

Report Prepared for:

Eric Grosjean
Atmospheric Analysis & Consulting
1534 Eastman Ave
Ventura CA 93003

**REPORT OF
LABORATORY
ANALYSIS FOR
PCDD/PCDF**

Report Information:

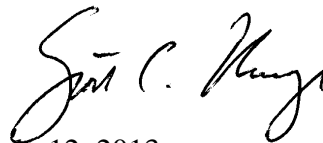
Pace Project #: 10232724
Sample Receipt Date: 06/19/2013
Client Project #: DNR
Client Sub PO #: N/A
State Cert #: N/A

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 4 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:



July 12, 2013

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com



Report of Laboratory Analysis

This report contains results for EPA Method 23 which is not included in Pace Analytical Service's, Inc. NELAC scope of accreditation

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The results relate only to the samples included in this report.

Report Prepared Date:

July 12, 2013



DISCUSSION

This report presents the results from the analyses performed on six of seven samples submitted by a representative of Atmospheric Analysis & Consulting. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method TO9A. The reporting limits were based on signal-to-noise measurements. Estimated Maximum Possible Concentration (EMPC) values were treated as positives in the toxic equivalence calculations. The samples were received above the laboratory-recommended temperature range of 0-6 degrees Celsius. The analysis of sample F3-A was canceled by the client.

TO9A and TO13A extractions of the samples were performed on the same samples. Each sample was spiked with the standard amount of the TO9A internal standard spiking solution prior to extraction. After concentration, each extract was split into two equal portions and processed for TO9A and TO13A analyses.

The recoveries of the isotopically labeled PCDD/PCDF internal standards in the sample extracts ranged from 30-94%. Except for the low internal standard recoveries in sample U1-A, which were flagged "R" on the results table, the labeled internal standard recoveries obtained for this project were within the target ranges for the method. Also, since the internal standards were added to the samples prior to the extraction step, the data were automatically corrected for recovery and accurate values were obtained.

The recoveries obtained for the PCDD/PCDF surrogate compounds in the field samples ranged from 33-103%. Except for one low value, which was flagged "R" on the results table, the surrogate recoveries obtained for this project were within the 50-120% target range specified in the method.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners; the affected values were flagged "I" where incorrect isotope ratios were obtained. Concentrations below the calibration range were flagged "J" and should be regarded as estimates.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. For ease of comparison, the method blank results (and the field blank results) were normalized to the lowest field sample collection volume. The results show the blank to contain trace levels of selected congeners. These levels were below the calibration range of the method. Sample levels similar to the corresponding blank levels were flagged "B" on the results tables and may be, at least partially, attributed to the background. It should be noted that levels less than ten times the background are not generally considered to be statistically different from the background.

Laboratory quality control PCDD/PCDF spike samples were also prepared with the sample batch using clean PUF cartridges that had been fortified with native standards. The results show that the spiked native compounds were recovered at 91-128% with relative percent differences of 0.0-12.4%. These results indicate high degrees of accuracy and precision for these determinations. Matrix spikes were not prepared with the sample batch. It should be noted that the laboratory spike samples appeared to have been spiked with twice the standard amount of the native congeners. This likelihood was confirmed by discussion with the extraction technician who performed the work and the calculations were then adjusted to account for this deviation.

REPORT OF LABORATORY ANALYSIS

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Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
Alabama	40770	Mississippi	MN00064
Alaska	MN00064	Montana	92
Arizona	AZ0014	Nebraska	
Arkansas	88-0680	Nevada	MN_00064_200
California	01155CA	New Jersey (NE)	MN002
Colorado	MN00064	New Mexico	MN00064
Connecticut	PH-0256	New York (NEL)	11647
EPA Region 5	WD-15J	North Carolina	27700
EPA Region 8	8TMS-Q	North Dakota	R-036
Florida (NELAP)	E87605	Ohio	4150
Georgia (DNR)	959	Oklahoma	D9922
Guam	959	Oregon (ELAP)	MN200001-005
Hawaii	SLD	Oregon (OREL)	MN300001-001
Idaho	MN00064	Pennsylvania	68-00563
Illinois	200012	Saipan	MP0003
Indiana	C-MN-01	South Carolina	74003001
Indiana	C-MN-01	Tennessee	2818
Iowa	368	Tennessee	02818
Kansas	E-10167	Texas	T104704192-08
Kentucky	90062	Utah (NELAP)	PAM
Louisiana	03086	Virginia	00251
Maine	2007029	Washington	C755
Maryland	322	West Virginia	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-Q

REPORT OF LABORATORY ANALYSIS

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Report No.....10232724

Reporting Flags

- A = Reporting Limit based on signal to noise
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- I = Interference present
- J = Estimated value
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs
- * = See Discussion

REPORT OF LABORATORY ANALYSIS

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**2,3,7,8-TCDD Equivalency Factors (TEFs) for the
Polychlorinated Dibenzop-dioxins and Dibenzofurans**

89-ITE-Factors

Compound	TEF
2,3,7,8-TCDD	1.000000
1,2,3,7,8-PeCDD	0.500000
1,2,3,4,7,8-HxCDD	0.100000
1,2,3,6,7,8-HxCDD	0.100000
1,2,3,7,8,9-HxCDD	0.100000
1,2,3,4,6,7,8-HpCDD	0.010000
OCDD	0.001000
Total TCDD	0.000000
Total PeCDD	0.000000
Total HxCDD	0.000000
Total HpCDD	0.000000
<hr/>	
2,3,7,8-TCDF	0.100000
1,2,3,7,8-PeCDF	0.050000
2,3,4,7,8-PeCDF	0.500000
1,2,3,4,7,8-HxCDF	0.100000
1,2,3,6,7,8-HxCDF	0.100000
2,3,4,6,7,8-HxCDF	0.100000
1,2,3,7,8,9-HxCDF	0.100000
1,2,3,4,6,7,8-HpCDF	0.010000
1,2,3,4,7,8,9-HpCDF	0.010000
OCDF	0.001000
Total TCDF	0.000000
Total PeCDF	0.000000
Total HxCDF	0.000000
Total HpCDF	0.000000

REPORT OF LABORATORY ANALYSIS

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Appendix A

Sample Management



Sample ID Cross Reference

<u>Client Sample ID</u>	<u>Pace Sample ID</u>	<u>Date Received</u>	<u>Sample Type</u>
U1-A PUF	10232724001	06/19/2013	PUF
D1-A PUF	10232724002	06/19/2013	PUF
BZ-1A PUF	10232724003	06/19/2013	PUF
F1-A PUF,LIQ	10232724004	06/19/2013	PUF
F2-A PUF,LIQ	10232724005	06/19/2013	PUF
Blank	10232724007	06/19/2013	PUF

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CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1140



10232724

Section A
Required Client Information:

Company: **SWARE**
Address: **1640 FIFTH ST, STE 204**
SANTA MONICA CA 90401
Email: **ROSENFELD.PAULO@GMAIL.COM**
Phone: **310-434-0110** Fax:
Requested Due Date/TAT:

Section B
Required Project Information:

Report To: **PAUL ROSENFELD**
Copy To: **ROB RESSE**
Address: **RRESSE@SWARE.COM**
Purchase Order No.:
Project Name: **DNR**
Project Number:

Section C
Invoice Information:

Attention: **BETH GLICKMAN**
Company Name: **SWARE**
Address: **SAME**
Pace Quote Reference:
Pace Project Manager: **GLOTT UNZE**
Pace Profile #:

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

Site Location STATE: **MO**

Page: **1** of **1**

1518936

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test ↑	Requested Analysis Filtered (Y/N)	Temp in °C	Received on	Custody	Sealed Cooler	Samples Intact	
				COMPOSITE START	COMPOSITE END/GRAB											DATE
1	U1 - A PUF	DW	AL C	6/19/13	0827	6/19/13	0827	25	1							
2	D1 - A PUF	WT	AL C	6/17/13	0905	6/18/13	1200	25	1							
3	B2 - A PUF	WW	AL C	6/17/13	1128	6/18/13	1152	25	1							
4	E1 - A PUF	P	AL C	6/17/13	1211	6/17/13	1411	25	1							
5	F1 - A LIQ	SL	AL C	6/17/13	1455	6/17/13	1658	25	1							
6	F2 - A PUF	OL	AL C	6/17/13	1455	6/17/13	1658	25	1							
7	F3 - A LIQ	WP	AL C	6/17/13	1455	6/17/13	1658	25	1							
8	F3 - A PUF	AR	AL C	6/18/13	900	6/18/13	1100	25	1							
9	F3 - A LIQ	TS	AL C	6/18/13	900	6/18/13	1100	25	1							
10		OT														
11																
12																
<p>ADDITIONAL COMMENTS: SAMPLE VOLUMES TO BE SUPPLIED</p> <p>RELINQUISHED BY / AFFILIATION: TRU/M/MEGR/Winegar for SW</p> <p>DATE: 6/18/2013 TIME: 1300</p> <p>ACCEPTED BY / AFFILIATION: [Signature]</p> <p>DATE: 6/19/13 TIME: 0845</p> <p>DATE SIGNED: 06/18/2013</p>																

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: **ERIC WINEGAR**
SIGNATURE of SAMPLER: **[Signature]**


ORIGINAL

*Important Note: Returning this form will not prevent Pace's NET 30 day payment terms and condition in late payment for all invoices and not utilized due

Sample Condition Upon Receipt

Client Name: SWAPE Project #: _____

WO#: **10232724**



Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____

Tracking Number: 6010 9129 1442

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other: _____ Temp Blank? Yes No

Thermom. Used: 888A912167504 80512447 72337080 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temp Read (°C): 12.3 Cooler Temp Corrected (°C): 12.8 Biological Tissue Frozen? Yes No
 Temp should be above freezing to 6°C Correction Factor: 10.5 Date and Initials of Person Examining Contents: 06/19/13

Question	Yes	No	N/A	Comments
Chain of Custody Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6.
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Sufficient Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.
Correct Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
-Pace Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
Containers Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: <u>PUFF/WT</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. "Blank" PUFF received & not on COC
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13. All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>12) Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl Sample # Initial when completed: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Trip Blank Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
Trip Blank Custody Seals Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pace Trip Blank Lot # (If purchased):				

CLIENT NOTIFICATION/RESOLUTION Person Contacted: Rob H. Date/Time: 06/19/13 Field Data Required? Yes No
 Comments/Resolution: Analyze PUF blank as sample 007.

Project Manager Review: _____ Date: 06/19/13
 Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

DIOXIN EXTRACTION WORKSHEET

Non Aqueous

Extraction Batch : EB-13566

Pace Analytical Services, Inc.

EB-13566

Method 8290 1613B TO9 M23
Matrix PUF XAD Solid Oil
 Tissue Other _____
Spiked By _____
Spike Witness _____
Time of Spiking _____

Extraction On (Date/Time):
6/24/2013 9:30:00 PM
Extraction Off (Date/Time):
6/25/2013 1:30:00 PM

Standards:

Internal Std M23-I-8954-025
 Native 8954-093
 CI-37 Std M23-Alt-9066-06
 Recovery Std FS-R-9966-012
 Tridecane
 Mineral Oil
 Others M23-S-7726-192

	Sample #	Internal Stds	Native Stds	Extracted mL or g	#AcidRinse	Buffer Soln	Glassware Set	Location	Comments
1	BLANK-36849			6.39					
2	LCS-36850			0.50					
3	LCSD-36851			0.50					
4	10232724001			159.54				10 0619 03	TO-9/TO-13 split, extract by 6/24!
5	10232724002			110.75				10 0619 03	TO-9/TO-13 split, extract by 6/24!
6	10232724003			131.22				10 0619 03	TO-9/TO-13 split, extract by 6/24!
7	10232724004			6.39				10 0619 03	TO-9/TO-13 split, extract by 6/24!
8	10232724005			9.59				10 0619 03	TO-9/TO-13 split, extract by 6/24!
9	10232724006			0.50				10 0619 03	TO-9/TO-13 split, extract by 6/24!
10	10232724007			6.39				10 0619 03	TO-9/TO-13 split, extract by 6/24!

Silica:

Date 6/27/2013
 Initials PED
 Hexane Lot # 130151
 Dispenser ID
 Neutral Batch # 239
 Basic Batch # 320
 Acid Batch # 482

Alumina:

Date 6/29/2013
 Initials TDP
 Hexane Lot # 130151
 Dispenser ID
 60% Batch # 1530
 Dispenser ID
 Alumina Lot

Carbon:

Date 6/29/2013
 Initials TDP
 Toluene Lot # 126286
 Dispenser ID
 75% Batch # 309
 Dispenser ID
 50% Batch # 427
 Dispenser ID
 Hexane Lot # 130151
 Dispenser ID

Extract Solvents:

Toluene Lot #
 Hexane Lot #
 MeCl Lot #

Acid Base:

H2SO4 Lot #
 Buffer Soln #

QC Matrix Lot/Batch# _____

Extracts Relinquished By: _____

Received By: _____

Date: _____

METHOD 23 EXTRACTION WORKSHEET

EB-13566

Extraction Batch : EB-13566

Extraction Notes

The LCS/LCSD appeared to have been inadvertently spiked with 1-uL of native spiking solution instead of 0.5-uL. This was confirmed by discussion with KH. SWH 07/12/2013

Client names have been blacked out on notebook pages in order to preserve client confidentiality



Analysis Key Code List

- = Not used	RRM = ReRun - Matrix
✓ = Worked up	RRLM = ReRun – Lock Mass
# = See comment # below	RRBI = ReRun – Bad Injection
Li = Liner, replace or clean	RRRT = ReRun – Retention Time shift
Ba = Baseplate, change	RR>S = Rerun – need better Sensitivity
SyB = Syringe, replace – bent	Re = Re-extract
SyP = Syringe, replace – plugged	AS = Adjust Slits
SyO = Syringe, replace – other	LC = Leak Check
IS = Injector Septum, replace	RB = Re-Boot system
BS = Batch Septum, replace	CiS = Cleaned inner Source
Fi = Filament, replace	CoS = Cleaned outer Source
Co = Contacts, adjust	AiS = Alternate inner Source
Ca = re-Calibrate	AoS = Alternate outer Source
Tu = Tune	<Y = Adjust Y focus down
TC = Tune and Calibrate	>Y = Adjust Y focus up
CC () = Cut Column (length cut)	Di () = Dilution needed (amount needed)
CO = Carry-Over possible	FE = Front End – liner, baseplate and septum

Sample List: C:\MassLynx\Default.pro\Sampledb\P121229A.SPL

Page 1 of 1

Last Modified: Saturday, December 29, 2012 19:34:33 Central Standard Time

Printed: Saturday, December 29, 2012 19:35:14 Central Standard Time

Page Position (1, 1)

File Name	File Text	Method	MS File	Inlet File	Bottle	Vol
1	P121229A_01 ✓ CAL CS3/CPM-7604-248 - BAL TC USC473217H	8290/1613B	dioxfur	dioxfur	Tray01:2	1.0
2	P121229A_02 ✓ CAL CS2-7604-215 - BAL arc	8290/1613B	dioxfur	dioxfur	Tray01:5	1.0
3	P121229A_03 ✓ CAL CS1-7604-207 - BAL	8290/1613B	dioxfur	dioxfur	Tray01:6	1.0
4	P121229A_04 ✓ CAL CS1-7604-218 - BAL ratio out	23	dioxfur	dioxfur	Tray01:16	1.0
5	P121229A_05 ✓ CAL CS2-7604-219 - BAL	23	dioxfur	dioxfur	Tray01:17	1.0
6	P121229A_06 ✓ CAL CS1-7604-218 - BAL	23	dioxfur	dioxfur	Tray01:16	1.0
7	P121229A_07 ✓ CAL CS3-7604-246 - BAL	23	dioxfur	dioxfur	Tray01:18	1.0
8	P121229A_08 ✓ CAL CS2-7604-215 - BAL	8290/1613B	dioxfur	dioxfur	Tray01:5	1.0
9	P121229A_09 ✓ CAL CS4-7604-221 - BAL	23	dioxfur	dioxfur	Tray01:19	1.0
10	P121229A_10 ✓ CAL CS5-7604-222 - BAL	23	dioxfur	dioxfur	Tray01:20	1.0
11	P121229A_11 ✓ CAL CS5-7604-217 - BAL	8290/1613B	dioxfur	dioxfur	Tray01:7	1.0
12	P121229A_12 ✓ CAL CS4-7604-216 - BAL	8290/1613B	dioxfur	dioxfur	Tray01:8	1.0
13	P121229A_13 ✓ BLANK NONANE - BAL	HOUSE	dioxfur	dioxfur	Tray01:3	1.0
14	P121229A_14 ✓ SAMP STD-33641 - BAL 2NDSRC	8290/1613B	dioxfur	dioxfur	Tray01:9	1.0
15	P121229A_15 ✓ SAMP STD-33643 - BAL 2NDSRC	23	dioxfur	dioxfur	Tray01:21	1.0
16	P121229A_16 ✓ CAL CS3/CPM-7604-248 - BAL	8290/1613B	dioxfur	dioxfur	Tray01:2	1.0

Sample List Report

MassLynx 4.0 SCN480 SCN533

10MSH205

4/8/13

Sample List: C:\MassLynx\Default.pro\Sampledb\F130408A.SPL
Last Modified: Monday, April 08, 2013 2:32:34 PM Central Daylight Time
Printed: Monday, April 08, 2013 2:33:00 PM Central Daylight Time

Page 1 of 1

Page Position (1, 1)

File Name	File Text	Method	MS File	Inlet File	Vial	Inject
1	F130408A_01 ✓ CAL CS3/CPM-7604-254 - SMT Ca	8290/1613B	dioxfur	dioxfur	1	1.000000
2	F130408A_02 ✓ CAL CS3/CPM-7604-254 - SMT FE 2"	8290/1613B	dioxfur	dioxfur	1	1.000000
3	F130408A_03 ✓ CAL CS3-7604-246 - SMT	23	dioxfur	dioxfur	4	1.000000
4	F130408A_04 ✓ CAL CS2-7604-219 - SMT	23	dioxfur	dioxfur	5	1.000000
5	F130408A_05 ✓ CAL CS1-7604-218 - SMT	23	dioxfur	dioxfur	6	1.000000
6	F130408A_06 ✓ CAL CS5-7604-222 - SMT	23	dioxfur	dioxfur	7	1.000000
7	F130408A_07 ✓ CAL CS4-7604-221 - SMT	23	dioxfur	dioxfur	8	1.000000
8	F130408A_08 ✓ BLANK NONANE - SMT	HOUSE	dioxfur	dioxfur	3	1.000000
9	F130408A_09 ✓ CAL STD-33643 - SMT 2ND	23	dioxfur	dioxfur	9	1.000000
10	F130408A_10 ✓ LCS LCS-36058 - SMT	1613B	dioxfur	dioxfur	10	1.000000
11	F130408A_11 ✓ LCS LCSD-36059 - SMT	1613B	dioxfur	dioxfur	11	1.000000
12	F130408A_12 ✓ BLANK BLANK-8151-142-10X - SMT	HOUSE	dioxfur	dioxfur	3	1.000000
13	F130408A_13 ✓ BLANK BLANK-36057 - SMT	1613B	dioxfur	dioxfur	12	1.000000
14	F130408A_14 ✓ SAMP 10224336001 - SMT	1613B	dioxfur	dioxfur	13	1.000000
15	F130408A_15 ✓ SAMP 10224517001 - SMT	1613B	dioxfur	dioxfur	14	1.000000
16	F130408A_16 ✓ BLANK BLANK-36046 - SMT	HOUSE	dioxfur	dioxfur	15	1.000000
17	F130408A_17 ✓ BLANK BLANK-36047 - SMT	HOUSE	dioxfur	dioxfur	16	1.000000

Sample List Report

MassLynx 4.0 SCN480 SCN533

10MSHR205

7/3/13

Sample List: C:\MassLynx\Default.pro\Sampledb\F130703A.SPL

Page 1 of 1

Last Modified: Wednesday, July 03, 2013 4:33:56 PM Central Daylight Time

Printed: Wednesday, July 03, 2013 4:33:59 PM Central Daylight Time

Page Position (1, 1)

File Name	File Text	Method	MS File	Inlet File	Vial	Inject
1	F130703A_01 ✓ CAL CS3-7604-246 - SMT 1M AS TC	23	dioxfur	dioxfur	31	1.000000
2	F130703A_02 ✓ CAL CS3/CPM-7604-272 - SMT	8290/1613B	dioxfur	dioxfur	1	1.000000
3	F130703A_03 ✓ LCS LCS-36931 - SMT	8290/1613B	dioxfur	dioxfur	32	1.000000
4	F130703A_04 ✓ LCS LCS-36850 - SMT	23	dioxfur	dioxfur	33	1.000000
5	F130703A_05 ✓ LCS LCSD-36851 - SMT	23	dioxfur	dioxfur	34	1.000000
6	F130703A_06 ✓ LCS LCSD-36932 - SMT	8290/1613B	dioxfur	dioxfur	35	1.000000
7	F130703A_07 ✓ BLANK BLANK-36898 - SMT XAD check	HOUSE	dioxfur	dioxfur	36	1.000000
8	F130703A_08 ✓ SAMP 4080301001 - SMT	1613B-TD/F	dioxfur	dioxfur	37	1.000000
9	F130703A_09 ✓ BLANK BLANK-36849 - SMT	23	dioxfur	dioxfur	38	1.000000
10	F130703A_10 ✓ BLANK BLANK-36930 - SMT	8290/1613B	dioxfur	dioxfur	39	1.000000
11	F130703A_11 ✓ BLANK BLANK-36937 - SMT	8290/1613B	dioxfur	dioxfur	40	1.000000
12	F130703A_12 ✓ SAMP 10233912002 - SMT	8290	dioxfur	dioxfur	41	1.000000
13	F130703A_13 ✓ SAMP 10233734001 - SMT	1613B	dioxfur	dioxfur	42	1.000000
14	F130703A_14 ✓ SAMP 10233734002 - SMT	1613B	dioxfur	dioxfur	43	1.000000
15	F130703A_15 ✓ SAMP 10233912001 - SMT	8290	dioxfur	dioxfur	44	1.000000
16	F130703A_16 ✓ LCS LCS-36938 - SMT	8290/1613B	dioxfur	dioxfur	45	1.000000
17	F130703A_17 ✓ LCS LCSD-36939 - SMT	8290/1613B	dioxfur	dioxfur	46	1.000000
18	F130703A_18 ✓ CAL CS3-7604-246 - SMT	23	dioxfur	dioxfur	31	1.000000
19	F130703A_19 ✓ CAL CS3/CPM-7604-272 - SMT	8290/1613B	dioxfur	dioxfur	1	1.000000

H&F high
end only

Sample List Report

MassLynx 4.1

10MSHRO9

7/6/13

Sample List: C:\MassLynx\Default.pro\Sampled\b\P130706B.SPL
Last Modified: Saturday, July 06, 2013 16:12:34 Central Daylight Time
Printed: Saturday, July 06, 2013 16:13:21 Central Daylight Time

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Page Position (1, 1)

File Name	File Text	Method	MS File	Inlet File	Bottle	Vol
1	P130706B_01 ✓ CAL CS3/CPM-7604-274 - BAL TC	8290/1613B	dioxfur	dioxfur	Tray01:2	1.0 - pass all
2	P130706B_02 ✓ BLANK NONANE - BAL	HOUSE	dioxfur	dioxfur	Tray01:3	1.0
3	P130706B_03 ✓ CAL CS3-7604-246 - BAL	23	dioxfur	dioxfur	Tray01:4	1.0
4	P130706B_04 ✓ BLANK NONANE - BAL	HOUSE	dioxfur	dioxfur	Tray01:3	1.0
5	P130706B_05 ✓ SAMP 10232724007 - BAL AAC	23	dioxfur	dioxfur	Tray01:5	1.0
6	P130706B_06 ✓ SAMP 10232724006 - BAL AAC	23	dioxfur	dioxfur	Tray01:6	1.0
7	P130706B_07 ✓ SAMP 10232724005 - BAL AAC	23	dioxfur	dioxfur	Tray01:7	1.0
8	P130706B_08 ✓ SAMP 10232724004 - BAL AAC	23	dioxfur	dioxfur	Tray01:8	1.0
9	P130706B_09 ✓ SAMP 10232724003 - BAL AAC	23	dioxfur	dioxfur	Tray01:9	1.0
10	P130706B_10 ✓ SAMP 10232724002 - BAL AAC	23	dioxfur	dioxfur	Tray01:10	1.0
11	P130706B_11 ✓ SAMP 10232724001 - BAL AAC	23	dioxfur	dioxfur	Tray01:11	1.0
12	P130706B_12 ✓ SAMP 10233484001 - BAL [REDACTED]	8290	dioxfur	dioxfur	Tray01:12	1.0
13	P130706B_13 ✓ SAMP 10233484002 - BAL [REDACTED]	8290	dioxfur	dioxfur	Tray01:13	1.0
14	P130706B_14 ✓ SAMP 10233484003 - BAL [REDACTED]	8290	dioxfur	dioxfur	Tray01:14	1.0
15	P130706B_15 ✓ SAMP 10233484004 - BAL [REDACTED]	8290	dioxfur	dioxfur	Tray01:16	1.0
16	P130706B_16 ✓ SAMP 10233484005 - BAL [REDACTED]	8290	dioxfur	dioxfur	Tray01:17	1.0
17	P130706B_17 ✓ SAMP 10233484006 - BAL [REDACTED]	8290	dioxfur	dioxfur	Tray01:18	1.0
18	P130706B_18 ✓ BLANK NONANE - BAL hist high	HOUSE	dioxfur	dioxfur	Tray01:3	1.0
19	P130706B_19 ✓ CAL CS3/CPM-7604-274 - BAL	8290/1613B	dioxfur	dioxfur	Tray01:2	1.0

Date (start)	Sample ID	Vol (m3)
6/17/2013	U1-B	312.32
6/17/2013	U1-A	319.08
6/17/2013	D-1B	215.08
6/17/2013	D-1A	221.49
6/17/2013	BZ-1A	262.44
6/17/2013	BZ-1B	261.83
6/17/2013	F1-A	12.78
6/17/2013	F1-B	13.90
6/17/2013	F2-A	19.18
6/17/2013	F2-B	11.00
6/18/2013	F3-A	0.00
6/18/2013	F3-B	0.00

Appendix B

Sample Analysis Summary



Method TO9 Sample Analysis Results

Client - Atmospheric Analysis & Consulting

Client's Sample ID	U1-A PUF	Matrix	PUF
Lab Sample ID	10232724001	Dilution	NA
Filename	P130706B_11	Collected	06/18/2013 08:27
Injected By	BAL	Received	06/19/2013 08:45
Amount Extracted	160 m3	Extracted	06/24/2013 21:30
ICAL ID	P121229M23	Analyzed	07/06/2013 21:02
CCal Filename(s)	P130706B_03		
Method Blank ID	BLANK-36849		

Native Isomers	Conc pg/m3	EMPC pg/m3	LRL pg/m3	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.0092	2,3,7,8-TCDF-13C	1.00	37 R
Total TCDF	0.057	----	0.0092	2,3,7,8-TCDD-13C	1.00	37 R
				1,2,3,7,8-PeCDF-13C	1.00	38 R
2,3,7,8-TCDD	ND	----	0.0110	1,2,3,7,8-PeCDD-13C	1.00	37 R
Total TCDD	0.042	----	0.0110	1,2,3,6,7,8-HxCDF-13C	1.00	45 R
				1,2,3,6,7,8-HxCDD-13C	1.00	38 R
1,2,3,7,8-PeCDF	ND	----	0.0089	1,2,3,4,6,7,8-HpCDF-13C	1.00	39 R
2,3,4,7,8-PeCDF	ND	----	0.0086	1,2,3,4,6,7,8-HpCDD-13C	1.00	38 R
Total PeCDF	0.110	----	0.0088	OCDD-13C	2.00	30 R
1,2,3,7,8-PeCDD	ND	----	0.0100	Recovery Standards		
Total PeCDD	0.011	----	0.0100	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	----	0.0066	Surrogates		
1,2,3,6,7,8-HxCDF	ND	----	0.0066	2,3,7,8-TCDD-37Cl4	1.00	98
2,3,4,6,7,8-HxCDF	ND	----	0.0088	2,3,4,7,8-PeCDF-13C	1.00	85
1,2,3,7,8,9-HxCDF	ND	----	0.0096	1,2,3,4,7,8-HxCDF-13C	1.00	66
Total HxCDF	0.046	----	0.0079	1,2,3,4,7,8-HxCDD-13C	1.00	94
				1,2,3,4,7,8,9-HpCDF-13C	1.00	55
1,2,3,4,7,8-HxCDD	ND	----	0.0120			
1,2,3,6,7,8-HxCDD	ND	----	0.0120	Total 2,3,7,8-TCDD		
1,2,3,7,8,9-HxCDD	ND	----	0.0110	Equivalence: 0.00051 pg/m3		
Total HxCDD	0.051	----	0.0120	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDF	0.019	----	0.0100			
1,2,3,4,7,8,9-HpCDF	ND	----	0.0100			
Total HpCDF	0.019	----	0.0100			
1,2,3,4,6,7,8-HpCDD	0.022	----	0.0140			
Total HpCDD	0.052	----	0.0140			
OCDF	ND	----	0.0240			
OCDD	0.110	----	0.0230			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
 EMPC = Estimated Maximum Possible Concentration
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 J = Estimated value
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REPORT OF LABORATORY ANALYSIS

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Method TO9 Sample Analysis Results

Client - Atmospheric Analysis & Consulting

Client's Sample ID	D1-A PUF	Matrix	PUF
Lab Sample ID	10232724002	Dilution	NA
Filename	P130706B_10	Collected	06/18/2013 12:00
Injected By	BAL	Received	06/19/2013 08:45
Amount Extracted	111 m3	Extracted	06/24/2013 21:30
ICAL ID	P121229M23	Analyzed	07/06/2013 20:18
CCal Filename(s)	P130706B_03		
Method Blank ID	BLANK-36849		

Native Isomers	Conc pg/m3	EMPC pg/m3	LRL pg/m3	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.0120	2,3,7,8-TCDF-13C	1.00	81
Total TCDF	0.250	----	0.0120 B	2,3,7,8-TCDD-13C	1.00	72
				1,2,3,7,8-PeCDF-13C	1.00	79
2,3,7,8-TCDD	ND	----	0.0150	1,2,3,7,8-PeCDD-13C	1.00	83
Total TCDD	0.027	----	0.0150 J	1,2,3,6,7,8-HxCDF-13C	1.00	92
				1,2,3,6,7,8-HxCDD-13C	1.00	71
1,2,3,7,8-PeCDF	ND	----	0.0130	1,2,3,4,6,7,8-HpCDF-13C	1.00	69
2,3,4,7,8-PeCDF	ND	----	0.0130	1,2,3,4,6,7,8-HpCDD-13C	1.00	67
Total PeCDF	0.036	----	0.0130 J	OCDD-13C	2.00	51
1,2,3,7,8-PeCDD	ND	----	0.0100	Recovery Standards		
Total PeCDD	ND	----	0.0100	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	----	0.0075	Surrogates		
1,2,3,6,7,8-HxCDF	ND	----	0.0077	2,3,7,8-TCDD-37Cl4	1.00	97
2,3,4,6,7,8-HxCDF	ND	----	0.0087	2,3,4,7,8-PeCDF-13C	1.00	93
1,2,3,7,8,9-HxCDF	ND	----	0.0090	1,2,3,4,7,8-HxCDF-13C	1.00	59
Total HxCDF	0.086	----	0.0082 J	1,2,3,4,7,8-HxCDD-13C	1.00	95
				1,2,3,4,7,8,9-HpCDF-13C	1.00	33 R
1,2,3,4,7,8-HxCDD	ND	----	0.0120	Total 2,3,7,8-TCDD		
1,2,3,6,7,8-HxCDD	ND	----	0.0100	Equivalence: 0.00088 pg/m3		
1,2,3,7,8,9-HxCDD	ND	----	0.0150	(Using ITE Factors)		
Total HxCDD	0.064	----	0.0120 J			
1,2,3,4,6,7,8-HpCDF	0.026	----	0.0110 J			
1,2,3,4,7,8,9-HpCDF	ND	----	0.0150			
Total HpCDF	0.045	----	0.0130 J			
1,2,3,4,6,7,8-HpCDD	0.047	----	0.0190 J			
Total HpCDD	0.047	----	0.0190 J			
OCDF	ND	----	0.0230			
OCDD	----	0.15	0.0330 I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
LRL = Lower Reporting Limit
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Method TO9 Sample Analysis Results

Client - Atmospheric Analysis & Consulting

Client's Sample ID	BZ-1A PUF	Matrix	PUF
Lab Sample ID	10232724003	Dilution	NA
Filename	P130706B_09	Collected	06/18/2013 11:32
Injected By	BAL	Received	06/19/2013 08:45
Amount Extracted	131 m3	Extracted	06/24/2013 21:30
ICAL ID	P121229M23	Analyzed	07/06/2013 19:34
CCal Filename(s)	P130706B_03		
Method Blank ID	BLANK-36849		

Native Isomers	Conc pg/m3	EMPC pg/m3	LRL pg/m3	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.0130	2,3,7,8-TCDF-13C	1.00	79
Total TCDF	0.270	----	0.0130	2,3,7,8-TCDD-13C	1.00	72
				1,2,3,7,8-PeCDF-13C	1.00	70
2,3,7,8-TCDD	ND	----	0.0170	1,2,3,7,8-PeCDD-13C	1.00	65
Total TCDD	0.018	----	0.0170	1,2,3,6,7,8-HxCDF-13C	1.00	87
				1,2,3,6,7,8-HxCDD-13C	1.00	77
1,2,3,7,8-PeCDF	ND	----	0.0140	1,2,3,4,6,7,8-HpCDF-13C	1.00	77
2,3,4,7,8-PeCDF	ND	----	0.0150	1,2,3,4,6,7,8-HpCDD-13C	1.00	75
Total PeCDF	0.170	----	0.0150	OCDD-13C	2.00	66
1,2,3,7,8-PeCDD	ND	----	0.0180	Recovery Standards		
Total PeCDD	ND	----	0.0180	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	----	0.0110	Surrogates		
1,2,3,6,7,8-HxCDF	ND	----	0.0098	2,3,7,8-TCDD-37Cl4	1.00	98
2,3,4,6,7,8-HxCDF	ND	----	0.0100	2,3,4,7,8-PeCDF-13C	1.00	90
1,2,3,7,8,9-HxCDF	ND	----	0.0100	1,2,3,4,7,8-HxCDF-13C	1.00	73
Total HxCDF	0.043	----	0.0100	1,2,3,4,7,8-HxCDD-13C	1.00	88
				1,2,3,4,7,8,9-HpCDF-13C	1.00	75
1,2,3,4,7,8-HxCDD	ND	----	0.0150			
1,2,3,6,7,8-HxCDD	ND	----	0.0150			
1,2,3,7,8,9-HxCDD	ND	----	0.0150			
Total HxCDD	ND	----	0.0150			
1,2,3,4,6,7,8-HpCDF	0.018	----	0.0130	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.0150	Equivalence: 0.00053 pg/m3		
Total HpCDF	0.018	----	0.0140	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	0.024	----	0.0130			
Total HpCDD	0.056	----	0.0130			
OCDF	ND	----	0.0200			
OCDD	0.110	----	0.0370			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
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 A = Detection Limit based on signal to noise

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Method TO9 Sample Analysis Results

Client - Atmospheric Analysis & Consulting

Client's Sample ID	F1-A PUF,LIQ	Matrix	PUF
Lab Sample ID	10232724004	Dilution	NA
Filename	P130706B_08	Collected	06/17/2013 14:11
Injected By	BAL	Received	06/19/2013 08:45
Amount Extracted	6.39 m3	Extracted	06/24/2013 21:30
ICAL ID	P121229M23	Analyzed	07/06/2013 18:50
CCal Filename(s)	P130706B_03		
Method Blank ID	BLANK-36849		

Native Isomers	Conc pg/m3	EMPC pg/m3	LRL pg/m3	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.23	2,3,7,8-TCDF-13C	1.00	89
Total TCDF	ND	----	0.23	2,3,7,8-TCDD-13C	1.00	73
				1,2,3,7,8-PeCDF-13C	1.00	84
2,3,7,8-TCDD	ND	----	0.40	1,2,3,7,8-PeCDD-13C	1.00	76
Total TCDD	ND	----	0.40	1,2,3,6,7,8-HxCDF-13C	1.00	91
				1,2,3,6,7,8-HxCDD-13C	1.00	74
1,2,3,7,8-PeCDF	ND	----	0.21	1,2,3,4,6,7,8-HpCDF-13C	1.00	68
2,3,4,7,8-PeCDF	ND	----	0.18	1,2,3,4,6,7,8-HpCDD-13C	1.00	60
Total PeCDF	ND	----	0.19	OCDD-13C	2.00	54
1,2,3,7,8-PeCDD	ND	----	0.24	Recovery Standards		
Total PeCDD	ND	----	0.24	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	----	0.12	Surrogates		
1,2,3,6,7,8-HxCDF	ND	----	0.11	2,3,7,8-TCDD-37Cl4	1.00	103
2,3,4,6,7,8-HxCDF	ND	----	0.12	2,3,4,7,8-PeCDF-13C	1.00	88
1,2,3,7,8,9-HxCDF	ND	----	0.12	1,2,3,4,7,8-HxCDF-13C	1.00	69
Total HxCDF	ND	----	0.12	1,2,3,4,7,8-HxCDD-13C	1.00	91
1,2,3,4,7,8-HxCDD	ND	----	0.28	1,2,3,4,7,8,9-HpCDF-13C	1.00	72
1,2,3,6,7,8-HxCDD	ND	----	0.22			
1,2,3,7,8,9-HxCDD	ND	----	0.27			
Total HxCDD	0.32	----	0.26 J			
1,2,3,4,6,7,8-HpCDF	0.20	----	0.17 J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.18	Equivalence: 0.015 pg/m3		
Total HpCDF	0.20	----	0.18 J	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	0.71	----	0.28 J			
Total HpCDD	0.71	----	0.28 J			
OCDF	0.49	----	0.40 J			
OCDD	5.20	----	0.78 BJ			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
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Method TO9 Sample Analysis Results

Client - Atmospheric Analysis & Consulting

Client's Sample ID	F2-A PUF,LIQ	Matrix	PUF
Lab Sample ID	10232724005	Dilution	NA
Filename	P130706B_07	Collected	06/17/2013 16:58
Injected By	BAL	Received	06/19/2013 08:45
Amount Extracted	9.59 m3	Extracted	06/24/2013 21:30
ICAL ID	P121229M23	Analyzed	07/06/2013 18:06
CCal Filename(s)	P130706B_03		
Method Blank ID	BLANK-36849		

Native Isomers	Conc pg/m3	EMPC pg/m3	LRL pg/m3	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.120	2,3,7,8-TCDF-13C	1.00	84
Total TCDF	0.14	----	0.120	2,3,7,8-TCDD-13C	1.00	75
				1,2,3,7,8-PeCDF-13C	1.00	94
2,3,7,8-TCDD	ND	----	0.170	1,2,3,7,8-PeCDD-13C	1.00	92
Total TCDD	ND	----	0.170	1,2,3,6,7,8-HxCDF-13C	1.00	89
				1,2,3,6,7,8-HxCDD-13C	1.00	77
1,2,3,7,8-PeCDF	ND	----	0.110	1,2,3,4,6,7,8-HpCDF-13C	1.00	70
2,3,4,7,8-PeCDF	ND	----	0.110	1,2,3,4,6,7,8-HpCDD-13C	1.00	58
Total PeCDF	ND	----	0.110	OCDD-13C	2.00	51
1,2,3,7,8-PeCDD	ND	----	0.160	Recovery Standards		
Total PeCDD	ND	----	0.160	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	----	0.130	Surrogates		
1,2,3,6,7,8-HxCDF	ND	----	0.110	2,3,7,8-TCDD-37Cl4	1.00	96
2,3,4,6,7,8-HxCDF	ND	----	0.110	2,3,4,7,8-PeCDF-13C	1.00	91
1,2,3,7,8,9-HxCDF	ND	----	0.130	1,2,3,4,7,8-HxCDF-13C	1.00	70
Total HxCDF	ND	----	0.120	1,2,3,4,7,8-HxCDD-13C	1.00	89
1,2,3,4,7,8-HxCDD	ND	----	0.320	1,2,3,4,7,8,9-HpCDF-13C	1.00	73
1,2,3,6,7,8-HxCDD	ND	----	0.310			
1,2,3,7,8,9-HxCDD	ND	----	0.280			
Total HxCDD	ND	----	0.300			
1,2,3,4,6,7,8-HpCDF	ND	----	0.160	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.180	Equivalence: 0.0042 pg/m3		
Total HpCDF	ND	----	0.170	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	----	0.25	0.210 I			
Total HpCDD	0.40	----	0.210 J			
OCDF	ND	----	0.270			
OCDD	1.80	----	0.390 BJ			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
 EMPC = Estimated Maximum Possible Concentration
 LRL = Lower Reporting Limit
 J = Estimated value
 B = Less than 10 times higher than method blank level
 R = Recovery outside of target range
 Nn = Value obtained from additional analysis
 A = Detection Limit based on signal to noise

I = Interference
 P = PCDE Interference
 S = Saturated signal
 ND = Not Detected
 NA = Not Applicable
 NC = Not Calculated

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Method TO9 Sample Analysis Results

Client - Atmospheric Analysis & Consulting

Client's Sample ID	Blank		
Lab Sample ID	10232724007		
Filename	P130706B_05	Matrix	PUF
Injected By	BAL	Dilution	NA
Amount Extracted	6.39 m3	Collected	NA
ICAL ID	P121229M23	Received	06/19/2013 08:45
CCal Filename(s)	P130706B_03	Extracted	06/24/2013 21:30
Method Blank ID	BLANK-36849	Analyzed	07/06/2013 16:38

Native Isomers	Conc pg/m3	EMPC pg/m3	LRL pg/m3	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.21	2,3,7,8-TCDF-13C	1.00	78
Total TCDF	ND	----	0.21	2,3,7,8-TCDD-13C	1.00	73
				1,2,3,7,8-PeCDF-13C	1.00	69
2,3,7,8-TCDD	ND	----	0.26	1,2,3,7,8-PeCDD-13C	1.00	59
Total TCDD	ND	----	0.26	1,2,3,6,7,8-HxCDF-13C	1.00	83
				1,2,3,6,7,8-HxCDD-13C	1.00	74
1,2,3,7,8-PeCDF	ND	----	0.22	1,2,3,4,6,7,8-HpCDF-13C	1.00	76
2,3,4,7,8-PeCDF	ND	----	0.25	1,2,3,4,6,7,8-HpCDD-13C	1.00	77
Total PeCDF	ND	----	0.24	OCDD-13C	2.00	75
1,2,3,7,8-PeCDD	ND	----	0.33	Recovery Standards		
Total PeCDD	ND	----	0.33	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	----	0.19	Surrogates		
1,2,3,6,7,8-HxCDF	ND	----	0.18	2,3,7,8-TCDD-37Cl4	1.00	101
2,3,4,6,7,8-HxCDF	ND	----	0.20	2,3,4,7,8-PeCDF-13C	1.00	88
1,2,3,7,8,9-HxCDF	ND	----	0.21	1,2,3,4,7,8-HxCDF-13C	1.00	71
Total HxCDF	ND	----	0.19	1,2,3,4,7,8-HxCDD-13C	1.00	93
1,2,3,4,7,8-HxCDD	ND	----	0.33	1,2,3,4,7,8,9-HpCDF-13C	1.00	93
1,2,3,6,7,8-HxCDD	ND	----	0.33			
1,2,3,7,8,9-HxCDD	ND	----	0.30			
Total HxCDD	ND	----	0.32			
1,2,3,4,6,7,8-HpCDF	ND	----	0.31	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.27	Equivalence: 0.0070 pg/m3		
Total HpCDF	ND	----	0.29	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	0.49	----	0.27 J			
Total HpCDD	0.49	----	0.27 J			
OCDF	0.46	----	0.40 J			
OCDD	-----	1.7	0.54 I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
 EMPC = Estimated Maximum Possible Concentration
 LRL = Lower Reporting Limit
 J = Estimated value
 B = Less than 10 times higher than method blank level
 R = Recovery outside of target range
 Nn = Value obtained from additional analysis
 A = Detection Limit based on signal to noise

I = Interference
 P = PCDE Interference
 S = Saturated signal
 ND = Not Detected
 NA = Not Applicable
 NC = Not Calculated

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Appendix C

QC and Calibration Results Summary



Method TO9 Blank Analysis Results

Lab Sample ID	BLANK-36849	Matrix	XAD
Filename	F130703A_09	Dilution	NA
Amount Extracted	6.39 m3	Extracted	06/24/2013 21:30
ICAL ID	F130408	Analyzed	07/03/2013 14:49
CCal Filename(s)	F130703A_01	Injected By	SMT

Native Isomers	Conc pg/m3	EMPC pg/m3	LRL pg/m3	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.21	2,3,7,8-TCDF-13C	1.00	58
Total TCDF	0.28	----	0.21 J	2,3,7,8-TCDD-13C	1.00	70
				1,2,3,7,8-PeCDF-13C	1.00	65
2,3,7,8-TCDD	ND	----	0.40	1,2,3,7,8-PeCDD-13C	1.00	67
Total TCDD	ND	----	0.40	1,2,3,6,7,8-HxCDF-13C	1.00	61
				1,2,3,6,7,8-HxCDD-13C	1.00	64
1,2,3,7,8-PeCDF	ND	----	0.26	1,2,3,4,6,7,8-HpCDF-13C	1.00	65
2,3,4,7,8-PeCDF	ND	----	0.25	1,2,3,4,6,7,8-HpCDD-13C	1.00	73
Total PeCDF	ND	----	0.25	OCDD-13C	2.00	55
1,2,3,7,8-PeCDD	ND	----	0.33	Recovery		
Total PeCDD	ND	----	0.33	Standards		
				1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	----	0.16	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	----	0.13			
2,3,4,6,7,8-HxCDF	ND	----	0.16	Surrogates		
1,2,3,7,8,9-HxCDF	ND	----	0.19	2,3,7,8-TCDD-37Cl4	1.00	104
Total HxCDF	ND	----	0.16	2,3,4,7,8-PeCDF-13C	1.00	85
				1,2,3,4,7,8-HxCDF-13C	1.00	84
1,2,3,4,7,8-HxCDD	ND	----	0.35	1,2,3,4,7,8-HxCDD-13C	1.00	103
1,2,3,6,7,8-HxCDD	ND	----	0.33	1,2,3,4,7,8,9-HpCDF-13C	1.00	88
1,2,3,7,8,9-HxCDD	ND	----	0.32			
Total HxCDD	ND	----	0.33			
1,2,3,4,6,7,8-HpCDF	ND	----	0.23	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.23	Equivalence: 0.0082 pg/m3		
Total HpCDF	ND	----	0.23	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	----	0.47	0.31 I			
Total HpCDD	ND	----	0.31			
OCDF	ND	----	0.43			
OCDD	3.50	----	0.63 J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
LRL = Lower Reporting Limit
J = Estimated value
Nn = Value obtained from additional analysis
A = Detection Limit based on signal to noise
R = Recovery outside of target range

I = Interference
P = PCDE Interference
ND = Not Detected
NA = Not Applicable
NC = Not Calculated

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Method TO9 Laboratory Control Spike Results

Lab Sample ID	LCS-36850	Matrix	XAD
Filename	F130703A_04	Dilution	NA
Total Amount Extracted	0.500 Sample	Extracted	06/24/2013 21:30
ICAL ID	F130408	Analyzed	07/03/2013 11:00
CCal Filename(s)	F130703A_01	Injected By	SMT
Method Blank ID	BLANK-36849		

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.22	108	2,3,7,8-TCDF-13C	1.0	69
Total TCDF				2,3,7,8-TCDD-13C	1.0	82
				1,2,3,7,8-PeCDF-13C	1.0	75
2,3,7,8-TCDD	0.20	0.20	101	1,2,3,7,8-PeCDD-13C	1.0	82
Total TCDD				1,2,3,6,7,8-HxCDF-13C	1.0	76
				1,2,3,6,7,8-HxCDD-13C	1.0	78
1,2,3,7,8-PeCDF	1.0	1.1	110	1,2,3,4,6,7,8-HpCDF-13C	1.0	77
2,3,4,7,8-PeCDF	1.0	1.0	104	1,2,3,4,6,7,8-HpCDD-13C	1.0	87
Total PeCDF				OCDD-13C	2.0	66
1,2,3,7,8-PeCDD	1.0	0.99	99	Recovery Standards		
Total PeCDD				1,2,3,4-TCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDF	1.0	1.0	102	1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,6,7,8-HxCDF	1.0	1.1	107			
2,3,4,6,7,8-HxCDF	1.0	1.2	116	Surrogates		
1,2,3,7,8,9-HxCDF	1.0	1.1	108	2,3,7,8-TCDD-37Cl4	1.0	101
Total HxCDF				2,3,4,7,8-PeCDF-13C	1.0	85
1,2,3,4,7,8-HxCDD	1.0	1.1	111	1,2,3,4,7,8-HxCDF-13C	1.0	77
1,2,3,6,7,8-HxCDD	1.0	1.1	112	1,2,3,4,7,8-HxCDD-13C	1.0	99
1,2,3,7,8,9-HxCDD	1.0	1.1	108	1,2,3,4,7,8,9-HpCDF-13C	1.0	86
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.3	127			
1,2,3,4,7,8,9-HpCDF	1.0	0.99	99			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	1.1	106			
Total HpCDD						
OCDF	2.0	2.0	100			
OCDD	2.0	2.6	128			

Qs = Quantity Spiked
 Qm = Quantity Measured
 Rec. = Recovery (Expressed as Percent)
 R = Outside the method specified target recovery range
 NA = Not Applicable
 Nn = Value obtained from additional analysis

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Method TO9 Laboratory Control Spike Results

Lab Sample ID	LCSD-36851	Matrix	XAD
Filename	F130703A_05	Dilution	NA
Total Amount Extracted	0.500 Sample	Extracted	06/24/2013 21:30
ICAL ID	F130408	Analyzed	07/03/2013 11:46
CCal Filename(s)	F130703A_01	Injected By	SMT
Method Blank ID	BLANK-36849		

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.21	104	2,3,7,8-TCDF-13C	1.0	66
Total TCDF				2,3,7,8-TCDD-13C	1.0	77
				1,2,3,7,8-PeCDF-13C	1.0	73
2,3,7,8-TCDD	0.20	0.19	93	1,2,3,7,8-PeCDD-13C	1.0	78
Total TCDD				1,2,3,6,7,8-HxCDF-13C	1.0	68
				1,2,3,6,7,8-HxCDD-13C	1.0	74
1,2,3,7,8-PeCDF	1.0	1.0	102	1,2,3,4,6,7,8-HpCDF-13C	1.0	71
2,3,4,7,8-PeCDF	1.0	0.99	99	1,2,3,4,6,7,8-HpCDD-13C	1.0	79
Total PeCDF				OCDD-13C	2.0	62
1,2,3,7,8-PeCDD	1.0	0.91	91	Recovery Standards		
Total PeCDD				1,2,3,4-TCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDF	1.0	1.0	104	1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,6,7,8-HxCDF	1.0	1.0	102			
2,3,4,6,7,8-HxCDF	1.0	1.1	112	Surrogates		
1,2,3,7,8,9-HxCDF	1.0	1.1	108	2,3,7,8-TCDD-37Cl4	1.0	104
Total HxCDF				2,3,4,7,8-PeCDF-13C	1.0	85
1,2,3,4,7,8-HxCDD	1.0	1.0	101	1,2,3,4,7,8-HxCDF-13C	1.0	84
1,2,3,6,7,8-HxCDD	1.0	1.0	103	1,2,3,4,7,8-HxCDD-13C	1.0	98
1,2,3,7,8,9-HxCDD	1.0	0.99	99	1,2,3,4,7,8,9-HpCDF-13C	1.0	91
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.1	114			
1,2,3,4,7,8,9-HpCDF	1.0	0.95	95			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	0.99	99			
Total HpCDD						
OCDF	2.0	1.9	95			
OCDD	2.0	2.3	113			

Qs = Quantity Spiked
 Qm = Quantity Measured
 Rec. = Recovery (Expressed as Percent)
 R = Outside the method specified target recovery range
 NA = Not Applicable
 Nn = Value obtained from additional analysis

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Method T09

Spike Recovery Relative Percent Difference (RPD) Results

Client Atmospheric Analysis & Consulting

Spike 1 ID LCS-36850 Spike 2 ID LCSD-36851
Spike 1 Filename F130703A_04 Spike 2 Filename F130703A_05

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	108	104	3.8
2,3,7,8-TCDD	101	93	8.2
1,2,3,7,8-PeCDF	110	102	7.5
2,3,4,7,8-PeCDF	104	99	4.9
1,2,3,7,8-PeCDD	99	91	8.4
1,2,3,4,7,8-HxCDF	102	104	1.9
1,2,3,6,7,8-HxCDF	107	102	4.8
2,3,4,6,7,8-HxCDF	116	112	3.5
1,2,3,7,8,9-HxCDF	108	108	0.0
1,2,3,4,7,8-HxCDD	111	101	9.4
1,2,3,6,7,8-HxCDD	112	103	8.4
1,2,3,7,8,9-HxCDD	108	99	8.7
1,2,3,4,6,7,8-HpCDF	127	114	10.8
1,2,3,4,7,8,9-HpCDF	99	95	4.1
1,2,3,4,6,7,8-HpCDD	106	99	6.8
OCDF	100	95	5.1
OCDD	128	113	12.4

%REC = Percent Recovered

RPD = The difference between the two values divided by the mean value

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Method 23 Initial Calibration (ICAL) - Response Factor Summary

Ical ID.....F130408	Data Files:	Time	Analyst
Calibration Date.....04/08/2013	CS-1 F130408A_05	15:19	SMT
Instrument.....10MSHR05 (F)	CS-2 F130408A_04	14:31	SMT
Column Phase.....DB-5MS	CS-3 F130408A_03	13:45	SMT
Column ID No.....USC508227H	CS-4 F130408A_07	16:53	SMT
	CS-5 F130408A_06	16:06	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Ave RF	%RSD
Native Analytes							
2,3,7,8-TCDF	0.9228	0.9261	0.9499	0.9692	0.9530	0.9442	2.06
2,3,7,8-TCDD	0.9312	0.9493	0.9860	1.0266	1.0261	0.9838	4.42
1,2,3,7,8-PeCDF	0.9105	0.9536	0.9634	0.9506	0.9336	0.9424	2.20
2,3,4,7,8-PeCDF	0.8786	0.9061	0.9069	1.0002	1.0146	0.9413	6.55
1,2,3,7,8-PeCDD	0.8911	0.9449	0.9697	0.9723	0.9538	0.9464	3.48
1,2,3,4,7,8-HxCDF	0.9890	0.9716	0.9391	0.9875	0.8914	0.9557	4.31
1,2,3,6,7,8-HxCDF	1.1881	1.2187	1.2484	1.0912	0.9770	1.1447	9.68
2,3,4,6,7,8-HxCDF	0.9379	1.0008	0.9452	0.9265	0.8339	0.9289	6.49
1,2,3,7,8,9-HxCDF	0.8732	0.8763	0.8566	0.8900	0.7977	0.8588	4.21
1,2,3,4,7,8-HxCDD	0.8922	0.8861	0.9300	0.9244	0.8730	0.9011	2.76
1,2,3,6,7,8-HxCDD	1.0450	1.0603	1.1009	0.9731	0.8938	1.0146	8.06
1,2,3,7,8,9-HxCDD	1.0676	1.0389	1.1246	0.9973	0.9044	1.0265	8.04
1,2,3,4,6,7,8-HpCDF	1.4744	1.4622	1.4947	1.5571	1.5343	1.5045	2.67
1,2,3,4,7,8,9-HpCDF	1.0744	1.1870	1.2098	1.4040	1.4118	1.2574	11.67
1,2,3,4,6,7,8-HpCDD	1.1154	1.1105	1.1375	1.1135	1.1078	1.1169	1.06
OCDF	1.1051	1.1609	1.2432	1.3156	1.3214	1.2292	7.74
OCDD	0.9352	0.9944	1.0000	1.0524	1.0275	1.0019	4.39
Total PeCDF	0.8945	0.9299	0.9351	0.9754	0.9741	0.9418	3.60
Total HxCDF	0.9970	1.0168	0.9973	0.9738	0.8750	0.9720	5.80
Total HxCDD	1.0016	0.9951	1.0518	0.9649	0.8904	0.9808	6.06
Total HpCDF	1.2744	1.3246	1.3522	1.4806	1.4731	1.3810	6.65
Surrogate Standards							
2,3,7,8-TCDD-37Cl4	0.8706	0.9718	1.0188	1.0365	1.0396	0.9874	7.16
2,3,4,7,8-PeCDF-13C	0.9605	0.9520	0.9015	0.9672	0.9607	0.9484	2.82
1,2,3,4,7,8-HxCDF-13C	0.9692	0.9538	0.8328	0.8312	0.7541	0.8682	10.49
1,2,3,4,7,8-HxCDD-13C	0.8669	0.8944	0.8726	0.8407	0.8015	0.8552	4.16
1,2,3,4,7,8,9-HpCDF-13C	0.7678	0.8288	0.8456	0.9831	0.9754	0.8801	10.80
Internal Standards							
2,3,7,8-TCDF-13C	1.4631	1.4287	1.4103	1.4588	1.4665	1.4455	1.71
2,3,7,8-TCDD-13C	0.9940	0.9861	1.0132	1.0283	1.0185	1.0080	1.73
1,2,3,7,8-PeCDF-13C	1.1705	1.1158	1.2389	1.2647	1.3015	1.2183	6.13
1,2,3,7,8-PeCDD-13C	0.7769	0.7722	0.8205	0.8549	0.8746	0.8198	5.57
1,2,3,6,7,8-HxCDF-13C	1.2791	1.2577	1.3413	1.4809	1.6235	1.3965	11.02
1,2,3,6,7,8-HxCDD-13C	0.8892	0.9200	0.9199	1.0575	1.1186	0.9810	10.28
1,2,3,4,6,7,8-HpCDF-13C	0.9313	0.9341	0.9582	0.9200	0.9153	0.9318	1.79
1,2,3,4,6,7,8-HpCDD-13C	0.7472	0.7571	0.7748	0.7622	0.7580	0.7599	1.32
OCDD-13C	0.8431	0.8354	0.8496	0.8577	0.8573	0.8486	1.12

Method 23 Initial Calibration (ICAL) - Isotope Ratio Summary

Ical IDF130408	Data Files:	Time	Analyst
Calibration Date.....04/08/2013	CS-1 F130408A_05	15:19	SMT
Instrument.....10MSHR05 (F)	CS-2 F130408A_04	14:31	SMT
Column Phase.....DB-5MS	CS-3 F130408A_03	13:45	SMT
Column ID No.....USC508227H	CS-4 F130408A_07	16:53	SMT
	CS-5 F130408A_06	16:06	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Limits
Native Analytes						
2,3,7,8-TCDF	0.75	0.73	0.76	0.77	0.76	0.65 - 0.89
2,3,7,8-TCDD	0.79	0.87	0.78	0.78	0.77	0.65 - 0.89
1,2,3,7,8-PeCDF	1.55	1.53	1.57	1.56	1.51	1.32 - 1.78
2,3,4,7,8-PeCDF	1.57	1.51	1.54	1.52	1.55	1.32 - 1.78
1,2,3,7,8-PeCDD	0.66	0.60	0.62	0.62	0.62	0.52 - 0.70
1,2,3,4,7,8-HxCDF	1.36	1.21	1.24	1.26	1.25	1.05 - 1.43
1,2,3,6,7,8-HxCDF	1.22	1.28	1.25	1.24	1.27	1.05 - 1.43
2,3,4,6,7,8-HxCDF	1.25	1.25	1.28	1.25	1.27	1.05 - 1.43
1,2,3,7,8,9-HxCDF	1.18	1.22	1.28	1.29	1.24	1.05 - 1.43
1,2,3,4,7,8-HxCDD	1.25	1.17	1.28	1.25	1.24	1.05 - 1.43
1,2,3,6,7,8-HxCDD	1.28	1.34	1.26	1.25	1.25	1.05 - 1.43
1,2,3,7,8,9-HxCDD	1.17	1.37	1.24	1.25	1.24	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF	1.06	1.13	1.02	1.05	1.02	0.88 - 1.20
1,2,3,4,7,8,9-HpCDF	1.09	1.01	1.07	1.03	1.01	0.88 - 1.20
1,2,3,4,6,7,8-HpCDD	1.13	1.08	1.04	1.08	1.07	0.88 - 1.20
OCDF	0.86	0.88	0.92	0.90	0.92	0.76 - 1.02
OCDD	0.89	0.83	0.92	0.90	0.87	0.76 - 1.02
Surrogate Standards						
2,3,4,7,8-PeCDF-13C	1.51	1.59	1.58	1.58	1.59	1.32 - 1.78
1,2,3,4,7,8-HxCDF-13C	0.50	0.48	0.51	0.53	0.52	0.43 - 0.59
1,2,3,4,7,8-HxCDD-13C	1.18	1.29	1.35	1.30	1.24	1.05 - 1.43
1,2,3,4,7,8,9-HpCDF-13C	0.42	0.47	0.47	0.46	0.45	0.37 - 0.51
Internal Standards						
2,3,7,8-TCDF-13C	0.80	0.78	0.78	0.79	0.78	0.65 - 0.89
2,3,7,8-TCDD-13C	0.81	0.81	0.80	0.82	0.80	0.65 - 0.89
1,2,3,7,8-PeCDF-13C	1.58	1.56	1.55	1.56	1.55	1.32 - 1.78
1,2,3,7,8-PeCDD-13C	1.58	1.57	1.56	1.50	1.58	1.32 - 1.78
1,2,3,6,7,8-HxCDF-13C	0.52	0.53	0.53	0.52	0.53	0.43 - 0.59
1,2,3,6,7,8-HxCDD-13C	1.27	1.25	1.24	1.17	1.27	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF-13C	0.46	0.44	0.45	0.45	0.45	0.37 - 0.51
1,2,3,4,6,7,8-HpCDD-13C	1.06	1.11	1.06	1.05	1.07	0.88 - 1.20
OCDD-13C	0.89	0.93	0.90	0.94	0.91	0.76 - 1.02
Recovery Standards						
1,2,3,4-TCDD-13C	0.80	0.83	0.82	0.79	0.81	0.65 - 0.89
1,2,3,7,8,9-HxCDD-13C	1.26	1.29	1.27	1.25	1.25	1.05 - 1.43

Method 23 Initial Calibration (ICAL) - Response Factor Summary

Ical ID.....P121229M23	Data Files:	Time	Analyst
Calibration Date.....12/29/2012	CS-1 P121229A_06	19:55	BAL
Instrument.....10MSHR09 (P)	CS-2 P121229A_05	19:11	BAL
Column Phase.....DB-5MS	CS-3 P121229A_07	20:40	BAL
Column ID No.....USC473217H	CS-4 P121229A_09	22:09	BAL
	CS-5 P121229A_10	22:54	BAL

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Ave RF	%RSD
Native Analytes							
2,3,7,8-TCDF	1.0570	1.0305	1.0788	1.0605	1.0592	1.0572	1.63
2,3,7,8-TCDD	1.0391	1.1303	1.0655	1.0810	1.0828	1.0797	3.08
1,2,3,7,8-PeCDF	1.0452	1.0070	1.0465	1.0165	0.9995	1.0229	2.13
2,3,4,7,8-PeCDF	1.0323	1.0089	1.0395	1.0531	1.0520	1.0372	1.74
1,2,3,7,8-PeCDD	1.0316	1.0336	1.0495	1.0437	1.0368	1.0390	0.72
1,2,3,4,7,8-HxCDF	1.1236	1.1529	1.1872	1.1038	1.0346	1.1204	5.12
1,2,3,6,7,8-HxCDF	1.2646	1.2286	1.2838	1.1599	1.0977	1.2069	6.40
2,3,4,6,7,8-HxCDF	1.0868	1.1091	1.1164	1.0355	0.9617	1.0619	6.06
1,2,3,7,8,9-HxCDF	1.0175	1.0384	1.0440	1.0054	0.9431	1.0097	4.00
1,2,3,4,7,8-HxCDD	1.0983	1.0450	1.0782	1.0786	1.0303	1.0661	2.60
1,2,3,6,7,8-HxCDD	1.1064	1.0763	1.0964	1.0727	0.9951	1.0694	4.10
1,2,3,7,8,9-HxCDD	1.1470	1.1271	1.1691	1.1146	1.0378	1.1191	4.46
1,2,3,4,6,7,8-HpCDF	1.5330	1.4809	1.4735	1.5018	1.5143	1.5007	1.62
1,2,3,4,7,8,9-HpCDF	1.1996	1.1717	1.2253	1.3287	1.3706	1.2592	6.83
1,2,3,4,6,7,8-HpCDD	1.0800	1.0250	1.0517	1.0567	1.0568	1.0540	1.86
OCDF	1.2563	1.2318	1.2949	1.3320	1.3376	1.2905	3.59
OCDD	0.9922	0.9735	1.0342	1.0124	1.0330	1.0090	2.60
Total PeCDF	1.0387	1.0079	1.0430	1.0348	1.0258	1.0300	1.35
Total HxCDF	1.1231	1.1322	1.1578	1.0762	1.0093	1.0997	5.32
Total HxCDD	1.1172	1.0828	1.1145	1.0886	1.0211	1.0849	3.57
Total HpCDF	1.3663	1.3263	1.3494	1.4153	1.4424	1.3799	3.47
Surrogate Standards							
2,3,7,8-TCDD-37Cl4	1.0313	0.9924	1.0042	1.0292	1.0586	1.0232	2.52
2,3,4,7,8-PeCDF-13C	0.9777	0.9694	0.9254	0.9248	0.9275	0.9450	2.78
1,2,3,4,7,8-HxCDF-13C	1.1567	1.0774	0.9723	0.8827	0.8268	0.9832	13.80
1,2,3,4,7,8-HxCDD-13C	1.0844	0.9591	0.9482	0.9269	0.8509	0.9539	8.84
1,2,3,4,7,8,9-HpCDF-13C	0.9304	0.8392	0.8745	0.9120	0.9375	0.8987	4.59
Internal Standards							
2,3,7,8-TCDF-13C	1.4903	1.4727	1.4643	1.4690	1.5088	1.4810	1.24
2,3,7,8-TCDD-13C	1.0333	1.0307	1.0336	1.0510	1.0550	1.0407	1.09
1,2,3,7,8-PeCDF-13C	1.2648	1.2393	1.2515	1.3125	1.3769	1.2890	4.38
1,2,3,7,8-PeCDD-13C	0.8355	0.8386	0.8283	0.8693	0.8992	0.8542	3.47
1,2,3,6,7,8-HxCDF-13C	1.3151	1.2714	1.2782	1.3838	1.4903	1.3478	6.77
1,2,3,6,7,8-HxCDD-13C	0.9323	0.9373	0.9353	0.9683	1.0449	0.9636	4.95
1,2,3,4,6,7,8-HpCDF-13C	0.8635	0.8309	0.8388	0.8161	0.8140	0.8327	2.41
1,2,3,4,6,7,8-HpCDD-13C	0.7744	0.7779	0.7579	0.7784	0.7730	0.7723	1.08
OCDD-13C	0.6970	0.6898	0.6770	0.6870	0.7039	0.6909	1.48

Method 23 Initial Calibration (ICAL) - Isotope Ratio Summary

Ical ID.....P121229M23
 Calibration Date.....12/29/2012
 Instrument.....10MSHR09 (P)
 Column Phase.....DB-5MS
 Column ID No.....USC473217H

Data Files:		Time	Analyst
CS-1	P121229A_06	19:55	BAL
CS-2	P121229A_05	19:11	BAL
CS-3	P121229A_07	20:40	BAL
CS-4	P121229A_09	22:09	BAL
CS-5	P121229A_10	22:54	BAL

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Limits
Native Analytes						
2,3,7,8-TCDF	0.83	0.76	0.81	0.77	0.79	0.65 - 0.89
2,3,7,8-TCDD	0.88	0.86	0.78	0.79	0.80	0.65 - 0.89
1,2,3,7,8-PeCDF	1.52	1.57	1.60	1.57	1.61	1.32 - 1.78
2,3,4,7,8-PeCDF	1.57	1.60	1.60	1.55	1.61	1.32 - 1.78
1,2,3,7,8-PeCDD	0.67	0.68	0.63	0.64	0.63	0.52 - 0.70
1,2,3,4,7,8-HxCDF	1.30	1.27	1.30	1.26	1.27	1.05 - 1.43
1,2,3,6,7,8-HxCDF	1.30	1.30	1.26	1.27	1.26	1.05 - 1.43
2,3,4,6,7,8-HxCDF	1.24	1.27	1.26	1.26	1.23	1.05 - 1.43
1,2,3,7,8,9-HxCDF	1.28	1.34	1.29	1.27	1.26	1.05 - 1.43
1,2,3,4,7,8-HxCDD	1.27	1.20	1.27	1.26	1.26	1.05 - 1.43
1,2,3,6,7,8-HxCDD	1.29	1.19	1.29	1.26	1.26	1.05 - 1.43
1,2,3,7,8,9-HxCDD	1.28	1.30	1.31	1.28	1.27	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF	0.99	1.07	1.05	1.04	1.06	0.88 - 1.20
1,2,3,4,7,8,9-HpCDF	1.03	0.96	1.06	1.06	1.04	0.88 - 1.20
1,2,3,4,6,7,8-HpCDD	1.06	1.17	1.10	1.08	1.03	0.88 - 1.20
OCDF	0.90	0.92	0.91	0.92	0.90	0.76 - 1.02
OCDD	0.85	0.83	0.90	0.89	0.91	0.76 - 1.02
Surrogate Standards						
2,3,4,7,8-PeCDF-13C	1.47	1.54	1.55	1.62	1.60	1.32 - 1.78
1,2,3,4,7,8-HxCDF-13C	0.56	0.53	0.54	0.53	0.53	0.43 - 0.59
1,2,3,4,7,8-HxCDD-13C	1.34	1.24	1.27	1.28	1.28	1.05 - 1.43
1,2,3,4,7,8,9-HpCDF-13C	0.40	0.48	0.46	0.45	0.46	0.37 - 0.51
Internal Standards						
2,3,7,8-TCDF-13C	0.80	0.81	0.81	0.81	0.80	0.65 - 0.89
2,3,7,8-TCDD-13C	0.80	0.79	0.80	0.81	0.82	0.65 - 0.89
1,2,3,7,8-PeCDF-13C	1.57	1.61	1.53	1.59	1.60	1.32 - 1.78
1,2,3,7,8-PeCDD-13C	1.59	1.59	1.56	1.59	1.60	1.32 - 1.78
1,2,3,6,7,8-HxCDF-13C	0.53	0.52	0.53	0.55	0.55	0.43 - 0.59
1,2,3,6,7,8-HxCDD-13C	1.26	1.26	1.27	1.24	1.30	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF-13C	0.46	0.46	0.46	0.45	0.47	0.37 - 0.51
1,2,3,4,6,7,8-HpCDD-13C	1.05	1.06	1.04	1.07	1.10	0.88 - 1.20
OCDD-13C	0.92	0.93	0.91	0.92	0.92	0.76 - 1.02
Recovery Standards						
1,2,3,4-TCDD-13C	0.81	0.80	0.82	0.81	0.81	0.65 - 0.89
1,2,3,7,8,9-HxCDD-13C	1.23	1.26	1.27	1.28	1.24	1.05 - 1.43

PCDD/PCDF Calibration Verification

Run Name: F130703A_01 Instrument ID 10MSHR05 (F)
Standard CS3-7604-246 GC Column ID USC508227H
Analyzed 07/03/2013 08:45 ICAL ID F130408

