Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3134.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3134.d
Lab Smp Id: WG145314-1 Client Smp ID: WG145314-Blank
Inj Date : 26-JUN-2014 18:30
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-1,WE53-7
Misc Info : WG145456,WG145314,WG142382-3,SH4521-8
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\AROA060A.m
Meth Date : 30-Jun-2014 07:25 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: AROMATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3133.d
Target Version: 4.12
Processing Host: T8-D4700

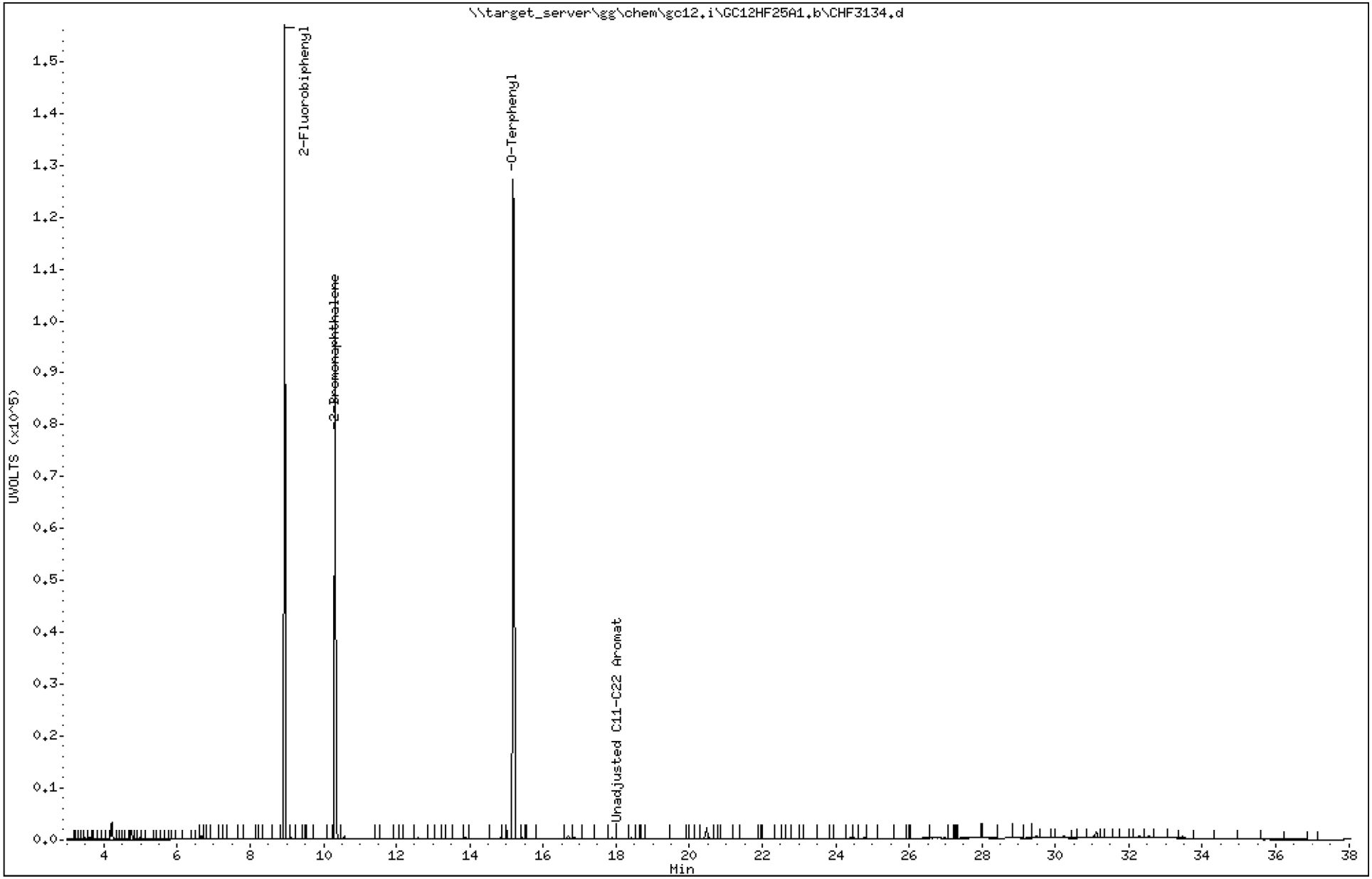
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 2-Fluorobiphenyl	8.937	8.982	-0.045	427224	36.0609	72.1	
$ 6 2-Bromonaphthalene	10.318	10.364	-0.046	293880	36.4613	72.9	
$ 11 O-Terphenyl	15.191	15.185	0.006	443495	33.6698	67.3	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3134.d
Date : 26-JUN-2014 18:30
Client ID: WG145314-Blank
Sample Info: WG145314-1,WE53-7
Purge Volume: 1.0
Column phase: RTX-5

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



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Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4134.d
Lab Smp Id: WG145314-1 Client Smp ID: WG145314-Blank
Inj Date : 26-JUN-2014 18:30
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-1,WE53-7
Misc Info : WG145456,WG145314,WG142382-9,SH4521-8
Comment :
Method : \\TARGET_SERVER\GG\chem\gc12.i\GC12HF25B1.B\ALIB053A.m
Meth Date : 30-Jun-2014 07:32 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 22:23 Cal File: CHE2016.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ALIPHATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4133.d
Target Version: 4.12
Processing Host: T8-D4700

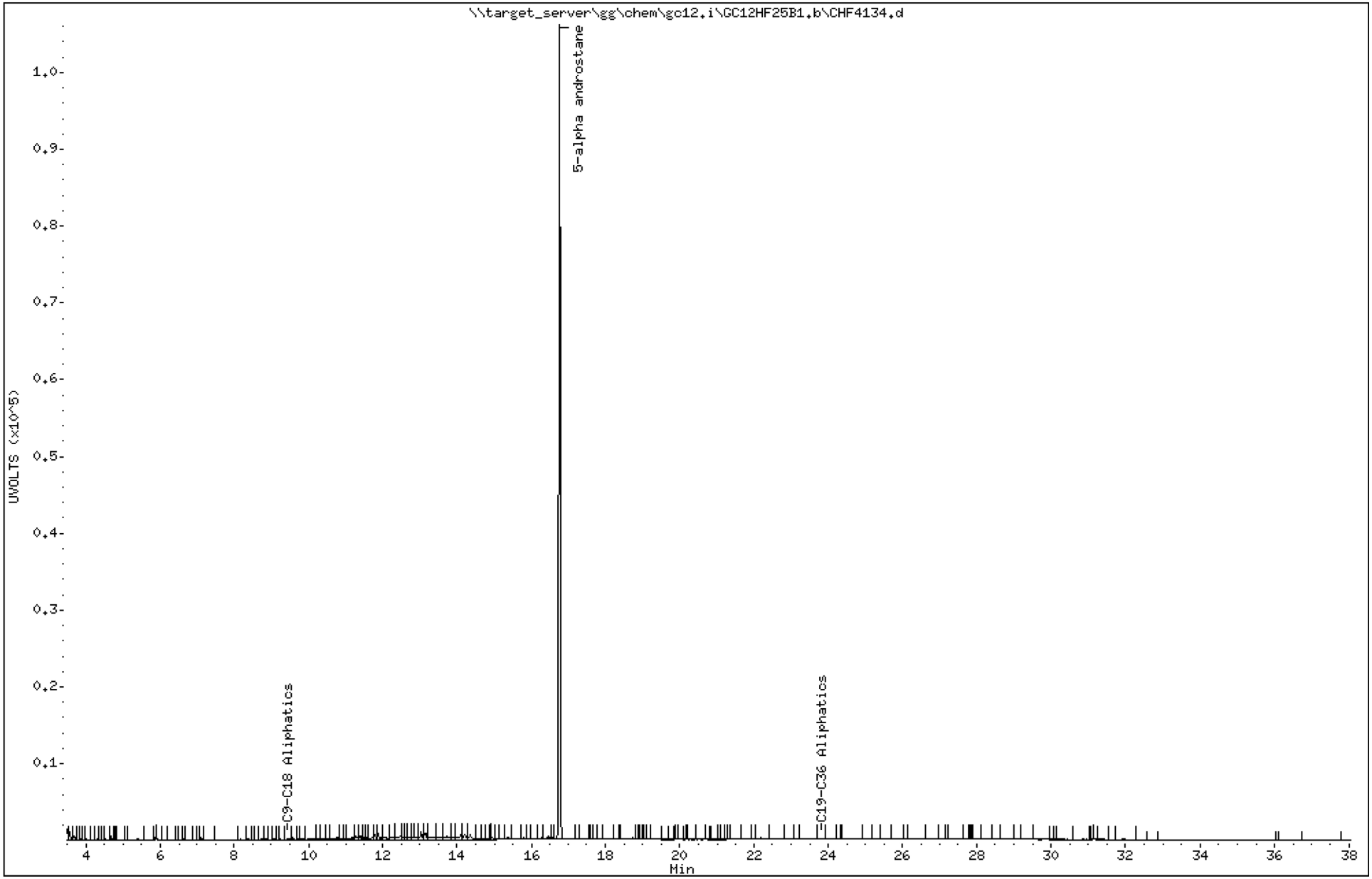
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 44 5-alpha androstane	16.752	16.782	-0.030	380098	29.5164	59.0	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4134.d
Date : 26-JUN-2014 18:30
Client ID: WG145314-Blank
Sample Info: WG145314-1,WE53-7
Purge Volume: 1.0
Column phase: RTX-1

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000222

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG145668-1
Client ID: Method Blank Sample
Project:
SDG: WE53-7
Lab File ID: CHG2055.D

Sample Date:
Received Date:
Extract Date: 30-JUN-14
Extracted By: AM
Extraction Method: SW846 3510
Lab Prep Batch: WG145668

Analysis Date: 07-JUL-14
Analyst: AC
Analysis Method: MA DEP EPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 09-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C11-C22 Aromatics	J	57	ug/L	1	100	100	50.	75.
C9-C18 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C19-C36 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C11-C22 Aromatics	J	57	ug/L	1	100	100	50.	75.
5-Alpha Androstane		55.4	%					
o-Terphenyl		65.9	%					
2-Fluorobiphenyl		74.7	%					
2-Bromonaphthalene		74.8	%					

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P.O. Box 540, Scarborough, ME 04070
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Data File: \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1055.d
Report Date: 09-Jul-2014 14:16

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1055.d
Lab Smp Id: WG145668-1 Client Smp ID: WG145668-Blank
Inj Date : 07-JUL-2014 12:17
Operator : AC Inst ID: gc12.i
Smp Info : WG145668-1,WE53-7
Misc Info : WG146138,WG145668,WG142382-3,SH4521-18
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HG07A1.b\AROA060A.m
Meth Date : 09-Jul-2014 09:49 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: AROMATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1054.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

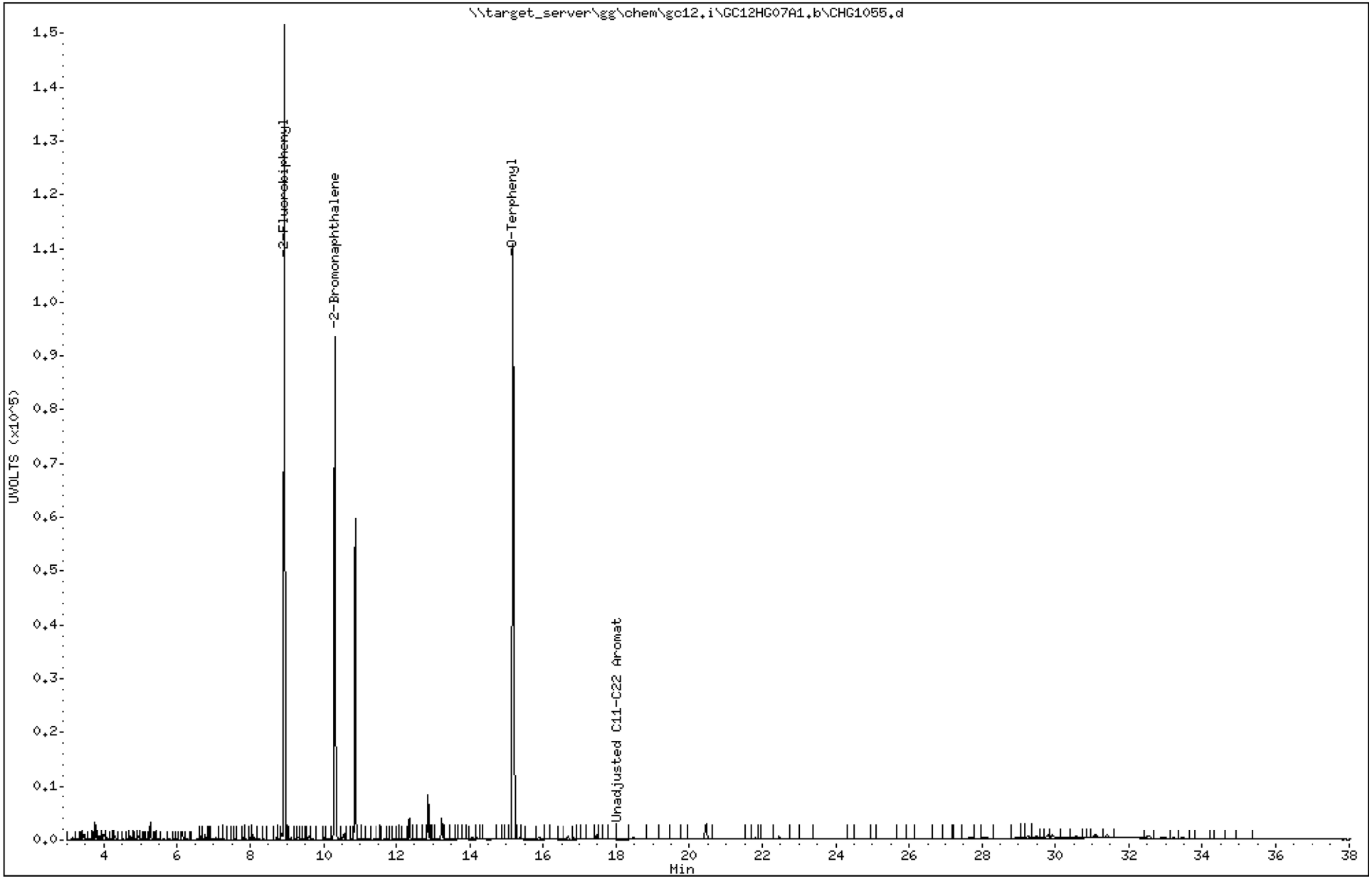
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 2-Fluorobiphenyl	8.931	8.945	-0.014	397869	33.5832	67.2	
$ 6 2-Bromonaphthalene	10.311	10.325	-0.014	271187	33.6459	67.3	
$ 11 O-Terphenyl	15.181	15.196	-0.015	390592	29.6534	59.3	
S 15 Unadjusted C11-C22 Aromatics	6.578-29.474			363062	28.4778	57.0(a)	

QC Flag Legend

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

Data File: \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1055.d
Date : 07-JUL-2014 12:17
Client ID: WG145668-Blank
Sample Info: WG145668-1,WE53-7
Purge Volume: 1.0
Column phase: RTX-5

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000225

Data File: \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2055.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

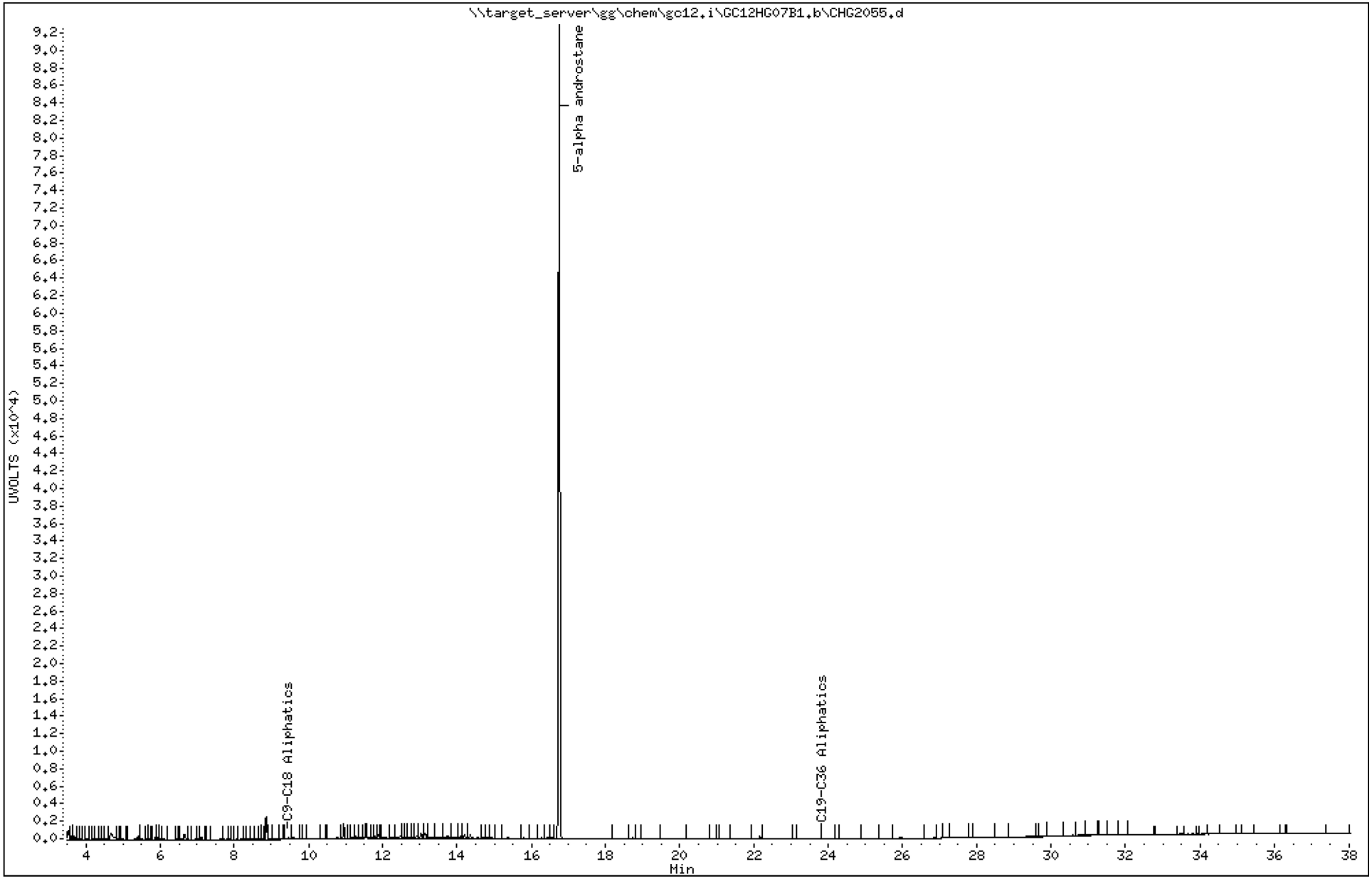
Data file : \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2055.d
Lab Smp Id: WG145668-1 Client Smp ID: WG145668-Blank
Inj Date : 07-JUL-2014 12:17
Operator : AC Inst ID: gc12.i
Smp Info : WG145668-1,WE53-7
Misc Info : WG146138,WG145668,WG142382-9,SH4521-18
Comment :
Method : \\TARGET_SERVER\GG\chem\gc12.i\GC12HG07B1.B\ALIB053A.m
Meth Date : 09-Jul-2014 09:50 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 22:23 Cal File: CHE2016.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ALIPHATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2054.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 44 5-alpha androstane	16.742	16.742	0.000	321164	24.9399	49.9	

Data File: \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2055.d
Date : 07-JUL-2014 12:17
Client ID: WG145668-Blank
Instrument: gc12.i
Sample Info: WG145668-1,WE53-7
Purge Volume: 1.0
Operator: AC
Column phase: RTX-1
Column diameter: 0.53



Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG145094-2
LCSD ID: WG145094-3
Project:
SDG: WE53-7
Report Date: 09-JUL-14
LCS File ID: CHF4037.D

Received Date:
Extract Date: 20-JUN-14
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG145094
LCSD File ID: CHF3038A.d

Analysis Date: 23-JUN-14
Analyst: AC
Analysis Method: MA DEP EPH 04-1.1
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Unadjusted C11-C22 Aromatics	1530	1410	92.2	1180	77.1	ug/L	18	25	40-140
C9-C18 Aliphatics	540.	359.	66.5	353.	65.4	ug/L	2	25	40-140
C19-C36 Aliphatics	720.	602.	83.6	581.	80.7	ug/L	4	25	40-140
5-Alpha Androstane			76.4		76.9				40-140
o-Terphenyl			91.2		80.1				40-140
2-Fluorobiphenyl			92.1		67.4				40-140
2-Bromonaphthalene			92.9		68.9				40-140

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Data File: \\target_server\gg\chem\gc12.i\GC12HF23A1.b\CHF3037.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF23A1.b\CHF3037.d
Lab Smp Id: WG145094-2 Client Smp ID: WG145094-LCS
Inj Date : 23-JUN-2014 14:16
Operator : AC Inst ID: gc12.i
Smp Info : WG145094-2,WE53-7
Misc Info : WG145269,WG145094,WG142382-3,SH4401-2
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF23A1.b\AROA060A.m
Meth Date : 26-Jun-2014 11:03 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: AROMATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF23A1.b\CHF3034.d
Target Version: 4.12
Processing Host: T8-D4700

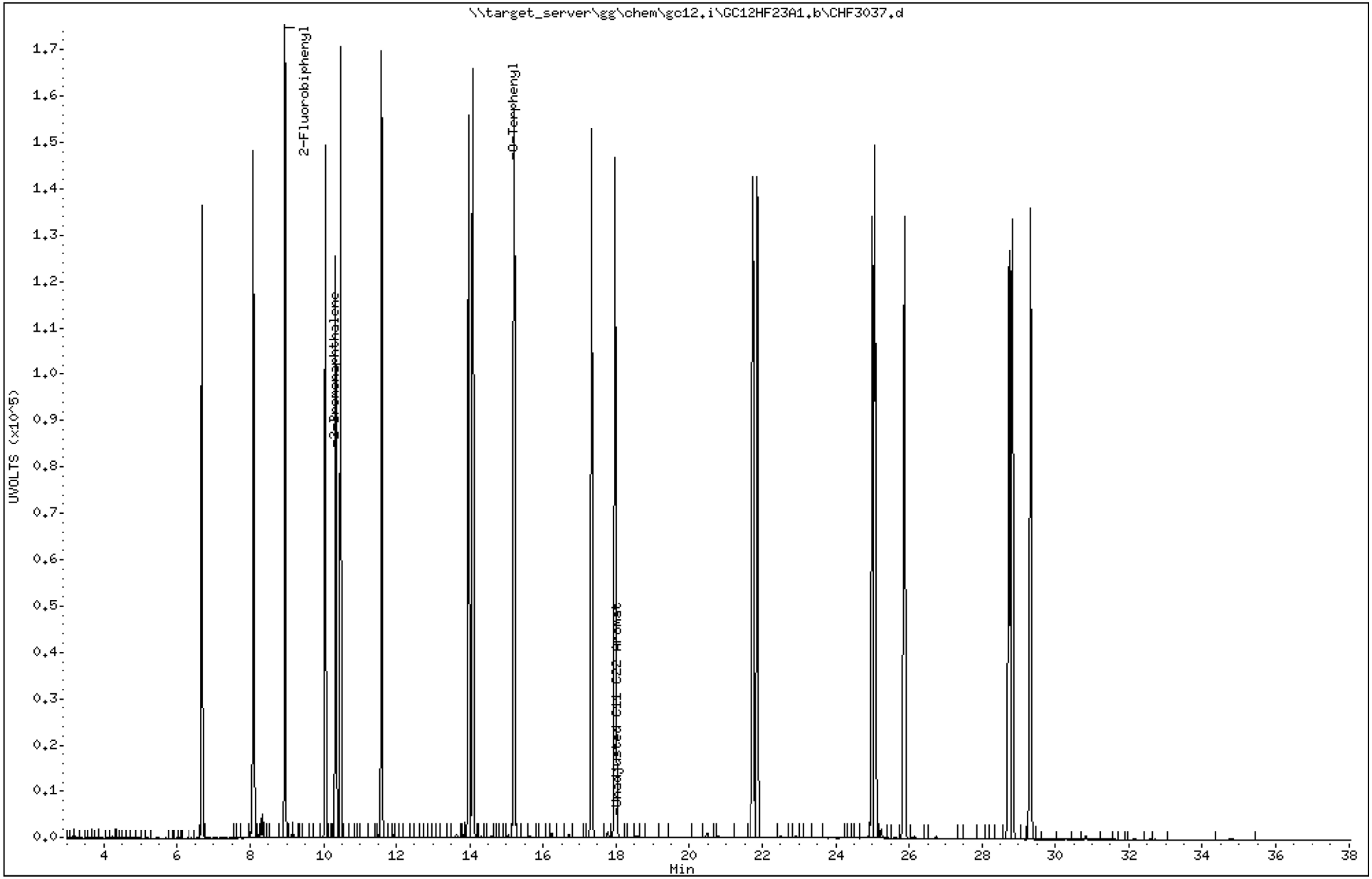
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 2-Fluorobiphenyl	8.951	8.982	-0.031	490990	41.4433	82.9	
$ 6 2-Bromonaphthalene	10.333	10.364	-0.031	336805	41.7870	83.6	
$ 11 O-Terphenyl	15.208	15.242	-0.034	540981	41.0708	82.1	
S 15 Unadjusted C11-C22 Aromatics	6.618-29.474			9017805	707.336	1410	

Data File: \\target_server\gg\chem\gc12.i\GC12HF23A1.b\CHF3037.d
Date : 23-JUN-2014 14:16
Client ID: WG145094-LCS
Sample Info: WG145094-2,WE53-7
Purge Volume: 1.0
Column phase: RTX-5

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000230

Data File: \\target_server\gg\chem\gc12.i\GC12HF23B1.b\CHF4037.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF23B1.b\CHF4037.d
Lab Smp Id: WG145094-2 Client Smp ID: WG145094-LCS
Inj Date : 23-JUN-2014 14:16
Operator : AC Inst ID: gc12.i
Smp Info : WG145094-2,WE53-7
Misc Info : WG145269,WG145094,WG142382-9,SH4401-2
Comment :
Method : \\TARGET_SERVER\GG\chem\gc12.i\GC12HF23B1.B\ALIB053A.m
Meth Date : 09-Jul-2014 10:04 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 22:23 Cal File: CHE2016.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ALIPHATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF23B1.b\CHF4035.d
Target Version: 4.12
Processing Host: T8-D4700

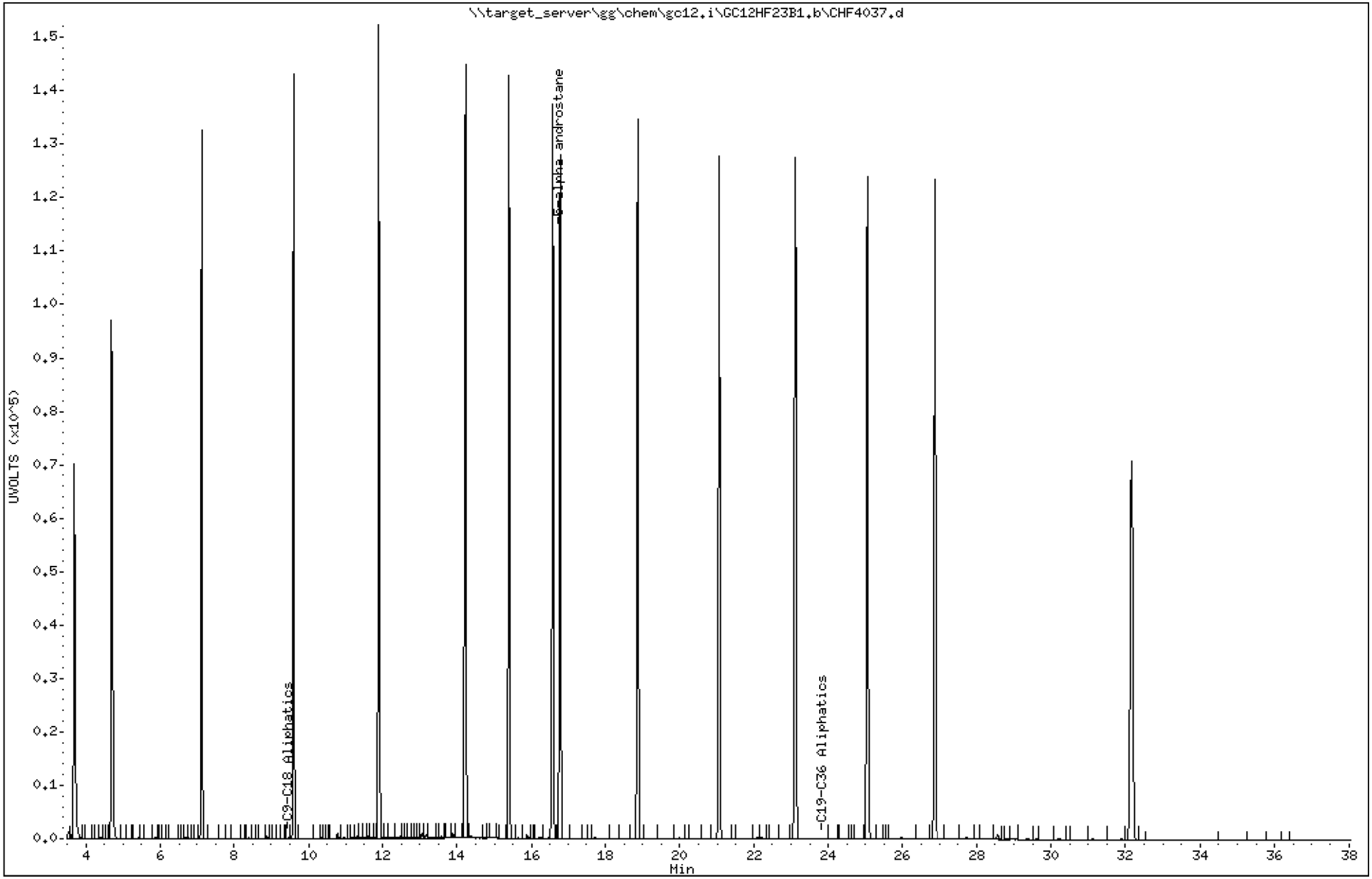
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 44 5-alpha androstane	16.769	16.782	-0.013	443088	34.4079	68.8	
S 6 C9-C18 Aliphatics	3.600-15.355			2188318	179.470	359	
S 17 C19-C36 Aliphatics	15.355-32.383			3695244	300.977	602	

Data File: \\target_server\gg\chem\gc12.i\GC12HF23B1.b\CHF4037.d
Date : 23-JUN-2014 14:16
Client ID: WG145094-LCS
Sample Info: WG145094-2,WE53-7
Purge Volume: 1.0
Column phase: RTX-1

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000232

Data File: \\target_server\gg\chem\gc12.i\GC12HF23A1.b\CHF3038.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF23A1.b\CHF3038.d
Lab Smp Id: WG145094-3 Client Smp ID: WG145094-LCSD
Inj Date : 23-JUN-2014 15:02
Operator : AC Inst ID: gc12.i
Smp Info : WG145094-3,WE53-7
Misc Info : WG145269,WG145094,WG142382-3,SH4401-2
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF23A1.b\AROA060A.m
Meth Date : 26-Jun-2014 11:03 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: AROMATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF23A1.b\CHF3034.d
Target Version: 4.12
Processing Host: T8-D4700

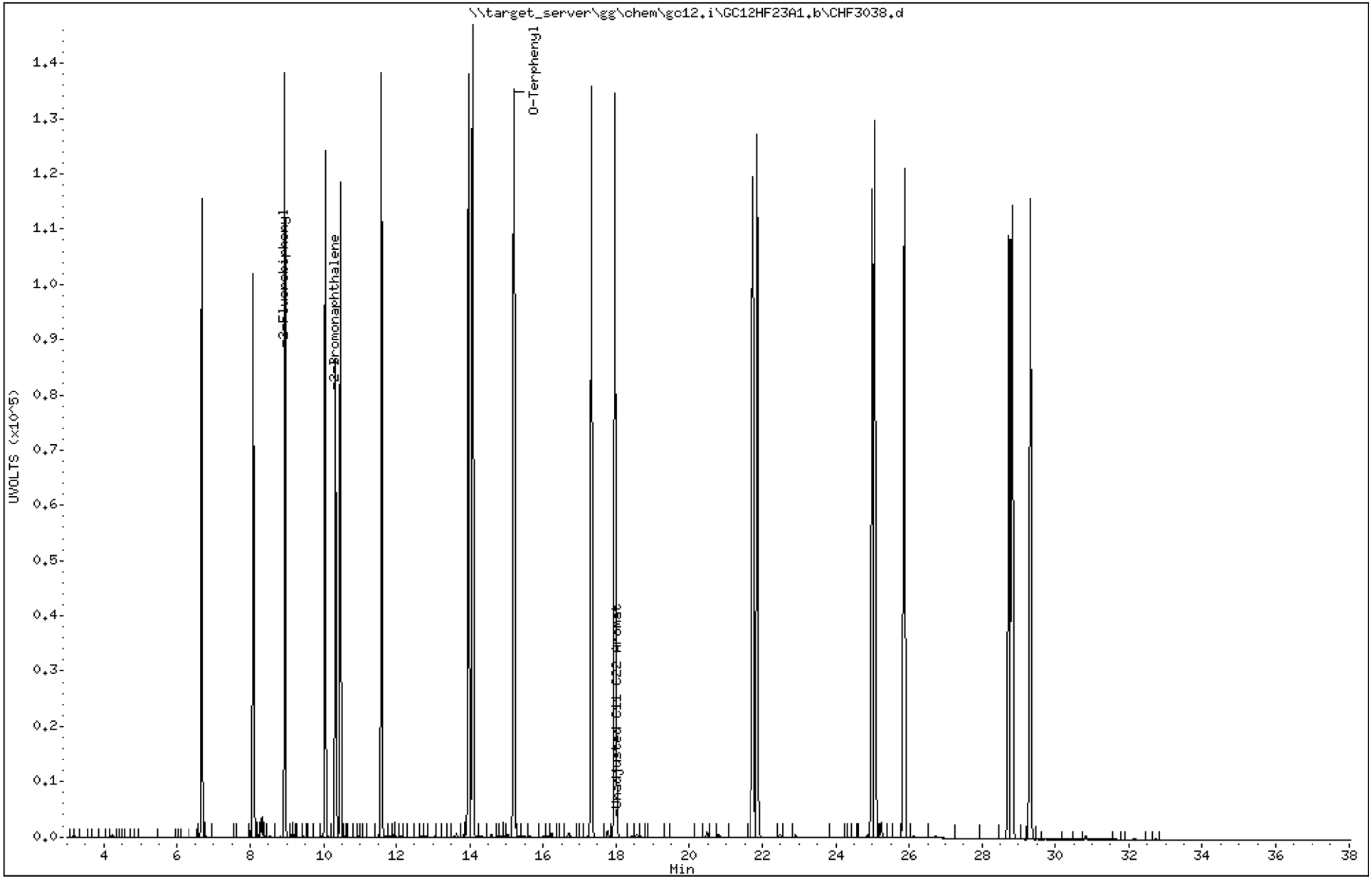
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 2-Fluorobiphenyl	8.946	8.982	-0.036	359498	30.3444	60.7	
$ 6 2-Bromonaphthalene	10.328	10.364	-0.036	249681	30.9776	62.0	
$ 11 O-Terphenyl	15.205	15.242	-0.037	474683	36.0375	72.1	
S 15 Unadjusted C11-C22 Aromatics	6.618-29.474			7545834	591.878	1180	

Data File: \\target_server\gg\chem\gc12.i\GC12HF23A1.b\CHF3038.d
Date : 23-JUN-2014 15:02
Client ID: WG145094-LCSD
Sample Info: WG145094-3,WE53-7
Purge Volume: 1.0
Column phase: RTX-5

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000234

Data File: \\target_server\gg\chem\gc12.i\GC12HF23B1.b\CHF4038.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF23B1.b\CHF4038.d
Lab Smp Id: WG145094-3 Client Smp ID: WG145094-LCSD
Inj Date : 23-JUN-2014 15:02
Operator : AC Inst ID: gc12.i
Smp Info : WG145094-3,WE53-7
Misc Info : WG145269,WG145094,WG142382-9,SH4401-2
Comment :
Method : \\TARGET_SERVER\GG\chem\gc12.i\GC12HF23B1.B\ALIB053A.m
Meth Date : 09-Jul-2014 10:04 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 22:23 Cal File: CHE2016.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ALIPHATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF23B1.b\CHF4035.d
Target Version: 4.12
Processing Host: T8-D4700

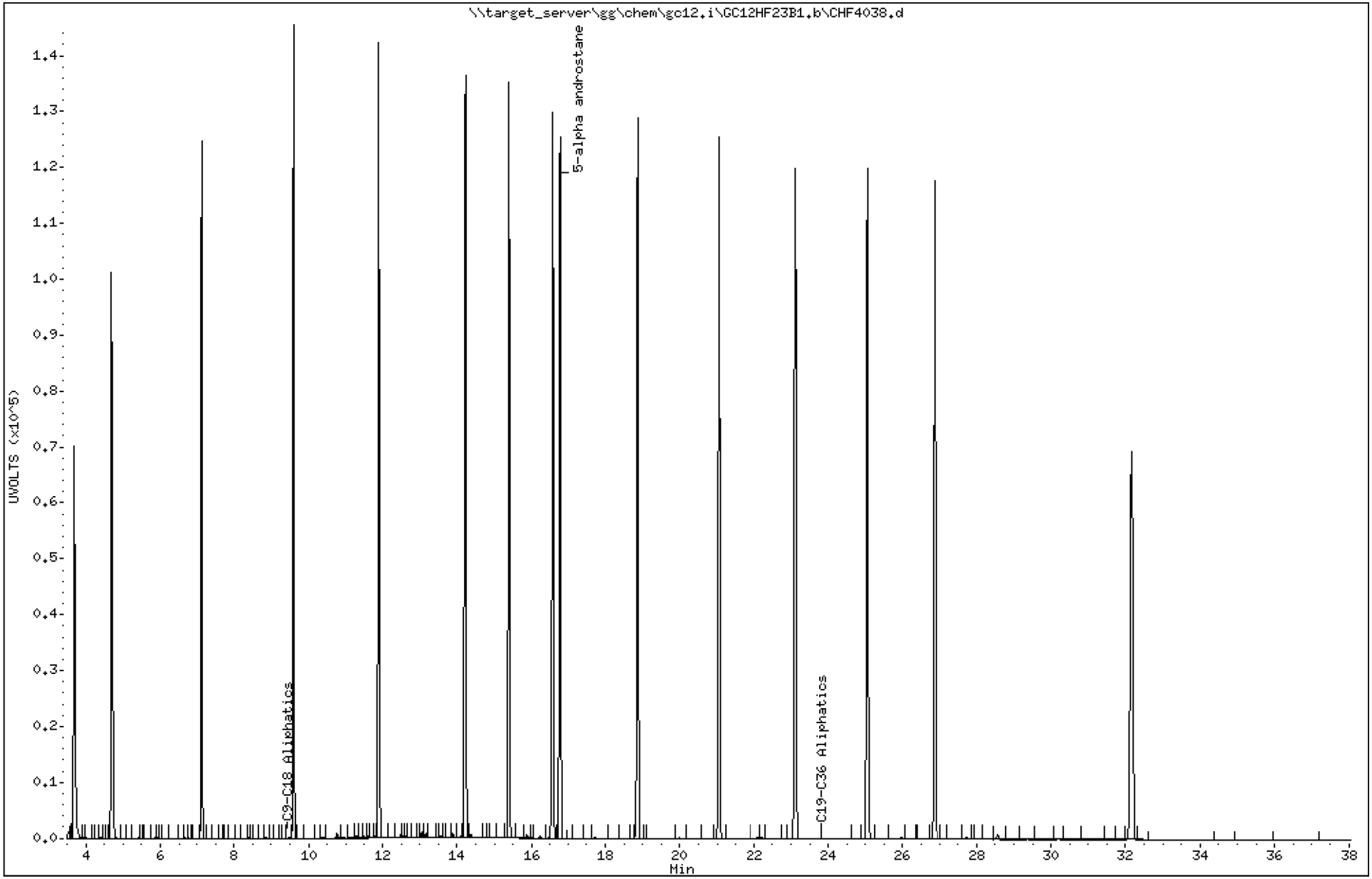
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 44 5-alpha androstane	16.768	16.782	-0.014	445930	34.6286	69.2	
S 6 C9-C18 Aliphatics	3.600-15.355			2153418	176.608	353	
S 17 C19-C36 Aliphatics	15.355-32.383			3566653	290.504	581	

Data File: \\target_server\gg\chem\gc12.i\GC12HF23B1.b\CHF4038.d
Date : 23-JUN-2014 15:02
Client ID: WG145094-LCSD
Sample Info: WG145094-3,WE53-7
Purge Volume: 1.0
Column phase: RTX-1

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000236

Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG145314-2
LCSD ID: WG145314-3
Project:
SDG: WE53-7
Report Date: 09-JUL-14
LCS File ID: CHF4135.D

Received Date:
Extract Date: 24-JUN-14
Extracted By: AM
Extraction Method: SW846 3510
Lab Prep Batch: WG145314
LCSD File ID: CHF3136A.d

Analysis Date: 26-JUN-14
Analyst: AC
Analysis Method: MA DEP EPH 04-1.1
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Unadjusted C11-C22 Aromatics	1530	1040	68.0	1100	71.9	ug/L	6	25	40-140
C9-C18 Aliphatics	540.	256.	47.4	265.	49.1	ug/L	3	25	40-140
C19-C36 Aliphatics	720.	517.	71.8	600.	83.3	ug/L	15	25	40-140
5-Alpha Androstane			68.3		71.7				40-140
o-Terphenyl			75.7		77.9				40-140
2-Fluorobiphenyl			79.4		76.0				40-140
2-Bromonaphthalene			79.6		76.7				40-140

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3135.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3135.d
Lab Smp Id: WG145314-2 Client Smp ID: WG145314-LCS
Inj Date : 26-JUN-2014 19:16
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-2,WE53-7
Misc Info : WG145456,WG145314,WG142382-3,SH4521-8
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\AROA060A.m
Meth Date : 30-Jun-2014 07:25 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: AROMATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3133.d
Target Version: 4.12
Processing Host: T8-D4700

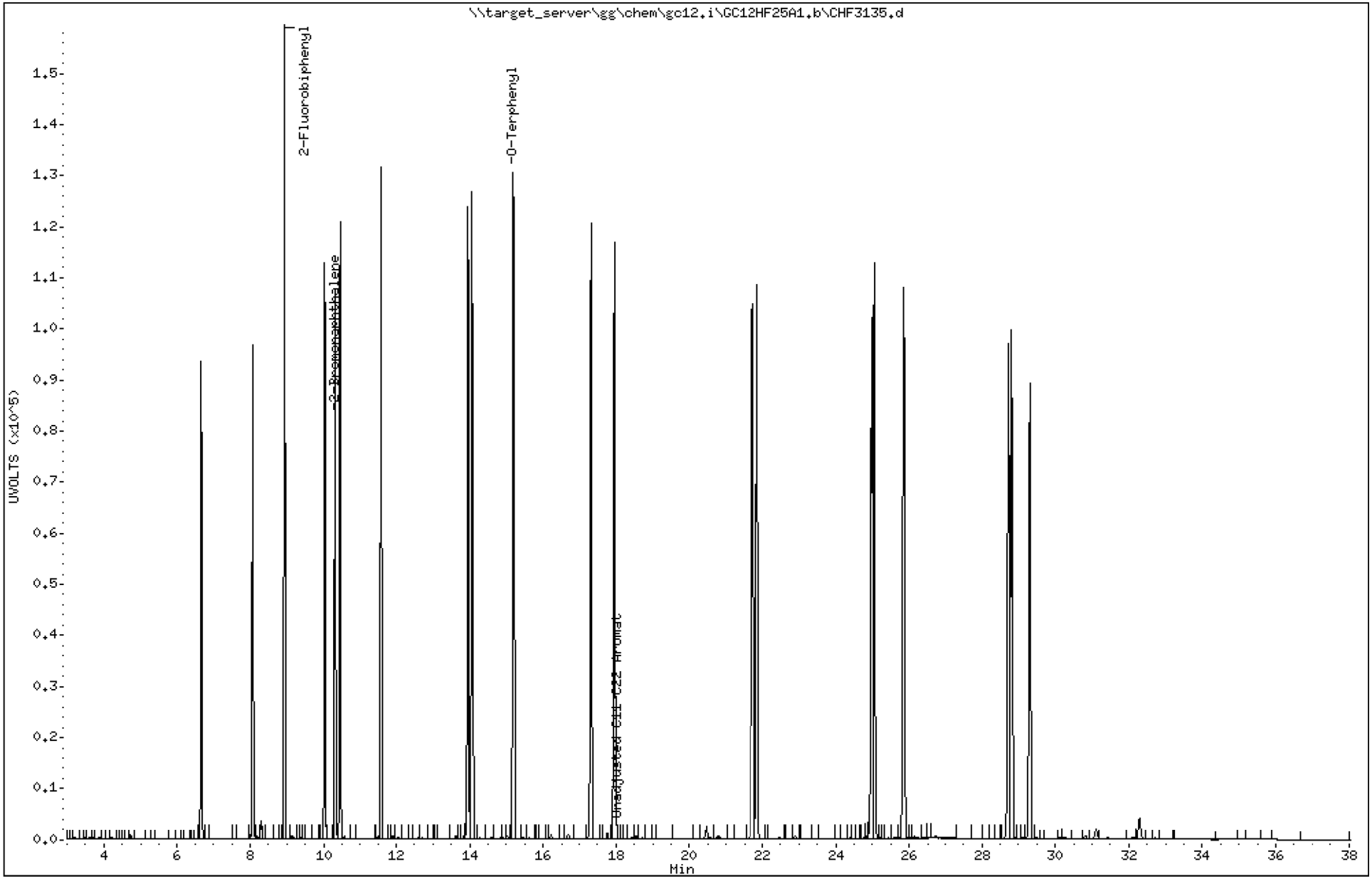
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 2-Fluorobiphenyl	8.935	8.982	-0.047	423772	35.7696	71.5	
$ 6 2-Bromonaphthalene	10.317	10.364	-0.047	288466	35.7896	71.6	
$ 11 O-Terphenyl	15.191	15.185	0.006	448559	34.0542	68.1	
S 15 Unadjusted C11-C22 Aromatics	6.618-29.474			6617502	519.062	1040	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3135.d
Date : 26-JUN-2014 19:16
Client ID: WG145314-LCS
Sample Info: WG145314-2,WE53-7
Purge Volume: 1.0
Column phase: RTX-5

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Data File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4135.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4135.d
Lab Smp Id: WG145314-2 Client Smp ID: WG145314-LCS
Inj Date : 26-JUN-2014 19:16
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-2,WE53-7
Misc Info : WG145456,WG145314,WG142382-9,SH4521-8
Comment :
Method : \\TARGET_SERVER\GG\chem\gc12.i\GC12HF25B1.B\ALIB053A.m
Meth Date : 30-Jun-2014 07:32 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 22:23 Cal File: CHE2016.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ALIPHATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4133.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

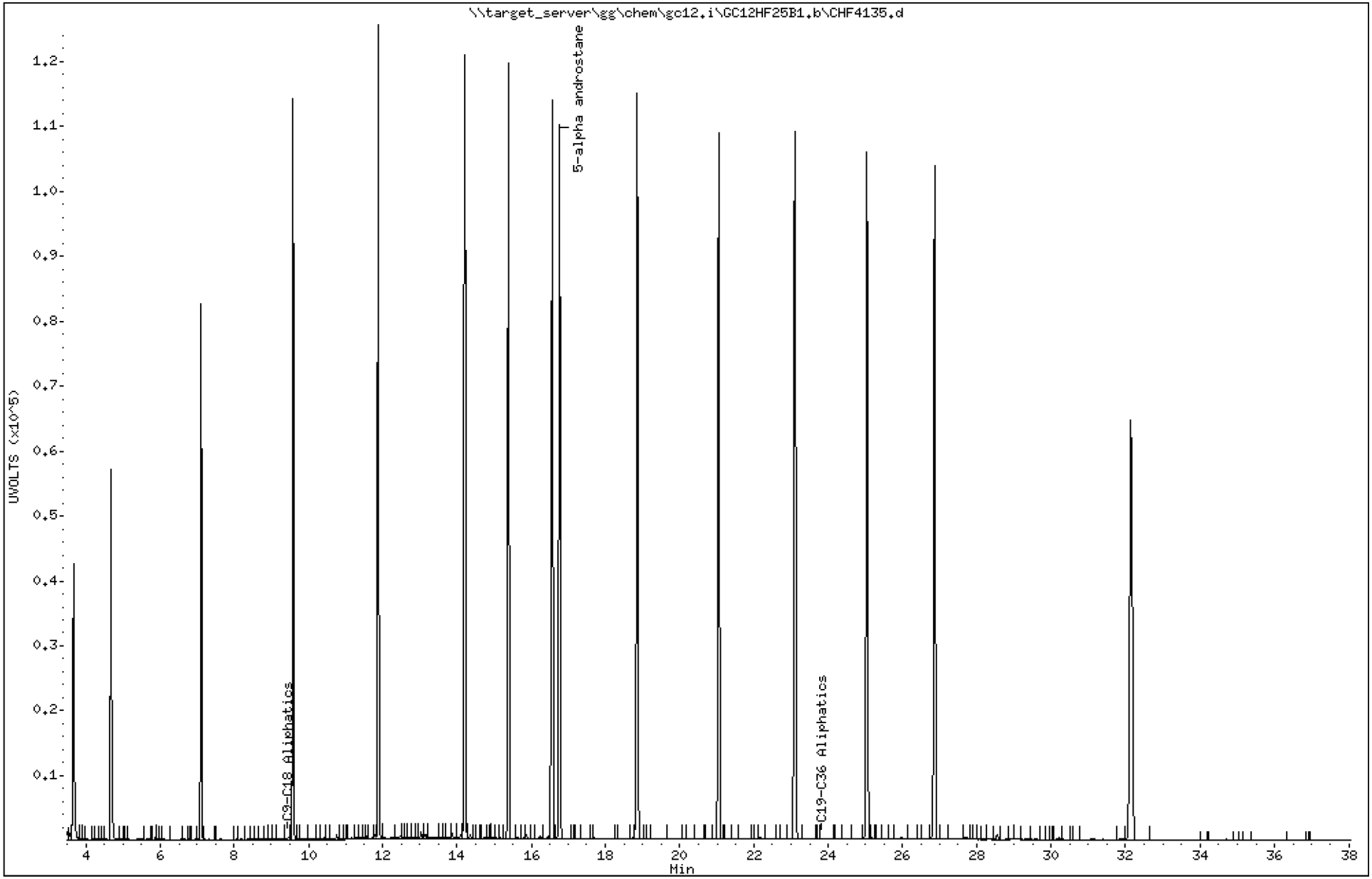
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 44 5-alpha androstane	16.752	16.782	-0.030	395780	30.7342	61.5	
S 6 C9-C18 Aliphatics	3.600-15.355			1560335	127.967	256	
S 17 C19-C36 Aliphatics	15.355-32.383			3176638	258.737	517	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4135.d
Date : 26-JUN-2014 19:16
Client ID: WG145314-LCS
Sample Info: WG145314-2,WE53-7
Purge Volume: 1.0
Column phase: RTX-1

Instrument: gc12.i

Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000241

Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3136.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3136.d
Lab Smp Id: WG145314-3 Client Smp ID: WG145314-LCSD
Inj Date : 26-JUN-2014 20:01
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-3,WE53-7
Misc Info : WG145456,WG145314,WG142382-3,SH4521-8
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\AROA060A.m
Meth Date : 30-Jun-2014 07:25 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: AROMATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3133.d
Target Version: 4.12
Processing Host: T8-D4700

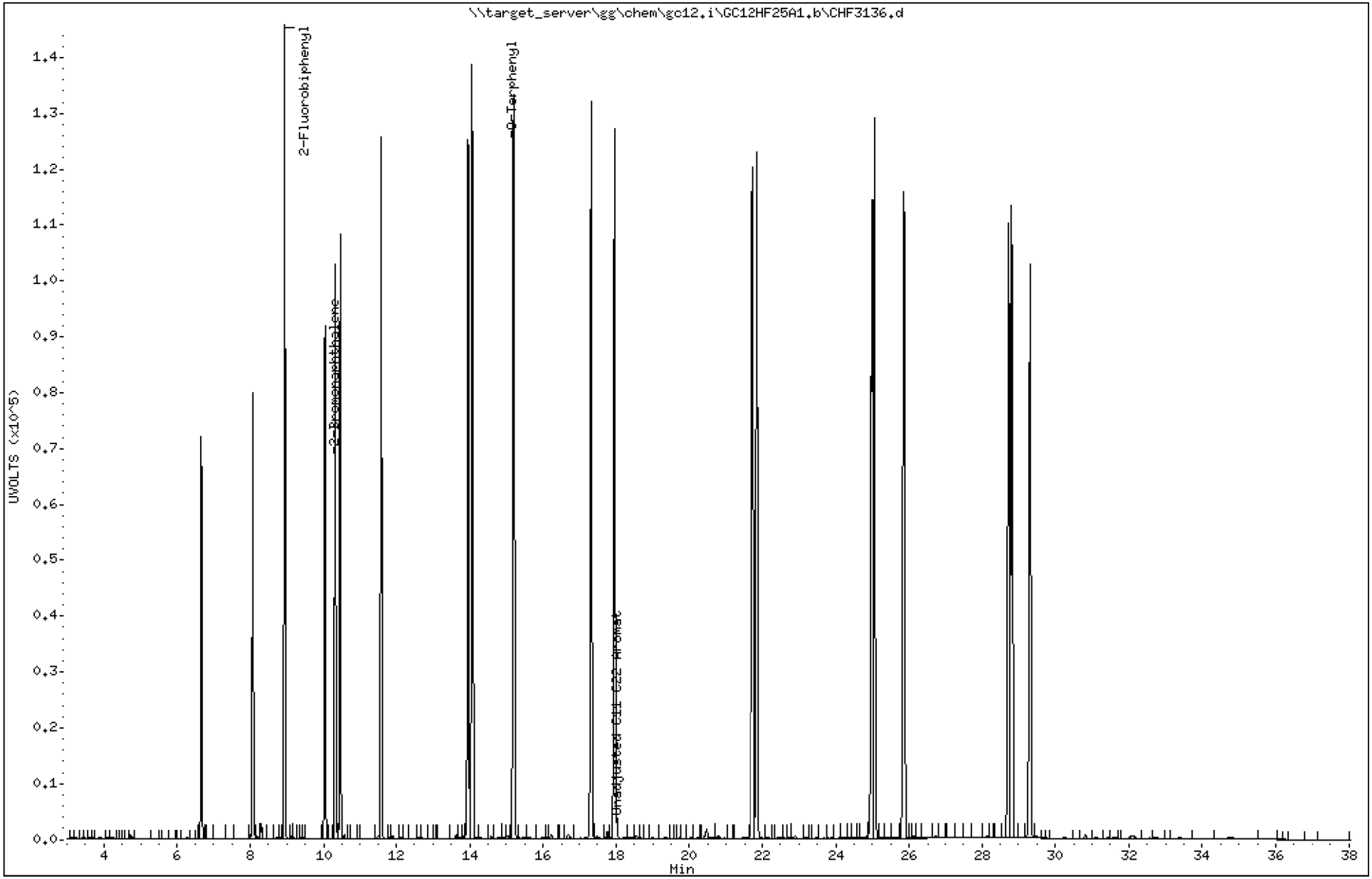
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 2-Fluorobiphenyl	8.938	8.982	-0.044	405420	34.2205	68.4	
$ 6 2-Bromonaphthalene	10.319	10.364	-0.045	278131	34.5074	69.0	
$ 11 O-Terphenyl	15.195	15.185	0.010	461495	35.0363	70.1	
S 15 Unadjusted C11-C22 Aromatics	6.618-29.474			7042051	552.363	1100	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3136.d
Date : 26-JUN-2014 20:01
Client ID: WG145314-LCSD
Sample Info: WG145314-3,WE53-7
Purge Volume: 1.0
Column phase: RTX-5

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Data File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4136.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4136.d
Lab Smp Id: WG145314-3 Client Smp ID: WG145314-LCSD
Inj Date : 26-JUN-2014 20:01
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-3,WE53-7
Misc Info : WG145456,WG145314,WG142382-9,SH4521-8
Comment :
Method : \\TARGET_SERVER\GG\chem\gc12.i\GC12HF25B1.B\ALIB053A.m
Meth Date : 30-Jun-2014 07:32 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 22:23 Cal File: CHE2016.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ALIPHATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4133.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

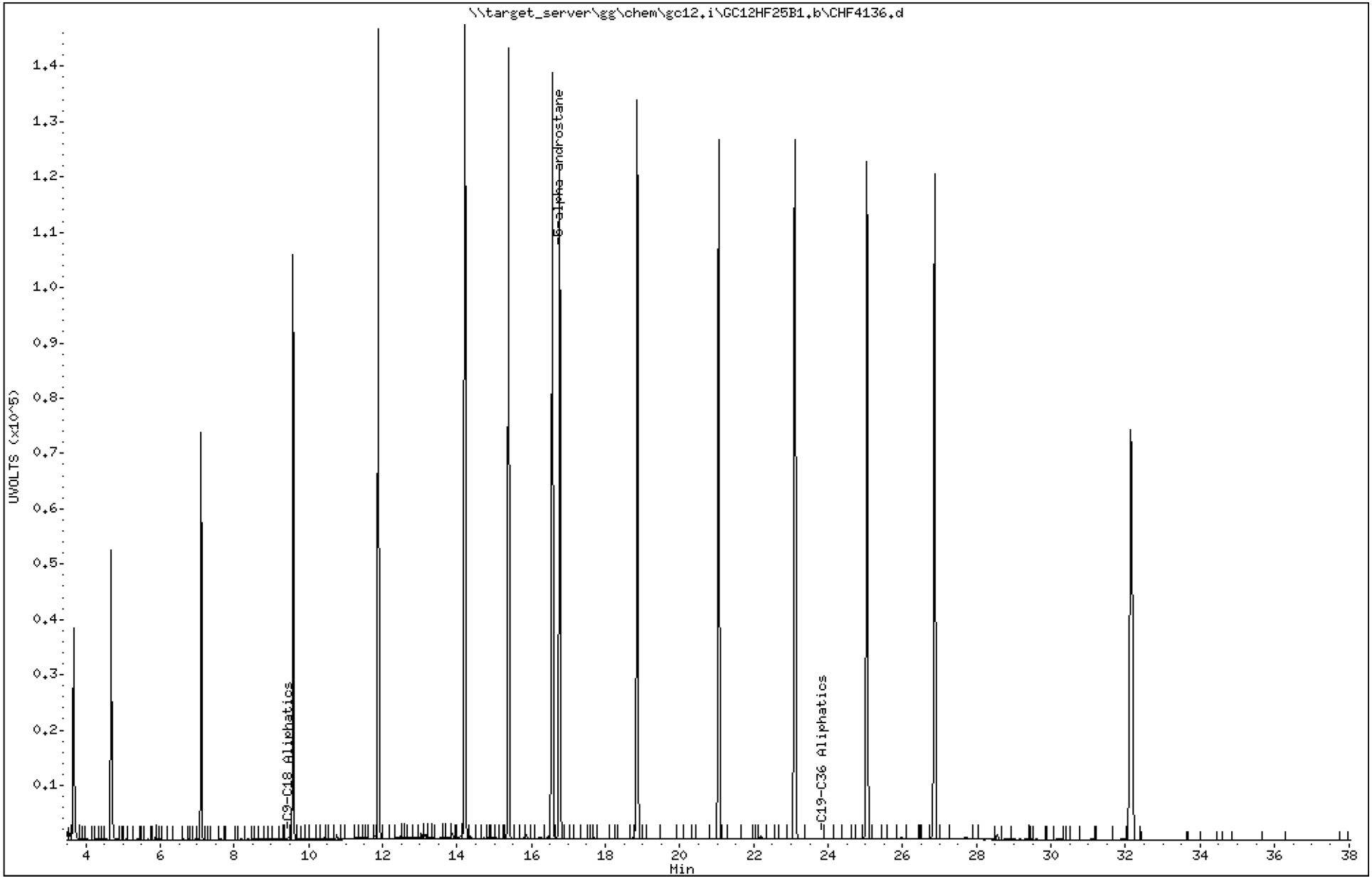
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 44 5-alpha androstane	16.756	16.782	-0.026	415324	32.2519	64.5	
S 6 C9-C18 Aliphatics	3.600-15.355			1616787	132.597	265	
S 17 C19-C36 Aliphatics	15.355-32.383			3681845	299.886	600	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4136.d
Date : 26-JUN-2014 20:01
Client ID: WG145314-LCSD
Sample Info: WG145314-3,WE53-7
Purge Volume: 1.0
Column phase: RTX-1

Instrument: gc12.i

Operator: AC
Column diameter: 0.53



Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG145668-2
LCSD ID: WG145668-3
Project:
SDG: WE53-7
Report Date: 09-JUL-14
LCS File ID: CHG2056.D

Received Date:
Extract Date: 30-JUN-14
Extracted By: AM
Extraction Method: SW846 3510
Lab Prep Batch: WG145668
LCSD File ID: CHG1057.d

Analysis Date: 07-JUL-14
Analyst: AC
Analysis Method: MA DEP EPH 04-1.1
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Unadjusted C11-C22 Aromatics	1530	889.	58.1	1050	68.6	ug/L	17	25	40-140
C9-C18 Aliphatics	540.	188.	34.8*	231.	42.8	ug/L	20	25	40-140
C19-C36 Aliphatics	720.	472.	65.6	546.	75.8	ug/L	14	25	40-140
5-Alpha Androstane			64.0		60.9				40-140
o-Terphenyl			67.6		68.9				40-140
2-Fluorobiphenyl			77.2		84.2				40-140
2-Bromonaphthalene			78.3		84.4				40-140

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1056.d
Report Date: 09-Jul-2014 14:16

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1056.d
Lab Smp Id: WG145668-2 Client Smp ID: WG145668-LCS
Inj Date : 07-JUL-2014 13:02
Operator : AC Inst ID: gc12.i
Smp Info : WG145668-2,WE53-7
Misc Info : WG146138,WG145668,WG142382-3,SH4521-18
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HG07A1.b\AROA060A.m
Meth Date : 09-Jul-2014 09:49 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: AROMATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1054.d
Target Version: 4.12
Processing Host: T8-D4700

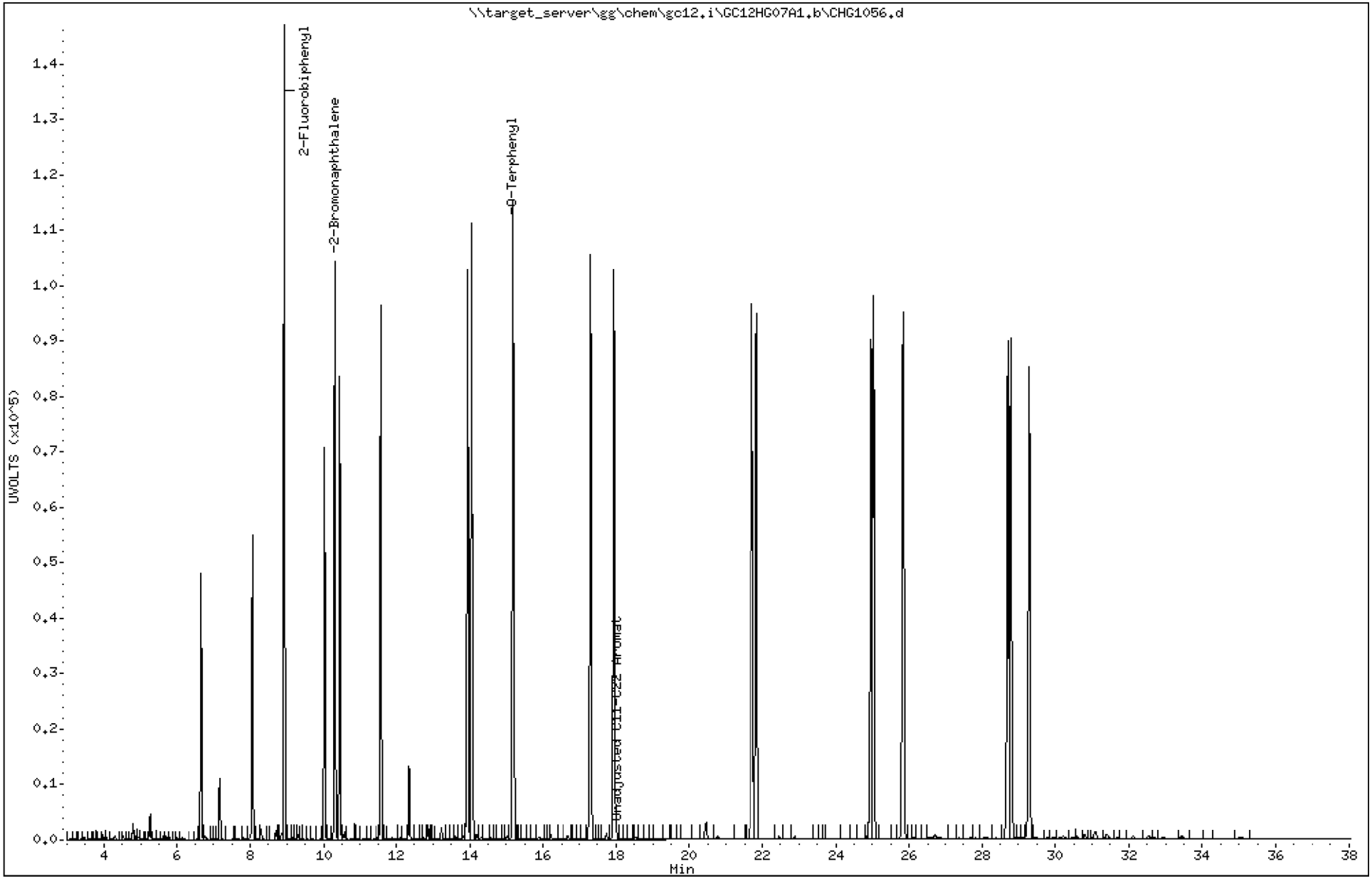
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 2-Fluorobiphenyl	8.928	8.945	-0.017	411841	34.7625	69.5	
$ 6 2-Bromonaphthalene	10.308	10.325	-0.017	284228	35.2638	70.5	
$ 11 O-Terphenyl	15.181	15.196	-0.015	400453	30.4021	60.8	
S 15 Unadjusted C11-C22 Aromatics	6.578-29.474			5666820	444.493	889	

Data File: \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1056.d
Date : 07-JUL-2014 13:02
Client ID: WG145668-LCS
Sample Info: WG145668-2,WE53-7
Purge Volume: 1.0
Column phase: RTX-5

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000248

Data File: \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2056.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2056.d
Lab Smp Id: WG145668-2 Client Smp ID: WG145668-LCS
Inj Date : 07-JUL-2014 13:02
Operator : AC Inst ID: gc12.i
Smp Info : WG145668-2,WE53-7
Misc Info : WG146138,WG145668,WG142382-9,SH4521-18
Comment :
Method : \\TARGET_SERVER\GG\chem\gc12.i\GC12HG07B1.B\ALIB053A.m
Meth Date : 09-Jul-2014 09:50 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 22:23 Cal File: CHE2016.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ALIPHATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2054.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

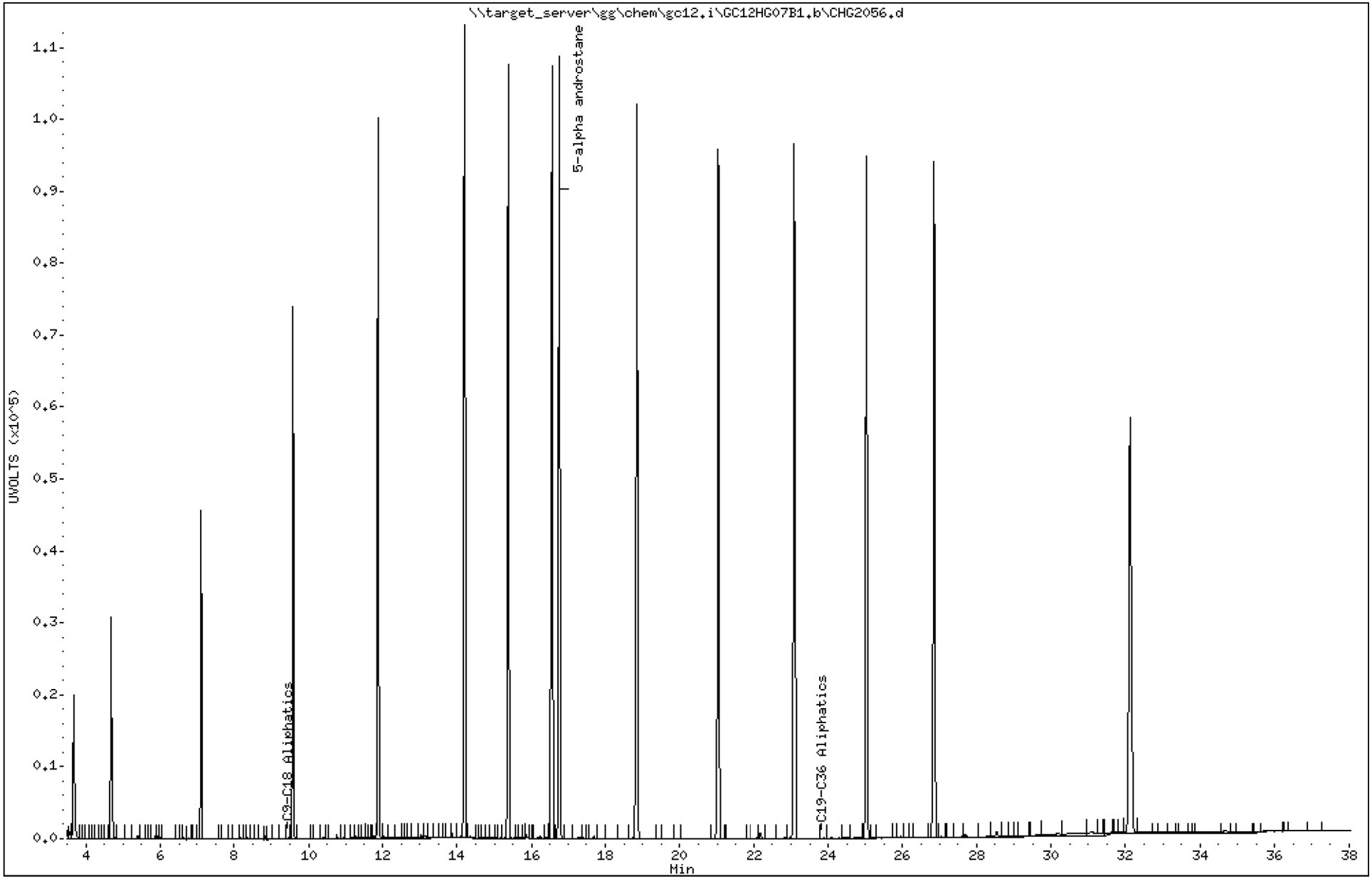
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 44 5-alpha androstane	16.744	16.742	0.002	370965	28.8072	57.6	
S 6 C9-C18 Aliphatics	3.581-15.284			1147693	94.1254	188(R)	
S 17 C19-C36 Aliphatics	15.284-32.237			2896549	235.924	472	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2056.d
Date : 07-JUL-2014 13:02
Client ID: WG145668-LCS
Sample Info: WG145668-2,WE53-7
Purge Volume: 1.0
Column phase: RTX-1

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000250

Data File: \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1057.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1057.d
Lab Smp Id: WG145668-3 Client Smp ID: WG145668-LCSD
Inj Date : 07-JUL-2014 13:47
Operator : AC Inst ID: gc12.i
Smp Info : WG145668-3,WE53-7
Misc Info : WG146138,WG145668,WG142382-3,SH4521-18
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HG07A1.b\AROA060A.m
Meth Date : 09-Jul-2014 09:49 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: AROMATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1054.d
Target Version: 4.12
Processing Host: KATHADIN-50E985

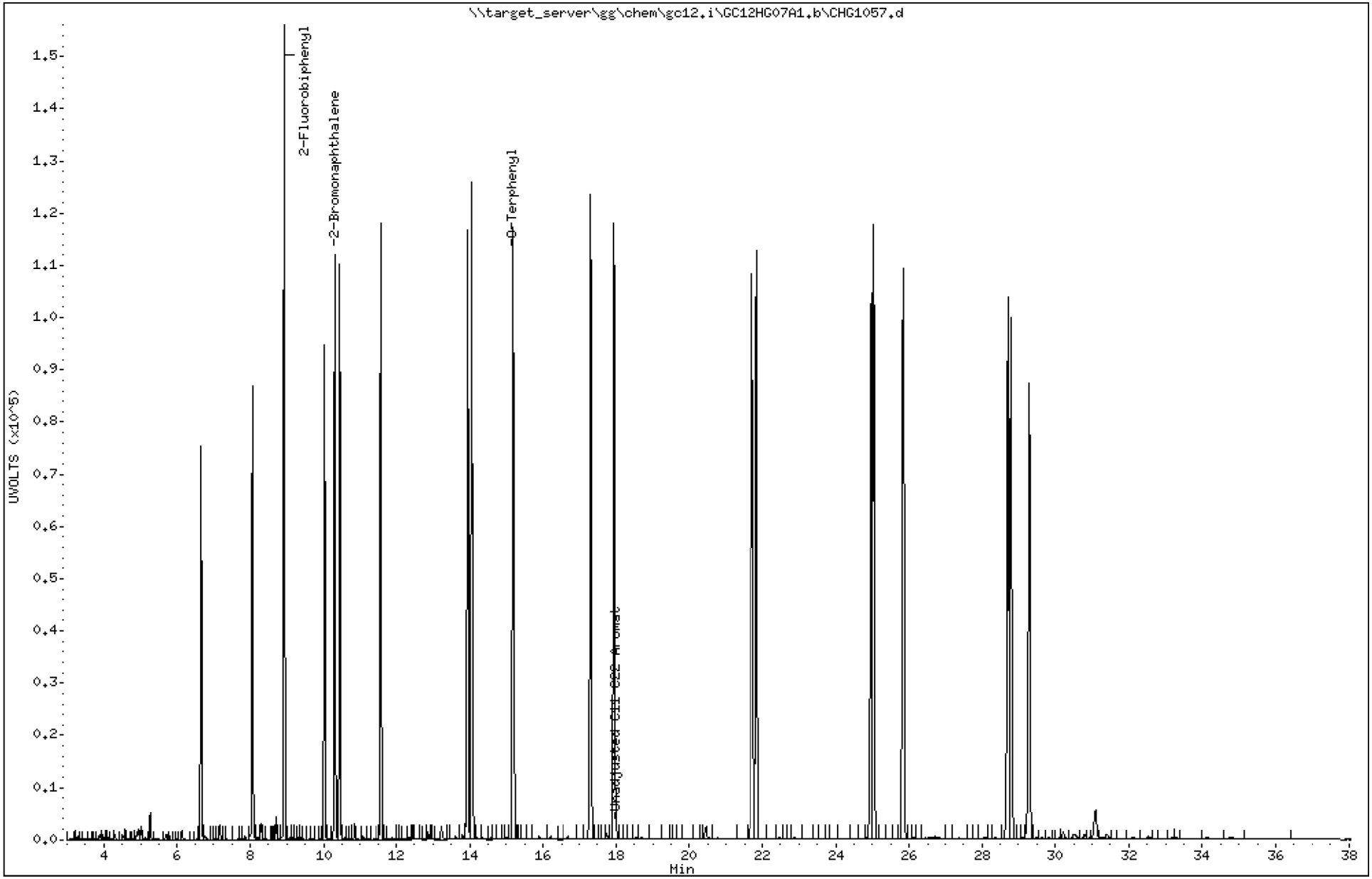
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 2-Fluorobiphenyl	8.927	8.945	-0.018	448911	37.8915	75.8	
$ 6 2-Bromonaphthalene	10.307	10.325	-0.018	306117	37.9796	76.0	
$ 11 O-Terphenyl	15.181	15.196	-0.015	408083	30.9813	62.0	
S 15 Unadjusted C11-C22 Aromatics	6.578-29.474			6673826	523.480	1050	

Data File: \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1057.d
Date : 07-JUL-2014 13:47
Client ID: WG145668-LCSD
Sample Info: WG145668-3,WE53-7
Purge Volume: 1.0
Column phase: RTX-5

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000252

Data File: \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2057.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2057.d
Lab Smp Id: WG145668-3 Client Smp ID: WG145668-LCSD
Inj Date : 07-JUL-2014 13:47
Operator : AC Inst ID: gc12.i
Smp Info : WG145668-3,WE53-7
Misc Info : WG146138,WG145668,WG142382-9,SH4521-18
Comment :
Method : \\TARGET_SERVER\GG\chem\gc12.i\GC12HG07B1.B\ALIB053A.m
Meth Date : 09-Jul-2014 09:50 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 22:23 Cal File: CHE2016.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ALIPHATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2054.d
Target Version: 4.12
Processing Host: KATHADIN-50E985

