Mountain States ACCUTEST LABORATORIES

05/29/12

Technical Report for

XTO Energy

FRU 297-17A

1108-13A

Accutest Job Number: D34697

Sampling Date: 05/17/12

Report to:

KRW Consulting, Inc.
8000 West 14th Avenue
Lakewood, CO 80214
cburger@krwconsulting.com; dknudson@krwconsulting.com;
jhess@krwconsulting.com; crachak@krwconsulting.com;
ATTN: Dwayne Knudson

Total number of pages in report: **45**

ACCREDITED IN ACCORDANCE WITH nelac

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

Brad Madadian
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW), UT (NELAP CO00049), TX (T104704511-12-1)

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5 6 7 8

Table of Contents

Sample Summary

XTO Energy

Job No: D34697

FRU 297-17A
Project No: 1108-13A

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D34697-1	05/17/12	14:00	DS	05/21/12	SO	Soil	RP MB DAY 3 (5/16)
D34697-2	05/17/12	14:10	DS	05/21/12	SO	Soil	RP MB DAY 4 (5/17)

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	XTO Energy	**Job No**	D34697
Site:	FRU 297-17A	**Report Date**	5/29/2012 2:26:06 PM

On 05/21/2012, 2 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 21.2 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D34697 was assigned to the project. The lab sample IDs, client sample IDs, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GC By Method SW846 8015B

Matrix SO **Batch ID:** GGB896

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D34697-1MS, D34697-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO **Batch ID:** OP5953

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D34692-1MS, D34692-1MSD were used as the QC samples indicated.
- Sample(s) OP5953-MB have surrogates outside control limits. Probable cause due to matrix interference.
- OP5953-MB for o-Terphenyl: Outside control limits. Since the bias is high and DRO is non-detect, no further action is required.

Wet Chemistry By Method SM19 2540B M

Matrix SO **Batch ID:** GN15061

- The data for SM19 2540B M meets quality control requirements.

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

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

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	RP MB DAY 3 (5/16)		
Lab Sample ID:	D34697-1	**Date Sampled:**	05/17/12
Matrix:	SO - Soil	**Date Received:**	05/21/12
Method:	SW846 8015B	**Percent Solids:**	86.8
Project:	FRU 297-17A		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB16105.D	1	05/22/12	SK	n/a	n/a	GGB896
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	13	6.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	94%		60-140%

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	RP MB DAY 3 (5/16)		
Lab Sample ID:	D34697-1	**Date Sampled:**	05/17/12
Matrix:	SO - Soil	**Date Received:**	05/21/12
Method:	SW846-8015B SW846 3546	**Percent Solids:**	86.8
Project:	FRU 297-17A		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH004755.D	1	05/26/12	AW	05/24/12	OP5953	GFH266
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	314	15	10	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	81%		43-136%

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	RP MB DAY 4 (5/17)		
Lab Sample ID:	D34697-2	**Date Sampled:**	05/17/12
Matrix:	SO - Soil	**Date Received:**	05/21/12
Method:	SW846 8015B	**Percent Solids:**	85.4
Project:	FRU 297-17A		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB16108.D	1	05/22/12	SK	n/a	n/a	GGB896
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	13	6.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	96%		60-140%

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

Accutest Laboratories

Report of Analysis

Client Sample ID: RP MB DAY 4 (5/17)
Lab Sample ID: D34697-2
Matrix: SO - Soil
Method: SW846-8015B SW846 3546
Project: FRU 297-17A

Date Sampled: 05/17/12
Date Received: 05/21/12
Percent Solids: 85.4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH004757.D	1	05/26/12	AW	05/24/12	OP5953	GFH266
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	263	16	10	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	63%		43-136%

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

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

PAGE 1 OF 1

ACCUTEST LABORATORIES

Accutest Laboratories Mountain States
4036 Youngfield Street Wheat Ridge, Co 80033
TEL. 303-425-6021 877-737-4521
FAX 303-425-6021

FED-EX Tracking # | Bottle Order Control #
Accutest Quote # | Accutest Job # D34697

Client / Reporting Information

Company Name: KRW CONSULTING
Street Address: 8000 W 14TH AVE STE 200
City: LAKEWOOD State: CO Zip: 80214
Project Contact: DWAYNE KUNDSON E-mail:
Phone #: 970 488 1098 Fax #:
Sampler(s) Name(s): DAVID SANDERS Phone #: 970 488 1098

Project Information

Project Name: XTO FRU 297-17A
Street:
City:
Project#: 1108-13A
Client PO#:
Project Manager: JOE HESS

Billing Information (If different from Report to)

Company Name: XTO ENERGY
Street Address: 2145 CR 5
City: RIFLE State: CO Zip: 81650
Attention: JESSICA DOLING PO#:

Requested Analysis (see TEST CODE sheet)

TPH(GRO + DRO)

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	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Sterile	TPH(GRO + DRO)	LAB USE ONLY
	RP MB DAY 3 (5/16)		5/17/12	14:00	DLS	SO	2					X					X	01
	RP MB DAY 4 (5/17)		5/17/12	14:10	DLS	SO	2					X					X	02

ps 5/21/12

Turnaround Time (Business days)

Approved By (Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [x] Std. 5 Business Days (By Contract only)
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] Commercial "B" +Narrative
- [ ] FULLT1 (Level 3+4)
- [ ] State Forms
- [ ] EDD Format
- [x] PDF

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

PLEASE EMAIL RESULTS TO KRW PICEANCE TEAM

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		5/17/12		0925 5/21/12		2
3			3	4		4
5			5			

Custody Seal # | Intact | Not Intact | Preserved where applicable | On Ice | Cooler Temp. 2 | 2

Frozen PLASTIC TEMP melted

D34697: Chain of Custody
Page 1 of 1

Mountain States ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D34697
Account: XTOKRWR XTO Energy
Project: FRU 297-17A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB896-MB	GB16102.D	1	05/22/12	SK	n/a	n/a	GGB896

The QC reported here applies to the following samples: **Method:** SW846 8015B

D34697-1, D34697-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	5.0	mg/kg	

CAS No.	Surrogate Recoveries		Limits
120-82-1	1,2,4-Trichlorobenzene	98%	60-140%

Blank Spike Summary

Job Number: D34697
Account: XTOKRWR XTO Energy
Project: FRU 297-17A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB896-BS	GB16103.D	1	05/22/12	SK	n/a	n/a	GGB896

The QC reported here applies to the following samples: **Method:** SW846 8015B

D34697-1, D34697-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	117	106	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	107%	60-140%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D34697
Account: XTOKRWR XTO Energy
Project: FRU 297-17A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D34697-1MS	GB16106.D	1	05/22/12	SK	n/a	n/a	GGB896
D34697-1MSD	GB16107.D	1	05/22/12	SK	n/a	n/a	GGB896
D34697-1	GB16105.D	1	05/22/12	SK	n/a	n/a	GGB896

The QC reported here applies to the following samples: **Method:** SW846 8015B

D34697-1, D34697-2

CAS No.	Compound	D34697-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		142	150	105	149	105	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D34697-1	Limits
120-82-1	1,2,4-Trichlorobenzene	104%	98%	94%	60-140%

Mountain States ACCUTEST LABORATORIES

GC Volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Judy Melson 05/23/12 09:37

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\052212\GB16105.D\FID1A.CH Vial: 6
Signal #2 : Y:\1\DATA\052212\GB16105.D\FID2B.CH
Acq On : 22 May 2012 4:51 pm Operator: StephK
Sample : D34697-1, 50X Inst : GC/MS Ins
Misc : GC2856,GGB896,5.049,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: May 22 17:08:24 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Tue May 22 08:41:21 2012
Response via : Initial Calibration
DataAcq Meth : TVB4.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
2) S	1,2,4-Trichlorobenzene	14.31	2952984	94.242 %		m
10) S	1,2,4-Trichlorobenzene (P)	14.31	15963667	98.221 %		
	Target Compounds					
1) H	TVH-Gasoline	7.23	4775426	<MDL	mg/L	
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L	d
5) T	Benzene	0.00	0	N.D.	ug/L	d
6) T	Toluene	7.56	182300	0.460	ug/L	
7) T	Ethylbenzene	0.00	0	N.D.	ug/L	d
8) T	m,p-Xylene	10.39	194236	0.159	ug/L	
9) T	o-Xylene	0.00	0	N.D.	ug/L	d
11) T	Naphthalene	14.50	1173770	5.949	ug/L	

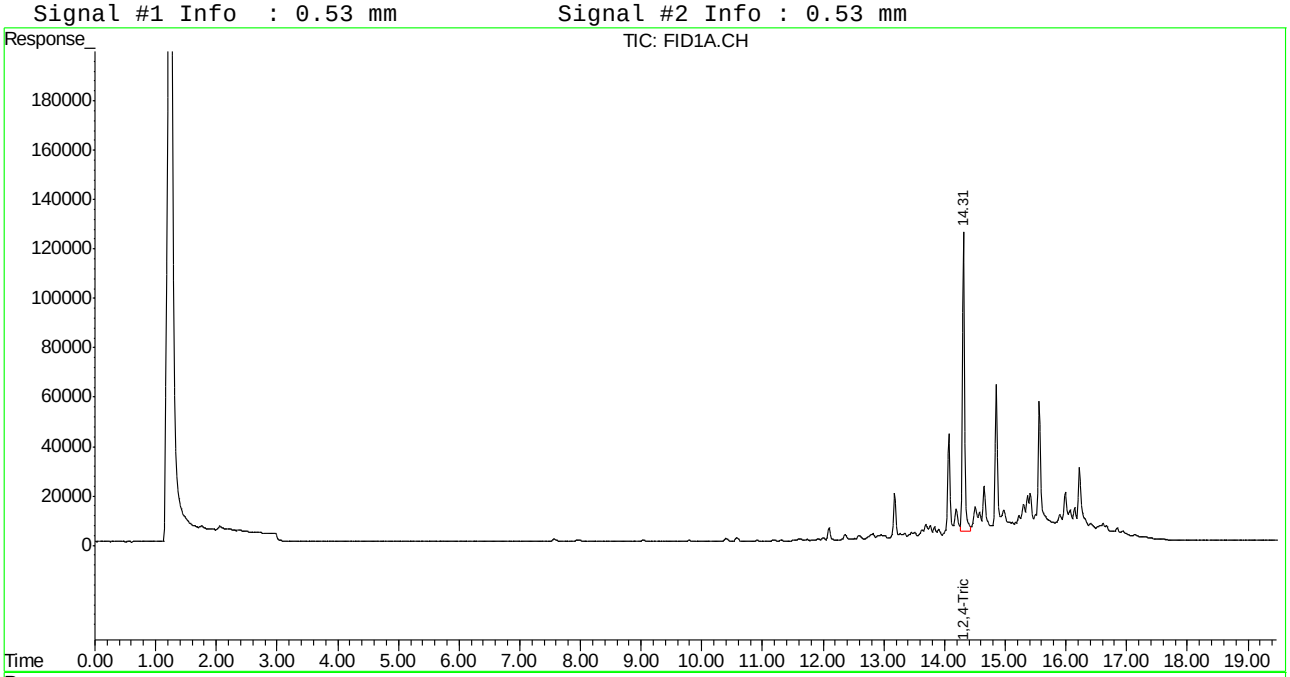
(f)=RT Delta > 1/2 Window (m)=manual int.
GB16105.D TB868GB868SOIL.M Wed May 23 07:49:08 2012 GC Page 1

