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Apex Laboratories
Philip Nerenberg
12232 S.W. Garden Place
Tigard, OR 97223

RE: A6D0013
Lab ID: 1604080

April 27, 2016

Attention Philip Nerenberg:

Fremont Analytical, Inc. received 4 sample(s) on 4/9/2016 for the analyses presented in the following report.

Extractable Petroleum Hydrocarbons by NWEPH
Sample Moisture (Percent Moisture)
Volatile Petroleum Hydrocarbons by NWVPH

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President

CLIENT: Apex Laboratories
Project: A6D0013
Lab Order: 1604080

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1604080-001	5237-160331-NDP-SED002G	03/31/2016 10:45 AM	04/09/2016 12:34 PM
1604080-002	5237-160331-NDP-SED002	03/31/2016 10:45 AM	04/09/2016 12:34 PM
1604080-003	5237-160331-NDP-SED004G	03/31/2016 11:40 AM	04/09/2016 12:34 PM
1604080-004	5237-160331-NDP-SED004	03/31/2016 11:40 AM	04/09/2016 12:34 PM

Case Narrative

WO#: **1604080**
Date: **4/27/2016**

CLIENT: Apex Laboratories
Project: A6D0013

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Analytical Report

WO#: **1604080**
Date Reported: **4/27/2016**

Client: Apex Laboratories
Collection Date: 3/31/2016 10:45:00 AM
Project: A6D0013
Lab ID: 1604080-001
Matrix: Sediment
Client Sample ID: **5237-160331-NDP-SED002G**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Petroleum Hydrocarbons by NWVPH				Batch ID: 13429		Analyst: BC
Aliphatic Hydrocarbon (C5-C6)	ND	2.07	Q	mg/Kg	1	4/12/2016 8:17:48 PM
Aliphatic Hydrocarbon (C6-C8)	ND	2.07		mg/Kg	1	4/12/2016 8:17:48 PM
Aliphatic Hydrocarbon (C8-C10)	ND	2.07		mg/Kg	1	4/12/2016 8:17:48 PM
Aliphatic Hydrocarbon (C10-C12)	ND	2.07		mg/Kg	1	4/12/2016 8:17:48 PM
Aromatic Hydrocarbon (C8-C10)	ND	2.07		mg/Kg	1	4/12/2016 8:17:48 PM
Aromatic Hydrocarbon (C10-C12)	ND	2.07		mg/Kg	1	4/12/2016 8:17:48 PM
Aromatic Hydrocarbon (C12-C13)	ND	2.07		mg/Kg	1	4/12/2016 8:17:48 PM
Surr: 1,4-Difluorobenzene	93.9	65-140		%Rec	1	4/12/2016 8:17:48 PM
Surr: Bromofluorobenzene	76.0	65-140		%Rec	1	4/12/2016 8:17:48 PM

NOTES:
Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Analytical Report

WO#: **1604080**
Date Reported: **4/27/2016**

Client: Apex Laboratories
Collection Date: 3/31/2016 10:45:00 AM
Project: A6D0013
Lab ID: 1604080-002
Matrix: Sediment
Client Sample ID: **5237-160331-NDP-SED002**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 13403		Analyst: CM
Aliphatic Hydrocarbon (C8-C10)	ND	4.99		mg/Kg-dry	1	4/23/2016 12:08:00 AM
Aliphatic Hydrocarbon (C10-C12)	ND	4.99		mg/Kg-dry	1	4/23/2016 12:08:00 AM
Aliphatic Hydrocarbon (C12-C16)	ND	4.99		mg/Kg-dry	1	4/23/2016 12:08:00 AM
Aliphatic Hydrocarbon (C16-C21)	ND	4.99		mg/Kg-dry	1	4/23/2016 12:08:00 AM
Aliphatic Hydrocarbon (C21-C34)	ND	4.99		mg/Kg-dry	1	4/23/2016 12:08:00 AM
Aromatic Hydrocarbon (C8-C10)	ND	4.99		mg/Kg-dry	1	4/23/2016 12:07:00 PM
Aromatic Hydrocarbon (C10-C12)	ND	4.99		mg/Kg-dry	1	4/23/2016 12:07:00 PM
Aromatic Hydrocarbon (C12-C16)	ND	4.99		mg/Kg-dry	1	4/23/2016 12:07:00 PM
Aromatic Hydrocarbon (C16-C21)	ND	4.99		mg/Kg-dry	1	4/23/2016 12:07:00 PM
Aromatic Hydrocarbon (C21-C34)	5.76	4.99		mg/Kg-dry	1	4/23/2016 12:07:00 PM
Surr: 1-Chlorooctadecane	44.8	60-140	S	%Rec	1	4/23/2016 12:08:00 AM
Surr: o-Terphenyl	44.8	60-140	S	%Rec	1	4/23/2016 12:07:00 PM

NOTES:
S - Outlying QC recoveries were associated with this sample. The method is in control as indicated by the LCS.
S - Outlying QC recoveries were associated with this sample. The method is in control as indicated by the LCS.

Sample Moisture (Percent Moisture)				Batch ID: R28687		Analyst: SB
Percent Moisture	32.9	0.500		wt%	1	4/11/2016 10:17:14 AM

Analytical Report

WO#: **1604080**
Date Reported: **4/27/2016**

Client: Apex Laboratories
Collection Date: 3/31/2016 11:40:00 AM
Project: A6D0013
Lab ID: 1604080-003
Matrix: Sediment
Client Sample ID: **5237-160331-NDP-SED004G**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Petroleum Hydrocarbons by NWVPH				Batch ID: 13429		Analyst: BC
Aliphatic Hydrocarbon (C5-C6)	ND	2.11	Q	mg/Kg	1	4/12/2016 8:53:27 PM
Aliphatic Hydrocarbon (C6-C8)	ND	2.11		mg/Kg	1	4/12/2016 8:53:27 PM
Aliphatic Hydrocarbon (C8-C10)	ND	2.11		mg/Kg	1	4/12/2016 8:53:27 PM
Aliphatic Hydrocarbon (C10-C12)	ND	2.11		mg/Kg	1	4/12/2016 8:53:27 PM
Aromatic Hydrocarbon (C8-C10)	ND	2.11		mg/Kg	1	4/12/2016 8:53:27 PM
Aromatic Hydrocarbon (C10-C12)	ND	2.11		mg/Kg	1	4/12/2016 8:53:27 PM
Aromatic Hydrocarbon (C12-C13)	ND	2.11		mg/Kg	1	4/12/2016 8:53:27 PM
Surr: 1,4-Difluorobenzene	93.4	65-140		%Rec	1	4/12/2016 8:53:27 PM
Surr: Bromofluorobenzene	69.6	65-140		%Rec	1	4/12/2016 8:53:27 PM

NOTES:
Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Analytical Report

WO#: **1604080**
Date Reported: **4/27/2016**

Client: Apex Laboratories
Collection Date: 3/31/2016 11:40:00 AM
Project: A6D0013
Lab ID: 1604080-004
Matrix: Sediment
Client Sample ID: **5237-160331-NDP-SED004**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 13403		Analyst: CM
Aliphatic Hydrocarbon (C8-C10)	12.3	4.85		mg/Kg-dry	1	4/23/2016 12:53:00 AM
Aliphatic Hydrocarbon (C10-C12)	6.40	4.85		mg/Kg-dry	1	4/23/2016 12:53:00 AM
Aliphatic Hydrocarbon (C12-C16)	6.90	4.85		mg/Kg-dry	1	4/23/2016 12:53:00 AM
Aliphatic Hydrocarbon (C16-C21)	7.11	4.85		mg/Kg-dry	1	4/23/2016 12:53:00 AM
Aliphatic Hydrocarbon (C21-C34)	11.5	4.85		mg/Kg-dry	1	4/23/2016 12:53:00 AM
Aromatic Hydrocarbon (C8-C10)	ND	4.85		mg/Kg-dry	1	4/23/2016 12:52:00 PM
Aromatic Hydrocarbon (C10-C12)	ND	4.85		mg/Kg-dry	1	4/23/2016 12:52:00 PM
Aromatic Hydrocarbon (C12-C16)	ND	4.85		mg/Kg-dry	1	4/23/2016 12:52:00 PM
Aromatic Hydrocarbon (C16-C21)	5.25	4.85	B	mg/Kg-dry	1	4/23/2016 12:52:00 PM
Aromatic Hydrocarbon (C21-C34)	ND	4.85		mg/Kg-dry	1	4/23/2016 12:52:00 PM
Surr: 1-Chlorooctadecane	49.7	60-140	S	%Rec	1	4/23/2016 12:53:00 AM
Surr: o-Terphenyl	63.7	60-140		%Rec	1	4/23/2016 12:52:00 PM

NOTES:
S - Outlying QC recoveries were associated with this sample. The method is in control as indicated by the LCS.

Sample Moisture (Percent Moisture)				Batch ID: R28687		Analyst: SB
Percent Moisture	51.0	0.500		wt%	1	4/11/2016 10:17:14 AM

Work Order: 1604080
CLIENT: Apex Laboratories
Project: A6D0013

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID **ALI ICB**	SampType: **ICB**	Units: **mg/Kg**	Prep Date: **4/21/2016**	RunNo: **28953**
Client ID: **ICB**	Batch ID: **R28953**		Analysis Date: **4/21/2016**	SeqNo: **544719**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	27.1	5.00									
Aliphatic Hydrocarbon (C10-C12)	14.1	5.00									
Aliphatic Hydrocarbon (C12-C16)	16.1	5.00									
Aliphatic Hydrocarbon (C16-C21)	96.9	5.00									
Aliphatic Hydrocarbon (C21-C34)	25.0	5.00									
Surr: 1-Chlorooctadecane	31.2		40.00		78.1	60	140				

Sample ID **ALI ICV**	SampType: **ICV**	Units: **mg/Kg**	Prep Date: **4/22/2016**	RunNo: **28953**
Client ID: **ICV**	Batch ID: **R28953**		Analysis Date: **4/22/2016**	SeqNo: **544720**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	186	5.00	200.0	0	92.8	80	120				
Aliphatic Hydrocarbon (C10-C12)	93.7	5.00	100.0	0	93.7	80	120				
Aliphatic Hydrocarbon (C12-C16)	91.1	5.00	100.0	0	91.1	80	120				
Aliphatic Hydrocarbon (C16-C21)	115	5.00	100.0	0	115	80	120				
Aliphatic Hydrocarbon (C21-C34)	85.5	5.00	100.0	0	85.5	80	120				
Surr: 1-Chlorooctadecane	37.9		40.00		94.8	60	140				

Sample ID **ARO ICB**	SampType: **ICB**	Units: **mg/Kg**	Prep Date: **4/22/2016**	RunNo: **28953**
Client ID: **ICB**	Batch ID: **R28953**		Analysis Date: **4/22/2016**	SeqNo: **544721**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	5.00									
Aromatic Hydrocarbon (C10-C12)	ND	5.00									
Aromatic Hydrocarbon (C12-C16)	ND	5.00									
Aromatic Hydrocarbon (C16-C21)	21.4	5.00									
Aromatic Hydrocarbon (C21-C34)	41.1	5.00									
Surr: o-Terphenyl	30.6		40.00		76.6	60	140				

Work Order: 1604080
CLIENT: Apex Laboratories
Project: A6D0013

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID **ARO ICV**	SampType: **ICV**			Units: **mg/Kg**		Prep Date: **4/22/2016**		RunNo: **28953**		
Client ID: **ICV**	Batch ID: **R28953**					Analysis Date: **4/22/2016**		SeqNo: **544722**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	94.4	5.00	100.0	0	94.4	80	120				
Aromatic Hydrocarbon (C12-C16)	97.5	5.00	100.0	0	97.5	80	120				
Aromatic Hydrocarbon (C16-C21)	111	5.00	100.0	0	111	80	120				
Aromatic Hydrocarbon (C21-C34)	82.7	5.00	100.0	0	82.7	80	120				
Surr: o-Terphenyl	34.7		40.00		86.7	60	140				

Sample ID **ALI CCVA**	SampType: **CCV**			Units: **mg/Kg**		Prep Date: **4/22/2016**		RunNo: **28989**		
Client ID: **CCV**	Batch ID: **13403**					Analysis Date: **4/22/2016**		SeqNo: **545602**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	202	5.00	200.0	0	101	80	120				
Aliphatic Hydrocarbon (C10-C12)	101	5.00	100.0	0	101	80	120				
Aliphatic Hydrocarbon (C12-C16)	100	5.00	100.0	0	100	80	120				
Aliphatic Hydrocarbon (C16-C21)	107	5.00	100.0	0	107	80	120				
Aliphatic Hydrocarbon (C21-C34)	96.0	5.00	100.0	0	96.0	80	120				
Surr: 1-Chlorooctadecane	36.6		40.00		91.5	60	140				

Sample ID **ARO CCVA**	SampType: **CCV**			Units: **mg/Kg**		Prep Date: **4/22/2016**		RunNo: **28989**		
Client ID: **CCV**	Batch ID: **13403**					Analysis Date: **4/22/2016**		SeqNo: **545638**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	104	5.00	100.0	0	104	80	120				
Aromatic Hydrocarbon (C10-C12)	100	5.00	100.0	0	100	80	120				
Aromatic Hydrocarbon (C12-C16)	105	5.00	100.0	0	105	80	120				
Aromatic Hydrocarbon (C16-C21)	97.9	5.00	100.0	0	97.9	80	120				
Aromatic Hydrocarbon (C21-C34)	82.1	5.00	100.0	0	82.1	80	120				
Surr: o-Terphenyl	34.7		40.00		86.7	60	140				

Work Order: 1604080
CLIENT: Apex Laboratories
Project: A6D0013

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID **LCS-13403**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **4/6/2016**		RunNo: **28989**		
Client ID: **LCSS**	Batch ID: **13403**					Analysis Date: **4/22/2016**		SeqNo: **545604**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	77.9	5.00	100.0	0	77.9	70	130				
Aliphatic Hydrocarbon (C10-C12)	46.5	5.00	50.00	0	93.0	70	130				
Aliphatic Hydrocarbon (C12-C16)	43.5	5.00	50.00	0	86.9	70	130				
Aliphatic Hydrocarbon (C16-C21)	44.7	5.00	50.00	0	89.5	70	130				
Aliphatic Hydrocarbon (C21-C34)	43.2	5.00	50.00	0	86.4	70	130				
Surr: 1-Chlorooctadecane	16.5		20.00		82.3	60	140				

Sample ID **MB-13403**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **4/6/2016**		RunNo: **28989**		
Client ID: **MBLKS**	Batch ID: **13403**					Analysis Date: **4/22/2016**		SeqNo: **545603**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	5.00									
Aliphatic Hydrocarbon (C10-C12)	ND	5.00									
Aliphatic Hydrocarbon (C12-C16)	ND	5.00									
Aliphatic Hydrocarbon (C16-C21)	ND	5.00									
Aliphatic Hydrocarbon (C21-C34)	ND	5.00									
Surr: 1-Chlorooctadecane	12.2		20.00		61.2	60	140				

Sample ID **1604081-004ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **4/6/2016**		RunNo: **28989**		
Client ID: **BATCH**	Batch ID: **13403**					Analysis Date: **4/23/2016**		SeqNo: **545612**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	6.35						0		30	
Aliphatic Hydrocarbon (C10-C12)	ND	6.35						0		30	
Aliphatic Hydrocarbon (C12-C16)	ND	6.35						0		30	
Aliphatic Hydrocarbon (C16-C21)	22.2	6.35						13.69	47.4	30	R
Aliphatic Hydrocarbon (C21-C34)	ND	6.35						0		30	
Surr: 1-Chlorooctadecane	13.6		25.41		53.6	60	140		0		S

Work Order: 1604080
CLIENT: Apex Laboratories
Project: A6D0013

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID	1604081-004ADUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	4/6/2016	RunNo:	28989
Client ID:	BATCH	Batch ID:	13403			Analysis Date:	4/23/2016	SeqNo:	545612

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying QC recoveries were associated with this sample. The method is in control as indicated by the LCS.
R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID	ALI CCVB	SampType:	CCV	Units:	mg/Kg	Prep Date:	4/23/2016	RunNo:	28989
Client ID:	CCV	Batch ID:	13403			Analysis Date:	4/23/2016	SeqNo:	545613

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	210	5.00	200.0	0	105	80	120				
Aliphatic Hydrocarbon (C10-C12)	105	5.00	100.0	0	105	80	120				
Aliphatic Hydrocarbon (C12-C16)	103	5.00	100.0	0	103	80	120				
Aliphatic Hydrocarbon (C16-C21)	104	5.00	100.0	0	104	80	120				
Aliphatic Hydrocarbon (C21-C34)	114	5.00	100.0	0	114	80	120				
Surr: 1-Chlorooctadecane	47.2		40.00		118	60	140				

Sample ID	ARO CCVB	SampType:	CCV	Units:	mg/Kg	Prep Date:	4/23/2016	RunNo:	28989
Client ID:	CCV	Batch ID:	13403			Analysis Date:	4/23/2016	SeqNo:	545647

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	94.2	5.00	100.0	0	94.2	80	120				
Aromatic Hydrocarbon (C10-C12)	91.0	5.00	100.0	0	91.0	80	120				
Aromatic Hydrocarbon (C12-C16)	95.8	5.00	100.0	0	95.8	80	120				
Aromatic Hydrocarbon (C16-C21)	117	5.00	100.0	0	117	80	120				
Aromatic Hydrocarbon (C21-C34)	102	5.00	100.0	0	102	80	120				
Surr: o-Terphenyl	33.0		40.00		82.6	60	140				

Work Order: 1604080
CLIENT: Apex Laboratories
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QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID **LCS-13403**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **4/6/2016**		RunNo: **28989**		
Client ID: **LCSS**	Batch ID: **13403**					Analysis Date: **4/23/2016**		SeqNo: **546204**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	43.0	5.00	50.00	0	86.0	70	130				
Aromatic Hydrocarbon (C10-C12)	45.1	5.00	50.00	0	90.3	70	130				
Aromatic Hydrocarbon (C12-C16)	47.6	5.00	50.00	0	95.2	70	130				
Aromatic Hydrocarbon (C16-C21)	53.3	5.00	50.00	0	107	70	130				
Aromatic Hydrocarbon (C21-C34)	38.0	5.00	50.00	0	75.9	70	130				
Surr: o-Terphenyl	16.5		20.00		82.4	60	140				

Sample ID **MB-13403**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **4/6/2016**		RunNo: **28989**		
Client ID: **MBLKS**	Batch ID: **13403**					Analysis Date: **4/23/2016**		SeqNo: **546205**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	5.00									
Aromatic Hydrocarbon (C10-C12)	ND	5.00									
Aromatic Hydrocarbon (C12-C16)	ND	5.00									
Aromatic Hydrocarbon (C16-C21)	ND	5.00									
Aromatic Hydrocarbon (C21-C34)	ND	5.00									
Surr: o-Terphenyl	15.1		20.00		75.6	60	140				

Sample ID **1604081-004ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **4/6/2016**		RunNo: **28989**		
Client ID: **BATCH**	Batch ID: **13403**					Analysis Date: **4/23/2016**		SeqNo: **546202**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	6.35						0		30	
Aromatic Hydrocarbon (C10-C12)	ND	6.35						0		30	
Aromatic Hydrocarbon (C12-C16)	ND	6.35						0		30	
Aromatic Hydrocarbon (C16-C21)	10.6	6.35						8.481	22.1	30	
Aromatic Hydrocarbon (C21-C34)	ND	6.35						0		30	
Surr: o-Terphenyl	16.6		25.41		65.3	60	140		0		

Work Order: 1604080
CLIENT: Apex Laboratories
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QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID **ARO CCVC** SampType: **CCV** Units: **mg/Kg** Prep Date: **4/23/2016** RunNo: **28989**
Client ID: **CCV** Batch ID: **13403** Analysis Date: **4/23/2016** SeqNo: **546203**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	104	5.00	100.0	0	104	80	120				
Aromatic Hydrocarbon (C10-C12)	102	5.00	100.0	0	102	80	120				
Aromatic Hydrocarbon (C12-C16)	107	5.00	100.0	0	107	80	120				
Aromatic Hydrocarbon (C16-C21)	120	5.00	100.0	0	120	80	120				
Aromatic Hydrocarbon (C21-C34)	89.3	5.00	100.0	0	89.3	80	120				
Surr: o-Terphenyl	38.3		40.00		95.7	60	140				

Work Order: 1604080
CLIENT: Apex Laboratories
Project: A6D0013

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID **ICB-R28814**	SampType: **ICB**	Units: **mg/Kg**	Prep Date: **4/12/2016**	RunNo: **28814**
Client ID: **ICB**	Batch ID: **R28814**		Analysis Date: **4/12/2016**	SeqNo: **546560**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	14.7	2.00		0	0						
Aliphatic Hydrocarbon (C6-C8)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C8-C10)	4.02	2.00		0	0						
Aliphatic Hydrocarbon (C10-C12)	ND	2.00		0	0						
Aromatic Hydrocarbon (C8-C10)	66.6	2.00		0	0						
Aromatic Hydrocarbon (C10-C12)	ND	2.00		0	0						
Aromatic Hydrocarbon (C12-C13)	ND	2.00		0	0						
Surr: 1,4-Difluorobenzene	46.5		50.00		93.0	65	140				
Surr: Bromofluorobenzene	38.8		50.00		77.6	65	140				

Sample ID **ICV-17311**	SampType: **ICV**	Units: **mg/Kg**	Prep Date: **4/12/2016**	RunNo: **28814**
Client ID: **ICV**	Batch ID: **R28814**		Analysis Date: **4/12/2016**	SeqNo: **541585**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	894	2.00	600.0	0	149	70	130				S
Aliphatic Hydrocarbon (C6-C8)	182	2.00	200.0	0	91.2	70	130				
Aliphatic Hydrocarbon (C8-C10)	218	2.00	200.0	0	109	70	130				
Aliphatic Hydrocarbon (C10-C12)	244	2.00	200.0	0	122	70	130				
Aromatic Hydrocarbon (C8-C10)	984	2.00	800.0	0	123	70	130				
Aromatic Hydrocarbon (C10-C12)	254	2.00	200.0	0	127	70	130				
Aromatic Hydrocarbon (C12-C13)	184	2.00	200.0	0	91.9	70	130				
Surr: 1,4-Difluorobenzene	53.0		50.00		106	65	140				
Surr: Bromofluorobenzene	58.7		50.00		117	65	140				

Sample ID **CCV-A-13429**	SampType: **CCV**	Units: **mg/Kg**	Prep Date: **4/12/2016**	RunNo: **28816**
Client ID: **CCV**	Batch ID: **R28816**		Analysis Date: **4/12/2016**	SeqNo: **541680**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	657	2.00	600.0	0	109	80	120				Q
Aliphatic Hydrocarbon (C6-C8)	185	2.00	200.0	0	92.6	80	120				

Work Order: 1604080
CLIENT: Apex Laboratories
Project: A6D0013

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID **CCV-A-13429**	SampType: **CCV**	Units: **mg/Kg**	Prep Date: **4/12/2016**	RunNo: **28816**
Client ID: **CCV**	Batch ID: **R28816**		Analysis Date: **4/12/2016**	SeqNo: **541680**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	199	2.00	200.0	0	99.4	80	120				
Aliphatic Hydrocarbon (C10-C12)	197	2.00	200.0	0	98.4	80	120				
Aromatic Hydrocarbon (C8-C10)	873	2.00	800.0	0	109	80	120				
Aromatic Hydrocarbon (C10-C12)	342	2.00	200.0	0	171	80	120				S
Aromatic Hydrocarbon (C12-C13)	301	2.00	200.0	0	150	80	120				S
Surr: 1,4-Difluorobenzene	51.6		50.00		103	65	140				
Surr: Bromofluorobenzene	54.7		50.00		109	65	140				

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.
Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID **LCS-13429**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **4/11/2016**	RunNo: **28816**
Client ID: **LCSS**	Batch ID: **13429**		Analysis Date: **4/12/2016**	SeqNo: **541681**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	24.8	2.00	30.00	0	82.7	70	130				Q
Aliphatic Hydrocarbon (C6-C8)	8.19	2.00	10.00	0	81.9	70	130				
Aliphatic Hydrocarbon (C8-C10)	8.46	2.00	10.00	0	84.6	70	130				
Aliphatic Hydrocarbon (C10-C12)	11.8	2.00	10.00	0	118	70	130				
Aromatic Hydrocarbon (C8-C10)	37.5	2.00	40.00	0	93.6	70	130				
Aromatic Hydrocarbon (C10-C12)	14.9	2.00	10.00	0	149	70	130				S
Aromatic Hydrocarbon (C12-C13)	12.9	2.00	10.00	0	129	70	130				
Surr: 1,4-Difluorobenzene	2.02		2.500		80.6	65	140				
Surr: Bromofluorobenzene	2.33		2.500		93.1	65	140				

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.
Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Work Order: 1604080
CLIENT: Apex Laboratories
Project: A6D0013

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID **MB-13429** SampType: **MBLK** Units: **mg/Kg** Prep Date: **4/11/2016** RunNo: **28816**
Client ID: **MBLKS** Batch ID: **13429** Analysis Date: **4/12/2016** SeqNo: **541630**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	2.00		0	0						Q
Aliphatic Hydrocarbon (C6-C8)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C8-C10)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C10-C12)	ND	2.00		0	0						
Aromatic Hydrocarbon (C8-C10)	ND	2.00		0	0						
Aromatic Hydrocarbon (C10-C12)	ND	2.00		0	0						
Aromatic Hydrocarbon (C12-C13)	ND	2.00		0	0						
Surr: 1,4-Difluorobenzene	2.46		2.500		98.2	65	140				
Surr: Bromofluorobenzene	1.82		2.500		72.9	65	140				

NOTES:
Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID **1604078-003ADUP** SampType: **DUP** Units: **mg/Kg** Prep Date: **4/11/2016** RunNo: **28816**
Client ID: **BATCH** Batch ID: **13429** Analysis Date: **4/12/2016** SeqNo: **541616**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	1.91		0	0			0		25	QH
Aliphatic Hydrocarbon (C6-C8)	ND	1.91		0	0			0		25	H
Aliphatic Hydrocarbon (C8-C10)	ND	1.91		0	0			0		25	H
Aliphatic Hydrocarbon (C10-C12)	ND	1.91		0	0			0		25	H
Aromatic Hydrocarbon (C8-C10)	ND	1.91		0	0			0		25	H
Aromatic Hydrocarbon (C10-C12)	ND	1.91		0	0			0		25	H
Aromatic Hydrocarbon (C12-C13)	ND	1.91		0	0			0		25	H
Surr: 1,4-Difluorobenzene	2.48		2.385		104	65	140		0		H
Surr: Bromofluorobenzene	2.00		2.385		83.8	65	140		0	0	H

NOTES:
Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Work Order: 1604080
CLIENT: Apex Laboratories
Project: A6D0013

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID **1604081-001AMS** SampType: **MS** Units: **mg/Kg** Prep Date: **4/11/2016** RunNo: **28816**
Client ID: **BATCH** Batch ID: **13429** Analysis Date: **4/12/2016** SeqNo: **541621**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	20.4	1.59	23.89	0	85.4	70	130				Q
Aliphatic Hydrocarbon (C6-C8)	7.49	1.59	7.962	0	94.1	70	130				
Aliphatic Hydrocarbon (C8-C10)	6.74	1.59	7.962	0	84.6	70	130				
Aliphatic Hydrocarbon (C10-C12)	9.69	1.59	7.962	0	122	70	130				
Aromatic Hydrocarbon (C8-C10)	30.1	1.59	31.85	0	94.4	70	130				
Aromatic Hydrocarbon (C10-C12)	16.2	1.59	7.962	0	204	70	130				S
Aromatic Hydrocarbon (C12-C13)	8.95	1.59	7.962	0	112	70	130				
Surr: 1,4-Difluorobenzene	1.76		1.990		88.6	65	140				
Surr: Bromofluorobenzene	1.97		1.990		99.0	65	140				

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.
Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID **1604081-001AMSD** SampType: **MSD** Units: **mg/Kg** Prep Date: **4/11/2016** RunNo: **28816**
Client ID: **BATCH** Batch ID: **13429** Analysis Date: **4/12/2016** SeqNo: **541622**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	19.9	1.59	23.89	0	83.4	70	130	20.41	2.46	30	Q
Aliphatic Hydrocarbon (C6-C8)	6.68	1.59	7.962	0	83.9	70	130	7.492	11.5	30	
Aliphatic Hydrocarbon (C8-C10)	7.17	1.59	7.962	0	90.1	70	130	6.738	6.21	30	
Aliphatic Hydrocarbon (C10-C12)	10.3	1.59	7.962	0	129	70	130	9.690	6.16	30	
Aromatic Hydrocarbon (C8-C10)	30.6	1.59	31.85	0	96.1	70	130	30.08	1.69	30	
Aromatic Hydrocarbon (C10-C12)	18.0	1.59	7.962	0	226	70	130	16.24	10.3	30	S
Aromatic Hydrocarbon (C12-C13)	12.2	1.59	7.962	0	153	70	130	8.954	30.5	30	RS
Surr: 1,4-Difluorobenzene	1.69		1.990		84.9	65	140		0		
Surr: Bromofluorobenzene	1.93		1.990		96.9	65	140		0	0	

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.
R - High RPD observed.
Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Work Order: 1604080
CLIENT: Apex Laboratories
Project: A6D0013

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID **CCV-B-13429** SampType: **CCV** Units: **mg/Kg** Prep Date: **4/13/2016** RunNo: **28816**
Client ID: **CCV** Batch ID: **13429** Analysis Date: **4/13/2016** SeqNo: **541628**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	494	2.00	600.0	0	82.4	80	120				
Aliphatic Hydrocarbon (C6-C8)	189	2.00	200.0	0	94.7	80	120				
Aliphatic Hydrocarbon (C8-C10)	161	2.00	200.0	0	80.4	80	120				
Aliphatic Hydrocarbon (C10-C12)	164	2.00	200.0	0	81.8	80	120				
Aromatic Hydrocarbon (C8-C10)	684	2.00	800.0	0	85.6	80	120				
Aromatic Hydrocarbon (C10-C12)	253	2.00	200.0	0	127	80	120				S
Aromatic Hydrocarbon (C12-C13)	220	2.00	200.0	0	110	80	120				
Surr: 1,4-Difluorobenzene	42.4		50.00		84.8	65	140				
Surr: Bromofluorobenzene	42.0		50.00		83.9	65	140				

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.
Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Work Order: 1604080
CLIENT: Apex Laboratories
Project: A6D0013

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1604078-002ADUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **4/11/2016**		RunNo: **28687**			
Client ID: **BATCH**	Batch ID: **R28687**					Analysis Date: **4/11/2016**		SeqNo: **539603**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	40.5	0.500						36.85	9.52	20	

Sample Log-In Check List

Client Name:	**APEX**	Work Order Number:	**1604080**
Logged by:	**Erica Silva**	Date Received:	**4/9/2016 12:34:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	UPS		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☑	Not Required ☐
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	2.1
Sample	2.9

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT ORDER

Apex Laboratories

A6D0013

1604080

SENDING LABORATORY:

Apex Laboratories
12232 S.W. Garden Place
Tigard, OR 97223
Phone: (503) 718-2323
Fax: (503) 718-0333
Project Manager: Philip Nerenberg

RECEIVING LABORATORY:

Fremont Analytical
3600 Fremont Avenue N.
Seattle, WA 98103
Phone :(206) 352-3790
Fax: (206) 352-7178

NDP Sediment-002 (0.5)

Sample Name: 5237-160331-NDP-SED002G **Sedimen** **Sampled: 03/31/16 10:45** (A6D0013-03)

Analysis	Due	Expires	Comments
NWTPH-VPH (Sub)	04/14/16 17:00	04/14/16 10:45	level IV DP needed
Containers Supplied: (B)40 mL VOA - 5035 (MeOH)			

NDP Sediment-002 (0-0.5)

Sample Name: 5237-160331-NDP-SED002 **Sedimen** **Sampled: 03/31/16 10:45** (A6D0013-04)

Analysis	Due	Expires	Comments
NWTPH-EPH (Sub)	04/14/16 17:00	04/14/16 10:45	Level IV DP needed
Containers Supplied: (H)4 oz Glass Jar			

NDP Sediment -004 (0.5)

Sample Name: 5237-160331-NDP-SED004G **Sedimen** **Sampled: 03/31/16 11:40** (A6D0013-09)

Analysis	Due	Expires	Comments
NWTPH-VPH (Sub)	04/14/16 17:00	04/14/16 11:40	level IV DP needed
Containers Supplied: (B)40 mL VOA - 5035 (MeOH)			

NDP Sediment-004(0-0.5)

Sample Name: 5237-160331-NDP-SED004 **Sedimen** **Sampled: 03/31/16 11:40** (A6D0013-10)

Analysis	Due	Expires	Comments
NWTPH-EPH (Sub)	04/14/16 17:00	04/14/16 11:40	Level IV DP needed
Containers Supplied: (H)4 oz Glass Jar			

Released By 4/8/16 Date — UPS (Shipper) — Received By — Date

Released By — UPS (Shipper) — Date — Received By — Date 4/9/16

DATA SET for Review -- Deliverable Requirements

EPH by NWTPH-EPH

Fremont Analytical Work Order No. 1604080

APEX Laboratories

Project Name: A6D0013

This Data set contains the following:

- Method Detection Limits
- Analytical Sequence Summary for **Work Order 1604080**
- Raw Printouts and Chromatograms for Analytical Sequence(s) governing **Work Order 1604080** including: Initial and Continuing Calibration Data, Blank, Laboratory Control, Duplicates, Spikes, Samples / Batch QC
- Prep Summary and Bench Sheets

Calibration

Calibration Report GC #20

Method : C:\GC20\METHODS\QUANT METHODS\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Initial Calibration

Calibration Files
1 =042103 2 =042104 3 =042105 4 =042106 5 =042107
6 =042108 7 =042109 8 =042110

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	S	1-Chlorooctadecane	Quad	-7.8467 e3	3.2649 e3	9.6747	1.000
2)	S	o-Terphenyl	Avg	-----	7.9476 e3	-----	0.029
3)	H	Aliphatic (C8-C10)	Avg	-----	1.0911 e4	-----	0.043
4)	H	Aliphatic (C10-C12)	Avg	-----	1.1625 e4	-----	0.049
5)	H	Aliphatic (C12-C16)	Avg	-----	1.1935 e4	-----	0.060
6)	H	Aliphatic (C16-C21)	Quad	3.7398 e4	6.4571 e2	-0.3418	0.994
7)	H	Aliphatic (C21-C34)	Avg	-----	7.1502 e3	-----	0.150

ALG20421.M Tue May 10 14:28:14 2016

Response Factor Report GC #20

Method : C:\GC20\METHODS\QUANT METHODS\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016

Calibration Files
1 =042103.D 2 =042104.D 3 =042105.D
4 =042106.D 5 =042107.D 6 =042108.D

		Compound	1	2	3	4	5	6	Avg		%RSD
1)	S	1-Chlorooctadecane	2.095	2.408	2.896	3.418	4.173	5.159	3.358	E3	34.27
2)	S	o-Terphenyl	8.139	7.715	7.774	7.803	7.959	8.297	7.948	E3	2.89
3)	H	Aliphatic (C8-C10)	1.133	1.147	1.117	1.071	1.041	1.039	1.091	E4	4.34
4)	H	Aliphatic (C10-C12)	1.215	1.239	1.179	1.127	1.106	1.108	1.162	E4	4.92
5)	H	Aliphatic (C12-C16)	1.301	1.237	1.223	1.133	1.132	1.135	1.194	E4	5.96
6)	H	Aliphatic (C16-C21)	3.965	3.084	1.506	0.812	0.766	0.558	1.576	E3	88.94
7)	H	Aliphatic (C21-C34)	6.429	6.455	6.310	6.865	7.820	9.023	7.150	E3	14.99

(#) = Out of Range ### Number of calibration levels exceeded format ###

ALG20421.M Tue May 10 14:28:37 2016

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042103.D Vial: 1
Acq On : 21 Apr 2016 4:42 pm Operator: CM
Sample : ALI CAL10 Inst : GC #20
Misc : CO O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:26 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:45:01 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

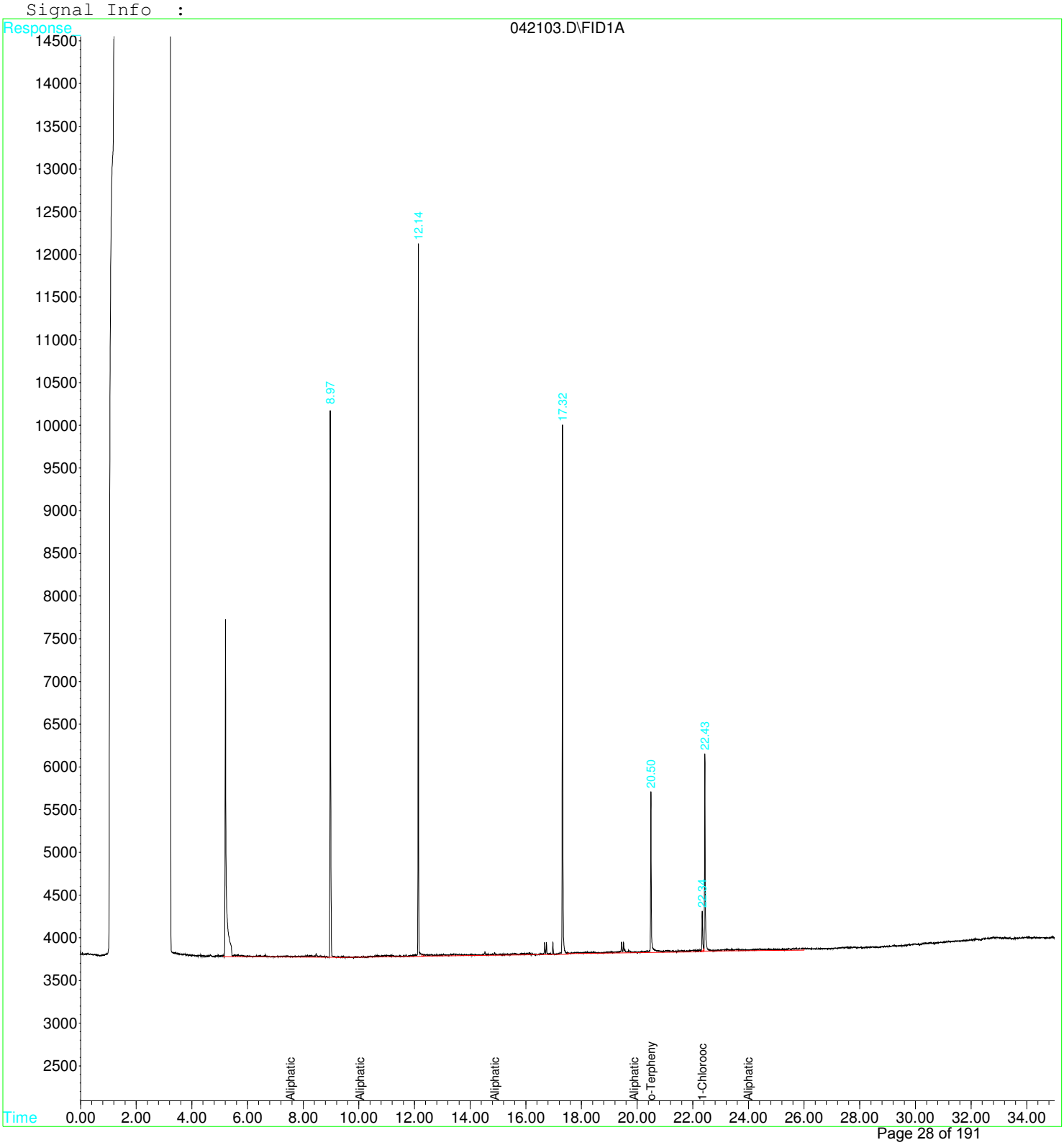
		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.34f	8379	1.096	mg/L	m
2)	S	o-Terphenyl	20.50	32555	3.496	mg/L	m
		Target Compounds					
3)	H	Aliphatic (C8-C10)	7.55	226565	22.148	mg/L	
4)	H	Aliphatic (C10-C12)	10.05	121521	11.405	mg/L	
5)	H	Aliphatic (C12-C16)	14.90	130141	11.298	mg/L	
6)	H	Aliphatic (C16-C21)	19.90	39647	3.097	mg/L	
7)	H	Aliphatic (C21-C34)	24.00	64288	5.502	mg/L	

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042103.D Vial: 1
Acq On : 21 Apr 2016 4:42 pm Operator: CM
Sample : ALI CAL10 Inst : GC #20
Misc : CO O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:26 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:45:01 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042104.D Vial: 2
Acq On : 21 Apr 2016 5:39 pm Operator: CM
Sample : ALI CAL20 Inst : GC #20
Misc : ICAL 1 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:24 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:48:41 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.34	19264	2.520	mg/L	m
2)	S	o-Terphenyl	20.50	61718	6.628	mg/L	
		Target Compounds					
3)	H	Aliphatic (C8-C10)	7.55	458627	44.833	mg/L	
4)	H	Aliphatic (C10-C12)	10.05	247857	23.263	mg/L	
5)	H	Aliphatic (C12-C16)	14.90	247444	21.482	mg/L	
6)	H	Aliphatic (C16-C21)	19.90	61671	4.818	mg/L	
7)	H	Aliphatic (C21-C34)	24.00	129102	11.049	mg/L	

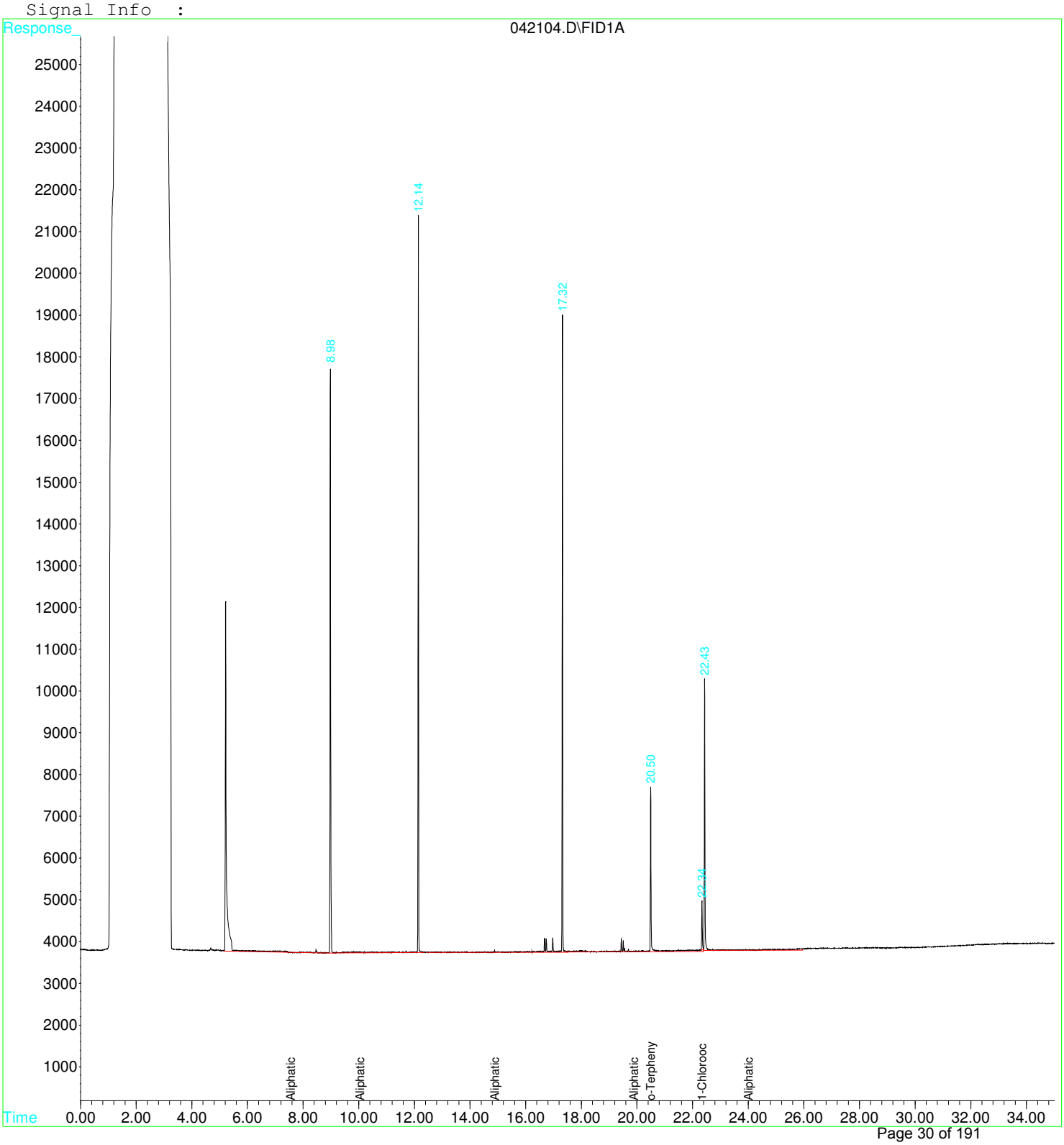
(f)=RT Delta > 1/2 Window (m)=manual int.
042104.D ALG20421.M Mon Apr 25 13:40:11 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042104.D Vial: 2
Acq On : 21 Apr 2016 5:39 pm Operator: CM
Sample : ALI CAL20 Inst : GC #20
Misc : ICAL 1 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:24 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:48:41 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042105.D Vial: 3
Acq On : 21 Apr 2016 6:34 pm Operator: CM
Sample : ALI CAL50 Inst : GC #20
Misc : ICAL 2 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:16 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:48:41 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

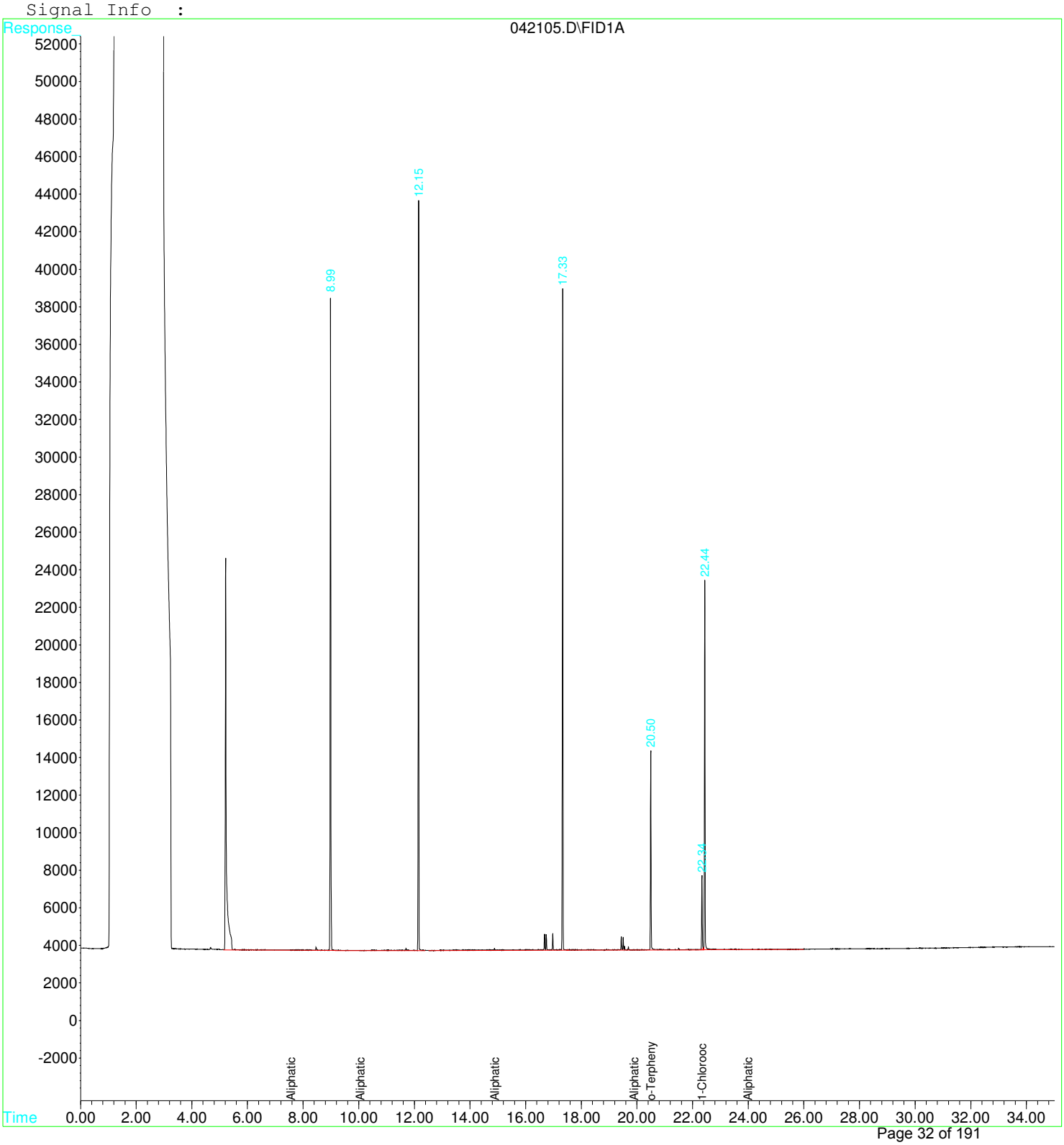
		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	22.34	57921	7.577	mg/L
2)	S	o-Terphenyl	20.50	155473	16.696	mg/L
		Target Compounds				
3)	H	Aliphatic (C8-C10)	7.55	1117333	109.224	mg/L
4)	H	Aliphatic (C10-C12)	10.05	589654	55.342	mg/L
5)	H	Aliphatic (C12-C16)	14.90	611283	53.069	mg/L
6)	H	Aliphatic (C16-C21)	19.90	75283	5.881	mg/L
7)	H	Aliphatic (C21-C34)	24.00	315505	27.001	mg/L

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042105.D Vial: 3
Acq On : 21 Apr 2016 6:34 pm Operator: CM
Sample : ALI CAL50 Inst : GC #20
Misc : ICAL 2 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:16 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:48:41 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042106.D Vial: 4
Acq On : 21 Apr 2016 7:24 pm Operator: CM
Sample : ALI CAL100 Inst : GC #20
Misc : ICAL 3 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:17 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:48:41 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

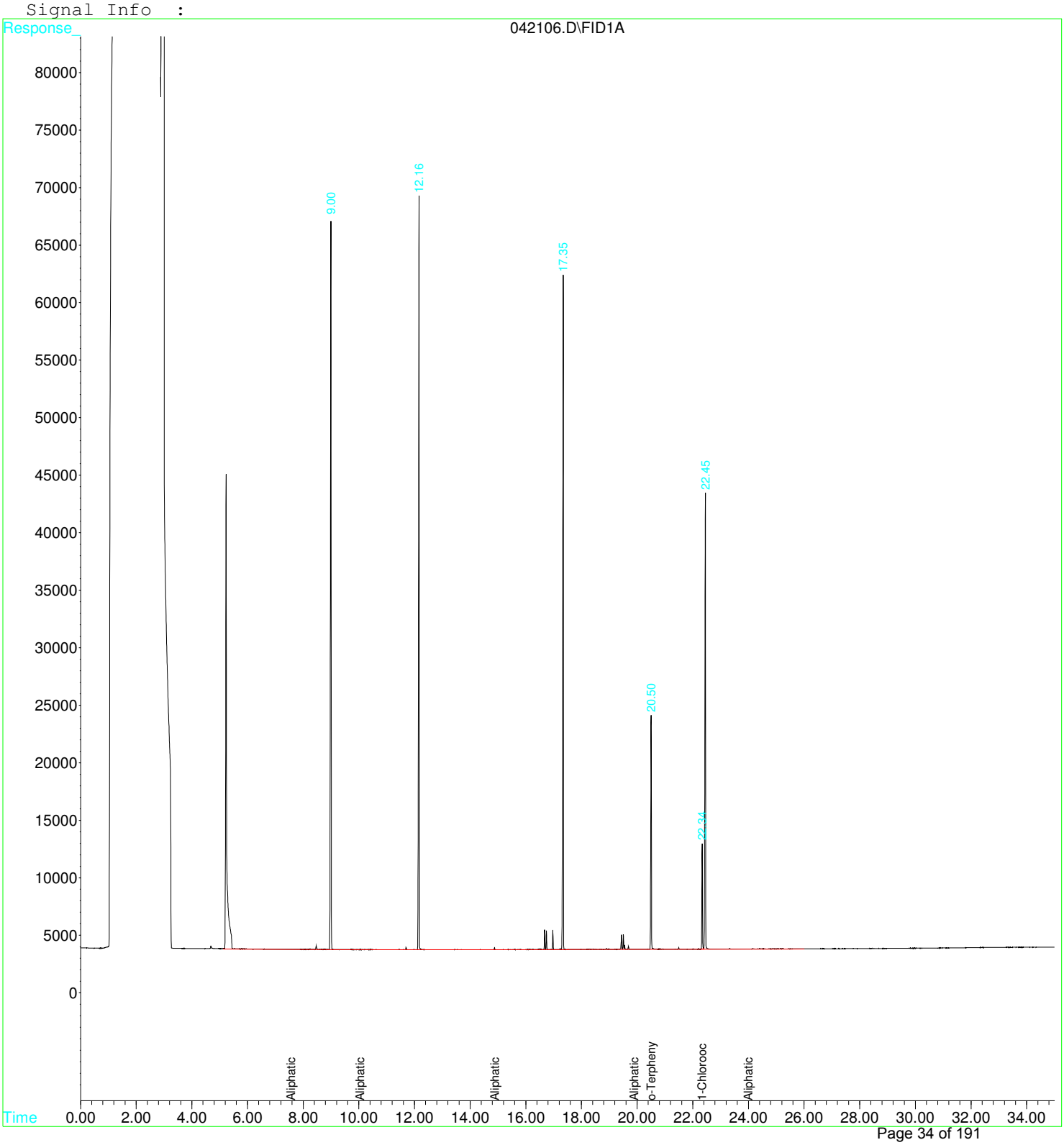
		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	22.34	136740	17.887	mg/L
2)	S	o-Terphenyl	20.50	312111	33.518	mg/L
		Target Compounds				
3)	H	Aliphatic (C8-C10)	7.55	2141075	209.299	mg/L
4)	H	Aliphatic (C10-C12)	10.05	1127114	105.786	mg/L
5)	H	Aliphatic (C12-C16)	14.90	1133317	98.390	mg/L
6)	H	Aliphatic (C16-C21)	19.90	81241	6.347	mg/L
7)	H	Aliphatic (C21-C34)	24.00	686451	58.746	mg/L

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042106.D Vial: 4
Acq On : 21 Apr 2016 7:24 pm Operator: CM
Sample : ALI CAL100 Inst : GC #20
Misc : ICAL 3 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:17 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:48:41 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042107.D Vial: 5
Acq On : 21 Apr 2016 8:13 pm Operator: CM
Sample : ALI CAL200 Inst : GC #20
Misc : ICAL 4 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:34 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:48:41 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	22.35	417272	54.584	mg/L
2)	S	o-Terphenyl	20.52	795885	85.471	mg/L
		Target Compounds				
3)	H	Aliphatic (C8-C10)	7.55	4163525	407.001	mg/L
4)	H	Aliphatic (C10-C12)	10.05	2211582	207.568	mg/L
5)	H	Aliphatic (C12-C16)	14.90	2263659	196.523	mg/L
6)	H	Aliphatic (C16-C21)	19.90	153239	11.972	mg/L
7)	H	Aliphatic (C21-C34)	24.00	1563958	133.843	mg/L

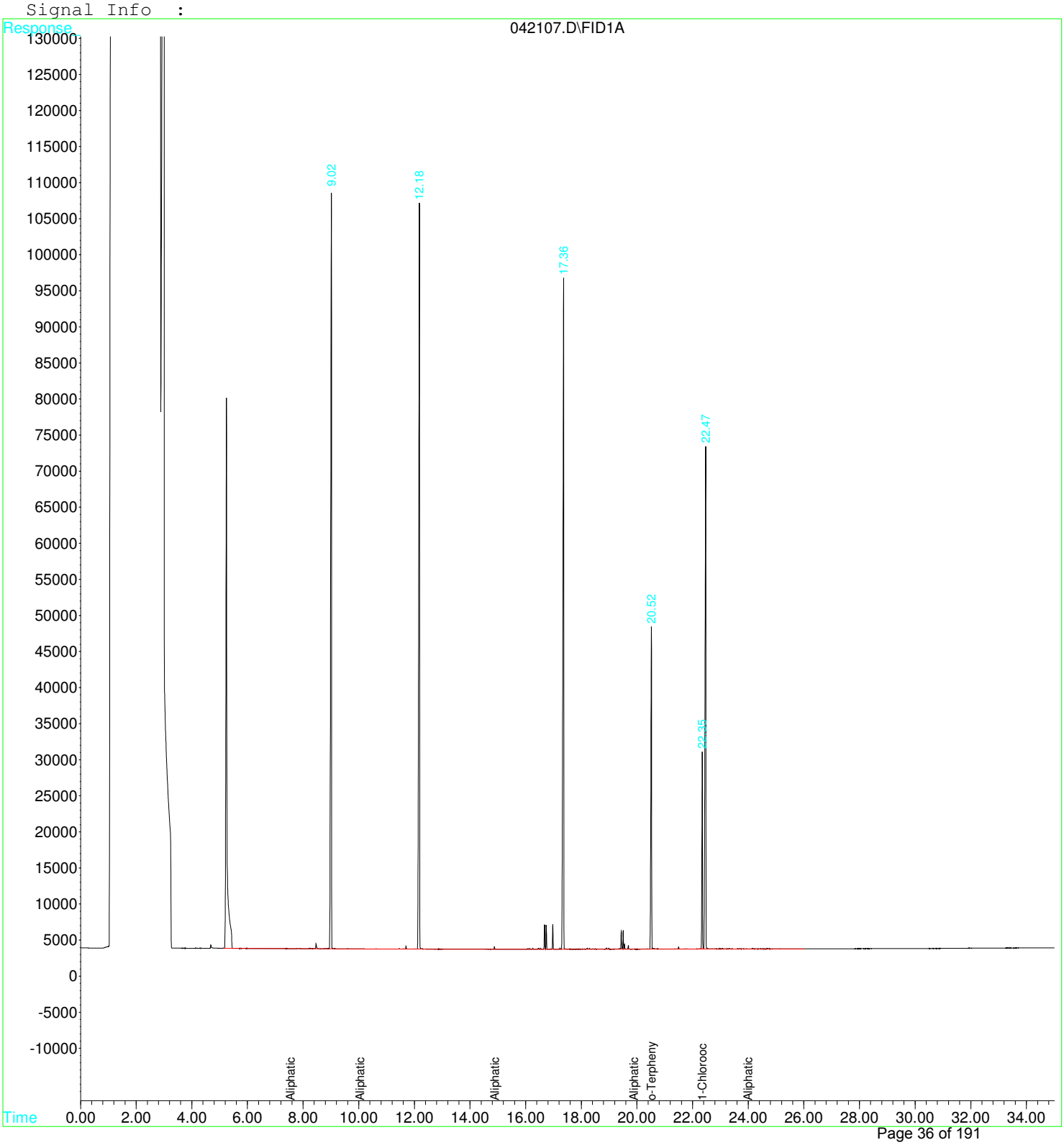
(f)=RT Delta > 1/2 Window (m)=manual int.
042107.D ALG20421.M Mon Apr 25 13:41:48 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042107.D Vial: 5
Acq On : 21 Apr 2016 8:13 pm Operator: CM
Sample : ALI CAL200 Inst : GC #20
Misc : ICAL 4 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:34 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:48:41 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042108.D Vial: 6
Acq On : 21 Apr 2016 9:01 pm Operator: CM
Sample : ALI CAL500 Inst : GC #20
Misc : ICAL 5 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:34 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:48:41 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	22.37	1031739	134.964	mg/L
2)	S	o-Terphenyl	20.54f	1659321	178.197	mg/L
		Target Compounds				
3)	H	Aliphatic (C8-C10)	7.55	10386716	1015.342	mg/L
4)	H	Aliphatic (C10-C12)	10.05	5540355	519.991	mg/L
5)	H	Aliphatic (C12-C16)	14.90	5673531	492.555	mg/L
6)	H	Aliphatic (C16-C21)	19.90	278840	21.784	mg/L
7)	H	Aliphatic (C21-C34)	24.00	4511555	386.098	mg/L