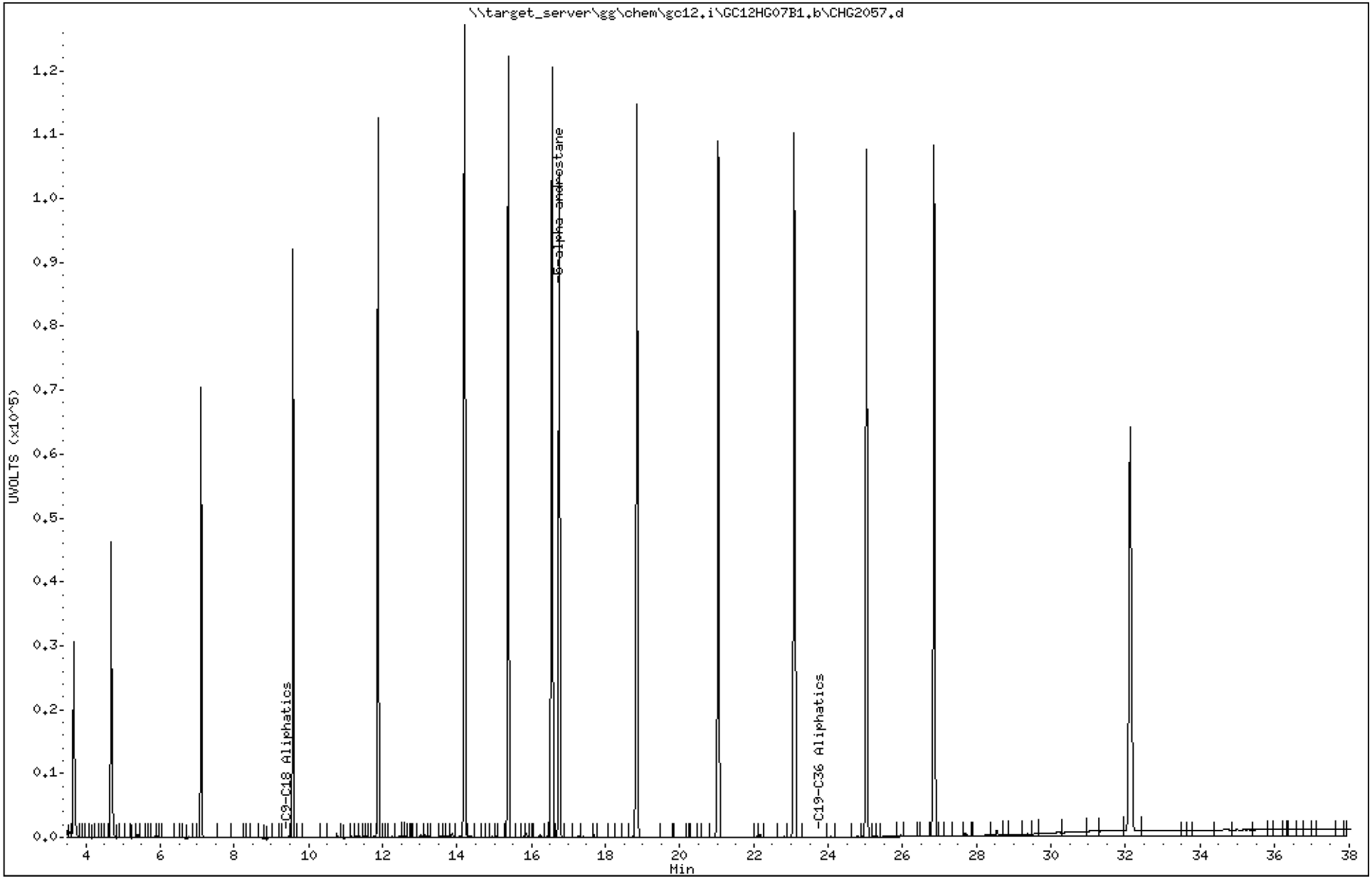
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 44 5-alpha androstane	16.744	16.742	0.002	352838	27.3996	54.8	
S 6 C9-C18 Aliphatics	3.581-15.284			1411148	115.732	231	
S 17 C19-C36 Aliphatics	15.284-32.237			3352396	273.052	546	

Data File: \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2057.d
Date : 07-JUL-2014 13:47
Client ID: WG145668-LCSD
Sample Info: WG145668-3,WE53-7
Purge Volume: 1.0
Column phase: RTX-1

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000254

Katahdin
ANALYTICAL SERVICES

Cert No E87604

MS/MSD Recovery Report

MS ID: WG145314-4
MSD ID: WG145314-5
Sample ID: SH4521-8
Client ID: FTA-MW-210-061814
Project:
SDG: WE53-7
MS File ID: CHF4137.D

Received Date:
Extract Date: 24-JUN-14
Extracted By: AM
Extraction Method: SW846 3510
Lab Prep Batch: WG145314
Report Date: 09-JUL-14
MSD File ID: CHF3138A.d

Analysis Date: 26-JUN-14
Analyst: AC
Analysis Method: MA DEP EPH 04-1.1
Matrix: AQ
% Solids: NA

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Unadjusted C11-C22 Aromatics	1540	1510	ug/L	U72	1160	1110	75.0	73.3	4	25	40-140
C9-C18 Aliphatics	545.	535.	ug/L	U72	320	259	58.7	48.4	21	25	40-140
C19-C36 Aliphatics	727.	713.	ug/L	U72	559	590	76.9	82.8	5	25	40-140
5-Alpha Androstane							61.2	61.5			40-140
o-Terphenyl							73.8	75.3			40-140
2-Fluorobiphenyl							75.4	75.0			40-140
2-Bromonaphthalene							75.5	76.0			40-140

600 Technology Way
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Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3137.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3137.d
Lab Smp Id: WG145314-4 Client Smp ID: FTA-MW-210-061814MS
Inj Date : 26-JUN-2014 20:46
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-4,WE53-7
Misc Info : WG145456,WG145314,WG142382-3,SH4521-8
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\AROA060A.m
Meth Date : 30-Jun-2014 07:25 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: AROMATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3133.d
Target Version: 4.12
Processing Host: T8-D4700

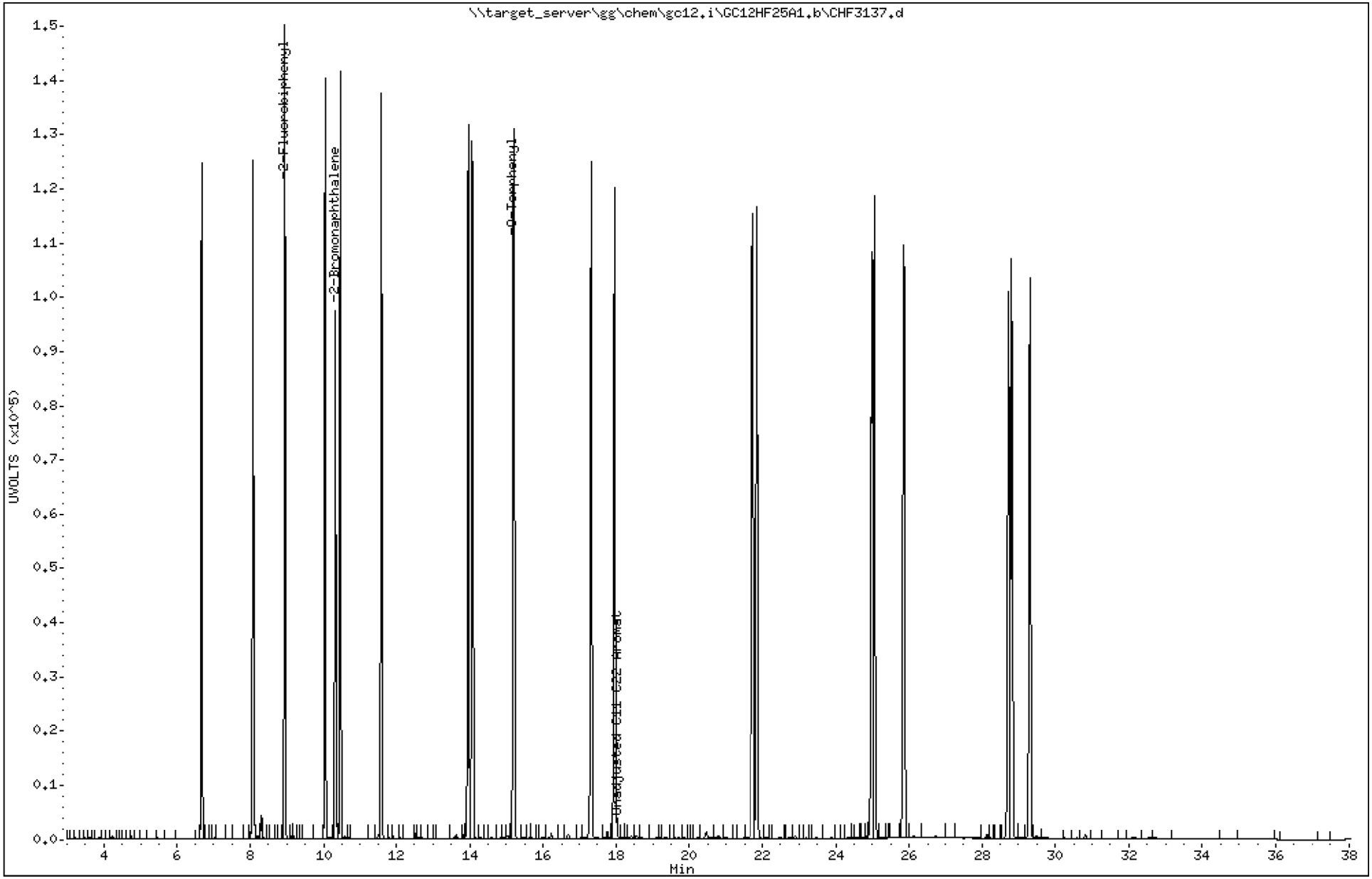
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	0.99000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 2-Fluorobiphenyl	8.943	8.982	-0.039	401704	33.9069	68.5	
$ 6 2-Bromonaphthalene	10.323	10.364	-0.041	273827	33.9734	68.6	
$ 11 O-Terphenyl	15.197	15.185	0.012	437258	33.1963	67.1	
S 15 Unadjusted C11-C22 Aromatics	6.618-29.474			7319029	574.088	1160	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3137.d
Date : 26-JUN-2014 20:46
Client ID: FTA-MW-210-061814MS
Sample Info: WG145314-4,WE53-7
Purge Volume: 1.0
Column phase: RTX-5

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



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Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4137.d
Lab Smp Id: WG145314-4 Client Smp ID: FTA-MW-210-061814MS
Inj Date : 26-JUN-2014 20:46
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-4,WE53-7
Misc Info : WG145456,WG145314,WG142382-9,SH4521-8
Comment :
Method : \\TARGET_SERVER\GG\chem\gc12.i\GC12HF25B1.B\ALIB053A.m
Meth Date : 30-Jun-2014 07:32 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 22:23 Cal File: CHE2016.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ALIPHATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4133.d
Target Version: 4.12
Processing Host: T8-D4700

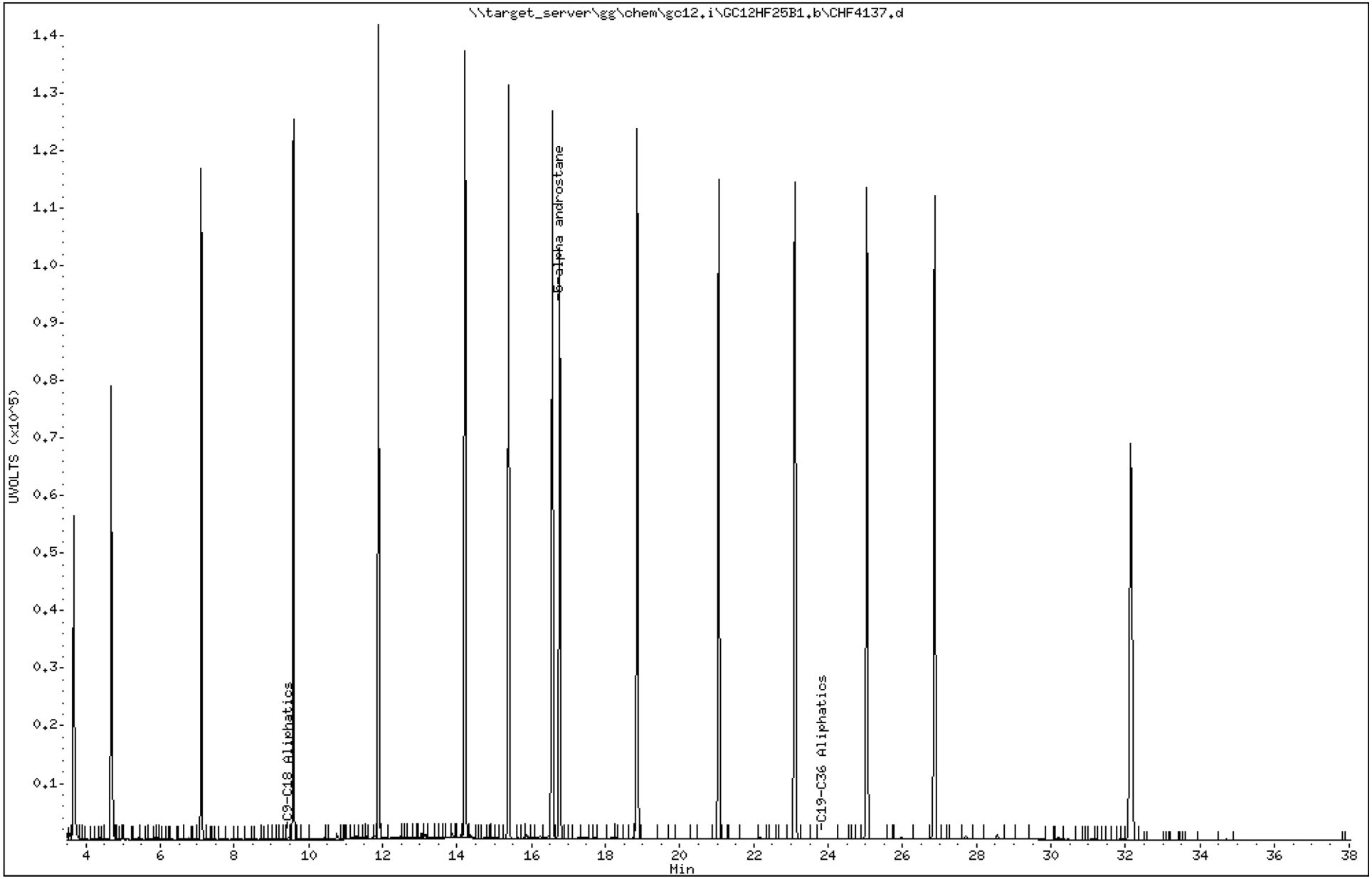
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	0.99000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 44 5-alpha androstane	16.756	16.782	-0.026	354793	27.5514	55.6	
S 6 C9-C18 Aliphatics	3.600-15.355			1931578	158.414	320	
S 17 C19-C36 Aliphatics	15.355-32.383			3397793	276.750	559	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4137.d
Date : 26-JUN-2014 20:46
Client ID: FTA-MW-210-061814MS
Sample Info: WG145314-4,WE53-7
Purge Volume: 1.0
Column phase: RTX-1

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



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Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3138.d
Lab Smp Id: WG145314-5 Client Smp ID: FTA-MW-210-061814MS
Inj Date : 26-JUN-2014 21:32
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-5,WE53-7
Misc Info : WG145456,WG145314,WG142382-3,SH4521-8
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\AROA060A.m
Meth Date : 30-Jun-2014 07:25 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: AROMATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3133.d
Target Version: 4.12
Processing Host: T8-D4700

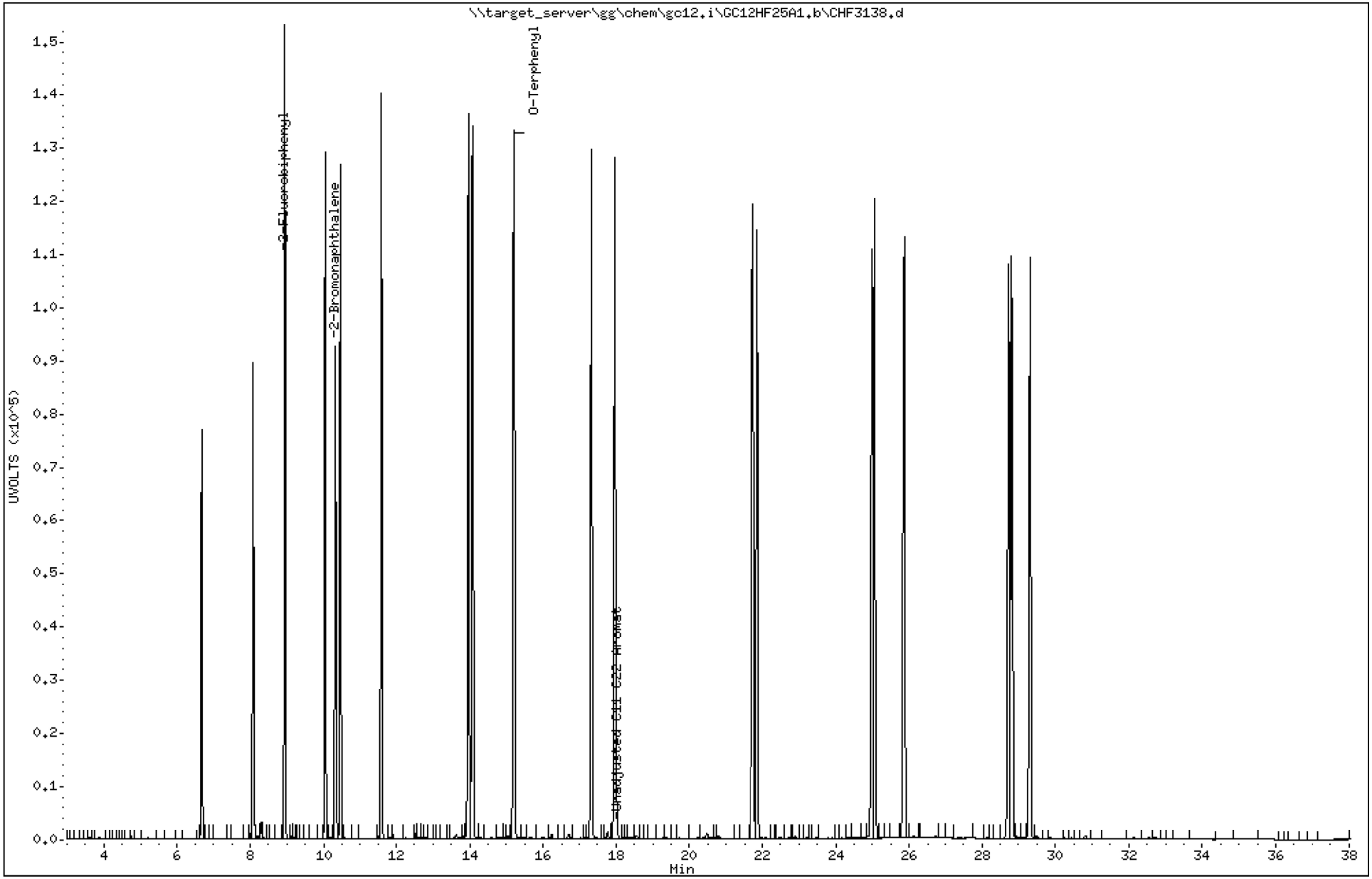
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.010	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 2-Fluorobiphenyl	8.945	8.982	-0.037	399692	33.7370	66.8	
$ 6 2-Bromonaphthalene	10.326	10.364	-0.038	275755	34.2126	67.7	
$ 11 O-Terphenyl	15.201	15.185	0.016	446330	33.8850	67.1	
S 15 Unadjusted C11-C22 Aromatics	6.618-29.474			7166842	562.151	1110	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3138.d
Date : 26-JUN-2014 21:32
Client ID: FTA-MW-210-061814MS
Sample Info: WG145314-5,WE53-7
Purge Volume: 1.0
Column phase: RTX-5

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000261

Data File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4138.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4138.d
Lab Smp Id: WG145314-5 Client Smp ID: FTA-MW-210-061814MS
Inj Date : 26-JUN-2014 21:32
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-5,WE53-7
Misc Info : WG145456,WG145314,WG142382-9,SH4521-8
Comment :
Method : \\TARGET_SERVER\GG\chem\gc12.i\GC12HF25B1.B\ALIB053A.m
Meth Date : 30-Jun-2014 07:32 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 22:23 Cal File: CHE2016.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ALIPHATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4133.d
Target Version: 4.12
Processing Host: T8-D4700

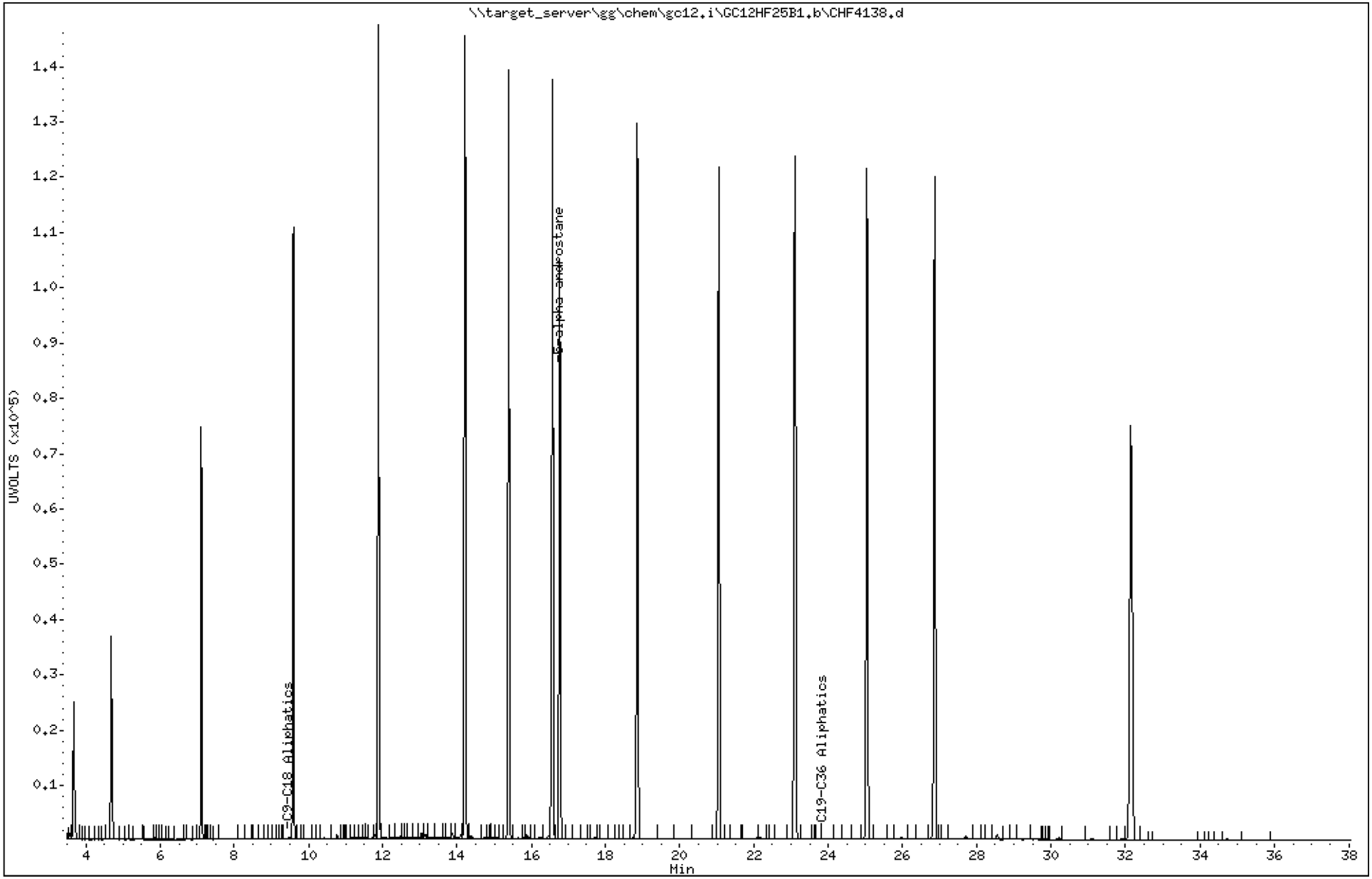
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.010	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 44 5-alpha androstane	16.758	16.782	-0.024	356287	27.6674	54.8	
S 6 C9-C18 Aliphatics	3.600-15.355			1593812	130.713	259	
S 17 C19-C36 Aliphatics	15.355-32.383			3659269	298.047	590	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4138.d
Date : 26-JUN-2014 21:32
Client ID: FTA-MW-210-061814MS
Sample Info: WG145314-5,WE53-7
Purge Volume: 1.0
Column phase: RTX-1

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000263

Katahdin
ANALYTICAL SERVICES

Cert No E87604

MS/MSD Recovery Report

MS ID: WG145314-6
MSD ID: WG145314-7
Sample ID: SH4521-14
Client ID: FTA-SW-03-061914
Project:
SDG: WE53-7
MS File ID: CHF4139.D

Received Date:
Extract Date: 24-JUN-14
Extracted By: AM
Extraction Method: SW846 3510
Lab Prep Batch: WG145314
Report Date: 09-JUL-14
MSD File ID: CHF3140.d

Analysis Date: 26-JUN-14
Analyst: AC
Analysis Method: MA DEP EPH 04-1.1
Matrix: AQ
% Solids: NA

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Unadjusted C11-C22 Aromatics	1470	1470	ug/L	U71	1060	1090	72.0	74.1	3	25	40-140
C9-C18 Aliphatics	519.	519.	ug/L	U71	247	257	47.6	49.5	4	25	40-140
C19-C36 Aliphatics	692.	692.	ug/L	U71	489	534	70.6	77.1	9	25	40-140
5-Alpha Androstane							56.0	57.6			40-140
o-Terphenyl							71.6	74.4			40-140
2-Fluorobiphenyl							74.4	74.4			40-140
2-Bromonaphthalene							75.0	73.5			40-140

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Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3139.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3139.d
Lab Smp Id: WG145314-6 Client Smp ID: FTA-SW-03-061914MS
Inj Date : 26-JUN-2014 22:17
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-6,WE53-7
Misc Info : WG145456,WG145314,WG142382-3,SH4521-14
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\AROA060A.m
Meth Date : 30-Jun-2014 07:25 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: AROMATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3133.d
Target Version: 4.12
Processing Host: T8-D4700

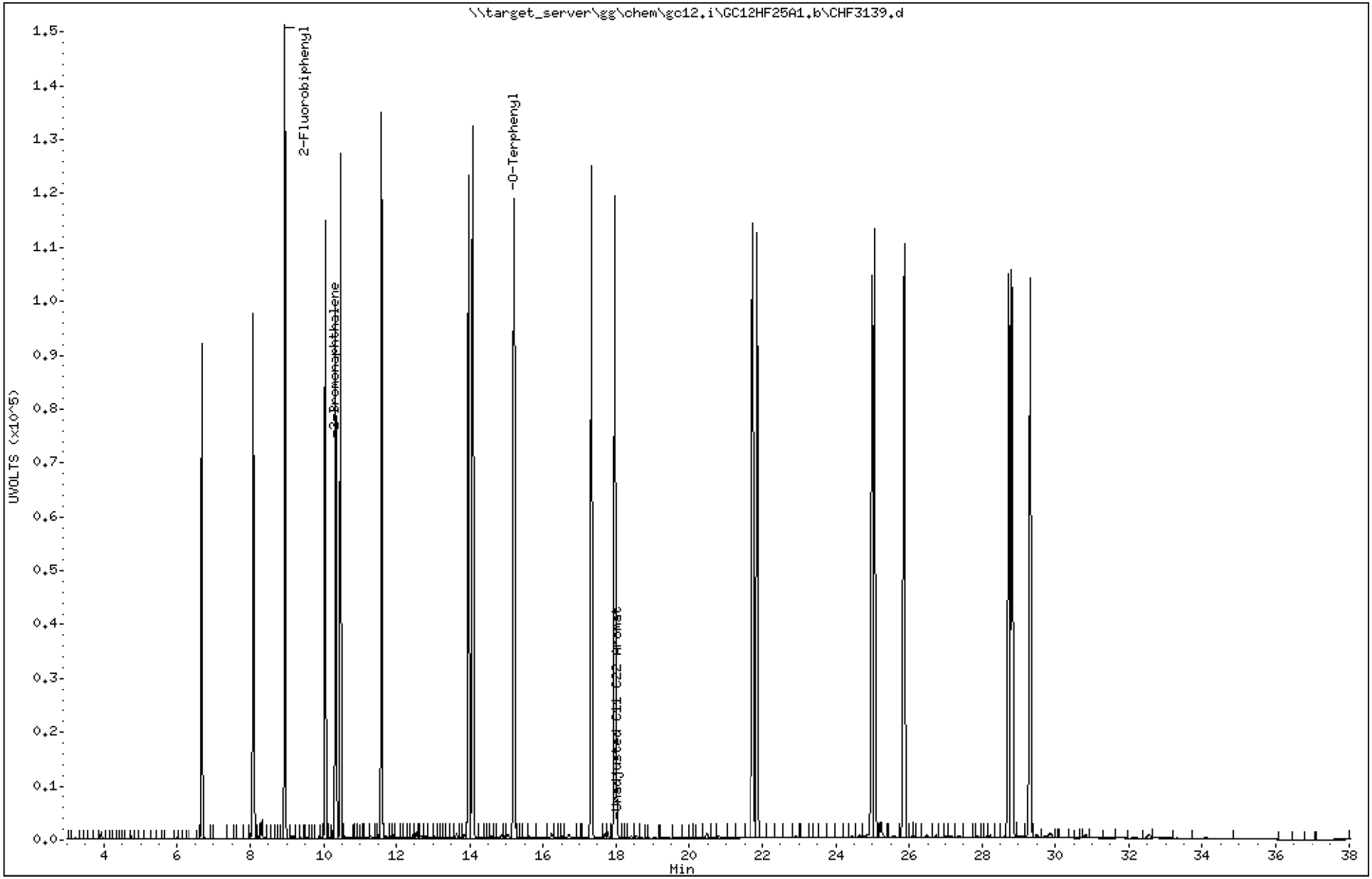
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.040	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 2-Fluorobiphenyl	8.948	8.982	-0.034	396766	33.4901	64.4	
$ 6 2-Bromonaphthalene	10.331	10.364	-0.033	271900	33.7343	64.9	
$ 11 O-Terphenyl	15.206	15.185	0.021	423949	32.1858	61.9	
S 15 Unadjusted C11-C22 Aromatics	6.618-29.474			7040915	552.274	1060	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3139.d
Date : 26-JUN-2014 22:17
Client ID: FTA-SW-03-061914MS
Sample Info: WG145314-6,WE53-7
Purge Volume: 1.0
Column phase: RTX-5

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000266

Data File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4139.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4139.d
Lab Smp Id: WG145314-6 Client Smp ID: FTA-SW-03-061914MS
Inj Date : 26-JUN-2014 22:17
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-6,WE53-7
Misc Info : WG145456,WG145314,WG142382-9,SH4521-14
Comment :
Method : \\TARGET_SERVER\GG\chem\gc12.i\GC12HF25B1.B\ALIB053A.m
Meth Date : 30-Jun-2014 07:32 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 22:23 Cal File: CHE2016.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ALIPHATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4133.d
Target Version: 4.12
Processing Host: T8-D4700

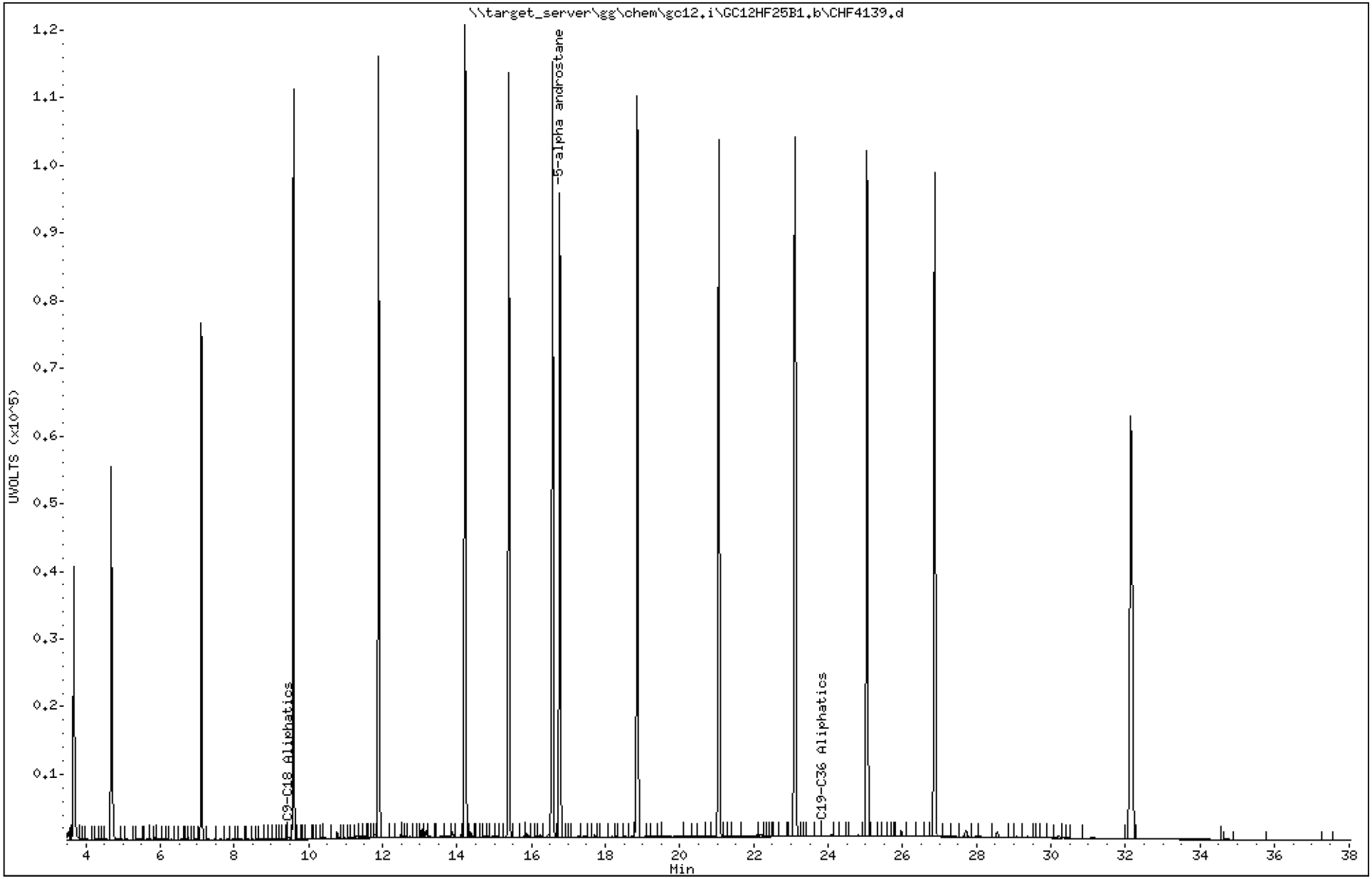
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.040	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 44 5-alpha androstane	16.761	16.782	-0.021	324095	25.1675	48.4	
S 6 C9-C18 Aliphatics	3.600-15.355			1568951	128.674	247	
S 17 C19-C36 Aliphatics	15.355-32.383			3122728	254.346	489	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4139.d
Date : 26-JUN-2014 22:17
Client ID: FTA-SW-03-061914MS
Sample Info: WG145314-6,WE53-7
Purge Volume: 1.0
Column phase: RTX-1

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000268

Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3140.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3140.d
Lab Smp Id: WG145314-7 Client Smp ID: FTA-SW-03-061914MSD
Inj Date : 26-JUN-2014 23:02
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-7,WE53-7
Misc Info : WG145456,WG145314,WG142382-3,SH4521-14
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\AROA060A.m
Meth Date : 30-Jun-2014 07:25 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: AROMATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3133.d
Target Version: 4.12
Processing Host: T8-D4700

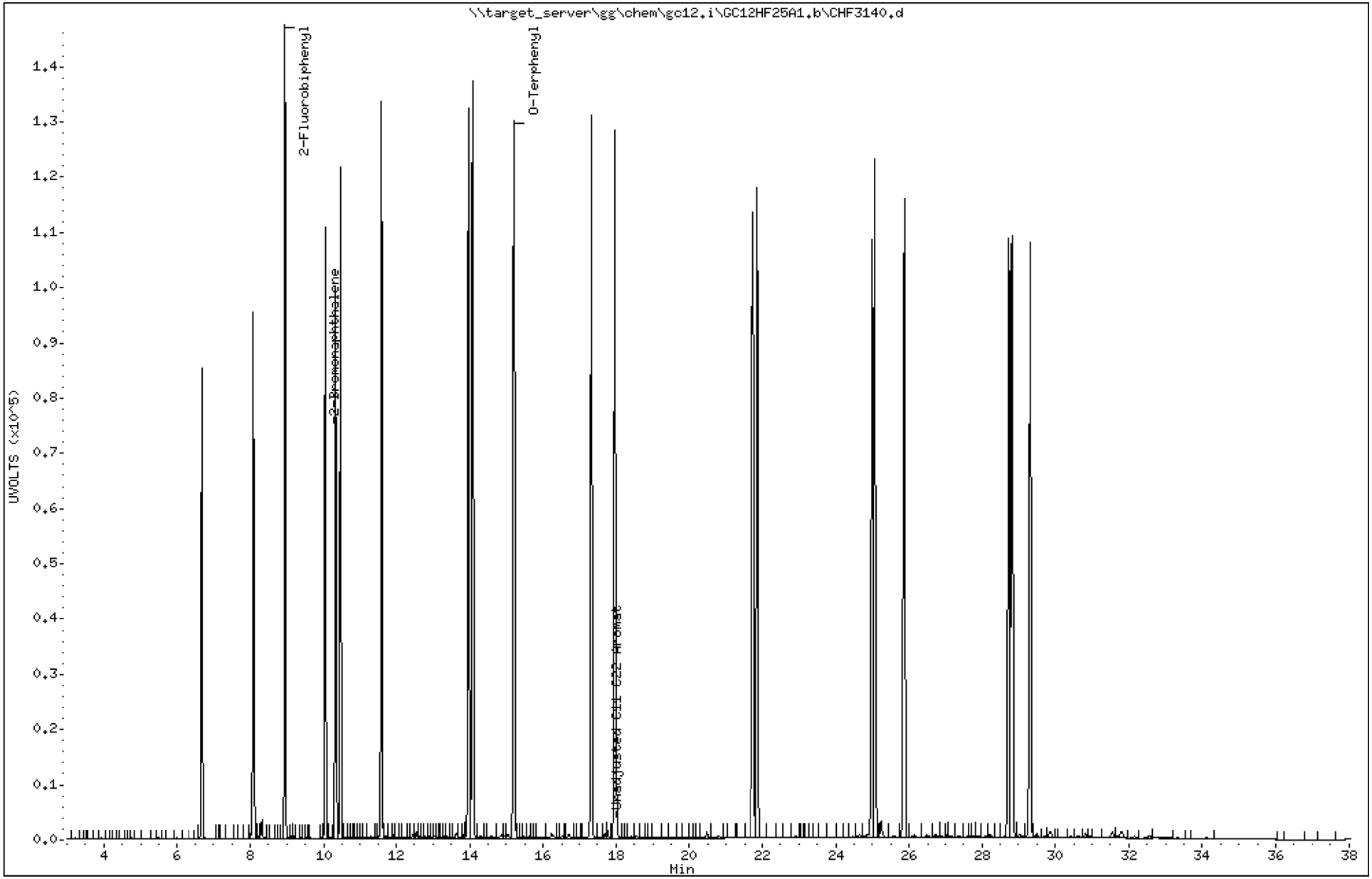
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.040	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 2-Fluorobiphenyl	8.949	8.982	-0.033	396804	33.4933	64.4	
$ 6 2-Bromonaphthalene	10.331	10.364	-0.033	266754	33.0959	63.6	
$ 11 O-Terphenyl	15.203	15.185	0.018	440814	33.4662	64.4	
S 15 Unadjusted C11-C22 Aromatics	6.618-29.474			7217803	566.148	1090	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3140.d
Date : 26-JUN-2014 23:02
Client ID: FTA-SW-03-061914MSD
Sample Info: WG145314-7,WE53-7
Purge Volume: 1.0
Column phase: RTX-5

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



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Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4140.d
Lab Smp Id: WG145314-7 Client Smp ID: FTA-SW-03-061914MSD
Inj Date : 26-JUN-2014 23:02
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-7,WE53-7
Misc Info : WG145456,WG145314,WG142382-9,SH4521-14
Comment :
Method : \\TARGET_SERVER\GG\chem\gc12.i\GC12HF25B1.B\ALIB053A.m
Meth Date : 30-Jun-2014 07:32 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 22:23 Cal File: CHE2016.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ALIPHATIC.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4133.d
Target Version: 4.12
Processing Host: T8-D4700

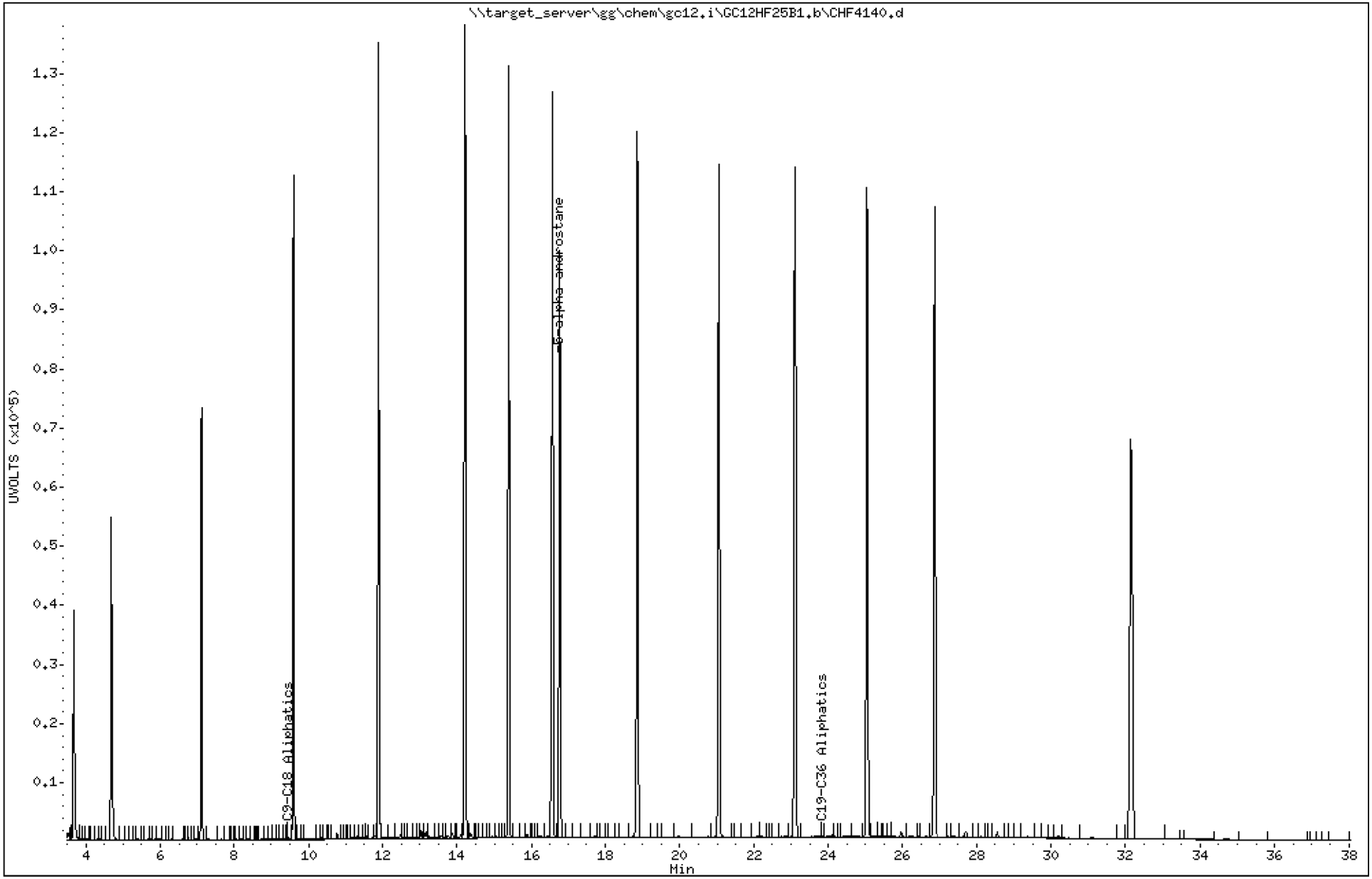
Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.040	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 44 5-alpha androstane	16.758	16.782	-0.024	333851	25.9251	49.8	
S 6 C9-C18 Aliphatics	3.600-15.355			1631275	133.785	257	
S 17 C19-C36 Aliphatics	15.355-32.383			3406897	277.491	534	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4140.d
Date : 26-JUN-2014 23:02
Client ID: FTA-SW-03-061914MSD
Sample Info: WG145314-7,WE53-7
Purge Volume: 1.0
Column phase: RTX-1

Instrument: gc12.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 9000272

KATAHDIN ANALYTICAL SERVICES

% Breakthrough

Lab ID: WG145094-2
Data Files: CHF3037a and CHF4037a

	Naphthalene	2-Methylnaphthalene
Aromatic Conc.	60.50	61.60
Aliphatic Conc.	0.00	0.00
Total	60.50	61.60
% Breakthrough	0	0
% Limits	5	5

Lab ID: WG145094-3
Data Files: CHF3038a and CHF4038a

	Naphthalene	2-Methylnaphthalene
Aromatic Conc.	47.10	46.80
Aliphatic Conc.	0.00	0.00
Total	47.10	46.80
% Breakthrough	0	0
% Limits	5	5

Lab ID: WG145314-2
Data Files: CHF3135a and GHF4135a

	Naphthalene	2-Methylnaphthalene
Aromatic Conc.	38.10	41.70
Aliphatic Conc.	0.00	0.00
Total	38.10	41.70
% Breakthrough	0	0
% Limits	5	5

Lab ID: WG145314-3
Data Files: CHF3136a and CHF4136a

	Naphthalene	2-Methylnaphthalene
Aromatic Conc.	30.80	32.90
Aliphatic Conc.	0.00	0.00
Total	30.80	32.90
% Breakthrough	0	0
% Limits	5	5

Lab ID: WG145668-2
Data Files: CHG1056a and CHG2056a

	Naphthalene	2-Methylnaphthalene
Aromatic Conc.	21.00	22.80
Aliphatic Conc.	0.00	0.00
Total	21.00	22.80
% Breakthrough	0	0
% Limits	5	5

Lab ID: WG145668-3
Data Files: CHG1057a and CHG2057a

	Naphthalene	2-Methylnaphthalene
Aromatic Conc.	33.30	36.30
Aliphatic Conc.	0.00	0.00
Total	33.30	36.30
% Breakthrough	0	0
% Limits	5	5

Data File: \\target_server\gg\chem\gc12.i\GC12HF20A1.b\CHF3031.d
Report Date: 23-Jun-2014 11:03

Katahdin Analytical Services

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: FC 6-19-14
Level: LOW
Data Type: GC DATA
SpikeList File: ARO-PAH.spk
Sublist File: PAHmdl.sub
Method File: \\target_server\gg\chem\gc12.i\GC12HF20A1.b\AROA060A.m
Misc Info: WG145269,WG145035,WG142382-3

Client SDG: SDGa02536
Fraction: DRO

Operator: AC
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
2 Naphthalene	90.0	82.8	92.07	40-140
3 2-Methylnaphthalen	90.0	82.1	91.18	40-140
5 Acenaphthylene	90.0	84.1	93.45	40-140
7 Acenaphthene	90.0	83.3	92.55	40-140
8 Fluorene	90.0	84.2	93.54	40-140
9 Phenanthrene	90.0	85.7	95.27	40-140
10 Anthracene	90.0	95.0	105.55	40-140
12 Fluoranthene	90.0	90.6	100.67	40-140
13 Pyrene	90.0	89.3	99.20	40-140
16 Benzo(a)Anthracene	90.0	95.3	105.89	40-140
17 Chrysene	90.0	91.9	102.08	40-140
18 Benzo(b)Fluoranthe	90.0	85.2	94.67	40-140
19 Benzo(k)Fluoranthe	90.0	101	111.80	40-140
20 Benzo(a)Pyrene	90.0	94.7	105.22	40-140
21 Indeno(1,2,3-cd)Py	90.0	91.3	101.45	40-140
22 Dibenzo(a,h)Anthra	90.0	95.0	105.61	40-140
23 Benzo(g,h,i)Peryle	90.0	98.0	108.86	40-140

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorobiphenyl	90.0	86.6	96.27	40-140
$ 6 2-Bromonaphthalene	90.0	87.2	96.85	40-140
$ 11 O-Terphenyl	90.0	87.4	97.08	40-140

Data File: \\target_server\gg\chem\gc12.i\GC12HF20B1.b\CHF4031.d
Report Date: 23-Jun-2014 11:22

Katahdin Analytical Services

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: FC 6-19-14
Level: LOW
Data Type: GC DATA
SpikeList File: FRACCHECK.spk
Sublist File: IndComp.sub
Method File: \\TARGET_SERVER\GG\chem\gc12.i\GC12HF20B1.B\ALIB053A.m
Misc Info: WG145269,WG145035,WG142382-9

Client SDG: SDGa02536
Fraction: DRO

Operator: AC
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3 C-9	90.0	54.6	60.68	30-140
4 C-10	90.0	55.9	62.08	40-140
5 C-12	90.0	60.8	67.54	40-140
7 C-14	90.0	60.5	67.19	40-140
8 C-16	90.0	61.7	68.55	40-140
9 C-18	90.0	65.6	72.92	40-140
10 C-19	90.0	65.6	72.84	40-140
11 C-20	90.0	66.4	73.76	40-140
13 C-22	90.0	66.8	74.26	40-140
14 C-24	90.0	67.4	74.91	40-140
15 C-26	90.0	67.9	75.41	40-140
16 C-28	90.0	67.8	75.30	40-140
18 C-30	90.0	68.4	76.05	40-140
19 C-36	90.0	71.2	79.11	40-140

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 44 5-alpha androstane	90.0	64.5	71.63	40-140

Data File: \\target_server\gg\chem\gc12.i\GC12HF30B1.b\CHF4221.d
Report Date: 15-Jul-2014 18:17

Katahdin Analytical Services

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: FC 6-27-14
Level: LOW
Data Type: GC DATA
SpikeList File: FRACCHECK.spk
Sublist File: IndComp.sub
Method File: \\TARGET_SERVER\GG\chem\gc12.i\GC12HF30B1.B\ALIB053A.m
Misc Info: WG145741,WG145,WG142382-9

Client SDG: SDGa02536
Fraction: DRO

Operator: AC
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3 C-9	90.0	66.8	74.23	30-140
4 C-10	90.0	67.2	74.73	40-140
5 C-12	90.0	72.6	80.72	40-140
7 C-14	90.0	72.4	80.47	40-140
8 C-16	90.0	75.4	83.81	40-140
9 C-18	90.0	80.8	89.75	40-140
10 C-19	90.0	80.7	89.69	40-140
11 C-20	90.0	81.6	90.62	40-140
13 C-22	90.0	81.9	91.02	40-140
14 C-24	90.0	82.6	91.81	40-140
15 C-26	90.0	83.1	92.39	40-140
16 C-28	90.0	82.8	91.95	40-140
18 C-30	90.0	82.8	92.06	40-140
19 C-36	90.0	84.7	94.08	40-140

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 44 5-alpha androstane	90.0	74.0	82.17	40-140

Data File: \\target_server\gg\chem\gc12.i\GC12HF30A1.b\CHF3221.d
Report Date: 15-Jul-2014 18:17

Katahdin Analytical Services

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: FC 6-27-14
Level: LOW
Data Type: GC DATA
SpikeList File: ARO-PAH.spk
Sublist File: PAHmdl.sub
Method File: \\target_server\gg\chem\gc12.i\GC12HF30A1.b\AROA060A.m
Misc Info: FC 6-27-14

Client SDG: SDGa02536
Fraction: DRO

Operator: AC
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
2 Naphthalene	90.0	78.1	86.75	40-140
3 2-Methylnaphthalen	90.0	77.0	85.54	40-140
5 Acenaphthylene	90.0	79.5	88.39	40-140
7 Acenaphthene	90.0	79.3	88.10	40-140
8 Fluorene	90.0	80.1	88.97	40-140
9 Phenanthrene	90.0	81.8	90.92	40-140
10 Anthracene	90.0	91.0	101.17	40-140
12 Fluoranthene	90.0	87.9	97.69	40-140
13 Pyrene	90.0	86.3	95.87	40-140
16 Benzo(a)Anthracene	90.0	91.4	101.59	40-140
17 Chrysene	90.0	88.1	97.92	40-140
18 Benzo(b)Fluoranthe	90.0	90.4	100.49	40-140
19 Benzo(k)Fluoranthe	90.0	87.0	96.68	40-140
20 Benzo(a)Pyrene	90.0	91.1	101.23	40-140
21 Indeno(1,2,3-cd)Py	90.0	89.3	99.19	40-140
22 Dibenzo(a,h)Anthra	90.0	89.3	99.21	40-140
23 Benzo(g,h,i)Peryle	90.0	94.1	104.53	40-140

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorobiphenyl	90.0	74.8	83.14	40-140
$ 6 2-Bromonaphthalene	90.0	75.4	83.78	40-140
$ 11 O-Terphenyl	90.0	78.7	87.42	40-140

Data File: \\target_server\gg\chem\gc12.i\GC12HF23A1.b\CHF3037A.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF23A1.b\CHF3037A.d
Lab Smp Id: WG145094-2 Client Smp ID: WG145094-LCS
Inj Date : 23-JUN-2014 14:16
Operator : AC Inst ID: gc12.i
Smp Info : WG145094-2,WE53-7
Misc Info : WG145269,WG145094,WG142382-3,SH4401-2
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF23A1.b\AROA060A.m
Meth Date : 26-Jun-2014 11:03 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PAH.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF23A1.b\CHF3034.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
2 Naphthalene	6.685	6.718	-0.033	390907	30.2684	60.5	
3 2-Methylnaphthalene	8.092	8.124	-0.032	394328	30.8234	61.6	
5 Acenaphthylene	10.047	10.080	-0.033	437311	34.4486	68.9	
7 Acenaphthene	10.465	10.499	-0.034	456208	35.0924	70.2	
8 Fluorene	11.602	11.638	-0.036	494055	38.0705	76.1	
9 Phenanthrene	13.967	14.005	-0.038	526308	40.9728	81.9	
10 Anthracene	14.082	14.081	0.001	531374	46.2726	92.5	
12 Fluoranthene	17.337	17.377	-0.040	563640	44.2287	88.4	
13 Pyrene	17.978	18.020	-0.042	565889	43.4083	86.8	
16 Benzo(a)Anthracene	21.744	21.786	-0.042	570526	45.3463	90.7	
17 Chrysene	21.871	21.914	-0.043	551717	43.5107	87.0	
18 Benzo(b)Fluoranthene	25.070	25.001	0.069	564910	40.7077	81.4	
19 Benzo(k)Fluoranthene	24.999	25.075	-0.076	589565	47.0667	94.1	
20 Benzo(a)Pyrene	25.872	25.916	-0.044	565531	44.8853	89.8	
21 Indeno(1,2,3-cd)Pyrene	28.826	28.786	0.040	527255	38.7649	77.5	
22 Dibenzo(a,h)Anthracene	28.742	28.872	-0.130	579600	48.6405	97.3	
23 Benzo(g,h,i)Perylene	29.329	29.373	-0.044	569363	45.6946	91.4	

Data File: \\target_server\gg\chem\gc12.i\GC12HF23A1.b\CHF3038A.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF23A1.b\CHF3038A.d
Lab Smp Id: WG145094-3 Client Smp ID: WG145094-LCSD
Inj Date : 23-JUN-2014 15:02
Operator : AC Inst ID: gc12.i
Smp Info : WG145094-3,WE53-7
Misc Info : WG145269,WG145094,WG142382-3,SH4401-2
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF23A1.b\AROA060A.m
Meth Date : 26-Jun-2014 11:03 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PAH.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF23A1.b\CHF3034.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
2 Naphthalene	6.679	6.718	-0.039	304146	23.5504	47.1	
3 2-Methylnaphthalene	8.086	8.124	-0.038	299494	23.4105	46.8	
5 Acenaphthylene	10.041	10.080	-0.039	338206	26.6417	53.3	
7 Acenaphthene	10.460	10.499	-0.039	349558	26.8887	53.8	
8 Fluorene	11.598	11.638	-0.040	388275	29.9194	59.8	
9 Phenanthrene	13.962	14.005	-0.043	448446	34.9113	69.8	
10 Anthracene	14.079	14.081	-0.002	460801	40.1270	80.2	
12 Fluoranthene	17.332	17.377	-0.045	488594	38.3398	76.7	
13 Pyrene	17.974	18.020	-0.046	490548	37.6290	75.2	
16 Benzo(a)Anthracene	21.740	21.786	-0.046	489488	38.9053	77.8	
17 Chrysene	21.866	21.914	-0.048	473892	37.3731	74.7	
18 Benzo(b)Fluoranthene	25.066	25.001	0.065	448628	32.3284	64.6	
19 Benzo(k)Fluoranthene	24.996	25.075	-0.079	543044	43.3528	86.7	
20 Benzo(a)Pyrene	25.868	25.916	-0.048	488060	38.7366	77.5	
21 Indeno(1,2,3-cd)Pyrene	28.823	28.786	0.037	434979	31.9806	64.0	
22 Dibenzo(a,h)Anthracene	28.739	28.872	-0.133	520193	43.6550	87.3	
23 Benzo(g,h,i)Perylene	29.323	29.373	-0.050	489987	39.3243	78.6	

Data File: \\target_server\gg\chem\gc12.i\GC12HF23B1.b\CHF4037A.d
Report Date: 15-Jul-2014 15:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF23B1.b\CHF4037A.d
Lab Smp Id: WG145094-2 Client Smp ID: WG145094-LCS
Inj Date : 23-JUN-2014 14:16
Operator : AC Inst ID: gc12.i
Smp Info : AROB038A,WG145094-2,WE53-7
Misc Info : MA DEP EPH 04-1.1
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF23B1.b\AROB038A.m
Meth Date : 06-Jun-2014 07:55 Quant Type: ESTD
Cal Date : 05-JUN-2014 16:46 Cal File: CHF2055.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: confirm.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF23B1.b\CHF4035.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE

Data File: \\target_server\gg\chem\gc12.i\GC12HF23B1.b\CHF4038A.d
Report Date: 15-Jul-2014 15:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF23B1.b\CHF4038A.d
Lab Smp Id: WG145094-3 Client Smp ID: WG145094-LCSD
Inj Date : 23-JUN-2014 15:02
Operator : AC Inst ID: gc12.i
Smp Info : AROB038A,WG145094-3,WE53-7
Misc Info : MA DEP EPH 04-1.1
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF23B1.b\AROB038A.m
Meth Date : 06-Jun-2014 07:55 Quant Type: ESTD
Cal Date : 05-JUN-2014 16:46 Cal File: CHF2055.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: confirm.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF23B1.b\CHF4035.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE

Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3135A.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3135A.d
Lab Smp Id: WG145314-2 Client Smp ID: WG145314-LCS
Inj Date : 26-JUN-2014 19:16
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-2,WE53-7
Misc Info : WG145456,WG145314,WG142382-3,SH4521-8
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\AROA060A.m
Meth Date : 30-Jun-2014 07:25 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PAH.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3133.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
2 Naphthalene	6.668	6.718	-0.050	246335	19.0740	38.1	
3 2-Methylnaphthalene	8.076	8.124	-0.048	266692	20.8465	41.7	
5 Acenaphthylene	10.030	10.080	-0.050	315264	24.8345	49.7	
7 Acenaphthene	10.449	10.499	-0.050	336615	25.8931	51.8	
8 Fluorene	11.586	11.638	-0.052	370094	28.5184	57.0	
9 Phenanthrene	13.949	14.005	-0.056	398070	30.9896	62.0	
10 Anthracene	14.065	14.081	-0.016	400694	34.8928	69.8	
12 Fluoranthene	17.318	17.377	-0.059	424116	33.2802	66.6	
13 Pyrene	17.960	18.020	-0.060	425561	32.6440	65.3	
16 Benzo(a)Anthracene	21.727	21.786	-0.059	427575	33.9843	68.0	
17 Chrysene	21.852	21.914	-0.062	409991	32.3336	64.7	
18 Benzo(b)Fluoranthene	24.983	25.001	-0.018	475424	34.2593	68.5	
19 Benzo(k)Fluoranthene	25.051	25.075	-0.024	388587	31.0221	62.0	
20 Benzo(a)Pyrene	25.854	25.916	-0.062	423799	33.6363	67.3	
21 Indeno(1,2,3-cd)Pyrene	28.724	28.786	-0.062	449593	33.0550	66.1(M)	
22 Dibenzo(a,h)Anthracene	28.809	28.872	-0.063	381276	31.9970	64.0(M)	
23 Benzo(g,h,i)Perylene	29.307	29.373	-0.066	374255	30.0361	60.1	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3136A.d
Report Date: 09-Jul-2014 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3136A.d
Lab Smp Id: WG145314-3 Client Smp ID: WG145314-LCSD
Inj Date : 26-JUN-2014 20:01
Operator : AC Inst ID: gc12.i
Smp Info : WG145314-3,WE53-7
Misc Info : WG145456,WG145314,WG142382-3,SH4521-8
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF25A1.b\AROA060A.m
Meth Date : 30-Jun-2014 07:25 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PAH.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25A1.b\CHF3133.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
2 Naphthalene	6.670	6.718	-0.048	199263	15.4292	30.8(R)	
3 2-Methylnaphthalene	8.078	8.124	-0.046	210391	16.4456	32.9(R)	
5 Acenaphthylene	10.034	10.080	-0.046	266881	21.0232	42.0	
7 Acenaphthene	10.452	10.499	-0.047	291710	22.4389	44.9	
8 Fluorene	11.589	11.638	-0.049	358785	27.6470	55.3	
9 Phenanthrene	13.952	14.005	-0.053	429822	33.4614	66.9	
10 Anthracene	14.068	14.081	-0.013	443786	38.6453	77.3	
12 Fluoranthene	17.322	17.377	-0.055	475467	37.3097	74.6	
13 Pyrene	17.963	18.020	-0.057	477323	36.6146	73.2	
16 Benzo(a)Anthracene	21.729	21.786	-0.057	481254	38.2508	76.5	
17 Chrysene	21.854	21.914	-0.060	464974	36.6698	73.3	
18 Benzo(b)Fluoranthene	24.985	25.001	-0.016	544884	39.2646	78.5	
19 Benzo(k)Fluoranthene	25.054	25.075	-0.021	427624	34.1385	68.3	
20 Benzo(a)Pyrene	25.857	25.916	-0.059	479123	38.0272	76.0	
21 Indeno(1,2,3-cd)Pyrene	28.729	28.786	-0.057	490497	36.0624	72.1(M)	
22 Dibenzo(a,h)Anthracene	28.814	28.872	-0.058	456598	38.3181	76.6(M)	
23 Benzo(g,h,i)Perylene	29.315	29.373	-0.058	446372	35.8239	71.6	

Data File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4135A.d
Report Date: 15-Jul-2014 15:20

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4135A.d
Lab Smp Id: WG145314-2 Client Smp ID: WG145314-LCS
Inj Date : 26-JUN-2014 19:16
Operator : AC Inst ID: gc12.i
Smp Info : AROB038A,WG145314-2,WE53-7
Misc Info : MA DEP EPH 04-1.1
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF25B1.b\AROB038A.m
Meth Date : 06-Jun-2014 07:55 Quant Type: ESTD
Cal Date : 05-JUN-2014 16:46 Cal File: CHF2055.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: confirm.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4133.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE

Data File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4136A.d
Report Date: 15-Jul-2014 15:20

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4136A.d
Lab Smp Id: WG145314-3 Client Smp ID: WG145314-LCSD
Inj Date : 26-JUN-2014 20:01
Operator : AC Inst ID: gc12.i
Smp Info : AROB038A,WG145314-3,WE53-7
Misc Info : MA DEP EPH 04-1.1
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HF25B1.b\AROB038A.m
Meth Date : 06-Jun-2014 07:55 Quant Type: ESTD
Cal Date : 05-JUN-2014 16:46 Cal File: CHF2055.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: confirm.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HF25B1.b\CHF4133.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE

Data File: \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1057A.d
Report Date: 10-Jul-2014 16:57

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1057A.d
Lab Smp Id: WG145668-3 Client Smp ID: WG145668-LCSD
Inj Date : 07-JUL-2014 13:47
Operator : AC Inst ID: gc12.i
Smp Info : WG145668-3,SH4768
Misc Info : WG146138,WG145668,WG142382-3,SH4768-1
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HG07A1.b\AROA060A.m
Meth Date : 10-Jul-2014 09:41 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PAH.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1054.d
Target Version: 4.12
Processing Host: KATHADIN-50E985

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
2 Naphthalene	6.661	6.732	-0.071	215199	16.6631	33.3(R)	
3 2-Methylnaphthalene	8.066	8.137	-0.071	232446	18.1696	36.3	
5 Acenaphthylene	10.022	10.090	-0.068	271048	21.3514	42.7	
7 Acenaphthene	10.439	10.507	-0.068	294109	22.6234	45.2	
8 Fluorene	11.577	11.644	-0.067	343620	26.4784	53.0	
9 Phenanthrene	13.938	14.008	-0.070	391807	30.5020	61.0	
10 Anthracene	14.055	14.123	-0.068	405457	35.3076	70.6	
12 Fluoranthene	17.307	17.376	-0.069	442586	34.7296	69.4	
13 Pyrene	17.948	18.019	-0.071	440570	33.7953	67.6	
16 Benzo(a)Anthracene	21.713	21.781	-0.068	449254	35.7074	71.4	
17 Chrysene	21.838	21.908	-0.070	430302	33.9354	67.9	
18 Benzo(b)Fluoranthene	24.968	25.036	-0.068	495621	35.7147	71.4	
19 Benzo(k)Fluoranthene	25.037	25.108	-0.071	414200	33.0668	66.1	
20 Benzo(a)Pyrene	25.840	25.907	-0.067	449511	35.6770	71.4	
21 Indeno(1,2,3-cd)Pyrene	28.709	28.776	-0.067	470950	34.6252	69.2	
22 Dibenzo(a,h)Anthracene	28.794	28.860	-0.066	390636	32.7825	65.6	
23 Benzo(g,h,i)Perylene	29.291	29.364	-0.073	381709	30.6343	61.3	

Data File: \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1056A.d
Report Date: 10-Jul-2014 16:56

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1056A.d
Lab Smp Id: WG145668-2 Client Smp ID: WG145668-LCS
Inj Date : 07-JUL-2014 13:02
Operator : AC Inst ID: gc12.i
Smp Info : WG145668-2,SH4768
Misc Info : WG146138,WG145668,WG142382-3,SH4768-1
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HG07A1.b\AROA060A.m
Meth Date : 10-Jul-2014 09:41 acronin Quant Type: ESTD
Cal Date : 06-MAY-2014 19:22 Cal File: CHE1012.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: PAH.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HG07A1.b\CHG1054.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
2 Naphthalene	6.661	6.732	-0.071	135740	10.5105	21.0(R)	
3 2-Methylnaphthalene	8.067	8.137	-0.070	145884	11.4033	22.8(R)	
5 Acenaphthylene	10.022	10.090	-0.068	199146	15.6874	31.4(R)	
7 Acenaphthene	10.439	10.507	-0.068	220928	16.9942	34.0(R)	
8 Fluorene	11.577	11.644	-0.067	279730	21.5552	43.1	
9 Phenanthrene	13.938	14.008	-0.070	343721	26.7585	53.5	
10 Anthracene	14.054	14.123	-0.069	351917	30.6453	61.3	
12 Fluoranthene	17.305	17.376	-0.071	379176	29.7538	59.5	
13 Pyrene	17.946	18.019	-0.073	380207	29.1650	58.3	
16 Benzo(a)Anthracene	21.710	21.781	-0.071	379282	30.1459	60.3	
17 Chrysene	21.835	21.908	-0.073	367614	28.9916	58.0	
18 Benzo(b)Fluoranthene	24.965	25.036	-0.071	406460	29.2897	58.6	
19 Benzo(k)Fluoranthene	25.035	25.108	-0.073	360389	28.7709	57.5	
20 Benzo(a)Pyrene	25.837	25.907	-0.070	377789	29.9845	60.0	
21 Indeno(1,2,3-cd)Pyrene	28.705	28.776	-0.071	391738	28.8014	57.6	
22 Dibenzo(a,h)Anthracene	28.790	28.860	-0.070	353294	29.6487	59.3	
23 Benzo(g,h,i)Perylene	29.290	29.364	-0.074	358621	28.7814	57.6	

Data File: \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2056A.d
Report Date: 15-Jul-2014 18:05

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2056A.d
Lab Smp Id: WG145668-2 Client Smp ID: WG145668-LCS
Inj Date : 07-JUL-2014 13:02
Operator : AC Inst ID: gc12.i
Smp Info : AROB038A,WG145668-2,SH4768
Misc Info : MA DEP EPH 04-1.1
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HG07B1.b\AROB038A.m
Meth Date : 06-Jun-2014 07:55 Quant Type: ESTD
Cal Date : 05-JUN-2014 16:46 Cal File: CHF2055.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: confirm.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2054.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE

Data File: \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2057A.d
Report Date: 15-Jul-2014 18:07

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2057A.d
Lab Smp Id: WG145668-3 Client Smp ID: WG145668-LCSD
Inj Date : 07-JUL-2014 13:47
Operator : AC Inst ID: gc12.i
Smp Info : AROB038A,WG145668-3,SH4768
Misc Info : MA DEP EPH 04-1.1
Comment :
Method : \\target_server\gg\chem\gc12.i\GC12HG07B1.b\AROB038A.m
Meth Date : 06-Jun-2014 07:55 Quant Type: ESTD
Cal Date : 05-JUN-2014 16:46 Cal File: CHF2055.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: confirm.sub
Subtraction File: \\target_server\gg\chem\gc12.i\GC12HG07B1.b\CHG2054.d
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * (Vt/Vo)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE

Logbooks and Supporting Documents

Katahdin Analytical Services, Inc.

GC Laboratory Instrument Runlog

Method (circle): MADEP EPH / FL PRO / TNRCC 1005 / DRO/TPH - 8015 Mod. / MEDEP 4.1.25

Instrument: GC12 (FID)

Amount Injected: 1 uL

Column ID: 418

Standard	Standard ID
AR050	H2383

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
		Installed new column #418					
		New liner / septa					
5-6-14	AC	HHE1009	TB	N	WG142382	AROA060A	
		10	TB	N			
		11	TB	Y			
		12	AR050	Y	-3		
		13	200	Y	-5		
		14	100	Y	-4		
		15	10	Y	-2		
		16	1	Y	-1		
		17	IND	Y	-6		
		18	WG142286-1	Y			
5-7-14		19	-2	N			rerpt
		20	-3	N			rerpt
		21	SH2588-1RE	Y			
		22	SH2590-1RE	Y			
		23	SH2646-1RE	Y			
		24	SH2756-1	Y			
		25	SH2775-2	Y			
		26	SH2803-1	Y			
		27	SH2811-1	Y			
		28	-2	Y			
		29	-4	Y			
		30	-5	Y			
		31	-6	N			
		32	-7	Y			
		33	SH2816-1	Y			
		34	SH2817-1	Y			
		35	SH2819-1	Y			
		36	WG142286-2	Y			rerpt

Katahdin Analytical Services, Inc.

GC Laboratory Instrument Runlog

Method (circle): MADEP EPH / FL PRO / TNRCC 1005 / DRO/TPH - 8015 Mod. / MEDEP 4.1.25

Instrument: GC12 (FID)

Amount Injected: 1 uL

Column ID: 419

Standard	Standard ID
ALI50	H2380

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
		Installed New Column # 419					
		New Liner					
5-6-14	AC	HHE2009	TB	N	WG142382	ALIBOS3A	
		10	TB	N			
		11	TB	Y			
		12	ALI50	Y	-9		
		13	200	Y	-7		
		14	100	Y	-8		
		15	10	Y	-10		
		16	1	Y	-11		
		17	IND	Y	-12		
		18	WG142286-1	Y			
5-7-14		19	-2	N			
		20	-3	N			
		21	SH2588-1RE	Y			
		22	SH2590-1RE	Y			
		23	SH2646-1RE	Y			
		24	SH2756-1	Y			
		25	SH2775-2	Y			
		26	SH2803-1	Y			
		27	SH2811-1	Y			
		28	-2	Y			
		29	-4	Y			
		30	-5	Y			
		31	-6	N			SSD
		32	-7	Y			
		33	SH2816-1	Y			
		34	SH2817-1	Y			SSD
		35	SH2819-1	Y			
		36	WG142286-2	Y			

Katahdin Analytical Services, Inc.

GC Laboratory Instrument Runlog

Method (circle): MADEP EPH / FL PRO / TNRCC 1005 / DRO/TPH - 8015 Mod. / MEDEP 4.1.25

Instrument: GC12 (FID)

Amount Injected: 1 uL

Column ID: 418

Standard	Standard ID
AR050	H2383

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
6-21-14	AC	CHF3031	FC 6-19-14	Y	WG145269	AR0060A	
6-23-14		32	TB	Y			
		33	AR050	N			2↑
		34	TB	Y			
		35	AR050	Y	-3		H2402
		36	WG145094-1	Y			
		37	-2	Y			
		38	-3	Y			
		39	SH4401-2	Y			
		40	-4	Y			
		41	-6	Y			
		42	-8	Y			
		43	-10	Y			
		44	-12	Y			
		45	-14	Y			
		46	-16	Y			
		47	-18	Y			
		48	-20	Y			
		49	SH4422-1	Y			con
6-24-14		50	SH4423-1	Y			con
		51	SH4425-1	Y			
		52	SH4426-1	Y			
		53	SH4428-1	Y			
		54	SH4430-1	Y			
		55	-3	Y			
		56	TB -	Y			
		57	AR050	Y	-4		
		58	WG145024-1	Y			
		59	-2	Y			napt
		60	-3	Y			napt

Katahdin Analytical Services, Inc.

GC Laboratory Instrument Runlog

Method (circle): MADEP EPH / FL PRO / TNRCC 1005 / DRO/TPH - 8015 Mod. / MEDEP 4.1.25

Instrument: GC12 (FID)

Amount Injected: 1 uL

Column ID: 416

Standard	Standard ID
AR050	H2402

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
6-26-14	AC	CHF3 120	AR050	Y	WG145456-2	AROA060A	
		121	SH4431-2	Y			
		122	SH4506-1	Y			
		123	-2	Y			con
		124	-3	Y			
		125	SH4507-2	Y			con
		126	SH4431-1	Y			DL 1:4 con
		127	-1DL	Y			1:4 100/100
		128	TB	N			
		129					
		130					
		131					
		132					
		133	TB	Y			
		134	WG145314-1	Y			
		135	-2	Y			
		136	-3	Y			nap 2mt
		137	-4	Y			
		138	-5	Y			
		139	-6	Y			
		140	-7	Y			
		141	TB	Y			
6-27-14		142	AR050	Y	-3		
		143	SH4503-1	N			
		144	SH4505-1	N			
		145	SH4509-1	N			
		146	SH4510-1	Y			
		147	-2	Y			
		148	SH4511-1	Y			
		149	SH4521-2	Y			

Katahdin Analytical Services, Inc.

GC Laboratory Instrument Runlog

Method (circle): MADEP EPH / FL PRO / TNRCC 1005 / DRO/TPH - 8015 Mod. / MEDEP 4.1.25

Instrument: GC12 (FID)

Amount Injected: 1 uL

Column ID: 418

Standard	Standard ID
Ar050	H2402

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
6-27-14	AC	CHF3 150	SH4521-4	Y	W6145456	AR0060A	
		151	-6	Y			
		152	-8	Y			
		153	-10	Y			
		154	-12	Y			
		155	-14	Y			
		156	-16	Y			
		157	-18	Y			
		158	-20	Y			
		159	-22	Y			
		160	-24	Y			
		161	SH4523-9	Y			
		162	-22	Y			
		163	TB	Y			
		164	AR050	Y	-4		
		165	W6145805-1	Y			
		166	-2	Y			
		167	-3	Y			
		168	-4	Y			
		169	-5	Y			
		170	SH4413-2	Y			
		171	-14	Y			con
		172	-16	Y			
		173	-18	Y			con
6-28-14		174	-20	Y			
		175	-22	Y			
		176	-38	Y			
		177	-46	Y			
		178	-52	Y			
		179	-54	Y			

Katahdin Analytical Services, Inc.

GC Laboratory Instrument Runlog

Method (circle): MADEP EPH / FL PRO / TNRCC 1005 / DRO/TPH - 8015 Mod. / MEDEP 4.1.25

Instrument: GC12 (FID)

Amount Injected: 1 uL

Column ID: 418

Standard	Standard ID
ARO50	HV402

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
7-2-14	AC	CHG1044	SH4413-68		WG145741	ARDA060A	
		45	-92DL	N			1.5 RA 54
		46	TB	N			
		47					
		48					
		49					
		50	ARO50	Y	-5		
			Change Liner				
7-7-14		51	TB	N	WG146138		
		52	TB	Y			
		53	ARO	Y	-1		
		54	TB	Y			
		55	WG145668-1	Y			
		56	-2	Y			4↓
		57	-3	Y			napt↓
		58	SH4427-3RE	Y			
		59	SH4521-18RE	Y			ss↓
		60	SH4718-1				
		61	-3				
		62	-5				
		63	SH4719-1				
		64	SH4721-1				
		65	SH4722-1				con
		66	SH4768-1				
		67	WG145836-1	Y			
		68	-2	Y			
		69	-3	Y			napt↓
		70	SH4523-19	Y			
7-8-14		71	-20	Y			
		72	-21	Y			

Katahdin Analytical Services, Inc.

