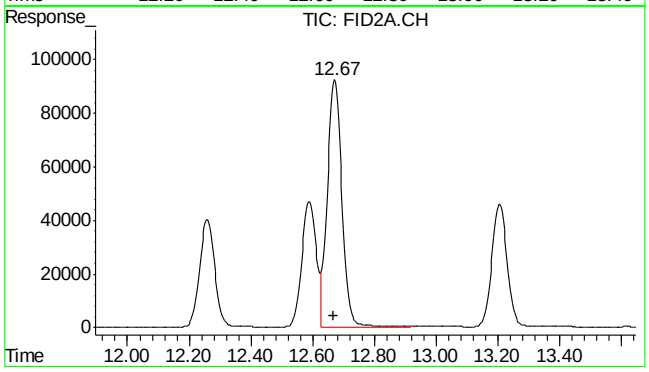
#17 Ethylbenzene

R.T.: 12.589 min
Delta R.T.: 0.002 min
Response: 1484395
Conc: 75.95 ug/L



#18 m,p-Xylene

R.T.: 12.670 min
Delta R.T.: 0.001 min
Response: 3106066
Conc: 140.42 ug/L



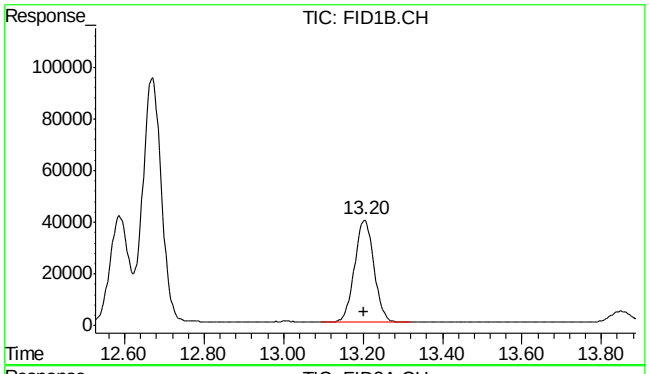
#18 m,p-Xylene

R.T.: 12.672 min
Delta R.T.: 0.003 min
Response: 3057188
Conc: 147.60 ug/L

7.4.1

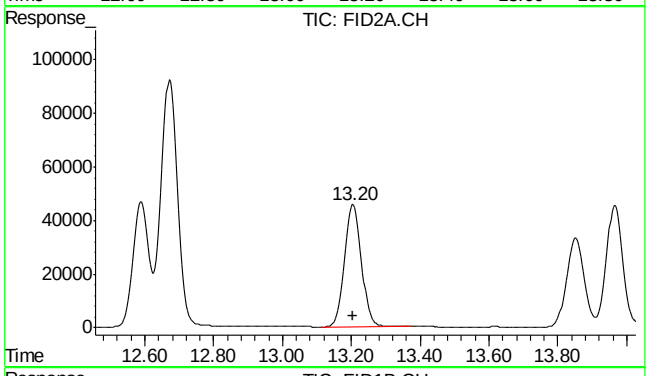
7

SGS ACCUTEST FA40754



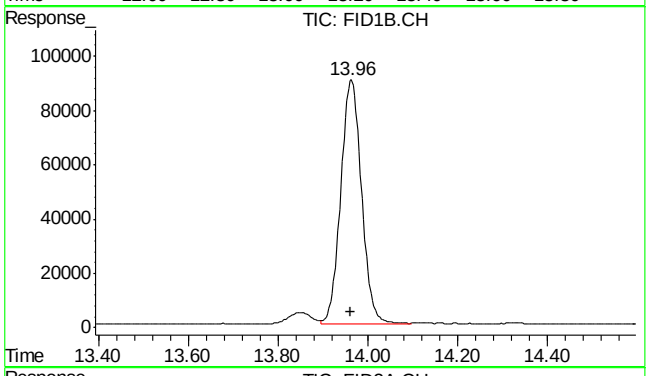
#19 o-Xylene

R.T.: 13.204 min
Delta R.T.: 0.002 min
Response: 1339439
Conc: 70.05 ug/L



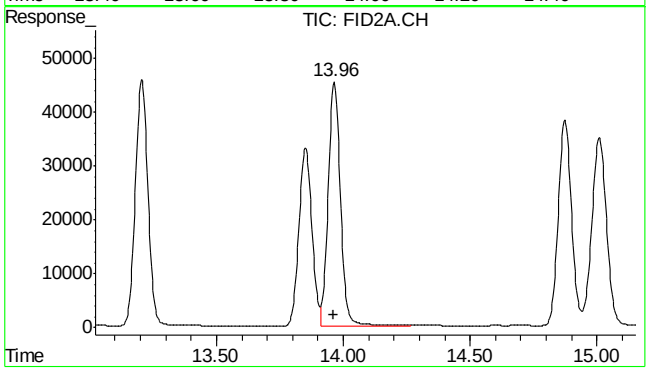
#19 o-Xylene

R.T.: 13.206 min
Delta R.T.: 0.003 min
Response: 1558671
Conc: 74.67 ug/L



#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 2884126
Conc: 157.13 ug/L



#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 1521070
Conc: 167.93 ug/L

7.4.1

7

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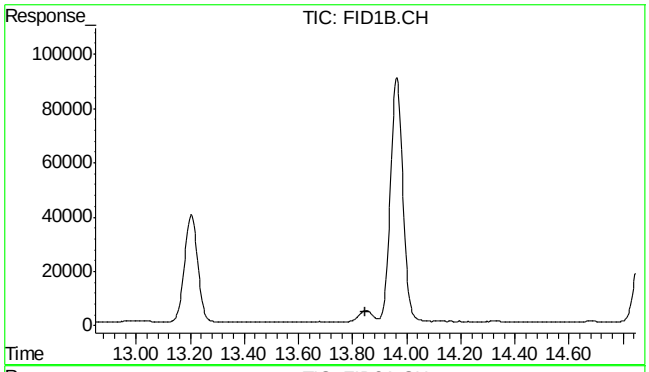
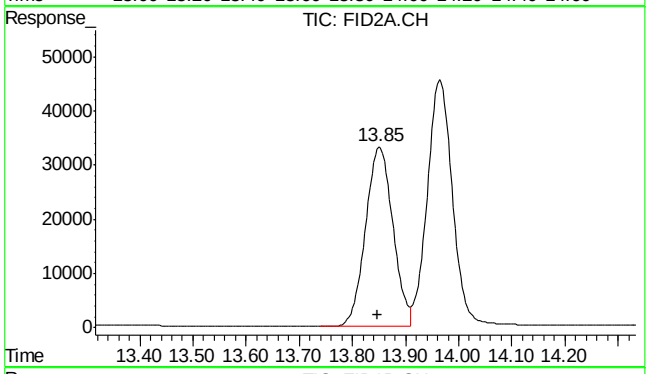


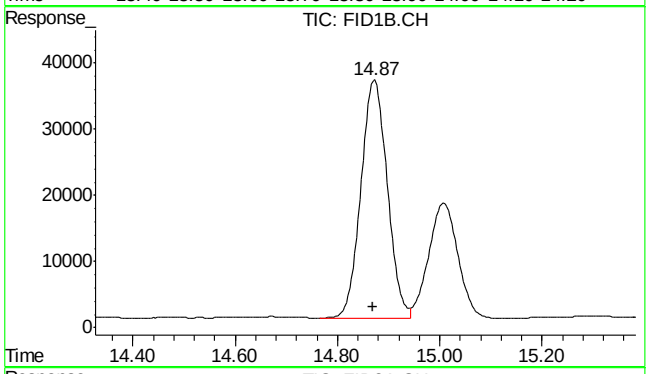
#21 Decane

R.T.: 13.850 min
Delta R.T.: 0.002 min
Response: 150549
Conc: N.D.



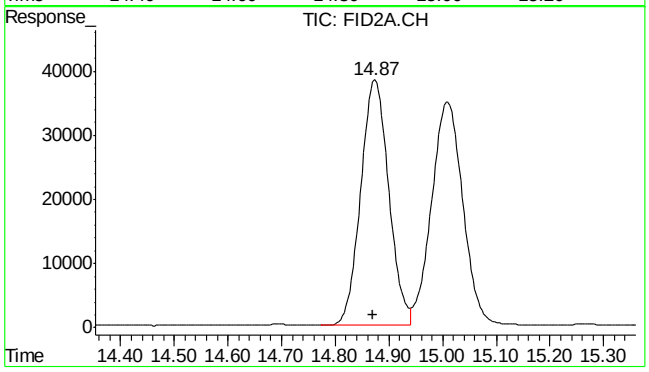
#21 Decane

R.T.: 13.852 min
Delta R.T.: 0.004 min
Response: 1182354
Conc: 65.67 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.873 min
Delta R.T.: 0.003 min
Response: 1289345
Conc: 64.47 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.875 min
Delta R.T.: 0.004 min
Response: 1384179
Conc: 68.64 ug/L

7.4.1

7

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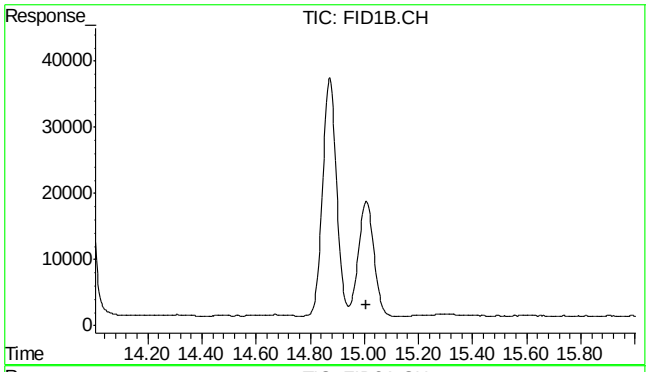
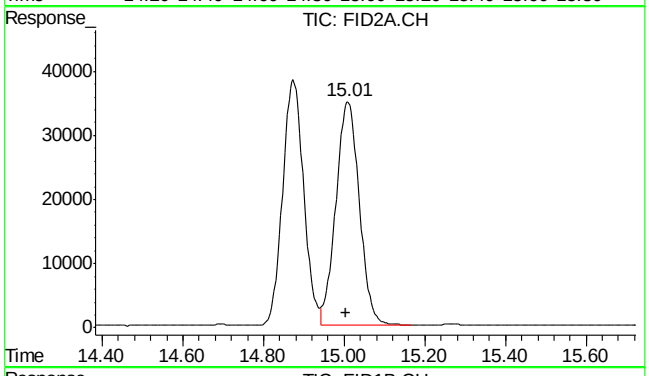


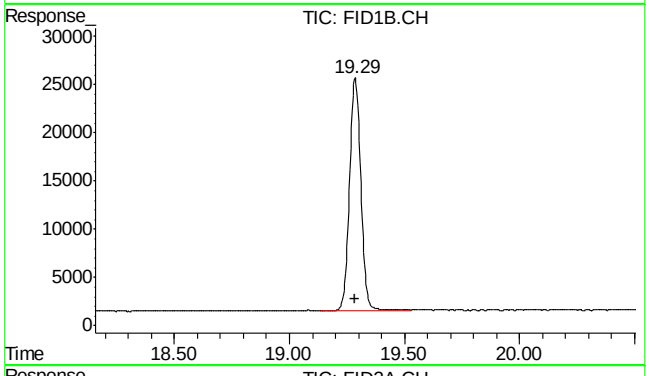
#23 Butylcyclohexane

R.T.: 15.008 min
Delta R.T.: 0.002 min
Response: 695938
Conc: N.D.



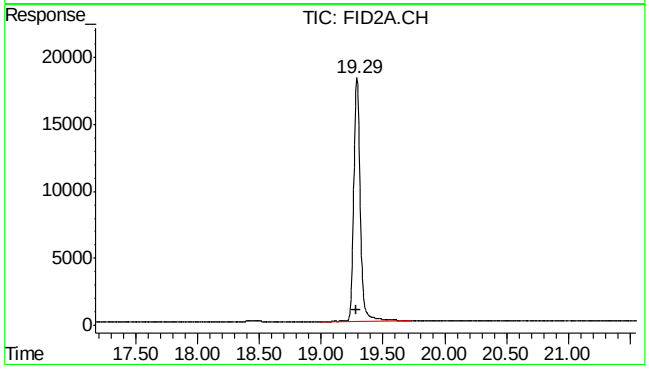
#23 Butylcyclohexane

R.T.: 15.010 min
Delta R.T.: 0.004 min
Response: 1408710
Conc: 67.52 ug/L



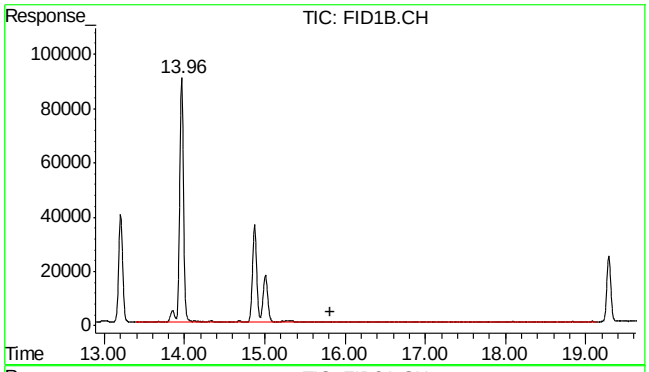
#24 Naphthalene

R.T.: 19.287 min
Delta R.T.: 0.003 min
Response: 827108
Conc: 66.87 ug/L



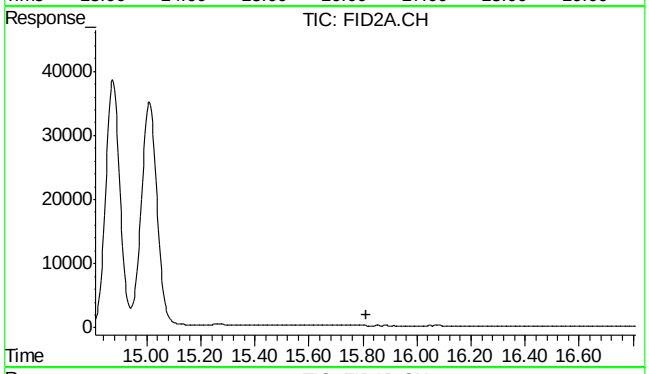
#24 Naphthalene

R.T.: 19.290 min
Delta R.T.: 0.003 min
Response: 659521
Conc: 69.45 ug/L



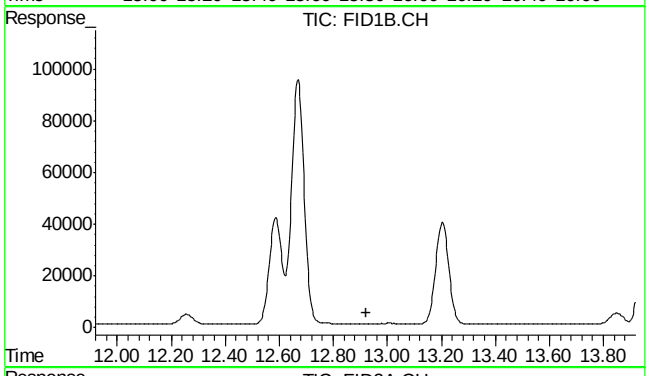
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 1783909
Conc: 74.47 ug/L m



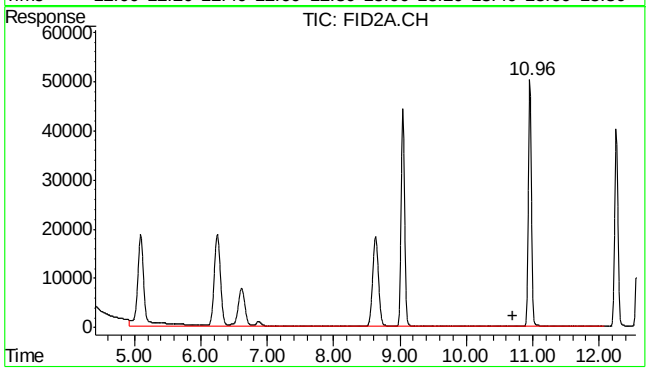
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2700605
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 10199133
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 3996166
Conc: 284.16 ug/L m

7.4.1

7

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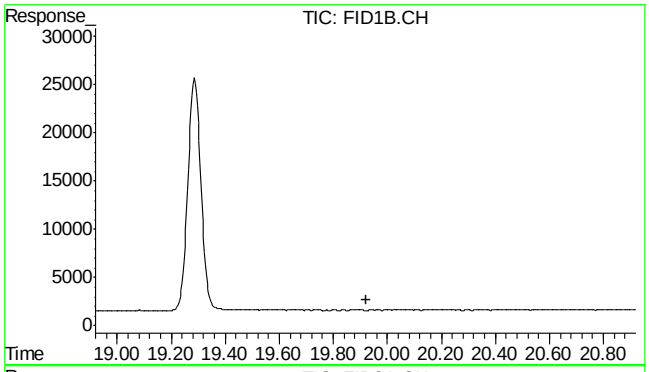
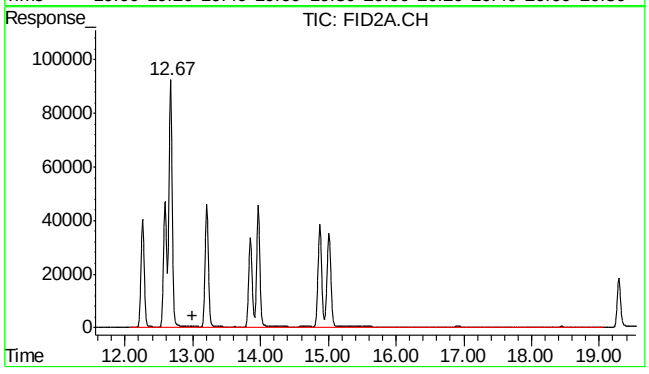


#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 2627627
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 4224508
Conc: 210.07 ug/L m

7.4.1

7

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Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077778.D\FID1B.CH Vial: 47
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077778.D\FID2A.CH
Acq On : 01-Feb-2017, 08:58:00 Operator: antonioc
Sample : fa40755-4msd Inst : HP5890
Misc : gc19636,guv4135,4.50,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 02 18:01:42 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		System Monitoring Compounds							
1)	S	Alkane A	13.85f	0.00	136197	0	NoCal m	N.D.	
2)	S	Alkane B	15.01f	0.00	628153	0	NoCal m	N.D.	
3)	S	Aromatic A	0.00	6.61f	0	517427	N.D.	NoCal m	
4)	S	Aromatic B	0.00	9.04f	0	1711610	N.D.	NoCal m	
5)	S	Aromatic C	0.00	10.96f	0	1657597	N.D.	NoCal m	
6)	S	Aromatic D	0.00	12.59f	0	1536028	N.D.	NoCal m	
7)	S	Aromatic E	0.00	12.67f	0	3004211	N.D.	NoCal m	
8)	S	Aromatic F	0.00	13.20f	0	1600969	N.D.	NoCal m	
9)	S	Aromatic G	0.00	14.87f	0	1321474	N.D.	NoCal m	
20)	S	BFB	13.96	13.97	2752291	1441109	149.943	159.098	
		Spiked Amount 200.000 Range 70 - 130 Recovery =					74.97%	79.55%	
		Target Compounds							
10)		Pentane	0.00	5.10	0	1174332	N.D.	85.623	#
11)		2-Methylpentane	6.25	6.25	46519	1247471	NoCal	83.026	#
12)		Methyl Tert Buty	6.61	6.62	423364	516288	78.470	78.940	
13)		2,2,4-Trimethylp	8.63	8.63	170294	1001552	NoCal	82.718	#
14)		Benzene	9.04	9.05	1762496	1714121	73.896	78.289	
15)		Toluene	10.96	10.96	1571487	1654299	72.366	80.263	
16)		Nonane	12.26	12.26	128590	1345488	NoCal	69.759	#
17)		Ethylbenzene	12.59	12.59	1316528	1512209	72.037	77.372	
18)		m,p-Xylene	12.67	12.67	3122481	3090686	141.167	149.218	
19)		o-Xylene	13.20	13.21	1350481	1585035	70.632	75.935	
21)		Decane	13.85	13.85	134325	1114879	NoCal	61.918	#
22)		1,2,4-Trimethylb	14.87	14.87	1217971	1322969	60.898	65.606	
23)		Butylcyclohexane	15.01	15.01	622406	1282867	NoCal	61.488	#
24)		Naphthalene	19.29	19.29	844707	678308	68.293	71.426	
25)	H	C9- C10 Aromatic	15.81	15.81	1674011	2530653	68.952	NoCal	#
26)	H	C5- C8 Aliphatic	12.92	10.70	10230173	3962009	NoCal	281.386	#
27)	H	C9- C12 Aliphati	19.92	13.00	2567942	4111451	NoCal	204.089	#

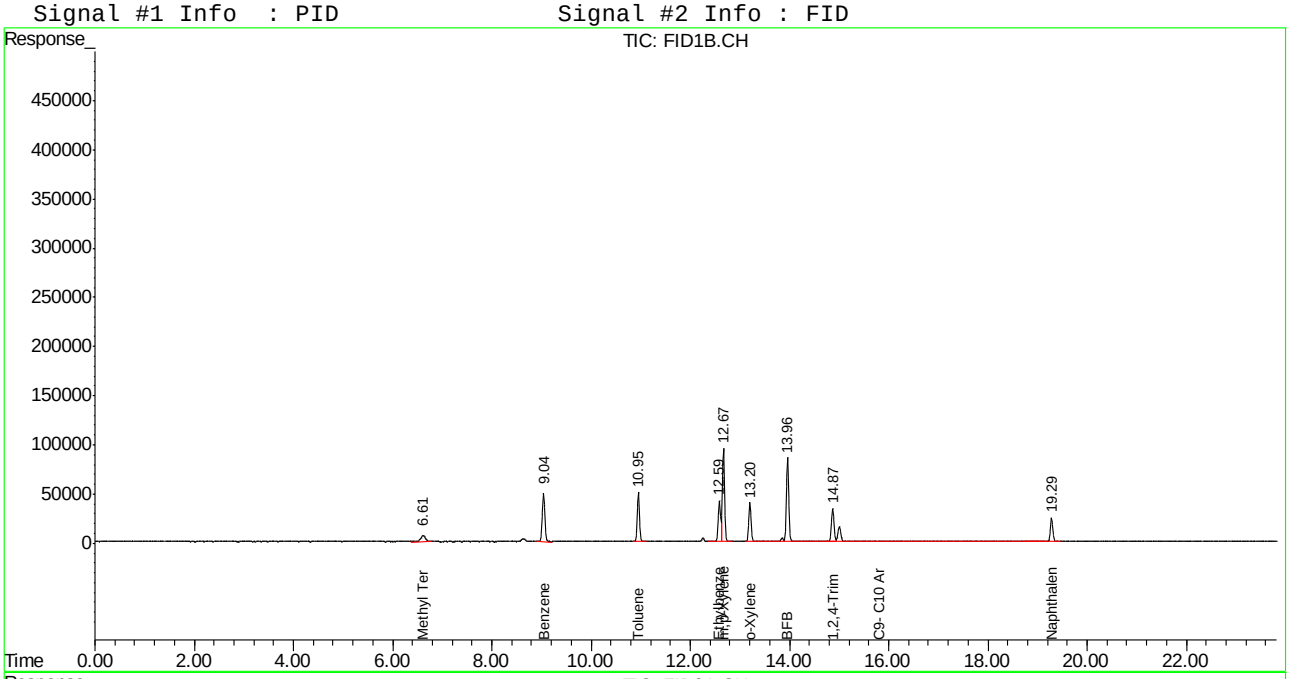
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077778.D VPH011317.M Fri Feb 03 13:19:50 2017

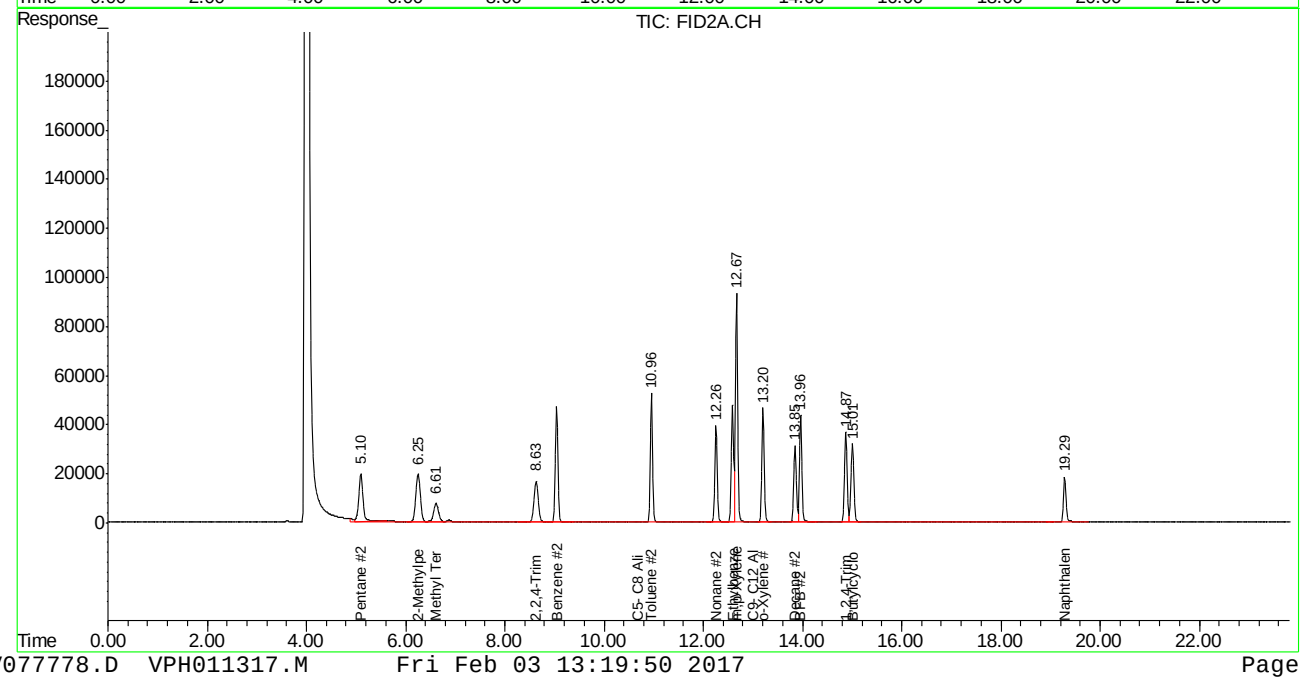
Quantitation Report (QT Reviewed)

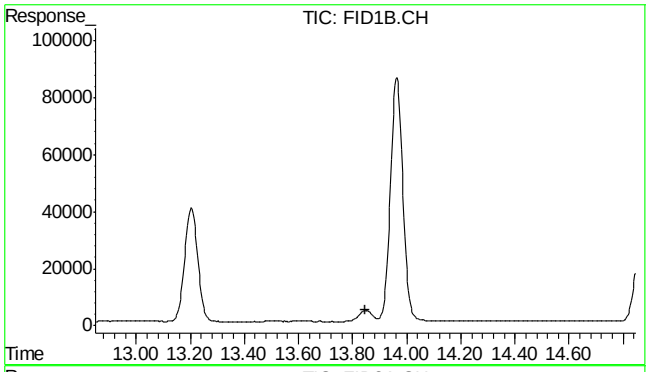
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077778.D\FID1B.CH Vial: 47
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077778.D\FID2A.CH
Acq On : 01-Feb-2017, 08:58:00 Operator: antonioc
Sample : fa40755-4msd Inst : HP5890
Misc : gc19636,guv4135,4.50,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 3 12:53 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

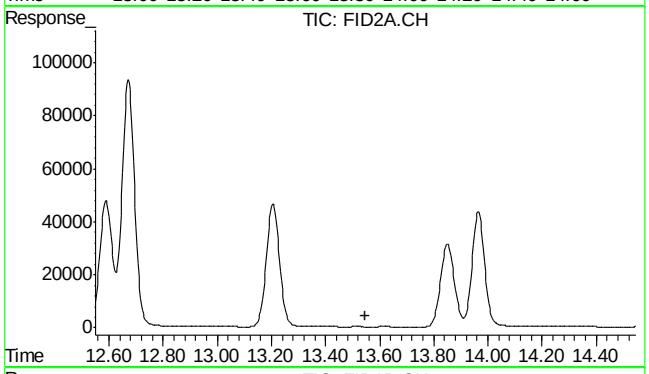






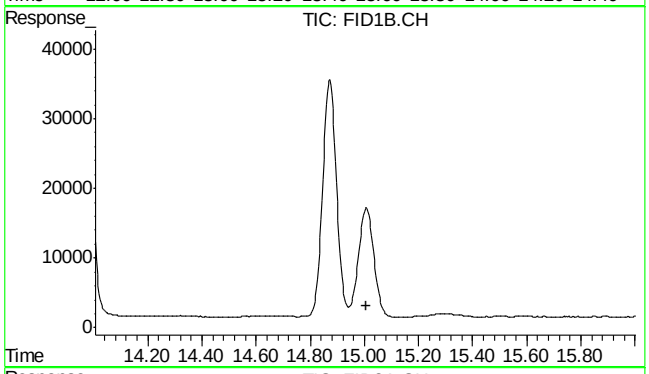
#1 Alkane A

R.T.: 13.848 min
Delta R.T.: 0.001 min
Response: 136197
Conc: N.D.



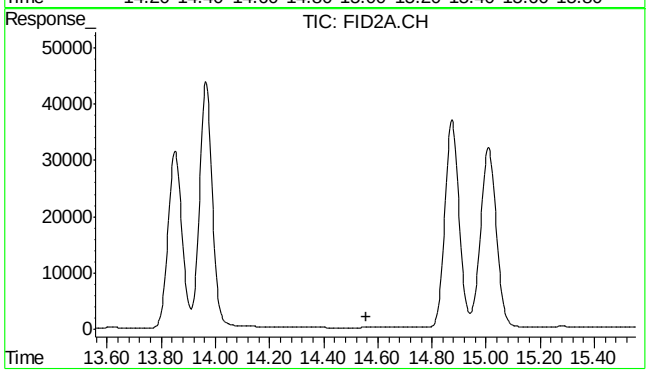
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.007 min
Delta R.T.: 0.001 min
Response: 628153
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.4.2

7

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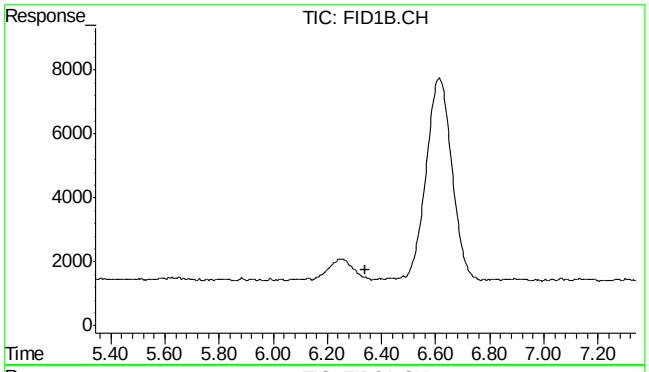
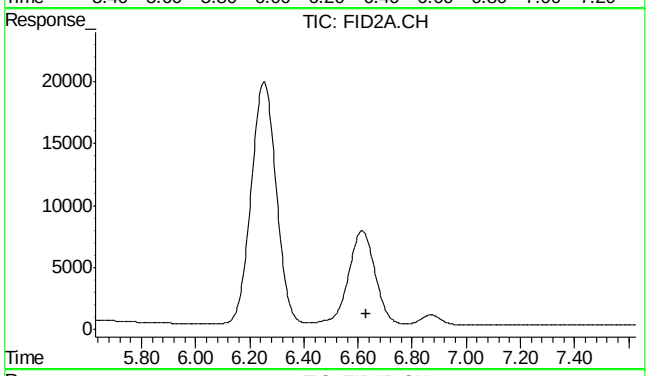


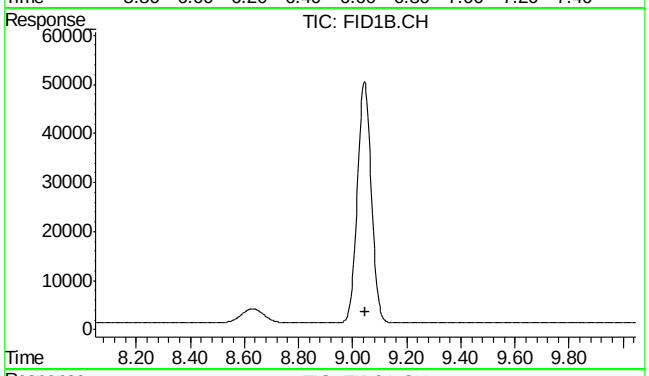
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



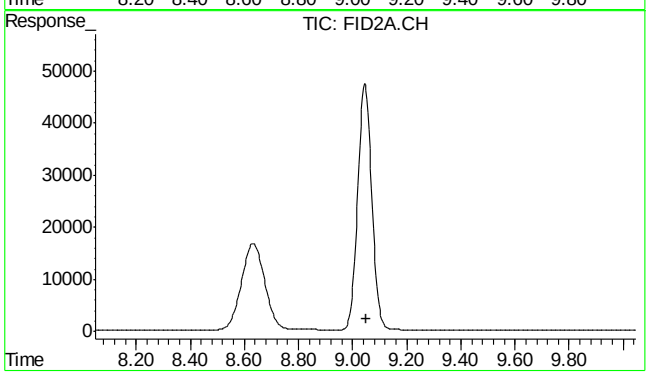
#3 Aromatic A

R.T.: 6.614 min
Delta R.T.: -0.014 min
Response: 517427
Conc: N.D.



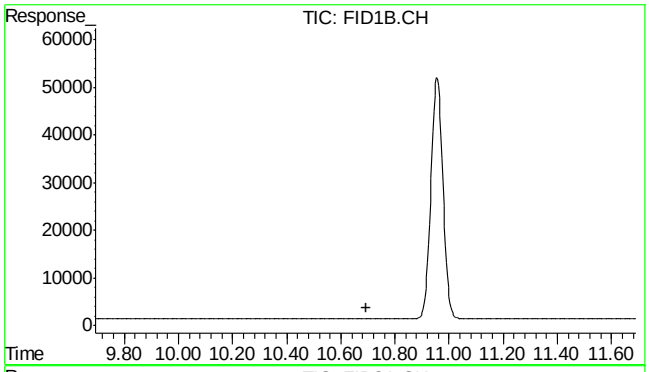
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



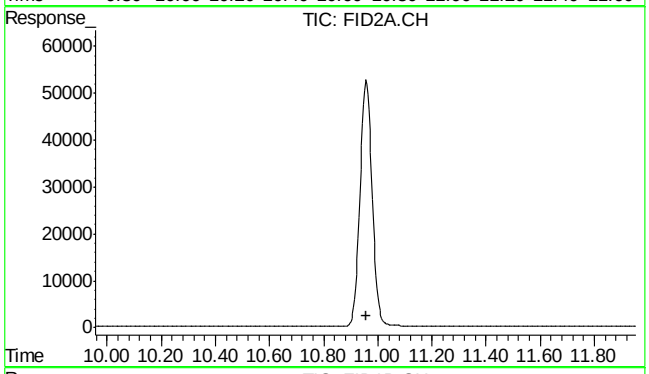
#4 Aromatic B

R.T.: 9.045 min
Delta R.T.: -0.004 min
Response: 1711610
Conc: N.D.



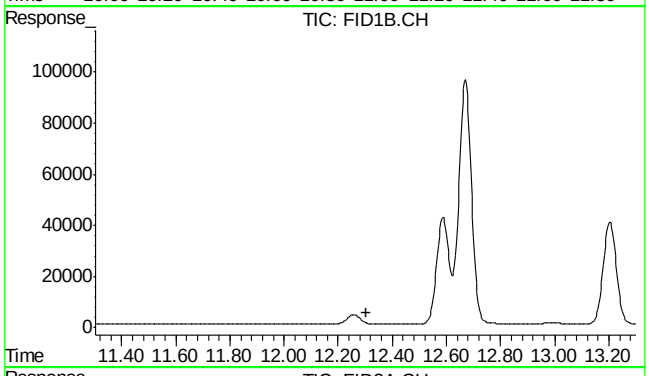
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



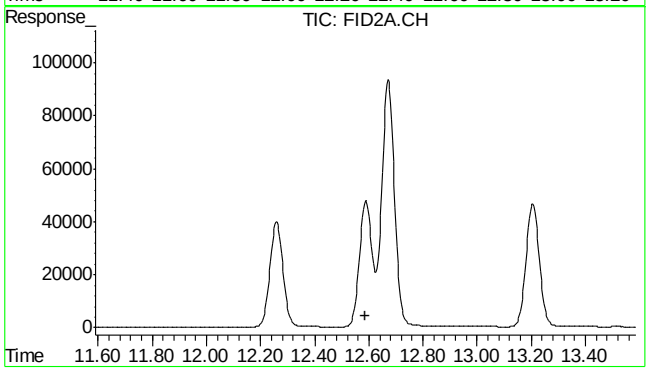
#5 Aromatic C

R.T.: 10.956 min
Delta R.T.: 0.000 min
Response: 1657597
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 12.588 min
Delta R.T.: 0.001 min
Response: 1536028
Conc: N.D.

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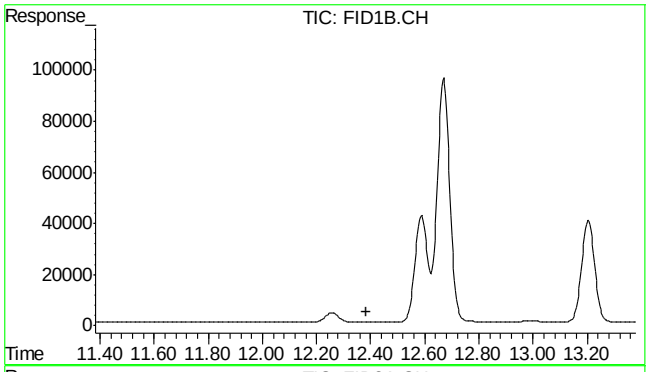
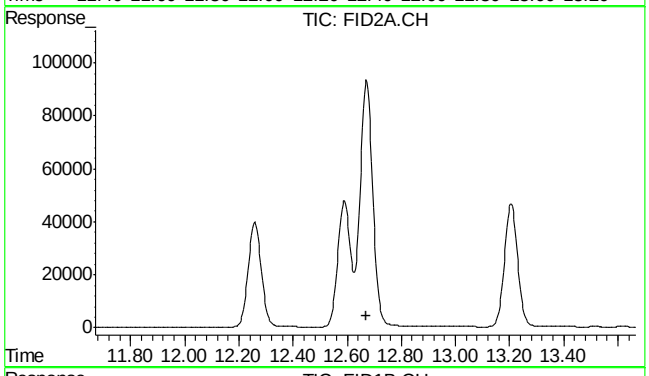


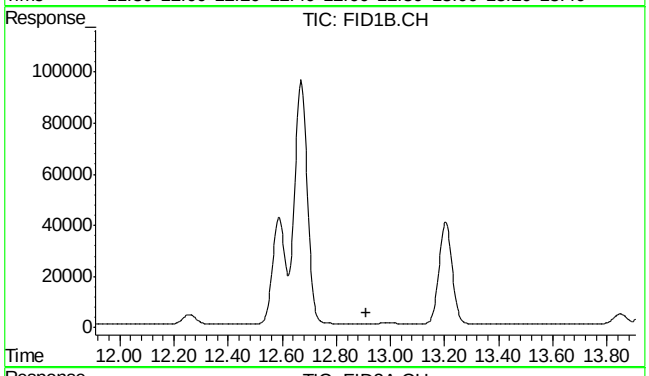
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



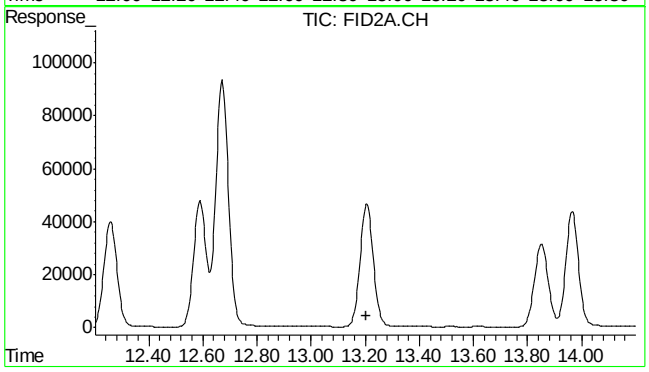
#7 Aromatic E

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 3004211
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

R.T.: 13.205 min
Delta R.T.: 0.002 min
Response: 1600969
Conc: N.D.

7.4.2

7

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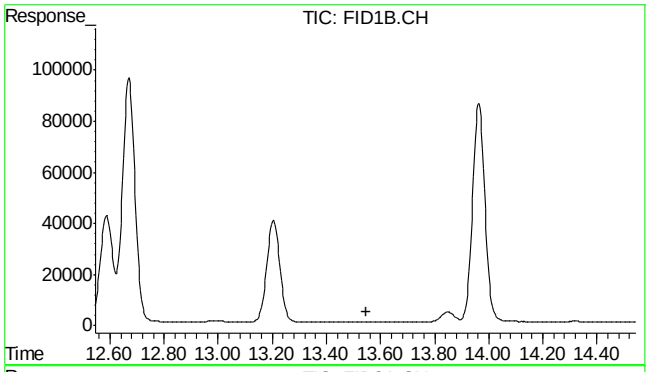
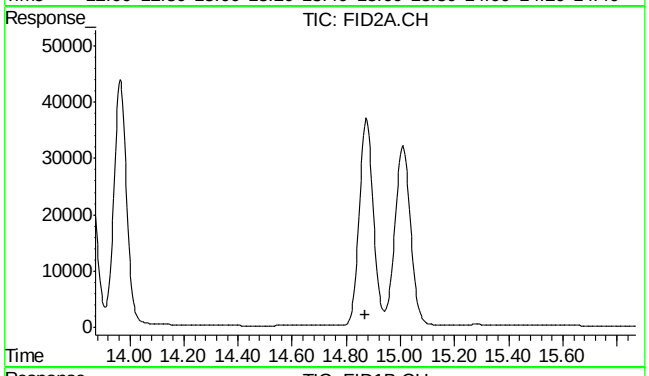


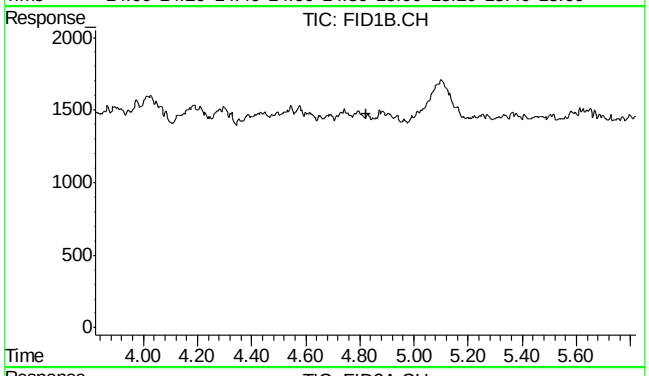
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



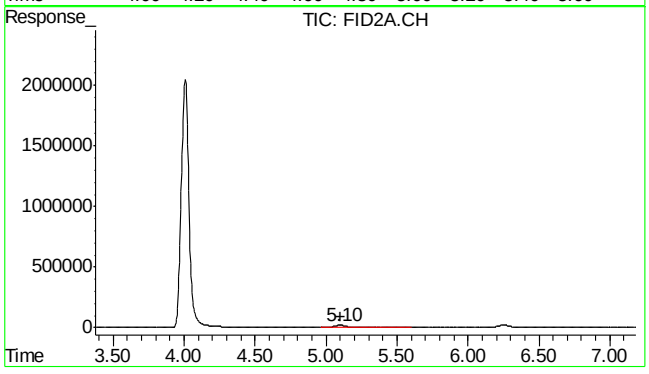
#9 Aromatic G

R.T.: 14.873 min
Delta R.T.: 0.002 min
Response: 1321474
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



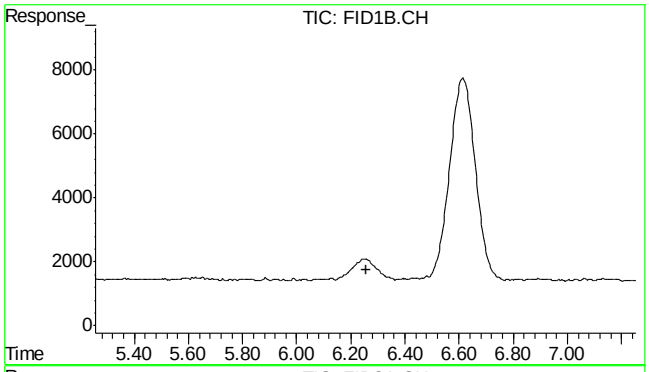
#10 Pentane

R.T.: 5.100 min
Delta R.T.: 0.000 min
Response: 1174332
Conc: 85.62 ug/L

7.4.2

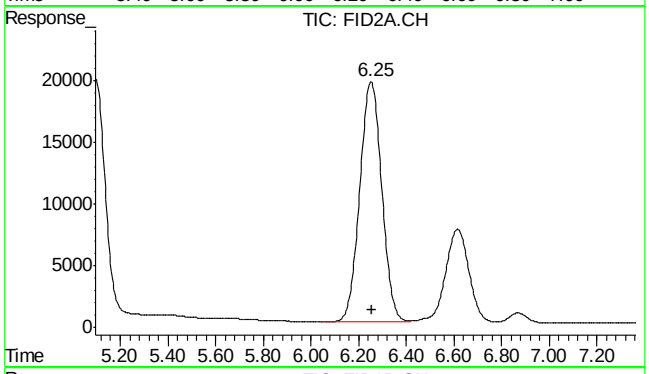
7

SGS ACCUTEST FA40754



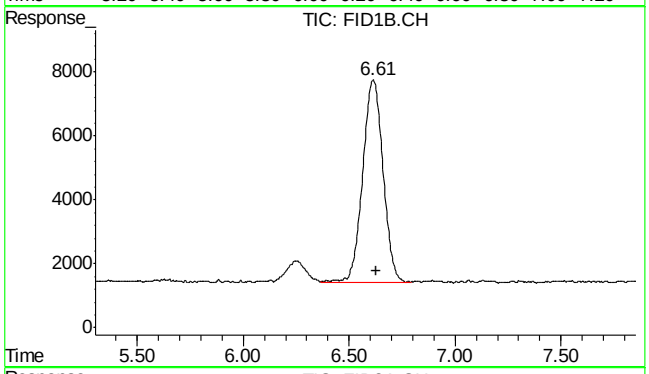
#11 2-Methylpentane

R.T.: 6.253 min
Delta R.T.: -0.003 min
Response: 46519
Conc: N.D.



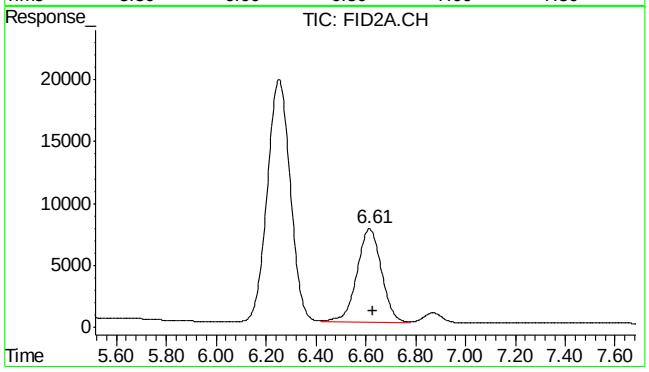
#11 2-Methylpentane

R.T.: 6.253 min
Delta R.T.: -0.003 min
Response: 1247471
Conc: 83.03 ug/L



#12 Methyl Tert Butyl Ether

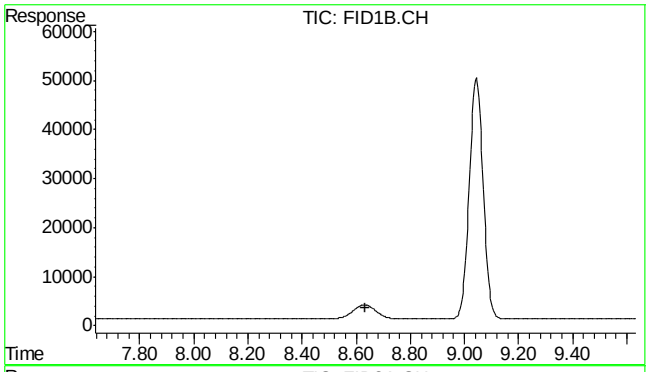
R.T.: 6.614 min
Delta R.T.: -0.015 min
Response: 423364
Conc: 78.47 ug/L



#12 Methyl Tert Butyl Ether

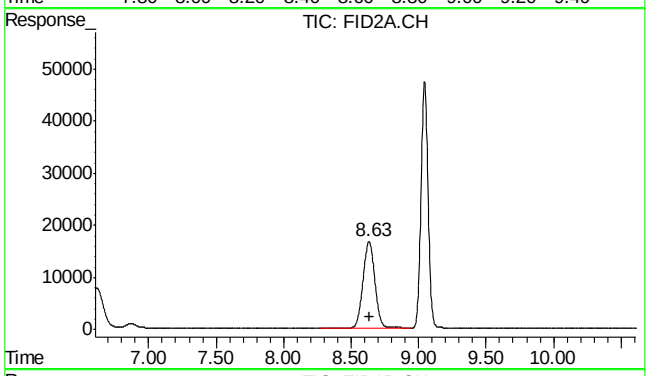
R.T.: 6.616 min
Delta R.T.: -0.012 min
Response: 516288
Conc: 78.94 ug/L

SGS ACCUTEST FA40754



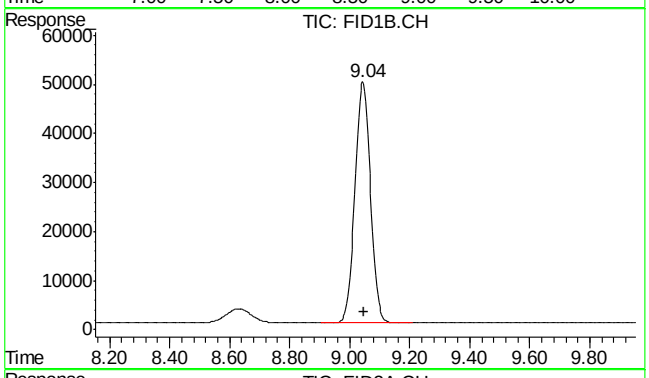
#13 2,2,4-Trimethylpentane

R.T.: 8.631 min
Delta R.T.: -0.003 min
Response: 170294
Conc: N.D.



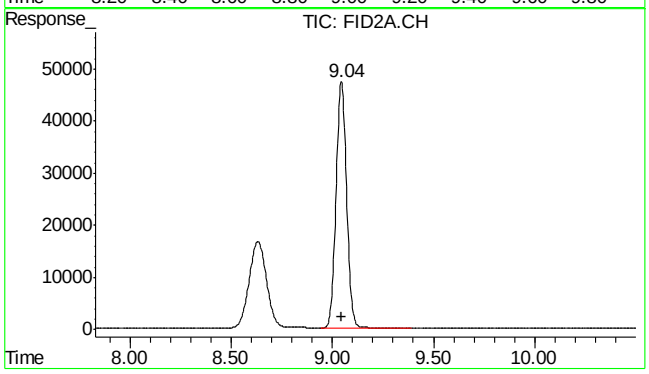
#13 2,2,4-Trimethylpentane

R.T.: 8.633 min
Delta R.T.: 0.000 min
Response: 1001552
Conc: 82.72 ug/L



#14 Benzene

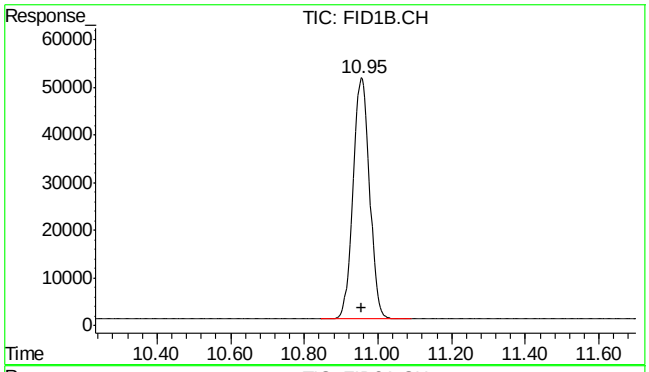
R.T.: 9.045 min
Delta R.T.: -0.001 min
Response: 1762496
Conc: 73.90 ug/L



#14 Benzene

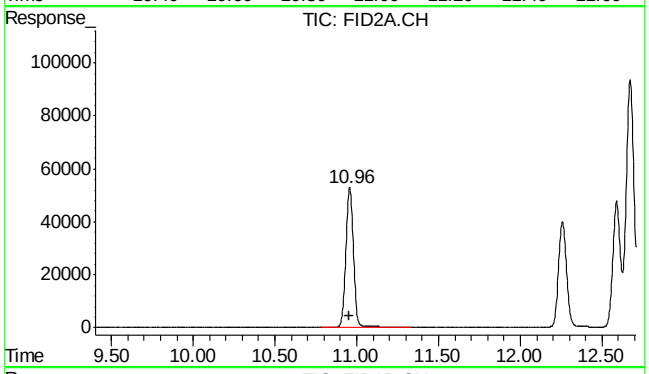
R.T.: 9.046 min
Delta R.T.: 0.000 min
Response: 1714121
Conc: 78.29 ug/L

SGS ACCUTEST FA40754



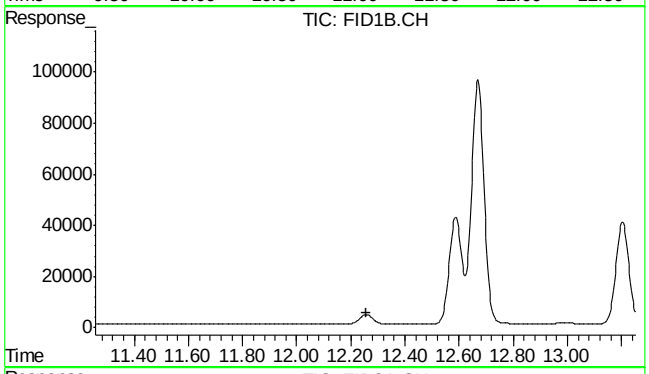
#15 Toluene

R.T.: 10.956 min
Delta R.T.: 0.001 min
Response: 1571487
Conc: 72.37 ug/L



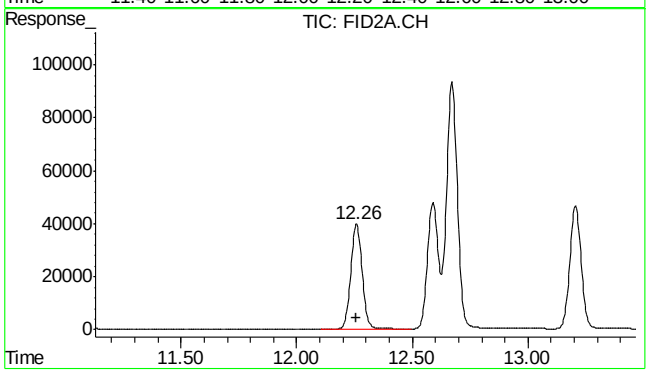
#15 Toluene

R.T.: 10.957 min
Delta R.T.: 0.002 min
Response: 1654299
Conc: 80.26 ug/L



#16 Nonane

R.T.: 12.258 min
Delta R.T.: 0.002 min
Response: 128590
Conc: N.D.



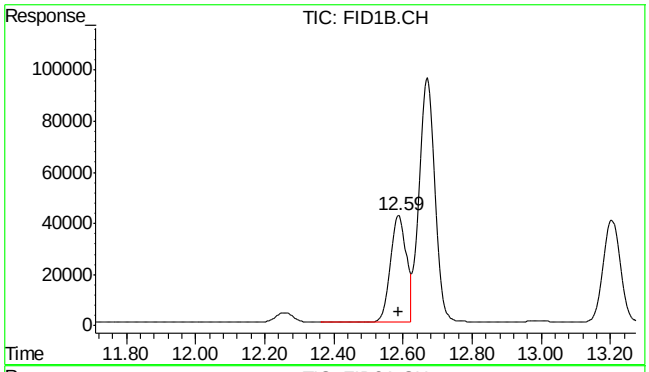
#16 Nonane

R.T.: 12.259 min
Delta R.T.: 0.003 min
Response: 1345488
Conc: 69.76 ug/L

7.4.2

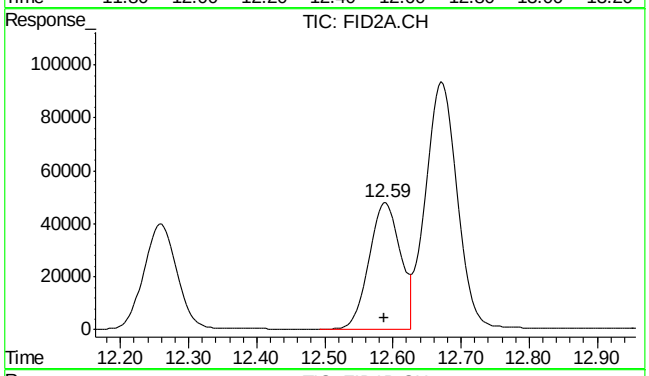
7

SGS ACCUTEST FA40754



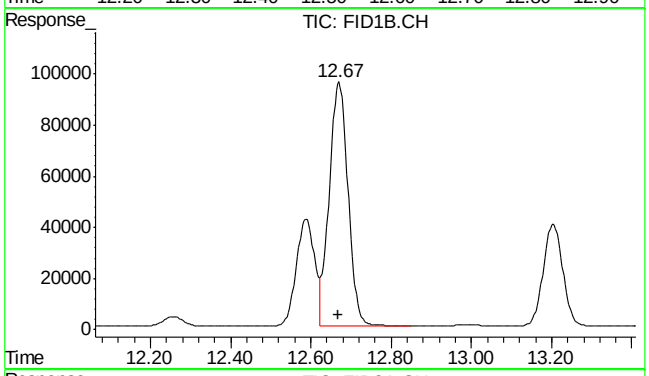
#17 Ethylbenzene

R.T.: 12.588 min
Delta R.T.: 0.002 min
Response: 1316528
Conc: 72.04 ug/L



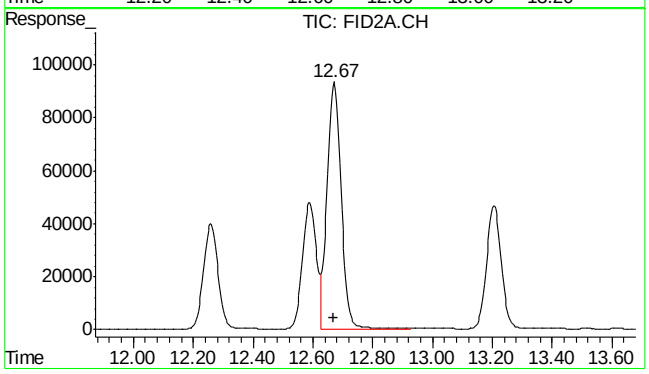
#17 Ethylbenzene

R.T.: 12.590 min
Delta R.T.: 0.003 min
Response: 1512209
Conc: 77.37 ug/L



#18 m,p-Xylene

R.T.: 12.670 min
Delta R.T.: 0.002 min
Response: 3122481
Conc: 141.17 ug/L



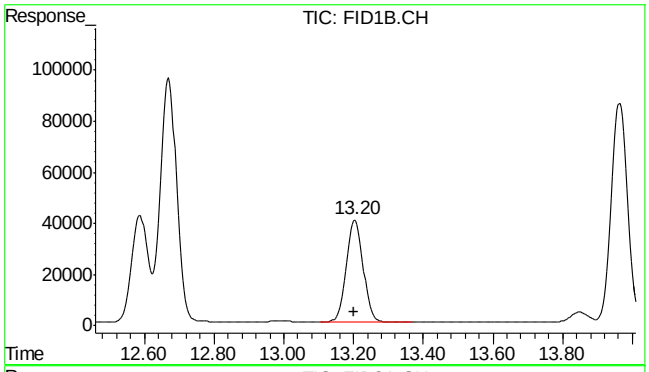
#18 m,p-Xylene

R.T.: 12.672 min
Delta R.T.: 0.003 min
Response: 3090686
Conc: 149.22 ug/L

7.4.2

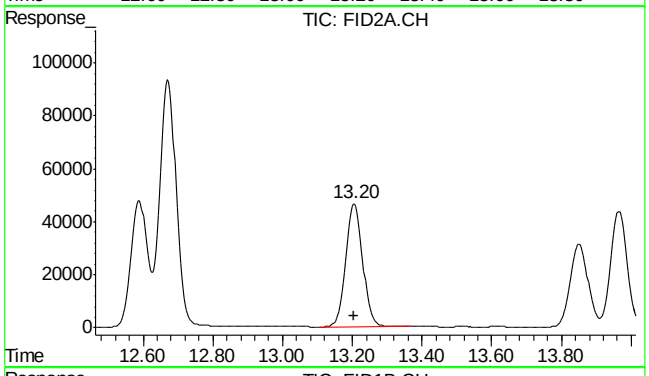
7

SGS ACCUTEST FA40754



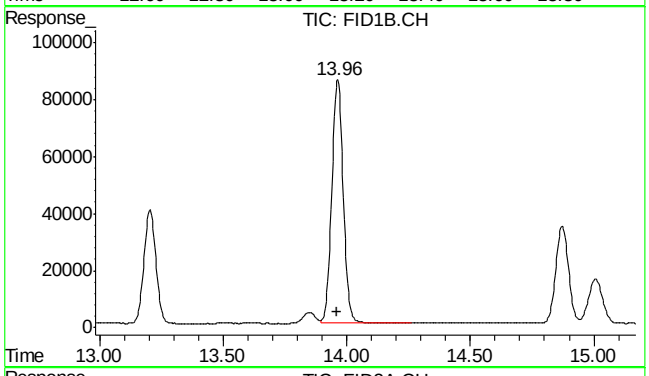
#19 o-Xylene

R.T.: 13.205 min
Delta R.T.: 0.002 min
Response: 1350481
Conc: 70.63 ug/L



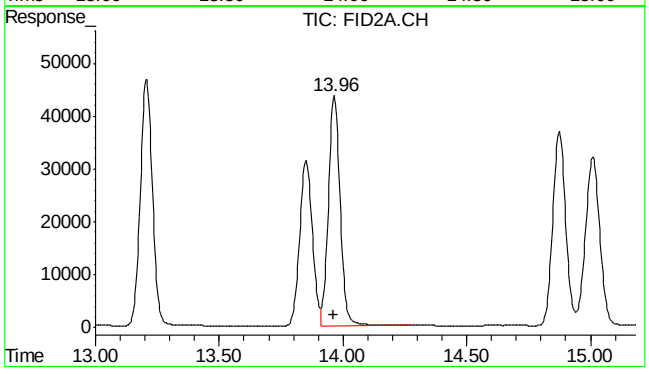
#19 o-Xylene

R.T.: 13.206 min
Delta R.T.: 0.003 min
Response: 1585035
Conc: 75.94 ug/L



#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 2752291
Conc: 149.94 ug/L



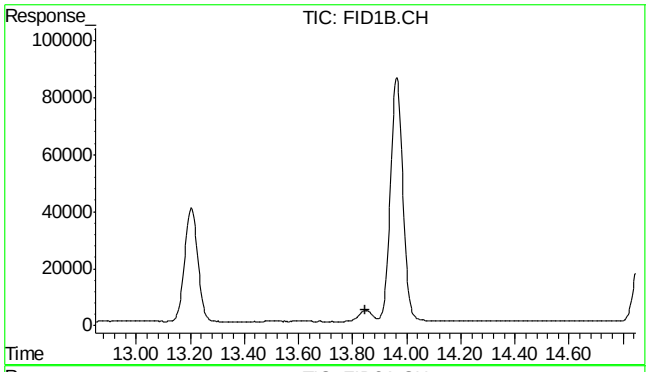
#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 1441109
Conc: 159.10 ug/L

7.4.2

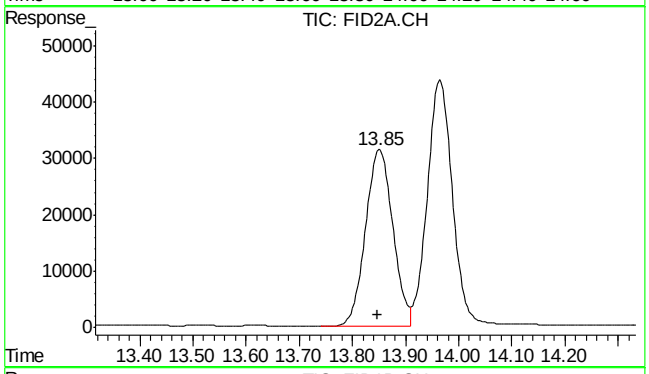
7

SGS ACCUTEST FA40754



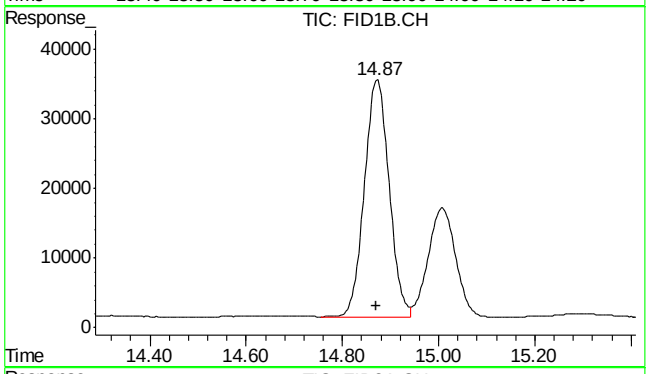
#21 Decane

R.T.: 13.850 min
Delta R.T.: 0.002 min
Response: 134325
Conc: N.D.



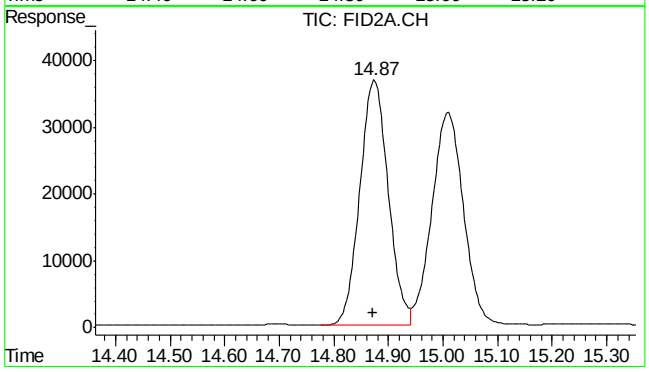
#21 Decane

R.T.: 13.852 min
Delta R.T.: 0.004 min
Response: 1114879
Conc: 61.92 ug/L



#22 1,2,4-Trimethylbenzene

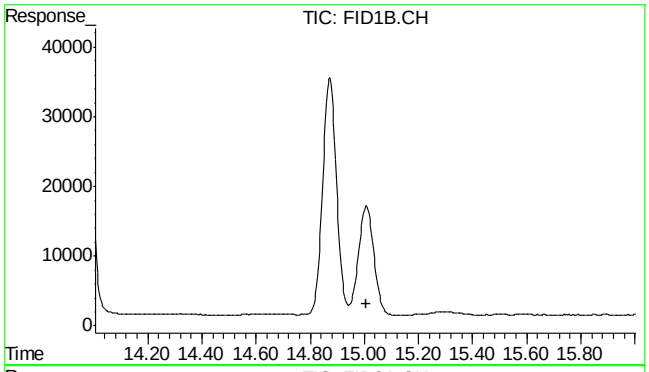
R.T.: 14.873 min
Delta R.T.: 0.003 min
Response: 1217971
Conc: 60.90 ug/L



#22 1,2,4-Trimethylbenzene

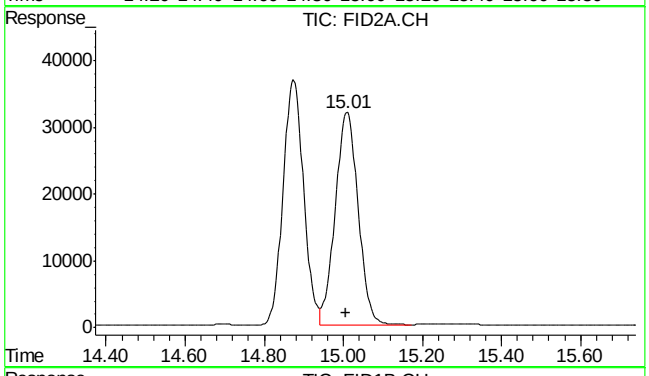
R.T.: 14.875 min
Delta R.T.: 0.004 min
Response: 1322969
Conc: 65.61 ug/L

SGS ACCUTEST FA40754



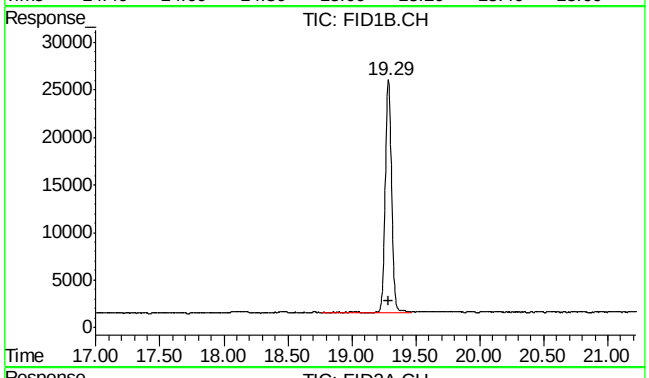
#23 Butylcyclohexane

R.T.: 15.008 min
Delta R.T.: 0.002 min
Response: 622406
Conc: N.D.



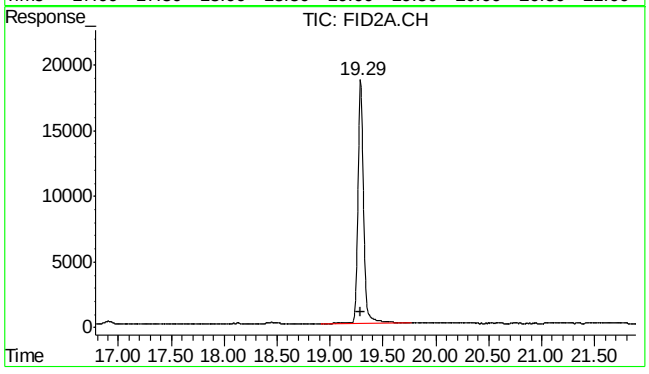
#23 Butylcyclohexane

R.T.: 15.010 min
Delta R.T.: 0.004 min
Response: 1282867
Conc: 61.49 ug/L



#24 Naphthalene

R.T.: 19.287 min
Delta R.T.: 0.003 min
Response: 844707
Conc: 68.29 ug/L



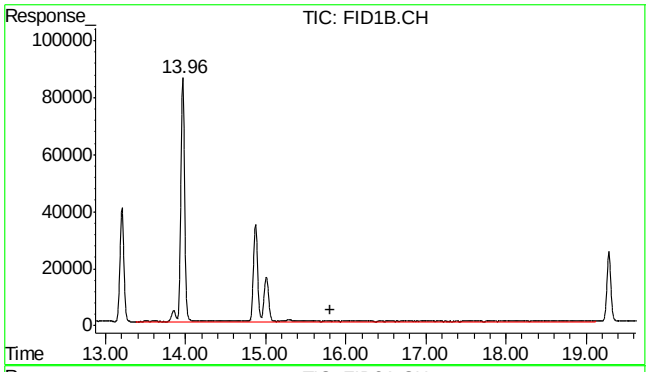
#24 Naphthalene

R.T.: 19.289 min
Delta R.T.: 0.003 min
Response: 678308
Conc: 71.43 ug/L

7.4.2

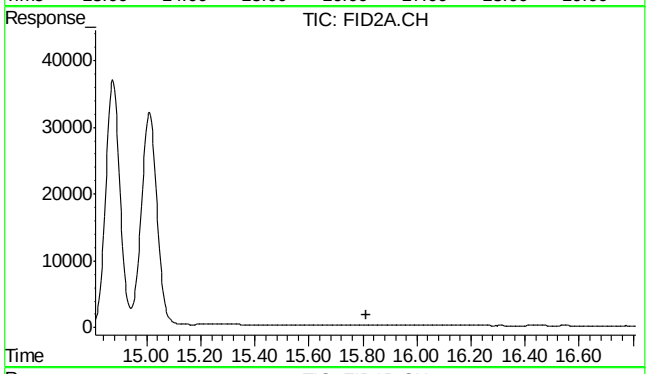
7

SGS ACCUTEST FA40754



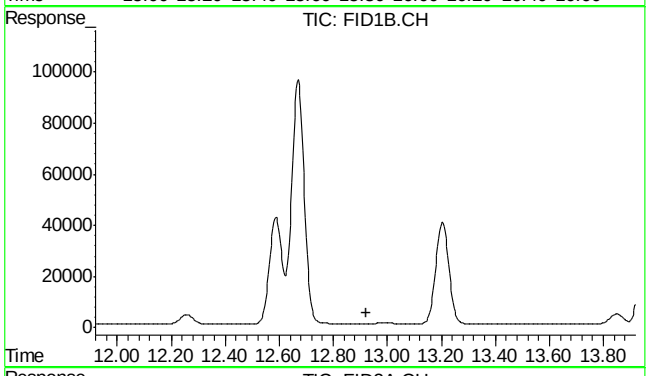
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 1674011
Conc: 68.95 ug/L m



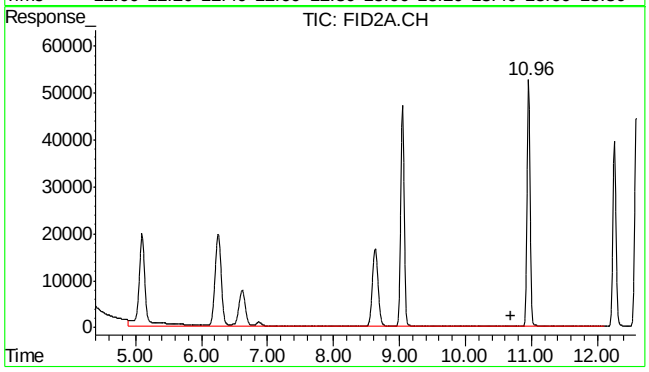
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2530653
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

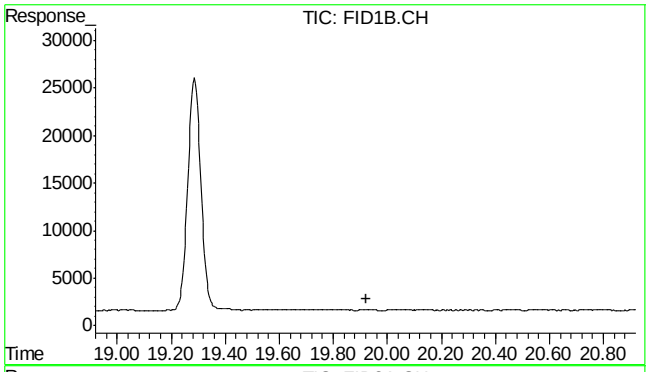
R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 10230173
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

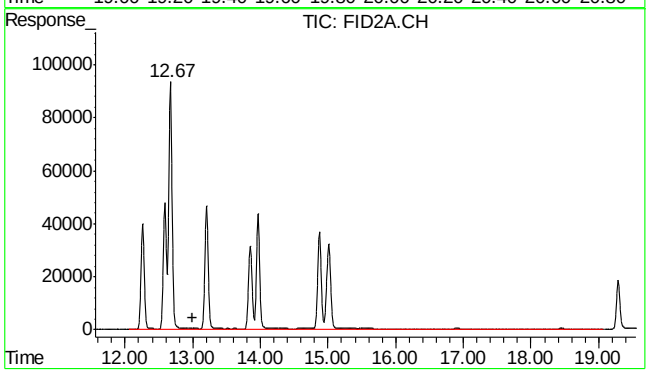
R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 3962009
Conc: 281.39 ug/L m

SGS ACCUTEST FA40754



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 2567942
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 4111451
Conc: 204.09 ug/L m

7.4.2

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077761.D\FID1B.CH Vial: 30
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077761.D\FID2A.CH
Acq On : 01-Feb-2017, 00:15:48 Operator: antonioc
Sample : fa40754-2dup Inst : HP5890
Misc : gc19636,guv4134,4.87,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:04:08 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	0.00	0.00	0	0	N.D.	N.D.
2)	S	Alkane B	0.00	0.00	0	0	N.D.	N.D.
3)	S	Aromatic A	0.00	0.00	0	0	N.D.	N.D.
4)	S	Aromatic B	0.00	0.00	0	0	N.D.	N.D.
5)	S	Aromatic C	0.00	0.00	0	0	N.D.	N.D.
6)	S	Aromatic D	0.00	0.00	0	0	N.D.	N.D.
7)	S	Aromatic E	0.00	0.00	0	0	N.D.	N.D.
8)	S	Aromatic F	0.00	0.00	0	0	N.D.	N.D.
9)	S	Aromatic G	0.00	0.00	0	0	N.D.	N.D.
20)	S	BFB	13.96	13.96	3107965	1612039	169.320	177.969
		Spiked Amount 200.000 Range 70 - 130 Recovery =					84.66%	88.98%
		Target Compounds						
10)		Pentane	0.00	0.00	0	0	N.D.	N.D.
11)		2-Methylpentane	0.00	0.00	0	0	N.D.	N.D.
12)		Methyl Tert Buty	0.00	0.00	0	0	N.D. d	N.D. d
13)		2,2,4-Trimethylp	0.00	0.00	0	0	N.D.	N.D.
14)		Benzene	0.00	0.00	0	0	N.D.	N.D.
15)		Toluene	0.00	0.00	0	0	N.D.	N.D.
16)		Nonane	0.00	0.00	0	0	N.D.	N.D.
17)		Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
18)		m,p-Xylene	0.00	0.00	0	0	N.D.	N.D.
19)		o-Xylene	0.00	0.00	0	0	N.D.	N.D.
21)		Decane	0.00	0.00	0	0	N.D.	N.D.
22)		1,2,4-Trimethylb	0.00	0.00	0	0	N.D.	N.D.
23)		Butylcyclohexane	0.00	0.00	0	0	N.D.	N.D.
24)		Naphthalene	0.00	0.00	0	0	N.D.	N.D.
25)	H	C9- C10 Aromatic	15.81	15.81	468599	131217	8.430	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	508408	615280	NoCal	9.654 #
27)	H	C9- C12 Aliphati	19.92	13.00	562927	164542	NoCal	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077761.D VPH011317.M Fri Feb 03 13:19:03 2017

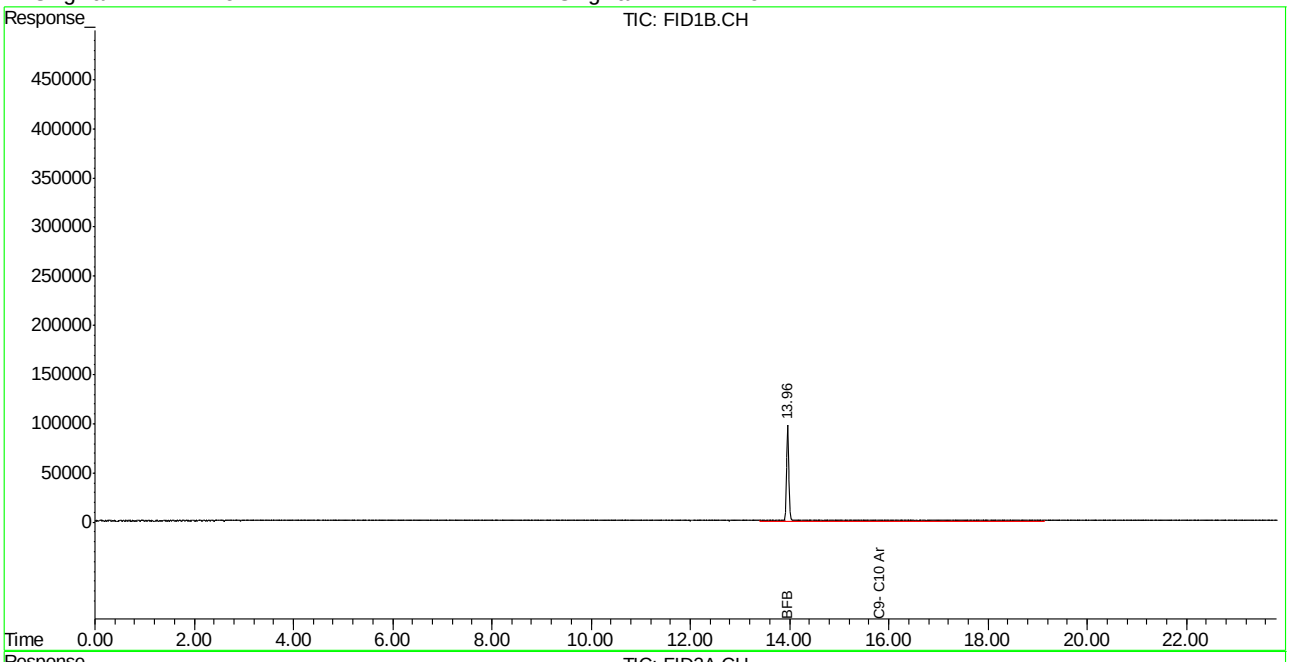
SGS ACCUTEST FA40754

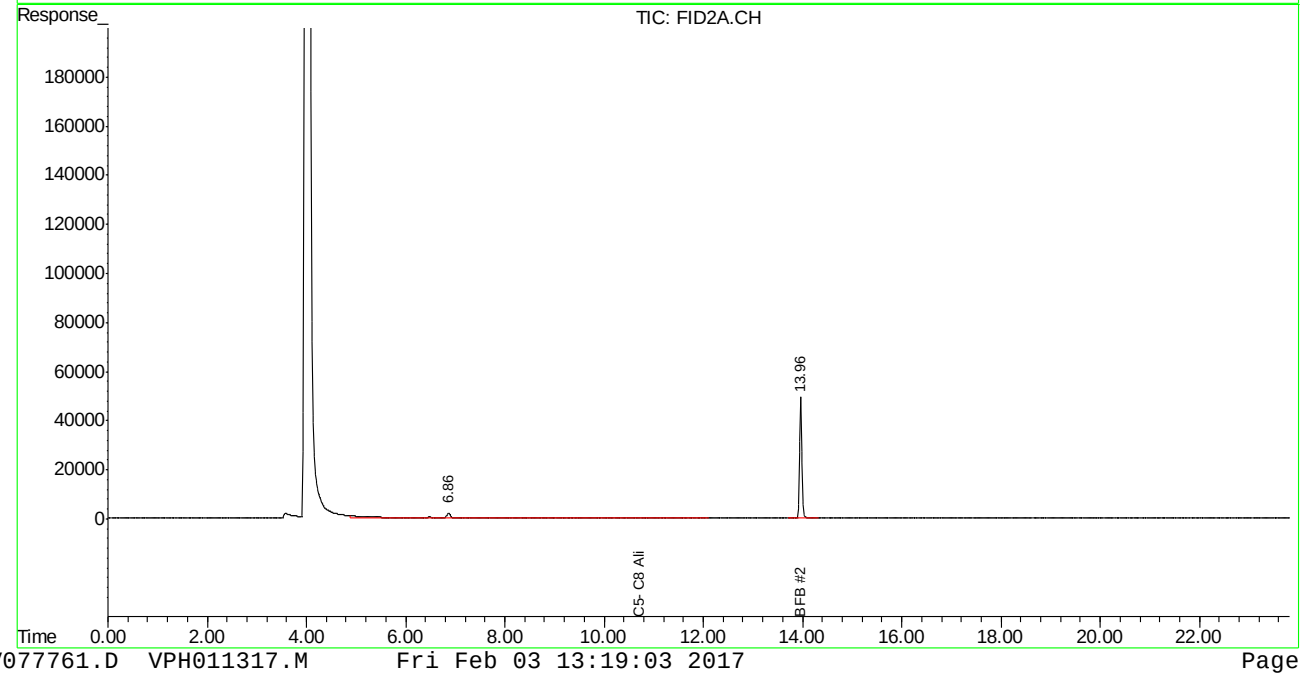
Quantitation Report (QT Reviewed)

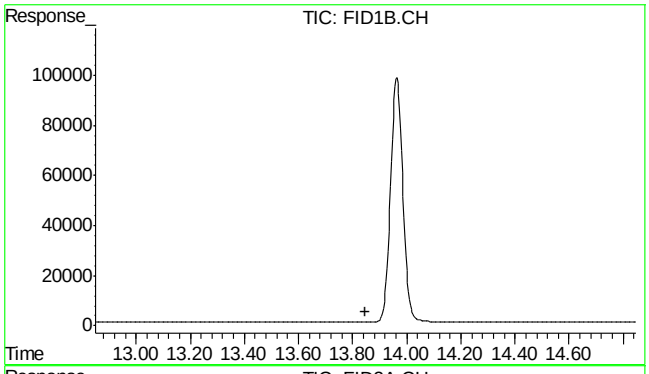
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077761.D\FID1B.CH Vial: 30
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077761.D\FID2A.CH
Acq On : 01-Feb-2017, 00:15:48 Operator: antonioc
Sample : fa40754-2dup Inst : HP5890
Misc : gc19636,guv4134,4.87,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 3 12:04 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

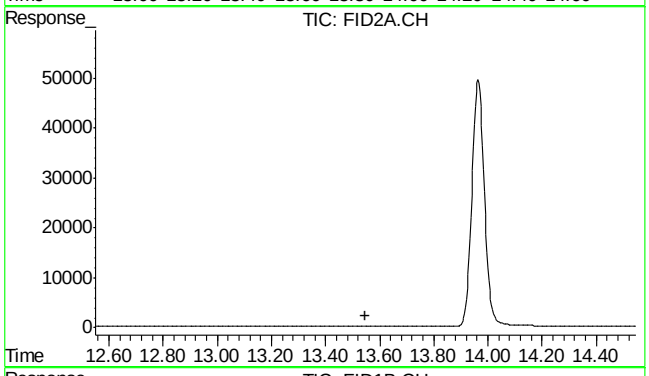






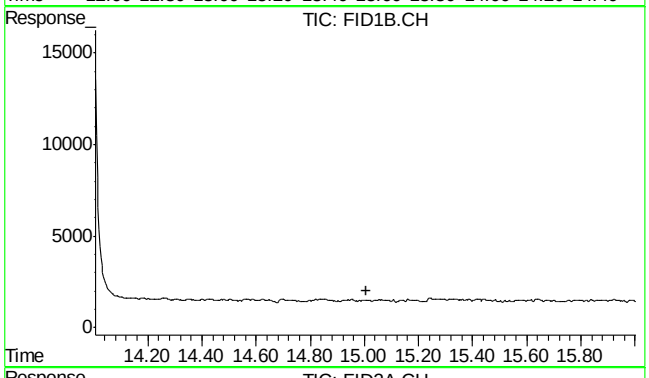
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.847 min
Response: 0
Conc: N.D.



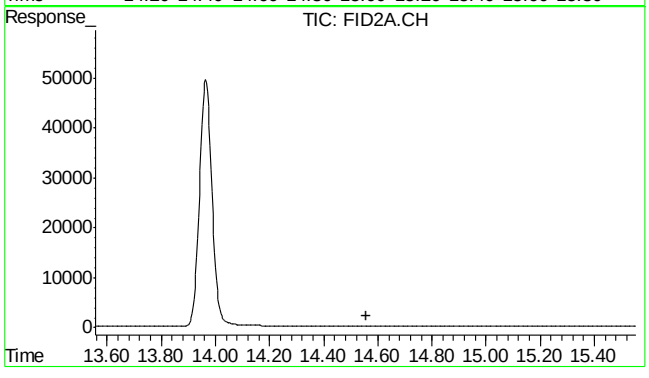
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



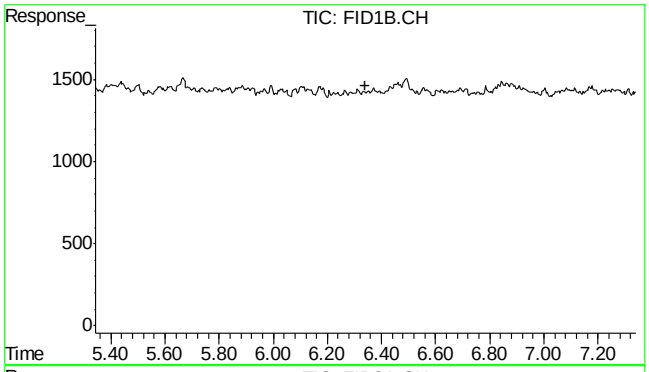
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



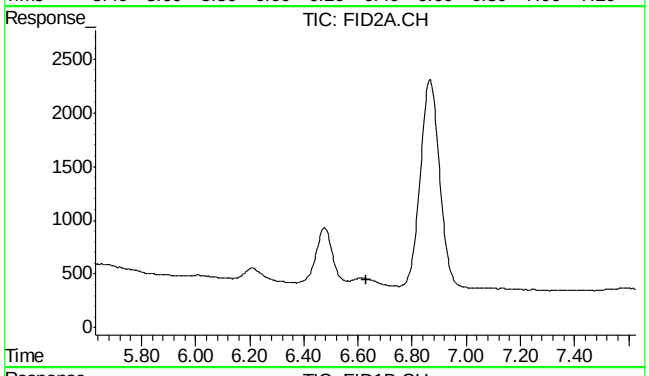
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.



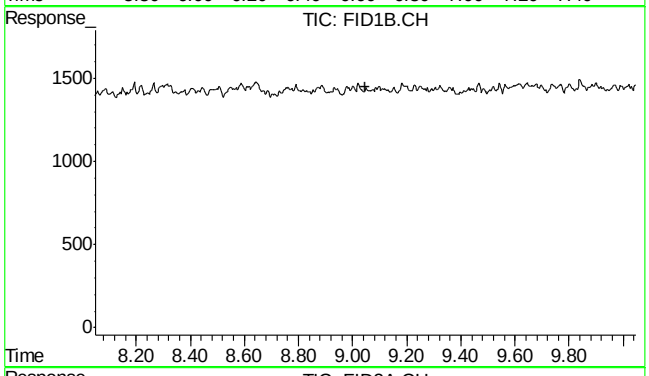
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



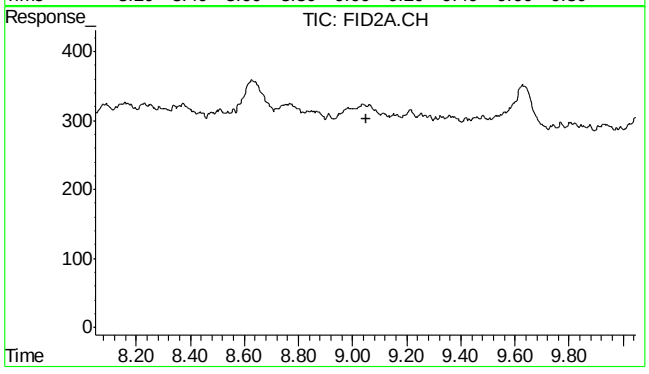
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



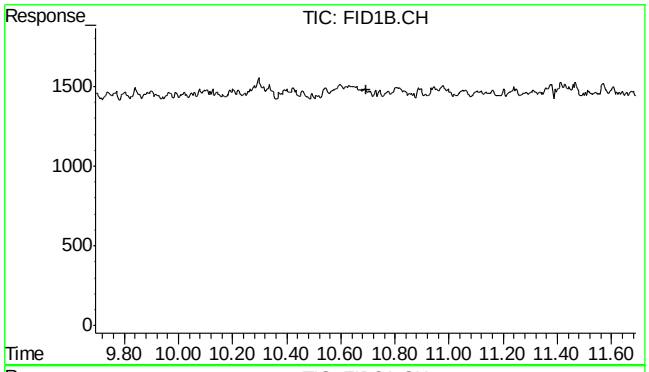
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



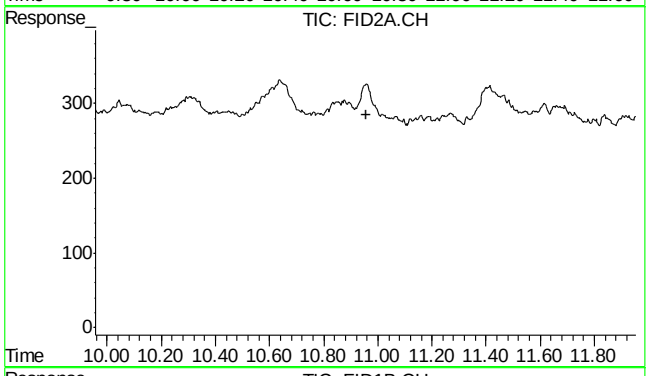
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.049 min
Response: 0
Conc: N.D.



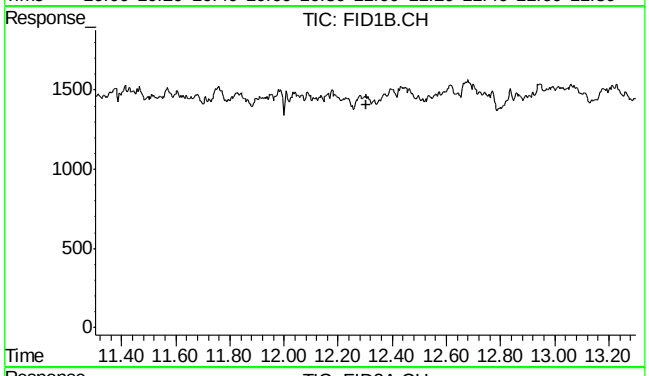
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



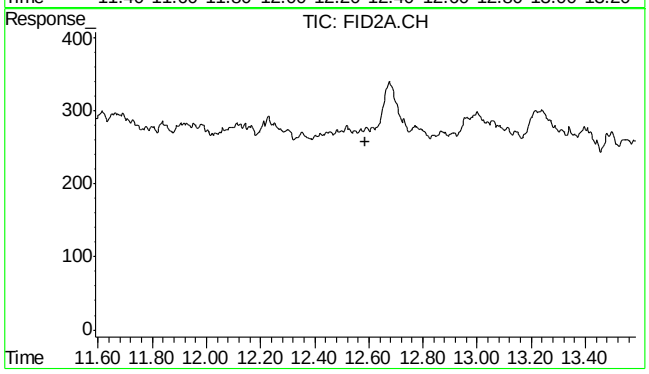
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.956 min
Response: 0
Conc: N.D.



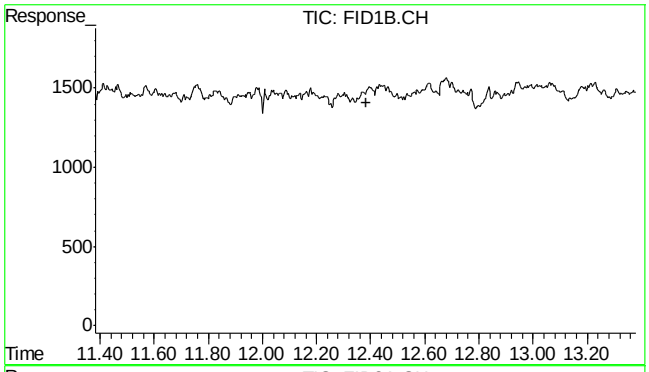
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



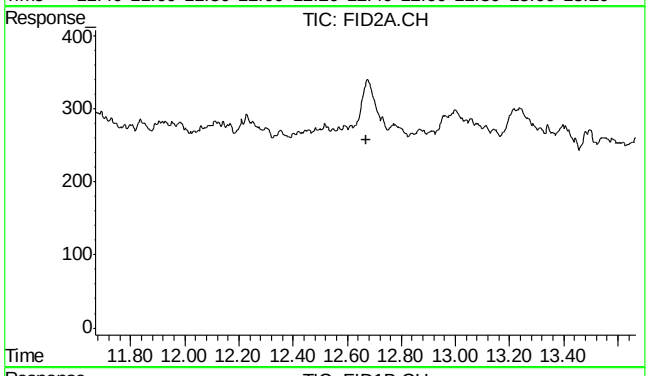
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



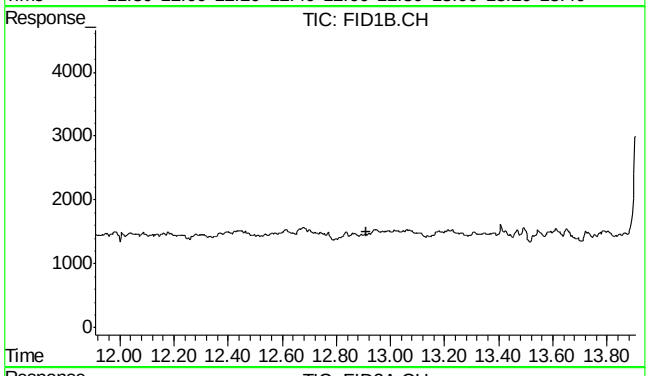
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



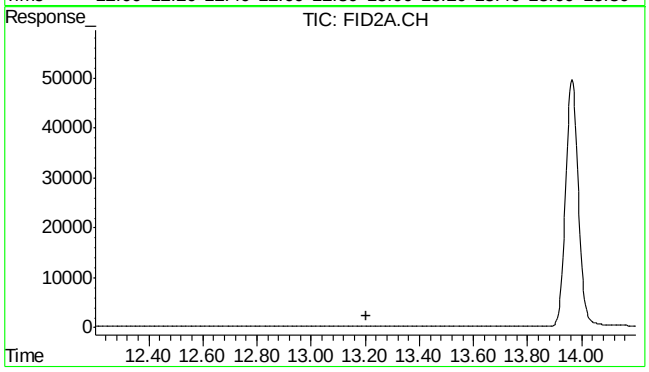
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



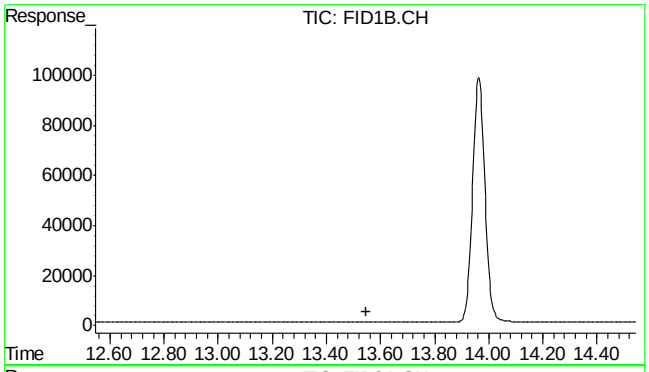
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



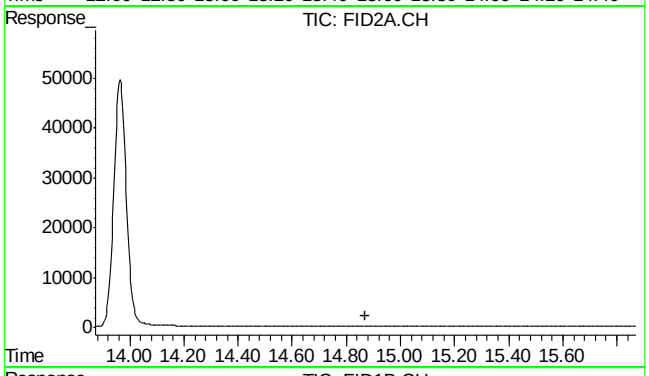
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



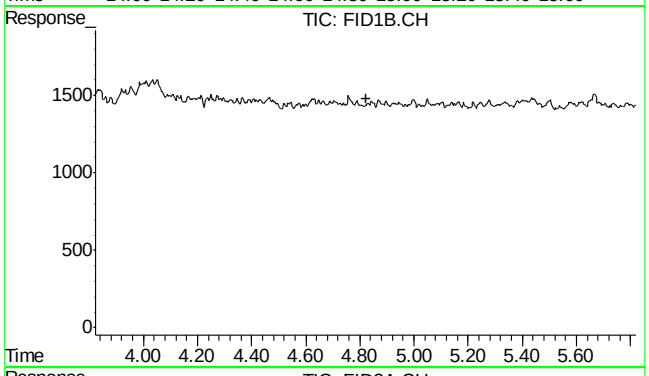
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



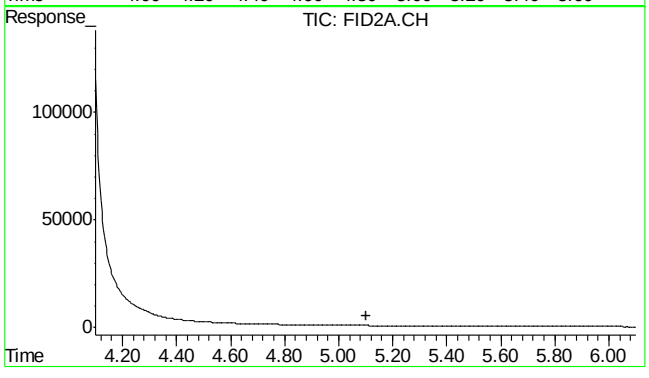
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 5.100 min
Response: 0
Conc: N.D.

7.5.1

7

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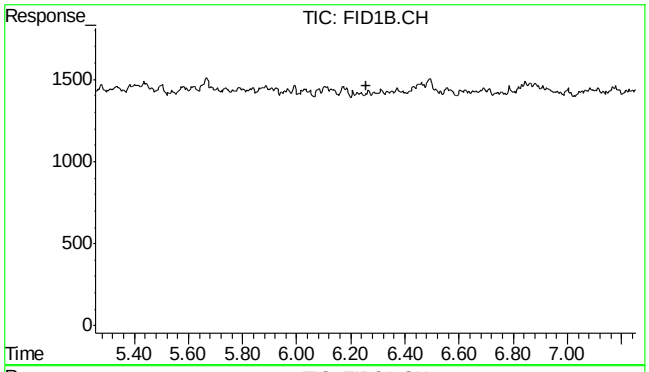
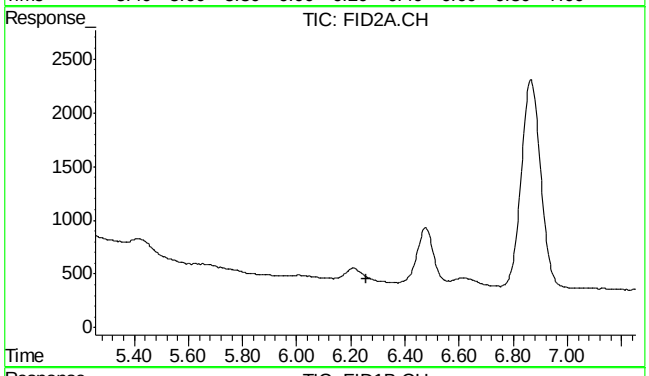


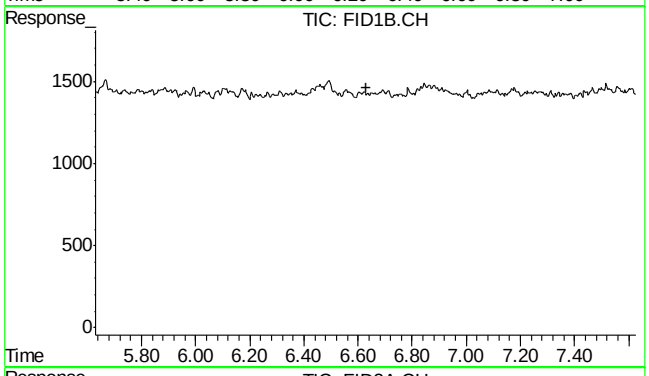
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



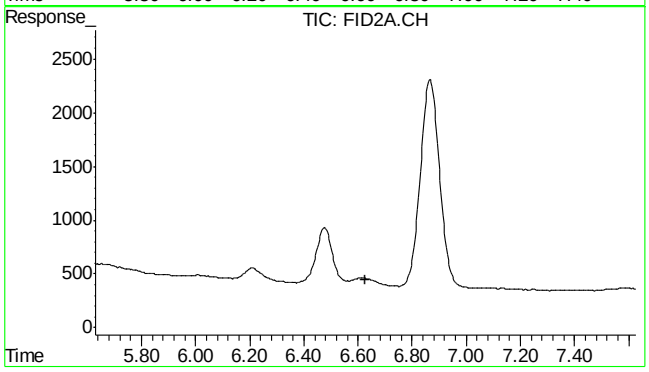
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



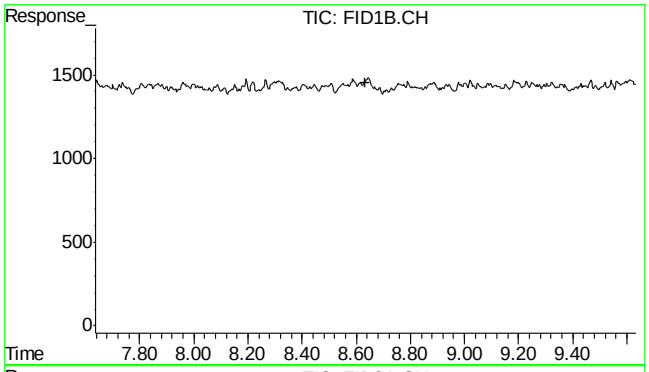
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



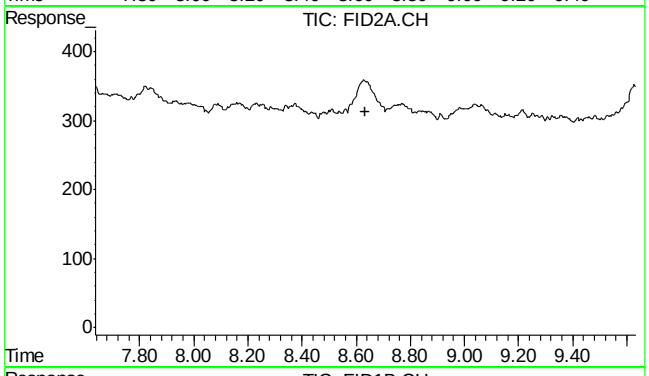
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.628 min
Response: 0
Conc: N.D.



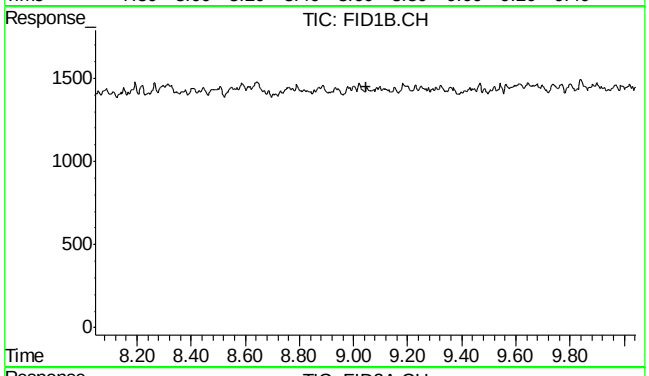
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



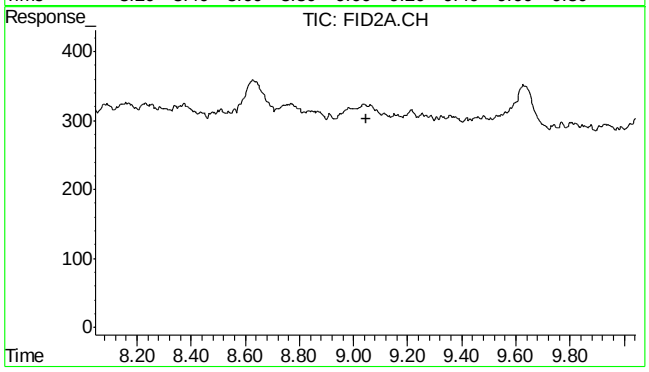
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



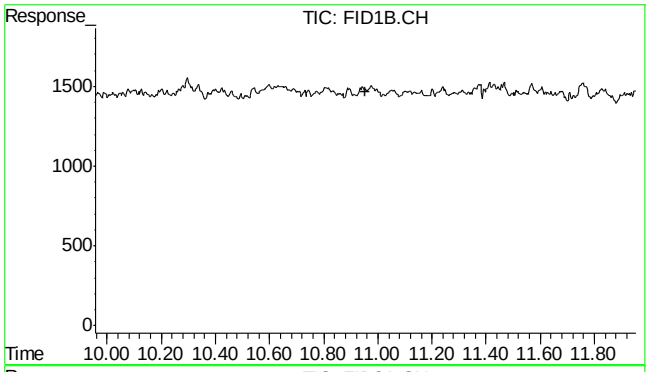
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



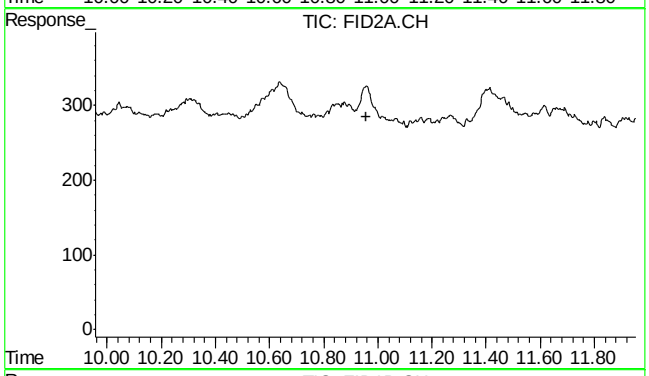
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



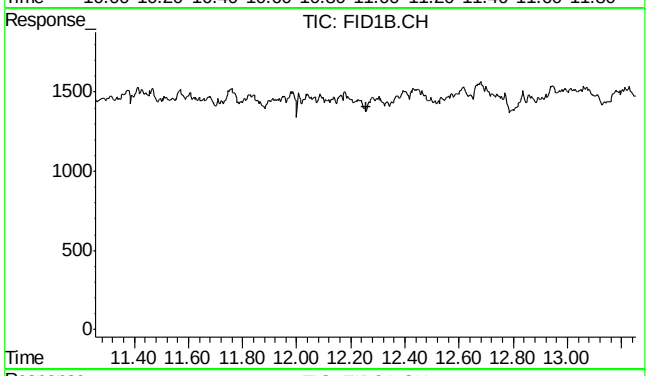
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



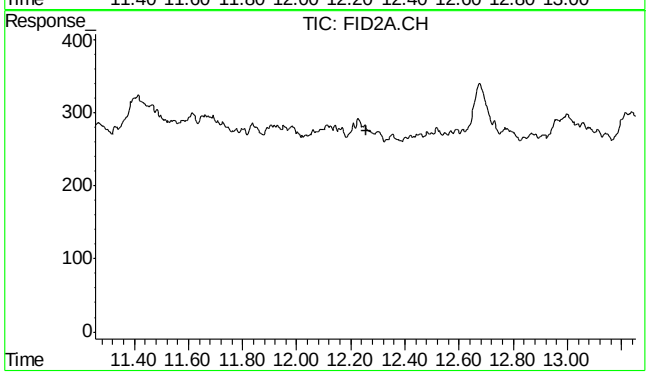
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



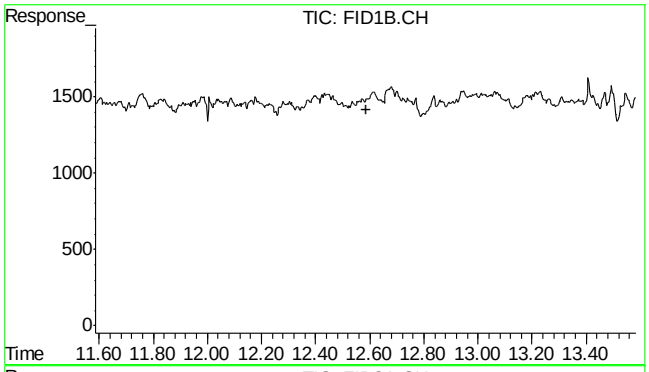
#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



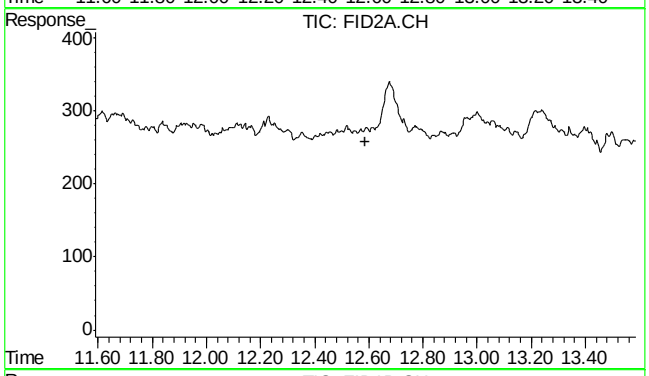
#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



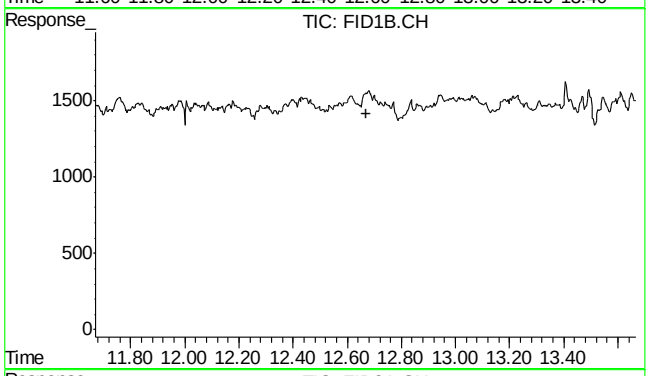
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.586 min
Response: 0
Conc: N.D.



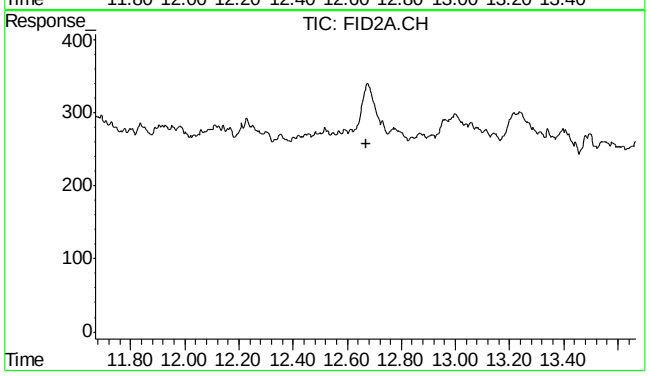
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



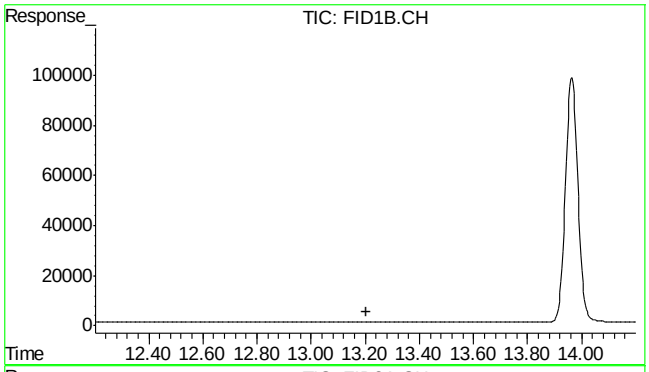
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



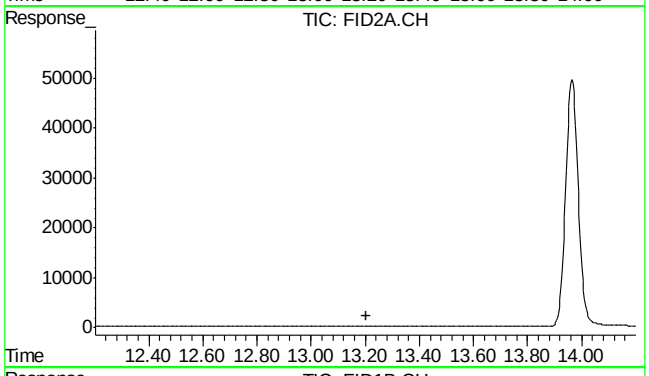
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



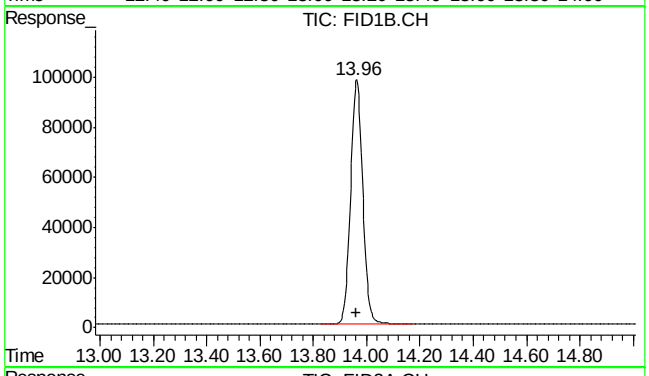
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



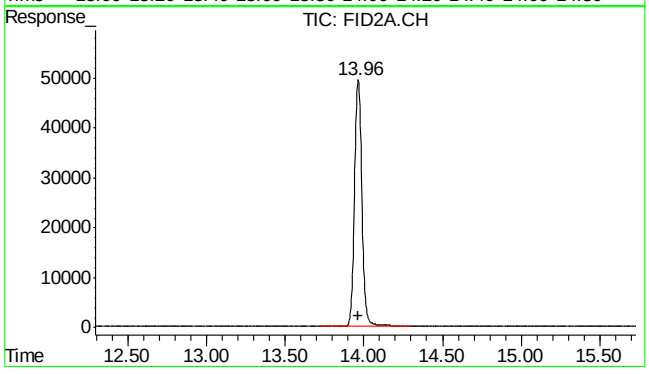
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



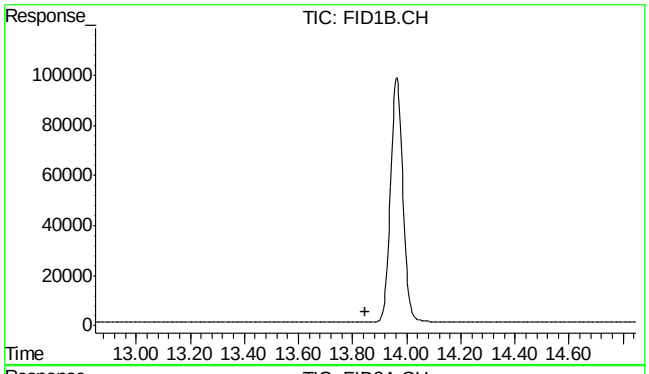
#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 3107965
Conc: 169.32 ug/L



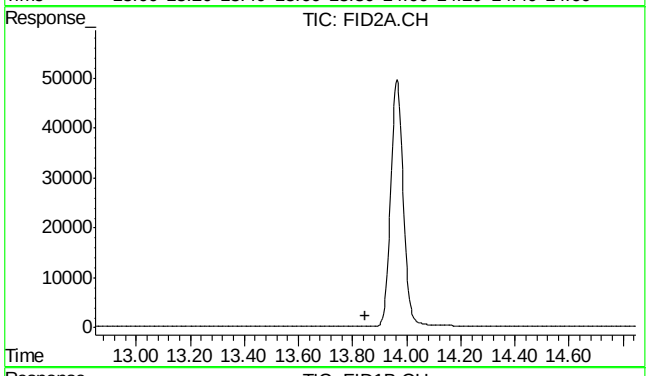
#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 1612039
Conc: 177.97 ug/L



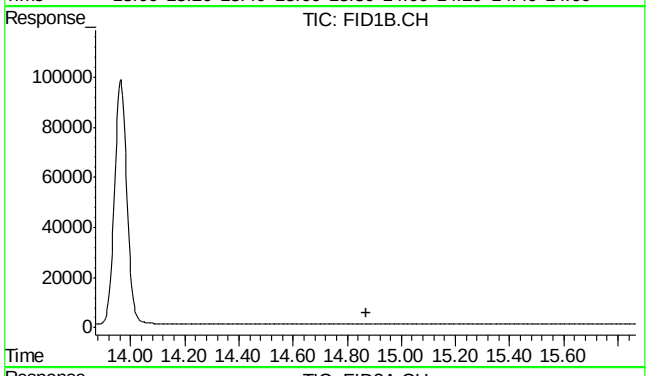
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



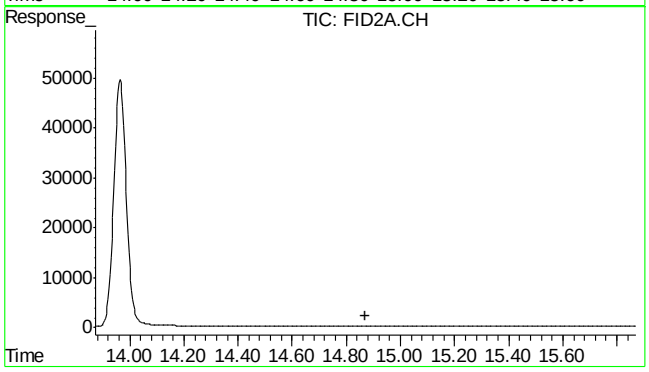
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.870 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.

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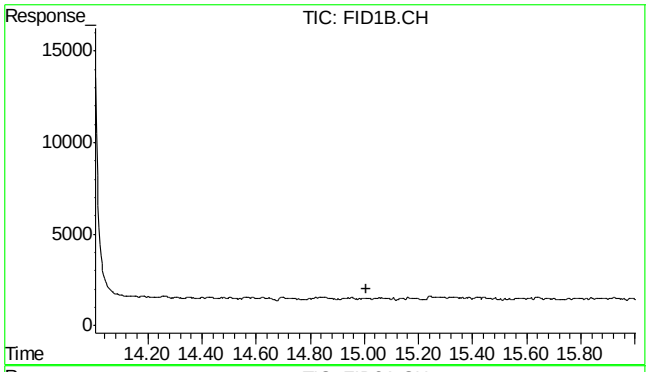
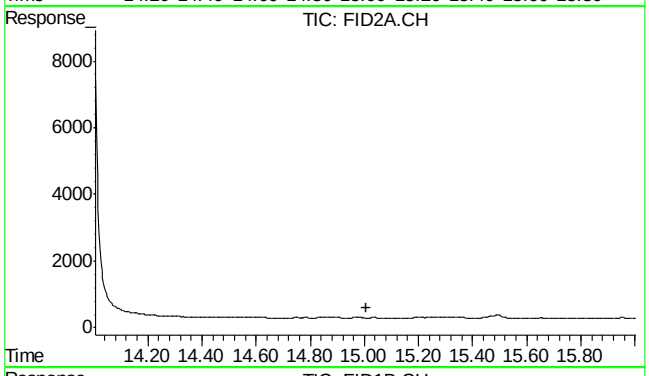


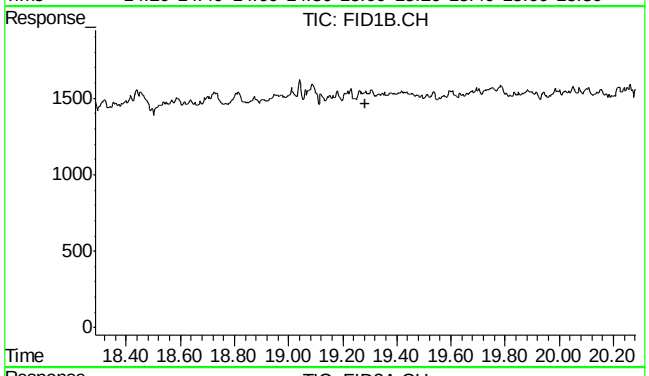
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



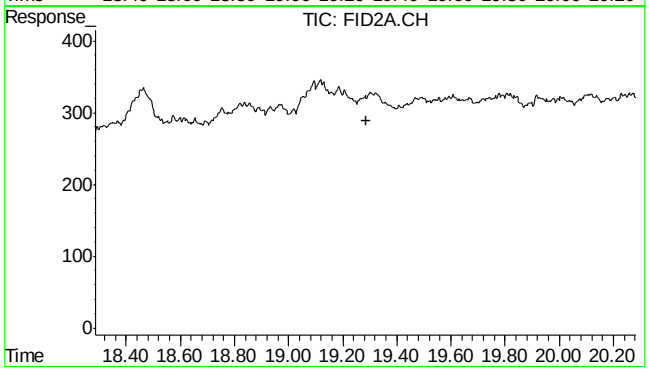
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



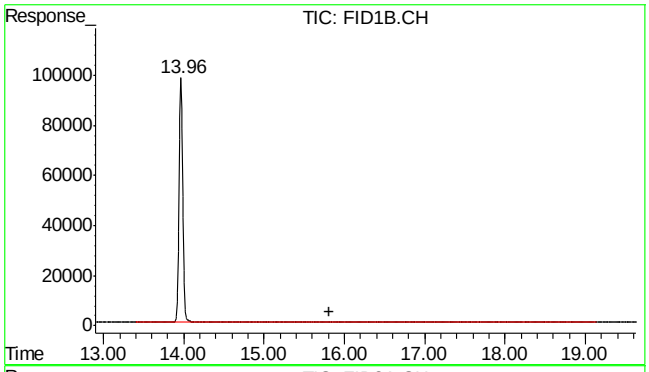
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.284 min
Response: 0
Conc: N.D.



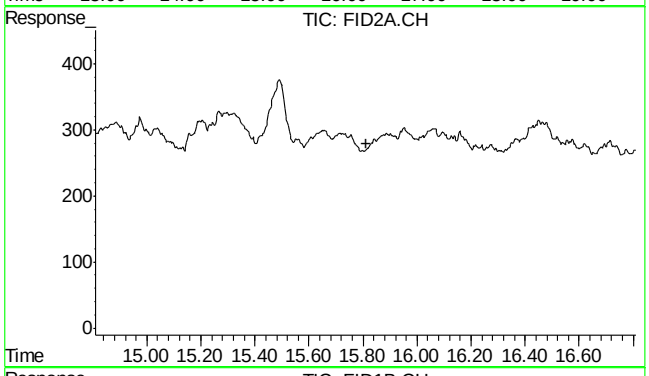
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.286 min
Response: 0
Conc: N.D.



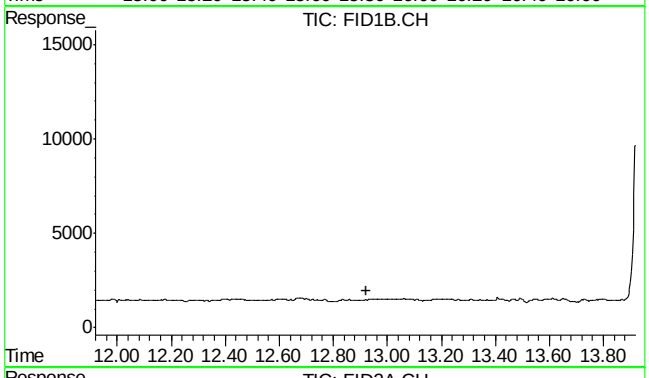
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 468599
Conc: 8.43 ug/L m



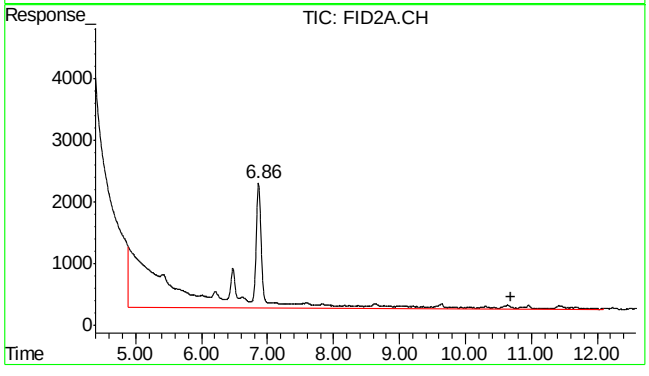
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 131217
Conc: N.D.



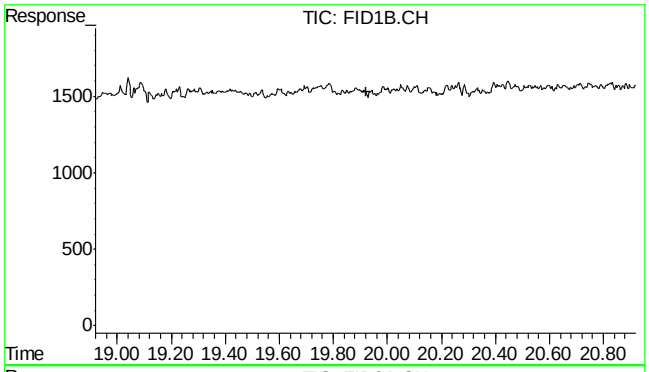
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 508408
Conc: N.D.



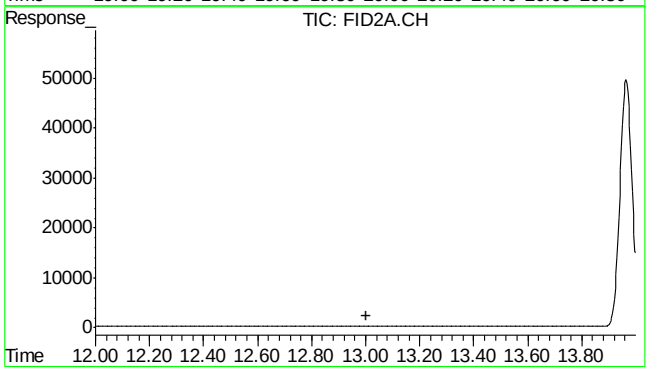
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 615280
Conc: 9.65 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 562927
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 164542
Conc: N.D.

7.5.1

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077779.D\FID1B.CH Vial: 48
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077779.D\FID2A.CH
Acq On : 01-Feb-2017, 09:28:37 Operator: antonioc
Sample : fa40755-3dup Inst : HP5890
Misc : gc19636,guv4135,4.18,,100,15.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 02 18:01:45 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	0.00	0.00	0	0	N.D.	N.D.
2)	S	Alkane B	0.00	0.00	0	0	N.D.	N.D.
3)	S	Aromatic A	0.00	0.00	0	0	N.D.	N.D.
4)	S	Aromatic B	0.00	0.00	0	0	N.D.	N.D.
5)	S	Aromatic C	0.00	0.00	0	0	N.D.	N.D.
6)	S	Aromatic D	0.00	0.00	0	0	N.D.	N.D.
7)	S	Aromatic E	0.00	0.00	0	0	N.D.	N.D.
8)	S	Aromatic F	0.00	0.00	0	0	N.D.	N.D.
9)	S	Aromatic G	0.00	0.00	0	0	N.D.	N.D.
20)	S	BFB	13.96	13.97	1114199	572255	60.701	63.177
		Spiked Amount 200.000 Range 70 - 130 Recovery =					30.35%#	31.59%#
		Target Compounds						
10)		Pentane	0.00	0.00	0	0	N.D.	N.D.
11)		2-Methylpentane	0.00	0.00	0	0	N.D.	N.D.
12)		Methyl Tert Buty	0.00	0.00	0	0	N.D. d	N.D. d
13)		2,2,4-Trimethylp	0.00	0.00	0	0	N.D.	N.D.
14)		Benzene	0.00	0.00	0	0	N.D.	N.D.
15)		Toluene	0.00	0.00	0	0	N.D.	N.D.
16)		Nonane	0.00	0.00	0	0	N.D.	N.D.
17)		Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
18)		m,p-Xylene	0.00	0.00	0	0	N.D.	N.D.
19)		o-Xylene	0.00	0.00	0	0	N.D.	N.D.
21)		Decane	0.00	0.00	0	0	N.D.	N.D.
22)		1,2,4-Trimethylb	0.00	0.00	0	0	N.D.	N.D.
23)		Butylcyclohexane	0.00	0.00	0	0	N.D.	N.D.
24)		Naphthalene	19.29	19.29	11964	8060	0.967	0.849
25)	H	C9- C10 Aromatic	15.81	15.81	409121	116719	5.444	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	518362	825919	NoCal	26.756
27)	H	C9- C12 Aliphati	19.92	13.00	437252	158275	NoCal	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077779.D GROS012717.M Mon Feb 06 15:55:47 2017

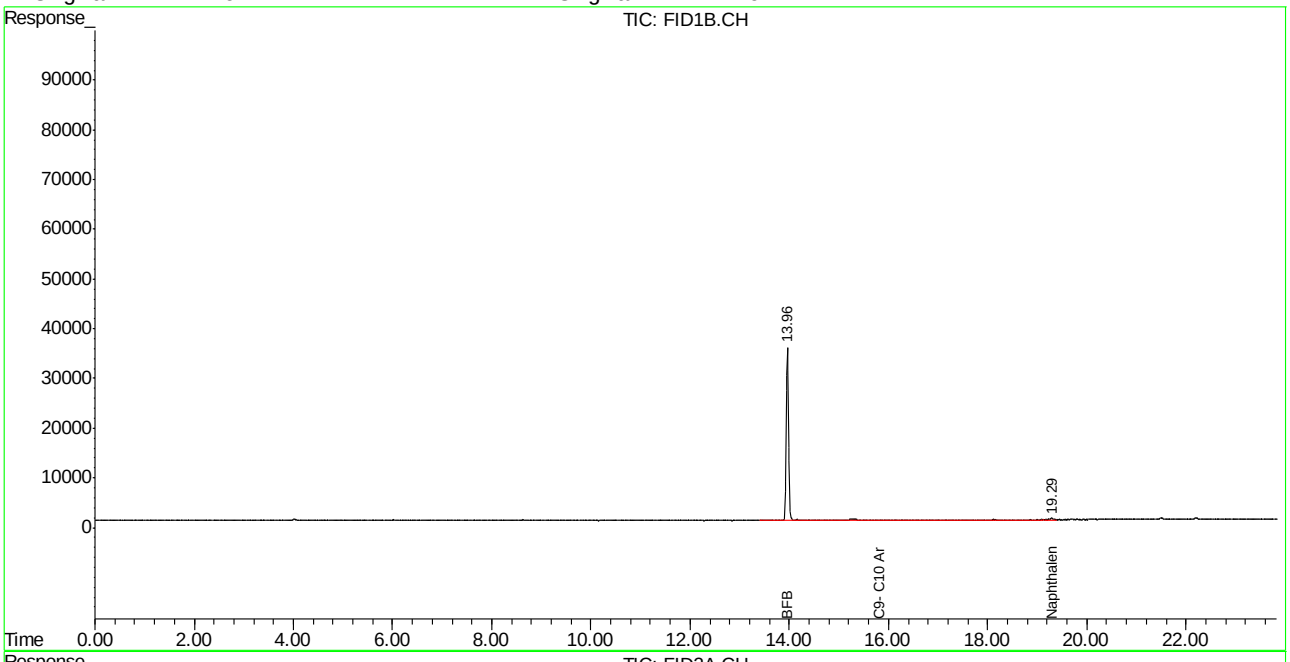
SGS ACCUTEST FA40754

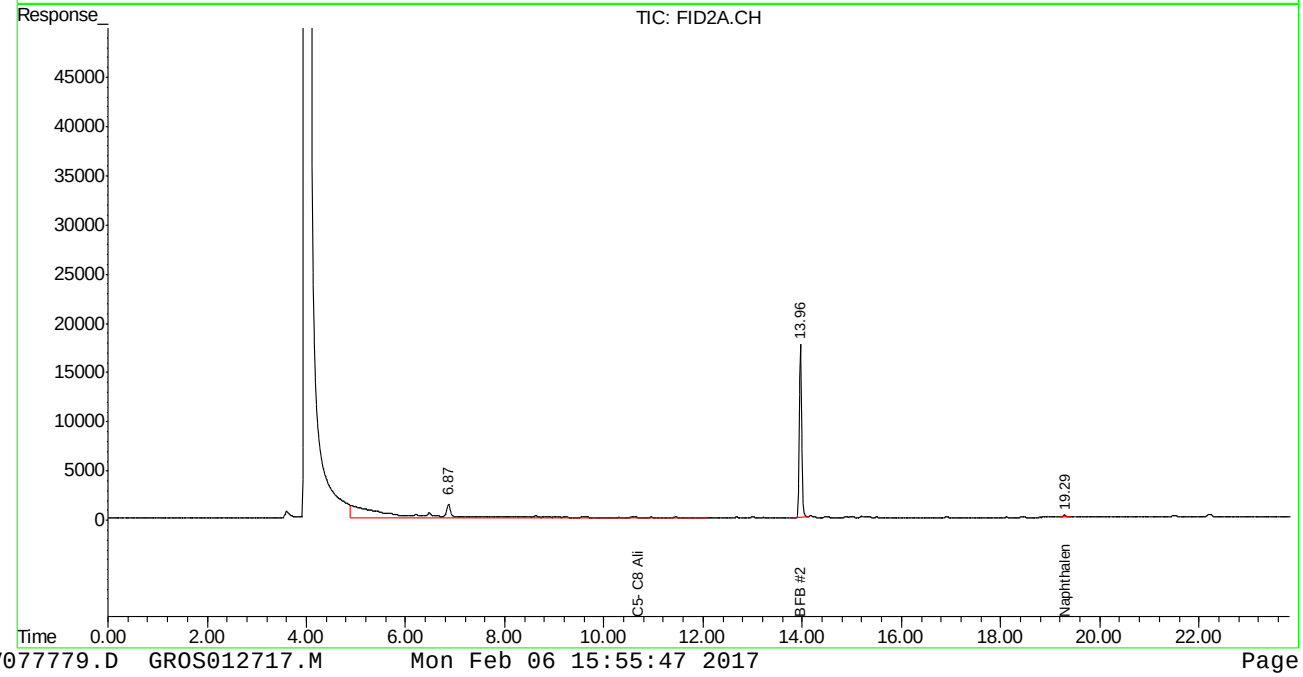
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077779.D\FID1B.CH Vial: 48
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077779.D\FID2A.CH
Acq On : 01-Feb-2017, 09:28:37 Operator: antonioc
Sample : fa40755-3dup Inst : HP5890
Misc : gc19636,guv4135,4.18,,100,15.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: events2.e
Quant Time: Feb 3 12:55 2017 Quant Results File: VPH011317.RES

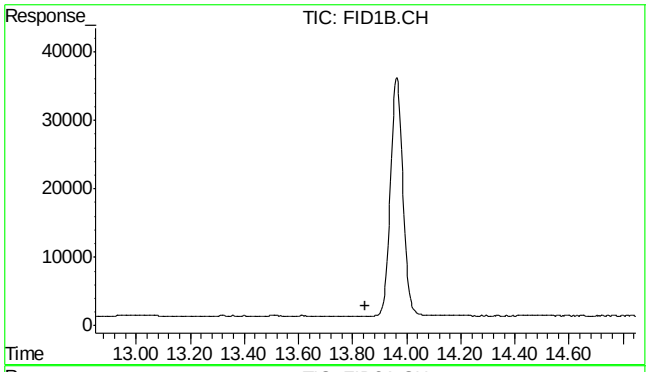
Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID



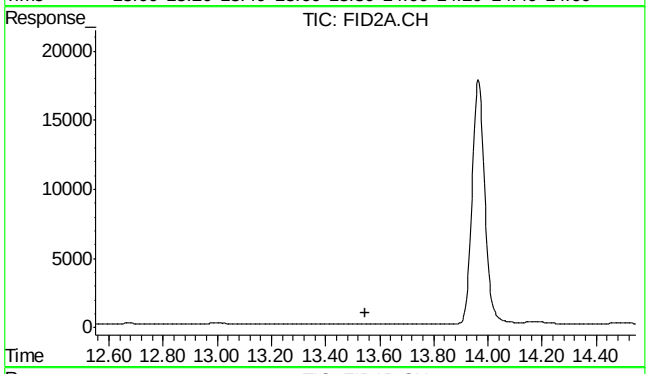


UV077779.D GROS012717.M Mon Feb 06 15:55:47 2017 Page 2



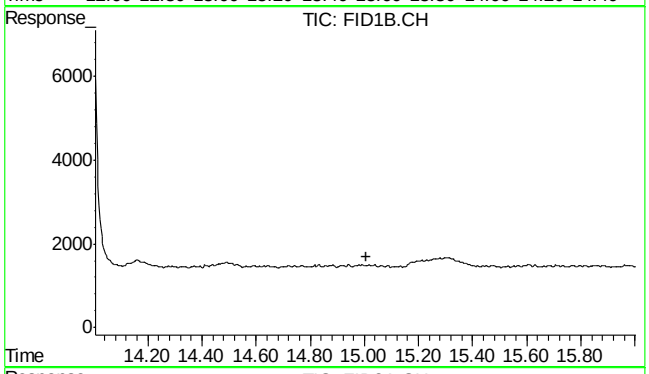
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.847 min
Response: 0
Conc: N.D.



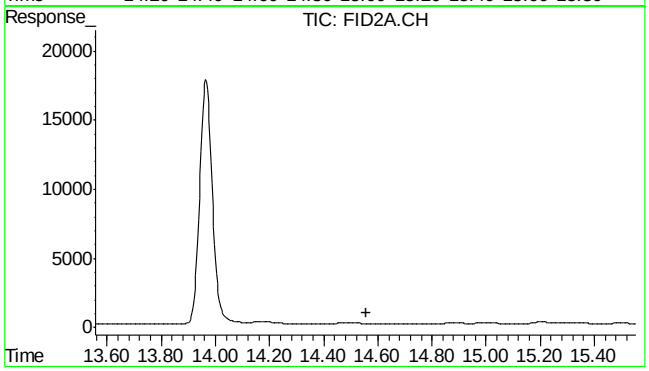
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



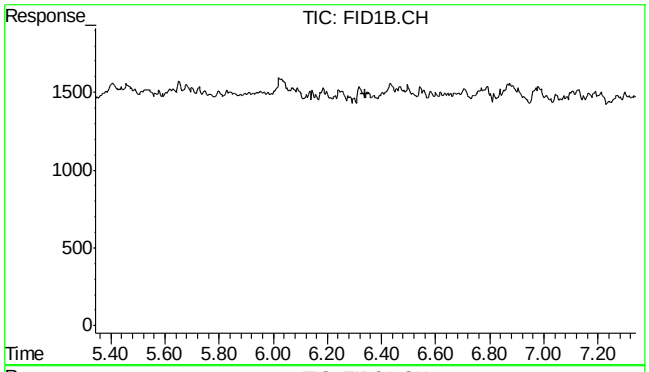
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



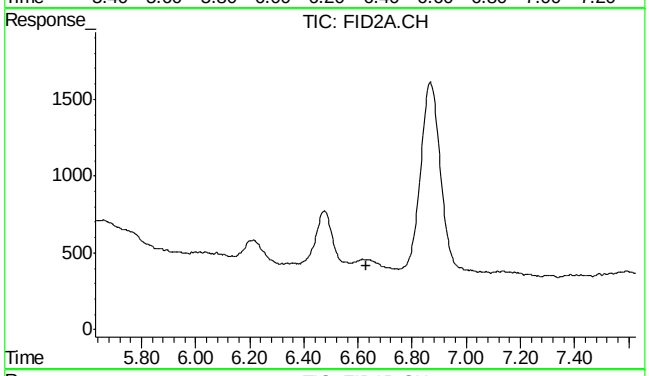
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.



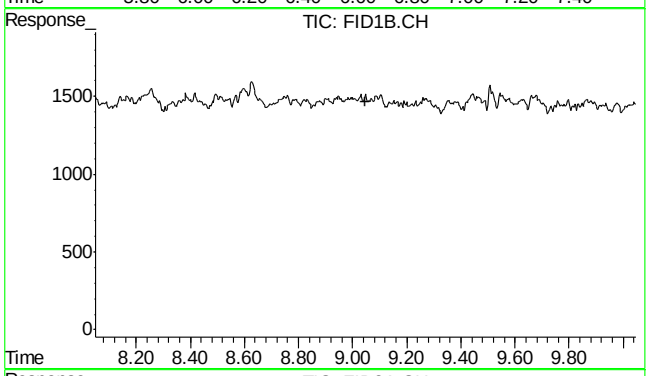
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



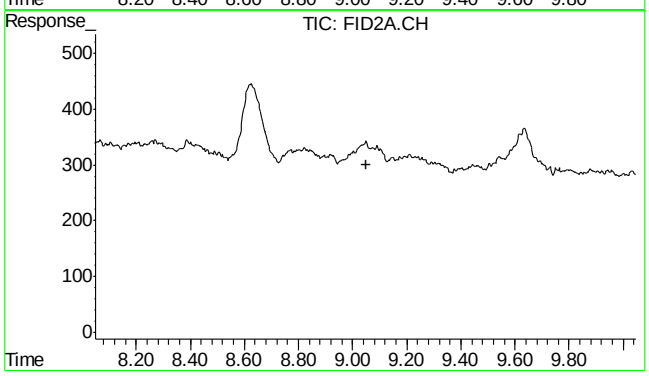
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.049 min
Response: 0
Conc: N.D.

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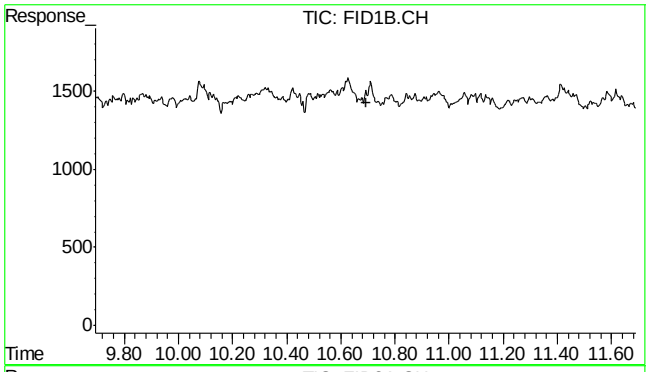
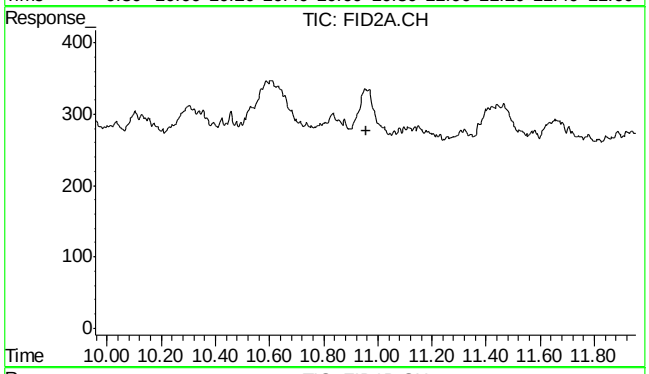


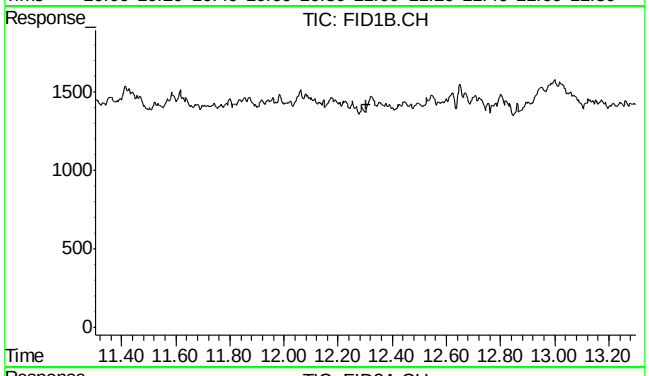
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



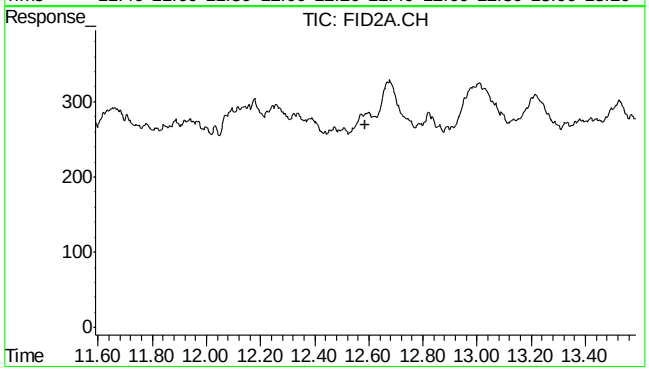
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.956 min
Response: 0
Conc: N.D.



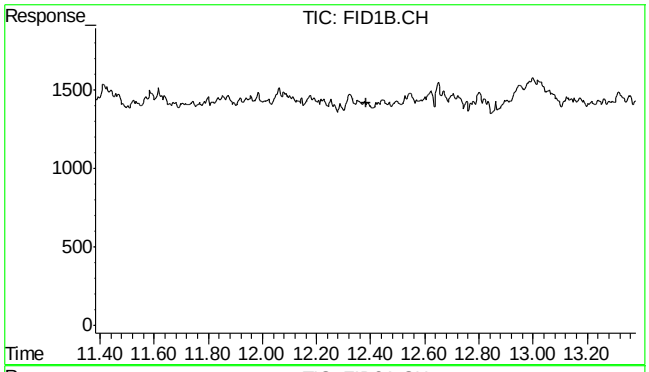
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



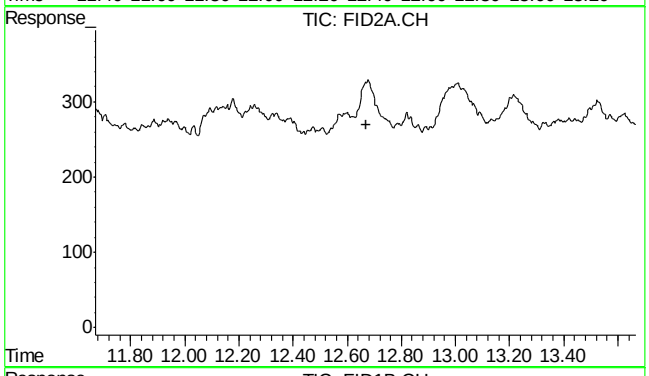
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



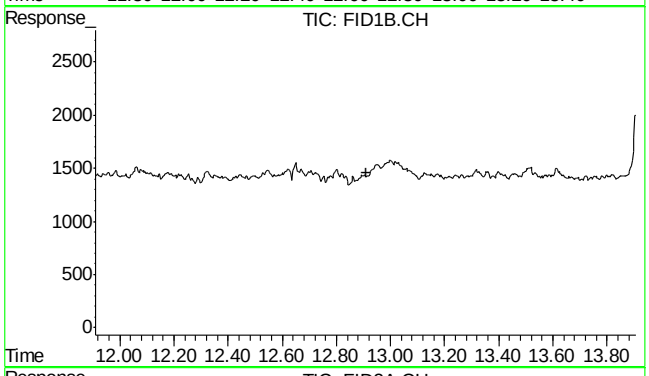
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



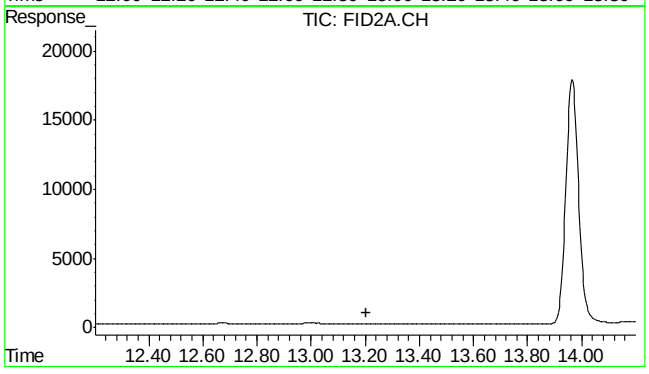
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



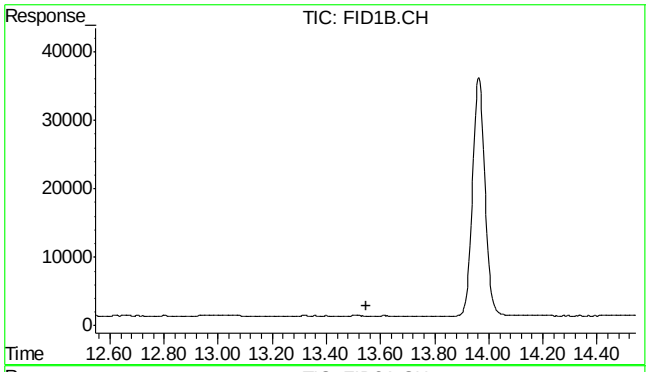
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



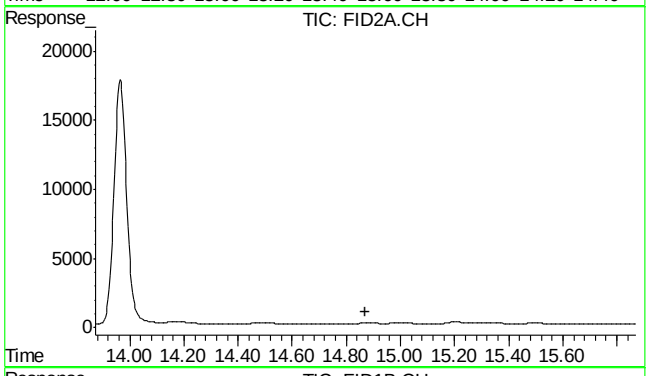
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



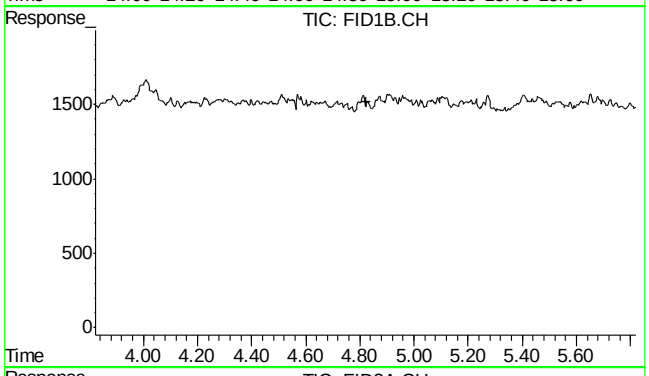
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



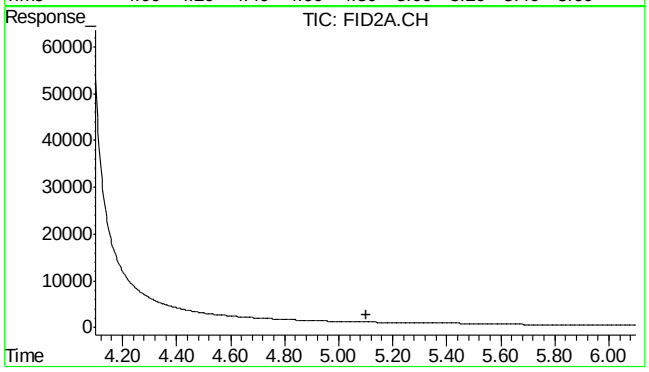
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



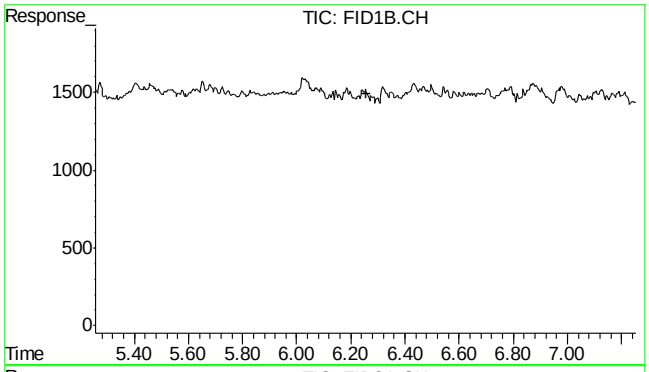
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



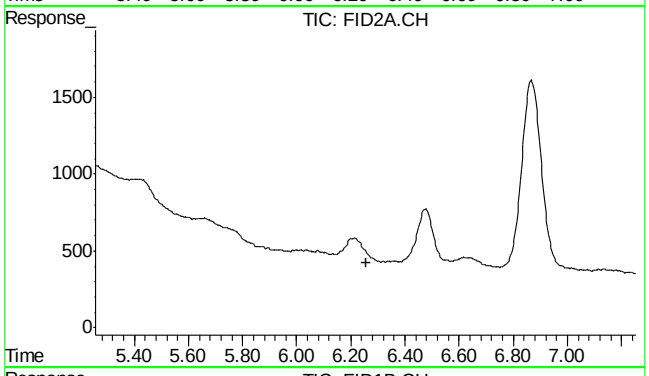
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 5.100 min
Response: 0
Conc: N.D.



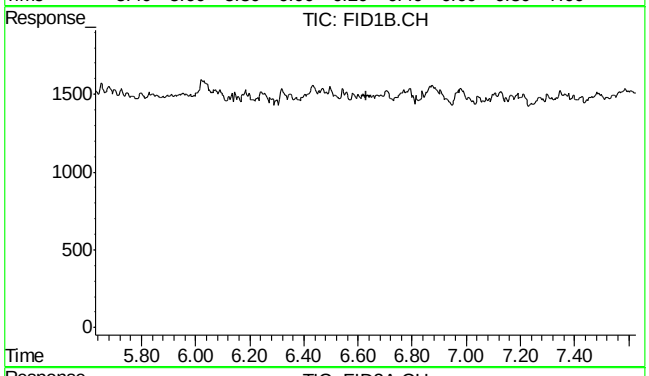
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



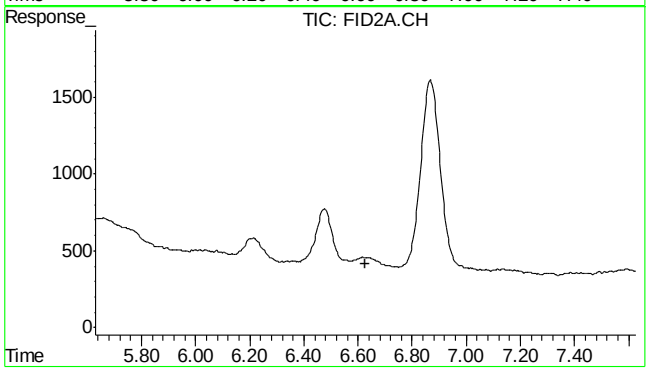
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



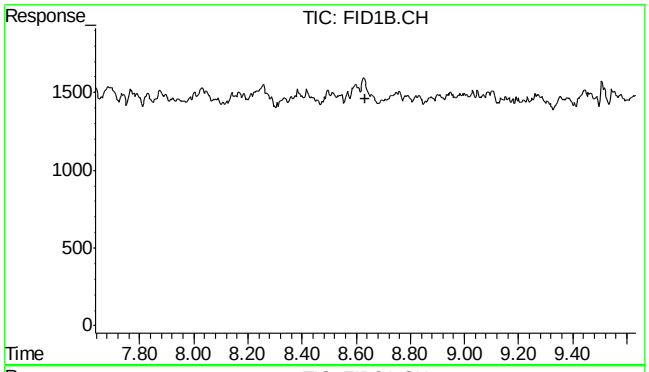
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



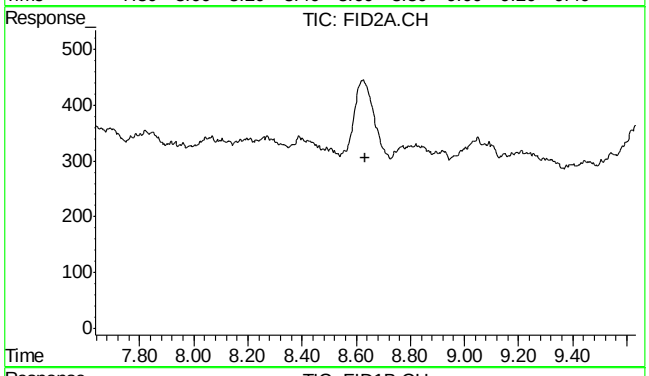
#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.628 min
Response: 0
Conc: N.D.



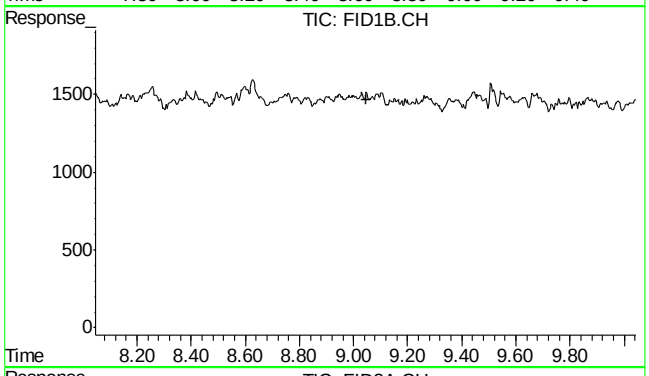
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



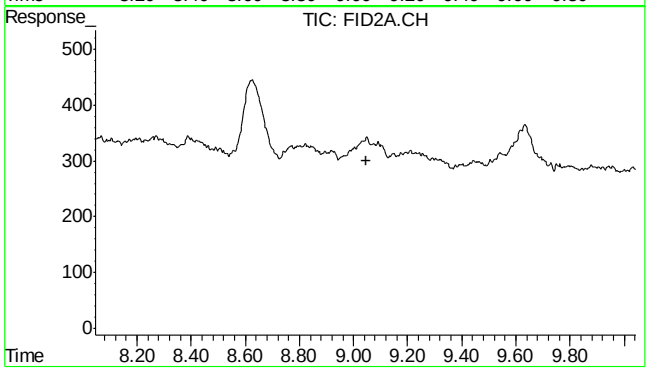
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



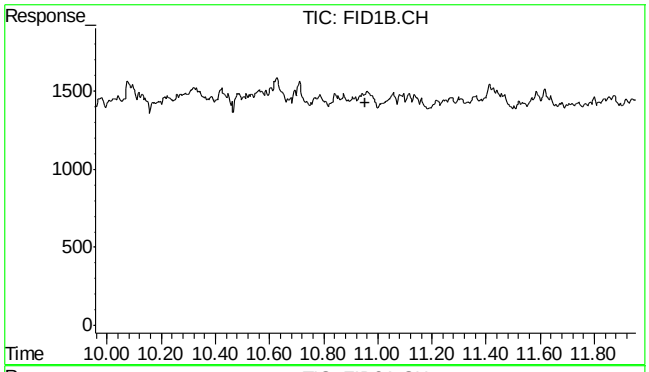
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



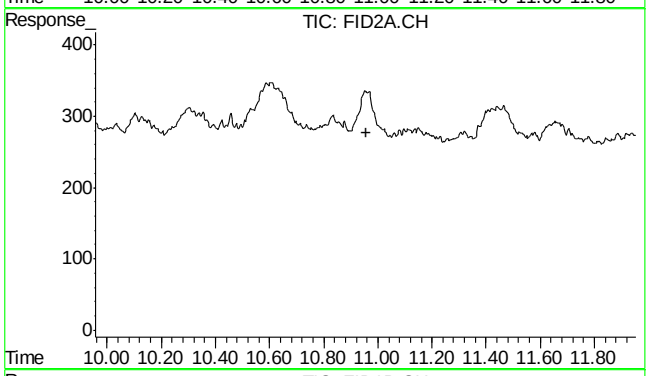
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



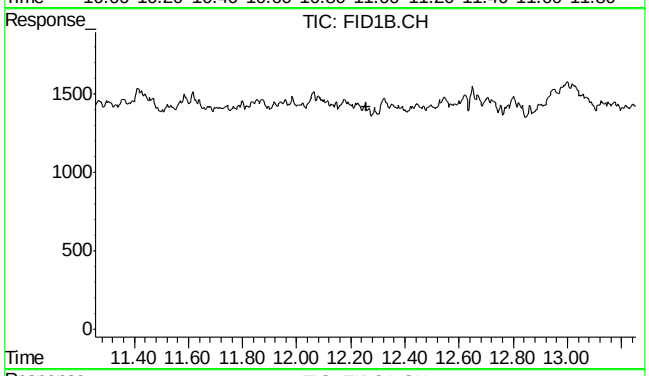
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



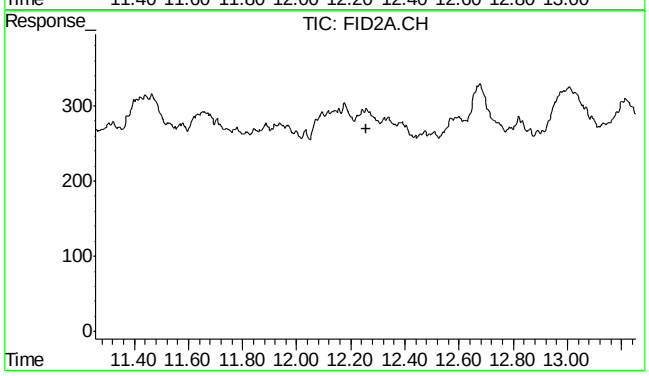
#15 Toluene

R.T.: 0.000 min
Exp R.T. : 10.955 min
Response: 0
Conc: N.D.



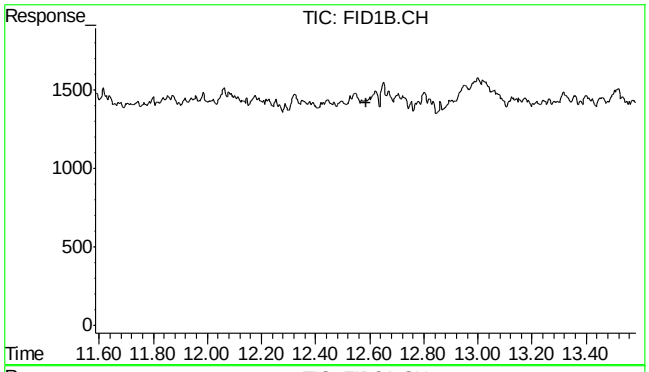
#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



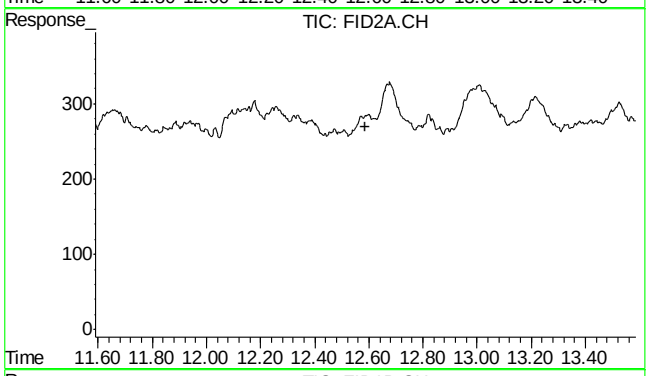
#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



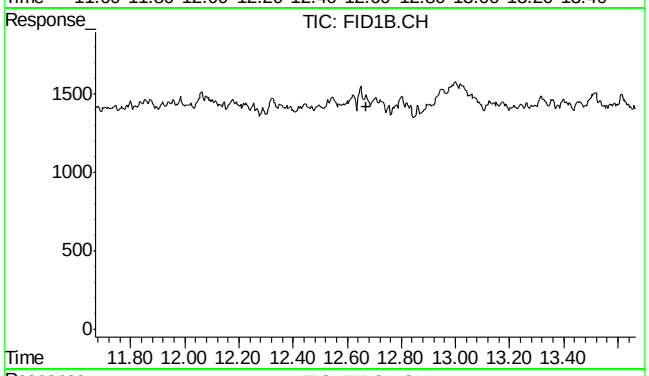
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.586 min
Response: 0
Conc: N.D.



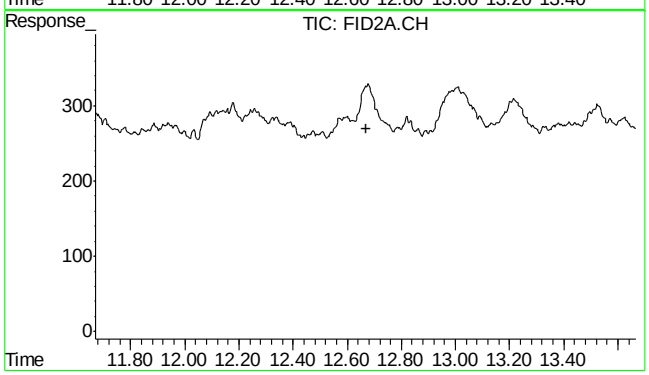
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



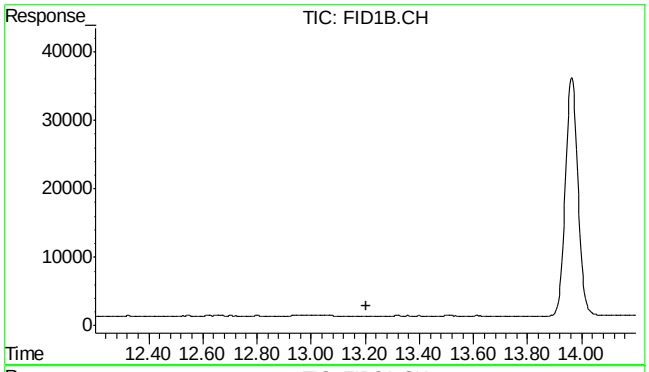
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



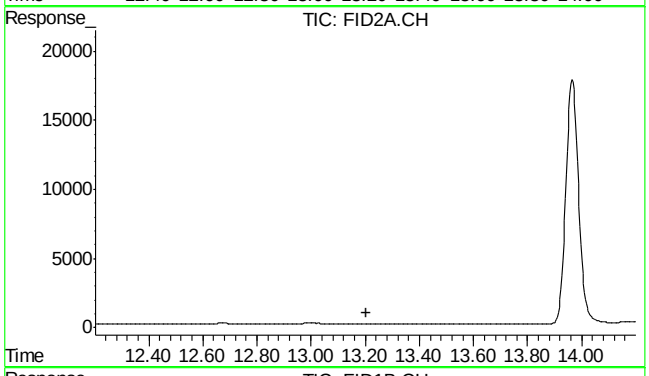
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



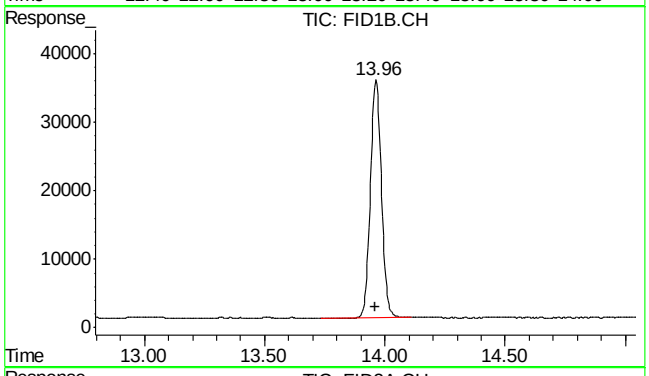
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



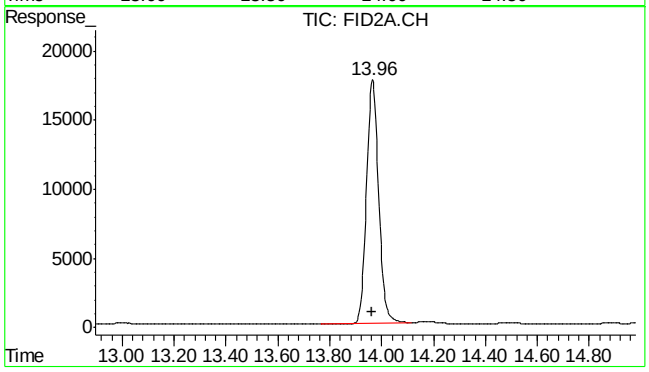
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 1114199
Conc: 60.70 ug/L



#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 572255
Conc: 63.18 ug/L

7.5.2

7

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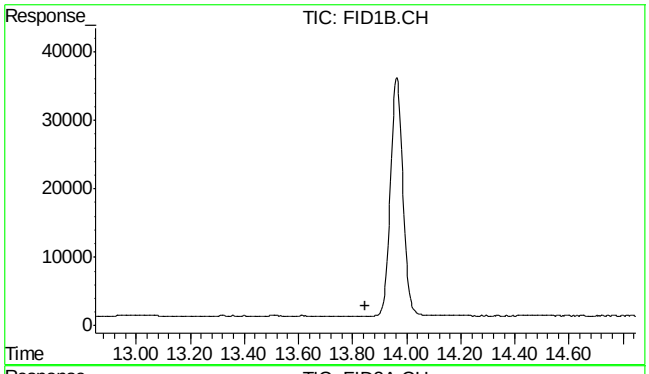
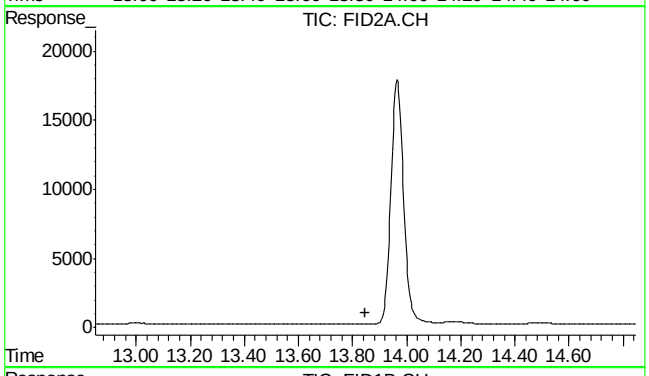


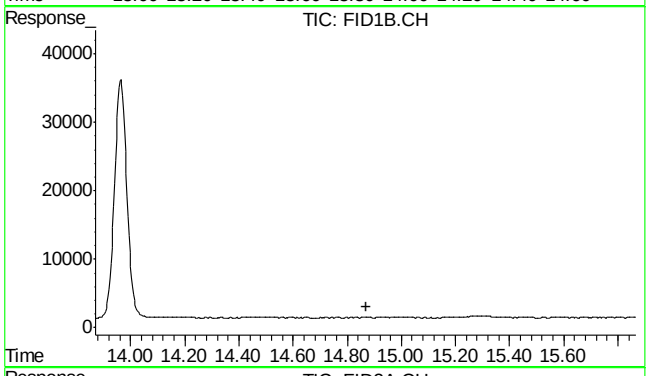
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



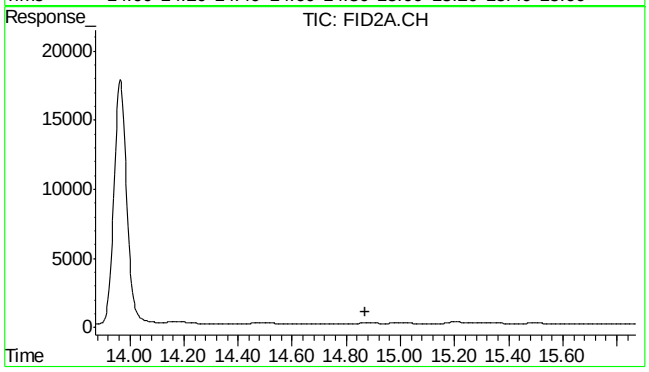
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



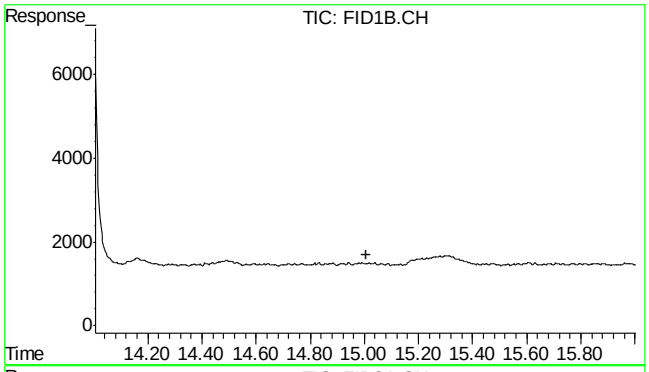
#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.870 min
Response: 0
Conc: N.D.



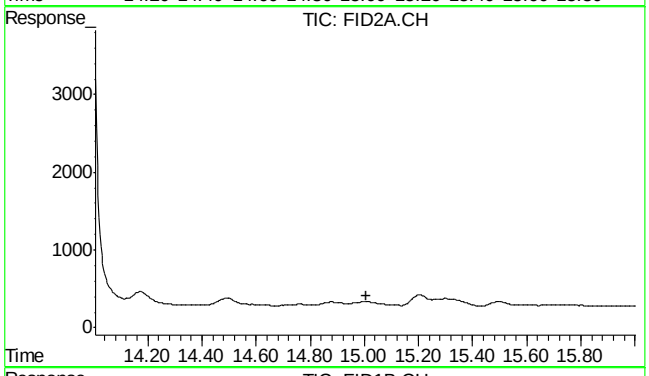
#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



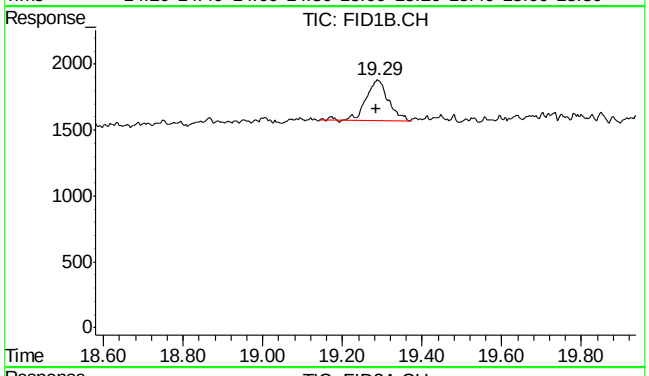
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



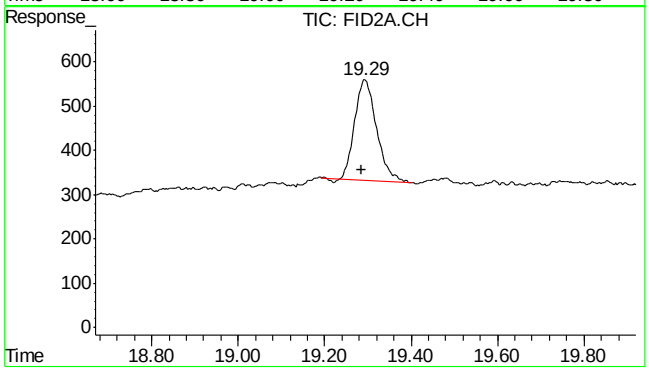
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



#24 Naphthalene

R.T.: 19.289 min
Delta R.T.: 0.005 min
Response: 11964
Conc: 0.97 ug/L



#24 Naphthalene

R.T.: 19.294 min
Delta R.T.: 0.008 min
Response: 8060
Conc: 0.85 ug/L

7.5.2

7

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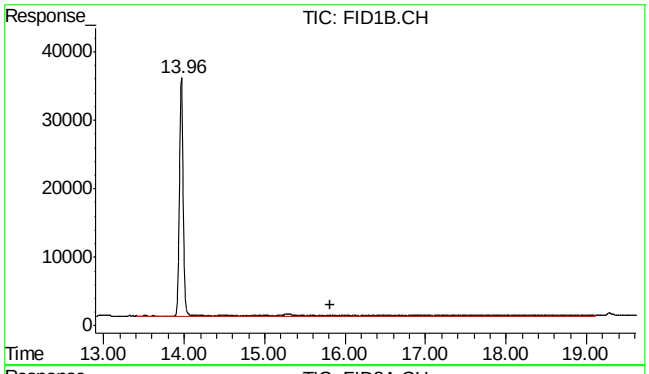
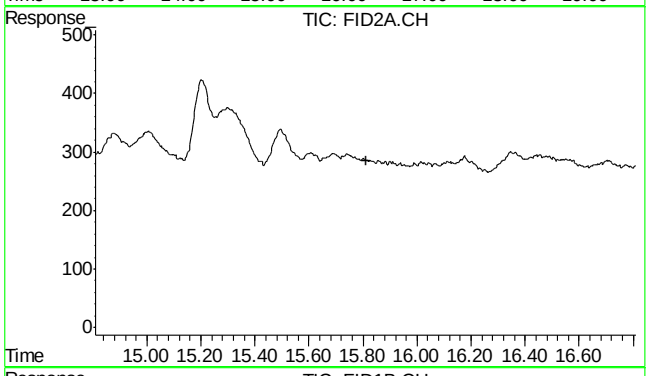


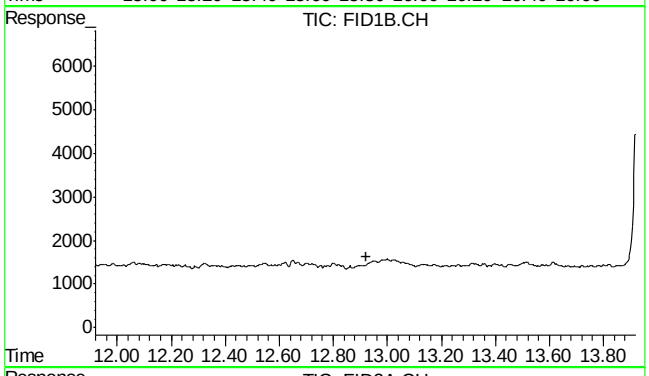
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 409121
Conc: 5.44 ug/L m



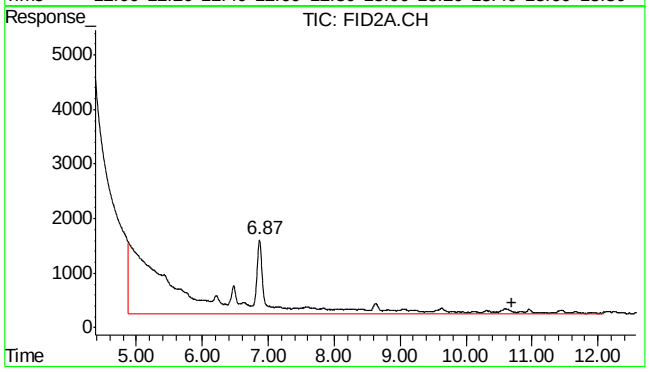
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 116719
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

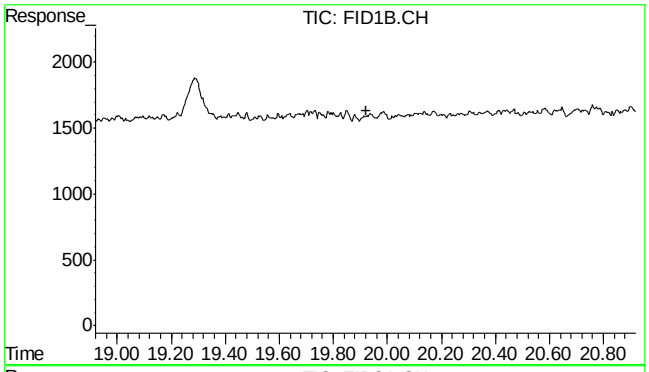
R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 518362
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

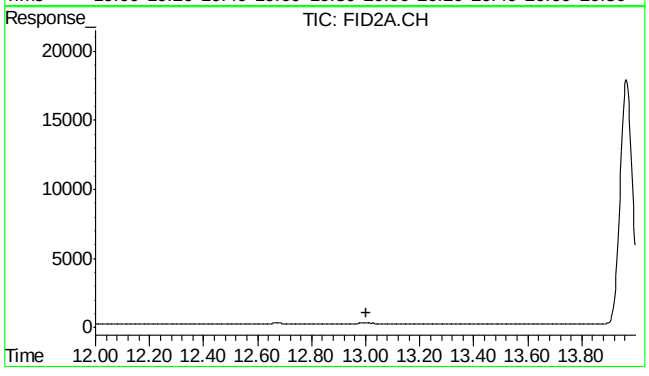
R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 825919
Conc: 26.76 ug/L m

SGS ACCUTEST FA40754



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 437252
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 158275
Conc: N.D.

7.5.2

7

SGS ACCUTEST FA40754

Manual Integrations
APPROVED
(compounds with "m" flag)
Juan Garcia
02/08/17 14:54

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\020617\UV077879.D\FID1B.CH Vial: 29
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077879.D\FID2A.CH
Acq On : 07-Feb-2017, 07:15:59 Operator: antonioc
Sample : fa40908-6dup Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 07 10:02:56 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	0.00	0.00	0	0	N.D.	N.D.
2)	S	Alkane B	0.00	0.00	0	0	N.D.	N.D.
3)	S	Aromatic A	0.00	0.00	0	0	N.D.	N.D.
4)	S	Aromatic B	0.00	0.00	0	0	N.D.	N.D.
5)	S	Aromatic C	0.00	0.00	0	0	N.D.	N.D.
6)	S	Aromatic D	0.00	0.00	0	0	N.D.	N.D.
7)	S	Aromatic E	0.00	0.00	0	0	N.D.	N.D.
8)	S	Aromatic F	0.00	0.00	0	0	N.D.	N.D.
9)	S	Aromatic G	0.00	0.00	0	0	N.D.	N.D.
20)	S	BFB	13.97	13.97	1470207	773522	80.096	85.397
		Spiked Amount 40.000 Range 70 - 130 Recovery = 200.24%# 213.49%#						
		Target Compounds						
10)		Pentane	0.00	0.00	0	0	N.D.	N.D.
11)		2-Methylpentane	0.00	0.00	0	0	N.D.	N.D.
12)		Methyl Tert Buty	0.00	0.00	0	0	N.D. d	N.D. d
13)		2,2,4-Trimethylp	0.00	0.00	0	0	N.D.	N.D.
14)		Benzene	0.00	0.00	0	0	N.D.	N.D.
15)		Toluene	10.96	10.96	5123	3648	0.236m	0.177m
16)		Nonane	0.00	0.00	0	0	N.D.	N.D.
17)		Ethylbenzene	0.00	0.00	0	0	N.D.	N.D.
18)		m,p-Xylene	0.00	0.00	0	0	N.D.	N.D.
19)		o-Xylene	0.00	0.00	0	0	N.D.	N.D.
21)		Decane	0.00	0.00	0	0	N.D.	N.D.
22)		1,2,4-Trimethylb	0.00	0.00	0	0	N.D.	N.D.
23)		Butylcyclohexane	0.00	0.00	0	0	N.D.	N.D.
24)		Naphthalene	0.00	0.00	0	0	N.D.	N.D.
25)	H	C9- C10 Aromatic	15.81	15.81	372687	135621	3.615	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	826636	834194	NoCal	27.428 #
27)	H	C9- C12 Aliphati	19.92	13.00	430789	176335	NoCal	N.D.

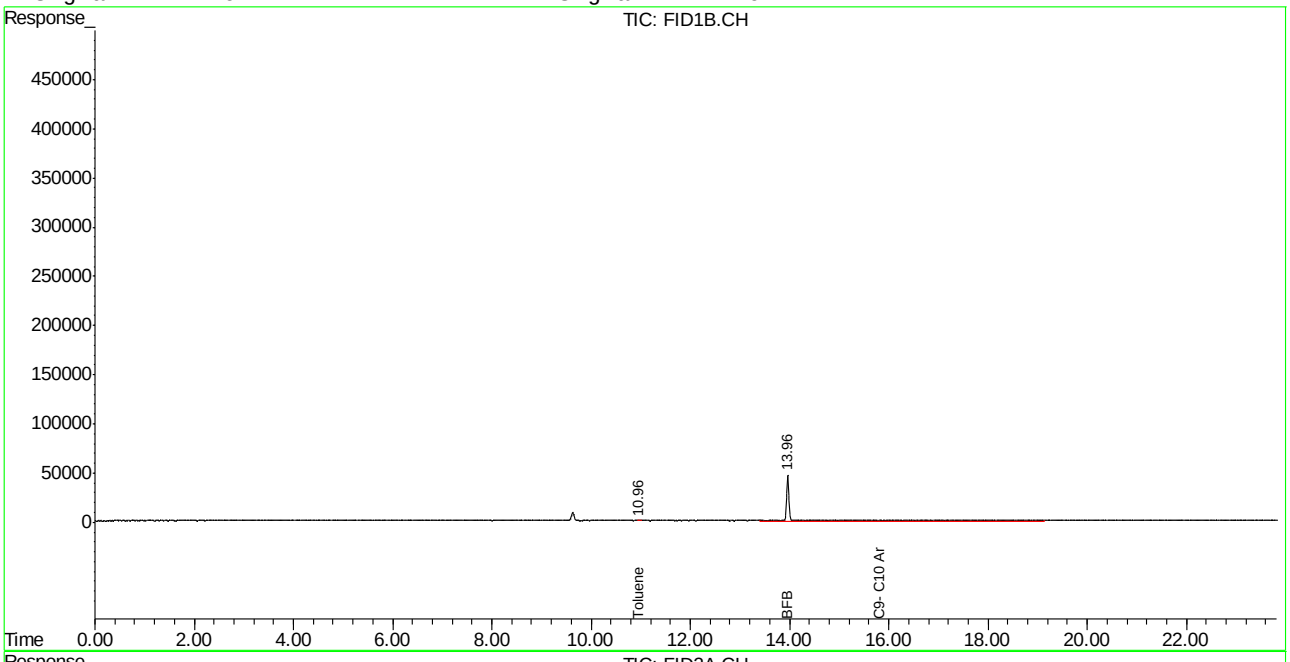
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077879.D VPH011317.M Tue Feb 07 12:55:43 2017

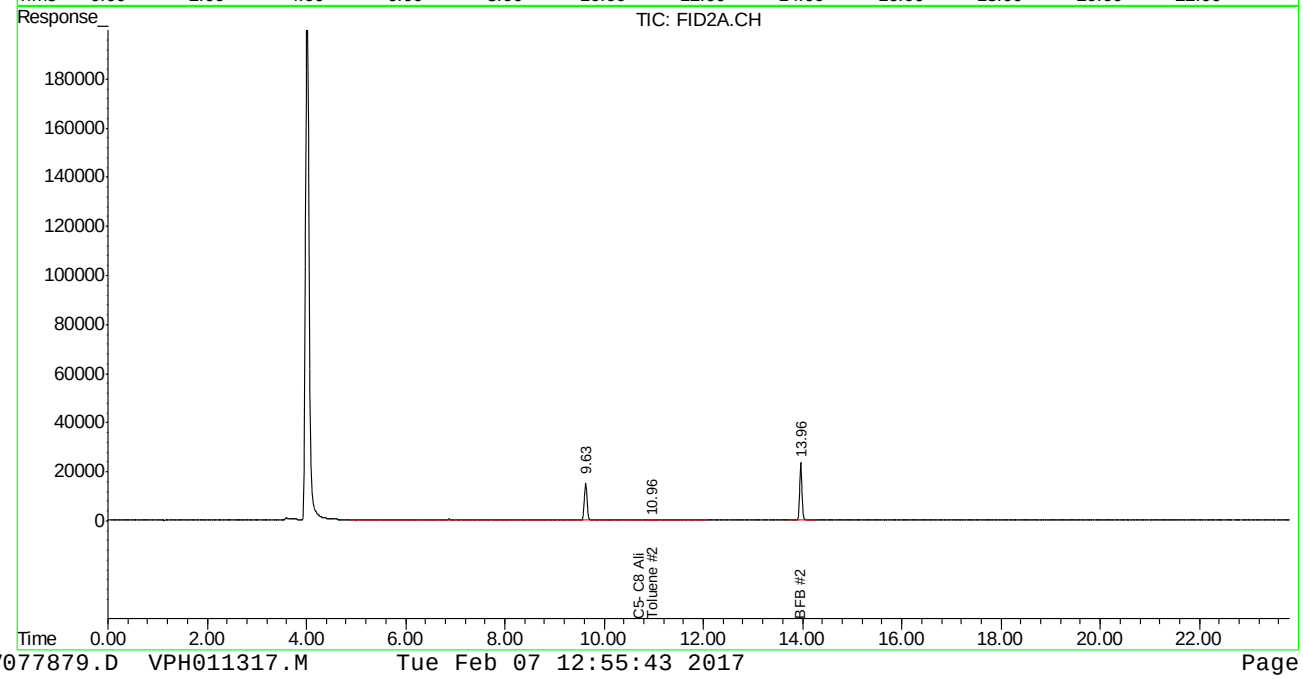
Quantitation Report (QT Reviewed)

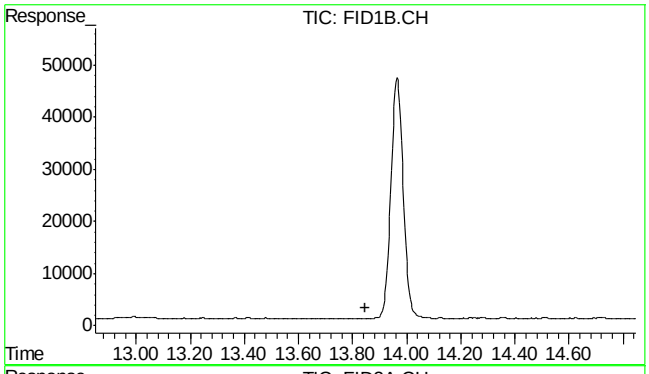
Signal #1 : C:\HPCHEM\2\DATA\020617\UV077879.D\FID1B.CH Vial: 29
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077879.D\FID2A.CH
Acq On : 07-Feb-2017, 07:15:59 Operator: antonioc
Sample : fa40908-6dup Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 7 11:32 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

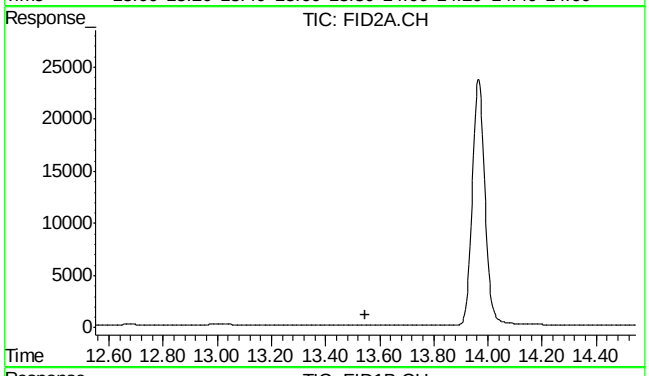






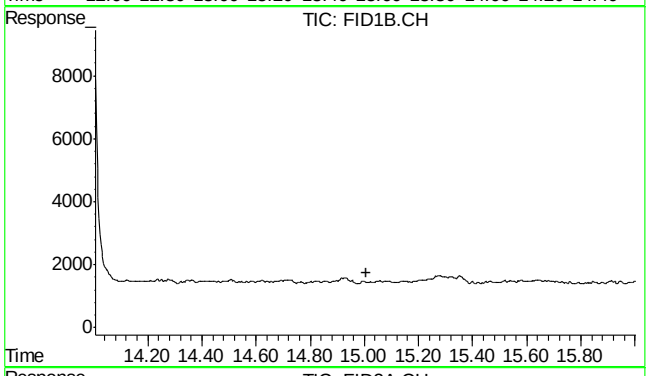
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.847 min
Response: 0
Conc: N.D.



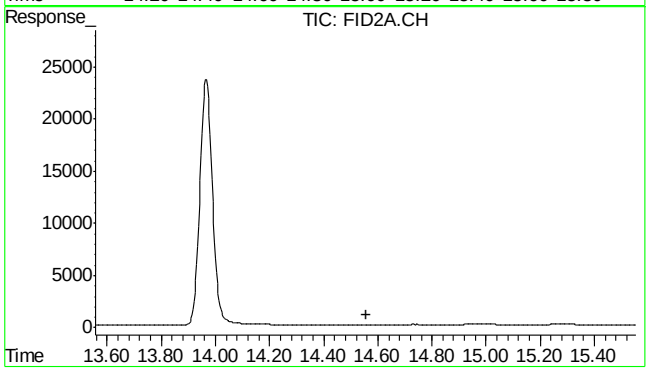
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



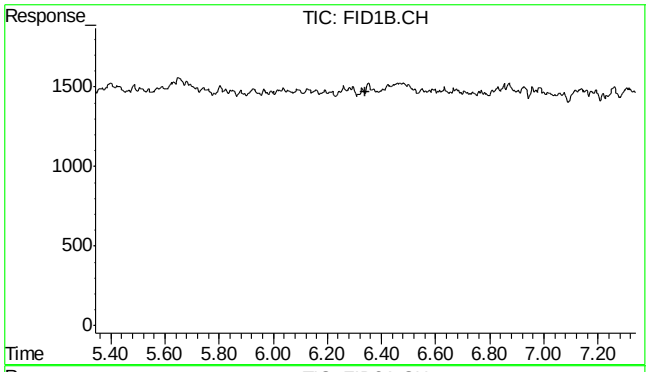
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



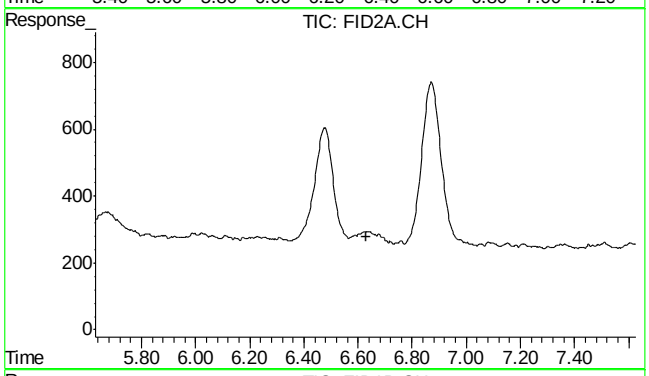
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.



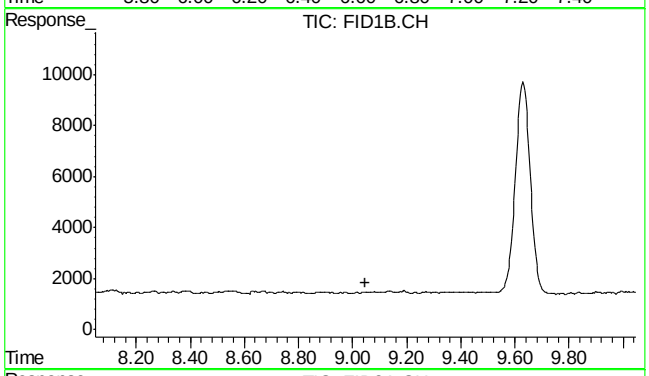
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



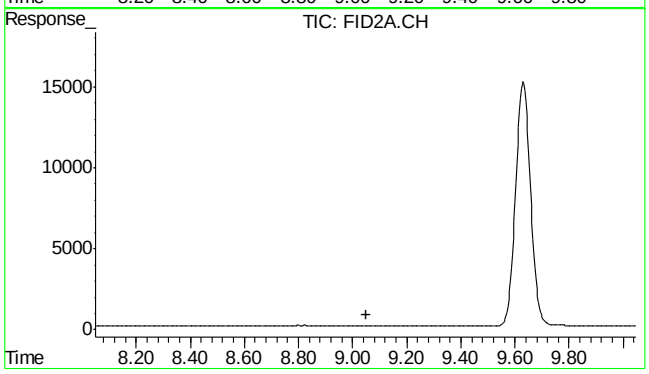
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



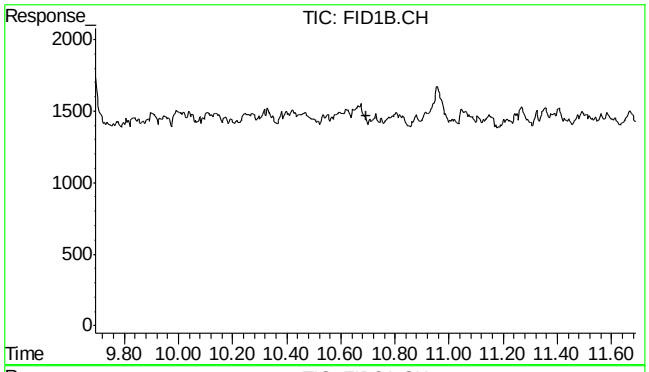
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



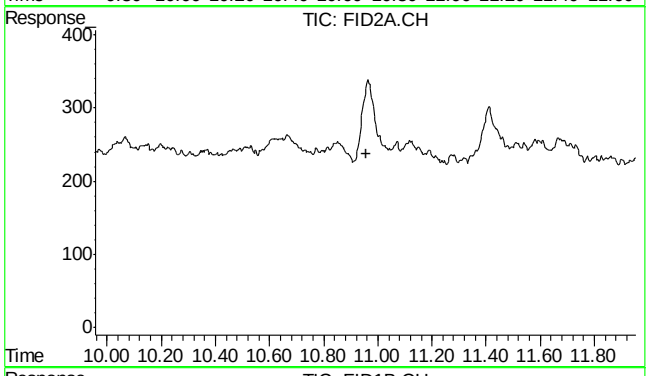
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.049 min
Response: 0
Conc: N.D.