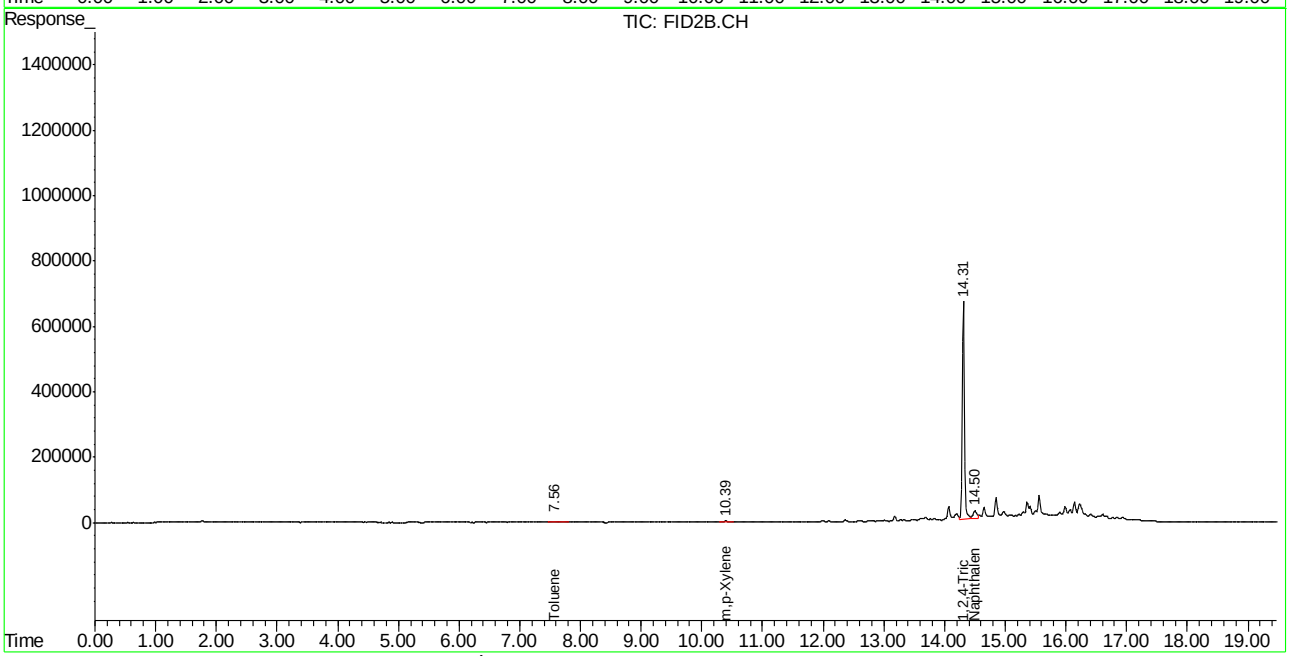
Quantitation Report (QT Reviewed)

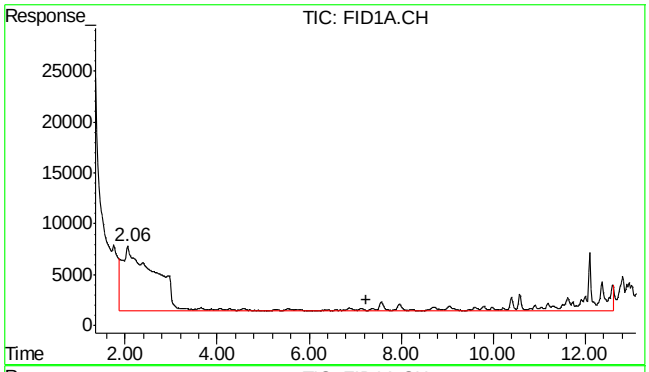
Signal #1 : Y:\1\DATA\052212\GB16105.D\FID1A.CH Vial: 6
Signal #2 : Y:\1\DATA\052212\GB16105.D\FID2B.CH
Acq On : 22 May 2012 4:51 pm Operator: StephK
Sample : D34697-1, 50X Inst : GC/MS Ins
Misc : GC2856,GGB896,5.049,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: May 22 16:12 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Tue May 22 08:41:21 2012
Response via : Multiple Level Calibration
DataAcq Meth : TVB4.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

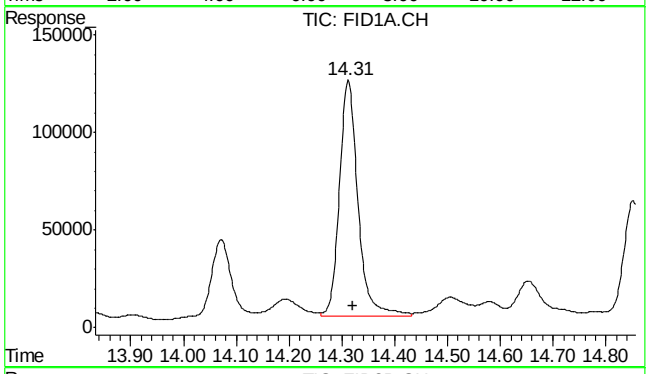






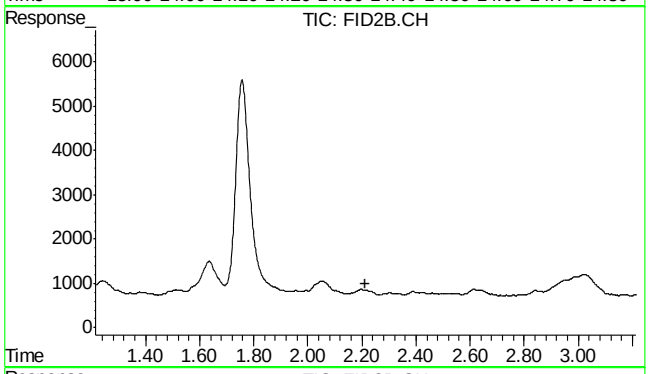
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 4775426
Conc: N.D.



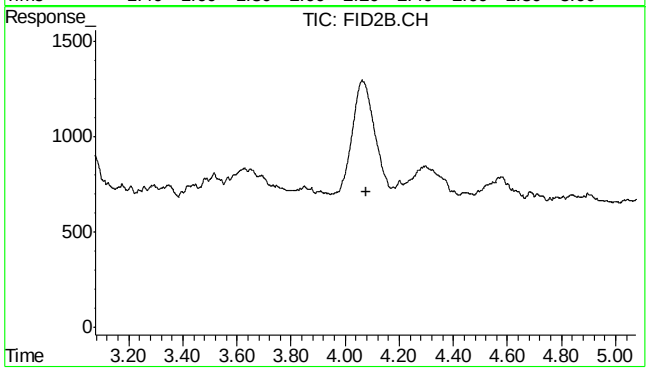
#2 1,2,4-Trichlorobenzene

R.T.: 14.311 min
Delta R.T.: -0.010 min
Response: 2952984
Conc: 94.24 % m



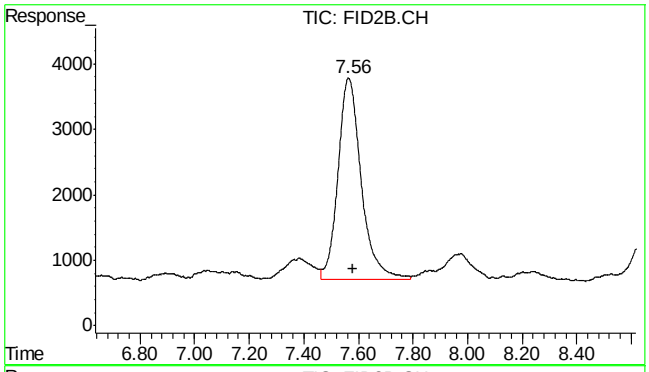
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T. : 2.214 min
Response: 0
Conc: N.D.



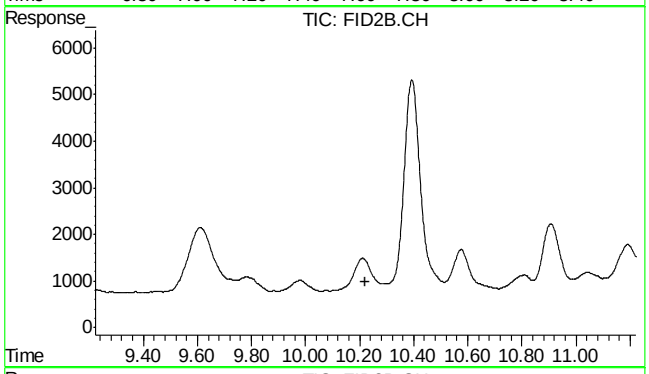
#5 Benzene

R.T.: 0.000 min
Exp R.T. : 4.077 min
Response: 0
Conc: N.D.