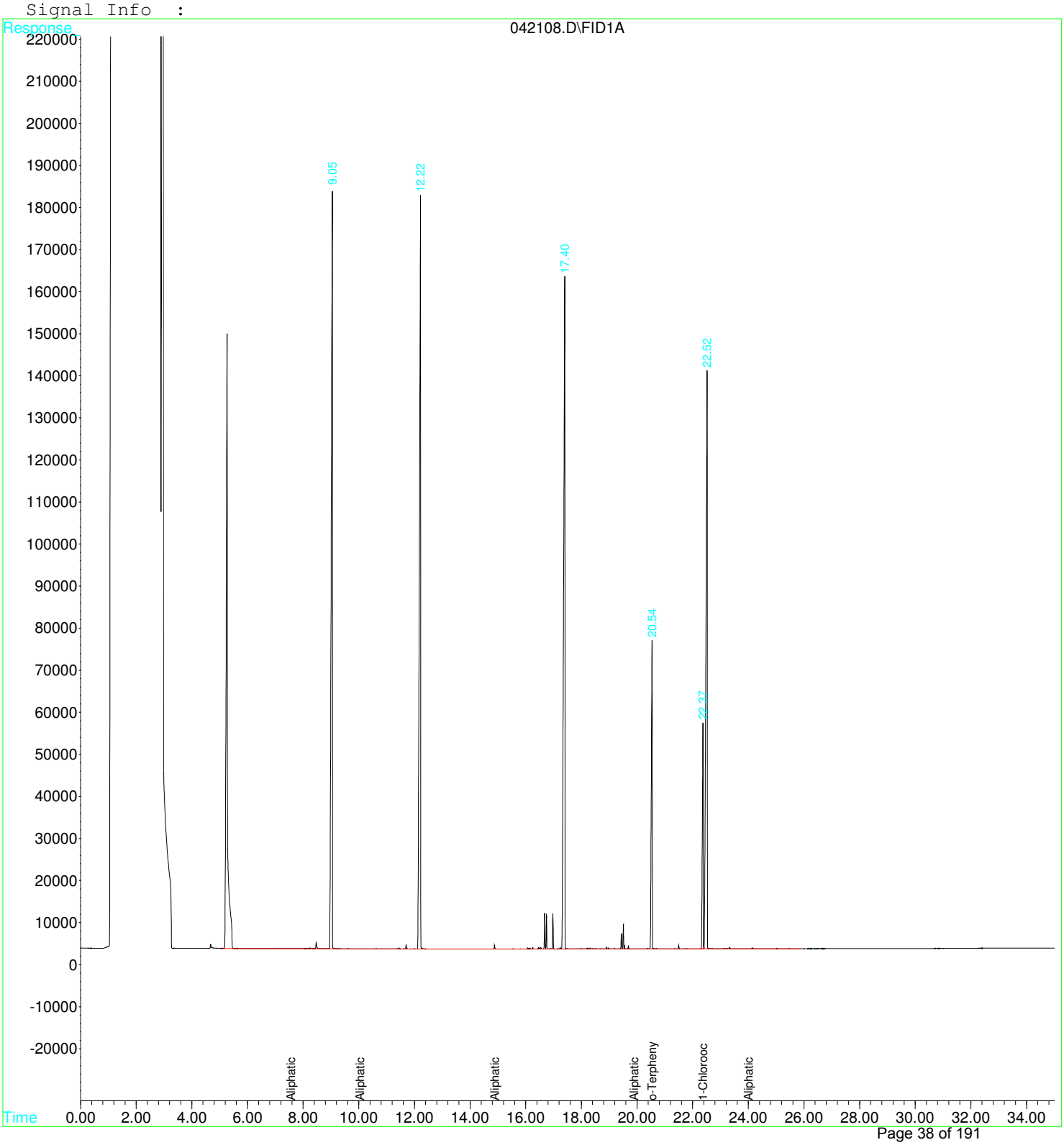
(f)=RT Delta > 1/2 Window (m)=manual int.
042108.D ALG20421.M Mon Apr 25 13:41:29 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042108.D Vial: 6
Acq On : 21 Apr 2016 9:01 pm Operator: CM
Sample : ALI CAL500 Inst : GC #20
Misc : ICAL 5 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:34 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:48:41 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042109.D Vial: 7
Acq On : 21 Apr 2016 9:49 pm Operator: CM
Sample : ALI CAL1000 Inst : GC #20
Misc : ICAL 6 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:37 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:48:41 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.39f	2435934	318.649	mg/L	
2)	S	o-Terphenyl	20.57f	3676420	394.816	mg/L	m
		Target Compounds					
3)	H	Aliphatic (C8-C10)	7.55	11610644	1134.986	mg/L	
4)	H	Aliphatic (C10-C12)	10.05	6204528	582.327	mg/L	
5)	H	Aliphatic (C12-C16)	14.90	6368409	552.882	mg/L	
6)	H	Aliphatic (C16-C21)	19.90	340459	26.598	mg/L	
7)	H	Aliphatic (C21-C34)	24.00	5473361	468.409	mg/L	

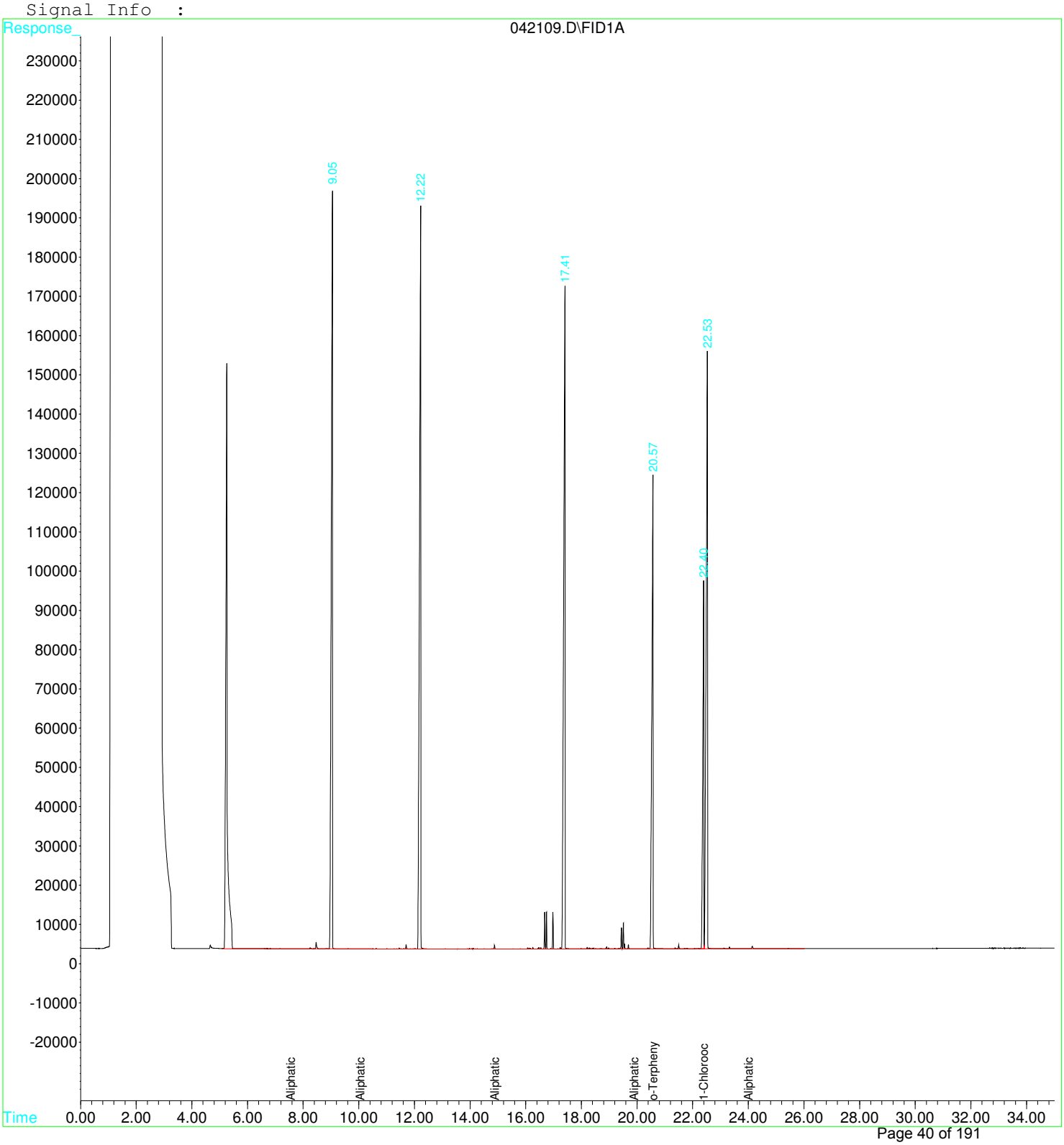
(f)=RT Delta > 1/2 Window (m)=manual int.
042109.D ALG20421.M Mon Apr 25 13:42:06 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042109.D Vial: 7
Acq On : 21 Apr 2016 9:49 pm Operator: CM
Sample : ALI CAL1000 Inst : GC #20
Misc : ICAL 6 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:37 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:48:41 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042110.D Vial: 8
Acq On : 21 Apr 2016 10:36 pm Operator: CM
Sample : ALI CAL2000 Inst : GC #20
Misc : ICAL 7 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:28 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:48:41 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.44f	5554815	726.637	mg/L	m
2)	S	o-Terphenyl	20.61f	7412854	796.077	mg/L	m
		Target Compounds					
3)	H	Aliphatic (C8-C10)	7.55	43534575	4255.676	mg/L	
4)	H	Aliphatic (C10-C12)	10.05	23980348	2250.680	mg/L	
5)	H	Aliphatic (C12-C16)	14.90	24998099	2170.243	mg/L	
6)	H	Aliphatic (C16-C21)	19.90	5562884	434.597	mg/L	
7)	H	Aliphatic (C21-C34)	24.00	19751920	1690.365	mg/L	

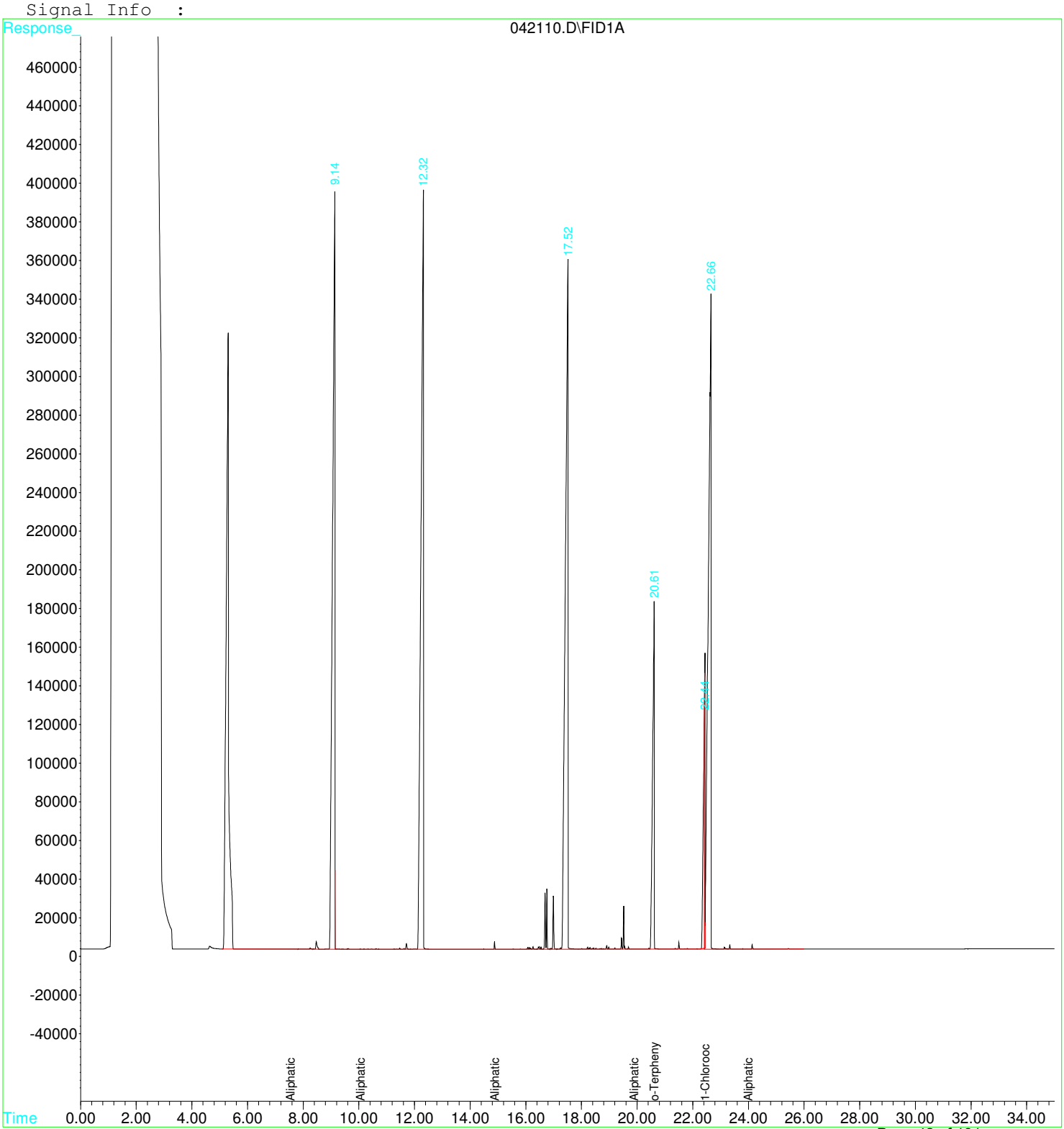
(f)=RT Delta > 1/2 Window (m)=manual int.
042110.D ALG20421.M Mon Apr 25 13:42:28 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042110.D Vial: 8
Acq On : 21 Apr 2016 10:36 pm Operator: CM
Sample : ALI CAL2000 Inst : GC #20
Misc : ICAL 7 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:28 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 12:48:41 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042111.D Vial: 9
Acq On : 21 Apr 2016 11:23 pm Operator: CM
Sample : ALI ICB Inst : GC #20
Misc : ICB O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:44 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:37:52 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.34	118159	31.234	mg/L	m
2)	S	o-Terphenyl	20.50	332286	41.810	mg/L	m
		Target Compounds					
3)	H	Aliphatic (C8-C10)	7.55	62624	27.086	mg/L	
4)	H	Aliphatic (C10-C12)	10.05	38011	14.073	mg/L	
5)	H	Aliphatic (C12-C16)	14.90	68807	16.111	mg/L	
6)	H	Aliphatic (C16-C21)	19.90	96769	96.920	mg/L	
7)	H	Aliphatic (C21-C34)	24.00	41162	24.974	mg/L	

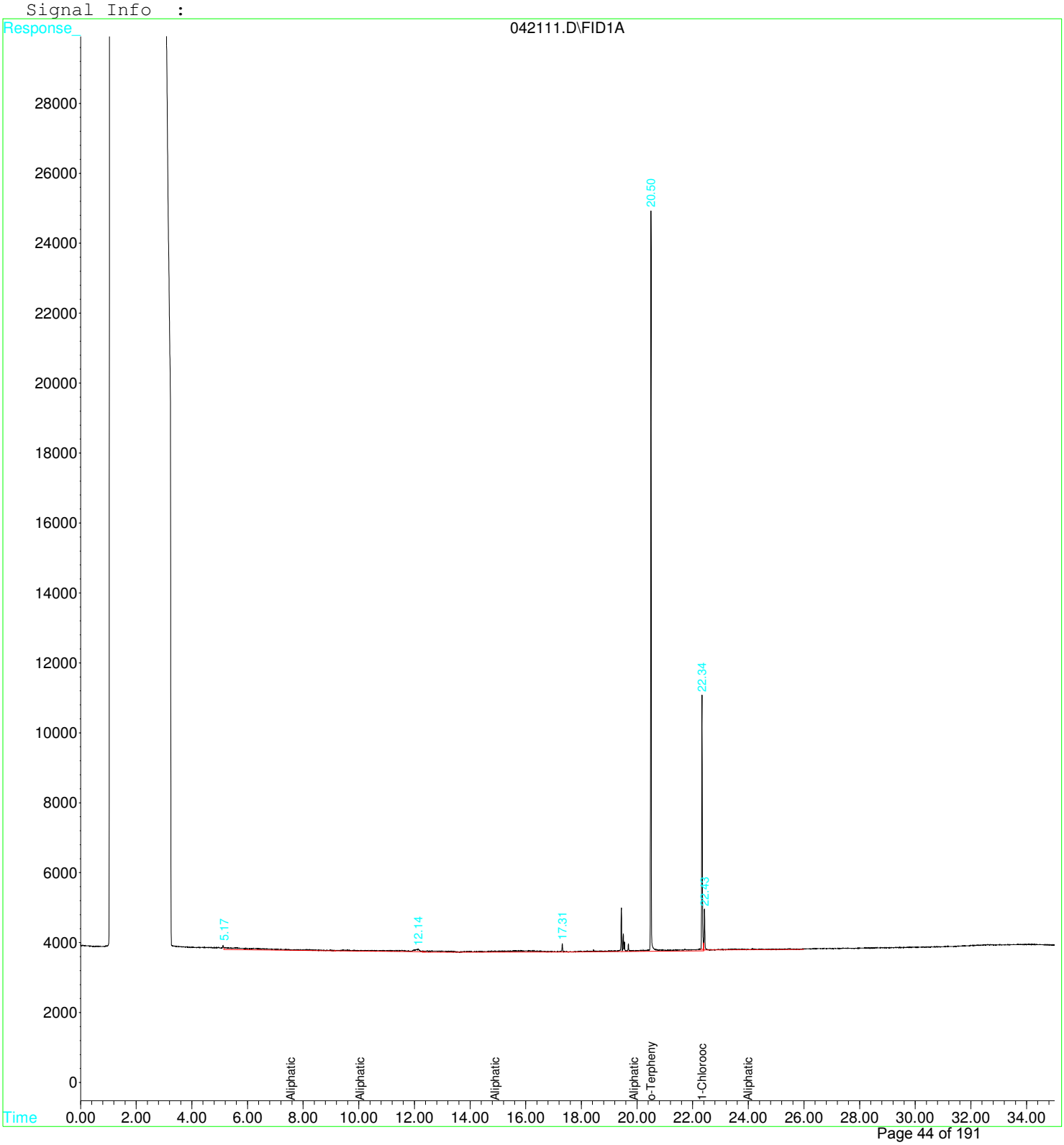
(f)=RT Delta > 1/2 Window (m)=manual int.
042111.D ALG20421.M Mon Apr 25 13:44:31 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042111.D Vial: 9
Acq On : 21 Apr 2016 11:23 pm Operator: CM
Sample : ALI ICB Inst : GC #20
Misc : ICB O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:44 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:37:52 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042112.D Vial: 10
Acq On : 22 Apr 2016 12:11 am Operator: CM
Sample : ALI ICV Inst : GC #20
Misc : ICV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:43 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:37:52 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	22.34	152977	37.912	mg/L
2)	S	o-Terphenyl	20.50	328221	41.298	mg/L
		Target Compounds				
3)	H	Aliphatic (C8-C10)	7.55	2215895	185.532	mg/L
4)	H	Aliphatic (C10-C12)	10.05	1189481	93.674	mg/L
5)	H	Aliphatic (C12-C16)	14.90	1179202	91.135	mg/L
6)	H	Aliphatic (C16-C21)	19.90	107060	114.869	mg/L
7)	H	Aliphatic (C21-C34)	24.00	734211	85.499	mg/L

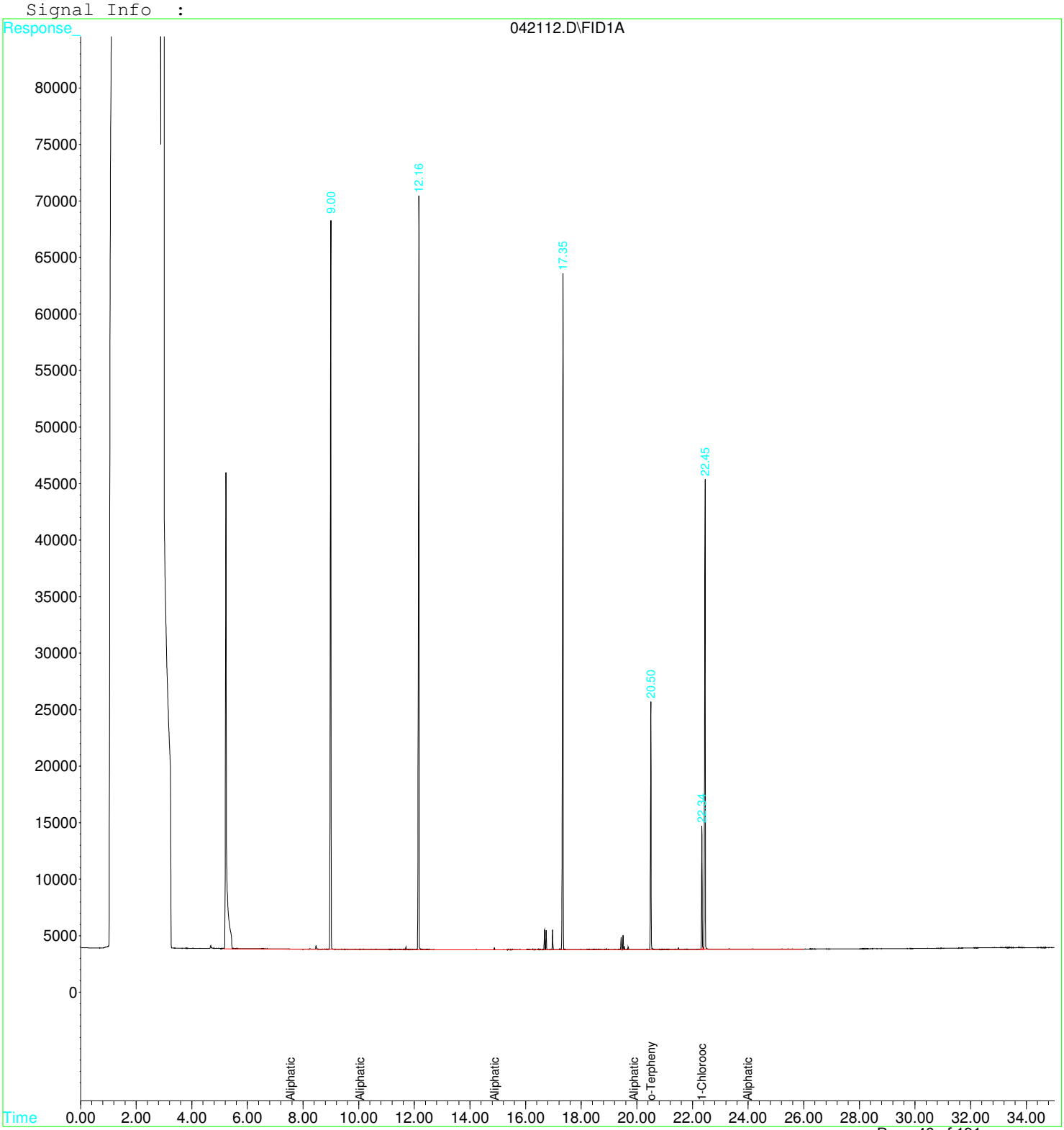
(f)=RT Delta > 1/2 Window (m)=manual int.
042112.D ALG20421.M Mon Apr 25 13:43:13 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042112.D Vial: 10
Acq On : 22 Apr 2016 12:11 am Operator: CM
Sample : ALI ICV Inst : GC #20
Misc : ICV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 13:43 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:37:52 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Calibration

Calibration Report GC #20

Method : C:\GC20\METHODS\QUANT METHODS\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Initial Calibration

Calibration Files
1 =042113 2 =042114 3 =042115 4 =042116 5 =042117
6 =042118 7 =042119 8 =042120

	Compound	Fit	Constant	Linear	Quad	RSD/Cf
1) S	1-Chlorooctadecane	Quad	-1.3532 e5	6.7825 e3	0.6641	0.994
2) S	o-Terphenyl	Lin	-2.2663 e4	9.5622 e3	-----	0.994
3) H	Aromatic (C8-C10)	Lin	5.2855 e4	1.1598 e4	-----	0.999
4) H	Aromatic (C10-C12)	Avg	-----	1.2955 e4	-----	0.060
5) H	Aromatic (C12-C16)	Avg	-----	1.1867 e4	-----	0.087
6) H	Aromatic (C16-C21)	Quad	4.5339 e4	2.7361 e3	4.2460	0.999
7) H	Aromatic (C21-C34)	Quad	1.0054 e5	1.0435 e3	-0.3785	0.993

ARG20421.M Tue May 10 14:26:37 2016

Response Factor Report GC #20

Method : C:\GC20\METHODS\QUANT METHODS\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016

Calibration Files
1 =042113.D 2 =042114.D 3 =042115.D
4 =042116.D 5 =042117.D 6 =042118.D

		Compound	1	2	3	4	5	6	Avg		%RSD
1)	S	1-Chlorooctadecane	1.127	1.272	1.878	2.517	3.791	5.029	3.755	E3	66.56
2)	S	o-Terphenyl	0.697	0.696	0.744	0.767	0.828	0.862	0.823	E4	15.11
3)	H	Aromatic (C8-C10)	1.624	1.529	1.265	1.215	1.173	1.112	1.302	E4	14.98
4)	H	Aromatic (C10-C12)	1.319	1.384	1.259	1.270	1.242	1.191	1.296	E4	5.96
5)	H	Aromatic (C12-C16)	1.310	1.224	1.206	1.197	1.214	1.185	1.187	E4	8.73
6)	H	Aromatic (C16-C21)	7.591	4.844	3.663	3.599	4.092	4.821	5.094	E3	31.53
7)	H	Aromatic (C21-C34)	8.072	5.685	3.183	2.330	1.544	1.014	3.228	E3	83.96

(#) = Out of Range ### Number of calibration levels exceeded format ###

ARG20421.M Tue May 10 14:27:46 2016

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042113.D Vial: 11
Acq On : 22 Apr 2016 12:57 am Operator: CM
Sample : ARO CAL10 Inst : GC #20
Misc : ICV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:26 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.35f	4508	1.437	mg/L	m
2)	S	o-Terphenyl	20.49	27893	4.016	mg/L	m
		Target Compounds					
3)	H	Aromatic (C8-C10)	7.50	162356	34.960	mg/L	
4)	H	Aromatic (C10-C12)	10.00	131872	44.545	mg/L	
5)	H	Aromatic (C12-C16)	14.96	130995	41.790	mg/L	
6)	H	Aromatic (C16-C21)	20.00	75912	N.D.	mg/L	
7)	H	Aromatic (C21-C34)	31.17	80717	N.D.	mg/L	

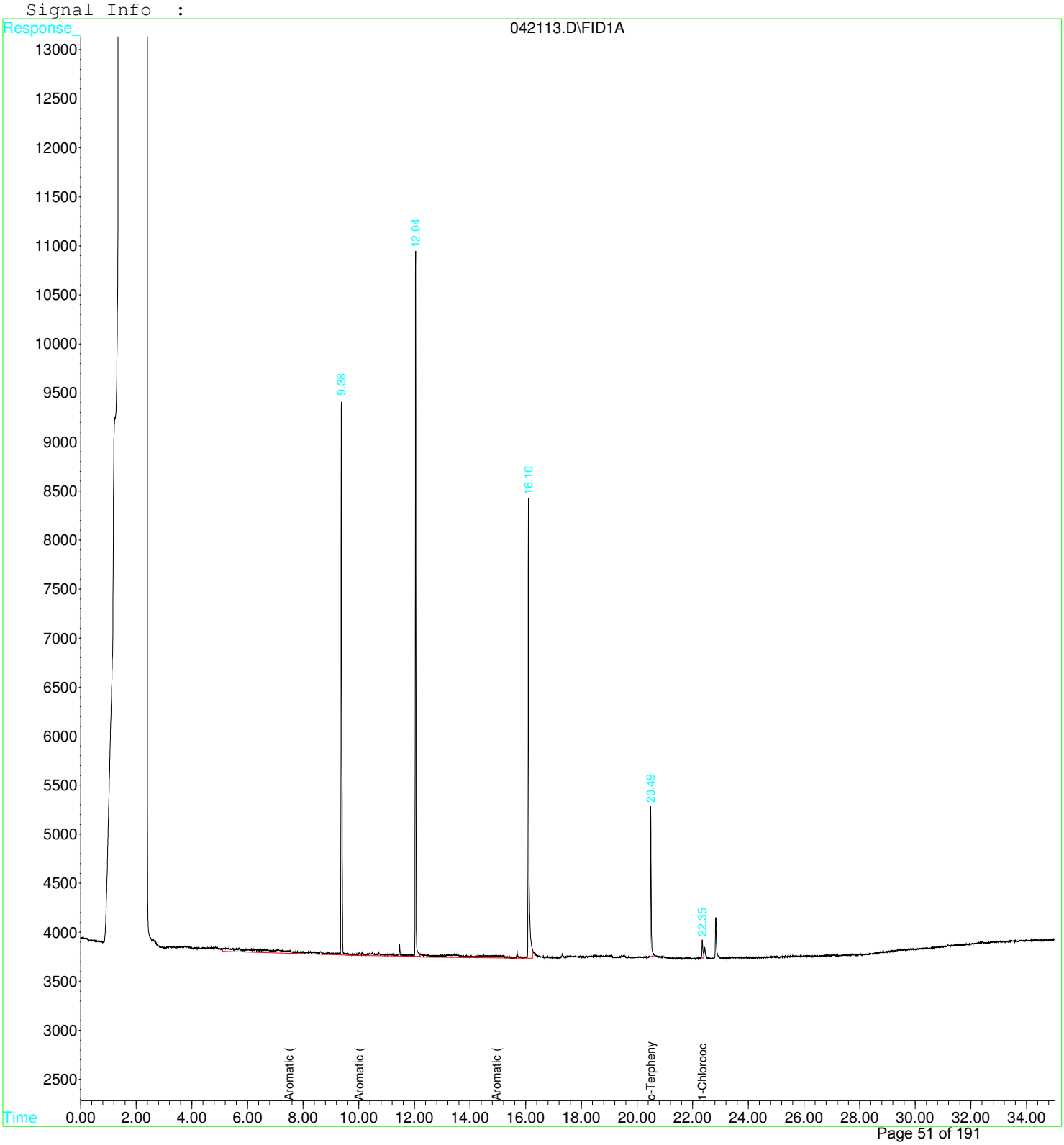
(f)=RT Delta > 1/2 Window (m)=manual int.
042113.D ARG20421.M Mon Apr 25 14:30:01 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042113.D Vial: 11
Acq On : 22 Apr 2016 12:57 am Operator: CM
Sample : ARO CAL10 Inst : GC #20
Misc : ICV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:26 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042114.D Vial: 12
Acq On : 22 Apr 2016 1:44 am Operator: CM
Sample : ARO CAL20 Inst : GC #20
Misc : ICAL 1 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:27 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.34f	10174	3.244	mg/L	m
2)	S	o-Terphenyl	20.49	55674	8.015	mg/L	m
		Target Compounds					
3)	H	Aromatic (C8-C10)	7.50	305832	92.320	mg/L	
4)	H	Aromatic (C10-C12)	10.00	276864	99.010	mg/L	
5)	H	Aromatic (C12-C16)	14.96	244877	84.886	mg/L	
6)	H	Aromatic (C16-C21)	20.00	96871	N.D.	mg/L	
7)	H	Aromatic (C21-C34)	31.17	113704	N.D.	mg/L	

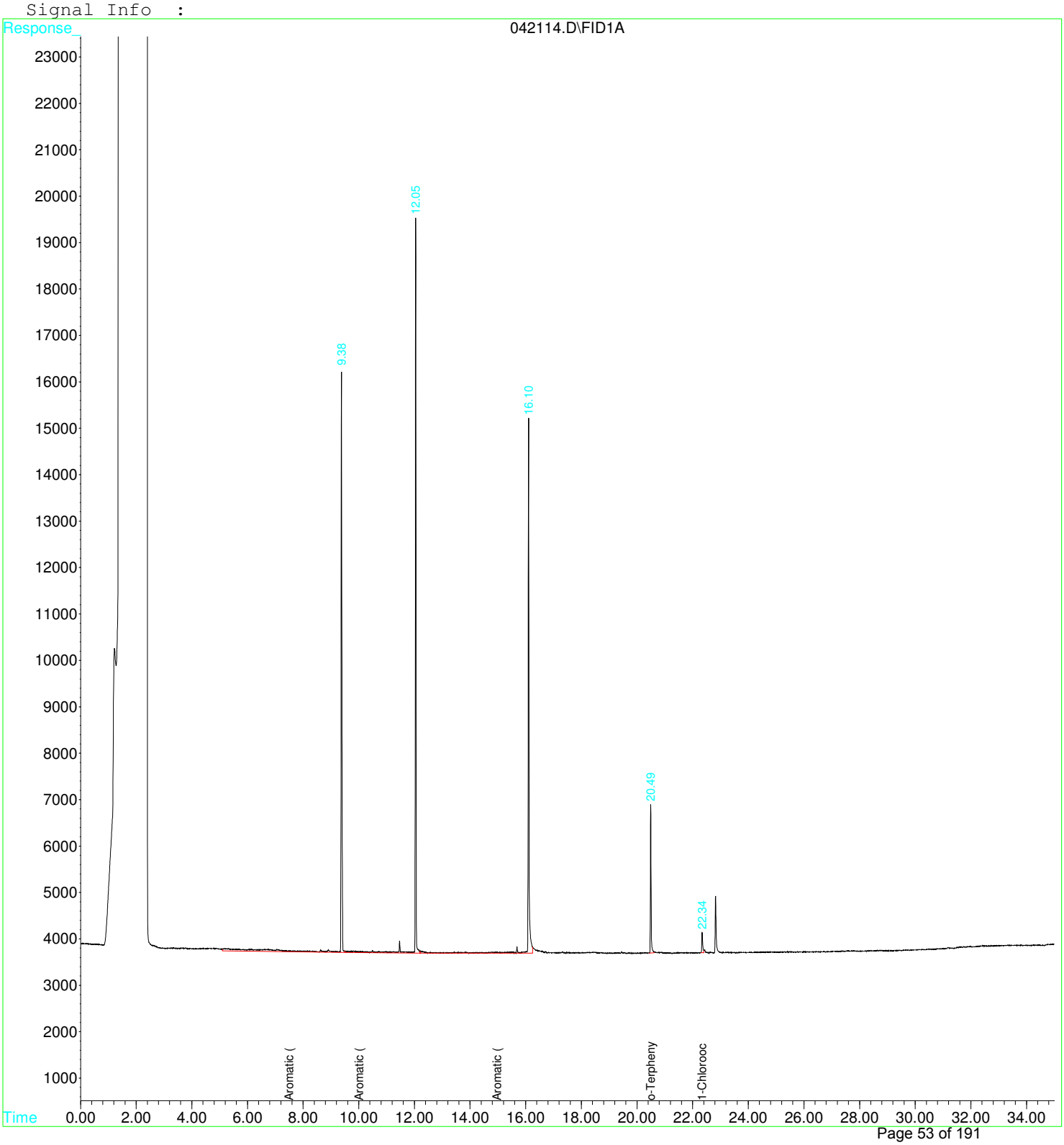
(f)=RT Delta > 1/2 Window (m)=manual int.
042114.D ARG20421.M Mon Apr 25 14:30:27 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042114.D Vial: 12
Acq On : 22 Apr 2016 1:44 am Operator: CM
Sample : ARO CAL20 Inst : GC #20
Misc : ICAL 1 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:27 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042115.D Vial: 13
Acq On : 22 Apr 2016 2:31 am Operator: CM
Sample : ARO CAL50 Inst : GC #20
Misc : ICAL 2 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:27 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.34f	37551	11.971	mg/L	
2)	S	o-Terphenyl	20.50	148736	21.413	mg/L	m
		Target Compounds					
3)	H	Aromatic (C8-C10)	7.50	632307	222.839	mg/L	
4)	H	Aromatic (C10-C12)	10.00	629709	231.555	mg/L	
5)	H	Aromatic (C12-C16)	14.96	602773	220.325	mg/L	
6)	H	Aromatic (C16-C21)	20.00	183152	N.D.	mg/L	
7)	H	Aromatic (C21-C34)	31.17	159159	300.233	mg/L	

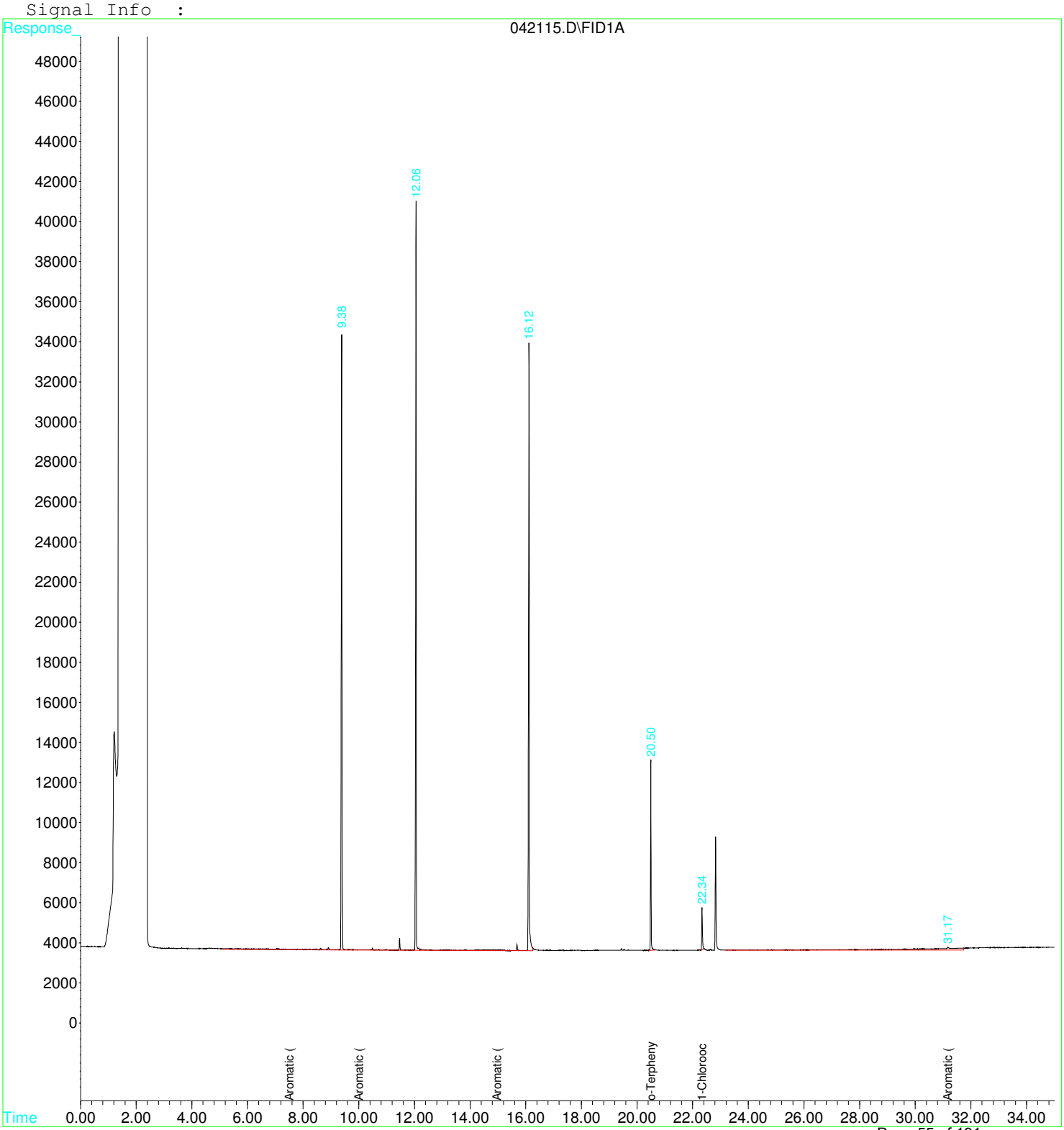
(f)=RT Delta > 1/2 Window (m)=manual int.
042115.D ARG20421.M Mon Apr 25 14:30:45 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042115.D Vial: 13
Acq On : 22 Apr 2016 2:31 am Operator: CM
Sample : ARO CAL50 Inst : GC #20
Misc : ICAL 2 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:27 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042116.D Vial: 14
Acq On : 22 Apr 2016 3:17 am Operator: CM
Sample : ARO CAL100 Inst : GC #20
Misc : ICAL 3 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:28 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	22.34f	100664	32.092	mg/L
2)	S	o-Terphenyl	20.50	306867	44.179	mg/L
		Target Compounds				
3)	H	Aromatic (C8-C10)	7.50	1214701	455.672	mg/L
4)	H	Aromatic (C10-C12)	10.00	1270437	472.241	mg/L
5)	H	Aromatic (C12-C16)	14.96	1196791	445.121	mg/L
6)	H	Aromatic (C16-C21)	20.00	359937	N.D.	mg/L
7)	H	Aromatic (C21-C34)	31.17	233034	924.546	mg/L

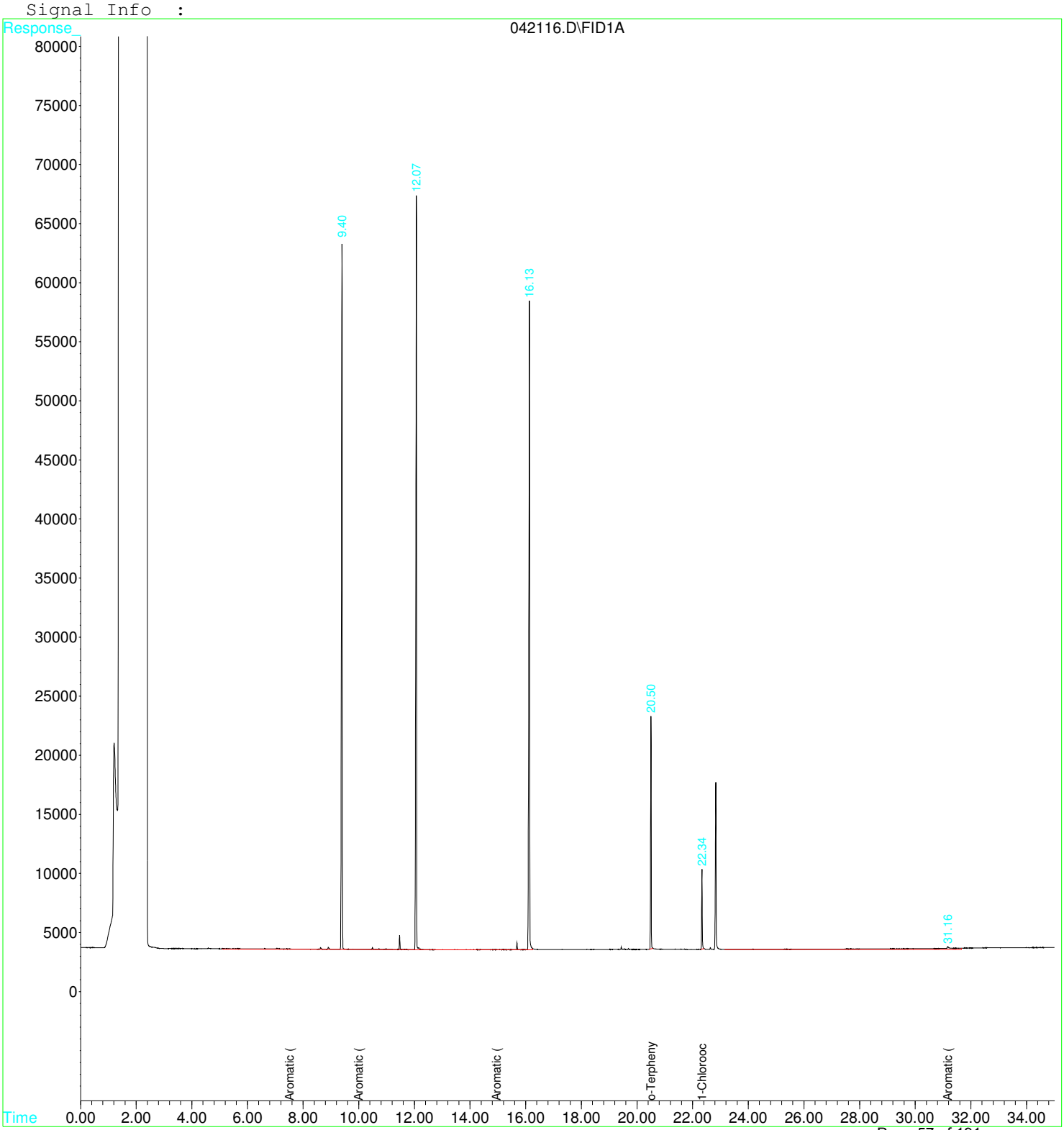
(f)=RT Delta > 1/2 Window (m)=manual int.
042116.D ARG20421.M Mon Apr 25 14:42:46 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042116.D Vial: 14
Acq On : 22 Apr 2016 3:17 am Operator: CM
Sample : ARO CAL100 Inst : GC #20
Misc : ICAL 3 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:28 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042117.D Vial: 15
Acq On : 22 Apr 2016 4:03 am Operator: CM
Sample : ARO CAL200 Inst : GC #20
Misc : ICAL 4 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:29 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	22.35f	379064	120.846	mg/L
2)	S	o-Terphenyl	20.52	828164	119.228	mg/L
		Target Compounds				
3)	H	Aromatic (C8-C10)	7.50	2345502	907.749	mg/L
4)	H	Aromatic (C10-C12)	10.00	2483919	928.080	mg/L
5)	H	Aromatic (C12-C16)	14.96	2427841	910.989	mg/L
6)	H	Aromatic (C16-C21)	20.00	818309	306.087	mg/L
7)	H	Aromatic (C21-C34)	31.17	308898	1565.672	mg/L

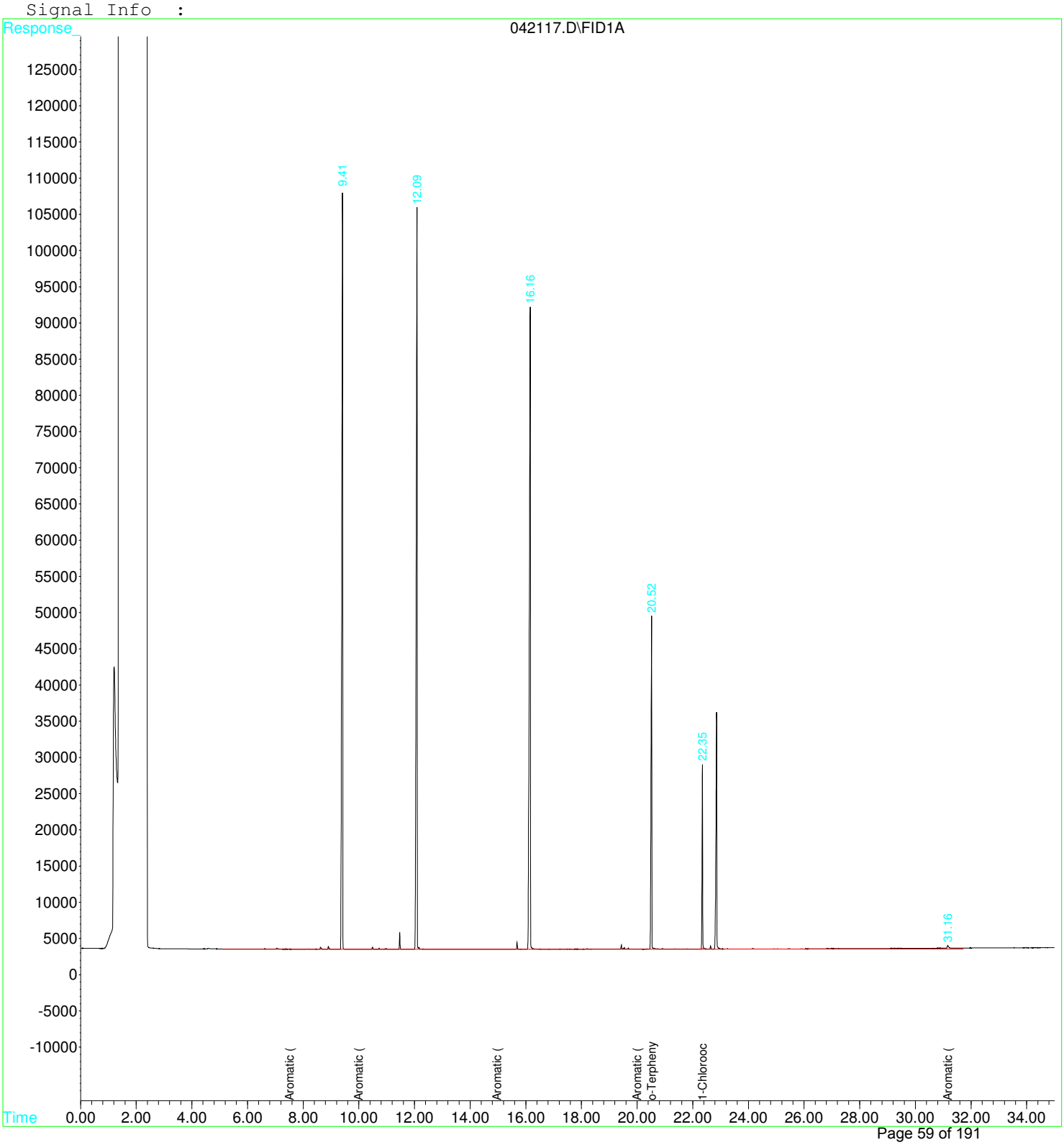
(f)=RT Delta > 1/2 Window (m)=manual int.
042117.D ARG20421.M Mon Apr 25 14:31:19 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042117.D Vial: 15
Acq On : 22 Apr 2016 4:03 am Operator: CM
Sample : ARO CAL200 Inst : GC #20
Misc : ICAL 4 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:29 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042118.D Vial: 16
Acq On : 22 Apr 2016 4:49 am Operator: CM
Sample : ARO CAL500 Inst : GC #20
Misc : ICAL 5 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:25 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

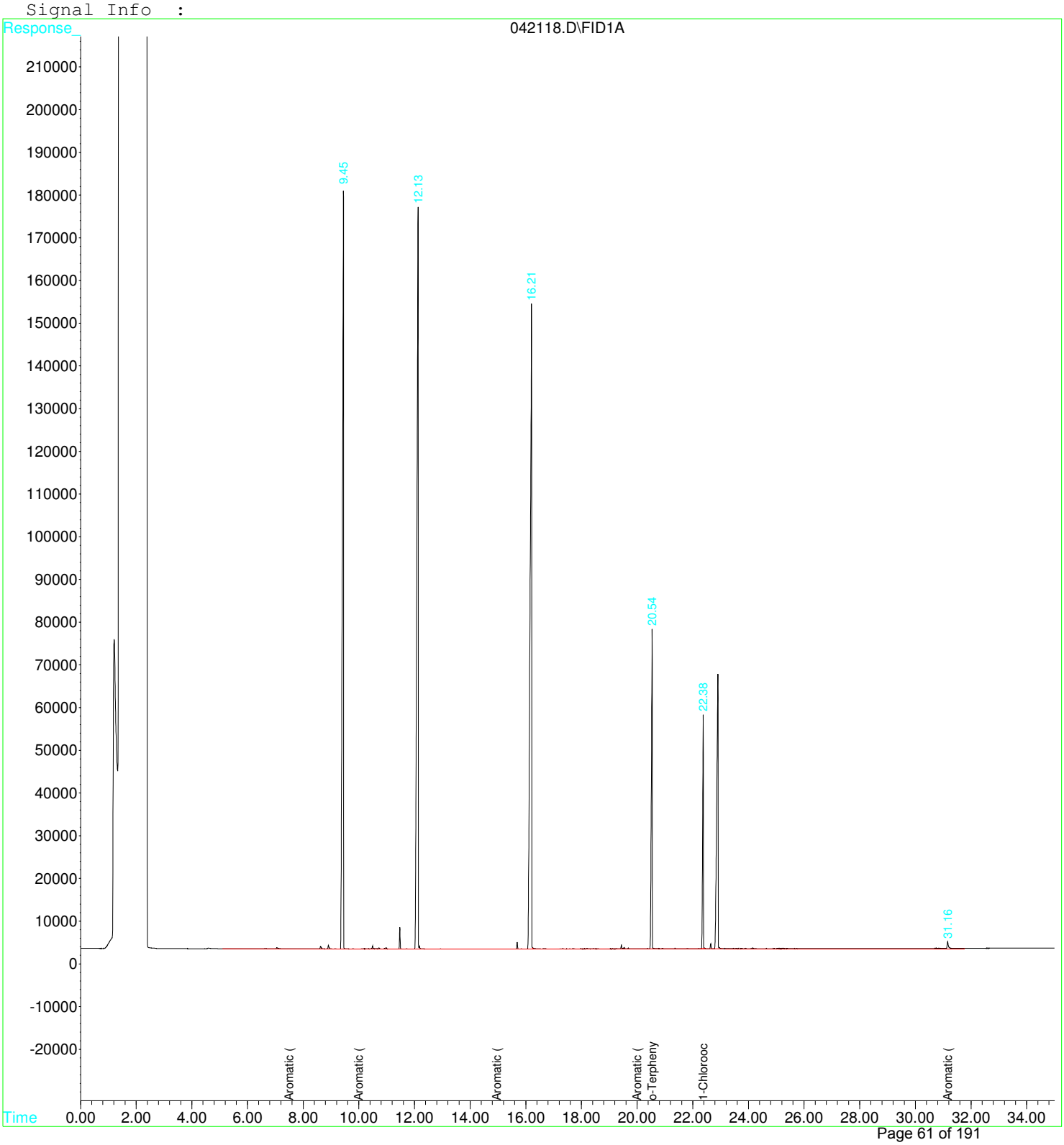
		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	22.37	1005791	320.647	mg/L
2)	S	o-Terphenyl	20.54	1723345	248.105	mg/L
		Target Compounds				
3)	H	Aromatic (C8-C10)	7.50	5559229	2192.548	mg/L
4)	H	Aromatic (C10-C12)	10.00	5952964	2231.209	mg/L
5)	H	Aromatic (C12-C16)	14.96	5926566	2235.018	mg/L
6)	H	Aromatic (C16-C21)	20.00	2410331	1615.315	mg/L
7)	H	Aromatic (C21-C34)	31.17	507090	3240.590	mg/L

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042118.D Vial: 16
Acq On : 22 Apr 2016 4:49 am Operator: CM
Sample : ARO CAL500 Inst : GC #20
Misc : ICAL 5 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:25 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042119.D Vial: 17
Acq On : 22 Apr 2016 5:35 am Operator: CM
Sample : ARO CAL1000 Inst : GC #20
Misc : ICAL 6 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:25 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.44f	2937420	936.453	mg/L	m
2)	S	o-Terphenyl	20.58f	4187996	602.933	mg/L	m
		Target Compounds					
3)	H	Aromatic (C8-C10)	7.50	11953542	4748.898	mg/L	
4)	H	Aromatic (C10-C12)	10.00	14030924	5265.654	mg/L	
5)	H	Aromatic (C12-C16)	14.96	9707152	3665.712	mg/L	
6)	H	Aromatic (C16-C21)	20.00	7049127	5430.112	mg/L	
7)	H	Aromatic (C21-C34)	31.17	769812	5460.857	mg/L	

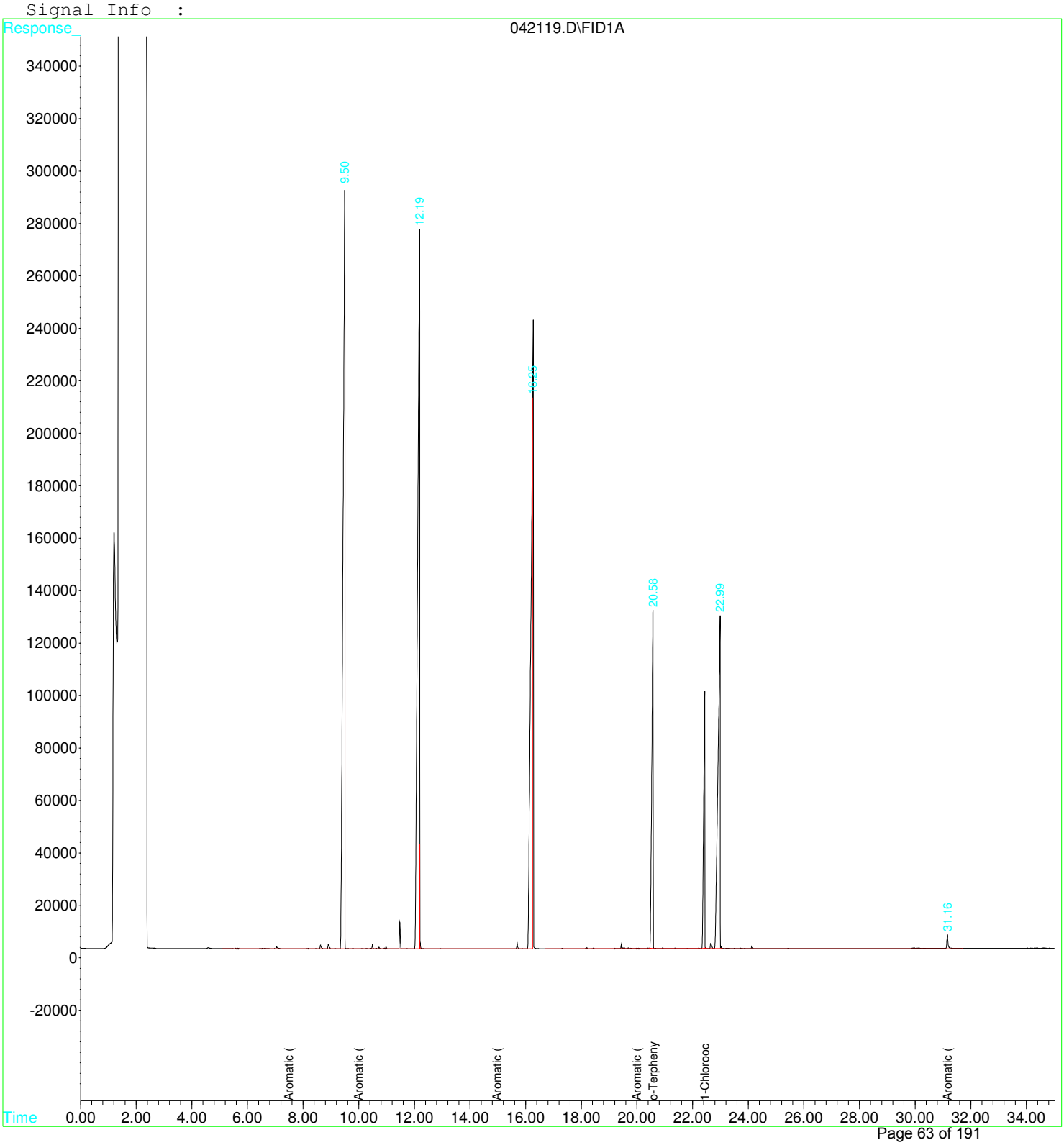
(f)=RT Delta > 1/2 Window (m)=manual int.
042119.D ARG20421.M Mon Apr 25 14:32:00 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042119.D Vial: 17
Acq On : 22 Apr 2016 5:35 am Operator: CM
Sample : ARO CAL1000 Inst : GC #20
Misc : ICAL 6 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:25 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042120.D Vial: 18
Acq On : 22 Apr 2016 6:21 am Operator: CM
Sample : ARO CAL2000 Inst : GC #20
Misc : ICAL 7 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:04 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.47f	5670132	1807.645	mg/L	m
2)	S	o-Terphenyl	20.61f	7571730	1090.079	mg/L	m
		Target Compounds					
3)	H	Aromatic (C8-C10)	7.50	21829658	8697.219	mg/L	
4)	H	Aromatic (C10-C12)	10.00	23812627	8940.101	mg/L	
5)	H	Aromatic (C12-C16)	14.96	24533889	9276.620	mg/L	
6)	H	Aromatic (C16-C21)	20.00	27497311	22246.044	mg/L	
7)	H	Aromatic (C21-C34)	31.17	637854	4345.678	mg/L	

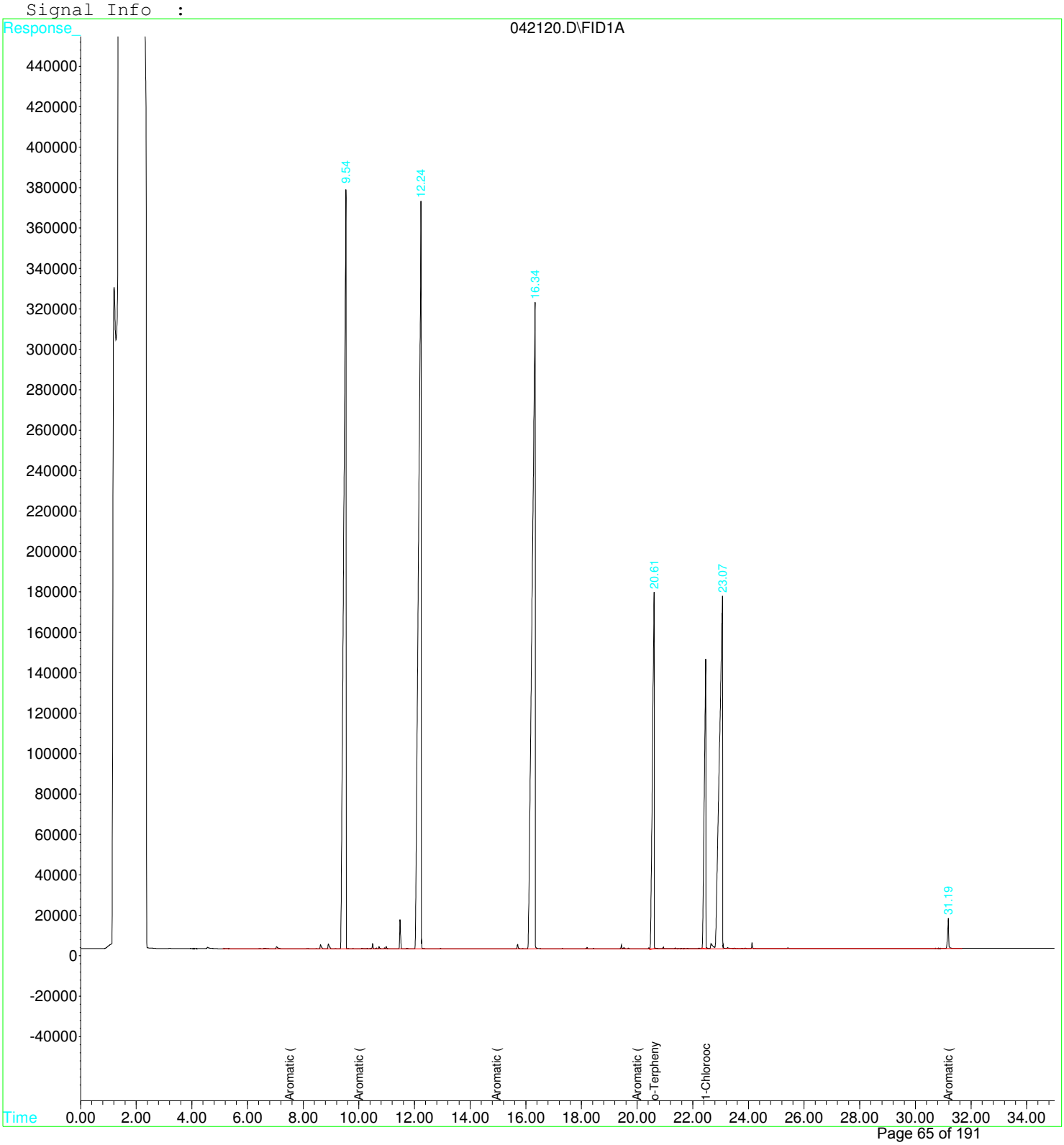
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042120.D Vial: 18
Acq On : 22 Apr 2016 6:21 am Operator: CM
Sample : ARO CAL2000 Inst : GC #20
Misc : ICAL 7 O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:04 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:57:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042121.D Vial: 19
Acq On : 22 Apr 2016 7:06 am Operator: CM
Sample : ARO ICB Inst : GC #20
Misc : ICB O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:33 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	22.34f	72215	30.508	mg/L
2)	S	o-Terphenyl	20.50	270373	30.645	mg/L
		Target Compounds				
3)	H	Aromatic (C8-C10)	7.50	37892	N.D.	mg/L
4)	H	Aromatic (C10-C12)	10.00	27937	2.156	mg/L
5)	H	Aromatic (C12-C16)	14.96	33573	2.829	mg/L
6)	H	Aromatic (C16-C21)	20.00	105699	21.354	mg/L
7)	H	Aromatic (C21-C34)	31.17	142790	41.106	mg/L