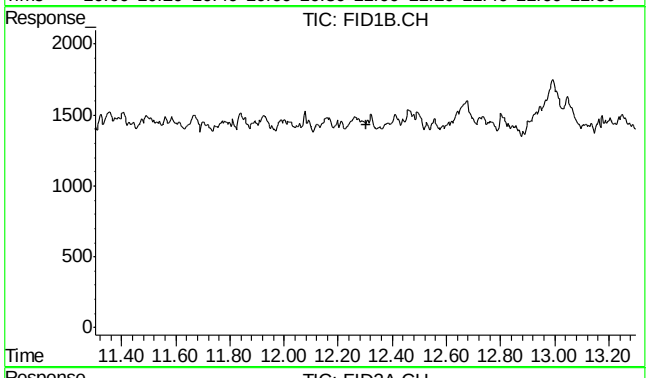
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



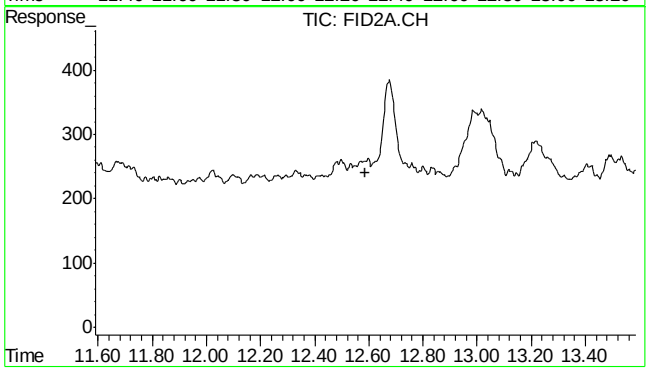
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.956 min
Response: 0
Conc: N.D.



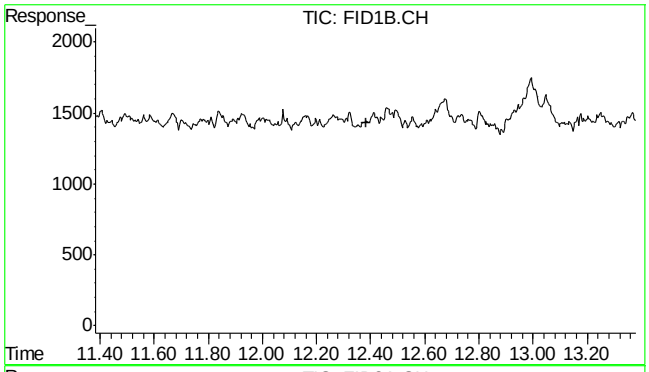
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



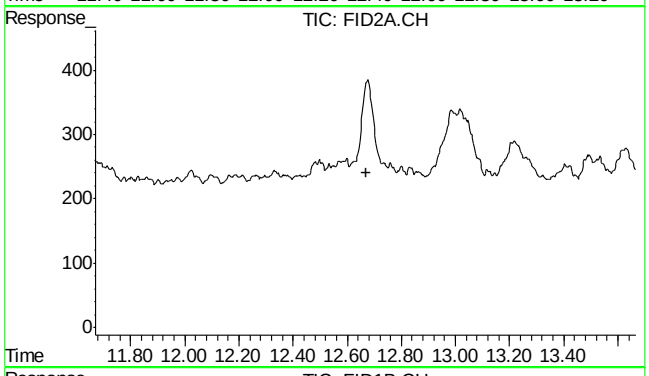
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



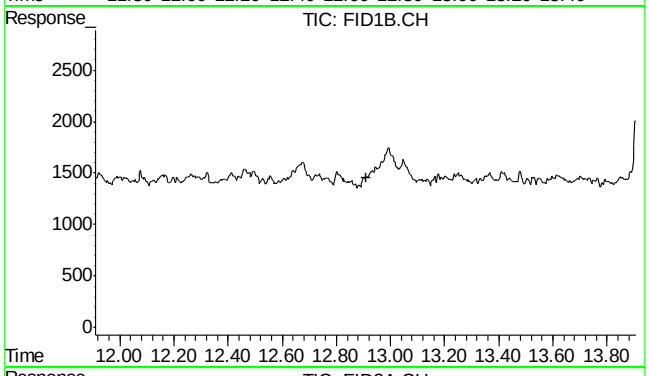
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



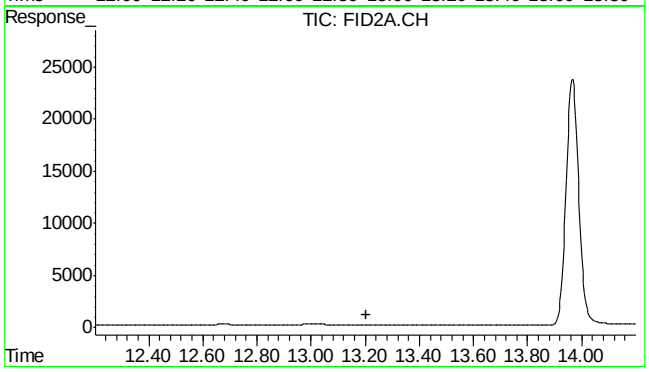
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.

7.5.3

7

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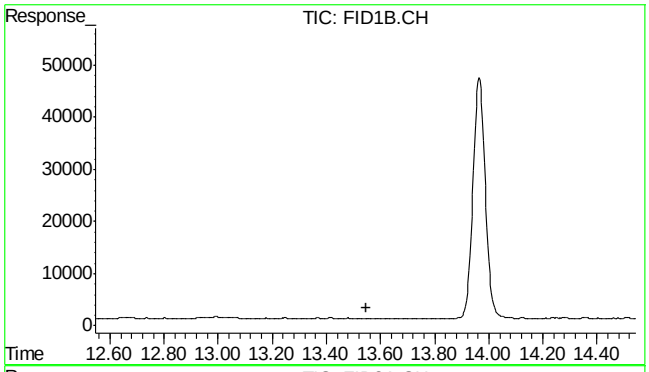
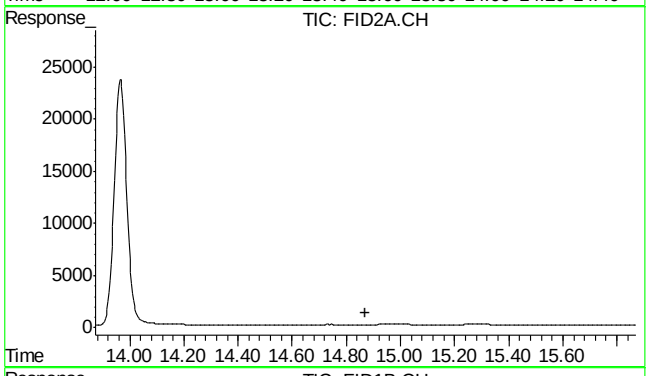


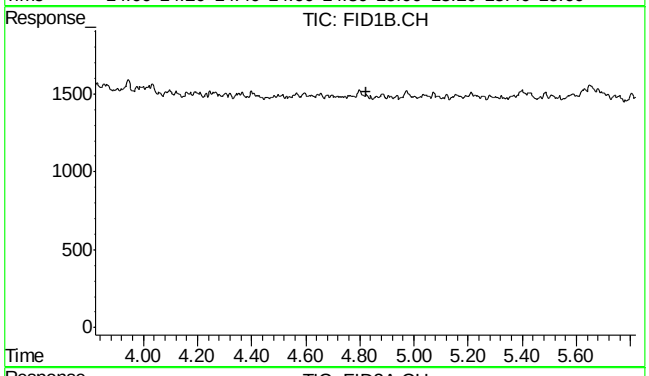
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



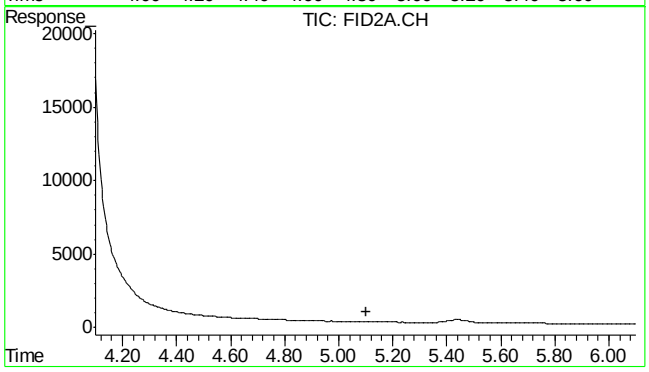
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.



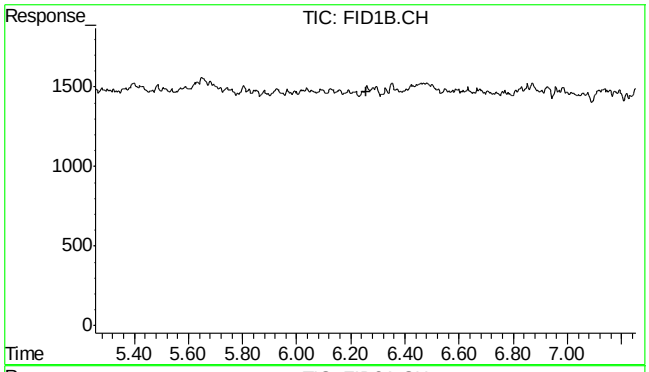
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



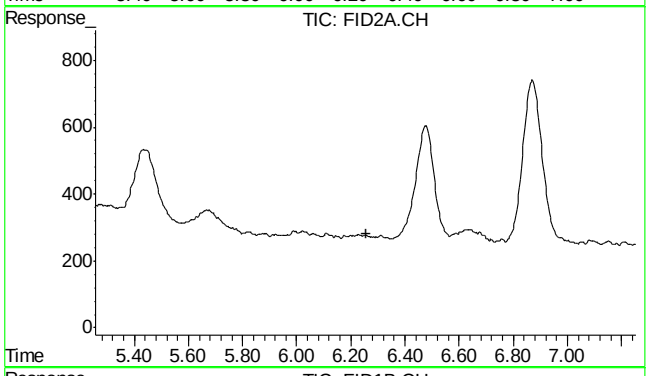
#10 Pentane

R.T.: 0.000 min
Exp R.T. : 5.100 min
Response: 0
Conc: N.D.



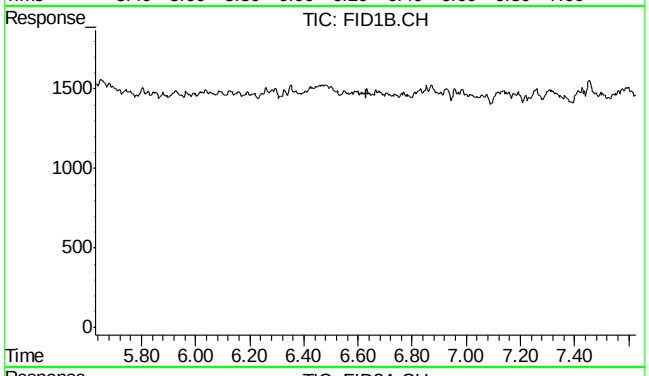
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



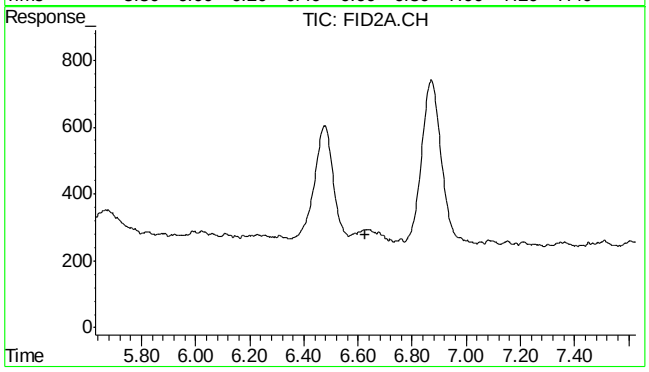
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.629 min
Response: 0
Conc: N.D.



#12 Methyl Tert Butyl Ether

R.T.: 0.000 min
Exp R.T. : 6.628 min
Response: 0
Conc: N.D.

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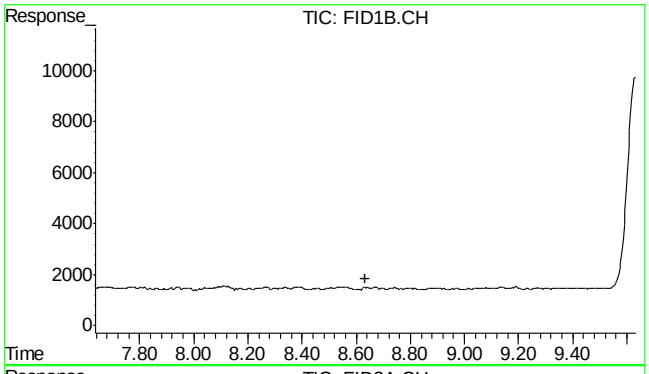
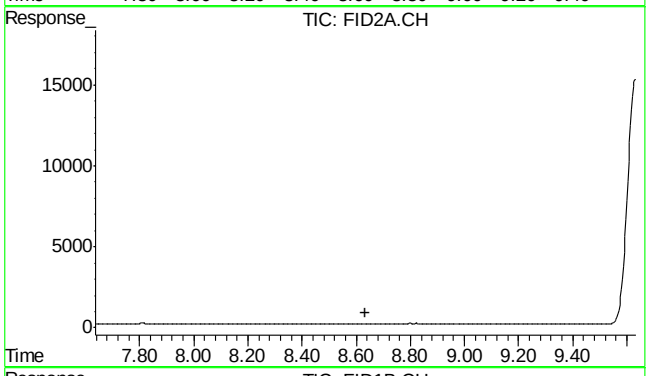


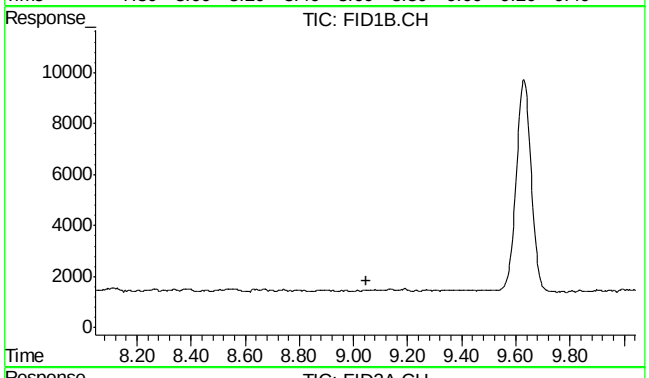
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



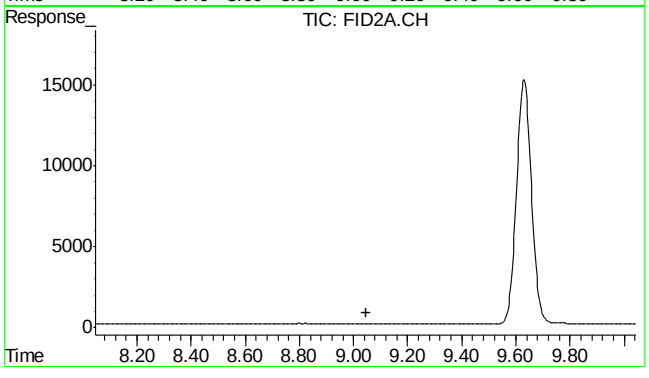
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



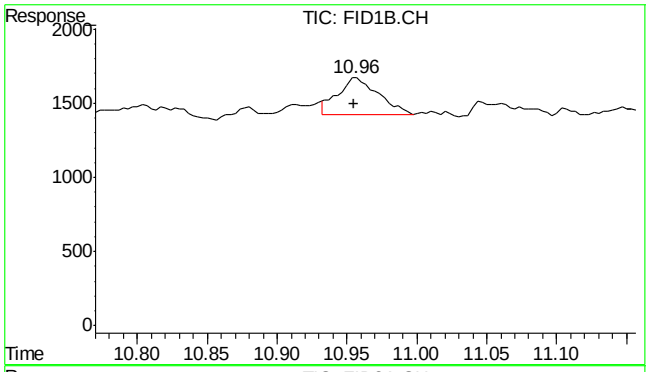
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



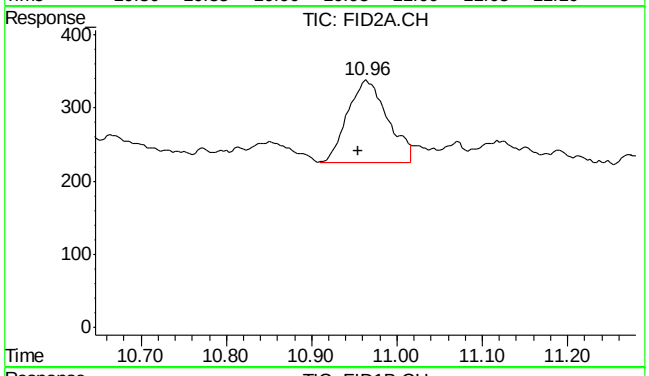
#14 Benzene

R.T.: 0.000 min
Exp R.T. : 9.046 min
Response: 0
Conc: N.D.



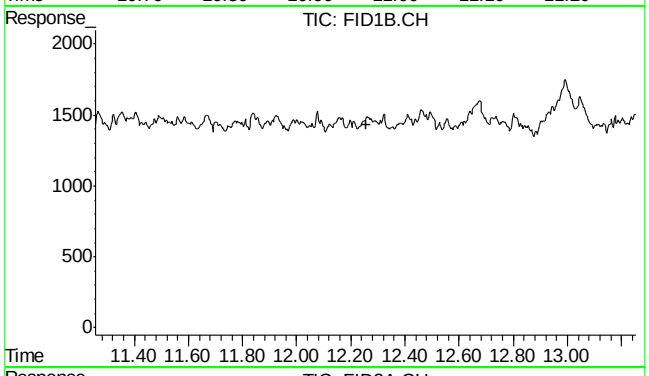
#15 Toluene

R.T.: 10.955 min
Delta R.T.: 0.000 min
Response: 5123
Conc: 0.24 ug/L m



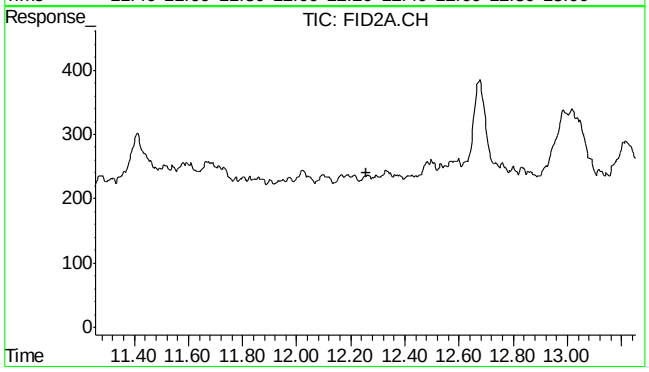
#15 Toluene

R.T.: 10.963 min
Delta R.T.: 0.008 min
Response: 3648
Conc: 0.18 ug/L m



#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.

7.5.3

7

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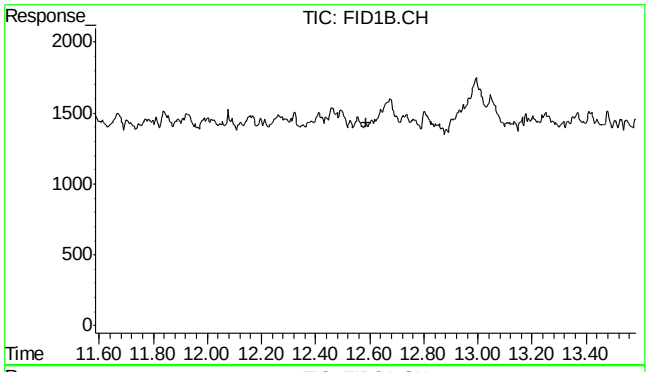
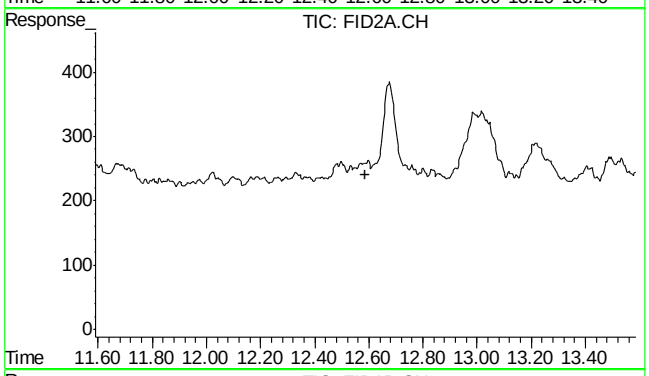


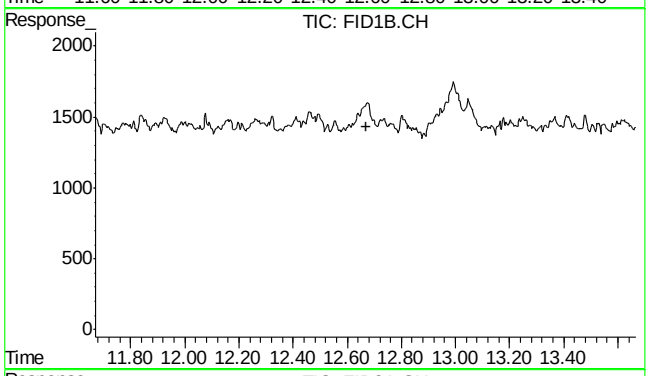
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.586 min
Response: 0
Conc: N.D.



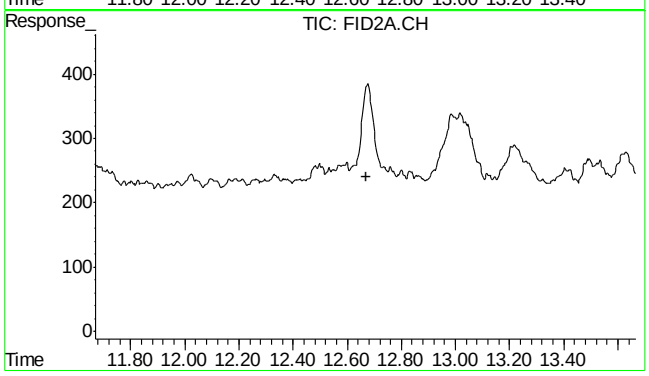
#17 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 12.587 min
Response: 0
Conc: N.D.



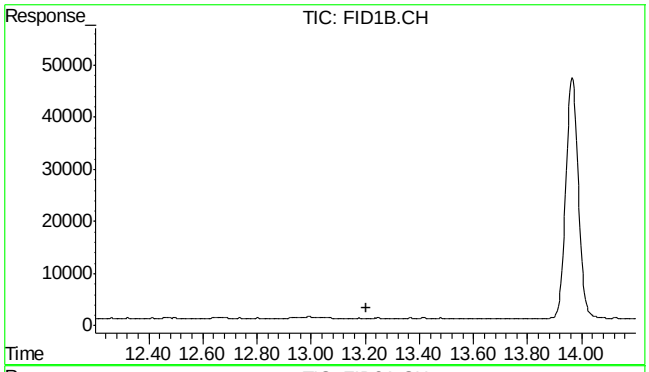
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



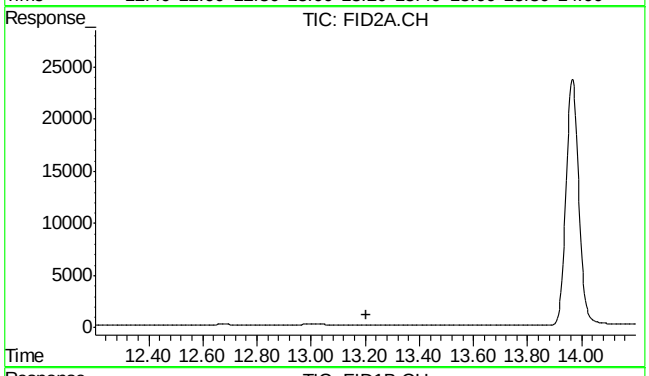
#18 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 12.669 min
Response: 0
Conc: N.D.



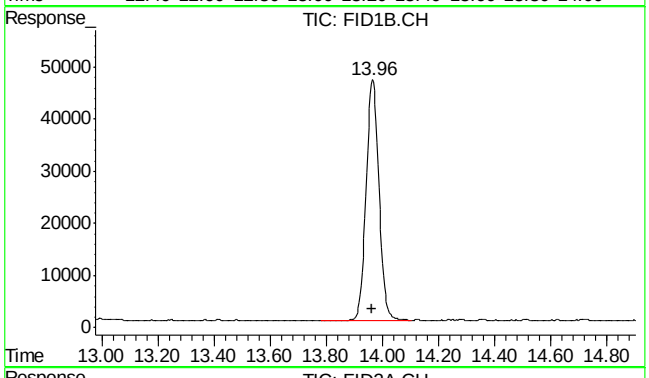
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



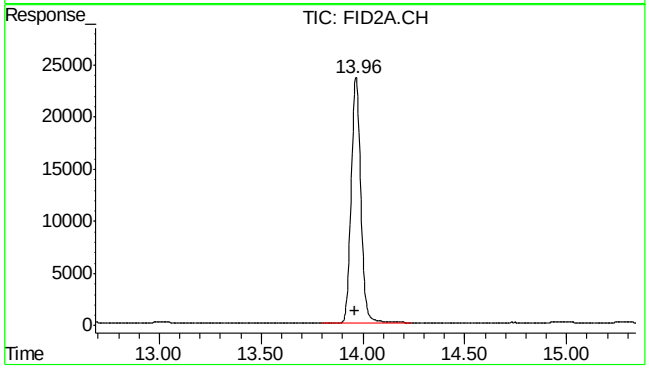
#19 o-Xylene

R.T.: 0.000 min
Exp R.T. : 13.203 min
Response: 0
Conc: N.D.



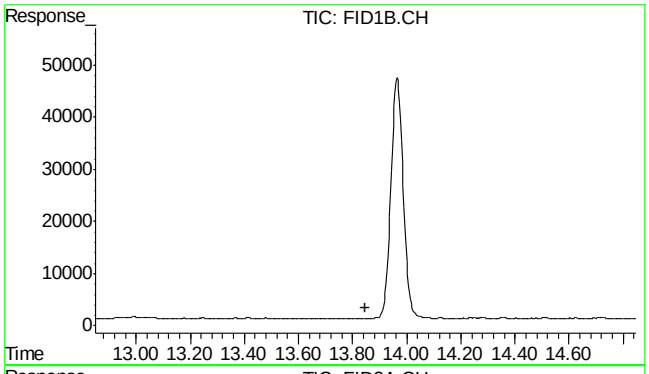
#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.004 min
Response: 1470207
Conc: 80.10 ug/L



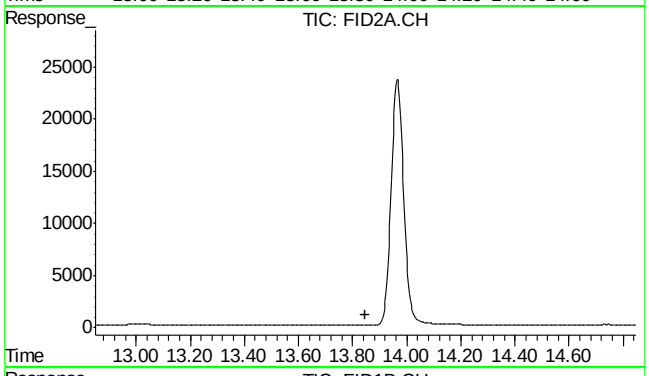
#20 BFB

R.T.: 13.966 min
Delta R.T.: 0.004 min
Response: 773522
Conc: 85.40 ug/L



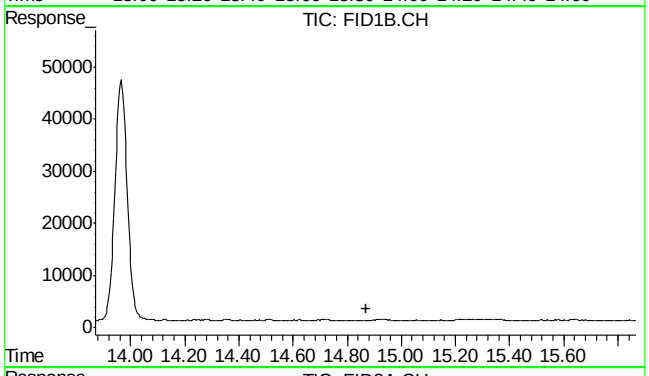
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



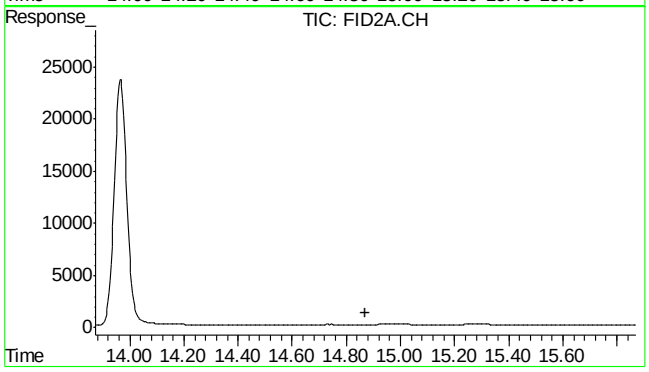
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.870 min
Response: 0
Conc: N.D.



#22 1,2,4-Trimethylbenzene

R.T.: 0.000 min
Exp R.T. : 14.871 min
Response: 0
Conc: N.D.

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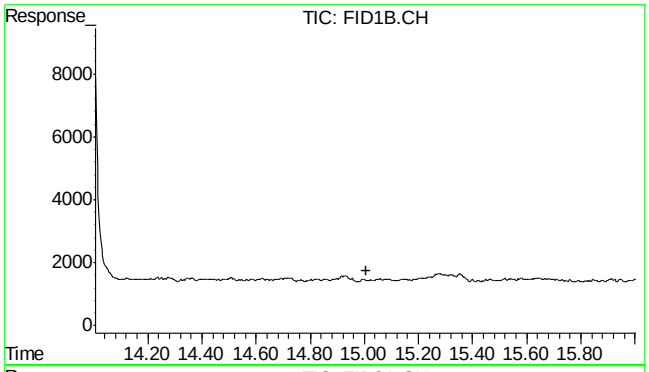
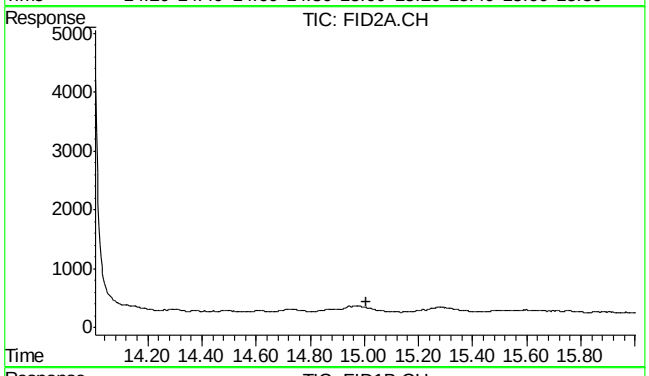


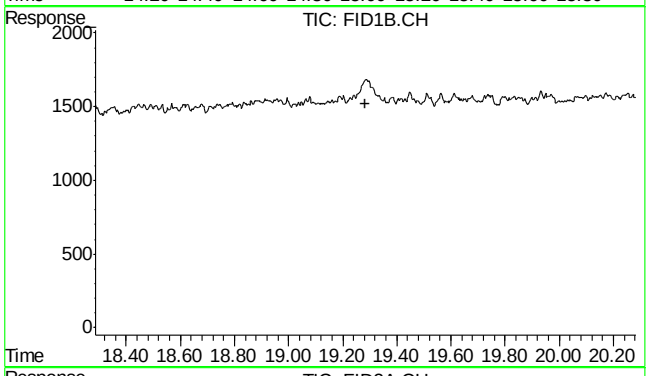
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



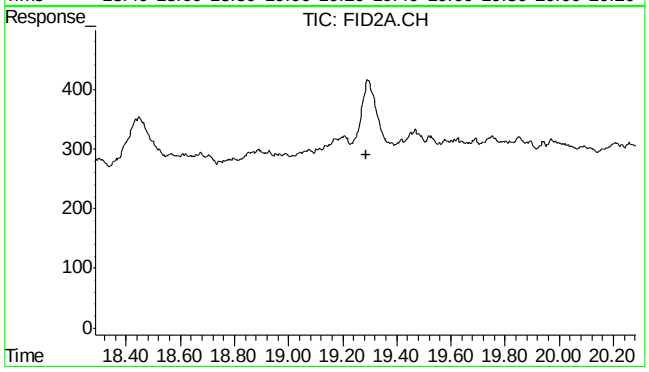
#23 Butylcyclohexane

R.T.: 0.000 min
Exp R.T. : 15.006 min
Response: 0
Conc: N.D.



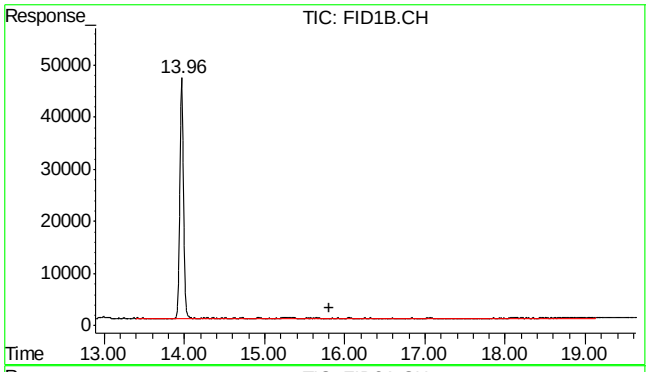
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.284 min
Response: 0
Conc: N.D.



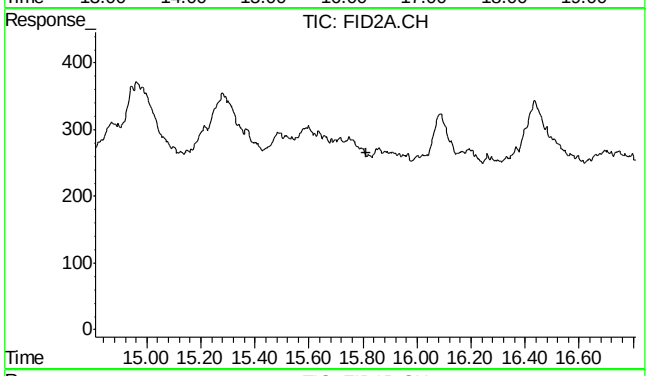
#24 Naphthalene

R.T.: 0.000 min
Exp R.T. : 19.286 min
Response: 0
Conc: N.D.



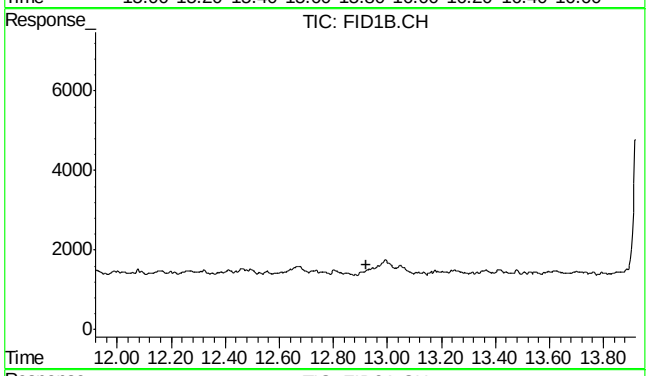
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 372687
Conc: 3.61 ug/L m



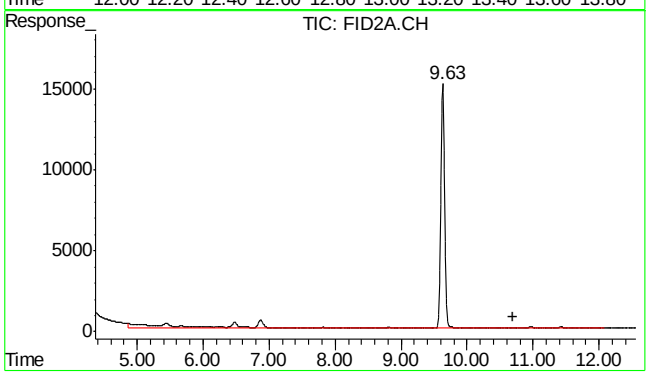
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 135621
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 826636
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 834194
Conc: 27.43 ug/L m

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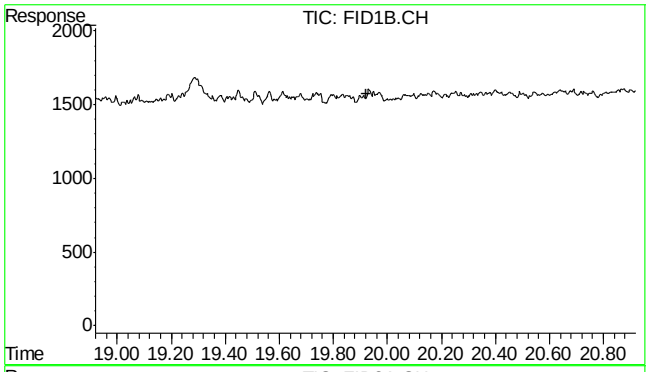
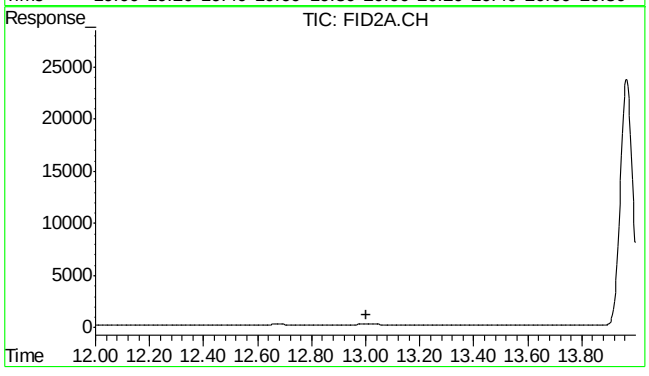


#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 430789
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 176335
Conc: N.D.

7.5.3

7

SGS ACCUTEST FA40754

Manual Integration Approval Summary

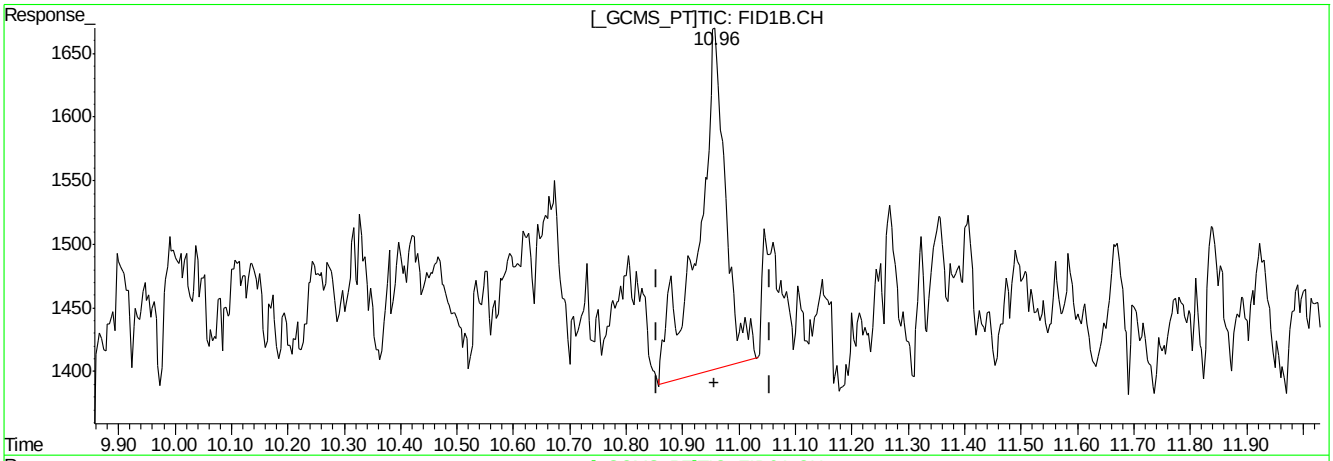
Sample Number:	FA40908-6DUP	**Method:**	MADEP VPH REV 1.1
Lab FileID:	UV077879.D	**Analyst approved:**	02/07/17 13:06 Antonio Chardon
Injection Time:	02/07/17 07:15	**Supervisor approved:**	02/08/17 14:54 Juan Garcia

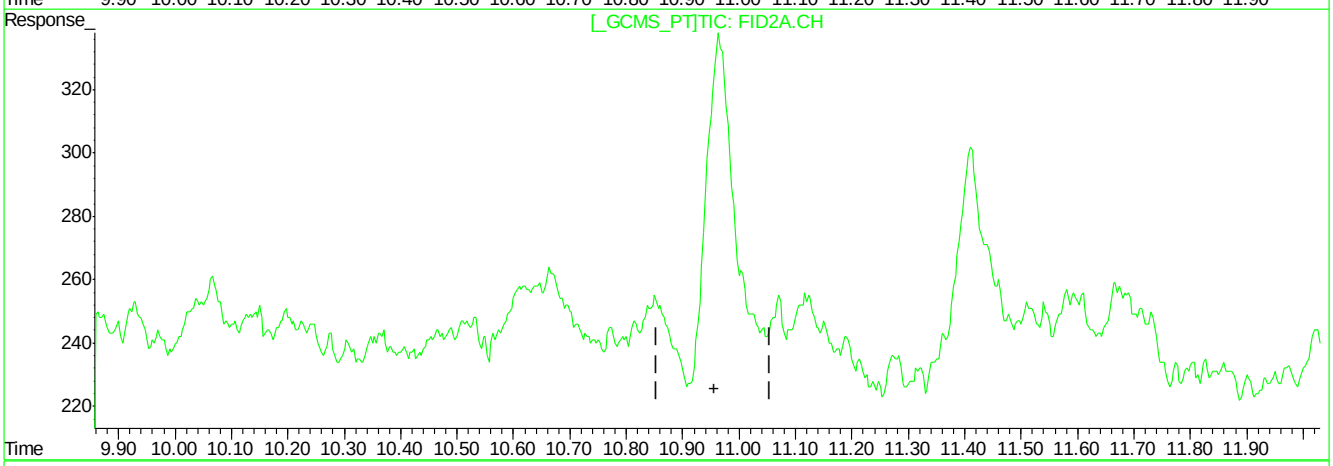
Parameter	CAS	Sig#	R.T. (min.)	Reason
Toluene	108-88-3	1	10.96	Poor instrument integration
Toluene	108-88-3	2	10.96	Poor instrument integration

Quantitation Report (Qedit)

```
Signal #1 : C:\HPCHEM\2\DATA\020617\UV077879.D\FID1B.CH  Vial: 29
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077879.D\FID2A.CH
Acq On    : 07-Feb-2017, 07:15:59                        Operator: antonioc
Sample    : fa40908-6dup                                 Inst    : HP5890
Misc      :                                              Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E
Quant Time: Feb  7 10:02 2017  Quant Results File: VPH011317.RES


Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Multiple Level Calibration
```





QEdit

(15) Toluene

10.96min 0.419ug/L

response 9088

(15) Toluene #2

0.00min 0.000ug/L

response 0

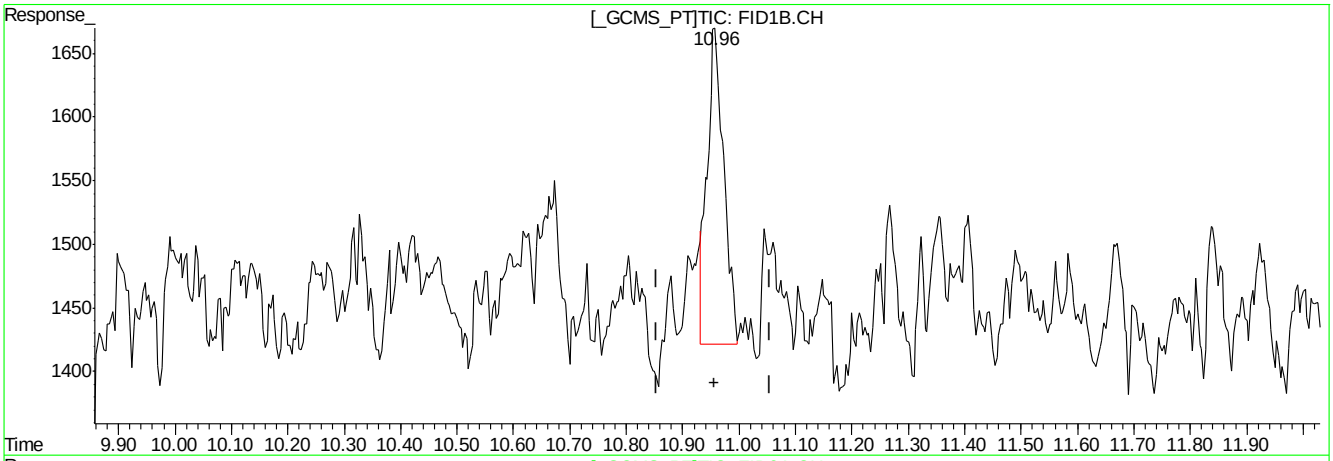
(+) = Expected Retention Time

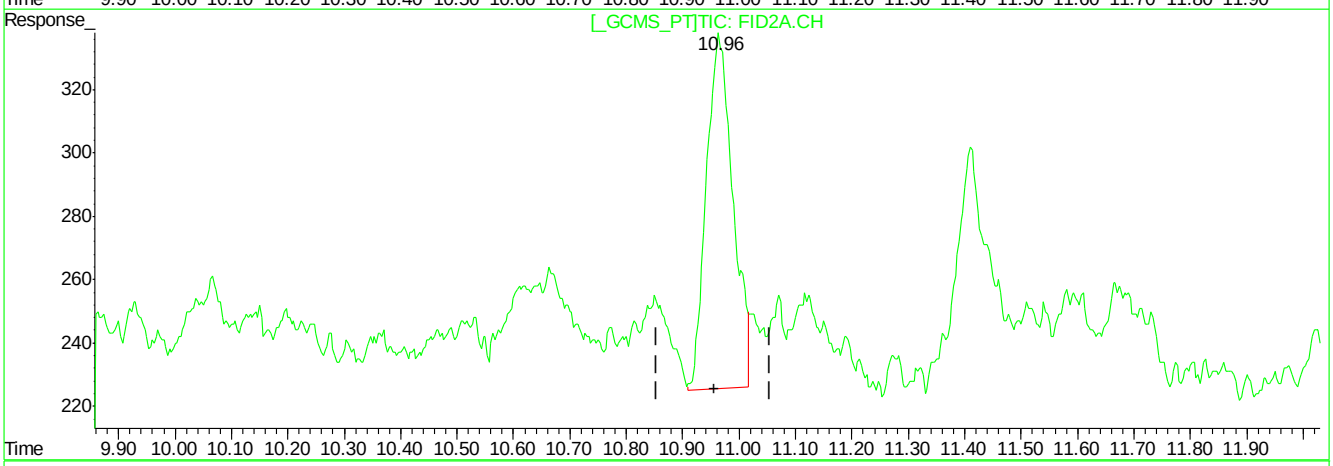
UV077879.D VPH011317.M Tue Feb 07 11:30:39 2017

Quantitation Report (Qedit)

```
Signal #1 : C:\HPCHEM\2\DATA\020617\UV077879.D\FID1B.CH  Vial: 29
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077879.D\FID2A.CH
Acq On    : 07-Feb-2017, 07:15:59                        Operator: antonioc
Sample    : fa40908-6dup                                 Inst    : HP5890
Misc      :                                              Multiplr: 1.00
IntFile Signal #1: PID.E        IntFile Signal #2: FID.E
Quant Time: Feb  7 10:02 2017  Quant Results File: VPH011317.RES


Method       : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title        : Mass. DEP VPH
Last Update  : Thu Jan 19 13:21:03 2017
Response via : Multiple Level Calibration
```





QEdit

(15) Toluene

10.96min 0.236ug/L m

response 5123

(15) Toluene #2

10.96min 0.177ug/L m

response 3648

(+) = Expected Retention Time

UV077879.D VPH011317.M Tue Feb 07 11:31:20 2017

7.5.3.3

7

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 01/19/17 14:21

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\011317\UV077464.D\FID1B.CH Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\011317\UV077464.D\FID2A.CH
Acq On : 13-Jan-2017, 14:22:20 Operator: antonioc
Sample : ic4115-1 Inst : HP5890
Misc : gc19571,guv4115,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 17 09:07:13 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Mon Jan 16 12:23:20 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.86f	0.00	4503	0	NoCal m	N.D.
2)	S	Alkane B	15.00f	0.00	15431	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.60f	0	7064	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	26158	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.95f	0	21640	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	18678	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	41036	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	22120	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	22464	N.D.	NoCal m
20)	S	BFB	13.96	13.96	36509	18263	1.989m	2.016
		Spiked Amount 200.000 Range 70 - 130 Recovery =					0.99%#	1.01%#
		Target Compounds						
10)		Pentane	0.00	5.08	0	6541	N.D.	0.477m#
11)		2-Methylpentane	0.00	6.24	0	12310	N.D.	0.824m#
12)		Methyl Tert Buty	6.59	6.60	9952	6838	1.845m	1.052m#
13)		2,2,4-Trimethylp	0.00	8.63	0	17518	N.D.	1028.003 #
14)		Benzene	9.03	9.04	29400	26847	1.229m	1.227m
15)		Toluene	10.95	10.95	26566	21166	1.220m	1.021
16)		Nonane	0.00	12.26	0	20331	N.D.	1.054 #
17)		Ethylbenzene	12.58	12.59	18778	19394	1.027	0.992
18)		m,p-Xylene	12.67	12.67	44450	41669	2.010	2.012
19)		o-Xylene	13.20	13.20	21389	22345	1.119	1.071
21)		Decane	0.00	13.85	0	19149	N.D.	1.070m#
22)		1,2,4-Trimethylb	14.87	14.87	22288	21666	1.121m	1.074
23)		Butylcyclohexane	15.00	15.01	15688	25196	NoCal	1.287 #
24)		Naphthalene	19.28	19.29	18933	8583	1.531m	0.909 #
25)	H	C9- C10 Aromatic	0.00	0.00	0	0	N.D.	N.D.
26)	H	C5- C8 Aliphatic	0.00	0.00	0	0	N.D.	N.D.
27)	H	C9- C12 Aliphati	0.00	0.00	0	0	N.D.	N.D.

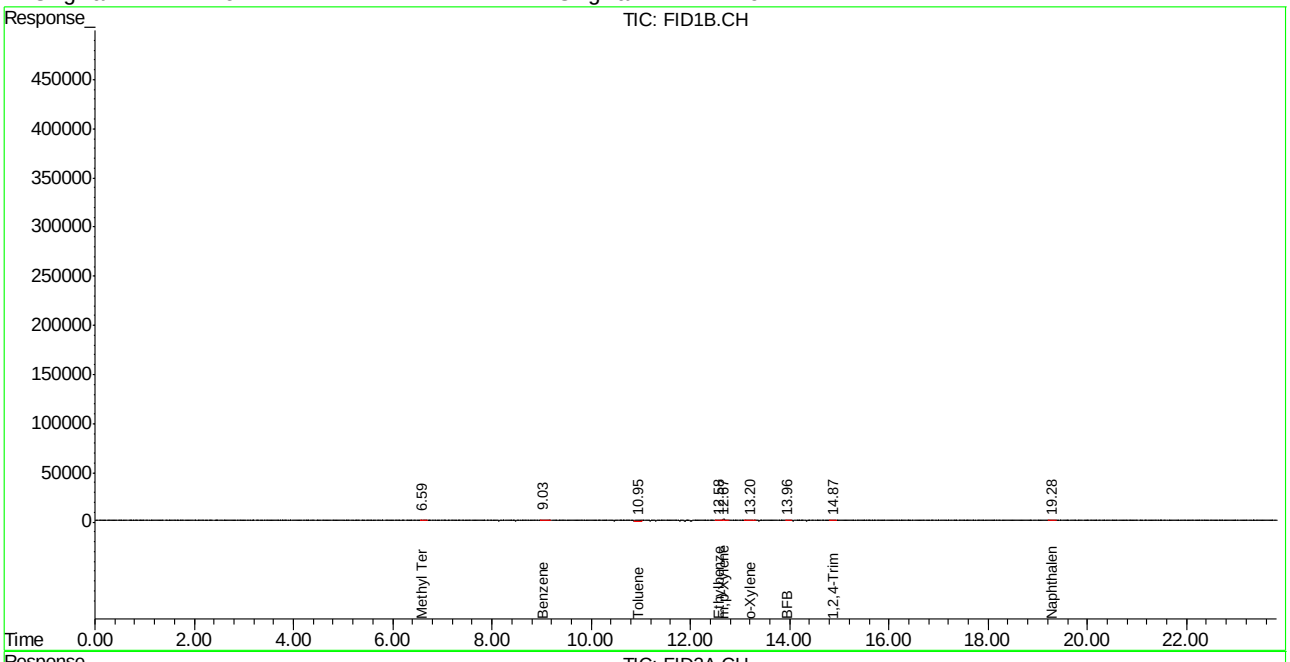
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077464.D VPH011317.M Thu Jan 19 14:19:40 2017

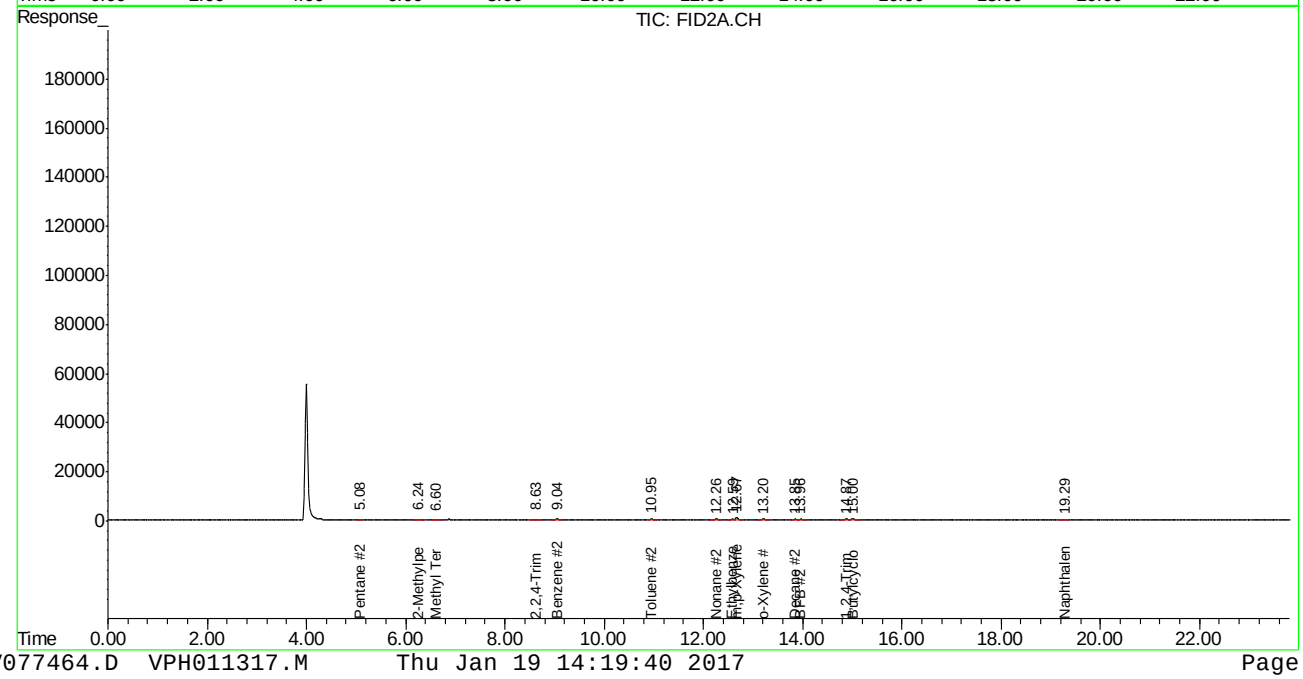
Quantitation Report (QT Reviewed)

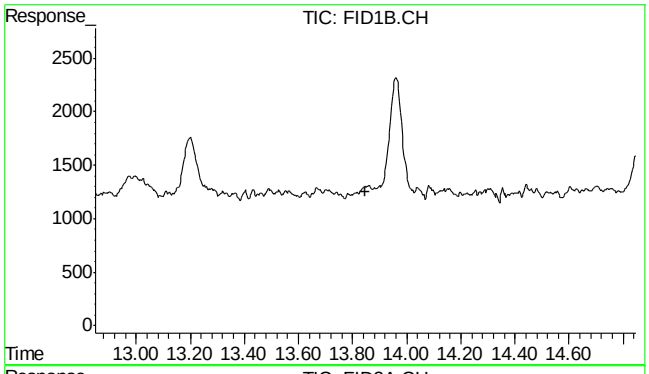
Signal #1 : C:\HPCHEM\2\DATA\011317\UV077464.D\FID1B.CH Vial: 8
Signal #2 : C:\HPCHEM\2\DATA\011317\UV077464.D\FID2A.CH
Acq On : 13-Jan-2017, 14:22:20 Operator: antonioc
Sample : ic4115-1 Inst : HP5890
Misc : gc19571,guv4115,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 17 9:15 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Mon Jan 16 12:23:20 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

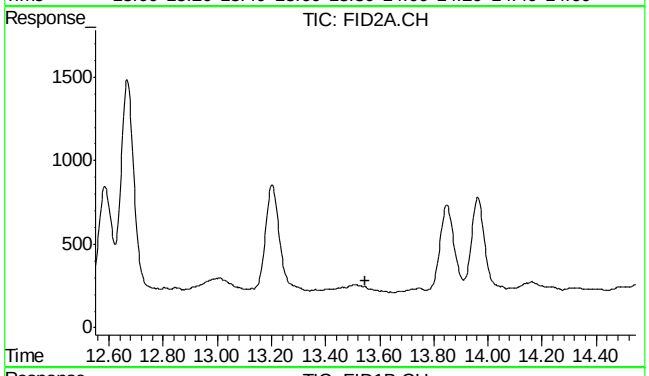






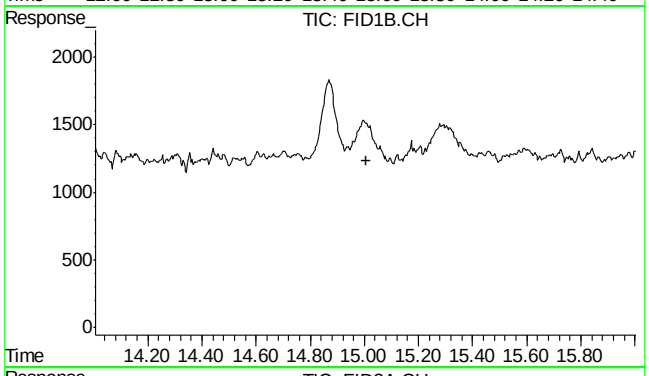
#1 Alkane A

R.T.: 13.859 min
Delta R.T.: 0.012 min
Response: 4503
Conc: N.D.



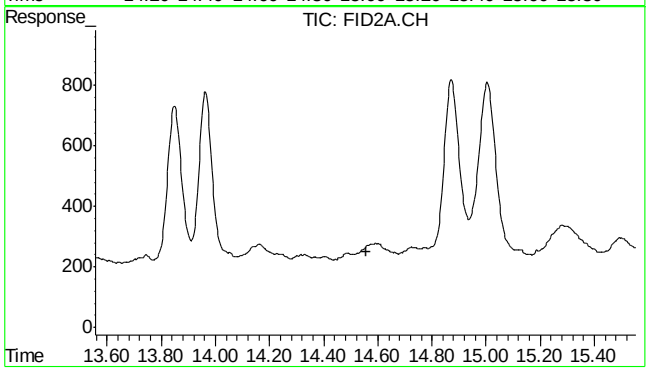
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 14.997 min
Delta R.T.: -0.009 min
Response: 15431
Conc: N.D.



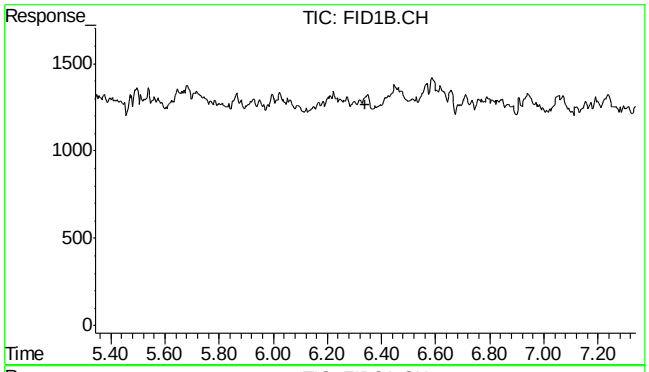
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.6.1

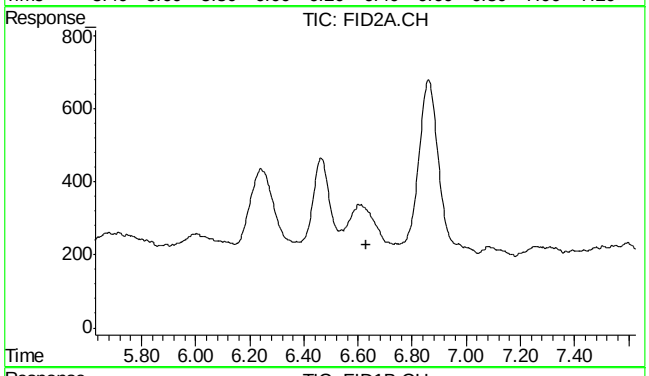
7

SGS ACCUTEST FA40754



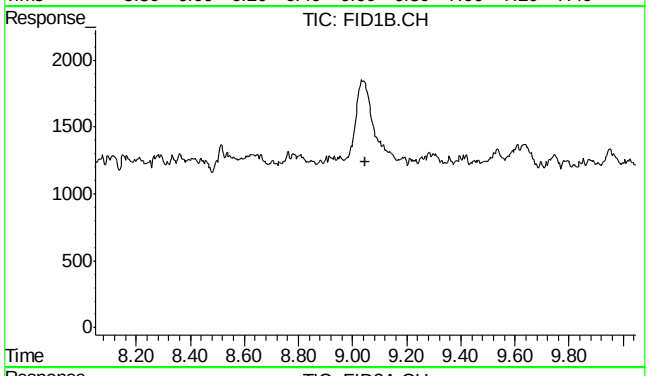
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



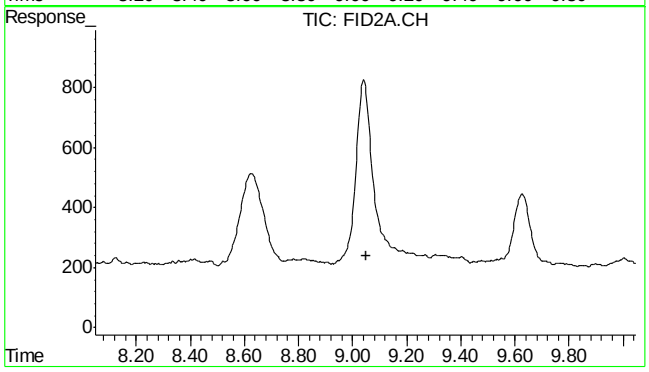
#3 Aromatic A

R.T.: 6.600 min
Delta R.T.: -0.029 min
Response: 7064
Conc: N.D.



#4 Aromatic B

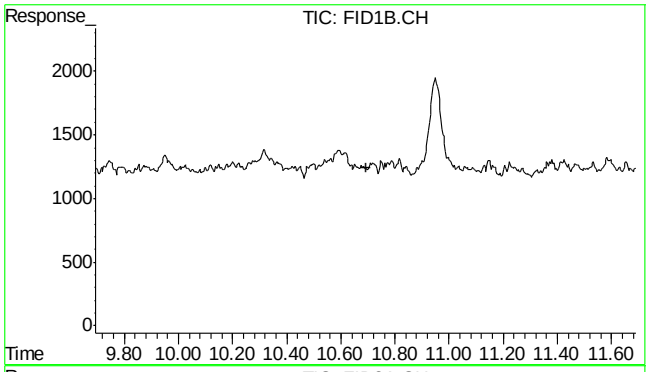
R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

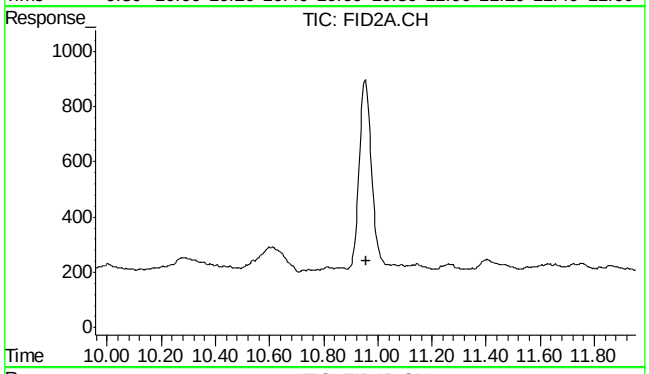
R.T.: 9.040 min
Delta R.T.: -0.008 min
Response: 26158
Conc: N.D.

SGS ACCUTEST FA40754



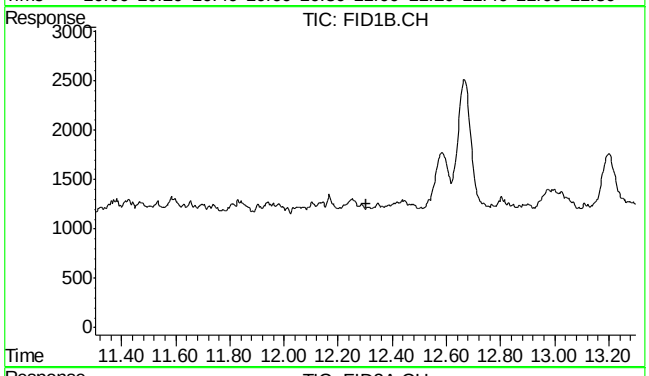
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



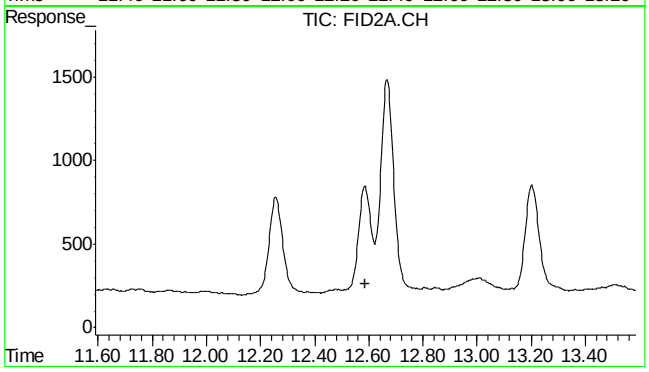
#5 Aromatic C

R.T.: 10.953 min
Delta R.T.: -0.003 min
Response: 21640
Conc: N.D.



#6 Aromatic D

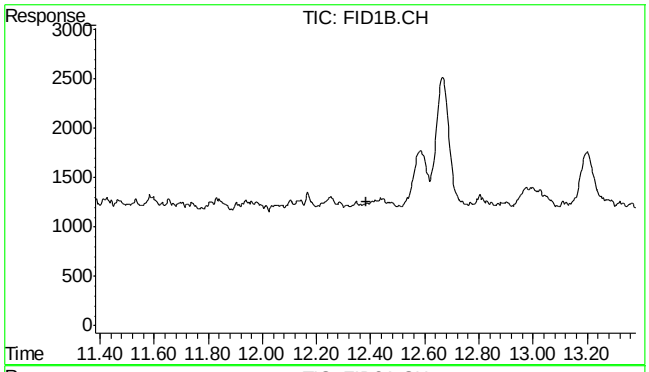
R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

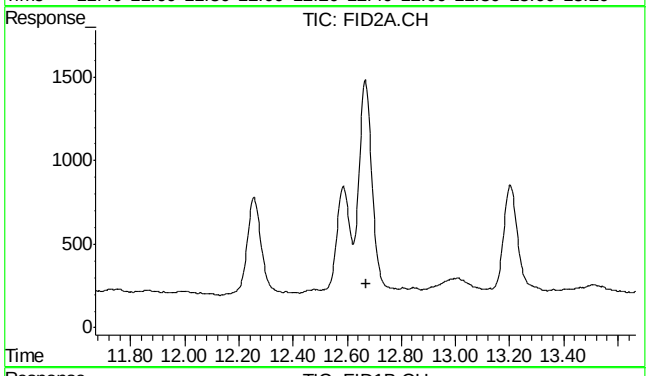
R.T.: 12.585 min
Delta R.T.: -0.002 min
Response: 18678
Conc: N.D.

SGS ACCUTEST FA40754



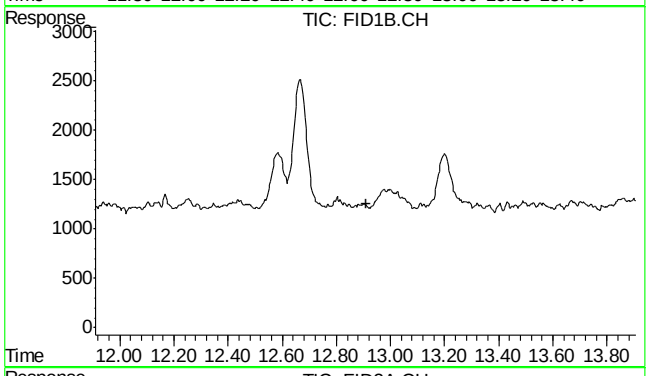
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



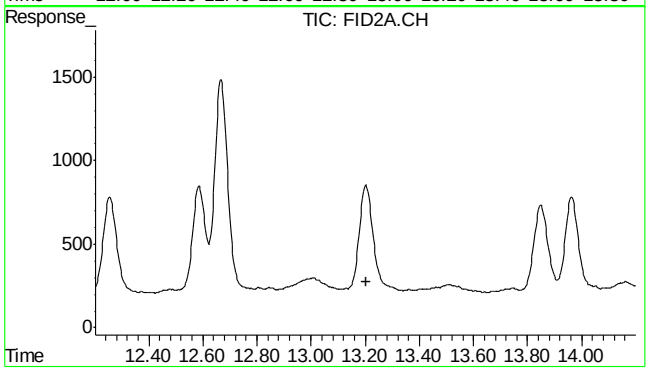
#7 Aromatic E

R.T.: 12.666 min
Delta R.T.: -0.003 min
Response: 41036
Conc: N.D.



#8 Aromatic F

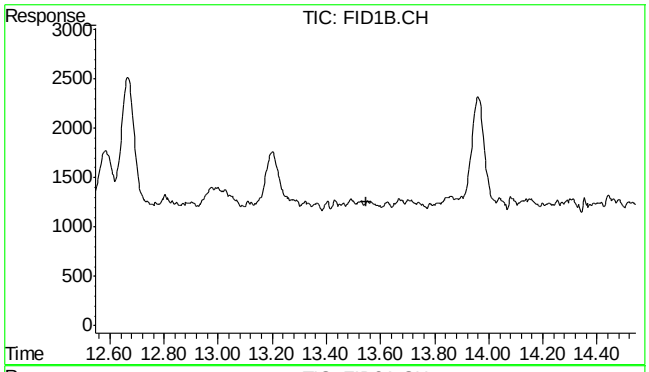
R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

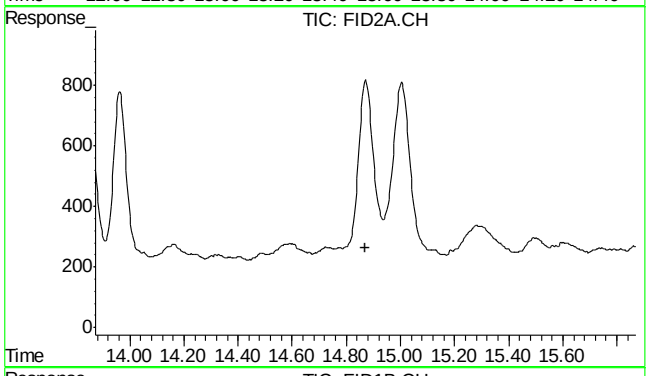
R.T.: 13.202 min
Delta R.T.: -0.001 min
Response: 22120
Conc: N.D.

SGS ACCUTEST FA40754



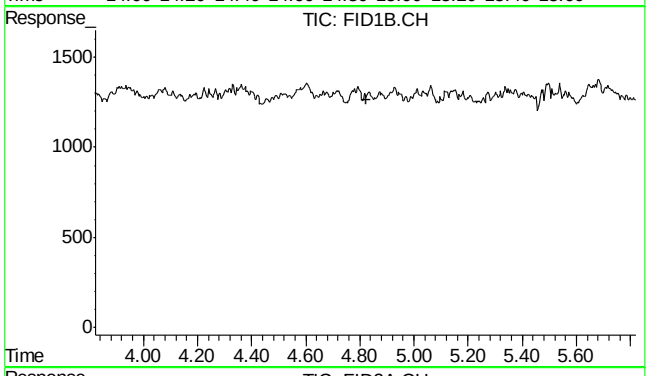
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



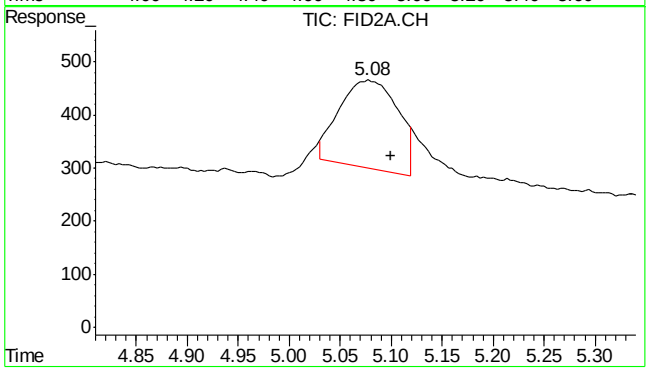
#9 Aromatic G

R.T.: 14.871 min
Delta R.T.: 0.000 min
Response: 22464
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



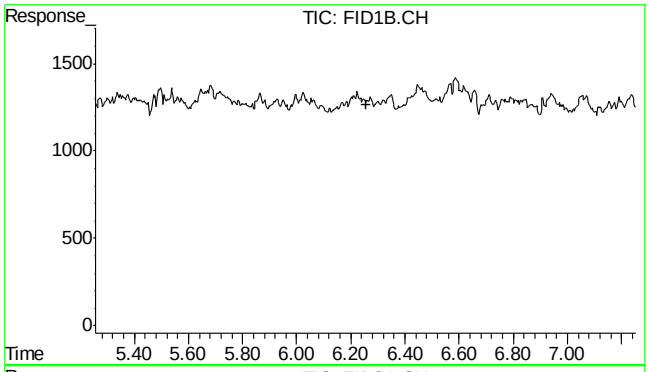
#10 Pentane

R.T.: 5.077 min
Delta R.T.: -0.023 min
Response: 6541
Conc: 0.48 ug/L m

7.6.1

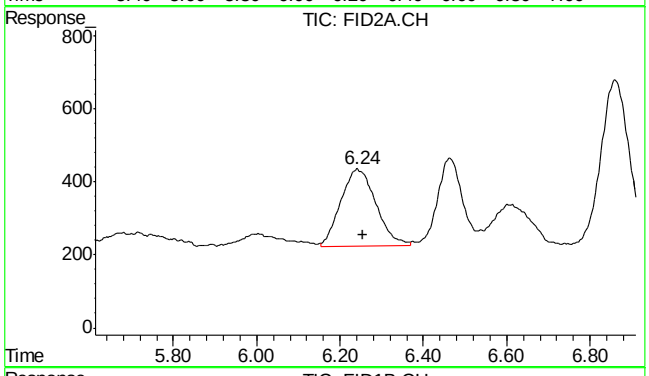
7

SGS ACCUTEST FA40754



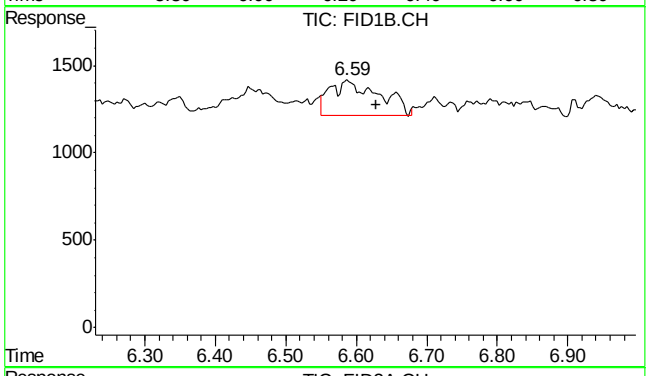
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



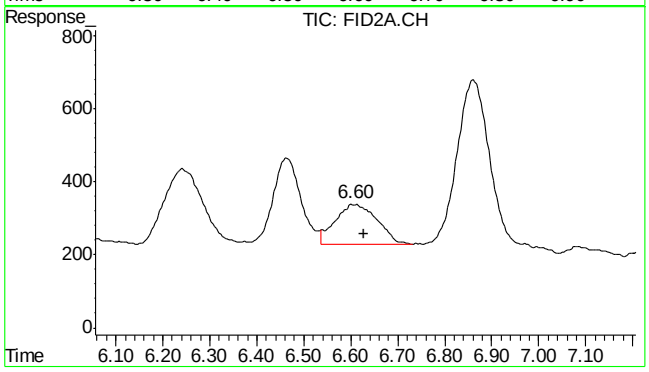
#11 2-Methylpentane

R.T.: 6.241 min
Delta R.T.: -0.015 min
Response: 12310
Conc: 0.82 ug/L m



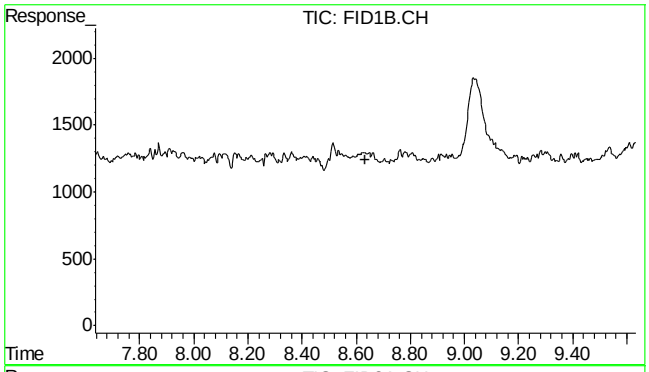
#12 Methyl Tert Butyl Ether

R.T.: 6.587 min
Delta R.T.: -0.042 min
Response: 9952
Conc: 1.84 ug/L m



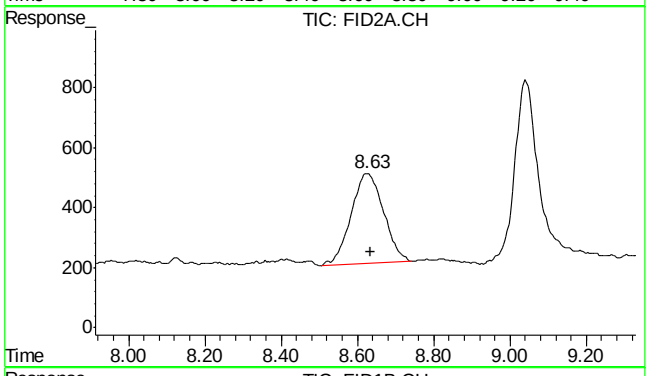
#12 Methyl Tert Butyl Ether

R.T.: 6.600 min
Delta R.T.: -0.028 min
Response: 6838
Conc: 1.05 ug/L m



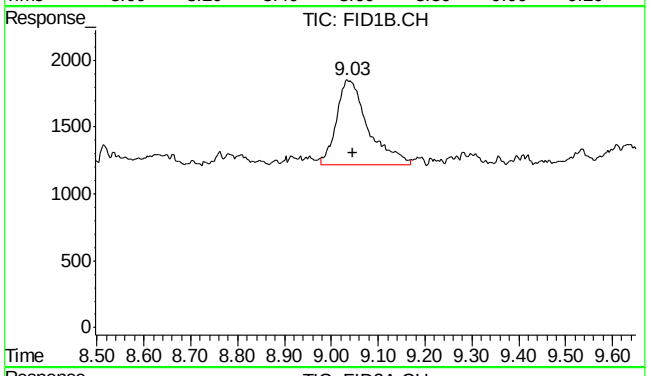
#13 2,2,4-Trimethylpentane

R.T.: 0.000 min
Exp R.T. : 8.634 min
Response: 0
Conc: N.D.



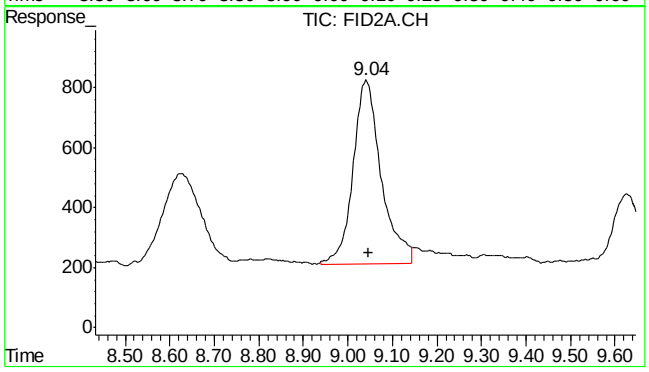
#13 2,2,4-Trimethylpentane

R.T.: 8.626 min
Delta R.T.: -0.008 min
Response: 17518
Conc: 1028.00 ug/L



#14 Benzene

R.T.: 9.033 min
Delta R.T.: -0.013 min
Response: 29400
Conc: 1.23 ug/L m



#14 Benzene

R.T.: 9.040 min
Delta R.T.: -0.006 min
Response: 26847
Conc: 1.23 ug/L m

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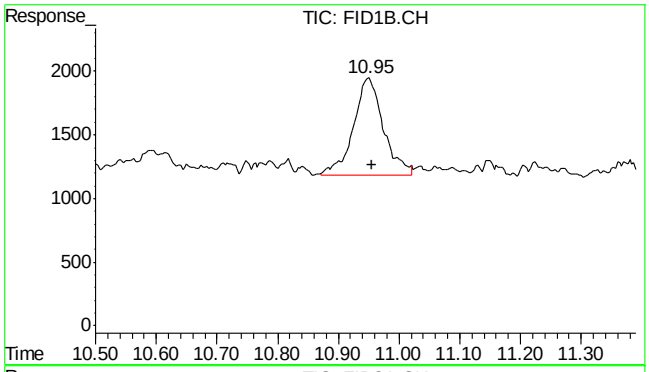
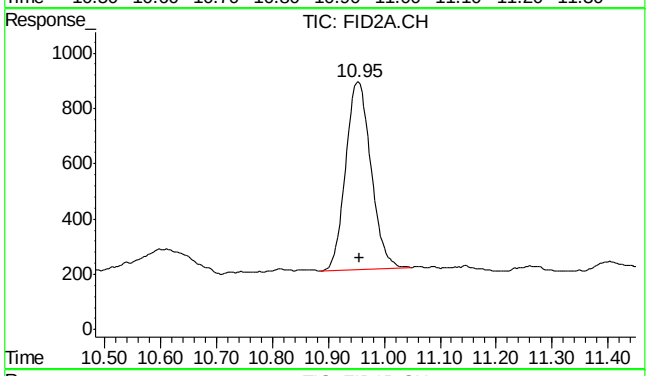


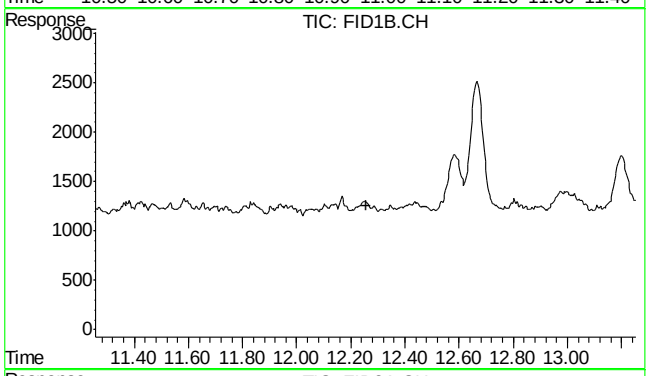
#15 Toluene

R.T.: 10.949 min
Delta R.T.: -0.006 min
Response: 26566
Conc: 1.22 ug/L m



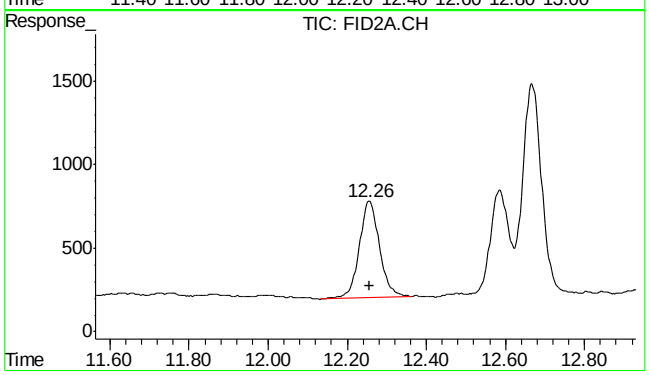
#15 Toluene

R.T.: 10.954 min
Delta R.T.: -0.001 min
Response: 21166
Conc: 1.02 ug/L



#16 Nonane

R.T.: 0.000 min
Exp R.T. : 12.256 min
Response: 0
Conc: N.D.



#16 Nonane

R.T.: 12.256 min
Delta R.T.: 0.000 min
Response: 20331
Conc: 1.05 ug/L

7.6.1

7

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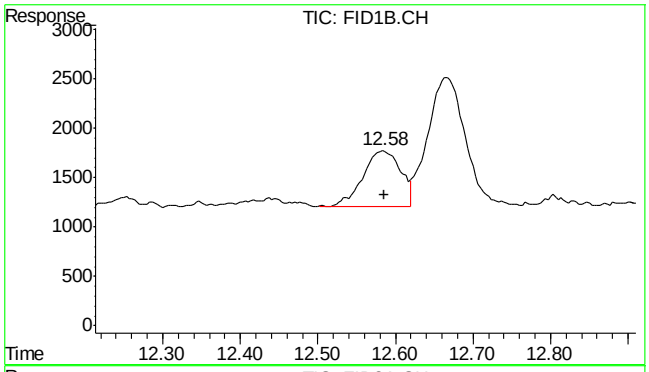
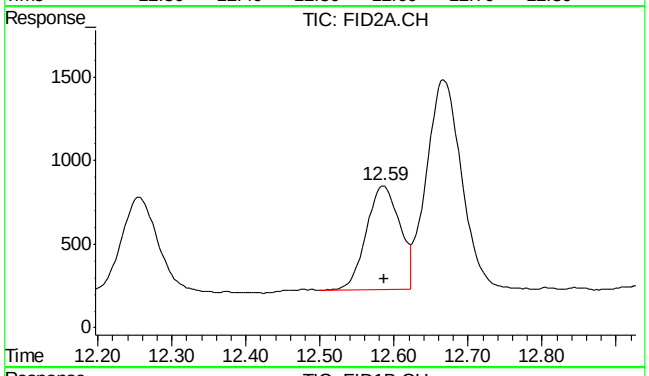


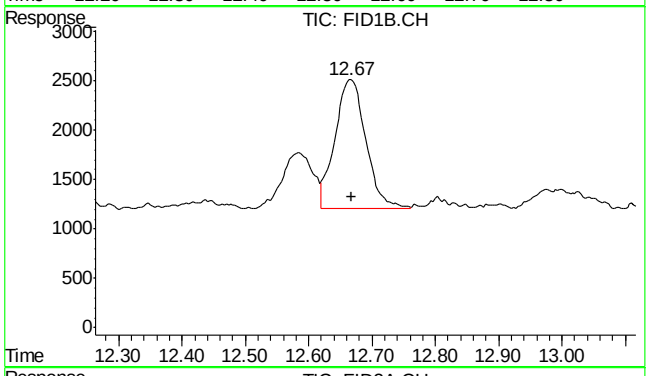
#17 Ethylbenzene

R.T.: 12.584 min
Delta R.T.: -0.002 min
Response: 18778
Conc: 1.03 ug/L



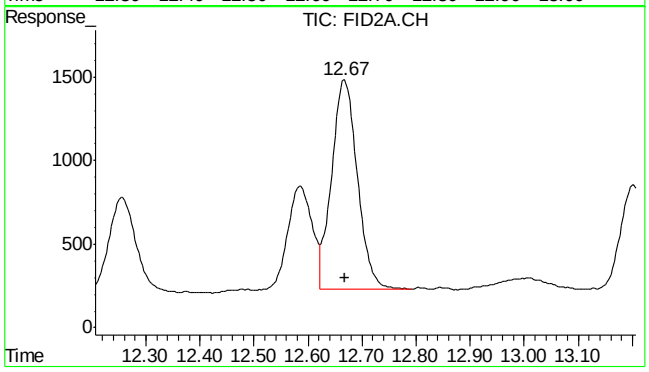
#17 Ethylbenzene

R.T.: 12.586 min
Delta R.T.: 0.000 min
Response: 19394
Conc: 0.99 ug/L



#18 m,p-Xylene

R.T.: 12.667 min
Delta R.T.: -0.002 min
Response: 44450
Conc: 2.01 ug/L



#18 m,p-Xylene

R.T.: 12.668 min
Delta R.T.: -0.001 min
Response: 41669
Conc: 2.01 ug/L

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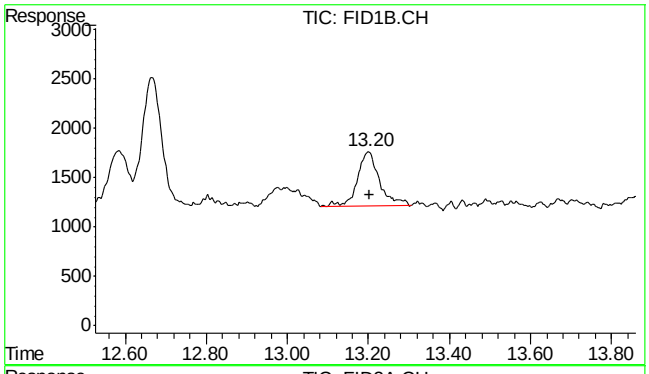
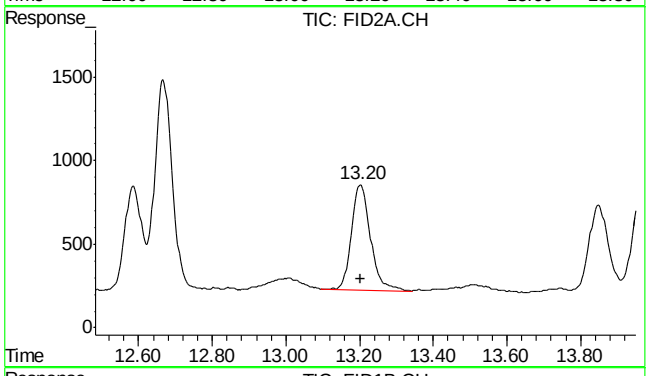


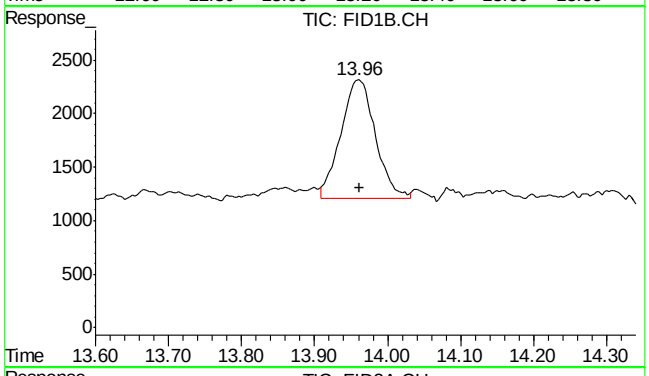
#19 o-Xylene

R.T.: 13.200 min
Delta R.T.: -0.002 min
Response: 21389
Conc: 1.12 ug/L



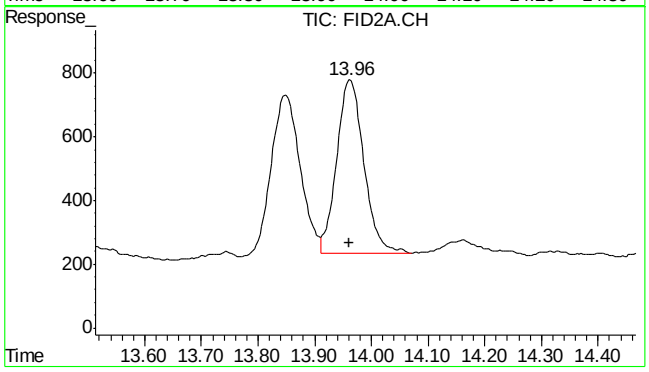
#19 o-Xylene

R.T.: 13.203 min
Delta R.T.: 0.000 min
Response: 22345
Conc: 1.07 ug/L



#20 BFB

R.T.: 13.959 min
Delta R.T.: -0.002 min
Response: 36509
Conc: 1.99 ug/L m



#20 BFB

R.T.: 13.963 min
Delta R.T.: 0.001 min
Response: 18263
Conc: 2.02 ug/L

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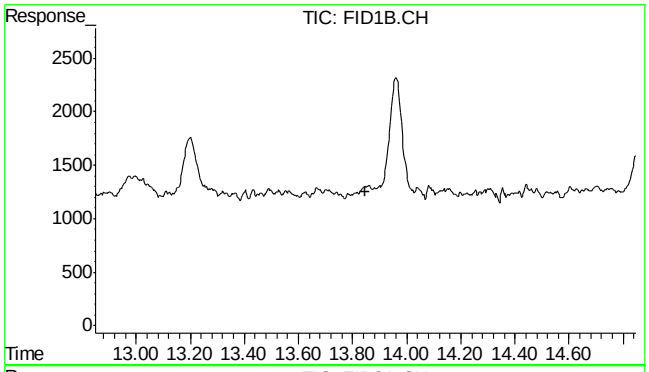
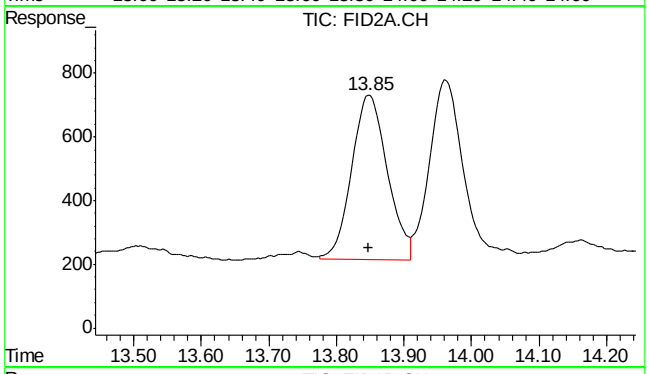


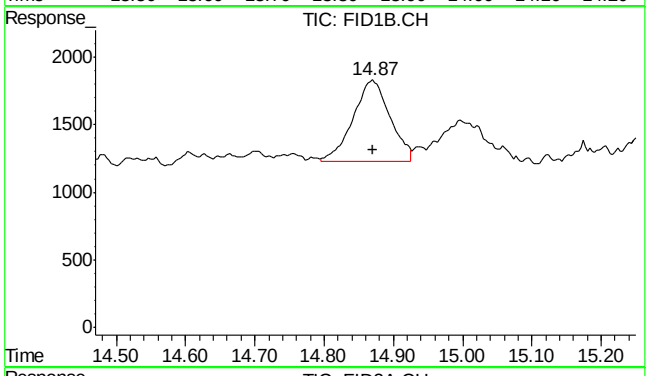
#21 Decane

R.T.: 0.000 min
Exp R.T. : 13.848 min
Response: 0
Conc: N.D.



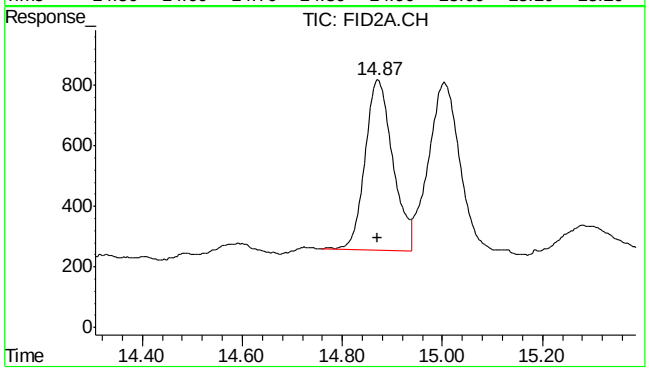
#21 Decane

R.T.: 13.848 min
Delta R.T.: 0.000 min
Response: 19149
Conc: 1.07 ug/L m



#22 1,2,4-Trimethylbenzene

R.T.: 14.870 min
Delta R.T.: 0.000 min
Response: 22288
Conc: 1.12 ug/L m



#22 1,2,4-Trimethylbenzene

R.T.: 14.872 min
Delta R.T.: 0.001 min
Response: 21666
Conc: 1.07 ug/L

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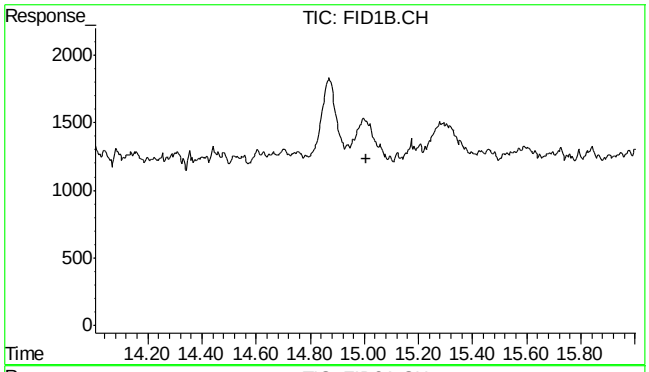
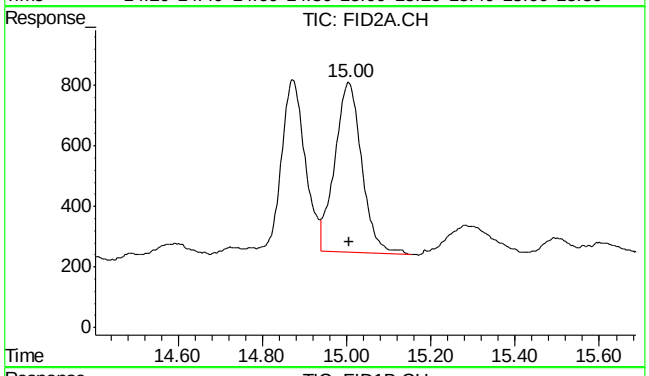


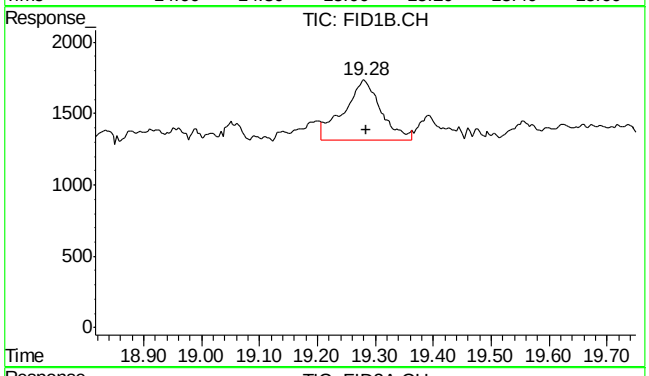
#23 Butylcyclohexane

R.T.: 15.000 min
Delta R.T.: -0.006 min
Response: 15688
Conc: N.D.



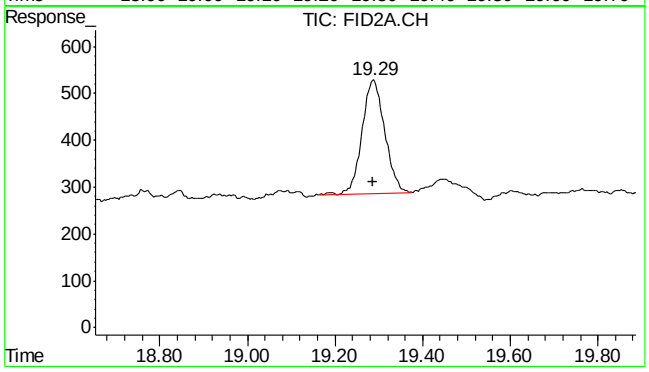
#23 Butylcyclohexane

R.T.: 15.005 min
Delta R.T.: 0.000 min
Response: 25196
Conc: 1.29 ug/L



#24 Naphthalene

R.T.: 19.280 min
Delta R.T.: -0.004 min
Response: 18933
Conc: 1.53 ug/L m



#24 Naphthalene

R.T.: 19.288 min
Delta R.T.: 0.002 min
Response: 8583
Conc: 0.91 ug/L

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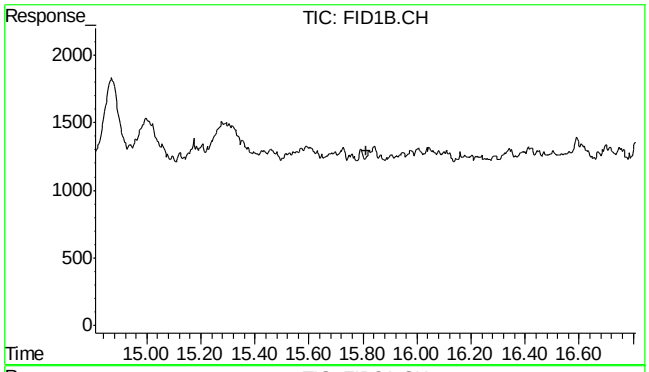
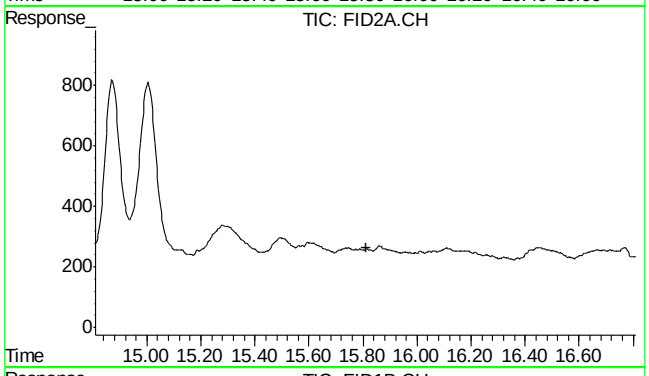


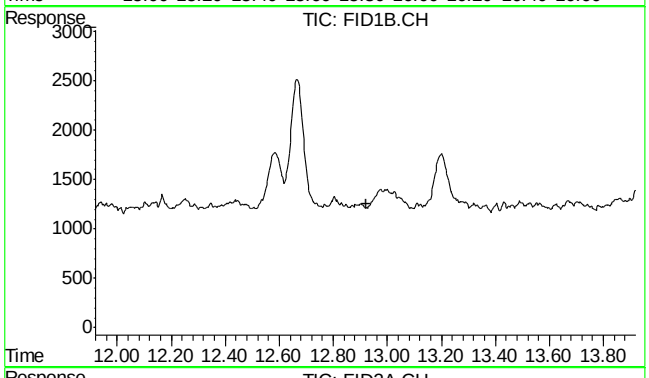
#25 C9- C10 Aromatics (unadjusted)

R.T.: 0.000 min
Exp R.T. : 15.810 min
Response: 0
Conc: N.D.



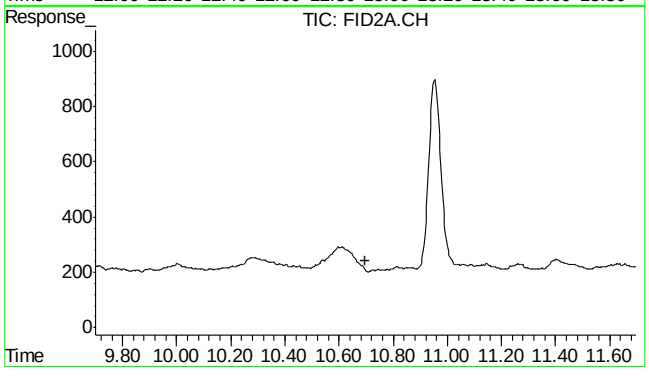
#25 C9- C10 Aromatics (unadjusted)

R.T.: 0.000 min
Exp R.T. : 15.810 min
Response: 0
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 0.000 min
Exp R.T. : 12.920 min
Response: 0
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 0.000 min
Exp R.T. : 10.697 min
Response: 0
Conc: N.D.

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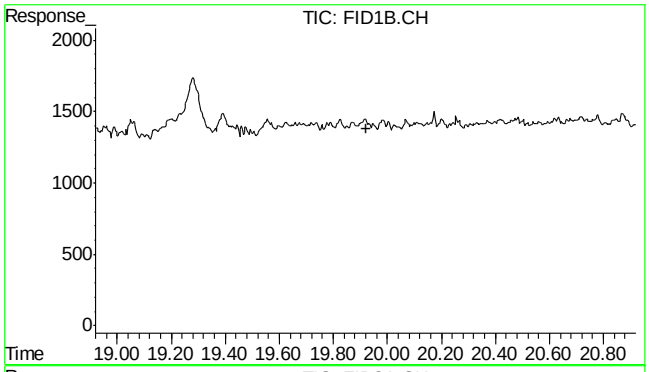
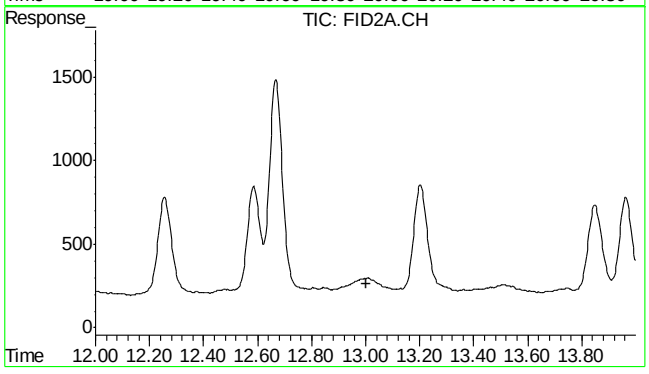


#27 C9- C12 Aliphatics (raw)

R.T.: 0.000 min
Exp R.T. : 19.920 min
Response: 0
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 0.000 min
Exp R.T. : 13.000 min
Response: 0
Conc: N.D.

7.6.1

7

SGS ACCUTEST FA40754

Manual Integration Approval Summary

Sample Number: GUV4115-IC4115 **Method:** MADEP VPH REV 1.1
Lab FileID: UV077464.D **Analyst approved:** 01/19/17 10:37 Antonio Chardon
Injection Time: 01/13/17 14:22 **Supervisor approved:** 01/19/17 14:21 Melissa Mangual

Parameter	CAS	Sig#	R.T. (min.)	Reason
Pentane	109-66-0	2	5.08	Poor instrument integration
2-Methylpentane	107-83-5	2	6.24	Poor instrument integration
Methyl Tert Butyl Ether	1634-04-4	1	6.59	Poor instrument integration
Methyl Tert Butyl Ether	1634-04-4	2	6.60	Poor instrument integration
Benzene	71-43-2	1	9.03	Poor instrument integration
Benzene	71-43-2	2	9.04	Poor instrument integration
Toluene	108-88-3	1	10.95	Poor instrument integration
Decane	124-18-5	2	13.85	Poor instrument integration
BFB	460-00-4	1	13.96	Poor instrument integration
1,2,4-Trimethylbenzene	95-63-6	1	14.87	Poor instrument integration
Naphthalene	91-20-3	1	19.28	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Melissa Mangual 01/19/17 14:21

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\011317\UV077465.D\FID1B.CH Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\011317\UV077465.D\FID2A.CH
Acq On : 13-Jan-2017, 14:52:59 Operator: antonioc
Sample : ic4115-2 Inst : HP5890
Misc : gc19571,guv4115,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 17 09:07:15 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Mon Jan 16 12:23:20 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	23838	0	NoCal m	N.D.
2)	S	Alkane B	15.00f	0.00	110465	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.60f	0	67960	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	227041	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.95f	0	216924	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.58f	0	201603	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	439891	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	219402	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	209348	N.D.	NoCal m
20)	S	BFB	13.96	13.96	195430	99827	10.647	11.021
		Spiked Amount 200.000 Range 70 - 130 Recovery =					5.32%#	5.51%#
		Target Compounds						
10)		Pentane	0.00	5.08	0	147619	N.D.	10.763 #
11)		2-Methylpentane	0.00	6.24	0	170855	N.D.	11.439 #
12)		Methyl Tert Buty	6.60	6.61	70046	70908	12.983	10.906
13)		2,2,4-Trimethylp	8.63	8.63	42308	172564	NoCal	8.276 #
14)		Benzene	9.04	9.04	240280	223907	10.046	10.234
15)		Toluene	10.95	10.95	218155	217319	10.016	10.487
16)		Nonane	12.25	12.26	23855	202678	NoCal	10.508 #
17)		Ethylbenzene	12.58	12.59	190571	206034	10.428	10.542
18)		m,p-Xylene	12.67	12.67	462399	439264	20.905	21.208
19)		o-Xylene	13.20	13.20	195951	219175	10.249	10.500
21)		Decane	13.85	13.85	28392	192290	NoCal	10.744 #
22)		1,2,4-Trimethylb	14.87	14.87	204982	215988	10.309	10.711
23)		Butylcyclohexane	15.00	15.01	109825	216880	NoCal	11.081 #
24)		Naphthalene	19.28	19.28	133651	103224	10.805m	10.936m
25)	H	C9- C10 Aromatic	15.81	15.81	505793	498255	2.444	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	1815878	651774	NoCal	5.406 #
27)	H	C9- C12 Aliphati	19.92	13.00	815567	770844	NoCal	14.029 #

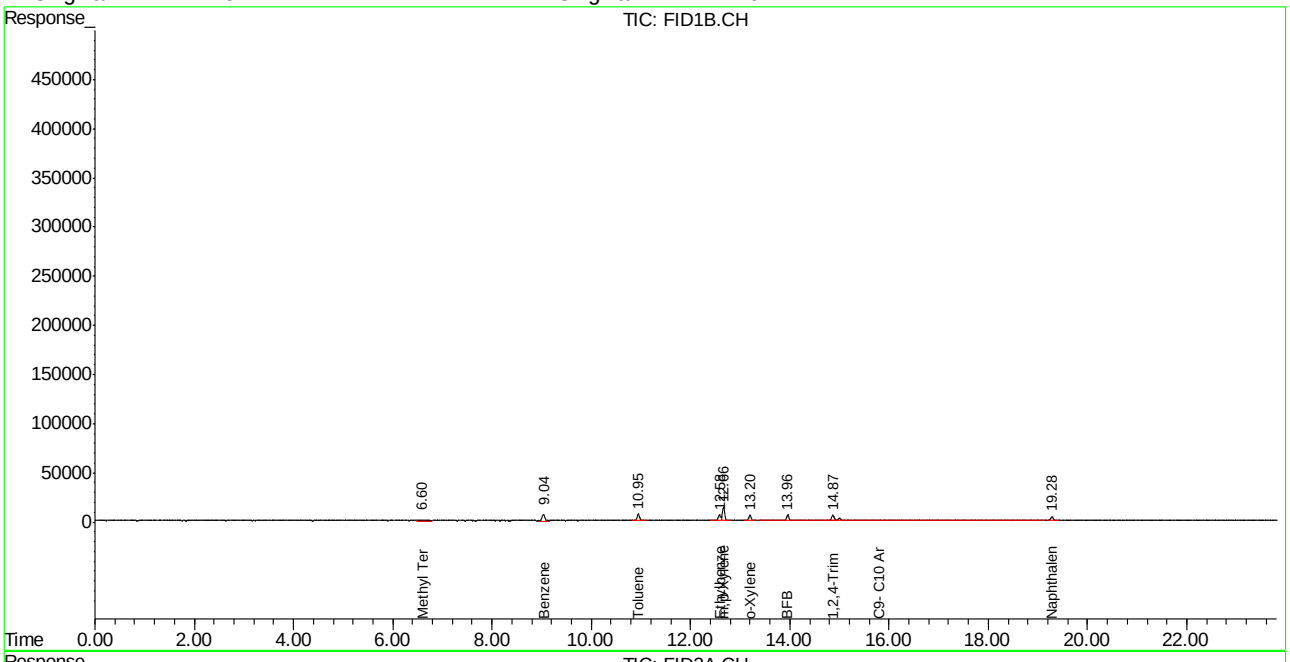
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077465.D VPH011317.M Thu Jan 19 10:55:31 2017

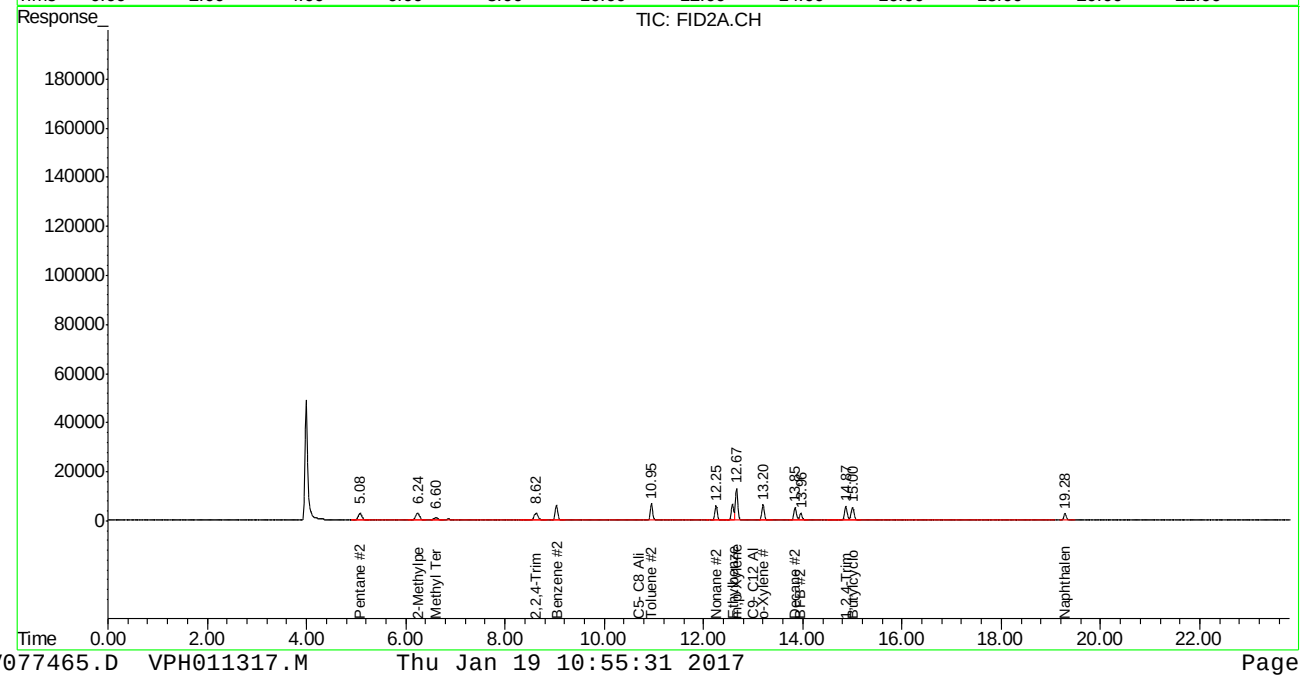
Quantitation Report (QT Reviewed)

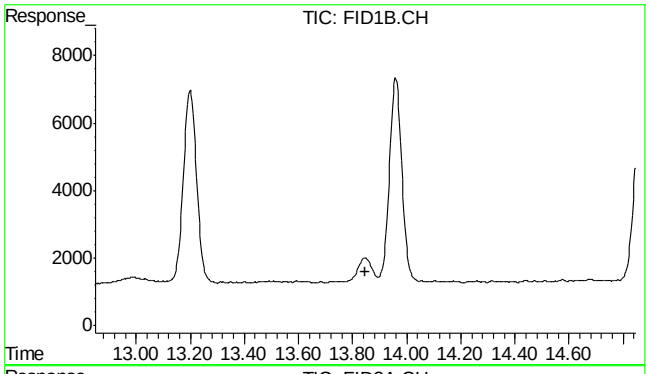
Signal #1 : C:\HPCHEM\2\DATA\011317\UV077465.D\FID1B.CH Vial: 9
Signal #2 : C:\HPCHEM\2\DATA\011317\UV077465.D\FID2A.CH
Acq On : 13-Jan-2017, 14:52:59 Operator: antonioc
Sample : ic4115-2 Inst : HP5890
Misc : gc19571,guv4115,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 17 9:18 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Mon Jan 16 12:23:20 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

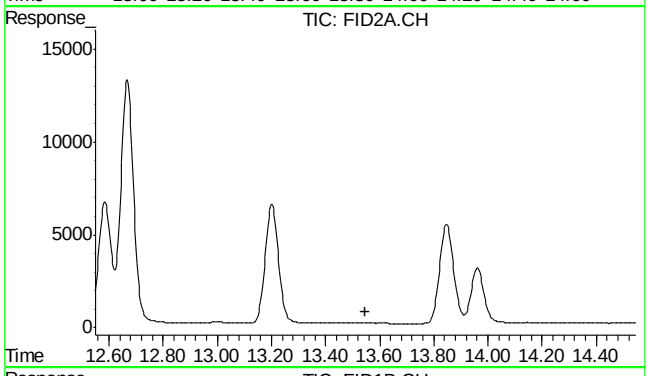






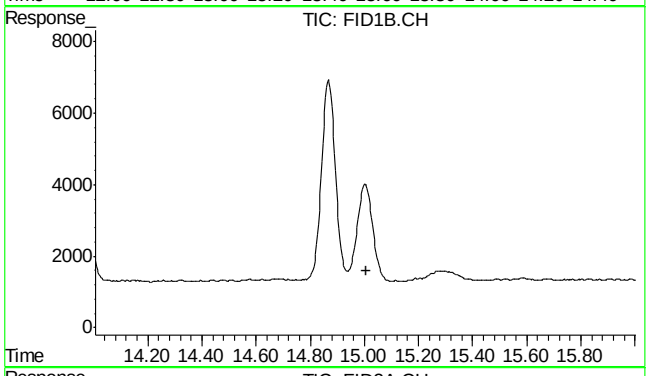
#1 Alkane A

R.T.: 13.846 min
Delta R.T.: -0.001 min
Response: 23838
Conc: N.D.



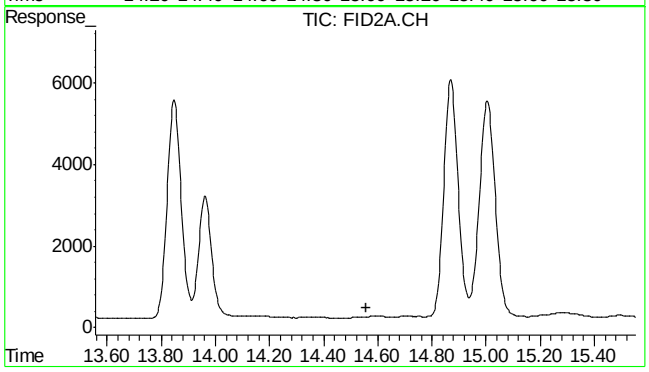
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

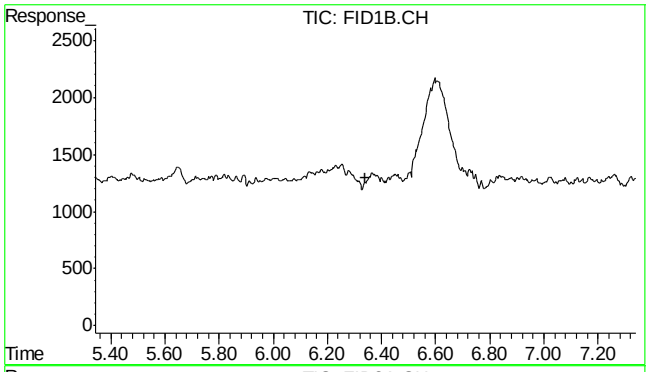
R.T.: 15.002 min
Delta R.T.: -0.004 min
Response: 110465
Conc: N.D.



#2 Alkane B

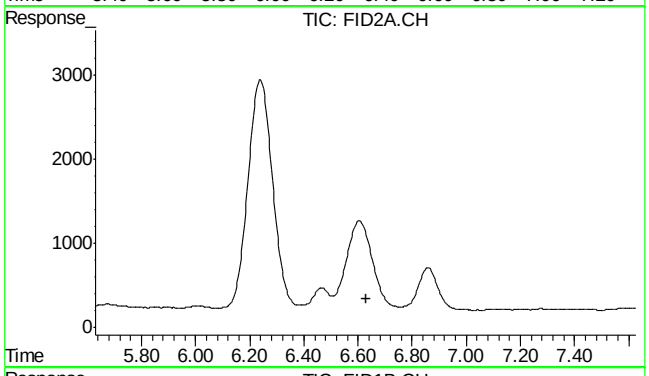
R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

SGS ACCUTEST FA40754



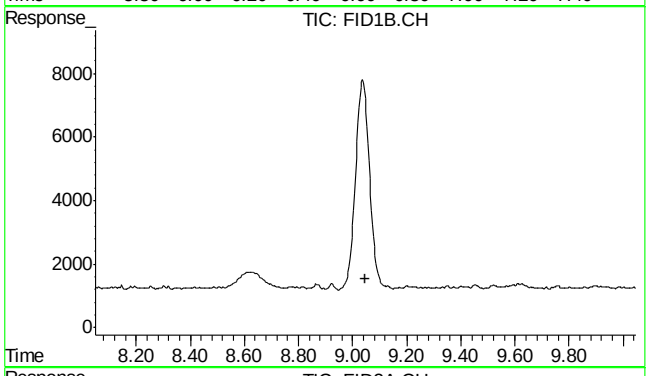
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



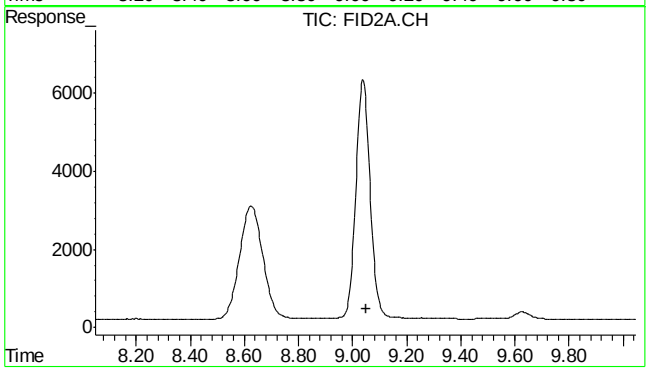
#3 Aromatic A

R.T.: 6.604 min
Delta R.T.: -0.025 min
Response: 67960
Conc: N.D.



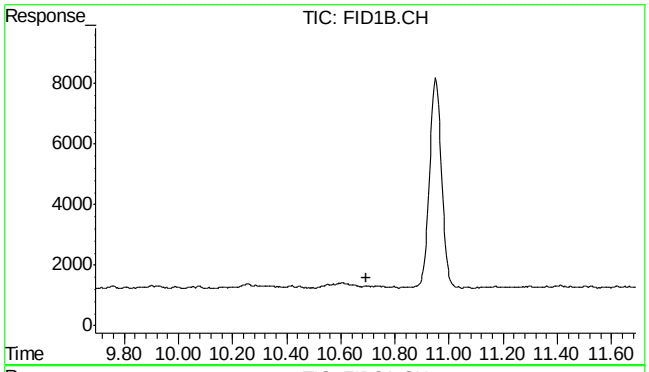
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



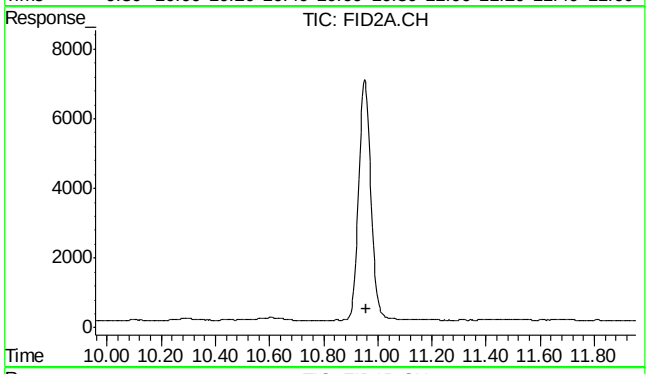
#4 Aromatic B

R.T.: 9.038 min
Delta R.T.: -0.011 min
Response: 227041
Conc: N.D.



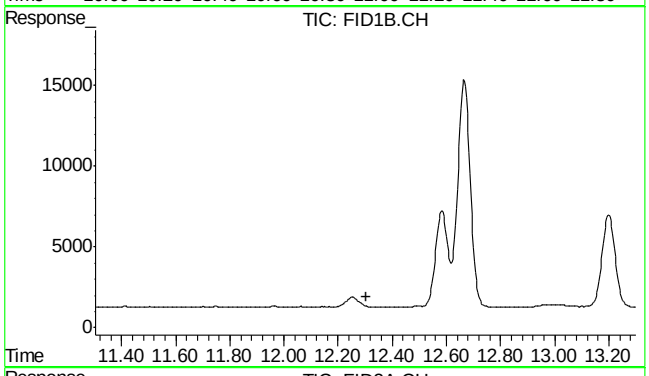
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



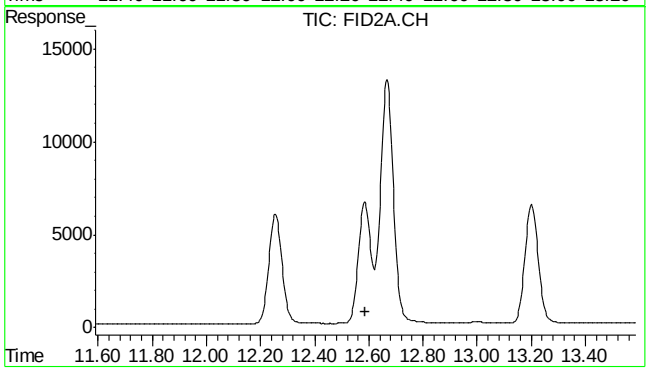
#5 Aromatic C

R.T.: 10.951 min
Delta R.T.: -0.005 min
Response: 216924
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 12.584 min
Delta R.T.: -0.003 min
Response: 201603
Conc: N.D.

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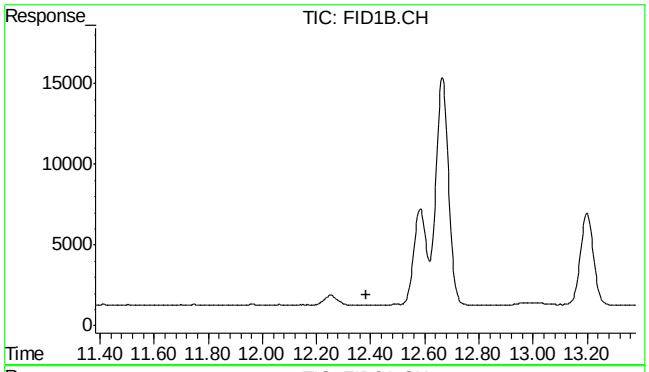
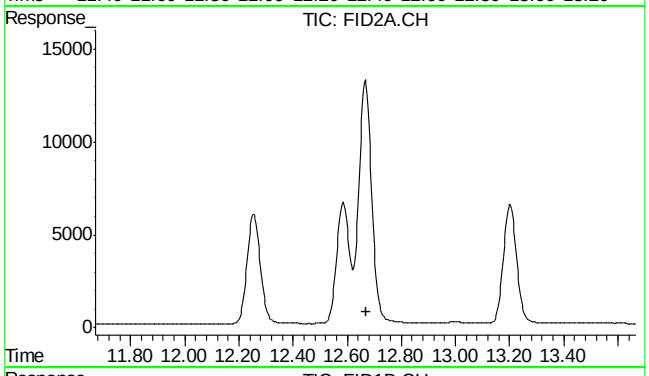


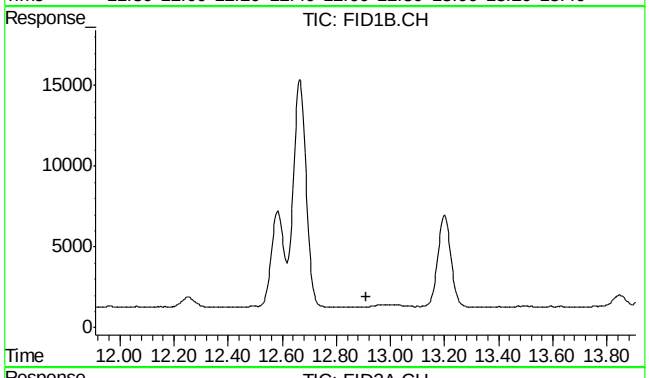
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



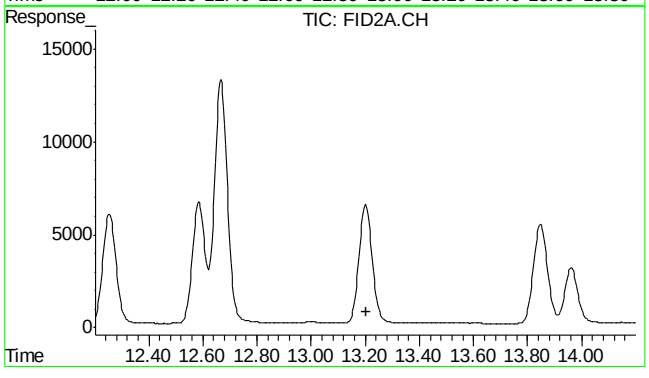
#7 Aromatic E

R.T.: 12.666 min
Delta R.T.: -0.003 min
Response: 439891
Conc: N.D.



#8 Aromatic F

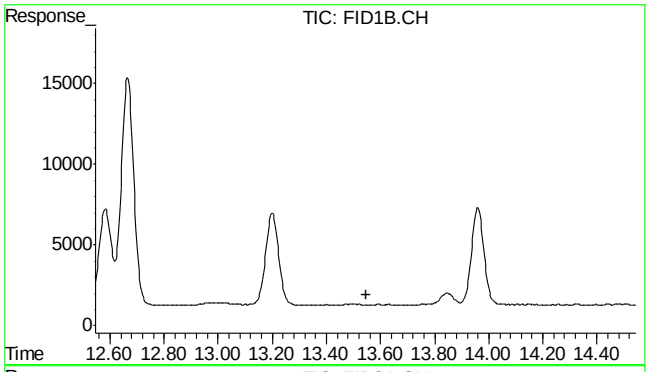
R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

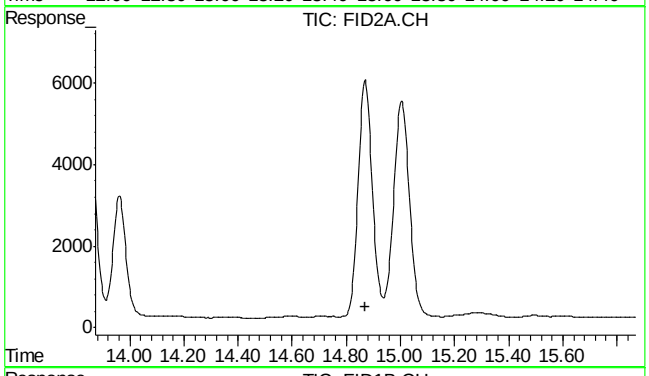
R.T.: 13.201 min
Delta R.T.: -0.003 min
Response: 219402
Conc: N.D.

SGS ACCUTEST FA40754



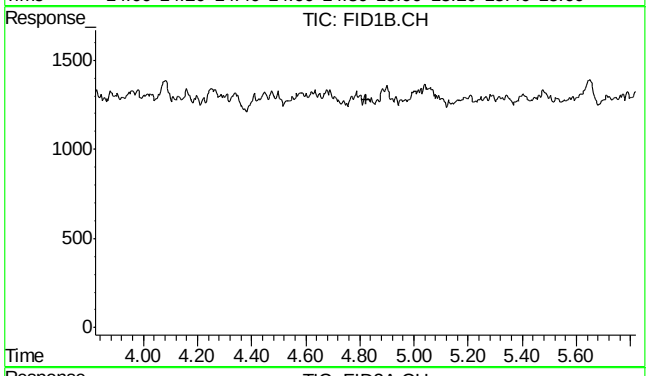
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



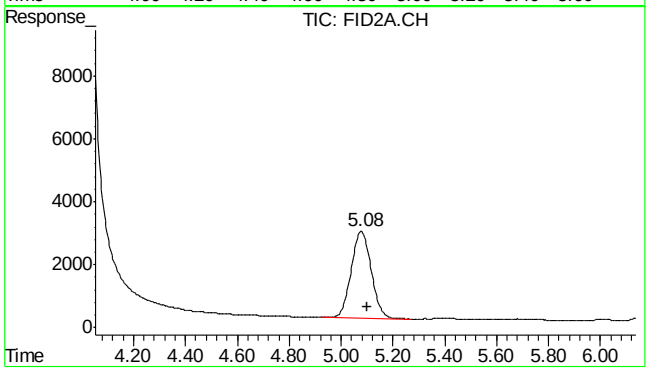
#9 Aromatic G

R.T.: 14.869 min
Delta R.T.: -0.002 min
Response: 209348
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 5.078 min
Delta R.T.: -0.022 min
Response: 147619
Conc: 10.76 ug/L

7.6.2

7

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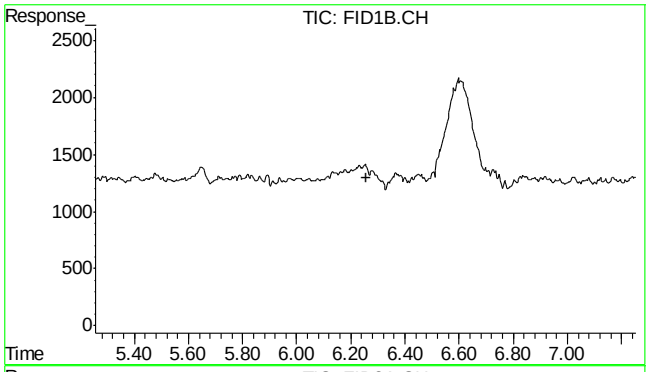
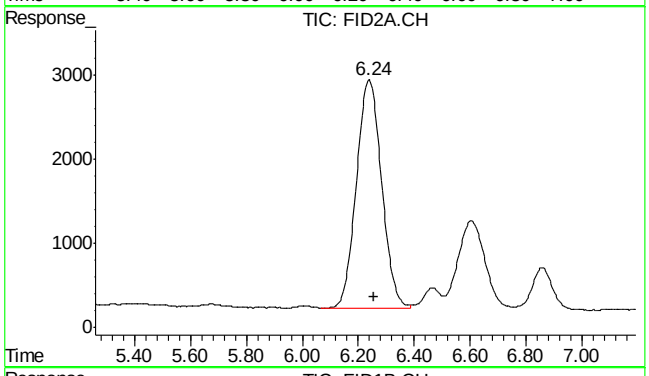


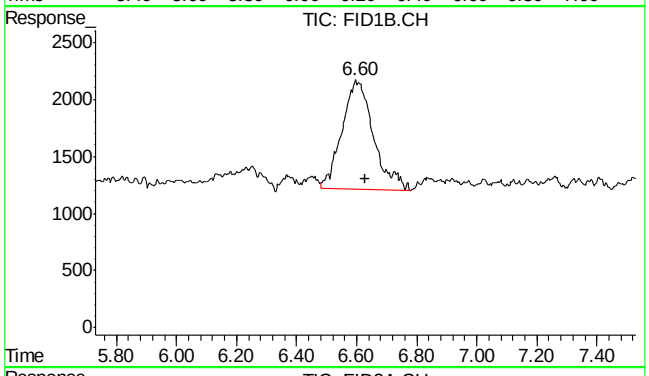
#11 2-Methylpentane

R.T.: 0.000 min
Exp R.T. : 6.256 min
Response: 0
Conc: N.D.



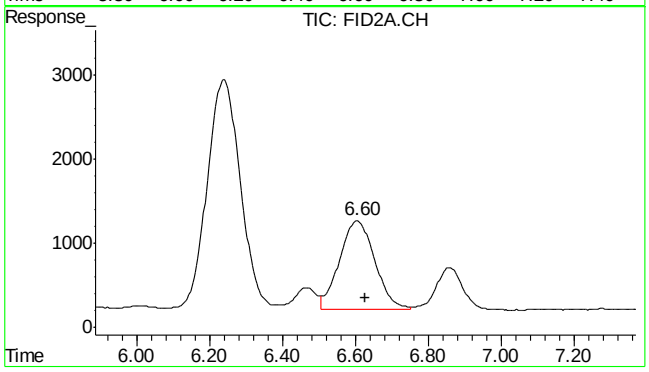
#11 2-Methylpentane

R.T.: 6.239 min
Delta R.T.: -0.017 min
Response: 170855
Conc: 11.44 ug/L



#12 Methyl Tert Butyl Ether

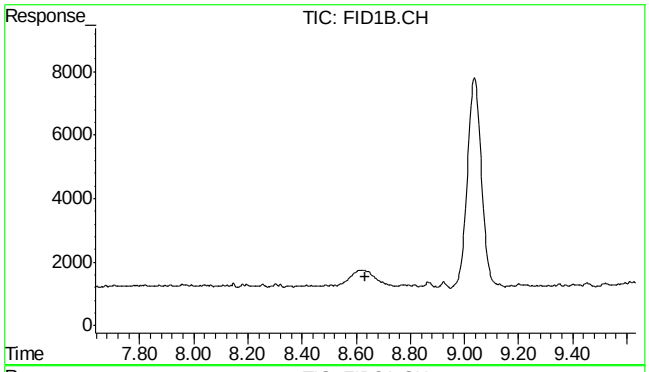
R.T.: 6.600 min
Delta R.T.: -0.029 min
Response: 70046
Conc: 12.98 ug/L



#12 Methyl Tert Butyl Ether

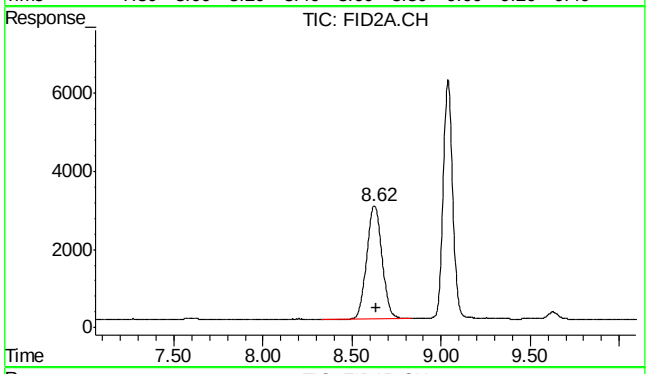
R.T.: 6.605 min
Delta R.T.: -0.023 min
Response: 70908
Conc: 10.91 ug/L

SGS ACCUTEST FA40754



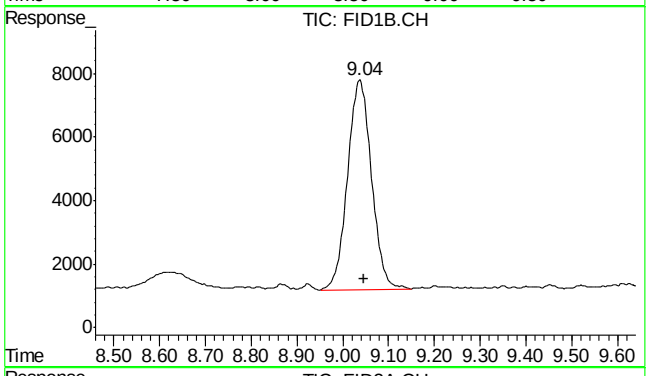
#13 2,2,4-Trimethylpentane

R.T.: 8.625 min
Delta R.T.: -0.008 min
Response: 42308
Conc: N.D.



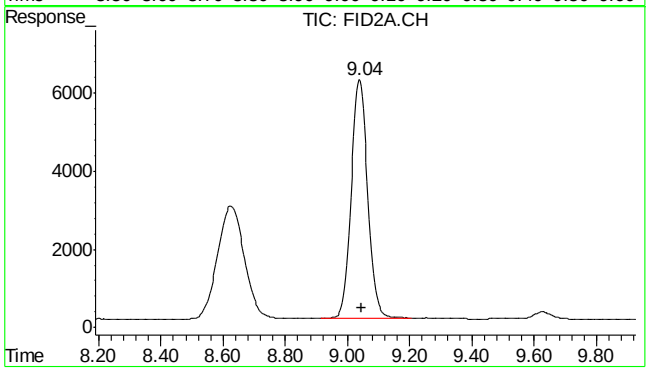
#13 2,2,4-Trimethylpentane

R.T.: 8.626 min
Delta R.T.: -0.008 min
Response: 172564
Conc: 8.28 ug/L



#14 Benzene

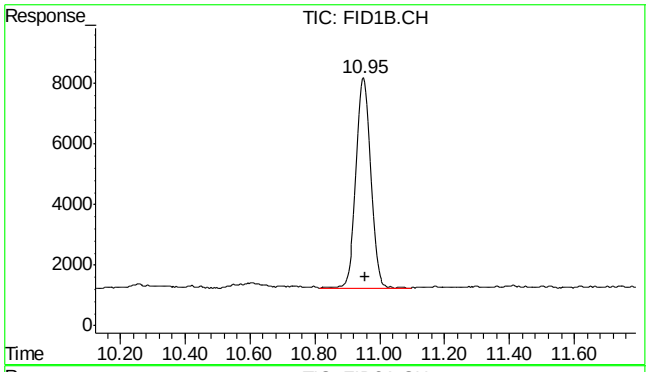
R.T.: 9.038 min
Delta R.T.: -0.008 min
Response: 240280
Conc: 10.05 ug/L



#14 Benzene

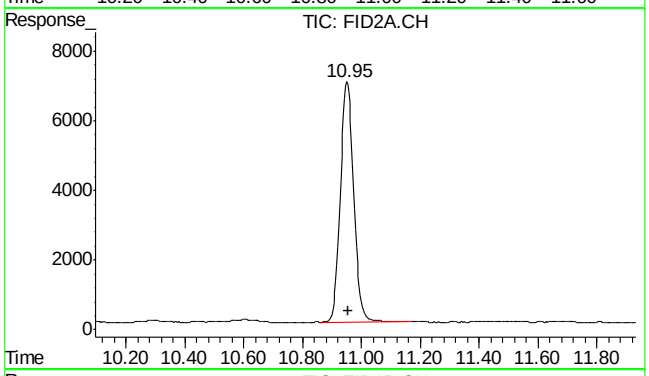
R.T.: 9.039 min
Delta R.T.: -0.007 min
Response: 223907
Conc: 10.23 ug/L

SGS ACCUTEST FA40754



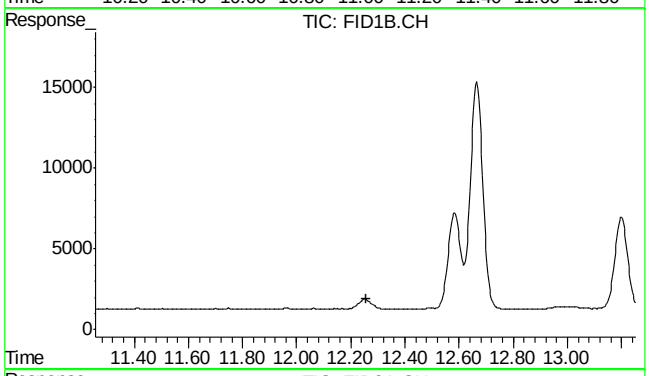
#15 Toluene

R.T.: 10.951 min
Delta R.T.: -0.004 min
Response: 218155
Conc: 10.02 ug/L



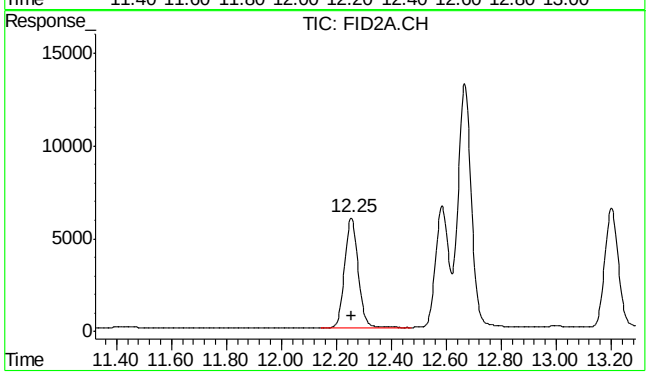
#15 Toluene

R.T.: 10.952 min
Delta R.T.: -0.003 min
Response: 217319
Conc: 10.49 ug/L



#16 Nonane

R.T.: 12.253 min
Delta R.T.: -0.002 min
Response: 23855
Conc: N.D.



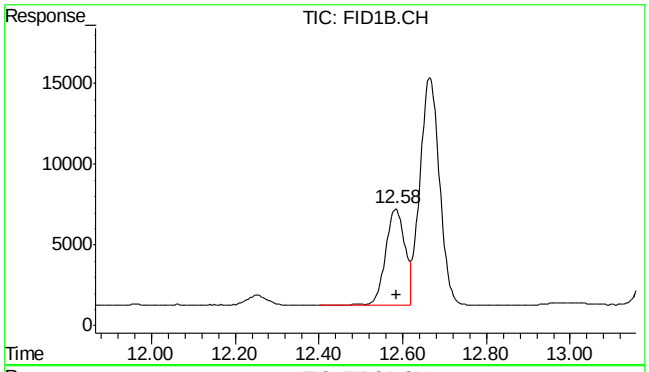
#16 Nonane

R.T.: 12.255 min
Delta R.T.: 0.000 min
Response: 202678
Conc: 10.51 ug/L

7.6.2

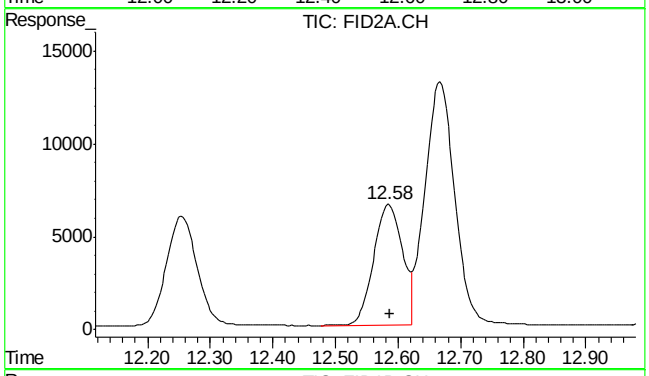
7

SGS ACCUTEST FA40754



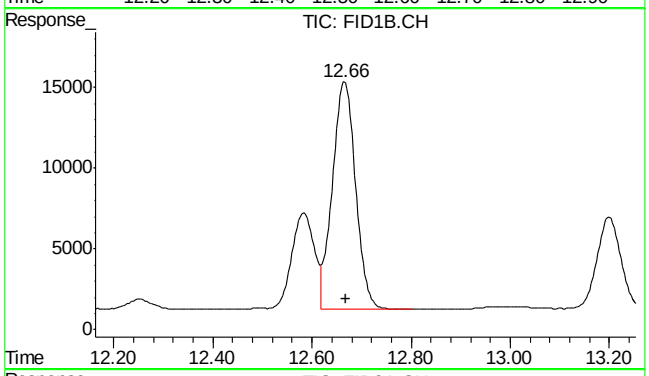
#17 Ethylbenzene

R.T.: 12.584 min
Delta R.T.: -0.002 min
Response: 190571
Conc: 10.43 ug/L



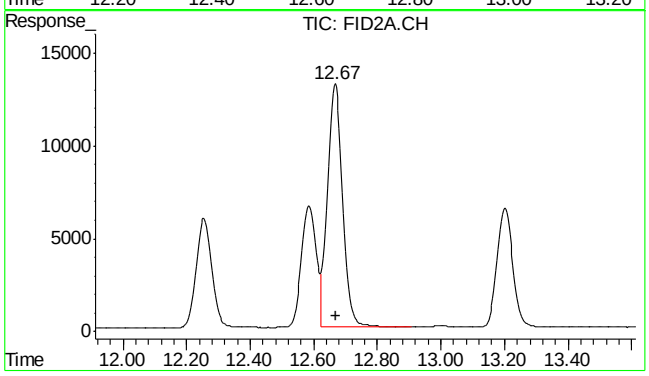
#17 Ethylbenzene

R.T.: 12.586 min
Delta R.T.: -0.001 min
Response: 206034
Conc: 10.54 ug/L



#18 m,p-Xylene

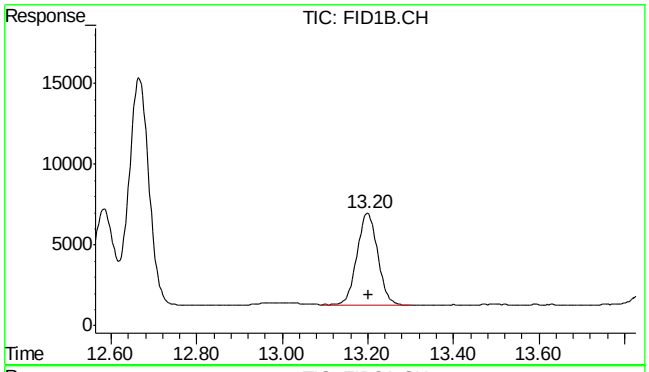
R.T.: 12.666 min
Delta R.T.: -0.003 min
Response: 462399
Conc: 20.90 ug/L



#18 m,p-Xylene

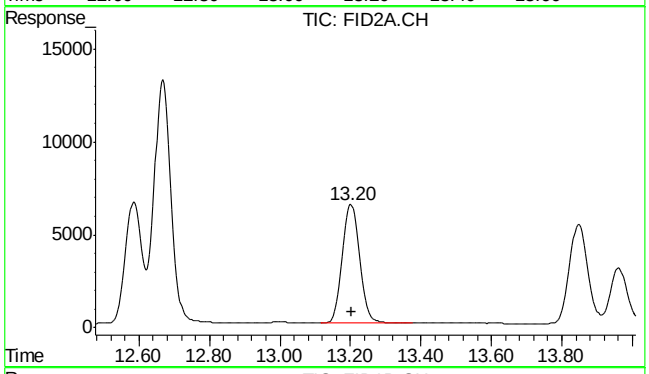
R.T.: 12.668 min
Delta R.T.: -0.001 min
Response: 439264
Conc: 21.21 ug/L

SGS ACCUTEST FA40754



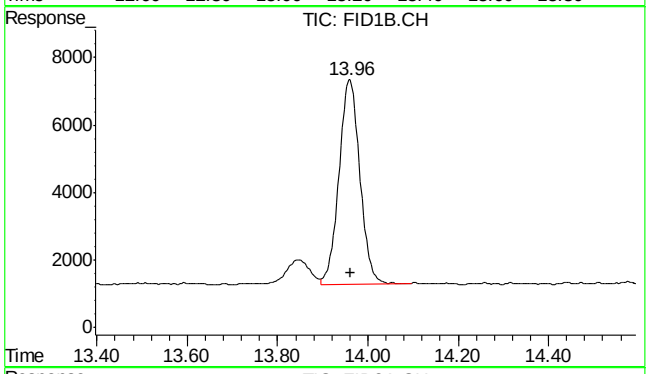
#19 o-Xylene

R.T.: 13.200 min
Delta R.T.: -0.002 min
Response: 195951
Conc: 10.25 ug/L



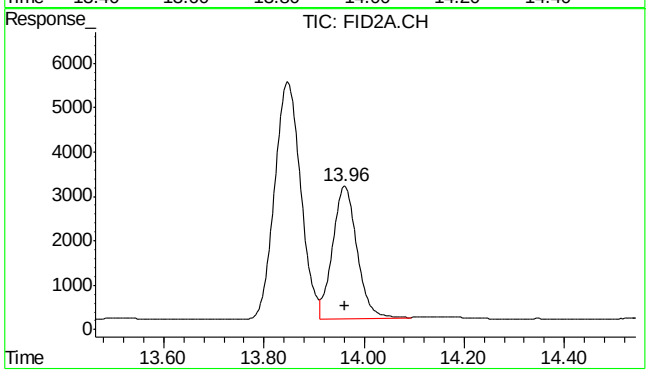
#19 o-Xylene

R.T.: 13.202 min
Delta R.T.: 0.000 min
Response: 219175
Conc: 10.50 ug/L



#20 BFB

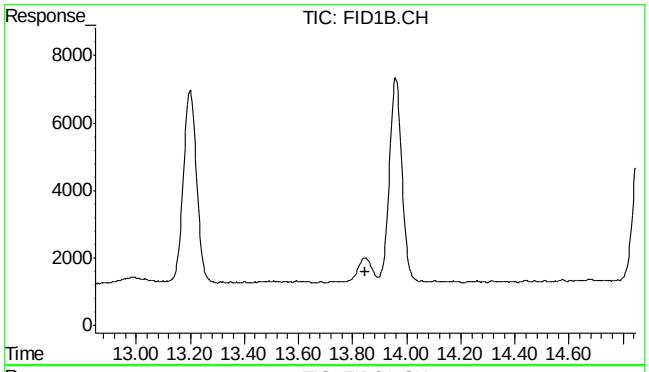
R.T.: 13.960 min
Delta R.T.: -0.001 min
Response: 195430
Conc: 10.65 ug/L



#20 BFB

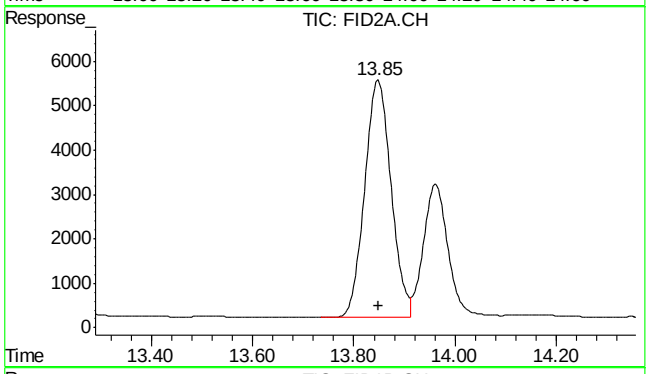
R.T.: 13.962 min
Delta R.T.: 0.000 min
Response: 99827
Conc: 11.02 ug/L

SGS ACCUTEST FA40754



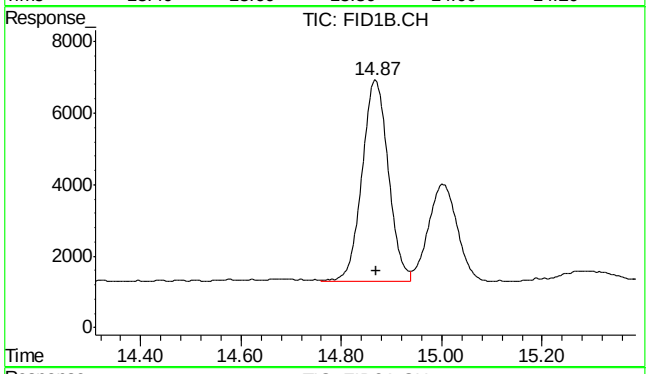
#21 Decane

R.T.: 13.847 min
Delta R.T.: 0.000 min
Response: 28392
Conc: N.D.



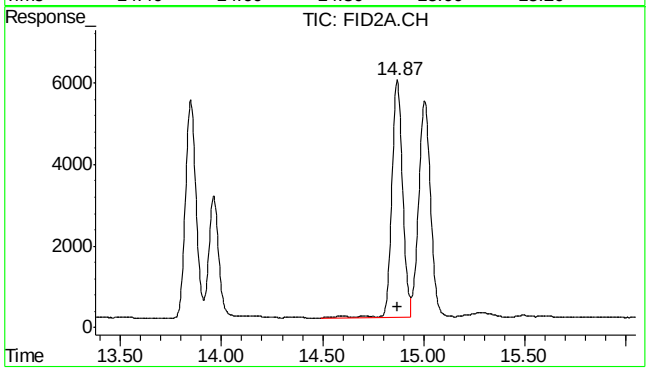
#21 Decane

R.T.: 13.848 min
Delta R.T.: 0.000 min
Response: 192290
Conc: 10.74 ug/L



#22 1,2,4-Trimethylbenzene

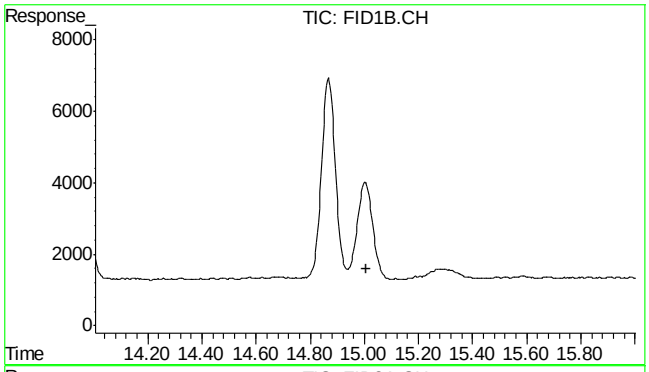
R.T.: 14.868 min
Delta R.T.: -0.002 min
Response: 204982
Conc: 10.31 ug/L



#22 1,2,4-Trimethylbenzene

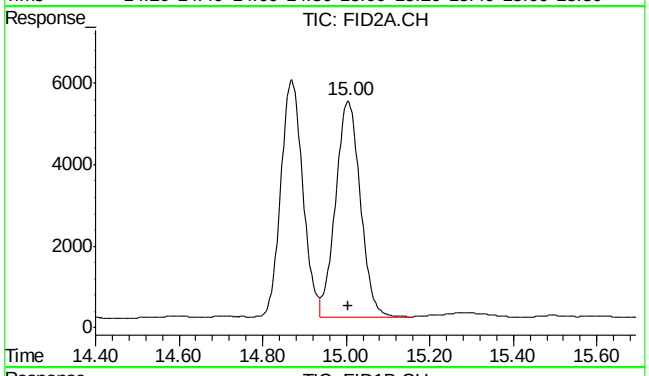
R.T.: 14.871 min
Delta R.T.: 0.000 min
Response: 215988
Conc: 10.71 ug/L

SGS ACCUTEST FA40754



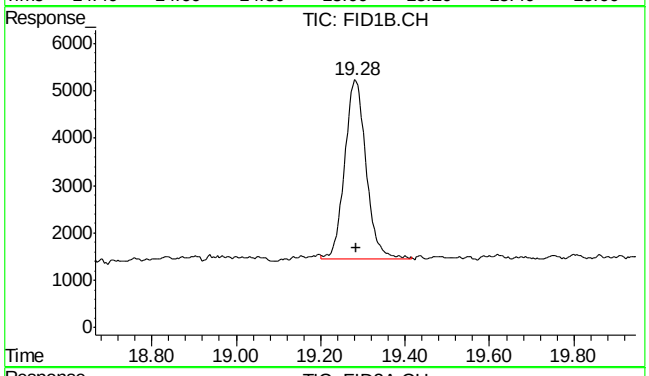
#23 Butylcyclohexane

R.T.: 15.004 min
Delta R.T.: -0.002 min
Response: 109825
Conc: N.D.



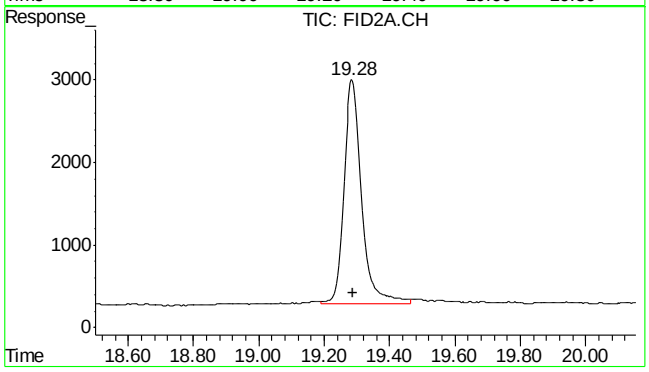
#23 Butylcyclohexane

R.T.: 15.005 min
Delta R.T.: 0.000 min
Response: 216880
Conc: 11.08 ug/L



#24 Naphthalene

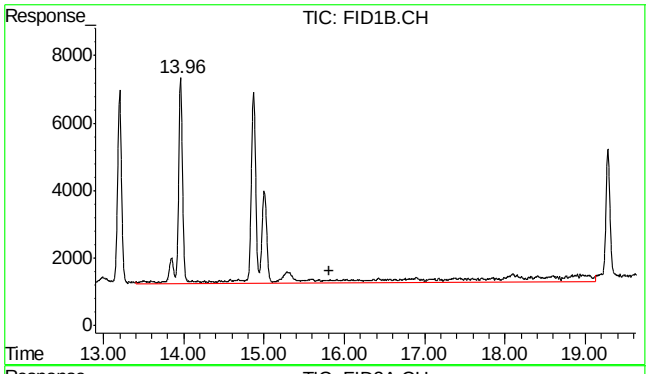
R.T.: 19.281 min
Delta R.T.: -0.003 min
Response: 133651
Conc: 10.81 ug/L m



#24 Naphthalene

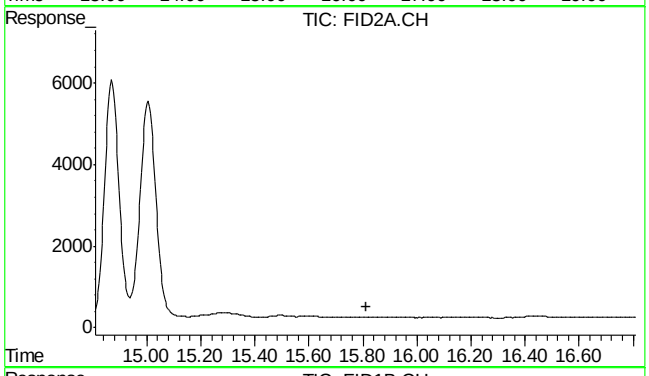
R.T.: 19.285 min
Delta R.T.: -0.001 min
Response: 103224
Conc: 10.94 ug/L m

SGS ACCUTEST FA40754



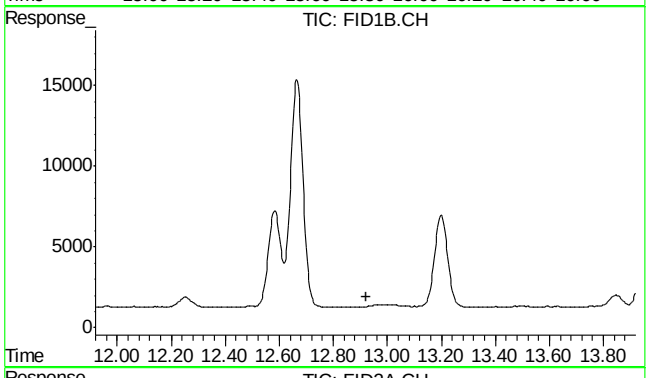
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 505793
Conc: 2.44 ug/L m



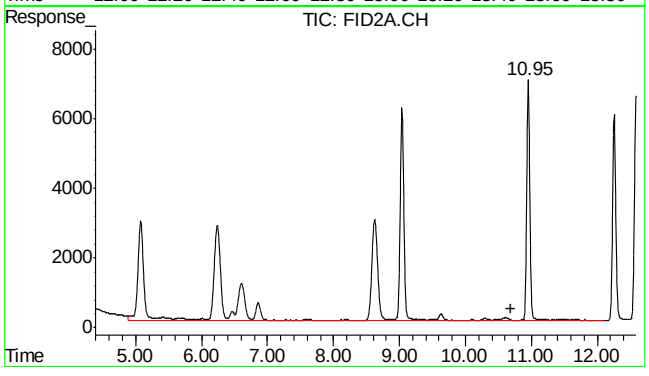
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 498255
Conc: N.D.



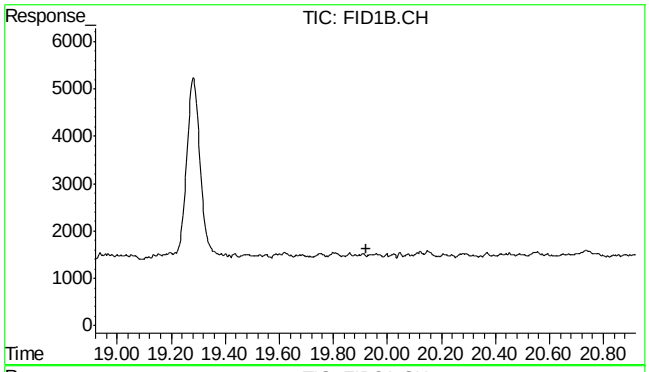
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 1815878
Conc: N.D.



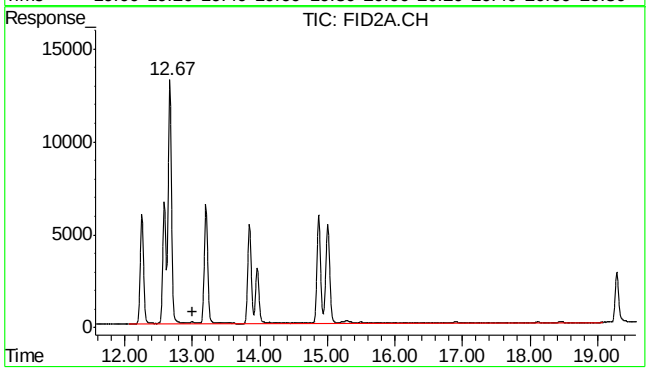
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 651774
Conc: 5.41 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 815567
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 770844
Conc: 14.03 ug/L m

SGS ACCUTEST FA40754

Manual Integration Approval Summary

Sample Number:	GUV4115-IC4115	**Method:**	MADEP VPH REV 1.1
Lab FileID:	UV077465.D	**Analyst approved:**	01/19/17 10:37 Antonio Chardon
Injection Time:	01/13/17 14:52	**Supervisor approved:**	01/19/17 14:21 Melissa Mangual

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	1	19.28	Poor instrument integration
Naphthalene	91-20-3	2	19.28	Poor instrument integration

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\011317\UV077466.D\FID1B.CH Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\011317\UV077466.D\FID2A.CH
Acq On : 13-Jan-2017, 15:23:45 Operator: antonioc
Sample : ic4115-1 Inst : HP5890
Misc : gc19571,guv4115,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 17 09:07:17 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Mon Jan 16 12:23:20 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.84f	0.00	121412	0	NoCal m	N.D.
2)	S	Alkane B	15.00f	0.00	535456	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.60f	0	344187	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	1033633	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.95f	0	1017872	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.58f	0	994805	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	2023847	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	1034038	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	994190	N.D.	NoCal m
20)	S	BFB	13.96	13.96	911793	462798	49.674	51.093
		Spiked Amount 200.000 Range 70 - 130 Recovery =					24.84%#	25.55%#
		Target Compounds						
10)		Pentane	0.00	5.08	0	696081	N.D.	50.753 #
11)		2-Methylpentane	6.24	6.24	33587	789127	NoCal	52.833 #
12)		Methyl Tert Buty	6.61	6.61	311387	355970	57.716	54.749
13)		2,2,4-Trimethylp	8.62	8.63	145082	768179	NoCal	60.518 #
14)		Benzene	9.04	9.04	1121393	1038717	46.887	47.474
15)		Toluene	10.95	10.95	1023920	1017881	47.010	49.121
16)		Nonane	12.25	12.25	101152	949174	NoCal	49.211 #
17)		Ethylbenzene	12.58	12.58	907614	972429	49.662	49.754
18)		m,p-Xylene	12.67	12.67	2214804	2062091	100.131	99.557
19)		o-Xylene	13.20	13.20	929374	1021464	48.608	48.936
21)		Decane	13.85	13.85	125071	906116	NoCal	50.626 #
22)		1,2,4-Trimethylb	14.87	14.87	985102	984469	49.545	48.820
23)		Butylcyclohexane	15.00	15.00	526322	992486	NoCal	50.709 #
24)		Naphthalene	19.28	19.28	644503	487337	52.107	51.628
25)	H	C9- C10 Aromatic	15.81	15.81	1407605	1935963	30.748	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	7349649	2468075	NoCal	70.469 #
27)	H	C9- C12 Aliphati	19.92	13.00	2248085	3053444	NoCal	55.573 #

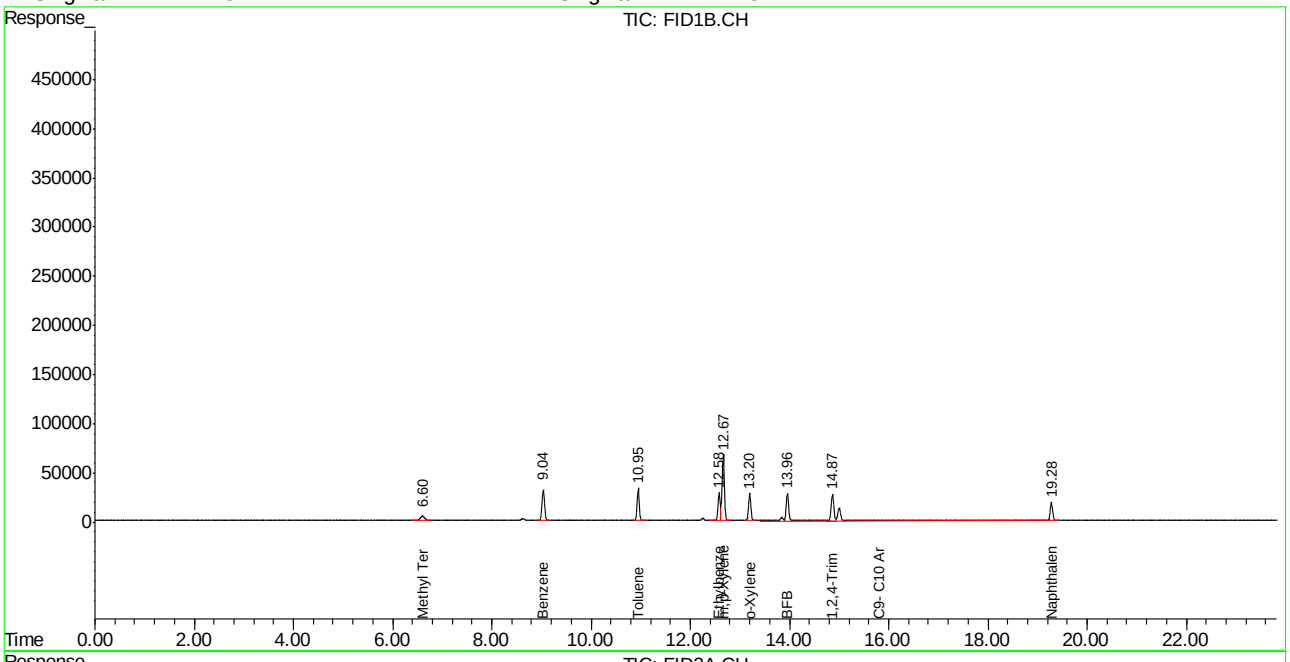
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077466.D VPH011317.M Thu Jan 19 10:55:33 2017

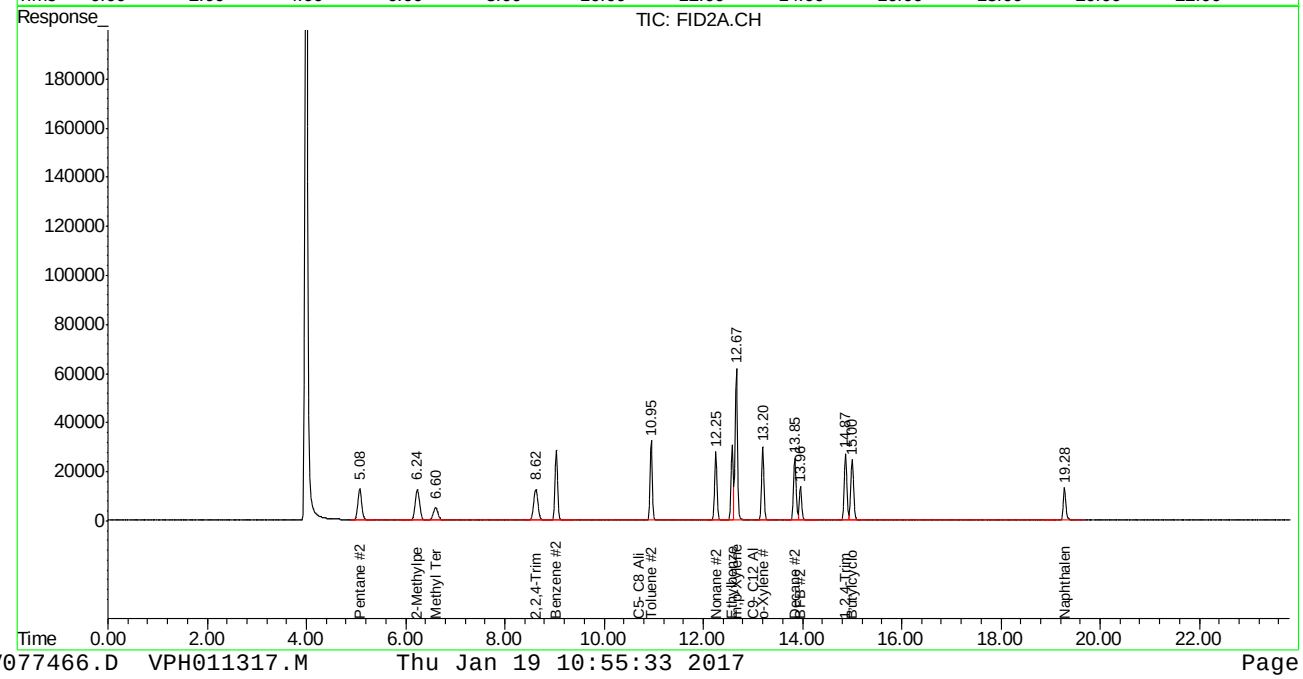
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\011317\UV077466.D\FID1B.CH Vial: 10
Signal #2 : C:\HPCHEM\2\DATA\011317\UV077466.D\FID2A.CH
Acq On : 13-Jan-2017, 15:23:45 Operator: antonioc
Sample : ic4115-1 Inst : HP5890
Misc : gc19571,guv4115,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 17 9:20 2017 Quant Results File: VPH011317.RES

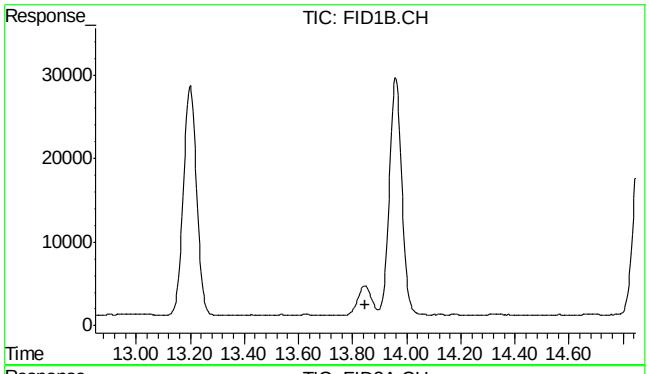
Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Mon Jan 16 12:23:20 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID



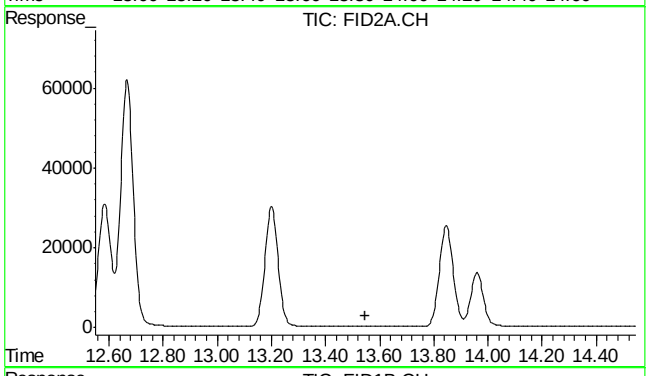


UV077466.D VPH011317.M Thu Jan 19 10:55:33 2017 Page 2



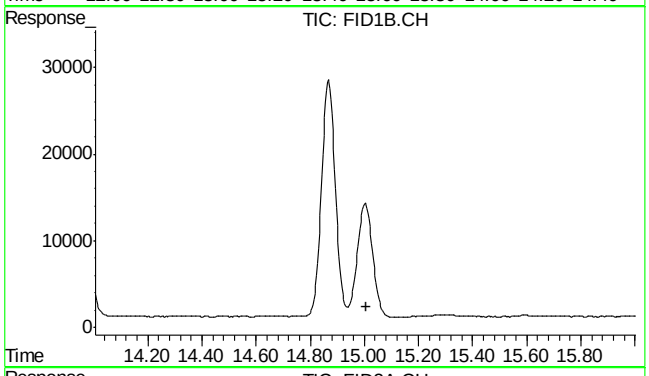
#1 Alkane A

R.T.: 13.844 min
Delta R.T.: -0.003 min
Response: 121412
Conc: N.D.



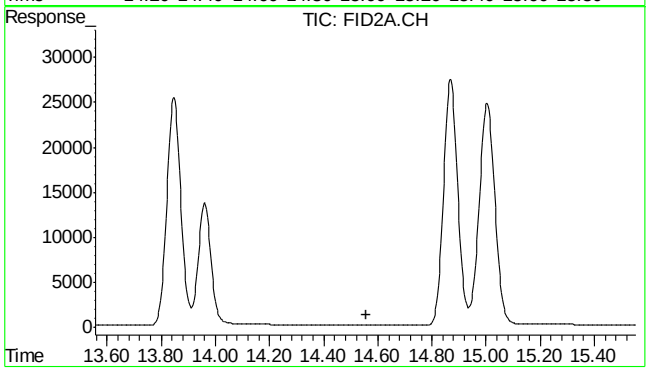
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.003 min
Delta R.T.: -0.003 min
Response: 535456
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.6.3

7

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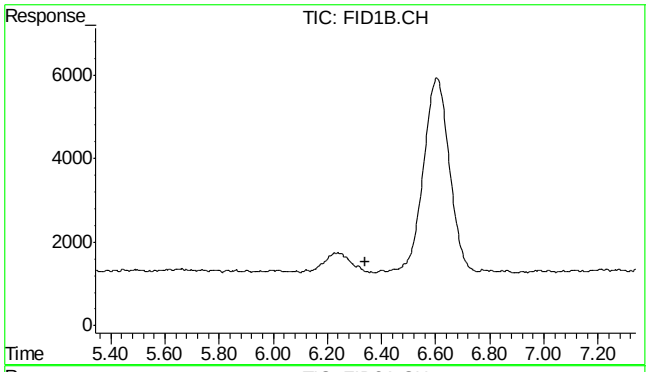
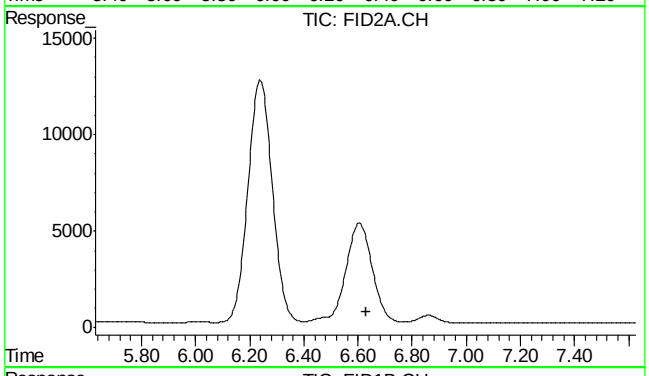


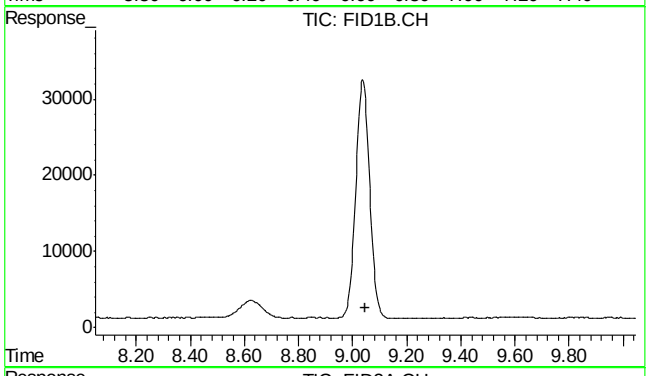
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



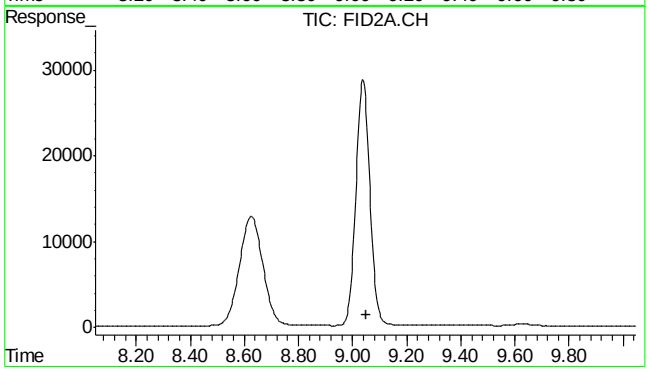
#3 Aromatic A

R.T.: 6.604 min
Delta R.T.: -0.025 min
Response: 344187
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

R.T.: 9.038 min
Delta R.T.: -0.011 min
Response: 1033633
Conc: N.D.

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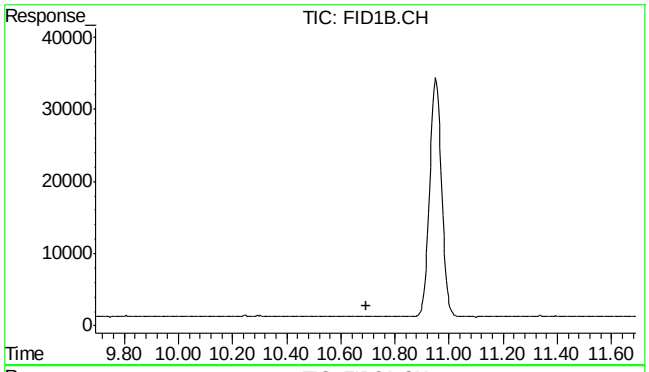
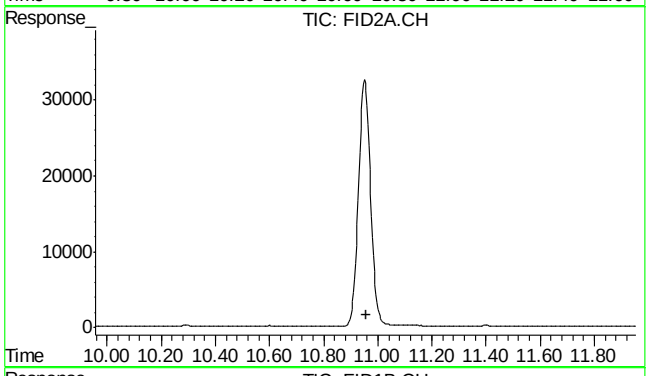


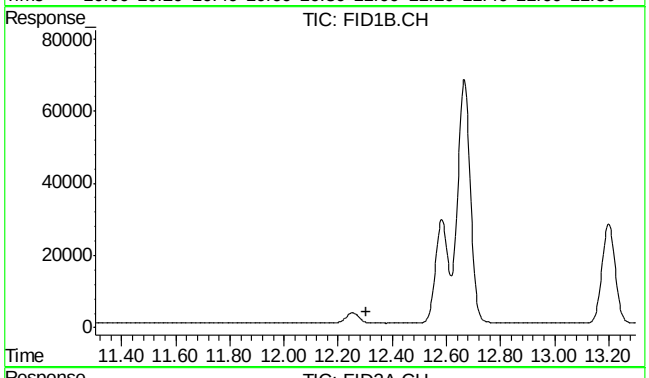
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



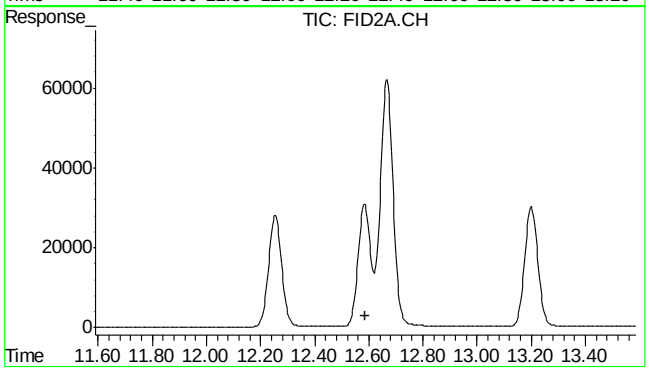
#5 Aromatic C

R.T.: 10.950 min
Delta R.T.: -0.006 min
Response: 1017872
Conc: N.D.



#6 Aromatic D

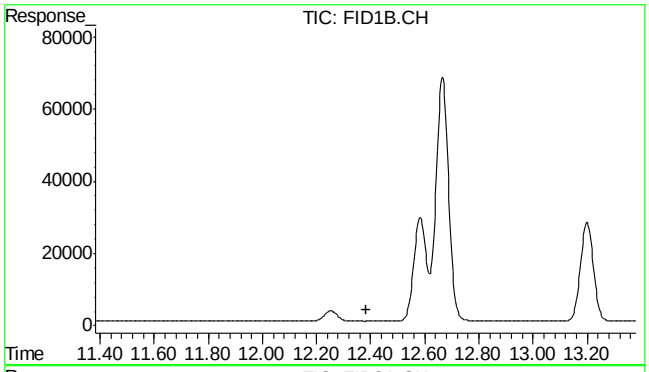
R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

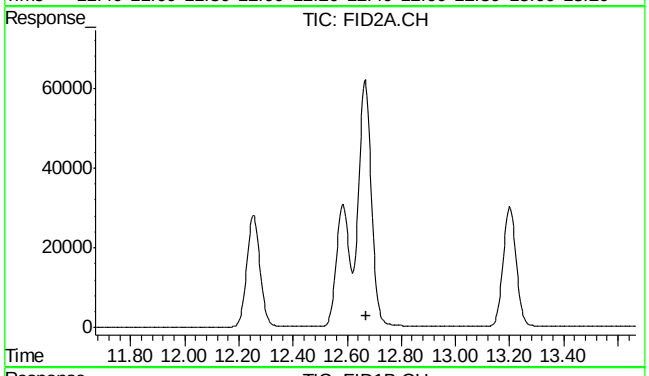
R.T.: 12.583 min
Delta R.T.: -0.004 min
Response: 994805
Conc: N.D.

SGS ACCUTEST FA40754



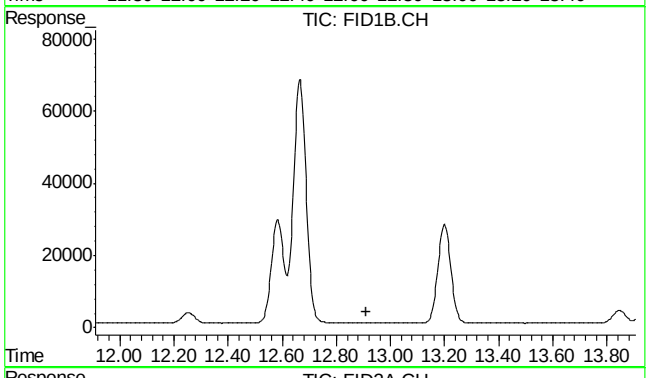
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



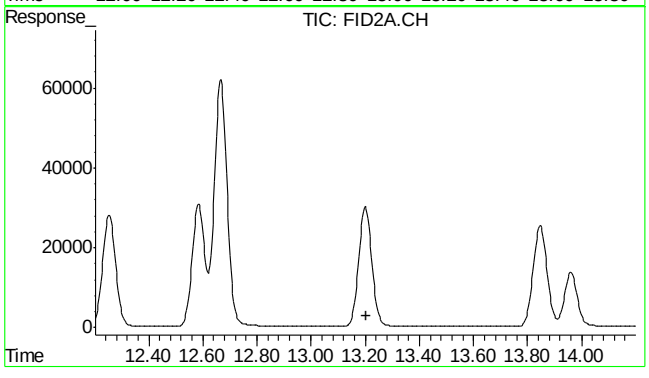
#7 Aromatic E

R.T.: 12.666 min
Delta R.T.: -0.003 min
Response: 2023847
Conc: N.D.



#8 Aromatic F

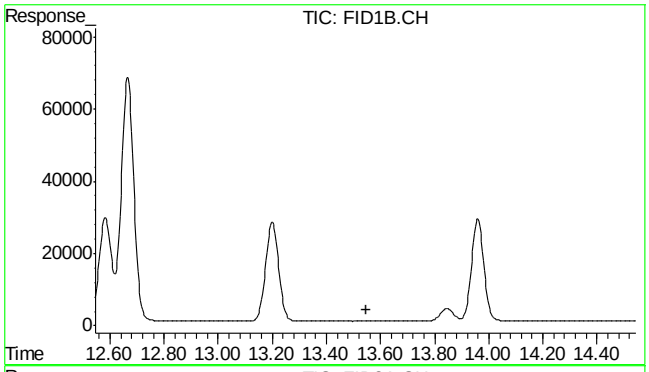
R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

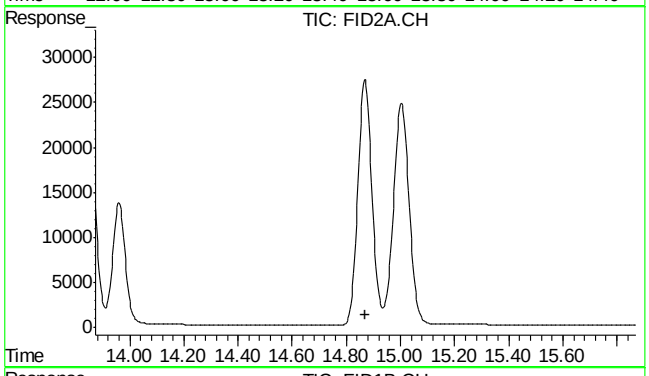
R.T.: 13.200 min
Delta R.T.: -0.004 min
Response: 1034038
Conc: N.D.

SGS ACCUTEST FA40754



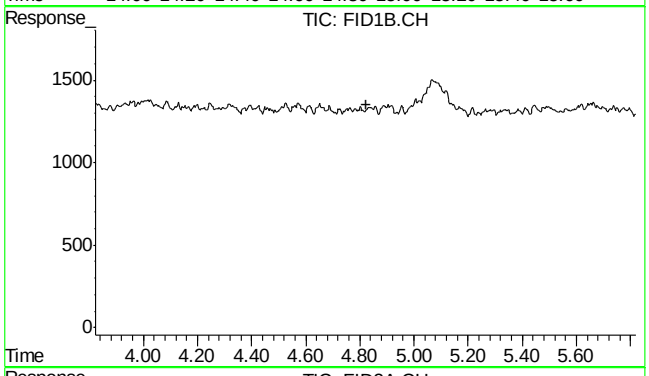
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



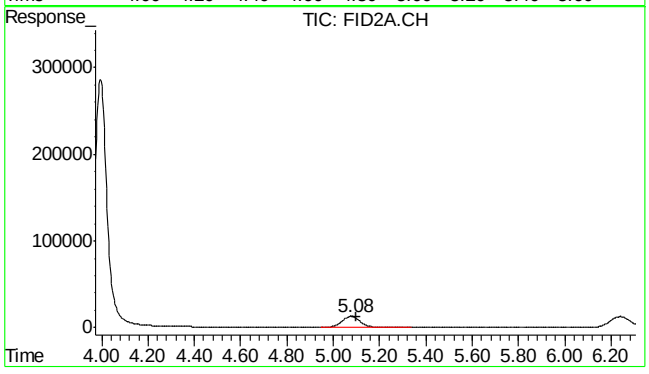
#9 Aromatic G

R.T.: 14.868 min
Delta R.T.: -0.003 min
Response: 994190
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 5.077 min
Delta R.T.: -0.023 min
Response: 696081
Conc: 50.75 ug/L

7.6.3

7

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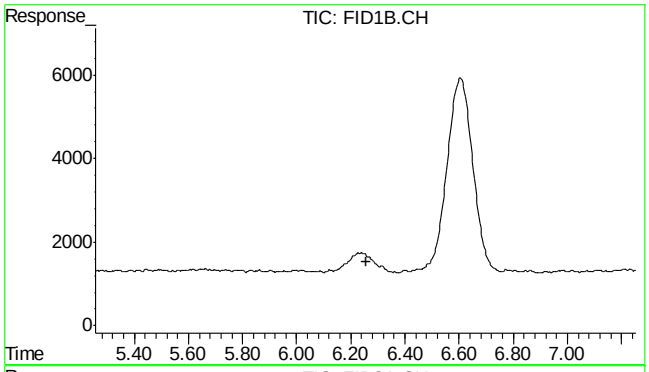
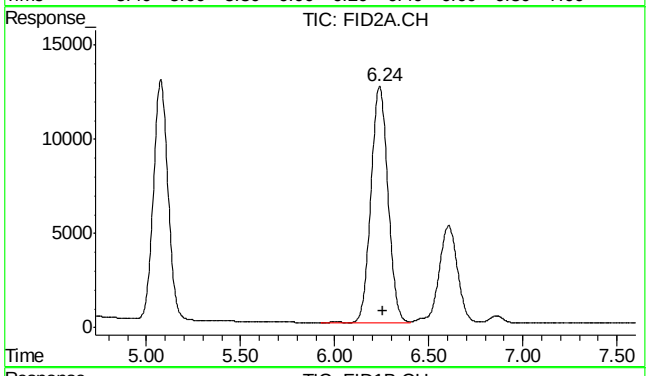


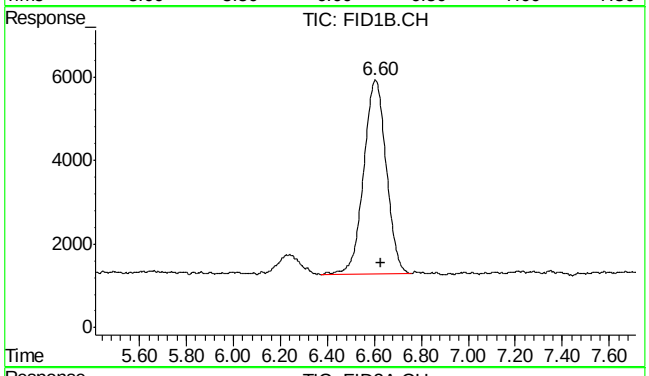
#11 2-Methylpentane

R.T.: 6.240 min
Delta R.T.: -0.016 min
Response: 33587
Conc: N.D.



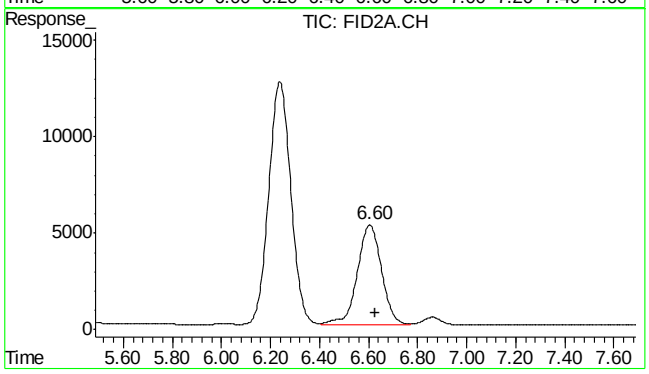
#11 2-Methylpentane

R.T.: 6.239 min
Delta R.T.: -0.017 min
Response: 789127
Conc: 52.83 ug/L



#12 Methyl Tert Butyl Ether

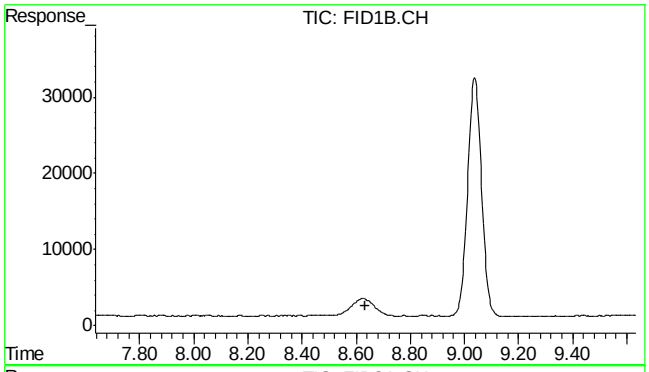
R.T.: 6.605 min
Delta R.T.: -0.024 min
Response: 311387
Conc: 57.72 ug/L



#12 Methyl Tert Butyl Ether

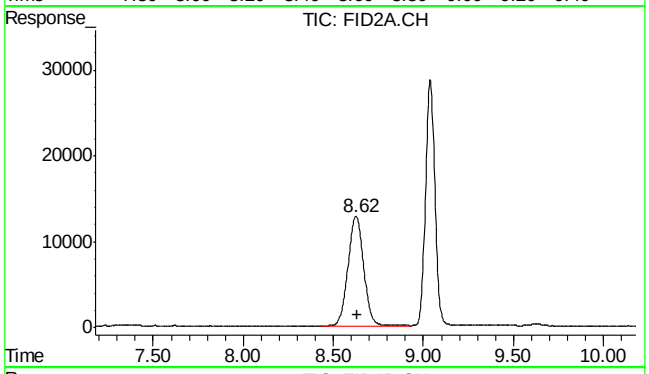
R.T.: 6.606 min
Delta R.T.: -0.022 min
Response: 355970
Conc: 54.75 ug/L

SGS ACCUTEST FA40754



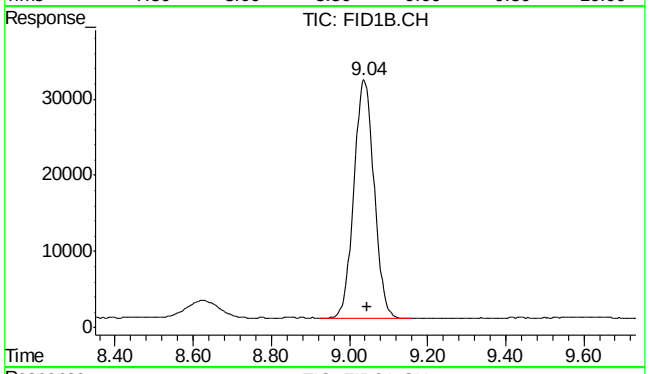
#13 2,2,4-Trimethylpentane

R.T.: 8.624 min
Delta R.T.: -0.009 min
Response: 145082
Conc: N.D.