GC Laboratory Instrument Runlog

Method (circle): MADEP EPH / FL PRO / TNRCC 1005 / DRO/TPH - 8015 Mod. / MEDEP 4.1.25

Instrument: GC12 (FID)

Amount Injected: 1 uL

Column ID: 418

Standard	Standard ID

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
7-8-14	AC	CHG1073	SH4587-1		WG146138	AROA060A	
		74	SH4767-1				con
		75	TB	Y			
		76	AR050	Y	-2		
		77	SH4845-2				con
		78	-3	N			detector not lit
		79	-4				
		80	-5				
		81	-3				con
		82	-4				con
		83	-5				con
		84	TB				
		85	WG145691-1				
		86	-2				
		87	-3				
		88	-4				
		89	-5				
		90	SH4674-1				con
		91	SH4588-1				DL 1:3
		92	-2				RA carryover
		93	SH4523-2				
		94	-3				
		95	-4				
7-9-14		96	-5				
		97	TB				
		98	AR050				several ↑
		99	SH4523-6				
		100	-7				
		101	-8				
		102	-10				

Katahdin Analytical Services, Inc.

GC Laboratory Instrument Runlog

Method (circle): MADEP EPH / FL PRO / TNRCC 1005 / DRO/TPH - 8015 Mod. / MEDEP 4.1.25

Instrument: GC12 (FID)

Amount Injected: 1 uL

Column ID: 419

Standard	Standard ID
ALI50	H2380

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
6-21-14	AC	CHF4016	SH4256-6	Y	W6145269	ALI8053A	
		17	-8	Y			
		18	-10	Y			
		19	-12	Y			
		20	-14	Y			
		21	-16				55↓
		22	-18	Y			
		23	-38	Y			
		24	TB	Y			
		25	ALI50	Y	-8		785%
		26	SH4271-1	Y			
		27	L -2	Y			
		28	SH4306-1	Y			
		29	TB	Y			
		30	ALI50	Y			785%
		31	FC 6-19-14	Y			
6-23-14		32	TB	Y			
		33	ALI50	Y	-9		
		34	TB	Y			
		35	TB	Y			
		36	W6145094-1	Y			
		37	-2	Y			
		38	-3	Y			
		39	SH4401-2	Y			
		40	-4	Y			
		41	-6	Y			
		42	-8	Y			
		43	-10	Y			
		44	-12	Y			
		45	-14	Y			

Katahdin Analytical Services, Inc.

GC Laboratory Instrument Runlog

Method (circle): ~~MADEP EPH~~ / FL PRO / TNRCC 1005 / DRO/TPH - 8015 Mod. / MEDEP 4.1.25

Instrument: GC12 (FID)

Amount Injected: 1 uL

Column ID: 419

Standard	Standard ID
ALI50	H2386

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
6-23-14	AC	CHF4046	SH4401-16	Y	W6145269	ALI8053A	
		47	-18	Y			
		48	-20	Y			
		49	SH4422-1	Y			con
6-24-14		50	SH4423-1	Y			con
		51	SH4425-1	Y			
		52	SH4426-1	Y			
		53	SH4428-1	Y			
		54	SH4430-1	Y			
		55	-3	Y			
		56	TB	Y			
		57	ALI50	Y	-10		285%
		58	W6145024-1	Y			
		59	-2	Y			nap
		60	-3	Y			nap
		61	SH4430-5	Y			
		62	-7	Y			
		63	-10	Y			
		64	SH4016-8				
		65	-30				con
		66	SH4357-1	Y			con OL 1:2
		67	SH4272-2				
		68	-4				
		69	-10				
		70	-12				
		71	-14				
		72	-16				
		73	-18				
		74	-20				
		75	TB -	Y			

Katahdin Analytical Services, Inc.

GC Laboratory Instrument Runlog

Method (circle): MADEP EPH / FL PRO / TNRCC 1005 / DRO/TPH - 8015 Mod. / MEDEP 4.1.25

Instrument: GC12 (FID)

Amount Injected: 1 uL

Column ID: 419

Standard	Standard ID
ALI50	H23860

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
6-25-14	AC	CHFU 105	SH4400-4	Y	W6145456	ALIB053A	
		106	-5	Y			
		107	-6	Y			
		108	-7	Y			AC
		109	-8	Y			
		110	-9	Y			
		111	-10	Y			
		112	-11	Y			
6-26-14		113	-12	Y			
		114	-13	Y			
		115	-14	Y			
		116	-15	Y			
		117	-2	Y			
		118	TB	N			
		119	TB	Y			
		120	ALI50	Y	-8		78.58%
		121	SH4431-1	N			DL 1:10
		122	SH4506-1	Y			
		123	-2	Y			DL 1:7
		124	-3	Y			
		125	SH4507-2	N			RA vial vent dry
		126	SH4431-2	Y			
		127	-1DL	Y			1:10 100/1000
		128	SH4507-2	Y			DL 1:2
		129	SH4506-2DL	N			1:7 AC ~~AH~~ DL 1:10
		130	SH4357-1DL	Y			1:2 100/200
		131	SH4506-2DL	Y			1:10 100/1000
		132	SH4507+2DL	Y			1:2 100/200
		133	TB	Y			
		134	W6145314-1	Y			

GC-007 – Revision 3 – 5/22/2012

Katahdin Analytical Services, Inc.

GC Laboratory Instrument Runlog

Method (circle): MADEP EPH / FL PRO / TNRCC 1005 / DRO/TPH - 8015 Mod. / MEDEP 4.1.25

Instrument: GC12 (FID)

Amount Injected: 1 uL

Column ID: 4/9

Standard	Standard ID
ALISO	H2380

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
6-26-14	AK	CHF2135	WG145314-2	Y	WG145456	ALI8053A	
		136	-3	Y			
		137	-4	Y			
		138	-5	Y			
		139	-6	Y			
		140	-7	Y			
		141	TB	Y			
6-27-14		142	ALISO	Y	-9		78%
		143	SH4503-1	N			
		144	SH4505-1	N			
		145	SH4509-1	N			
		146	SH4510-1	Y			
		147	-2	Y			
		148	SH4511-1	Y			
		149	SH4521-2	Y			
		150	-4	Y			
		151	-6	Y			
		152	-8	Y			
		153	-10	Y			
		154	-12	Y			
		155	-14	Y			
		156	-16	Y			
		157	-18	Y			SS↓
		158	-20	Y			
		159	-22	Y			
		160	-24	Y			
		161	SH4523-9	Y			
		162	-22	Y			
		163	TB	Y			
		164	ALISO	Y	-10		78%

Katahdin Analytical Services, Inc.

GC Laboratory Instrument Runlog

Method (circle): MADEP EPH / FL PRO / TNRCC 1005 / DRO/TPH - 8015 Mod. / MEDEP 4.1.25

Instrument: GC12 (FID)

Amount Injected: 1 uL

Column ID: 419

Standard	Standard ID
ALI50	H2403

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
7-2-14	AC	CHG2029	SH4522 -9		WG145941	ALI3053A	
		30	-1				ss↓
		31	-3				ss↓
		32	-4				ss↓
		33	TB	Y			
		34	SH4536-2	Y			
		35	-4	Y			
		36	-6	Y			
		37	-8	Y			
		38	-12	Y			
		39	TB -	Y			
		40	ALI50	Y	-9		
		41	SH4413-50	Y			
		42	-56				ss↓
		43	-62	Y			
		44	-68				
		45	-92DL				1:5
		46	-40DL				1:3
		47	-42DL				1:2
		48	TB	N			
		49	TB	N			
		50	ALI50	Y	-10		78%
			Change Liner				
7-7-14		51	TB	N	WG146138		
		52	TB	Y			
		53	ALI50	Y	-3		
		54	TB	Y			
		55	WG145668-1	Y			
		56	-2	Y			9-18 ↓
		57	-3	Y			

Katahdin Analytical Services, Inc.

GC Laboratory Instrument Runlog

Method (circle): MADEP ERH / FL PRO / TNRCC 1005 / DRO/TPH - 8015 Mod. / MEDEP 4.1.25

Instrument: GC12 (FID)

Amount Injected: 1 uL

Column ID: U19

Standard	Standard ID
	H2403

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
7-7-14	AC	CHG2058	SH4427-3RE	Y	WG146138	ALIB053A	
		59	SH4521-18RE	Y			ss↓
		60	SH4718-1				
		61	-3				
		62	-5				
		63	SH4719-1				
		64	SH4721-1				
		65	SH4722-1	N			DL 1:7
		66	SH4768-1				ss↓
		67	WG145836-1	Y			
		68	-2	Y			
		69	-3	Y			
		70	SH4523-19	Y			
7-8-14		71	-20	Y			
		72	-21	Y			
		73	SH4587-1				
		74	SH4767-1				DL 1:4
		75	TB	Y			
		76	ALI50	Y	-4		
		77	SH4845-2				
		78	-3				
		79	-4				
		80	-5				
		81	TB				
		82	TB				
		83	SH4722-1DL				1:7
		84	SH4767-1				1:4
		85	WG145691-1				
		86	-2				
		87	-3				

EPH SEP

KATAHDIN ANALYTICAL SERVICES, INC.
ORGANIC EXTRACTIONS LOG - AQUEOUS FUEL OILS

Extraction Method: (check one)	SW846 3510 (SEP) ✓		SW846 3520 (CLLE)					
Analytical Method: (check one)	SW8015M (DRO)	SW8100M (TPH)	MADEP EPH ✓	ME DEP 4.1.25	FLO PRO	CT ETPH	TX 1005	Other:

Spike ID: GC1365	Surrogate ID: GC1361 + GC1390	Frac. Surrogate ID: GC1365	Other:
MeCl2 Lot #: DK836	Acetone Lot #: –	n-Pentane Lot #: –	Hexane Lot #: DK003
NaSO4 Lot # 2214 68002	Filter Paper Lot # (KD) FC010320	Nitrogen Water Bath Temperature: 36°C	Vial Lot #:
Sample pH checked prior to extraction?	Yes ✓ / No	Note unpreserved samples in comments section.	
Blank and LCSs adjusted to pH < 2?	Yes ✓ / No	Prep Start Time: 1145	CLLE Start Time:
HCl Lot # 67034		Prep End Time: 1515	CLLE End Time:

Date Extracted	Ext. Init.	Sample ID	Init. Wt (g)	Surr Vol. (mL)	Spike Vol. (mL)	Final Vol Pre-Frac. (mL)	Date Conc. Pre-Frac.	Conc. Init. Pre-Frac.	Tray Location AF273	Frac. Init.	Frac. Surr Vol. (mL)	Final Vol. Post-Frac. (mL)	Date Conc Post-Frac.	Tray Location EPH 326	Conc. Init Post-Frac.	Comments
6-20-14	KF	W2145094-1	1000	1mL	NR	1mL	6-21-14	JMS	D6	KF	1mL	2mL	6-22-14	A9	KF	R279820
		-2			1mL				7					10		
		-3							8					B1		
		SH4430-1Dc	1060		NR				D9					B2		
														KF	6-22-14	

Date Extracted	Ext. Init.	Sample ID	Init. Wt (g)	Surr Vol. (mL)	Spike Vol. (mL)	Final Vol Pre-Frac. (mL)	Date Conc. Pre-Frac.	Conc. Init. Pre-Frac.	Tray Location	Frac. Init.	Frac. Surr Vol. (mL)	Final Vol. Post-Frac. (mL)	Date Conc Post-Frac.	Tray Location	Conc. Init Post-Frac.	Comments
6-20-14	KF	SH4401-2I	1060	1mL	NR	1mL	6-21-14	JMS	D10	KF	1mL	2mL	6-22-14	B3	KF	
		KF 6-20 ~~-3~~-4I							D11					4		
		-6I							D12					5		
		-8I							AF 274 A1					6		
		-10I							2					7		
		-12I							3					8		
		-14I							4					9		
		-16I	1040						5					B10		
		-18I	1060						6					C1		
		-20I							7					2		em-S.S.
		SH4422-1c							8					3		
		SH4423-1c							9					4		
		SH4425-1c							10					5		
		SH4426-1c							11					6		
		SH4428-1c							A12					7		
		SH4430-1c	1030						B1					8		
		-3c	1060						2					9		
		-5c							3					C10		
		-7c							B4					D1		

EPH
Sep

KATAHDIN ANALYTICAL SERVICES, INC.
ORGANIC EXTRACTIONS LOG - AQUEOUS FUEL OILS

Extraction Method: (check one)	SW846 3510 (SEP) ✓			SW846 3520 (CLLE)				
Analytical Method: (check one)	SW8015M (DRO)	SW8100M (TPH)	MADEP EPH ✓	ME DEP 4.1.25	FLO PRO	CT ETPH	TX 1005	Other:

Spike ID: GC1368	Surrogate ID: GC1360	Frac. Surrogate ID: GC1350	Other:
MeCl2 Lot #: DK836	Acetone Lot #: —	n-Pentane Lot #: —	Hexane Lot #:: DK003
NaSO4 Lot # 279640102	Filter Paper Lot # (KD) FC010220	Nitrogen Water Bath Temperature: 35°C	Vial Lot #:
Sample pH checked prior to extraction?	Yes ✓ / No	Note unpreserved samples in comments section.	
Blank and LCSs adjusted to pH < 2?	Yes ✓ / No	Prep Start Time: ~~1400~~ 1225 (MS 6-24-14)	CLLE Start Time:
HCl Lot # 67024		Prep End Time: 1500	CLLE End Time:

Date Extracted	Ext. Init.	Sample ID	Init. Wt (g)	Surr Vol. (mL)	Spike Vol. (mL)	Final Vol Pre-Frac. (mL)	Date Conc. Pre-Frac.	Conc. Init. Pre-Frac.	Tray Location PF 275	Frac. Init.	Frac. Surr Vol. (mL)	Final Vol. Post-Frac. (mL)	Date Conc Post-Frac.	Tray Location 327	Conc. Init Post-Frac.	Comments
6-24-14	AM	WG445314-1	1000	1ml	NR	1ml	6-24-14	KF	A11	JMS	1mL	1ml	6-26-14	C4	KF	R279235
		-2			1ml				12					5		
		-3							B1					6		
		-4	990						2					7		MS SH4521-2 C1
		-5	1010						3					8		MSD SH4521-2 D1
		-6	1010						4					9		S.S. + cent for emul MS SH4521-4 B1
		-7	1040						5					C10		S.S. + cent for emul MSD SH4521-4 A1
		SH4523-22 J	1050		NR				B6					D1		
														KF	6-26-14	

EX-015 – Revision 2 – 01/08/2013 QAEX263 0000058

Date Extracted	Ext. Init.	Sample ID	Init. Wt (g)	Surr Vol. (mL)	Spike Vol. (mL)	Final Vol Pre-Frac. (mL)	Date Conc. Pre-Frac.	Conc. Init. Pre-Frac.	Tray Location	Frac. Init.	Frac. Surr Vol. (mL)	Final Vol. Post-Frac. (mL)	Date Conc Post-Frac.	Tray Location	Conc. Init Post-Frac.	Comments
6-24-14	AM	SH4503-1 C	1050	1ml	NR	1ml	6-24-14	KF	B7	JMS	1mL	1ml	6-26-14	D2	KF	
		SH4505-1 C	1030						8					3		
		SH4509-1 A	1020						9					4		
		SH4510-1 A	1040						10					5		
		-2 A	1060						11					6		
		SH4511-1 A	1050						B12					7		
		SH4521-2 I	1040						C1					8		
		-4 K	1060						2					9		
		-6 J	1060						3					D10		
		-8 Y	1040						4					E1		MS/D
		-10 I	1050						5					2		S.S. for emul.
		-12 J	1040						6					3		
		-14 C1	1050						7					4		MS/D
		-16 J	1060						8					5		S.S. + cent for emul.
		-18 J	1010						9					6		
		-20 I	1060						10					7		
		-22 I	1060						11					8		
		-24 J	1060						C12					9		
		SH4523-9 K	1050						D1					E10		

EPH
Sep Re

KATAHDIN ANALYTICAL SERVICES, INC.
ORGANIC EXTRACTIONS LOG - AQUEOUS FUEL OILS

Extraction Method: (check one)	SW846 3510 (SEP) ✓		SW846 3520 (CLLE)				
Analytical Method: (check one)	SW8015M (DRO)	SW8100M (TPH)	MADEP EPH ✓	ME DEP 4.1.25	FLO PRO	CT ETPH	TX 1005	Other:

Spike ID: GC1368	Surrogate ID: GC1390	Frac. Surrogate ID: GC1383	Other:
MeCl2 Lot #: DK982	Acetone Lot #: —	n-Pentane Lot #: —	Hexane Lot #: DK003
NaSO4 Lot # 27964002	Filter Paper Lot # (KD) FC010270	Nitrogen Water Bath Temperature: 35°C	Vial Lot #:
Sample pH checked prior to extraction?	Yes ✓ / No	Note unpreserved samples in comments section.	
Blank and LCSs adjusted to pH < 2?	Yes ✓ / No	Prep Start Time: 0900	CLLE Start Time:
HCl Lot # 97024		Prep End Time: 1530	CLLE End Time:

Date Extracted	Ext. Init.	Sample ID	Init. Wt (g)	Surr Vol. (mL)	Spike Vol. (mL)	Final Vol Pre-Frac. (mL)	Date Conc. Pre-Frac.	Conc. Init. Pre-Frac.	Tray Location PF377	Frac. Init.	Frac. Surr Vol. (mL)	Final Vol. Post-Frac. (mL)	Date Conc Post-Frac.	Tray Location EPH 329	Conc. Init Post-Frac.	Comments
6-30-14	AM	WE-145668-1	1000	1ml	NR	1ml	7-3-14	KF	D1	JMS	1mL	2mL	7-6-14	E5	KF	R274941
		-2			1ml				2					6		
		-3							3					7		
		-4	1060						4					8		MS SH4682-4G
		-5	1060						5					9		MSD SH4682-4H
		SH4768-1 A	1060		NR				6					E10		
												KF	7-6-14			

Date Extracted	Ext. Init.	Sample ID	Init. Wt (g)	Surr Vol. (mL)	Spike Vol. (mL)	Final Vol Pre-Frac. (mL)	Date Conc. Pre-Frac.	Conc. Init. Pre-Frac.	Tray Location	Frac. Init.	Frac. Surr Vol. (mL)	Final Vol. Post-Frac. (mL)	Date Conc Post-Frac.	Tray Location EPH 330	Conc. Init Post-Frac.	Comments
6-30-14	AM	SH4682-2 C	1060	1ml	NR	1ml	7-3-14	KF	D7	JMS	1mL	2mL	7-6-14	A1	KF	
		-4 I	1060						8					2		MS/D
		-6 C	1060						9					3		
		-8 D	1060						10					4		
		-10 C	1040 ~~1060~~						11		-			5		
		-12 C	960						D8					6		
		-14 C	960						R278 A1					7		
		-16 D	940						2					8		
		-18 D	940						3					9		
		-20 C	950						4					A10		
		-22 C	960						5					B1		
		SH4427-3 D	1060						6					2		Re
		SH4921-18 I	1030						7					3		SS. + acet for emul.
		SH4718-1 D	1060						8					4		
		-3 D	1060						9					5		
		-5	1050						10					6		
		SH4719-1 D	1060						11					7		
		SH4721-1 D	980						A8					8		
		SH4722-1 D	980						B1					B9		

Katahdin Analytical Services
HPLC03 Logbook

Analytical Method:	MA-EPH: ✓	Other:	Flow: 5.0mL/hr
MeCl2 Lot #: 01C836		Hexane Lot #: 01C003	

Tray Pos. No.	Sample Identification	Date	Initials	Injection Volume	Dilution	Comments
14	SHU400-15	6/24/11	TMJ	1mL	1	
15	SHU506-1	↓	↓	↓	↓	
16	↓ -2					
17	↓ -3					
18	SHU431-2					
19	SHU400-11					
20	↓ -8					
21	SHU507-2					
22	SHU400-~~6~~ -TMJ					
23	SHU400-2					
24	SHU431-1					
25	Rinse					
26	↓					
27	↓	↓	↓	↓	↓	
2	Rinse	6/25/11	TMJ	1mL	1	
3	WGM5314-1	↓	↓		↓	
4	↓ -2					
5	-3					
6	-4					
7	-5					
8	-6					
9	↓ -7					
10	SHU523-22					
11	SHU503-1					
12	SHU505-1	↓	↓		↓	

Reviewed by: Review Date:

Katahdin Analytical Services
HPLC03 Logbook

Analytical Method:	MA-EPH: ✓	Other:	Flow: 5.0 mL/min
MeCl2 Lot #: DK982		Hexane Lot #: DK1644	

Tray Pos. No.	Sample Identification	Date	Initials	Injection Volume	Dilution	Comments
13	SHU509-1	6.25.14	JMS	1mL	1	
14	SHU510-1					
15	-2					
16	SHU511-1					
17	SHU521-2					
18	-4					
19	-6					
20	-8					
21	-10					
22	-12					
23	-24					
24	SHU523-9					
25	SHU521-14					
26	-16					
27	-18					
28	-20					
29	-22					
1	Rinse	6.26.14	JMS	1mL	1	
2	W6M5305-1					
3	-2					
4	-3					
5	SHU413-100					
6	-14					
7	-46					
8	-16					

Reviewed by:

Review Date:

EX-011 – Revision 2 – 03/16/2010

Katahdin Analytical Services
HPLC03 Logbook

Analytical Method:	MA-EPH: ✓	Other:	Flow: 5.0mL/min
MeCl2 Lot #: DK982		Hexane Lot #: DK644	

Tray Pos. No.	Sample Identification	Date	Initials	Injection Volume	Dilution	Comments
9	SH4413-22	6-26-14	JMS	1mL	1	
10	-96					
11	-78					
12	-38					
13	-54					
14	-52					
15	-76					
16	-20					
17	-18					
18	-2					
19	-72					
20	-98					
21	-74					
22	WGM5305-4					
23	✓ -5				✓	
24	SH4413-44					
25	-42					
26	-40					
27	Rinse				1	
28						
29						
1	Rinse	6-27-14	JMS	1mL	1	
2	Frac Check					
3	WGM5312-1					
4	-2					

Reviewed by: Review Date:

Katahdin Analytical Services
HPLC03 Logbook

Analytical Method:	MA-EPH: ✓	Other:	Flow: 5.0mL/m
MeCl2 Lot #: DK758		Hexane Lot #: DK003	

Tray Pos. No.	Sample Identification	Date	Initials	Injection Volume	Dilution	Comments
2	W6144791-1	6-16-14	JMS	1mL	1	
3	W6144774-1	↓	↓	↓	↓	
4	W6144791-2					
5	↓ -3					
6	W6144774-2					
7	↓ -3					
8	SH4246-1					
9	SH4247-1					
10	↓ -3					
11	SH4248-1					
12	↓ -3					
13	SH4244-1					
14	SH4184-1					
15	SH4185-1					
16	SH4180-3					
17	↓ -7					
18	SH3915-7 Re					
19	SH4186-1					
20	SH4187-1					
21	SH4180-2					
22	Rinse	↓	↓	↓	↓	
1	Rinse	6-19-14	JMS	1mL	1	
2	Frac Check	↓	↓	↓	↓	
3	W6145035-1					
4	↓ -2	↓	↓	↓	↓	

Reviewed by:

Review Date:

Katahdin Analytical Services
HPLC03 Logbook

Analytical Method:	MA-EPH: ✓	Other:	Flow: 50ml/min
MeCl2 Lot #: ~~DK758~~ AM 6-20-14 DK836		Hexane Lot #: DK644	

Tray Pos. No.	Sample Identification	Date	Initials	Injection Volume	Dilution	Comments
4	WG145024-3	6-20-14	AM	1ml	1.	
5	SH4016-8					
6	-30					
7	SH4272-2					
8	-4					
9	-10					
10	-12					
11	-16					
12	-18					
13	SH4357-1					
14	SH4272-20					
15	-14					
16	Rinse					
17						
18						
1	Rinse	6/24/14	KF	1ml	1	
2	WG145094-1					
3	-2					
4	-3					
5	SH4401-2					
6	-4					
7	-6					
8	-8					
9	-10					
10	-12					

Reviewed by: Review Date:

EX-011 – Revision 2 – 03/16/2010

Katahdin Analytical Services
HPLC03 Logbook

Analytical Method:	MA-EPH: ✓	Other:	Flow: 5.0 mL/min
MeCl2 Lot #: DK836		Hexane Lot #: DK644	

Tray Pos. No.	Sample Identification	Date	Initials	Injection Volume	Dilution	Comments
11	SN4401 -14	6/21/14	KF	1mL	1	
12	-16					
13	-18					
14	-20					
15	SN4422-1					
16	SN4423-1					
17	SN4425-1					
18	SN4426-1					
19	SN4428-1					
20	SN4430-1					
21	-3					
22	-5					
23	-7					
24	-10					
25	Rinse					
26	↓	↓	↓	↓	↓	

Reviewed by: Review Date:

EX-011 – Revision 2 – 03/16/2010

Katahdin Analytical Services
HPLC03 Logbook

Analytical Method:	MA-EPH: ✓	Other:	Flow: 5.0mL/min
MeCl2 Lot #: DK982		Hexane Lot #: OK6444	

Tray Pos. No.	Sample Identification	Date	Initials	Injection Volume	Dilution	Comments
2	WG145666-1	7-5-14	JMS	1mL	1	
3	-2					
4	-3					
5	-4					
6	-5					
7	SH4768-1					
8	SH4682-2					
9	-6					
10	-12					
11	-14					
12	-16					
13	-18					
14	-20					
15	-22					
16	SH4427-3 Re					
17	SH4718-1					
18	-3					
19	-5					
20	SH4719-1					
21	SH4721-1					
22	SH4521-18 Re					
23	SH4682-10					
24	-8					
25	-4					
26	SH4722-1					

Reviewed by:

Review Date:

EX-011 – Revision 2 – 03/16/2010

VOLATILE PETROLEUM HYDROCARBON DATA

QC Summary Section

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** NCTAMSLANT Cutler CTO WE53 **Matrix:** AQ
Lab Code: KAS **SDG:** WE53-7

Client Sample ID	Lab Sample ID	Col. ID	DBT-FID	#	DBT-PID	#
FTA-GW-TB01-061714	SH4401-1	B	94.9		77.8	
FTA-MW-5-061814	SH4401-10	B	114.		88.8	
FTA-MW-203-061814	SH4401-12	B	111.		88.5	
FTA-GW-DUP01-061814	SH4401-14	B	113.		88.7	
FTA-MW-218-061814	SH4401-16	B	118.		92.8	
FTA-MW-206-061814	SH4401-18	B	115.		91.6	
FTA-MW-9-061714	SH4401-2	B	105.		84.6	
FTA-MW-14-061714	SH4401-20	B	111.		88.2	
FTA-MW-10-061714	SH4401-4	B	96.2		77.2	
FTA-MW-11-061714	SH4401-6	B	110.		87.5	
FTA-MW-12-061714	SH4401-8	B	113.		90.2	
FTA-GW-TB02-061814	SH4521-1	B	109.		87.0	
FTA-MW-208-061814	SH4521-2	B	113.		90.1	
FTA-MW-1-061814	SH4521-4	B	111.		88.5	
FTA-GW-DUP02-061814	SH4521-6	B	115.		91.4	
FTA-MW-210-061814	SH4521-8	B	114.		91.2	
Method Blank Sample	WG146189-1	B	93.8		76.5	
Laboratory Control S	WG146189-2	B	80.9		67.0	*
Laboratory Control S	WG146189-3	B	89.1		72.9	
Matrix Spike	WG146189-4	B	90.6		74.2	
Matrix Spike Duplica	WG146189-5	B	91.5		74.7	

		QC Limits
DBT-FID	2,5-DIBROMOTOLUENE (FID)	70-130
DBT-PID	2,5-DIBROMOTOLUENE (PID)	70-130

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Form 4
Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : NCTAMSLANT Cutler CTO WE53
Lab File ID : 2HG10162.D
Instrument ID : GC02

SDG : WE53-7
Lab Sample ID : WG146189-1
Date Analyzed : 11-JUL-14
Time Analyzed : 13:58
Date Extracted : 11-JUL-14

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG146189-2	2HG10157.	07/11/14	09:35
Laboratory Control S	WG146189-3	2HG10158.	07/11/14	10:28
Matrix Spike	WG146189-4	2HG10159.	07/11/14	11:20
Matrix Spike Duplica	WG146189-5	2HG10160.	07/11/14	12:13
FTA-GW-TB01-061714	SH4401-1	2HG10163.	07/11/14	16:12
FTA-MW-9-061714	SH4401-2	2HG10164.	07/11/14	17:05
FTA-MW-10-061714	SH4401-4	2HG10165.	07/11/14	17:57
FTA-MW-11-061714	SH4401-6	2HG10166.	07/11/14	18:51
FTA-MW-12-061714	SH4401-8	2HG10167.	07/11/14	19:45
FTA-MW-5-061814	SH4401-10	2HG10168.	07/11/14	20:39
FTA-MW-203-061814	SH4401-12	2HG10169.	07/11/14	21:33
FTA-GW-DUP01-061814	SH4401-14	2HG10170.	07/11/14	22:27
FTA-MW-218-061814	SH4401-16	2HG10171.	07/11/14	23:22
FTA-MW-206-061814	SH4401-18	2HG10172.	07/12/14	00:16
FTA-MW-14-061714	SH4401-20	2HG10174.	07/12/14	02:05
FTA-GW-TB02-061814	SH4521-1	2HG10175.	07/12/14	02:59
FTA-MW-208-061814	SH4521-2	2HG10176.	07/12/14	03:54
FTA-MW-1-061814	SH4521-4	2HG10177.	07/12/14	04:49
FTA-GW-DUP02-061814	SH4521-6	2HG10178.	07/12/14	05:43
FTA-MW-210-061814	SH4521-8	2HG10179.	07/12/14	08:28

Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services
Project : NCTAMSLANT Cutler CTO WE53
Instrument ID : GC02

SDG : WE53-7

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	DBT (FID)	DBT (PID)
Initial Calibration	WG142498-1	05/08/14	18:08		42.965
Initial Calibration	WG142498-2	05/08/14	18:08	42.967	
Initial Calibration	WG142498-3	05/08/14	19:01		42.962
Initial Calibration	WG142498-4	05/08/14	19:01	42.963	
Initial Calibration	WG142498-5	05/08/14	19:55		42.962
Initial Calibration	WG142498-6	05/08/14	19:55	42.963	
Initial Calibration	WG142498-7	05/08/14	20:49		42.962
Initial Calibration	WG142498-8	05/08/14	20:49	42.963	
Initial Calibration	WG142498-9	05/08/14	21:43		42.963
Initial Calibration	WG142498-10	05/08/14	21:43	42.963	
Initial Calibration	WG142498-11	05/08/14	22:38		42.962
Initial Calibration	WG142498-12	05/08/14	22:38	42.963	
Independent Source	WG142498-13	05/09/14	07:40		42.953
Independent Source	WG142498-13	05/09/14	07:40	42.953	42.953
Continuing Calibrati	WG146189-6	07/11/14	08:43		42.95
Continuing Calibrati	WG146189-6	07/11/14	08:43	42.951	42.95
Laboratory Control S	WG146189-2	07/11/14	09:35	42.953	42.952
Laboratory Control S	WG146189-3	07/11/14	10:28	42.953	42.952
Matrix Spike	WG146189-4	07/11/14	11:20	42.953	42.952
Matrix Spike Duplica	WG146189-5	07/11/14	12:13	42.953	42.952
Method Blank Sample	WG146189-1	07/11/14	13:58	42.952	42.952
FTA-GW-TB01-061714	SH4401-1	07/11/14	16:12	42.954	42.953
FTA-MW-9-061714	SH4401-2	07/11/14	17:05	42.954	42.954
FTA-MW-10-061714	SH4401-4	07/11/14	17:57	42.961	42.96
FTA-MW-11-061714	SH4401-6	07/11/14	18:51	42.961	42.96
FTA-MW-12-061714	SH4401-8	07/11/14	19:45	42.96	42.959
FTA-MW-5-061814	SH4401-10	07/11/14	20:39	42.958	42.958
FTA-MW-203-061814	SH4401-12	07/11/14	21:33	42.96	42.959
FTA-GW-DUP01-061814	SH4401-14	07/11/14	22:27	42.96	42.959
FTA-MW-218-061814	SH4401-16	07/11/14	23:22	42.959	42.959
FTA-MW-206-061814	SH4401-18	07/12/14	00:16	42.96	42.959
Continuing Calibrati	WG146189-7	07/12/14	01:11		42.959
Continuing Calibrati	WG146189-7	07/12/14	01:11	42.959	42.959
FTA-MW-14-061714	SH4401-20	07/12/14	02:05	42.959	42.958
FTA-GW-TB02-061814	SH4521-1	07/12/14	02:59	42.96	42.959
FTA-MW-208-061814	SH4521-2	07/12/14	03:54	42.961	42.961

Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services
Project : NCTAMSLANT Cutler CTO WE53
Instrument ID : GC02
SDG : WE53-7

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	DBT (FID)	DBT (PID)
FTA-MW-1-061814	SH4521-4	07/12/14	04:49	42.962	42.961
FTA-GW-DUP02-061814	SH4521-6	07/12/14	05:43	42.96	42.959
FTA-MW-210-061814	SH4521-8	07/12/14	08:28	42.96	42.96
Continuing Calibrati	WG146189-8	07/12/14	12:01		42.955
Continuing Calibrati	WG146189-8	07/12/14	12:01	42.955	42.955

Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4401-1
Client ID: FTA-GW-TB01-061714
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10163.D

Sample Date: 17-JUN-14
Received Date: 19-JUN-14
Extract Date: 11-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 11-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		94.9	%					
2,5-Dibromotoluene (PID)		77.8	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10163.D
Report Date: 15-Jul-2014 08:31

Katahdin Analytical Services

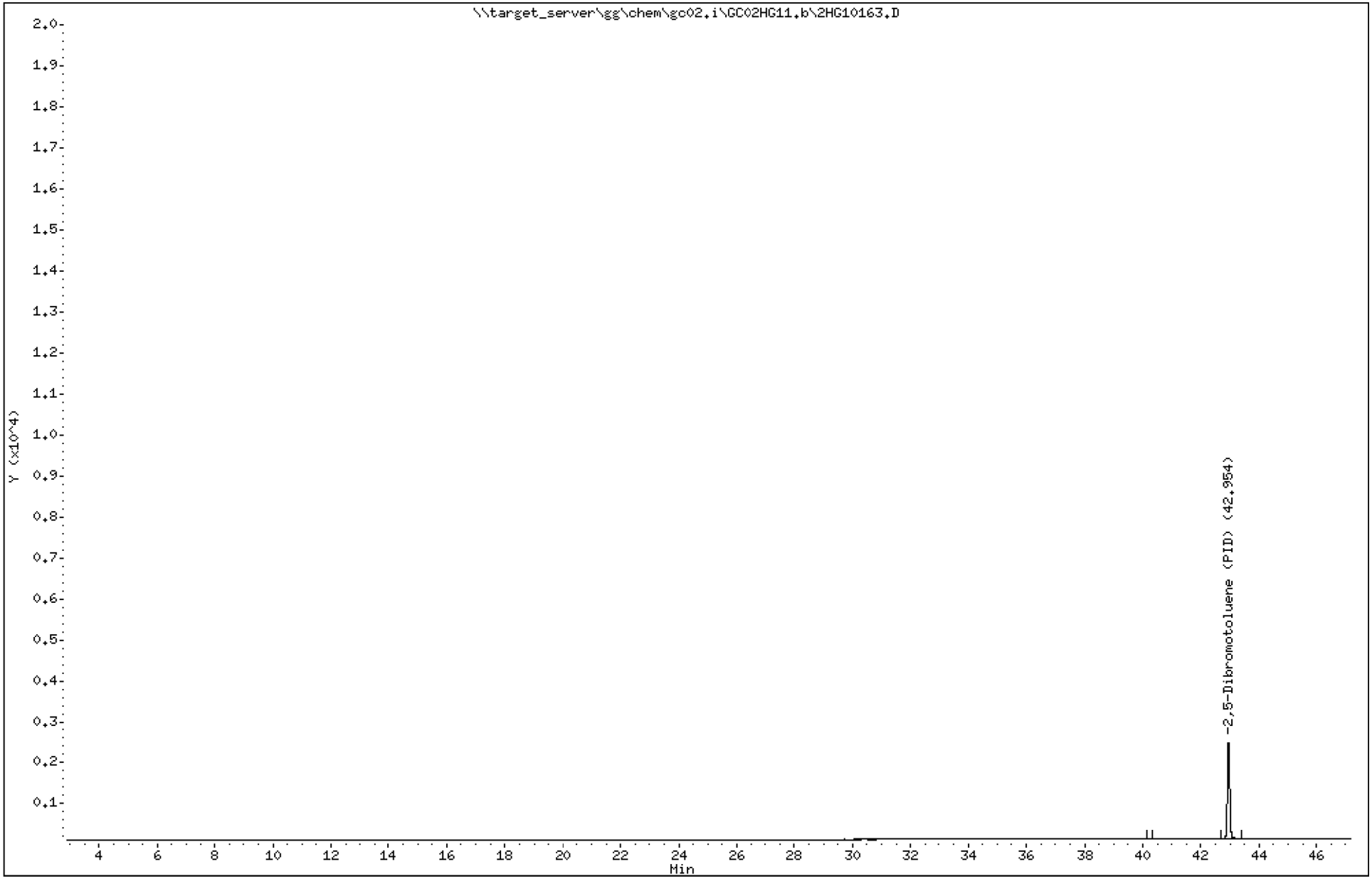
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10163.D
Lab Smp Id: SH4401-1 Client Smp ID: FTA-GW-TB01-061714
Inj Date : 11-JUL-2014 16:12
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-1
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.953	42.962	-0.009	265468	77.7686	77.8	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10163.D
Date : 11-JUL-2014 16:12
Client ID: FTA-GW-TB01-061714 Instrument: gc02.i
Sample Info: SH4401-1
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



Data File: 2HG10163.D
Report Date: 15-Jul-2014 08:35

Katahdin Analytical Services

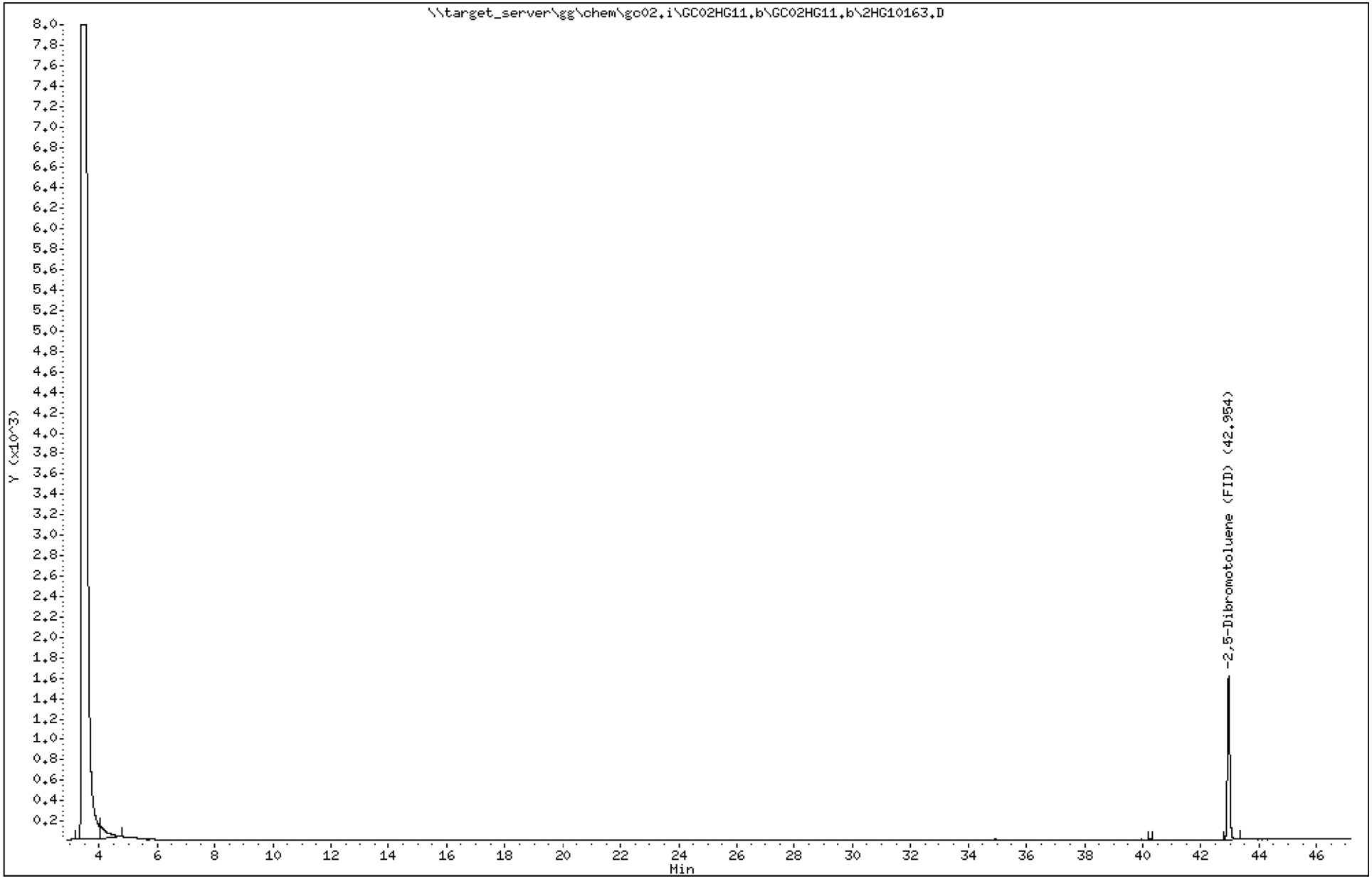
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10163.D
Lab Smp Id: SH4401-1 Client Smp ID: FTA-GW-TB01-061714
Inj Date : 11-JUL-2014 16:12
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-1
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.954	42.963	-0.009	180247	94.8655	94.9	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10163.D
Date : 11-JUL-2014 16:12
Client ID: FTA-GW-TB01-061714 Instrument: gc02.i
Sample Info: SH4401-1
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4401-2
Client ID: FTA-MW-9-061714
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10164.D

Sample Date: 17-JUN-14
Received Date: 19-JUN-14
Extract Date: 11-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 11-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		105.	%					
2,5-Dibromotoluene (PID)		84.6	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10164.D
Report Date: 15-Jul-2014 08:31

Katahdin Analytical Services

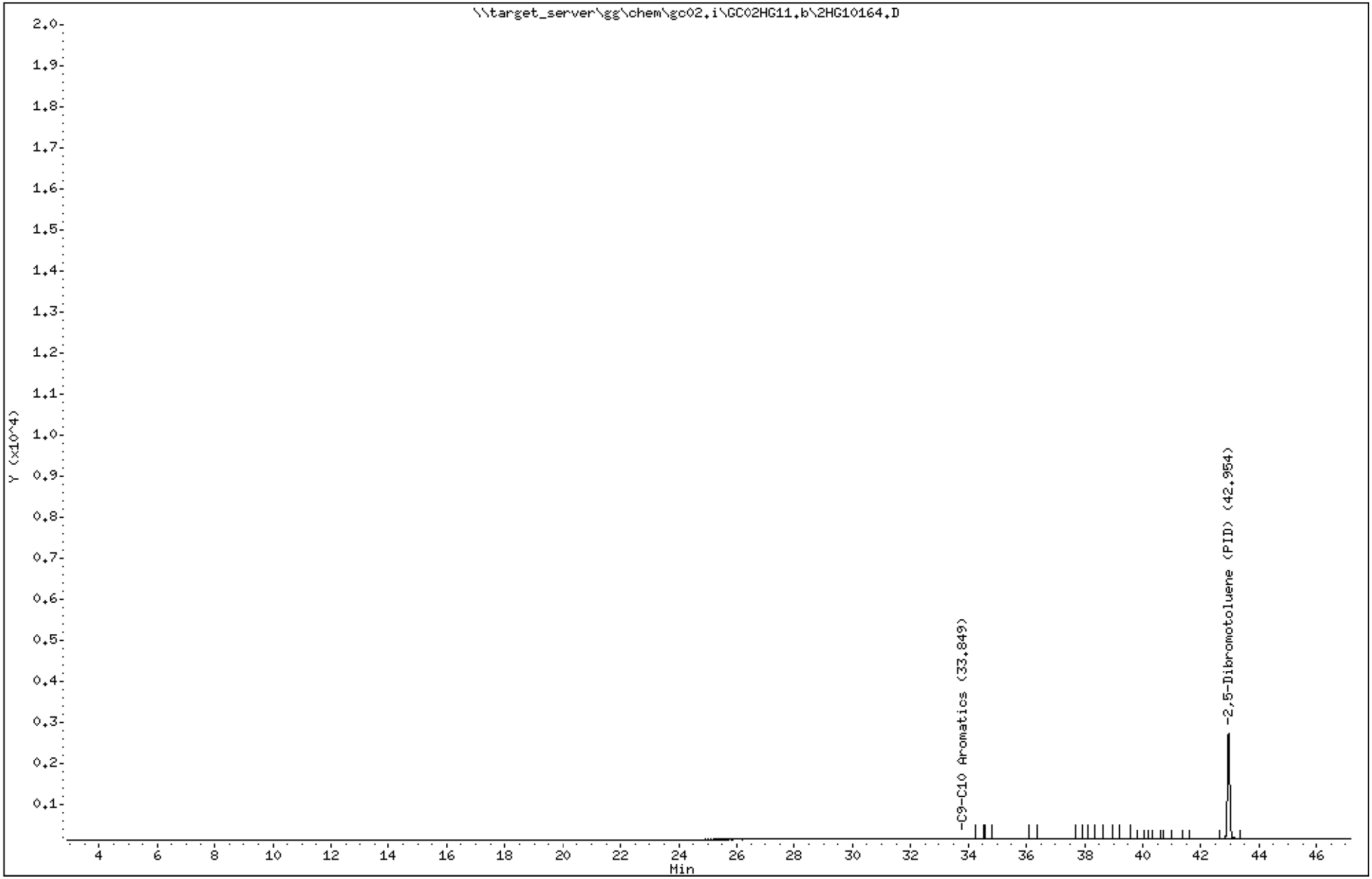
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10164.D
Lab Smp Id: SH4401-2 Client Smp ID: FTA-MW-9-061714
Inj Date : 11-JUL-2014 17:05
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-2
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.954	42.962	-0.008	288812	84.5988	84.6	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10164.D
Date : 11-JUL-2014 17:05
Client ID: FTA-MW-9-061714 Instrument: gc02.i
Sample Info: SH4401-2
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



Data File: 2HG10164.D
Report Date: 15-Jul-2014 08:35

Katahdin Analytical Services

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Lab Smp Id: SH4401-2 Client Smp ID: FTA-MW-9-061714
Inj Date : 11-JUL-2014 17:05
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-2
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

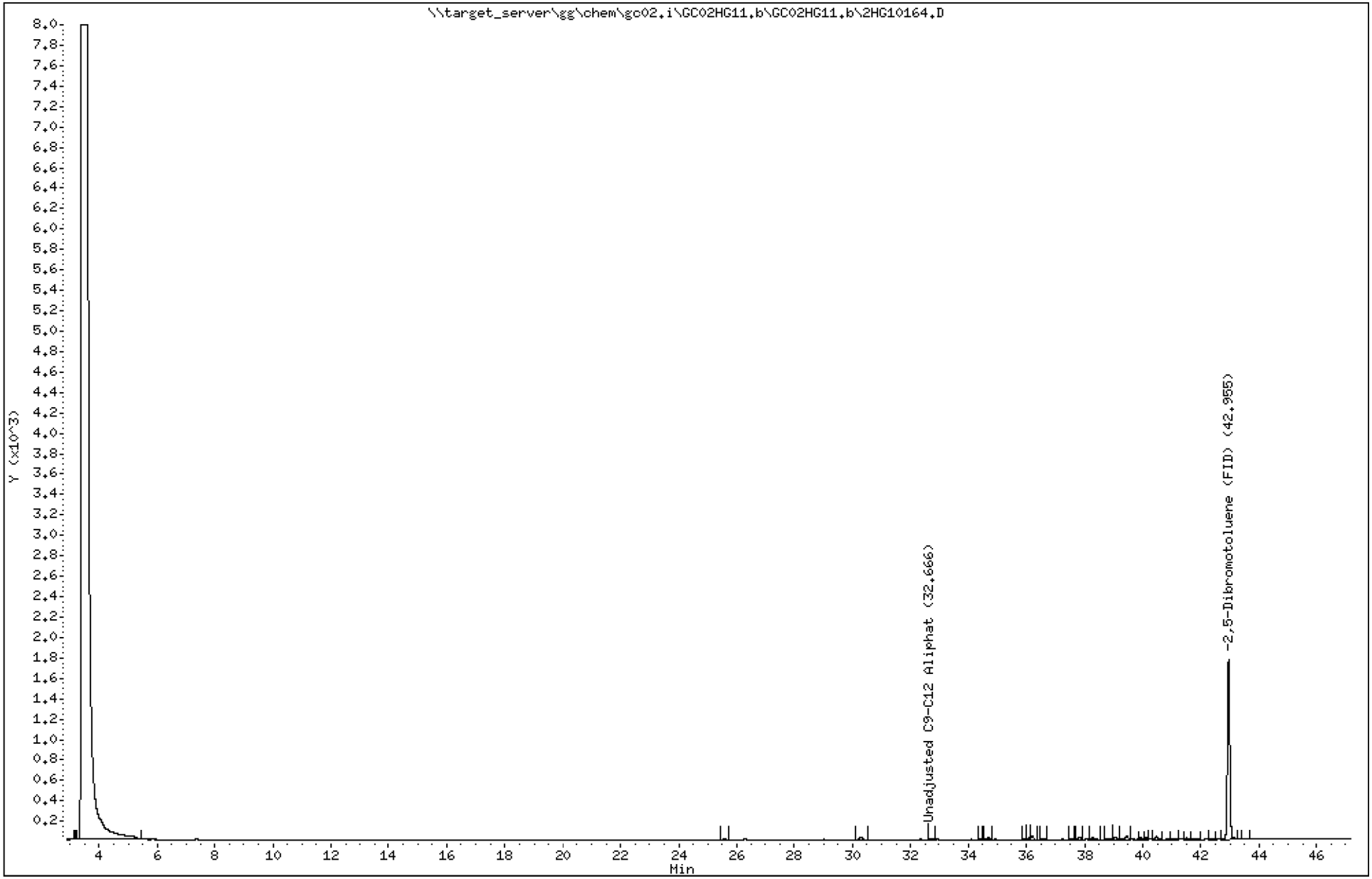
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.954	42.963	-0.009	200225	105.380	105	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10164.D
Date : 11-JUL-2014 17:05
Client ID: FTA-MW-9-061714
Sample Info: SH4401-2
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Katahdin Analytical Services 11000019

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4401-4
Client ID: FTA-MW-10-061714
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10165.D

Sample Date: 17-JUN-14
Received Date: 19-JUN-14
Extract Date: 11-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 11-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		96.2	%					
2,5-Dibromotoluene (PID)		77.2	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10165.D
Report Date: 15-Jul-2014 08:31

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10165.D
Lab Smp Id: SH4401-4 Client Smp ID: FTA-MW-10-061714
Inj Date : 11-JUL-2014 17:57
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-4
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

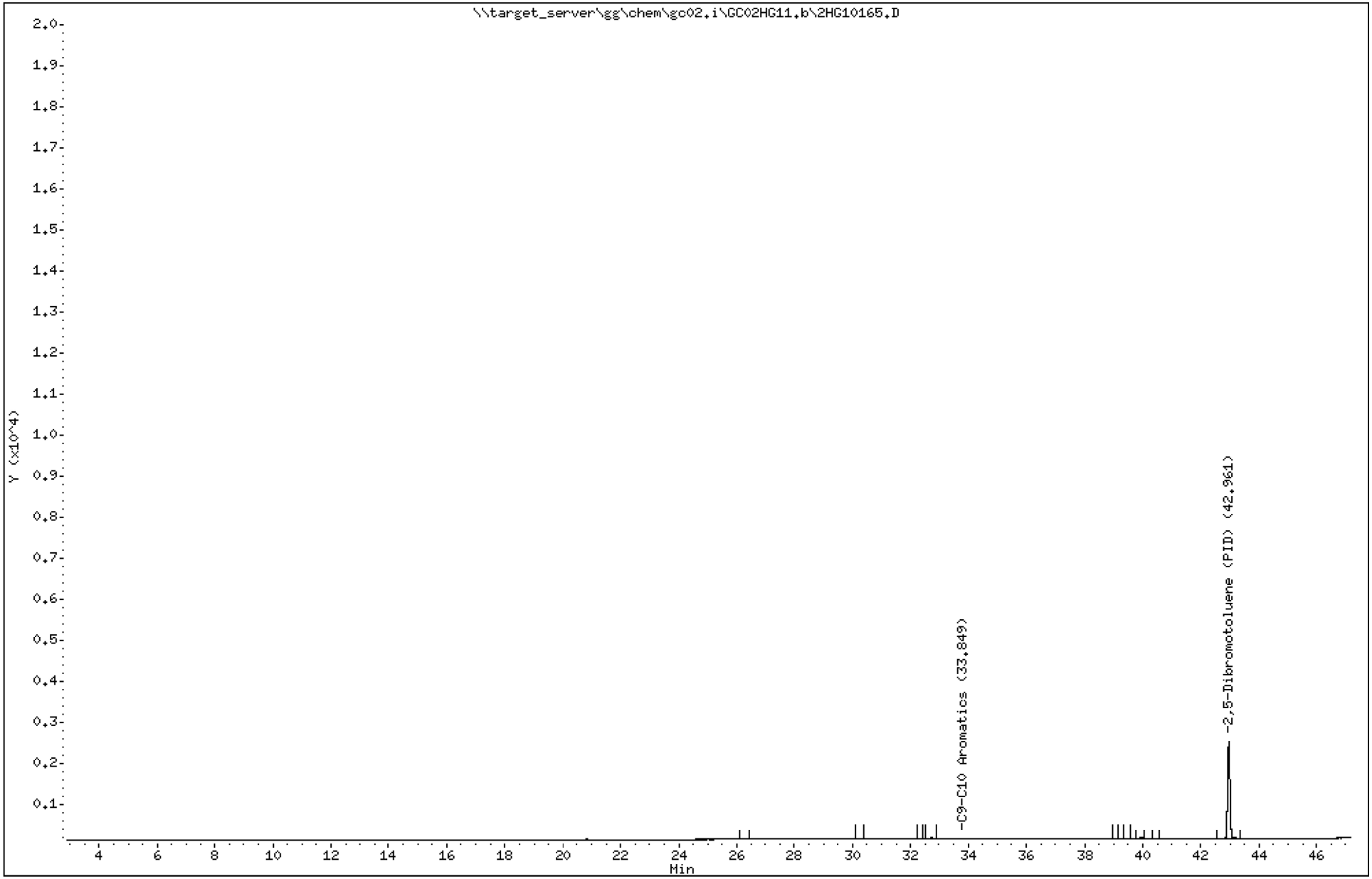
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.960	42.962	-0.002	263606	77.2238	77.2	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10165.D
Date : 11-JUL-2014 17:57
Client ID: FTA-MW-10-061714
Sample Info: SH4401-4
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Katahdin Analytical Services 11000022

Data File: 2HG10165.D
Report Date: 15-Jul-2014 08:35

Katahdin Analytical Services

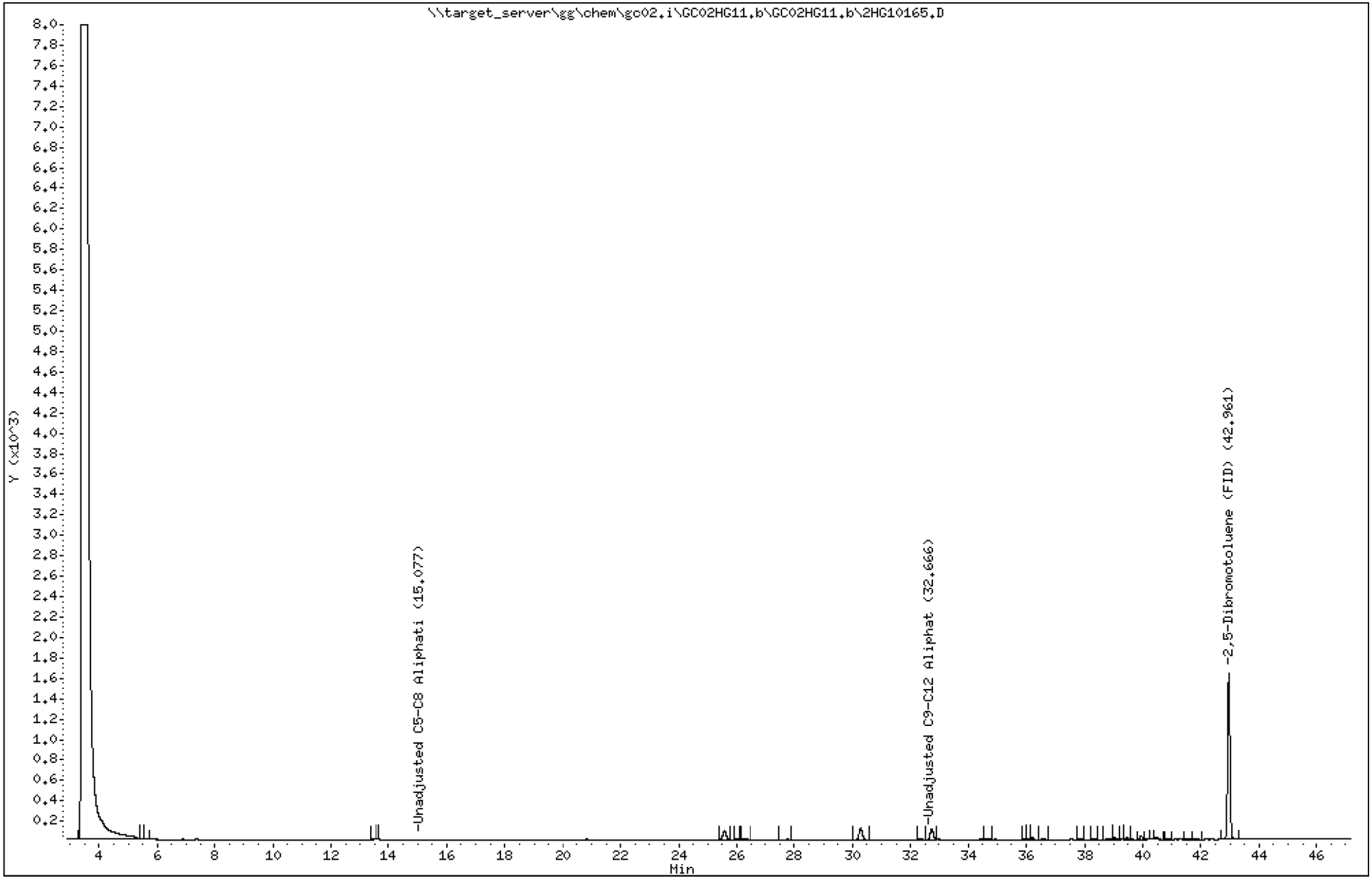
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10165.D
Lab Smp Id: SH4401-4 Client Smp ID: FTA-MW-10-061714
Inj Date : 11-JUL-2014 17:57
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-4
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.961	42.963	-0.002	182777	96.1970	96.2	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10165.D
Date : 11-JUL-2014 17:57
Client ID: FTA-MW-10-061714 Instrument: gc02.i
Sample Info: SH4401-4
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4401-6
Client ID: FTA-MW-11-061714
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10166.D

Sample Date: 17-JUN-14
Received Date: 19-JUN-14
Extract Date: 11-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 11-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		110.	%					
2,5-Dibromotoluene (PID)		87.5	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10166.D
Report Date: 15-Jul-2014 08:31

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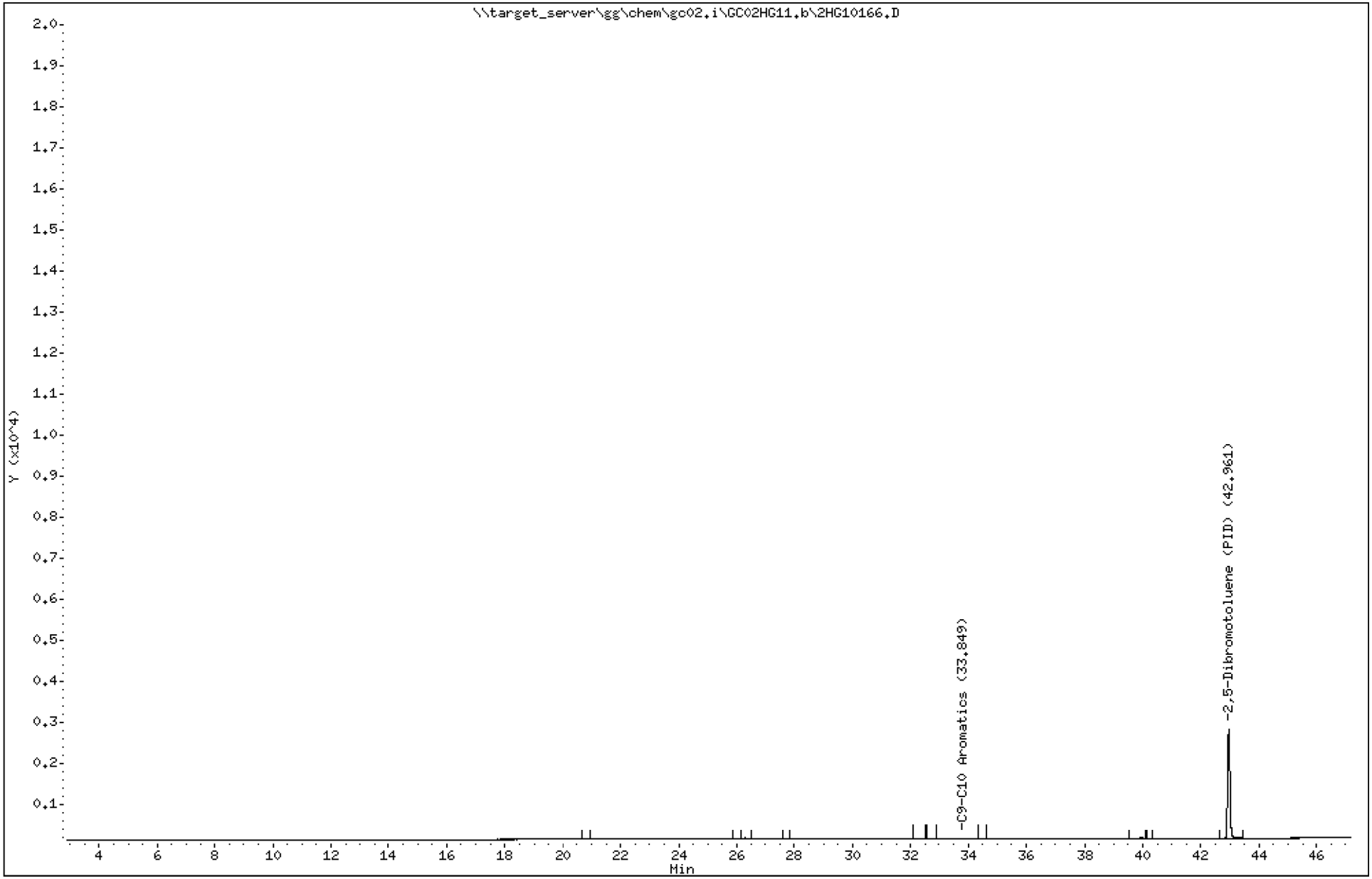
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10166.D
Lab Smp Id: SH4401-6 Client Smp ID: FTA-MW-11-061714
Inj Date : 11-JUL-2014 18:51
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-6
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.960	42.962	-0.002	298804	87.5223	87.5	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10166.D
Date : 11-JUL-2014 18:51
Client ID: FTA-MW-11-061714
Instrument: gc02.i
Sample Info: SH4401-6
Purge Volume: 0.0
Operator: AAB
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 11000027

Data File: 2HG10166.D
Report Date: 15-Jul-2014 08:35

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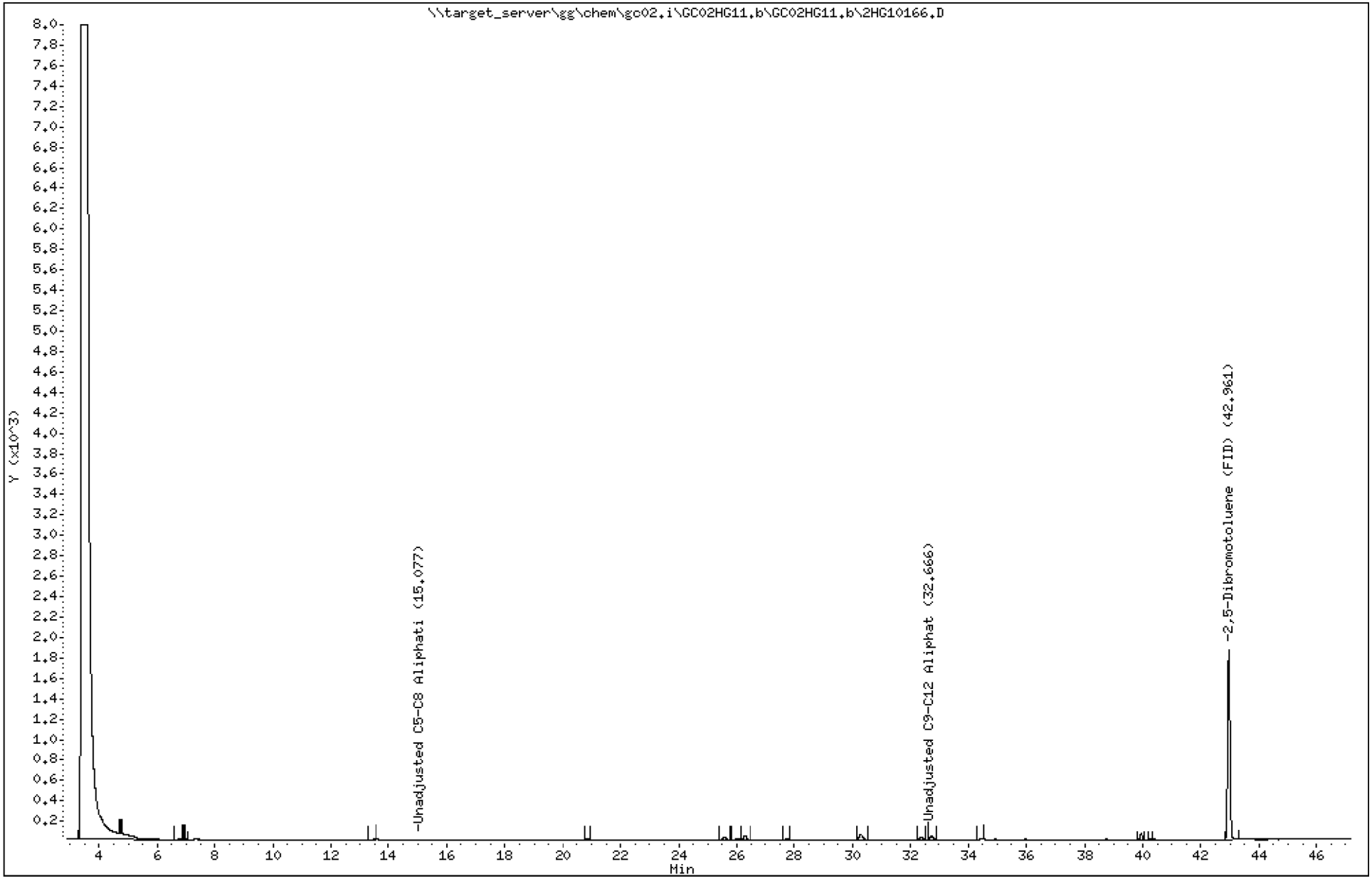
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10166.D
Lab Smp Id: SH4401-6 Client Smp ID: FTA-MW-11-061714
Inj Date : 11-JUL-2014 18:51
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-6
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.961	42.963	-0.002	208273	109.616	110	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10166.D
Date : 11-JUL-2014 18:51
Client ID: FTA-MW-11-061714
Instrument: gc02.i
Sample Info: SH4401-6
Purge Volume: 0.0
Operator: AAB
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 11000029

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4401-8
Client ID: FTA-MW-12-061714
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10167.D

Sample Date: 17-JUN-14
Received Date: 19-JUN-14
Extract Date: 11-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 11-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		113.	%					
2,5-Dibromotoluene (PID)		90.2	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10167.D
Report Date: 15-Jul-2014 08:31

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Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10167.D
Lab Smp Id: SH4401-8 Client Smp ID: FTA-MW-12-061714
Inj Date : 11-JUL-2014 19:45
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-8
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

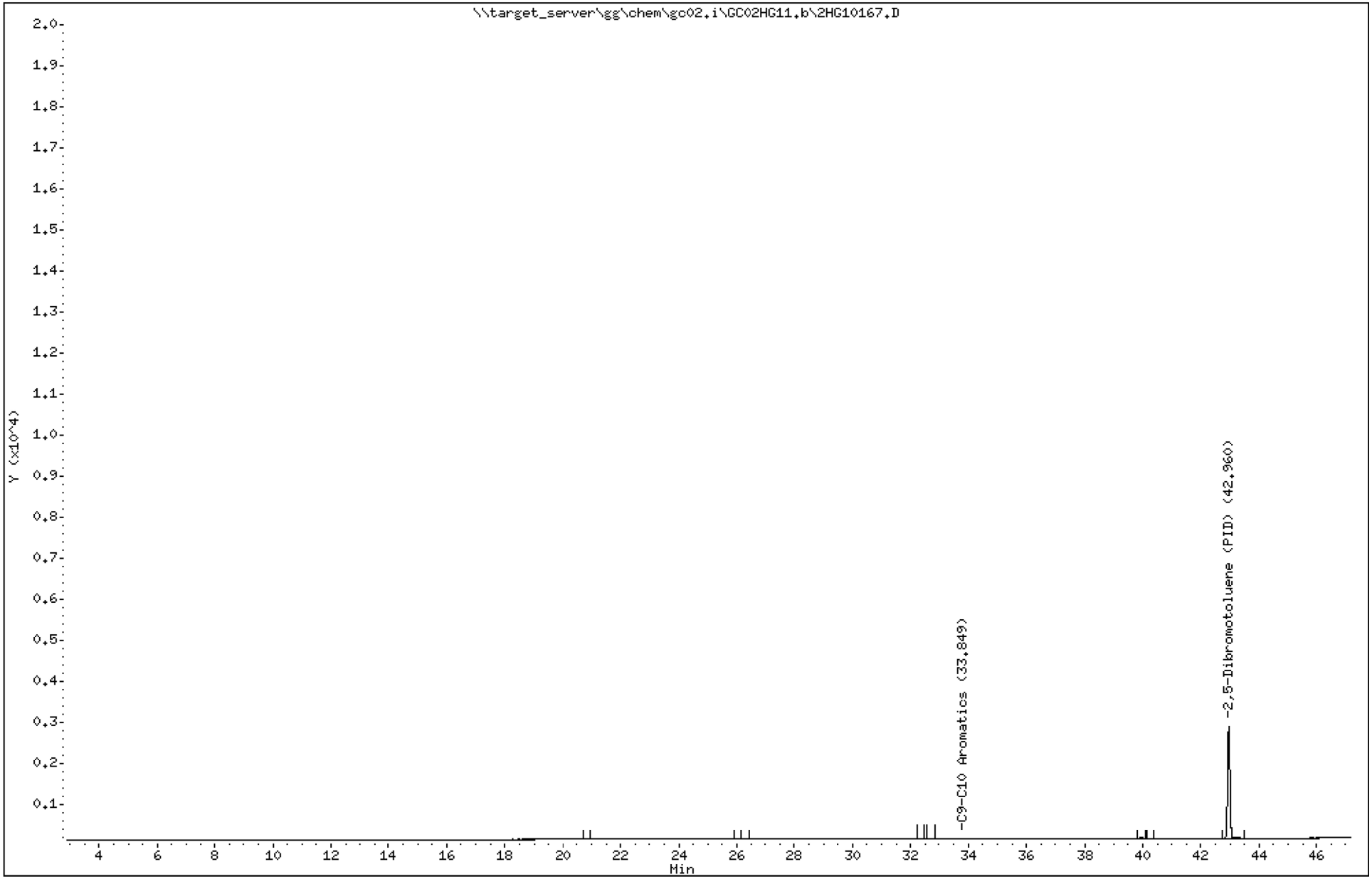
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.959	42.962	-0.003	307898	90.1831	90.2	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10167.D
Date : 11-JUL-2014 19:45
Client ID: FTA-MW-12-061714
Sample Info: SH4401-8
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Data File: 2HG10167.D
Report Date: 15-Jul-2014 08:35

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10167.D
Lab Smp Id: SH4401-8 Client Smp ID: FTA-MW-12-061714
Inj Date : 11-JUL-2014 19:45
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-8
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

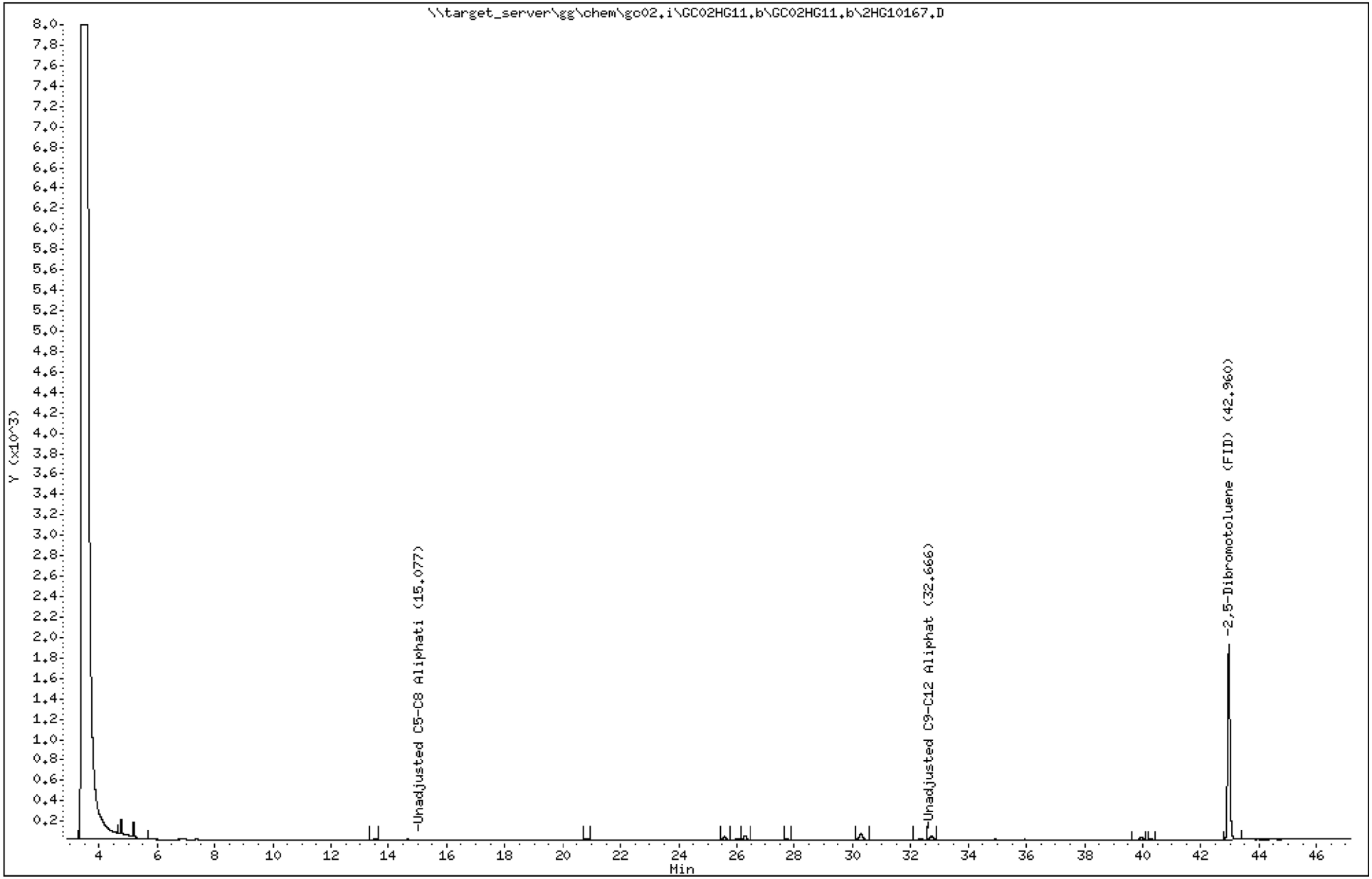
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.960	42.963	-0.003	215188	113.255	113	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10167.D
Date : 11-JUL-2014 19:45
Client ID: FTA-MW-12-061714
Sample Info: SH4401-8
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Katahdin Analytical Services 11000034

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4401-10
Client ID: FTA-MW-5-061814
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10168.D

Sample Date: 18-JUN-14
Received Date: 19-JUN-14
Extract Date: 11-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 11-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		114.	%					
2,5-Dibromotoluene (PID)		88.8	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10168.D
Report Date: 15-Jul-2014 08:31