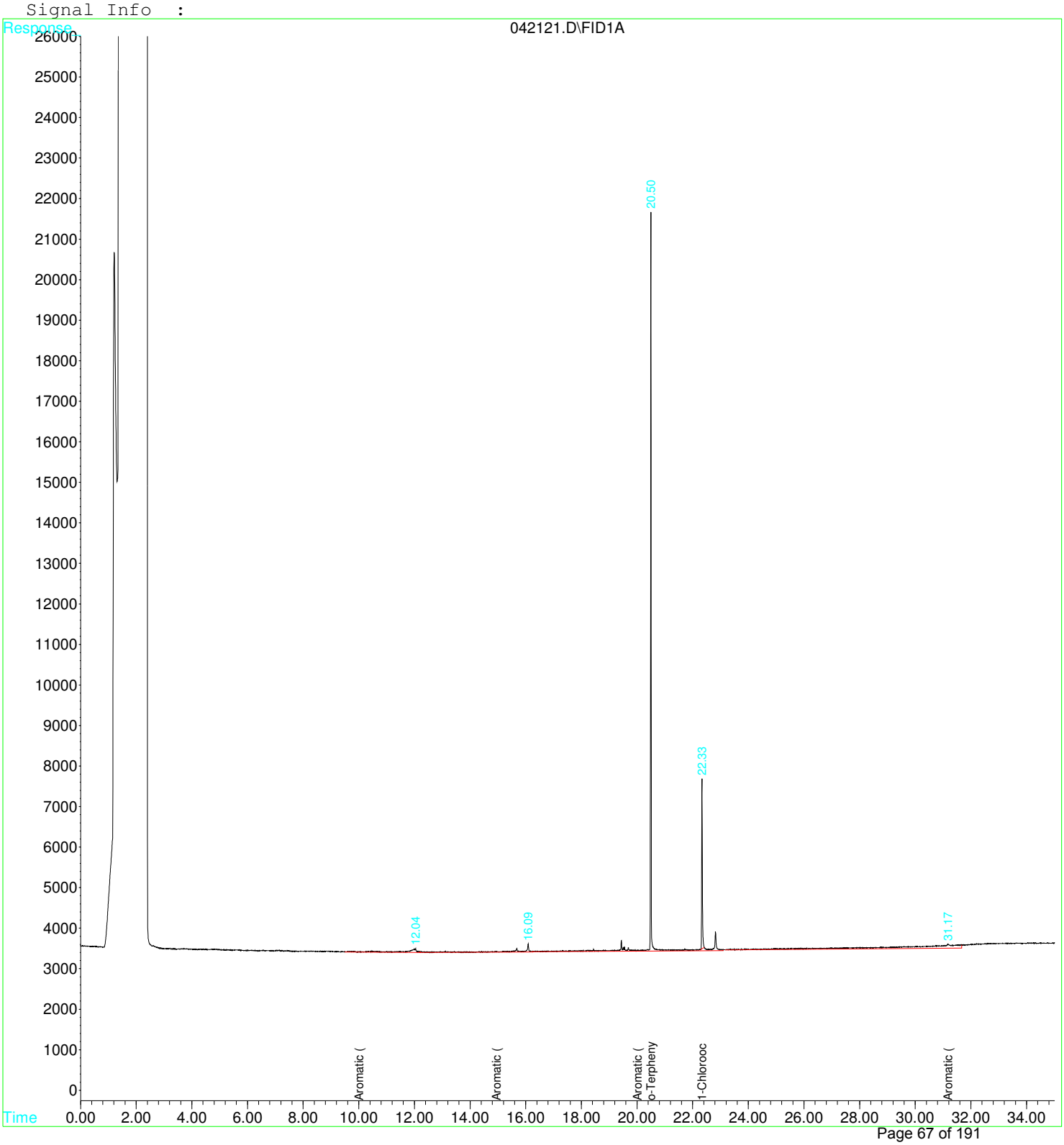
(f)=RT Delta > 1/2 Window (m)=manual int.
042121.D ARG20421.M Mon Apr 25 14:35:06 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042121.D Vial: 19
Acq On : 22 Apr 2016 7:06 am Operator: CM
Sample : ARO ICB Inst : GC #20
Misc : ICB O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:33 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042122.D Vial: 20
Acq On : 22 Apr 2016 7:52 am Operator: CM
Sample : ARO ICV Inst : GC #20
Misc : ICV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:35 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	22.34f	115550	36.856	mg/L
2)	S	o-Terphenyl	20.50	309098	34.695	mg/L
		Target Compounds				
3)	H	Aromatic (C8-C10)	7.50	1147730	94.405	mg/L
4)	H	Aromatic (C10-C12)	10.00	1193498	92.126	mg/L
5)	H	Aromatic (C12-C16)	14.96	1157419	97.536	mg/L
6)	H	Aromatic (C16-C21)	20.00	401308	110.987	mg/L
7)	H	Aromatic (C21-C34)	31.17	184263	82.718	mg/L

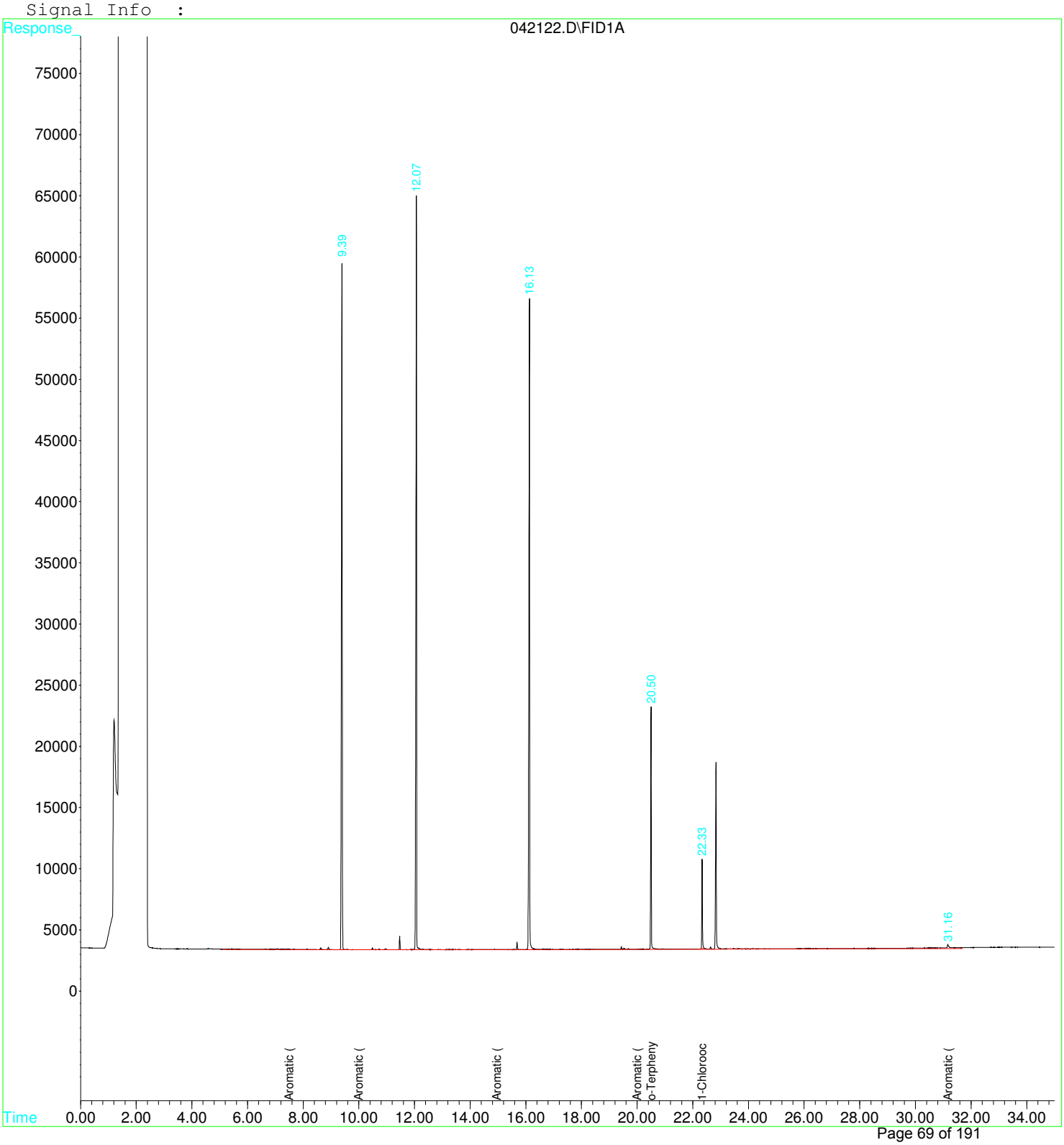
(f)=RT Delta > 1/2 Window (m)=manual int.
042122.D ARG20421.M Mon Apr 25 14:35:48 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04211620\042122.D Vial: 20
Acq On : 22 Apr 2016 7:52 am Operator: CM
Sample : ARO ICV Inst : GC #20
Misc : ICV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 25 14:35 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Injection Log

Directory: C:\GC20\DATA\04211620

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	100	042101.d	1.	CO	CO O-EPH-S	21 Apr 2016 14:49
2	100	042102.d	1.	CO	CO O-EPH-S	21 Apr 2016 15:44
3	1	042103.d	1.	ALI CAL10	CO O-EPH-S	21 Apr 2016 16:42
4	2	042104.d	1.	ALI CAL20	ICAL 1 O-EPH-S	21 Apr 2016 17:39
5	3	042105.d	1.	ALI CAL50	ICAL 2 O-EPH-S	21 Apr 2016 18:34
6	4	042106.d	1.	ALI CAL100	ICAL 3 O-EPH-S	21 Apr 2016 19:24
7	5	042107.d	1.	ALI CAL200	ICAL 4 O-EPH-S	21 Apr 2016 20:13
8	6	042108.d	1.	ALI CAL500	ICAL 5 O-EPH-S	21 Apr 2016 21:01
9	7	042109.d	1.	ALI CAL1000	ICAL 6 O-EPH-S	21 Apr 2016 21:49
10	8	042110.d	1.	ALI CAL2000	ICAL 7 O-EPH-S	21 Apr 2016 22:36
11	9	042111.d	1.	ALI ICB	ICB O-EPH-S	21 Apr 2016 23:23
12	10	042112.d	1.	ALI ICV	ICV O-EPH-S	22 Apr 2016 00:11
13	11	042113.d	1.	ARO CAL10	ICV O-EPH-S	22 Apr 2016 00:57
14	12	042114.d	1.	ARO CAL20	ICAL 1 O-EPH-S	22 Apr 2016 01:44
15	13	042115.d	1.	ARO CAL50	ICAL 2 O-EPH-S	22 Apr 2016 02:31
16	14	042116.d	1.	ARO CAL100	ICAL 3 O-EPH-S	22 Apr 2016 03:17
17	15	042117.d	1.	ARO CAL200	ICAL 4 O-EPH-S	22 Apr 2016 04:03
18	16	042118.d	1.	ARO CAL500	ICAL 5 O-EPH-S	22 Apr 2016 04:49
19	17	042119.d	1.	ARO CAL1000	ICAL 6 O-EPH-S	22 Apr 2016 05:35
20	18	042120.d	1.	ARO CAL2000	ICAL 7 O-EPH-S	22 Apr 2016 06:21
21	19	042121.d	1.	ARO ICB	ICB O-EPH-S	22 Apr 2016 07:06
22	20	042122.d	1.	ARO ICV	ICV O-EPH-S	22 Apr 2016 07:52

EPH SURR # 18010 250 ml
ARO SPIKE # 17985 250 ml
ALI SPIKE # 17989 250 ml

4/11/2016 CW
Spike witness Leyasha Beeman
04/11/16

Leyasha Beeman
Balance 2 04/11/16

CH Batch 3
4/6/16
Final
1080

Omega Run # 28989

Fremont Analytical, Inc.

PREP BATCH REPORT

Prep Start Date: **4/6/2016 8:56:10 A**
Prep End Date:

Prep Batch ID: **13403** Prep Code: **PREP-EPH-S** Method No: **SW3550C** Technician: **Clark Gilbert**

Prep Factor Units: **mL / g**

Initial Temp: **°C** Final Temp **°C**

Buchi Solvent Exchange On: 15:22 Off: 17:23

Sample ID	ClientSampleID	Matrix	pH1	pH2	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-13403		Soil			10	0	0	1	0.100	4/6/2016	
LCS-13403		Soil			10	0	0	1	0.100	4/6/2016	
1604014-001A	NSW3:231	Soil	11.28		10	0	0	1	0.100	4/6/2016	
1604015-001A	WSW2-11	Soil	11.14		10	0	0	1	0.100	4/6/2016	
1604015-001AMS		Soil	10.17		10	0	0	1	0.100	4/6/2016	
1604015-001AMSD		Soil	11.43		10	0	0	1	0.100	4/6/2016	
1604015-002A	B1-18	Soil	10.63		10	0	0	1	0.100	4/6/2016	
1604015-002ADUP		Soil	10.96		10	0	0	1	0.100	4/6/2016	

Type	Chemical / Reagent ID	Chemical / Reagent Name	Container#	Container ID	Amount Added	Amount Unit

Spike ID	Spike Name	Samp Type	Container#	Container ID	Amount Added	Amount Unit

Equipment ID	Description

Buchi Solvent Exchange On: 10:16 Off: 11:32

1604049-001A 11.12
1604050-001A 11.12 wet sand; petroleum odor
1604078-002A 11.34
1604078-004A 11.10
1604079-002A 10.30
1604080-002A ~~10.46~~ 8.13 04/11/16 14.93
1604080-004A 21.07
1604081-002A 10.46
1604081-004A 11.29
1604081-004A DUP 11.36

High Moisture weight adjusted

Balance #2
4-11-16

Raw Data

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042201.D Vial: 4
Acq On : 22 Apr 2016 2:51 pm Operator: CM
Sample : ALI CCV Inst : GC #20
Misc : CCV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:27 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

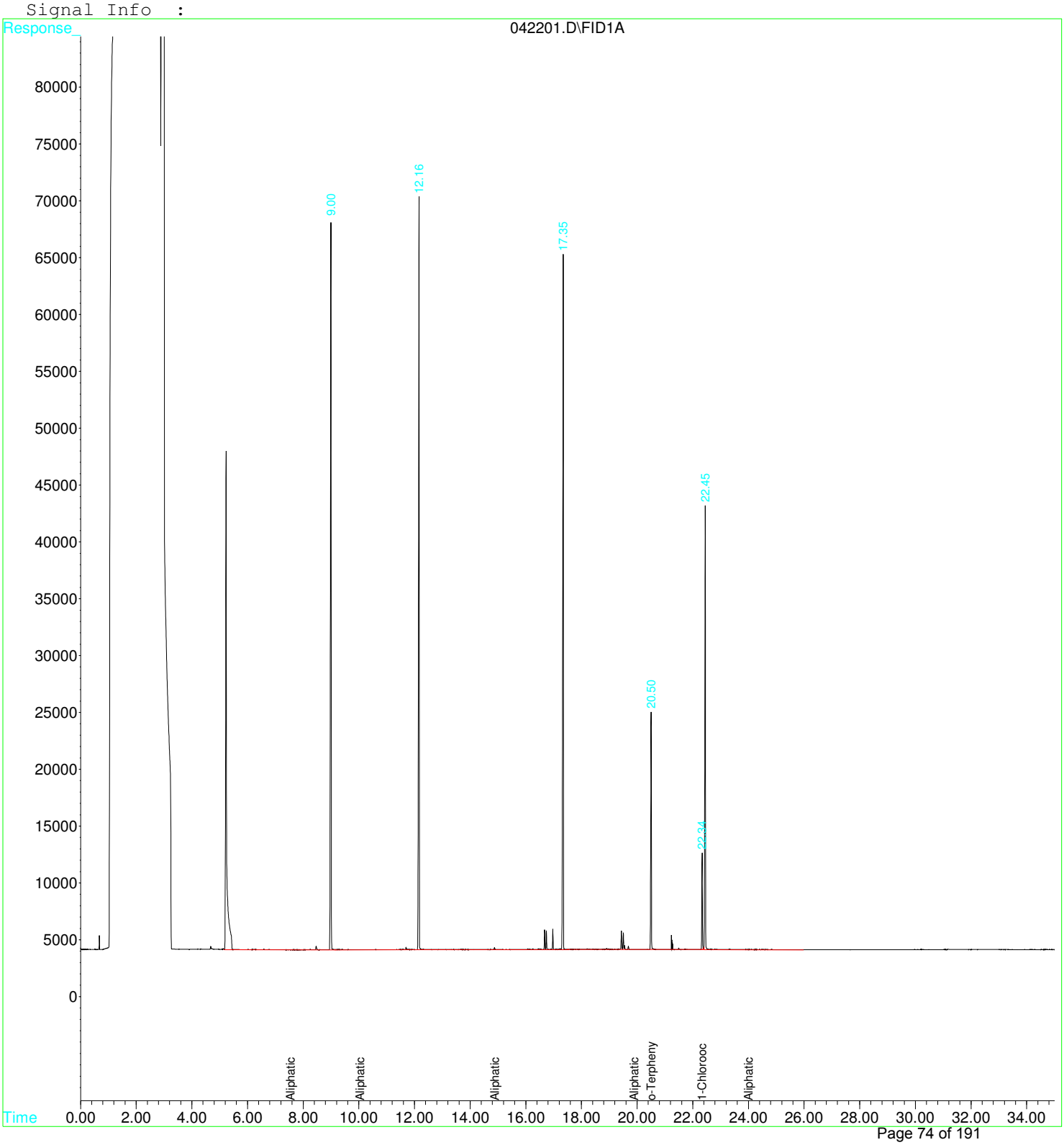
		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	22.34	124615	36.602	mg/L
2)	S	o-Terphenyl	20.50	314848	39.616	mg/L
		Target Compounds				
3)	H	Aliphatic (C8-C10)	7.55	2202086	201.816	mg/L
4)	H	Aliphatic (C10-C12)	10.05	1172828	100.892	mg/L
5)	H	Aliphatic (C12-C16)	14.90	1198235	100.396	mg/L
6)	H	Aliphatic (C16-C21)	19.90	102479	106.832	mg/L
7)	H	Aliphatic (C21-C34)	24.00	686309	95.984	mg/L

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042201.D Vial: 4
Acq On : 22 Apr 2016 2:51 pm Operator: CM
Sample : ALI CCV Inst : GC #20
Misc : CCV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:27 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042208.D Vial: 26
Acq On : 22 Apr 2016 8:20 pm Operator: CM
Sample : MB-13403 Inst : GC #20
Misc : MBLK O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:31 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

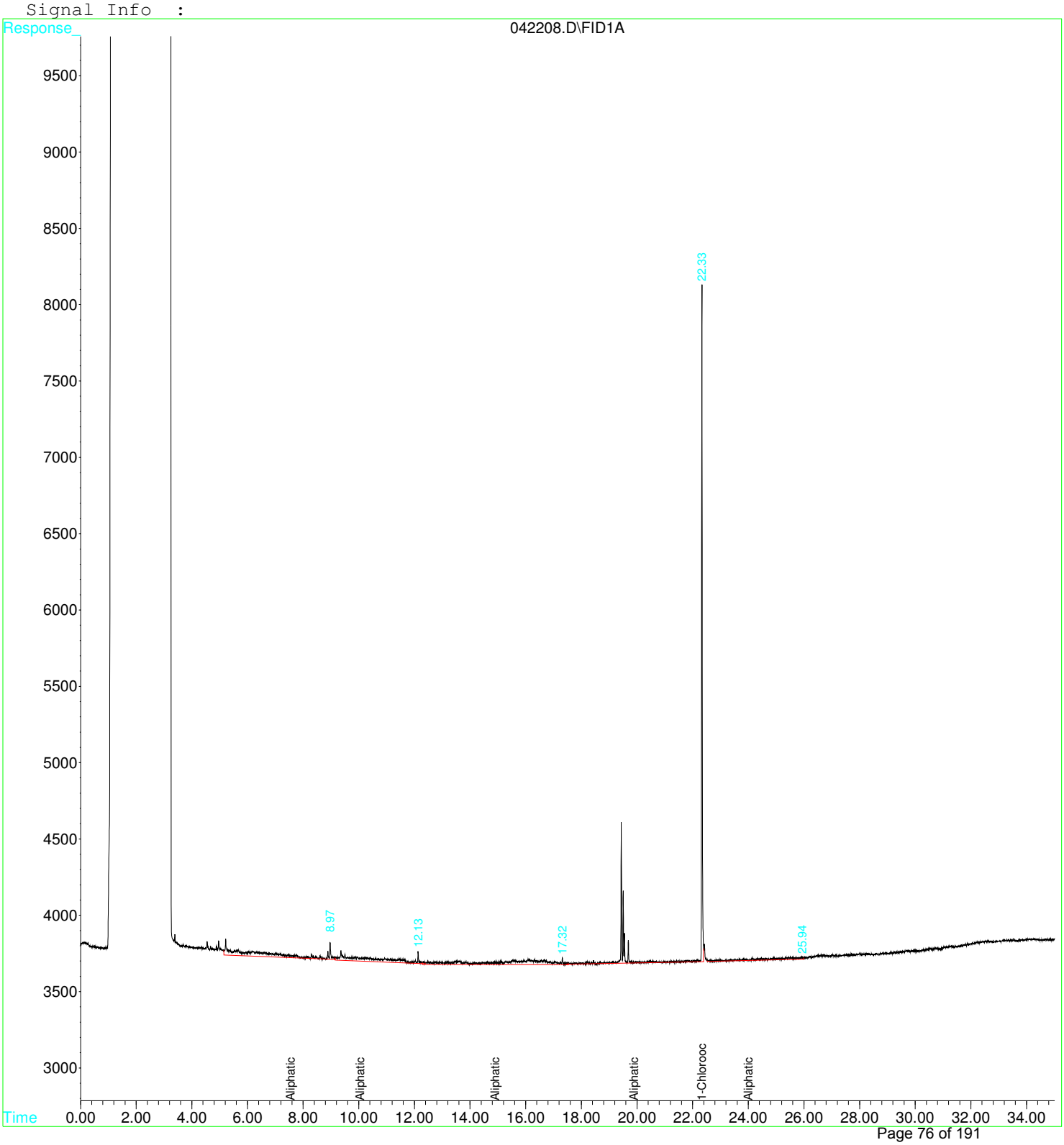
		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.33	77887	24.483	mg/L	m
2)	S	o-Terphenyl	0.00	0	N.D.	mg/L	
		Target Compounds					
3)	H	Aliphatic (C8-C10)	7.55	41940	3.844	mg/L	
4)	H	Aliphatic (C10-C12)	10.05	32272	2.776	mg/L	
5)	H	Aliphatic (C12-C16)	14.90	44680	3.744	mg/L	
6)	H	Aliphatic (C16-C21)	19.90	38266	1.346	mg/L	
7)	H	Aliphatic (C21-C34)	24.00	12489	1.747	mg/L	

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042208.D Vial: 26
Acq On : 22 Apr 2016 8:20 pm Operator: CM
Sample : MB-13403 Inst : GC #20
Misc : MBLK O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:31 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042205.D Vial: 23
Acq On : 22 Apr 2016 6:01 pm Operator: CM
Sample : LCS-13403 Inst : GC #20
Misc : LCS O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:35 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

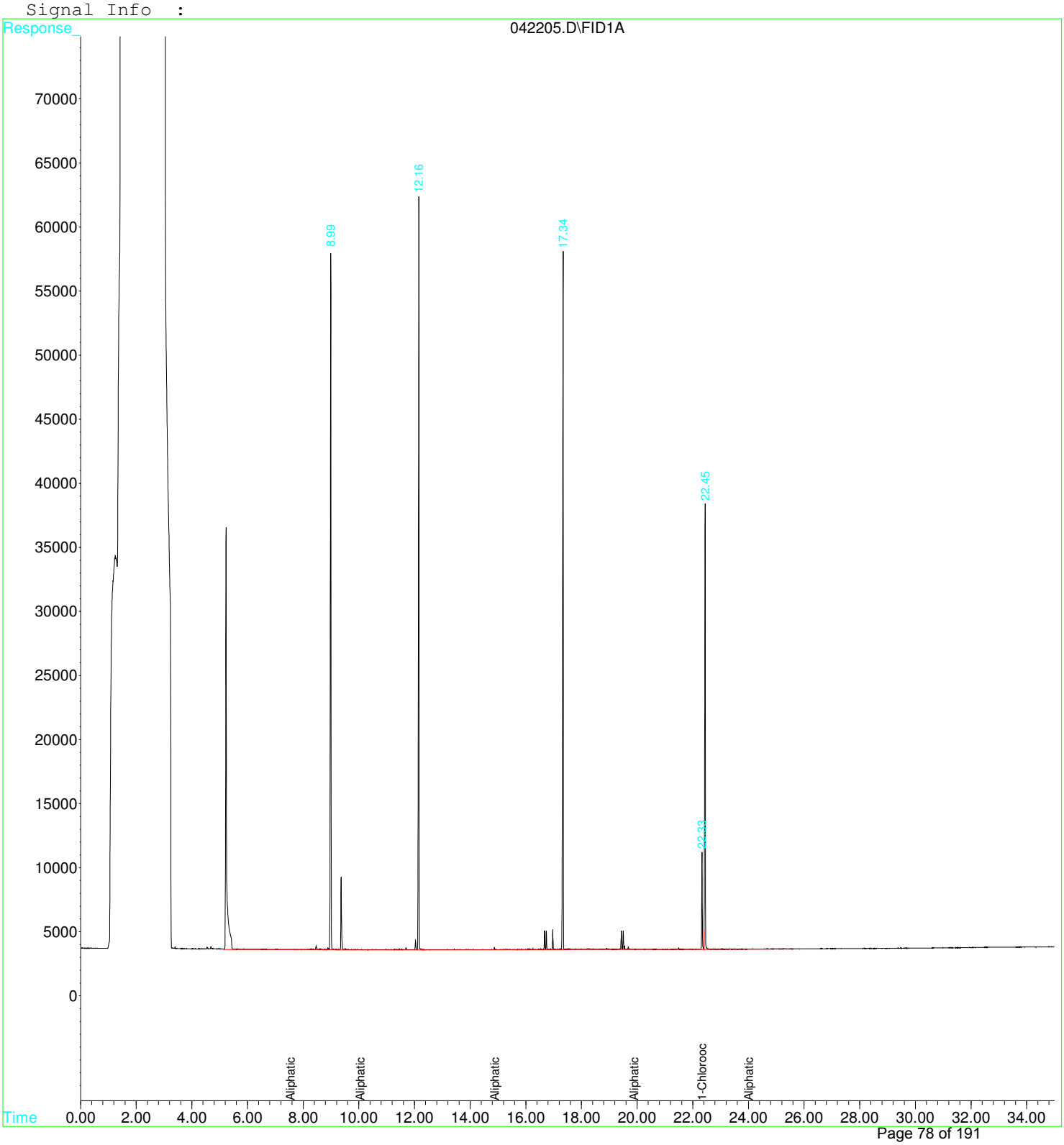
		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	22.33	110080	32.910	mg/L
2)	S	o-Terphenyl	0.00	0	N.D.	mg/L
		Target Compounds				
3)	H	Aliphatic (C8-C10)	7.55	1699794	155.782	mg/L
4)	H	Aliphatic (C10-C12)	10.05	1080814	92.976	mg/L
5)	H	Aliphatic (C12-C16)	14.90	1037388	86.919	mg/L
6)	H	Aliphatic (C16-C21)	19.90	92437	89.476	mg/L
7)	H	Aliphatic (C21-C34)	24.00	617721	86.392	mg/L

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042205.D Vial: 23
Acq On : 22 Apr 2016 6:01 pm Operator: CM
Sample : LCS-13403 Inst : GC #20
Misc : LCS O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:35 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042213.D Vial: 31
Acq On : 23 Apr 2016 12:08 am Operator: CM
Sample : 1604080-002A Inst : GC #20
Misc : SAMP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:42 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

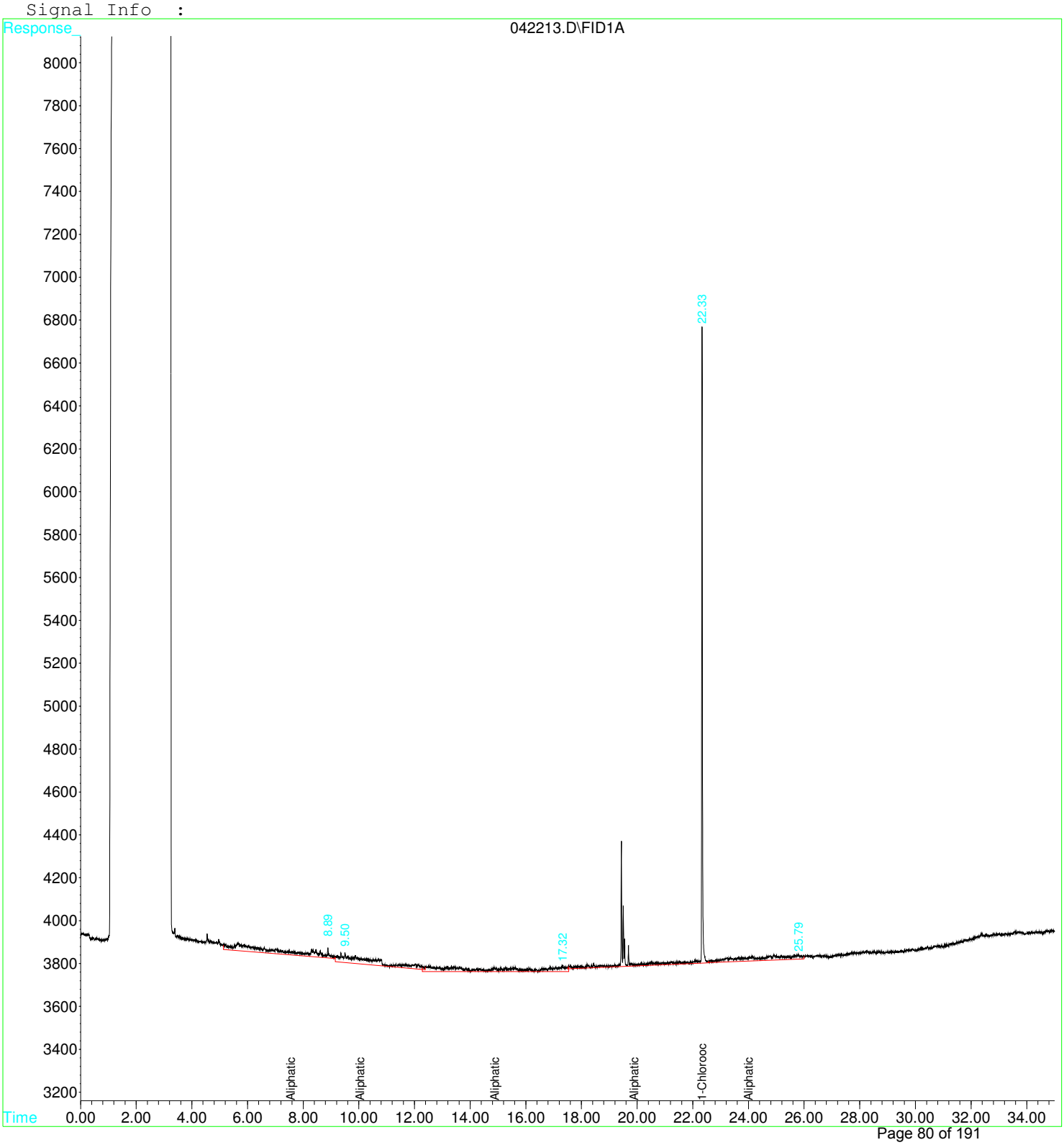
		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.33	53746	17.914	mg/L	m
2)	S	o-Terphenyl	0.00	0	N.D.	mg/L	
		Target Compounds					
3)	H	Aliphatic (C8-C10)	7.55	37727	3.458	mg/L	
4)	H	Aliphatic (C10-C12)	10.05	33260	2.861	mg/L	
5)	H	Aliphatic (C12-C16)	14.90	38844	3.255	mg/L	
6)	H	Aliphatic (C16-C21)	19.90	38750	2.097	mg/L	
7)	H	Aliphatic (C21-C34)	24.00	27404	3.833	mg/L	

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042213.D Vial: 31
Acq On : 23 Apr 2016 12:08 am Operator: CM
Sample : 1604080-002A Inst : GC #20
Misc : SAMP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:42 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042214.D Vial: 32
Acq On : 23 Apr 2016 12:53 am Operator: CM
Sample : 1604080-004A Inst : GC #20
Misc : SAMP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:43 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:37:52 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.33	58949	19.876	mg/L	m
2)	S	o-Terphenyl	0.00	0	N.D.	mg/L	
		Target Compounds					
3)	H	Aliphatic (C8-C10)	7.55	38499	25.395	mg/L	
4)	H	Aliphatic (C10-C12)	10.05	24953	13.214	mg/L	
5)	H	Aliphatic (C12-C16)	14.90	39736	14.236	mg/L	
6)	H	Aliphatic (C16-C21)	19.90	46793	14.664	mg/L	
7)	H	Aliphatic (C21-C34)	24.00	26004	23.694	mg/L	

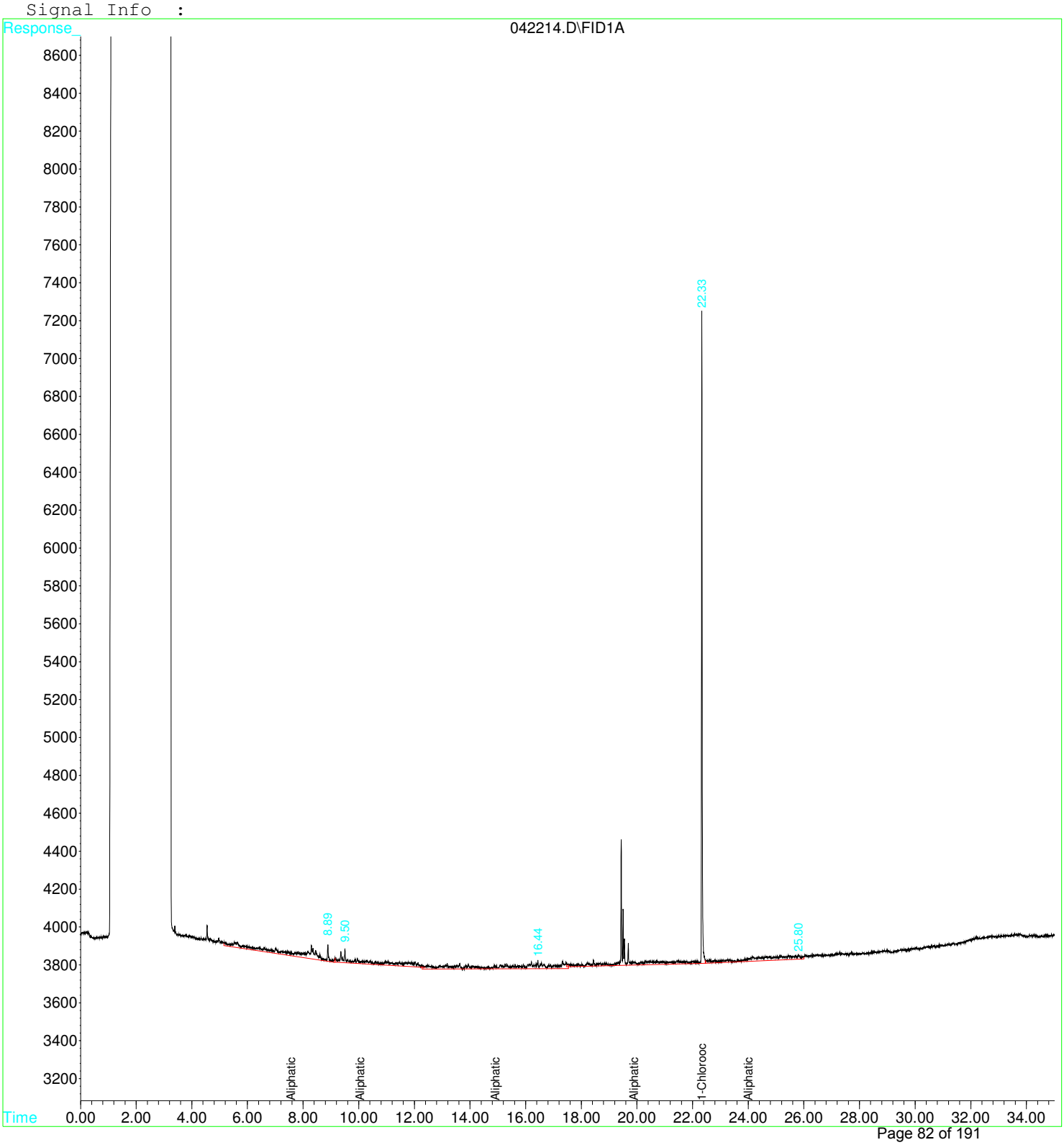
(f)=RT Delta > 1/2 Window (m)=manual int.
042214.D ALG20421.M Tue Apr 26 16:43:48 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042214.D Vial: 32
Acq On : 23 Apr 2016 12:53 am Operator: CM
Sample : 1604080-004A Inst : GC #20
Misc : SAMP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:43 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 13:37:52 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042216.D Vial: 34
Acq On : 23 Apr 2016 2:23 am Operator: CM
Sample : 1604081-004A Inst : GC #20
Misc : SAMP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:45 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.33	70546	22.509	mg/L	m
2)	S	o-Terphenyl	0.00	0	N.D.	mg/L	
		Target Compounds					
3)	H	Aliphatic (C8-C10)	7.55	50994	4.673	mg/L	
4)	H	Aliphatic (C10-C12)	10.05	27106	2.332	mg/L	
5)	H	Aliphatic (C12-C16)	14.90	42122	3.529	mg/L	
6)	H	Aliphatic (C16-C21)	19.90	51065	21.409	mg/L	
7)	H	Aliphatic (C21-C34)	24.00	23517	3.289	mg/L	

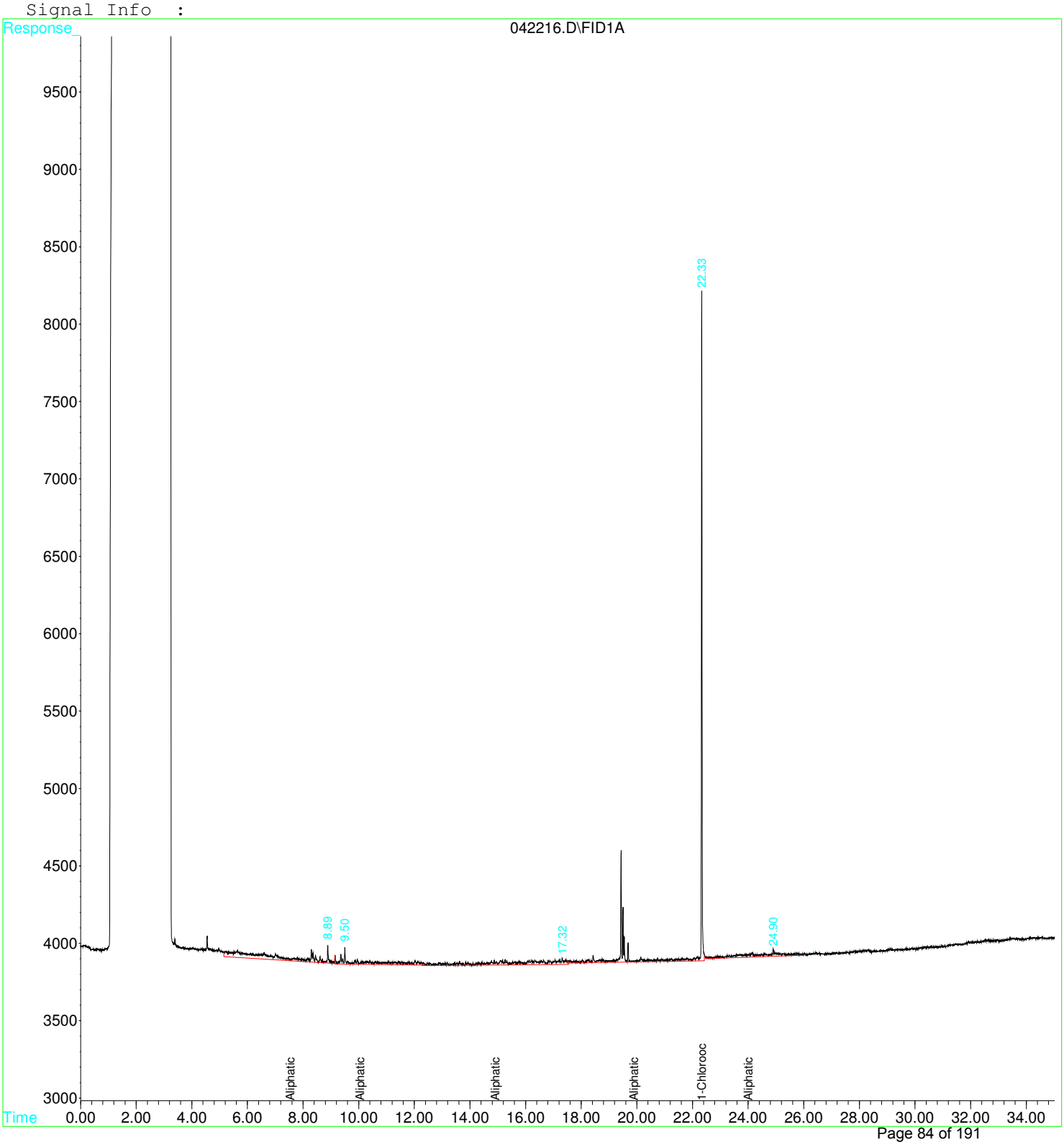
(f)=RT Delta > 1/2 Window (m)=manual int.
042216.D ALG20421.M Tue Apr 26 16:45:49 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042216.D Vial: 34
Acq On : 23 Apr 2016 2:23 am Operator: CM
Sample : 1604081-004A Inst : GC #20
Misc : SAMP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:45 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042217.D Vial: 35
Acq On : 23 Apr 2016 3:08 am Operator: CM
Sample : 1604081-004ADUP Inst : GC #20
Misc : DUP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:46 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.33	66602	21.441	mg/L	m
2)	S	o-Terphenyl	0.00	0	N.D.	mg/L	
		Target Compounds					
3)	H	Aliphatic (C8-C10)	7.55	45513	4.171	mg/L	
4)	H	Aliphatic (C10-C12)	10.05	28258	2.431	mg/L	
5)	H	Aliphatic (C12-C16)	14.90	39203	3.285	mg/L	
6)	H	Aliphatic (C16-C21)	19.90	59540	34.938	mg/L	
7)	H	Aliphatic (C21-C34)	24.00	47735	6.676	mg/L	

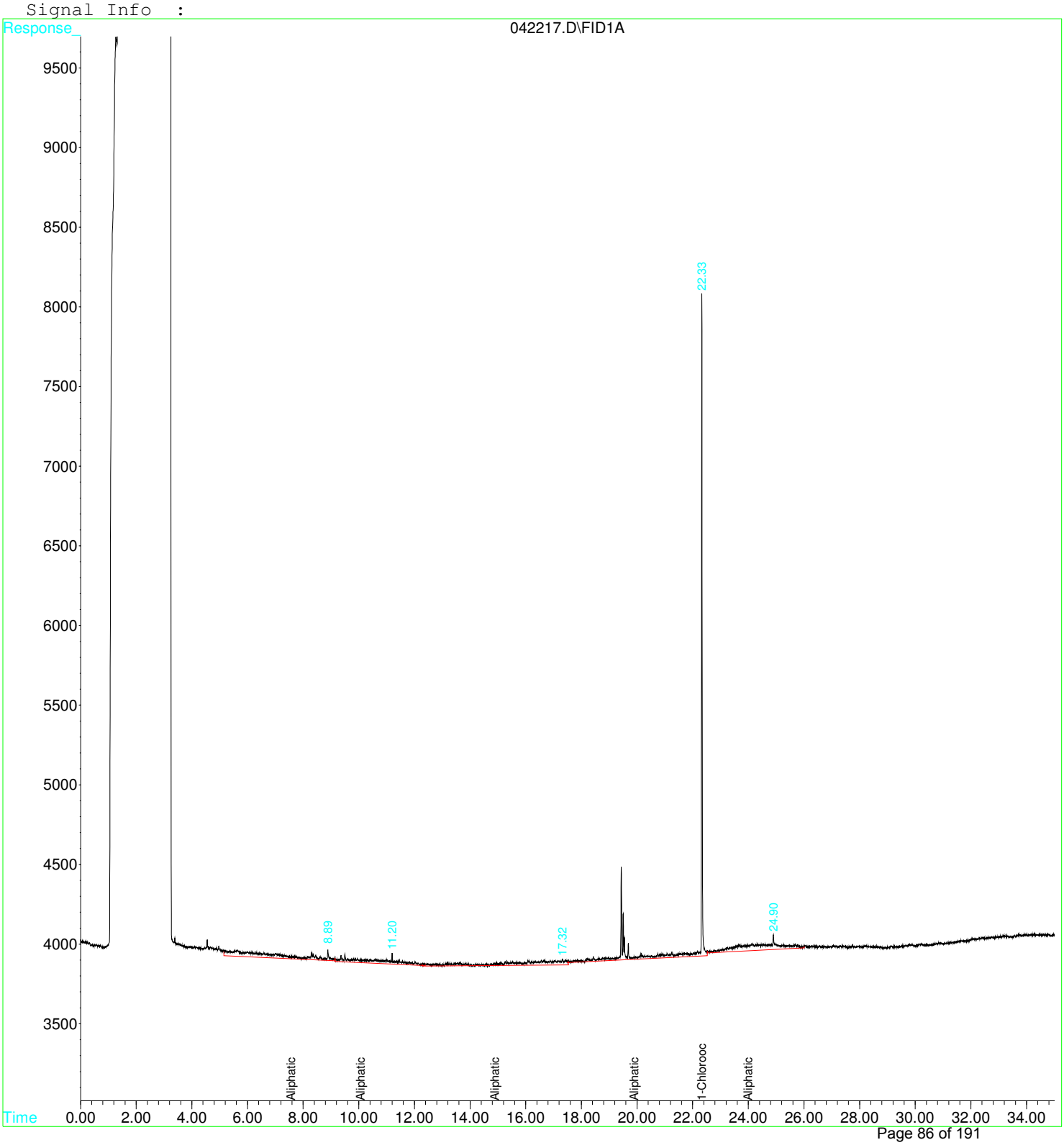
(f)=RT Delta > 1/2 Window (m)=manual int.
042217.D ALG20421.M Tue Apr 26 16:46:43 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042217.D Vial: 35
Acq On : 23 Apr 2016 3:08 am Operator: CM
Sample : 1604081-004ADUP Inst : GC #20
Misc : DUP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:46 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042218.D Vial: 4
Acq On : 23 Apr 2016 3:53 am Operator: CM
Sample : ALI CCV Inst : GC #20
Misc : CCV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:47 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

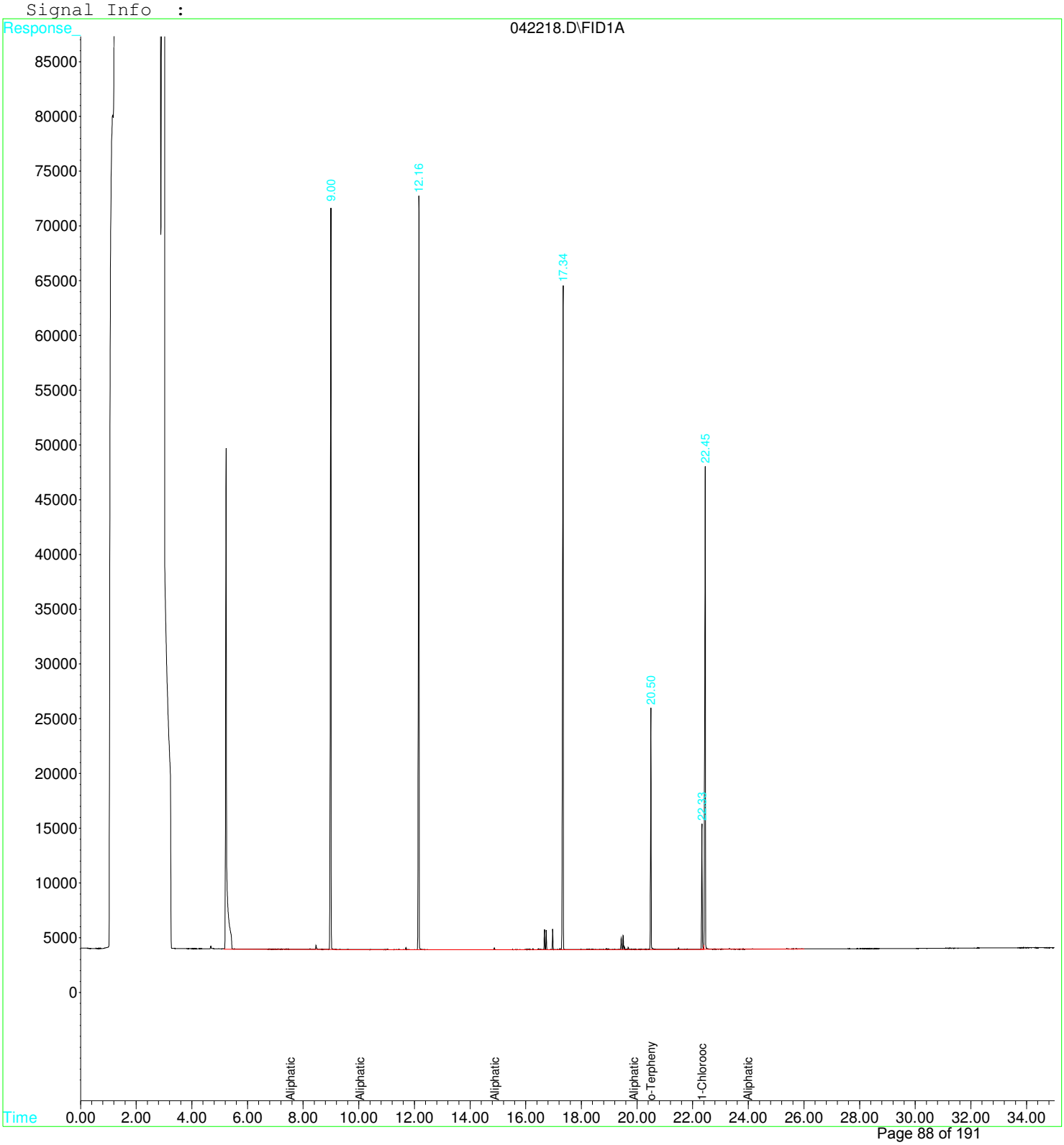
		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	22.33	167792	47.196	mg/L
2)	S	o-Terphenyl	20.50	341469	42.965	mg/L
		Target Compounds				
3)	H	Aliphatic (C8-C10)	7.55	2289738	209.849	mg/L
4)	H	Aliphatic (C10-C12)	10.05	1216376	104.638	mg/L
5)	H	Aliphatic (C12-C16)	14.90	1226270	102.745	mg/L
6)	H	Aliphatic (C16-C21)	19.90	100830	103.956	mg/L
7)	H	Aliphatic (C21-C34)	24.00	816208	114.151	mg/L

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042218.D Vial: 4
Acq On : 23 Apr 2016 3:53 am Operator: CM
Sample : ALI CCV Inst : GC #20
Misc : CCV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:47 2016 Quant Results File: ALG20421.RES

Quant Method : C:\GC20\M...\ALG20421.M (Chemstation Integrator)
Title :
Last Update : Tue Apr 26 15:38:24 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Raw Data

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042219.D Vial: 14
Acq On : 23 Apr 2016 4:38 am Operator: CM
Sample : ARO CCV Inst : GC #20
Misc : CCV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:55 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1-Chlorooctadecane	22.33f	111019	36.192	mg/L	m
2)	S	o-Terphenyl	20.50	293368	33.050	mg/L	
		Target Compounds					
3)	H	Aromatic (C8-C10)	7.50	1145049	94.174	mg/L	
4)	H	Aromatic (C10-C12)	10.00	1179392	91.037	mg/L	
5)	H	Aromatic (C12-C16)	14.96	1136310	95.757	mg/L	
6)	H	Aromatic (C16-C21)	20.00	423003	116.845	mg/L	
7)	H	Aromatic (C21-C34)	31.17	203421	102.399	mg/L	

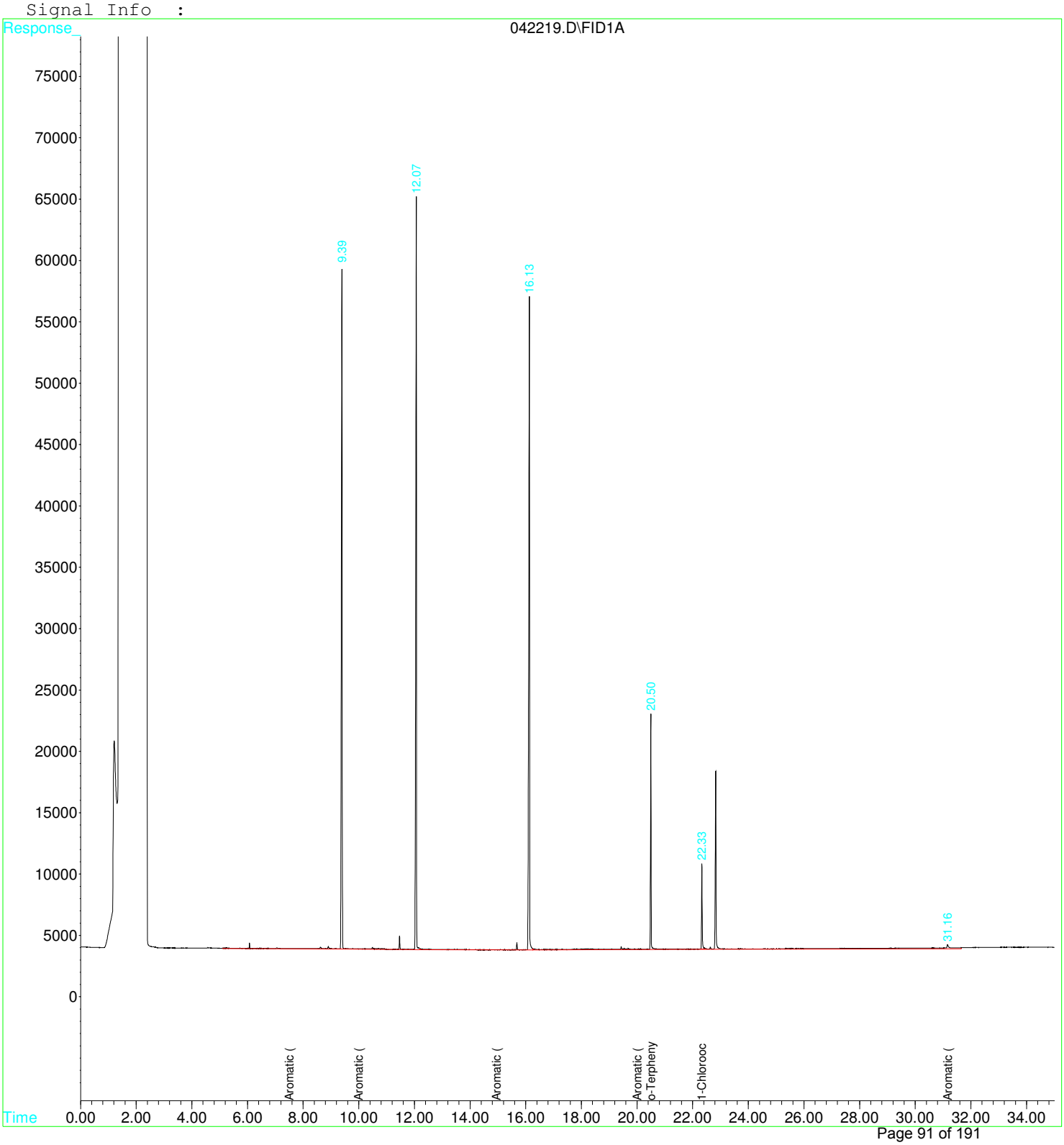
(f)=RT Delta > 1/2 Window (m)=manual int.
042219.D ARG20421.M Tue Apr 26 16:55:58 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042219.D Vial: 14
Acq On : 23 Apr 2016 4:38 am Operator: CM
Sample : ARO CCV Inst : GC #20
Misc : CCV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 16:55 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042224.D Vial: 40
Acq On : 23 Apr 2016 8:22 am Operator: CM
Sample : MB-13403 Inst : GC #20
Misc : MBLK O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 27 13:08 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

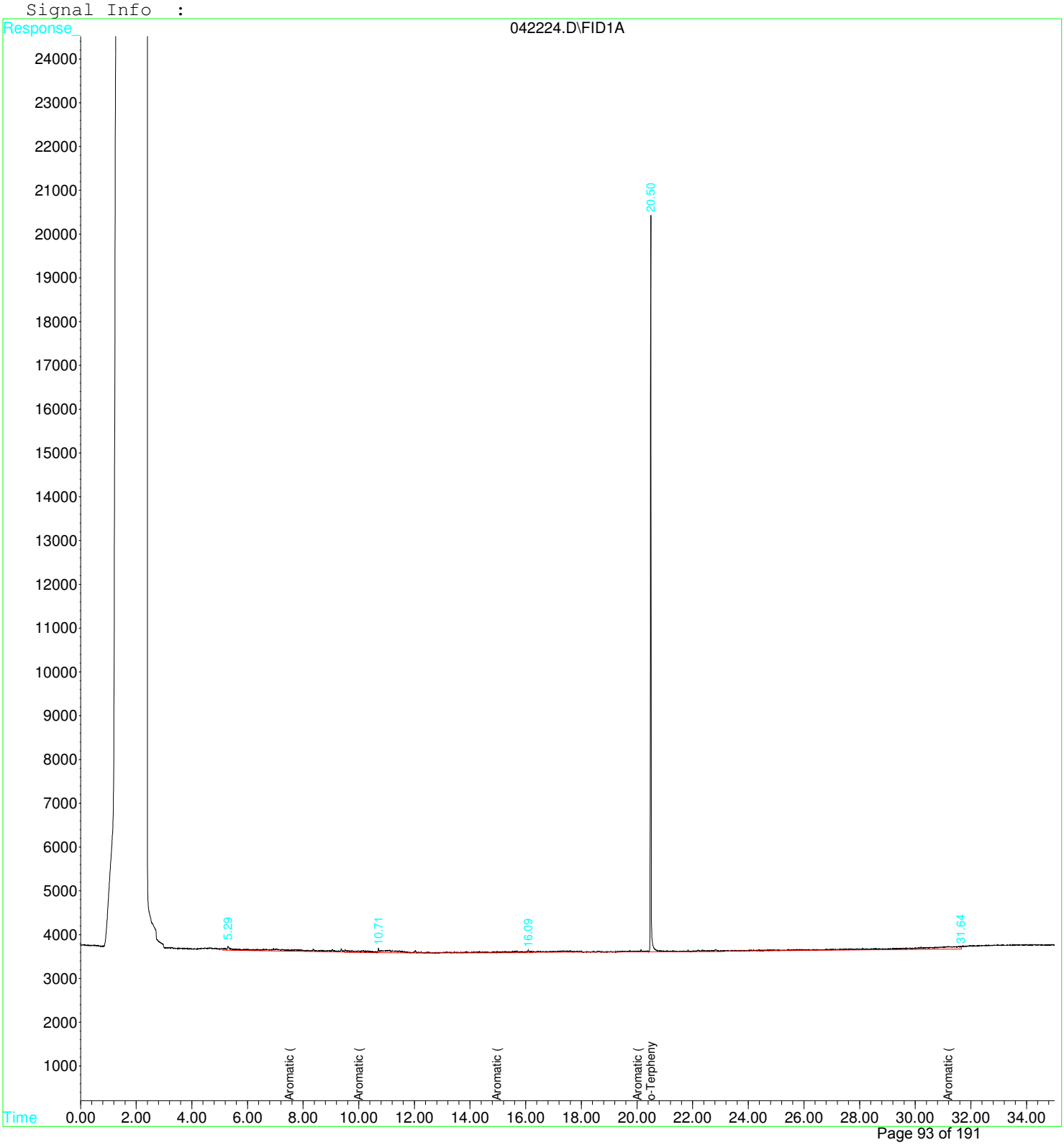
		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	0.00	0	N.D.	mg/L
2)	S	o-Terphenyl	20.50	266496	30.240	mg/L
		Target Compounds				
3)	H	Aromatic (C8-C10)	7.50	68027	1.308	mg/L
4)	H	Aromatic (C10-C12)	10.00	47180	3.642	mg/L
5)	H	Aromatic (C12-C16)	14.96	31524	2.657	mg/L
6)	H	Aromatic (C16-C21)	20.00	61268	5.770	mg/L
7)	H	Aromatic (C21-C34)	31.17	101279	0.713	mg/L