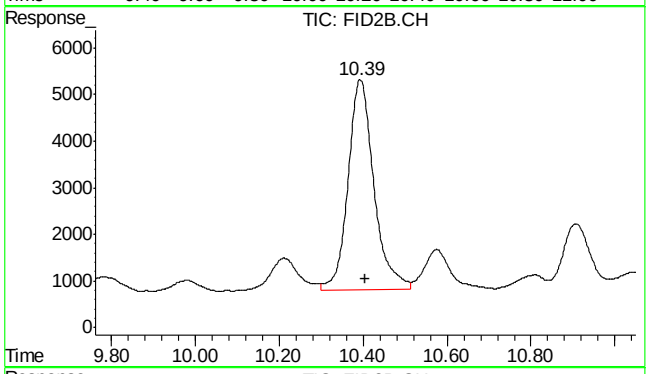
#6 Toluene

R.T.: 7.564 min
Delta R.T.: -0.016 min
Response: 182300
Conc: 0.46 ug/L



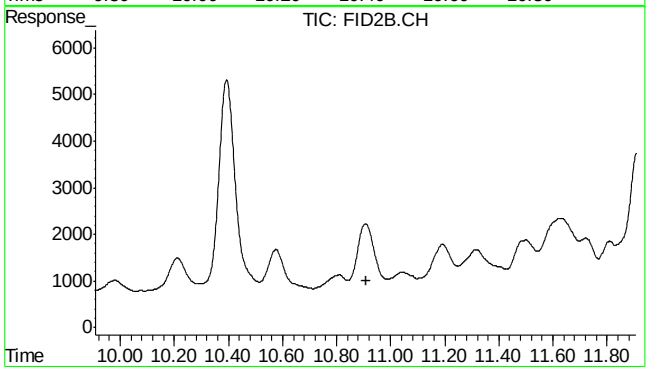
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.222 min
Response: 0
Conc: N.D.



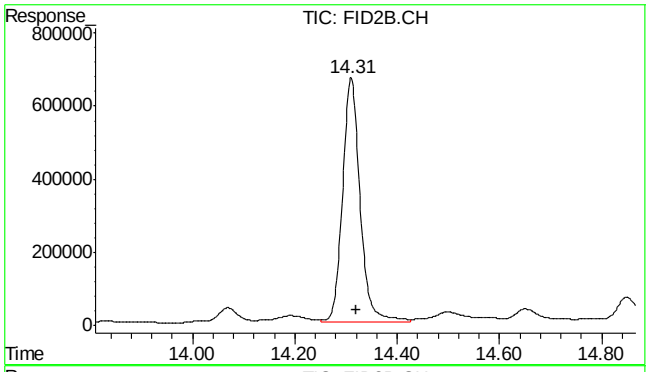
#8 m,p-Xylene

R.T.: 10.393 min
Delta R.T.: -0.012 min
Response: 194236
Conc: 0.16 ug/L



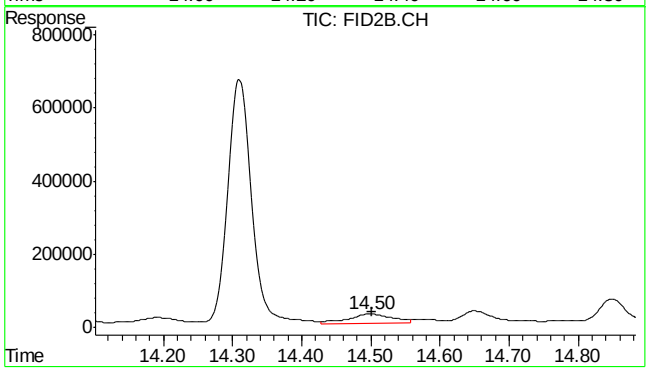
#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 10.908 min
Response: 0
Conc: N.D.



#10 1,2,4-Trichlorobenzene (P)

R.T.:	14.310 min
Delta R.T.:	-0.009 min
Response:	15963667
Conc:	98.22 %



#11 Naphthalene

R.T.:	14.499 min
Delta R.T.:	-0.002 min
Response:	1173770
Conc:	5.95 ug/L

Manual Integrations APPROVED (compounds with "m" flag)
Judy Melson 05/23/12 09:37

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\052212\GB16108.D\FID1A.CH Vial: 9
Signal #2 : Y:\1\DATA\052212\GB16108.D\FID2B.CH
Acq On : 22 May 2012 6:37 pm Operator: StephK
Sample : D34697-2, 50X Inst : GC/MS Ins
Misc : GC2856,GGB896,5.012,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: May 23 07:39:01 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Tue May 22 08:41:21 2012
Response via : Initial Calibration
DataAcq Meth : TVB4.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
2) S	1,2,4-Trichlorobenzene	14.31	3021595	96.432	%	m
10) S	1,2,4-Trichlorobenzene (P)	14.31	17362091	106.826	%	
	Target Compounds					
1) H	TVH-Gasoline	7.23	5668969	<MDL	mg/L	
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L	d
5) T	Benzene	0.00	0	N.D.	ug/L	d
6) T	Toluene	7.55	257121	0.649	ug/L	
7) T	Ethylbenzene	0.00	0	N.D.	ug/L	d
8) T	m,p-Xylene	10.39	242169	0.290	ug/L	
9) T	o-Xylene	0.00	0	N.D.	ug/L	d
11) T	Naphthalene	14.49	2869904	14.545	ug/L	

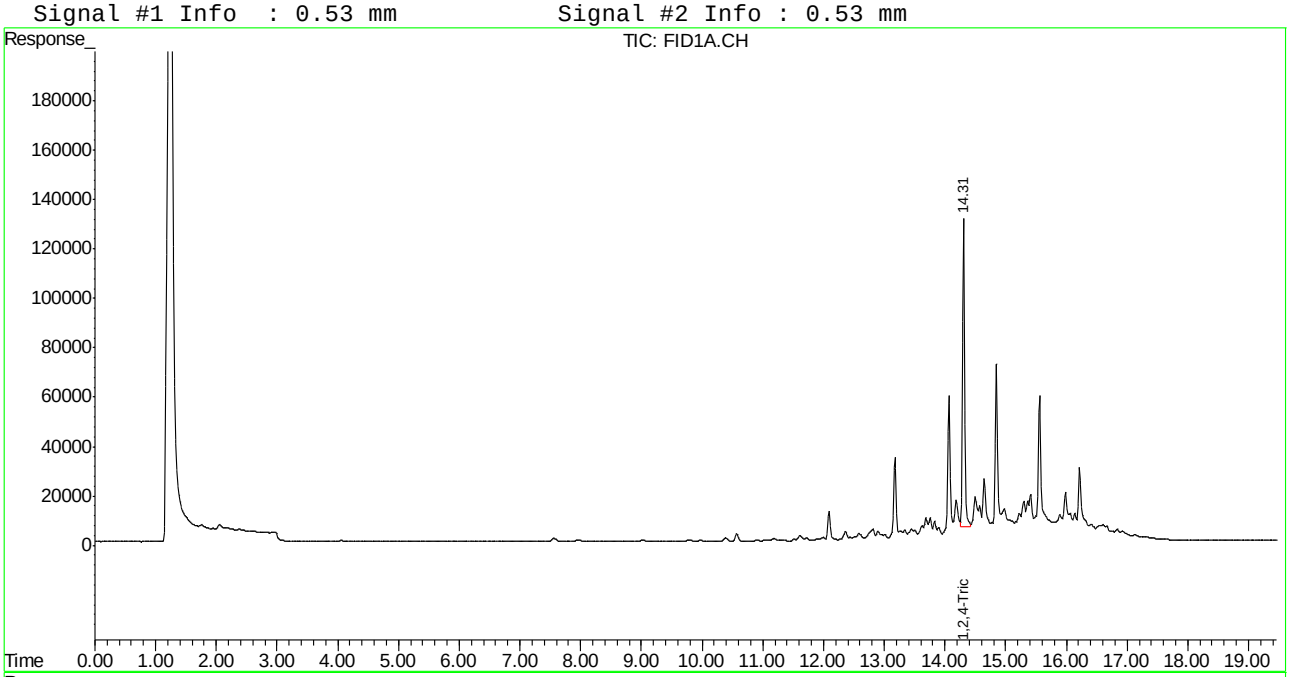
(f)=RT Delta > 1/2 Window (m)=manual int.

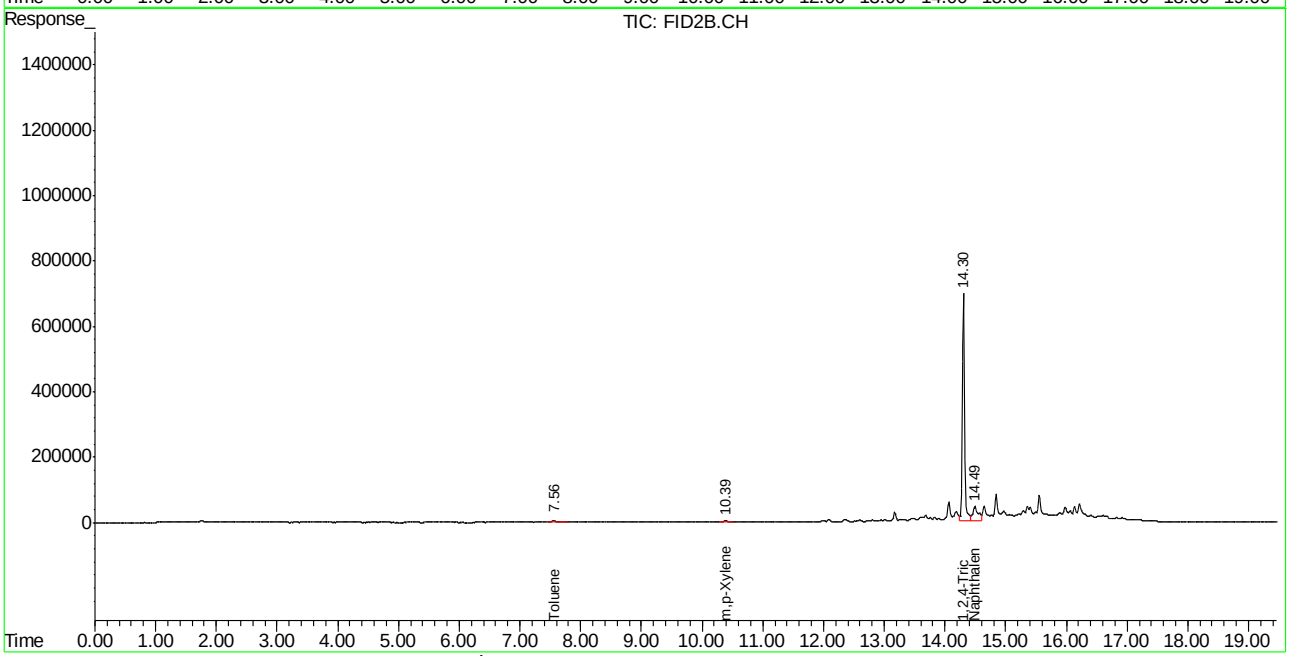
Quantitation Report (QT Reviewed)