Katahdin Analytical Services

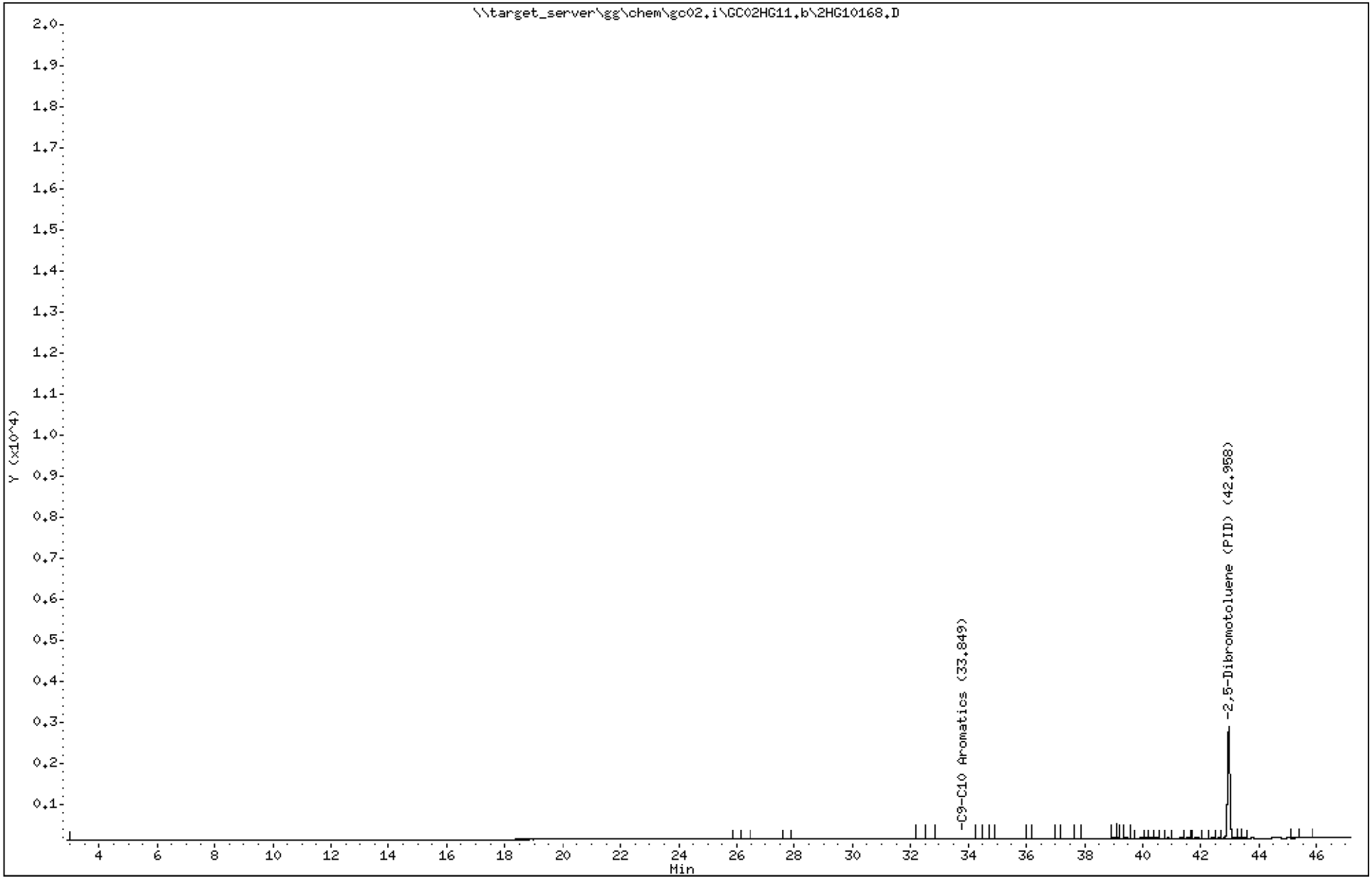
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10168.D
Lab Smp Id: SH4401-10 Client Smp ID: FTA-MW-5-061814
Inj Date : 11-JUL-2014 20:39
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-10
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.958	42.962	-0.004	303241	88.8206	88.8	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10168.D
Date : 11-JUL-2014 20:39
Client ID: FTA-MW-5-061814 Instrument: gc02.i
Sample Info: SH4401-10
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



Data File: 2HG10168.D
Report Date: 15-Jul-2014 08:35

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10168.D
Lab Smp Id: SH4401-10 Client Smp ID: FTA-MW-5-061814
Inj Date : 11-JUL-2014 20:39
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-10
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

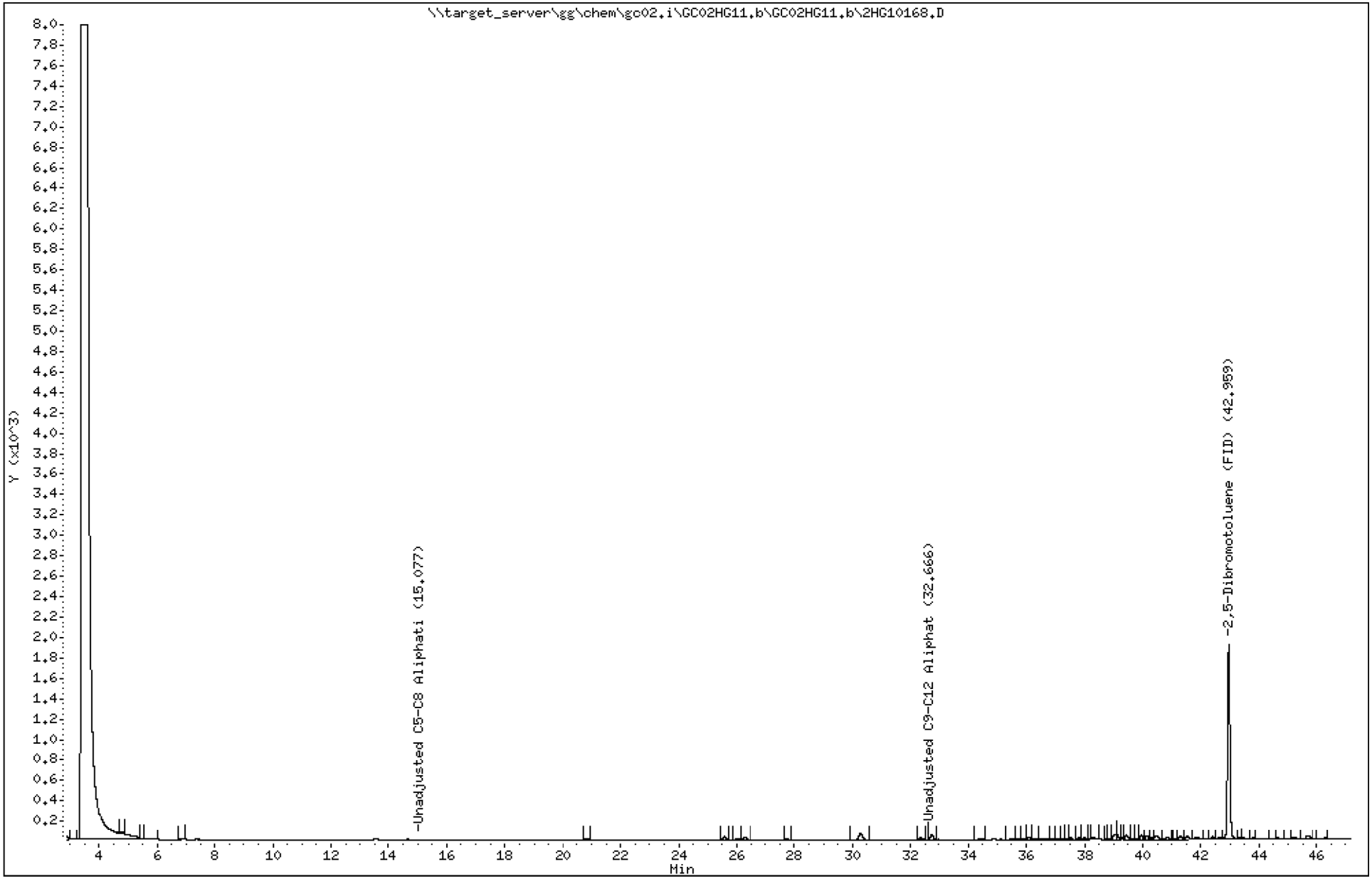
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.958	42.963	-0.005	216074	113.722	114	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10168.D
Date : 11-JUL-2014 20:39
Client ID: FTA-MW-5-061814
Sample Info: SH4401-10
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4401-12
Client ID: FTA-MW-203-061814
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10169.D

Sample Date: 18-JUN-14
Received Date: 19-JUN-14
Extract Date: 11-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 11-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		111.	%					
2,5-Dibromotoluene (PID)		88.5	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10169.D
Report Date: 15-Jul-2014 08:31

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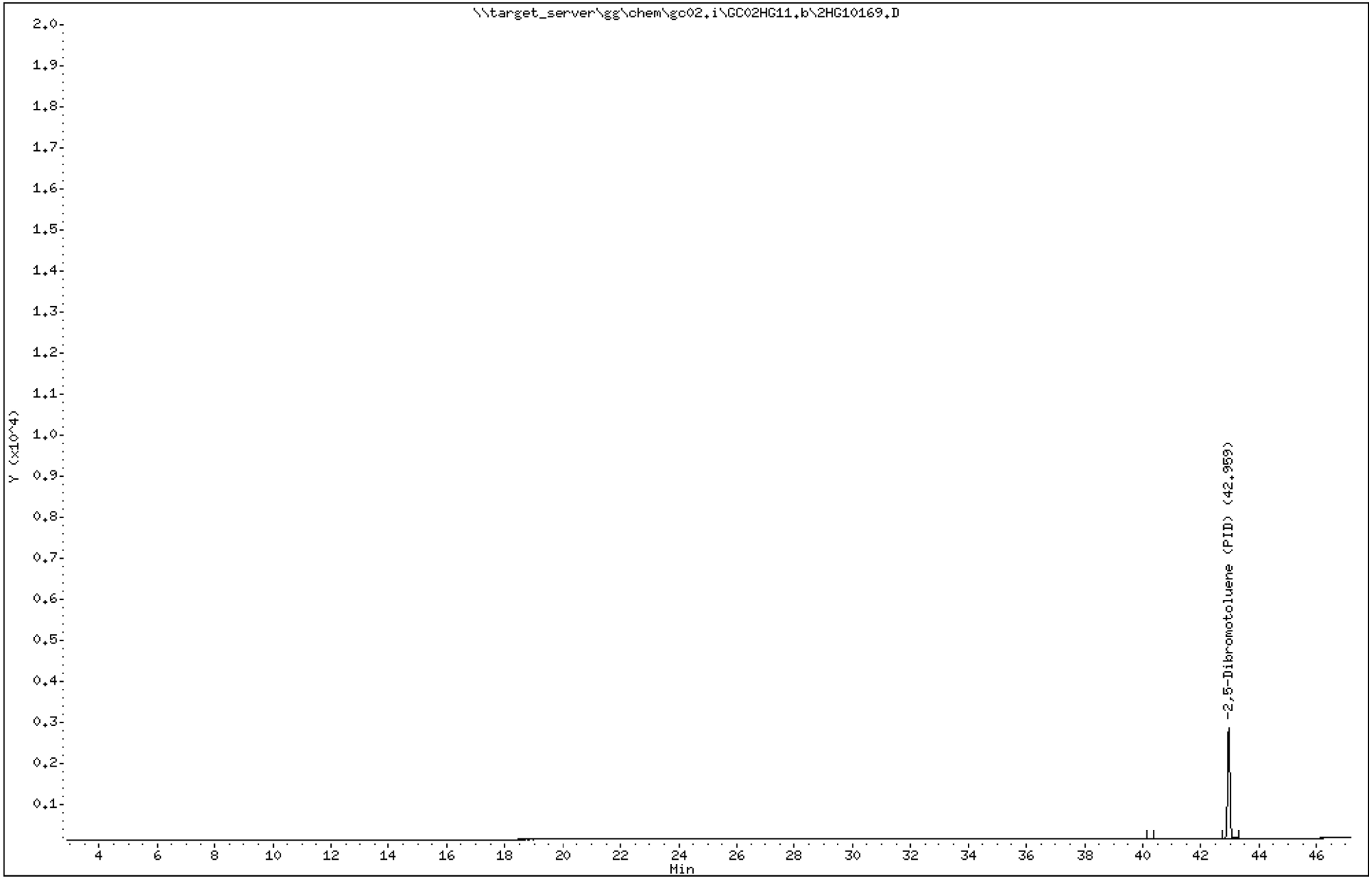
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10169.D
Lab Smp Id: SH4401-12 Client Smp ID: FTA-MW-203-061814
Inj Date : 11-JUL-2014 21:33
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-12
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.959	42.962	-0.003	302263	88.5344	88.5	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10169.D
Date : 11-JUL-2014 21:33
Client ID: FTA-MW-203-061814 Instrument: gc02.i
Sample Info: SH4401-12
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



Data File: 2HG10169.D
Report Date: 15-Jul-2014 08:35

Katahdin Analytical Services

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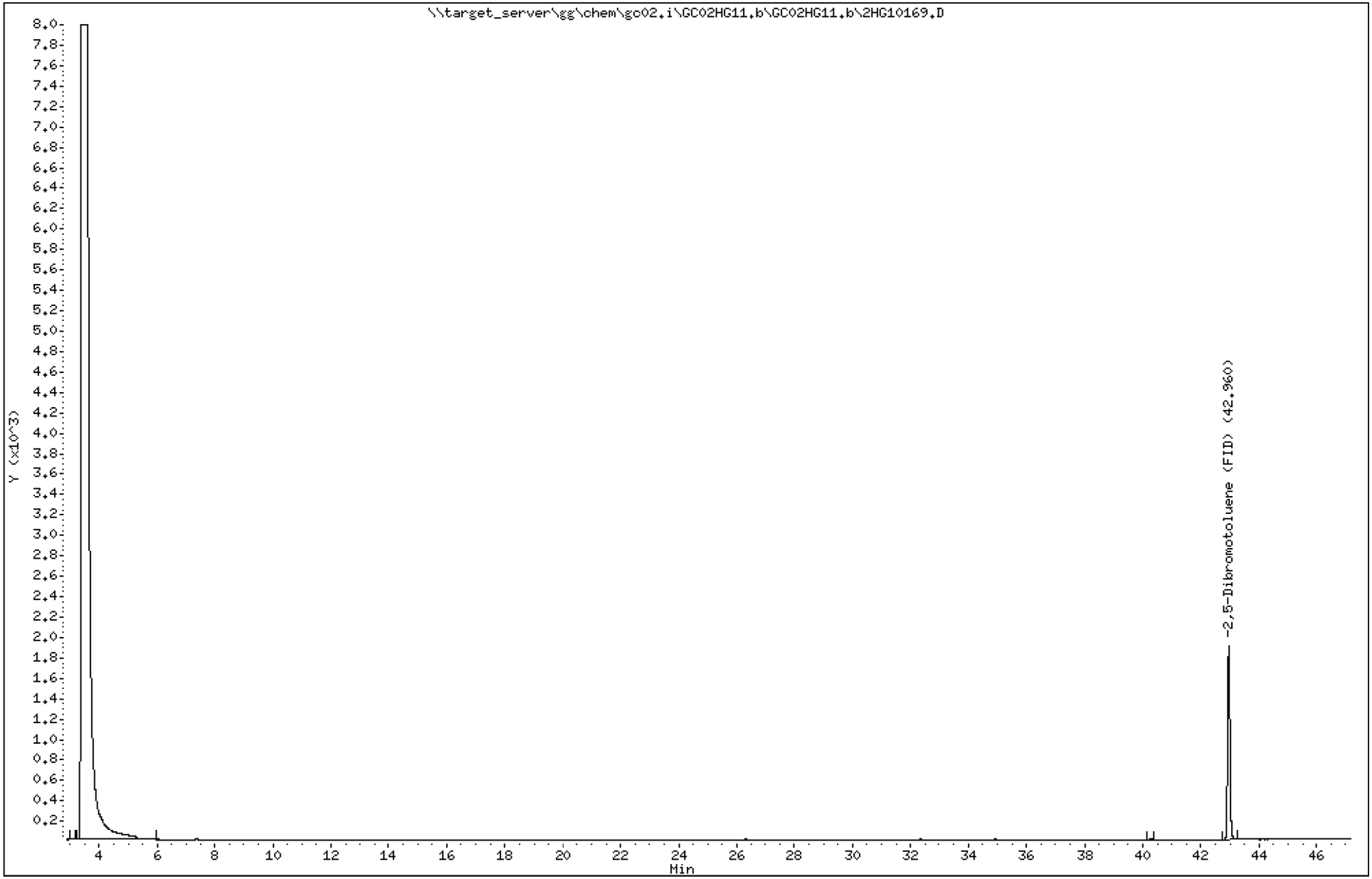
Lab Smp Id: SH4401-12 Client Smp ID: FTA-MW-203-061814
Inj Date : 11-JUL-2014 21:33
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-12
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.960	42.963	-0.003	210987	111.044	111	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10169.D
Date : 11-JUL-2014 21:33
Client ID: FTA-MW-203-061814 Instrument: gc02.i
Sample Info: SH4401-12
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4401-14
Client ID: FTA-GW-DUP01-061814
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10170.D

Sample Date: 18-JUN-14
Received Date: 19-JUN-14
Extract Date: 11-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 11-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		113.	%					
2,5-Dibromotoluene (PID)		88.7	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10170.D
Report Date: 15-Jul-2014 08:31

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10170.D
Lab Smp Id: SH4401-14 Client Smp ID: FTA-GW-DUP01-061814
Inj Date : 11-JUL-2014 22:27
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-14
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

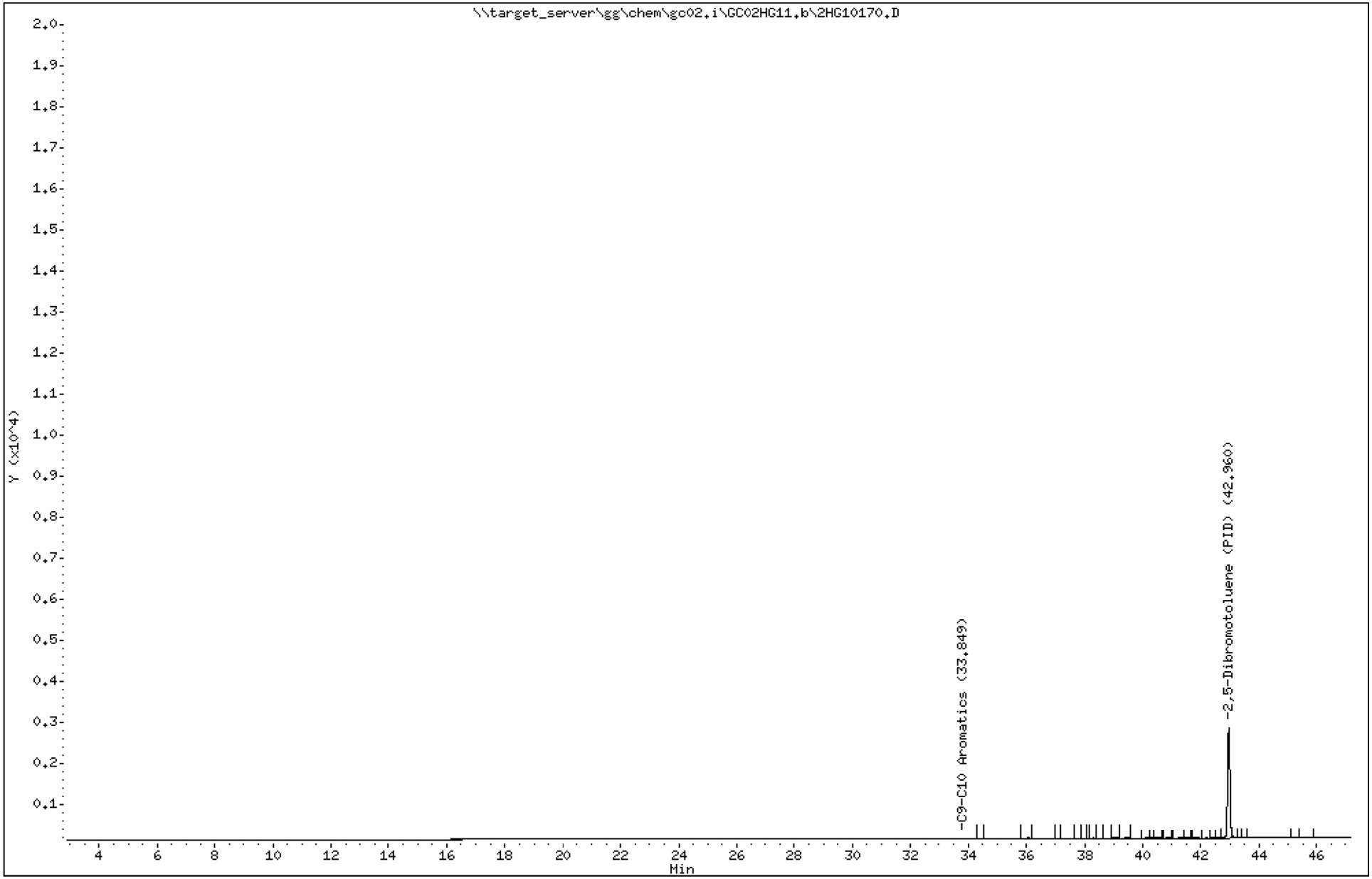
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.959	42.962	-0.003	302703	88.6631	88.7	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10170.D
Date : 11-JUL-2014 22:27
Client ID: FTA-GW-DUP01-061814
Sample Info: SH4401-14
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



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Data File: 2HG10170.D
Report Date: 15-Jul-2014 08:35

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Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10170.D
Lab Smp Id: SH4401-14 Client Smp ID: FTA-GW-DUP01-061814
Inj Date : 11-JUL-2014 22:27
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-14
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

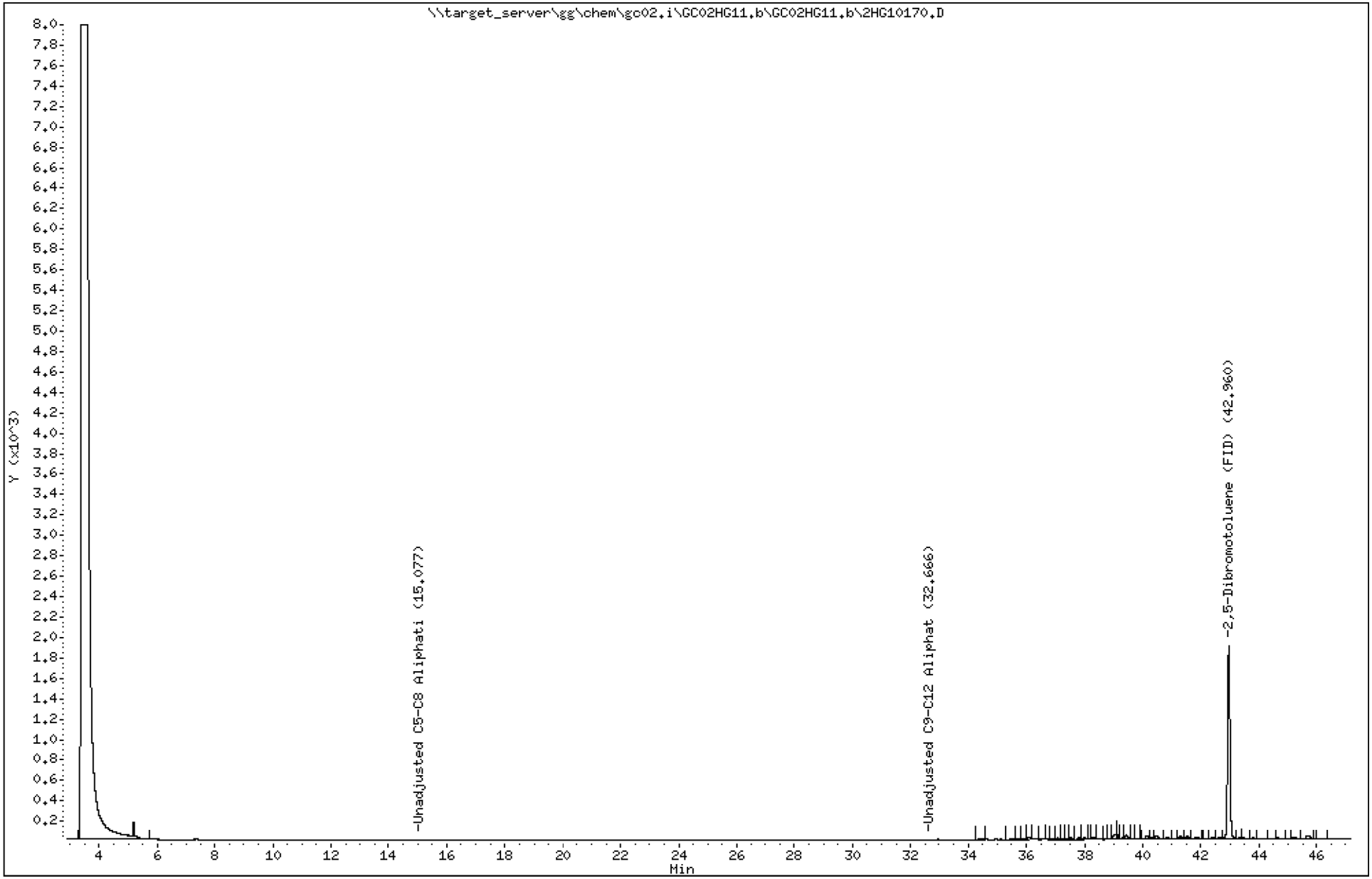
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.960	42.963	-0.003	215508	113.424	113	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10170.D
Date : 11-JUL-2014 22:27
Client ID: FTA-GW-DUP01-061814
Sample Info: SH4401-14
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4401-16
Client ID: FTA-MW-218-061814
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10171.D

Sample Date: 18-JUN-14
Received Date: 19-JUN-14
Extract Date: 11-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 11-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		118.	%					
2,5-Dibromotoluene (PID)		92.8	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10171.D
Report Date: 15-Jul-2014 08:31

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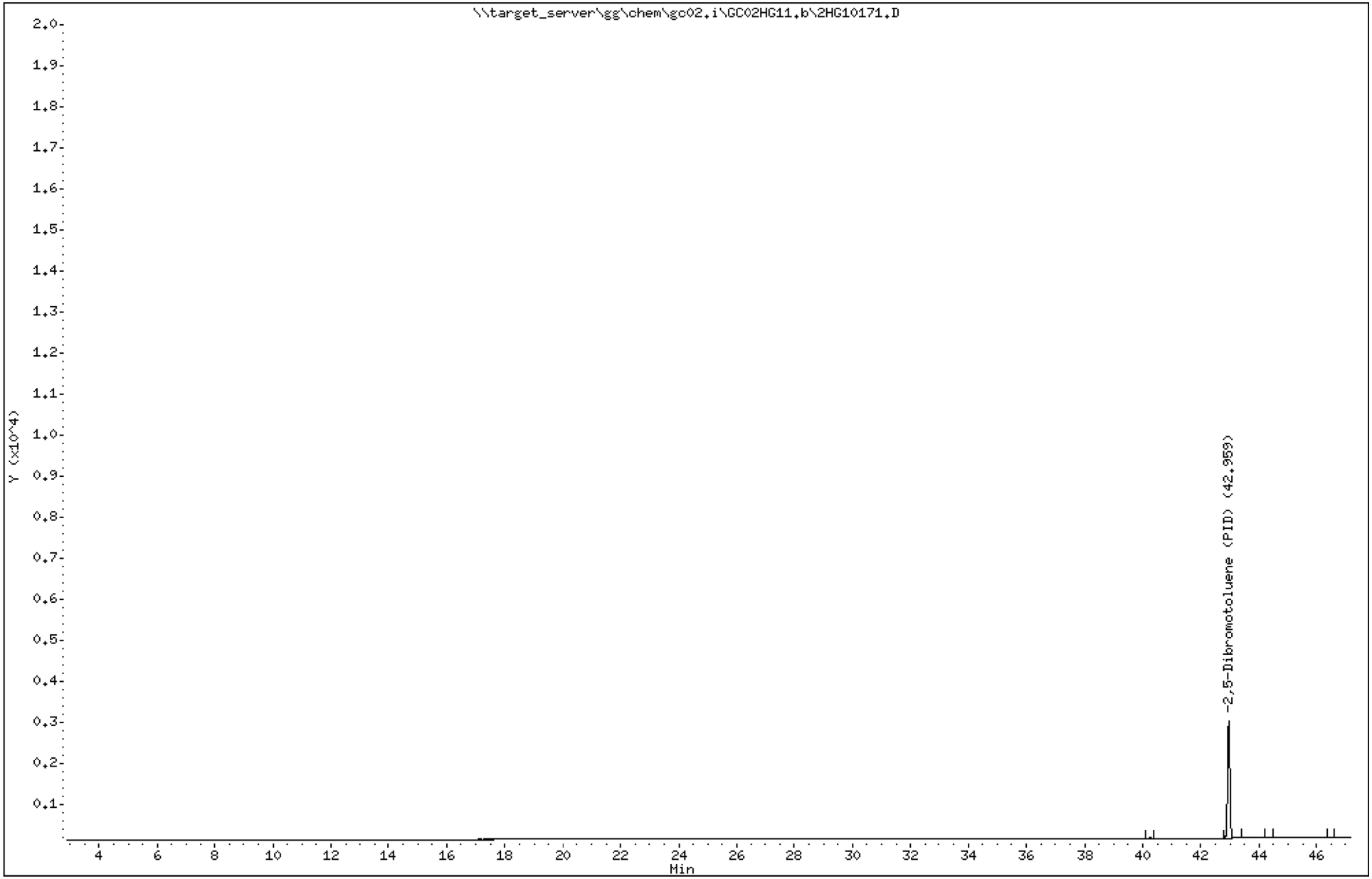
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10171.D
Lab Smp Id: SH4401-16 Client Smp ID: FTA-MW-218-061814
Inj Date : 11-JUL-2014 23:22
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-16
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.959	42.962	-0.003	317024	92.8533	92.8	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10171.D
Date : 11-JUL-2014 23:22
Client ID: FTA-MW-218-061814 Instrument: gc02.i
Sample Info: SH4401-16
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



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Data File: 2HG10171.D
Report Date: 15-Jul-2014 08:35

Katahdin Analytical Services

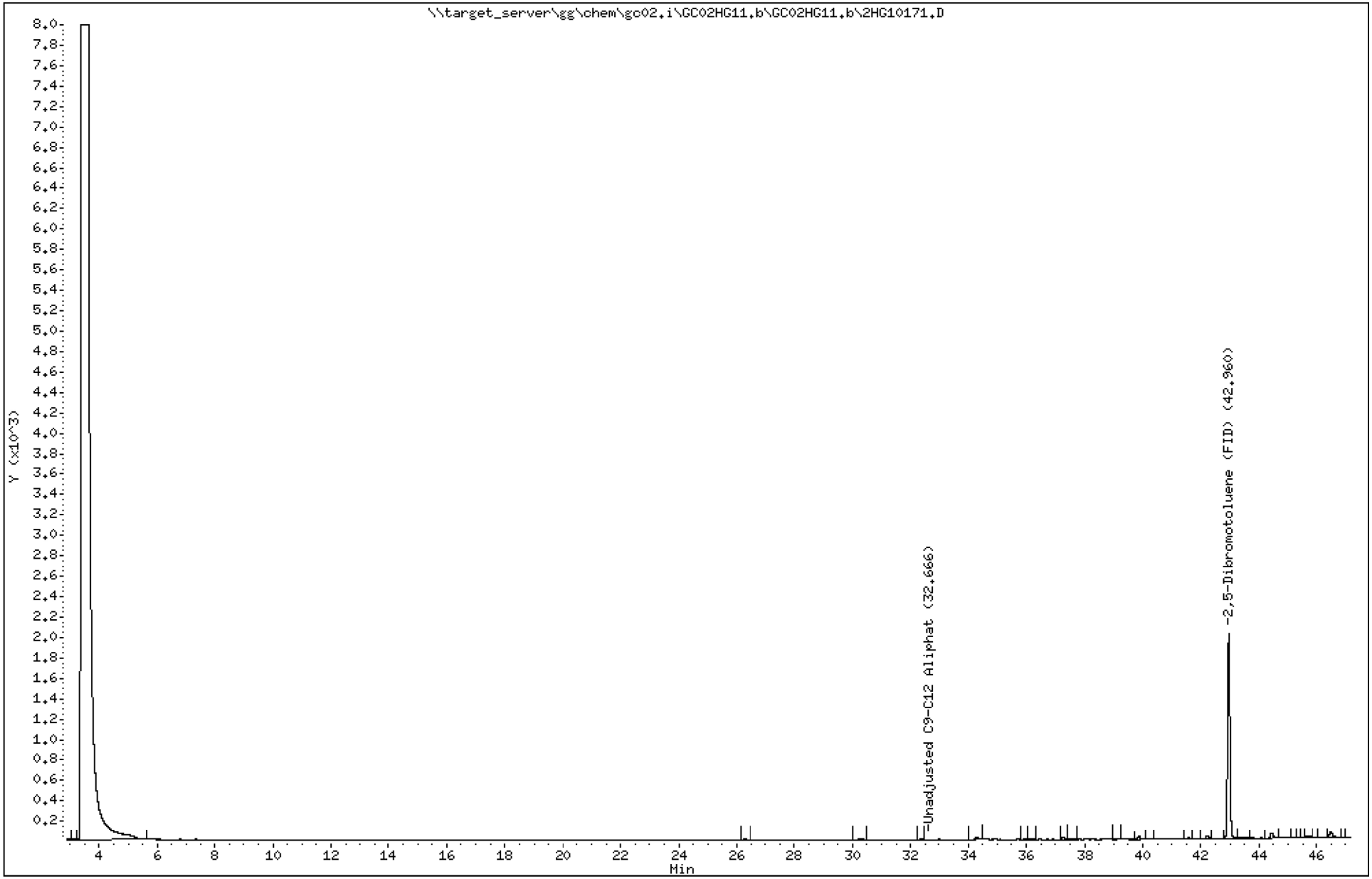
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10171.D
Lab Smp Id: SH4401-16 Client Smp ID: FTA-MW-218-061814
Inj Date : 11-JUL-2014 23:22
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-16
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.959	42.963	-0.004	223787	117.781	118	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10171.D
Date : 11-JUL-2014 23:22
Client ID: FTA-MW-218-061814 Instrument: gc02.i
Sample Info: SH4401-16
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4401-18
Client ID: FTA-MW-206-061814
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10172.D

Sample Date: 18-JUN-14
Received Date: 19-JUN-14
Extract Date: 12-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 12-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		115.	%					
2,5-Dibromotoluene (PID)		91.6	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10172.D
Report Date: 15-Jul-2014 08:31

Katahdin Analytical Services

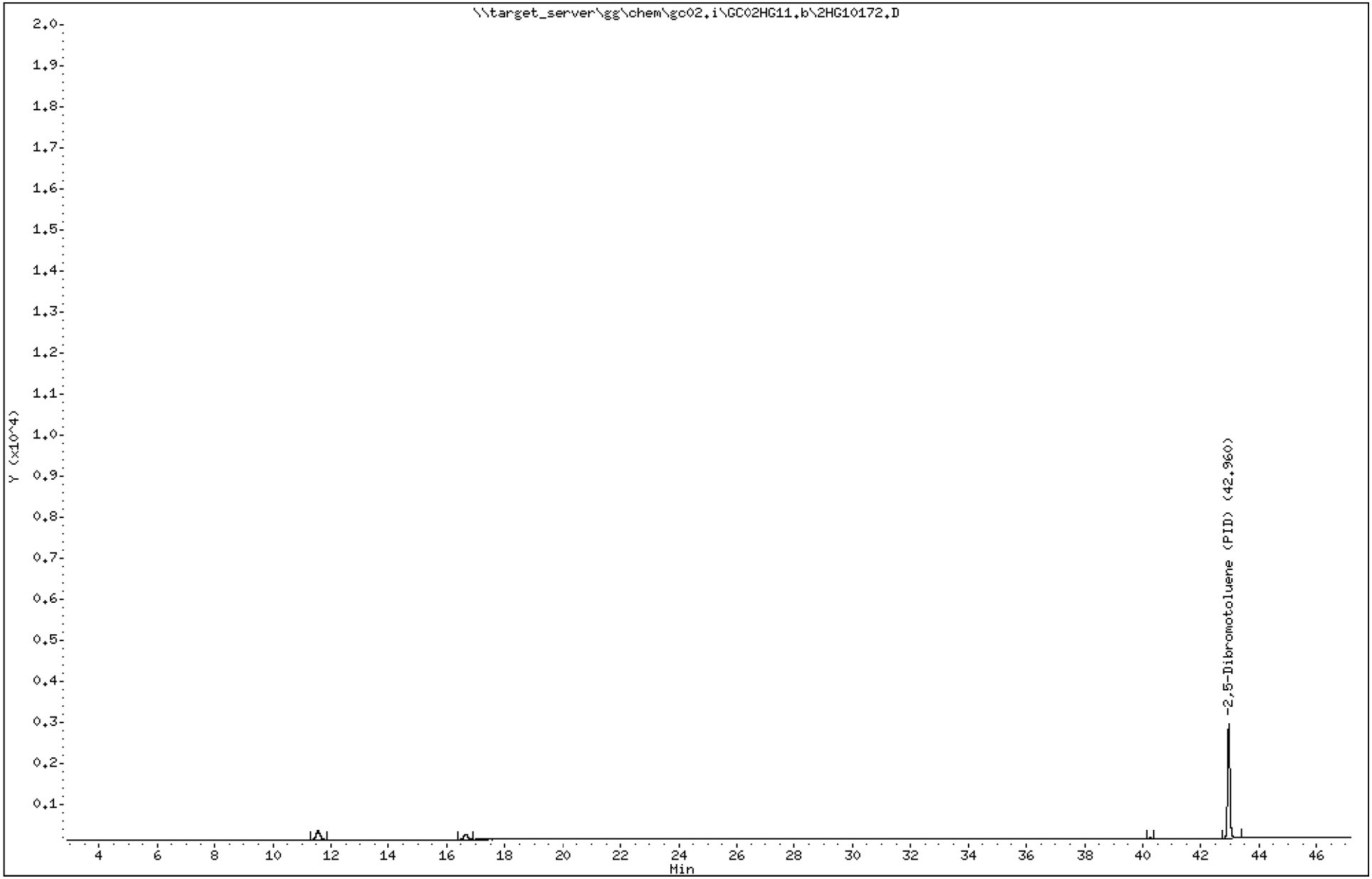
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10172.D
Lab Smp Id: SH4401-18 Client Smp ID: FTA-MW-206-061814
Inj Date : 12-JUL-2014 00:16
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-18
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.959	42.962	-0.003	312800	91.6174	91.6	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10172.D
Date : 12-JUL-2014 00:16
Client ID: FTA-MW-206-061814 Instrument: gc02.i
Sample Info: SH4401-18
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



Data File: 2HG10172.D
Report Date: 15-Jul-2014 08:35

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10172.D
Lab Smp Id: SH4401-18 Client Smp ID: FTA-MW-206-061814
Inj Date : 12-JUL-2014 00:16
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-18
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

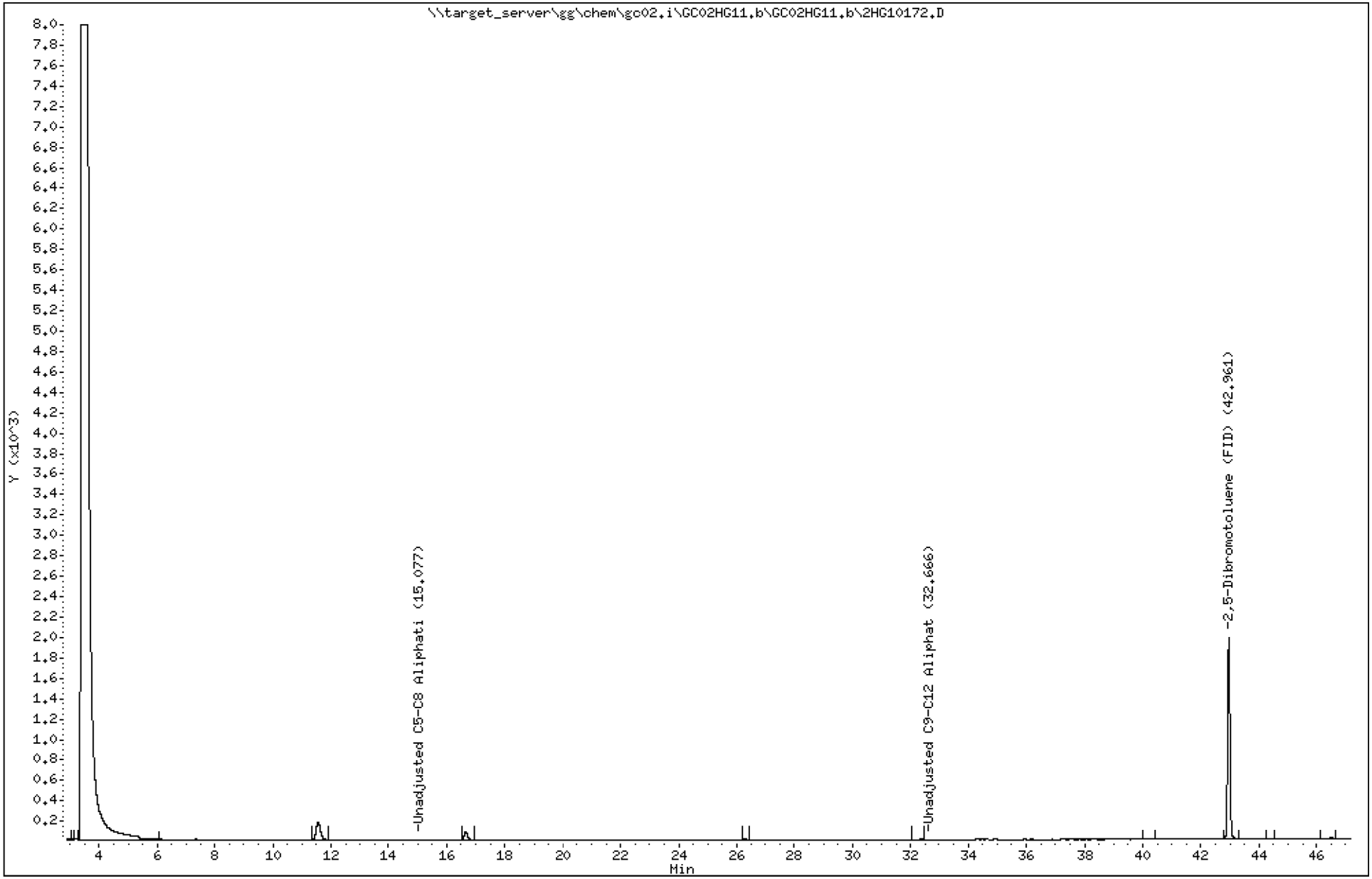
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.960	42.963	-0.003	218879	115.198	115	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10172.D
Date : 12-JUL-2014 00:16
Client ID: FTA-MW-206-061814
Sample Info: SH4401-18
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Katahdin Analytical Services 11000059

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4401-20
Client ID: FTA-MW-14-061714
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10174.D

Sample Date: 17-JUN-14
Received Date: 19-JUN-14
Extract Date: 12-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 12-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		111.	%					
2,5-Dibromotoluene (PID)		88.2	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10174.D
Report Date: 15-Jul-2014 08:31

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10174.D
Lab Smp Id: SH4401-20 Client Smp ID: FTA-MW-14-061714
Inj Date : 12-JUL-2014 02:05
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-20
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

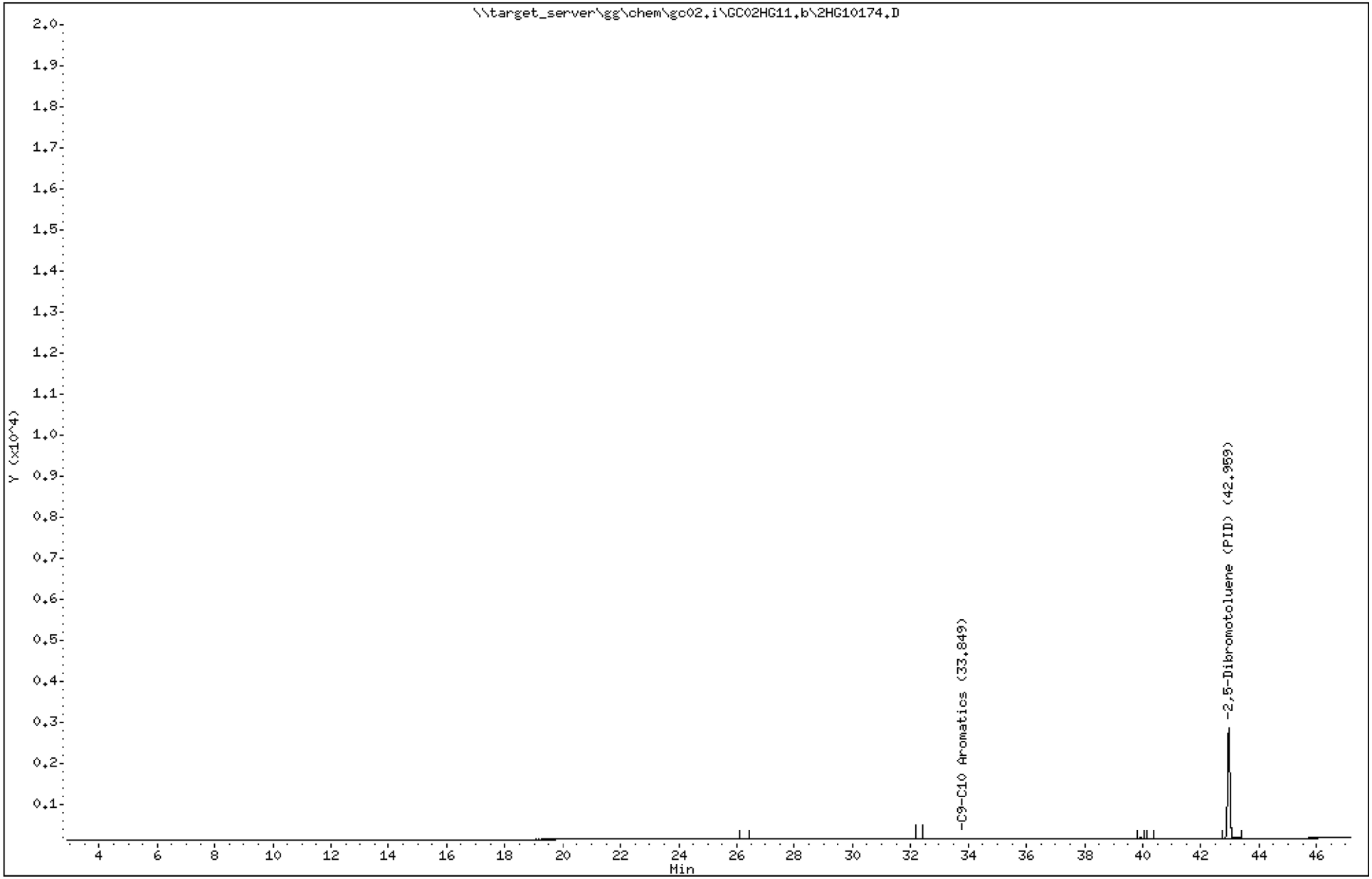
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.958	42.962	-0.004	301144	88.2070	88.2	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10174.D
Date : 12-JUL-2014 02:05
Client ID: FTA-MW-14-061714
Sample Info: SH4401-20
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Katahdin Analytical Services 11000062

Data File: 2HG10174.D
Report Date: 15-Jul-2014 08:35

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10174.D
Lab Smp Id: SH4401-20 Client Smp ID: FTA-MW-14-061714
Inj Date : 12-JUL-2014 02:05
Operator : AAB Inst ID: gc02.i
Smp Info : SH4401-20
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

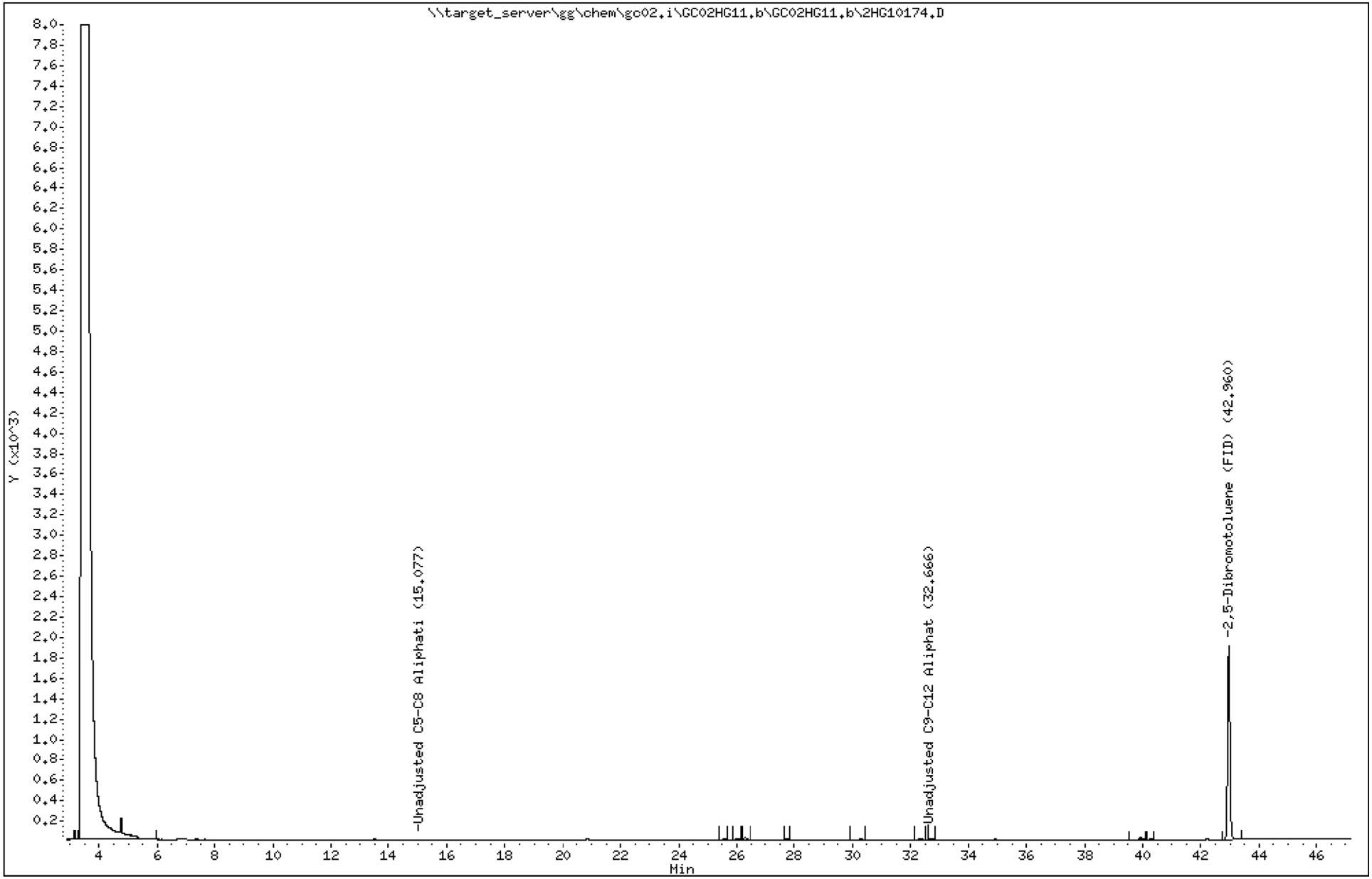
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.959	42.963	-0.004	211576	111.354	111	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10174.D
Date : 12-JUL-2014 02:05
Client ID: FTA-MW-14-061714
Sample Info: SH4401-20
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Katahdin Analytical Services 11000064

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4521-1
Client ID: FTA-GW-TB02-061814
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10175.D

Sample Date: 18-JUN-14
Received Date: 20-JUN-14
Extract Date: 12-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 12-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		109.	%					
2,5-Dibromotoluene (PID)		87.0	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10175.D
Report Date: 15-Jul-2014 09:10

Katahdin Analytical Services

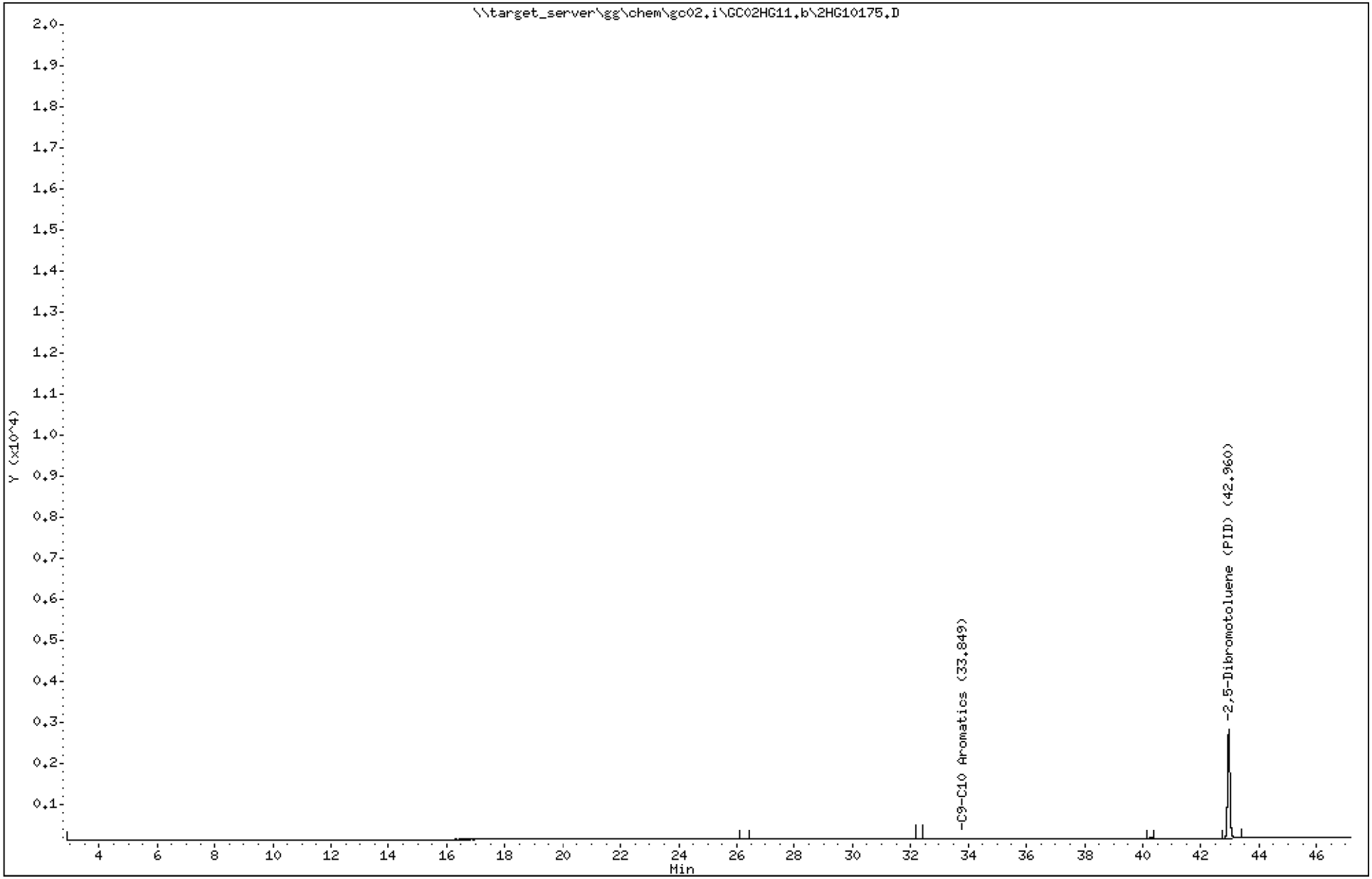
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10175.D
Lab Smp Id: SH4521-1 Client Smp ID: FTA-GW-TB02-061814
Inj Date : 12-JUL-2014 02:59
Operator : AAB Inst ID: gc02.i
Smp Info : SH4521-1
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.959	42.962	-0.003	296856	86.9524	87.0	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10175.D
Date : 12-JUL-2014 02:59
Client ID: FTA-GW-TB02-061814 Instrument: gc02.i
Sample Info: SH4521-1
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



Data File: 2HG10175.D
Report Date: 15-Jul-2014 09:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10175.D
Lab Smp Id: SH4521-1 Client Smp ID: FTA-GW-TB02-061814
Inj Date : 12-JUL-2014 02:59
Operator : AAB Inst ID: gc02.i
Smp Info : SH4521-1
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

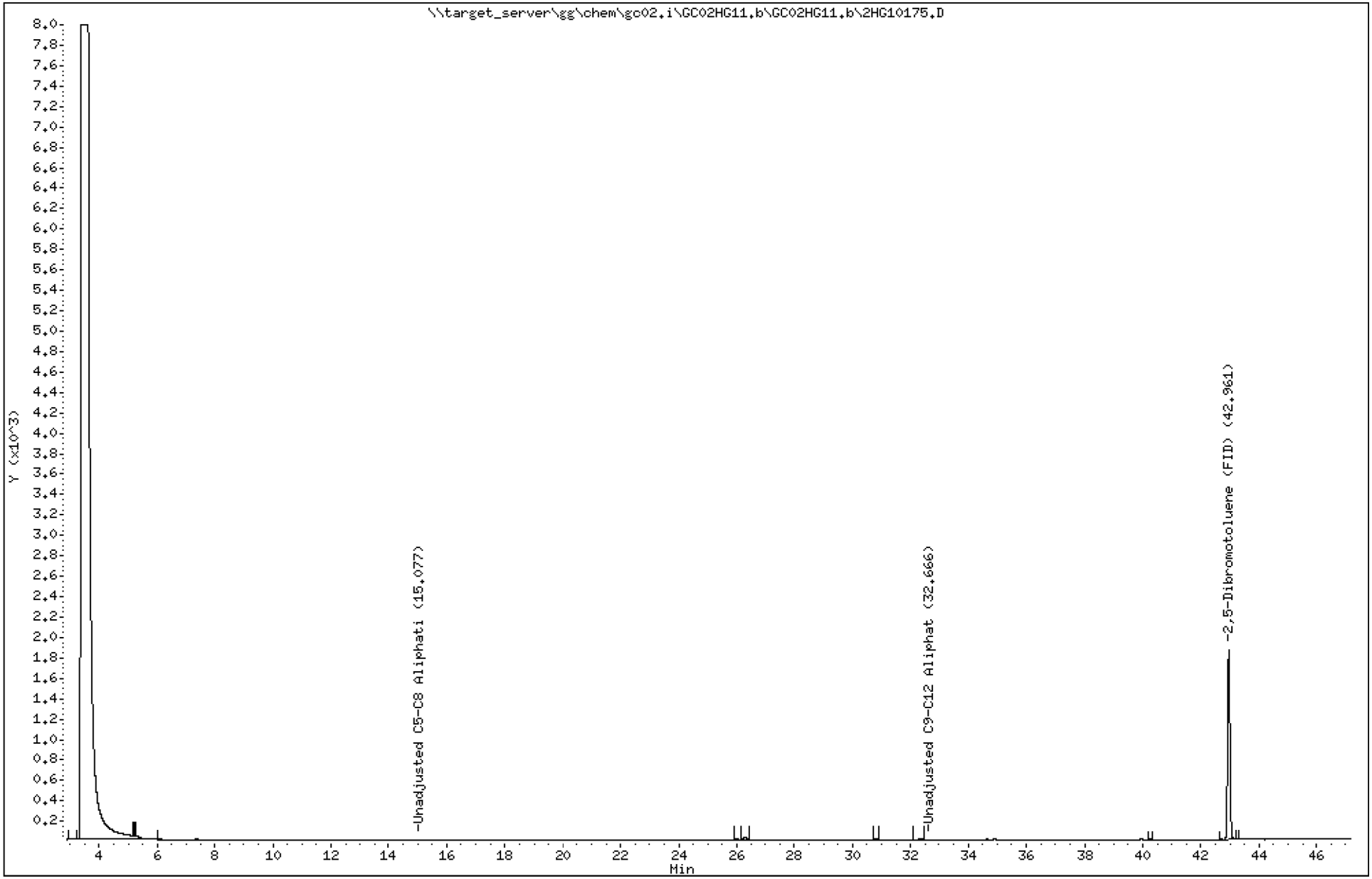
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.960	42.963	-0.003	207243	109.074	109	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10175.D
Date : 12-JUL-2014 02:59
Client ID: FTA-GW-TB02-061814
Sample Info: SH4521-1
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4521-2
Client ID: FTA-MW-208-061814
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10176.D

Sample Date: 18-JUN-14
Received Date: 20-JUN-14
Extract Date: 12-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 12-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		113.	%					
2,5-Dibromotoluene (PID)		90.1	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10176.D
Report Date: 15-Jul-2014 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10176.D
Lab Smp Id: SH4521-2 Client Smp ID: FTA-MW-208-061814
Inj Date : 12-JUL-2014 03:54
Operator : AAB Inst ID: gc02.i
Smp Info : SH4521-2
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

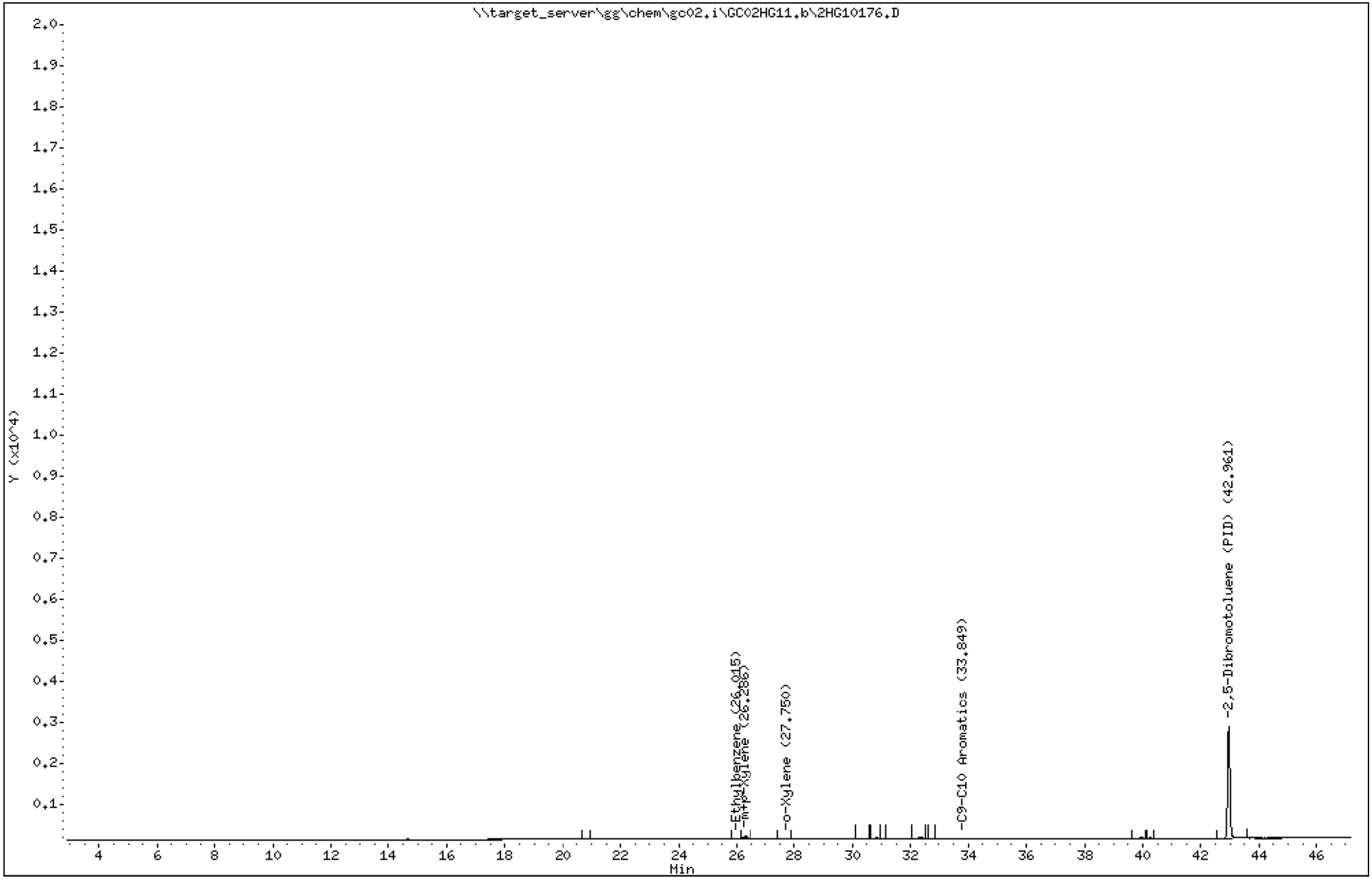
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
5 Ethylbenzene	26.014	26.011	0.003	2921	0.79082	0.791(a)	
6 m+p-Xylene	26.286	26.282	0.004	10213	2.43103	2.43(a)	
7 o-Xylene	27.749	27.745	0.004	2123	0.58314	0.583(a)	
$ 11 2,5-Dibromotoluene (PID)	42.961	42.962	-0.001	307535	90.0769	90.1	

QC Flag Legend

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

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10176.D
Date : 12-JUL-2014 03:54
Client ID: FTA-MW-208-061814 Instrument: gc02.i
Sample Info: SH4521-2
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



Katahdin Analytical Services 11000072

Data File: 2HG10176.D
Report Date: 15-Jul-2014 09:11

Katahdin Analytical Services

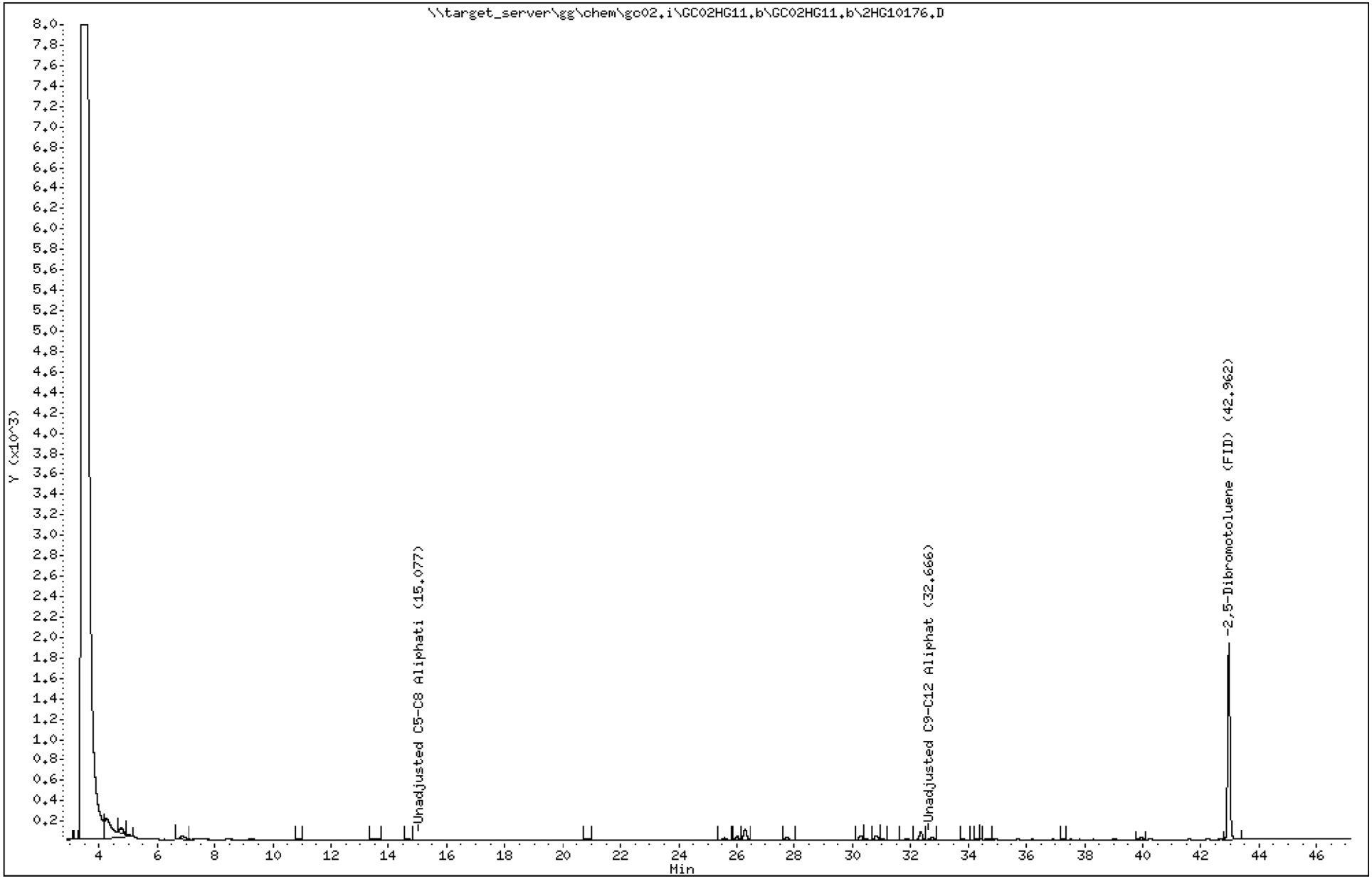
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10176.D
Lab Smp Id: SH4521-2 Client Smp ID: FTA-MW-208-061814
Inj Date : 12-JUL-2014 03:54
Operator : AAB Inst ID: gc02.i
Smp Info : SH4521-2
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.961	42.963	-0.002	215068	113.192	113	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10176.D
Date : 12-JUL-2014 03:54
Client ID: FTA-MW-208-061814 Instrument: gc02.i
Sample Info: SH4521-2
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4521-4
Client ID: FTA-MW-1-061814
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10177.D

Sample Date: 18-JUN-14
Received Date: 20-JUN-14
Extract Date: 12-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 12-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		111.	%					
2,5-Dibromotoluene (PID)		88.5	%					

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Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10177.D
Report Date: 15-Jul-2014 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10177.D
Lab Smp Id: SH4521-4 Client Smp ID: FTA-MW-1-061814
Inj Date : 12-JUL-2014 04:49
Operator : AAB Inst ID: gc02.i
Smp Info : SH4521-4
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

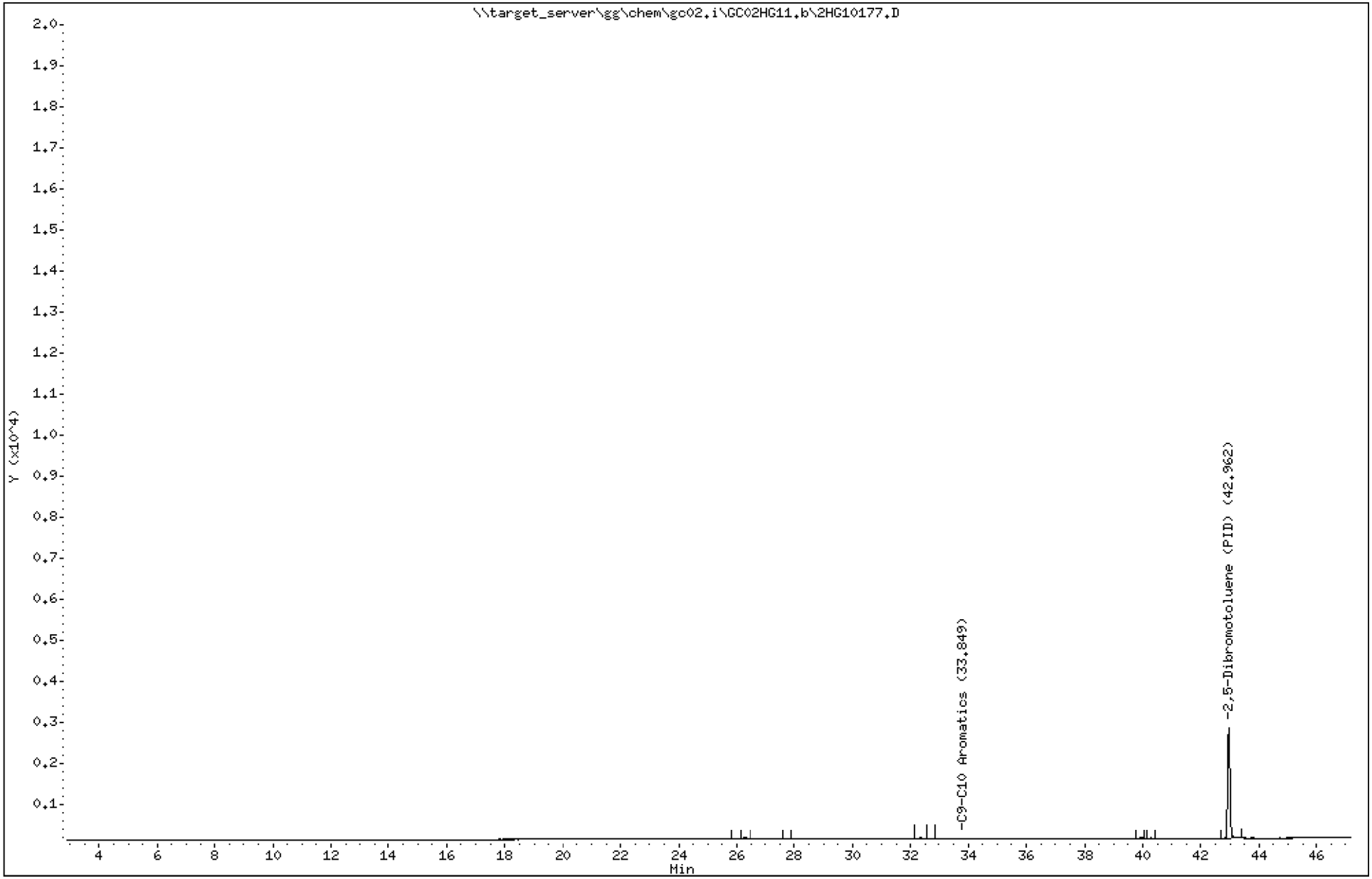
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.961	42.962	-0.001	302137	88.4975	88.5	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10177.D
Date : 12-JUL-2014 04:49
Client ID: FTA-MW-1-061814
Sample Info: SH4521-4
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Katahdin Analytical Services 11000077

Data File: 2HG10177.D
Report Date: 15-Jul-2014 09:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10177.D
Lab Smp Id: SH4521-4 Client Smp ID: FTA-MW-1-061814
Inj Date : 12-JUL-2014 04:49
Operator : AAB Inst ID: gc02.i
Smp Info : SH4521-4
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

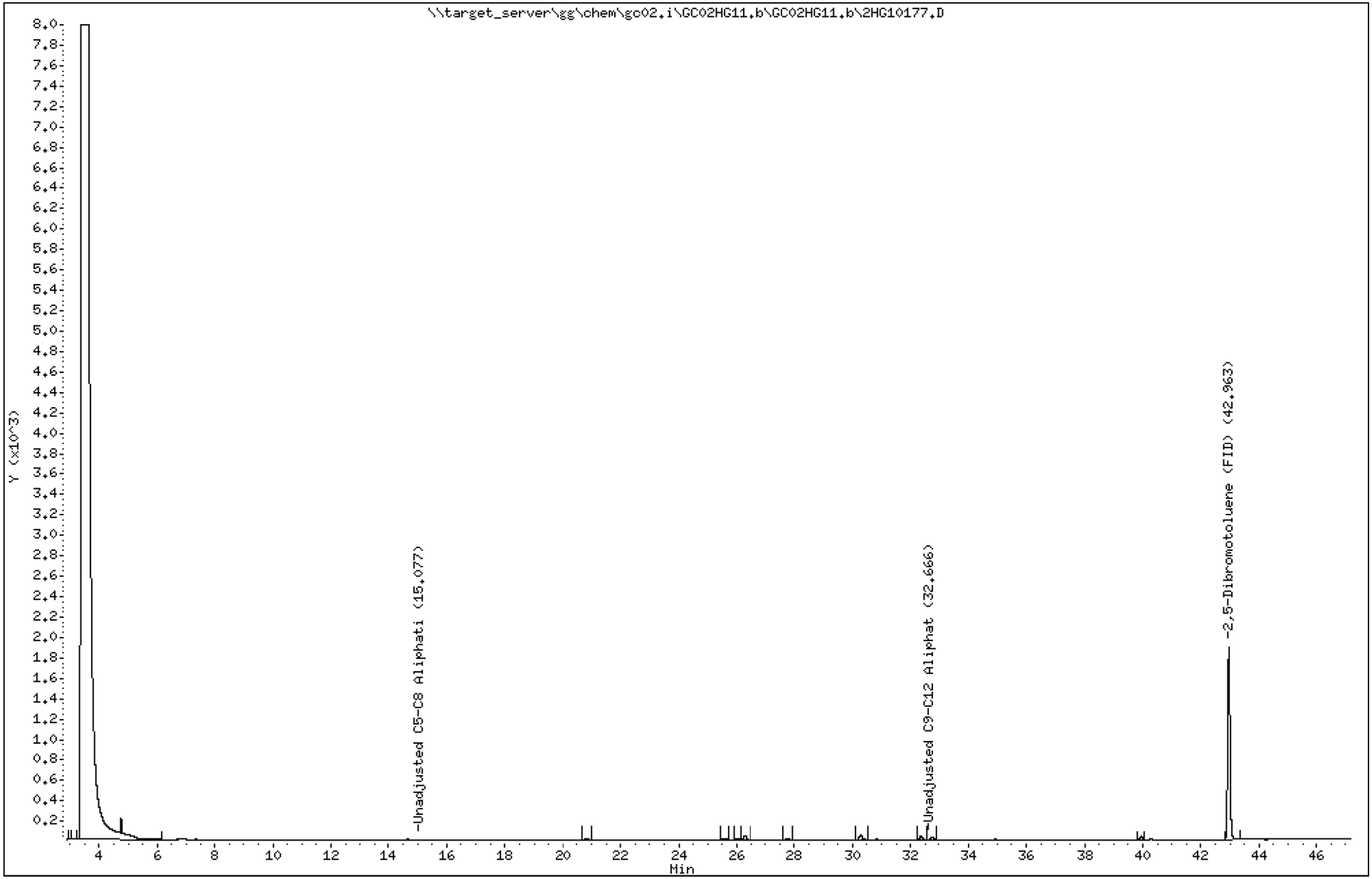
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.962	42.963	-0.001	211592	111.363	111	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10177.D
Date : 12-JUL-2014 04:49
Client ID: FTA-MW-1-061814
Sample Info: SH4521-4
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Katahdin Analytical Services 11000079