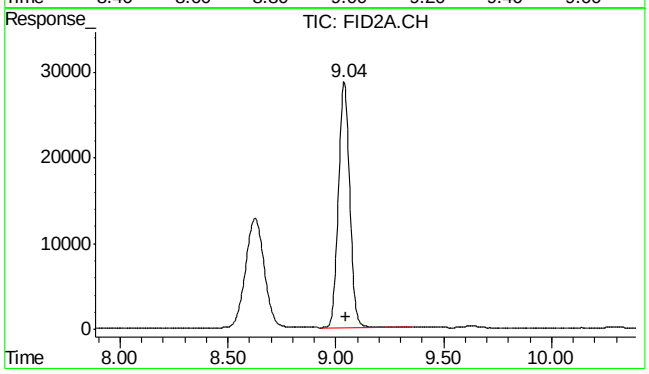
#13 2,2,4-Trimethylpentane

R.T.: 8.626 min
Delta R.T.: -0.008 min
Response: 768179
Conc: 60.52 ug/L



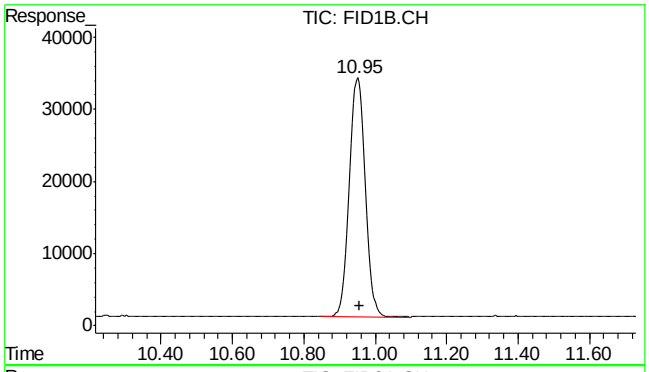
#14 Benzene

R.T.: 9.038 min
Delta R.T.: -0.007 min
Response: 1121393
Conc: 46.89 ug/L



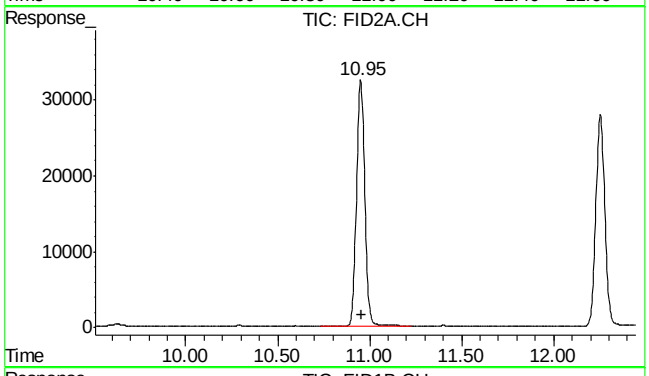
#14 Benzene

R.T.: 9.039 min
Delta R.T.: -0.007 min
Response: 1038717
Conc: 47.47 ug/L



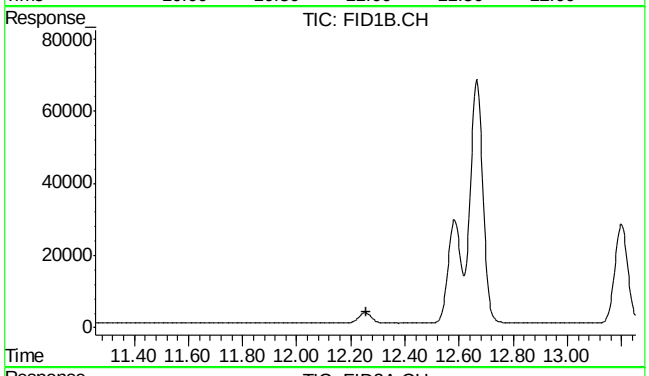
#15 Toluene

R.T.: 10.951 min
Delta R.T.: -0.004 min
Response: 1023920
Conc: 47.01 ug/L



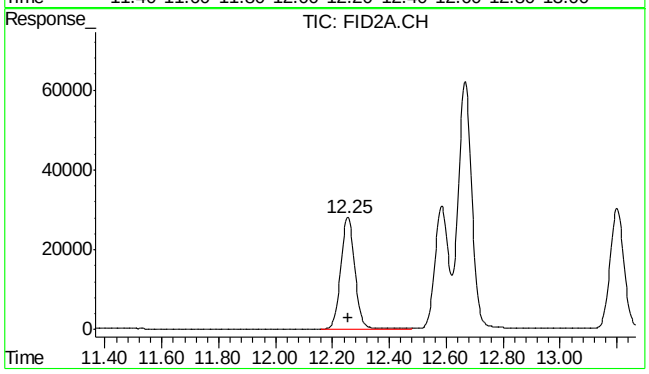
#15 Toluene

R.T.: 10.952 min
Delta R.T.: -0.003 min
Response: 1017881
Conc: 49.12 ug/L



#16 Nonane

R.T.: 12.254 min
Delta R.T.: -0.001 min
Response: 101152
Conc: N.D.



#16 Nonane

R.T.: 12.255 min
Delta R.T.: -0.002 min
Response: 949174
Conc: 49.21 ug/L

7.6.3

7

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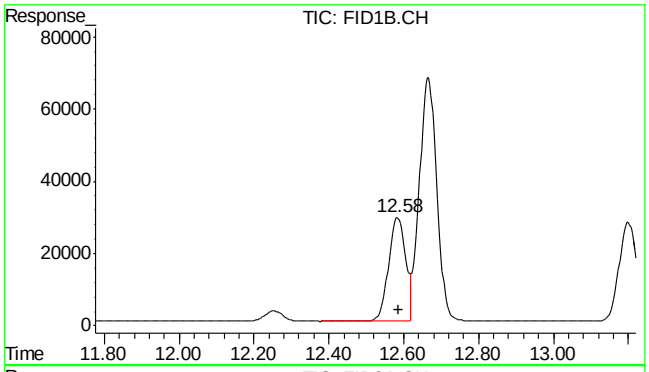
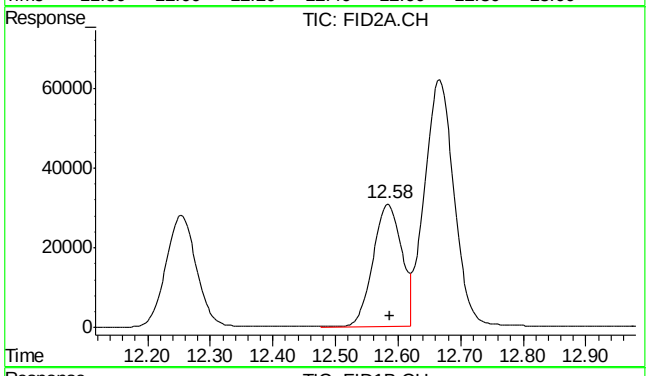


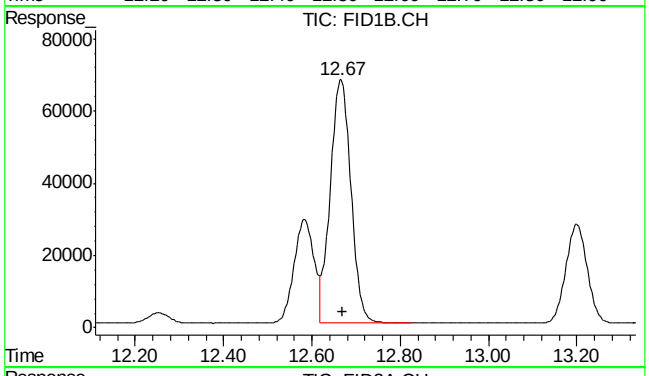
#17 Ethylbenzene

R.T.: 12.584 min
Delta R.T.: -0.002 min
Response: 907614
Conc: 49.66 ug/L



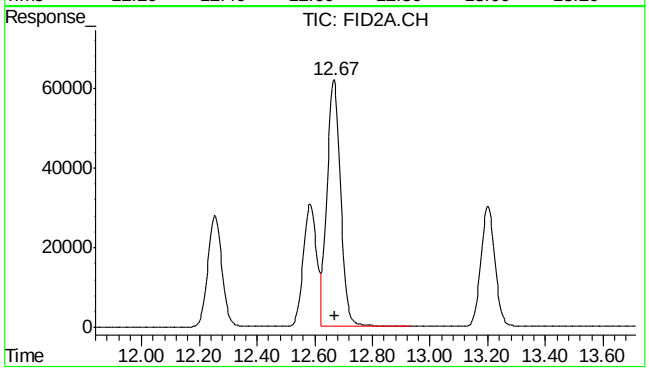
#17 Ethylbenzene

R.T.: 12.585 min
Delta R.T.: -0.002 min
Response: 972429
Conc: 49.75 ug/L



#18 m,p-Xylene

R.T.: 12.666 min
Delta R.T.: -0.002 min
Response: 2214804
Conc: 100.13 ug/L



#18 m,p-Xylene

R.T.: 12.667 min
Delta R.T.: -0.002 min
Response: 2062091
Conc: 99.56 ug/L

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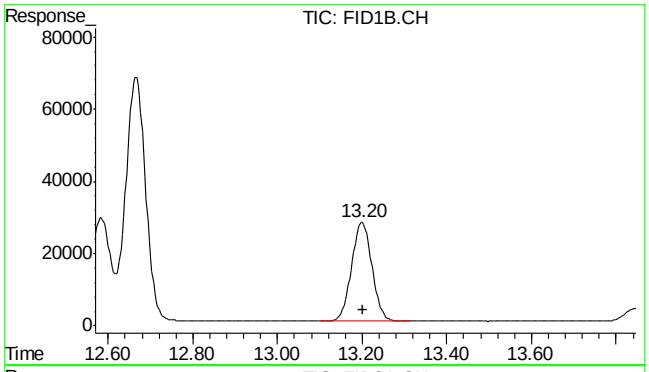
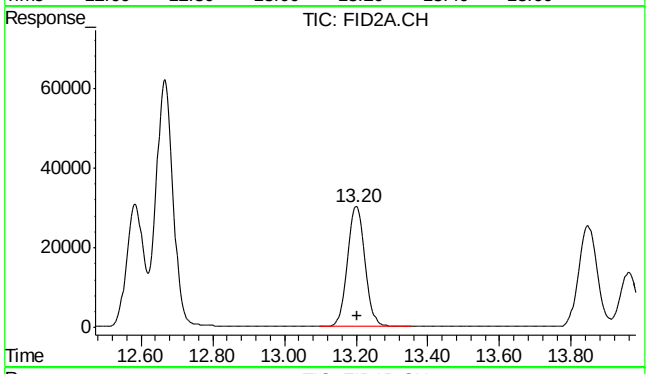


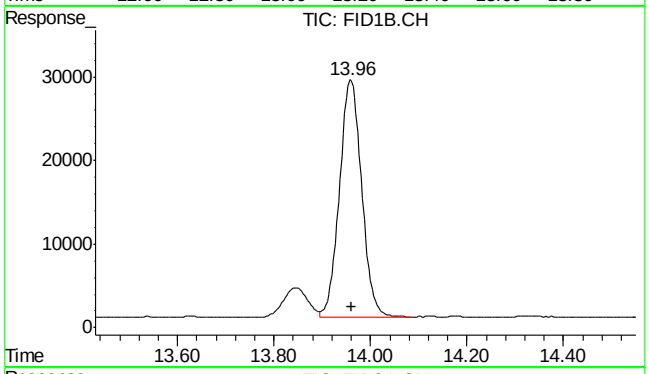
#19 o-Xylene

R.T.: 13.200 min
Delta R.T.: -0.002 min
Response: 929374
Conc: 48.61 ug/L



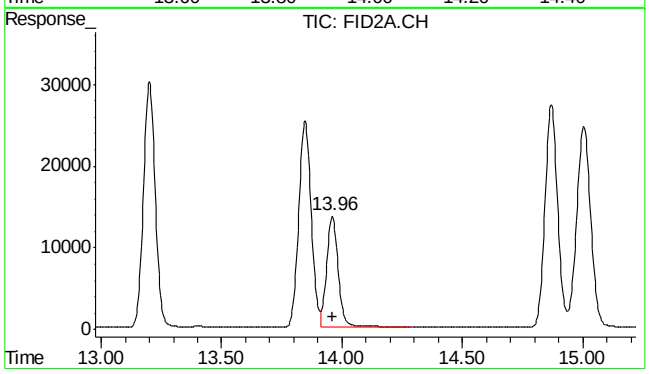
#19 o-Xylene

R.T.: 13.201 min
Delta R.T.: -0.002 min
Response: 1021464
Conc: 48.94 ug/L



#20 BFB

R.T.: 13.960 min
Delta R.T.: -0.001 min
Response: 911793
Conc: 49.67 ug/L



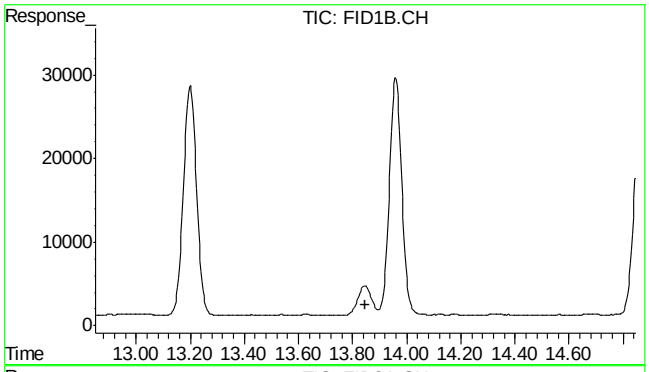
#20 BFB

R.T.: 13.961 min
Delta R.T.: -0.001 min
Response: 462798
Conc: 51.09 ug/L

7.6.3

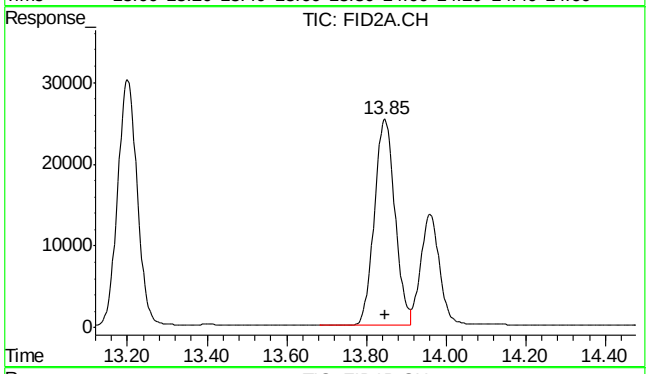
7

SGS ACCUTEST FA40754



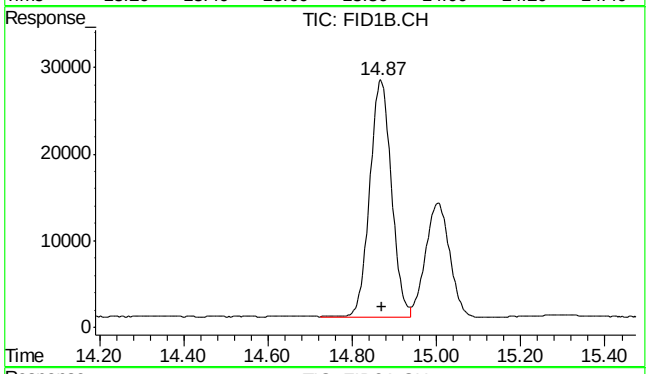
#21 Decane

R.T.: 13.846 min
Delta R.T.: -0.002 min
Response: 125071
Conc: N.D.



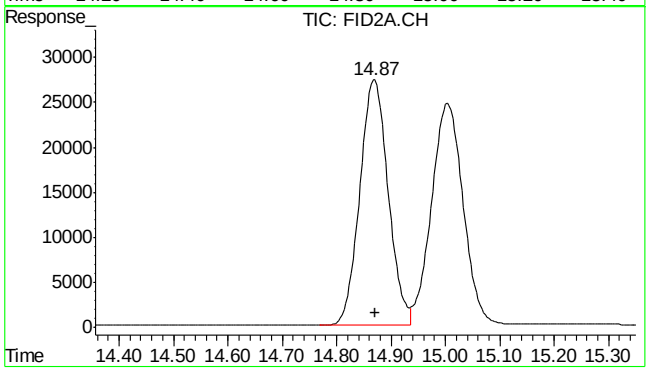
#21 Decane

R.T.: 13.847 min
Delta R.T.: -0.001 min
Response: 906116
Conc: 50.63 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.868 min
Delta R.T.: -0.002 min
Response: 985102
Conc: 49.54 ug/L



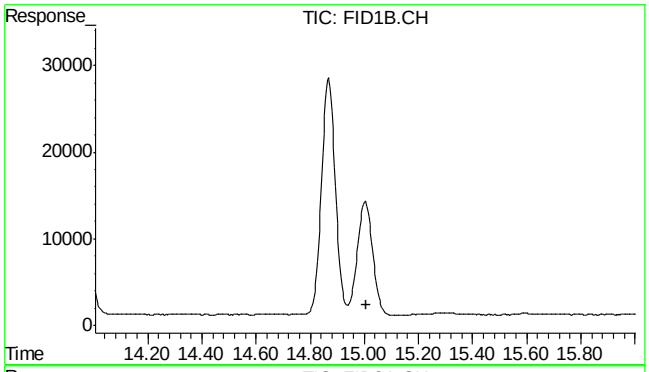
#22 1,2,4-Trimethylbenzene

R.T.: 14.870 min
Delta R.T.: -0.001 min
Response: 984469
Conc: 48.82 ug/L

7.6.3

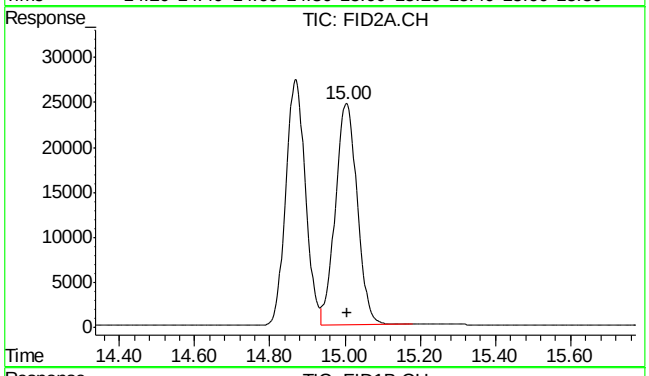
7

SGS ACCUTEST FA40754



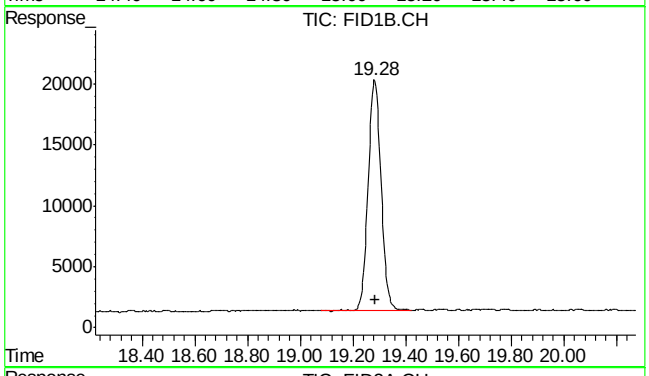
#23 Butylcyclohexane

R.T.: 15.004 min
Delta R.T.: -0.002 min
Response: 526322
Conc: N.D.



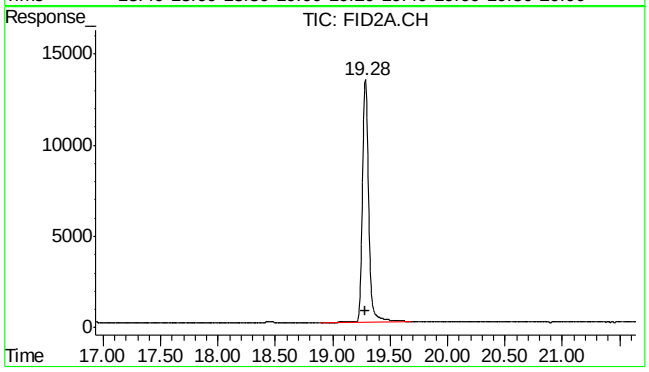
#23 Butylcyclohexane

R.T.: 15.005 min
Delta R.T.: -0.001 min
Response: 992486
Conc: 50.71 ug/L



#24 Naphthalene

R.T.: 19.283 min
Delta R.T.: -0.001 min
Response: 644503
Conc: 52.11 ug/L



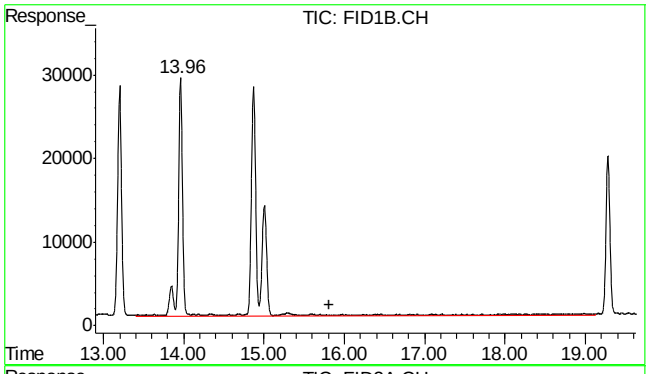
#24 Naphthalene

R.T.: 19.285 min
Delta R.T.: -0.001 min
Response: 487337
Conc: 51.63 ug/L

7.6.3

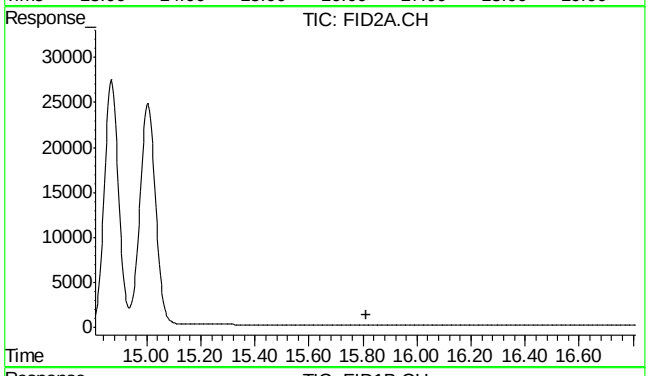
7

SGS ACCUTEST FA40754



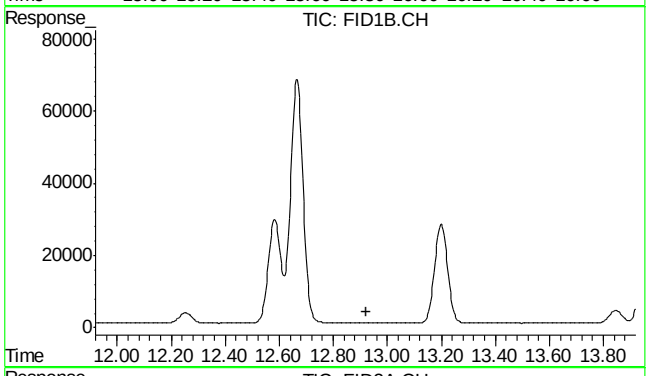
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 1407605
Conc: 30.75 ug/L m



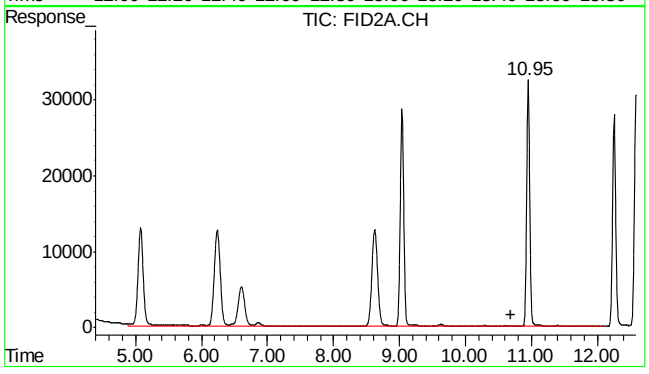
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 1935963
Conc: N.D.



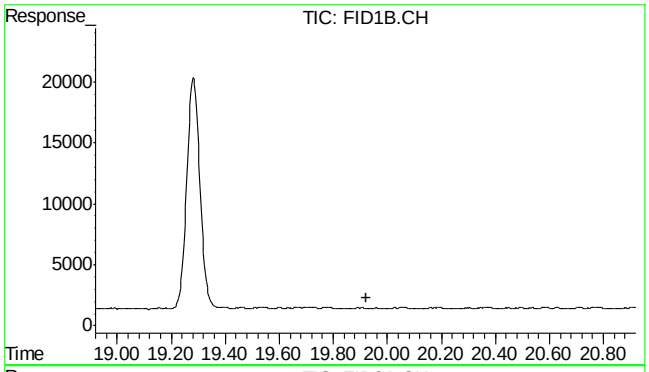
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 7349649
Conc: N.D.



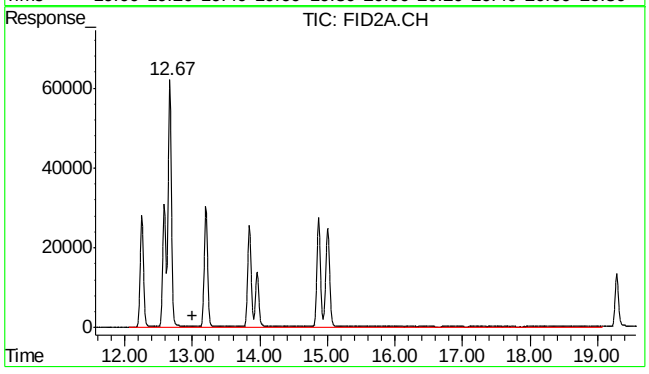
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 2468075
Conc: 70.47 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 2248085
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 3053444
Conc: 55.57 ug/L m

7.6.3

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\011317\UV077467.D\FID1B.CH Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\011317\UV077467.D\FID2A.CH
Acq On : 13-Jan-2017, 15:54:26 Operator: antonioc
Sample : icc4115-4 Inst : HP5890
Misc : gc19571,guv4115,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 17 09:07:19 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Mon Jan 16 12:23:20 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.84f	0.00	249486	0	NoCal m	N.D.
2)	S	Alkane B	15.00f	0.00	1035584	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.60f	0	612478	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	2081370	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.95f	0	2052252	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.58f	0	1987053	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	4038235	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	2064294	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	1966529	N.D.	NoCal m
20)	S	BFB	13.96	13.96	1811129	913255	98.669	100.823
		Spiked Amount 200.000 Range 70 - 130 Recovery =					49.33%#	50.41%#
		Target Compounds						
10)		Pentane	0.00	5.07	0	1416108	N.D.	103.252 #
11)		2-Methylpentane	6.24	6.24	62665	1555674	NoCal	104.155 #
12)		Methyl Tert Buty	6.60	6.60	559594	627142	103.721	96.457
13)		2,2,4-Trimethylp	8.62	8.62	215932	1187491	NoCal	101.265 #
14)		Benzene	9.04	9.04	2288771	2091120	95.697	95.573
15)		Toluene	10.95	10.95	2090012	2058062	95.956	99.319
16)		Nonane	12.25	12.25	195478	1891292	NoCal	98.056 #
17)		Ethylbenzene	12.58	12.58	1824551	1957769	99.835	100.169
18)		m,p-Xylene	12.67	12.67	4478896	4121657	202.490	198.993
19)		o-Xylene	13.20	13.20	1869333	2039297	97.769	97.698
21)		Decane	13.85	13.85	242791	1804241	NoCal	100.806 #
22)		1,2,4-Trimethylb	14.87	14.87	1941556	1961046	97.648	97.248
23)		Butylcyclohexane	15.00	15.00	1030324	1963586	NoCal	100.325 #
24)		Naphthalene	19.28	19.28	1270869	971779	102.747	102.950
25)	H	C9- C10 Aromatic	15.81	15.81	2300681	3790195	58.778	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	14011894	4442693	NoCal	141.203 #
27)	H	C9- C12 Aliphati	19.92	13.00	3779021	6053132	NoCal	110.167 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077467.D VPH011317.M Thu Jan 19 10:55:35 2017

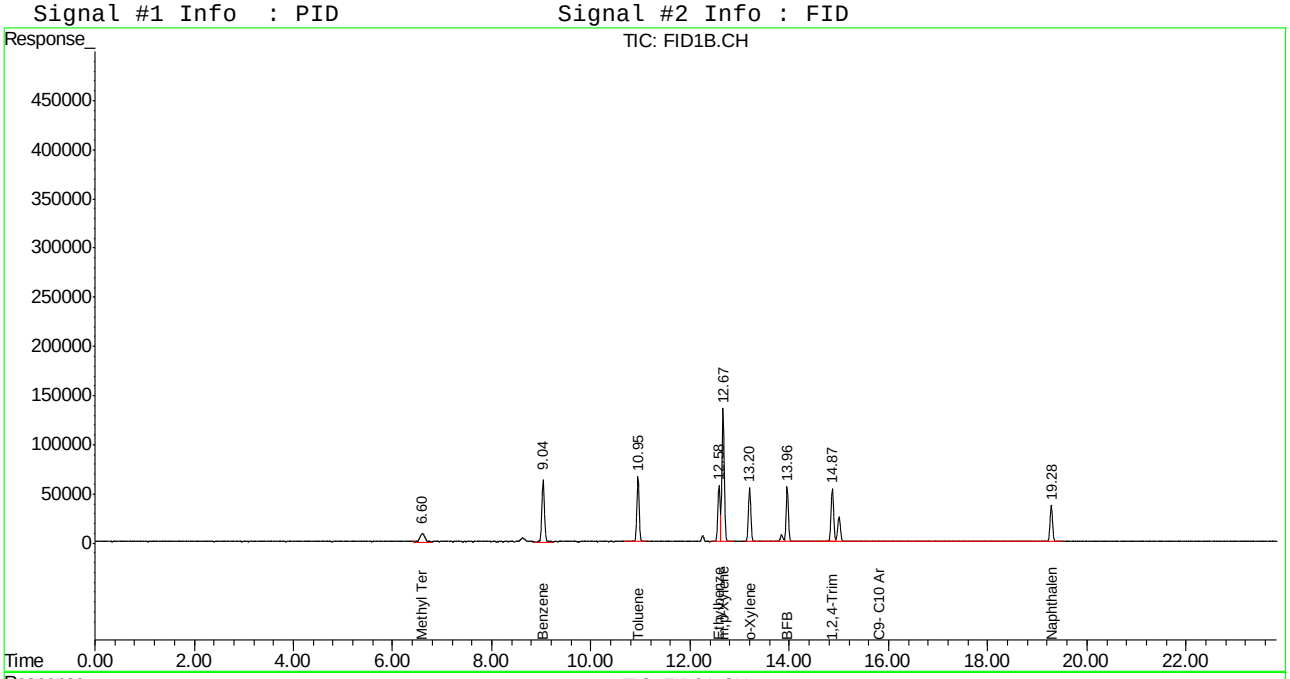
SGS ACCUTEST FA40754

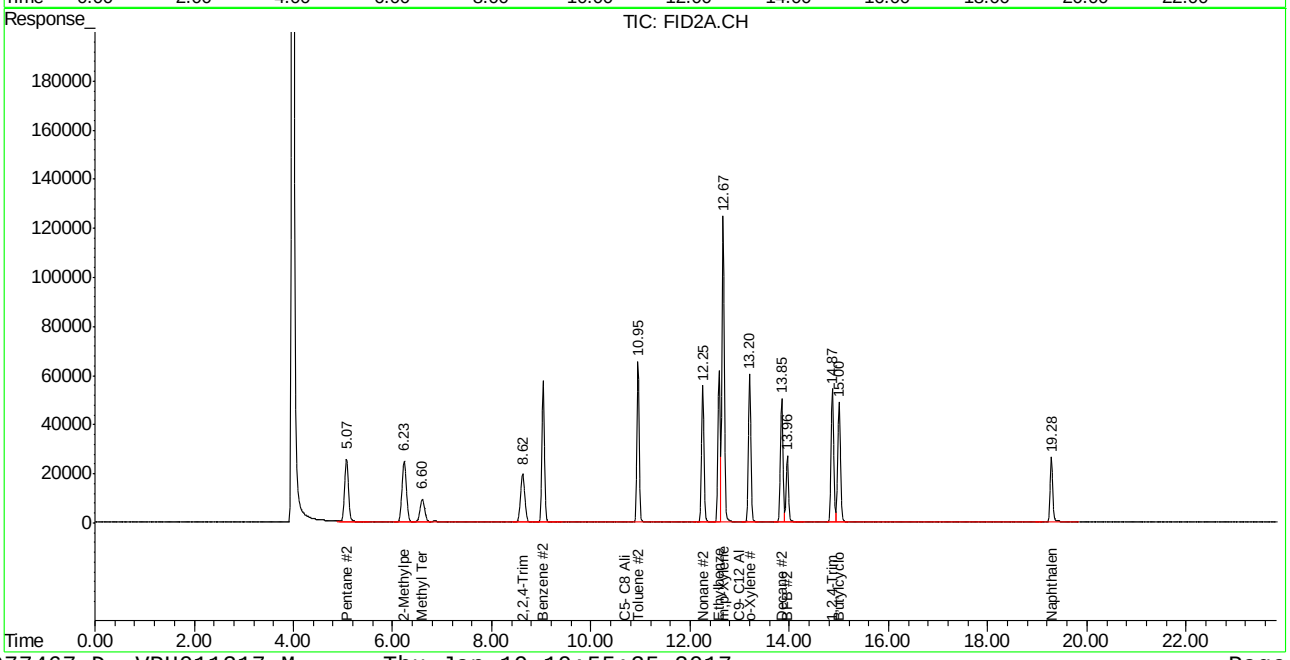
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\011317\UV077467.D\FID1B.CH Vial: 11
Signal #2 : C:\HPCHEM\2\DATA\011317\UV077467.D\FID2A.CH
Acq On : 13-Jan-2017, 15:54:26 Operator: antonioc
Sample : icc4115-4 Inst : HP5890
Misc : gc19571,guv4115,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 17 9:22 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Mon Jan 16 12:23:20 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

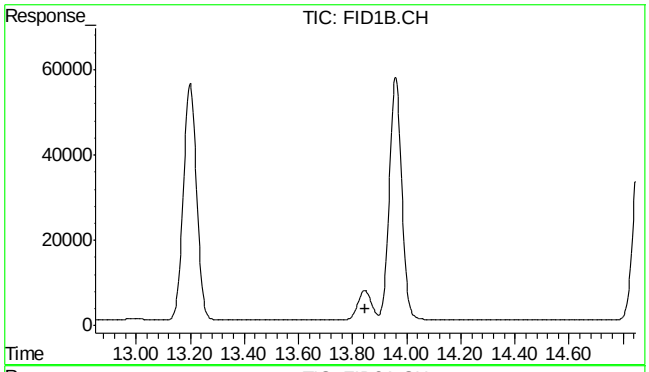
Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID





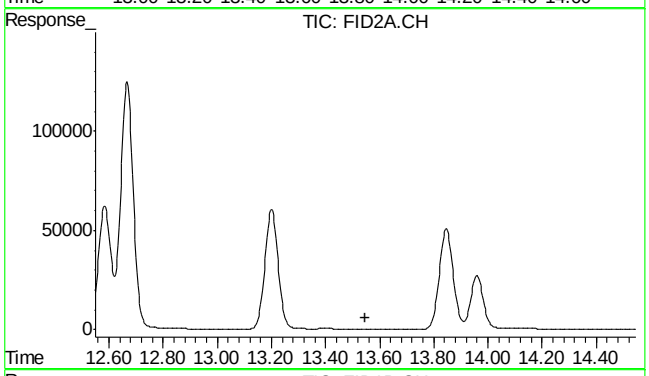
UV077467.D VPH011317.M Thu Jan 19 10:55:35 2017 Page 2

SGS ACCUTEST FA40754



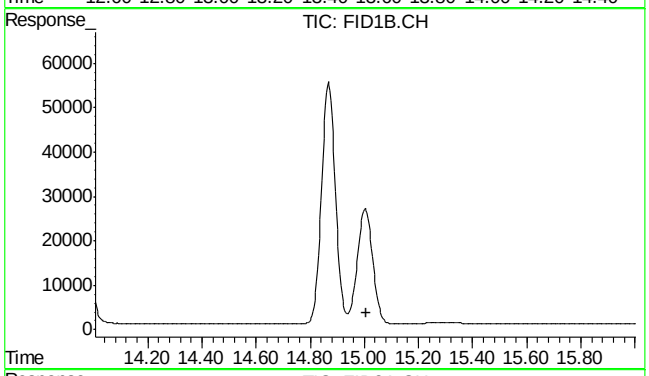
#1 Alkane A

R.T.: 13.845 min
Delta R.T.: -0.002 min
Response: 249486
Conc: N.D.



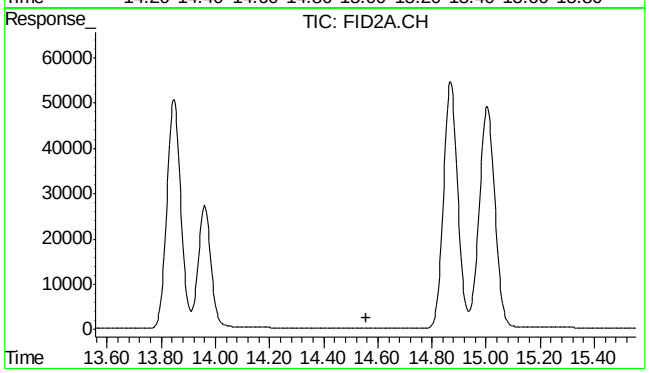
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.003 min
Delta R.T.: -0.003 min
Response: 1035584
Conc: N.D.



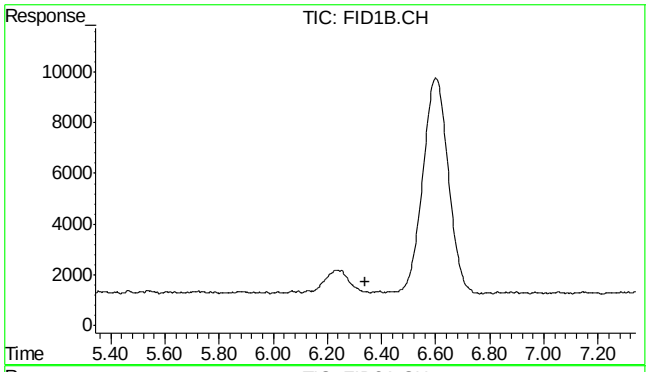
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.6.4

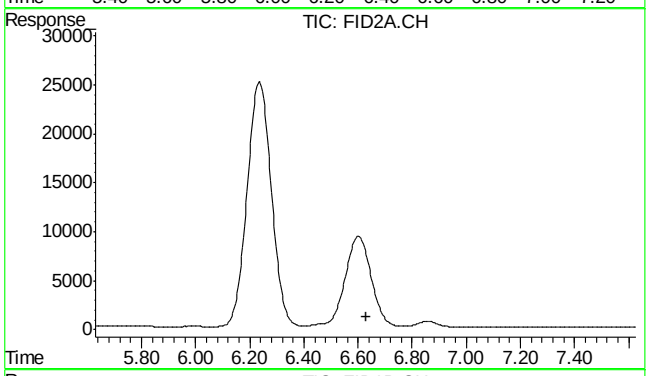
7

SGS ACCUTEST FA40754



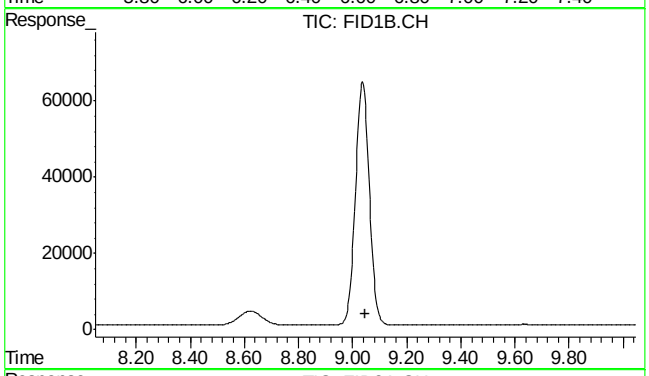
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



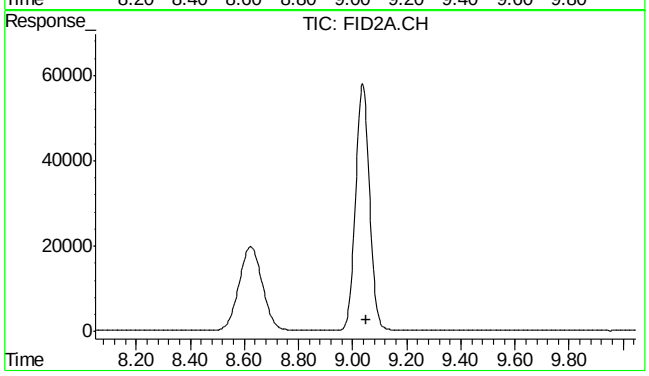
#3 Aromatic A

R.T.: 6.600 min
Delta R.T.: -0.029 min
Response: 612478
Conc: N.D.



#4 Aromatic B

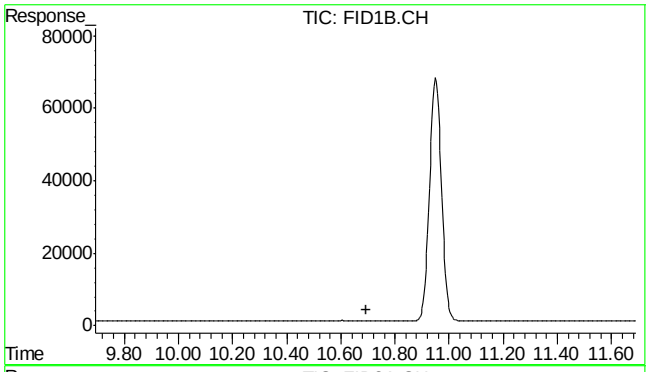
R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

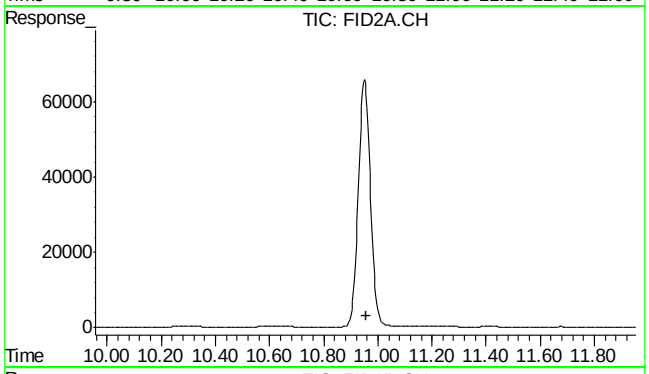
R.T.: 9.036 min
Delta R.T.: -0.012 min
Response: 2081370
Conc: N.D.

SGS ACCUTEST FA40754



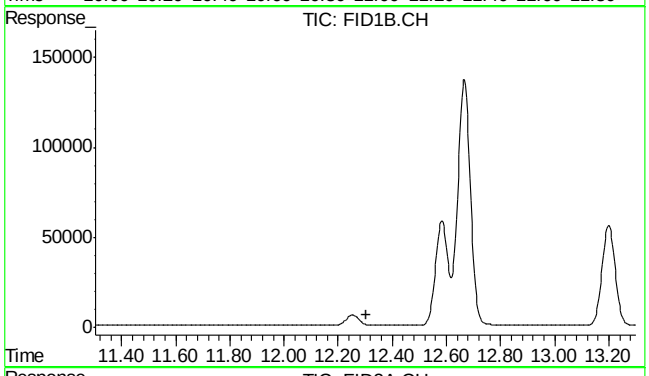
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



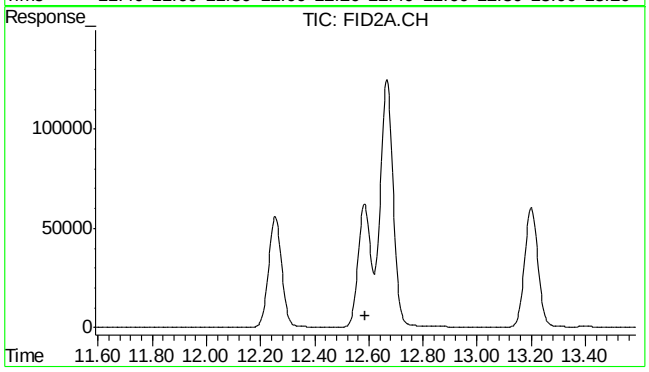
#5 Aromatic C

R.T.: 10.950 min
Delta R.T.: -0.006 min
Response: 2052252
Conc: N.D.



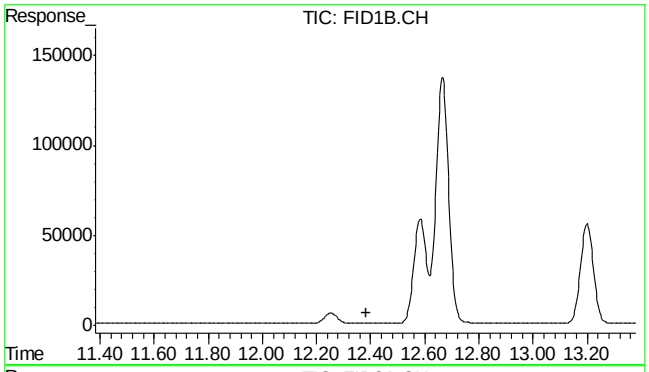
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



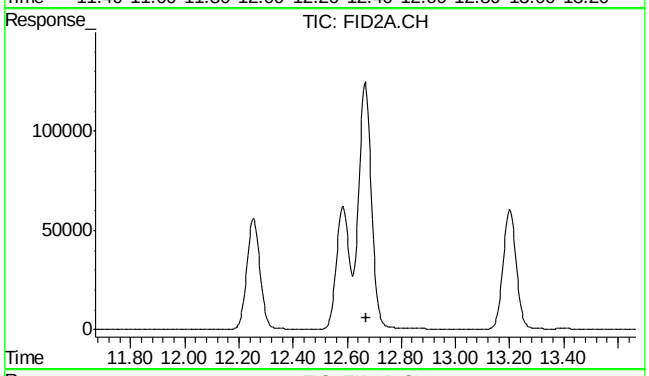
#6 Aromatic D

R.T.: 12.583 min
Delta R.T.: -0.004 min
Response: 1987053
Conc: N.D.



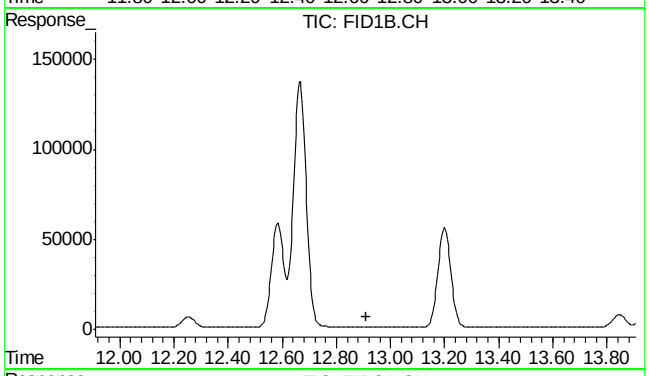
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



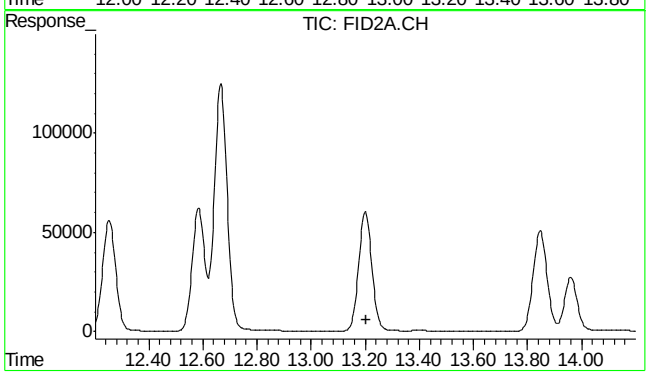
#7 Aromatic E

R.T.: 12.666 min
Delta R.T.: -0.003 min
Response: 4038235
Conc: N.D.



#8 Aromatic F

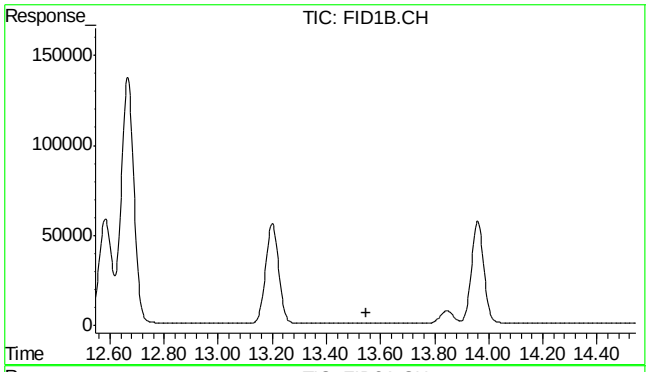
R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

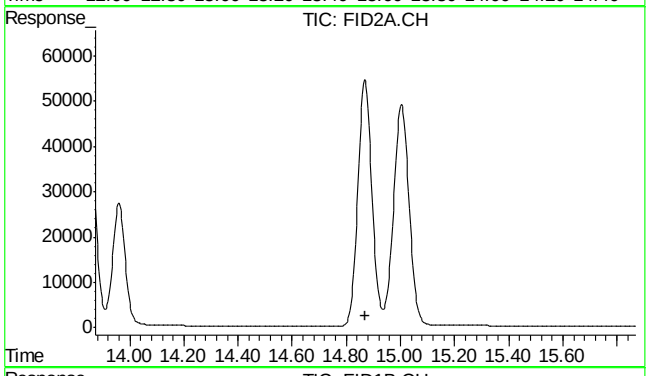
R.T.: 13.200 min
Delta R.T.: -0.003 min
Response: 2064294
Conc: N.D.

SGS ACCUTEST FA40754



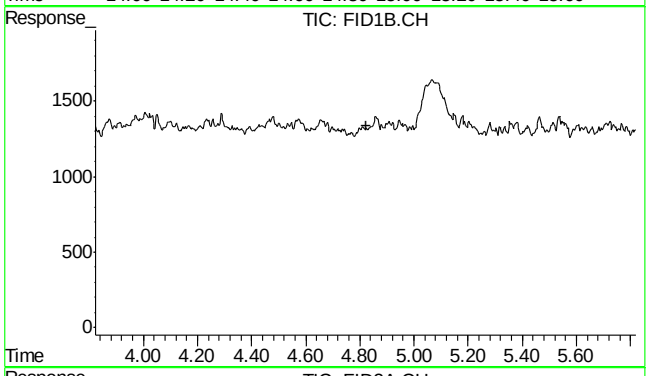
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



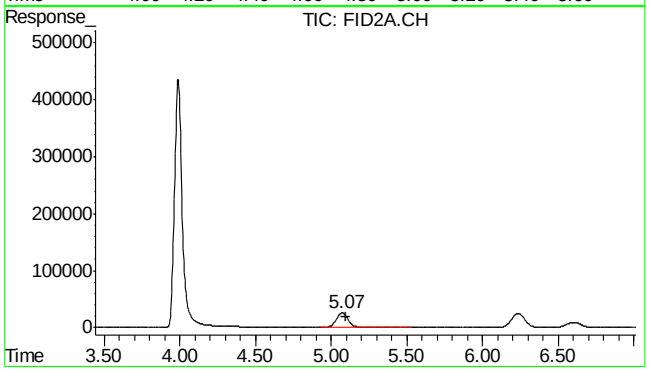
#9 Aromatic G

R.T.: 14.868 min
Delta R.T.: -0.003 min
Response: 1966529
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



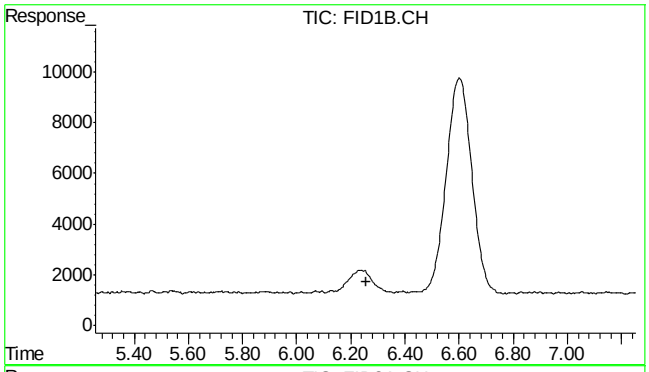
#10 Pentane

R.T.: 5.074 min
Delta R.T.: -0.026 min
Response: 1416108
Conc: 103.25 ug/L

7.6.4

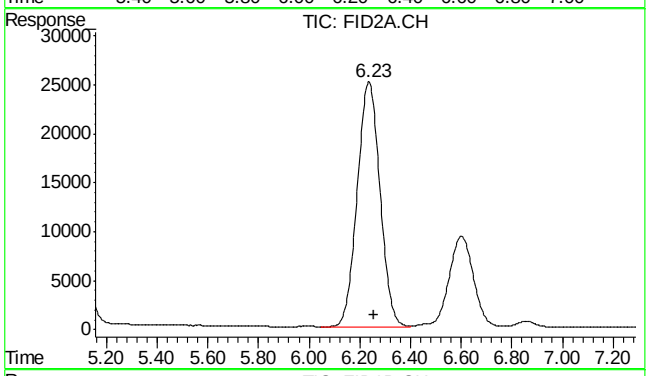
7

SGS ACCUTEST FA40754



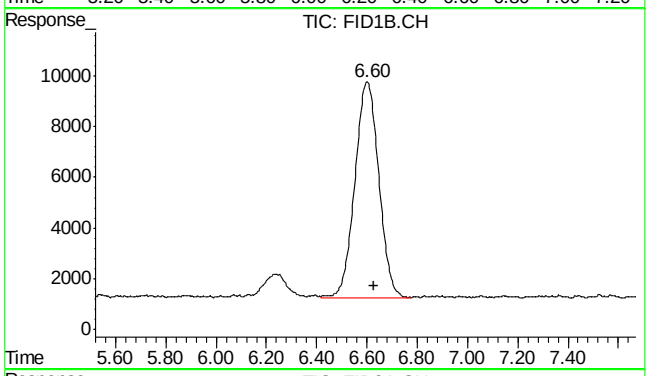
#11 2-Methylpentane

R.T.: 6.237 min
Delta R.T.: -0.019 min
Response: 62665
Conc: N.D.



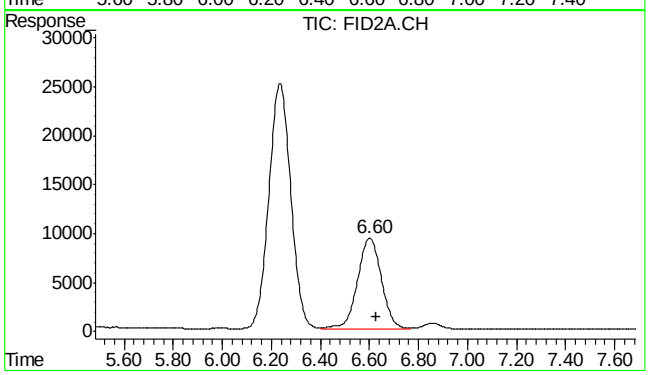
#11 2-Methylpentane

R.T.: 6.236 min
Delta R.T.: -0.020 min
Response: 1555674
Conc: 104.15 ug/L



#12 Methyl Tert Butyl Ether

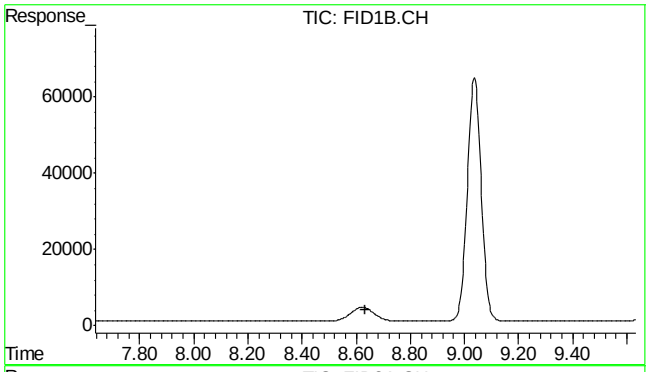
R.T.: 6.601 min
Delta R.T.: -0.028 min
Response: 559594
Conc: 103.72 ug/L



#12 Methyl Tert Butyl Ether

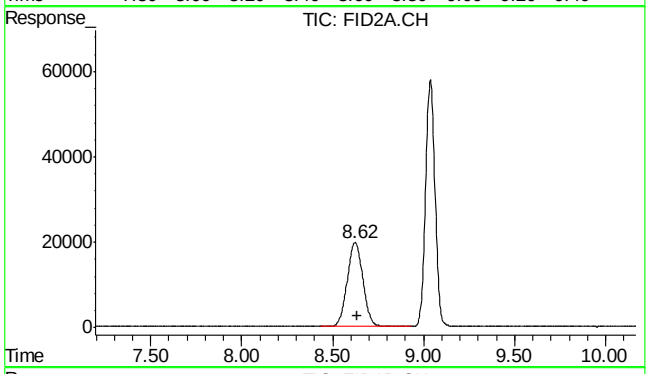
R.T.: 6.602 min
Delta R.T.: -0.026 min
Response: 627142
Conc: 96.46 ug/L

SGS ACCUTEST FA40754



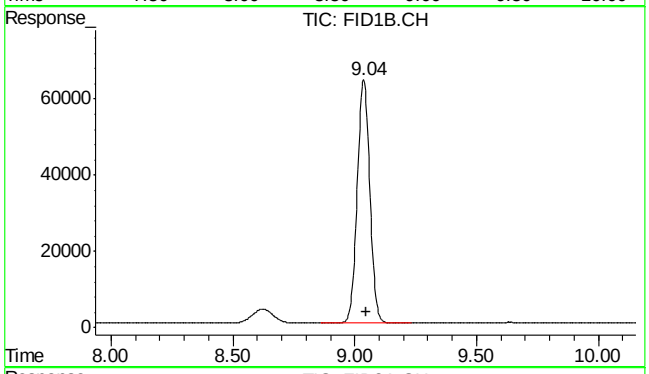
#13 2,2,4-Trimethylpentane

R.T.: 8.622 min
Delta R.T.: -0.012 min
Response: 215932
Conc: N.D.



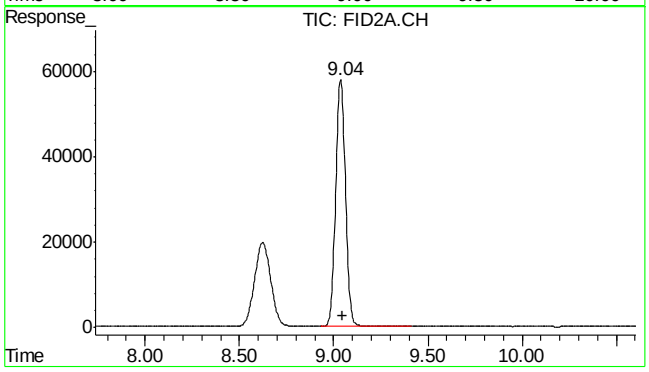
#13 2,2,4-Trimethylpentane

R.T.: 8.624 min
Delta R.T.: -0.010 min
Response: 1187491
Conc: 101.26 ug/L



#14 Benzene

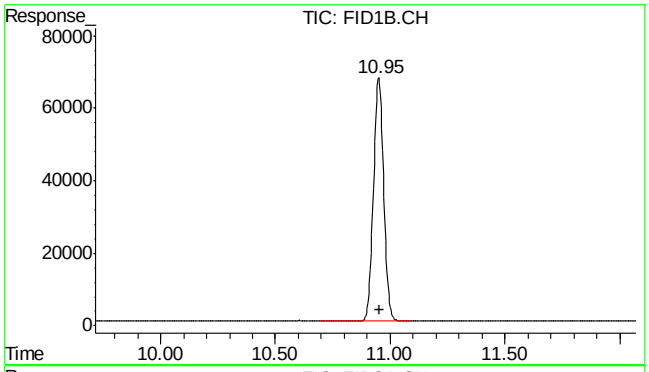
R.T.: 9.037 min
Delta R.T.: -0.009 min
Response: 2288771
Conc: 95.70 ug/L



#14 Benzene

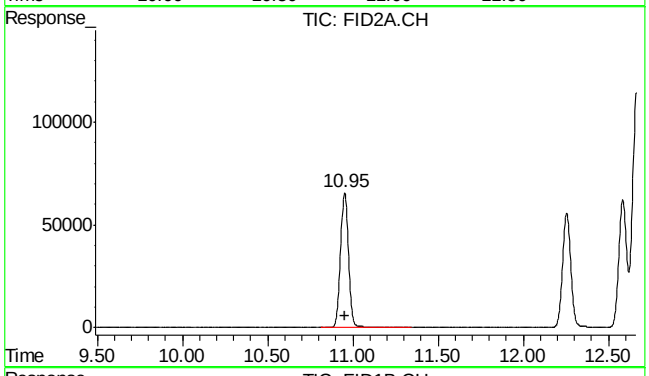
R.T.: 9.038 min
Delta R.T.: -0.008 min
Response: 2091120
Conc: 95.57 ug/L

SGS ACCUTEST FA40754



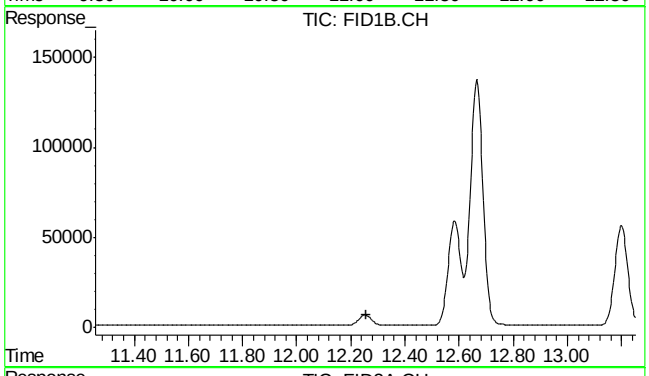
#15 Toluene

R.T.: 10.951 min
Delta R.T.: -0.004 min
Response: 2090012
Conc: 95.96 ug/L



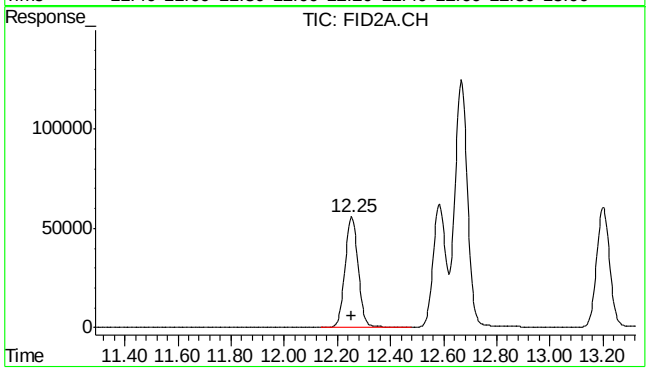
#15 Toluene

R.T.: 10.951 min
Delta R.T.: -0.004 min
Response: 2058062
Conc: 99.32 ug/L



#16 Nonane

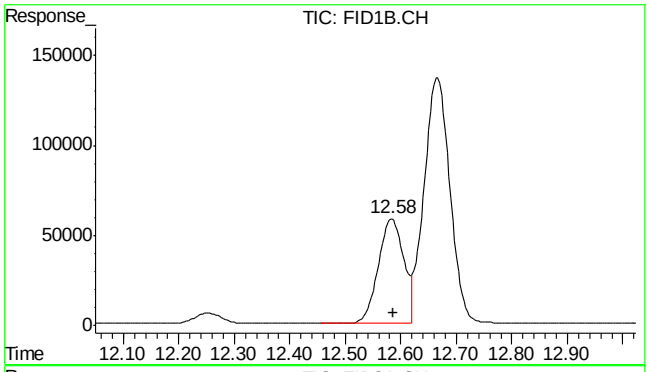
R.T.: 12.254 min
Delta R.T.: -0.002 min
Response: 195478
Conc: N.D.



#16 Nonane

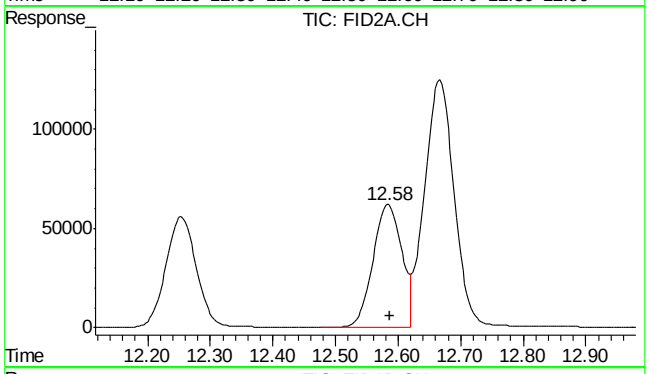
R.T.: 12.255 min
Delta R.T.: -0.001 min
Response: 1891292
Conc: 98.06 ug/L

SGS ACCUTEST FA40754



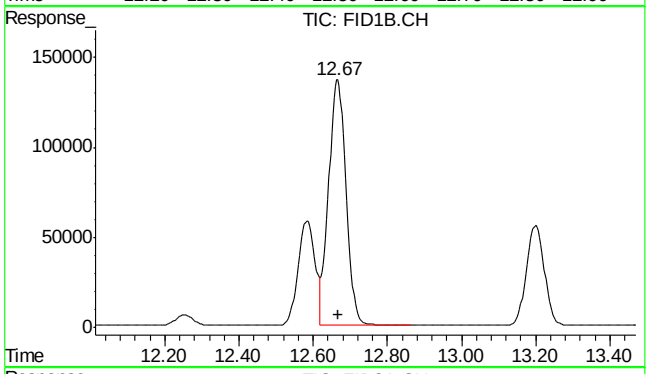
#17 Ethylbenzene

R.T.: 12.584 min
Delta R.T.: -0.002 min
Response: 1824551
Conc: 99.84 ug/L



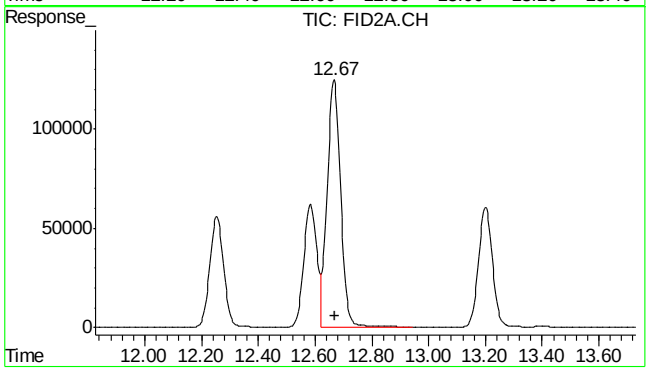
#17 Ethylbenzene

R.T.: 12.585 min
Delta R.T.: -0.002 min
Response: 1957769
Conc: 100.17 ug/L



#18 m,p-Xylene

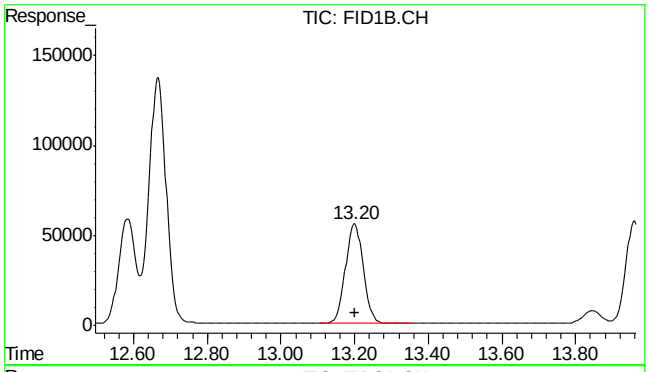
R.T.: 12.666 min
Delta R.T.: -0.002 min
Response: 4478896
Conc: 202.49 ug/L



#18 m,p-Xylene

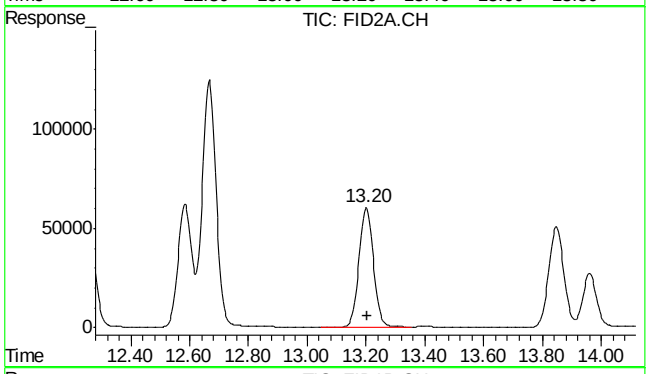
R.T.: 12.667 min
Delta R.T.: -0.002 min
Response: 4121657
Conc: 198.99 ug/L

SGS ACCUTEST FA40754



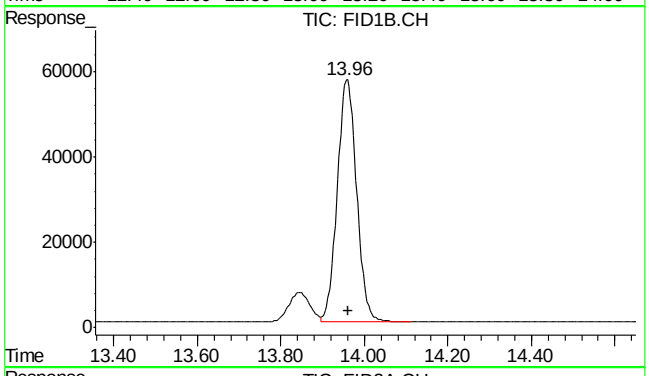
#19 o-Xylene

R.T.: 13.200 min
Delta R.T.: -0.002 min
Response: 1869333
Conc: 97.77 ug/L



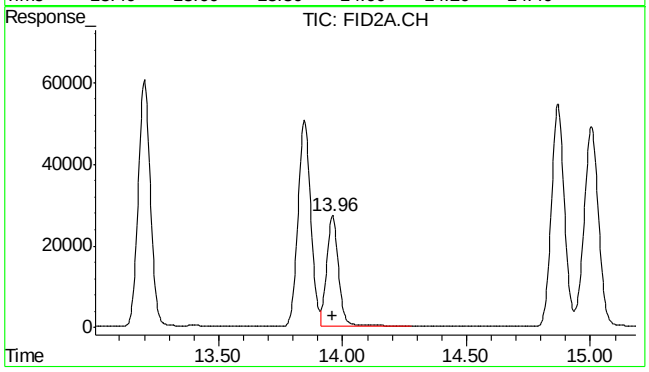
#19 o-Xylene

R.T.: 13.201 min
Delta R.T.: -0.002 min
Response: 2039297
Conc: 97.70 ug/L



#20 BFB

R.T.: 13.960 min
Delta R.T.: -0.001 min
Response: 1811129
Conc: 98.67 ug/L



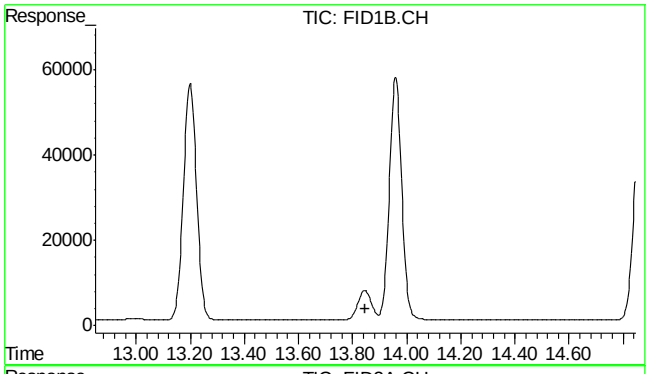
#20 BFB

R.T.: 13.960 min
Delta R.T.: -0.002 min
Response: 913255
Conc: 100.82 ug/L

7.6.4

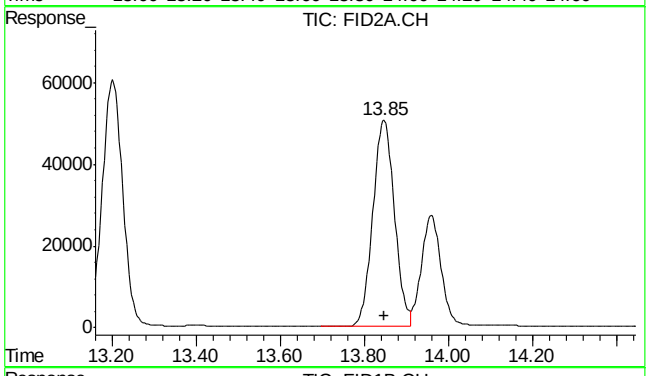
7

SGS ACCUTEST FA40754



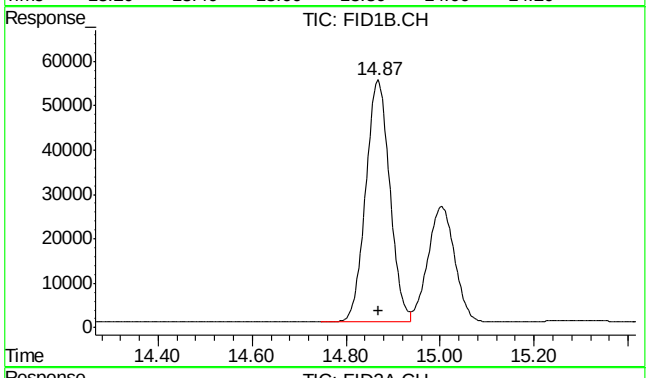
#21 Decane

R.T.: 13.846 min
Delta R.T.: -0.002 min
Response: 242791
Conc: N.D.



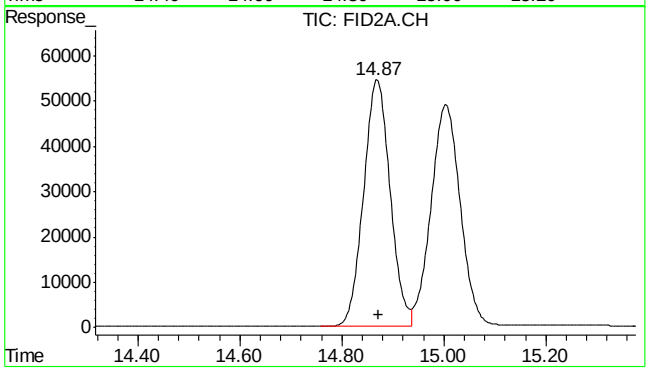
#21 Decane

R.T.: 13.847 min
Delta R.T.: -0.001 min
Response: 1804241
Conc: 100.81 ug/L



#22 1,2,4-Trimethylbenzene

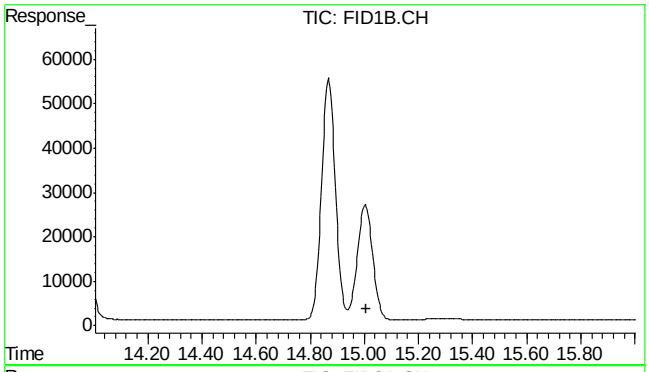
R.T.: 14.869 min
Delta R.T.: -0.001 min
Response: 1941556
Conc: 97.65 ug/L



#22 1,2,4-Trimethylbenzene

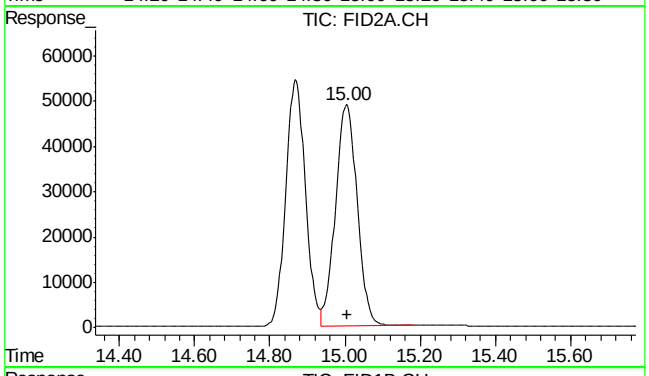
R.T.: 14.870 min
Delta R.T.: -0.001 min
Response: 1961046
Conc: 97.25 ug/L

SGS ACCUTEST FA40754



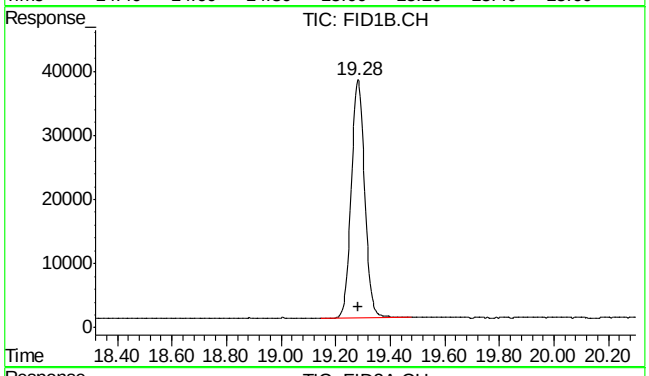
#23 Butylcyclohexane

R.T.: 15.004 min
Delta R.T.: -0.002 min
Response: 1030324
Conc: N.D.



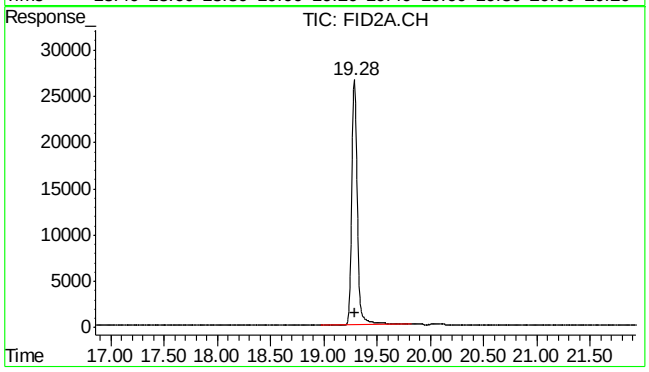
#23 Butylcyclohexane

R.T.: 15.005 min
Delta R.T.: -0.001 min
Response: 1963586
Conc: 100.32 ug/L



#24 Naphthalene

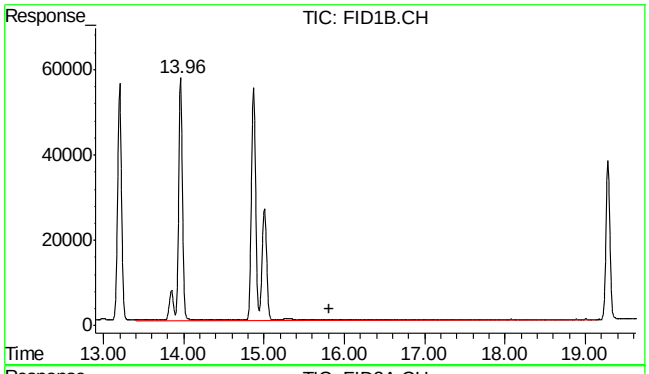
R.T.: 19.283 min
Delta R.T.: -0.001 min
Response: 1270869
Conc: 102.75 ug/L



#24 Naphthalene

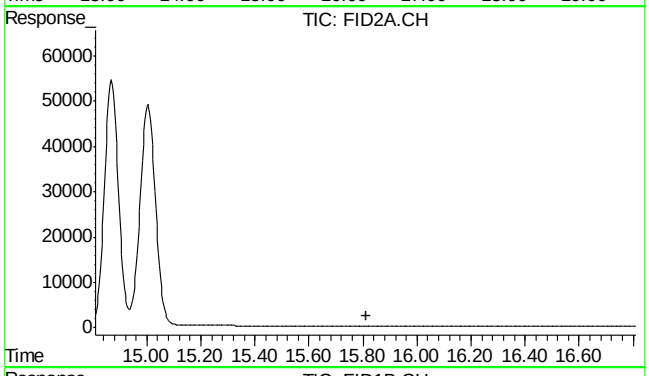
R.T.: 19.285 min
Delta R.T.: -0.001 min
Response: 971779
Conc: 102.95 ug/L

SGS ACCUTEST FA40754



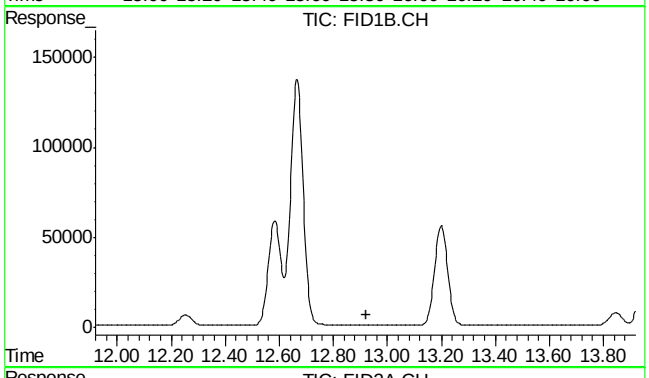
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2300681
Conc: 58.78 ug/L m



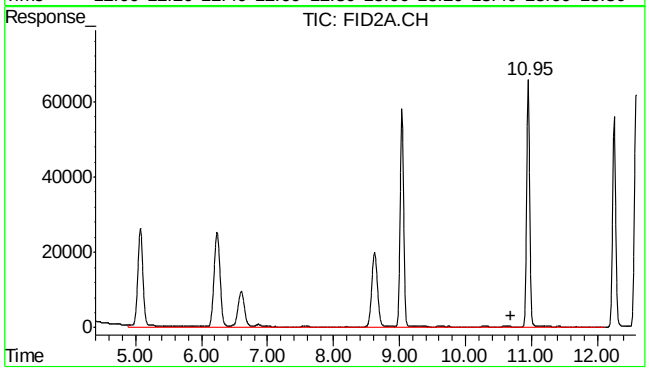
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 3790195
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

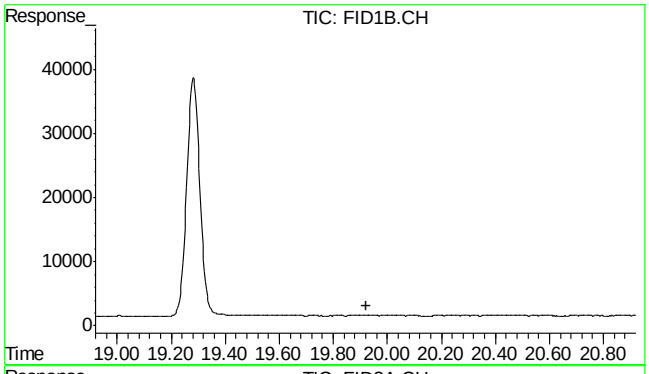
R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 14011894
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

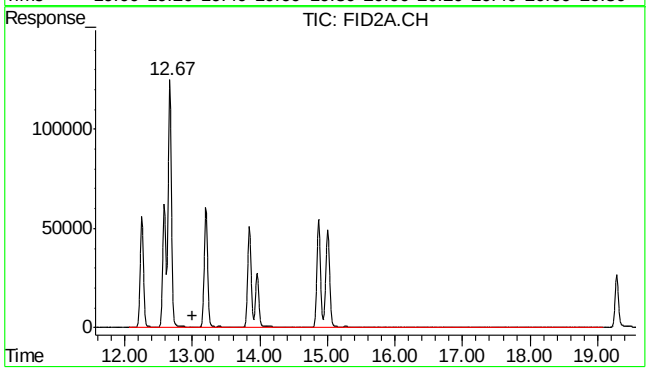
R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 4442693
Conc: 141.20 ug/L m

SGS ACCUTEST FA40754



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 3779021
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 6053132
Conc: 110.17 ug/L m

7.6.4

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\011317\UV077468.D\FID1B.CH Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\011317\UV077468.D\FID2A.CH
Acq On : 13-Jan-2017, 16:24:45 Operator: antonioc
Sample : ic4115-5 Inst : HP5890
Misc : gc19571,guv4115,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 17 09:07:22 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Mon Jan 16 12:23:20 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.84f	0.00	560902	0	NoCal m	N.D.
2)	S	Alkane B	15.00f	0.00	2519606	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.61f	0	1514531	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	4820364	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.95f	0	4744451	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.58f	0	4439558	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	9511830	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	4764941	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	4665901	N.D.	NoCal m
20)	S	BFB	13.96	13.96	4420594	2199166	240.832	242.787
		Spiked Amount 200.000 Range 70 - 130 Recovery =					120.42%	121.39%
		Target Compounds						
10)		Pentane	0.00	5.08	0	3184526	N.D.	232.191 #
11)		2-Methylpentane	6.24	6.24	134217	3555730	NoCal	238.062 #
12)		Methyl Tert Buty	6.61	6.61	1396800	1536997	258.897	236.396
13)		2,2,4-Trimethylp	8.62	8.63	414997	2320954	NoCal	240.482 #
14)		Benzene	9.04	9.04	5316254	4858671	222.281	222.062
15)		Toluene	10.95	10.95	4871987	4790115	223.682	231.164
16)		Nonane	12.25	12.26	463116	4563596	NoCal	236.606 #
17)		Ethylbenzene	12.58	12.59	4266737	4598379	233.466	235.275
18)		m,p-Xylene	12.67	12.67	10381510	9712370	469.345	468.911
19)		o-Xylene	13.20	13.20	4409575	4846405	230.628	232.180
21)		Decane	13.85	13.85	573244	4276833	NoCal	238.953 #
22)		1,2,4-Trimethylb	14.87	14.87	4620995	4645395	232.408	230.364
23)		Butylcyclohexane	15.00	15.01	2481277	4760700	NoCal	243.236 #
24)		Naphthalene	19.28	19.28	3116748	2332480	251.983	247.103
25)	H	C9- C10 Aromatic	15.81	15.81	4988814	8875417	143.146	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	32115795	9497493	NoCal	322.275 #
27)	H	C9- C12 Aliphati	19.92	13.00	8247170	14383656	NoCal	261.783 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077468.D VPH011317.M Thu Jan 19 10:55:37 2017

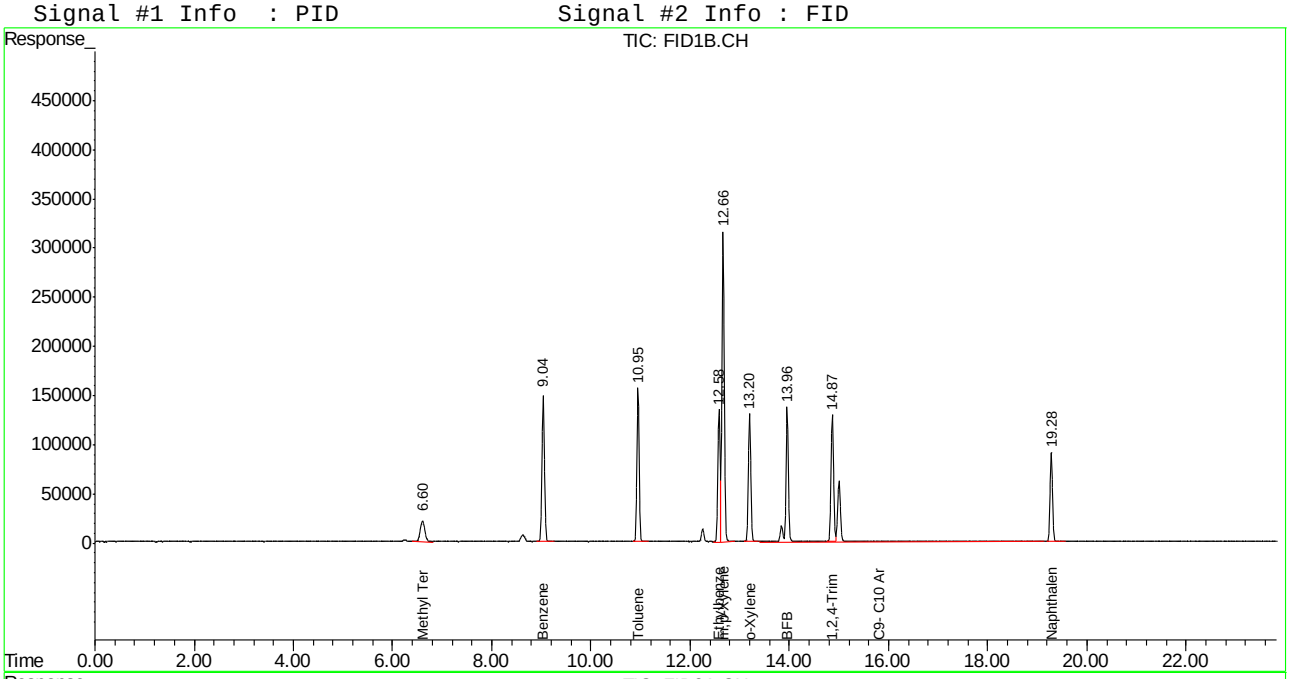
SGS ACCUTEST FA40754

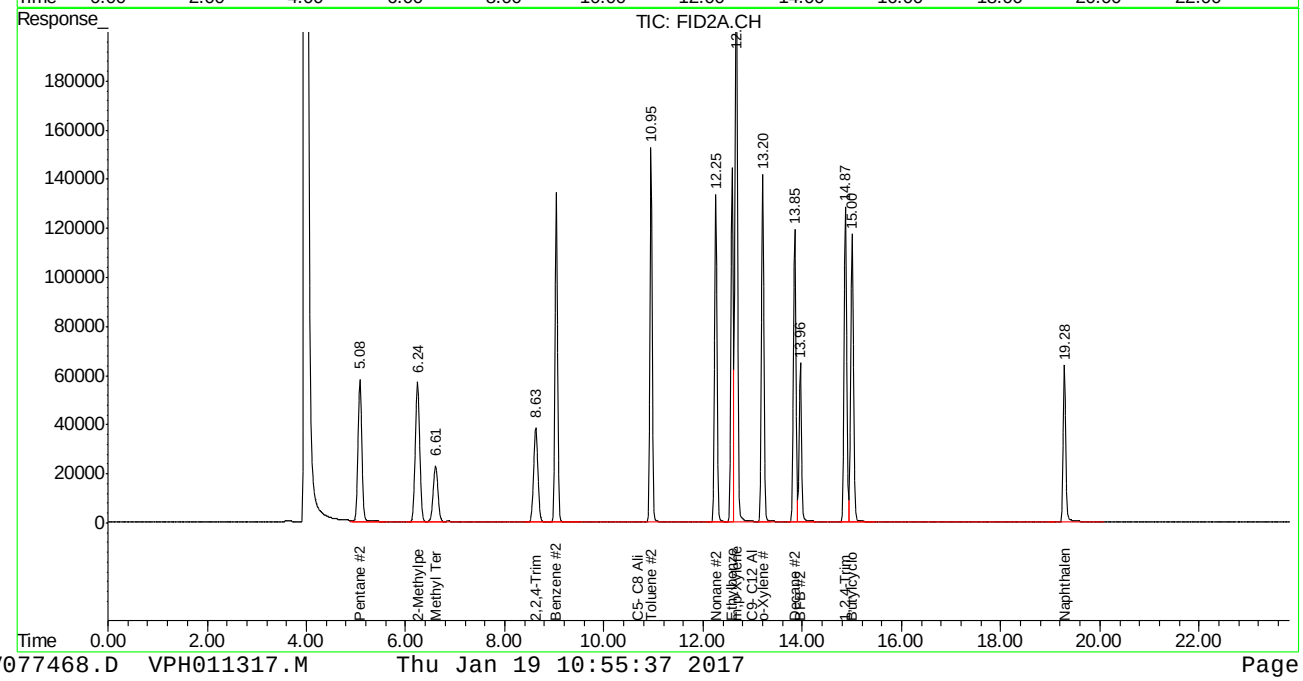
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\011317\UV077468.D\FID1B.CH Vial: 12
Signal #2 : C:\HPCHEM\2\DATA\011317\UV077468.D\FID2A.CH
Acq On : 13-Jan-2017, 16:24:45 Operator: antonioc
Sample : ic4115-5 Inst : HP5890
Misc : gc19571,guv4115,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 17 9:24 2017 Quant Results File: VPH011317.RES

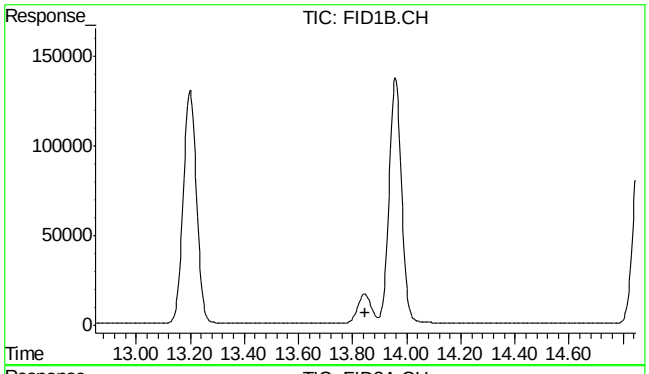
Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Mon Jan 16 12:23:20 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID



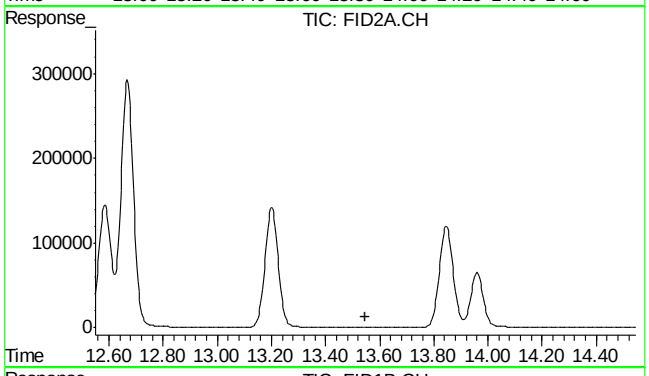


SGS ACCUTEST FA40754



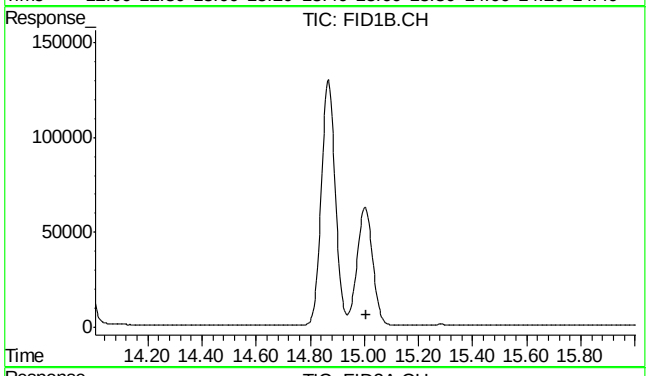
#1 Alkane A

R.T.: 13.844 min
Delta R.T.: -0.003 min
Response: 560902
Conc: N.D.



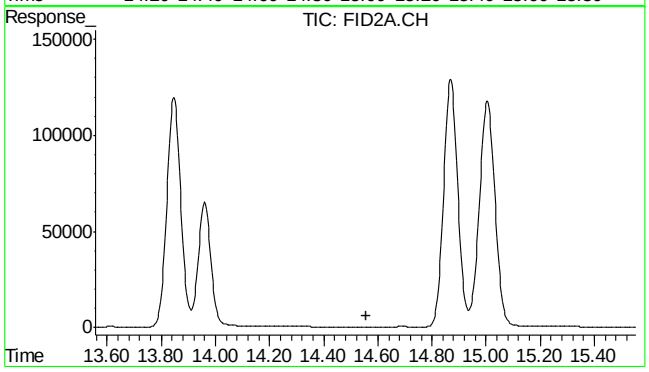
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.002 min
Delta R.T.: -0.004 min
Response: 2519606
Conc: N.D.



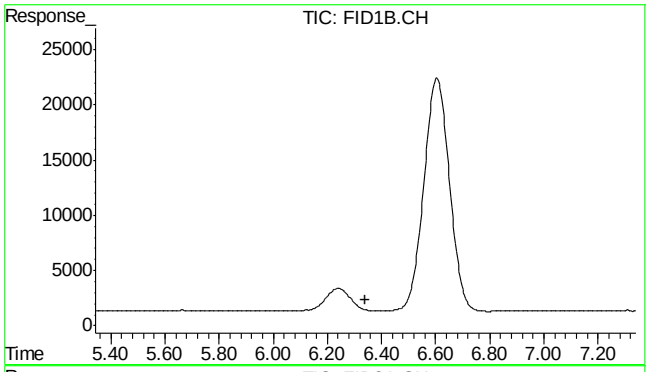
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.6.5

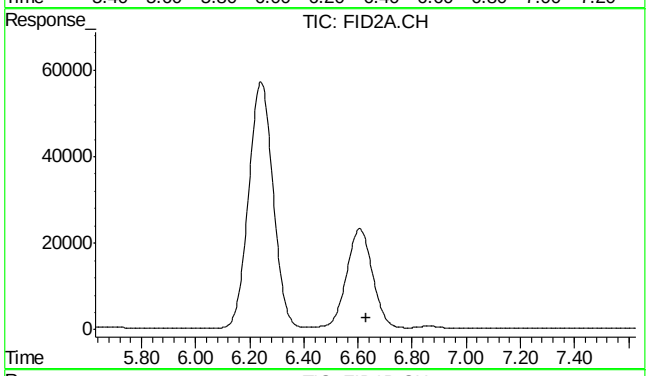
7

SGS ACCUTEST FA40754



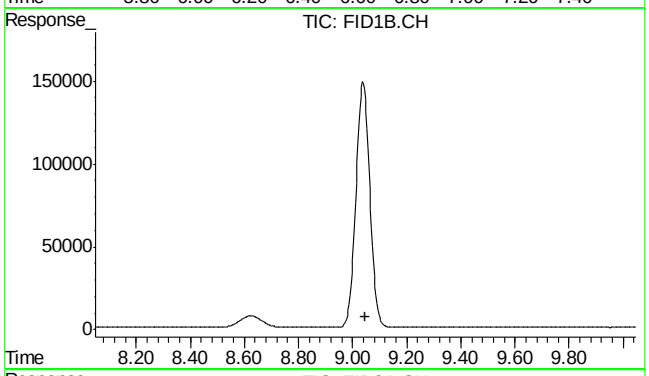
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



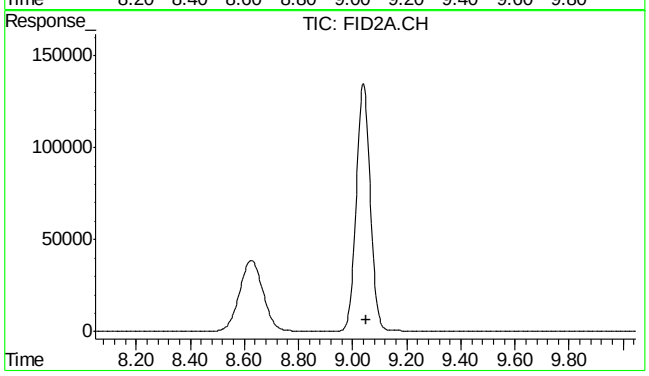
#3 Aromatic A

R.T.: 6.605 min
Delta R.T.: -0.024 min
Response: 1514531
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



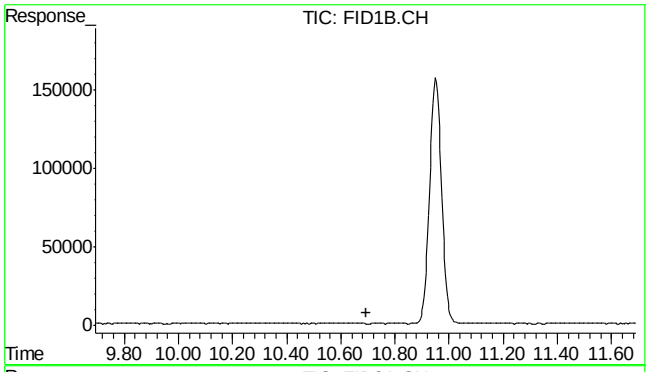
#4 Aromatic B

R.T.: 9.039 min
Delta R.T.: -0.009 min
Response: 4820364
Conc: N.D.

7.6.5

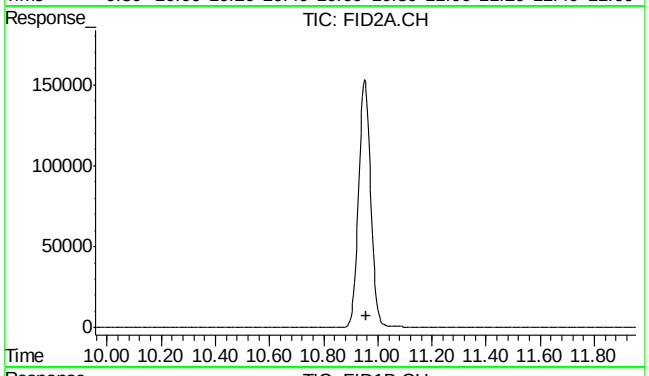
7

SGS ACCUTEST FA40754



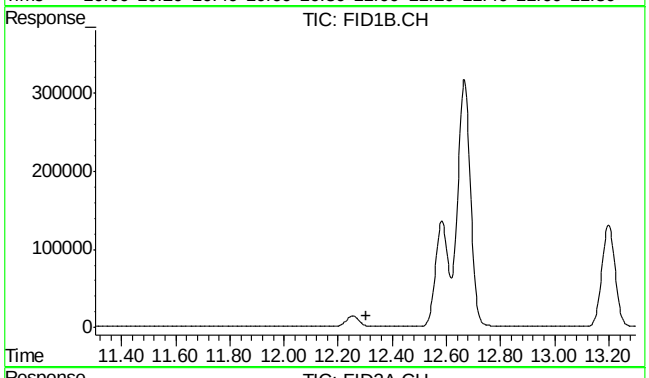
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



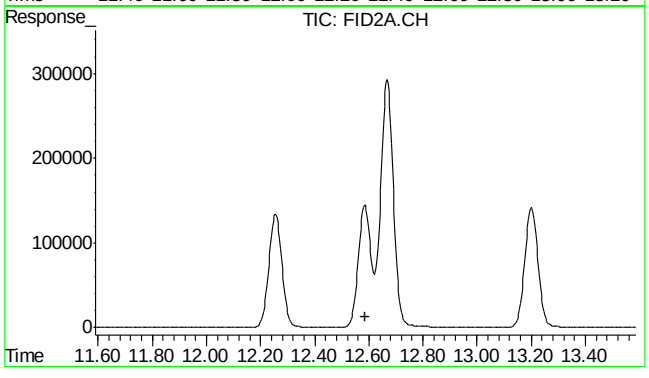
#5 Aromatic C

R.T.: 10.951 min
Delta R.T.: -0.005 min
Response: 4744451
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



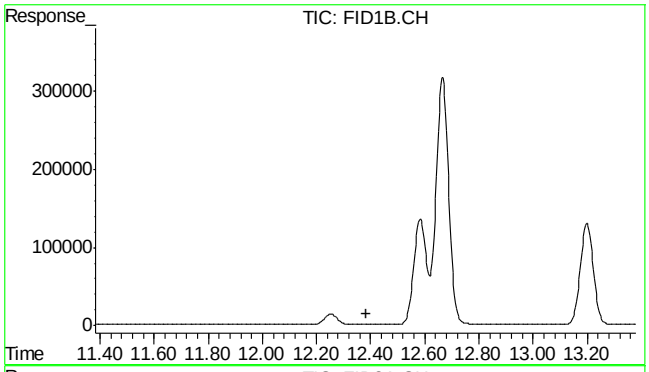
#6 Aromatic D

R.T.: 12.584 min
Delta R.T.: -0.003 min
Response: 4439558
Conc: N.D.

7.6.5

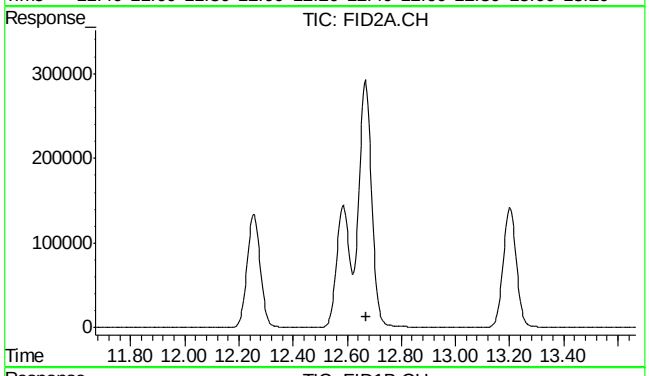
7

SGS ACCUTEST FA40754



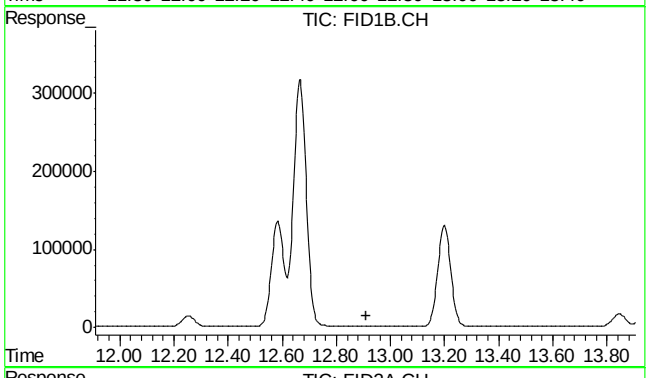
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



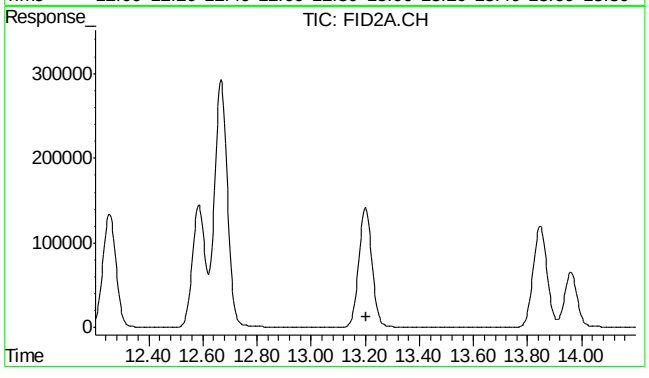
#7 Aromatic E

R.T.: 12.667 min
Delta R.T.: -0.002 min
Response: 9511830
Conc: N.D.



#8 Aromatic F

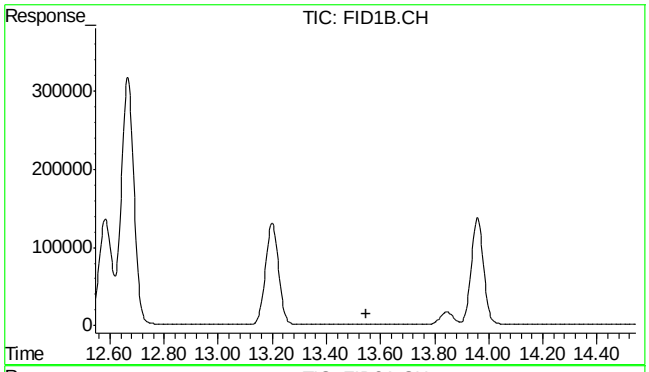
R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

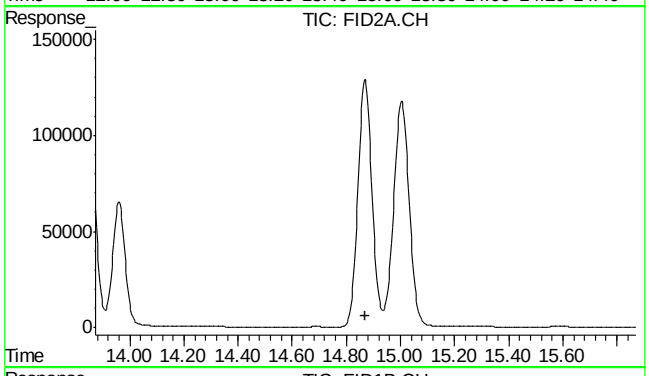
R.T.: 13.200 min
Delta R.T.: -0.003 min
Response: 4764941
Conc: N.D.

SGS ACCUTEST FA40754



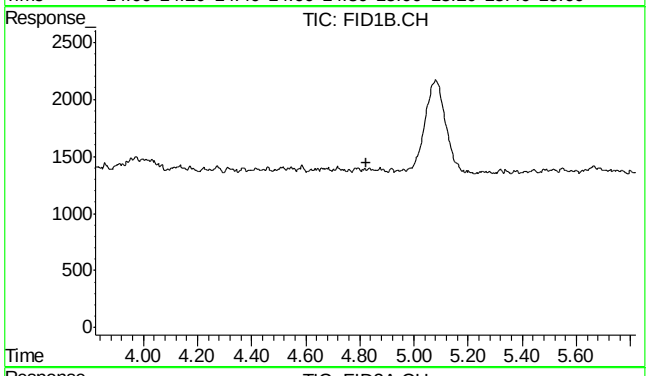
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



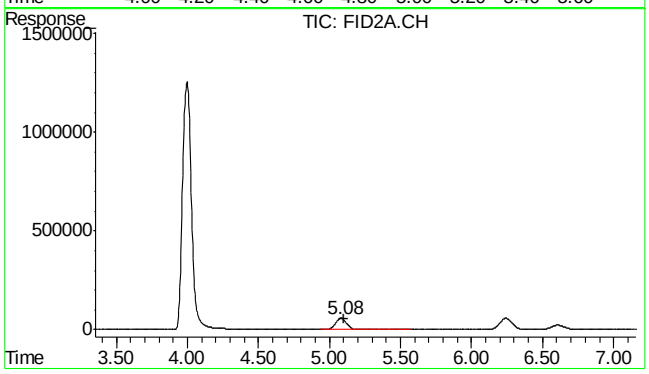
#9 Aromatic G

R.T.: 14.868 min
Delta R.T.: -0.003 min
Response: 4665901
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



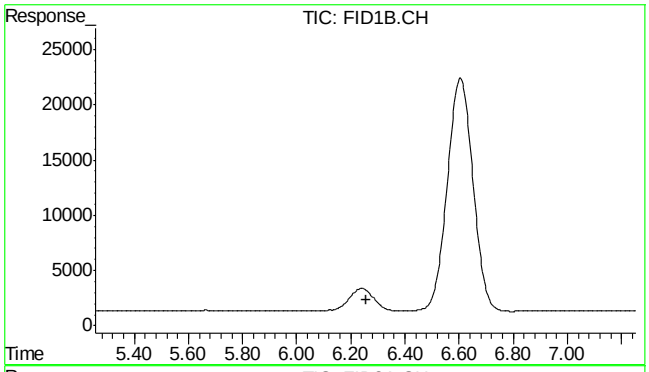
#10 Pentane

R.T.: 5.081 min
Delta R.T.: -0.019 min
Response: 3184526
Conc: 232.19 ug/L

7.6.5

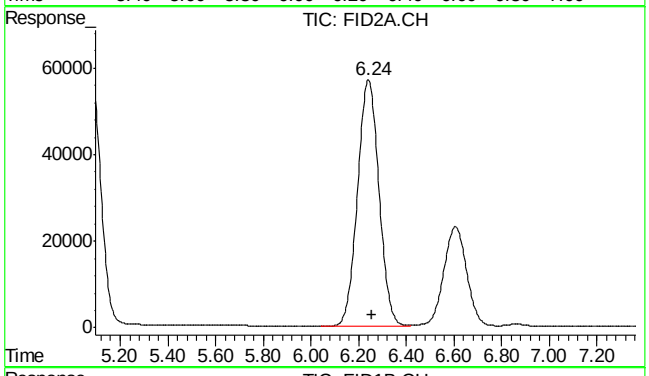
7

SGS ACCUTEST FA40754



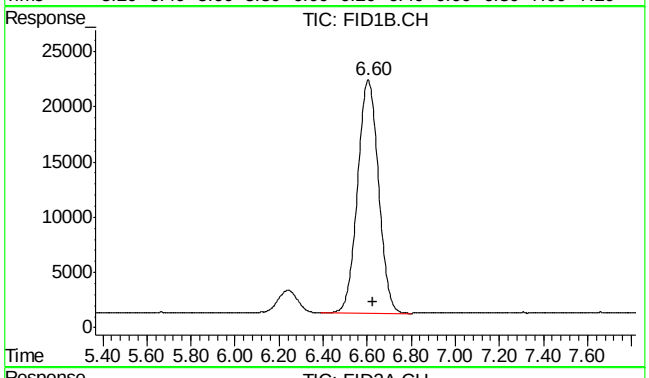
#11 2-Methylpentane

R.T.: 6.241 min
Delta R.T.: -0.015 min
Response: 134217
Conc: N.D.



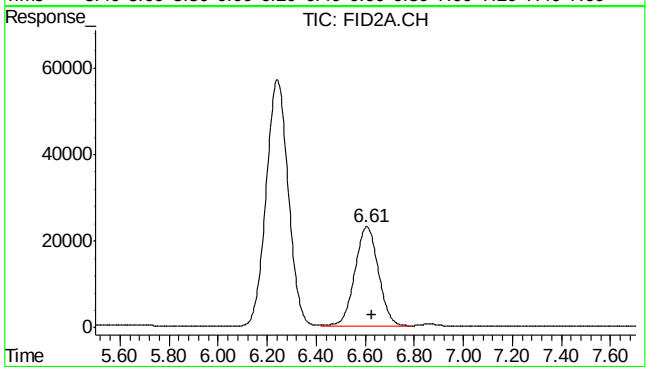
#11 2-Methylpentane

R.T.: 6.242 min
Delta R.T.: -0.014 min
Response: 3555730
Conc: 238.06 ug/L



#12 Methyl Tert Butyl Ether

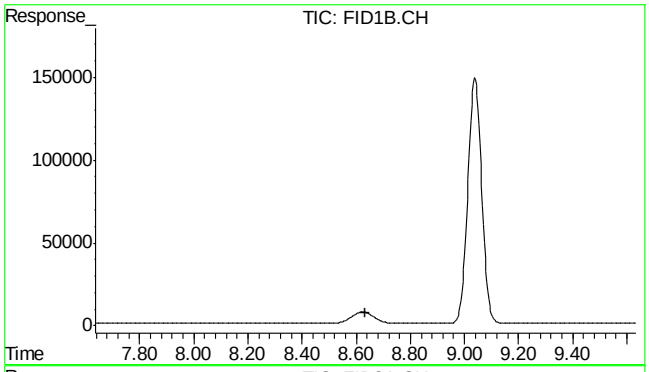
R.T.: 6.605 min
Delta R.T.: -0.024 min
Response: 1396800
Conc: 258.90 ug/L



#12 Methyl Tert Butyl Ether

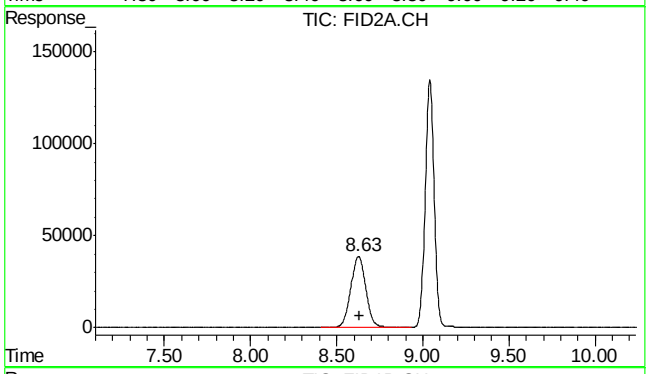
R.T.: 6.607 min
Delta R.T.: -0.021 min
Response: 1536997
Conc: 236.40 ug/L

SGS ACCUTEST FA40754



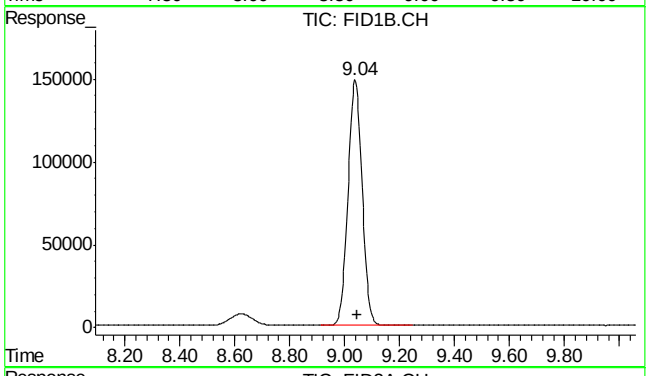
#13 2,2,4-Trimethylpentane

R.T.: 8.624 min
Delta R.T.: -0.010 min
Response: 414997
Conc: N.D.



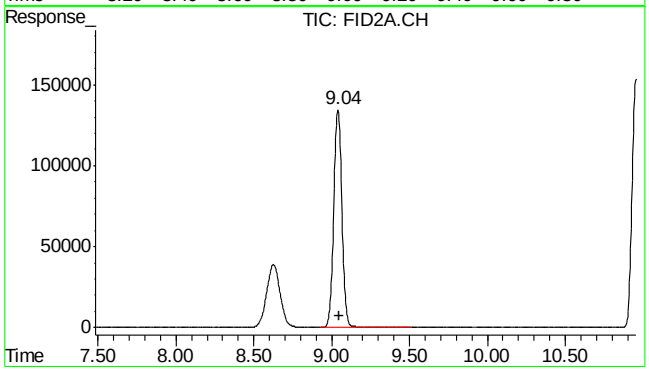
#13 2,2,4-Trimethylpentane

R.T.: 8.627 min
Delta R.T.: -0.007 min
Response: 2320954
Conc: 240.48 ug/L



#14 Benzene

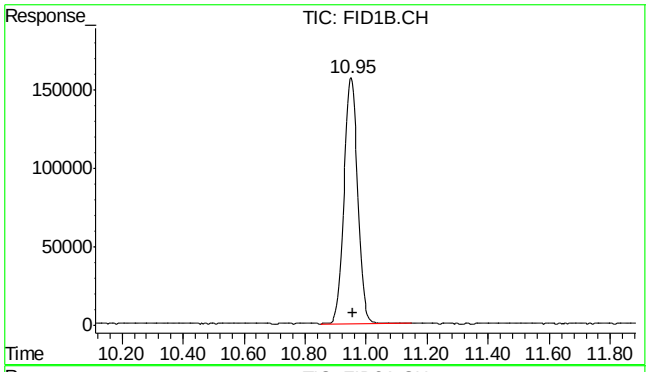
R.T.: 9.039 min
Delta R.T.: -0.007 min
Response: 5316254
Conc: 222.28 ug/L



#14 Benzene

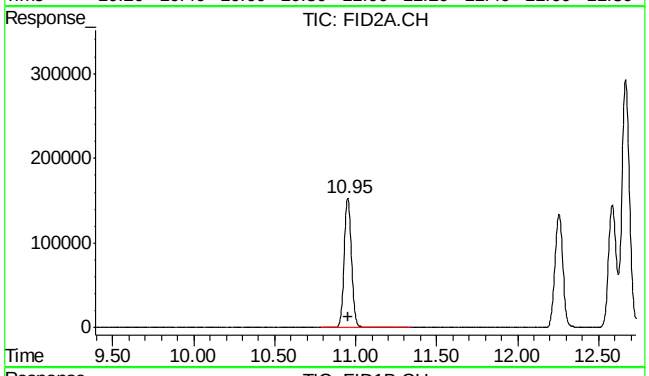
R.T.: 9.041 min
Delta R.T.: -0.005 min
Response: 4858671
Conc: 222.06 ug/L

SGS ACCUTEST FA40754



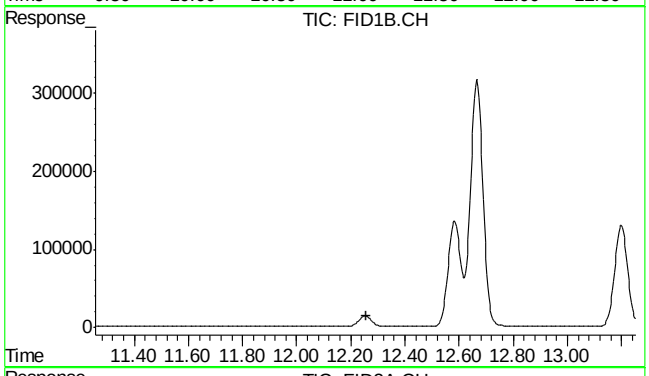
#15 Toluene

R.T.: 10.951 min
Delta R.T.: -0.004 min
Response: 4871987
Conc: 223.68 ug/L



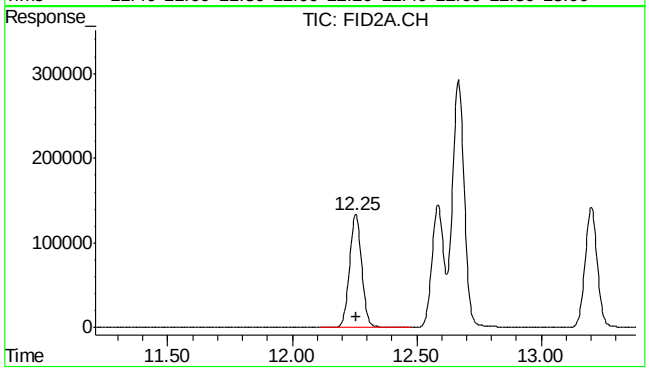
#15 Toluene

R.T.: 10.952 min
Delta R.T.: -0.003 min
Response: 4790115
Conc: 231.16 ug/L



#16 Nonane

R.T.: 12.254 min
Delta R.T.: -0.002 min
Response: 463116
Conc: N.D.



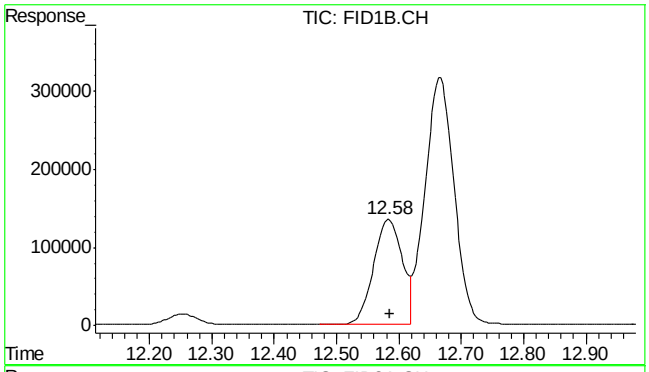
#16 Nonane

R.T.: 12.256 min
Delta R.T.: 0.000 min
Response: 4563596
Conc: 236.61 ug/L

7.6.5

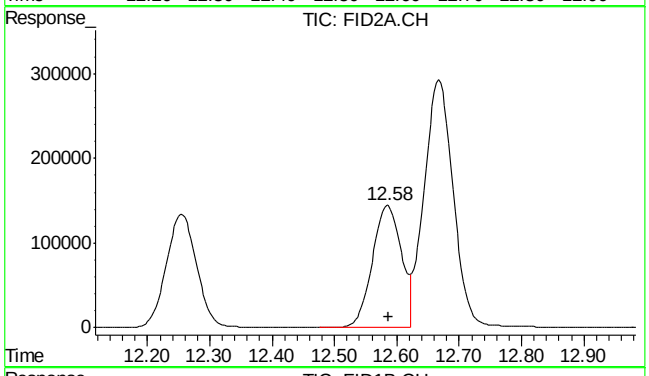
7

SGS ACCUTEST FA40754



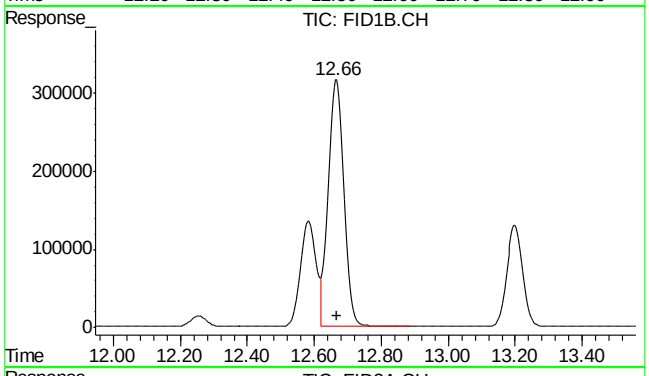
#17 Ethylbenzene

R.T.: 12.584 min
Delta R.T.: -0.002 min
Response: 4266737
Conc: 233.47 ug/L



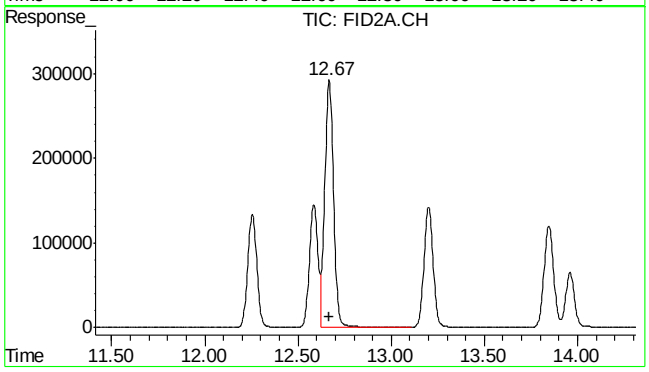
#17 Ethylbenzene

R.T.: 12.586 min
Delta R.T.: -0.001 min
Response: 4598379
Conc: 235.27 ug/L



#18 m,p-Xylene

R.T.: 12.666 min
Delta R.T.: -0.002 min
Response: 10381510
Conc: 469.35 ug/L



#18 m,p-Xylene

R.T.: 12.668 min
Delta R.T.: 0.000 min
Response: 9712370
Conc: 468.91 ug/L

7.6.5

7

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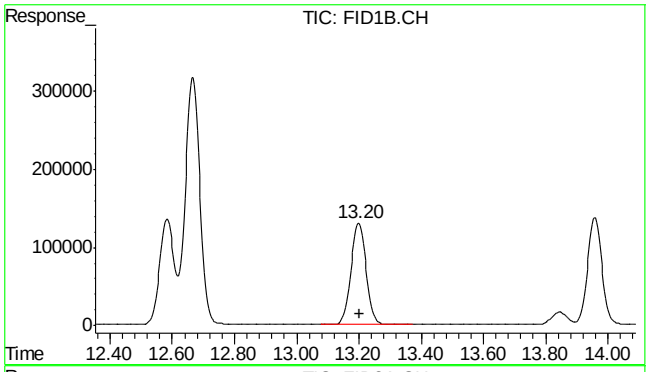
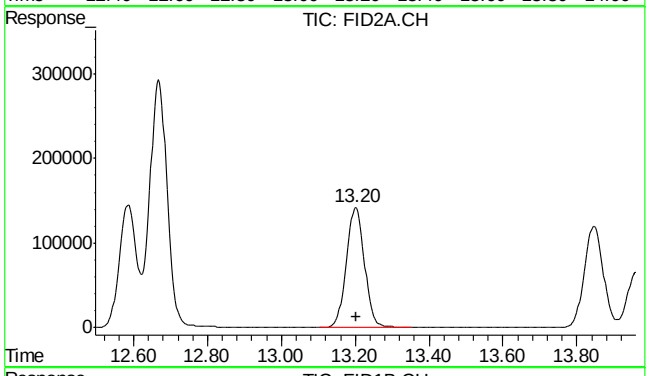


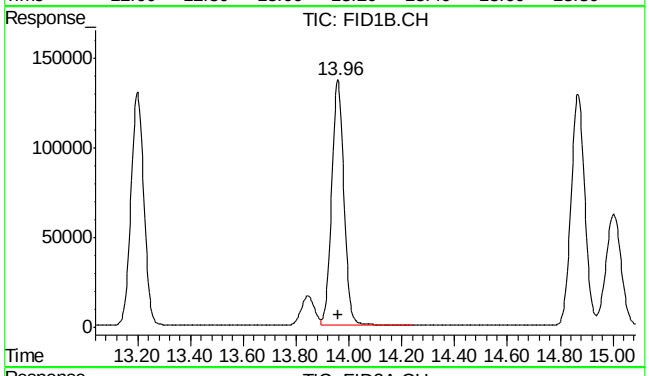
#19 o-Xylene

R.T.: 13.200 min
Delta R.T.: -0.003 min
Response: 4409575
Conc: 230.63 ug/L



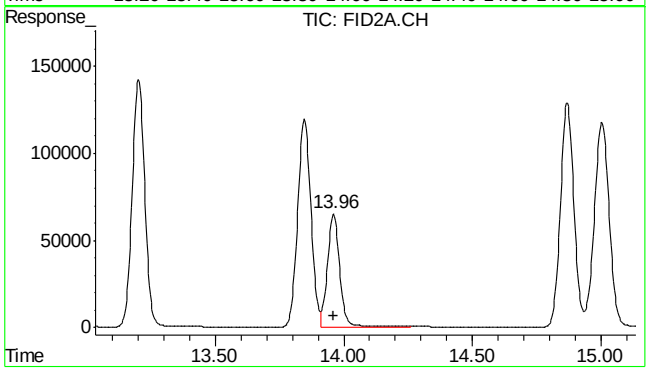
#19 o-Xylene

R.T.: 13.202 min
Delta R.T.: -0.001 min
Response: 4846405
Conc: 232.18 ug/L



#20 BFB

R.T.: 13.959 min
Delta R.T.: -0.002 min
Response: 4420594
Conc: 240.83 ug/L



#20 BFB

R.T.: 13.961 min
Delta R.T.: -0.001 min
Response: 2199166
Conc: 242.79 ug/L

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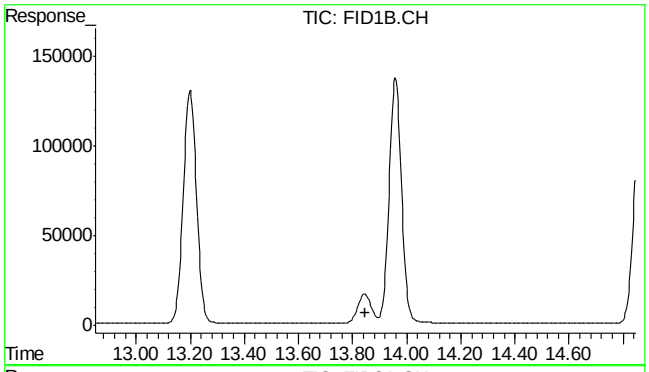
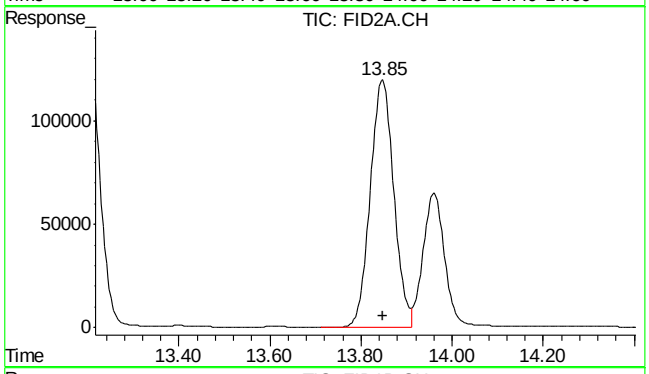


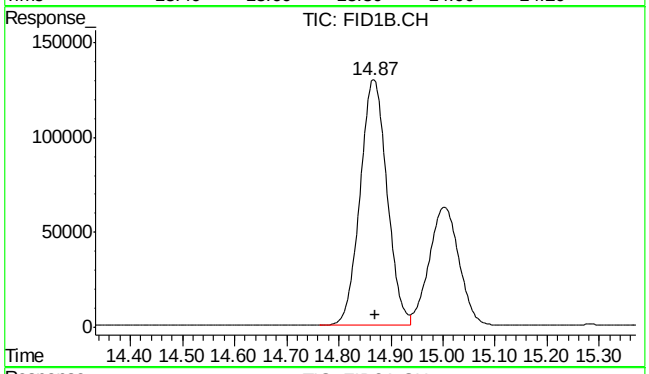
#21 Decane

R.T.: 13.845 min
Delta R.T.: -0.002 min
Response: 573244
Conc: N.D.



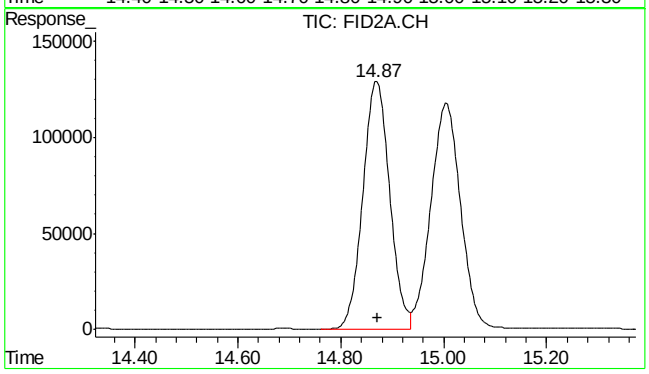
#21 Decane

R.T.: 13.847 min
Delta R.T.: 0.000 min
Response: 4276833
Conc: 238.95 ug/L



#22 1,2,4-Trimethylbenzene

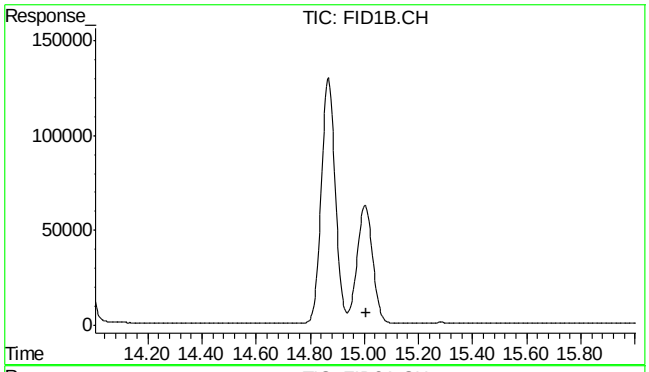
R.T.: 14.868 min
Delta R.T.: -0.002 min
Response: 4620995
Conc: 232.41 ug/L



#22 1,2,4-Trimethylbenzene

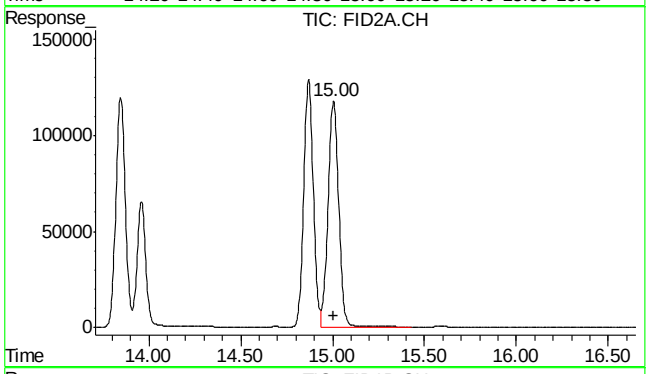
R.T.: 14.870 min
Delta R.T.: -0.001 min
Response: 4645395
Conc: 230.36 ug/L

SGS ACCUTEST FA40754



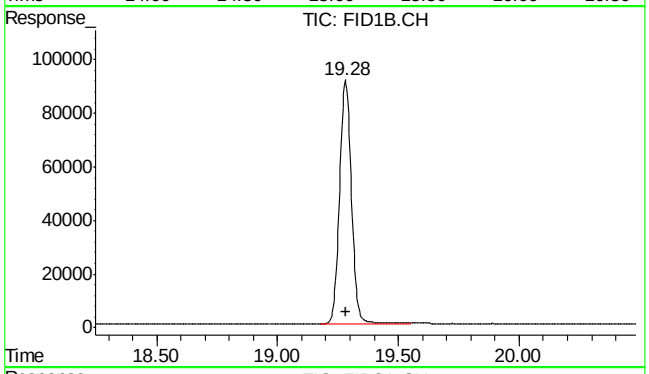
#23 Butylcyclohexane

R.T.: 15.003 min
Delta R.T.: -0.002 min
Response: 2481277
Conc: N.D.



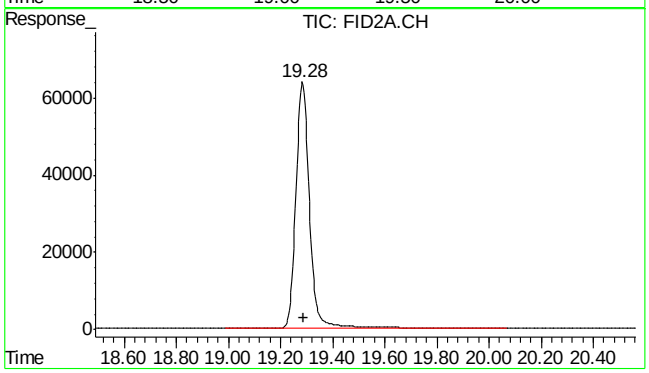
#23 Butylcyclohexane

R.T.: 15.005 min
Delta R.T.: 0.000 min
Response: 4760700
Conc: 243.24 ug/L



#24 Naphthalene

R.T.: 19.282 min
Delta R.T.: -0.002 min
Response: 3116748
Conc: 251.98 ug/L



#24 Naphthalene

R.T.: 19.285 min
Delta R.T.: -0.001 min
Response: 2332480
Conc: 247.10 ug/L

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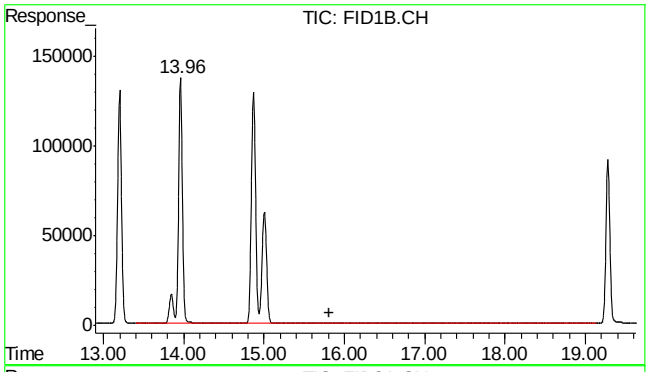
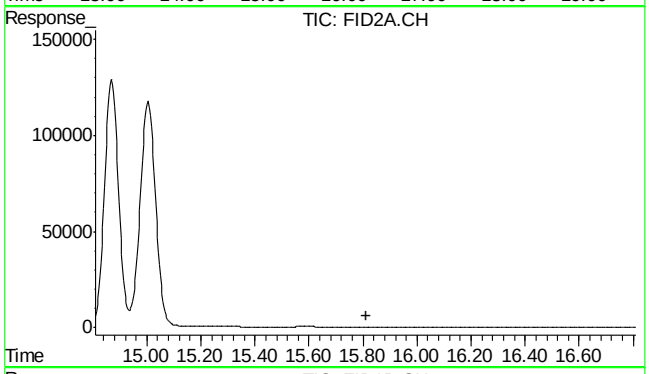


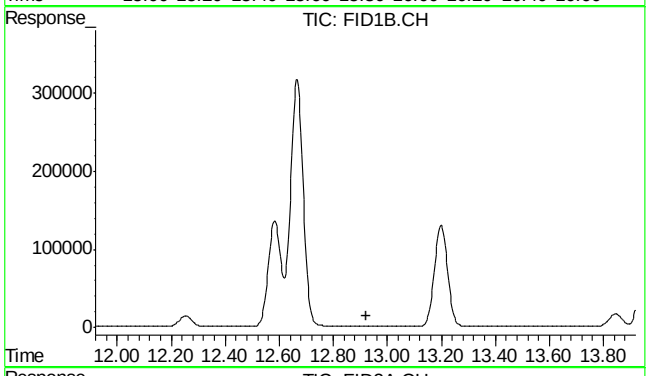
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 4988814
Conc: 143.15 ug/L m



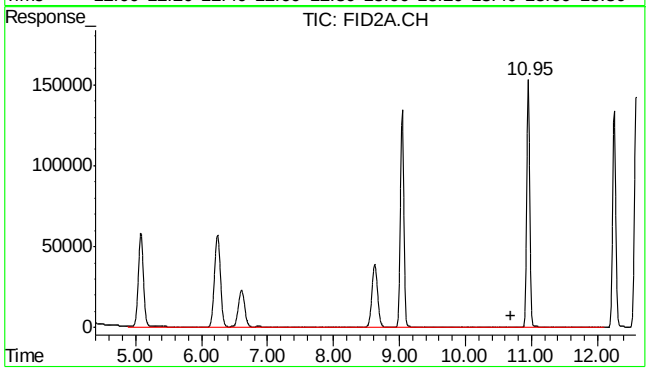
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 8875417
Conc: N.D.



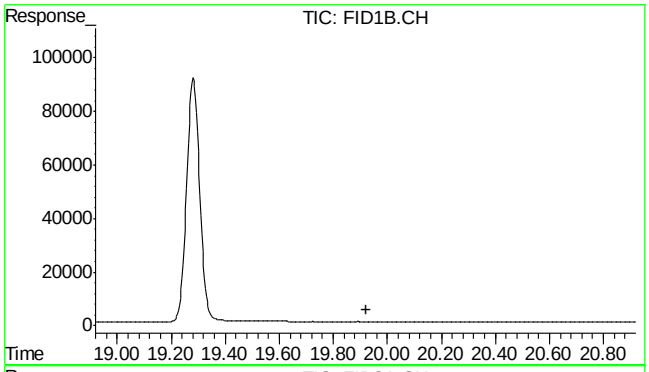
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 32115795
Conc: N.D.



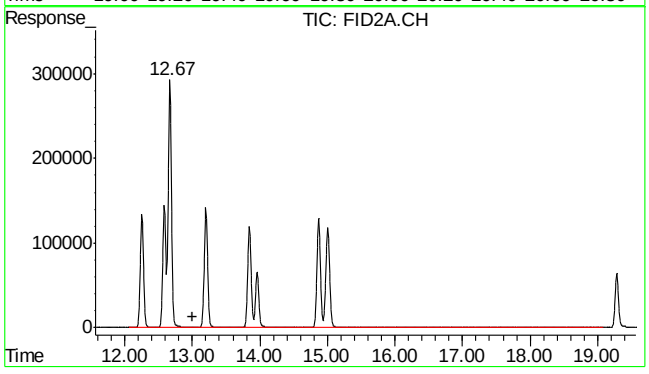
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 9497493
Conc: 322.28 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 8247170
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 14383656
Conc: 261.78 ug/L m

7.6.5

7

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Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\011317\UV077469.D\FID1B.CH Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\011317\UV077469.D\FID2A.CH
Acq On : 13-Jan-2017, 16:55:22 Operator: antonioc
Sample : ic4115-6 Inst : HP5890
Misc : gc19571,guv4115,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 17 09:07:24 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Mon Jan 16 12:23:20 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.84f	0.00	862862	0	NoCal m	N.D.
2)	S	Alkane B	15.00f	0.00	4084991	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.60f	0	2281521	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	8391761	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.95f	0	8255162	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.58f	0	8060487	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	16316671	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	8239460	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	7947404	N.D.	NoCal m
20)	S	BFB	13.96	13.96	7453904	3660676	406.085	404.138
		Spiked Amount 200.000 Range 70 - 130 Recovery =					203.04%#	202.07%#
		Target Compounds						
10)		Pentane	0.00	5.08	0	5625995	N.D.	410.205 #
11)		2-Methylpentane	6.24	6.24	221740	6077075	NoCal	406.870 #
12)		Methyl Tert Buty	6.60	6.61	2117448	2309328	392.468	355.183
13)		2,2,4-Trimethylp	8.62	8.63	554378	3071749	NoCal	408.210 #
14)		Benzene	9.04	9.04	9239055	8404211	386.299	384.108
15)		Toluene	10.95	10.95	8418685	8267418	386.518	398.973
16)		Nonane	12.25	12.26	756998	7590687	NoCal	393.549 #
17)		Ethylbenzene	12.58	12.59	7341546	7940449	401.712	406.271
18)		m,p-Xylene	12.67	12.67	17651390	16658943	798.015	804.291
19)		o-Xylene	13.20	13.20	7526431	8308099	393.644	398.023
21)		Decane	13.85	13.85	855680	6553986	NoCal	366.181 #
22)		1,2,4-Trimethylb	14.87	14.87	7845136	7938729	394.562	393.679
23)		Butylcyclohexane	15.00	15.01	4076191	7907803	NoCal	404.030 #
24)		Naphthalene	19.28	19.28	4920233	3712066	397.791	393.256
25)	H	C9- C10 Aromatic	15.81	15.81	8433364	14238497	251.255	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	54386470	15350478	NoCal	531.939 #
27)	H	C9- C12 Aliphati	19.92	13.00	13375048	22920816	NoCal	417.160 #

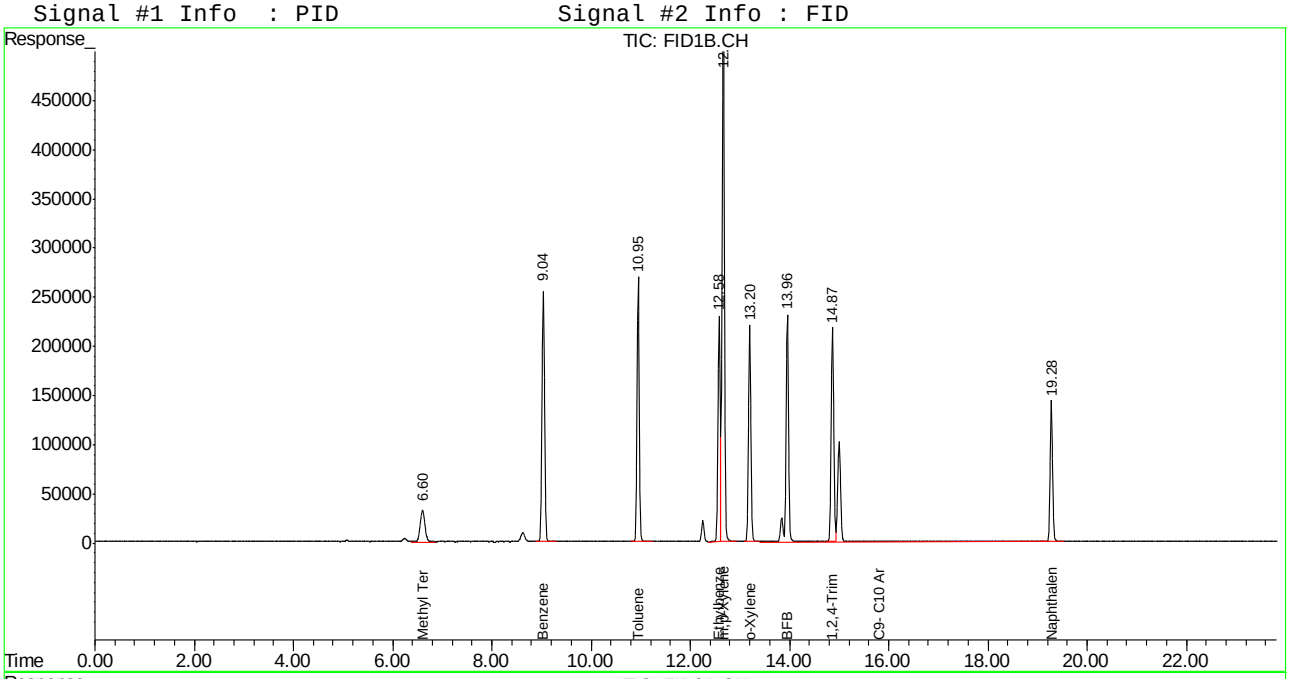
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077469.D VPH011317.M Thu Jan 19 10:55:39 2017

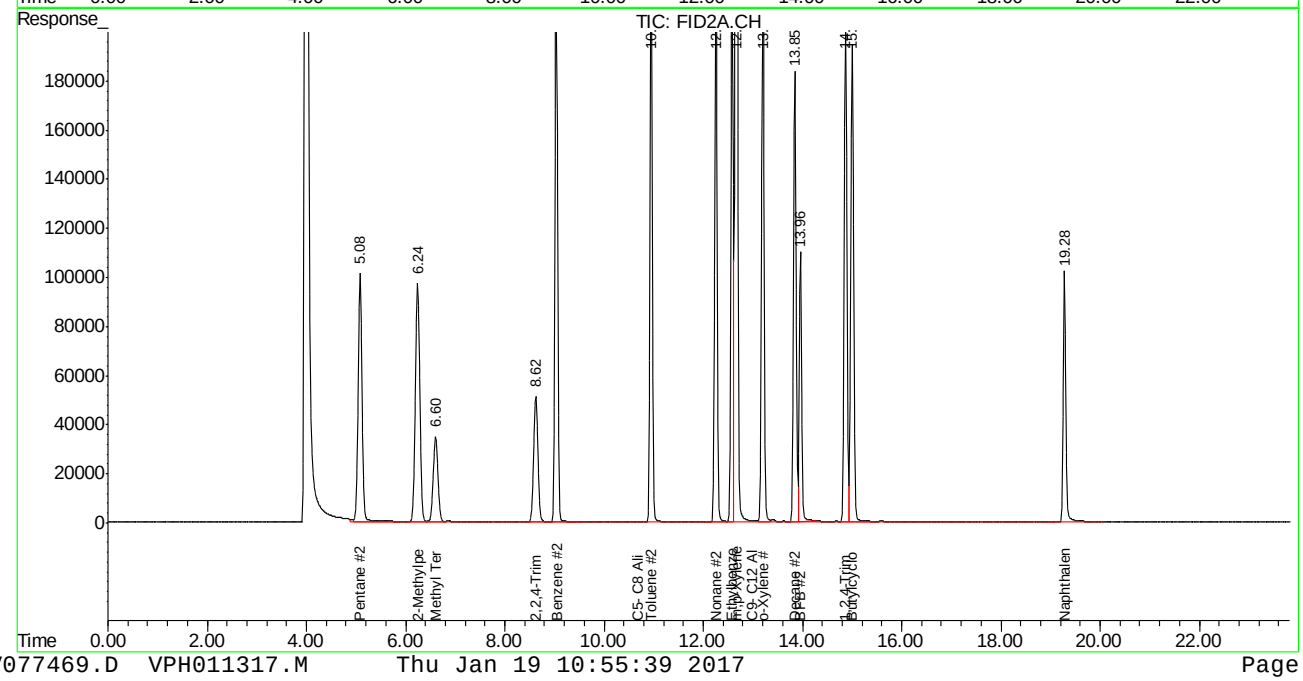
Quantitation Report (QT Reviewed)

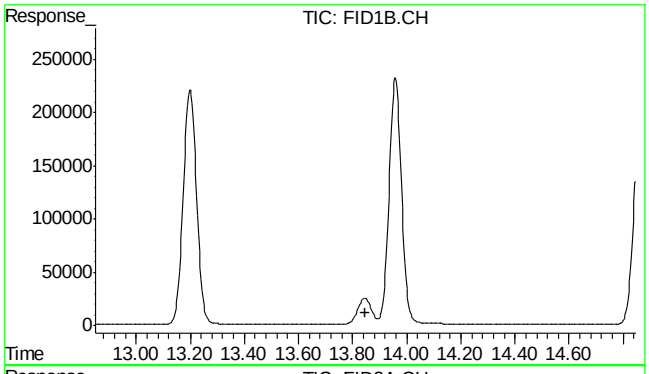
Signal #1 : C:\HPCHEM\2\DATA\011317\UV077469.D\FID1B.CH Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\011317\UV077469.D\FID2A.CH
Acq On : 13-Jan-2017, 16:55:22 Operator: antonioc
Sample : ic4115-6 Inst : HP5890
Misc : gc19571,guv4115,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 17 9:27 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Mon Jan 16 12:23:20 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

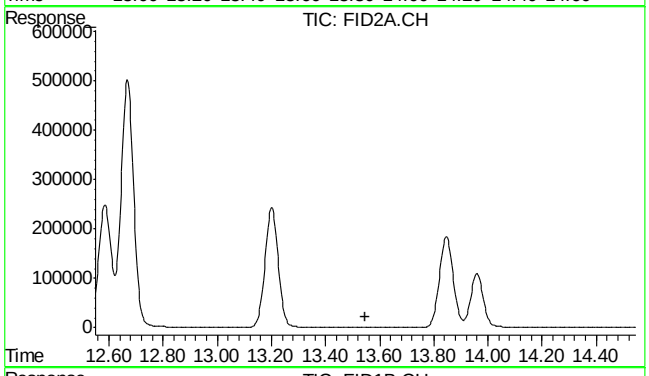






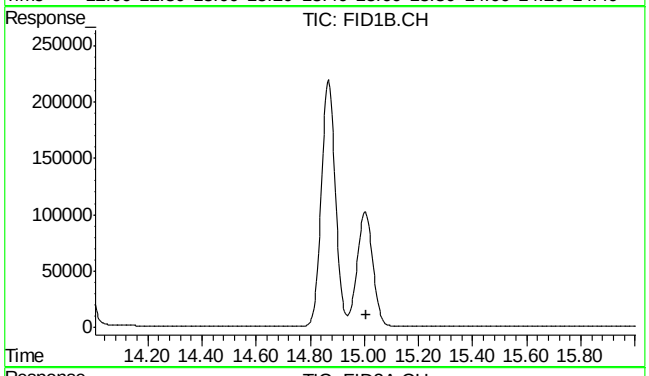
#1 Alkane A

R.T.: 13.844 min
Delta R.T.: -0.003 min
Response: 862862
Conc: N.D.



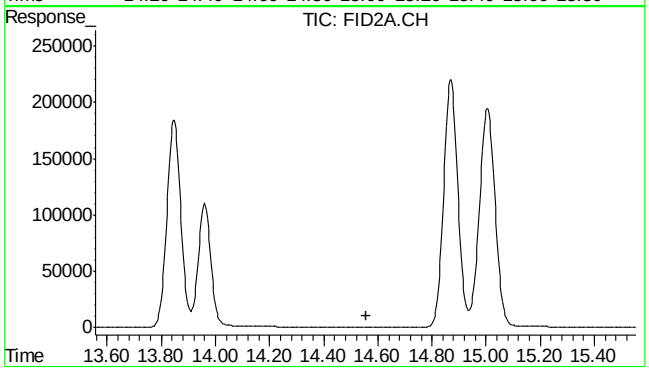
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.003 min
Delta R.T.: -0.003 min
Response: 4084991
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

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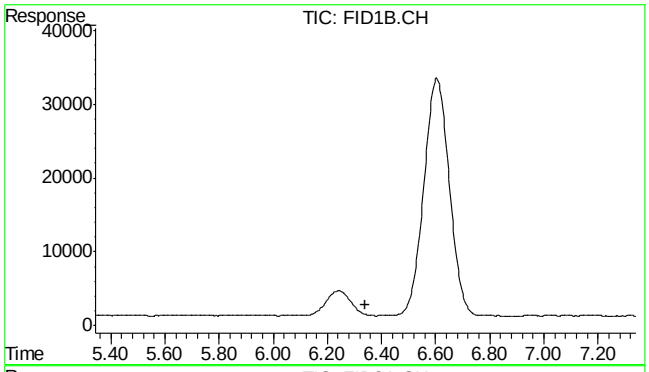
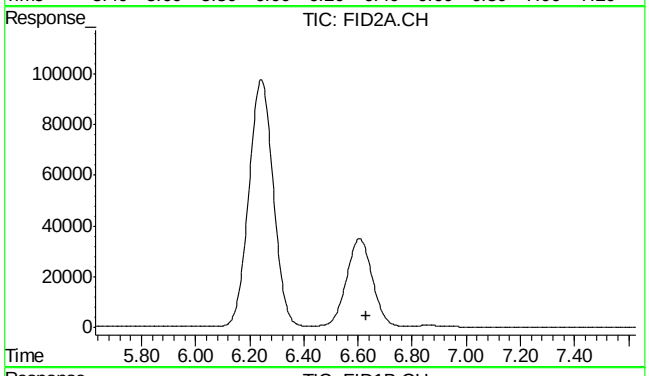


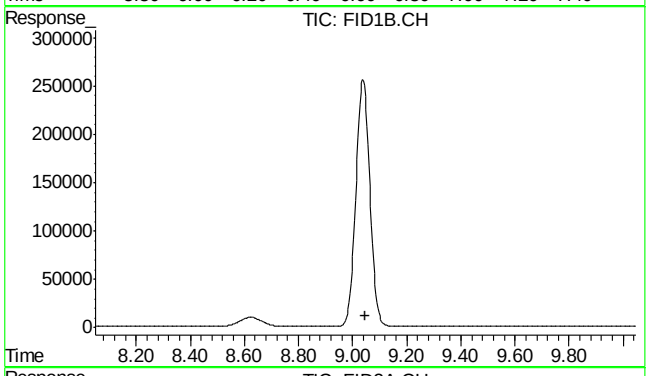
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



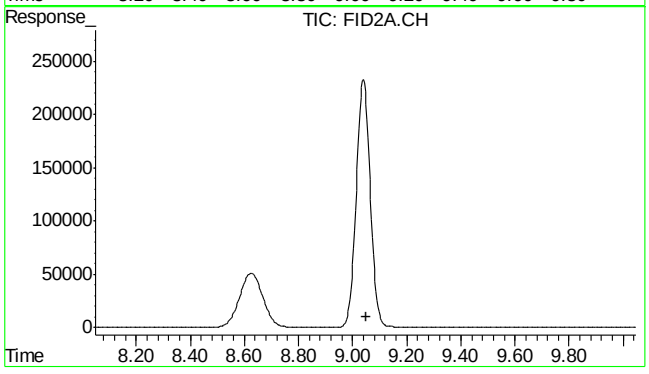
#3 Aromatic A

R.T.: 6.605 min
Delta R.T.: -0.024 min
Response: 2281521
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

R.T.: 9.039 min
Delta R.T.: -0.009 min
Response: 8391761
Conc: N.D.

7.6.6

7

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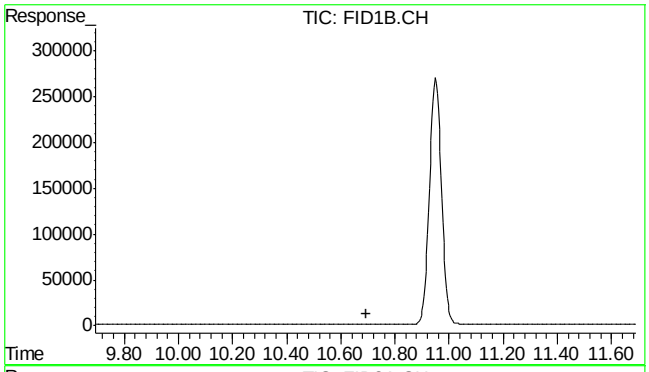
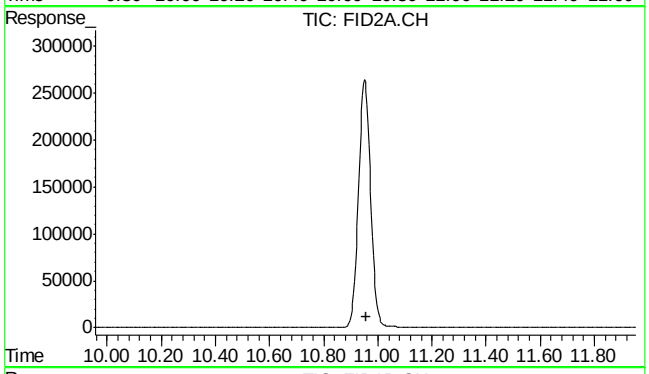


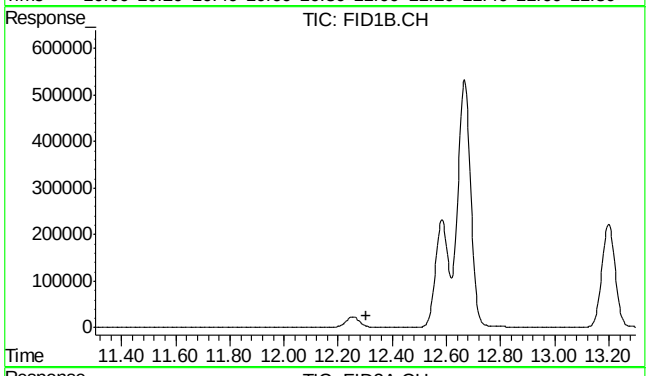
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



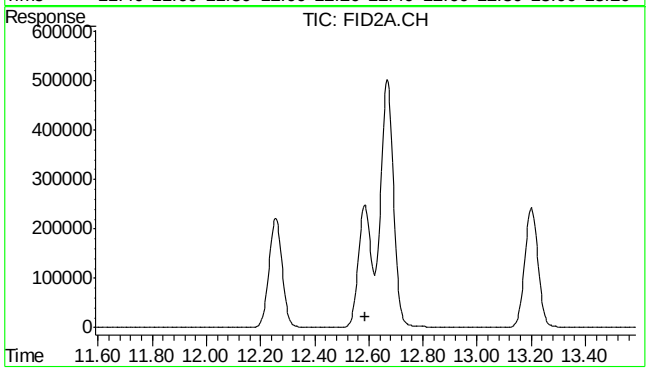
#5 Aromatic C

R.T.: 10.951 min
Delta R.T.: -0.005 min
Response: 8255162
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 12.584 min
Delta R.T.: -0.003 min
Response: 8060487
Conc: N.D.

7.6.6

7

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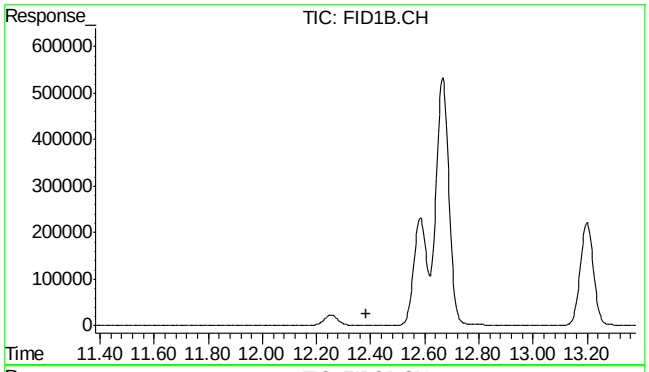
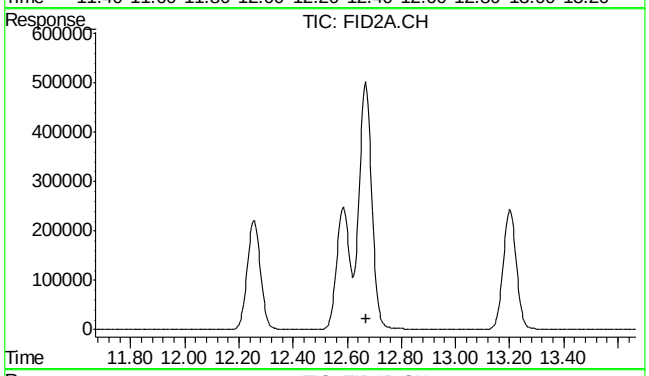


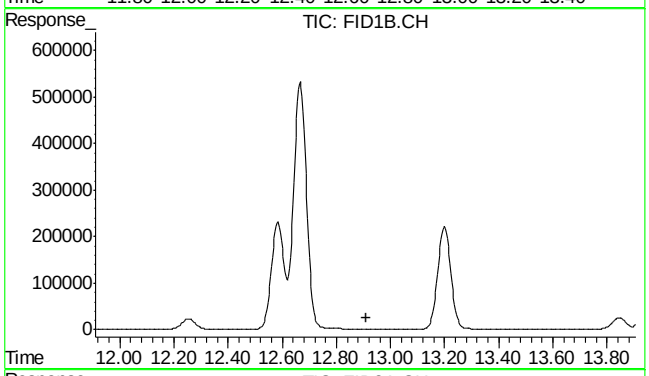
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



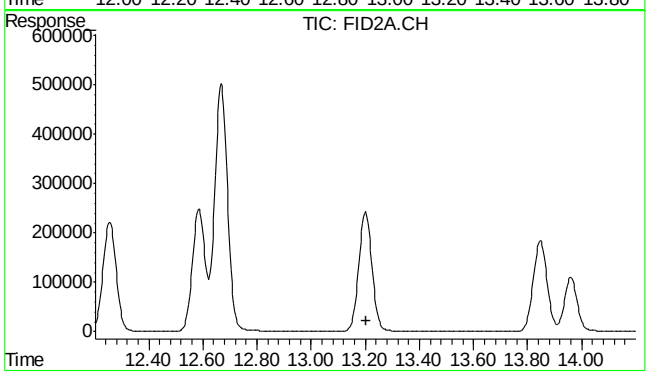
#7 Aromatic E

R.T.: 12.667 min
Delta R.T.: -0.002 min
Response: 16316671
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



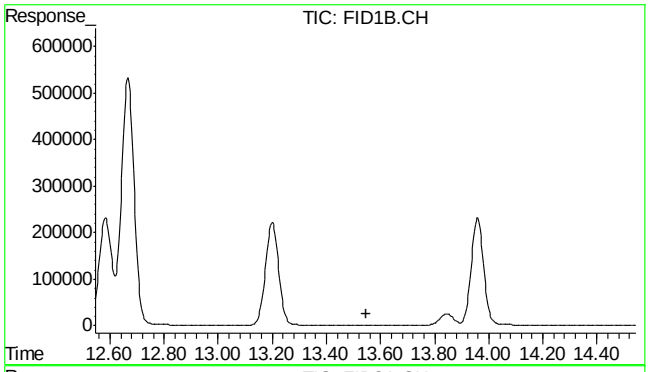
#8 Aromatic F

R.T.: 13.200 min
Delta R.T.: -0.003 min
Response: 8239460
Conc: N.D.

7.6.6

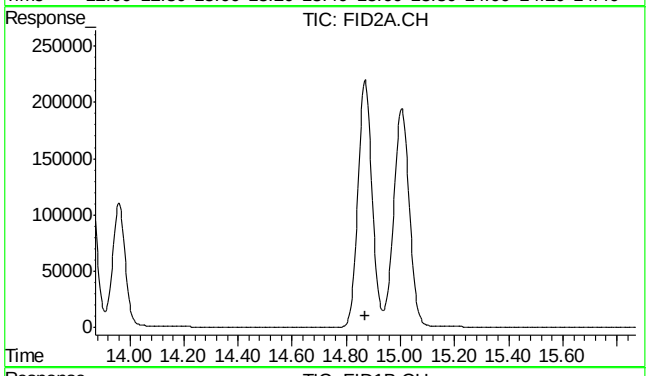
7

SGS ACCUTEST FA40754



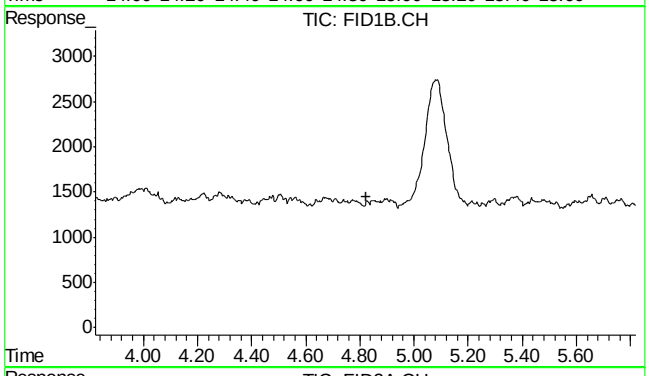
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



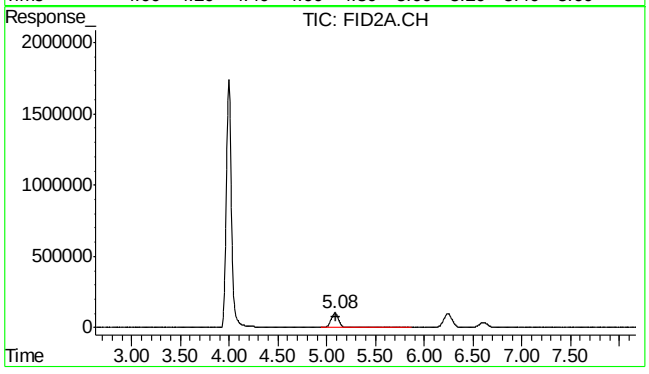
#9 Aromatic G

R.T.: 14.869 min
Delta R.T.: -0.002 min
Response: 7947404
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



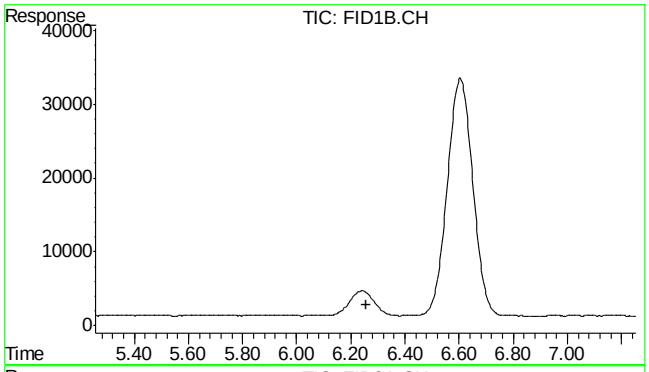
#10 Pentane

R.T.: 5.084 min
Delta R.T.: -0.016 min
Response: 5625995
Conc: 410.20 ug/L

7.6.6

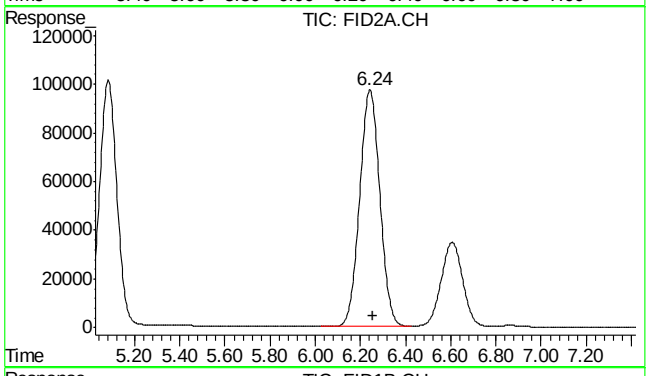
7

SGS ACCUTEST FA40754



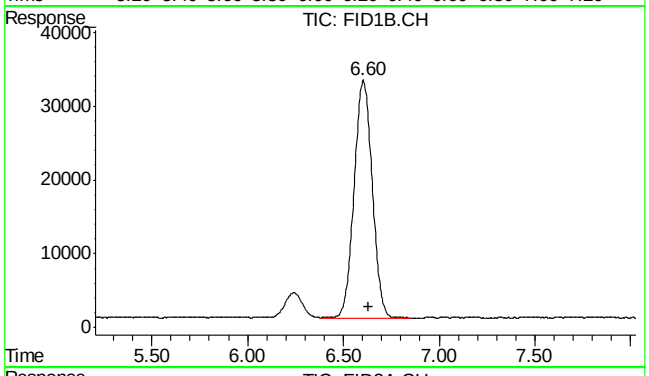
#11 2-Methylpentane

R.T.: 6.242 min
Delta R.T.: -0.014 min
Response: 221740
Conc: N.D.



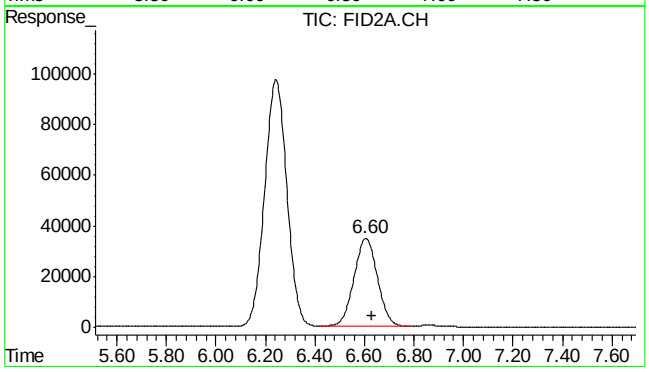
#11 2-Methylpentane

R.T.: 6.243 min
Delta R.T.: -0.013 min
Response: 6077075
Conc: 406.87 ug/L



#12 Methyl Tert Butyl Ether

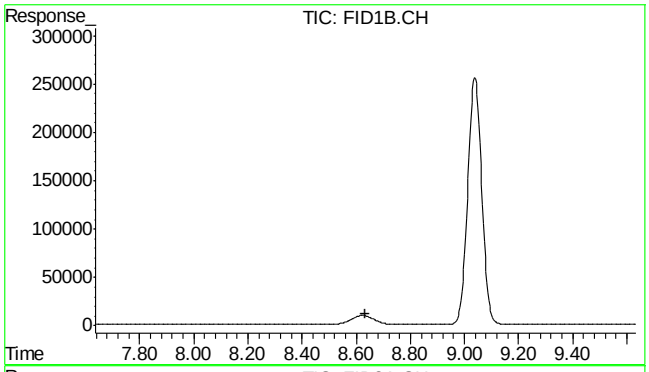
R.T.: 6.605 min
Delta R.T.: -0.024 min
Response: 2117448
Conc: 392.47 ug/L



#12 Methyl Tert Butyl Ether

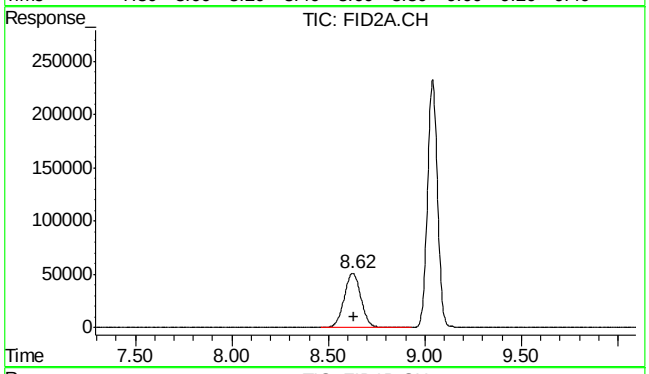
R.T.: 6.606 min
Delta R.T.: -0.022 min
Response: 2309328
Conc: 355.18 ug/L

SGS ACCUTEST FA40754



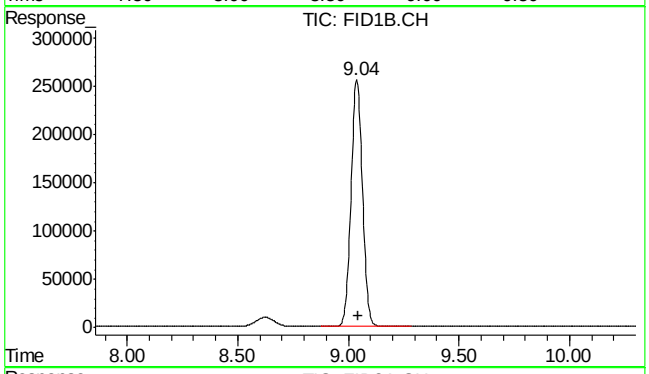
#13 2,2,4-Trimethylpentane

R.T.: 8.625 min
Delta R.T.: -0.009 min
Response: 554378
Conc: N.D.



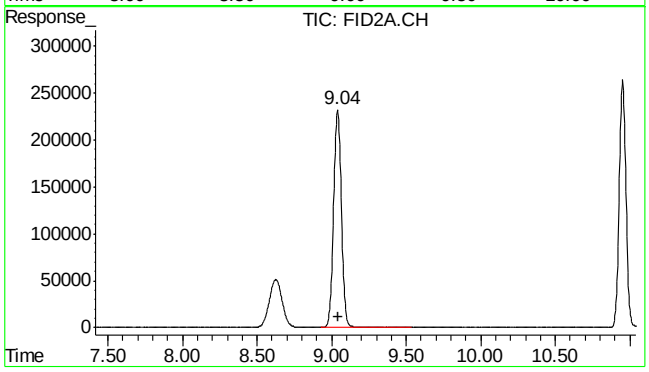
#13 2,2,4-Trimethylpentane

R.T.: 8.626 min
Delta R.T.: -0.008 min
Response: 3071749
Conc: 408.21 ug/L



#14 Benzene

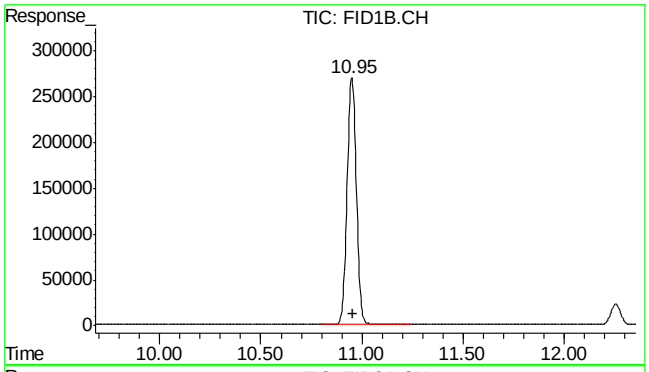
R.T.: 9.039 min
Delta R.T.: -0.007 min
Response: 9239055
Conc: 386.30 ug/L



#14 Benzene

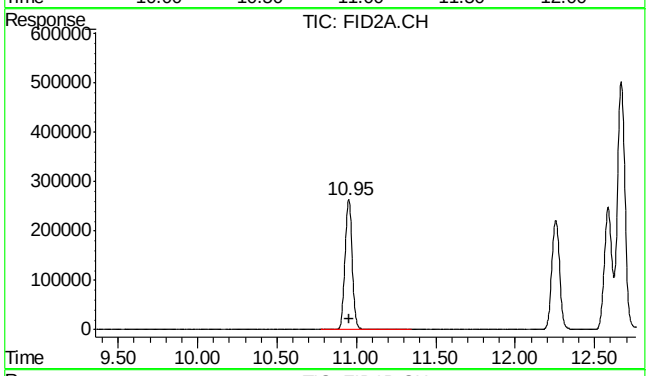
R.T.: 9.041 min
Delta R.T.: -0.005 min
Response: 8404211
Conc: 384.11 ug/L

SGS ACCUTEST FA40754



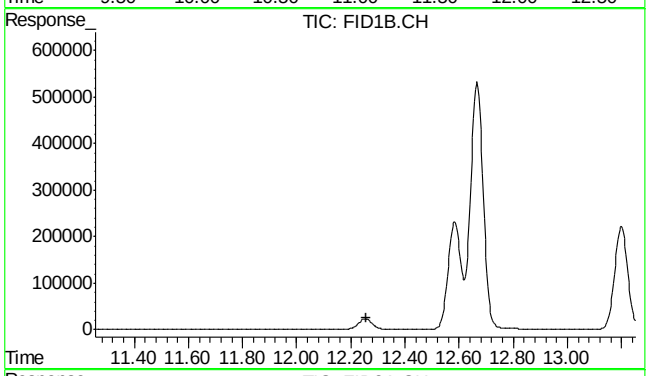
#15 Toluene

R.T.: 10.951 min
Delta R.T.: -0.004 min
Response: 8418685
Conc: 386.52 ug/L



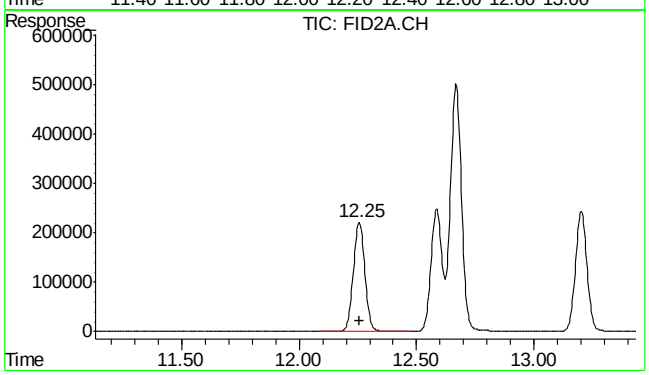
#15 Toluene

R.T.: 10.952 min
Delta R.T.: -0.003 min
Response: 8267418
Conc: 398.97 ug/L



#16 Nonane

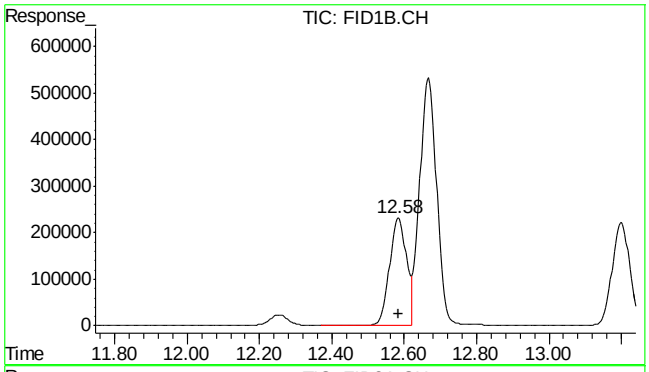
R.T.: 12.255 min
Delta R.T.: 0.000 min
Response: 756998
Conc: N.D.



#16 Nonane

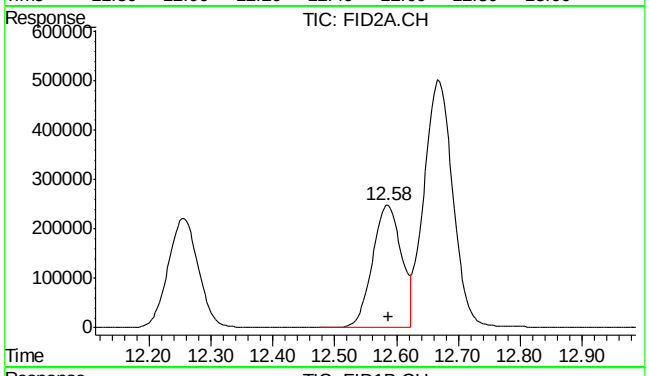
R.T.: 12.256 min
Delta R.T.: 0.000 min
Response: 7590687
Conc: 393.55 ug/L

SGS ACCUTEST FA40754



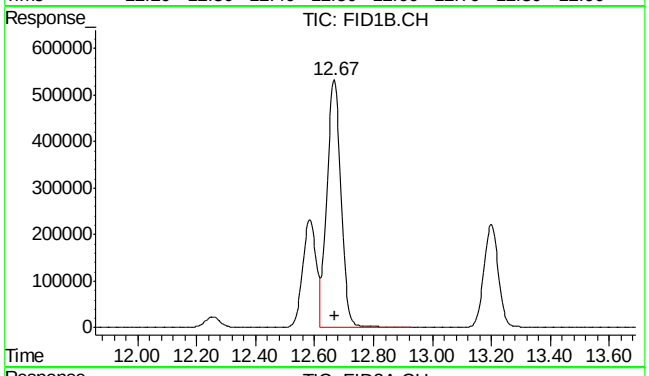
#17 Ethylbenzene

R.T.: 12.584 min
Delta R.T.: -0.002 min
Response: 7341546
Conc: 401.71 ug/L



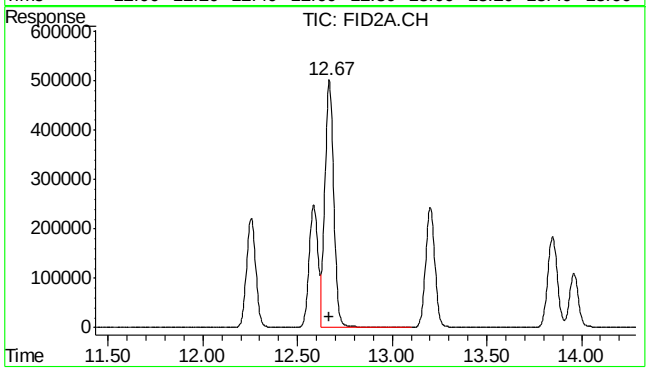
#17 Ethylbenzene

R.T.: 12.586 min
Delta R.T.: -0.001 min
Response: 7940449
Conc: 406.27 ug/L



#18 m,p-Xylene

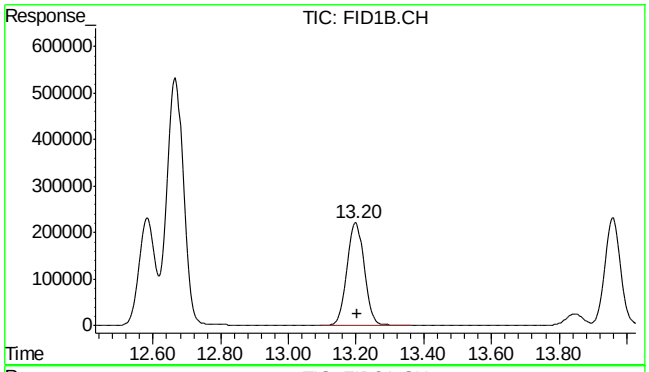
R.T.: 12.667 min
Delta R.T.: -0.002 min
Response: 17651390
Conc: 798.01 ug/L



#18 m,p-Xylene

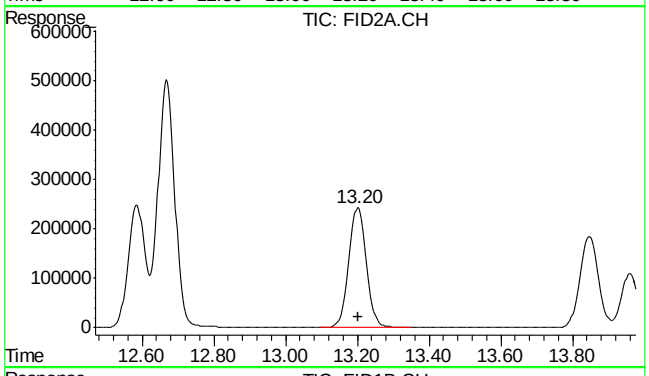
R.T.: 12.669 min
Delta R.T.: 0.000 min
Response: 16658943
Conc: 804.29 ug/L

SGS ACCUTEST FA40754



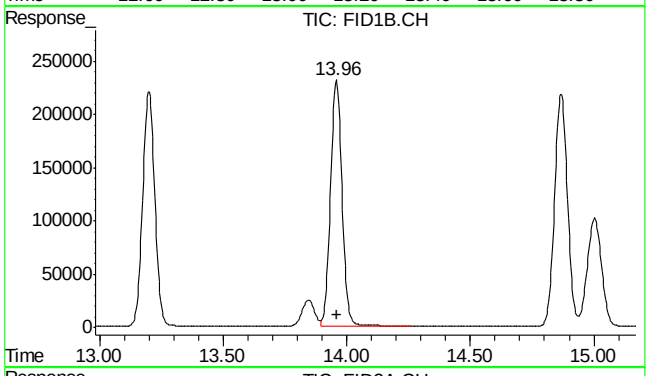
#19 o-Xylene

R.T.: 13.200 min
Delta R.T.: -0.002 min
Response: 7526431
Conc: 393.64 ug/L



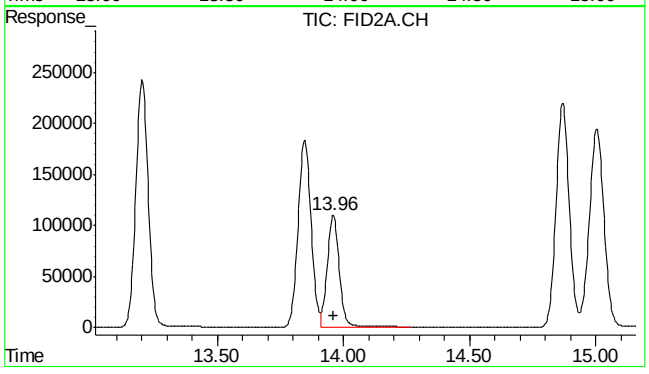
#19 o-Xylene

R.T.: 13.202 min
Delta R.T.: -0.001 min
Response: 8308099
Conc: 398.02 ug/L



#20 BFB

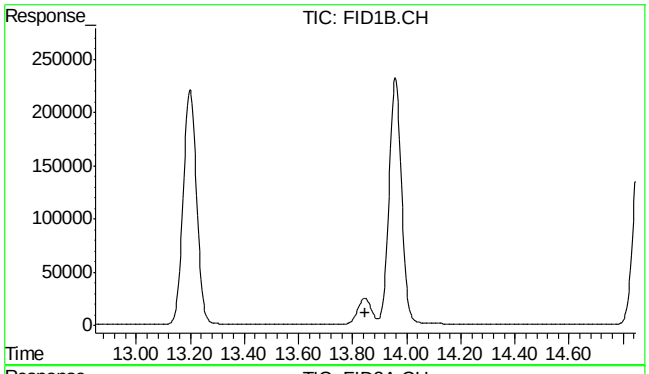
R.T.: 13.959 min
Delta R.T.: -0.002 min
Response: 7453904
Conc: 406.08 ug/L



#20 BFB

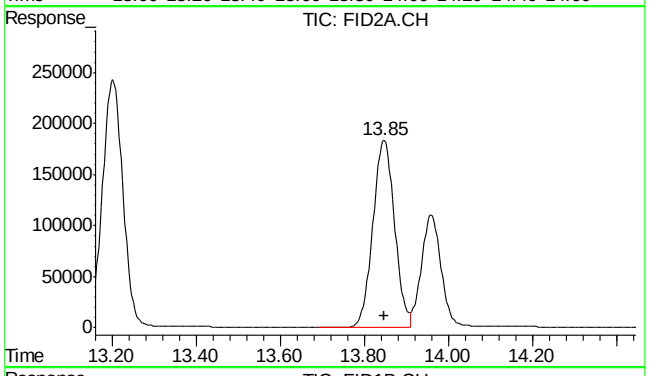
R.T.: 13.960 min
Delta R.T.: -0.002 min
Response: 3660676
Conc: 404.14 ug/L

SGS ACCUTEST FA40754



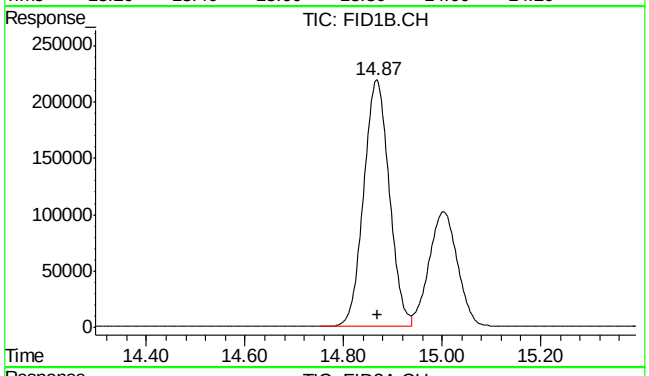
#21 Decane

R.T.: 13.846 min
Delta R.T.: -0.002 min
Response: 855680
Conc: N.D.



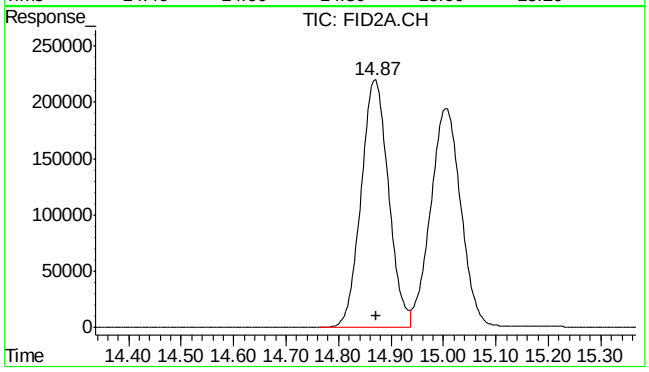
#21 Decane

R.T.: 13.847 min
Delta R.T.: 0.000 min
Response: 6553986
Conc: 366.18 ug/L



#22 1,2,4-Trimethylbenzene

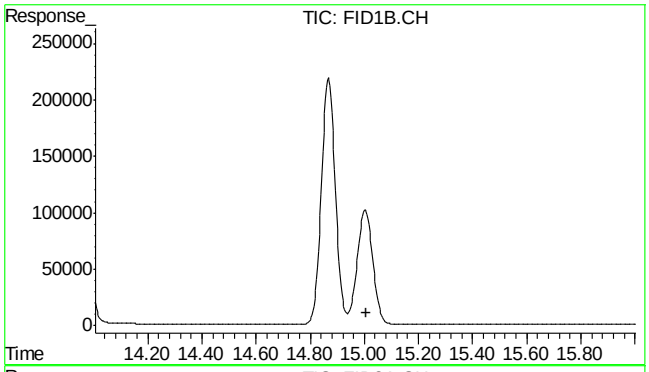
R.T.: 14.868 min
Delta R.T.: -0.002 min
Response: 7845136
Conc: 394.56 ug/L



#22 1,2,4-Trimethylbenzene

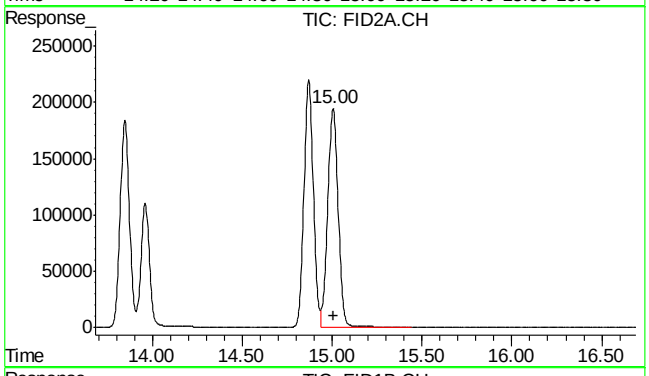
R.T.: 14.870 min
Delta R.T.: 0.000 min
Response: 7938729
Conc: 393.68 ug/L

SGS ACCUTEST FA40754



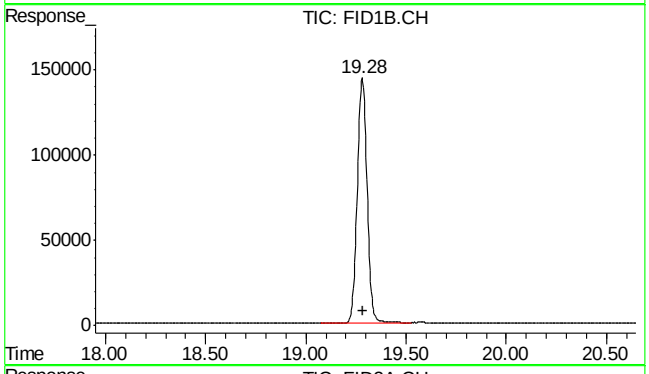
#23 Butylcyclohexane

R.T.: 15.004 min
Delta R.T.: -0.002 min
Response: 4076191
Conc: N.D.



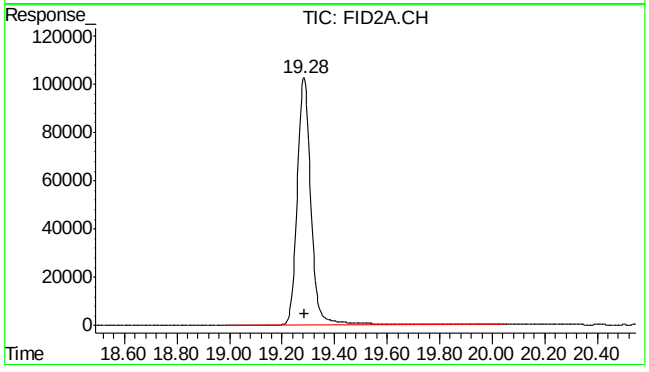
#23 Butylcyclohexane

R.T.: 15.006 min
Delta R.T.: 0.000 min
Response: 7907803
Conc: 404.03 ug/L



#24 Naphthalene

R.T.: 19.282 min
Delta R.T.: -0.002 min
Response: 4920233
Conc: 397.79 ug/L



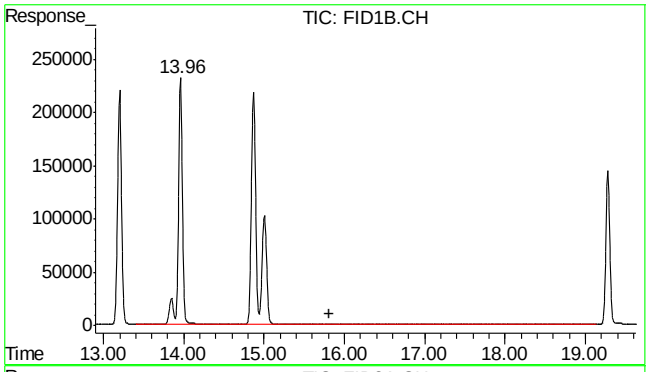
#24 Naphthalene

R.T.: 19.284 min
Delta R.T.: -0.002 min
Response: 3712066
Conc: 393.26 ug/L

7.6.6

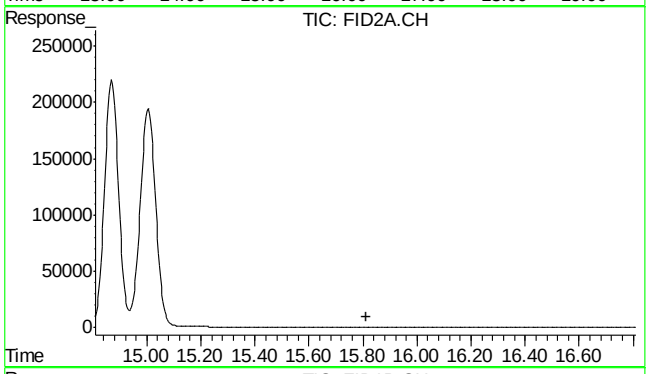
7

SGS ACCUTEST FA40754



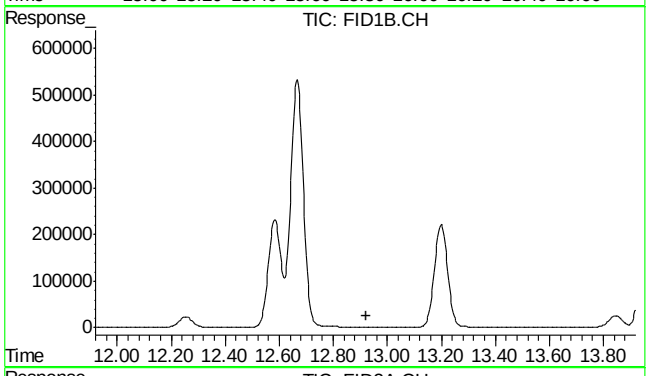
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 8433364
Conc: 251.25 ug/L m



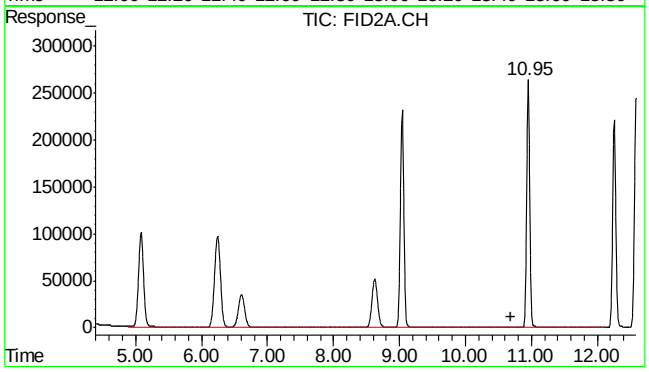
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 14238497
Conc: N.D.



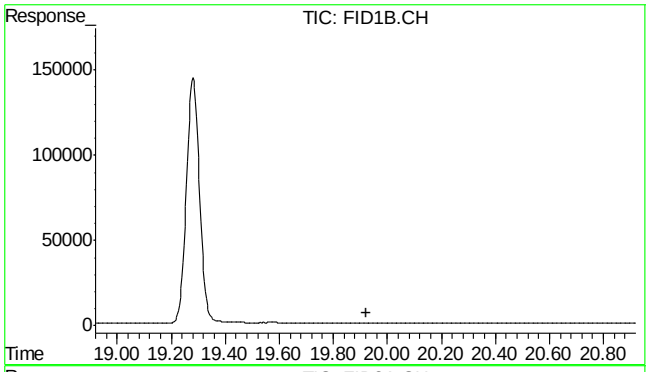
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 54386470
Conc: N.D.