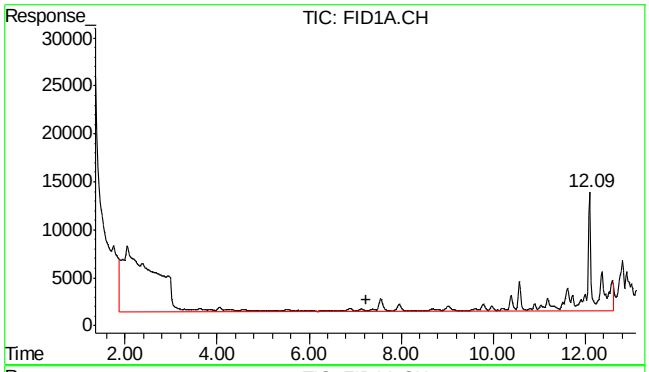
Signal #1 : Y:\1\DATA\052212\GB16108.D\FID1A.CH Vial: 9
Signal #2 : Y:\1\DATA\052212\GB16108.D\FID2B.CH
Acq On : 22 May 2012 6:37 pm Operator: StephK
Sample : D34697-2, 50X Inst : GC/MS Ins
Misc : GC2856,GGB896,5.012,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: May 23 6:50 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Tue May 22 08:41:21 2012
Response via : Multiple Level Calibration
DataAcq Meth : TVB4.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

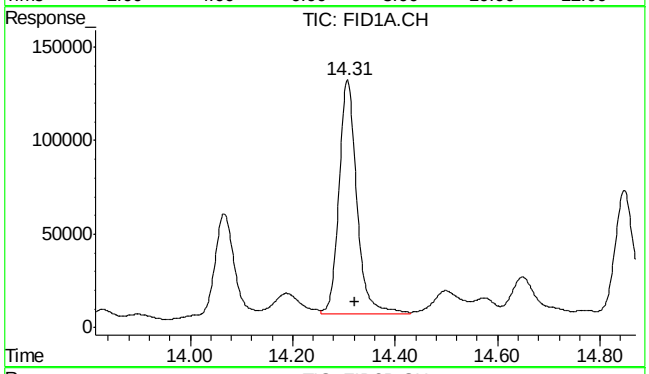






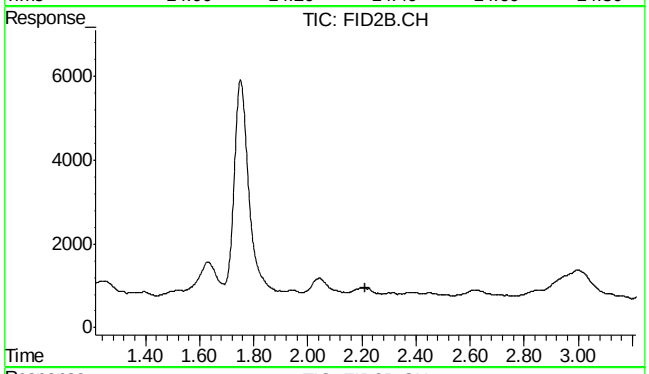
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 5668969
Conc: N.D.



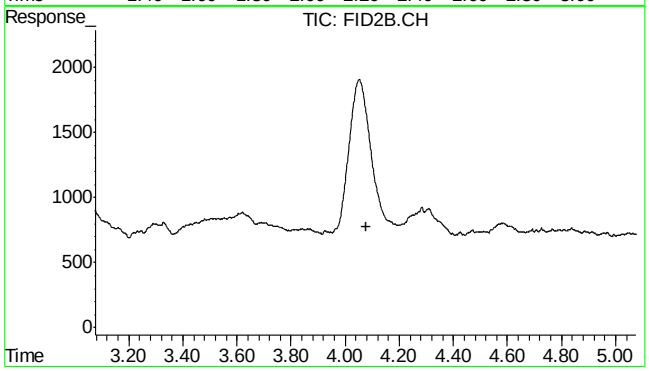
#2 1,2,4-Trichlorobenzene

R.T.: 14.307 min
Delta R.T.: -0.015 min
Response: 3021595
Conc: 96.43 % m



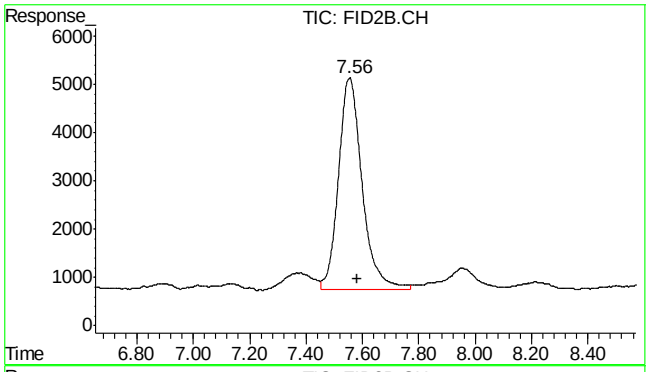
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T. : 2.214 min
Response: 0
Conc: N.D.



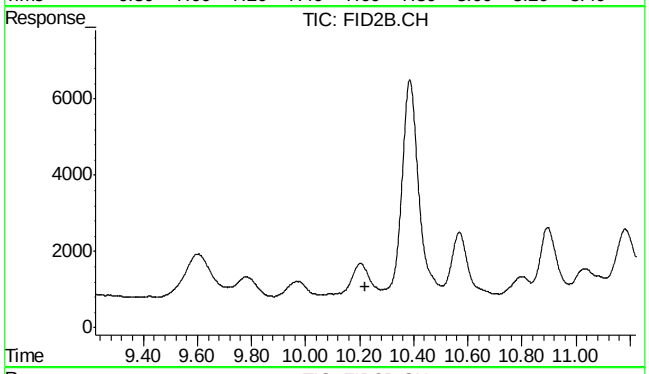
#5 Benzene

R.T.: 0.000 min
Exp R.T. : 4.077 min
Response: 0
Conc: N.D.



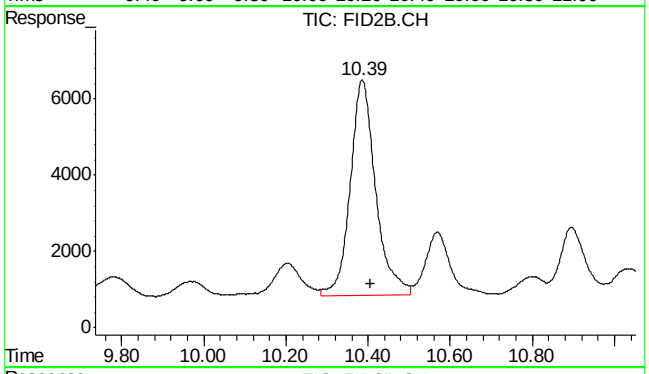
#6 Toluene

R.T.: 7.554 min
Delta R.T.: -0.026 min
Response: 257121
Conc: 0.65 ug/L



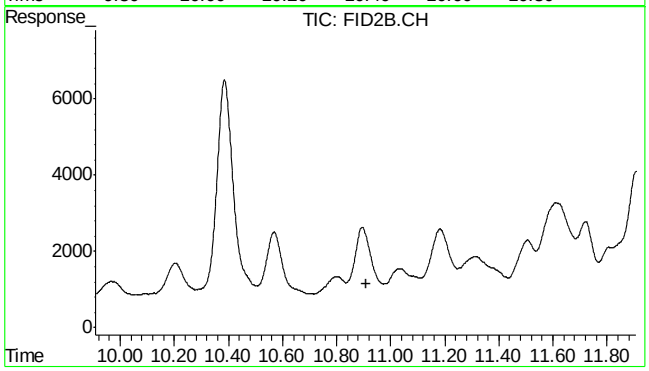
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.222 min
Response: 0
Conc: N.D.



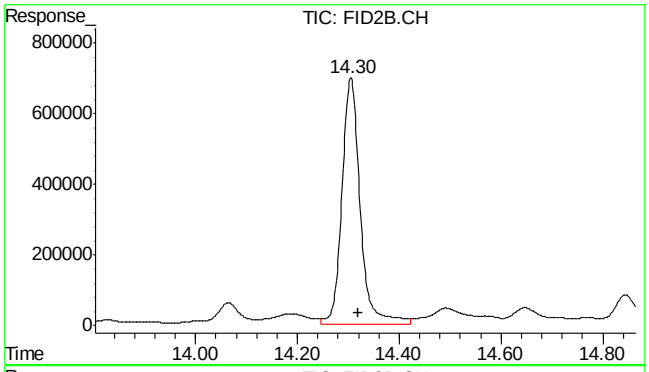
#8 m,p-Xylene

R.T.: 10.386 min
Delta R.T.: -0.020 min
Response: 242169
Conc: 0.29 ug/L



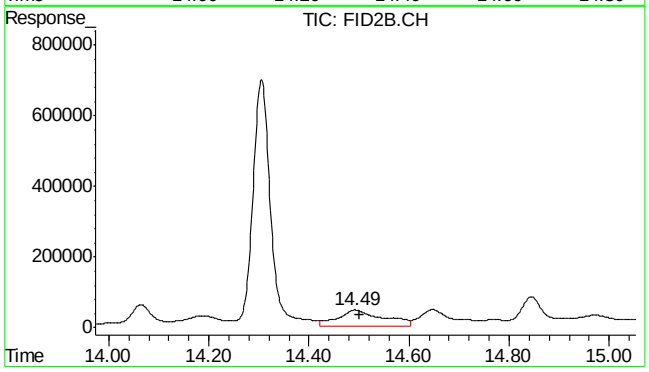
#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 10.908 min
Response: 0
Conc: N.D.