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042224.D Vial: 40
Acq On : 23 Apr 2016 8:22 am Operator: CM
Sample : MB-13403 Inst : GC #20
Misc : MBLK O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 27 13:08 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042221.D Vial: 37
Acq On : 23 Apr 2016 6:08 am Operator: CM
Sample : LCS-13403 Inst : GC #20
Misc : LCS O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 27 13:09 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

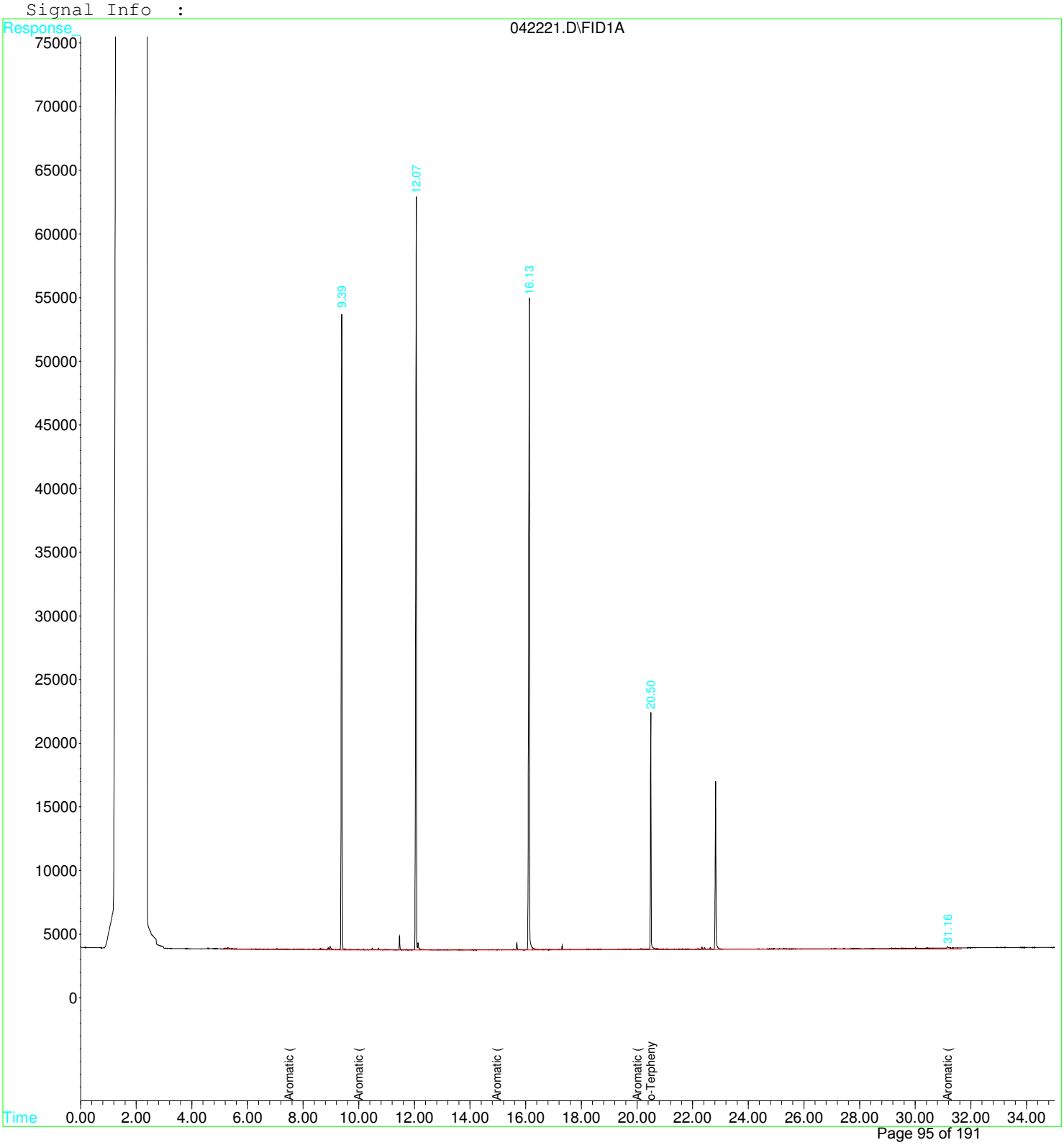
		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	0.00	0	N.D.	mg/L
2)	S	o-Terphenyl	20.50	292357	32.944	mg/L
		Target Compounds				
3)	H	Aromatic (C8-C10)	7.50	1050653	86.035	mg/L
4)	H	Aromatic (C10-C12)	10.00	1169668	90.287	mg/L
5)	H	Aromatic (C12-C16)	14.96	1130175	95.240	mg/L
6)	H	Aromatic (C16-C21)	20.00	385241	106.597	mg/L
7)	H	Aromatic (C21-C34)	31.17	177589	75.932	mg/L

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042221.D Vial: 37
Acq On : 23 Apr 2016 6:08 am Operator: CM
Sample : LCS-13403 Inst : GC #20
Misc : LCS O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 27 13:09 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042229.D Vial: 45
Acq On : 23 Apr 2016 12:07 pm Operator: CM
Sample : 1604080-002A Inst : GC #20
Misc : SAMP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 27 13:13 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	0.00	0	N.D.	mg/L
2)	S	o-Terphenyl	20.49	148793	17.931	mg/L
		Target Compounds				
3)	H	Aromatic (C8-C10)	7.50	33713	N.D.	mg/L
4)	H	Aromatic (C10-C12)	10.00	16880	1.303	mg/L
5)	H	Aromatic (C12-C16)	14.96	26962	2.272	mg/L
6)	H	Aromatic (C16-C21)	20.00	66710	7.719	mg/L
7)	H	Aromatic (C21-C34)	31.17	112518	11.532	mg/L

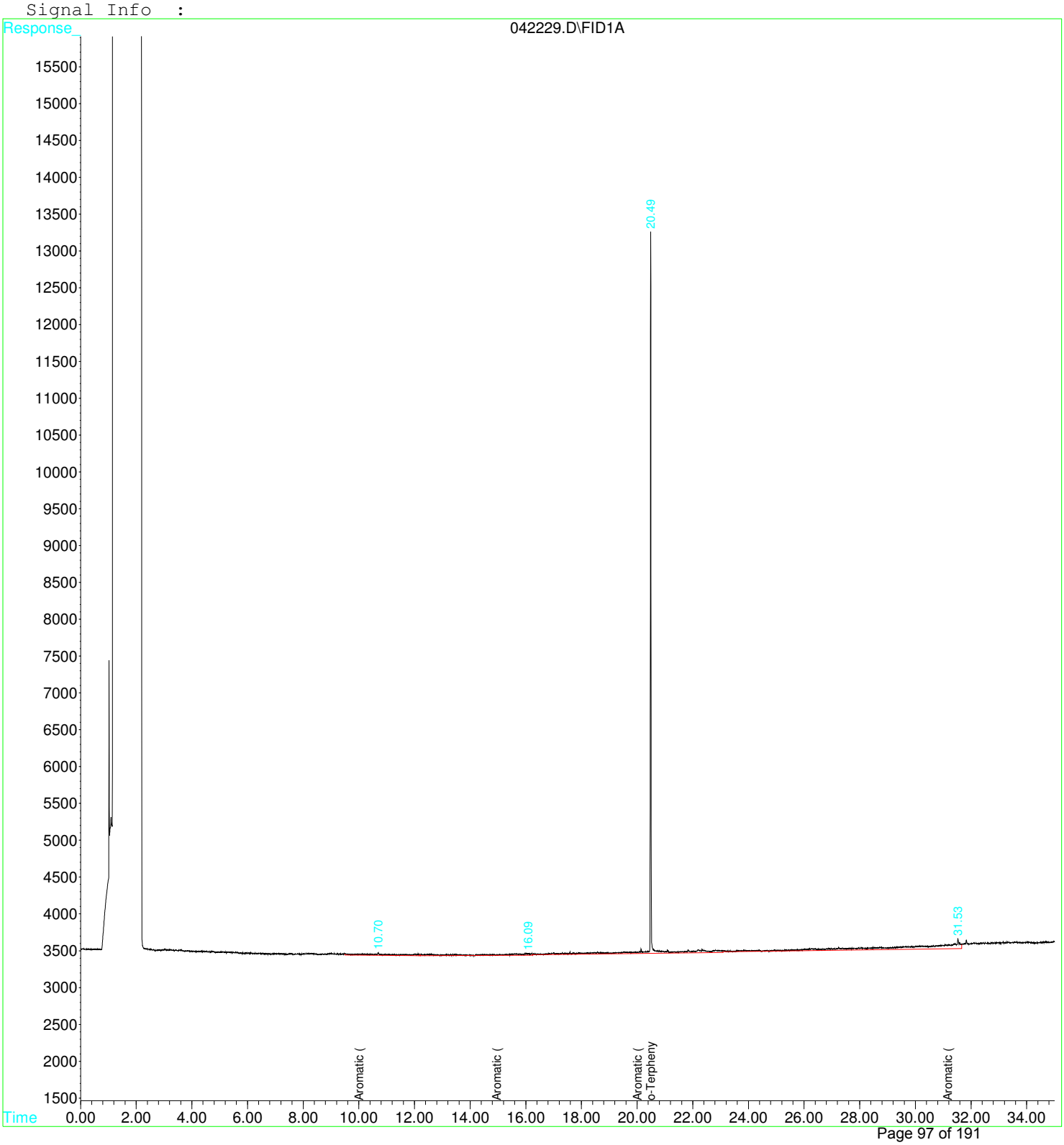
(f)=RT Delta > 1/2 Window (m)=manual int.
042229.D ARG20421.M Wed Apr 27 13:13:24 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042229.D Vial: 45
Acq On : 23 Apr 2016 12:07 pm Operator: CM
Sample : 1604080-002A Inst : GC #20
Misc : SAMP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 27 13:13 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042230.D Vial: 46
Acq On : 23 Apr 2016 12:52 pm Operator: CM
Sample : 1604080-004A Inst : GC #20
Misc : SAMP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 27 13:14 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

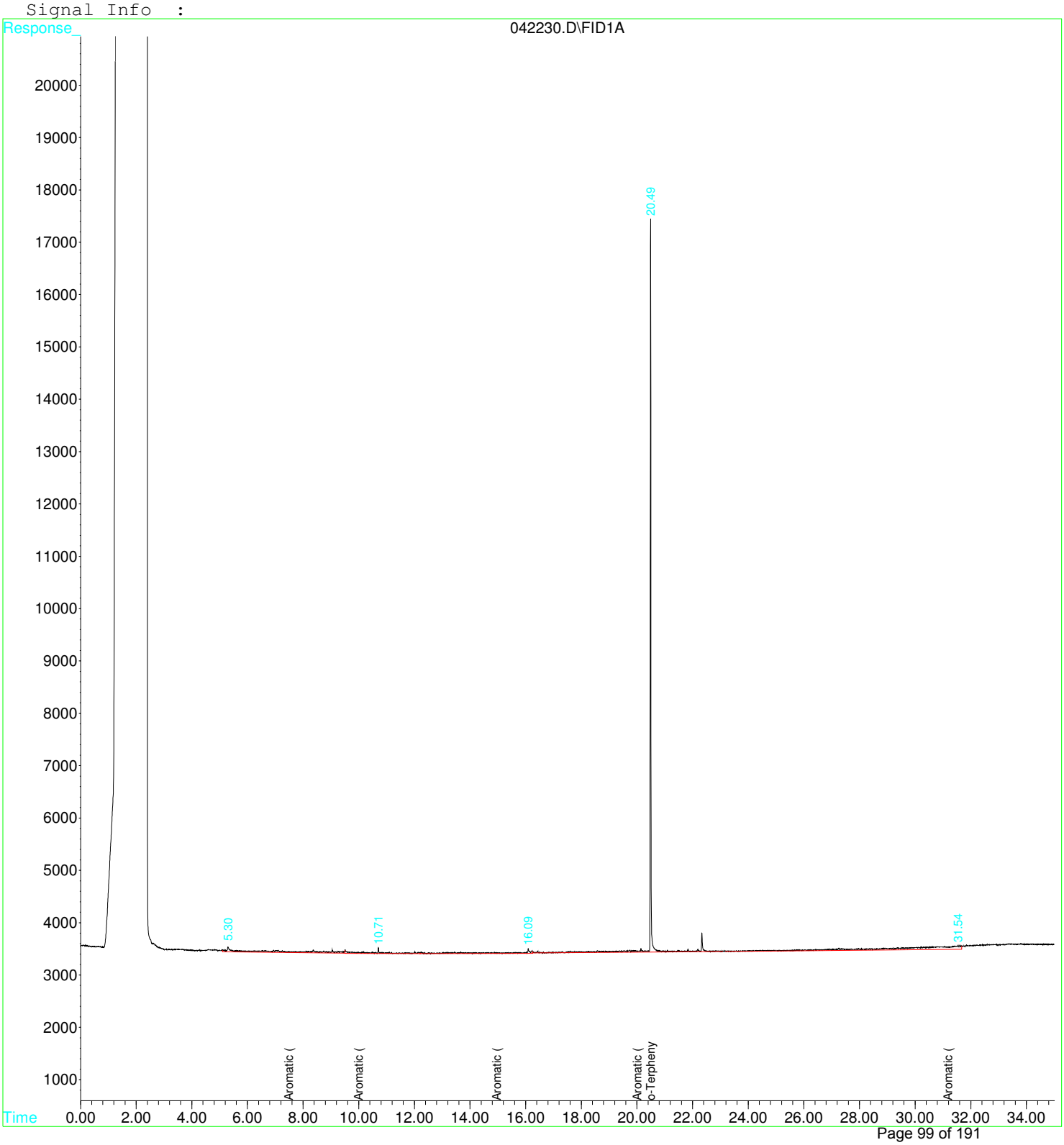
		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	0.00	0	N.D.	mg/L
2)	S	o-Terphenyl	20.49	220930	25.475	mg/L
		Target Compounds				
3)	H	Aromatic (C8-C10)	7.50	54634	0.153	mg/L
4)	H	Aromatic (C10-C12)	10.00	22776	1.758	mg/L
5)	H	Aromatic (C12-C16)	14.96	27269	2.298	mg/L
6)	H	Aromatic (C16-C21)	20.00	75471	10.831	mg/L
7)	H	Aromatic (C21-C34)	31.17	107866	7.043	mg/L

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042230.D Vial: 46
Acq On : 23 Apr 2016 12:52 pm Operator: CM
Sample : 1604080-004A Inst : GC #20
Misc : SAMP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 27 13:14 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042232.D Vial: 48
Acq On : 23 Apr 2016 2:24 pm Operator: CM
Sample : 1604081-004A Inst : GC #20
Misc : SAMP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 27 13:15 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	0.00	0	N.D.	mg/L
2)	S	o-Terphenyl	20.49	218503	25.221	mg/L
		Target Compounds				
3)	H	Aromatic (C8-C10)	7.50	68337	1.335	mg/L
4)	H	Aromatic (C10-C12)	10.00	22923	1.769	mg/L
5)	H	Aromatic (C12-C16)	14.96	21830	1.840	mg/L
6)	H	Aromatic (C16-C21)	20.00	82389	13.268	mg/L
7)	H	Aromatic (C21-C34)	31.17	106523	5.750	mg/L

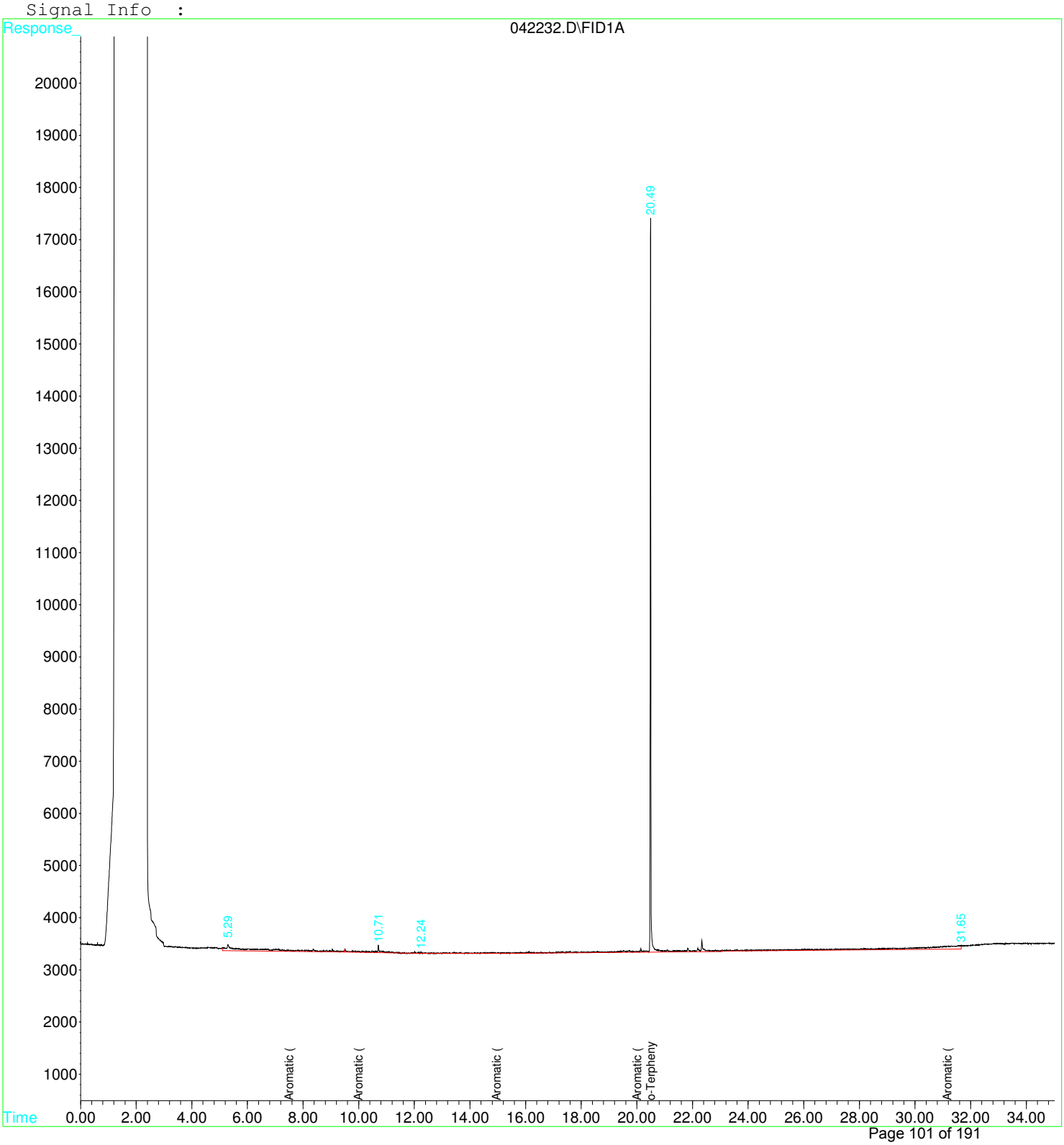
(f)=RT Delta > 1/2 Window (m)=manual int.
042232.D ARG20421.M Wed Apr 27 13:15:30 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042232.D Vial: 48
Acq On : 23 Apr 2016 2:24 pm Operator: CM
Sample : 1604081-004A Inst : GC #20
Misc : SAMP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 27 13:15 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042233.D Vial: 49
Acq On : 23 Apr 2016 3:10 pm Operator: CM
Sample : 1604081-004ADUP Inst : GC #20
Misc : DUP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 27 13:16 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

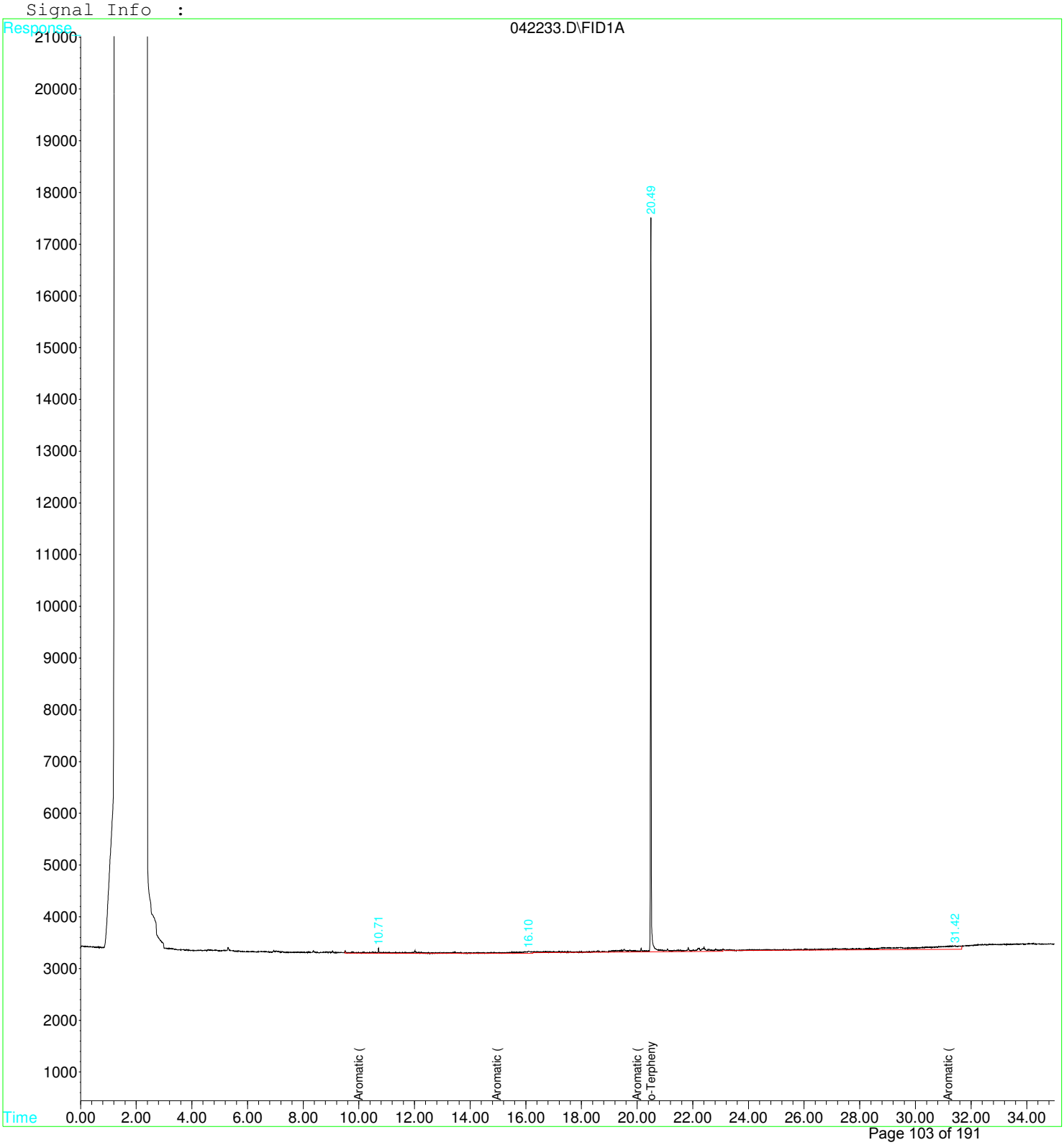
		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	0.00	0	N.D.	mg/L
2)	S	o-Terphenyl	20.49	227232	26.134	mg/L
		Target Compounds				
3)	H	Aromatic (C8-C10)	7.50	41244	N.D.	mg/L
4)	H	Aromatic (C10-C12)	10.00	19715	1.522	mg/L
5)	H	Aromatic (C12-C16)	14.96	28949	2.440	mg/L
6)	H	Aromatic (C16-C21)	20.00	92140	16.674	mg/L
7)	H	Aromatic (C21-C34)	31.17	107609	6.795	mg/L

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042233.D Vial: 49
Acq On : 23 Apr 2016 3:10 pm Operator: CM
Sample : 1604081-004ADUP Inst : GC #20
Misc : DUP O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 27 13:16 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042219.D Vial: 14
Acq On : 23 Apr 2016 4:38 am Operator: CM
Sample : ARO CCV Inst : GC #20
Misc : CCV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 12:00 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

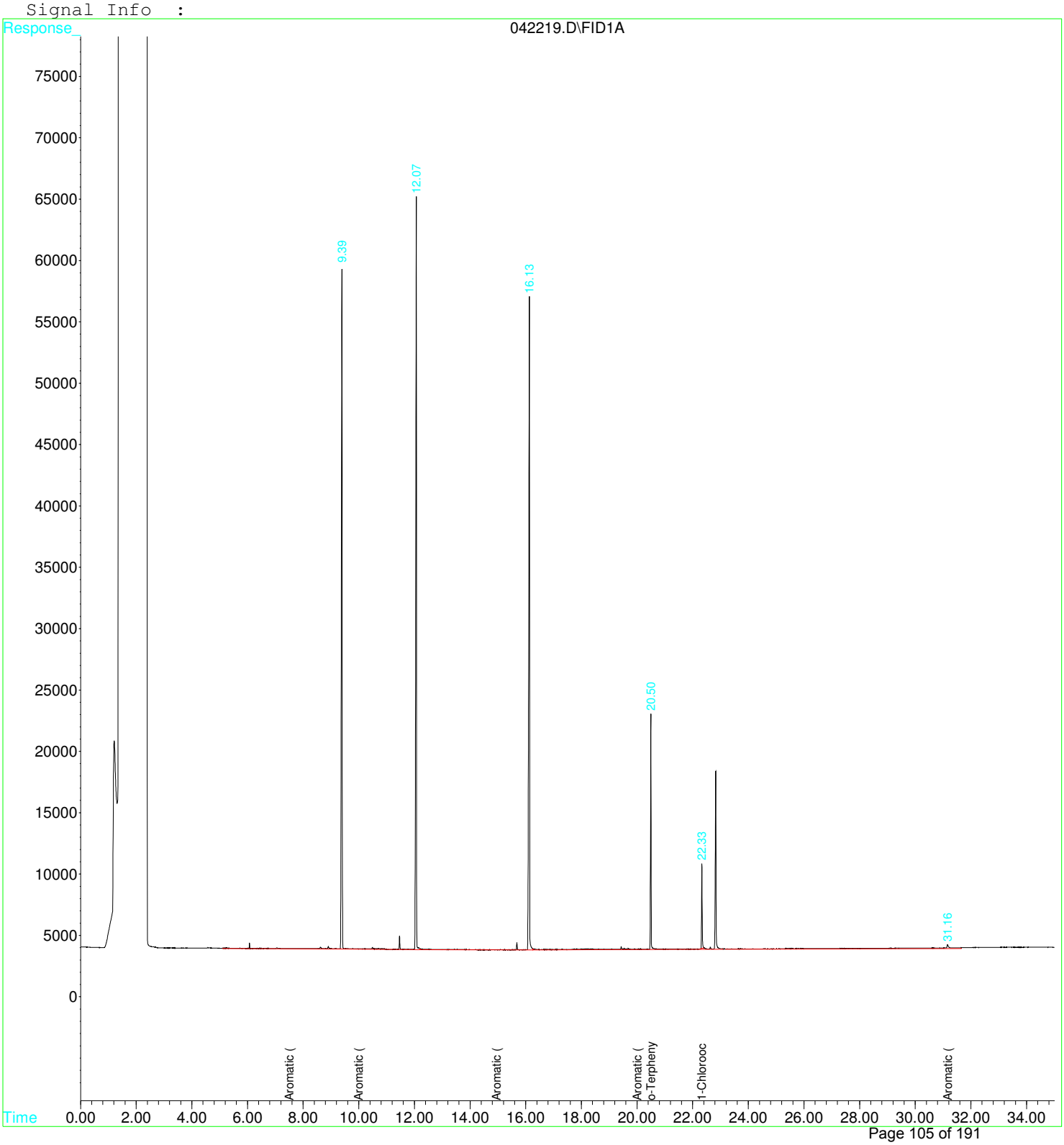
		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
1)	S	1-Chlorooctadecane	22.33f	104906	35.297 mg/L
2)	S	o-Terphenyl	20.50	293368	33.050 mg/L
		Target Compounds			
3)	H	Aromatic (C8-C10)	7.50	1145049	94.174 mg/L
4)	H	Aromatic (C10-C12)	10.00	1179392	91.037 mg/L
5)	H	Aromatic (C12-C16)	14.96	1136310	95.757 mg/L
6)	H	Aromatic (C16-C21)	20.00	429116	118.482 mg/L
7)	H	Aromatic (C21-C34)	31.17	198515	97.331 mg/L

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042219.D Vial: 14
Acq On : 23 Apr 2016 4:38 am Operator: CM
Sample : ARO CCV Inst : GC #20
Misc : CCV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 26 12:00 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042234.D Vial: 14
Acq On : 23 Apr 2016 3:56 pm Operator: CM
Sample : ARO CCV Inst : GC #20
Misc : CCV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 27 13:16 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Initial Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1-Chlorooctadecane	22.33f	138597	40.228	mg/L
2)	S	o-Terphenyl	20.50	343546	38.298	mg/L
		Target Compounds				
3)	H	Aromatic (C8-C10)	7.50	1261027	104.174	mg/L
4)	H	Aromatic (C10-C12)	10.00	1317798	101.721	mg/L
5)	H	Aromatic (C12-C16)	14.96	1274103	107.369	mg/L
6)	H	Aromatic (C16-C21)	20.00	433100	119.545	mg/L
7)	H	Aromatic (C21-C34)	31.17	190701	89.299	mg/L

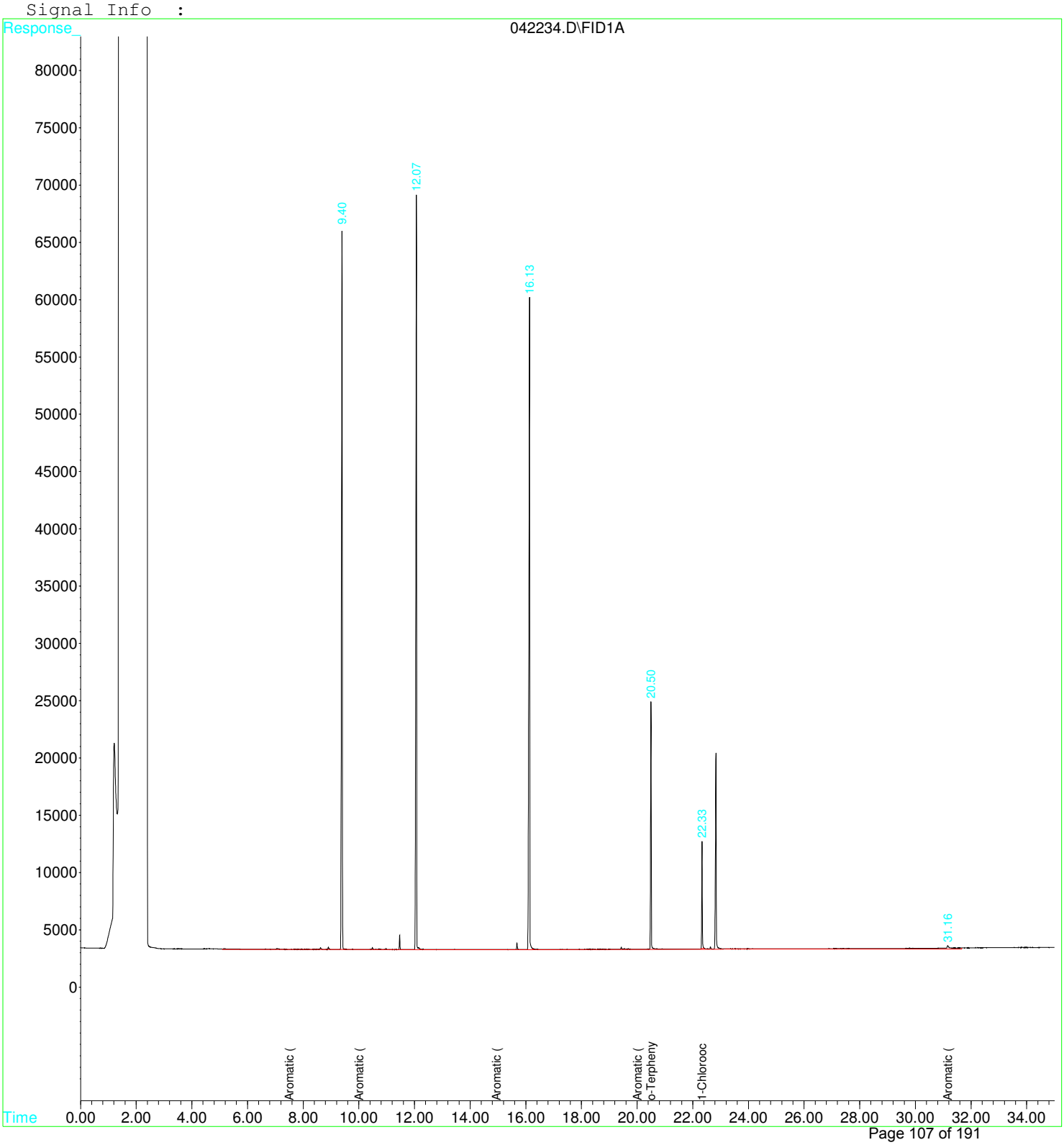
(f)=RT Delta > 1/2 Window (m)=manual int.
042234.D ARG20421.M Wed Apr 27 13:16:57 2016 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\GC20\DATA\04221620\042234.D Vial: 14
Acq On : 23 Apr 2016 3:56 pm Operator: CM
Sample : ARO CCV Inst : GC #20
Misc : CCV O-EPH-S Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 27 13:16 2016 Quant Results File: ARG20421.RES

Quant Method : C:\GC20\M...\ARG20421.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 25 14:29:26 2016
Response via : Multiple Level Calibration
DataAcq Meth : EPHSG.M

Volume Inj. :
Signal Phase :
Signal Info :



Injection Log

Directory: C:\GC20\DATA\04221620

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	4	042201.d	1.	ALI CCV	CCV O-EPH-S	22 Apr 2016 14:51
2	14	042202.d	1.	ARO CCV	CCV O-EPH-S	22 Apr 2016 15:38
3	21	042203.d	1.	FLA TPH	CCV O-EPH-S	22 Apr 2016 16:26
4	22	042204.d	1.	ALI IDC1	LCS O-EPH-S	22 Apr 2016 17:13
5	23	042205.d	1.	LCS-13403	LCS O-EPH-S	22 Apr 2016 18:01
6	24	042206.d	1.	ALI IDC3	LCS O-EPH-S	22 Apr 2016 18:48
7	25	042207.d	1.	ALI IDC4	LCS O-EPH-S	22 Apr 2016 19:34
8	26	042208.d	1.	MB-13403	MBLK O-EPH-S	22 Apr 2016 20:20
9	27	042209.d	1.	LCS-13403	MBLK O-EPH-S	22 Apr 2016 21:05
10	28	042210.d	1.	1604078-002A	SAMP O-EPH-S	22 Apr 2016 21:51
11	29	042211.d	1.	1604078-004A	SAMP O-EPH-S	22 Apr 2016 22:37
12	30	042212.d	1.	1604079-002A	SAMP O-EPH-S	22 Apr 2016 23:22
13	31	042213.d	1.	1604080-002A	SAMP O-EPH-S	23 Apr 2016 00:08
14	32	042214.d	1.	1604080-004A	SAMP O-EPH-S	23 Apr 2016 00:53
15	33	042215.d	1.	1604081-002	SAMP O-EPH-S	23 Apr 2016 01:38
16	34	042216.d	1.	1604081-004	SAMP O-EPH-S	23 Apr 2016 02:23
17	35	042217.d	1.	1604081-004DUP	DUP O-EPH-S	23 Apr 2016 03:08
18	4	042218.d	1.	ALI CCV	CCV O-EPH-S	23 Apr 2016 03:53
19	14	042219.d	1.	ARO CCV	CCV O-EPH-S	23 Apr 2016 04:38
20	36	042220.d	1.	AR IDC1	LCS O-EPH-S	23 Apr 2016 05:23
21	37	042221.d	1.	LCS-13403	LCS O-EPH-S	23 Apr 2016 06:08
22	38	042222.d	1.	AR IDC3	LCS O-EPH-S	23 Apr 2016 06:53
23	39	042223.d	1.	AR IDC4	LCS O-EPH-S	23 Apr 2016 07:37
24	40	042224.d	1.	MB-13403	MBLK O-EPH-S	23 Apr 2016 08:22
25	41	042225.d	1.	LCS-13403	LCS O-EPH-S	23 Apr 2016 09:07
26	42	042226.d	1.	1604078-002A	SAMP O-EPH-S	23 Apr 2016 09:52
27	43	042227.d	1.	1604078-004A	SAMP O-EPH-S	23 Apr 2016 10:37
28	44	042228.d	1.	1604079-002A	SAMP O-EPH-S	23 Apr 2016 11:22
29	45	042229.d	1.	1604080-002A	SAMP O-EPH-S	23 Apr 2016 12:07
30	46	042230.d	1.	1604080-004A	SAMP O-EPH-S	23 Apr 2016 12:52
31	47	042231.d	1.	1604081-002A	SAMP O-EPH-S	23 Apr 2016 13:38
32	48	042232.d	1.	1604081-004A	SAMP O-EPH-S	23 Apr 2016 14:24
33	49	042233.d	1.	1604081-004ADUP	DUP O-EPH-S	23 Apr 2016 15:10
34	14	042234.d	1.	ARO CCV	CCV O-EPH-S	23 Apr 2016 15:56

Supporting Data

17986–
17993

Crescent Chemical Co., Inc.
2 OVAL DRIVE, ISLANDIA NY 11749
TEL:(631) 348-0333 FAX: (631) 348-0913
www.crescentchemical.com

Certificate of Analysis

Rev 0

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
CCO-2683 -10X	260540	≤ -10 °C	Methylene Chloride	9/15/2017	EPH Aliphatic Check Mix, 10,000 mg/L, 5 x 1 mL

Compound	CAS No	Purity (%)	Compound Lot No	Concentration, mg/L
n-decane (C10)	124-18-5	99.4	415.1.2P	10020
n-dodecane (C12)	112-40-3	99	416.9.1.1P	9910
n-heneicosane (C21)	629-94-7	99.6	547.1.1P	10110
n-hexadecane (C16)	544-76-3	99	368.13.1P	9959
octane (C8)	111-65-9	99.5	385.1.1P	9915

Certified By: F. Zucker

All weights are traceable through N. I. S. T. Test No. 822/264157-00. Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.

Manufacturer is ISO/IEC 17025:2005 Accredited by A2LA - Certificate Number 3031.01 for Chemical Testing

Manufacturer's Quality System Audited & Registered by NSF-ISR to ISO 9001:2008

17980 - 17985

Crescent Chemical Co., Inc.
2 OVAL DRIVE, ISLANDIA NY 11749
TEL:(631) 348-0333 FAX: (631) 348-0913
www.crescentchemical.com

Certificate of Analysis

Rev 0

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
CCO-2682 -10X	260542	≤ -10 °C	Methylene Chloride	9/15/2017	EPH Aromatic Check Mix, 10,000 mg/L, 5 x 1 ml

Compound	CAS No	Purity (%)	Compound Lot No	Concentration, mg/L
1,2,3-trimethylbenzene	526-73-8	99	869.3.9.2P	9999
acenaphthene	83-32-9	99	13.1.4P	10040
benzo[ghi]perylene	191-24-2	99.6	19.4.5.3P	9945
naphthalene	91-20-3	99.9	26.29.1P	9990
pyrene	129-00-0	98.5	28.29.1P	10010

Certified By: J. Zucker

All weights are traceable through N. I. S. T. Test No. 822/264157-00. Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.

Manufacturer is ISO/IEC 17025:2005 Accredited by A2LA - Certificate Number 3031.01 for Chemical Testing

Manufacturer's Quality System Audited & Registered by NSF-ISR to ISO 9001:2008

DATA SET for Review -- Deliverable Requirements

VPH by NWTPH-VPH

Fremont Analytical Work Order No. 1604080

Apex Laboratories

Project Name: A6D0013

This Data set contains the following:

- Analytical Sequence Summary for **Work Order 1604080**
- Raw Printouts and Chromatograms for Analytical Sequence(s) governing **Work Order 1604080** including: Initial and Continuing Calibration Data, Blank, Laboratory Control, Duplicates, Spikes, Samples / Batch QC
- Prep Summary and Bench Sheets

Injection Log

Data Directory: C:\GC-2\DATA\041116\2016-04-11\

SampleName	MiscInfo	Vial	Multiplier	Injection Time
1) 001F0101.D				
CLEANOUT		1	1.000	11-Apr-2016, 09:43:07
2) 001F0201.D				
CCV-A-17689	CCV O-VPH-S	1	1.000	11-Apr-2016, 10:18:34
3) 001F0301.D				
CLEANOUT		1	1.000	11-Apr-2016, 10:53:44
4) 001F0401.D				
1604078-001A	SAMP O-VPH-S	1	1.000	11-Apr-2016, 11:29:20
5) 001F0501.D				
1604078-003A	SAMP O-VPH-S	1	1.000	11-Apr-2016, 12:04:51
6) 001F0601.D				
1604079-001A	SAMP O-VPH-S	1	1.000	11-Apr-2016, 12:40:24
7) 001F0701.D				
1604079-001ADUP	DUP O-VPH-S	1	1.000	11-Apr-2016, 13:16:16
8) 001F0801.D				
1604080-001A	SAMP O-VPH-S	1	1.000	11-Apr-2016, 13:51:53
9) 001F0901.D				
1604080-003A	SAMP O-VPH-S	1	1.000	11-Apr-2016, 14:27:37
10) 001F1001.D				
1604081-001A	SAMP O-VPH-S	1	1.000	11-Apr-2016, 15:03:39
11) 001F1101.D				
1604081-003A	SAMP O-VPH-S	1	1.000	11-Apr-2016, 15:39:28
12) 001F1201.D				
1604081-003AMS	MS O-VPH-S	1	1.000	11-Apr-2016, 16:15:27
13) 001F1301.D				
1604081-003AMSD	MSD O-VPH-S	1	1.000	11-Apr-2016, 16:51:00
14) 001F1401.D				
LCS-13429	LCS O-VPH-S	1	1.000	11-Apr-2016, 17:26:40
15) 001F1501.D				
CLEANOUT		1	1.000	11-Apr-2016, 18:02:17
16) 001F1601.D				
CLEANOUT		1	1.000	11-Apr-2016, 18:37:35
17) 001F1701.D				
MB-13429	MBLK O-VPH-S	1	1.000	11-Apr-2016, 19:13:12
18) 001F1801.D				
CCV-B-13429	CCV O-VPH-S	1	1.000	11-Apr-2016, 19:48:55
19) 001F1901.D				
CLEANOUT		1	1.000	11-Apr-2016, 20:24:27
20) 001F2001.D				
CLEANOUT		1	1.000	11-Apr-2016, 20:59:53
21) 001F2101.D				
VPH 10 PPB 17869	ICAL O-VPH-S	1	1.000	11-Apr-2016, 21:35:16

22) 001F2201.D
VPH 20 PPB 17869 ICAL O-VPH-S 1 1.000 11-Apr-2016, 22:10:53

23) 001F2301.D
VPH 50 PPB 17869 ICAL O-VPH-S 1 1.000 11-Apr-2016, 22:46:19

24) 001F2401.D
VPH 100 PPB 17869 ICAL O-VPH-S 1 1.000 11-Apr-2016, 23:21:59

25) 001F2501.D
VPH 200 PPB 17869 ICAL O-VPH-S 1 1.000 11-Apr-2016, 23:58:00

26) 001F2601.D
CLEANOUT 1 1.000 12-Apr-2016, 00:33:27

27) 001F2701.D
VPH 500 PPB 17869 ICAL O-VPH-S 1 1.000 12-Apr-2016, 01:09:21

28) 001F2801.D
CLEANOUT 1 1.000 12-Apr-2016, 01:44:30

29) 001F2901.D
VPH 1000 PPB 17869 ICAL O-VPH-S 1 1.000 12-Apr-2016, 02:20:22

30) 001F3001.D
CLEANOUT 1 1.000 12-Apr-2016, 02:55:41

31) 001F3101.D
CLEANOUT 1 1.000 12-Apr-2016, 03:30:50

32) 001F3201.D
ICB- ICB O-VPH-S 1 1.000 12-Apr-2016, 04:06:12

33) 001F3301.D
ICV-17311 ICV O-VPH-S 1 1.000 12-Apr-2016, 04:41:38

Injection Log

Data Directory: C:\GC-2\DATA\041216\2016-04-12\

SampleName	MiscInfo	Vial	Multiplier	Injection Time
1) 001F0101.D				
CLEANOUT		1	1.000	12-Apr-2016, 12:55:57
2) 001F0201.D				
CCV-A-17689	CCV O-VPH-S	1	1.000	12-Apr-2016, 13:31:26
3) 001F0201-1.D				
CLEANOUT		1	1.000	12-Apr-2016, 15:35:13
4) 001F0201-2.D				
LCS-A-13429	LCS O-VPH-S	1	1.000	12-Apr-2016, 16:10:42
5) 001F0301.D				
CLEANOUT		1	1.000	12-Apr-2016, 16:45:42
6) 001F0401.D				
MB-13429	MBLK O-VPH-S	1	1.000	12-Apr-2016, 17:20:59
7) 001F0501.D				
1604078-001A	SAMP O-VPH-S	1	1.000	12-Apr-2016, 17:56:22
8) 001F0601.D				
1604078-003A	SAMP O-VPH-S	1	1.000	12-Apr-2016, 18:31:36
9) 001F0701.D				
1604078-003ADUP	DUP O-VPH-S	1	1.000	12-Apr-2016, 19:06:57
10) 001F0801.D				
1604079-001A	SAMP O-VPH-S	1	1.000	12-Apr-2016, 19:42:25
11) 001F0901.D				
1604080-001A	SAMP O-VPH-S	1	1.000	12-Apr-2016, 20:17:48
12) 001F1001.D				
1604080-003A	SAMP O-VPH-S	1	1.000	12-Apr-2016, 20:53:27
13) 001F1101.D				
1604081-001A	SAMP O-VPH-S	1	1.000	12-Apr-2016, 21:29:11
14) 001F1201.D				
1604081-003A	SAMP O-VPH-S	1	1.000	12-Apr-2016, 22:04:24
15) 001F1301.D				
1604081-001AMS	MS O-VPH-S	1	1.000	12-Apr-2016, 22:39:37
16) 001F1401.D				
1604081-001AMSD	MSD O-VPH-S	1	1.000	12-Apr-2016, 23:14:49
17) 001F1501.D				
CLEANOUT		1	1.000	12-Apr-2016, 23:50:11
18) 001F1601.D				
CCV-B-13429	CCV O-VPH-S	1	1.000	13-Apr-2016, 00:25:46

Calibration

Response Factor Report HP5890

Method Path : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\
Method File : QV041116.M
Title : BTEX
Last Update : Fri Apr 15 09:42:15 2016
Response Via : Initial Calibration

Calibration Files
1 =001F2101.D 2 =001F2201.D 3 =001F2301.D
4 =001F2401.D 5 =001F2501.D 6 =001F2701.D

		Compound	1	2	3	4	5	6	Avg		%RSD
1)	S	1,4-Difluorob...	3.718	4.784	4.508	3.229	3.352	3.907	3.842	E4	15.65
2)	S	Bromofluorobe...	5.607	7.325	8.663	8.265	7.876	9.166	8.099	E4	16.88
3)	t	MTBE		1.765	0.937	0.507	0.264	0.142	0.723	E4	90.90
4)	t	Benzene	1.350	1.947	1.546	1.259	1.206	1.474	1.490	E5	17.12
5)	t	Toluene	1.221	1.823	1.518	1.229	1.204	1.468	1.441	E5	16.43
6)	t	Ethylbenzene	1.039	1.494	1.333	1.066	1.039	1.239	1.229	E5	15.07
7)	t	m&p xylenes	1.325	1.886	1.765	1.424	1.377	1.581	1.589	E5	13.89
8)	t	o xylene	1.279	1.738	1.674	1.362	1.312	1.492	1.502	E5	12.61
9)	t	1,2,3-Trimeth...	0.895	1.292	1.412	1.196	1.161	1.162	1.222	E5	15.02
10)	t	Naphthalene	1.366	0.553	0.543	0.081	1.366	2.135	1.628	E3	109.24
11)	T	PID C8-C10	2.406	2.677	2.327	1.826	1.746	1.933	2.159	E5	15.72
12)	T	PID C10-C12	1.873	0.760	0.289	0.170	0.128	0.247	0.583	E4	105.60
13)	T	PID C12-C13		5.493	1.815	0.813	0.570	0.321	1.571	E3	127.06
14)	T	SUB C6-C8	2.427	2.729	1.864	1.442	1.381	1.672	1.901	E5	26.38
15)	T	SUB C8-C10	2.929	3.065	2.586	1.980	1.851	2.109	2.410	E5	19.47
16)	T	SUB C10-C12	1.282	1.533	1.544	1.350	1.293	1.322	1.414	E5	9.20

Signal #2 Calibration Files
1 =001F2101.D 2 =001F2201.D 3 =001F2301.D
4 =001F2401.D 5 =001F2501.D 6 =001F2701.D

		Compound	1	2	3	4	5	6	Avg		%RSD
18)		Signal 2 #2							0.000		-1.00
19)	t	MTBE 2	1.231	1.448	0.461	0.318	0.192	0.079	0.540	E3	105.12
20)	t	HEXANE	0.851	3.620	0.049	1.947	1.772	0.007	1.541	E3	86.23
21)	T	FID C5-C6	3.558	2.301	1.877	1.279	1.094	1.229	1.822	E3	48.01
22)	T	FID C6-C8	1.077	0.859	0.544	0.379	0.312	0.384	0.571	E4	50.39
23)	T	FID C8-C10	7.702	8.074	6.719	4.966	4.605	5.244	6.195	E3	21.89
24)	T	FID C10-C12		4.258	4.438	3.331	2.335	2.303	3.314	E3	27.48

(#) = Out of Range ### Number of calibration levels exceeded format ###

QV041116.M Fri Apr 15 10:48:25 2016

Calibration Report HP5890

Method Path : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\
Method File : QV041116.M
Title : BTEX
Last Update : Fri Apr 15 09:42:15 2016
Response Via : Initial Calibration

Calibration Files
1 =001F2101 2 =001F2201 3 =001F2301 4 =001F2401 5 =001F2501
6 =001F2701 7 =001F2901

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	S	1,4-Difluorobenzene	Avg	-----	3.8416 e4	-----	0.1565
2)	S	Bromofluorobenzene	Avg	-----	8.0995 e4	-----	0.1688
3)	t	MTBE	Quad	3.7819 e5	1.0482 e3	-0.7832	0.9168
4)	t	Benzene	Avg	-----	1.4899 e5	-----	0.1712
5)	t	Toluene	Avg	-----	1.4413 e5	-----	0.1643
6)	t	Ethylbenzene	Avg	-----	1.2285 e5	-----	0.1507
7)	t	m&p xylenes	Avg	-----	1.5894 e5	-----	0.1389
8)	t	o xylene	Avg	-----	1.5023 e5	-----	0.1261
9)	t	1,2,3-Trimethylbe...	Avg	-----	1.2223 e5	-----	0.1502
10)	t	Naphthalene	Quad	5.4731 e4	-8.8649 e2	6.1652	0.9986
11)	T	PID C8-C10	Lin	-1.0724 e7	2.1683 e5	-----	0.9952
12)	T	PID C10-C12	Quad	2.1809 e5	-1.6275 e3	7.5233	0.9997
13)	T	PID C12-C13	Quad	9.9441 e4	-6.4069 e1	0.3789	0.9929
14)	T	SUB C6-C8	Lin	-3.6226 e6	1.7808 e5	-----	0.9965
15)	T	SUB C8-C10	Lin	-7.4288 e6	2.3228 e5	-----	0.9957
16)	T	SUB C10-C12	Quad	1.4816 e6	1.0683 e5	4.8932 e1	0.9997

Signal #2

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
18)		Signal 2 #2	Lin	-----	-----	-----	0.0000
19)	t	MTBE 2	Lin	2.4577 e4	2.7445 e1	-----	0.6828
20)	t	HEXANE	Lin	-1.4587 e5	2.2342 e3	-----	0.7672
21)	T	FID C5-C6	Lin	-1.6164 e4	1.3767 e3	-----	0.9925
22)	T	FID C6-C8	Lin	-8.5883 e4	4.2948 e3	-----	0.9911
23)	T	FID C8-C10	Lin	-3.0476 e5	5.9591 e3	-----	0.9936
24)	T	FID C10-C12	Quad	2.8137 e5	1.1145 e3	0.9786	0.9983

QV041116.M Fri Apr 15 10:48:50 2016

Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F2101.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 11-Apr-2016, 21:35:16
Operator : BC
Sample : VPH 10 PPB 17869
Misc : ICAL O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 09:59:58 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1) S	1,4-Difluorobenzene	8.717	1859106	48.394	ug/l	
2) S	Bromofluorobenzene	16.436	2803631	34.615	ug/l	
	Target Compounds					
3) t	MTBE	5.868f	205356	1486.774	ug/l	m
4) t	Benzene	8.212	1332943	8.947	ug/l	m
5) t	Toluene	11.383	1220627	8.469	ug/l	
6) t	Ethylbenzene	14.345	1038937	8.457	ug/l	
7) t	m&p xylenes	14.649	2650566	16.676	ug/l	
8) t	o xylene	15.354	1279219	8.515	ug/l	
9) t	1,2,3-Trimethylbenzene	19.202	895270	7.325	ug/l	
10) t	Naphthalene	22.842	13663	BelowCal	ug/l	
11) T	PID C8-C10	16.435	10367413	97.275	ug/l	m
12) T	PID C10-C12	22.838f	116369	BelowCal	ug/l	m
13) T	PID C12-C13	26.885	72702	BelowCal	ug/l	m
14) T	SUB C6-C8	8.715f	5184380	49.455	ug/l	m
15) T	SUB C8-C10	16.435	8456161	68.389	ug/l	m
16) T	SUB C10-C12	19.201	1244826	BelowCal	ug/l	m
18)	Signal 2 #2	0.000	0	N.D.		
19) t	MTBE 2	5.874	12313	N.D.	ug/l	
20) t	HEXANE	6.328	8506	69.097	ug/l	
21) T	FID C5-C6	6.494	112635	93.558	ug/l	m
22) T	FID C6-C8	8.718f	296945	89.139	ug/l	m
23) T	FID C8-C10	14.654	319818	104.812	ug/l	m
24) T	FID C10-C12	19.210	193156	BelowCal	ug/l	m

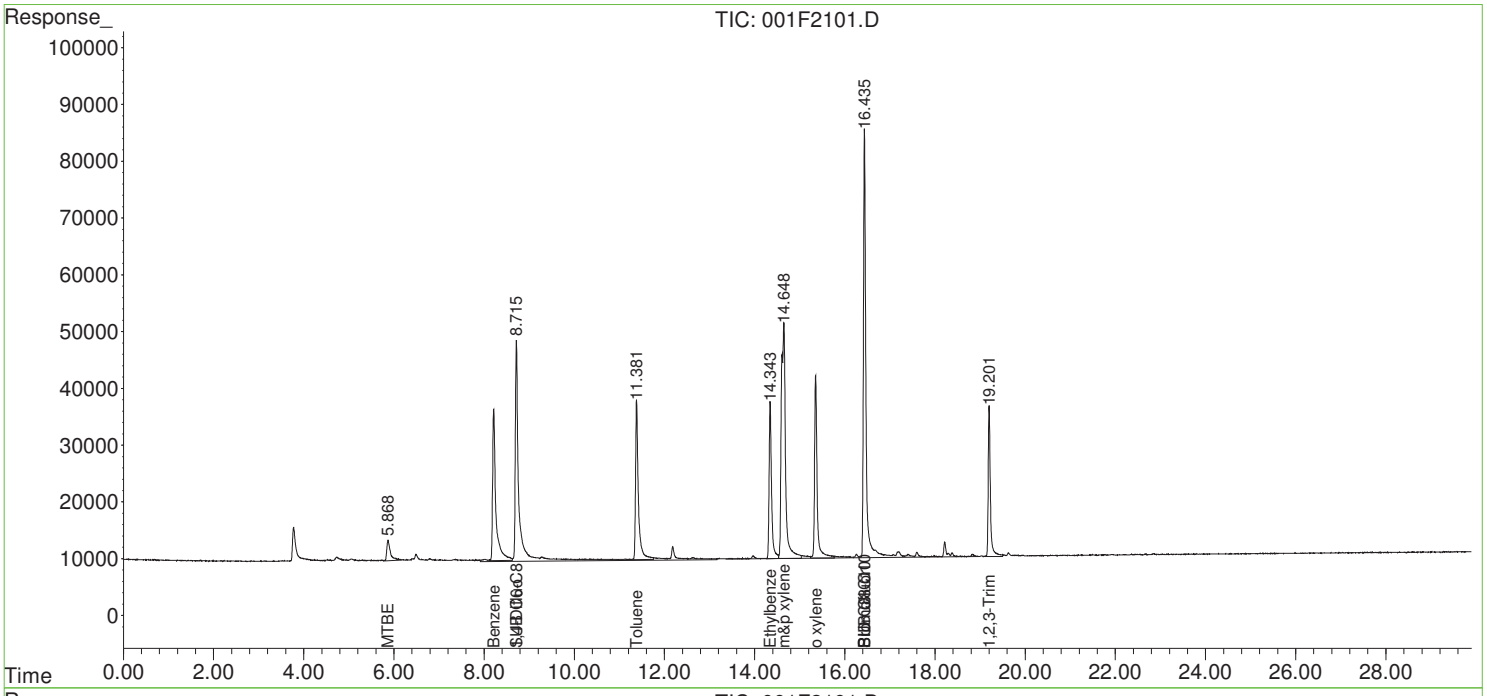
(f)=RT Delta > 1/2 Window (m)=manual int.