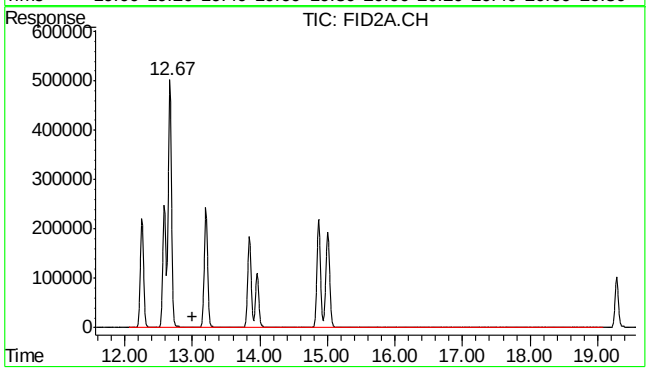
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 15350478
Conc: 531.94 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 13375048
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 22920816
Conc: 417.16 ug/L m

7.6.6

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\011617\UV077473.D\FID1B.CH Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\011617\UV077473.D\FID2A.CH
Acq On : 16-Jan-2017, 19:24:31 Operator: ArielH
Sample : icv4115-4 Inst : HP5890
Misc : gc19571,guv4115,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 19 13:25:57 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.84f	0.00	116588	0	NoCal m	N.D.
2)	S	Alkane B	15.00f	0.00	483147	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.60f	0	317570	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	998896	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.95f	0	979010	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.58f	0	916802	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	1925761	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	994442	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	922074	N.D.	NoCal m
20)	S	BFB	13.96	13.96	1078970	557564	58.782	61.555
		Spiked Amount 200.000 Range 70 - 130 Recovery =					29.39%#	30.78%#
		Target Compounds						
10)		Pentane	0.00	5.08	0	754370	N.D.	55.003 #
11)		2-Methylpentane	6.23	6.24	29811	728486	NoCal	48.485 #
12)		Methyl Tert Buty	6.60	6.60	271977	318092	50.411	48.636
13)		2,2,4-Trimethylp	8.62	8.62	121275	680582	NoCal	52.462 #
14)		Benzene	9.04	9.04	1061112	999043	44.489	45.629
15)		Toluene	10.95	10.95	971551	984738	44.740	47.777
16)		Nonane	12.25	12.25	94461	921636	NoCal	47.783 #
17)		Ethylbenzene	12.58	12.59	852462	937763	46.645	47.980
18)		m,p-Xylene	12.67	12.67	2063098	1961878	93.272	94.719
19)		o-Xylene	13.20	13.20	879126	988669	45.980	47.365
21)		Decane	13.85	13.85	115095	882477	NoCal	49.011 #
22)		1,2,4-Trimethylb	14.87	14.87	878103	913969	43.905	45.323
23)		Butylcyclohexane	15.00	15.01	481264	946972	NoCal	45.388 #
24)		Naphthalene	19.28	19.29	576950	457022	46.645	48.124
25)	H	C9- C10 Aromatic	15.81	15.81	1309502	1926326	50.651	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	6843468	2700235	NoCal	178.938 #
27)	H	C9- C12 Aliphati	19.92	13.00	2040591	3050138	NoCal	147.901 #

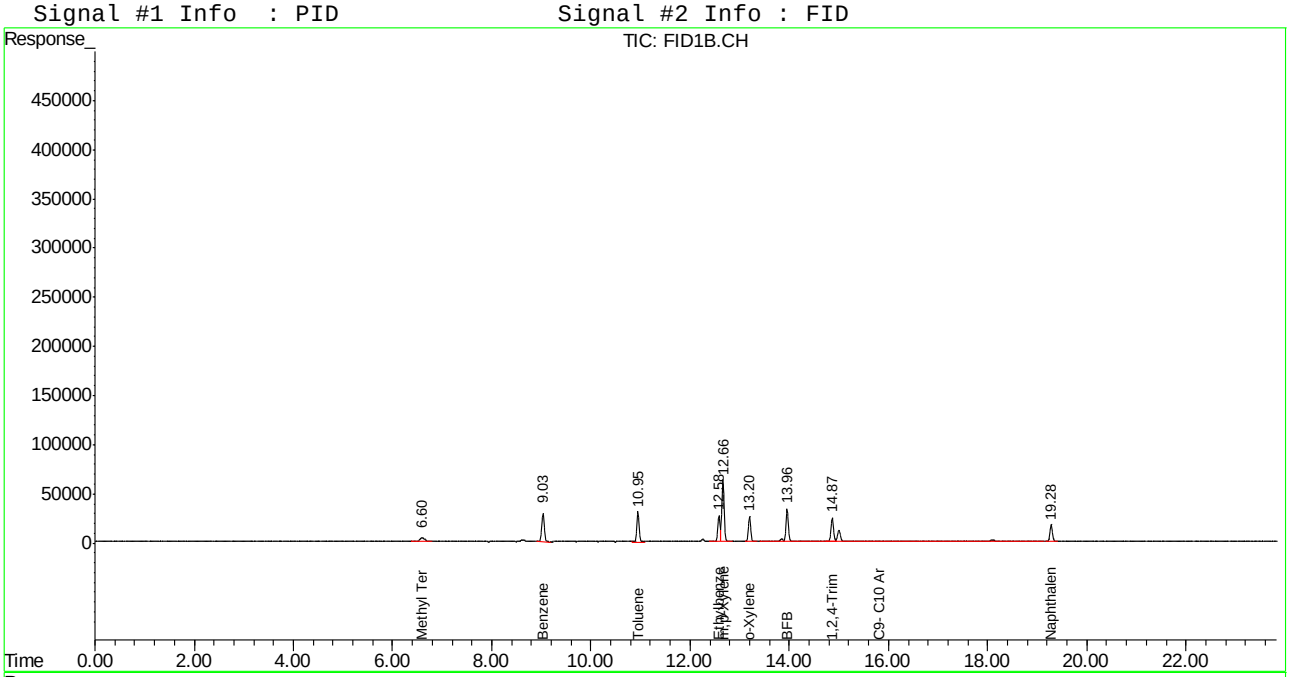
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077473.D VPH011317.M Thu Jan 19 13:49:01 2017

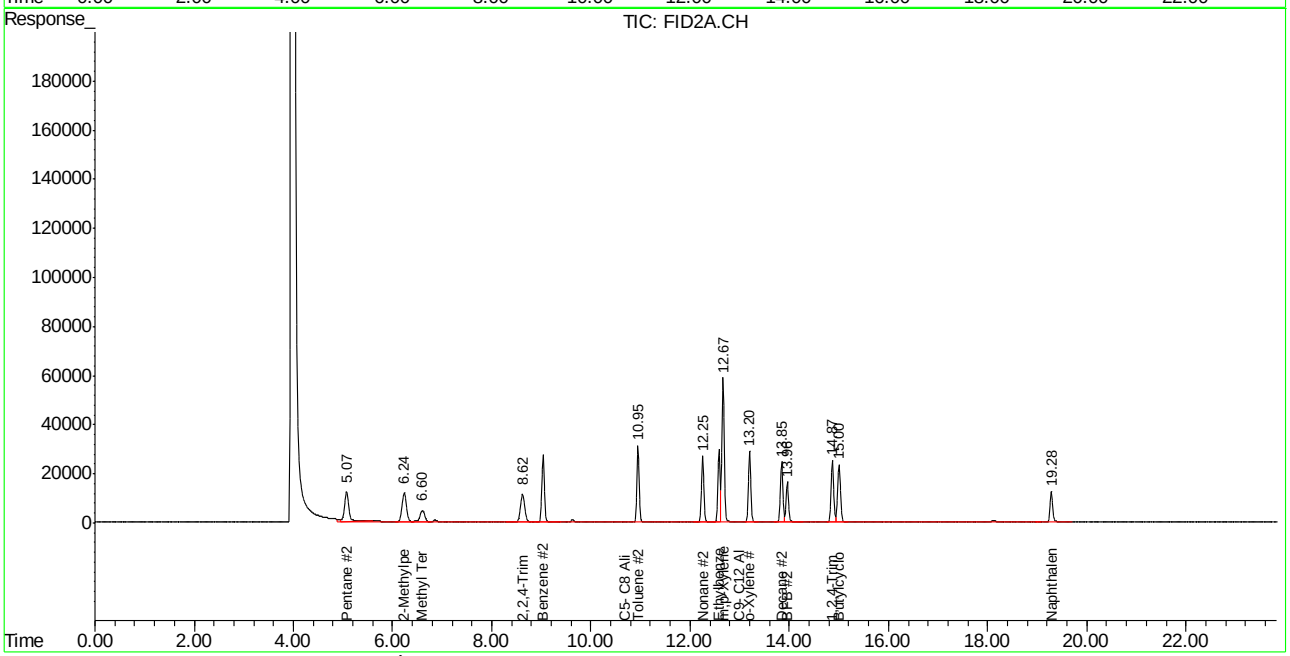
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\011617\UV077473.D\FID1B.CH Vial: 3
Signal #2 : C:\HPCHEM\2\DATA\011617\UV077473.D\FID2A.CH
Acq On : 16-Jan-2017, 19:24:31 Operator: ArielH
Sample : icv4115-4 Inst : HP5890
Misc : gc19571,guv4115,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 19 13:34 2017 Quant Results File: VPH011317.RES

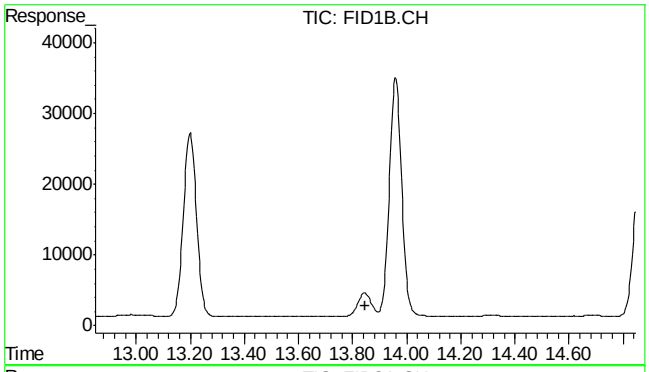
Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID



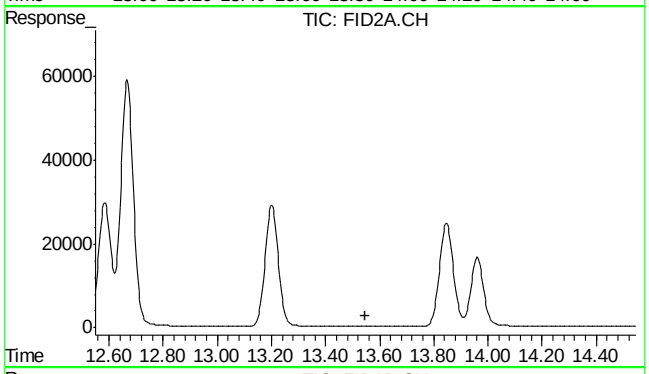


SGS ACCUTEST FA40754



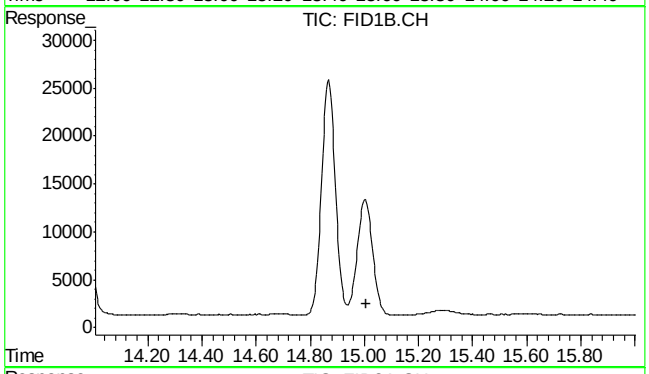
#1 Alkane A

R.T.: 13.844 min
Delta R.T.: -0.003 min
Response: 116588
Conc: N.D.



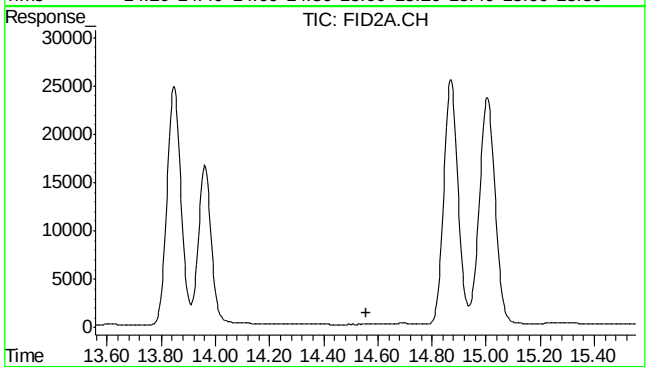
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.001 min
Delta R.T.: -0.004 min
Response: 483147
Conc: N.D.



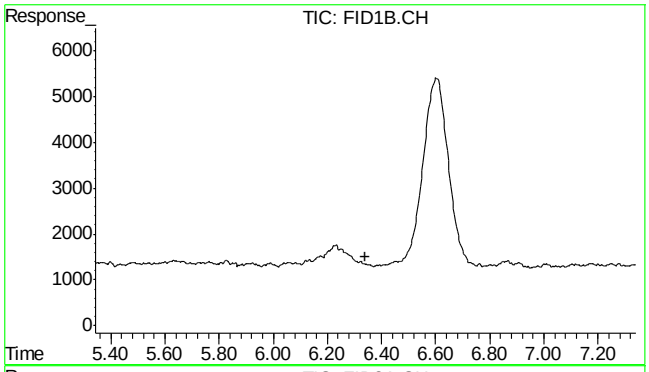
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.6.7

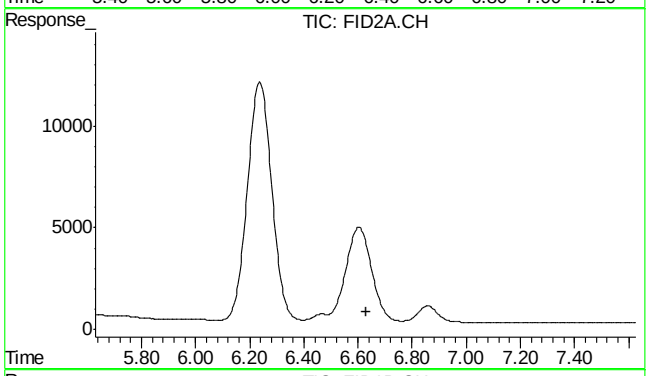
7

SGS ACCUTEST FA40754



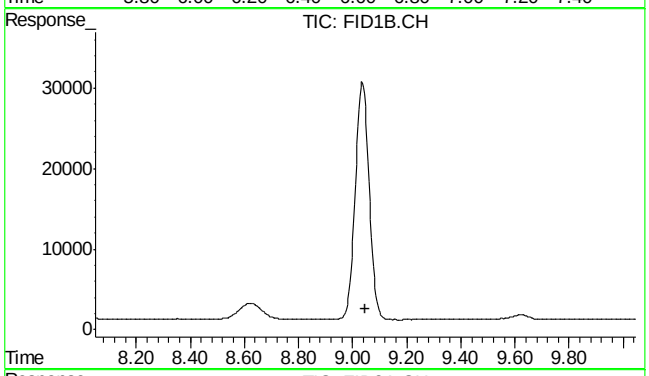
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



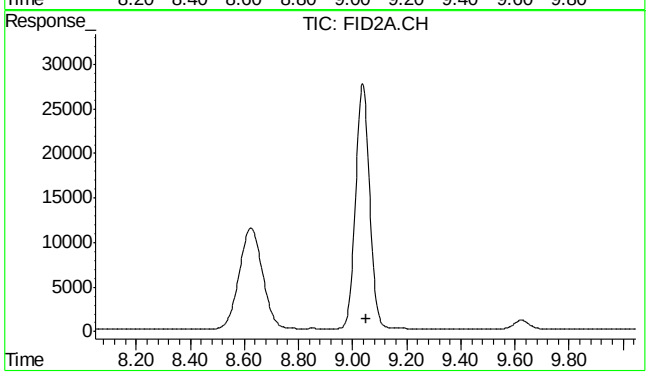
#3 Aromatic A

R.T.: 6.601 min
Delta R.T.: -0.027 min
Response: 317570
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



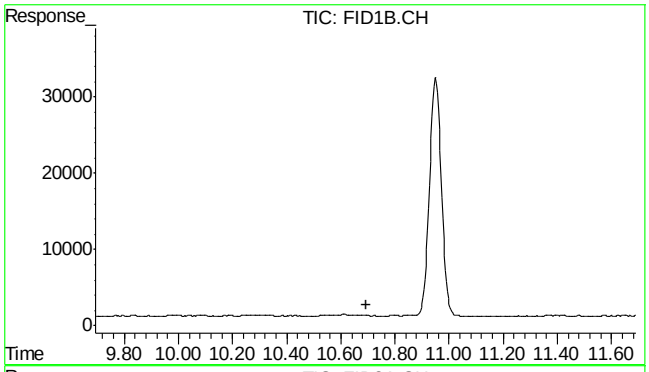
#4 Aromatic B

R.T.: 9.037 min
Delta R.T.: -0.012 min
Response: 998896
Conc: N.D.

7.6.7

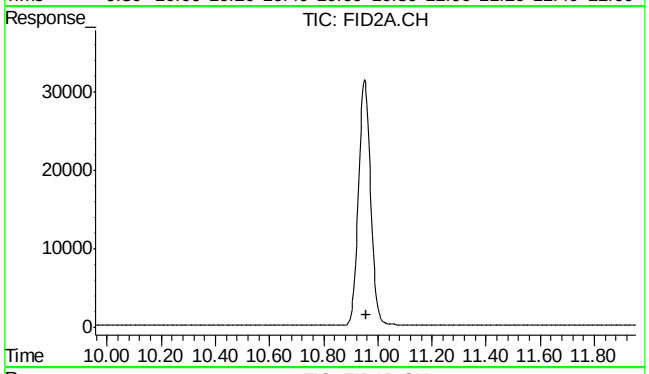
7

SGS ACCUTEST FA40754



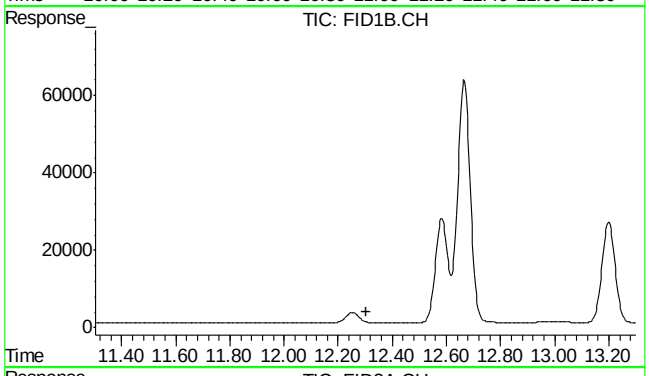
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



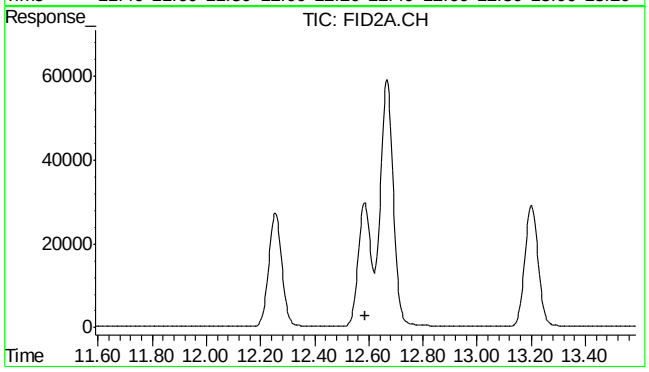
#5 Aromatic C

R.T.: 10.951 min
Delta R.T.: -0.005 min
Response: 979010
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



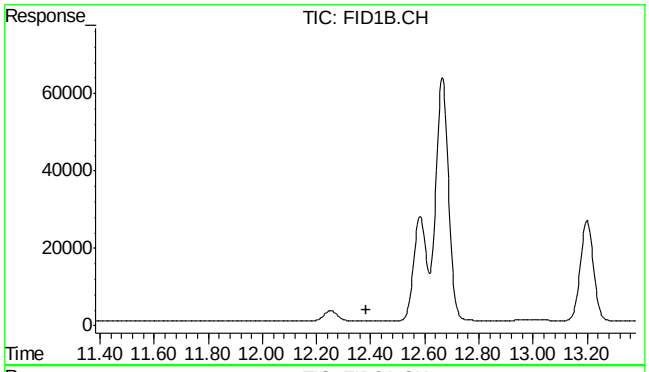
#6 Aromatic D

R.T.: 12.584 min
Delta R.T.: -0.003 min
Response: 916802
Conc: N.D.

7.6.7

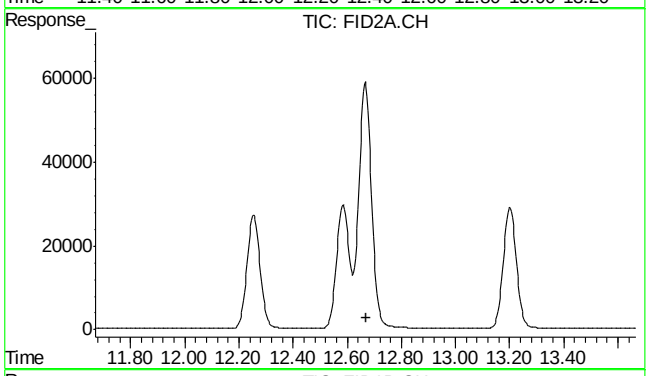
7

SGS ACCUTEST FA40754



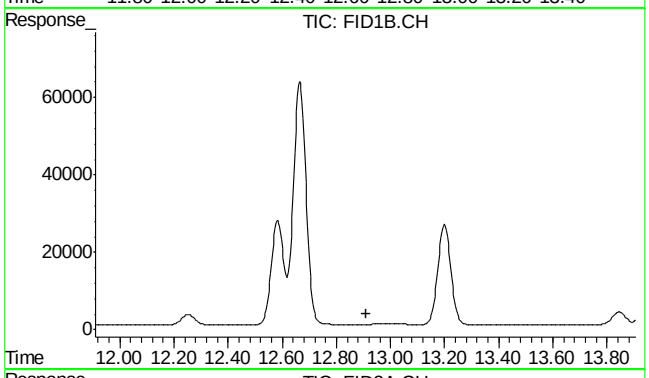
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



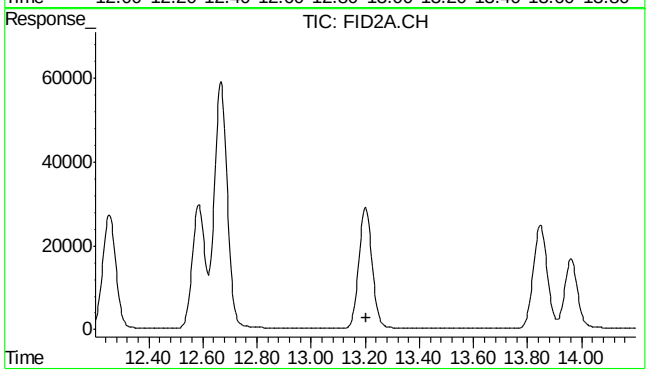
#7 Aromatic E

R.T.: 12.666 min
Delta R.T.: -0.003 min
Response: 1925761
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



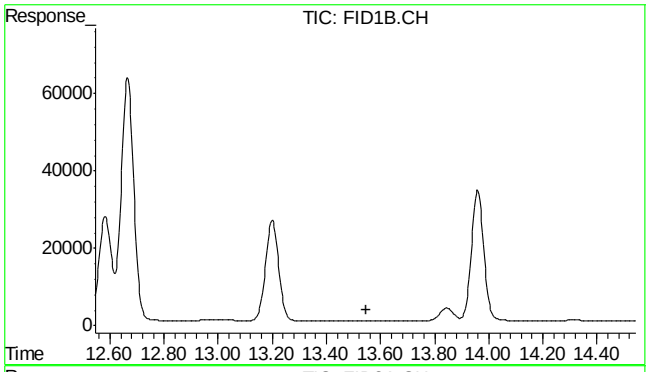
#8 Aromatic F

R.T.: 13.200 min
Delta R.T.: -0.003 min
Response: 994442
Conc: N.D.

7.6.7

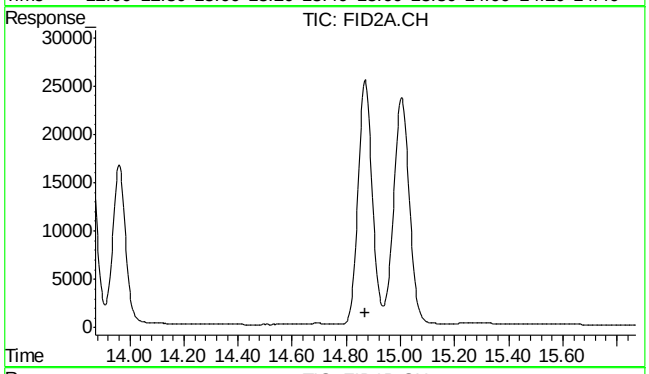
7

SGS ACCUTEST FA40754



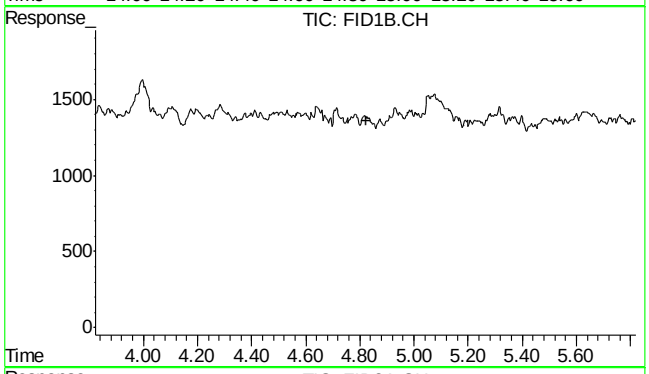
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



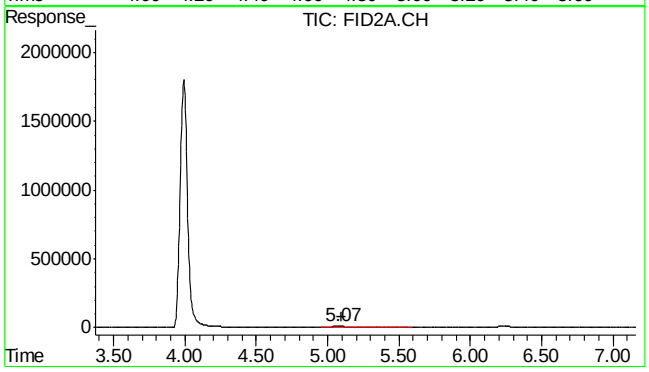
#9 Aromatic G

R.T.: 14.869 min
Delta R.T.: -0.002 min
Response: 922074
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



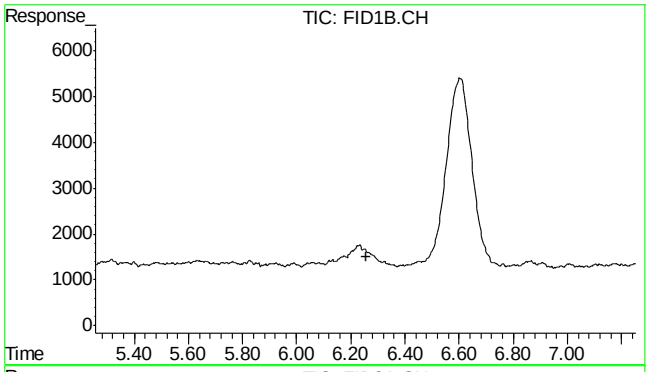
#10 Pentane

R.T.: 5.075 min
Delta R.T.: -0.025 min
Response: 754370
Conc: 55.00 ug/L

7.6.7

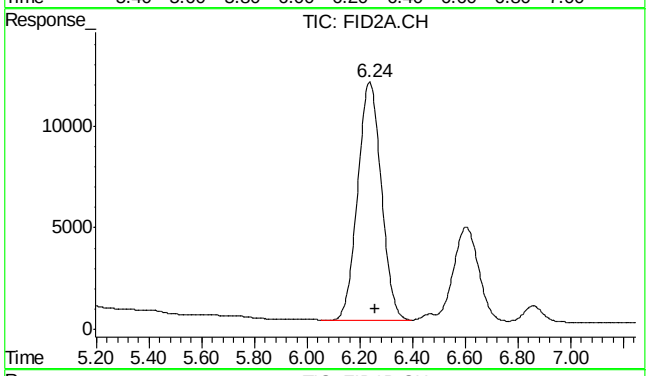
7

SGS ACCUTEST FA40754



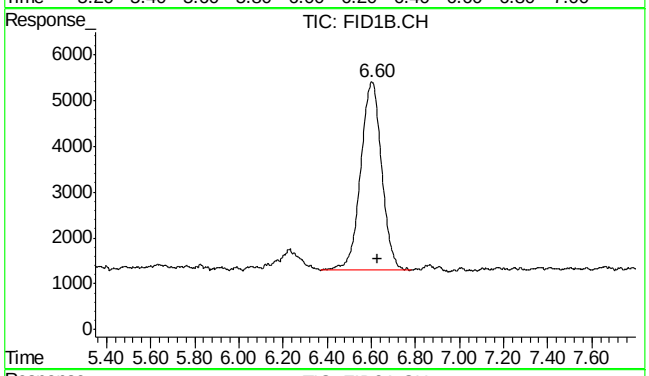
#11 2-Methylpentane

R.T.: 6.230 min
Delta R.T.: -0.026 min
Response: 29811
Conc: N.D.



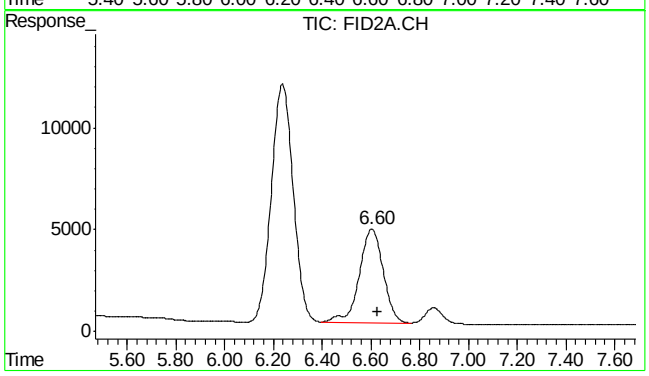
#11 2-Methylpentane

R.T.: 6.237 min
Delta R.T.: -0.019 min
Response: 728486
Conc: 48.48 ug/L



#12 Methyl Tert Butyl Ether

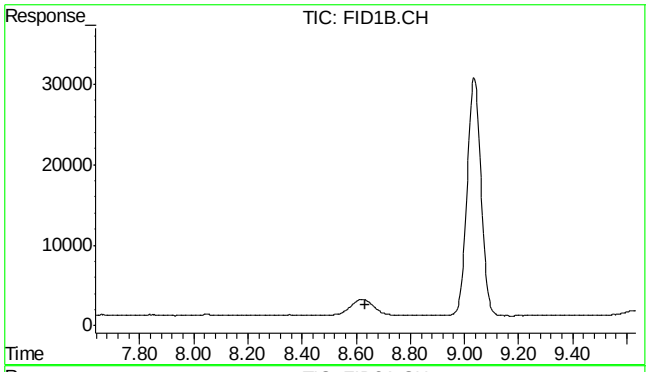
R.T.: 6.604 min
Delta R.T.: -0.025 min
Response: 271977
Conc: 50.41 ug/L



#12 Methyl Tert Butyl Ether

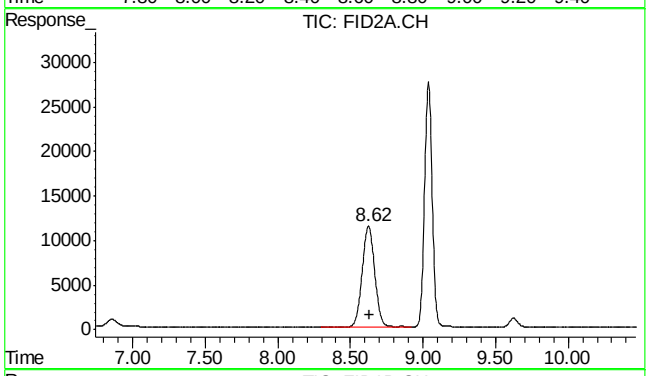
R.T.: 6.603 min
Delta R.T.: -0.025 min
Response: 318092
Conc: 48.64 ug/L

SGS ACCUTEST FA40754



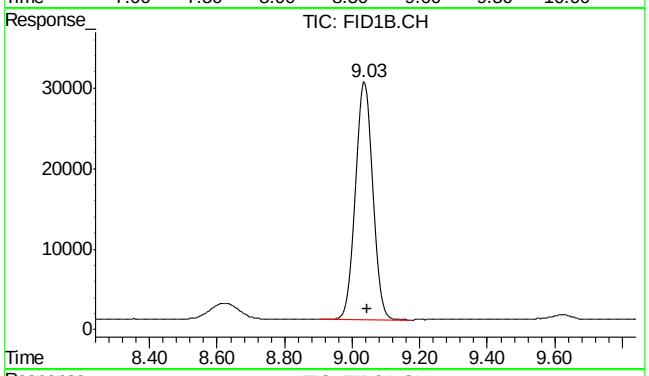
#13 2,2,4-Trimethylpentane

R.T.: 8.623 min
Delta R.T.: -0.011 min
Response: 121275
Conc: N.D.



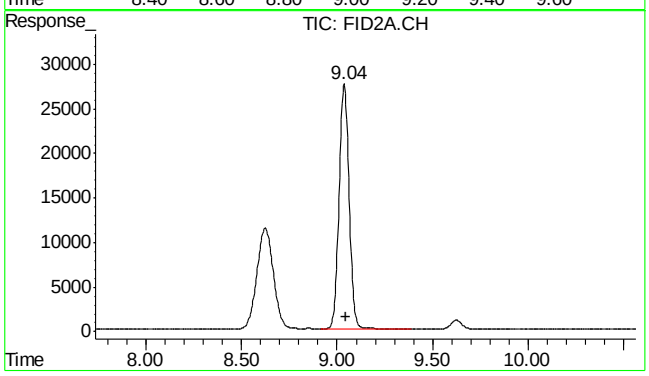
#13 2,2,4-Trimethylpentane

R.T.: 8.625 min
Delta R.T.: -0.009 min
Response: 680582
Conc: 52.46 ug/L



#14 Benzene

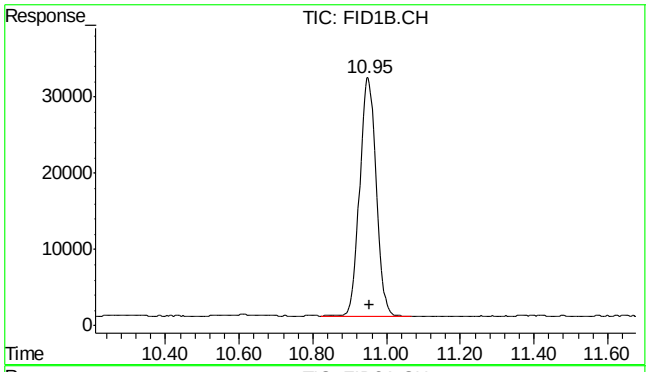
R.T.: 9.037 min
Delta R.T.: -0.009 min
Response: 1061112
Conc: 44.49 ug/L



#14 Benzene

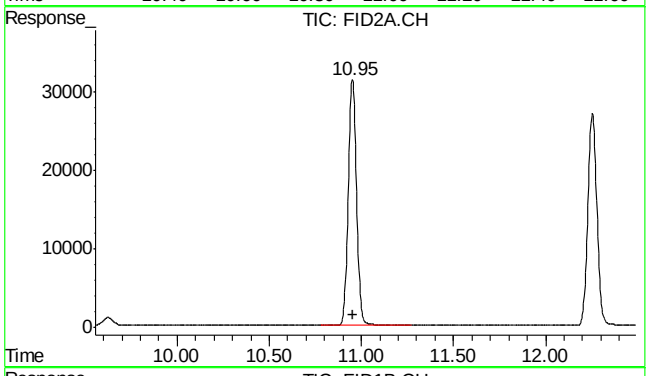
R.T.: 9.038 min
Delta R.T.: -0.008 min
Response: 999043
Conc: 45.63 ug/L

SGS ACCUTEST FA40754



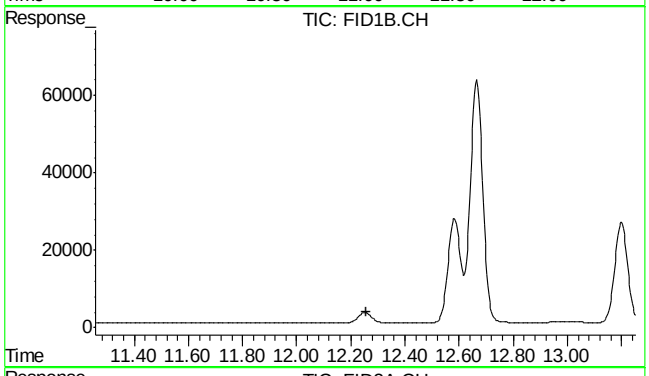
#15 Toluene

R.T.: 10.950 min
Delta R.T.: -0.004 min
Response: 971551
Conc: 44.74 ug/L



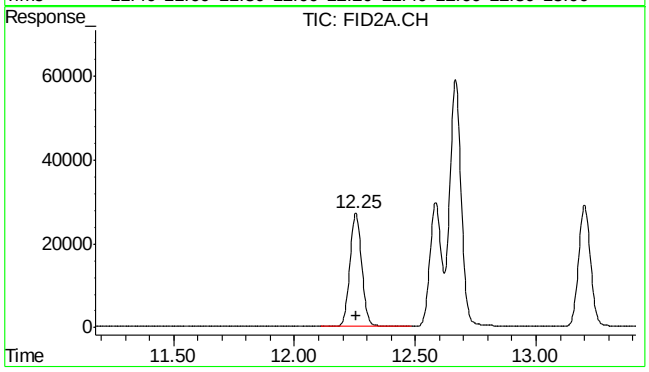
#15 Toluene

R.T.: 10.952 min
Delta R.T.: -0.003 min
Response: 984738
Conc: 47.78 ug/L



#16 Nonane

R.T.: 12.254 min
Delta R.T.: -0.002 min
Response: 94461
Conc: N.D.



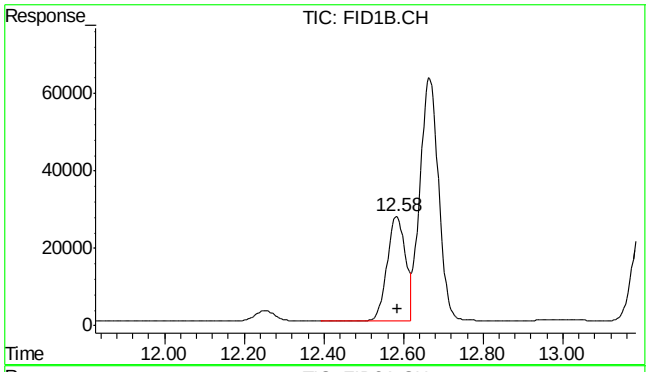
#16 Nonane

R.T.: 12.255 min
Delta R.T.: -0.001 min
Response: 921636
Conc: 47.78 ug/L

7.6.7

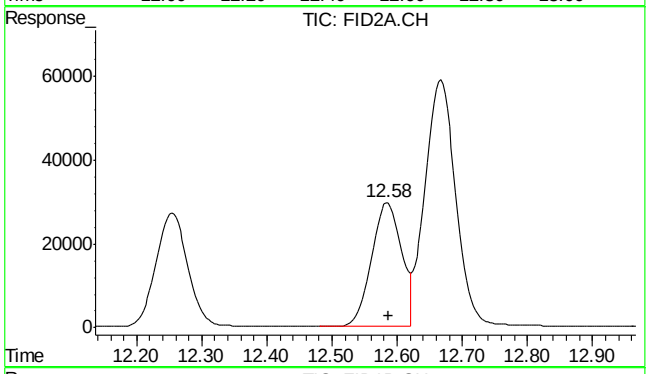
7

SGS ACCUTEST FA40754



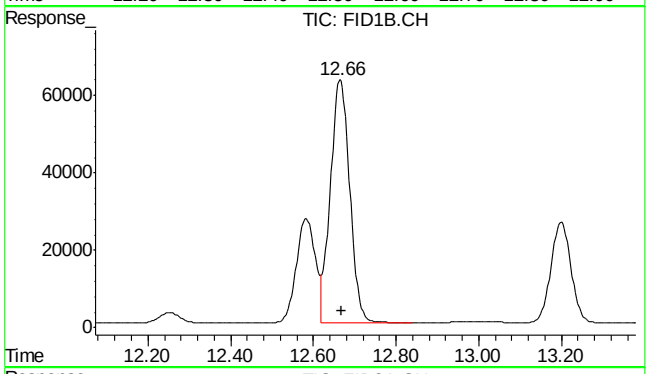
#17 Ethylbenzene

R.T.: 12.584 min
Delta R.T.: -0.002 min
Response: 852462
Conc: 46.64 ug/L



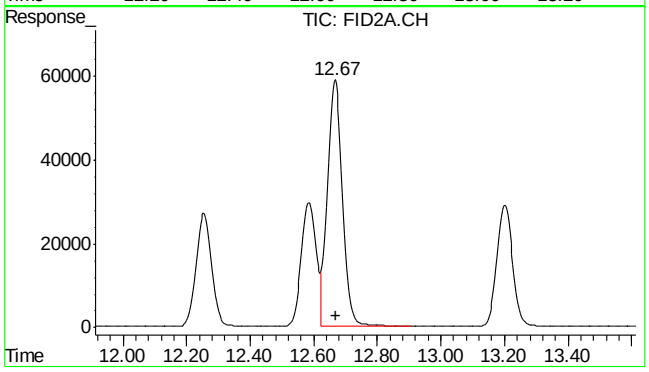
#17 Ethylbenzene

R.T.: 12.585 min
Delta R.T.: -0.002 min
Response: 937763
Conc: 47.98 ug/L



#18 m,p-Xylene

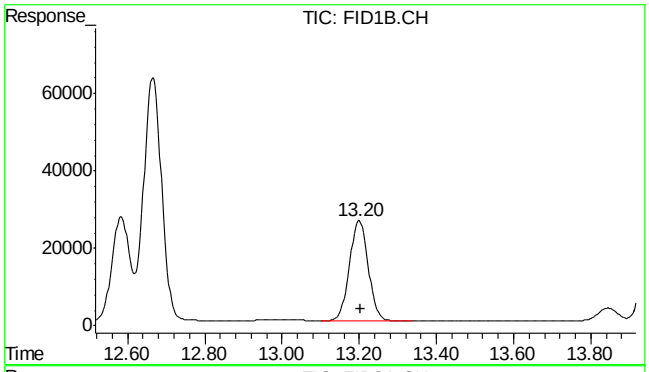
R.T.: 12.666 min
Delta R.T.: -0.003 min
Response: 2063098
Conc: 93.27 ug/L



#18 m,p-Xylene

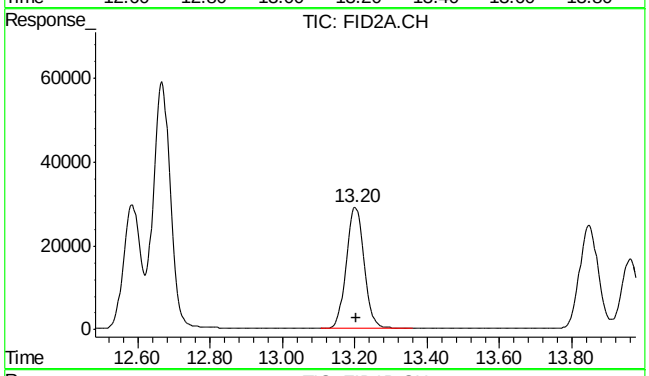
R.T.: 12.667 min
Delta R.T.: -0.002 min
Response: 1961878
Conc: 94.72 ug/L

SGS ACCUTEST FA40754



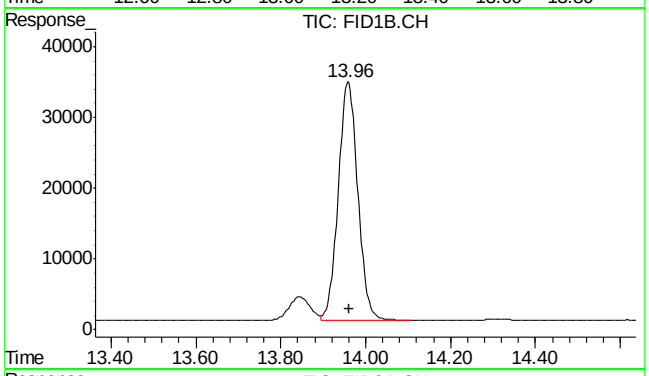
#19 o-Xylene

R.T.: 13.200 min
Delta R.T.: -0.002 min
Response: 879126
Conc: 45.98 ug/L



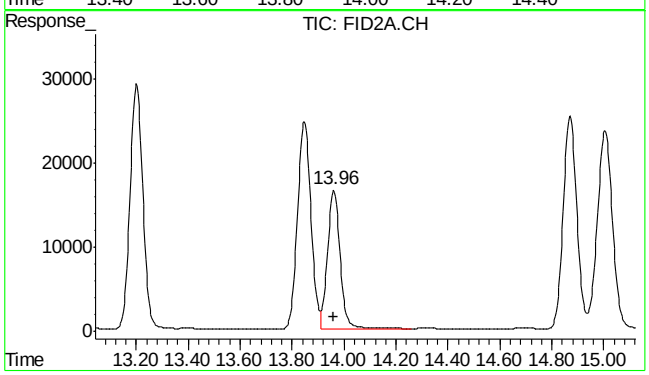
#19 o-Xylene

R.T.: 13.202 min
Delta R.T.: -0.001 min
Response: 988669
Conc: 47.36 ug/L



#20 BFB

R.T.: 13.959 min
Delta R.T.: -0.002 min
Response: 1078970
Conc: 58.78 ug/L



#20 BFB

R.T.: 13.961 min
Delta R.T.: 0.000 min
Response: 557564
Conc: 61.55 ug/L

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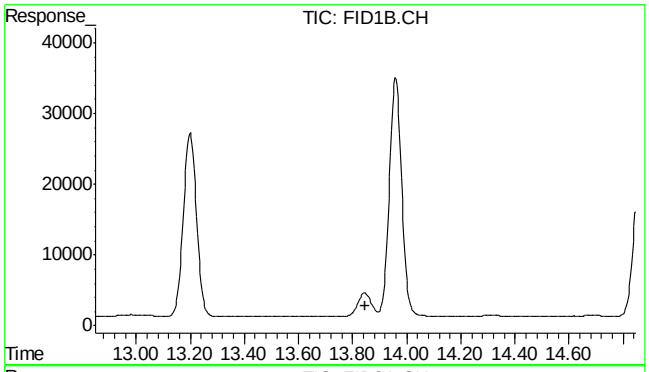
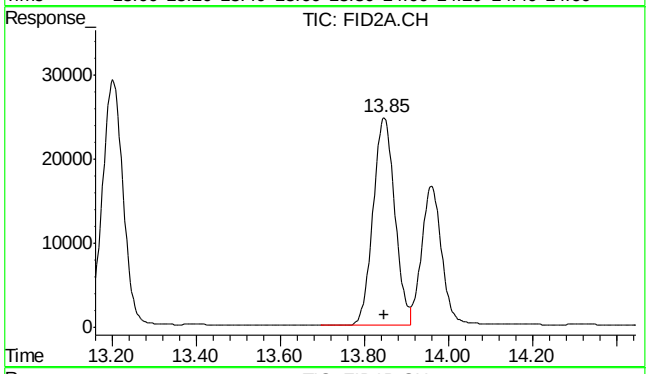


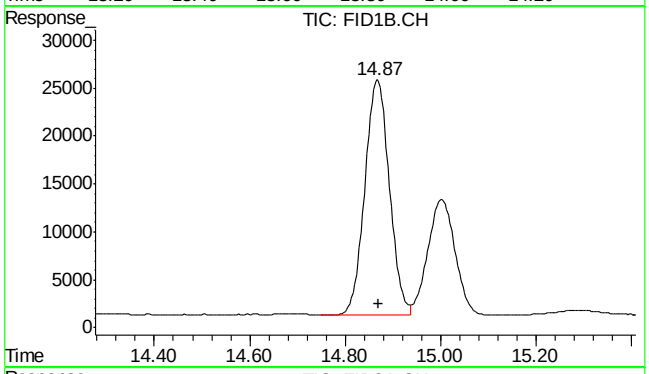
#21 Decane

R.T.: 13.846 min
Delta R.T.: -0.002 min
Response: 115095
Conc: N.D.



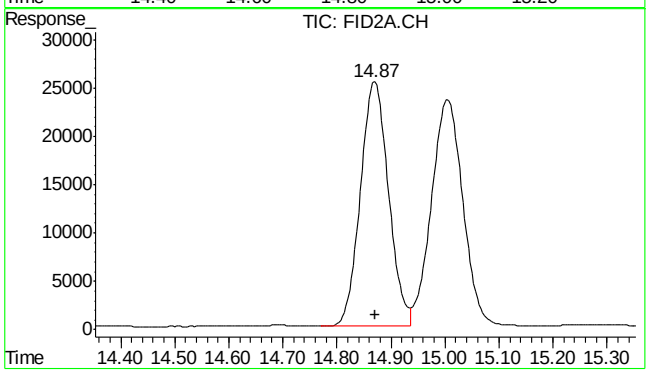
#21 Decane

R.T.: 13.848 min
Delta R.T.: 0.000 min
Response: 882477
Conc: 49.01 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.868 min
Delta R.T.: -0.001 min
Response: 878103
Conc: 43.90 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.871 min
Delta R.T.: 0.000 min
Response: 913969
Conc: 45.32 ug/L

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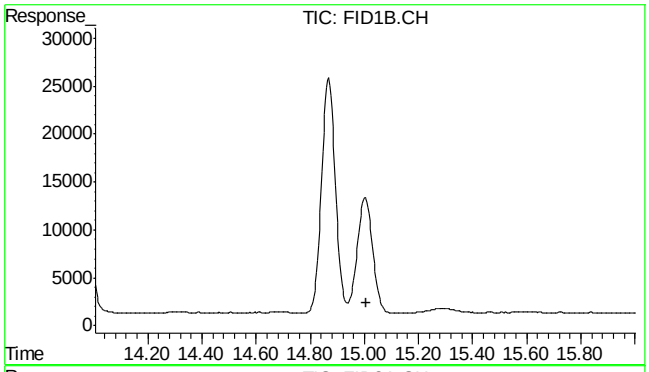
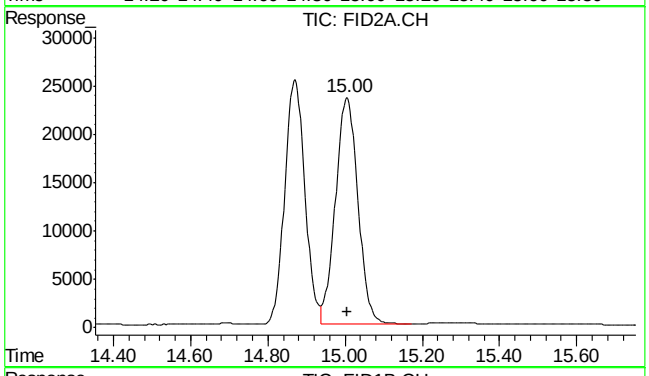


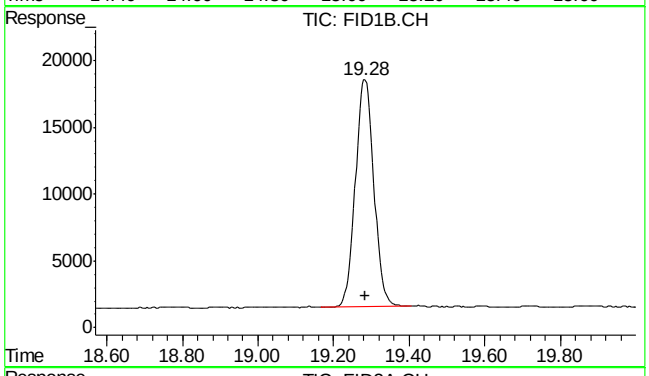
#23 Butylcyclohexane

R.T.: 15.004 min
Delta R.T.: -0.002 min
Response: 481264
Conc: N.D.



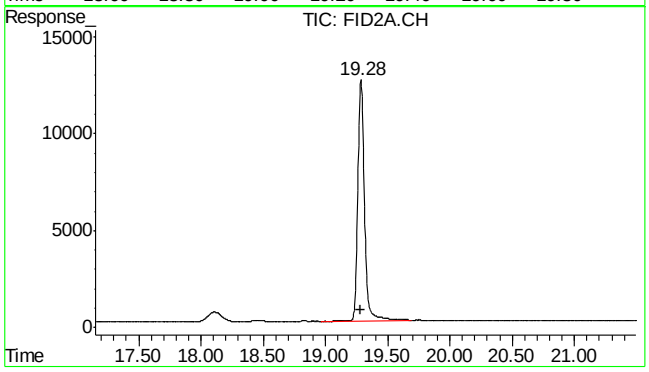
#23 Butylcyclohexane

R.T.: 15.005 min
Delta R.T.: 0.000 min
Response: 946972
Conc: 45.39 ug/L



#24 Naphthalene

R.T.: 19.283 min
Delta R.T.: 0.000 min
Response: 576950
Conc: 46.65 ug/L



#24 Naphthalene

R.T.: 19.286 min
Delta R.T.: 0.000 min
Response: 457022
Conc: 48.12 ug/L

7.6.7

7

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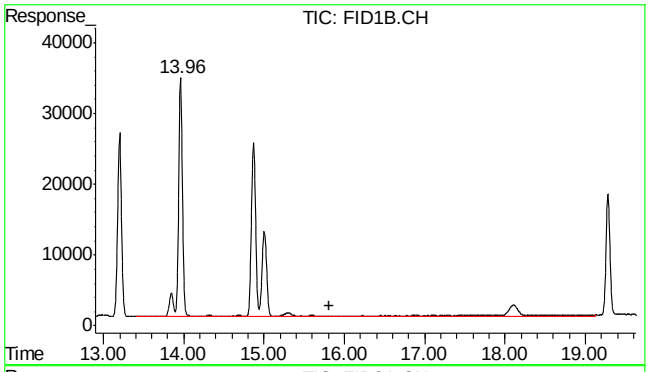
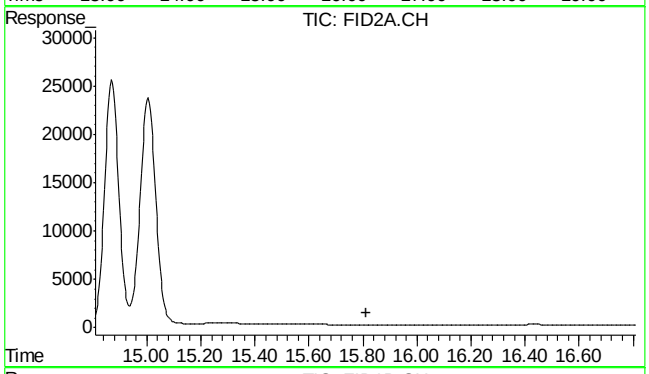


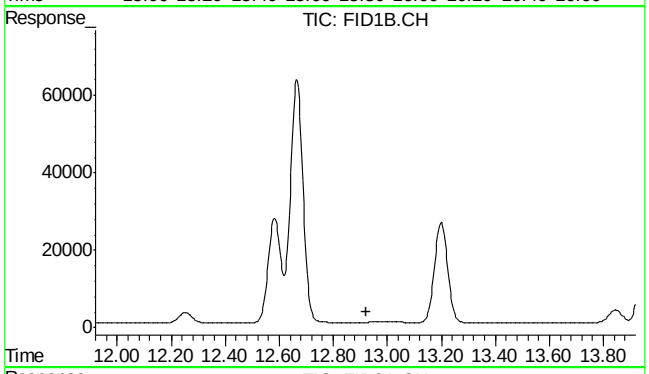
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 1309502
Conc: 50.65 ug/L m



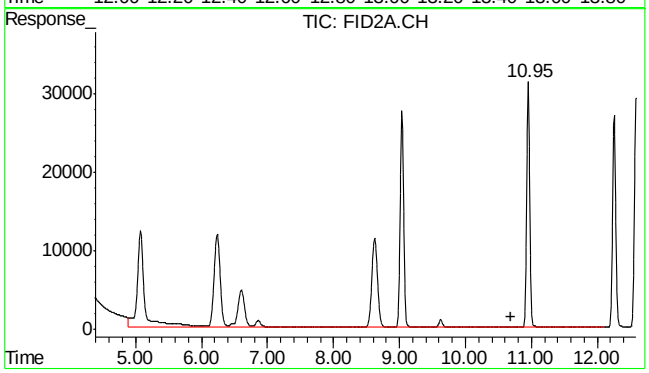
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 1926326
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 6843468
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 2700235
Conc: 178.94 ug/L m

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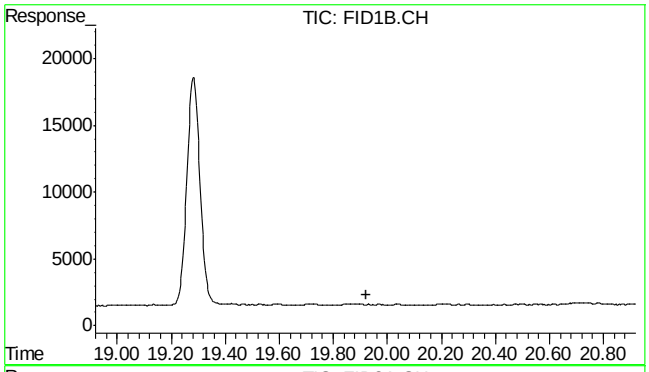
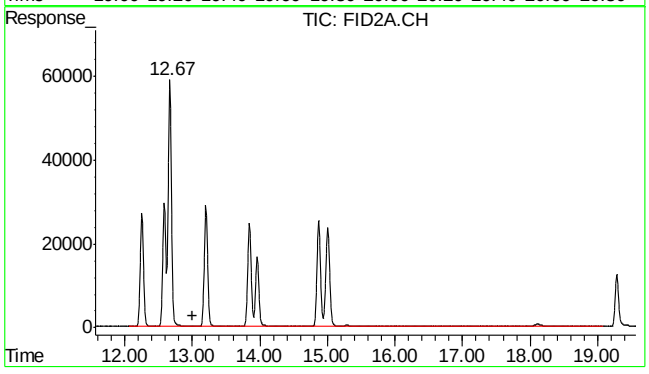


#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 2040591
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 3050138
Conc: 147.90 ug/L m

7.6.7

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077733.D\FID1B.CH Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077733.D\FID2A.CH
Acq On : 31-Jan-2017, 09:58:01 Operator: antonioc
Sample : cc4115-4 Inst : HP5890
Misc : gc19636,guv4134,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 31 10:38:58 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	232924	0	NoCal m	N.D.
2)	S	Alkane B	15.01f	0.00	985613	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.61f	0	623806	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	2114443	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.96f	0	2110814	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	1979094	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	4206311	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	2101965	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	2024626	N.D.	NoCal m
20)	S	BFB	13.96	13.96	1654079	890732	90.113	98.337
		Spiked Amount 200.000 Range 70 - 130 Recovery =					45.06%#	49.17%#
		Target Compounds						
10)		Pentane	0.00	5.10	0	1359120	N.D.	99.097 #
11)		2-Methylpentane	6.25	6.25	58684	1544315	NoCal	102.783 #
12)		Methyl Tert Buty	6.61	6.62	525356	633648	97.375	96.885
13)		2,2,4-Trimethylp	8.63	8.63	215691	1311164	NoCal	114.079 #
14)		Benzene	9.04	9.05	2155483	2117420	90.373	96.709
15)		Toluene	10.96	10.96	1985510	2106656	91.432	102.211
16)		Nonane	12.26	12.26	184848	1970264	NoCal	102.151 #
17)		Ethylbenzene	12.59	12.59	1737575	2013216	95.076	103.006
18)		m,p-Xylene	12.67	12.67	4283446	4256359	193.653	205.496
19)		o-Xylene	13.20	13.21	1776343	2098733	92.906	100.546
21)		Decane	13.85	13.85	236716	1889746	NoCal	104.952 #
22)		1,2,4-Trimethylb	14.87	14.87	1860988	2016846	93.049	100.015
23)		Butylcyclohexane	15.01	15.01	978943	2012208	NoCal	96.445 #
24)		Naphthalene	19.29	19.29	1136245	922118	91.863	97.099
25)	H	C9- C10 Aromatic	15.81	15.81	2180336	3971311	94.374	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	13270888	4551390	NoCal	329.239 #
27)	H	C9- C12 Aliphati	19.92	13.00	3508371	6278012	NoCal	318.791 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077733.D VPH011317.M Fri Feb 03 13:17:50 2017

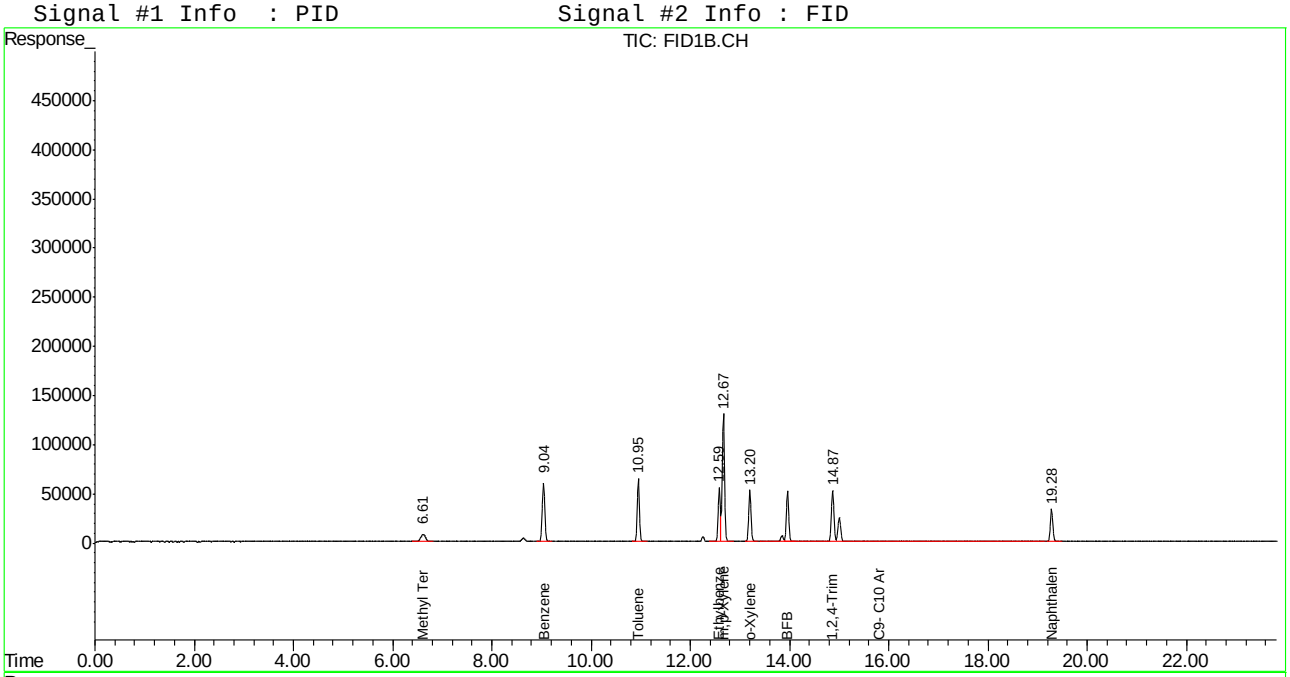
SGS ACCUTEST FA40754

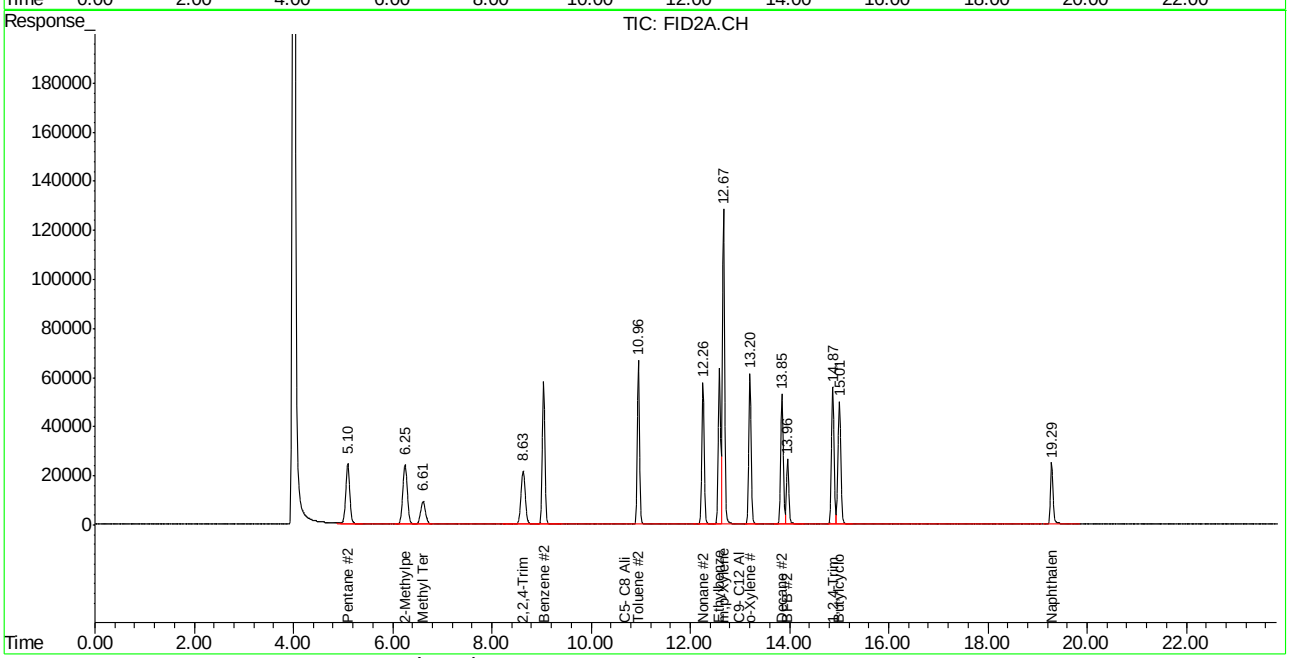
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077733.D\FID1B.CH Vial: 2
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077733.D\FID2A.CH
Acq On : 31-Jan-2017, 09:58:01 Operator: antonioc
Sample : cc4115-4 Inst : HP5890
Misc : gc19636,guv4134,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Jan 31 10:41 2017 Quant Results File: VPH011317.RES

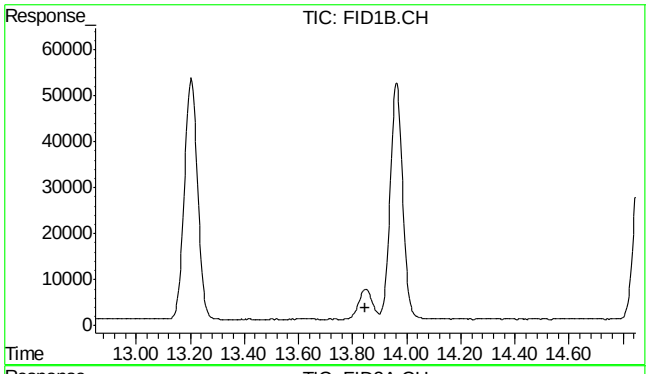
Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID



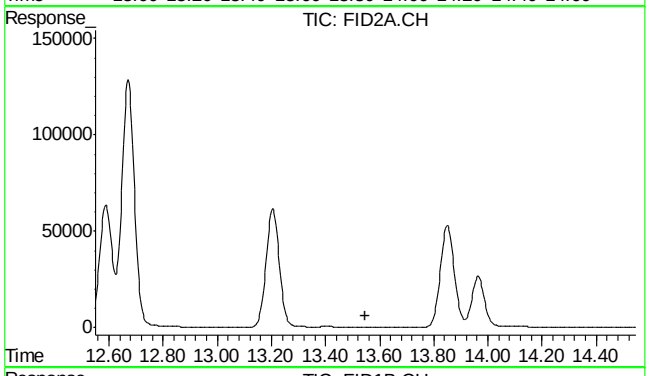


UV077733.D VPH011317.M Fri Feb 03 13:17:50 2017 Page 2



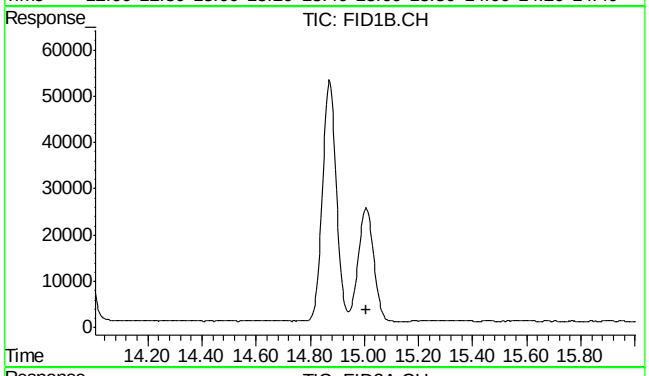
#1 Alkane A

R.T.: 13.848 min
Delta R.T.: 0.001 min
Response: 232924
Conc: N.D.



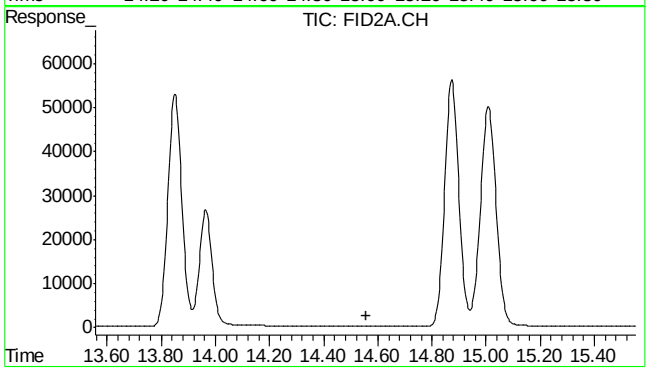
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.006 min
Delta R.T.: 0.000 min
Response: 985613
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

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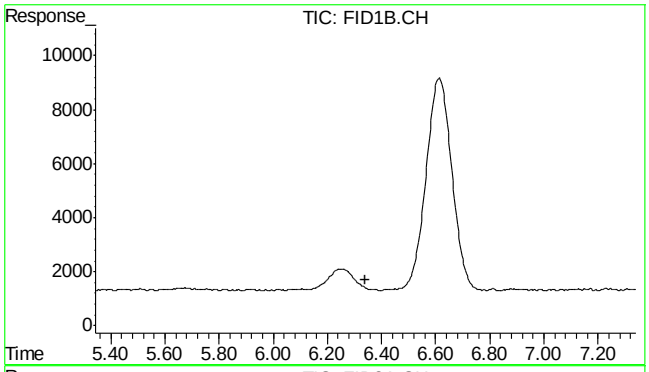
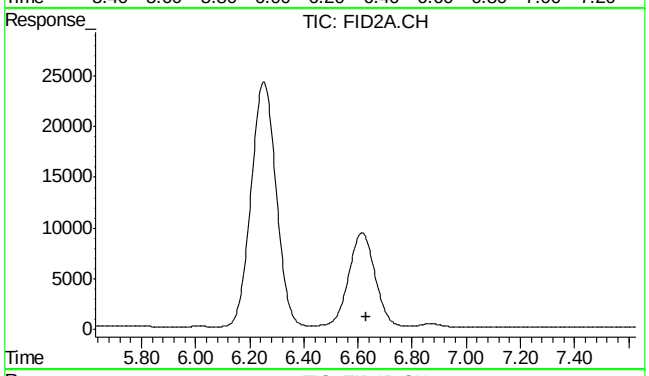


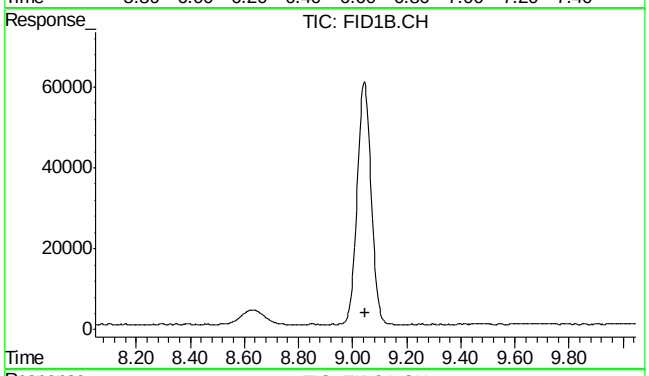
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



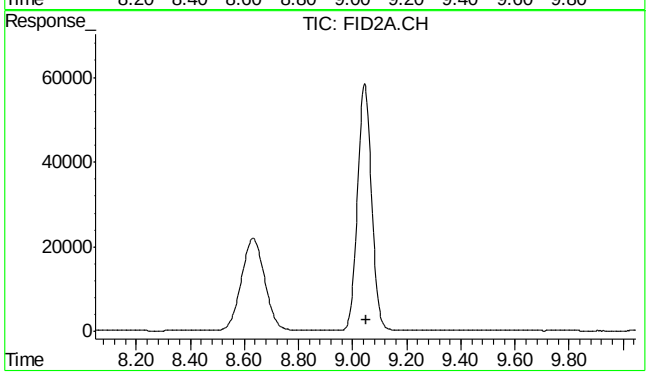
#3 Aromatic A

R.T.: 6.614 min
Delta R.T.: -0.015 min
Response: 623806
Conc: N.D.



#4 Aromatic B

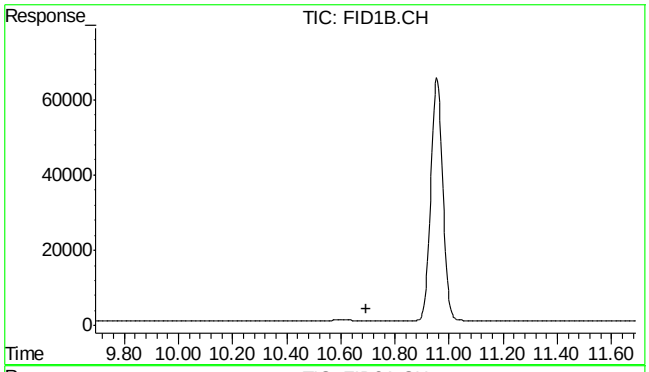
R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

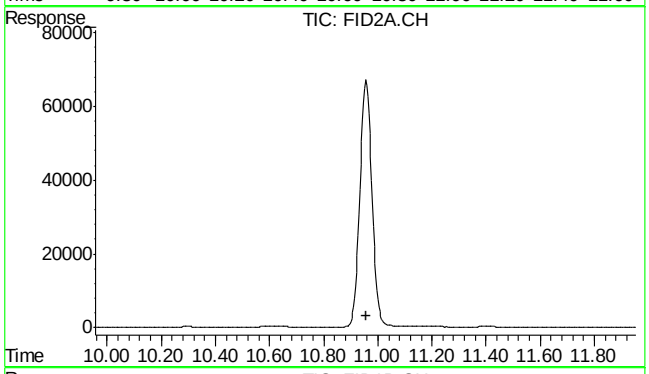
R.T.: 9.044 min
Delta R.T.: -0.005 min
Response: 2114443
Conc: N.D.

SGS ACCUTEST FA40754



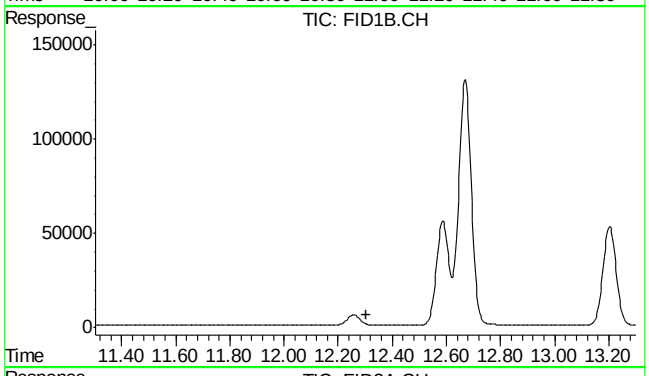
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



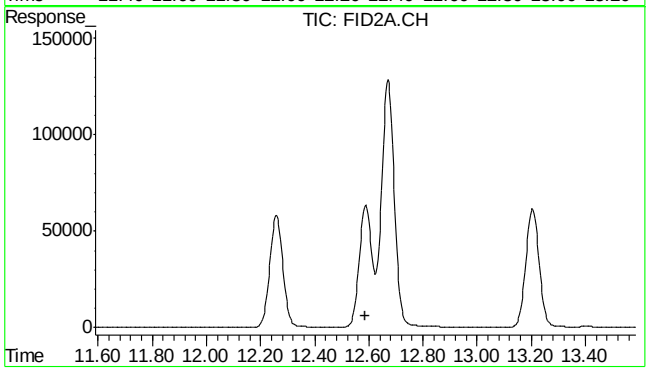
#5 Aromatic C

R.T.: 10.955 min
Delta R.T.: 0.000 min
Response: 2110814
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



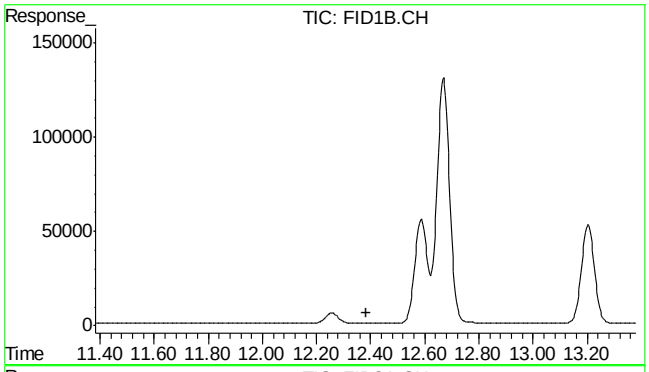
#6 Aromatic D

R.T.: 12.588 min
Delta R.T.: 0.000 min
Response: 1979094
Conc: N.D.

7.6.8

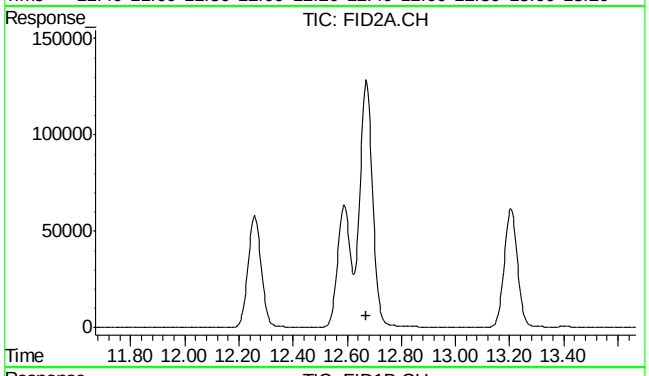
7

SGS ACCUTEST FA40754



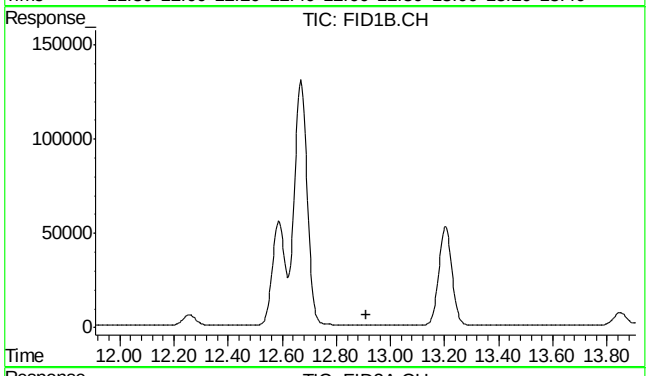
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



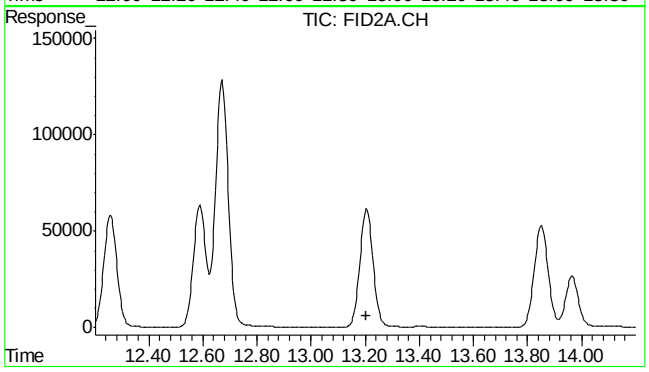
#7 Aromatic E

R.T.: 12.670 min
Delta R.T.: 0.001 min
Response: 4206311
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



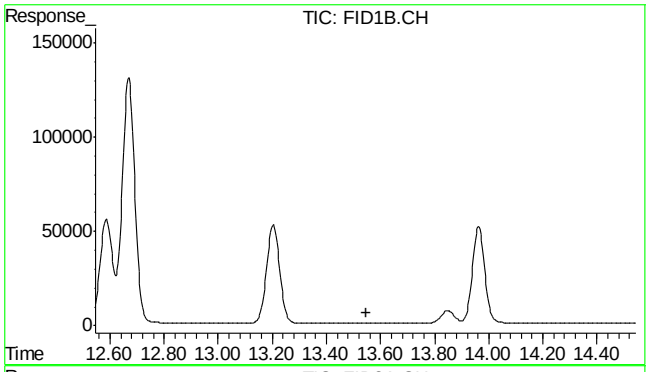
#8 Aromatic F

R.T.: 13.204 min
Delta R.T.: 0.000 min
Response: 2101965
Conc: N.D.

7.6.8

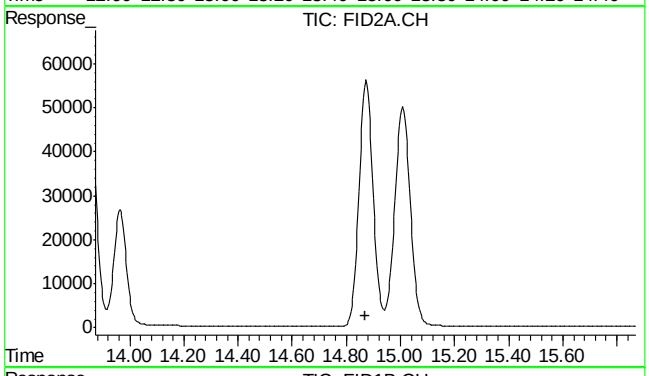
7

SGS ACCUTEST FA40754



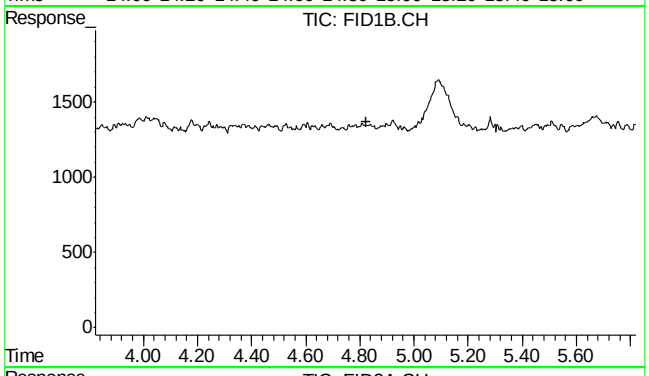
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



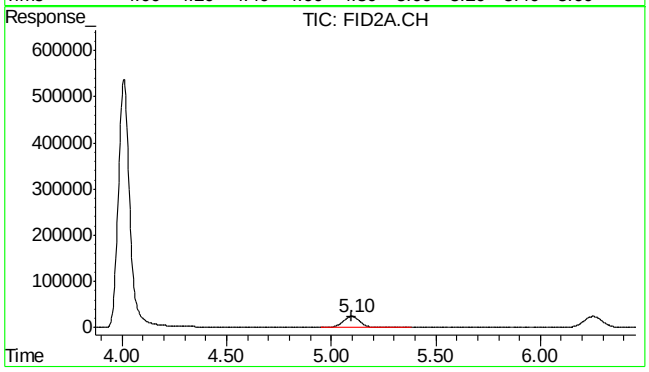
#9 Aromatic G

R.T.: 14.873 min
Delta R.T.: 0.001 min
Response: 2024626
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



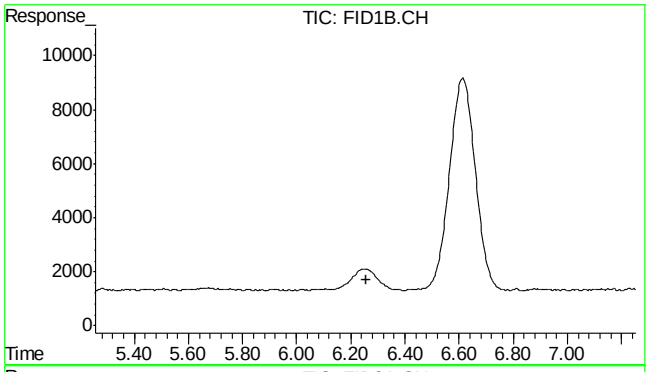
#10 Pentane

R.T.: 5.098 min
Delta R.T.: -0.002 min
Response: 1359120
Conc: 99.10 ug/L

7.6.8

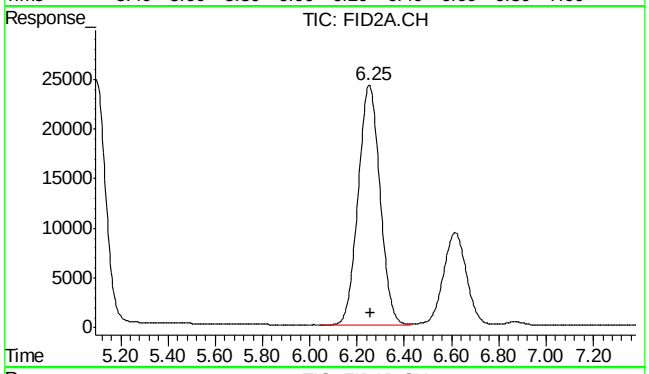
7

SGS ACCUTEST FA40754



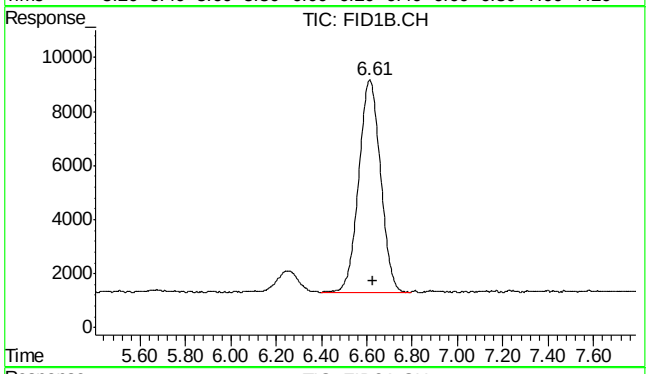
#11 2-Methylpentane

R.T.: 6.253 min
Delta R.T.: -0.003 min
Response: 58684
Conc: N.D.



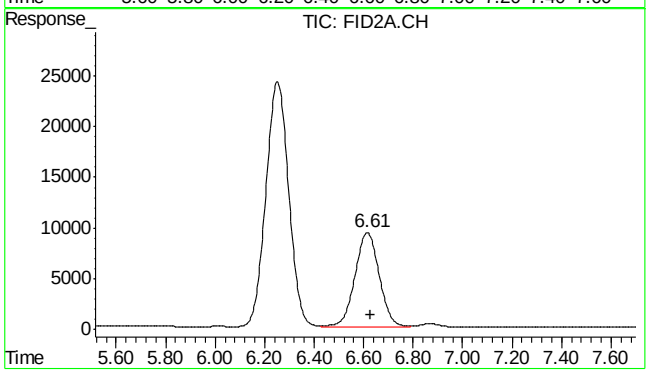
#11 2-Methylpentane

R.T.: 6.252 min
Delta R.T.: -0.004 min
Response: 1544315
Conc: 102.78 ug/L



#12 Methyl Tert Butyl Ether

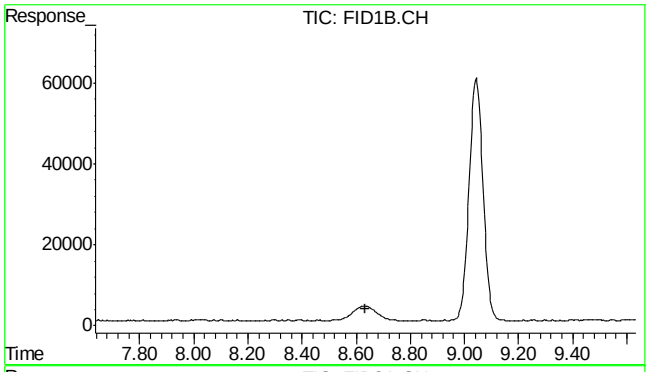
R.T.: 6.614 min
Delta R.T.: -0.015 min
Response: 525356
Conc: 97.37 ug/L



#12 Methyl Tert Butyl Ether

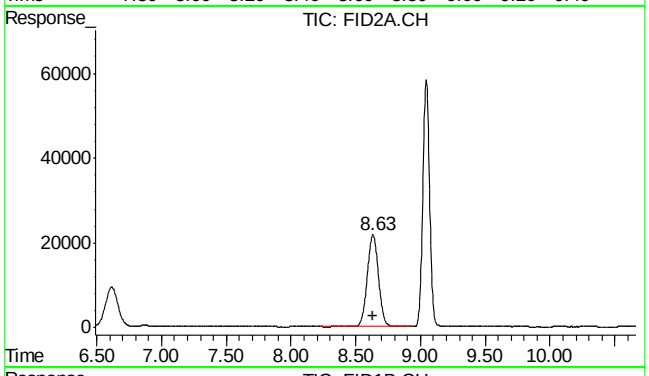
R.T.: 6.615 min
Delta R.T.: -0.013 min
Response: 633648
Conc: 96.88 ug/L

SGS ACCUTEST FA40754



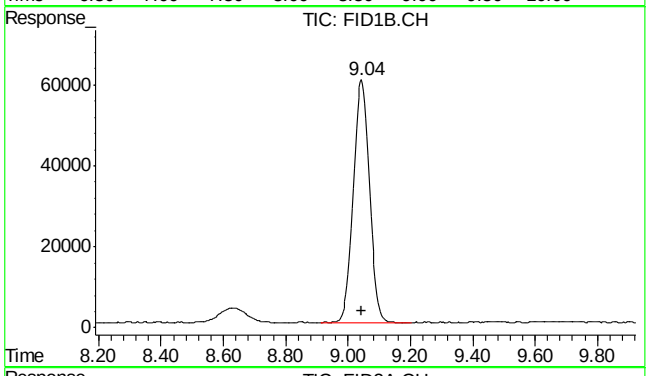
#13 2,2,4-Trimethylpentane

R.T.: 8.631 min
Delta R.T.: -0.003 min
Response: 215691
Conc: N.D.



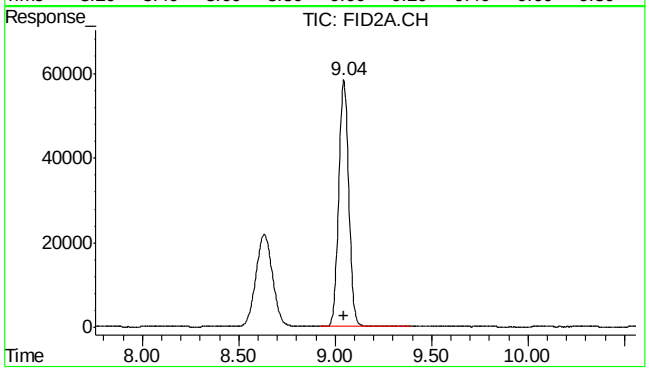
#13 2,2,4-Trimethylpentane

R.T.: 8.633 min
Delta R.T.: 0.000 min
Response: 1311164
Conc: 114.08 ug/L



#14 Benzene

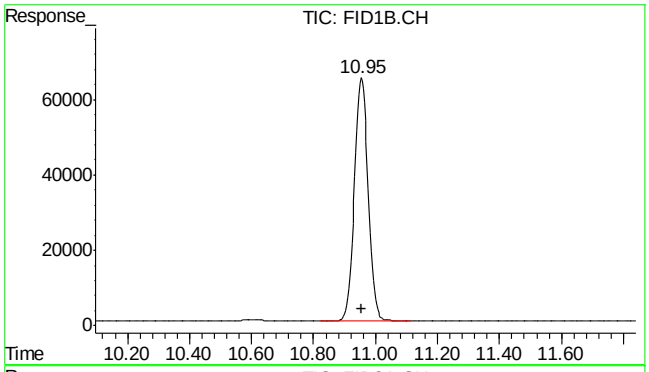
R.T.: 9.044 min
Delta R.T.: -0.002 min
Response: 2155483
Conc: 90.37 ug/L



#14 Benzene

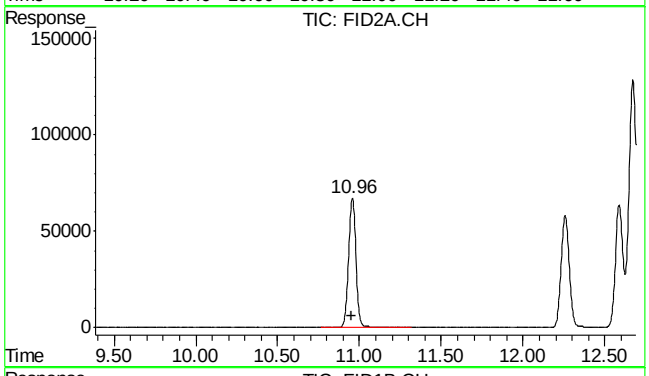
R.T.: 9.045 min
Delta R.T.: 0.000 min
Response: 2117420
Conc: 96.71 ug/L

SGS ACCUTEST FA40754



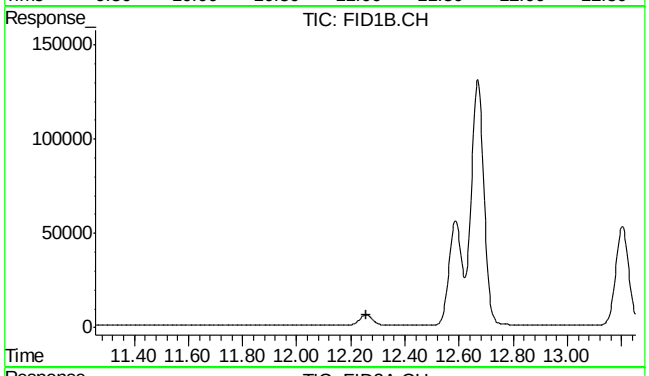
#15 Toluene

R.T.: 10.955 min
Delta R.T.: 0.000 min
Response: 1985510
Conc: 91.43 ug/L



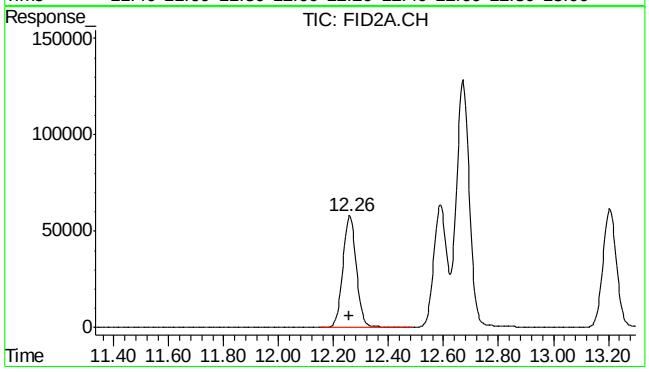
#15 Toluene

R.T.: 10.957 min
Delta R.T.: 0.002 min
Response: 2106656
Conc: 102.21 ug/L



#16 Nonane

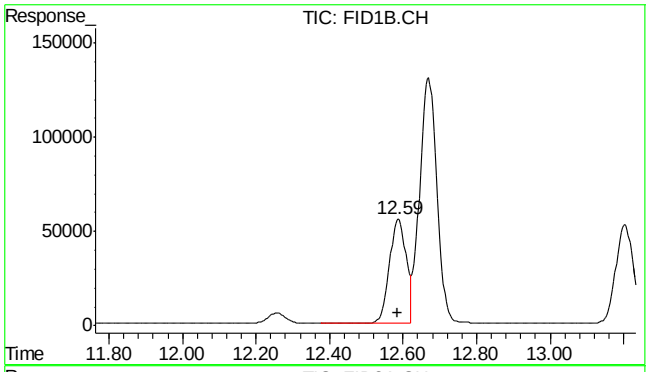
R.T.: 12.258 min
Delta R.T.: 0.002 min
Response: 184848
Conc: N.D.



#16 Nonane

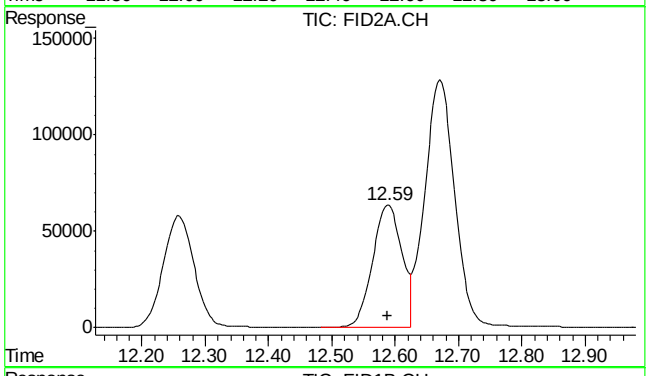
R.T.: 12.259 min
Delta R.T.: 0.003 min
Response: 1970264
Conc: 102.15 ug/L

SGS ACCUTEST FA40754



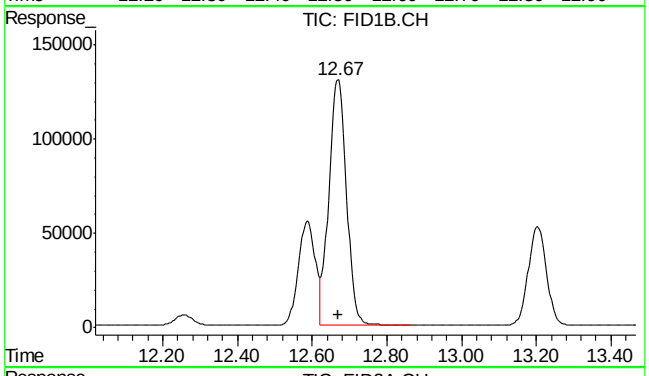
#17 Ethylbenzene

R.T.: 12.588 min
Delta R.T.: 0.002 min
Response: 1737575
Conc: 95.08 ug/L



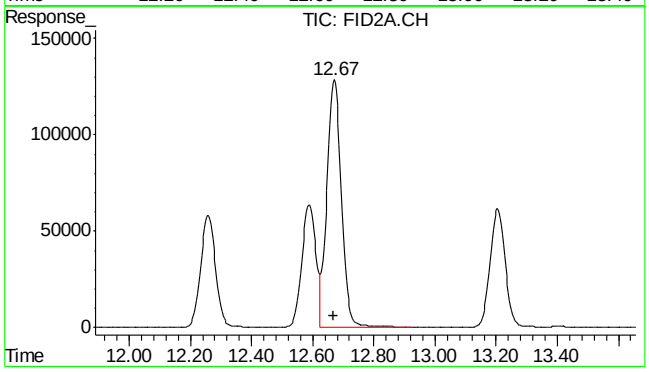
#17 Ethylbenzene

R.T.: 12.589 min
Delta R.T.: 0.002 min
Response: 2013216
Conc: 103.01 ug/L



#18 m,p-Xylene

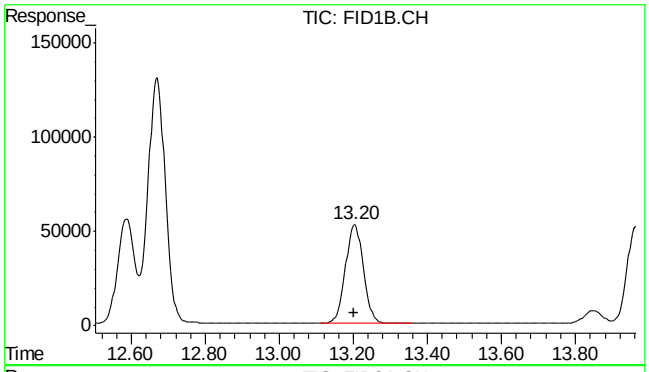
R.T.: 12.670 min
Delta R.T.: 0.001 min
Response: 4283446
Conc: 193.65 ug/L



#18 m,p-Xylene

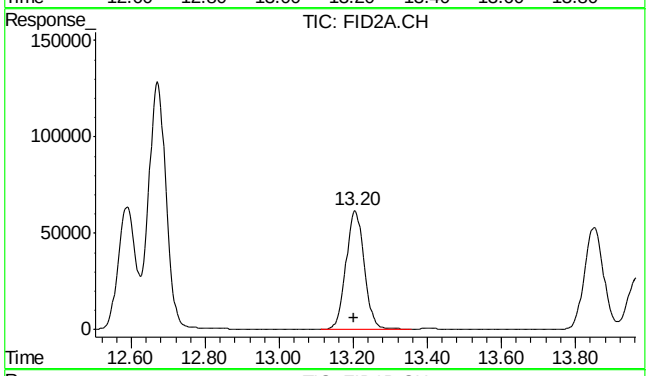
R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 4256359
Conc: 205.50 ug/L

SGS ACCUTEST FA40754



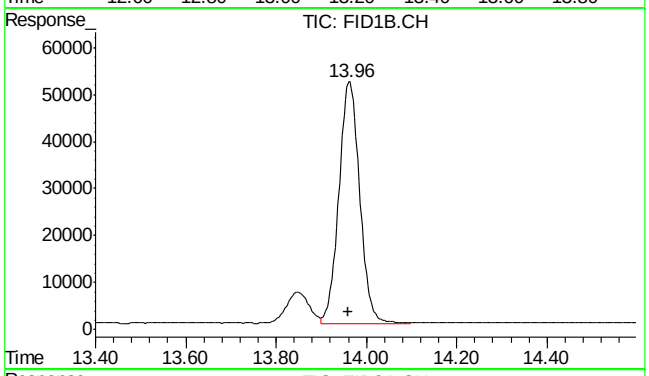
#19 o-Xylene

R.T.: 13.204 min
Delta R.T.: 0.001 min
Response: 1776343
Conc: 92.91 ug/L



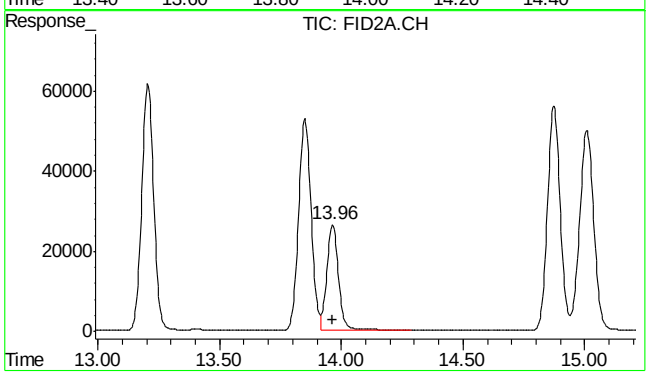
#19 o-Xylene

R.T.: 13.206 min
Delta R.T.: 0.003 min
Response: 2098733
Conc: 100.55 ug/L



#20 BFB

R.T.: 13.963 min
Delta R.T.: 0.002 min
Response: 1654079
Conc: 90.11 ug/L



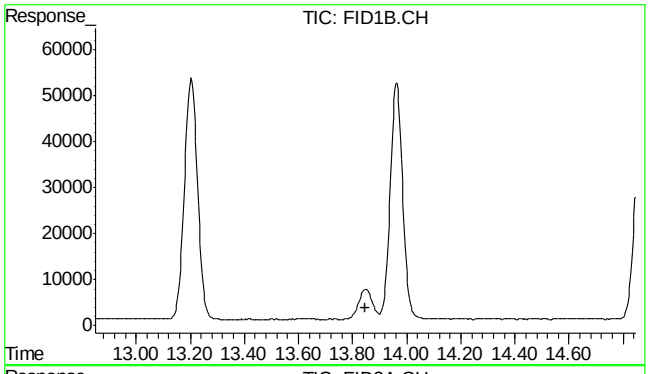
#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 890732
Conc: 98.34 ug/L

7.6.8

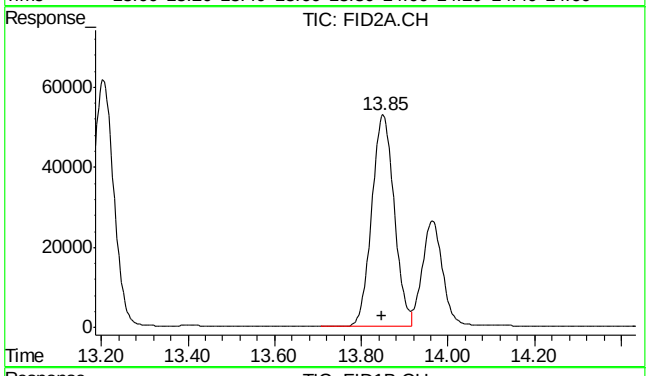
7

SGS ACCUTEST FA40754



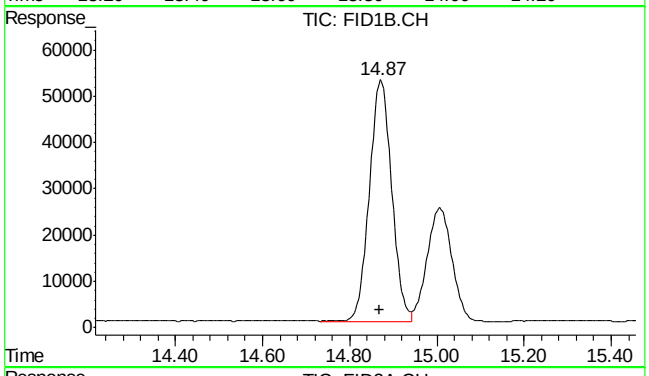
#21 Decane

R.T.: 13.849 min
Delta R.T.: 0.001 min
Response: 236716
Conc: N.D.



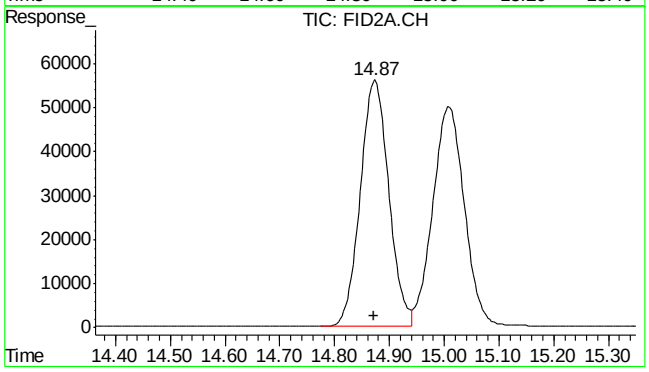
#21 Decane

R.T.: 13.851 min
Delta R.T.: 0.003 min
Response: 1889746
Conc: 104.95 ug/L



#22 1,2,4-Trimethylbenzene

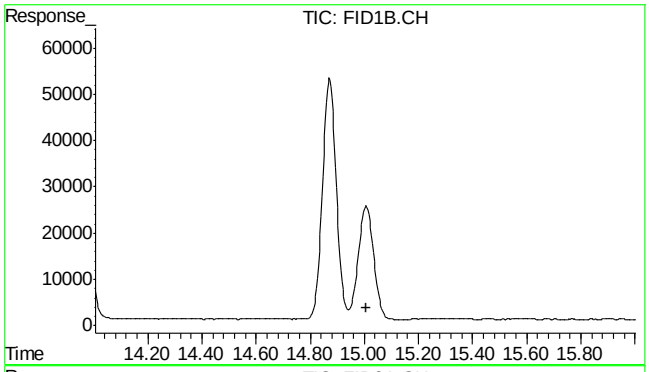
R.T.: 14.872 min
Delta R.T.: 0.002 min
Response: 1860988
Conc: 93.05 ug/L



#22 1,2,4-Trimethylbenzene

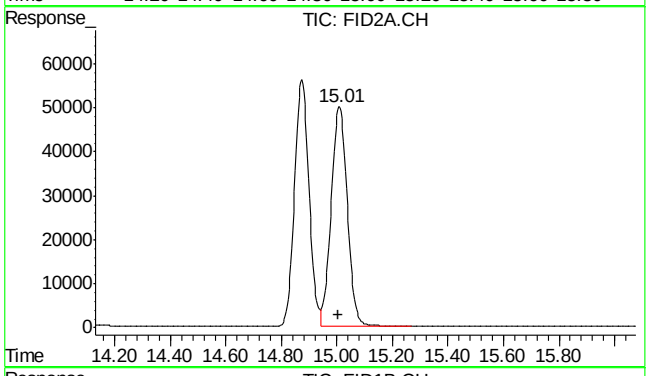
R.T.: 14.874 min
Delta R.T.: 0.003 min
Response: 2016846
Conc: 100.01 ug/L

SGS ACCUTEST FA40754



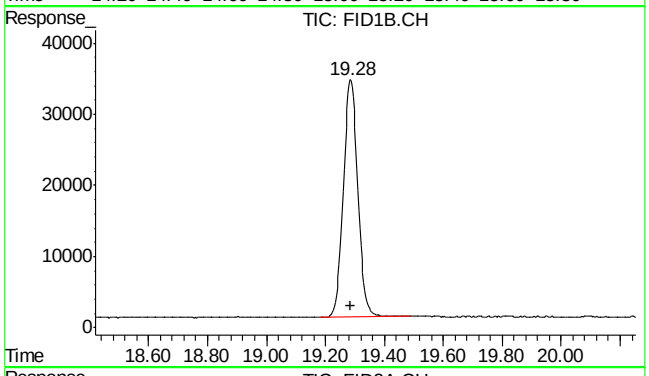
#23 Butylcyclohexane

R.T.: 15.007 min
Delta R.T.: 0.002 min
Response: 978943
Conc: N.D.



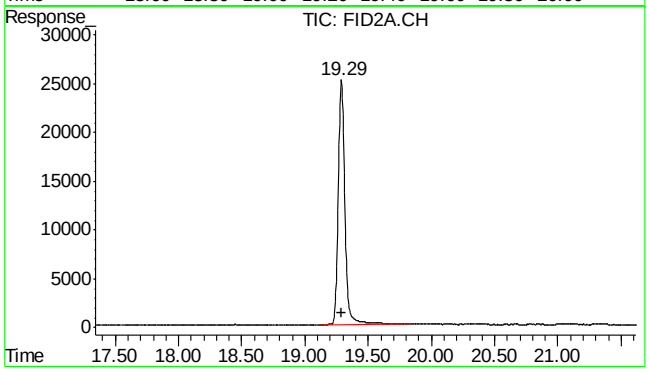
#23 Butylcyclohexane

R.T.: 15.009 min
Delta R.T.: 0.003 min
Response: 2012208
Conc: 96.45 ug/L



#24 Naphthalene

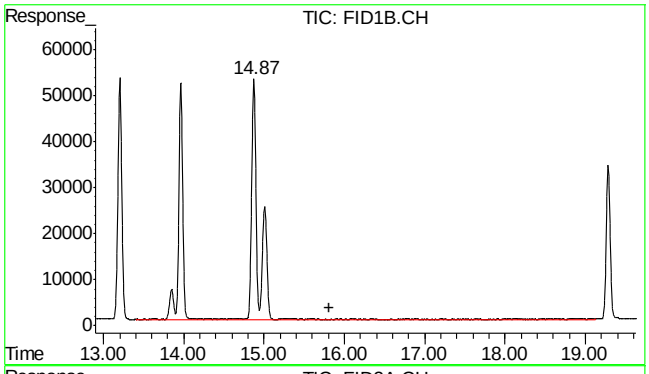
R.T.: 19.286 min
Delta R.T.: 0.002 min
Response: 1136245
Conc: 91.86 ug/L



#24 Naphthalene

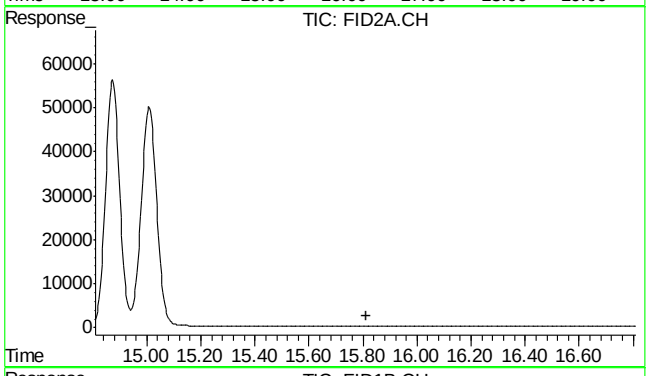
R.T.: 19.289 min
Delta R.T.: 0.003 min
Response: 922118
Conc: 97.10 ug/L

SGS ACCUTEST FA40754



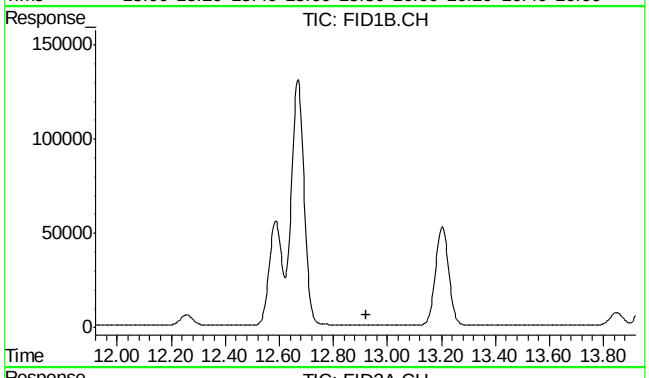
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2180336
Conc: 94.37 ug/L m



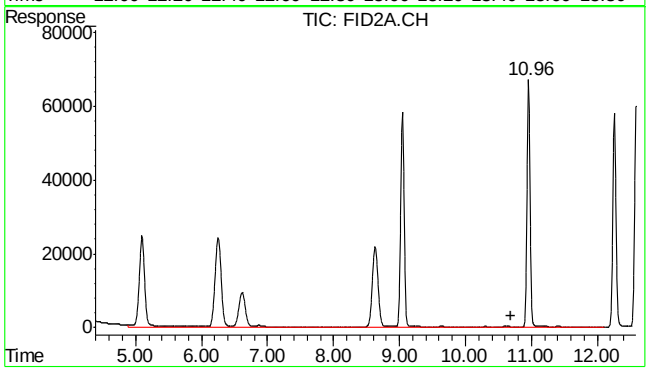
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 3971311
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

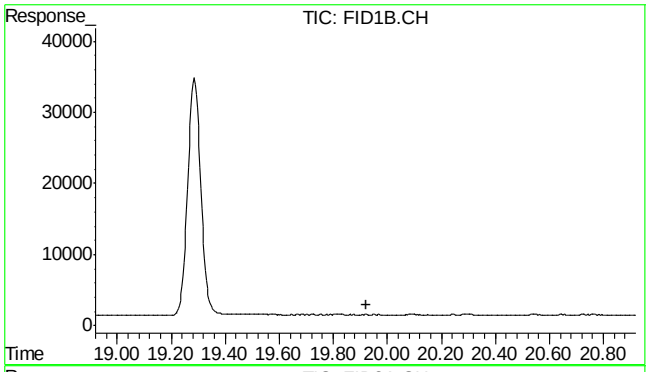
R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 13270888
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

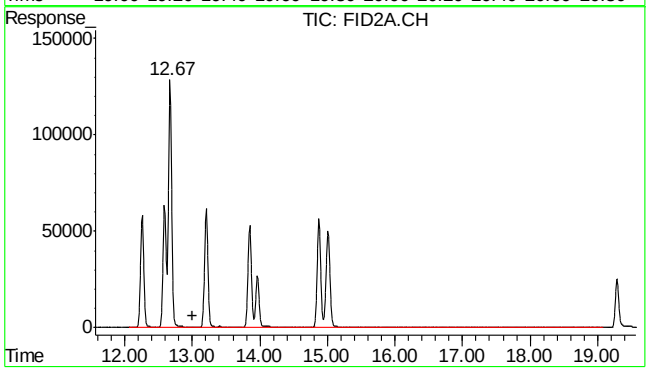
R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 4551390
Conc: 329.24 ug/L m

SGS ACCUTEST FA40754



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 3508371
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 6278012
Conc: 318.79 ug/L m

7.6.8

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077744.D\FID1B.CH Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077744.D\FID2A.CH
Acq On : 31-Jan-2017, 15:35:36 Operator: antonioc
Sample : cc4115-4 Inst : HP5890
Misc : gc19636,guv4134,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:03:17 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	233362	0	NoCal m	N.D.
2)	S	Alkane B	15.01f	0.00	993648	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.61f	0	662032	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.05f	0	2177365	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.96f	0	2162101	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	2026653	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	4324320	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.21f	0	2154819	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.88f	0	2044120	N.D.	NoCal m
20)	S	BFB	13.97	13.97	1681785	905424	91.623	99.959
		Spiked Amount 200.000 Range 70 - 130 Recovery =					45.81%#	49.98%#
		Target Compounds						
10)		Pentane	0.00	5.10	0	1385488	N.D.	101.019 #
11)		2-Methylpentane	6.26	6.25	54453	1576854	NoCal	104.949 #
12)		Methyl Tert Buty	6.62	6.62	552508	657415	102.407	100.519
13)		2,2,4-Trimethylp	8.63	8.63	220720	1288250	NoCal	111.674 #
14)		Benzene	9.05	9.05	2253169	2180304	94.469	99.581
15)		Toluene	10.96	10.96	2062410	2160481	94.973	104.822
16)		Nonane	12.26	12.26	187092	1987874	NoCal	103.064 #
17)		Ethylbenzene	12.59	12.59	1785421	2056609	97.694	105.226
18)		m,p-Xylene	12.67	12.67	4376795	4353678	197.874	210.195
19)		o-Xylene	13.21	13.21	1821303	2150350	95.257	103.018
21)		Decane	13.85	13.85	226878	1865686	NoCal	103.616 #
22)		1,2,4-Trimethylb	14.88	14.88	1895042	2039817	94.751	101.154
23)		Butylcyclohexane	15.01	15.01	991746	2051025	NoCal	98.306 #
24)		Naphthalene	19.29	19.29	1172861	943451	94.823	99.345
25)	H	C9- C10 Aromatic	15.81	15.81	2323898	3950709	101.582	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	13694578	4523811	NoCal	327.000 #
27)	H	C9- C12 Aliphati	19.92	13.00	3591079	6197753	NoCal	314.541 #

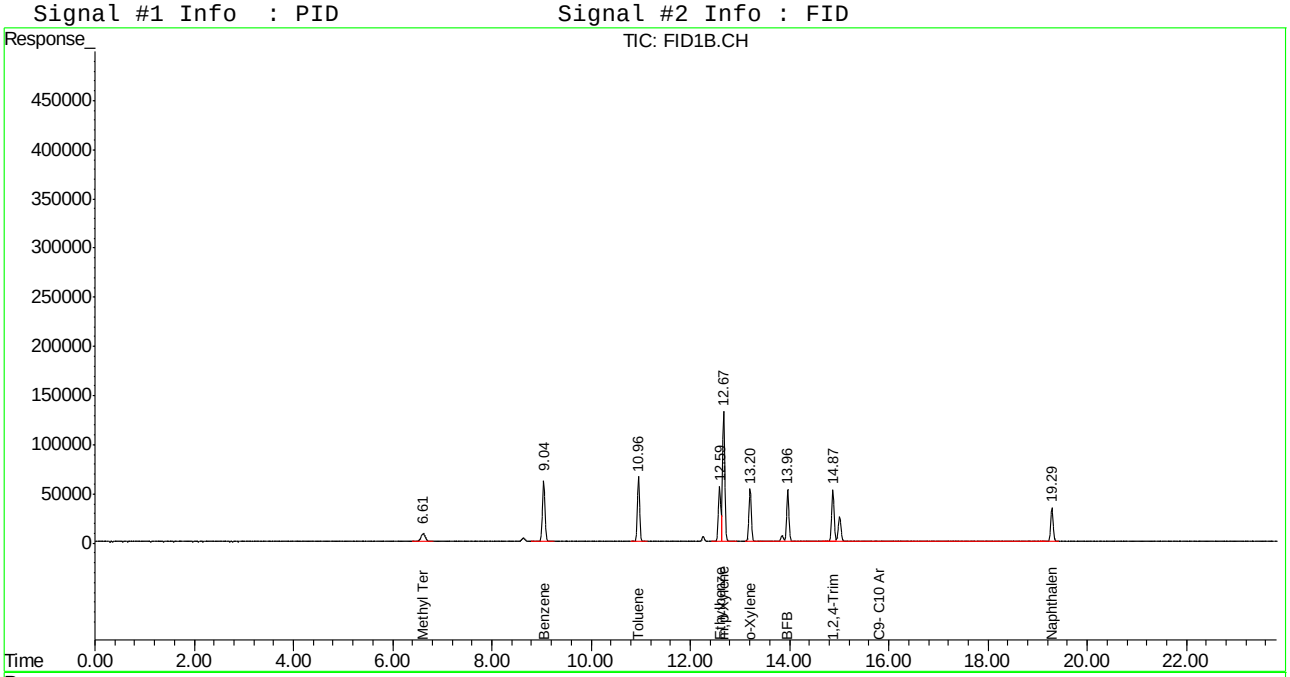
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077744.D VPH011317.M Fri Feb 03 13:18:19 2017

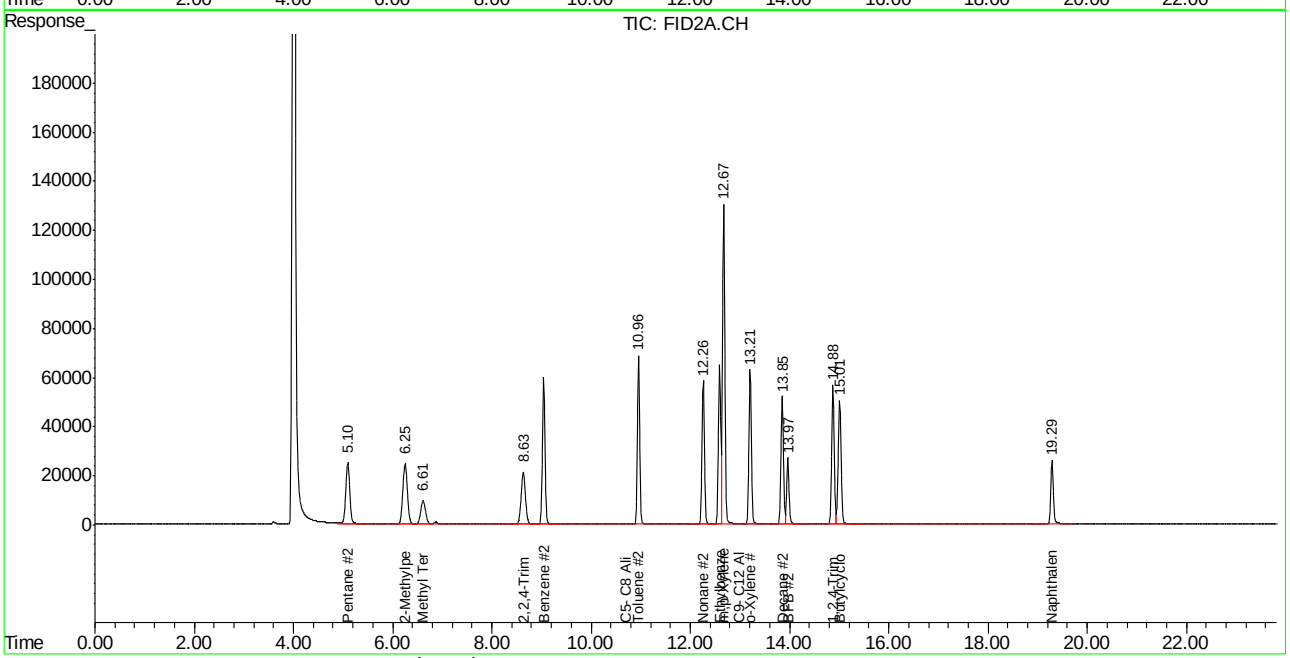
Quantitation Report (QT Reviewed)

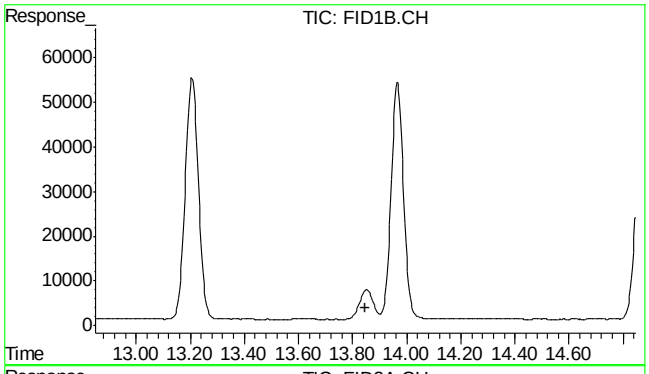
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077744.D\FID1B.CH Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077744.D\FID2A.CH
Acq On : 31-Jan-2017, 15:35:36 Operator: antonioc
Sample : cc4115-4 Inst : HP5890
Misc : gc19636,guv4134,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 1 8:10 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

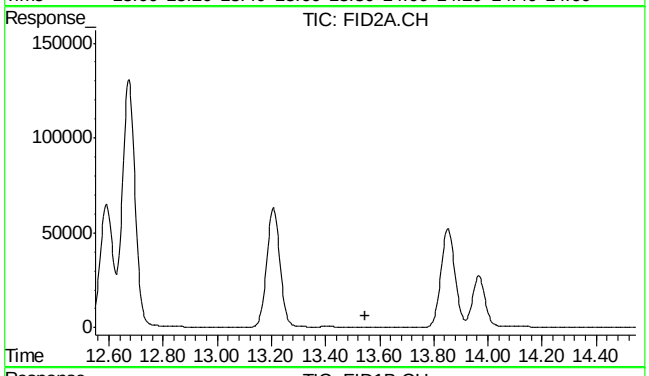






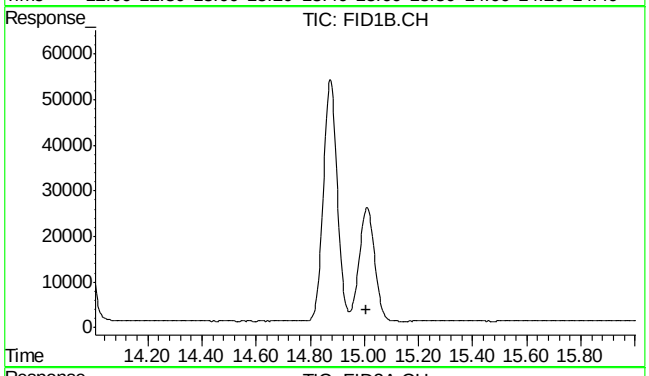
#1 Alkane A

R.T.: 13.852 min
Delta R.T.: 0.005 min
Response: 233362
Conc: N.D.



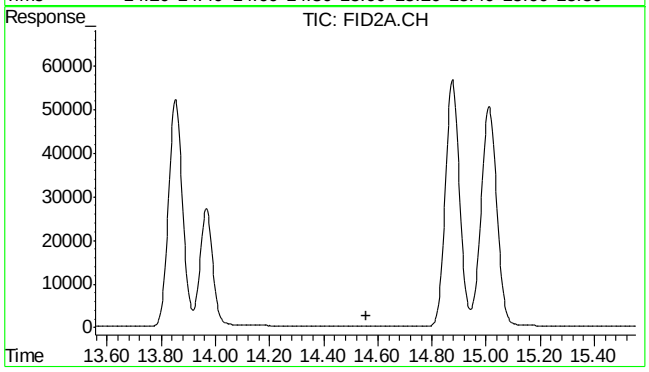
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.009 min
Delta R.T.: 0.004 min
Response: 993648
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.6.9

7

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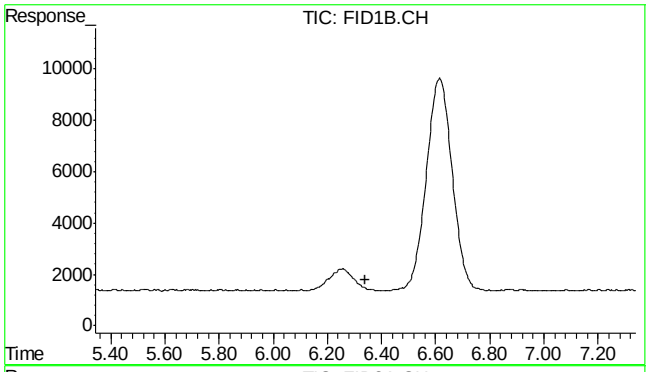
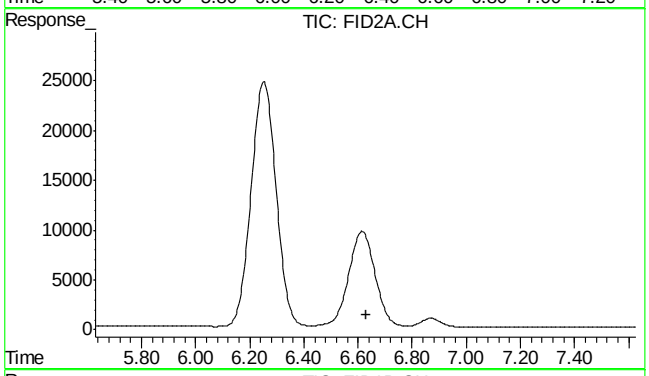


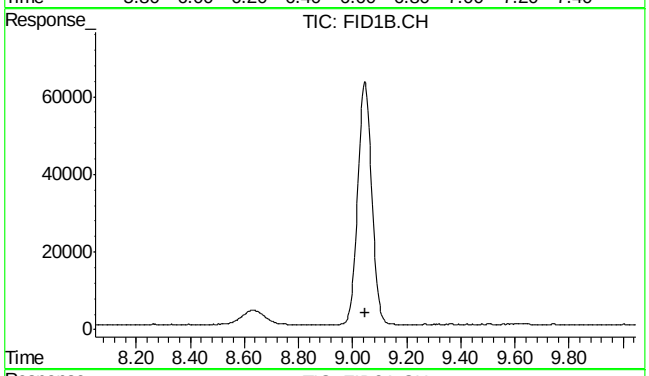
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



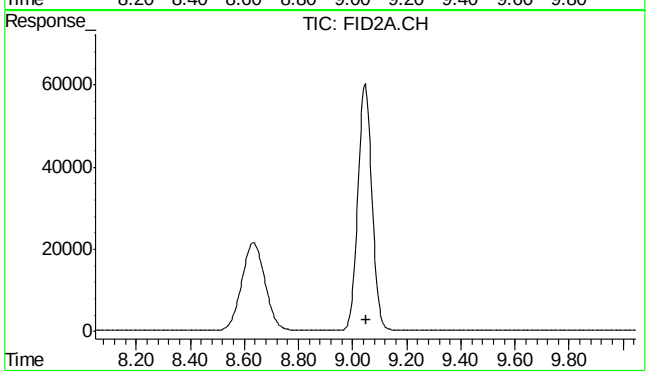
#3 Aromatic A

R.T.: 6.614 min
Delta R.T.: -0.015 min
Response: 662032
Conc: N.D.



#4 Aromatic B

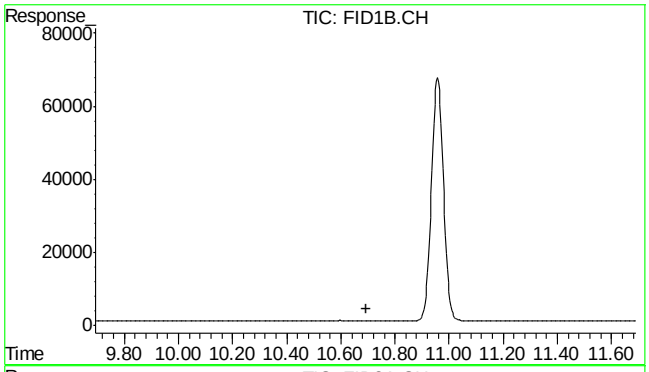
R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

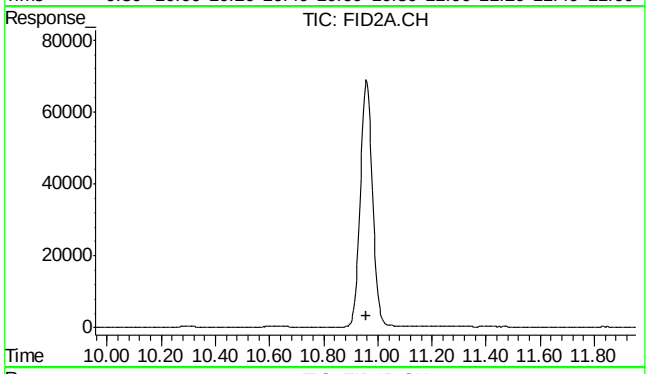
R.T.: 9.046 min
Delta R.T.: -0.003 min
Response: 2177365
Conc: N.D.

SGS ACCUTEST FA40754



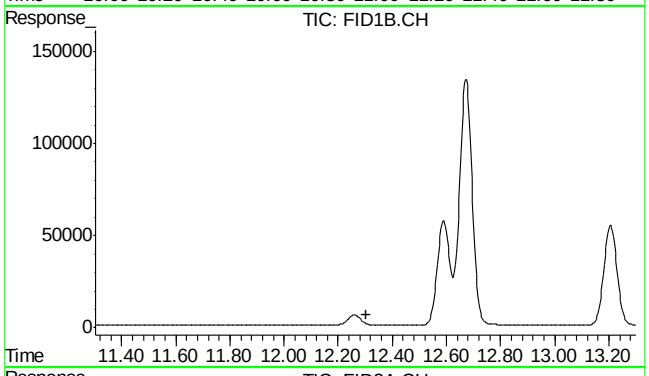
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



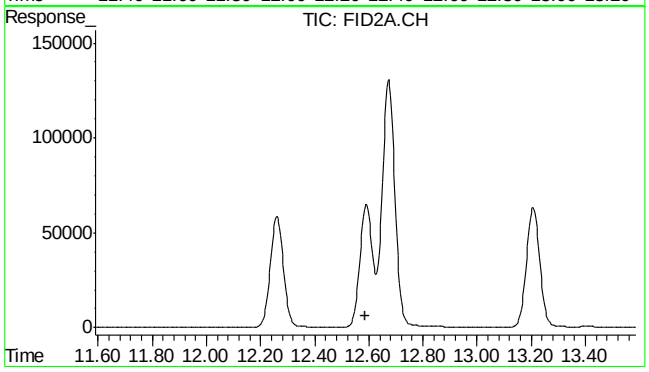
#5 Aromatic C

R.T.: 10.957 min
Delta R.T.: 0.001 min
Response: 2162101
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 12.590 min
Delta R.T.: 0.003 min
Response: 2026653
Conc: N.D.

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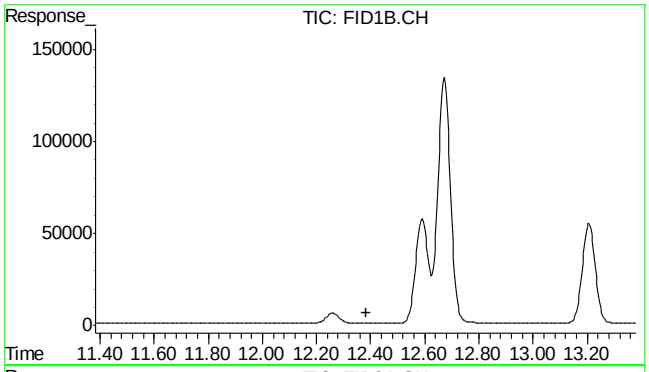
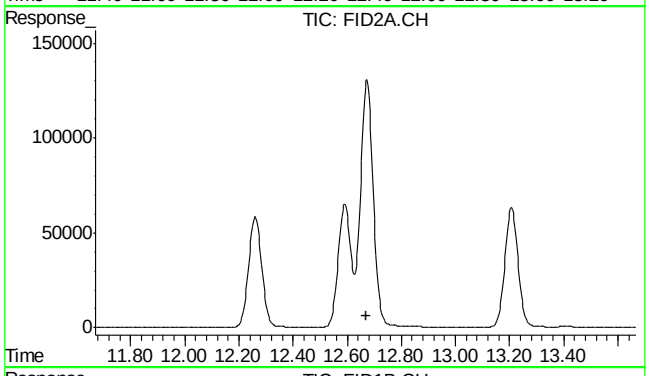


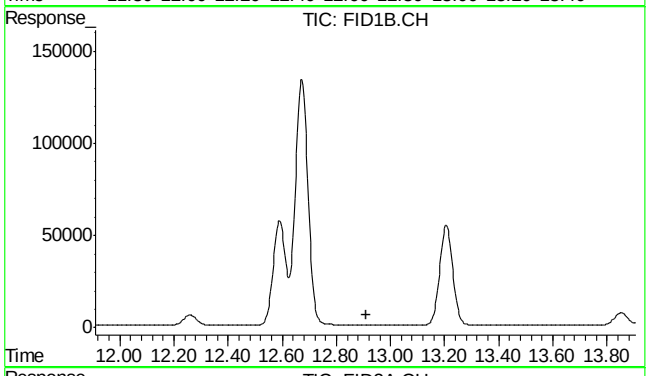
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



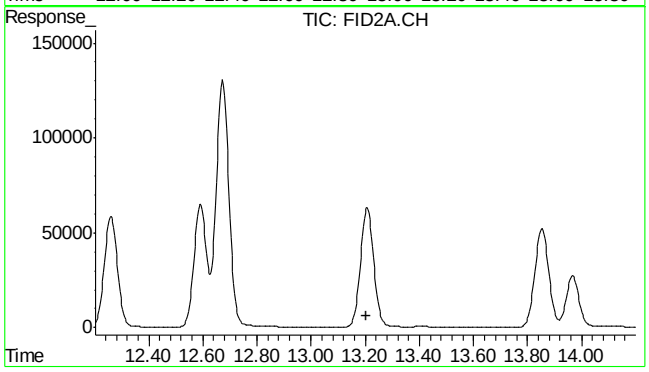
#7 Aromatic E

R.T.: 12.672 min
Delta R.T.: 0.003 min
Response: 4324320
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

R.T.: 13.207 min
Delta R.T.: 0.003 min
Response: 2154819
Conc: N.D.

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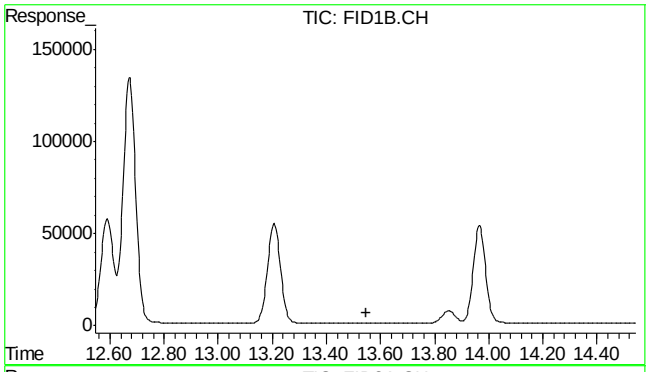
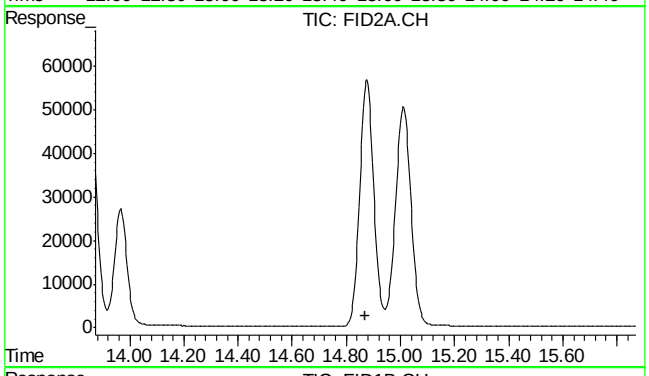


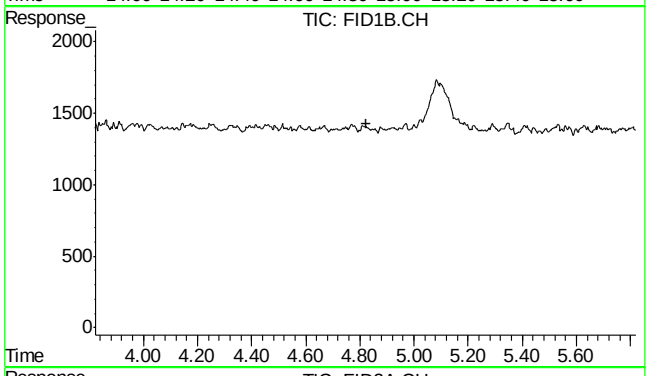
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



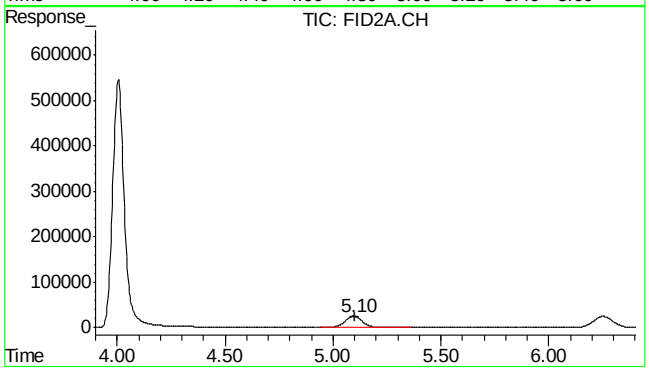
#9 Aromatic G

R.T.: 14.875 min
Delta R.T.: 0.004 min
Response: 2044120
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 5.098 min
Delta R.T.: -0.002 min
Response: 1385488
Conc: 101.02 ug/L

7.6.9

7

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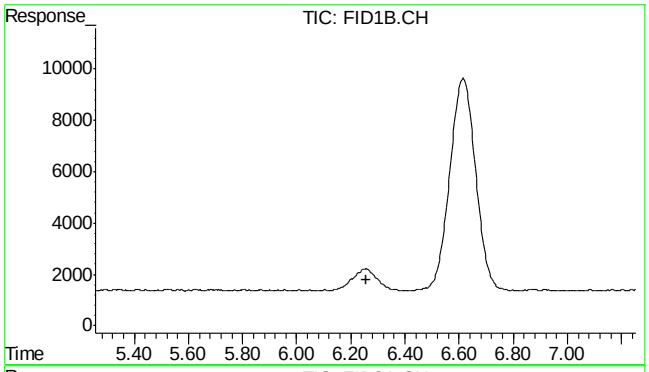
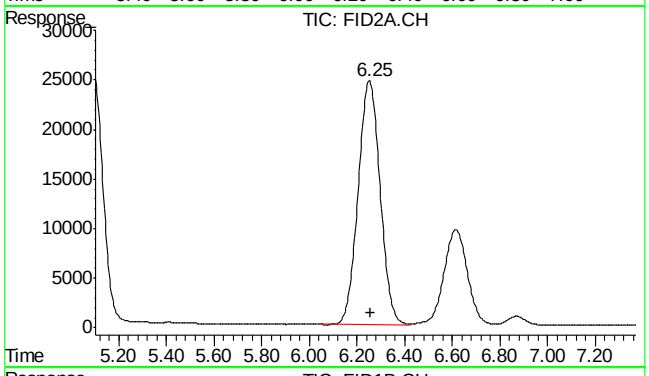


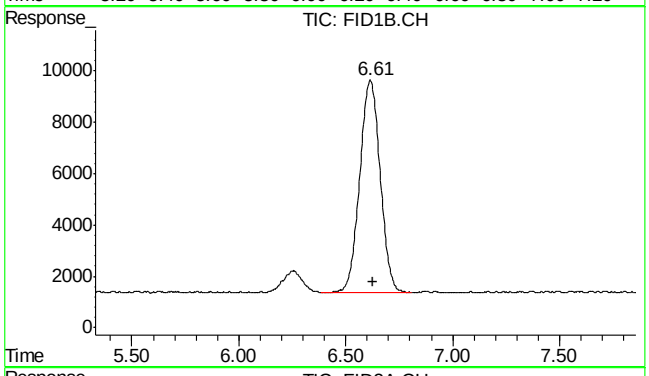
#11 2-Methylpentane

R.T.: 6.256 min
Delta R.T.: 0.000 min
Response: 54453
Conc: N.D.



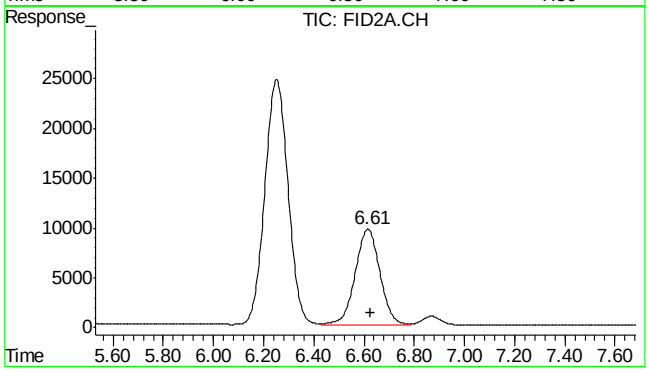
#11 2-Methylpentane

R.T.: 6.252 min
Delta R.T.: -0.004 min
Response: 1576854
Conc: 104.95 ug/L



#12 Methyl Tert Butyl Ether

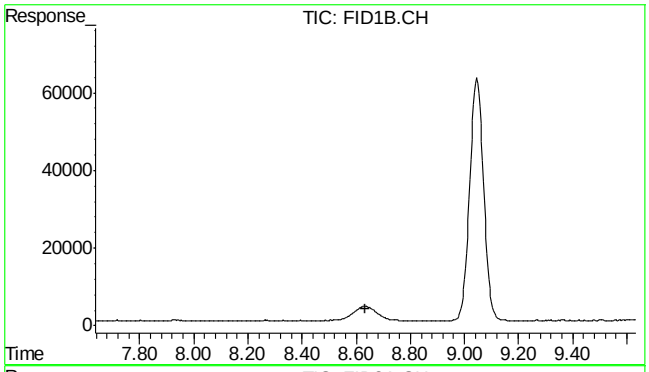
R.T.: 6.615 min
Delta R.T.: -0.014 min
Response: 552508
Conc: 102.41 ug/L



#12 Methyl Tert Butyl Ether

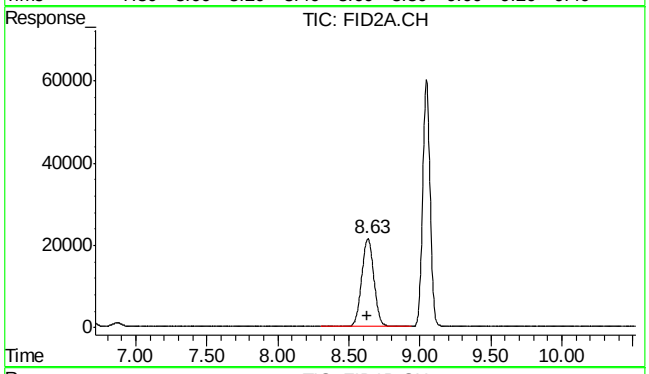
R.T.: 6.616 min
Delta R.T.: -0.012 min
Response: 657415
Conc: 100.52 ug/L

SGS ACCUTEST FA40754



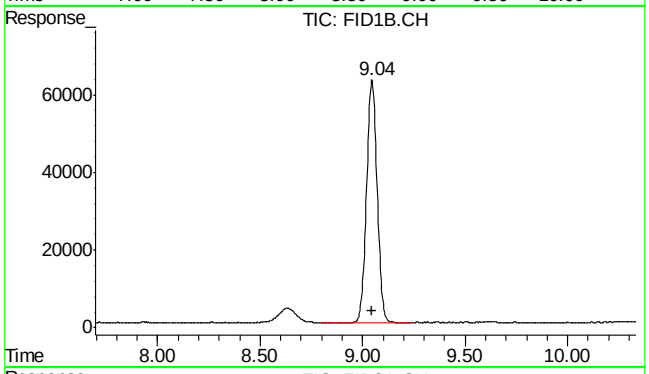
#13 2,2,4-Trimethylpentane

R.T.: 8.634 min
Delta R.T.: 0.000 min
Response: 220720
Conc: N.D.



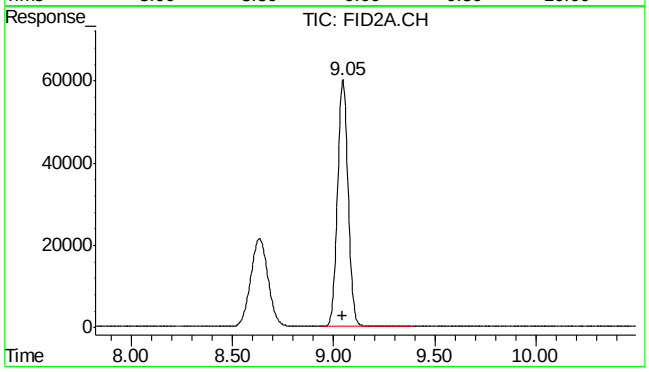
#13 2,2,4-Trimethylpentane

R.T.: 8.634 min
Delta R.T.: 0.000 min
Response: 1288250
Conc: 111.67 ug/L



#14 Benzene

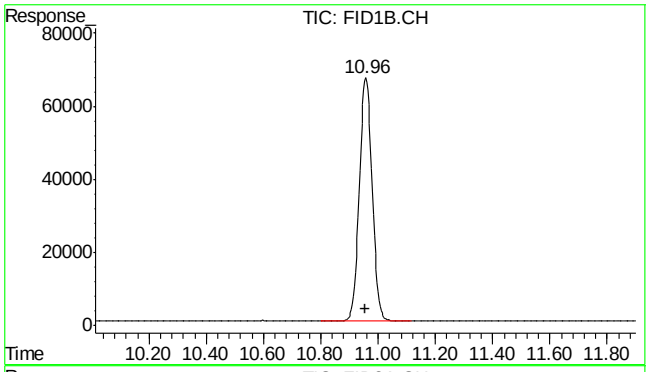
R.T.: 9.046 min
Delta R.T.: 0.000 min
Response: 2253169
Conc: 94.47 ug/L



#14 Benzene

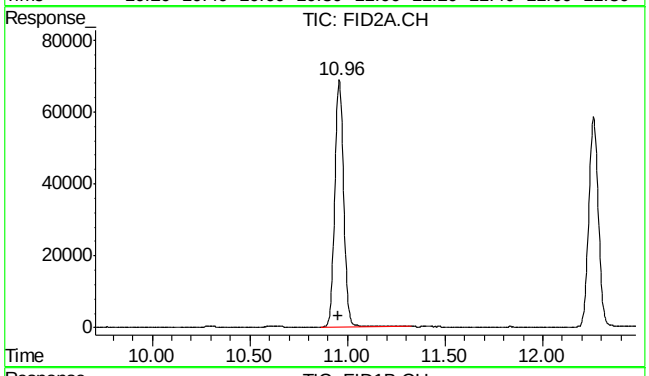
R.T.: 9.047 min
Delta R.T.: 0.000 min
Response: 2180304
Conc: 99.58 ug/L

SGS ACCUTEST FA40754



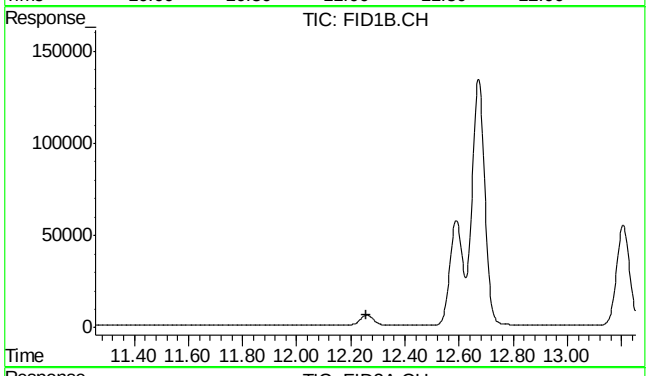
#15 Toluene

R.T.: 10.958 min
Delta R.T.: 0.003 min
Response: 2062410
Conc: 94.97 ug/L



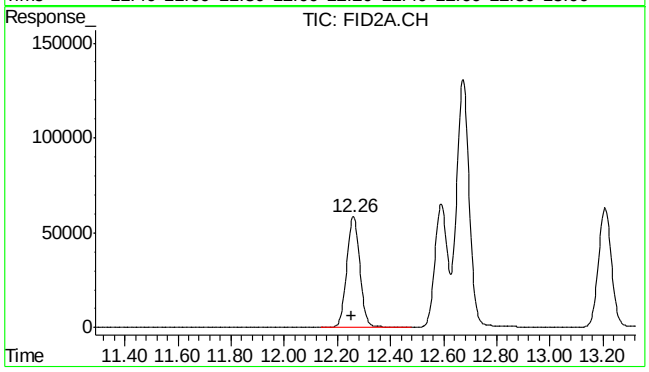
#15 Toluene

R.T.: 10.959 min
Delta R.T.: 0.004 min
Response: 2160481
Conc: 104.82 ug/L



#16 Nonane

R.T.: 12.260 min
Delta R.T.: 0.005 min
Response: 187092
Conc: N.D.



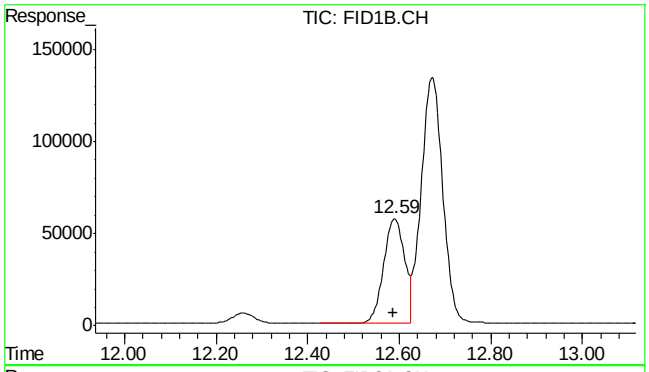
#16 Nonane

R.T.: 12.261 min
Delta R.T.: 0.005 min
Response: 1987874
Conc: 103.06 ug/L

7.6.9

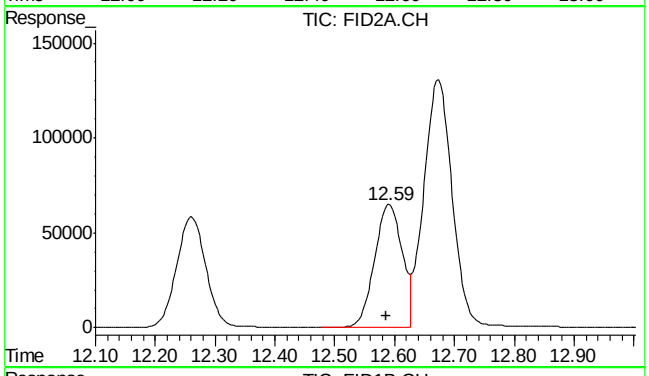
7

SGS ACCUTEST FA40754



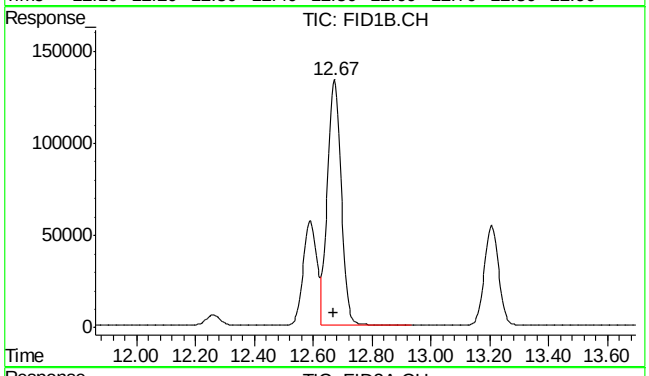
#17 Ethylbenzene

R.T.: 12.591 min
Delta R.T.: 0.005 min
Response: 1785421
Conc: 97.69 ug/L



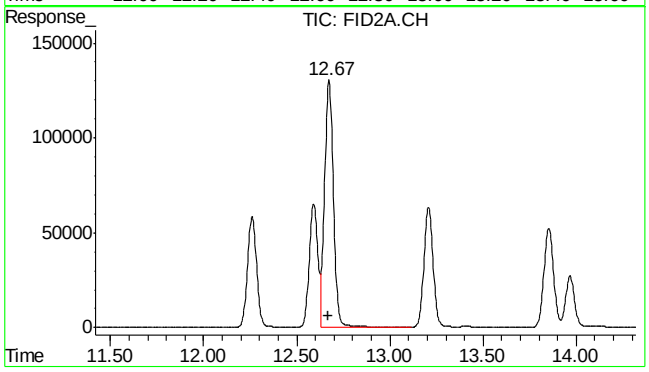
#17 Ethylbenzene

R.T.: 12.591 min
Delta R.T.: 0.004 min
Response: 2056609
Conc: 105.23 ug/L



#18 m,p-Xylene

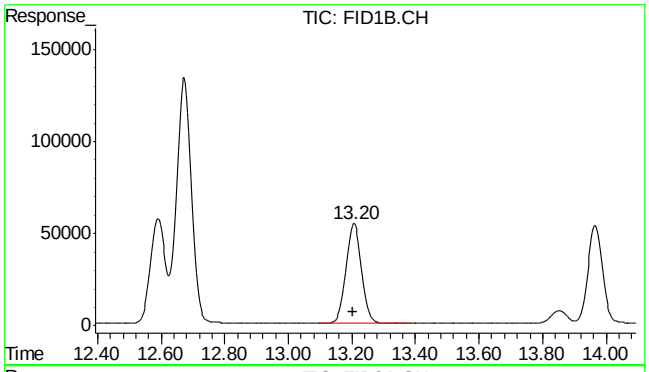
R.T.: 12.673 min
Delta R.T.: 0.004 min
Response: 4376795
Conc: 197.87 ug/L



#18 m,p-Xylene

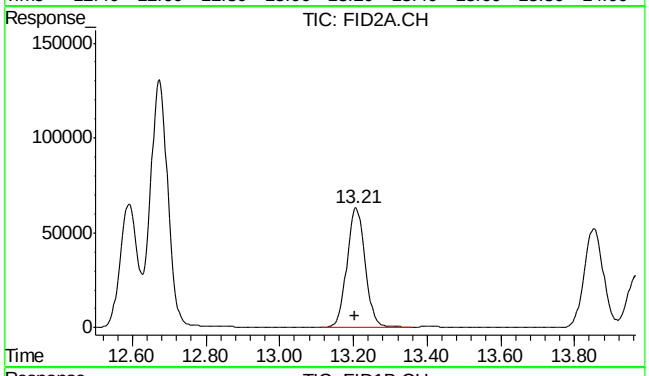
R.T.: 12.674 min
Delta R.T.: 0.005 min
Response: 4353678
Conc: 210.19 ug/L

SGS ACCUTEST FA40754



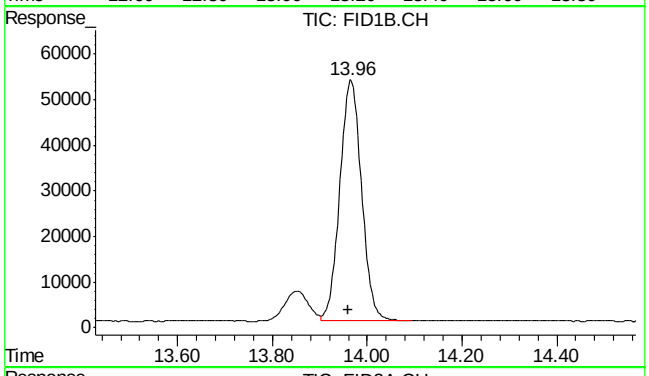
#19 o-Xylene

R.T.: 13.207 min
Delta R.T.: 0.005 min
Response: 1821303
Conc: 95.26 ug/L



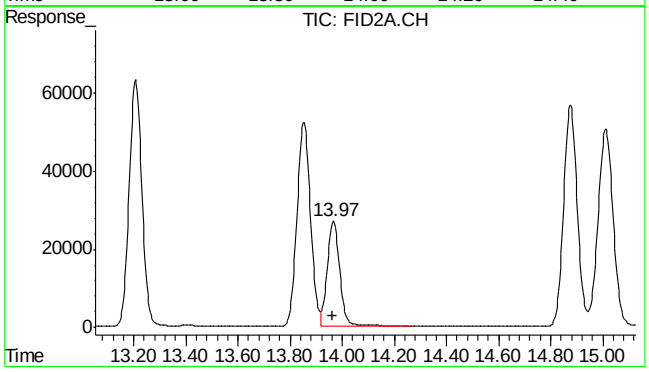
#19 o-Xylene

R.T.: 13.208 min
Delta R.T.: 0.005 min
Response: 2150350
Conc: 103.02 ug/L



#20 BFB

R.T.: 13.966 min
Delta R.T.: 0.005 min
Response: 1681785
Conc: 91.62 ug/L



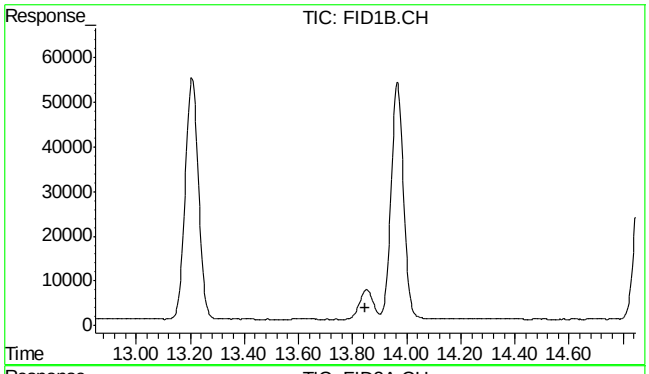
#20 BFB

R.T.: 13.967 min
Delta R.T.: 0.005 min
Response: 905424
Conc: 99.96 ug/L

7.6.9

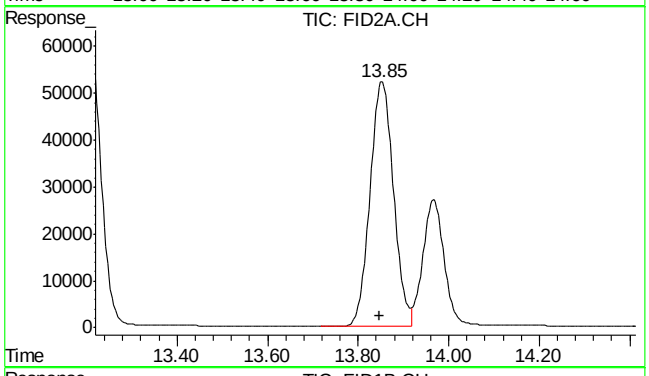
7

SGS ACCUTEST FA40754



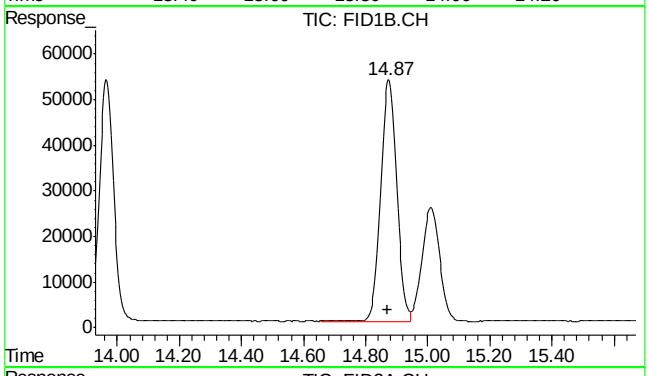
#21 Decane

R.T.: 13.852 min
Delta R.T.: 0.005 min
Response: 226878
Conc: N.D.



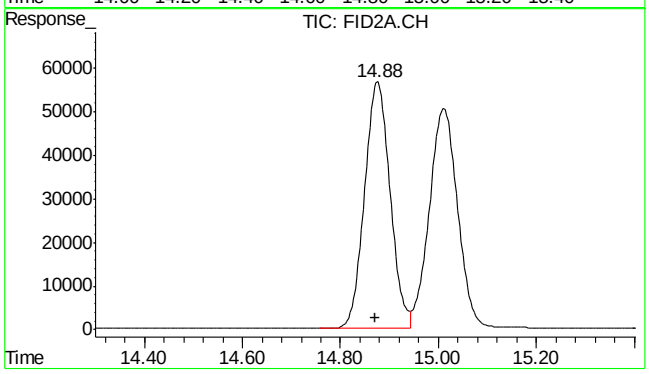
#21 Decane

R.T.: 13.853 min
Delta R.T.: 0.005 min
Response: 1865686
Conc: 103.62 ug/L



#22 1,2,4-Trimethylbenzene

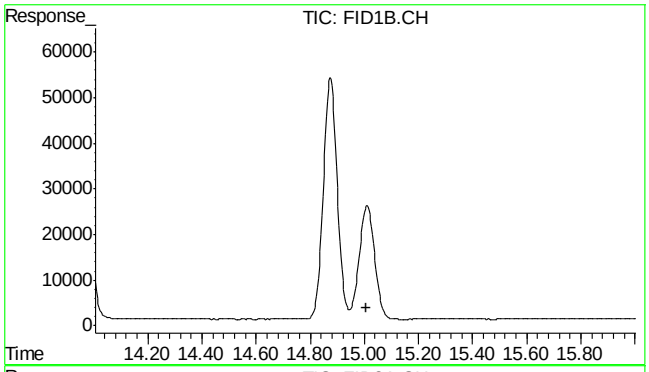
R.T.: 14.875 min
Delta R.T.: 0.005 min
Response: 1895042
Conc: 94.75 ug/L



#22 1,2,4-Trimethylbenzene

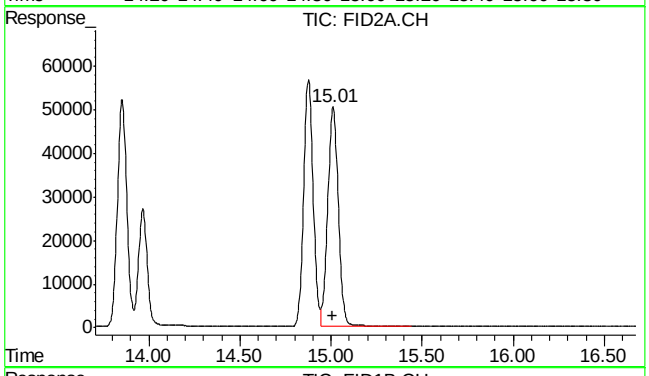
R.T.: 14.877 min
Delta R.T.: 0.005 min
Response: 2039817
Conc: 101.15 ug/L

SGS ACCUTEST FA40754



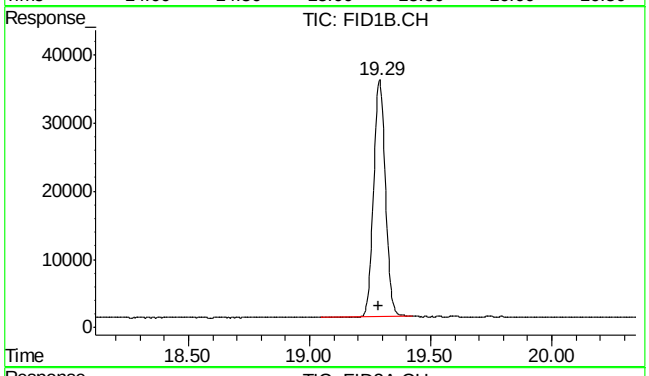
#23 Butylcyclohexane

R.T.: 15.011 min
Delta R.T.: 0.005 min
Response: 991746
Conc: N.D.



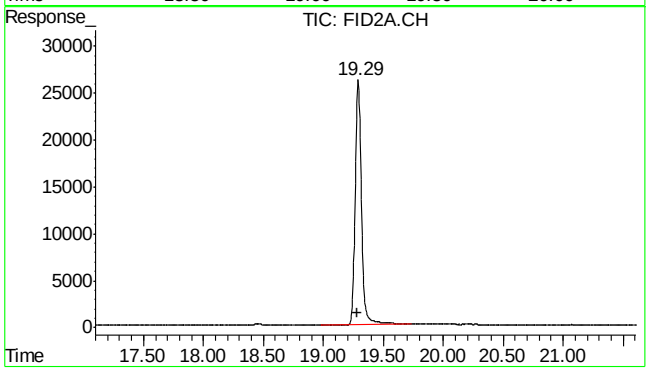
#23 Butylcyclohexane

R.T.: 15.012 min
Delta R.T.: 0.006 min
Response: 2051025
Conc: 98.31 ug/L



#24 Naphthalene

R.T.: 19.290 min
Delta R.T.: 0.006 min
Response: 1172861
Conc: 94.82 ug/L



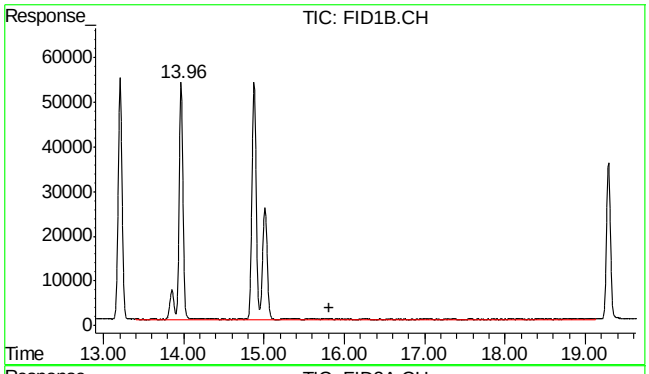
#24 Naphthalene

R.T.: 19.291 min
Delta R.T.: 0.005 min
Response: 943451
Conc: 99.35 ug/L

7.6.9

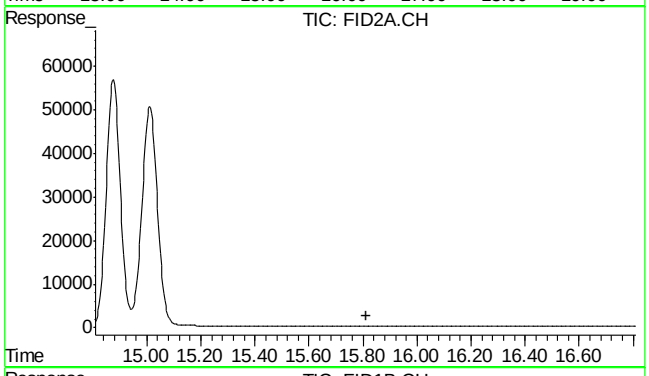
7

SGS ACCUTEST FA40754



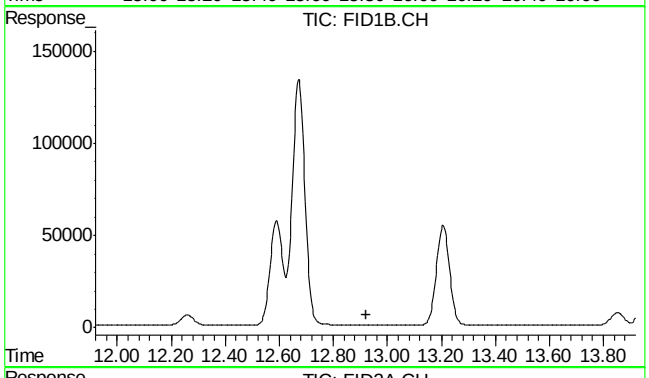
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2323898
Conc: 101.58 ug/L m



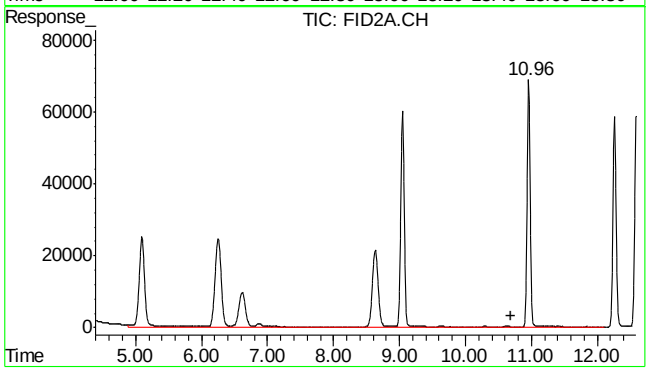
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 3950709
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 13694578
Conc: N.D.



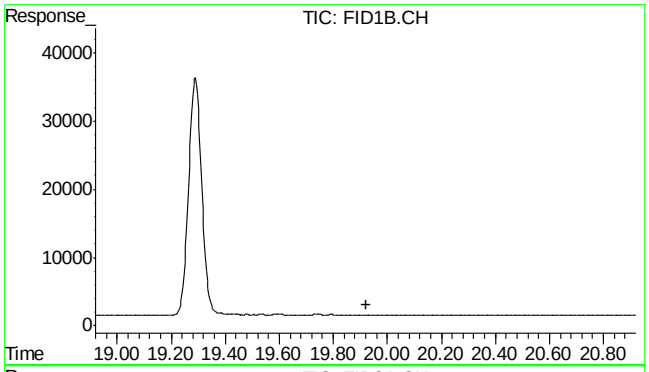
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 4523811
Conc: 327.00 ug/L m

7.6.9

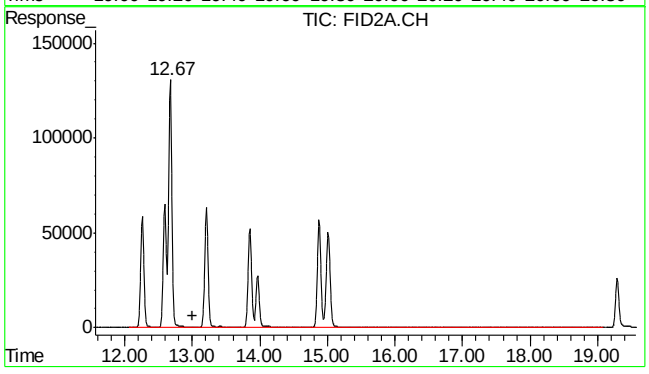
7

SGS ACCUTEST FA40754



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 3591079
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 6197753
Conc: 314.54 ug/L m

7.6.9

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077755.D\FID1B.CH Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077755.D\FID2A.CH
Acq On : 31-Jan-2017, 21:11:37 Operator: antonioc
Sample : cc4115-4 Inst : HP5890
Misc : gc19636,guv4134,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:03:50 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	222329	0	NoCal m	N.D.
2)	S	Alkane B	15.01f	0.00	991498	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.61f	0	709117	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	2190614	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.96f	0	2167622	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	2007855	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	4250159	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	2146179	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	2014072	N.D.	NoCal m
20)	S	BFB	13.96	13.96	1700061	900293	92.618	99.392
		Spiked Amount 200.000 Range 70 - 130 Recovery =					46.31%#	49.70%#
		Target Compounds						
10)		Pentane	0.00	5.09	0	1404877	N.D.	102.433 #
11)		2-Methylpentane	6.25	6.25	57881	1610752	NoCal	107.205 #
12)		Methyl Tert Buty	6.61	6.61	579090	708522	107.334	108.333
13)		2,2,4-Trimethylp	8.63	8.63	243133	1503623	NoCal	134.886 #
14)		Benzene	9.04	9.04	2240323	2194947	93.930	100.250
15)		Toluene	10.96	10.96	2052992	2166233	94.540	105.101
16)		Nonane	12.26	12.26	184306	1951825	NoCal	101.195 #
17)		Ethylbenzene	12.59	12.59	1786882	2056153	97.774	105.202
18)		m,p-Xylene	12.67	12.67	4399295	4330440	198.891	209.073
19)		o-Xylene	13.21	13.21	1834089	2150310	95.926	103.017
21)		Decane	13.85	13.85	224512	1792510	NoCal	99.552 #
22)		1,2,4-Trimethylb	14.87	14.87	1882215	2013028	94.110	99.825
23)		Butylcyclohexane	15.01	15.01	985754	1992451	NoCal	95.498 #
24)		Naphthalene	19.29	19.29	1184539	964218	95.767	101.532
25)	H	C9- C10 Aromatic	15.81	15.81	2182322	3840371	94.473	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	13880472	4810911	NoCal	350.311 #
27)	H	C9- C12 Aliphati	19.92	13.00	3526984	6134169	NoCal	311.175 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077755.D VPH011317.M Fri Feb 03 13:18:47 2017

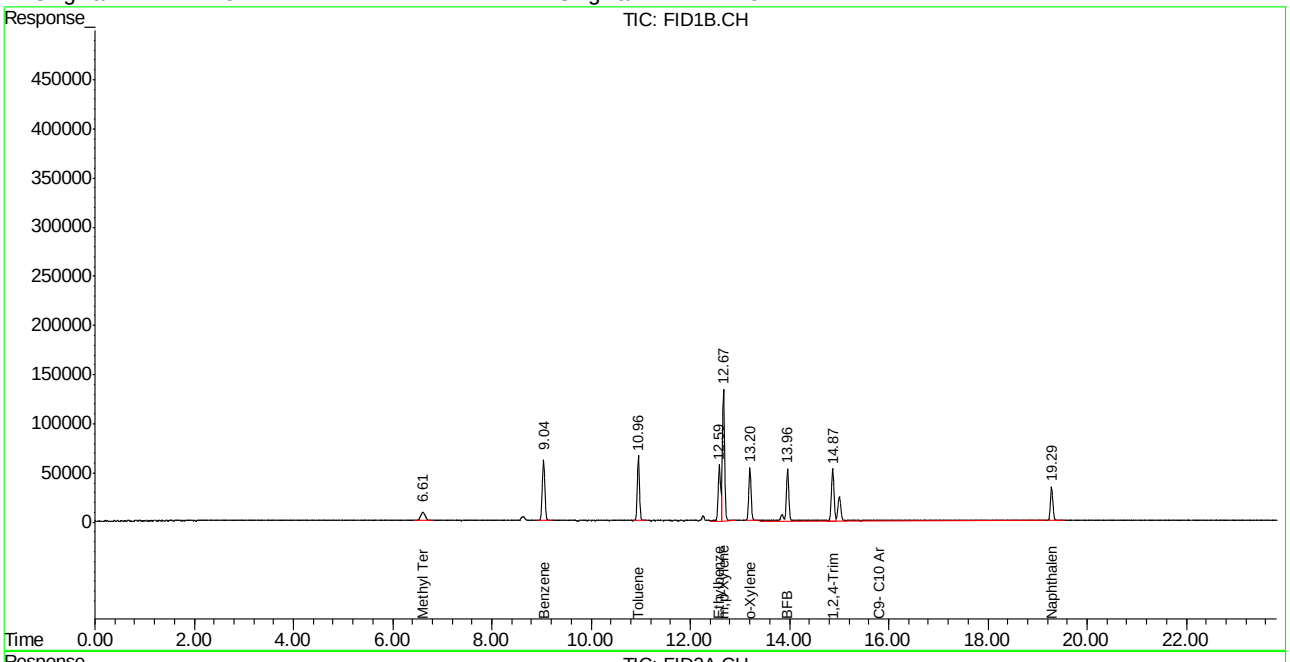
SGS ACCUTEST FA40754

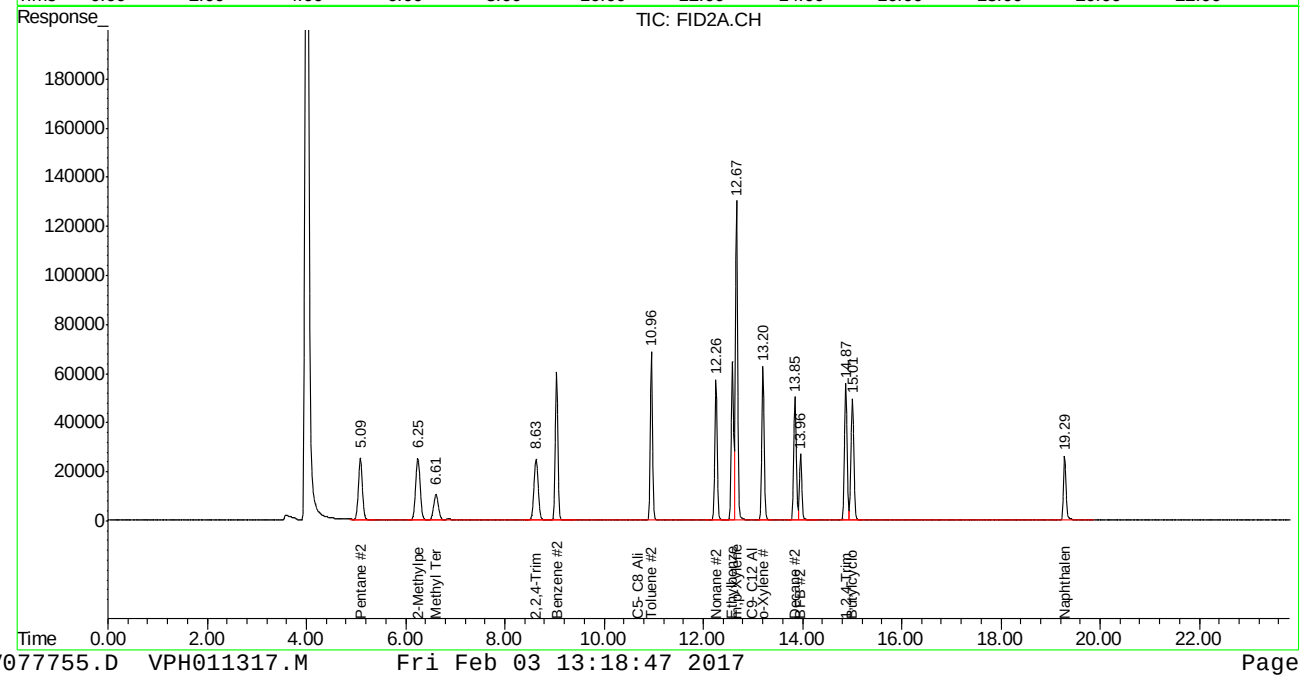
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077755.D\FID1B.CH Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077755.D\FID2A.CH
Acq On : 31-Jan-2017, 21:11:37 Operator: antonioc
Sample : cc4115-4 Inst : HP5890
Misc : gc19636,guv4134,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 1 8:14 2017 Quant Results File: VPH011317.RES

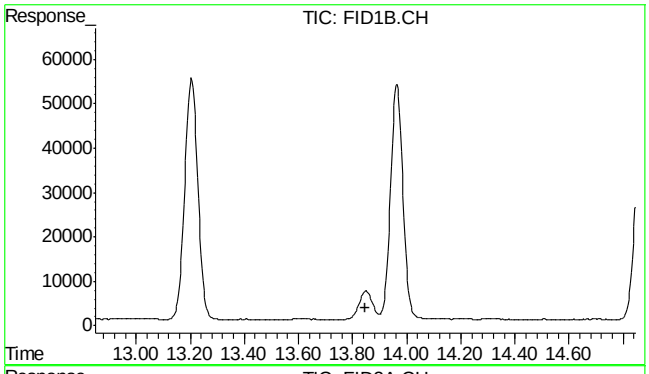
Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID



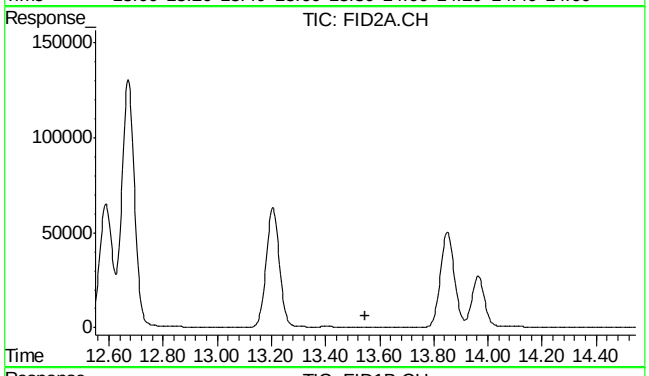


SGS ACCUTEST FA40754



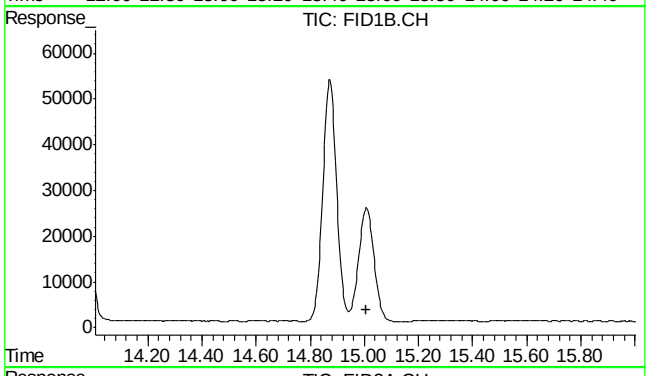
#1 Alkane A

R.T.: 13.848 min
Delta R.T.: 0.001 min
Response: 222329
Conc: N.D.



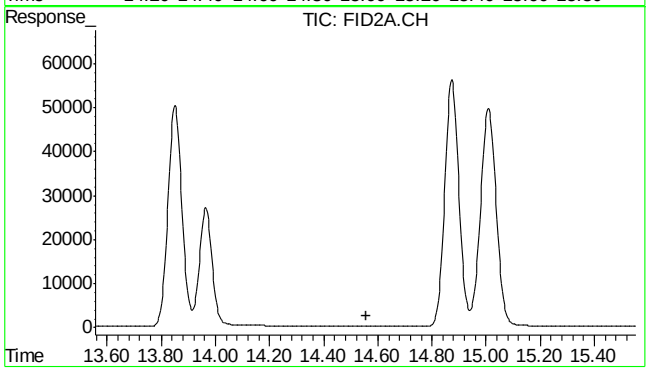
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

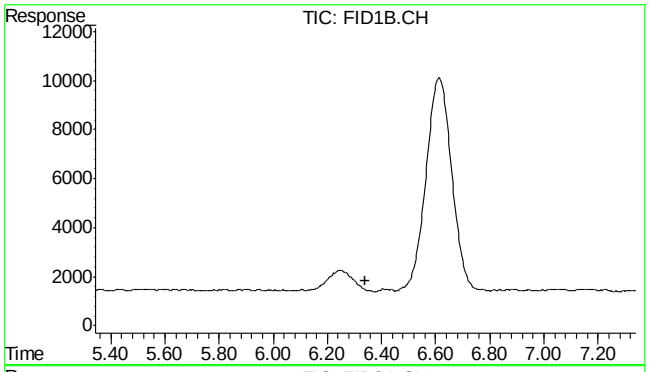
R.T.: 15.007 min
Delta R.T.: 0.002 min
Response: 991498
Conc: N.D.



#2 Alkane B

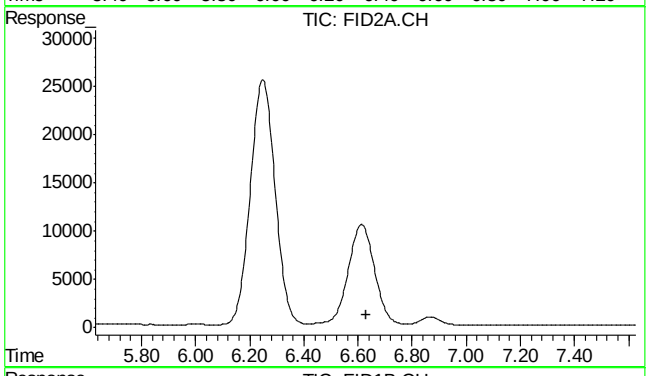
R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

SGS ACCUTEST FA40754



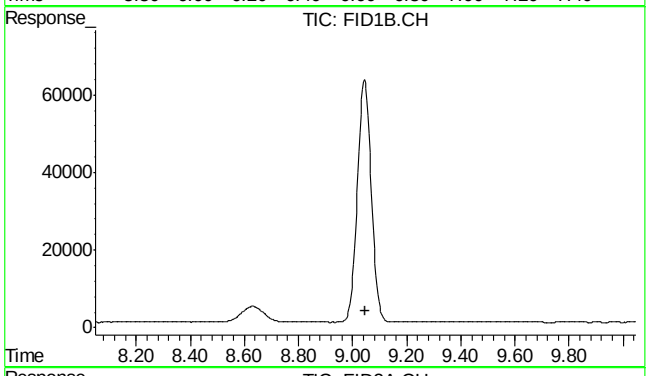
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



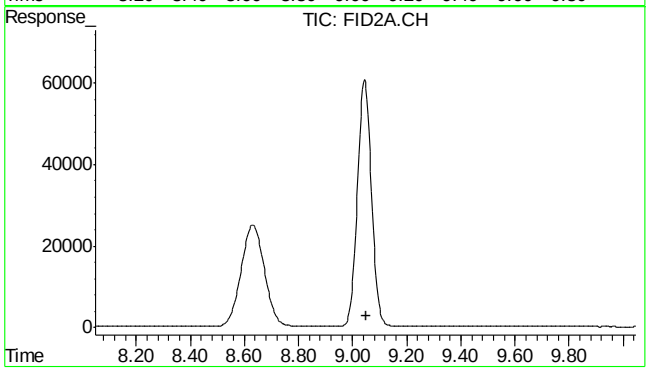
#3 Aromatic A

R.T.: 6.612 min
Delta R.T.: -0.017 min
Response: 709117
Conc: N.D.



#4 Aromatic B

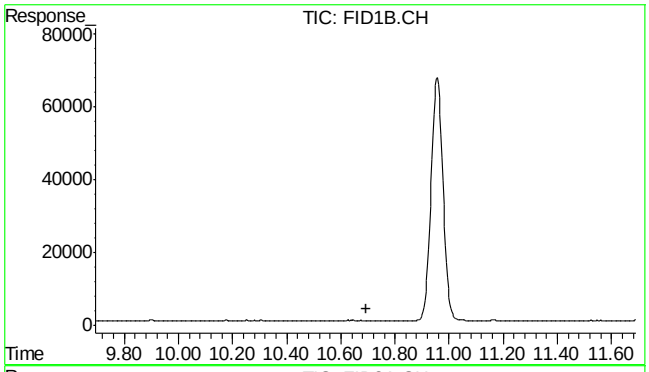
R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

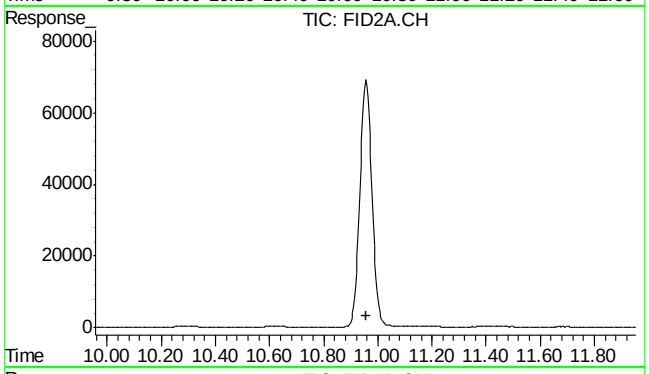
R.T.: 9.044 min
Delta R.T.: -0.005 min
Response: 2190614
Conc: N.D.

SGS ACCUTEST FA40754



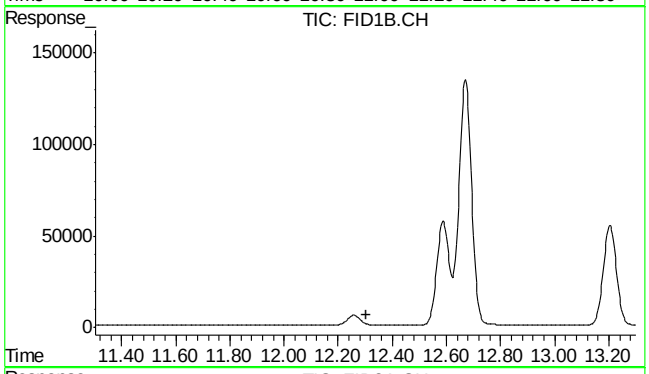
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



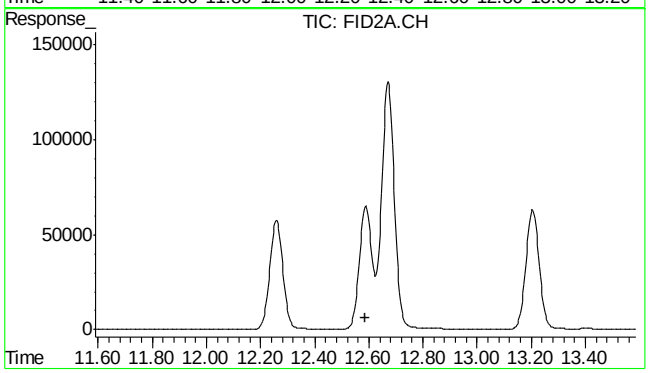
#5 Aromatic C

R.T.: 10.956 min
Delta R.T.: 0.000 min
Response: 2167622
Conc: N.D.



#6 Aromatic D

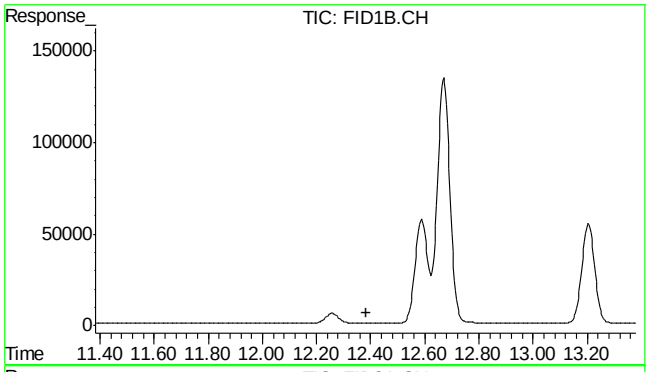
R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

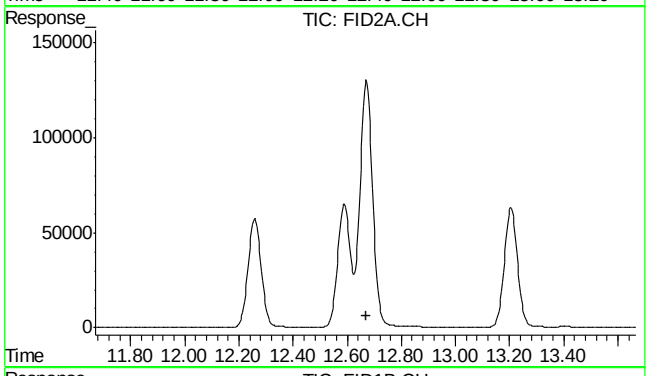
R.T.: 12.588 min
Delta R.T.: 0.000 min
Response: 2007855
Conc: N.D.

SGS ACCUTEST FA40754



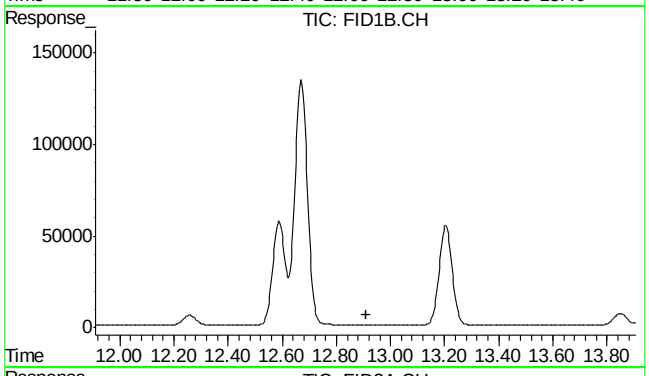
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



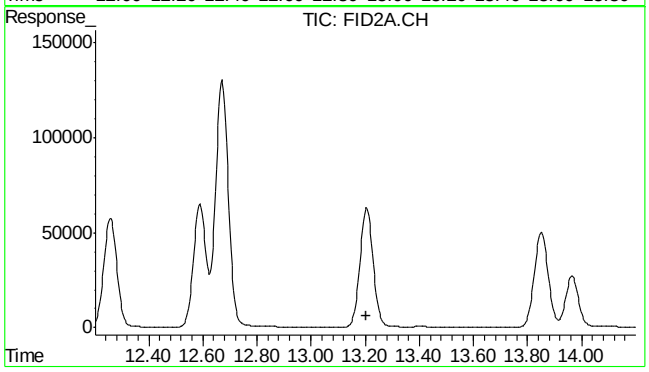
#7 Aromatic E

R.T.: 12.670 min
Delta R.T.: 0.001 min
Response: 4250159
Conc: N.D.



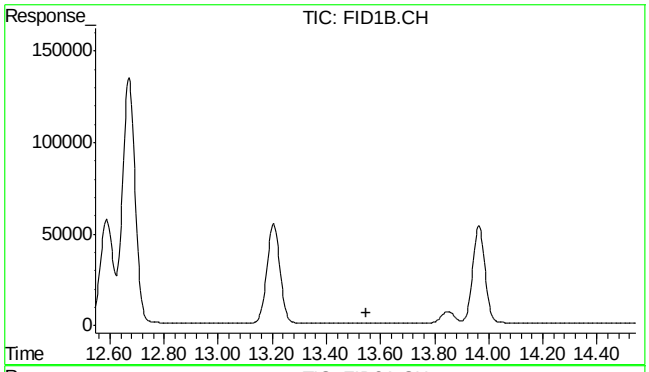
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



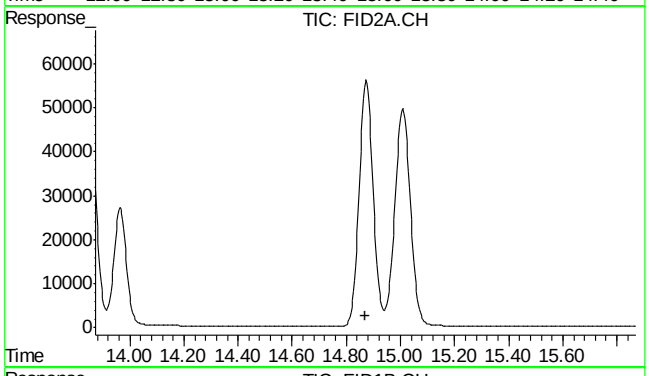
#8 Aromatic F

R.T.: 13.204 min
Delta R.T.: 0.001 min
Response: 2146179
Conc: N.D.



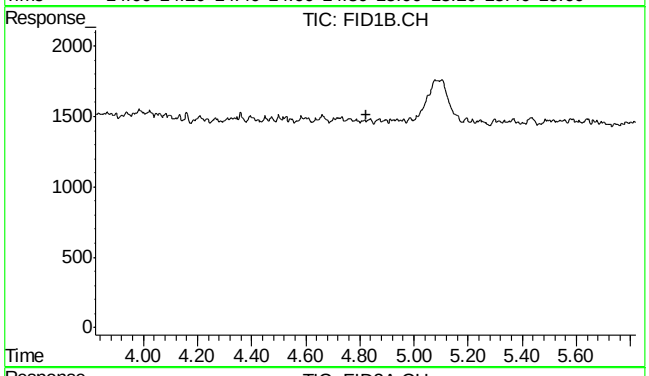
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



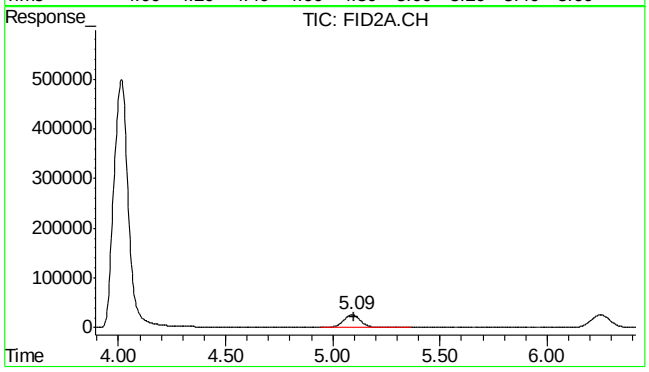
#9 Aromatic G

R.T.: 14.873 min
Delta R.T.: 0.002 min
Response: 2014072
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 5.091 min
Delta R.T.: -0.009 min
Response: 1404877
Conc: 102.43 ug/L

7.6.10

7

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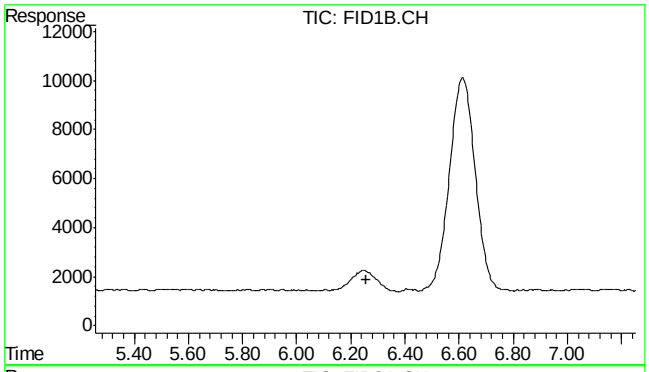
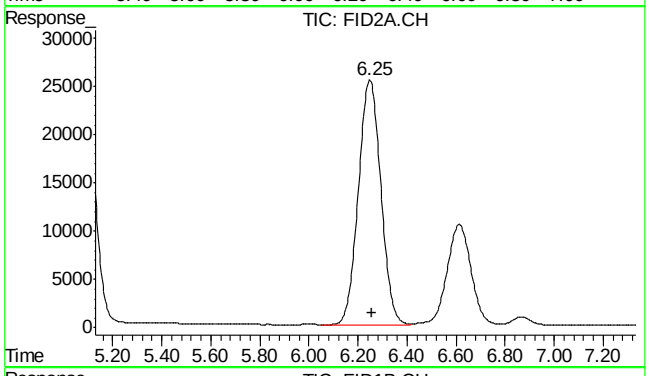


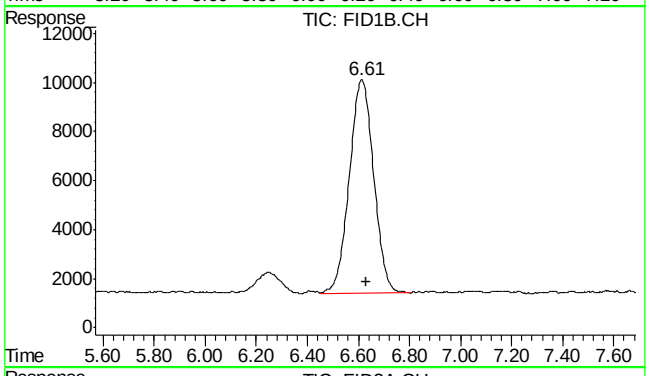
#11 2-Methylpentane

R.T.: 6.248 min
Delta R.T.: -0.008 min
Response: 57881
Conc: N.D.