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.305 min
Delta R.T.: -0.014 min
Response: 17362091
Conc: 106.83 %



#11 Naphthalene

R.T.: 14.492 min
Delta R.T.: -0.008 min
Response: 2869904
Conc: 14.55 ug/L

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\052212\GB16102.D\FID1A.CH Vial: 3
Signal #2 : Y:\1\DATA\052212\GB16102.D\FID2B.CH
Acq On : 22 May 2012 3:05 pm Operator: StephK
Sample : MB Inst : GC/MS Ins
Misc : GC2856,GGB896,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: May 22 17:04:14 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Tue May 22 08:41:21 2012
Response via : Initial Calibration
DataAcq Meth : TVB4.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
2) S	1,2,4-Trichlorobenzene	14.31	3061082	97.692	%	
10) S	1,2,4-Trichlorobenzene (P)	14.31	16468570	101.328	%	
	Target Compounds					
1) H	TVH-Gasoline	7.23	4127214	<MDL	mg/L	
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L	d
5) T	Benzene	0.00	0	N.D.	ug/L	d
6) T	Toluene	7.56	146631	0.370	ug/L	
7) T	Ethylbenzene	0.00	0	N.D.	ug/L	d
8) T	m,p-Xylene	0.00	0	N.D.	ug/L	d
9) T	o-Xylene	0.00	0	N.D.	ug/L	d
11) T	Naphthalene	14.49	227043	1.151	ug/L	

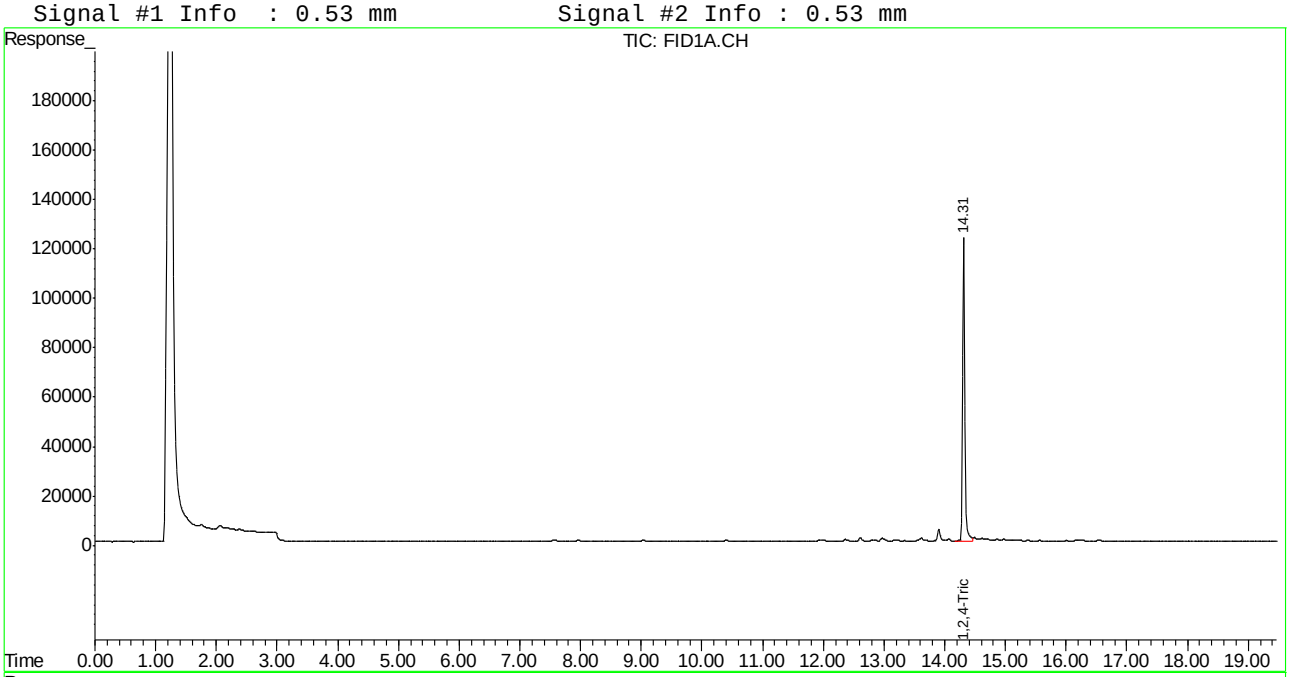
(f)=RT Delta > 1/2 Window (m)=manual int.
GB16102.D TB868GB868SOIL.M Wed May 23 07:48:59 2012 GC Page 1

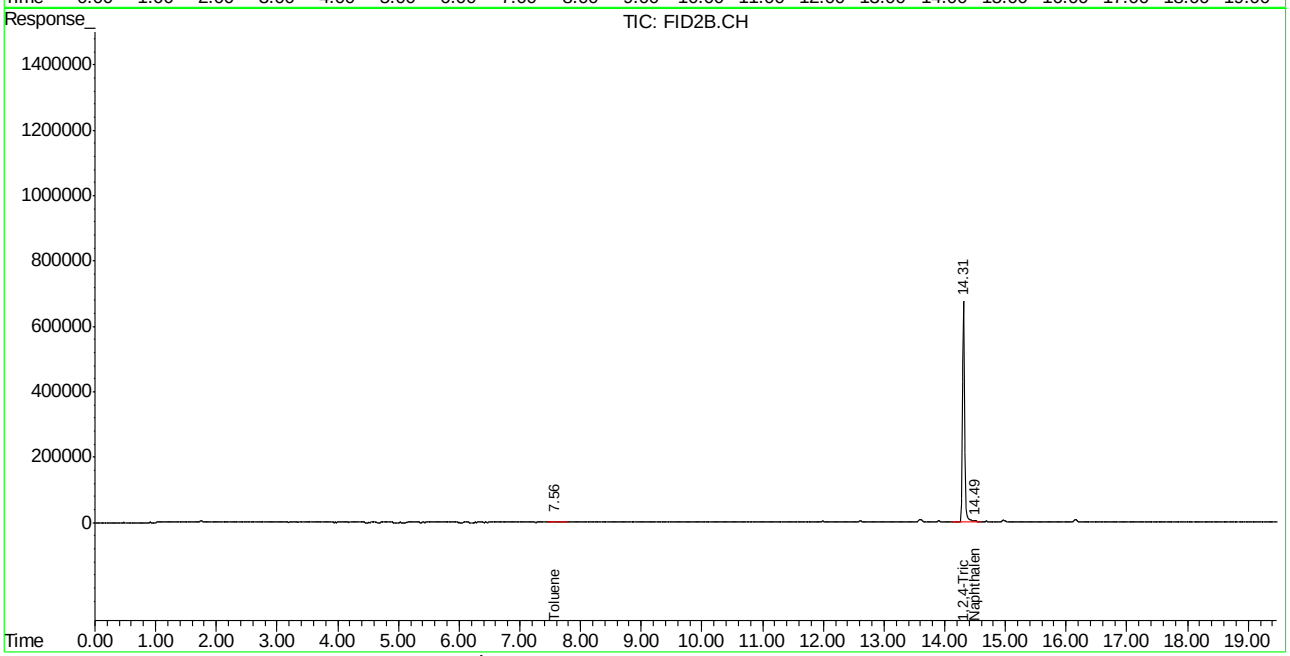
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\052212\GB16102.D\FID1A.CH Vial: 3
Signal #2 : Y:\1\DATA\052212\GB16102.D\FID2B.CH
Acq On : 22 May 2012 3:05 pm Operator: StephK
Sample : MB Inst : GC/MS Ins
Misc : GC2856,GGB896,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: May 22 16:08 2012 Quant Results File: TB868GB868SOIL.RES

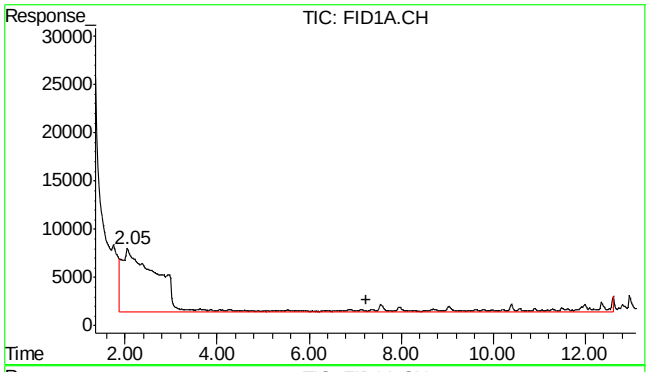
Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Tue May 22 08:41:21 2012
Response via : Multiple Level Calibration
DataAcq Meth : TVB4.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm



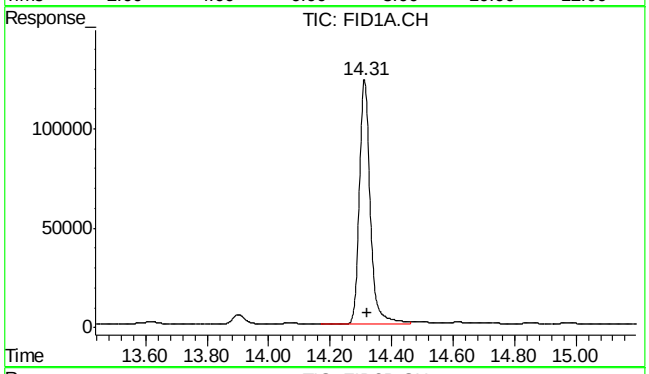


GB16102.D TB868GB868SOIL.M Wed May 23 07:48:59 2012 GC Page 2



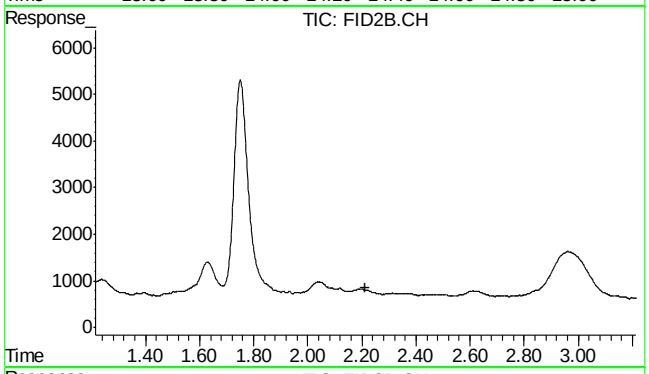
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 4127214
Conc: N.D.