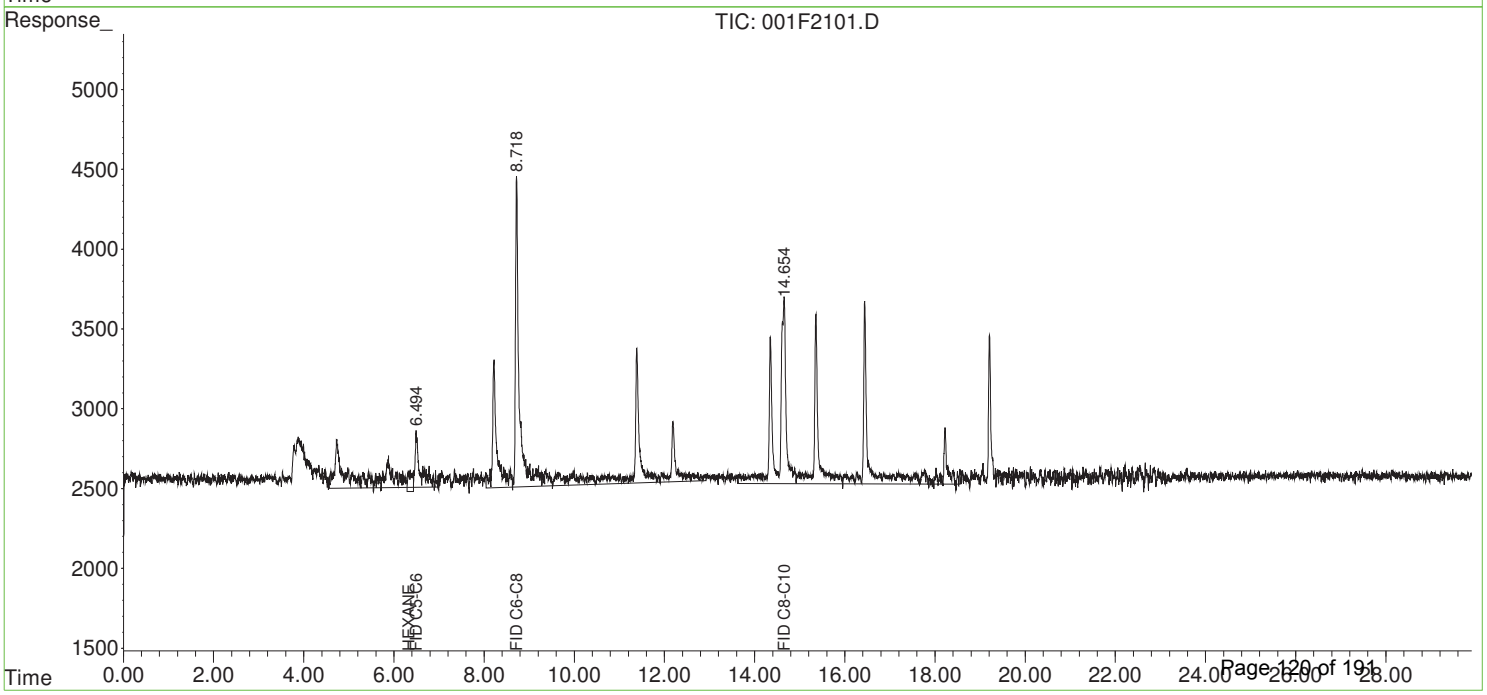
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F2101.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 11-Apr-2016, 21:35:16
Operator : BC
Sample : VPH 10 PPB 17869
Misc : ICAL O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 09:59:58 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\040816\2016-05-03\
Data File : 001F0101.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 03-May-2016, 15:47:59
Operator : BC
Sample : VPH 10 PPB 18064 (Sig #1); CLEANOUT (Sig #2)
Misc : ICAL O-VPH-W
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: May 04 14:16:01 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QVPH050316.M
Quant Title : BTEX
QLast Update : Wed May 04 14:12:03 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1,4-Difluorobenzene	8.604	2876724	51.097	ug/l	
2)	S	Bromofluorobenzene	16.408	7520416	48.175	ug/l	
		Target Compounds					
3)	t	MTBE	5.679	460541	6.496	ug/l	
4)	t	Benzene	8.083	1931591	10.549	ug/l	
5)	t	Toluene	11.311	1947581	11.180	ug/l	
6)	t	Ethylbenzene	14.305	1786874	5.471	ug/l	
7)	t	m&p xylenes	14.612	4539854	4.445	ug/l	m
8)	t	o xylene	15.320	2002645	1.830	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.189	2245701	5.899	ug/l	
10)	t	Naphthalene	22.843	1547910	18.618	ug/l	
11)	T	PID C8-C10	16.406	20880209	28.097	ug/l	m
12)	T	PID C10-C12	22.841f	2062524	13.644	ug/l	m
13)	T	PID C12-C13	25.830f	816192	22.113	ug/l	m
14)	T	SUB C6-C8	8.602f	8170069	10.666	ug/l	m
15)	T	SUB C8-C10	16.406	17549056	16.336	ug/l	m
16)	T	SUB C10-C12	19.187	3623195	N.D.	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.898	2915	83.992	ug/l	
20)	t	HEXANE	6.329	52394	9.529	ug/l	
21)	T	FID C5-C6	6.326	154268	34.590	ug/l	m
22)	T	FID C6-C8	8.605f	453903	22.041	ug/l	m
23)	T	FID C8-C10	16.411	591397	46.554	ug/l	m
24)	T	FID C10-C12	19.193	246731	14.034	ug/l	m

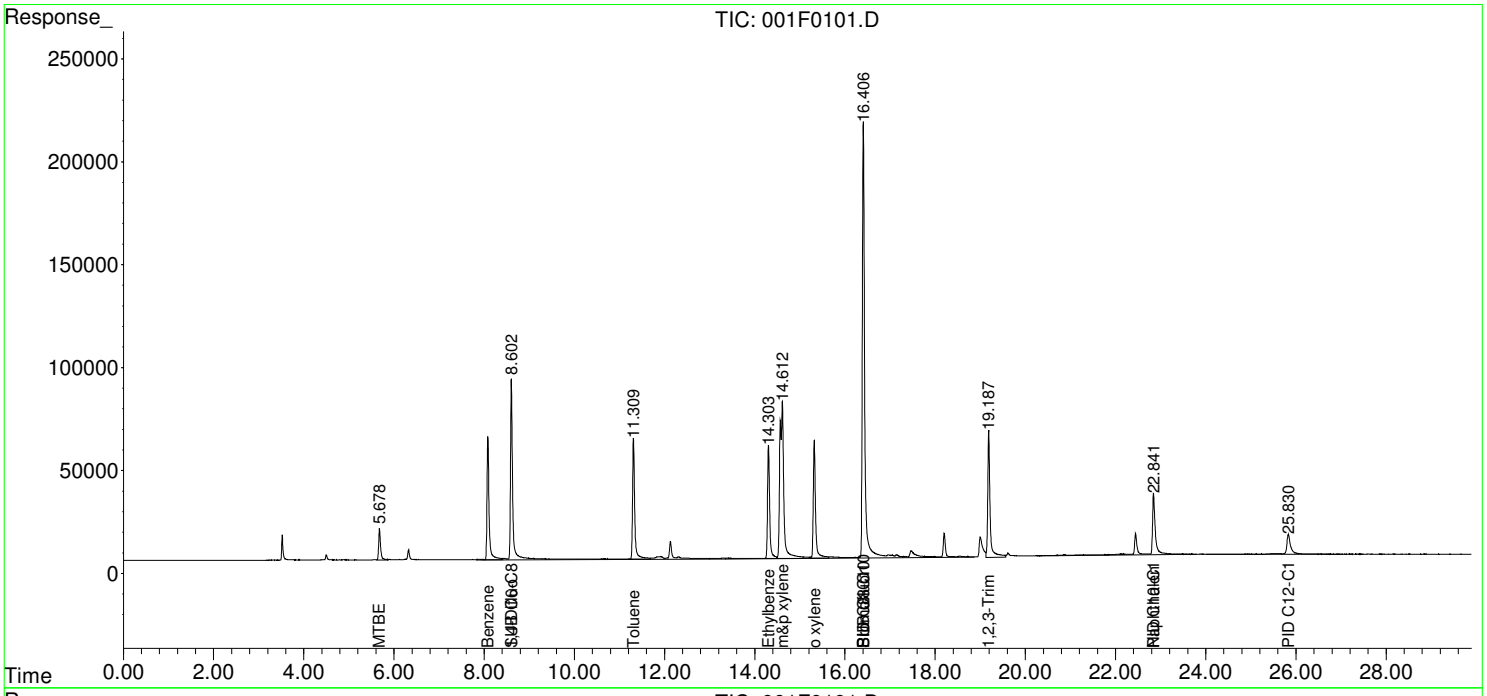
(f)=RT Delta > 1/2 Window (m)=manual int.

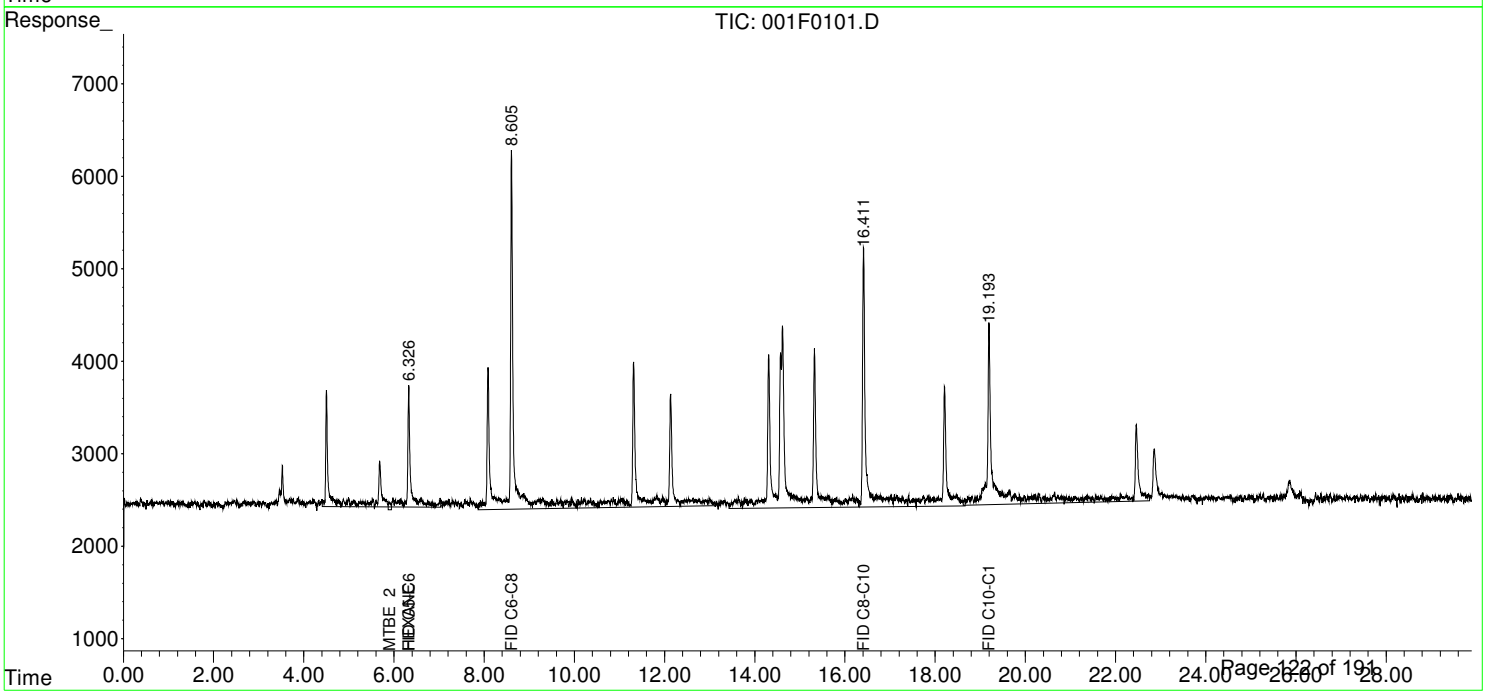
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\040816\2016-05-03\
Data File : 001F0101.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 03-May-2016, 15:47:59
Operator : BC
Sample : VPH 10 PPB 18064 (Sig #1); CLEANOUT (Sig #2)
Misc : ICAL O-VPH-W
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: May 04 14:16:01 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QVPH050316.M
Quant Title : BTEX
QLast Update : Wed May 04 14:12:03 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F2201.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 11-Apr-2016, 22:10:53
Operator : BC
Sample : VPH 20 PPB 17869
Misc : ICAL O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:00:09 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

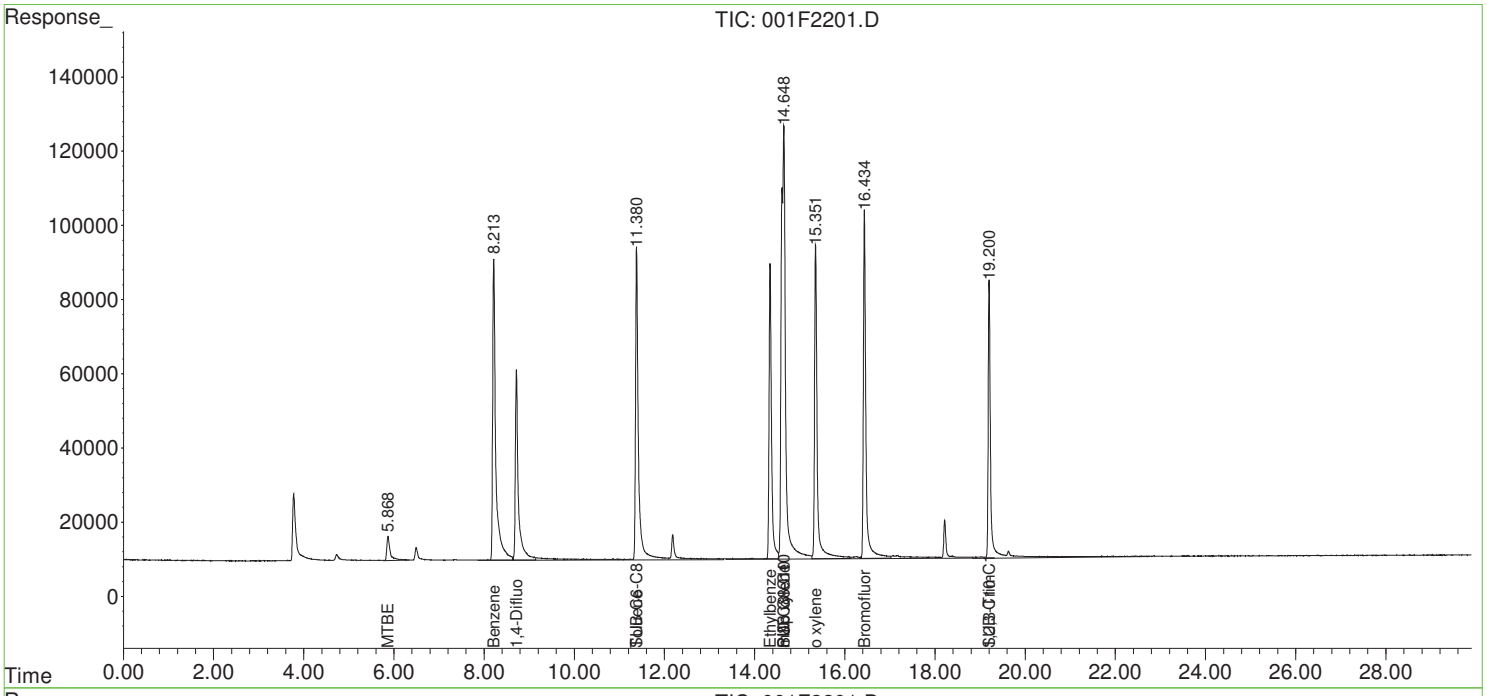
		Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds							
1)	S	1,4-Difluorobenzene	8.717	2392148	62.269	ug/l	
2)	S	Bromofluorobenzene	16.435	3662562	45.220	ug/l	
Target Compounds							
3)	t	MTBE	5.868f	348330	1366.257	ug/l	m
4)	t	Benzene	8.215	3893258	26.131	ug/l	
5)	t	Toluene	11.382	3646569	25.300	ug/l	
6)	t	Ethylbenzene	14.343	2988127	24.323	ug/l	
7)	t	m&p xylenes	14.649	7544197	47.466	ug/l	
8)	t	o xylene	15.353	3475384	23.134	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.202	2584514	21.146	ug/l	
10)	t	Naphthalene	22.869	11054	BelowCal	ug/l	
11)	T	PID C8-C10	14.648	21569301	148.938	ug/l	m
12)	T	PID C10-C12	22.869	115582	BelowCal	ug/l	m
13)	T	PID C12-C13	26.473	74910	BelowCal	ug/l	m
14)	T	SUB C6-C8	11.380	10920845	81.668	ug/l	m
15)	T	SUB C8-C10	14.648	18629098	112.186	ug/l	m
16)	T	SUB C10-C12	19.200	3182248	15.804	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.878	28969	160.057	ug/l	
20)	t	HEXANE	6.501	72396	97.693	ug/l	
21)	T	FID C5-C6	6.499	150903	121.356	ug/l	m
22)	T	FID C6-C8	8.721f	495355	135.337	ug/l	m
23)	T	FID C8-C10	14.655	712168	170.653	ug/l	m
24)	T	FID C10-C12	19.208	179775	BelowCal	ug/l	m

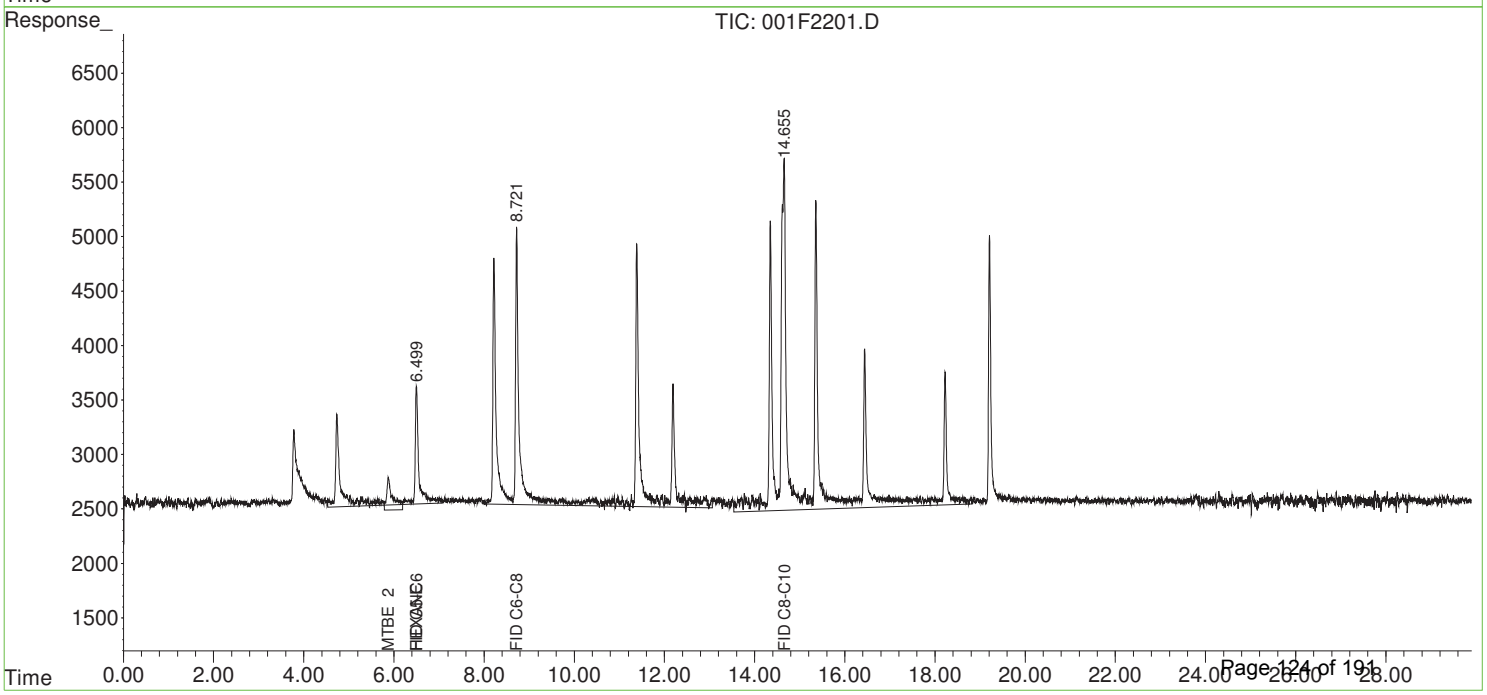
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F2201.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 11-Apr-2016, 22:10:53
Operator : BC
Sample : VPH 20 PPB 17869
Misc : ICAL O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:00:09 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\040816\2016-05-03\
Data File : 001F0201.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 03-May-2016, 16:23:58
Operator : BC
Sample : VPH 20 PPB
Misc : ICAL O-VPH-W
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: May 04 14:16:26 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QVPH050316.M
Quant Title : BTEX
QLast Update : Wed May 04 14:12:03 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1,4-Difluorobenzene	8.603	2902939	51.563	ug/l	
2)	S	Bromofluorobenzene	16.409	8047781	51.554	ug/l	
		Target Compounds					
3)	t	MTBE	5.673	917358	21.528	ug/l	
4)	t	Benzene	8.081	4244604	23.182	ug/l	
5)	t	Toluene	11.312	4232389	24.296	ug/l	
6)	t	Ethylbenzene	14.306	3861324	21.419	ug/l	
7)	t	m&p xylenes	14.614	9331579	36.106	ug/l	m
8)	t	o xylene	15.322	4352538	19.279	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.189	4362647	21.913	ug/l	
10)	t	Naphthalene	22.841	2476478	27.890	ug/l	m
11)	T	PID C8-C10	16.407	33228147	90.816	ug/l	m
12)	T	PID C10-C12	22.841f	3361977	25.398	ug/l	m
13)	T	PID C12-C13	25.830f	1325445	32.619	ug/l	m
14)	T	SUB C6-C8	8.080f	12841019	37.722	ug/l	m
15)	T	SUB C8-C10	16.407	27512716	64.313	ug/l	m
16)	T	SUB C10-C12	19.187	6249919	15.101	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.869	2489	83.716	ug/l	
20)	t	HEXANE	6.325	94933	20.815	ug/l	
21)	T	FID C5-C6	6.323	298495	83.736	ug/l	m
22)	T	FID C6-C8	8.605f	674992	71.908	ug/l	m
23)	T	FID C8-C10	14.619	886662	101.773	ug/l	m
24)	T	FID C10-C12	19.194	475396	83.819	ug/l	m

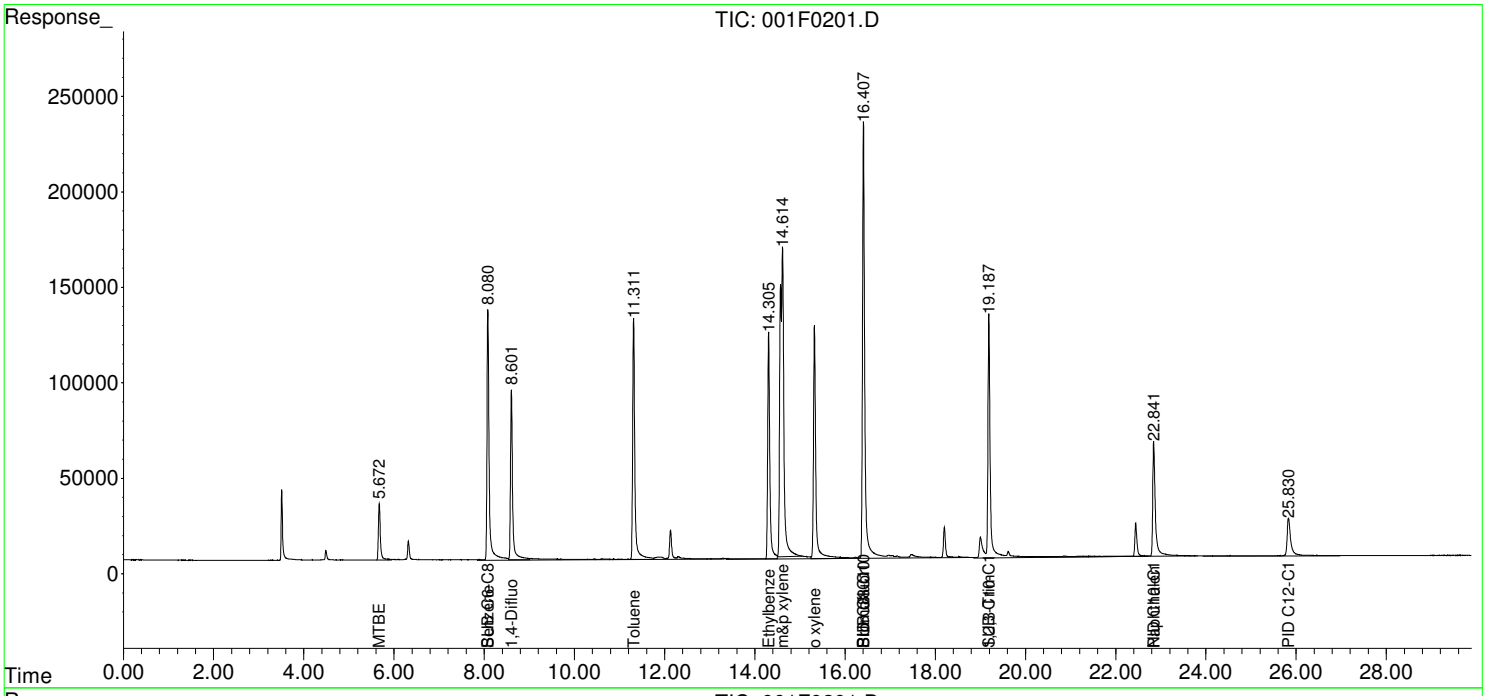
(f)=RT Delta > 1/2 Window (m)=manual int.

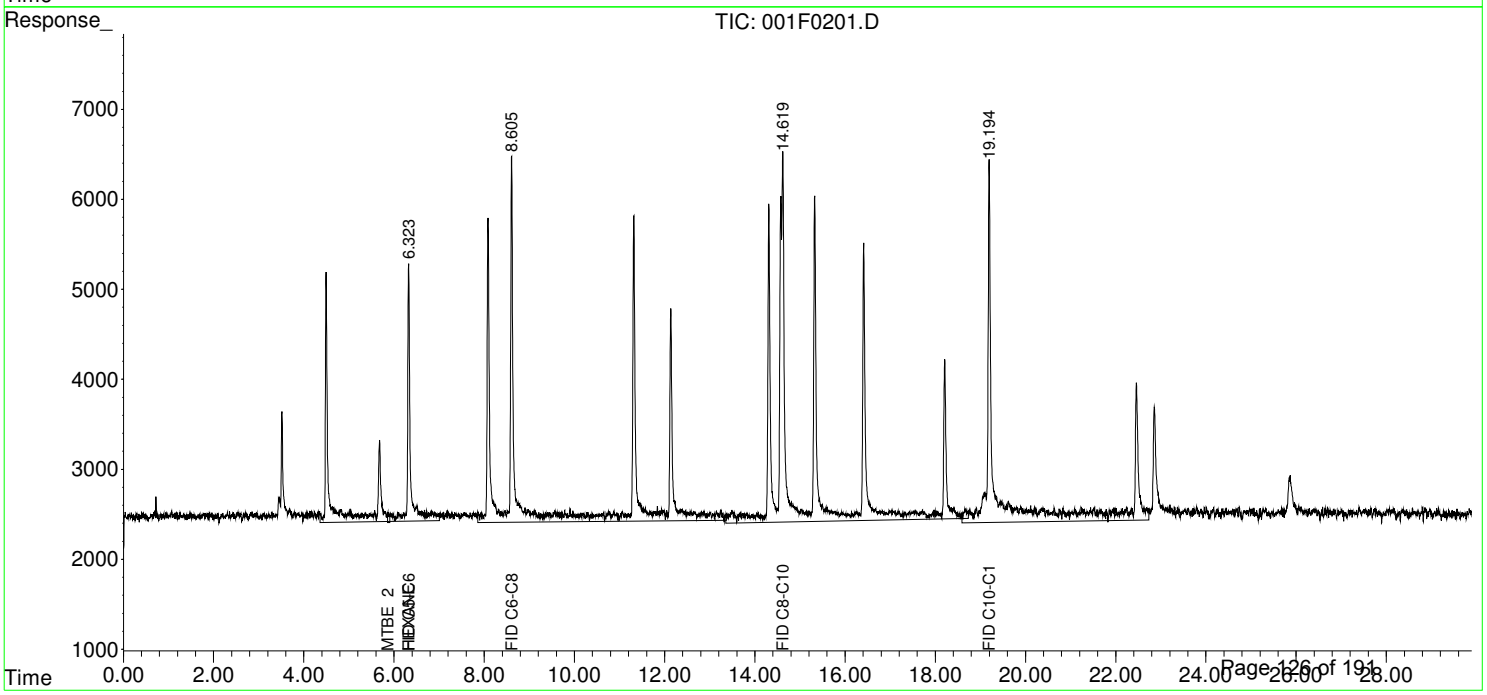
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\040816\2016-05-03\
Data File : 001F0201.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 03-May-2016, 16:23:58
Operator : BC
Sample : VPH 20 PPB
Misc : ICAL O-VPH-W
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: May 04 14:16:26 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QVPH050316.M
Quant Title : BTEX
QLast Update : Wed May 04 14:12:03 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F2301.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 11-Apr-2016, 22:46:19
Operator : BC
Sample : VPH 50 PPB 17869
Misc : ICAL O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:00:18 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds							
1)	S	1,4-Difluorobenzene	8.718	2254073	58.675	ug/l	
2)	S	Bromofluorobenzene	16.436	4331517	53.479	ug/l	
Target Compounds							
3)	t	MTBE	5.868f	477995	103.163	ug/l	m
4)	t	Benzene	8.216	7728166	51.871	ug/l	
5)	t	Toluene	11.383	7590334	52.663	ug/l	
6)	t	Ethylbenzene	14.345	6665807	54.259	ug/l	
7)	t	m&p xylenes	14.649	17653586	111.071	ug/l	
8)	t	o xylene	15.355	8370216	55.717	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.203	7060279	57.765	ug/l	
10)	t	Naphthalene	22.865	27163	45.490	ug/l	
11)	T	PID C8-C10	14.648	46983978	266.149	ug/l	m
12)	T	PID C10-C12	20.168f	181666	25.350	ug/l	m
13)	T	PID C12-C13	26.724	100280	181.295	ug/l	m
14)	T	SUB C6-C8	11.382	19292063	128.677	ug/l	m
15)	T	SUB C8-C10	14.648	40921788	208.161	ug/l	m
16)	T	SUB C10-C12	19.202	7641872	56.214	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.873	23031	N.D.	ug/l	
20)	t	HEXANE	0.000	0	N.D.	ug/l	d
21)	T	FID C5-C6	6.499	300711	230.175	ug/l	m
22)	T	FID C6-C8	11.385	801912	206.716	ug/l	m
23)	T	FID C8-C10	14.652	1311134	271.167	ug/l	m
24)	T	FID C10-C12	19.208	375865	79.266	ug/l	m

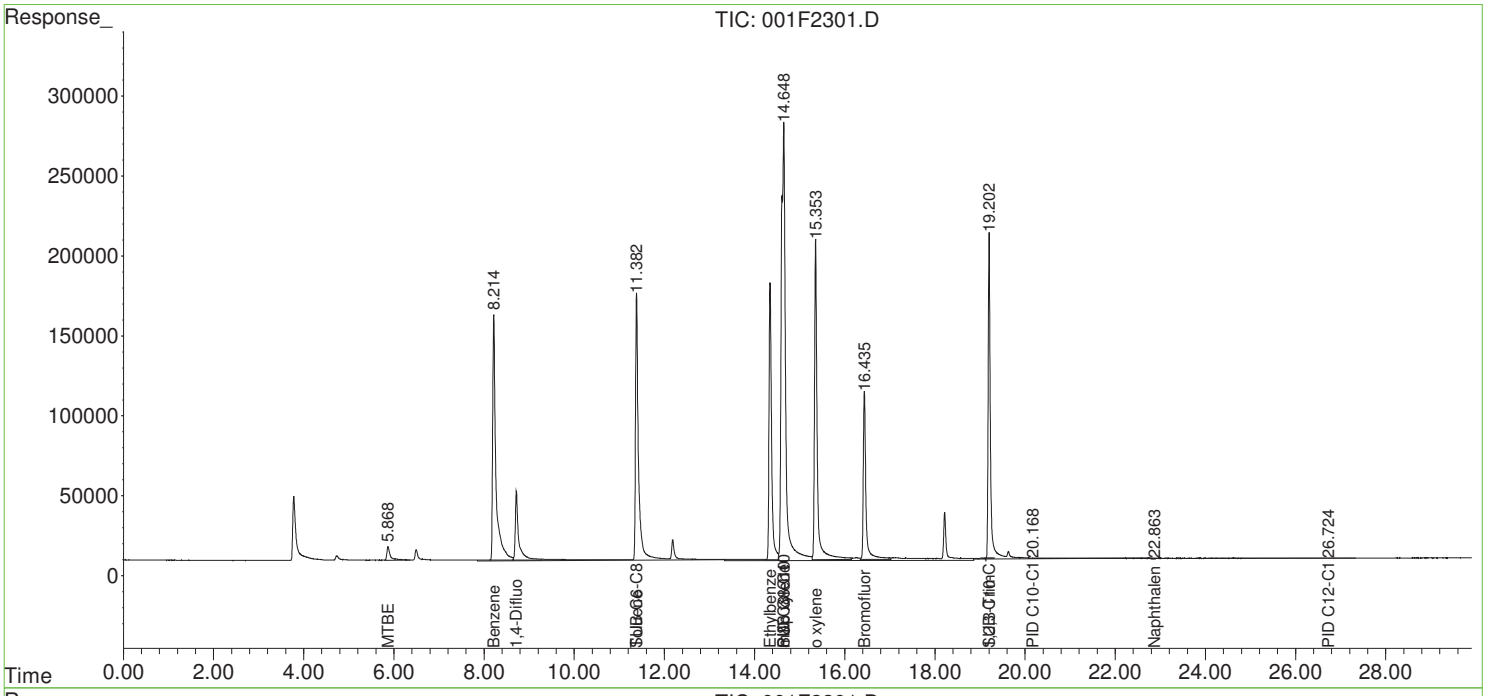
(f)=RT Delta > 1/2 Window (m)=manual int.

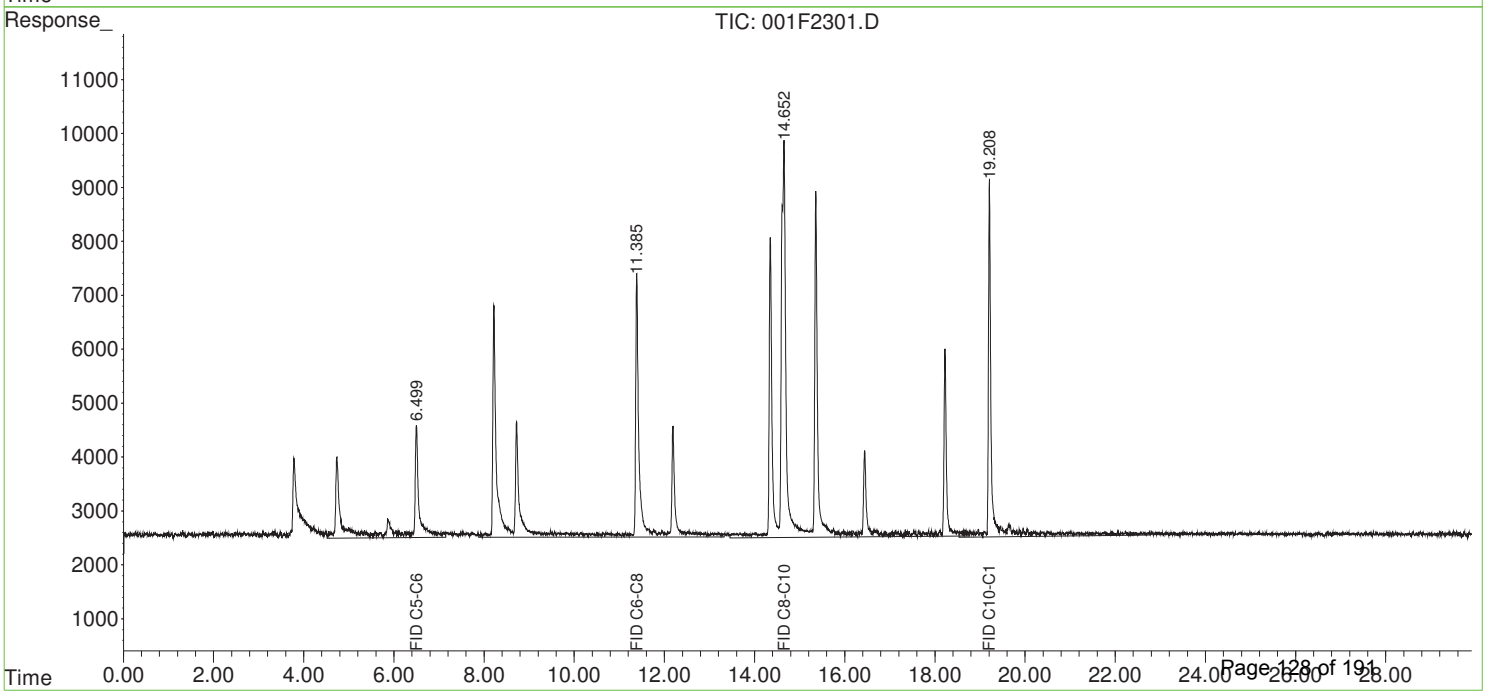
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F2301.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 11-Apr-2016, 22:46:19
Operator : BC
Sample : VPH 50 PPB 17869
Misc : ICAL O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:00:18 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\040816\2016-05-03\
Data File : 001F0301.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 03-May-2016, 17:00:02
Operator : BC
Sample : VPH 50 PPB
Misc : ICAL O-VPH-W
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: May 04 14:16:35 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QVPH050316.M
Quant Title : BTEX
QLast Update : Wed May 04 14:12:03 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1,4-Difluorobenzene	8.603	2902128	51.548	ug/l	
2)	S	Bromofluorobenzene	16.410	7912058	50.684	ug/l	
		Target Compounds					
3)	t	MTBE	5.674	1795664	49.598	ug/l	
4)	t	Benzene	8.083	9440952	51.562	ug/l	
5)	t	Toluene	11.314	8646347	49.634	ug/l	
6)	t	Ethylbenzene	14.308	7603244	50.186	ug/l	
7)	t	m&p xylenes	14.616	18394622	95.990	ug/l	m
8)	t	o xylene	15.323	8504156	50.107	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.191	8190144	50.866	ug/l	
10)	t	Naphthalene	22.844	5279135	55.877	ug/l	
11)	T	PID C8-C10	14.616	55311501	202.984	ug/l	m
12)	T	PID C10-C12	22.842f	7058713	58.839	ug/l	m
13)	T	PID C12-C13	25.831f	2593174	58.772	ug/l	m
14)	T	SUB C6-C8	8.081f	24101715	102.949	ug/l	m
15)	T	SUB C8-C10	14.616	46480552	155.648	ug/l	m
16)	T	SUB C10-C12	19.189	11140073	47.027	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.878	5051	85.373	ug/l	
20)	t	HEXANE	6.325	219049	53.743	ug/l	
21)	T	FID C5-C6	6.323	538701	165.587	ug/l	m
22)	T	FID C6-C8	8.084f	1064112	159.673	ug/l	m
23)	T	FID C8-C10	14.620	1450962	207.305	ug/l	m
24)	T	FID C10-C12	19.195	568465	112.222	ug/l	m

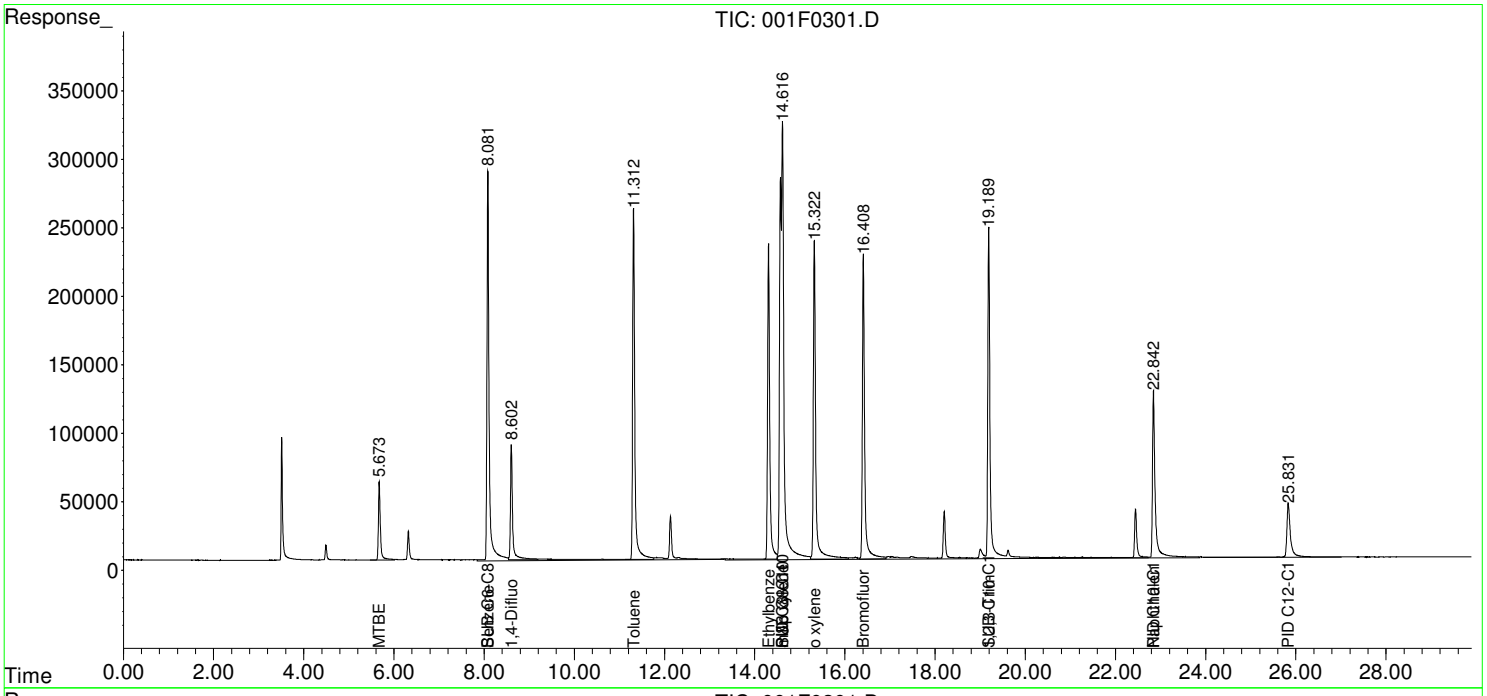
(f)=RT Delta > 1/2 Window (m)=manual int.

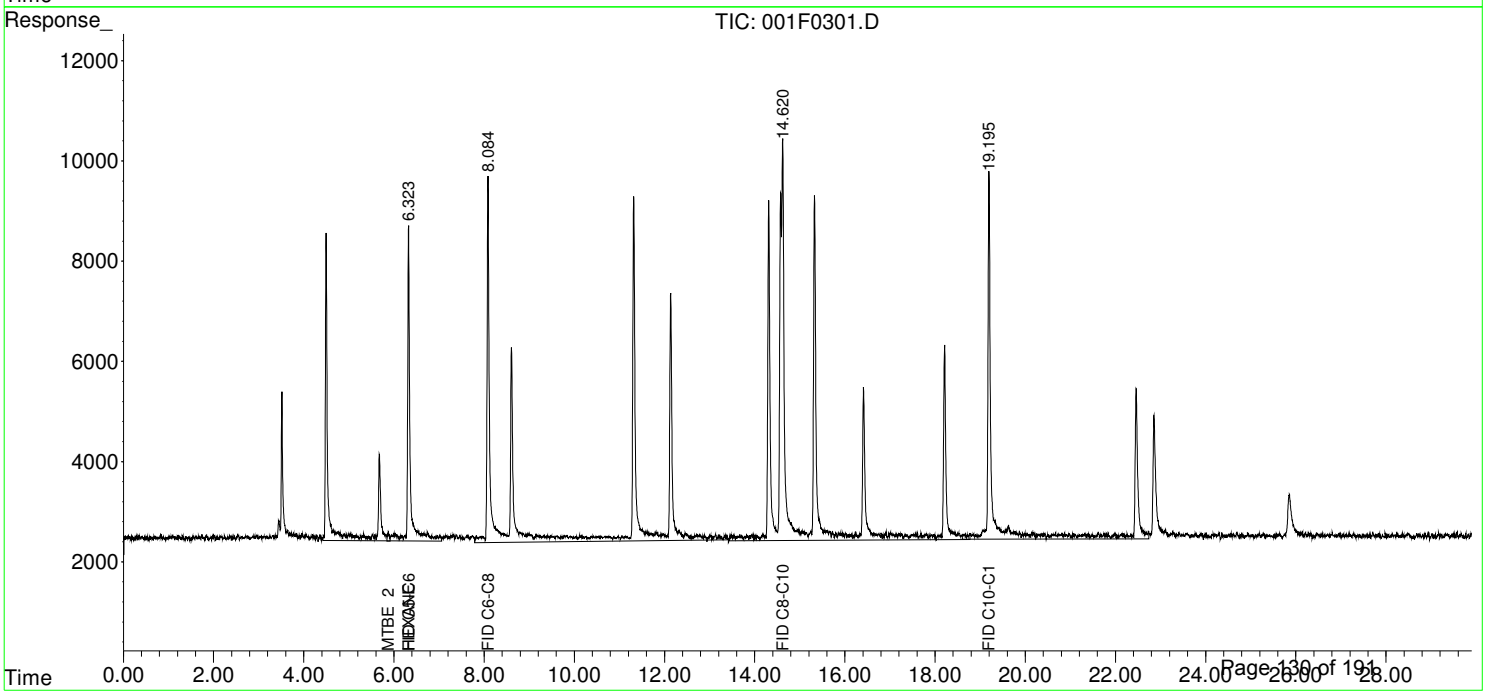
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\040816\2016-05-03\
Data File : 001F0301.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 03-May-2016, 17:00:02
Operator : BC
Sample : VPH 50 PPB
Misc : ICAL O-VPH-W
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: May 04 14:16:35 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QVPH050316.M
Quant Title : BTEX
QLast Update : Wed May 04 14:12:03 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F2401.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 11-Apr-2016, 23:21:59
Operator : BC
Sample : VPH 100 PPB 17869
Misc : ICAL O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:00:29 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds							
1)	S	1,4-Difluorobenzene	8.721	1574721	40.991	ug/l	m
2)	S	Bromofluorobenzene	16.437	4132520	51.022	ug/l	
Target Compounds							
3)	t	MTBE	5.877f	508293	138.434	ug/l	m
4)	t	Benzene	8.220	12720467	85.378	ug/l	m
5)	t	Toluene	11.386	12290046	85.270	ug/l	
6)	t	Ethylbenzene	14.347	10657588	86.752	ug/l	
7)	t	m&p xylenes	14.651	28483412	179.208	ug/l	
8)	t	o xylene	15.357	13616576	90.640	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.205	11958267	97.838	ug/l	
10)	t	Naphthalene	22.908	38144	22.112	ug/l	m
11)	T	PID C8-C10	14.650	72978121	386.034	ug/l	m
12)	T	PID C10-C12	20.352f	232822	225.028	ug/l	m
13)	T	PID C12-C13	26.450	97054	55.403	ug/l	m
14)	T	SUB C6-C8	11.384	29334028	185.067	ug/l	m
15)	T	SUB C8-C10	14.650	60096421	290.712	ug/l	m
16)	T	SUB C10-C12	19.203	13501433	107.242	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.889	31822	263.980	ug/l	
20)	t	HEXANE	6.509	194736	152.451	ug/l	
21)	T	FID C5-C6	6.507	378442	286.637	ug/l	m
22)	T	FID C6-C8	11.388	1209428	301.603	ug/l	m
23)	T	FID C8-C10	14.655	1985282	384.297	ug/l	m
24)	T	FID C10-C12	19.209	527537	189.379	ug/l	m

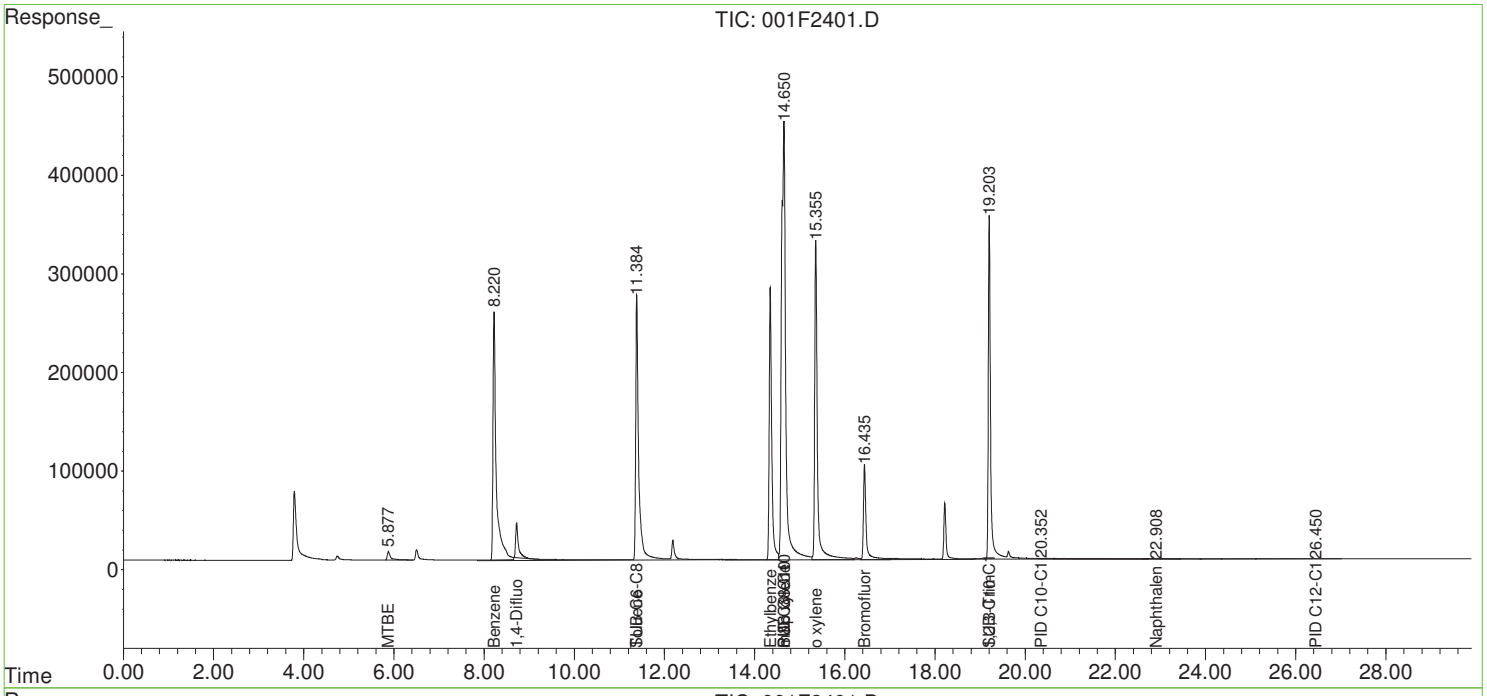
(f)=RT Delta > 1/2 Window (m)=manual int.

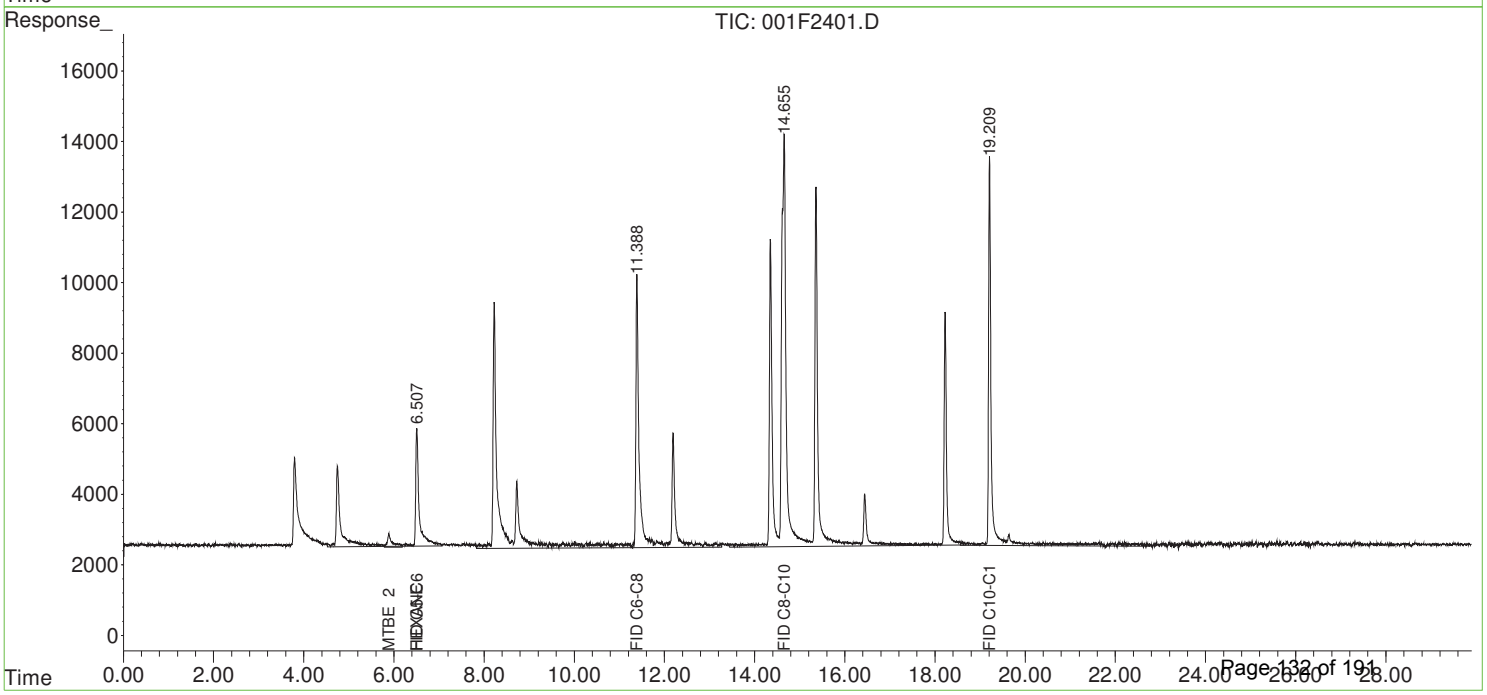
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F2401.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 11-Apr-2016, 23:21:59
Operator : BC
Sample : VPH 100 PPB 17869
Misc : ICAL O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:00:29 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\040816\2016-05-03\
Data File : 001F0401.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 03-May-2016, 17:36:12
Operator : BC
Sample : VPH 100 PPB
Misc : ICAL O-VPH-W
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: May 04 14:16:43 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QVPH050316.M
Quant Title : BTEX
QLast Update : Wed May 04 14:12:03 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

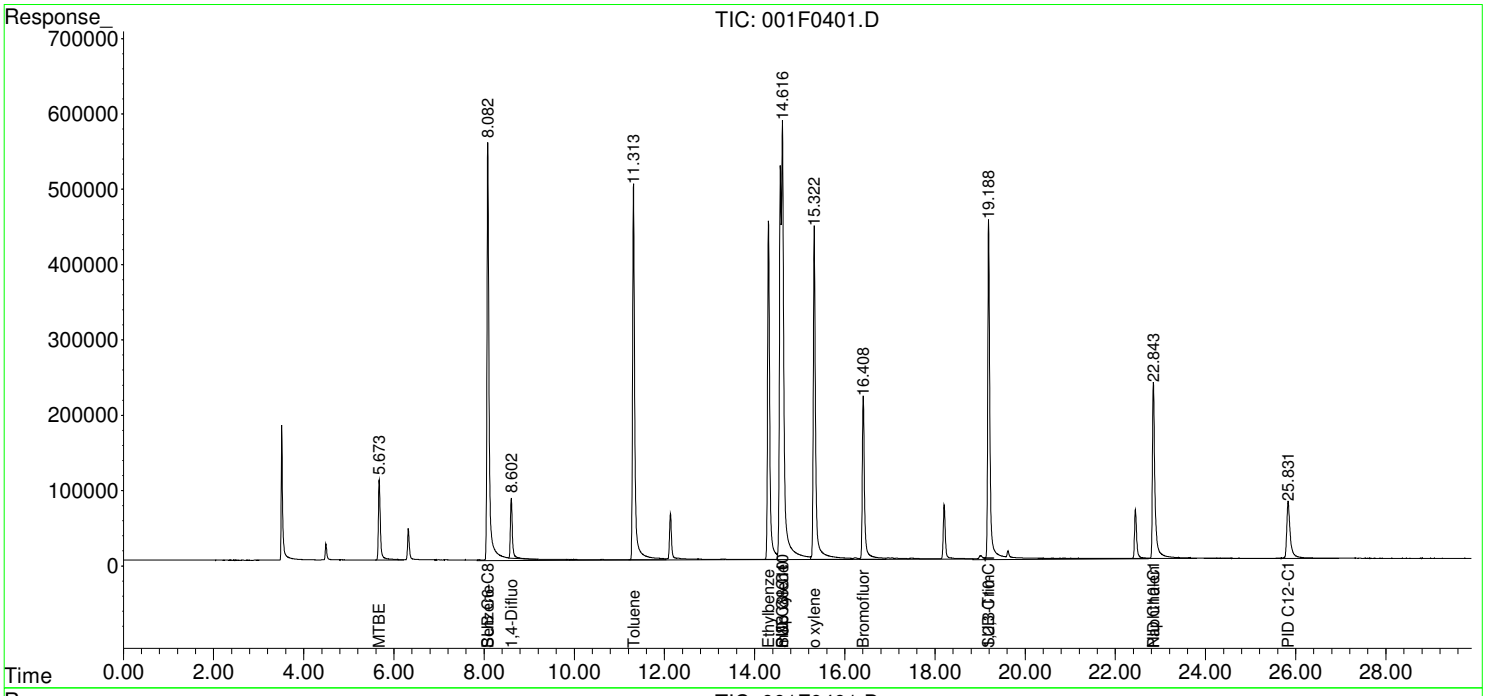
		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1,4-Difluorobenzene	8.602	2495670	44.329	ug/l	m
2)	S	Bromofluorobenzene	16.410	7817498	50.079	ug/l	
		Target Compounds					
3)	t	MTBE	5.675	3444627	99.684	ug/l	
4)	t	Benzene	8.083	18569772	101.420	ug/l	
5)	t	Toluene	11.314	17254371	99.047	ug/l	
6)	t	Ethylbenzene	14.309	14770146	105.284	ug/l	
7)	t	m&p xylenes	14.616	34311573	201.160	ug/l	m
8)	t	o xylene	15.323	16277366	107.827	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.190	15083526	103.012	ug/l	
10)	t	Naphthalene	22.845	9690743	99.931	ug/l	
11)	T	PID C8-C10	14.616	98175495	420.703	ug/l	m
12)	T	PID C10-C12	22.843f	11881701	102.467	ug/l	m
13)	T	PID C12-C13	25.831f	4451573	97.110	ug/l	m
14)	T	SUB C6-C8	8.082f	43487348	215.240	ug/l	m
15)	T	SUB C8-C10	14.616	78862004	311.572	ug/l	m
16)	T	SUB C10-C12	19.188	20416335	107.590	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.898	6792	86.498	ug/l	
20)	t	HEXANE	6.325	398970	101.477	ug/l	
21)	T	FID C5-C6	6.323	979084	315.651	ug/l	m
22)	T	FID C6-C8	8.085f	1591309	278.581	ug/l	m
23)	T	FID C8-C10	14.620	2470742	398.019	ug/l	m
24)	T	FID C10-C12	19.195	913013	217.372	ug/l	m

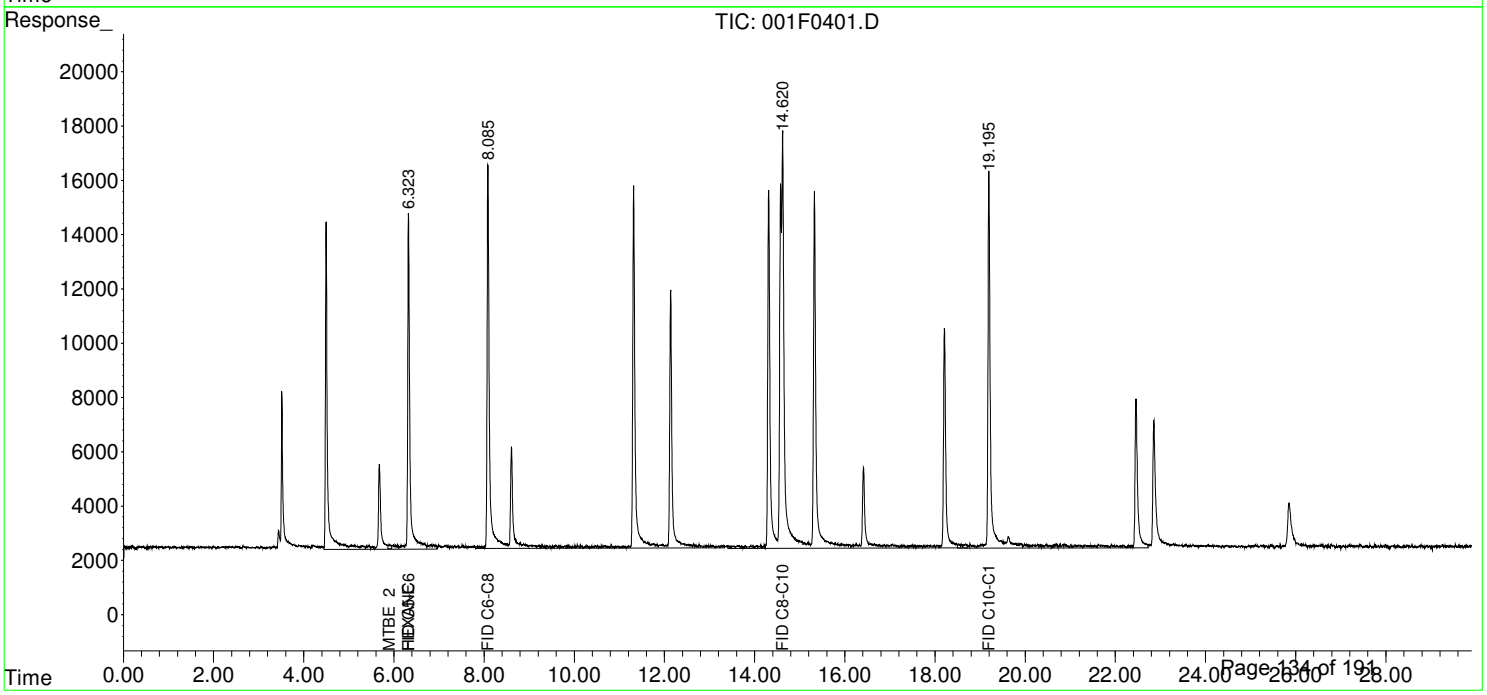
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\GC-2\DATA\040816\2016-05-03\
Data File : 001F0401.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 03-May-2016, 17:36:12
Operator : BC
Sample : VPH 100 PPB
Misc : ICAL O-VPH-W
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: May 04 14:16:43 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QVPH050316.M
Quant Title : BTEX
QLast Update : Wed May 04 14:12:03 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F2501.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 11-Apr-2016, 23:58:00
Operator : BC
Sample : VPH 200 PPB 17869
Misc : ICAL O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:00:39 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1,4-Difluorobenzene	8.720	1643007	42.769	ug/l	m
2)	S	Bromofluorobenzene	16.436	4781181	59.031	ug/l	
		Target Compounds					
3)	t	MTBE	5.876f	549624	190.723	ug/l	m
4)	t	Benzene	8.220	24154360	162.122	ug/l	m
5)	t	Toluene	11.385	24082820	167.089	ug/l	
6)	t	Ethylbenzene	14.346	20784395	169.183	ug/l	
7)	t	m&p xylenes	14.651	55099098	346.666	ug/l	
8)	t	o xylene	15.356	26241095	174.677	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.204	23223751	190.008	ug/l	
10)	t	Naphthalene	22.847	273195	273.399	ug/l	
11)	T	PID C8-C10	14.650	138628465	688.811	ug/l	m
12)	T	PID C10-C12	22.446f	391741	294.659	ug/l	m
13)	T	PID C12-C13	24.064f	106152	242.207	ug/l	m
14)	T	SUB C6-C8	11.383	56214860	336.015	ug/l	m
15)	T	SUB C8-C10	14.650	112612921	516.808	ug/l	m
16)	T	SUB C10-C12	19.203	25853125	208.260	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.885	38421	504.430	ug/l	
20)	t	HEXANE	6.510	354383	223.907	ug/l	
21)	T	FID C5-C6	6.507	652645	485.815	ug/l	m
22)	T	FID C6-C8	11.387	1900209	462.445	ug/l	m
23)	T	FID C8-C10	14.654	3686114	669.716	ug/l	m
24)	T	FID C10-C12	19.208	930006	424.074	ug/l	m

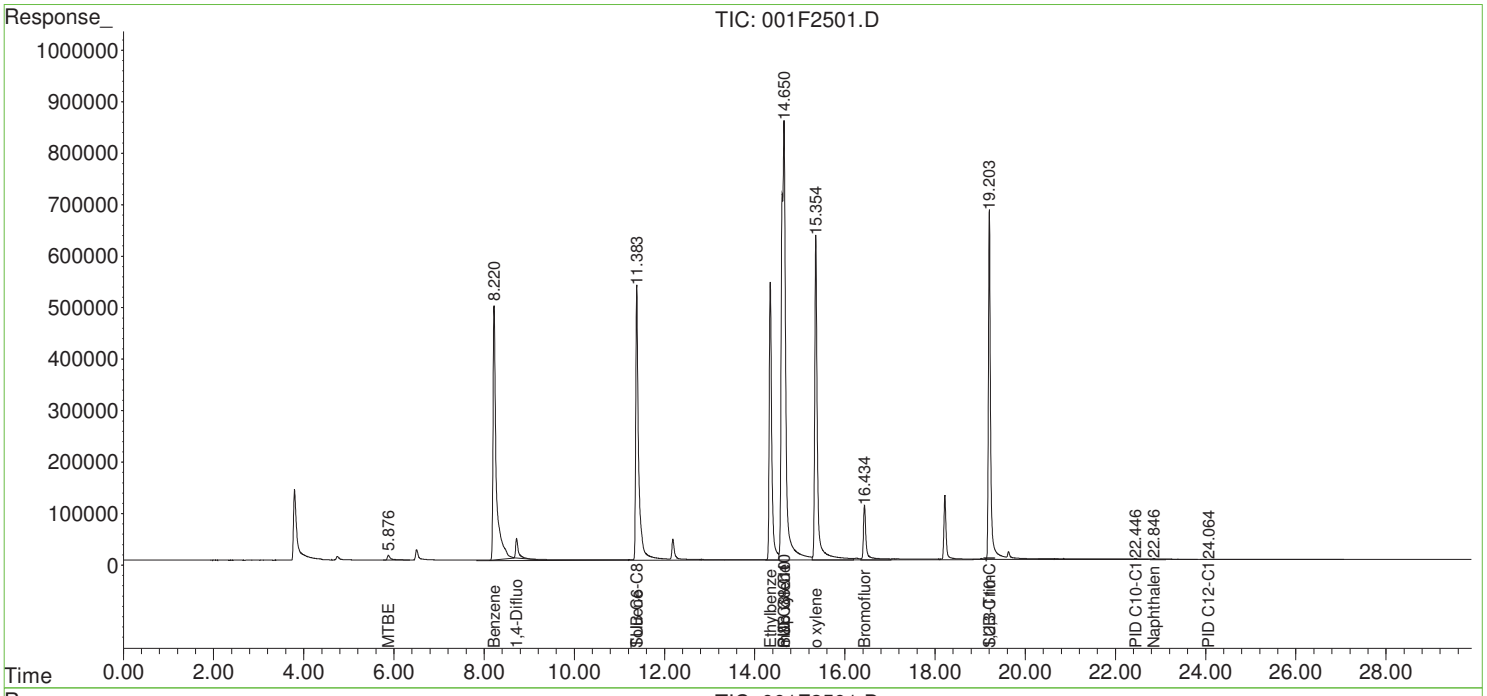
(f)=RT Delta > 1/2 Window (m)=manual int.