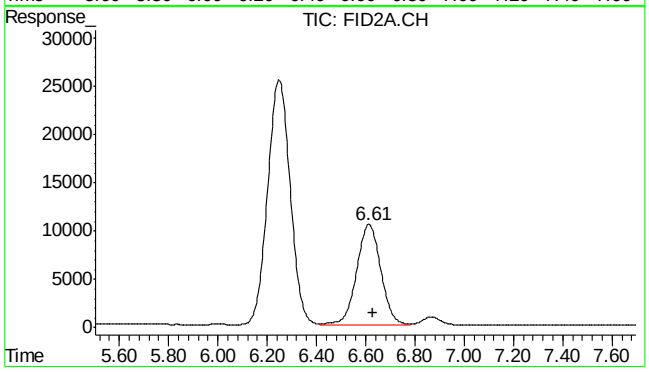
#11 2-Methylpentane

R.T.: 6.249 min
Delta R.T.: -0.007 min
Response: 1610752
Conc: 107.20 ug/L



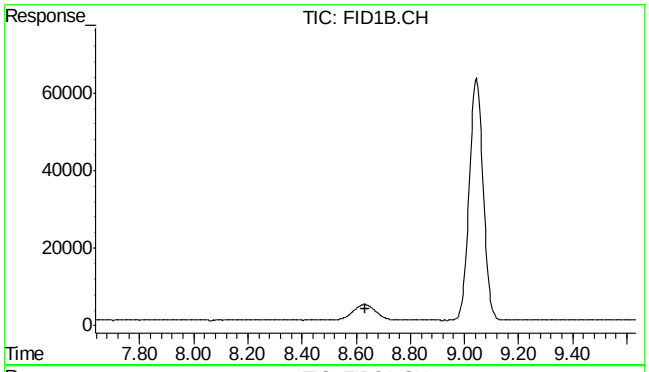
#12 Methyl Tert Butyl Ether

R.T.: 6.614 min
Delta R.T.: -0.015 min
Response: 579090
Conc: 107.33 ug/L



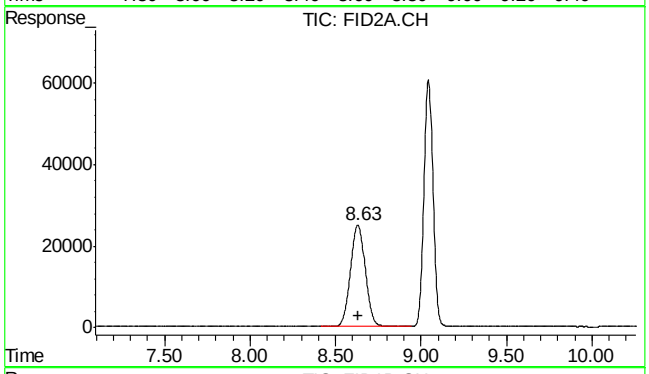
#12 Methyl Tert Butyl Ether

R.T.: 6.614 min
Delta R.T.: -0.014 min
Response: 708522
Conc: 108.33 ug/L



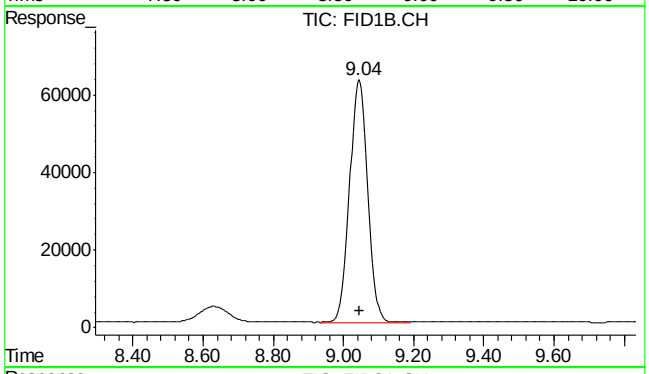
#13 2,2,4-Trimethylpentane

R.T.: 8.632 min
Delta R.T.: -0.002 min
Response: 243133
Conc: N.D.



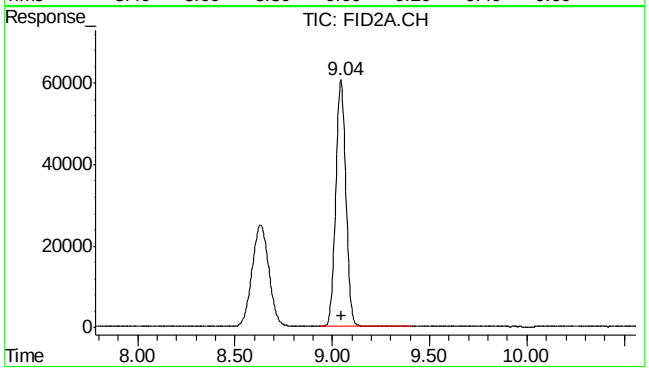
#13 2,2,4-Trimethylpentane

R.T.: 8.632 min
Delta R.T.: -0.002 min
Response: 1503623
Conc: 134.89 ug/L



#14 Benzene

R.T.: 9.045 min
Delta R.T.: -0.001 min
Response: 2240323
Conc: 93.93 ug/L



#14 Benzene

R.T.: 9.045 min
Delta R.T.: 0.000 min
Response: 2194947
Conc: 100.25 ug/L

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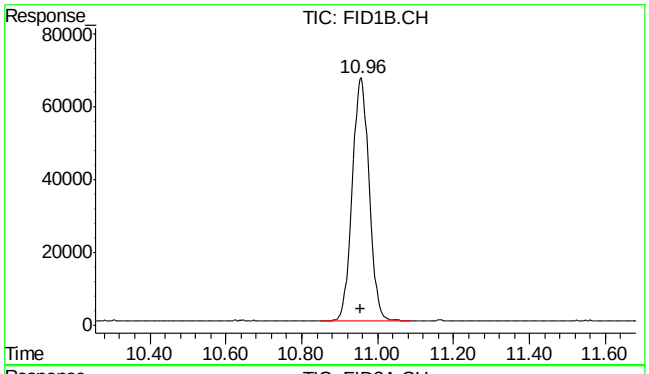
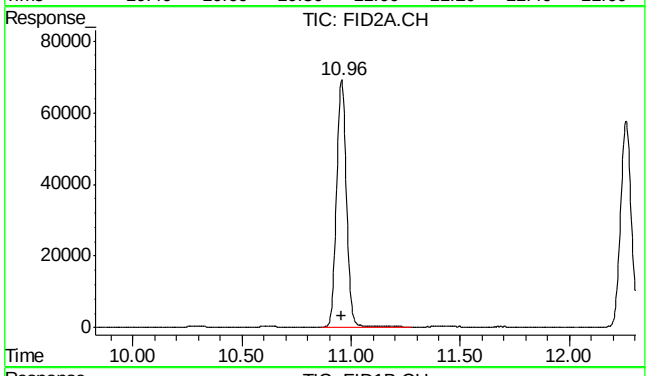


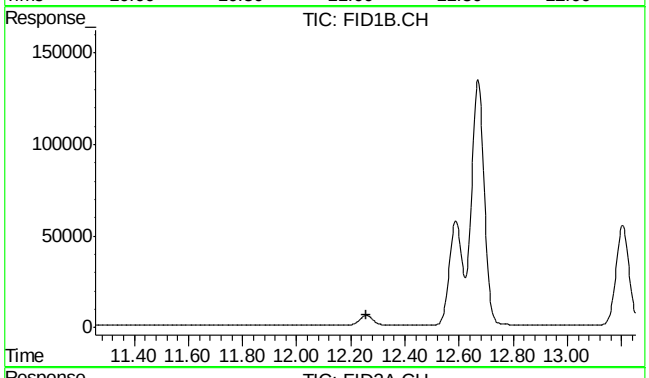
#15 Toluene

R.T.: 10.957 min
Delta R.T.: 0.002 min
Response: 2052992
Conc: 94.54 ug/L



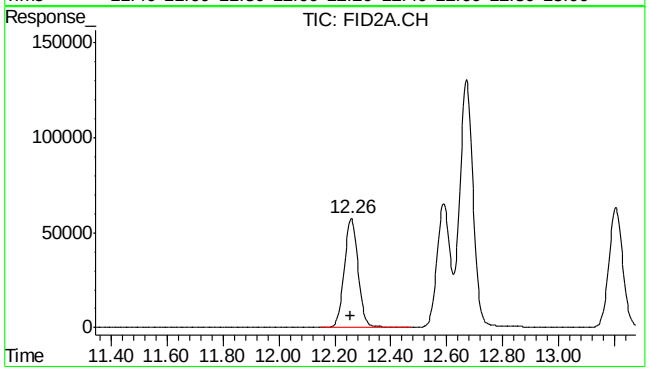
#15 Toluene

R.T.: 10.957 min
Delta R.T.: 0.002 min
Response: 2166233
Conc: 105.10 ug/L



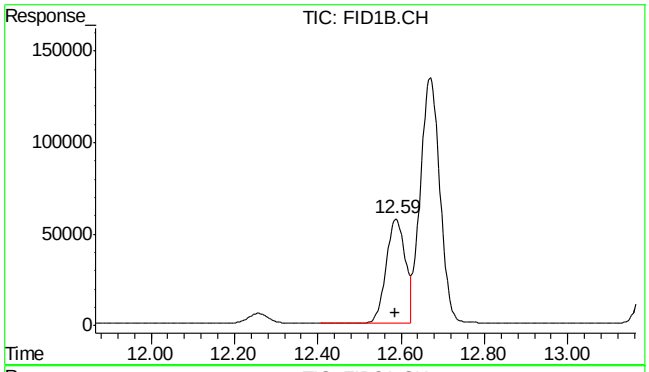
#16 Nonane

R.T.: 12.258 min
Delta R.T.: 0.003 min
Response: 184306
Conc: N.D.



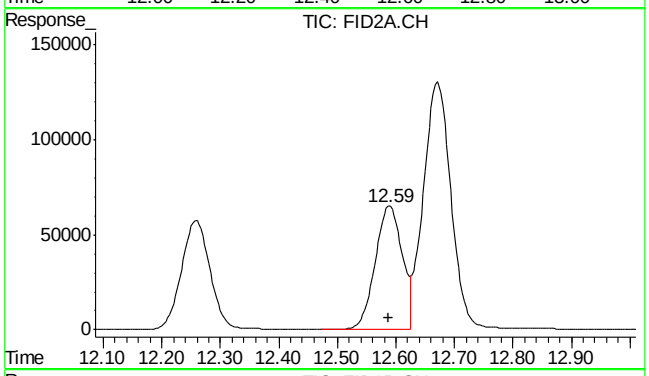
#16 Nonane

R.T.: 12.259 min
Delta R.T.: 0.003 min
Response: 1951825
Conc: 101.19 ug/L



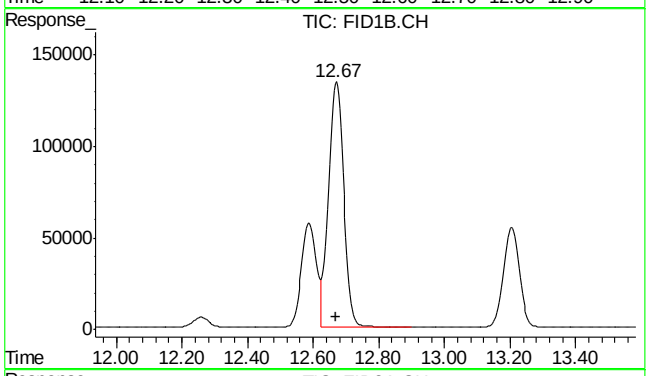
#17 Ethylbenzene

R.T.: 12.589 min
Delta R.T.: 0.003 min
Response: 1786882
Conc: 97.77 ug/L



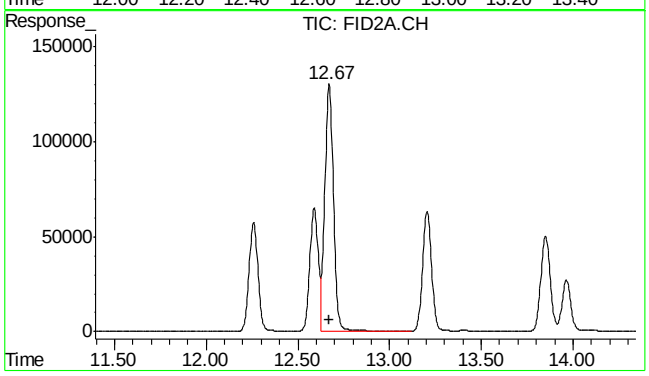
#17 Ethylbenzene

R.T.: 12.589 min
Delta R.T.: 0.002 min
Response: 2056153
Conc: 105.20 ug/L



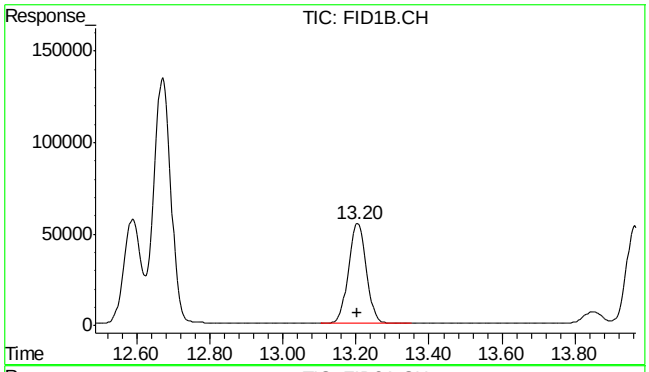
#18 m,p-Xylene

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 4399295
Conc: 198.89 ug/L



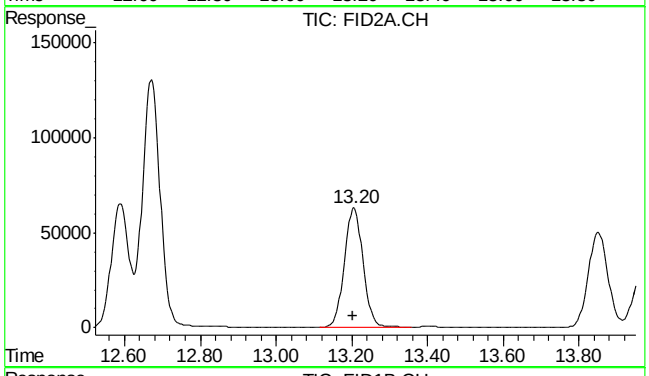
#18 m,p-Xylene

R.T.: 12.672 min
Delta R.T.: 0.003 min
Response: 4330440
Conc: 209.07 ug/L



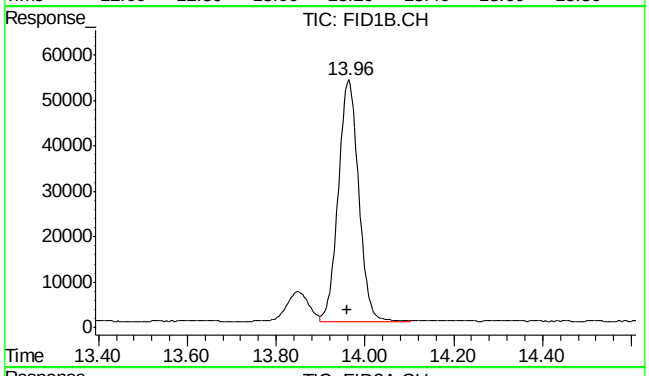
#19 o-Xylene

R.T.: 13.205 min
Delta R.T.: 0.003 min
Response: 1834089
Conc: 95.93 ug/L



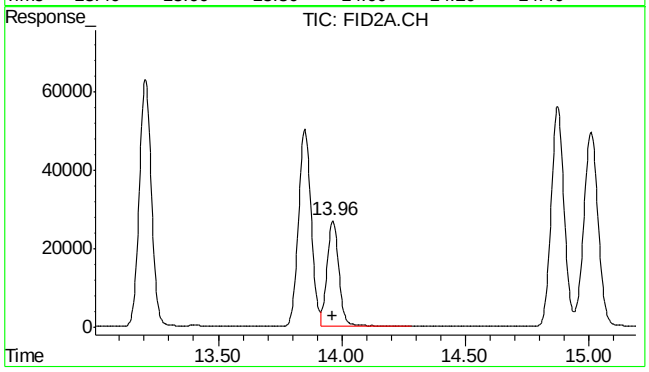
#19 o-Xylene

R.T.: 13.206 min
Delta R.T.: 0.003 min
Response: 2150310
Conc: 103.02 ug/L



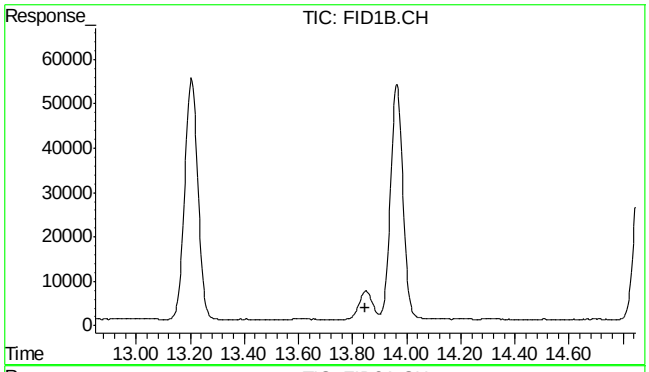
#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 1700061
Conc: 92.62 ug/L



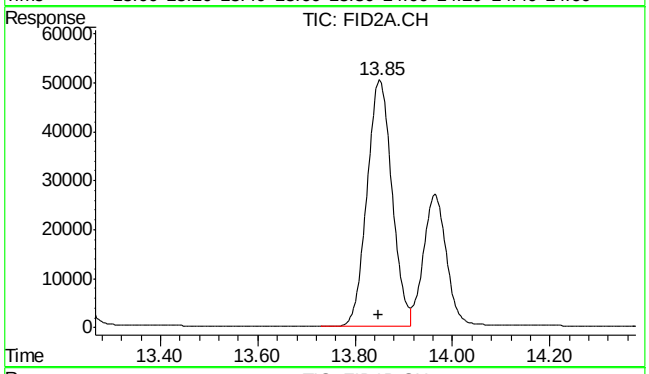
#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 900293
Conc: 99.39 ug/L



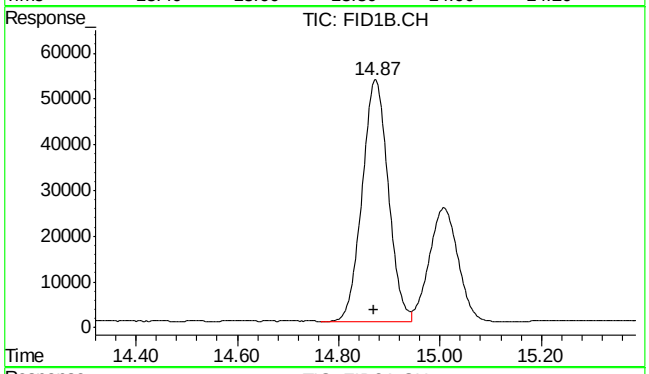
#21 Decane

R.T.: 13.850 min
Delta R.T.: 0.002 min
Response: 224512
Conc: N.D.



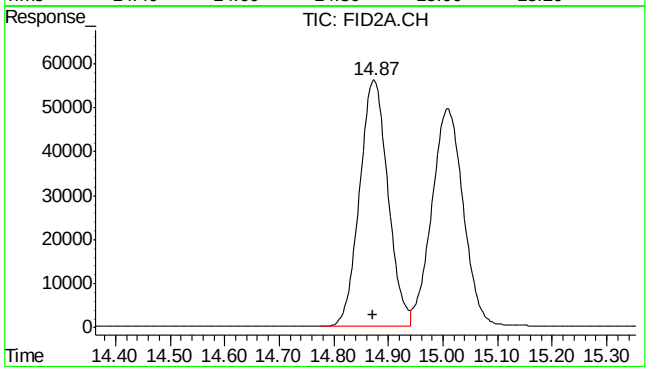
#21 Decane

R.T.: 13.851 min
Delta R.T.: 0.003 min
Response: 1792510
Conc: 99.55 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.873 min
Delta R.T.: 0.003 min
Response: 1882215
Conc: 94.11 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.874 min
Delta R.T.: 0.003 min
Response: 2013028
Conc: 99.83 ug/L

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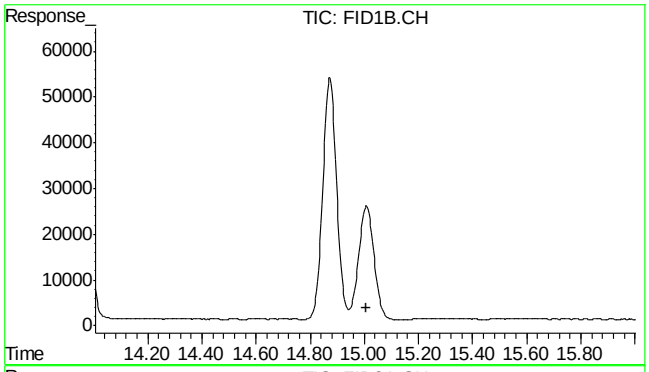
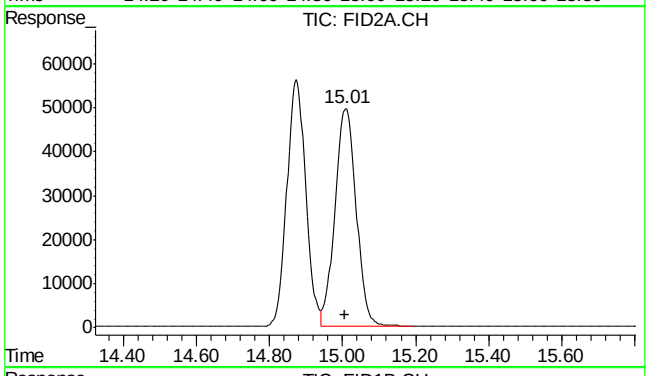


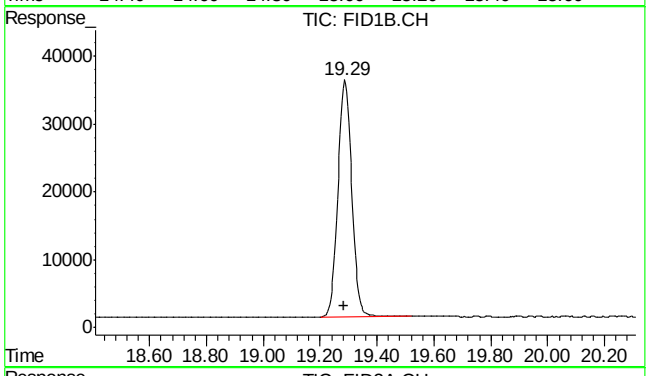
#23 Butylcyclohexane

R.T.: 15.009 min
Delta R.T.: 0.003 min
Response: 985754
Conc: N.D.



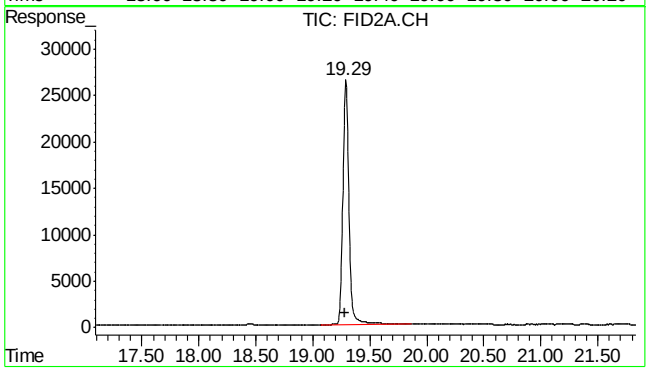
#23 Butylcyclohexane

R.T.: 15.010 min
Delta R.T.: 0.004 min
Response: 1992451
Conc: 95.50 ug/L



#24 Naphthalene

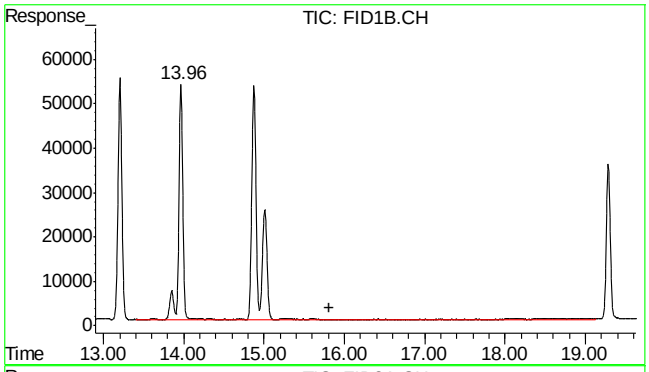
R.T.: 19.287 min
Delta R.T.: 0.003 min
Response: 1184539
Conc: 95.77 ug/L



#24 Naphthalene

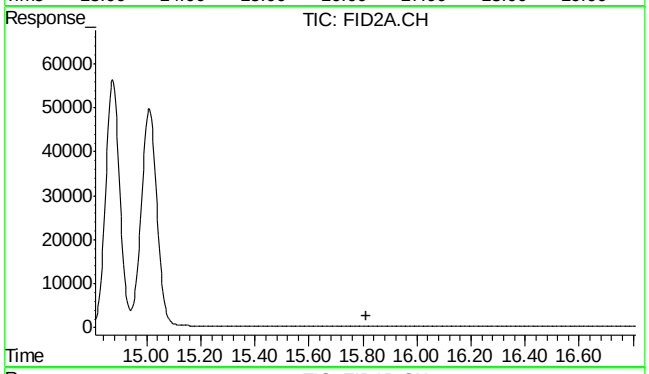
R.T.: 19.289 min
Delta R.T.: 0.003 min
Response: 964218
Conc: 101.53 ug/L

SGS ACCUTEST FA40754



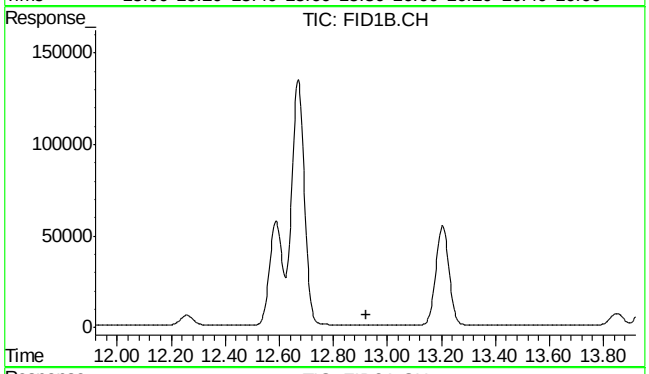
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2182322
Conc: 94.47 ug/L m



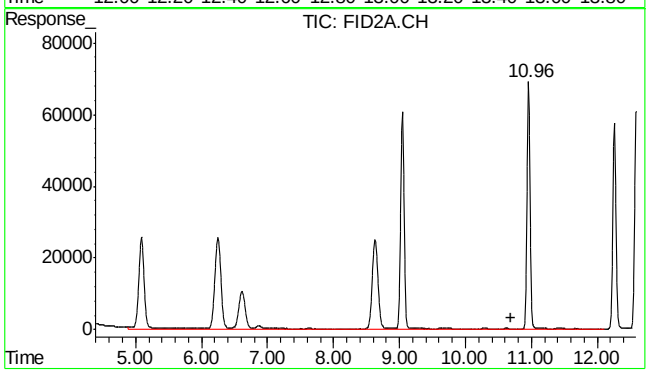
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 3840371
Conc: N.D.



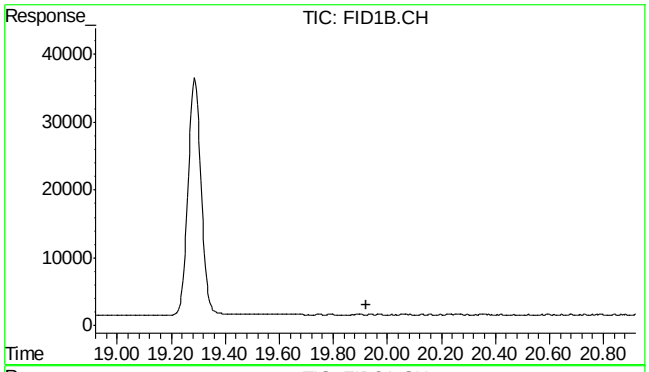
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 13880472
Conc: N.D.



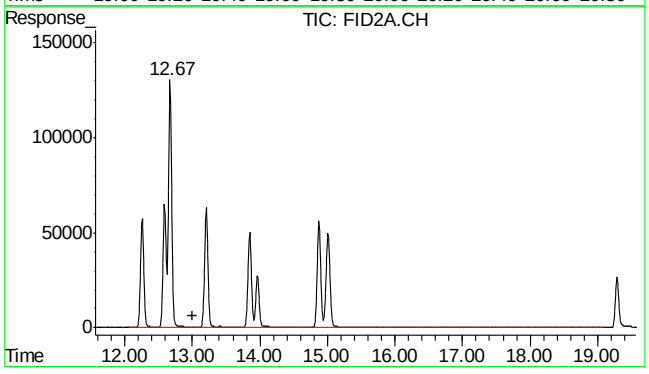
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 4810911
Conc: 350.31 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 3526984
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 6134169
Conc: 311.18 ug/L m

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077762.D\FID1B.CH Vial: 31
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077762.D\FID2A.CH
Acq On : 01-Feb-2017, 00:46:30 Operator: antonioc
Sample : ecc4115-4 Inst : HP5890
Misc : gc19636,guv4134,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:04:11 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	215787	0	NoCal m	N.D.
2)	S	Alkane B	15.01f	0.00	982345	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.61f	0	674364	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	2208283	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.96f	0	2171461	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	2078167	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	4253726	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	2159078	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	2007877	N.D.	NoCal m
20)	S	BFB	13.96	13.97	1679665	900175	91.507	99.379
		Spiked Amount 200.000 Range 70 - 130 Recovery =					45.75%#	49.69%#
		Target Compounds						
10)		Pentane	0.00	5.10	0	1423255	N.D.	103.773 #
11)		2-Methylpentane	6.25	6.25	63090	1612646	NoCal	107.331 #
12)		Methyl Tert Buty	6.62	6.62	571901	678906	106.002	103.805
13)		2,2,4-Trimethylp	8.63	8.63	229601	1355439	NoCal	118.768 #
14)		Benzene	9.05	9.05	2283890	2208218	95.757	100.856
15)		Toluene	10.96	10.96	2078444	2179219	95.712	105.731
16)		Nonane	12.26	12.26	182705	1939881	NoCal	100.576 #
17)		Ethylbenzene	12.59	12.59	1795561	2062521	98.249	105.528
18)		m,p-Xylene	12.67	12.67	4388247	4332652	198.391	209.180
19)		o-Xylene	13.21	13.21	1841567	2162130	96.317	103.583
21)		Decane	13.85	13.85	215156	1746977	NoCal	97.023 #
22)		1,2,4-Trimethylb	14.87	14.87	1858378	2008021	92.918	99.577
23)		Butylcyclohexane	15.01	15.01	972271	1991689	NoCal	95.462 #
24)		Naphthalene	19.29	19.29	1233101	1006093	99.693	105.942
25)	H	C9- C10 Aromatic	15.81	15.81	2209240	3799610	95.825	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	13822890	4700346	NoCal	341.333 #
27)	H	C9- C12 Aliphati	19.92	13.00	3543201	6007034	NoCal	304.444 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077762.D VPH011317.M Fri Feb 03 13:19:06 2017

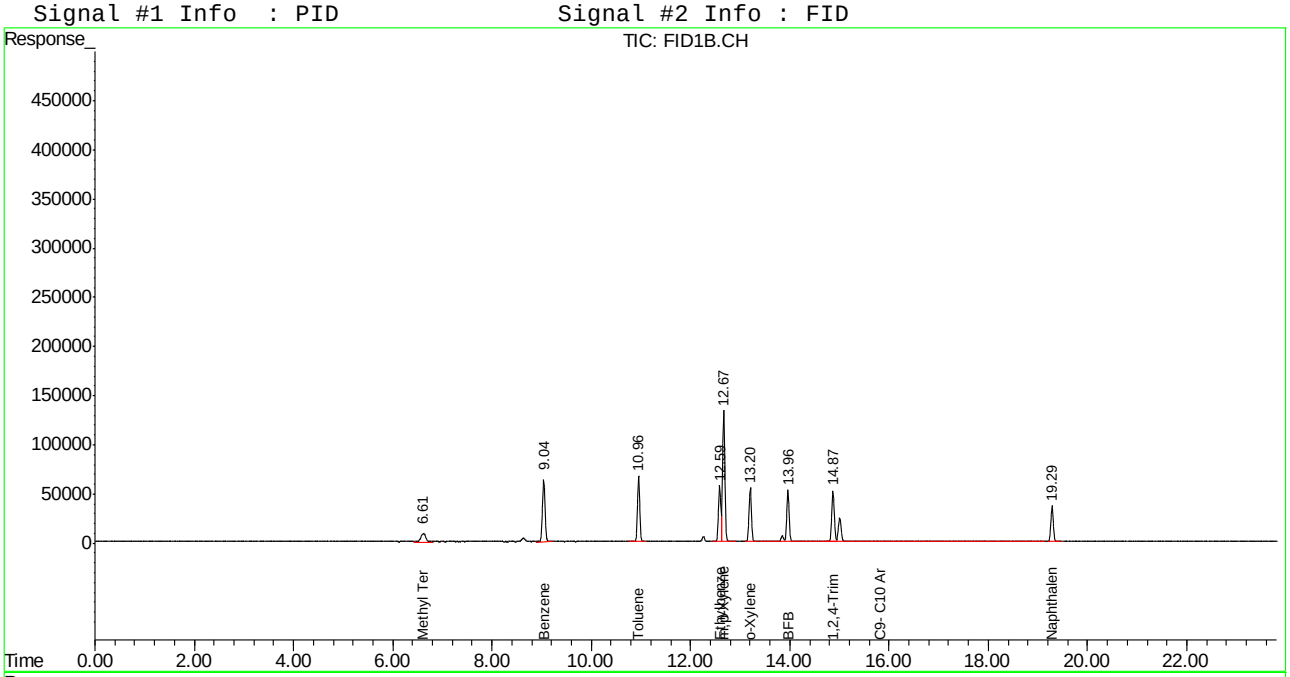
SGS ACCUTEST FA40754

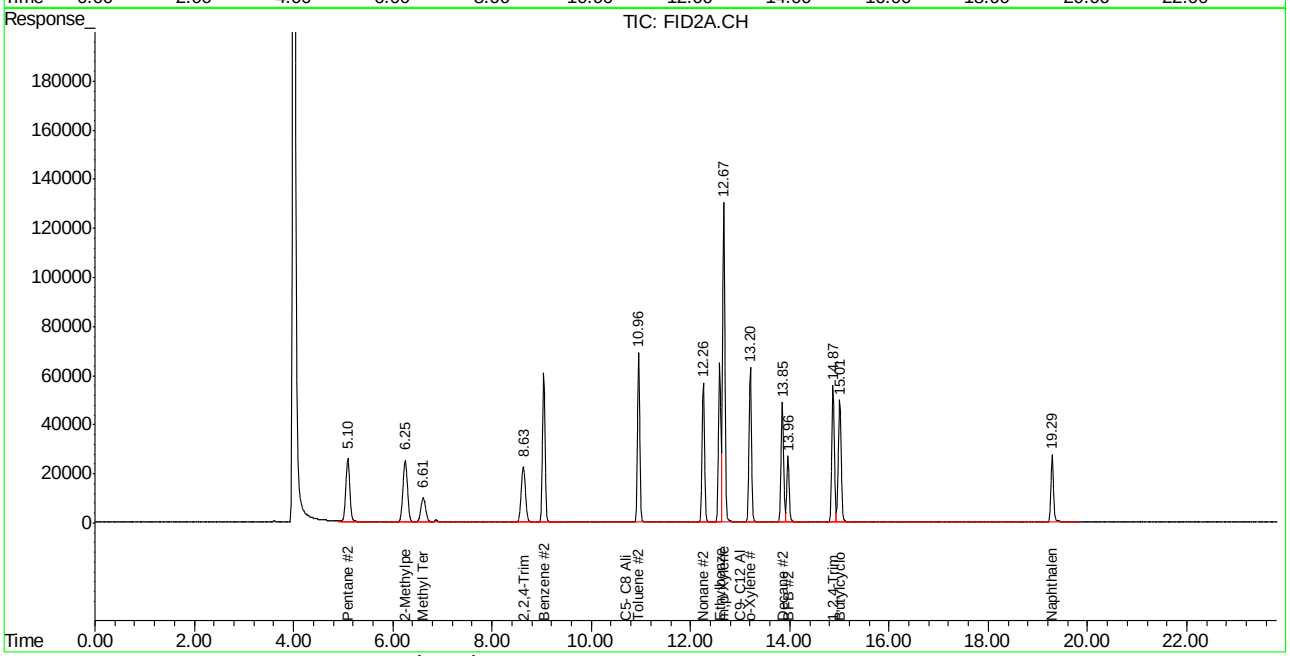
Quantitation Report (QT Reviewed)

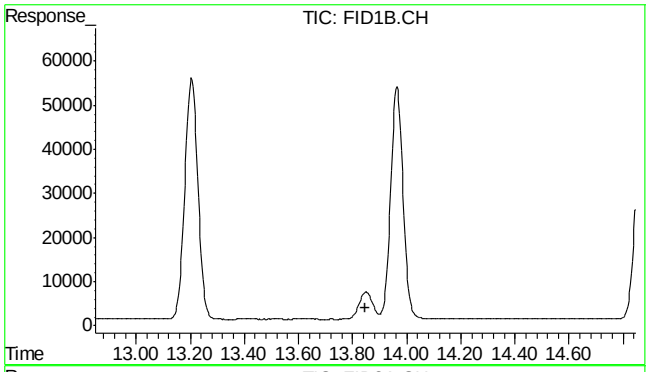
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077762.D\FID1B.CH Vial: 31
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077762.D\FID2A.CH
Acq On : 01-Feb-2017, 00:46:30 Operator: antonioc
Sample : ecc4115-4 Inst : HP5890
Misc : gc19636,guv4134,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 1 8:17 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

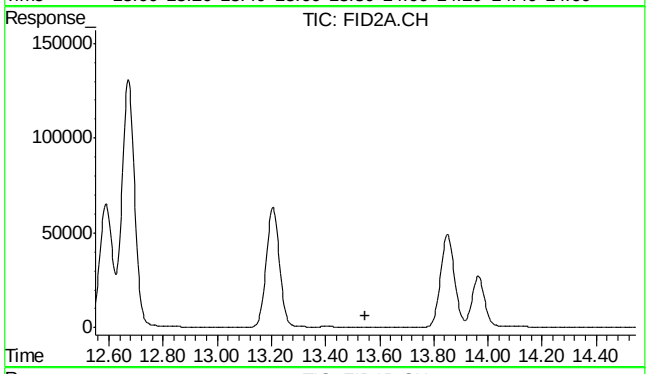






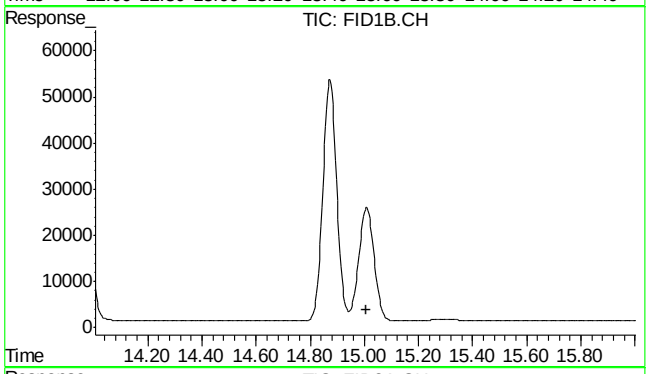
#1 Alkane A

R.T.: 13.849 min
Delta R.T.: 0.002 min
Response: 215787
Conc: N.D.



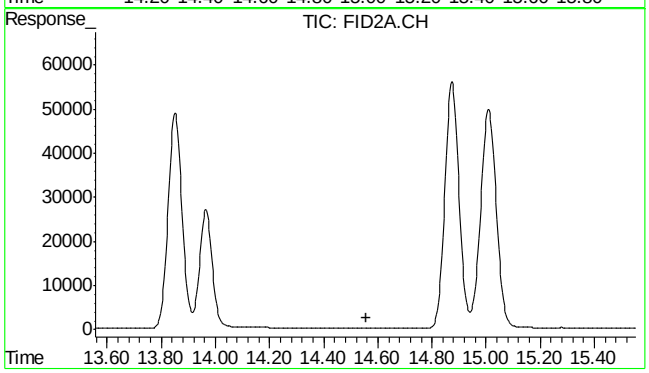
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.008 min
Delta R.T.: 0.002 min
Response: 982345
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.6.11

7

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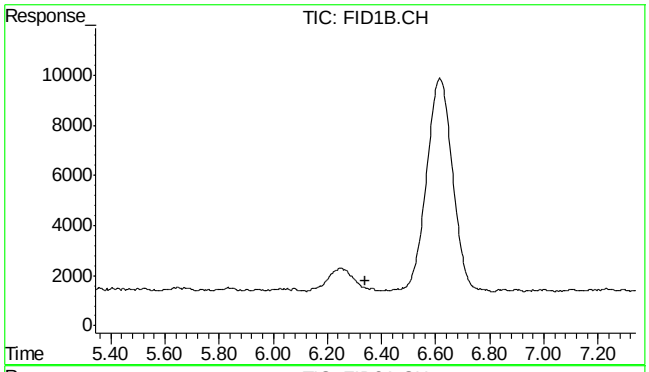
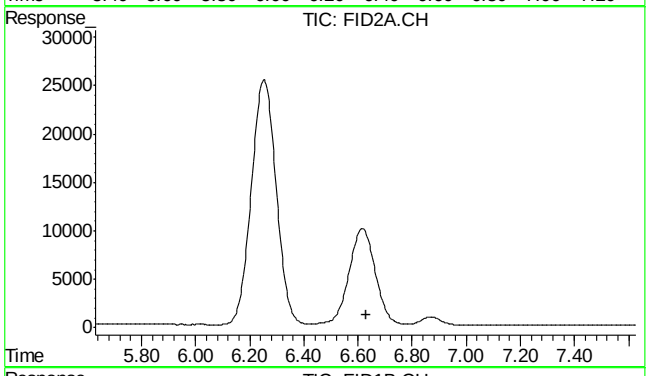


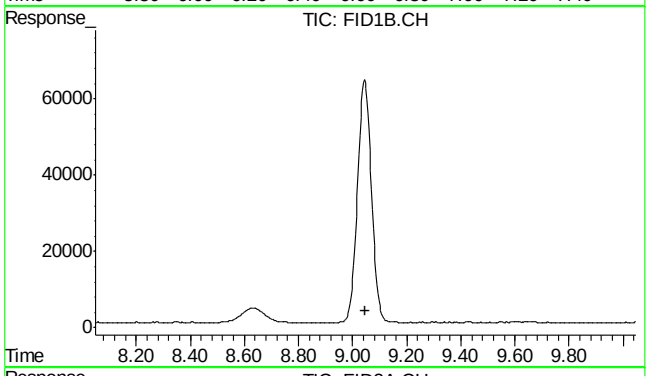
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



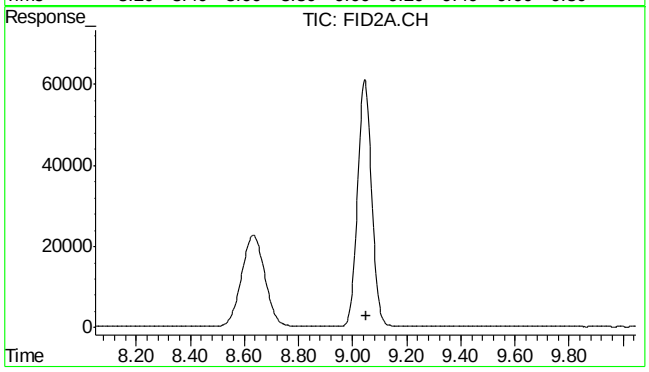
#3 Aromatic A

R.T.: 6.615 min
Delta R.T.: -0.014 min
Response: 674364
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

R.T.: 9.044 min
Delta R.T.: -0.004 min
Response: 2208283
Conc: N.D.

7.6.11

7

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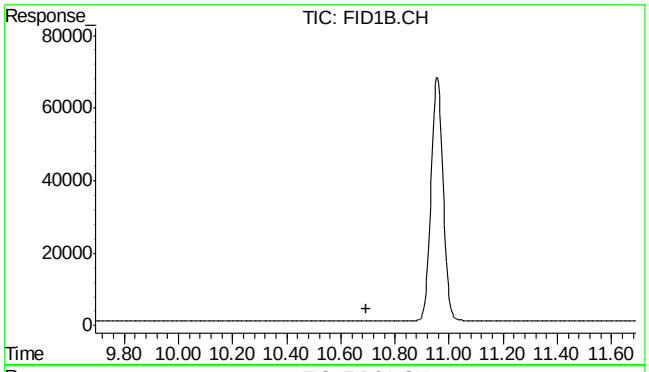
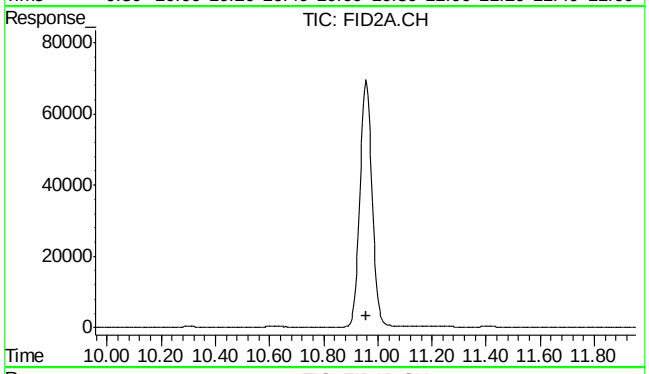


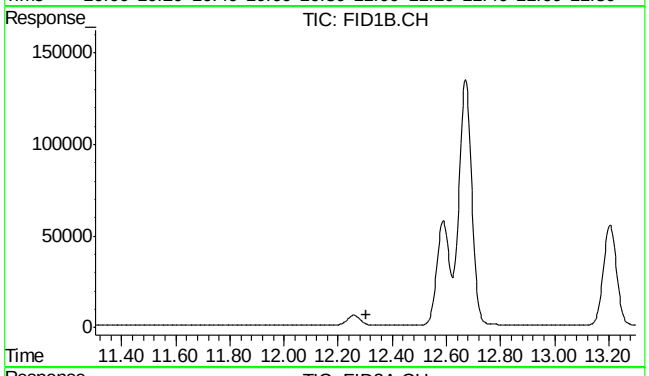
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



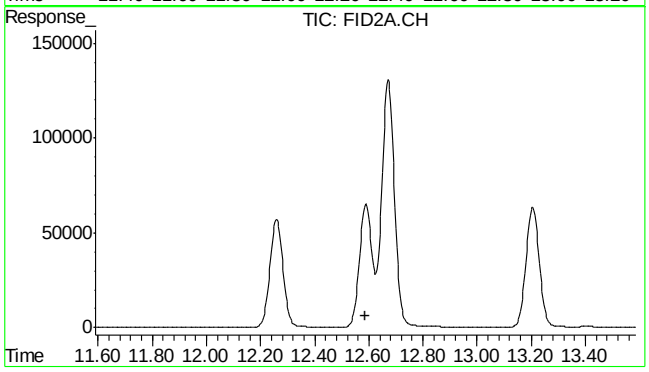
#5 Aromatic C

R.T.: 10.956 min
Delta R.T.: 0.000 min
Response: 2171461
Conc: N.D.



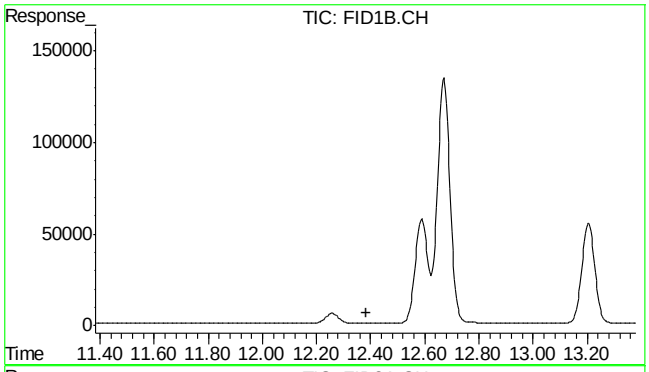
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



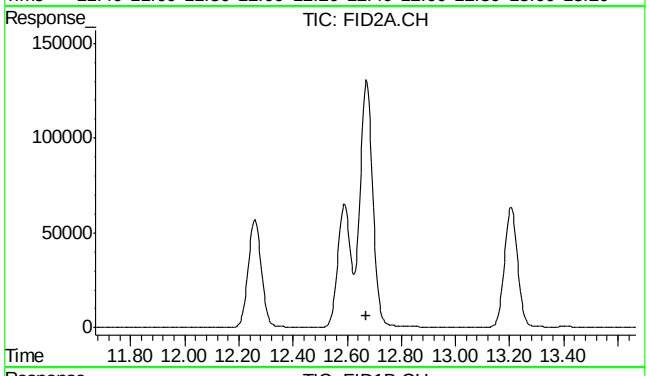
#6 Aromatic D

R.T.: 12.589 min
Delta R.T.: 0.002 min
Response: 2078167
Conc: N.D.



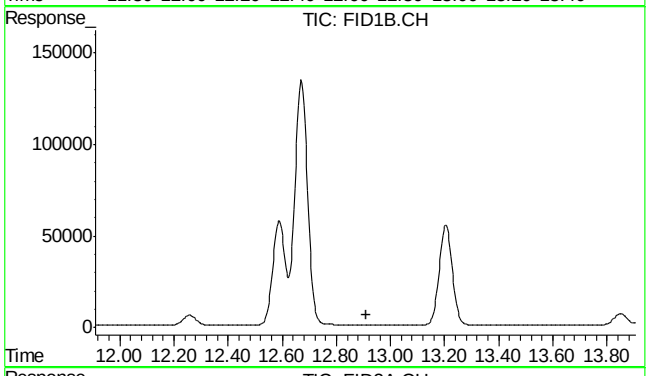
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



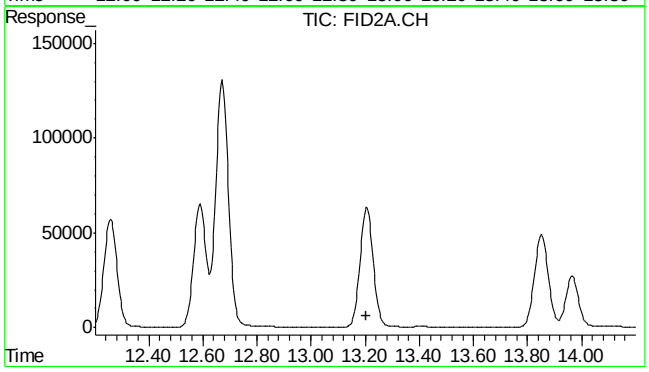
#7 Aromatic E

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 4253726
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

R.T.: 13.205 min
Delta R.T.: 0.001 min
Response: 2159078
Conc: N.D.

7.6.11

7

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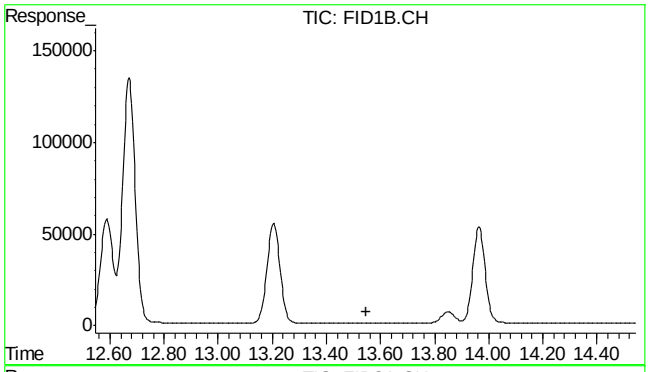
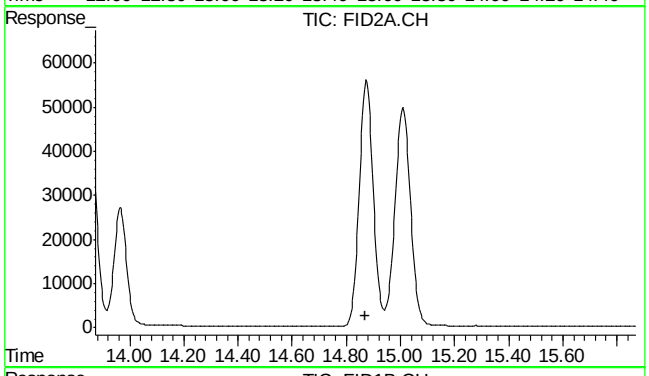


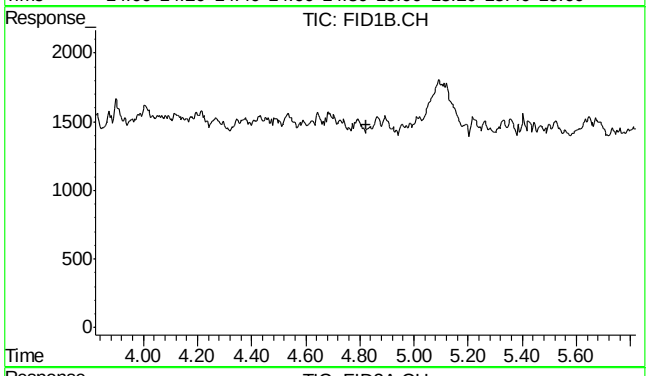
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



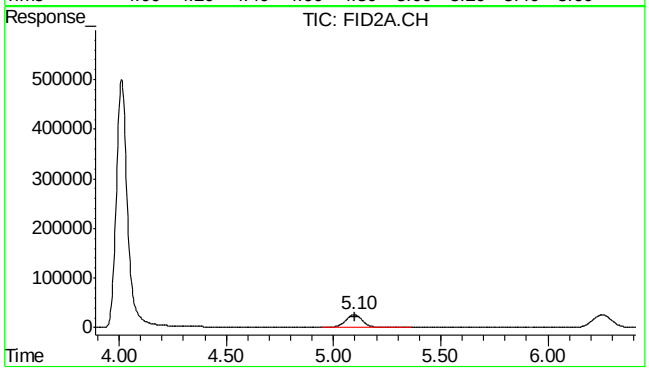
#9 Aromatic G

R.T.: 14.873 min
Delta R.T.: 0.002 min
Response: 2007877
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



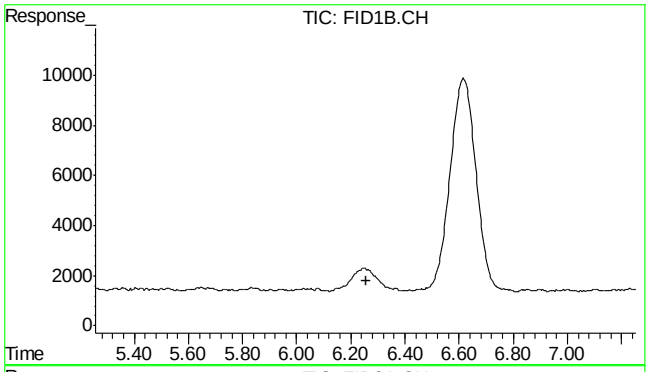
#10 Pentane

R.T.: 5.097 min
Delta R.T.: -0.003 min
Response: 1423255
Conc: 103.77 ug/L

7.6.11

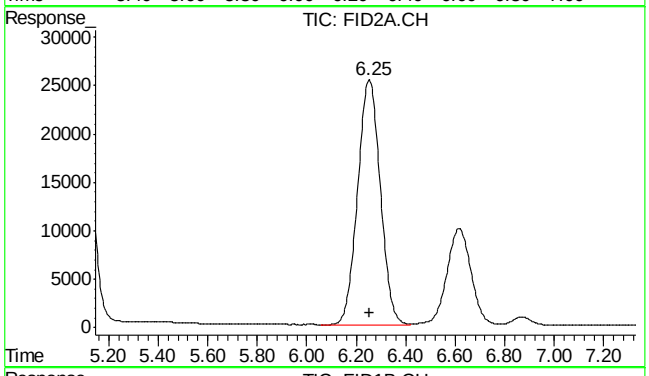
7

SGS ACCUTEST FA40754



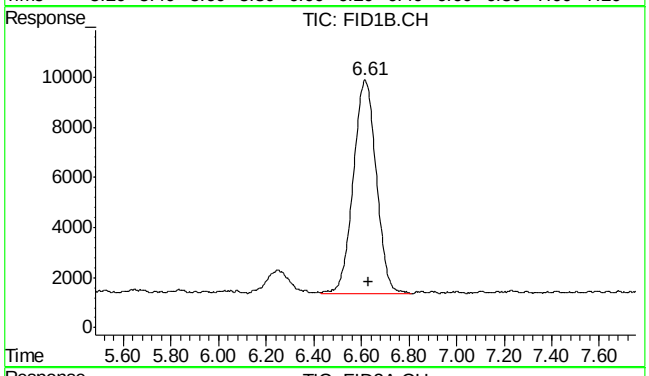
#11 2-Methylpentane

R.T.: 6.249 min
Delta R.T.: -0.007 min
Response: 63090
Conc: N.D.



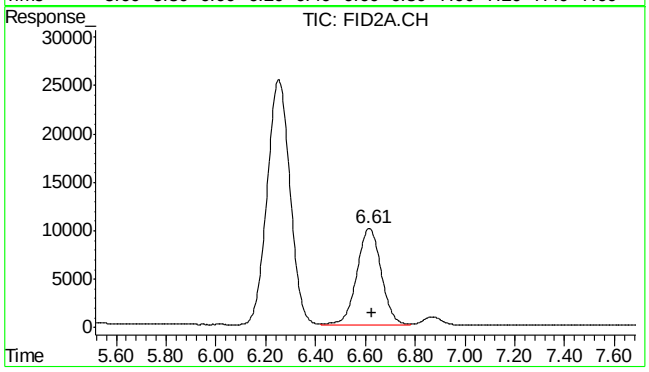
#11 2-Methylpentane

R.T.: 6.253 min
Delta R.T.: -0.003 min
Response: 1612646
Conc: 107.33 ug/L



#12 Methyl Tert Butyl Ether

R.T.: 6.617 min
Delta R.T.: -0.012 min
Response: 571901
Conc: 106.00 ug/L



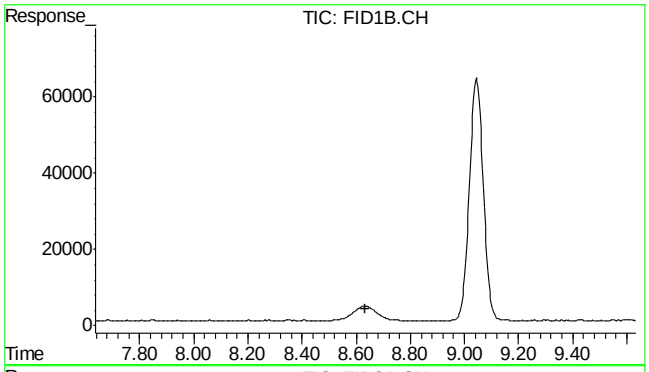
#12 Methyl Tert Butyl Ether

R.T.: 6.617 min
Delta R.T.: -0.011 min
Response: 678906
Conc: 103.80 ug/L

7.6.11

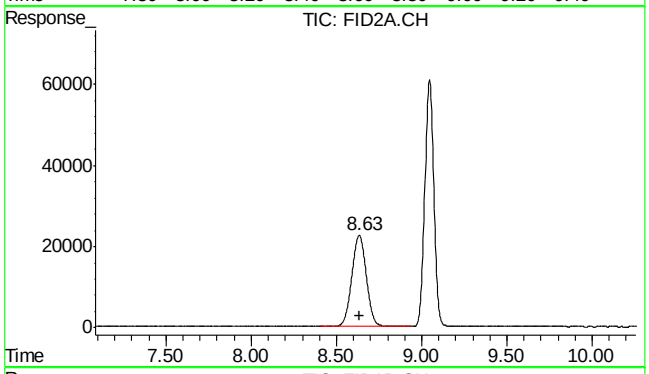
7

SGS ACCUTEST FA40754



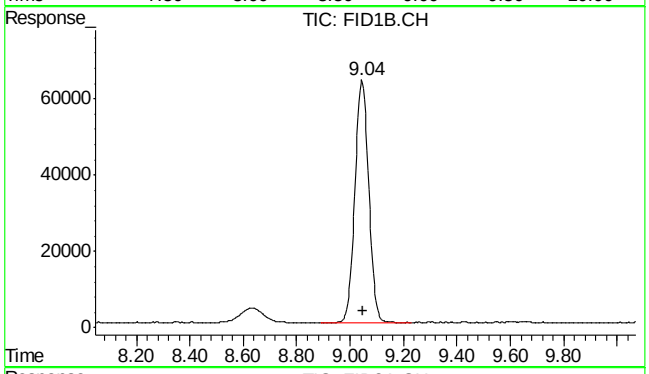
#13 2,2,4-Trimethylpentane

R.T.: 8.633 min
Delta R.T.: 0.000 min
Response: 229601
Conc: N.D.



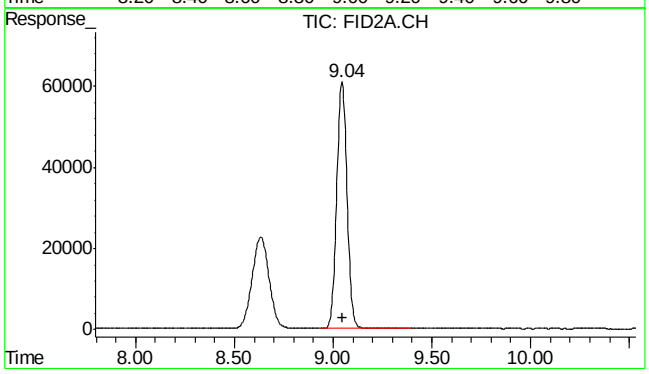
#13 2,2,4-Trimethylpentane

R.T.: 8.634 min
Delta R.T.: 0.000 min
Response: 1355439
Conc: 118.77 ug/L



#14 Benzene

R.T.: 9.045 min
Delta R.T.: 0.000 min
Response: 2283890
Conc: 95.76 ug/L



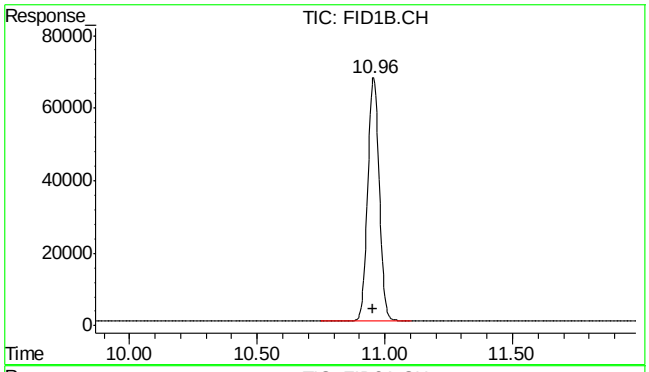
#14 Benzene

R.T.: 9.046 min
Delta R.T.: 0.000 min
Response: 2208218
Conc: 100.86 ug/L

7.6.11

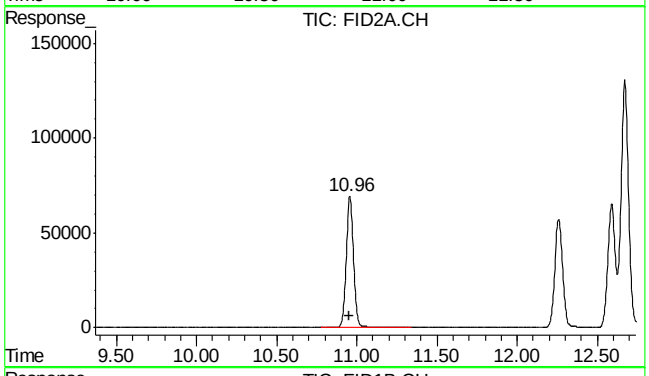
7

SGS ACCUTEST FA40754



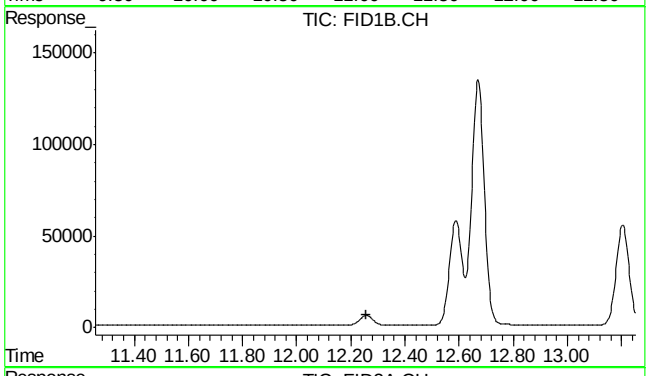
#15 Toluene

R.T.: 10.957 min
Delta R.T.: 0.002 min
Response: 2078444
Conc: 95.71 ug/L



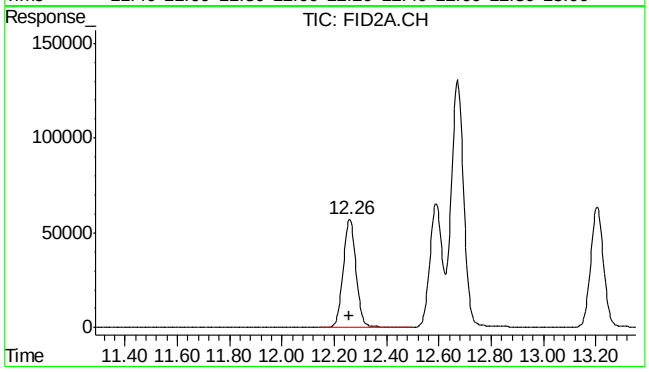
#15 Toluene

R.T.: 10.957 min
Delta R.T.: 0.002 min
Response: 2179219
Conc: 105.73 ug/L



#16 Nonane

R.T.: 12.259 min
Delta R.T.: 0.003 min
Response: 182705
Conc: N.D.



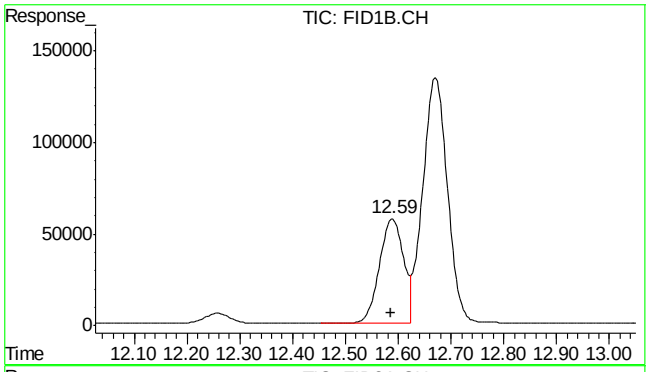
#16 Nonane

R.T.: 12.259 min
Delta R.T.: 0.003 min
Response: 1939881
Conc: 100.58 ug/L

7.6.11

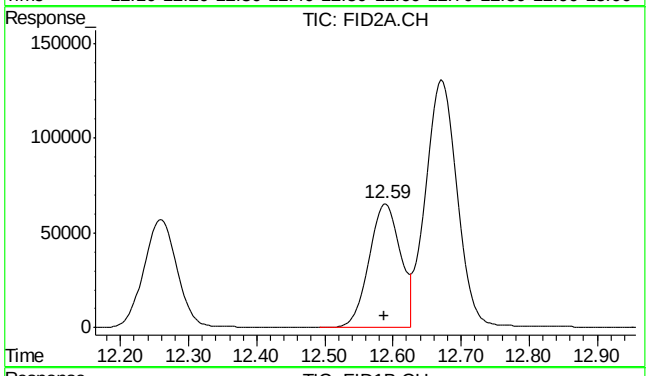
7

SGS ACCUTEST FA40754



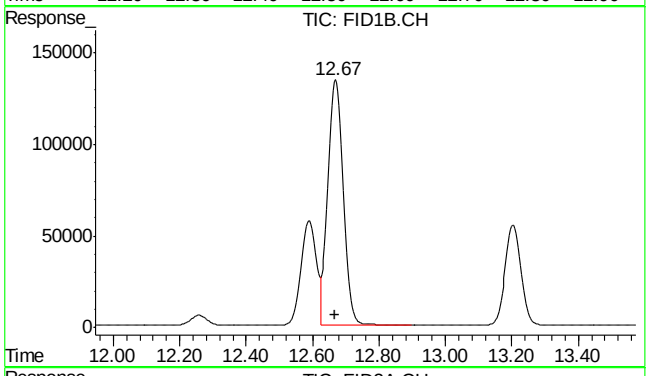
#17 Ethylbenzene

R.T.: 12.589 min
Delta R.T.: 0.003 min
Response: 1795561
Conc: 98.25 ug/L



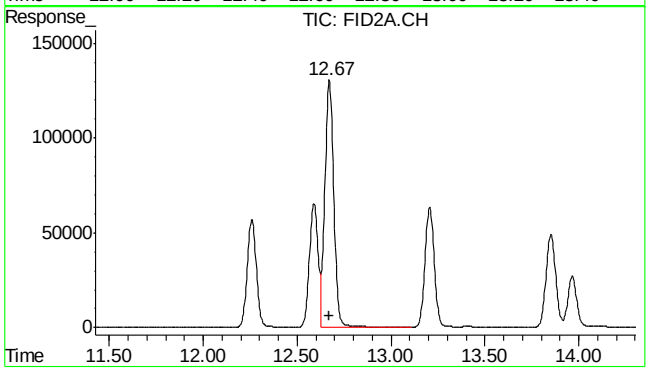
#17 Ethylbenzene

R.T.: 12.590 min
Delta R.T.: 0.003 min
Response: 2062521
Conc: 105.53 ug/L



#18 m,p-Xylene

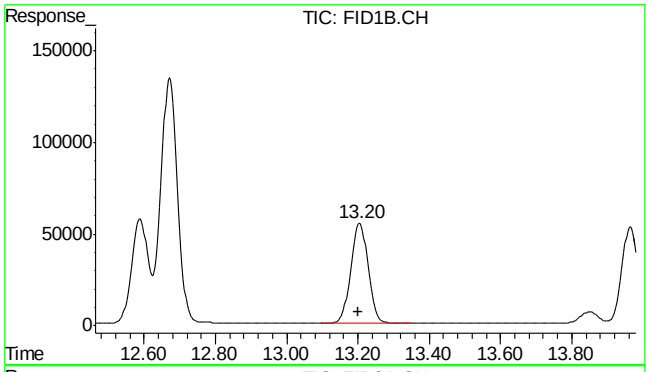
R.T.: 12.671 min
Delta R.T.: 0.003 min
Response: 4388247
Conc: 198.39 ug/L



#18 m,p-Xylene

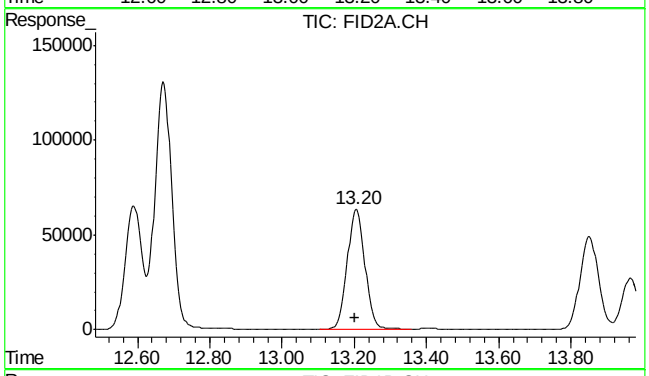
R.T.: 12.672 min
Delta R.T.: 0.003 min
Response: 4332652
Conc: 209.18 ug/L

SGS ACCUTEST FA40754



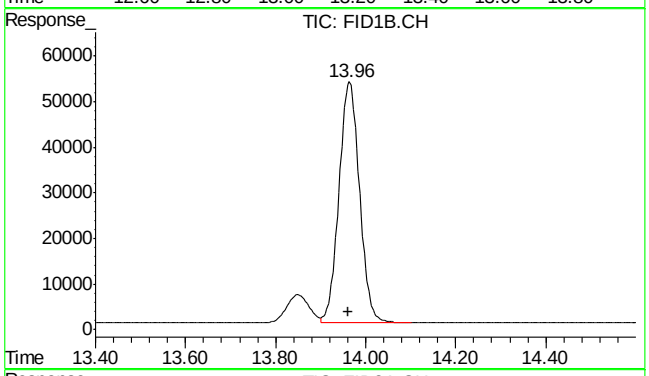
#19 o-Xylene

R.T.: 13.205 min
Delta R.T.: 0.003 min
Response: 1841567
Conc: 96.32 ug/L



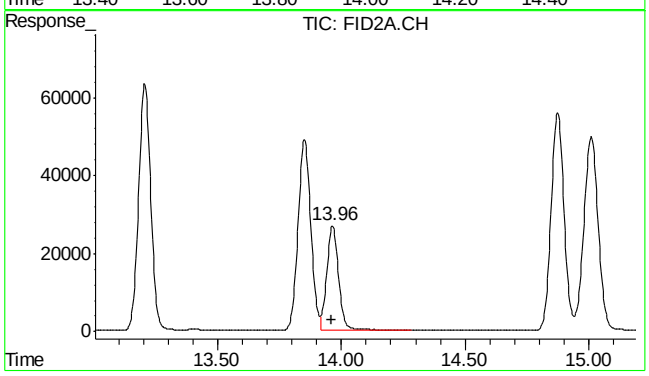
#19 o-Xylene

R.T.: 13.206 min
Delta R.T.: 0.003 min
Response: 2162130
Conc: 103.58 ug/L



#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 1679665
Conc: 91.51 ug/L



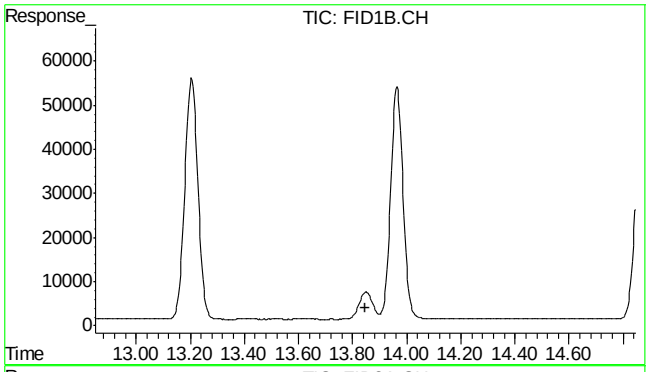
#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 900175
Conc: 99.38 ug/L

7.6.11

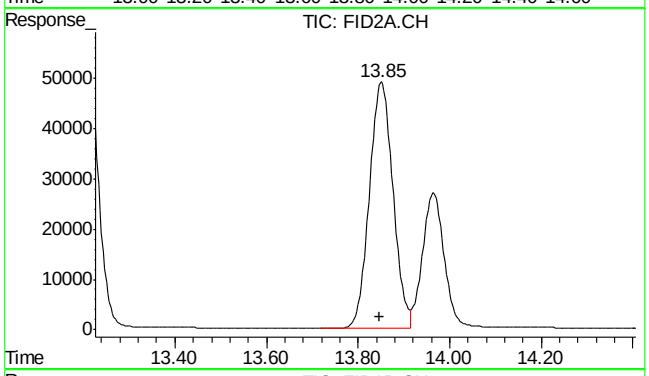
7

SGS ACCUTEST FA40754



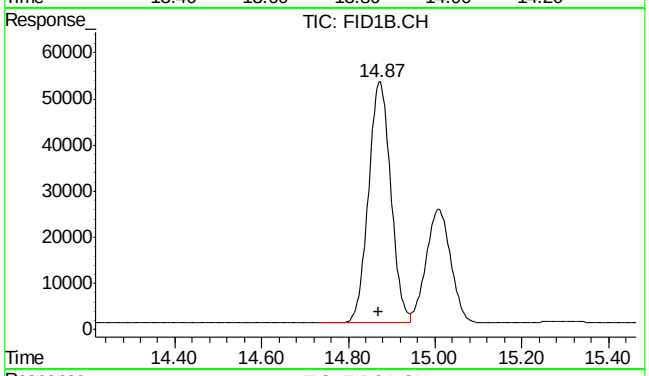
#21 Decane

R.T.: 13.851 min
Delta R.T.: 0.003 min
Response: 215156
Conc: N.D.



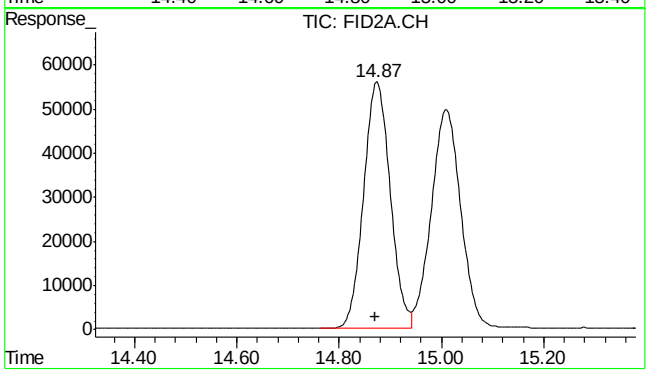
#21 Decane

R.T.: 13.852 min
Delta R.T.: 0.004 min
Response: 1746977
Conc: 97.02 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.874 min
Delta R.T.: 0.004 min
Response: 1858378
Conc: 92.92 ug/L



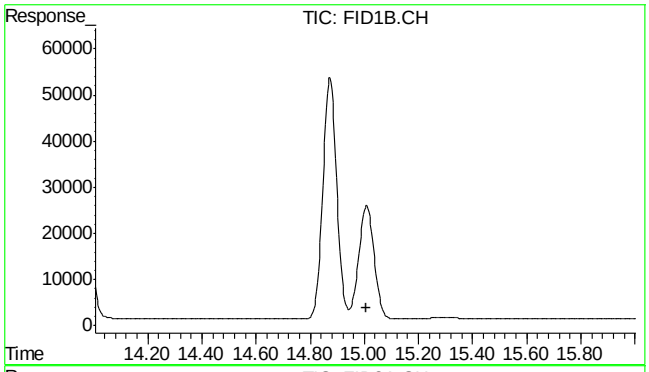
#22 1,2,4-Trimethylbenzene

R.T.: 14.875 min
Delta R.T.: 0.004 min
Response: 2008021
Conc: 99.58 ug/L

7.6.11

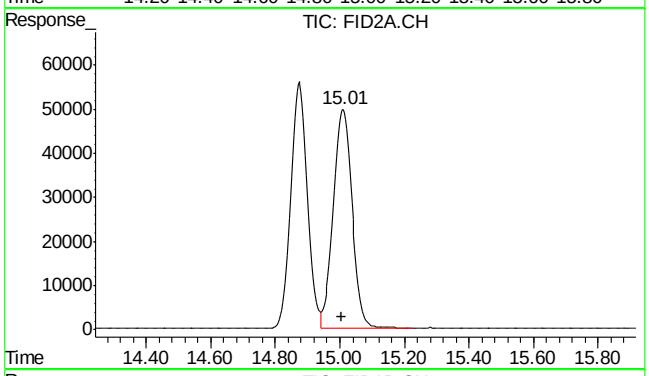
7

SGS ACCUTEST FA40754



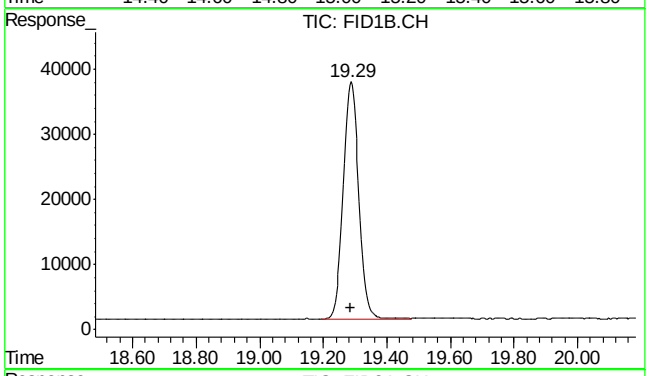
#23 Butylcyclohexane

R.T.: 15.009 min
Delta R.T.: 0.003 min
Response: 972271
Conc: N.D.



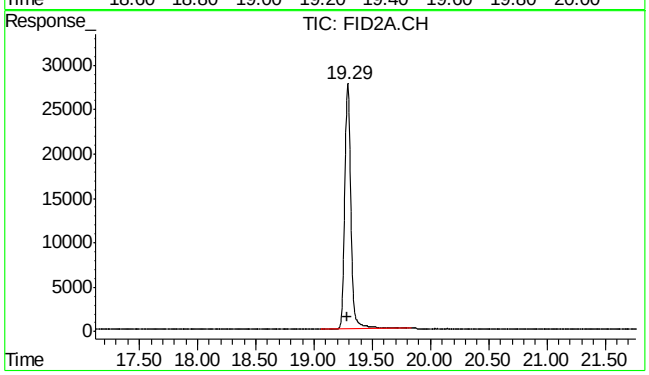
#23 Butylcyclohexane

R.T.: 15.010 min
Delta R.T.: 0.004 min
Response: 1991689
Conc: 95.46 ug/L



#24 Naphthalene

R.T.: 19.288 min
Delta R.T.: 0.004 min
Response: 1233101
Conc: 99.69 ug/L



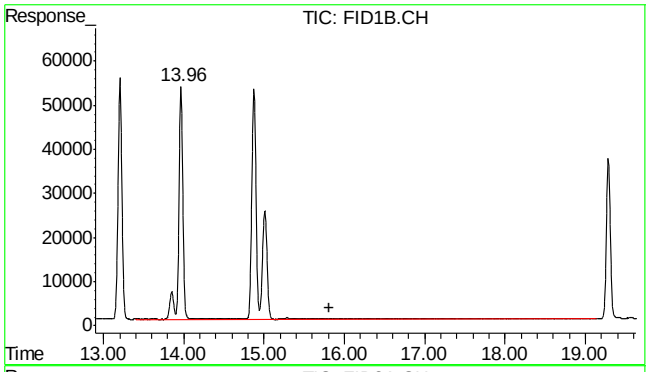
#24 Naphthalene

R.T.: 19.290 min
Delta R.T.: 0.004 min
Response: 1006093
Conc: 105.94 ug/L

7.6.11

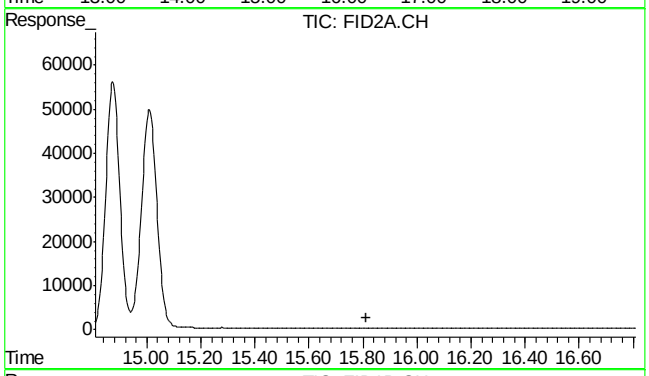
7

SGS ACCUTEST FA40754



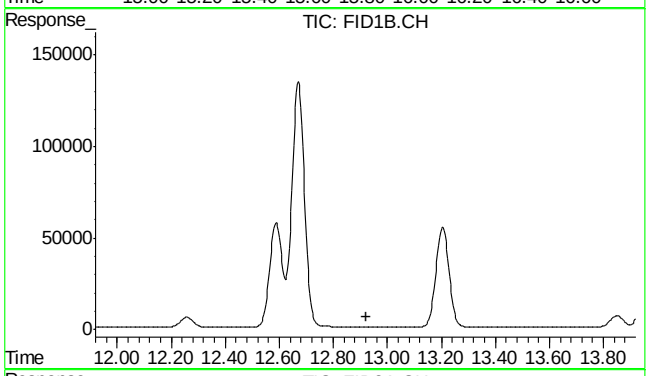
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2209240
Conc: 95.82 ug/L m



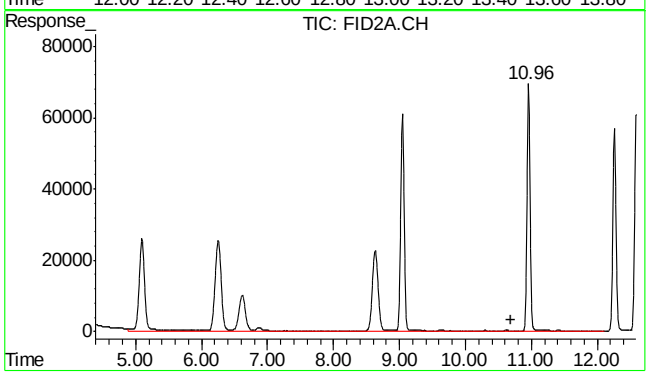
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 3799610
Conc: N.D.



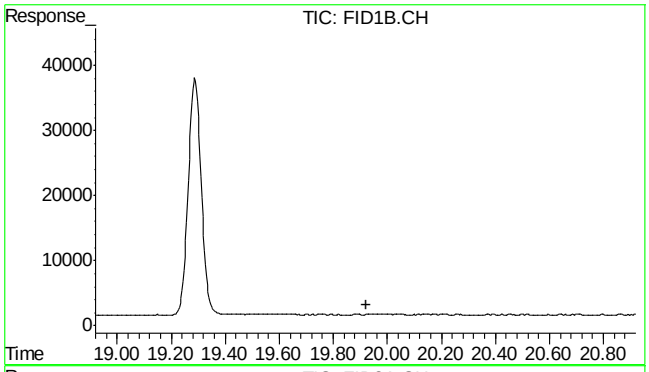
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 13822890
Conc: N.D.



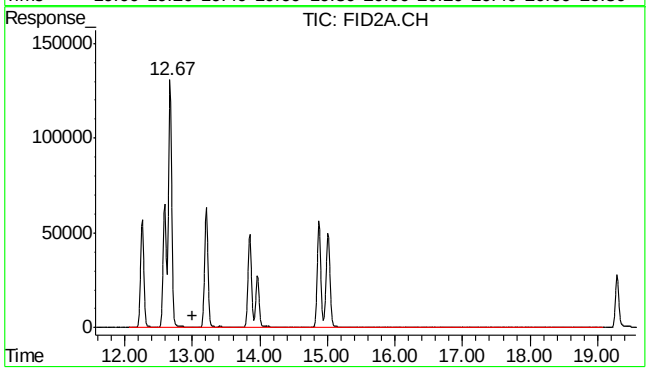
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 4700346
Conc: 341.33 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 3543201
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 6007034
Conc: 304.44 ug/L m

7.6.11

7

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077764.D\FID1B.CH Vial: 33
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077764.D\FID2A.CH
Acq On : 01-Feb-2017, 01:47:42 Operator: antonioc
Sample : cc4115-4 Inst : HP5890
Misc : gc19636,guv4135,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:04:17 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	213710	0	NoCal m	N.D.
2)	S	Alkane B	15.01f	0.00	980617	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.61f	0	652654	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	2179291	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.95f	0	2160038	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	2017660	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	4259151	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	2145385	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	2008622	N.D.	NoCal m
20)	S	BFB	13.96	13.96	1682867	897956	91.682	99.134
		Spiked Amount 200.000 Range 70 - 130 Recovery =					45.84%#	49.57%#
		Target Compounds						
10)		Pentane	0.00	5.09	0	1374120	N.D.	100.191 #
11)		2-Methylpentane	6.25	6.25	53794	1569428	NoCal	104.454 #
12)		Methyl Tert Buty	6.61	6.61	555787	664132	103.015	101.546
13)		2,2,4-Trimethylp	8.63	8.63	205531	1238011	NoCal	106.450 #
14)		Benzene	9.04	9.04	2255642	2186275	94.572	99.854
15)		Toluene	10.95	10.96	2057336	2159350	94.740	104.767
16)		Nonane	12.26	12.26	181831	1927035	NoCal	99.910 #
17)		Ethylbenzene	12.59	12.59	1782528	2047774	97.536	104.774
18)		m,p-Xylene	12.67	12.67	4348490	4306324	196.594	207.909
19)		o-Xylene	13.20	13.21	1821403	2148326	95.262	102.921
21)		Decane	13.85	13.85	213889	1750431	NoCal	97.215 #
22)		1,2,4-Trimethylb	14.87	14.87	1855395	2007790	92.769	99.566
23)		Butylcyclohexane	15.01	15.01	966331	2000819	NoCal	95.899 #
24)		Naphthalene	19.29	19.29	1212259	987550	98.008	103.989
25)	H	C9- C10 Aromatic	15.81	15.81	2187896	3769496	94.753	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	13677911	4498717	NoCal	324.963 #
27)	H	C9- C12 Aliphati	19.92	13.00	3504125	5990999	NoCal	303.596 #

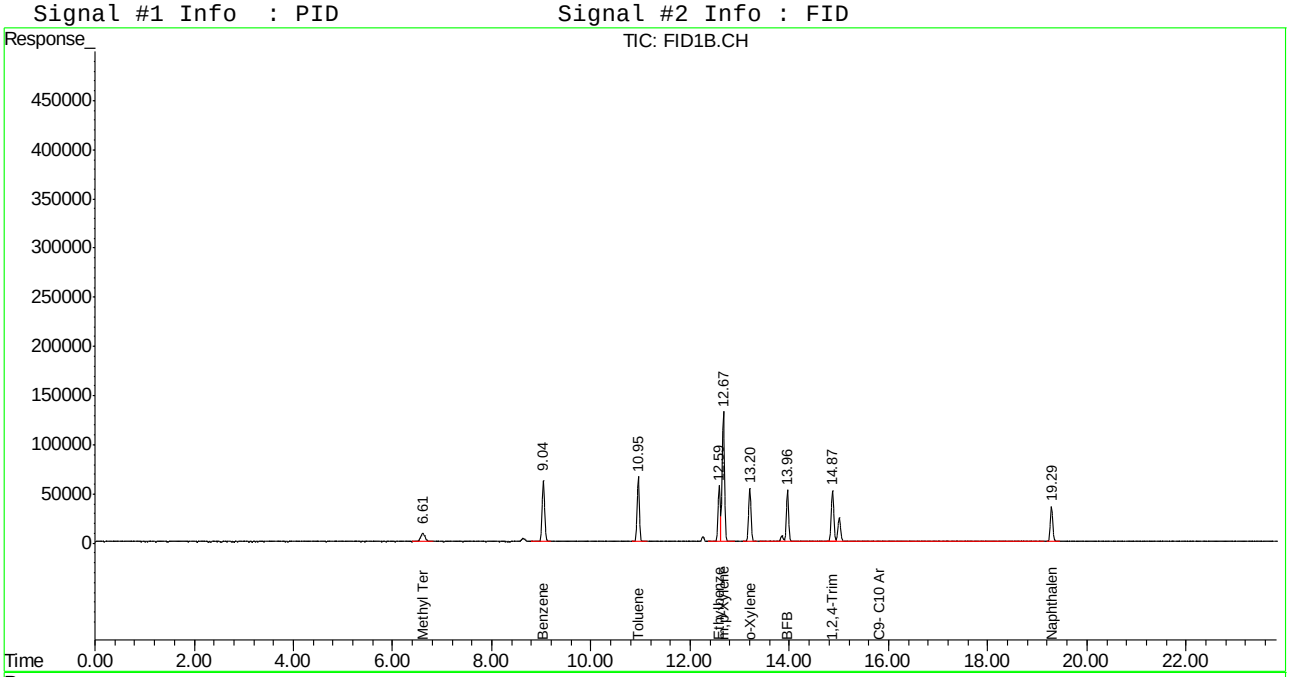
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077764.D VPH011317.M Fri Feb 03 13:19:11 2017

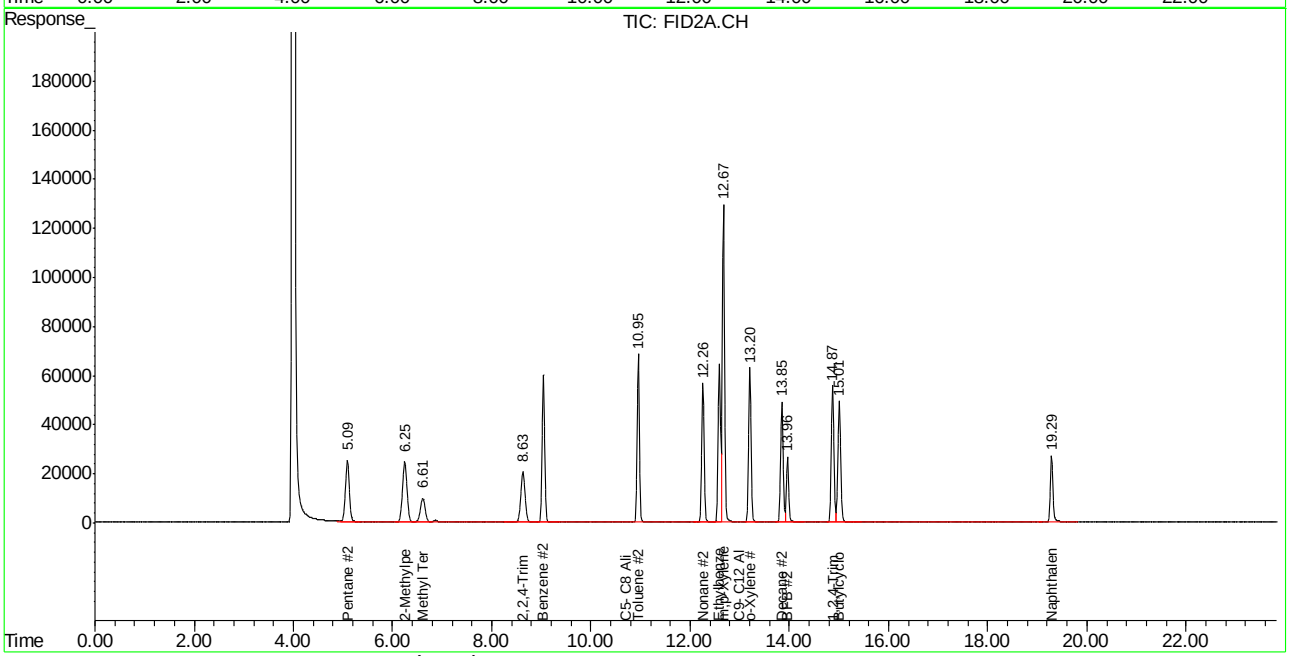
Quantitation Report (QT Reviewed)

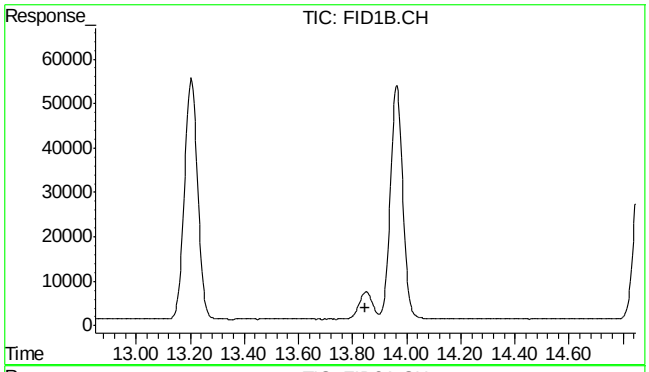
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077764.D\FID1B.CH Vial: 33
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077764.D\FID2A.CH
Acq On : 01-Feb-2017, 01:47:42 Operator: antonioc
Sample : cc4115-4 Inst : HP5890
Misc : gc19636,guv4135,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 1 8:20 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

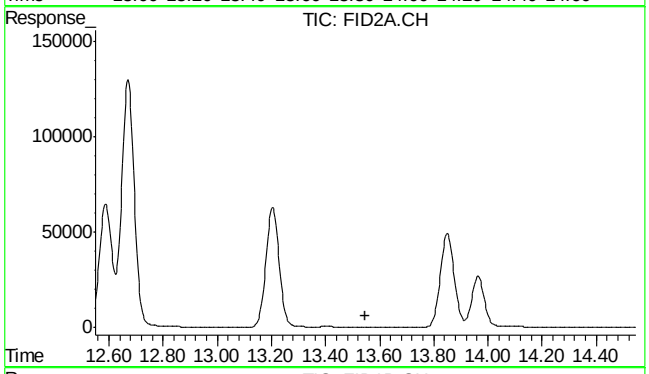






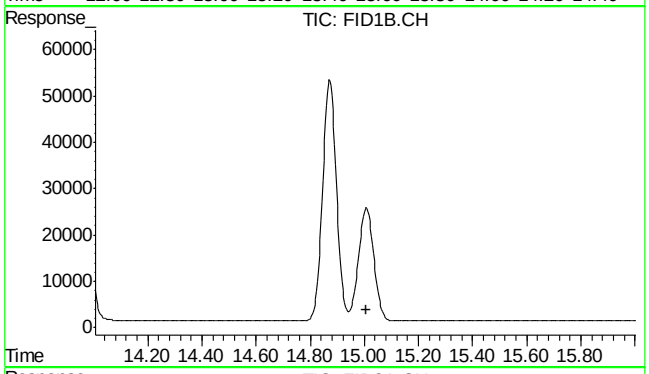
#1 Alkane A

R.T.: 13.848 min
Delta R.T.: 0.001 min
Response: 213710
Conc: N.D.



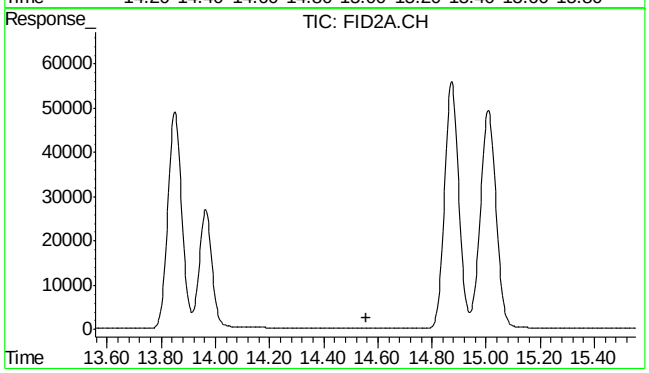
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



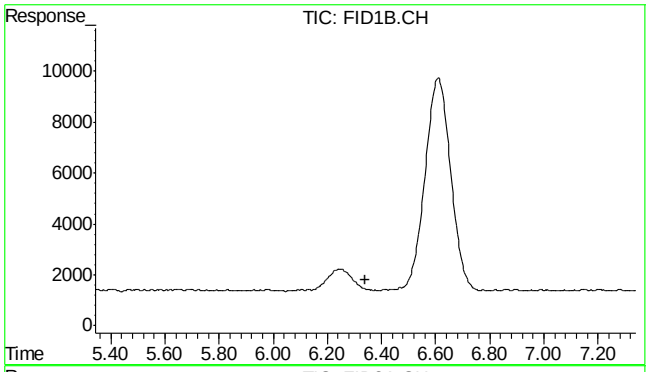
#2 Alkane B

R.T.: 15.007 min
Delta R.T.: 0.000 min
Response: 980617
Conc: N.D.



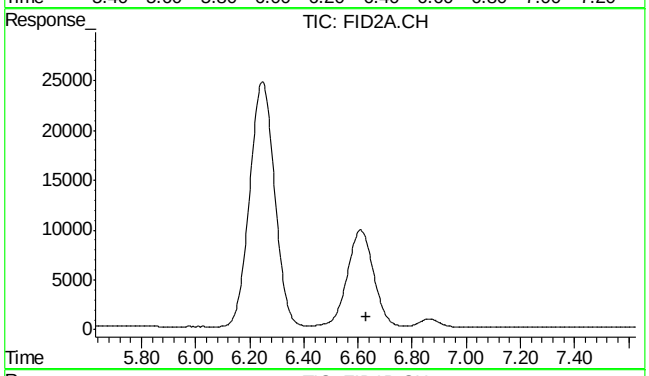
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.



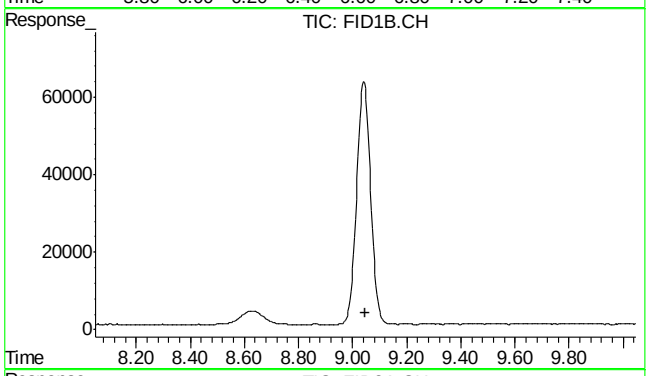
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



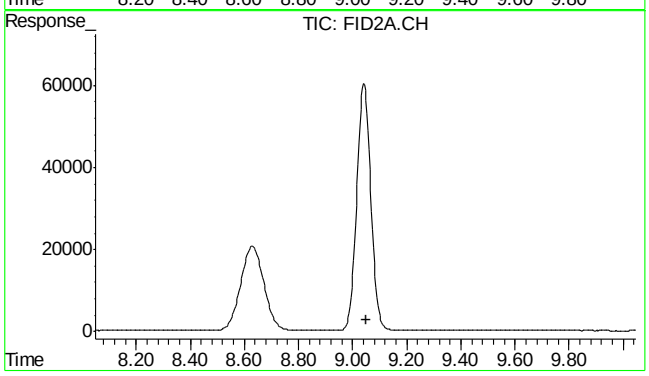
#3 Aromatic A

R.T.: 6.609 min
Delta R.T.: -0.020 min
Response: 652654
Conc: N.D.



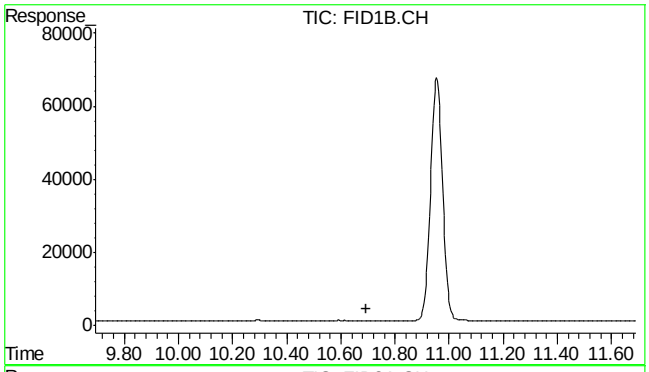
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



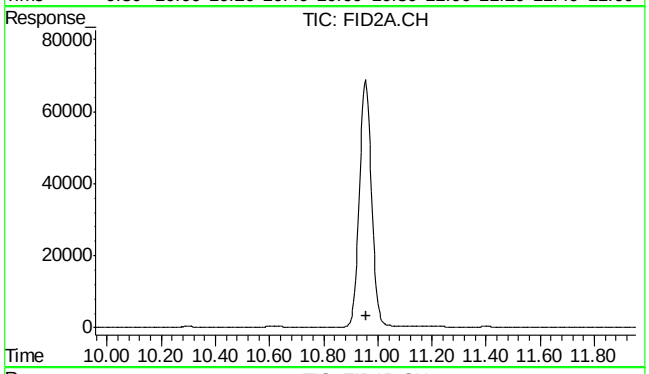
#4 Aromatic B

R.T.: 9.041 min
Delta R.T.: -0.007 min
Response: 2179291
Conc: N.D.



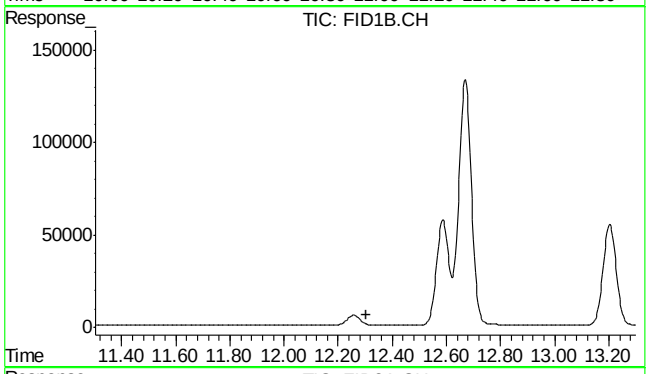
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



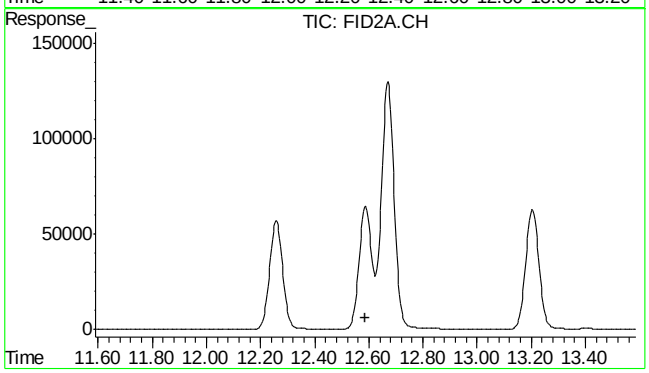
#5 Aromatic C

R.T.: 10.954 min
Delta R.T.: -0.002 min
Response: 2160038
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 12.587 min
Delta R.T.: 0.000 min
Response: 2017660
Conc: N.D.

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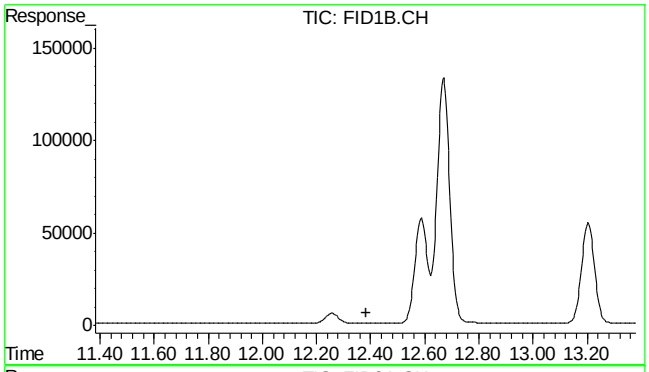
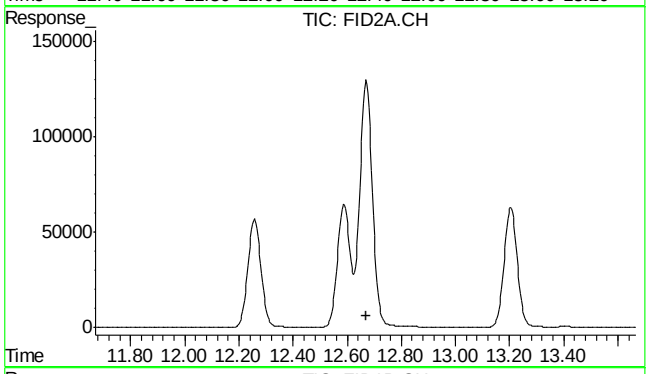


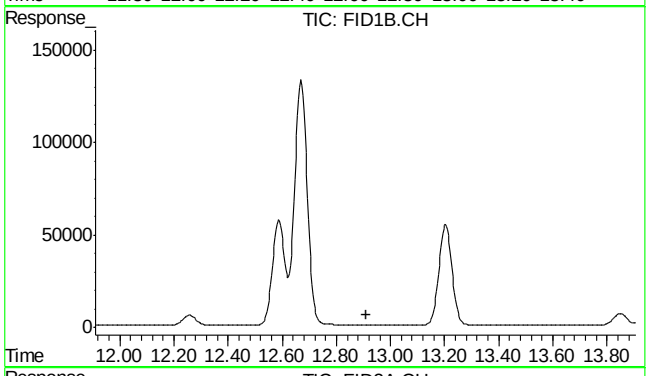
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



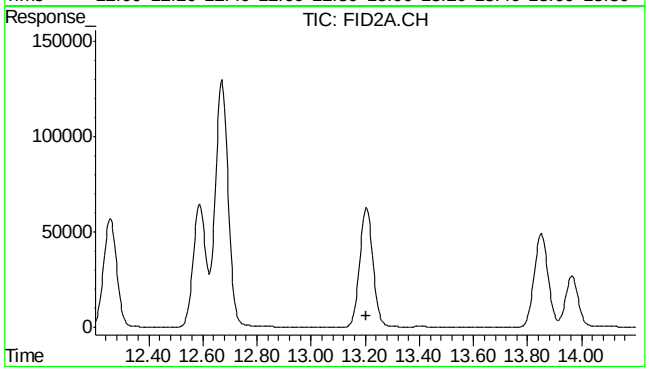
#7 Aromatic E

R.T.: 12.669 min
Delta R.T.: 0.000 min
Response: 4259151
Conc: N.D.



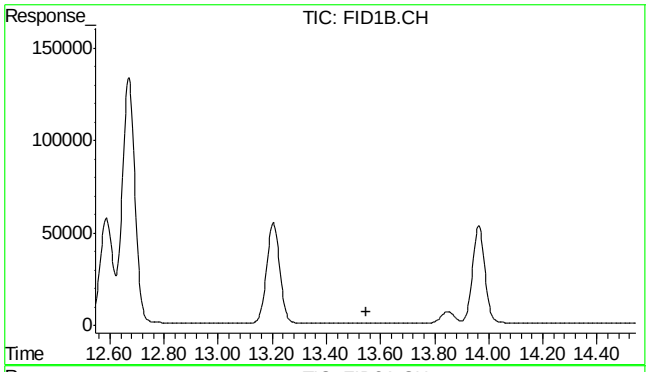
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



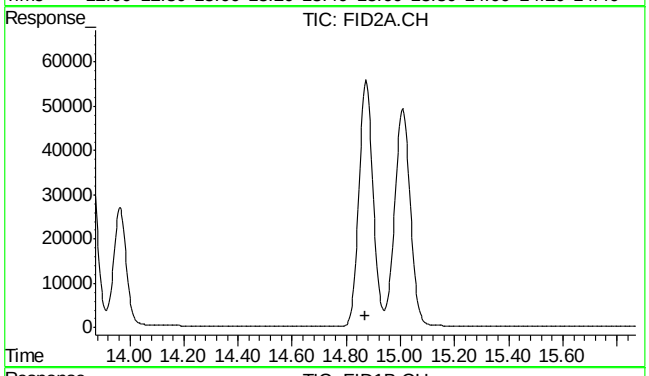
#8 Aromatic F

R.T.: 13.204 min
Delta R.T.: 0.000 min
Response: 2145385
Conc: N.D.



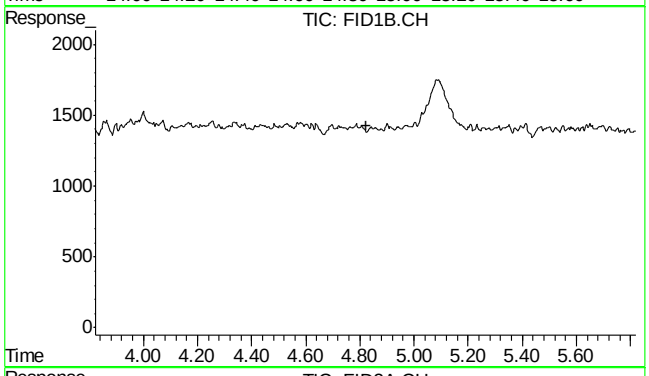
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



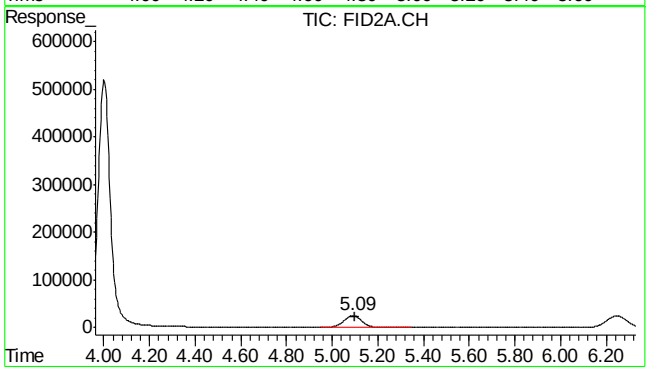
#9 Aromatic G

R.T.: 14.872 min
Delta R.T.: 0.000 min
Response: 2008622
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 5.092 min
Delta R.T.: -0.008 min
Response: 1374120
Conc: 100.19 ug/L

7.6.12

7

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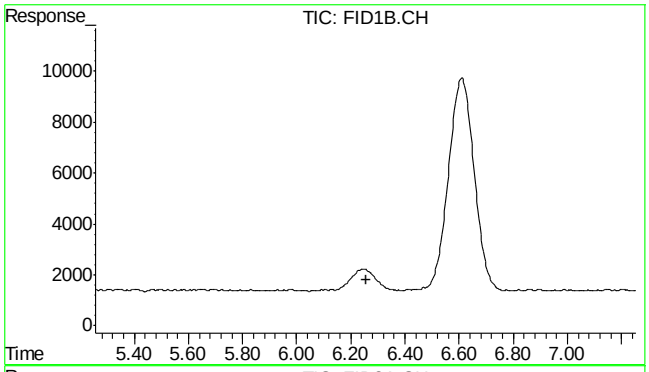
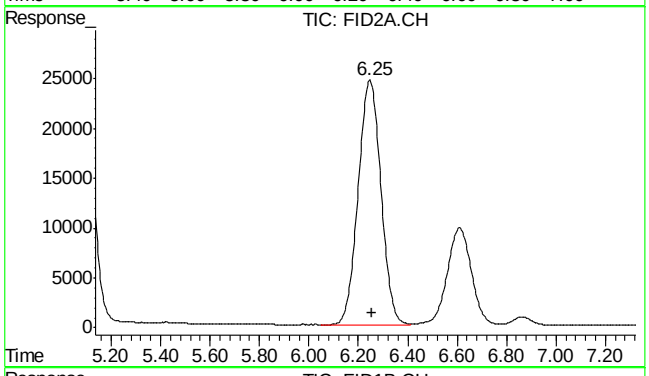


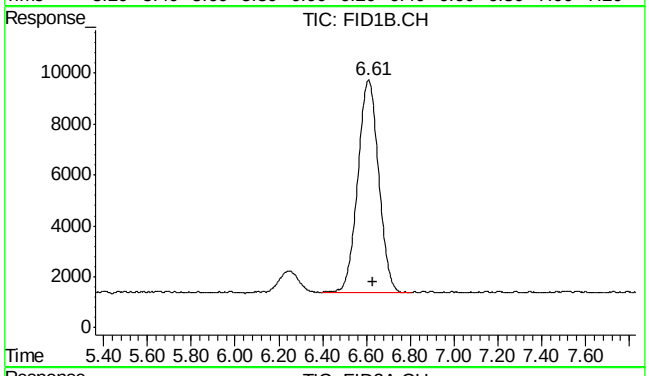
#11 2-Methylpentane

R.T.: 6.249 min
Delta R.T.: -0.007 min
Response: 53794
Conc: N.D.



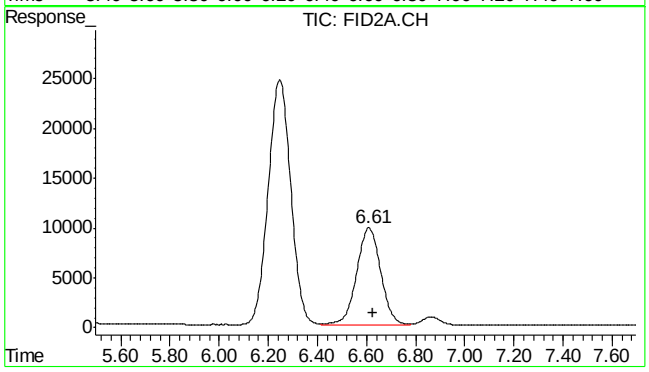
#11 2-Methylpentane

R.T.: 6.247 min
Delta R.T.: -0.009 min
Response: 1569428
Conc: 104.45 ug/L



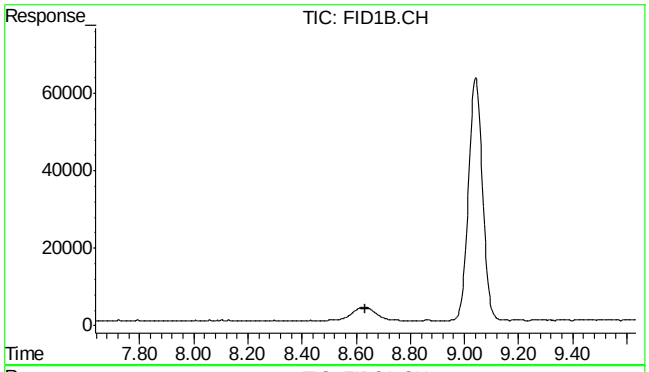
#12 Methyl Tert Butyl Ether

R.T.: 6.610 min
Delta R.T.: -0.019 min
Response: 555787
Conc: 103.01 ug/L



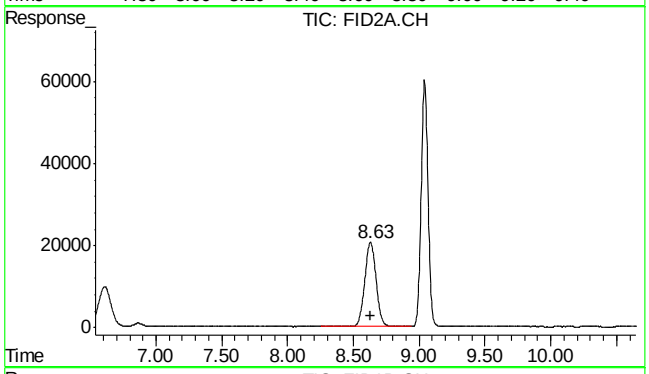
#12 Methyl Tert Butyl Ether

R.T.: 6.610 min
Delta R.T.: -0.018 min
Response: 664132
Conc: 101.55 ug/L



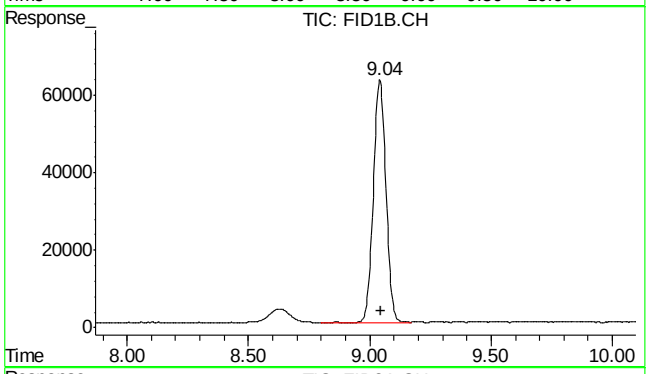
#13 2,2,4-Trimethylpentane

R.T.: 8.629 min
Delta R.T.: -0.005 min
Response: 205531
Conc: N.D.



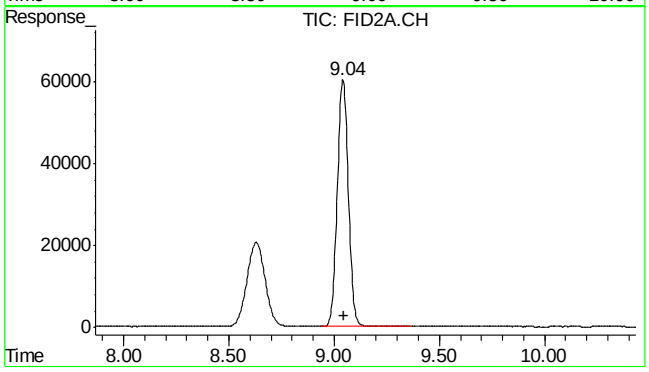
#13 2,2,4-Trimethylpentane

R.T.: 8.630 min
Delta R.T.: -0.004 min
Response: 1238011
Conc: 106.45 ug/L



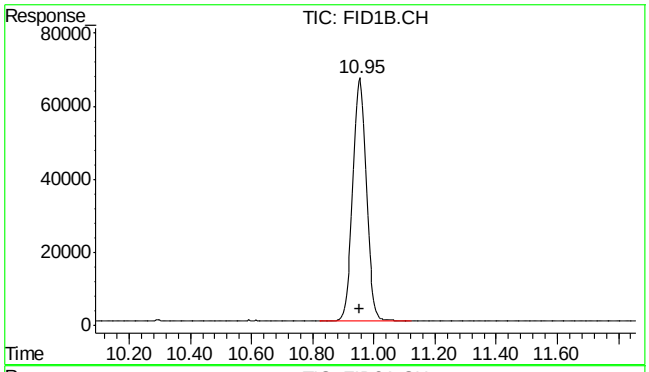
#14 Benzene

R.T.: 9.042 min
Delta R.T.: -0.004 min
Response: 2255642
Conc: 94.57 ug/L



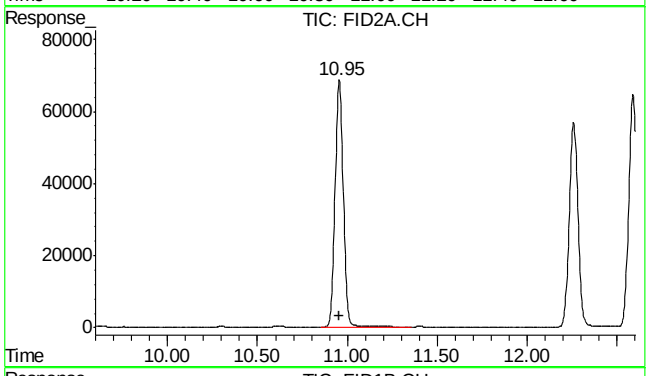
#14 Benzene

R.T.: 9.043 min
Delta R.T.: -0.003 min
Response: 2186275
Conc: 99.85 ug/L



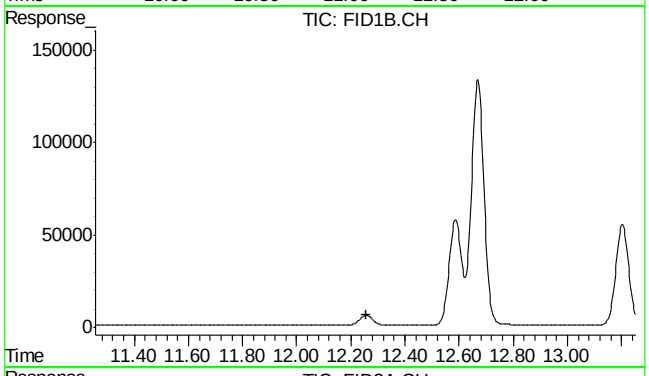
#15 Toluene

R.T.: 10.955 min
Delta R.T.: 0.000 min
Response: 2057336
Conc: 94.74 ug/L



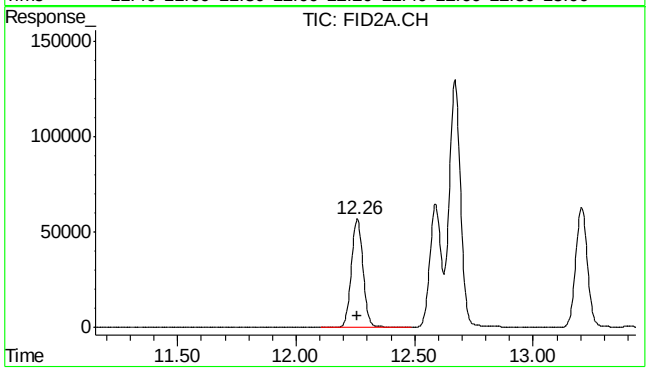
#15 Toluene

R.T.: 10.955 min
Delta R.T.: 0.000 min
Response: 2159350
Conc: 104.77 ug/L



#16 Nonane

R.T.: 12.257 min
Delta R.T.: 0.002 min
Response: 181831
Conc: N.D.



#16 Nonane

R.T.: 12.258 min
Delta R.T.: 0.002 min
Response: 1927035
Conc: 99.91 ug/L

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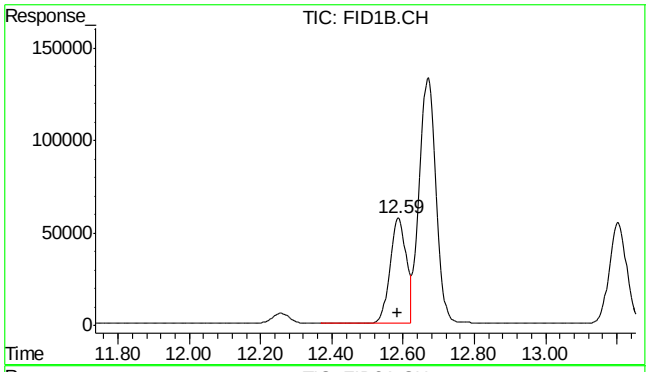
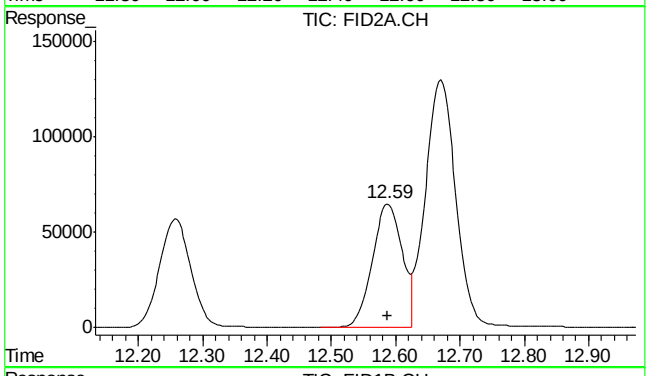


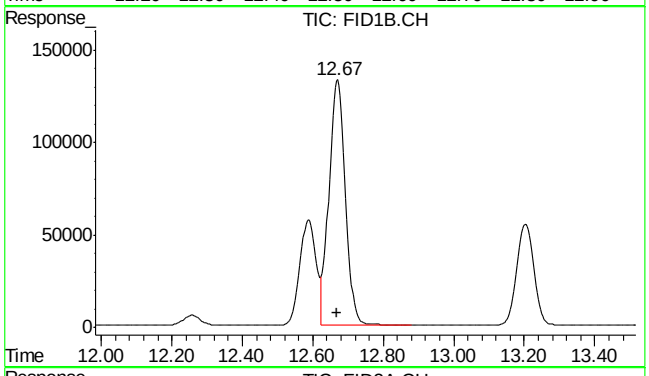
#17 Ethylbenzene

R.T.: 12.588 min
Delta R.T.: 0.002 min
Response: 1782528
Conc: 97.54 ug/L



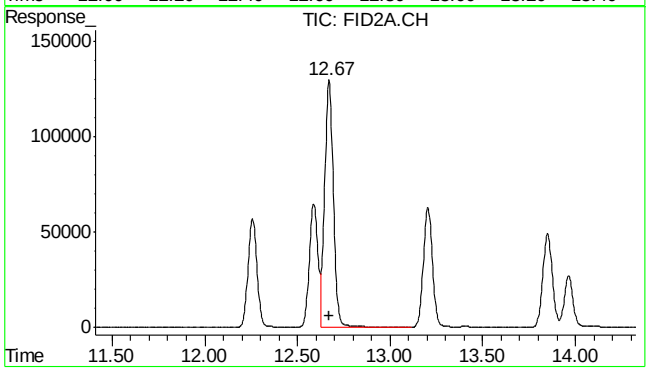
#17 Ethylbenzene

R.T.: 12.589 min
Delta R.T.: 0.002 min
Response: 2047774
Conc: 104.77 ug/L



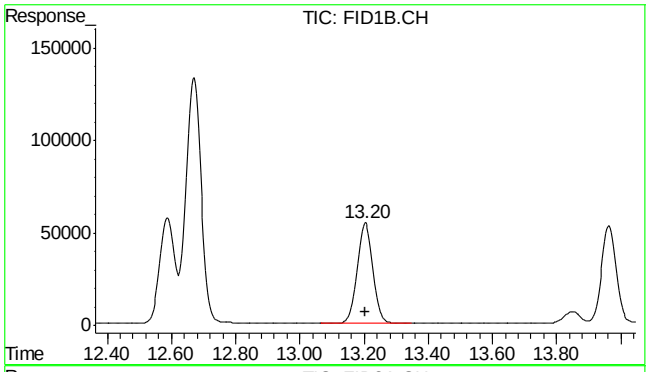
#18 m,p-Xylene

R.T.: 12.670 min
Delta R.T.: 0.002 min
Response: 4348490
Conc: 196.59 ug/L



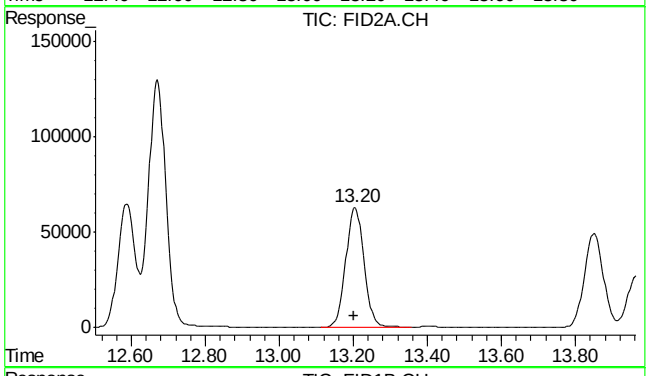
#18 m,p-Xylene

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 4306324
Conc: 207.91 ug/L



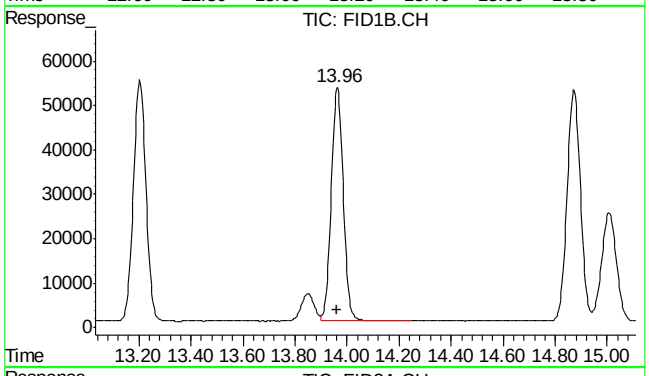
#19 o-Xylene

R.T.: 13.204 min
Delta R.T.: 0.002 min
Response: 1821403
Conc: 95.26 ug/L



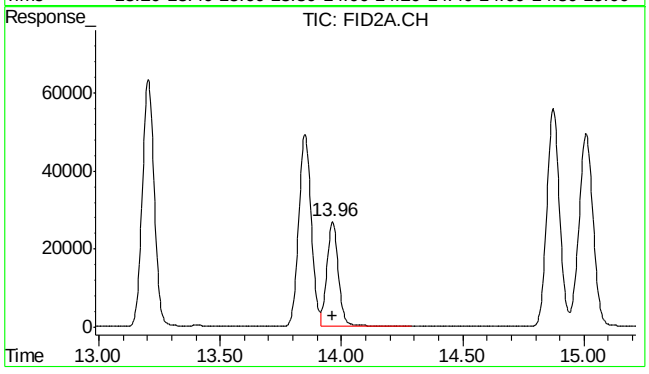
#19 o-Xylene

R.T.: 13.205 min
Delta R.T.: 0.002 min
Response: 2148326
Conc: 102.92 ug/L



#20 BFB

R.T.: 13.963 min
Delta R.T.: 0.002 min
Response: 1682867
Conc: 91.68 ug/L



#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.002 min
Response: 897956
Conc: 99.13 ug/L

7.6.12

7

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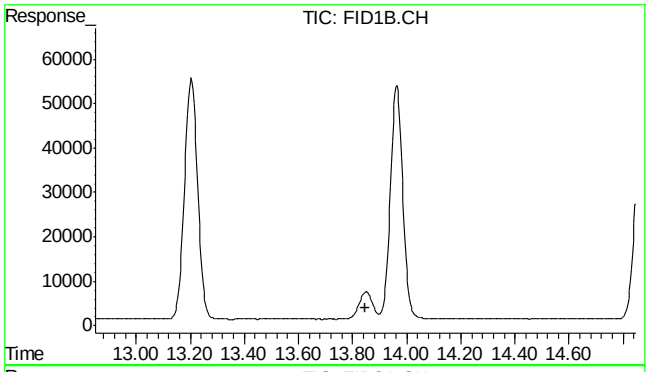
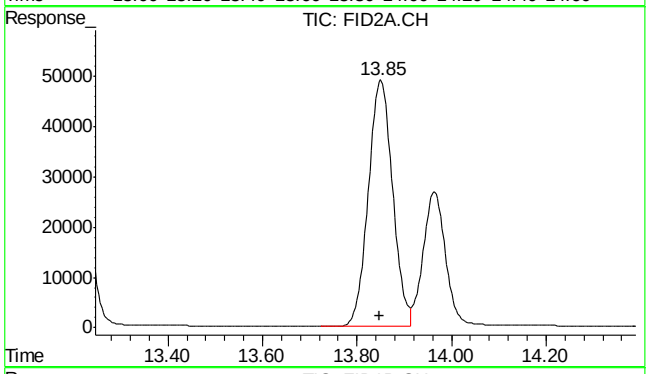


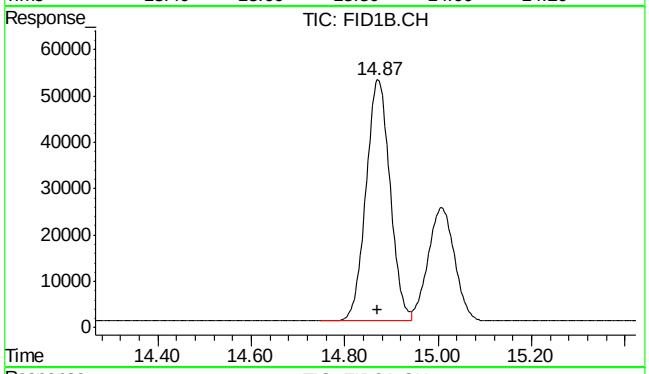
#21 Decane

R.T.: 13.850 min
Delta R.T.: 0.002 min
Response: 213889
Conc: N.D.



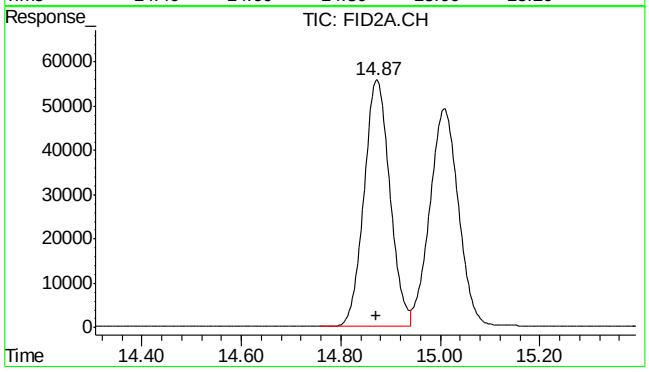
#21 Decane

R.T.: 13.851 min
Delta R.T.: 0.003 min
Response: 1750431
Conc: 97.21 ug/L



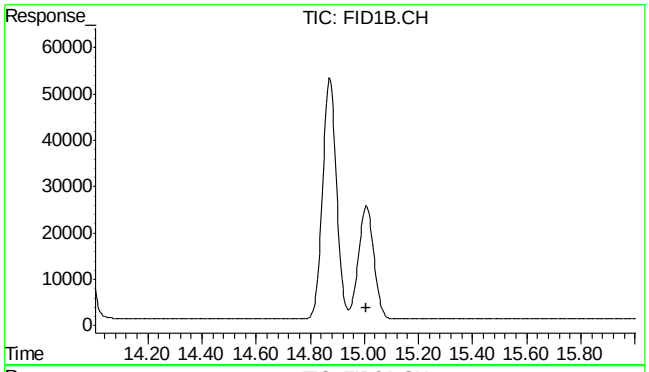
#22 1,2,4-Trimethylbenzene

R.T.: 14.873 min
Delta R.T.: 0.003 min
Response: 1855395
Conc: 92.77 ug/L



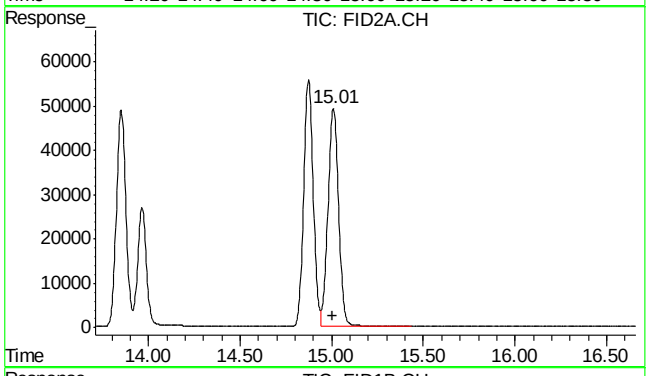
#22 1,2,4-Trimethylbenzene

R.T.: 14.874 min
Delta R.T.: 0.003 min
Response: 2007790
Conc: 99.57 ug/L



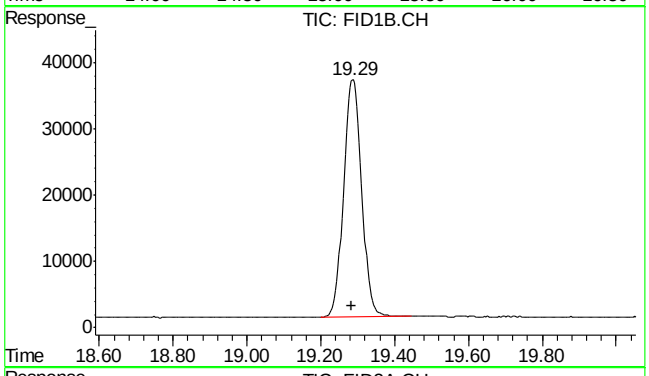
#23 Butylcyclohexane

R.T.: 15.008 min
Delta R.T.: 0.002 min
Response: 966331
Conc: N.D.



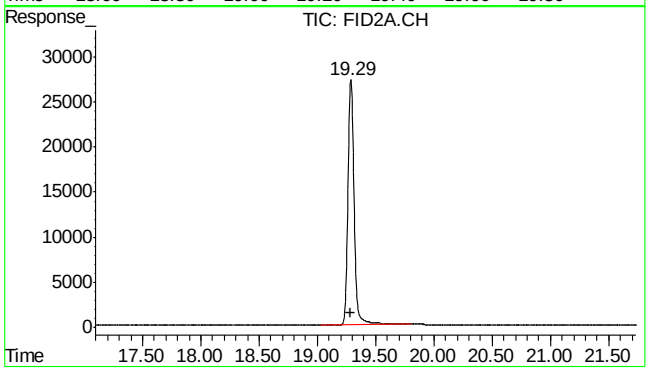
#23 Butylcyclohexane

R.T.: 15.009 min
Delta R.T.: 0.003 min
Response: 2000819
Conc: 95.90 ug/L



#24 Naphthalene

R.T.: 19.287 min
Delta R.T.: 0.003 min
Response: 1212259
Conc: 98.01 ug/L



#24 Naphthalene

R.T.: 19.289 min
Delta R.T.: 0.003 min
Response: 987550
Conc: 103.99 ug/L

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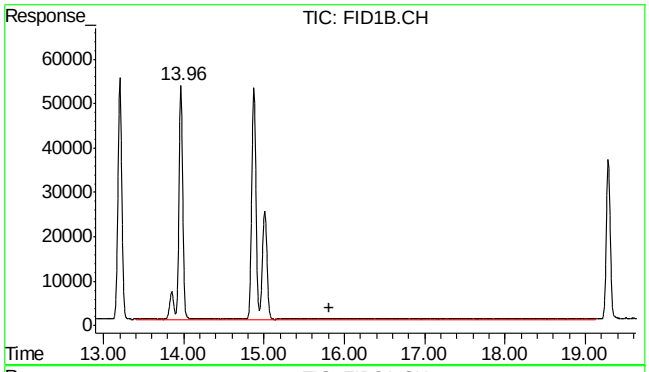
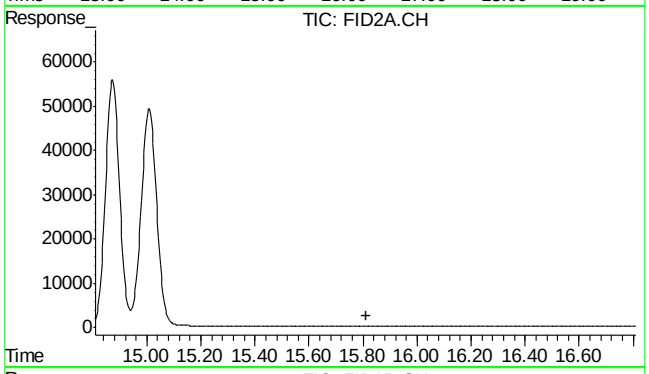


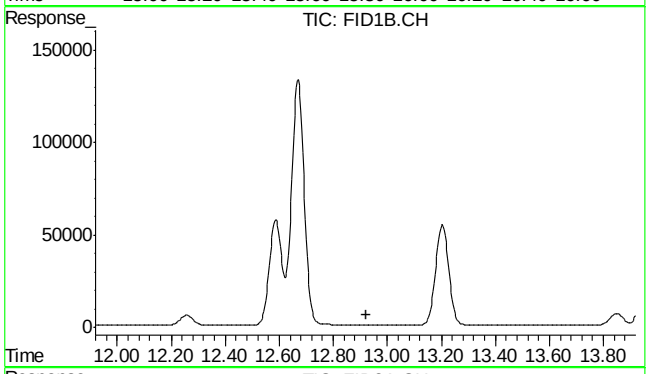
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2187896
Conc: 94.75 ug/L m



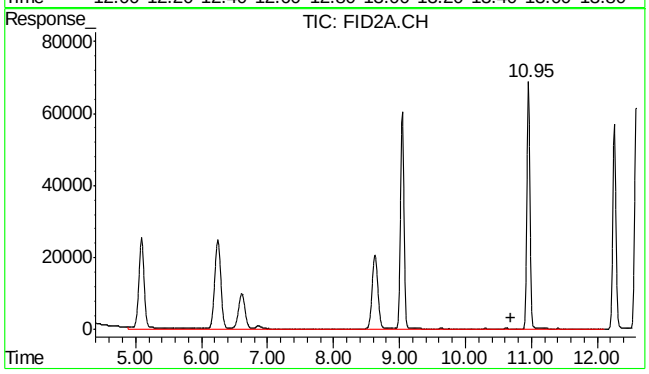
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 3769496
Conc: N.D.



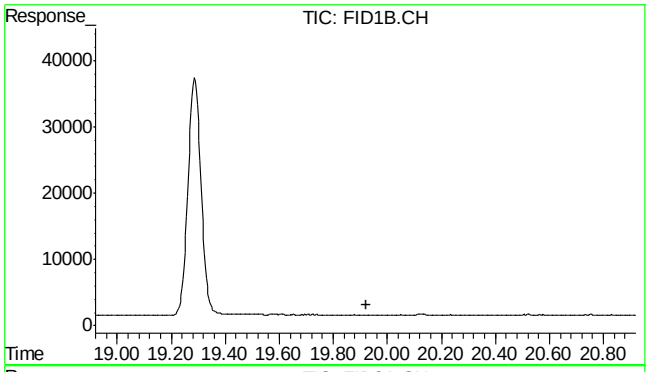
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 13677911
Conc: N.D.



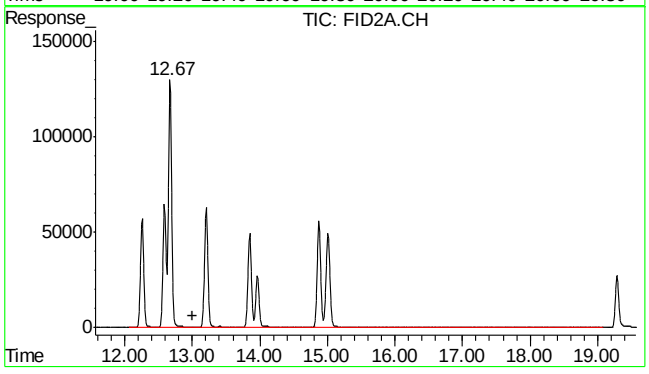
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 4498717
Conc: 324.96 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 3504125
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 5990999
Conc: 303.60 ug/L m

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Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077775.D\FID1B.CH Vial: 44
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077775.D\FID2A.CH
Acq On : 01-Feb-2017, 07:26:01 Operator: antonioc
Sample : cc4115-4 Inst : HP5890
Misc : gc19636,guv4135,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 01 08:04:50 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	197640	0	NoCal m	N.D.
2)	S	Alkane B	15.01f	0.00	909158	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.61f	0	680531	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	2040877	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.96f	0	2014501	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	1962745	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	3934798	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	2003868	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	1861842	N.D.	NoCal m
20)	S	BFB	13.96	13.96	1570310	832547	85.550	91.913
		Spiked Amount 200.000 Range 70 - 130 Recovery =					42.77%#	45.96%#
		Target Compounds						
10)		Pentane	0.00	5.09	0	1316236	N.D.	95.970 #
11)		2-Methylpentane	6.26	6.25	46770	1502784	NoCal	100.019 #
12)		Methyl Tert Buty	6.61	6.62	572379	684615	106.090	104.678
13)		2,2,4-Trimethylp	8.63	8.63	224624	1372521	NoCal	120.592 #
14)		Benzene	9.04	9.05	2096363	2044218	87.894	93.366
15)		Toluene	10.96	10.96	1911113	2015443	88.006	97.785
16)		Nonane	12.26	12.26	162851	1772501	NoCal	91.898 #
17)		Ethylbenzene	12.59	12.59	1655451	1907452	90.582	97.594
18)		m,p-Xylene	12.67	12.67	4018494	3984703	181.675	192.381
19)		o-Xylene	13.20	13.21	1706081	2008849	89.231	96.239
21)		Decane	13.85	13.85	201109	1578887	NoCal	87.688 #
22)		1,2,4-Trimethylb	14.87	14.87	1723972	1846172	86.198	91.551
23)		Butylcyclohexane	15.01	15.01	900250	1825250	NoCal	87.484 #
24)		Naphthalene	19.29	19.29	1102989	880661	89.174	92.734
25)	H	C9- C10 Aromatic	15.81	15.81	2074748	3472888	89.072	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	12864015	4477577	NoCal	323.246 #
27)	H	C9- C12 Aliphati	19.92	13.00	3292954	5480287	NoCal	276.558 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077775.D VPH011317.M Fri Feb 03 13:19:42 2017

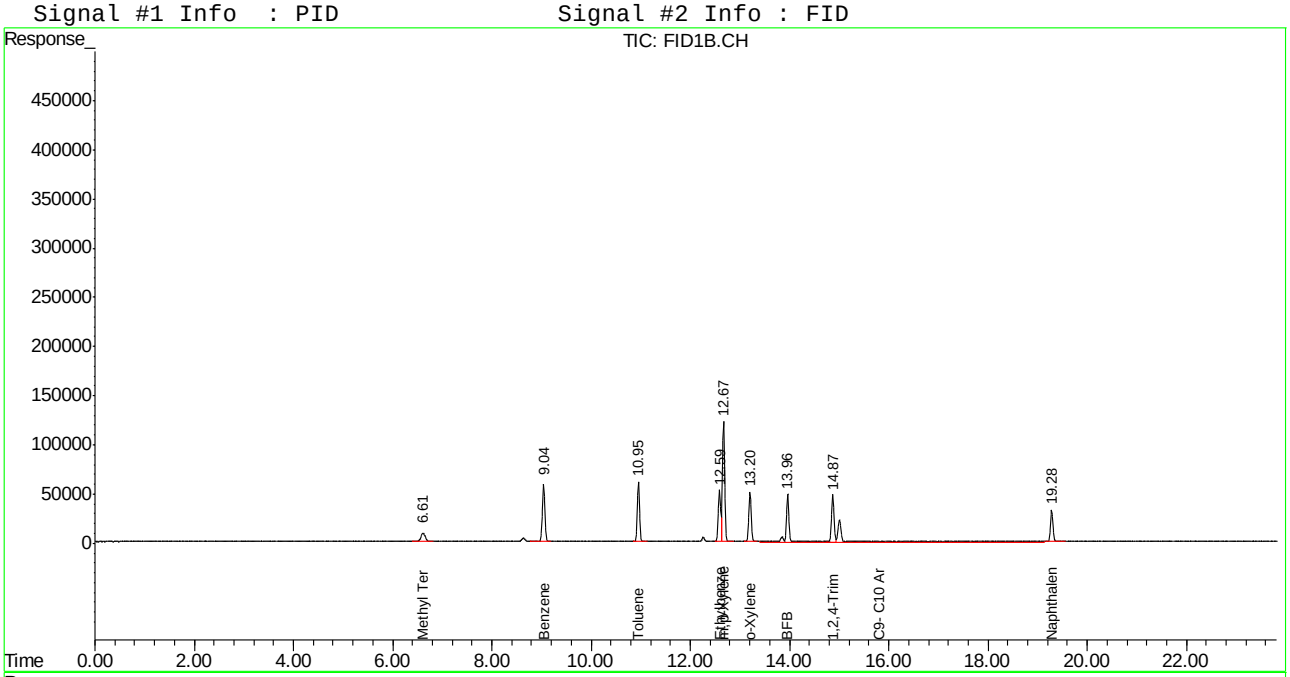
SGS ACCUTEST FA40754

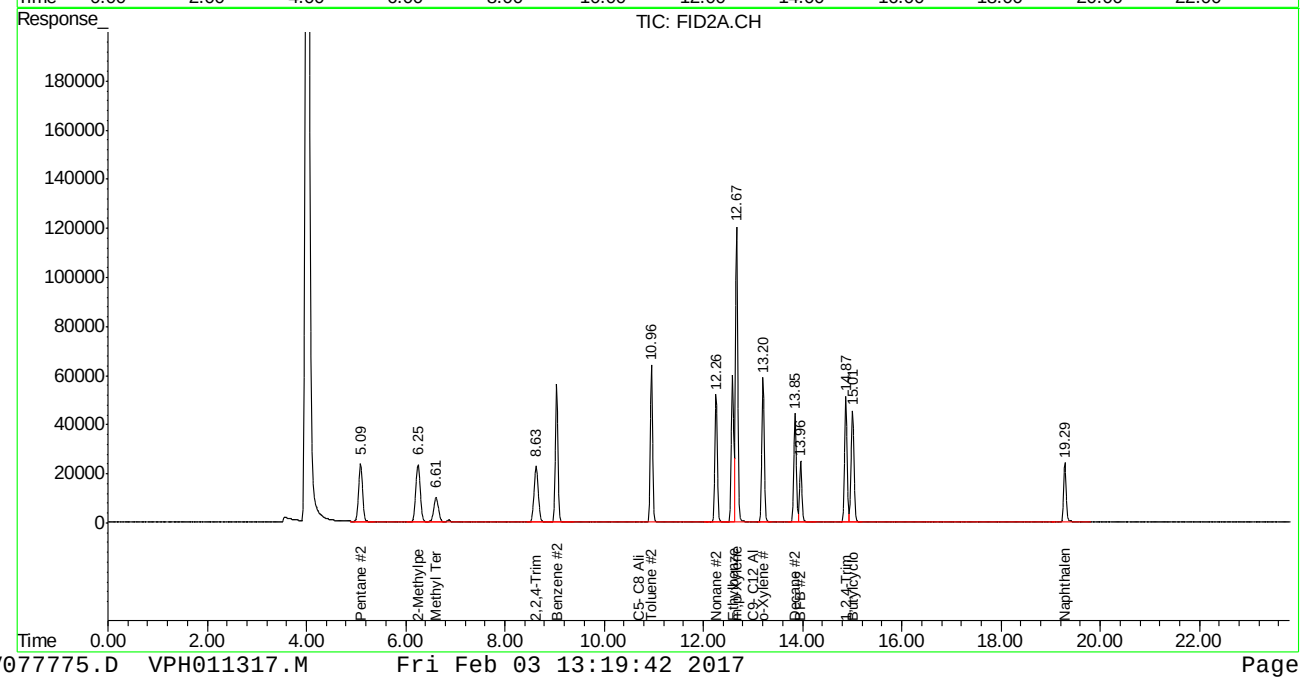
Quantitation Report (QT Reviewed)

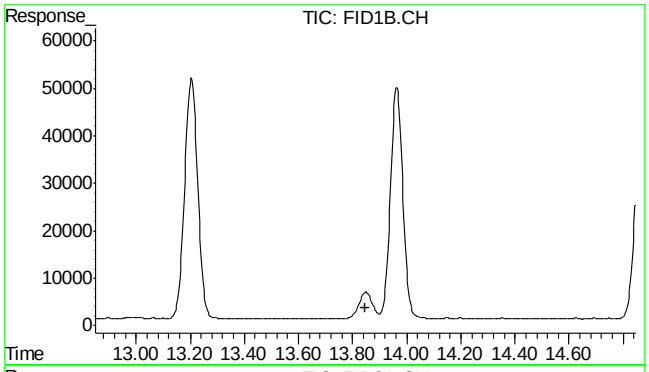
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077775.D\FID1B.CH Vial: 44
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077775.D\FID2A.CH
Acq On : 01-Feb-2017, 07:26:01 Operator: antonioc
Sample : cc4115-4 Inst : HP5890
Misc : gc19636,guv4135,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 1 8:28 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

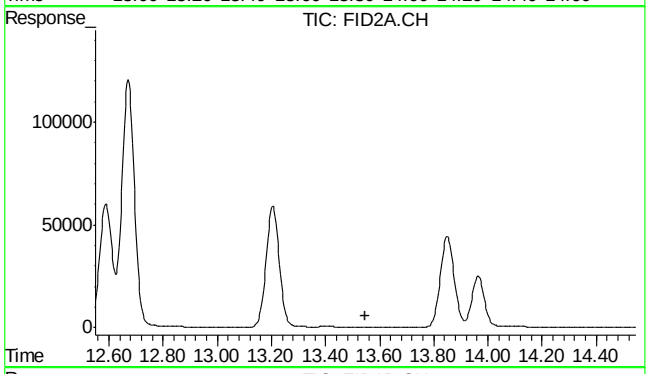






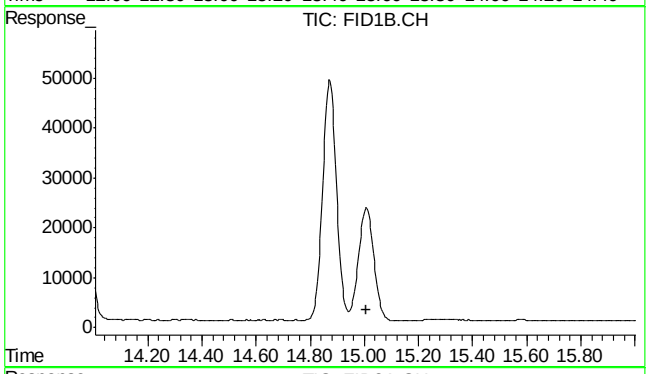
#1 Alkane A

R.T.: 13.849 min
Delta R.T.: 0.002 min
Response: 197640
Conc: N.D.



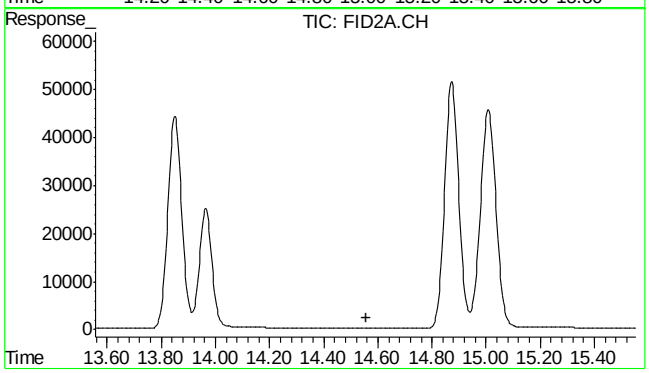
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

R.T.: 15.007 min
Delta R.T.: 0.001 min
Response: 909158
Conc: N.D.



#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

7.6.13

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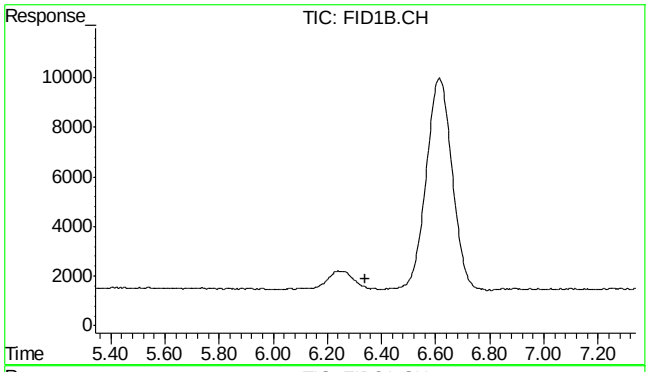
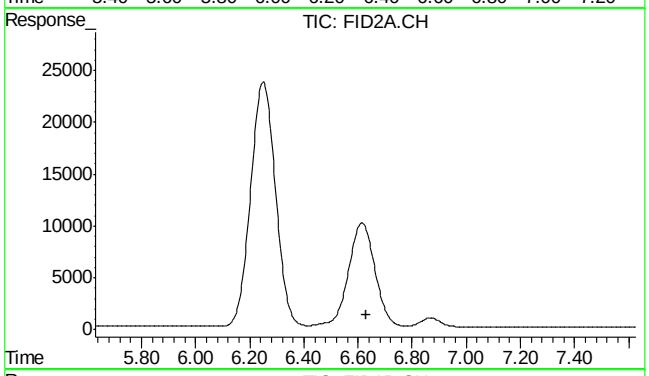


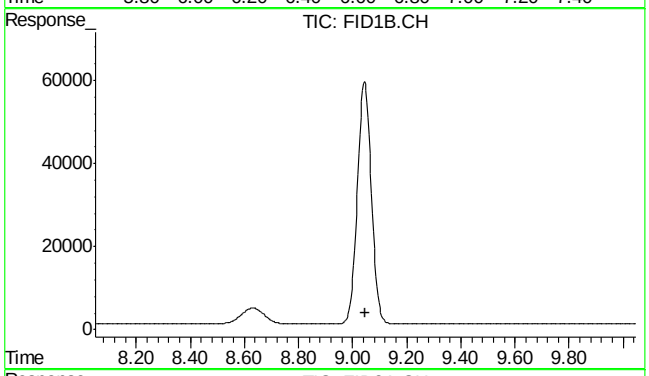
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



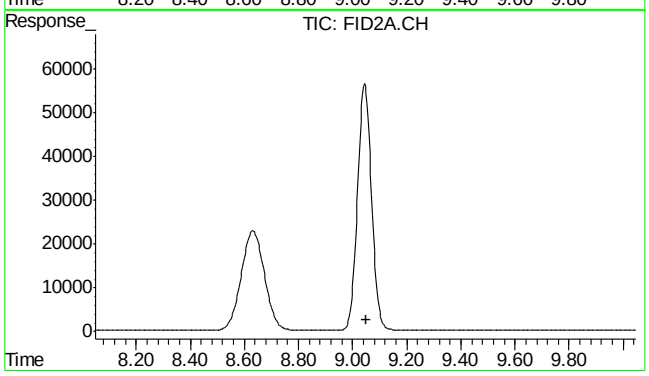
#3 Aromatic A

R.T.: 6.614 min
Delta R.T.: -0.015 min
Response: 680531
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

R.T.: 9.044 min
Delta R.T.: -0.005 min
Response: 2040877
Conc: N.D.

7.6.13

7

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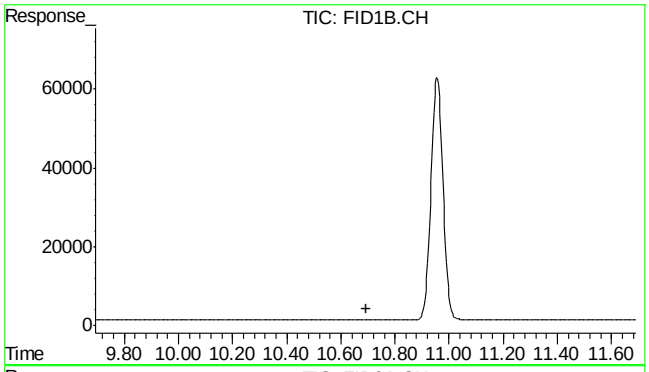
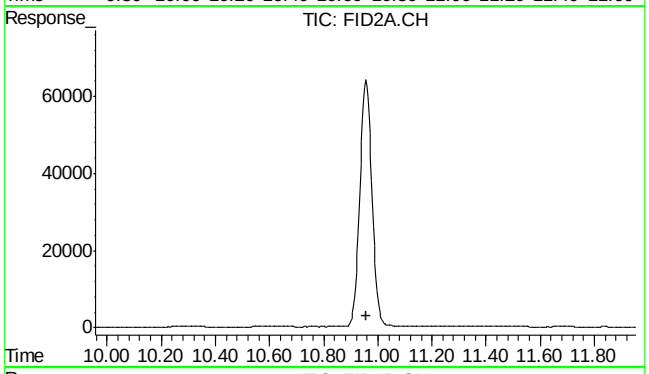


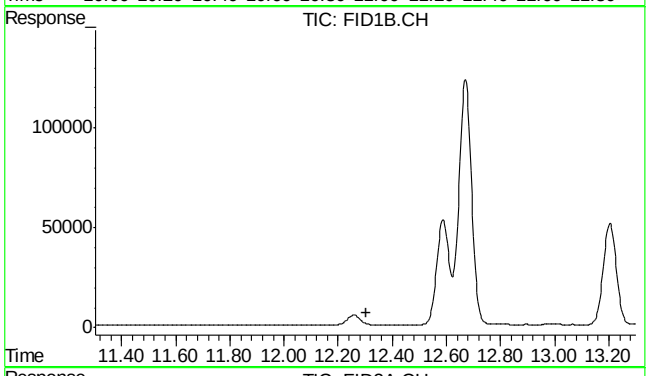
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



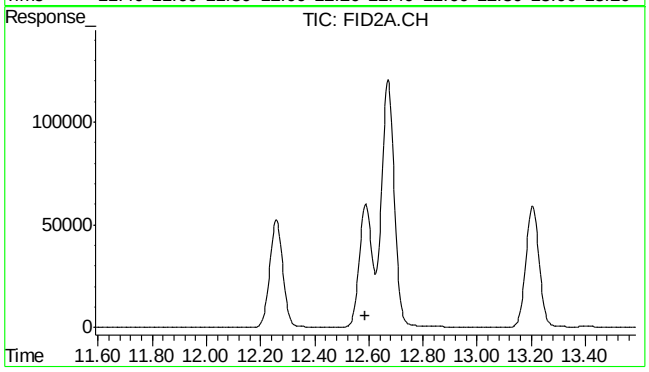
#5 Aromatic C

R.T.: 10.955 min
Delta R.T.: 0.000 min
Response: 2014501
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 12.588 min
Delta R.T.: 0.001 min
Response: 1962745
Conc: N.D.

7.6.13

7

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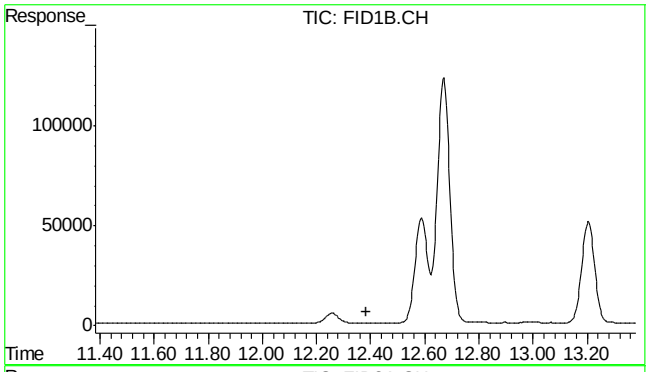
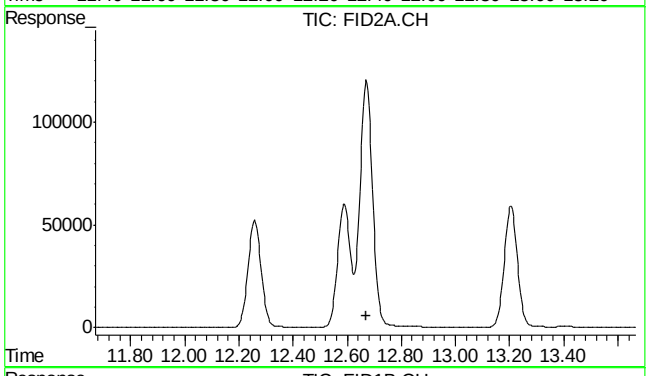


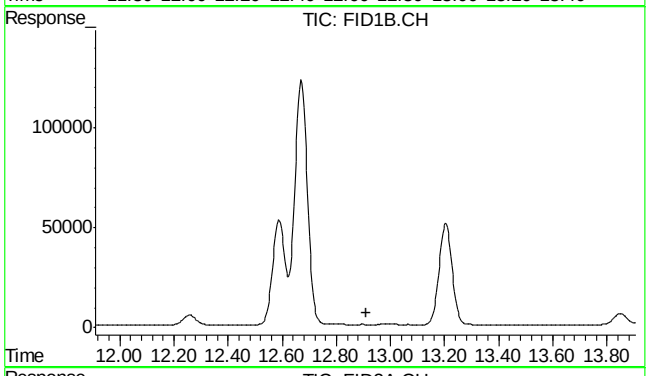
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



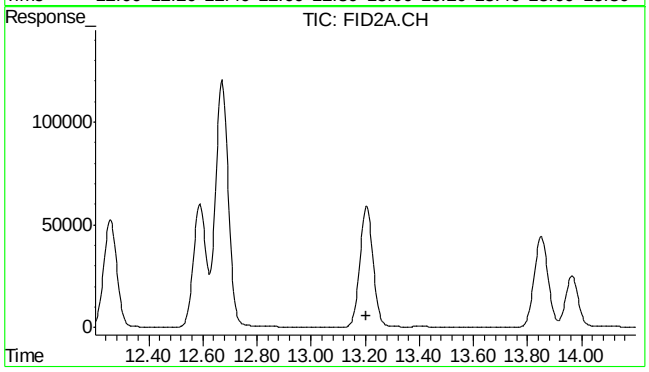
#7 Aromatic E

R.T.: 12.670 min
Delta R.T.: 0.001 min
Response: 3934798
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

R.T.: 13.204 min
Delta R.T.: 0.000 min
Response: 2003868
Conc: N.D.

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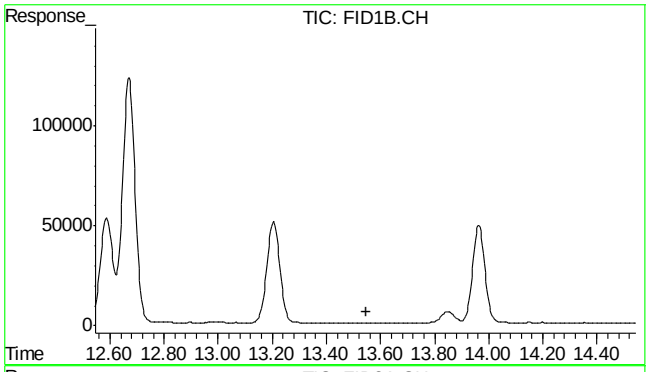
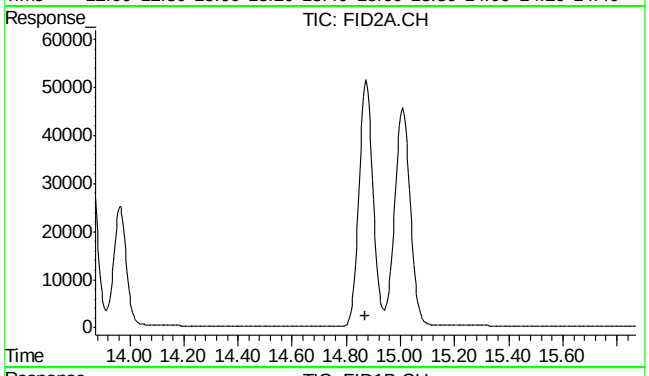


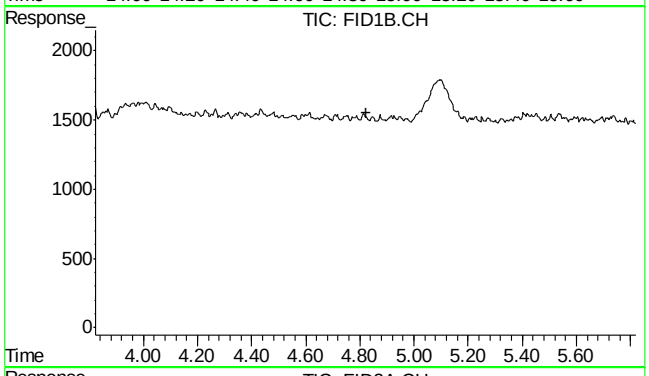
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



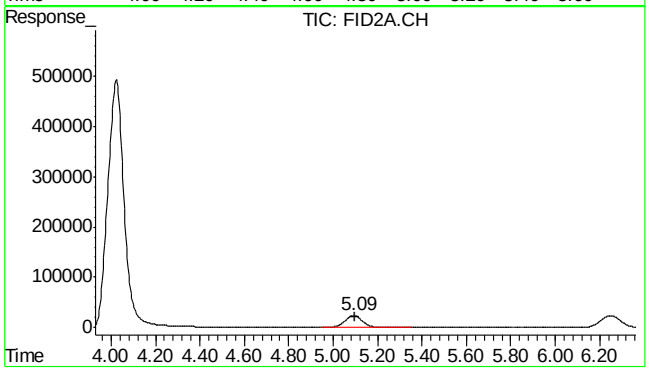
#9 Aromatic G

R.T.: 14.872 min
Delta R.T.: 0.001 min
Response: 1861842
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 5.093 min
Delta R.T.: -0.007 min
Response: 1316236
Conc: 95.97 ug/L

7.6.13

7

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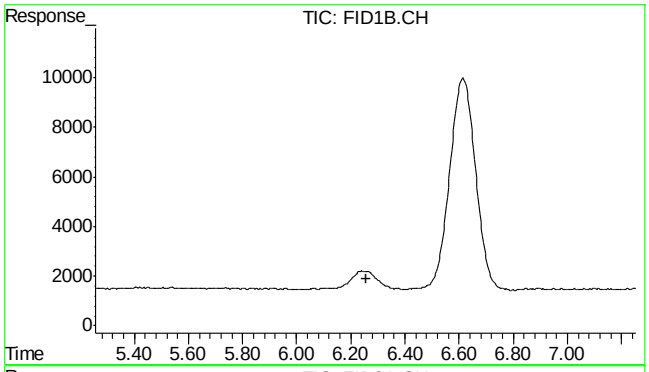
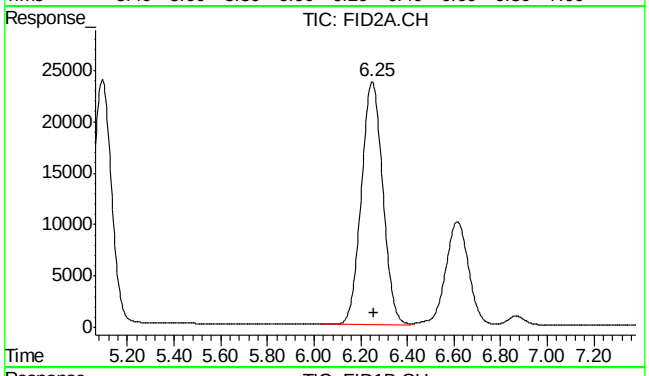


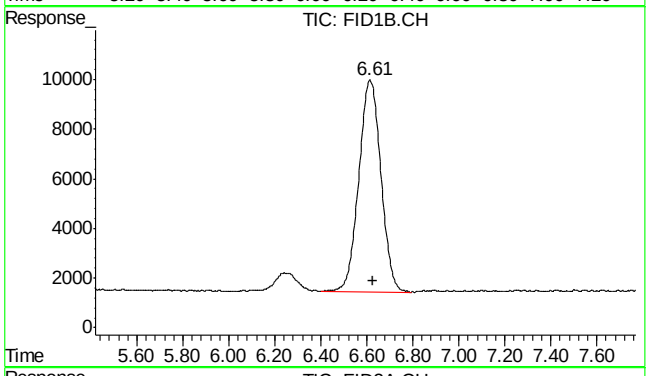
#11 2-Methylpentane

R.T.: 6.256 min
Delta R.T.: 0.000 min
Response: 46770
Conc: N.D.



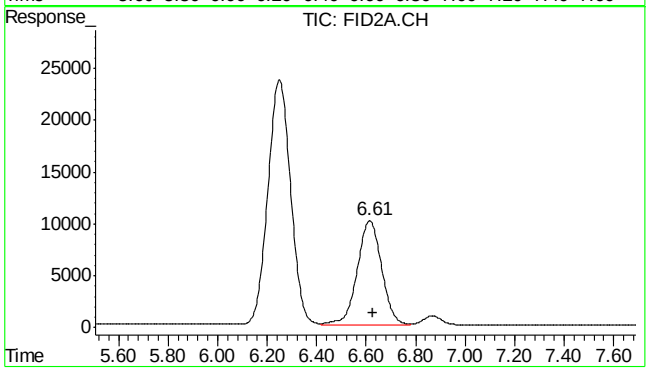
#11 2-Methylpentane

R.T.: 6.250 min
Delta R.T.: -0.006 min
Response: 1502784
Conc: 100.02 ug/L



#12 Methyl Tert Butyl Ether

R.T.: 6.615 min
Delta R.T.: -0.014 min
Response: 572379
Conc: 106.09 ug/L



#12 Methyl Tert Butyl Ether

R.T.: 6.615 min
Delta R.T.: -0.013 min
Response: 684615
Conc: 104.68 ug/L

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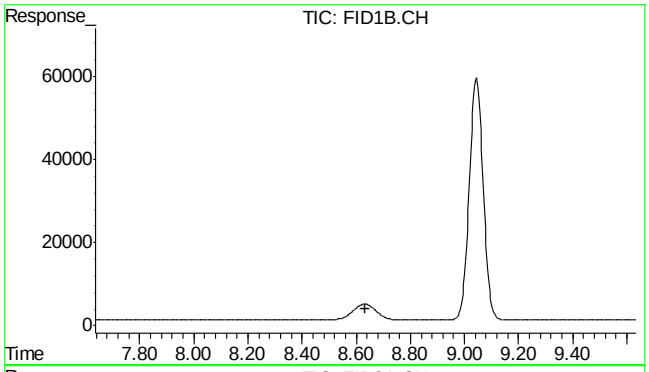
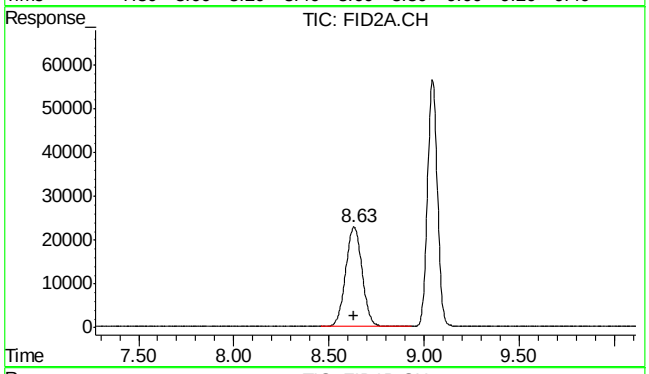


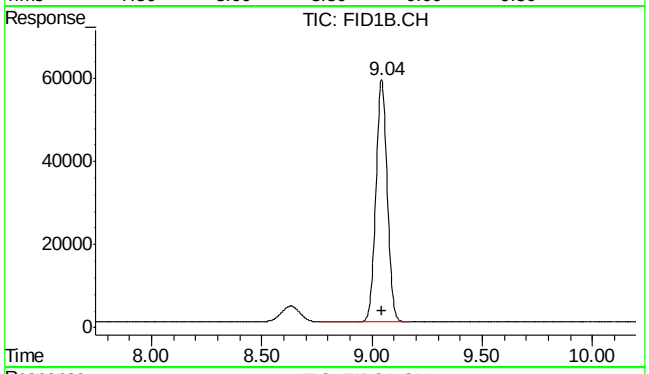
#13 2,2,4-Trimethylpentane

R.T.: 8.633 min
Delta R.T.: 0.000 min
Response: 224624
Conc: N.D.



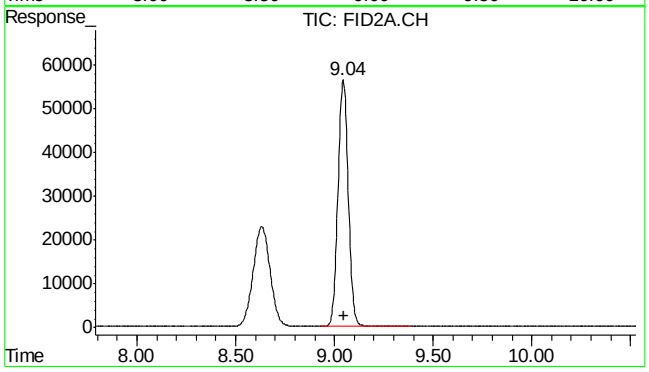
#13 2,2,4-Trimethylpentane

R.T.: 8.632 min
Delta R.T.: -0.002 min
Response: 1372521
Conc: 120.59 ug/L



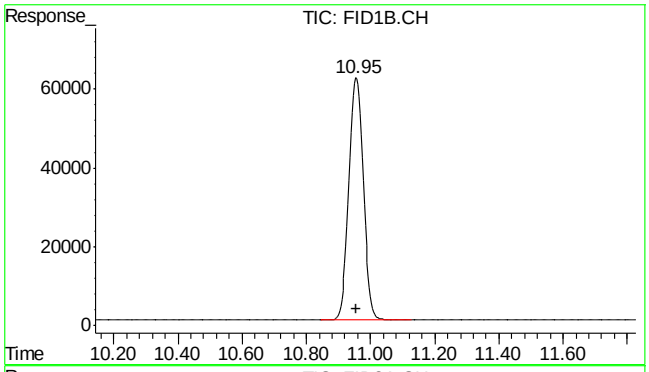
#14 Benzene

R.T.: 9.045 min
Delta R.T.: -0.001 min
Response: 2096363
Conc: 87.89 ug/L



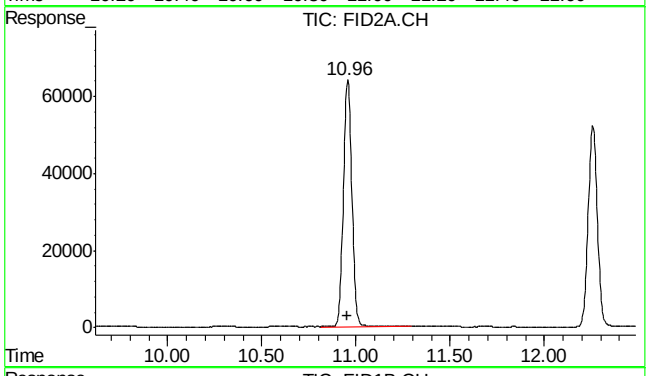
#14 Benzene

R.T.: 9.045 min
Delta R.T.: 0.000 min
Response: 2044218
Conc: 93.37 ug/L



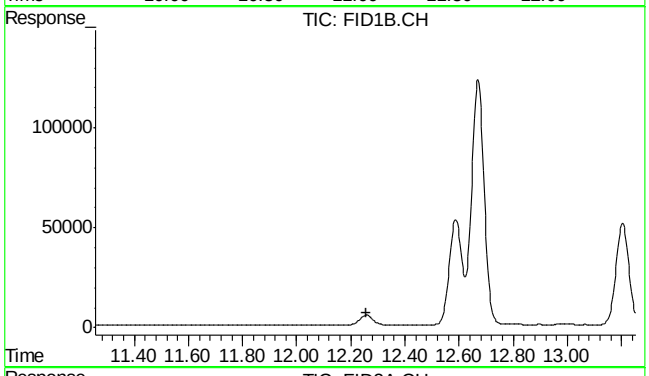
#15 Toluene

R.T.: 10.956 min
Delta R.T.: 0.001 min
Response: 1911113
Conc: 88.01 ug/L



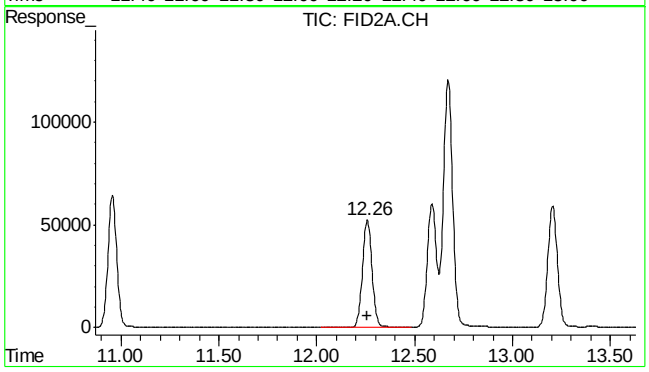
#15 Toluene

R.T.: 10.957 min
Delta R.T.: 0.002 min
Response: 2015443
Conc: 97.79 ug/L



#16 Nonane

R.T.: 12.258 min
Delta R.T.: 0.003 min
Response: 162851
Conc: N.D.



#16 Nonane

R.T.: 12.259 min
Delta R.T.: 0.003 min
Response: 1772501
Conc: 91.90 ug/L

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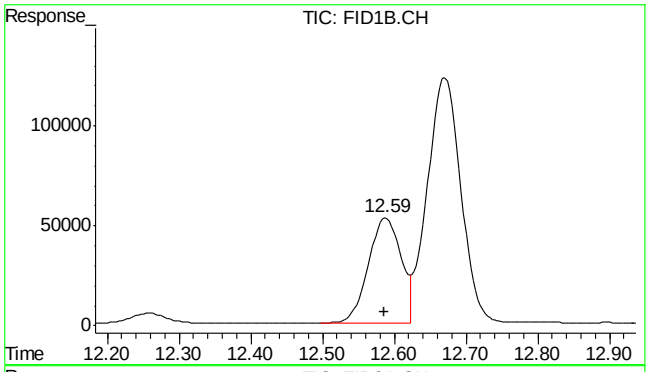
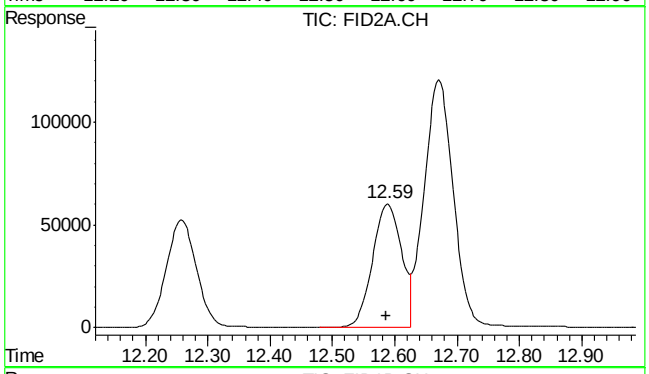


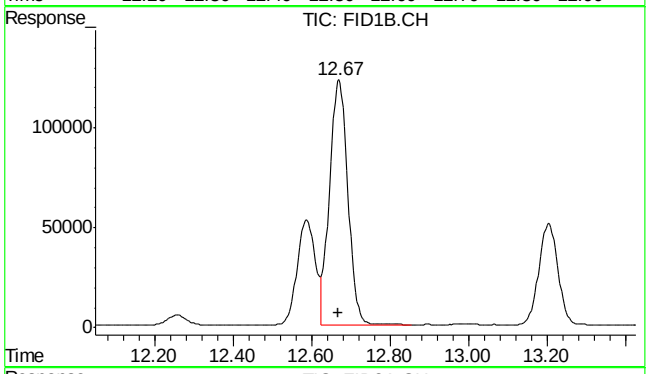
#17 Ethylbenzene

R.T.: 12.588 min
Delta R.T.: 0.002 min
Response: 1655451
Conc: 90.58 ug/L



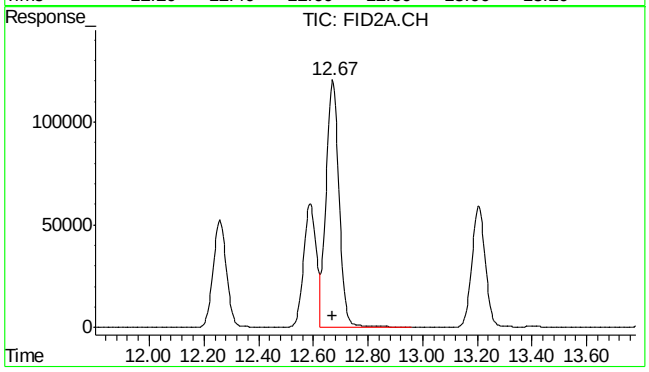
#17 Ethylbenzene

R.T.: 12.589 min
Delta R.T.: 0.002 min
Response: 1907452
Conc: 97.59 ug/L



#18 m,p-Xylene

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 4018494
Conc: 181.68 ug/L



#18 m,p-Xylene

R.T.: 12.672 min
Delta R.T.: 0.003 min
Response: 3984703
Conc: 192.38 ug/L

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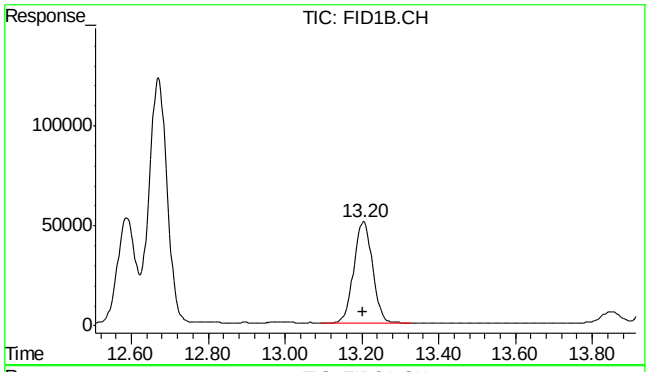
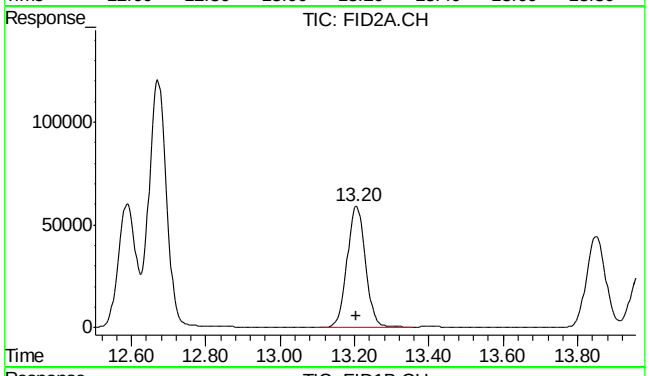


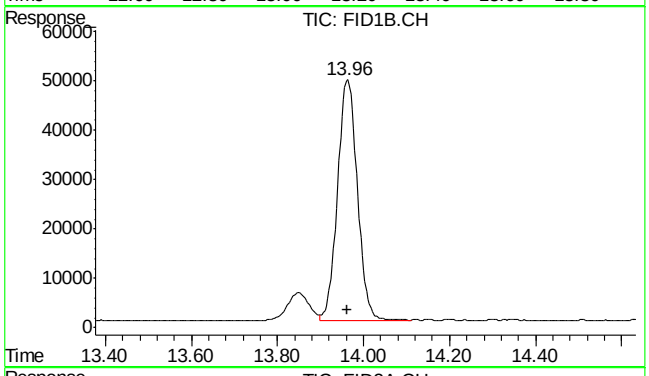
#19 o-Xylene

R.T.: 13.205 min
Delta R.T.: 0.002 min
Response: 1706081
Conc: 89.23 ug/L



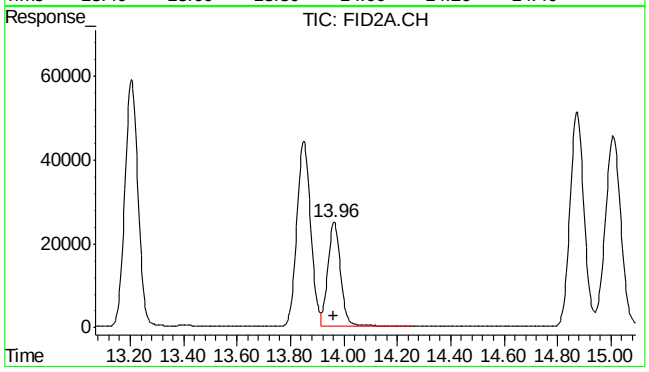
#19 o-Xylene

R.T.: 13.206 min
Delta R.T.: 0.003 min
Response: 2008849
Conc: 96.24 ug/L



#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 1570310
Conc: 85.55 ug/L



#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 832547
Conc: 91.91 ug/L

7.6.13

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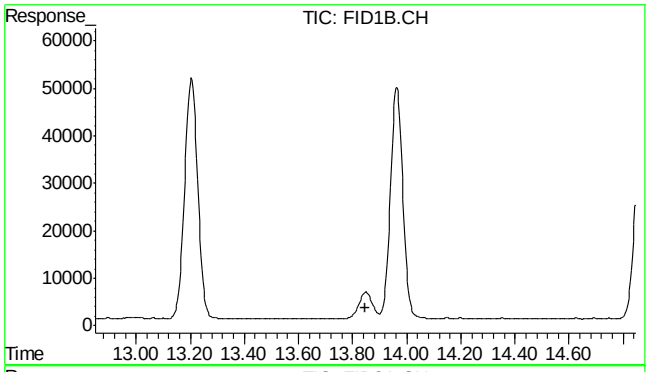
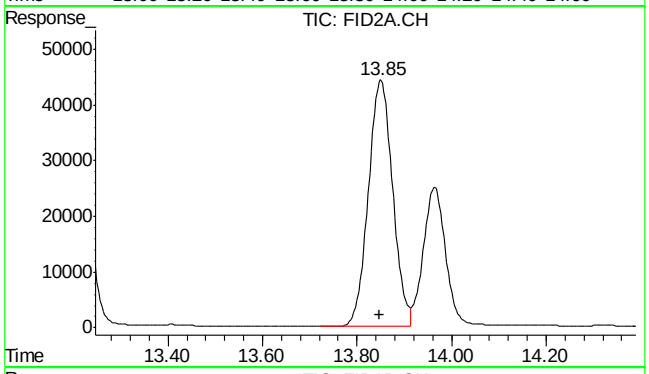


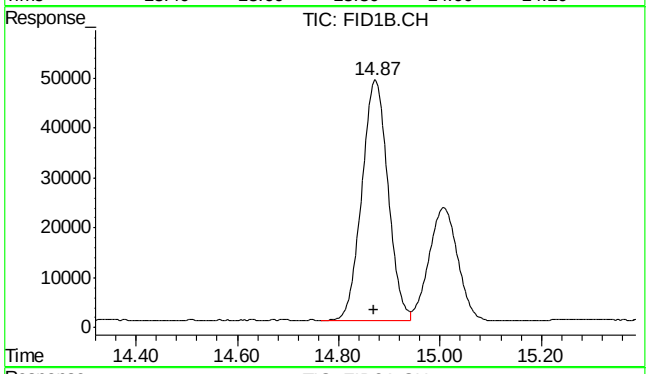
#21 Decane

R.T.: 13.850 min
Delta R.T.: 0.002 min
Response: 201109
Conc: N.D.



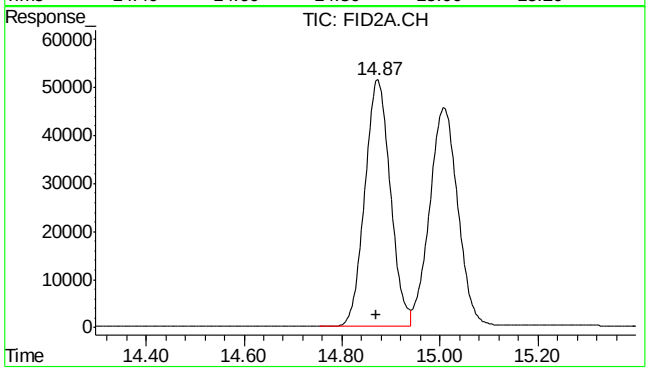
#21 Decane

R.T.: 13.851 min
Delta R.T.: 0.003 min
Response: 1578887
Conc: 87.69 ug/L



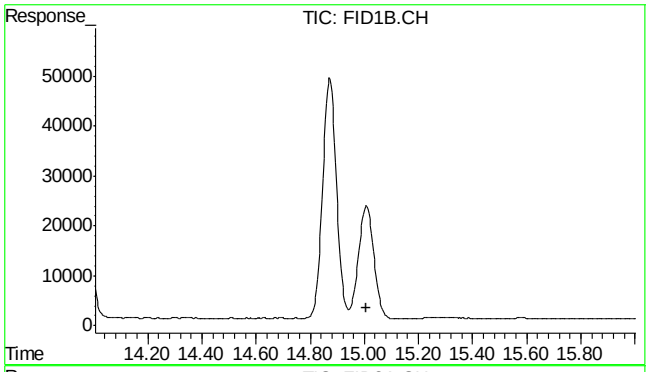
#22 1,2,4-Trimethylbenzene

R.T.: 14.873 min
Delta R.T.: 0.003 min
Response: 1723972
Conc: 86.20 ug/L



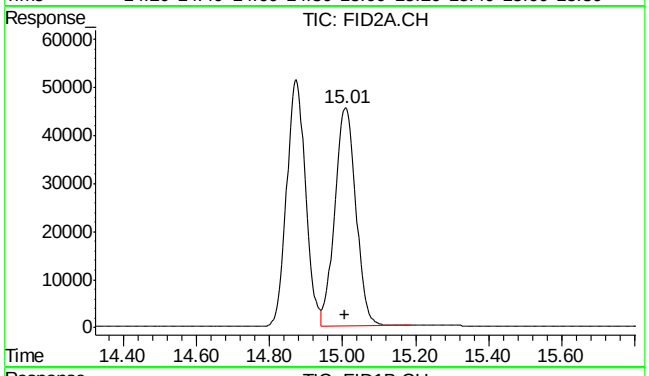
#22 1,2,4-Trimethylbenzene

R.T.: 14.874 min
Delta R.T.: 0.003 min
Response: 1846172
Conc: 91.55 ug/L



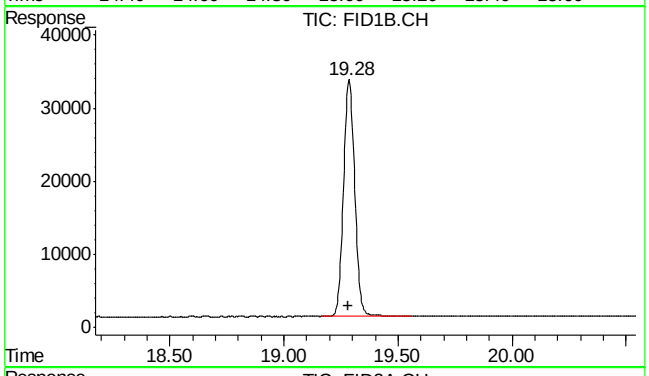
#23 Butylcyclohexane

R.T.: 15.008 min
Delta R.T.: 0.003 min
Response: 900250
Conc: N.D.