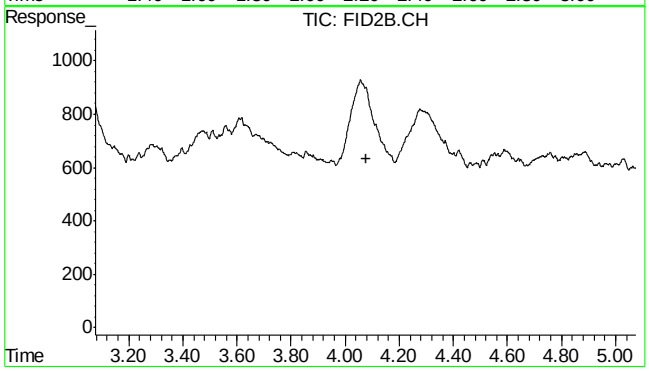
#2 1,2,4-Trichlorobenzene

R.T.: 14.312 min
Delta R.T.: -0.009 min
Response: 3061082
Conc: 97.69 %



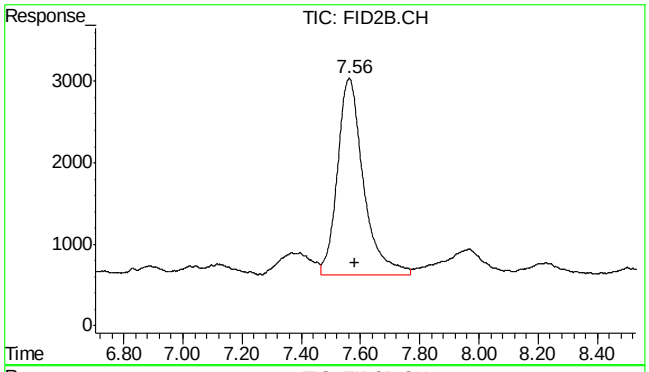
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T. : 2.214 min
Response: 0
Conc: N.D.



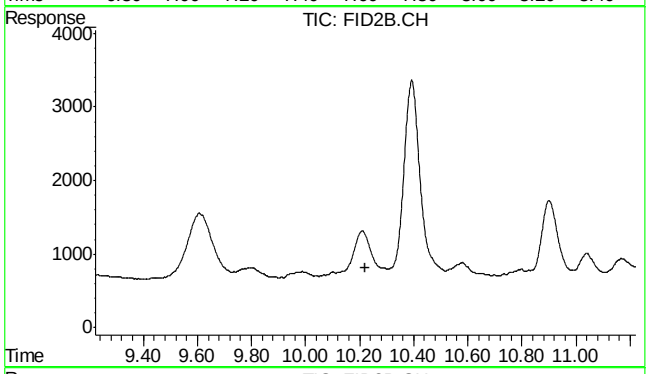
#5 Benzene

R.T.: 0.000 min
Exp R.T. : 4.077 min
Response: 0
Conc: N.D.



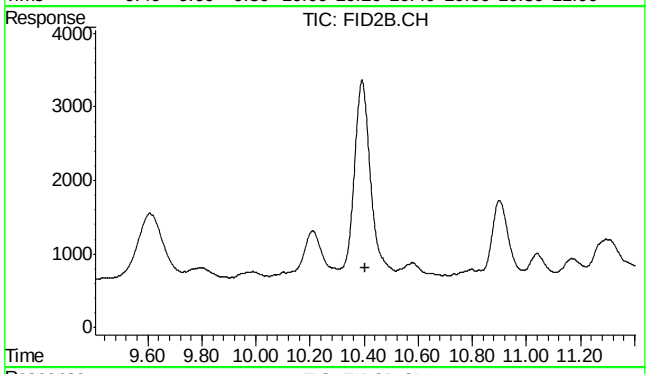
#6 Toluene

R.T.: 7.562 min
Delta R.T.: -0.018 min
Response: 146631
Conc: 0.37 ug/L



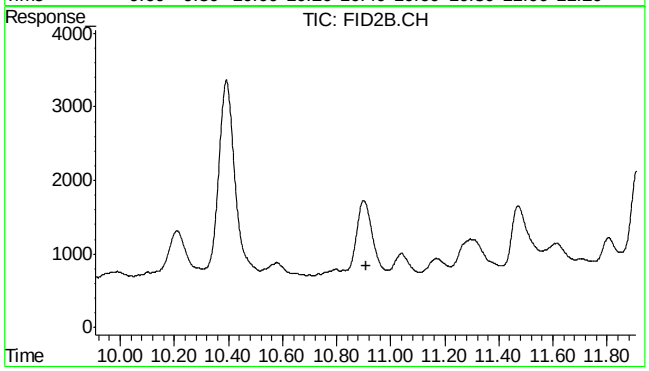
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.222 min
Response: 0
Conc: N.D.



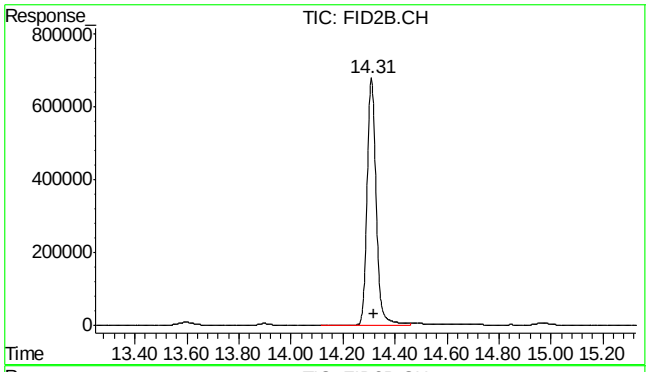
#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 10.405 min
Response: 0
Conc: N.D.



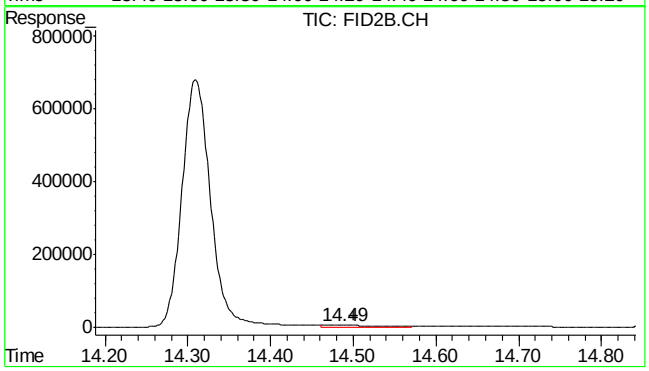
#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 10.908 min
Response: 0
Conc: N.D.



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.310 min
Delta R.T.: -0.009 min
Response: 16468570
Conc: 101.33 %



#11 Naphthalene

R.T.: 14.488 min
Delta R.T.: -0.013 min
Response: 227043
Conc: 1.15 ug/L

Mountain States ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D34697
Account: XTOKRWR XTO Energy
Project: FRU 297-17A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5953-MB	FH004743.D	1	05/25/12	AW	05/24/12	OP5953	GFH266

The QC reported here applies to the following samples: **Method:** SW846-8015B

D34697-1, D34697-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	13	8.7	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	145%* [a]	43-136%

(a) Outside control limits. Since the bias is high and DRO is non-detect, no further action is required.

Blank Spike Summary

Job Number: D34697
Account: XTOKRWR XTO Energy
Project: FRU 297-17A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5953-BS	FH004745.D	1	05/25/12	AW	05/24/12	OP5953	GFH266

The QC reported here applies to the following samples: **Method:** SW846-8015B

D34697-1, D34697-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	532	80	58-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	120%	43-136%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D34697
Account: XTOKRWR XTO Energy
Project: FRU 297-17A

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5953-MS	FH004747.D	1	05/25/12	AW	05/24/12	OP5953	GFH266
OP5953-MSD	FH004749.D	1	05/25/12	AW	05/24/12	OP5953	GFH266
D34692-1	FH004751.D	1	05/26/12	AW	05/24/12	OP5953	GFH266

The QC reported here applies to the following samples: **Method:** SW846-8015B

D34697-1, D34697-2

CAS No.	Compound	D34692-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	20.7		774	609	76	621	78	2	20-183/43

CAS No.	Surrogate Recoveries	MS	MSD	D34692-1	Limits
84-15-1	o-Terphenyl	109%	115%	128%	43-136%

Mountain States ACCUTEST LABORATORIES

GC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Judy Melson
05/29/12 13:43

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH052512\
Data File : FH004755.D
Signal(s) : FID1A.ch
Acq On : 26 May 2012 1:18 am
Operator : alexw1
Sample : D34697-1
Misc : OP5953,GFH266,30.00,,,2,1
ALS Vial : 23 Sample Multiplier: 1

Integration File: events.e
Quant Time: May 27 13:38:32 2012
Quant Method : C:\msdchem\1\METHODS\DRO-GFH264F.M
Quant Title : DRO-ORO FRONT
QLast Update : Fri May 25 15:42:58 2012
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) s	o-Terphenyl	12.389	618388665	807.970	ug/mlm
Target Compounds					
1) H	TPH-DRO (C10-C28)	9.771	5056100277	4093.641	ug/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