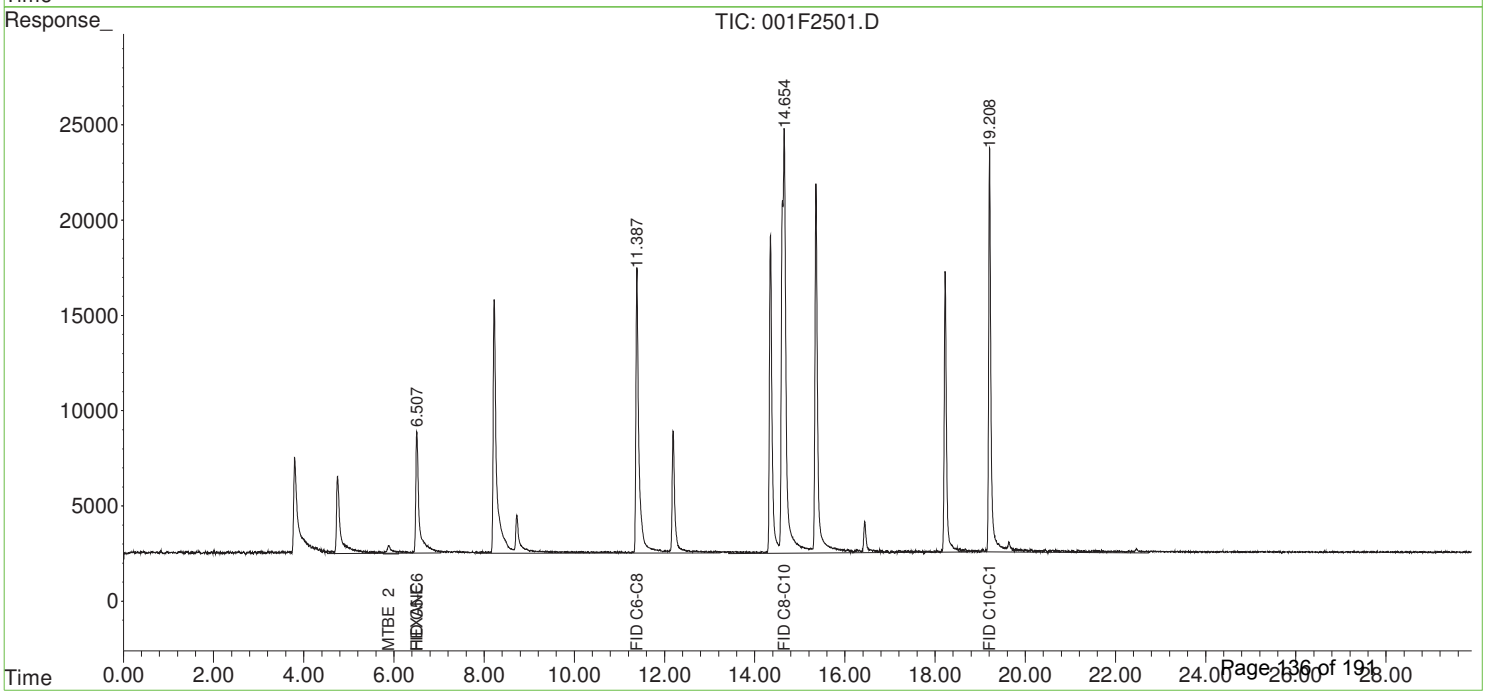
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F2501.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 11-Apr-2016, 23:58:00
Operator : BC
Sample : VPH 200 PPB 17869
Misc : ICAL O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:00:39 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\040816\2016-05-03\
Data File : 001F0601.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 03-May-2016, 18:47:50
Operator : BC
Sample : VPH 200 PPB
Misc : ICAL O-VPH-W
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: May 04 14:16:52 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QVPH050316.M
Quant Title : BTEX
QLast Update : Wed May 04 14:12:03 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

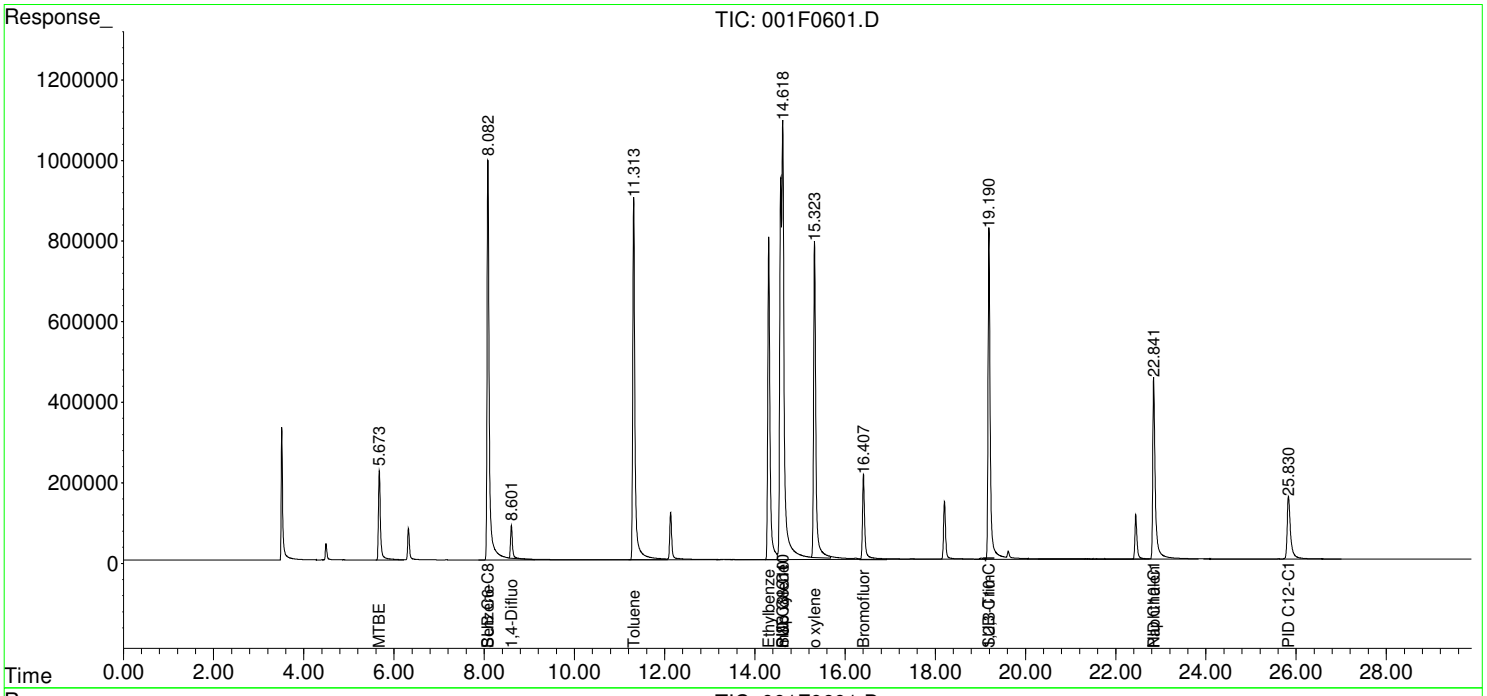
		Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds							
1)	S	1,4-Difluorobenzene	8.601	2501390	44.430	ug/l	m
2)	S	Bromofluorobenzene	16.408	7894911	50.574	ug/l	
Target Compounds							
3)	t	MTBE	5.675	7223077	204.199	ug/l	
4)	t	Benzene	8.083	34352533	187.618	ug/l	
5)	t	Toluene	11.314	31938419	183.340	ug/l	
6)	t	Ethylbenzene	14.309	27192575	200.786	ug/l	
7)	t	m&p xylenes	14.618	63698696	395.335	ug/l	m
8)	t	o xylene	15.323	27632897	192.147	ug/l	m
9)	t	1,2,3-Trimethylbenzene	19.192	27909256	200.034	ug/l	
10)	t	Naphthalene	22.843	18983659	192.728	ug/l	
11)	T	PID C8-C10	14.618	172805278	799.770	ug/l	m
12)	T	PID C10-C12	22.841f	22910876	202.236	ug/l	m
13)	T	PID C12-C13	25.830f	8909810	189.083	ug/l	m
14)	T	SUB C6-C8	8.082f	75583861	401.158	ug/l	m
15)	T	SUB C8-C10	14.618	138333768	597.943	ug/l	m
16)	T	SUB C10-C12	19.190	34091547	196.873	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.680f	227336	229.067	ug/l	
20)	t	HEXANE	6.326	763593	198.213	ug/l	
21)	T	FID C5-C6	6.324	1797275	594.454	ug/l	m
22)	T	FID C6-C8	8.086f	2946164	584.166	ug/l	m
23)	T	FID C8-C10	14.622	4530734	783.268	ug/l	m
24)	T	FID C10-C12	19.196	1588943	423.655	ug/l	m

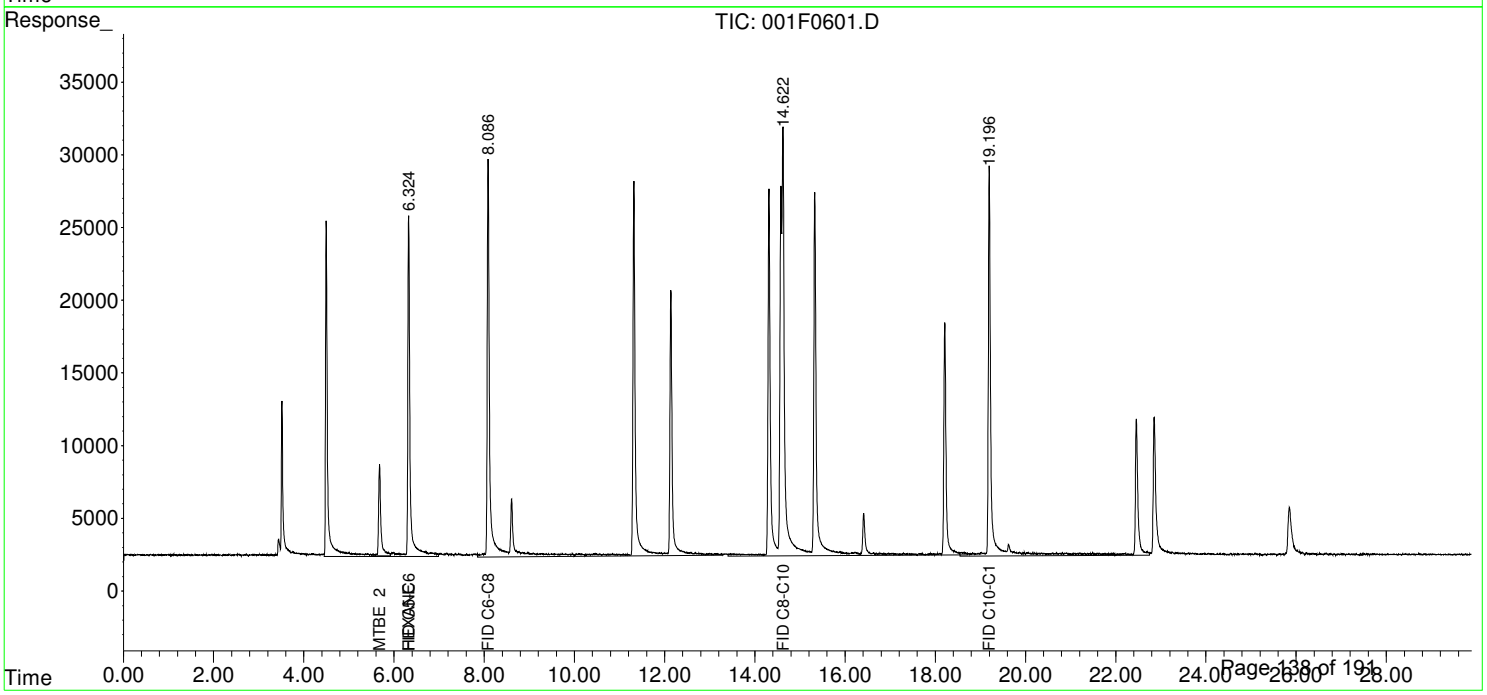
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\GC-2\DATA\040816\2016-05-03\
Data File : 001F0601.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 03-May-2016, 18:47:50
Operator : BC
Sample : VPH 200 PPB
Misc : ICAL O-VPH-W
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: May 04 14:16:52 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QVPH050316.M
Quant Title : BTEX
QLast Update : Wed May 04 14:12:03 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F2701.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 01:09:21
Operator : BC
Sample : VPH 500 PPB 17869
Misc : ICAL O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:00:50 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds							
1)	S	1,4-Difluorobenzene	8.716	1910306	49.727	ug/l	m
2)	S	Bromofluorobenzene	16.432	4695025	57.967	ug/l	m
Target Compounds							
3)	t	MTBE	5.867f	634219	321.455	ug/l	m
4)	t	Benzene	8.217	73443161	492.943	ug/l	m
5)	t	Toluene	11.385	73419992	509.396	ug/l	
6)	t	Ethylbenzene	14.347	61956097	504.317	ug/l	
7)	t	m&p xylenes	14.655	158102270	994.728	ug/l	
8)	t	o xylene	15.357	74594755	496.548	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.206	58098662	475.341	ug/l	
10)	t	Naphthalene	22.848	1067678	483.563	ug/l	
11)	T	PID C8-C10	14.654	383310234	1817.276	ug/l	m
12)	T	PID C10-C12	22.446f	1241549	492.529	ug/l	m
13)	T	PID C12-C13	24.003f	128968	376.217	ug/l	m
14)	T	SUB C6-C8	11.383	161482723	927.143	ug/l	m
15)	T	SUB C8-C10	14.654	313356733	1381.058	ug/l	m
16)	T	SUB C10-C12	19.205	63929743	479.311	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.876	39665	549.774	ug/l	
20)	t	HEXANE	6.332	3616	66.908	ug/l	
21)	T	FID C5-C6	6.501	1903851	1394.678	ug/l	m
22)	T	FID C6-C8	11.387	5655451	1336.823	ug/l	m
23)	T	FID C8-C10	14.658	10488994	1811.320	ug/l	m
24)	T	FID C10-C12	19.210	2614351	1076.226	ug/l	m

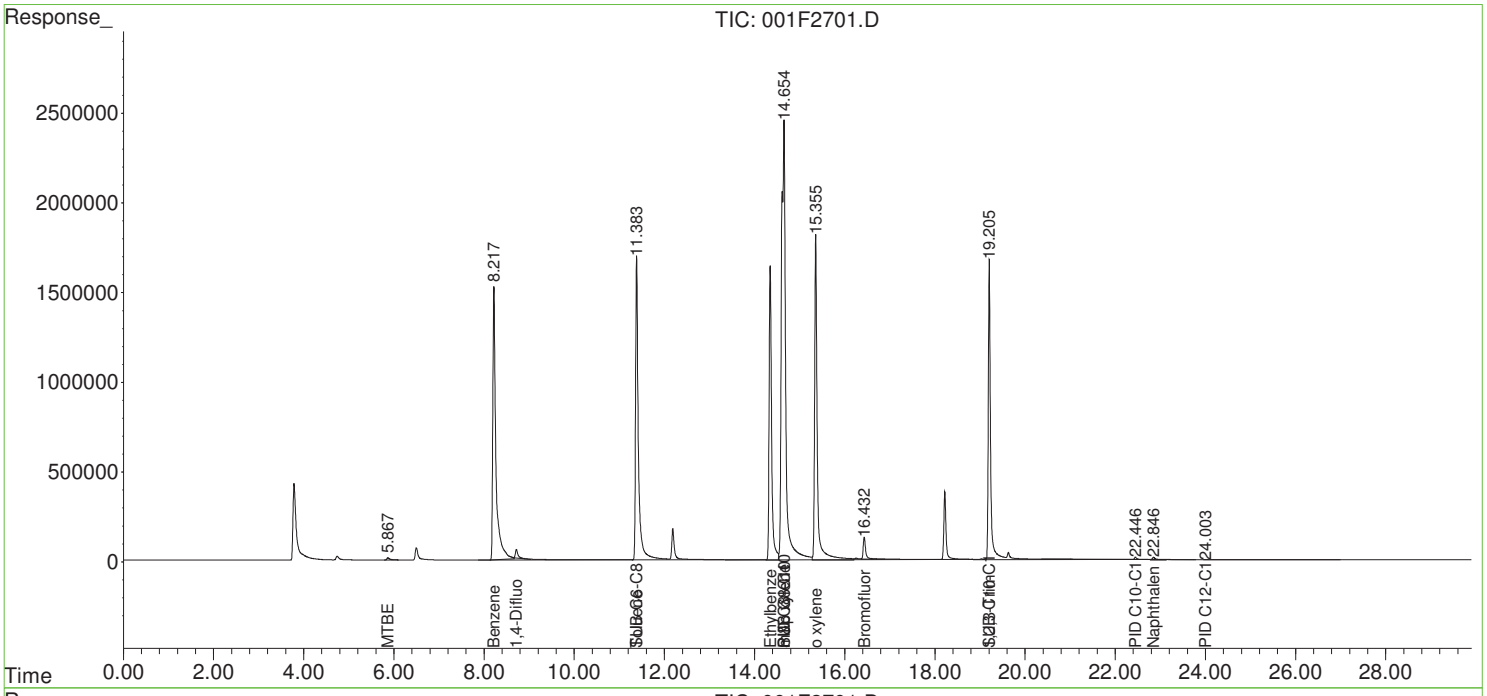
(f)=RT Delta > 1/2 Window (m)=manual int.

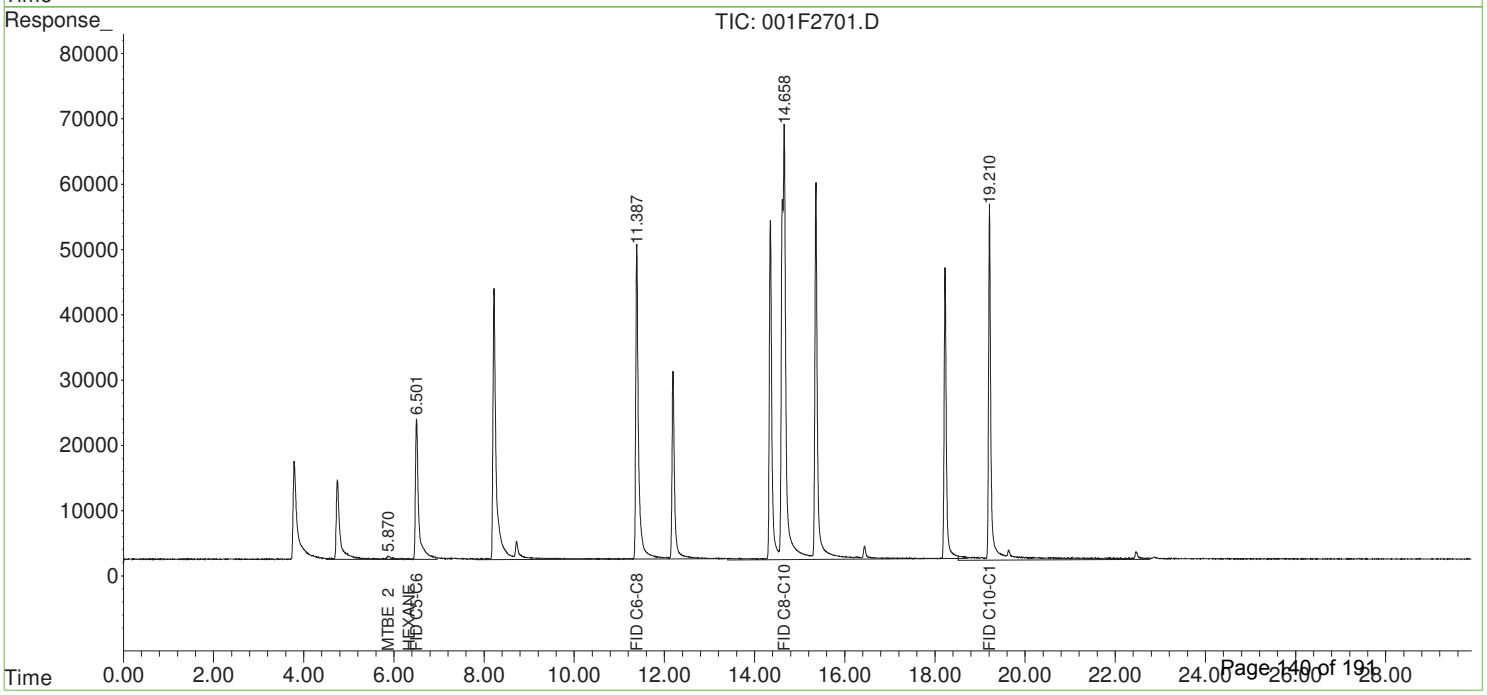
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F2701.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 01:09:21
Operator : BC
Sample : VPH 500 PPB 17869
Misc : ICAL O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:00:50 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\040816\2016-05-03\
Data File : 001F0801.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 03-May-2016, 19:59:56
Operator : BC
Sample : VPH 500 PPB
Misc : ICAL O-VPH-W
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: May 04 14:17:07 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QVPH050316.M
Quant Title : BTEX
QLast Update : Wed May 04 14:12:03 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds							
1)	S	1,4-Difluorobenzene	8.602	2901407	51.535	ug/l	m
2)	S	Bromofluorobenzene	16.406	7870647	50.419	ug/l	m
Target Compounds							
3)	t	MTBE	5.677	20294744	498.105	ug/l	
4)	t	Benzene	8.087	82355349	449.787	ug/l	
5)	t	Toluene	11.319	76664895	440.088	ug/l	
6)	t	Ethylbenzene	14.313	65470716	495.062	ug/l	
7)	t	m&p xylenes	14.624	154823404	997.440	ug/l	m
8)	t	o xylene	15.328	66797469	482.963	ug/l	m
9)	t	1,2,3-Trimethylbenzene	19.197	67199400	497.248	ug/l	
10)	t	Naphthalene	22.846	47027093	472.765	ug/l	
11)	T	PID C8-C10	14.624	405734849	1982.889	ug/l	m
12)	T	PID C10-C12	22.844f	52988037	474.312	ug/l	m
13)	T	PID C12-C13	25.831f	22327851	465.894	ug/l	m
14)	T	SUB C6-C8	8.085f	176022301	982.945	ug/l	m
15)	T	SUB C8-C10	14.624	322288648	1483.729	ug/l	m
16)	T	SUB C10-C12	19.195	79438418	492.932	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.978f	51054	115.111	ug/l	
20)	t	HEXANE	6.327	1872560	492.426	ug/l	
21)	T	FID C5-C6	6.325	4074936	1370.582	ug/l	m
22)	T	FID C6-C8	8.088f	6865037	1468.059	ug/l	m
23)	T	FID C8-C10	14.628	10556716	1910.214	ug/l	m
24)	T	FID C10-C12	19.200	3335620	956.712	ug/l	m

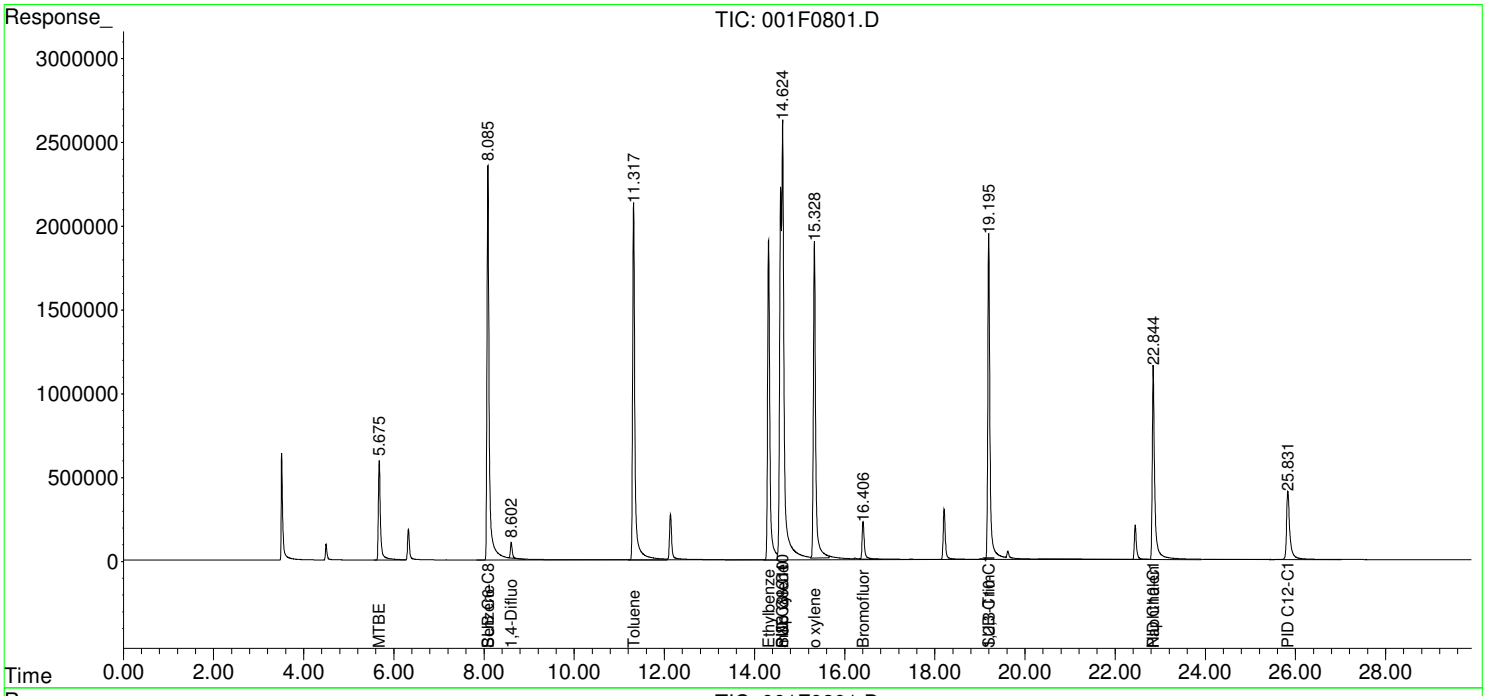
(f)=RT Delta > 1/2 Window (m)=manual int.

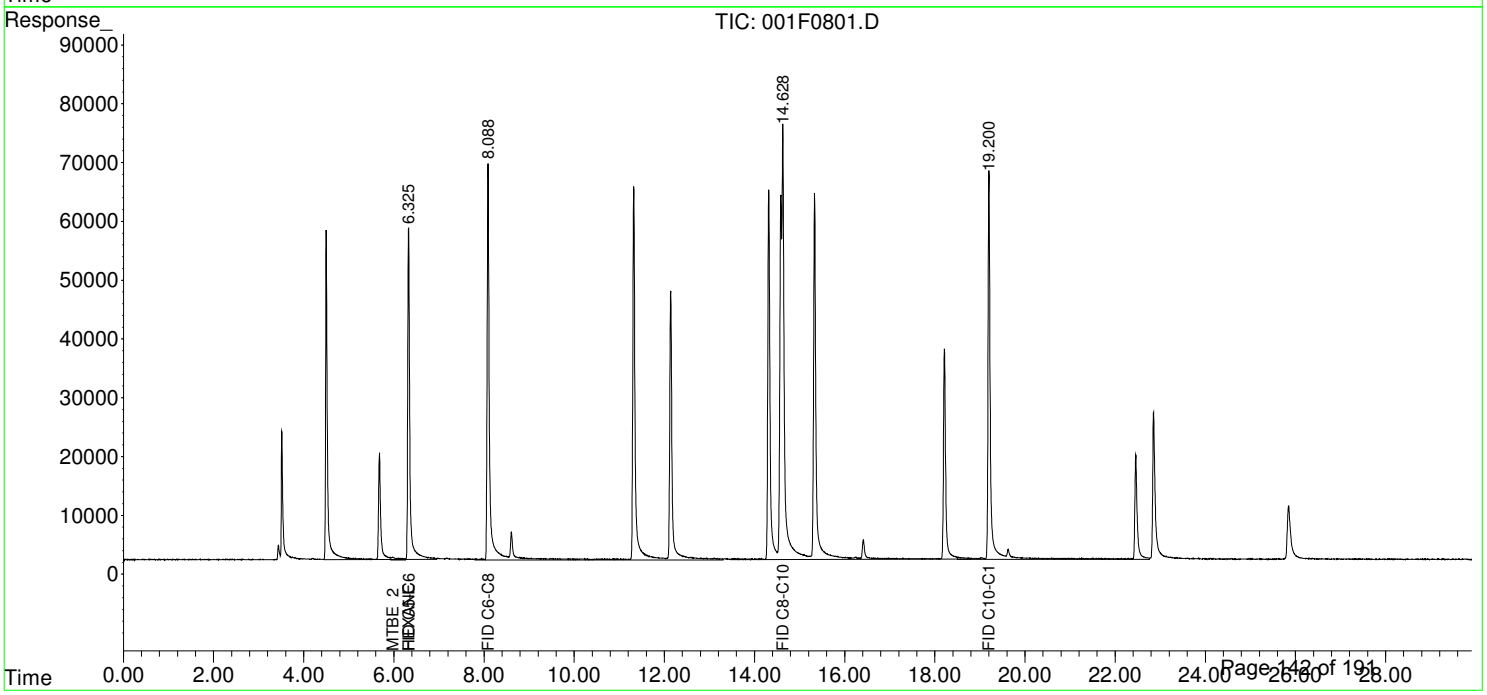
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\040816\2016-05-03\
Data File : 001F0801.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 03-May-2016, 19:59:56
Operator : BC
Sample : VPH 500 PPB
Misc : ICAL O-VPH-W
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: May 04 14:17:07 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QVPH050316.M
Quant Title : BTEX
QLast Update : Wed May 04 14:12:03 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F2901.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 02:20:22
Operator : BC
Sample : VPH 1000 PPB 17869
Misc : ICAL O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:01:03 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds							
1)	S	1,4-Difluorobenzene	8.717	1719249	44.753	ug/l	m
2)	S	Bromofluorobenzene	16.432	4872013	60.152	ug/l	m
Target Compounds							
3)	t	MTBE	5.868f	631621	316.718	ug/l	m
4)	t	Benzene	8.222	164759934	1105.851	ug/l	
5)	t	Toluene	11.387	162567086	1127.909	ug/l	
6)	t	Ethylbenzene	14.352	138933436	1130.907	ug/l	
7)	t	m&p xylenes	14.663	353290577	2222.789	ug/l	
8)	t	o xylene	15.363	165931517	1104.540	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.215	143718908	1175.854	ug/l	
10)	t	Naphthalene	22.848	5348936	1001.355	ug/l	
11)	T	PID C8-C10	14.662	874064714	4080.620	ug/l	m
12)	T	PID C10-C12	22.846f	6602142	1035.669	ug/l	m
13)	T	PID C12-C13	25.833f	399450	978.358	ug/l	m
14)	T	SUB C6-C8	11.386	358143377	2031.485	ug/l	m
15)	T	SUB C8-C10	14.662	696688675	3031.393	ug/l	m
16)	T	SUB C10-C12	19.213	155031283	989.148	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.876	49412	904.912	ug/l	
20)	t	HEXANE	6.507	2543114	1203.555	ug/l	
21)	T	FID C5-C6	6.504	4166399	3038.168	ug/l	m
22)	T	FID C6-C8	11.389	12998611	3046.619	ug/l	m
23)	T	FID C8-C10	14.666	24151975	4104.128	ug/l	m
24)	T	FID C10-C12	19.218	5583444	1826.844	ug/l	m

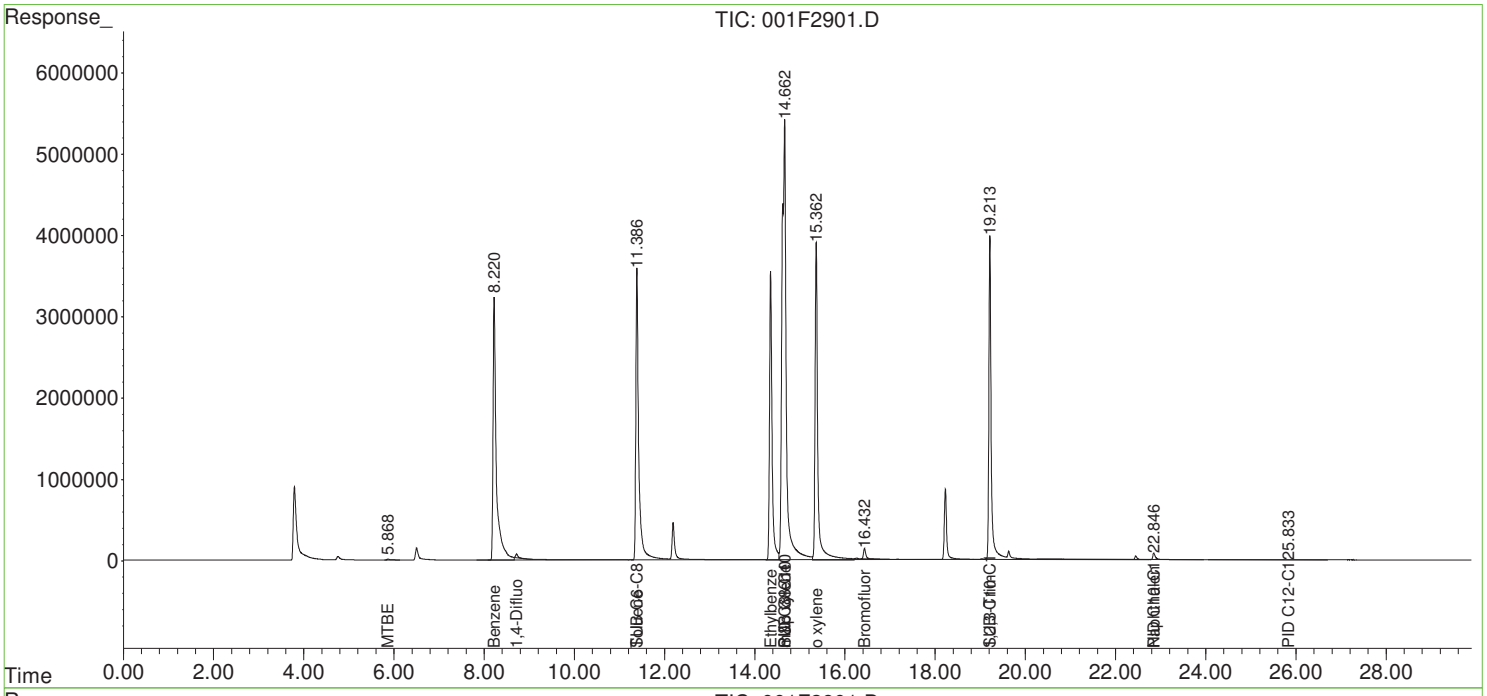
(f)=RT Delta > 1/2 Window (m)=manual int.

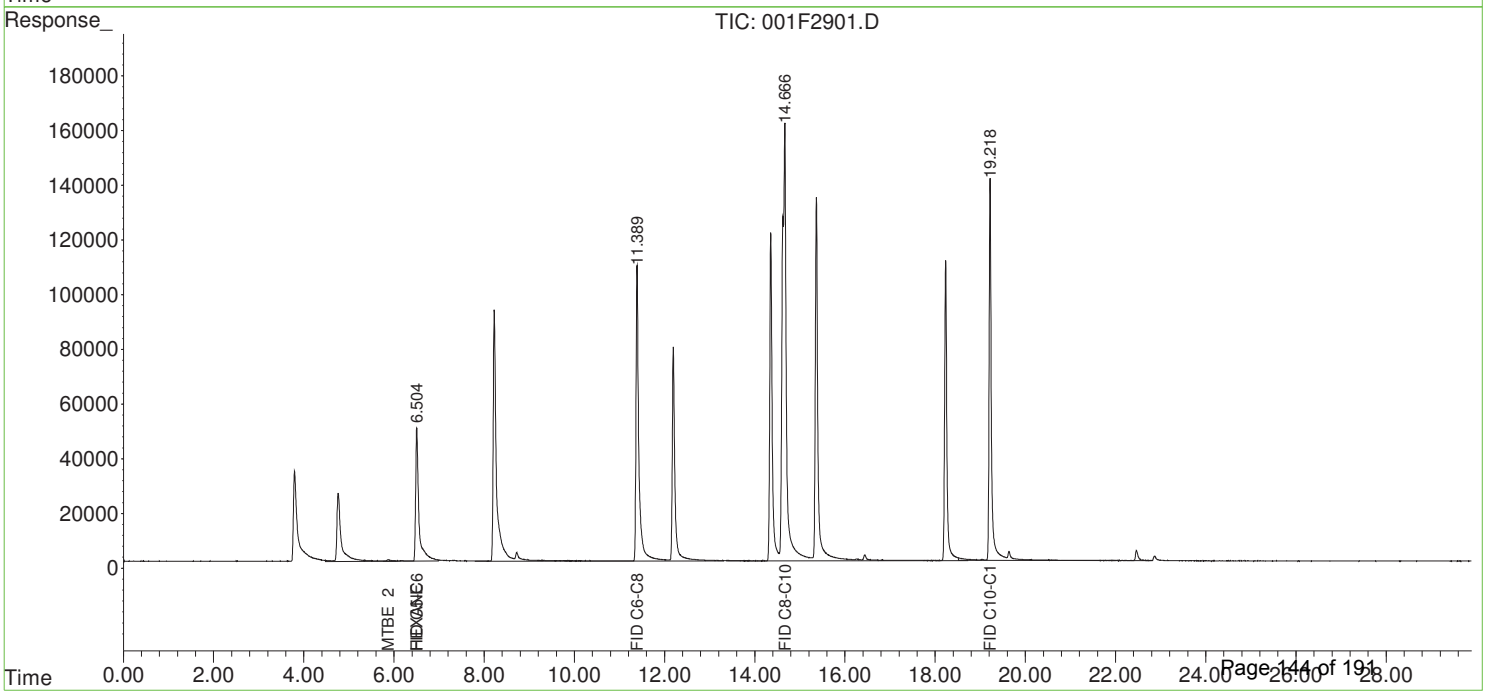
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F2901.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 02:20:22
Operator : BC
Sample : VPH 1000 PPB 17869
Misc : ICAL O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:01:03 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\040816\2016-05-03\
Data File : 001F1101.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 03-May-2016, 21:47:34
Operator : BC
Sample : VPH 1000 PPB (Sig #1); CLEANOUT (Sig #2)
Misc : ICAL O-VPH-W
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: May 04 14:17:25 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QVPH050316.M
Quant Title : BTEX
QLast Update : Wed May 04 14:12:03 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1) S	1,4-Difluorobenzene	8.602	3004627	53.369	ug/l	m
2) S	Bromofluorobenzene	16.407	8168333	52.326	ug/l	m
	Target Compounds					
3) t	MTBE	5.678	50978295	1000.247	ug/l	
4) t	Benzene	8.090	165310616	902.850	ug/l	
5) t	Toluene	11.323	154555337	887.211	ug/l	
6) t	Ethylbenzene	14.320	131383769	1001.791	ug/l	
7) t	m&p xylenes	14.634	308819867	2014.968	ug/l	m
8) t	o xylene	15.336	148698772	1091.120	ug/l	
9) t	1,2,3-Trimethylbenzene	19.204	133796182	1001.027	ug/l	
10) t	Naphthalene	22.848	101300534	1014.730	ug/l	
11) T	PID C8-C10	14.634	810130744	4036.938	ug/l	m
12) T	PID C10-C12	22.846f	110289197	992.654	ug/l	m
13) T	PID C12-C13	25.832f	50054339	1037.886	ug/l	m
14) T	SUB C6-C8	8.088f	352600833	2005.772	ug/l	m
15) T	SUB C8-C10	14.634	640436946	3015.688	ug/l	m
16) T	SUB C10-C12	19.202	156384021	995.294	ug/l	m
18)	Signal 2 #2	0.000	0	N.D.		
19) t	MTBE 2	5.977f	97263	144.982	ug/l	
20) t	HEXANE	6.329	3800055	1003.798	ug/l	
21) T	FID C5-C6	6.327	8626540	2921.569	ug/l	m
22) T	FID C6-C8	8.091f	13269316	2912.531	ug/l	m
23) T	FID C8-C10	14.637	21633995	3981.827	ug/l	m
24) T	FID C10-C12	19.207	6672414	1975.046	ug/l	m

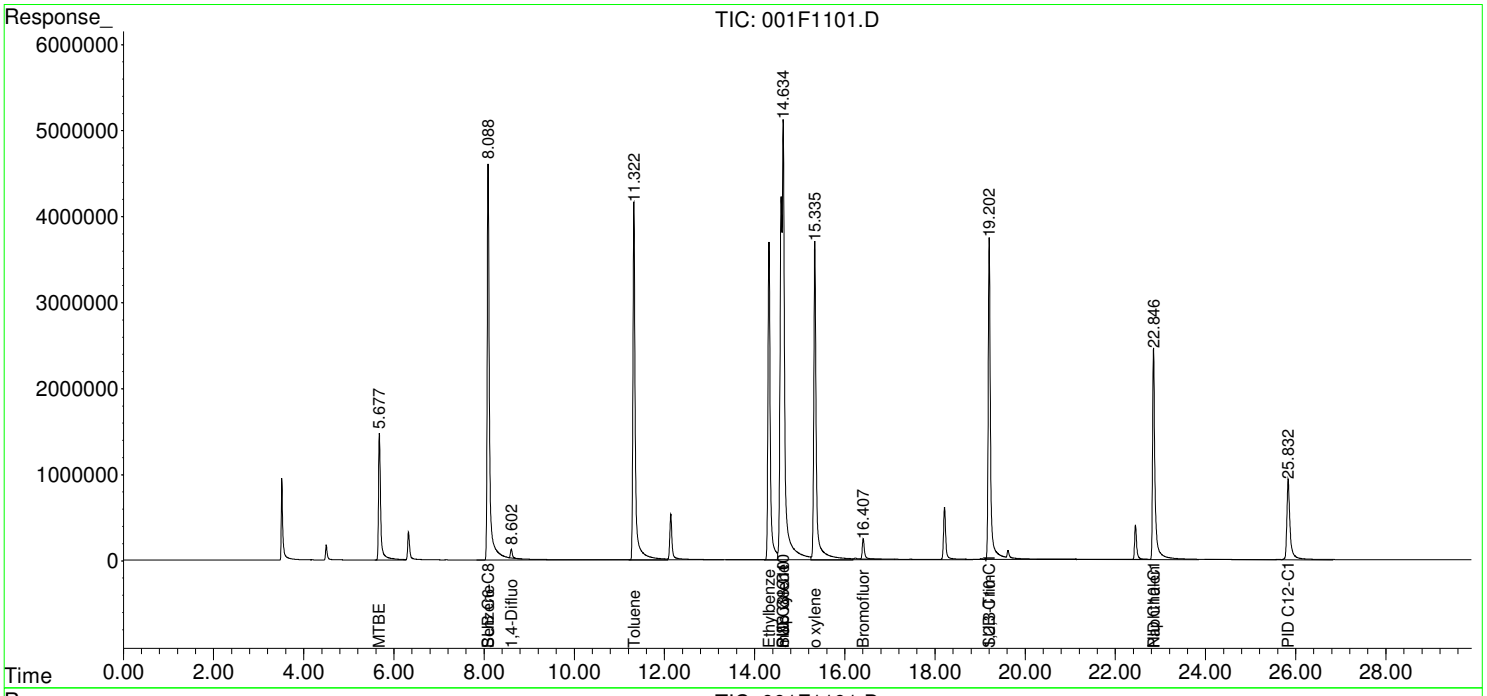
(f)=RT Delta > 1/2 Window (m)=manual int.

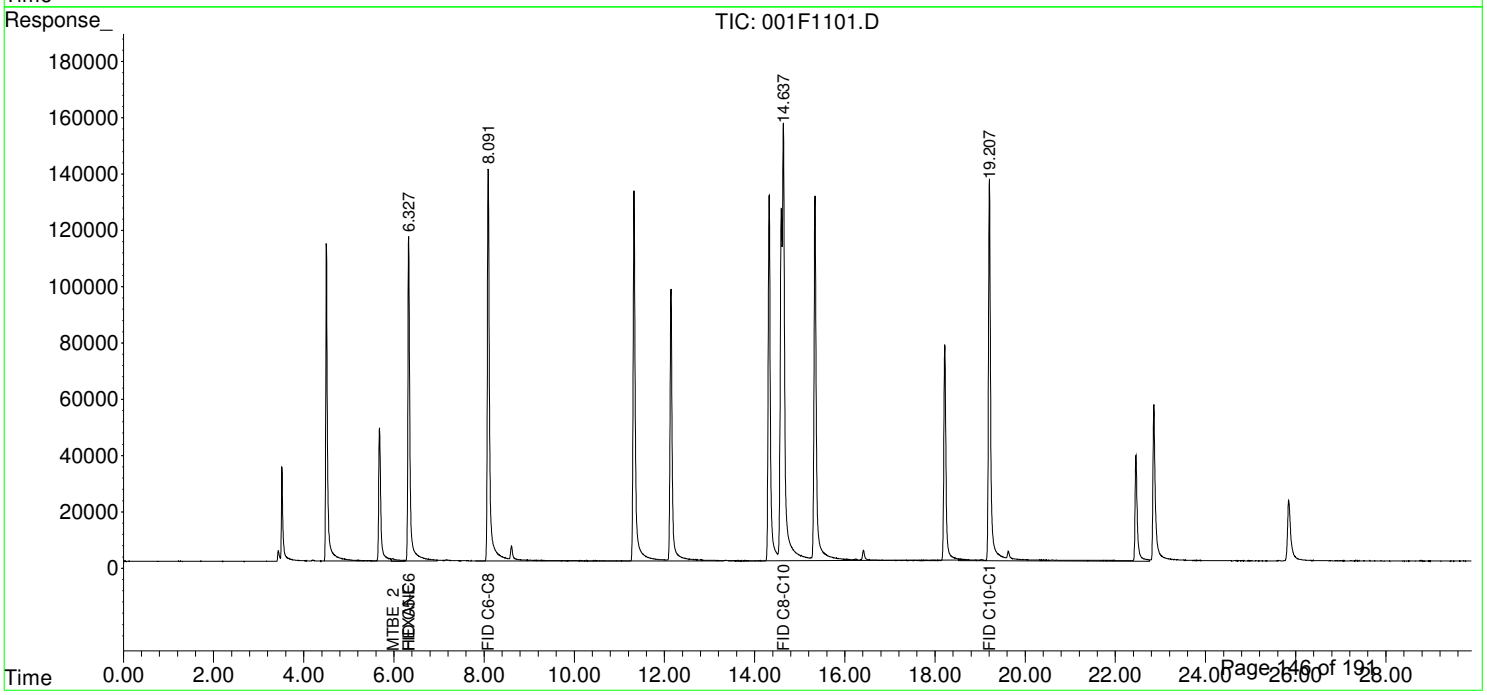
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\040816\2016-05-03\
Data File : 001F1101.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 03-May-2016, 21:47:34
Operator : BC
Sample : VPH 1000 PPB (Sig #1); CLEANOUT (Sig #2)
Misc : ICAL O-VPH-W
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: May 04 14:17:25 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QVPH050316.M
Quant Title : BTEX
QLast Update : Wed May 04 14:12:03 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F3201.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 04:06:12
Operator : BC
Sample : ICB-
Misc : ICB O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 09:42:30 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1,4-Difluorobenzene	8.719	1787112	46.520	ug/l	m
2)	S	Bromofluorobenzene	16.438	3143697	38.814	ug/l	
		Target Compounds					
3)	t	MTBE	5.742	1690	1632.763	ug/l	
4)	t	Benzene	8.148	1228	0.008	ug/l	
5)	t	Toluene	11.385	59053	0.410	ug/l	
6)	t	Ethylbenzene	14.347	79307	0.646	ug/l	
7)	t	m&p xylenes	14.650	194098	1.221	ug/l	
8)	t	o xylene	15.355	86808	0.578	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.203	173768	1.422	ug/l	
10)	t	Naphthalene	22.849	31537	34.387	ug/l	
11)	T	PID C8-C10	16.437	3721753	66.625	ug/l	m
12)	T	PID C10-C12	22.848f	95766	BelowCal	ug/l	m
13)	T	PID C12-C13	27.111	72784	BelowCal	ug/l	m
14)	T	SUB C6-C8	8.719f	3849458	41.959	ug/l	m
15)	T	SUB C8-C10	16.437	7188797	62.932	ug/l	m
16)	T	SUB C10-C12	19.201	222420	BelowCal	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.818	3595	N.D.	ug/l	
20)	t	HEXANE	6.431	5718	67.849	ug/l	
21)	T	FID C5-C6	5.810	4084	14.708	ug/l	m
22)	T	FID C6-C8	8.724f	93487	41.765	ug/l	m
23)	T	FID C8-C10	16.442	94206	66.952	ug/l	m
24)	T	FID C10-C12	19.208	37521	BelowCal	ug/l	m

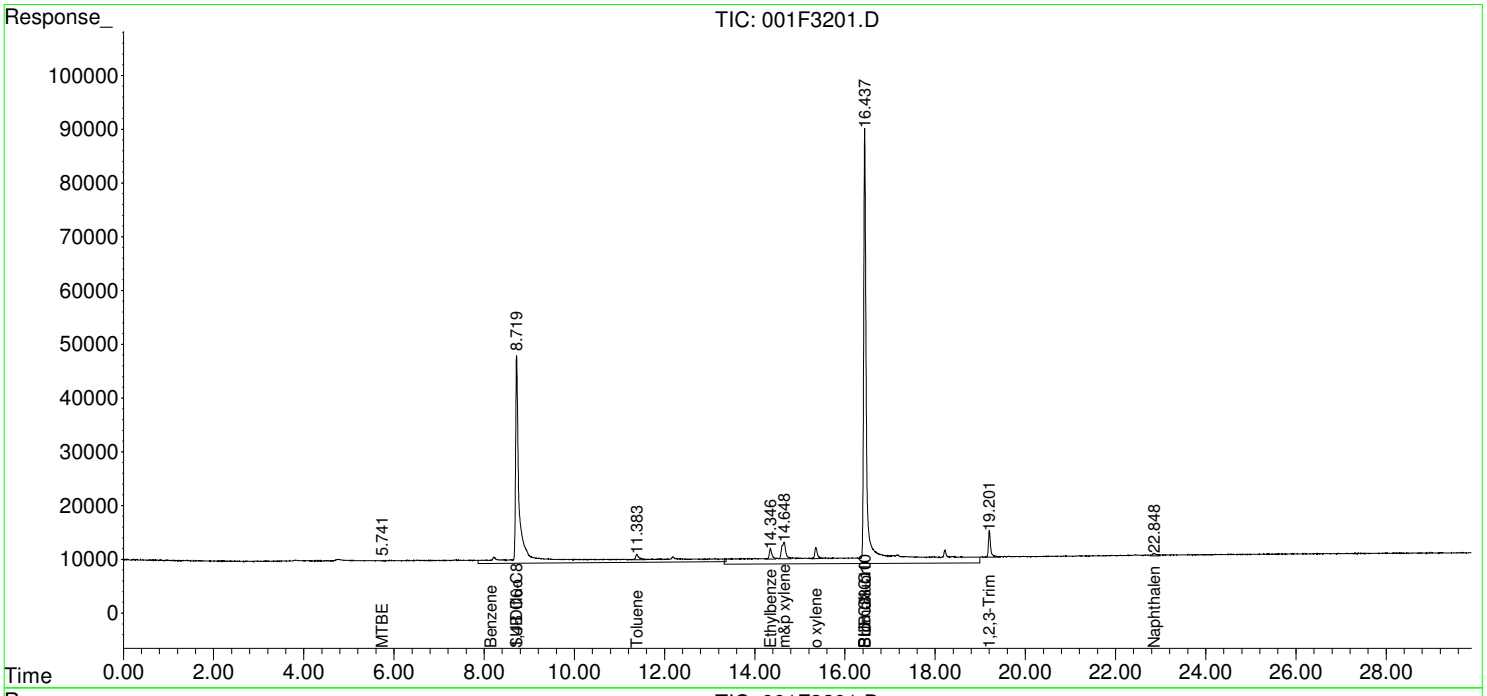
(f)=RT Delta > 1/2 Window (m)=manual int.

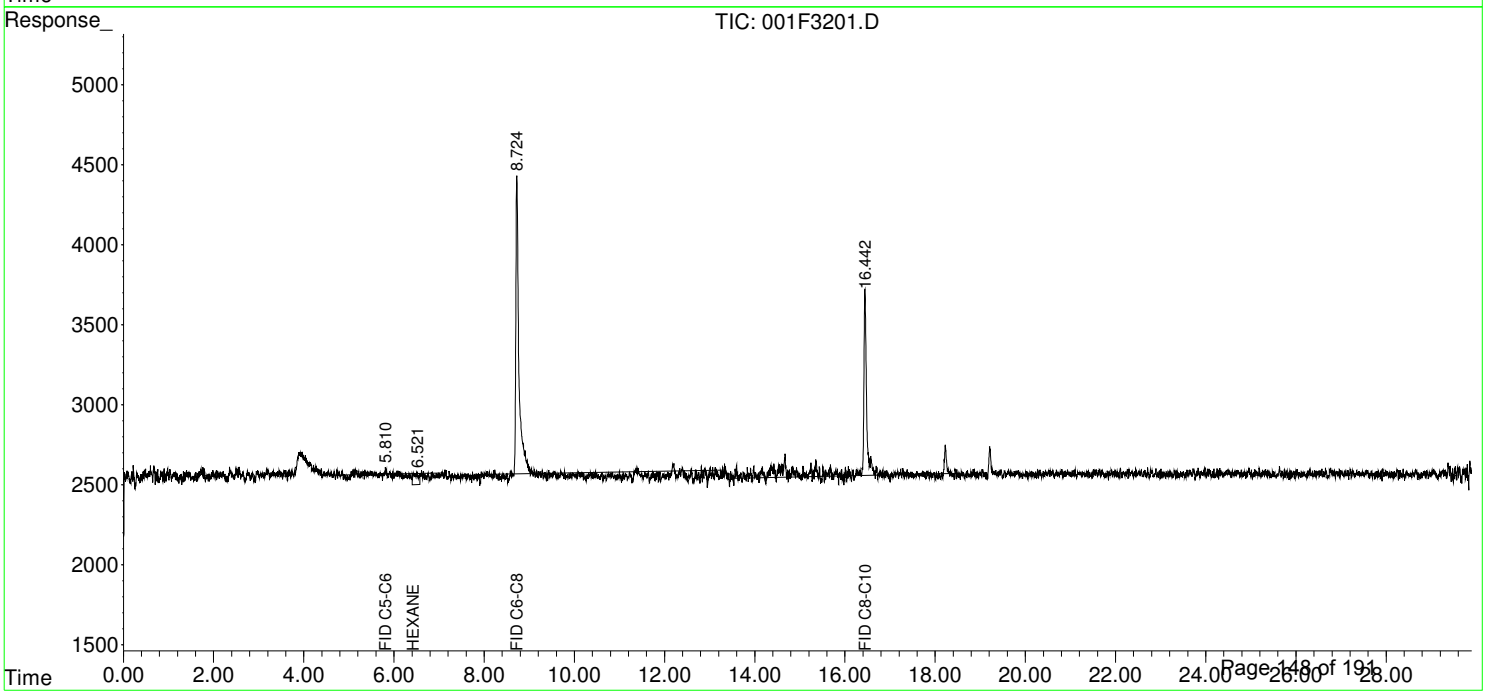
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F3201.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 04:06:12
Operator : BC
Sample : ICB-
Misc : ICB O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 09:42:30 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F3301.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 04:41:38
Operator : BC
Sample : ICV-17311
Misc : ICV O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 09:54:58 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds							
1)	S	1,4-Difluorobenzene	8.717	2035304	52.980	ug/l	m
2)	S	Bromofluorobenzene	16.433	4752788	58.680	ug/l	m
Target Compounds							
3)	t	MTBE	5.870f	550908	192.439	ug/l	m
4)	t	Benzene	8.217	38363307	257.490	ug/l	m
5)	t	Toluene	11.382	36780413	255.187	ug/l	m
6)	t	Ethylbenzene	14.345	31936143	259.958	ug/l	
7)	t	m&p xylenes	14.650	77585353	488.142	ug/l	m
8)	t	o xylene	15.354	35726716	237.819	ug/l	m
9)	t	1,2,3-Trimethylbenzene	19.203	31211286	255.359	ug/l	m
10)	t	Naphthalene	22.845	208548	245.441	ug/l	m
11)	T	PID C8-C10	14.650	202707571	984.342	ug/l	m
12)	T	PID C10-C12	22.445f	289540	253.752	ug/l	m
13)	T	PID C12-C13	26.635	100465	183.796	ug/l	m
14)	T	SUB C6-C8	11.382	88651236	518.161	ug/l	m
15)	T	SUB C8-C10	14.650	166862609	750.366	ug/l	m
16)	T	SUB C10-C12	19.203	36830663	291.863	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.877	23673	N.D.	ug/l	
20)	t	HEXANE	6.505	616090	341.044	ug/l	
21)	T	FID C5-C6	6.502	1214516	893.952	ug/l	m
22)	T	FID C6-C8	11.386	2922516	700.481	ug/l	m
23)	T	FID C8-C10	14.654	5467738	968.694	ug/l	m
24)	T	FID C10-C12	19.208	1160567	536.303	ug/l	m

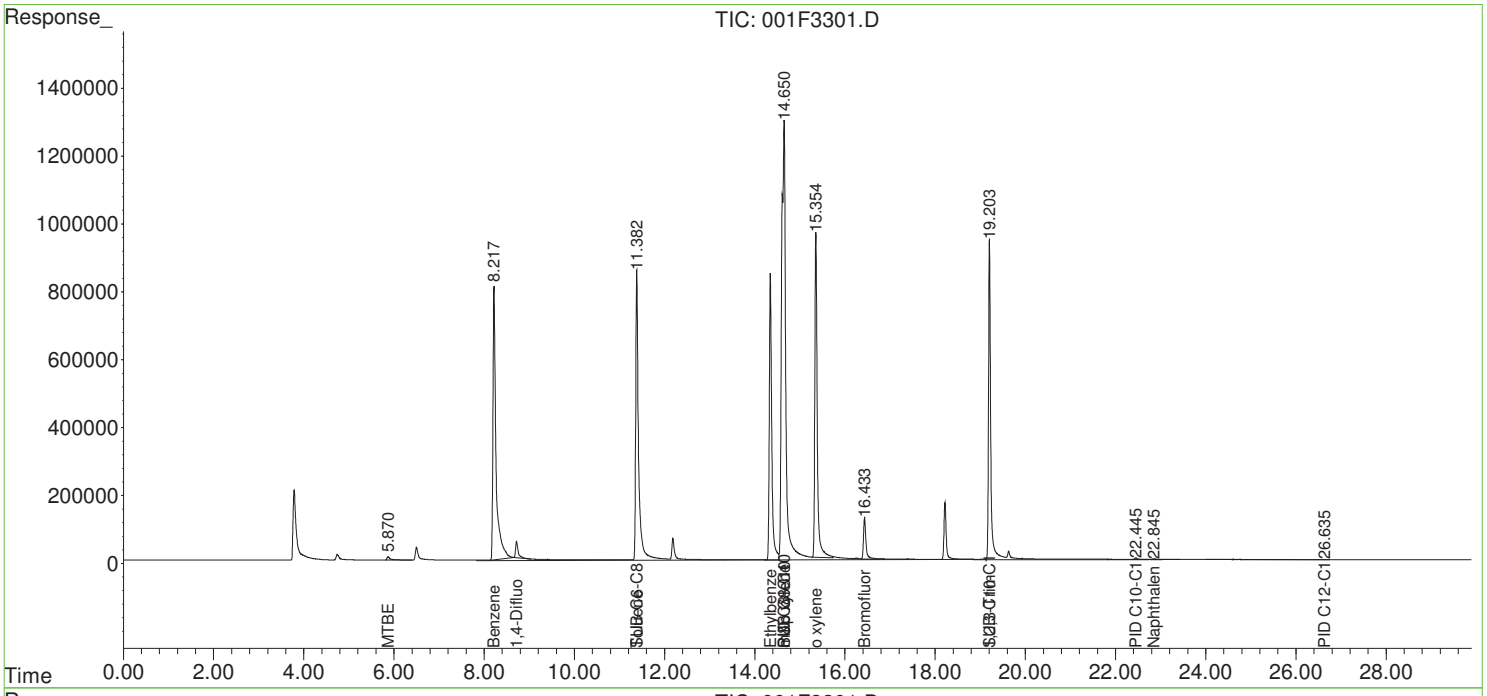
(f)=RT Delta > 1/2 Window (m)=manual int.