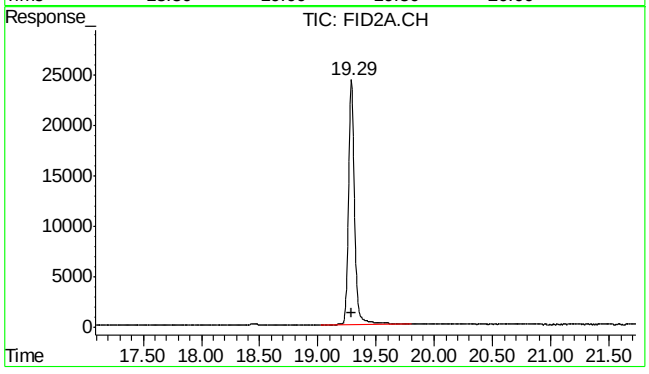
#23 Butylcyclohexane

R.T.: 15.009 min
Delta R.T.: 0.003 min
Response: 1825250
Conc: 87.48 ug/L



#24 Naphthalene

R.T.: 19.287 min
Delta R.T.: 0.003 min
Response: 1102989
Conc: 89.17 ug/L



#24 Naphthalene

R.T.: 19.288 min
Delta R.T.: 0.002 min
Response: 880661
Conc: 92.73 ug/L

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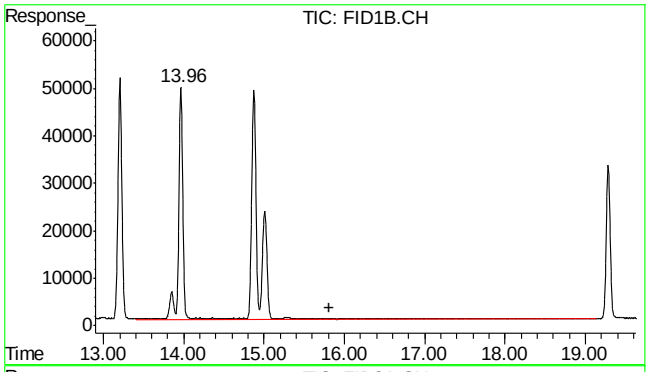
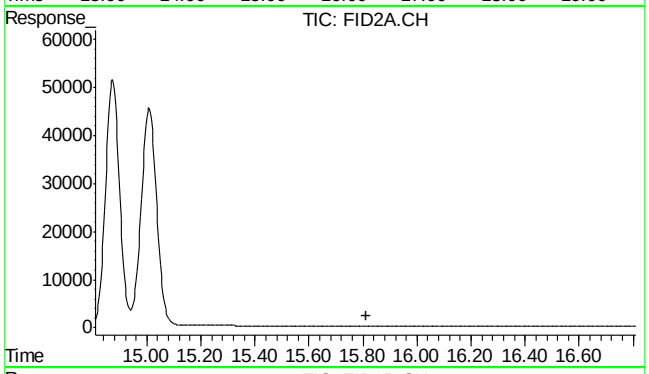


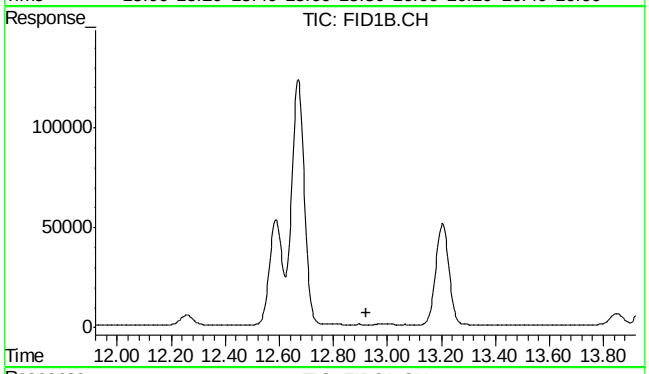
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2074748
Conc: 89.07 ug/L m



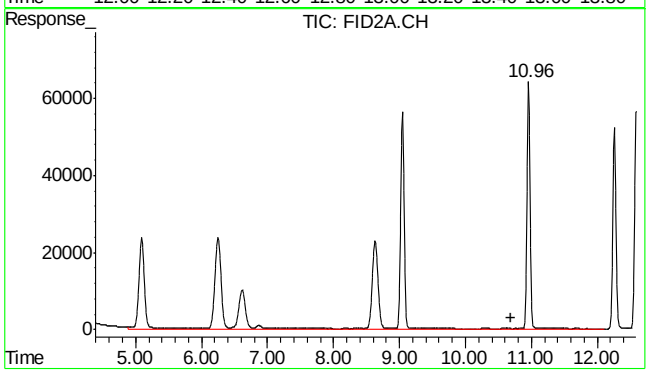
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 3472888
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 12864015
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 4477577
Conc: 323.25 ug/L m

7.6.13

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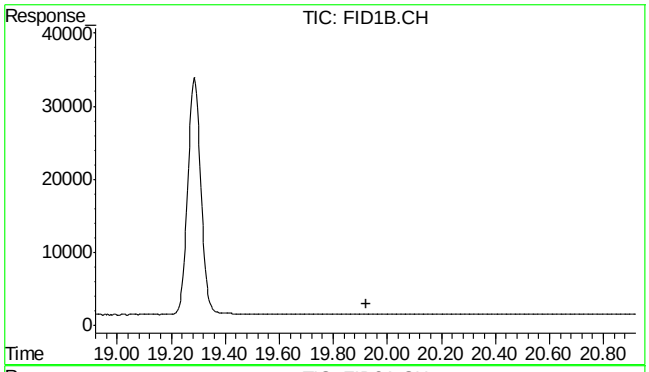
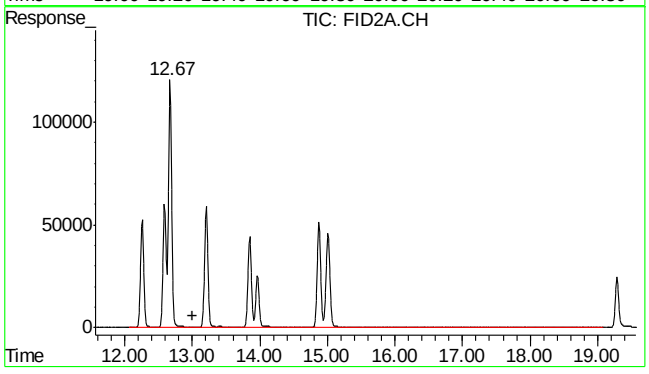


#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 3292954
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 5480287
Conc: 276.56 ug/L m

7.6.13

7

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Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\013117\UV077782.D\FID1B.CH Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077782.D\FID2A.CH
Acq On : 01-Feb-2017, 11:00:25 Operator: antonioc
Sample : ecc4115-4 Inst : HP5890
Misc : gc19636,guv4135,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 02 18:01:54 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	215031	0	NoCal m	N.D.
2)	S	Alkane B	15.01f	0.00	963925	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.60f	0	702211	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	2159041	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.95f	0	2128323	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	2051563	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	4190324	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	2098413	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	1952748	N.D.	NoCal m
20)	S	BFB	13.96	13.96	1680996	880292	91.580	97.184
		Spiked Amount 200.000 Range 70 - 130 Recovery =					45.79%#	48.59%#
		Target Compounds						
10)		Pentane	0.00	5.08	0	1390542	N.D.	101.388 #
11)		2-Methylpentane	6.24	6.24	53531	1590663	NoCal	105.868 #
12)		Methyl Tert Buty	6.61	6.61	587767	708135	108.942	108.274
13)		2,2,4-Trimethylp	8.63	8.63	245812	1476311	NoCal	131.864 #
14)		Benzene	9.04	9.04	2218587	2160221	93.019	98.664
15)		Toluene	10.95	10.96	2029573	2131183	93.461	103.401
16)		Nonane	12.26	12.26	181099	1881460	NoCal	97.547 #
17)		Ethylbenzene	12.59	12.59	1760241	2014023	96.316	103.047
18)		m,p-Xylene	12.67	12.67	4304965	4204759	194.626	203.005
19)		o-Xylene	13.20	13.21	1812743	2107029	94.809	100.943
21)		Decane	13.85	13.85	215300	1674956	NoCal	93.023 #
22)		1,2,4-Trimethylb	14.87	14.87	1832929	1955398	91.646	96.968
23)		Butylcyclohexane	15.01	15.01	953512	1923521	NoCal	92.195 #
24)		Naphthalene	19.29	19.29	1197430	954915	96.809	100.553
25)	H	C9- C10 Aromatic	15.81	15.81	2088577	3664182	89.767	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	13627479	4728513	NoCal	343.620 #
27)	H	C9- C12 Aliphati	19.92	13.00	3444944	5770737	NoCal	291.934 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077782.D VPH011317.M Fri Feb 03 13:20:02 2017

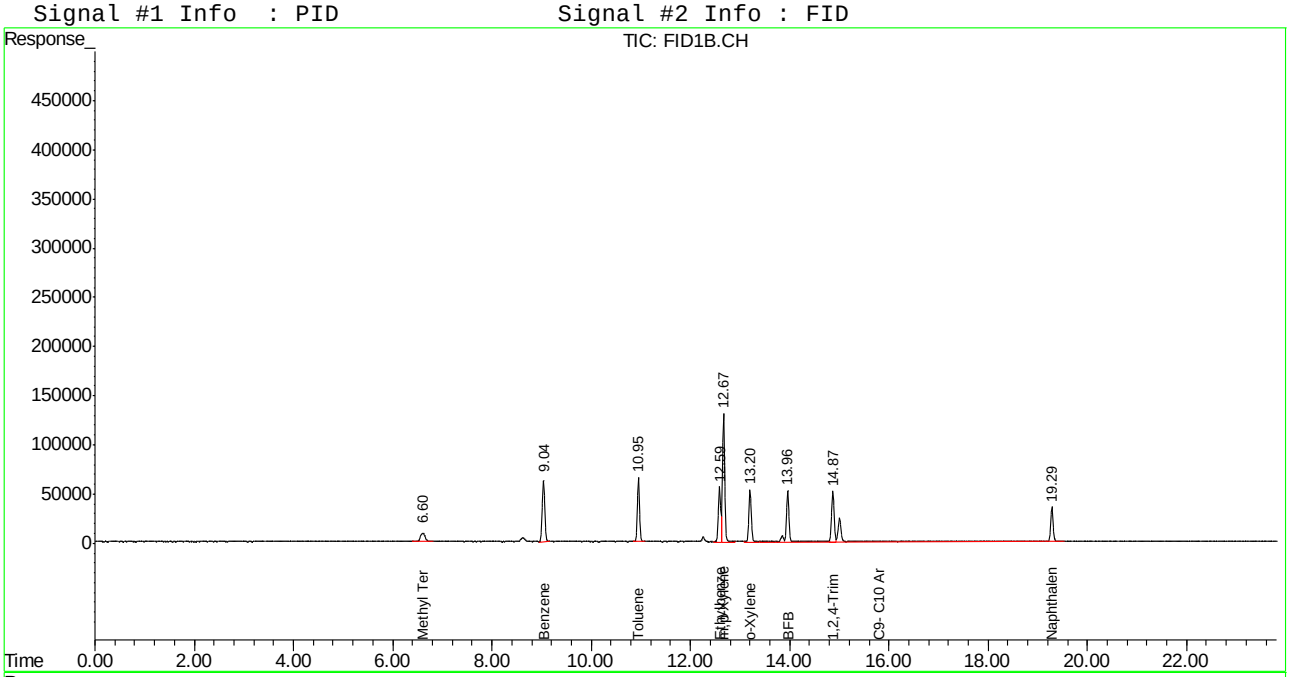
SGS ACCUTEST FA40754

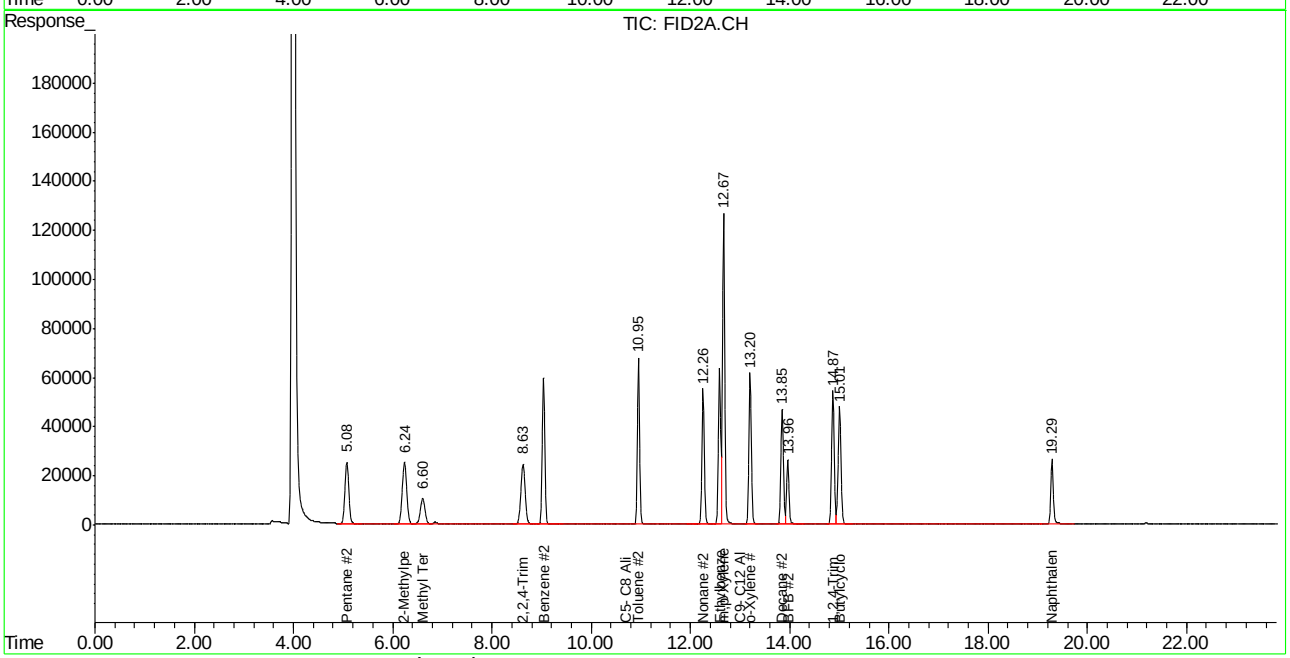
Quantitation Report (QT Reviewed)

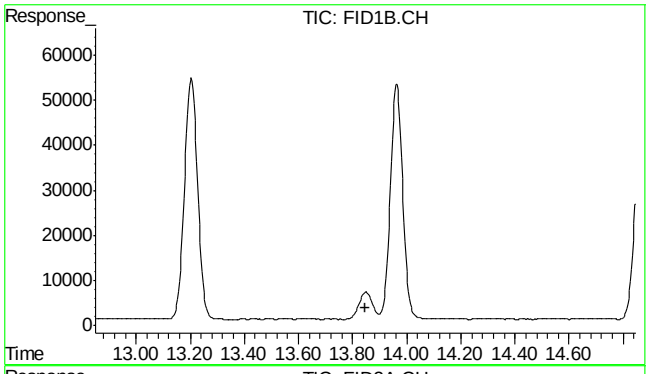
Signal #1 : C:\HPCHEM\2\DATA\013117\UV077782.D\FID1B.CH Vial: 51
Signal #2 : C:\HPCHEM\2\DATA\013117\UV077782.D\FID2A.CH
Acq On : 01-Feb-2017, 11:00:25 Operator: antonioc
Sample : ecc4115-4 Inst : HP5890
Misc : gc19636,guv4135,5.00,,100,5.1,,soil Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 2 18:19 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

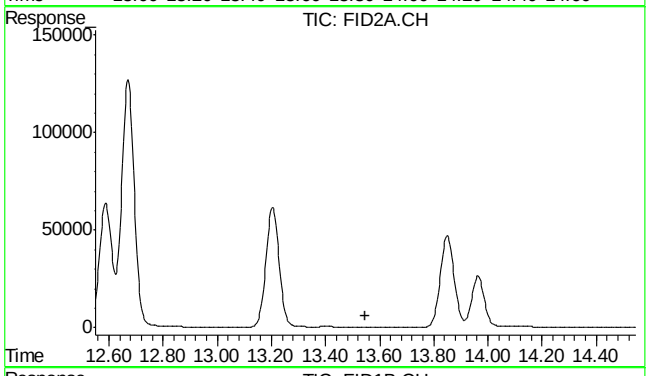






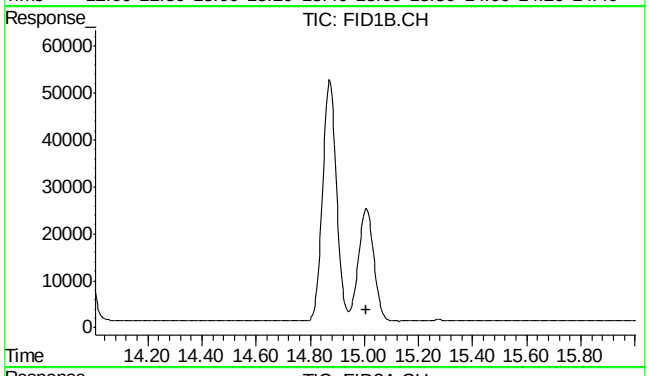
#1 Alkane A

R.T.: 13.847 min
Delta R.T.: 0.000 min
Response: 215031
Conc: N.D.



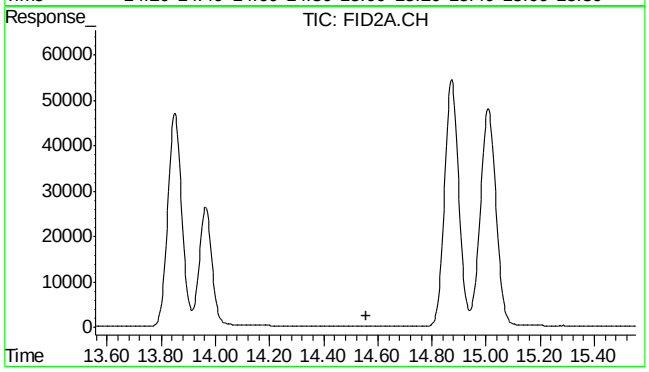
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



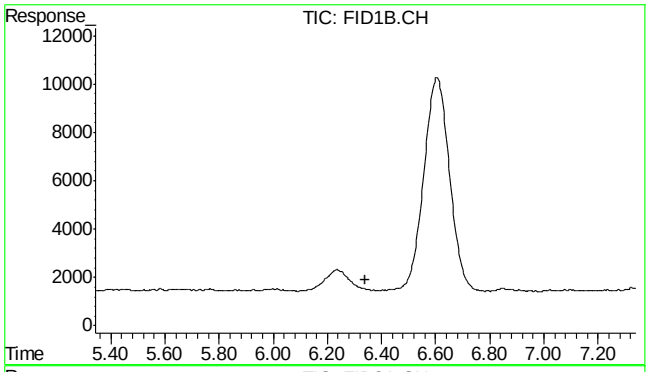
#2 Alkane B

R.T.: 15.006 min
Delta R.T.: 0.000 min
Response: 963925
Conc: N.D.



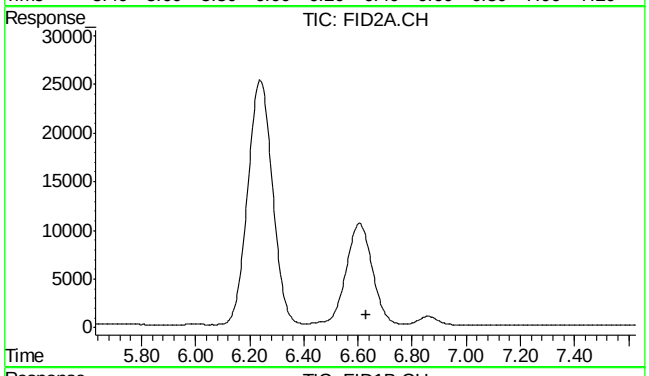
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.



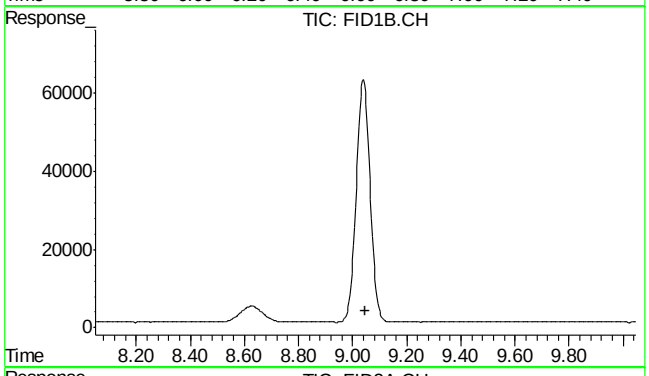
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



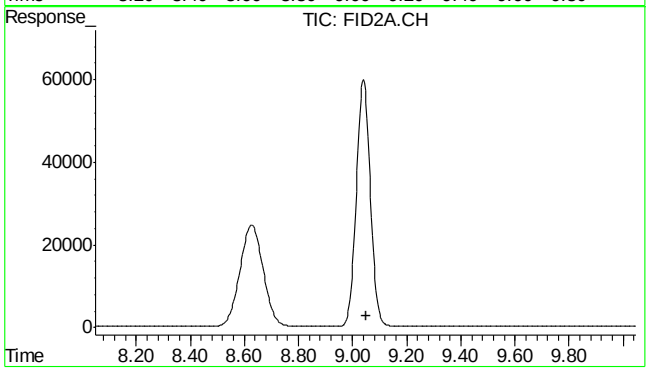
#3 Aromatic A

R.T.: 6.604 min
Delta R.T.: -0.025 min
Response: 702211
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

R.T.: 9.039 min
Delta R.T.: -0.009 min
Response: 2159041
Conc: N.D.

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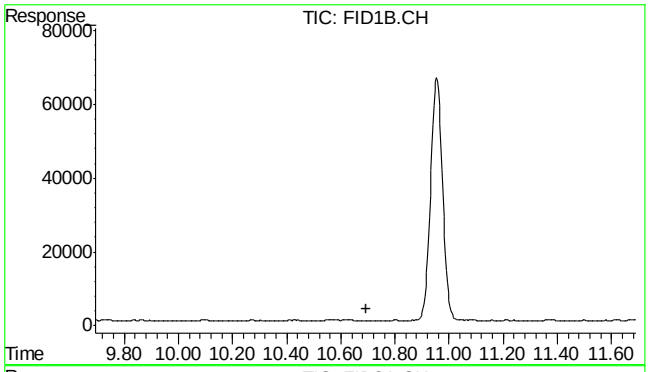
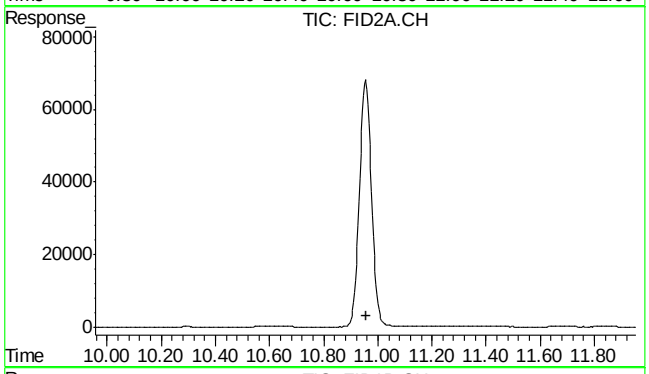


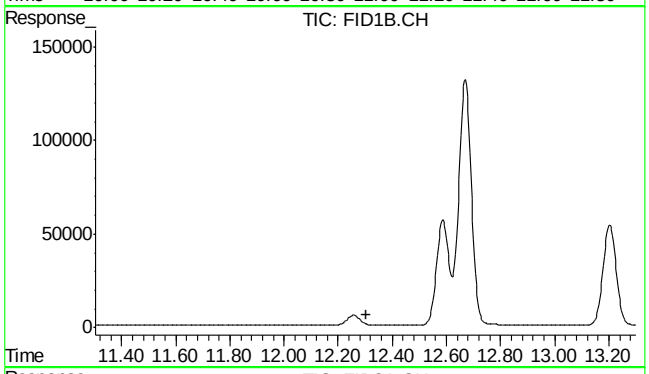
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



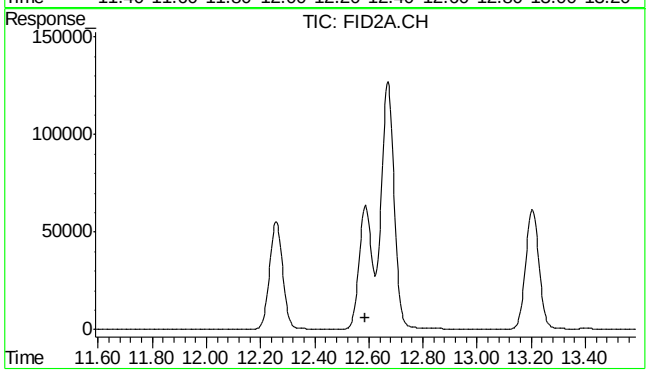
#5 Aromatic C

R.T.: 10.954 min
Delta R.T.: -0.002 min
Response: 2128323
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 12.587 min
Delta R.T.: 0.000 min
Response: 2051563
Conc: N.D.

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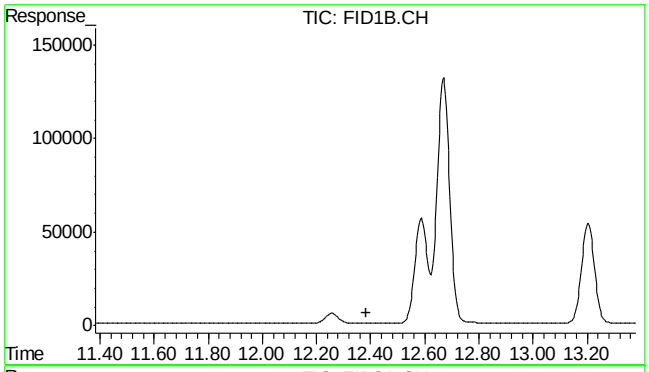
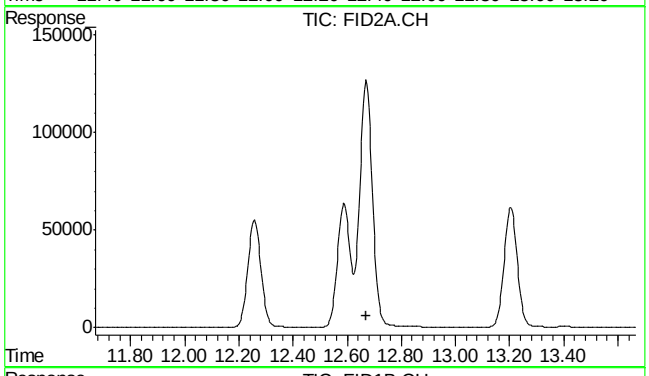


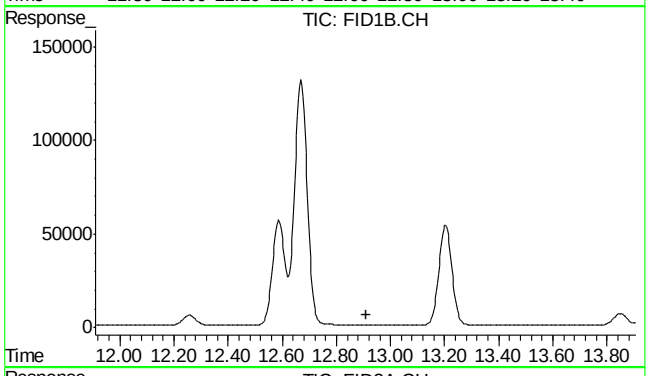
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



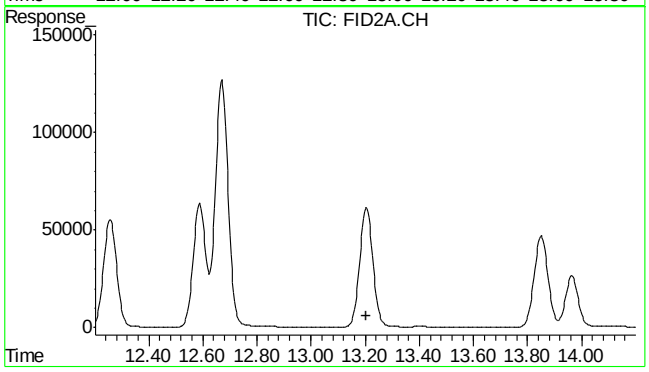
#7 Aromatic E

R.T.: 12.670 min
Delta R.T.: 0.000 min
Response: 4190324
Conc: N.D.



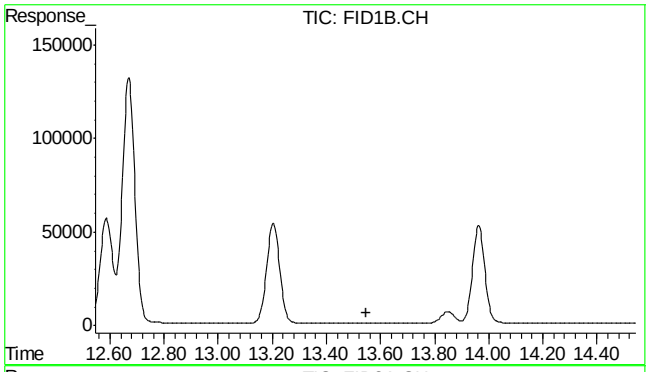
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



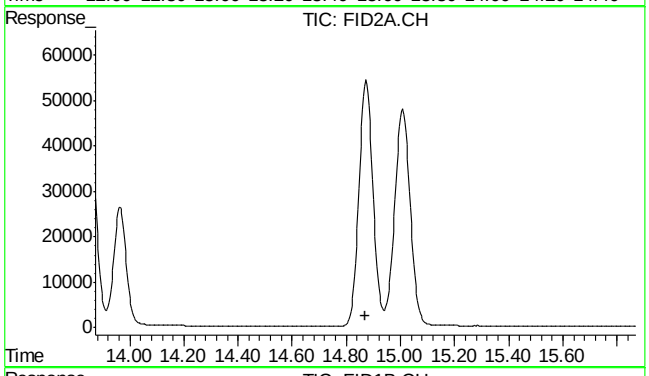
#8 Aromatic F

R.T.: 13.204 min
Delta R.T.: 0.000 min
Response: 2098413
Conc: N.D.



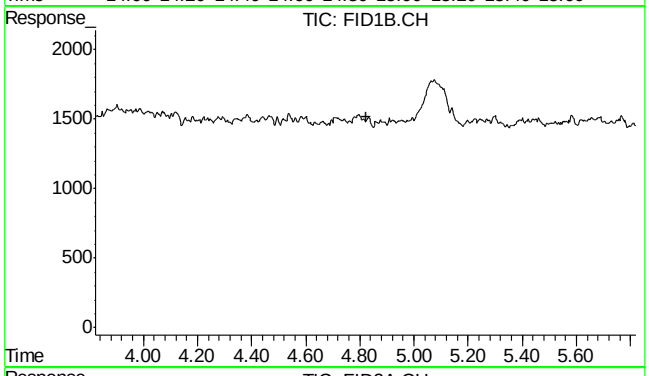
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



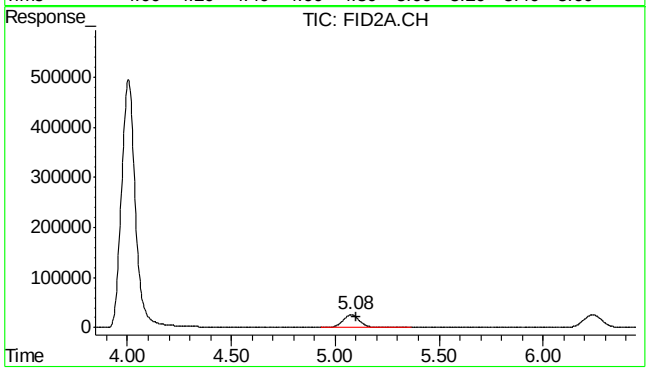
#9 Aromatic G

R.T.: 14.872 min
Delta R.T.: 0.000 min
Response: 1952748
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 5.078 min
Delta R.T.: -0.022 min
Response: 1390542
Conc: 101.39 ug/L

7.6.14

7

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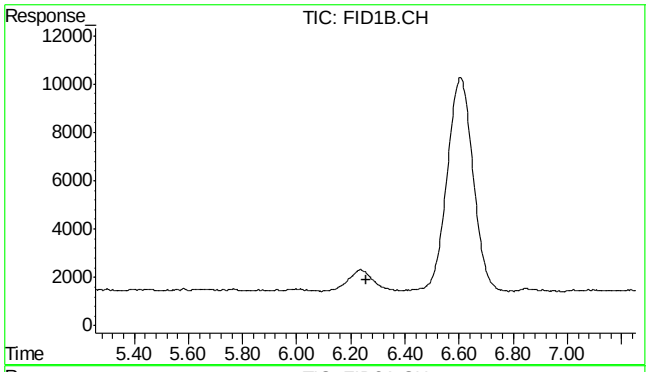
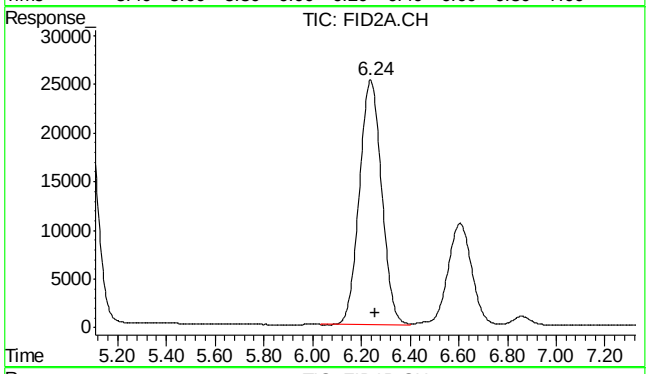


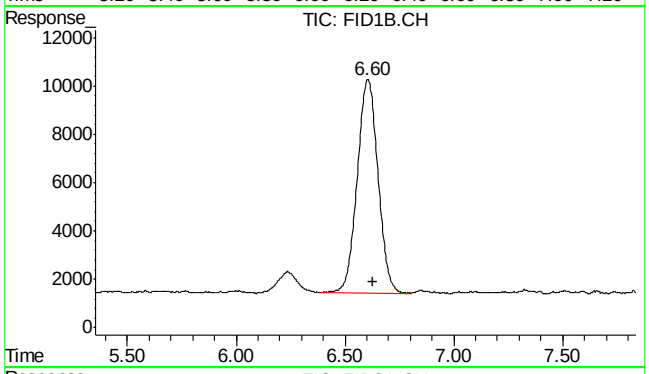
#11 2-Methylpentane

R.T.: 6.236 min
Delta R.T.: -0.020 min
Response: 53531
Conc: N.D.



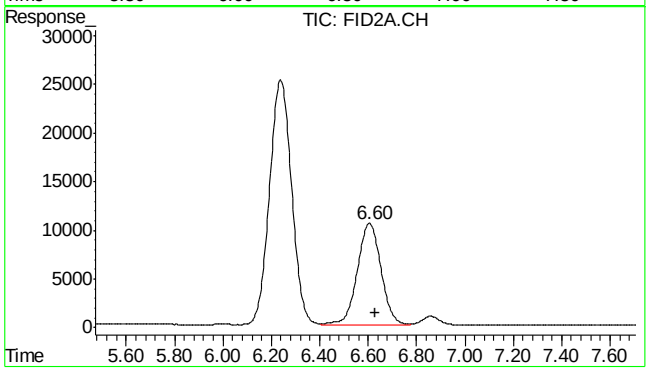
#11 2-Methylpentane

R.T.: 6.239 min
Delta R.T.: -0.017 min
Response: 1590663
Conc: 105.87 ug/L



#12 Methyl Tert Butyl Ether

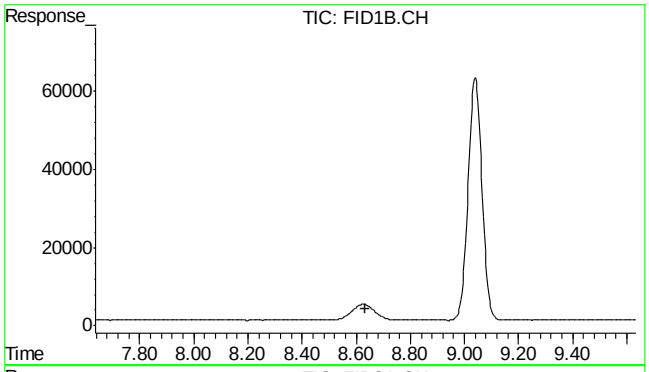
R.T.: 6.606 min
Delta R.T.: -0.023 min
Response: 587767
Conc: 108.94 ug/L



#12 Methyl Tert Butyl Ether

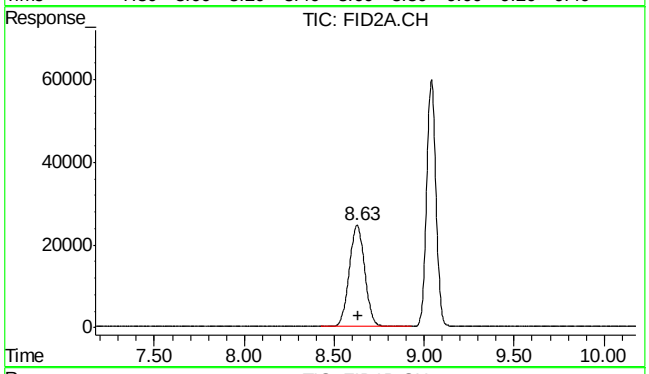
R.T.: 6.606 min
Delta R.T.: -0.022 min
Response: 708135
Conc: 108.27 ug/L

SGS ACCUTEST FA40754



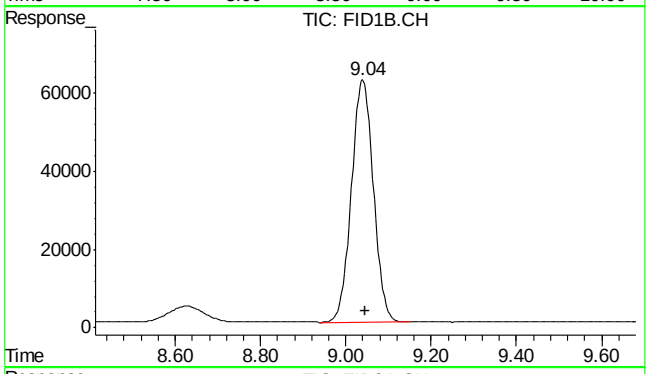
#13 2,2,4-Trimethylpentane

R.T.: 8.628 min
Delta R.T.: -0.006 min
Response: 245812
Conc: N.D.



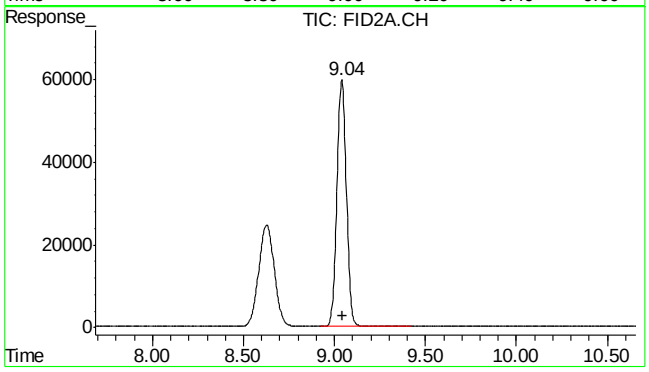
#13 2,2,4-Trimethylpentane

R.T.: 8.628 min
Delta R.T.: -0.006 min
Response: 1476311
Conc: 131.86 ug/L



#14 Benzene

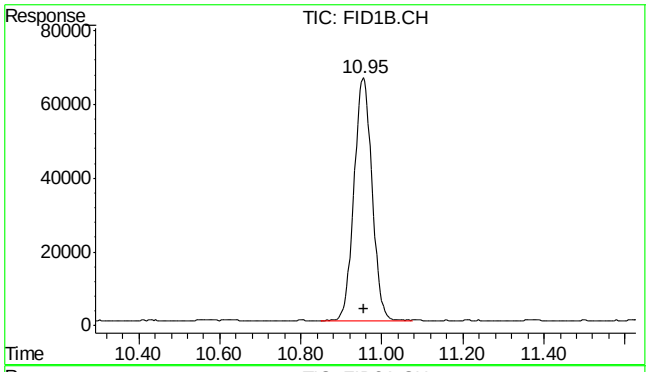
R.T.: 9.040 min
Delta R.T.: -0.006 min
Response: 2218587
Conc: 93.02 ug/L



#14 Benzene

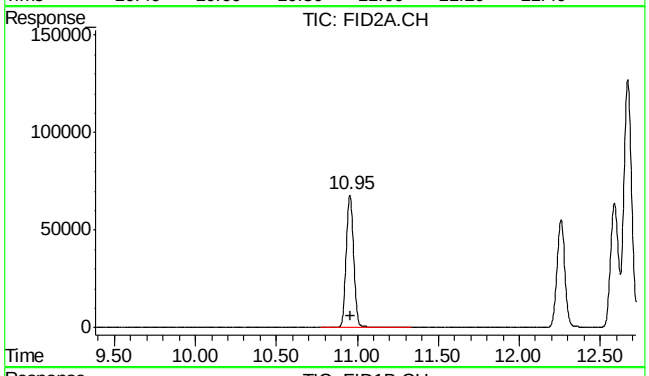
R.T.: 9.041 min
Delta R.T.: -0.005 min
Response: 2160221
Conc: 98.66 ug/L

SGS ACCUTEST FA40754



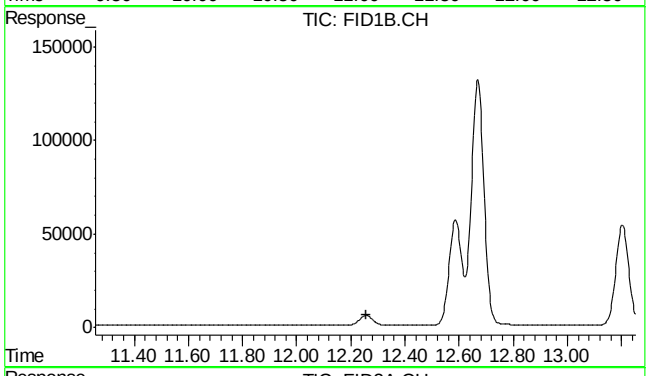
#15 Toluene

R.T.: 10.955 min
Delta R.T.: 0.000 min
Response: 2029573
Conc: 93.46 ug/L



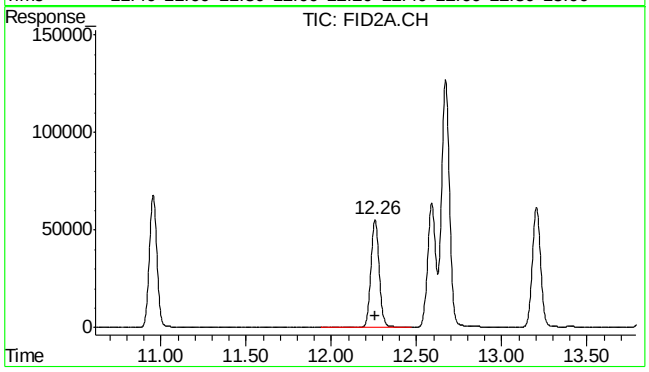
#15 Toluene

R.T.: 10.955 min
Delta R.T.: 0.000 min
Response: 2131183
Conc: 103.40 ug/L



#16 Nonane

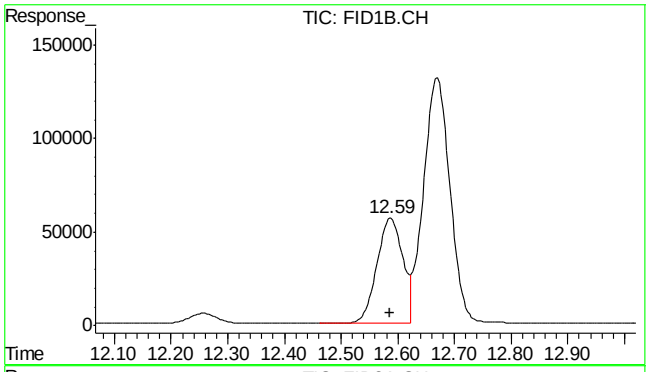
R.T.: 12.257 min
Delta R.T.: 0.002 min
Response: 181099
Conc: N.D.



#16 Nonane

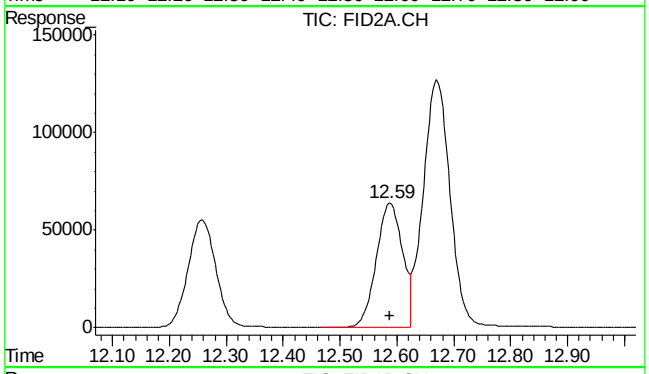
R.T.: 12.258 min
Delta R.T.: 0.002 min
Response: 1881460
Conc: 97.55 ug/L

SGS ACCUTEST FA40754



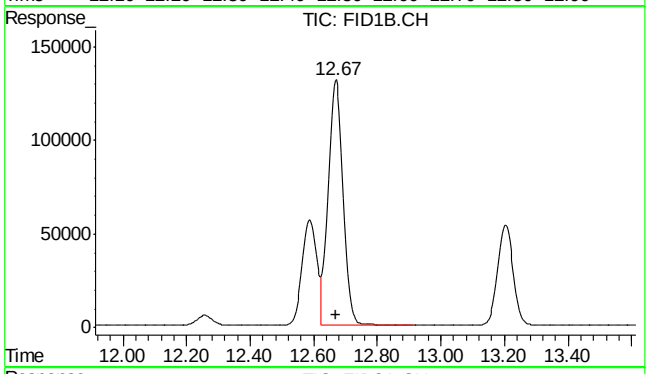
#17 Ethylbenzene

R.T.: 12.588 min
Delta R.T.: 0.002 min
Response: 1760241
Conc: 96.32 ug/L



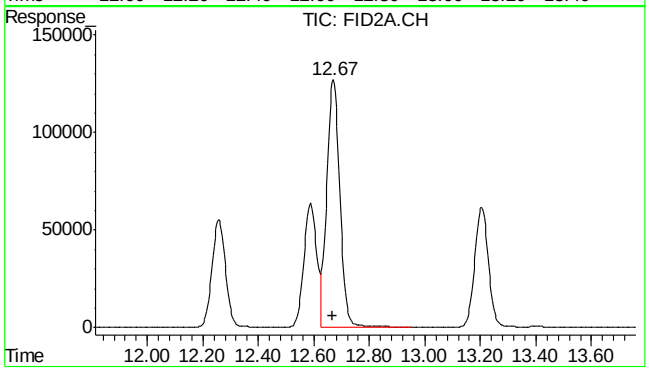
#17 Ethylbenzene

R.T.: 12.588 min
Delta R.T.: 0.001 min
Response: 2014023
Conc: 103.05 ug/L



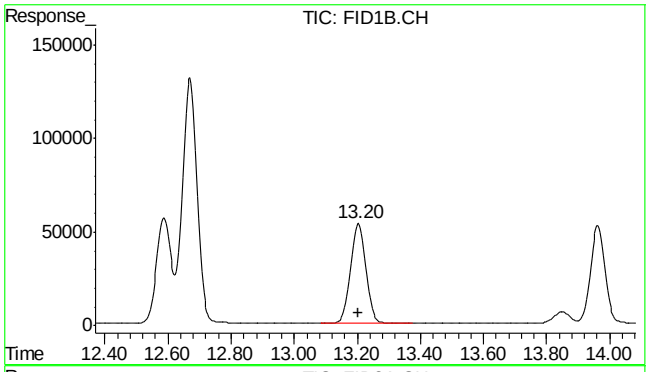
#18 m,p-Xylene

R.T.: 12.670 min
Delta R.T.: 0.002 min
Response: 4304965
Conc: 194.63 ug/L



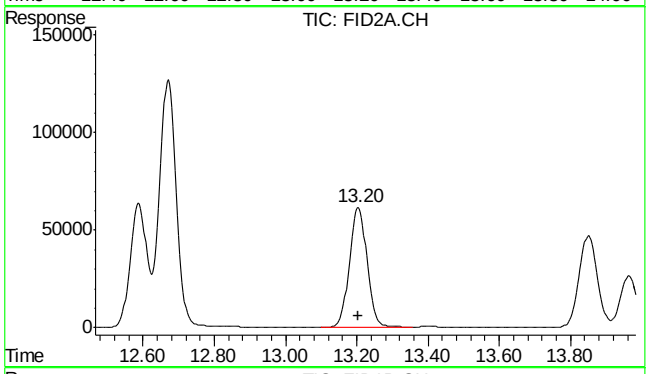
#18 m,p-Xylene

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 4204759
Conc: 203.00 ug/L



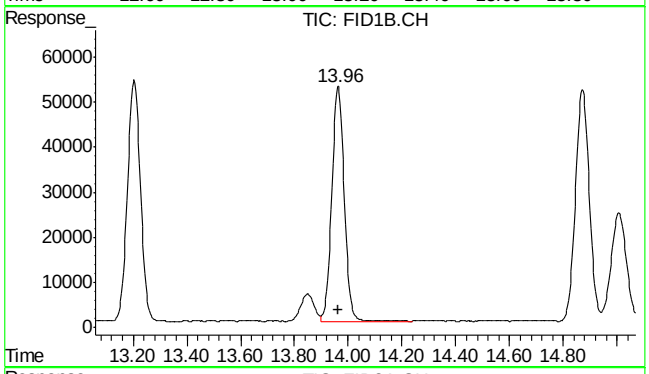
#19 o-Xylene

R.T.: 13.204 min
Delta R.T.: 0.002 min
Response: 1812743
Conc: 94.81 ug/L



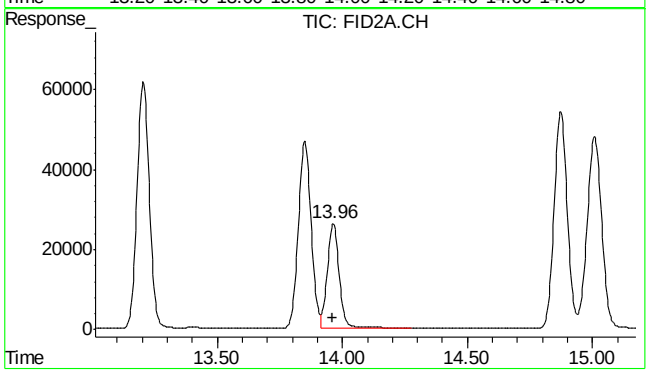
#19 o-Xylene

R.T.: 13.205 min
Delta R.T.: 0.002 min
Response: 2107029
Conc: 100.94 ug/L



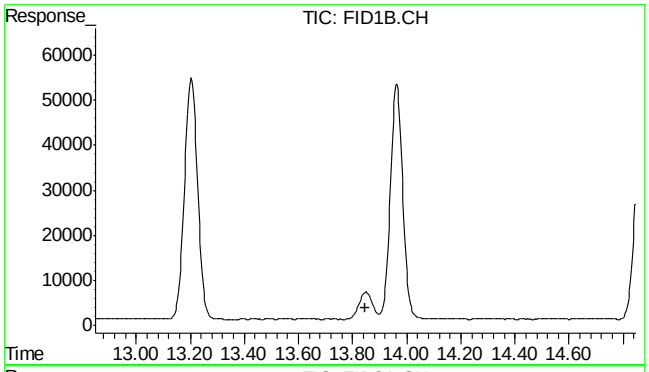
#20 BFB

R.T.: 13.963 min
Delta R.T.: 0.002 min
Response: 1680996
Conc: 91.58 ug/L



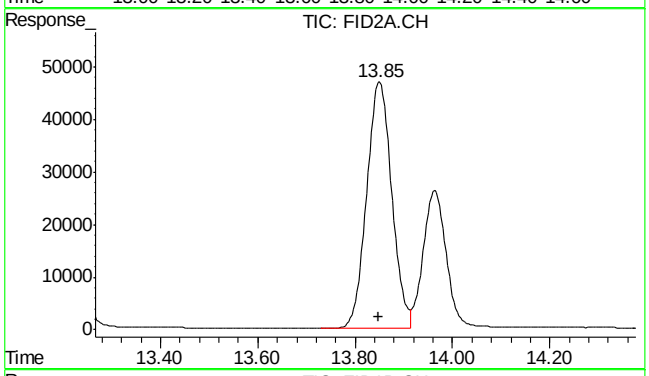
#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.002 min
Response: 880292
Conc: 97.18 ug/L



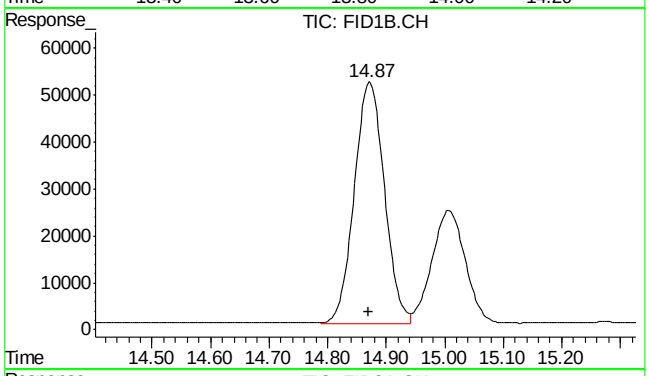
#21 Decane

R.T.: 13.850 min
Delta R.T.: 0.002 min
Response: 215300
Conc: N.D.



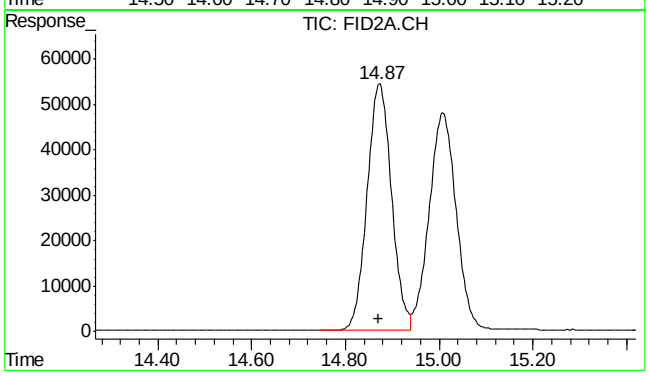
#21 Decane

R.T.: 13.851 min
Delta R.T.: 0.003 min
Response: 1674956
Conc: 93.02 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.872 min
Delta R.T.: 0.002 min
Response: 1832929
Conc: 91.65 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.874 min
Delta R.T.: 0.003 min
Response: 1955398
Conc: 96.97 ug/L

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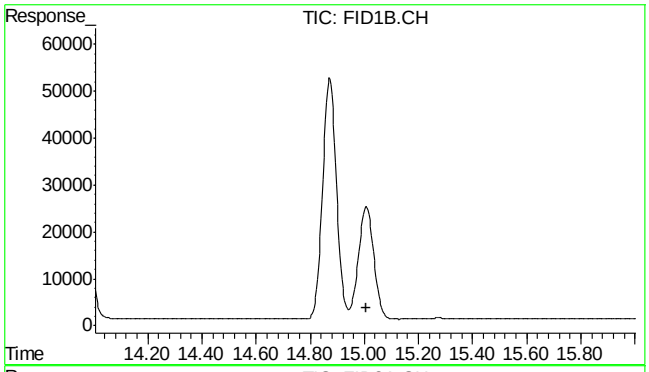
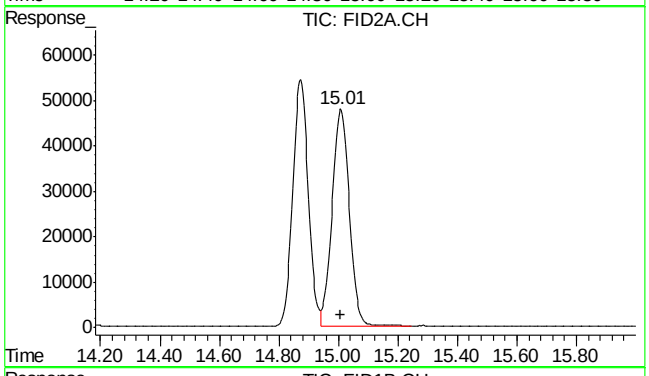


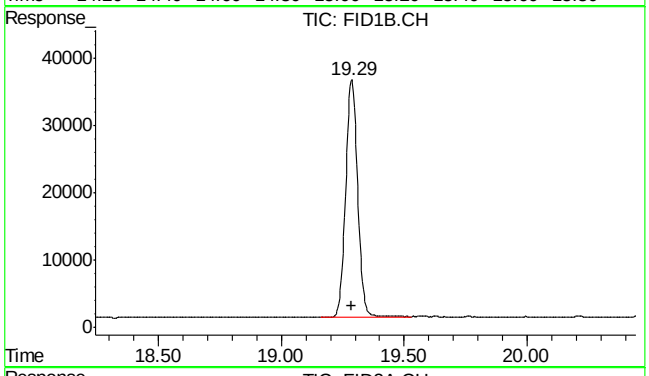
#23 Butylcyclohexane

R.T.: 15.008 min
Delta R.T.: 0.002 min
Response: 953512
Conc: N.D.



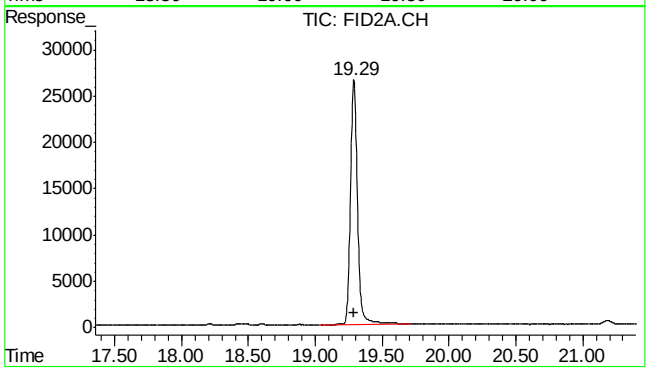
#23 Butylcyclohexane

R.T.: 15.009 min
Delta R.T.: 0.003 min
Response: 1923521
Conc: 92.19 ug/L



#24 Naphthalene

R.T.: 19.287 min
Delta R.T.: 0.003 min
Response: 1197430
Conc: 96.81 ug/L



#24 Naphthalene

R.T.: 19.289 min
Delta R.T.: 0.003 min
Response: 954915
Conc: 100.55 ug/L

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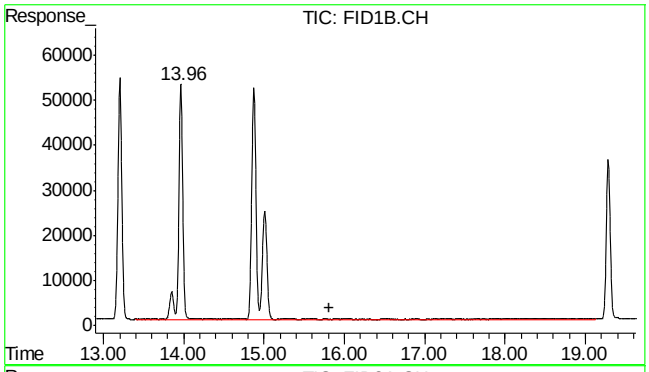
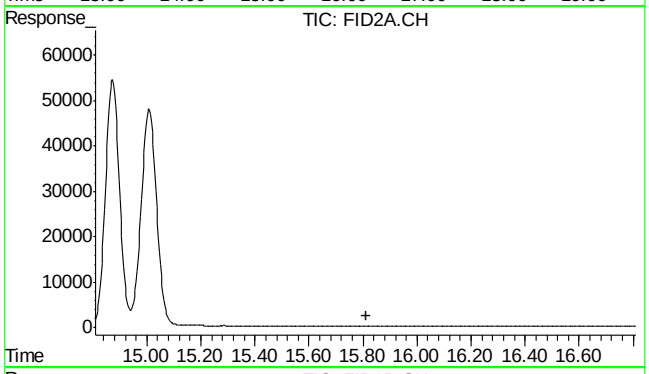


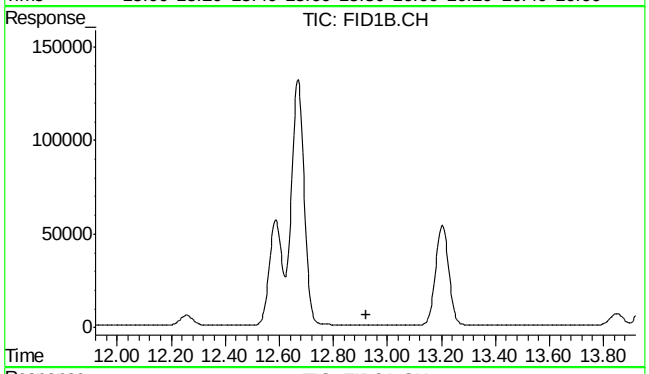
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2088577
Conc: 89.77 ug/L m



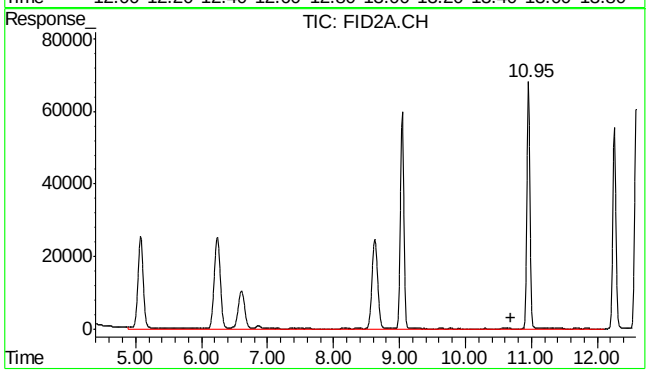
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 3664182
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

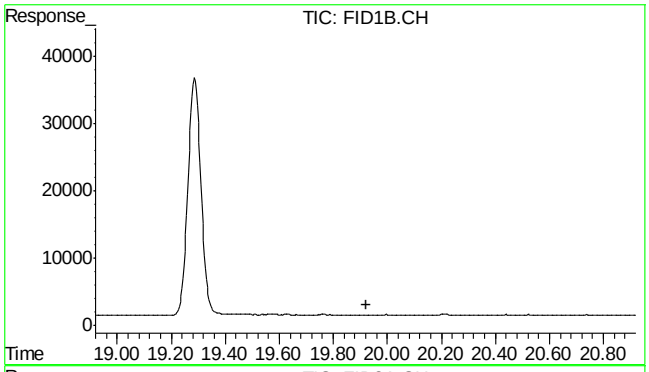
R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 13627479
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

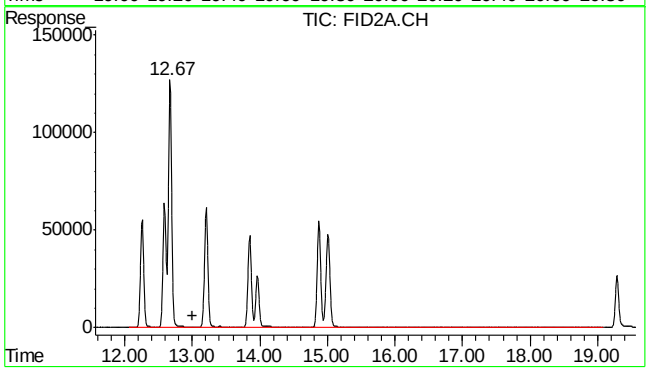
R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 4728513
Conc: 343.62 ug/L m

SGS ACCUTEST FA40754



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 3444944
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 5770737
Conc: 291.93 ug/L m

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\020617\UV077863.D\FID1B.CH Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077863.D\FID2A.CH
Acq On : 06-Feb-2017, 23:02:43 Operator: antonioc
Sample : cc4115-4 Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 07 10:02:08 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	224279	0	NoCal m	N.D.
2)	S	Alkane B	15.01f	0.00	979595	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.61f	0	672504	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.04f	0	2126408	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.95f	0	2108696	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	1952527	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	4232918	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.20f	0	2098399	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	1990056	N.D.	NoCal m
20)	S	BFB	13.96	13.97	2493015	1321524	135.818	145.896
		Spiked Amount 40.000 Range 70 - 130 Recovery = 339.55%# 364.74%#						
		Target Compounds						
10)		Pentane	0.00	5.08	0	1371583	N.D.	100.006 #
11)		2-Methylpentane	6.24	6.24	59415	1560941	NoCal	103.890 #
12)		Methyl Tert Buty	6.61	6.61	557014	667322	103.242	102.033
13)		2,2,4-Trimethylp	8.63	8.63	247506	1469143	NoCal	131.075 #
14)		Benzene	9.04	9.04	2167625	2126423	90.882	97.120
15)		Toluene	10.95	10.96	1991370	2108823	91.702	102.316
16)		Nonane	12.26	12.26	179868	1934020	NoCal	100.272 #
17)		Ethylbenzene	12.59	12.59	1730095	2008056	94.667	102.742
18)		m,p-Xylene	12.67	12.67	4223679	4233287	190.951	204.382
19)		o-Xylene	13.20	13.21	1764212	2099535	92.271	100.584
21)		Decane	13.85	13.85	221785	1819408	NoCal	101.046 #
22)		1,2,4-Trimethylb	14.87	14.87	1829233	1987234	91.461	98.546
23)		Butylcyclohexane	15.01	15.01	958683	1980398	NoCal	94.921 #
24)		Naphthalene	19.29	19.29	1189812	973808	96.194	102.542
25)	H	C9- C10 Aromatic	15.81	15.81	2115643	3846110	91.126	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	13861405	5286027	NoCal	388.887 #
27)	H	C9- C12 Aliphati	19.92	13.00	3435829	6034662	NoCal	305.907 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077863.D VPH011317.M Tue Feb 07 12:54:57 2017

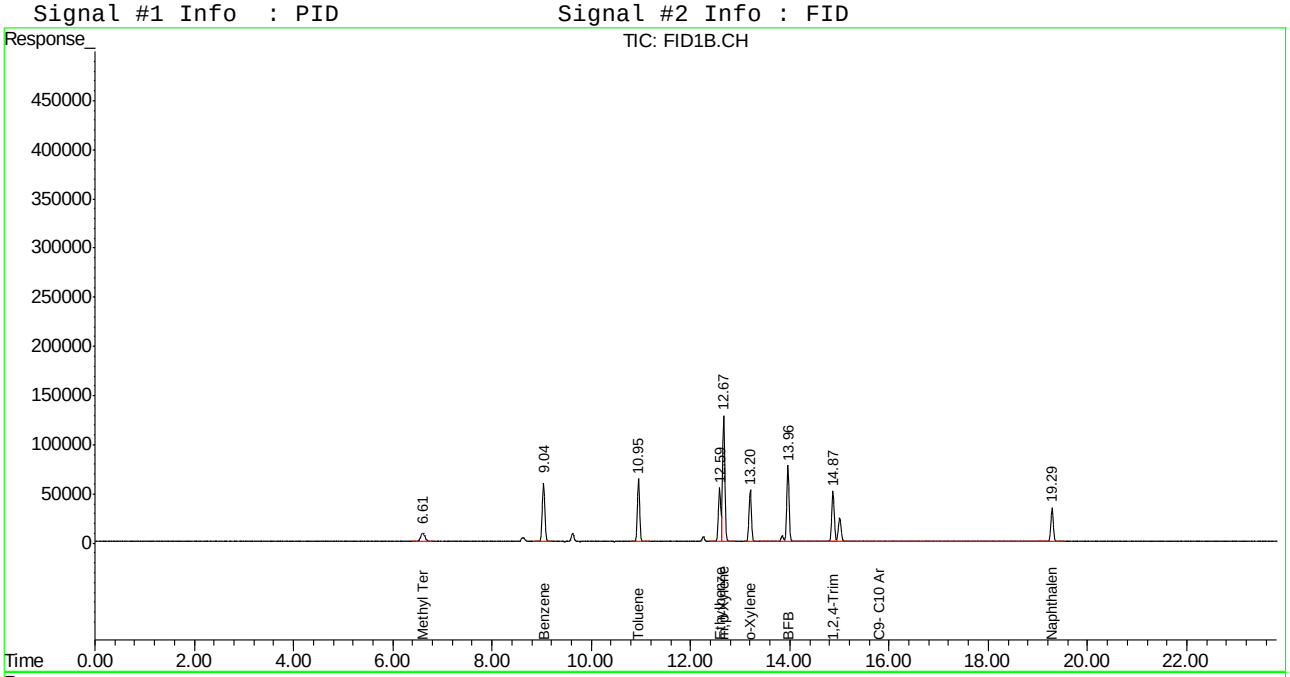
SGS ACCUTEST FA40754

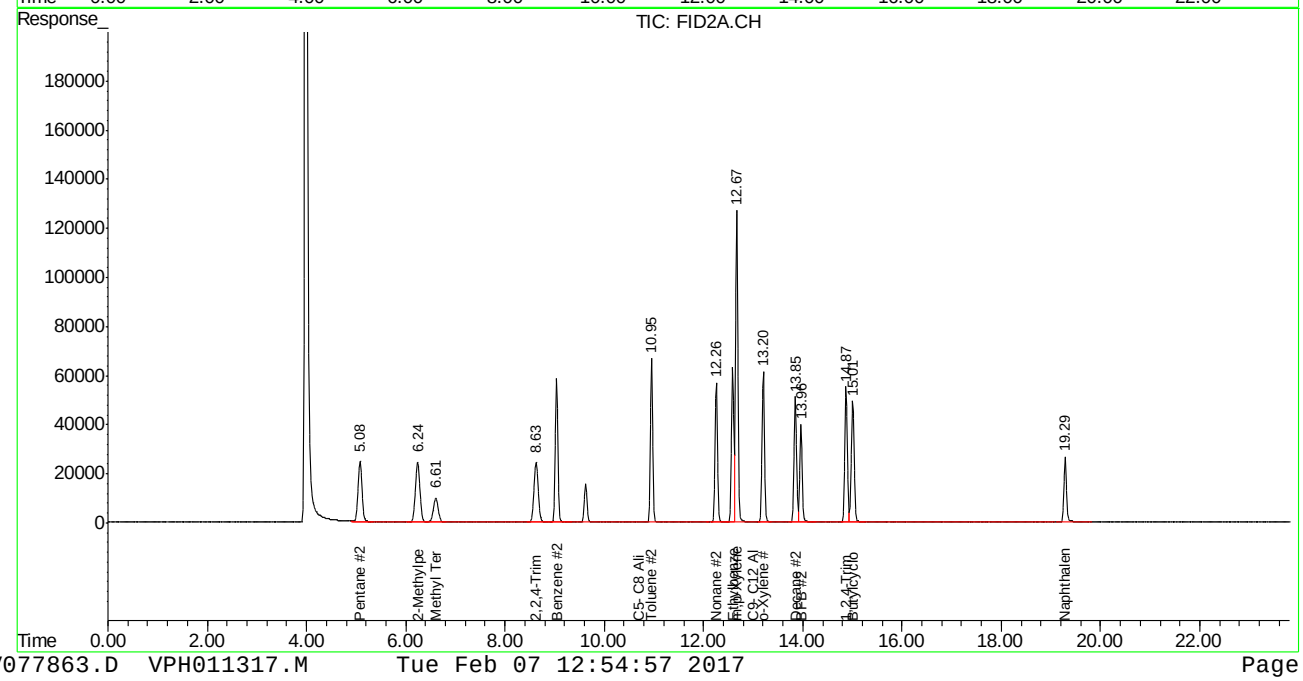
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\020617\UV077863.D\FID1B.CH Vial: 13
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077863.D\FID2A.CH
Acq On : 06-Feb-2017, 23:02:43 Operator: antonioc
Sample : cc4115-4 Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 7 10:09 2017 Quant Results File: VPH011317.RES

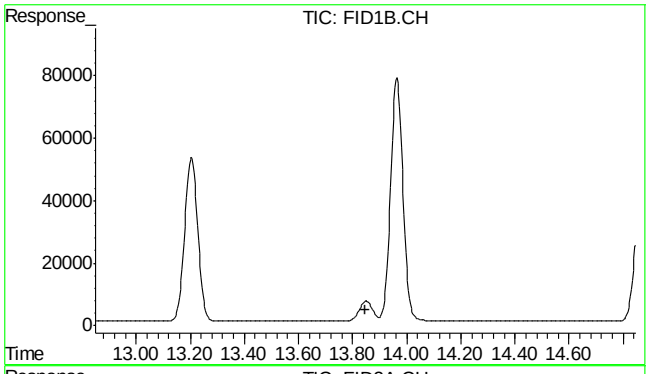
Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID



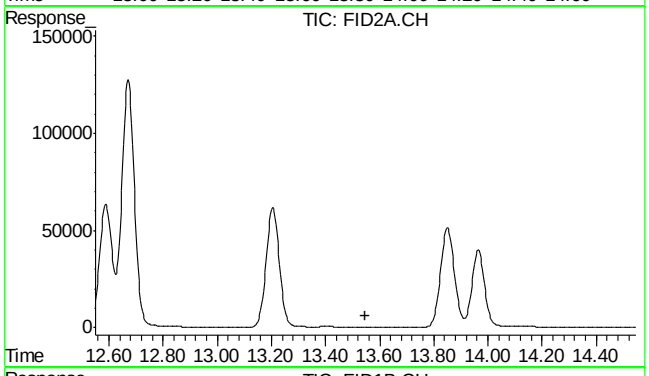


SGS ACCUTEST FA40754



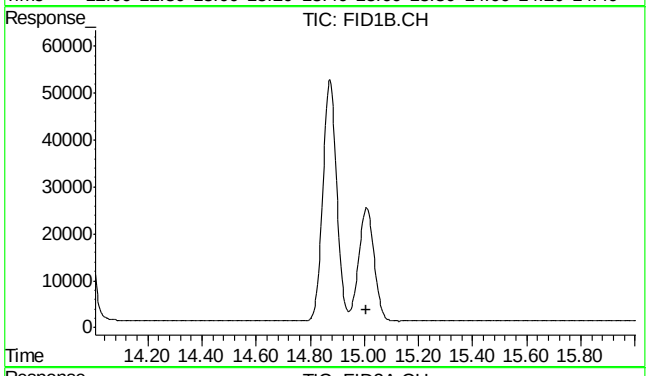
#1 Alkane A

R.T.: 13.849 min
Delta R.T.: 0.002 min
Response: 224279
Conc: N.D.



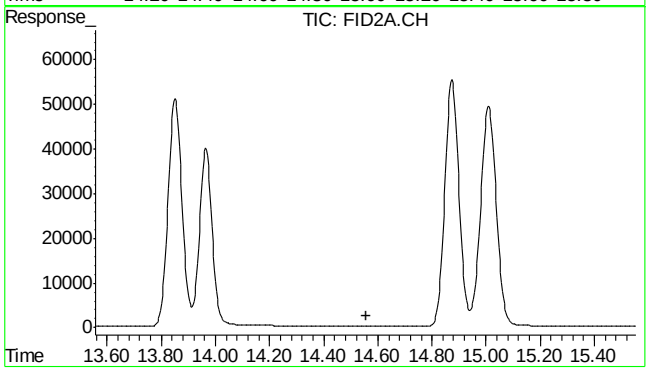
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



#2 Alkane B

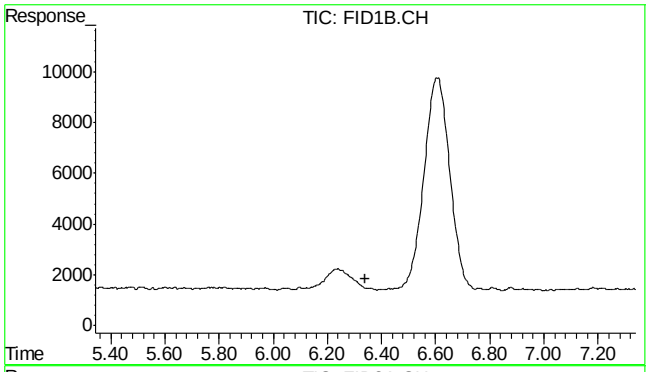
R.T.: 15.007 min
Delta R.T.: 0.002 min
Response: 979595
Conc: N.D.



#2 Alkane B

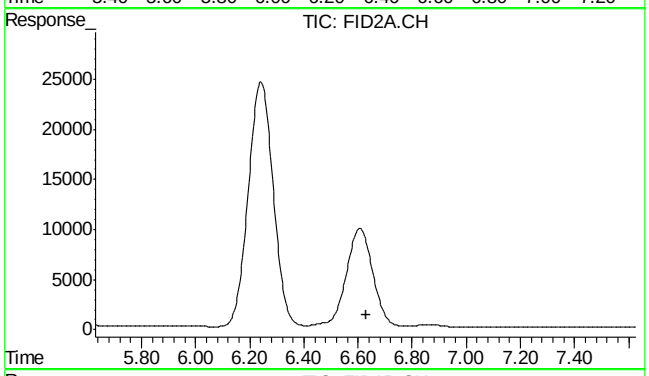
R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.

SGS ACCUTEST FA40754



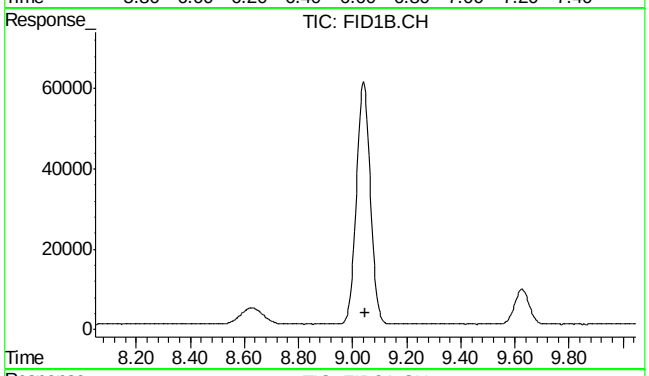
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



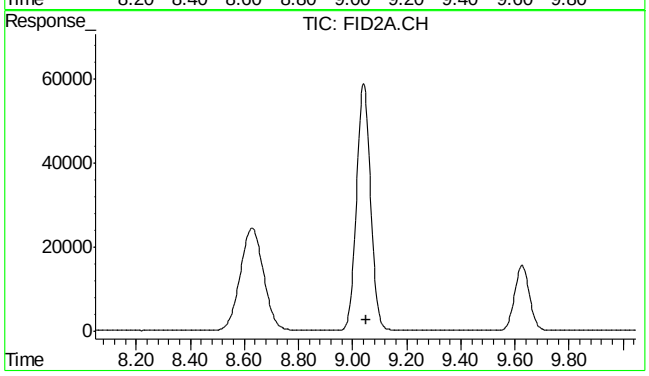
#3 Aromatic A

R.T.: 6.606 min
Delta R.T.: -0.023 min
Response: 672504
Conc: N.D.



#4 Aromatic B

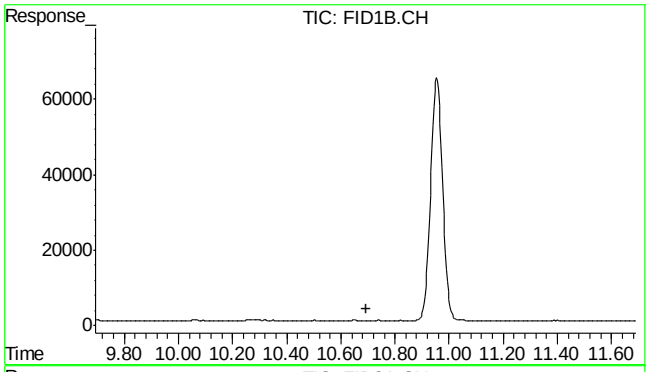
R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

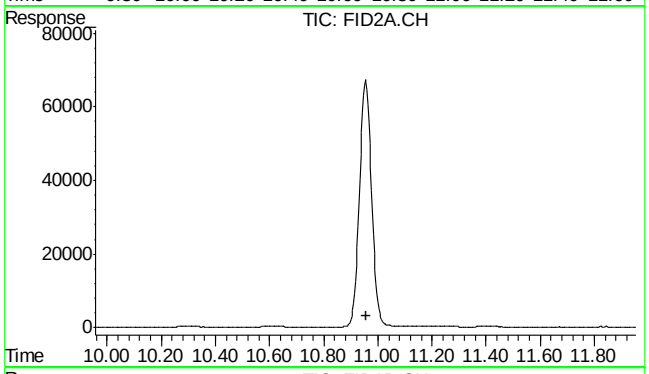
R.T.: 9.040 min
Delta R.T.: -0.008 min
Response: 2126408
Conc: N.D.

SGS ACCUTEST FA40754



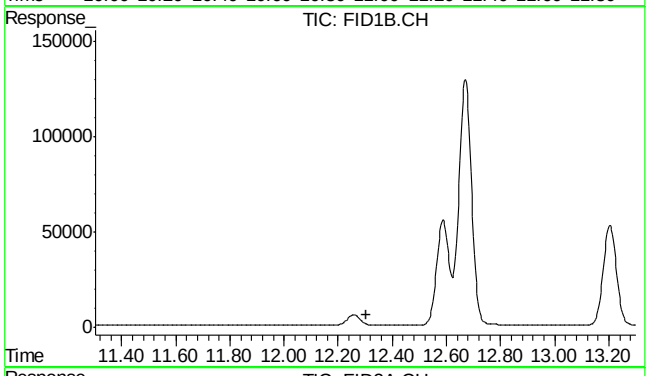
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



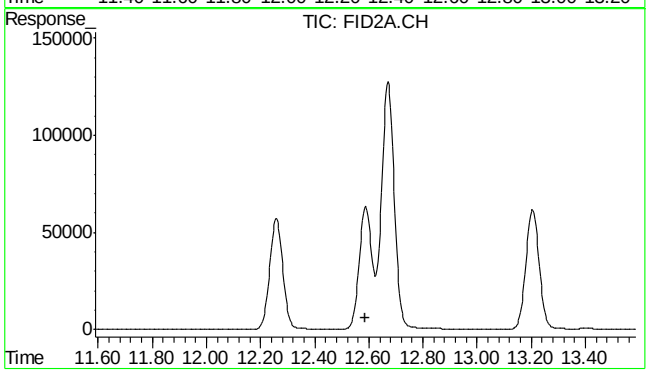
#5 Aromatic C

R.T.: 10.954 min
Delta R.T.: -0.002 min
Response: 2108696
Conc: N.D.



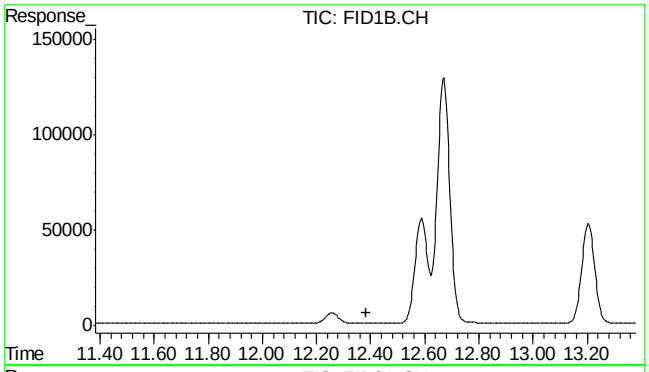
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



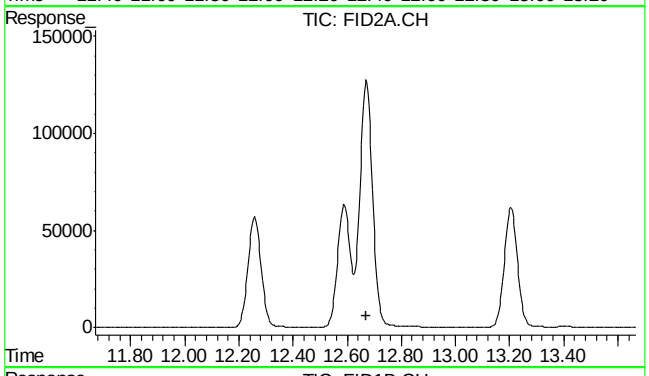
#6 Aromatic D

R.T.: 12.588 min
Delta R.T.: 0.000 min
Response: 1952527
Conc: N.D.



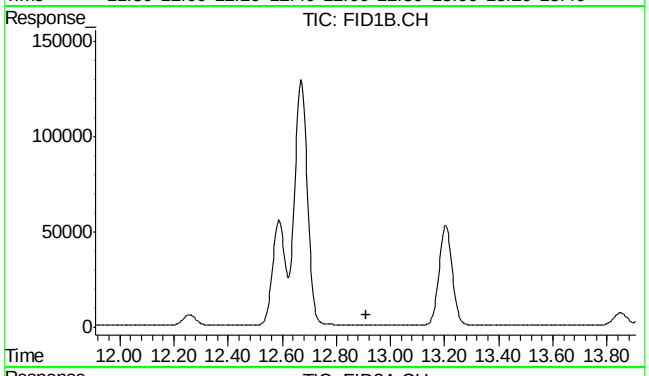
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



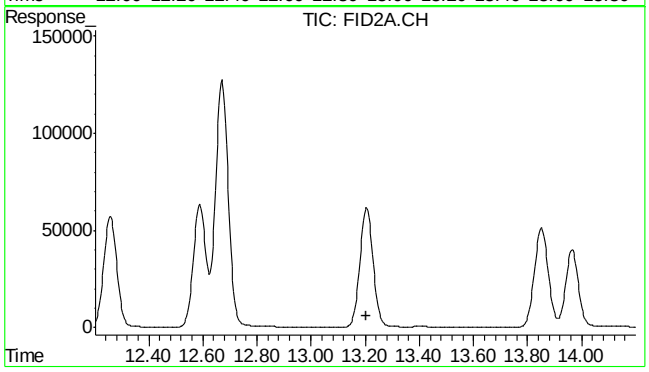
#7 Aromatic E

R.T.: 12.670 min
Delta R.T.: 0.001 min
Response: 4232918
Conc: N.D.



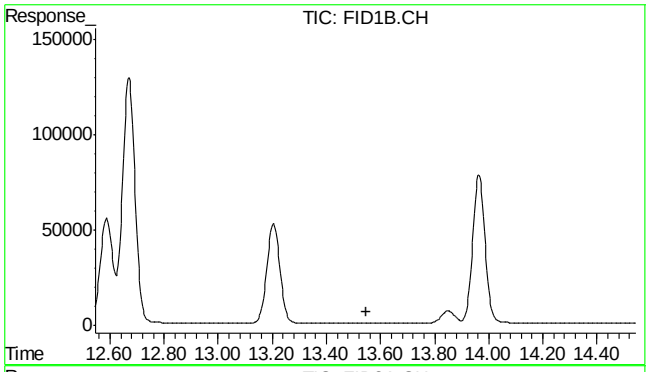
#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



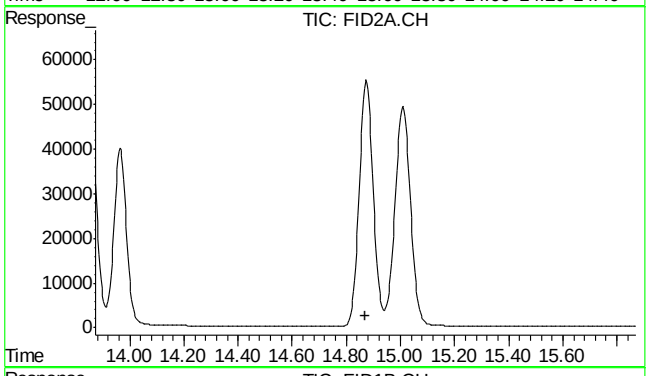
#8 Aromatic F

R.T.: 13.204 min
Delta R.T.: 0.001 min
Response: 2098399
Conc: N.D.



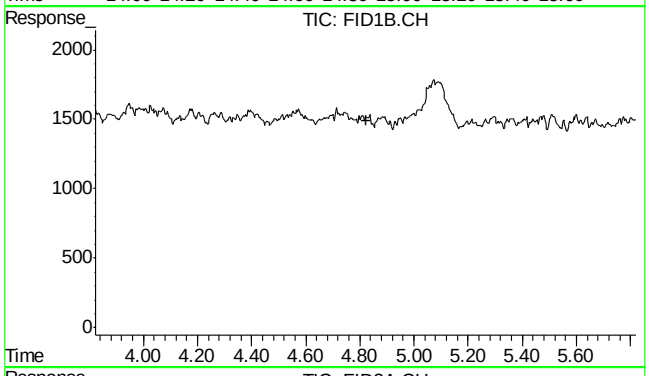
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



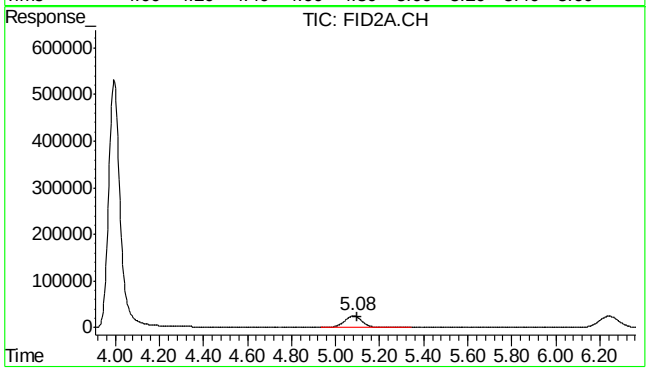
#9 Aromatic G

R.T.: 14.873 min
Delta R.T.: 0.002 min
Response: 1990056
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 5.082 min
Delta R.T.: -0.018 min
Response: 1371583
Conc: 100.01 ug/L

7.6.15

7

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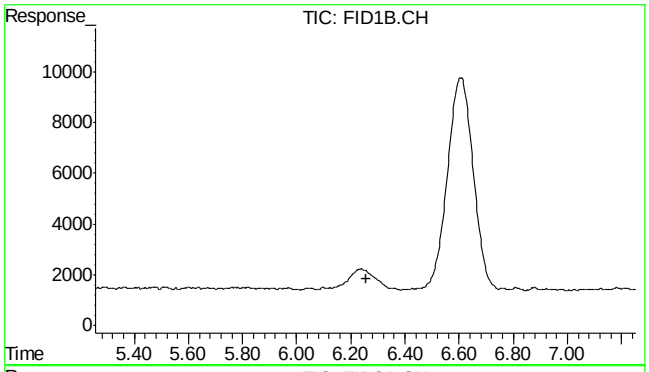
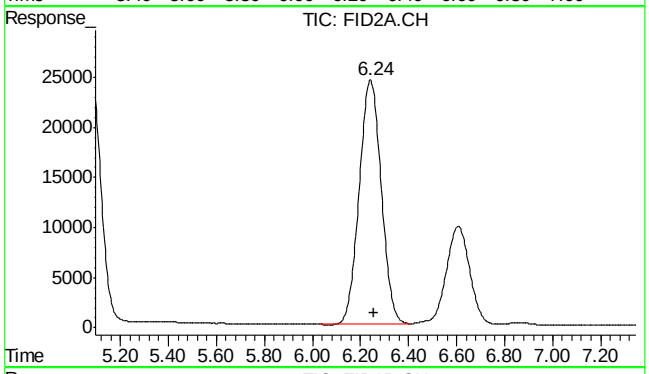


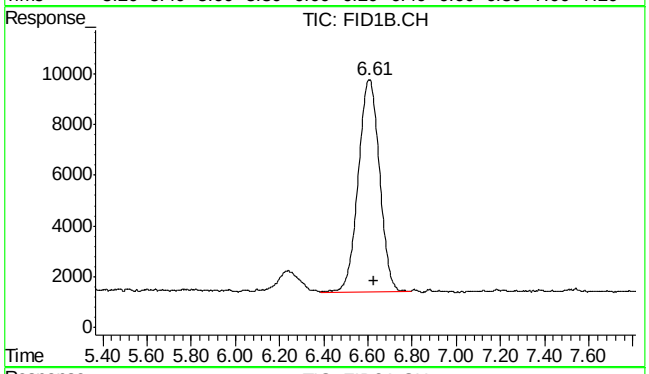
#11 2-Methylpentane

R.T.: 6.239 min
Delta R.T.: -0.017 min
Response: 59415
Conc: N.D.



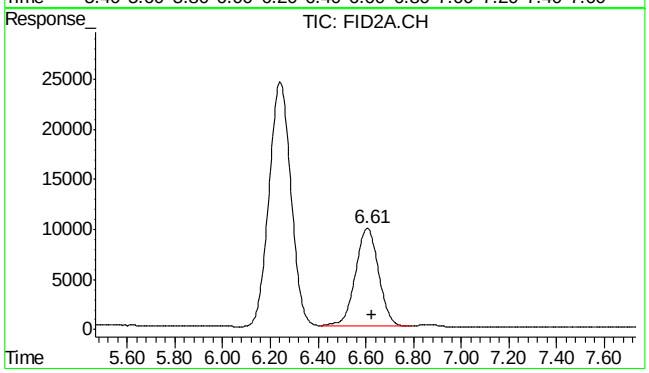
#11 2-Methylpentane

R.T.: 6.242 min
Delta R.T.: -0.014 min
Response: 1560941
Conc: 103.89 ug/L



#12 Methyl Tert Butyl Ether

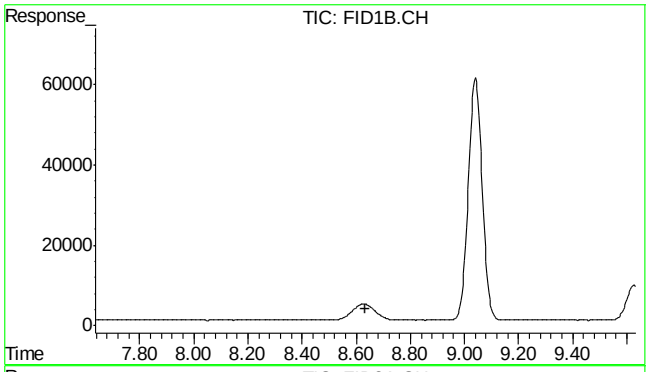
R.T.: 6.607 min
Delta R.T.: -0.022 min
Response: 557014
Conc: 103.24 ug/L



#12 Methyl Tert Butyl Ether

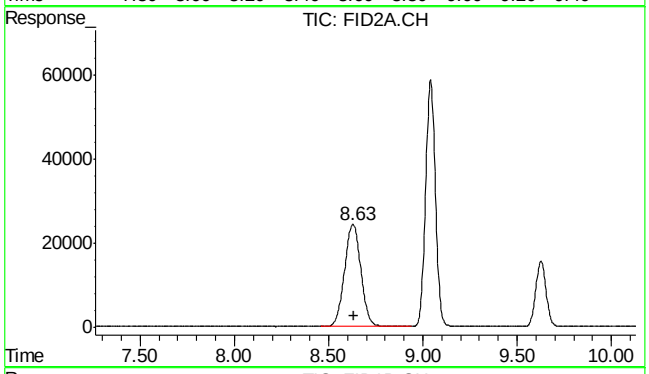
R.T.: 6.607 min
Delta R.T.: -0.021 min
Response: 667322
Conc: 102.03 ug/L

SGS ACCUTEST FA40754



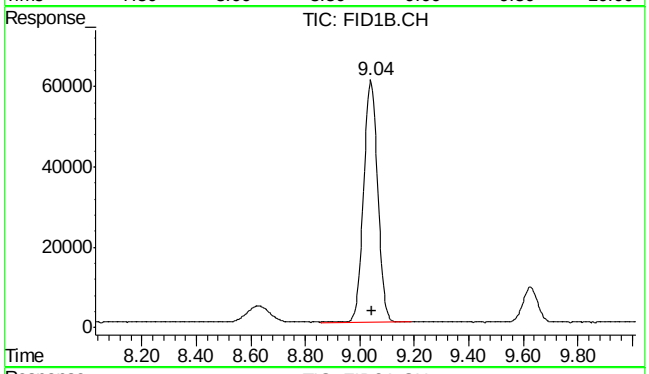
#13 2,2,4-Trimethylpentane

R.T.: 8.628 min
Delta R.T.: -0.006 min
Response: 247506
Conc: N.D.



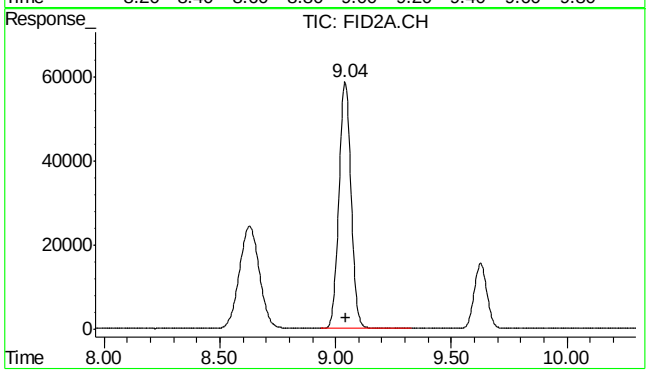
#13 2,2,4-Trimethylpentane

R.T.: 8.629 min
Delta R.T.: -0.005 min
Response: 1469143
Conc: 131.07 ug/L



#14 Benzene

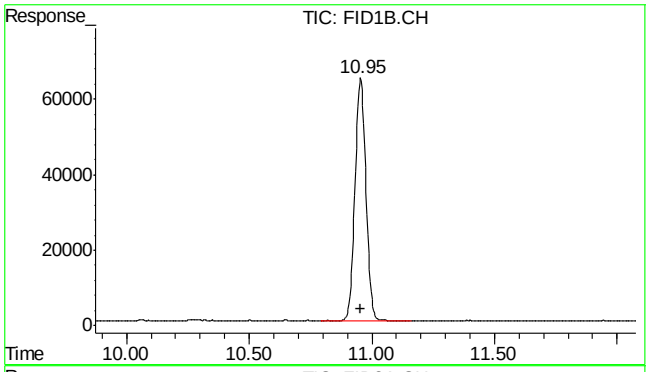
R.T.: 9.041 min
Delta R.T.: -0.005 min
Response: 2167625
Conc: 90.88 ug/L



#14 Benzene

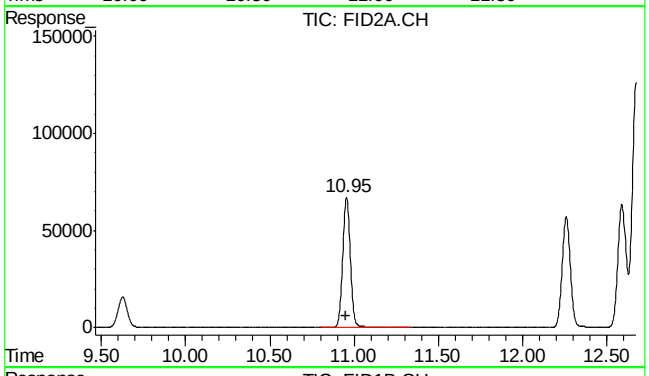
R.T.: 9.042 min
Delta R.T.: -0.004 min
Response: 2126423
Conc: 97.12 ug/L

SGS ACCUTEST FA40754



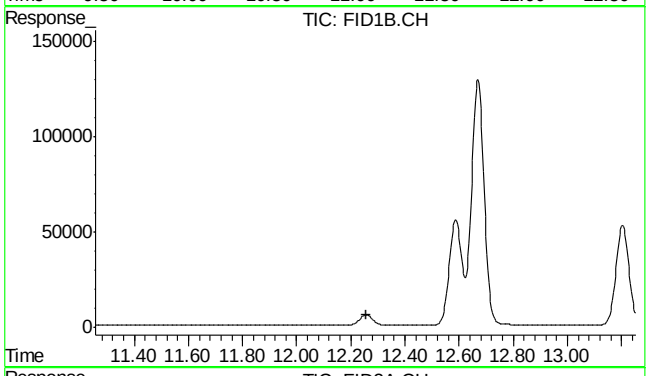
#15 Toluene

R.T.: 10.955 min
Delta R.T.: 0.000 min
Response: 1991370
Conc: 91.70 ug/L



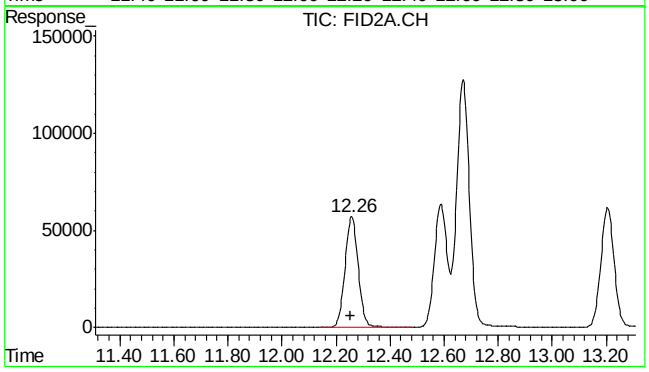
#15 Toluene

R.T.: 10.956 min
Delta R.T.: 0.000 min
Response: 2108823
Conc: 102.32 ug/L



#16 Nonane

R.T.: 12.258 min
Delta R.T.: 0.002 min
Response: 179868
Conc: N.D.



#16 Nonane

R.T.: 12.259 min
Delta R.T.: 0.003 min
Response: 1934020
Conc: 100.27 ug/L

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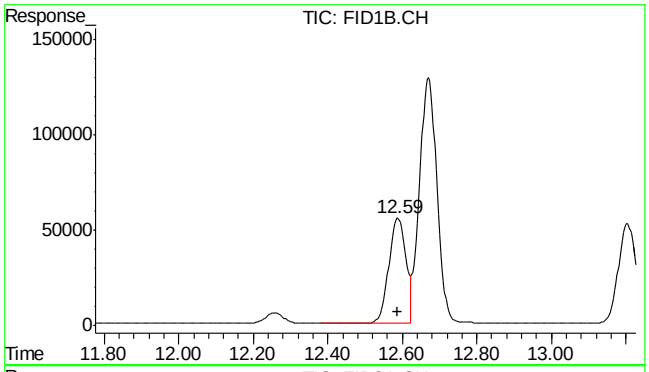
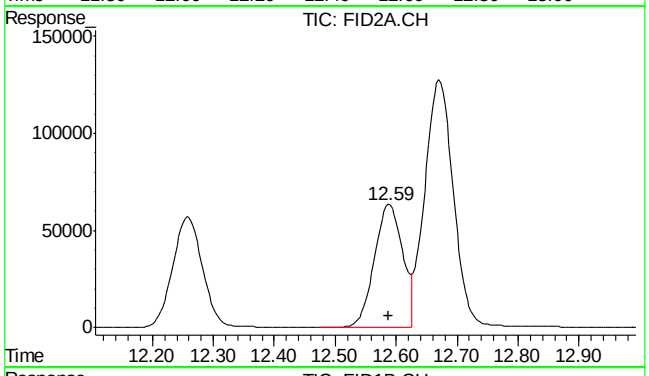


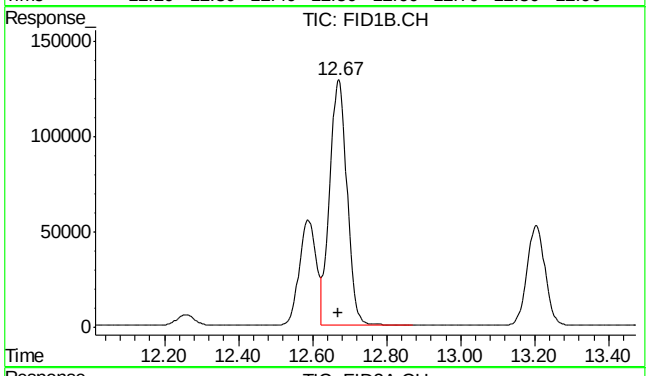
#17 Ethylbenzene

R.T.: 12.588 min
Delta R.T.: 0.002 min
Response: 1730095
Conc: 94.67 ug/L



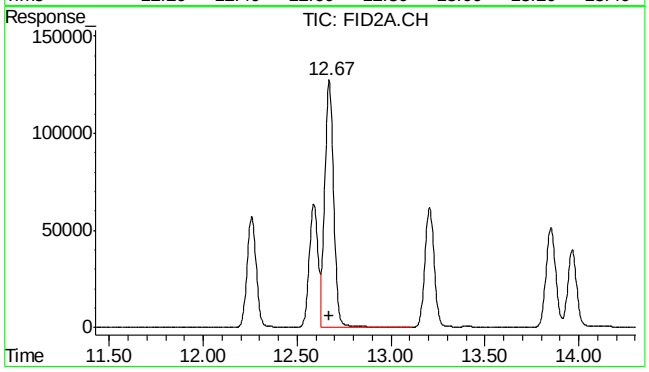
#17 Ethylbenzene

R.T.: 12.589 min
Delta R.T.: 0.002 min
Response: 2008056
Conc: 102.74 ug/L



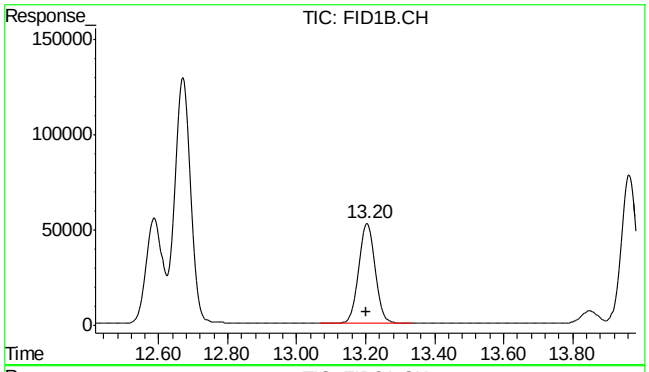
#18 m,p-Xylene

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 4223679
Conc: 190.95 ug/L



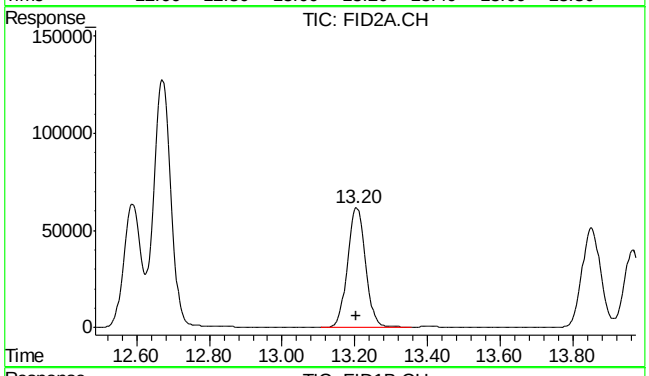
#18 m,p-Xylene

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 4233287
Conc: 204.38 ug/L



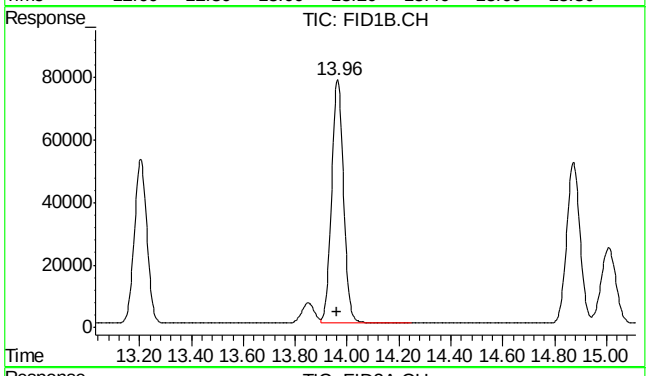
#19 o-Xylene

R.T.: 13.205 min
Delta R.T.: 0.002 min
Response: 1764212
Conc: 92.27 ug/L



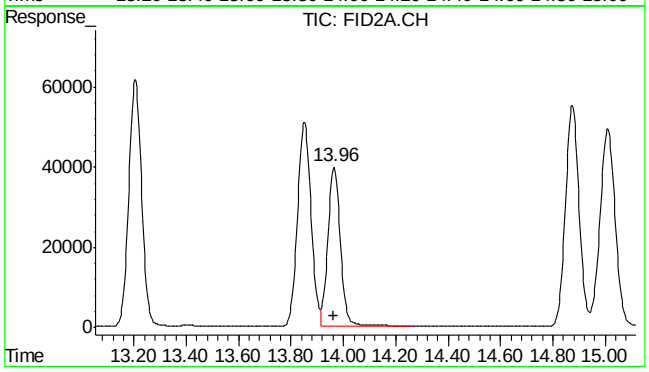
#19 o-Xylene

R.T.: 13.206 min
Delta R.T.: 0.003 min
Response: 2099535
Conc: 100.58 ug/L



#20 BFB

R.T.: 13.964 min
Delta R.T.: 0.003 min
Response: 2493015
Conc: 135.82 ug/L



#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.003 min
Response: 1321524
Conc: 145.90 ug/L

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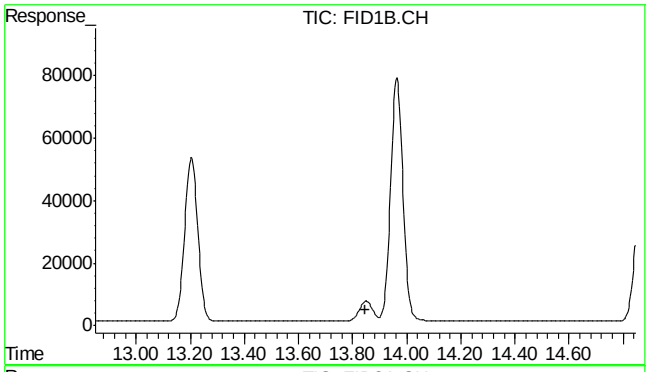
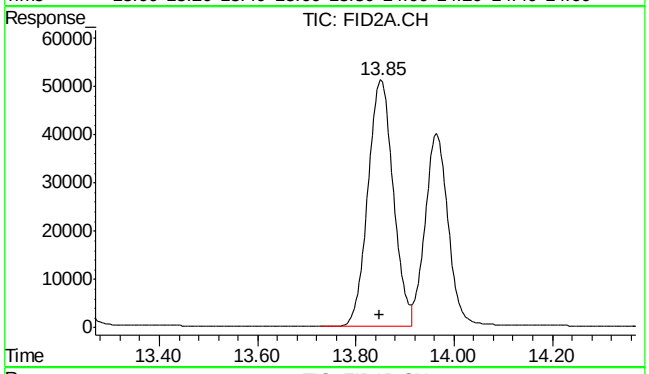


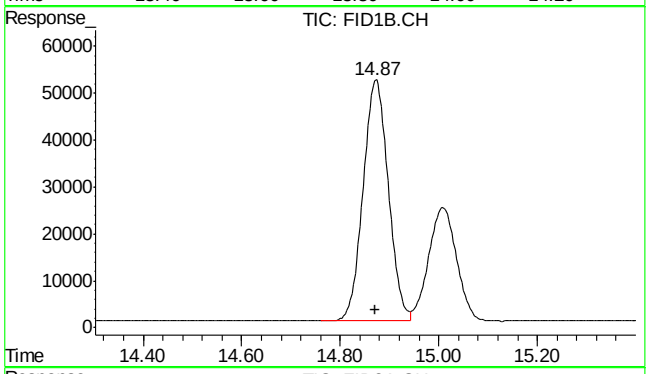
#21 Decane

R.T.: 13.850 min
Delta R.T.: 0.003 min
Response: 221785
Conc: N.D.



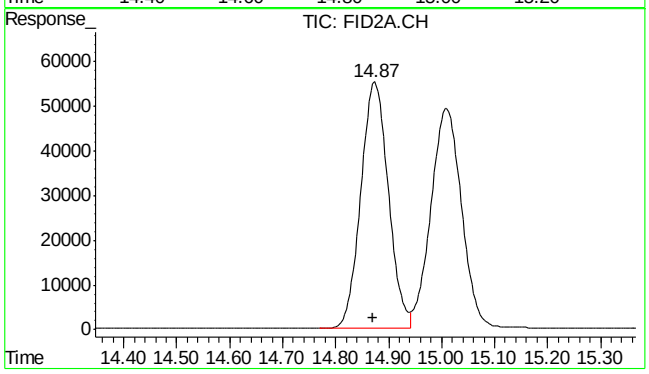
#21 Decane

R.T.: 13.852 min
Delta R.T.: 0.004 min
Response: 1819408
Conc: 101.05 ug/L



#22 1,2,4-Trimethylbenzene

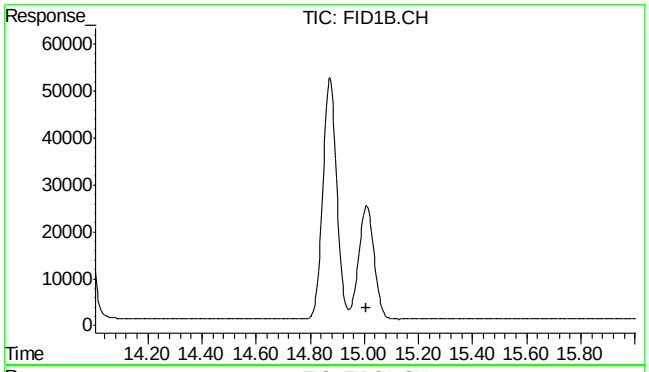
R.T.: 14.873 min
Delta R.T.: 0.003 min
Response: 1829233
Conc: 91.46 ug/L



#22 1,2,4-Trimethylbenzene

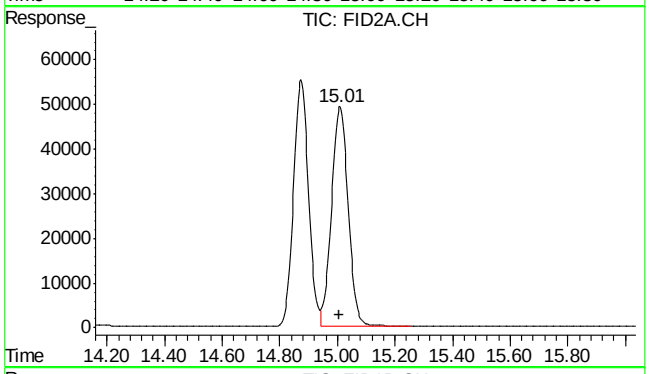
R.T.: 14.875 min
Delta R.T.: 0.004 min
Response: 1987234
Conc: 98.55 ug/L

SGS ACCUTEST FA40754



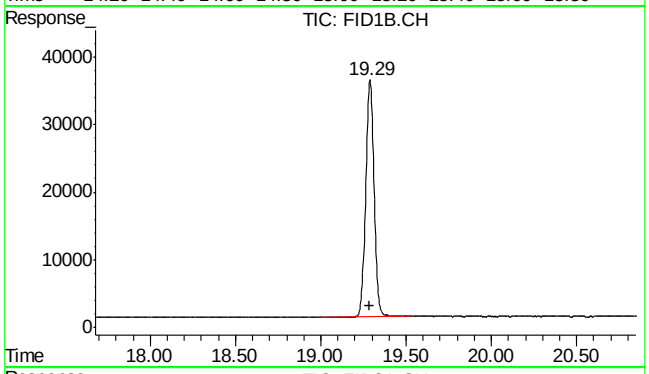
#23 Butylcyclohexane

R.T.: 15.009 min
Delta R.T.: 0.003 min
Response: 958683
Conc: N.D.



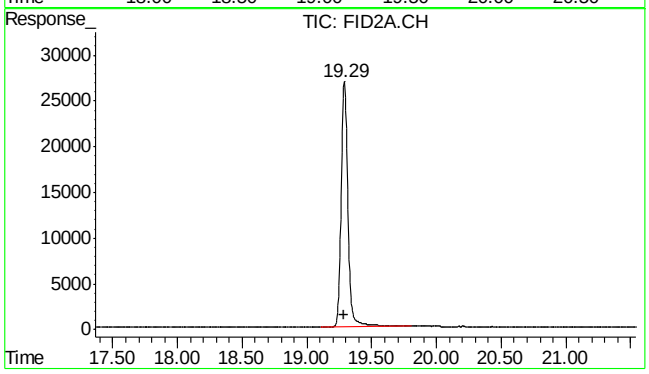
#23 Butylcyclohexane

R.T.: 15.010 min
Delta R.T.: 0.004 min
Response: 1980398
Conc: 94.92 ug/L



#24 Naphthalene

R.T.: 19.288 min
Delta R.T.: 0.004 min
Response: 1189812
Conc: 96.19 ug/L



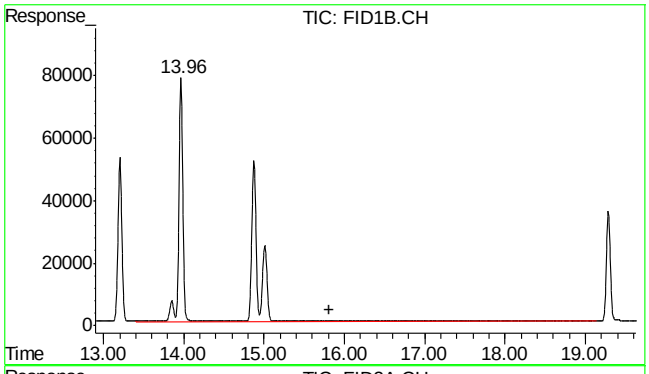
#24 Naphthalene

R.T.: 19.290 min
Delta R.T.: 0.004 min
Response: 973808
Conc: 102.54 ug/L

7.6.15

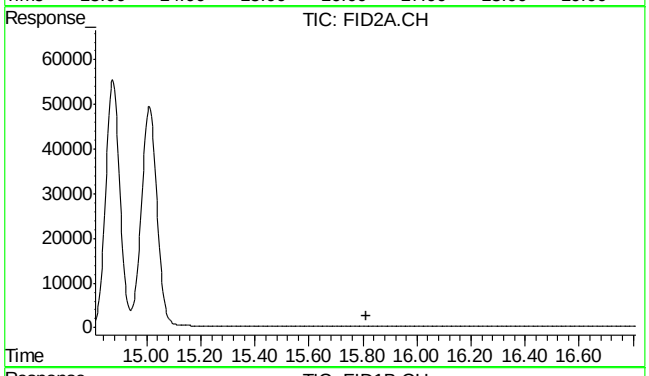
7

SGS ACCUTEST FA40754



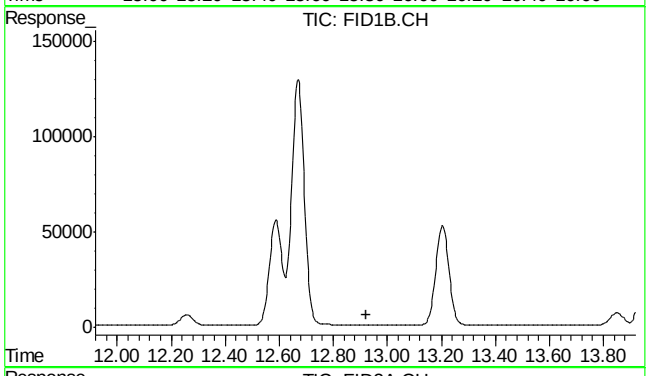
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2115643
Conc: 91.13 ug/L m



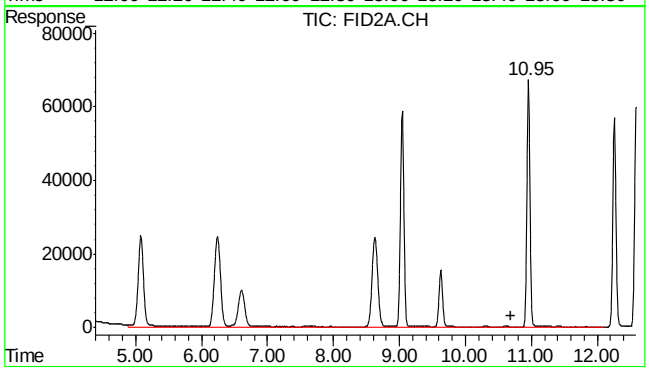
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 3846110
Conc: N.D.



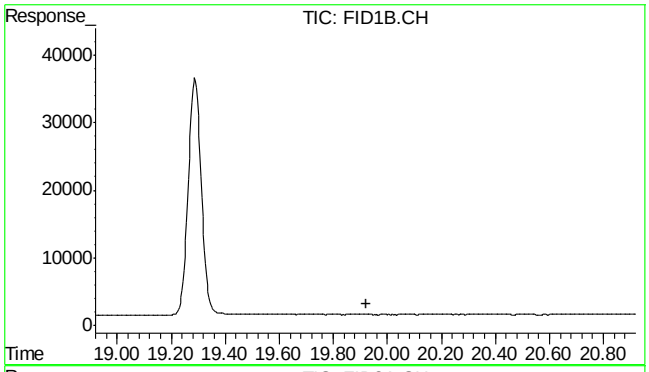
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 13861405
Conc: N.D.



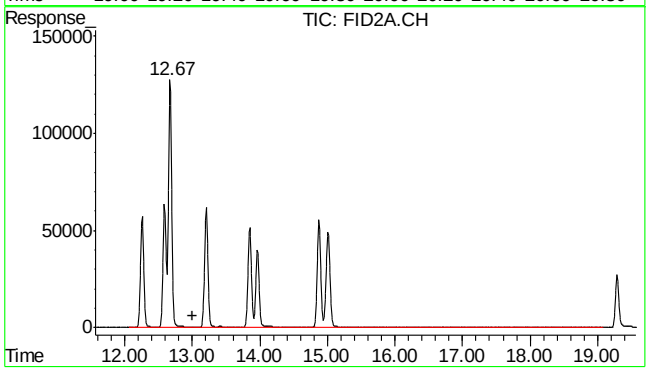
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 5286027
Conc: 388.89 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 3435829
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 6034662
Conc: 305.91 ug/L m

SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\020617\UV077874.D\FID1B.CH Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077874.D\FID2A.CH
Acq On : 07-Feb-2017, 04:42:37 Operator: antonioc
Sample : cc4115-4 Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 07 10:02:41 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	209998	0	NoCal m	N.D.
2)	S	Alkane B	15.01f	0.00	941582	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.61f	0	711220	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.05f	0	2144186	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.96f	0	2111198	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	1974915	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	4152697	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.21f	0	2094414	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	1940633	N.D.	NoCal m
20)	S	BFB	13.97	13.97	2446646	1306882	133.292	144.279
		Spiked Amount 40.000 Range 70 - 130 Recovery =					333.23%#	360.70%#
		Target Compounds						
10)		Pentane	0.00	5.10	0	1359482	N.D.	99.123 #
11)		2-Methylpentane	6.25	6.25	47572	1562794	NoCal	104.013 #
12)		Methyl Tert Buty	6.62	6.62	567133	693285	105.118	106.003
13)		2,2,4-Trimethylp	8.63	8.63	224674	1358821	NoCal	119.129 #
14)		Benzene	9.05	9.05	2162809	2145083	90.680	97.972
15)		Toluene	10.96	10.96	1972658	2117673	90.840	102.745
16)		Nonane	12.26	12.26	184843	1881061	NoCal	97.526 #
17)		Ethylbenzene	12.59	12.59	1722075	1998418	94.228	102.248
18)		m,p-Xylene	12.67	12.67	4176768	4199843	188.831	202.768
19)		o-Xylene	13.21	13.21	1753022	2092787	91.686	100.261
21)		Decane	13.85	13.85	206388	1706345	NoCal	94.766 #
22)		1,2,4-Trimethylb	14.87	14.88	1779448	1941599	88.972	96.283
23)		Butylcyclohexane	15.01	15.01	937768	1930567	NoCal	92.532 #
24)		Naphthalene	19.29	19.29	1124371	915625	90.903	96.415
25)	H	C9- C10 Aromatic	15.81	15.81	2182486	3721811	94.482	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	13650565	5112823	NoCal	374.824 #
27)	H	C9- C12 Aliphati	19.92	13.00	3350406	5887107	NoCal	298.095 #

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077874.D VPH011317.M Tue Feb 07 12:55:29 2017

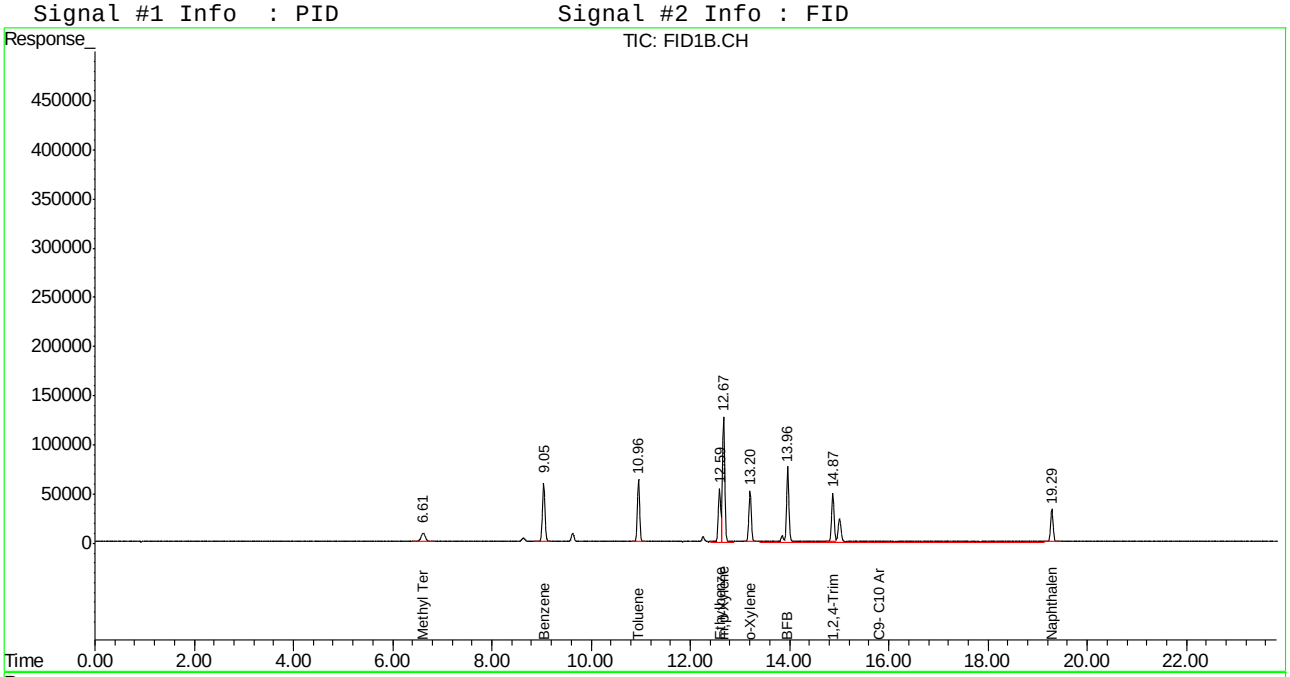
SGS ACCUTEST FA40754

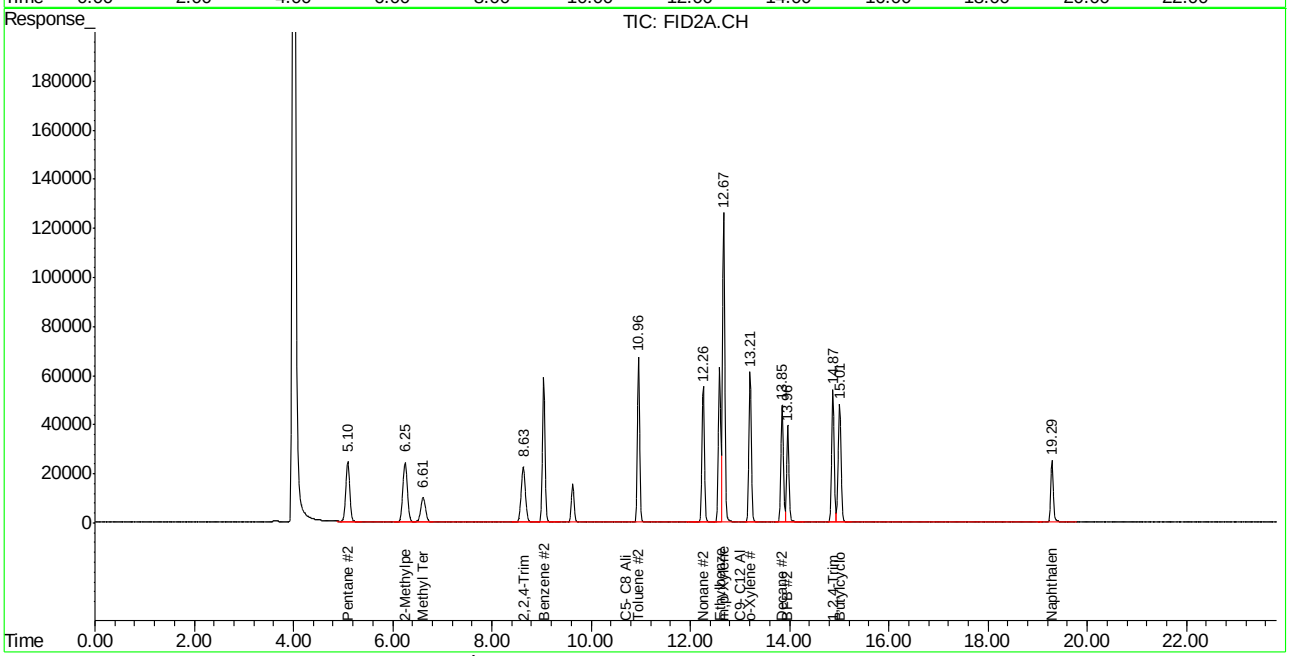
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\020617\UV077874.D\FID1B.CH Vial: 24
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077874.D\FID2A.CH
Acq On : 07-Feb-2017, 04:42:37 Operator: antonioc
Sample : cc4115-4 Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 7 11:08 2017 Quant Results File: VPH011317.RES

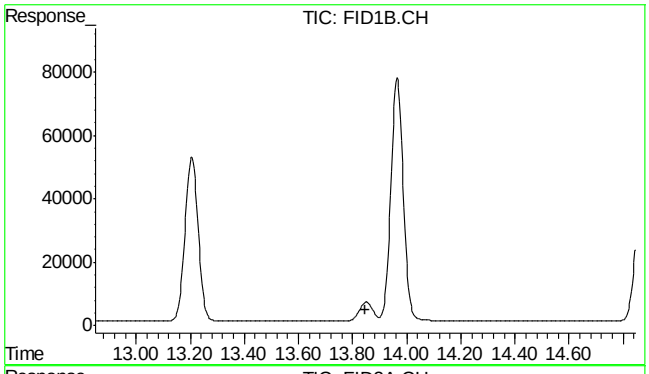
Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID



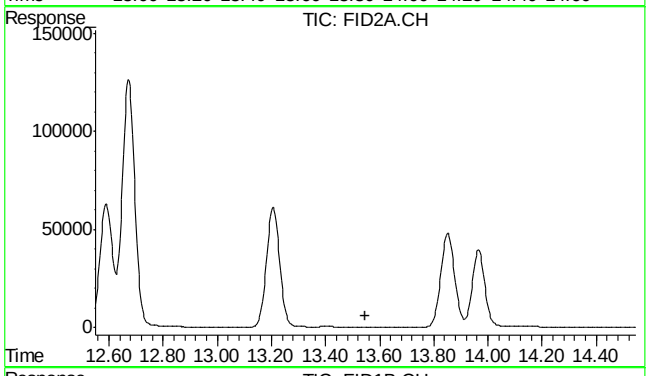


SGS ACCUTEST FA40754



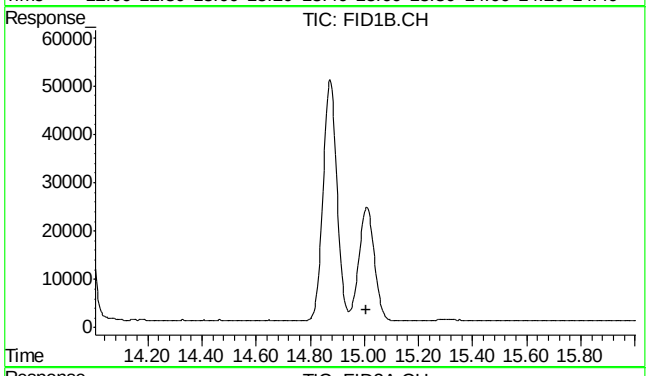
#1 Alkane A

R.T.: 13.850 min
Delta R.T.: 0.003 min
Response: 209998
Conc: N.D.



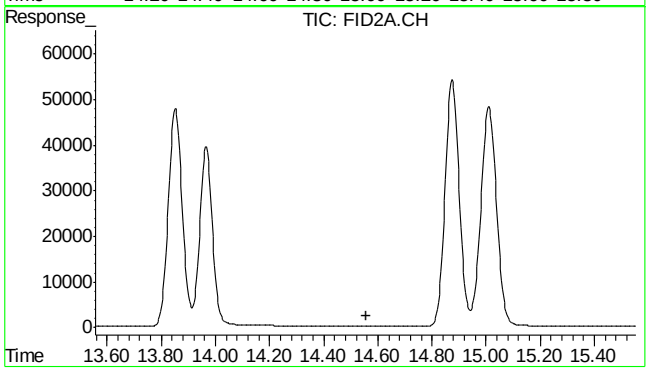
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



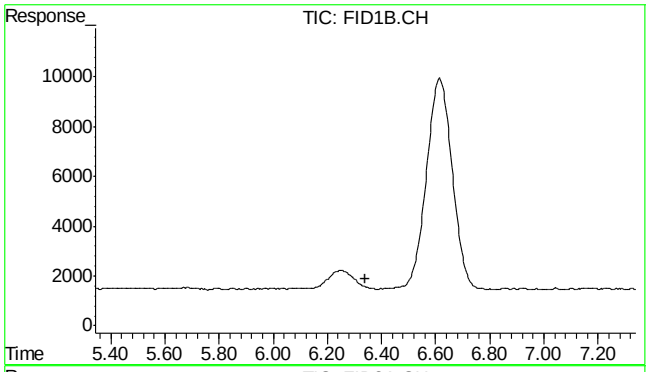
#2 Alkane B

R.T.: 15.008 min
Delta R.T.: 0.003 min
Response: 941582
Conc: N.D.



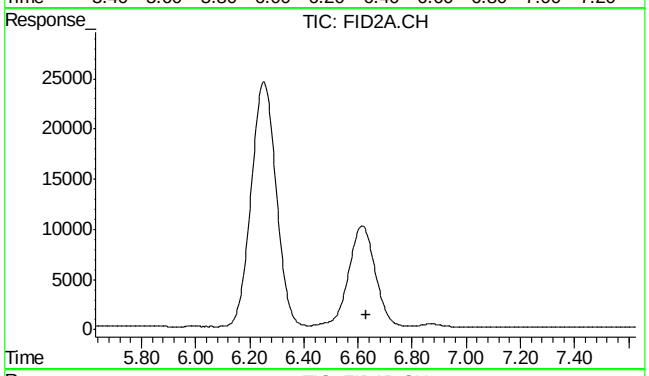
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.



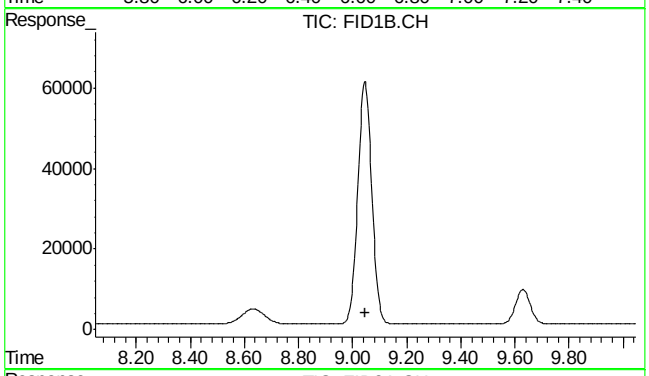
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



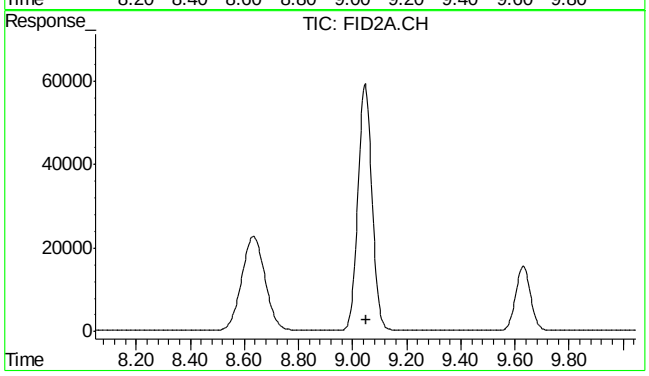
#3 Aromatic A

R.T.: 6.615 min
Delta R.T.: -0.014 min
Response: 711220
Conc: N.D.



#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



#4 Aromatic B

R.T.: 9.046 min
Delta R.T.: -0.003 min
Response: 2144186
Conc: N.D.

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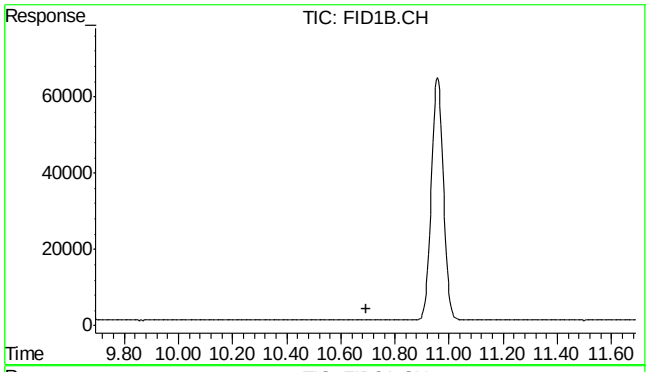
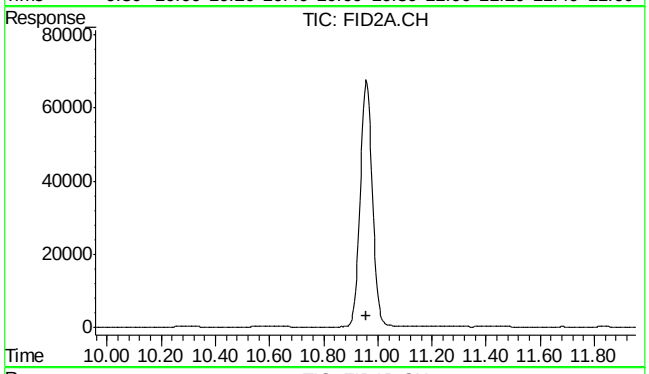


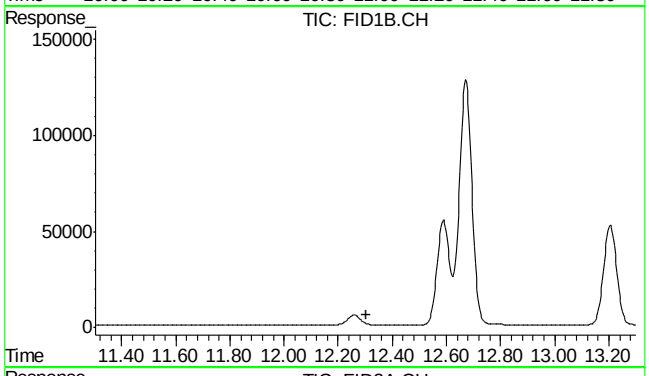
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



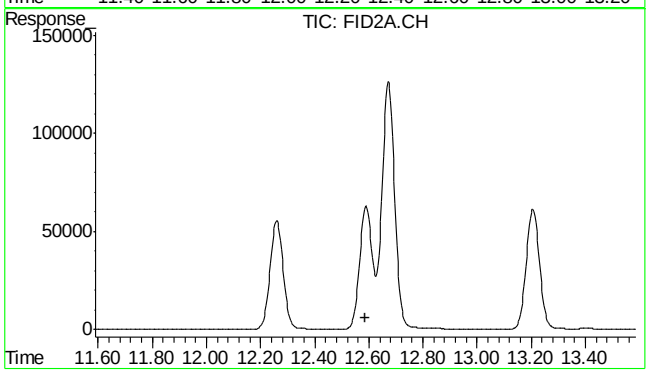
#5 Aromatic C

R.T.: 10.957 min
Delta R.T.: 0.001 min
Response: 2111198
Conc: N.D.



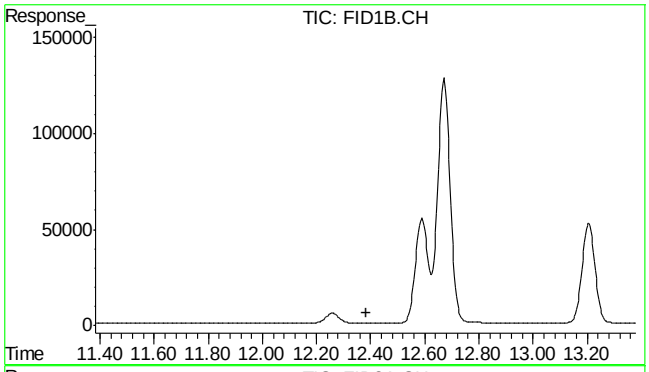
#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



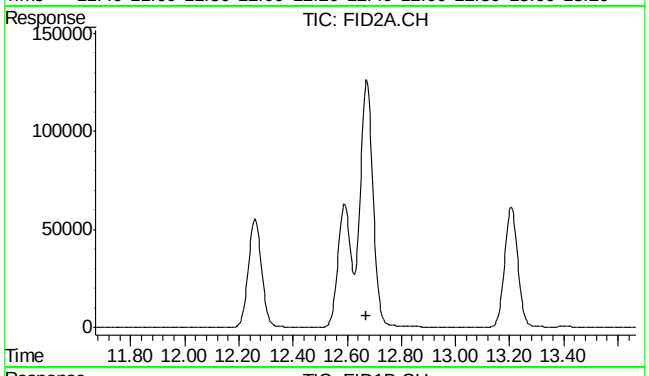
#6 Aromatic D

R.T.: 12.589 min
Delta R.T.: 0.002 min
Response: 1974915
Conc: N.D.



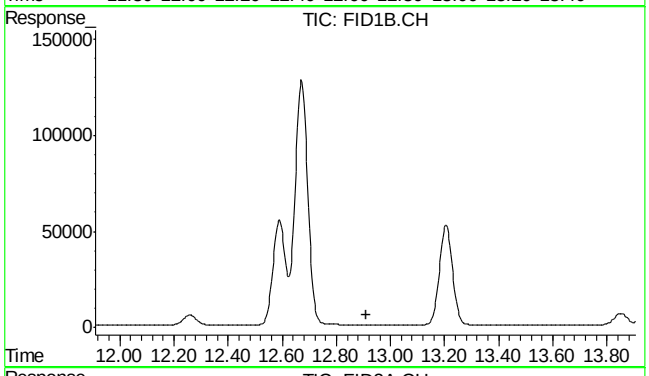
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



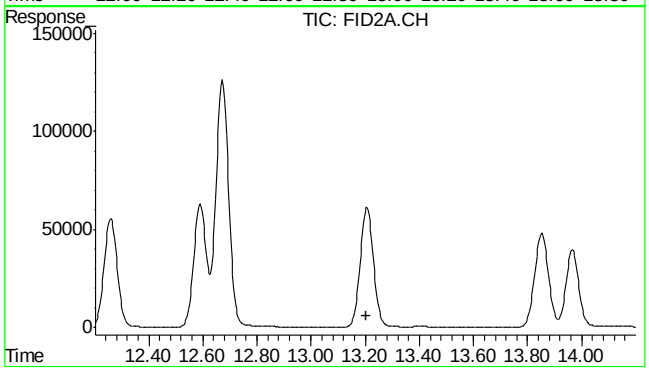
#7 Aromatic E

R.T.: 12.671 min
Delta R.T.: 0.002 min
Response: 4152697
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

R.T.: 13.205 min
Delta R.T.: 0.002 min
Response: 2094414
Conc: N.D.

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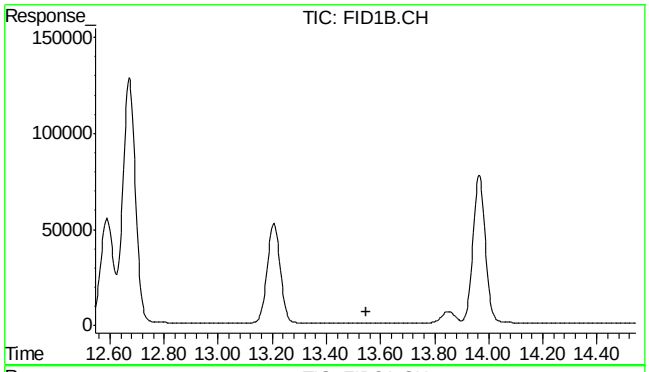
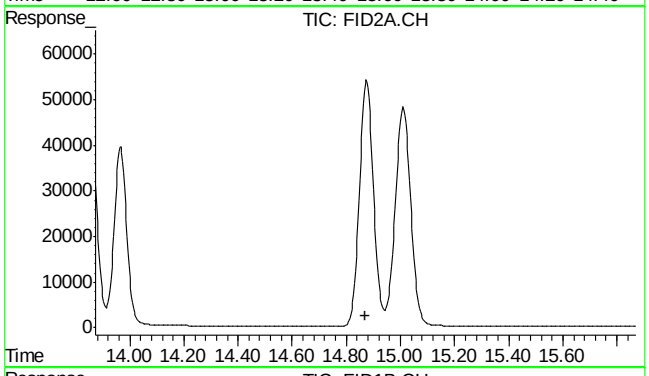


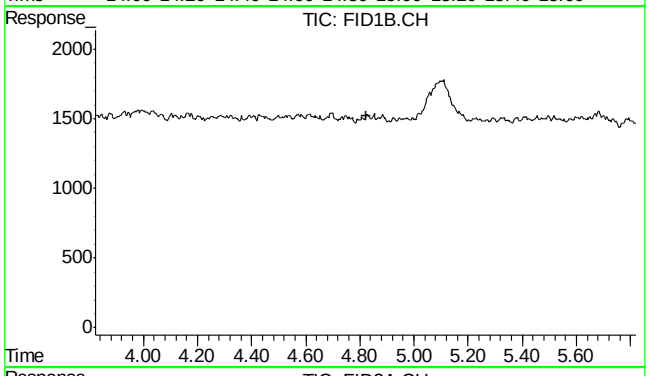
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



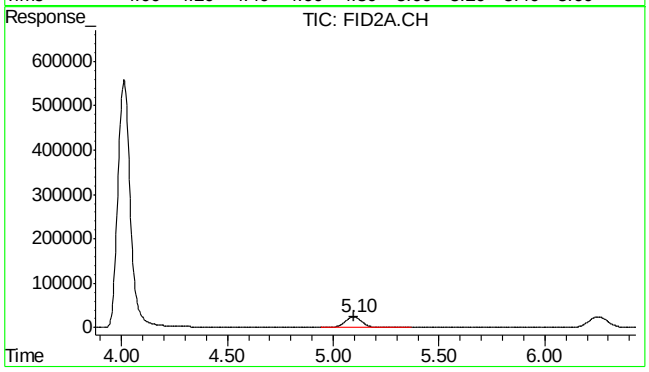
#9 Aromatic G

R.T.: 14.874 min
Delta R.T.: 0.003 min
Response: 1940633
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 5.097 min
Delta R.T.: -0.003 min
Response: 1359482
Conc: 99.12 ug/L

7.6.16

7

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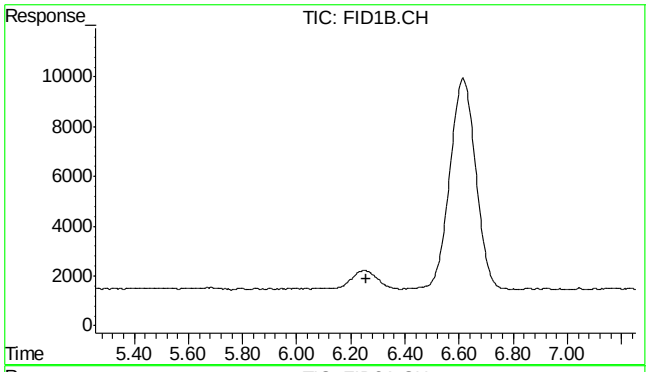
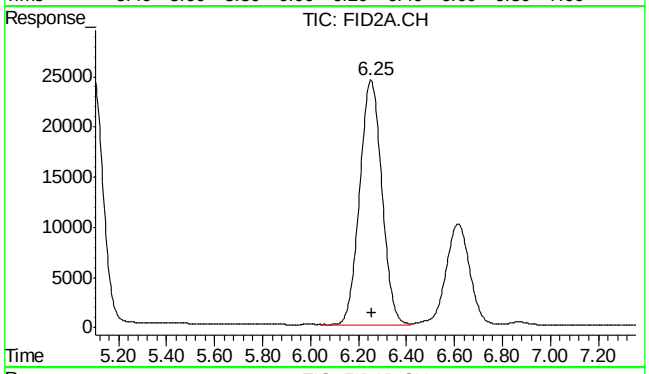


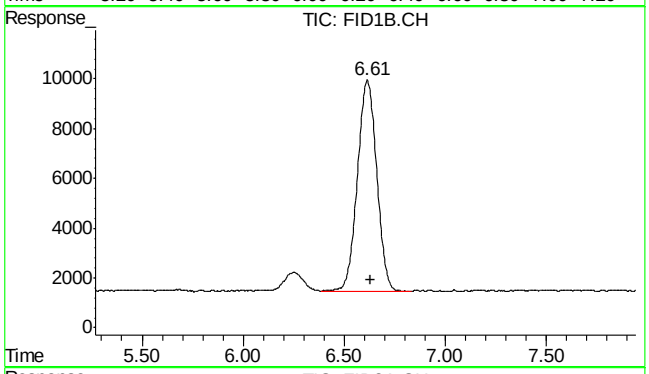
#11 2-Methylpentane

R.T.: 6.252 min
Delta R.T.: -0.004 min
Response: 47572
Conc: N.D.



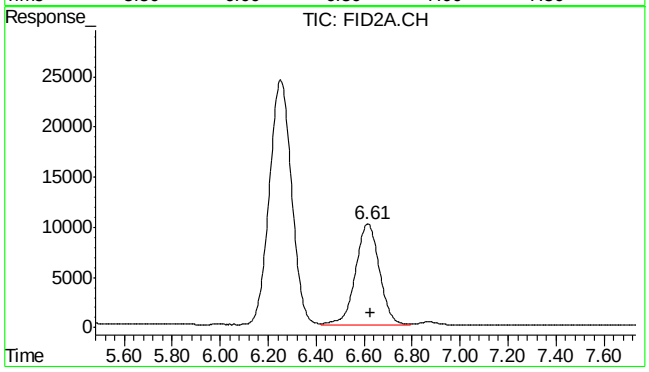
#11 2-Methylpentane

R.T.: 6.253 min
Delta R.T.: -0.003 min
Response: 1562794
Conc: 104.01 ug/L



#12 Methyl Tert Butyl Ether

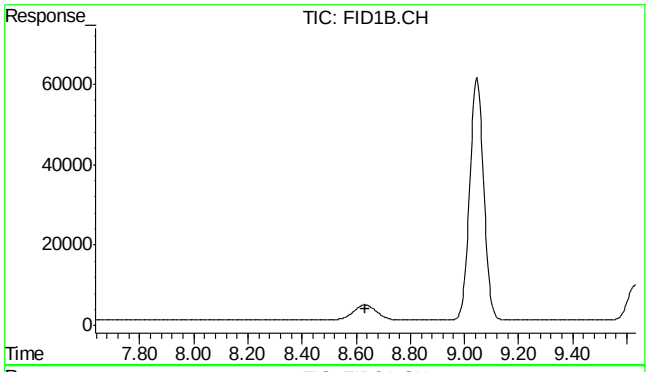
R.T.: 6.615 min
Delta R.T.: -0.014 min
Response: 567133
Conc: 105.12 ug/L



#12 Methyl Tert Butyl Ether

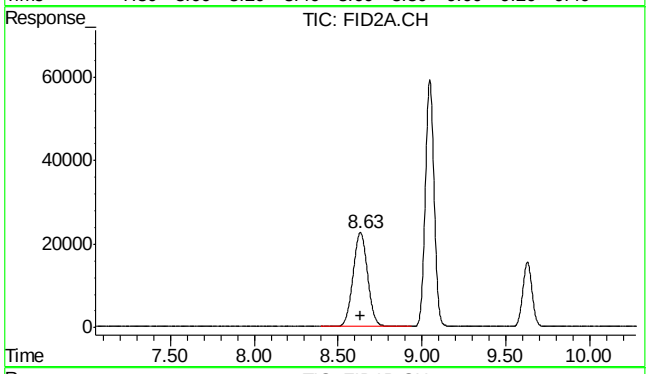
R.T.: 6.616 min
Delta R.T.: -0.012 min
Response: 693285
Conc: 106.00 ug/L

SGS ACCUTEST FA40754



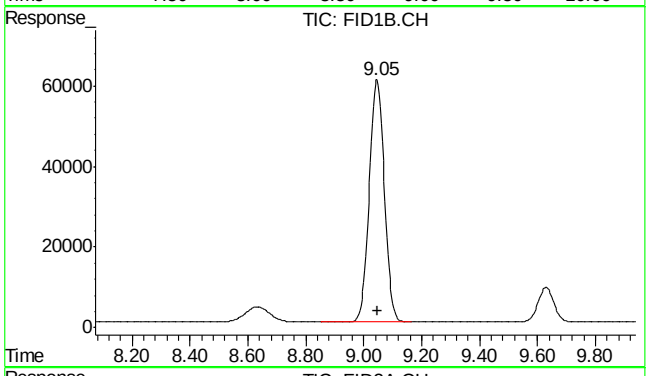
#13 2,2,4-Trimethylpentane

R.T.: 8.633 min
Delta R.T.: -0.001 min
Response: 224674
Conc: N.D.



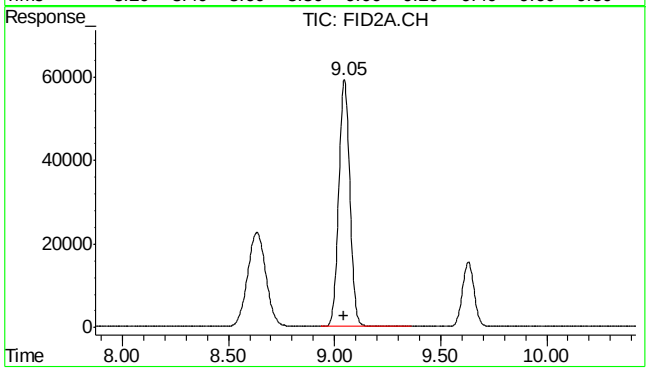
#13 2,2,4-Trimethylpentane

R.T.: 8.634 min
Delta R.T.: 0.000 min
Response: 1358821
Conc: 119.13 ug/L



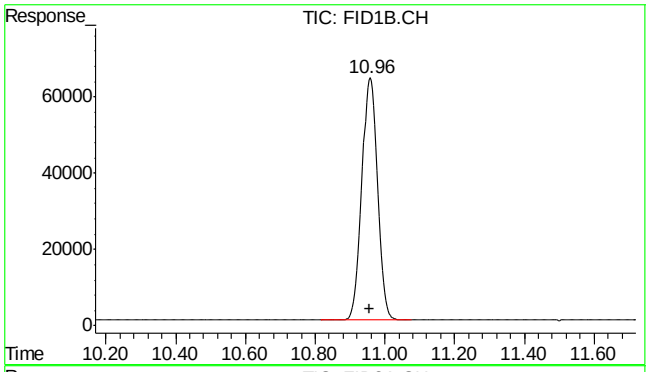
#14 Benzene

R.T.: 9.046 min
Delta R.T.: 0.000 min
Response: 2162809
Conc: 90.68 ug/L



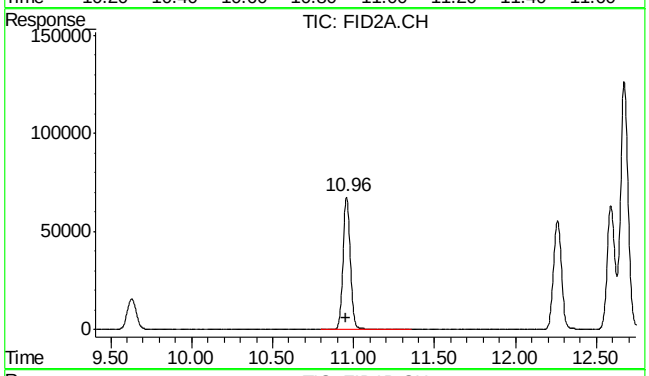
#14 Benzene

R.T.: 9.047 min
Delta R.T.: 0.000 min
Response: 2145083
Conc: 97.97 ug/L



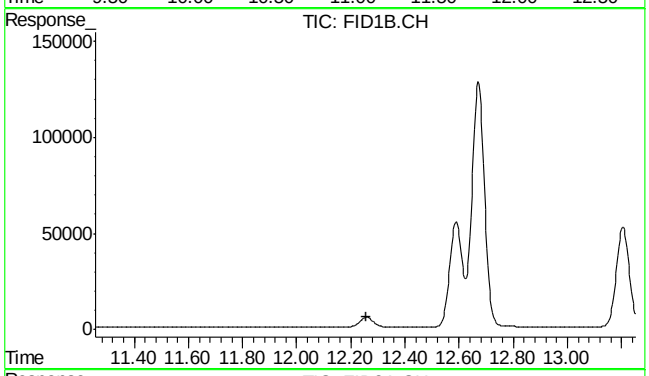
#15 Toluene

R.T.: 10.958 min
Delta R.T.: 0.003 min
Response: 1972658
Conc: 90.84 ug/L



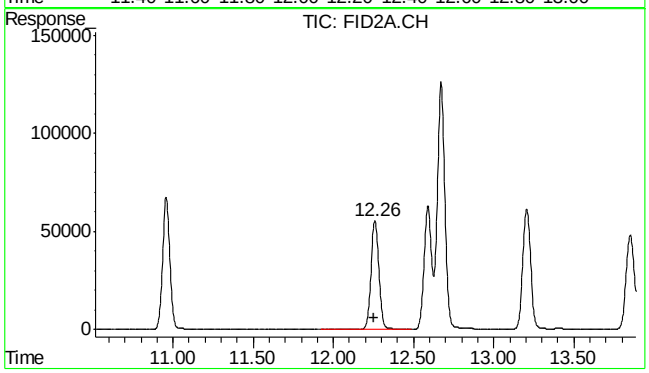
#15 Toluene

R.T.: 10.958 min
Delta R.T.: 0.003 min
Response: 2117673
Conc: 102.75 ug/L



#16 Nonane

R.T.: 12.259 min
Delta R.T.: 0.004 min
Response: 184843
Conc: N.D.



#16 Nonane

R.T.: 12.260 min
Delta R.T.: 0.004 min
Response: 1881061
Conc: 97.53 ug/L

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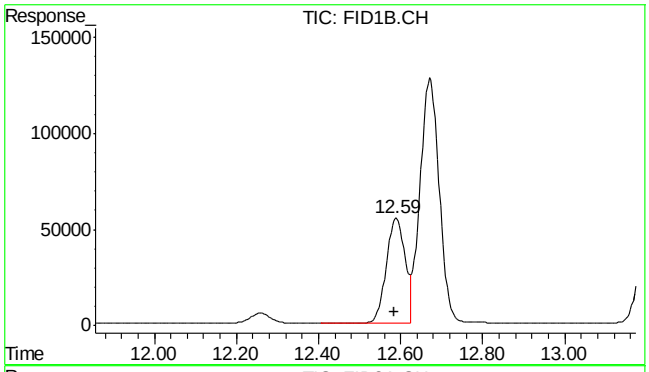
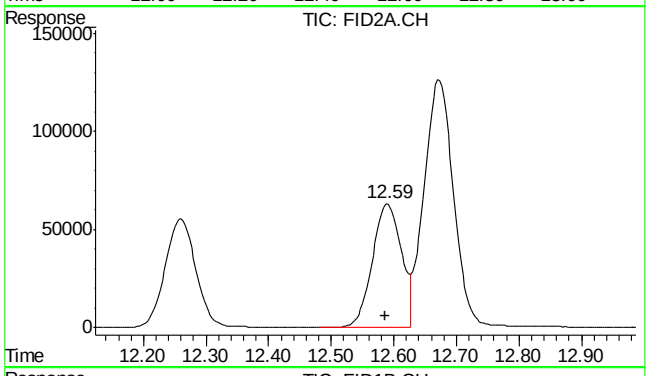


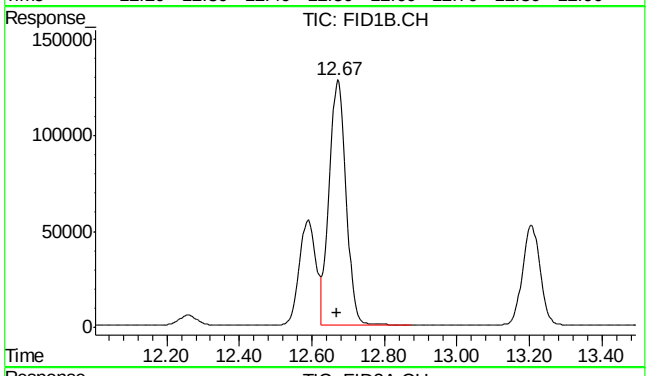
#17 Ethylbenzene

R.T.: 12.590 min
Delta R.T.: 0.004 min
Response: 1722075
Conc: 94.23 ug/L



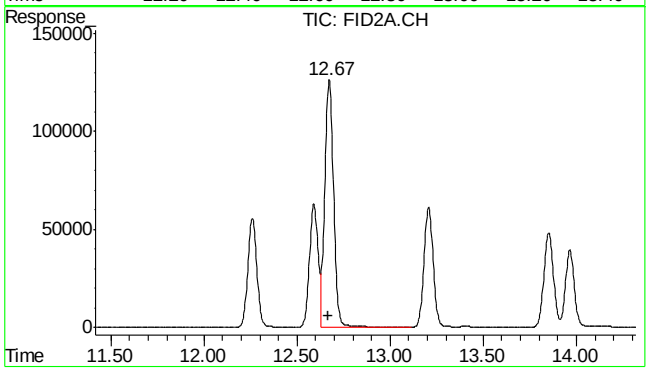
#17 Ethylbenzene

R.T.: 12.591 min
Delta R.T.: 0.004 min
Response: 1998418
Conc: 102.25 ug/L



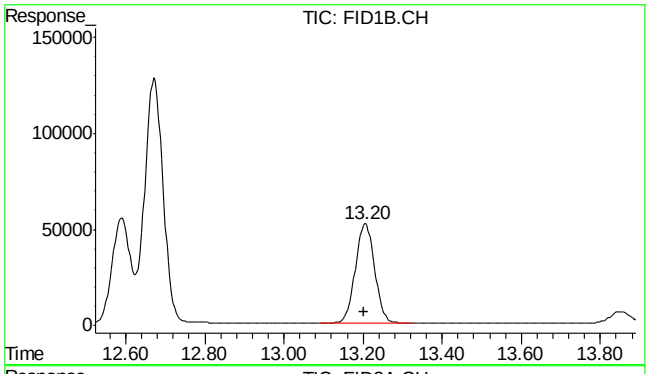
#18 m,p-Xylene

R.T.: 12.672 min
Delta R.T.: 0.003 min
Response: 4176768
Conc: 188.83 ug/L



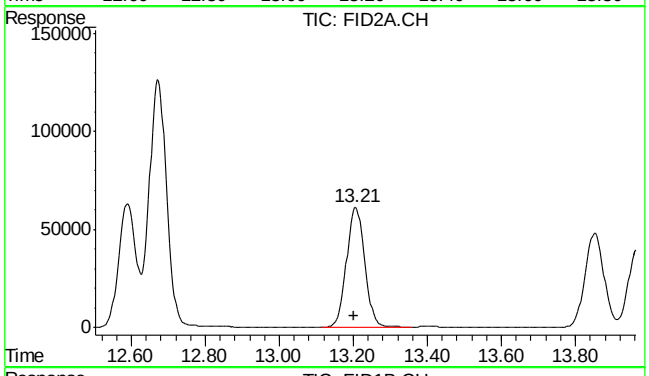
#18 m,p-Xylene

R.T.: 12.673 min
Delta R.T.: 0.004 min
Response: 4199843
Conc: 202.77 ug/L



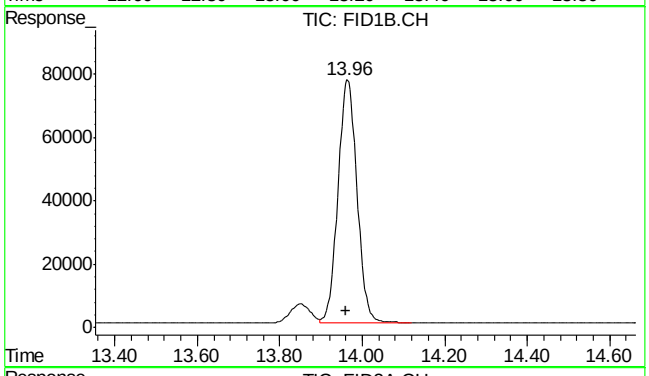
#19 o-Xylene

R.T.: 13.206 min
Delta R.T.: 0.004 min
Response: 1753022
Conc: 91.69 ug/L



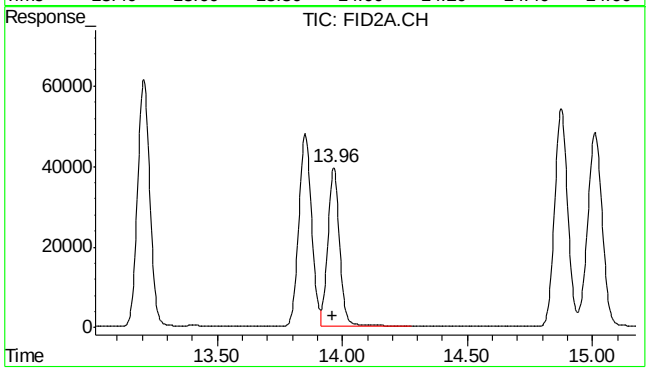
#19 o-Xylene

R.T.: 13.207 min
Delta R.T.: 0.004 min
Response: 2092787
Conc: 100.26 ug/L



#20 BFB

R.T.: 13.965 min
Delta R.T.: 0.004 min
Response: 2446646
Conc: 133.29 ug/L



#20 BFB

R.T.: 13.966 min
Delta R.T.: 0.004 min
Response: 1306882
Conc: 144.28 ug/L

7.6.16

7

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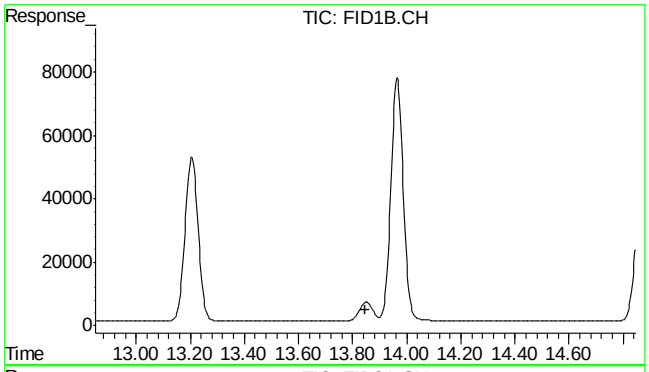
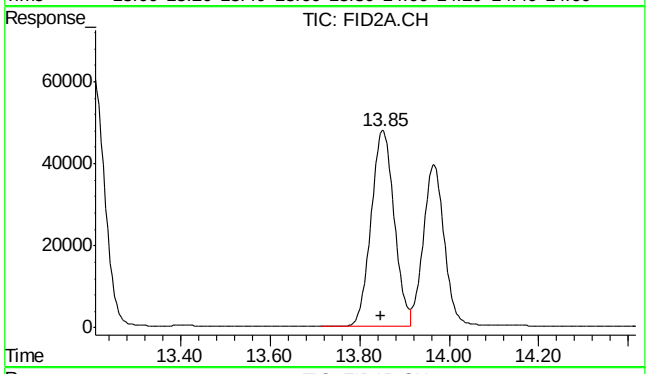


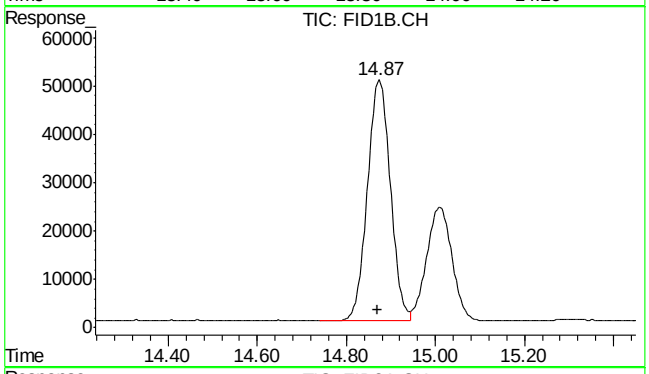
#21 Decane

R.T.: 13.851 min
Delta R.T.: 0.004 min
Response: 206388
Conc: N.D.



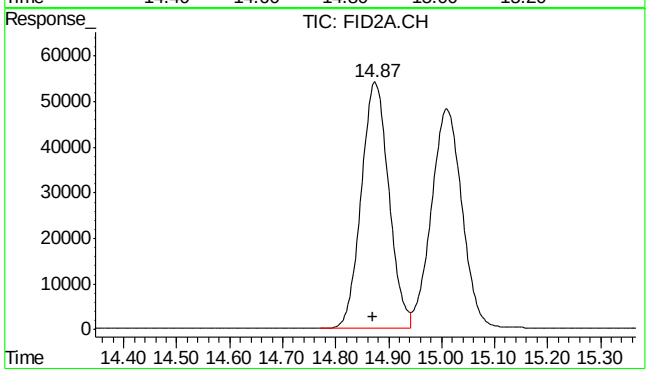
#21 Decane

R.T.: 13.852 min
Delta R.T.: 0.004 min
Response: 1706345
Conc: 94.77 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.874 min
Delta R.T.: 0.004 min
Response: 1779448
Conc: 88.97 ug/L



#22 1,2,4-Trimethylbenzene

R.T.: 14.875 min
Delta R.T.: 0.004 min
Response: 1941599
Conc: 96.28 ug/L

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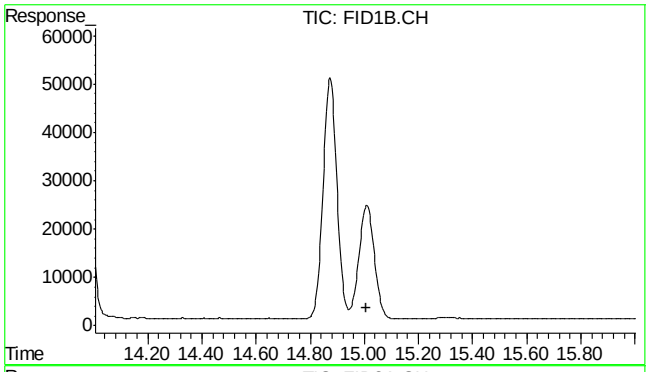
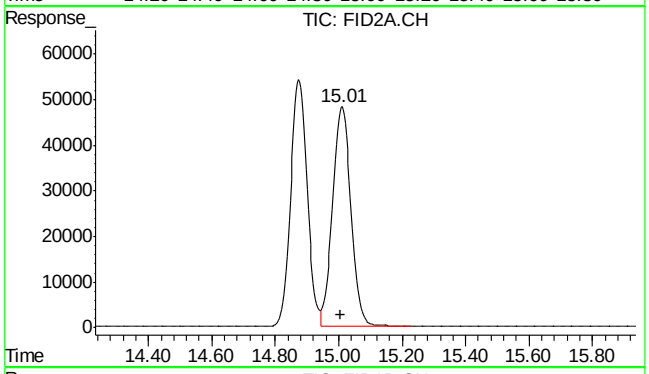


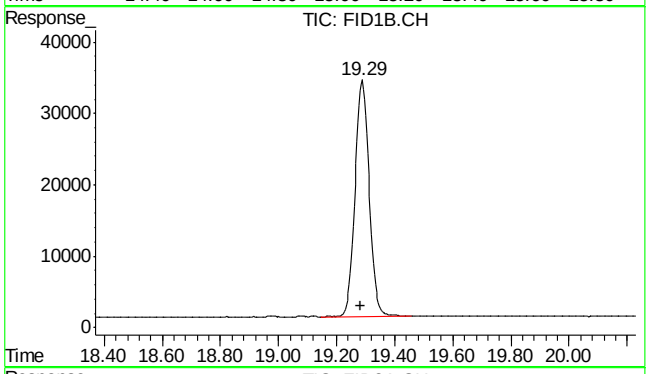
#23 Butylcyclohexane

R.T.: 15.010 min
Delta R.T.: 0.004 min
Response: 937768
Conc: N.D.



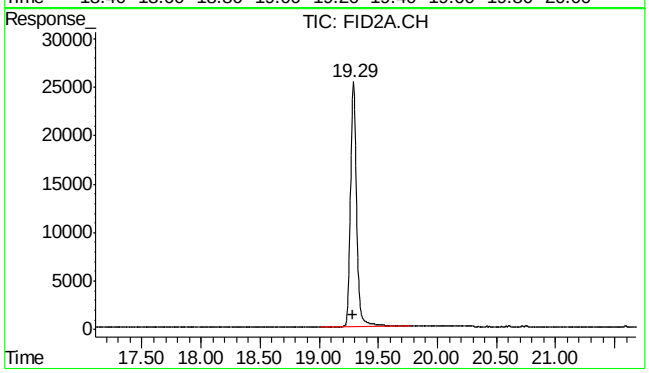
#23 Butylcyclohexane

R.T.: 15.011 min
Delta R.T.: 0.005 min
Response: 1930567
Conc: 92.53 ug/L



#24 Naphthalene

R.T.: 19.289 min
Delta R.T.: 0.005 min
Response: 1124371
Conc: 90.90 ug/L



#24 Naphthalene

R.T.: 19.290 min
Delta R.T.: 0.004 min
Response: 915625
Conc: 96.42 ug/L

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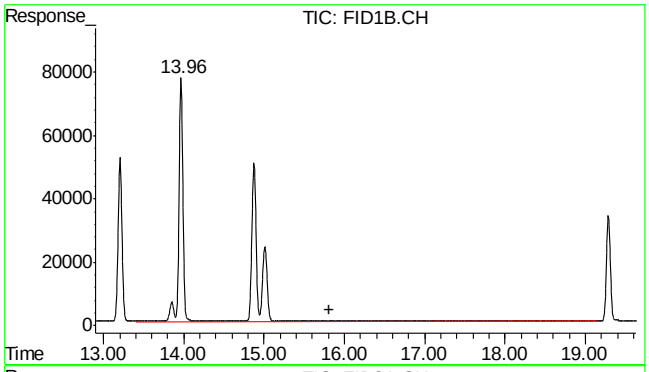
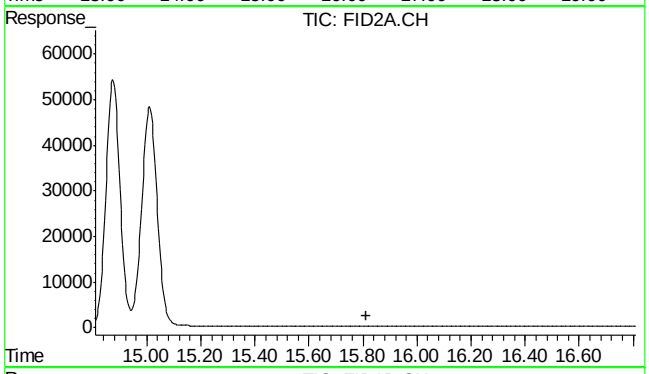


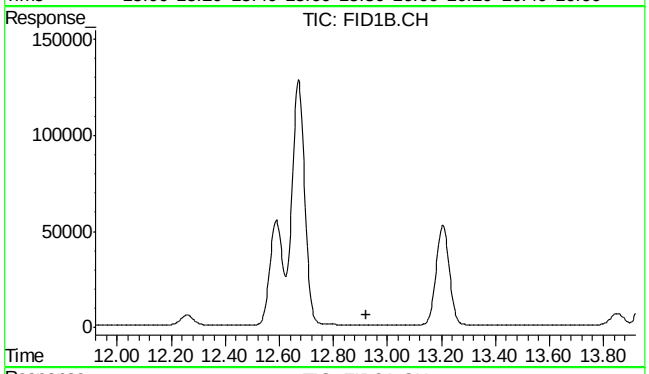
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2182486
Conc: 94.48 ug/L m



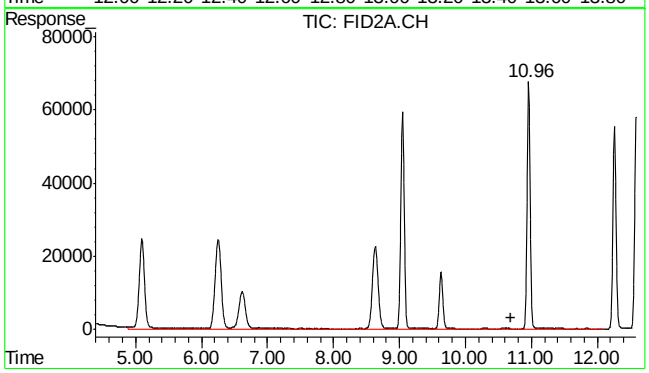
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 3721811
Conc: N.D.



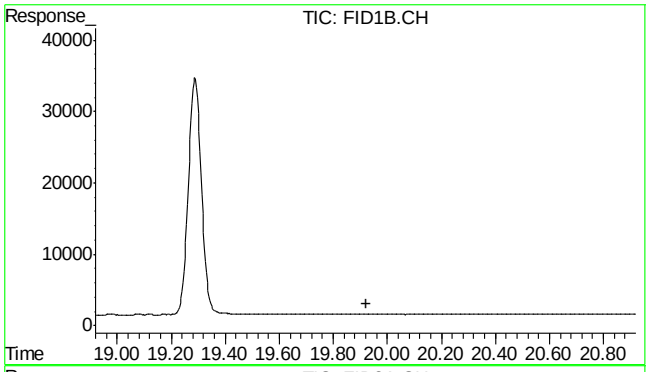
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 13650565
Conc: N.D.



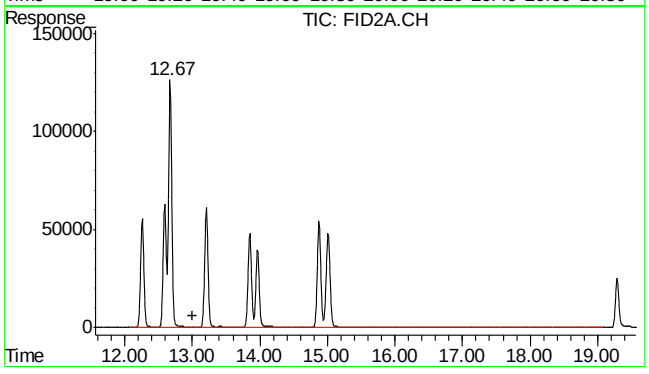
#26 C5- C8 Aliphatics (unadjusted)

R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 5112823
Conc: 374.82 ug/L m



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 3350406
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 5887107
Conc: 298.10 ug/L m

7.6.16

7

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Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\2\DATA\020617\UV077885.D\FID1B.CH Vial: 35
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077885.D\FID2A.CH
Acq On : 07-Feb-2017, 10:21:43 Operator: antonioc
Sample : ecc4115-4 Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 07 11:46:18 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Initial Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		System Monitoring Compounds						
1)	S	Alkane A	13.85f	0.00	205705	0	NoCal m	N.D.
2)	S	Alkane B	15.01f	0.00	926758	0	NoCal m	N.D.
3)	S	Aromatic A	0.00	6.61f	0	716417	N.D.	NoCal m
4)	S	Aromatic B	0.00	9.05f	0	2127195	N.D.	NoCal m
5)	S	Aromatic C	0.00	10.96f	0	2093165	N.D.	NoCal m
6)	S	Aromatic D	0.00	12.59f	0	2042187	N.D.	NoCal m
7)	S	Aromatic E	0.00	12.67f	0	4097697	N.D.	NoCal m
8)	S	Aromatic F	0.00	13.21f	0	2083046	N.D.	NoCal m
9)	S	Aromatic G	0.00	14.87f	0	1935391	N.D.	NoCal m
20)	S	BFB	13.97	13.97	2449404	1300951	133.442	143.625
		Spiked Amount 40.000 Range 70 - 130 Recovery =					333.61%#	359.06%#
		Target Compounds						
10)		Pentane	0.00	5.10	0	1346777	N.D.	98.197 #
11)		2-Methylpentane	6.25	6.25	52384	1536806	NoCal	102.283 #
12)		Methyl Tert Buty	6.62	6.62	569988	677905	105.647	103.651
13)		2,2,4-Trimethylp	8.63	8.63	231618	1351096	NoCal	118.306 #
14)		Benzene	9.05	9.05	2175772	2131092	91.224	97.333
15)		Toluene	10.96	10.96	1985690	2096836	91.440	101.734
16)		Nonane	12.26	12.26	179510	1849589	NoCal	95.894 #
17)		Ethylbenzene	12.59	12.59	1717942	1984230	94.002	101.523
18)		m,p-Xylene	12.67	12.67	4165849	4168301	188.337	201.245
19)		o-Xylene	13.21	13.21	1759849	2083345	92.043	99.808
21)		Decane	13.85	13.85	204108	1655327	NoCal	91.933 #
22)		1,2,4-Trimethylb	14.88	14.88	1783878	1924500	89.193	95.435
23)		Butylcyclohexane	15.01	15.01	927395	1891301	NoCal	90.650 #
24)		Naphthalene	19.29	19.29	1165164	922952	94.201	97.187
25)	H	C9- C10 Aromatic	15.81	15.81	2128842	3613761	91.788	NoCal #
26)	H	C5- C8 Aliphatic	12.92	10.70	13571954	5104641	NoCal	374.159 #
27)	H	C9- C12 Aliphati	19.92	13.00	3428328	5686701	NoCal	287.485 #

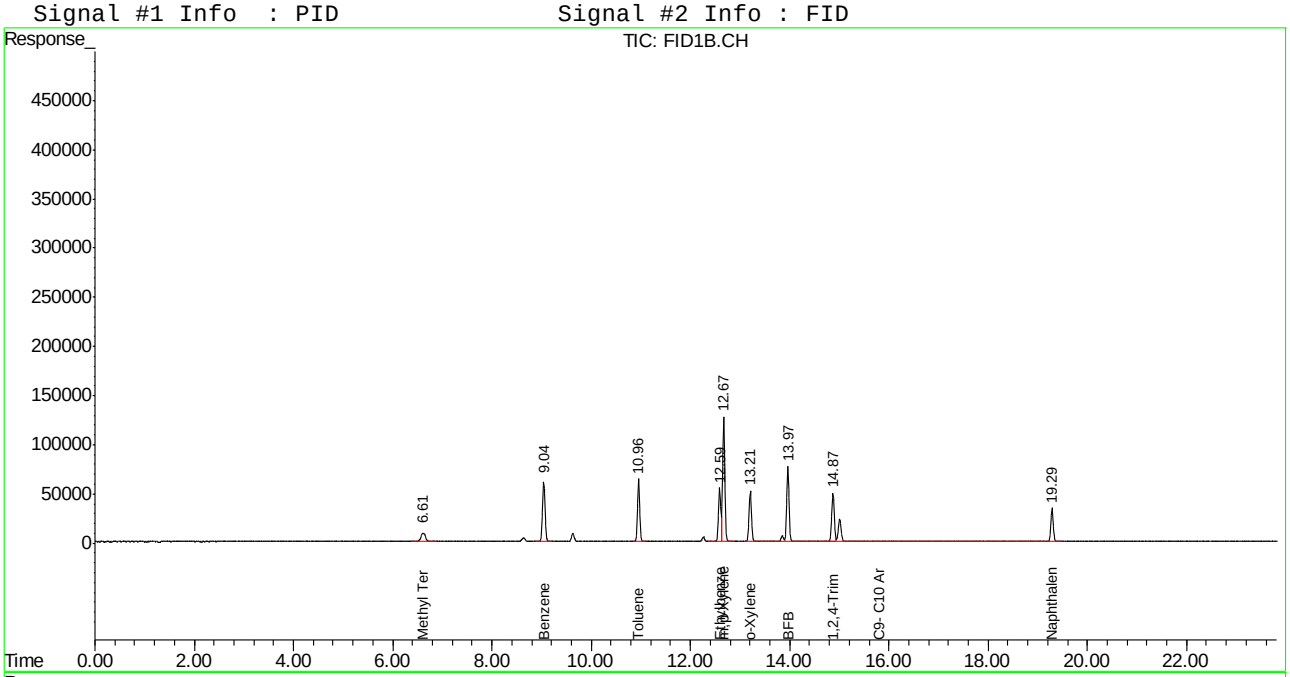
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.
UV077885.D VPH011317.M Tue Feb 07 12:56:01 2017

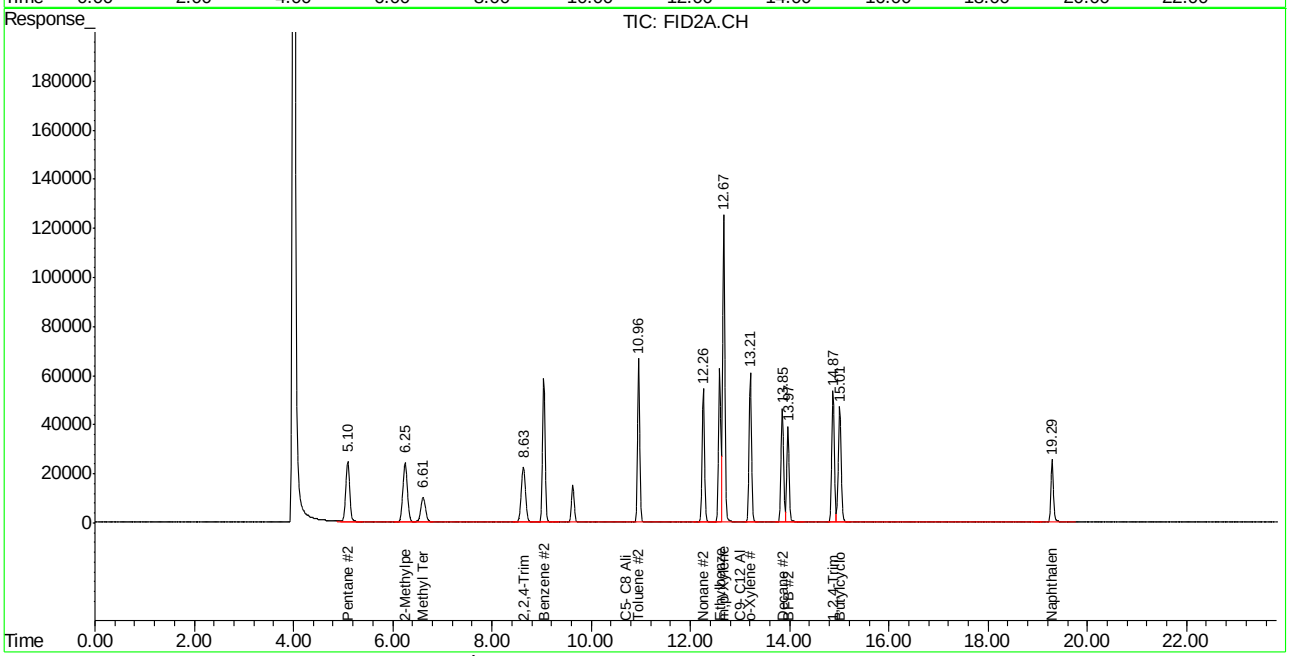
Quantitation Report (QT Reviewed)

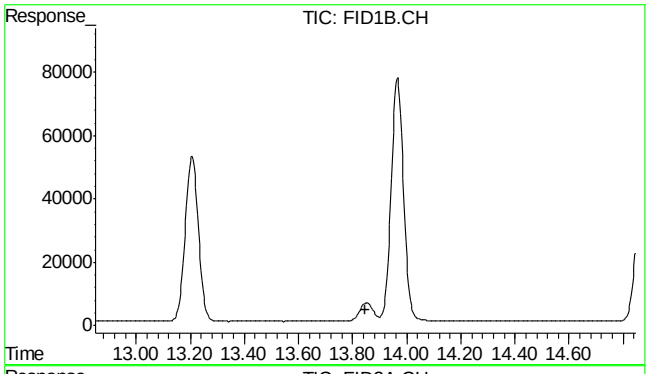
Signal #1 : C:\HPCHEM\2\DATA\020617\UV077885.D\FID1B.CH Vial: 35
Signal #2 : C:\HPCHEM\2\DATA\020617\UV077885.D\FID2A.CH
Acq On : 07-Feb-2017, 10:21:43 Operator: antonioc
Sample : ecc4115-4 Inst : HP5890
Misc : gc19657,guv4141,,,,, Multiplr: 1.00
IntFile Signal #1: PID.E IntFile Signal #2: FID.E
Quant Time: Feb 7 11:49 2017 Quant Results File: VPH011317.RES

Quant Method : C:\HPCHEM\2\METHODS\VPH011317.M (Chemstation Integrator)
Title : Mass. DEP VPH
Last Update : Thu Jan 19 13:21:03 2017
Response via : Single Level Calibration
DataAcq Meth : ACQ_VP~1.M

Volume Inj. :
Signal #1 Phase : RTX-502.2 Signal #2 Phase: RTX-502.2
Signal #1 Info : PID Signal #2 Info : FID

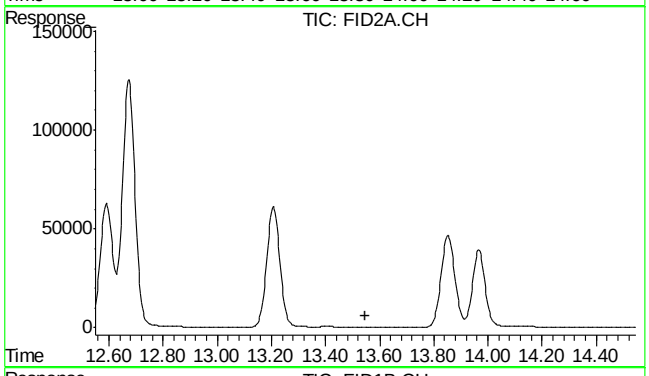






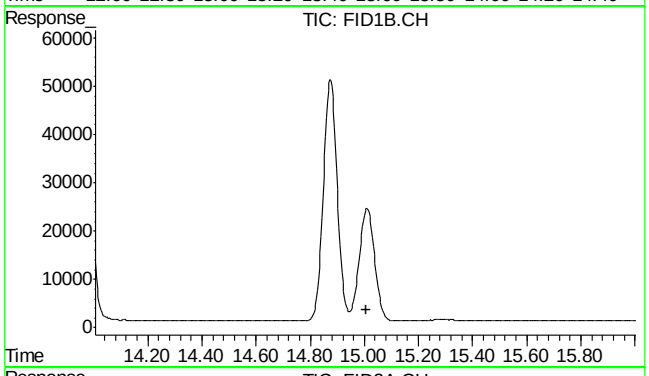
#1 Alkane A

R.T.: 13.852 min
Delta R.T.: 0.005 min
Response: 205705
Conc: N.D.



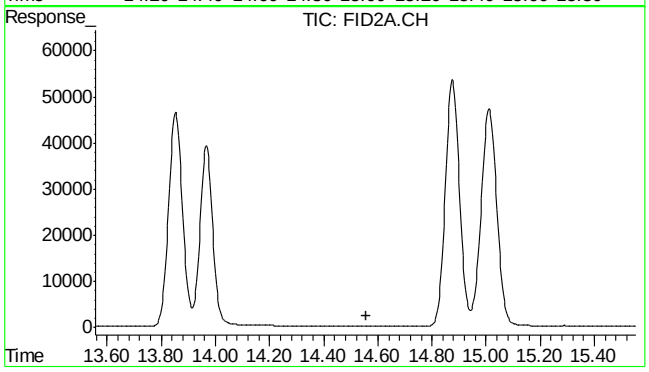
#1 Alkane A

R.T.: 0.000 min
Exp R.T. : 13.548 min
Response: 0
Conc: N.D.



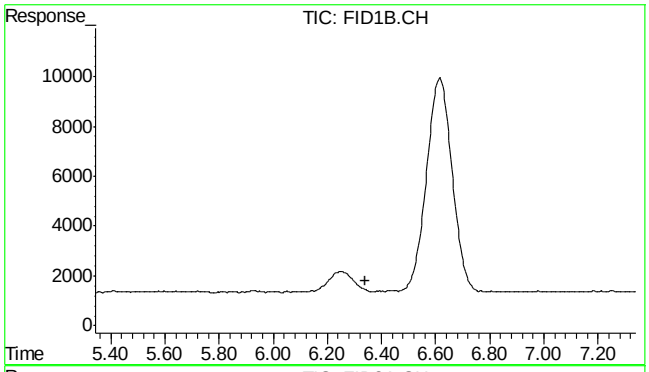
#2 Alkane B

R.T.: 15.009 min
Delta R.T.: 0.004 min
Response: 926758
Conc: N.D.



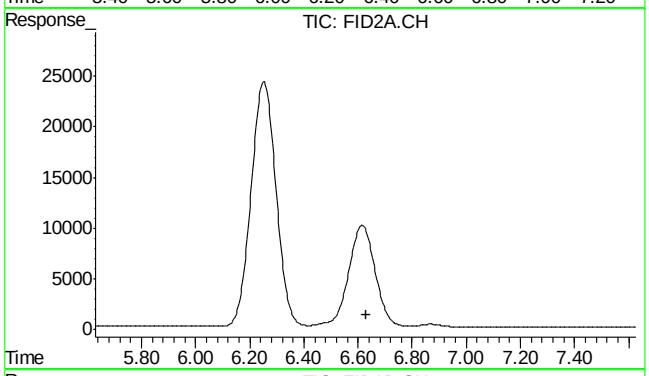
#2 Alkane B

R.T.: 0.000 min
Exp R.T. : 14.556 min
Response: 0
Conc: N.D.



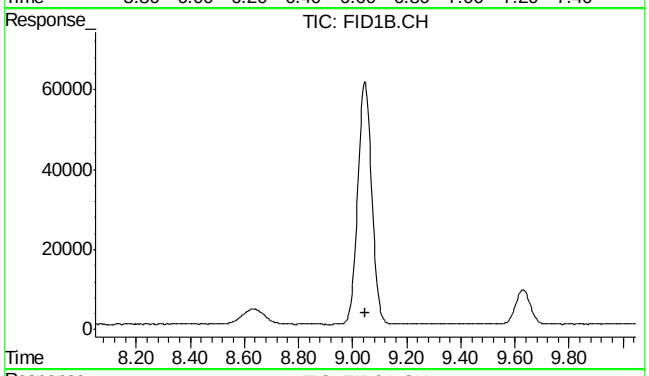
#3 Aromatic A

R.T.: 0.000 min
Exp R.T. : 6.341 min
Response: 0
Conc: N.D.



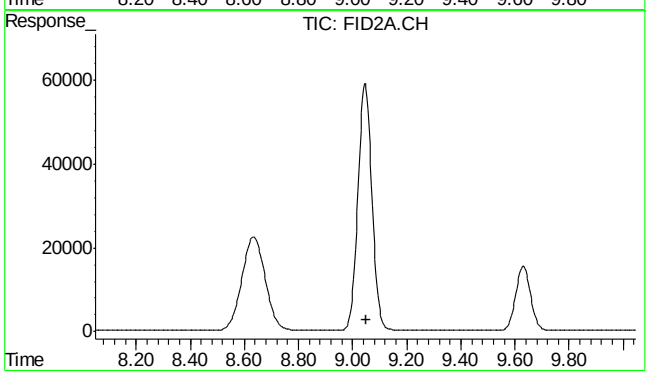
#3 Aromatic A

R.T.: 6.614 min
Delta R.T.: -0.015 min
Response: 716417
Conc: N.D.



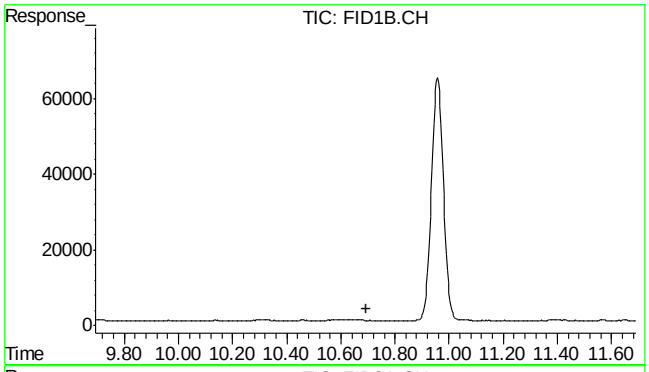
#4 Aromatic B

R.T.: 0.000 min
Exp R.T. : 9.048 min
Response: 0
Conc: N.D.



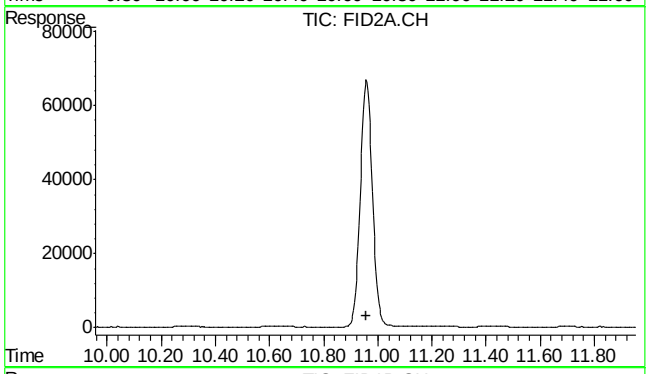
#4 Aromatic B

R.T.: 9.045 min
Delta R.T.: -0.003 min
Response: 2127195
Conc: N.D.



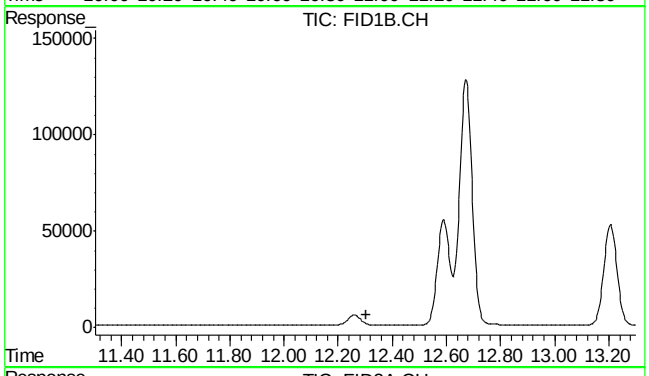
#5 Aromatic C

R.T.: 0.000 min
Exp R.T. : 10.693 min
Response: 0
Conc: N.D.



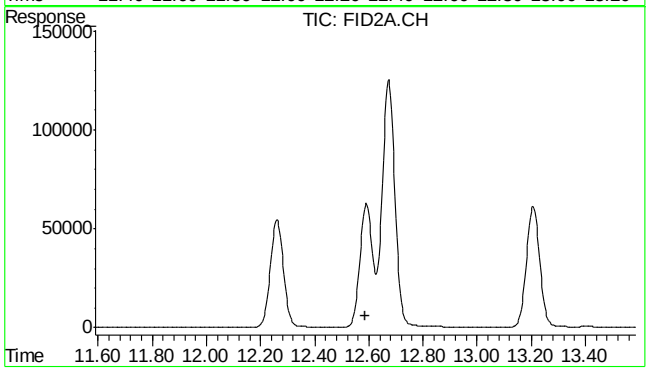
#5 Aromatic C

R.T.: 10.957 min
Delta R.T.: 0.001 min
Response: 2093165
Conc: N.D.



#6 Aromatic D

R.T.: 0.000 min
Exp R.T. : 12.303 min
Response: 0
Conc: N.D.



#6 Aromatic D

R.T.: 12.590 min
Delta R.T.: 0.003 min
Response: 2042187
Conc: N.D.

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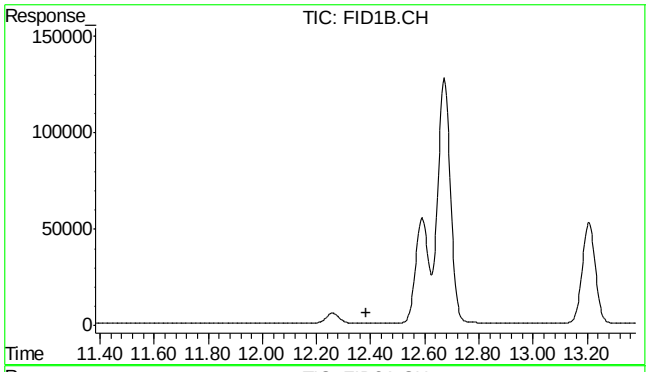
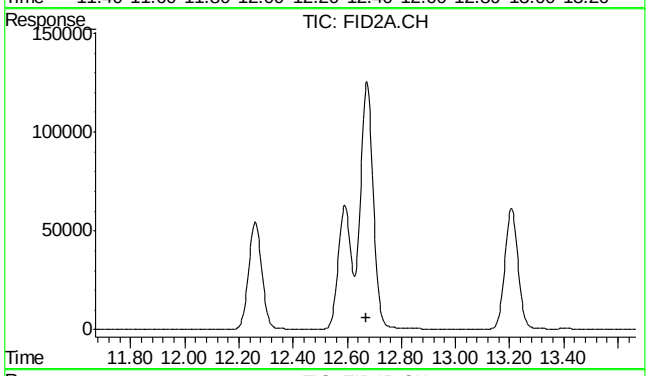


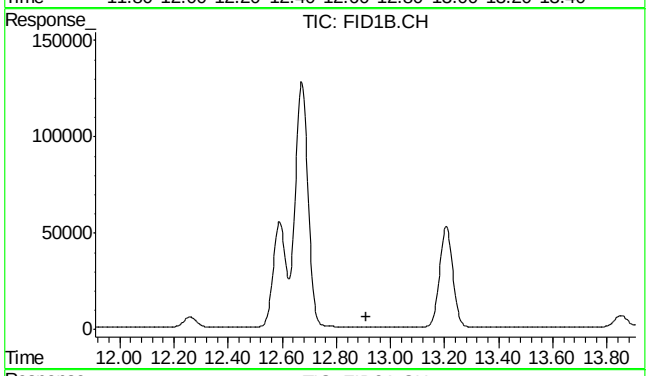
#7 Aromatic E

R.T.: 0.000 min
Exp R.T. : 12.383 min
Response: 0
Conc: N.D.