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	5.0	5.2	0.80	0.9442	0.9803	3.8
2,3,7,8-TCDD	5.0	4.9	0.78	0.9838	0.9665	-1.8
1,2,3,7,8-PeCDF	25.0	26.9	1.55	0.9424	1.0124	7.4
2,3,4,7,8-PeCDF	25.0	27.2	1.57	0.9413	1.0249	8.9
1,2,3,7,8-PeCDD	25.0	24.6	0.62	0.9464	0.9302	-1.7
1,2,3,4,7,8-HxCDF	25.0	27.4	1.25	0.9557	1.0490	9.8
1,2,3,6,7,8-HxCDF	25.0	28.4	1.26	1.1447	1.3022	13.8
2,3,4,6,7,8-HxCDF	25.0	30.1	1.27	0.9289	1.1185	20.4
1,2,3,7,8,9-HxCDF	25.0	30.3	1.26	0.8588	1.0425	21.4
1,2,3,4,7,8-HxCDD	25.0	24.2	1.25	0.9011	0.8732	-3.1
1,2,3,6,7,8-HxCDD	25.0	27.7	1.26	1.0146	1.1230	10.7
1,2,3,7,8,9-HxCDD	25.0	27.2	1.28	1.0265	1.1166	8.8
1,2,3,4,6,7,8-HpCDF	25.0	24.0	1.03	1.5045	1.4417	-4.2
1,2,3,4,7,8,9-HpCDF	25.0	23.7	1.01	1.2574	1.1896	-5.4
1,2,3,4,6,7,8-HpCDD	25.0	24.5	1.07	1.1169	1.0961	-1.9
OCDF	50.0	46.1	0.90	1.2292	1.1343	-7.7
OCDD	50.0	48.1	0.87	1.0019	0.9645	-3.7
Total PeCDF	50	54.1	NA	0.9418	1.0187	8.2
Total HxCDF	100	116.3	NA	0.9720	1.1281	16.1
Total HxCDD	75	79.1	NA	0.9808	1.0376	5.8
Total HpCDF	50	47.6	NA	1.3810	1.3157	-4.7
2,3,7,8-TCDD-37Cl4	5.0	5.2	NA	0.9874	1.0305	4.4
2,3,4,7,8-PeCDF-13C	25.0	25.8	1.55	0.9484	0.9795	3.3
1,2,3,4,7,8-HxCDF-13C	25.0	24.8	0.52	0.8682	0.8608	-0.9
1,2,3,4,7,8-HxCDD-13C	25.0	22.0	1.24	0.8552	0.7515	-12.1
1,2,3,4,7,8,9-HpCDF-13C	25.0	24.8	0.46	0.8801	0.8744	-0.7
2,3,7,8-TCDF-13C	100.0	86.5	0.78	1.4455	1.2498	-13.5
2,3,7,8-TCDD-13C	100.0	99.5	0.80	1.0080	1.0032	-0.5
1,2,3,7,8-PeCDF-13C	100.0	84.2	1.57	1.2183	1.0253	-15.8
1,2,3,7,8-PeCDD-13C	100.0	98.9	1.56	0.8198	0.8112	-1.1
1,2,3,6,7,8-HxCDF-13C	100.0	83.6	0.53	1.3965	1.1678	-16.4
1,2,3,6,7,8-HxCDD-13C	100.0	95.0	1.24	0.9810	0.9319	-5.0
1,2,3,4,6,7,8-HpCDF-13C	100.0	96.1	0.46	0.9318	0.8954	-3.9
1,2,3,4,6,7,8-HpCDD-13C	100.0	106.0	1.06	0.7599	0.8057	6.0
OCDD-13C	200.0	184.4	0.92	0.8486	0.7825	-7.8
1,2,3,4-TCDD-13C	100.0	NA	0.81	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100.0	NA	1.30	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside Quality Control limits

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PCDD/PCDF Calibration Verification

Run Name:	P130706B_03	Instrument ID	10MSHR09 (P)
Standard	CS3-7604-246	GC Column ID	USC473217H
Analyzed	07/06/2013 15:09	ICAL ID	P121229M23

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	5.0	4.8	0.75	1.0572	1.0216	-3.4
2,3,7,8-TCDD	5.0	5.1	0.81	1.0797	1.0940	1.3
1,2,3,7,8-PeCDF	25.0	25.1	1.56	1.0229	1.0280	0.5
2,3,4,7,8-PeCDF	25.0	24.6	1.58	1.0372	1.0221	-1.4
1,2,3,7,8-PeCDD	25.0	25.5	0.63	1.0390	1.0581	1.8
1,2,3,4,7,8-HxCDF	25.0	22.8	1.25	1.1204	1.0229	-8.7
1,2,3,6,7,8-HxCDF	25.0	26.3	1.23	1.2069	1.2715	5.4
2,3,4,6,7,8-HxCDF	25.0	25.2	1.25	1.0619	1.0711	0.9
1,2,3,7,8,9-HxCDF	25.0	23.2	1.27	1.0097	0.9389	-7.0
1,2,3,4,7,8-HxCDD	25.0	22.6	1.28	1.0661	0.9622	-9.7
1,2,3,6,7,8-HxCDD	25.0	28.0	1.22	1.0694	1.1962	11.9
1,2,3,7,8,9-HxCDD	25.0	26.4	1.27	1.1191	1.1802	5.5
1,2,3,4,6,7,8-HpCDF	25.0	25.0	1.05	1.5007	1.5019	0.1
1,2,3,4,7,8,9-HpCDF	25.0	23.7	1.06	1.2592	1.1919	-5.3
1,2,3,4,6,7,8-HpCDD	25.0	24.2	1.05	1.0540	1.0213	-3.1
OCDF	50.0	49.0	0.87	1.2905	1.2640	-2.1
OCDD	50.0	50.0	0.91	1.0090	1.0097	0.1
Total PeCDF	50	49.8	NA	1.0300	1.0251	-0.5
Total HxCDF	100	97.6	NA	1.0997	1.0761	-2.2
Total HxCDD	75	76.9	NA	1.0849	1.1129	2.6
Total HpCDF	50	48.7	NA	1.3799	1.3469	-2.4
2,3,7,8-TCDD-37Cl4	5.0	5.2	NA	1.0232	1.0698	4.6
2,3,4,7,8-PeCDF-13C	25.0	25.3	1.53	0.9450	0.9556	1.1
1,2,3,4,7,8-HxCDF-13C	25.0	21.9	0.53	0.9832	0.8616	-12.4
1,2,3,4,7,8-HxCDD-13C	25.0	22.4	1.28	0.9539	0.8565	-10.2
1,2,3,4,7,8,9-HpCDF-13C	25.0	23.1	0.43	0.8987	0.8318	-7.4
2,3,7,8-TCDF-13C	100.0	99.6	0.81	1.4810	1.4746	-0.4
2,3,7,8-TCDD-13C	100.0	92.1	0.80	1.0407	0.9585	-7.9
1,2,3,7,8-PeCDF-13C	100.0	83.1	1.56	1.2890	1.0708	-16.9
1,2,3,7,8-PeCDD-13C	100.0	79.8	1.58	0.8542	0.6817	-20.2
1,2,3,6,7,8-HxCDF-13C	100.0	99.2	0.54	1.3478	1.3371	-0.8
1,2,3,6,7,8-HxCDD-13C	100.0	96.5	1.30	0.9636	0.9301	-3.5
1,2,3,4,6,7,8-HpCDF-13C	100.0	109.2	0.46	0.8327	0.9094	9.2
1,2,3,4,6,7,8-HpCDD-13C	100.0	101.8	1.09	0.7723	0.7865	1.8
OCDD-13C	200.0	215.5	0.90	0.6909	0.7444	7.7
1,2,3,4-TCDD-13C	100.0	NA	0.81	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100.0	NA	1.22	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside Quality Control limits

REPORT OF LABORATORY ANALYSIS

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Appendix D

Sample Raw Data

Homologue Group: Tetras

Data File Name: P130706B_11

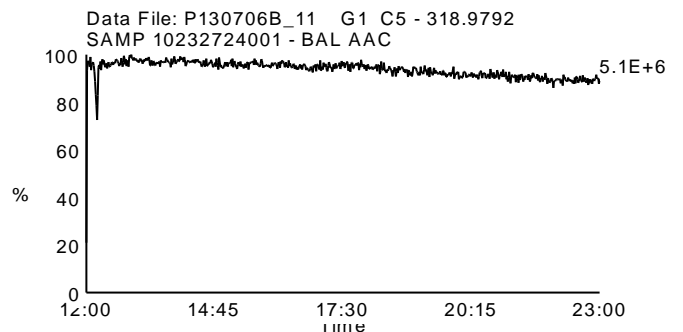
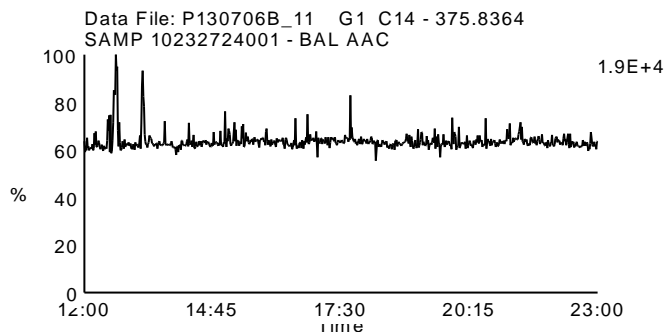
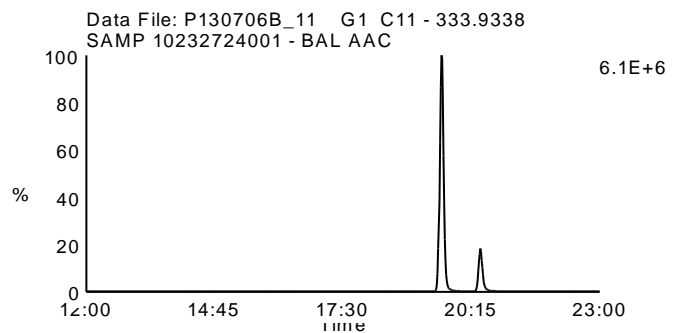
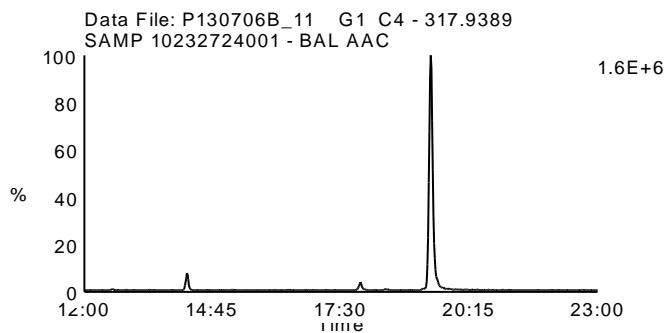
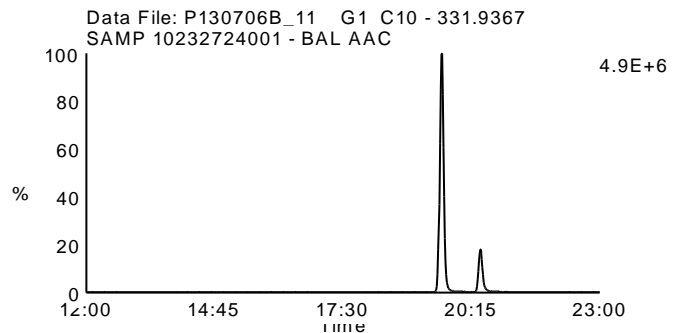
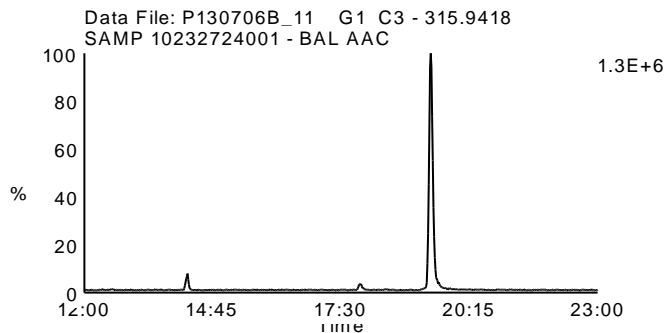
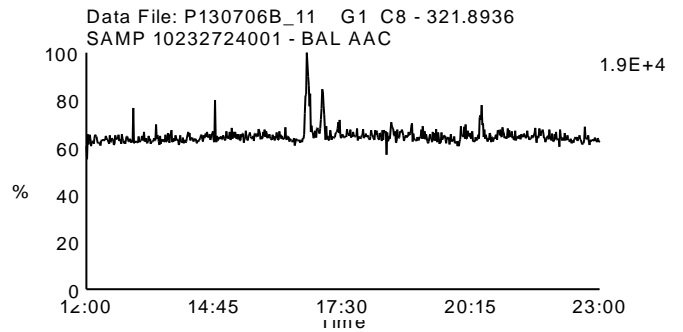
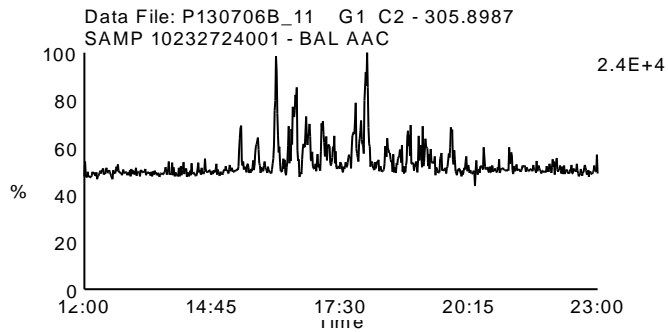
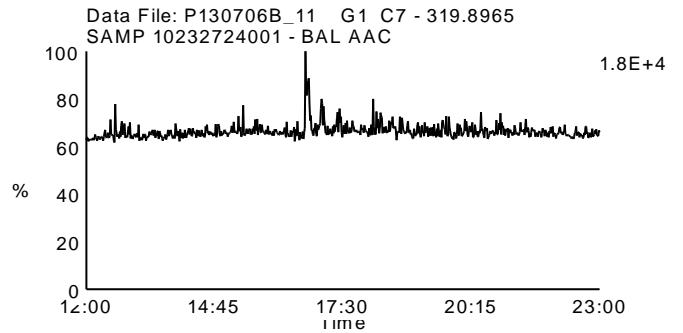
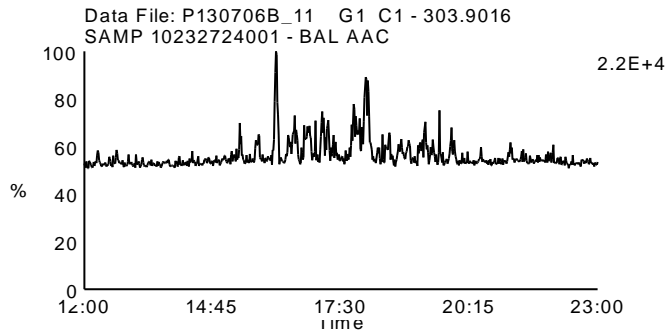
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724001 - BAL AAC

Lab Sample ID: 10232724001

Client Sample ID: U1-A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Penta & Cleanup

Data File Name: P130706B_11

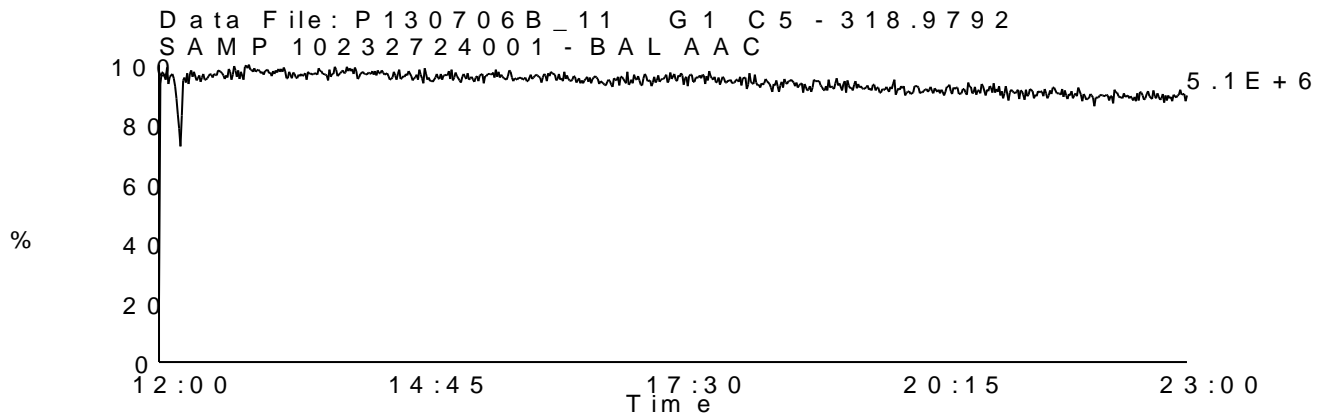
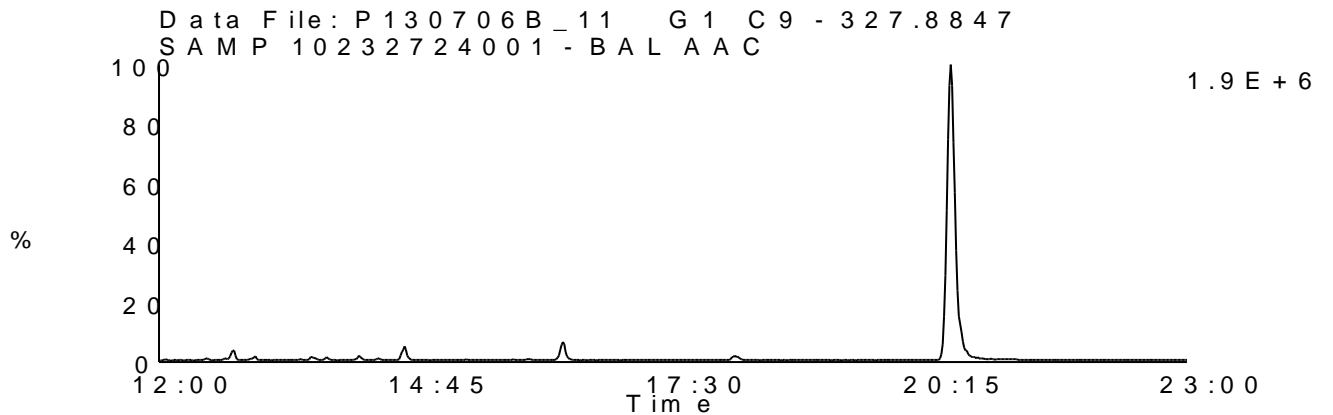
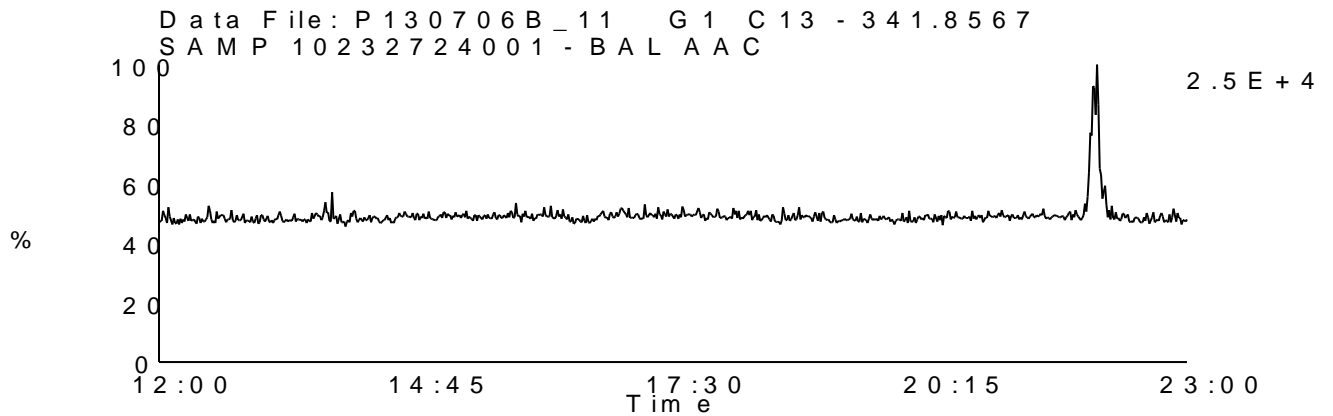
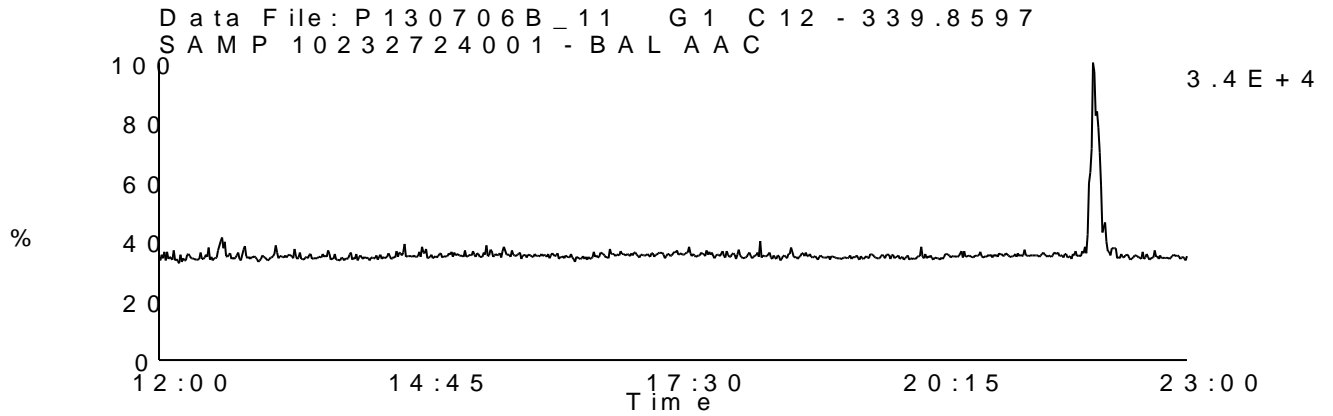
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724001 - BAL AAC

Lab Sample ID: 10232724001

Client Sample ID: U1-A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Pentas

Data File Name: P130706B_11

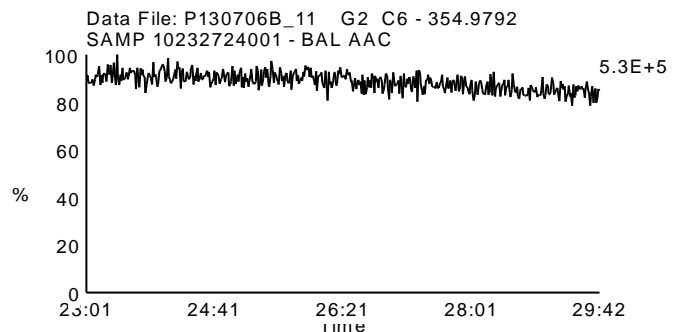
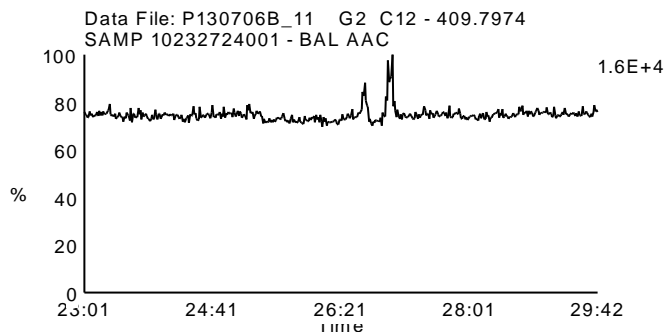
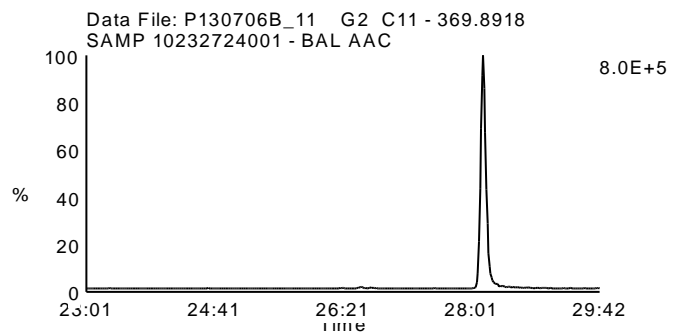
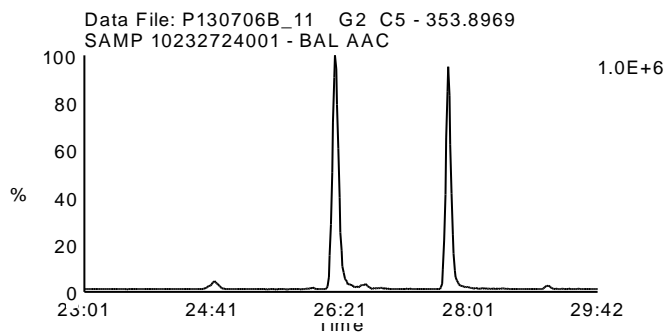
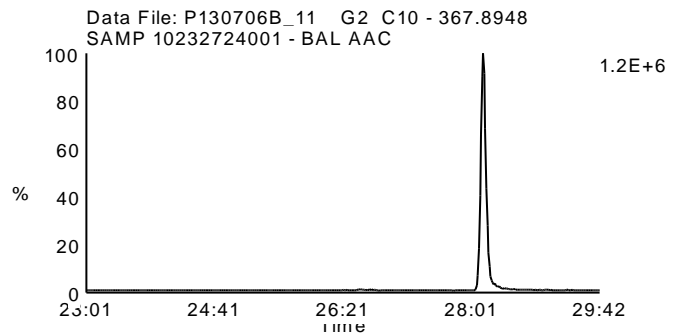
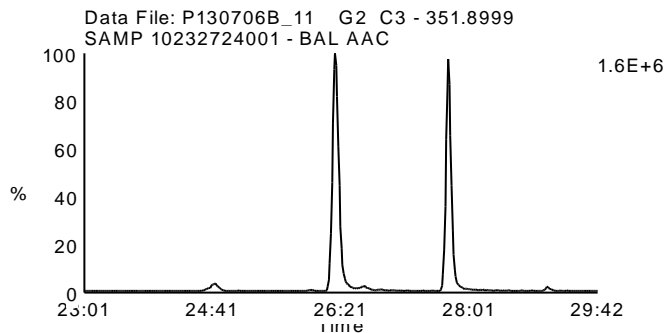
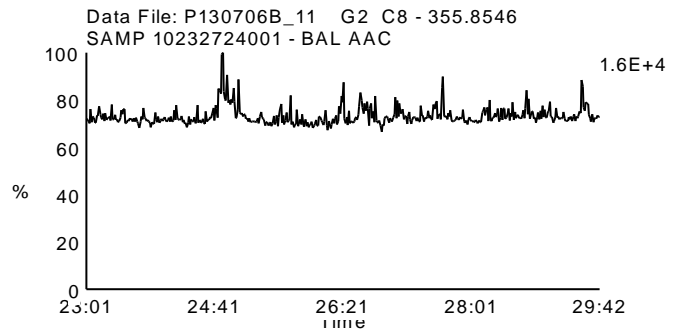
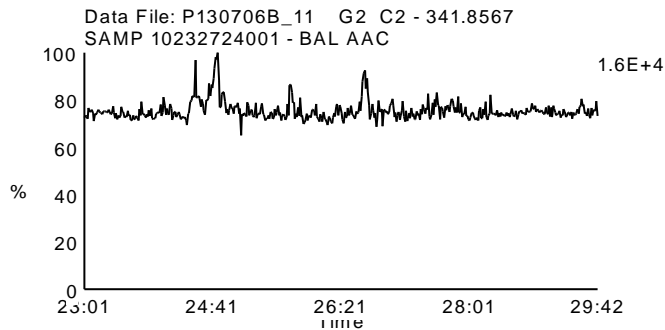
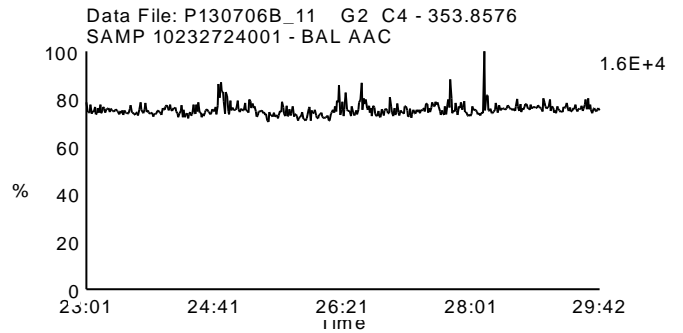
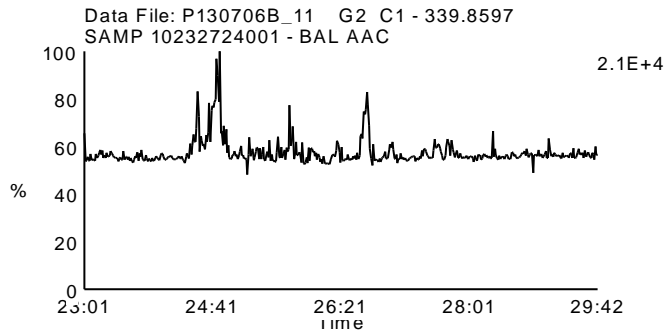
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724001 - BAL AAC

Lab Sample ID: 10232724001

Client Sample ID: U1-A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Hexas

Data File Name: P130706B_11

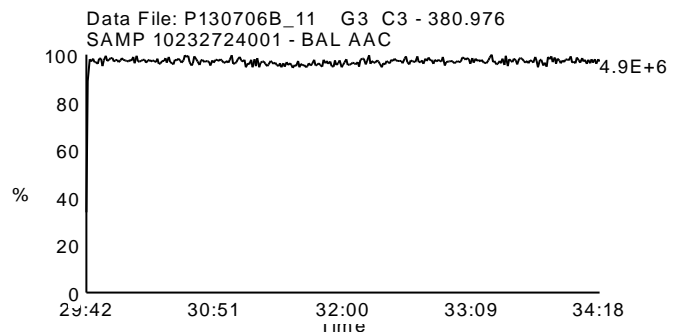
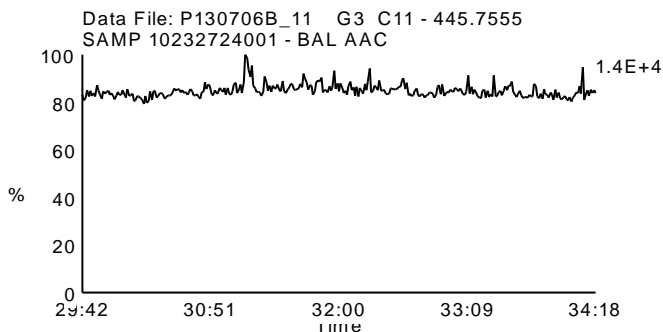
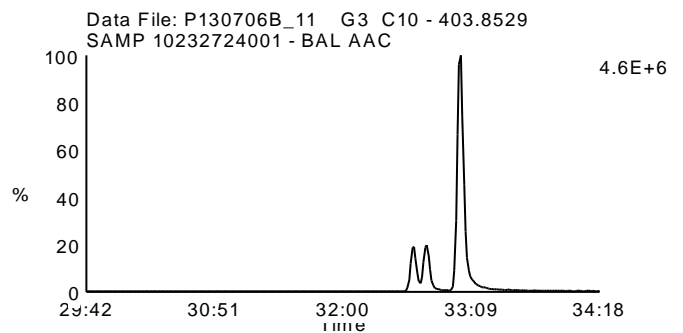
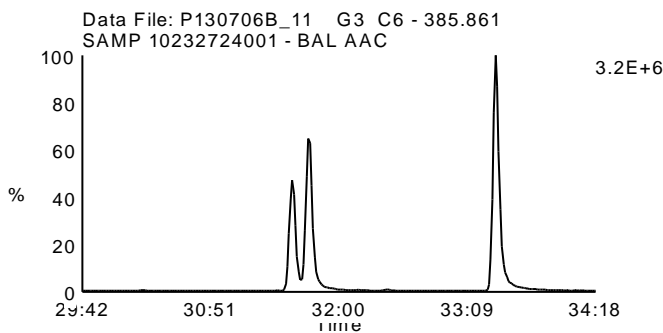
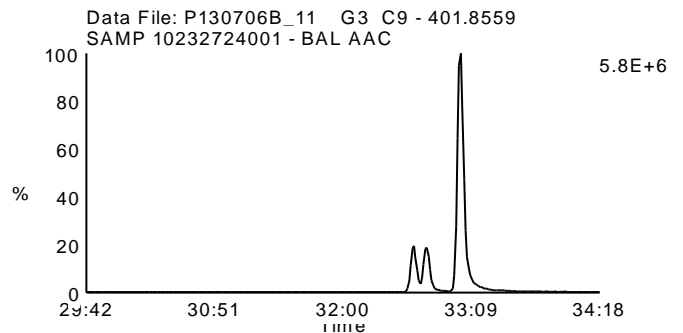
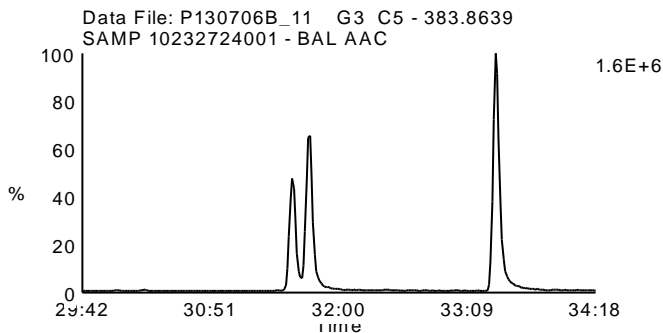
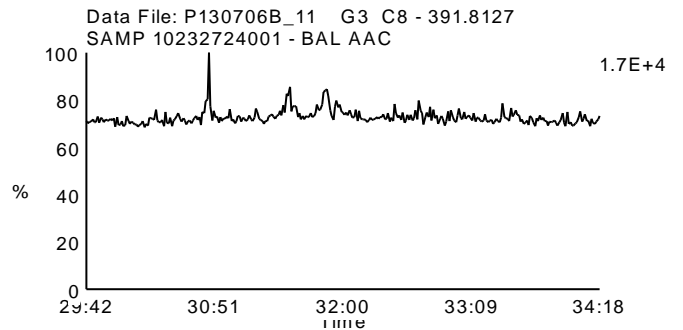
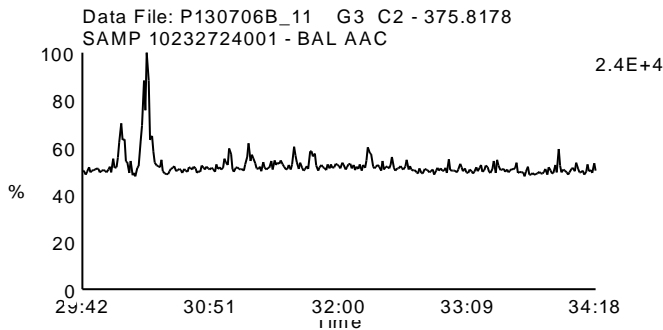
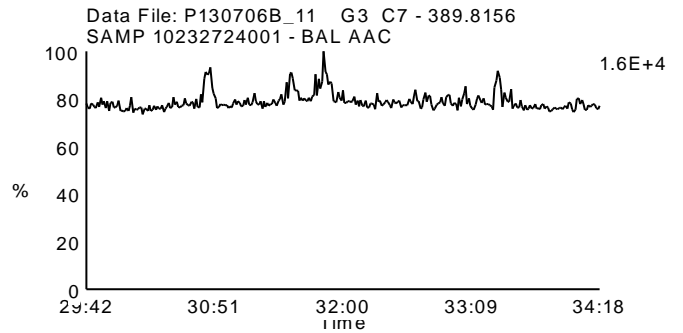
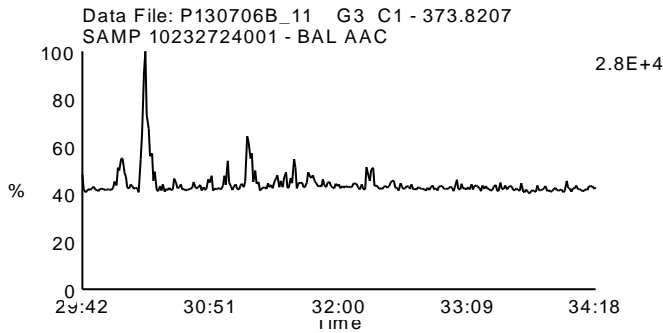
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724001 - BAL AAC

Lab Sample ID: 10232724001

Client Sample ID: U1-A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Heptas

Data File Name: P130706B_11

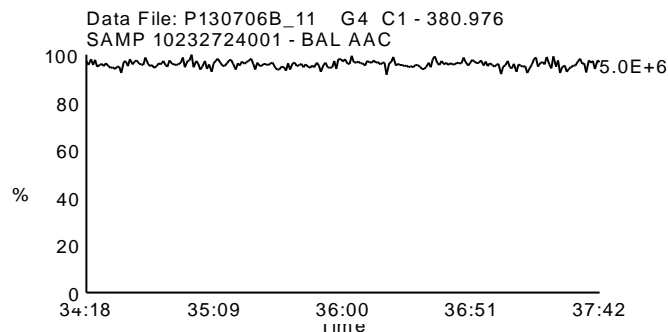
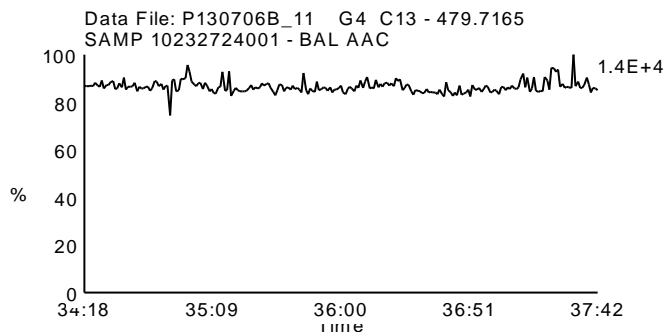
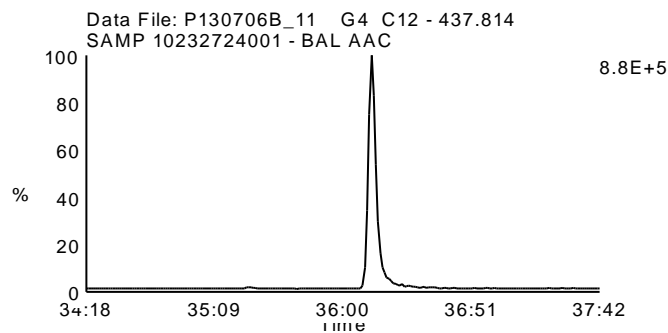
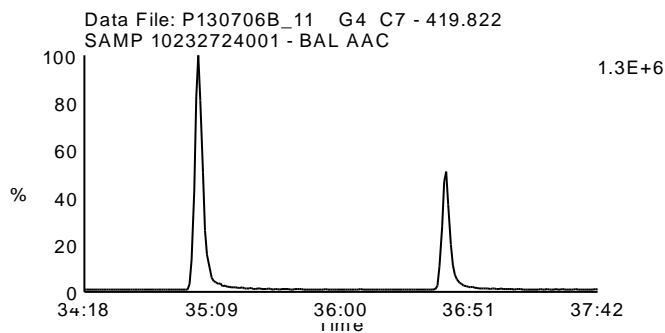
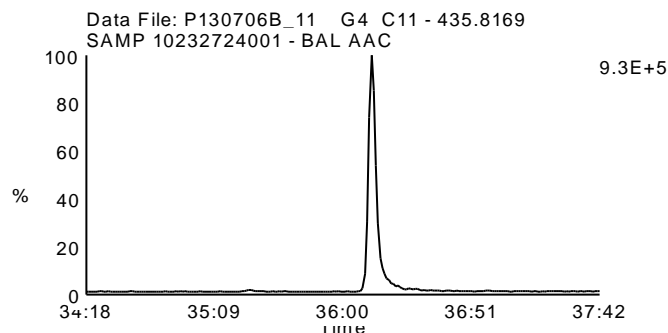
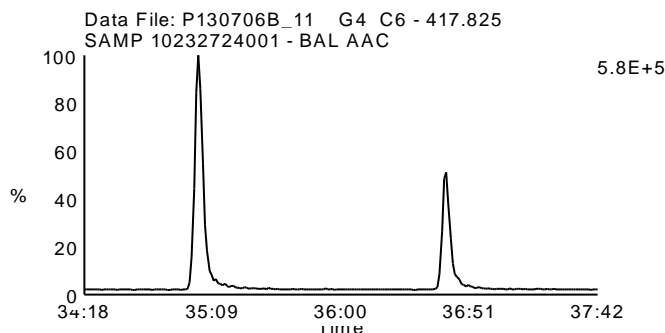
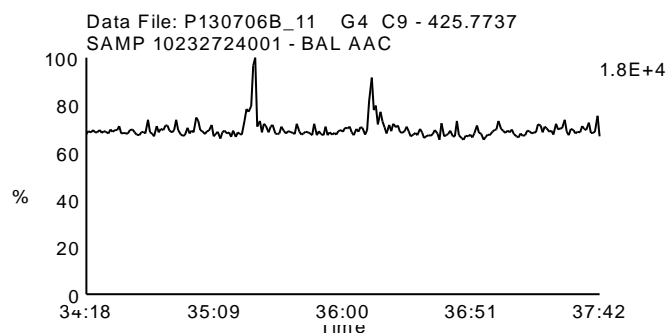
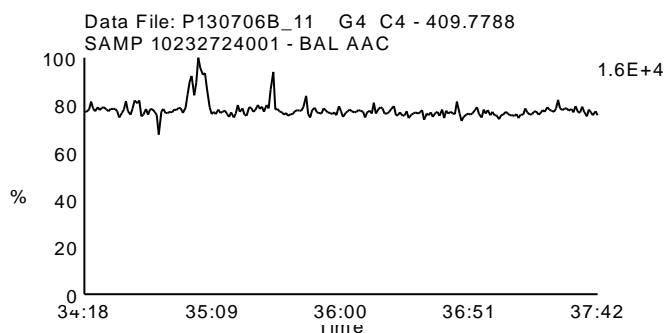
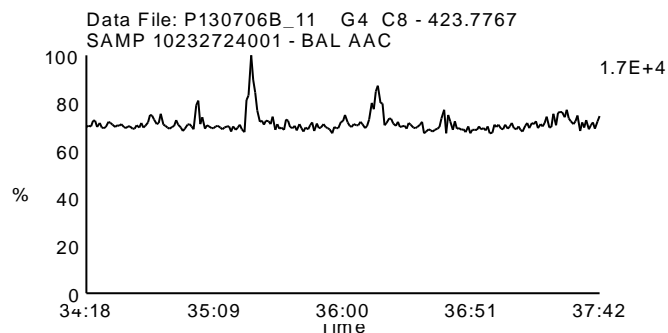
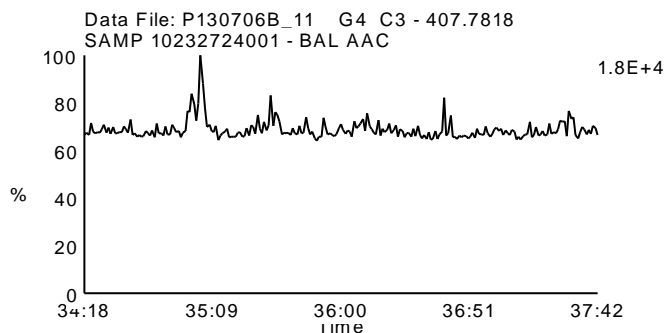
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724001 - BAL AAC

Lab Sample ID: 10232724001

Client Sample ID: U1-A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Octas

Data File Name: P130706B_11

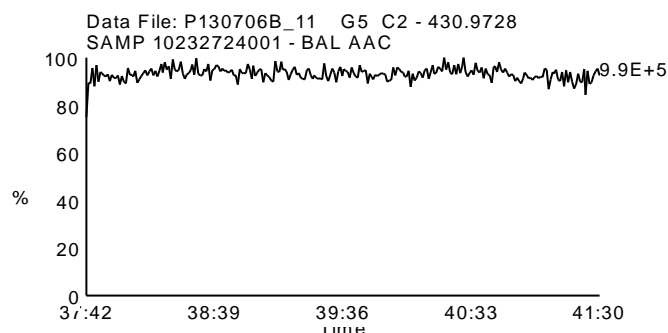
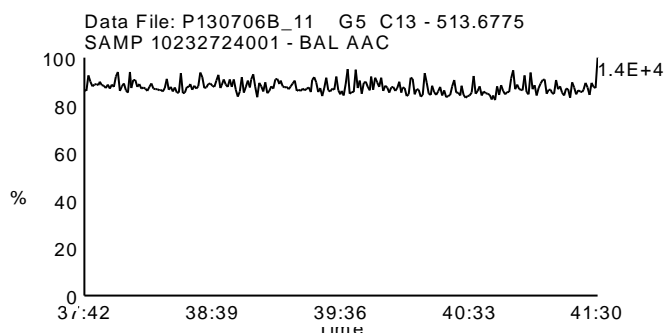
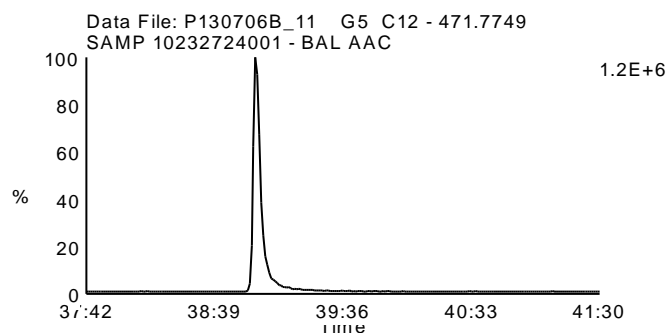
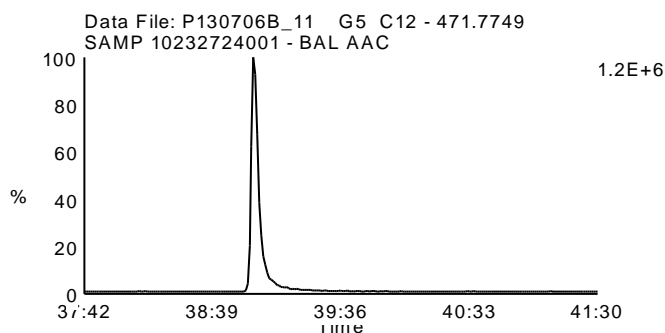
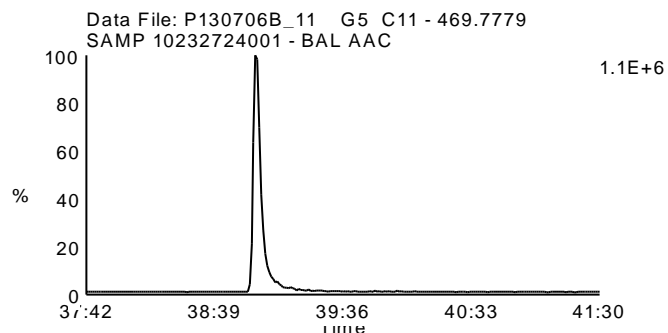
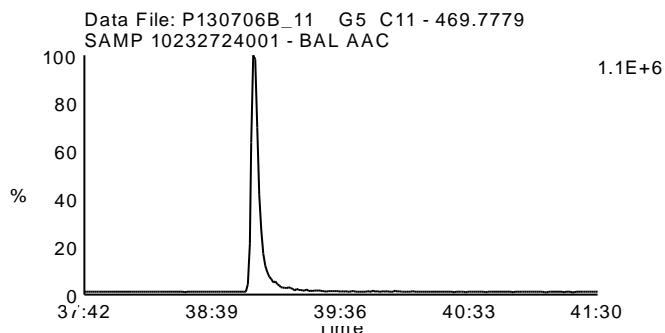
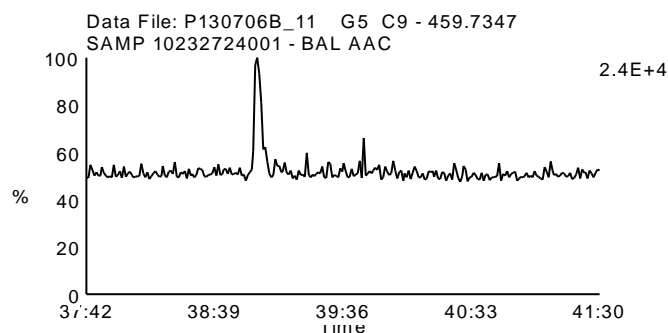
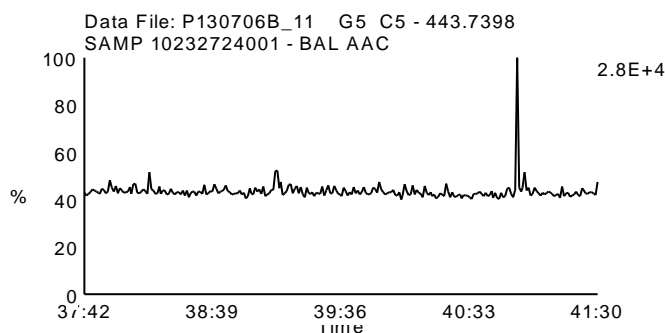
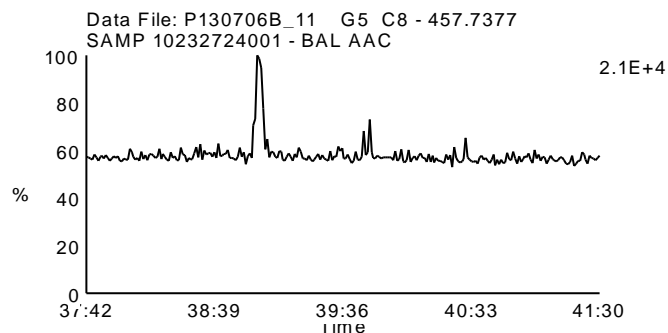
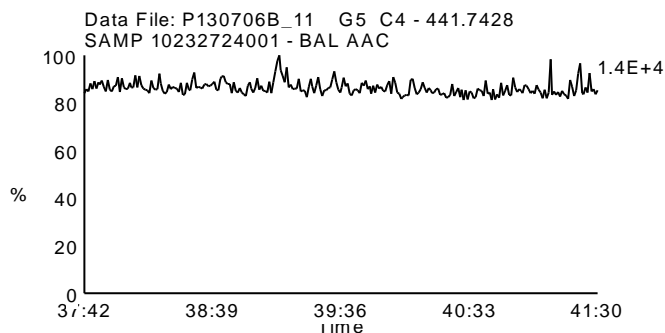
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724001 - BAL AAC

Lab Sample ID: 10232724001

Client Sample ID: U1-A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Tetras

Data File Name: P130706B_10

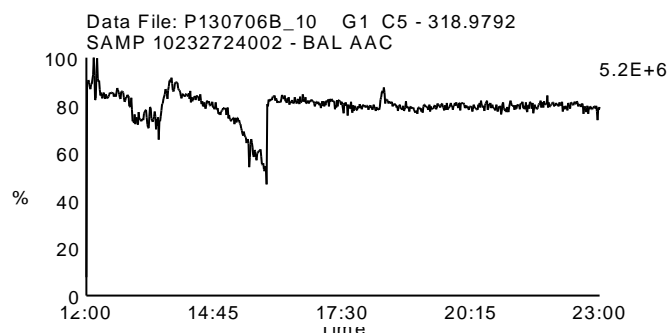
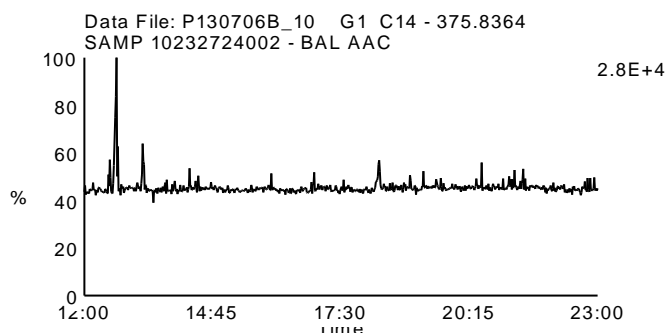
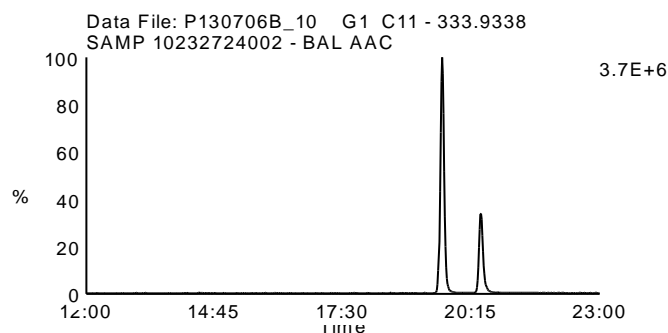
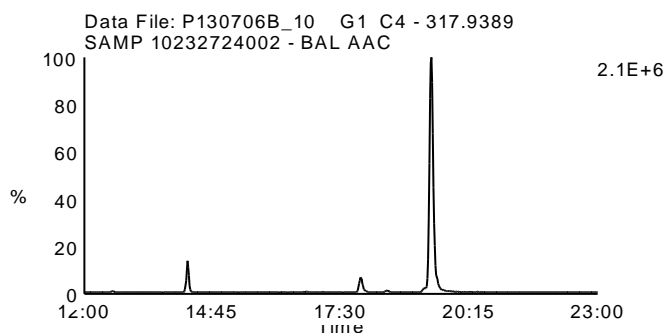
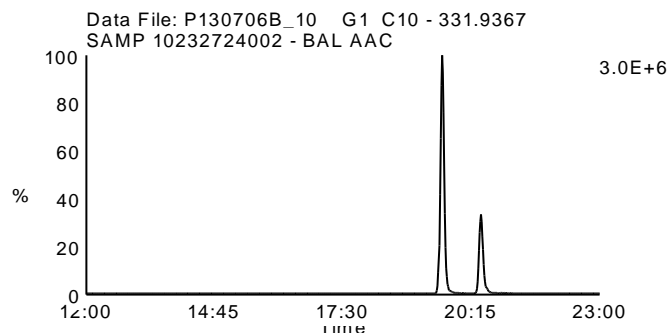
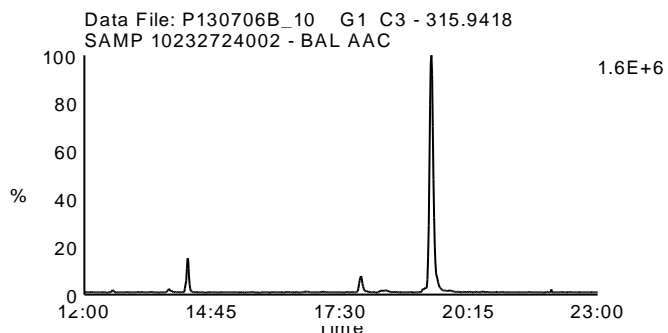
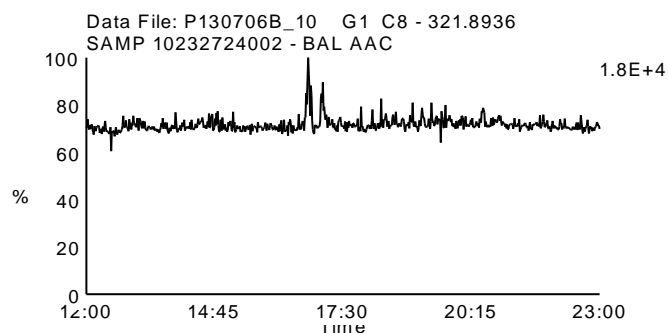
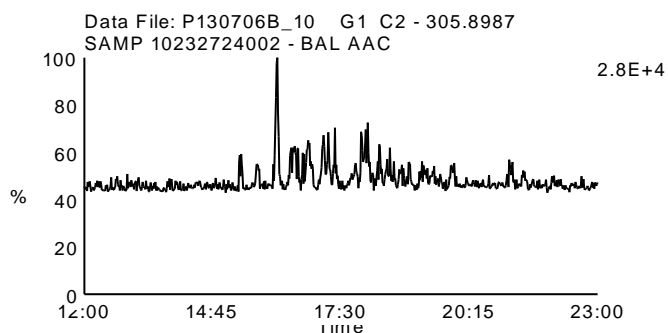
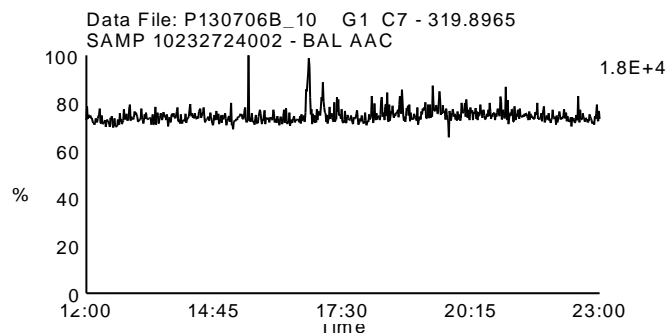
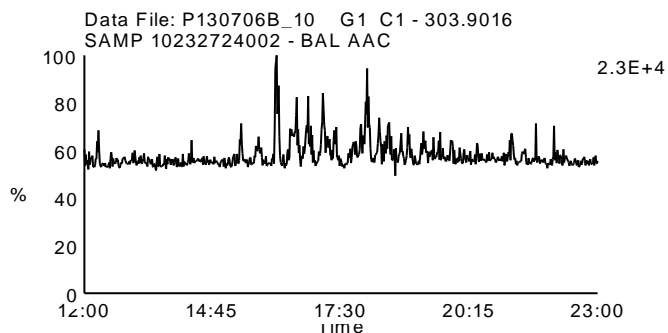
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724002 - BAL AAC

Lab Sample ID: 10232724002

Client Sample ID: D1-A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Penta & Cleanup

Data File Name: P130706B_10

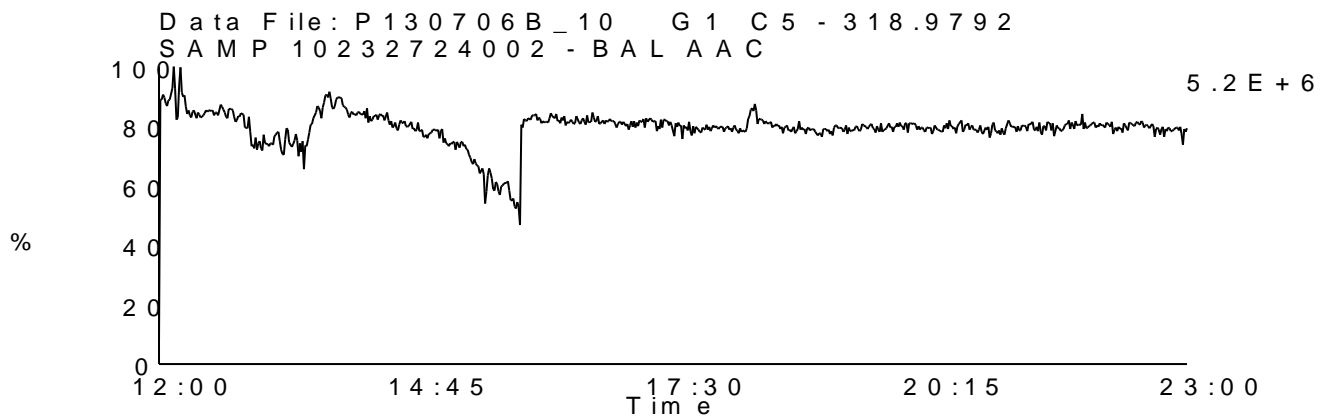
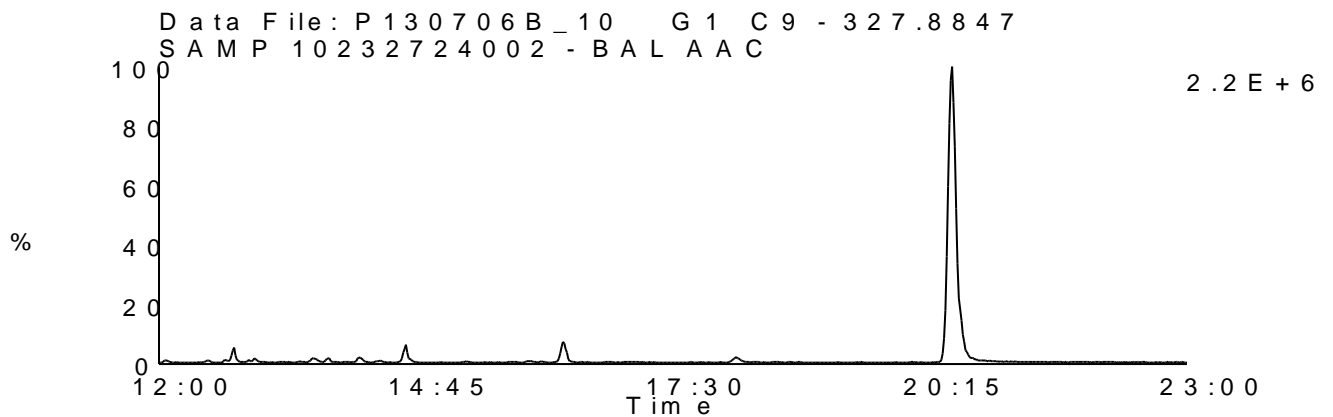
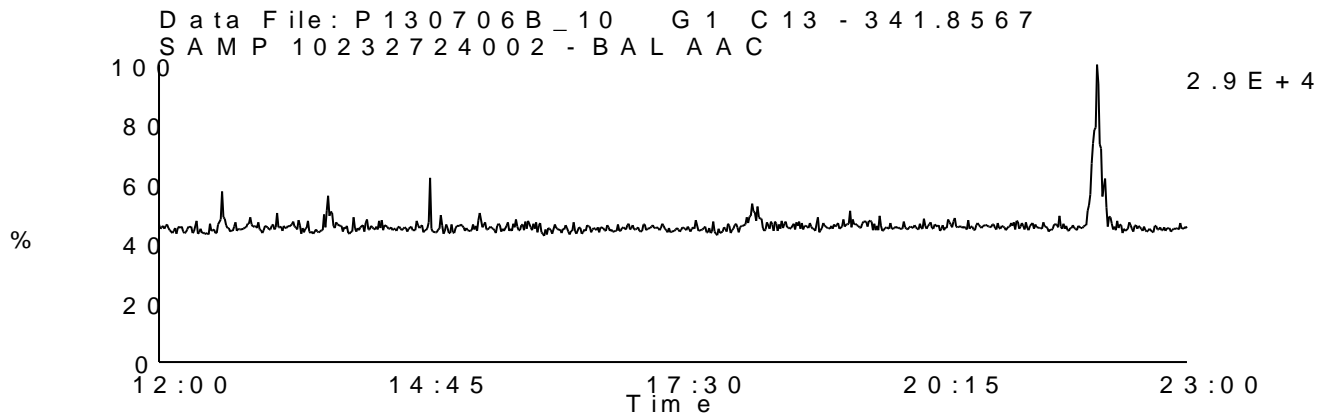
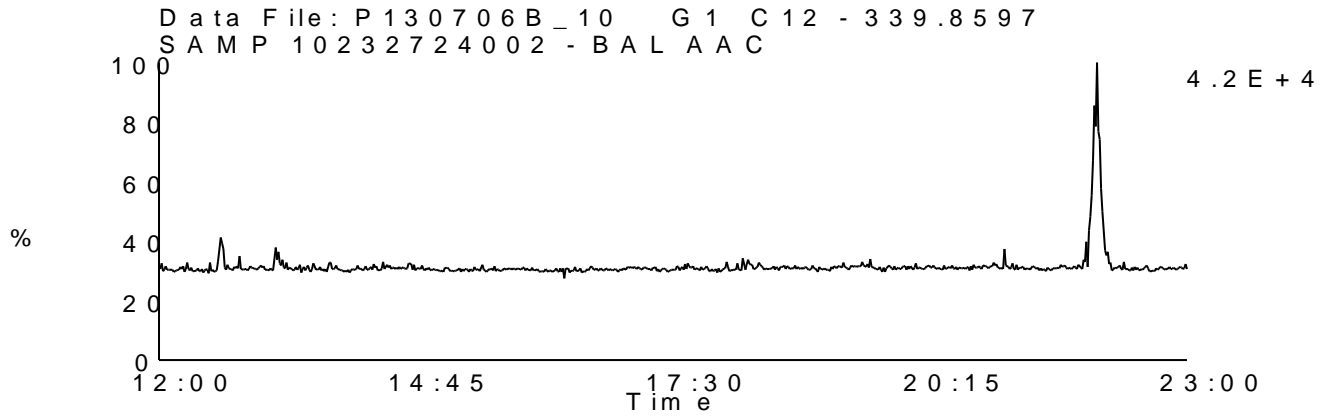
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724002 - BAL AAC

Lab Sample ID: 10232724002

Client Sample ID: D1-A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Pentas

Data File Name: P130706B_10

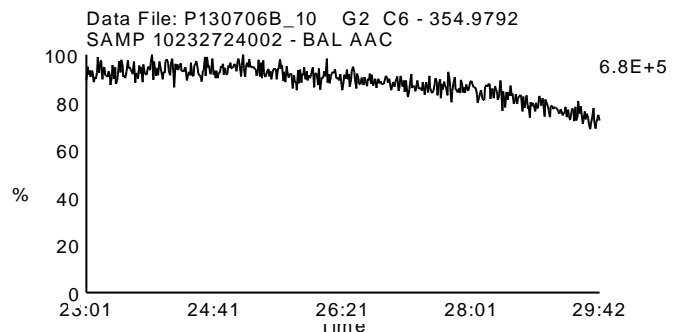
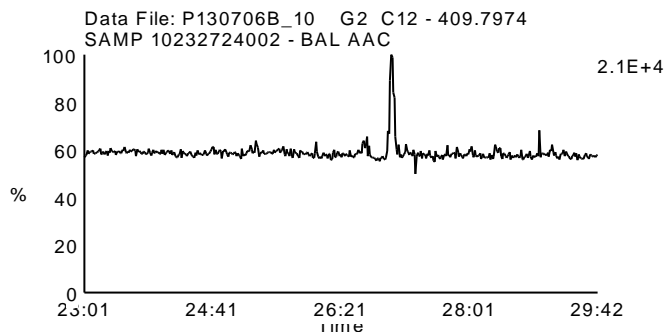
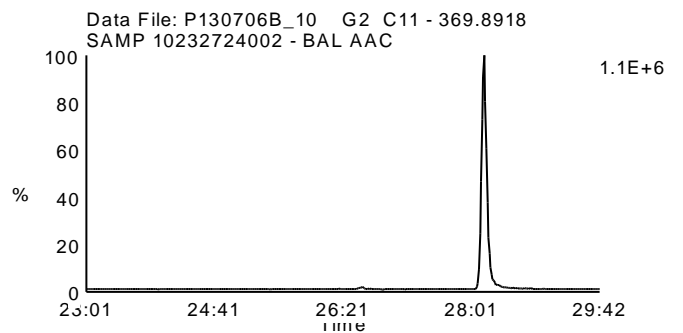
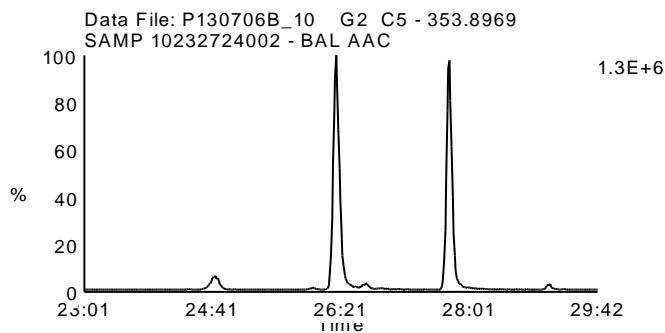
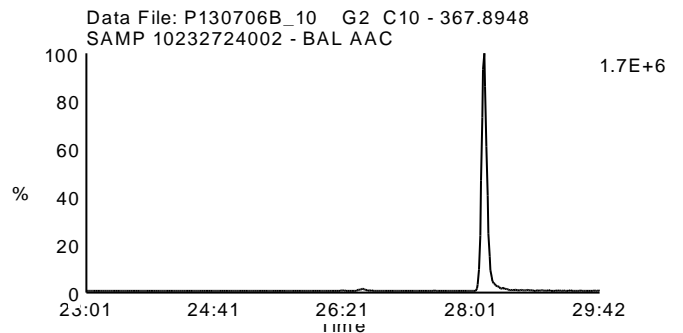
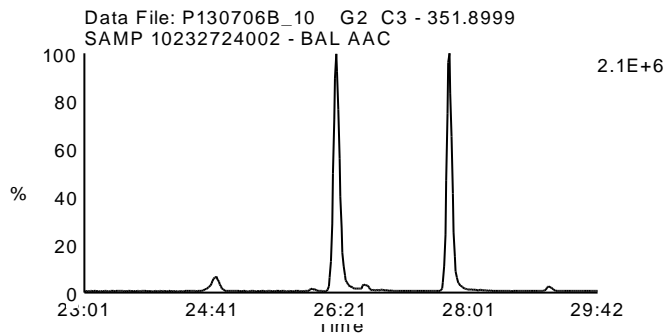
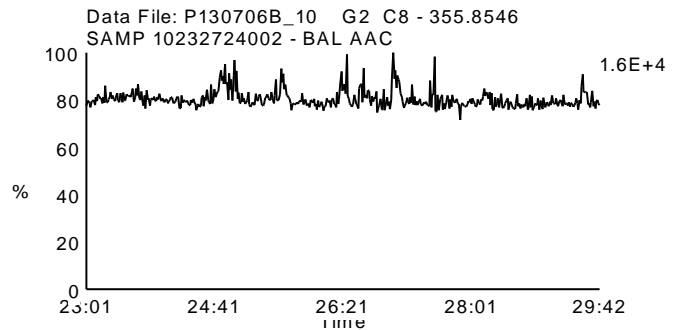
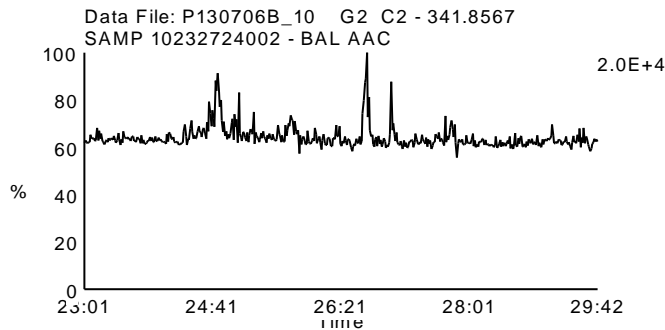
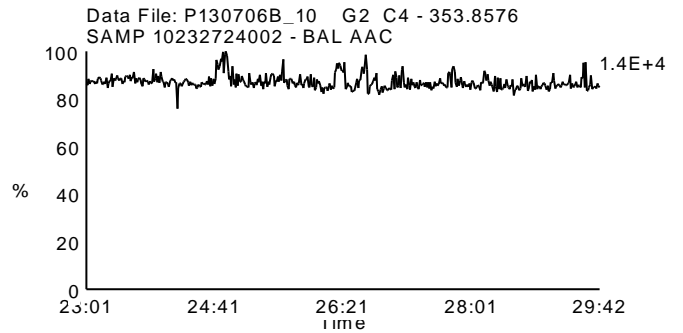
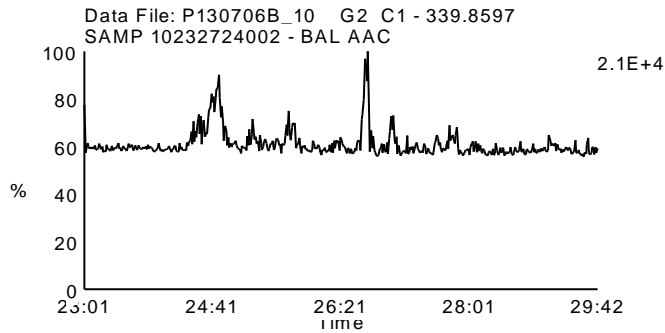
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724002 - BAL AAC