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4521-6
Client ID: FTA-GW-DUP02-061814
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10178.D

Sample Date: 18-JUN-14
Received Date: 20-JUN-14
Extract Date: 12-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 12-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		115.	%					
2,5-Dibromotoluene (PID)		91.4	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10178.D
Report Date: 15-Jul-2014 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10178.D
Lab Smp Id: SH4521-6 Client Smp ID: FTA-GW-DUP02-061814
Inj Date : 12-JUL-2014 05:43
Operator : AAB Inst ID: gc02.i
Smp Info : SH4521-6
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

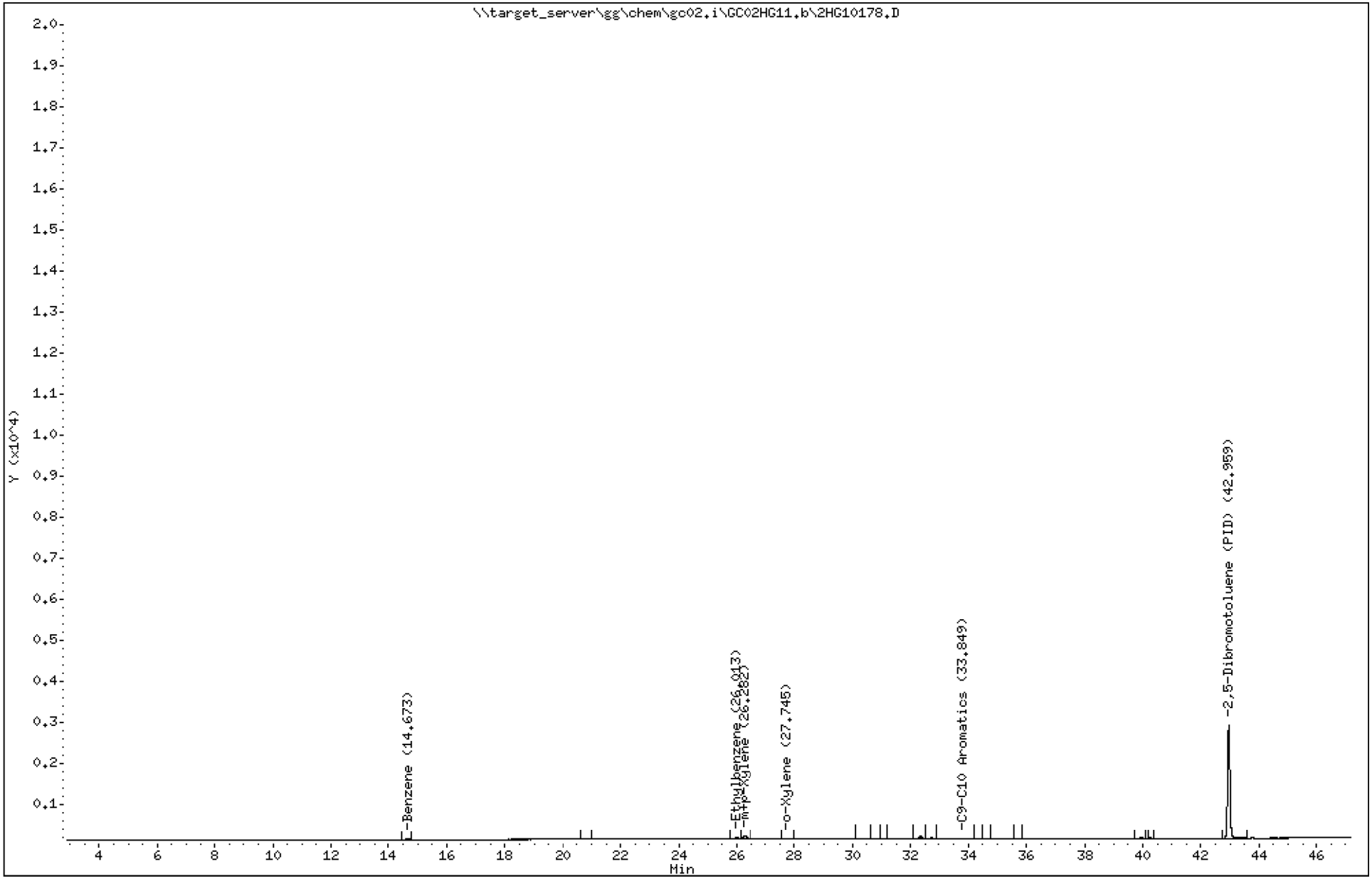
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
3 Benzene	14.673	14.656	0.017	1607	0.35285	0.353(a)	
5 Ethylbenzene	26.013	26.011	0.002	5056	1.36883	1.37(a)	
6 m+p-Xylene	26.282	26.282	0.000	14010	3.33484	3.33(a)	
7 o-Xylene	27.744	27.745	-0.001	3581	0.98361	0.984(a)	
$ 11 2,5-Dibromotoluene (PID)	42.959	42.962	-0.003	311948	91.3681	91.4	

QC Flag Legend

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

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10178.D
Date : 12-JUL-2014 05:43
Client ID: FTA-GW-DUP02-061814
Sample Info: SH4521-6
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Katahdin Analytical Services 11000082

Data File: 2HG10178.D
Report Date: 15-Jul-2014 09:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10178.D
Lab Smp Id: SH4521-6 Client Smp ID: FTA-GW-DUP02-061814
Inj Date : 12-JUL-2014 05:43
Operator : AAB Inst ID: gc02.i
Smp Info : SH4521-6
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

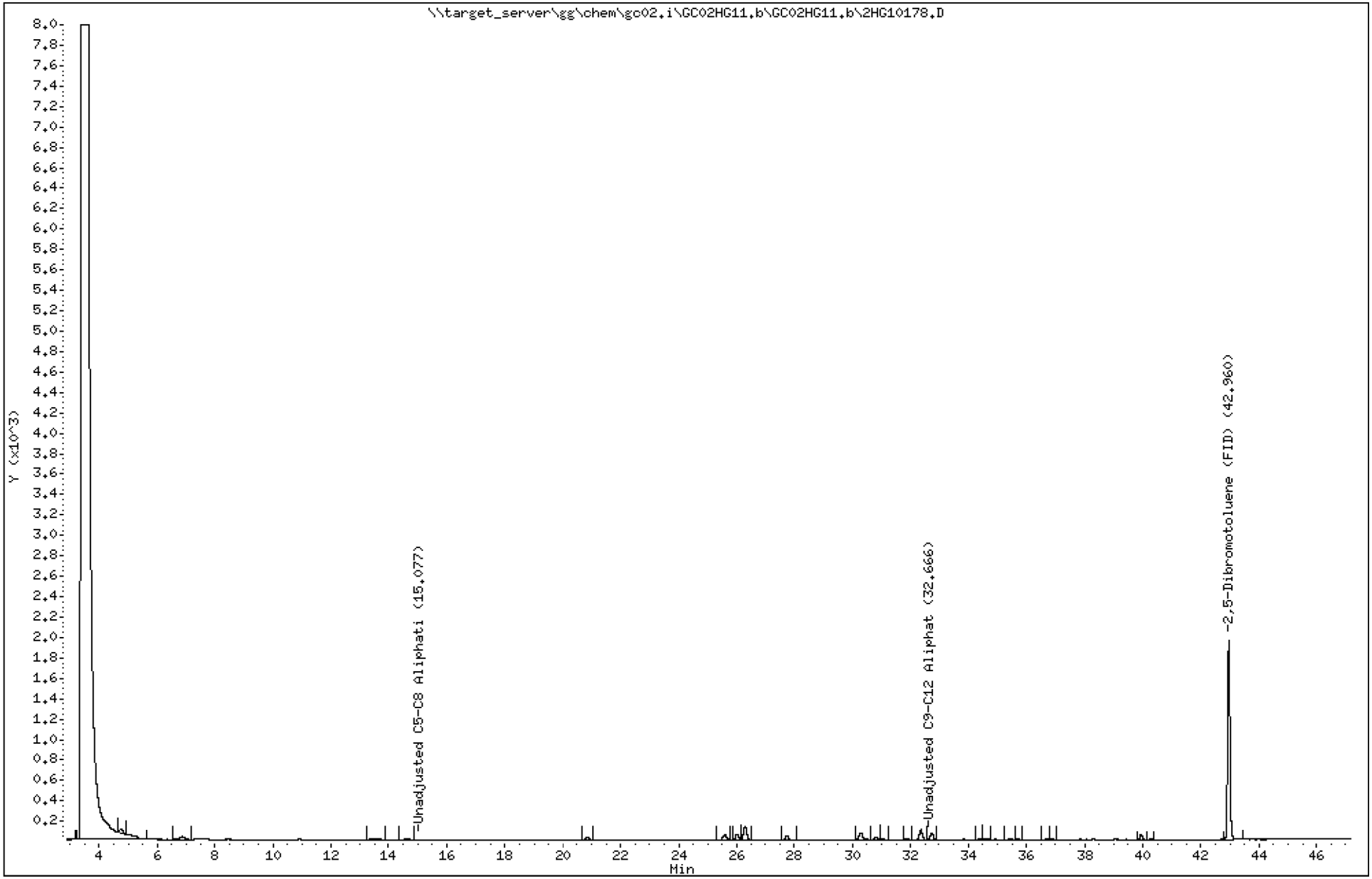
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.960	42.963	-0.003	219015	115.269	115	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10178.D
Date : 12-JUL-2014 05:43
Client ID: FTA-GW-DUP02-061814
Sample Info: SH4521-6
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Katahdin Analytical Services 11000084

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Tetra Tech NUS, Inc.
Lab ID: SH4521-8
Client ID: FTA-MW-210-061814
Project: NCTAMSLANT Cutler CTO
SDG: WE53-7
Lab File ID: 2HG10179.D

Sample Date: 19-JUN-14
Received Date: 20-JUN-14
Extract Date: 12-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 12-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		114.	%					
2,5-Dibromotoluene (PID)		91.2	%					

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P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gc02.i\GC02HG12.b\2HG10179.D
Report Date: 15-Jul-2014 09:13

Katahdin Analytical Services

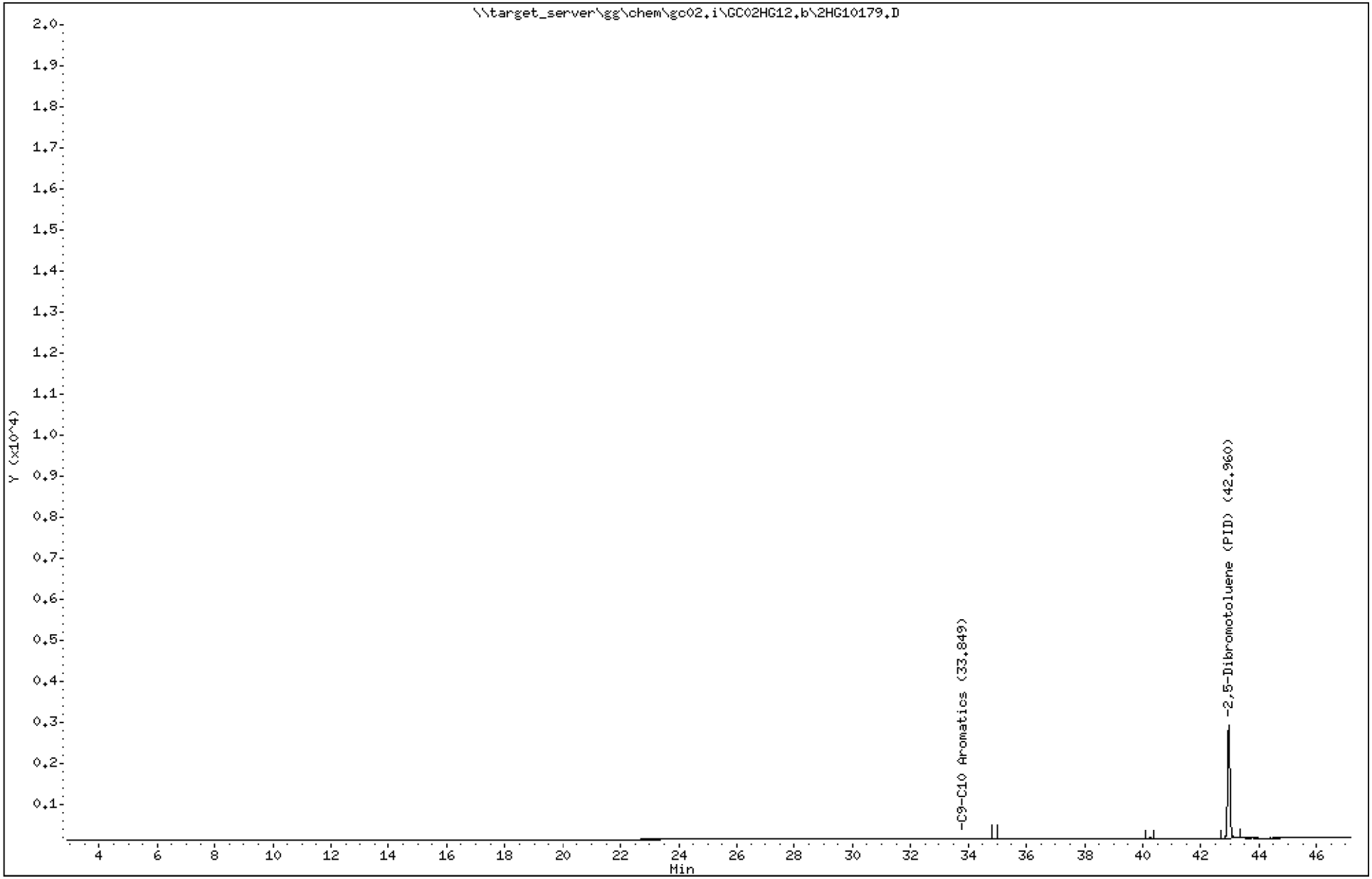
Data file : \\target_server\gg\chem\gc02.i\GC02HG12.b\2HG10179.D
Lab Smp Id: SH4521-8 Client Smp ID: FTA-MW-210-061814
Inj Date : 12-JUL-2014 08:28
Operator : AAB Inst ID: gc02.i
Smp Info : SH4521-8
Misc Info : WG146189,WG142498
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG12.b\VPHPID29.m
Meth Date : 13-Jul-2014 08:51 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.960	42.962	-0.002	311452	91.2230	91.2	

Data File: \\target_server\gg\chem\gc02.i\GC02HG12.b\2HG10179.D
Date : 12-JUL-2014 08:28
Client ID: FTA-MW-210-061814 Instrument: gc02.i
Sample Info: SH4521-8
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



Data File: 2HG10179.D
Report Date: 15-Jul-2014 09:13

Katahdin Analytical Services

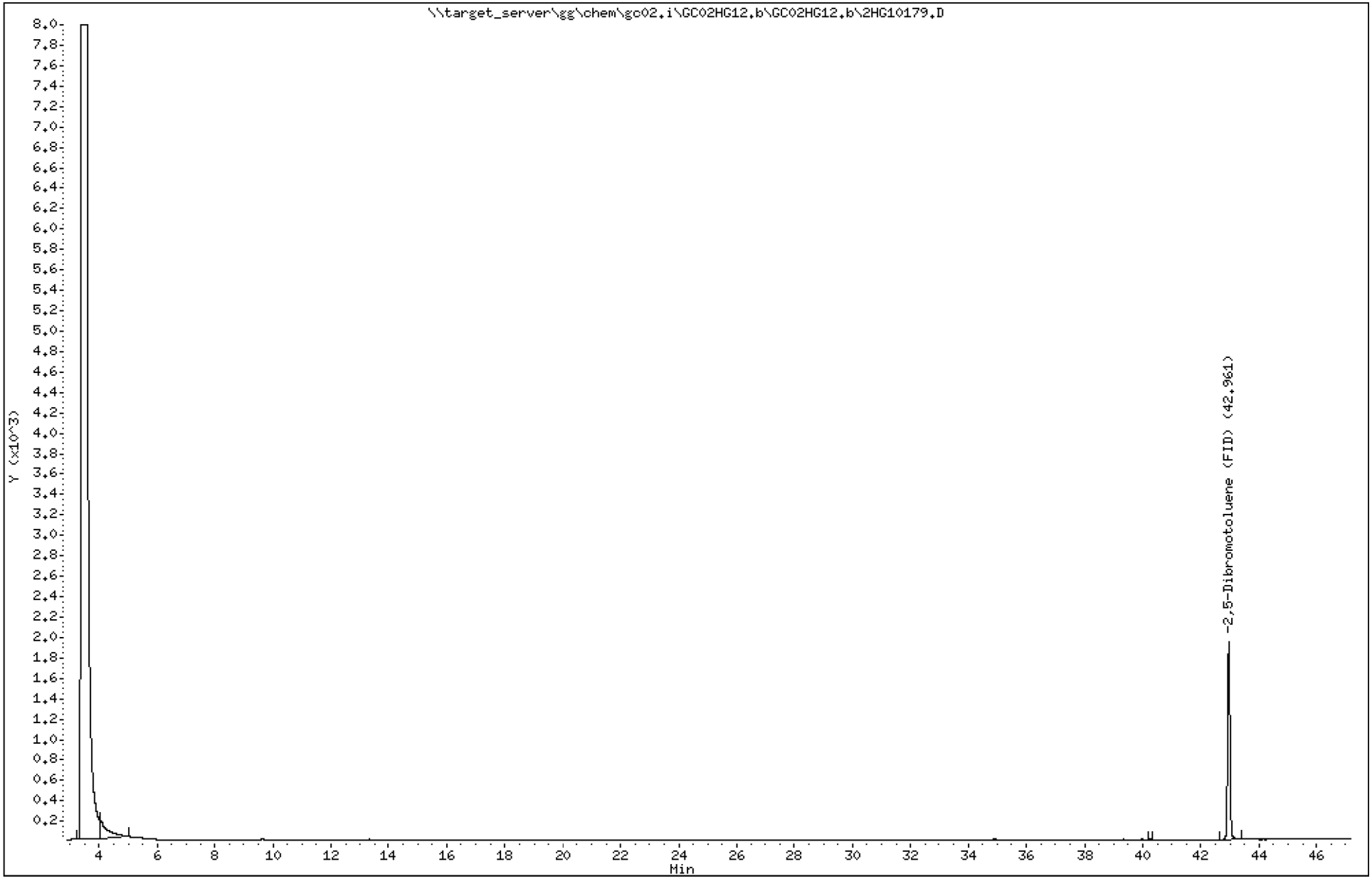
Data file : \\target_server\gg\chem\gc02.i\GC02HG12.b\GC02HG12.b\2HG10179.D
Lab Smp Id: SH4521-8 Client Smp ID: FTA-MW-210-061814
Inj Date : 12-JUL-2014 08:28
Operator : AAB Inst ID: gc02.i
Smp Info : SH4521-8
Misc Info : WG146189,WG142498
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG12.b\VPHPID29.m\VPHFID29.m
Meth Date : 13-Jul-2014 08:54 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.960	42.963	-0.003	217427	114.434	114	

Data File: \\target_server\gg\chem\gc02.i\GC02HG12.b\GC02HG12.b\2HG10179.D
Date : 12-JUL-2014 08:28
Client ID: FTA-MW-210-061814 Instrument: gc02.i
Sample Info: SH4521-8
Purge Volume: 0.0 Operator: AAB
Column phase: RTX-502.2 Column diameter: 0.53



Katahdin Analytical Services 11000089

Standards Data Section

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services **SDG:** WE53-7
Project : NCTAMSLANT Cutler CTO WE53 **Instrument ID:** GC02
Lab File IDs : 08-MAY-14 18:08
09-MAY-14 04:57

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Crv					Max	
	1.0000	5.0000	10.0000	50.0000	100.0000	300.0000	New	b	m1	m2	%RSD	%RSD	
C9-C10 Aromatic	3480	3402	3294	4492	4399	3944	AVG		3835		13.63726	25.00000	M (
Methyl tert-butylether	1628	1705	1638	2232	2198	1698	AVG		1850		15.39838	25.00000	O
Benzene	3452	4190	4043	5415	5319	4906	AVG		4554		17.17725	25.00000	O
Toluene	3184	3879	3712	4955	4891	4529	AVG		4191		16.96510	25.00000	O
Ethylbenzene	2745	3351	3285	4415	4358	4009	AVG		3694		18.14513	25.00000	O
m+p-Xylene	3275	3913	3814	5014	4849	4342	AVG		4201		15.75720	25.00000	O
o-Xylene	2780	3350	3218	4359	4277	3861	AVG		3641		17.25243	25.00000	O
1,2,4-trimethylbenzene	3480	3402	3294	4492	4399	3944	AVG		3835		13.63726	25.00000	O
Naphthalene	2935	3141	2885	3777	3556	2507	AVG		3133		14.88265	25.00000	O
2,5-Dibromotoluene (PID)	10587	17271	30016	162537	345305	+++++	LNR	0.09552	3418		0.99819	0.99000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services **SDG:** WE53-7
Project : NCTAMSLANT Cutler CTO WE53 **Instrument ID:** GC02
Lab File IDs : 08-MAY-14 18:08
09-MAY-14 00:26

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Crv					Max	
	1.0000	5.0000	10.0000	50.0000	100.0000	300.0000	New	b	m1	m2	%RSD	%RSD	
C5-C8 Aliphatic	9119	55452	116841	751536	1534470	4400902	LNR	0.12774	4916		0.99961	0.99000	M (
C9-C12 Aliphatic	4387	3854	4151	4868	4743	4050	AVG		4342		9.20735	25.00000	M (
n-Pentane	2768	15860	33983	230249	459534	1333267	LNR	0.22051	4467		0.99969	0.99000	O
2-Methylpentane	2920	19589	40591	259354	521995	1512467	LNR	0.08225	5064		0.99975	0.99000	O
Methyl tert-butylether	1997	2187	2265	3034	2981	2333	AVG		2466		17.60463	25.00000	O
2,2,4-Trimethylpentane	3431	20003	42267	261933	552941	1555168	LNR	-0.12798	5217		0.99938	0.99000	O
Benzene	3828	4960	4950	6517	6429	5999	AVG		5447		19.28681	25.00000	O
Toluene	4292	5076	4917	6627	6586	6170	AVG		5611		17.46648	25.00000	O
n-Nonane	3934	3979	4249	4931	4952	4507	AVG		4425		10.16218	25.00000	O
n-Decane	4416	3560	3904	4503	4259	3267	AVG		3985		12.46033	25.00000	O
Ethylbenzene	4317	5075	4935	6664	6631	6145	AVG		5628		17.50057	25.00000	O
m+p-Xylene	4520	5110	5006	6743	6718	6295	AVG		5732		16.90754	25.00000	O
o-Xylene	4519	5194	5002	6812	6713	6237	AVG		5746		16.82652	25.00000	O
1,2,4-trimethylbenzene	5409	5137	4920	6695	6624	6049	AVG		5806		13.13949	25.00000	O
n-Butylcyclohexane	4357	4149	4399	5233	5227	4833	AVG		4700		9.94037	25.00000	O
Naphthalene	3857	3958	3534	4438	4233	3033	AVG		3842		13.11771	25.00000	O
2,5-Dibromotoluene (FID)	+++++	2119	1832	1937	2071	1541	AVG		1900		12.12549	25.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10062.D
Report Date: 21-May-2014 15:15

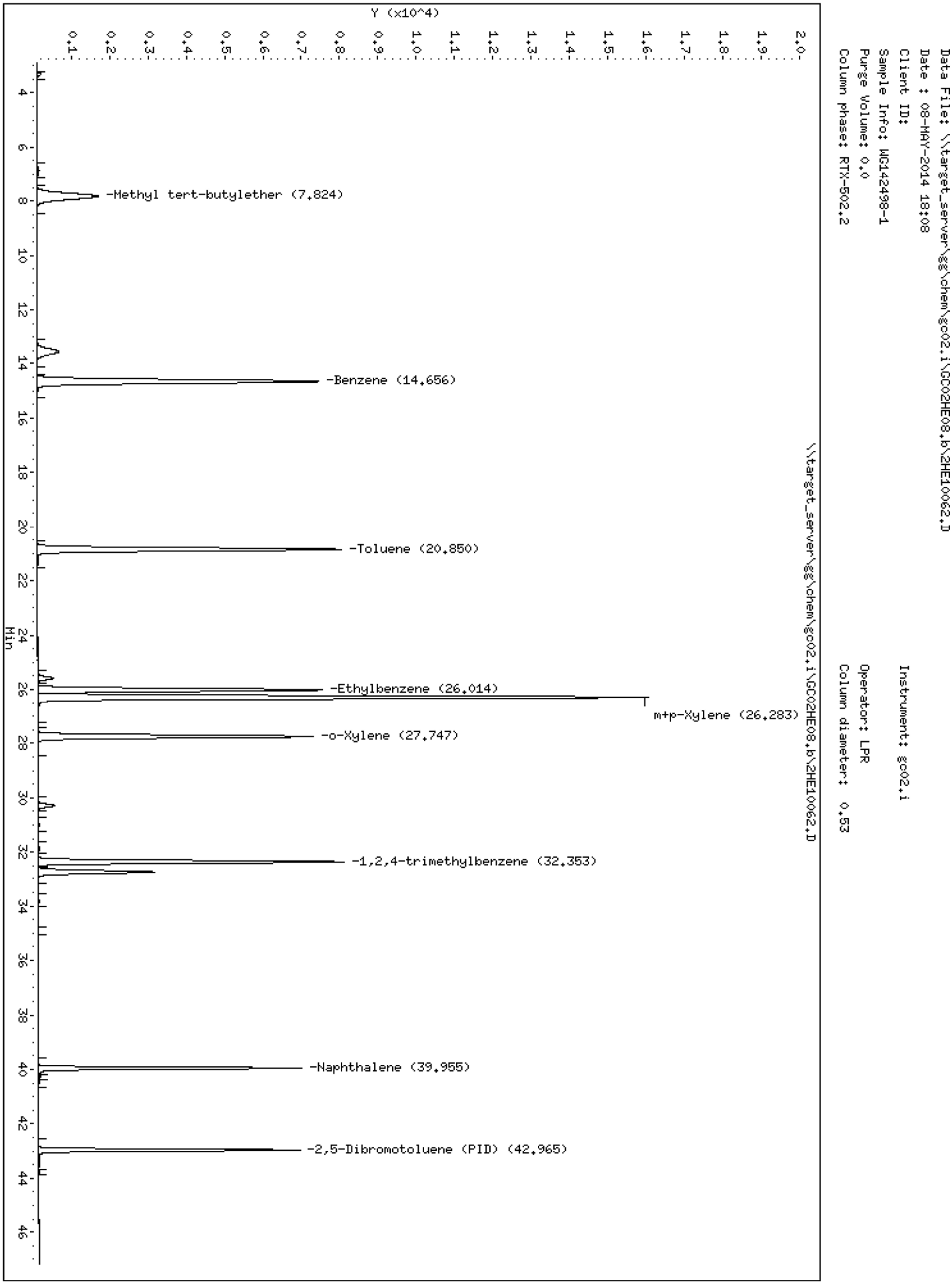
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10062.D
Lab Smp Id: WG142498-1
Inj Date : 08-MAY-2014 18:08
Operator : LPR Inst ID: gc02.i
Smp Info : WG142498-1
Misc Info :
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m
Meth Date : 19-May-2014 12:46 lredmond Quant Type: ESTD
Cal Date : 08-MAY-2014 18:08 Cal File: 2HE10062.D
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: Peaks.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
M 1 C9-C10 Aromatic				1183221	300.000	308	
2 Methyl tert-butylether	7.824	7.826	-0.002	509267	300.000	275	
3 Benzene	14.656	14.656	0.000	1471949	300.000	323	
4 Toluene	20.849	20.852	-0.003	1358557	300.000	324	
5 Ethylbenzene	26.014	26.011	0.003	1202683	300.000	326	
6 m+p-Xylene	26.283	26.282	0.001	2605496	600.000	620	
7 o-Xylene	27.746	27.745	0.001	1158266	300.000	318	
8 1,2,4-trimethylbenzene	32.353	32.348	0.005	1183221	300.000	308	
10 Naphthalene	39.955	39.951	0.004	751975	300.000	240	
$ 11 2,5-Dibromotoluene (PID)	42.965	42.962	0.003	764604	300.000	224	


Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10062.D
Date : 08-MAY-2014 18:08
Client ID:
Sample Info: WG142498-1
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: LPR
Column diameter: 0.53
\\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10062.D
Y (x10^4)
Min
-Methyl tert-butylether (7.824)
-Benzene (14.656)
-Toluene (20.850)
-Ethylbenzene (26.014)
m+p-Xylene (26.283)
-o-Xylene (27.747)
-1,2,4-trimethylbenzene (32.353)
-Naphthalene (39.955)
-2,5-Dibromotoluene (PID) (42.965)

Data File: 2HE10062.D
Report Date: 21-May-2014 15:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10062.D
Lab Smp Id: WG142498-2
Inj Date : 08-MAY-2014 18:08
Operator : LPR Inst ID: gc02.i
Smp Info : WG142498-2
Misc Info :
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m\VPHFID29.m
Meth Date : 21-May-2014 15:14 gc02.i Quant Type: ESTD
Cal Date : 08-MAY-2014 18:08 Cal File: 2HE10062.D
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: Peaks.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

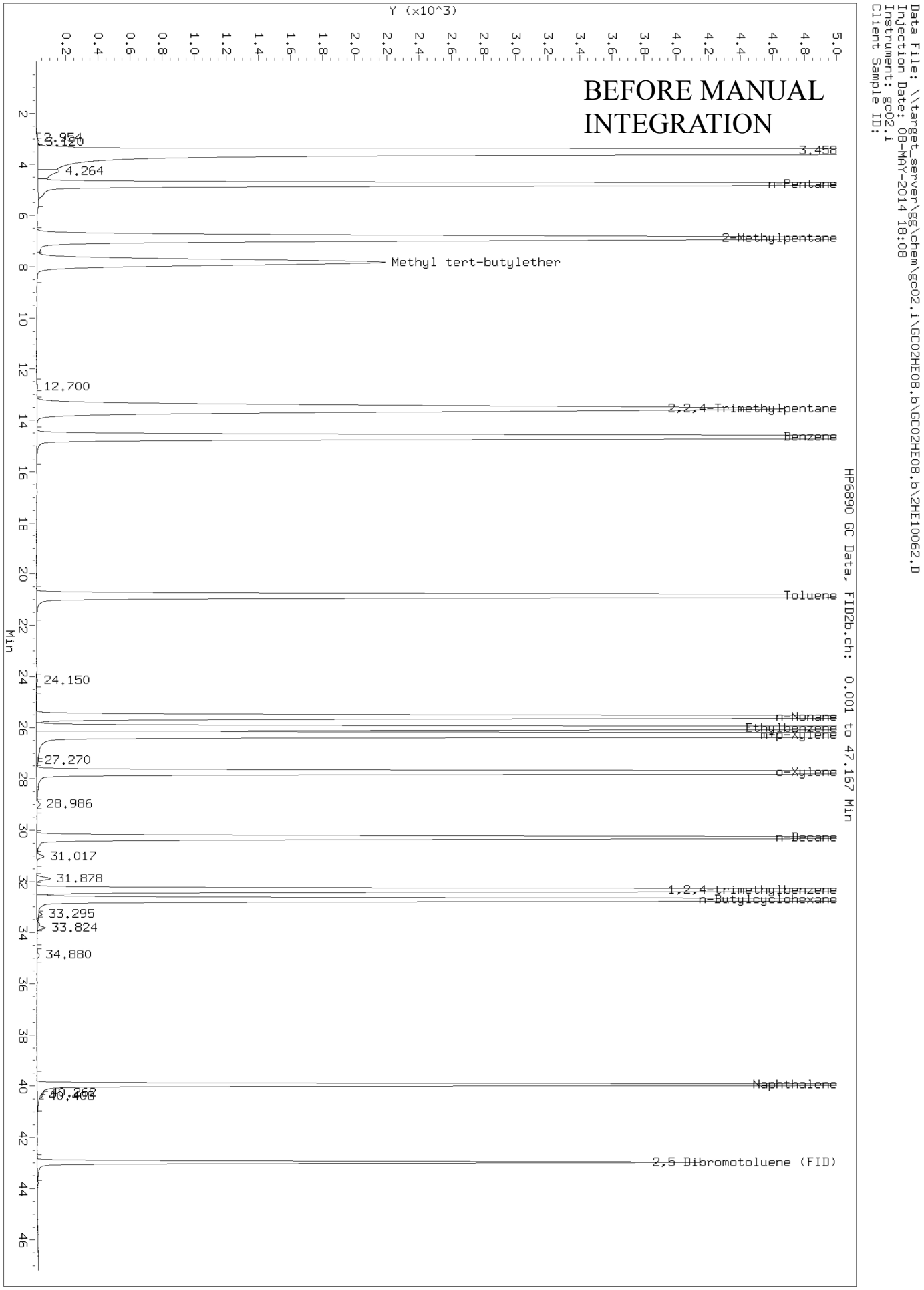
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
M 1 C5-C8 Aliphatic				4400902	900.000		
M 2 C9-C12 Aliphatic				2429901	600.000		
5 n-Pentane	4.787	4.774	0.013	1333267	300.000	299(M)	M2
6 2-Methylpentane	6.884	6.875	0.009	1512467	300.000	299	
7 Methyl tert-butylether	7.827	7.825	0.002	700024	300.000	284	
8 2,2,4-Trimethylpentane	13.549	13.551	-0.002	1555168	300.000	298	
9 Benzene	14.655	14.656	-0.001	1799738	300.000	330	
11 Toluene	20.850	20.853	-0.003	1851085	300.000	330	
12 n-Nonane	25.585	25.579	0.006	1352150	300.000	306	
14 Ethylbenzene	26.015	26.012	0.003	1843592	300.000	328	
15 m+p-Xylene	26.291	26.284	0.007	3776976	600.000	659	
16 o-Xylene	27.748	27.746	0.002	1871142	300.000	326	
13 n-Decane	30.285	30.283	0.002	980116	300.000	246	
18 1,2,4-trimethylbenzene	32.354	32.349	0.005	1814624	300.000	312	
19 n-Butylcyclohexane	32.728	32.724	0.004	1449785	300.000	308	
20 Naphthalene	39.956	39.952	0.004	910029	300.000	237	
$ 21 2,5-Dibromotoluene (FID)	42.967	42.963	0.004	462248	300.000	243	

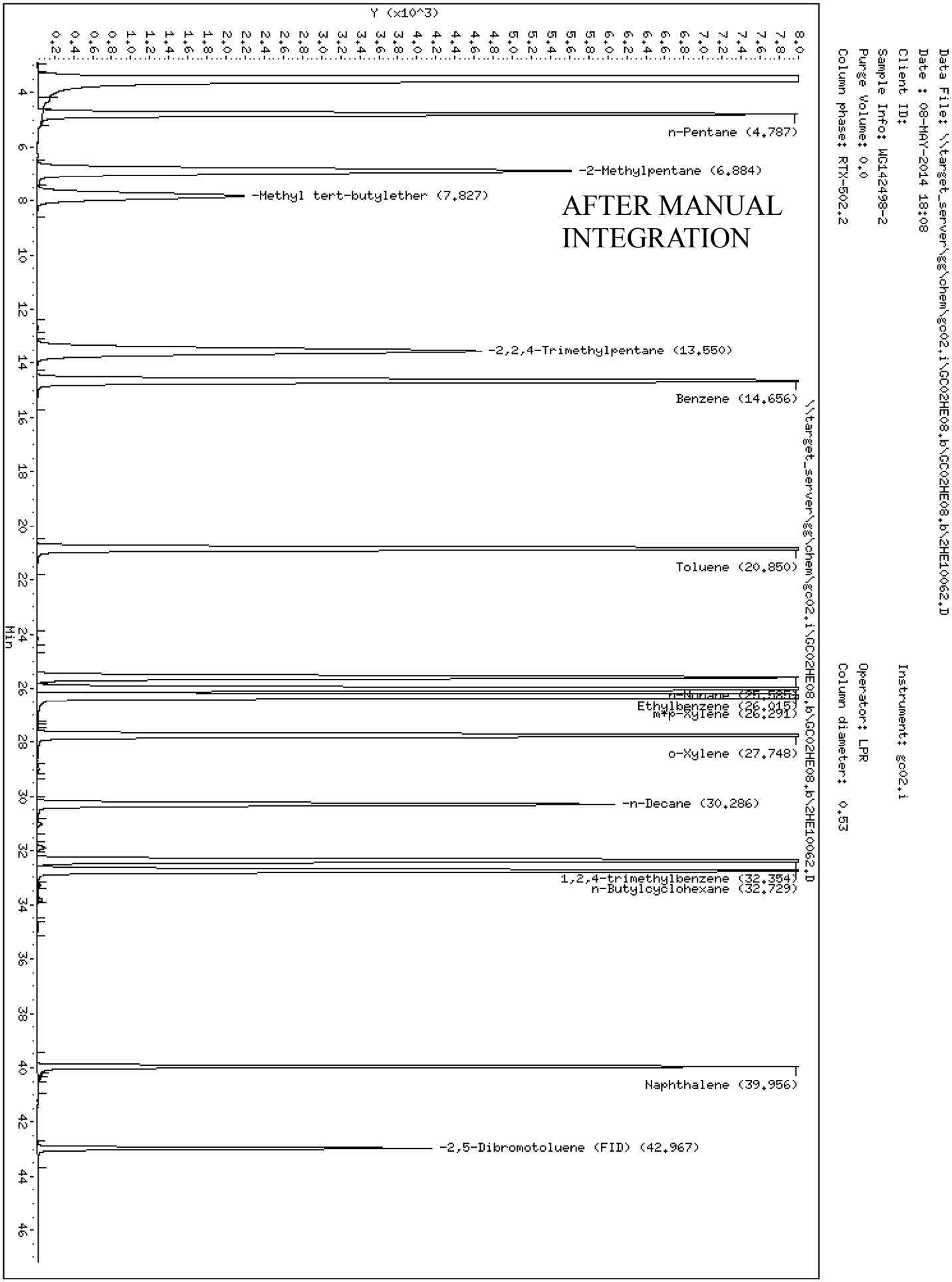
LPR

9:40 am, May 22, 2014

QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10062.D
Injection Date: 08-MAY-2014 18:08
Instrument: gc02.i
Client Sample ID:
BEFORE MANUAL INTEGRATION
HP6890 GC Data, FID2b.ch: 0.001 to 47.167 Min
Y (x10^3)
Min
3.954
3.120
3.458
4.264
n-Pentane
2-Methylpentane
Methyl tert-butylether
12.700
2,2,4-Trimethylpentane
Benzene
Toluene
24.150
n-Nonane
Ethylbenzene
m+p-Xylene
27.270
o-Xylene
28.986
n-Decane
31.017
31.878
1,2,4-trimethylbenzene
n-Butylcyclohexane
33.295
33.824
34.880
Naphthalene
40.262
40.408
2,5 Dibromotoluene (FID)


Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10062.D
Date : 08-MAY-2014 18:08
Client ID:
Sample Info: WG142498-2
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: LPR
Column diameter: 0.53
Y (x10^3)
Min
n-Pentane (4.787)
-2-Methylpentane (6.884)
-Methyl tert-butylether (7.827)
AFTER MANUAL INTEGRATION
-2,2,4-Trimethylpentane (13.550)
Benzene (14.656)
Toluene (20.850)
n-Nonane (25.885)
Ethylbenzene (26.015)
m+p-Xylene (26.291)
o-Xylene (27.748)
-n-Decane (30.286)
1,2,4-trimethylbenzene (32.354)
n-Butylcyclohexane (32.729)
Naphthalene (39.956)
-2,5-Dibromotoluene (FID) (42.967)
\\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10062.D

Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10063.D
Report Date: 21-May-2014 15:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10063.D
Lab Smp Id: WG142498-3
Inj Date : 08-MAY-2014 19:01
Operator : LPR Inst ID: gc02.i
Smp Info : WG142498-3
Misc Info :
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m
Meth Date : 19-May-2014 12:46 lredmond Quant Type: ESTD
Cal Date : 08-MAY-2014 19:01 Cal File: 2HE10063.D
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: Peaks.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

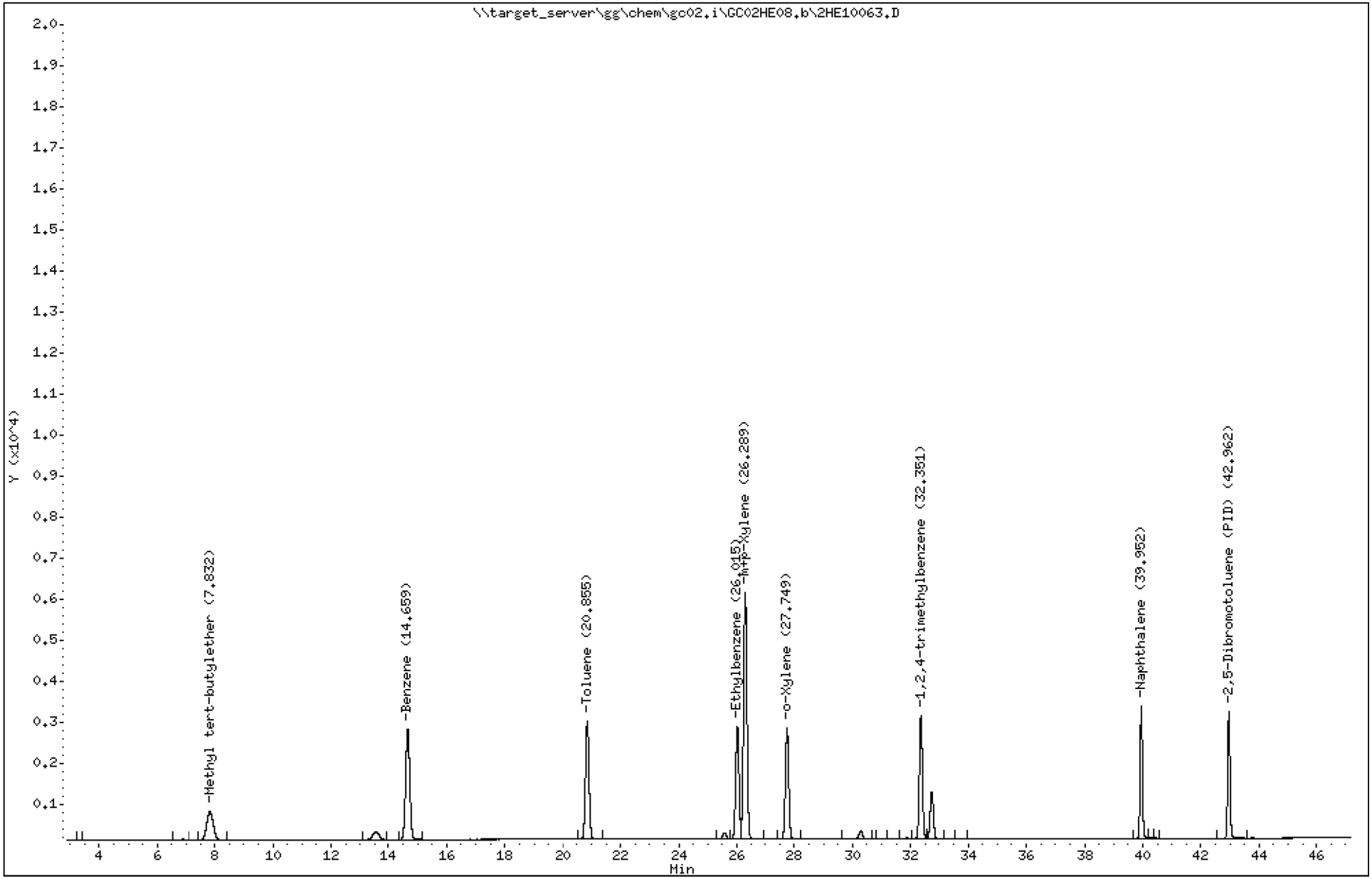
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
M 1 C9-C10 Aromatic				439889	100.000	115	
2 Methyl tert-butylether	7.832	7.826	0.006	219836	100.000	119	
3 Benzene	14.659	14.656	0.003	531936	100.000	117	
4 Toluene	20.855	20.852	0.003	489088	100.000	117	
5 Ethylbenzene	26.015	26.011	0.004	435804	100.000	118	
6 m+p-Xylene	26.288	26.282	0.006	969737	200.000	231	
7 o-Xylene	27.748	27.745	0.003	427670	100.000	117	
8 1,2,4-trimethylbenzene	32.350	32.348	0.002	439889	100.000	115	
10 Naphthalene	39.951	39.951	0.000	355644	100.000	113	
$ 11 2,5-Dibromotoluene (PID)	42.962	42.962	0.000	345305	100.000	101	

Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10063.D
Date : 08-MAY-2014 19:01
Client ID:
Sample Info: WG142498-3
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i

Operator: LPR
Column diameter: 0.53



Data File: 2HE10063.D
Report Date: 21-May-2014 15:15

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Data file : \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10063.D
Lab Smp Id: WG142498-4
Inj Date : 08-MAY-2014 19:01
Operator : LPR Inst ID: gc02.i
Smp Info : WG142498-4
Misc Info :
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m\VPHFID29.m
Meth Date : 21-May-2014 15:14 gc02.i Quant Type: ESTD
Cal Date : 08-MAY-2014 19:01 Cal File: 2HE10063.D
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: Peaks.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

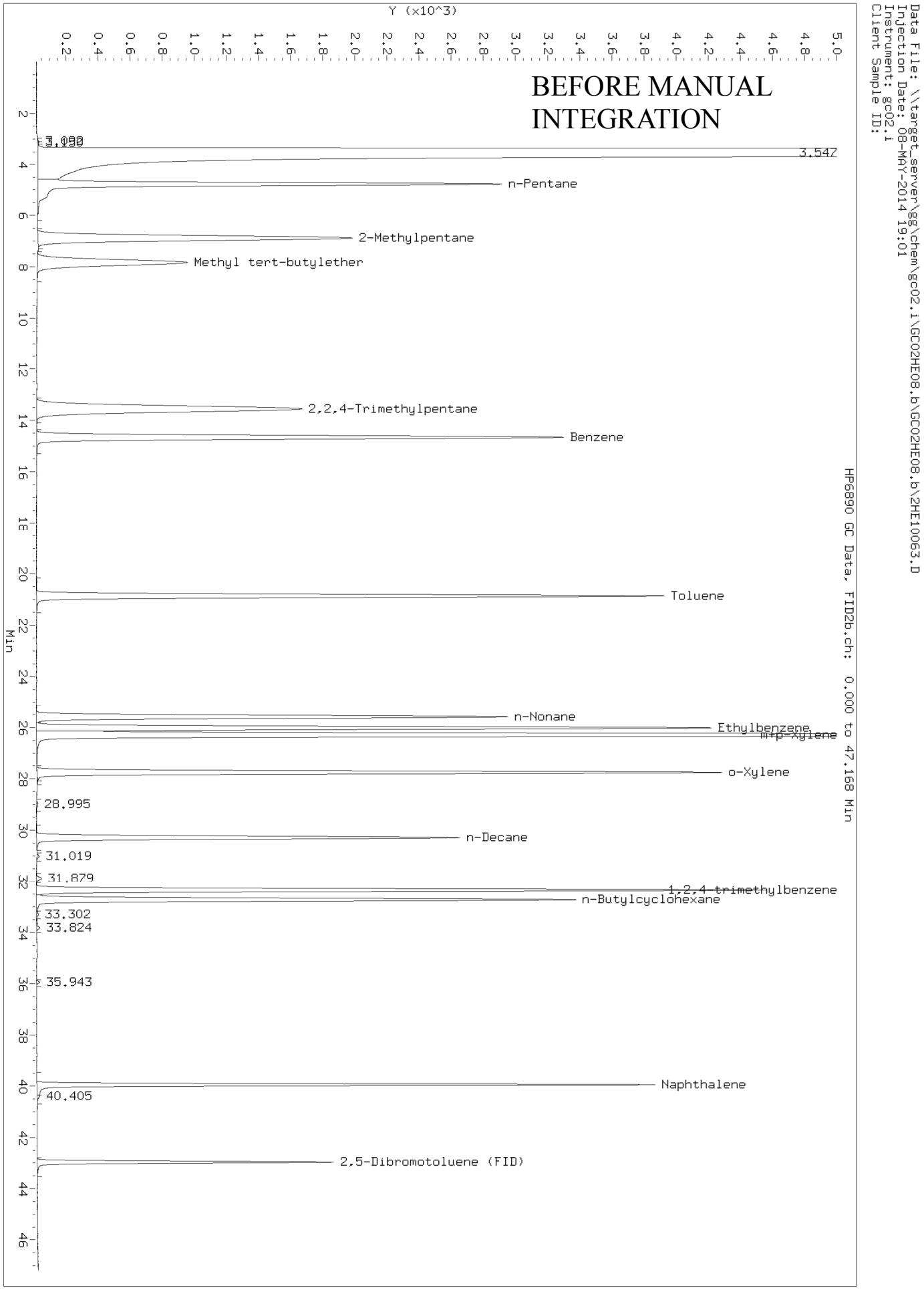
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
M 1 C5-C8 Aliphatic				1534470	300.000		
M 2 C9-C12 Aliphatic				948649	200.000		
5 n-Pentane	4.779	4.774	0.005	459534	100.000	103(M)	M2
6 2-Methylpentane	6.881	6.875	0.006	521995	100.000	103	
7 Methyl tert-butylether	7.834	7.825	0.009	298076	100.000	121	
8 2,2,4-Trimethylpentane	13.555	13.551	0.004	552941	100.000	106	
9 Benzene	14.660	14.656	0.004	642868	100.000	118	
11 Toluene	20.856	20.853	0.003	658567	100.000	117	
12 n-Nonane	25.583	25.579	0.004	495187	100.000	112	
14 Ethylbenzene	26.016	26.012	0.004	663053	100.000	118	
15 m+p-Xylene	26.289	26.284	0.005	1343592	200.000	234	
16 o-Xylene	27.749	27.746	0.003	671263	100.000	117	
13 n-Decane	30.285	30.283	0.002	425924	100.000	107	
18 1,2,4-trimethylbenzene	32.351	32.349	0.002	662421	100.000	114	
19 n-Butylcyclohexane	32.726	32.724	0.002	522725	100.000	111	
20 Naphthalene	39.952	39.952	0.000	423299	100.000	110	
$ 21 2,5-Dibromotoluene (FID)	42.963	42.963	0.000	207095	100.000	109	

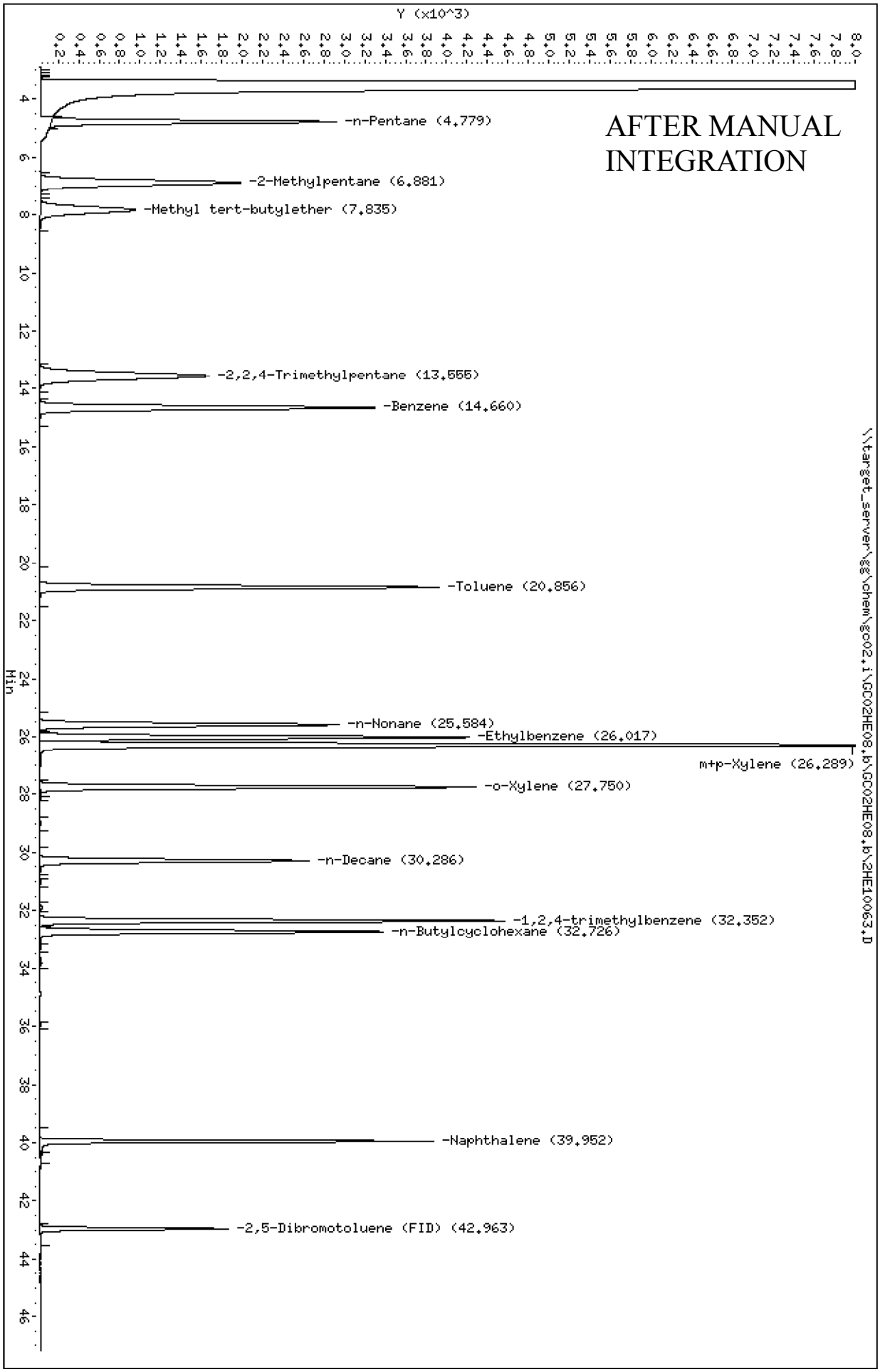
LPR

9:40 am, May 22, 2014

QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10063.D
Injection Date: 08-MAY-2014 19:01
Instrument: gc02.i
Client Sample ID:
HP6890 GC Data, FID2b.ch: 0.000 to 47.168 Min
Y (x10^3)
BEFORE MANUAL INTEGRATION
3.090
3.547
n-Pentane
2-Methylpentane
Methyl tert-butylether
2,2,4-Trimethylpentane
Benzene
Toluene
n-Nonane
Ethylbenzene
m+p-Xylene
o-Xylene
28.995
n-Decane
31.019
31.879
1,2,4-trimethylbenzene
n-Butylcyclohexane
33.302
33.824
35.943
Naphthalene
40.405
2,5-Dibromotoluene (FID)
Min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Date : 08-MAY-2014 19:01
Client ID:
Sample Info: WG142498-4
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: LPR
Column diameter: 0.53
AFTER MANUAL INTEGRATION
Y (x10^3)
Min
-n-Pentane (4.779)
-2-Methylpentane (6.881)
-Methyl tert-butylether (7.835)
-2,2,4-Trimethylpentane (13.555)
-Benzene (14.660)
-Toluene (20.856)
-n-Nonane (25.584)
-Ethylbenzene (26.017)
m+p-Xylene (26.289)
-o-Xylene (27.750)
-n-Decane (30.286)
-1,2,4-trimethylbenzene (32.352)
-n-Butylcyclohexane (32.726)
-Naphthalene (39.952)
-2,5-Dibromotoluene (FID) (42.963)
\\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10063.D

Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10064.D
Report Date: 21-May-2014 15:15

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Data file : \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10064.D
Lab Smp Id: WG142498-5
Inj Date : 08-MAY-2014 19:55
Operator : LPR Inst ID: gc02.i
Smp Info : WG142498-5
Misc Info :
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m
Meth Date : 19-May-2014 12:46 lredmond Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: Peaks.sub
Target Version: 4.12
Processing Host: V200T1

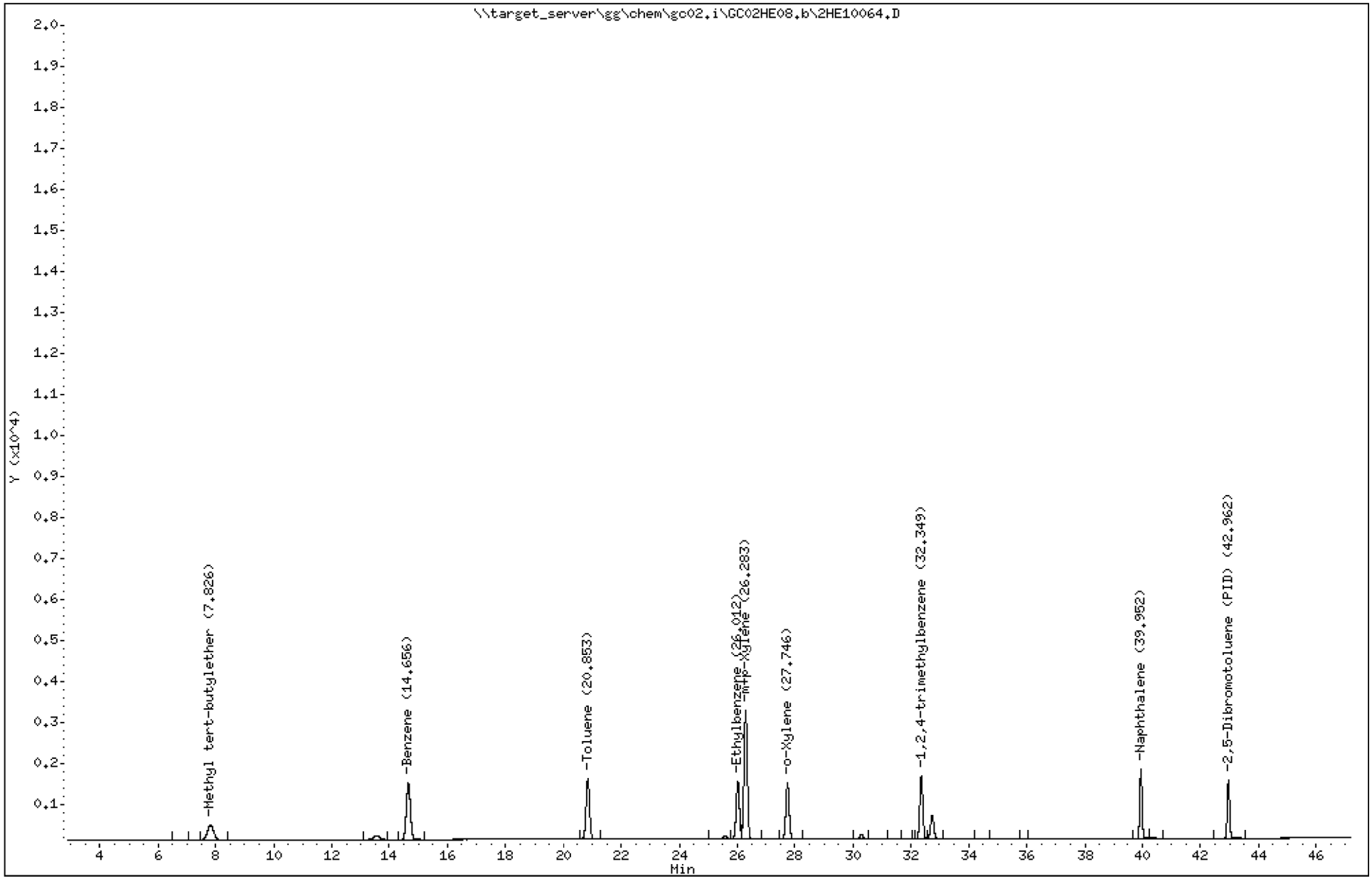
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
M 1 C9-C10 Aromatic				224578	50.0000	58.6	
2 Methyl tert-butylether	7.826	7.826	0.000	111597	50.0000	60.3	
3 Benzene	14.656	14.656	0.000	270771	50.0000	59.4	
4 Toluene	20.852	20.852	0.000	247731	50.0000	59.1	
5 Ethylbenzene	26.011	26.011	0.000	220742	50.0000	59.8	
6 m+p-Xylene	26.282	26.282	0.000	501401	100.000	119	
7 o-Xylene	27.745	27.745	0.000	217930	50.0000	59.8	
8 1,2,4-trimethylbenzene	32.348	32.348	0.000	224578	50.0000	58.6	
10 Naphthalene	39.951	39.951	0.000	188855	50.0000	60.3	
$ 11 2,5-Dibromotoluene (PID)	42.962	42.962	0.000	162537	50.0000	47.6	

Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10064.D
Date : 08-MAY-2014 19:55
Client ID:
Sample Info: WG142498-5
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: LPR
Column diameter: 0.53



Data File: 2HE10064.D
Report Date: 21-May-2014 15:29

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Data file : \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10064.D
Lab Smp Id: WG142498-6 Client Smp ID: Initial Calibration
Inj Date : 08-MAY-2014 19:55
Operator : LPR Inst ID: gc02.i
Smp Info : WG142498-6
Misc Info :
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m\VPHFID29.m
Meth Date : 21-May-2014 15:28 gc02.i Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: Peaks.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
M 1 C5-C8 Aliphatic				751536	150.000		
M 2 C9-C12 Aliphatic				486804	100.000		
5 n-Pentane	4.773	4.774	-0.001	230249	50.0000	51.8(M)	M2
6 2-Methylpentane	6.875	6.875	0.000	259354	50.0000	51.3	
7 Methyl tert-butylether	7.825	7.825	0.000	151680	50.0000	61.5	
8 2,2,4-Trimethylpentane	13.550	13.551	-0.001	261933	50.0000	50.1	
9 Benzene	14.656	14.656	0.000	325859	50.0000	59.8	
11 Toluene	20.853	20.853	0.000	331374	50.0000	59.0	
12 n-Nonane	25.579	25.579	0.000	246528	50.0000	55.7	
14 Ethylbenzene	26.012	26.012	0.000	333184	50.0000	59.2	
15 m+p-Xylene	26.284	26.284	0.000	674333	100.000	118	
16 o-Xylene	27.746	27.746	0.000	340584	50.0000	59.3	
13 n-Decane	30.283	30.283	0.000	225170	50.0000	56.5	
18 1,2,4-trimethylbenzene	32.349	32.349	0.000	334769	50.0000	57.7	
19 n-Butylcyclohexane	32.724	32.724	0.000	261634	50.0000	55.7	
20 Naphthalene	39.952	39.952	0.000	221893	50.0000	57.8	
$ 21 2,5-Dibromotoluene (FID)	42.963	42.963	0.000	96838	50.0000	51.0	

LPR

9:40 am, May 22, 2014

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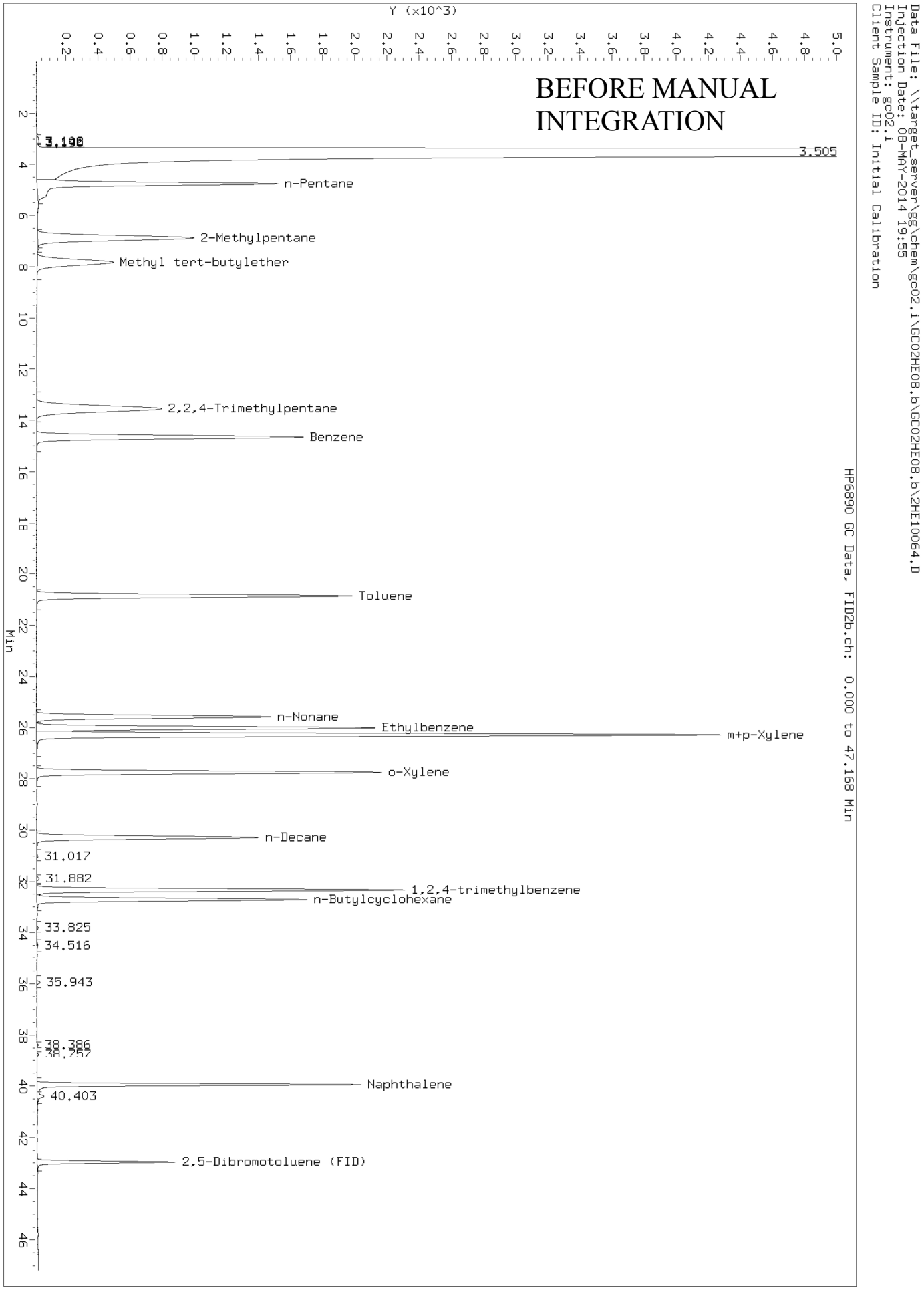
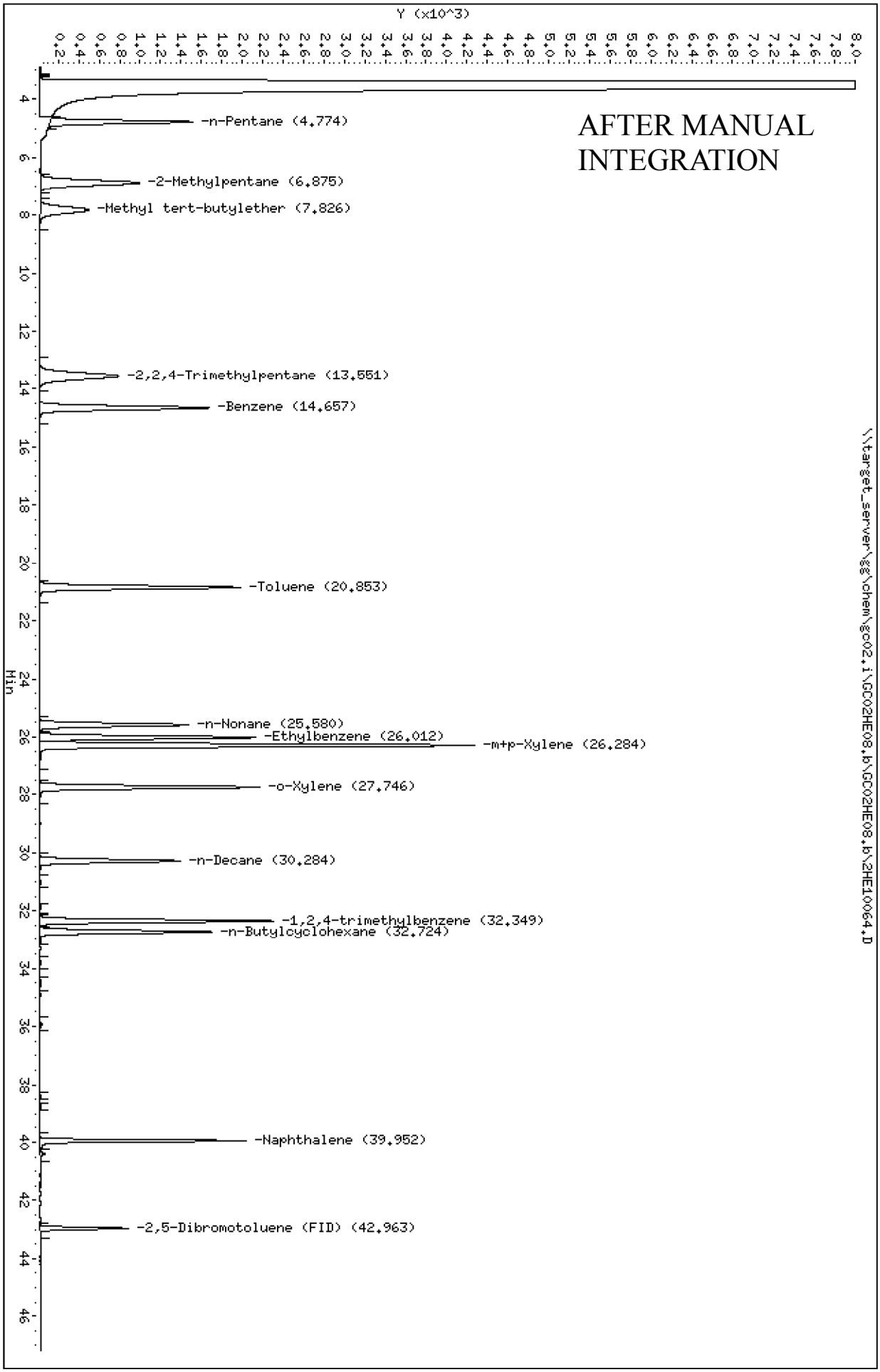
M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10064.D
Injection Date: 08-MAY-2014 19:55
Instrument: gc02.i
Client Sample ID: Initial Calibration
HP6890 GC Data, FID2b.ch: 0.000 to 47.168 Min
Y (x10^3)
BEFORE MANUAL INTEGRATION
3.106
3.505
n-Pentane
2-Methylpentane
Methyl tert-butylether
2,2,4-Trimethylpentane
Benzene
Toluene
n-Nonane
Ethylbenzene
m+p-Xylene
o-Xylene
n-Decane
31.017
31.882
1,2,4-trimethylbenzene
n-Butylcyclohexane
33.825
34.516
35.943
38.386
38.757
Naphthalene
40.403
2,5-Dibromotoluene (FID)
Min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Date : 08-MAY-2014 19:55
Client ID: Initial Calibration
Sample Info: WG142498-6
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: LPR
Column diameter: 0.53
\\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10064.D
Y (x10^3)
Min
AFTER MANUAL INTEGRATION
-n-Pentane (4.774)
-2-Methylpentane (6.875)
-Methyl tert-butylether (7.826)
-2,2,4-Trimethylpentane (13.551)
-Benzene (14.657)
-Toluene (20.853)
-n-Nonane (25.580)
-Ethylbenzene (26.012)
-m+p-Xylene (26.284)
-o-Xylene (27.746)
-n-Decane (30.284)
-1,2,4-trimethylbenzene (32.349)
-n-Butylcyclohexane (32.724)
-Naphthalene (39.952)
-2,5-Dibromotoluene (FID) (42.963)

Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10065.D
Report Date: 21-May-2014 15:15

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Data file : \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10065.D
Lab Smp Id: WG142498-7
Inj Date : 08-MAY-2014 20:49
Operator : LPR Inst ID: gc02.i
Smp Info : WG142498-7
Misc Info :
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m
Meth Date : 19-May-2014 12:46 lredmond Quant Type: ESTD
Cal Date : 08-MAY-2014 20:49 Cal File: 2HE10065.D
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: Peaks.sub
Target Version: 4.12
Processing Host: V200T1

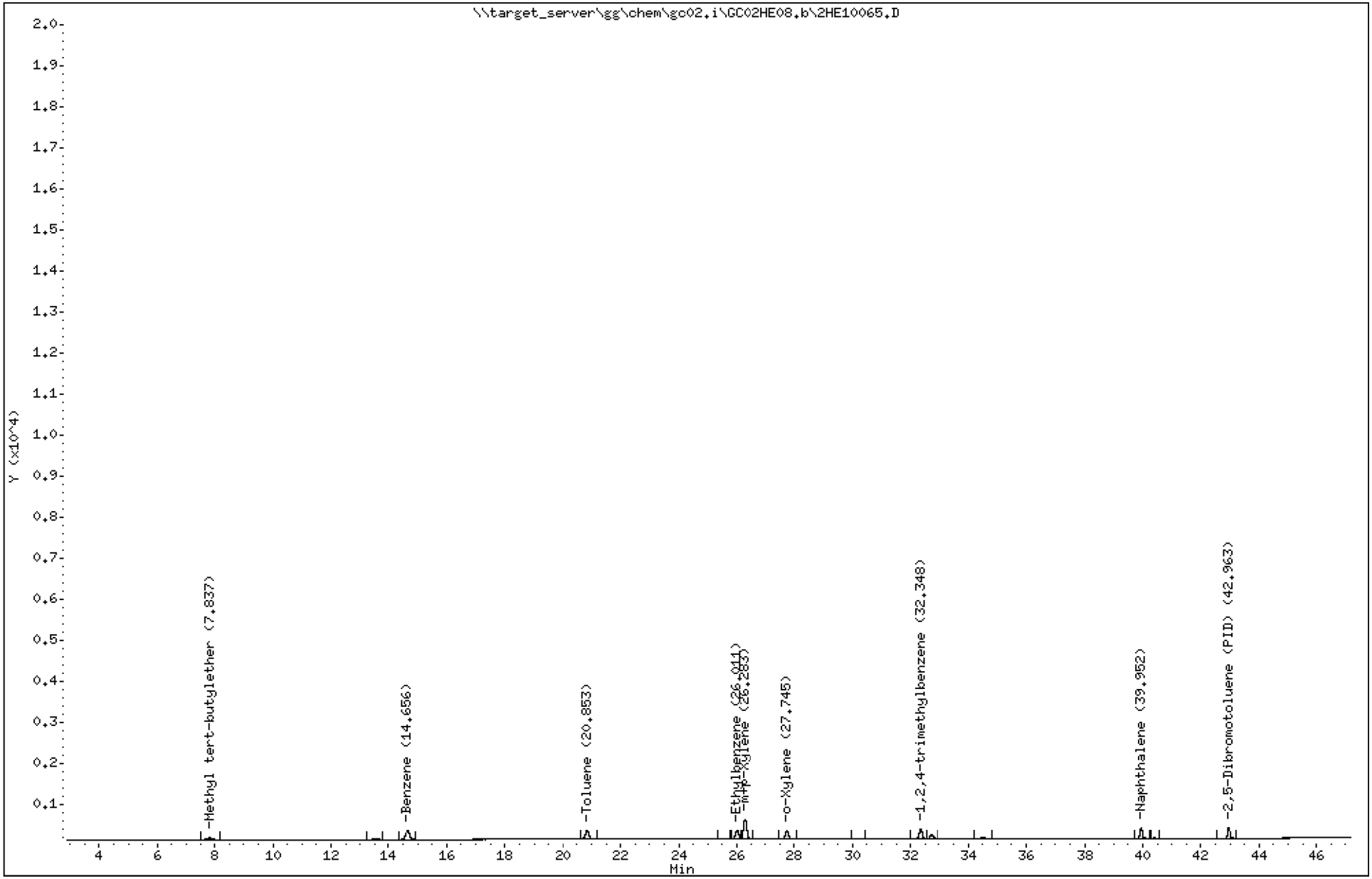
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
M 1 C9-C10 Aromatic				32939	10.0000	8.59	
2 Methyl tert-butylether	7.836	7.826	0.010	16384	10.0000	8.86	
3 Benzene	14.655	14.656	-0.001	40433	10.0000	8.88	
4 Toluene	20.852	20.852	0.000	37118	10.0000	8.86	
5 Ethylbenzene	26.010	26.011	-0.001	32845	10.0000	8.89	
6 m+p-Xylene	26.282	26.282	0.000	76278	20.0000	18.2	
7 o-Xylene	27.745	27.745	0.000	32176	10.0000	8.84	
8 1,2,4-trimethylbenzene	32.348	32.348	0.000	32939	10.0000	8.59	
10 Naphthalene	39.951	39.951	0.000	28849	10.0000	9.21	
$ 11 2,5-Dibromotoluene (PID)	42.962	42.962	0.000	30016	10.0000	8.88	

Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10065.D
Date : 08-MAY-2014 20:49
Client ID:
Sample Info: WG142498-7
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: LPR
Column diameter: 0.53



Data File: 2HE10065.D
Report Date: 21-May-2014 15:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10065.D
Lab Smp Id: WG142498-8
Inj Date : 08-MAY-2014 20:49
Operator : LPR Inst ID: gc02.i
Smp Info : WG142498-8
Misc Info :
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m\VPHFID29.m
Meth Date : 21-May-2014 15:14 gc02.i Quant Type: ESTD
Cal Date : 08-MAY-2014 20:49 Cal File: 2HE10065.D
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: Peaks.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

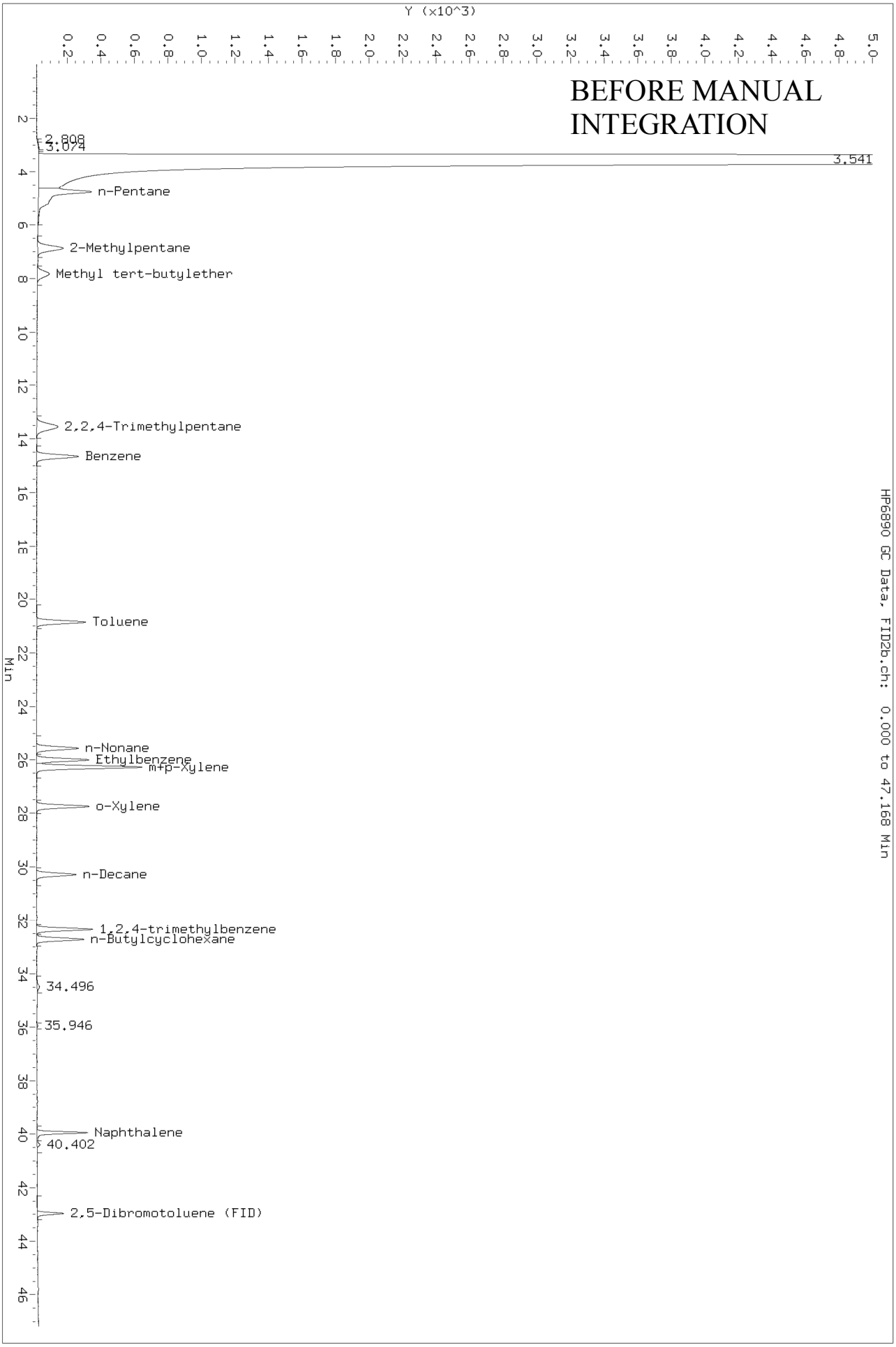
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
M 1 C5-C8 Aliphatic				116841	30.0000		
M 2 C9-C12 Aliphatic				83029	20.0000		
5 n-Pentane	4.762	4.774	-0.012	33983	10.0000	7.84(M)	M2
6 2-Methylpentane	6.870	6.875	-0.005	40591	10.0000	8.10	
7 Methyl tert-butylether	7.833	7.825	0.008	22654	10.0000	9.18	
8 2,2,4-Trimethylpentane	13.547	13.551	-0.004	42267	10.0000	7.97	
9 Benzene	14.655	14.656	-0.001	49502	10.0000	9.09	
11 Toluene	20.853	20.853	0.000	49173	10.0000	8.76	
12 n-Nonane	25.578	25.579	-0.001	42493	10.0000	9.60	
14 Ethylbenzene	26.011	26.012	-0.001	49352	10.0000	8.77	
15 m+p-Xylene	26.282	26.284	-0.002	100113	20.0000	17.5	
16 o-Xylene	27.745	27.746	-0.001	50022	10.0000	8.70	
13 n-Decane	30.283	30.283	0.000	39039	10.0000	9.80	
18 1,2,4-trimethylbenzene	32.348	32.349	-0.001	49198	10.0000	8.47	
19 n-Butylcyclohexane	32.723	32.724	-0.001	43990	10.0000	9.36	
20 Naphthalene	39.951	39.952	-0.001	35342	10.0000	9.20	
$ 21 2,5-Dibromotoluene (FID)	42.963	42.963	0.000	18322	10.0000	9.64	

LPR
9:41 am, May 22, 2014

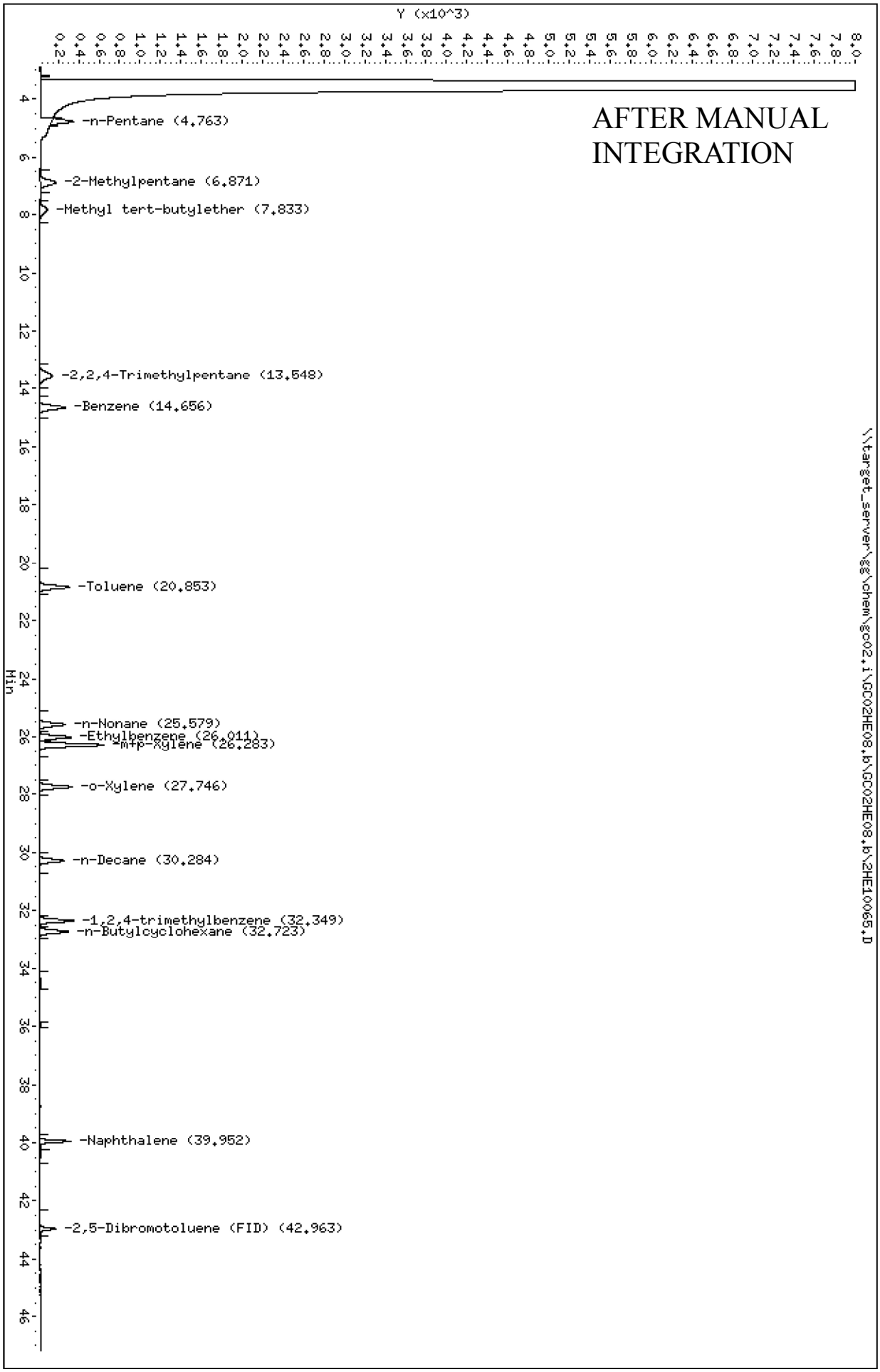
QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10065.D
Injection Date: 08-MAY-2014 20:49
Instrument: gc02.i
Client Sample ID:
HP6890 GC Data, FID2b.ch: 0.000 to 47.168 Min
Y (x10^3)
BEFORE MANUAL INTEGRATION
2.808
3.074
3.541
n-Pentane
2-Methylpentane
Methyl tert-butylether
2,2,4-Trimethylpentane
Benzene
Toluene
n-Nonane
Ethylbenzene
m+p-Xylene
o-Xylene
n-Decane
1,2,4-trimethylbenzene
n-Butylcyclohexane
34.496
35.946
Naphthalene
40.402
2,5-Dibromotoluene (FID)
Min

Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10065.D
Date : 08-MAY-2014 20:49
Client ID:
Sample Info: WG142498-8
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: LPR
Column diameter: 0.53



\\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10065.D

Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10066.D
Report Date: 21-May-2014 15:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10066.D
Lab Smp Id: WG142498-9
Inj Date : 08-MAY-2014 21:43
Operator : LPR Inst ID: gc02.i
Smp Info : WG142498-9
Misc Info :
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m
Meth Date : 19-May-2014 12:46 lredmond Quant Type: ESTD
Cal Date : 08-MAY-2014 21:43 Cal File: 2HE10066.D
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: Peaks.sub
Target Version: 4.12
Processing Host: V200T1

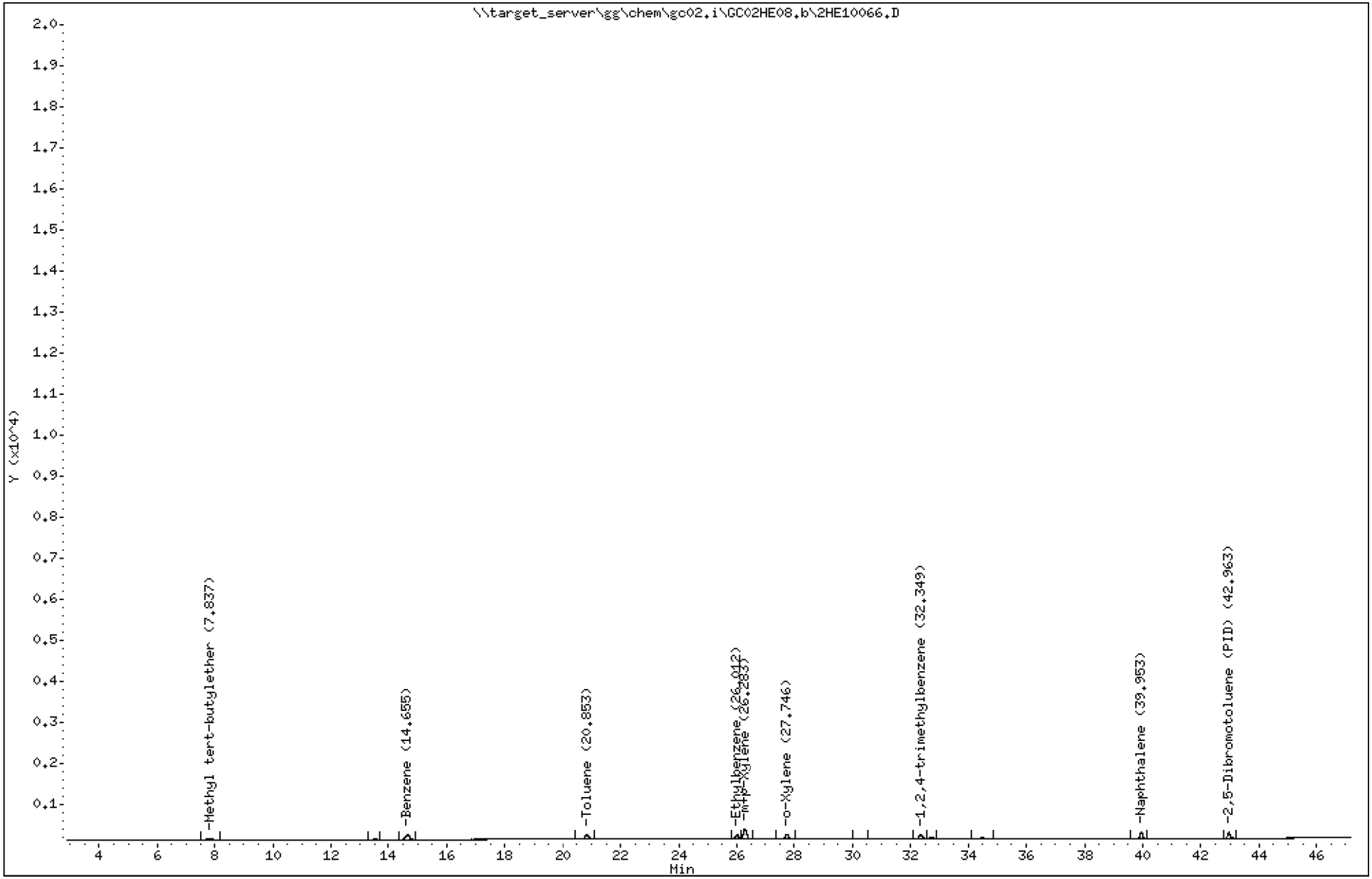
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
M 1 C9-C10 Aromatic				17008	5.00000	4.43	
2 Methyl tert-butylether	7.836	7.826	0.010	8523	5.00000	4.61	
3 Benzene	14.654	14.656	-0.002	20948	5.00000	4.60	
4 Toluene	20.853	20.852	0.001	19393	5.00000	4.63	
5 Ethylbenzene	26.011	26.011	0.000	16753	5.00000	4.54	
6 m+p-Xylene	26.282	26.282	0.000	39125	10.0000	9.31	
7 o-Xylene	27.745	27.745	0.000	16751	5.00000	4.60	
8 1,2,4-trimethylbenzene	32.349	32.348	0.001	17008	5.00000	4.43	
10 Naphthalene	39.952	39.951	0.001	15704	5.00000	5.01	
$ 11 2,5-Dibromotoluene (PID)	42.963	42.962	0.001	17271	5.00000	5.15	

Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10066.D
Date : 08-MAY-2014 21:43
Client ID:
Sample Info: WG142498-9
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: LPR
Column diameter: 0.53



Data File: 2HE10066.D
Report Date: 21-May-2014 15:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10066.D
Lab Smp Id: WG142498-10
Inj Date : 08-MAY-2014 21:43
Operator : LPR Inst ID: gc02.i
Smp Info : WG142498-10
Misc Info :
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m\VPHFID29.m
Meth Date : 21-May-2014 15:14 gc02.i Quant Type: ESTD
Cal Date : 08-MAY-2014 21:43 Cal File: 2HE10066.D
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: Peaks.sub
Target Version: 4.12

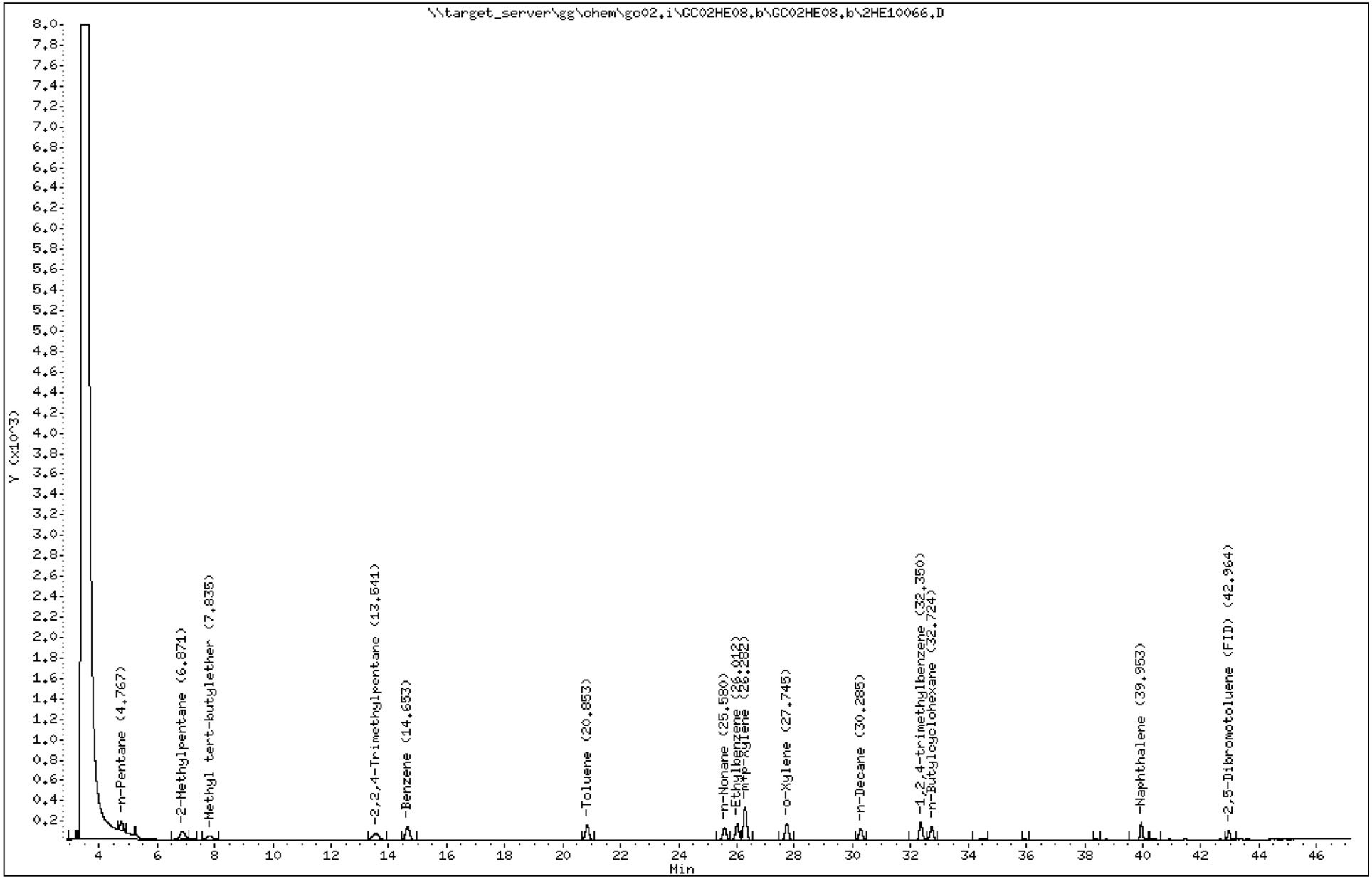
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
M 1 C5-C8 Aliphatic				55452	15.0000		
M 2 C9-C12 Aliphatic				38543	10.0000		
5 n-Pentane	4.767	4.774	-0.007	15860	5.00000	3.78	
6 2-Methylpentane	6.871	6.875	-0.004	19589	5.00000	3.95	
7 Methyl tert-butylether	7.835	7.825	0.010	10937	5.00000	4.43	
8 2,2,4-Trimethylpentane	13.541	13.551	-0.010	20003	5.00000	3.71	
9 Benzene	14.653	14.656	-0.003	24801	5.00000	4.55	
11 Toluene	20.852	20.853	-0.001	25380	5.00000	4.52	
12 n-Nonane	25.579	25.579	0.000	19893	5.00000	4.50	
14 Ethylbenzene	26.011	26.012	-0.001	25374	5.00000	4.51	
15 m+p-Xylene	26.282	26.284	-0.002	51103	10.0000	8.92	
16 o-Xylene	27.745	27.746	-0.001	25972	5.00000	4.52	
13 n-Decane	30.284	30.283	0.001	17798	5.00000	4.47	
18 1,2,4-trimethylbenzene	32.349	32.349	0.000	25686	5.00000	4.42	
19 n-Butylcyclohexane	32.723	32.724	-0.001	20745	5.00000	4.41	
20 Naphthalene	39.953	39.952	0.001	19791	5.00000	5.15	
$ 21 2,5-Dibromotoluene (FID)	42.963	42.963	0.000	10597	5.00000	5.58	

Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10066.D
Date : 08-MAY-2014 21:43
Client ID:
Sample Info: WG142498-10
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: LPR
Column diameter: 0.53



Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10067.D
Report Date: 21-May-2014 15:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10067.D
Lab Smp Id: WG142498-11
Inj Date : 08-MAY-2014 22:38
Operator : LPR Inst ID: gc02.i
Smp Info : WG142498-11
Misc Info :
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m
Meth Date : 19-May-2014 12:46 lredmond Quant Type: ESTD
Cal Date : 08-MAY-2014 22:38 Cal File: 2HE10067.D
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: Peaks.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

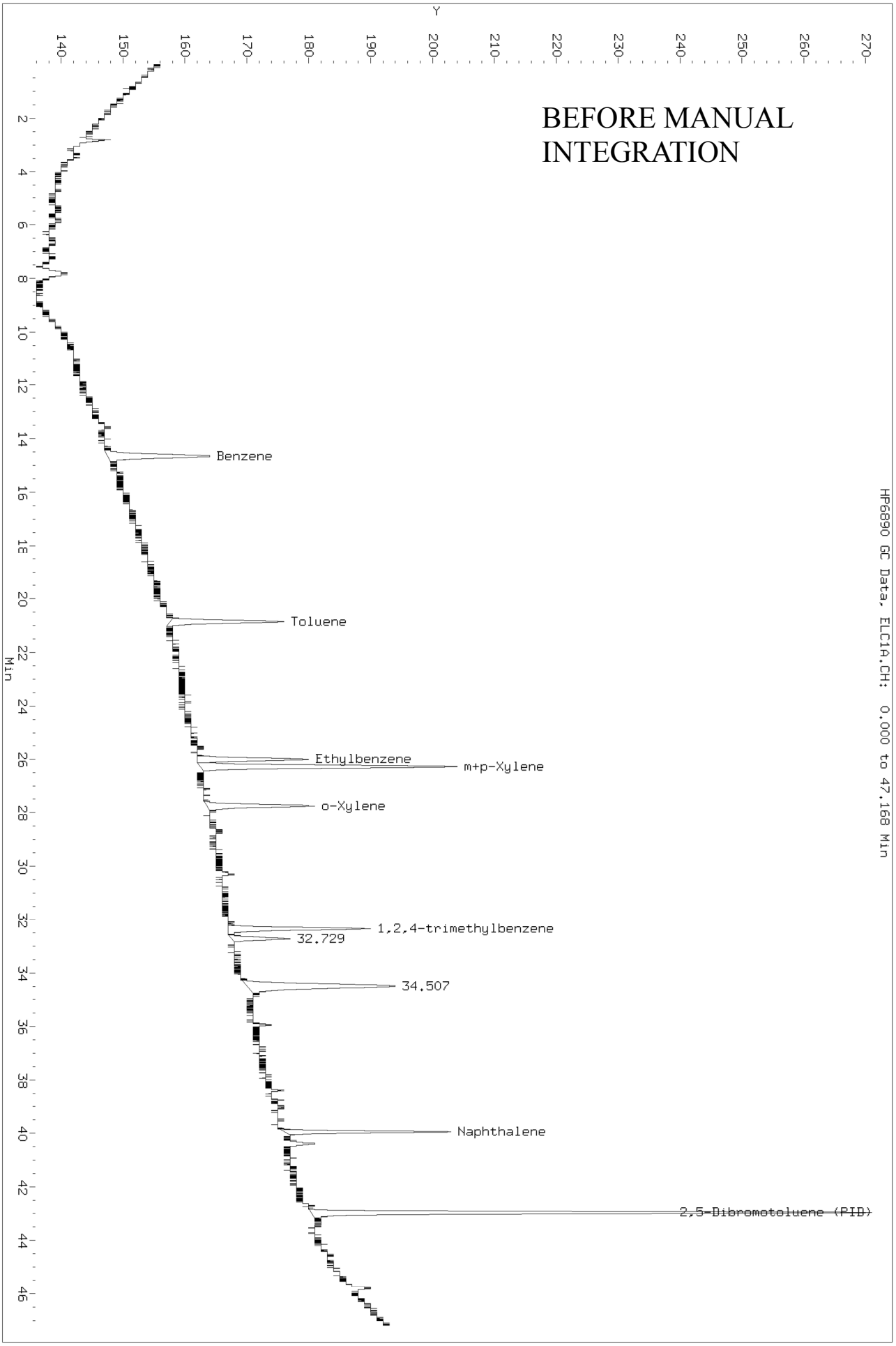
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
M 1 C9-C10 Aromatic				3480	1.00000	0.907	
2 Methyl tert-butylether	7.777	7.826	-0.049	1628	1.00000	0.880(M)	M6
3 Benzene	14.666	14.656	0.010	3452	1.00000	0.758	
4 Toluene	20.851	20.852	-0.001	3184	1.00000	0.760(M)	M9
5 Ethylbenzene	26.006	26.011	-0.005	2745	1.00000	0.743	
6 m+p-Xylene	26.286	26.282	0.004	6550	2.00000	1.56	
7 o-Xylene	27.754	27.745	0.009	2780	1.00000	0.764	
8 1,2,4-trimethylbenzene	32.351	32.348	0.003	3480	1.00000	0.907	
10 Naphthalene	39.953	39.951	0.002	2935	1.00000	0.937	
$ 11 2,5-Dibromotoluene (PID)	42.962	42.962	0.000	10587	1.00000	3.19	

LPR

9:41 am, May 22, 2014

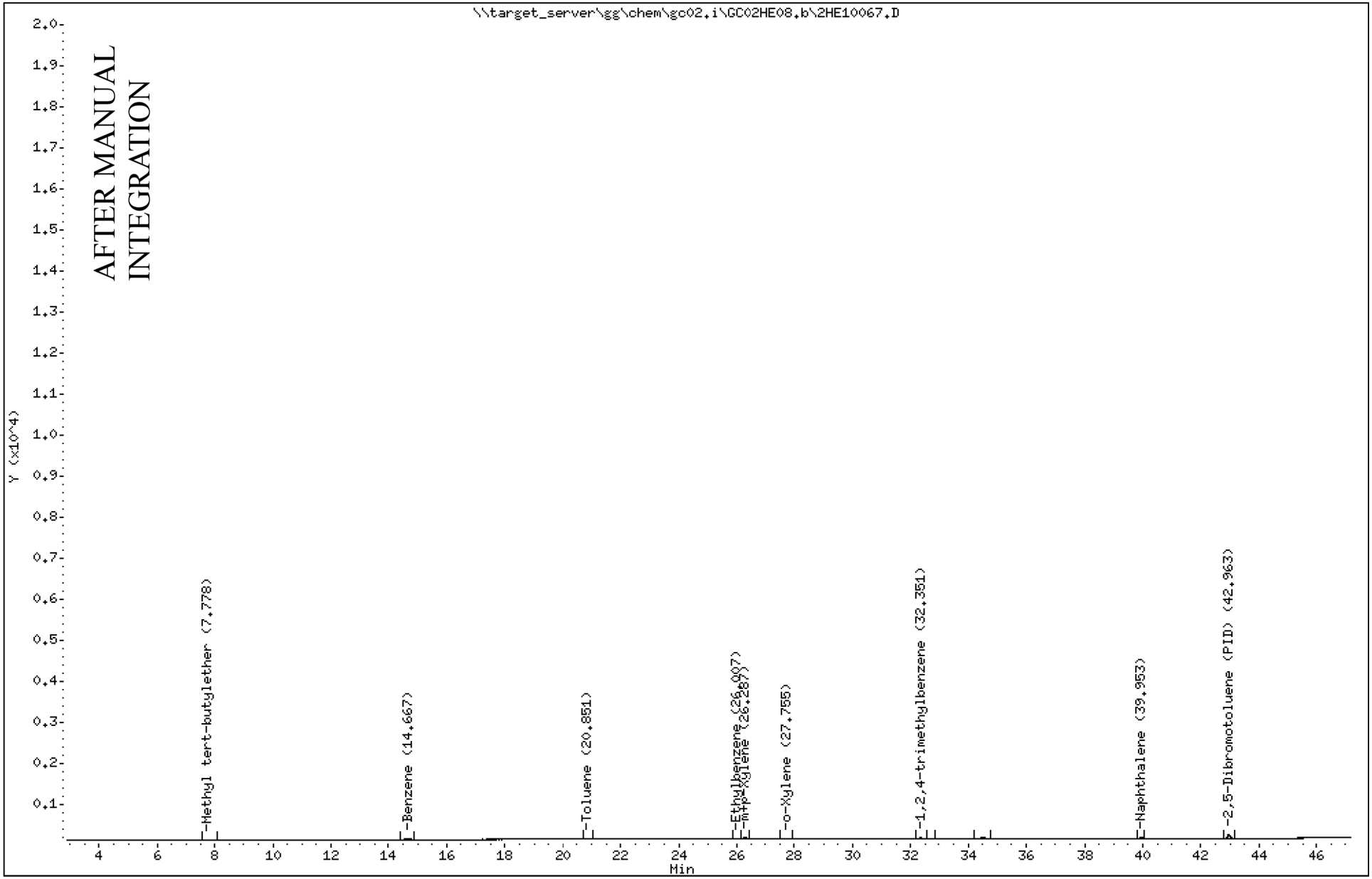
QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10067.D
Injection Date: 08-MAY-2014 22:38
Instrument: gc02.i
Client Sample ID:
HP6890 GC Data, ELC1A.CH: 0.000 to 47.168 Min
BEFORE MANUAL INTEGRATION
Benzene
Toluene
Ethylbenzene
m+p-Xylene
o-Xylene
1,2,4-trimethylbenzene
32.729
34.507
Naphthalene
2,5-Dibromotoluene (PID)
Y
Min

Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10067.D
Date : 08-MAY-2014 22:38
Client ID:
Sample Info: WG142498-11
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: LPR
Column diameter: 0.53



Katahdin Analytical Services 11000119

Data File: 2HE10067.D
Report Date: 21-May-2014 15:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10067.D
Lab Smp Id: WG142498-12
Inj Date : 08-MAY-2014 22:38
Operator : LPR Inst ID: gc02.i
Smp Info : WG142498-12
Misc Info :
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m\VPHFID29.m
Meth Date : 21-May-2014 15:14 gc02.i Quant Type: ESTD
Cal Date : 08-MAY-2014 22:38 Cal File: 2HE10067.D
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: Peaks.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

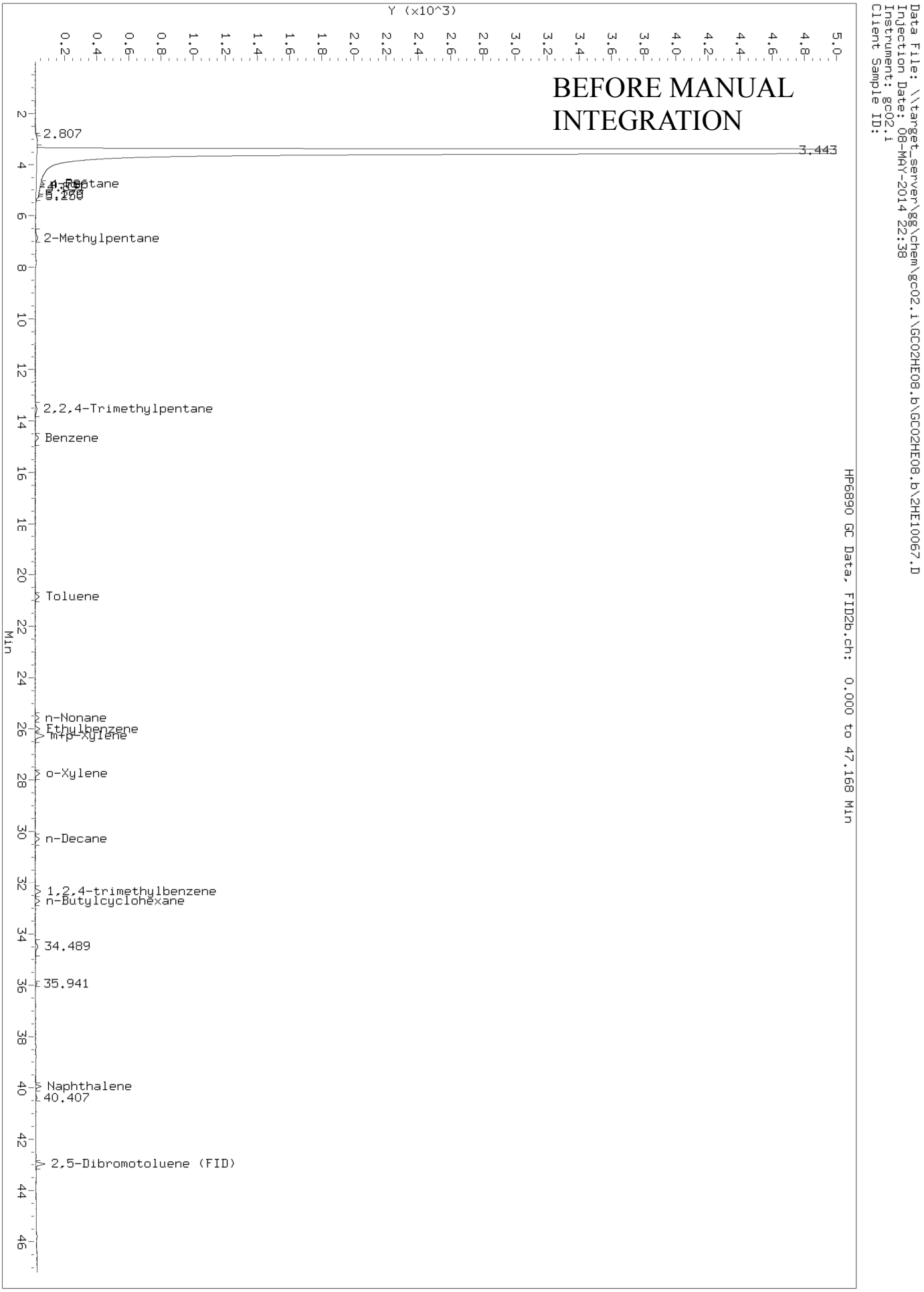
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
M 1 C5-C8 Aliphatic				9119	3.00000		
M 2 C9-C12 Aliphatic				8773	2.00000		
5 n-Pentane	4.750	4.774	-0.024	2768	1.00000	0.852(M)	M9
6 2-Methylpentane	6.873	6.875	-0.002	2920	1.00000	0.659	
7 Methyl tert-butylether	7.855	7.825	0.030	1997	1.00000	0.810(M)	M6
8 2,2,4-Trimethylpentane	13.533	13.551	-0.018	3431	1.00000	0.530	
9 Benzene	14.659	14.656	0.003	3828	1.00000	0.703	
11 Toluene	20.849	20.853	-0.004	4292	1.00000	0.765	
12 n-Nonane	25.583	25.579	0.004	3934	1.00000	0.889	
14 Ethylbenzene	26.014	26.012	0.002	4317	1.00000	0.767	
15 m+p-Xylene	26.281	26.284	-0.003	9039	2.00000	1.58	
16 o-Xylene	27.744	27.746	-0.002	4519	1.00000	0.786	
13 n-Decane	30.286	30.283	0.003	4416	1.00000	1.11	
18 1,2,4-trimethylbenzene	32.352	32.349	0.003	5409	1.00000	0.932	
19 n-Butylcyclohexane	32.724	32.724	0.000	4357	1.00000	0.927	
20 Naphthalene	39.953	39.952	0.001	3857	1.00000	1.00	
$ 21 2,5-Dibromotoluene (FID)	42.963	42.963	0.000	6675	1.00000	3.51	

LPR
9:41 am, May 22, 2014

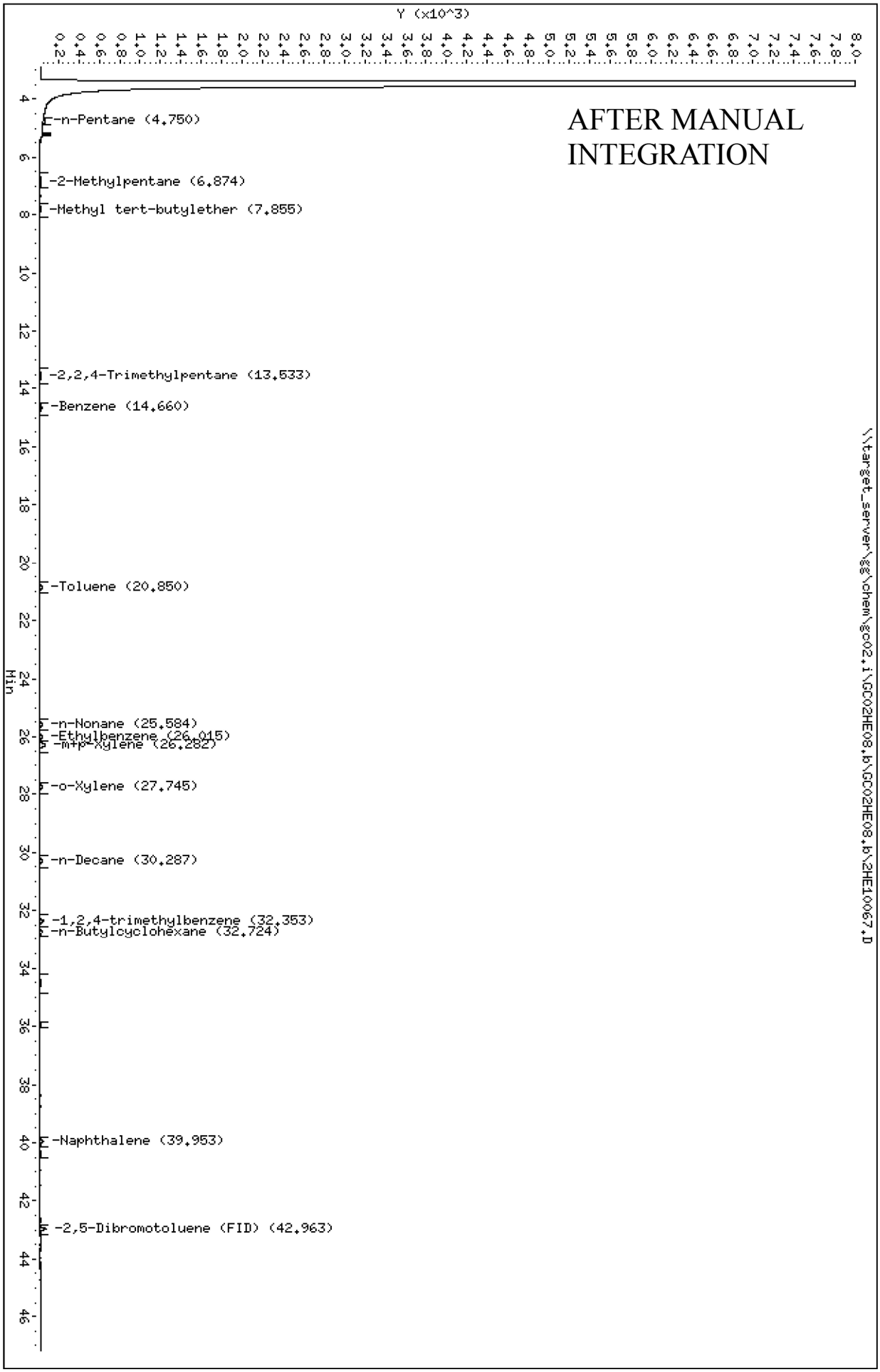
QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10067.D
Injection Date: 08-MAY-2014 22:38
Instrument: gc02.i
Client Sample ID:
HP6890 GC Data, FID2b.ch: 0.000 to 47.168 Min
Y (x10^3)
BEFORE MANUAL INTEGRATION
2.807
3.443
4-Methylpentane
2-Methylpentane
2,2,4-Trimethylpentane
Benzene
Toluene
n-Nonane
Ethylbenzene
m+p-Xylene
o-Xylene
n-Decane
1,2,4-trimethylbenzene
n-Butylcyclohexane
34.489
35.941
Naphthalene
40.407
2,5-Dibromotoluene (FID)
Min

Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10067.D
Date : 08-MAY-2014 22:38
Client ID:
Sample Info: WG142498-12
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: LPR
Column diameter: 0.53



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Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10077.D
Report Date: 21-May-2014 15:02

Katahdin Analytical Services

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: WG142498-13
Level: LOW
Data Type: GC DATA
SpikeList File: ind.spk
Sublist File: IND.sub
Method File: \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m
Misc Info: WG142498,WG142498,SH2832-1

Client SDG: WG142498
Fraction: VPH
Client Smp ID: WG142498
Operator: LPR
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
2 Methyl tert-butyle	100	111	111.22	80-120
3 Benzene	100	106	106.20	80-120
4 Toluene	100	105	104.64	80-120
5 Ethylbenzene	100	105	105.15	80-120
6 m+p-Xylene	200	205	102.70	80-120
7 o-Xylene	100	106	105.66	80-120
8 1,2,4-trimethylben	100	102	101.54	80-120
10 Naphthalene	100	103	102.68	80-120

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 11 2,5-Dibromotoluene	100	84.0	84.04	70-130

Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10077.D
Report Date: 21-May-2014 15:02

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10077.D
Lab Smp Id: WG142498-13 Client Smp ID: WG142498
Inj Date : 09-MAY-2014 07:40
Operator : LPR Inst ID: gc02.i
Smp Info : WG142498-13,SH2832
Misc Info : WG142498,WG142498,SH2832-1
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m
Meth Date : 19-May-2014 12:46 lredmond Quant Type: ESTD
Cal Date : 08-MAY-2014 22:38 Cal File: 2HE10067.D
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: IND.sub
Target Version: 4.12
Processing Host: V200T1

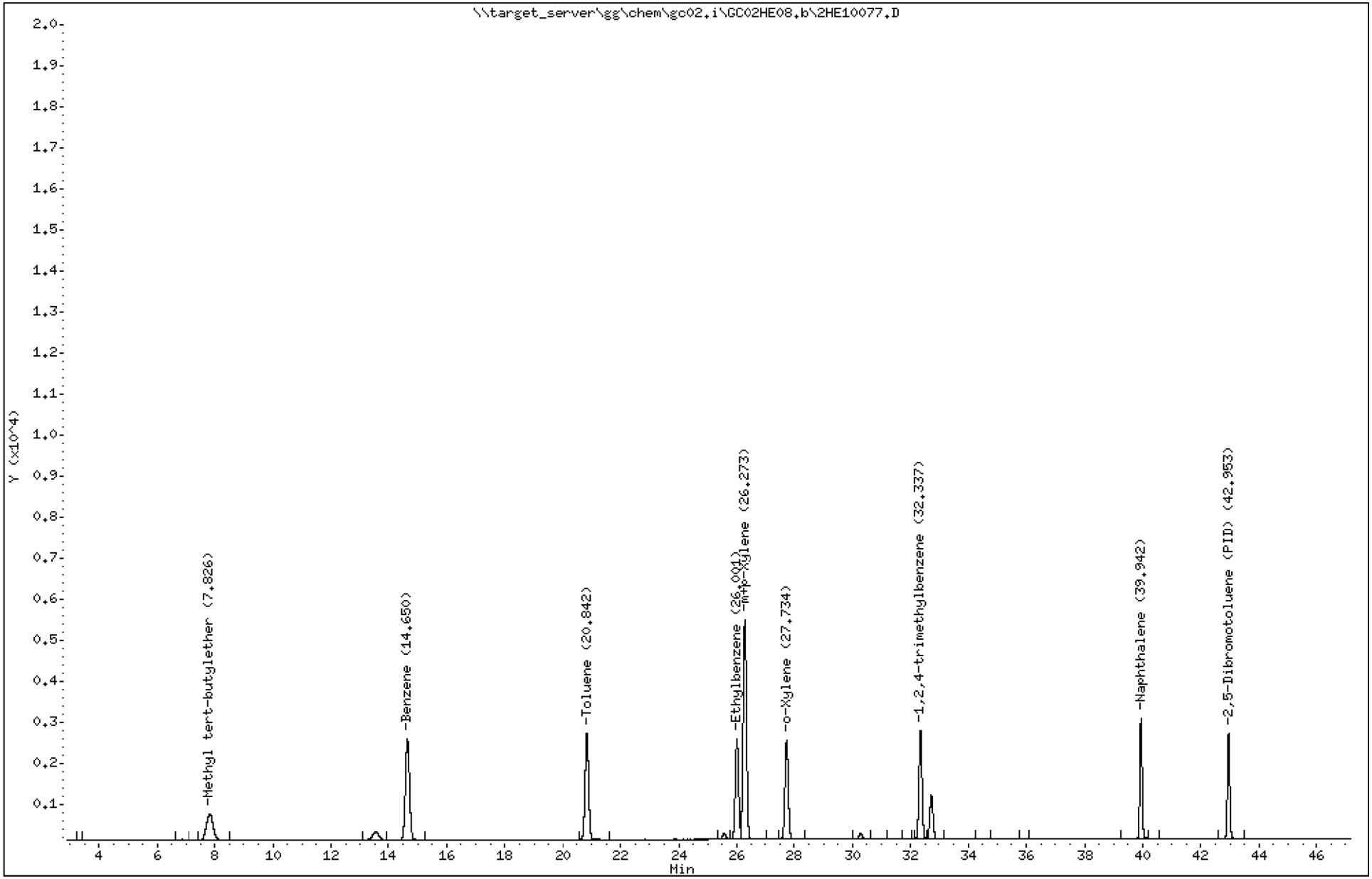
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
2 Methyl tert-butylether	7.826	7.826	0.000	205737	111.221	111	
3 Benzene	14.650	14.656	-0.006	483682	106.202	106	
4 Toluene	20.842	20.852	-0.010	438578	104.637	105	
5 Ethylbenzene	26.000	26.011	-0.011	388387	105.150	105	
6 m+p-Xylene	26.273	26.282	-0.009	862908	205.401	205	
7 o-Xylene	27.734	27.745	-0.011	384679	105.662	106	
8 1,2,4-trimethylbenzene	32.336	32.348	-0.012	389407	101.540	102	
10 Naphthalene	39.942	39.951	-0.009	321752	102.682	103	
$ 11 2,5-Dibromotoluene (PID)	42.953	42.962	-0.009	286908	84.0417	84.0	

Data File: \\target_server\gg\chem\gc02.i\GC02HE08.b\2HE10077.D
Date : 09-MAY-2014 07:40
Client ID: WG142498
Sample Info: WG142498-13,SH2832
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: LPR
Column diameter: 0.53



Katahdin Analytical Services 11000125

Data File: 2HE10077.D
Report Date: 21-May-2014 15:02

Katahdin Analytical Services

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: WG142498-13
Level: LOW
Data Type: GC DATA
SpikeList File: ind.spk
Sublist File: IND.sub
Method File: \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m\VPHFID29.m
Misc Info: WG142498,WG142498,SH2832-1

Client SDG: SDGa00355
Fraction: VPH
Client Smp ID: WG142498
Operator: LPR
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 n-Pentane	100	95.2	95.16	80-120
6 2-Methylpentane	100	94.6	94.64	80-120
7 Methyl tert-butyle	100	115	114.61	80-120
8 2,2,4-Trimethylpen	100	96.8	96.79	80-120
9 Benzene	100	108	107.83	80-120
11 Toluene	100	105	105.01	80-120
12 n-Nonane	100	104	103.79	80-120
13 n-Decane	100	81.5	81.47	80-120
14 Ethylbenzene	100	105	104.66	80-120
15 m+p-Xylene	200	206	103.29	80-120
16 o-Xylene	100	105	104.98	80-120
18 1,2,4-trimethylben	100	100	100.39	80-120
19 n-Butylcyclohexane	100	104	104.04	80-120
20 Naphthalene	100	100	100.15	80-120

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 21 2,5-Dibromotoluene	100	90.4	90.36	70-130

Data File: 2HE10077.D
Report Date: 21-May-2014 15:02

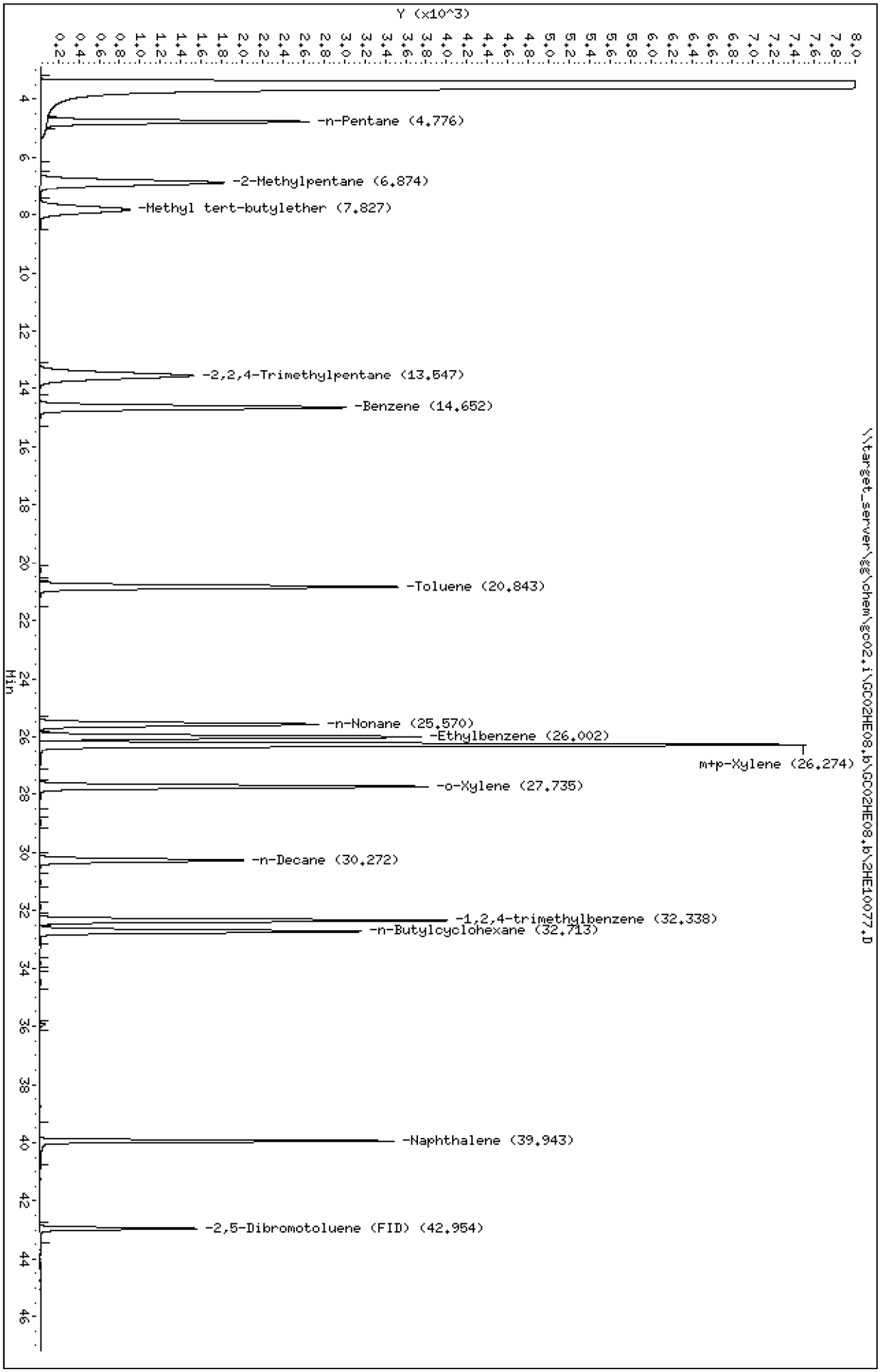
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10077.D
Lab Smp Id: WG142498-13 Client Smp ID: WG142498
Inj Date : 09-MAY-2014 07:40
Operator : LPR Inst ID: gc02.i
Smp Info : WG142498-13,SH2832
Misc Info : WG142498,WG142498,SH2832-1
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HE08.b\VPHPID29.m\VPHFID29.m
Meth Date : 20-May-2014 10:04 lredmond Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: IND.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
5 n-Pentane	4.776	4.774	0.002	424038	95.1598	95.2	
6 2-Methylpentane	6.874	6.875	-0.001	478828	94.6372	94.6	
7 Methyl tert-butylether	7.826	7.825	0.001	282652	114.607	115	
8 2,2,4-Trimethylpentane	13.547	13.551	-0.004	505594	96.7869	96.8	
9 Benzene	14.651	14.656	-0.005	587382	107.831	108	
11 Toluene	20.843	20.853	-0.010	589264	105.011	105	
12 n-Nonane	25.569	25.579	-0.010	459291	103.789	104	
14 Ethylbenzene	26.001	26.012	-0.011	588992	104.658	105	
15 m+p-Xylene	26.274	26.284	-0.010	1184135	206.585	206	
16 o-Xylene	27.734	27.746	-0.012	603254	104.984	105	
13 n-Decane	30.271	30.283	-0.012	324628	81.4652	81.5	
18 1,2,4-trimethylbenzene	32.337	32.349	-0.012	582851	100.392	100	
19 n-Butylcyclohexane	32.712	32.724	-0.012	488942	104.039	104	
20 Naphthalene	39.942	39.952	-0.010	384808	100.151	100	
$ 21 2,5-Dibromotoluene (FID)	42.953	42.963	-0.010	171684	90.3587	90.4	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Date : 09-MAY-2014 07:40
Client ID: WG142498
Sample Info: WG142498-13,SH2832
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: LPR
Column diameter: 0.53
\\target_server\gg\chem\gc02.i\GC02HE08.b\GC02HE08.b\2HE10077.D
Y (x10^3)
Min
-n-Pentane (4.776)
-2-Methylpentane (6.874)
-Methyl tert-butylether (7.827)
-2,2,4-Trimethylpentane (13.547)
-Benzene (14.652)
-Toluene (20.843)
-n-Nonane (25.570)
-Ethylbenzene (26.002)
m+p-Xylene (26.274)
-o-Xylene (27.735)
-n-Decane (30.272)
-1,2,4-trimethylbenzene (32.338)
-n-Butylcyclohexane (32.713)
-Naphthalene (39.943)
-2,5-Dibromotoluene (FID) (42.954)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NCTAMSLANT Cutler CTO WE53
SDG: WE53-7
Lab ID : WG146189-6
Analytical Date: 07/11/14 08:43
Lab File ID : 2HG10156.D
Instrument ID: GC02
Initial Calibration Date(s): 05/08/14 18:08 05/09/14 04:57
Column ID: A

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
2	Methyl tert-butylether	1850	2061	2061	0.100	11.41364	25.00000	Averaged
3	Benzene	4554	5064	5064	0.100	11.18043	25.00000	Averaged
4	Toluene	4191	4686	4686	0.100	11.78832	25.00000	Averaged
5	Ethylbenzene	3694	4188	4188	0.100	13.38095	25.00000	Averaged
6	m+p-Xylene	4201	4758	4758	0.100	13.26515	25.00000	Averaged
7	o-Xylene	3641	4142	4142	0.100	13.77209	25.00000	Averaged
8	1,2,4-trimethylbenzene	3835	4250	4250	0.100	10.82441	25.00000	Averaged
10	Naphthalene	3133	3216	3216	0.100	2.62678	25.00000	Averaged
11	2,5-Dibromotoluene (PID)	50.00000	41.71312	2845	0.100	-16.57377	25.00000	Linear

*** = Compound out of QC criteria**

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10156.D
Report Date: 15-Jul-2014 09:42

Katahdin Analytical Services

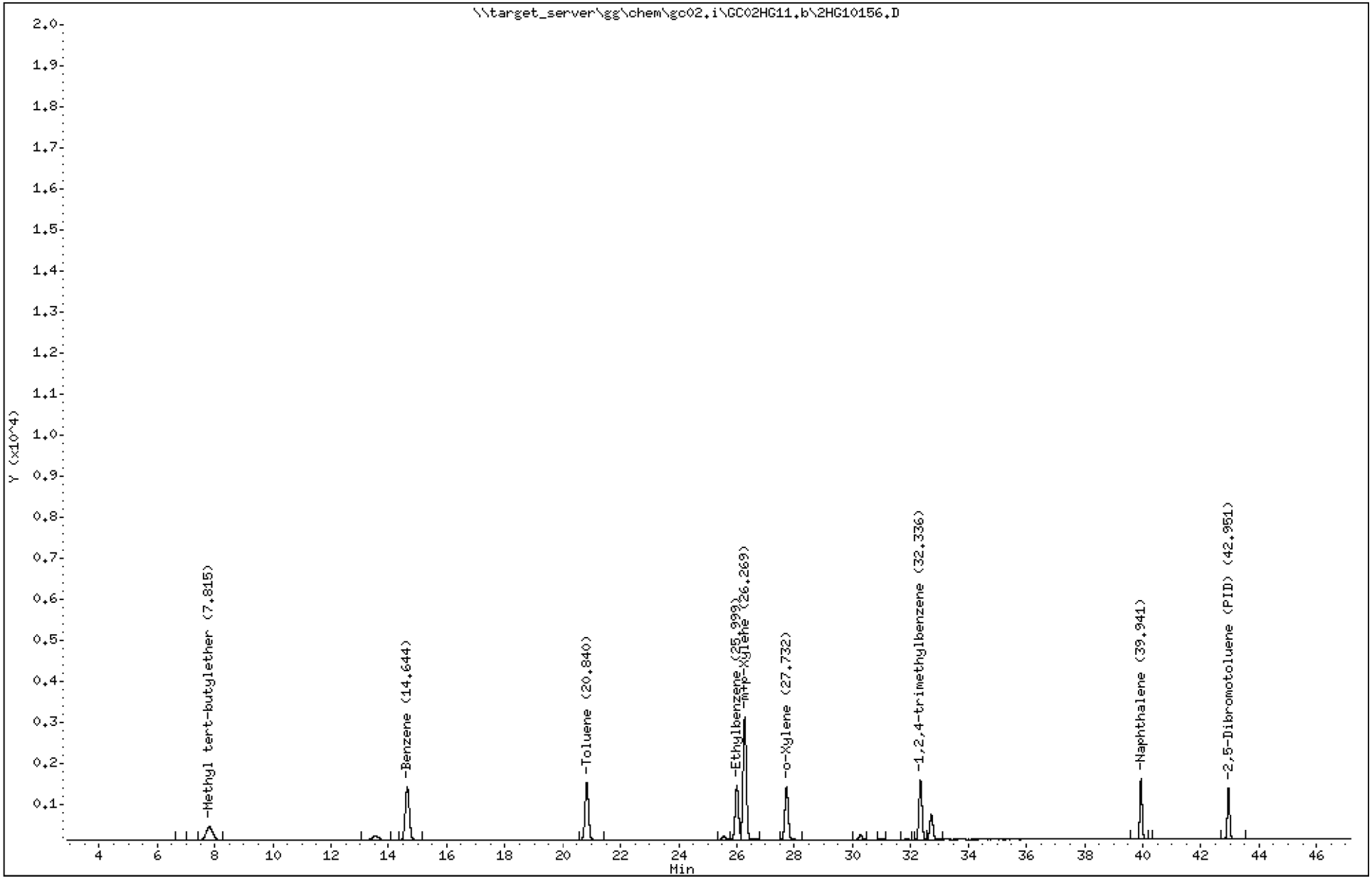
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10156.D
Lab Smp Id: WG146189-6
Inj Date : 11-JUL-2014 08:43
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-6,WE53-7
Misc Info : WG146189,WG142498,SH4401-1
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
2 Methyl tert-butylether	7.814	7.826	-0.012	103047	50.0000	55.7	
3 Benzene	14.644	14.656	-0.012	253178	50.0000	55.6	
4 Toluene	20.839	20.852	-0.013	234275	50.0000	55.9	
5 Ethylbenzene	25.998	26.011	-0.013	209395	50.0000	56.7	
6 m+p-Xylene	26.269	26.282	-0.013	475838	100.000	113	
7 o-Xylene	27.732	27.745	-0.013	207103	50.0000	56.9	
8 1,2,4-trimethylbenzene	32.336	32.348	-0.012	212506	50.0000	55.4	
10 Naphthalene	39.940	39.951	-0.011	160789	50.0000	51.3	
$ 11 2,5-Dibromotoluene (PID)	42.950	42.962	-0.012	142239	50.0000	41.7	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10156.D
Date : 11-JUL-2014 08:43
Client ID:
Instrument: gc02.i
Sample Info: WG146189-6,WE53-7
Purge Volume: 0.0
Operator: AAB
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 11000131

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NCTAMSLANT Cutler CTO WE53
Lab ID : WG146189-6
Lab File ID : 2HG10156.D
Initial Calibration Date(s): 05/08/14 18:08 05/09/14 04:57

SDG: WE53-7
Analytical Date: 07/11/14 08:43
Instrument ID: GC02
Column ID: B

	Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
5	n-Pentane	50.00000	52.53295	4672	0.100	5.06590	25.00000	Linear	
6	2-Methylpentane	50.00000	54.73136	5535	0.100	9.46272	25.00000	Linear	
7	Methyl tert-butylether	2466	3256	3256	0.100	32.03057	25.00000	Averaged	*
8	2,2,4-Trimethylpentane	50.00000	57.57060	6020	0.100	15.14121	25.00000	Linear	
9	Benzene	5447	6967	6967	0.100	27.89140	25.00000	Averaged	*
11	Toluene	5611	7142	7142	0.100	27.27785	25.00000	Averaged	*
12	n-Nonane	4425	5936	5936	0.100	34.14023	30.00000	Averaged	*
13	n-Decane	3985	5408	5408	0.100	35.70395	25.00000	Averaged	*
14	Ethylbenzene	5628	7208	7208	0.100	28.07492	25.00000	Averaged	*
15	m+p-Xylene	5732	7289	7289	0.100	27.17033	25.00000	Averaged	*
16	o-Xylene	5746	7350	7350	0.100	27.90421	25.00000	Averaged	*
18	1,2,4-trimethylbenzene	5806	7241	7241	0.100	24.72659	25.00000	Averaged	
19	n-Butylcyclohexane	4700	6304	6304	0.100	34.12869	25.00000	Averaged	*
20	Naphthalene	3842	4381	4381	0.100	14.02292	25.00000	Averaged	
21	2,5-Dibromotoluene (FID)	1900	1935	1935	0.100	1.83853	25.00000	Averaged	

*** = Compound out of QC criteria**

Data File: 2HG10156.D
Report Date: 15-Jul-2014 09:42

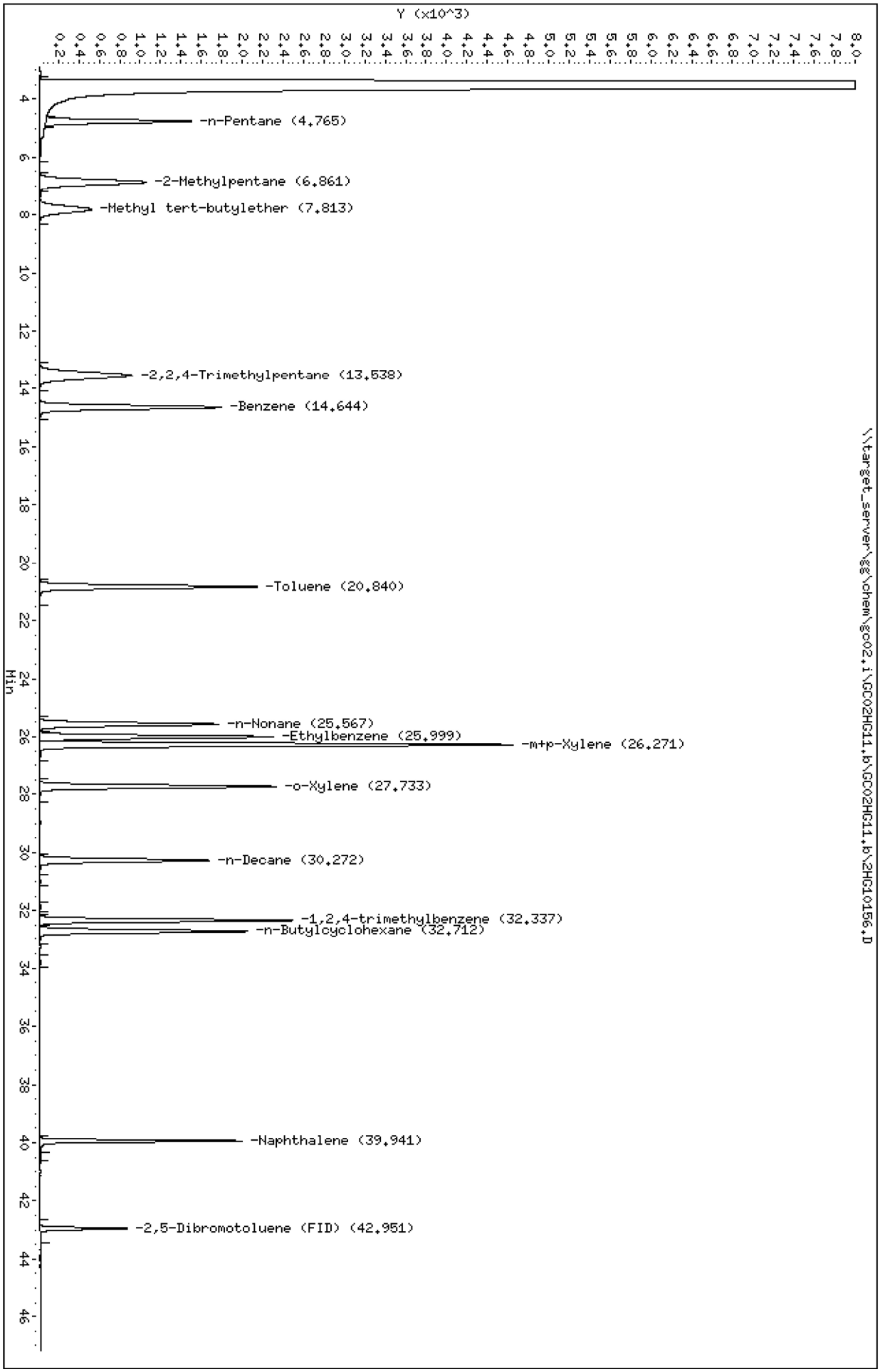
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10156.D
Lab Smp Id: WG146189-6
Inj Date : 11-JUL-2014 08:43
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-6,WE53-7
Misc Info : WG146189,WG142498,SH4401-1
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5 n-Pentane	4.765	4.774	-0.009	233624	50.0000	52.5	
6 2-Methylpentane	6.861	6.875	-0.014	276744	50.0000	54.7	
7 Methyl tert-butylether	7.813	7.825	-0.012	162811	50.0000	66.0	
8 2,2,4-Trimethylpentane	13.538	13.551	-0.013	301007	50.0000	57.6	
9 Benzene	14.644	14.656	-0.012	348327	50.0000	63.9	
11 Toluene	20.839	20.853	-0.014	357107	50.0000	63.6	
12 n-Nonane	25.567	25.579	-0.012	296802	50.0000	67.1	
14 Ethylbenzene	25.999	26.012	-0.013	360387	50.0000	64.0	
15 m+p-Xylene	26.270	26.284	-0.014	728934	100.000	127	
16 o-Xylene	27.732	27.746	-0.014	367480	50.0000	64.0	
13 n-Decane	30.271	30.283	-0.012	270381	50.0000	67.8	
18 1,2,4-trimethylbenzene	32.336	32.349	-0.013	362064	50.0000	62.4	
19 n-Butylcyclohexane	32.712	32.724	-0.012	315175	50.0000	67.1	
20 Naphthalene	39.941	39.952	-0.011	219054	50.0000	57.0	
$ 21 2,5-Dibromotoluene (FID)	42.951	42.963	-0.012	96748	50.0000	50.9	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Date : 11-JUL-2014 08:43
Client ID:
Sample Info: WG146189-6,WE53-7
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: AAB
Column diameter: 0.53
\\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10156.D
Y (x10^3)
Min
-n-Pentane (4.765)
-2-Methylpentane (6.861)
-Methyl tert-butylether (7.813)
-2,2,4-Trimethylpentane (13.538)
-Benzene (14.644)
-Toluene (20.840)
-n-Nonane (25.567)
-Ethylbenzene (25.999)
-m+p-Xylene (26.271)
-o-Xylene (27.733)
-n-Decane (30.272)
-1,2,4-trimethylbenzene (32.337)
-n-Butylcyclohexane (32.712)
-Naphthalene (39.941)
-2,5-Dibromotoluene (FID) (42.951)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NCTAMSLANT Cutler CTO WE53
SDG: WE53-7
Lab ID : WG146189-7
Analytical Date: 07/12/14 01:11
Lab File ID : 2HG10173.D
Instrument ID: GC02
Initial Calibration Date(s): 05/08/14 18:08 05/09/14 04:57
Column ID: A

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
2	Methyl tert-butylether	1850	2092	2092	0.100	13.08841	25.00000	Averaged
3	Benzene	4554	4897	4897	0.100	7.51888	25.00000	Averaged
4	Toluene	4191	4500	4500	0.100	7.36594	25.00000	Averaged
5	Ethylbenzene	3694	4008	4008	0.100	8.50123	25.00000	Averaged
6	m+p-Xylene	4201	4554	4554	0.100	8.40951	25.00000	Averaged
7	o-Xylene	3641	3970	3970	0.100	9.05811	25.00000	Averaged
8	1,2,4-trimethylbenzene	3835	4082	4082	0.100	6.44267	25.00000	Averaged
10	Naphthalene	3133	3445	3445	0.100	9.95667	25.00000	Averaged
11	2,5-Dibromotoluene (PID)	50.00000	43.16290	2944	0.100	-13.67421	25.00000	Linear

*** = Compound out of QC criteria**

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10173.D
Report Date: 15-Jul-2014 09:42

Katahdin Analytical Services

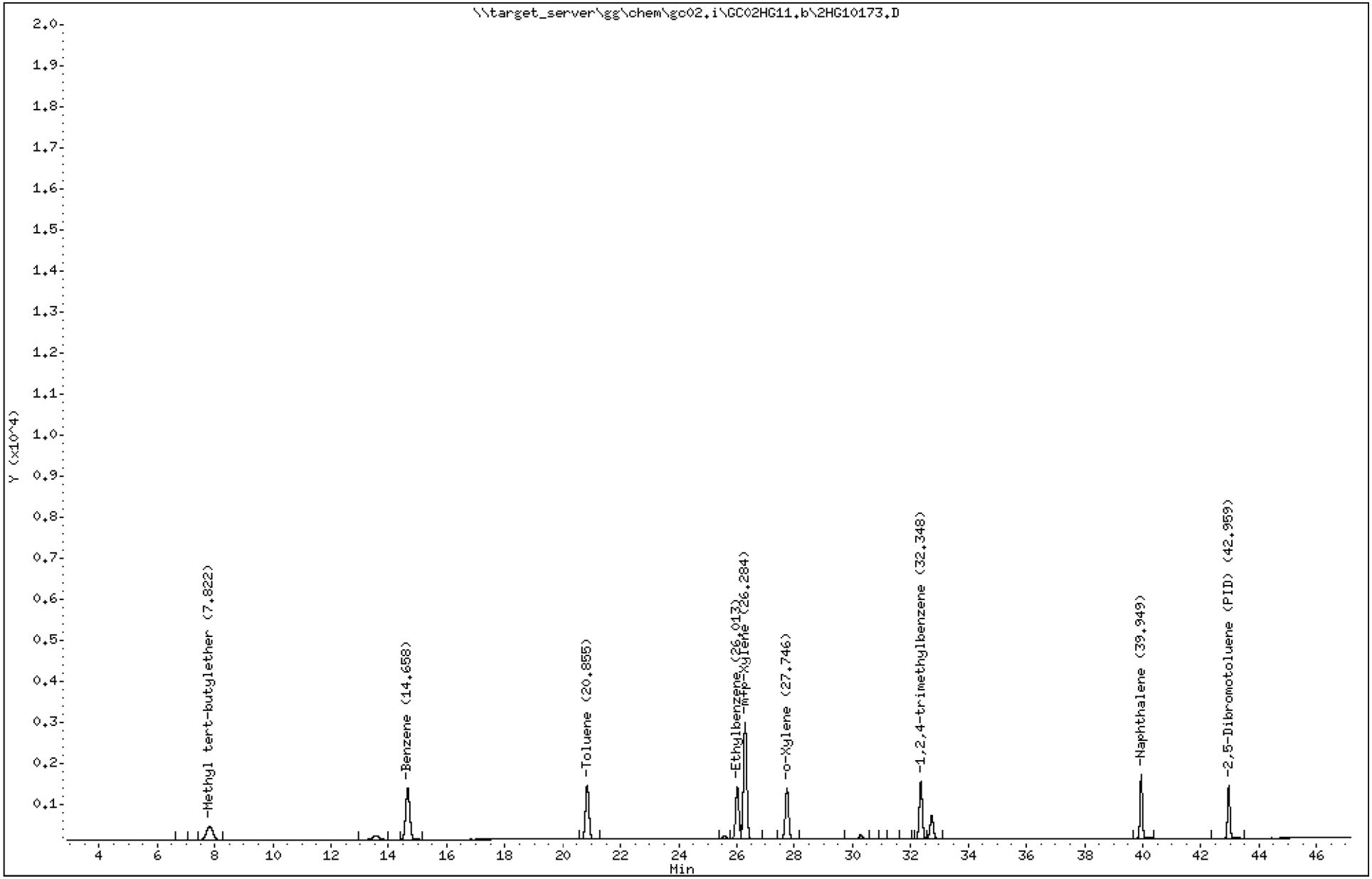
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10173.D
Lab Smp Id: WG146189-7
Inj Date : 12-JUL-2014 01:11
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-7,WE53-7
Misc Info : WG146189,WG142498,SH4401-1
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
2 Methyl tert-butylether	7.822	7.826	-0.004	104596	50.0000	56.5	
3 Benzene	14.658	14.656	0.002	244840	50.0000	53.8	
4 Toluene	20.855	20.852	0.003	225007	50.0000	53.7	
5 Ethylbenzene	26.013	26.011	0.002	200383	50.0000	54.2	
6 m+p-Xylene	26.283	26.282	0.001	455439	100.000	108	
7 o-Xylene	27.746	27.745	0.001	198522	50.0000	54.5	
8 1,2,4-trimethylbenzene	32.347	32.348	-0.001	204104	50.0000	53.2	
10 Naphthalene	39.949	39.951	-0.002	172273	50.0000	55.0	
$ 11 2,5-Dibromotoluene (PID)	42.959	42.962	-0.003	147194	50.0000	43.2	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10173.D
Date : 12-JUL-2014 01:11
Client ID:
Instrument: gc02.i
Sample Info: WG146189-7,WE53-7
Purge Volume: 0.0
Operator: AAB
Column phase: RTX-502.2
Column diameter: 0.53



Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NCTAMSLANT Cutler CTO WE53
Lab ID : WG146189-7
Lab File ID : 2HG10173.D
Initial Calibration Date(s): 05/08/14 18:08 05/09/14 04:57

SDG: WE53-7
Analytical Date: 07/12/14 01:11
Instrument ID: GC02
Column ID: B

	Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
5	n-Pentane	50.00000	50.03104	4449	0.100	0.06208	25.00000	Linear	
6	2-Methylpentane	50.00000	52.24776	5283	0.100	4.49552	25.00000	Linear	
7	Methyl tert-butylether	2466	3357	3357	0.100	36.10961	25.00000	Averaged	*
8	2,2,4-Trimethylpentane	50.00000	55.63075	5818	0.100	11.26150	25.00000	Linear	
9	Benzene	5447	6906	6906	0.100	26.78221	25.00000	Averaged	*
11	Toluene	5611	7051	7051	0.100	25.65759	25.00000	Averaged	*
12	n-Nonane	4425	5641	5641	0.100	27.47078	30.00000	Averaged	
13	n-Decane	3985	4847	4847	0.100	21.63622	25.00000	Averaged	
14	Ethylbenzene	5628	7069	7069	0.100	25.60324	25.00000	Averaged	*
15	m+p-Xylene	5732	7142	7142	0.100	24.60489	25.00000	Averaged	
16	o-Xylene	5746	7253	7253	0.100	26.22031	25.00000	Averaged	*
18	1,2,4-trimethylbenzene	5806	7099	7099	0.100	22.27900	25.00000	Averaged	
19	n-Butylcyclohexane	4700	6024	6024	0.100	28.17073	25.00000	Averaged	*
20	Naphthalene	3842	4725	4725	0.100	22.97542	25.00000	Averaged	
21	2,5-Dibromotoluene (FID)	1900	2041	2041	0.100	7.41530	25.00000	Averaged	