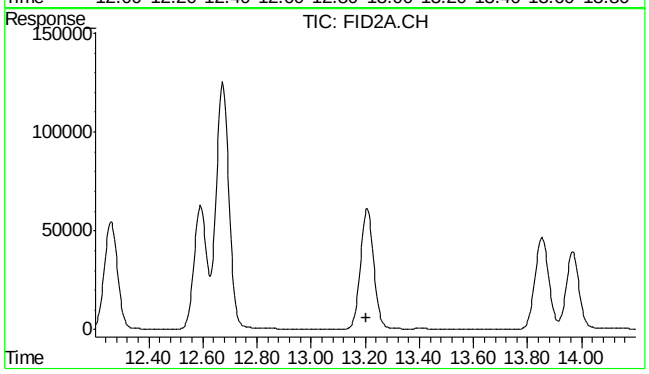
#7 Aromatic E

R.T.: 12.672 min
Delta R.T.: 0.003 min
Response: 4097697
Conc: N.D.



#8 Aromatic F

R.T.: 0.000 min
Exp R.T. : 12.910 min
Response: 0
Conc: N.D.



#8 Aromatic F

R.T.: 13.207 min
Delta R.T.: 0.003 min
Response: 2083046
Conc: N.D.

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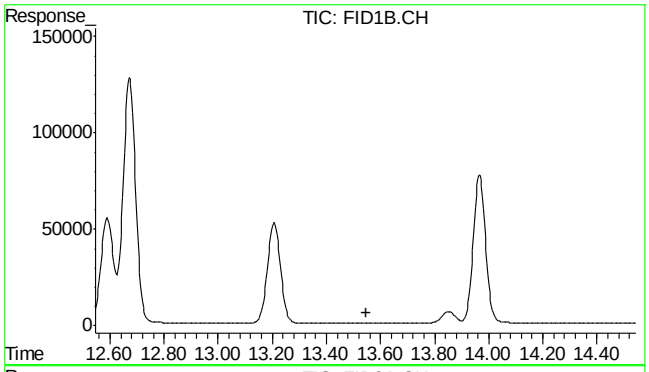
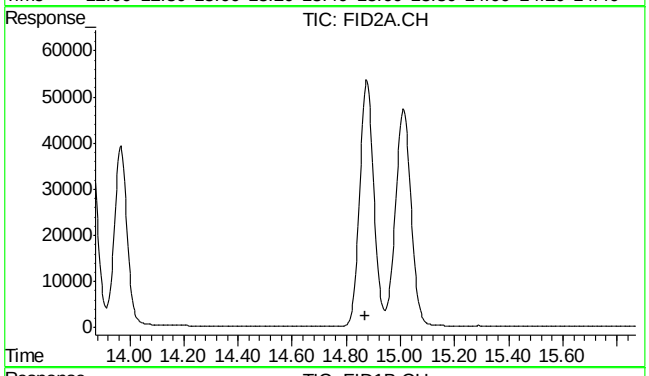


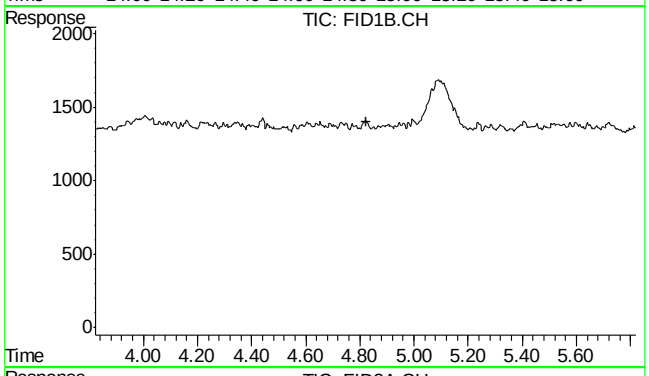
#9 Aromatic G

R.T.: 0.000 min
Exp R.T. : 13.546 min
Response: 0
Conc: N.D.



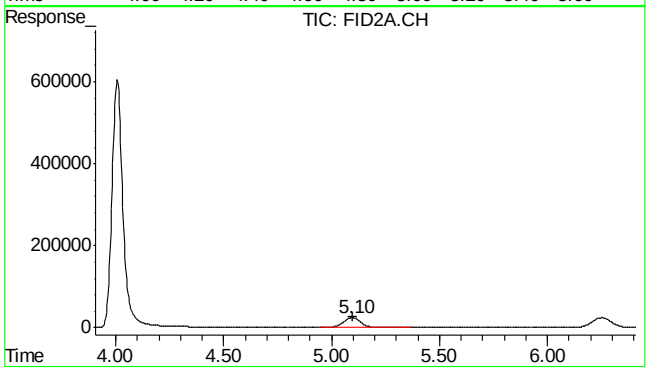
#9 Aromatic G

R.T.: 14.875 min
Delta R.T.: 0.003 min
Response: 1935391
Conc: N.D.



#10 Pentane

R.T.: 0.000 min
Exp R.T. : 4.822 min
Response: 0
Conc: N.D.



#10 Pentane

R.T.: 5.096 min
Delta R.T.: -0.004 min
Response: 1346777
Conc: 98.20 ug/L

7.6.17

7

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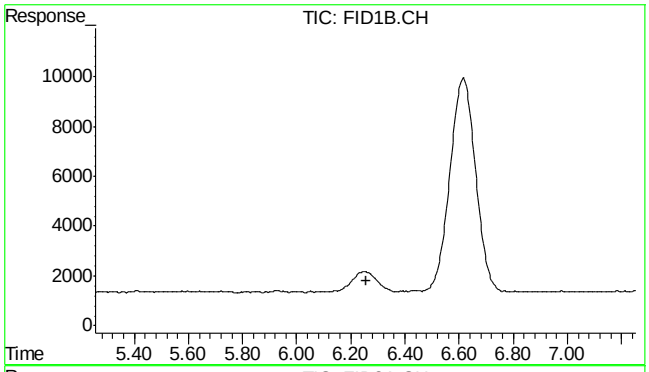
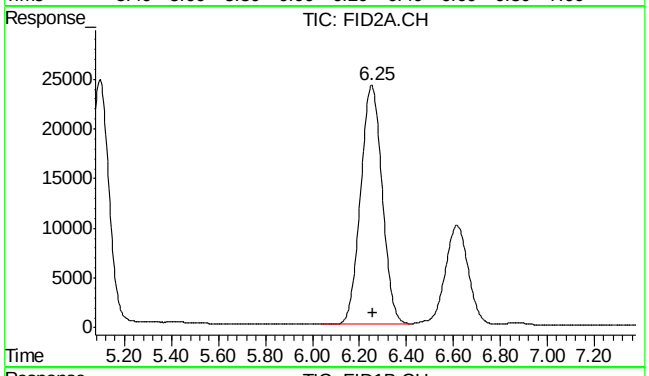


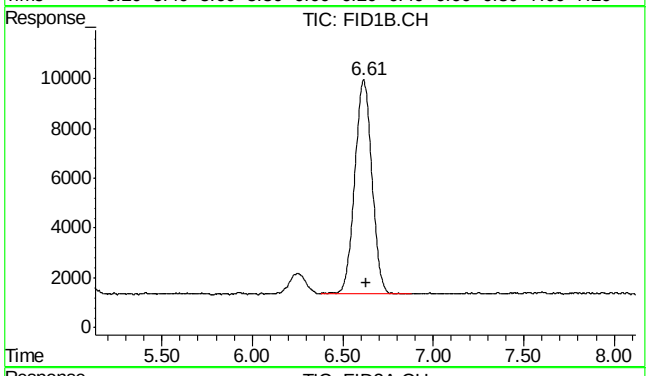
#11 2-Methylpentane

R.T.: 6.252 min
Delta R.T.: -0.004 min
Response: 52384
Conc: N.D.



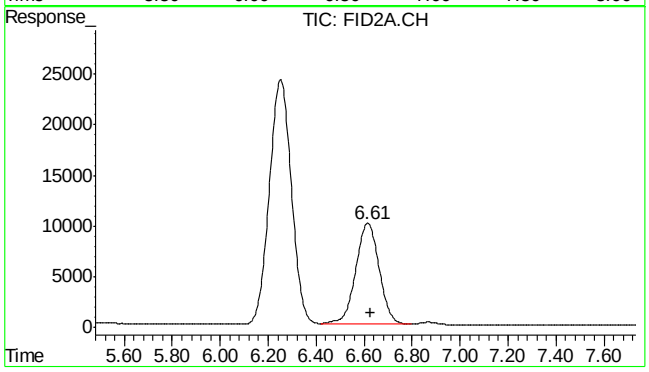
#11 2-Methylpentane

R.T.: 6.252 min
Delta R.T.: -0.004 min
Response: 1536806
Conc: 102.28 ug/L



#12 Methyl Tert Butyl Ether

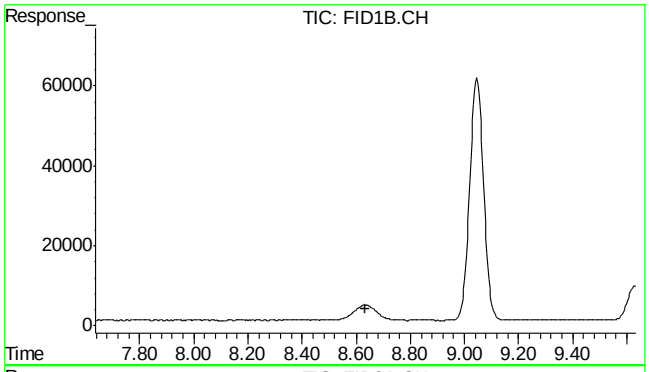
R.T.: 6.616 min
Delta R.T.: -0.013 min
Response: 569988
Conc: 105.65 ug/L



#12 Methyl Tert Butyl Ether

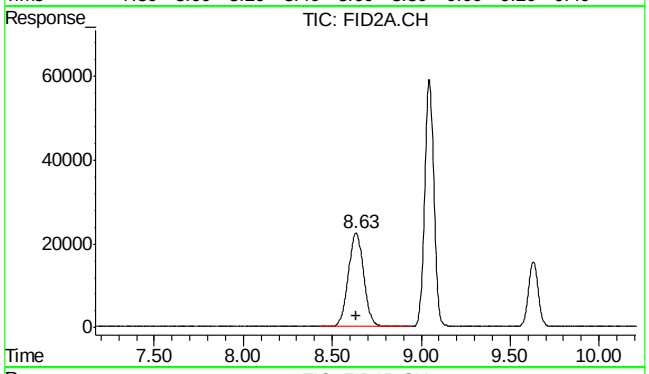
R.T.: 6.616 min
Delta R.T.: -0.012 min
Response: 677905
Conc: 103.65 ug/L

SGS ACCUTEST FA40754



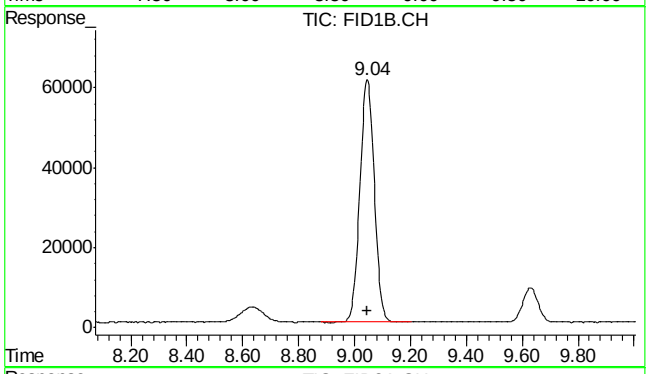
#13 2,2,4-Trimethylpentane

R.T.: 8.635 min
Delta R.T.: 0.000 min
Response: 231618
Conc: N.D.



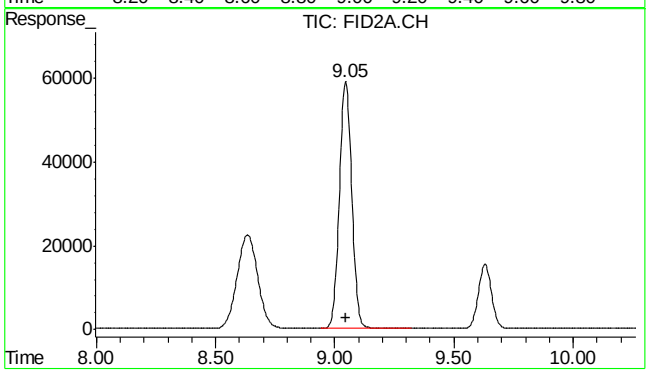
#13 2,2,4-Trimethylpentane

R.T.: 8.635 min
Delta R.T.: 0.000 min
Response: 1351096
Conc: 118.31 ug/L



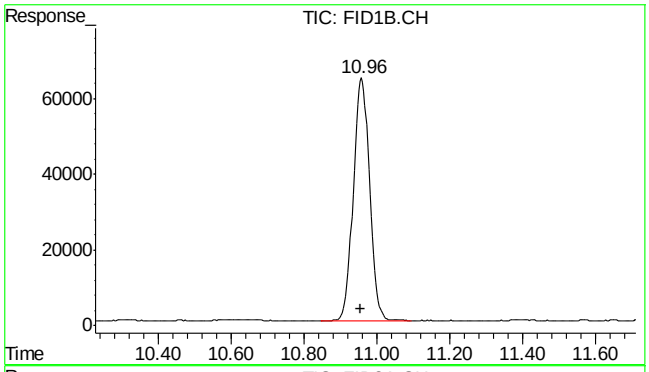
#14 Benzene

R.T.: 9.046 min
Delta R.T.: 0.000 min
Response: 2175772
Conc: 91.22 ug/L



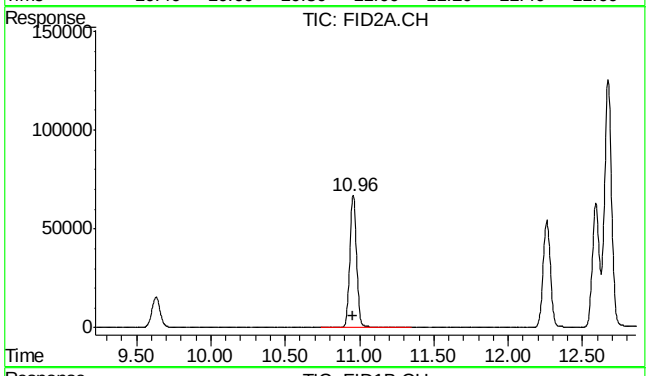
#14 Benzene

R.T.: 9.047 min
Delta R.T.: 0.000 min
Response: 2131092
Conc: 97.33 ug/L



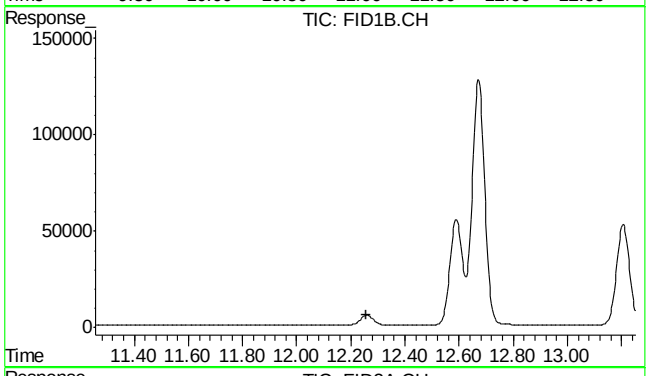
#15 Toluene

R.T.: 10.958 min
Delta R.T.: 0.003 min
Response: 1985690
Conc: 91.44 ug/L



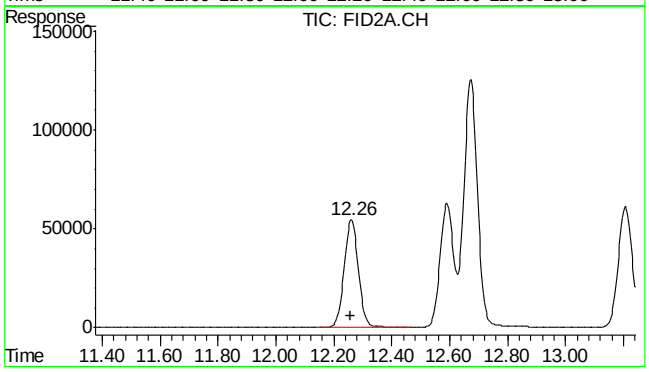
#15 Toluene

R.T.: 10.959 min
Delta R.T.: 0.004 min
Response: 2096836
Conc: 101.73 ug/L



#16 Nonane

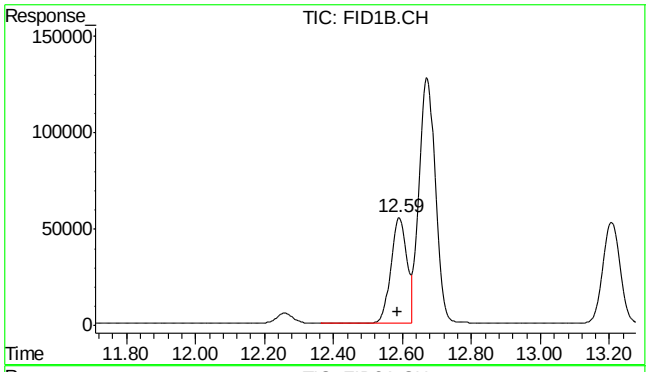
R.T.: 12.260 min
Delta R.T.: 0.005 min
Response: 179510
Conc: N.D.



#16 Nonane

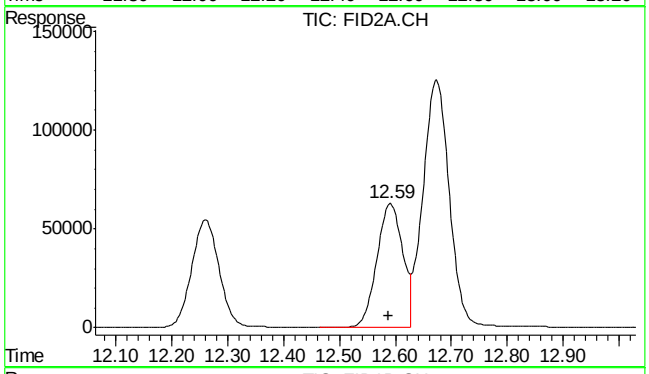
R.T.: 12.261 min
Delta R.T.: 0.005 min
Response: 1849589
Conc: 95.89 ug/L

SGS ACCUTEST FA40754



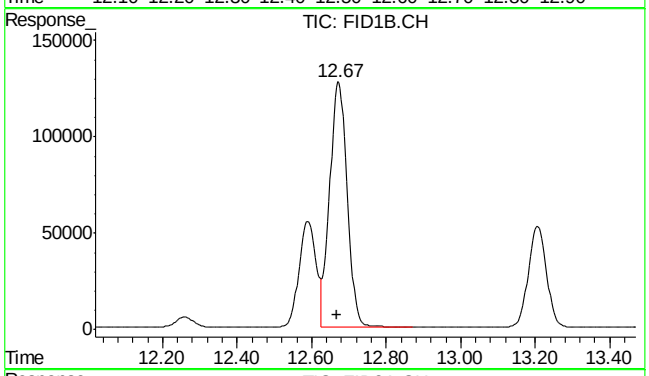
#17 Ethylbenzene

R.T.: 12.591 min
Delta R.T.: 0.005 min
Response: 1717942
Conc: 94.00 ug/L



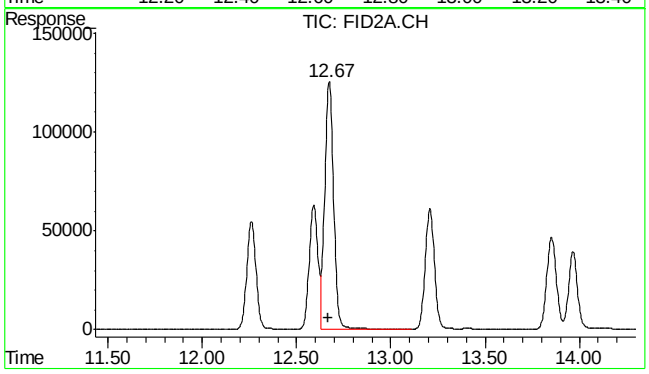
#17 Ethylbenzene

R.T.: 12.591 min
Delta R.T.: 0.004 min
Response: 1984230
Conc: 101.52 ug/L



#18 m,p-Xylene

R.T.: 12.673 min
Delta R.T.: 0.004 min
Response: 4165849
Conc: 188.34 ug/L



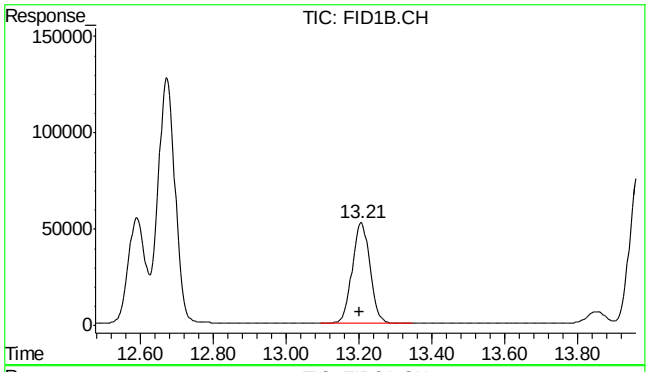
#18 m,p-Xylene

R.T.: 12.674 min
Delta R.T.: 0.005 min
Response: 4168301
Conc: 201.24 ug/L

7.6.17

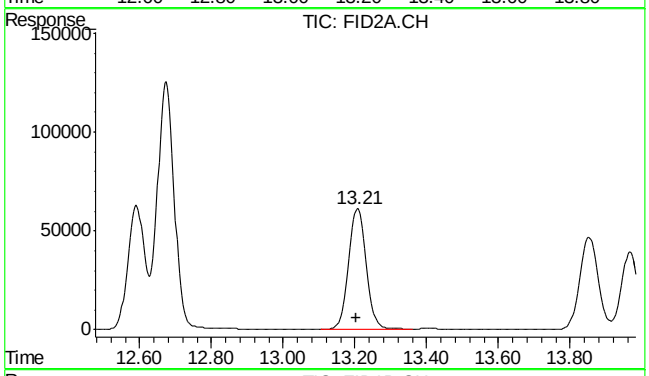
7

SGS ACCUTEST FA40754



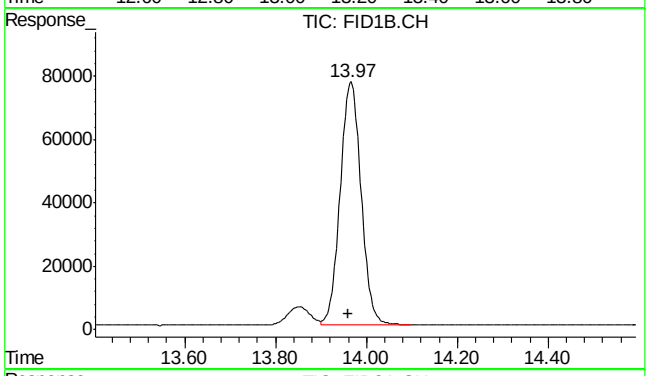
#19 o-Xylene

R.T.: 13.207 min
Delta R.T.: 0.004 min
Response: 1759849
Conc: 92.04 ug/L



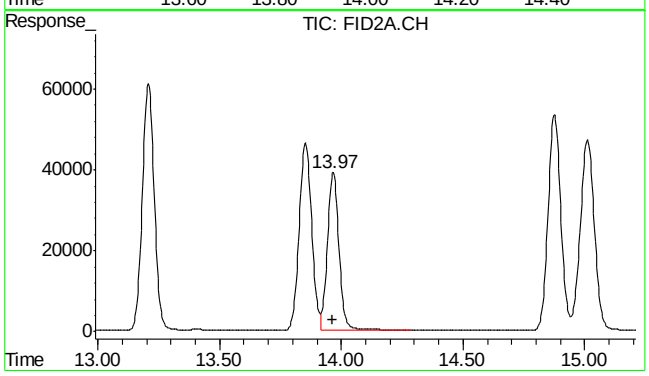
#19 o-Xylene

R.T.: 13.208 min
Delta R.T.: 0.005 min
Response: 2083345
Conc: 99.81 ug/L



#20 BFB

R.T.: 13.966 min
Delta R.T.: 0.005 min
Response: 2449404
Conc: 133.44 ug/L



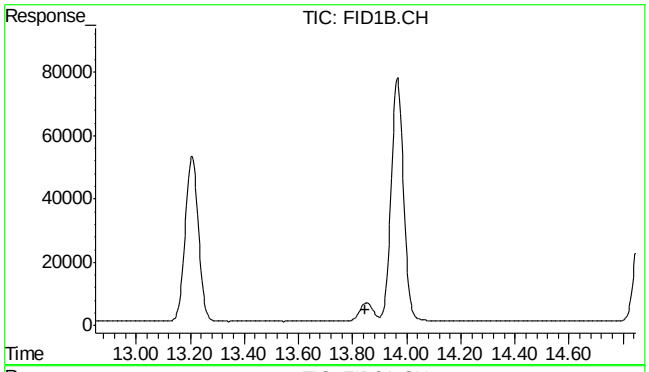
#20 BFB

R.T.: 13.967 min
Delta R.T.: 0.005 min
Response: 1300951
Conc: 143.62 ug/L

7.6.17

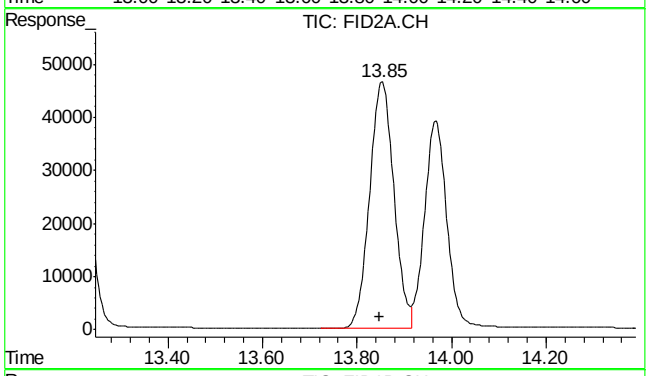
7

SGS ACCUTEST FA40754



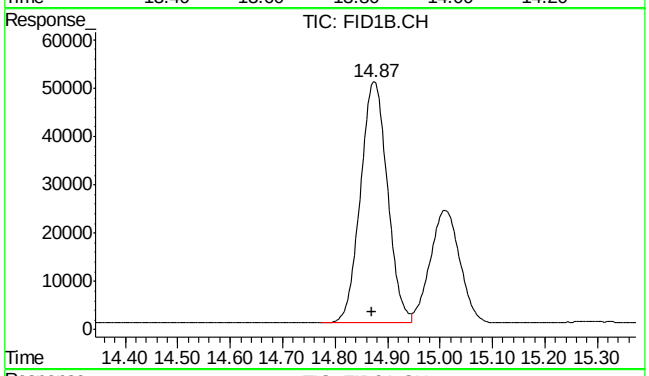
#21 Decane

R.T.: 13.853 min
Delta R.T.: 0.005 min
Response: 204108
Conc: N.D.



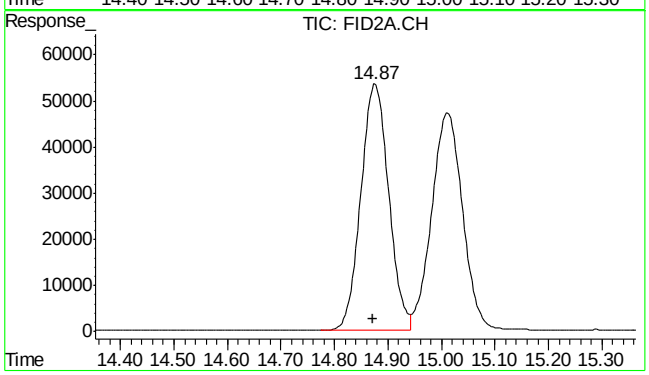
#21 Decane

R.T.: 13.853 min
Delta R.T.: 0.005 min
Response: 1655327
Conc: 91.93 ug/L



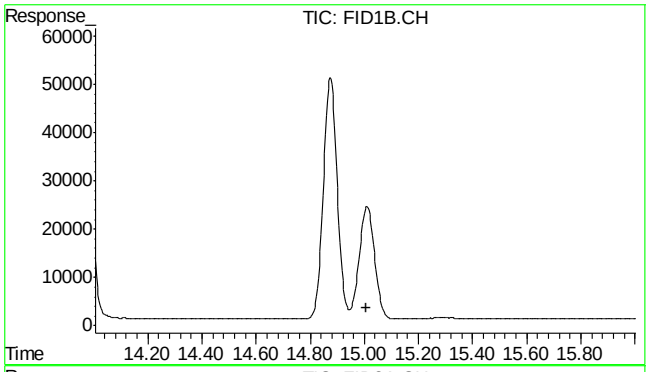
#22 1,2,4-Trimethylbenzene

R.T.: 14.876 min
Delta R.T.: 0.006 min
Response: 1783878
Conc: 89.19 ug/L



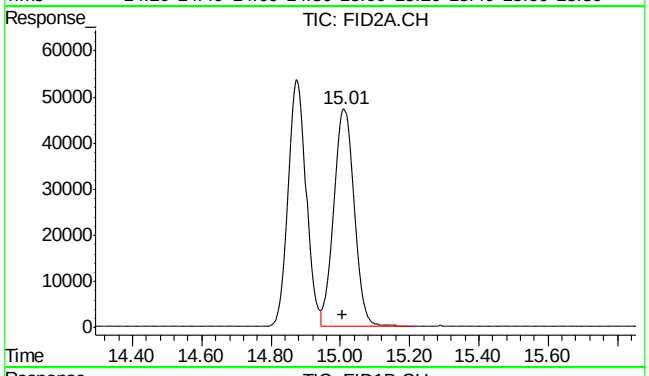
#22 1,2,4-Trimethylbenzene

R.T.: 14.876 min
Delta R.T.: 0.005 min
Response: 1924500
Conc: 95.44 ug/L



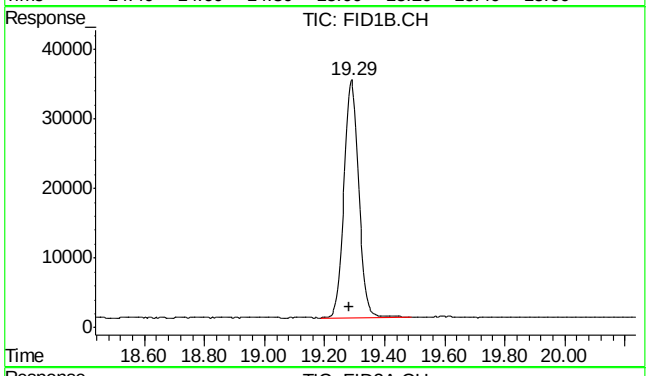
#23 Butylcyclohexane

R.T.: 15.011 min
Delta R.T.: 0.005 min
Response: 927395
Conc: N.D.



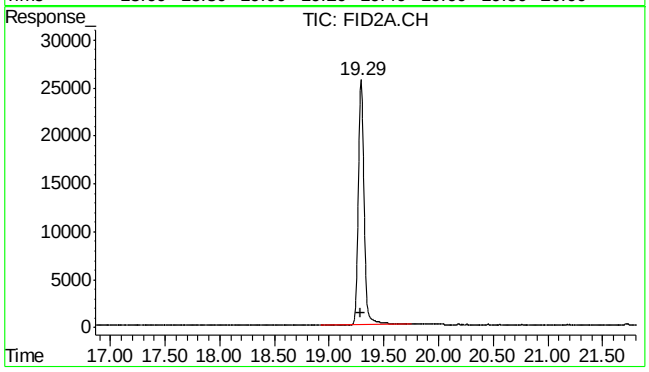
#23 Butylcyclohexane

R.T.: 15.012 min
Delta R.T.: 0.006 min
Response: 1891301
Conc: 90.65 ug/L



#24 Naphthalene

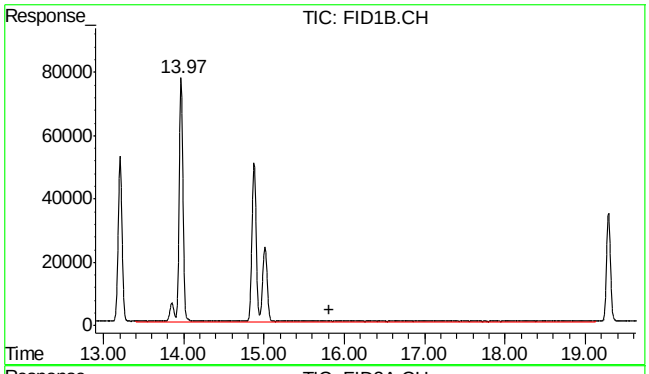
R.T.: 19.290 min
Delta R.T.: 0.006 min
Response: 1165164
Conc: 94.20 ug/L



#24 Naphthalene

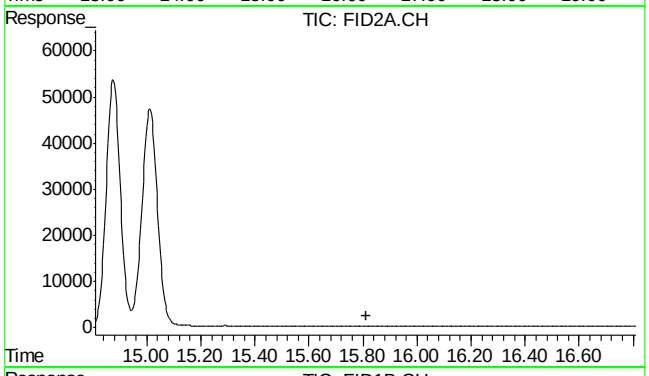
R.T.: 19.292 min
Delta R.T.: 0.006 min
Response: 922952
Conc: 97.19 ug/L

SGS ACCUTEST FA40754



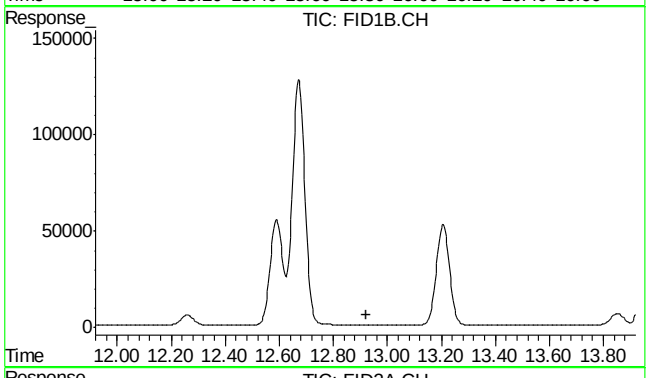
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 2128842
Conc: 91.79 ug/L m



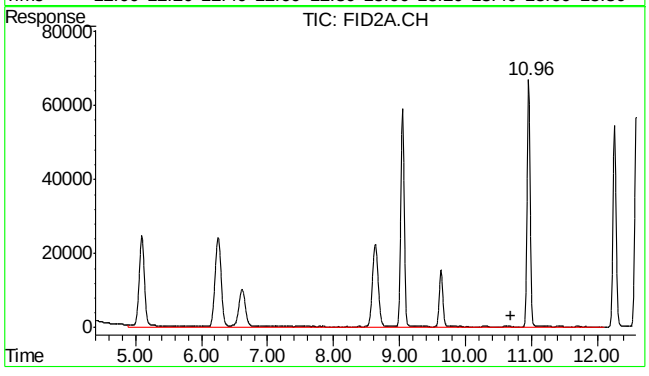
#25 C9- C10 Aromatics (unadjusted)

R.T.: 15.810 min
Delta R.T.: 0.000 min
Response: 3613761
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

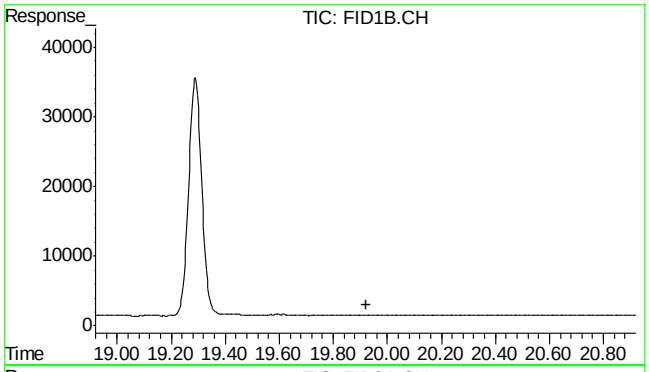
R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 13571954
Conc: N.D.



#26 C5- C8 Aliphatics (unadjusted)

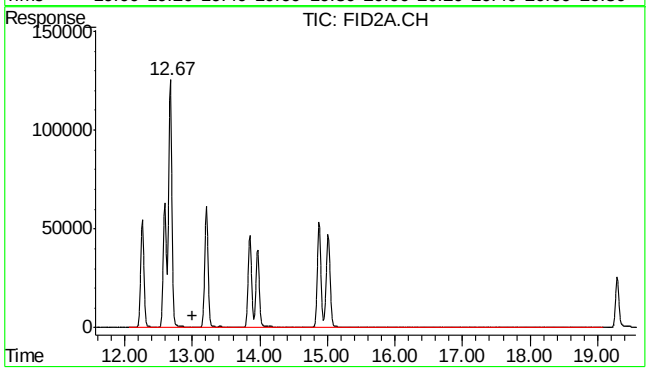
R.T.: 10.697 min
Delta R.T.: 0.000 min
Response: 5104641
Conc: 374.16 ug/L m

SGS ACCUTEST FA40754



#27 C9- C12 Aliphatics (raw)

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 3428328
Conc: N.D.



#27 C9- C12 Aliphatics (raw)

R.T.: 13.000 min
Delta R.T.: 0.000 min
Response: 5686701
Conc: 287.49 ug/L m

SGS ACCUTEST FA40754

SGS ACCUTEST-ORLANDO

DATE:	01/13/17
COLUMN TYPE:	RTX502.2
DETECTOR:	PID/FID
PURGE PRESSURE:	20 PSI
METHANOL LOT #:	158716
ANALYST:	Antonio C

GC VOA4-UV ANALYSIS LOG

METHODS:	VP17
METHOD FILE:	~~GAD50VPM070716.M~~ VPH011317 m
CALIB. DATE:	ACH 01/03/17 ~~07/07/16~~ 01/13/17
INSTRUMENT:	GCVOA4-UV
RUN ID:	GUV 4115

AH 01/16/17

Acquisition: ACQ_VP~1.M

STANDARDS

Window Defining	
ICAL/CCV	V21252
ISTD/SURR	~~V21310~~ V21259
ICV/QC	ACH 01/13/17 V21253

DATA FILE	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	ALS POSITION	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	CI ?	RR	COMMENTS
											Archon Method 1
UV 077457	Blank	—	Soil	5.00	100	1		NA	NA		✓
UV 58	Blank	—				2					✓
UV 59	Blank	—				3					✓
UV 60	Blank	—				4					✓
UV 61	Blank	—				5					✓
UV 62	Blank	—				6					✓
UV 63	~~STD~~ Blank	—				7					✓ ~~2.5ul/10ml → 5mL~~
UV ~~IC4115-1~~ 64	STD 1 ~~2~~	—				8	IC4115-1 01:19 10,1,12 21,2022				✓ 2.5ul/10ml → 5mL
UV ~~IC4115-2~~ 65	2 ~~3~~	—				9	IC4115-2 01:24				✓ ACH 01/13/17 ~~5~~ 2.5ul → 5mL
UV ~~IC4115-3~~ 66	3 ~~4~~	—				10	IC4115-3				✓ ~~5~~ 12.5ul → 5mL
UV ~~IC4115-4~~ 67	4 ~~5~~	—				11	IC4115-4				✓ ~~10~~ 62.5ul → 5mL
UV ~~IC4115-5~~ 68	STD 5 ~~6~~	—				12	IC4115-5				✓ 62.5ul ~~100ul~~ → 5mL
UV ~~IC4115-6~~ 69	6	—				13	IC4115-6				✓ 100ul → 5mL
UV 70	Blank	—				14					ND
UV						~~15~~	AH 1/16/17				
UV											
UV											
UV											
UV											
UV											
UV											
UV											
UV							AH 01/16/17				
UV											
UV											
UV											
UV											
UV											

Analyst's Signature: [signature]

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.
Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

SGS ACCUTEST-ORLANDO

DATE:	01/31/17
COLUMN TYPE:	Rtx SO2.2
DETECTOR:	PID/FID
PURGE PRESSURE:	20 PSI
METHANOL LOT #:	158718
ANALYST:	AntonioC

Acqusition.
ACQ_VPM1

GC VOA4-UV ANALYSIS LOG

METHODS:	VPH
METHOD FILE:	VPH 11317.m
CALIB. DATE:	01/13/17
INSTRUMENT:	GCVOA4-UV
RUN ID:	GUV 4134

STANDARDS

Window Defining	
ICAL/CCV	V21391
ISTD/SURR	V21390
ICV/QC	V21389

DATA FILE (GC 10936)	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	ALS POSITION	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	Cl ?	RR	COMMENTS
UV 077732	Blank	N/A	S	5.00	100ul	1		N/A	N/A		
UV 33	CC4115-4					2					Passed 25ul→5mL
UV 34	BS					3					20ul→5mL
UV 35	BSD					4					20ul→5mL
UV 36	MB					5					
UV 37	FA40726-1	AD090		4.62	100ul	6		N/A	N/A		ND
UV 38	2	AD094		4.34		7					ND
UV 39	3	AD099		4.19		8					ND
UV 40	4	AD104		4.32		9	PII: 15				ND
UV 41	5	AD108		4.93		10					ND
UV 42	6	AD113		5.06		11					ND
UV 43	7	AD119		5.14		12					ND
UV 44	CC4115-4	N/A		5.00	100ul	13					Passed 25ul→5mL
UV 45	CCB					14					ND
UV 46	FA40726-8	AD124		5.26	100ul	15	PII: 15,17,24,20				
UV 47	FA40727-1	AD063		4.53		16	PII: 12,15,17,18,19			500X 1000X	High Ranges
UV 48	-2	AD069		4.45		17	PII: 15,18,17,18,29,19,20			50X 100X	
UV 49	-3	AD074		4.59		18	PII: 15,17,18,20,24				
UV 50	-4	AD079		5.01		19	PII: 15,17,19,18			500 1000X	High Ranges
UV 51	-5	AD084		5.06		20	PII: 12,14,15,17,18,19,29			100X 2000X	
UV 52	FA40776-1	D0910		4.93		21	PII: 17,24				
UV 53	2	D0916		4.01		22					
UV 54	3	D0920		4.51		23					ND
UV 55	CC4115-4	N/A		5.00	100ul	24					Passed 25ul→5mL
UV 56	CCB		ACH 01/31/17			25					
UV 57	FA40776-4	D0927		4.99		26					ND
UV 58	-5	D0932		4.44		27					ND

Analyst's Signature

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.
Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

gcvoa4_uv_log.xls ME 06/16

SGS ACCUTEST-ORLANDO

DATE:	01/31/17
COLUMN TYPE:	RtX502.2
DETECTOR:	PID/FID
PURGE PRESSURE:	20 PSI
METHANOL LOT #:	158718
ANALYST:	Antonio C

GC VOA4-UV ANALYSIS LOG

METHODS:	VPH
METHOD FILE:	VPH 11317.M
CALIB. DATE:	01/13/17
INSTRUMENT:	GCVOA4-UV
RUN ID:	GUV 4134/4135

STANDARDS

Window Defining	
ICAL/CCV	V21391
ISTD/SURR	V21390
ICV/QC	V21389

DATA FILE (GC19636)	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	ALS POSITION	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	CI ?	RR	COMMENTS
UV 077759	FA40754-1	D0842	S	4.76	100ul	28		N/A	N/A		ND
UV 60	-2	D0845		4.87		29					ND
UV 61	-2DUP	D0845		4.87		30					ND
UV 62	ECC4115-4	N/A		5.00		31					Passed 25ul→5mL
UV 63	ECB					32					/
UV 64	ECC4115-4					33	GUV4135				Passed 25ul→5mL
UV 65	BS					34					/ 20ul→5mL
UV 66	BSD					35					/ 20ul→5mL
UV 67	MB					36					ND
UV 68	FA40754-3	D0847		3.07		37					/
UV 69	-4	D0848		5.03		38					/
UV 70	-5	D0850		4.06		39					ND
UV 71	FA40755-1	D0871		6.04		40					ND
UV 72	-2	D0872		4.73		41					ND
UV 73	-3	D0874		4.18		42					Low Surr
UV 74	-4	D0879		4.50		43					/
UV 75	CC4115-4	N/A		5.00		44					Passed 25ul→5mL
UV 76	CCB					45					/
UV 77	FA40755-4MS	D0879		4.50		46					/ 20ul→5mL
UV 78	-4MSD	D0879		4.50		47					/ 20ul→5mL
UV 79	FA40755-3DUP	D0874		4.18		48					Low Surr /
UV 80	FA40560-2	D0343		6.75		49	PII: 14, 15, 17, 18, 19, 20			500X	High Range Naph
UV 81	FA40560-2 500X	D0343		6.75	10ul	50	PII: 14, 15, 17, 18, 19, 20			1000X	/
UV 82	ECC4115-4	N/A		5.00	100ul	51					Passed 25ml→5mL
UV 83	ECB					1					
UV ACH 01/30/17 84											ACH 02/03/17
UV 85											

Analyst's Signature:

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.
Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

gcvoa4_uv_log.xls ME 06/16

SGS ACCUTEST-ORLANDO

5035A SOIL PREP LOG

BALANCE ID: NAV 1

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
AD058	FA40725-5	W (NaHSO4)	32.07	37.86	5.79	01-27-17	1217	S	PT	W
59	-5	W +	31.81	36.36	4.55					
60	-5	M	30.04	34.97	4.93					
61	FA40727-1	W (NaHSO4)	31.83	36.03	4.20					
62	-1	W +	31.83	36.26	4.43					
63	-1	M	29.36	33.89	4.53					
64	-1	M	29.58	33.64	4.06					
65	-1	M	29.59	33.89	4.30					
66	-2	W (NaHSO4)	31.79	36.32	4.53					
67	-2	W +	31.71	35.28	3.57					
68	-2	M	29.35	33.43	4.08					
69	-2	M	29.59	34.04	4.45					
AD070	-2	M	29.61	33.90	4.29					
71	-3	W (NaHSO4)	31.71	36.62	4.91					
72	-3	W +	31.72	36.22	4.50					
73	-3	M	29.59	34.24	4.65					
74	-3	M	29.41	34.00	4.59					
75	-3	M	29.59	33.94	4.35					
76	-4	W (NaHSO4)	31.73	36.57	4.84					
77	-4	W +	31.75	36.60	4.85					
78	-4	M	29.74	34.12	4.38					
79	-4	M	29.93	34.94	5.01					
AD080	-4	M	29.57	33.70	4.13		1230			

Container Type: PT for pre-tared vials (field kits): EN for Encore or similar type: 5030A for samples collected in jars or bulk containers: SL for core sleeve

Comment: N/O for no odor: S/O for slight odor: OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped: P for plunger not locked: F for sampler not completely filled

5035 soil prep log NAV 1.xls ME rev 06/16

SGS ACCUTEST-ORLANDO

5035A SOIL PREP LOG

BALANCE ID: NAV 1

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
AD081	FA40727-5	W (NaHSO4)	31.58	35.68	4.10	01-27-17	1234	JS	PT	IN
82	-5	W +	31.78	36.44	4.66					
83	-5	M	29.63	34.65	5.02					
84	-5	M	29.59	34.65	5.06					
85	-5	M	29.45	33.60	4.15		1235			
86	FA40726-1	W (NaHSO4)	31.86	35.92	4.06		1327	JS	PT	IN
87	-1	W +	31.90	36.97	5.07					
88	-1	M	29.40	33.75	4.35					
89	-1	M	29.34	33.81	4.47					
AD090	-1	M	29.30	33.92	4.62					
91	-2	W (NaHSO4)	31.71	36.23	4.52					
92	-2	W +	31.88	36.19	4.31					
93	-2	M	29.41	33.68	4.27					
94	-2	M	29.46	33.80	4.34					
95	-2	M	29.38	33.90	4.52					
96	-3	W	31.83	36.03	4.20					
97	-3	W	31.90	36.41	4.51					
98	-3	M	29.45	33.61	4.16					
99	-3	M	29.34	33.53	4.19					
AD100	-3	M	29.37	33.64	4.27					
AD101	-4	W (NaHSO4)	32.02	36.12	4.10					
02	-4	W +	31.85	35.79	3.94					
AD103	-4	M	29.34	33.62	4.28		1337			

Container Type: **PT** for pre-tared vials (field kits): **EN** for Encore or similar type: **5030A** for samples collected in jars or bulk containers: **SL** for core sleeve

Comment: **N/O** for no odor: **S/O** for slight odor: **OOH** for Out of Hold

Encore Comment: **C** for sampler incorrectly capped: **P** for plunger not locked: **F** for sampler not completely filled

5035 soil prep log NAV 1.xls ME rev 06/16

SGS ACCUTEST-ORLANDO

5035A SOIL PREP LOG

BALANCE ID: NAV 1

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
AD104	FA40726-4	M	29.37	33.69	4.32	1-27-17	1339	[illegible]	PT	IN
05	-4	M	29.34	33.66	8.64					
06	-5	W (NaHSO4)	31.81	36.38	4.57					
07	-5	W ↓	31.95	36.16	4.21					
08	-5	M	29.36	34.29	4.93					
09	-5	M	29.33	33.93	4.60					
AD110	-5	M	29.34	34.26	4.92					
11	-6	W (NaHSO4)	31.94	36.79	4.85					
12	-6	W ↓	31.81	35.95	4.14					
13	-6	M	29.32	34.38	5.06					
14	-6	M	29.44	33.85	4.41					
15	-6	M	29.40	34.14	4.74					
16	-7	W (NaHSO4)	31.81	37.95	6.14					
17	-7	W ↓	31.85	37.34	5.49					
18	-7	M	29.37	34.69	5.32					
19	-7	M	29.29	34.43	5.14					
AD120	-7	M	29.17	35.02	5.85					
21	-8	W (NaHSO4)	31.87	37.39	5.52					
22	-8	W ↓	32.04	37.23	5.19					
23	-8	M [illegible] 1-27-16	~~29~~ 29.34	34.68	5.34					
24	-8	M	29.45	34.71	5.26					
25	-8	M	29.31	35.29	5.98		1355			
AD126	FA40778-1	W	31.18	38.48	7.30	01/28/17	1330	DT	PT	IN

Container Type: PT for pre-tared vials (field kits): EN for Encore or similar type: 5030A for samples collected in jars or bulk containers: SL for core sleeve

Comment: N/O for no odor: S/O for slight odor: OOH for Out of Hold

Encore Comment: C for sampler incorrectly capped: P for plunger not locked: F for sampler not completely filled

5035 soil prep log NAV 1.xls ME rev 06/16

SGS ACCUTEST-ORLANDO

5035A SOIL PREP LOG

BALANCE ID: NAV 4

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
D0825	40723-20	W	31.28	38.85	7.57	01/27/17	1257	DP	PT	IN
26	-20	M	29.39	37.21	7.82					
27	-21	W	30.57	39.68	9.11					
28	-21	W	31.06	40.74	9.68					
29	-21	M	29.40	36.51	7.11					
30	-22	W	31.11	38.90	7.79					
31	-22	W	30.69	39.08	8.39					
32	-22	M	29.67	37.74	8.07					
33	-23	W	30.84	39.15	8.31					
34	-23	W	30.70	38.72	8.02					
35	-23	M	29.24	34.50	5.26					
36	-25	W	30.95	30.95	0.00					
37	-25	W	31.18	31.20	0.02					
38	-25	M	29.42	29.43	0.01		1311			
39	FA40750-2	W (NaHSO4)	32.89	38.28	5.39	01/28/17	0918	DP	PT	IN
40	-2	W ↓	32.84	38.20	5.36					
41	-2	M	30.01	35.46	5.45					Vial #: 2626 01/18/17
42	FA40754-1	M	32.53	37.29	4.76					Vial #: 2628 01/18/17
43	-1	M	32.48	37.77	5.29					Vial #: 2633 01/18/17
44	-2	M	32.37	38.33	5.96					Vial #: 2638 01/18/17
45	-2	M	DP 01/30/17 ~~36~~ 32.67	37.54	4.87					Vial #: 2630 01/18/17
46	-3	M	32.94	35.94	3.00					Vial #: 2627 01/18/17
D0847	-3	M	32.45	35.57	3.07		0935			

Container Type: PT for pre-tared vials (field kits): EN for Encore or similar type: 5030A for samples collected in jars or bulk containers: SL for core sleeve

Encore Comment: C for sampler incorrectly capped: P for plunger not locked: F for sampler not completely filled

Comment: N/O for no odor: S/O for slight odor: OOH for Out of Hold

5035 soil prep log NAV 4.xls ME rev 06/16

SGS ACCUTEST-ORLANDO

5035A SOIL PREP LOG

BALANCE ID: NAV 4

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
D0894	FA40778-12	W	31.20	39.26	8.06	01-28-17	1334	S	PT	IN
95	-12	M	29.61	36.77	7.16					
96	-13	W	30.93	39.54	8.61					
97	-13	W	31.08	37.48	6.40					
98	-13	M	29.58	36.23	6.65					
99	-14	W	31.04	36.40	5.36					
D0900	-14	W	31.09	36.17	5.08					
01	-14	M	29.47	35.26	5.79					
02	-15	W	31.13	36.10	4.97					
03	-15	W	31.10	36.79	5.69					
04	-15	M	29.55	34.84	5.29					
05	-16	W	31.15	31.17	0.02					
06	-16	W	31.12	31.15	0.03					
07	-16	M	29.68	29.65	-0.03					
08	FA40776-1	W (Light Soil)	32.06	36.88	4.82					
09	-1	W	31.88	37.07	5.19					
10	-1	M	29.36	34.29	4.93					
11	-1	M	29.23	33.86	4.63					
12	-1	M	29.40	34.33	4.93					
13	-2	W (Light Soil)	31.88	36.05	4.17					
14	-2	W	31.87	36.07	4.20					
15	-2	M	29.31	32.92	3.61					
D0916	-2	M	29.38	33.39	4.01		1348			

Container Type: **PT** for pre-tared vials (field kits): **EN** for Encore or similar type: **5030A** for samples collected in jars or bulk containers: **SL** for core sleeve

Comment: **N/O** for no odor: **S/O** for slight odor: **OOH** for Out of Hold

Encore Comment: **C** for sampler incorrectly capped: **P** for plunger not locked: **F** for sampler not completely filled

5035 soil prep log NAV 4.xls ME rev 06/16

SGS ACCUTEST-ORLANDO

5035A SOIL PREP LOG

BALANCE ID: NAV 4

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
D0917	FA40776-2	M	29.51	33.26	3.75	01-28-17	1350	G	PT	IW
18	-3	W ($NaHSO_4$)	31.85	36.95	5.10					
19	-3	W	31.88	36.32	4.41					
20	-3	M	29.36	33.87	4.51					
21	-3	M	29.42	34.03	4.62					
22	-3	M	29.43	33.88	4.45					
23	-4	W ($NaHSO_4$)	31.95	35.51	3.56					
24	-4	W	31.88	35.58	3.70					
25	-4	M	29.44	33.38	3.94					
26	-4	M	29.42	33.10	3.68					
27	-4	M	29.22	33.41	4.19					
28	-5	W ($NaHSO_4$)	31.86	36.16	4.30					
29	-5	W	31.86	36.59	4.73					
30	-5	M	29.36	33.57	4.21					
31	-5	M	29.33	33.56	4.23					
32	-5	M	29.36	33.80	4.44					
33	FA40777-1	M	29.91	33.54	3.63					
34	-1	M	29.69	34.06	4.37					
35	-2	M	29.92	34.60	4.68					
36	-2	M	29.86	35.10	5.24		1404			
37	FA40782-3	W	30.78	37.39	6.61	01-28-17	1550	G	PT	IW Frozen 1.28.17
38	-3	W	31.12	37.71	6.59					
D0939	-3	M	29.24	35.81	6.57		1551			

Container Type: **PT** for pre-tared vials (field kits): **EN** for Encore or similar type: **5030A** for samples collected in jars or bulk containers: **SL** for core sleeve

Comment: **N/O** for no odor: **S/O** for slight odor: **OOH** for Out of Hold

Encore Comment: **C** for sampler incorrectly capped: **P** for plunger not locked: **F** for sampler not completely filled

5035 soil prep log NAV 4.xls ME rev 06/16

SGS ACCUTEST FA40754

7.7.2 7

SGS ACCUTEST-ORLANDO

DATE:	01/31/17
COLUMN TYPE:	Rtx 502.2
DETECTOR:	PID/FID
PURGE PRESSURE:	20 PSI
METHANOL LOT #:	158718
ANALYST:	Antonio

GC VOA4-UV ANALYSIS LOG

METHODS:	VPH
METHOD FILE:	VPH 11317.M
CALIB. DATE:	01/13/17
INSTRUMENT:	GCVOA4-UV
RUN ID:	GUV 4134/4135

STANDARDS

Window Defining	
ICAL/CCV	V21391
ISTD/SURR	V21390
ICV/QC	V21389

DATA FILE (GC 19636)	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	ALS POSITION	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	CI ?	RR	COMMENTS
UV 077759	FA40754-1	D0842	S	4.76	100ul	28		N/A	N/A		ND
UV 60	-2	D0845		4.87		29					ND
UV 61	-2DUP	D0845		4.87		30					ND
UV 62	ECC4115-4	N/A		5.00		31					Passed 25ul→5mL
UV 63	ECB					32					/
UV 64	ECC4115-4					33	GUV4135				Passed 25ul→5mL
UV 65	BS					34					/ 20ul→5mL
UV 66	BSD					35					/ 20ul→5mL
UV 67	MB					36					ND
UV 68	FA40754-3	D0847		3.07		37					/
UV 69	-4	D0848		5.03		38					/
UV 70	-5	D0850		4.06		39					ND
UV 71	FA40755-1	D0871		6.04		40					ND
UV 72	-2	D0872		4.73		41					ND
UV 73	-3	D0874		4.18		42					Low Surr
UV 74	-4	D0879		4.50		43					/
UV 75	CC4115-4	N/A		5.00		44					Passed 25ul→5mL
UV 76	CCB					45					/
UV 77	FA40755-4MS	D0879		4.50		46					/ 20ul→5mL
UV 78	-4MSD	D0879		4.50		47					/ 20ul→5mL
UV 79	FA40755-3DUP	D0874		4.18		48					Low Surr /
UV 80	FA40560-2	D0343		6.75		49	PII: 14, 15, 17, 18, 19, 20			500x	High Range Na PH
UV 81	FA40560-2 500x	D0343		6.75	10ul	50	PII: 14, 15, 17, 18, 19, 20			1000x	/
UV 82	ECC4115-4	N/A		5.00	100ul	51					Passed 25ml→5mL
UV 83	ECB					1					
UV ACH 01/30/17 ~~84~~											ACH 02/03/17
UV ~~85~~											

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

Analyst's Signature:

SGS ACCUTEST-ORLANDO

5035A SOIL PREP LOG

BALANCE ID: NAV 4

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
D0342	FA40 560-2	W	31.59	38.66	7.07	01-21-17	0916	S	PT	1W
43	-2	M	30.01	36.76	6.75					
44	-2	M	29.56	36.06	6.50					
45	-3	W	31.72	38.20	6.48					
46	-3	W	31.73	38.44	6.71					
47	-3	M	29.92	36.76	6.84					
48	-3	M	29.99	36.96	6.97					
49	-4	W	31.59	38.46	6.87					
D0350	-4	W	31.59	38.24	6.65					
51	-4	M	29.69	36.28	6.59					
52	-4	M	29.95	36.56	6.61					
53	FA40 562-1	W	31.17	38.47	7.30					
54	-1	W	31.53	39.03	7.50					
55	-1	M	29.99	37.55	7.56					
56	FA40 564-1	W	31.49	36.92	5.43					
57	-1	W	31.63	37.06	5.43					
58	-1	M	28.82	32.71	3.89					
59	-2	W	31.69	37.19	5.50					
D0360	-2	W	30.95	36.75	5.80					
61	-2	M	29.15	34.58	5.43					
62	-3	W	31.17	37.02	5.85					
63	-3	W	31.52	36.44	4.92					
D0364	-3	M	29.13	34.48	5.35		0930			

Container Type: **PT** for pre-tared vials (field kits): **EN** for Encore or similar type: **5030A** for samples collected in jars or bulk containers: **SL** for core sleeve

Comment: **N/O** for no odor: **S/O** for slight odor: **OOH** for Out of Hold

Encore Comment: **C** for sampler incorrectly capped: **P** for plunger not locked: **F** for sampler not completely filled

5035 soil prep log NAV 4.xls ME rev 06/16

SGS ACCUTEST FA40754

SGS ACCUTEST-ORLANDO

5035A SOIL PREP LOG

BALANCE ID: NAV 4

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
D0871	FA40755-1	M	32.49	38.53	6.04	01/28/17	1046	DP	PT	IN Vial #: 2623 01/18/17
72	-2	M	32.41	37.14	4.73					Vial #: 2622 01/18/17
73	-2	M	32.37	36.99	4.67					Vial #: 2624 01/18/17
74	-3	M	40.48	44.66	4.18					~~Vial #:~~ DP 01/28/17
75	-3	M	40.34	44.51	4.17					~~Vial #:~~
76	-4	M	32.44	37.11	4.67					Vial #: 2644 01/18/17
77	-4	M	32.95	37.71	4.76					Vial #: 2636 01/18/17 DP 01/28/17
78	-4MS	M	32.76	37.77	5.01					Vial #: 2645 01/18/17 25
79	-4MS	M	32.68	37.18	4.50					Vial #: 2643 01/18/17
80	-4MSD	M	32.51	36.57	4.06					Vial # 2647 01/18/17
81	-4MSD	M	32.51	37.37	4.86					Vial # 2629 01/18/17
82	FA40750-1	W (NaHSO4)	37.41 ↔	32.80	4.61					
83	-1	M	29.74	34.70	4.96					
84	FA40758-3	W	31.05	39.21	8.16					
85	-3	W	30.80	38.73	7.93 DP 01/28/17					
86	-3	M	29.83	37.44	7.61					
87	-6	W	30.71	36.93	6.22					
88	-6	W (HCl)	31.00	37.86	6.86					extra label. poss altered weight
89	-6	M	29.65	36.01	6.36					
90	-8	W	31.18	39.03	7.85					
91	-8	W	30.84	38.56	7.72					
92	-8	M	29.18	37.30	8.12		1120			
D0893	FA40778-12	W	30.99	38.53	7.54	01.28-17	1333	S	PT	IN

Container Type: **PT** for pre-tared vials (field kits): **EN** for Encore or similar type: **5030A** for samples collected in jars or bulk containers: **SL** for core sleeve

Comment: **N/O** for no odor: **S/O** for slight odor: **OOH** for Out of Hold

Encore Comment: **C** for sampler incorrectly capped: **P** for plunger not locked: **F** for sampler not completely filled

5035 soil prep log NAV 4.xls ME rev 06/16

SGS ACCUTEST FA40754

SGS ACCUTEST-ORLANDO

5035A SOIL PREP LOG

BALANCE ID: NAV 4

Serial #	Sample #	Vial Type or Vial Lot #	Tare Wt gram	Total Wt gram	Sample Wt gram	Date	Time	Initials	Container Type *	Comments
D0848	FA40754-4	M	37.61 ↔	32.58	5.03	01/28/17	0937	DP	PT	IN Vial #: 2639 01/18/17
49	-4	M	38.15 ↔	32.86	5.29					Vial #: 2641 01/18/17
50	-5	M	36.39 ↔	32.33	4.06					Vial #: 2637 01/18/17
51	-5	M	36.71 ↔	32.63	4.08		0948			Vial # 2631 01/18/17
52	FA40755-1	W (AC2598)	—	—	5.57		0956		Encore	OOH
53	-1	W ↓	—	—	5.08		0959			
54	-1	M (2554)	—	—	5.56		1001			
55	-2	W (AC2598)	—	—	4.57		1005			IN
56	-2	W ↓	—	—	4.90		1006			
57	-2	M (AC2554)	—	—	4.71		1008			
58	-3	W (AC2598)	—	—	4.39		1012			
59	-3	W ↓	—	—	4.07		1013			
60	-3	M (AC2554)	—	—	4.77		1015			P
61	-4	W (AC2598)	—	—	3.94		1023			
62	-4	W ↓	—	—	4.34		1025			
63	-4	M (AC2554)	—	—	5.03		1030			
64	-4MS	W (AC2598)	—	—	4.29		1032			
65	-4MS	W ↓	—	—	4.27		1034			
66	-4MS	M (AC2554)	—	—	4.36		1035			
67	-4MSD	W (AC2598)	—	—	4.81		1037			
68	-4MSD	W ↓	—	—	3.71		1038			
69	-4MSD	M (AC2554)	—	—	4.59		1039			
D0870	-1	M	32.63	37.20	4.57	01/28/17	1045	DP	PT	IN Vial #2645 01/18/17

Container Type: **PT** for pre-tared vials (field kits): **EN** for Encore or similar type: **5030A** for samples collected in jars or bulk containers: **SL** for core sleeve

Comment: **N/O** for no odor: **S/O** for slight odor: **OOH** for Out of Hold

Encore Comment: **C** for sampler incorrectly capped: **P** for plunger not locked: **F** for sampler not completely filled

5035 soil prep log NAV 4.xls ME rev 06/16

SGS ACCUTEST-ORLANDO

DATE:	02/06/17
COLUMN TYPE:	RtX 502.2
DETECTOR:	PID/FID
PURGE PRESSURE:	20 psi
METHANOL LOT #:	158718
ANALYST:	Antonio C

GC VOA4-UV ANALYSIS LOG

METHODS:	VPH
METHOD FILE:	VPH 113/7.M
CALIB. DATE:	01/13/17
INSTRUMENT:	GCVOA4-UV
RUN ID:	GUV 4141

STANDARDS

Window Defining	
ICAL/CCV	V21252
ISTD/SURR	V21310
ICV/QC	V21389

DATA FILE (GC19657)	SAMPLE ID, DIL.	Vial #	MATRIX	SAMPLE AMT.	MeOH Aliq.	ALS POSITION	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	PH	Cl ?	RR	COMMENTS
UV 077862	Blank	N/A	W	5mL	N/A	12		N/A	N/A		✓
UV 63	CC 4115-4					13					✓
UV 64	BS					14					✓ CS-C8 High
UV 65	BSD					15					✓
UV 66	MB	N/A		5mL		16					✓
UV 67	FA40741-1	4				17	PII: 17,18,24				✓
UV 68	-2	4				18	PII: 17,18				✓
UV 69	-3	4				19	PII: 15,12,17,18				✓
UV 70	-4	4				20	PII: 12,15,17,18,24				✓
UV 71	FA40908-1	4				21	PII: 12,24,15				✓
UV 72	-2	4				22					✓ ND
UV 73	-3	4				23					✓ ND
UV 74	CC 4115-4	N/A				24		N/A	N/A		✓
UV 75	CCB					25					✓ ND
UV 76	FA40908-4	4				26					✓ ND
UV 77	-5	4				27					✓ ND
UV 78	-6	4				28	PII: 15				✓ ND
UV 79	-6DUP	4				29	PII: 15				✓
UV 80	FA40754-7	4				30					✓ ND
UV 81	FA40755-5	4				31					✓ ND
UV 82	FA40930-1	5				32	PII: 12,4,15				✓
UV 83	-1,10X	5		500ul		33	PII: 12,4,15,17			10X	✓ High Ranges
UV 84	FA40908-6,10X	4		500ul		34					✓ Not used
UV 85	ECC 4115-4	N/A		5mL		35		N/A	N/A		✓
UV 86	ECB					36					✓
UV											
UV											

Matrix: Designate "W" for Water, "S" for Soil, "O" for Oil, "Liq" for Non-aqueous Liquid, and "TCLP" or "SPLP" for Leachate

All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration

Analyst's Signature:

gcvoa4_uv_log.xls ME 06/16

SGS ACCUTEST FA40754

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP63636-MB	NN017281.D	1	02/02/17	MG	01/31/17	OP63636	GNN873

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

FA40754-6, FA40754-7

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	200	150	ug/l	
	C9-C18 Aliphatics	ND	200	100	ug/l	
	C19-C36 Aliphatics	ND	200	100	ug/l	

CAS No.	Surrogate Recoveries		Limits
3386-33-2	1-Chlorooctadecane	57%	40-140%
580-13-2	2-Bromonaphthalene	86%	40-140%
84-15-1	o-Terphenyl	80%	40-140%
321-60-8	2-Fluorobiphenyl	95%	40-140%

Method Blank Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP63645-MB	NN017355.D	1	02/08/17	MG	02/01/17	OP63645	GNN877

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

FA40754-1, FA40754-2, FA40754-3, FA40754-4, FA40754-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	10000	7500	ug/kg	
	C9-C18 Aliphatics	ND	10000	5000	ug/kg	
	C19-C36 Aliphatics	ND	10000	5000	ug/kg	

CAS No.	Surrogate Recoveries		Limits
3386-33-2	1-Chlorooctadecane	62%	40-140%
580-13-2	2-Bromonaphthalene	112%	40-140%
84-15-1	o-Terphenyl	69%	40-140%
321-60-8	2-Fluorobiphenyl	122%	40-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP63636-BS	NN017282.D	1	02/02/17	MG	01/31/17	OP63636	GNN873
OP63636-BSD	NN017285.D	1	02/02/17	MG	01/31/17	OP63636	GNN873

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

FA40754-6, FA40754-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	C11-C22 Aromatics (Unadj.)	1700	1320	78	1440	85	9	40-140/30
	C9-C18 Aliphatics	600	317	53	329	55	4	40-140/30
	C19-C36 Aliphatics	800	450	56	467	58	4	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
3386-33-2	1-Chlorooctadecane	58%	68%	40-140%
580-13-2	2-Bromonaphthalene	81%	88%	40-140%
84-15-1	o-Terphenyl	71%	78%	40-140%
321-60-8	2-Fluorobiphenyl	88%	93%	40-140%

Sample	Compound	Col #1	Col #2	Breakthrough	Limit
OP63636-BS	2-Methylnaphthalene	60.9	ND	0.0%	5.0
OP63636-BS	Naphthalene	56.6	ND	0.0%	5.0
OP63636-BSD	2-Methylnaphthalene	65.3	ND	0.0%	5.0
OP63636-BSD	Naphthalene	60.1	ND	0.0%	5.0

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP63645-BS	NN017356.D	1	02/08/17	MG	02/01/17	OP63645	GNN877
OP63645-BSD	NN017357.D	1	02/08/17	MG	02/01/17	OP63645	GNN877

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

FA40754-1, FA40754-2, FA40754-3, FA40754-4, FA40754-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
	C11-C22 Aromatics (Unadj.)	85000	70700	83	65200	77	8	40-140/30
	C9-C18 Aliphatics	30000	16500	55	15900	53	4	40-140/30
	C19-C36 Aliphatics	40000	25200	63	23800	60	6	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
3386-33-2	1-Chlorooctadecane	69%	67%	40-140%
580-13-2	2-Bromonaphthalene	120%	79%	40-140%
84-15-1	o-Terphenyl	76%	69%	40-140%
321-60-8	2-Fluorobiphenyl	129%	86%	40-140%

Sample	Compound	Col #1	Col #2	Breakthrough	Limit
OP63645-BS	2-Methylnaphthalene	3120	ND	0.0%	5.0
OP63645-BS	Naphthalene	2960	ND	0.0%	5.0
OP63645-BSD	2-Methylnaphthalene	2860	ND	0.0%	5.0
OP63645-BSD	Naphthalene	2750	ND	0.0%	5.0

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP63645-MS	NN017407.D	1	02/10/17	MG	02/01/17	OP63645	GNN879
OP63645-MSD	NN017408.D	1	02/10/17	MG	02/01/17	OP63645	GNN879
FA40755-4	NN017406.D	1	02/10/17	MG	02/01/17	OP63645	GNN879

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

FA40754-1, FA40754-2, FA40754-3, FA40754-4, FA40754-5

CAS No.	Compound	FA40755-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
	C11-C22 Aromatics (Unadj.)	27000		101000	75200	48	98600	71500	45	5	40-140/50
	C9-C18 Aliphatics	ND		35500	15500	44	34800	12400	36*	22	40-140/50
	C19-C36 Aliphatics	ND		47400	27700	58	46400	24200	52	13	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	FA40755-4	Limits
3386-33-2	1-Chlorooctadecane	57%	49%	43%	40-140%
580-13-2	2-Bromonaphthalene	74%	74%	95%	40-140%
84-15-1	o-Terphenyl	58%	54%	70%	40-140%
321-60-8	2-Fluorobiphenyl	78%	78%	100%	40-140%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP63636-DUP	NN017287.D	1	02/02/17	MG	01/31/17	OP63636	GNN873
FA40651-1	NN017326.D	1	02/06/17	MG	01/31/17	OP63636	GNN875

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

FA40754-6, FA40754-7

CAS No.	Compound	FA40651-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
	C11-C22 Aromatics (Unadj.)	200 U		ND		nc	30 [a]
	C9-C18 Aliphatics	200 U		ND		nc	30 [a]
	C19-C36 Aliphatics	200 U		ND		nc	30 [a]

CAS No.	Surrogate Recoveries	DUP	FA40651-1	Limits
3386-33-2	1-Chlorooctadecane	52%	41%	40-140%
580-13-2	2-Bromonaphthalene	78%	69%	40-140%
84-15-1	o-Terphenyl	69%	66%	40-140%
321-60-8	2-Fluorobiphenyl	85%	74%	40-140%

(a) Advisory control limits.

8.4.1

8

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP63645-DUP	NN017359.D	1	02/08/17	MG	02/01/17	OP63645	GNN877
FA40754-1	NN017358.D	1	02/08/17	MG	02/01/17	OP63645	GNN877

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

FA40754-1, FA40754-2, FA40754-3, FA40754-4, FA40754-5

CAS No.	Compound	FA40754-1 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
	C11-C22 Aromatics (Unadj.)	ND		ND		nc	30 [a]
	C9-C18 Aliphatics	ND		ND		nc	30 [a]
	C19-C36 Aliphatics	ND		ND		nc	30 [a]

CAS No.	Surrogate Recoveries	DUP	FA40754-1	Limits
3386-33-2	1-Chlorooctadecane	62%	61%	40-140%
580-13-2	2-Bromonaphthalene	74%	78%	40-140%
84-15-1	o-Terphenyl	56%	65%	40-140%
321-60-8	2-Fluorobiphenyl	83%	87%	40-140%

(a) Advisory control limits.

8.4.2

8

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Method: MADEP EPH REV 1.1 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [b]	S3 [b]	S4 [b]
FA40754-6	NN017292.D	47	82	74	87
FA40754-7	NN017293.D	45	77	68	83
OP63636-BS	NN017282.D	58	81	71	88
OP63636-BSD	NN017285.D	68	88	78	93
OP63636-DUP	NN017287.D	52	78	69	85
OP63636-MB	NN017281.D	57	86	80	95

Surrogate Compounds	Recovery Limits
S1 = 1-Chlorooctadecane	40-140%
S2 = 2-Bromonaphthalene	40-140%
S3 = o-Terphenyl	40-140%
S4 = 2-Fluorobiphenyl	40-140%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

8.5.1

8

Semivolatile Surrogate Recovery Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Method: MADEP EPH REV 1.1 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [b]	S3 [b]	S4 [b]
FA40754-1	NN017358.D	61	78	65	87
FA40754-2	NN017405.D	50	67	52	71
FA40754-3	NN017361.D	67	80	68	86
FA40754-4	NN017362.D	68	74	67	80
FA40754-5	NN017363.D	67	73	58	80
OP63645-BS	NN017356.D	69	120	76	129
OP63645-BSD	NN017357.D	67	79	69	86
OP63645-DUP	NN017359.D	62	74	56	83
OP63645-MB	NN017355.D	62	112	69	122
OP63645-MS	NN017407.D	57	74	58	78
OP63645-MSD	NN017408.D	49	74	54	78

Surrogate Compounds	Recovery Limits
S1 = 1-Chlorooctadecane	40-140%
S2 = 2-Bromonaphthalene	40-140%
S3 = o-Terphenyl	40-140%
S4 = 2-Fluorobiphenyl	40-140%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Check Std:	GNN873-CC825	**Injection Date:**	02/02/17
Lab File ID:	NN017273.D	**Injection Time:**	14:57
Instrument ID:	GCNN	**Method:**	MADEP EPH REV 1.1

	S1 [a] RT	S2 [b] RT	S3 [b] RT	S4 [b] RT
Check Std	10.79	7.72	10.14	6.91

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [b] RT	S3 [b] RT	S4 [b] RT
FA40421-2R	NN017277.D	02/02/17	17:59	10.77	7.72	10.13	6.91
ZZZZZZ	NN017278.D	02/02/17	18:29	10.77	7.72	10.13	6.91
OP63591-DUP	NN017279.D	02/02/17	18:58	10.77	7.72	10.13	6.91
OP63636-MB	NN017281.D	02/02/17	19:57	10.77	7.72	10.14	6.91
OP63636-BS	NN017282.D	02/02/17	20:27	10.77	7.72	10.13	6.91

Surrogate Compounds

S1 = 1-Chlorooctadecane
S2 = 2-Bromonaphthalene
S3 = o-Terphenyl
S4 = 2-Fluorobiphenyl

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Check Std:	GNN873-CC825	**Injection Date:**	02/02/17
Lab File ID:	NN017283.D	**Injection Time:**	20:56
Instrument ID:	GCNN	**Method:**	MADEP EPH REV 1.1

	S1 [a] RT	S2 [b] RT	S3 [b] RT	S4 [b] RT
Check Std	10.78	7.73	10.14	6.92

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [b] RT	S3 [b] RT	S4 [b] RT
OP63636-BSD	NN017285.D	02/02/17	21:56	10.77	7.73	10.14	6.92
ZZZZZZ	NN017286.D	02/02/17	22:25	10.77	7.72	10.14	6.92
OP63636-DUP	NN017287.D	02/02/17	22:55	10.77	7.72	10.14	6.91
ZZZZZZ	NN017288.D	02/02/17	23:24	10.77	7.72	10.13	6.91
ZZZZZZ	NN017289.D	02/02/17	23:54	10.77	7.72	10.13	6.91
FA40754-6	NN017292.D	02/03/17	01:22	10.77	7.72	10.13	6.91
FA40754-7	NN017293.D	02/03/17	01:52	10.77	7.72	10.13	6.91
ZZZZZZ	NN017294.D	02/03/17	02:21	10.77	7.72	10.14	6.91
GNN873-ECC825	NN017295.D	02/03/17	02:51	10.78	7.73	10.14	6.92

Surrogate Compounds

S1 = 1-Chlorooctadecane
S2 = 2-Bromonaphthalene
S3 = o-Terphenyl
S4 = 2-Fluorobiphenyl

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Check Std:	GNN877-CC825	**Injection Date:**	02/08/17
Lab File ID:	NN017353.D	**Injection Time:**	10:57
Instrument ID:	GCNN	**Method:**	MADEP EPH REV 1.1

	S1 [a] RT	S2 [b] RT	S3 [b] RT	S4 [b] RT
Check Std	10.74	7.71	10.12	6.91

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [b] RT	S3 [b] RT	S4 [b] RT
OP63645-MB	NN017355.D	02/08/17	11:59	10.73	7.72	10.12	6.91
OP63645-BS	NN017356.D	02/08/17	12:29	10.73	7.71	10.12	6.91
OP63645-BSD	NN017357.D	02/08/17	13:00	10.73	7.71	10.12	6.90
FA40754-1	NN017358.D	02/08/17	13:30	10.73	7.71	10.12	6.90
OP63645-DUP	NN017359.D	02/08/17	14:00	10.73	7.71	10.12	6.91
FA40754-3	NN017361.D	02/08/17	15:01	10.73	7.71	10.12	6.91
FA40754-4	NN017362.D	02/08/17	15:31	10.73	7.71	10.12	6.90
FA40754-5	NN017363.D	02/08/17	16:02	10.73	7.71	10.12	6.91
ZZZZZZ	NN017364.D	02/08/17	16:35	10.73	7.71	10.12	6.90

Surrogate Compounds

S1 = 1-Chlorooctadecane
S2 = 2-Bromonaphthalene
S3 = o-Terphenyl
S4 = 2-Fluorobiphenyl

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Check Std:	GNN879-CC825	**Injection Date:**	02/10/17
Lab File ID:	NN017401.D	**Injection Time:**	11:07
Instrument ID:	GCNN	**Method:**	MADEP EPH REV 1.1

	S1 [a] RT	S2 [b] RT	S3 [b] RT	S4 [b] RT
Check Std	10.74	7.72	10.12	6.91

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [b] RT	S3 [b] RT	S4 [b] RT
ZZZZZZ	NN017403.D	02/10/17	12:07	0.00	0.00	0.00	0.00
ZZZZZZ	NN017404.D	02/10/17	12:37	10.73	7.71	10.12	6.90
FA40754-2	NN017405.D	02/10/17	13:28	10.73	7.71	10.12	6.90
FA40755-4	NN017406.D	02/10/17	13:58	10.73	7.71	10.12	6.90
OP63645-MS	NN017407.D	02/10/17	14:27	10.73	7.72	10.12	6.91
OP63645-MSD	NN017408.D	02/10/17	14:57	10.73	7.71	10.12	6.91
ZZZZZZ	NN017409.D	02/10/17	15:27	10.73	7.71	10.12	6.90
GNN879-ECC825	NN017410.D	02/10/17	15:57	10.74	7.72	10.12	6.91

Surrogate Compounds

S1 = 1-Chlorooctadecane
S2 = 2-Bromonaphthalene
S3 = o-Terphenyl
S4 = 2-Fluorobiphenyl

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

Initial Calibration Summary

Job Number: FA40754 **Sample:** GNN825-ICC825
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** NN016516.D
Project: BMSMC, Humacao, PR

Response Factor Report FID 7

Method : C:\msdchem\1\methods\maeph-1029.m (ChemStation Integrator)
Title : MADEP Extractable Petroleum Hydrocarbons
Last Update : Sat Oct 29 14:57:55 2016
Response via : Initial Calibration

Calibration Files
1 =NN016513.d 2 =NN016514.d 3 =NN016515.d 4 =NN016516.d
5 =NN016517.d 6 =NN016518.d 7 =NN016519.d

Compound	1	2	3	4	5	6	7	Avg	%RSD
1) Naphthalene	1.001	0.990	1.015	1.068	1.097	1.039	1.011	1.032 E6	3.74
2) 2-Methylnaphthale	0.961	0.961	0.989	1.045	1.074	1.018	0.992	1.006 E6	4.22
3)S 2-Fluorobiphenyl	7.879	7.971	8.195	8.655	8.915	8.459	8.233	8.329 E5	4.45
4) Acenaphthylene	0.953	0.949	0.977	1.033	1.062	1.008	0.981	0.995 E6	4.21
5)S 2-Bromonaphthalen	1.531	0.552	0.572	0.608	0.628	0.596	0.582	0.724 E6	49.27
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9992									
Response Ratio = 0.00000 + 644065.88050 *A + -614.82840 *A^2									
6) Acenaphthene	1.531	0.987	1.015	1.072	1.103	1.046	1.018	1.110 E6	17.08
7) Fluorene	0.986	0.985	1.014	1.073	1.105	1.048	1.022	1.033 E6	4.34
8) Phenanthrene	0.985	0.985	1.016	1.077	1.109	1.054	1.027	1.036 E6	4.51
9) Anthracene	0.947	0.947	0.978	1.039	1.073	1.019	0.994	0.999 E6	4.72
10)S o-Terphenyl	0.974	0.985	1.012	1.071	1.100	1.044	1.017	1.029 E6	4.43
11) Fluoranthene	0.973	0.984	1.022	1.084	1.119	1.063	1.037	1.040 E6	5.06
12) Pyrene	0.972	0.981	1.016	1.080	1.116	1.060	1.033	1.037 E6	5.05
13) Benzo(a)Anthracen	0.718	0.839	0.905	1.014	1.075	1.030	1.010	0.942 E6	13.55
14) Chrysene	0.751	0.852	0.915	1.019	1.077	1.030	1.010	0.951 E6	12.24
15) Benzo(b)Fluoranth	0.798	0.873	0.935	1.043	1.099	1.055	1.043	0.978 E6	11.38
16) Benzo(k)Fluoranth	0.621	0.777	0.854	0.982	1.053	1.010	0.996	0.899 E6	17.38
17) Benzo(a)Pyrene	0.728	0.796	0.860	0.987	1.056	1.020	1.005	0.922 E6	13.73
18) Indeno(1,2,3-cd)P	0.516	0.612	0.693	0.870	1.010	1.032	1.054	0.827 E6	26.56
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9991									
Response Ratio = 0.00000 + 893713.07087 *A + 1679.46559 *A^2									
19) Dibenzo(ah)Anthra	3.493	4.714	5.322	7.281	8.635	8.208	8.017	6.524 E5	30.66
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9974									
Response Ratio = 0.00000 + 816966.93870 *A + -69.10775 *A^2									
20) Benzo(ghi)Perylen	0.591	0.756	0.829	0.964	1.042	1.006	0.992	0.883 E6	18.70
21)H C11-C22 Aromatics	1.020	0.693	0.567	0.593	0.615	0.561	0.538	0.656 E6	25.71
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9991									
Response Ratio = 0.00000 + 650270.53139 *A + -65.85727 *A^2									

Signal #2

23)H C9-C18 Aliphatics	1.076	0.928	0.904	0.992	0.907	1.026	1.062	0.985 E6	7.40
24)S 1-Chlorooctadecan	4.961	6.584	7.138	8.024	7.383	8.417	8.740	7.321 E5	17.51
25) C20 #2	0.710	0.835	0.878	0.976	0.898	1.021	1.060	0.911 E6	13.14
26) C28 #2	0.706	0.847	0.891	0.990	0.910	1.038	1.076	0.923 E6	13.65
27)H C19-C36 Aliphatic	1.480	1.032	0.931	1.017	0.922	1.049	1.088	1.074 E6	17.59
28)s Naphthalene #2	0.368	0.444	1.180	1.029	0.949	1.068	1.110	0.878 E6	37.67
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9977									
Response Ratio = 0.00000 + 895257.63360 *A + 2142.99435 *A^2									
29)s 2-Methylnaphthale	0.341	0.442	1.174	1.032	0.951	1.074	1.116	0.876 E6	38.71
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9977									

Initial Calibration Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample: GNN825-ICC825
Lab FileID: NN016516.D

```
Response Ratio = 0.00000 + 895823.05761 *A + 2199.32607 *A^2

-----------------------------------------------------------------------------
(#) = Out of Range

maeph-1029.m        Mon Oct 31 10:54:59 2016
```

Initial Calibration Verification

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR
Sample: GNN825-ICV825
Lab FileID: NN016520.D

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\data\GN...9\NN016520.d\FID1B.ch Vial: 8
Signal #2 : C:\msdchem\1\data\GNN825_1029\NN016520.d\FID2A.ch
Acq On    : 29 Oct 2016   2:31 pm                    Operator: fouads
Sample    : icv825-4                                 Inst    : FID 7
Misc      : op61868,gnn825,1000,,,2,1,water          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\msdchem\1\methods\maeph-1029.m (ChemStation Integrator)
Title        : MADEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Oct 29 14:57:55 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.500  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		Naphthalene	25.000	24.312	2.8	94	0.00	5.60- 5.82
2		2-Methylnaphthalene	25.000	25.510	-2.0	98	0.00	6.40- 6.57
3	S	2-Fluorobiphenyl		----------NA----------				
4		Acenaphthylene	25.000	25.198	-0.8	97	0.00	7.48- 7.66
5	S	2-Bromonaphthalene		----------NA----------				
6		Acenaphthene	25.000	23.222	7.1	96	0.00	7.65- 7.84
7		Fluorene	25.000	24.274	2.9	93	0.00	8.24- 8.60
8		Phenanthrene	25.000	24.149	3.4	93	0.00	9.47- 9.84
9		Anthracene	25.000	25.088	-0.4	97	0.00	9.51- 9.91
10	S	o-Terphenyl		----------NA----------				
11		Fluoranthene	25.000	24.295	2.8	93	0.00	11.49-11.90
12		Pyrene	25.000	25.094	-0.4	96	0.00	11.96-12.36
13		Benzo(a)Anthracene	25.000	25.573	-2.3	95	0.00	15.00-15.32
14		Chrysene	25.000	25.949	-3.8	97	0.00	15.02-15.42
15		Benzo(b)Fluoranthene	25.000	25.157	-0.6	94	0.01	17.75-18.12
16		Benzo(k)Fluoranthene	25.000	26.151	-4.6	96	0.01	17.79-18.19
17		Benzo(a)Pyrene	25.000	24.563	1.7	92	0.01	18.49-18.89
		----------	Amount	Calc.	%Drift			----------
18		Indeno(1,2,3-cd)Pyrene	25.000	22.437	10.3	96	0.00	20.19-20.59
19		Dibenzo(ah)Anthracene	25.000	22.318	10.7	100	-0.03	20.07-20.66
		----------	Amount	Calc.	%Drift			----------
20		Benzo(ghi)Perylene	25.000	25.900	-3.6	95	0.01	20.50-20.91
		----------	Amount	Calc.	%Drift			----------
21	H	C11-C22 Aromatics (una	425.000	423.853	0.3	105	0.00	4.08-17.82

***** Signal #2 *****

		----------	Amount	Calc.	%Drift			----------
23	H	C9-C18 Aliphatics #2	300.000	248.122	17.3	82	0.00	2.98- 9.24
24	S	1-Chlorooctadecane #2		----------NA----------				
25		C20 #2	50.000	43.783	12.4	82	-0.01	9.55- 9.75
26		C28 #2	50.000	43.696	12.6	81	-0.03	13.11-13.31
27	H	C19-C36 Aliphatics #2	400.000	305.848	23.5	81	0.00	9.23-21.19
		----------	Amount	Calc.	%Drift			----------
28	s	Naphthalene #2		----------NA----------				
29	s	2-Methylnaphthalene #2		----------NA----------				

Initial Calibration Verification

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample: GNN825-ICV825
Lab FileID: NN016520.D

```
--------------------------------------------------------------------------
--------------------------------------------------------------------------

   (#) = Out of Range                SPCC's out = 0  CCC's out = 0
    NN016516.d maeph-1029.m       Mon Oct 31 10:54:44 2016
```

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GNN873-CC825
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** NN017273.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\data\GN...2\NN017273.d\FID1B.ch Vial: 1
Signal #2 : C:\msdchem\1\data\GNN873_0202\NN017273.d\FID2A.ch
Acq On    :  2 Feb 2017   2:57 pm                    Operator: mayrag
Sample    : cc825-4                                  Inst    : FID 7
Misc      : op63425,gnn873,1000,,,2,1,water          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\msdchem\1\methods\maeph-1029.m (ChemStation Integrator)
Title        : MADEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Oct 29 14:31:04 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.500  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		Naphthalene	25.000	24.568	1.7	95	-0.01	5.61- 5.82
2		2-Methylnaphthalene	25.000	24.482	2.1	94	-0.01	6.40- 6.58
3	S	2-Fluorobiphenyl	25.000	26.417	-5.7	102	-0.01	6.81- 7.13
4		Acenaphthylene	25.000	24.320	2.7	94	-0.01	7.49- 7.66
		----------	Amount	Calc.	%Drift			----------
5	S	2-Bromonaphthalene	25.000	24.454	2.2	101	-0.01	7.68- 7.89
		----------	Amount	Calc.	%Drift			----------
6		Acenaphthene	25.000	22.682	9.3	94	-0.01	7.66- 7.85
7		Fluorene	25.000	24.338	2.6	94	0.00	8.25- 8.61
8		Phenanthrene	25.000	24.260	3.0	93	0.00	9.48- 9.84
9		Anthracene	25.000	24.696	1.2	95	-0.01	9.52- 9.93
10	S	o-Terphenyl	25.000	25.129	-0.5	97	0.00	10.03-10.35
11		Fluoranthene	25.000	24.207	3.2	93	-0.01	11.50-11.90
12		Pyrene	25.000	24.186	3.3	93	-0.01	11.97-12.37
13		Benzo(a)Anthracene	25.000	25.923	-3.7	96	0.00	15.01-15.34
14		Chrysene	25.000	25.740	-3.0	96	0.00	15.03-15.43
15		Benzo(b)Fluoranthene	25.000	25.514	-2.1	96	0.00	17.77-18.14
16		Benzo(k)Fluoranthene	25.000	26.898	-7.6	99	0.00	17.81-18.21
17		Benzo(a)Pyrene	25.000	26.813	-7.3	100	0.00	18.51-18.91
		----------	Amount	Calc.	%Drift			----------
18		Indeno(1,2,3-cd)Pyrene	25.000	25.893	-3.6	112	0.00	20.19-20.59
19		Dibenzo(ah)Anthracene	25.000	28.505	-14.0	128	0.00	20.05-20.63
		----------	Amount	Calc.	%Drift			----------
20		Benzo(ghi)Perylene	25.000	27.568	-10.3	101	0.00	20.52-20.92
		----------	Amount	Calc.	%Drift			----------
21	H	C11-C22 Aromatics (una	425.000	377.878	11.1	94	0.00	4.08-17.82

***** Signal #2 *****

		----------	Amount	Calc.	%Drift			----------
23	H	C9-C18 Aliphatics #2	300.000	259.418	13.5	86	0.00	2.98- 9.24
24	S	1-Chlorooctadecane #2	50.000	46.825	6.3	85	0.03	10.66-10.86
25		C20 #2	50.000	44.232	11.5	83	0.02	9.49- 9.69
26		C28 #2	50.000	43.377	13.2	81	0.00	13.06-13.26
27	H	C19-C36 Aliphatics #2	400.000	301.866	24.5	80	0.00	9.23-21.19

Continuing Calibration Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample: GNN873-CC825
Lab FileID: NN017273.D

			Amount	Calc.	%Drift			
28	s	Naphthalene #2	25.000	24.078	3.7	89	0.00	5.37- 5.37
29	s	2-Methylnaphthalene #2	25.000	24.532	1.9	90	0.00	6.14- 6.14

(#) = Out of Range SPCC's out = 0 CCC's out = 0
NN016516.d maeph-1029.m Fri Feb 03 14:20:49 2017

8.7.3

8

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GNN873-CC825
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** NN017283.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\data\GN...2\NN017283.d\FID1B.ch Vial: 1
Signal #2 : C:\msdchem\1\data\GNN873_0202\NN017283.d\FID2A.ch
Acq On    :  2 Feb 2017   8:56 pm                    Operator: mayrag
Sample    : cc825-4                                  Inst    : FID 7
Misc      : op63425,gnn873,1000,,,2,1,water          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\msdchem\1\methods\maeph-1029.m (ChemStation Integrator)
Title        : MADEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Oct 29 14:31:04 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.500  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		Naphthalene	25.000	25.034	-0.1	97	-0.01	5.61- 5.82
2		2-Methylnaphthalene	25.000	24.941	0.2	96	-0.01	6.40- 6.58
3	S	2-Fluorobiphenyl	25.000	26.906	-7.6	104	-0.01	6.81- 7.13
4		Acenaphthylene	25.000	24.818	0.7	96	-0.01	7.49- 7.66
		----------	Amount	Calc.	%Drift			----------
5	S	2-Bromonaphthalene	25.000	24.850	0.6	103	-0.01	7.68- 7.89
		----------	Amount	Calc.	%Drift			----------
6		Acenaphthene	25.000	23.092	7.6	96	-0.01	7.66- 7.85
7		Fluorene	25.000	24.753	1.0	95	-0.01	8.25- 8.61
8		Phenanthrene	25.000	24.708	1.2	95	-0.01	9.48- 9.84
9		Anthracene	25.000	25.115	-0.5	97	-0.02	9.52- 9.93
10	S	o-Terphenyl	25.000	25.556	-2.2	98	-0.01	10.03-10.35
11		Fluoranthene	25.000	24.669	1.3	95	-0.01	11.50-11.90
12		Pyrene	25.000	24.659	1.4	95	-0.01	11.97-12.37
13		Benzo(a)Anthracene	25.000	26.410	-5.6	98	0.00	15.01-15.34
14		Chrysene	25.000	26.120	-4.5	97	0.00	15.03-15.43
15		Benzo(b)Fluoranthene	25.000	26.078	-4.3	98	0.00	17.77-18.14
16		Benzo(k)Fluoranthene	25.000	27.356	-9.4	100	0.00	17.81-18.21
17		Benzo(a)Pyrene	25.000	27.504	-10.0	103	0.00	18.51-18.91
		----------	Amount	Calc.	%Drift			----------
18		Indeno(1,2,3-cd)Pyrene	25.000	26.460	-5.8	114	0.00	20.19-20.59
19		Dibenzo(ah)Anthracene	25.000	29.353	-17.4	131	0.00	20.05-20.63
		----------	Amount	Calc.	%Drift			----------
20		Benzo(ghi)Perylene	25.000	28.134	-12.5	103	0.00	20.52-20.92
		----------	Amount	Calc.	%Drift			----------
21	H	C11-C22 Aromatics (una	425.000	460.103	-8.3	113	0.00	4.08-17.82

***** Signal #2 *****

		----------	Amount	Calc.	%Drift			----------
23	H	C9-C18 Aliphatics #2	300.000	314.103	-4.7	104	0.00	2.98- 9.24
24	S	1-Chlorooctadecane #2	50.000	48.770	2.5	89	0.02	10.66-10.86
25		C20 #2	50.000	45.959	8.1	86	0.02	9.49- 9.69
26		C28 #2	50.000	45.145	9.7	84	-0.02	13.06-13.26
27	H	C19-C36 Aliphatics #2	400.000	315.657	21.1	83	0.00	9.23-21.19

Continuing Calibration Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR
Sample: GNN873-CC825
Lab FileID: NN017283.D

```
            -------------------- Amount  Calc.    %Drift  --------------
28 s   Naphthalene #2                       ----------NA----------
29 s   2-Methylnaphthalene #2               ----------NA----------
-------------------------------------------------------------------------
-------------------------------------------------------------------------

   (#) = Out of Range                SPCC's out = 0  CCC's out = 0
    NN016516.d maeph-1029.m       Fri Feb 03 14:20:52 2017
```

8.7.4

8

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GNN873-ECC825
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** NN017295.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\data\GN...2\NN017295.d\FID1B.ch Vial: 1
Signal #2 : C:\msdchem\1\data\GNN873_0202\NN017295.d\FID2A.ch
Acq On    :  3 Feb 2017   2:51 am                    Operator: mayrag
Sample    : ecc825-4                                 Inst    : FID 7
Misc      : op63425,gnn873,1000,,,2,1,water          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\msdchem\1\methods\maeph-1029.m (ChemStation Integrator)
Title        : MADEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Oct 29 14:31:04 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.500  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 200%
```

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	Naphthalene	25.000	25.843	-3.4	100	-0.01	5.61- 5.82
2	2-Methylnaphthalene	25.000	25.750	-3.0	99	-0.01	6.40- 6.58
3 S	2-Fluorobiphenyl	25.000	27.776	-11.1	107	-0.01	6.81- 7.13
4	Acenaphthylene	25.000	25.621	-2.5	99	-0.01	7.49- 7.66
	----------	Amount	Calc.	%Drift			----------
5 S	2-Bromonaphthalene	25.000	25.731	-2.9	106	-0.01	7.68- 7.89
	----------	Amount	Calc.	%Drift			----------
6	Acenaphthene	25.000	23.851	4.6	99	-0.01	7.66- 7.85
7	Fluorene	25.000	25.584	-2.3	99	0.00	8.25- 8.61
8	Phenanthrene	25.000	25.523	-2.1	98	-0.01	9.48- 9.84
9	Anthracene	25.000	25.951	-3.8	100	-0.01	9.52- 9.93
10 S	o-Terphenyl	25.000	26.396	-5.6	101	-0.01	10.03-10.35
11	Fluoranthene	25.000	25.466	-1.9	98	-0.01	11.50-11.90
12	Pyrene	25.000	25.457	-1.8	98	-0.01	11.97-12.37
13	Benzo(a)Anthracene	25.000	27.247	-9.0	101	0.00	15.01-15.34
14	Chrysene	25.000	27.025	-8.1	101	0.00	15.03-15.43
15	Benzo(b)Fluoranthene	25.000	26.808	-7.2	101	0.00	17.77-18.14
16	Benzo(k)Fluoranthene	25.000	28.034	-12.1	103	0.00	17.81-18.21
17	Benzo(a)Pyrene	25.000	28.285	-13.1	106	0.00	18.51-18.91
	----------	Amount	Calc.	%Drift			----------
18	Indeno(1,2,3-cd)Pyrene	25.000	27.123	-8.5	117	0.00	20.19-20.59
19	Dibenzo(ah)Anthracene	25.000	30.004	-20.0	134	0.00	20.05-20.63
	----------	Amount	Calc.	%Drift			----------
20	Benzo(ghi)Perylene	25.000	28.812	-15.2	106	0.00	20.52-20.92
	----------	Amount	Calc.	%Drift			----------
21 H	C11-C22 Aromatics (una	425.000	476.197	-12.0	117	0.00	4.08-17.82

***** Signal #2 *****

	----------	Amount	Calc.	%Drift			----------
23 H	C9-C18 Aliphatics #2	300.000	324.561	-8.2	107	0.00	2.98- 9.24
24 S	1-Chlorooctadecane #2	50.000	49.890	0.2	91	0.02	10.66-10.86
25	C20 #2	50.000	47.208	5.6	88	0.02	9.49- 9.69
26	C28 #2	50.000	46.146	7.7	86	-0.02	13.06-13.26
27 H	C19-C36 Aliphatics #2	400.000	325.437	18.6	86	0.00	9.23-21.19

Continuing Calibration Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR
Sample: GNN873-ECC825
Lab FileID: NN017295.D

```
            -------------------- Amount  Calc.    %Drift  --------------
28 s   Naphthalene #2                       ----------NA----------
29 s   2-Methylnaphthalene #2               ----------NA----------
-------------------------------------------------------------------------
-------------------------------------------------------------------------

   (#) = Out of Range                SPCC's out = 0  CCC's out = 0
    NN016516.d maeph-1029.m       Fri Feb 03 14:20:54 2017
```

8.7.5

8

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GNN877-CC825
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** NN017353.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\data\GN...8\NN017353.d\FID1B.ch Vial: 1
Signal #2 : C:\msdchem\1\data\GNN877_0208\NN017353.d\FID2A.ch
Acq On    :  8 Feb 2017  10:57 am                    Operator: mayrag
Sample    : cc825-4                                  Inst    : FID 7
Misc      : op63425,gnn877,1000,,,2,1,water          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\msdchem\1\methods\maeph-1029.m (ChemStation Integrator)
Title        : MADEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Oct 29 14:31:04 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.500  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 200%
```

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	Naphthalene	25.000	25.909	-3.6	100	0.00	5.58- 5.80
2	2-Methylnaphthalene	25.000	25.359	-1.4	98	0.00	6.38- 6.56
3 S	2-Fluorobiphenyl	25.000	27.319	-9.3	105	0.00	6.79- 7.10
4	Acenaphthylene	25.000	24.768	0.9	95	0.00	7.47- 7.64
	----------	Amount	Calc.	%Drift			
5 S	2-Bromonaphthalene	25.000	24.770	0.9	102	0.00	7.66- 7.87
	----------	Amount	Calc.	%Drift			
6	Acenaphthene	25.000	23.762	5.0	98	0.00	7.64- 7.82
7	Fluorene	25.000	24.502	2.0	94	0.00	8.23- 8.59
8	Phenanthrene	25.000	24.996	0.0	96	0.00	9.46- 9.82
9	Anthracene	25.000	25.426	-1.7	98	0.00	9.49- 9.90
10 S	o-Terphenyl	25.000	25.909	-3.6	100	0.00	10.01-10.32
11	Fluoranthene	25.000	24.934	0.3	96	0.00	11.48-11.88
12	Pyrene	25.000	24.909	0.4	96	0.00	11.94-12.34
13	Benzo(a)Anthracene	25.000	26.875	-7.5	100	0.00	14.99-15.31
14	Chrysene	25.000	26.648	-6.6	99	0.00	15.01-15.41
15	Benzo(b)Fluoranthene	25.000	26.304	-5.2	99	0.00	17.74-18.11
16	Benzo(k)Fluoranthene	25.000	27.566	-10.3	101	0.00	17.79-18.19
17	Benzo(a)Pyrene	25.000	27.541	-10.2	103	0.00	18.49-18.89
	----------	Amount	Calc.	%Drift			
18	Indeno(1,2,3-cd)Pyrene	25.000	26.489	-6.0	114	0.00	20.18-20.58
19	Dibenzo(ah)Anthracene	25.000	29.517	-18.1	132	0.00	20.04-20.62
	----------	Amount	Calc.	%Drift			
20	Benzo(ghi)Perylene	25.000	28.091	-12.4	103	0.00	20.51-20.91
	----------	Amount	Calc.	%Drift			
21 H	C11-C22 Aromatics (una	425.000	381.232	10.3	95	0.00	3.53-17.65
*****	Signal #2 *****						
	----------	Amount	Calc.	%Drift			
23 H	C9-C18 Aliphatics #2	300.000	289.709	3.4	96	0.00	2.99- 9.13
24 S	1-Chlorooctadecane #2	50.000	55.251	-10.5	101	-0.02	10.66-10.86
25	C20 #2	50.000	50.690	-1.4	95	-0.01	9.49- 9.69
26	C28 #2	50.000	50.106	-0.2	93	-0.02	13.01-13.21
27 H	C19-C36 Aliphatics #2	400.000	379.194	5.2	100	0.00	9.43-21.21

Continuing Calibration Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR
Sample: GNN877-CC825
Lab FileID: NN017353.D

```
            -------------------- Amount  Calc.    %Drift  --------------
28 s   Naphthalene #2           25.000  27.173     -8.7  101   0.00    5.35- 5.35
29 s   2-Methylnaphthalene #2   25.000  27.737    -10.9  103   0.00    6.12- 6.12
---------------------------------------------------------------------------
---------------------------------------------------------------------------

   (#) = Out of Range                SPCC's out = 0  CCC's out = 0
    NN016516.d maeph-1029.m       Thu Feb 09 14:43:53 2017
```

8.7.6

8

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GNN877-CC825
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** NN017365.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\data\GN...8\NN017365.d\FID1B.ch Vial: 1
Signal #2 : C:\msdchem\1\data\GNN877_0208\NN017365.d\FID2A.ch
Acq On    :  8 Feb 2017   5:06 pm                    Operator: mayrag
Sample    : cc825-4                                  Inst    : FID 7
Misc      : op63425,gnn877,1000,,,2,1,water          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\msdchem\1\methods\maeph-1029.m (ChemStation Integrator)
Title        : MADEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Oct 29 14:31:04 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.500  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		Naphthalene	25.000	26.380	-5.5	102	0.00	5.58- 5.80
2		2-Methylnaphthalene	25.000	26.053	-4.2	100	0.00	6.38- 6.56
3	S	2-Fluorobiphenyl	25.000	28.123	-12.5	108	0.00	6.79- 7.10
4		Acenaphthylene	25.000	25.771	-3.1	99	0.00	7.47- 7.64
		----------	Amount	Calc.	%Drift			----------
5	S	2-Bromonaphthalene	25.000	25.898	-3.6	107	0.00	7.66- 7.87
		----------	Amount	Calc.	%Drift			----------
6		Acenaphthene	25.000	24.180	3.3	100	0.00	7.64- 7.82
7		Fluorene	25.000	25.647	-2.6	99	0.00	8.23- 8.59
8		Phenanthrene	25.000	25.695	-2.8	99	0.00	9.46- 9.82
9		Anthracene	25.000	26.154	-4.6	101	0.00	9.49- 9.90
10	S	o-Terphenyl	25.000	26.606	-6.4	102	0.00	10.01-10.32
11		Fluoranthene	25.000	25.647	-2.6	98	0.00	11.48-11.88
12		Pyrene	25.000	25.619	-2.5	98	0.00	11.94-12.34
13		Benzo(a)Anthracene	25.000	27.736	-10.9	103	0.00	14.99-15.31
14		Chrysene	25.000	27.449	-9.8	102	0.00	15.01-15.41
15		Benzo(b)Fluoranthene	25.000	27.216	-8.9	102	0.00	17.74-18.11
16		Benzo(k)Fluoranthene	25.000	28.550	-14.2	105	0.00	17.79-18.19
17		Benzo(a)Pyrene	25.000	28.612	-14.4	107	0.00	18.49-18.89
		----------	Amount	Calc.	%Drift			----------
18		Indeno(1,2,3-cd)Pyrene	25.000	27.635	-10.5	119	0.00	20.18-20.58
19		Dibenzo(ah)Anthracene	25.000	31.068	-24.3	139	0.00	20.04-20.62
		----------	Amount	Calc.	%Drift			----------
20		Benzo(ghi)Perylene	25.000	29.598	-18.4	108	0.00	20.51-20.91
		----------	Amount	Calc.	%Drift			----------
21	H	C11-C22 Aromatics (una	425.000	411.259	3.2	102	0.00	3.53-17.65

***** Signal #2 *****

		----------	Amount	Calc.	%Drift			----------
23	H	C9-C18 Aliphatics #2	300.000	260.579	13.1	86	0.00	2.99- 9.13
24	S	1-Chlorooctadecane #2	50.000	49.975	0.0	91	-0.02	10.66-10.86
25		C20 #2	50.000	45.644	8.7	85	-0.01	9.49- 9.69
26		C28 #2	50.000	45.239	9.5	84	-0.02	13.01-13.21
27	H	C19-C36 Aliphatics #2	400.000	345.418	13.6	91	0.00	9.43-21.21

Continuing Calibration Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR
Sample: GNN877-CC825
Lab FileID: NN017365.D

```
            -------------------- Amount  Calc.    %Drift  --------------
28 s   Naphthalene #2          25.000  24.590      1.6   91   0.00    5.35- 5.35
29 s   2-Methylnaphthalene #2  25.000  25.245     -1.0   93   0.00    6.12- 6.12
---------------------------------------------------------------------------
---------------------------------------------------------------------------

   (#) = Out of Range               SPCC's out = 0  CCC's out = 0
    NN016516.d maeph-1029.m       Thu Feb 09 14:45:09 2017
```

8.7.7

8

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GNN879-CC825
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** NN017401.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\data\GN...0\NN017401.d\FID1B.ch Vial: 1
Signal #2 : C:\msdchem\1\data\GNN879_0210\NN017401.d\FID2A.ch
Acq On    : 10 Feb 2017  11:07 am                    Operator: mayrag
Sample    : cc825-4                                  Inst    : FID 7
Misc      : op63425,gnn879,1000,,,2,1,water          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\msdchem\1\methods\maeph-1029.m (ChemStation Integrator)
Title        : MADEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Oct 29 14:31:04 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.500  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		Naphthalene	25.000	24.344	2.6	94	0.00	5.58- 5.80
2		2-Methylnaphthalene	25.000	24.083	3.7	93	0.00	6.38- 6.56
3	S	2-Fluorobiphenyl	25.000	25.952	-3.8	100	0.00	6.79- 7.10
4		Acenaphthylene	25.000	23.785	4.9	92	0.00	7.47- 7.64
		----------	Amount	Calc.	%Drift			----------
5	S	2-Bromonaphthalene	25.000	23.792	4.8	98	0.00	7.66- 7.87
		----------	Amount	Calc.	%Drift			----------
6		Acenaphthene	25.000	22.258	11.0	92	0.00	7.64- 7.82
7		Fluorene	25.000	23.527	5.9	91	0.00	8.23- 8.59
8		Phenanthrene	25.000	23.461	6.2	90	0.00	9.46- 9.82
9		Anthracene	25.000	23.812	4.8	92	0.00	9.49- 9.90
10	S	o-Terphenyl	25.000	24.416	2.3	94	0.00	10.01-10.32
11		Fluoranthene	25.000	23.281	6.9	89	0.00	11.48-11.88
12		Pyrene	25.000	23.258	7.0	89	0.00	11.94-12.34
13		Benzo(a)Anthracene	25.000	24.847	0.6	92	0.00	14.99-15.31
14		Chrysene	25.000	24.640	1.4	92	0.00	15.01-15.41
15		Benzo(b)Fluoranthene	25.000	24.340	2.6	91	0.00	17.74-18.11
16		Benzo(k)Fluoranthene	25.000	25.486	-1.9	93	0.00	17.79-18.19
17		Benzo(a)Pyrene	25.000	25.472	-1.9	95	0.00	18.49-18.89
		----------	Amount	Calc.	%Drift			----------
18		Indeno(1,2,3-cd)Pyrene	25.000	24.912	0.4	107	0.00	20.18-20.58
19		Dibenzo(ah)Anthracene	25.000	27.746	-11.0	124	0.00	20.04-20.62
		----------	Amount	Calc.	%Drift			----------
20		Benzo(ghi)Perylene	25.000	26.626	-6.5	98	0.00	20.51-20.91
		----------	Amount	Calc.	%Drift			----------
21	H	C11-C22 Aromatics (una	425.000	370.759	12.8	92	0.00	3.53-17.65

***** Signal #2 *****

		----------	Amount	Calc.	%Drift			----------
23	H	C9-C18 Aliphatics #2	300.000	250.637	16.5	83	0.00	2.99- 9.13
24	S	1-Chlorooctadecane #2	50.000	47.708	4.6	87	-0.02	10.66-10.86
25		C20 #2	50.000	43.735	12.5	82	-0.02	9.49- 9.69
26		C28 #2	50.000	43.132	13.7	80	-0.02	13.01-13.21
27	H	C19-C36 Aliphatics #2	400.000	302.464	24.4	80	0.00	9.43-21.21

Continuing Calibration Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample: GNN879-CC825
Lab FileID: NN017401.D

```
            -------------------- Amount  Calc.    %Drift  --------------
28 s   Naphthalene #2           25.000  23.528      5.9   86   0.00    5.35- 5.35
29 s   2-Methylnaphthalene #2   25.000  24.155      3.4   89   0.00    6.12- 6.12
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------

   (#) = Out of Range                SPCC's out = 0  CCC's out = 0
    NN016516.d maeph-1029.m       Fri Feb 10 15:47:32 2017
```

8.7.8

8

Continuing Calibration Summary

Job Number: FA40754 **Sample:** GNN879-ECC825
Account: AMANYWP Anderson, Mulholland & Associates **Lab FileID:** NN017410.D
Project: BMSMC, Humacao, PR