Lab Sample ID: 10232724002

Client Sample ID: D1-A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Hexas

Data File Name: P130706B_10

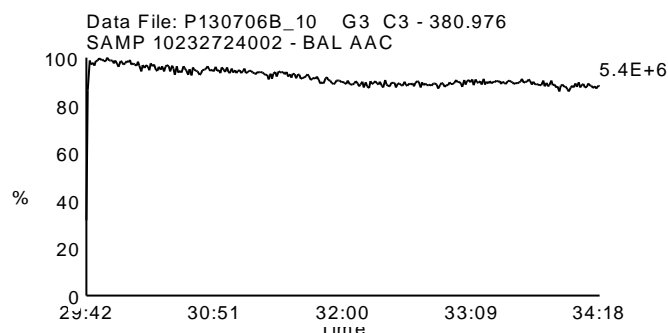
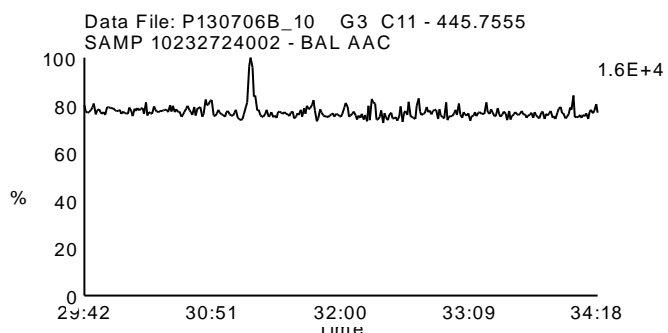
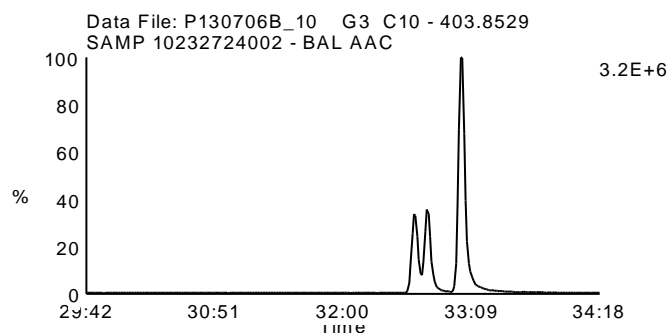
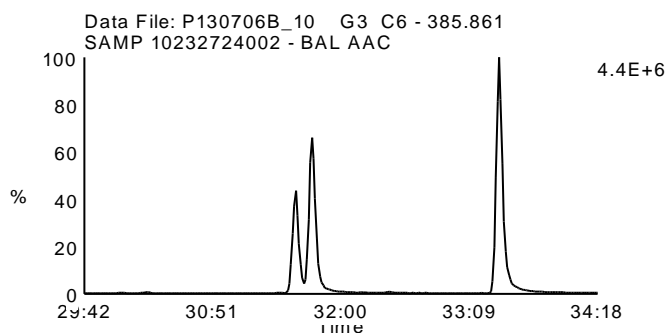
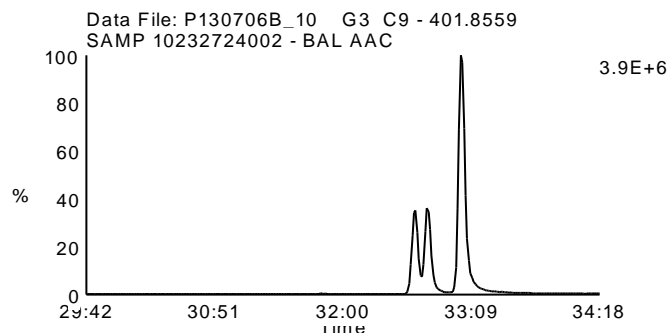
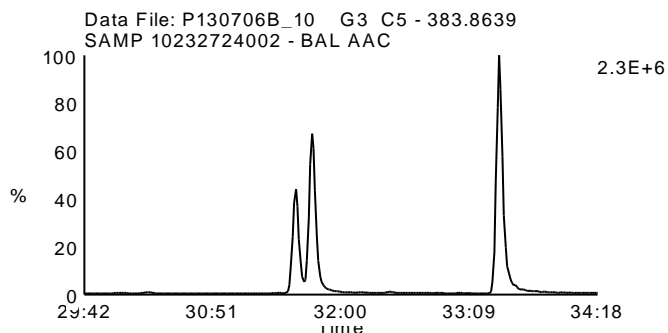
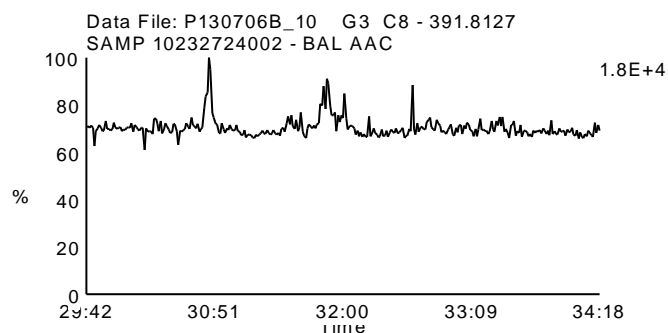
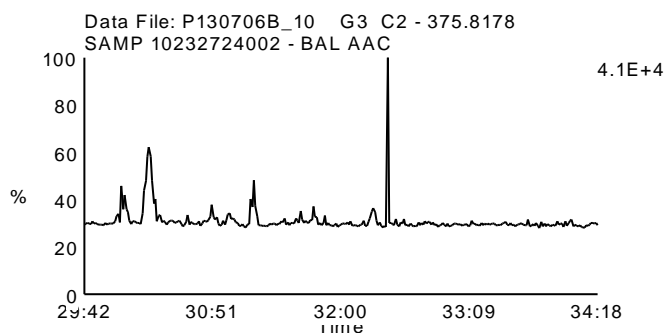
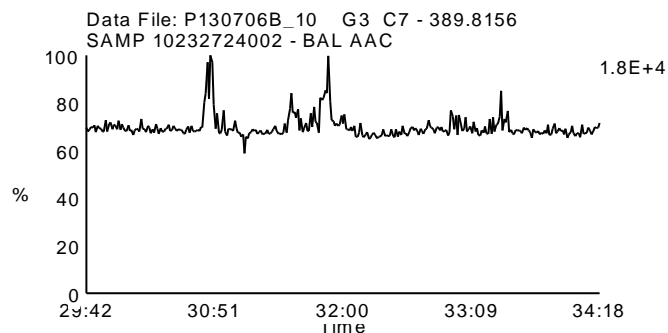
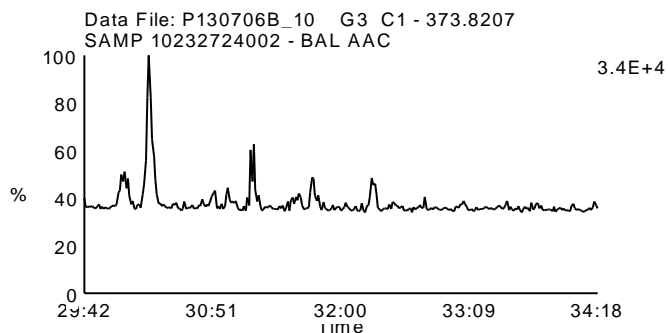
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724002 - BAL AAC

Lab Sample ID: 10232724002

Client Sample ID: D1-A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Heptas

Data File Name: P130706B_10

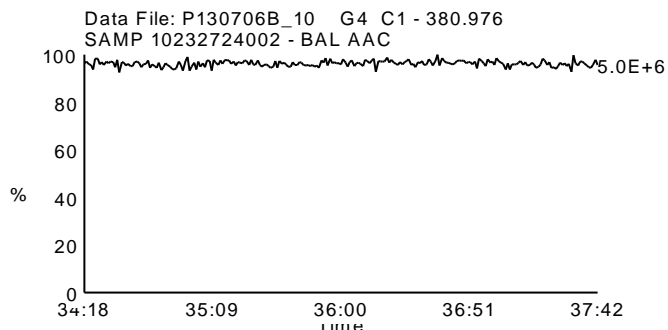
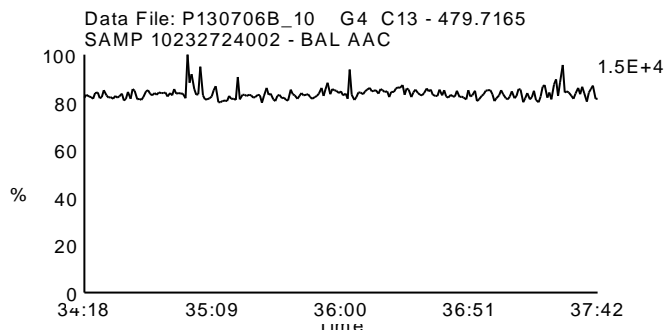
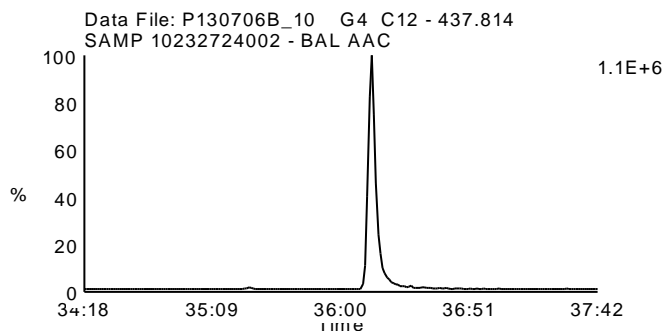
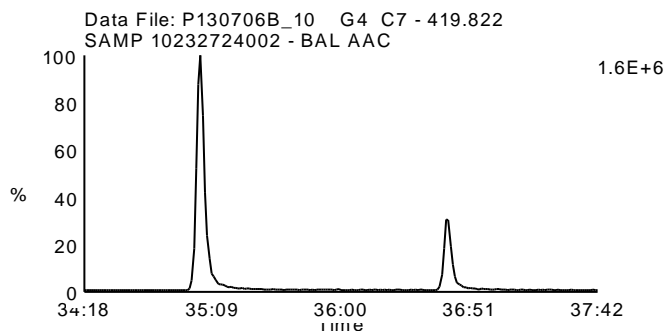
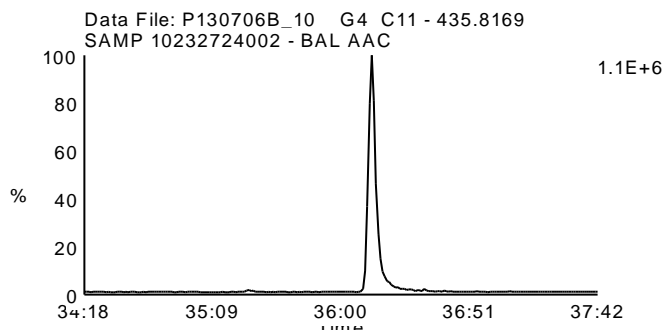
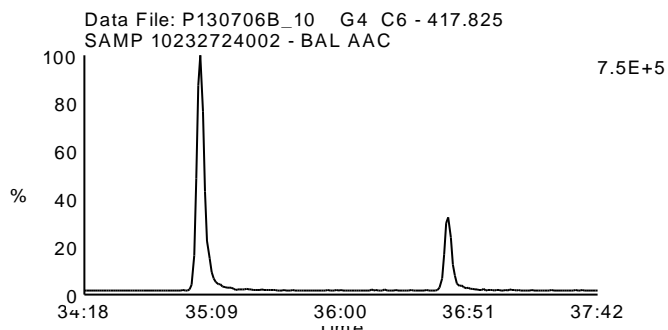
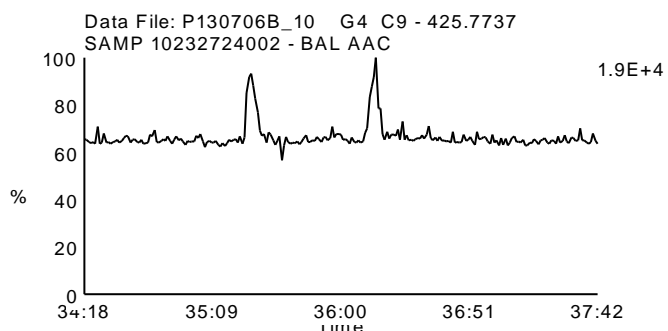
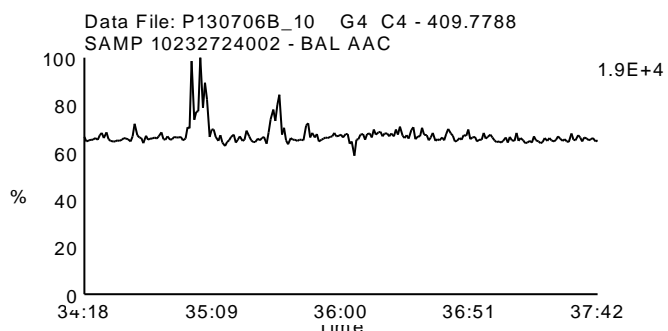
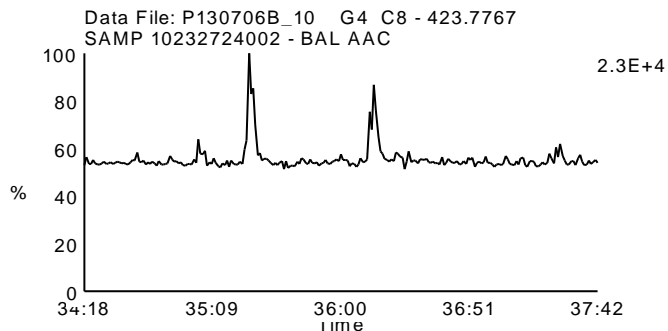
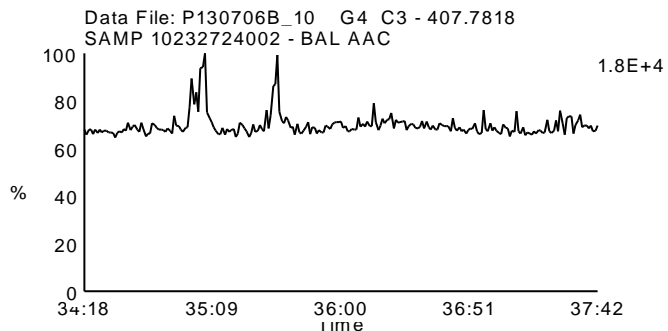
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724002 - BAL AAC

Lab Sample ID: 10232724002

Client Sample ID: D1-A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Octas

Data File Name: P130706B_10

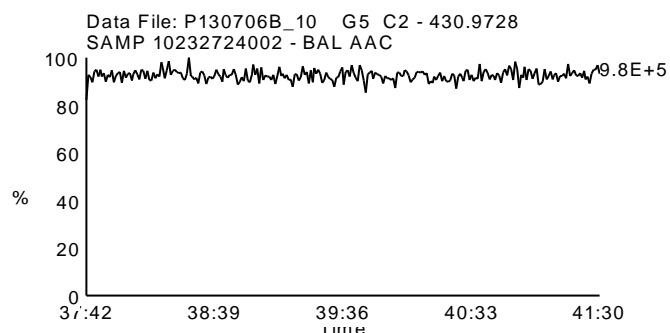
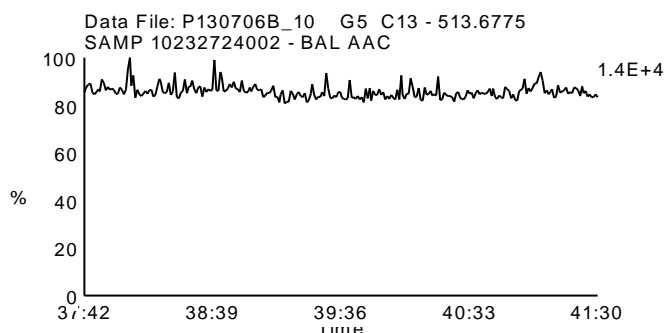
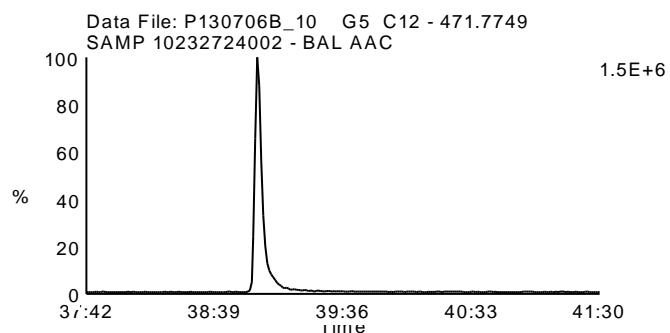
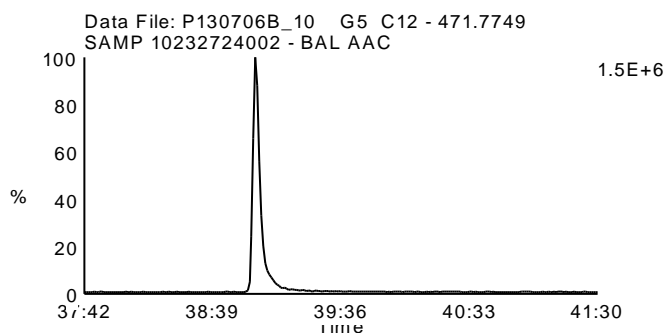
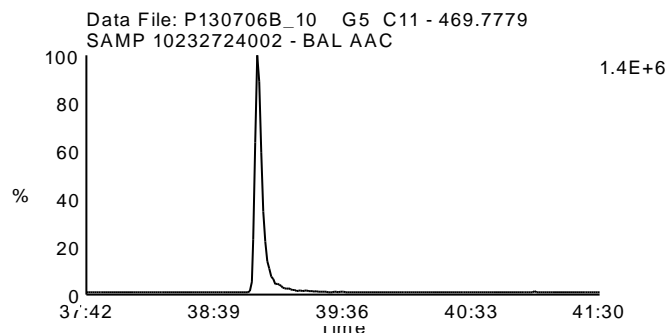
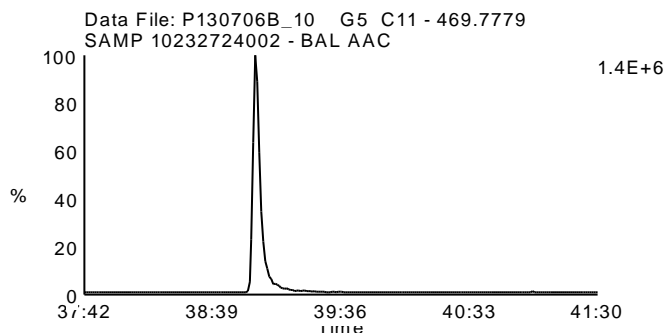
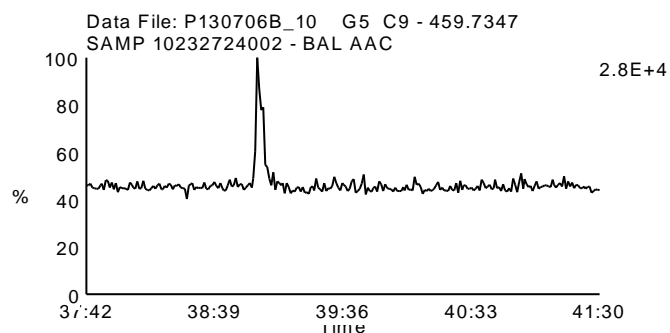
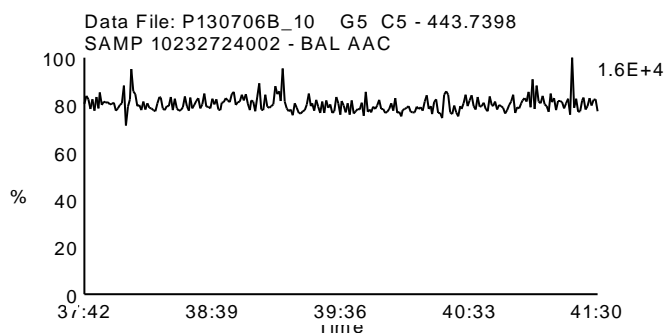
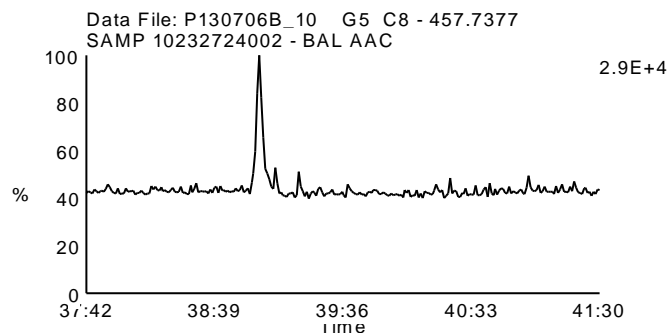
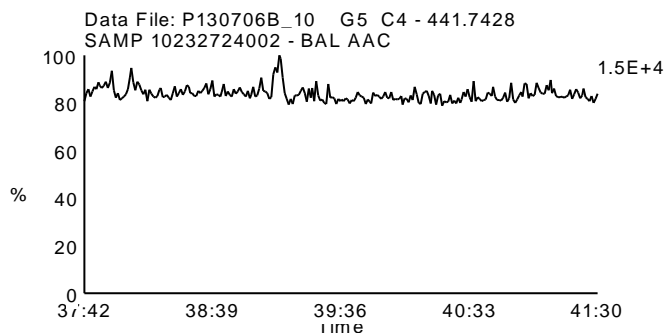
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724002 - BAL AAC

Lab Sample ID: 10232724002

Client Sample ID: D1-A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Tetras

Data File Name: P130706B_09

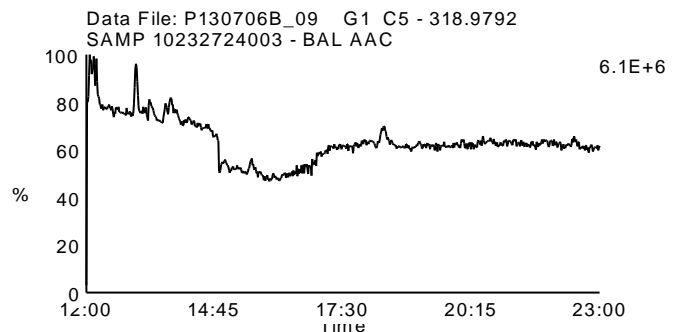
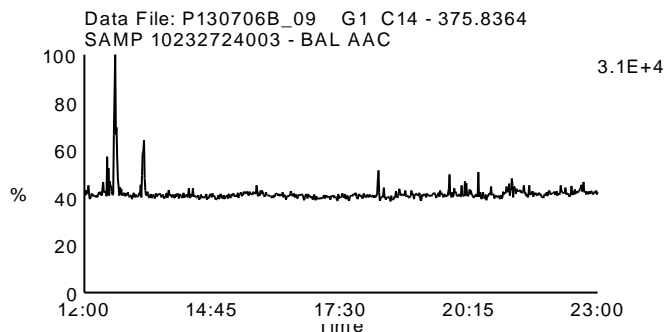
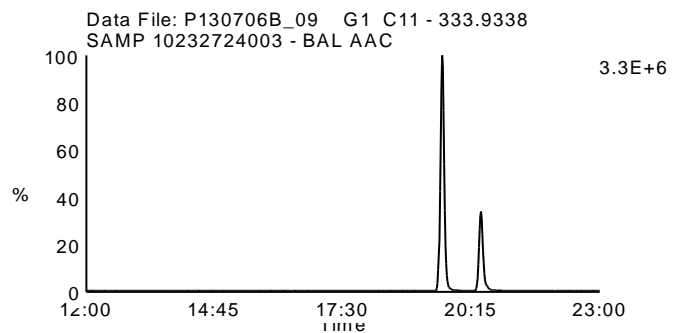
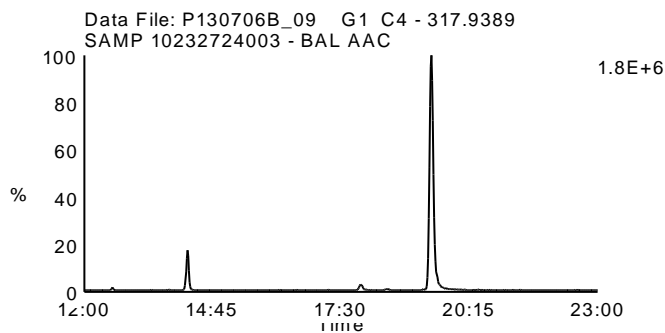
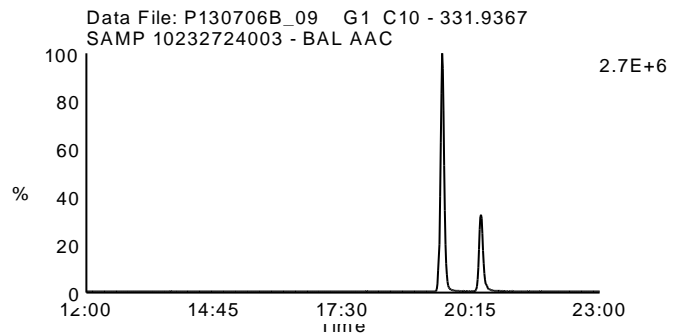
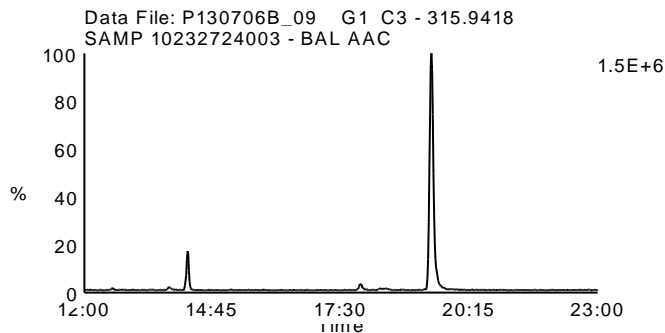
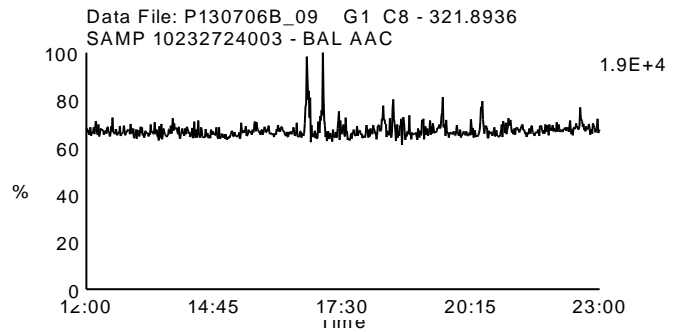
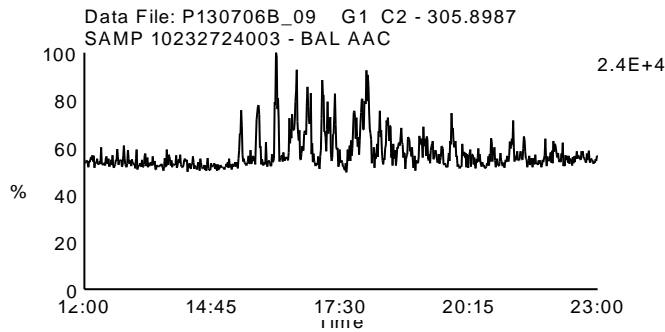
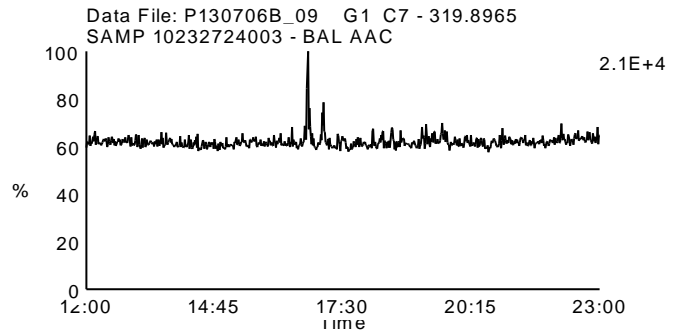
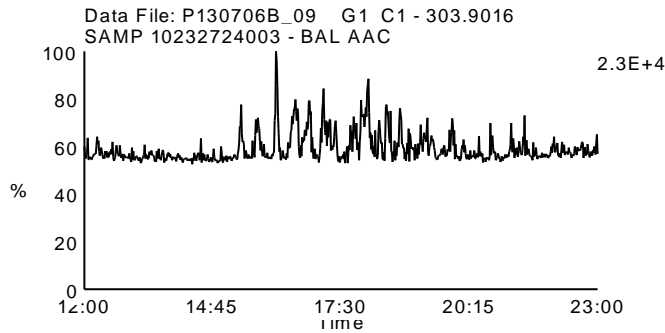
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724003 - BAL AAC

Lab Sample ID: 10232724003

Client Sample ID: BZ-1A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Penta & Cleanup

Data File Name: P130706B_09

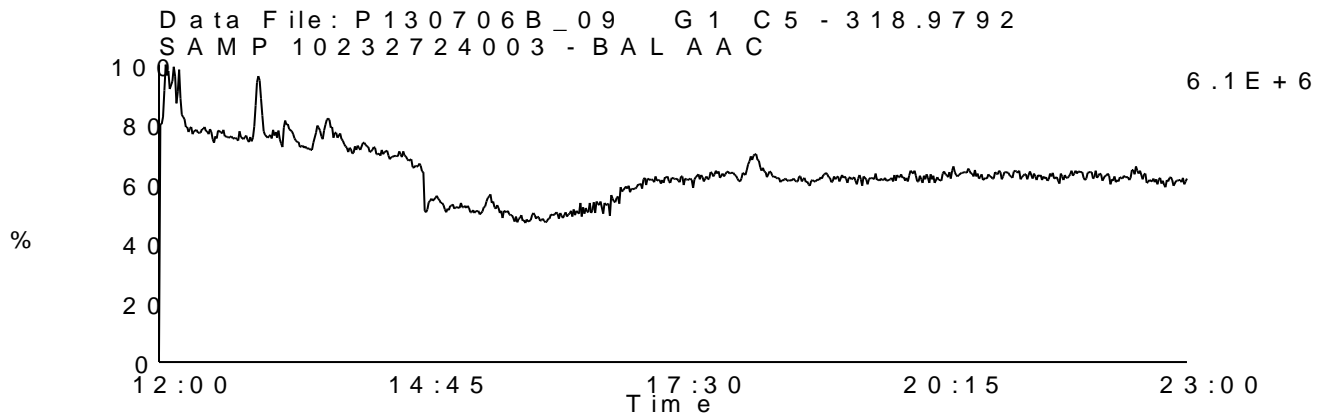
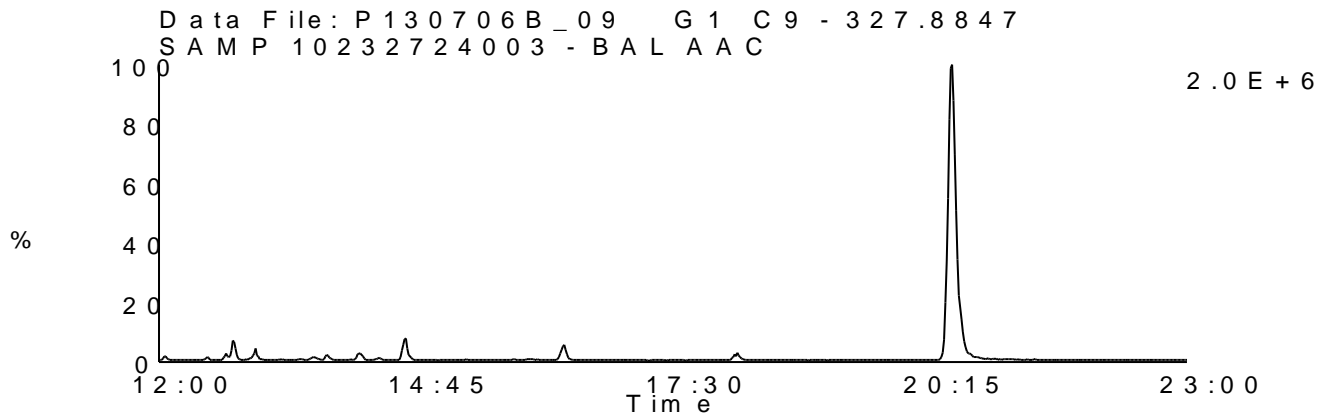
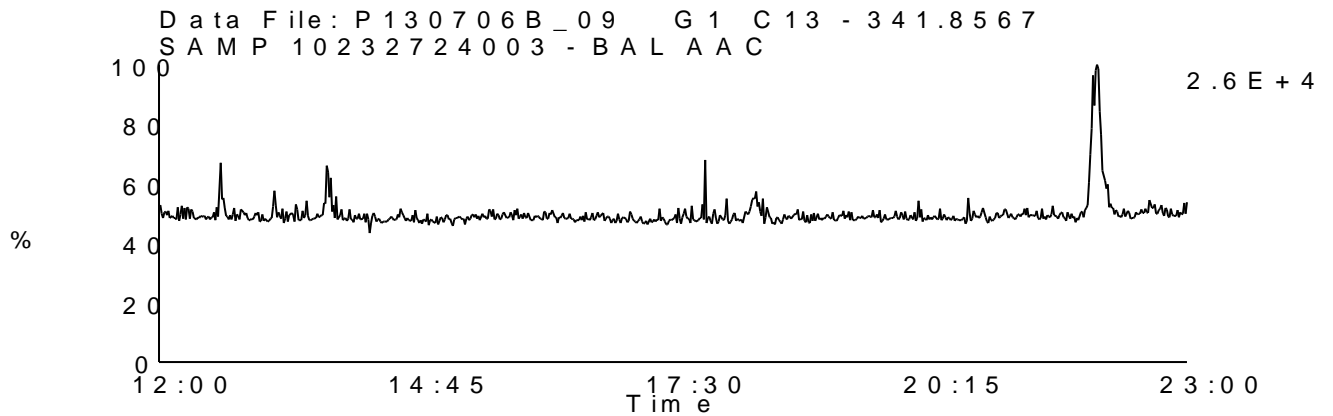
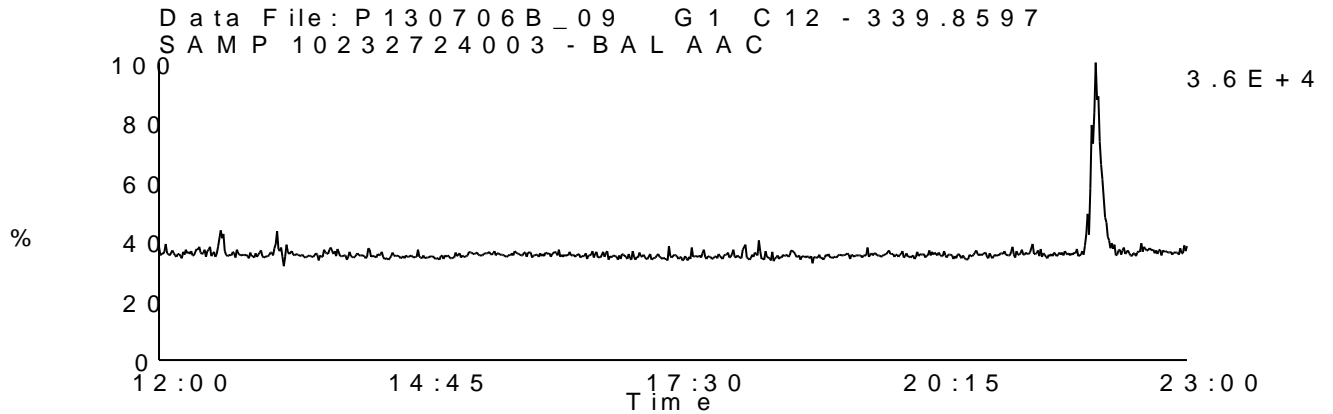
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724003 - BAL AAC

Lab Sample ID: 10232724003

Client Sample ID: BZ-1A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Pentas

Data File Name: P130706B_09

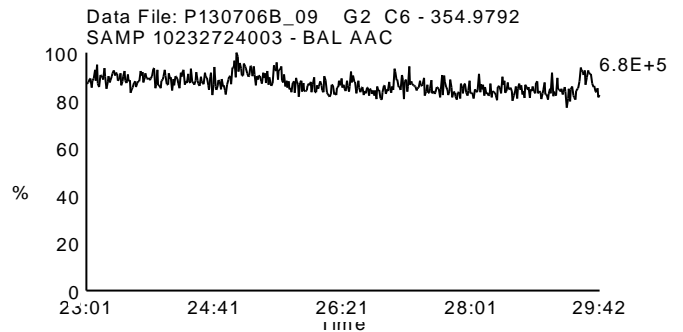
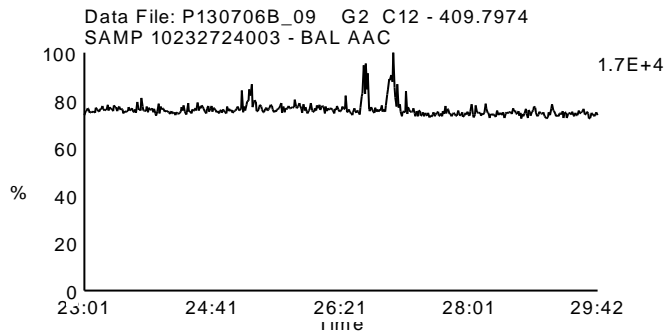
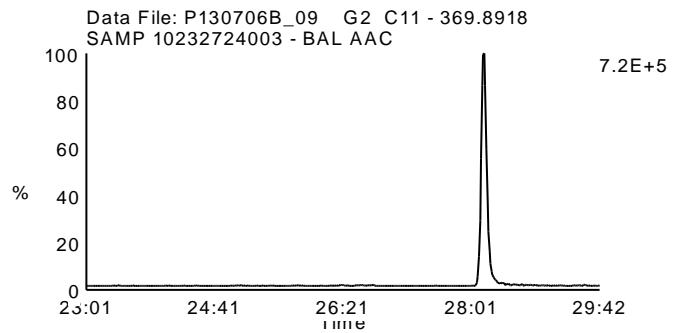
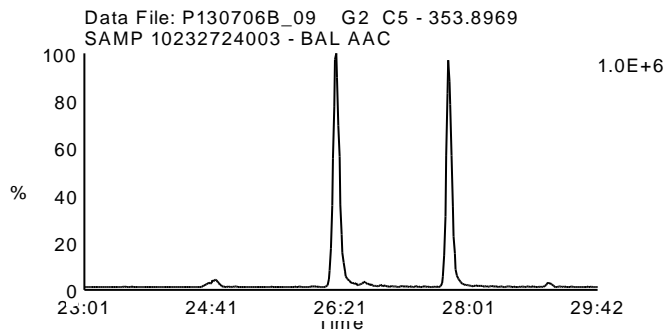
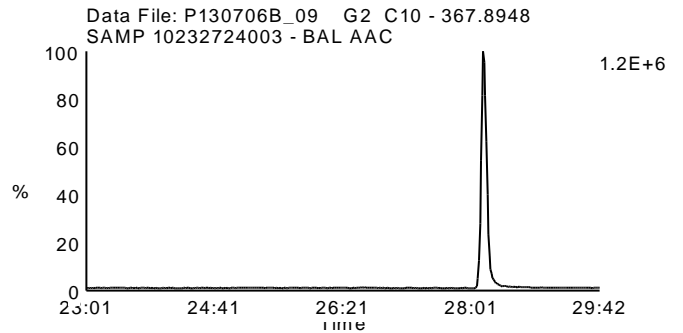
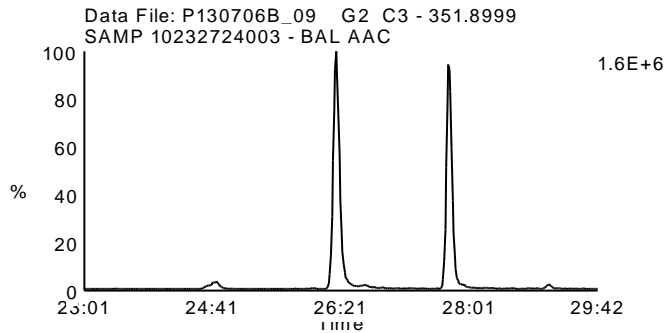
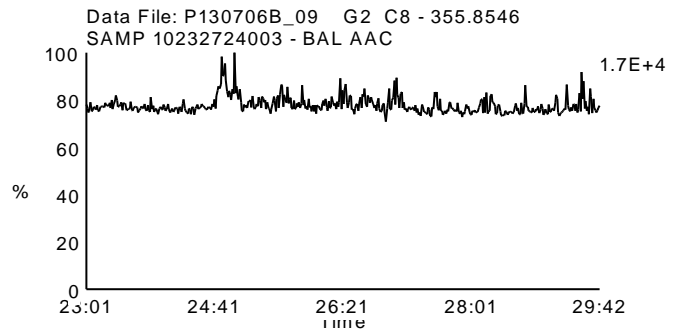
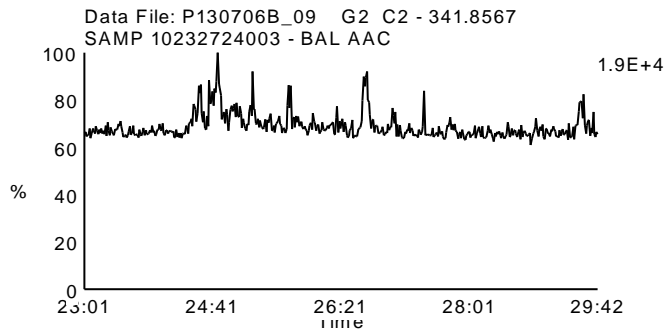
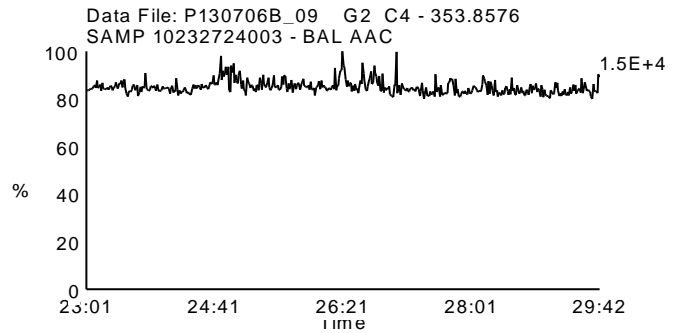
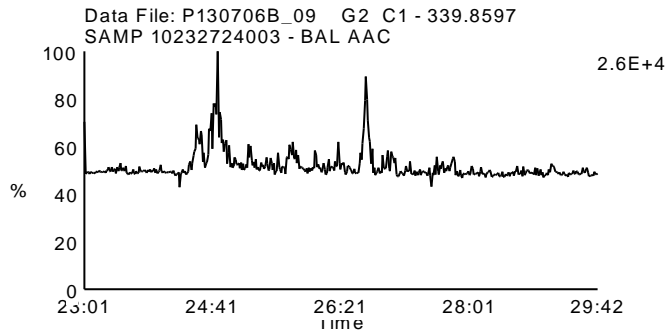
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724003 - BAL AAC

Lab Sample ID: 10232724003

Client Sample ID: BZ-1A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Hexas

Data File Name: P130706B_09

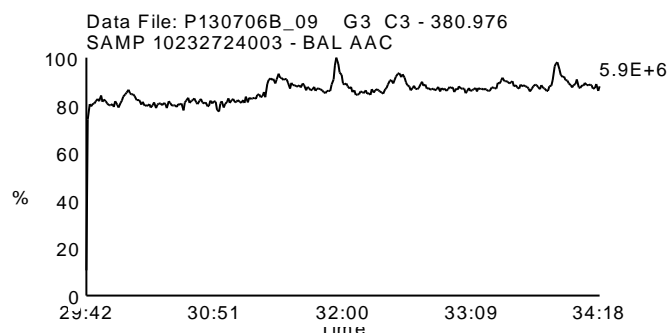
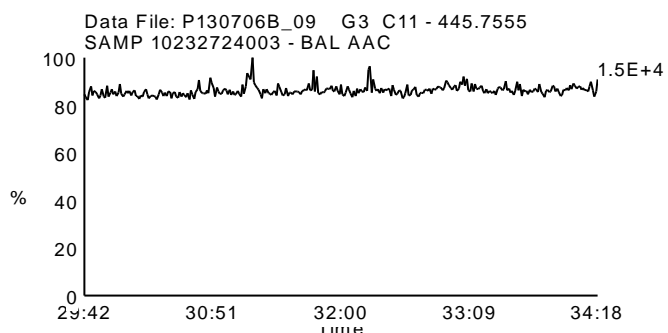
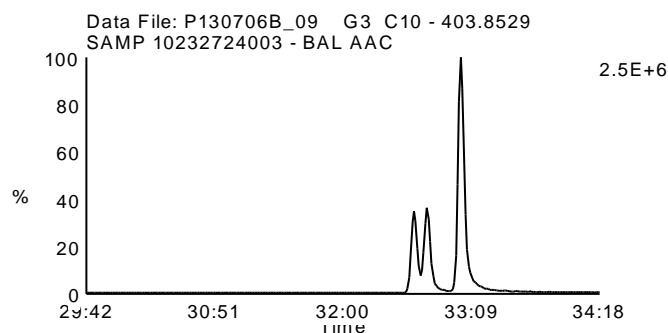
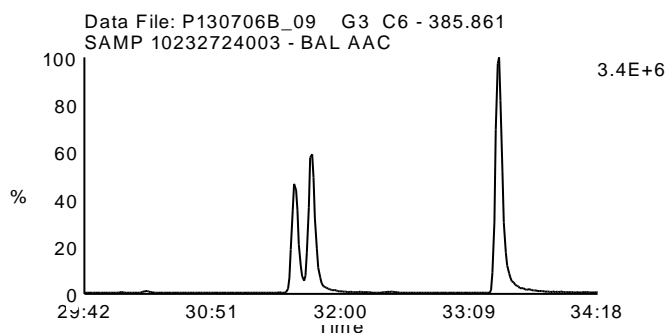
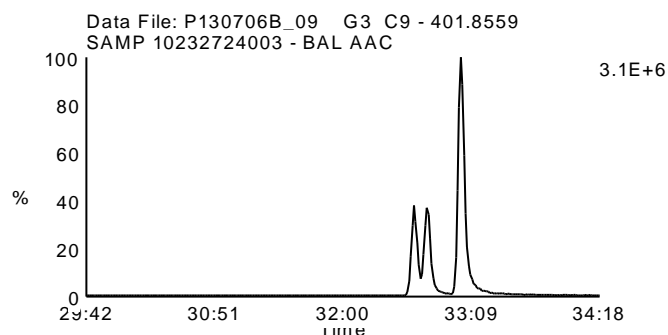
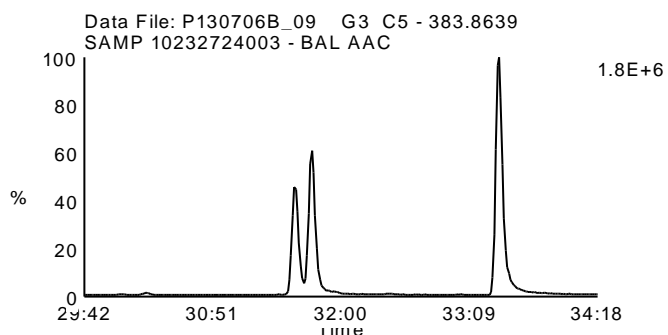
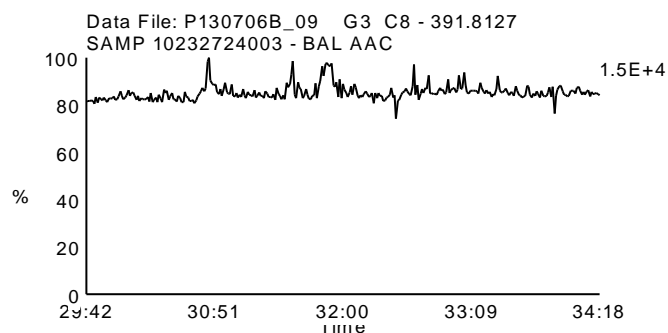
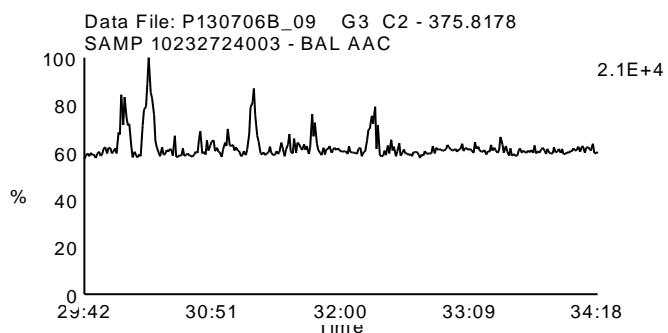
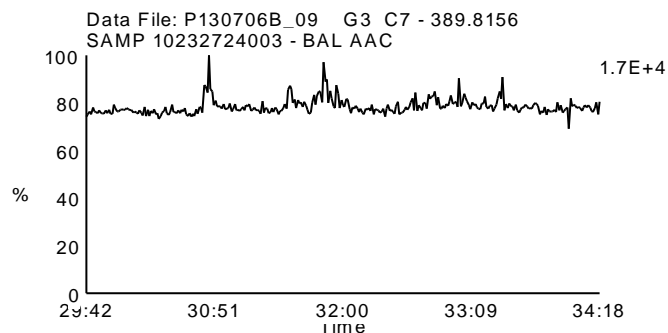
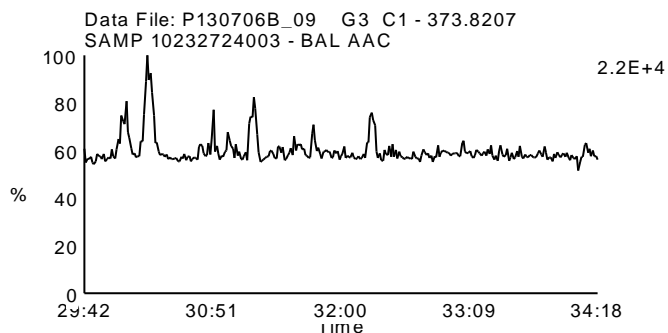
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724003 - BAL AAC

Lab Sample ID: 10232724003

Client Sample ID: BZ-1A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Heptas

Data File Name: P130706B_09

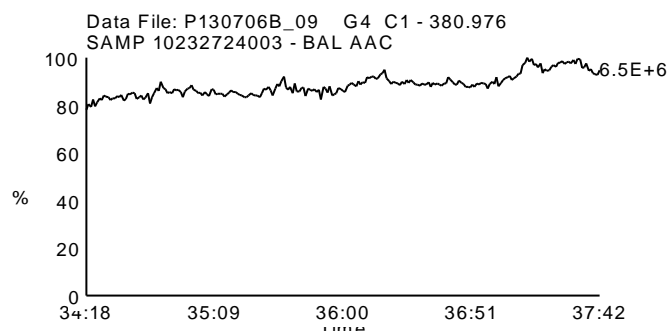
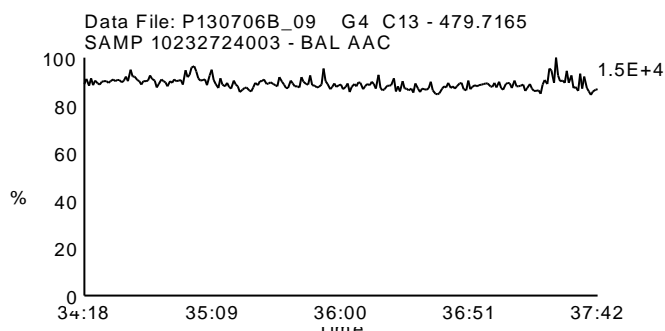
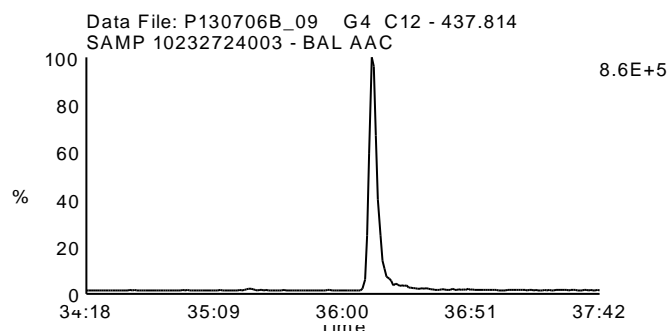
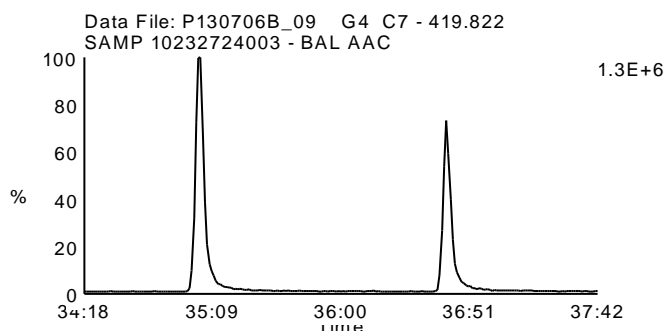
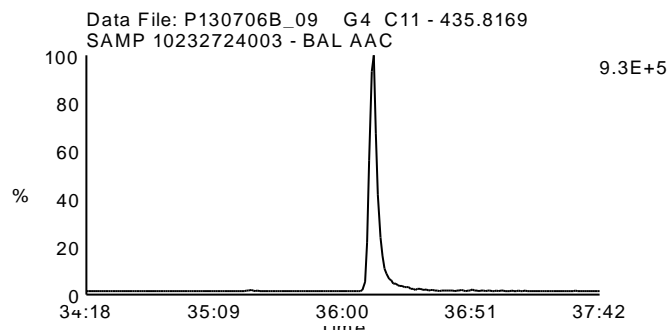
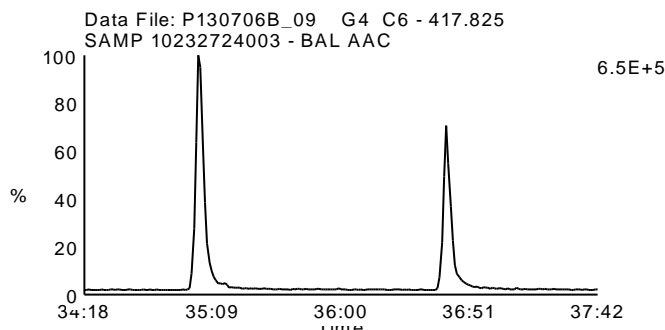
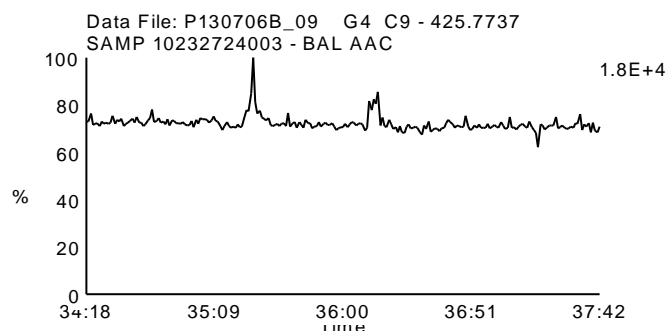
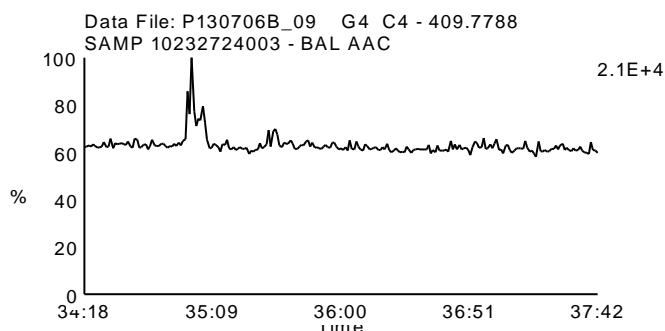
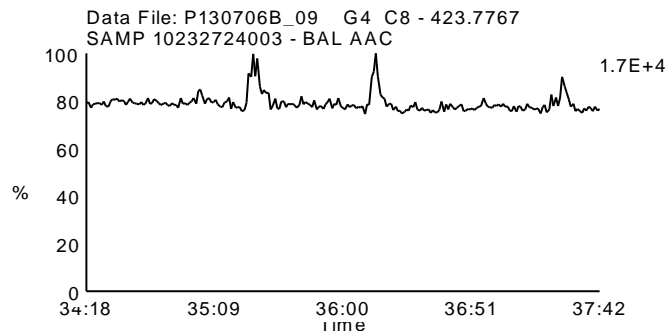
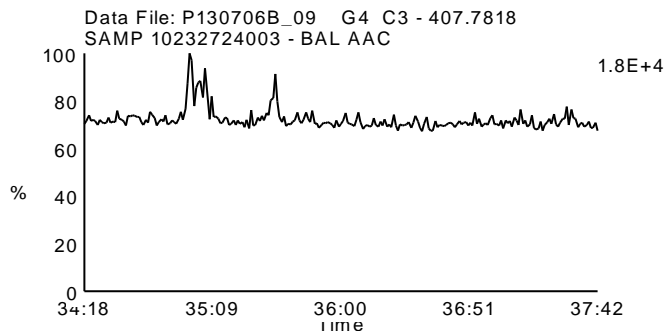
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724003 - BAL AAC

Lab Sample ID: 10232724003

Client Sample ID: BZ-1A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Octas

Data File Name: P130706B_09

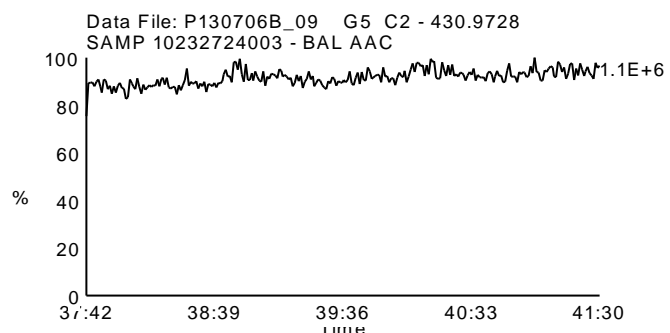
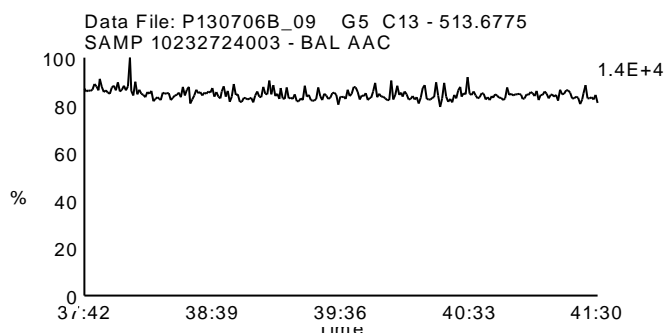
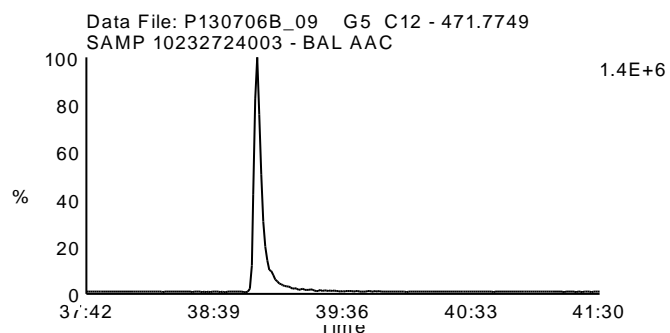
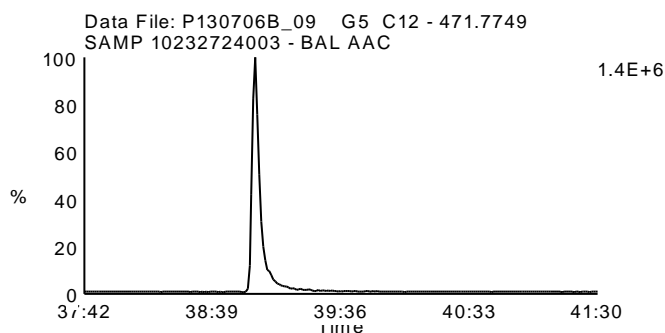
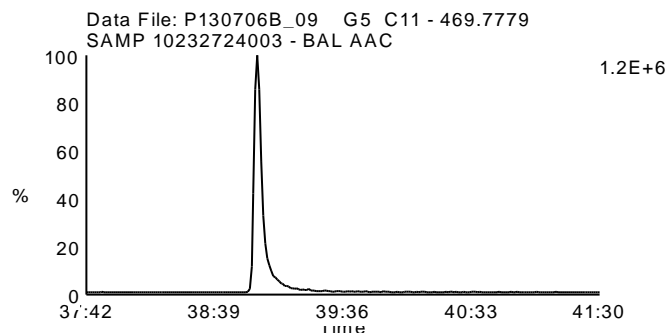
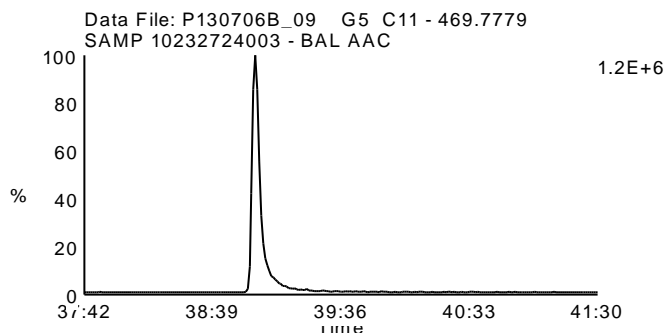
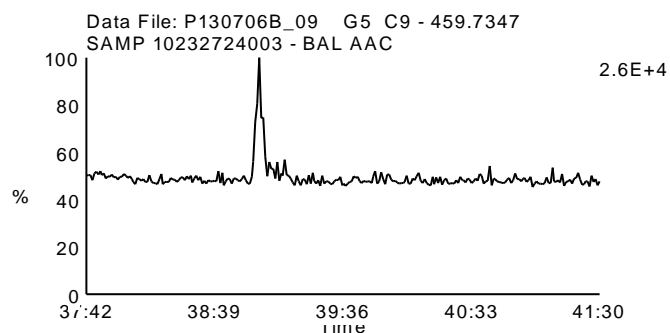
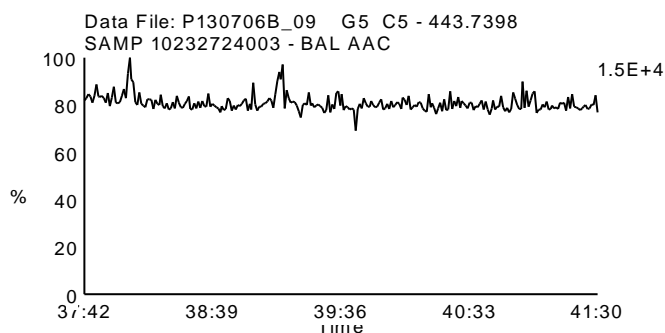
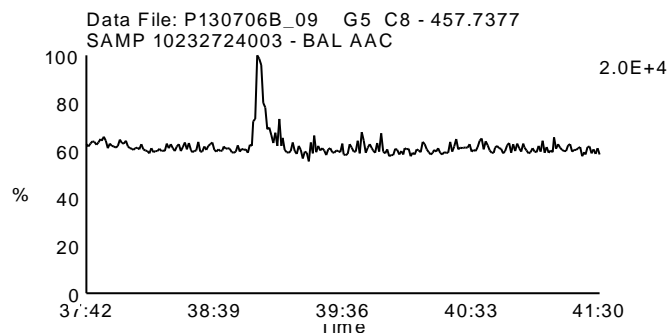
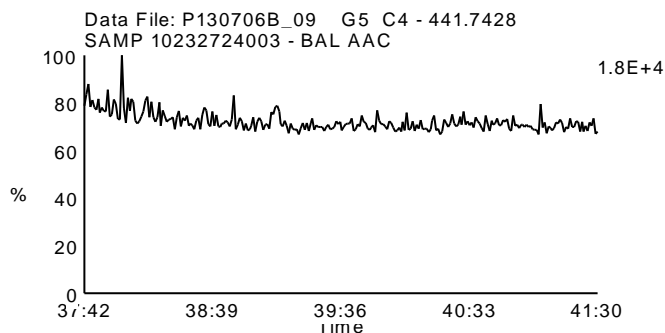
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724003 - BAL AAC

Lab Sample ID: 10232724003

Client Sample ID: BZ-1A PUF

Instrument: 10MSHR09 (P)



Homologue Group: Tetras

Data File Name: P130706B_08

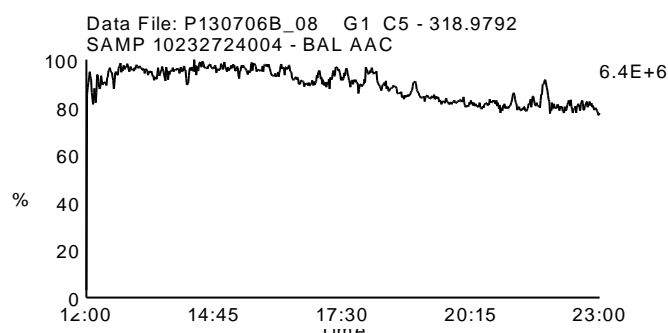
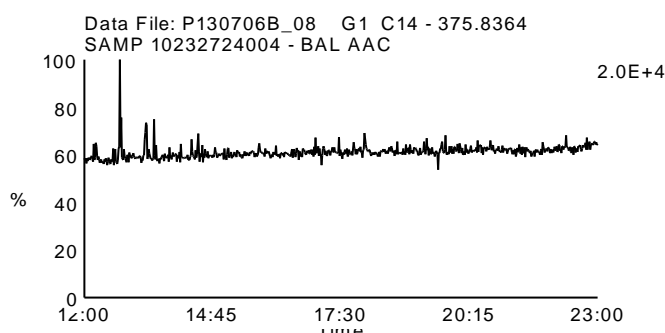
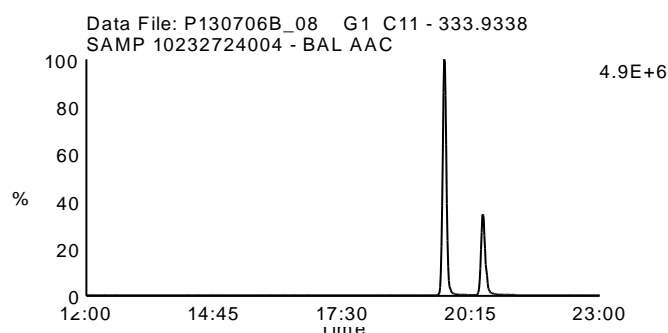
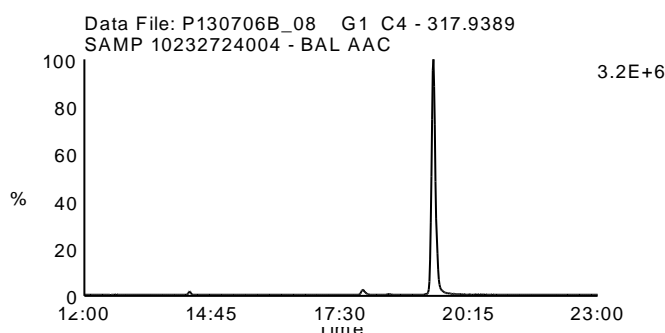
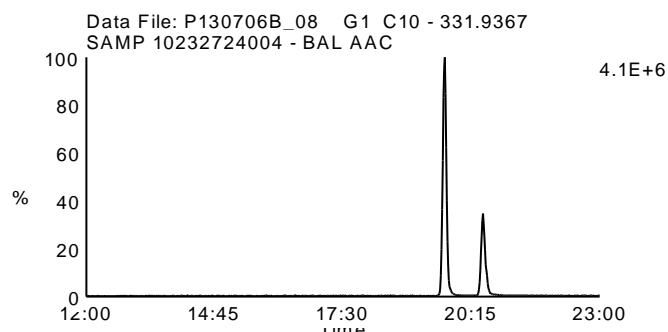
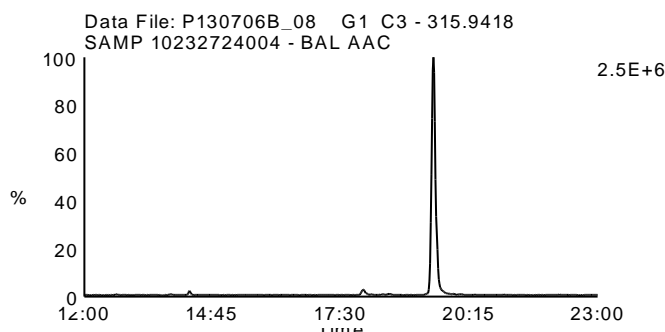
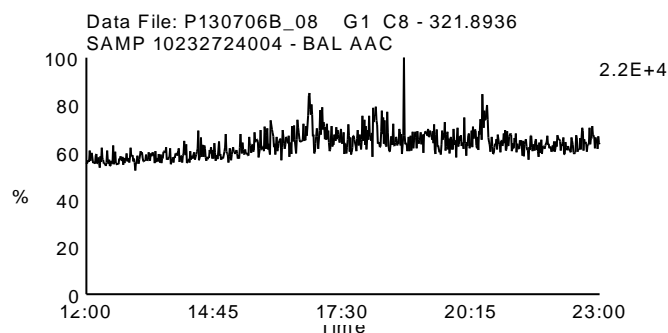
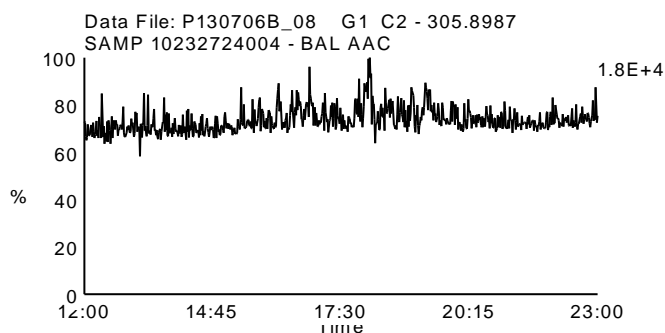
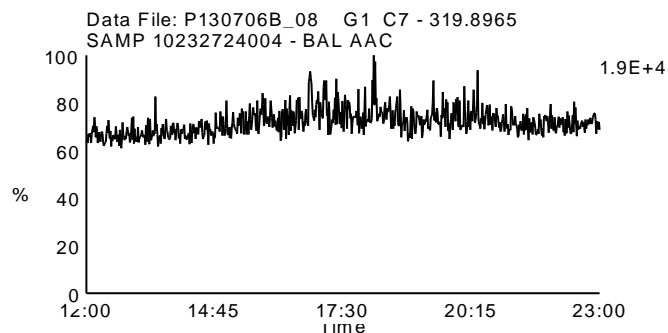
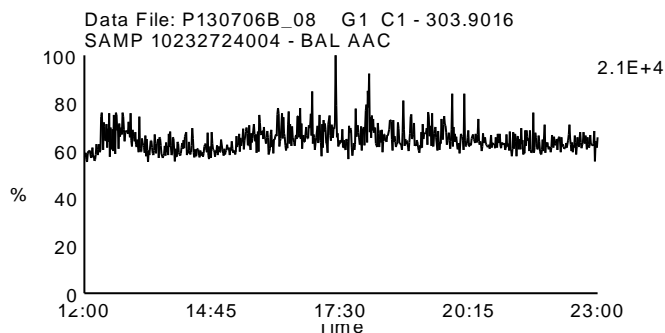
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724004 - BAL AAC

Lab Sample ID: 10232724004

Client Sample ID: F1-A PUF,LIQ

Instrument: 10MSHR09 (P)