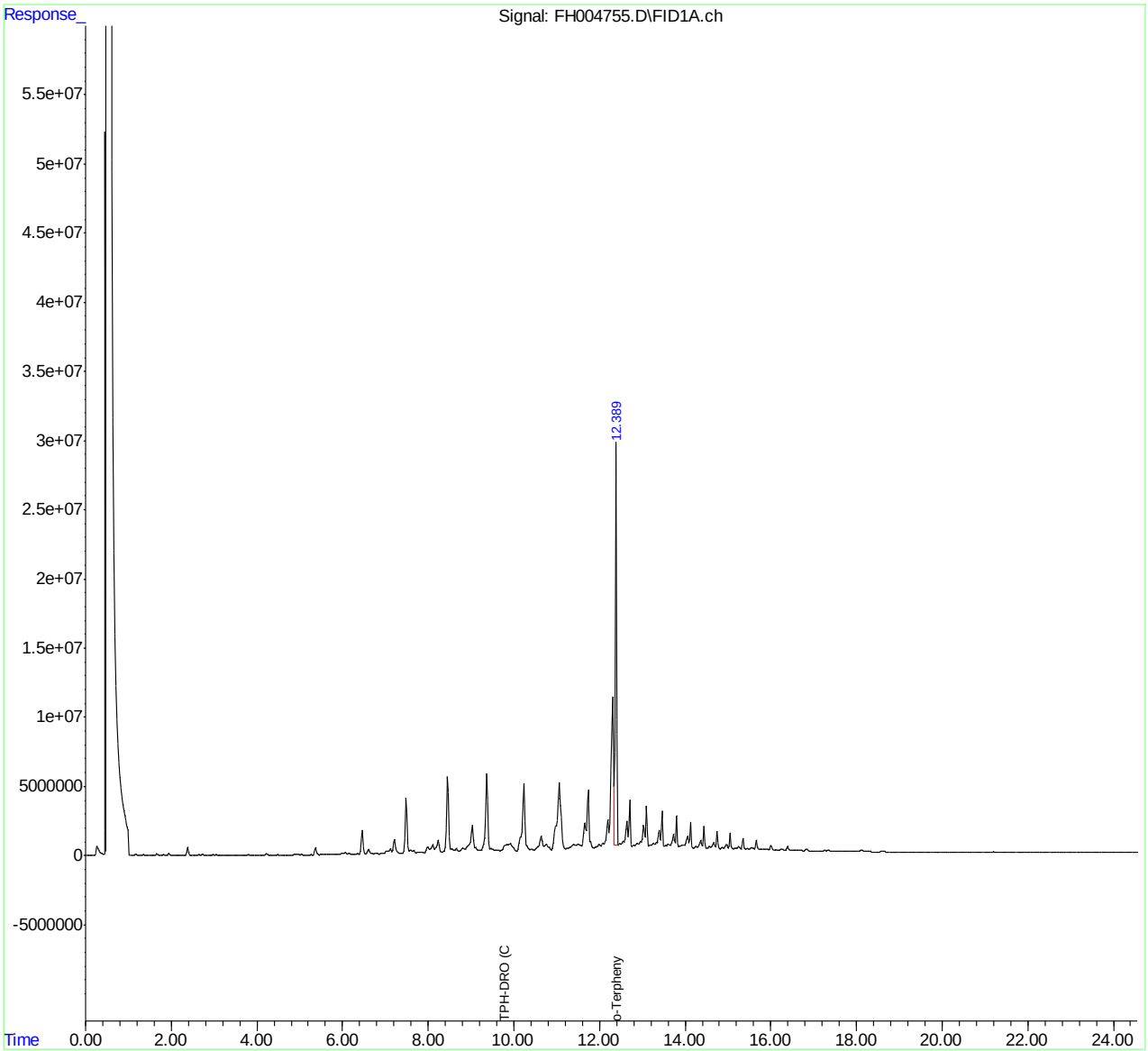
8.1.1
8

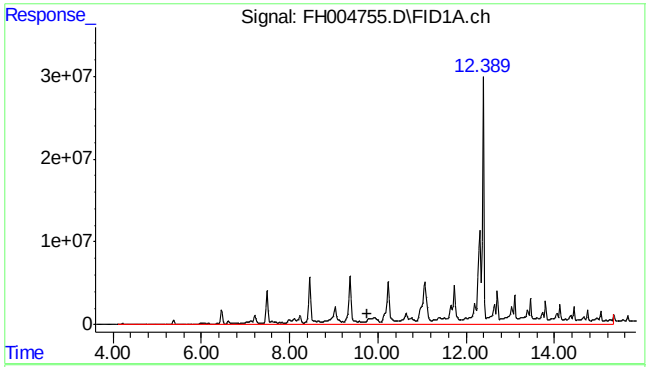
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH052512\
Data File : FH004755.D
Signal(s) : FID1A.ch
Acq On : 26 May 2012 1:18 am
Operator : alexw1
Sample : D34697-1
Misc : OP5953,GFH266,30.00,,,2,1
ALS Vial : 23 Sample Multiplier: 1

Integration File: events.e
Quant Time: May 27 13:38:32 2012
Quant Method : C:\msdchem\1\METHODS\DRO-GFH264F.M
Quant Title : DRO-ORO FRONT
QLast Update : Fri May 25 15:42:58 2012
Response via : Initial Calibration
Integrator: ChemStation

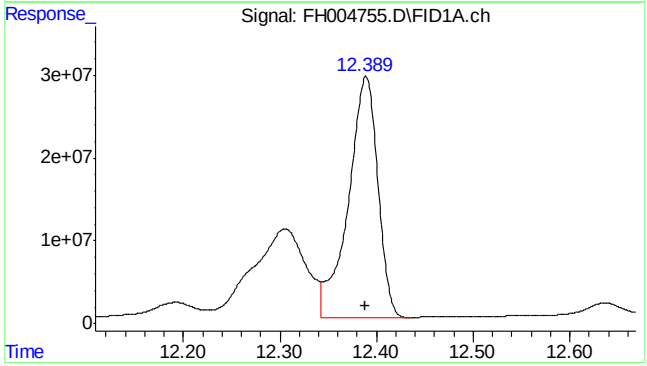
Volume Inj. :
Signal Phase :
Signal Info :





#1 TPH-DRO (C10-C28)

R.T.: 9.771 min
Delta R.T.: 0.000 min
Response: 5056100277
Conc: 4093.64 ug/ml m



#2 o-Terphenyl

R.T.: 12.389 min
Delta R.T.: 0.000 min
Response: 618388665
Conc: 807.97 ug/ml m

Manual Integrations APPROVED (compounds with "m" flag)
Judy Melson
05/29/12 13:43

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH052512\
Data File : FH004757.D
Signal(s) : FID1A.ch
Acq On : 26 May 2012 1:54 am
Operator : alexw1
Sample : D34697-2
Misc : OP5953,GFH266,30.17,,,2,1
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e
Quant Time: May 27 13:39:13 2012
Quant Method : C:\msdchem\1\METHODS\DRO-GFH264F.M
Quant Title : DRO-ORO FRONT
QLast Update : Fri May 25 15:42:58 2012
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) s	o-Terphenyl	12.388	478891733	625.707	ug/mlm
Target Compounds					
1) H	TPH-DRO (C10-C28)	9.771	4181428024	3385.468	ug/ml

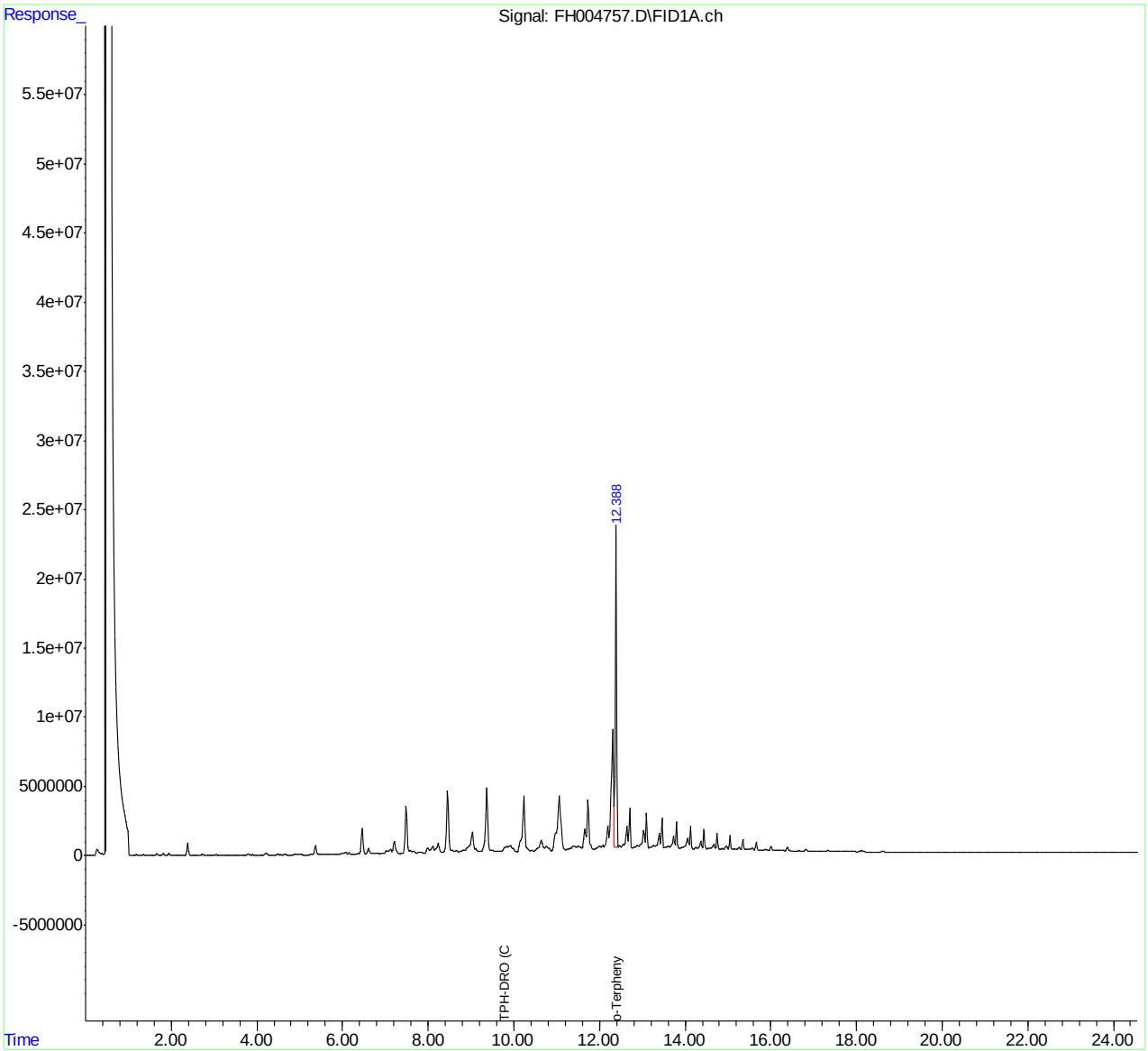
(f)=RT Delta > 1/2 Window (m)=manual int.