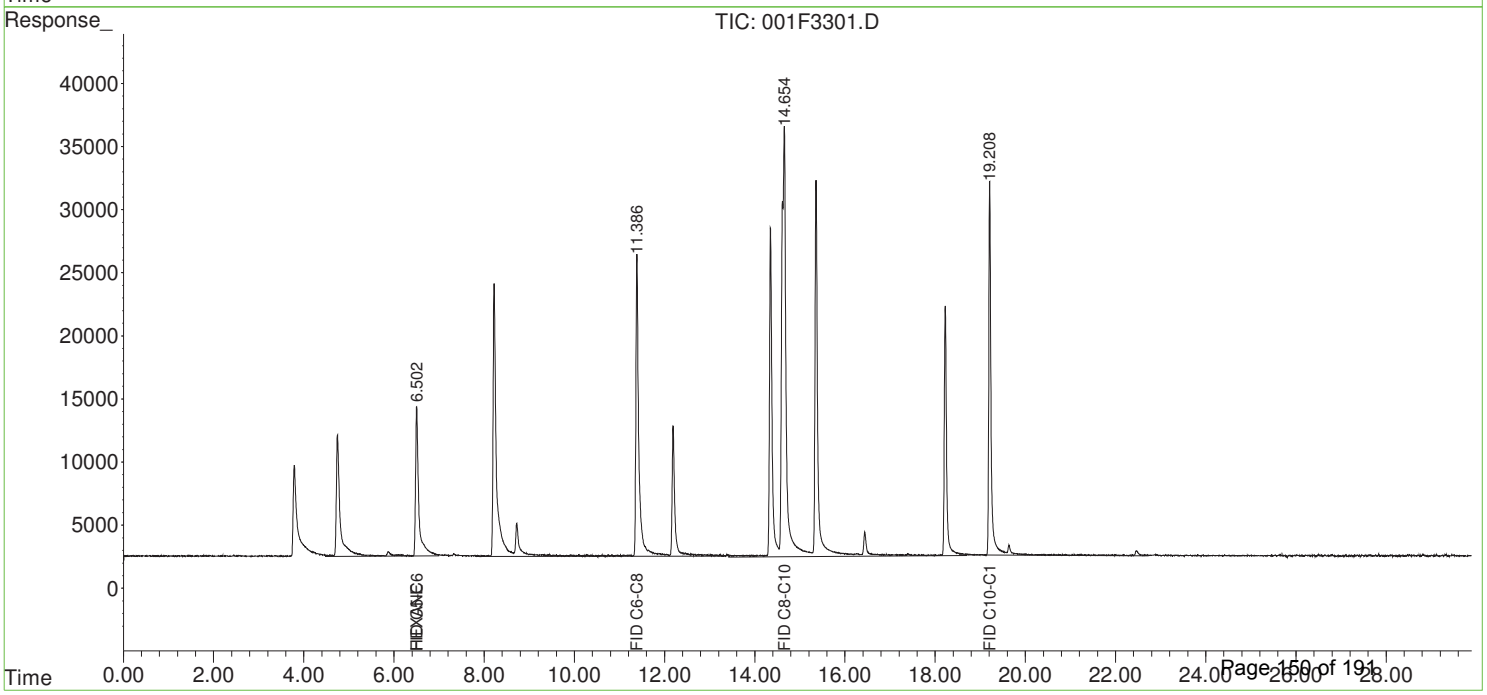
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041116\2016-04-11\
Data File : 001F3301.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 04:41:38
Operator : BC
Sample : ICV-17311
Misc : ICV O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 09:54:58 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\QV041116.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F0201.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 13:31:26
Operator : BC
Sample : CCV-A-17689
Misc : CCV O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:54:08 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds							
1)	S	1,4-Difluorobenzene	8.716	1981184	51.572	ug/l	m
2)	S	Bromofluorobenzene	16.431	4431955	54.719	ug/l	m
Target Compounds							
3)	t	MTBE	5.870f	581260	234.981	ug/l	m
4)	t	Benzene	8.217	32005308	214.816	ug/l	
5)	t	Toluene	11.382	31824986	220.805	ug/l	
6)	t	Ethylbenzene	14.344	27704439	225.512	ug/l	
7)	t	m&p xylenes	14.649	72619451	456.898	ug/l	
8)	t	o xylene	15.353	33568108	223.450	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.203	28008190	229.152	ug/l	
10)	t	Naphthalene	22.844	168271	225.470	ug/l	m
11)	T	PID C8-C10	14.648	178537424	872.870	ug/l	m
12)	T	PID C10-C12	22.445f	540403	341.703	ug/l	m
13)	T	PID C12-C13	26.630	114448	300.767	ug/l	m
14)	T	SUB C6-C8	11.380	72796422	429.128	ug/l	m
15)	T	SUB C8-C10	14.648	148119017	669.670	ug/l	m
16)	T	SUB C10-C12	19.201	34774324	276.591	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		d
19)	t	MTBE 2	5.876	34237	351.995	ug/l	
20)	t	HEXANE	6.504	517837	297.067	ug/l	
21)	T	FID C5-C6	6.501	888011	656.783	ug/l	m
22)	T	FID C6-C8	11.384	2552858	614.410	ug/l	m
23)	T	FID C8-C10	14.653	4870830	868.526	ug/l	m
24)	T	FID C10-C12	19.207	1028160	473.330	ug/l	m

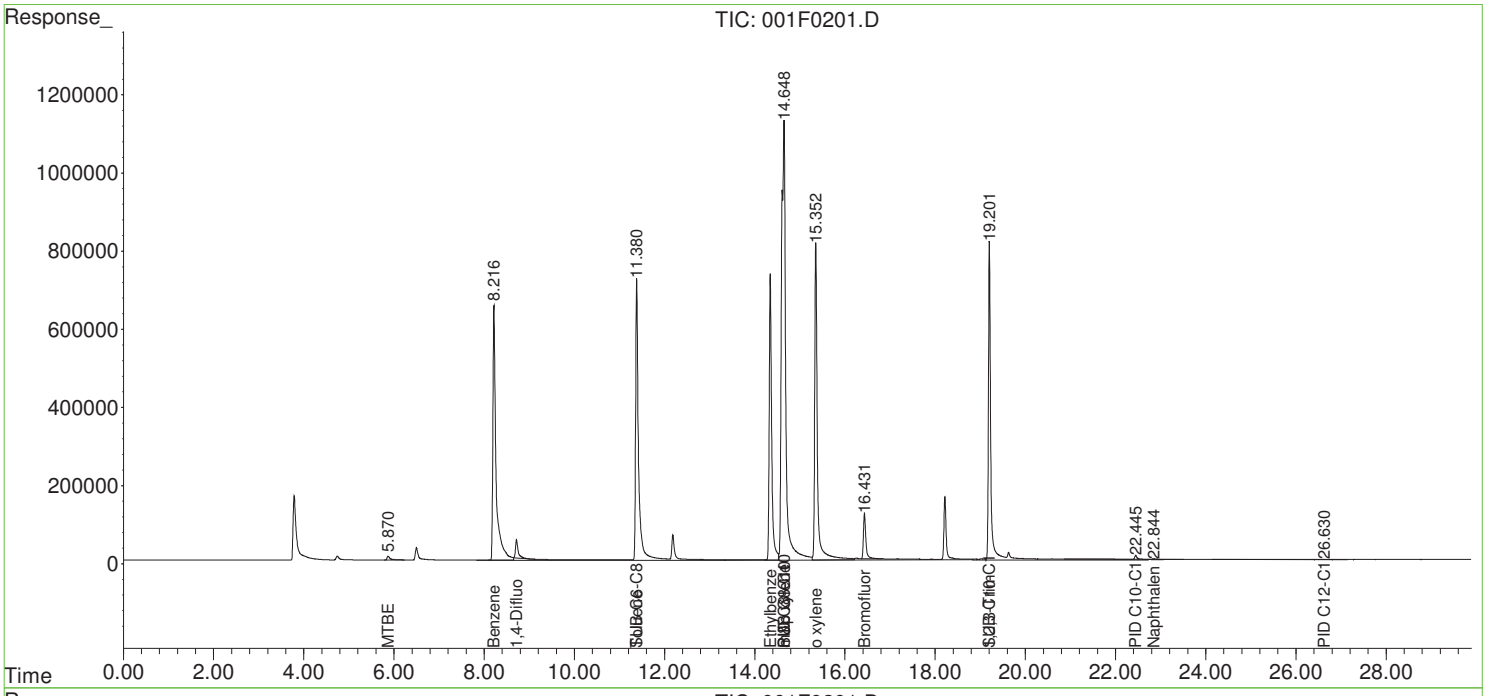
(f)=RT Delta > 1/2 Window (m)=manual int.

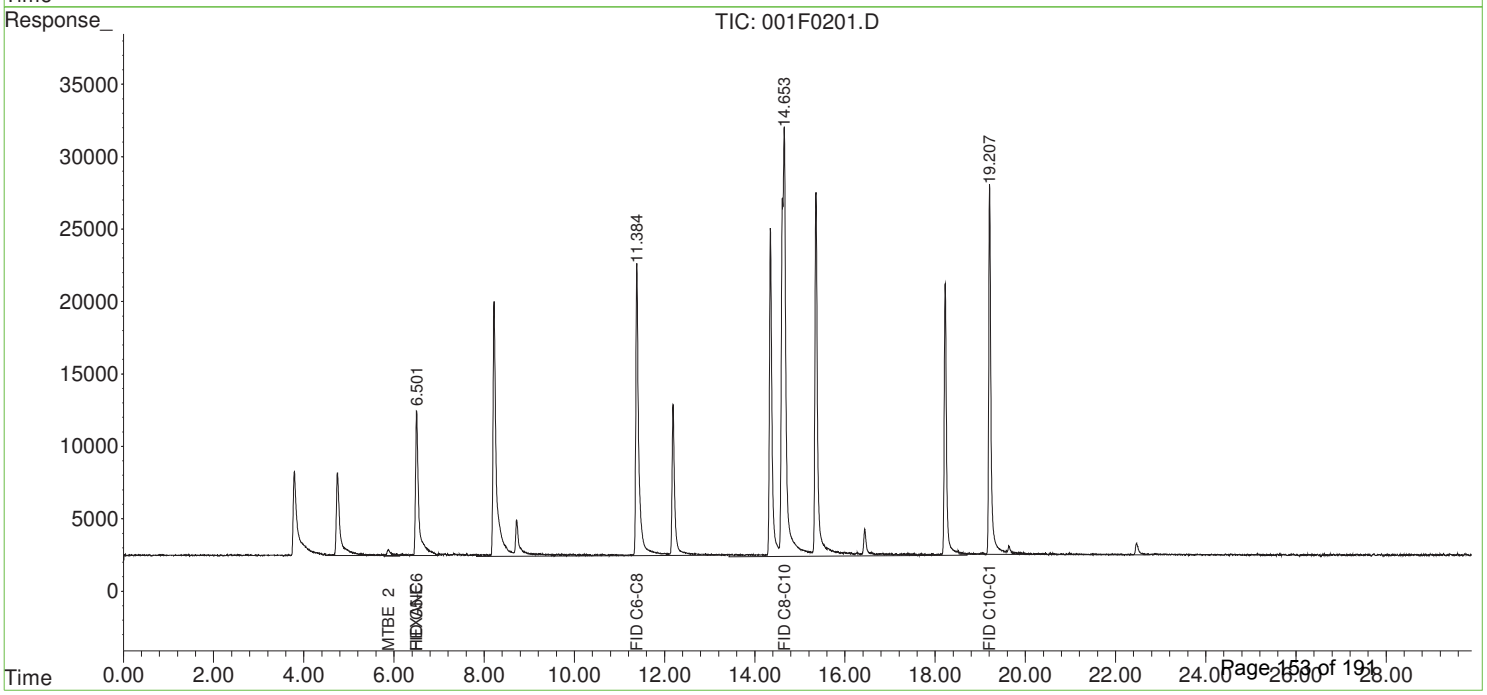
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F0201.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 13:31:26
Operator : BC
Sample : CCV-A-17689
Misc : CCV O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:54:08 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F0201-2.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 16:10:42
Operator : BC
Sample : LCS-A-13429
Misc : LCS O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:00:14 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1) S	1,4-Difluorobenzene	8.727	1549102	40.324	ug/l	m
2) S	Bromofluorobenzene	16.433	3769248	46.537	ug/l	m
	Target Compounds					
3) t	MTBE	5.893f	492182	119.396	ug/l	m
4) t	Benzene	8.228	25486871	171.065	ug/l	m
5) t	Toluene	11.388	26156504	181.477	ug/l	
6) t	Ethylbenzene	14.346	23174756	188.641	ug/l	
7) t	m&p xylenes	14.651	61538648	387.181	ug/l	
8) t	o xylene	15.355	28700445	191.047	ug/l	
9) t	1,2,3-Trimethylbenzene	19.203	25104966	205.399	ug/l	
10) t	Naphthalene	22.846	225994	253.411	ug/l	
11) T	PID C8-C10	14.650	151691145	749.056	ug/l	m
12) T	PID C10-C12	22.444f	400974	297.920	ug/l	m
13) T	PID C12-C13	26.540	108035	257.251	ug/l	m
14) T	SUB C6-C8	11.386	57749255	344.632	ug/l	m
15) T	SUB C8-C10	14.650	125261047	571.261	ug/l	m
16) T	SUB C10-C12	19.201	27173990	218.602	ug/l	m
18)	Signal 2 #2	0.000	0	N.D.		
19) t	MTBE 2	5.776	3457	N.D.	ug/l	
20) t	HEXANE	6.523	385882	238.006	ug/l	
21) T	FID C5-C6	6.520	667154	496.355	ug/l	m
22) T	FID C6-C8	11.390	2097900	508.476	ug/l	m
23) T	FID C8-C10	14.654	4108118	740.533	ug/l	m
24) T	FID C10-C12	19.207	990272	454.598	ug/l	m

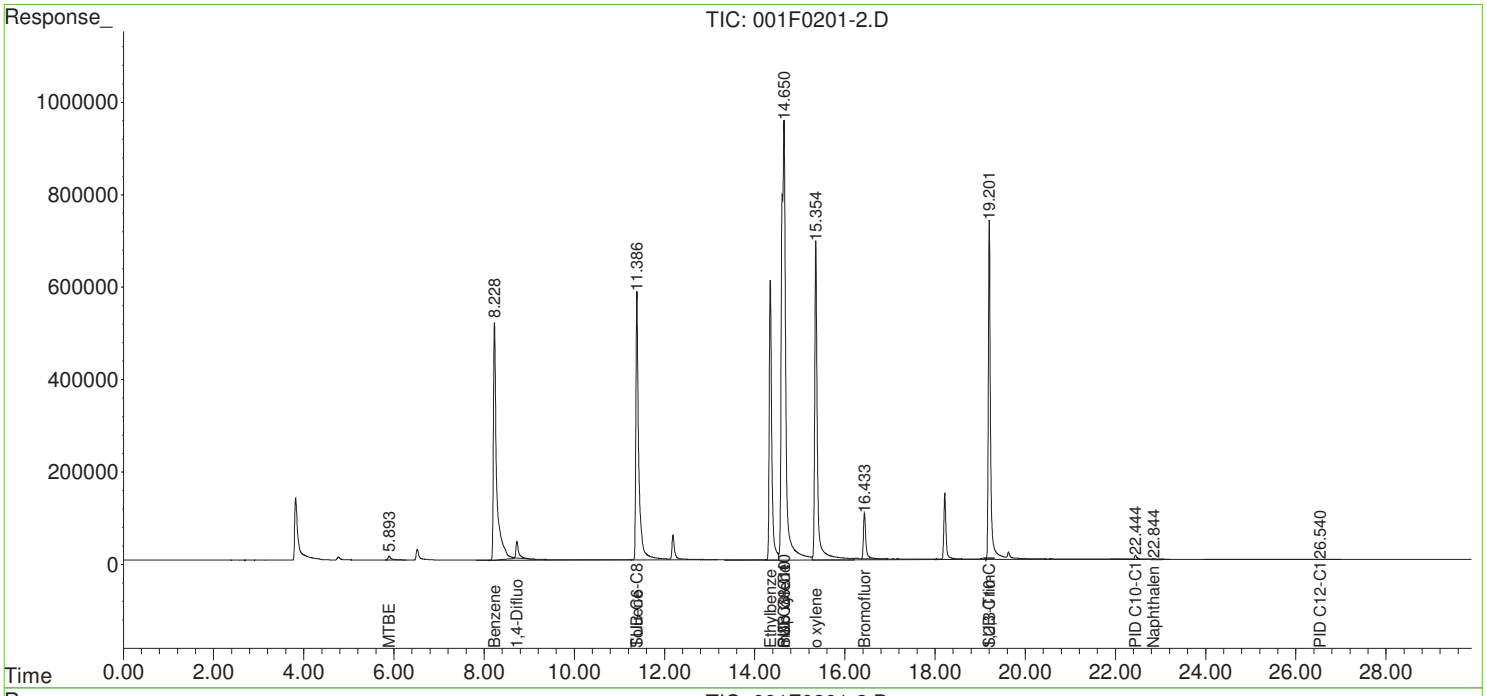
(f)=RT Delta > 1/2 Window (m)=manual int.

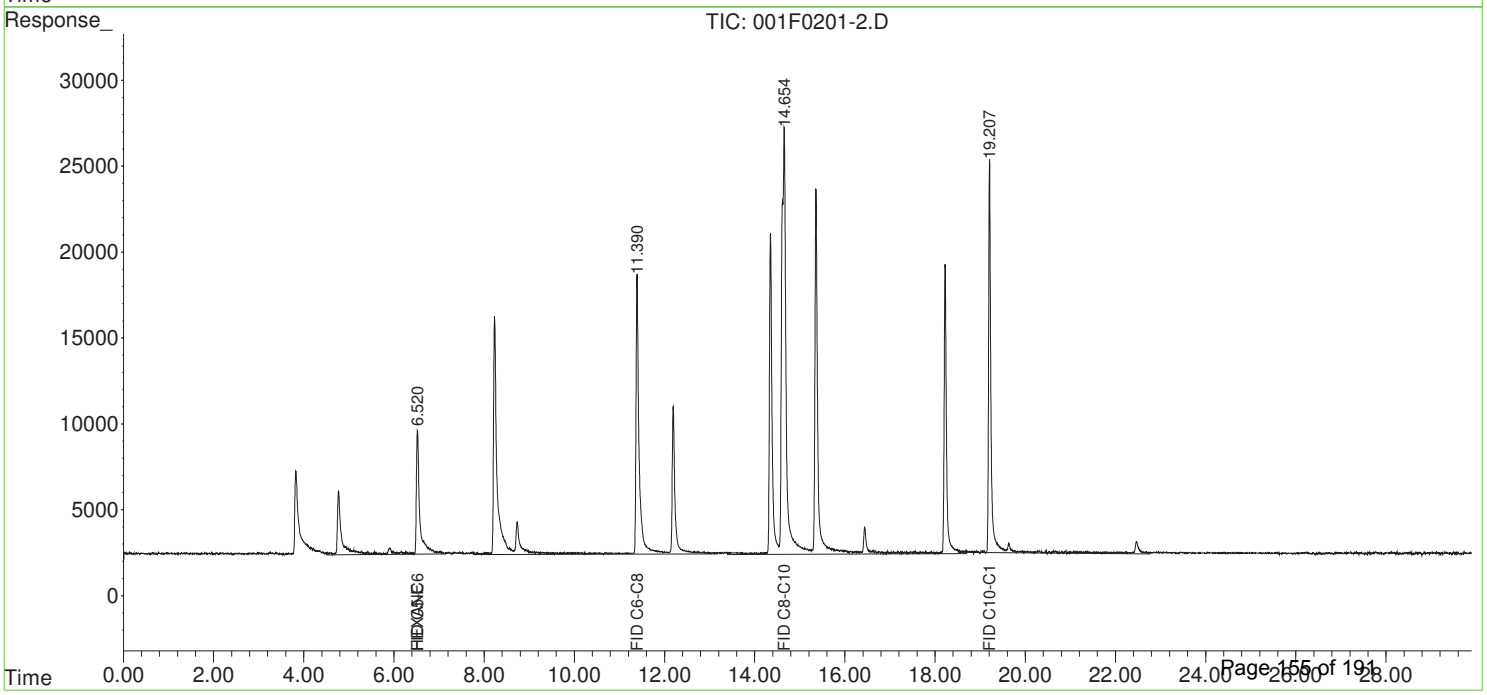
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F0201-2.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 16:10:42
Operator : BC
Sample : LCS-A-13429
Misc : LCS O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:00:14 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F0401.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 17:20:59
Operator : BC
Sample : MB-13429
Misc : MBLK O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:04:35 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	1,4-Difluorobenzene	8.717	1886498	49.107	ug/l
2)	S	Bromofluorobenzene	16.436	2952481	36.453	ug/l
		Target Compounds				
3)	t	MTBE	5.737	1841	1632.663	ug/l
4)	t	Benzene	8.136	1819	0.012	ug/l
5)	t	Toluene	11.382	33809	0.235	ug/l
6)	t	Ethylbenzene	14.344	41645	0.339	ug/l
7)	t	m&p xylenes	14.648	103264	0.650	ug/l
8)	t	o xylene	15.353	45718	0.304	ug/l
9)	t	1,2,3-Trimethylbenzene	19.201	74708	0.611	ug/l
10)	t	Naphthalene	22.840	11634	BelowCal	ug/l
11)	T	PID C8-C10	14.513	1898	49.469	ug/l
12)	T	PID C10-C12	23.711	2909	BelowCal	ug/l
13)	T	PID C12-C13	26.676	611	BelowCal	ug/l
14)	T	SUB C6-C8	11.618	2708	20.358	ug/l
15)	T	SUB C8-C10	15.185	2512	31.994	ug/l
16)	T	SUB C10-C12	19.991	1572	BelowCal	ug/l
18)		Signal 2 #2	0.000	0	N.D.	
19)	t	MTBE 2	5.864	1518	N.D.	ug/l
20)	t	HEXANE	6.476	7453	68.626	ug/l
21)	T	FID C5-C6	6.170	7300	17.044	ug/l
22)	T	FID C6-C8	11.748	8794	22.045	ug/l
23)	T	FID C8-C10	15.213	3333	51.702	ug/l
24)	T	FID C10-C12	20.092	3723	BelowCal	ug/l

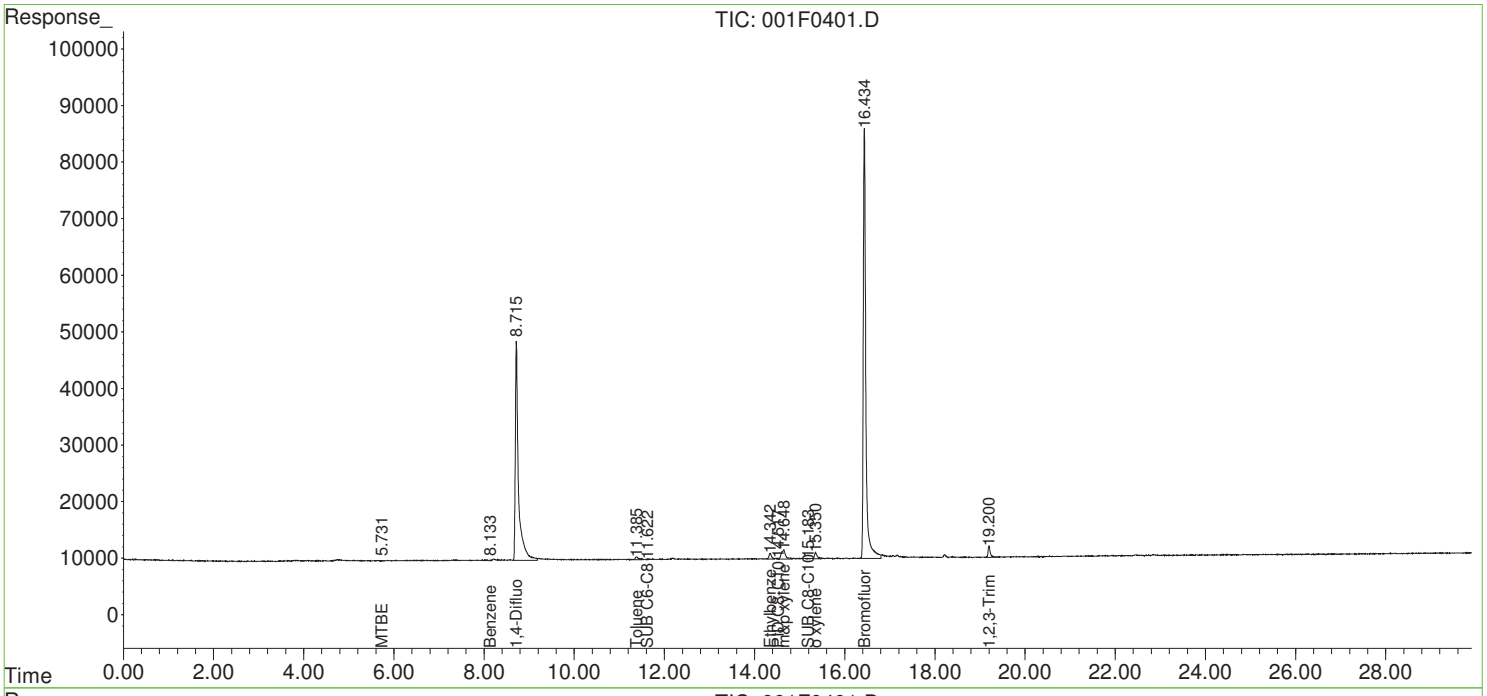
(f)=RT Delta > 1/2 Window (m)=manual int.

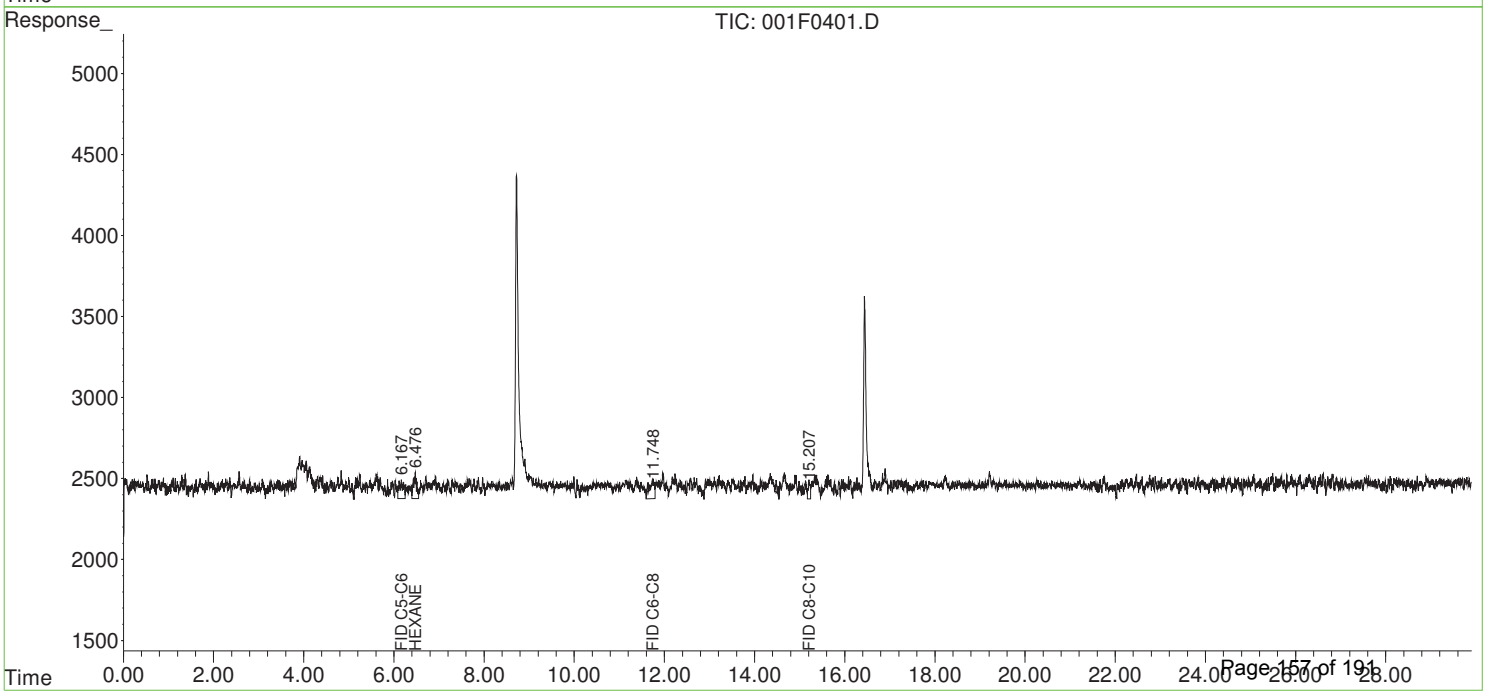
Quantitation Report (Not Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F0401.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 17:20:59
Operator : BC
Sample : MB-13429
Misc : MBLK O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:04:35 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F0601.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 18:31:36
Operator : BC
Sample : 1604078-003A
Misc : SAMP O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:04:57 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1) S	1,4-Difluorobenzene	8.718	1880204	48.943	ug/l	m
2) S	Bromofluorobenzene	16.436	3328403	41.094	ug/l	
	Target Compounds					
3) t	MTBE	5.721	3224	1631.746	ug/l	
4) t	Benzene	8.215	12199	0.082	ug/l	
5) t	Toluene	11.381	19666	0.136	ug/l	
6) t	Ethylbenzene	14.345	24587	0.200	ug/l	
7) t	m&p xylenes	14.648	61997	0.390	ug/l	
8) t	o xylene	15.355	30194	0.201	ug/l	
9) t	1,2,3-Trimethylbenzene	19.200	49624	0.406	ug/l	
10) t	Naphthalene	22.832	25661	50.594	ug/l	
11) T	PID C8-C10	14.648	61997	49.747	ug/l	
12) T	PID C10-C12	23.757	3645	BelowCal	ug/l	
13) T	PID C12-C13	26.677	4083	BelowCal	ug/l	
14) T	SUB C6-C8	11.635	3393	20.362	ug/l	
15) T	SUB C8-C10	15.215	2840	31.995	ug/l	
16) T	SUB C10-C12	20.036	7446	BelowCal	ug/l	
18)	Signal 2 #2	0.000	0	N.D.		
19) t	MTBE 2	5.929	9827	N.D.	ug/l	
20) t	HEXANE	6.440	10142	69.829	ug/l	
21) T	FID C5-C6	6.244	8098	17.624	ug/l	
22) T	FID C6-C8	11.643	6582	21.530	ug/l	
23) T	FID C8-C10	15.113	7788	52.450	ug/l	
24) T	FID C10-C12	19.870	12034	BelowCal	ug/l	

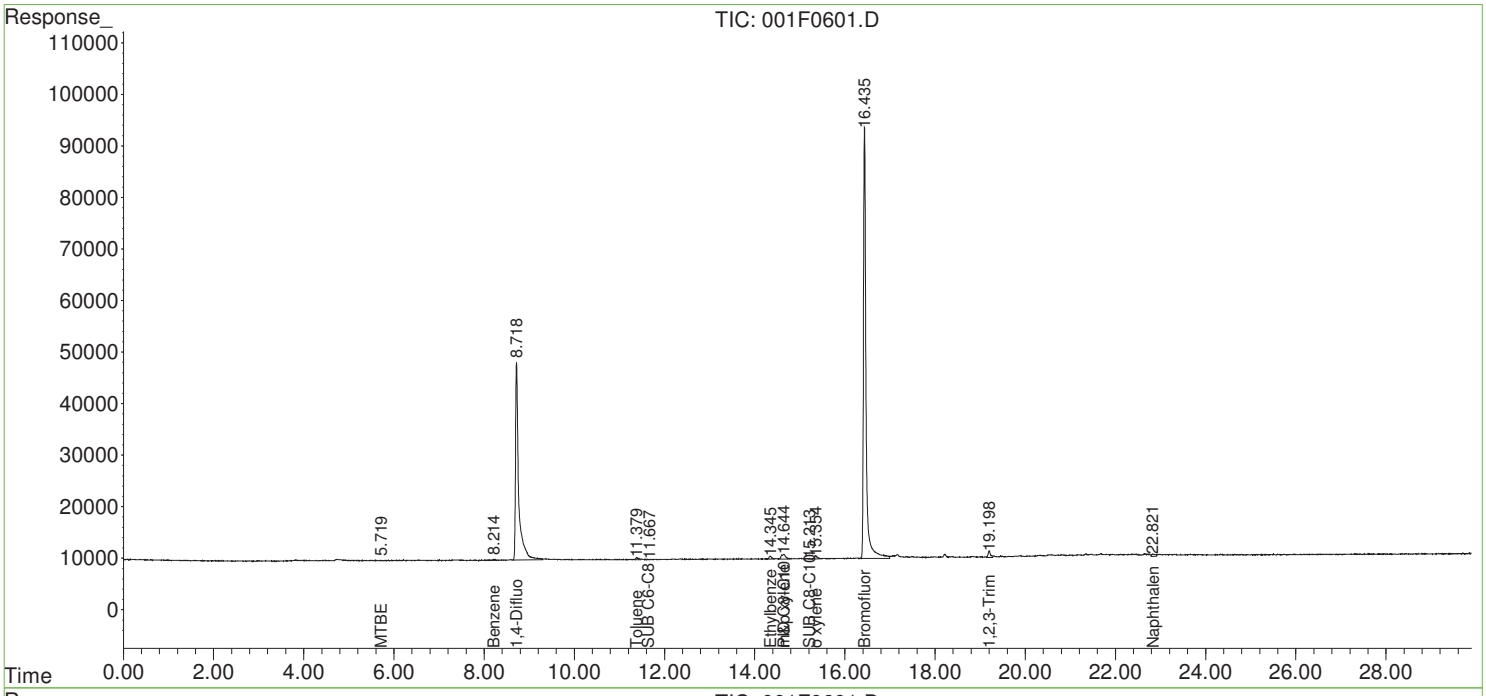
(f)=RT Delta > 1/2 Window (m)=manual int.

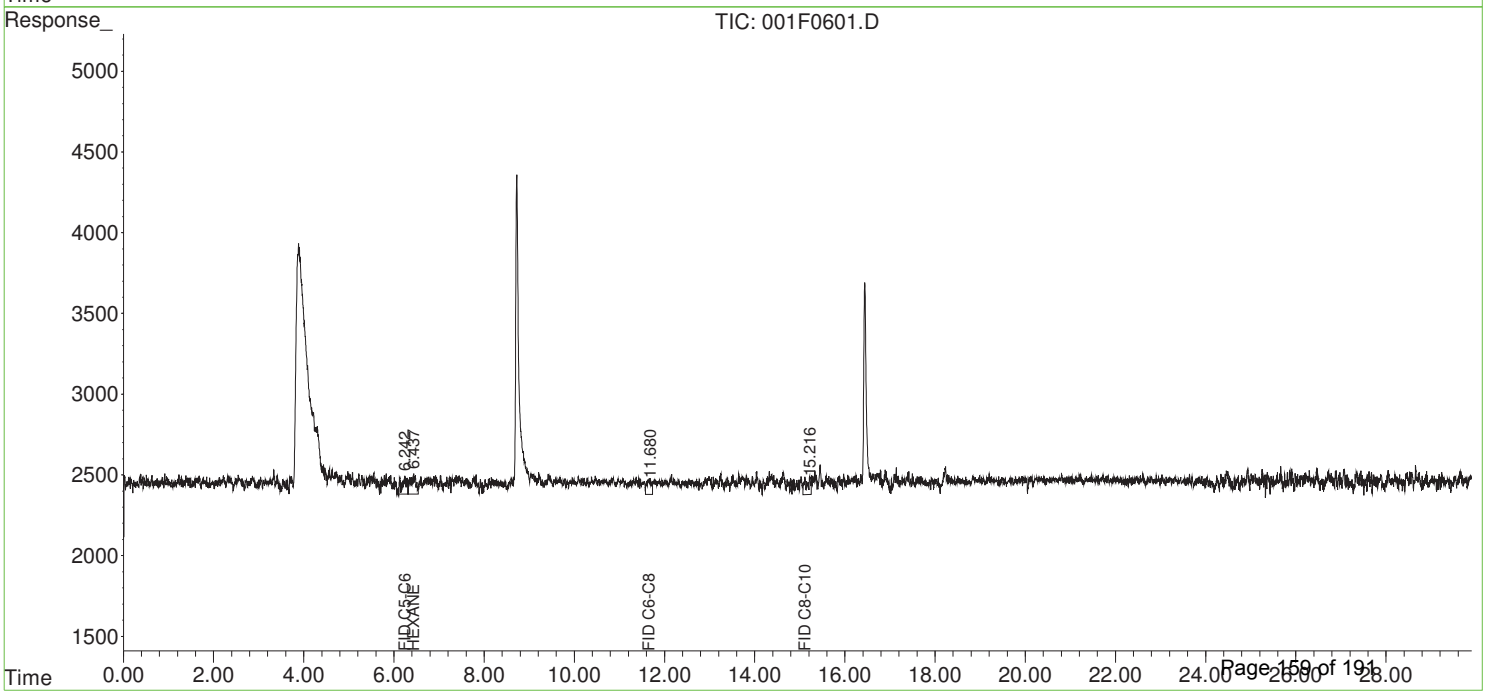
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F0601.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 18:31:36
Operator : BC
Sample : 1604078-003A
Misc : SAMP O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:04:57 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F0701.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 19:06:57
Operator : BC
Sample : 1604078-003ADUP
Misc : DUP O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:05:07 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1) S	1,4-Difluorobenzene	8.715	2000112	52.064	ug/l	m
2) S	Bromofluorobenzene	16.435	3393036	41.892	ug/l	
	Target Compounds					
3) t	MTBE	5.753	1155	1633.118	ug/l	
4) t	Benzene	8.079	2187	0.015	ug/l	
5) t	Toluene	11.390	26235	0.182	ug/l	
6) t	Ethylbenzene	14.341	21185	0.172	ug/l	
7) t	m&p xylenes	14.647	56385	0.355	ug/l	
8) t	o xylene	15.350	26047	0.173	ug/l	
9) t	1,2,3-Trimethylbenzene	19.201	49867	0.408	ug/l	
10) t	Naphthalene	22.844	26492	47.636	ug/l	
11) T	PID C8-C10	14.647	56385	49.721	ug/l	
12) T	PID C10-C12	23.739	4706	BelowCal	ug/l	
13) T	PID C12-C13	26.673	9059	BelowCal	ug/l	
14) T	SUB C6-C8	11.609	953	20.348	ug/l	
15) T	SUB C8-C10	15.171	1476	31.989	ug/l	
16) T	SUB C10-C12	20.025	11986	BelowCal	ug/l	
18)	Signal 2 #2	0.000	0	N.D.		
19) t	MTBE 2	5.794	4052	N.D.	ug/l	
20) t	HEXANE	6.460	11006	70.216	ug/l	
21) T	FID C5-C6	6.117	5300	15.591	ug/l	
22) T	FID C6-C8	11.574	1423	20.329	ug/l	
23) T	FID C8-C10	15.189	11501	53.073	ug/l	
24) T	FID C10-C12	20.017	4083	BelowCal	ug/l	

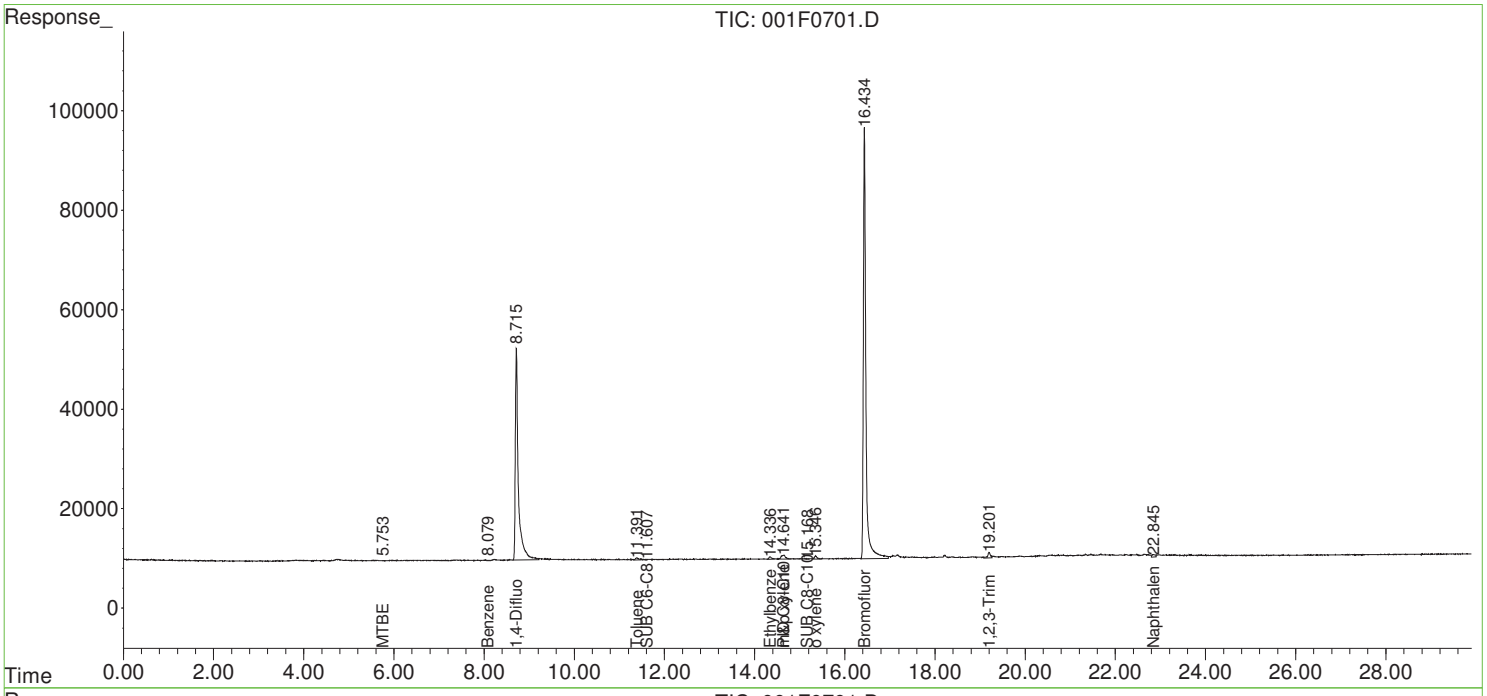
(f)=RT Delta > 1/2 Window (m)=manual int.

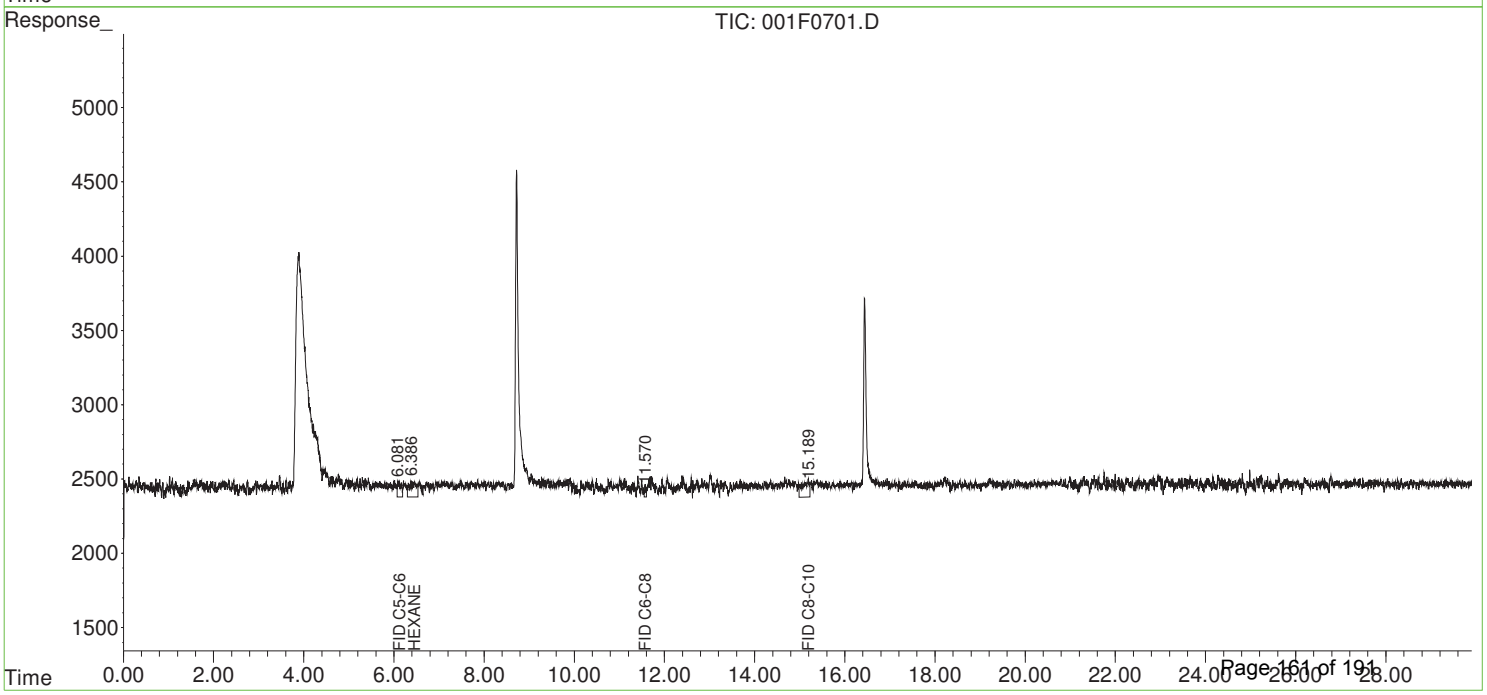
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F0701.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 19:06:57
Operator : BC
Sample : 1604078-003ADUP
Misc : DUP O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:05:07 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F0901.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 20:17:48
Operator : BC
Sample : 1604080-001A
Misc : SAMP O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:05:30 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1,4-Difluorobenzene	8.717	1803886	46.956	ug/l	m
2)	S	Bromofluorobenzene	16.436	3077512	37.996	ug/l	
		Target Compounds					
3)	t	MTBE	5.692	3953	1631.263	ug/l	
4)	t	Benzene	8.086	4479	0.030	ug/l	
5)	t	Toluene	11.387	29112	0.202	ug/l	
6)	t	Ethylbenzene	14.346	17764	0.145	ug/l	
7)	t	m&p xylenes	14.647	43163	0.272	ug/l	
8)	t	o xylene	15.351	18633	0.124	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.201	28758	0.235	ug/l	
10)	t	Naphthalene	22.864	28025	42.963	ug/l	
11)	T	PID C8-C10	14.647	43163	49.660	ug/l	
12)	T	PID C10-C12	23.758	9499	BelowCal	ug/l	
13)	T	PID C12-C13	26.734	9955	BelowCal	ug/l	
14)	T	SUB C6-C8	11.672	4951	20.370	ug/l	
15)	T	SUB C8-C10	15.181	947	31.987	ug/l	
16)	T	SUB C10-C12	20.000	4108	BelowCal	ug/l	
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.806	4699	N.D.	ug/l	
20)	t	HEXANE	6.415	2878	66.578	ug/l	
21)	T	FID C5-C6	6.108	5023	15.390	ug/l	
22)	T	FID C6-C8	11.522	10018	22.330	ug/l	
23)	T	FID C8-C10	15.189	6537	52.240	ug/l	
24)	T	FID C10-C12	20.076	6893	BelowCal	ug/l	

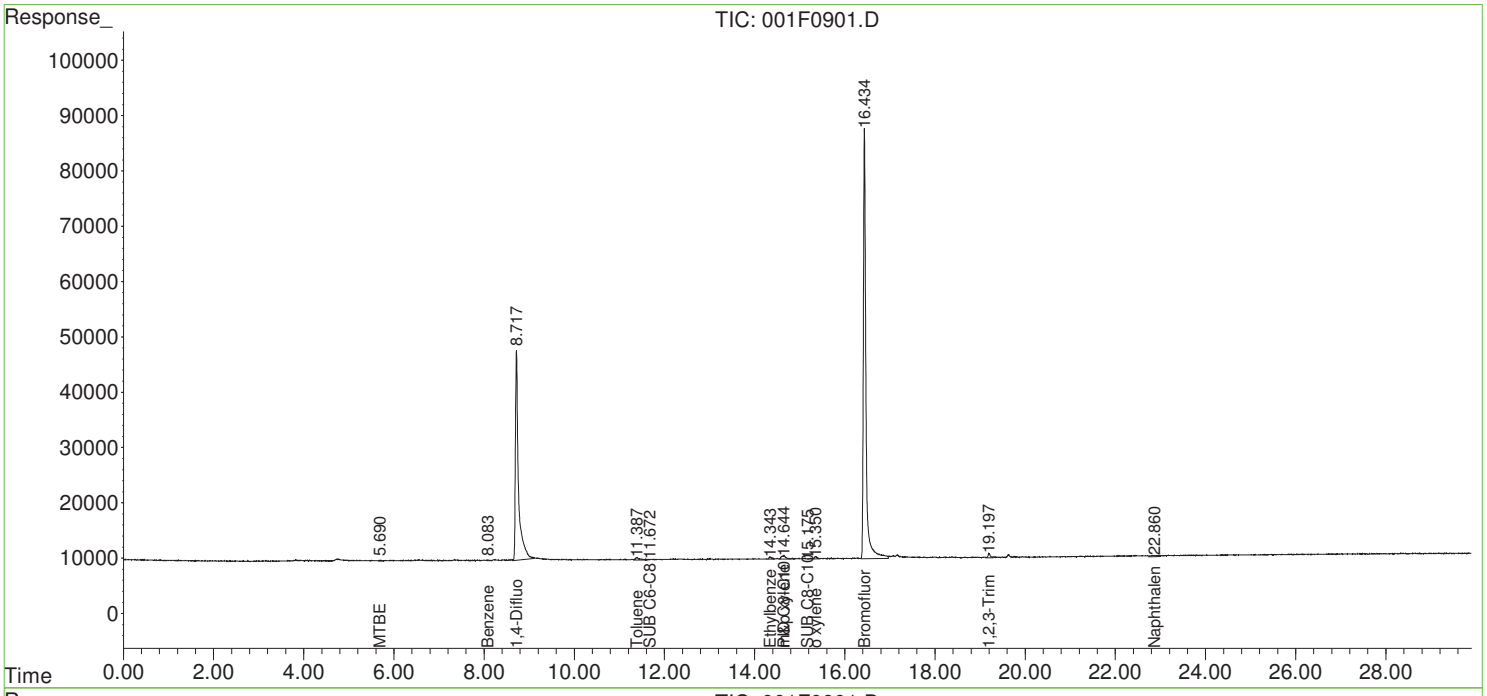
(f)=RT Delta > 1/2 Window (m)=manual int.

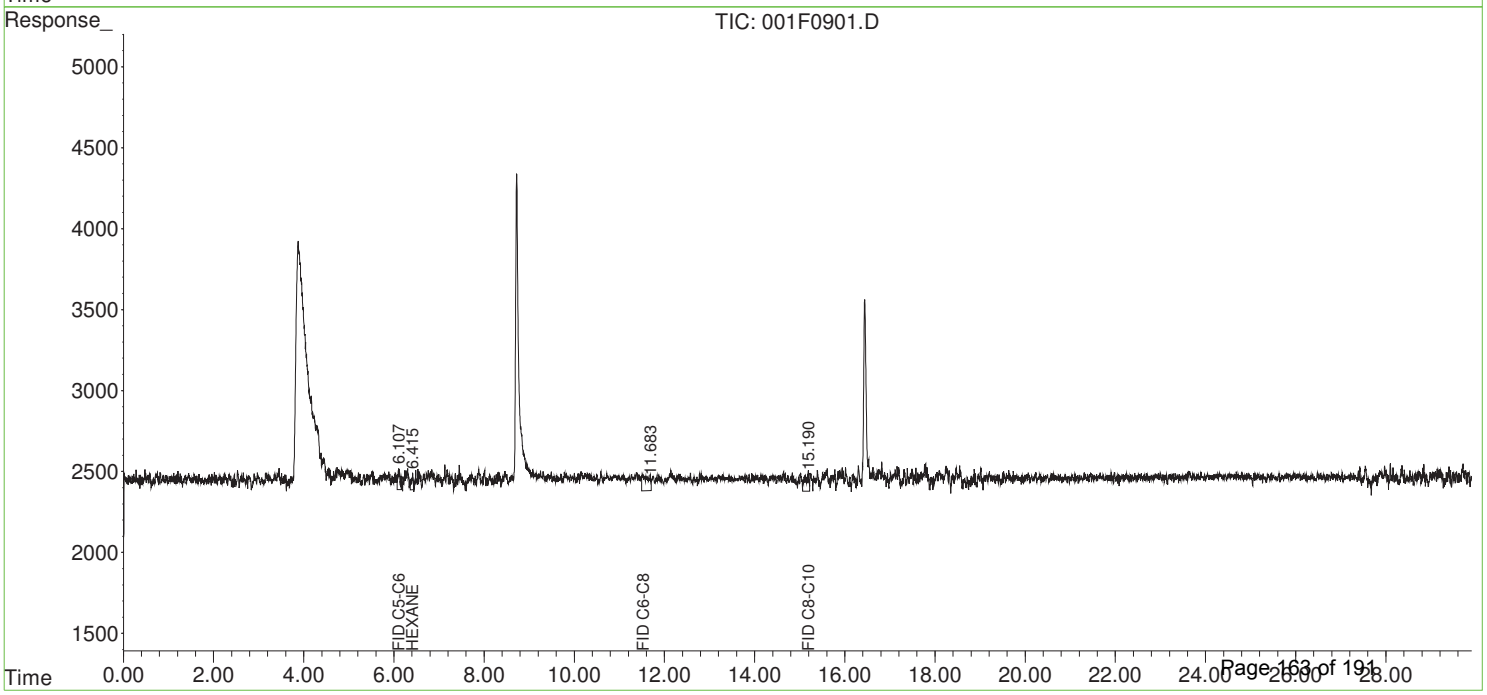
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F0901.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 20:17:48
Operator : BC
Sample : 1604080-001A
Misc : SAMP O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:05:30 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (Not Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F1001.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 20:53:27
Operator : BC
Sample : 1604080-003A
Misc : SAMP O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:05:41 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	8.719	1793974	46.698	ug/l
2) S	Bromofluorobenzene	16.436	2820038	34.818	ug/l
	Target Compounds				
3) t	MTBE	5.708	2730	1632.074	ug/l
4) t	Benzene	8.109	849	0.006	ug/l
5) t	Toluene	11.384	16579	0.115	ug/l
6) t	Ethylbenzene	14.343	17907	0.146	ug/l
7) t	m&p xylenes	14.644	37433	0.236	ug/l
8) t	o xylene	15.353	18361	0.122	ug/l
9) t	1,2,3-Trimethylbenzene	19.202	35340	0.289	ug/l
10) t	Naphthalene	22.838	7408	BelowCal	ug/l
11) T	PID C8-C10	14.644	37433	49.633	ug/l
12) T	PID C10-C12	23.718	14366	BelowCal	ug/l
13) T	PID C12-C13	26.725	12431	BelowCal	ug/l
14) T	SUB C6-C8	11.605	935	20.348	ug/l
15) T	SUB C8-C10	15.223	3660	31.999	ug/l
16) T	SUB C10-C12	20.001	5303	BelowCal	ug/l
18)	Signal 2 #2	0.000	0	N.D.	
19) t	MTBE 2	5.854	3526	N.D.	ug/l
20) t	HEXANE	6.377	1727	66.063	ug/l
21) T	FID C5-C6	6.113	5721	15.897	ug/l
22) T	FID C6-C8	11.632	2993	20.694	ug/l
23) T	FID C8-C10	15.226	6316	52.203	ug/l
24) T	FID C10-C12	19.957	4120	BelowCal	ug/l

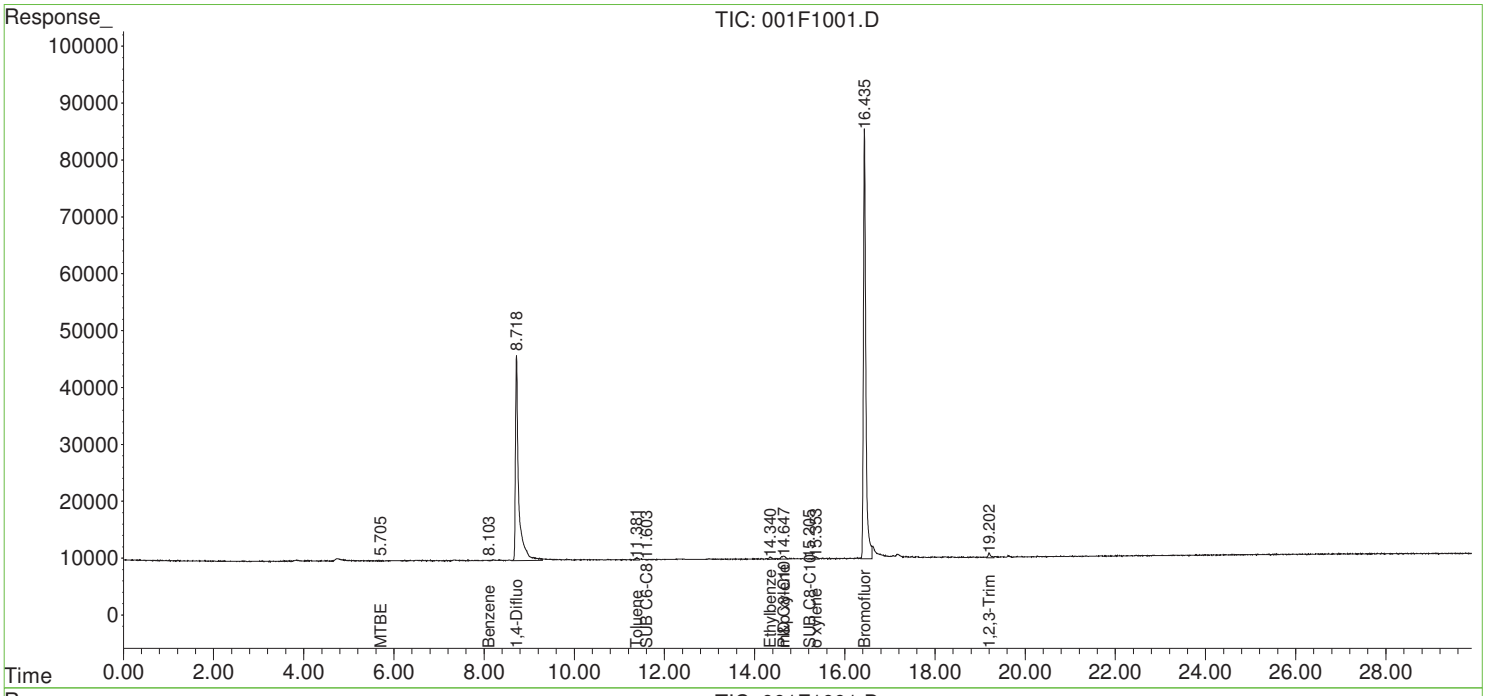
(f)=RT Delta > 1/2 Window (m)=manual int.