Homologue Group: Penta & Cleanup

Data File Name: P130706B_08

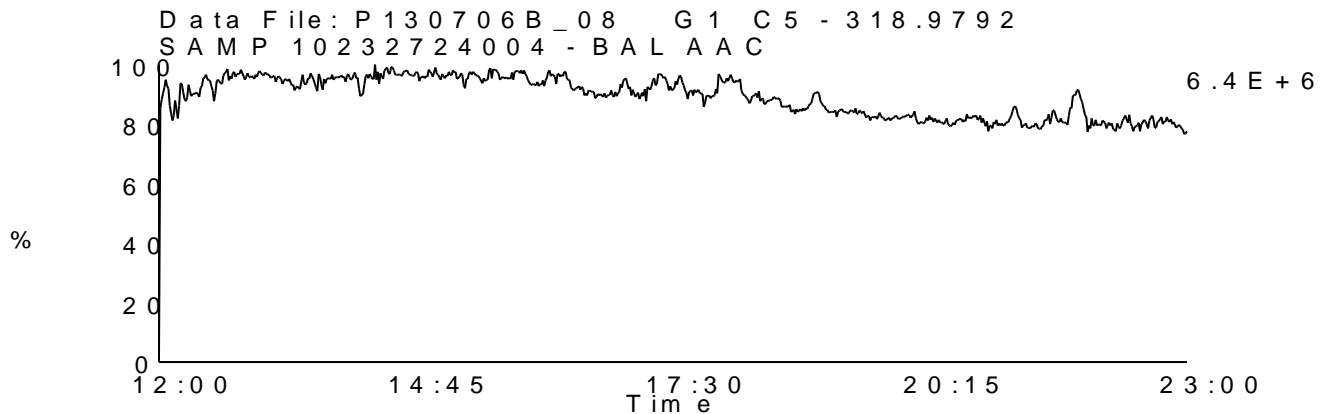
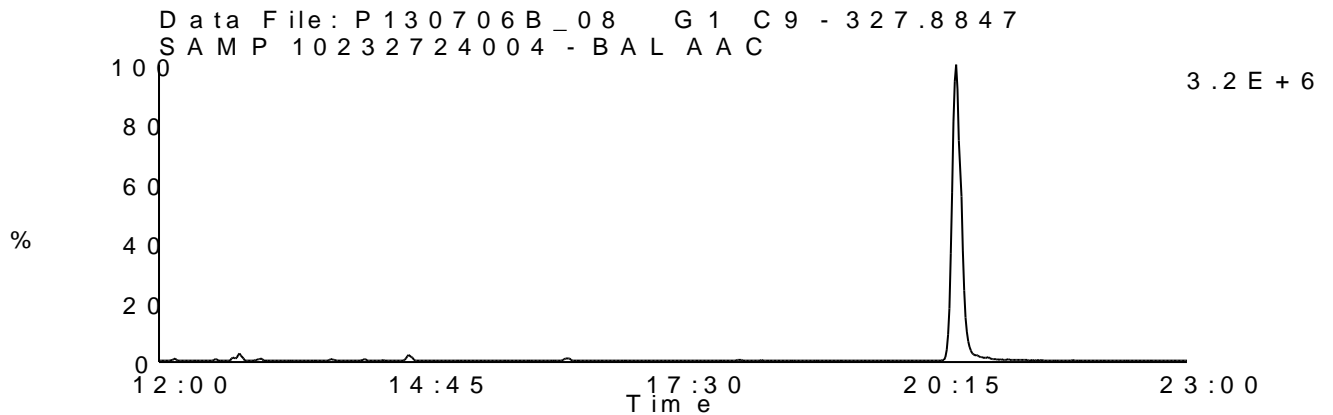
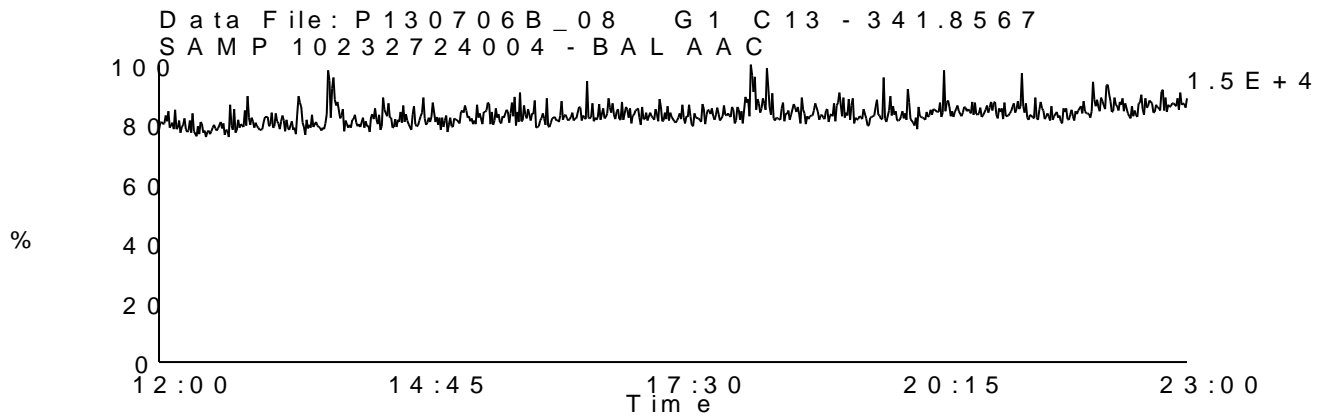
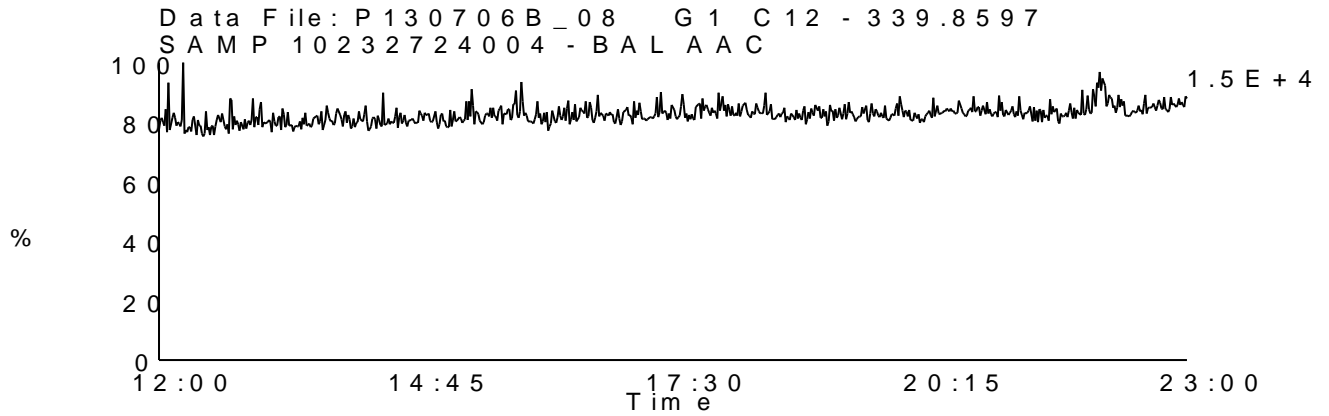
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724004 - BAL AAC

Lab Sample ID: 10232724004

Client Sample ID: F1-A PUF,LIQ

Instrument: 10MSHR09 (P)



Homologue Group: Pentas

Data File Name: P130706B_08

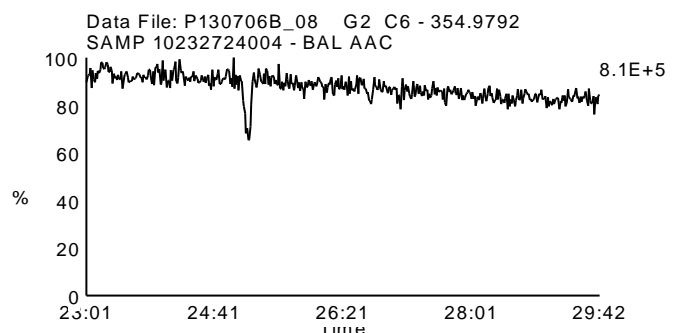
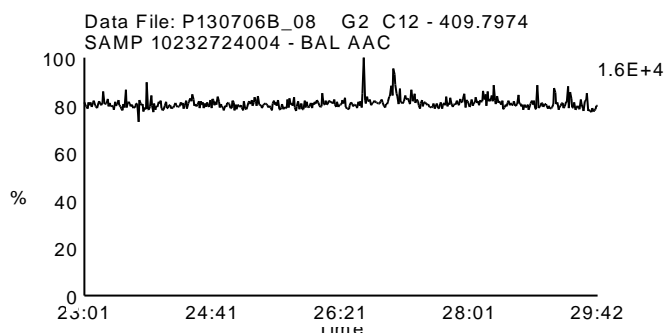
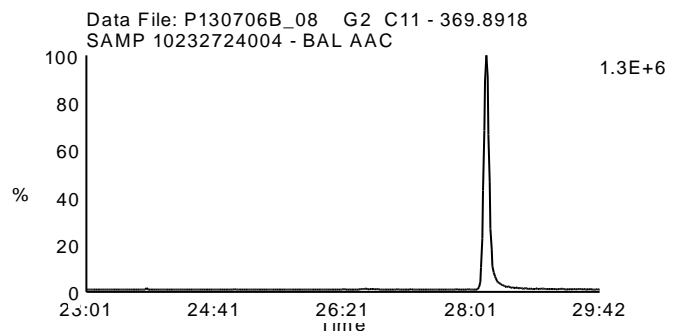
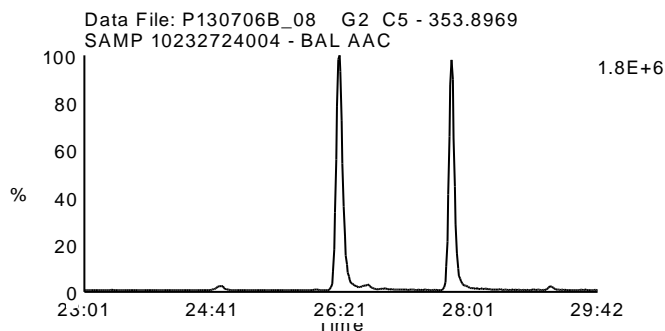
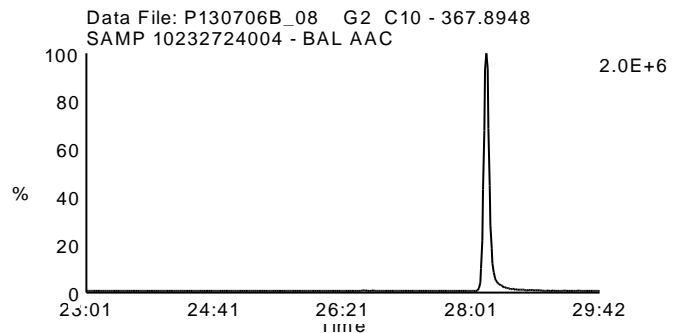
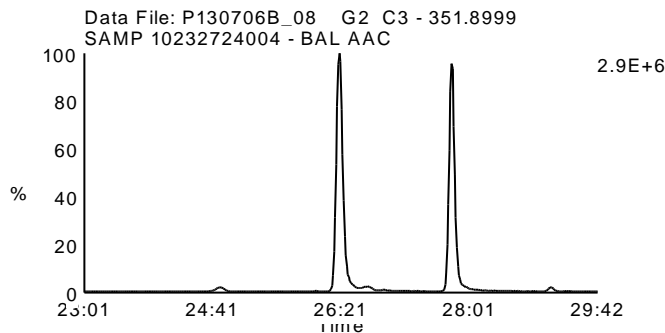
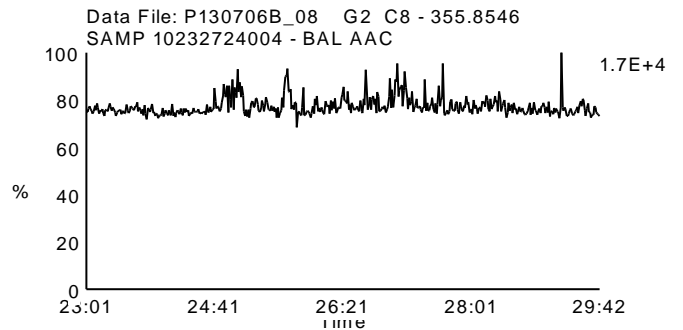
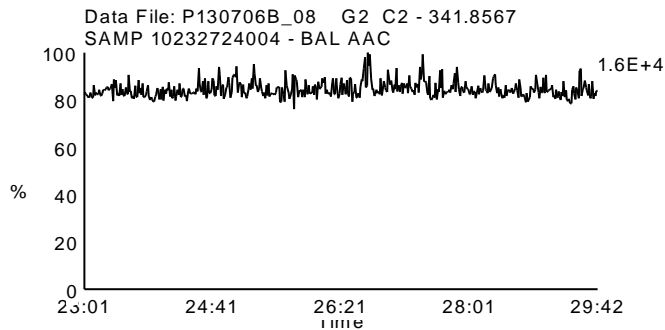
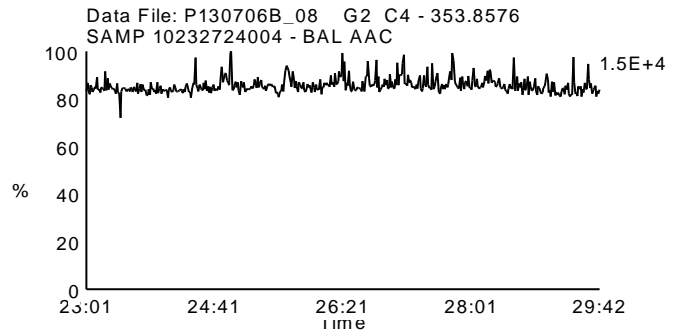
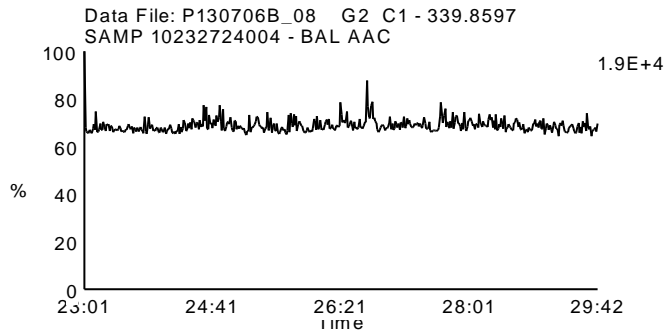
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724004 - BAL AAC

Lab Sample ID: 10232724004

Client Sample ID: F1-A PUF,LIQ

Instrument: 10MSHR09 (P)



Homologue Group: Hexas

Data File Name: P130706B_08

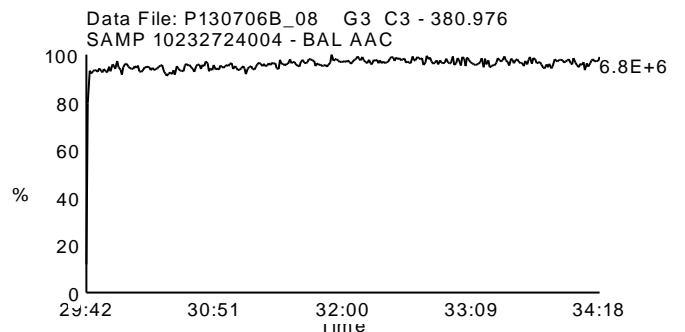
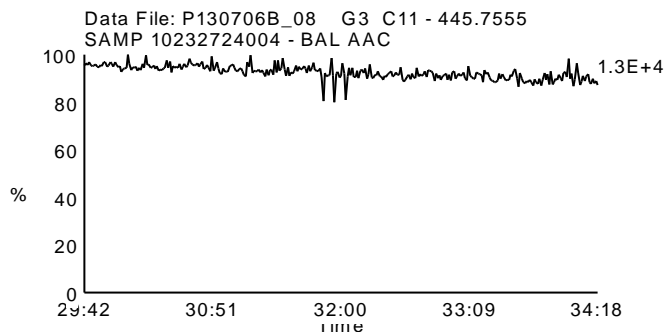
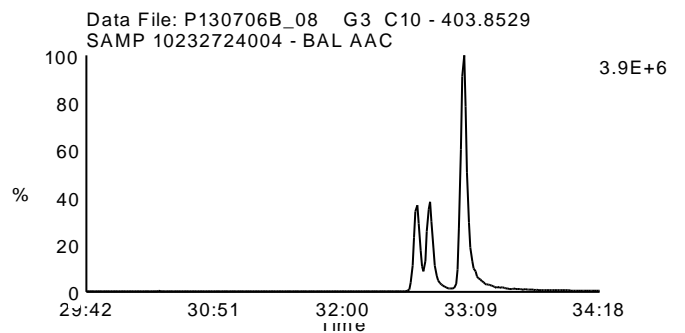
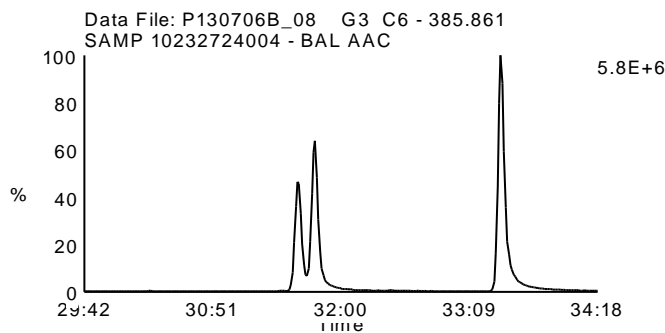
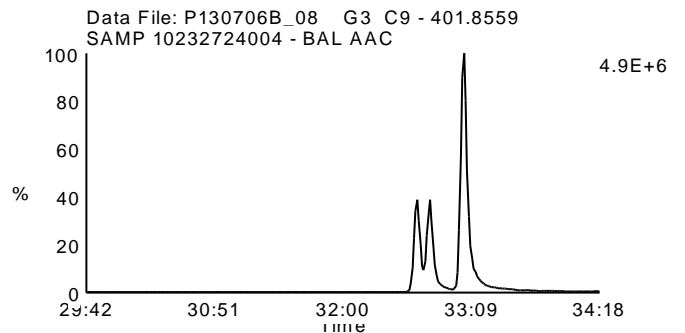
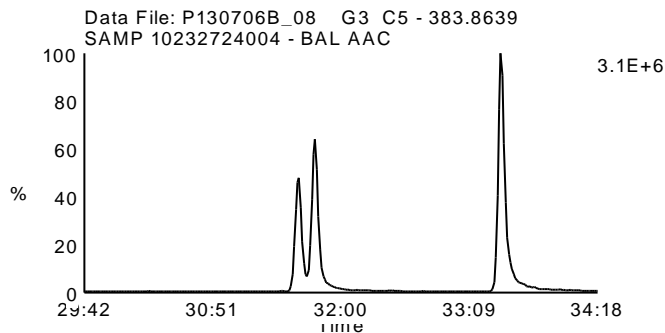
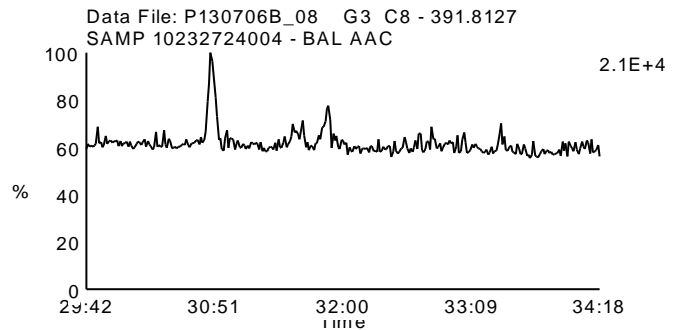
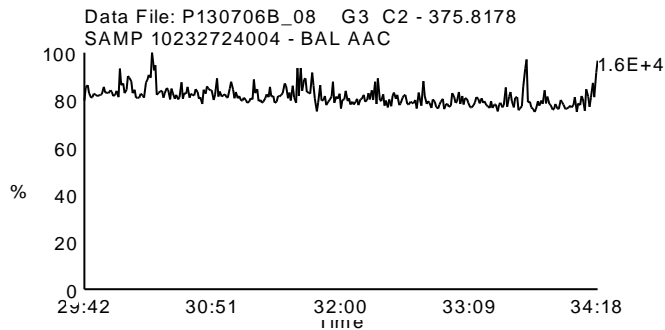
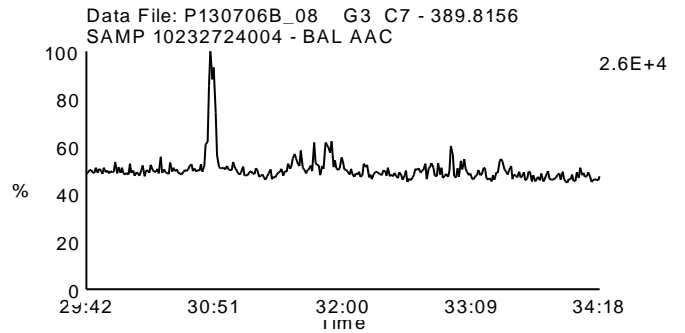
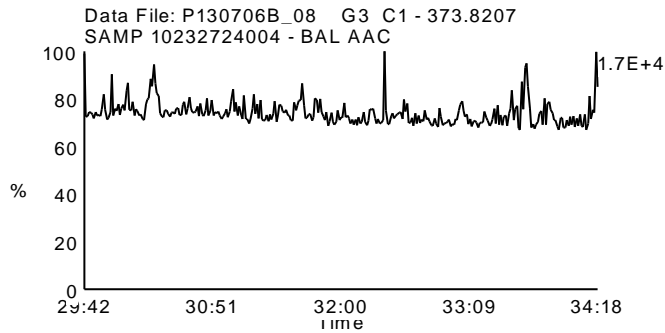
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724004 - BAL AAC

Lab Sample ID: 10232724004

Client Sample ID: F1-A PUF,LIQ

Instrument: 10MSHR09 (P)



Homologue Group: Heptas

Data File Name: P130706B_08

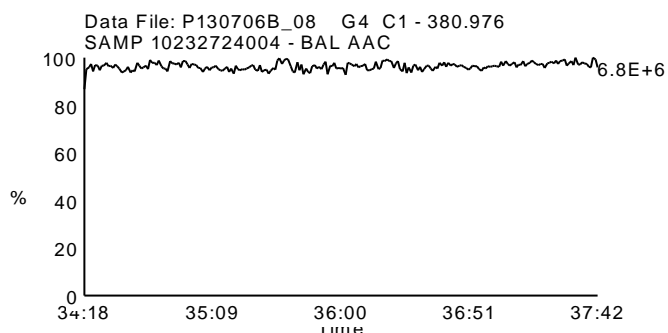
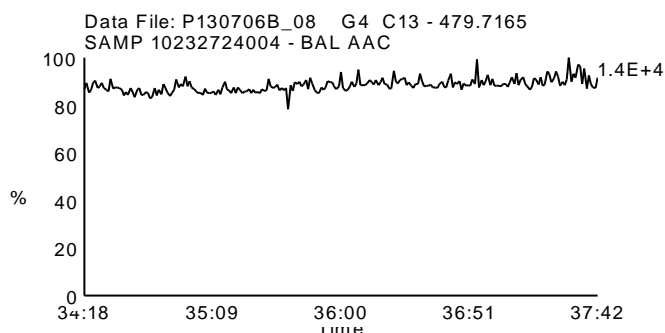
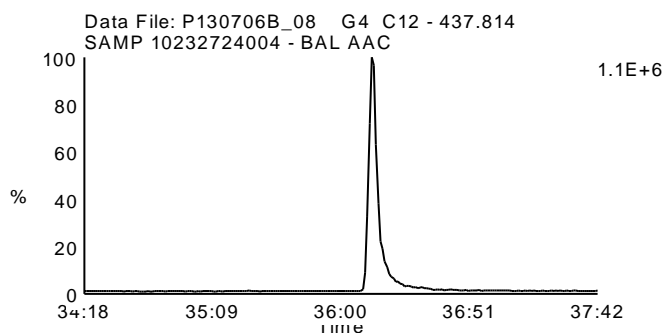
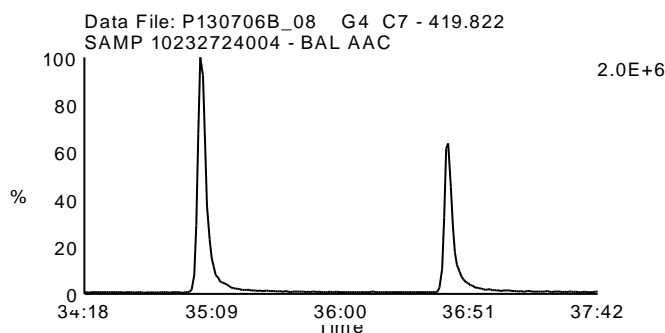
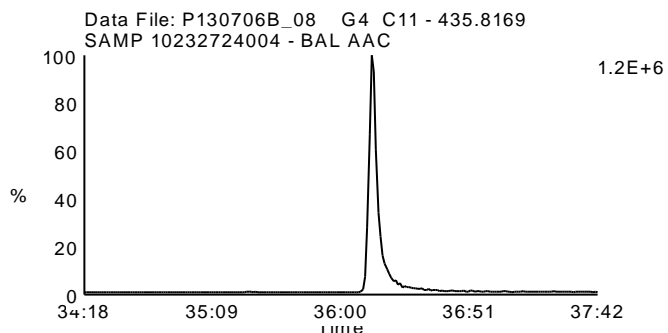
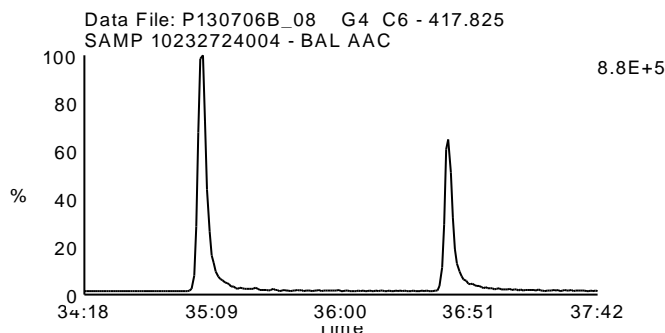
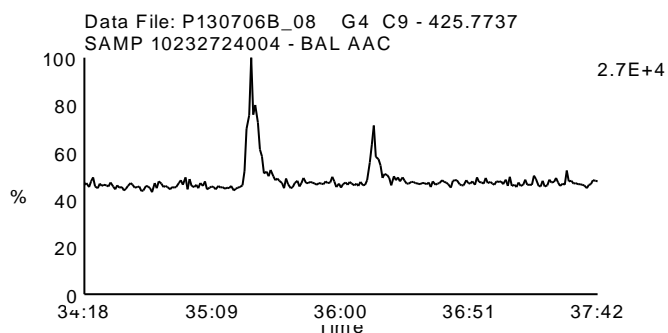
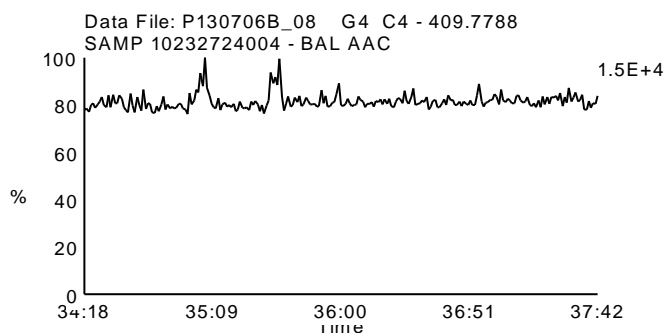
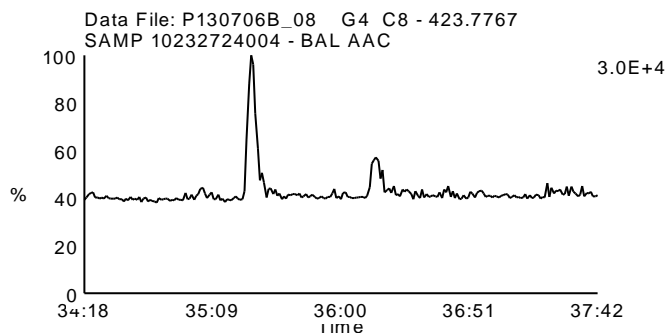
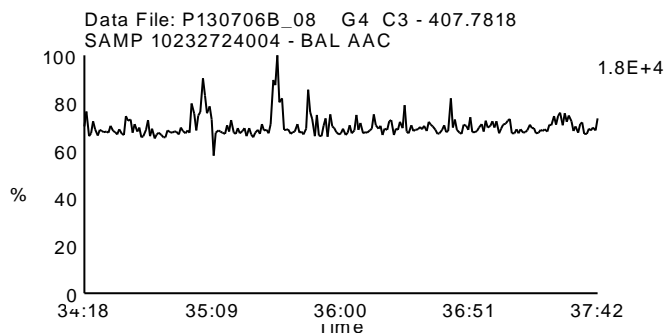
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724004 - BAL AAC

Lab Sample ID: 10232724004

Client Sample ID: F1-A PUF,LIQ

Instrument: 10MSHR09 (P)



Homologue Group: Octas

Data File Name: P130706B_08

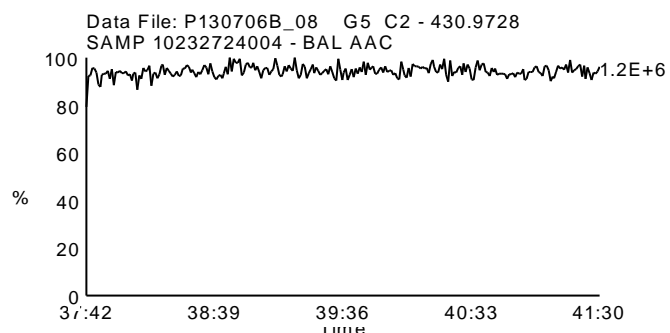
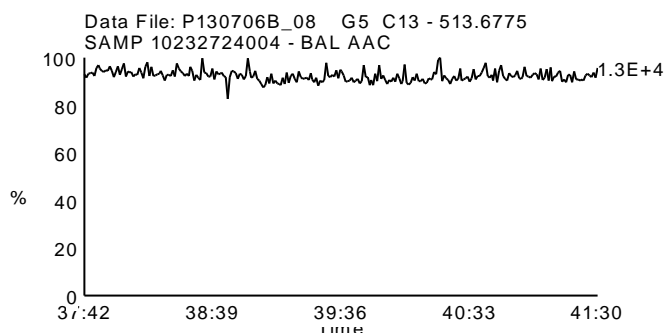
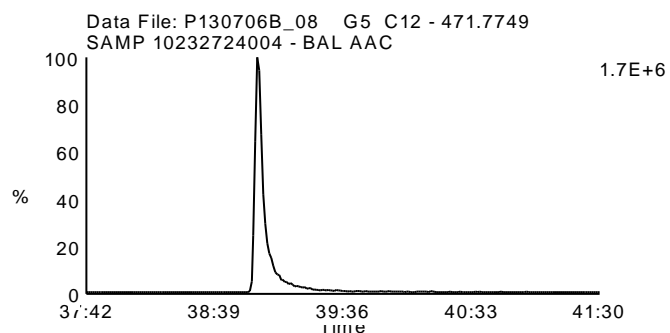
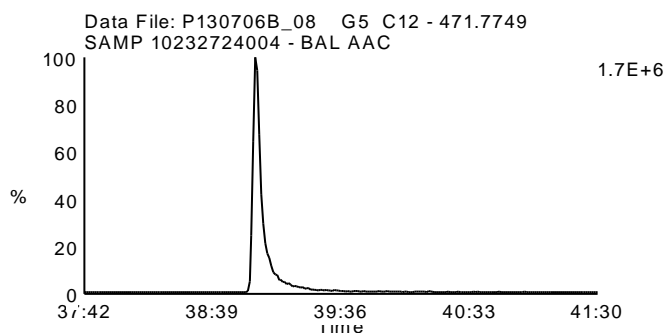
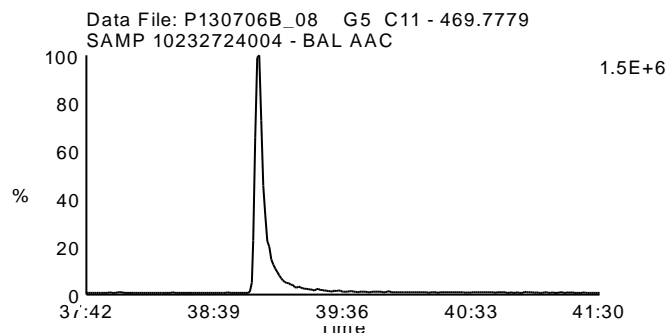
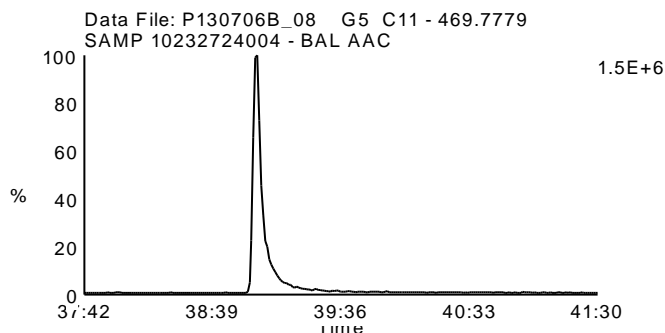
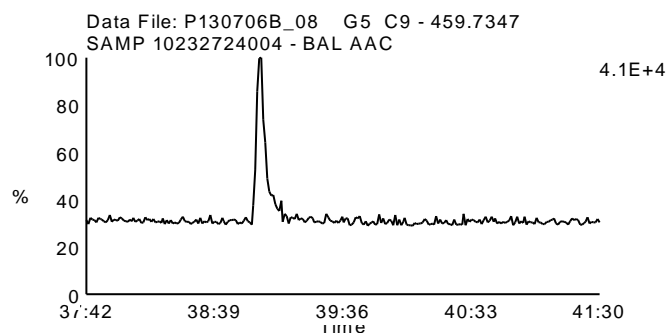
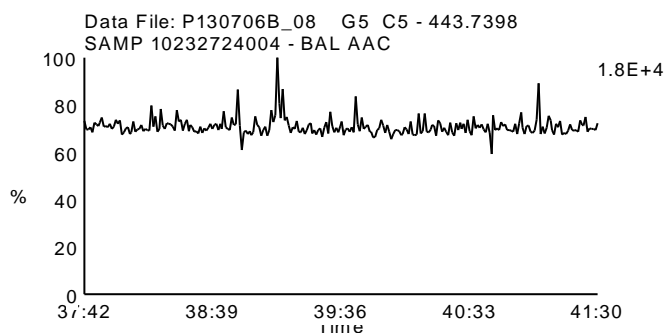
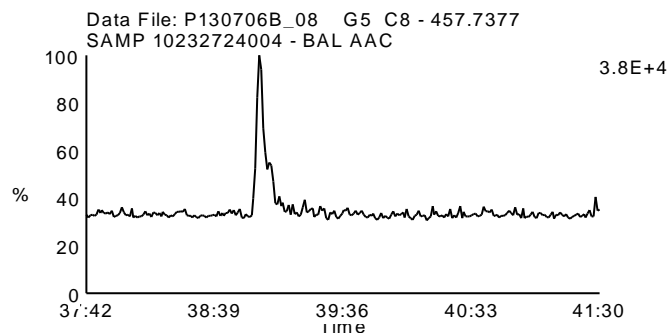
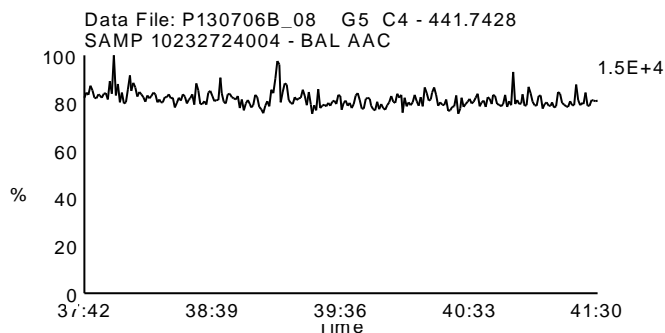
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724004 - BAL AAC

Lab Sample ID: 10232724004

Client Sample ID: F1-A PUF,LIQ

Instrument: 10MSHR09 (P)



Homologue Group: Tetras

Data File Name: P130706B_07

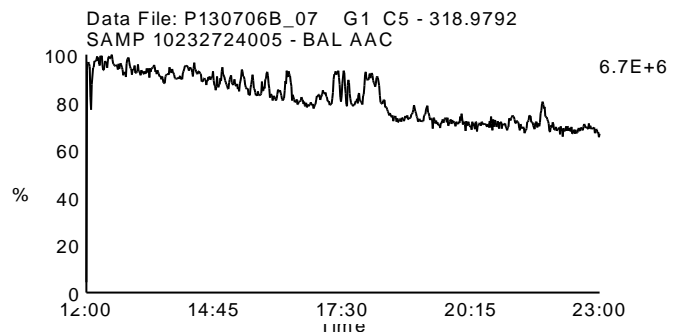
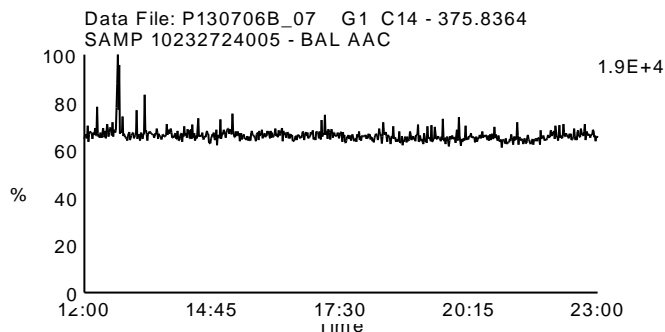
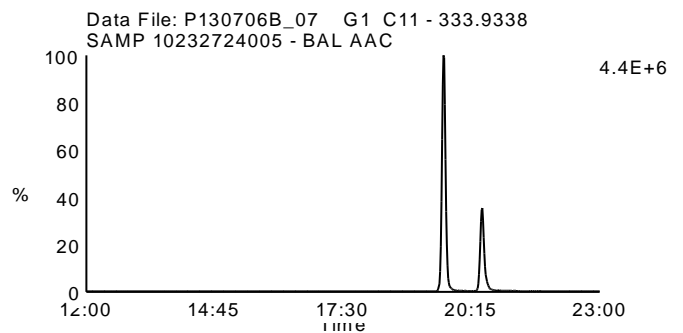
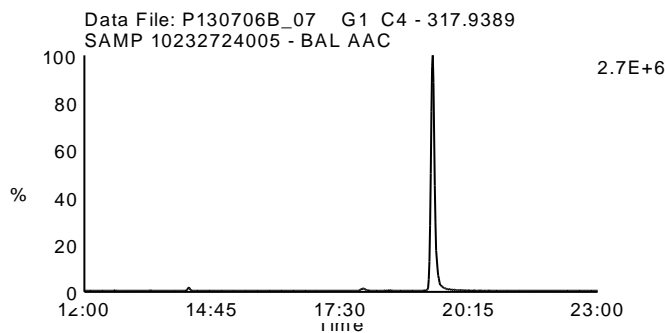
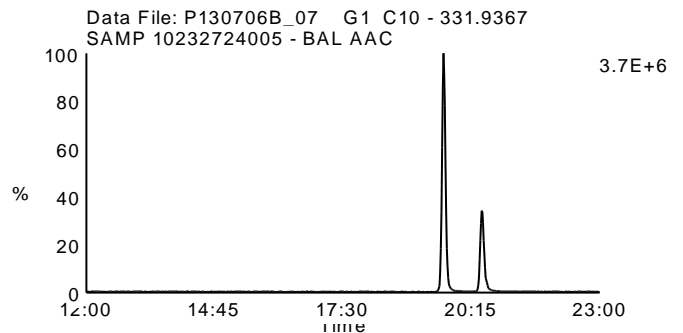
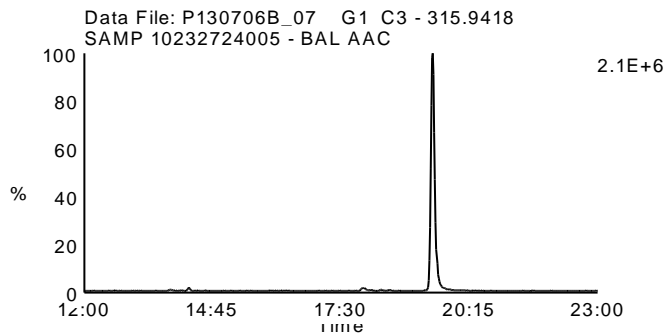
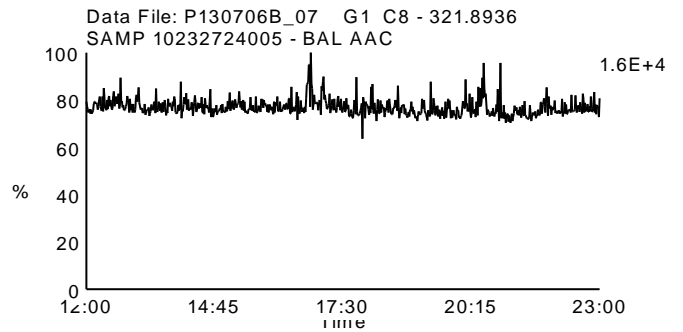
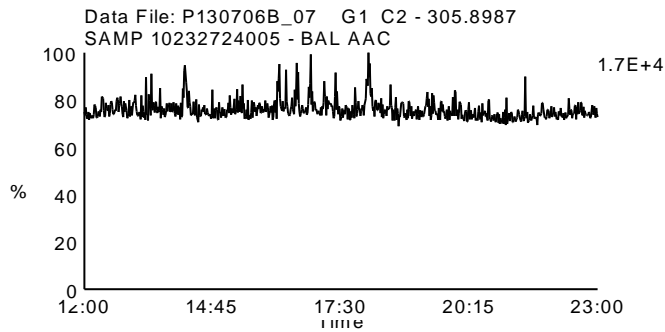
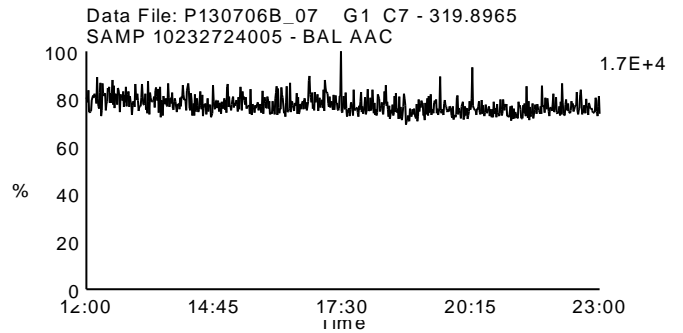
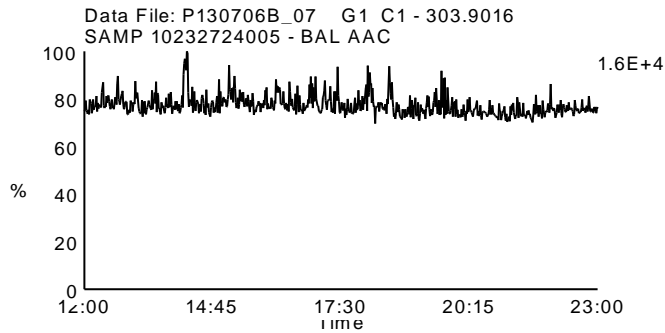
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724005 - BAL AAC

Lab Sample ID: 10232724005

Client Sample ID: F2-A PUF,LIQ

Instrument: 10MSHR09 (P)



Homologue Group: Penta & Cleanup

Data File Name: P130706B_07

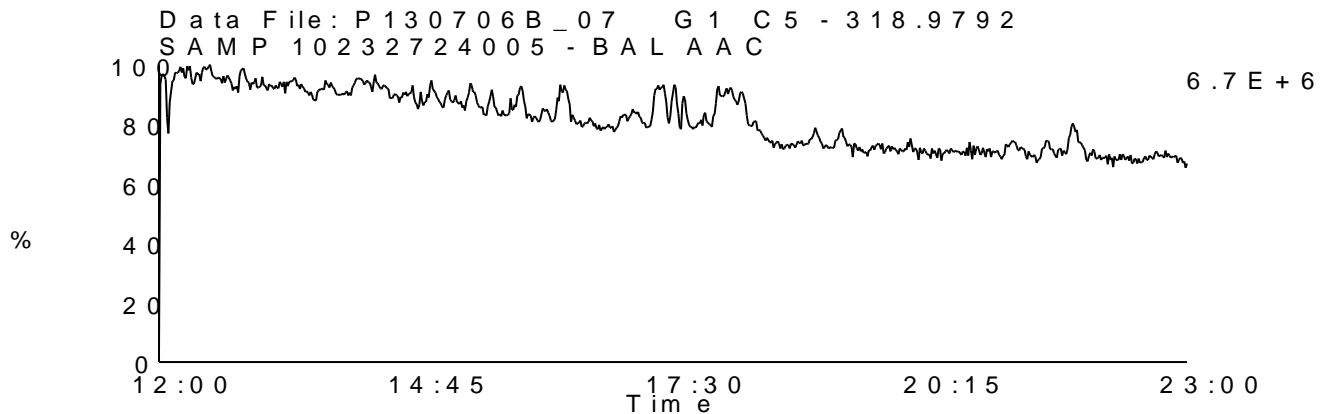
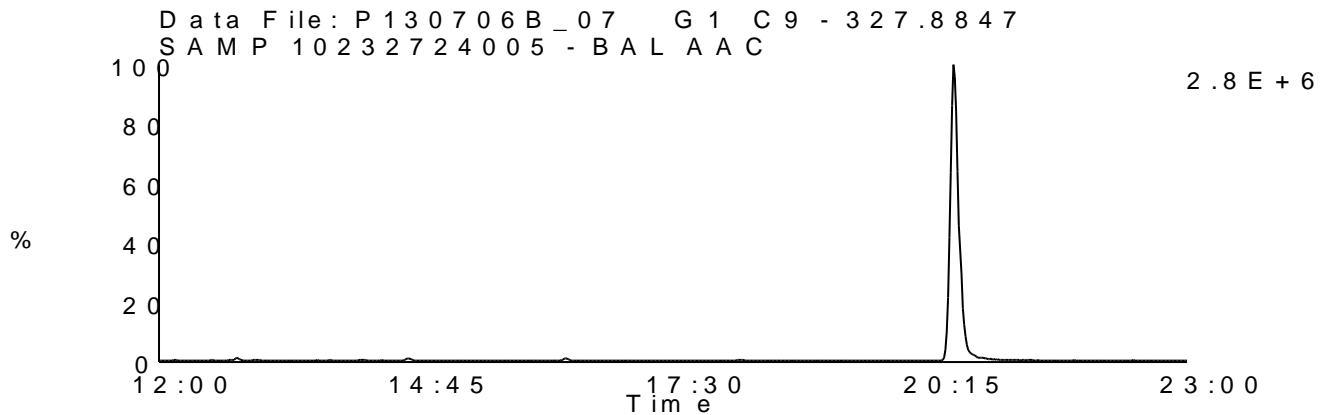
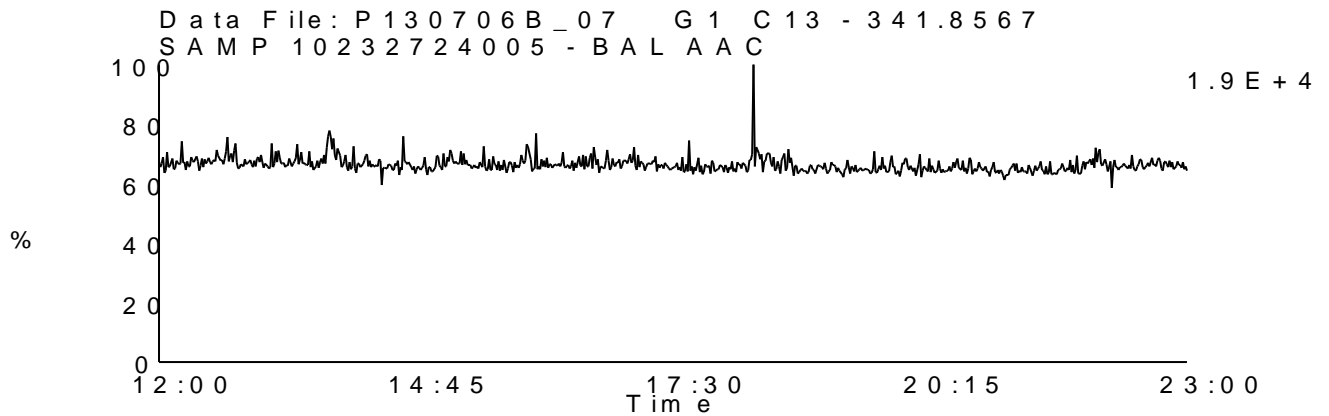
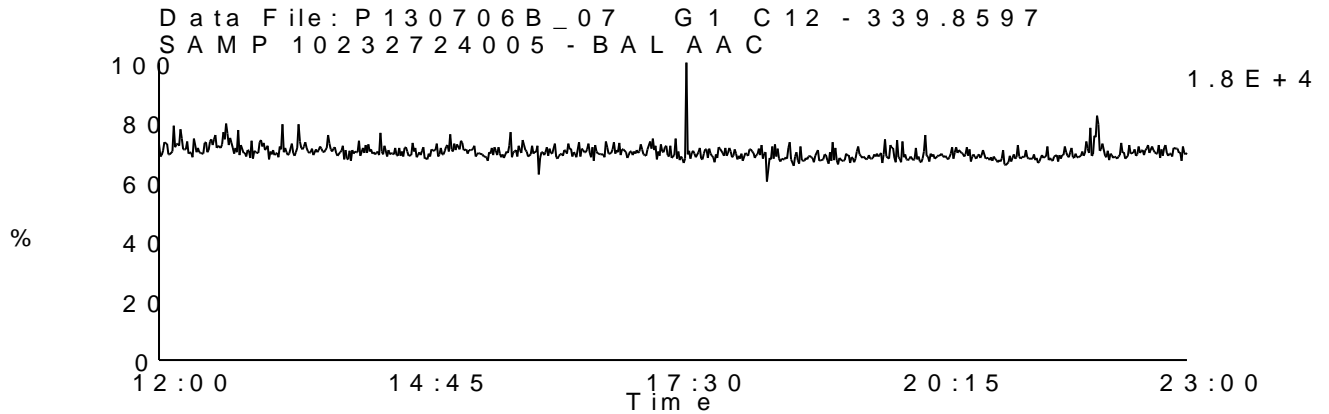
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724005 - BAL AAC

Lab Sample ID: 10232724005

Client Sample ID: F2-A PUF,LIQ

Instrument: 10MSHR09 (P)



Homologue Group: Pentas

Data File Name: P130706B_07

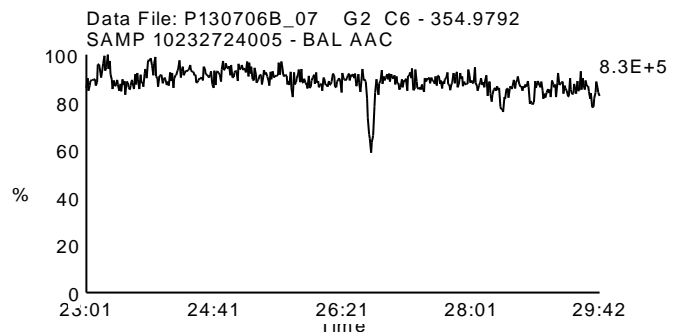
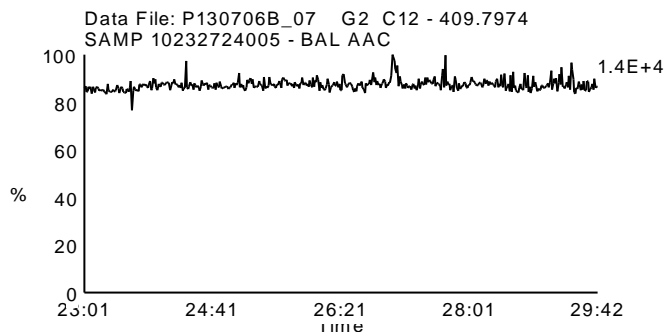
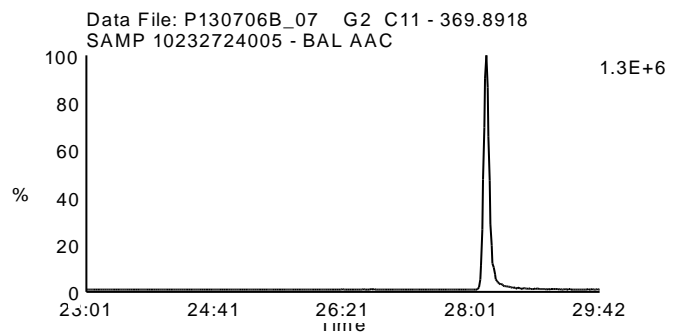
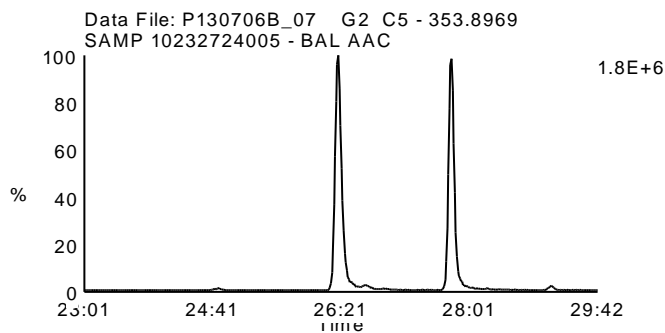
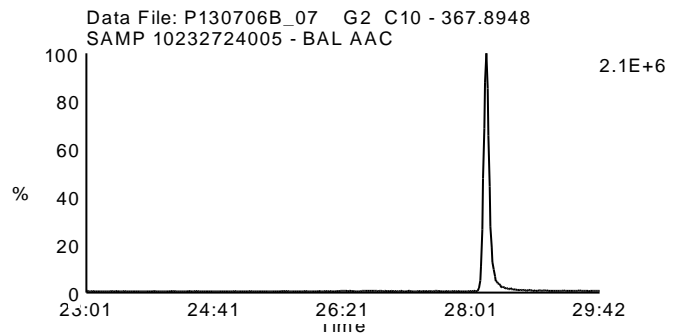
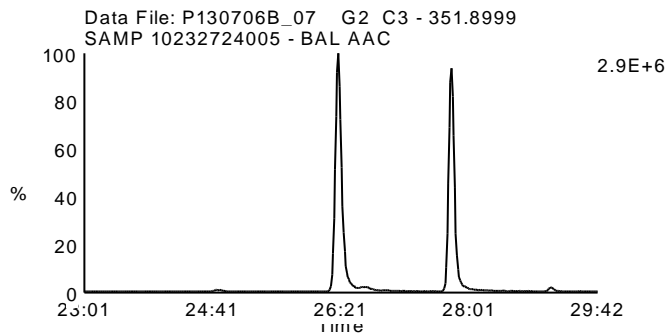
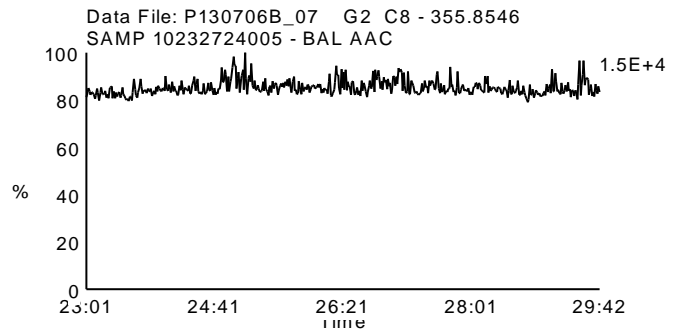
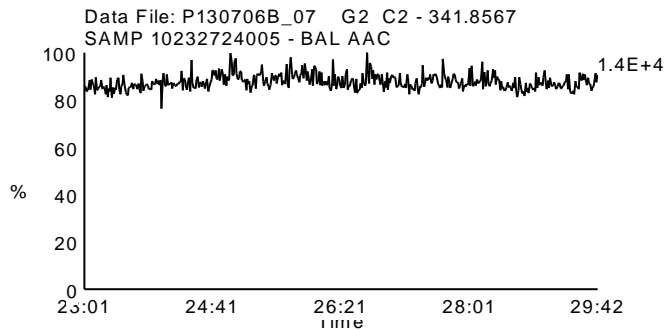
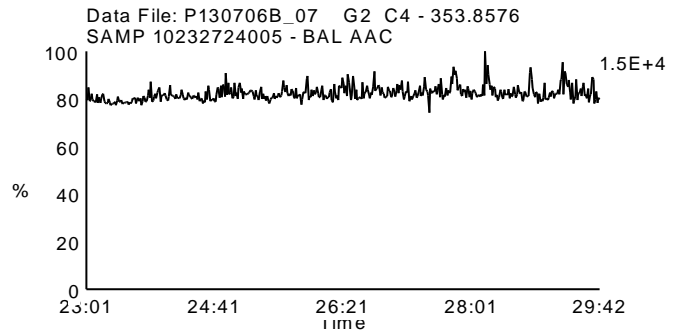
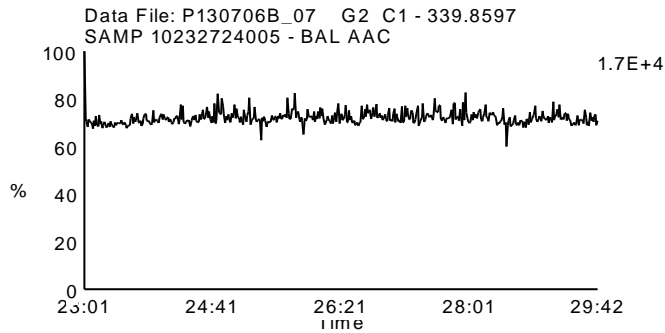
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724005 - BAL AAC

Lab Sample ID: 10232724005

Client Sample ID: F2-A PUF,LIQ

Instrument: 10MSHR09 (P)



Homologue Group: Hexas

Data File Name: P130706B_07

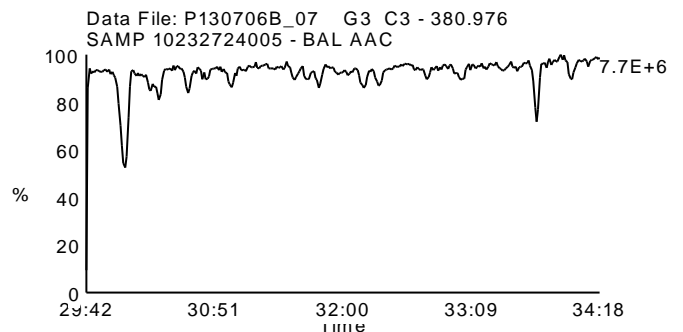
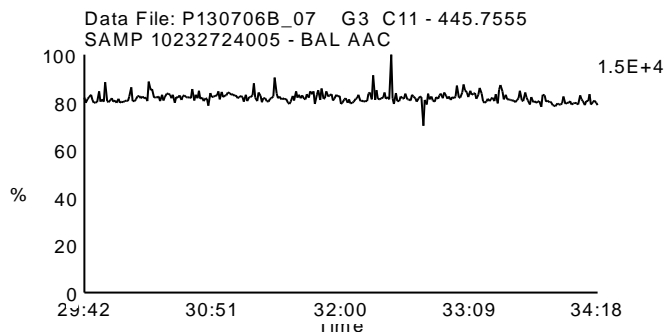
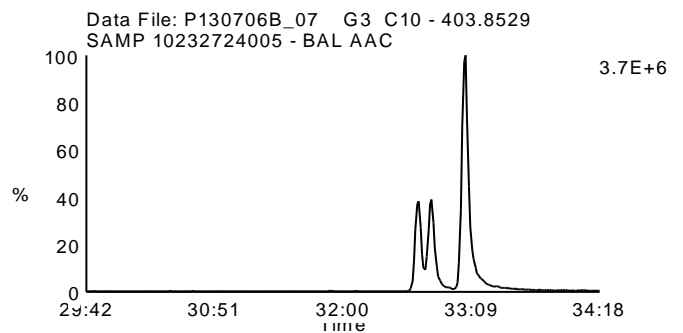
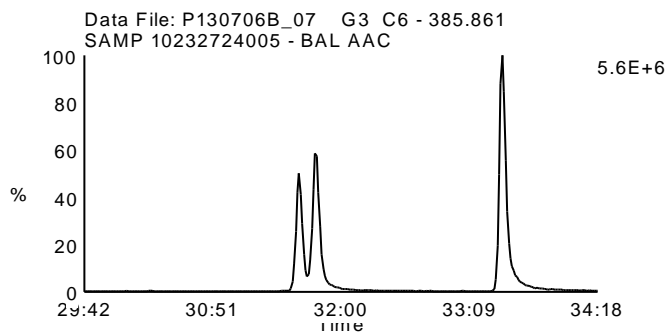
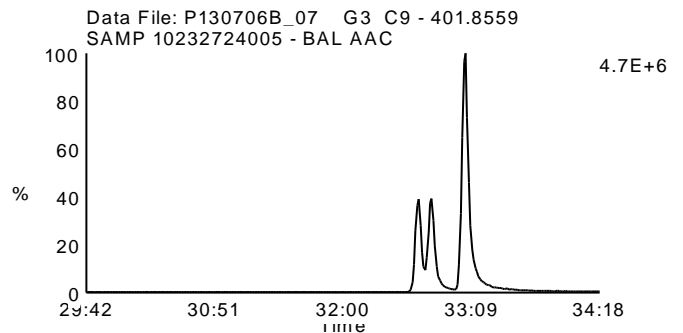
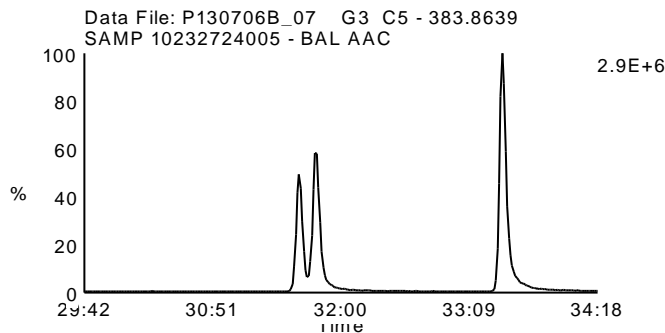
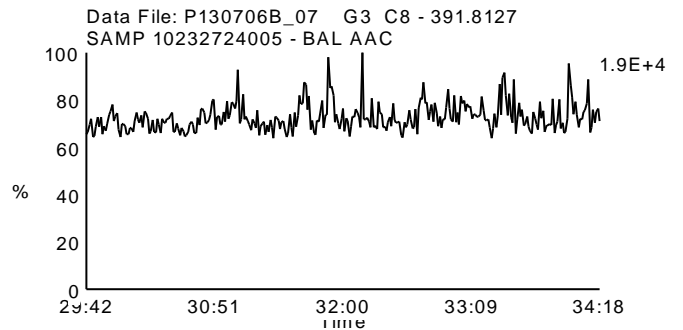
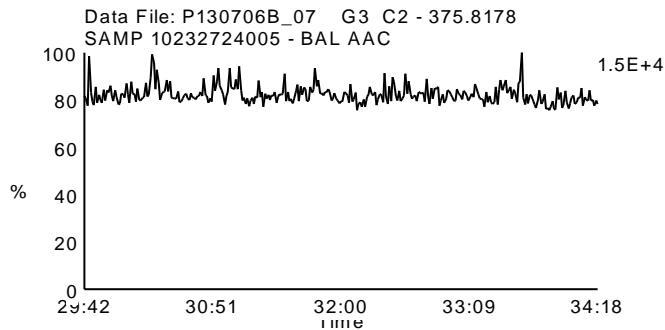
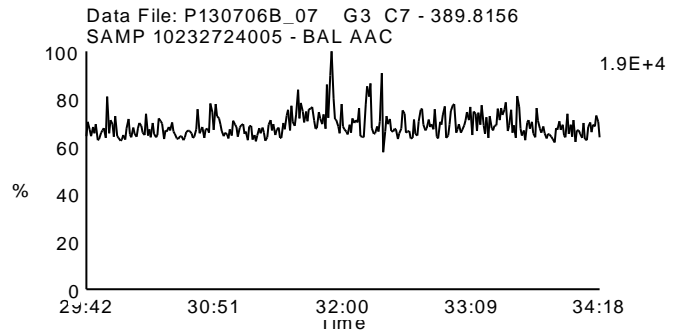
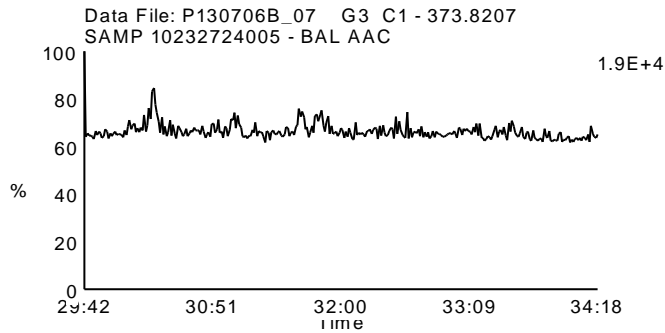
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724005 - BAL AAC

Lab Sample ID: 10232724005

Client Sample ID: F2-A PUF,LIQ

Instrument: 10MSHR09 (P)



Homologue Group: Heptas

Data File Name: P130706B_07

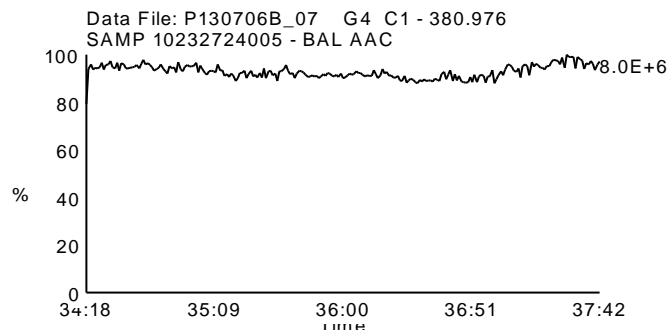
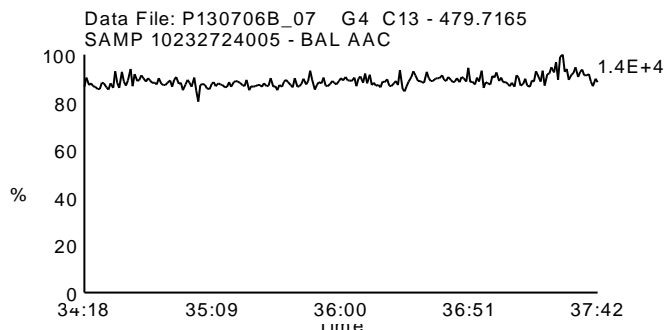
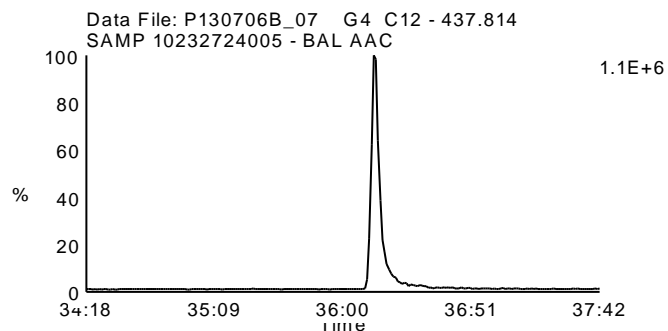
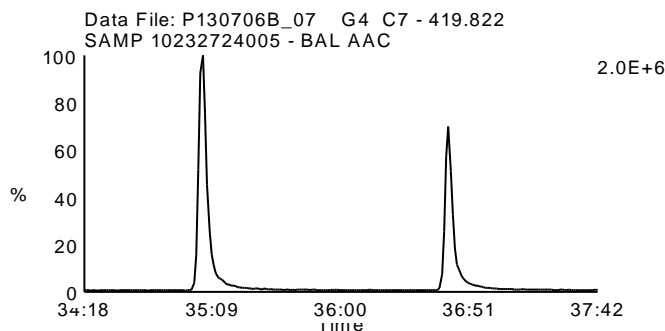
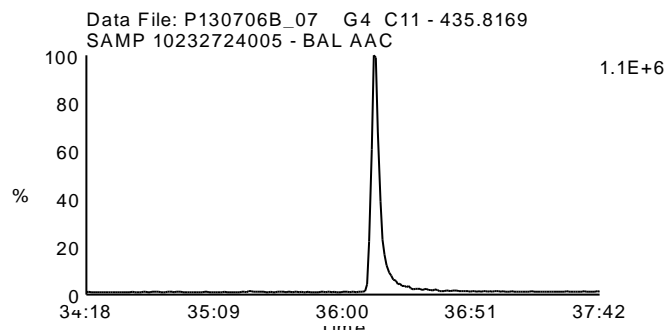
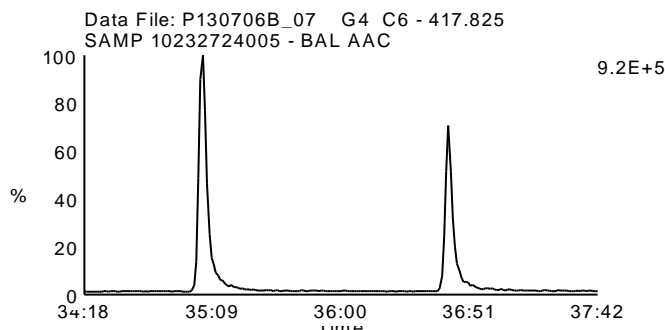
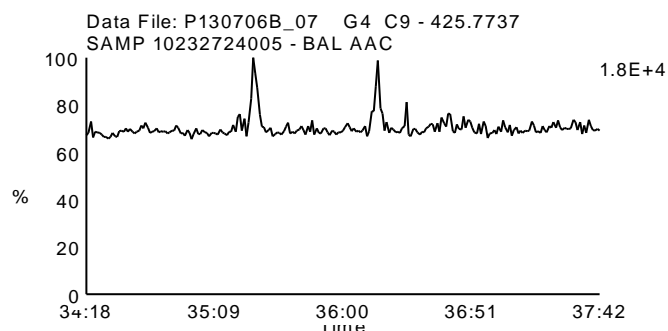
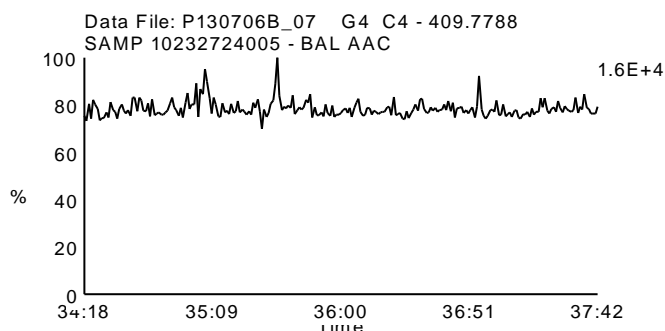
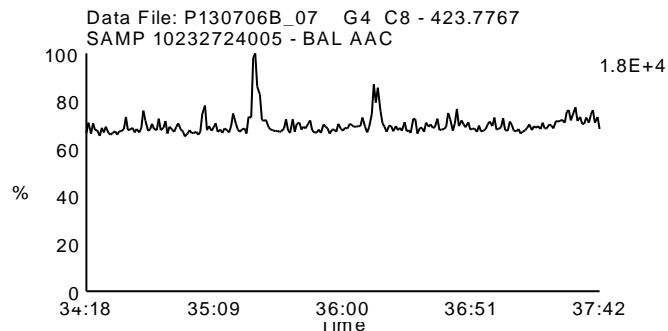
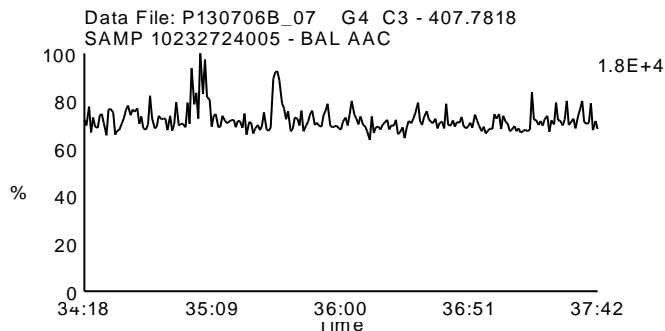
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724005 - BAL AAC

Lab Sample ID: 10232724005

Client Sample ID: F2-A PUF,LIQ

Instrument: 10MSHR09 (P)