Evaluate Continuing Calibration Report

```
Signal #1 : C:\msdchem\1\data\GN...0\NN017410.d\FID1B.ch Vial: 1
Signal #2 : C:\msdchem\1\data\GNN879_0210\NN017410.d\FID2A.ch
Acq On    : 10 Feb 2017   3:57 pm                    Operator: mayrag
Sample    : ecc825-4                                 Inst    : FID 7
Misc      : op63425,gnn879,1000,,,2,1,water          Multiplr: 1.00
IntFile Signal #1: EVENTS.E     IntFile Signal #2: EVENTS2.E

Method       : C:\msdchem\1\methods\maeph-1029.m (ChemStation Integrator)
Title        : MADEP Extractable Petroleum Hydrocarbons
Last Update  : Sat Oct 29 14:31:04 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.500  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		Naphthalene	25.000	25.005	-0.0	97	0.00	5.58- 5.80
2		2-Methylnaphthalene	25.000	24.881	0.5	96	0.00	6.38- 6.56
3	S	2-Fluorobiphenyl	25.000	26.863	-7.5	103	0.00	6.79- 7.10
4		Acenaphthylene	25.000	24.700	1.2	95	0.00	7.47- 7.64
		----------	Amount	Calc.	%Drift			----------
5	S	2-Bromonaphthalene	25.000	24.864	0.5	103	0.00	7.66- 7.87
		----------	Amount	Calc.	%Drift			----------
6		Acenaphthene	25.000	22.984	8.1	95	0.00	7.64- 7.82
7		Fluorene	25.000	24.491	2.0	94	0.00	8.23- 8.59
8		Phenanthrene	25.000	24.388	2.4	94	0.00	9.46- 9.82
9		Anthracene	25.000	24.834	0.7	96	0.00	9.49- 9.90
10	S	o-Terphenyl	25.000	25.315	-1.3	97	0.00	10.01-10.32
11		Fluoranthene	25.000	24.389	2.4	94	0.00	11.48-11.88
12		Pyrene	25.000	24.427	2.3	94	0.00	11.94-12.34
13		Benzo(a)Anthracene	25.000	26.746	-7.0	99	0.00	14.99-15.31
14		Chrysene	25.000	26.502	-6.0	99	0.00	15.01-15.41
15		Benzo(b)Fluoranthene	25.000	26.740	-7.0	100	0.00	17.74-18.11
16		Benzo(k)Fluoranthene	25.000	28.064	-12.3	103	0.00	17.79-18.19
17		Benzo(a)Pyrene	25.000	28.226	-12.9	105	0.00	18.49-18.89
		----------	Amount	Calc.	%Drift			----------
18		Indeno(1,2,3-cd)Pyrene	25.000	27.881	-11.5	121	0.00	20.18-20.58
19		Dibenzo(ah)Anthracene	25.000	31.244	-25.0	140	0.00	20.04-20.62
		----------	Amount	Calc.	%Drift			----------
20		Benzo(ghi)Perylene	25.000	29.698	-18.8	109	0.00	20.51-20.91
		----------	Amount	Calc.	%Drift			----------
21	H	C11-C22 Aromatics (una	425.000	387.576	8.8	96	0.00	3.53-17.65

***** Signal #2 *****

		----------	Amount	Calc.	%Drift			----------
23	H	C9-C18 Aliphatics #2	300.000	286.552	4.5	95	0.00	2.99- 9.13
24	S	1-Chlorooctadecane #2	50.000	54.818	-9.6	100	-0.02	10.66-10.86
25		C20 #2	50.000	50.079	-0.2	93	-0.01	9.49- 9.69
26		C28 #2	50.000	49.608	0.8	92	-0.02	13.01-13.21
27	H	C19-C36 Aliphatics #2	400.000	355.866	11.0	94	0.00	9.43-21.21

Continuing Calibration Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample: GNN879-ECC825
Lab FileID: NN017410.D

			Amount	Calc.	%Drift			
28	s	Naphthalene #2	25.000	26.834	-7.3	99	0.00	5.35- 5.35
29	s	2-Methylnaphthalene #2	25.000	27.376	-9.5	101	0.00	6.12- 6.12

(#) = Out of Range SPCC's out = 0 CCC's out = 0
NN016516.d maeph-1029.m Fri Feb 10 16:22:37 2017

8.7.9

8

GC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/09/17 17:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017358.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 1:30 pm
Operator : mayrag
Sample : fa40754-1 Inst : FID 7
Misc : op63645,gnn877,19.7,,,2,1,soil
ALS Vial : 6 (Sig #1); 56 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 13:04:12 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.905	14465863	17.367	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 86.84%			
5) S 2-Bromonaphthalene	7.714	9836553	15.502	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 77.51%			
10) S o-Terphenyl	10.121	13397733	13.022	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 65.11%			
24) S 1-Chlorooctadecane #2	10.731	8898066	12.154	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 60.77%			
28) s Naphthalene #2	0.000	0	N.D.	ppm	
29) s 2-Methylnaphthalene #2	0.000	0	N.D.	ppm	
Target Compounds					
1) Naphthalene	0.000	0	N.D.	ppm	d
2) 2-Methylnaphthalene	0.000	0	N.D.	ppm	
4) Acenaphthylene	0.000	0	N.D.	ppm	d
6) Acenaphthene	0.000	0	N.D.	ppm	d
7) Fluorene	0.000	0	N.D.	ppm	
8) Phenanthrene	0.000	0	N.D.	ppm	
9) Anthracene	0.000	0	N.D.	ppm	
11) Fluoranthene	0.000	0	N.D.	ppm	
12) Pyrene	0.000	0	N.D.	ppm	
13) Benzo(a)Anthracene	0.000	0	N.D.	ppm	
14) Chrysene	0.000	0	N.D.	ppm	
15) Benzo(b)Fluoranthene	0.000	0	N.D.	ppm	
16) Benzo(k)Fluoranthene	0.000	0	N.D.	ppm	
17) Benzo(a)Pyrene	18.661	1452606	1.576	ppm	m
18) Indeno(1,2,3-cd)Pyrene	0.000	0	N.D.	ppm	d
19) Dibenzo(ah)Anthracene	0.000	0	N.D.	ppm	d
20) Benzo(ghi)Perylene	0.000	0	N.D.	ppm	d
21) H C11-C22 Aromatics (un...	5.669	20968075	32.351	ppm	
23) H C9-C18 Aliphatics #2	9.044	5192981	5.272	ppm	
25) C20 #2	0.000	0	N.D.	ppm	
26) C28 #2	0.000	0	N.D.	ppm	
27) H C19-C36 Aliphatics #2	9.585	13743078	12.794	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

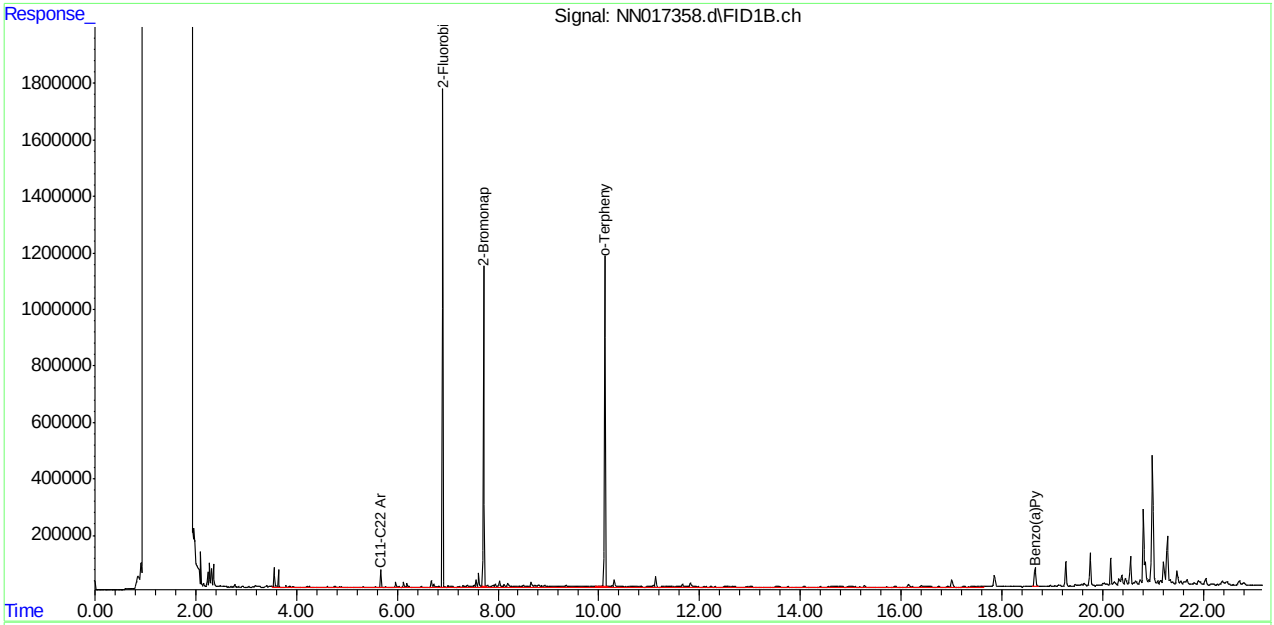
9.1.1
9

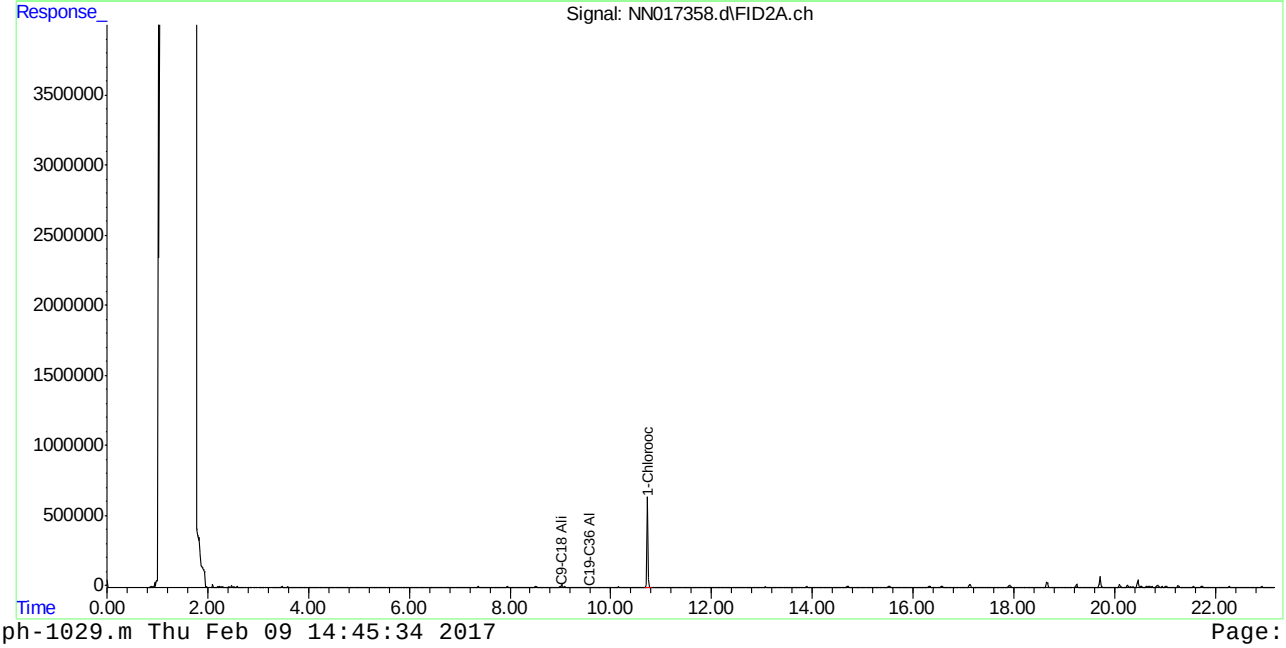
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017358.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 1:30 pm
Operator : mayrag
Sample : fa40754-1 Inst : FID 7
Misc : op63645,gnn877,19.7,,,2,1,soil
ALS Vial : 6 (Sig #1); 56 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 13:04:12 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Manual Integration Approval Summary

Sample Number:	FA40754-1	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN017358.D	**Analyst approved:**	02/09/17 15:34 Mayra Gonzalez
Injection Time:	02/08/17 13:30	**Supervisor approved:**	02/09/17 17:18 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Benzo(a)pyrene	50-32-8	1	18.66	Poorly defined baseline

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/10/17 16:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN879_0210\
Data File : NN017405.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 10 Feb 2017 1:28 pm
Operator : mayrag
Sample : fa40754-2 Inst : FID 7
Misc : op63645,gnn879,20.1,,,2,1,soil
ALS Vial : 5 (Sig #1); 55 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 10 15:41:25 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.904	11822167	14.193	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 70.97%			
5) S 2-Bromonaphthalene	7.713	8471520	13.323	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 66.62%			
10) S o-Terphenyl	10.121	10623318	10.325	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 51.63%			
24) S 1-Chlorooctadecane #2	10.734	7277655	9.941	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 49.71%			
28) s Naphthalene #2	0.000	0	N.D.	ppm	
29) s 2-Methylnaphthalene #2	0.000	0	N.D.	ppm	
Target Compounds					
1) Naphthalene	0.000	0	N.D.	ppm	d
2) 2-Methylnaphthalene	0.000	0	N.D.	ppm	
4) Acenaphthylene	7.569	766743	0.771	ppm	m
6) Acenaphthene	0.000	0	N.D.	ppm	d
7) Fluorene	0.000	0	N.D.	ppm	
8) Phenanthrene	0.000	0	N.D.	ppm	
9) Anthracene	0.000	0	N.D.	ppm	
11) Fluoranthene	11.653	1033587	0.994	ppm	m
12) Pyrene	0.000	0	N.D.	ppm	
13) Benzo(a)Anthracene	0.000	0	N.D.	ppm	
14) Chrysene	0.000	0	N.D.	ppm	
15) Benzo(b)Fluoranthene	0.000	0	N.D.	ppm	
16) Benzo(k)Fluoranthene	0.000	0	N.D.	ppm	
17) Benzo(a)Pyrene	18.665	793546	0.861	ppm	m
18) Indeno(1,2,3-cd)Pyrene	0.000	0	N.D.	ppm	d
19) Dibenzo(ah)Anthracene	0.000	0	N.D.	ppm	
20) Benzo(ghi)Perylene	0.000	0	N.D.	ppm	
21) H C11-C22 Aromatics (un...	5.669	58982088	91.553	ppm	
23) H C9-C18 Aliphatics #2	9.044	7430564	7.543	ppm	
25) C20 #2	0.000	0	N.D.	ppm	
26) C28 #2	0.000	0	N.D.	ppm	
27) H C19-C36 Aliphatics #2	9.585	182835695	170.213	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

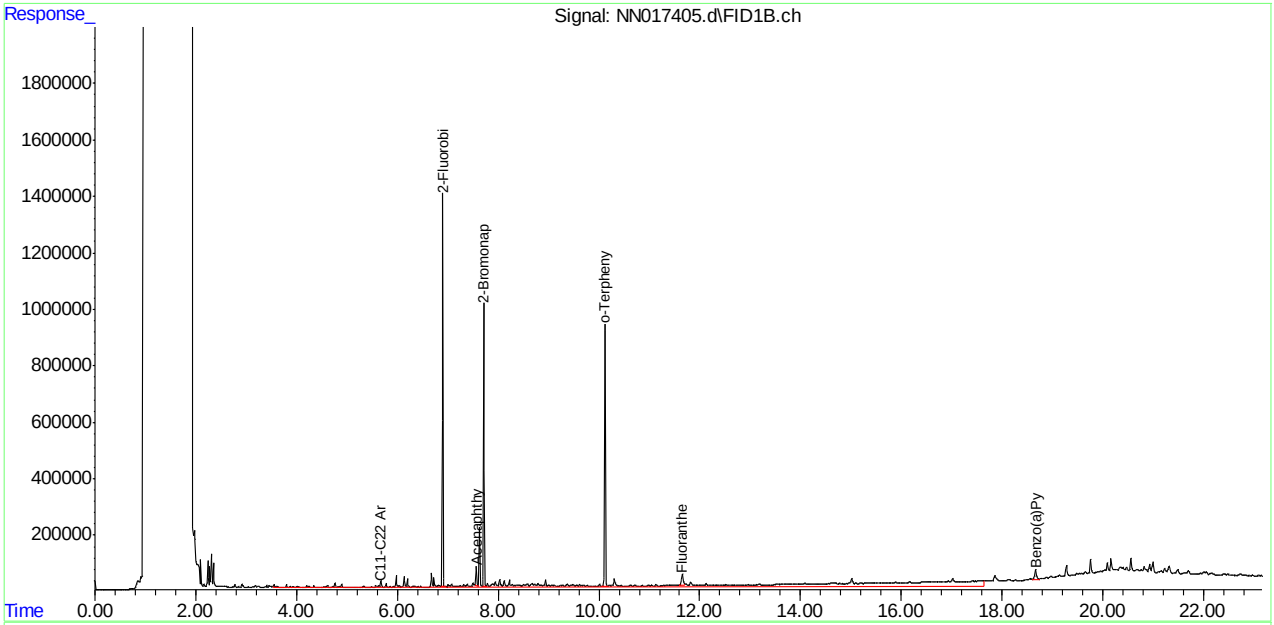
9.1.2
9

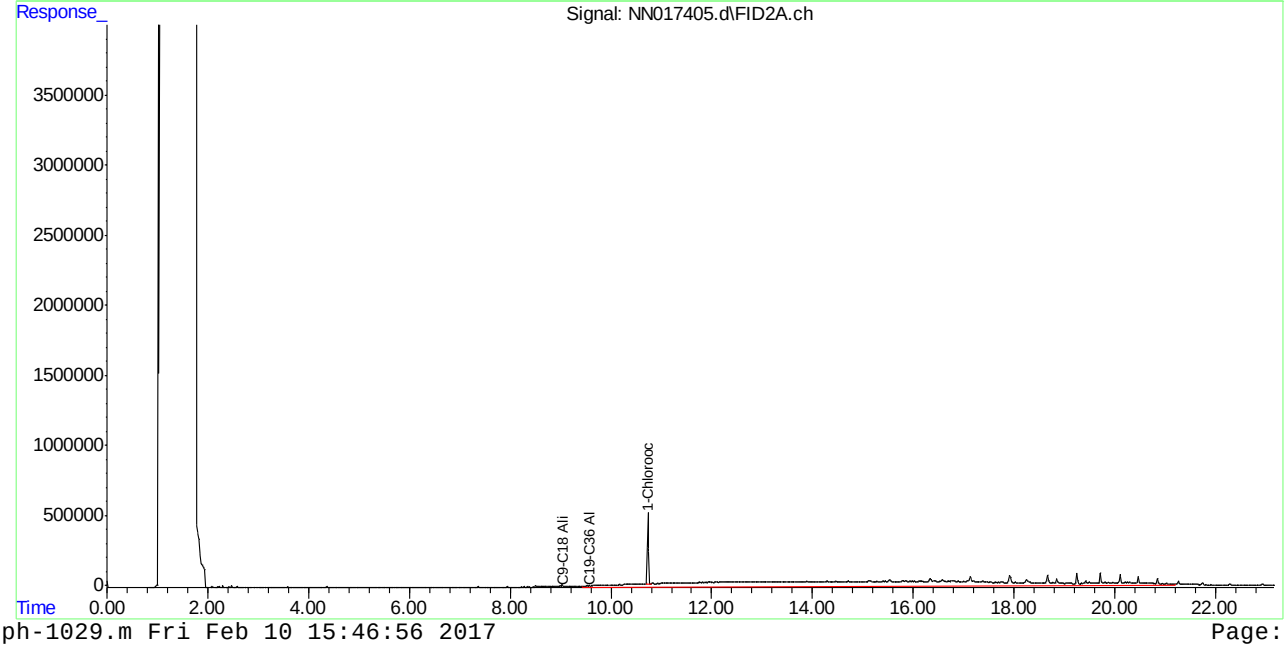
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN879_0210\
Data File : NN017405.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 10 Feb 2017 1:28 pm
Operator : mayrag
Sample : fa40754-2 Inst : FID 7
Misc : op63645,gnn879,20.1,,,2,1,soil
ALS Vial : 5 (Sig #1); 55 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 10 15:41:25 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Manual Integration Approval Summary

Sample Number:	FA40754-2	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN017405.D	**Analyst approved:**	02/10/17 16:09 Mayra Gonzalez
Injection Time:	02/10/17 13:28	**Supervisor approved:**	02/10/17 16:34 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Acenaphthylene	208-96-8	1	7.57	Poorly defined baseline
Fluoranthene	206-44-0	1	11.65	Poorly defined baseline
Benzo(a)pyrene	50-32-8	1	18.67	Poorly defined baseline

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/09/17 17:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017361.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 3:01 pm
Operator : mayrag
Sample : fa40754-3 Inst : FID 7
Misc : op63645,gnn877,20.2,,,2,1,soil
ALS Vial : 9 (Sig #1); 59 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 13:12:29 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.905	14292857	17.160	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 85.80%			
5) S 2-Bromonaphthalene	7.714	10191950	16.071	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 80.36%			
10) S o-Terphenyl	10.122	14049058	13.655	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 68.27%			
24) S 1-Chlorooctadecane #2	10.730	9863268	13.473	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 67.37%			
28) s Naphthalene #2	0.000	0	N.D.	ppm	
29) s 2-Methylnaphthalene #2	0.000	0	N.D.	ppm	
Target Compounds					
1) Naphthalene	0.000	0	N.D.	ppm	d
2) 2-Methylnaphthalene	0.000	0	N.D.	ppm	
4) Acenaphthylene	0.000	0	N.D.	ppm	d
6) Acenaphthene	0.000	0	N.D.	ppm	d
7) Fluorene	0.000	0	N.D.	ppm	
8) Phenanthrene	0.000	0	N.D.	ppm	d
9) Anthracene	0.000	0	N.D.	ppm	
11) Fluoranthene	0.000	0	N.D.	ppm	d
12) Pyrene	0.000	0	N.D.	ppm	
13) Benzo(a)Anthracene	0.000	0	N.D.	ppm	
14) Chrysene	0.000	0	N.D.	ppm	d
15) Benzo(b)Fluoranthene	0.000	0	N.D.	ppm	
16) Benzo(k)Fluoranthene	0.000	0	N.D.	ppm	
17) Benzo(a)Pyrene	0.000	0	N.D.	ppm	
18) Indeno(1,2,3-cd)Pyrene	20.386	1535709	1.713	ppm	m
19) Dibenzo(ah)Anthracene	0.000	0	N.D.	ppm	d
20) Benzo(ghi)Perylene	0.000	0	N.D.	ppm	d
21) H C11-C22 Aromatics (un...	5.669	83656729	130.370	ppm	
23) H C9-C18 Aliphatics #2	9.044	13997132	14.210	ppm	
25) C20 #2	9.565	128213	0.141	ppm	
26) C28 #2	0.000	0	N.D.	ppm	
27) H C19-C36 Aliphatics #2	9.585	35594436	33.137	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

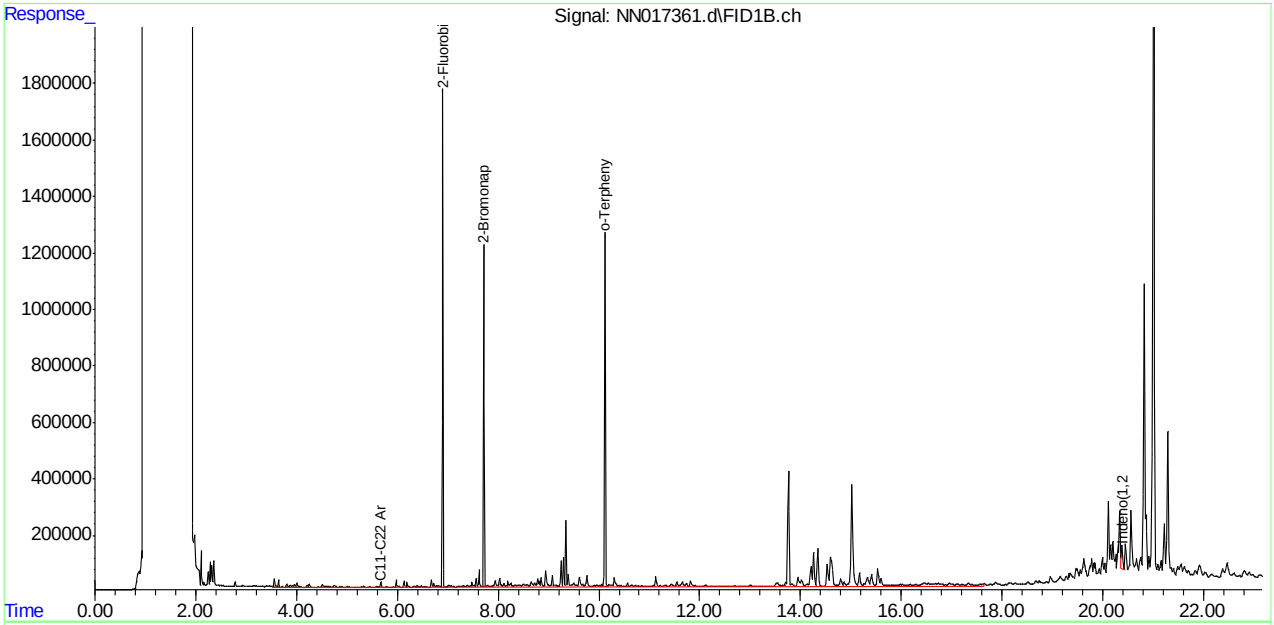
9.1.3
9

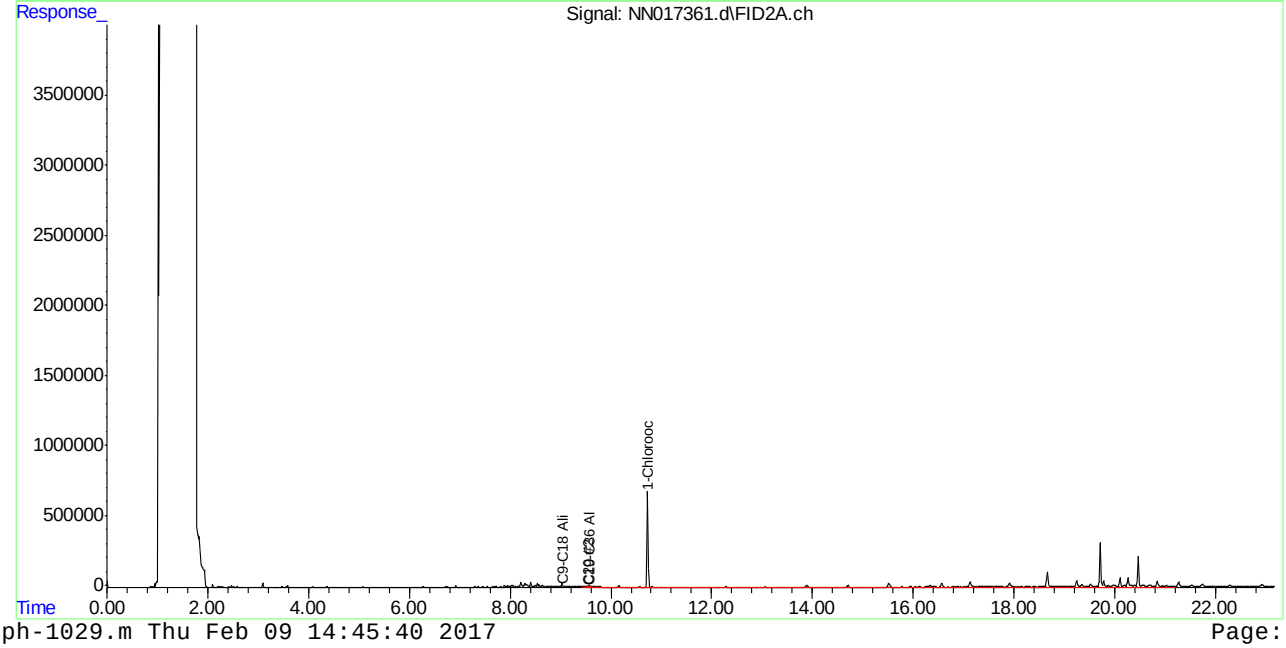
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017361.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 3:01 pm
Operator : mayrag
Sample : fa40754-3 Inst : FID 7
Misc : op63645,gnn877,20.2,,,2,1,soil
ALS Vial : 9 (Sig #1); 59 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 13:12:29 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Manual Integration Approval Summary

Sample Number:	FA40754-3	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN017361.D	**Analyst approved:**	02/09/17 15:34 Mayra Gonzalez
Injection Time:	02/08/17 15:01	**Supervisor approved:**	02/09/17 17:18 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5	1	20.39	Poorly defined baseline

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017362.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 3:31 pm
Operator : mayrag
Sample : fa40754-4 Inst : FID 7
Misc : op63645,gnn877,20.1,,,2,1,soil
ALS Vial : 10 (Sig #1); 60 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 13:13:12 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.905	13355775	16.035	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 80.17%			
5) S 2-Bromonaphthalene	7.714	9339572	14.707	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 73.54%			
10) S o-Terphenyl	10.123	13772708	13.386	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 66.93%			
24) S 1-Chlorooctadecane #2	10.731	9895865	13.517	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 67.58%			
28) s Naphthalene #2	0.000	0	N.D.	ppm	
29) s 2-Methylnaphthalene #2	0.000	0	N.D.	ppm	
Target Compounds					
1) Naphthalene	0.000	0	N.D.	ppm	d
2) 2-Methylnaphthalene	0.000	0	N.D.	ppm	
4) Acenaphthylene	0.000	0	N.D.	ppm	d
6) Acenaphthene	0.000	0	N.D.	ppm	d
7) Fluorene	0.000	0	N.D.	ppm	
8) Phenanthrene	0.000	0	N.D.	ppm	
9) Anthracene	0.000	0	N.D.	ppm	
11) Fluoranthene	0.000	0	N.D.	ppm	
12) Pyrene	0.000	0	N.D.	ppm	
13) Benzo(a)Anthracene	0.000	0	N.D.	ppm	
14) Chrysene	0.000	0	N.D.	ppm	
15) Benzo(b)Fluoranthene	0.000	0	N.D.	ppm	
16) Benzo(k)Fluoranthene	0.000	0	N.D.	ppm	
17) Benzo(a)Pyrene	0.000	0	N.D.	ppm	d
18) Indeno(1,2,3-cd)Pyrene	0.000	0	N.D.	ppm	
19) Dibenzo(ah)Anthracene	0.000	0	N.D.	ppm	d
20) Benzo(ghi)Perylene	0.000	0	N.D.	ppm	
21) H C11-C22 Aromatics (un...	5.669	26499309	40.921	ppm	
23) H C9-C18 Aliphatics #2	9.044	6547062	6.647	ppm	
25) C20 #2	0.000	0	N.D.	ppm	
26) C28 #2	0.000	0	N.D.	ppm	
27) H C19-C36 Aliphatics #2	9.585	32597224	30.347	ppm	

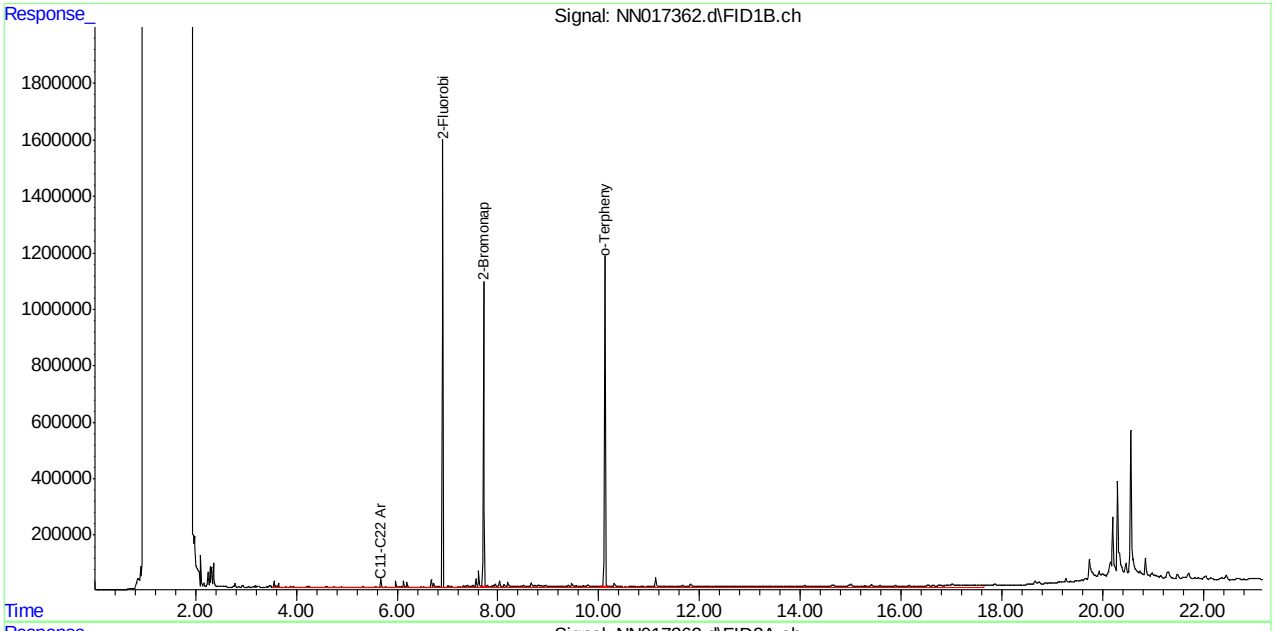
(f)=RT Delta > 1/2 Window (m)=manual int.

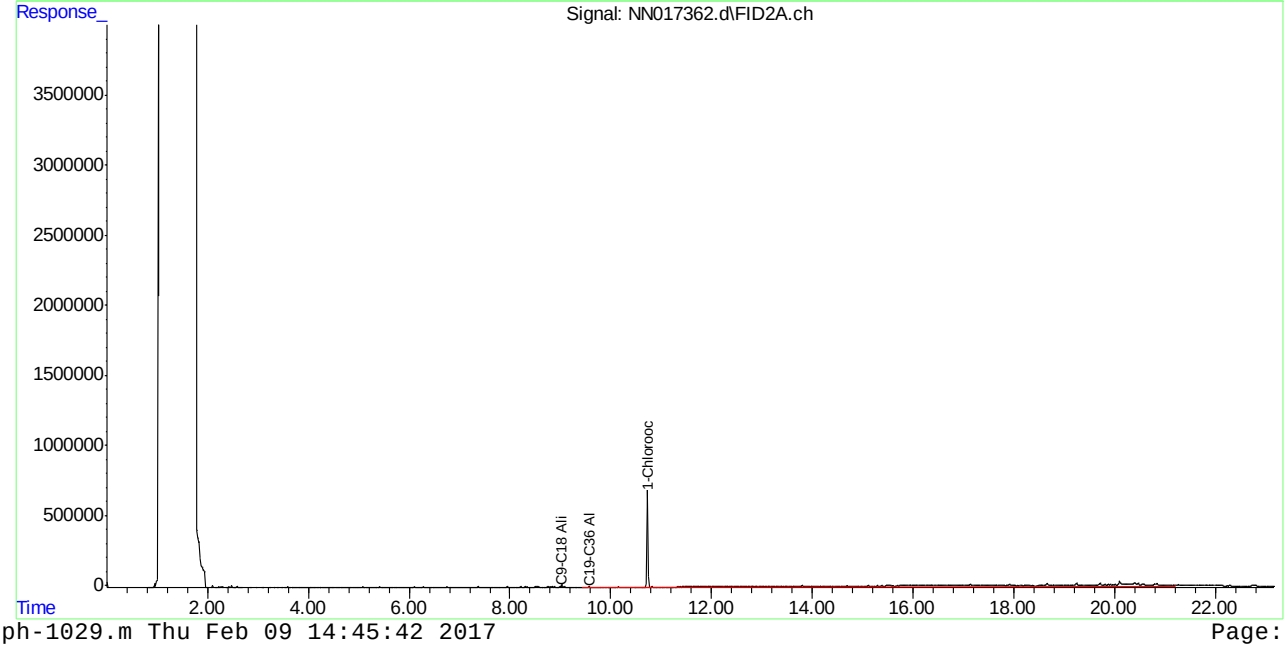
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017362.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 3:31 pm
Operator : mayrag
Sample : fa40754-4 Inst : FID 7
Misc : op63645,gnn877,20.1,,,2,1,soil
ALS Vial : 10 (Sig #1); 60 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 13:13:12 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017363.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 4:02 pm
Operator : mayrag
Sample : fa40754-5 Inst : FID 7
Misc : op63645,gnn877,20.7,,,2,1,soil
ALS Vial : 11 (Sig #1); 61 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 13:14:12 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.905	13353620	16.032	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 80.16%			
5) S 2-Bromonaphthalene	7.714	9332856	14.697	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 73.48%			
10) S o-Terphenyl	10.122	12034294	11.696	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 58.48%			
24) S 1-Chlorooctadecane #2	10.732	9812762	13.404	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 67.02%			
28) s Naphthalene #2	0.000	0	N.D.	ppm	
29) s 2-Methylnaphthalene #2	0.000	0	N.D.	ppm	
Target Compounds					
1) Naphthalene	0.000	0	N.D.	ppm	d
2) 2-Methylnaphthalene	0.000	0	N.D.	ppm	
4) Acenaphthylene	0.000	0	N.D.	ppm	d
6) Acenaphthene	0.000	0	N.D.	ppm	d
7) Fluorene	0.000	0	N.D.	ppm	
8) Phenanthrene	0.000	0	N.D.	ppm	
9) Anthracene	0.000	0	N.D.	ppm	
11) Fluoranthene	0.000	0	N.D.	ppm	
12) Pyrene	0.000	0	N.D.	ppm	
13) Benzo(a)Anthracene	0.000	0	N.D.	ppm	
14) Chrysene	0.000	0	N.D.	ppm	
15) Benzo(b)Fluoranthene	0.000	0	N.D.	ppm	
16) Benzo(k)Fluoranthene	0.000	0	N.D.	ppm	
17) Benzo(a)Pyrene	0.000	0	N.D.	ppm	
18) Indeno(1,2,3-cd)Pyrene	0.000	0	N.D.	ppm	d
19) Dibenzo(ah)Anthracene	0.000	0	N.D.	ppm	d
20) Benzo(ghi)Perylene	0.000	0	N.D.	ppm	d
21) H C11-C22 Aromatics (un...	5.669	26909336	41.557	ppm	
23) H C9-C18 Aliphatics #2	9.044	6249866	6.345	ppm	
25) C20 #2	0.000	0	N.D.	ppm	
26) C28 #2	0.000	0	N.D.	ppm	
27) H C19-C36 Aliphatics #2	9.585	49383985	45.974	ppm	

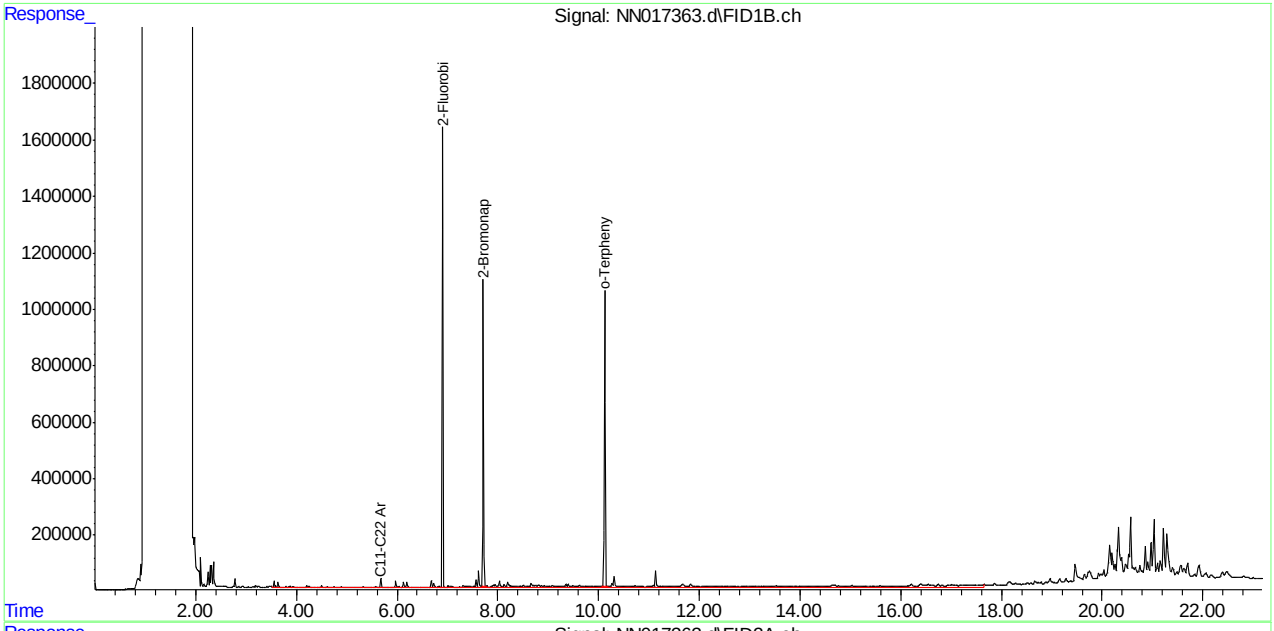
(f)=RT Delta > 1/2 Window (m)=manual int.

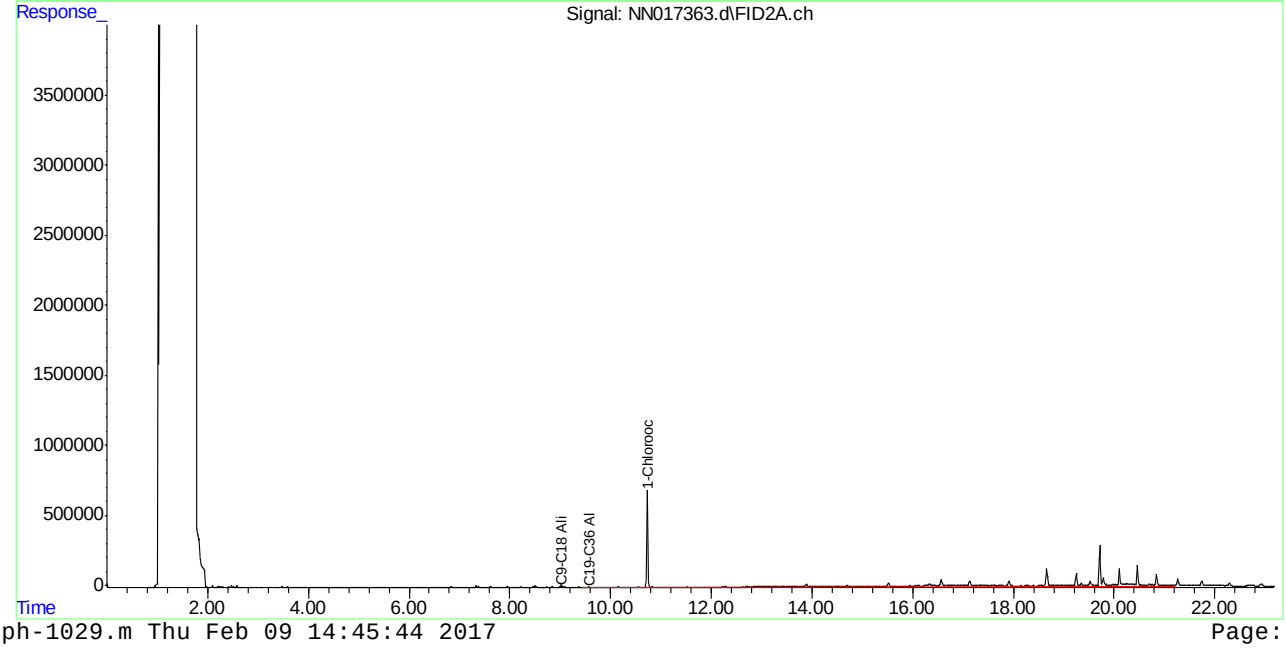
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017363.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 4:02 pm
Operator : mayrag
Sample : fa40754-5 Inst : FID 7
Misc : op63645,gnn877,20.7,,,2,1,soil
ALS Vial : 11 (Sig #1); 61 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 13:14:12 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017292.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 3 Feb 2017 1:22 am
Operator : mayrag
Sample : fa40754-6 Inst : FID 7
Misc : op63636,gnn873,800,,,2,1,water
ALS Vial : 19 (Sig #1); 69 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 09:52:41 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) S 2-Fluorobiphenyl	6.915	14466044	17.368	ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	86.84%	
5) S 2-Bromonaphthalene	7.724	10433906	16.459	ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	82.30%	
10) S o-Terphenyl	10.135	15197829	14.771	ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	73.86%	
24) S 1-Chlorooctadecane #2	10.772	6938877	9.478	ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	47.39%	
28) s Naphthalene #2	0.000	0	N.D.	ppm
29) s 2-Methylnaphthalene #2	0.000	0	N.D.	ppm
Target Compounds				
1) Naphthalene	0.000	0	N.D.	ppm
2) 2-Methylnaphthalene	0.000	0	N.D.	ppm
4) Acenaphthylene	0.000	0	N.D.	ppm
6) Acenaphthene	0.000	0	N.D.	ppm
7) Fluorene	0.000	0	N.D.	ppm
8) Phenanthrene	0.000	0	N.D.	ppm
9) Anthracene	0.000	0	N.D.	ppm
11) Fluoranthene	0.000	0	N.D.	ppm
12) Pyrene	0.000	0	N.D.	ppm
13) Benzo(a)Anthracene	0.000	0	N.D.	ppm
14) Chrysene	0.000	0	N.D.	ppm
15) Benzo(b)Fluoranthene	0.000	0	N.D.	ppm
16) Benzo(k)Fluoranthene	0.000	0	N.D.	ppm
17) Benzo(a)Pyrene	0.000	0	N.D.	ppm
18) Indeno(1,2,3-cd)Pyrene	0.000	0	N.D.	ppm
19) Dibenzo(ah)Anthracene	0.000	0	N.D.	ppm
20) Benzo(ghi)Perylene	0.000	0	N.D.	ppm
21) H C11-C22 Aromatics (un...	10.000	17879792	27.573	ppm
23) H C9-C18 Aliphatics #2	7.353	5308857	5.389	ppm
25) C20 #2	0.000	0	N.D.	ppm
26) C28 #2	0.000	0	N.D.	ppm
27) H C19-C36 Aliphatics #2	17.000	7401489	6.890	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

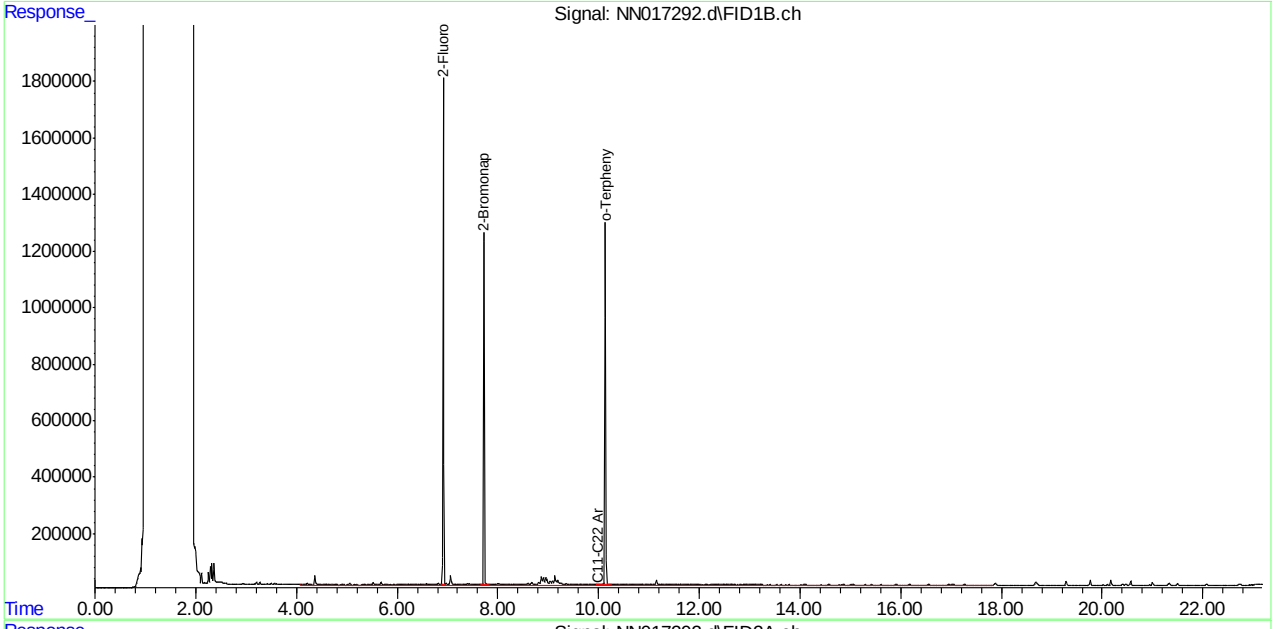
SGS ACCUTEST FA40754

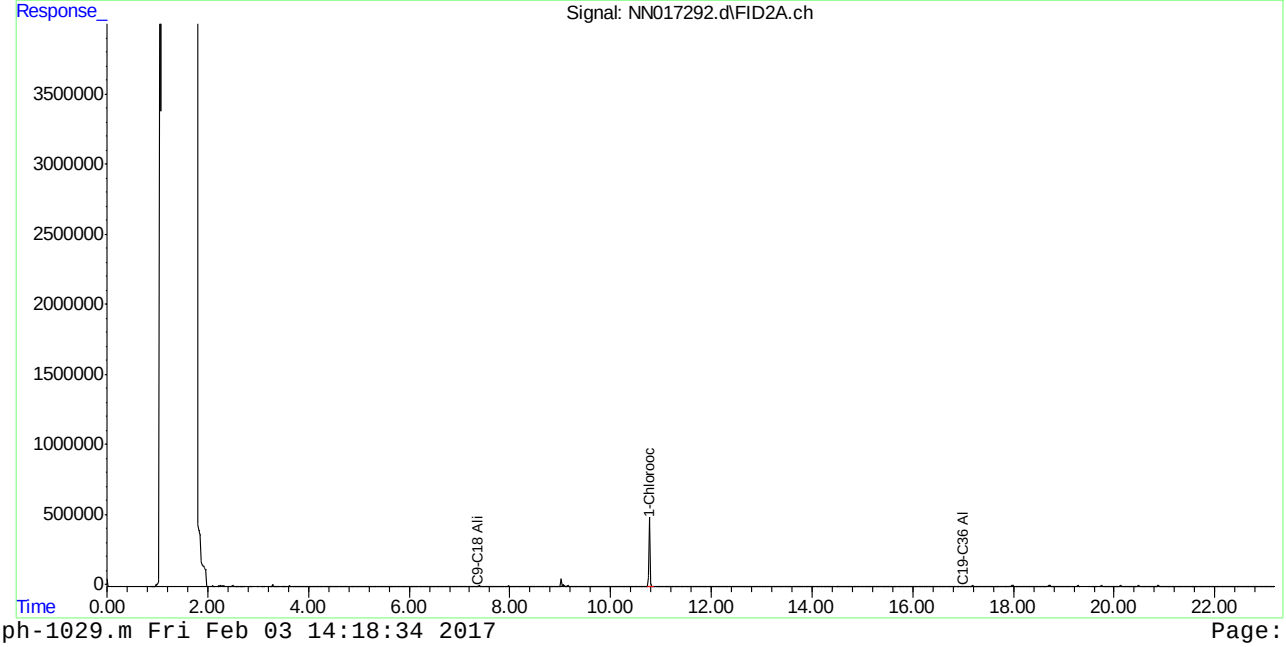
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017292.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 3 Feb 2017 1:22 am
Operator : mayrag
Sample : fa40754-6 Inst : FID 7
Misc : op63636,gnn873,800,,,2,1,water
ALS Vial : 19 (Sig #1); 69 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 09:52:41 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017293.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 3 Feb 2017 1:52 am
Operator : mayrag
Sample : fa40754-7 Inst : FID 7
Misc : op63636,gnn873,800,,,2,1,water
ALS Vial : 20 (Sig #1); 70 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 09:52:44 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S 2-Fluorobiphenyl	6.914	13789127	16.555 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	82.78%
5) S 2-Bromonaphthalene	7.723	9769771	15.395 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	76.97%
10) S o-Terphenyl	10.135	14022042	13.628 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	68.14%
24) S 1-Chlorooctadecane #2	10.772	6580655	8.989 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	44.95%
28) s Naphthalene #2	0.000	0	N.D. ppm
29) s 2-Methylnaphthalene #2	0.000	0	N.D. ppm
Target Compounds			
1) Naphthalene	5.682	391083	0.379 ppm
2) 2-Methylnaphthalene	0.000	0	N.D. ppm
4) Acenaphthylene	0.000	0	N.D. ppm
6) Acenaphthene	0.000	0	N.D. ppm
7) Fluorene	0.000	0	N.D. ppm
8) Phenanthrene	0.000	0	N.D. ppm
9) Anthracene	0.000	0	N.D. ppm
11) Fluoranthene	0.000	0	N.D. ppm
12) Pyrene	0.000	0	N.D. ppm
13) Benzo(a)Anthracene	0.000	0	N.D. ppm
14) Chrysene	0.000	0	N.D. ppm
15) Benzo(b)Fluoranthene	0.000	0	N.D. ppm
16) Benzo(k)Fluoranthene	0.000	0	N.D. ppm
17) Benzo(a)Pyrene	0.000	0	N.D. ppm
18) Indeno(1,2,3-cd)Pyrene	0.000	0	N.D. ppm
19) Dibenzo(ah)Anthracene	0.000	0	N.D. ppm
20) Benzo(ghi)Perylene	0.000	0	N.D. ppm
21) H C11-C22 Aromatics (un...	10.000	11517524	17.744 ppm
23) H C9-C18 Aliphatics #2	7.353	5012676	5.089 ppm
25) C20 #2	0.000	0	N.D. ppm
26) C28 #2	0.000	0	N.D. ppm
27) H C19-C36 Aliphatics #2	17.000	8082310	7.524 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

9.1.7

9

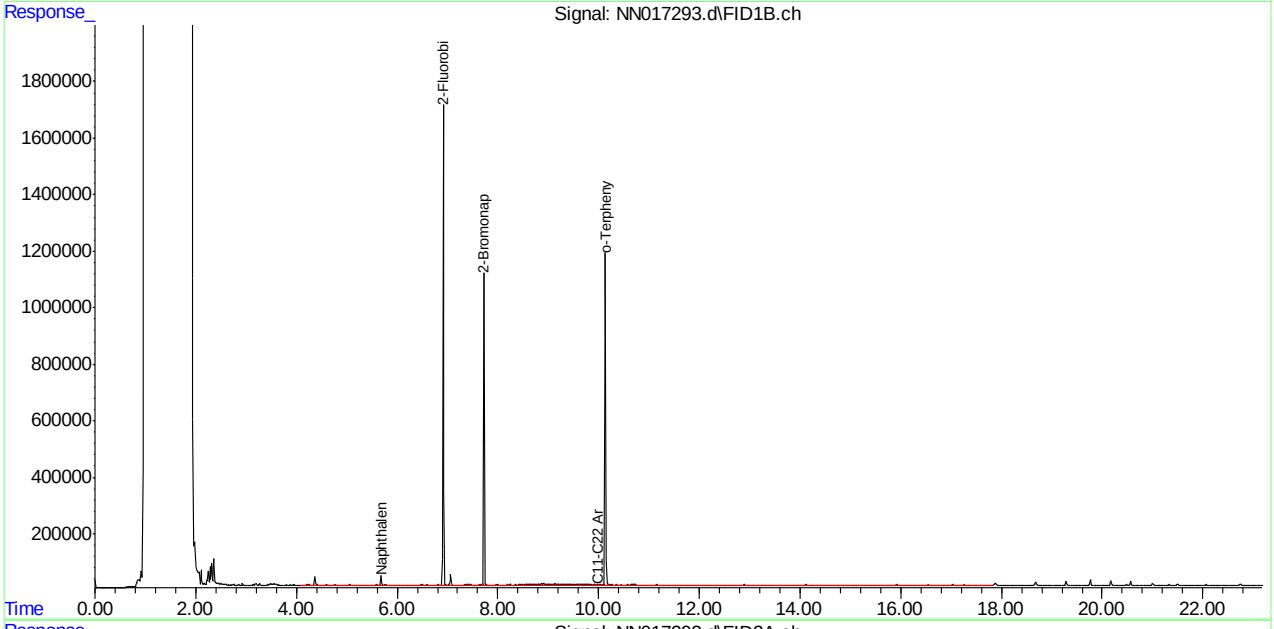
SGS ACCUTEST FA40754

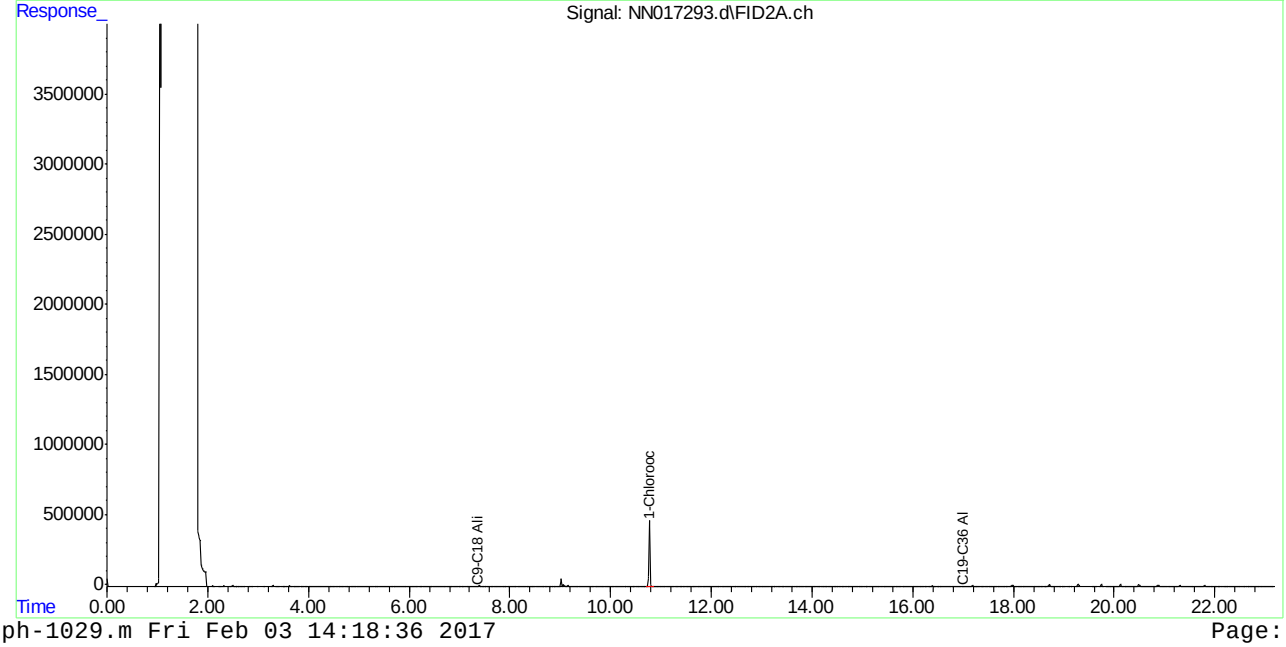
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017293.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 3 Feb 2017 1:52 am
Operator : mayrag
Sample : fa40754-7 Inst : FID 7
Misc : op63636,gnn873,800,,,2,1,water
ALS Vial : 20 (Sig #1); 70 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 09:52:44 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





maeph-1029.m Fri Feb 03 14:18:36 2017 Page: 2

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
02/03/17 15:00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017281.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 2 Feb 2017 7:57 pm
Operator : mayrag
Sample : op63636-mb Inst : FID 7
Misc : op63636,gnn873,1000,,,2,1,water
ALS Vial : 10 (Sig #1); 60 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 13:43:12 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.915	15872555	19.056	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 95.28%			
5) S 2-Bromonaphthalene	7.724	10844001	17.116	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 85.58%			
10) S o-Terphenyl	10.135	16435543	15.974	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 79.87%			
24) S 1-Chlorooctadecane #2	10.773	8400965	11.475	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 57.38%			
28) s Naphthalene #2	0.000	0	N.D.	ppm	
29) s 2-Methylnaphthalene #2	0.000	0	N.D.	ppm	
Target Compounds					
1) Naphthalene	5.680	403016	0.391	ppm	m
2) 2-Methylnaphthalene	0.000	0	N.D.	ppm	
4) Acenaphthylene	0.000	0	N.D.	ppm	
6) Acenaphthene	0.000	0	N.D.	ppm	
7) Fluorene	0.000	0	N.D.	ppm	
8) Phenanthrene	0.000	0	N.D.	ppm	
9) Anthracene	0.000	0	N.D.	ppm	
11) Fluoranthene	0.000	0	N.D.	ppm	
12) Pyrene	0.000	0	N.D.	ppm	
13) Benzo(a)Anthracene	0.000	0	N.D.	ppm	
14) Chrysene	0.000	0	N.D.	ppm	
15) Benzo(b)Fluoranthene	0.000	0	N.D.	ppm	
16) Benzo(k)Fluoranthene	0.000	0	N.D.	ppm	
17) Benzo(a)Pyrene	18.679	378686	0.411	ppm	m
18) Indeno(1,2,3-cd)Pyrene	0.000	0	N.D.	ppm	
19) Dibenzo(ah)Anthracene	0.000	0	N.D.	ppm	
20) Benzo(ghi)Perylene	0.000	0	N.D.	ppm	
21) H C11-C22 Aromatics (un...	10.000	10269038	15.817	ppm	
23) H C9-C18 Aliphatics #2	7.353	5534050	5.618	ppm	
25) C20 #2	0.000	0	N.D.	ppm	
26) C28 #2	0.000	0	N.D.	ppm	
27) H C19-C36 Aliphatics #2	17.000	7591182	7.067	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

9.2.1
9

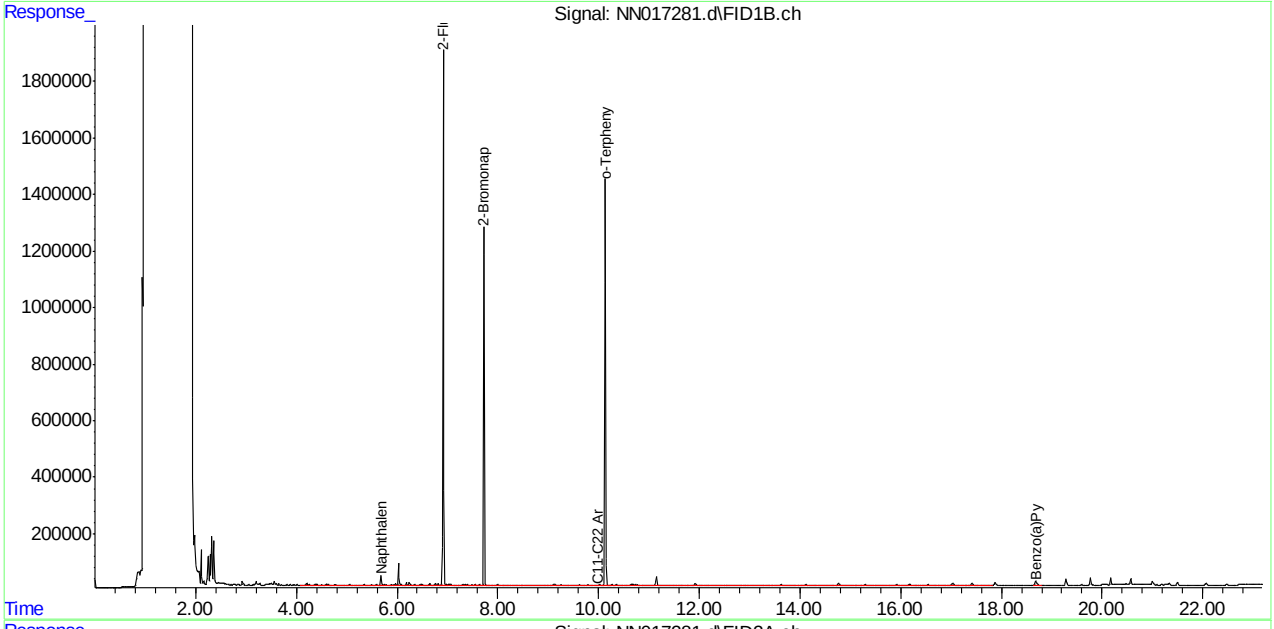
SGS ACCUTEST FA40754

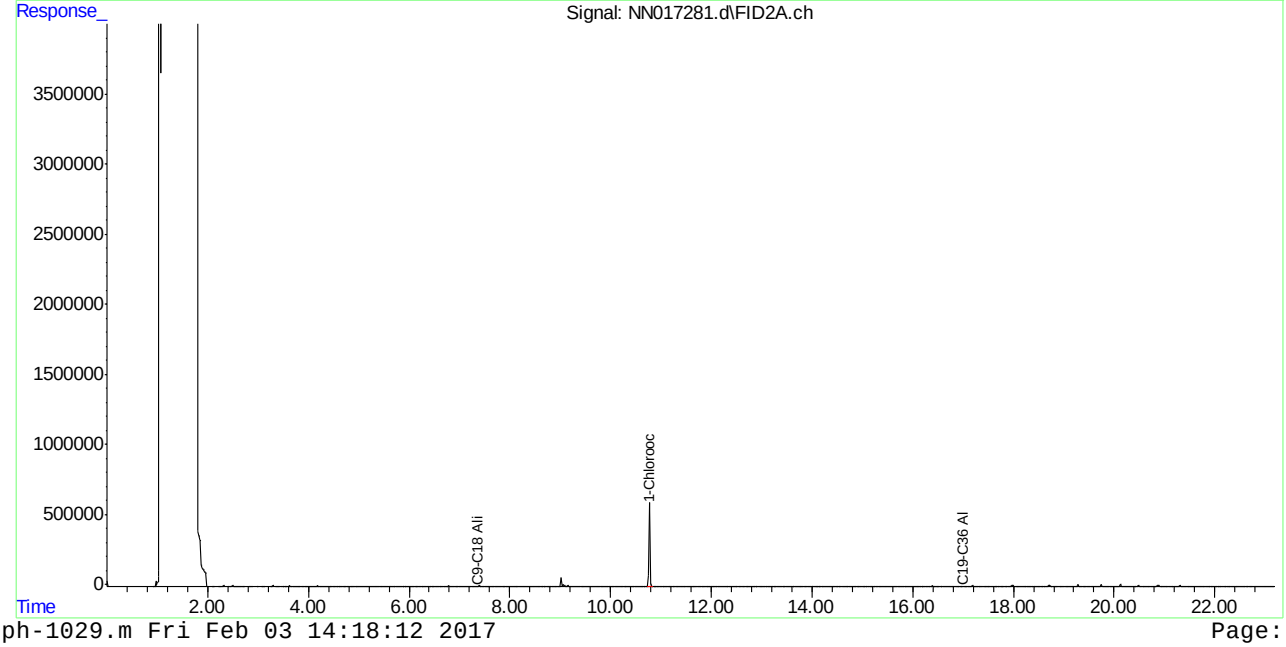
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017281.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 2 Feb 2017 7:57 pm
Operator : mayrag
Sample : op63636-mb Inst : FID 7
Misc : op63636,gnn873,1000,,,2,1,water
ALS Vial : 10 (Sig #1); 60 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 13:43:12 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





SGS ACCUTEST FA40754

Manual Integration Approval Summary

Sample Number:	OP63636-MB	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN017281.D	**Analyst approved:**	02/03/17 14:10 Mayra Gonzalez
Injection Time:	02/02/17 19:57	**Supervisor approved:**	02/03/17 15:00 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	1	5.68	Poorly defined baseline
Benzo(a)pyrene	50-32-8	1	18.68	Poorly defined baseline

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017355.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 11:59 am
Operator : mayrag
Sample : op63645-mb Inst : FID 7
Misc : op63645,gnn877,20.0,,,2,1,soil
ALS Vial : 3 (Sig #1); 53 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 16:58:16 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.905	20406305	24.499	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 122.50%			
5) S 2-Bromonaphthalene	7.715	14116645	22.397	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 111.99%			
10) S o-Terphenyl	10.122	14156781	13.759	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 68.80%			
24) S 1-Chlorooctadecane #2	10.732	9067000	12.385	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 61.92%			
28) s Naphthalene #2	0.000	0	N.D.	ppm	
29) s 2-Methylnaphthalene #2	0.000	0	N.D.	ppm	
Target Compounds					
1) Naphthalene	0.000	0	N.D.	ppm	d
2) 2-Methylnaphthalene	0.000	0	N.D.	ppm	
4) Acenaphthylene	0.000	0	N.D.	ppm	d
6) Acenaphthene	0.000	0	N.D.	ppm	d
7) Fluorene	0.000	0	N.D.	ppm	
8) Phenanthrene	0.000	0	N.D.	ppm	
9) Anthracene	0.000	0	N.D.	ppm	
11) Fluoranthene	0.000	0	N.D.	ppm	
12) Pyrene	0.000	0	N.D.	ppm	
13) Benzo(a)Anthracene	0.000	0	N.D.	ppm	
14) Chrysene	0.000	0	N.D.	ppm	
15) Benzo(b)Fluoranthene	0.000	0	N.D.	ppm	
16) Benzo(k)Fluoranthene	0.000	0	N.D.	ppm	
17) Benzo(a)Pyrene	0.000	0	N.D.	ppm	
18) Indeno(1,2,3-cd)Pyrene	0.000	0	N.D.	ppm	
19) Dibenzo(ah)Anthracene	0.000	0	N.D.	ppm	
20) Benzo(ghi)Perylene	0.000	0	N.D.	ppm	
21) H C11-C22 Aromatics (un...	5.669	16753679	25.832	ppm	
23) H C9-C18 Aliphatics #2	9.044	5508806	5.592	ppm	
25) C20 #2	0.000	0	N.D.	ppm	
26) C28 #2	0.000	0	N.D.	ppm	
27) H C19-C36 Aliphatics #2	9.585	28803803	26.815	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

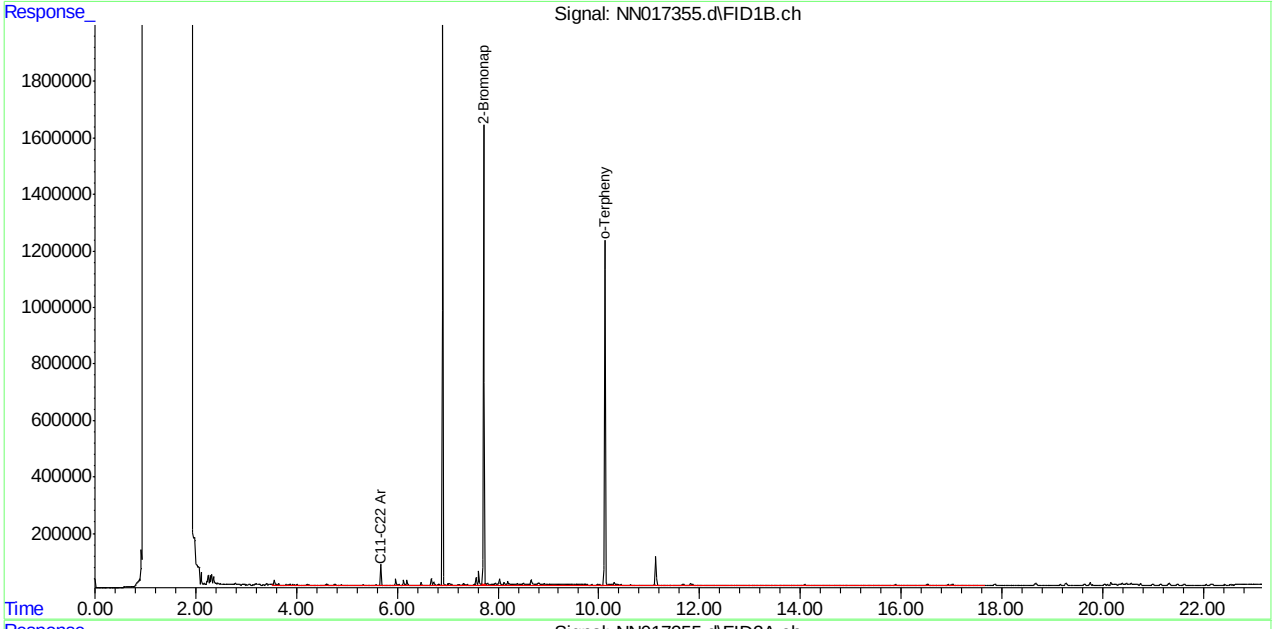
SGS ACCUTEST FA40754

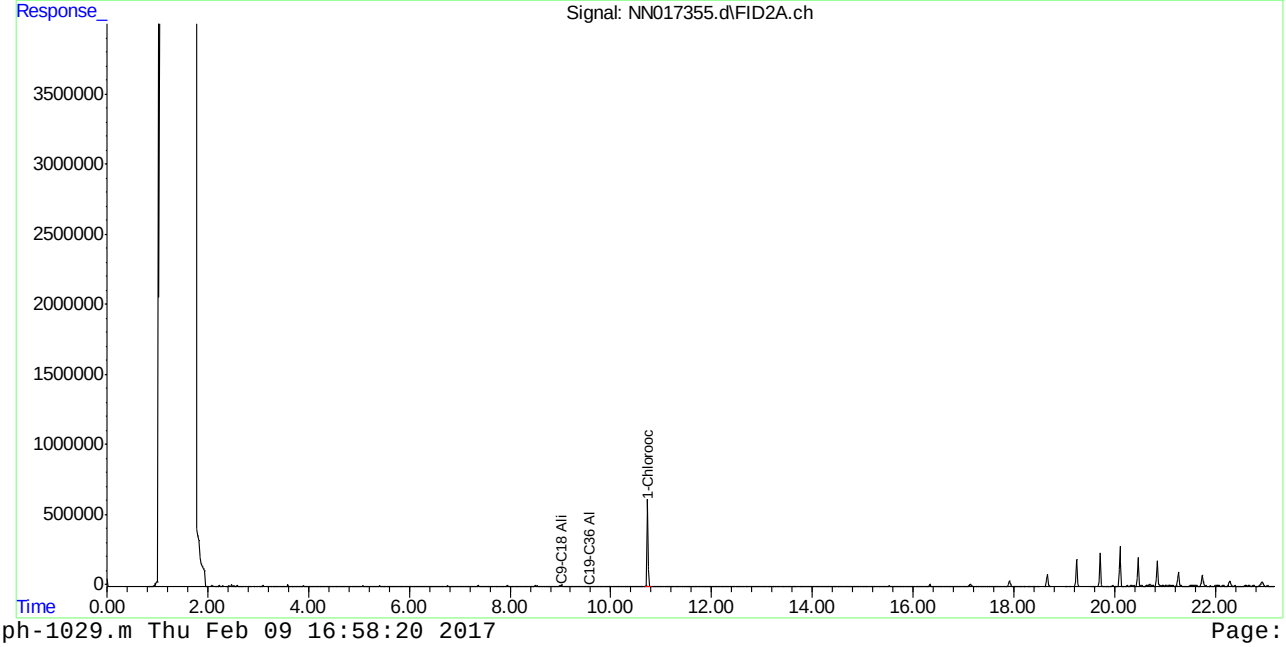
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017355.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 11:59 am
Operator : mayrag
Sample : op63645-mb Inst : FID 7
Misc : op63645,gnn877,20.0,,,2,1,soil
ALS Vial : 3 (Sig #1); 53 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 16:58:16 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017282.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 2 Feb 2017 8:27 pm
Operator : mayrag
Sample : op63636-bs Inst : FID 7
Misc : op63636,gnn873,1000,,,2,1,water
ALS Vial : 11 (Sig #1); 61 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 09:52:11 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S 2-Fluorobiphenyl	6.914	14694823	17.642 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	88.21%
5) S 2-Bromonaphthalene	7.725	10314539	16.267 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	81.34%
10) S o-Terphenyl	10.135	14594239	14.184 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	70.92%
24) S 1-Chlorooctadecane #2	10.773	8527157	11.648 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	58.24%
28) s Naphthalene #2	0.000	0	N.D. ppm
29) s 2-Methylnaphthalene #2	0.000	0	N.D. ppm
Target Compounds			
1) Naphthalene	5.680	29196508	28.302 ppm
2) 2-Methylnaphthalene	6.484	30599376	30.426 ppm
4) Acenaphthylene	7.582	32884509	33.057 ppm
6) Acenaphthene	7.768	34651592	31.207 ppm
7) Fluorene	8.402	35345826	34.212 ppm
8) Phenanthrene	9.636	37040226	35.749 ppm
9) Anthracene	9.714	37261833	37.288 ppm
11) Fluoranthene	11.697	38179080	36.705 ppm
12) Pyrene	12.163	39381362	37.983 ppm
13) Benzo(a)Anthracene	15.136	37444940	39.769 ppm
14) Chrysene	15.236	38424653	40.423 ppm
15) Benzo(b)Fluoranthene	17.943	38423426	39.289 ppm
16) Benzo(k)Fluoranthene	18.018	37326188	41.516 ppm
17) Benzo(a)Pyrene	18.712	36742717	39.863 ppm
18) Indeno(1,2,3-cd)Pyrene	20.389	36261187	37.878 ppm
19) Dibenzo(ah)Anthracene	20.435	36035597	44.275 ppm
20) Benzo(ghi)Perylene	20.725	35901516	40.664 ppm
21) H C11-C22 Aromatics (un...	10.000	401666218	662.086 ppm
23) H C9-C18 Aliphatics #2	7.353	155959971	158.329 ppm
25) C20 #2	9.603	30468187	33.436 ppm
26) C28 #2	13.133	30539283	33.104 ppm
27) H C19-C36 Aliphatics #2	17.000	241472750	224.801 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

9.3.1

9

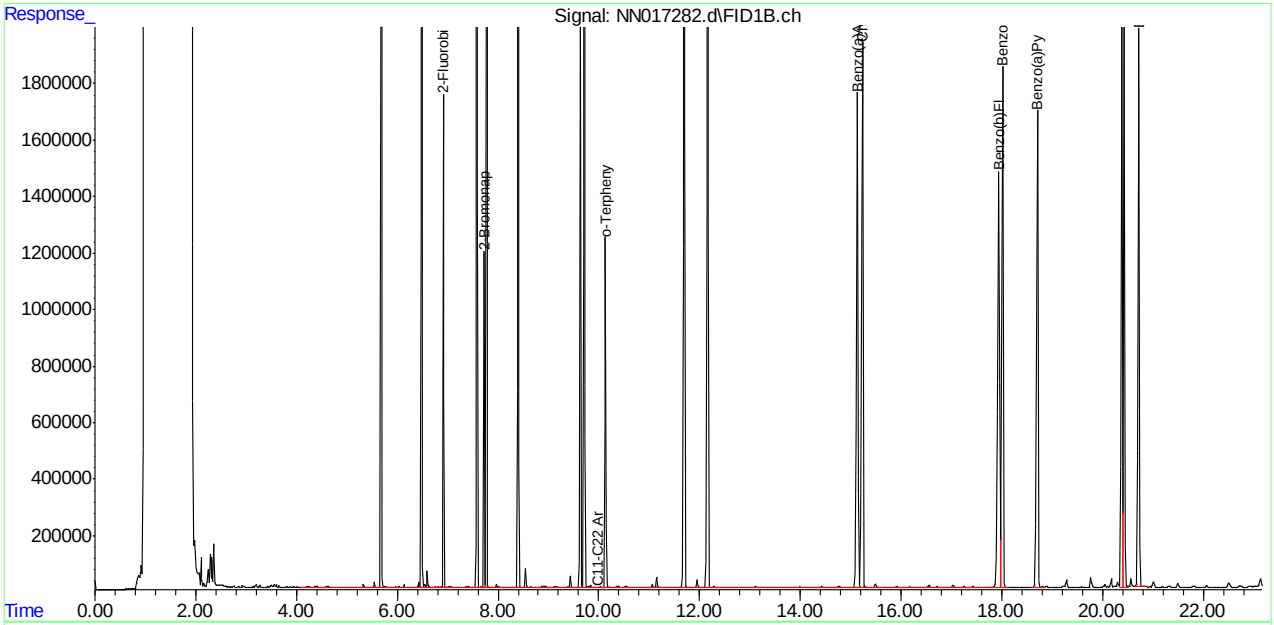
SGS ACCUTEST FA40754

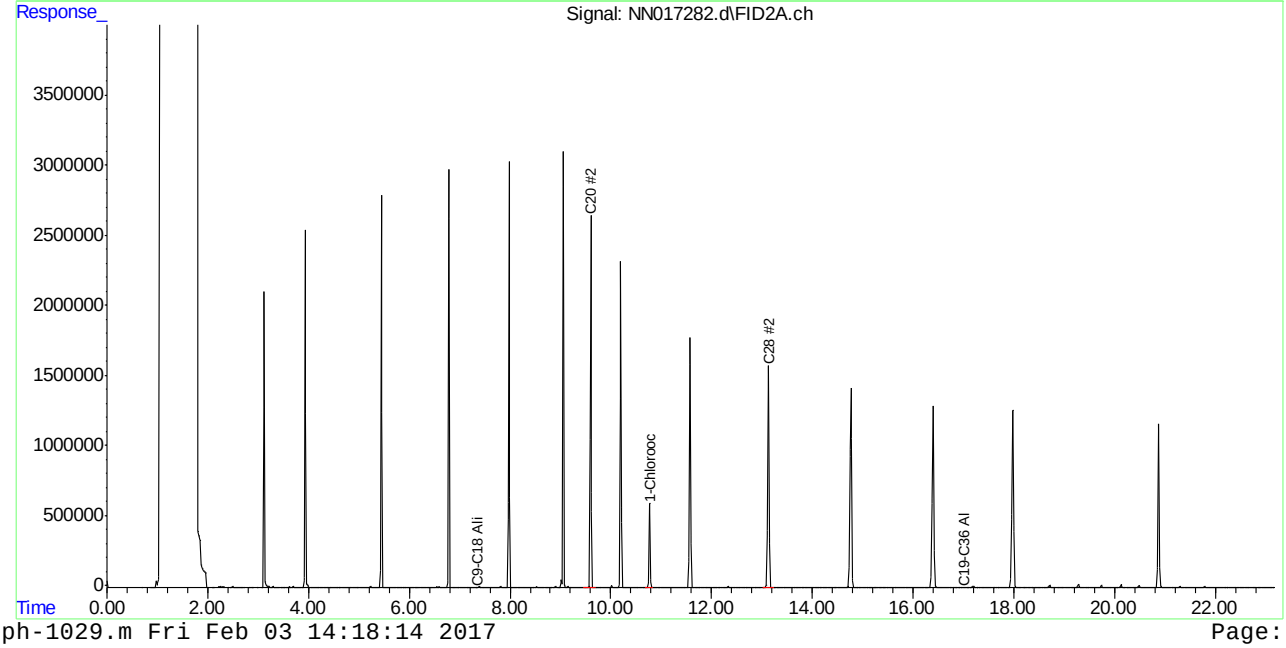
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017282.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 2 Feb 2017 8:27 pm
Operator : mayrag
Sample : op63636-bs Inst : FID 7
Misc : op63636,gnn873,1000,,,2,1,water
ALS Vial : 11 (Sig #1); 61 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 09:52:11 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017285.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 2 Feb 2017 9:56 pm
Operator : mayrag
Sample : op63636-bsd Inst : FID 7
Misc : op63636,gnn873,1000,,,2,1,water
ALS Vial : 12 (Sig #1); 62 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 09:52:20 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S 2-Fluorobiphenyl	6.915	15503335	18.613 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	93.06%
5) S 2-Bromonaphthalene	7.725	11139155	17.590 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	87.95%
10) S o-Terphenyl	10.135	16062418	15.611 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	78.06%
24) S 1-Chlorooctadecane #2	10.772	9942666	13.581 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	67.90%
28) s Naphthalene #2	0.000	0	N.D. ppm
29) s 2-Methylnaphthalene #2	0.000	0	N.D. ppm
Target Compounds			
1) Naphthalene	5.681	30992685	30.043 ppm
2) 2-Methylnaphthalene	6.486	32827508	32.641 ppm
4) Acenaphthylene	7.583	35445895	35.631 ppm
6) Acenaphthene	7.769	37372875	33.658 ppm
7) Fluorene	8.403	38242106	37.016 ppm
8) Phenanthrene	9.638	40166892	38.766 ppm
9) Anthracene	9.715	39948779	39.977 ppm
11) Fluoranthene	11.699	41397030	39.799 ppm
12) Pyrene	12.166	42685093	41.169 ppm
13) Benzo(a)Anthracene	15.139	40467421	42.979 ppm
14) Chrysene	15.239	41459556	43.616 ppm
15) Benzo(b)Fluoranthene	17.947	41508108	42.443 ppm
16) Benzo(k)Fluoranthene	18.022	40593449	45.150 ppm
17) Benzo(a)Pyrene	18.717	39712331	43.085 ppm
18) Indeno(1,2,3-cd)Pyrene	20.394	39925301	41.446 ppm
19) Dibenzo(ah)Anthracene	20.440	39571314	48.637 ppm
20) Benzo(ghi)Perylene	20.731	39524765	44.768 ppm
21) H C11-C22 Aromatics (un...	10.000	433443346	718.900 ppm
23) H C9-C18 Aliphatics #2	7.353	162150162	164.613 ppm
25) C20 #2	9.602	32500200	35.666 ppm
26) C28 #2	13.133	32563852	35.298 ppm
27) H C19-C36 Aliphatics #2	17.000	251056916	233.724 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

9.3.2

9

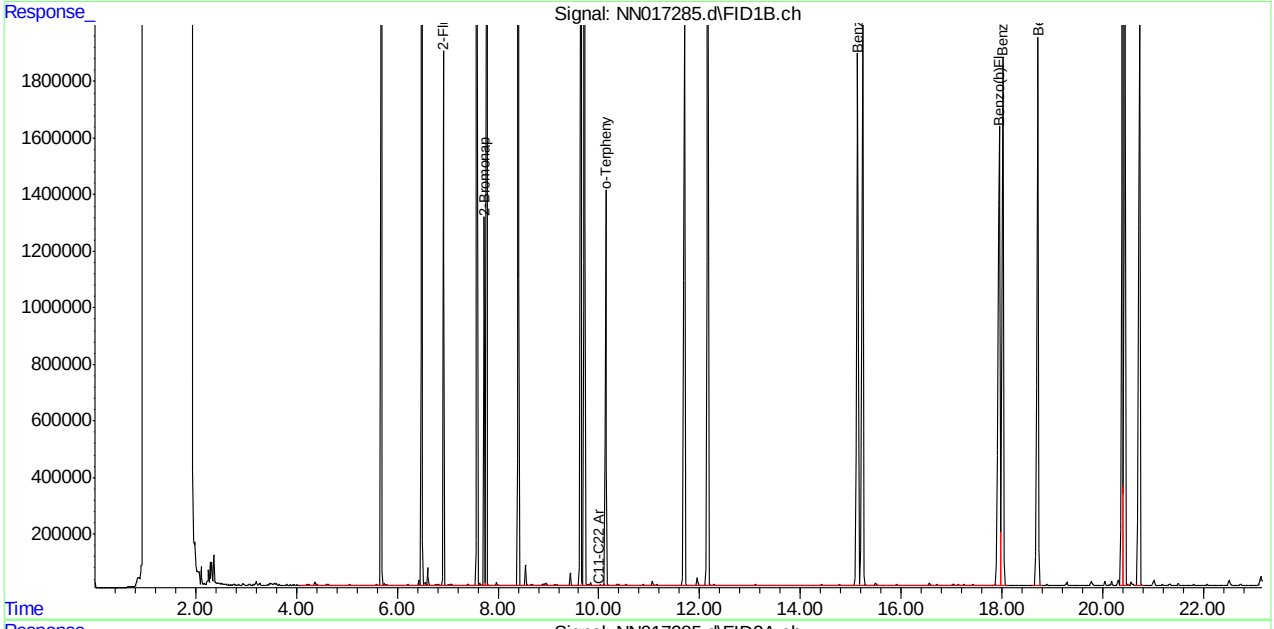
SGS ACCUTEST FA40754

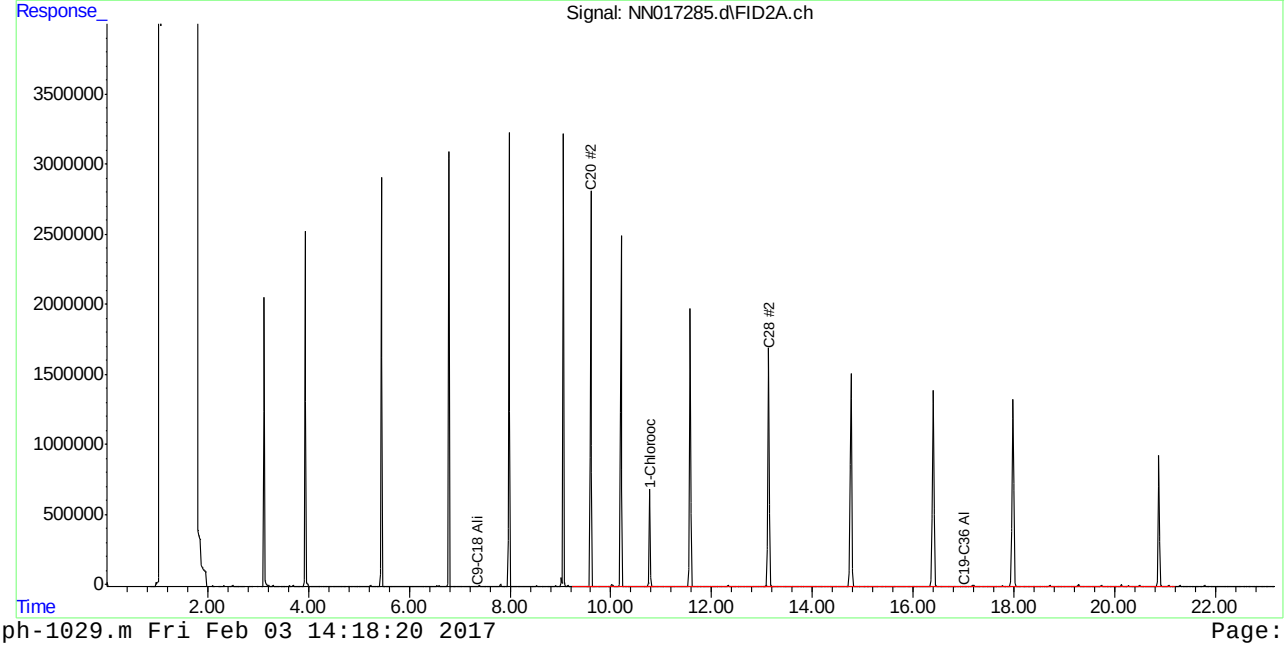
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017285.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 2 Feb 2017 9:56 pm
Operator : mayrag
Sample : op63636-bsd Inst : FID 7
Misc : op63636,gnn873,1000,,,2,1,water
ALS Vial : 12 (Sig #1); 62 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 09:52:20 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





SGS ACCUTEST FA40754

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017356.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 12:29 pm
Operator : mayrag
Sample : op63645-bs Inst : FID 7
Misc : op63645,gnn877,20.0,,,2,1,soil
ALS Vial : 4 (Sig #1); 54 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 10:49:02 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S 2-Fluorobiphenyl	6.906	21520782	25.837 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 129.19%	
5) S 2-Bromonaphthalene	7.715	15130025	24.043 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 120.22%	
10) S o-Terphenyl	10.121	15598377	15.160 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 75.80%	
24) S 1-Chlorooctadecane #2	10.732	10070419	13.756 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 68.78%	
28) s Naphthalene #2	0.000	0	N.D. ppm
29) s 2-Methylnaphthalene #2	0.000	0	N.D. ppm
Target Compounds			
1) Naphthalene	5.671	30523492	29.588 ppm
2) 2-Methylnaphthalene	6.475	31348431	31.171 ppm
4) Acenaphthylene	7.571	33728073	33.905 ppm
6) Acenaphthene	7.758	36911910	33.243 ppm
7) Fluorene	8.392	36024503	34.869 ppm
8) Phenanthrene	9.623	38684574	37.336 ppm
9) Anthracene	9.701	39182742	39.211 ppm
11) Fluoranthene	11.681	39885281	38.346 ppm
12) Pyrene	12.146	41072453	39.614 ppm
13) Benzo(a)Anthracene	15.116	38956631	41.375 ppm
14) Chrysene	15.215	39932118	42.009 ppm
15) Benzo(b)Fluoranthene	17.923	39575975	40.467 ppm
16) Benzo(k)Fluoranthene	17.997	38257968	42.553 ppm
17) Benzo(a)Pyrene	18.694	37732183	40.937 ppm
18) Indeno(1,2,3-cd)Pyrene	20.378	36850998	38.455 ppm
19) Dibenzo(ah)Anthracene	20.424	36227964	44.512 ppm
20) Benzo(ghi)Perylene	20.712	35989737	40.764 ppm
21) H C11-C22 Aromatics (un...	5.669	426873995	707.092 ppm
23) H C9-C18 Aliphatics #2	9.044	162304605	164.770 ppm
25) C20 #2	9.571	32185986	35.321 ppm
26) C28 #2	13.084	32658050	35.400 ppm
27) H C19-C36 Aliphatics #2	9.585	270404583	251.736 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

9.3.3

9

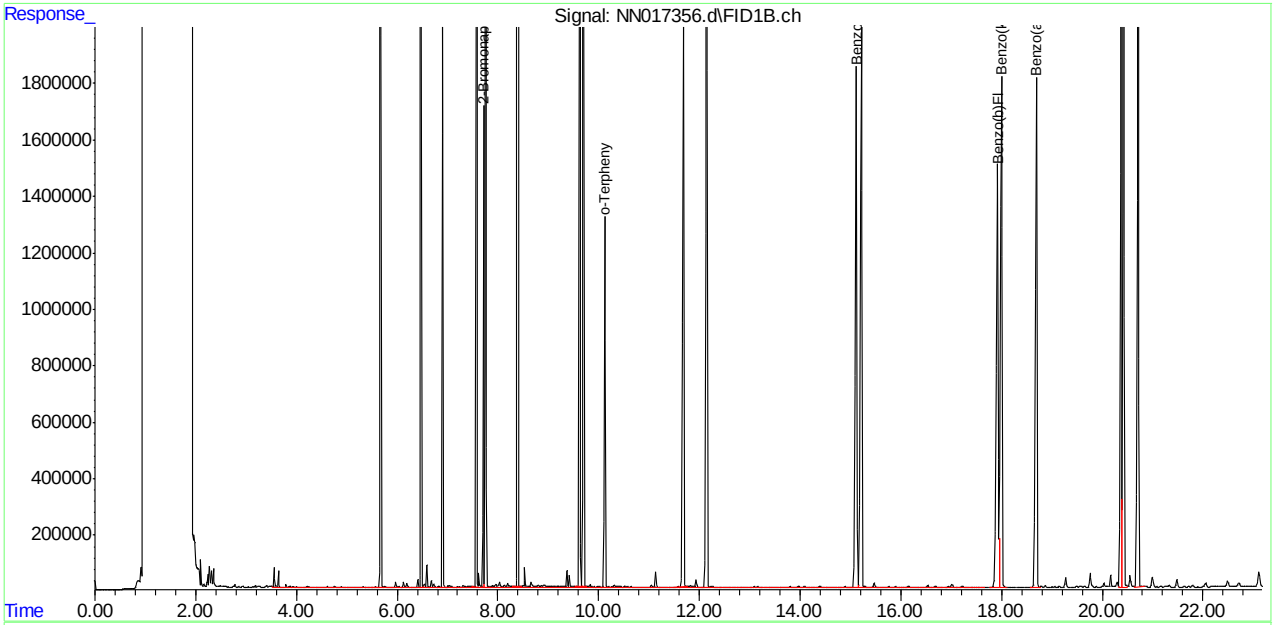
SGS ACCUTEST FA40754

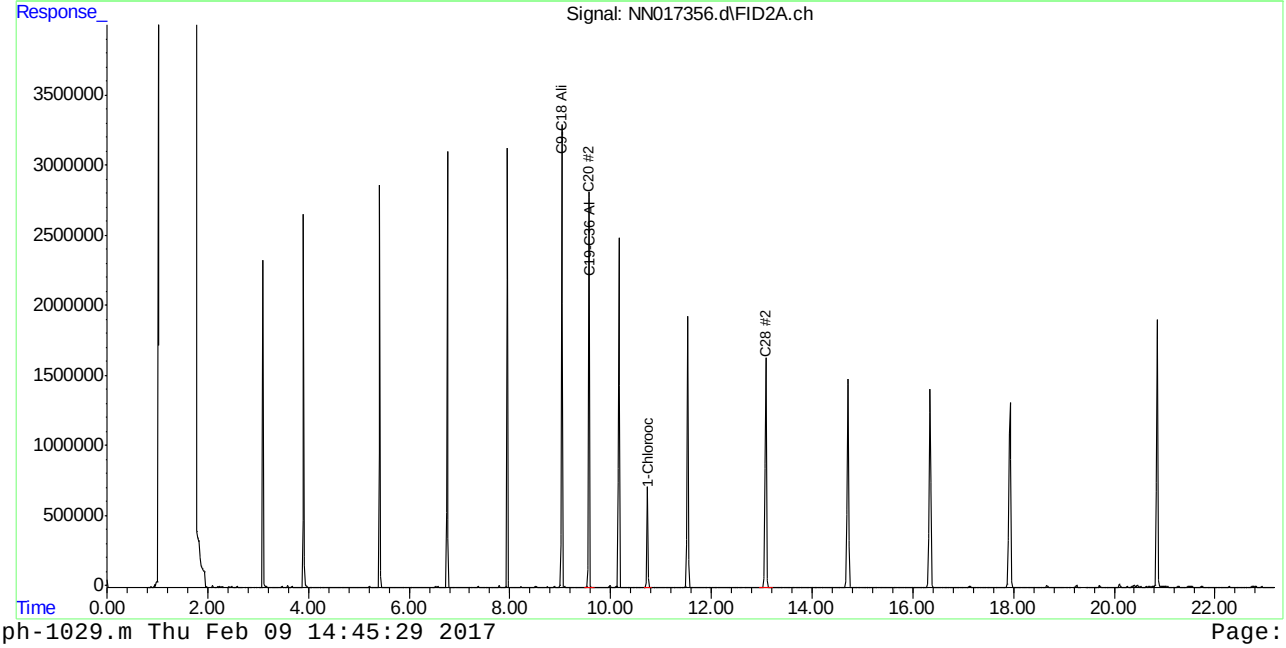
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017356.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 12:29 pm
Operator : mayrag
Sample : op63645-bs Inst : FID 7
Misc : op63645,gnn877,20.0,,,2,1,soil
ALS Vial : 4 (Sig #1); 54 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 10:49:02 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





maeph-1029.m Thu Feb 09 14:45:29 2017 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017357.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 1:00 pm
Operator : mayrag
Sample : op63645-bsd Inst : FID 7
Misc : op63645,gnn877,20.0,,,2,1,soil
ALS Vial : 5 (Sig #1); 55 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 10:49:05 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S 2-Fluorobiphenyl	6.905	14360746	17.241 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	86.20%
5) S 2-Bromonaphthalene	7.714	9961770	15.702 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	78.51%
10) S o-Terphenyl	10.121	14128858	13.732 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	68.66%
24) S 1-Chlorooctadecane #2	10.731	9740704	13.305 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	66.53%
28) s Naphthalene #2	0.000	0	N.D. ppm
29) s 2-Methylnaphthalene #2	0.000	0	N.D. ppm
Target Compounds			
1) Naphthalene	5.671	28395051	27.525 ppm
2) 2-Methylnaphthalene	6.474	28812121	28.649 ppm
4) Acenaphthylene	7.571	30773902	30.935 ppm
6) Acenaphthene	7.758	33538484	30.205 ppm
7) Fluorene	8.391	32881120	31.827 ppm
8) Phenanthrene	9.623	35416784	34.182 ppm
9) Anthracene	9.701	35942643	35.968 ppm
11) Fluoranthene	11.679	37032568	35.603 ppm
12) Pyrene	12.144	38174119	36.819 ppm
13) Benzo(a)Anthracene	15.114	36394866	38.654 ppm
14) Chrysene	15.214	37298299	39.238 ppm
15) Benzo(b)Fluoranthene	17.920	38052088	38.909 ppm
16) Benzo(k)Fluoranthene	17.997	36410651	40.498 ppm
17) Benzo(a)Pyrene	18.693	36775259	39.898 ppm
18) Indeno(1,2,3-cd)Pyrene	20.377	35186807	36.823 ppm
19) Dibenzo(ah)Anthracene	20.424	35148466	43.181 ppm
20) Benzo(ghi)Perylene	20.711	34443307	39.013 ppm
21) H C11-C22 Aromatics (un...	5.669	396222902	652.430 ppm
23) H C9-C18 Aliphatics #2	9.044	156394226	158.770 ppm
25) C20 #2	9.570	30120515	33.055 ppm
26) C28 #2	13.082	31084266	33.694 ppm
27) H C19-C36 Aliphatics #2	9.585	255765318	238.107 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

9.3.4

9

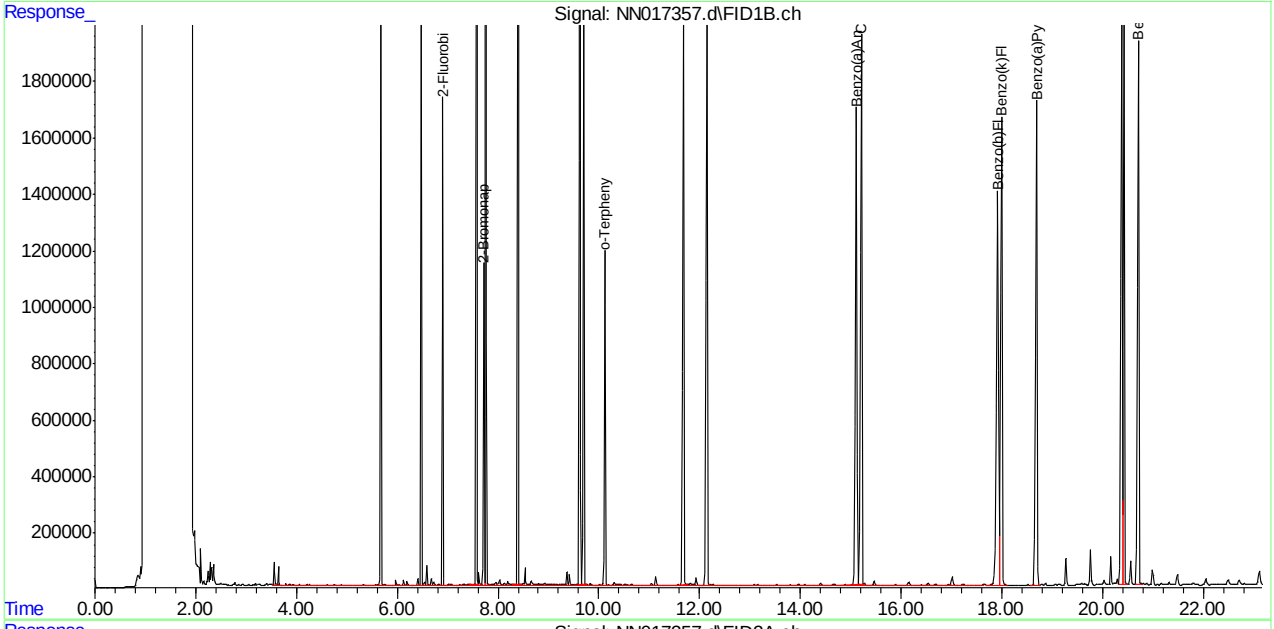
SGS ACCUTEST FA40754

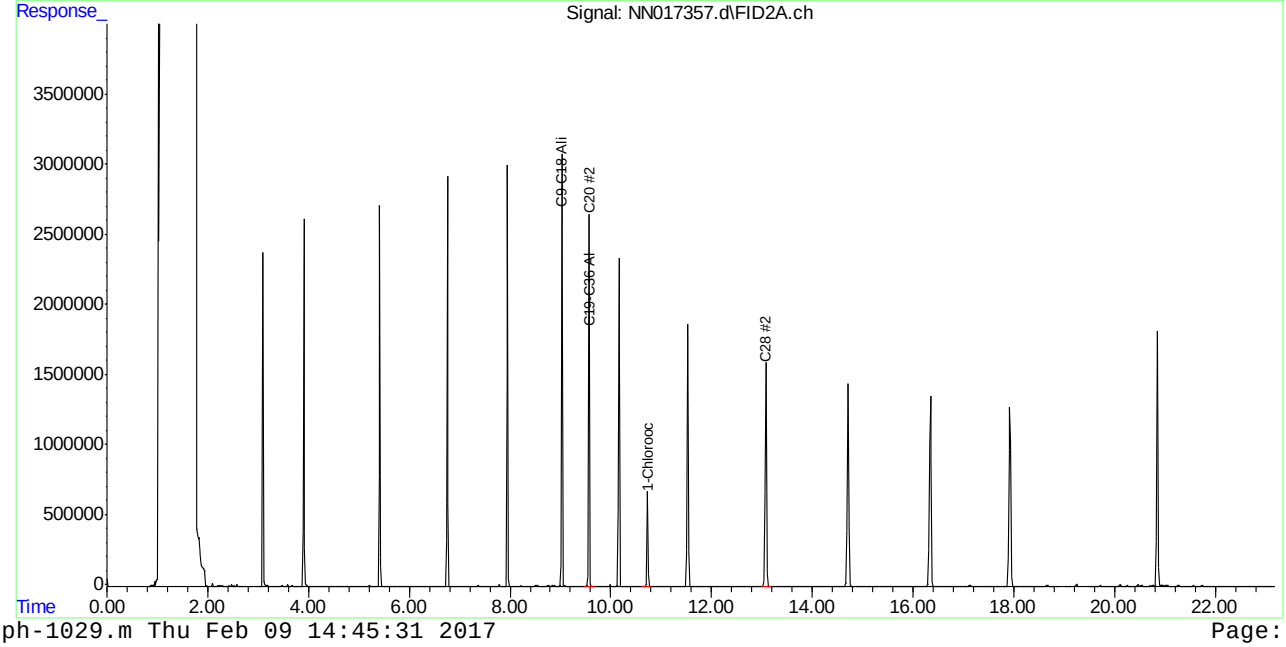
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017357.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 1:00 pm
Operator : mayrag
Sample : op63645-bsd Inst : FID 7
Misc : op63645,gnn877,20.0,,,2,1,soil
ALS Vial : 5 (Sig #1); 55 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 10:49:05 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





maeph-1029.m Thu Feb 09 14:45:31 2017 Page: 2

SGS ACCUTEST FA40754

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/10/17 16:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN879_0210\
Data File : NN017407.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 10 Feb 2017 2:27 pm
Operator : mayrag
Sample : op63645-ms Inst : FID 7
Misc : op63645,gnn879,19.6,,,2,1,soil
ALS Vial : 7 (Sig #1); 57 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 10 15:44:44 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.905	13058903	15.678	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 78.39%			
5) S 2-Bromonaphthalene	7.715	9395892	14.797	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 73.98%			
10) S o-Terphenyl	10.122	11917869	11.583	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 57.92%			
24) S 1-Chlorooctadecane #2	10.729	8332449	11.382	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 56.91%			
28) s Naphthalene #2	0.000	0	N.D.	ppm	
29) s 2-Methylnaphthalene #2	0.000	0	N.D.	ppm	
Target Compounds					
1) Naphthalene	5.671	24194267	23.453	ppm	
2) 2-Methylnaphthalene	6.475	25725416	25.580	ppm	
4) Acenaphthylene	7.572	28567288	28.717	ppm	
6) Acenaphthene	7.758	29391688	26.470	ppm	
7) Fluorene	8.392	29331458	28.391	ppm	
8) Phenanthrene	9.624	30939766	29.861	ppm	
9) Anthracene	9.701	30091366	30.113	ppm	
11) Fluoranthene	11.681	33418144	32.128	ppm	
12) Pyrene	12.145	32758300	31.595	ppm	
13) Benzo(a)Anthracene	15.115	29963461	31.823	ppm	
14) Chrysene	15.212	30540344	32.129	ppm	
15) Benzo(b)Fluoranthene	17.920	31058273	31.758	ppm	
16) Benzo(k)Fluoranthene	17.995	29375394	32.673	ppm	
17) Benzo(a)Pyrene	18.691	29328128	31.819	ppm	
18) Indeno(1,2,3-cd)Pyrene	20.376	28322737	30.000	ppm	m
19) Dibenzo(ah)Anthracene	20.423	27870619	34.214	ppm	m
20) Benzo(ghi)Perylene	20.709	26576962	30.103	ppm	m
21) H C11-C22 Aromatics (un...	5.669	386627839	635.461	ppm	
23) H C9-C18 Aliphatics #2	9.044	129332011	131.297	ppm	
25) C20 #2	9.567	23953042	26.286	ppm	
26) C28 #2	13.077	24061330	26.082	ppm	
27) H C19-C36 Aliphatics #2	9.585	251500593	234.137	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

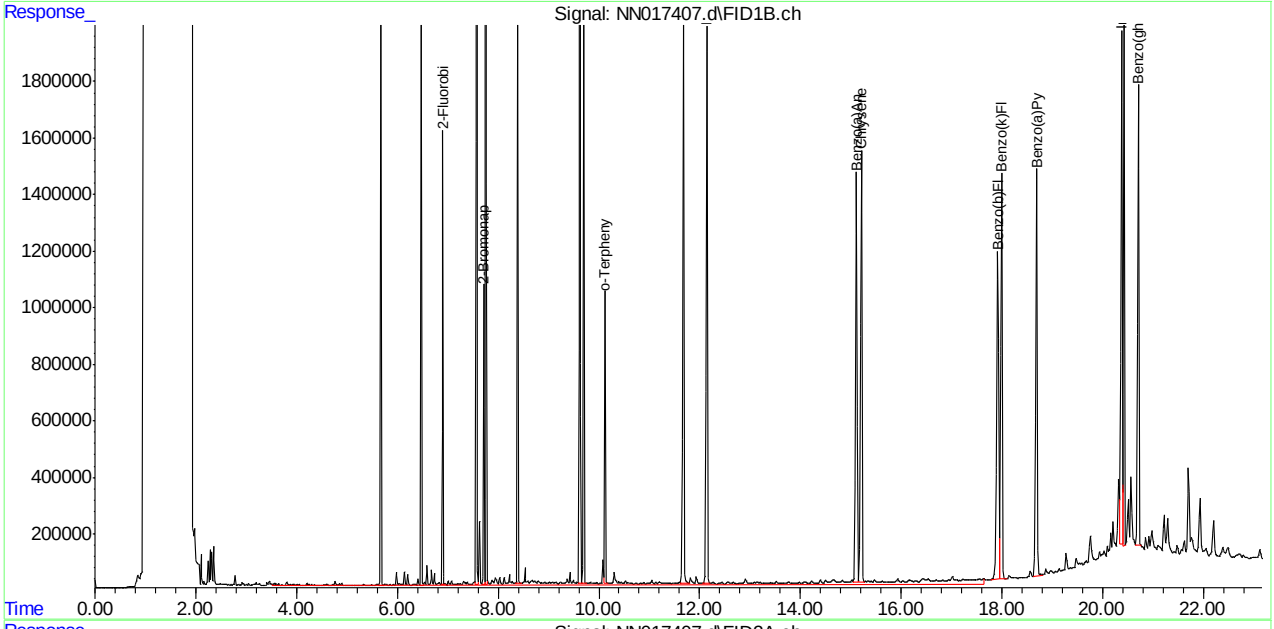
SGS ACCUTEST FA40754

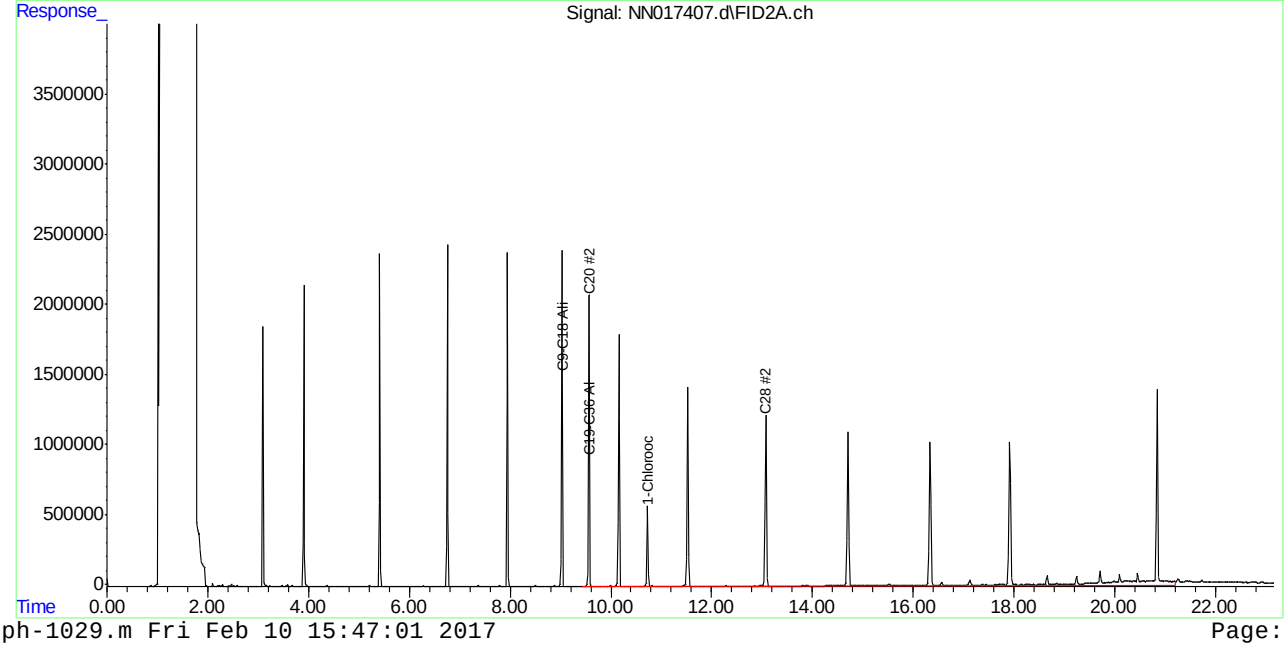
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN879_0210\
Data File : NN017407.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 10 Feb 2017 2:27 pm
Operator : mayrag
Sample : op63645-ms Inst : FID 7
Misc : op63645,gnn879,19.6,,,2,1,soil
ALS Vial : 7 (Sig #1); 57 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 10 15:44:44 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Manual Integration Approval Summary

Sample Number:	OP63645-MS	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN017407.D	**Analyst approved:**	02/10/17 16:09 Mayra Gonzalez
Injection Time:	02/10/17 14:27	**Supervisor approved:**	02/10/17 16:34 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5	1	20.38	Poorly defined baseline
Dibenzo(a,h)anthracene	53-70-3	1	20.42	Poorly defined baseline
Benzo(g,h,i)perylene	191-24-2	1	20.71	Poorly defined baseline

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/10/17 16:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN879_0210\
Data File : NN017408.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 10 Feb 2017 2:57 pm
Operator : mayrag
Sample : op63645-msd Inst : FID 7
Misc : op63645,gnn879,20.0,,,2,1,soil
ALS Vial : 8 (Sig #1); 58 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 10 15:45:40 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.905	13045504	15.662	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 78.31%			
5) S 2-Bromonaphthalene	7.715	9356577	14.735	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 73.67%			
10) S o-Terphenyl	10.122	11187964	10.874	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 54.37%			
24) S 1-Chlorooctadecane #2	10.729	7138377	9.751	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 48.75%			
28) s Naphthalene #2	0.000	0	N.D.	ppm	
29) s 2-Methylnaphthalene #2	0.000	0	N.D.	ppm	
Target Compounds					
1) Naphthalene	5.671	21386403	20.731	ppm	
2) 2-Methylnaphthalene	6.475	22878879	22.749	ppm	
4) Acenaphthylene	7.572	25711112	25.846	ppm	
6) Acenaphthene	7.758	26856157	24.187	ppm	
7) Fluorene	8.392	26726584	25.870	ppm	
8) Phenanthrene	9.624	30684909	29.615	ppm	
9) Anthracene	9.701	28168310	28.188	ppm	
11) Fluoranthene	11.682	34099084	32.783	ppm	
12) Pyrene	12.146	33108490	31.933	ppm	
13) Benzo(a)Anthracene	15.115	29039078	30.841	ppm	
14) Chrysene	15.213	29768959	31.317	ppm	
15) Benzo(b)Fluoranthene	17.921	29828649	30.500	ppm	
16) Benzo(k)Fluoranthene	17.993	27970299	31.110	ppm	
17) Benzo(a)Pyrene	18.692	27807480	30.169	ppm	
18) Indeno(1,2,3-cd)Pyrene	20.377	26898459	28.564	ppm	m
19) Dibenzo(ah)Anthracene	20.424	26129879	32.071	ppm	m
20) Benzo(ghi)Perylene	20.710	25056438	28.380	ppm	m
21) H C11-C22 Aromatics (un...	5.669	375749253	616.303	ppm	
23) H C9-C18 Aliphatics #2	9.044	105293176	106.893	ppm	
25) C20 #2	9.566	19531423	21.434	ppm	
26) C28 #2	13.076	19575984	21.220	ppm	
27) H C19-C36 Aliphatics #2	9.585	224055307	208.586	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

9.4.2
9

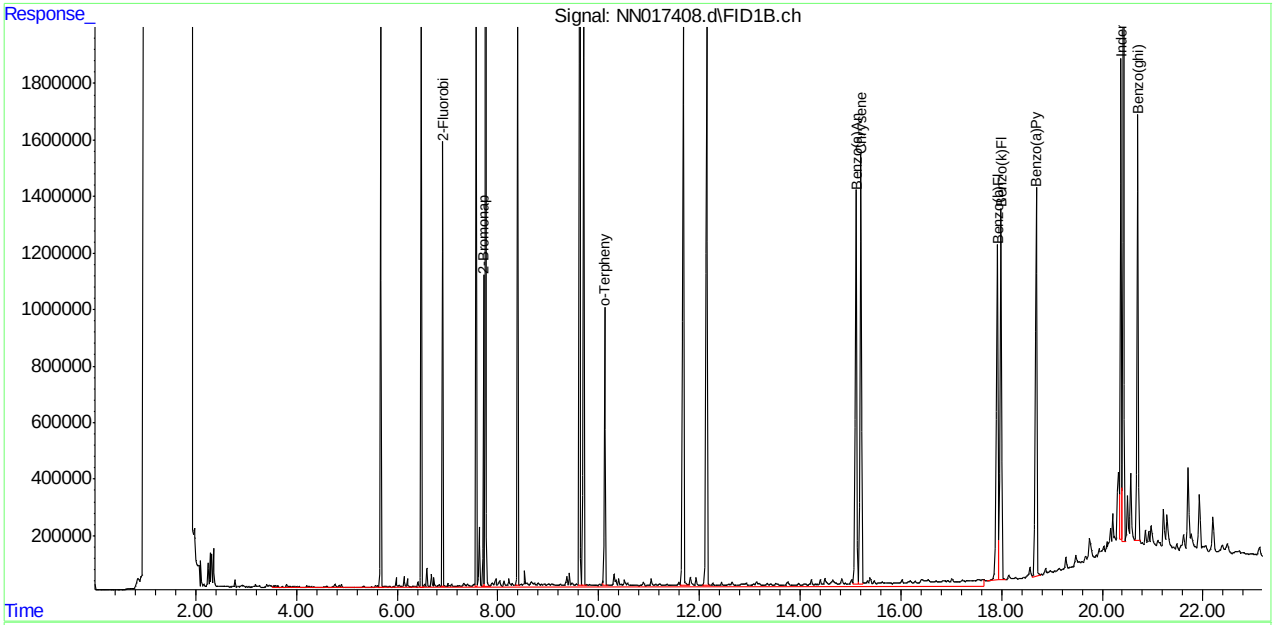
SGS ACCUTEST FA40754

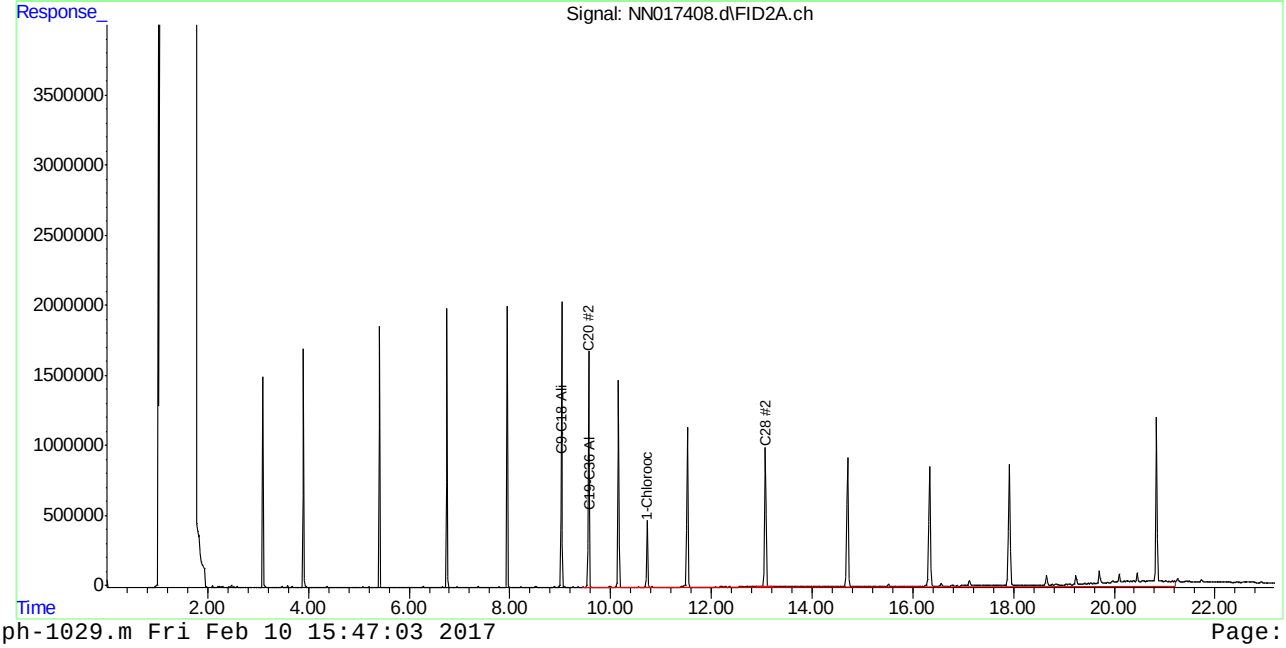
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN879_0210\
Data File : NN017408.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 10 Feb 2017 2:57 pm
Operator : mayrag
Sample : op63645-msd Inst : FID 7
Misc : op63645,gnn879,20.0,,,2,1,soil
ALS Vial : 8 (Sig #1); 58 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 10 15:45:40 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





SGS ACCUTEST FA40754

Manual Integration Approval Summary

Sample Number:	OP63645-MSD	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN017408.D	**Analyst approved:**	02/10/17 16:09 Mayra Gonzalez
Injection Time:	02/10/17 14:57	**Supervisor approved:**	02/10/17 16:34 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5	1	20.38	Poorly defined baseline
Dibenzo(a,h)anthracene	53-70-3	1	20.42	Poorly defined baseline
Benzo(g,h,i)perylene	191-24-2	1	20.71	Poorly defined baseline

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/07/17 14:17

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017287.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 2 Feb 2017 10:55 pm
Operator : mayrag
Sample : op63636-dup Inst : FID 7
Misc : op63636,gnn873,950,,,2,1,water
ALS Vial : 14 (Sig #1); 64 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 13:48:38 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.914	14141185	16.978	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 84.89%			
5) S 2-Bromonaphthalene	7.724	9892417	15.591	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 77.95%			
10) S o-Terphenyl	10.135	14268197	13.868	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 69.34%			
24) S 1-Chlorooctadecane #2	10.772	7557087	10.323	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 51.62%			
28) s Naphthalene #2	0.000	0	N.D.	ppm	
29) s 2-Methylnaphthalene #2	0.000	0	N.D.	ppm	
Target Compounds					
1) Naphthalene	5.680	410837	0.398	ppm	m
2) 2-Methylnaphthalene	0.000	0	N.D.	ppm	
4) Acenaphthylene	0.000	0	N.D.	ppm	
6) Acenaphthene	0.000	0	N.D.	ppm	
7) Fluorene	0.000	0	N.D.	ppm	
8) Phenanthrene	0.000	0	N.D.	ppm	
9) Anthracene	0.000	0	N.D.	ppm	
11) Fluoranthene	0.000	0	N.D.	ppm	
12) Pyrene	0.000	0	N.D.	ppm	
13) Benzo(a)Anthracene	0.000	0	N.D.	ppm	
14) Chrysene	0.000	0	N.D.	ppm	
15) Benzo(b)Fluoranthene	0.000	0	N.D.	ppm	
16) Benzo(k)Fluoranthene	0.000	0	N.D.	ppm	
17) Benzo(a)Pyrene	0.000	0	N.D.	ppm	
18) Indeno(1,2,3-cd)Pyrene	0.000	0	N.D.	ppm	
19) Dibenzo(ah)Anthracene	0.000	0	N.D.	ppm	
20) Benzo(ghi)Perylene	0.000	0	N.D.	ppm	
21) H C11-C22 Aromatics (un...	10.000	20227491	31.205	ppm	
23) H C9-C18 Aliphatics #2	7.353	5247420	5.327	ppm	
25) C20 #2	0.000	0	N.D.	ppm	
26) C28 #2	0.000	0	N.D.	ppm	
27) H C19-C36 Aliphatics #2	17.000	7639274	7.112	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

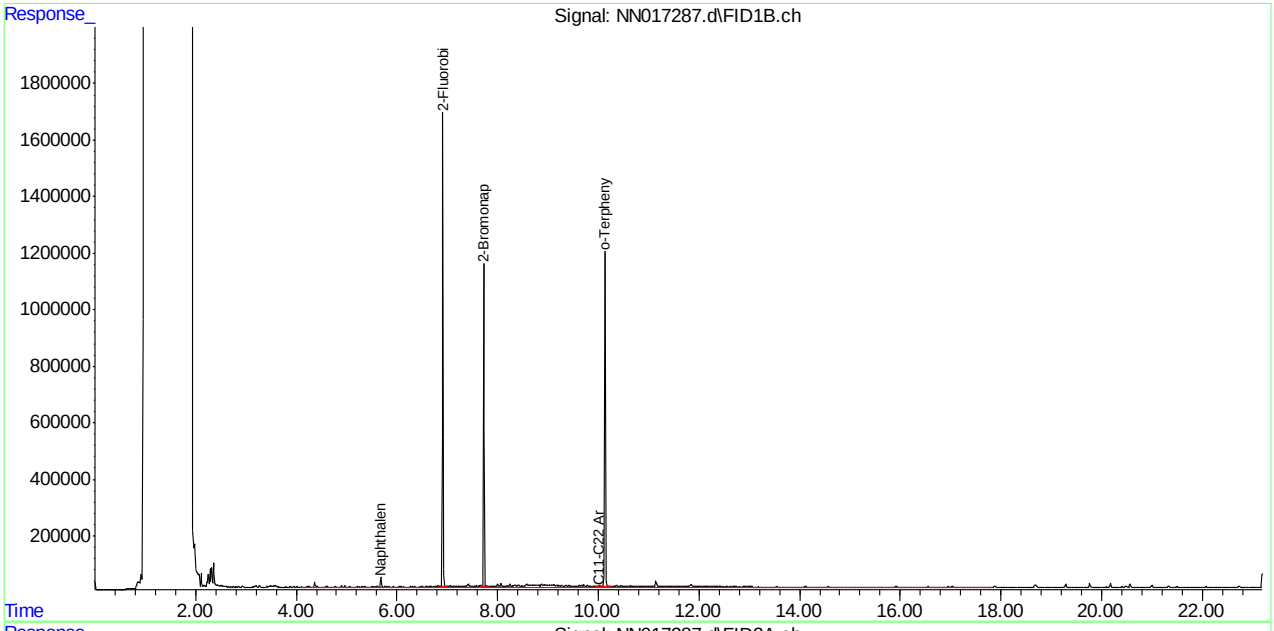
9.5.1
9

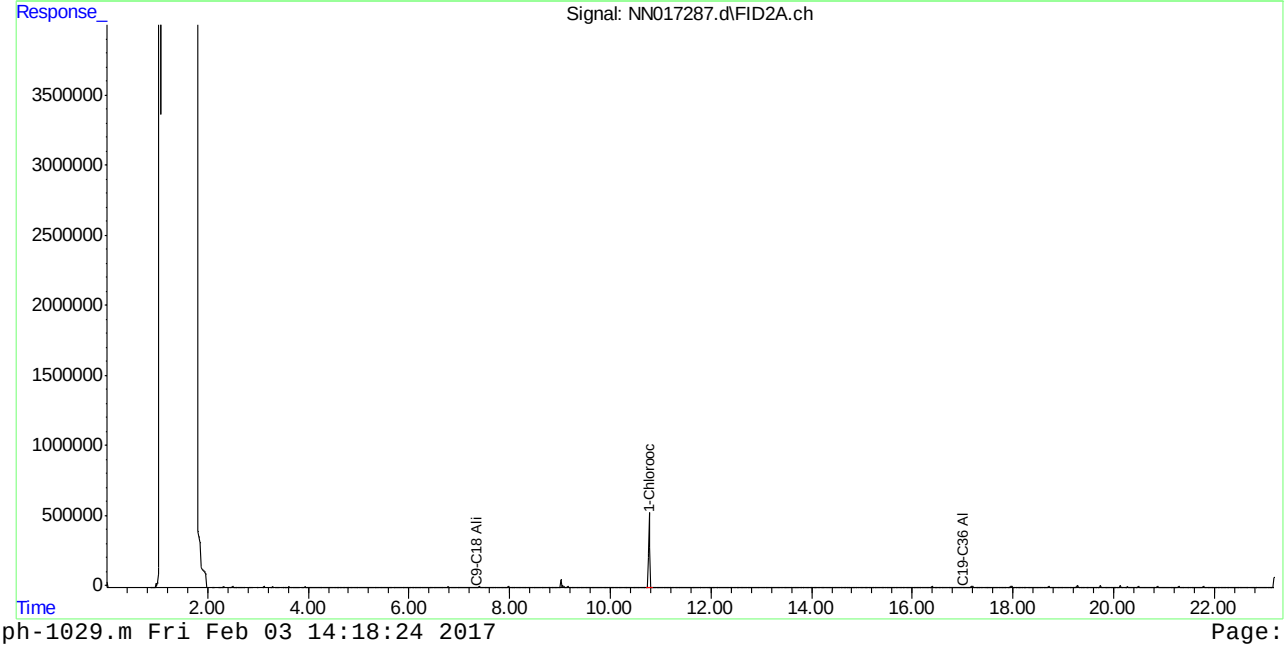
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017287.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 2 Feb 2017 10:55 pm
Operator : mayrag
Sample : op63636-dup Inst : FID 7
Misc : op63636,gnn873,950,,,2,1,water
ALS Vial : 14 (Sig #1); 64 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 13:48:38 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





SGS ACCUTEST FA40754

Manual Integration Approval Summary

Sample Number:	OP63636-DUP	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN017287.D	**Analyst approved:**	02/03/17 14:10 Mayra Gonzalez
Injection Time:	02/02/17 22:55	**Supervisor approved:**	02/07/17 14:17 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	1	5.68	Poorly defined baseline

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017359.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 2:00 pm
Operator : mayrag
Sample : op63645-dup Inst : FID 7
Misc : op63645,gnn877,20.6,,,2,1,soil
ALS Vial : 7 (Sig #1); 57 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 13:05:16 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.905	13826037	16.599	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 82.99%			
5) S 2-Bromonaphthalene	7.713	9366054	14.750	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 73.75%			
10) S o-Terphenyl	10.121	11473117	11.151	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 55.75%			
24) S 1-Chlorooctadecane #2	10.730	9133607	12.476	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 62.38%			
28) s Naphthalene #2	0.000	0	N.D.	ppm	
29) s 2-Methylnaphthalene #2	0.000	0	N.D.	ppm	
Target Compounds					
1) Naphthalene	0.000	0	N.D.	ppm	d
2) 2-Methylnaphthalene	0.000	0	N.D.	ppm	
4) Acenaphthylene	0.000	0	N.D.	ppm	d
6) Acenaphthene	0.000	0	N.D.	ppm	d
7) Fluorene	0.000	0	N.D.	ppm	
8) Phenanthrene	0.000	0	N.D.	ppm	
9) Anthracene	0.000	0	N.D.	ppm	
11) Fluoranthene	0.000	0	N.D.	ppm	
12) Pyrene	0.000	0	N.D.	ppm	
13) Benzo(a)Anthracene	0.000	0	N.D.	ppm	
14) Chrysene	0.000	0	N.D.	ppm	
15) Benzo(b)Fluoranthene	0.000	0	N.D.	ppm	
16) Benzo(k)Fluoranthene	0.000	0	N.D.	ppm	
17) Benzo(a)Pyrene	0.000	0	N.D.	ppm	d
18) Indeno(1,2,3-cd)Pyrene	0.000	0	N.D.	ppm	d
19) Dibenzo(ah)Anthracene	0.000	0	N.D.	ppm	d
20) Benzo(ghi)Perylene	0.000	0	N.D.	ppm	d
21) H C11-C22 Aromatics (un...	5.669	19303667	29.775	ppm	
23) H C9-C18 Aliphatics #2	9.044	5117759	5.195	ppm	
25) C20 #2	0.000	0	N.D.	ppm	
26) C28 #2	0.000	0	N.D.	ppm	
27) H C19-C36 Aliphatics #2	9.585	13432581	12.505	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

9.5.2

9

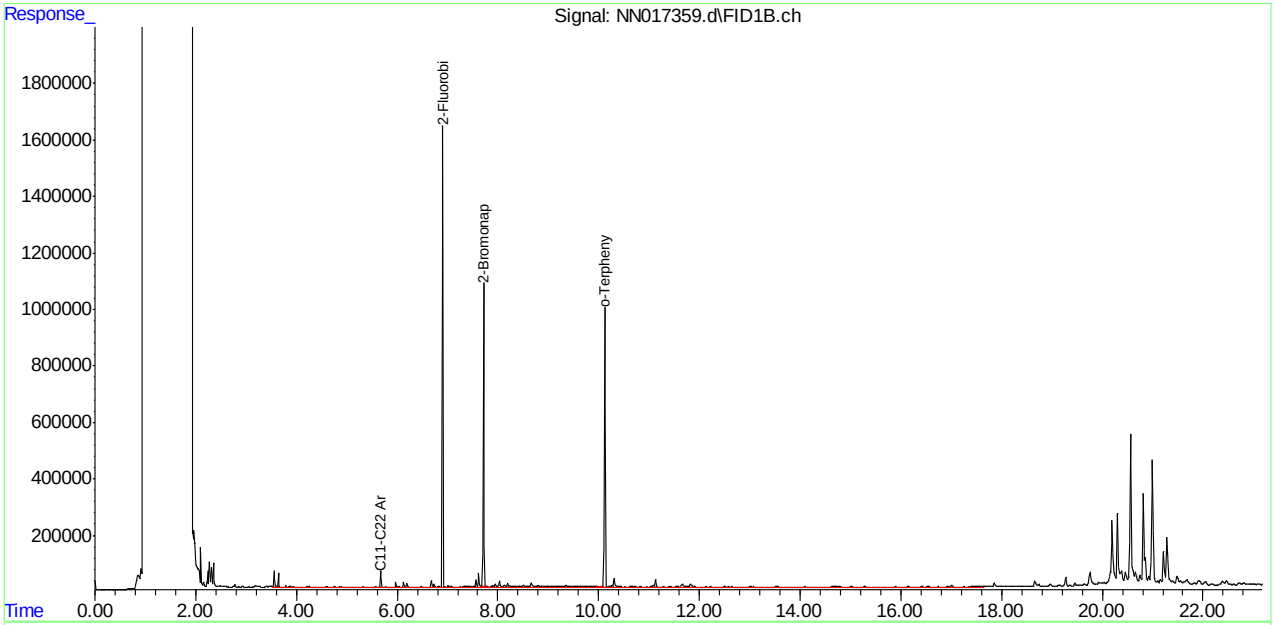
SGS ACCUTEST FA40754

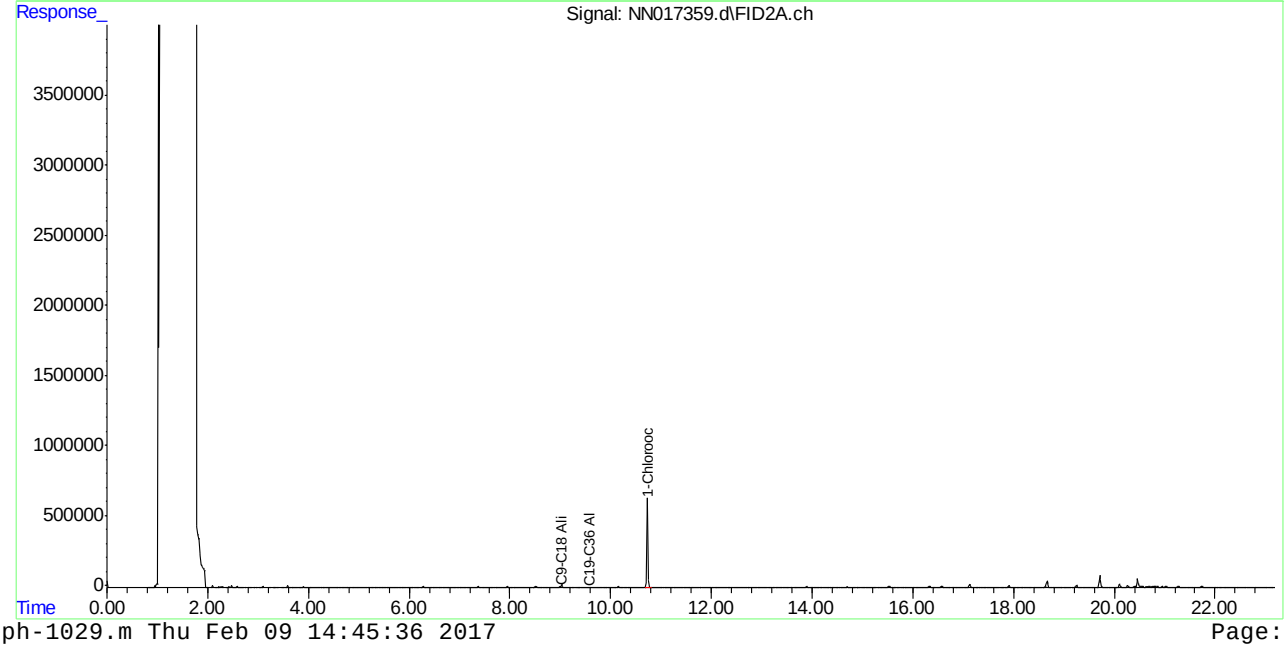
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017359.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 2:00 pm
Operator : mayrag
Sample : op63645-dup Inst : FID 7
Misc : op63645,gnn877,20.6,,,2,1,soil
ALS Vial : 7 (Sig #1); 57 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 13:05:16 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Manual Integrations
APPROVED
(compounds with "m" flag)
Mike Eger
11/02/16 12:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016513.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 11:04 am
Operator : fouads
Sample : ic825-1 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 13:12:42 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Oct 25 12:20:28 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.922	787871	0.857	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery =	4.29%#		
5) S 2-Bromonaphthalene	7.772	1531367	2.374	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery =	11.87%#		
10) S o-Terphenyl	10.143	973561	0.888	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery =	4.44%#		
24) S 1-Chlorooctadecane #2	10.814	496096	0.710	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery =	3.55%#		
28) s Naphthalene #2	5.400f	367908	0.550	ppm	m
29) s 2-Methylnaphthalene #2	6.175f	341334	0.480	ppm	m
Target Compounds					
1) Naphthalene	5.687	1001207	0.934	ppm	
2) 2-Methylnaphthalene	6.490	961017	0.918	ppm	
4) Acenaphthylene	7.586	953007	0.937	ppm	
6) Acenaphthene	7.772	1531367	1.285	ppm	
7) Fluorene	8.405	985655	0.929	ppm	
8) Phenanthrene	9.638	984901	1.027	ppm	
9) Anthracene	9.715	946896	0.828	ppm	
11) Fluoranthene	11.696	972778	0.900	ppm	
12) Pyrene	12.158	971504	0.882	ppm	
13) Benzo(a)Anthracene	15.121	717957	0.772	ppm	
14) Chrysene	15.216	751020	0.700	ppm	
15) Benzo(b)Fluoranthene	17.915	797543	0.841	ppm	
16) Benzo(k)Fluoranthene	17.984	621180	0.596	ppm	
17) Benzo(a)Pyrene	18.685	728069	0.815	ppm	
18) Indeno(1,2,3-cd)Pyrene	20.375	516341	0.601	ppm	
19) Dibenzo(ah)Anthracene	20.420	349281	0.407	ppm	
20) Benzo(ghi)Perylene	20.701	590764	0.659	ppm	m
21) H C11-C22 Aromatics (un...	10.000	17345927	12.895	ppm	
23) H C9-C18 Aliphatics #2	7.353	6455623	6.500	ppm	
25) C20 #2	9.633	710002	0.895	ppm	
26) C28 #2	13.175	706089	0.916	ppm	
27) H C19-C36 Aliphatics #2	17.000	11840006	7.174	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

9.6.1
9

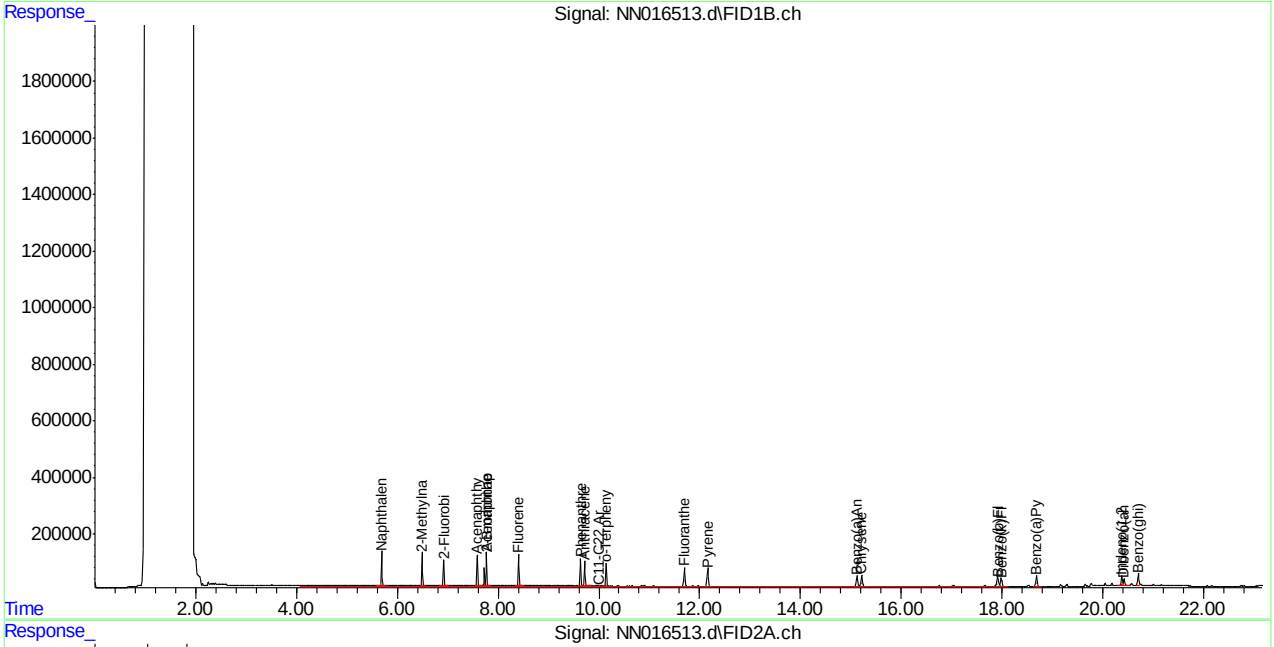
SGS ACCUTEST FA40754

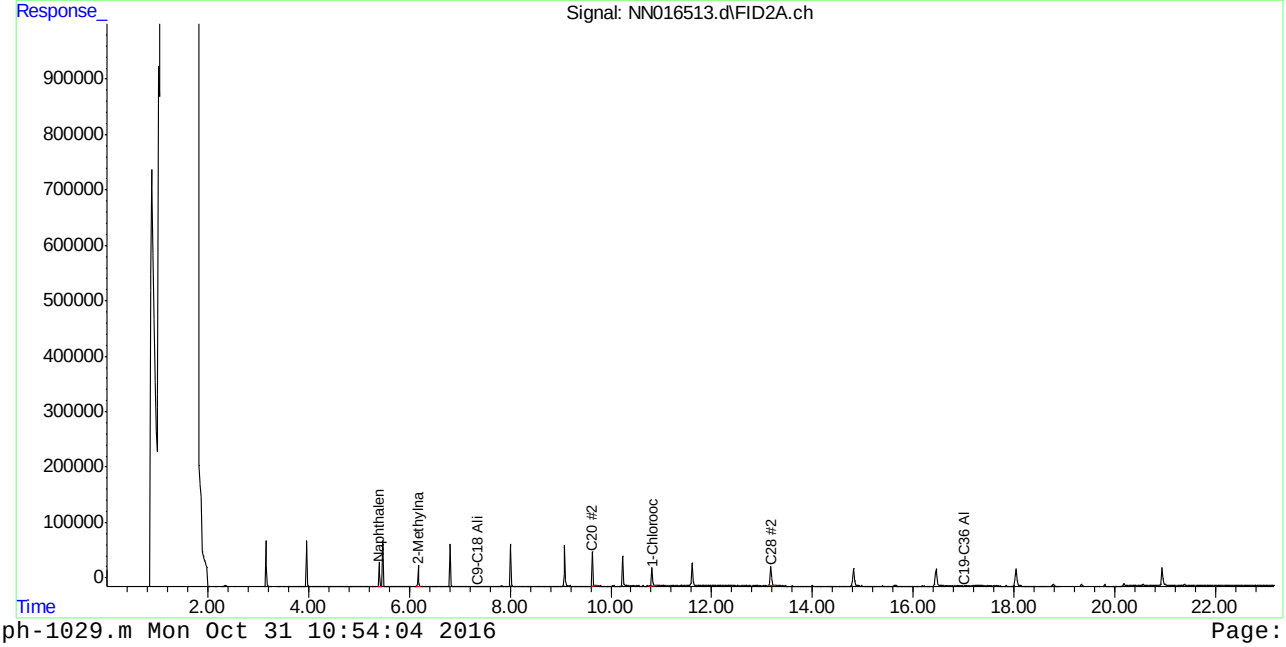
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016513.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 11:04 am
Operator : fouads
Sample : ic825-1 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 13:12:42 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Oct 25 12:20:28 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





SGS ACCUTEST FA40754

Manual Integration Approval Summary

Sample Number:	GNN825-IC825	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN016513.D	**Analyst approved:**	10/31/16 11:04 Fouad Sekkar
Injection Time:	10/29/16 11:04	**Supervisor approved:**	11/02/16 12:28 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	2	5.40	Poorly defined baseline
2-Methylnaphthalene	91-57-6	2	6.17	Poorly defined baseline
Benzo(g,h,i)perylene	191-24-2	1	20.70	Poorly defined baseline

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
11/02/16 12:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016514.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 11:34 am
Operator : fouads
Sample : ic825-2 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 2 (Sig #1); 52 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 13:13:09 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Oct 25 12:20:28 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.922	3985276	4.333	ppm	
Spiked Amount 20.000 Range 40 - 140	Recovery = 21.66%#				
5) S 2-Bromonaphthalene	7.731	2758659	4.276	ppm	
Spiked Amount 20.000 Range 40 - 140	Recovery = 21.38%#				
10) S o-Terphenyl	10.142	4923923	4.492	ppm	
Spiked Amount 20.000 Range 40 - 140	Recovery = 22.46%#				
24) S 1-Chlorooctadecane #2	10.808	3292029	4.710	ppm	
Spiked Amount 20.000 Range 40 - 140	Recovery = 23.55%#				
28) s Naphthalene #2	5.399f	2222351	3.325	ppm	m
29) s 2-Methylnaphthalene #2	6.172f	2211036	3.108	ppm	m
Target Compounds					
1) Naphthalene	5.689	4950517	4.620	ppm	
2) 2-Methylnaphthalene	6.491	4806946	4.593	ppm	
4) Acenaphthylene	7.587	4747168	4.668	ppm	
6) Acenaphthene	7.773	4935818	4.141	ppm	
7) Fluorene	8.406	4923048	4.642	ppm	
8) Phenanthrene	9.638	4925068	5.133	ppm	
9) Anthracene	9.714	4732534	4.141	ppm	
11) Fluoranthene	11.694	4919032	4.552	ppm	
12) Pyrene	12.158	4905476	4.454	ppm	
13) Benzo(a)Anthracene	15.121	4192776	4.506	ppm	
14) Chrysene	15.215	4259516	3.970	ppm	
15) Benzo(b)Fluoranthene	17.915	4366437	4.602	ppm	
16) Benzo(k)Fluoranthene	17.984	3884306	3.730	ppm	
17) Benzo(a)Pyrene	18.686	3980363	4.457	ppm	
18) Indeno(1,2,3-cd)Pyrene	20.372	3062119	3.565	ppm	
19) Dibenzo(ah)Anthracene	20.419	2357147	2.744	ppm	
20) Benzo(ghi)Perylene	20.701	3778314	4.213	ppm	
21) H C11-C22 Aromatics (un...	10.000	58922627	43.802	ppm	
23) H C9-C18 Aliphatics #2	7.353	27846817	28.040	ppm	
25) C20 #2	9.629	4175384	5.265	ppm	
26) C28 #2	13.167	4234534	5.491	ppm	
27) H C19-C36 Aliphatics #2	17.000	41299896	25.026	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

9.6.2
9

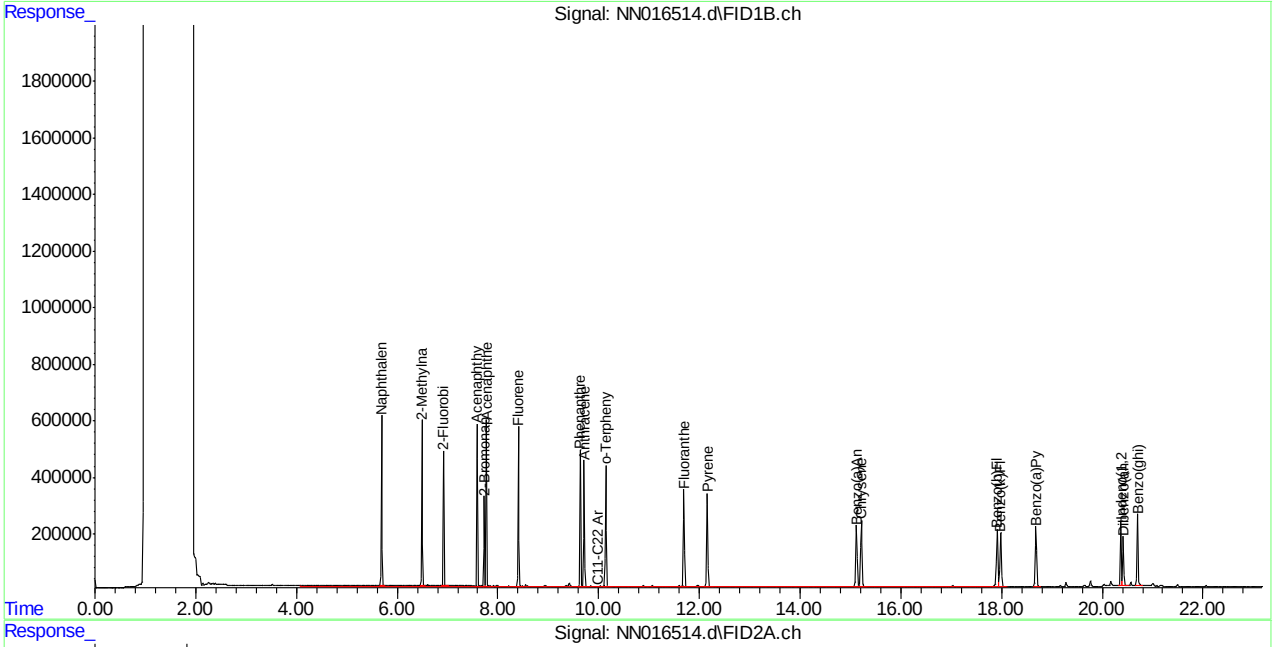
SGS ACCUTEST FA40754

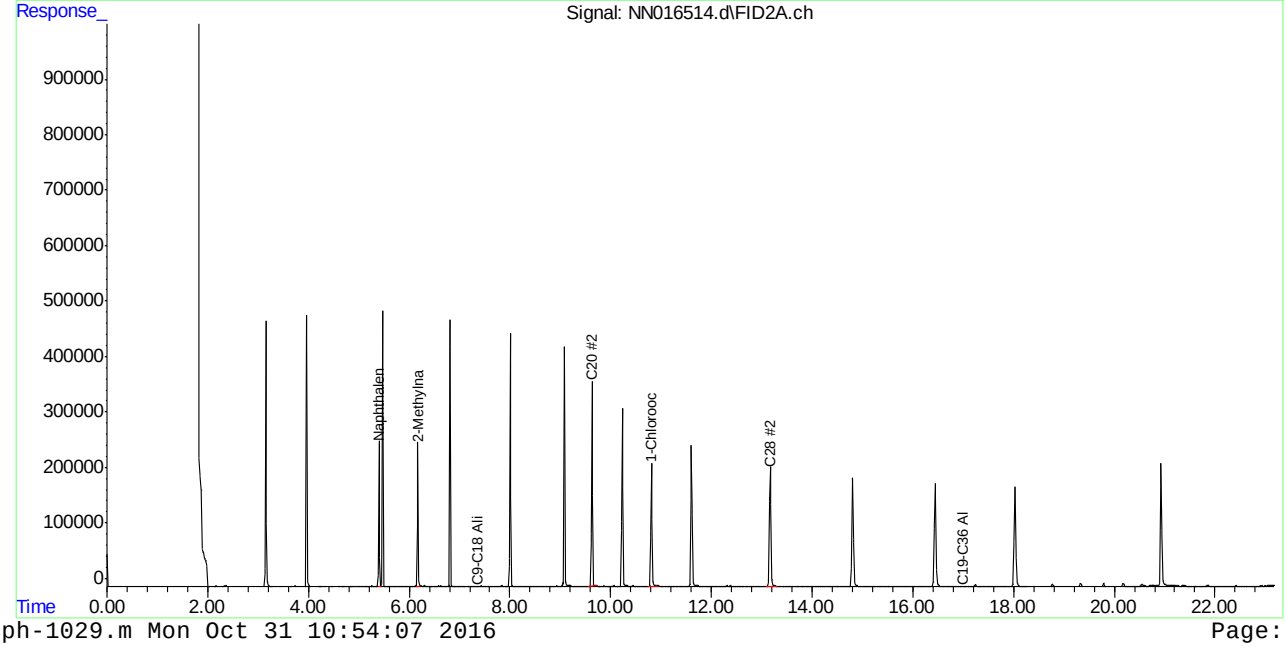
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016514.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 11:34 am
Operator : fouads
Sample : ic825-2 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 2 (Sig #1); 52 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 13:13:09 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Oct 25 12:20:28 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





maeph-1029.m Mon Oct 31 10:54:07 2016 Page: 2

SGS ACCUTEST FA40754

Manual Integration Approval Summary

Sample Number:	GNN825-IC825	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN016514.D	**Analyst approved:**	10/31/16 11:04 Fouad Sekkar
Injection Time:	10/29/16 11:34	**Supervisor approved:**	11/02/16 12:28 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	2	5.40	Poorly defined baseline
2-Methylnaphthalene	91-57-6	2	6.17	Poorly defined baseline

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
11/02/16 12:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016515.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 12:03 pm
Operator : fouads
Sample : ic825-3 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 3 (Sig #1); 53 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 13:13:41 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Oct 25 12:20:28 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.923	8195384	8.911	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 44.56%			
5) S 2-Bromonaphthalene	7.732	5715847	8.860	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 44.30%			
10) S o-Terphenyl	10.143	10123806	9.236	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 46.18%			
24) S 1-Chlorooctadecane #2	10.810	17844233	25.528	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 127.64%			
28) s Naphthalene #2	5.399f	11798425	17.651	ppm	m
29) s 2-Methylnaphthalene #2	6.173f	11744352	16.511	ppm	m
Target Compounds					
1) Naphthalene	5.690	10151680	9.474	ppm	
2) 2-Methylnaphthalene	6.492	9885888	9.447	ppm	
4) Acenaphthylene	7.588	9765517	9.603	ppm	
6) Acenaphthene	7.773	10151640	8.516	ppm	
7) Fluorene	8.406	10137114	9.559	ppm	
8) Phenanthrene	9.639	10155681	10.585	ppm	
9) Anthracene	9.716	9776523	8.554	ppm	
11) Fluoranthene	11.696	10218126	9.455	ppm	
12) Pyrene	12.160	10159375	9.224	ppm	
13) Benzo(a)Anthracene	15.124	9049265	9.726	ppm	
14) Chrysene	15.219	9154763	8.533	ppm	
15) Benzo(b)Fluoranthene	17.921	9351505	9.855	ppm	
16) Benzo(k)Fluoranthene	17.990	8540819	8.201	ppm	
17) Benzo(a)Pyrene	18.690	8599561	9.630	ppm	
18) Indeno(1,2,3-cd)Pyrene	20.375	6927674	8.066	ppm	
19) Dibenzo(ah)Anthracene	20.421	5321793	6.196	ppm	
20) Benzo(ghi)Perylene	20.706	8293851	9.249	ppm	
21) H C11-C22 Aromatics (un...	10.000	96431554	71.686	ppm	
23) H C9-C18 Aliphatics #2	7.353	135539418	136.479	ppm	
25) C20 #2	9.632	21955141	27.684	ppm	
26) C28 #2	13.171	22264199	28.869	ppm	
27) H C19-C36 Aliphatics #2	17.000	186224761	112.843	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

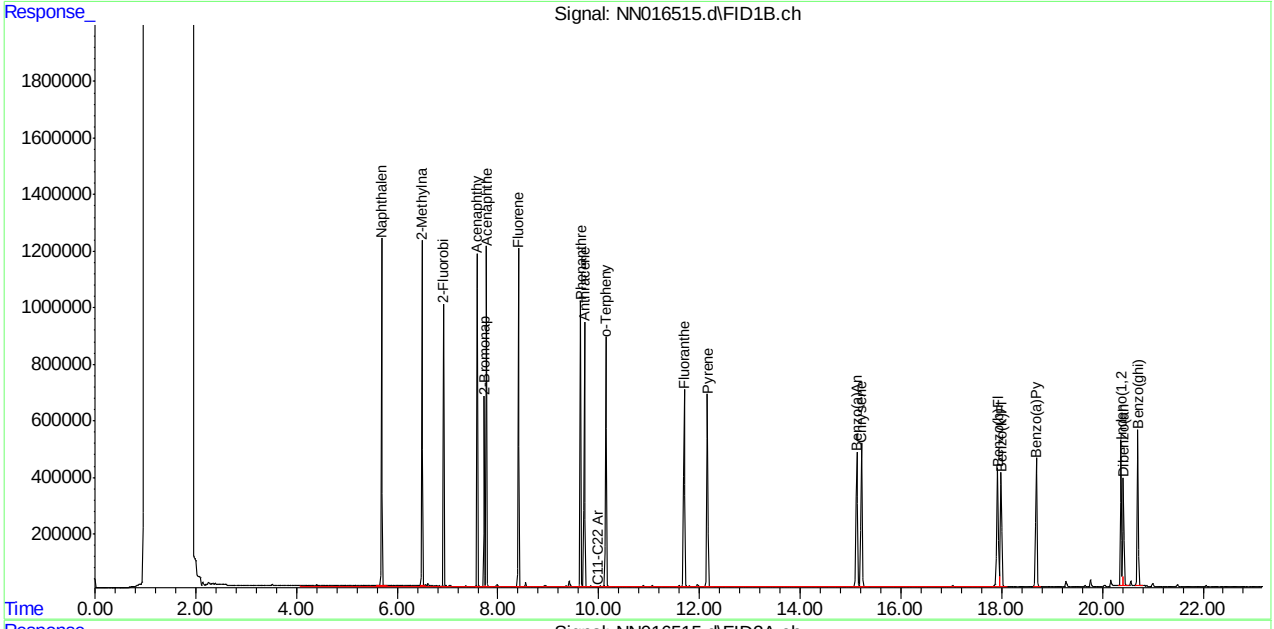
9.6.3
9

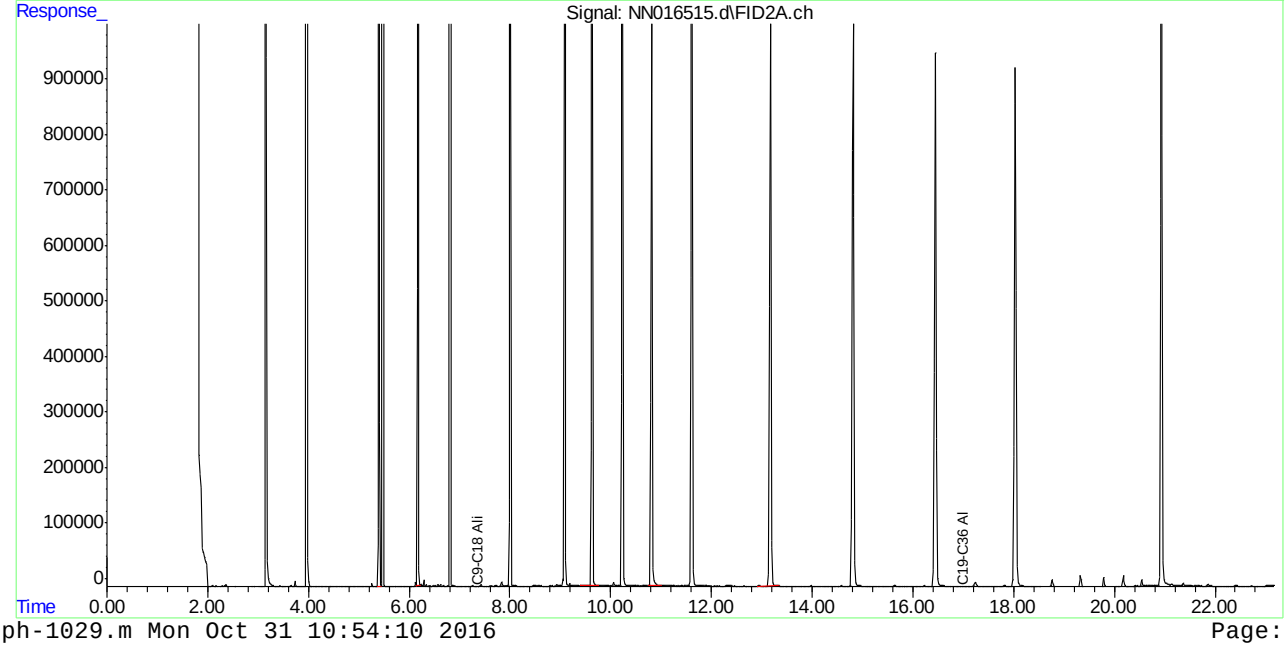
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016515.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 12:03 pm
Operator : fouads
Sample : ic825-3 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 3 (Sig #1); 53 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 13:13:41 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Oct 25 12:20:28 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Manual Integration Approval Summary

Sample Number:	GNN825-IC825	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN016515.D	**Analyst approved:**	10/31/16 11:04 Fouad Sekkar
Injection Time:	10/29/16 12:03	**Supervisor approved:**	11/02/16 12:28 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	2	5.40	Poorly defined baseline
2-Methylnaphthalene	91-57-6	2	6.17	Poorly defined baseline

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
11/02/16 12:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016516.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 12:33 pm
Operator : fouads
Sample : icc825-4 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 4 (Sig #1); 54 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 14:12:20 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Oct 25 12:20:28 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.925	21636361	23.525	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 117.63%			
5) S 2-Bromonaphthalene	7.734	15204565	23.569	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 117.85%			
10) S o-Terphenyl	10.146	26767280	24.420	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 122.10%			
24) S 1-Chlorooctadecane #2	10.816	40120277	57.395	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 286.98%#			
28) s Naphthalene #2	5.402f	25725424	38.488	ppm	m
29) s 2-Methylnaphthalene #2	6.176f	25806694	36.282	ppm	m
Target Compounds					
1) Naphthalene	5.692	26694974	24.913	ppm	
2) 2-Methylnaphthalene	6.494	26116077	24.956	ppm	
4) Acenaphthylene	7.590	25817842	25.388	ppm	
6) Acenaphthene	7.776	26809945	22.491	ppm	
7) Fluorene	8.409	26828162	25.299	ppm	
8) Phenanthrene	9.643	26934347	28.073	ppm	
9) Anthracene	9.720	25976887	22.728	ppm	
11) Fluoranthene	11.704	27094379	25.072	ppm	
12) Pyrene	12.168	27001726	24.515	ppm	
13) Benzo(a)Anthracene	15.136	25354533	27.251	ppm	
14) Chrysene	15.233	25484711	23.753	ppm	
15) Benzo(b)Fluoranthene	17.936	26073662	27.478	ppm	
16) Benzo(k)Fluoranthene	18.008	24550559	23.575	ppm	
17) Benzo(a)Pyrene	18.703	24662847	27.618	ppm	
18) Indeno(1,2,3-cd)Pyrene	20.385	21750219	25.325	ppm	
19) Dibenzo(ah)Anthracene	20.430	18203718	21.193	ppm	
20) Benzo(ghi)Perylene	20.721	24097340	26.872	ppm	
21) H C11-C22 Aromatics (un...	10.000	252162805	187.455	ppm	
23) H C9-C18 Aliphatics #2	7.353	297580567	299.644	ppm	
25) C20 #2	9.636	48821545	61.561	ppm	
26) C28 #2	13.180	49503469	64.189	ppm	
27) H C19-C36 Aliphatics #2	17.000	406934185	246.581	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

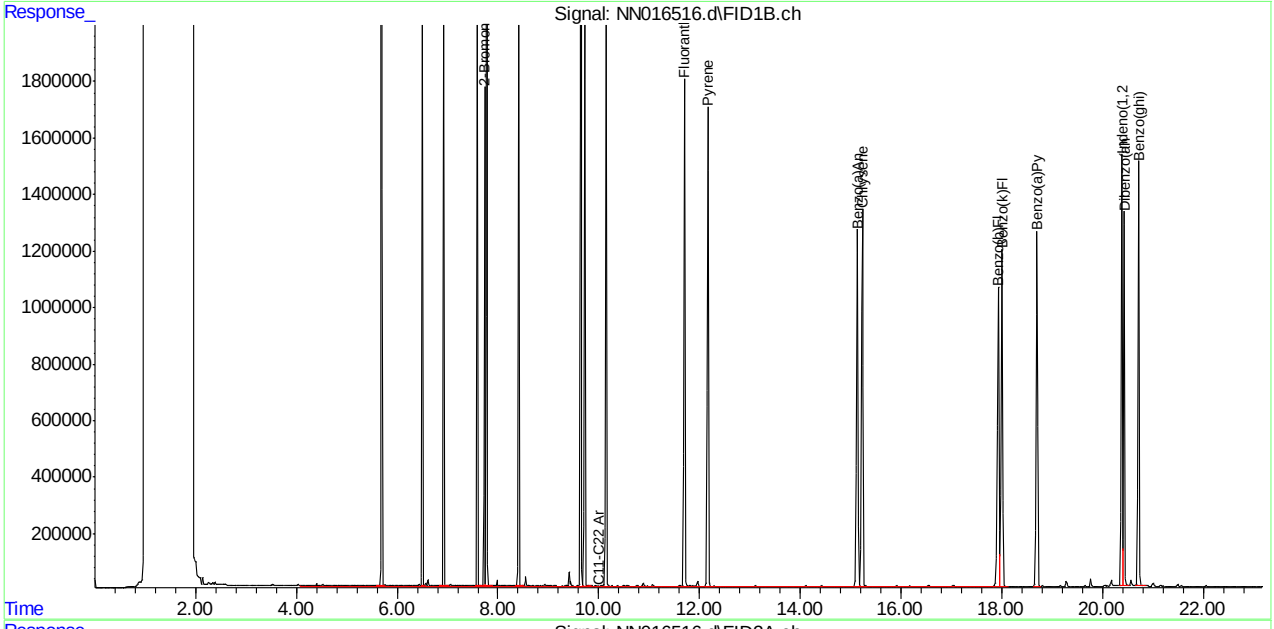
9.6.4
9

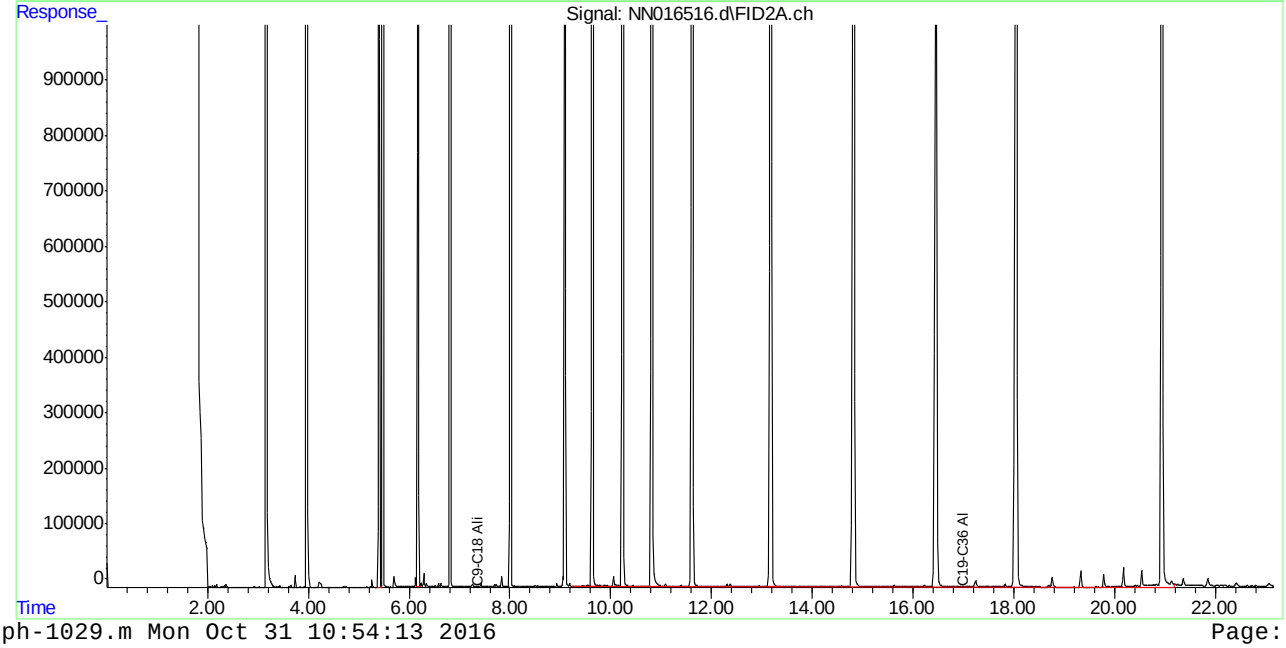
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016516.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 12:33 pm
Operator : fouads
Sample : icc825-4 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 4 (Sig #1); 54 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 14:12:20 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Oct 25 12:20:28 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Manual Integration Approval Summary

Sample Number:	GNN825-ICC825	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN016516.D	**Analyst approved:**	10/31/16 11:04 Fouad Sekkar
Injection Time:	10/29/16 12:33	**Supervisor approved:**	11/02/16 12:28 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	2	5.40	Poorly defined baseline
2-Methylnaphthalene	91-57-6	2	6.18	Poorly defined baseline

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
11/02/16 12:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016517.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 1:02 pm
Operator : fouads
Sample : ic825-5 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 5 (Sig #1); 55 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 14:12:43 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Oct 25 12:20:28 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.927	44574110	48.466	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 242.33%#			
5) S 2-Bromonaphthalene	7.738	31423685	48.711	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 243.56%#			
10) S o-Terphenyl	10.150	55009873	50.186	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 250.93%#			
24) S 1-Chlorooctadecane #2	10.824	73829862	105.620	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 528.10%#			
28) s Naphthalene #2	5.405f	47456844	71.000	ppm	m
29) s 2-Methylnaphthalene #2	6.179f	47571819	66.881	ppm	m
Target Compounds					
1) Naphthalene	5.695	54833881	51.174	ppm	
2) 2-Methylnaphthalene	6.497	53715351	51.329	ppm	
4) Acenaphthylene	7.594	53124687	52.240	ppm	
6) Acenaphthene	7.781	55141164	46.259	ppm	
7) Fluorene	8.413	55231228	52.082	ppm	
8) Phenanthrene	9.648	55449706	57.794	ppm	
9) Anthracene	9.726	53627207	46.921	ppm	
11) Fluoranthene	11.713	55930666	51.755	ppm	
12) Pyrene	12.179	55784887	50.647	ppm	
13) Benzo(a)Anthracene	15.150	53766332	57.787	ppm	
14) Chrysene	15.251	53844006	50.185	ppm	
15) Benzo(b)Fluoranthene	17.955	54945060	57.905	ppm	
16) Benzo(k)Fluoranthene	18.033	52647481	50.555	ppm	
17) Benzo(a)Pyrene	18.723	52824052	59.153	ppm	
18) Indeno(1,2,3-cd)Pyrene	20.398	50509296	58.811	ppm	
19) Dibenzo(ah)Anthracene	20.443	43172980	50.262	ppm	
20) Benzo(ghi)Perylene	20.738	52118230	58.120	ppm	
21) H C11-C22 Aromatics (un...	10.000	522498345	388.419	ppm	
23) H C9-C18 Aliphatics #2	7.353	544455416	548.231	ppm	
25) C20 #2	9.643	89756027	113.176	ppm	
26) C28 #2	13.192	91007092	118.005	ppm	
27) H C19-C36 Aliphatics #2	17.000	737577285	446.934	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

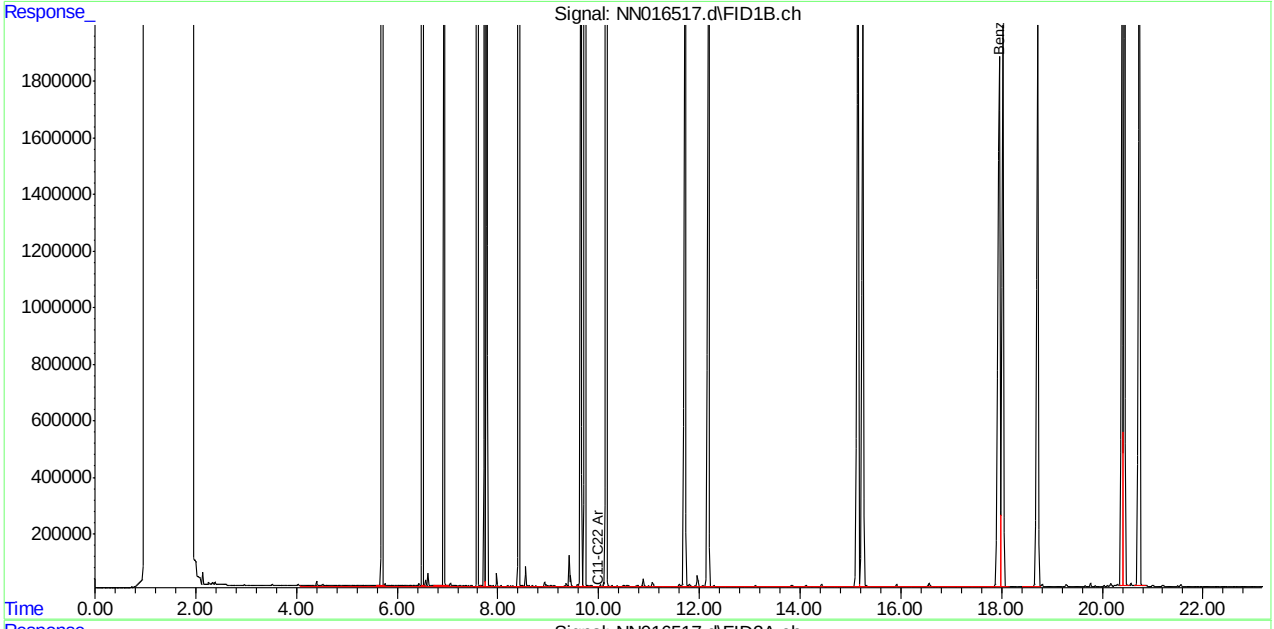
9.6.5
9

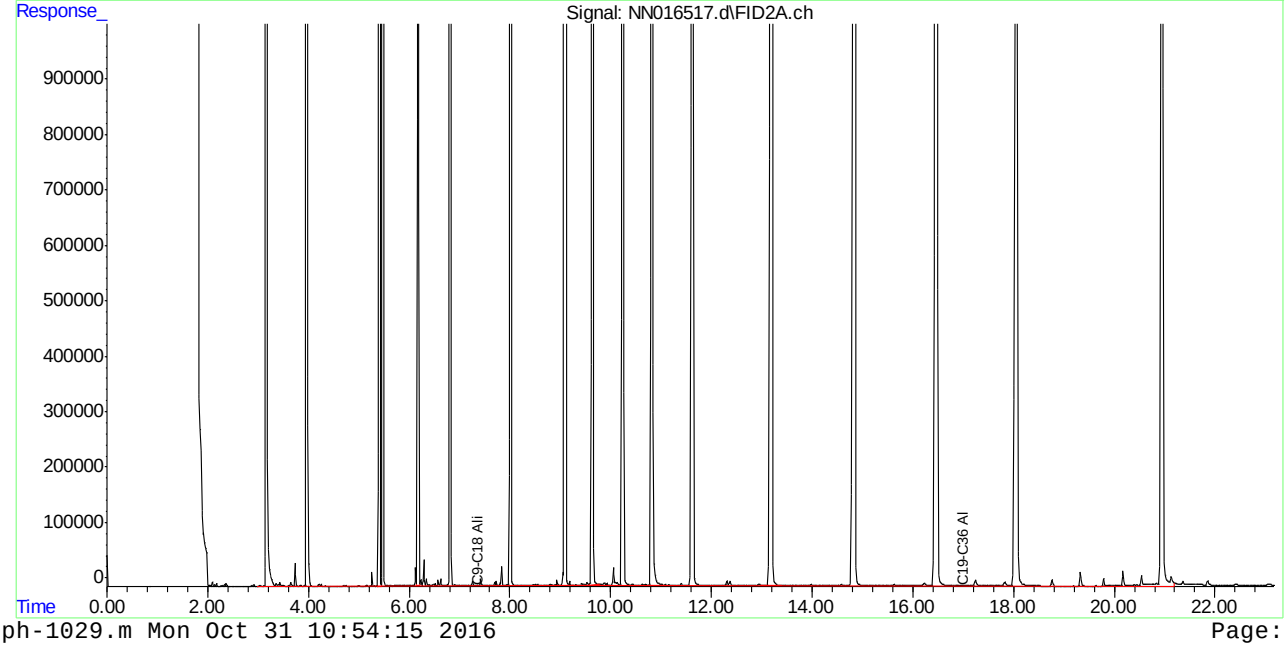
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016517.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 1:02 pm
Operator : fouads
Sample : ic825-5 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 5 (Sig #1); 55 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 14:12:43 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Oct 25 12:20:28 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Manual Integration Approval Summary

Sample Number:	GNN825-IC825	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN016517.D	**Analyst approved:**	10/31/16 11:04 Fouad Sekkar
Injection Time:	10/29/16 13:02	**Supervisor approved:**	11/02/16 12:28 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	2	5.40	Poorly defined baseline
2-Methylnaphthalene	91-57-6	2	6.18	Poorly defined baseline

Manual Integrations APPROVED (compounds with "m" flag)
Mike Eger
11/02/16 12:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016518.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 1:32 pm
Operator : fouads
Sample : ic825-6 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 6 (Sig #1); 56 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 14:11:45 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Oct 25 12:20:28 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.929	63439777	68.979	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 344.89%#			
5) S 2-Bromonaphthalene	7.740	44733976	69.344	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 346.72%#			
10) S o-Terphenyl	10.153	78267328	71.403	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 357.02%#			
24) S 1-Chlorooctadecane #2	10.835	126256451	180.620	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 903.10%#			
28) s Naphthalene #2	5.409f	80094802	119.829	ppm	m
29) s 2-Methylnaphthalene #2	6.184f	80531064	113.219	ppm	m
Target Compounds					
1) Naphthalene	5.697	77925809	72.725	ppm	
2) 2-Methylnaphthalene	6.500	76373192	72.980	ppm	
4) Acenaphthylene	7.596	75601324	74.343	ppm	
6) Acenaphthene	7.784	78420594	65.788	ppm	
7) Fluorene	8.416	78623768	74.141	ppm	
8) Phenanthrene	9.652	79070811	82.413	ppm	
9) Anthracene	9.731	76407151	66.852	ppm	
11) Fluoranthene	11.720	79725652	73.773	ppm	
12) Pyrene	12.187	79519069	72.195	ppm	
13) Benzo(a)Anthracene	15.159	77227937	83.004	ppm	
14) Chrysene	15.262	77224697	71.978	ppm	
15) Benzo(b)Fluoranthene	17.967	79132802	83.395	ppm	
16) Benzo(k)Fluoranthene	18.051	75746684	72.736	ppm	m
17) Benzo(a)Pyrene	18.735	76527681	85.697	ppm	
18) Indeno(1,2,3-cd)Pyrene	20.408	77383214	90.101	ppm	
19) Dibenzo(ah)Anthracene	20.453	61556780	71.664	ppm	
20) Benzo(ghi)Perylene	20.750	75462417	84.153	ppm	
21) H C11-C22 Aromatics (un...	10.000	715691766	532.037	ppm	
23) H C9-C18 Aliphatics #2	7.353	923148783	929.551	ppm	
25) C20 #2	9.652	153219965	193.200	ppm	
26) C28 #2	13.209	155740037	201.942	ppm	
27) H C19-C36 Aliphatics #2	17.000	1258267211	762.445	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

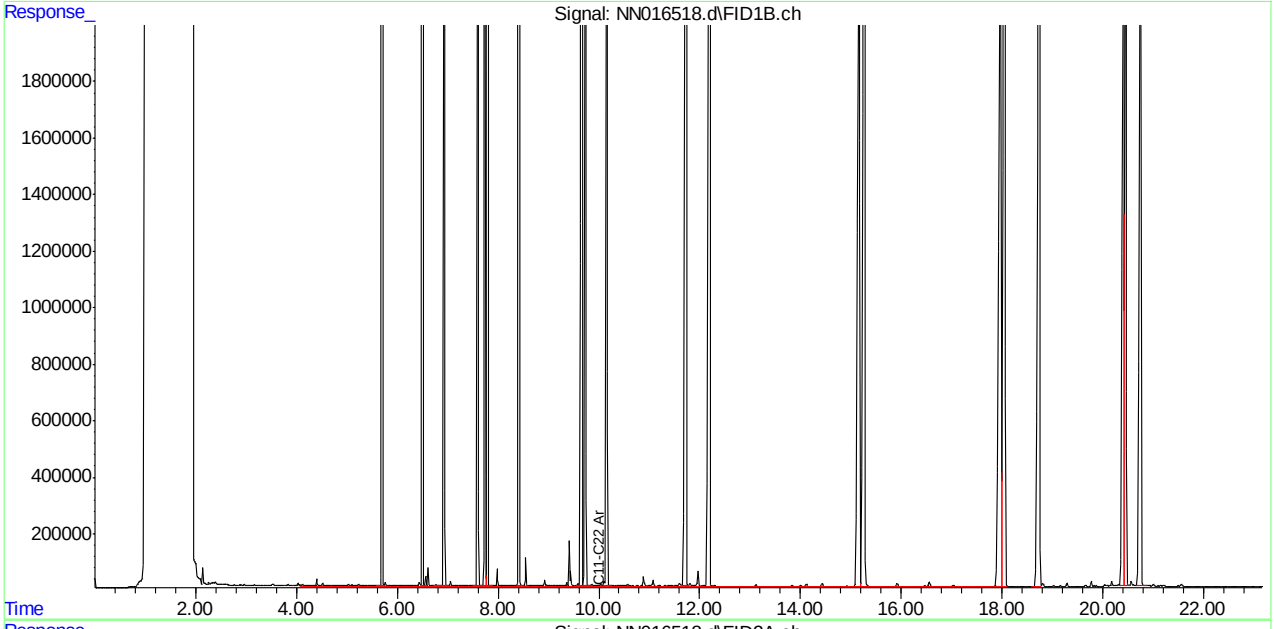
SGS ACCUTEST FA40754

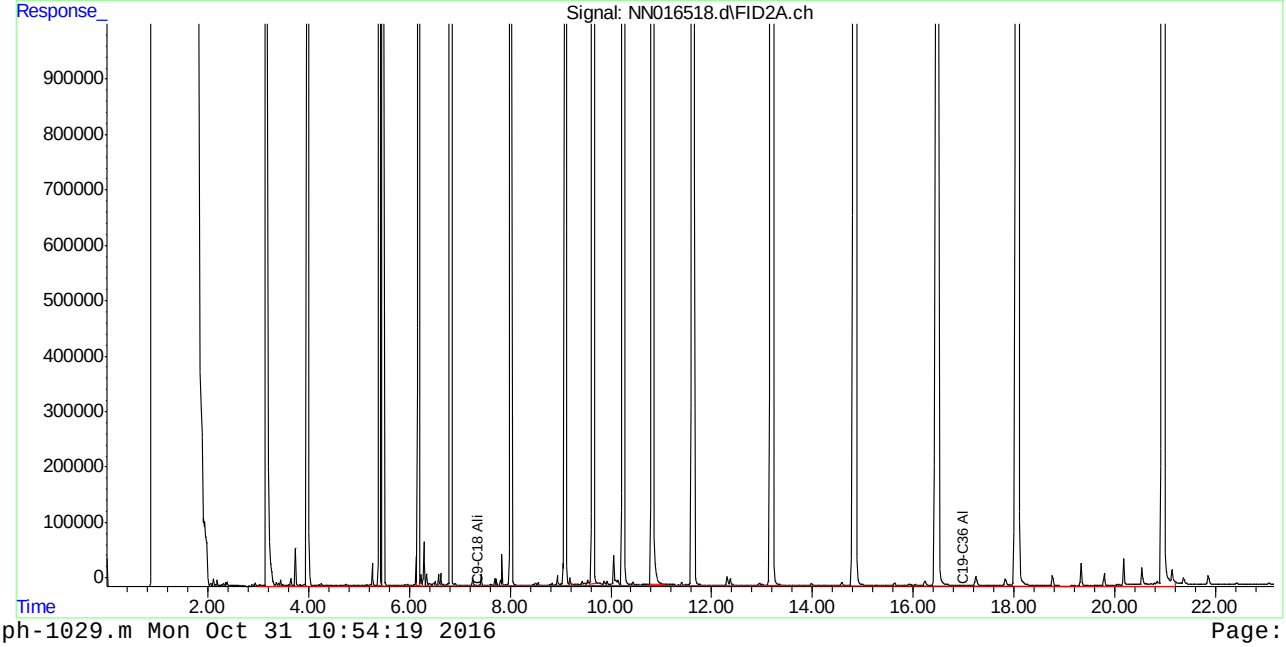
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016518.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 1:32 pm
Operator : fouads
Sample : ic825-6 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 6 (Sig #1); 56 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 14:11:45 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Oct 25 12:20:28 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Manual Integration Approval Summary

Sample Number:	GNN825-IC825	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN016518.D	**Analyst approved:**	10/31/16 11:04 Fouad Sekkar
Injection Time:	10/29/16 13:32	**Supervisor approved:**	11/02/16 12:28 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	2	5.41	Poorly defined baseline
2-Methylnaphthalene	91-57-6	2	6.18	Poorly defined baseline
Benzo(k)fluoranthene	207-08-9	1	18.05	Poorly defined baseline

NN016519.D

Manual Integrations APPROVED (compounds with "m" flag)

Mike Eger
11/02/16 12:28

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016519.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 2:01 pm
Operator : fouads
Sample : ic825-7 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 7 (Sig #1); 57 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 14:27:56 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Oct 25 12:20:28 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.931	82328416	89.517	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 447.58%#			
5) S 2-Bromonaphthalene	7.742	58171962	90.175	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 450.88%#			
10) S o-Terphenyl	10.157	101705118	92.786	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 463.93%#			
24) S 1-Chlorooctadecane #2	10.844	174793065	250.056	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 1250.28%#			
28) s Naphthalene #2	5.413f	110971729	166.023	ppm	m
29) s 2-Methylnaphthalene #2	6.188f	111560513	156.843	ppm	m
Target Compounds					
1) Naphthalene	5.699	101138308	94.388	ppm	
2) 2-Methylnaphthalene	6.502	99166173	94.760	ppm	
4) Acenaphthylene	7.599	98133032	96.500	ppm	
6) Acenaphthene	7.787	101805282	85.406	ppm	
7) Fluorene	8.419	102184254	96.359	ppm	
8) Phenanthrene	9.655	102678454	107.019	ppm	
9) Anthracene	9.735	99357048	86.932	ppm	
11) Fluoranthene	11.725	103724065	95.980	ppm	
12) Pyrene	12.193	103316631	93.801	ppm	
13) Benzo(a)Anthracene	15.167	101025983	108.582	ppm	
14) Chrysene	15.277	100957506	94.098	ppm	m
15) Benzo(b)Fluoranthene	17.979	104288174	109.906	ppm	m
16) Benzo(k)Fluoranthene	18.066	99643927	95.683	ppm	m
17) Benzo(a)Pyrene	18.750	100460506	112.497	ppm	m
18) Indeno(1,2,3-cd)Pyrene	20.417	105377190	122.696	ppm	
19) Dibenzo(ah)Anthracene	20.462	80171559	93.335	ppm	
20) Benzo(ghi)Perylene	20.765	99191490	110.615	ppm	m
21) H C11-C22 Aromatics (un...	10.000	915243625	680.381	ppm	
23) H C9-C18 Aliphatics #2	7.353	1274903171	1283.745	ppm	
25) C20 #2	9.659	211978260	267.290	ppm	
26) C28 #2	13.220	215157244	278.986	ppm	
27) H C19-C36 Aliphatics #2	17.000	1740225598	1054.488	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

9.6.7

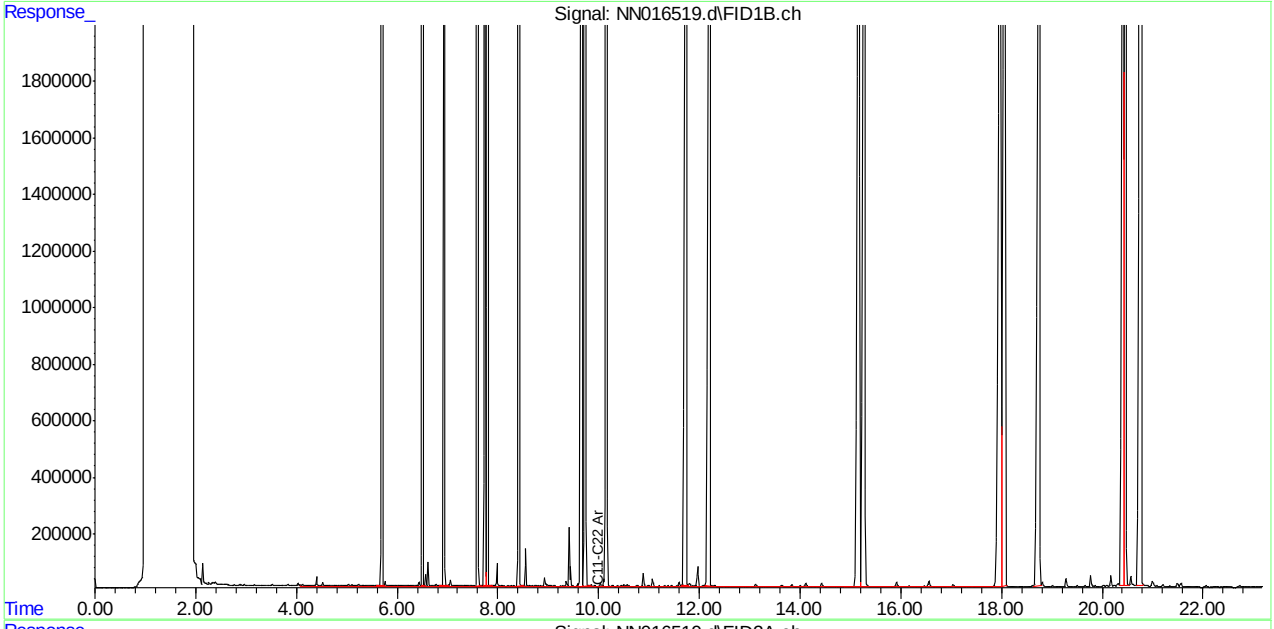
9

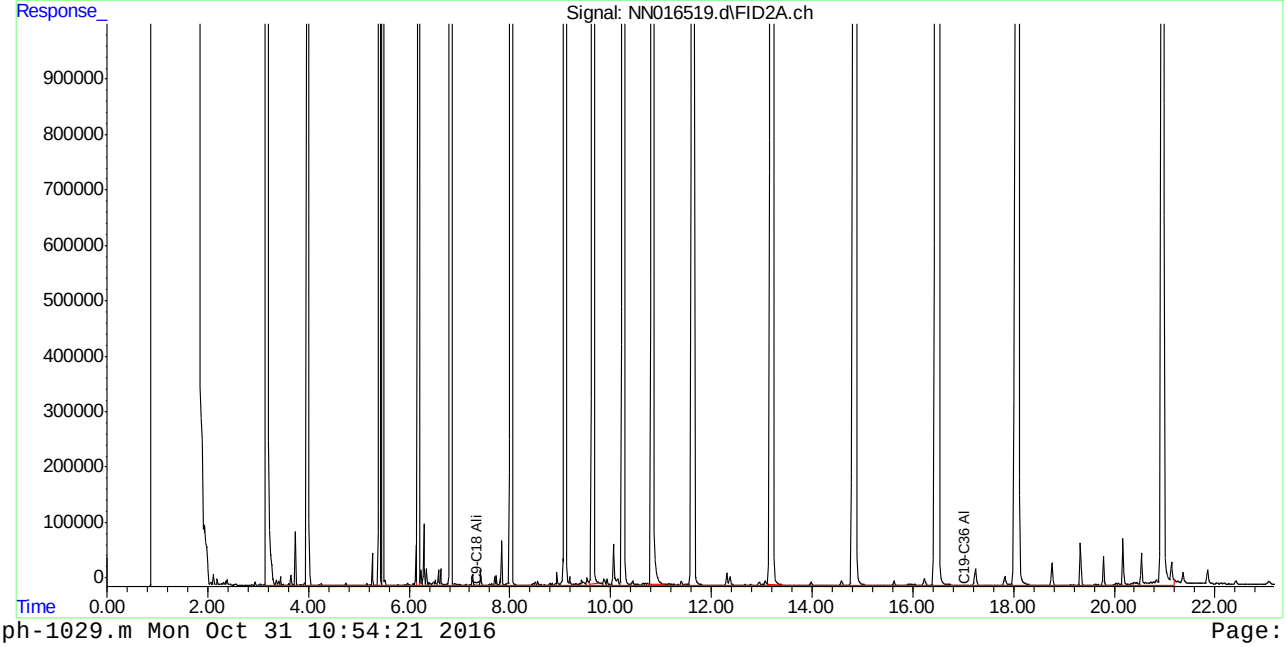
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016519.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 2:01 pm
Operator : fouads
Sample : ic825-7 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 7 (Sig #1); 57 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 14:27:56 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Tue Oct 25 12:20:28 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Manual Integration Approval Summary

Sample Number:	GNN825-IC825	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN016519.D	**Analyst approved:**	10/31/16 11:04 Fouad Sekkar
Injection Time:	10/29/16 14:01	**Supervisor approved:**	11/02/16 12:28 Mike Eger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	2	5.41	Poorly defined baseline
2-Methylnaphthalene	91-57-6	2	6.19	Poorly defined baseline
Chrysene	218-01-9	1	15.28	Poorly defined baseline
Benzo(b)fluoranthene	205-99-2	1	17.98	Poorly defined baseline
Benzo(k)fluoranthene	207-08-9	1	18.07	Poorly defined baseline
Benzo(a)pyrene	50-32-8	1	18.75	Poorly defined baseline
Benzo(g,h,i)perylene	191-24-2	1	20.76	Poorly defined baseline

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016520.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 2:31 pm
Operator : fouads
Sample : icv825-4 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 8 (Sig #1); 58 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 14:58:36 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) S 2-Fluorobiphenyl	0.000	0	N.D.	ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	0.00%#	
5) S 2-Bromonaphthalene	0.000	0	N.D.	ppm d
Spiked Amount 20.000 Range 40 - 140		Recovery =	0.00%#	
10) S o-Terphenyl	0.000	0	N.D.	ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	0.00%#	
24) S 1-Chlorooctadecane #2	0.000	0	N.D.	ppm
Spiked Amount 20.000 Range 40 - 140		Recovery =	0.00%#	
28) s Naphthalene #2	0.000	0	N.D.	ppm
29) s 2-Methylnaphthalene #2	0.000	0	N.D.	ppm
Target Compounds				
1) Naphthalene	5.691	25080310	24.312	ppm
2) 2-Methylnaphthalene	6.494	25655047	25.510	ppm
4) Acenaphthylene	7.590	25066558	25.198	ppm
6) Acenaphthene	7.775	25785329	23.222	ppm
7) Fluorene	8.408	25078629	24.274	ppm
8) Phenanthrene	9.642	25021467	24.149	ppm
9) Anthracene	9.720	25070222	25.088	ppm
11) Fluoranthene	11.703	25269939	24.295	ppm
12) Pyrene	12.167	26017766	25.094	ppm
13) Benzo(a)Anthracene	15.134	24078301	25.573	ppm
14) Chrysene	15.232	24665858	25.949	ppm
15) Benzo(b)Fluoranthene	17.934	24602625	25.157	ppm
16) Benzo(k)Fluoranthene	18.007	23511224	26.151	ppm
17) Benzo(a)Pyrene	18.702	22640100	24.563	ppm
18) Indeno(1,2,3-cd)Pyrene	20.384	20897431	22.437	ppm
19) Dibenzo(ah)Anthracene	20.429	18198969	22.318	ppm
20) Benzo(ghi)Perylene	20.718	22866926	25.900	ppm
21) H C11-C22 Aromatics (un...	10.000	263787826	423.853	ppm
23) H C9-C18 Aliphatics #2	7.353	244409466	248.122	ppm
25) C20 #2	9.635	39896304	43.783	ppm
26) C28 #2	13.177	40311221	43.696	ppm
27) H C19-C36 Aliphatics #2	17.000	328530043	305.848	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

9.6.8

9

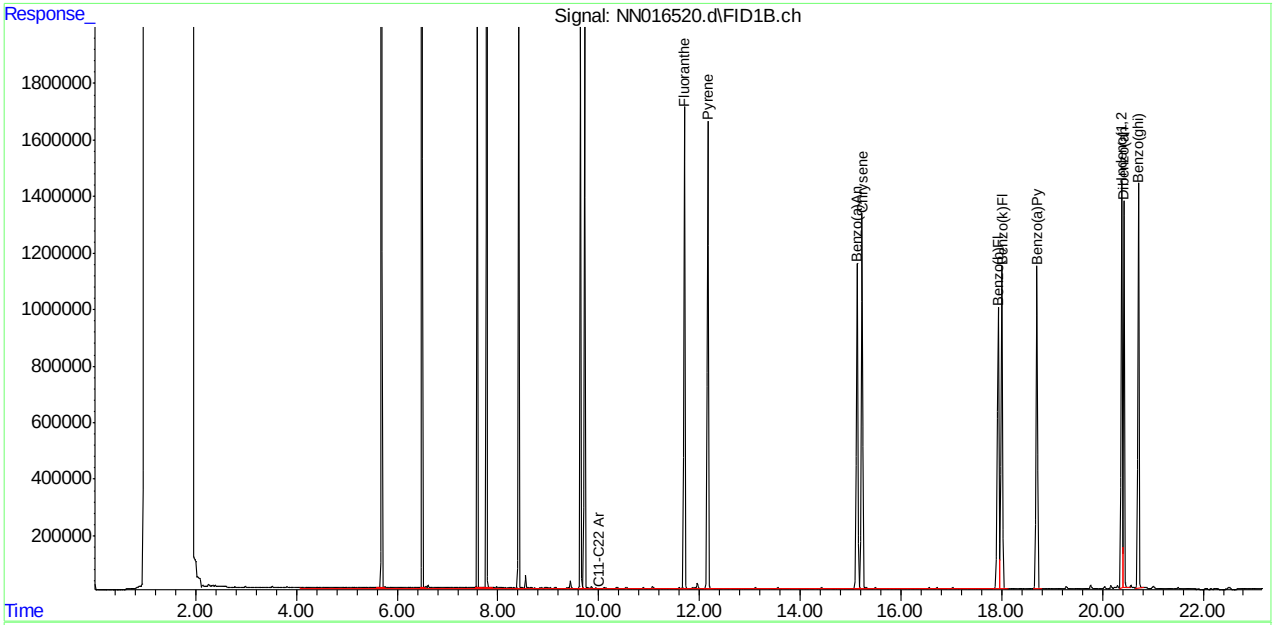
SGS ACCUTEST FA40754

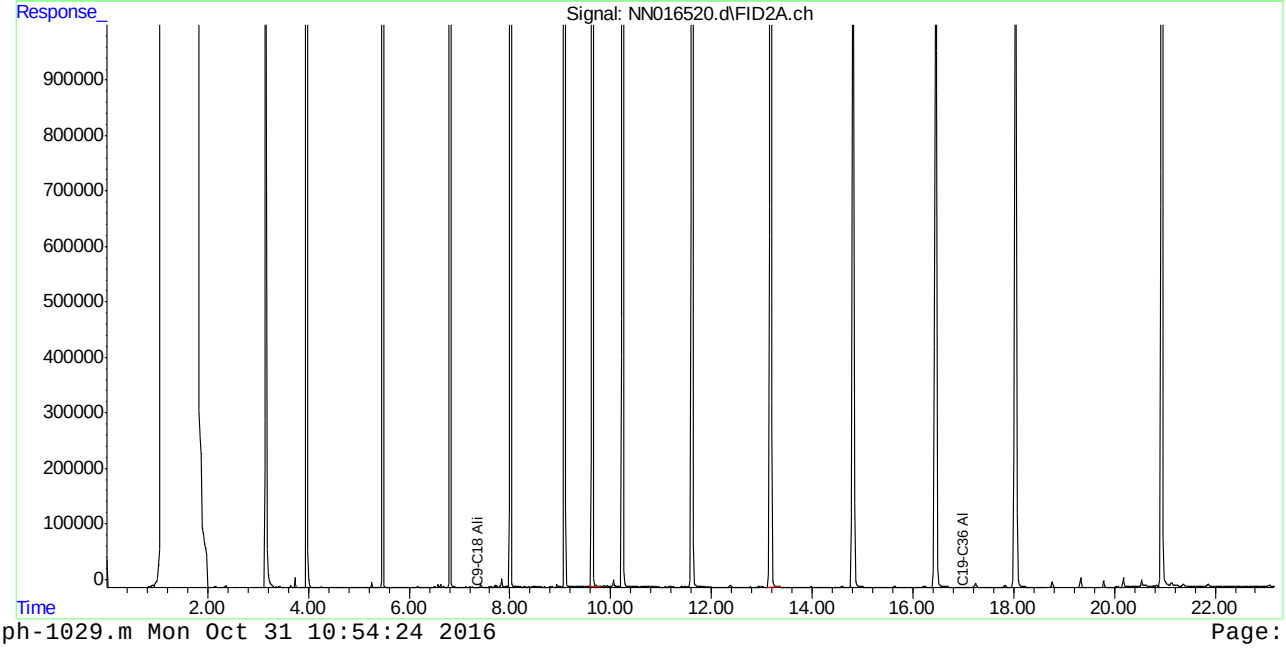
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN825_1029\
Data File : NN016520.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 29 Oct 2016 2:31 pm
Operator : fouads
Sample : icv825-4 Inst : FID 7
Misc : op61868,gnn825,1000,,,2,1,water
ALS Vial : 8 (Sig #1); 58 (Sig #2) Sample Multiplier: 1

Quant Time: Oct 29 14:58:36 2016
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





SGS ACCUTEST FA40754

Manual Integrations
APPROVED
(compounds with "m" flag)
Mark Erstling
02/03/17 15:00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017273.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 2 Feb 2017 2:57 pm
Operator : mayrag
Sample : cc825-4 Inst : FID 7
Misc : op63425,gnn872,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 02 15:51:48 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.915	22003972	26.417	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 132.09%			
5) S 2-Bromonaphthalene	7.725	15382478	24.454	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 122.27%			
10) S o-Terphenyl	10.138	25854925	25.129	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 125.65%			
24) S 1-Chlorooctadecane #2	10.789	34280075	46.825	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 234.13%#			
28) s Naphthalene #2	5.374f	22797961	24.078	ppm	m
29) s 2-Methylnaphthalene #2	6.150f	23299487	24.532	ppm	m
Target Compounds					
1) Naphthalene	5.678	25344605	24.568	ppm	
2) 2-Methylnaphthalene	6.483	24621452	24.482	ppm	
4) Acenaphthylene	7.581	24193050	24.320	ppm	
6) Acenaphthene	7.767	25185898	22.682	ppm	
7) Fluorene	8.401	25143846	24.338	ppm	
8) Phenanthrene	9.635	25136737	24.260	ppm	
9) Anthracene	9.712	24678559	24.696	ppm	
11) Fluoranthene	11.694	25178592	24.207	ppm	
12) Pyrene	12.159	25076209	24.186	ppm	
13) Benzo(a)Anthracene	15.133	24407719	25.923	ppm	
14) Chrysene	15.229	24467472	25.740	ppm	
15) Benzo(b)Fluoranthene	17.938	24952044	25.514	ppm	
16) Benzo(k)Fluoranthene	18.011	24183033	26.898	ppm	
17) Benzo(a)Pyrene	18.708	24714105	26.813	ppm	
18) Indeno(1,2,3-cd)Pyrene	20.390	24266771	25.893	ppm	
19) Dibenzo(ah)Anthracene	20.436	23231691	28.505	ppm	
20) Benzo(ghi)Perylene	20.723	24339359	27.568	ppm	
21) H C11-C22 Aromatics (un...	10.000	236319319	377.878	ppm	
23) H C9-C18 Aliphatics #2	7.353	255536685	259.418	ppm	
25) C20 #2	9.611	40306105	44.232	ppm	
26) C28 #2	13.150	40016978	43.377	ppm	
27) H C19-C36 Aliphatics #2	17.000	324253123	301.866	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

9.6.9

6

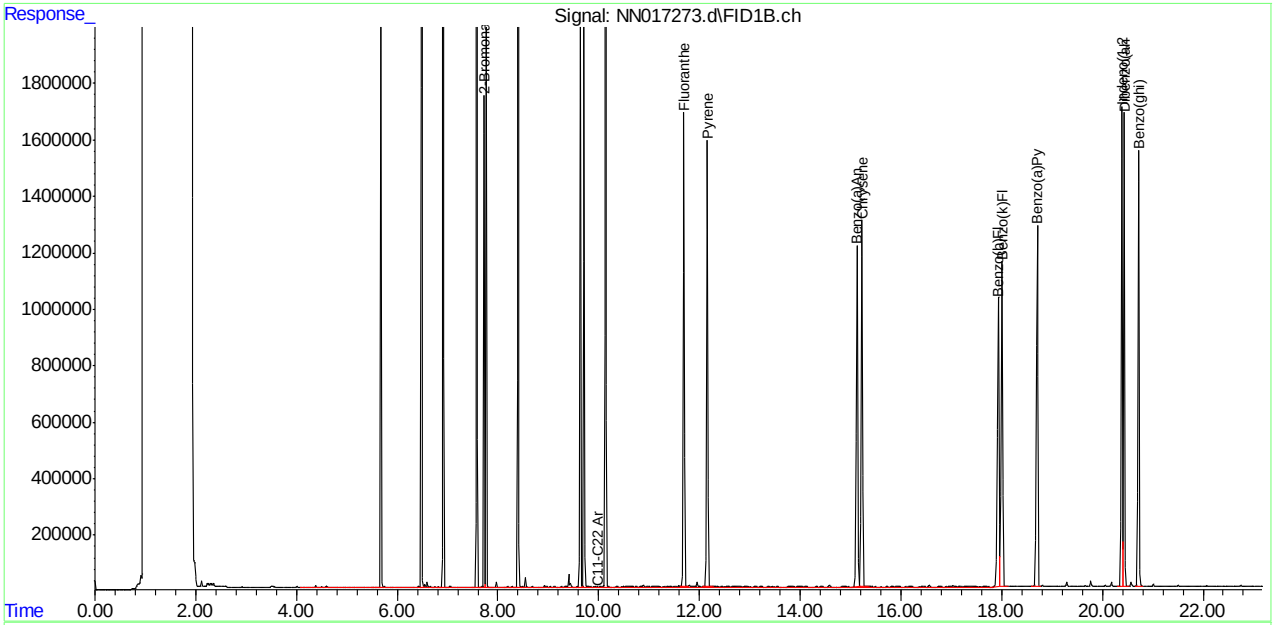
SGS ACCUTEST FA40754

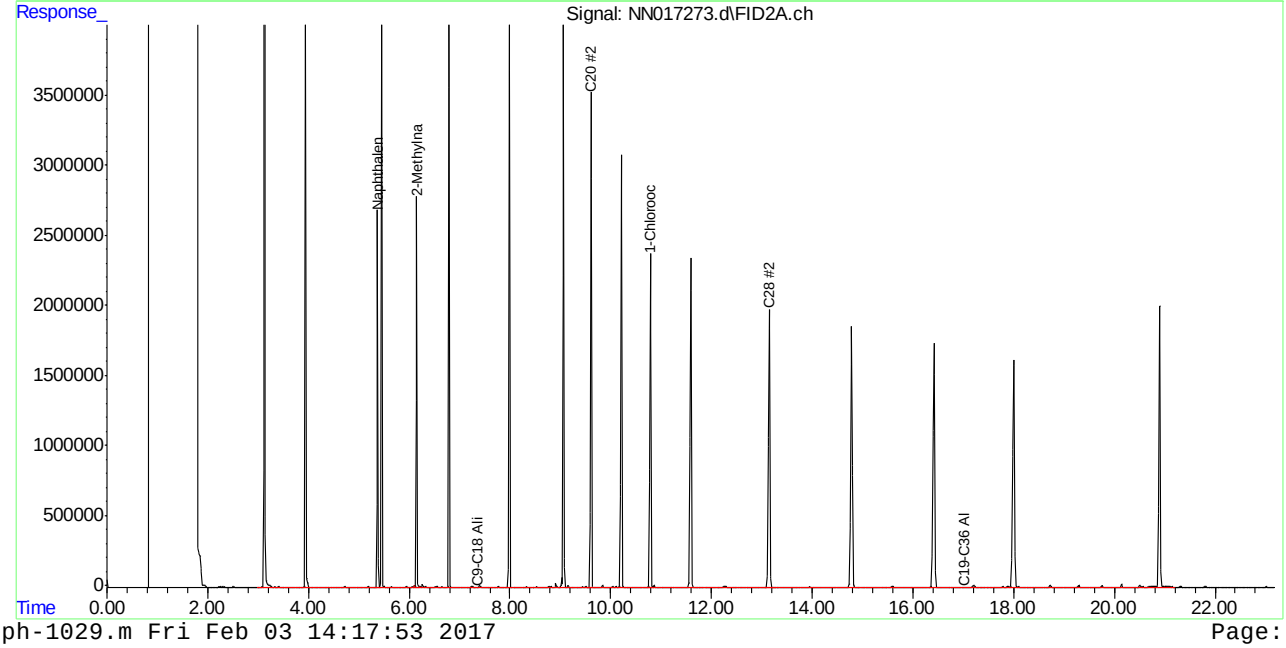
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017273.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 2 Feb 2017 2:57 pm
Operator : mayrag
Sample : cc825-4 Inst : FID 7
Misc : op63425,gnn872,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 02 15:51:48 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





maeph-1029.m Fri Feb 03 14:17:53 2017 Page: 2

SGS ACCUTEST FA40754

Manual Integration Approval Summary

Sample Number:	GNN873-CC825	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN017273.D	**Analyst approved:**	02/03/17 14:21 Mayra Gonzalez
Injection Time:	02/02/17 14:57	**Supervisor approved:**	02/03/17 15:00 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	2	5.37	Poorly defined baseline
2-Methylnaphthalene	91-57-6	2	6.15	Poorly defined baseline

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017283.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 2 Feb 2017 8:56 pm
Operator : mayrag
Sample : cc825-4 Inst : FID 7
Misc : op63425,gnn872,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 09:52:14 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S 2-Fluorobiphenyl	6.915	22410779	26.906 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 134.53%	
5) S 2-Bromonaphthalene	7.725	15625660	24.850 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 124.25%	
10) S o-Terphenyl	10.137	26294695	25.556 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 127.78%	
24) S 1-Chlorooctadecane #2	10.780	35703840	48.770 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 243.85%#	
28) s Naphthalene #2	0.000	0	N.D. ppm
29) s 2-Methylnaphthalene #2	0.000	0	N.D. ppm
Target Compounds			
1) Naphthalene	5.680	25825515	25.034 ppm
2) 2-Methylnaphthalene	6.484	25082804	24.941 ppm
4) Acenaphthylene	7.581	24688568	24.818 ppm
6) Acenaphthene	7.767	25640490	23.092 ppm
7) Fluorene	8.400	25572795	24.753 ppm
8) Phenanthrene	9.634	25600719	24.708 ppm
9) Anthracene	9.711	25097155	25.115 ppm
11) Fluoranthene	11.693	25659055	24.669 ppm
12) Pyrene	12.157	25567290	24.659 ppm
13) Benzo(a)Anthracene	15.131	24866805	26.410 ppm
14) Chrysene	15.226	24828357	26.120 ppm
15) Benzo(b)Fluoranthene	17.935	25503189	26.078 ppm
16) Benzo(k)Fluoranthene	18.007	24594664	27.356 ppm
17) Benzo(a)Pyrene	18.705	25351143	27.504 ppm
18) Indeno(1,2,3-cd)Pyrene	20.384	24823714	26.460 ppm
19) Dibenzo(ah)Anthracene	20.430	23921123	29.353 ppm
20) Benzo(ghi)Perylene	20.717	24838658	28.134 ppm
21) H C11-C22 Aromatics (un...	10.000	285249865	460.103 ppm
23) H C9-C18 Aliphatics #2	7.353	309402881	314.103 ppm
25) C20 #2	9.605	41879663	45.959 ppm
26) C28 #2	13.137	41647810	45.145 ppm
27) H C19-C36 Aliphatics #2	17.000	339066603	315.657 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

9.6.10

9

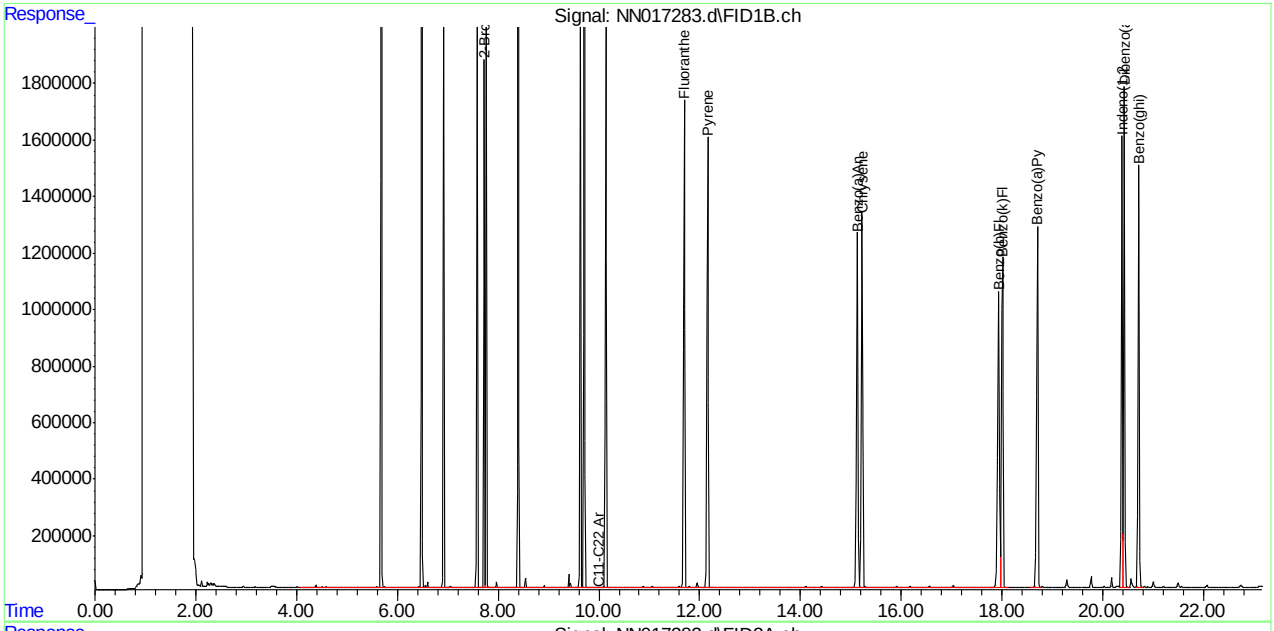
SGS ACCUTEST FA40754

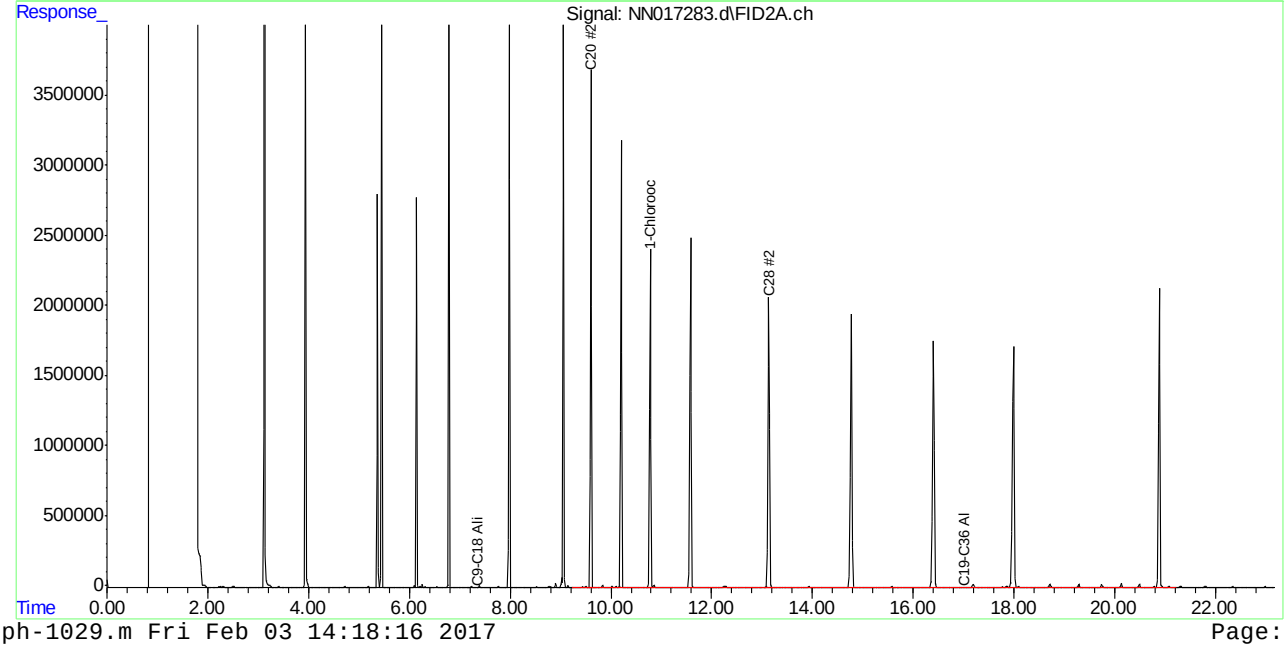
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017283.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 2 Feb 2017 8:56 pm
Operator : mayrag
Sample : cc825-4 Inst : FID 7
Misc : op63425,gnn872,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 09:52:14 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017295.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 3 Feb 2017 2:51 am
Operator : mayrag
Sample : ecc825-4 Inst : FID 7
Misc : op63425,gnn872,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 09:52:50 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S 2-Fluorobiphenyl	6.915	23135824	27.776 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 138.88%	
5) S 2-Bromonaphthalene	7.725	16165508	25.731 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 128.66%	
10) S o-Terphenyl	10.137	27158608	26.396 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 131.98%	
24) S 1-Chlorooctadecane #2	10.780	36524199	49.890 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 249.45%#	
28) s Naphthalene #2	0.000	0	N.D. ppm
29) s 2-Methylnaphthalene #2	0.000	0	N.D. ppm
Target Compounds			
1) Naphthalene	5.680	26660336	25.843 ppm
2) 2-Methylnaphthalene	6.484	25897296	25.750 ppm
4) Acenaphthylene	7.581	25487798	25.621 ppm
6) Acenaphthene	7.767	26483742	23.851 ppm
7) Fluorene	8.401	26431143	25.584 ppm
8) Phenanthrene	9.634	26445283	25.523 ppm
9) Anthracene	9.711	25932484	25.951 ppm
11) Fluoranthene	11.694	26488656	25.466 ppm
12) Pyrene	12.158	26394375	25.457 ppm
13) Benzo(a)Anthracene	15.130	25654510	27.247 ppm
14) Chrysene	15.228	25689114	27.025 ppm
15) Benzo(b)Fluoranthene	17.935	26217965	26.808 ppm
16) Benzo(k)Fluoranthene	18.008	25204829	28.034 ppm
17) Benzo(a)Pyrene	18.705	26070918	28.285 ppm
18) Indeno(1,2,3-cd)Pyrene	20.383	25475386	27.123 ppm
19) Dibenzo(ah)Anthracene	20.430	24450175	30.004 ppm
20) Benzo(ghi)Perylene	20.718	25437785	28.812 ppm
21) H C11-C22 Aromatics (un...	10.000	294722850	476.197 ppm
23) H C9-C18 Aliphatics #2	7.353	319705074	324.561 ppm
25) C20 #2	9.605	43017419	47.208 ppm
26) C28 #2	13.138	42571486	46.146 ppm
27) H C19-C36 Aliphatics #2	17.000	349572146	325.437 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

9.6.11

9

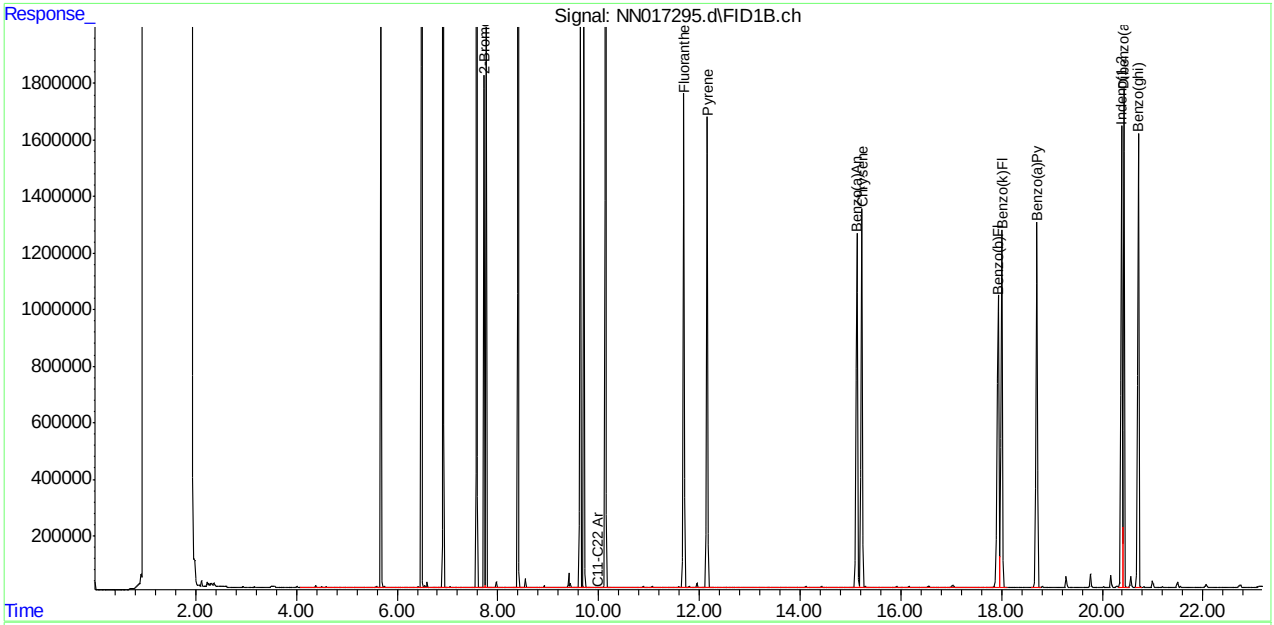
SGS ACCUTEST FA40754

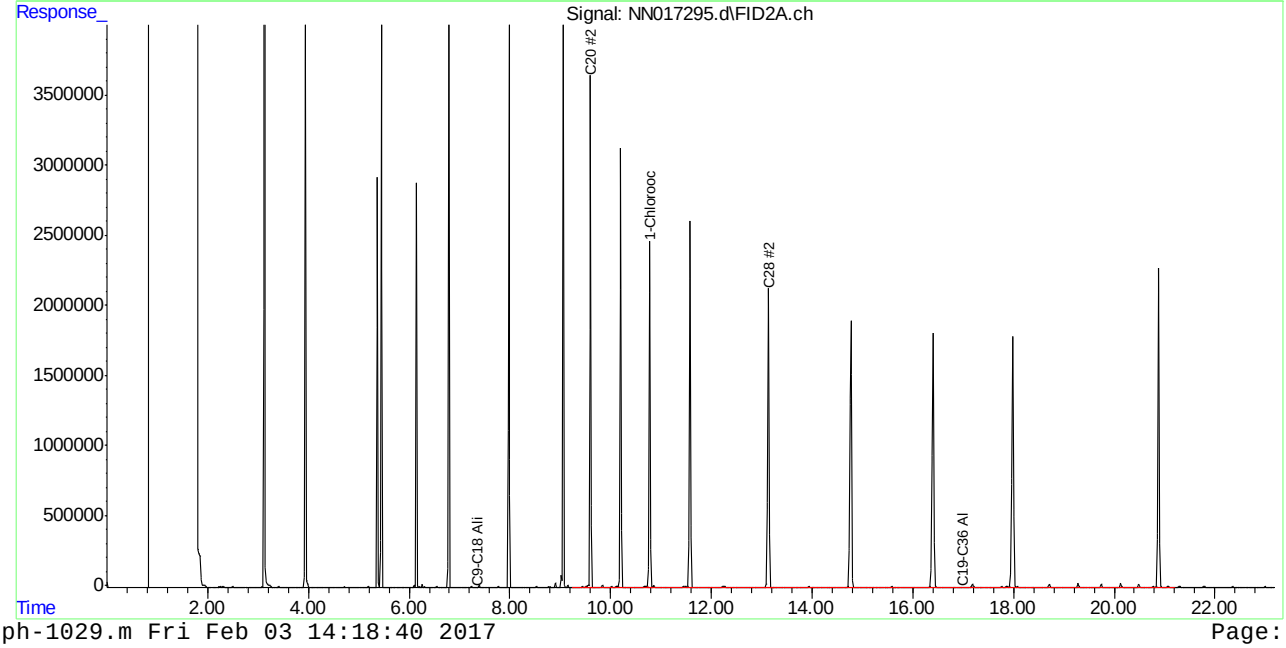
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN873_0202\
Data File : NN017295.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 3 Feb 2017 2:51 am
Operator : mayrag
Sample : ecc825-4 Inst : FID 7
Misc : op63425,gnn872,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 03 09:52:50 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Manual Integrations
APPROVED
(compounds with "m" flag)
Naresh Jiawan
02/09/17 17:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017353.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 10:57 am
Operator : mayrag
Sample : cc825-4 Inst : FID 7
Misc : op63425,gnn877,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 10:48:40 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Feb 08 10:48:05 2017
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.906	22755066	27.319	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 136.60%			
5) S 2-Bromonaphthalene	7.715	15576222	24.770	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 123.85%			
10) S o-Terphenyl	10.123	26657554	25.909	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 129.54%			
24) S 1-Chlorooctadecane #2	10.739	40449064	55.251	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 276.26%#			
28) s Naphthalene #2	5.341f	25908930	27.173	ppm	m
29) s 2-Methylnaphthalene #2	6.116f	26539050	27.737	ppm	m
Target Compounds					
1) Naphthalene	5.671	26728264	25.909	ppm	
2) 2-Methylnaphthalene	6.474	25504006	25.359	ppm	
4) Acenaphthylene	7.571	24638528	24.768	ppm	
6) Acenaphthene	7.757	26384387	23.762	ppm	
7) Fluorene	8.390	25313897	24.502	ppm	
8) Phenanthrene	9.621	25898926	24.996	ppm	
9) Anthracene	9.698	25408287	25.426	ppm	
11) Fluoranthene	11.675	25935000	24.934	ppm	
12) Pyrene	12.139	25826089	24.909	ppm	
13) Benzo(a)Anthracene	15.108	25304858	26.875	ppm	
14) Chrysene	15.206	25330675	26.648	ppm	
15) Benzo(b)Fluoranthene	17.913	25724800	26.304	ppm	
16) Benzo(k)Fluoranthene	17.985	24783442	27.566	ppm	
17) Benzo(a)Pyrene	18.685	25384927	27.541	ppm	
18) Indeno(1,2,3-cd)Pyrene	20.371	24852050	26.489	ppm	
19) Dibenzo(ah)Anthracene	20.417	24053866	29.517	ppm	
20) Benzo(ghi)Perylene	20.703	24800807	28.091	ppm	
21) H C11-C22 Aromatics (un...	5.669	238332329	381.232	ppm	
23) H C9-C18 Aliphatics #2	9.044	285373987	289.709	ppm	
25) C20 #2	9.574	46190234	50.690	ppm	
26) C28 #2	13.089	46225047	50.106	ppm	
27) H C19-C36 Aliphatics #2	9.585	407315026	379.194	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

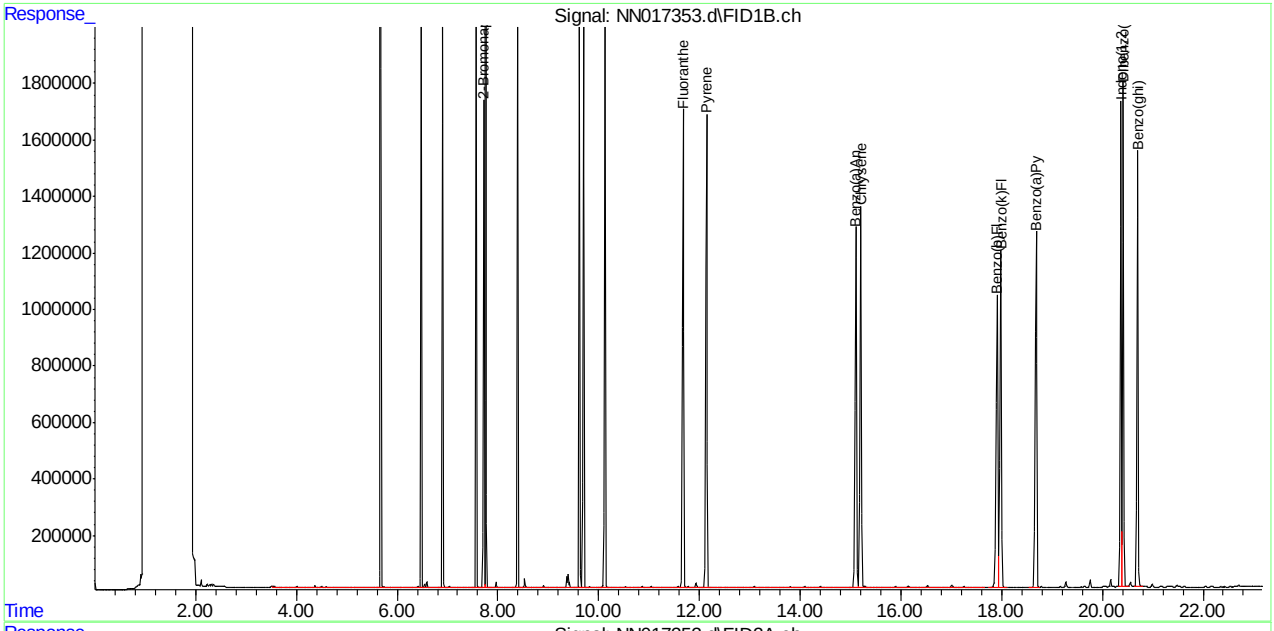
9.6.12
9

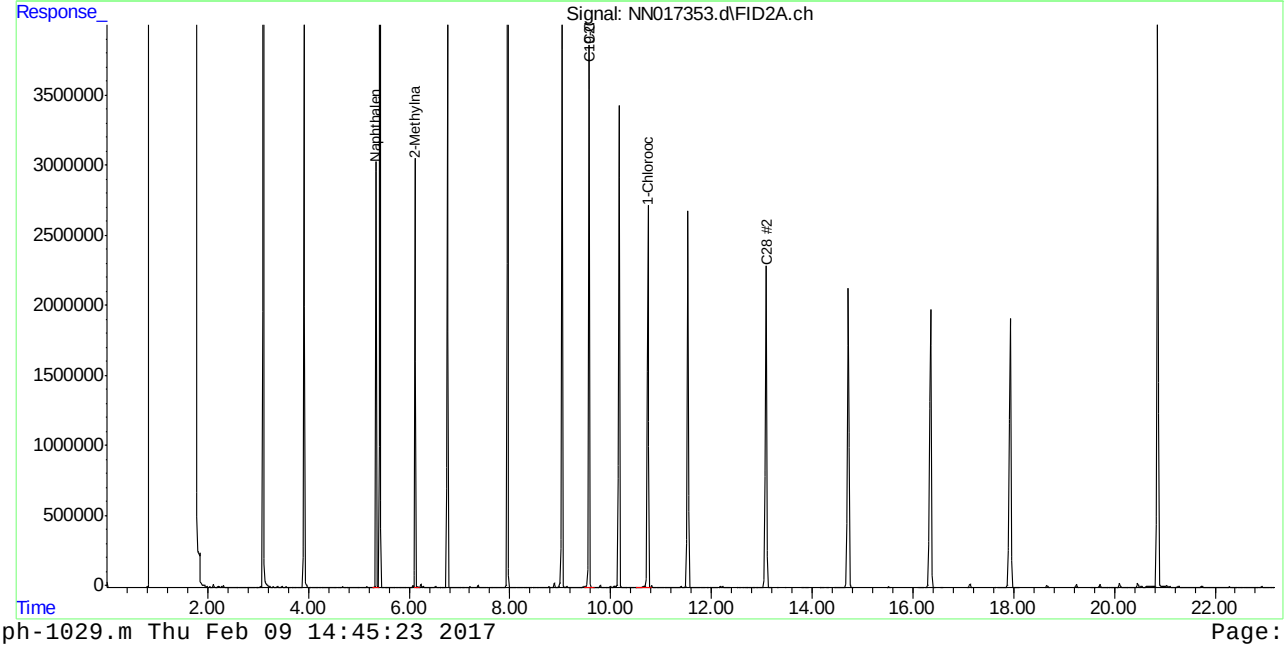
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017353.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 10:57 am
Operator : mayrag
Sample : cc825-4 Inst : FID 7
Misc : op63425,gnn877,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 10:48:40 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Wed Feb 08 10:48:05 2017
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Manual Integration Approval Summary

Sample Number:	GNN877-CC825	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN017353.D	**Analyst approved:**	02/09/17 15:34 Mayra Gonzalez
Injection Time:	02/08/17 10:57	**Supervisor approved:**	02/09/17 17:18 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	2	5.34	Poorly defined baseline
2-Methylnaphthalene	91-57-6	2	6.12	Poorly defined baseline

Manual Integrations
APPROVED
(compounds with "m" flag)
Naresh Jiawan
02/09/17 17:18

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017365.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 5:06 pm
Operator : mayrag
Sample : cc825-4 Inst : FID 7
Misc : op63425,gnn877,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 14:44:45 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) S 2-Fluorobiphenyl	6.906	23424918	28.123	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 140.62%#			
5) S 2-Bromonaphthalene	7.716	16267877	25.898	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 129.49%			
10) S o-Terphenyl	10.125	27374607	26.606	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 133.03%			
24) S 1-Chlorooctadecane #2	10.738	36586093	49.975	ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 249.88%#			
28) s Naphthalene #2	5.340f	23310167	24.590	ppm	m
29) s 2-Methylnaphthalene #2	6.115f	24016361	25.245	ppm	m
Target Compounds					
1) Naphthalene	5.671	27214241	26.380	ppm	
2) 2-Methylnaphthalene	6.475	26201938	26.053	ppm	
4) Acenaphthylene	7.571	25637070	25.771	ppm	
6) Acenaphthene	7.758	26848361	24.180	ppm	
7) Fluorene	8.391	26496248	25.647	ppm	
8) Phenanthrene	9.622	26623850	25.695	ppm	
9) Anthracene	9.700	26135610	26.154	ppm	
11) Fluoranthene	11.678	26677060	25.647	ppm	
12) Pyrene	12.141	26562424	25.619	ppm	
13) Benzo(a)Anthracene	15.110	26115395	27.736	ppm	
14) Chrysene	15.208	26092317	27.449	ppm	
15) Benzo(b)Fluoranthene	17.916	26616165	27.216	ppm	
16) Benzo(k)Fluoranthene	17.988	25668701	28.550	ppm	
17) Benzo(a)Pyrene	18.687	26371992	28.612	ppm	
18) Indeno(1,2,3-cd)Pyrene	20.372	25979903	27.635	ppm	
19) Dibenzo(ah)Anthracene	20.419	25314944	31.068	ppm	m
20) Benzo(ghi)Perylene	20.705	26131516	29.598	ppm	
21) H C11-C22 Aromatics (un...	5.669	256291017	411.259	ppm	
23) H C9-C18 Aliphatics #2	9.044	256680299	260.579	ppm	
25) C20 #2	9.572	41592453	45.644	ppm	
26) C28 #2	13.087	41735080	45.239	ppm	
27) H C19-C36 Aliphatics #2	9.585	371034735	345.418	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

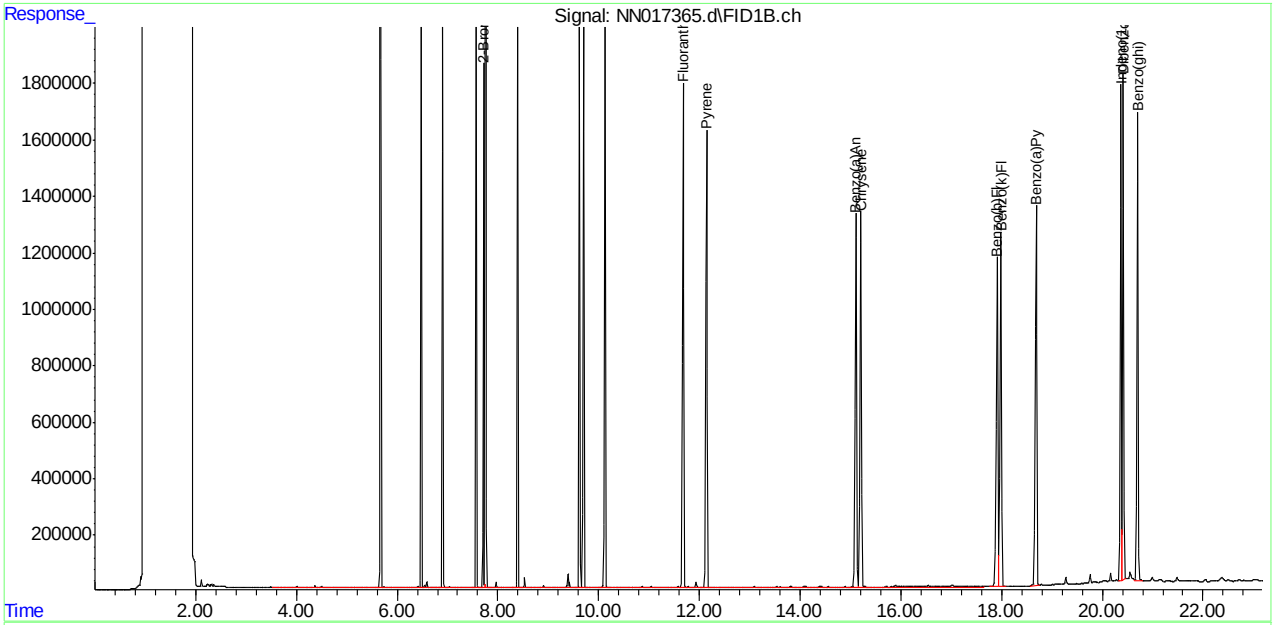
9.6.13
9

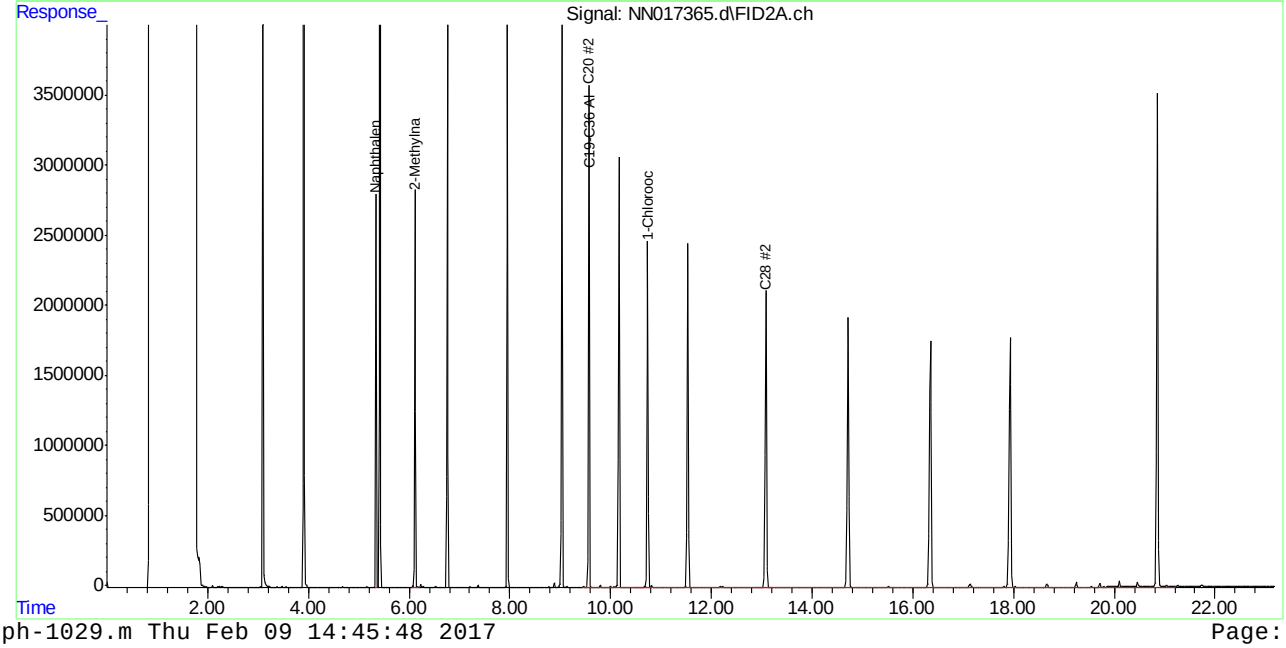
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN877_0208\
Data File : NN017365.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 8 Feb 2017 5:06 pm
Operator : mayrag
Sample : cc825-4 Inst : FID 7
Misc : op63425,gnn877,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 09 14:44:45 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





maeph-1029.m Thu Feb 09 14:45:48 2017 Page: 2

SGS ACCUTEST FA40754

Manual Integration Approval Summary

Sample Number:	GNN877-CC825	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN017365.D	**Analyst approved:**	02/09/17 15:34 Mayra Gonzalez
Injection Time:	02/08/17 17:06	**Supervisor approved:**	02/09/17 17:18 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	2	5.34	Poorly defined baseline
2-Methylnaphthalene	91-57-6	2	6.11	Poorly defined baseline
Dibenzo(a,h)anthracene	53-70-3	1	20.42	Poorly defined baseline

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
02/10/17 16:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN879_0210\
Data File : NN017401.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 10 Feb 2017 11:07 am
Operator : mayrag
Sample : cc825-4 Inst : FID 7
Misc : op63425,gnn879,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 10 12:01:57 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S 2-Fluorobiphenyl	6.906	21616320	25.952 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 129.76%	
5) S 2-Bromonaphthalene	7.715	14975468	23.792 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 118.96%	
10) S o-Terphenyl	10.123	25121842	24.416 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 122.08%	
24) S 1-Chlorooctadecane #2	10.736	34926658	47.708 ppm
Spiked Amount 20.000 Range 40 - 140		Recovery = 238.54%#	
28) s Naphthalene #2	5.340f	22250182	23.528 ppm m
29) s 2-Methylnaphthalene #2	6.114f	22922093	24.155 ppm m
Target Compounds			
1) Naphthalene	5.671	25114050	24.344 ppm
2) 2-Methylnaphthalene	6.475	24220500	24.083 ppm
4) Acenaphthylene	7.571	23661422	23.785 ppm
6) Acenaphthene	7.757	24714251	22.258 ppm
7) Fluorene	8.390	24306434	23.527 ppm
8) Phenanthrene	9.621	24308277	23.461 ppm
9) Anthracene	9.699	23795182	23.812 ppm
11) Fluoranthene	11.676	24215439	23.281 ppm
12) Pyrene	12.139	24114113	23.258 ppm
13) Benzo(a)Anthracene	15.108	23394510	24.847 ppm
14) Chrysene	15.204	23422130	24.640 ppm
15) Benzo(b)Fluoranthene	17.914	23803477	24.340 ppm
16) Benzo(k)Fluoranthene	17.984	22913433	25.486 ppm
17) Benzo(a)Pyrene	18.684	23478161	25.472 ppm
18) Indeno(1,2,3-cd)Pyrene	20.371	23306772	24.912 ppm
19) Dibenzo(ah)Anthracene	20.417	22614043	27.746 ppm
20) Benzo(ghi)Perylene	20.703	23507631	26.626 ppm
21) H C11-C22 Aromatics (un...	5.669	232040744	370.759 ppm
23) H C9-C18 Aliphatics #2	9.044	246886664	250.637 ppm
25) C20 #2	9.570	39852373	43.735 ppm
26) C28 #2	13.084	39791262	43.132 ppm
27) H C19-C36 Aliphatics #2	9.585	324894517	302.464 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

9.6.14

9

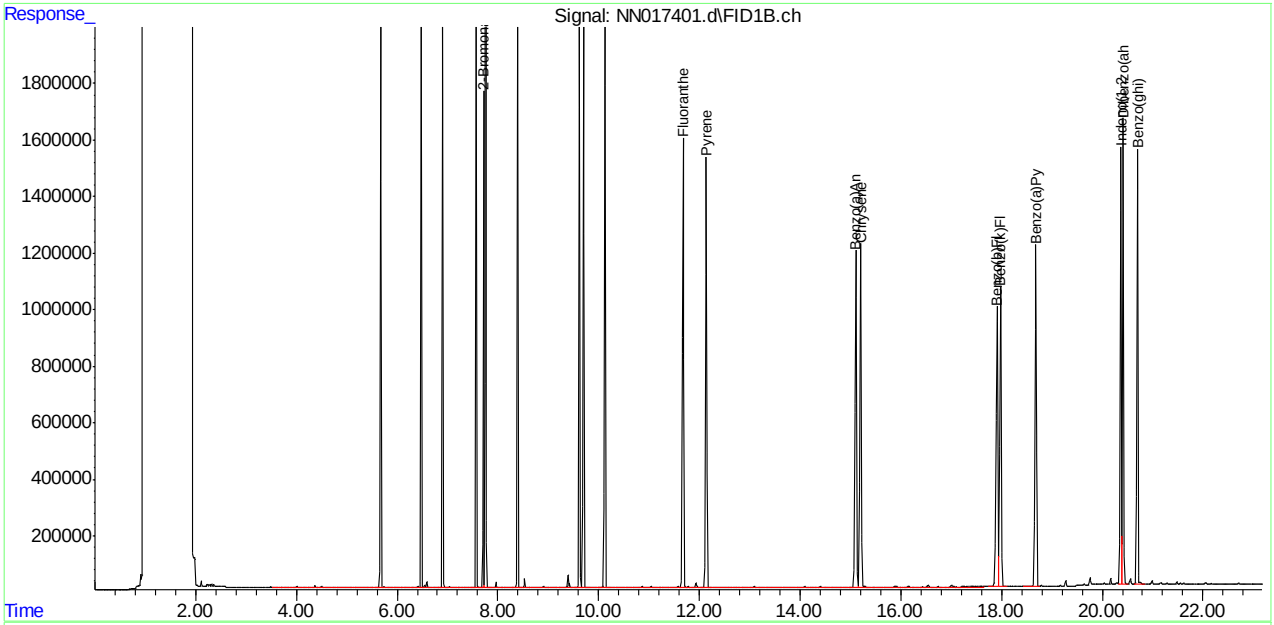
SGS ACCUTEST FA40754

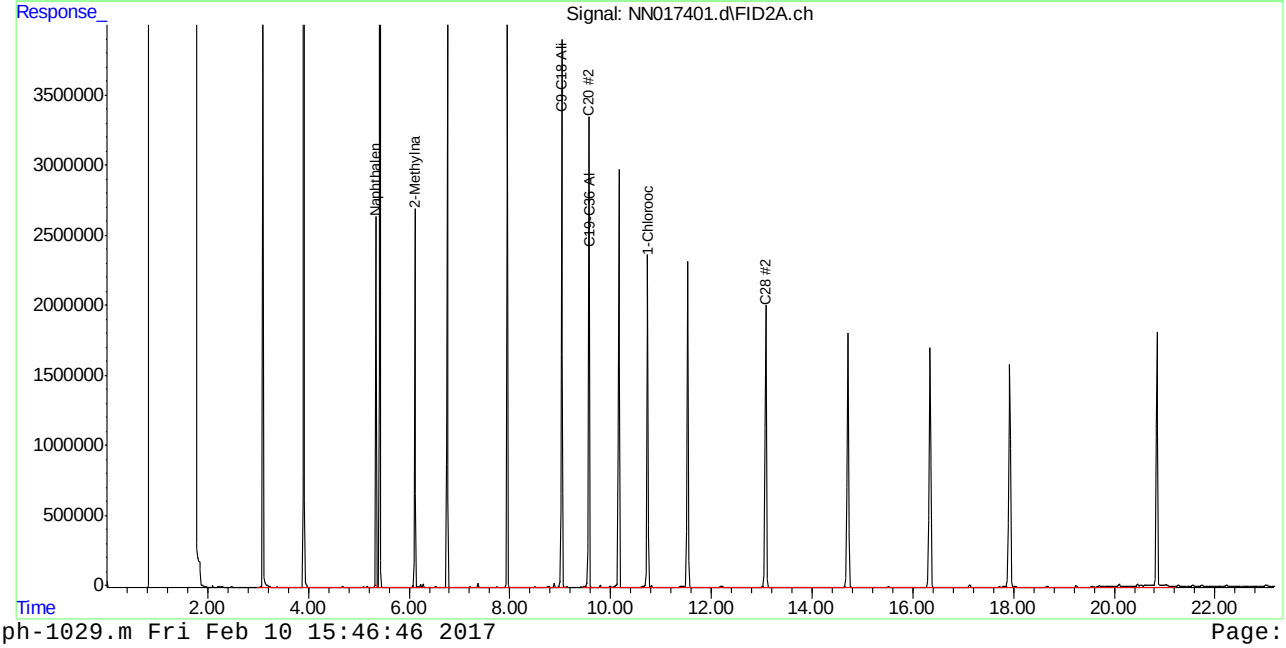
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN879_0210\
Data File : NN017401.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 10 Feb 2017 11:07 am
Operator : mayrag
Sample : cc825-4 Inst : FID 7
Misc : op63425,gnn879,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 10 12:01:57 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





maeph-1029.m Fri Feb 10 15:46:46 2017 Page: 2

SGS ACCUTEST FA40754

Manual Integration Approval Summary

Sample Number:	GNN879-CC825	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN017401.D	**Analyst approved:**	02/10/17 16:09 Mayra Gonzalez
Injection Time:	02/10/17 11:07	**Supervisor approved:**	02/10/17 16:34 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	2	5.34	Poorly defined baseline
2-Methylnaphthalene	91-57-6	2	6.11	Poorly defined baseline

Manual Integrations
APPROVED
(compounds with "m" flag)
Naresh Jiawan
02/10/17 16:34

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN879_0210\
Data File : NN017410.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 10 Feb 2017 3:57 pm
Operator : mayrag
Sample : ecc825-4 Inst : FID 7
Misc : op63425,gnn879,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 10 16:22:10 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

Compound	R.T.	Response	Conc Units	
System Monitoring Compounds				
3) S 2-Fluorobiphenyl	6.906	22375067	26.863 ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 134.32%		
5) S 2-Bromonaphthalene	7.716	15634237	24.864 ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 124.32%		
10) S o-Terphenyl	10.124	26045913	25.315 ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 126.58%		
24) S 1-Chlorooctadecane #2	10.738	40131810	54.818 ppm	
Spiked Amount 20.000 Range 40 - 140		Recovery = 274.09%#		
28) s Naphthalene #2	5.340f	25566876	26.834 ppm	m
29) s 2-Methylnaphthalene #2	6.114f	26172083	27.376 ppm	m
Target Compounds				
1) Naphthalene	5.671	25795388	25.005 ppm	
2) 2-Methylnaphthalene	6.475	25023157	24.881 ppm	
4) Acenaphthylene	7.572	24571652	24.700 ppm	
6) Acenaphthene	7.757	25520303	22.984 ppm	
7) Fluorene	8.391	25302681	24.491 ppm	
8) Phenanthrene	9.623	25269574	24.388 ppm	
9) Anthracene	9.700	24815991	24.834 ppm	
11) Fluoranthene	11.678	25368130	24.389 ppm	
12) Pyrene	12.142	25325913	24.427 ppm	
13) Benzo(a)Anthracene	15.112	25182630	26.746 ppm	
14) Chrysene	15.208	25192055	26.502 ppm	
15) Benzo(b)Fluoranthene	17.917	26151074	26.740 ppm	
16) Benzo(k)Fluoranthene	17.991	25231278	28.064 ppm	
17) Benzo(a)Pyrene	18.689	26016495	28.226 ppm	
18) Indeno(1,2,3-cd)Pyrene	20.376	26222715	27.881 ppm	m
19) Dibenzo(ah)Anthracene	20.422	25457979	31.244 ppm	m
20) Benzo(ghi)Perylene	20.707	26219633	29.698 ppm	
21) H C11-C22 Aromatics (un...	5.669	242136224	387.576 ppm	
23) H C9-C18 Aliphatics #2	9.044	282263956	286.552 ppm	
25) C20 #2	9.571	45634015	50.079 ppm	
26) C28 #2	13.085	45765324	49.608 ppm	
27) H C19-C36 Aliphatics #2	9.585	382257836	355.866 ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

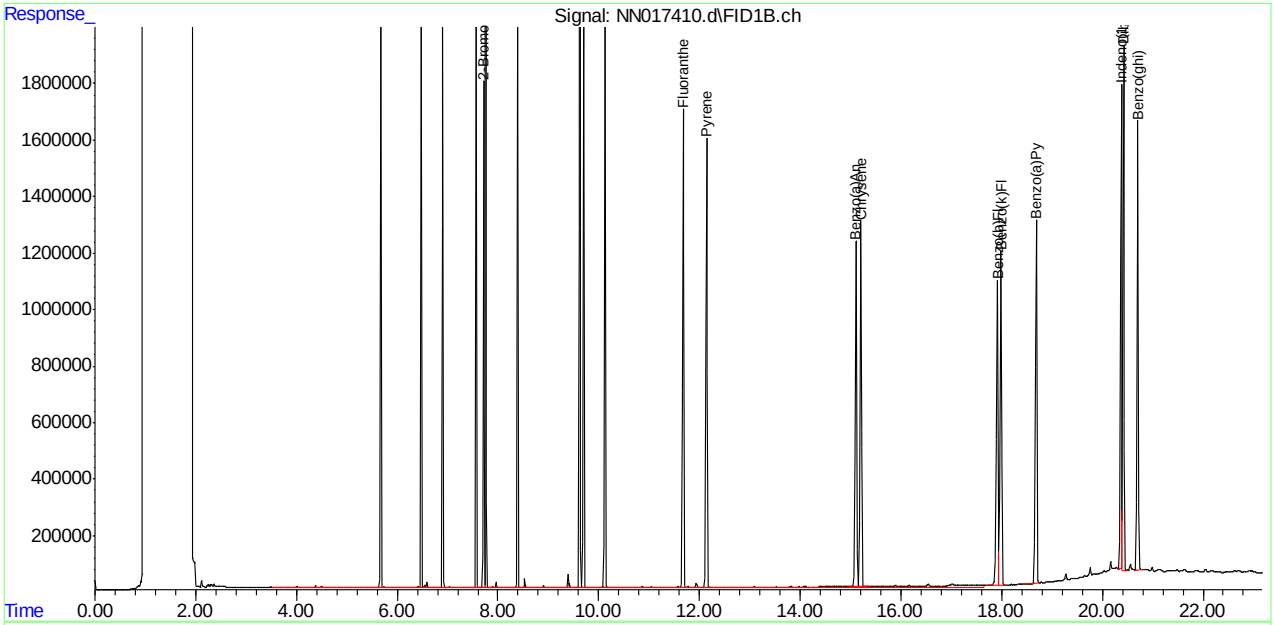
9.6.15
9

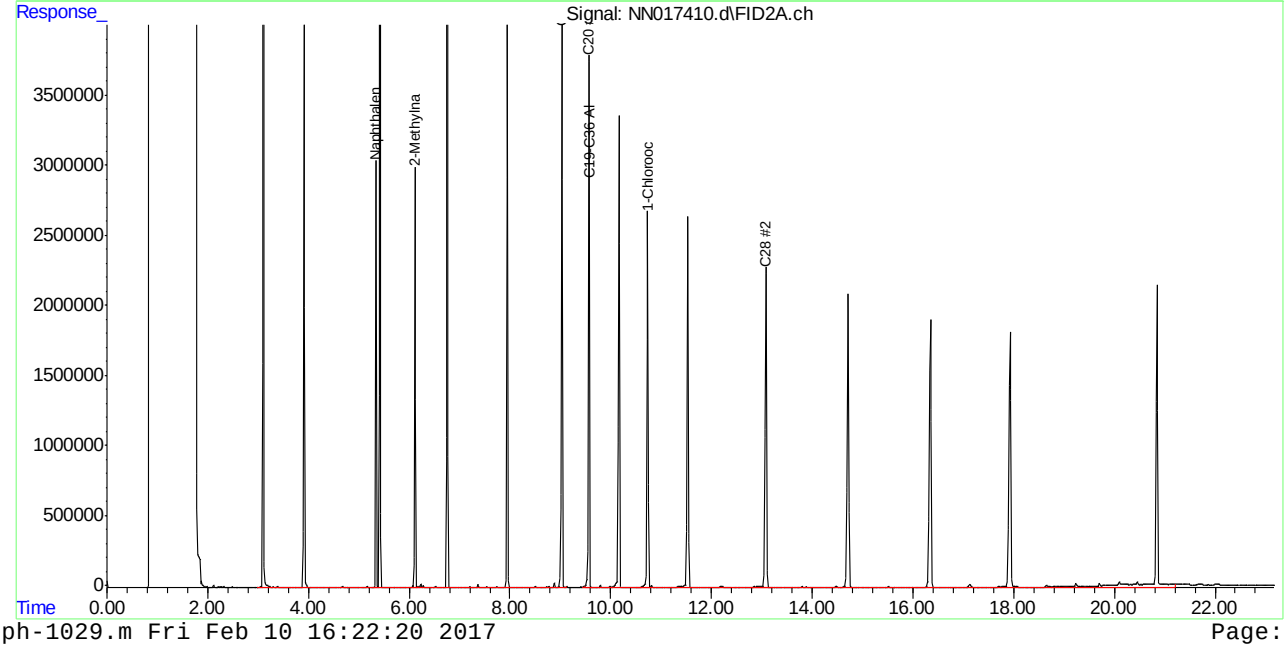
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GNN879_0210\
Data File : NN017410.d
Signal(s) : Signal #1: FID1B.ch Signal #2: FID2A.ch
Acq On : 10 Feb 2017 3:57 pm
Operator : mayrag
Sample : ecc825-4 Inst : FID 7
Misc : op63425,gnn879,1000,,,2,1,water
ALS Vial : 1 (Sig #1); 51 (Sig #2) Sample Multiplier: 1

Quant Time: Feb 10 16:22:10 2017
Quant Method : C:\msdchem\1\methods\maeph-1029.m
Quant Title : MADEP Extractable Petroleum Hydrocarbons
QLast Update : Sat Oct 29 14:31:04 2016
Response via : Initial Calibration

Volume Inj. : 1ul
Signal #1 Phase : DB-5 Signal #2 Phase: DB-5
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





SGS ACCUTEST FA40754

Manual Integration Approval Summary

Sample Number:	GNN879-ECC825	**Method:**	MADEP EPH REV 1.1
Lab FileID:	NN017410.D	**Analyst approved:**	02/10/17 16:24 Mayra Gonzalez
Injection Time:	02/10/17 15:57	**Supervisor approved:**	02/10/17 16:34 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Naphthalene	91-20-3	2	5.34	Poorly defined baseline
2-Methylnaphthalene	91-57-6	2	6.11	Poorly defined baseline
Indeno(1,2,3-cd)pyrene	193-39-5	1	20.38	Poorly defined baseline
Dibenzo(a,h)anthracene	53-70-3	1	20.42	Poorly defined baseline

SGS ACCUTEST-ORLANDO

DATE: 10/29/16
COLUMN TYPE: 46-5MS + 46P
AMOUNT INJECTED: 1 ul
INSTRUMENT: FID7-NN

GC FID7-NN ANALYSIS LOG

METHODS: MAEPH
ACQ. METHOD: MAEPH
PROC. METHOD: MAEPH
CALIB. DATE: 10/29/16
RUN BATCH: GNN 825

ANALYST: PS
HEXANE LOT #: 157130

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
NN 016513	51/1	16825-1	MAEPH	55569/70	5+795 5+495	#10 psi #28 29 MP	
NN 14	52/2	-2			10+390 20+380 50+350 40+360		Curve part
NN 15	53/3	-3			100+300 100+300 200+200 200+200	—	
NN 16	54/4	-4			300+100 300+100	#16 psi	
NN 17	55/5	-5			1X	#14→17 psi 20 psi	
NN 18	56/6	-6				Absolute block	
NN 19	57/7	-7		8171/8170	10+390 5+395		ICV part
NN 20	58/8	ICV825-4					
NN 21	59/9	CCB					NO
NN 22	60/10	op62415-mB		op62415	x1		
NN 23	61/11	-BS					
NN 24	62/12	-BSD					confirm No Sing
NN 25	63/13	F-37879-1			x2	#10, 24 psi	
NN 26	64/14	320-1			x20		
NN 27	65/15	DUP			x20		p.d. at 40 x
NN 28	66/16	Test					
NN 29	67/17	CC825-4		55569/70	4x	#28, 29 MP	part
NN 30	68/18	CCB					NO
NN 31	69/19	op62378-mB		op62378	x1		NO
NN 32	70/20	-BS					

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Analyst's Signature: [signature]

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SGS ACCUTEST FA40754

SGS ACCUTEST-ORLANDO

DATE:	10/29/16
COLUMN TYPE:	16 TMC,LLP
AMOUNT INJECTED:	ul
INSTRUMENT:	FID7-NN

GC FID7-NN ANALYSIS LOG

METHODS:	MAEPH
ACQ. METHOD:	MAEPH
PROC. METHOD:	MAEPH
CALIB. DATE:	10/29/16
RUN BATCH: GNN	825

ANALYST:	ES
HEXANE LOT #:	157130

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
NN 06533	71/21	op62378-bs0	MAEPH	op61378	x1		
NN 34	72/22	F-37782-1					
NN 35	73/23	-2					
NN 36	74/24	F-37783-1					
NN 37	75/25	-Dup					
NN 38	76/26	F-38027-8					
NN 39	77/27	F-37757-1			x10	#10,33 PSS	
NN 40	78/17	ecc825-4		SSSG9/20	4x	#28,29 MP	PASS
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							

ES 10/31/16

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Analyst's Signature: Edward [illegible]

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SGS ACCUTEST - ORLANDO

Date/Time Started: 10/26/16 9:45 {mm/dd/yy 24:00}

Date/Time Finished: 10/25/16 11:20 {mm/dd/yy 24:00}

SOLID SAMPLE PREP REPORT

Analytical Method: MA EPH

Batch#: OP62378

Prep Method: 3546

Balance ID: ADVPRO8 9

Extracted By: JC, BAA
Conc/vialed By: AE/AE

Fractionated By: [illegible]
Run ID: [illegible]
Conc/vialed By: [illegible]

Refractionated By:
Run ID:
Conc/vialed By:

Sample ID	Bottle Number	Extraction: Extracted Amount (g)	Extraction: Surr. Amount	Extraction: Spike Amount	Extraction: Final Volume (ml)	Fractionation: Fractionation Amount (ml)	Fractionation: Frac. Surr Amount	Fractionation: Volume Final (ml)	Fractionation: Equiv. Final Volume (ml)	Refractionation: Fractionation Amount (ml)	Refractionation: Frac. Surr Amount	Refractionation: Volume Final (ml)	Refractionation: Equiv. Final Volume (ml)
OP 62378 MB	X	20.0	0.5ml		1.0ml	0.5	10µl	1.0	2.0				
OP 62378 BS	X	20.0		0.5ml									
OP 62378 BSD	X	20.0											
FA37982-1	7	19.6											
-2	7	20.1											
FA37989-1	7	19.7											
FA38027-8	1	20.4											
FA37757-1	9	20.2											
OP FA37989-1 DUP	7	20.3	0.5ml		1.0ml	0.5	10µl	1.0	2.0				
OP MS													
OP MSD													

AE 10-25-16

Comments:

Surr. ID: ES732 Conc: 800ppm Exp. Date: 04/18/17 Inj. By: JC Ver. By BAA
Spk. ID: ES692 Conc: 200ppm Exp. Date: 02/18/17 Inj. By: JC Ver. By BAA
Frac Sur. ID: Conc: Exp. Date: Inj. By: Ver. By
ReFrac.Sur. ID: Conc: Exp. Date: Inj. By: Ver. By

Initial Bath Temp (Therm ID):
Observed Temp °C: Corr. Temp °C:
Exchange Bath/N-Evap Temp (Therm ID):
Observed Temp °C: Corr. Temp °C:

CH2CL2 Lot # — Hexane Lot # 163928 Acetone Lot # 162164 Na2SO4 Lot # .2143 Filter Paper # 5449 Reagent # —

Relinquished By: [signature] Date: 10-25-16
Accepted By: [signature] Date: 10-26-16

Relinquished By: [signature] Date: 10/27/16
Accepted By: [signature] Date: 10/27/16

NF rev. 02/01/16

maephextsolid 020116.xls

SGS ACCUTEST FA40754

SGS ACCUTEST - ORLANDO

Date/Time: 10/27/16 0905
Started {mm/dd/yy 24:00}

Date/Time: 10/27/16
Finished {mm/dd/yy 24:00}

SOLID SAMPLE PREP REPORT

Analytical Method: MA EPH

Batch#: OP 62415

Prep Method: 3546

Balance ID: ADVPRO8,9

Extracted By: DC, BAA
Conc/vialed By: AA

Fractionated By:
Run ID:
Conc/vialed By:

Refractionated By:
Run ID:
Conc/vialed By:

Sample ID	Bottle Number	Extraction: Extracted Amount (g)	Extraction: Surr. Amount	Extraction: Spike Amount	Extraction: Final Volume (ml)	Fractionation: Fractionation Amount (ml)	Fractionation: Frac. Surr Amount	Fractionation: Volume Final (ml)	Fractionation: Equiv. Final Volume (ml)	Refractionation: Fractionation Amount (ml)	Refractionation: Frac. Surr Amount	Refractionation: Volume Final (ml)	Refractionation: Equiv. Final Volume (ml)
OP 62415 MB	X	20.0	0.5ml		1.0ml	0.5ml	1ml	1.0ml	2.0ml				
OP 62415 BS	X	20.0	↓	0.5ml	↓	↓	↓	↓	↓				
OP 62415 BSD	X	20.0	↓	↓	↓	↓	↓	↓	↓				
FA37879-1	8	19.8			↓	↓	↓	↓	↓				
FA37920-1	3	19.5			↓	↓	↓	↓	↓				
P# A37920-1 AA. OP ~~FA37879~~ DUP	3	20.0	0.5ml		1.0ml	0.5	1ml	1.0ml	2.0ml				
OP MS													
OP MSD													

Comments:

Surr. ID: ES738C Conc: 800ppm Exp. Date: 04/25/17 Inj. By: DC Ver. By: BAA
Spk. ID: ES692 Conc: 200ppm Exp. Date: 02/18/17 Inj. By: DC Ver. By: BAA
Frac Sur. ID: 8208 Conc: 4000ppm Exp. Date: 09/27/17 Inj. By: FS Ver. By: FS
ReFrac.Sur. ID: Conc: Exp. Date: Inj. By: Ver. By:

Initial Bath Temp (Therm ID):
Observed Temp °C: Corr. Temp °C:
Exchange Bath/N-Evap Temp (Therm ID):
Observed Temp °C: Corr. Temp °C:

CH2CL2 Lot # Hexane Lot # 163928. Acetone Lot # 162164. Na2SO4 Lot # 2144 Filter Paper # 5449 Reagent #

Relinquished By: Ahmad Date: 10/27/16
Accepted By: Fouad Date: 10/27/16

Relinquished By: Ahmad Date: 10/28/16
Accepted By: Fouad Date: 10/28/16

NF rev. 02/01/16

maephextsolid 020116.xls

SGS ACCUTEST-ORLANDO

DATE:	02-08-17
COLUMN TYPE:	7G TMS
AMOUNT INJECTED:	/ul
INSTRUMENT:	FID7-NN

GC FID7-NN ANALYSIS LOG

METHODS:	~~SW846-5035A~~ MAEPH
ACQ. METHOD:	MAEPH
PROC. METHOD:	MAEPH
CALIB. DATE:	10-29-16
RUN BATCH:	GNN 873

ANALYST:	MA
HEXANE LOT #:	162947

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
NN017273	51/1	CC825-4	MAEPH	55569/20	4X 100+300		Pass
NN 74	52/2	CCb		—	1X		↓
NN 74	53/3	OP63635-MS		OP63635	1X		The Pass Reported data files
NN 74	54/4	-BS					
NN 75	55/5	-BSD					
NN 76	56/6	FA40460-4L			4X 100+300		
NN 77	57/7	FA40421-2R		OP63591	5X 100+400		
NN 78	58/8	-7R					
NN 79	59/9	OP63591-dup					
NN 80	60/10	OP63636-MS		OP63636	1X		
NN 81	60/10	-MS					Removed
NN 82	61/11	-BS					
NN 83	61/1	CC525-4		55569/20			Pass
NN 84	62/12	CCb		—			
NN 85	62/12	OP63636-BSD		OP63636			
NN 86	63/13	FA41050-1					MR 4X
NN 87	64/14	OP63636-Dup					
NN 88	65/15	FA46650-2					
NN 89	66/16	FA46736-1					
NN 90	67/17	FA40651-1					Very Degraded.

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

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Analyst's Signature: [signature]

SGS ACCUTEST FA40754

SGS ACCUTEST-ORLANDO

DATE:	02-02-17
COLUMN TYPE:	765MS
AMOUNT INJECTED:	1 ul
INSTRUMENT:	FID7-NN

DL-02-17

GC FID7-NN ANALYSIS LOG

METHODS:	~~[illegible]~~ MAEPH
ACQ. METHOD:	↓
PROC. METHOD:	↓
CALIB. DATE:	10-29-17
RUN BATCH:	GNN 873

ANALYST:	MGA
HEXANE LOT #:	163947

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
NN 017291	68/18	FG40651-2	MAEPH	OP63636	1X		Matrix
NN 92	69/19	FG40754-6	↓	↓	↓		—
NN 93	70/20	-7					—
NN 94	71/21	FG40755-5		↓	↓		—
NN 95	51/1	ECC825-4		55569/78	4X 00-300		—
NN 96	72/22	FG40755-6		OP636	1X		TPR out of bracket 02-13-17
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							

MGA 02-03-17

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid7_nn_log.xls ME rev. 06/16

Analyst's Signature: MGA

SGS ACCUTEST-ORLANDO

DATE:	02-08-17
COLUMN TYPE:	7G5MS
AMOUNT INJECTED:	1 ul
INSTRUMENT:	FID7-NN

GC FID7-NN ANALYSIS LOG

METHODS:	MAEPH
ACQ. METHOD:	↓
PROC. METHOD:	↓
CALIB. DATE:	12-29-16
RUN BATCH: GNN	877

ANALYST:	MGA
HEXANE LOT #:	163947

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
NN 017373	69/19	OP63645MS2	MAEPH	OP63645	1x 100+20+	All PDB	✓
NN 74	70/20	-MSD2	↓	↓	↓	↓	✓
NN 75	71/21	FA40807-2					✓ Run 20x only Naph
NN 76	72/22	-3		↓	↓		
NN 77	51/1	cc825-4			4x/4x 100+20+		✓
NN 78	52/2	CCb		—	1x		Pass Dibenz(ah)↑
NN 79	73/23	FA40807-4		OP63645	↓		↓
NN 80	74/24	-5		↓	↓		✓ Naph (hp.1x4x).
NN 81	75/25	bex		↓	↓		✓
NN 82	51/1	cc825-4	↓	55569/78	4x/4x	↓	No
NN							✓ Dibenz(ah)↑
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							

MGA 02-09-17

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid7_nn_log.xls ME rev. 06/16

Analyst's Signature: [signature]

SGS ACCUTEST-ORLANDO

DATE:	02-08-17
COLUMN TYPE:	TG5MS
AMOUNT INJECTED:	1 ul
INSTRUMENT:	FID7-NN

GC FID7-NN ANALYSIS LOG

METHODS:	MAEPH
ACQ. METHOD:	↓
PROC. METHOD:	↓
CALIB. DATE:	10-29-16
RUN BATCH:	GNN 877

ANALYST:	MGA
HEXANE LOT #:	163947

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
NN 017353	51/1	CC825-4	MAEPH	55569/70	4X/4X		PASS
NN 54	52/2	ccb		—	1X		↓
NN 55	53/3	OP63645-MB		OP63645		All POS	NO
NN 56	54/4	OP63645-BS					—
NN 57	55/5	-BSD					—
NN 58	56/6	FG40754-1					—
NN 59	57/7	OP63645-Dup					—
NN 60	58/8	FG40754-2			2X 200+200		—
NN 61	59/9	-3			1X		—
NN 62	60/10	-4					—
NN 63	61/11	-5					—
NN 64	62/12	FG40755-1					—
NN 65	51/1	CC825-4		55569/70	4X/4X		PASS
NN 66	52/2	ccb		—	1X		↓
NN 67	63/13	FG40755-2		OP63645			—
NN 68	64/14	-3					—
NN 69	65/15	-4			2X 200+200		—
NN 70	66/16	OP63645-MS					—
NN 71	67/17	-MSD					—
NN 72	68/18	FG40807-1			4X 100+300		—

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid7_nn_log.xls ME rev. 06/16

Analyst's Signature: [signature]

SGS ACCUTEST-ORLANDO MA 02-10-17

DATE:	02-09-2017
COLUMN TYPE:	1.65MS
AMOUNT INJECTED:	1 ul
INSTRUMENT:	FID7-NN

GC FID7-NN ANALYSIS LOG

METHODS:	MAEPH
ACQ. METHOD:	↓
PROC. METHOD:	↓
CALIB. DATE:	10-29-16
RUN BATCH:	GNN 879

ANALYST:	MA
HEXANE LOT #:	163947

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
NN 01701	51/1	CC835-4	MAEPH	SS569/70	4/4x	OH 1 Pn	PASS
NN 02	52/2	CC6	↓	—	1x	↓	↓
NN 03	53/3	FA40807-2	↓	OP63645	20x 20+380	↓	— (Oil only)
NN 04	54/4	-4	↓	↓	40 100+300	↓	—
NN 05	55/5	FA40759-2	↓	OP6XMS	1x	↓	—
NN 06	56/6	FA40755-4	↓	↓	↓	↓	—
NN 07	57/7	OP63645MS	↓	↓	↓	↓	—
NN 08	58/8	-MSD	↓	↓	↓	↓	—
NN 09	59/9	FA40847-21	↓	OP63720	10x 40+360	↓	— (Mp. Pan-n)
NN							
NN							
NN							
NN							
NN							
NN							
NN							
NN							MA 02-10-17
NN							
NN							

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid7_nn_log.xls ME rev. 06/16

Analyst's Signature: [signature]

SGS ACCUTEST - ORLANDO

Date/Time: 01/31/17 16:50 (mm/dd/yy 24:00) Started

Date/Time: 01/31/17 18:40 (mm/dd/yy 24:00) Finished

LIQUID SAMPLE PREP REPORT

Analytical Method: MA EPH

Prep Method: 3510C

Batch#: OP 63636

Extracted By: KC

Conc/vialed By: KC/KC

Fractionated By: [illegible]

Run ID: 760

Conc/vialed By: MA

Refractionated By:

Run ID:

Conc/vialed By:

Sample ID	Bottle Number	Extraction: Extracted Amount (ml)	Initial pH	Adjusted pH	Surr. Amount	Spike Amount	Final Volume (ml)	Fractionation: Fractionation Amount (ml)	Frac. Surr Amount	Volume Final (ml)	Equiv. Final Volume (ml)	Refractionation: Fractionation Amount (ml)	Frac. Surr Amount	Volume Final (ml)	Equiv. Final Volume (ml)
OP 63636 MB	X	1000	6	<2	0.5ml		1.0 ml	0.5mL	10µL	1mL	2mL				
OP 63636 BS	X	1000	6	<2		0.5ml									
OP 63636 BSD	X	1000	6	<2		0.5ml									
FA40776-1	1	950	<2	N/A											
FA40650-1	8	1000	<2												
↓ -2	9	1000	<2												
FA40651-1	8	1000													
↓ -2	8	1000													
FA40754-6	1	800													
↓ -7	8	800													
FA40755-5	8	800													
↓ -6	2	800	↓	↓	↓		↓	↓	↓	↓	↓				
		KC	01/31/17												
FA40651-1 DUP 2	2	950	<2	N/A	0.5ml		1.0 ml	0.5mL	10µL	1mL	2mL				
OP 63636 DUP 5															
OP MS															
OP MSD			KC	01/31/17											

Comments:

Surr. ID: E5763 B Conc: 800 PPM Exp. Date: 06/28/17 Inj. By: KC Ver. By: CB

Spk. ID: E5764 A Conc: 200 PPM Exp. Date: 06/28/17 Inj. By: KC Ver. By: CB

Frac Sur. ID: Conc: Exp. Date: Inj. By: Ver. By:

ReFrac.Sur. ID: Conc: Exp. Date: Inj. By: Ver. By:

Initial Bath Temp (Therm ID): TV# 7

Observed Temp °C: 45°C Corr. Temp °C: 45°C

Exchange Bath/N-Evap Temp (Therm ID): TV# 2

Observed Temp °C: 55°C Corr. Temp °C: 55°C

CH2CL2 Lot # 164775 Hexane Lot # 163928 Acetone Lot # — Na2SO4 Lot # — H2SO4 # 160466 pH Paper # 234215

Relinquished By: [illegible] Date: 01/31/17

Accepted By: [illegible] Date: 02-01-17

Relinquished By: [illegible] Date: 02-03-17

Accepted By: [illegible] Date: 02-01-17

NF rev. 02/01/16

maephextwater 020116.xls

SGS ACCUTEST - ORLANDO

SOLID SAMPLE PREP REPORT

Date/Time Started: 02/01/17 10:05 {mm/dd/yy 24:00}

Date/Time Finished: 02/01/17 13:23 {mm/dd/yy 24:00}

Analytical Method: MA EPH

Batch#: OP63645

Prep Method: 3546

Balance ID: ADVPR09

Extracted By: AA, YFS
Conc/vialed By: AE/AE

Fractionated By: hh
Run ID: 764
Conc/vialed By: MH

Refractionated By:
Run ID:
Conc/vialed By:

Sample ID	Bottle Number	Extraction: Extracted Amount (g)	Extraction: Surr. Amount	Extraction: Spike Amount	Extraction: Final Volume (ml)	Fractionation: Fractionation Amount (ml)	Fractionation: Frac. Surr Amount	Fractionation: Volume Final (ml)	Fractionation: Equiv. Final Volume (ml)	Refractionation: Fractionation Amount (ml)	Refractionation: Frac. Surr Amount	Refractionation: Volume Final (ml)	Refractionation: Equiv. Final Volume (ml)
OP 63645 MB	/	20.0	0.5 ml		1.0 ml	0.5 ml	10 µL	1 mL	2 mL				
OP 63645 BS	/	20.0		0.5 ml									
OP 63645 BSD	—	20.0											
FA40754-1	4	19.7											
-2	5	20.1											
-3	5	20.2											
-4	4	20.1											
-5	4	20.7											
FA40755-1	8	19.8											
-2	8	19.8											
-3	8	20.7											
-4	19	19.9											
FA40807-1	16	20.3											
-2	6	19.7											
-3	6	19.8											
~~OP~~ FA40754-1 DUP	4	20.6											
~~OP~~ FA40755-4 MS	19	19.6		0.5 ml									
OP -4 MSD	19	20.0											

Comments:

Surr. ID: E5763C Conc: 800 PPM Exp. Date: 06/28/17 Inj. By: YFS Ver. By: AA
Spk. ID: E5762 Conc: 200 PPM Exp. Date: 11/18/17 Inj. By: YFS Ver. By: AA
Frac Sur. ID: 8220C Conc: 4000 ppm Exp. Date: 02-07-18 Inj. By: hh Ver. By: —
ReFrac.Sur. ID: Conc: Exp. Date: Inj. By: Ver. By

Initial Bath Temp (Therm ID): Tv#8
Observed Temp °C: 55.2 Corr. Temp °C: ✓
Exchange Bath/N-Evap Temp (Therm ID):
Observed Temp °C: ✓ Corr. Temp °C: ✓

CH2CL2 Lot #: — Hexane Lot #: 163928 Acetone Lot #: 165424 Na2SO4 Lot #: 2183 Filter Paper #: 9685449 Reagent #: —

Relinquished By: [signature] Date: 02-01-17
Accepted By: [signature] Date: 02-09-17

Relinquished By: [signature] Date: 02/08/17
Accepted By: [signature] Date: 02-09-17

NF rev. 02/01/16

maephextsolid 020116.xls

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Percent Solids Raw Data Summary

Percent Solids Raw Data Summary

Job Number: FA40754
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Humacao, PR

Sample: FA40754-1 **Analyzed:** 30-JAN-17 by VK **Method:** SM19 2540G
ClientID: FTFSS-1

Wet Weight (Total)	14.24	g
Tare Weight	2.56	g
Dry Weight (Total)	13.46	g
Solids, Percent	93.3	%

Sample: FA40754-2 **Analyzed:** 01-FEB-17 by JL **Method:** SM19 2540G
ClientID: FTFSS-2

Wet Weight (Total)	12.74	g
Tare Weight	2.57	g
Dry Weight (Total)	11.61	g
Solids, Percent	88.9	%

Sample: FA40754-3 **Analyzed:** 01-FEB-17 by JL **Method:** SM19 2540G
ClientID: FTFSS-3

Wet Weight (Total)	12.75	g
Tare Weight	2.55	g
Dry Weight (Total)	12.23	g
Solids, Percent	94.9	%

Sample: FA40754-4 **Analyzed:** 30-JAN-17 by VK **Method:** SM19 2540G
ClientID: B5SS-1

Wet Weight (Total)	15.39	g
Tare Weight	2.56	g
Dry Weight (Total)	14.56	g
Solids, Percent	93.5	%

Sample: FA40754-5 **Analyzed:** 30-JAN-17 by VK **Method:** SM19 2540G
ClientID: B5SS-2

Wet Weight (Total)	14.53	g
Tare Weight	2.6	g
Dry Weight (Total)	13.89	g
Solids, Percent	94.6	%