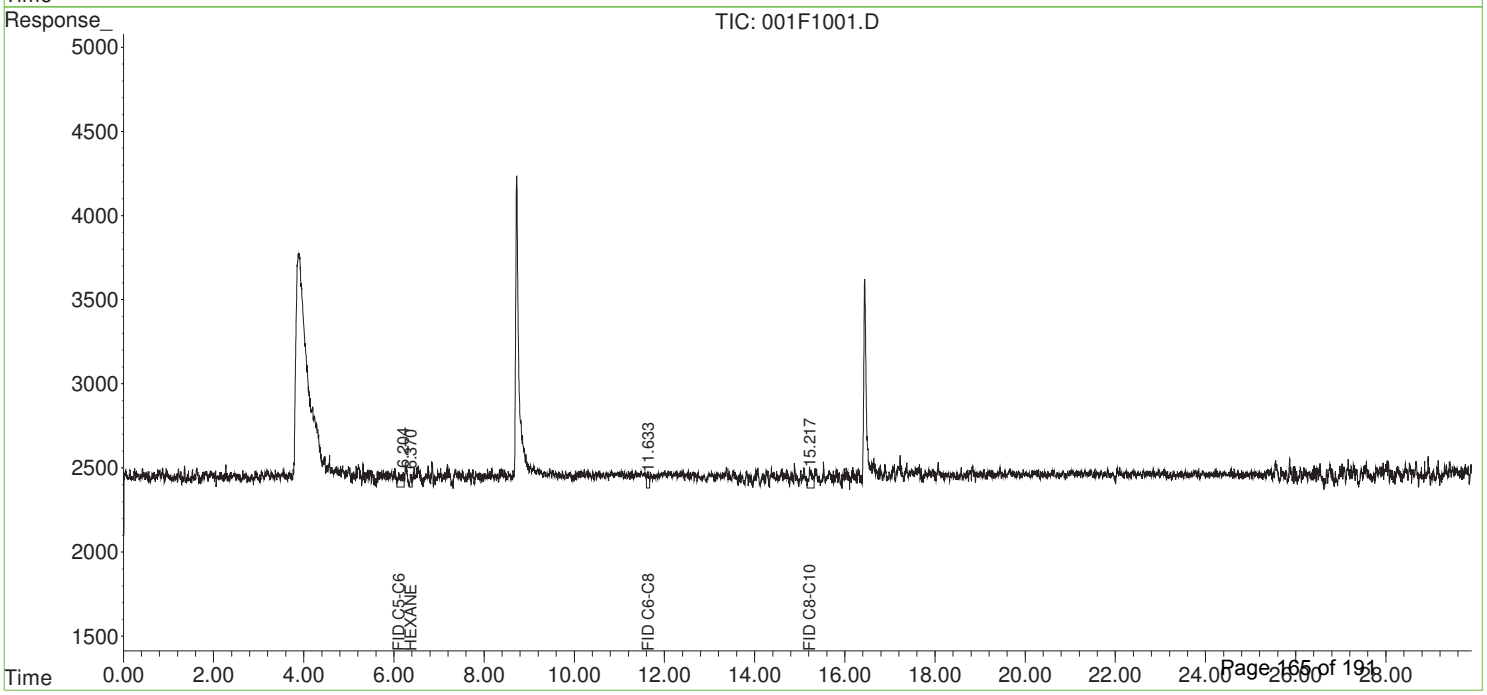
Quantitation Report (Not Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F1001.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 20:53:27
Operator : BC
Sample : 1604080-003A
Misc : SAMP O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:05:41 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F1101.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 21:29:11
Operator : BC
Sample : 1604081-001A
Misc : SAMP O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:05:51 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds							
1)	S	1,4-Difluorobenzene	8.727	1403657	36.538	ug/l	m
2)	S	Bromofluorobenzene	16.435	2765843	34.148	ug/l	m
Target Compounds							
3)	t	MTBE	5.747	2311	1632.351	ug/l	
4)	t	Benzene	8.158	2132	0.014	ug/l	
5)	t	Toluene	11.387	17415	0.121	ug/l	
6)	t	Ethylbenzene	14.340	14388	0.117	ug/l	
7)	t	m&p xylenes	14.651	32747	0.206	ug/l	
8)	t	o xylene	15.358	17793	0.118	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.201	22174	0.181	ug/l	
10)	t	Naphthalene	22.877	10031	BelowCal	ug/l	
11)	T	PID C8-C10	14.538	1555	49.468	ug/l	
12)	T	PID C10-C12	23.734	6665	BelowCal	ug/l	
13)	T	PID C12-C13	26.737	18776	BelowCal	ug/l	
14)	T	SUB C6-C8	11.666	3628	20.363	ug/l	
15)	T	SUB C8-C10	15.225	3592	31.998	ug/l	
16)	T	SUB C10-C12	20.017	3325	BelowCal	ug/l	
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.919	7887	N.D.	ug/l	
20)	t	HEXANE	6.406	3041	66.651	ug/l	
21)	T	FID C5-C6	6.144	2914	13.858	ug/l	
22)	T	FID C6-C8	11.629	4354	21.011	ug/l	
23)	T	FID C8-C10	15.165	8464	52.563	ug/l	
24)	T	FID C10-C12	19.962	10852	BelowCal	ug/l	

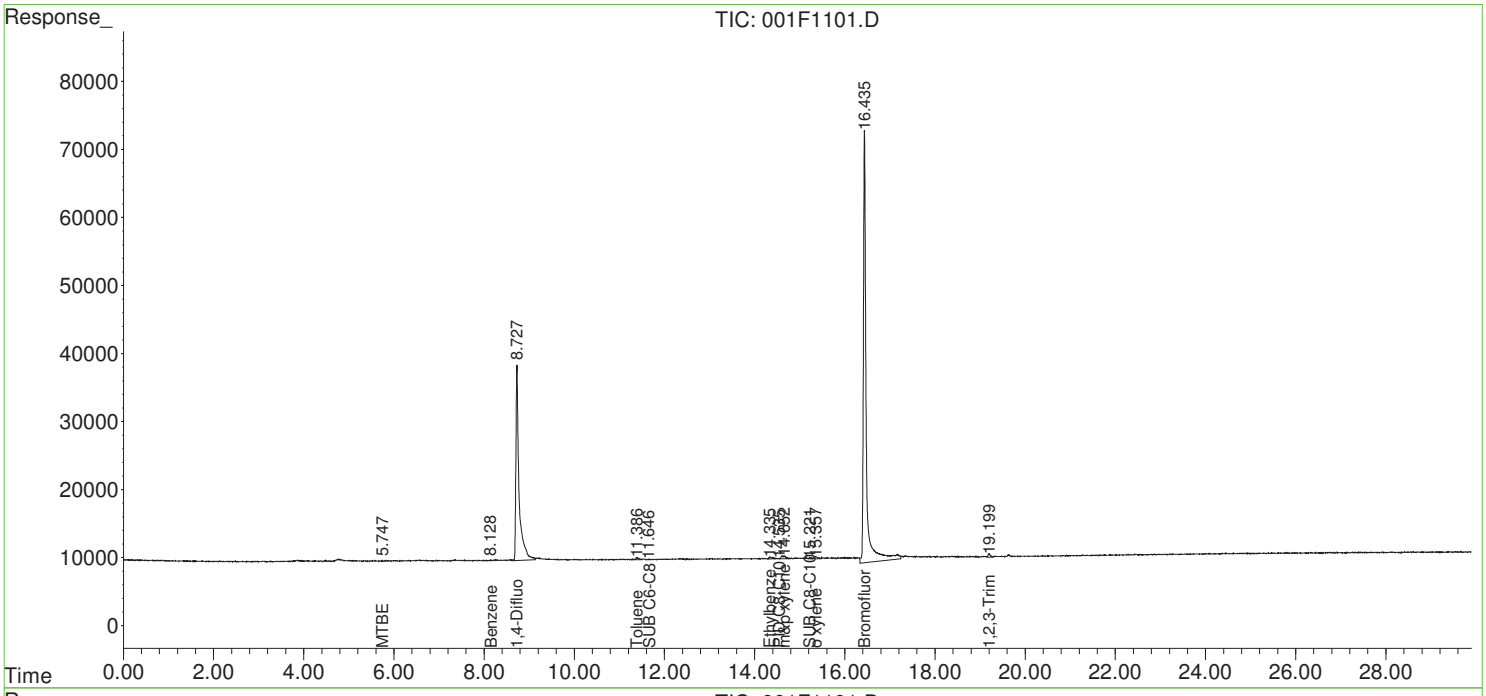
(f)=RT Delta > 1/2 Window (m)=manual int.

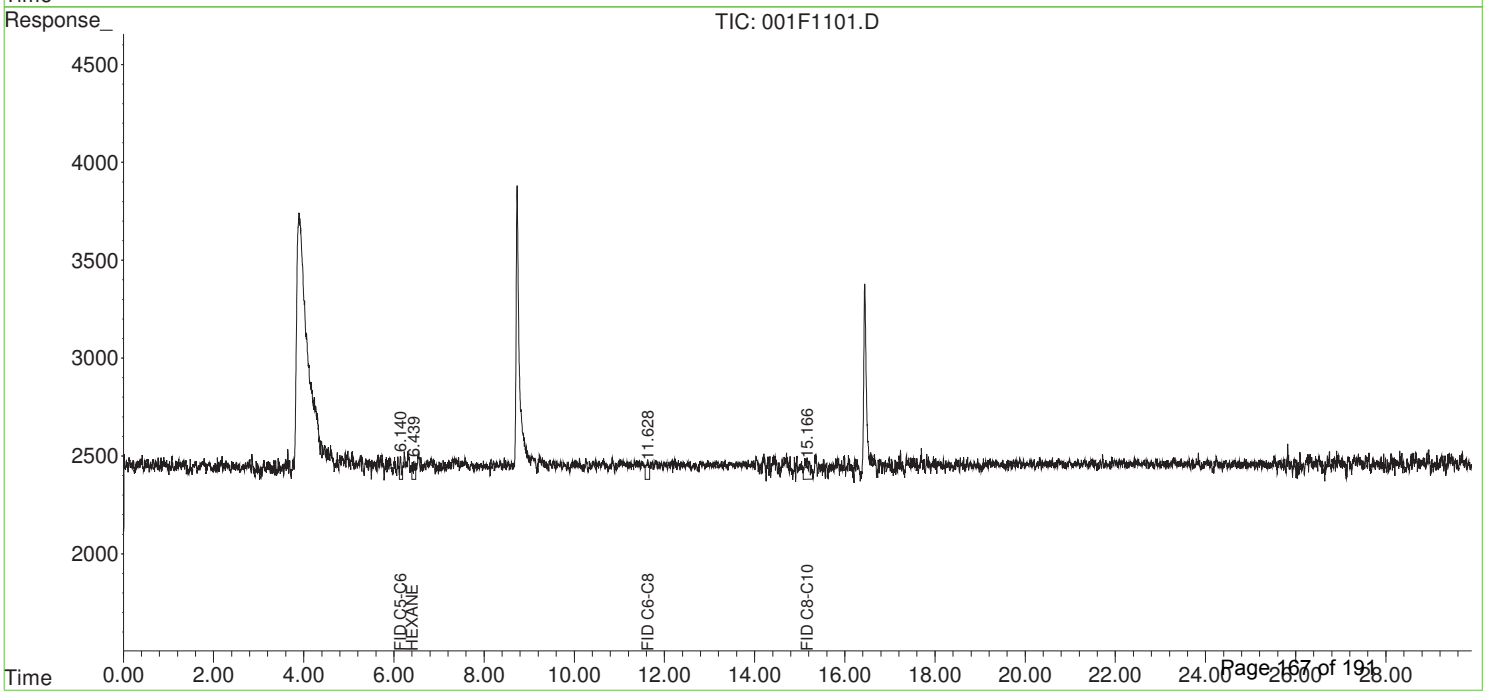
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F1101.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 21:29:11
Operator : BC
Sample : 1604081-001A
Misc : SAMP O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:05:51 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F1301.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 22:39:37
Operator : BC
Sample : 1604081-001AMS
Misc : MS O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:07:09 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds							
1)	S	1,4-Difluorobenzene	8.721	1702530	44.318	ug/l	m
2)	S	Bromofluorobenzene	16.433	4009150	49.499	ug/l	m
Target Compounds							
3)	t	MTBE	5.880f	596464	257.941	ug/l	m
4)	t	Benzene	8.223	26933670	180.776	ug/l	
5)	t	Toluene	11.385	27267000	189.182	ug/l	
6)	t	Ethylbenzene	14.345	24091470	196.103	ug/l	
7)	t	m&p xylenes	14.650	63207120	397.679	ug/l	
8)	t	o xylene	15.355	29117127	193.821	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.203	24446462	200.012	ug/l	
10)	t	Naphthalene	22.844	160021	221.049	ug/l	
11)	T	PID C8-C10	14.649	153105651	755.579	ug/l	m
12)	T	PID C10-C12	22.444f	806376	407.986	ug/l	m
13)	T	PID C12-C13	24.020f	104201	224.932	ug/l	m
14)	T	SUB C6-C8	11.384	59937512	356.920	ug/l	m
15)	T	SUB C8-C10	14.649	126200955	575.308	ug/l	m
16)	T	SUB C10-C12	19.201	28361802	227.833	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.888	32492	288.399	ug/l	
20)	t	HEXANE	6.386	3724	66.957	ug/l	
21)	T	FID C5-C6	6.511	689564	512.633	ug/l	m
22)	T	FID C6-C8	11.388	2255243	545.112	ug/l	m
23)	T	FID C8-C10	14.655	4132190	744.573	ug/l	m
24)	T	FID C10-C12	19.208	1023921	471.251	ug/l	m

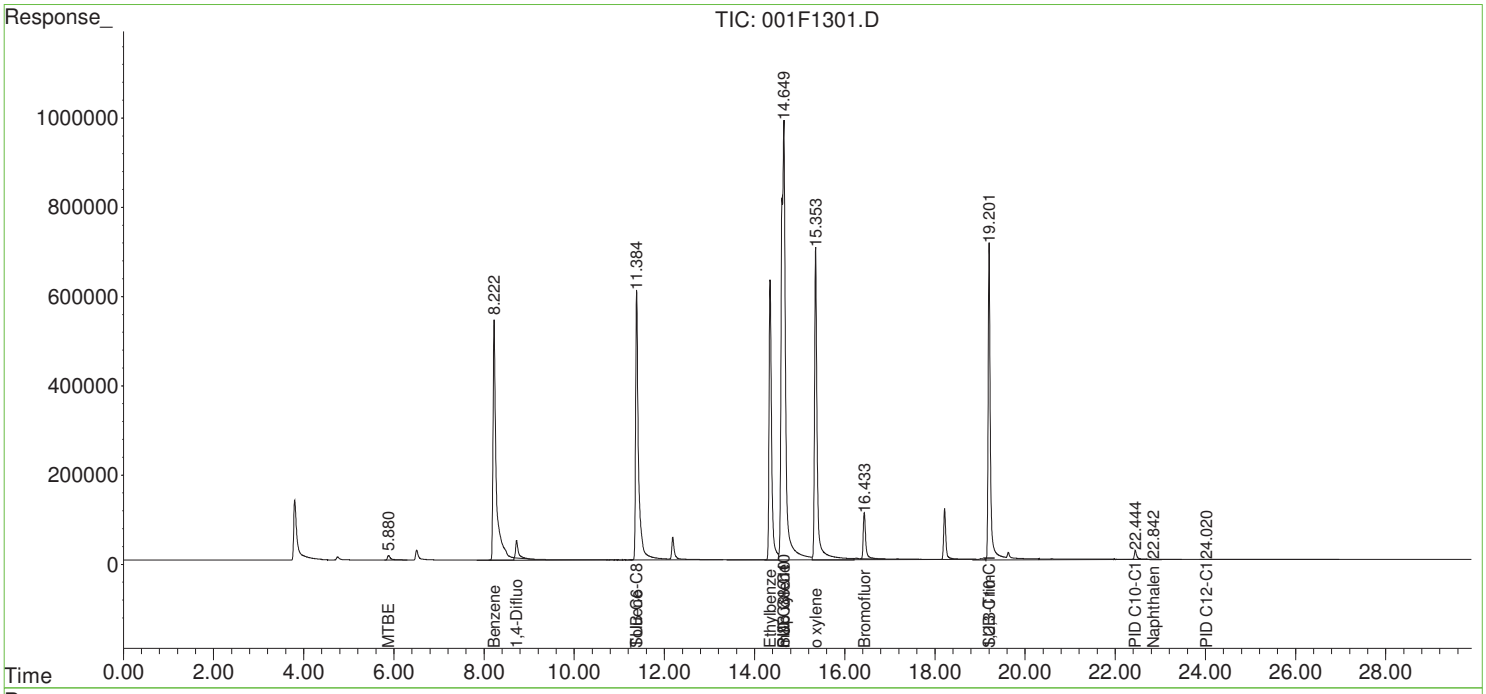
(f)=RT Delta > 1/2 Window (m)=manual int.

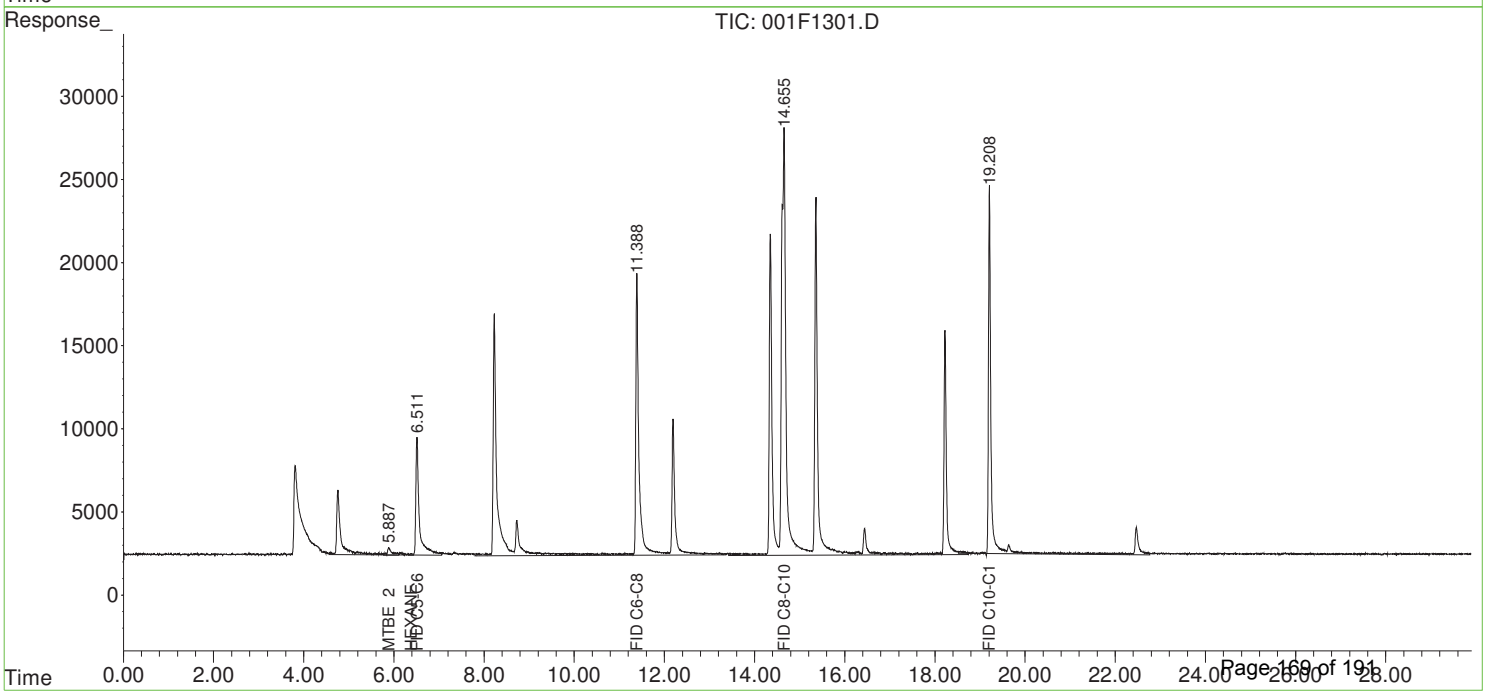
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F1301.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 22:39:37
Operator : BC
Sample : 1604081-001AMS
Misc : MS O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:07:09 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F1401.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 23:14:49
Operator : BC
Sample : 1604081-001AMSD
Misc : MSD O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:07:21 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1,4-Difluorobenzene	8.725	1630723	42.449	ug/l	m
2)	S	Bromofluorobenzene	16.434	3925123	48.461	ug/l	m
		Target Compounds					
3)	t	MTBE	5.887f	553153	195.455	ug/l	m
4)	t	Benzene	8.226	26348494	176.848	ug/l	m
5)	t	Toluene	11.388	27143208	188.323	ug/l	
6)	t	Ethylbenzene	14.347	24106057	196.221	ug/l	
7)	t	m&p xylenes	14.652	63438045	399.132	ug/l	
8)	t	o xylene	15.356	29138667	193.964	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.204	24744820	202.453	ug/l	
10)	t	Naphthalene	22.848	168980	225.844	ug/l	
11)	T	PID C8-C10	14.651	155901520	768.474	ug/l	m
12)	T	PID C10-C12	22.445f	1020215	452.136	ug/l	m
13)	T	PID C12-C13	24.550f	115305	305.935	ug/l	m
14)	T	SUB C6-C8	11.386	62403576	370.768	ug/l	m
15)	T	SUB C8-C10	14.651	129234604	588.369	ug/l	m
16)	T	SUB C10-C12	19.202	28345235	227.705	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.896	28174	131.067	ug/l	
20)	t	HEXANE	6.326	6550	68.222	ug/l	
21)	T	FID C5-C6	6.517	672416	500.177	ug/l	m
22)	T	FID C6-C8	11.390	2227083	538.556	ug/l	m
23)	T	FID C8-C10	14.656	4274716	768.491	ug/l	m
24)	T	FID C10-C12	19.208	1055390	486.587	ug/l	m

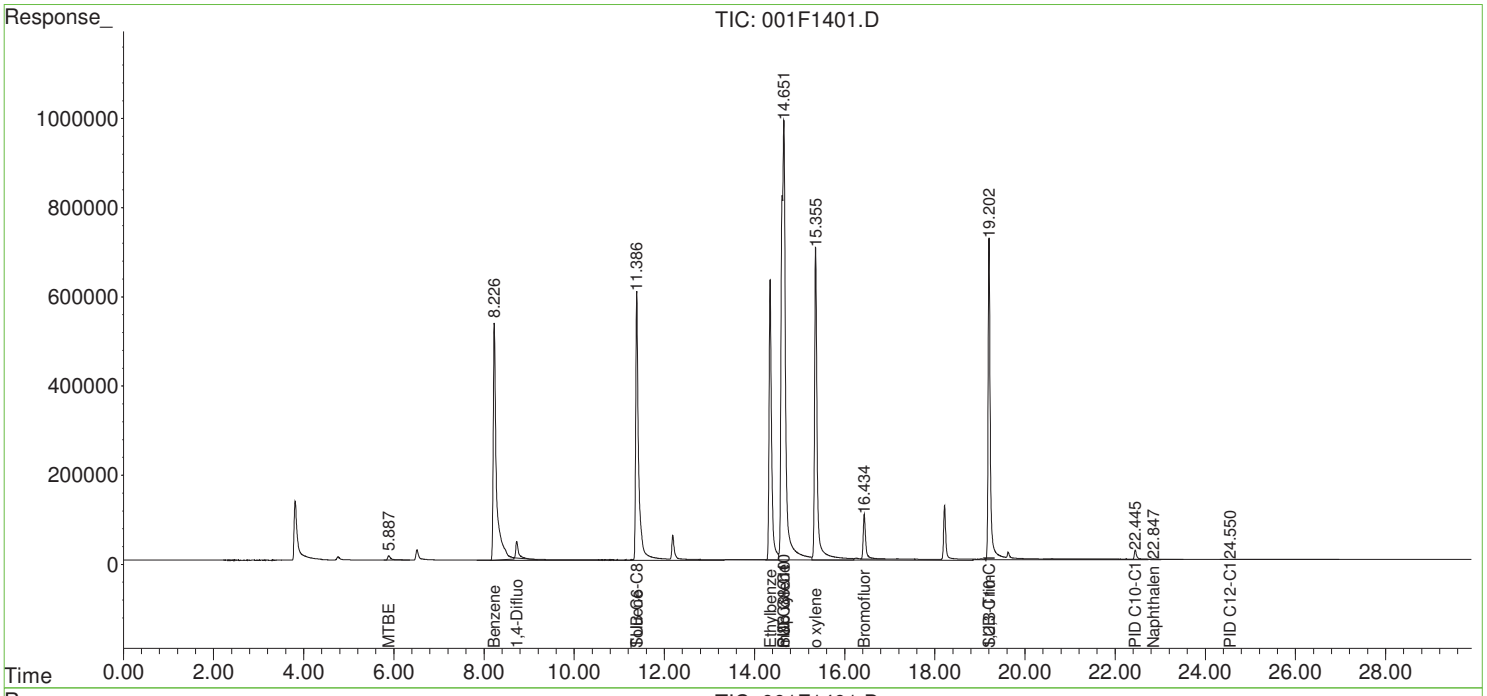
(f)=RT Delta > 1/2 Window (m)=manual int.

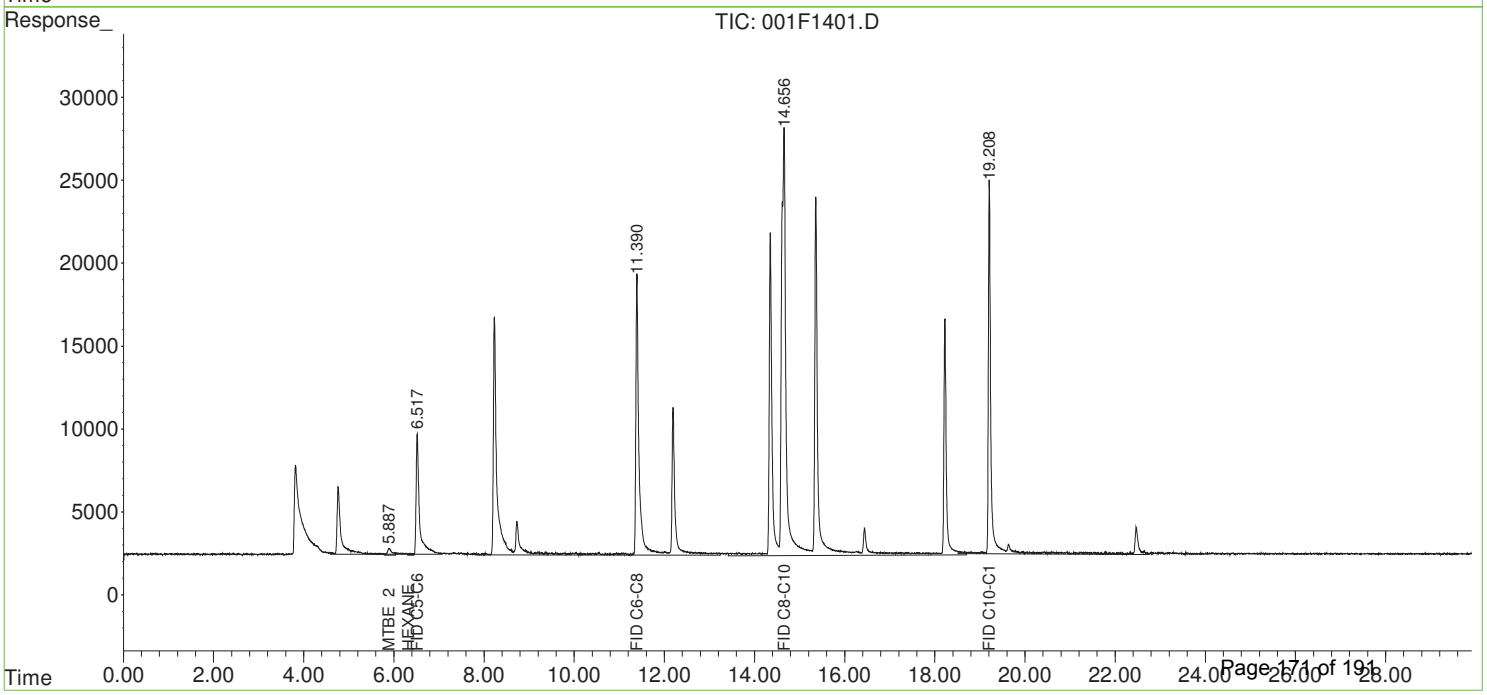
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F1401.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 12-Apr-2016, 23:14:49
Operator : BC
Sample : 1604081-001AMSD
Misc : MSD O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 11:07:21 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F1601.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 13-Apr-2016, 00:25:46
Operator : BC
Sample : CCV-B-13429
Misc : CCV O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:57:06 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
1)	S	1,4-Difluorobenzene	8.703	1629050	42.405	ug/l	m
2)	S	Bromofluorobenzene	16.428	3398125	41.955	ug/l	m
		Target Compounds					
3)	t	MTBE	5.850	629125	312.225	ug/l	m
4)	t	Benzene	8.202	26523755	178.025	ug/l	
5)	t	Toluene	11.374	25793134	178.956	ug/l	
6)	t	Ethylbenzene	14.339	21535542	175.298	ug/l	
7)	t	m&p xylenes	14.644	55001955	346.054	ug/l	m
8)	t	o xylene	15.349	26193203	174.358	ug/l	
9)	t	1,2,3-Trimethylbenzene	19.200	21599753	176.721	ug/l	
10)	t	Naphthalene	22.845	150604	215.838	ug/l	
11)	T	PID C8-C10	14.644	137683711	684.454	ug/l	m
12)	T	PID C10-C12	22.842f	288606	253.325	ug/l	m
13)	T	PID C12-C13	23.916f	103664	219.798	ug/l	m
14)	T	SUB C6-C8	11.373	58170341	346.996	ug/l	m
15)	T	SUB C8-C10	14.644	111778263	513.215	ug/l	m
16)	T	SUB C10-C12	19.199	23514905	189.748	ug/l	m
18)		Signal 2 #2	0.000	0	N.D.		
19)	t	MTBE 2	5.857	26224	60.029	ug/l	
20)	t	HEXANE	6.485	342677	218.668	ug/l	
21)	T	FID C5-C6	6.482	664393	494.349	ug/l	m
22)	T	FID C6-C8	11.377	2217635	536.356	ug/l	m
23)	T	FID C8-C10	14.648	3711370	673.954	ug/l	m
24)	T	FID C10-C12	19.205	797432	353.381	ug/l	m

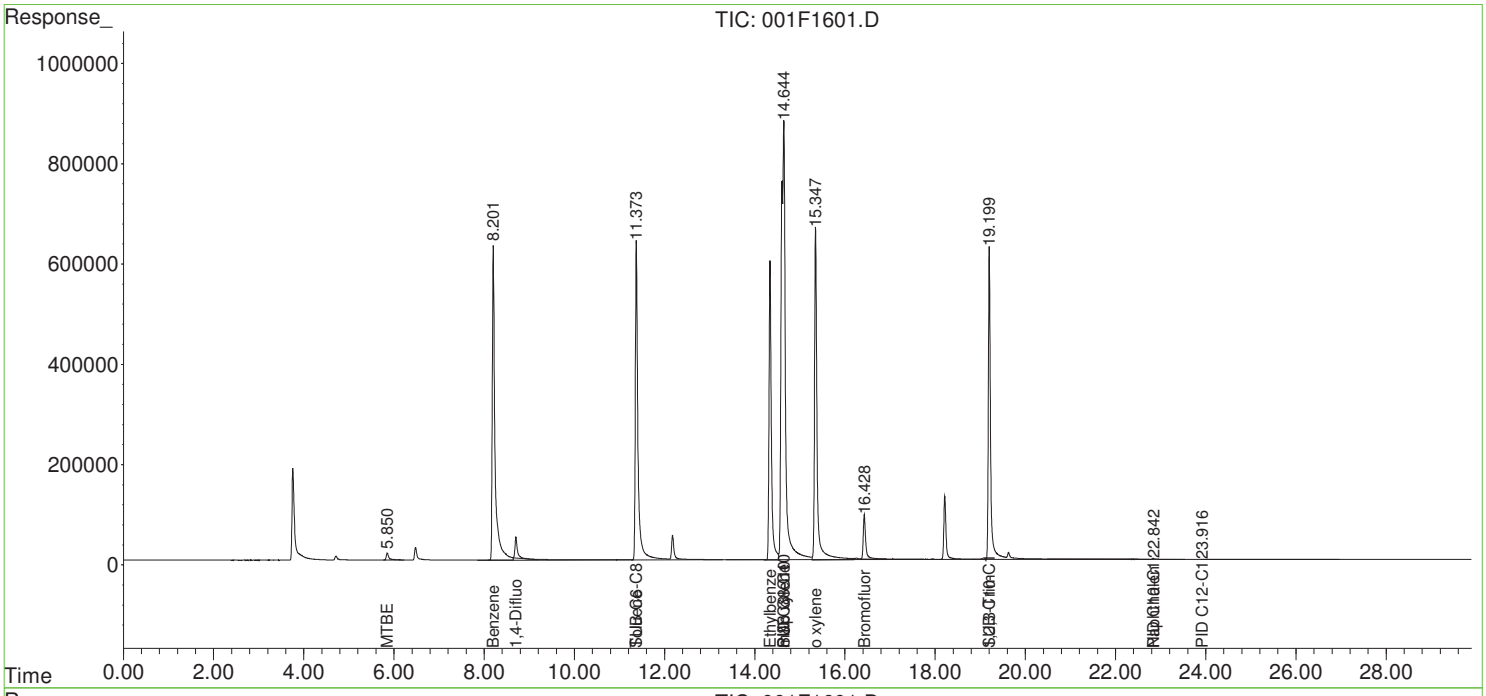
(f)=RT Delta > 1/2 Window (m)=manual int.

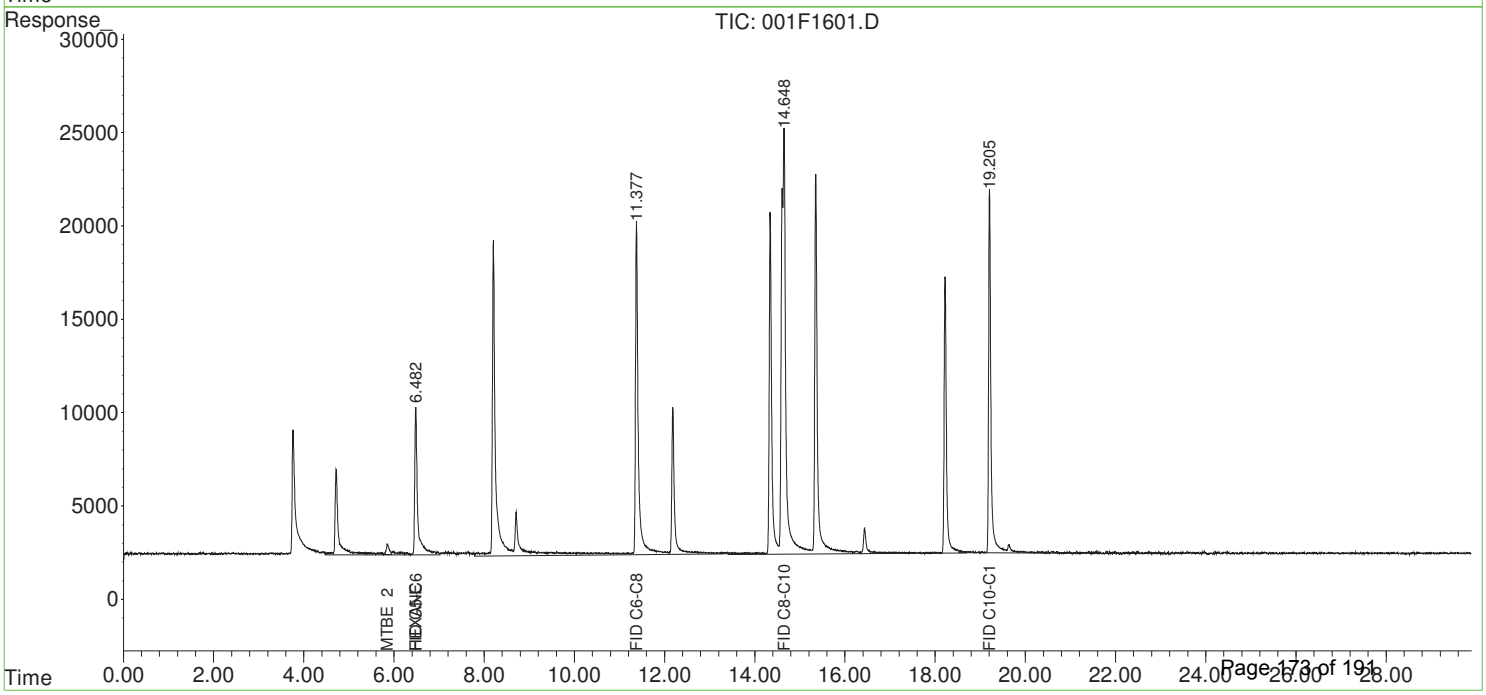
Quantitation Report (QT Reviewed)

Data Path : C:\GC-2\DATA\041216\2016-04-12\
Data File : 001F1601.D
Signal(s) : Signal #1: FID1B.CH Signal #2: FID2A.CH
Acq On : 13-Apr-2016, 00:25:46
Operator : BC
Sample : CCV-B-13429
Misc : CCV O-VPH-S
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: AUTOINT1.E
Integration File signal 2: autoint2.e
Quant Time: Apr 15 10:57:06 2016
Quant Method : C:\GC-2\METHODS\QUANT METHODS\VPH QUANT METHOD\VVPH27814.M
Quant Title : BTEX
QLast Update : Fri Apr 15 09:42:15 2016
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Supporting Data

Fremont Analytical, Inc.

ANALYTICAL RUN Summary

24-May-16

RunNo 28687

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
539602	1604078-002A (Container-01 of 01)	PMOIST	SAMP		4/11/2016 10:17:	1	R28687	4/11/2016	1	0	0

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Percent Moisture	A	wt%	36.8471954	36.8471954		0	0	0	0.1	0.5	0	0%	0	0	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
539603	1604078-002ADUP (Container-01 of 01)	PMOIST	DUP		4/11/2016 10:17:	1	R28687	4/11/2016	1	0 539602	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Percent Moisture	A	wt%	40.5303030	40.5303030		0	0	36.847195	0.1	0.5	0	0%	0	0	10%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
539604	1604078-004A (Container-01 of 01)	PMOIST	SAMP		4/11/2016 10:17:	1	R28687	4/11/2016	1	0	0

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Percent Moisture	A	wt%	27.2347536	27.2347536		0	0	0	0.1	0.5	0	0%	0	0	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
539605	1604079-002A (Container-01 of 01)	PMOIST	SAMP		4/11/2016 10:17:	1	R28687	4/11/2016	1	0	0

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Percent Moisture	A	wt%	29.5097132	29.5097132		0	0	0	0.1	0.5	0	0%	0	0	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
539606	1604080-002A (Container-01 of 01)	PMOIST	SAMP		4/11/2016 10:17:	1	R28687	4/11/2016 1	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Percent Moisture	A	wt%	32.9070759	32.9070759		0	0	0	0.1	0.5	0	0%	0	0	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
539607	1604080-004A (Container-01 of 01)	PMOIST	SAMP		4/11/2016 10:17:	1	R28687	4/11/2016 1	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Percent Moisture	A	wt%	51.0369702	51.0369702		0	0	0	0.1	0.5	0	0%	0	0	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
539608	1604081-002A (Container-01 of 01)	PMOIST	SAMP		4/11/2016 10:17:	1	R28687	4/11/2016 1	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Percent Moisture	A	wt%	20.1923077	20.1923077		0	0	0	0.1	0.5	0	0%	0	0	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
539609	1604081-004A (Container-01 of 01)	PMOIST	SAMP		4/11/2016 10:17:	1	R28687	4/11/2016 1	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Percent Moisture	A	wt%	30.7183365	30.7183365		0	0	0	0.1	0.5	0	0%	0	0	0%	

Samuel Beerman
Balance 2

Oven	Oven 3 - Stage One	Analyst	Sam Beerman
Oven Thermeter:	Oven_3_Thermo	Date and Time	4/11/2016
Temp (C): In/Out	105/110	RUN NUMBER	28687
Time in:	10:30 @ 105°C	Cooled for:	
Time Out:	12:30 P 110		

Pmoist Bench Sheet v.1
This is an uncontroled document

4/11/16

Tin #	&Sample ID	Testcode	Initial Weight	Final Weight 1	Comments
1	1604078-002A	PMOIST	10.34	6.53	36.84 PM
2	1604078-002ADUP	PMOIST	10.56	6.28	40.53 PM
3	1604078-004A	PMOIST	11.97	9.71	
4	1604079-002A	PMOIST	10.81	7.62	
5	1604080-002A	PMOIST	11.73	7.67	32.90 PM
6	1604080-004A	PMOIST	11.09	5.43	51.03 PM
7	1604081-002A	PMOIST	11.44	9.13	
8	1604081-004A	PMOIST	10.58	7.33	30.72 PM
9		PMOIST			
10		PMOIST			
11		PMOIST			

Bal 3
4/11/16

Calc Sep.
Reviewed

Fremont Analytical, Inc.

PREP BATCH REPORT

Prep Start Date: **4/11/2016 9:36:29 A**
Prep End Date: **4/15/2016 10:38:00**

Prep Batch ID: **13429** Prep Code: **PREP-VPH-S** Method No: **SW5035** Technician: **Brian Condit**

Prep Factor Units: **mL / g**

Initial Temp: **°C** Final Temp **°C**

Sample ID	ClientSampleID	Matrix	pH1	pH2	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
1604078-001A	5237-160328-DC-SE	Sediment			4.19	0	0	5	1.193	4/11/2016	4/11/2016
1604078-003A	5237-160328-DC-SE	Sediment			5.24	0	0	5	0.954	4/11/2016	4/11/2016
1604079-001A	5237-160330-DC-EM	Soil			5.75	0	0	5	0.870	4/11/2016	4/11/2016
1604079-001ADUP		Soil			5.75	0	0	5	0.870	4/11/2016	4/11/2016
1604080-001A	5237-160331-NDP-SE	Sediment			4.84	0	0	5	1.033	4/11/2016	4/11/2016
1604080-003A	5237-160331-NDP-SE	Sediment			4.75	0	0	5	1.053	4/11/2016	4/11/2016
1604081-001A	5237-160401-DC-EM	Soil			6.28	0	0	5	0.796	4/11/2016	4/11/2016
1604081-003A	5237-160401-NDP-E	Soil			5.96	0	0	5	0.839	4/11/2016	4/11/2016
1604081-003AMS		Soil			5.96	0	0	5	0.839	4/11/2016	4/11/2016
1604081-003AMSD		Soil			5.96	0	0	5	0.839	4/11/2016	4/11/2016
MB-13429		Soil			5	0	0	5	1.000	4/11/2016	4/11/2016
LCS-13429		Soil			5	0	0	5	1.000	4/11/2016	4/11/2016
1604078-003ADUP		Sediment			5.24	0	0	5	0.954	4/11/2016	4/15/2016
1604081-001AMS		Soil			6.28	0	0	5	0.796	4/11/2016	4/15/2016
1604081-001AMSD		Soil			6.28	0	0	5	0.796	4/11/2016	4/15/2016

Type	Chemical / Reagent ID	Chemical / Reagent Name	Container#	Container ID	Amount Added	Amount Unit
Chemical	420	Reagent Water	1045	#Error	50	mL

Spike ID	Spike Name	Samp Type	Container#	Container ID	Amount Added	Amount Unit
O-FID-1REF-VPHSTD 01.21.16	WA VPH Standard	LCS	17869	Container-01 of 01	10	µL
O-FID-1REF-VPHSTD 01.21.16	WA VPH Standard	MS	17869	Container-01 of 01	8.6	µL
O-FID-1REF-VPHSTD 01.21.16	WA VPH Standard	MSD	17869	Container-01 of 01	8.6	µL

Equipment ID	Description
Balance-2	B238330459

Fremont Analytical, Inc.

PREP BATCH REPORT

Prep Start Date: **4/11/2016 9:36:29 A**
Prep End Date: **4/15/2016 10:38:00**

Prep Batch ID: **13429** Prep Code: **PREP-VPH-S** Method No: **SW5035** Technician: **Brian Condit**

Prep Factor Units: **mL / g**

Initial Temp: **°C** Final Temp **°C**

Pipette 18	Gilson 1 mL pipette

Fremont Analytical, Inc.

Standard LOG

Standard ID:	O-VPH-CALSET 0		
Standard Name	VPH CAL SET 17869	Type:	Tertiary
Date Prepared	3/2/2016	BY:	Brian Condit
Date Expires:	8/29/2016		
Department	GC-FUELS		
Vendor:			
Lot Number:		**Final Volume:**	0 mL

Comments: Calibration Made by dilutiong 50ml Reagent Water with 0.5ul (10.0ppb), 1.0ul (20.0ppb) 2.5ul (50.0ppb), 5.0ul (100ppb), 10.0ul (200ppb), 25.0ul (500ppb), 50.0uL (1000ppb) in a class A volumetric flask. GC-2

Chemicals / Reagents

Type	Chem / Regt ID	Chemical / Reagent	Cont. No.	Container ID	Amount Added
Chemical	420	Reagent Water	1045	Container-01 of 01	50 mL

Stock Source

Stock ID	Stock Name	Base Units	Amount Added
O-FID-1REF-VPHS	WA VPH Standard		
O-FID-1REF-VPHS	WA VPH Standard		10 µL
O-GX-2SURR 02-2	GX SURR 25 mg/L		

Analytes

	Analyte	CAS	Conc:
	1,2,3-trimethylbenzene		0
	1,4-Difluorobenzene		0
	1-Bromo-4-fluorobenzene (BFB)		0
	1-methylnapthalene		0
A	Ethylbenzene	100-41-4	0
A	m,p-Xylene	179601-23-1	0
A	Naphthalene	91-20-3	0
A	o-Xylene	95-47-6	0
A	tert-Butyl Methyl Ether	1634-04-4	0
A	Toluene	108-88-3	0
A	VPH: Aliphatic Hydrocarbon (C10-C12)		0
A	VPH: Aliphatic Hydrocarbon (C5-C6)		0
A	VPH: Aliphatic Hydrocarbon (C6-C8)		0
A	VPH: Aliphatic Hydrocarbon (C8-C10)		0
A	VPH: Aromatic Hydrocarbon (C10-C12)		0
A	VPH: Aromatic Hydrocarbon (C12-C13)		0
A	VPH: Aromatic Hydrocarbon (C8-C10)		0

Containers

Cont. No.	Container ID	Storage	Volume	Status	Date Disposed
18012	Container-01 of 01		0 mL	Opened	

Fremont Analytical, Inc.

Standard LOG

Standard ID:	O-FID-1REF-VPHS		
Standard Name	WA VPH Standard	Type:	Primary
Date Prepared	1/21/2016	BY:	Samantha Beerma
Date Expires:	8/30/2022		
Department	GC		
Vendor:	Restek		
Lot Number:	A0112476	**Final Volume:**	0 mL
Comments:	1000 µg/mL each in P&T Methanol		

Chemicals / Reagents

Type	Chem / Regt ID	Chemical / Reagent	Cont. No.	Container ID	Amount Added

Stock Source

Stock ID	Stock Name	Base Units	Amount Added

Analytes

	Analyte	CAS	Conc: µg/mL
	1,2,3-trimethylbenzene		1000
	1-methylnapthalene		1000
A	Ethylbenzene	100-41-4	1000
A	m,p-Xylene	179601-23-1	1000
A	Naphthalene	91-20-3	1000
A	o-Xylene	95-47-6	1000
A	tert-Butyl Methyl Ether	1634-04-4	1000
A	Toluene	108-88-3	1000
A	VPH: Aliphatic Hydrocarbon (C10-C12)		1000
A	VPH: Aliphatic Hydrocarbon (C5-C6)		1000
A	VPH: Aliphatic Hydrocarbon (C6-C8)		1000
A	VPH: Aliphatic Hydrocarbon (C8-C10)		1000
A	VPH: Aromatic Hydrocarbon (C10-C12)		1000
A	VPH: Aromatic Hydrocarbon (C12-C13)		1000
A	VPH: Aromatic Hydrocarbon (C8-C10)		1000

Containers

Cont. No.	Container ID	Storage	Volume	Status	Date Disposed
17869	Container-01 of 01		1 mL	Opened	

17869

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30451 **Lot No.:** A0112476

Description : WA VPH Standard

WA VPH Std 1000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	n-Pentane (C5) **CAS #** 109-66-0 **Purity** 99% (Lot SHBF0815V)	1,006.0 µg/mL	+/- 5.9038 +/- 23.5136 +/- 24.0043	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	n-Hexane (C6) **CAS #** 110-54-3 **Purity** 99% (Lot SHBF132V)	1,000.0 µg/mL	+/- 5.8686 +/- 23.3733 +/- 23.8611	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Methyl-tert-butyl ether (MTBE) **CAS #** 1634-04-4 **Purity** 99% (Lot SHBF1193V)	1,007.0 µg/mL	+/- 5.9096 +/- 23.5369 +/- 24.0281	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	n-Octane (C8) **CAS #** 111-65-9 **Purity** 99% (Lot SHBF6351V)	1,008.0 µg/mL	+/- 5.9155 +/- 23.5603 +/- 24.0520	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Benzene **CAS #** 71-43-2 **Purity** 99% (Lot SHBF0424V)	1,003.0 µg/mL	+/- 5.8862 +/- 23.4434 +/- 23.9327	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	n-Decane (C10) **CAS #** 124-18-5 **Purity** 99% (Lot SHBG1119V)	1,006.5 µg/mL	+/- 5.9067 +/- 23.5253 +/- 24.0162	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	Toluene **CAS #** 108-88-3 **Purity** 99% (Lot SHBF2730V)	1,004.5 µg/mL	+/- 5.8950 +/- 23.4785 +/- 23.9685	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	Ethylbenzene **CAS #** 100-41-4 **Purity** 99%	(Lot SHBD6720V)	1,004.5	µg/mL	+/- 5.8950 +/- 23.4785 +/- 23.9685	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	p-Xylene **CAS #** 106-42-3 **Purity** 99%	(Lot SHBF3427V)	1,004.5	µg/mL	+/- 5.8950 +/- 23.4785 +/- 23.9685	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot SHBF8095V)	1,005.0	µg/mL	+/- 5.8979 +/- 23.4902 +/- 23.9804	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	n-Dodecane (C12) **CAS #** 112-40-3 **Purity** 99%	(Lot SHBB9864V)	1,000.0	µg/mL	+/- 5.8686 +/- 23.3733 +/- 23.8611	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	o-Xylene **CAS #** 95-47-6 **Purity** 98%	(Lot SHBC8668V)	999.1	µg/mL	+/- 5.8633 +/- 23.3525 +/- 23.8399	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	1,2,3-Trimethylbenzene **CAS #** 526-73-8 **Purity** 97%	(Lot 877605-14)	1,004.4	µg/mL	+/- 5.8946 +/- 23.4770 +/- 23.9669	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBH4351V)	1,000.0	µg/mL	+/- 5.8686 +/- 23.3733 +/- 23.8611	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	1-Methylnaphthalene **CAS #** 90-12-0 **Purity** 99%	(Lot 525000-10)	1,003.0	µg/mL	+/- 5.8862 +/- 23.4434 +/- 23.9327	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent:	P&T Methanol **CAS #** 67-56-1 **Purity** 99%						

Column:
60m x .53mm x 1.5µm
Stabilwax (cat.#10672)

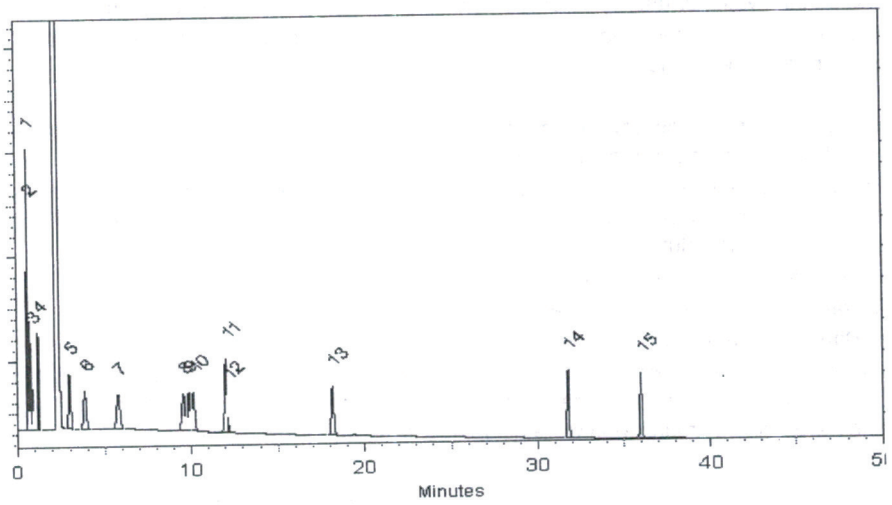
Carrier Gas:
hydrogen-constant pressure 20 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 4°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician

Date Mixed: 10-Jul-2015 **Balance:** B251644995

Jennifer L. Pollino - QC Analyst

Date Passed: 15-Jul-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Fremont Analytical, Inc.

Standard LOG

Standard ID:	O-FID-1REF-VPHS		
Standard Name	WA VPH Standard	Type:	Primary
Date Prepared	8/3/2015	BY:	Samantha Beerma
Date Expires:	11/30/2021		
Department	GC		
Vendor:	Restek		
Lot Number:	A0106735	**Final Volume:**	0 mL
Comments:	1000 µg/mL each in P&T Methanol		

Chemicals / Reagents

Type	Chem / Regt ID	Chemical / Reagent	Cont. No.	Container ID	Amount Added

Stock Source

Stock ID	Stock Name	Base Units	Amount Added

Analytes

	Analyte	CAS	Conc: µg/mL
	1,2,3-trimethylbenzene		1000
	1-methylnapthalene		1000
A	Ethylbenzene	100-41-4	1000
A	m,p-Xylene	179601-23-1	1000
A	Naphthalene	91-20-3	1000
A	o-Xylene	95-47-6	1000
A	tert-Butyl Methyl Ether	1634-04-4	1000
A	Toluene	108-88-3	1000
A	VPH: Aliphatic Hydrocarbon (C10-C12)		1000
A	VPH: Aliphatic Hydrocarbon (C5-C6)		1000
A	VPH: Aliphatic Hydrocarbon (C6-C8)		1000
A	VPH: Aliphatic Hydrocarbon (C8-C10)		1000
A	VPH: Aromatic Hydrocarbon (C10-C12)		1000
A	VPH: Aromatic Hydrocarbon (C12-C13)		1000
A	VPH: Aromatic Hydrocarbon (C8-C10)		1000

Containers

Cont. No.	Container ID	Storage	Volume	Status	Date Disposed
17311	Container-01 of 01		1000 µg/m	Opened	

17311

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30451 **Lot No.:** A0106735

Description : WA VPH Standard

WA VPH Std 1000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	n-Pentane (C5) **CAS #** 109-66-0 (Lot DG879) **Purity** 99%	1,002.5 µg/mL	+/- 5.8832 µg/mL +/- 23.4318 µg/mL +/- 23.9208 µg/mL	Gravimetric Unstressed Stressed
2	n-Hexane (C6) **CAS #** 110-54-3 (Lot SHBD5387V) **Purity** 99%	1,003.5 µg/mL	+/- 5.8891 µg/mL +/- 23.4551 µg/mL +/- 23.9446 µg/mL	Gravimetric Unstressed Stressed
3	Methyl-tert-butyl ether (MTBE) **CAS #** 1634-04-4 (Lot SHBD2980V) **Purity** 99%	1,002.0 µg/mL	+/- 5.8803 µg/mL +/- 23.4201 µg/mL +/- 23.9088 µg/mL	Gravimetric Unstressed Stressed
4	n-Octane (C8) **CAS #** 111-65-9 (Lot SHBC2265V) **Purity** 99%	1,001.5 µg/mL	+/- 5.8774 µg/mL +/- 23.4084 µg/mL +/- 23.8969 µg/mL	Gravimetric Unstressed Stressed
5	Benzene **CAS #** 71-43-2 (Lot SHBC0832V) **Purity** 99%	1,003.0 µg/mL	+/- 5.8862 µg/mL +/- 23.4434 µg/mL +/- 23.9327 µg/mL	Gravimetric Unstressed Stressed
6	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBC4624V) **Purity** 99%	1,004.5 µg/mL	+/- 5.8950 µg/mL +/- 23.4785 µg/mL +/- 23.9685 µg/mL	Gravimetric Unstressed Stressed
7	Toluene **CAS #** 108-88-3 (Lot DI125) **Purity** 99%	1,002.5 µg/mL	+/- 5.8832 µg/mL +/- 23.4318 µg/mL +/- 23.9208 µg/mL	Gravimetric Unstressed Stressed
8	Ethylbenzene **CAS #** 100-41-4 (Lot SHBD6720V) **Purity** 99%	1,001.5 µg/mL	+/- 5.8774 µg/mL +/- 23.4084 µg/mL +/- 23.8969 µg/mL	Gravimetric Unstressed Stressed

9	p-Xylene **CAS #** 106-42-3 **Purity** 99%	(Lot SHBC5759V)	1,003.0	µg/mL	+/- 5.8862 +/- 23.4434 +/- 23.9327	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot H08Y016)	1,004.0	µg/mL	+/- 5.8920 +/- 23.4668 +/- 23.9566	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	n-Dodecane (C12) **CAS #** 112-40-3 **Purity** 99%	(Lot SHBB9864V)	1,004.0	µg/mL	+/- 5.8920 +/- 23.4668 +/- 23.9566	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	o-Xylene **CAS #** 95-47-6 **Purity** 98%	(Lot SHBC8668V)	1,007.4	µg/mL	+/- 5.9122 +/- 23.5472 +/- 24.0386	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	1,2,3-Trimethylbenzene **CAS #** 526-73-8 **Purity** 97%	(Lot 877605-10)	1,004.4	µg/mL	+/- 5.8946 +/- 23.4770 +/- 23.9669	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBH4351V)	1,002.0	µg/mL	+/- 5.8803 +/- 23.4201 +/- 23.9088	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	1-Methylnaphthalene **CAS #** 90-12-0 **Purity** 99%	(Lot 525000-10)	1,003.0	µg/mL	+/- 5.8862 +/- 23.4434 +/- 23.9327	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent:	P&T Methanol **CAS #** 67-56-1 **Purity** 99%						

Fremont Analytical, Inc.

Spike LOG

Standard ID:	O-GX-2SURR 02-2		
Standard Name	GX SURR 25 mg/L	Type:	Secondary
Date Prepared	2/23/2016	BY:	Brian Condit
Date Expires:	8/21/2016		
Department	GC		
Vendor:			
Lot Number:		**Final Volume:**	0 mL
Comments:	GC 2		

Chemicals / Reagents

Type	Chem / Regt ID	Chemical / Reagent	Cont. No.	Container ID	Amount Added
Chemical	556	Methanol	1531	Container-01 of 06	4.95 mL

Stock Source

Stock ID	Stock Name	Base Units	Amount Added
O-GX-1SURR 11/2	NWTPH-Gx Surrogate Mix		50 µL

Analytes

Analyte	CAS	Conc: µg/mL
1,4-Difluorobenzene		25
1-Bromo-4-fluorobenzene (BFB)		25

Containers

Cont. No.	Container ID	Storage	Volume	Status	Date Disposed
17972	Container-01 of 03		0 mL	Opened	
17973	Container-02 of 03		0 mL	Opened	
17974	Container-03 of 03		0 mL	Opened	

Fremont Analytical, Inc.

Spike LOG

Standard ID:	O-GX-1SURR 11/2		
Standard Name	NWTPH-Gx Surrogate Mix	Type:	Primary
Date Prepared	11/25/2014	BY:	Kerra Ziegler
Date Expires:	11/14/2019		
Department	GC		
Vendor:	Restek		
Lot Number:	A0107205	**Final Volume:**	0 mL
Comments:	2500 µg/mL In MeOH		

Chemicals / Reagents

Type	Chem / Regt ID	Chemical / Reagent	Cont. No.	Container ID	Amount Added

Stock Source

Stock ID	Stock Name	Base Units	Amount Added

Analytes

	Analyte	CAS	Conc:	µg/mL
S	1,4-Difluorobenzene	540-36-3		2500
S	1-Bromo-4-fluorobenzene (BFB)	460-00-4		2500

Containers

Cont. No.	Container ID	Storage	Volume	Status	Date Disposed
6249	Container-01 of 01		2 mL	Opened	

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Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30455 **Lot No.:** A0107205

Description : NWTPH-Gx Surrogate Mix

NWTPH-Gx Surrogate 2500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2019 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Difluorobenzene	2,504.0 µg/mL	+/- 23.2859 µg/mL	Gravimetric
	CAS # 540-36-3 (Lot MKBN8571V)		+/- 33.5792 µg/mL	Unstressed
	Purity 99%		+/- 37.2289 µg/mL	Stressed
2	1-Bromo-4-fluorobenzene (BFB)	2,508.0 µg/mL	+/- 23.3231 µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 20401KOV)		+/- 33.6329 µg/mL	Unstressed
	Purity 99%		+/- 37.2884 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

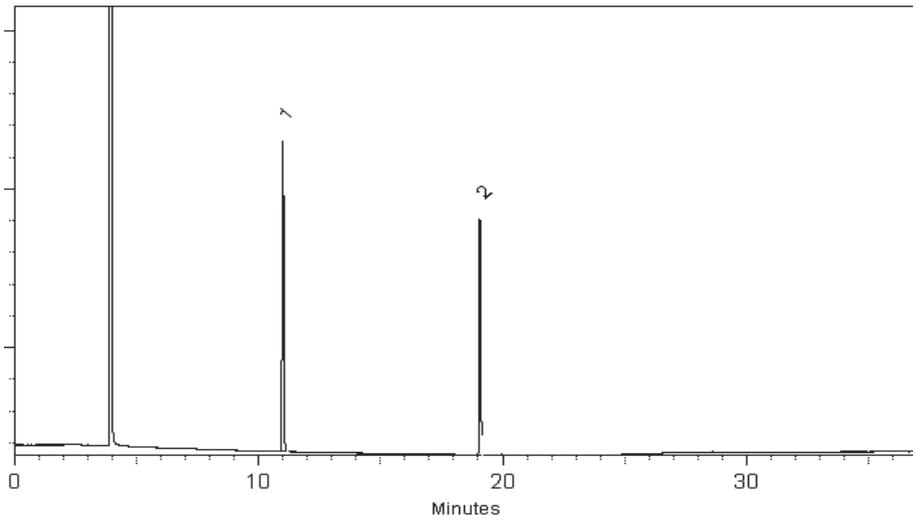
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 13-Nov-2014 **Balance:** B251644995

Diane Shaffer - QAAnalyst

Date Passed: 17-Nov-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397