Homologue Group: Octas

Data File Name: P130706B_07

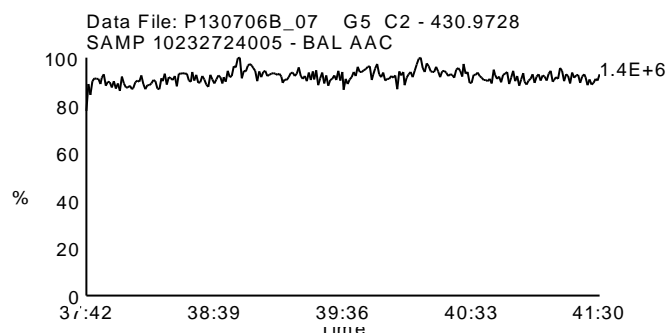
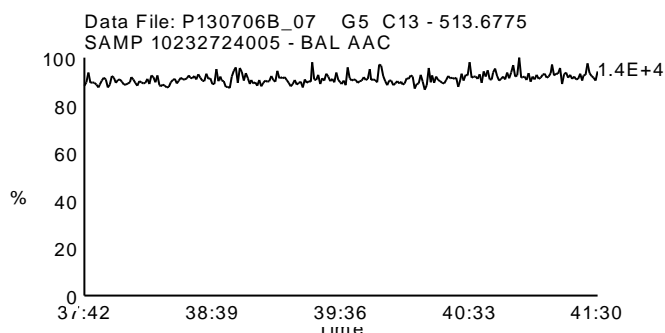
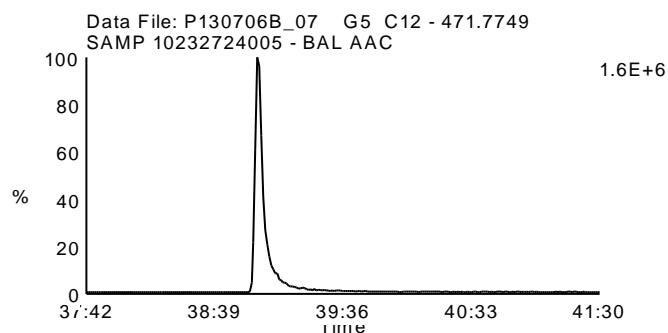
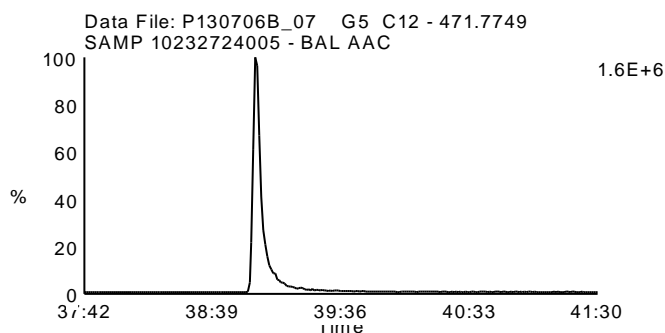
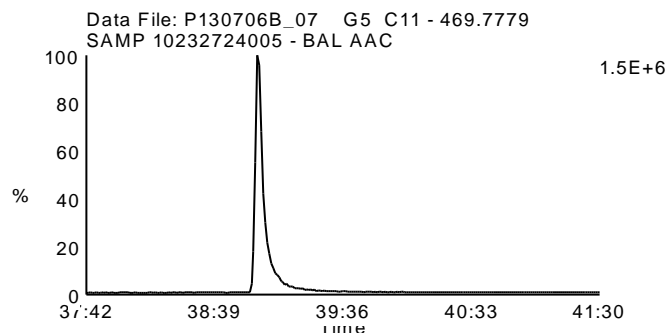
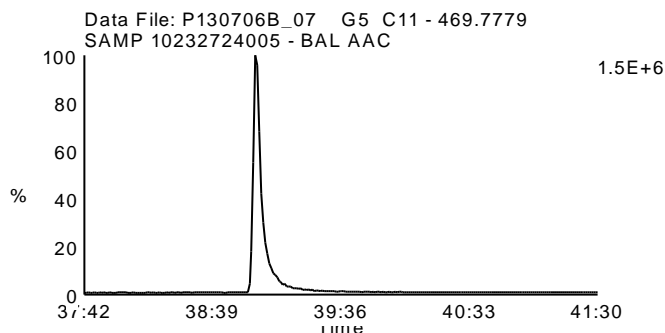
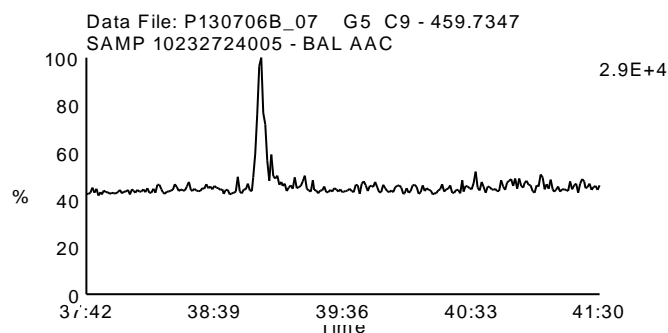
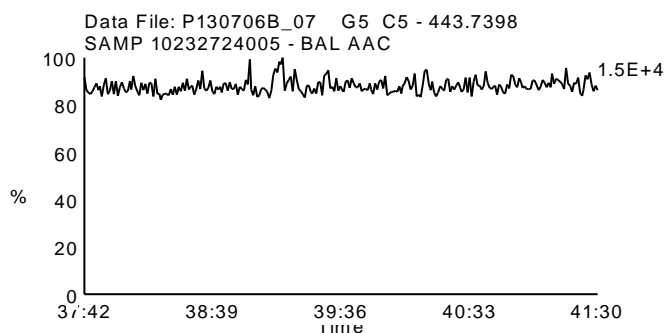
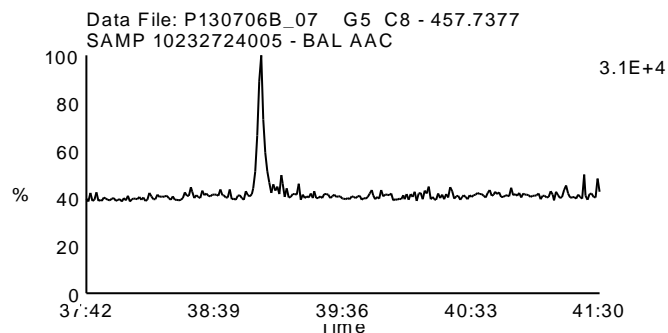
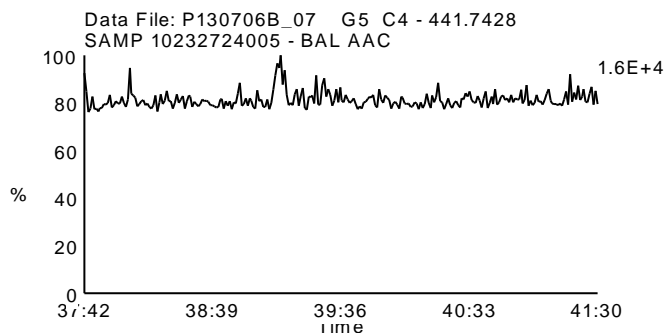
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724005 - BAL AAC

Lab Sample ID: 10232724005

Client Sample ID: F2-A PUF,LIQ

Instrument: 10MSHR09 (P)



Homologue Group: Tetras

Data File Name: P130706B_05

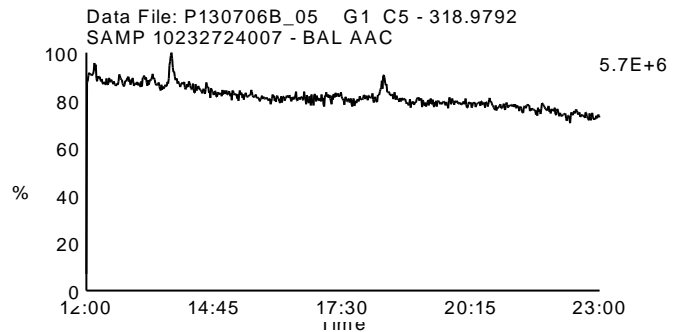
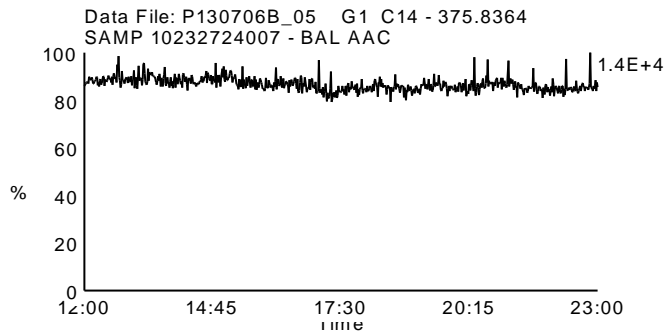
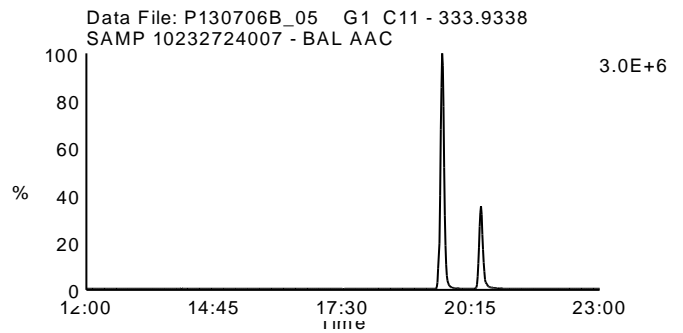
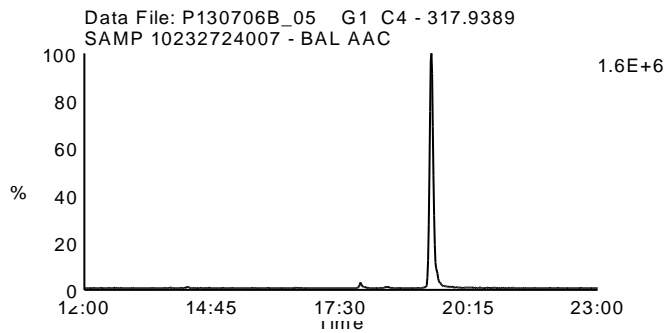
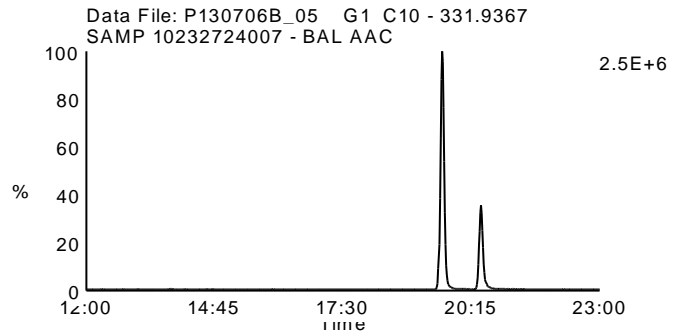
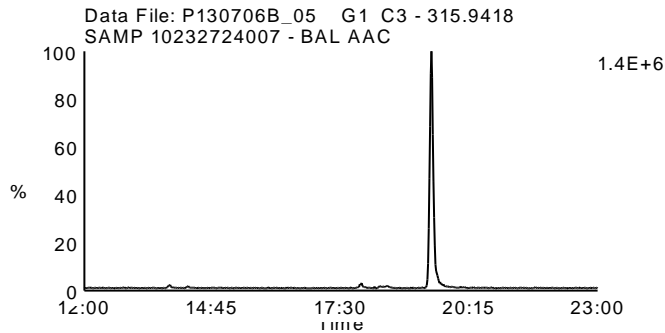
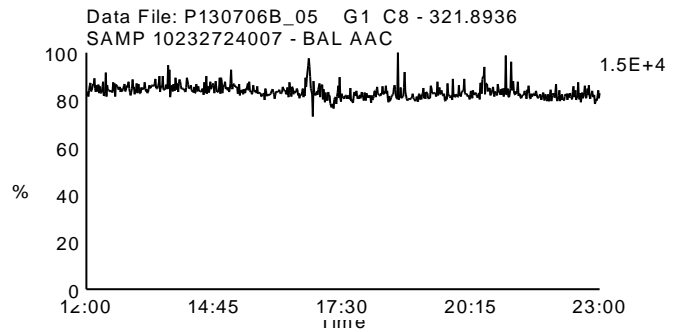
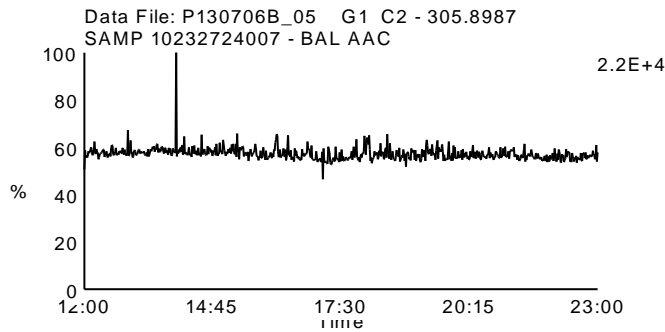
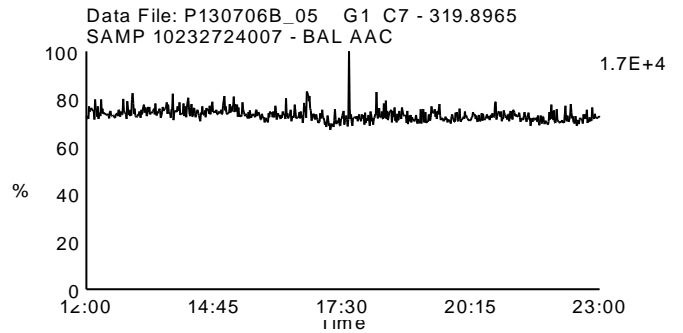
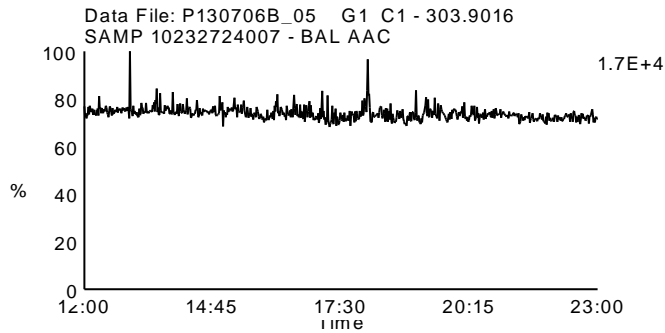
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724007 - BAL AAC

Lab Sample ID: 10232724007

Client Sample ID: Blank

Instrument: 10MSHR09 (P)



Homologue Group: Penta & Cleanup

Data File Name: P130706B_05

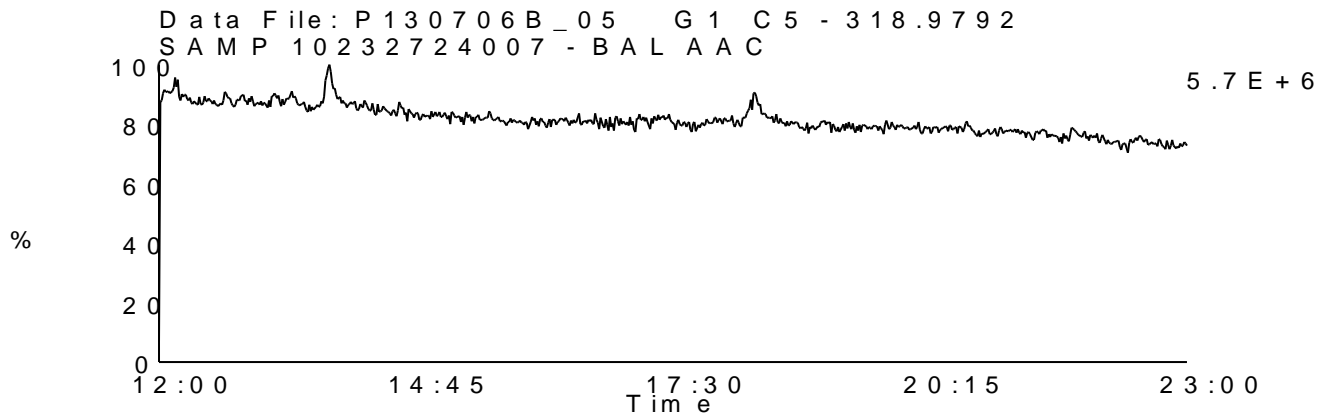
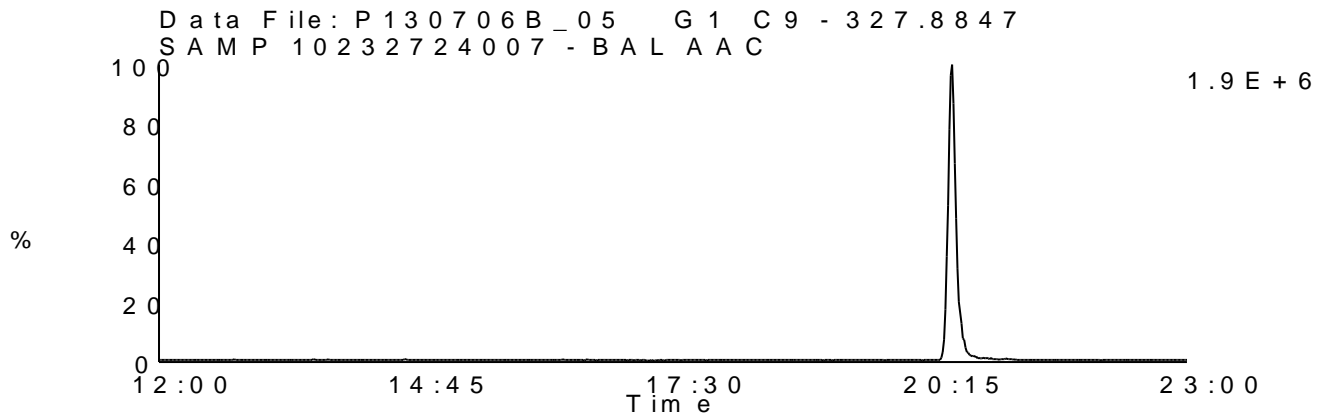
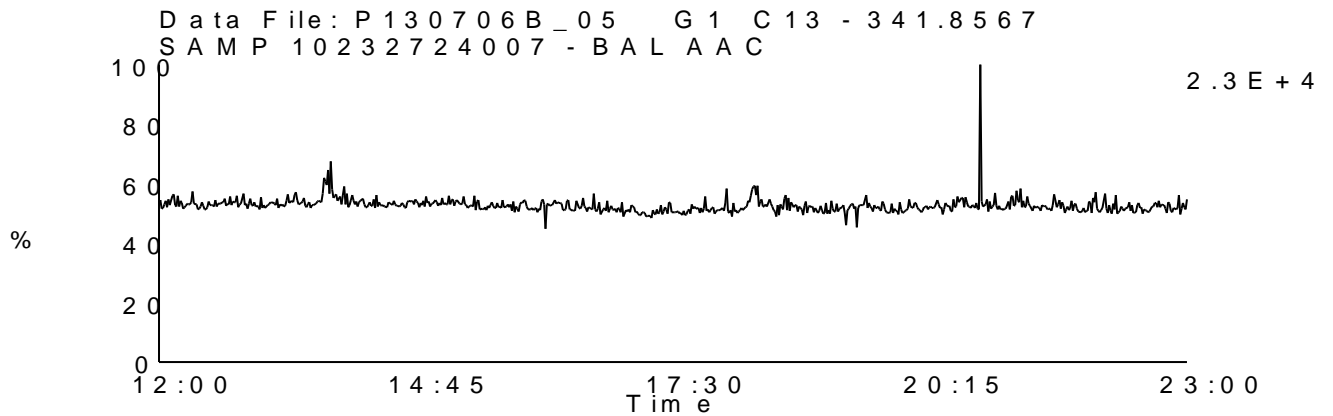
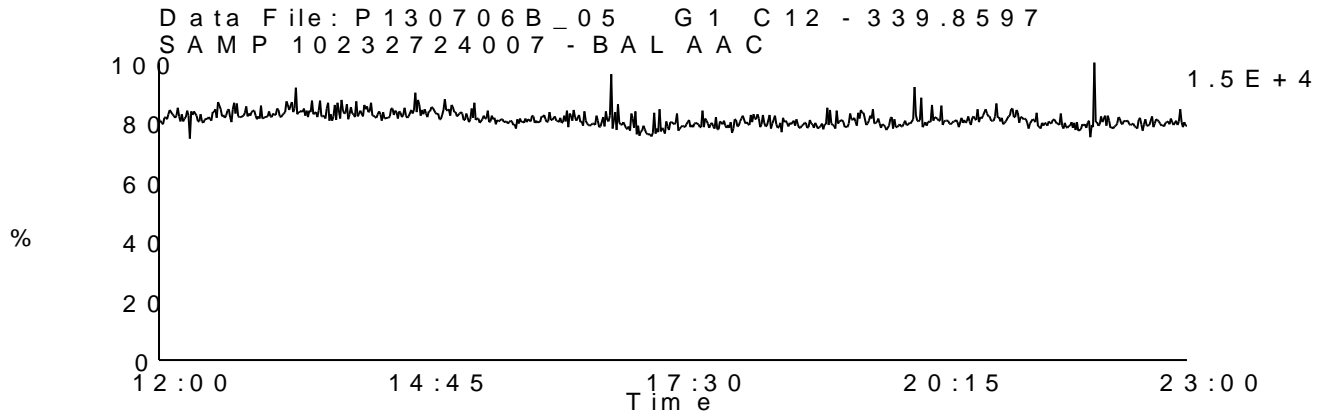
Lab Sample ID: 10232724007

Date Acquired: 7/6/2013

Client Sample ID: Blank

Sample Description: SAMP 10232724007 - BAL AAC

Instrument: 10MSHR09 (P)



Homologue Group: Pentas

Data File Name: P130706B_05

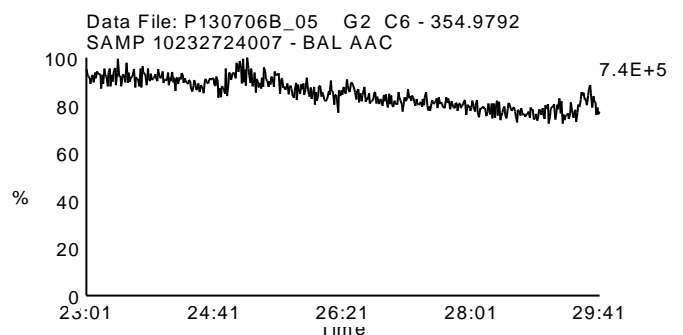
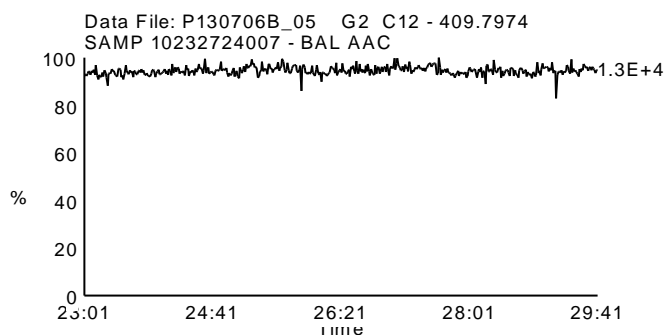
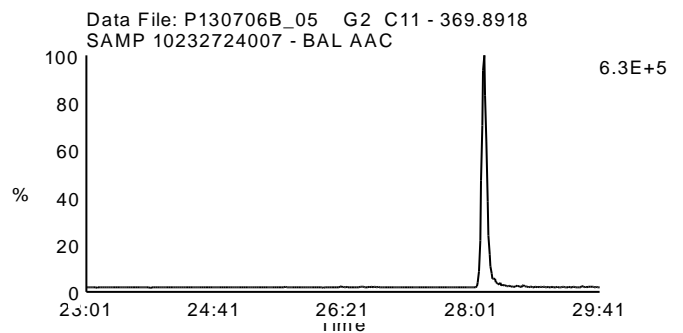
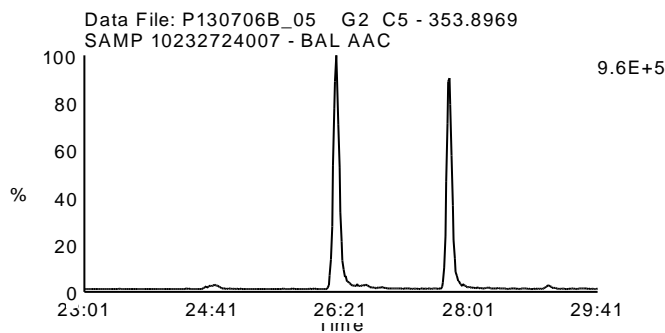
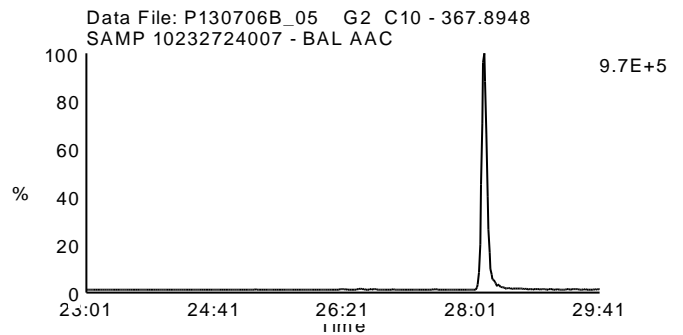
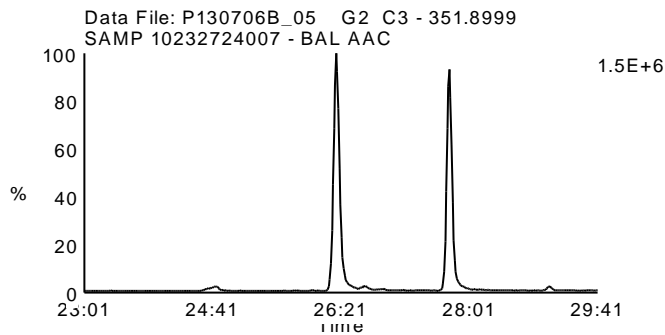
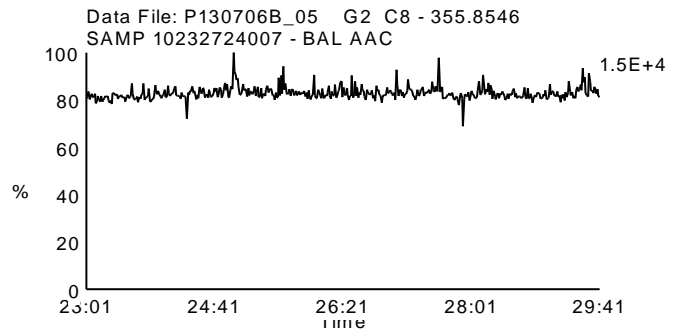
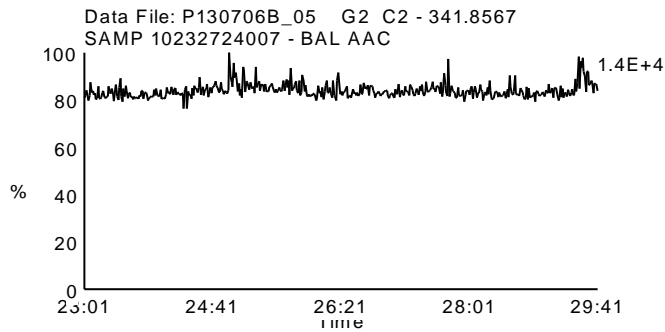
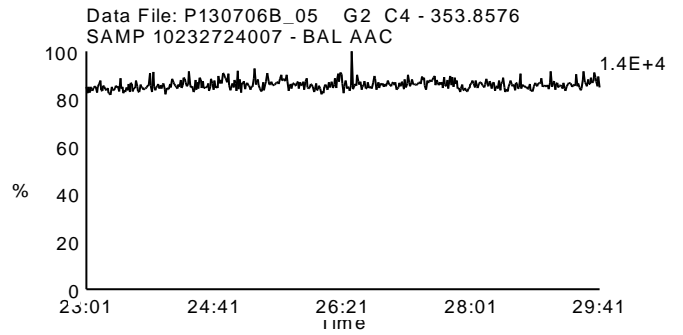
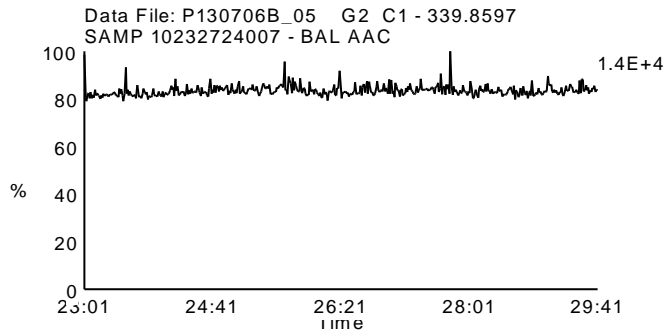
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724007 - BAL AAC

Lab Sample ID: 10232724007

Client Sample ID: Blank

Instrument: 10MSHR09 (P)



Homologue Group: Hexas

Data File Name: P130706B_05

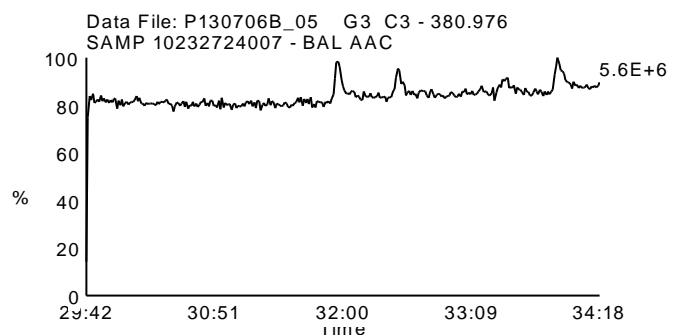
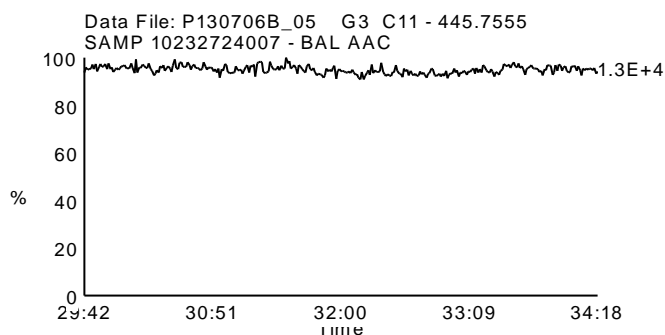
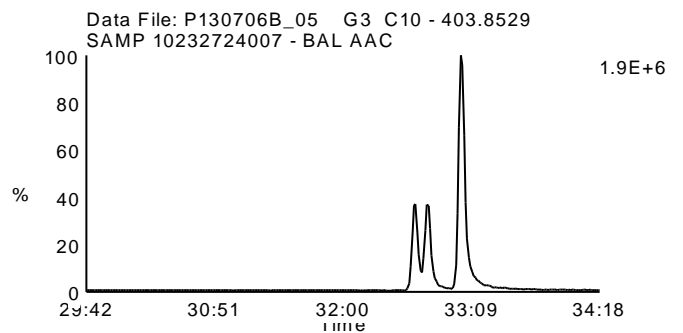
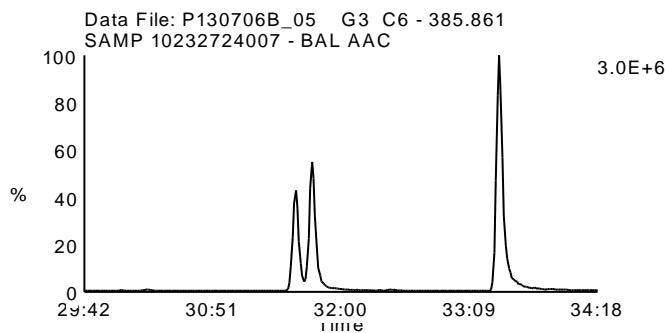
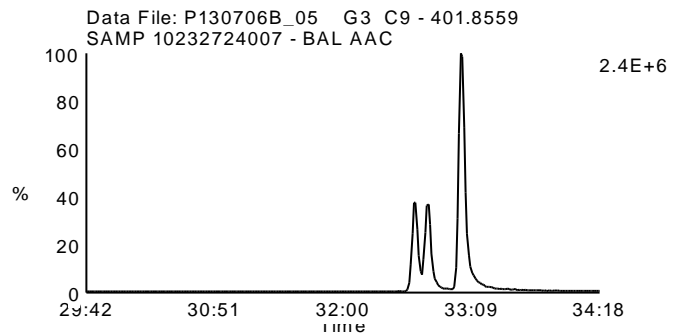
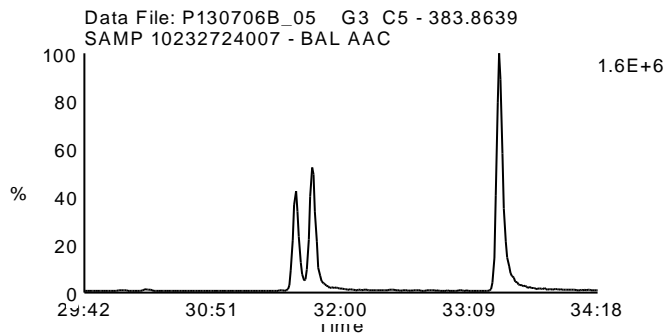
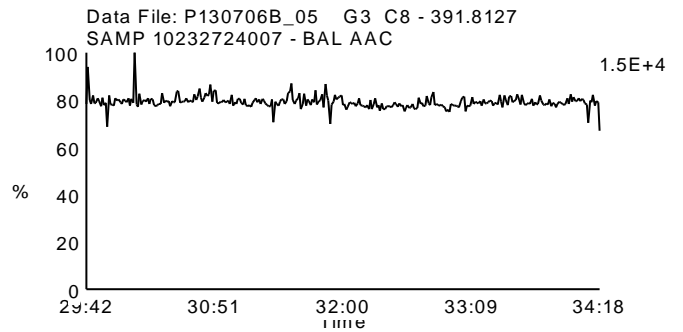
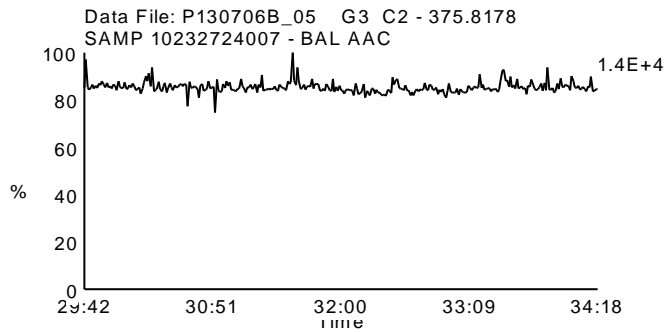
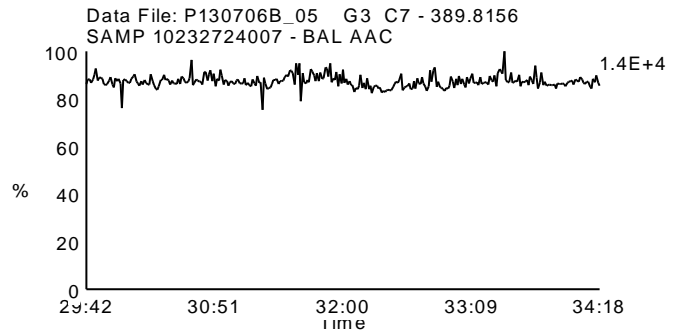
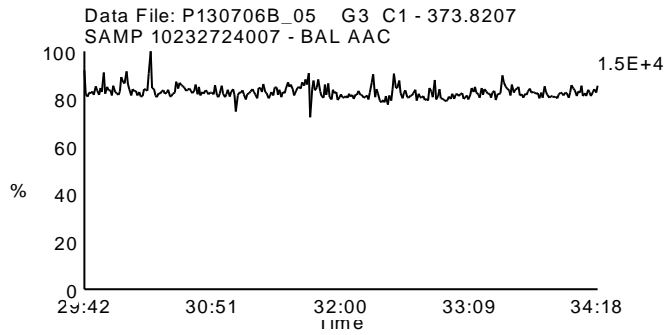
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724007 - BAL AAC

Lab Sample ID: 10232724007

Client Sample ID: Blank

Instrument: 10MSHR09 (P)



Homologue Group: Heptas

Data File Name: P130706B_05

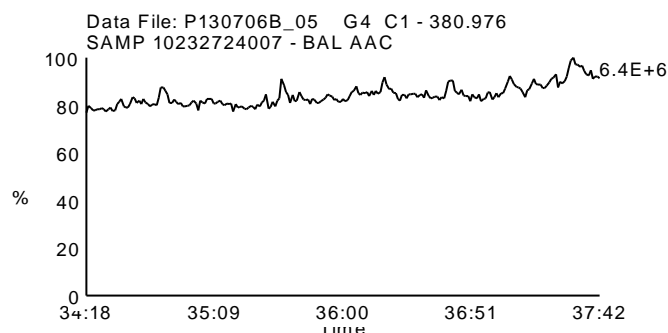
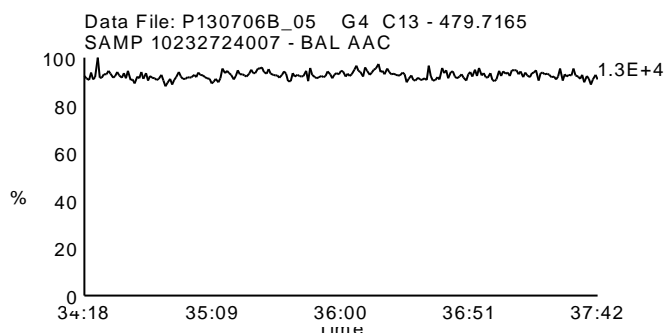
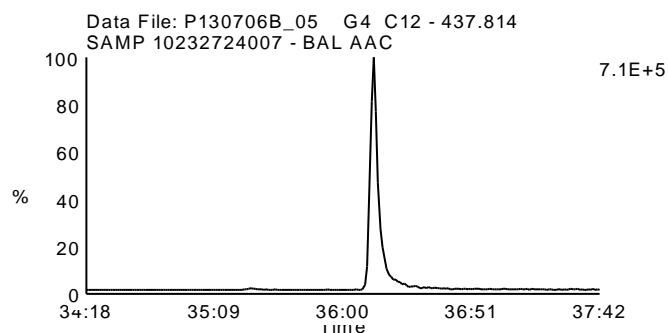
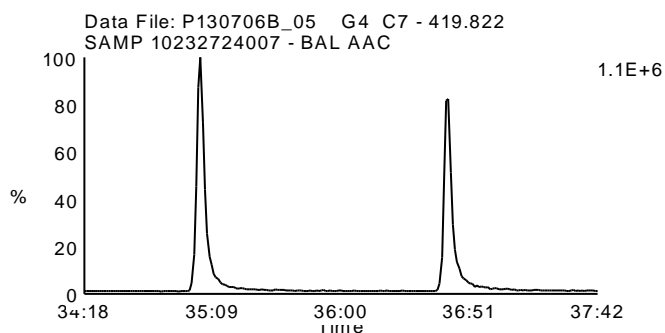
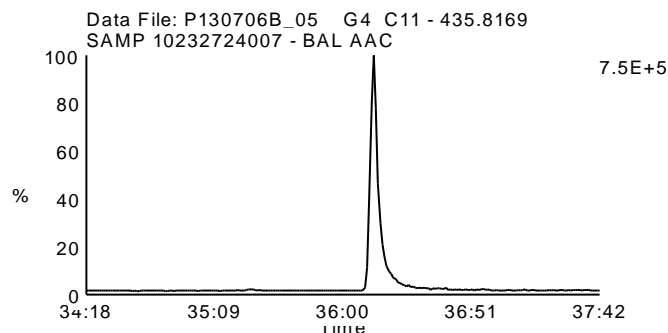
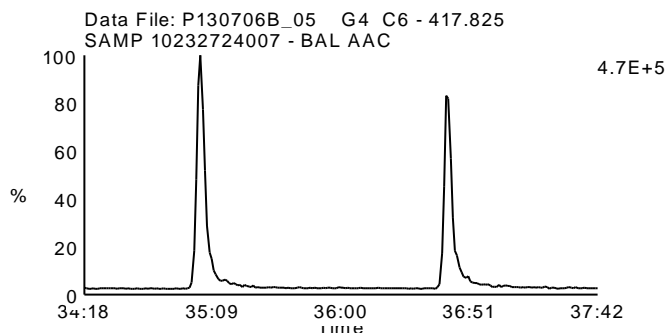
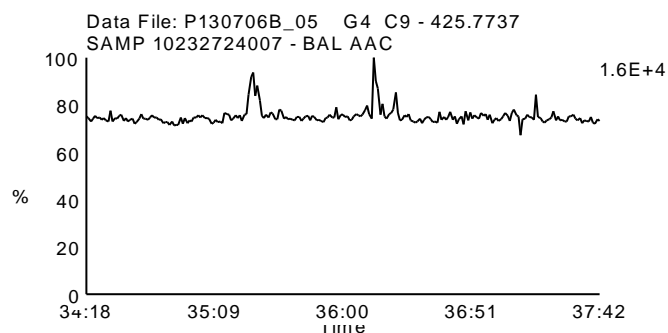
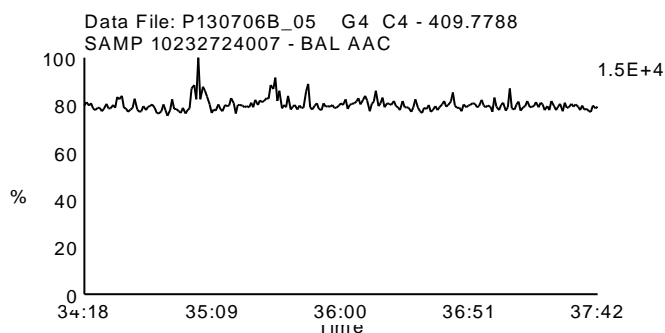
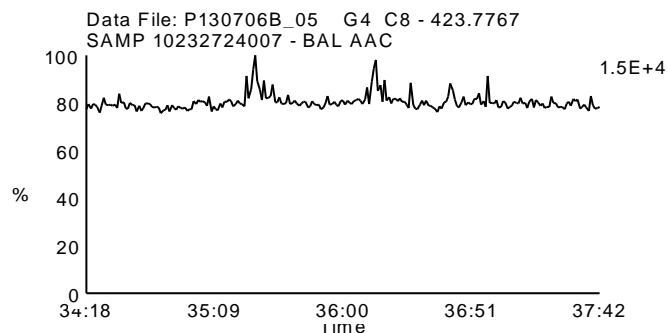
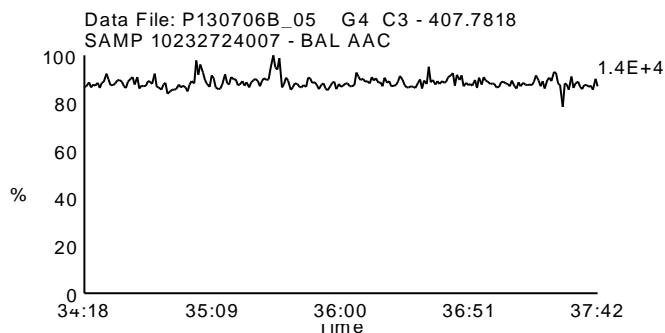
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724007 - BAL AAC

Lab Sample ID: 10232724007

Client Sample ID: Blank

Instrument: 10MSHR09 (P)



Homologue Group: Octas

Data File Name: P130706B_05

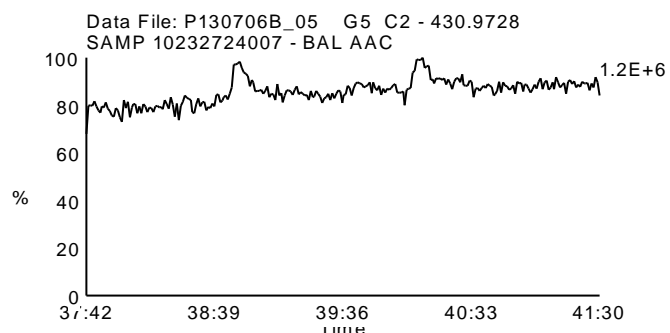
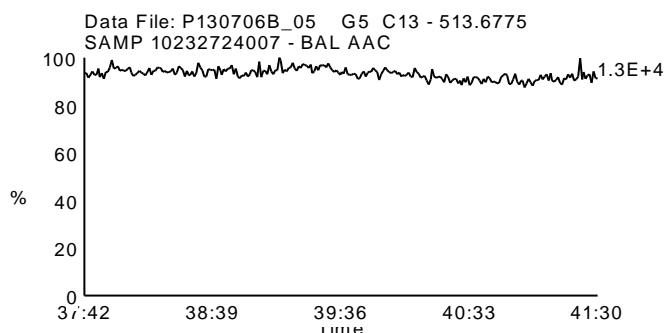
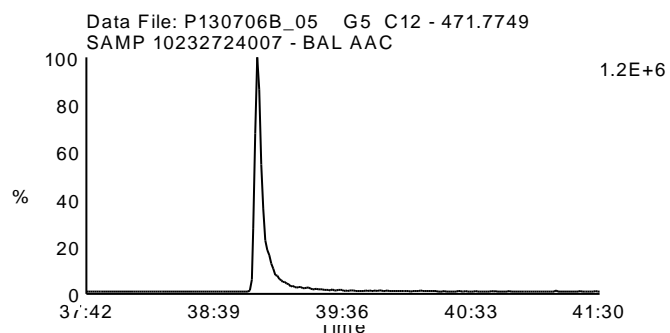
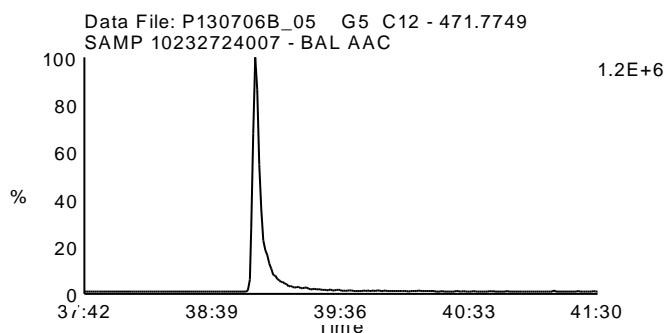
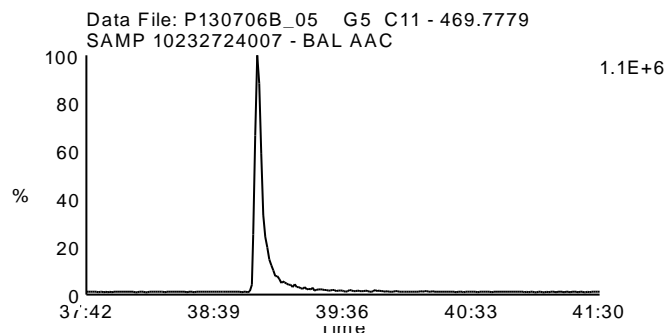
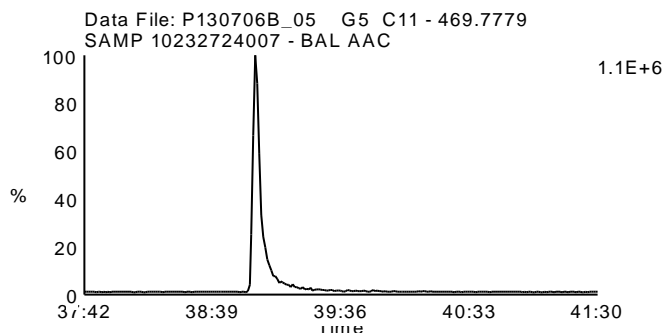
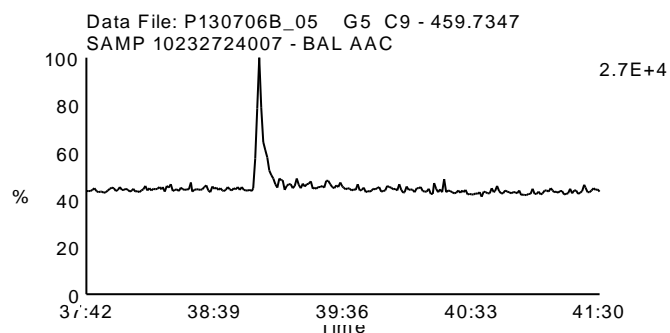
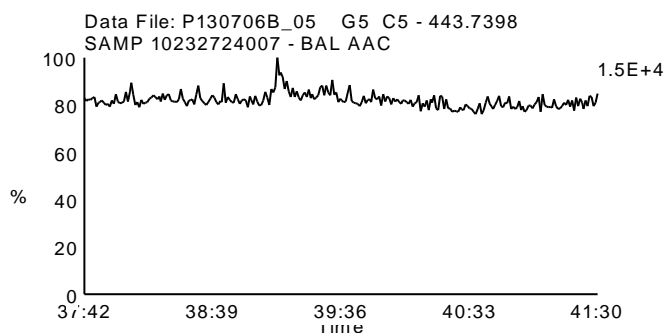
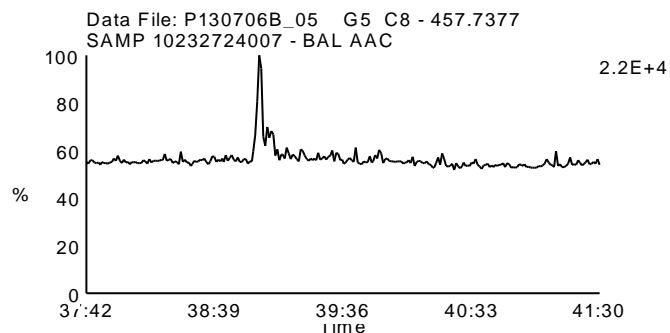
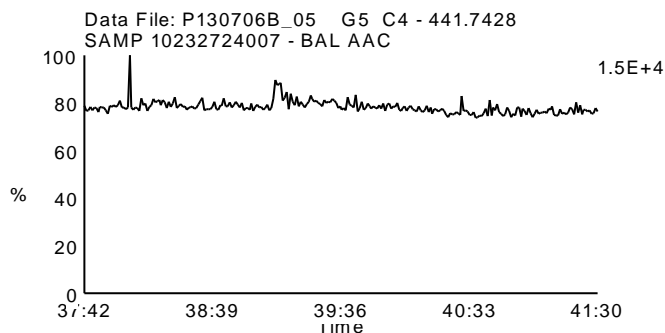
Date Acquired: 7/6/2013

Sample Description: SAMP 10232724007 - BAL AAC

Lab Sample ID: 10232724007

Client Sample ID: Blank

Instrument: 10MSHR09 (P)



PCDD/PCDF Detected Peak List

Client ID	U1-A PUF	Injected By	BAL
Lab ID	10232724001	Instrument ID	10MSHR09 (P)
Filename	P130706B_11	GC Column ID	USC473217H
Analyzed	07/06/2013 21:02	ICAL ID	P121229M23

Tetra-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C		19:26	7.93e6	9.92e6	1.27e6	1.63e6	3.023e3	2.084e3	0.80	
2,3,7,8-TCDF		19:29	1.90e4	1.21e4	2.13e3	2.00e3	7.550e2	1.046e3	1.57	I
Other TCDF	1	19:53	1.92e4	2.65e4					0.73	
	2	18:58	1.91e4	2.68e4					0.71	
	3	16:44	3.54e4	4.55e4					0.78	

Tetra-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C		19:38	2.90e7	3.60e7	4.84e6	6.08e6	1.930e3	1.067e3	0.81	
2,3,7,8-TCDD-13C		20:27	5.53e6	6.86e6	8.65e5	1.10e6	2.734e3	3.375e3	0.81	
2,3,7,8-TCDD-37Cl4		20:29	1.24e7		1.92e6		2.140e3	----		
2,3,7,8-TCDD		20:30	ND	ND	ND	ND	7.115e2	7.317e2		
Other TCDD	1	17:03	1.36e4	1.73e4					0.78	
	2	16:43	2.69e4	3.24e4					0.83	

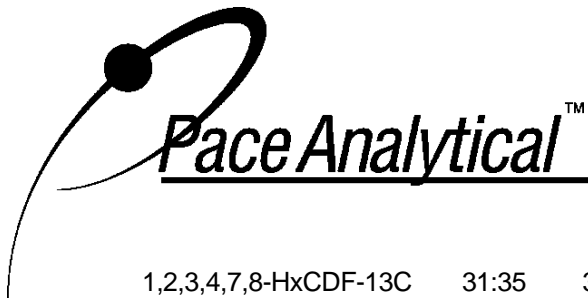
Penta-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C		26:17	9.77e6	6.14e6	1.62e6	1.03e6	1.999e3	4.947e2	1.59	
2,3,4,7,8-PeCDF-13C		27:46	7.83e6	4.89e6	1.58e6	9.79e5	1.718e3	1.350e3	1.60	
1,2,3,7,8-PeCDF		26:18	ND	ND	ND	ND	8.177e2	7.317e2		
2,3,4,7,8-PeCDF		27:47	ND	ND	ND	ND	7.892e2	7.167e2		
Other PeCDF	1	24:30	2.89e4	2.07e4					1.39	
	2	22:00	1.42e5	8.83e4					1.61	
Ethers	1	26:42	3.23e4	1.88e4					1.72	E

Penta-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C		28:11	6.18e6	4.01e6	1.22e6	7.84e5	2.021e3	9.512e2	1.54	
1,2,3,7,8-PeCDD		28:13	ND	ND	ND	ND	7.182e2	6.214e2		
Other PeCDD	1	26:36	7.44e3	1.08e4					0.69	

Hexa-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
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REPORT OF LABORATORY ANALYSIS

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1,2,3,4,7,8-HxCDF-13C	31:35	3.20e6	5.93e6	7.70e5	1.48e6	2.201e3	1.213e4	0.54	
1,2,3,6,7,8-HxCDF-13C	31:45	4.80e6	9.25e6	1.06e6	2.04e6	6.187e3	7.378e3	0.52	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	1.666e3	1.142e4		
1,2,3,7,8,9-HxCDF-13C	33:24	7.14e6	1.32e7	1.63e6	3.17e6	6.449e2	1.181e3	0.54	
1,2,3,4,7,8-HxCDF	31:35	7.90e3	4.74e3	3.50e3	2.27e3	8.204e2	6.461e2	1.67	I
1,2,3,6,7,8-HxCDF	31:46	ND	ND	ND	ND	8.117e2	7.571e2		
2,3,4,6,7,8-HxCDF	32:29	ND	ND	ND	ND	9.465e2	8.945e2		
1,2,3,7,8,9-HxCDF	33:25	ND	ND	ND	ND	8.284e2	1.087e3		
Other HxCDF	1 30:60	6.37e3	6.08e3					1.05	
	2 30:17	6.28e4	5.18e4					1.21	

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	32:39	4.27e6	3.34e6	1.12e6	8.69e5	1.998e3	1.629e3	1.28	
1,2,3,6,7,8-HxCDD-13C	32:46	4.70e6	3.78e6	1.08e6	9.02e5	7.155e2	1.186e3	1.24	
1,2,3,7,8,9-HxCDD-13C	33:04	2.58e7	2.03e7	5.76e6	4.57e6	5.692e3	1.758e4	1.27	
1,2,3,4,7,8-HxCDD	32:39	ND	ND	ND	ND	7.573e2	8.254e2		
1,2,3,6,7,8-HxCDD	32:46	ND	ND	ND	ND	8.889e2	7.072e2		
1,2,3,7,8,9-HxCDD	33:05	ND	ND	ND	ND	7.429e2	8.144e2		
Other HxCDD	1 31:50	1.67e4	1.29e4					1.29	
	2 31:33	1.08e4	9.55e3					1.13	
	3 30:50	1.27e4	1.16e4					1.09	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	35:04	2.30e6	5.11e6	5.69e5	1.30e6	2.561e3	9.815e2	0.45	
1,2,3,4,7,8,9-HpCDF-13C	36:42	1.10e6	2.58e6	2.85e5	6.56e5	2.426e2	1.055e3	0.43	
1,2,3,4,6,7,8-HpCDF	35:05	1.81e4	1.56e4	5.51e3	3.50e3	9.092e2	9.169e2	1.16	
1,2,3,4,7,8,9-HpCDF	36:43	ND	ND	ND	ND	9.592e2	5.711e2		

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	36:12	3.50e6	3.29e6	9.18e5	8.63e5	8.152e2	5.353e3	1.06	
1,2,3,4,6,7,8-HpCDD	36:14	1.26e4	1.21e4	2.93e3	4.17e3	8.051e2	8.282e2	1.04	
Other HpCDD	1 35:24	1.80e4	1.63e4					1.11	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	39:09	7.56e3	9.43e3	1.72e3	2.64e3	1.118e3	1.073e3	0.80	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
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OCDD-13C	38:58	4.59e6	5.12e6	1.05e6	1.21e6	3.036e3	1.307e3	0.90
OCDD	38:59	3.74e4	4.61e4	9.19e3	1.17e4	6.966e2	9.641e2	0.81

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PCDD/PCDF Detected Peak List

Client ID	D1-A PUF	Injected By	BAL
Lab ID	10232724002	Instrument ID	10MSHR09 (P)
Filename	P130706B_10	GC Column ID	USC473217H
Analyzed	07/06/2013 20:18	ICAL ID	P121229M23

Tetra-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C		19:27	1.03e7	1.31e7	1.62e6	2.05e6	3.766e3	3.683e3	0.78	
2,3,7,8-TCDF		19:28	ND	ND	ND	ND	1.122e3	9.992e2		
Other TCDF	1	19:17	1.44e4	1.94e4					0.74	
	2	18:32	2.58e4	2.90e4					0.89	
	3	18:20	1.97e4	2.84e4					0.69	
	4	18:04	7.40e4	9.93e4					0.75	
	5	17:07	3.90e4	5.53e4					0.71	
	6	16:48	3.94e4	5.47e4					0.72	
	7	16:34	4.58e4	5.35e4					0.86	
	8	16:08	5.44e4	7.05e4					0.77	
	9	15:23	1.15e4	1.75e4					0.66	

Tetra-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C		19:38	1.75e7	2.14e7	3.03e6	3.68e6	1.866e3	1.799e3	0.82	
2,3,7,8-TCDD-13C		20:28	6.54e6	8.12e6	1.00e6	1.24e6	1.938e3	1.304e3	0.80	
2,3,7,8-TCDD-37Cl4		20:30	1.45e7		2.21e6		1.716e3	----		
2,3,7,8-TCDD		20:31	ND	ND	ND	ND	9.254e2	6.532e2		
Other TCDD	1	17:05	1.15e4	1.38e4					0.83	
	2	16:46	1.98e4	2.71e4					0.73	

Penta-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C		26:18	1.21e7	7.72e6	2.08e6	1.33e6	1.354e3	8.964e2	1.57	
2,3,4,7,8-PeCDF-13C		27:46	1.07e7	6.69e6	2.08e6	1.30e6	3.039e3	1.683e3	1.60	
1,2,3,7,8-PeCDF		26:19	ND	ND	ND	ND	8.356e2	1.166e3		
2,3,4,7,8-PeCDF		27:46	1.29e4	1.08e4	2.35e3	2.44e3	1.131e3	8.610e2	1.19	I
Other PeCDF	1	25:13	1.15e4	6.51e3					1.77	
	2	24:46	4.91e4	3.24e4					1.51	
Ethers	1	27:03	1.94e4	1.24e4					1.57	E

Penta-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C		28:12	8.56e6	5.25e6	1.70e6	1.08e6	4.274e3	1.172e3	1.63	
1,2,3,7,8-PeCDD		28:14	ND	ND	ND	ND	6.998e2	5.831e2		

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Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	31:36	3.96e6	7.45e6	9.91e5	1.90e6	1.194e4	8.363e3	0.53	
1,2,3,6,7,8-HxCDF-13C	31:45	6.78e6	1.30e7	1.52e6	2.87e6	1.194e4	1.810e4	0.52	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	1.057e4	7.964e2		
1,2,3,7,8,9-HxCDF-13C	33:25	9.90e6	1.86e7	2.27e6	4.38e6	2.010e3	9.856e2	0.53	
1,2,3,4,7,8-HxCDF	31:37	ND	ND	ND	ND	8.681e2	7.562e2		
1,2,3,6,7,8-HxCDF	31:46	ND	ND	ND	ND	1.082e3	7.333e2		
2,3,4,6,7,8-HxCDF	32:29	ND	ND	ND	ND	8.504e2	9.396e2		
1,2,3,7,8,9-HxCDF	33:26	ND	ND	ND	ND	9.384e2	8.269e2		

Other HxCDF		RT	Area 1	Area 2	Ratio
1	32:17	1.64e4	1.45e4	1.13	
2	30:18	7.61e4	5.73e4	1.33	
3	30:05	2.55e4	1.82e4	1.40	

Ethers		RT	Area 1	Area 2	Ratio	Code
1	31:14	2.77e4	2.19e4	1.26	E	

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	32:39	5.51e6	4.37e6	1.38e6	1.06e6	2.004e3	1.616e3	1.26	
1,2,3,6,7,8-HxCDD-13C	32:46	6.07e6	4.78e6	1.41e6	1.12e6	6.150e2	1.581e3	1.27	
1,2,3,7,8,9-HxCDD-13C	33:04	1.75e7	1.42e7	3.89e6	3.16e6	2.117e4	1.046e4	1.23	
1,2,3,4,7,8-HxCDD	32:40	ND	ND	ND	ND	7.171e2	7.102e2		
1,2,3,6,7,8-HxCDD	32:46	ND	ND	ND	ND	5.397e2	6.811e2		
1,2,3,7,8,9-HxCDD	33:05	ND	ND	ND	ND	9.110e2	9.660e2		

Other HxCDD		RT	Area 1	Area 2	Ratio
1	31:53	2.22e4	1.95e4	1.14	
2	30:50	2.40e4	1.81e4	1.33	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	35:05	2.83e6	6.24e6	7.41e5	1.59e6	1.220e3	2.918e3	0.45	
1,2,3,4,7,8,9-HpCDF-13C	36:43	8.85e5	1.84e6	2.29e5	4.78e5	2.343e3	1.643e3	0.48	
1,2,3,4,6,7,8-HpCDF	35:07	2.05e4	1.88e4	5.77e3	6.36e3	8.922e2	8.219e2	1.09	
1,2,3,4,7,8,9-HpCDF	36:44	ND	ND	ND	ND	1.169e3	7.546e2		

Other HpCDF		RT	Area 1	Area 2	Ratio
1	35:35	1.42e4	1.25e4	1.14	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	36:13	4.21e6	4.02e6	1.11e6	1.05e6	7.441e3	5.247e3	1.05	
1,2,3,4,6,7,8-HpCDD	36:14	2.16e4	2.33e4	7.40e3	6.70e3	1.038e3	8.363e2	0.93	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
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OCDF	39:09	1.02e4	6.52e3	2.60e3	2.33e3	7.277e2	1.164e3	1.56	I
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Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	38:59	5.35e6	5.88e6	1.34e6	1.49e6	1.045e3	1.564e3	0.91	
OCDD	38:60	5.70e4	5.03e4	1.69e4	1.54e4	1.067e3	1.017e3	1.13	I

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PCDD/PCDF Detected Peak List

Client ID	BZ-1A PUF	Injected By	BAL
Lab ID	10232724003	Instrument ID	10MSHR09 (P)
Filename	P130706B_09	GC Column ID	USC473217H
Analyzed	07/06/2013 19:34	ICAL ID	P121229M23

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	19:27	9.07e6	1.11e7	1.44e6	1.79e6	3.006e3	2.662e3	0.82	
2,3,7,8-TCDF	19:27	1.21e4	1.18e4	1.35e3	1.87e3	9.847e2	1.416e3	1.03	I
Other TCDF									
	1	21:09	1.03e4	1.42e4				0.72	
	2	19:53	2.01e4	2.96e4				0.68	
	3	18:06	6.91e4	9.19e4				0.75	
	4	17:47	3.08e4	4.66e4				0.66	
	5	17:14	2.33e4	2.61e4				0.89	
	6	17:07	2.75e4	3.67e4				0.75	
	7	16:50	4.46e4	5.33e4				0.84	
	8	16:32	4.94e4	6.03e4				0.82	
	9	16:07	4.18e4	5.11e4				0.82	
	10	15:44	2.03e4	2.49e4				0.81	

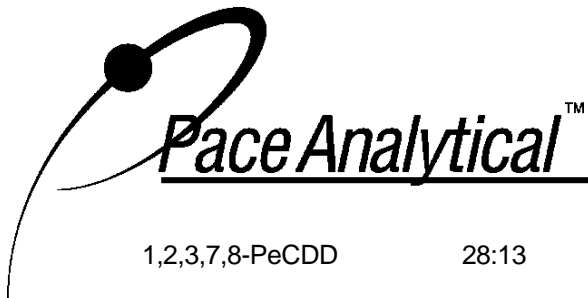
Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	19:38	1.54e7	1.93e7	2.69e6	3.27e6	3.331e3	1.054e3	0.80	
2,3,7,8-TCDD-13C	20:28	5.74e6	7.17e6	8.66e5	1.10e6	2.251e3	2.471e3	0.80	
2,3,7,8-TCDD-37Cl4	20:30	1.30e7		2.01e6		1.143e3	----		
2,3,7,8-TCDD	20:31	ND	ND	ND	ND	9.863e2	9.588e2		
Other TCDD	1	17:06	1.34e4	1.97e4				0.68	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	26:18	9.62e6	5.95e6	1.62e6	1.00e6	7.302e2	8.498e2	1.62	
2,3,4,7,8-PeCDF-13C	27:46	8.12e6	5.05e6	1.53e6	9.73e5	1.227e3	1.906e3	1.61	
1,2,3,7,8-PeCDF	26:19	ND	ND	ND	ND	9.121e2	1.099e3		
2,3,4,7,8-PeCDF	27:47	ND	ND	ND	ND	1.123e3	1.009e3		
Other PeCDF									
	1	25:44	2.09e4	1.27e4				1.64	
	2	24:29	3.62e4	2.53e4				1.43	
	3	22:02	1.61e5	1.11e5				1.44	
Ethers	1	26:41	4.86e4	3.04e4				1.60	E

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	28:11	5.90e6	3.70e6	1.15e6	7.05e5	4.217e2	6.028e2	1.59	

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1,2,3,7,8-PeCDD 28:13 ND ND ND ND 9.304e2 8.597e2

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	31:35	3.58e6	6.85e6	8.32e5	1.59e6	6.057e2	9.544e2	0.52	
1,2,3,6,7,8-HxCDF-13C	31:45	5.10e6	9.43e6	1.11e6	2.03e6	6.057e2	9.544e2	0.54	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	6.959e2	6.985e2		
1,2,3,7,8,9-HxCDF-13C	33:25	8.67e6	1.63e7	1.83e6	3.43e6	2.018e3	2.086e3	0.53	
1,2,3,4,7,8-HxCDF	31:36	ND	ND	ND	ND	1.125e3	9.143e2		
1,2,3,6,7,8-HxCDF	31:46	7.30e3	8.30e3	2.82e3	3.38e3	1.037e3	9.143e2	0.88	I
2,3,4,6,7,8-HxCDF	32:29	ND	ND	ND	ND	8.753e2	9.143e2		
1,2,3,7,8,9-HxCDF	33:26	ND	ND	ND	ND	1.014e3	6.558e2		
Other HxCDF	1 30:17	5.01e4	4.07e4					1.23	
Ethers	1 31:14	2.32e4	2.15e4					1.08	E

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	32:39	4.34e6	3.39e6	1.17e6	8.72e5	2.962e3	1.739e3	1.28	
1,2,3,6,7,8-HxCDD-13C	32:46	5.17e6	4.08e6	1.14e6	9.14e5	2.962e3	1.609e3	1.27	
1,2,3,7,8,9-HxCDD-13C	33:04	1.37e7	1.11e7	3.10e6	2.53e6	7.627e2	1.242e3	1.23	
1,2,3,4,7,8-HxCDD	32:39	ND	ND	ND	ND	8.583e2	8.334e2		
1,2,3,6,7,8-HxCDD	32:46	ND	ND	ND	ND	9.606e2	8.044e2		
1,2,3,7,8,9-HxCDD	33:05	ND	ND	ND	ND	9.896e2	8.457e2		
Other HxCDD	1 30:49	1.13e4	8.23e3					1.38	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	35:04	2.55e6	5.38e6	6.40e5	1.27e6	7.758e2	9.230e2	0.47	
1,2,3,4,7,8,9-HpCDF-13C	36:42	1.69e6	3.62e6	4.48e5	9.26e5	1.293e3	1.386e3	0.47	
1,2,3,4,6,7,8-HpCDF	35:04	1.45e4	1.29e4	5.33e3	7.92e3	1.027e3	9.820e2	1.13	
1,2,3,4,7,8,9-HpCDF	36:43	ND	ND	ND	ND	1.027e3	9.120e2		

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	36:13	3.75e6	3.49e6	9.12e5	8.47e5	6.570e2	7.836e2	1.08	
1,2,3,4,6,7,8-HpCDD	36:14	1.32e4	1.11e4	3.60e3	2.51e3	6.024e2	6.344e2	1.19	
Other HpCDD	1 35:25	1.64e4	1.55e4					1.06	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	39:09	ND	ND	ND	ND	1.021e3	7.771e2		

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Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	38:59	5.39e6	5.96e6	1.20e6	1.41e6	3.697e2	1.145e3	0.90	
OCDD	38:59	3.70e4	4.37e4	7.89e3	1.32e4	1.416e3	1.160e3	0.85	

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PCDD/PCDF Detected Peak List

Client ID	F1-A PUF,LIQ	Injected By	BAL
Lab ID	10232724004	Instrument ID	10MSHR09 (P)
Filename	P130706B_08	GC Column ID	USC473217H
Analyzed	07/06/2013 18:50	ICAL ID	P121229M23

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	19:30	1.57e7	1.96e7	2.51e6	3.18e6	2.084e3	1.735e3	0.80	
2,3,7,8-TCDF	19:31	ND	ND	ND	ND	1.980e3	1.580e3		

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	19:42	2.41e7	2.96e7	4.06e6	4.92e6	4.349e3	1.634e3	0.81	
2,3,7,8-TCDD-13C	20:31	9.03e6	1.14e7	1.40e6	1.68e6	2.346e3	1.522e3	0.79	
2,3,7,8-TCDD-37Cl4	20:33	2.15e7		3.15e6		1.476e3	----		
2,3,7,8-TCDD	20:34	ND	ND	ND	ND	1.600e3	1.782e3		

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	26:20	1.79e7	1.12e7	2.91e6	1.84e6	6.838e2	1.267e3	1.60	
2,3,4,7,8-PeCDF-13C	27:48	1.48e7	9.33e6	2.78e6	1.80e6	2.645e3	2.551e3	1.59	
1,2,3,7,8-PeCDF	26:21	ND	ND	ND	ND	1.384e3	1.235e3		
2,3,4,7,8-PeCDF	27:50	ND	ND	ND	ND	1.137e3	1.091e3		

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	28:14	1.07e7	6.77e6	2.00e6	1.28e6	1.236e3	6.452e2	1.58	
1,2,3,7,8-PeCDD	28:15	ND	ND	ND	ND	9.890e2	1.124e3		

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	31:38	6.19e6	1.17e7	1.47e6	2.69e6	8.878e2	7.391e2	0.53	
1,2,3,6,7,8-HxCDF-13C	31:47	8.95e6	1.73e7	1.97e6	3.70e6	5.466e3	9.731e3	0.52	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	8.878e2	1.116e4		
1,2,3,7,8,9-HxCDF-13C	33:26	1.44e7	2.75e7	3.08e6	5.81e6	9.715e2	4.147e3	0.52	
1,2,3,4,7,8-HxCDF	31:39	ND	ND	ND	ND	1.071e3	8.904e2		
1,2,3,6,7,8-HxCDF	31:48	ND	ND	ND	ND	1.141e3	8.555e2		
2,3,4,6,7,8-HxCDF	32:31	ND	ND	ND	ND	1.047e3	8.433e2		
1,2,3,7,8,9-HxCDF	33:27	ND	ND	ND	ND	9.626e2	7.896e2		

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	32:40	7.48e6	5.76e6	1.90e6	1.43e6	1.572e3	1.423e3	1.30	
1,2,3,6,7,8-HxCDD-13C	32:47	8.59e6	6.73e6	1.90e6	1.48e6	1.572e3	1.178e3	1.28	
1,2,3,7,8,9-HxCDD-13C	33:05	2.40e7	1.87e7	4.93e6	3.92e6	8.098e2	6.076e2	1.29	
1,2,3,4,7,8-HxCDD	32:41	ND	ND	ND	ND	1.403e3	1.169e3		
1,2,3,6,7,8-HxCDD	32:48	ND	ND	ND	ND	1.281e3	7.918e2		
1,2,3,7,8,9-HxCDD	33:06	ND	ND	ND	ND	1.403e3	1.169e3		

Other HxCDD	1	31:54	1.87e4	1.50e4					1.25
	2	31:35	1.27e4	1.17e4					1.09

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	35:06	3.85e6	8.28e6	8.67e5	1.97e6	1.274e3	1.650e3	0.47	
1,2,3,4,7,8,9-HpCDF-13C	36:43	2.38e6	5.50e6	5.56e5	1.24e6	1.261e3	4.281e3	0.43	
1,2,3,4,6,7,8-HpCDF	35:06	1.22e4	1.07e4	3.75e3	3.11e3	1.016e3	8.707e2	1.14	
1,2,3,4,7,8,9-HpCDF	36:44	ND	ND	ND	ND	1.016e3	6.282e2		

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	36:13	5.16e6	4.77e6	1.23e6	1.08e6	8.499e2	4.134e2	1.08	
1,2,3,4,6,7,8-HpCDD	36:14	2.42e4	2.31e4	4.84e3	6.51e3	7.695e2	9.926e2	1.05	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	39:08	1.46e4	1.74e4	2.64e3	5.44e3	1.025e3	1.146e3	0.84	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	38:60	7.56e6	8.37e6	1.53e6	1.73e6	6.964e2	1.050e3	0.90	
OCDD	38:60	1.26e5	1.40e5	2.52e4	2.80e4	1.680e3	1.603e3	0.90	