*** = Compound out of QC criteria**

Data File: 2HG10173.D
Report Date: 15-Jul-2014 09:42

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10173.D
Lab Smp Id: WG146189-7
Inj Date : 12-JUL-2014 01:11
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-7,WE53-7
Misc Info : WG146189,WG142498,SH4401-1
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

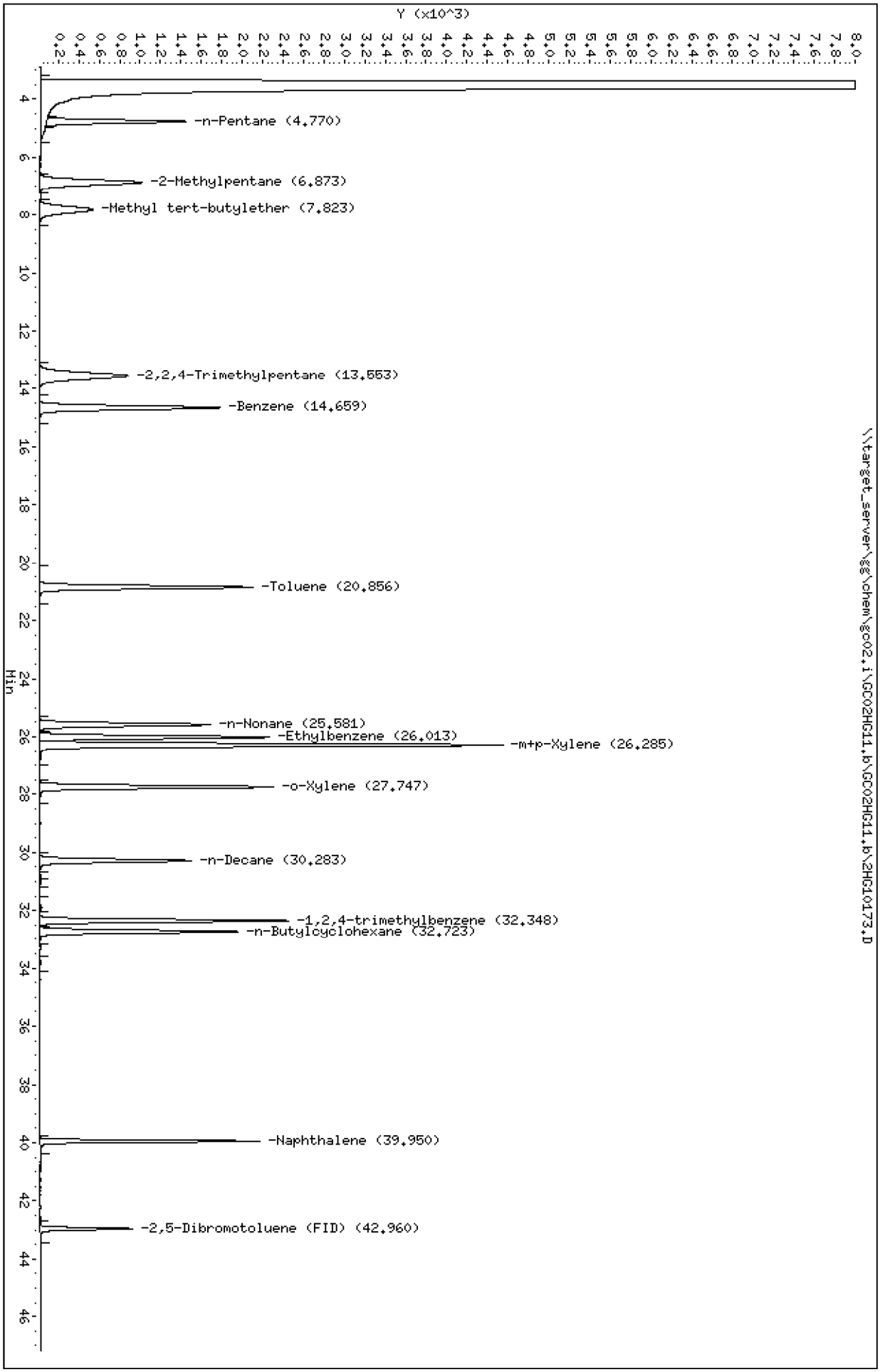
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5 n-Pentane	4.770	4.774	-0.004	222448	50.0000	50.0	
6 2-Methylpentane	6.872	6.875	-0.003	264167	50.0000	52.2	
7 Methyl tert-butylether	7.823	7.825	-0.002	167841	50.0000	68.0	
8 2,2,4-Trimethylpentane	13.552	13.551	0.001	290887	50.0000	55.6	
9 Benzene	14.659	14.656	0.003	345306	50.0000	63.4	
11 Toluene	20.855	20.853	0.002	352561	50.0000	62.8	
12 n-Nonane	25.581	25.579	0.002	282045	50.0000	63.7	
14 Ethylbenzene	26.013	26.012	0.001	353432	50.0000	62.8	
15 m+p-Xylene	26.285	26.284	0.001	714229	100.000	125	
16 o-Xylene	27.746	27.746	0.000	362642	50.0000	63.1	
13 n-Decane	30.282	30.283	-0.001	242352	50.0000	60.8	
18 1,2,4-trimethylbenzene	32.348	32.349	-0.001	354959	50.0000	61.1	
19 n-Butylcyclohexane	32.723	32.724	-0.001	301175	50.0000	64.1	
20 Naphthalene	39.949	39.952	-0.003	236253	50.0000	61.5	
$ 21 2,5-Dibromotoluene (FID)	42.959	42.963	-0.004	102046	50.0000	53.7	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10173.D
Date : 12-JUL-2014 01:11
Client ID:
Sample Info: WG146189-7,WE53-7
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NCTAMSLANT Cutler CTO WE53
SDG: WE53-7
Lab ID : WG146189-8
Analytical Date: 07/12/14 12:01
Lab File ID : 2HG10183.D
Instrument ID: GC02
Initial Calibration Date(s): 05/08/14 18:08 05/09/14 04:57
Column ID: A

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
2	Methyl tert-butylether	1850	1912	1912	0.100	3.33713	25.00000	Averaged
3	Benzene	4554	4860	4860	0.100	6.71043	25.00000	Averaged
4	Toluene	4191	4517	4517	0.100	7.76723	25.00000	Averaged
5	Ethylbenzene	3694	4029	4029	0.100	9.07032	25.00000	Averaged
6	m+p-Xylene	4201	4576	4576	0.100	8.92843	25.00000	Averaged
7	o-Xylene	3641	3971	3971	0.100	9.07624	25.00000	Averaged
8	1,2,4-trimethylbenzene	3835	4072	4072	0.100	6.18765	25.00000	Averaged
10	Naphthalene	3133	3115	3115	0.100	-0.60286	25.00000	Averaged
11	2,5-Dibromotoluene (PID)	50.00000	40.48775	2761	0.100	-19.02449	25.00000	Linear

*** = Compound out of QC criteria**

Data File: \\target_server\gg\chem\gc02.i\GC02HG12.b\2HG10183.D
Report Date: 15-Jul-2014 09:43

Katahdin Analytical Services

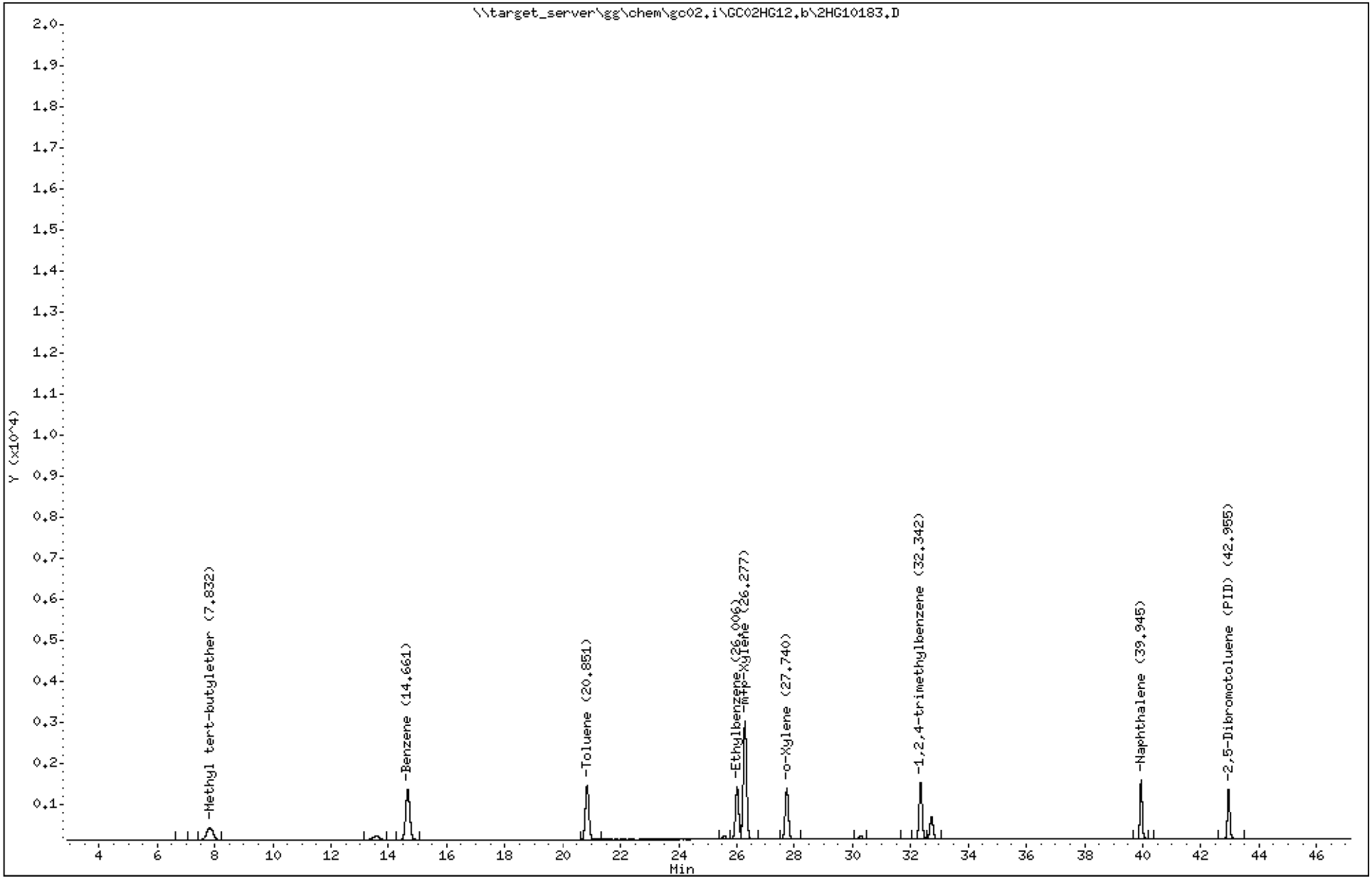
Data file : \\target_server\gg\chem\gc02.i\GC02HG12.b\2HG10183.D
Lab Smp Id: WG146189-8
Inj Date : 12-JUL-2014 12:01
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-8,WE53-7
Misc Info : WG146189,WG142498,SH4401-1
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG12.b\VPHPID29.m
Meth Date : 13-Jul-2014 08:51 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
2 Methyl tert-butylether	7.831	7.826	0.005	95577	50.0000	51.7	
3 Benzene	14.660	14.656	0.004	242999	50.0000	53.4	
4 Toluene	20.851	20.852	-0.001	225848	50.0000	53.9	
5 Ethylbenzene	26.006	26.011	-0.005	201434	50.0000	54.5	
6 m+p-Xylene	26.277	26.282	-0.005	457619	100.000	109	
7 o-Xylene	27.740	27.745	-0.005	198555	50.0000	54.5	
8 1,2,4-trimethylbenzene	32.341	32.348	-0.007	203615	50.0000	53.1	
10 Naphthalene	39.944	39.951	-0.007	155729	50.0000	49.7	
$ 11 2,5-Dibromotoluene (PID)	42.955	42.962	-0.007	138051	50.0000	40.5	

Data File: \\target_server\gg\chem\gc02.i\GC02HG12.b\2HG10183.D
Date : 12-JUL-2014 12:01
Client ID:
Instrument: gc02.i
Sample Info: WG146189-8,WE53-7
Purge Volume: 0.0
Operator: AAB
Column phase: RTX-502.2
Column diameter: 0.53



Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : NCTAMSLANT Cutler CTO WE53
Lab ID : WG146189-8
Lab File ID : 2HG10183.D
Initial Calibration Date(s): 05/08/14 18:08 05/09/14 04:57

SDG: WE53-7
Analytical Date: 07/12/14 12:01
Instrument ID: GC02
Column ID: B

	Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
5	n-Pentane	50.00000	50.23812	4467	0.100	0.47623	25.00000	Linear
6	2-Methylpentane	50.00000	52.82359	5342	0.100	5.64718	25.00000	Linear
7	Methyl tert-butylether	2466	3070	3070	0.100	24.46446	25.00000	Averaged
8	2,2,4-Trimethylpentane	50.00000	56.22037	5879	0.100	12.44075	25.00000	Linear
9	Benzene	5447	6750	6750	0.100	23.90956	25.00000	Averaged
11	Toluene	5611	6940	6940	0.100	23.68199	25.00000	Averaged
12	n-Nonane	4425	5479	5479	0.100	23.81585	30.00000	Averaged
13	n-Decane	3985	4851	4851	0.100	21.74664	25.00000	Averaged
14	Ethylbenzene	5628	7002	7002	0.100	24.42195	25.00000	Averaged
15	m+p-Xylene	5732	7082	7082	0.100	23.55865	25.00000	Averaged
16	o-Xylene	5746	7133	7133	0.100	24.13371	25.00000	Averaged
18	1,2,4-trimethylbenzene	5806	6995	6995	0.100	20.48422	25.00000	Averaged
19	n-Butylcyclohexane	4700	5844	5844	0.100	24.34188	25.00000	Averaged
20	Naphthalene	3842	4284	4284	0.100	11.48849	25.00000	Averaged
21	2,5-Dibromotoluene (FID)	1900	1896	1896	0.100	-0.23091	25.00000	Averaged

*** = Compound out of QC criteria**

Data File: 2HG10183.D
Report Date: 15-Jul-2014 09:43

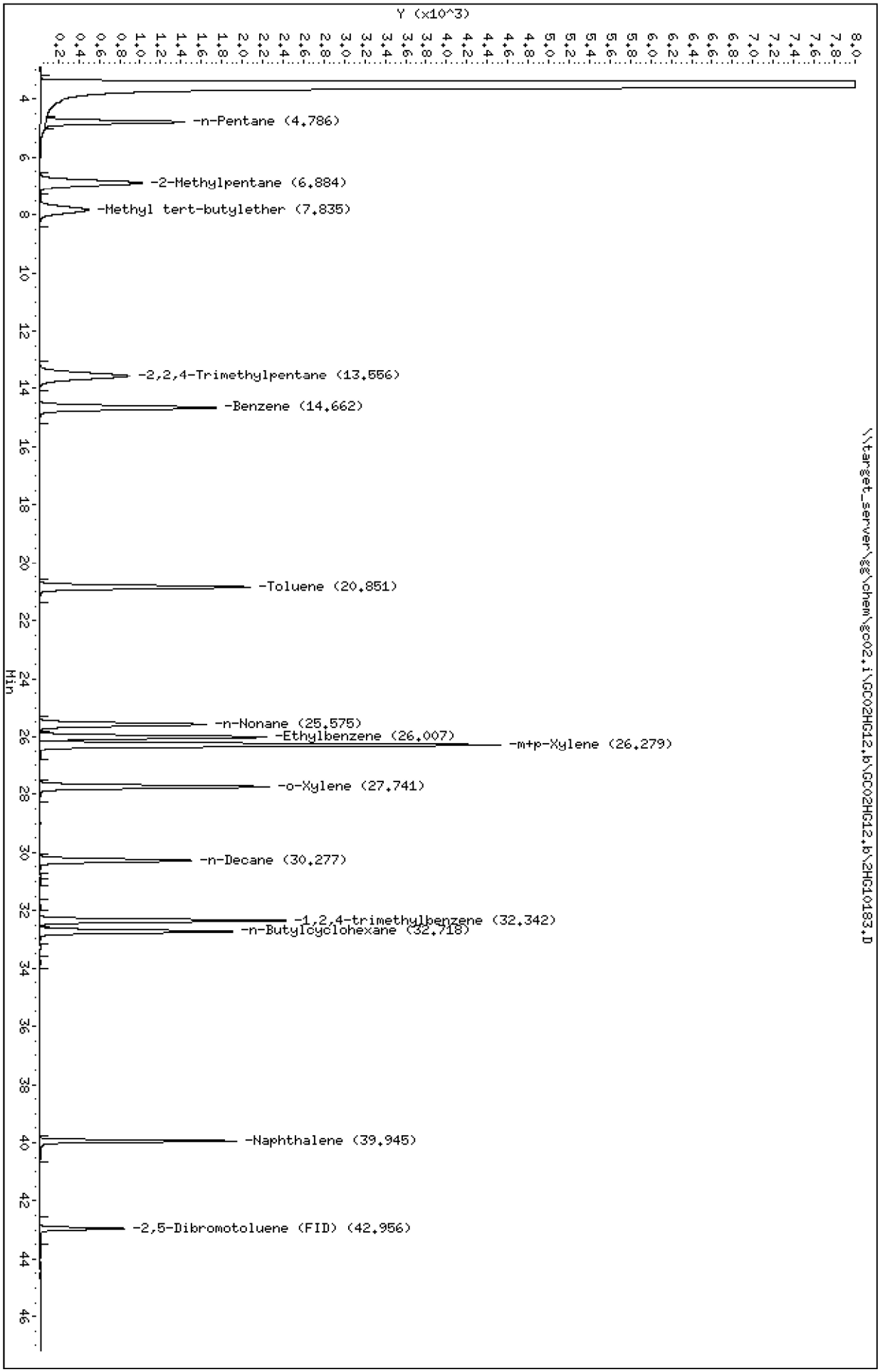
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG12.b\GC02HG12.b\2HG10183.D
Lab Smp Id: WG146189-8
Inj Date : 12-JUL-2014 12:01
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-8,WE53-7
Misc Info : WG146189,WG142498,SH4401-1
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG12.b\VPHPID29.m\VPHFID29.m
Meth Date : 13-Jul-2014 08:54 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5 n-Pentane	4.786	4.774	0.012	223373	50.0000	50.2	
6 2-Methylpentane	6.884	6.875	0.009	267083	50.0000	52.8	
7 Methyl tert-butylether	7.834	7.825	0.009	153481	50.0000	62.2	
8 2,2,4-Trimethylpentane	13.555	13.551	0.004	293963	50.0000	56.2	
9 Benzene	14.661	14.656	0.005	337482	50.0000	62.0	
11 Toluene	20.851	20.853	-0.002	347018	50.0000	61.8	
12 n-Nonane	25.575	25.579	-0.004	273958	50.0000	61.9	
14 Ethylbenzene	26.007	26.012	-0.005	350108	50.0000	62.2	
15 m+p-Xylene	26.279	26.284	-0.005	708232	100.000	124	
16 o-Xylene	27.740	27.746	-0.006	356647	50.0000	62.1	
13 n-Decane	30.277	30.283	-0.006	242572	50.0000	60.9	
18 1,2,4-trimethylbenzene	32.342	32.349	-0.007	349749	50.0000	60.2	
19 n-Butylcyclohexane	32.717	32.724	-0.007	292178	50.0000	62.2	
20 Naphthalene	39.944	39.952	-0.008	214185	50.0000	55.7	
$ 21 2,5-Dibromotoluene (FID)	42.955	42.963	-0.008	94782	50.0000	49.9	


Data File: \\target_server\gg\chem\gc02.i\GC02HG12.b\GC02HG12.b\2HG10183.D
Date : 12-JUL-2014 12:01
Client ID:
Sample Info: WG146189-8,WE53-7
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: AAB
Column diameter: 0.53
\\target_server\gg\chem\gc02.i\GC02HG12.b\GC02HG12.b\2HG10183.D
Y (x10^3)
Min
-n-Pentane (4.786)
-2-Methylpentane (6.884)
-Methyl tert-butylether (7.835)
-2,2,4-Trimethylpentane (13.556)
-Benzene (14.662)
-Toluene (20.851)
-n-Nonane (25.575)
-Ethylbenzene (26.007)
-m+p-Xylene (26.279)
-o-Xylene (27.741)
-n-Decane (30.277)
-1,2,4-trimethylbenzene (32.342)
-n-Butylcyclohexane (32.718)
-Naphthalene (39.945)
-2,5-Dibromotoluene (FID) (42.956)

Raw QC Data Section

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG146189-1
Client ID: Method Blank Sample
Project:
SDG: WE53-7
Lab File ID: 2HG10162.D

Sample Date:
Received Date:
Extract Date: 11-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189

Analysis Date: 11-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 15-JUL-14

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Unadjusted C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
Unadjusted C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
2,5-Dibromotoluene (FID)		93.8	%					
2,5-Dibromotoluene (PID)		76.5	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10162.D
Report Date: 15-Jul-2014 08:31

Katahdin Analytical Services

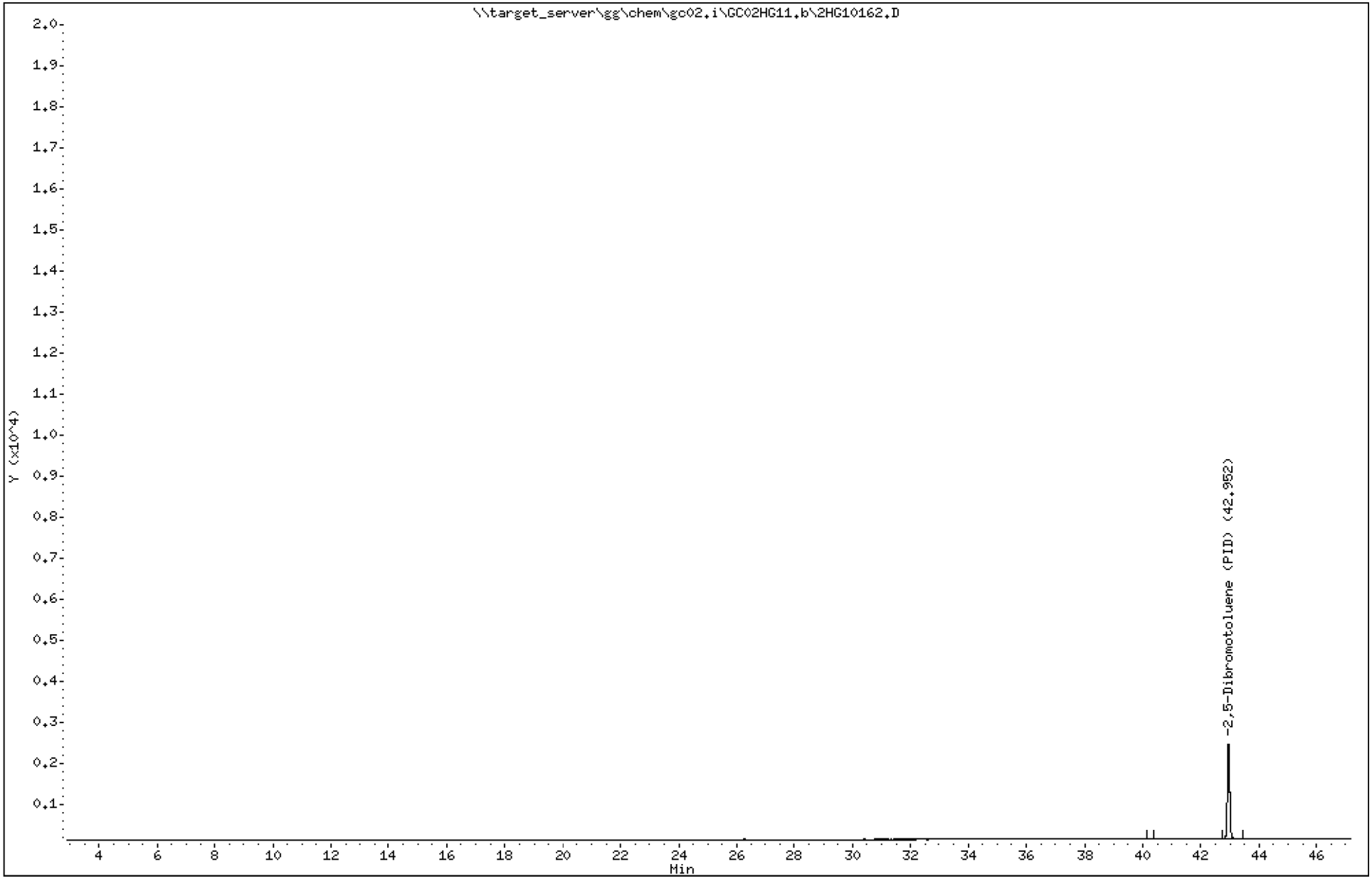
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10162.D
Lab Smp Id: WG146189-1 Client Smp ID: WG146189-Blank
Inj Date : 11-JUL-2014 13:58
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-1,WE53-7
Misc Info : WG146189,WG142498,SH4401-1
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	42.952	42.962	-0.010	261171	76.5113	76.5	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10162.D
Date : 11-JUL-2014 13:58
Client ID: WG146189-Blank
Instrument: gc02.i
Sample Info: WG146189-1,WE53-7
Purge Volume: 0.0
Operator: AAB
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 11000150

Data File: 2HG10162.D
Report Date: 15-Jul-2014 08:35

Katahdin Analytical Services

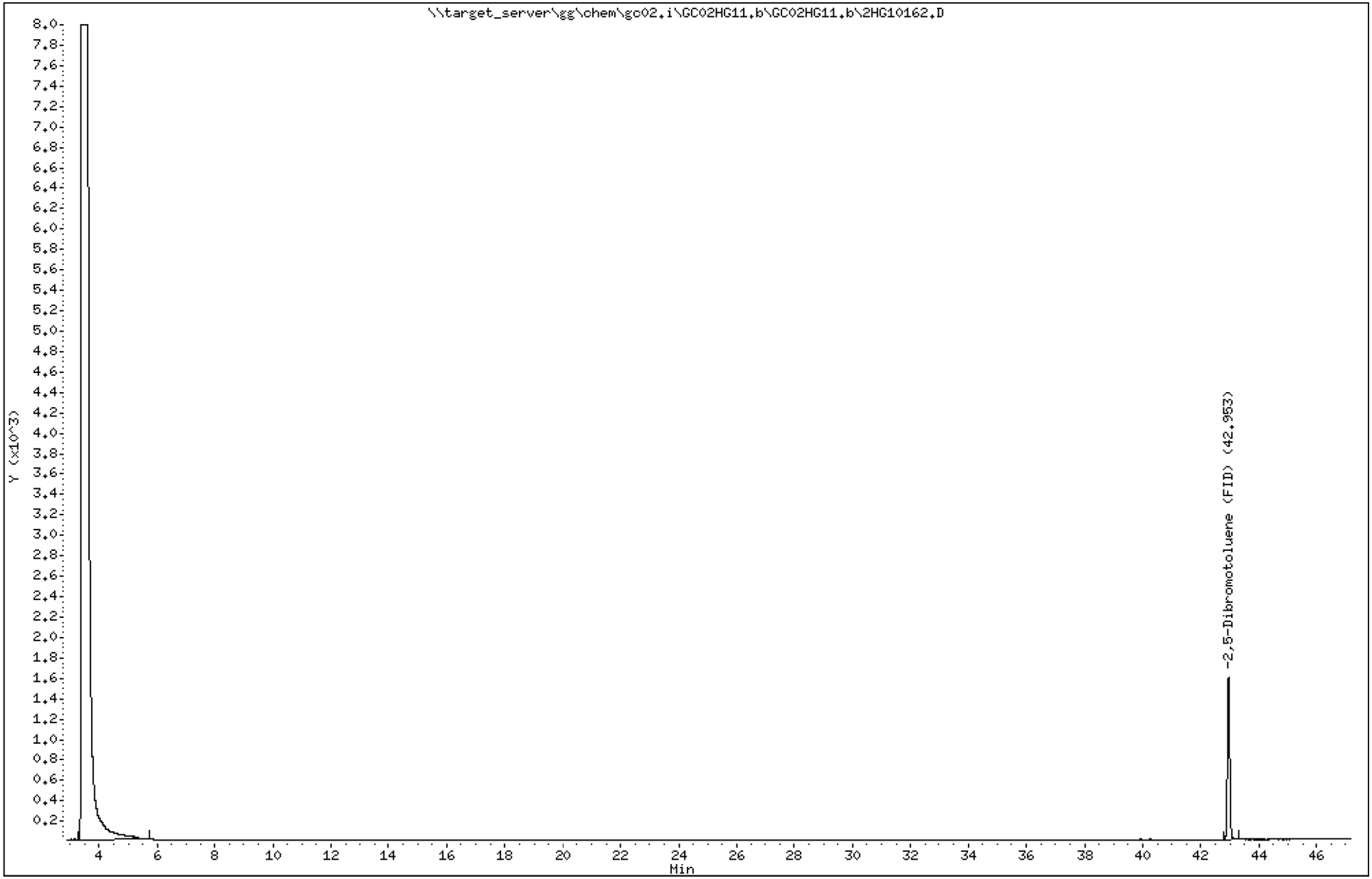
Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10162.D
Lab Smp Id: WG146189-1 Client Smp ID: WG146189-Blank
Inj Date : 11-JUL-2014 13:58
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-1,WE53-7
Misc Info : WG146189,WG142498,SH4401-1
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	42.952	42.963	-0.011	178235	93.8065	93.8	

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10162.D
Date : 11-JUL-2014 13:58
Client ID: WG146189-Blank
Instrument: gc02.i
Sample Info: WG146189-1,WE53-7
Purge Volume: 0.0
Operator: AAB
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS/LCSD Recovery Report

LCS ID: WG146189-2
LCSD ID: WG146189-3
Project:
SDG: WE53-7
Report Date: 15-JUL-14
LCS File ID: 2HG10157.D

Received Date:
Extract Date: 11-JUL-14
Extracted By: AAB
Extraction Method: MA DEP VPH 04-1.1
Lab Prep Batch: WG146189
LCSD File ID: 2HG10158.D

Analysis Date: 11-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Unadjusted C5-C8 Aliphatics	300.	253.	84.3	277.	92.3	ug/L	9	25	70-130
Unadjusted C9-C12 Aliphatics	200.	222.	111.	228.	114.	ug/L	3	25	70-130
C5-C8 Aliphatics	300.	253.	84.3	277.	92.3	ug/L	9	25	70-130
C9-C12 Aliphatics	200.	222.	111.	228.	114.	ug/L	3	25	70-130
C9-C10 Aromatics	100.	102.	102.	103.	103.	ug/L	1	25	70-130
2,5-Dibromotoluene (FID)			80.9		89.1				70-130
2,5-Dibromotoluene (PID)			67.0*		72.9				70-130

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10157.D
Report Date: 15-Jul-2014 08:31

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10157.D
Lab Smp Id: WG146189-2 Client Smp ID: WG146189-LCS
Inj Date : 11-JUL-2014 09:35
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-2,WE53-7
Misc Info : WG146189,WG142498,SH4401-1
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

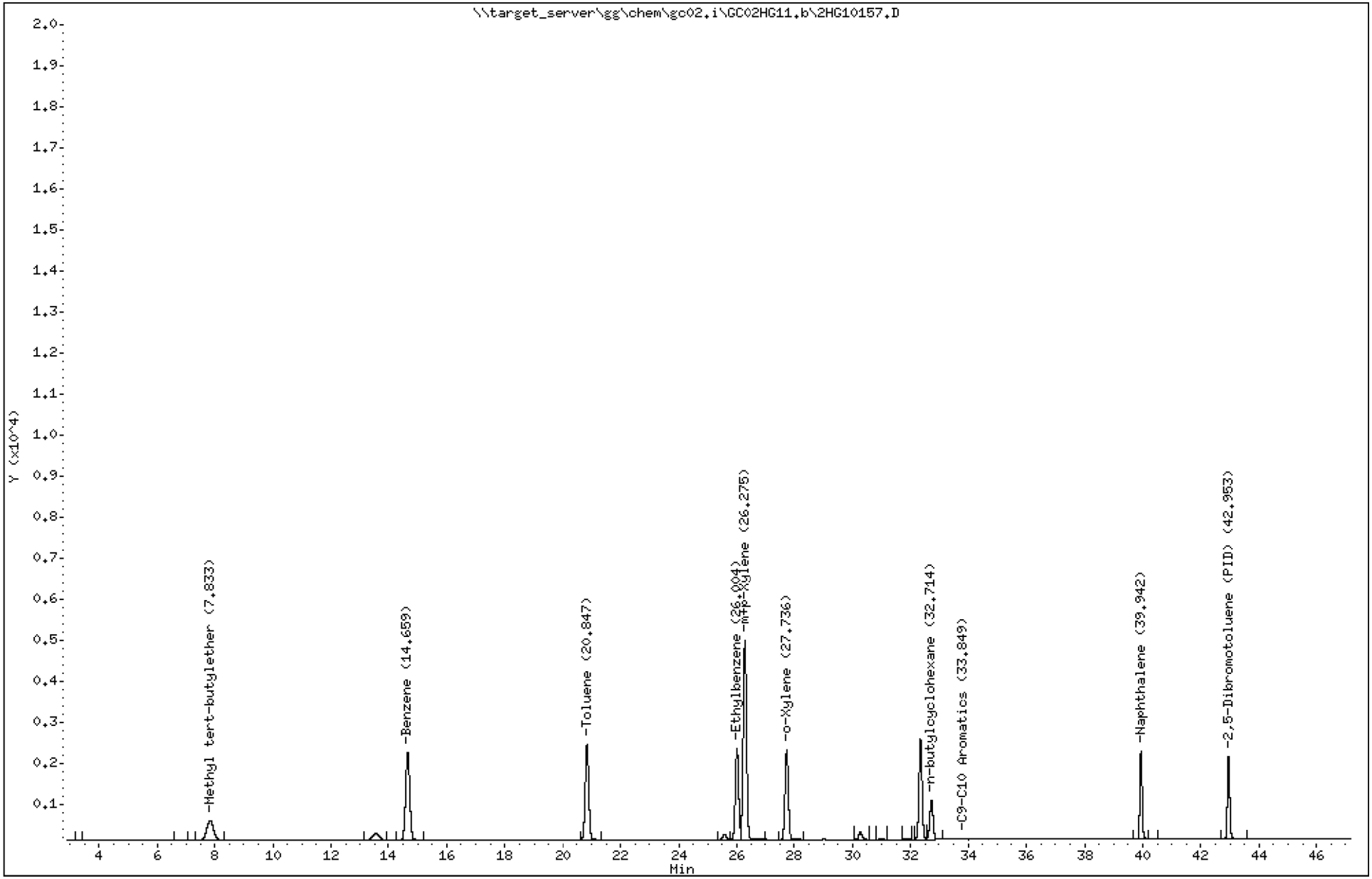
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
	2 Methyl tert-butylether	7.832	7.826	0.006	153459	82.9594	83.0	
	3 Benzene	14.658	14.656	0.002	421587	92.5677	92.6	
	4 Toluene	20.846	20.852	-0.006	392994	93.7619	93.8	
	5 Ethylbenzene	26.003	26.011	-0.008	354108	95.8693	95.9	
	6 m+p-Xylene	26.275	26.282	-0.007	784611	186.763	187	
	7 o-Xylene	27.736	27.745	-0.009	349392	95.9693	96.0	
	12 n-butylcyclohexane	32.713	32.720	-0.007	151715		(a)	
S	9 C9-C10 Aromatics	27.846	-39.852		389962	101.685	102	
	10 Naphthalene	39.942	39.951	-0.009	237801	75.8906	75.9	
$	11 2,5-Dibromotoluene (PID)	42.952	42.962	-0.010	228727	67.0186	67.0(R)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10157.D
Date : 11-JUL-2014 09:35
Client ID: WG146189-LCS
Sample Info: WG146189-2,WE53-7
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Katahdin Analytical Services 11000155

Data File: 2HG10157.D
Report Date: 15-Jul-2014 08:35

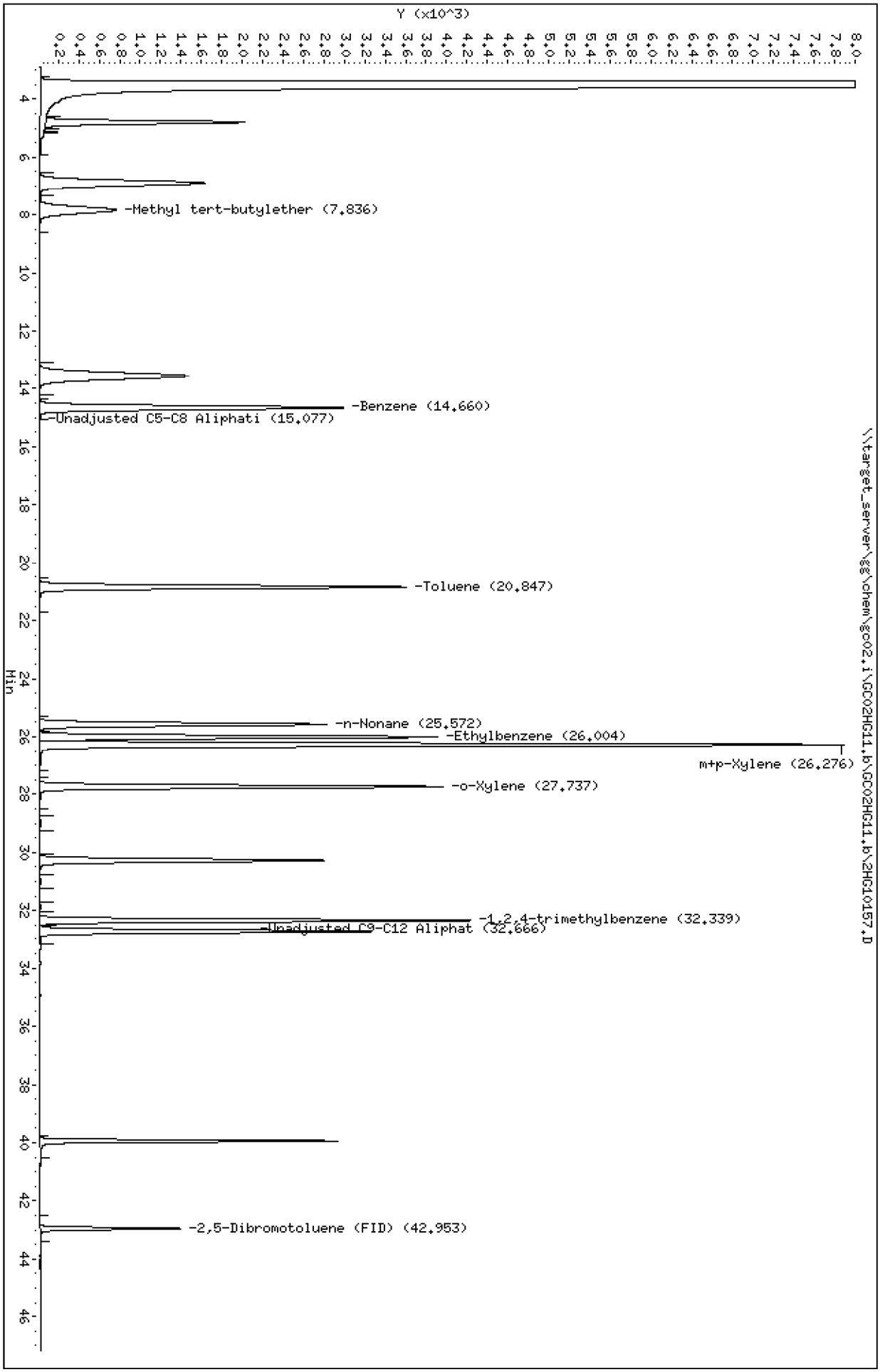
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10157.D
Lab Smp Id: WG146189-2 Client Smp ID: WG146189-LCS
Inj Date : 11-JUL-2014 09:35
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-2,WE53-7
Misc Info : WG146189,WG142498,SH4401-1
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
7	Methyl tert-butylether	7.836	7.825	0.011	242668	98.3951	98.4	
9	Benzene	14.659	14.656	0.003	583610	107.139	107	
11	Toluene	20.847	20.853	-0.006	605400	107.886	108	
12	n-Nonane	25.572	25.579	-0.007	473912	107.093	107	
14	Ethylbenzene	26.004	26.012	-0.008	614178	109.134	109	
15	m+p-Xylene	26.276	26.284	-0.008	1240635	216.442	216	
16	o-Xylene	27.736	27.746	-0.010	626196	108.976	109	
18	1,2,4-trimethylbenzene	32.339	32.349	-0.010	612660	105.527	106	
S 10	Unadjusted C5-C8 Aliphatics	4.674-25.480			1242643	252.913	253	
S 17	Unadjusted C9-C12 Aliphatics	25.480-39.852			963052	221.788	222	
$ 21	2,5-Dibromotoluene (FID)	42.953	42.963	-0.010	153781	80.9362	80.9	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Date : 11-JUL-2014 09:35
Client ID: WG146189-LCS
Sample Info: WG146189-2,WE53-7
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: AAB
Column diameter: 0.53
Y (x10^3)
Min
-Methyl tert-butylether (7.836)
-Benzene (14.660)
-Unadjusted C5-C8 Aliphati (15.077)
-Toluene (20.847)
-n-Nonane (25.572)
-Ethylbenzene (26.004)
m+p-Xylene (26.276)
-o-Xylene (27.737)
-1,2,4-trimethylbenzene (32.339)
-Unadjusted C9-C12 Aliphat (32.666)
-2,5-Dibromotoluene (FID) (42.953)
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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10158.D
Report Date: 15-Jul-2014 08:31

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Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10158.D
Lab Smp Id: WG146189-3 Client Smp ID: WG146189-LCSD
Inj Date : 11-JUL-2014 10:28
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-3,WE53-7
Misc Info : WG146189,WG142498,SH4401-1
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

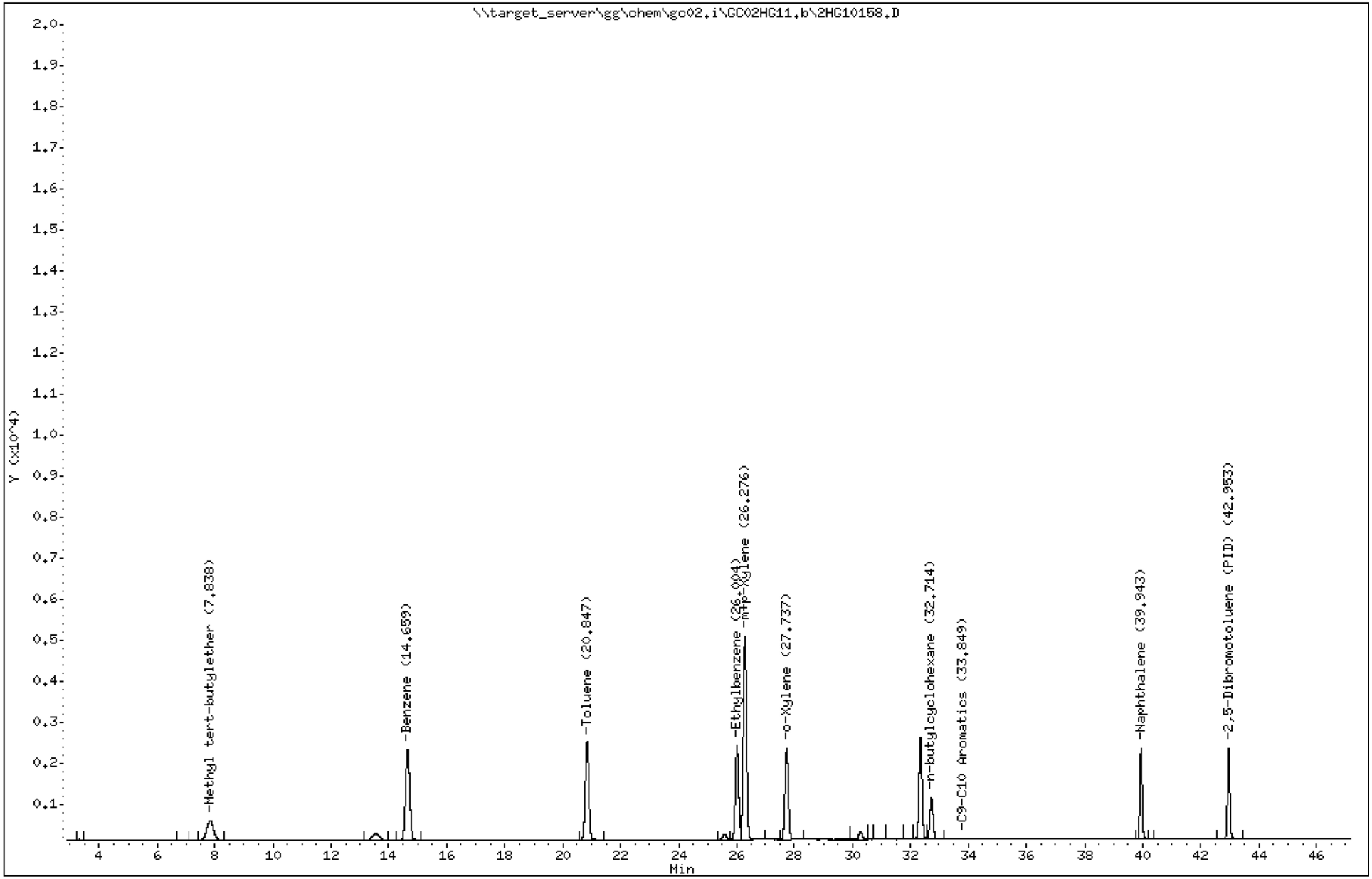
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
	2 Methyl tert-butylether	7.838	7.826	0.012	154346	83.4389	83.4	
	3 Benzene	14.658	14.656	0.002	433051	95.0849	95.1	
	4 Toluene	20.847	20.852	-0.005	403522	96.2737	96.3	
	5 Ethylbenzene	26.003	26.011	-0.008	361550	97.8841	97.9	
	6 m+p-Xylene	26.275	26.282	-0.007	797105	189.737	190	
	7 o-Xylene	27.736	27.745	-0.009	354808	97.4569	97.4	
	12 n-butylcyclohexane	32.714	32.720	-0.006	158717		(a)	
S	9 C9-C10 Aromatics	27.846	-39.852		395618	103.160	103	
	10 Naphthalene	39.942	39.951	-0.009	240381	76.7140	76.7	
$	11 2,5-Dibromotoluene (PID)	42.952	42.962	-0.010	248809	72.8943	72.9	

QC Flag Legend

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

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10158.D
Date : 11-JUL-2014 10:28
Client ID: WG146189-LCSD
Sample Info: WG146189-3,WE53-7
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Data File: 2HG10158.D
Report Date: 15-Jul-2014 08:35

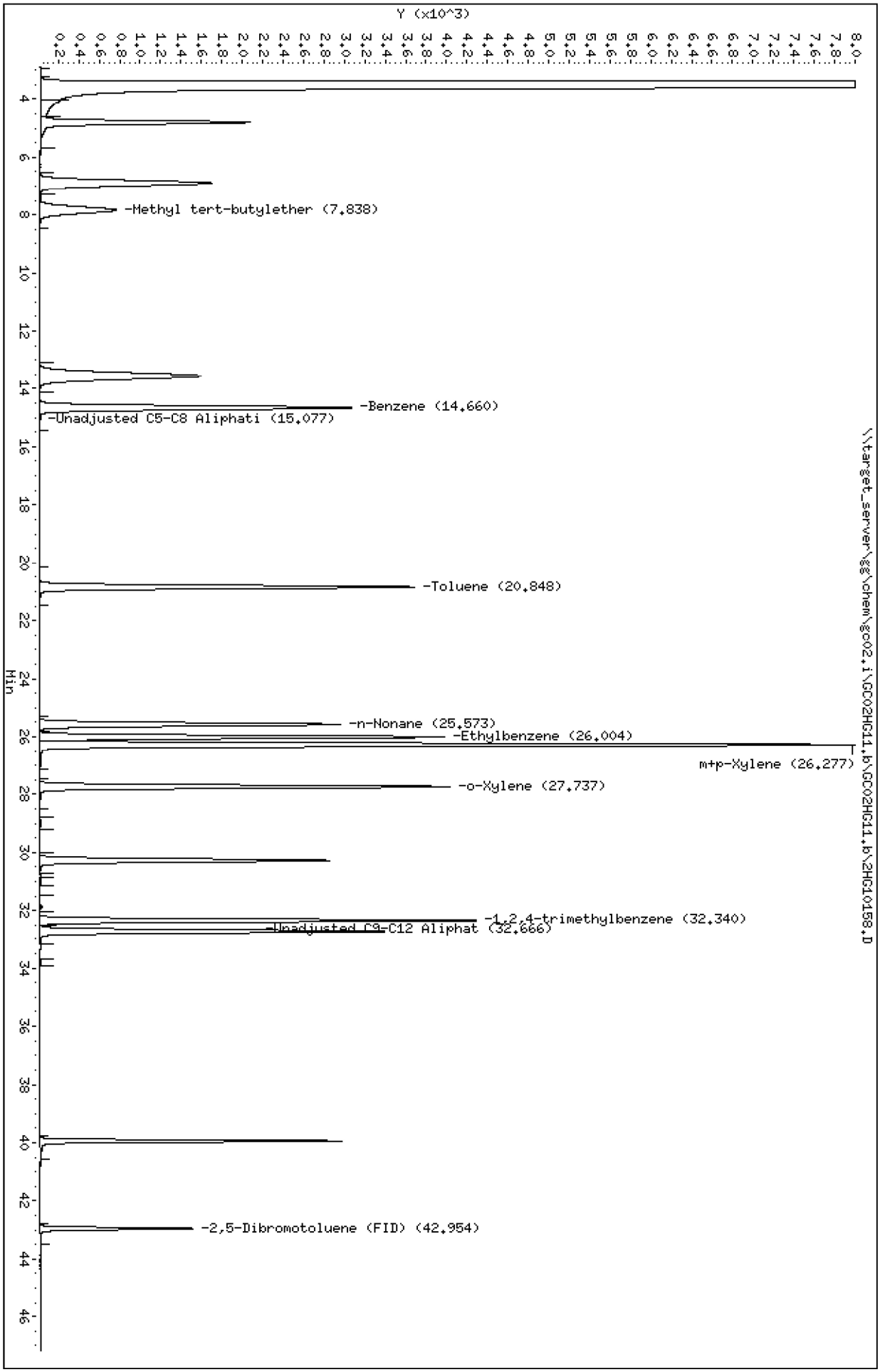
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10158.D
Lab Smp Id: WG146189-3 Client Smp ID: WG146189-LCSD
Inj Date : 11-JUL-2014 10:28
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-3,WE53-7
Misc Info : WG146189,WG142498,SH4401-1
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
7	Methyl tert-butylether	7.837	7.825	0.012	241591	97.9584	98.0	
9	Benzene	14.660	14.656	0.004	601170	110.362	110	
11	Toluene	20.847	20.853	-0.006	618809	110.276	110	
12	n-Nonane	25.572	25.579	-0.007	496190	112.127	112	
14	Ethylbenzene	26.004	26.012	-0.008	626610	111.343	111	
15	m+p-Xylene	26.276	26.284	-0.008	1260242	219.863	220	
16	o-Xylene	27.737	27.746	-0.009	636005	110.683	111	
18	1,2,4-trimethylbenzene	32.339	32.349	-0.010	620039	106.798	107	
S 10	Unadjusted C5-C8 Aliphatics	4.674-25.480			1361415	277.075	277	
S 17	Unadjusted C9-C12 Aliphatics	25.480-39.852			992582	228.588	228	
$ 21	2,5-Dibromotoluene (FID)	42.953	42.963	-0.010	169264	89.0850	89.1	


Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10158.D
Date : 11-JUL-2014 10:28
Client ID: WG146189-LCSD
Sample Info: WG146189-3,WE53-7
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: AAB
Column diameter: 0.53
Y (x10^3)
Min
-Methyl tert-butylether (7.838)
-Benzene (14.660)
-Unadjusted C5-C8 Aliphati (15.077)
-Toluene (20.848)
-n-Nonane (25.573)
-Ethylbenzene (26.004)
m+p-Xylene (26.277)
-o-Xylene (27.737)
-1,2,4-trimethylbenzene (32.340)
-Unadjusted C9-C12 Aliphat (32.666)
-2,5-Dibromotoluene (FID) (42.954)
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Cert No E87604

MS/MSD Recovery Report

MS ID: WG146189-4
MSD ID: WG146189-5
Sample ID: SH4521-8
Client ID: FTA-MW-210-061814
Project:
SDG: WE53-7
MS File ID: 2HG10159.D

Received Date:
Extract Date: 11-JUL-14
Extracted By: AAB
Extraction Method: MA-VPH
Lab Prep Batch: WG146189
Report Date: 15-JUL-14
MSD File ID: 2HG10160.D

Analysis Date: 11-JUL-14
Analyst: AAB
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Unadjusted C5-C8 Aliphatics	300.	300.	ug/L	U75	254	269	84.7	89.7	5	50	70-130
Unadjusted C9-C12 Aliphatics	200.	200.	ug/L	U75	195	233	97.5	116.	18	50	70-130
C5-C8 Aliphatics	300.	300.	ug/L	U75	254	269	84.7	89.7	5	50	70-130
C9-C12 Aliphatics	200.	200.	ug/L	U75	195	233	97.5	116	18	50	70-130
C9-C10 Aromatics	100.	100.	ug/L	U75	100	103	100.	103.	3	50	70-130
2,5-Dibromotoluene (FID)							90.6	91.5			70-130
2,5-Dibromotoluene (PID)							74.2	74.7			70-130

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10159.D
Report Date: 15-Jul-2014 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10159.D
Lab Smp Id: WG146189-4 Client Smp ID: FTA-MW-210-061814MS
Inj Date : 11-JUL-2014 11:20
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-4,WE53-7
Misc Info : WG146189,WG142498,SH4521-8
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

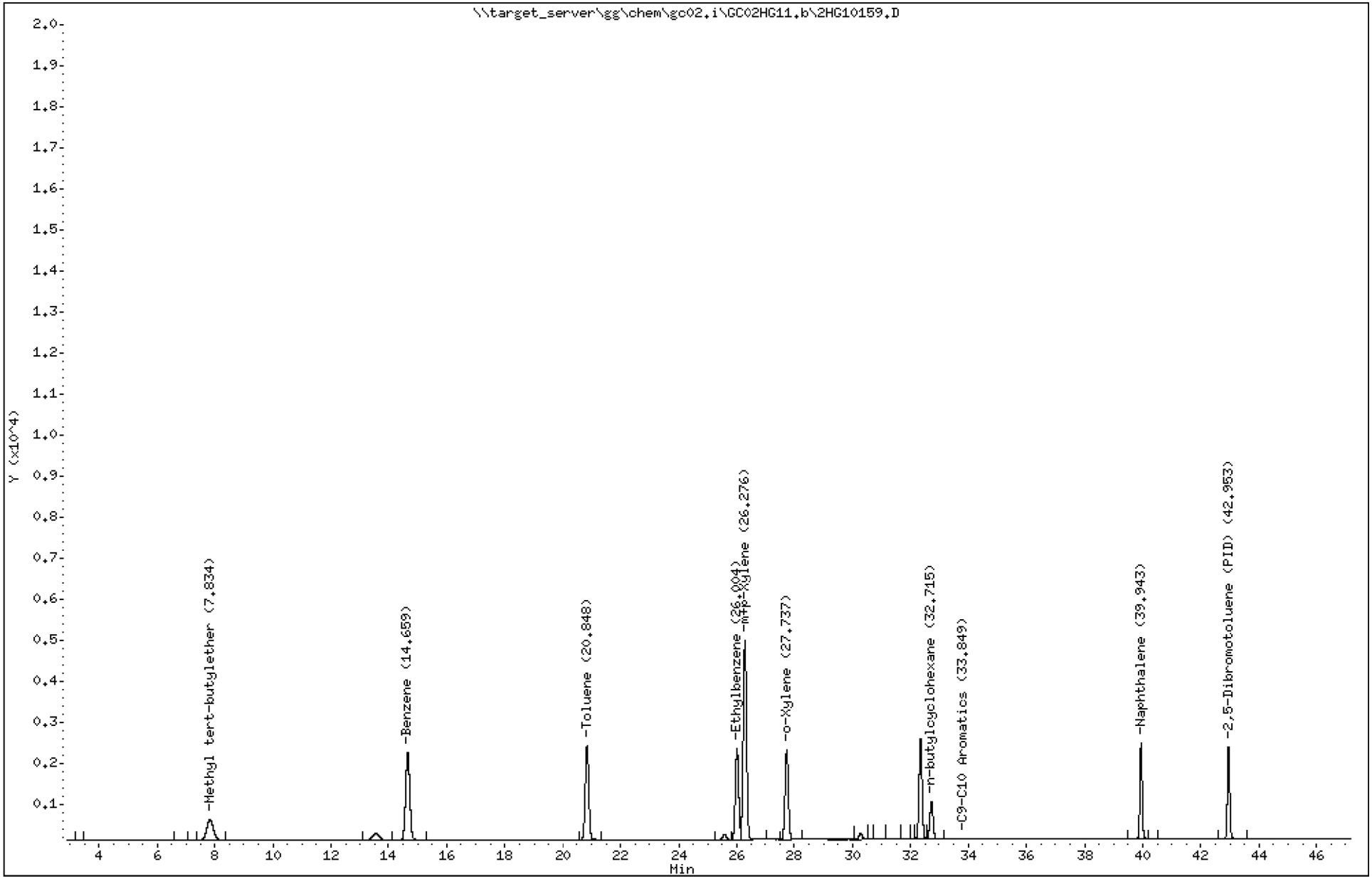
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
	2 Methyl tert-butylether	7.834	7.826	0.008	158260	85.5548	85.6	
	3 Benzene	14.659	14.656	0.003	421569	92.5638	92.6	
	4 Toluene	20.847	20.852	-0.005	391195	93.3327	93.3	
	5 Ethylbenzene	26.004	26.011	-0.007	353151	95.6102	95.6	
	6 m+p-Xylene	26.275	26.282	-0.007	781458	186.013	186	
	7 o-Xylene	27.737	27.745	-0.008	347980	95.5815	95.6	
	12 n-butylcyclohexane	32.714	32.720	-0.006	145915		(a)	
S	9 C9-C10 Aromatics	27.846	-39.852		384597	100.286	100	
	10 Naphthalene	39.942	39.951	-0.009	255212	81.4471	81.4	
$	11 2,5-Dibromotoluene (PID)	42.952	42.962	-0.010	253324	74.2154	74.2	

QC Flag Legend

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

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10159.D
Date : 11-JUL-2014 11:20
Client ID: FTA-MW-210-061814MS
Sample Info: WG146189-4,WE53-7
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Data File: 2HG10159.D
Report Date: 15-Jul-2014 09:11

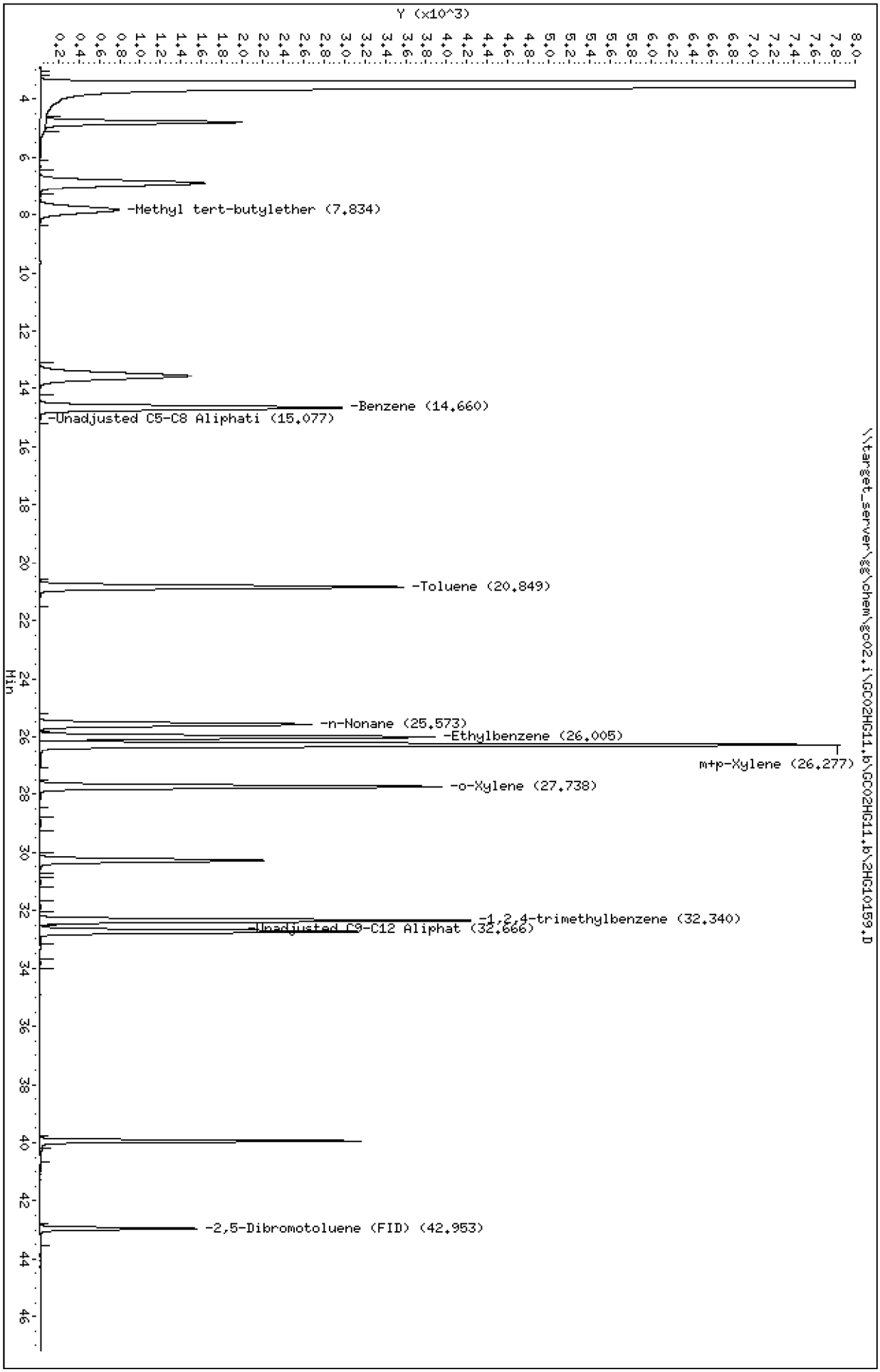
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10159.D
Lab Smp Id: WG146189-4 Client Smp ID: FTA-MW-210-061814MS
Inj Date : 11-JUL-2014 11:20
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-4,WE53-7
Misc Info : WG146189,WG142498,SH4521-8
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
	7 Methyl tert-butylether	7.833	7.825	0.008	247886	100.511	100	
	9 Benzene	14.660	14.656	0.004	582030	106.849	107	
	11 Toluene	20.848	20.853	-0.005	601313	107.158	107	
	12 n-Nonane	25.572	25.579	-0.007	449357	101.544	102	
	14 Ethylbenzene	26.004	26.012	-0.008	611844	108.719	109	
	15 m+p-Xylene	26.277	26.284	-0.007	1233969	215.279	215	
	16 o-Xylene	27.737	27.746	-0.009	622770	108.380	108	
	18 1,2,4-trimethylbenzene	32.340	32.349	-0.009	613916	105.743	106	
S	10 Unadjusted C5-C8 Aliphatics	4.674-25.480			1249548	254.317	254	
S	17 Unadjusted C9-C12 Aliphatics	25.480-39.852			848076	195.309	195	
$	21 2,5-Dibromotoluene (FID)	42.953	42.963	-0.010	172141	90.5992	90.6	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Date : 11-JUL-2014 11:20
Client ID: FTA-MW-210-061814MS
Sample Info: WG146189-4,WE53-7
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: AAB
Column diameter: 0.53
Y (x10^3)
Min
-Methyl tert-butylether (7.834)
-Benzene (14.660)
-Unadjusted C5-C8 Aliphati (15.077)
-Toluene (20.849)
-n-Nonane (25.573)
-Ethylbenzene (26.005)
m+p-Xylene (26.277)
-o-Xylene (27.738)
-1,2,4-trimethylbenzene (32.340)
-Unadjusted C9-C12 Aliphat (32.666)
-2,5-Dibromotoluene (FID) (42.953)
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Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10160.D
Report Date: 15-Jul-2014 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10160.D
Lab Smp Id: WG146189-5 Client Smp ID: FTA-MW-210-061814MS
Inj Date : 11-JUL-2014 12:13
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-5,WE53-7
Misc Info : WG146189,WG142498,SH4521-8
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m
Meth Date : 12-Jul-2014 08:23 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

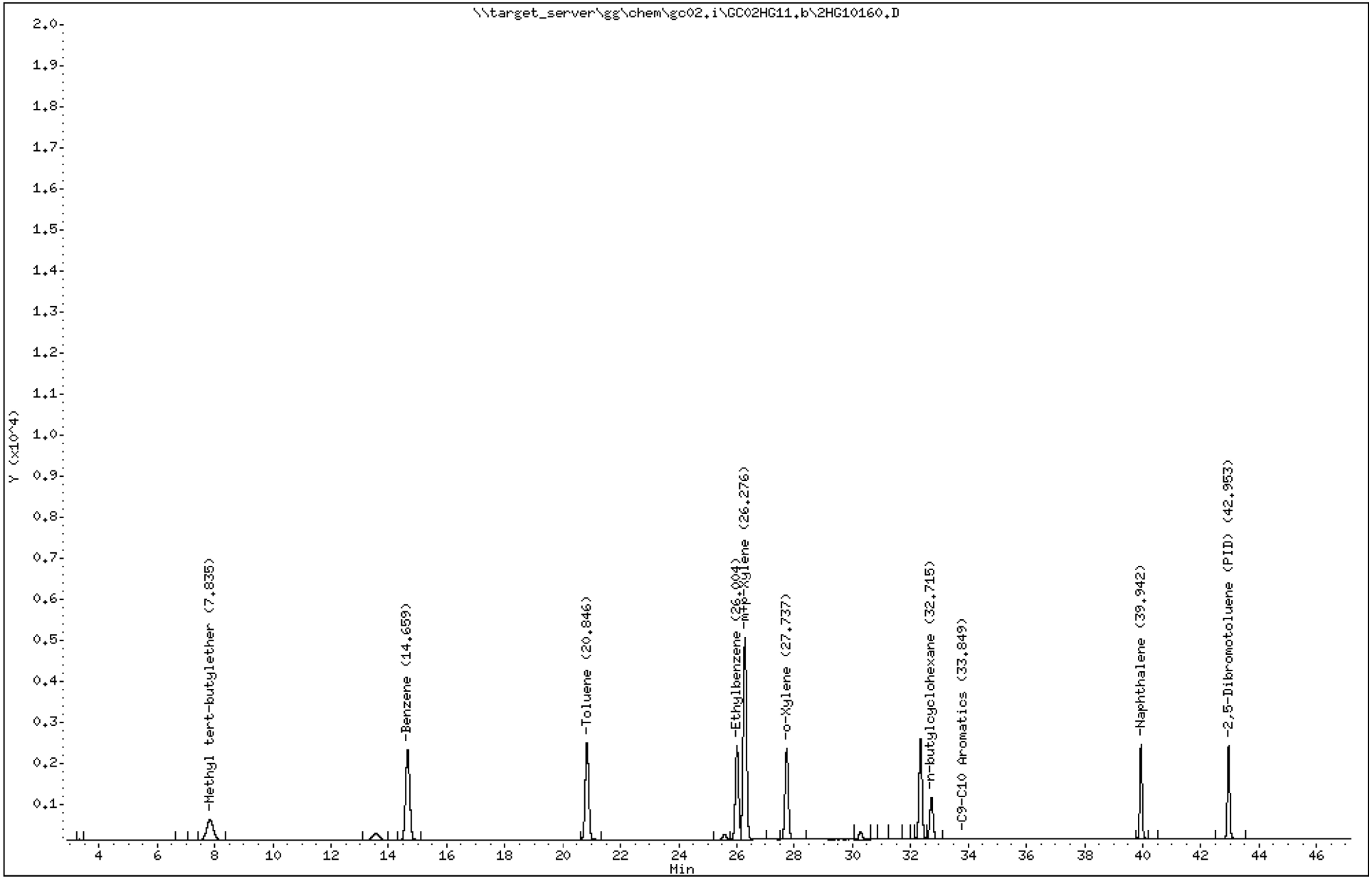
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
	2 Methyl tert-butylether	7.834	7.826	0.008	158491	85.6796	85.7	
	3 Benzene	14.658	14.656	0.002	434478	95.3982	95.4	
	4 Toluene	20.845	20.852	-0.007	403028	96.1558	96.2	
	5 Ethylbenzene	26.003	26.011	-0.008	362167	98.0511	98.0	
	6 m+p-Xylene	26.276	26.282	-0.006	794126	189.028	189	
	7 o-Xylene	27.736	27.745	-0.009	354881	97.4770	97.5	
	12 n-butylcyclohexane	32.715	32.720	-0.005	161566		(a)	
S	9 C9-C10 Aromatics	27.846	-39.852		393498	102.607	103	
	10 Naphthalene	39.942	39.951	-0.009	252926	80.7175	80.7	
$	11 2,5-Dibromotoluene (PID)	42.952	42.962	-0.010	255054	74.7216	74.7	

QC Flag Legend

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

Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\2HG10160.D
Date : 11-JUL-2014 12:13
Client ID: FTA-MW-210-061814MS
Sample Info: WG146189-5,WE53-7
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: AAB
Column diameter: 0.53



Katahdin Analytical Services 11000168

Data File: 2HG10160.D
Report Date: 15-Jul-2014 09:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10160.D
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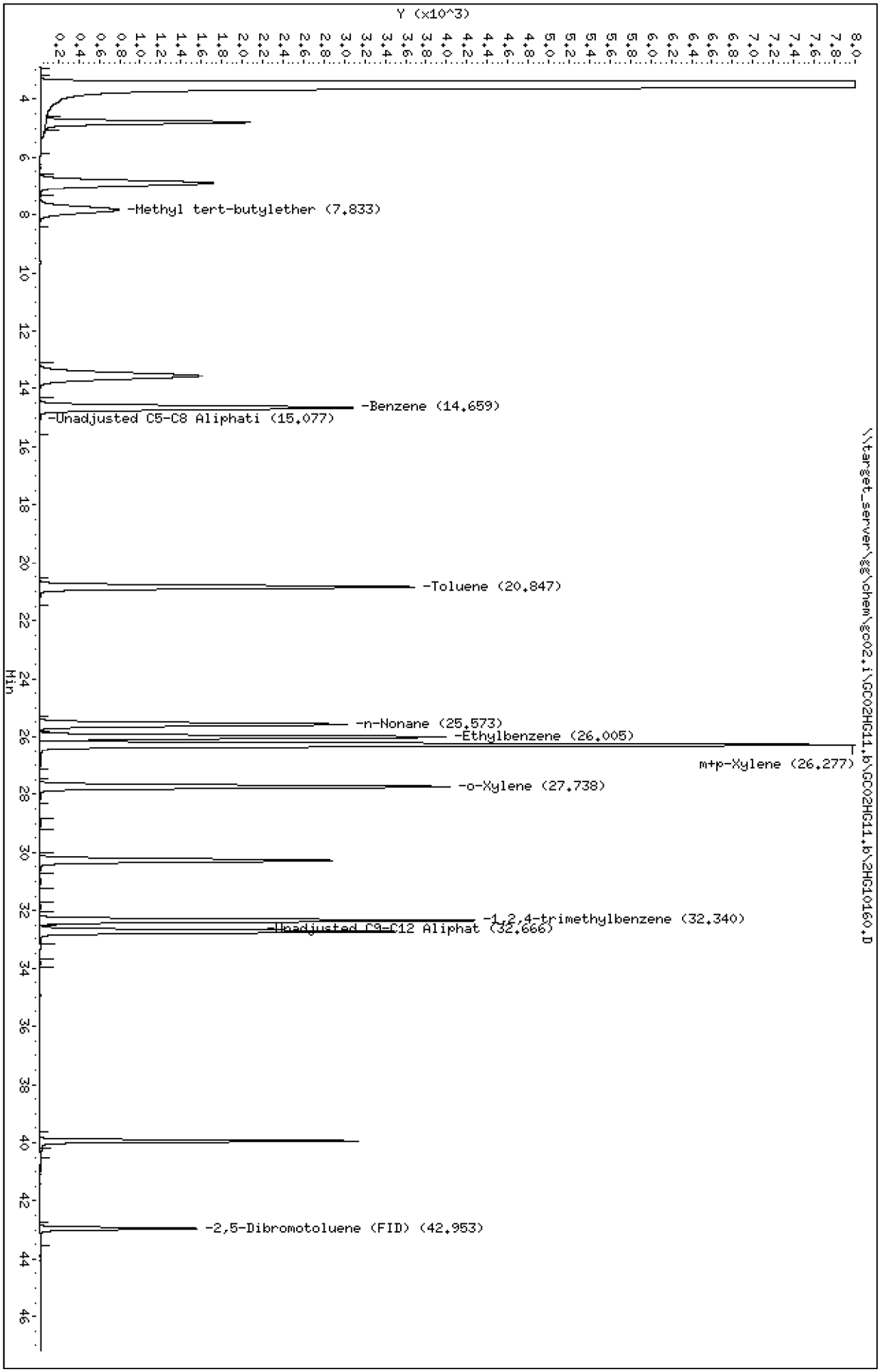
Inj Date : 11-JUL-2014 12:13
Operator : AAB Inst ID: gc02.i
Smp Info : WG146189-5,WE53-7
Misc Info : WG146189,WG142498,SH4521-8
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02HG11.b\VPHPID29.m\VPHFID29.m
Meth Date : 12-Jul-2014 08:26 abullentin Quant Type: ESTD
Cal Date : 08-MAY-2014 19:55 Cal File: 2HE10064.D
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
7	Methyl tert-butylether	7.833	7.825	0.008	247926	100.527	100	
9	Benzene	14.659	14.656	0.003	604122	110.904	111	
11	Toluene	20.847	20.853	-0.006	620163	110.517	110	
12	n-Nonane	25.573	25.579	-0.006	508390	114.884	115	
14	Ethylbenzene	26.004	26.012	-0.008	628417	111.664	112	
15	m+p-Xylene	26.277	26.284	-0.007	1257111	219.316	219	
16	o-Xylene	27.737	27.746	-0.009	636368	110.746	111	
18	1,2,4-trimethylbenzene	32.340	32.349	-0.009	618224	106.485	106	
S 10	Unadjusted C5-C8 Aliphatics	4.674-25.480			1323620	269.386	269	
S 17	Unadjusted C9-C12 Aliphatics	25.480-39.852			1011955	233.050	233	
$ 21	2,5-Dibromotoluene (FID)	42.953	42.963	-0.010	173777	91.4603	91.5	


Data File: \\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10160.D
Date : 11-JUL-2014 12:13
Client ID: FTA-MW-210-061814MS
Sample Info: WG146189-5,WE53-7
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: AAB
Column diameter: 0.53
Y (x10^3)
Min
-Methyl tert-butylether (7.833)
-Benzene (14.659)
-Unadjusted C5-C8 Aliphati (15.077)
-Toluene (20.847)
-n-Nonane (25.573)
-Ethylbenzene (26.005)
m+p-Xylene (26.277)
-o-Xylene (27.738)
-1,2,4-trimethylbenzene (32.340)
-Unadjusted C9-C12 Aliphat (32.666)
-2,5-Dibromotoluene (FID) (42.953)
\\target_server\gg\chem\gc02.i\GC02HG11.b\GC02HG11.b\2HG10160.D

Logbooks and Supporting Documents

Katahdin Analytical Services, Inc.
GC Laboratory Instrument Runlog

Instrumen

Method (Circle): MADEP-VPH-98-1 MEDEP 4.2.17 SW846 8015(M)

Date	Init.	Sample Name	Amt. Purged	SP. #	Result File	Dil.	Y/N	Method	pH	Comments
050814	LPR	ICAL 300	5 ml	1	2HE10062	1	Y	VPH PID 29/ VPH FID 89	–	6ul #8 WG142498-1,2
		100		2	63		Y		–	10ul #1 -3,4
		50		3	64		Y		–	5ul #1 -5,6
		10		4	65		Y		–	10ul #7 -7,8
		5		5	66		Y		–	5ul #7 -9,10
		1		6	67		Y		–	1ul #7 -11,12
		1		7	68		N		–	not needed
050914		1		8	69				–	
		5		9	70				–	
		10		10	71				–	
		50		11	72				–	
		100		12	73				–	
		300		13	74				–	
		Water		14	75		N		–	
				15	76		N		–	
		IND 100		16	77		Y		–	WG142498-13
050914	LPR	CV 50	5 ml	1	78	1	Y		–	1↑ FID
		WG142500-1		2	79		Y		–	
		-2		3	80		Y		–	
		-3		1	81		Y		–	
		Water		2	82		N		–	
		SH2756-1		3	83		Y		<2	
		-2		4	84					
		SH2775-4RA		5	85		Y			
		SH2779-1		6	86		Y			
		Water		7	87		N		–	OK TO USE
		SH2779-2		8	88		Y		<2	
		SH2803-1		9	89		Y			
		SH2820-1		10	90		Y			

	Std. Name	Conc.	Std. Code	Std. Code
1	VPH Cal mix	50 ug/ml	GCV 3194	GCV
2	VPH Surr. mix	100 ug/ml	GCV ~~3842~~ 3187 LPR 050914	GCV
3	VPH LCS mix	100 ug/ml	GCV 3192	GCV
4	GRO Cal mix	250 ug/mL Total	GCV	GCV
5	GRO Surr. Mix	50 ug/mL	GCV	GCV
6	GRO LCS mix	250 ug/mL Total	GCV	GCV
7	VPH Cal low	5 ug/ml	GCV 3193	
8	↓ High	260 ug/ml	GCV 3195	

VPH CC = 5uL Std. 1
VPH LCS = 5uL Std. 3
VPH Samples = 5uL Std. 2

GRO CC = 2uL Std. 4
GRO LCS = 2uL Std. 5 and 6
GRO Samples = 2uL Std. 5

Katahdin Analytical Services, Inc.
GC Laboratory Instrument Runlog

Instrument: GC02

Method (Circle): MADEP-VPH-98-1 MEDEP 4.2.17 SW846 8015(M)

Date	Init.	Sample Name	Amt. Purged	SP. #	Result File	Dil.	Y/N	Method	pH	Comments
7-11-14	AAB	SH4946-1A	5mL	9	ZHG10149	1	Y	VPHPID29 VPHFID29	<2	
		-3A		10	150		Y			
		-5A		11	151		Y			
		-7A		12	152		Y			
		SH4948-1A		13	153		Y			
		CV50		14	154		Y		–	↑ FID EXCEPT PENTANES & DECANE NAPHTH
7-11-14	AAB	WATER	5mL	1	ZHG10155	1	N	VPHPID29 VPHFID29	–	
		CV50 -6		2	156		Y		–	↑ ALIPH RANGES
		WG146189-2		3	157				–	↓ SS PID NAPRATE
		-3		4	158				–	
		-4		5	159				<2	SH4521-3L
		-5		6	160					-3M
		WATER		7	161		N		–	
		WG146189-1		8	162		Y		–	
		SH4401-1H		1	163		Y		<2	
		-2F		2	164					
		-4H		3	165					
		-6G		4	166					
		-8C		5	167					
		-10C		6	168					
		-12F		7	169					
		-14C		8	170					
		-16E		9	171					
7-12-14		-18C		10	172					
		CV50 WG146189-7		11	173		Y		–	↑ ALIPH RANGES
		SH4401-20C		12	174				<2	
		SH4521-1D		13	175					
		-2G		14	176					
		-4B		15	177					

	Std. Name	Conc.	Std. Code	Std. Code
1	VPH Cal mix	50 ug/ml	GCV 3228	GCV
2	VPH Surr. mix	100 ug/ml	GCV 3227	GCV
3	VPH LCS mix	100 ug/ml	GCV 3215	GCV
4	GRO Cal mix	250 ug/mL Total	GCV	GCV
5	GRO Surr. Mix	50 ug/mL	GCV	GCV
6	GRO LCS mix	250 ug/mL Total	GCV	GCV
7				
8				

VPH CC = 5uL Std. 1
VPH LCS = 5uL Std. 3
VPH Samples = 5uL Std. 2

GRO CC = 2uL Std. 4
GRO LCS = 2uL Std. 5 and 6
GRO Samples = 2uL Std. 5

Katahdin Analytical Services, Inc.
GC Laboratory Instrument Runlog

Instrument: GC02

Method (Circle): MADEP-VPH-98-1 MEDEP 4.2.17 SW846 8015(M)

Date	Init.	Sample Name	Amt. Purged	SP. #	Result File	Dil.	Y/N	Method	pH	Comments
7-12-14	AAB	SH4521-6D	5mL	16	2H610178	1	Y	VPHP1D29 VPHF1D29	<2	
7-12-14	AAB	SH4521-8D	5mL	1	2H610179	1	Y	VPHP1D29 VPHF1D29	<2	
		SH4523-9C		2	180		Y			
		-22G		3	181		Y			
		-23C		4	182		Y			
		CV5D WG146139-8		5	183		Y		–	
		WG146403-2	20mL	6	184		Y		–	
		-3		7	185		Y		–	
		-4		8	186		Y		–	
		-5		9	187		Y		–	
		WATER	5mL	10	188		N		–	
		WG146403-1	20mL	11	189		N		–	J ⊖ ⊖ m+p NAPHTH
		SH4400-1		1	190		Y		–	
		-2		2	191				–	
		-3		3	192				–	
		-4		4	193				–	
		-5		5	194				–	
		-6		6	195				–	
7-13-14		-7		7	196				–	
		-8		8	197				–	
		-9		9	198				–	
		-10		10	199				–	
		CV5D	5mL	11	200		Y		–	↑MTBE FID
		SH4400-11	20mL	12	201		Y		–	
		-12		13	202		Y		–	
		-13		14	203		Y		–	
		-14		15	204		Y		–	
		-15		16	205		Y		–	
7-13-14	AAB	SH4523-1	20mL	1	2H610206	1	Y	VPHP1D29 VPHF1D29	–	

	Std. Name	Conc.	Std. Code	Std. Code
1	VPH Cal mix	50 ug/ml	GCV 3228	GCV
2	VPH Surr. mix	100 ug/ml	GCV 3227	GCV
3	VPH LCS mix	100 ug/ml	GCV 3215	GCV
4	GRO Cal mix	250 ug/mL Total	GCV	GCV
5	GRO Surr. Mix	50 ug/mL	GCV	GCV
6	GRO LCS mix	250 ug/mL Total	GCV	GCV
7				
8				

VPH CC = 5uL Std. 1
VPH LCS = 5uL Std. 3
VPH Samples = 5uL Std. 2

GRO CC = 2uL Std. 4
GRO LCS = 2uL Std. 5 and 6
GRO Samples = 2uL Std. 5

TETRA TECH **INTERNAL CORRESPONDENCE**

TO: **M. MESSMER** **DATE:** **AUGUST 12, 2014**

FROM: **MICHELLE L. ALLEN** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – PFOA & PFOS**
NAVAL COMPUTER AND TELECOMMUNICATIONS AREA MASTER STATION ATLANTIC DETACHMENT (NCTAMS LANT), FIRE TRAINING AREA (FTA)
CUTLER, ME, CTO WE53
SDG WE53-7 (280-56984-1 & 280-57069-1)

SAMPLES: 14/Aqueous/PFOA & PFOS

SDG 280-56984-1

FTA-GW-DUP01-061814	FTA-MW-10-061714	FTA-MW-11-061714
FTA-MW-12-061714	FTA-MW-14-061714	FTA-MW-203-061814
FTA-MW-206-061814	FTA-MW-218-061814	FTA-MW-5-061814
FTA-MW-9-061714		

SDG 280-57069-1

FTA-GW-DUP02-061814	FTA-MW-1-061814	FTA-MW-208-061814
FTA-MW-210-061814		

Overview

The sample set for NCTAMS LANT FTA, Cutler CTO WE53 (280-56984-1 & 280-57069-1), SDG WE53-7 consisted of fourteen (14) aqueous environmental samples. All fourteen (14) aqueous samples were analyzed for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). Two field duplicate sample pairs were included in this Sample Delivery Group (SDG): FTA-GW-DUP01-06181/FTA-MW-5-0618144 and FTA-GW-DUP02-061814/FTA-MW-208-061814.