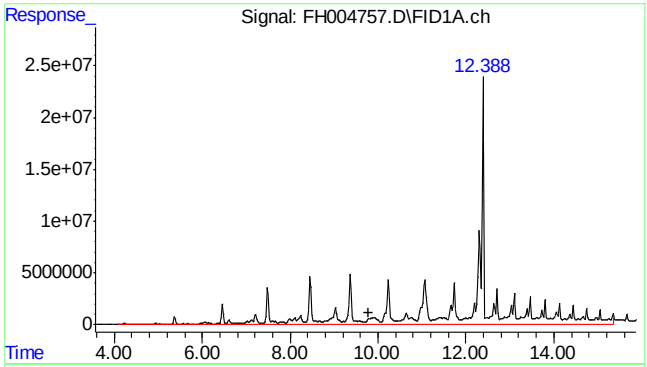
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH052512\
Data File : FH004757.D
Signal(s) : FID1A.ch
Acq On : 26 May 2012 1:54 am
Operator : alexw1
Sample : D34697-2
Misc : OP5953,GFH266,30.17,,,2,1
ALS Vial : 24 Sample Multiplier: 1

Integration File: events.e
Quant Time: May 27 13:39:13 2012
Quant Method : C:\msdchem\1\METHODS\DRO-GFH264F.M
Quant Title : DRO-ORO FRONT
QLast Update : Fri May 25 15:42:58 2012
Response via : Initial Calibration
Integrator: ChemStation

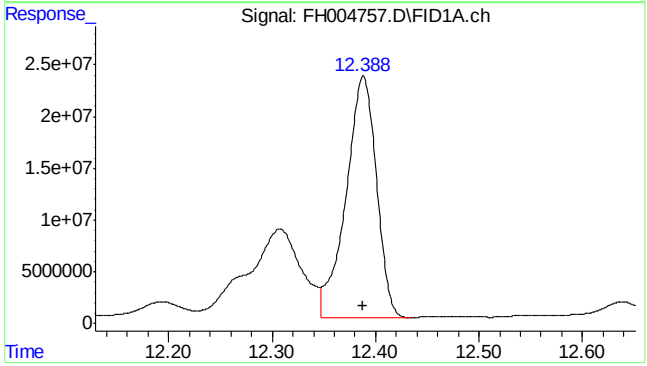
Volume Inj. :
Signal Phase :
Signal Info :





#1 TPH-DRO (C10-C28)

R.T.: 9.771 min
Delta R.T.: 0.000 min
Response: 4181428024
Conc: 3385.47 ug/ml m



#2 o-Terphenyl

R.T.: 12.388 min
Delta R.T.: 0.000 min
Response: 478891733
Conc: 625.71 ug/ml m

Manual Integrations APPROVED (compounds with "m" flag)
Judy Melson
05/29/12 13:43

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH052512\
Data File : FH004743.D
Signal(s) : FID1A.ch
Acq On : 25 May 2012 9:43 pm
Operator : alexw1
Sample : OP5953-MB
Misc : OP5953,GFH266,30.00,,,2,1
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: May 27 13:15:52 2012
Quant Method : C:\msdchem\1\METHODS\DRO-GFH264F.M
Quant Title : DRO-ORO FRONT
QLast Update : Fri May 25 15:42:58 2012
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
2) s	o-Terphenyl	12.397	1111663520	1452.470	ug/mlm
Target Compounds					
1) H	TPH-DRO (C10-C28)	9.771	102196268	82.743	ug/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

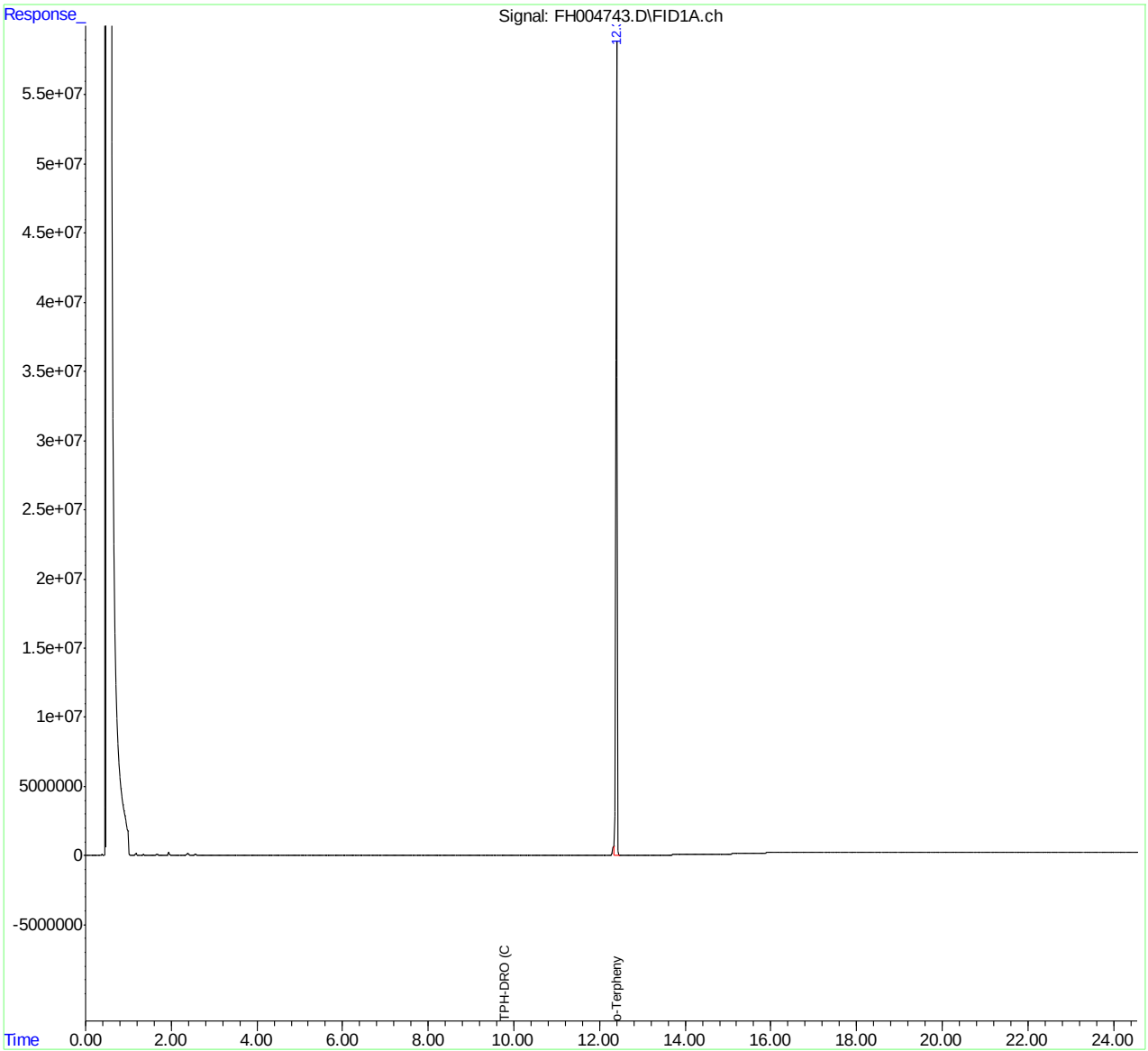
8.2.1
8

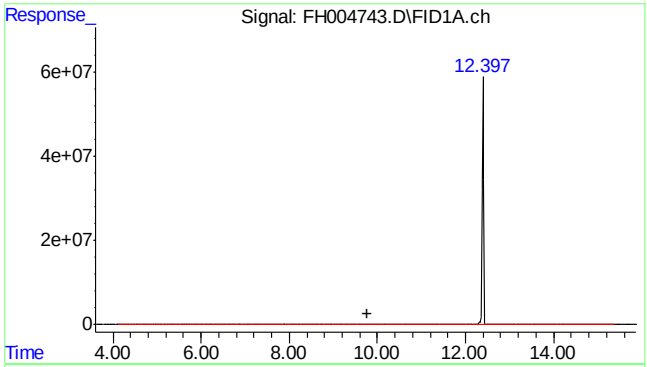
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\FH052512\
Data File : FH004743.D
Signal(s) : FID1A.ch
Acq On : 25 May 2012 9:43 pm
Operator : alexw1
Sample : OP5953-MB
Misc : OP5953,GFH266,30.00,,,2,1
ALS Vial : 17 Sample Multiplier: 1

Integration File: events.e
Quant Time: May 27 13:15:52 2012
Quant Method : C:\msdchem\1\METHODS\DRO-GFH264F.M
Quant Title : DRO-ORO FRONT
QLast Update : Fri May 25 15:42:58 2012
Response via : Initial Calibration
Integrator: ChemStation

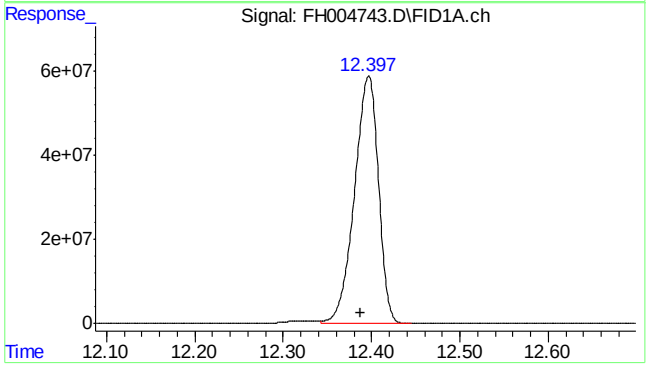
Volume Inj. :
Signal Phase :
Signal Info :





#1 TPH-DRO (C10-C28)

R.T.: 9.771 min
Delta R.T.: 0.000 min
Response: 102196268
Conc: 82.74 ug/ml m



#2 o-Terphenyl

R.T.: 12.397 min
Delta R.T.: 0.009 min
Response: 1111663520
Conc: 1452.47 ug/ml m