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PCDD/PCDF Detected Peak List

Client ID	F2-A PUF,LIQ	Injected By	BAL
Lab ID	10232724005	Instrument ID	10MSHR09 (P)
Filename	P130706B_07	GC Column ID	USC473217H
Analyzed	07/06/2013 18:06	ICAL ID	P121229M23

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	19:29	1.29e7	1.63e7	2.12e6	2.71e6	3.767e3	1.798e3	0.79	
2,3,7,8-TCDF	19:30	ND	ND	ND	ND	1.020e3	1.339e3		
Other TCDF	1	18:05	1.81e4	2.42e4				0.75	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	19:40	2.10e7	2.57e7	3.73e6	4.42e6	2.374e3	1.473e3	0.82	
2,3,7,8-TCDD-13C	20:29	8.12e6	9.99e6	1.27e6	1.56e6	1.805e3	1.974e3	0.81	
2,3,7,8-TCDD-37Cl4	20:31	1.77e7		2.74e6		8.157e2	-----		
2,3,7,8-TCDD	20:32	ND	ND	ND	ND	9.260e2	1.072e3		

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	26:20	1.74e7	1.09e7	2.93e6	1.79e6	8.624e2	1.348e3	1.59	
2,3,4,7,8-PeCDF-13C	27:48	1.48e7	9.35e6	2.74e6	1.76e6	5.728e3	3.894e3	1.59	
1,2,3,7,8-PeCDF	26:20	ND	ND	ND	ND	9.850e2	1.103e3		
2,3,4,7,8-PeCDF	27:50	ND	ND	ND	ND	1.079e3	9.976e2		

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	28:14	1.12e7	7.11e6	2.10e6	1.30e6	2.065e3	7.775e2	1.58	
1,2,3,7,8-PeCDD	28:15	ND	ND	ND	ND	1.149e3	1.018e3		

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	31:38	5.83e6	1.11e7	1.43e6	2.77e6	4.497e3	1.144e4	0.52	
1,2,3,6,7,8-HxCDF-13C	31:47	8.51e6	1.61e7	1.69e6	3.24e6	1.753e3	1.144e4	0.53	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	1.141e3	1.111e4		
1,2,3,7,8,9-HxCDF-13C	33:27	1.35e7	2.56e7	2.90e6	5.54e6	1.261e3	2.604e3	0.53	
1,2,3,4,7,8-HxCDF	31:39	ND	ND	ND	ND	1.243e3	1.471e3		
1,2,3,6,7,8-HxCDF	31:48	ND	ND	ND	ND	1.263e3	1.252e3		
2,3,4,6,7,8-HxCDF	32:31	ND	ND	ND	ND	1.030e3	1.228e3		
1,2,3,7,8,9-HxCDF	33:28	ND	ND	ND	ND	1.283e3	1.203e3		

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Other HxCDF 1 30:20 1.29e4 9.22e3 1.40

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	32:41	7.13e6	5.68e6	1.82e6	1.42e6	9.802e2	8.889e2	1.26	
1,2,3,6,7,8-HxCDD-13C	32:48	8.46e6	6.66e6	1.83e6	1.45e6	2.086e3	2.231e3	1.27	
1,2,3,7,8,9-HxCDD-13C	33:06	2.24e7	1.84e7	4.67e6	3.73e6	5.764e2	9.390e2	1.22	
1,2,3,4,7,8-HxCDD	32:42	ND	ND	ND	ND	2.196e3	2.132e3		
1,2,3,6,7,8-HxCDD	32:49	ND	ND	ND	ND	2.104e3	2.018e3		
1,2,3,7,8,9-HxCDD	33:07	ND	ND	ND	ND	1.787e3	2.104e3		

Other HxCDD 1 31:54 2.08e4 1.98e4 1.05

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	35:06	3.61e6	8.23e6	9.09e5	1.96e6	9.438e2	8.408e2	0.44	
1,2,3,4,7,8,9-HpCDF-13C	36:43	2.37e6	5.41e6	6.37e5	1.36e6	1.131e3	2.690e3	0.44	
1,2,3,4,6,7,8-HpCDF	35:06	1.47e4	8.49e3	5.09e3	2.68e3	1.576e3	1.035e3	1.73	I
1,2,3,4,7,8,9-HpCDF	36:44	ND	ND	ND	ND	1.323e3	1.219e3		

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	36:13	4.74e6	4.49e6	1.11e6	1.08e6	3.976e3	6.205e2	1.06	
1,2,3,4,6,7,8-HpCDD	36:13	1.19e4	1.49e4	3.31e3	5.12e3	1.127e3	6.960e2	0.80	I

Other HpCDD 1 35:26 2.01e4 1.74e4 1.16

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	39:10	1.50e4	1.08e4	3.00e3	1.79e3	1.207e3	8.293e2	1.39	I

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	38:59	6.71e6	7.57e6	1.46e6	1.62e6	7.179e2	5.005e2	0.89	
OCDD	39:01	6.09e4	6.04e4	1.85e4	1.60e4	1.339e3	1.005e3	1.01	

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PCDD/PCDF Detected Peak List

Client ID	Blank	Injected By	BAL
Lab ID	10232724007	Instrument ID	10MSHR09 (P)
Filename	P130706B_05	GC Column ID	USC473217H
Analyzed	07/06/2013 16:38	ICAL ID	P121229M23

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	19:27	8.06e6	1.01e7	1.39e6	1.63e6	1.991e3	1.633e3	0.80	
2,3,7,8-TCDF	19:28	ND	ND	ND	ND	8.103e2	9.097e2		

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	19:38	1.40e7	1.73e7	2.45e6	3.04e6	2.704e3	1.306e3	0.81	
2,3,7,8-TCDD-13C	20:28	5.28e6	6.53e6	8.62e5	1.07e6	1.485e3	2.094e3	0.81	
2,3,7,8-TCDD-37Cl4	20:30	1.22e7		1.93e6		8.923e2	----		
2,3,7,8-TCDD	20:31	ND	ND	ND	ND	6.938e2	6.769e2		

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	26:18	8.43e6	5.39e6	1.49e6	9.44e5	6.098e2	8.823e2	1.56	
2,3,4,7,8-PeCDF-13C	27:46	7.09e6	4.39e6	1.39e6	8.51e5	7.540e2	1.024e3	1.62	
1,2,3,7,8-PeCDF	26:19	ND	ND	ND	ND	6.694e2	7.522e2		
2,3,4,7,8-PeCDF	27:48	ND	ND	ND	ND	7.779e2	8.273e2		

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	28:12	4.87e6	2.96e6	9.60e5	6.16e5	9.052e2	9.212e2	1.65	
1,2,3,7,8-PeCDD	28:14	ND	ND	ND	ND	6.950e2	7.052e2		

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	31:36	2.56e6	4.92e6	6.62e5	1.27e6	4.338e2	4.343e2	0.52	
1,2,3,6,7,8-HxCDF-13C	31:45	3.60e6	7.17e6	8.20e5	1.62e6	5.428e2	7.038e2	0.50	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	4.539e2	4.705e2		
1,2,3,7,8,9-HxCDF-13C	33:25	7.00e6	1.31e7	1.58e6	2.96e6	1.983e3	1.913e3	0.53	
1,2,3,4,7,8-HxCDF	31:37	ND	ND	ND	ND	6.452e2	6.612e2		
1,2,3,6,7,8-HxCDF	31:46	ND	ND	ND	ND	8.390e2	4.986e2		
2,3,4,6,7,8-HxCDF	32:29	ND	ND	ND	ND	6.960e2	6.079e2		
1,2,3,7,8,9-HxCDF	33:26	ND	ND	ND	ND	5.850e2	7.131e2		

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	32:39	3.45e6	2.71e6	8.90e5	7.03e5	2.026e3	1.044e3	1.27	
1,2,3,6,7,8-HxCDD-13C	32:46	3.87e6	3.07e6	8.74e5	7.02e5	1.918e3	1.044e3	1.26	
1,2,3,7,8,9-HxCDD-13C	33:04	1.09e7	8.49e6	2.39e6	1.92e6	9.417e2	3.592e2	1.28	
1,2,3,4,7,8-HxCDD	32:39	ND	ND	ND	ND	6.853e2	7.530e2		
1,2,3,6,7,8-HxCDD	32:47	ND	ND	ND	ND	6.465e2	7.847e2		
1,2,3,7,8,9-HxCDD	33:04	ND	ND	ND	ND	6.208e2	7.441e2		

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	35:05	1.93e6	4.22e6	4.61e5	1.05e6	2.111e3	1.252e3	0.46	
1,2,3,4,7,8,9-HpCDF-13C	36:42	1.58e6	3.57e6	3.81e5	8.62e5	1.842e3	1.051e3	0.44	
1,2,3,4,6,7,8-HpCDF	35:03	6.30e3	1.09e4	1.29e3	3.07e3	8.084e2	1.008e3	0.58	I
1,2,3,4,7,8,9-HpCDF	36:43	ND	ND	ND	ND	5.666e2	7.239e2		
Other HpCDF	1 35:34	5.93e3	6.16e3					0.96	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	36:13	3.00e6	2.78e6	7.35e5	6.96e5	4.627e3	1.482e3	1.08	
1,2,3,4,6,7,8-HpCDD	36:13	9.97e3	9.00e3	2.85e3	4.08e3	5.298e2	5.051e2	1.11	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	39:08	9.60e3	9.48e3	1.63e3	2.72e3	6.896e2	8.014e2	1.01	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	38:59	4.78e6	5.26e6	1.08e6	1.20e6	3.481e2	5.783e2	0.91	
OCDD	38:60	2.58e4	3.95e4	9.59e3	1.49e4	8.107e2	7.688e2	0.65	I

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Appendix E

Calibration Raw Data

Homologue Group: Tetras

Data File Name: F130408A_05

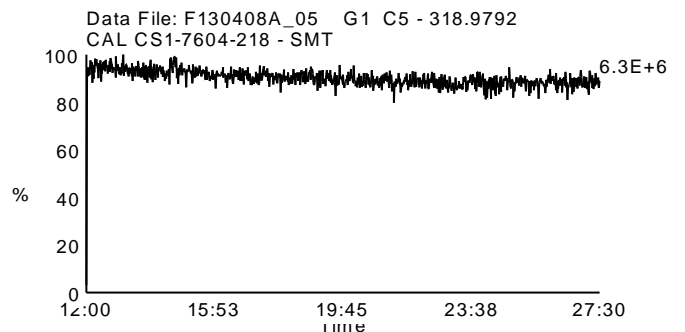
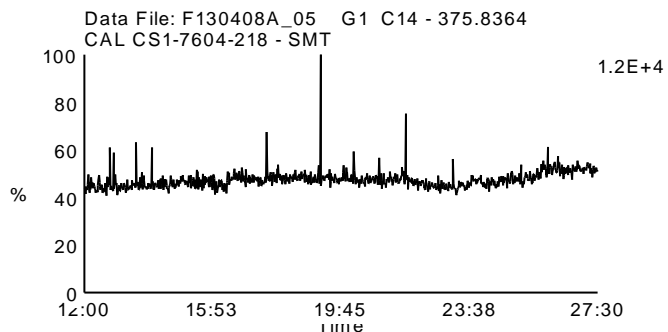
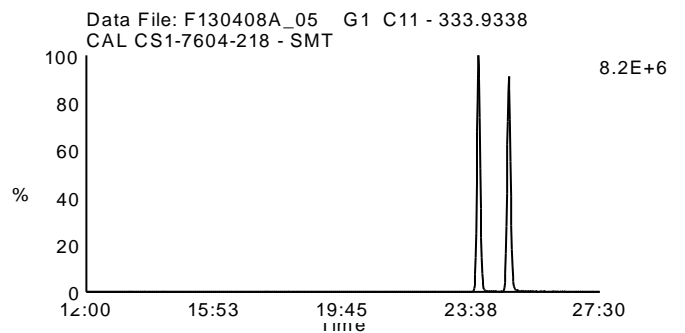
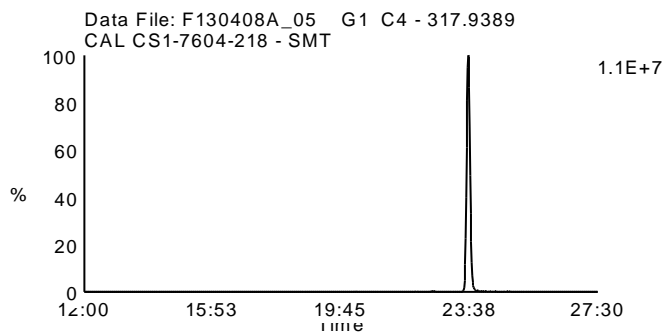
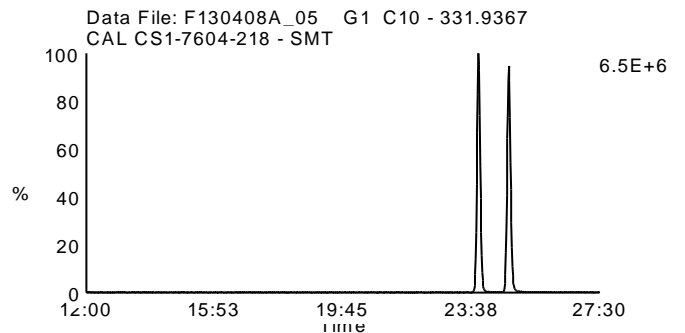
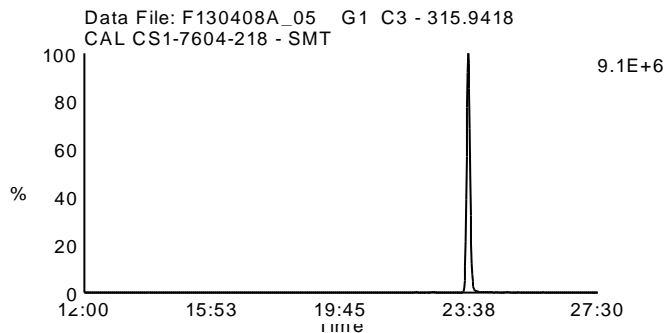
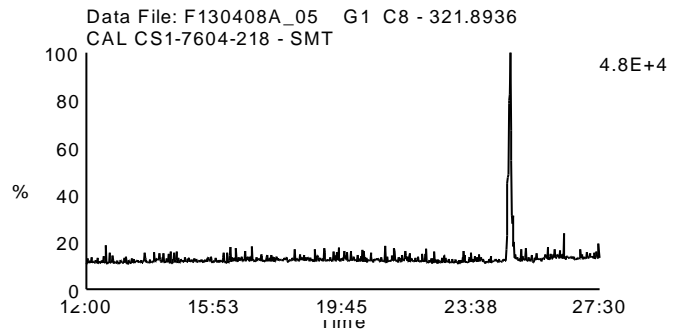
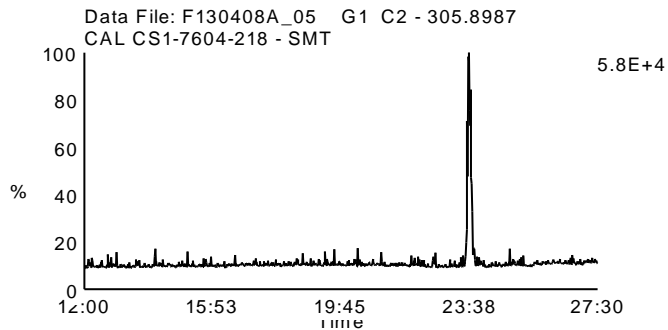
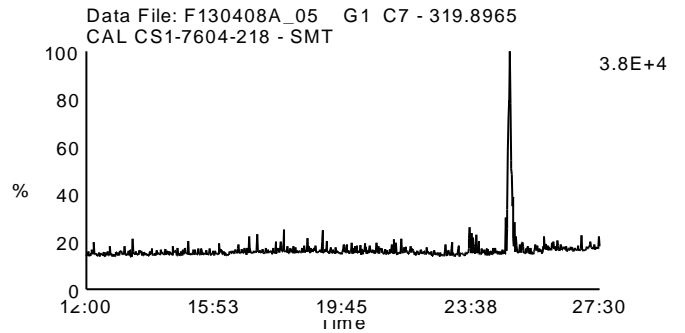
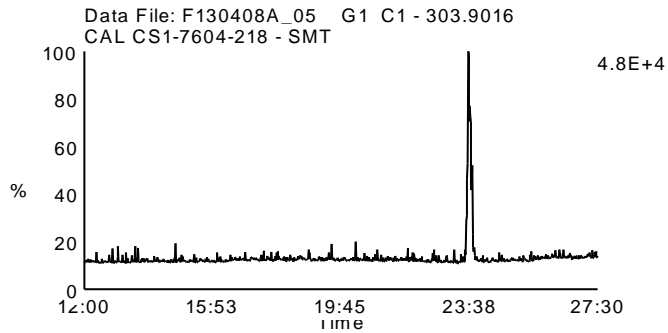
Date Acquired: 4/8/2013

Sample Description: CAL CS1-7604-218 - SMT

Lab Sample ID: CS1-7604-218

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Penta & Cleanup

Data File Name: F130408A_05

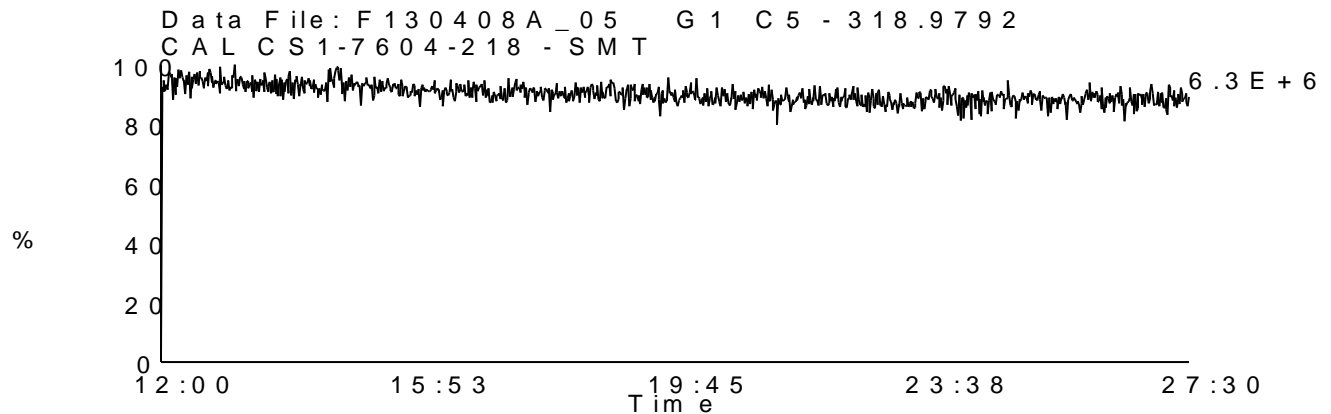
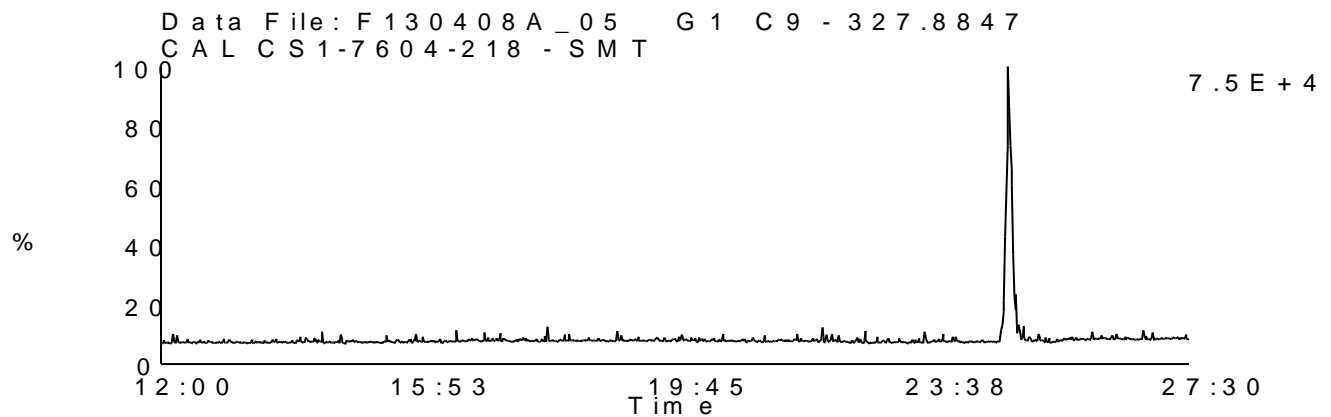
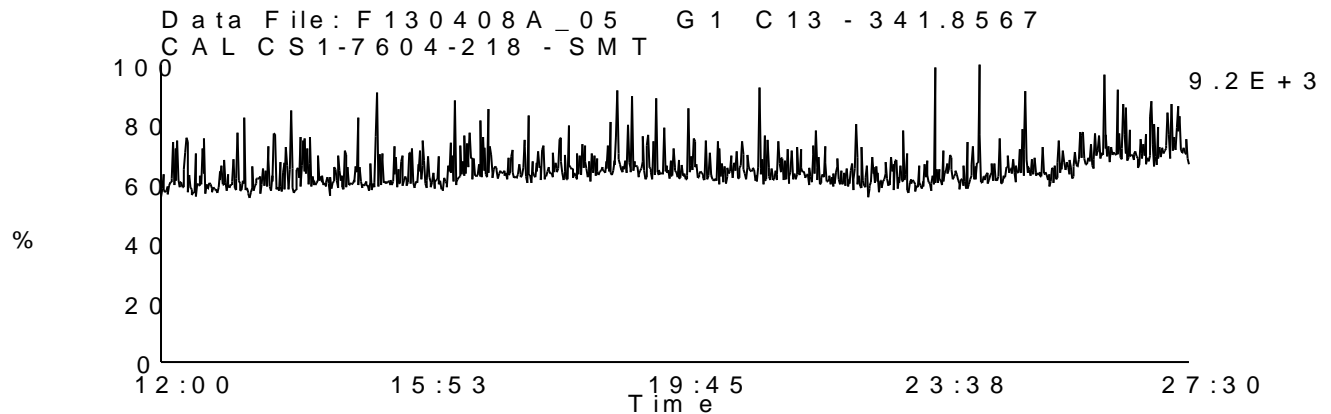
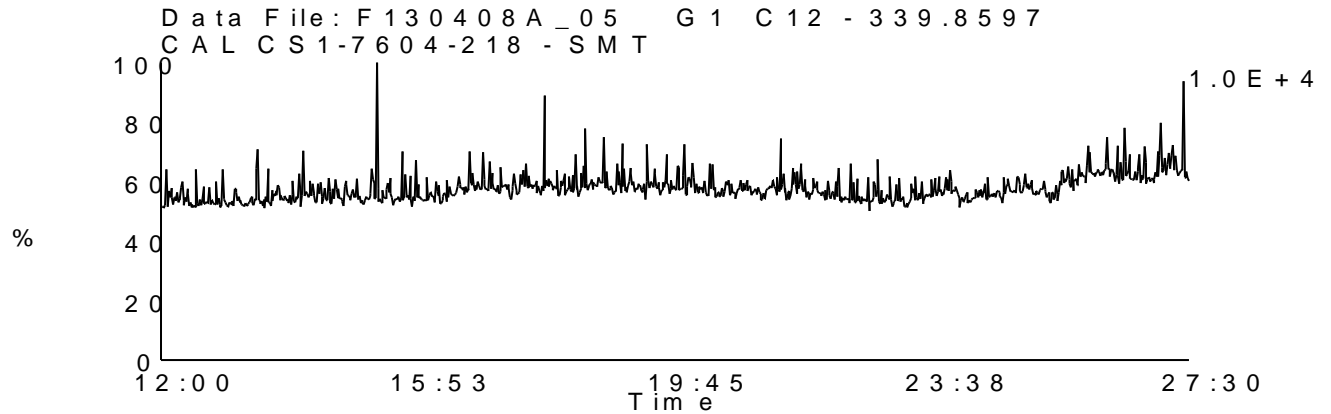
Date Acquired: 4/8/2013

Sample Description: CAL CS1-7604-218 - SMT

Lab Sample ID: CS1-7604-218

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Pentas

Data File Name: F130408A_05

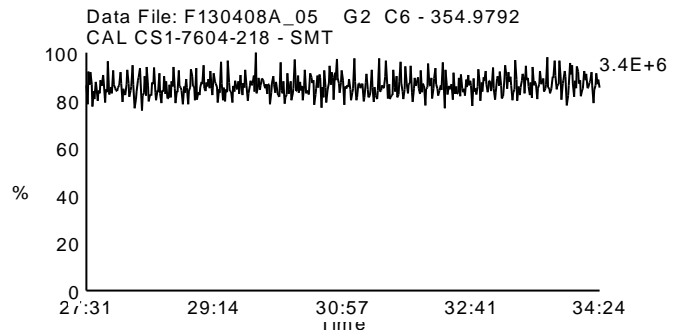
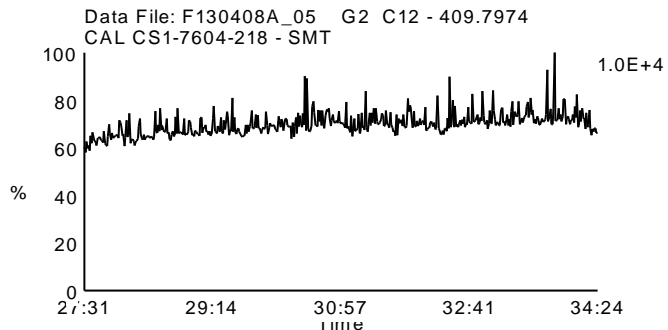
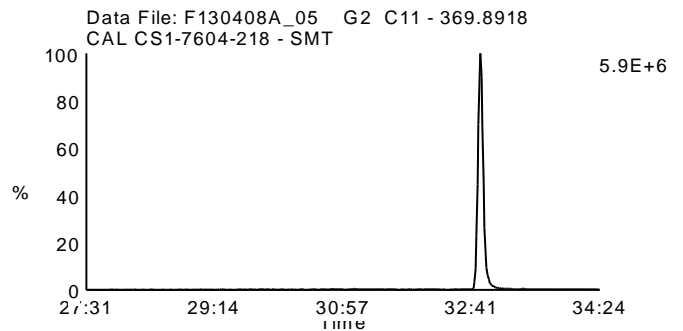
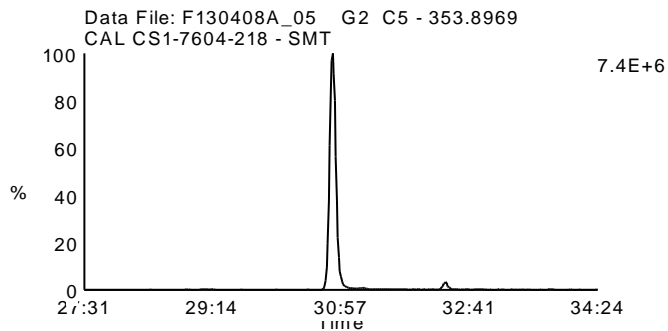
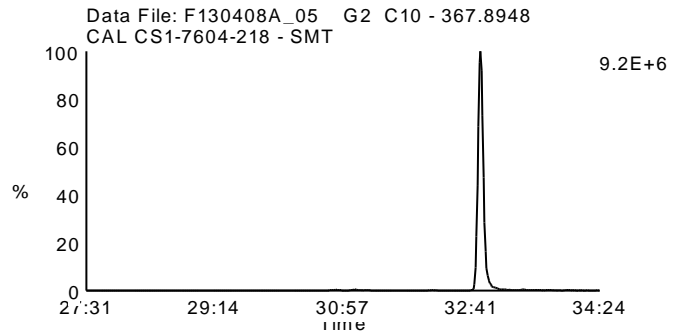
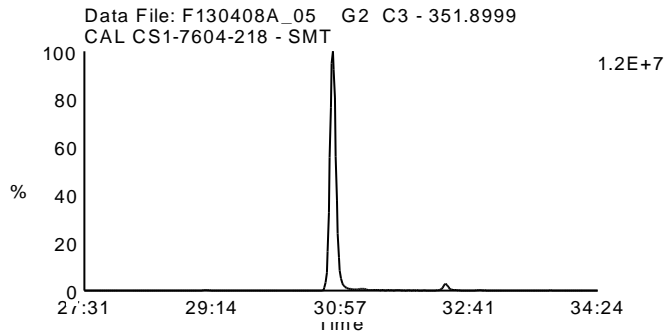
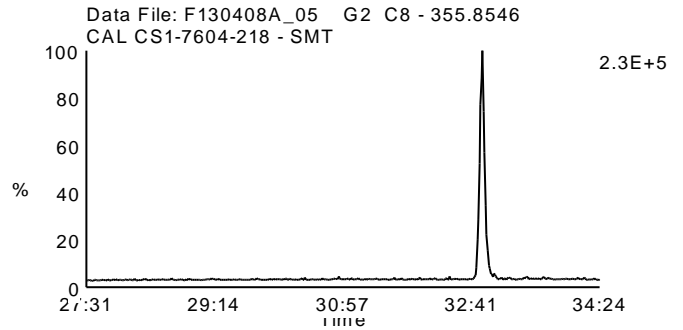
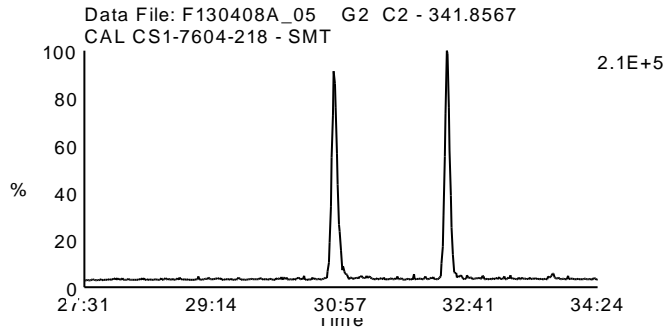
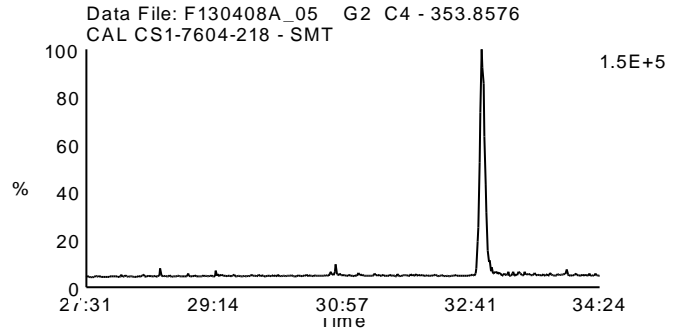
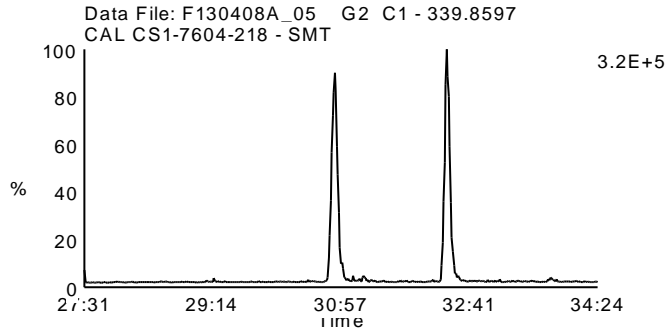
Date Acquired: 4/8/2013

Sample Description: CAL CS1-7604-218 - SMT

Lab Sample ID: CS1-7604-218

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Hexas

Data File Name: F130408A_05

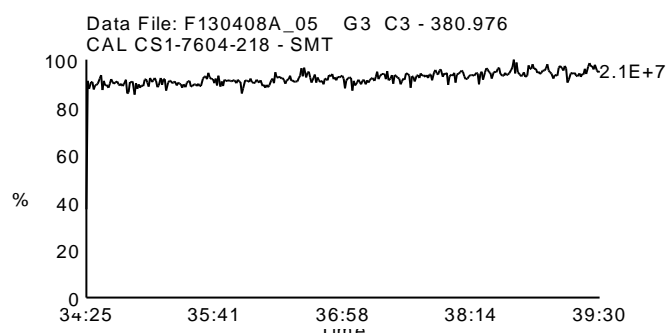
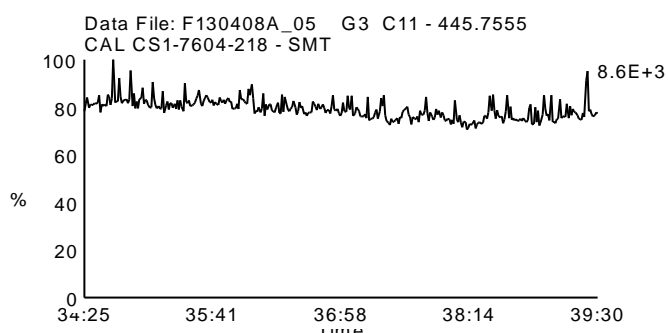
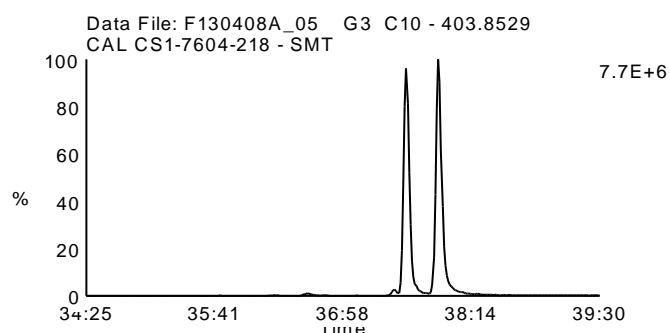
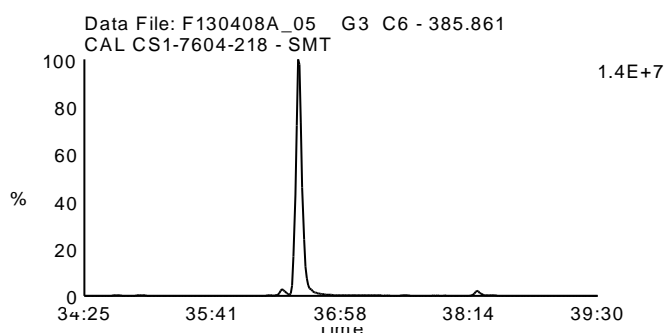
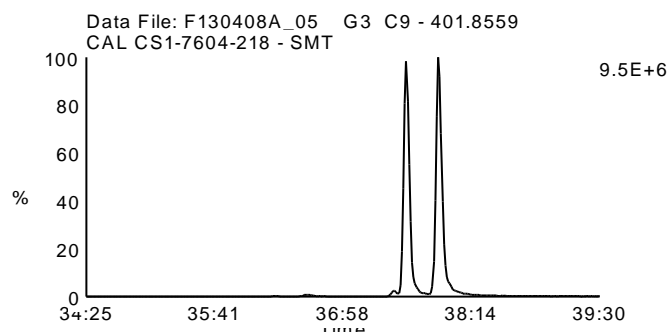
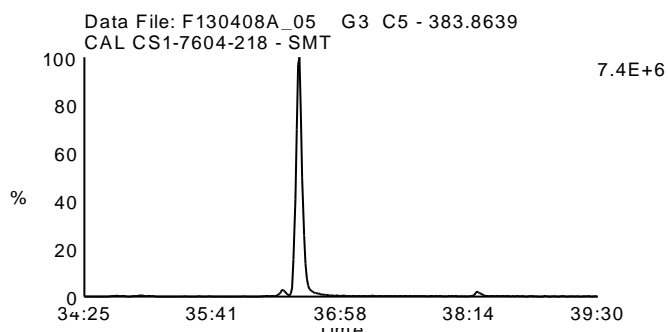
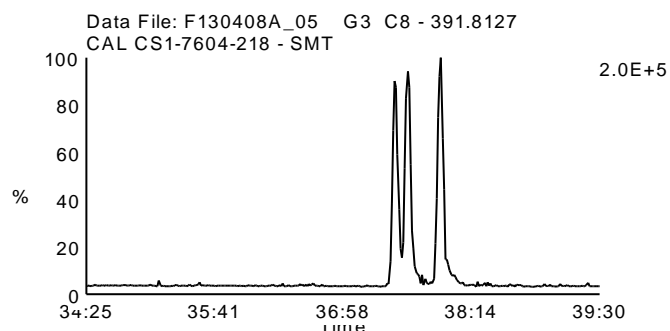
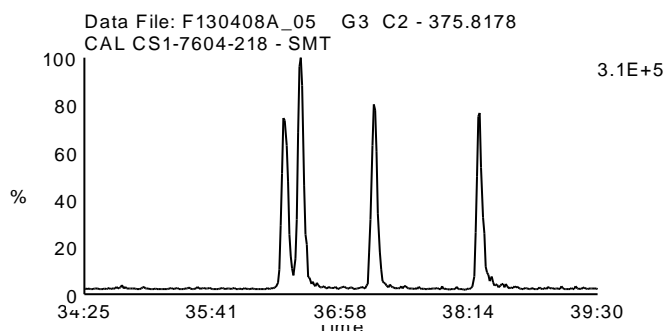
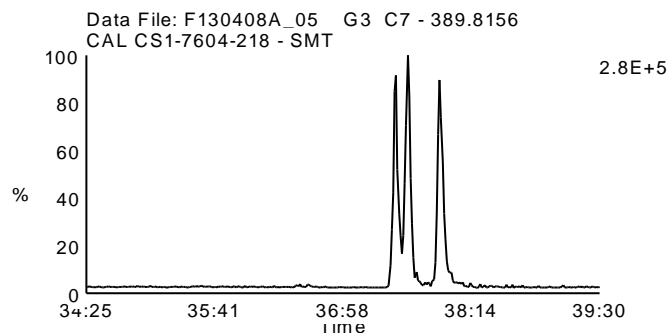
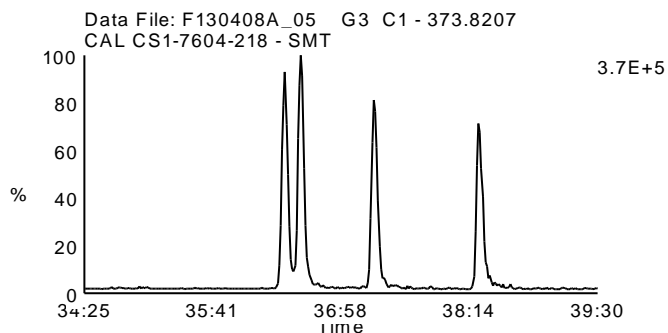
Date Acquired: 4/8/2013

Sample Description: CAL CS1-7604-218 - SMT

Lab Sample ID: CS1-7604-218

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Heptas

Data File Name: F130408A_05

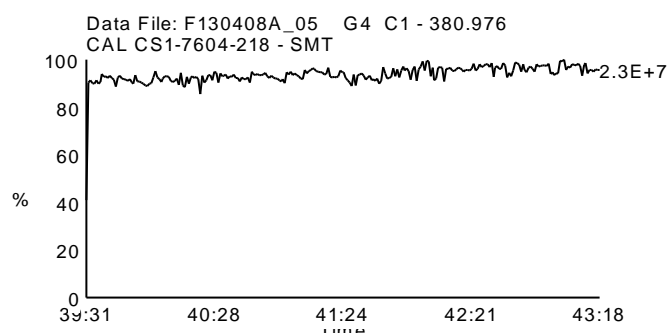
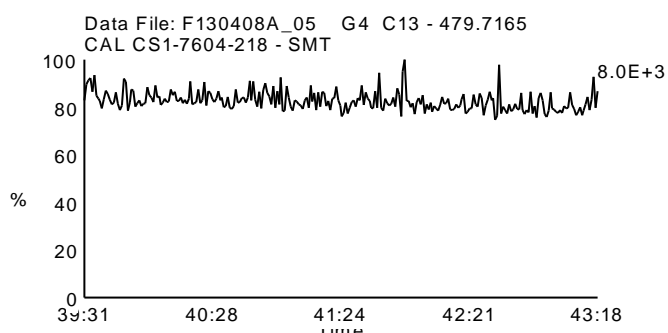
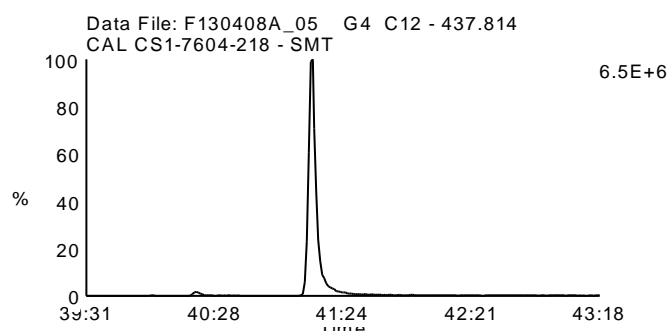
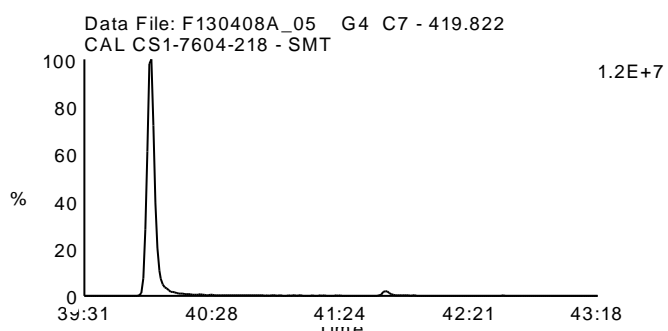
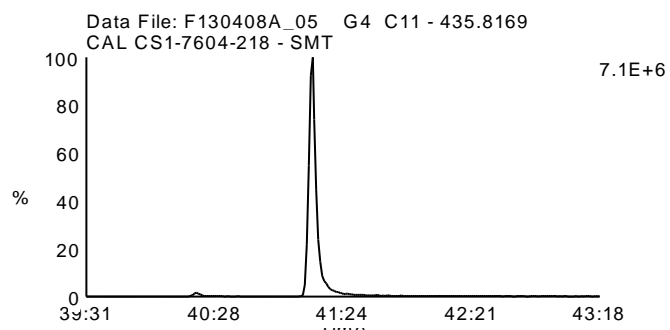
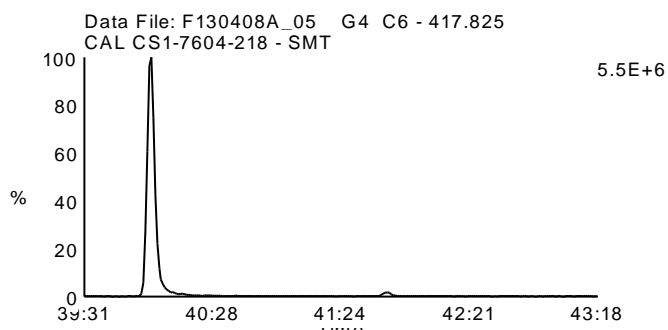
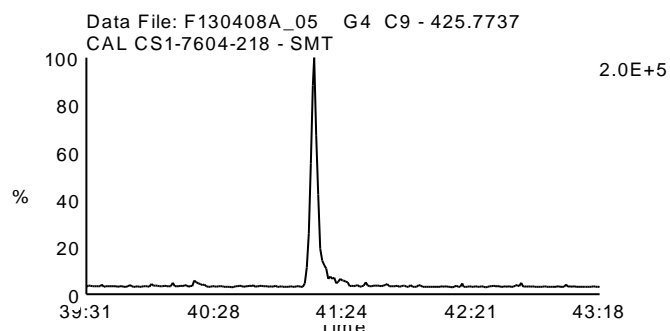
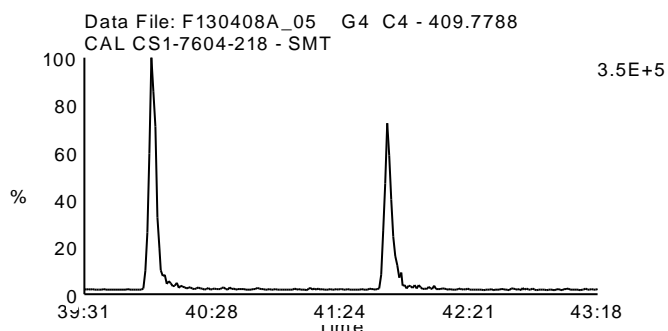
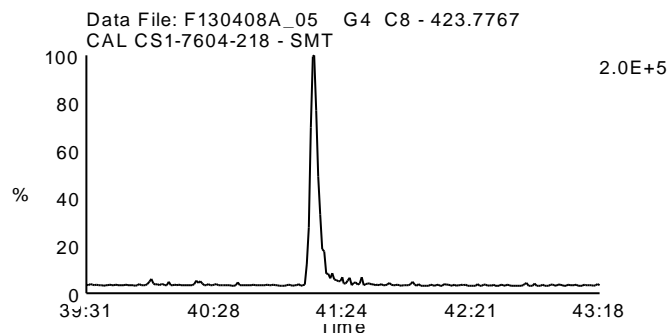
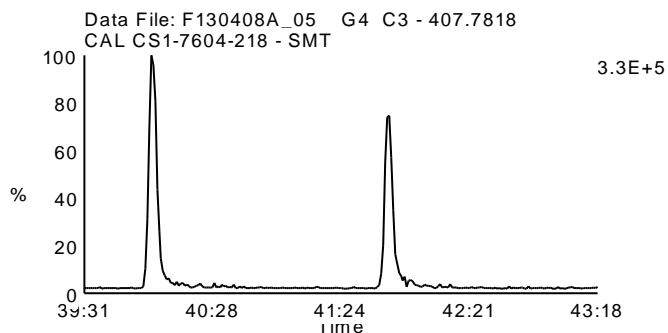
Date Acquired: 4/8/2013

Sample Description: CAL CS1-7604-218 - SMT

Lab Sample ID: CS1-7604-218

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Octas

Data File Name: F130408A_05

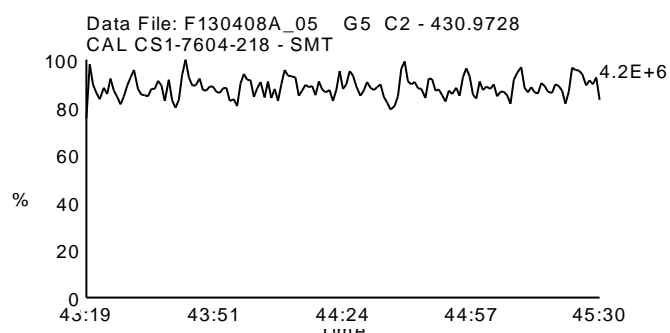
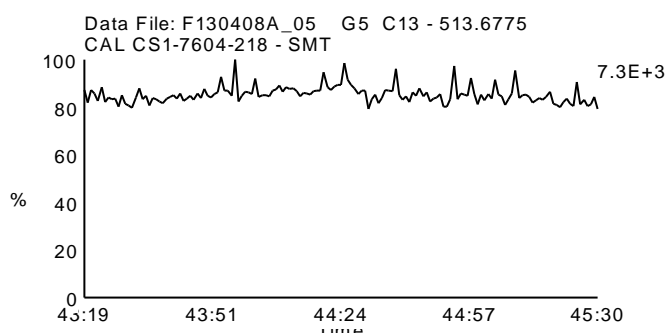
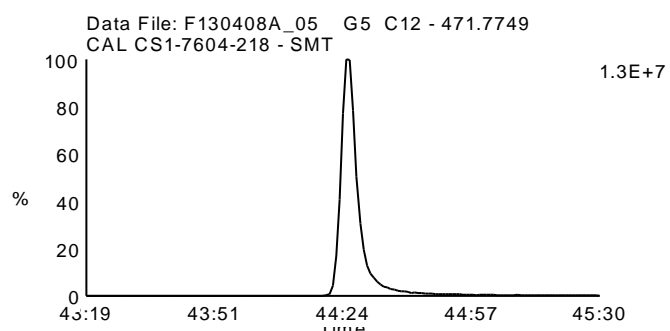
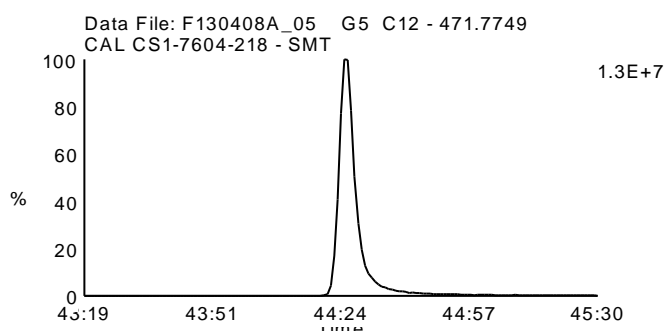
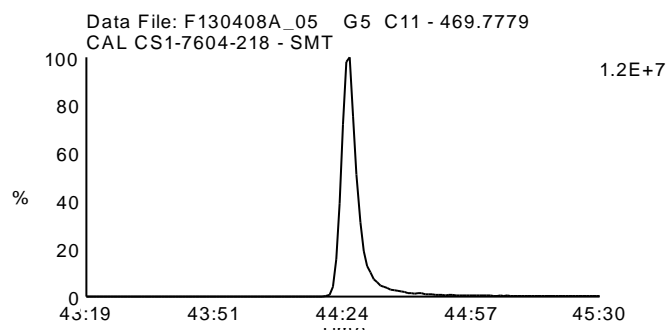
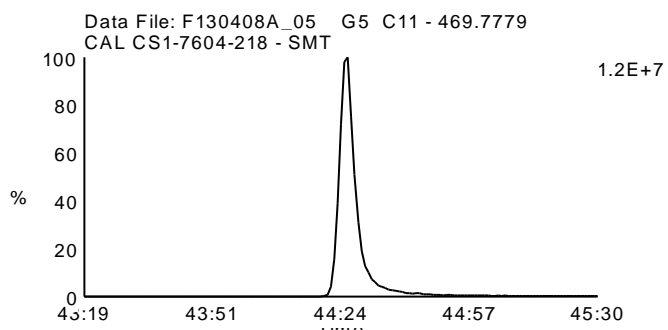
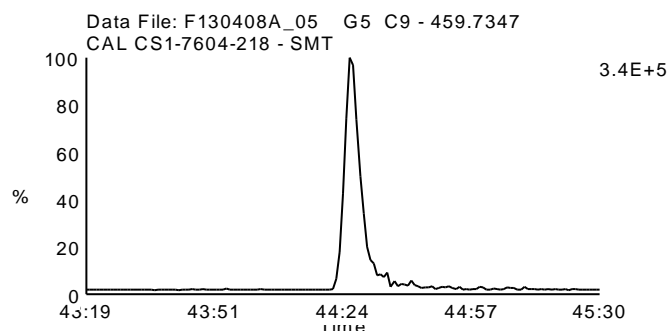
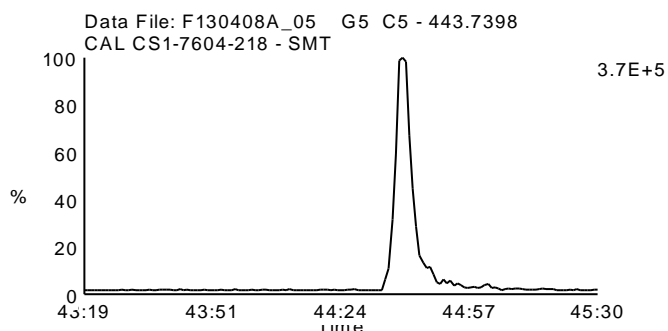
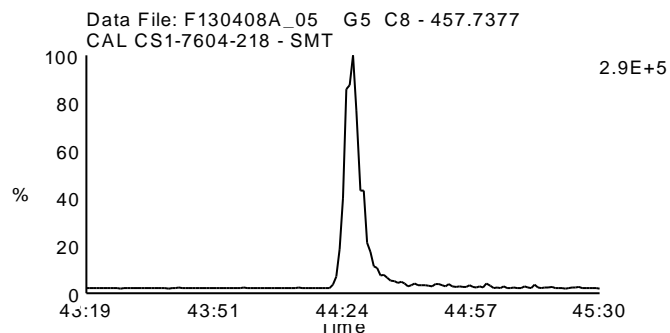
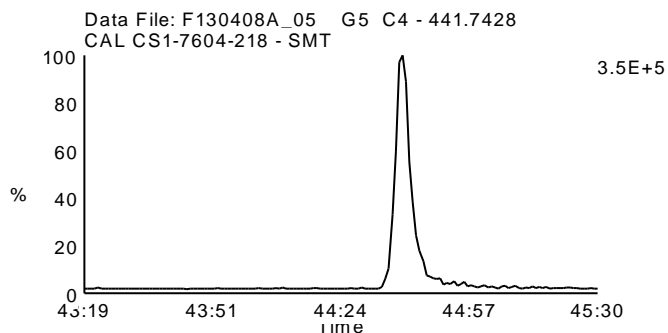
Date Acquired: 4/8/2013

Sample Description: CAL CS1-7604-218 - SMT

Lab Sample ID: CS1-7604-218

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Tetras

Data File Name: F130408A_04

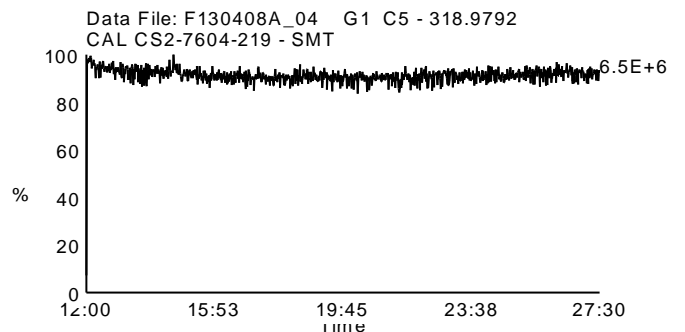
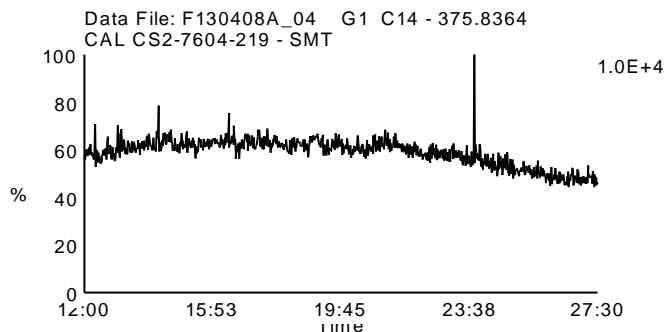
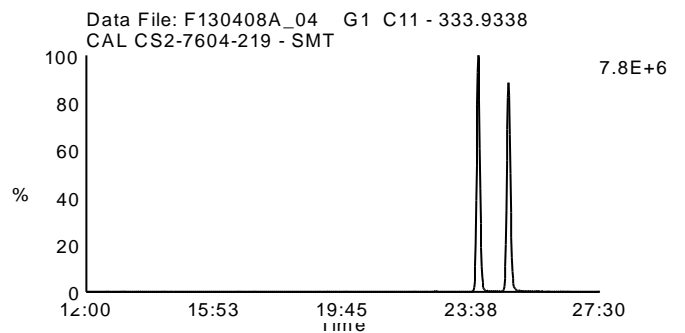
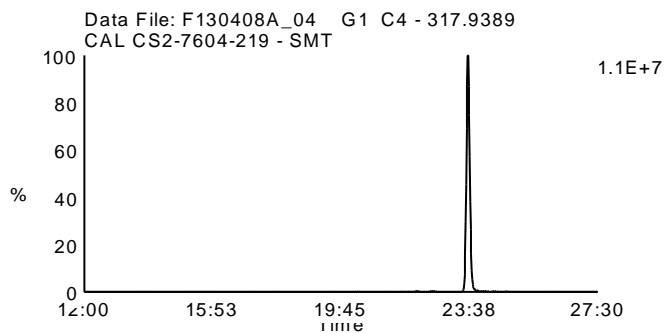
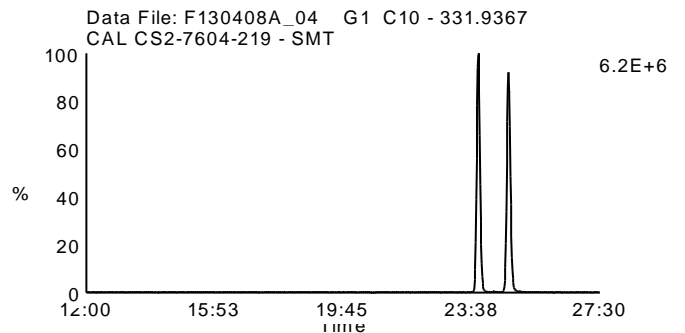
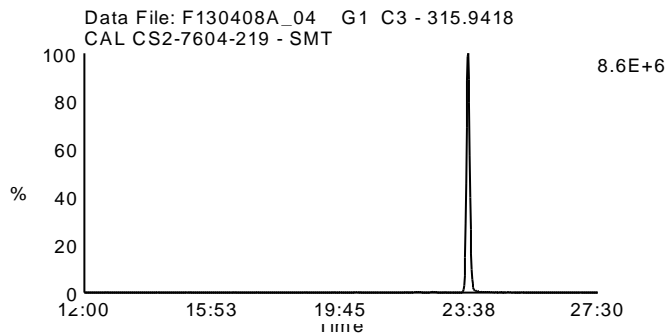
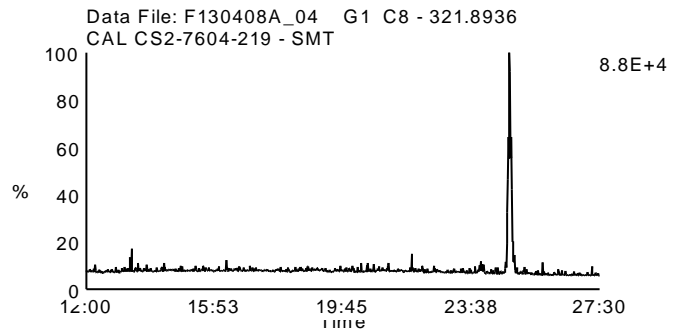
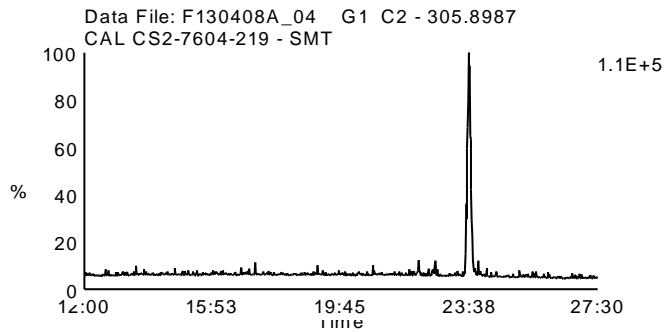
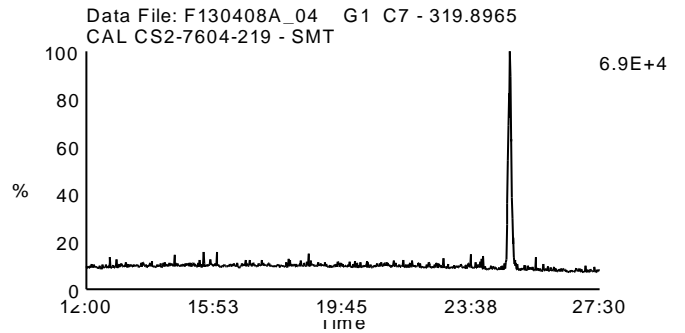
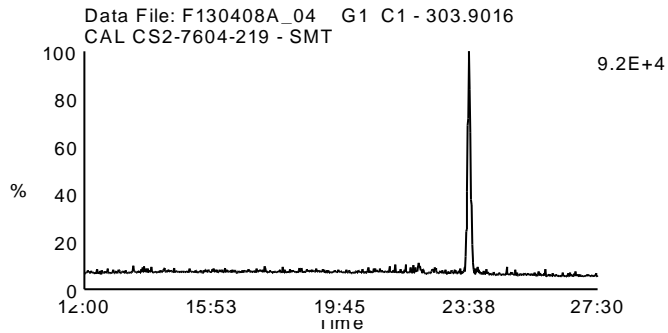
Date Acquired: 4/8/2013

Sample Description: CAL CS2-7604-219 - SMT

Lab Sample ID: CS2-7604-219

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Penta & Cleanup

Data File Name: F130408A_04

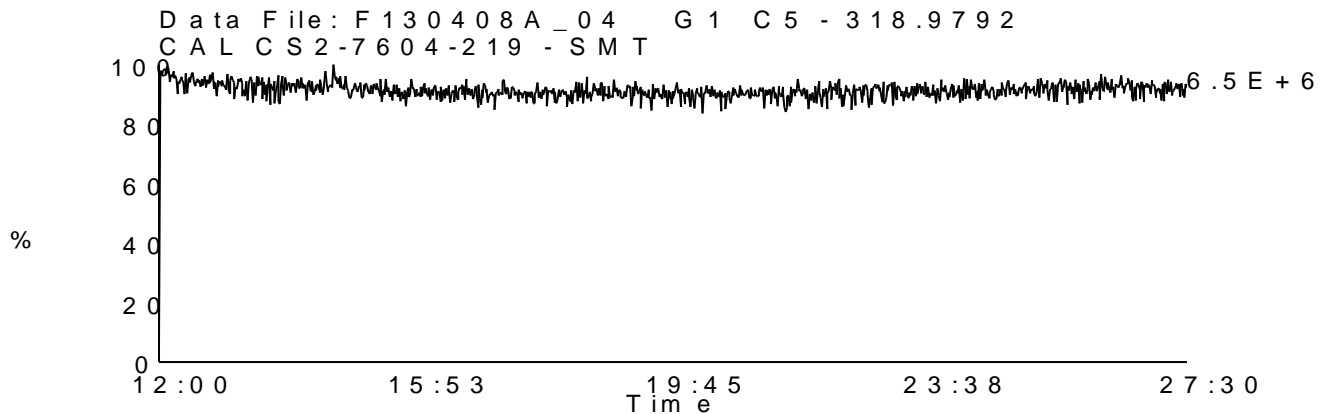
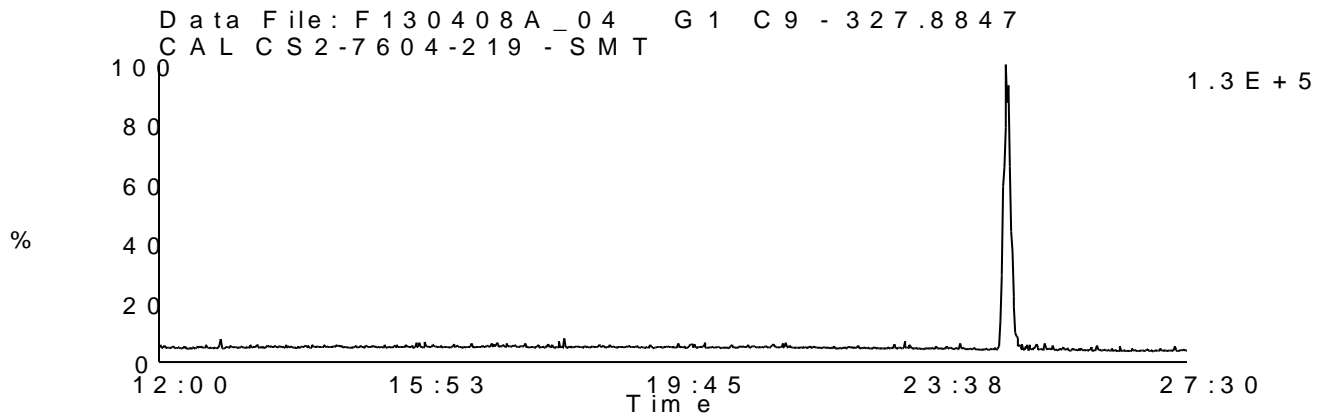
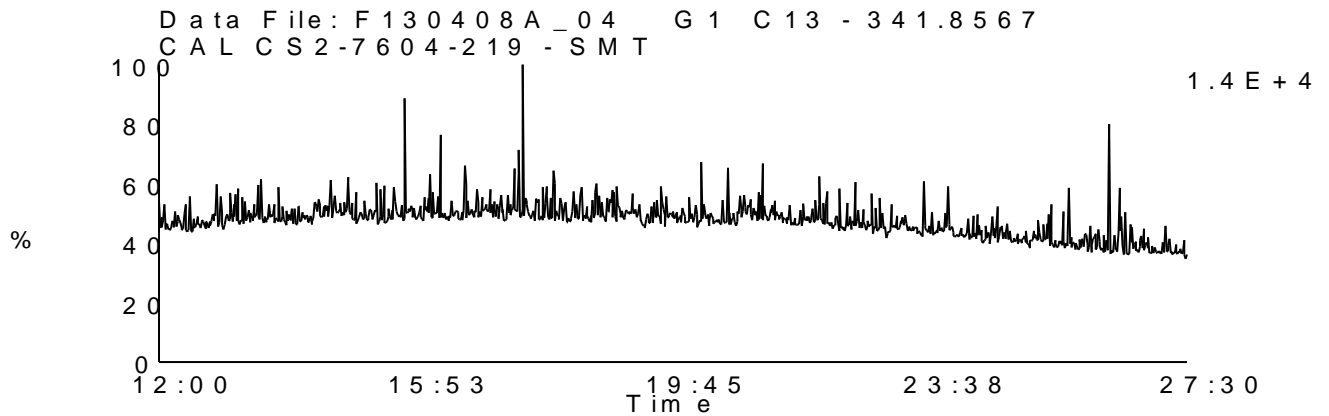
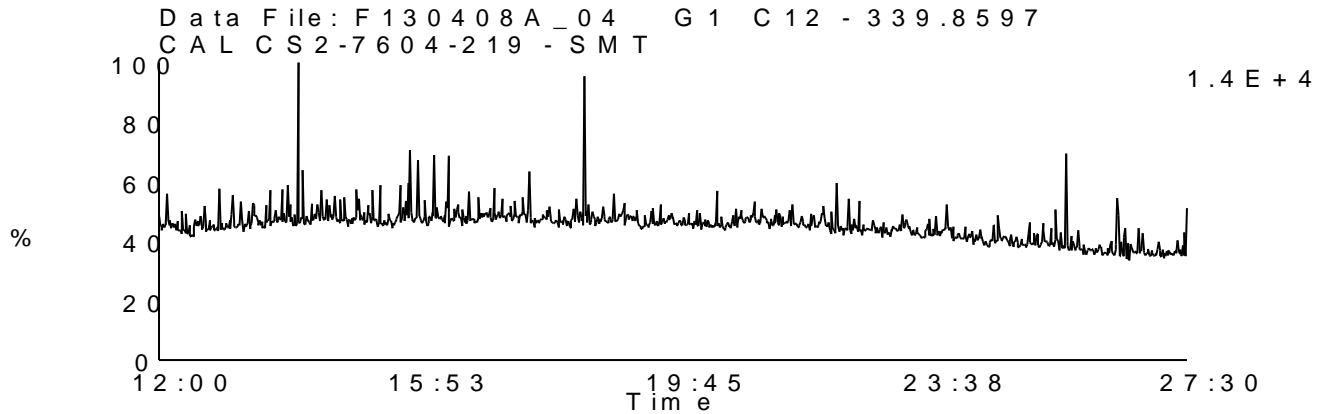
Date Acquired: 4/8/2013

Sample Description: CAL CS2-7604-219 - SMT

Lab Sample ID: CS2-7604-219

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Pentas

Data File Name: F130408A_04

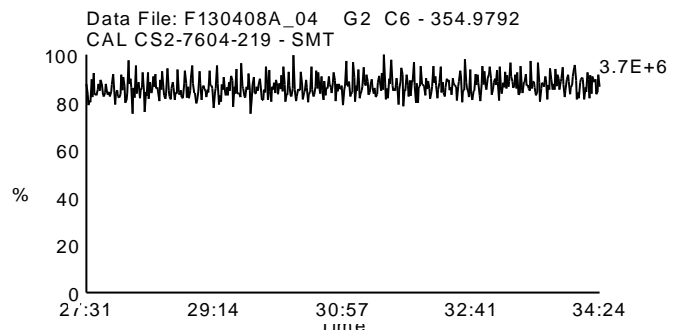
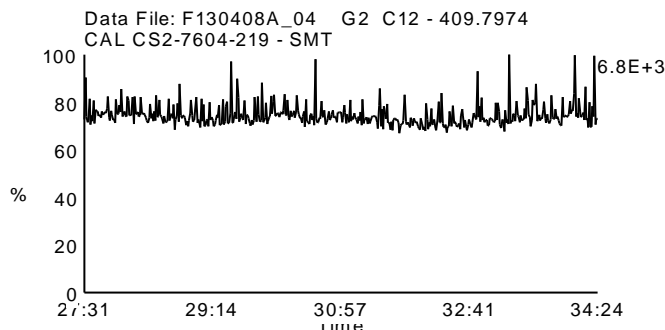
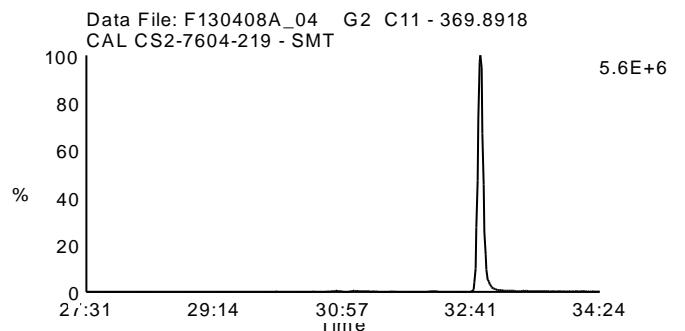
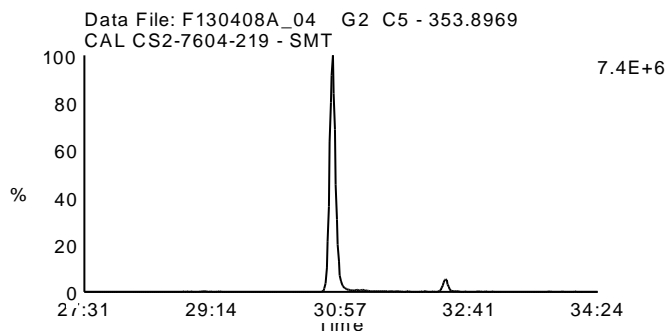
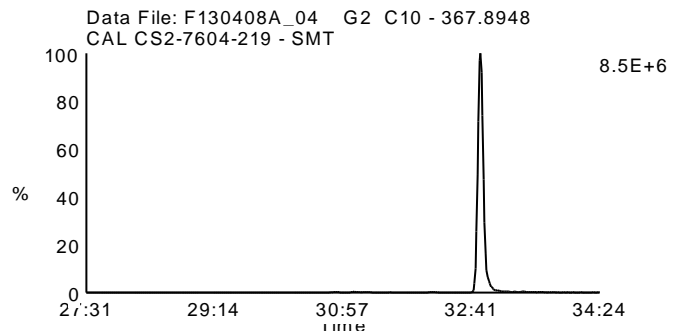
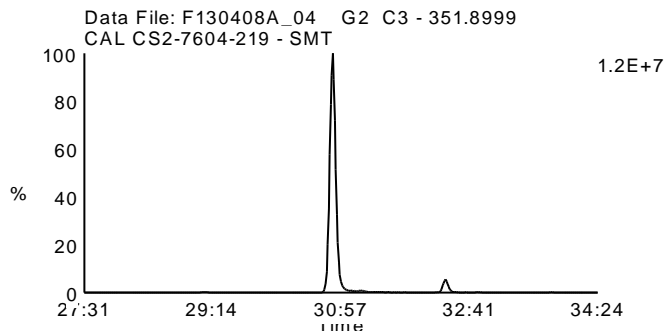
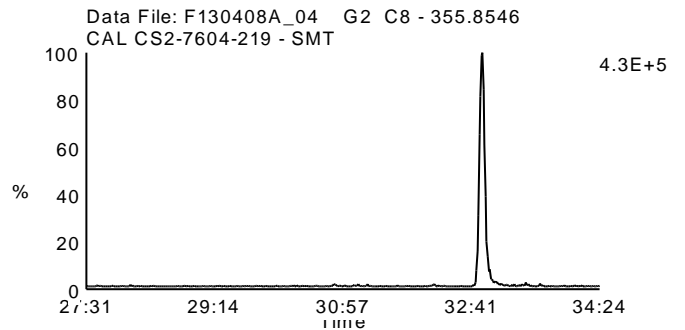
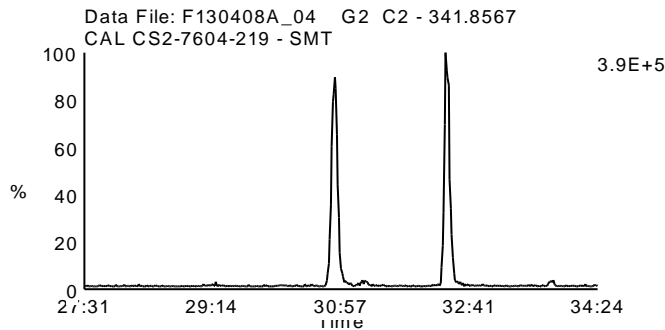
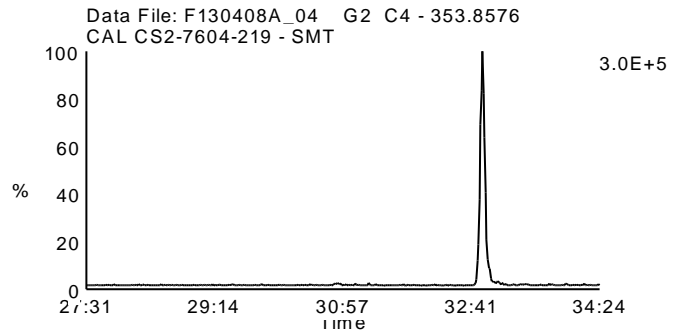
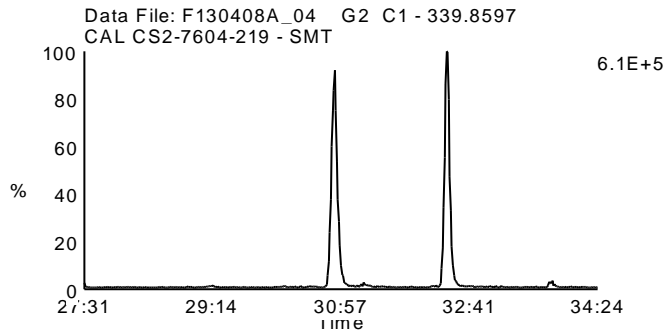
Date Acquired: 4/8/2013