The samples were collected by Tetra Tech, Inc. on June 17-19, 2014 and analyzed by Test America which was subcontracted by Katahdin Analytical Services. The analyses were conducted using Test America Standard Operating Procedure (SOP) PFOA/PFOS (Solid Phase Extraction (SPE) was conducted in accordance with SW-846 Method 3535 with liquid chromatography/mass spectroscopy) analytical and reporting protocols. The data was evaluated based on the following parameters:

* • Data Completeness
  • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method Blank Results
* • Surrogate Spike Recoveries
* • Internal Standard Areas
* • Matrix Spike/Matrix Spike Duplicate Results
* • Laboratory Control Sample Results
* • Detection Limit Check Standard Results
* • Field Duplicate Precision
* • Detection Limits
* • Compound Identification and Quantification

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains the documentation to support the findings as discussed in this data validation report.

HOLDING TIMES

Although PFOA and PFOS are very stable compounds, a 7 day collection to extraction holding time was implemented. The 7 day holding time for extractable organic compounds in aqueous matrices was exceeded because the Test America received the samples from Katahdin Analytical Services on the last day of the extraction holding time. Samples from SDG 280-57069-1 were affected. The detected and non-detected results reported for PFOA and PFOS in all the samples in this SDG were qualified as estimated, (J) and (UJ), due to a holding time noncompliance.

NOTES

Detected results reported below the Limit of Quantitation (LOQ) but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results are reported to the Limit of Detection (LOD).

EPA Region 1 worksheets were not available for the Test America SOP PFOA/PFOS methodology, therefore, were not included in this tier II validation.

EXECUTIVE SUMMARY

Laboratory Performance: The 7 day collection to extraction holding times was exceeded for one SDG.

Other Factors Affecting Data Quality: Detected results reported below the LOQ but above the MDL were estimated.

The data for these analyses were reviewed with reference to the EPA New England Environmental Data Review Supplement for Regional Data Review Elements Superfund Guidance/Procedures"(April 2013), National Functional Guidelines for Organic Data Validation (January 2008), and the Department of Defense (DoD) document entitled, "Quality Systems Manual (QSM) for Environmental Laboratories" (July 2013). The text of this report has been formulated to address only those areas affecting data quality.

Tetra Tech, Inc.
Michelle L. Allen
Environmental Chemist

Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate

PROJ_NO: 02585 SDG: WE53-7 FRACTION: MISC MEDIA: WATER	NSAMPLE	FTA-GW-DUP01-061814			FTA-GW-DUP02-061814			FTA-MW-10-061714			FTA-MW-1-061814		
	LAB_ID	280-56984-7			280-57069-3			280-56984-2			280-57069-2		
	SAMP_DATE	6/18/2014			6/18/2014			6/17/2014			6/18/2014		
	QC_TYPE	NM			FD			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	FTA-MW-5-061814			FTA-MW-208-061814								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PENTADECAFLUOROOCTANOIC ACID		0.26			0.0074	UJ	H	0.027			0.011	J	HP
PERFLUOROOCTANE SULFONIC ACID		0.018	U		0.019	UJ	H	0.016	J	P	0.018	UJ	H

PROJ_NO: 02585 SDG: WE53-7 FRACTION: MISC MEDIA: WATER	NSAMPLE	FTA-MW-11-061714			FTA-MW-12-061714			FTA-MW-14-061714			FTA-MW-203-061814		
	LAB_ID	280-56984-3			280-56984-4			280-56984-10			280-56984-6		
	SAMP_DATE	6/17/2014			6/17/2014			6/17/2014			6/18/2014		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PENTADECAFLUOROOCTANOIC ACID		0.016	J	P	0.0074	U		0.43			0.0074	U	
PERFLUOROOCTANE SULFONIC ACID		0.25			0.015	J	P	0.018	U		0.018	U	

PROJ_NO: 02585 SDG: WE53-7 FRACTION: MISC MEDIA: WATER	NSAMPLE	FTA-MW-206-061814			FTA-MW-208-061814			FTA-MW-210-061814			FTA-MW-218-061814		
	LAB_ID	280-56984-9			280-57069-1			280-57069-4			280-56984-8		
	SAMP_DATE	6/18/2014			6/18/2014			6/18/2014			6/18/2014		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PENTADECAFLUOROOCTANOIC ACID		0.0075	U		0.0072	UJ	H	0.0099	J	HP	0.0074	U	
PERFLUOROOCTANE SULFONIC ACID		0.011	J	P	0.018	UJ	H	0.018	UJ	H	0.019	U	

PROJ_NO: 02585 SDG: WE53-7 FRACTION: MISC MEDIA: WATER	NSAMPLE	FTA-MW-5-061814			FTA-MW-9-061714		
	LAB_ID	280-56984-5			280-56984-1		
	SAMP_DATE	6/18/2014			6/17/2014		
	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
PENTADECAFLUOROOCTANOIC ACID		0.28			0.026		
PERFLUOROOCTANE SULFONIC ACID		0.018	U		0.18		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-56984-1
SDG No.:
Client Sample ID: FTA-GW-DUP01-061814
Lab Sample ID: 280-56984-7
Matrix: Water
Lab File ID: PC514G02022.d
Analysis Method: PFOA/PFOS
Date Collected: 06/18/2014 00:00
Extraction Method: 3535
Date Extracted: 06/23/2014 16:11
Sample wt/vol: 275.7(mL)
Date Analyzed: 07/02/2014 15:29
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.018	U	0.027	0.018	0.0089
335-67-1	Perfluorooctanoic acid (PFOA)	0.26		0.018	0.0073	0.0041

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	101		60-155
STL01054	13C8 PFOS	106		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-57069-1
SDG No.:
Client Sample ID: FTA-GW-DUP02-061814
Lab Sample ID: 280-57069-3
Matrix: Water
Lab File ID: PC514G02034.d
Analysis Method: PFOA/PFOS
Date Collected: 06/18/2014 00:00
Extraction Method: 3535
Date Extracted: 06/26/2014 10:20
Sample wt/vol: 268.9(mL)
Date Analyzed: 07/02/2014 17:14
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.019	U H	0.028	0.019	0.0091
335-67-1	Perfluorooctanoic acid (PFOA)	0.0074	U H	0.019	0.0074	0.0042

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	102		60-155
STL01054	13C8 PFOS	104		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-57069-1
SDG No.:
Client Sample ID: FTA-MW-1-061814
Lab Sample ID: 280-57069-2
Matrix: Water
Lab File ID: PC514G02033.d
Analysis Method: PFOA/PFOS
Date Collected: 06/18/2014 16:30
Extraction Method: 3535
Date Extracted: 06/26/2014 10:20
Sample wt/vol: 271.1(mL)
Date Analyzed: 07/02/2014 17:05
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.018	U H	0.028	0.018	0.0090
335-67-1	Perfluorooctanoic acid (PFOA)	0.011	J H	0.018	0.0074	0.0041

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	101		60-155
STL01054	13C8 PFOS	105		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-56984-1
SDG No.:
Client Sample ID: FTA-MW-10-061714
Lab Sample ID: 280-56984-2
Matrix: Water
Lab File ID: PC514G02028.d
Analysis Method: PFOA/PFOS
Date Collected: 06/17/2014 12:30
Extraction Method: 3535
Date Extracted: 06/23/2014 16:11
Sample wt/vol: 275.3(mL)
Date Analyzed: 07/02/2014 16:22
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.016	J	0.027	0.018	0.0089
335-67-1	Perfluorooctanoic acid (PFOA)	0.027		0.018	0.0073	0.0041

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	102		60-155
STL01054	13C8 PFOS	103		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-56984-1
SDG No.:
Client Sample ID: FTA-MW-11-061714
Lab Sample ID: 280-56984-3
Matrix: Water
Lab File ID: PC514G02027.d
Analysis Method: PFOA/PFOS
Date Collected: 06/17/2014 10:20
Extraction Method: 3535
Date Extracted: 06/23/2014 16:11
Sample wt/vol: 272.6(mL)
Date Analyzed: 07/02/2014 16:13
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.25		0.028	0.018	0.0090
335-67-1	Perfluorooctanoic acid (PFOA)	0.016	J	0.018	0.0073	0.0041

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	102		60-155
STL01054	13C8 PFOS	101		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-56984-1
SDG No.:
Client Sample ID: FTA-MW-12-061714
Lab Sample ID: 280-56984-4
Matrix: Water
Lab File ID: PC514G02025.d
Analysis Method: PFOA/PFOS
Date Collected: 06/17/2014 12:40
Extraction Method: 3535
Date Extracted: 06/23/2014 16:11
Sample wt/vol: 271.4(mL)
Date Analyzed: 07/02/2014 15:55
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.015	J	0.028	0.018	0.0090
335-67-1	Perfluorooctanoic acid (PFOA)	0.0074	U M	0.018	0.0074	0.0041

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	102		60-155
STL01054	13C8 PFOS	104		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-56984-1
SDG No.:
Client Sample ID: FTA-MW-14-061714
Lab Sample ID: 280-56984-10
Matrix: Water
Lab File ID: PC514G02019.d
Analysis Method: PFOA/PFOS
Date Collected: 06/17/2014 16:00
Extraction Method: 3535
Date Extracted: 06/23/2014 16:11
Sample wt/vol: 276.9(mL)
Date Analyzed: 07/02/2014 15:03
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.018	U	0.027	0.018	0.0088
335-67-1	Perfluorooctanoic acid (PFOA)	0.43		0.018	0.0072	0.0041

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	101		60-155
STL01054	13C8 PFOS	107		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-56984-1
SDG No.:
Client Sample ID: FTA-MW-203-061814
Lab Sample ID: 280-56984-6
Matrix: Water
Lab File ID: PC514G02023.d
Analysis Method: PFOA/PFOS
Date Collected: 06/18/2014 10:20
Extraction Method: 3535
Date Extracted: 06/23/2014 16:11
Sample wt/vol: 271.6(mL)
Date Analyzed: 07/02/2014 15:38
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.018	U	0.028	0.018	0.0090
335-67-1	Perfluorooctanoic acid (PFOA)	0.0074	U	0.018	0.0074	0.0041

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	102		60-155
STL01054	13C8 PFOS	102		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-56984-1
SDG No.:
Client Sample ID: FTA-MW-206-061814
Lab Sample ID: 280-56984-9
Matrix: Water
Lab File ID: PC514G02020.d
Analysis Method: PFOA/PFOS
Date Collected: 06/18/2014 12:45
Extraction Method: 3535
Date Extracted: 06/23/2014 16:11
Sample wt/vol: 265.4(mL)
Date Analyzed: 07/02/2014 15:12
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.011	J	0.028	0.019	0.0092
335-67-1	Perfluorooctanoic acid (PFOA)	0.0075	U	0.019	0.0075	0.0042

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	103		60-155
STL01054	13C8 PFOS	103		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-57069-1
SDG No.:
Client Sample ID: FTA-MW-208-061814
Lab Sample ID: 280-57069-1
Matrix: Water
Lab File ID: PC514G02032.d
Analysis Method: PFOA/PFOS
Date Collected: 06/18/2014 16:15
Extraction Method: 3535
Date Extracted: 06/26/2014 10:20
Sample wt/vol: 277.3(mL)
Date Analyzed: 07/02/2014 16:57
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.018	U H	0.027	0.018	0.0088
335-67-1	Perfluorooctanoic acid (PFOA)	0.0072	U H	0.018	0.0072	0.0041

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	101		60-155
STL01054	13C8 PFOS	104		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-57069-1
SDG No.:
Client Sample ID: FTA-MW-210-061814
Lab Sample ID: 280-57069-4
Matrix: Water
Lab File ID: PC514G02035.d
Analysis Method: PFOA/PFOS
Date Collected: 06/18/2014 09:00
Extraction Method: 3535
Date Extracted: 06/26/2014 10:20
Sample wt/vol: 276.6(mL)
Date Analyzed: 07/02/2014 17:23
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.018	U H	0.027	0.018	0.0089
335-67-1	Perfluorooctanoic acid (PFOA)	0.0099	J H M	0.018	0.0072	0.0041

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	101		60-155
STL01054	13C8 PFOS	102		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-56984-1
SDG No.:
Client Sample ID: FTA-MW-218-061814
Lab Sample ID: 280-56984-8
Matrix: Water
Lab File ID: PC514G02021.d
Analysis Method: PFOA/PFOS
Date Collected: 06/18/2014 12:38
Extraction Method: 3535
Date Extracted: 06/23/2014 16:11
Sample wt/vol: 269.5(mL)
Date Analyzed: 07/02/2014 15:20
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.019	U	0.028	0.019	0.0091
335-67-1	Perfluorooctanoic acid (PFOA)	0.0074	U	0.019	0.0074	0.0042

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	100		60-155
STL01054	13C8 PFOS	105		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-56984-1
SDG No.:
Client Sample ID: FTA-MW-5-061814
Lab Sample ID: 280-56984-5
Matrix: Water
Lab File ID: PC514G02024.d
Analysis Method: PFOA/PFOS
Date Collected: 06/18/2014 09:52
Extraction Method: 3535
Date Extracted: 06/23/2014 16:11
Sample wt/vol: 276.6(mL)
Date Analyzed: 07/02/2014 15:47
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.018	U	0.027	0.018	0.0089
335-67-1	Perfluorooctanoic acid (PFOA)	0.28		0.018	0.0072	0.0041

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	101		60-155
STL01054	13C8 PFOS	107		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-56984-1
SDG No.:
Client Sample ID: FTA-MW-9-061714
Lab Sample ID: 280-56984-1
Matrix: Water
Lab File ID: PC514G02029.d
Analysis Method: PFOA/PFOS
Date Collected: 06/17/2014 10:20
Extraction Method: 3535
Date Extracted: 06/23/2014 16:11
Sample wt/vol: 270.5(mL)
Date Analyzed: 07/02/2014 16:30
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.18		0.028	0.018	0.0091
335-67-1	Perfluorooctanoic acid (PFOA)	0.026		0.018	0.0074	0.0042

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	101		60-155
STL01054	13C8 PFOS	106		45-130

APPENDIX C

SUPPORT DOCUMENTATION

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\chromdata\LC_LCMS5\20140702-24977.b\PC514G02019.d
Lims ID: 280-56984-B-10-A Lab Sample ID: 280-56984-10
Client ID: FTA-MW-14-061714
Sample Type: Client
Inject. Date: 02-Jul-2014 15:03:26 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 280-56984-B-10-A, Sample
Operator ID: TW/MPK/acm Instrument ID: LC_LCMS5
Raw Data: Smoothed

Method: \\Denchrom\chromdata\LC_LCMS5\20140702-24977.b\8321_PFOA_S.m
Limit Group: LC - PFOA
Last Update: 10-Jul-2014 11:35:45 Calib Date: 02-Jul-2014 14:02:14
Integrator: Falcon
Quant Method: Internal/External Standard Quant By: Initial Calibration
Last ICal File: \\Denchrom\chromdata\LC_LCMS5\20140702-24977.b\PC514G02012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK026

First Level Reviewer: kellisonm Date: 03-Jul-2014 07:49:06

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/L	Ratio(Limits)	S/N	Flags
$ 9 13C8 PFOA									
421.0 > 375.9	4.164	4.262	-0.098	1.002	21304031	10.1			
* 4 13C4 PFOA (IS)									
417.0 > 371.9	4.156	4.263	-0.107		22194574	10.0			
1 Perfluorooctanoic acid									
413.0 > 368.9	4.156	4.264	-0.108	1.000	50086395	23.9			
413.0 > 169.0	4.156	4.264	-0.108	1.000	11039593		4.54(3.27-6.07)		
2 Perfluorooctanoic Sulfonate									
498.9 > 79.9	4.277	4.375	-0.098	0.990	193540	0.1976			
498.9 > 98.9	4.277	4.375	-0.098	0.990	45808		4.23(1.62-3.00)		
$ 6 13C8 PFOS									
506.9 > 80.0	4.320	4.382	-0.062	1.000	3507645	10.2			
* 5 13C4 PFOS (IS)									sM
502.9 > 80.0	4.321	4.383	-0.062		3810205	9.56			M

QC Flag Legend

Processing Flags
s - Failed ISTD Recovery Test

Review Flags
M - Manually Integrated

$$\frac{23.9\ \mu g}{1L} \times \frac{5ml}{276.9ml} = 0.43\ \mu g/L$$

CUTLER
WATER DATA
WE53-7

FRACTION	CHEMICAL	FTA-GW-DUP01-061814	UNITS	FTA-MW-5-061814	RPD	D
MISC	PENTADECAFLUOROOCTANOIC ACID	0.26	UG/L	0.28	7.41	0.02

Current RPD Quality Control Limit: 30 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

1.1 +0.5 IRY
TL 6/25/14

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page ____ of ____

Client	Contact	Phone #	Fax #
Katahdin Analytical Services	Jen Obrin	(207) 874-2400	(207) 775-4029

Address: 600 Technology Way City: Scarborough State: ME Zip Code: 04074

Purchase Order # Proj. Name / No.: Cutler WE53 FTA TA ~~Katahdin~~ Quote #: 28012011

Bill (if different than above) Address

Sampler (Print / Sign) Copies To:

LAB USE ONLY WORK ORDER #: SH4521

KATAHDIN PROJECT NUMBER

REMARKS: TA - Denver
~~Deb Henderer/Michelle Johnston~~

SHIPPING INFO: ☒ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	PFOA/PFOS SW-846 3535A/8321									
					Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	FTA-MW-208-060814	6/18/14 / 16:15	AQ	4	✓	✓								
	FTA-MW-1-060814	6/18/14 / 16:30		4	✓	✓								
	FTA-GW-DUP02-060814	6/18/14 / —		4	✓	✓								
	FTA-MW-210-060814	6/18/14 / 9:00	↓	12	✓	✓	MS/MSD							
		/												
		/												
		/												
		/												
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		/												
		/												
		/												

280-57069 Chain of Custody

COMMENTS Due 7/9/14. DoD QSM w/ DoD limits. ND to LOD. "J" flag between MDL + LOQ. TetraTech ADAPT format for EDD.

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	6-23-14 / 15:30				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

ORIGINAL

KAS-COC1

Login Sample Receipt Checklist

Client: Katahdin Analytical Services

Job Number: 280-57069-1

Login Number: 57069
List Number: 1
Creator: Orfield, Tayler C

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Not requested on COC.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CASE NARRATIVE
Client: Katahdin Analytical Services
Project: CTO WE53 Cutler FTA
Report Number: 280-57069-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

TestAmerica Denver's DoD ELAP certification is 2907.01.

The PFC method DV-LC-0012 is an isotope dilution method; therefore, the internal standards are added prior to the extraction process. This technique inherently corrects for variability in the extraction efficiency due to sample matrix. Dilution of samples beyond the ability of the instrument to detect the internal standards is not recommended. Analyses performed at a dilution level requiring additional internal standard to be added after the extraction step in order to quantitate results has been shown to yield results with a significant low bias. As a result, data have been reported that exceed the calibration range and are qualified as estimated.

The PFC method is an isotope dilution method where the internal standards are added prior to extraction and used to quantitate results; therefore, the use of dilution factors is inappropriate. Application of dilution factors would yield results that are artificially high. Reporting limits and method detection limits are not adjusted for dilutions unless samples are fortified with additional internal standard, which is not recommended.

Internal standard abundances may vary depending upon both recovery and the dilution at which the analysis is performed. This is an inherent feature of the isotope dilution technique and is not indicative of bias to the reported results.

Sample Receipt

The following report contains the analytical results for four samples received June 25, 2014, according to documented sample acceptance procedures. The samples were received at a temperature of 1.6°C.

All four samples were received at the laboratory on the last day remaining in the laboratory recommended sample holding times. It is TestAmerica's policy to analyze all samples within holding times; however, the laboratory cannot guarantee that hold times will be met when samples are received with less than half the hold time remaining.

No other anomalies were encountered during sample receipt.

Perfluorinated Hydrocarbons (PFCs) - DV-LC-0012

Samples FTA-MW-208-061814 (280-57069-1), FTA-MW-1-061814 (280-57069-2), FTA-GW-DUP02-061814 (280-57069-3) and FTA-MW-210-061814 (280-57069-4) were analyzed for PFC in accordance with SOP DV-LC-0012. The samples were prepared on 06/26/2014 and analyzed on 07/02/2014.

All four samples were extracted past the laboratory recommended holding times as the samples were received at the laboratory on the last day of the laboratory recommended sample holding times. It is TestAmerica's policy to analyze all samples within holding times; however, the laboratory cannot guarantee that hold times will be met when samples are received with less than half the hold time remaining. The scientific literature indicates PFCs are highly persistent compounds in the environment. TestAmerica Denver has conducted stability studies indicating medium- and low-level standard solutions of PFOA are stable for at least three months in glass, polystyrene, and polypropylene plastics at 0-6°C. The 7-day/40-day holding times are based on the general EPA convention for the holding time of extractable organic compounds in water.

No other analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

SAMPLE SUMMARY

Client: Katahdin Analytical Services

Job Number: 280-57069-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-57069-1	FTA-MW-208-061814	Water	06/18/2014 1615	06/25/2014 0920
280-57069-2	FTA-MW-1-061814	Water	06/18/2014 1630	06/25/2014 0920
280-57069-3FD	FTA-GW-DUP02-061814	Water	06/18/2014 0000	06/25/2014 0920
280-57069-4	FTA-MW-210-061814	Water	06/18/2014 0900	06/25/2014 0920
280-57069-4MS	FTA-MW-210-061814	Water	06/18/2014 0900	06/25/2014 0920
280-57069-4MSD	FTA-MW-210-061814	Water	06/18/2014 0900	06/25/2014 0920

METHOD SUMMARY

Client: Katahdin Analytical Services

Job Number: 280-57069-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
PFOA/PFOS LC/MS/MS	TAL DEN	TestAmerica SOP PFOA/PFOS	
Solid-Phase Extraction (SPE)	TAL DEN		SW846 3535

Lab References:

TAL DEN = TestAmerica Denver

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

FORM II
LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-57069-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Gemini-NX ID:

Client Sample ID	Lab Sample ID	PFOA #	PFOS #
FTA-MW-208-061814	280-57069-1	101	104
FTA-MW-1-061814	280-57069-2	101	105
FTA-GW-DUP02-061814	280-57069-3	102	104
FTA-MW-210-061814	280-57069-4	101	102
	MB 280-232068/1-A	102	108
	LCS 280-232068/2-A	102	107
FTA-MW-210-061814 MS	280-57069-4 MS	101	103
FTA-MW-210-061814 MSD	280-57069-4 MSD	104	103
	DLCK 280-232919/14	113	87

	QC LIMITS
PFOA = 13C8 PFOA	60-155
PFOS = 13C8 PFOS	45-130

Column to be used to flag recovery values

FORM II PFOA/PFOS

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-57069-1

SDG No.:

Instrument ID: LC_LCMS5 Calibration Start Date: 07/02/2014 12:52

GC Column: Gemini-NX ID: Calibration End Date: 07/02/2014 14:02

Calibration ID: 18859

		OA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		36890206	4.24	8832883	4.40		
UPPER LIMIT		57179819	4.74	11482748	4.90		
LOWER LIMIT		22134124	3.74	3974797	3.90		
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 280-232919/12		38819948	4.17	9331415	4.33		
ICV 280-232919/13		38128068	4.16	9036161	4.34		
DLCK 280-232919/14		37267880	4.21	9104406	4.37		
CCV 280-232925/25		34018216	4.15	8426338	4.31		
MB 280-232068/1-A		36966376	4.14	8431665	4.30		
LCS 280-232068/2-A		36168275	4.15	8262809	4.31		
280-57069-1	FTA-MW-208-061814	36211193	4.13	7676887	4.29		
280-57069-2	FTA-MW-1-061814	38737860	4.14	8684066	4.30		
280-57069-3	FTA-GW-DUP02-061814	34143305	4.14	8430748	4.30		
280-57069-4	FTA-MW-210-061814	31549788	4.10	7515498	4.27		
280-57069-4 MS	FTA-MW-210-061814 MS	29867718	4.10	7639097	4.27		
280-57069-4 MSD	FTA-MW-210-061814 MSD	32367887	4.08	7777774	4.25		
CCV 280-232925/37		34838530	4.08	8709465	4.25		

OA = 13C4 PFOA (IS)
PFOS = 13C4 PFOS (IS)

Area Limit = 60%-155% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII PFOA/PFOS

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-57069-1

SDG No.:

Lab File ID: PC514G02030.d Lab Sample ID: MB 280-232068/1-A

Matrix: Water Date Extracted: 06/26/2014 10:20

Instrument ID: LC_LCMS5 Date Analyzed: 07/02/2014 16:39

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-232068/2-A	PC514G02031 .d	07/02/2014 16:48
FTA-MW-208-061814	280-57069-1	PC514G02032 .d	07/02/2014 16:57
FTA-MW-1-061814	280-57069-2	PC514G02033 .d	07/02/2014 17:05
FTA-GW-DUP02-061814	280-57069-3	PC514G02034 .d	07/02/2014 17:14
FTA-MW-210-061814	280-57069-4	PC514G02035 .d	07/02/2014 17:23
FTA-MW-210-061814 MS	280-57069-4 MS	PC514G02036 .d	07/02/2014 17:32
FTA-MW-210-061814 MSD	280-57069-4 MSD	PC514G02037 .d	07/02/2014 17:40

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-57069-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 280-232068/1-A
Matrix: Water
Lab File ID: PC514G02030.d
Analysis Method: PFOA/PFOS
Date Collected:
Extraction Method: 3535
Date Extracted: 06/26/2014 10:20
Sample wt/vol: 250(mL)
Date Analyzed: 07/02/2014 16:39
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.020	U	0.030	0.020	0.0098
335-67-1	Perfluorooctanoic acid (PFOA)	0.0080	U	0.020	0.0080	0.0045

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	102		60-155
STL01054	13C8 PFOS	108		45-130

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-57069-1

SDG No.:

Batch Number: 232068 Batch Start Date: 06/26/14 10:20 Batch Analyst: Frey, Alan C

Batch Method: 3535 Batch End Date: 06/26/14 14:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	PFOA/S_Spike 00008	PFOA/S_Sur/IS 00008
MB 280-232068/1		3535, PFOA/PFOS				250 mL	5 mL		0.1 mL
LCS 280-232068/2		3535, PFOA/PFOS				250 mL	5 mL	0.1 mL	0.1 mL
280-57069-D-1	FTA-MW-208-061814	3535, PFOA/PFOS	T	301.6 g	24.3 g	277.3 mL	5 mL		0.1 mL
280-57069-D-2	FTA-MW-1-061814	3535, PFOA/PFOS	T	295.4 g	24.3 g	271.1 mL	5 mL		0.1 mL
280-57069-D-3	FTA-GW-DUP02-061814	3535, PFOA/PFOS	T	292.7 g	23.8 g	268.9 mL	5 mL		0.1 mL
280-57069-I-4	FTA-MW-210-061814	3535, PFOA/PFOS	T	301.8 g	25.2 g	276.6 mL	5 mL		0.1 mL
280-57069-J-4 MS	FTA-MW-210-061814	3535, PFOA/PFOS	T	289.5 g	24.9 g	264.6 mL	5 mL	0.1 mL	0.1 mL
280-57069-K-4 MSD	FTA-MW-210-061814	3535, PFOA/PFOS	T	294.6 g	23.6 g	271 mL	5 mL	0.1 mL	0.1 mL

Batch Notes	
Acid Lot	2% Formic Aci_00040
Acid Name	2% Formic Acid
Balance ID	24950441
Batch Comment	Reviewer:Ashley Adams
First End time	6.26.14@1330
H2O Lot used	HPLC_Water_00361
Pipette ID	K, SPE-1
Reagent ID	10% NH4OH
Reagent Lot Number	10%_NH4OH_00026
Solvent Lot #	LCMS_MeOH_00095
Solvent Name	MeOH
SOP Number	DV-OP-0019
SPE Cartridge Type	Phenomenex Strata X-AW; 8B-S038-FCH
Solid Phase Extraction Disk Lot Number	S308-052
First Start time	6.26.14@1045

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-57069-1

SDG No.:

Matrix: Water Level: Low Lab File ID: PC514G02031.d

Lab ID: LCS 280-232068/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perfluorooctane Sulfonate (PFOS)	0.191	0.190	99	60-128	
Perfluorooctanoic acid (PFOA)	0.200	0.217	108	70-130	

Column to be used to flag recovery and RPD values

FORM III PFOA/PFOS

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-57069-1

SDG No.:

Matrix: Water Level: Low Lab File ID: PC514G02036.d

Lab ID: 280-57069-4 MS Client ID: FTA-MW-210-061814 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Perfluorooctane Sulfonate (PFOS)	0.181	0.018 U	0.153	85	60-128	H
Perfluorooctanoic acid (PFOA)	0.189	0.0099 J	0.195	98	70-130	H

Column to be used to flag recovery and RPD values

FORM III PFOA/PFOS

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-57069-1

SDG No.:

Matrix: Water Level: Low Lab File ID: PC514G02037.d

Lab ID: 280-57069-4 MSD Client ID: FTA-MW-210-061814 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perfluorooctane Sulfonate (PFOS)	0.176	0.162	92	6	20	60-128	H
Perfluorooctanoic acid (PFOA)	0.185	0.200	103	3	20	70-130	H

Column to be used to flag recovery and RPD values

FORM III PFOA/PFOS

FORM III
LCMS DETECTION LIMIT CHECK STANDARD RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-57069-1

SDG No.:

Matrix: Water Level: Low Lab File ID: PC514G02015.d

Lab ID: DLCK 280-232919/14 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	DLCK CONCENTRATION (ug/L)	DLCK % REC	QC LIMITS REC	#
Perfluorooctane Sulfonate (PFOS)	0.239	0.257	108	70-130	
Perfluorooctanoic acid (PFOA)	0.250	0.245 J	98	70-130	

Column to be used to flag recovery and RPD values

FORM III PFOA/PFOS

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-57069-1

SDG No.:

Instrument ID: LC_LCMS5 Start Date: 07/02/2014 12:52

Analysis Batch Number: 232919 End Date: 07/02/2014 14:28

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD00025 280-232919/3 IC		07/02/2014 12:52	1	PC514G02004.d	Gemini-NX
STD0005 280-232919/4 IC		07/02/2014 13:01	1	PC514G02005.d	Gemini-NX
STD0010 280-232919/5 IC		07/02/2014 13:09	1	PC514G02006.d	Gemini-NX
STD0020 280-232919/6 ICISAV		07/02/2014 13:18	1	PC514G02007.d	Gemini-NX
STD0050 280-232919/7 IC		07/02/2014 13:27	1	PC514G02008.d	Gemini-NX
STD0100 280-232919/8 IC		07/02/2014 13:36	1	PC514G02009.d	Gemini-NX
STD0200 280-232919/9 IC		07/02/2014 13:44	1	PC514G02010.d	Gemini-NX
STD0500 280-232919/10 IC		07/02/2014 13:53	1	PC514G02011.d	Gemini-NX
STD1250 280-232919/11 IC		07/02/2014 14:02	1	PC514G02012.d	Gemini-NX
CCB 280-232919/12		07/02/2014 14:10	1	PC514G02013.d	Gemini-NX
ICV 280-232919/13		07/02/2014 14:19	1	PC514G02014.d	Gemini-NX
DLCK 280-232919/14		07/02/2014 14:28	1	PC514G02015.d	Gemini-NX

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-57069-1 Analy Batch No.: 232919

SDG No.:

Instrument ID: LC_LCMS5 GC Column: Gemini-NX ID: Heated Purge: (Y/N) N

Calibration Start Date: 07/02/2014 12:52 Calibration End Date: 07/02/2014 14:02 Calibration ID: 18859

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD00025 280-232919/3	PC514G02004.d
Level 2	STD0005 280-232919/4	PC514G02005.d
Level 3	STD0010 280-232919/5	PC514G02006.d
Level 4	STD0020 280-232919/6	PC514G02007.d
Level 5	STD0050 280-232919/7	PC514G02008.d
Level 6	STD0100 280-232919/8	PC514G02009.d
Level 7	STD0200 280-232919/9	PC514G02010.d
Level 8	STD0500 280-232919/10	PC514G02011.d
Level 9	STD1250 280-232919/11	PC514G02012.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Ammonium Perfluorooctanoate (APFO)	1.0552 0.9148	1.0056 0.9312	1.0004 0.8601	1.0108 0.7659	0.9521	Lin2	0.0472	0.9043							0.9930		0.9800
Perfluorooctanoic acid (PFOA)	1.0981 0.9519	1.0464 0.9690	1.0410 0.8950	1.0518 0.7969	0.9908	Lin2	0.0472	0.9411							0.9930		0.9800
Perfluorooctane Sulfonate (PFOS)	2.1015 1.1629	1.8155 1.1434	1.6067 1.0475	1.4874 0.9466	1.1907	Lin2	0.2577	1.1532							0.9800		0.9800
13C8 PFOA	0.9822 0.9701	1.0105 0.9708	1.0063 0.9022	0.9973 0.7992	1.0193	Lin2	0.0174	0.9468							0.9940		0.9800
13C8 PFOS	0.9831 0.8933	0.9586 0.8979	0.9228 0.8085	0.8923 0.7478	0.9031	Lin2	0.0363	0.8565							0.9950		0.9800

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-57069-1

SDG No.:

Lab Sample ID: ICV 280-232919/13 Calibration Date: 07/02/2014 14:19

Instrument ID: LC_LCMS5 Calib Start Date: 07/02/2014 12:52

GC Column: Gemini-NX ID: Calib End Date: 07/02/2014 14:02

Lab File ID: PC514G02014.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ammonium Perfluorooctanoate (APFO)	Lin2		0.9418		2.12	2.08	1.6	30.0
Perfluorooctanoic acid (PFOA)	Lin2		0.9800		2.03	2.00	1.6	30.0
Perfluorooctane Sulfonate (PFOS)	Lin2		1.333		2.11	2.02	4.5	30.0
13C8 PFOA	Lin2		0.998		2.09	2.00	4.5	30.0
13C8 PFOS	Lin2		0.9179		2.01	1.91	4.9	30.0

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-57069-1

SDG No.:

Instrument ID: LC_LCMS5 Start Date: 07/02/2014 14:37

Analysis Batch Number: 232925 End Date: 07/02/2014 17:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		07/02/2014 14:37	1		Gemini-NX
ZZZZZ		07/02/2014 14:45	1		Gemini-NX
ZZZZZ		07/02/2014 14:54	1		Gemini-NX
ZZZZZ		07/02/2014 15:03	1		Gemini-NX
ZZZZZ		07/02/2014 15:12	1		Gemini-NX
ZZZZZ		07/02/2014 15:20	1		Gemini-NX
ZZZZZ		07/02/2014 15:29	1		Gemini-NX
ZZZZZ		07/02/2014 15:38	1		Gemini-NX
ZZZZZ		07/02/2014 15:47	1		Gemini-NX
ZZZZZ		07/02/2014 15:55	1		Gemini-NX
CCV 280-232925/25		07/02/2014 16:04	1	PC514G02026.d	Gemini-NX
ZZZZZ		07/02/2014 16:13	1		Gemini-NX
ZZZZZ		07/02/2014 16:22	1		Gemini-NX
ZZZZZ		07/02/2014 16:30	1		Gemini-NX
MB 280-232068/1-A		07/02/2014 16:39	1	PC514G02030.d	Gemini-NX
LCS 280-232068/2-A		07/02/2014 16:48	1	PC514G02031.d	Gemini-NX
280-57069-1	FTA-MW-208-061814	07/02/2014 16:57	1	PC514G02032.d	Gemini-NX
280-57069-2	FTA-MW-1-061814	07/02/2014 17:05	1	PC514G02033.d	Gemini-NX
280-57069-3	FTA-GW-DUP02-061814	07/02/2014 17:14	1	PC514G02034.d	Gemini-NX
280-57069-4	FTA-MW-210-061814	07/02/2014 17:23	1	PC514G02035.d	Gemini-NX
280-57069-4 MS	FTA-MW-210-061814 MS	07/02/2014 17:32	1	PC514G02036.d	Gemini-NX
280-57069-4 MSD	FTA-MW-210-061814 MSD	07/02/2014 17:40	1	PC514G02037.d	Gemini-NX
CCV 280-232925/37		07/02/2014 17:49	1	PC514G02038.d	Gemini-NX

PFOA/PFOS

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-57069-1

SDG No.:

Lab Sample ID: CCV 280-232925/25 Calibration Date: 07/02/2014 16:04

Instrument ID: LC_LCMS5 Calib Start Date: 07/02/2014 12:52

GC Column: Gemini-NX ID: Calib End Date: 07/02/2014 14:02

Lab File ID: PC514G02026.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ammonium Perfluorooctanoate (APFO)	Lin2		0.9309		10.7	10.4	2.4	30.0
Perfluorooctanoic acid (PFOA)	Lin2		0.9687		10.2	10.0	2.4	30.0
Perfluorooctane Sulfonate (PFOS)	Lin2		1.072		8.66	9.56	-9.4	30.0
13C8 PFOA	Lin2		0.9700		10.2	10.0	2.3	30.0
13C8 PFOS	Lin2		0.8838		9.82	9.56	2.7	30.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-57069-1

SDG No.:

Lab Sample ID: CCV 280-232925/37 Calibration Date: 07/02/2014 17:49

Instrument ID: LC_LCMS5 Calib Start Date: 07/02/2014 12:52

GC Column: Gemini-NX ID: Calib End Date: 07/02/2014 14:02

Lab File ID: PC514G02038.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ammonium Perfluorooctanoate (APFO)	Lin2		0.9482		5.40	5.20	3.8	30.0
Perfluorooctanoic acid (PFOA)	Lin2		0.9867		5.19	5.00	3.8	30.0
Perfluorooctane Sulfonate (PFOS)	Lin2		1.148		4.53	4.78	-5.2	30.0
13C8 PFOA	Lin2		0.998		5.25	5.00	5.1	30.0
13C8 PFOS	Lin2		0.9235		5.11	4.78	6.9	30.0

Katahdin ANALYTICAL SERVICES
600 Technology Way
P.O. Box 540
Scarborough, ME 04070
Tel: (207) 874-2400
Fax: (207) 775-4029

Chain of Custody

Client: Tetra Tech | Contact: Mindi Messmer | Phone #: (978) 474-8400 | Fax #: (978) 474-8499

Address: 250 Andover St. #200 | City: Wilmington | State: MA | Zip Code: ~~02~~ 01887

Purchase Order #: | Proj. Name/No.: Cutler FTA/ CTO WE53 | Katahdin Quote #:

Bill (if different than above): | Address:

Sampler (Print/Sign): Brian Geringer/ [signature] | Copies To:

LAB USE ONLY | Work Order #: S14481 | Katahdin Project Number

Remarks:

Shipping Info: FEDEX UPS CLIENT
Airbill No:
Temp C | Temp Blank | Intact | Not Intact

Analysis and Container Type Preservatives

*	Sample Description	Date/Time Collected	Matrix	No. of Containers	VOCs Filt. Y/N	Vinyl Chloride Filt. Y/N	VPH Filt. Y/N	EPH Filt. Y/N	Total Metals Filt. Y/N	Dissolved Metals Filt. Y/N	SVOCs Filt. Y/N	PCBs/PFOS Filt. Y/N	Filt. Y/N	Filt. Y/N
	FTA-GW-TB01-061714	6/17/14 0800	AQ	8	X	X	X						✓	
	FTA-MW-9-061714	6/17/14 1020	GW	18	X	X	X	X	X	X	X	X	✓	
	FTA-MW-10-061714	6/17/14 1230	↓	18	X	X	X	X	X	X	X	X	✓	
	FTA-MW-11-061714	6/17/14 1020		18	X	X	X	X	X	X	X	X	✓	
	FTA-MW-12-061714	6/17/14 1240		18	X	X	X	X	X	X	X	X	✓	
	FTA-MW-5-061814	6/18/14 0952		18	X	X	X	X	X	X	X	X	✓	
	FTA-MW-203-061814	6/18/14 1020		18	X	X	X	X	X	X	X	X	✓	
	FTA-GW-DUP01-061814	6/18/14 0000		18	X	X	X	X	X	X	X	X	✓	
	FTA-MW-218-061814	6/18/14 1238		18	X	X	X	X	X	X	X	X	✓	
	FTA-MW-206-061814	6/18/14 1245	↓	18	X	X	X	X	X	X	X	X	✓	

COMMENTS: Standard TAT

Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:
[signature]	6/18/14 1700	[signature]			
Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:

The terms and conditions on the following page hereof shall govern services, except when a signed contractual agreement exists.

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Page ____ of ____

Client: Tetra Tech
Contact: Mindi Messmer
Phone #: (978) 474-8400
Fax #: (978) 474-8499
Address: 250 Andover St. #200
City: Wilmington
State: MA
Zip Code: 01887
Purchase Order #:
Proj. Name / No.: Cutler-FTA / CTO WE53
Katahdin Quote #:
Bill (if different than above):
Address:
Sampler (Print / Sign): Brian Geringer / [signature]
Copies To:

LAB USE ONLY
WORK ORDER #: 514521
KATAHDIN PROJECT NUMBER ____

REMARKS: ____

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT
AIRBILL NO: ____
TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE / PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	VOCs (Filt. ☐Y ☐N)	Vinyl Chloride (Filt. ☐Y ☐N)	VPH (Filt. ☐Y ☐N)	EPH (Filt. ☐Y ☐N)	SVOCs (Filt. ☐Y ☐N)	PCBs (Filt. ☐Y ☐N)	Total Metals (Filt. ☐Y ☐N)	Dissolved Metals (Filt. ☒Y ☐N)	PFOA/PFOS (Filt. ☐Y ☐N)	Pesticides/PCBs (Filt. ☐Y ☐N)
	FTA-GW-TB02-061814	6/18/14 / 1600	AQ	8	X	X	X							
	FTA-MW-208-061814	" " / 1615	GW	18	X	X	X	X	X		X	X	X	
	FTA-MW-1-061814	/ 1630	" "	18	X	X	X	X	X		X	X	X	
	FTA-GW-DUP02-061814	/ 0000		18	X	X	X	X	X		X	X	X	
	FTA-~~GW~~ MW-210-061814	6/19/14 / 0900		52	X	X	X	X	X		X	X	X	
	FTA-SW-01-061914	" " / 0920	SW	14	X	X		X	X	X	X	X		
	" " -02-061914	/ 1042	" "	14	X	X		X	X	X	X	X		
	-03-061914	/ 1215		40	X	X		X	X	X	X	X		
	-06-061914	/ 1435		14	X	X		X	X	X	X	X		
	-07-061914	/ 1715		14	X	X		X	X	X	X	X		
	-08-061914	/ 1630		14	X	X		X	X	X	X	X		
	FTA-SW-DUP01-061914	/ 0000		14	X	X		X	X	X	X	X		
	FTA-SD-RB01-06~~08~~2014	6-20-14 / 0800	AQ	10	X			X	X		X			X
		/												
		/												
		/												

COMMENTS
Standard TAT - FTA-MW-210-061814 + FTA-SW-03-061914 are QC

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	6/20/14 1500	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL 0000037

KAS-COC1

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

TC 6/21/14

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client: Katahdin Analytical Services	Contact: Jun Obrin	Phone #: (207) 874-2400	Fax #: (207) 775-4029
Address: 600 Technology Way	City: Scarborough	State: ME	Zip Code: 04074
Purchase Order #	Proj. Name / No.: Cutler WES3 FTA		Katahdin Quote #
Bill (if different than above)	Address		
Sampler (Print / Sign)		Copies To:	

LAB USE ONLY — WORK ORDER #: SH4401
KATAHDIN PROJECT NUMBER

REMARKS: TA-Denver
Debra Henderer

SHIPPING INFO: ☒ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	PFCs (list of 12 compounds)	SW-846 3535A/8321	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	FTA-MW-9-061714	6/17/14 / 10:20	AQ	4	✓											
	FTA-MW-10-061714	/ 12:30														
	FTA-MW-11-061714	/ 10:20														
	FTA-MW-12-061714	/ 12:40														
	FTA-MW-5-061814	6/18/14 / 9:50														
	FTA-MW-203-061814	/ 10:20														
	FTA-GW-DUP01-061814	/ —														
	FTA-MW-218-061814	/ 12:38														
	FTA-MW-200-061814	/ 12:45														
	FTA-MW-214-061714	6/17/14 / 16:00														
	4	/														
		/														
		/														
		/														
		/														
		/														

280-56984 Chain of Custody

COMMENTS: Due July 7th, 2014. DoD QSM w/ DoD limits. ND to LOD. "J" flag between MDL and LOQ. Tetra Tech ADAPT format for EDD.

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	6-19-14 / 15:30	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

ORIGINAL

KAS-COC1

Login Sample Receipt Checklist

Client: Katahdin Analytical Services

Job Number: 280-56984-1

Login Number: 56984
List Number: 1
Creator: Dedio, Michael T

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Not requested on COC.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	False	Many labels were wet and difficult to read
Containers are not broken or leaking.	False	Refer to Job Narrative for details.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CASE NARRATIVE
Client: Katahdin Analytical Services
Project: CTO WE53 Cutler FTA
Report Number: 280-56984-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

TestAmerica Denver's DoD ELAP certification is 2907.01.

The PFC method DV-LC-0012 is an isotope dilution method; therefore, the internal standards are added prior to the extraction process. This technique inherently corrects for variability in the extraction efficiency due to sample matrix. Dilution of samples beyond the ability of the instrument to detect the internal standards is not recommended. Analyses performed at a dilution level requiring additional internal standard to be added after the extraction step in order to quantitate results has been shown to yield results with a significant low bias. As a result, data have been reported that exceed the calibration range and are qualified as estimated.

The PFC method is an isotope dilution method where the internal standards are added prior to extraction and used to quantitate results; therefore, the use of dilution factors is inappropriate. Application of dilution factors would yield results that are artificially high. Reporting limits and method detection limits are not adjusted for dilutions unless samples are fortified with additional internal standard, which is not recommended.

Internal standard abundances may vary depending upon both recovery and the dilution at which the analysis is performed. This is an inherent feature of the isotope dilution technique and is not indicative of bias to the reported results.

Sample Receipt

The following report contains the analytical results for ten samples received June 21, 2014, according to documented sample acceptance procedures. The samples were received at a temperature of 0.7°C.

One of the four 250-mL containers submitted for sample FTA-MW-10-061714 (280-56984-2) was received with the lid removed. Sufficient volume remains to perform the requested analysis. The client was notified on June 23, 2014.

All sample container labels were wet and difficult to read. The samples were identified as best as possible by the sample ID and/or the sample collection information listed on the chain-of-custody. Four containers were identified for each sample. The client was notified on June 23, 2014.

A discrepancy was noted between the chain-of-custody and the sample container labels for sample FTA-MW-214-061714 (280-56984-10). The chain-of-custody lists the sample ID as FTA-MW-214-061714; however, the container labels list the sample ID as FTA-MW-14-061714. The sample was logged per the sample container labels. The client was notified on June 23, 2014.

The chain-of-custody requests PFCs (list of 12 compounds) for all samples; however, the project was quoted for PFOA and PFOS. In accordance with the client's instructions provided on June 24, 2014, the samples are being analyzed for PFOA and PFOS.

No other anomalies were encountered during sample receipt.

Perfluorinated Hydrocarbons (PFCs) - DV-LC-0012

Samples FTA-MW-9-061714 (280-56984-1), FTA-MW-10-061714 (280-56984-2), FTA-MW-11-061714 (280-56984-3), FTA-MW-12-061714 (280-56984-4), FTA-MW-5-061814 (280-56984-5), FTA-MW-203-061814 (280-56984-6), FTA-GW-DUP01-061814 (280-56984-7), FTA-MW-218-061814 (280-56984-8), FTA-MW-206-061814 (280-56984-9) and FTA-MW-14-061714 (280-56984-10) were analyzed for PFC in accordance with SOP DV-LC-0012. The samples were prepared on 06/23/2014 and analyzed on 07/02/2014.

MS/MSD analyses for prep batch 280-231606 were not requested.

Internal standard responses were outside the control limits for sample FTA-MW-14-061714 (280-56984-10). The sample shows evidence of matrix interference. The internal standards were in control for the Method Blank, LCS and LCSD, indicating that the sample matrix may be causing the internal standard outages.

No other analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

SAMPLE SUMMARY

Client: Katahdin Analytical Services

Job Number: 280-56984-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-56984-1	FTA-MW-9-061714	Water	06/17/2014 1020	06/21/2014 0845
280-56984-2	FTA-MW-10-061714	Water	06/17/2014 1230	06/21/2014 0845
280-56984-3	FTA-MW-11-061714	Water	06/17/2014 1020	06/21/2014 0845
280-56984-4	FTA-MW-12-061714	Water	06/17/2014 1240	06/21/2014 0845
280-56984-5	FTA-MW-5-061814	Water	06/18/2014 0952	06/21/2014 0845
280-56984-6	FTA-MW-203-061814	Water	06/18/2014 1020	06/21/2014 0845
280-56984-7	FTA-GW-DUP01-061814	Water	06/18/2014 0000	06/21/2014 0845
280-56984-8	FTA-MW-218-061814	Water	06/18/2014 1238	06/21/2014 0845
280-56984-9	FTA-MW-206-061814	Water	06/18/2014 1245	06/21/2014 0845
280-56984-10	FTA-MW-14-061714	Water	06/17/2014 1600	06/21/2014 0845

METHOD SUMMARY

Client: Katahdin Analytical Services

Job Number: 280-56984-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
PFOA/PFOS LC/MS/MS	TAL DEN	TestAmerica SOP PFOA/PFOS	
Solid-Phase Extraction (SPE)	TAL DEN		SW846 3535

Lab References:

TAL DEN = TestAmerica Denver

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

FORM II
LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-56984-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Gemini-NX ID:

Client Sample ID	Lab Sample ID	PFOA #	PFOS #
FTA-MW-9-061714	280-56984-1	101	106
FTA-MW-10-061714	280-56984-2	102	103
FTA-MW-11-061714	280-56984-3	102	101
FTA-MW-12-061714	280-56984-4	102	104
FTA-MW-5-061814	280-56984-5	101	107
FTA-MW-203-061814	280-56984-6	102	102
FTA-GW-DUP01-06181 4	280-56984-7	101	106
FTA-MW-218-061814	280-56984-8	100	105
FTA-MW-206-061814	280-56984-9	103	103
FTA-MW-14-061714	280-56984-10	101	107
	MB 280-231606/1-A	102	101
	LCS 280-231606/2-A	104	101
	LCSD 280-231606/3-A	102	104
	DLCK 280-232919/14	113	87

	QC LIMITS
PFOA = 13C8 PFOA	60-155
PFOS = 13C8 PFOS	45-130

Column to be used to flag recovery values

FORM II PFOA/PFOS

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-56984-1

SDG No.:

Instrument ID: LC_LCMS5 Calibration Start Date: 07/02/2014 12:52

GC Column: Gemini-NX ID: Calibration End Date: 07/02/2014 14:02

Calibration ID: 18859

		OA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		36890206	4.24	8832883	4.40		
UPPER LIMIT		57179819	4.74	11482748	4.90		
LOWER LIMIT		22134124	3.74	3974797	3.90		
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 280-232919/12		38819948	4.17	9331415	4.33		
ICV 280-232919/13		38128068	4.16	9036161	4.34		
DLCK 280-232919/14		37267880	4.21	9104406	4.37		
CCV 280-232925/25		34018216	4.15	8426338	4.31		
280-56984-3	FTA-MW-11-061714	31113283	4.14	6082545	4.30		
280-56984-2	FTA-MW-10-061714	30259593	4.14	5696903	4.30		
280-56984-1	FTA-MW-9-061714	27772170	4.14	5145671	4.30		
CCV 280-232925/37		34838530	4.08	8709465	4.25		

OA = 13C4 PFOA (IS)
PFOS = 13C4 PFOS (IS)

Area Limit = 60%-155% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII PFOA/PFOS

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-56984-1

SDG No.:

Lab File ID: PC514G02016.d Lab Sample ID: MB 280-231606/1-A

Matrix: Water Date Extracted: 06/23/2014 16:11

Instrument ID: LC_LCMS5 Date Analyzed: 07/02/2014 14:37

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-231606/2-A	PC514G02017 .d	07/02/2014 14:45
	LCSD 280-231606/3-A	PC514G02018 .d	07/02/2014 14:54
FTA-MW-14-061714	280-56984-10	PC514G02019 .d	07/02/2014 15:03
FTA-MW-206-061814	280-56984-9	PC514G02020 .d	07/02/2014 15:12
FTA-MW-218-061814	280-56984-8	PC514G02021 .d	07/02/2014 15:20
FTA-GW-DUP01-061814	280-56984-7	PC514G02022 .d	07/02/2014 15:29
FTA-MW-203-061814	280-56984-6	PC514G02023 .d	07/02/2014 15:38
FTA-MW-5-061814	280-56984-5	PC514G02024 .d	07/02/2014 15:47
FTA-MW-12-061714	280-56984-4	PC514G02025 .d	07/02/2014 15:55
FTA-MW-11-061714	280-56984-3	PC514G02027 .d	07/02/2014 16:13
FTA-MW-10-061714	280-56984-2	PC514G02028 .d	07/02/2014 16:22
FTA-MW-9-061714	280-56984-1	PC514G02029 .d	07/02/2014 16:30

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver
Job No.: 280-56984-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 280-231606/1-A
Matrix: Water
Lab File ID: PC514G02016.d
Analysis Method: PFOA/PFOS
Date Collected:
Extraction Method: 3535
Date Extracted: 06/23/2014 16:11
Sample wt/vol: 250(mL)
Date Analyzed: 07/02/2014 14:37
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 20(uL)
GC Column: Gemini-NX ID:
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 232925
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.020	U	0.030	0.020	0.0098
335-67-1	Perfluorooctanoic acid (PFOA)	0.0080	U	0.020	0.0080	0.0045

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	102		60-155
STL01054	13C8 PFOS	101		45-130

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-56984-1

SDG No.:

Batch Number: 231606 Batch Start Date: 06/23/14 16:11 Batch Analyst: Cokley, Cheyana D

Batch Method: 3535 Batch End Date: 06/23/14 17:37

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	PFOA/S_Spike 00008	PFOA/S_Sur/IS 00008
MB 280-231606/1		3535, PFOA/PFOS				250 mL	5 mL		0.1 mL
LCS 280-231606/2		3535, PFOA/PFOS				250 mL	5 mL	0.1 mL	0.1 mL
LCSD 280-231606/3		3535, PFOA/PFOS				250 mL	5 mL	0.1 mL	0.1 mL
280-56984-B-10	FTA-MW-14-061714	3535, PFOA/PFOS	T	301.1 g	24.2 g	276.9 mL	5 mL		0.1 mL
280-56984-B-9	FTA-MW-206-061814	3535, PFOA/PFOS	T	289.2 g	23.8 g	265.4 mL	5 mL		0.1 mL
280-56984-A-8	FTA-MW-218-061814	3535, PFOA/PFOS	T	293.3 g	23.8 g	269.5 mL	5 mL		0.1 mL
280-56984-C-7	FTA-GW-DUP01-061814	3535, PFOA/PFOS	T	299.6 g	23.9 g	275.7 mL	5 mL		0.1 mL
280-56984-D-6	FTA-MW-203-061814	3535, PFOA/PFOS	T	295.8 g	24.2 g	271.6 mL	5 mL		0.1 mL
280-56984-D-5	FTA-MW-5-061814	3535, PFOA/PFOS	T	300.4 g	23.8 g	276.6 mL	5 mL		0.1 mL
280-56984-A-4	FTA-MW-12-061714	3535, PFOA/PFOS	T	295.9 g	24.5 g	271.4 mL	5 mL		0.1 mL
280-56984-A-3	FTA-MW-11-061714	3535, PFOA/PFOS	T	296.9 g	24.3 g	272.6 mL	5 mL		0.1 mL
280-56984-A-2	FTA-MW-10-061714	3535, PFOA/PFOS	T	298.9 g	23.6 g	275.3 mL	5 mL		0.1 mL
280-56984-A-1	FTA-MW-9-061714	3535, PFOA/PFOS	T	294.5 g	24.0 g	270.5 mL	5 mL		0.1 mL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-56984-1

SDG No.:

Matrix: Water Level: Low Lab File ID: PC514G02017.d

Lab ID: LCS 280-231606/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perfluorooctane Sulfonate (PFOS)	0.191	0.181	94	60-128	
Perfluorooctanoic acid (PFOA)	0.200	0.198	99	70-130	

Column to be used to flag recovery and RPD values

FORM III PFOA/PFOS

FORM III
LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-56984-1

SDG No.:

Matrix: Water Level: Low Lab File ID: PC514G02018.d

Lab ID: LCSD 280-231606/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perfluorooctane Sulfonate (PFOS)	0.191	0.173	90	4	20	60-128	
Perfluorooctanoic acid (PFOA)	0.200	0.199	100	1	20	70-130	

Column to be used to flag recovery and RPD values

FORM III PFOA/PFOS

FORM III
LCMS DETECTION LIMIT CHECK STANDARD RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-56984-1

SDG No.:

Matrix: Water Level: Low Lab File ID: PC514G02015.d

Lab ID: DLCK 280-232919/14 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	DLCK CONCENTRATION (ug/L)	DLCK % REC	QC LIMITS REC	#
Perfluorooctane Sulfonate (PFOS)	0.239	0.257	108	70-130	
Perfluorooctanoic acid (PFOA)	0.250	0.245 J	98	70-130	

Column to be used to flag recovery and RPD values

FORM III PFOA/PFOS

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-56984-1

SDG No.:

Instrument ID: LC_LCMS5 Start Date: 07/02/2014 12:52

Analysis Batch Number: 232919 End Date: 07/02/2014 14:28

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD00025 280-232919/3 IC		07/02/2014 12:52	1	PC514G02004.d	Gemini-NX
STD0005 280-232919/4 IC		07/02/2014 13:01	1	PC514G02005.d	Gemini-NX
STD0010 280-232919/5 IC		07/02/2014 13:09	1	PC514G02006.d	Gemini-NX
STD0020 280-232919/6 ICISAV		07/02/2014 13:18	1	PC514G02007.d	Gemini-NX
STD0050 280-232919/7 IC		07/02/2014 13:27	1	PC514G02008.d	Gemini-NX
STD0100 280-232919/8 IC		07/02/2014 13:36	1	PC514G02009.d	Gemini-NX
STD0200 280-232919/9 IC		07/02/2014 13:44	1	PC514G02010.d	Gemini-NX
STD0500 280-232919/10 IC		07/02/2014 13:53	1	PC514G02011.d	Gemini-NX
STD1250 280-232919/11 IC		07/02/2014 14:02	1	PC514G02012.d	Gemini-NX
CCB 280-232919/12		07/02/2014 14:10	1	PC514G02013.d	Gemini-NX
ICV 280-232919/13		07/02/2014 14:19	1	PC514G02014.d	Gemini-NX
DLCK 280-232919/14		07/02/2014 14:28	1	PC514G02015.d	Gemini-NX

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-56984-1 Analy Batch No.: 232919

SDG No.:

Instrument ID: LC_LCMS5 GC Column: Gemini-NX ID: Heated Purge: (Y/N) N

Calibration Start Date: 07/02/2014 12:52 Calibration End Date: 07/02/2014 14:02 Calibration ID: 18859

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD00025 280-232919/3	PC514G02004.d
Level 2	STD0005 280-232919/4	PC514G02005.d
Level 3	STD0010 280-232919/5	PC514G02006.d
Level 4	STD0020 280-232919/6	PC514G02007.d
Level 5	STD0050 280-232919/7	PC514G02008.d
Level 6	STD0100 280-232919/8	PC514G02009.d
Level 7	STD0200 280-232919/9	PC514G02010.d
Level 8	STD0500 280-232919/10	PC514G02011.d
Level 9	STD1250 280-232919/11	PC514G02012.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Ammonium Perfluorooctanoate (APFO)	1.0552 0.9148	1.0056 0.9312	1.0004 0.8601	1.0108 0.7659	0.9521	Lin2	0.0472	0.9043							0.9930		0.9800
Perfluorooctanoic acid (PFOA)	1.0981 0.9519	1.0464 0.9690	1.0410 0.8950	1.0518 0.7969	0.9908	Lin2	0.0472	0.9411							0.9930		0.9800
Perfluorooctane Sulfonate (PFOS)	2.1015 1.1629	1.8155 1.1434	1.6067 1.0475	1.4874 0.9466	1.1907	Lin2	0.2577	1.1532							0.9800		0.9800
13C8 PFOA	0.9822 0.9701	1.0105 0.9708	1.0063 0.9022	0.9973 0.7992	1.0193	Lin2	0.0174	0.9468							0.9940		0.9800
13C8 PFOS	0.9831 0.8933	0.9586 0.8979	0.9228 0.8085	0.8923 0.7478	0.9031	Lin2	0.0363	0.8565							0.9950		0.9800

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-56984-1

SDG No.:

Lab Sample ID: ICV 280-232919/13 Calibration Date: 07/02/2014 14:19

Instrument ID: LC_LCMS5 Calib Start Date: 07/02/2014 12:52

GC Column: Gemini-NX ID: Calib End Date: 07/02/2014 14:02

Lab File ID: PC514G02014.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ammonium Perfluorooctanoate (APFO)	Lin2		0.9418		2.12	2.08	1.6	30.0
Perfluorooctanoic acid (PFOA)	Lin2		0.9800		2.03	2.00	1.6	30.0
Perfluorooctane Sulfonate (PFOS)	Lin2		1.333		2.11	2.02	4.5	30.0
13C8 PFOA	Lin2		0.998		2.09	2.00	4.5	30.0
13C8 PFOS	Lin2		0.9179		2.01	1.91	4.9	30.0

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-56984-1

SDG No.:

Instrument ID: LC_LCMS5 Start Date: 07/02/2014 14:37

Analysis Batch Number: 232925 End Date: 07/02/2014 17:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
MB 280-231606/1-A		07/02/2014 14:37	1	PC514G02016.d	Gemini-NX
LCS 280-231606/2-A		07/02/2014 14:45	1	PC514G02017.d	Gemini-NX
LCSD 280-231606/3-A		07/02/2014 14:54	1	PC514G02018.d	Gemini-NX
280-56984-10	FTA-MW-14-061714	07/02/2014 15:03	1	PC514G02019.d	Gemini-NX
280-56984-9	FTA-MW-206-061814	07/02/2014 15:12	1	PC514G02020.d	Gemini-NX
280-56984-8	FTA-MW-218-061814	07/02/2014 15:20	1	PC514G02021.d	Gemini-NX
280-56984-7	FTA-GW-DUP01-061814	07/02/2014 15:29	1	PC514G02022.d	Gemini-NX
280-56984-6	FTA-MW-203-061814	07/02/2014 15:38	1	PC514G02023.d	Gemini-NX
280-56984-5	FTA-MW-5-061814	07/02/2014 15:47	1	PC514G02024.d	Gemini-NX
280-56984-4	FTA-MW-12-061714	07/02/2014 15:55	1	PC514G02025.d	Gemini-NX
CCV 280-232925/25		07/02/2014 16:04	1	PC514G02026.d	Gemini-NX
280-56984-3	FTA-MW-11-061714	07/02/2014 16:13	1	PC514G02027.d	Gemini-NX
280-56984-2	FTA-MW-10-061714	07/02/2014 16:22	1	PC514G02028.d	Gemini-NX
280-56984-1	FTA-MW-9-061714	07/02/2014 16:30	1	PC514G02029.d	Gemini-NX
ZZZZZ		07/02/2014 16:39	1		Gemini-NX
ZZZZZ		07/02/2014 16:48	1		Gemini-NX
ZZZZZ		07/02/2014 16:57	1		Gemini-NX
ZZZZZ		07/02/2014 17:05	1		Gemini-NX
ZZZZZ		07/02/2014 17:14	1		Gemini-NX
ZZZZZ		07/02/2014 17:23	1		Gemini-NX
ZZZZZ		07/02/2014 17:32	1		Gemini-NX
ZZZZZ		07/02/2014 17:40	1		Gemini-NX
CCV 280-232925/37		07/02/2014 17:49	1	PC514G02038.d	Gemini-NX

PFOA/PFOS

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-56984-1

SDG No.:

Lab Sample ID: CCV 280-232925/25 Calibration Date: 07/02/2014 16:04

Instrument ID: LC_LCMS5 Calib Start Date: 07/02/2014 12:52

GC Column: Gemini-NX ID: Calib End Date: 07/02/2014 14:02

Lab File ID: PC514G02026.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ammonium Perfluorooctanoate (APFO)	Lin2		0.9309		10.7	10.4	2.4	30.0
Perfluorooctanoic acid (PFOA)	Lin2		0.9687		10.2	10.0	2.4	30.0
Perfluorooctane Sulfonate (PFOS)	Lin2		1.072		8.66	9.56	-9.4	30.0
13C8 PFOA	Lin2		0.9700		10.2	10.0	2.3	30.0
13C8 PFOS	Lin2		0.8838		9.82	9.56	2.7	30.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-56984-1

SDG No.:

Lab Sample ID: CCV 280-232925/37 Calibration Date: 07/02/2014 17:49

Instrument ID: LC_LCMS5 Calib Start Date: 07/02/2014 12:52

GC Column: Gemini-NX ID: Calib End Date: 07/02/2014 14:02

Lab File ID: PC514G02038.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ammonium Perfluorooctanoate (APFO)	Lin2		0.9482		5.40	5.20	3.8	30.0
Perfluorooctanoic acid (PFOA)	Lin2		0.9867		5.19	5.00	3.8	30.0
Perfluorooctane Sulfonate (PFOS)	Lin2		1.148		4.53	4.78	-5.2	30.0
13C8 PFOA	Lin2		0.998		5.25	5.00	5.1	30.0
13C8 PFOS	Lin2		0.9235		5.11	4.78	6.9	30.0

DODCMD_ID	INSTALLATION_ID	SDG	SITE_NAME	NORM_SITE_NAME	LOCATION_NAME	LOCATION_TYPE_DESC	COORD_X	COORD_Y	CONTRACT_ID	DO_CTO_NUMBER	CONTR_NAME	SAMPLE_NAME	SAMPLE_MATRIX_DESC	SAMPLE_TYPE_DESC	COLLECT_DATE	ANALYTICAL_METHOD	ANALYTICAL_METHOD_GRP_DESC
MID_ATLANTIC	CUTLER_NCTAMS	WE53-7	SITE 00001	SITE 00001	FTA-MW-206	Monitoring well	1297786.226	365484.1059	N6247008D1001	WE53	TETRA TECH NUS, INC.	FTA-MW-206-061814	Ground water	Normal (Regular)	18-Jun-14	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	CUTLER_NCTAMS	WE53-7	SITE 00001	SITE 00001	FTA-MW-218	Monitoring well	1297631.942	365753.2309	N6247008D1001	WE53	TETRA TECH NUS, INC.	FTA-MW-218-061814	Ground water	Normal (Regular)	18-Jun-14	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	CUTLER_NCTAMS	WE53-7	SITE 00001	SITE 00001	FTA-MW-210	Monitoring well	1297652.529	365439.5969	N6247008D1001	WE53	TETRA TECH NUS, INC.	FTA-MW-210-061814	Ground water	Normal (Regular)	19-Jun-14	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	CUTLER_NCTAMS	WE53-7	SITE 00001	SITE 00001	FTA-MW-12	Monitoring well	1298212.528	365902.3889	N6247008D1001	WE53	TETRA TECH NUS, INC.	FTA-MW-12-061714	Ground water	Normal (Regular)	17-Jun-14	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	CUTLER_NCTAMS	WE53-7	SITE 00001	SITE 00001	FTA-MW-5	Monitoring well	1297776.992	365791.0649	N6247008D1001	WE53	TETRA TECH NUS, INC.	FTA-MW-5-061814	Ground water	Normal (Regular)	18-Jun-14	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	CUTLER_NCTAMS	WE53-7	SITE 00001	SITE 00001	FTA-MW-14	Monitoring well	1297943.34	366001.8669	N6247008D1001	WE53	TETRA TECH NUS, INC.	FTA-MW-14-061714	Ground water	Normal (Regular)	17-Jun-14	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	CUTLER_NCTAMS	WE53-7	SITE 00001	SITE 00001	FTA-MW-11	Monitoring well	1298115.187	366020.7299	N6247008D1001	WE53	TETRA TECH NUS, INC.	FTA-MW-11-061714	Ground water	Normal (Regular)	17-Jun-14	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	CUTLER_NCTAMS	WE53-7	SITE 00001	SITE 00001	FTA-MW-1	Monitoring well	1297875.938	365411.9829	N6247008D1001	WE53	TETRA TECH NUS, INC.	FTA-MW-1-061814	Ground water	Normal (Regular)	18-Jun-14	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	CUTLER_NCTAMS	WE53-7	SITE 00001	SITE 00001	FTA-MW-203	Monitoring well	1298242.071	365714.8309	N6247008D1001	WE53	TETRA TECH NUS, INC.	FTA-MW-203-061814	Ground water	Normal (Regular)	18-Jun-14	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	CUTLER_NCTAMS	WE53-7	SITE 00001	SITE 00001	FTA-MW-10	Monitoring well	1298112.457	365817.1259	N6247008D1001	WE53	TETRA TECH NUS, INC.	FTA-MW-10-061714	Ground water	Normal (Regular)	17-Jun-14	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	CUTLER_NCTAMS	WE53-7	SITE 00001	SITE 00001	FTA-MW-208	Monitoring well	1297771.687	365331.7079	N6247008D1001	WE53	TETRA TECH NUS, INC.	FTA-MW-208-061814	Ground water	Normal (Regular)	18-Jun-14	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	CUTLER_NCTAMS	WE53-7	SITE 00001	SITE 00001	FTA-MW-208	Monitoring well	1297771.687	365331.7079	N6247008D1001	WE53	TETRA TECH NUS, INC.	FTA-MW-208-061814-D	Ground water	Field duplicate	18-Jun-14	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	CUTLER_NCTAMS	WE53-7	SITE 00001	SITE 00001	FTA-MW-5	Monitoring well	1297776.992	365791.0649	N6247008D1001	WE53	TETRA TECH NUS, INC.	FTA-MW-5-061814-D	Ground water	Field duplicate	18-Jun-14	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	CUTLER_NCTAMS	WE53-7	SITE 00001	SITE 00001	FTA-MW-9	Monitoring well	1298073.474	365895.8749	N6247008D1001	WE53	TETRA TECH NUS, INC.	FTA-MW-9-061714	Ground water	Normal (Regular)	17-Jun-14	TA_WS-LC-0025	Perfluoroalkyl Compounds