Sample Description: CAL CS2-7604-219 - SMT

Lab Sample ID: CS2-7604-219

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Hexas

Data File Name: F130408A_04

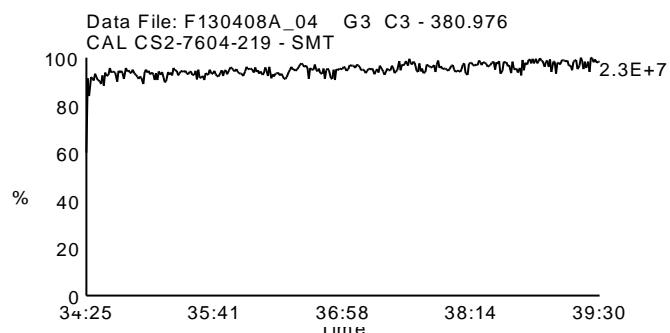
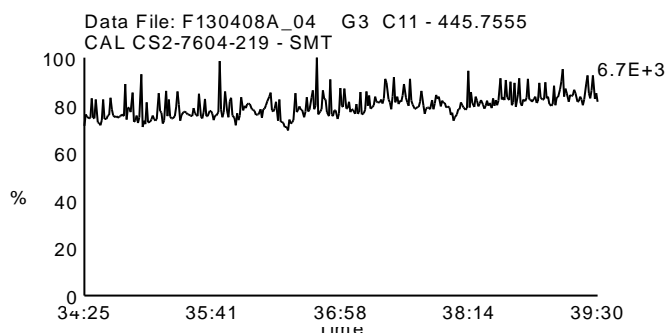
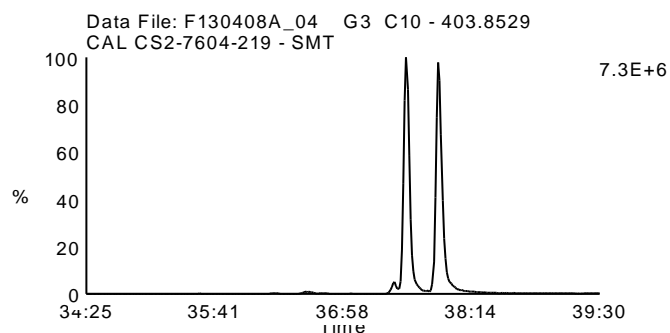
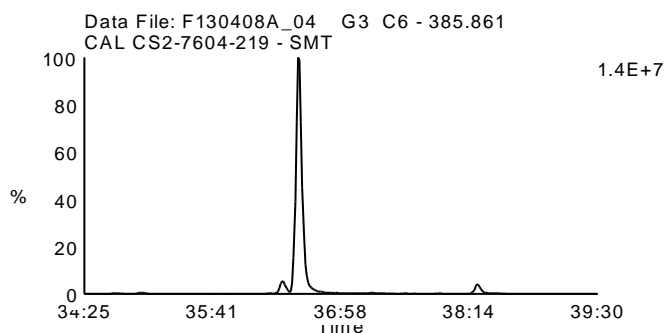
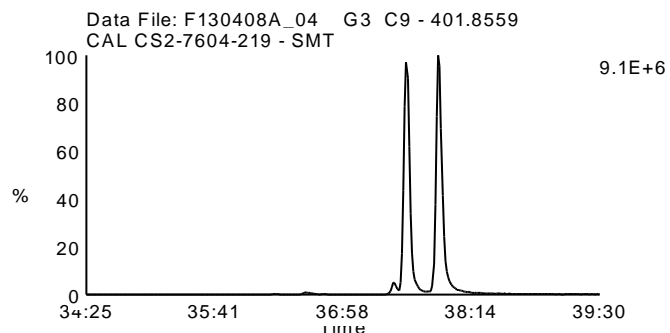
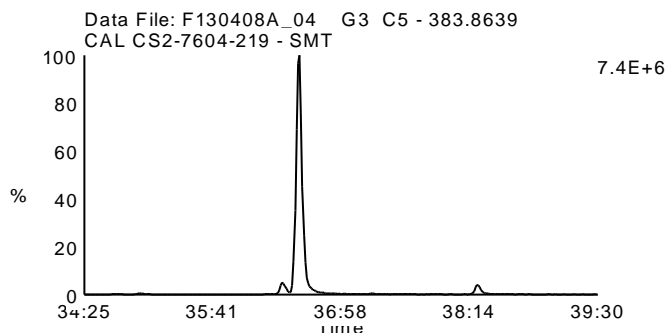
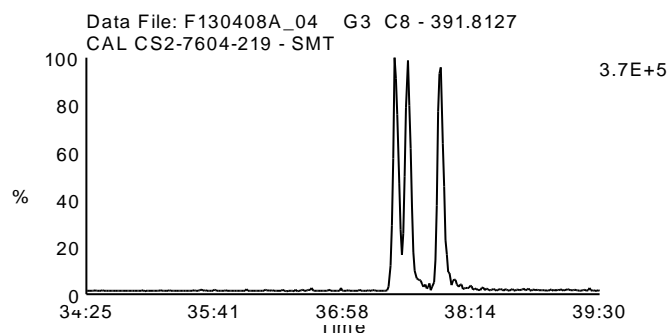
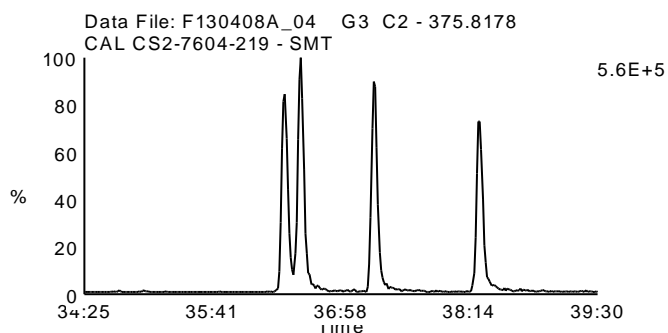
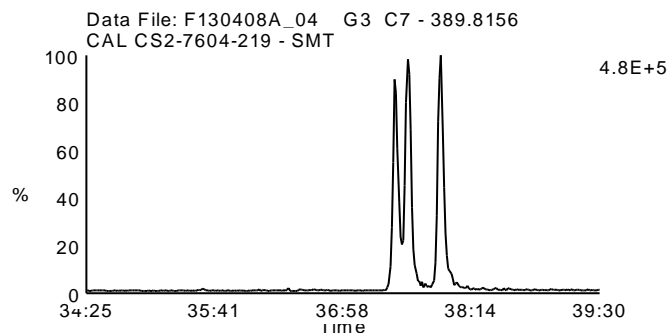
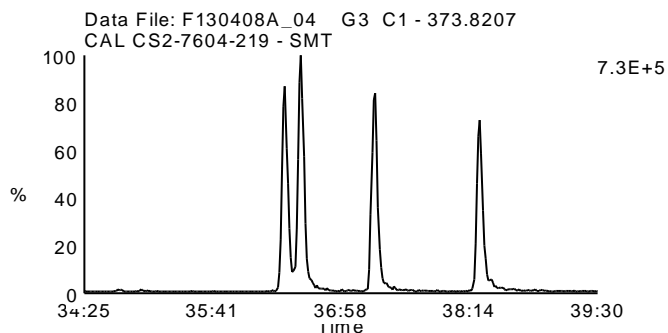
Date Acquired: 4/8/2013

Sample Description: CAL CS2-7604-219 - SMT

Lab Sample ID: CS2-7604-219

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Heptas

Data File Name: F130408A_04

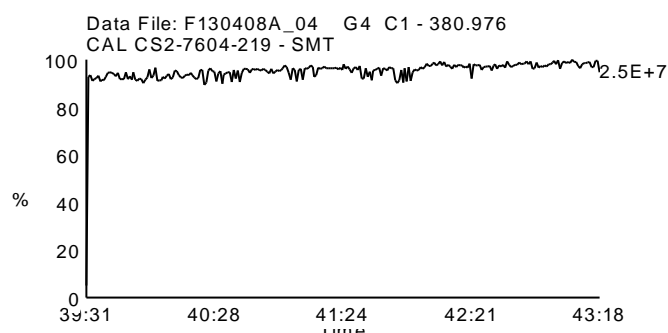
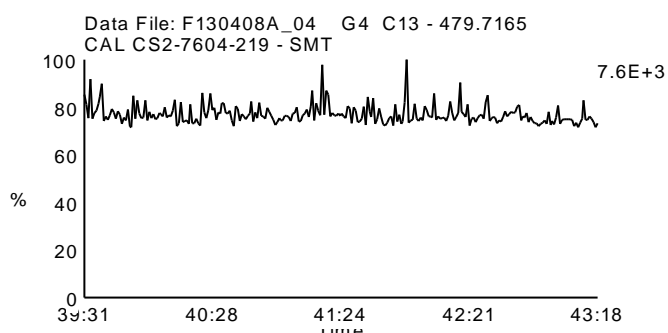
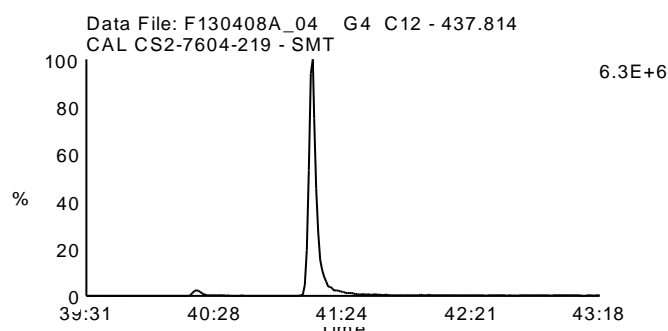
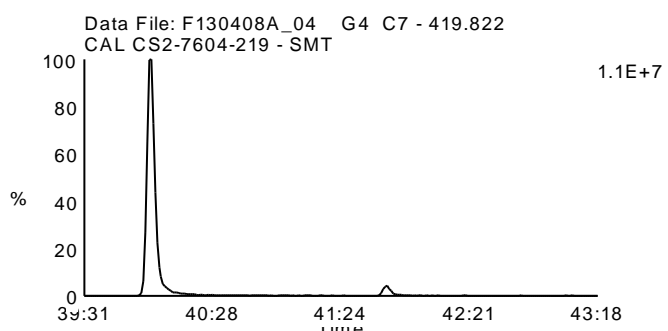
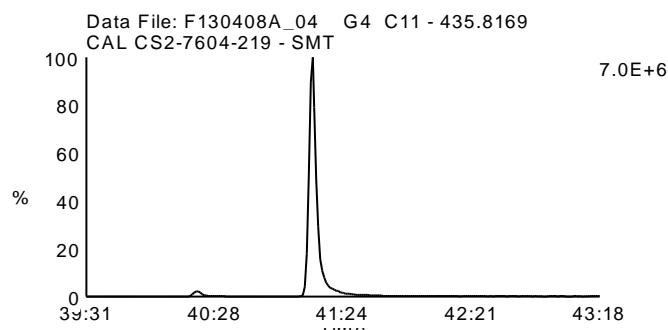
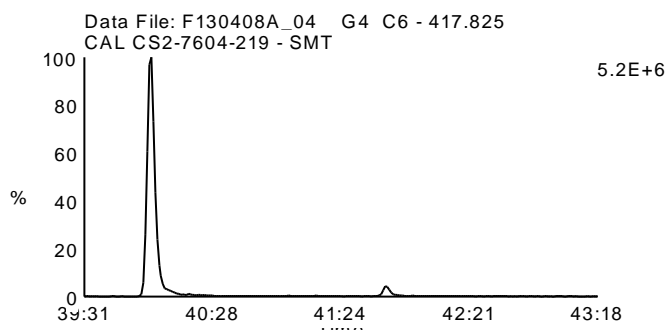
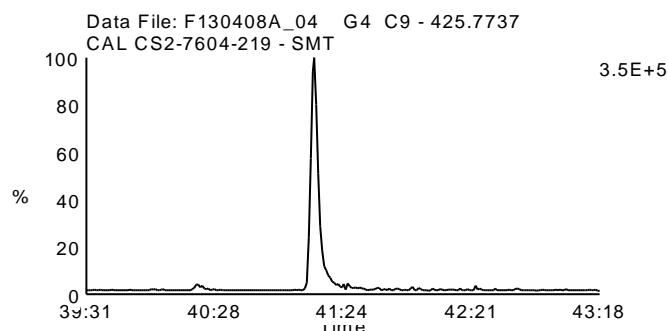
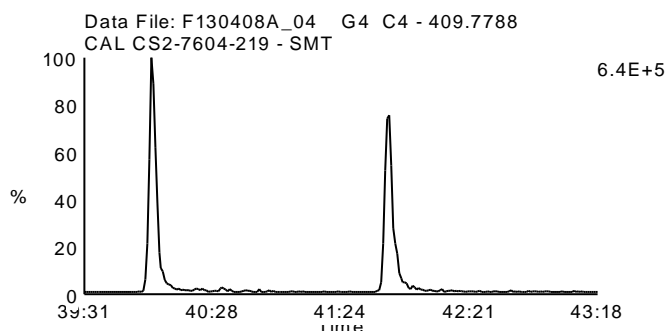
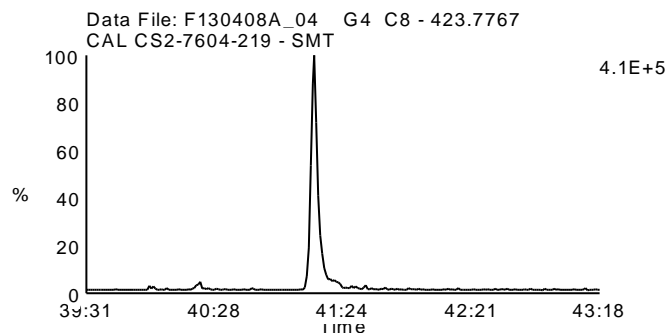
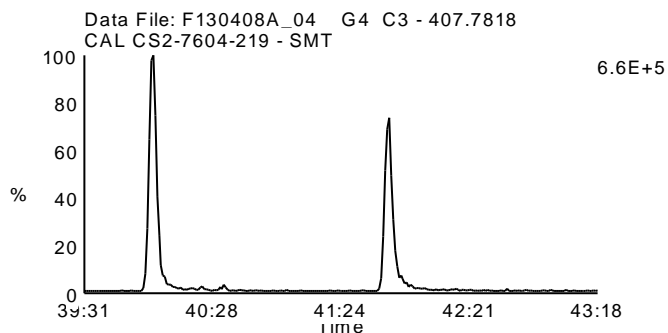
Date Acquired: 4/8/2013

Sample Description: CAL CS2-7604-219 - SMT

Lab Sample ID: CS2-7604-219

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Octas

Data File Name: F130408A_04

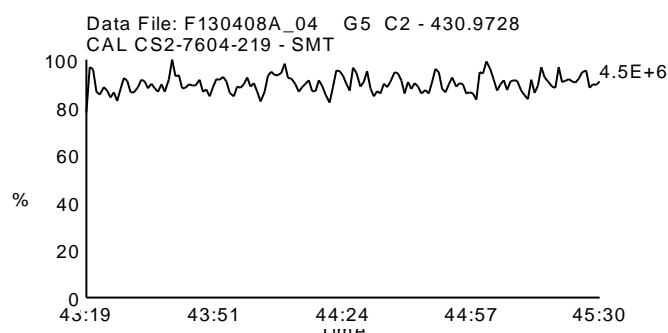
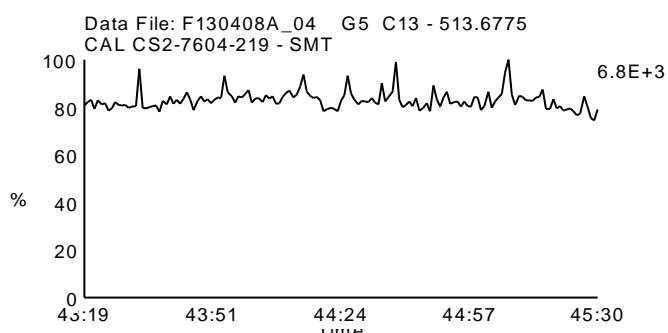
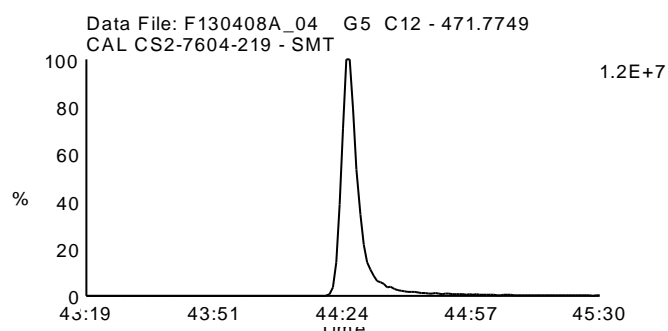
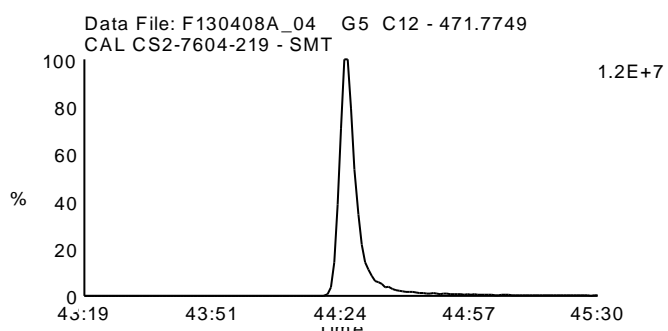
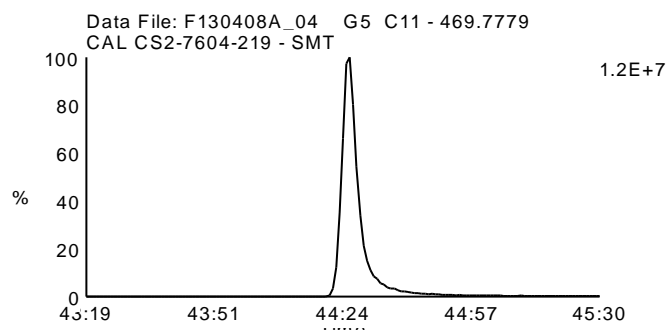
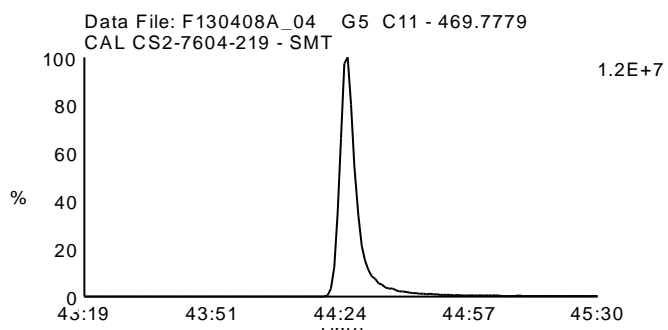
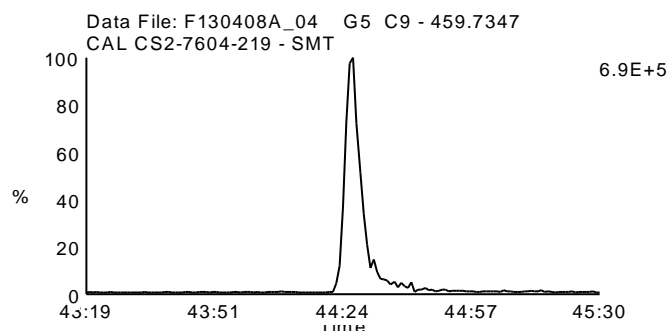
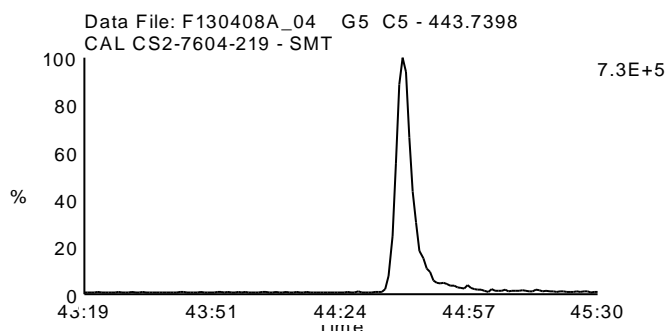
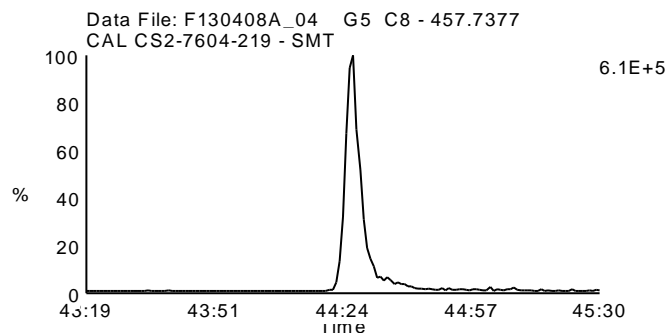
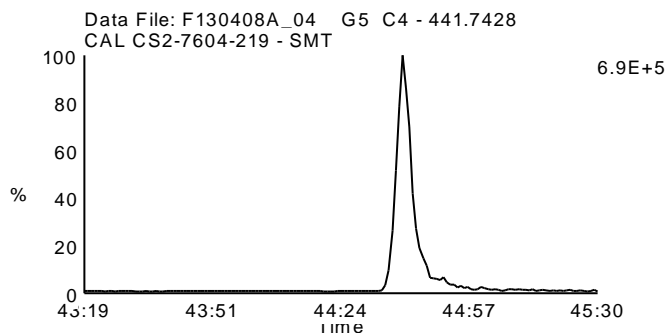
Date Acquired: 4/8/2013

Sample Description: CAL CS2-7604-219 - SMT

Lab Sample ID: CS2-7604-219

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Tetras

Data File Name: F130408A_03

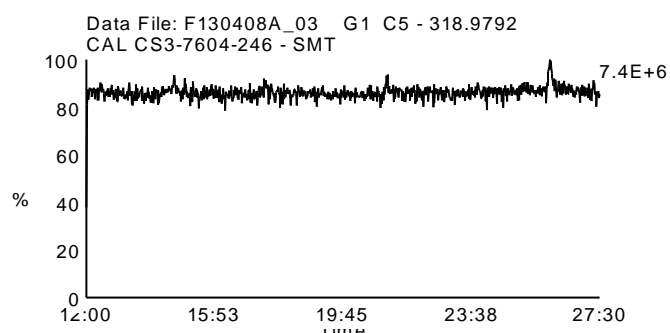
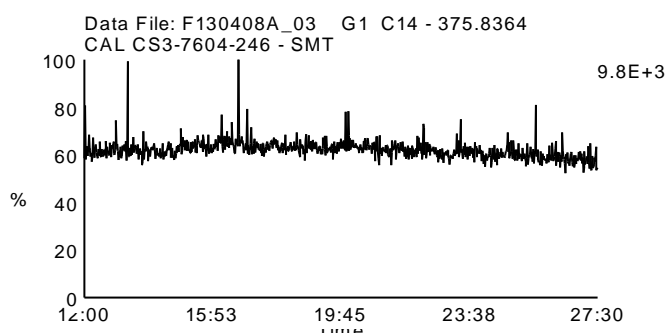
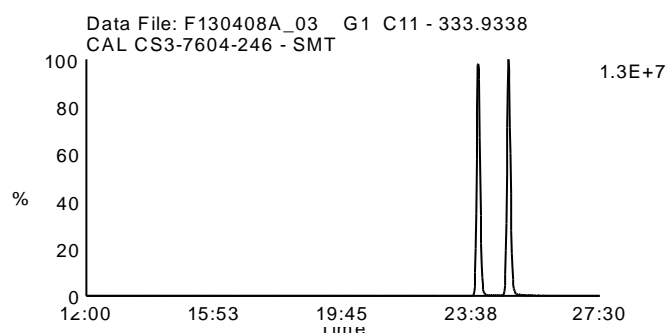
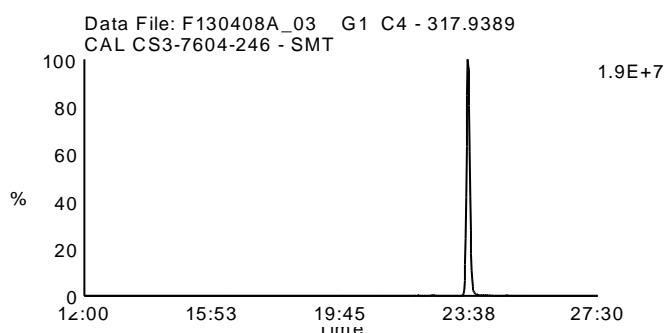
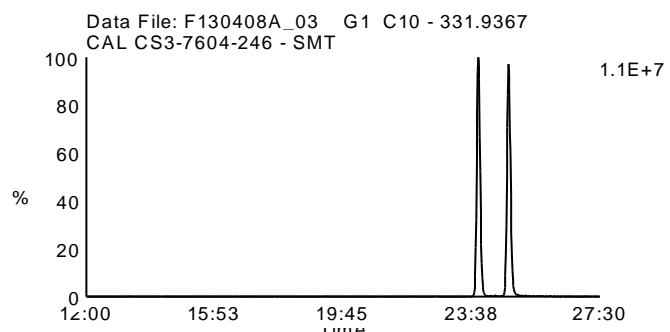
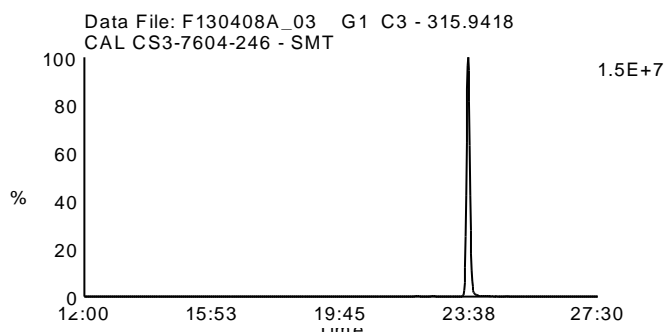
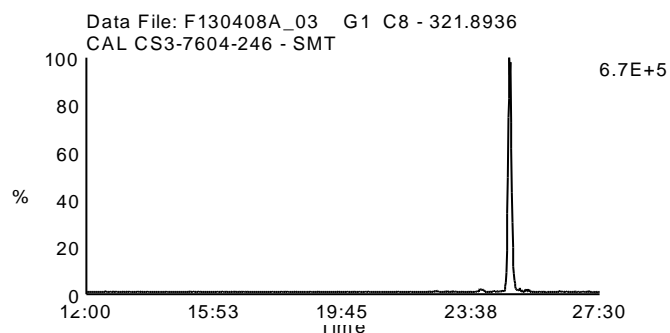
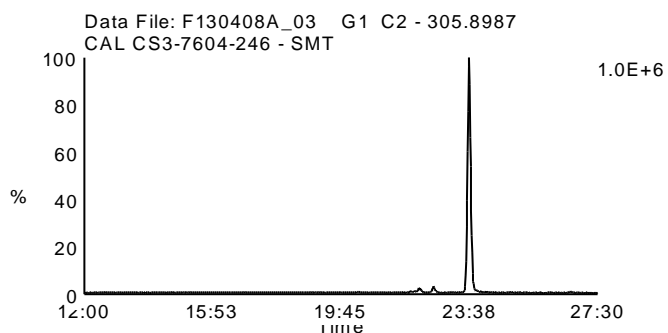
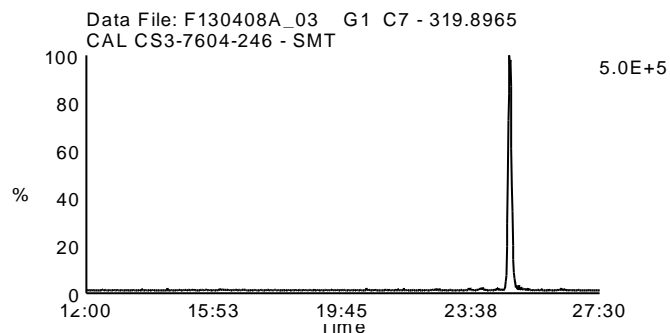
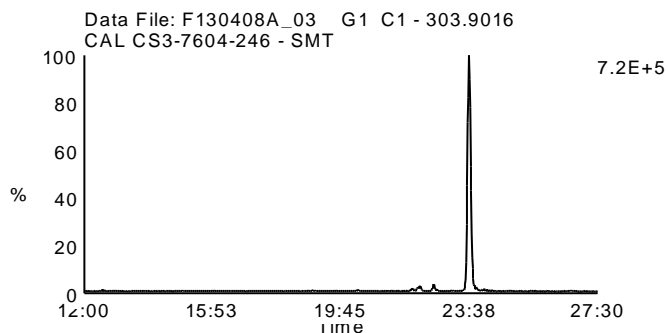
Date Acquired: 4/8/2013

Sample Description: CAL CS3-7604-246 - SMT

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Penta & Cleanup

Data File Name: F130408A_03

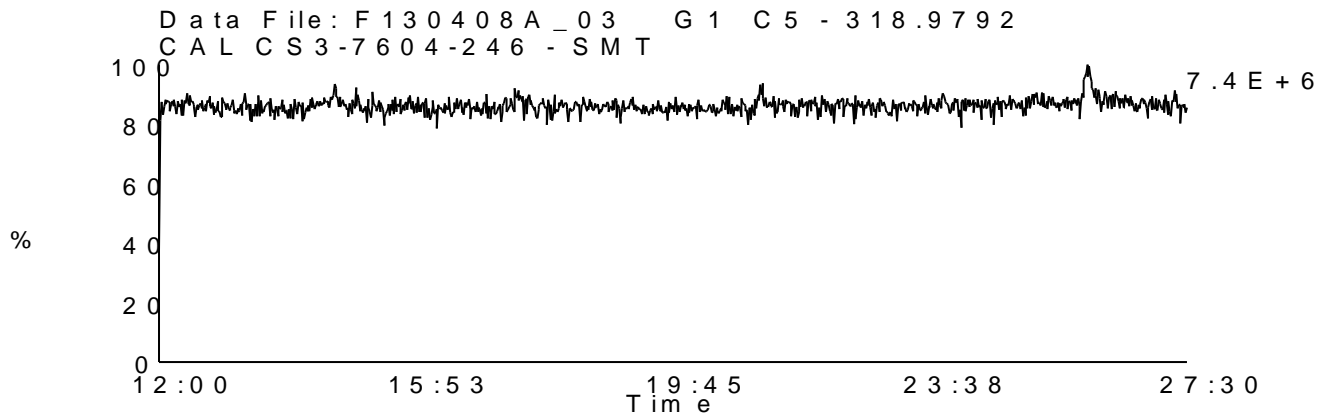
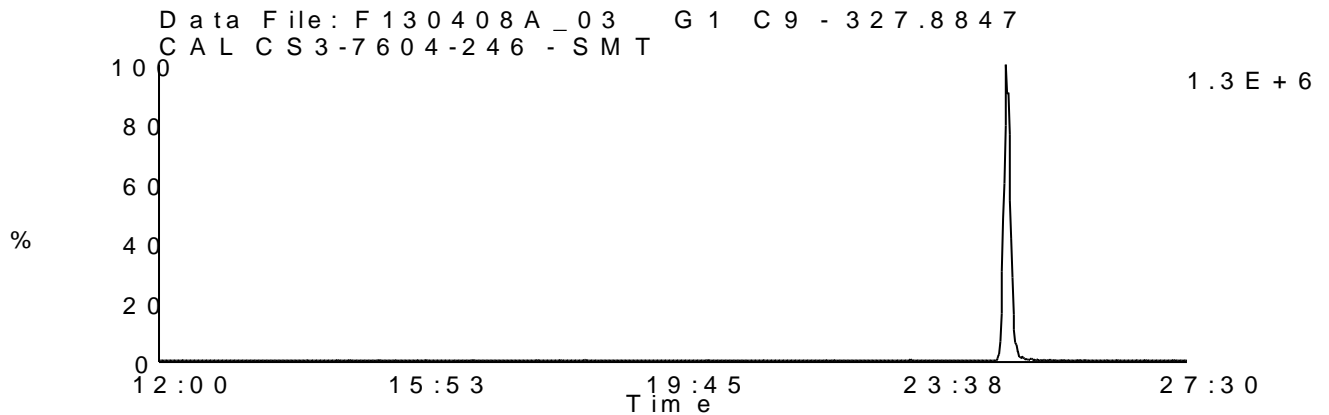
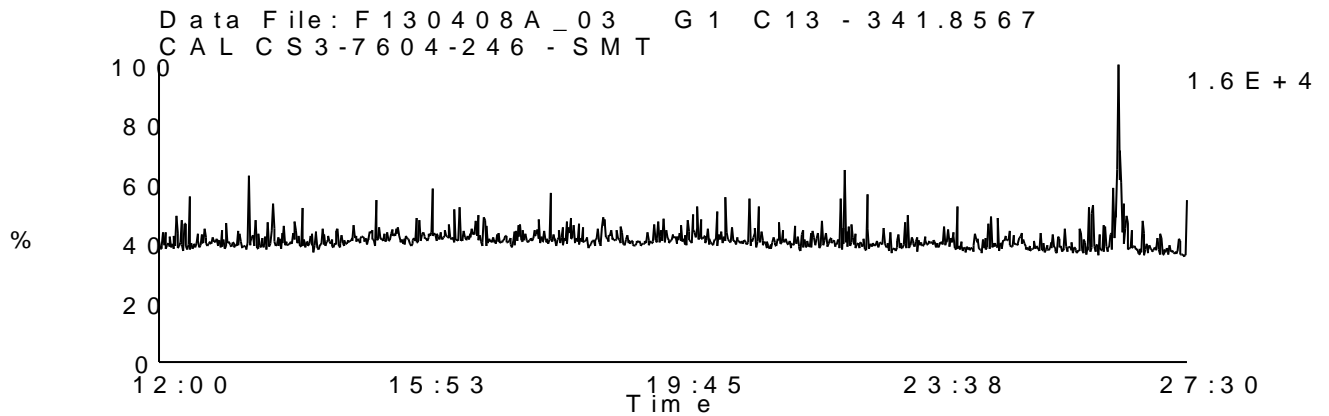
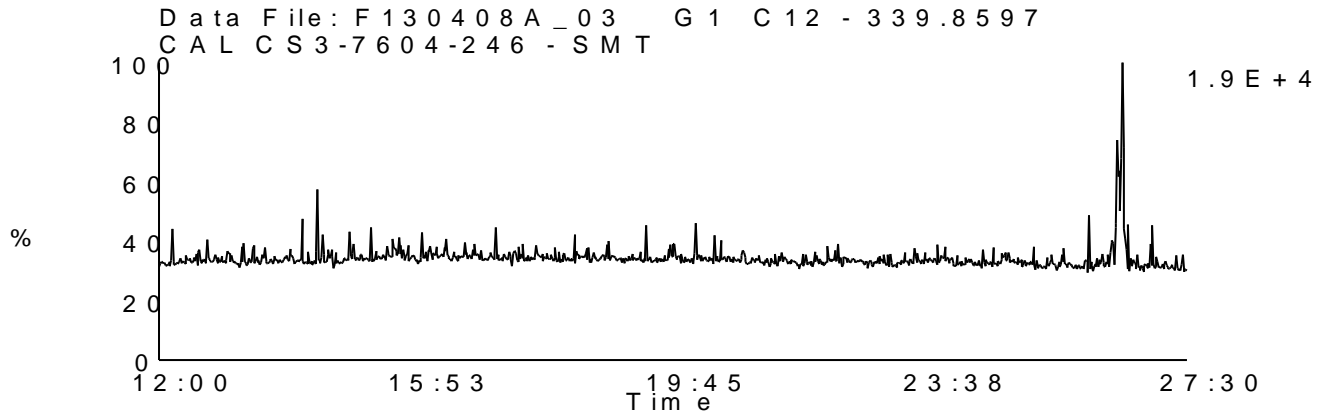
Date Acquired: 4/8/2013

Sample Description: CAL CS3-7604-246 - SMT

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Pentas

Data File Name: F130408A_03

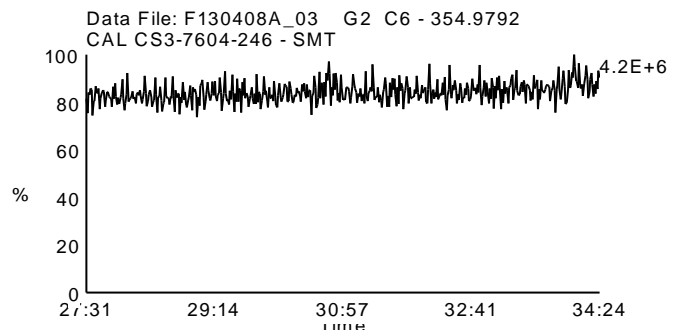
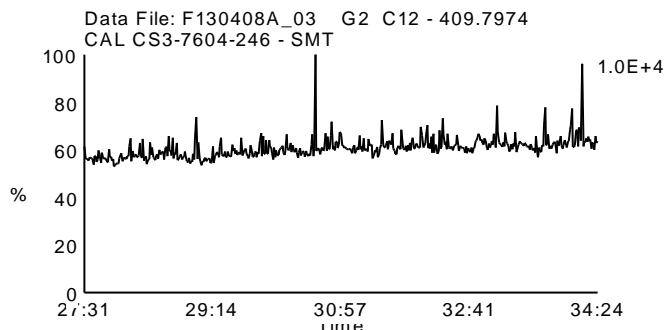
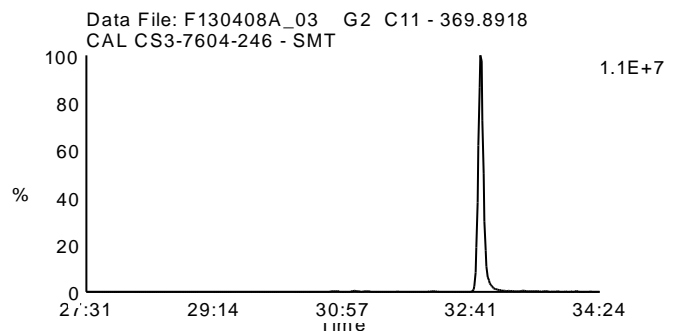
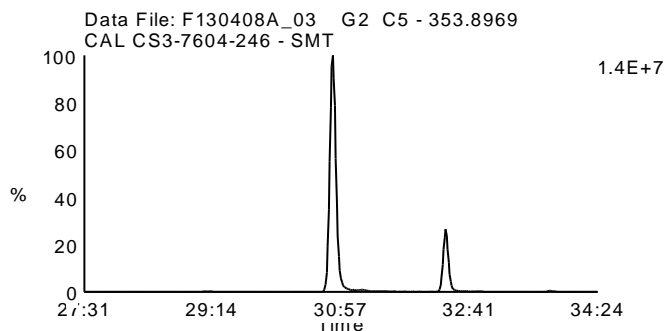
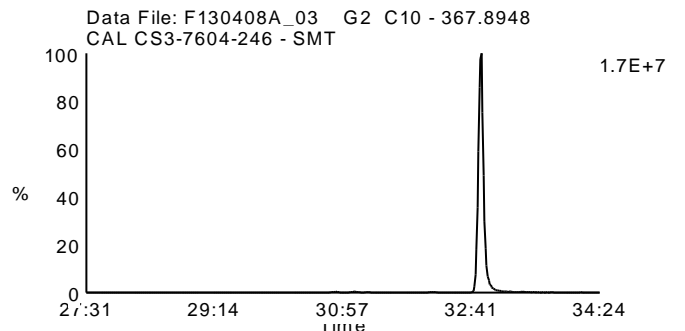
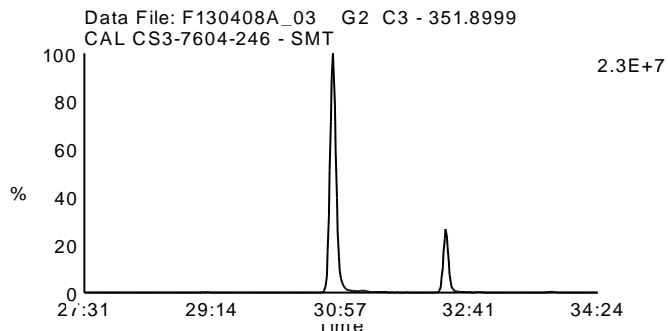
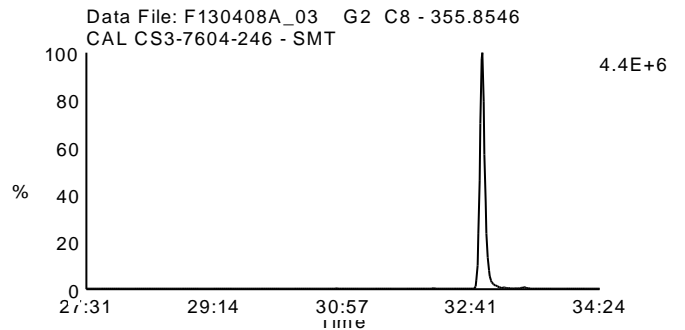
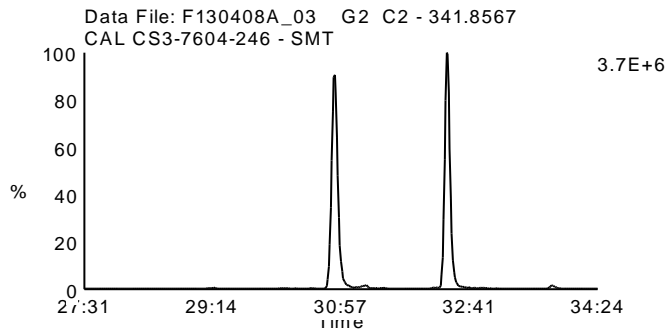
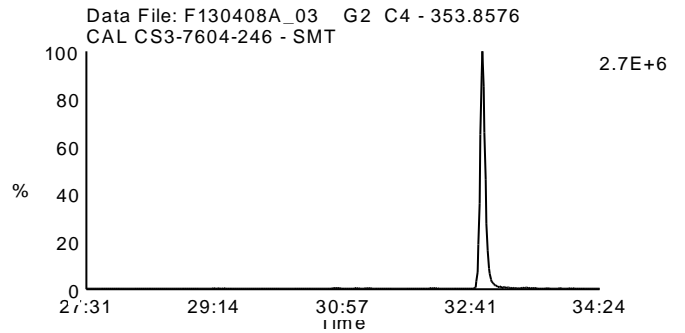
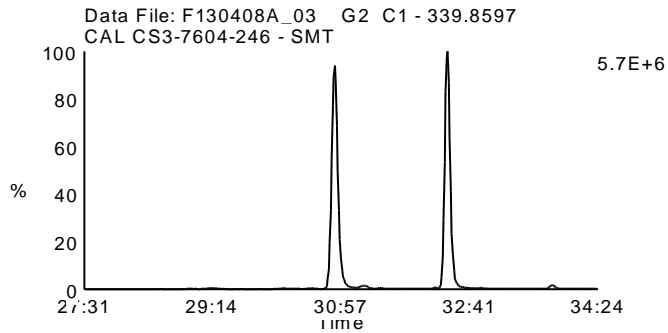
Date Acquired: 4/8/2013

Sample Description: CAL CS3-7604-246 - SMT

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Hexas

Data File Name: F130408A_03

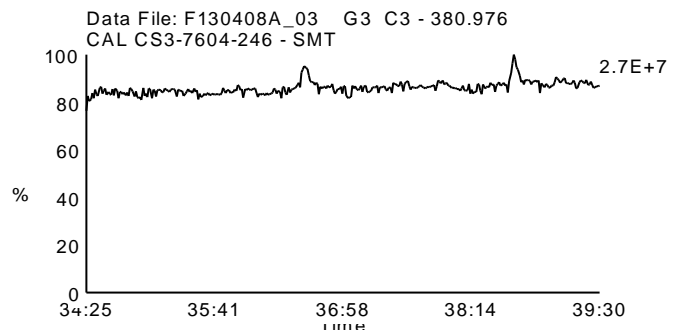
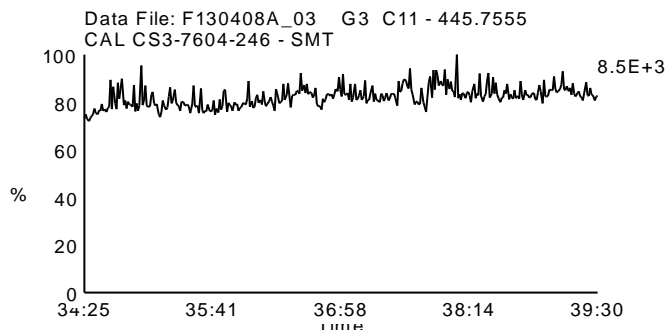
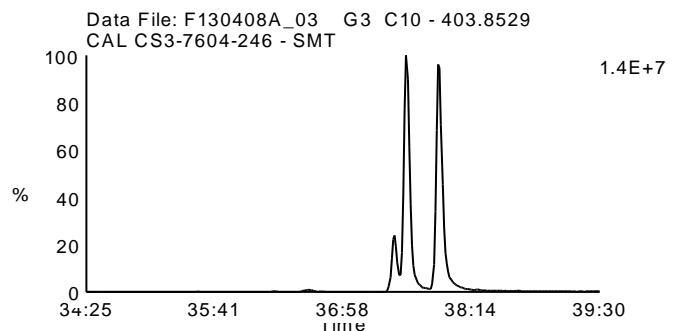
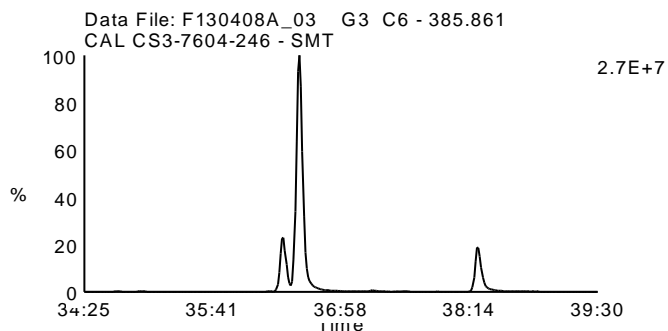
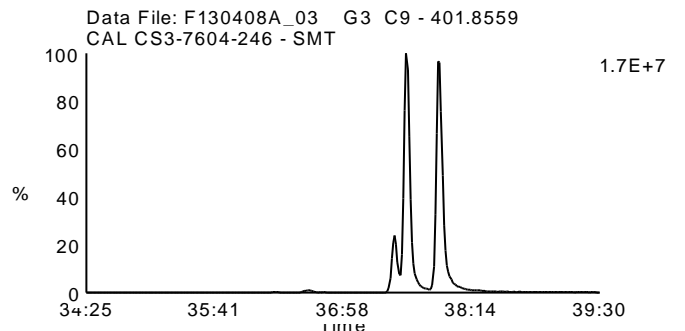
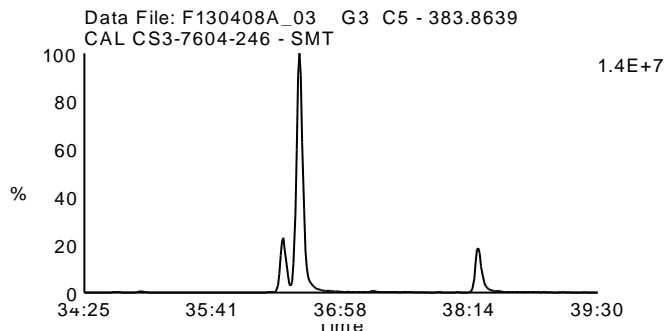
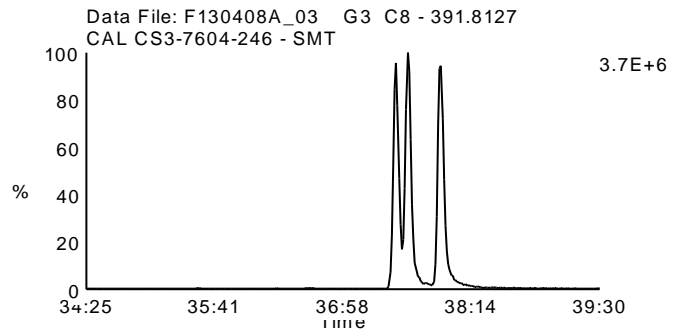
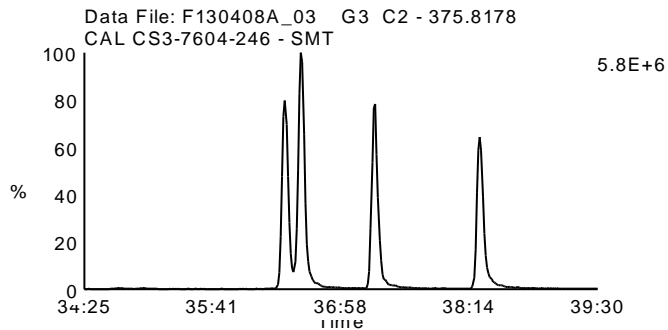
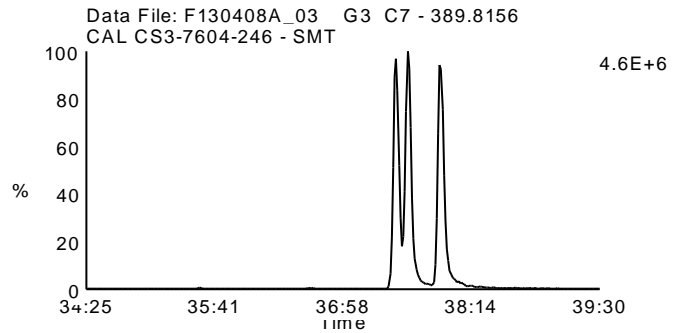
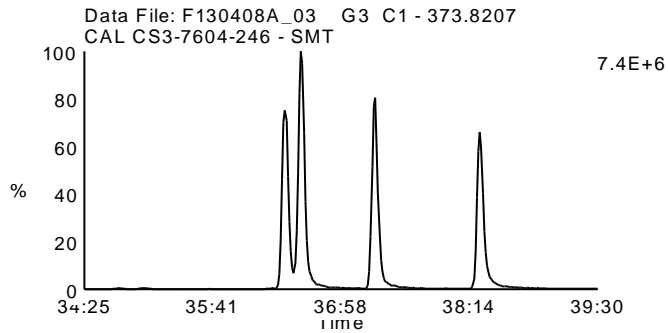
Date Acquired: 4/8/2013

Sample Description: CAL CS3-7604-246 - SMT

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Heptas

Data File Name: F130408A_03

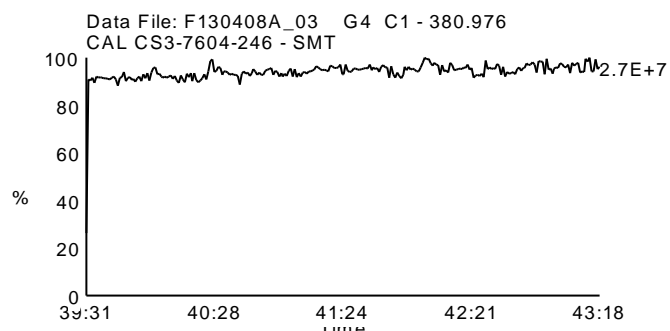
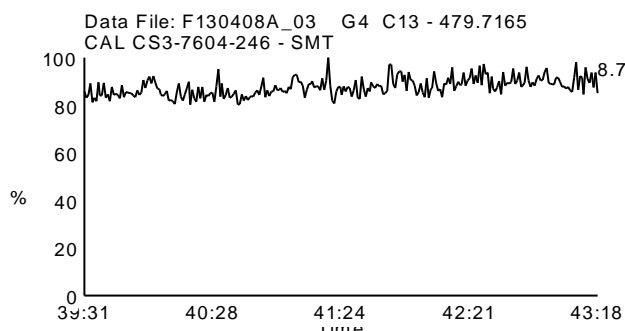
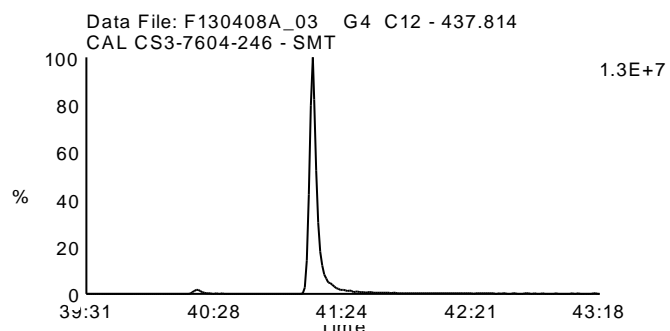
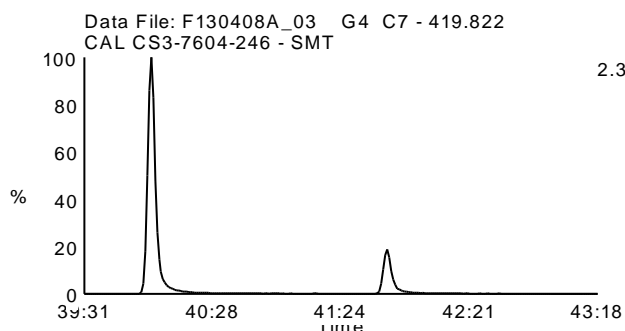
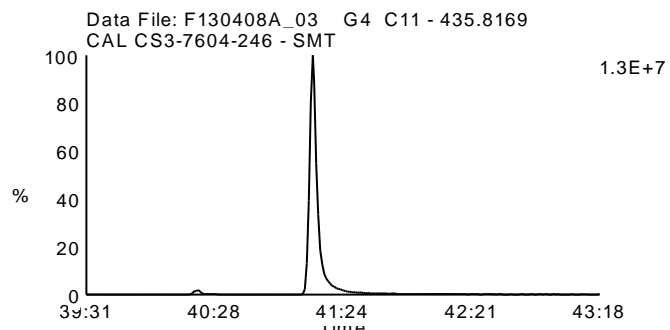
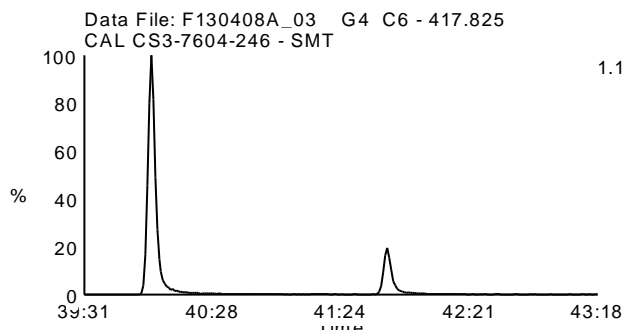
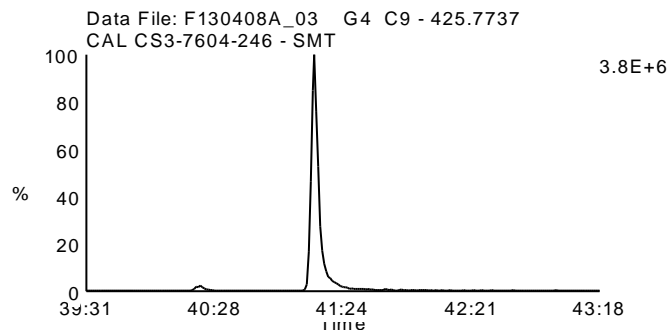
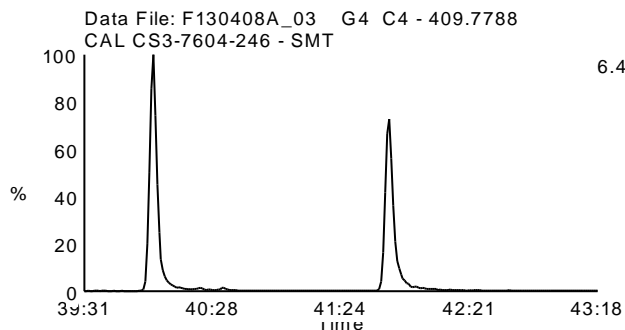
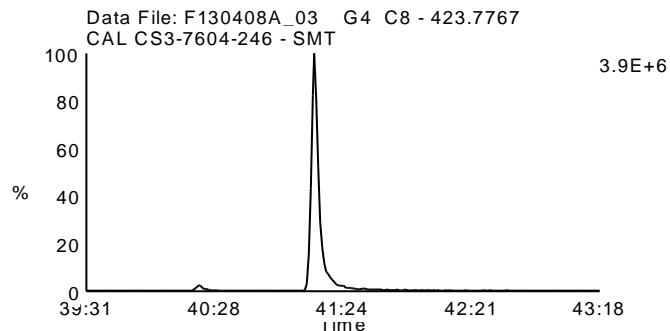
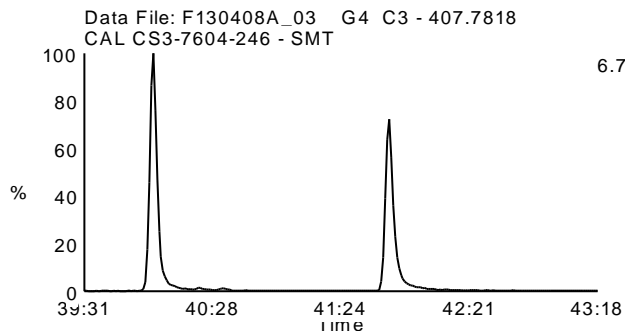
Date Acquired: 4/8/2013

Sample Description: CAL CS3-7604-246 - SMT

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Octas

Data File Name: F130408A_03

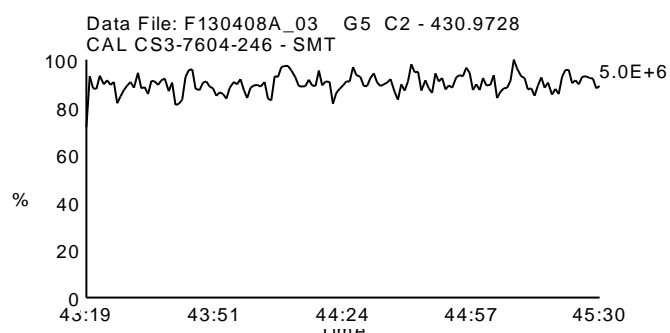
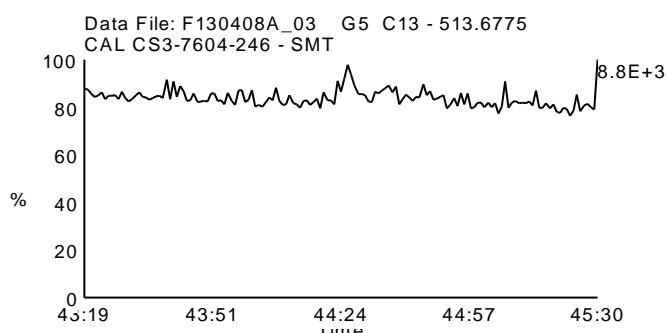
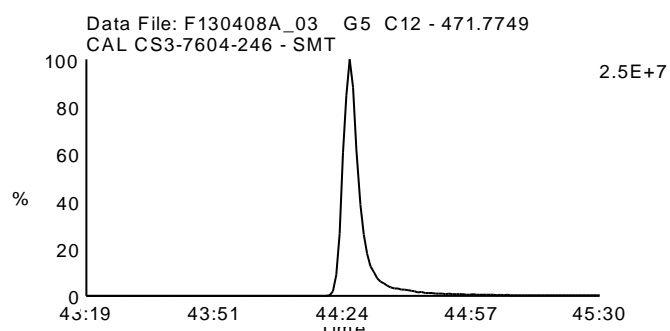
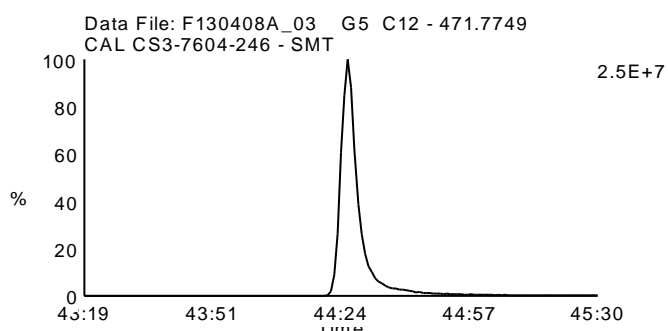
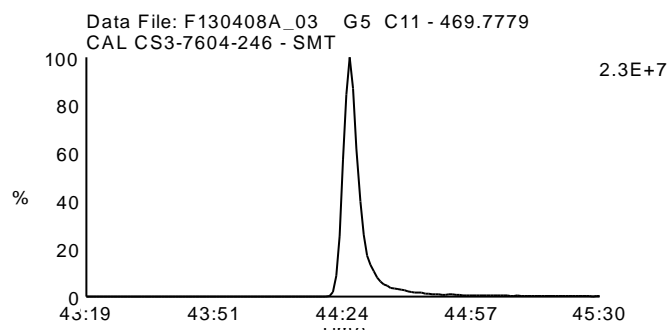
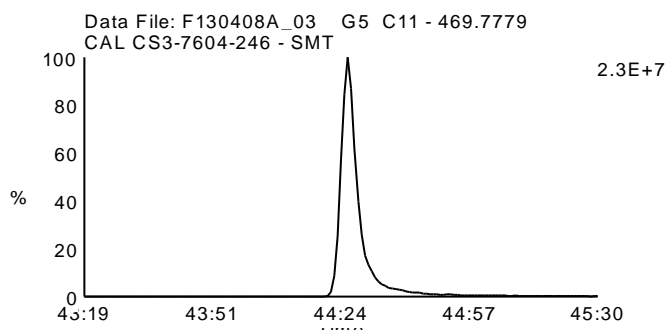
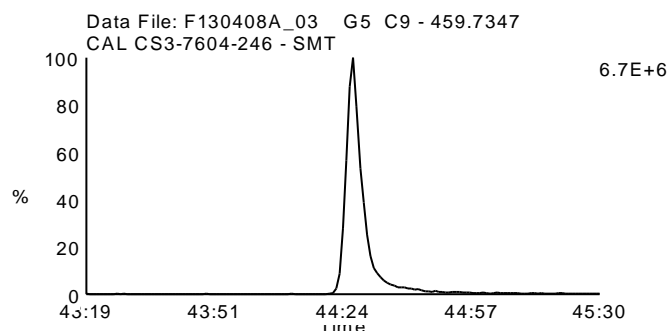
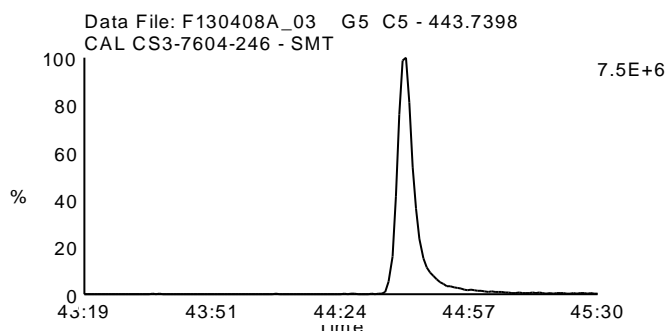
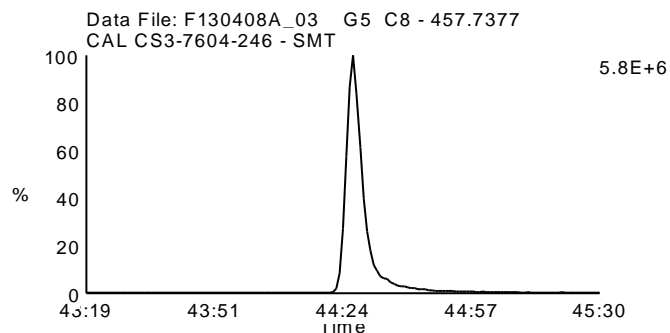
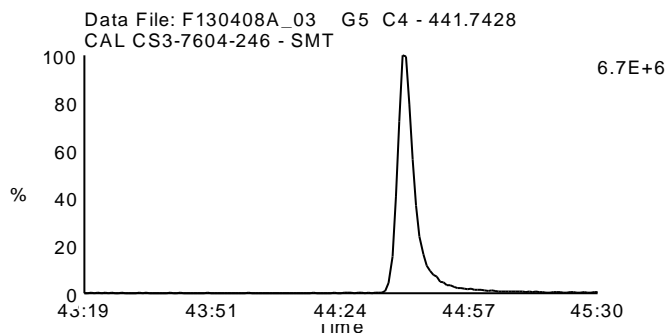
Date Acquired: 4/8/2013

Sample Description: CAL CS3-7604-246 - SMT

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Tetras

Data File Name: F130408A_07

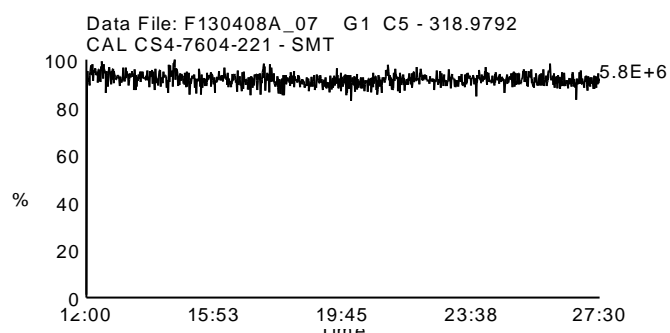
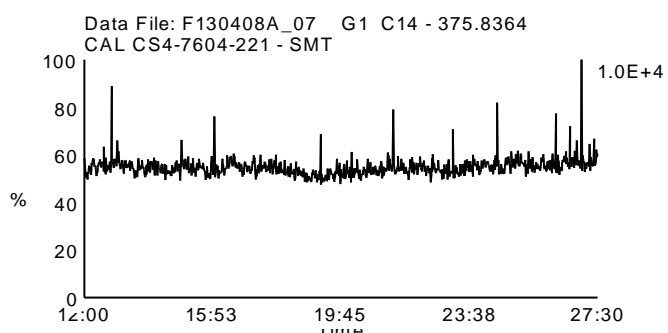
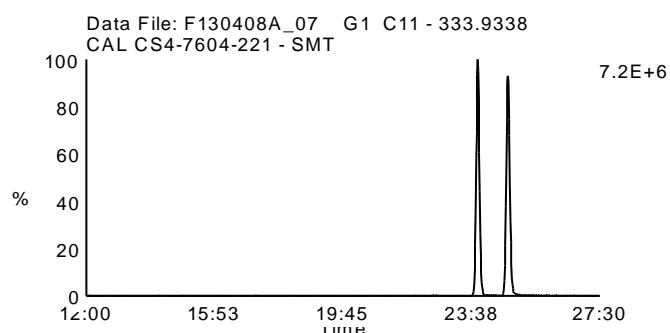
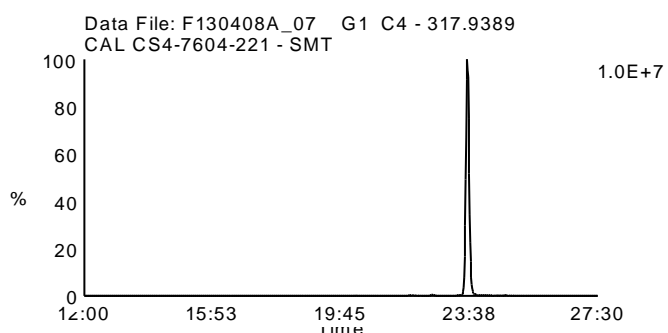
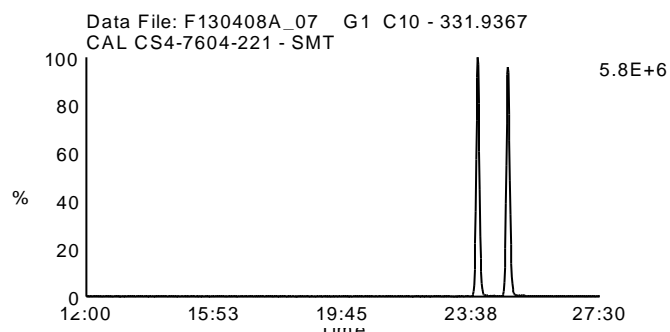
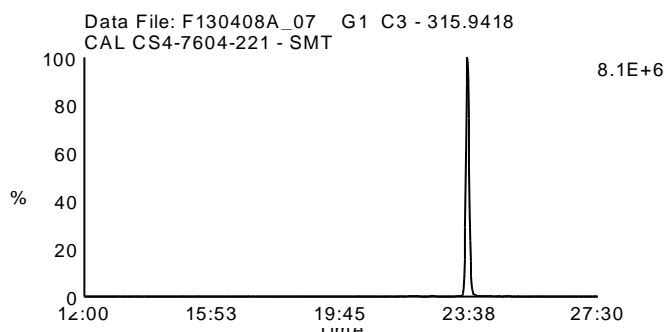
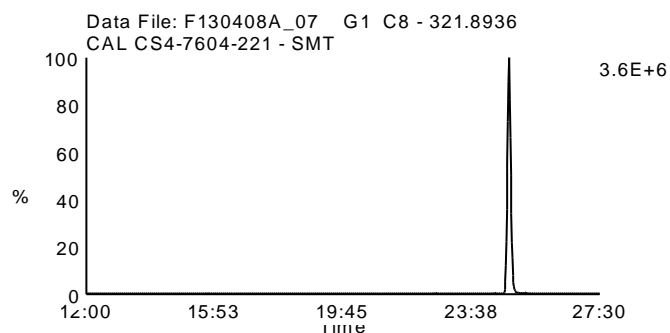
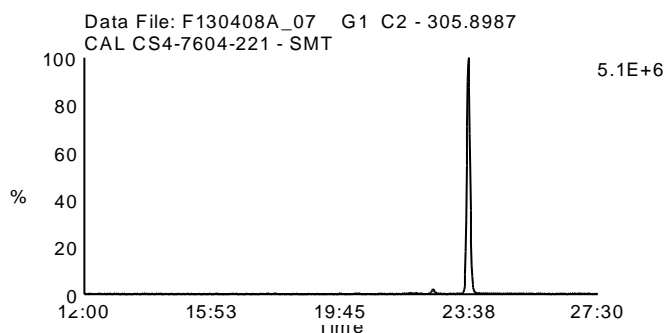
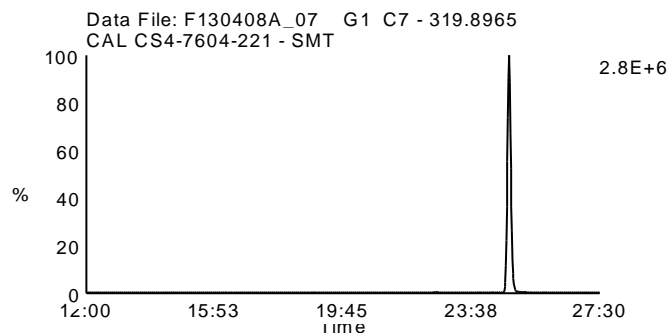
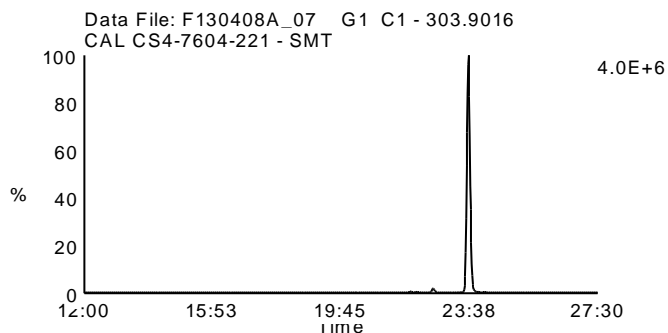
Date Acquired: 4/8/2013

Sample Description: CAL CS4-7604-221 - SMT

Lab Sample ID: CS4-7604-221

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Penta & Cleanup

Data File Name: F130408A_07

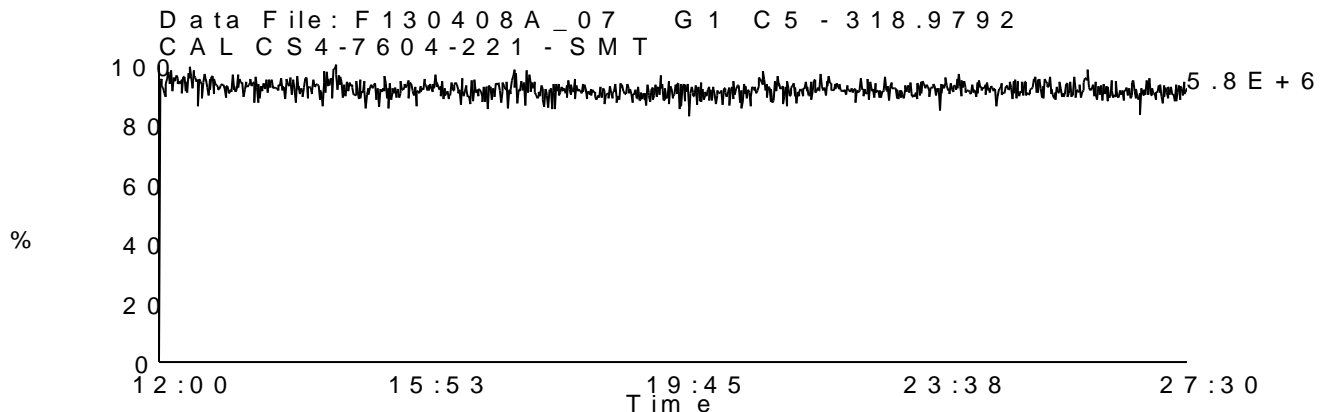
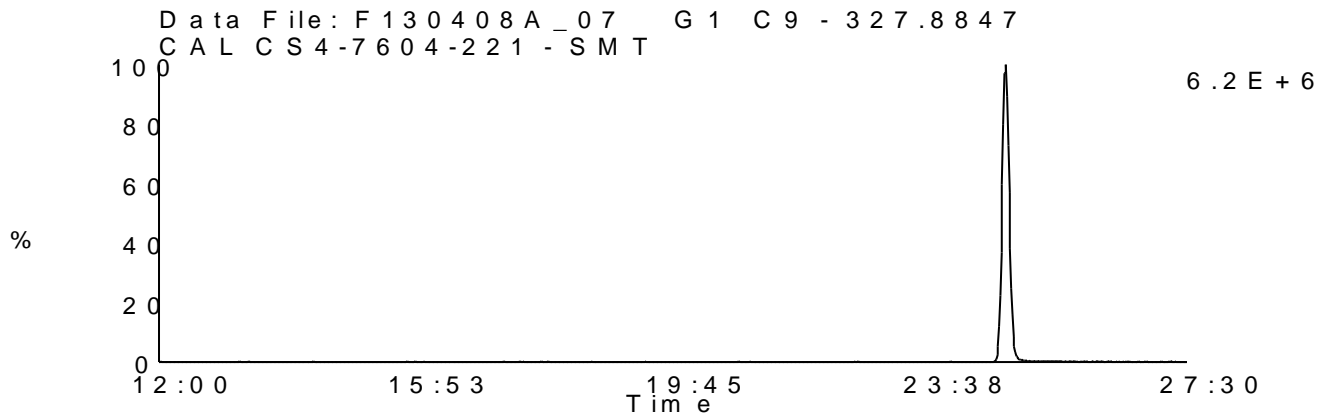
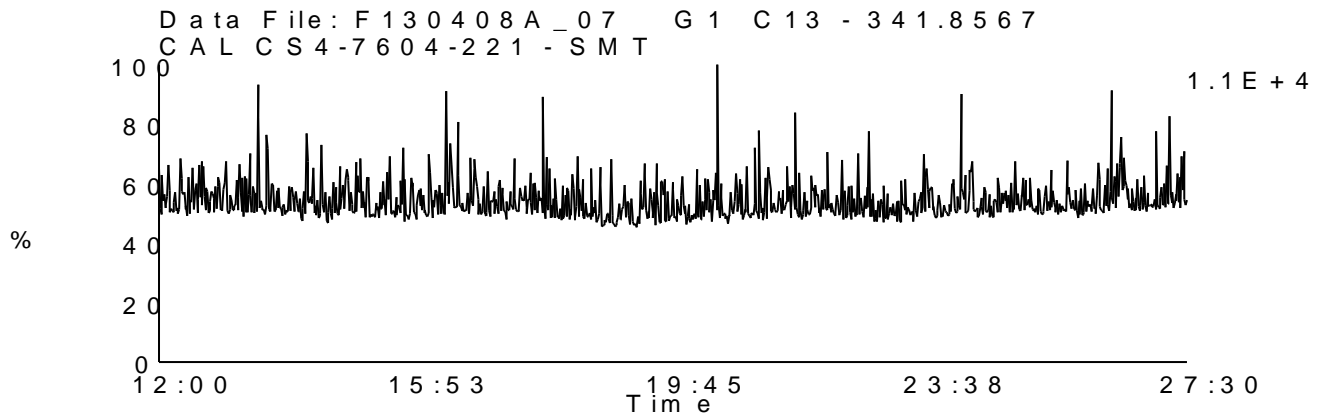
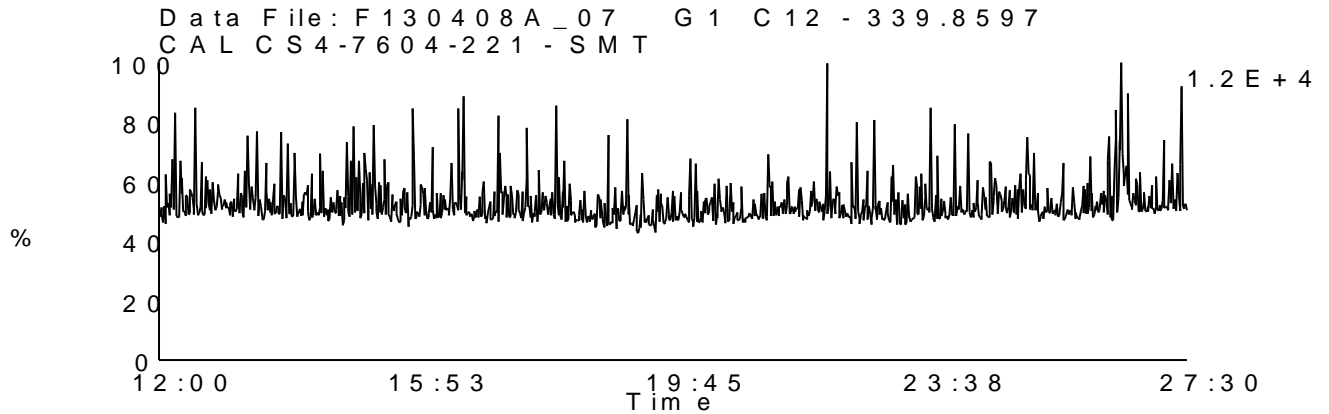
Date Acquired: 4/8/2013

Sample Description: CAL CS4-7604-221 - SMT

Lab Sample ID: CS4-7604-221

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Pentas

Data File Name: F130408A_07

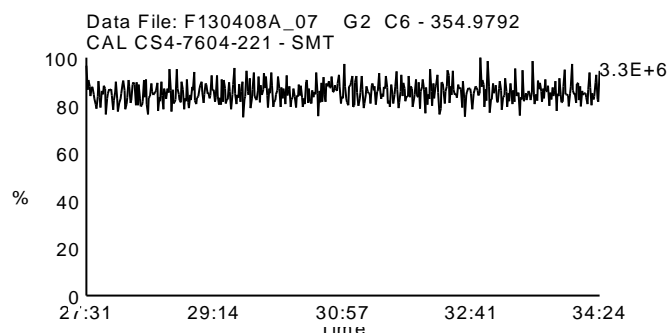
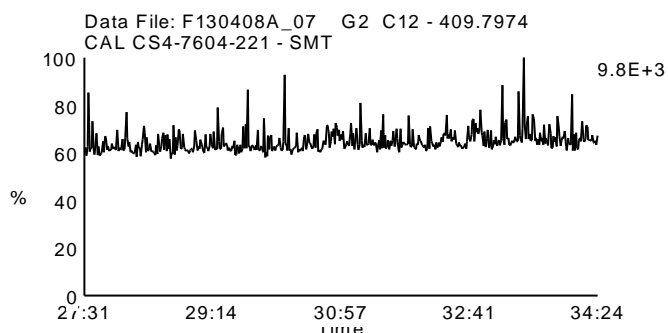
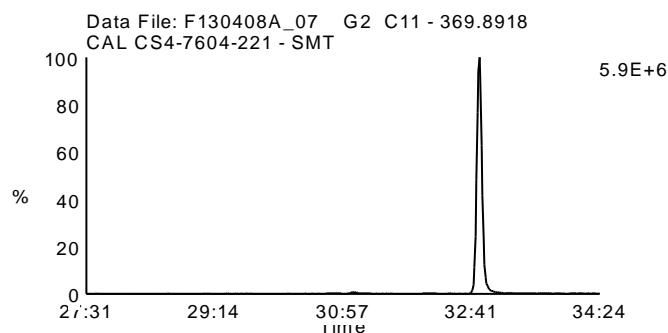
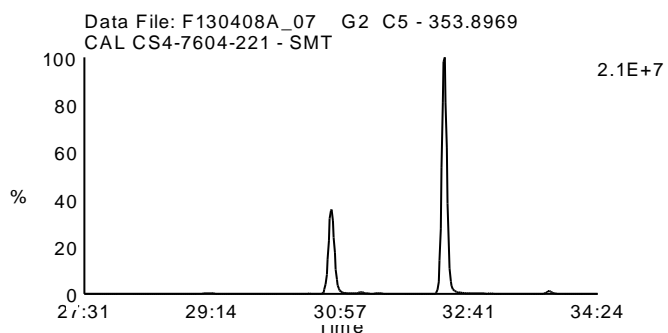
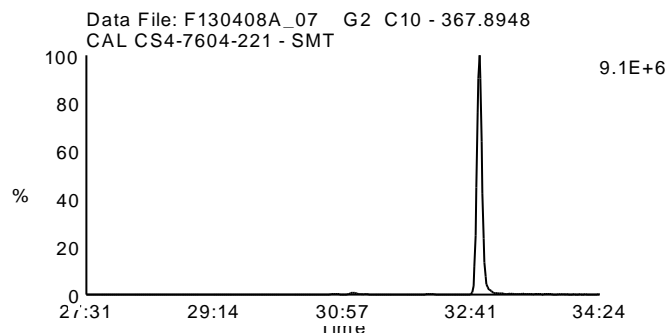
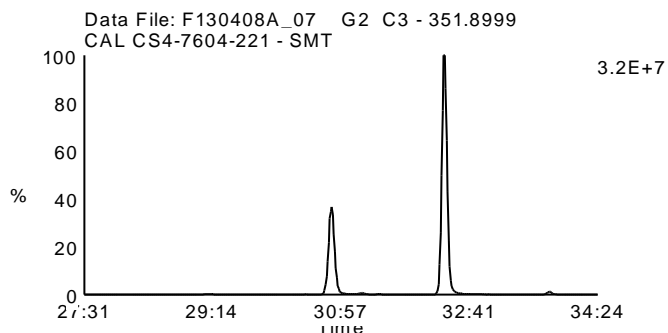
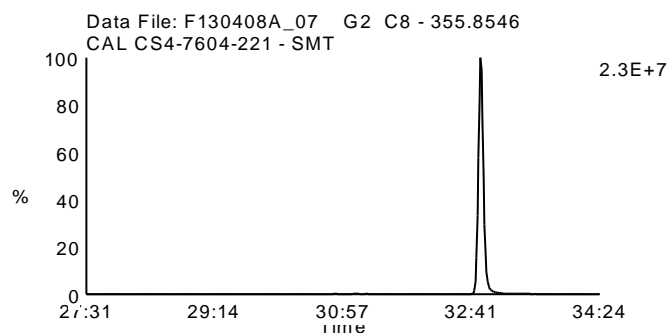
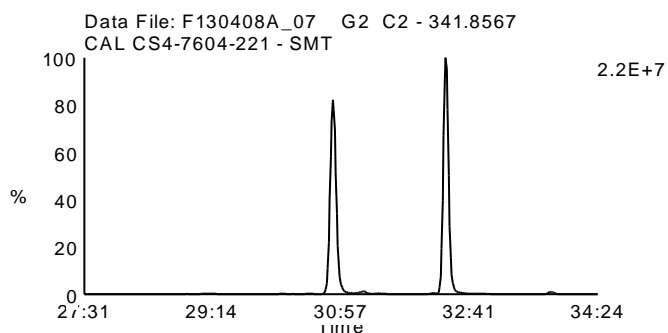
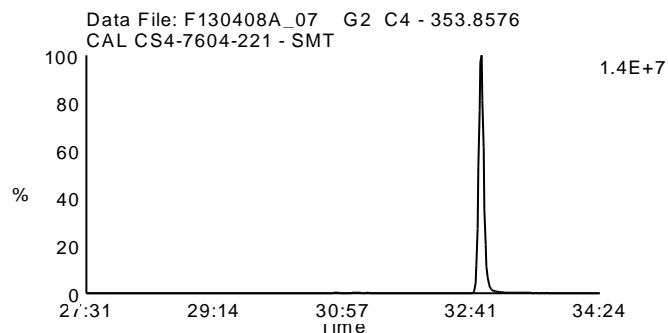
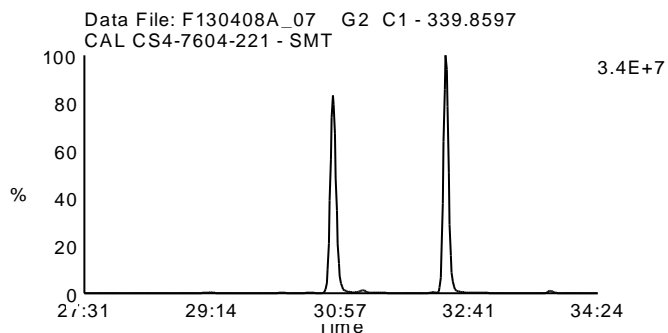
Date Acquired: 4/8/2013

Sample Description: CAL CS4-7604-221 - SMT

Lab Sample ID: CS4-7604-221

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Hexas

Data File Name: F130408A_07

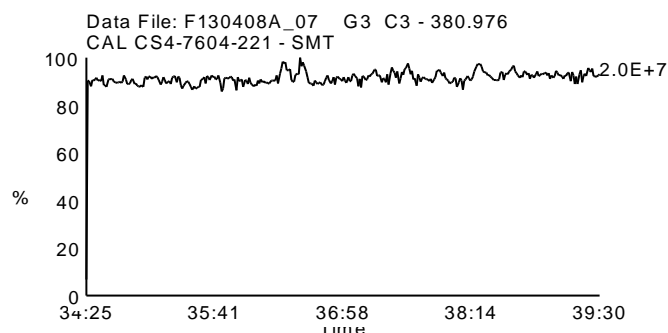
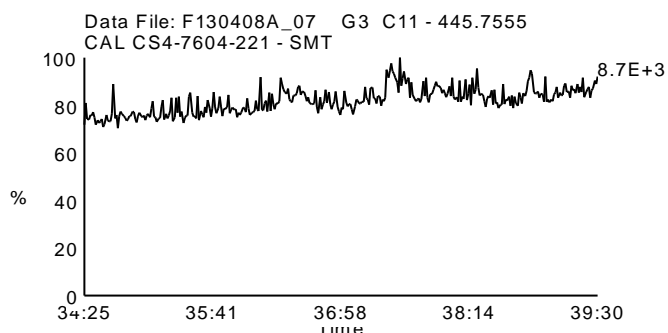
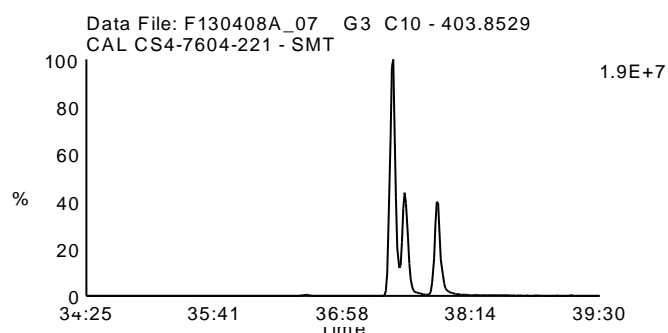
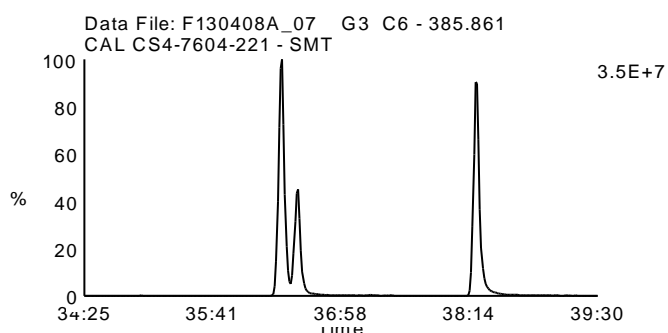
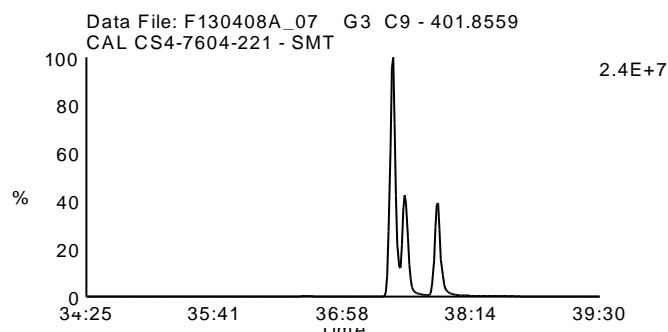
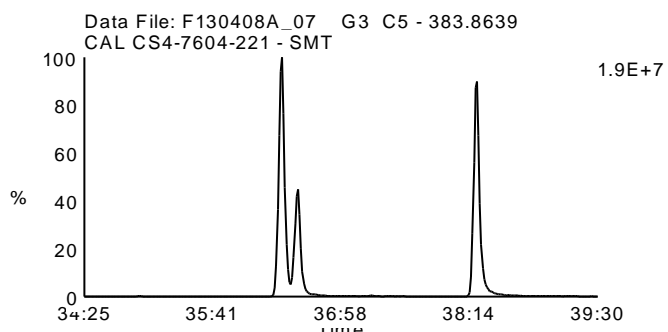
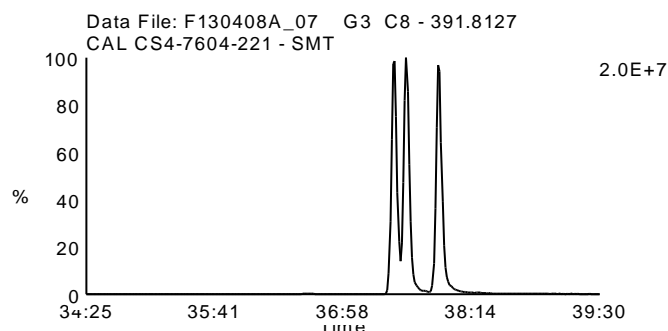
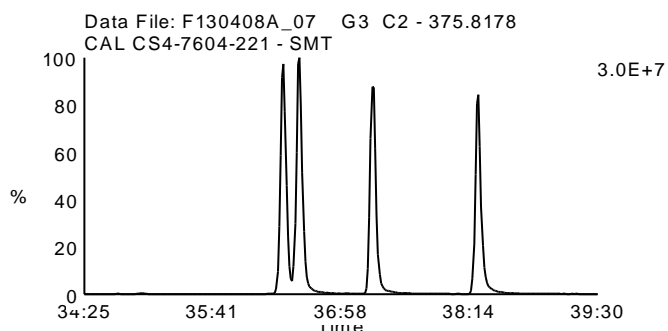
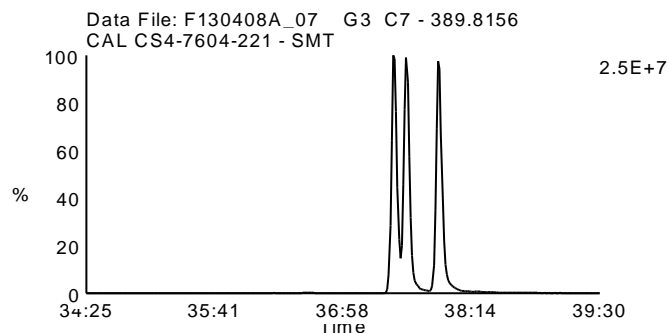
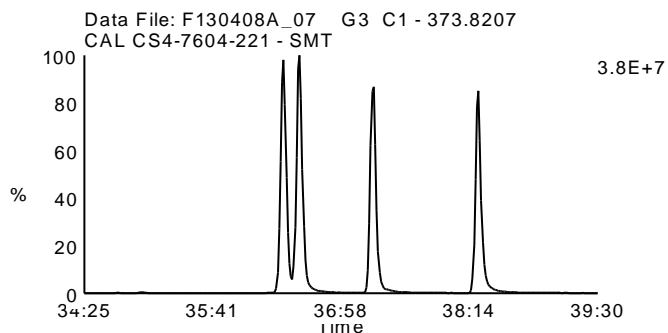
Date Acquired: 4/8/2013

Sample Description: CAL CS4-7604-221 - SMT

Lab Sample ID: CS4-7604-221

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Heptas

Data File Name: F130408A_07

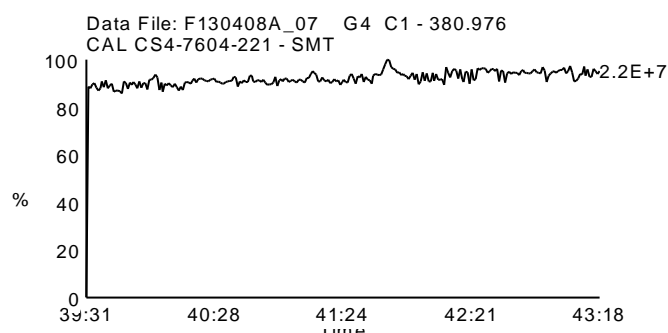
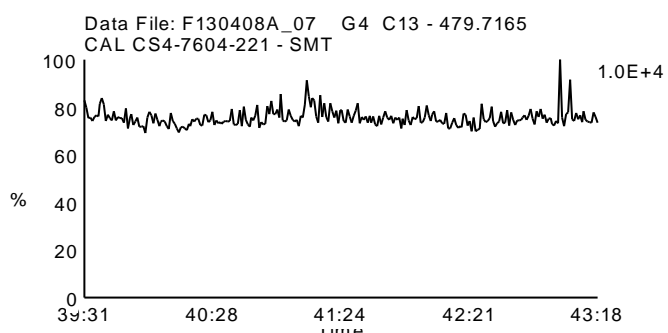
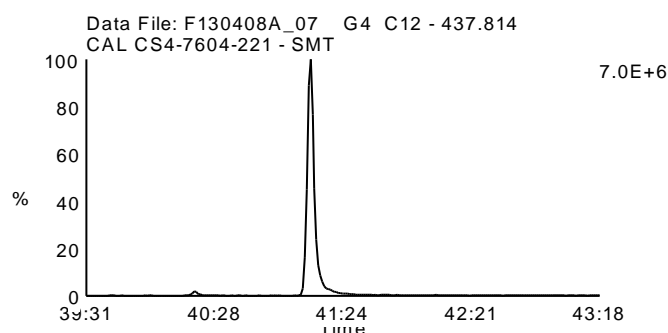
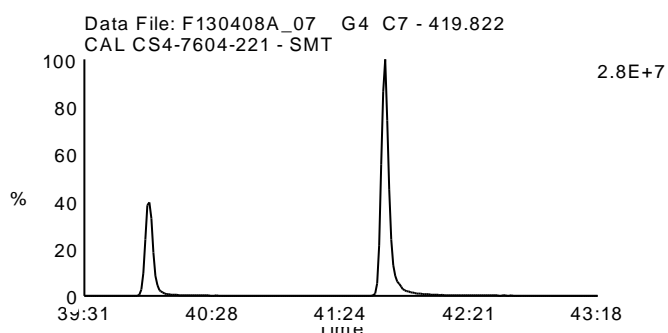
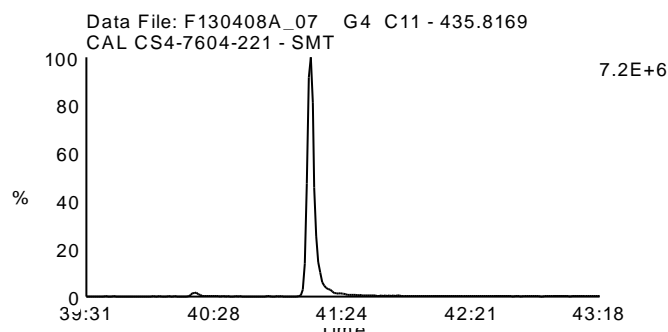
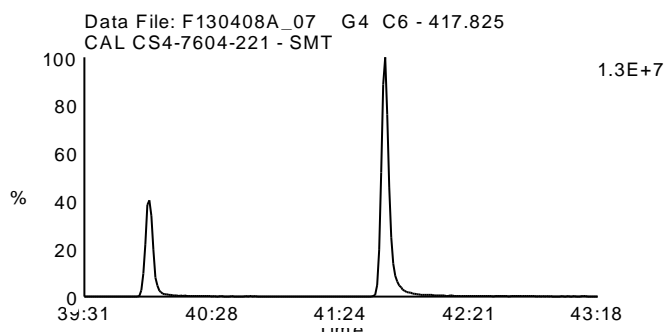
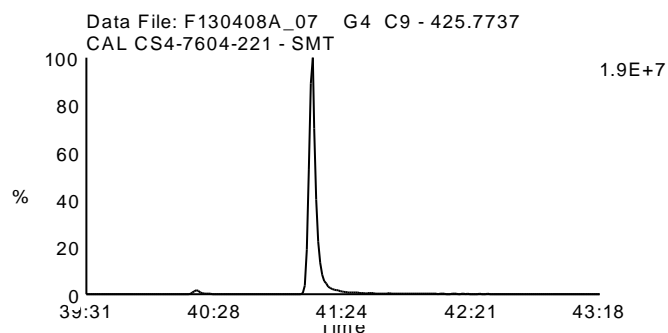
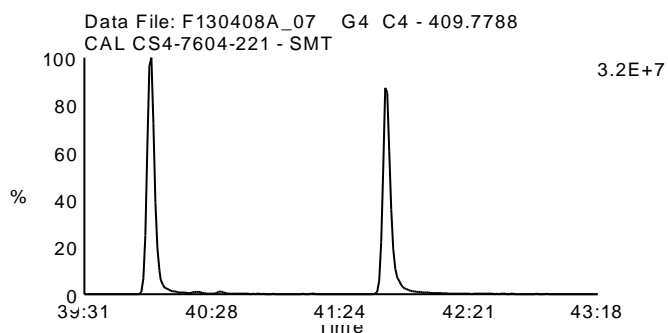
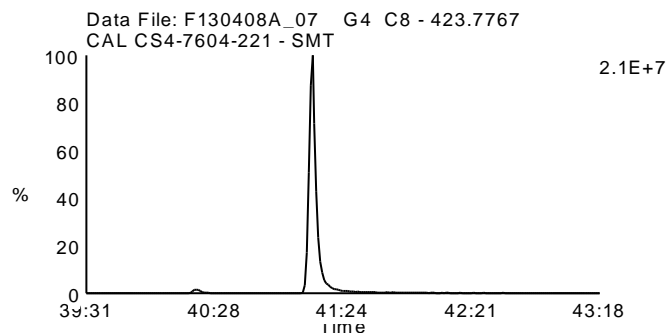
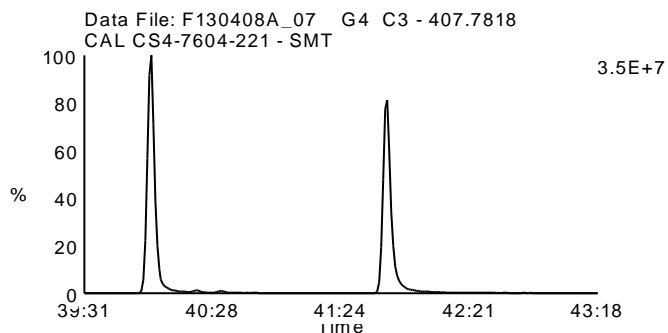
Date Acquired: 4/8/2013

Sample Description: CAL CS4-7604-221 - SMT

Lab Sample ID: CS4-7604-221

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Octas

Data File Name: F130408A_07

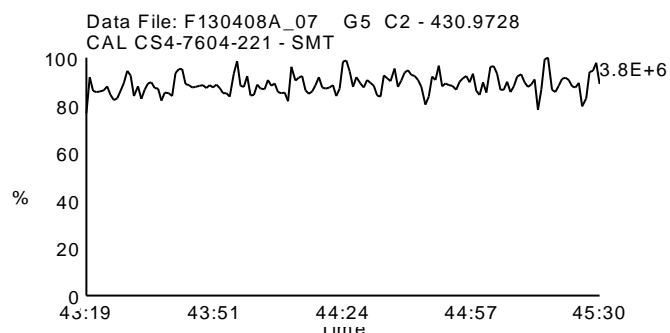
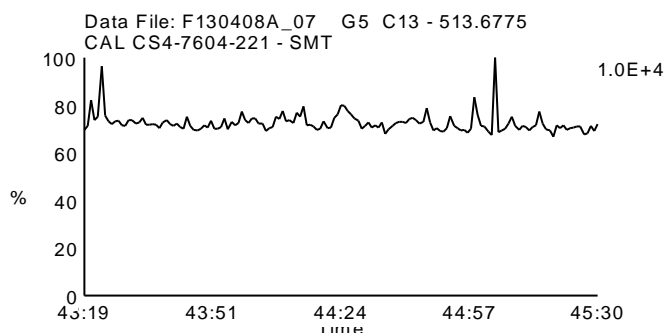
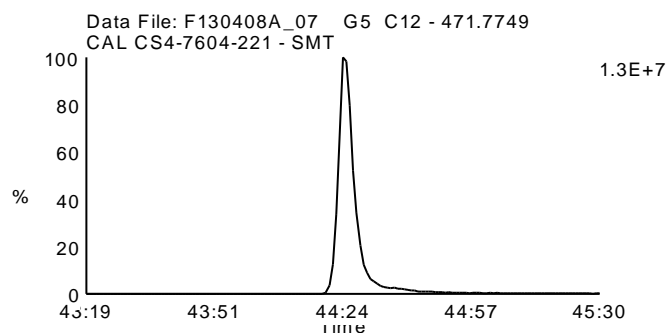
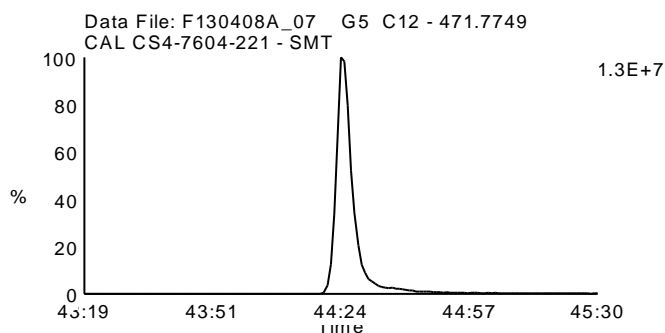
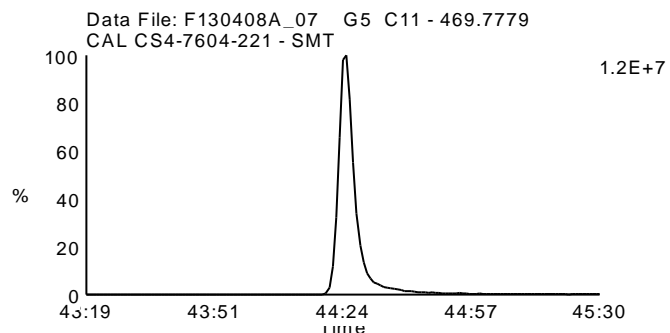
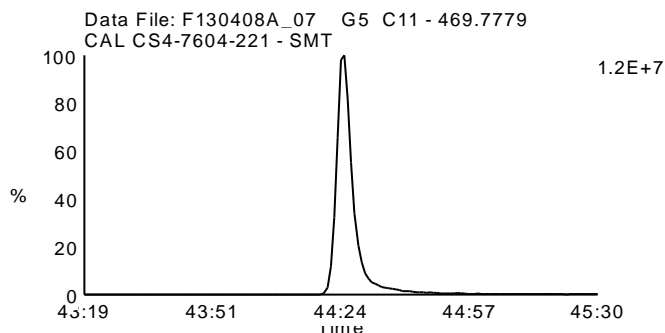
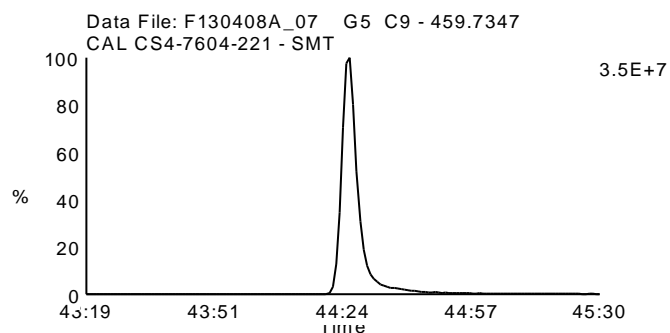
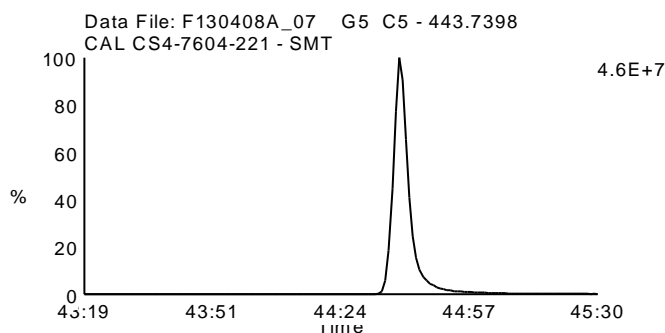
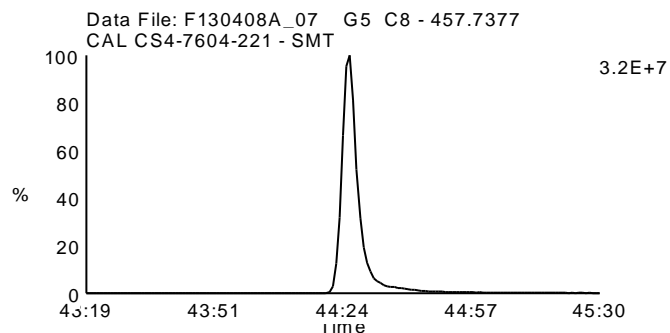
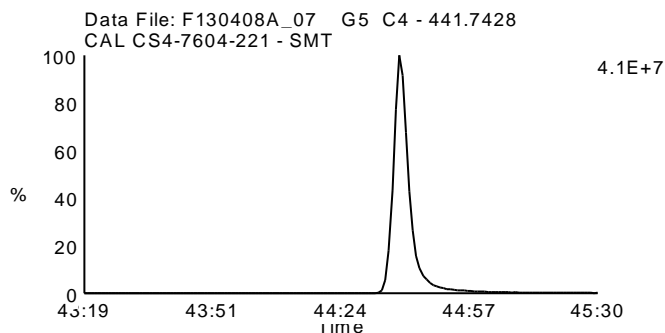
Date Acquired: 4/8/2013

Sample Description: CAL CS4-7604-221 - SMT

Lab Sample ID: CS4-7604-221

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Tetras

Data File Name: F130408A_06

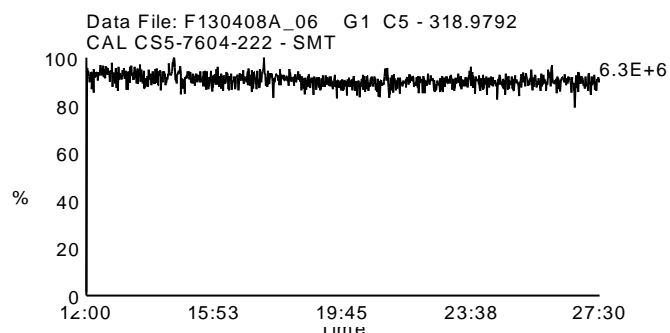
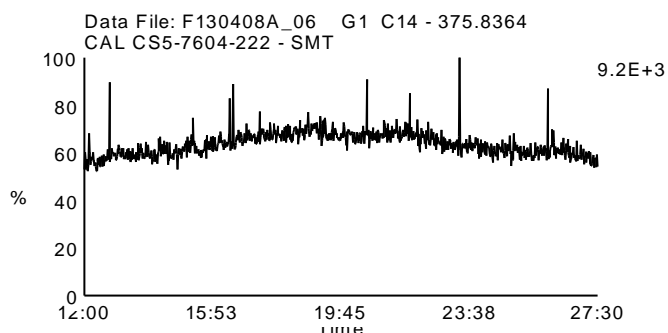
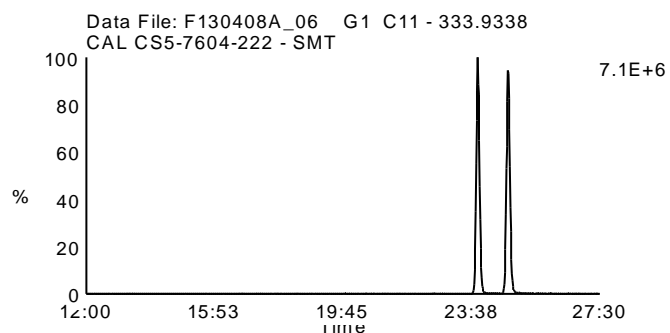
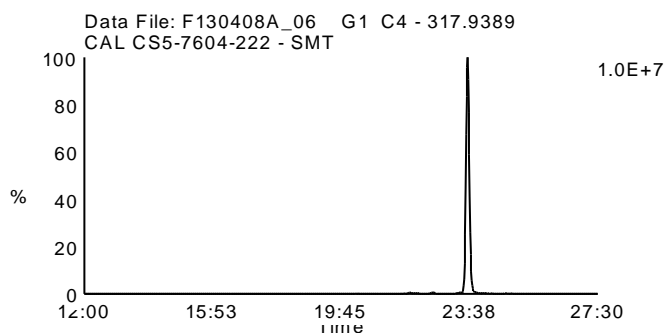
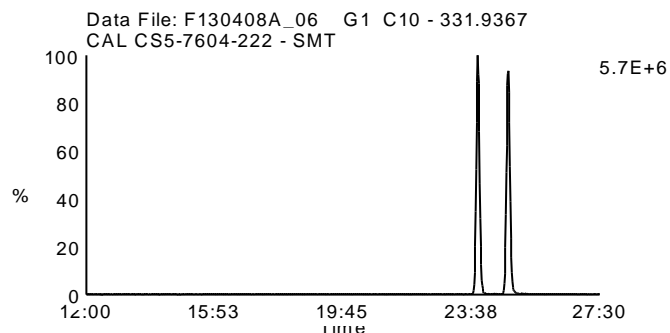
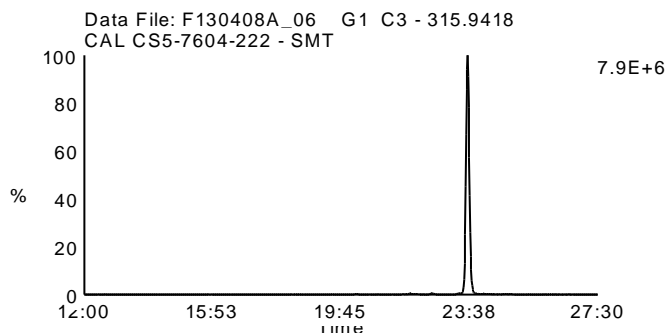
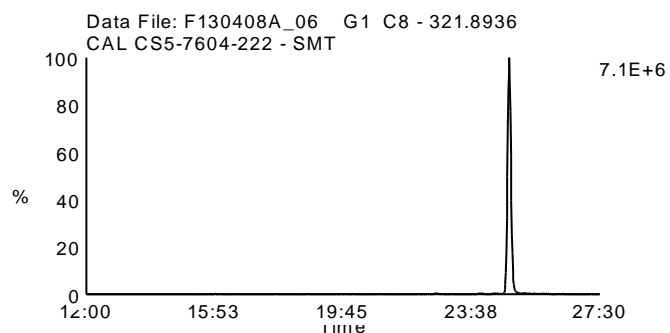
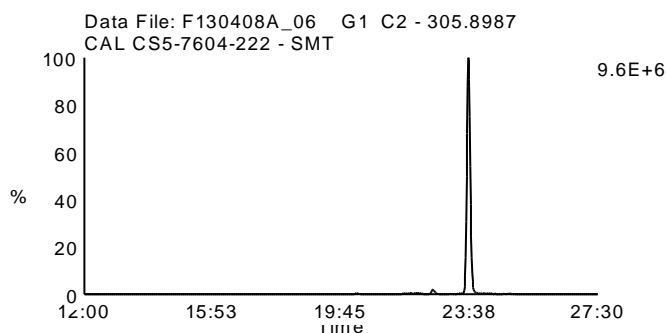
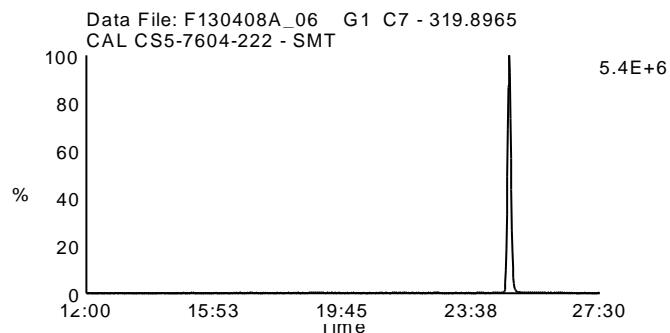
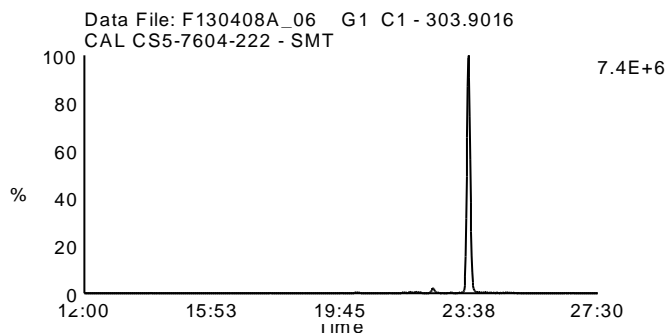
Date Acquired: 4/8/2013

Sample Description: CAL CS5-7604-222 - SMT

Lab Sample ID: CS5-7604-222

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Penta & Cleanup

Data File Name: F130408A_06

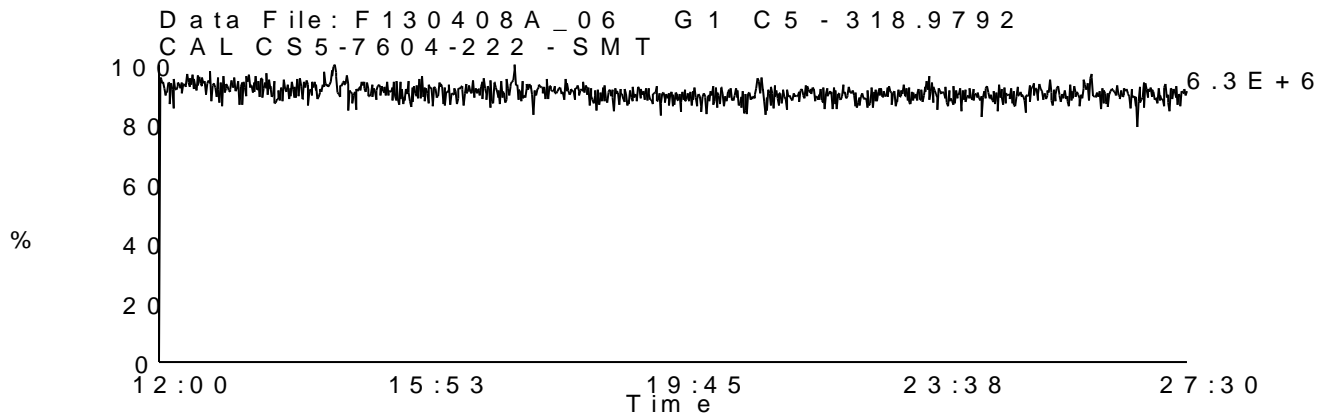
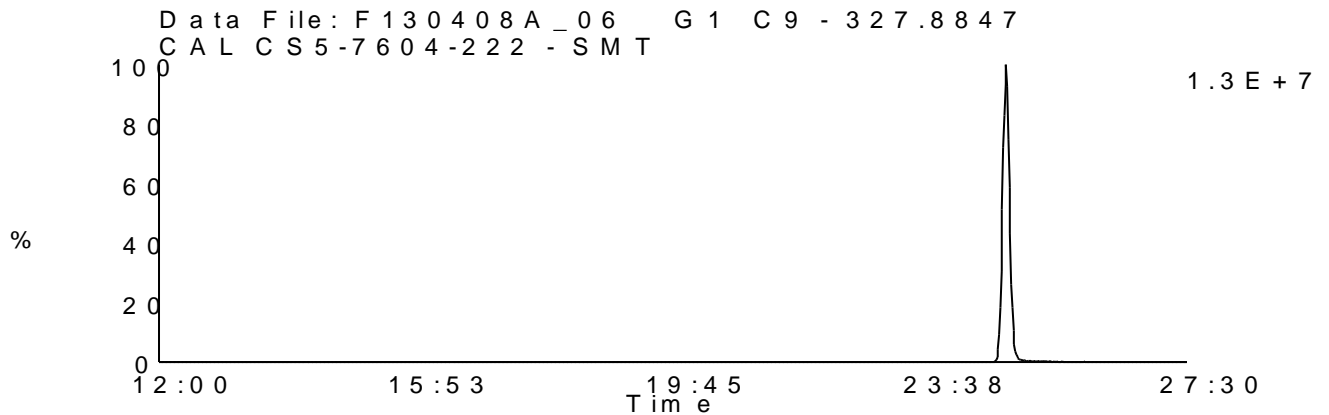
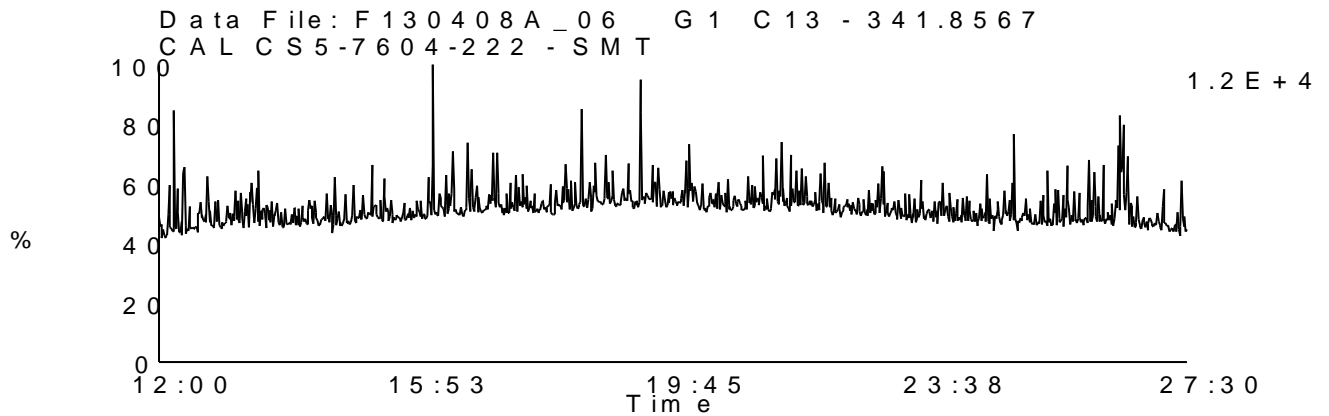
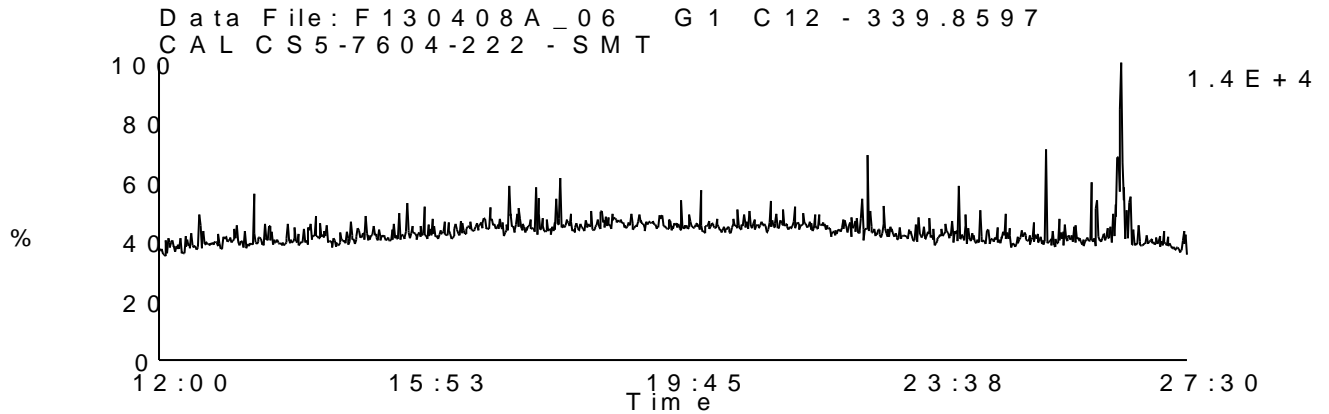
Date Acquired: 4/8/2013

Sample Description: CAL CS5-7604-222 - SMT

Lab Sample ID: CS5-7604-222

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Pentas

Data File Name: F130408A_06

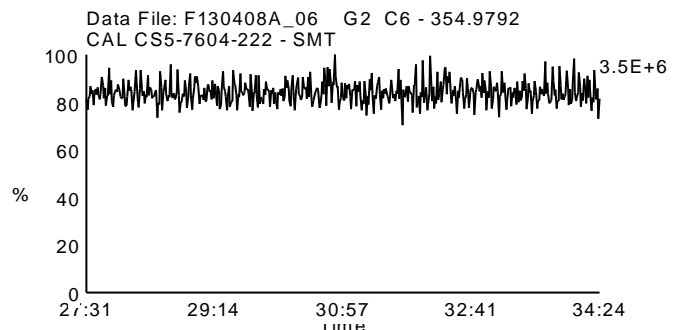
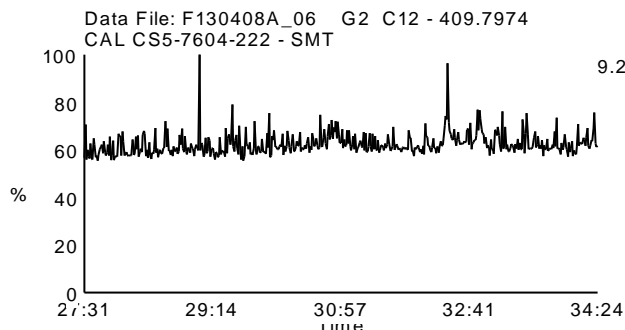
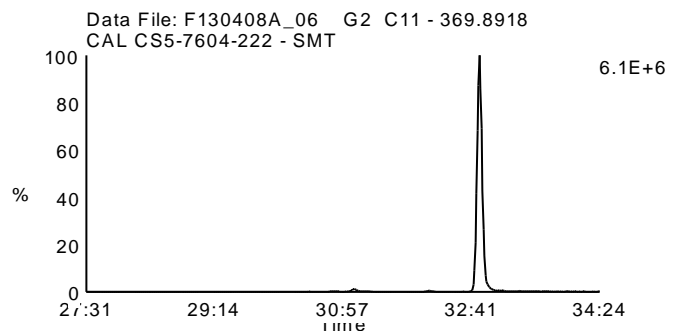
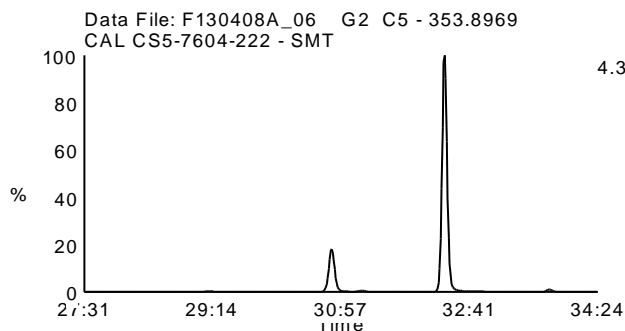
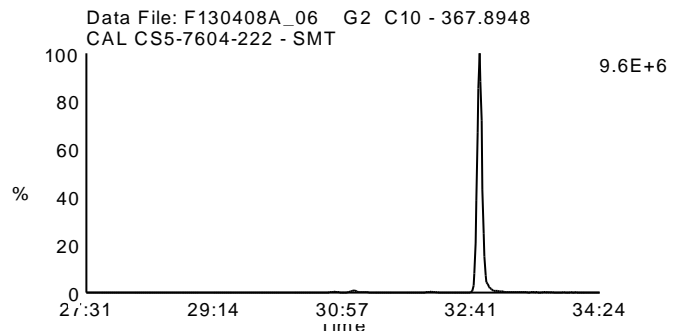
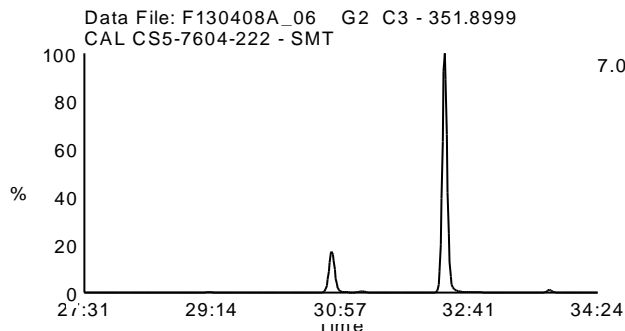
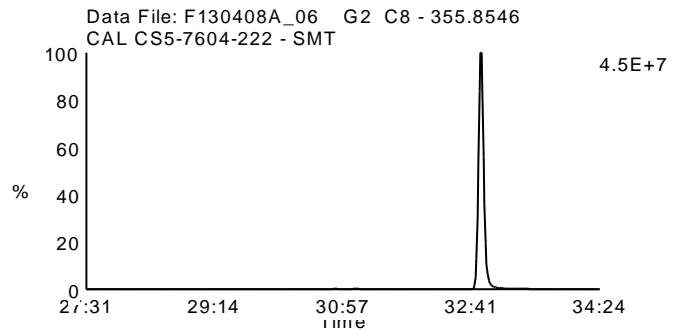
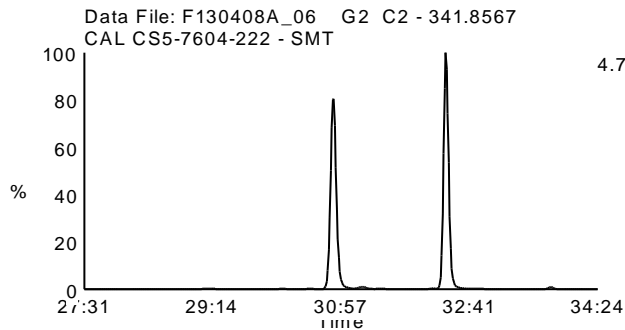
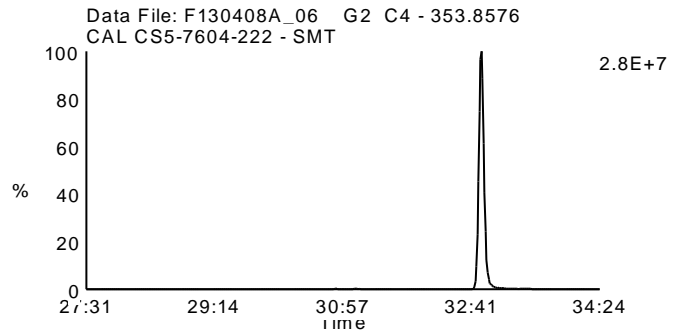
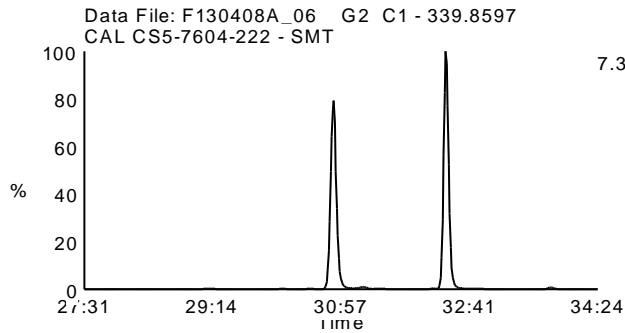
Date Acquired: 4/8/2013

Sample Description: CAL CS5-7604-222 - SMT

Lab Sample ID: CS5-7604-222

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Hexas

Data File Name: F130408A_06

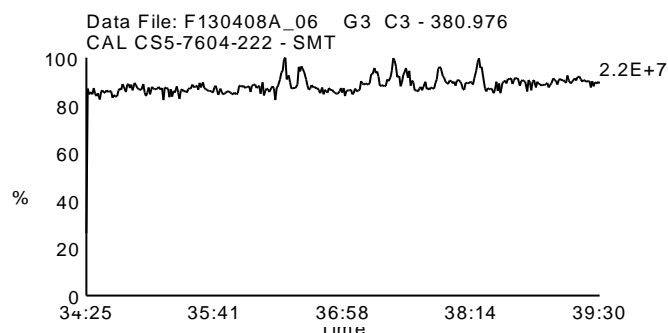
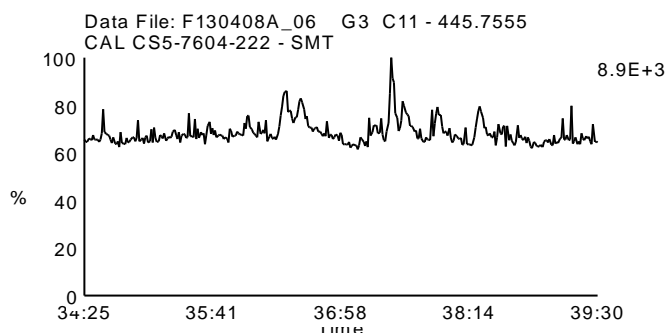
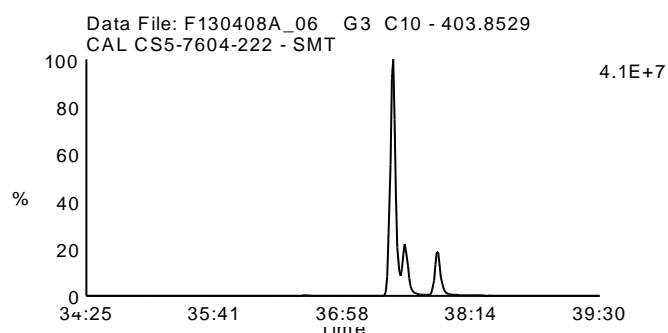
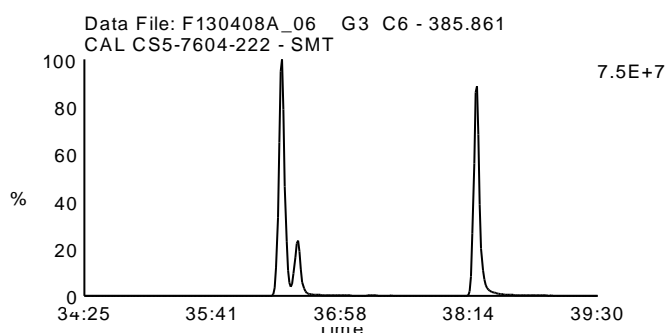
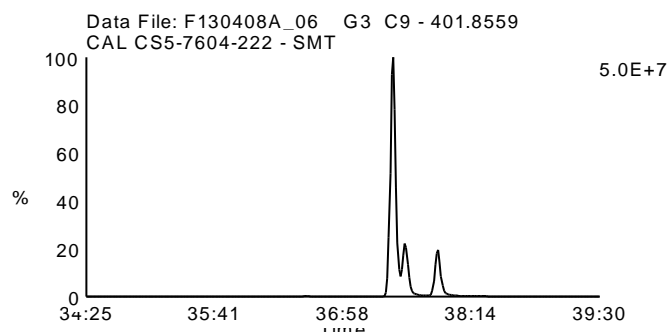
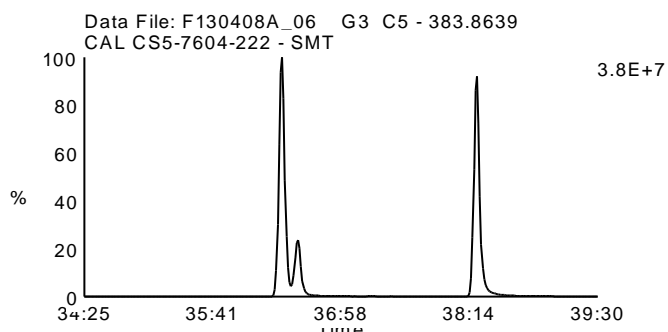
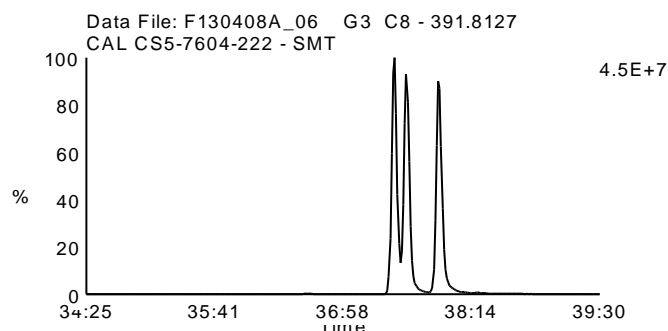
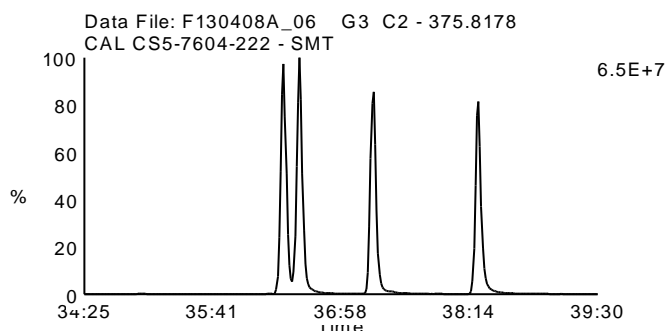
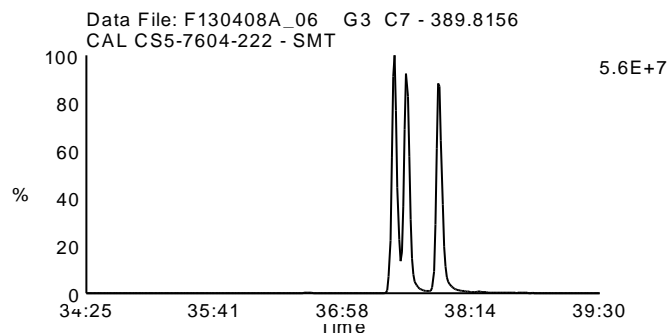
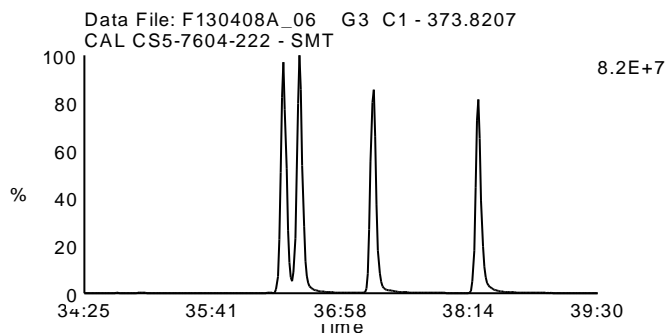
Date Acquired: 4/8/2013

Sample Description: CAL CS5-7604-222 - SMT

Lab Sample ID: CS5-7604-222

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Heptas

Data File Name: F130408A_06

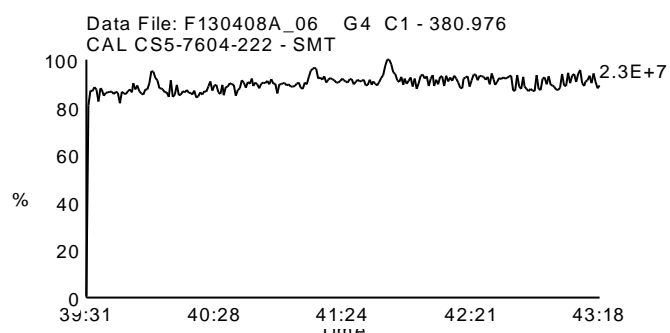
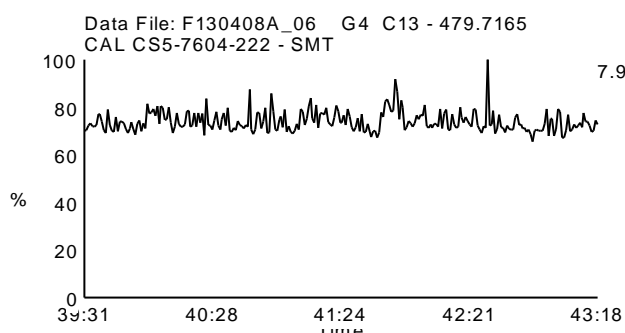
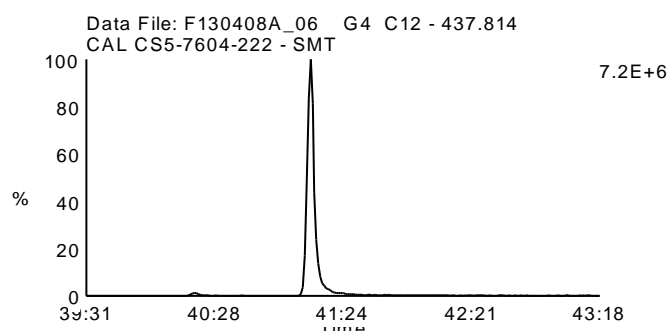
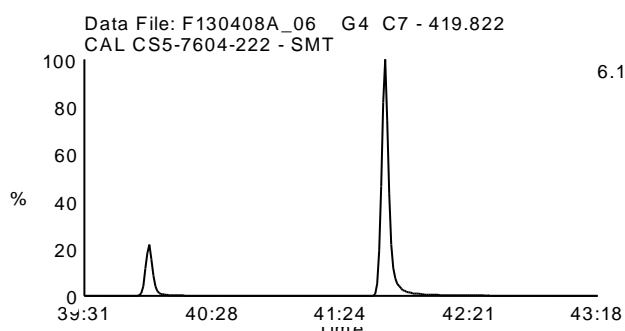
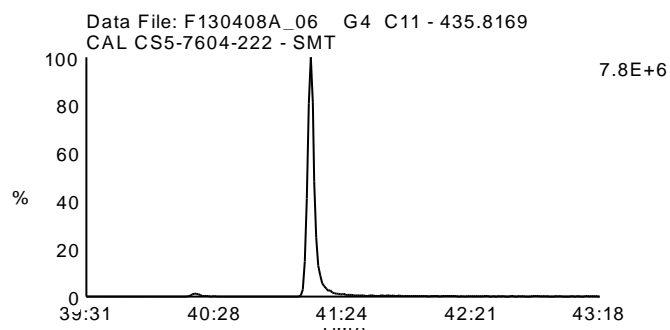
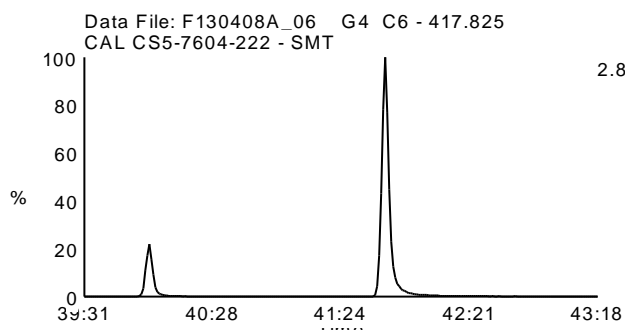
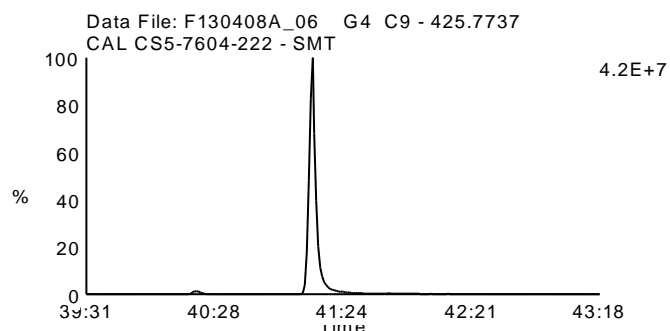
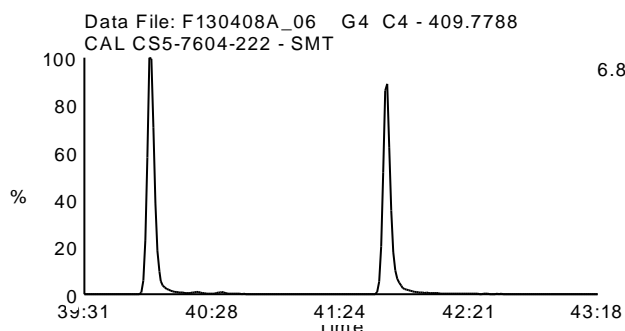
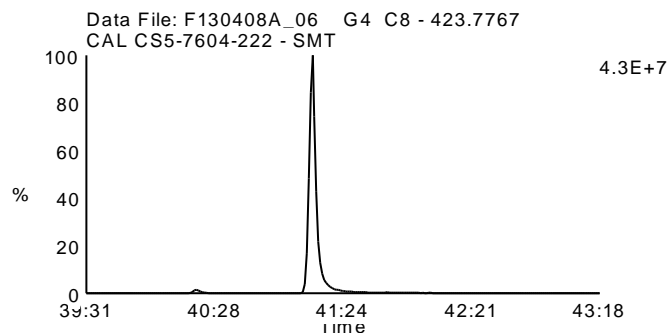
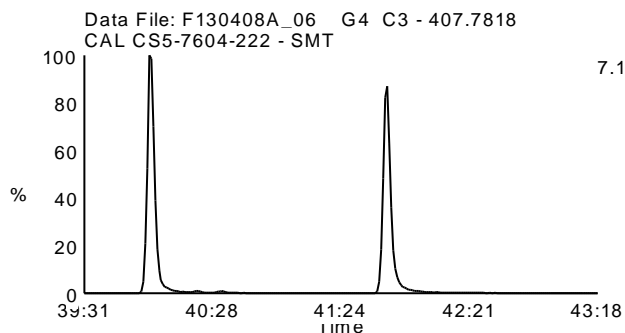
Date Acquired: 4/8/2013

Sample Description: CAL CS5-7604-222 - SMT

Lab Sample ID: CS5-7604-222

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Octas

Data File Name: F130408A_06

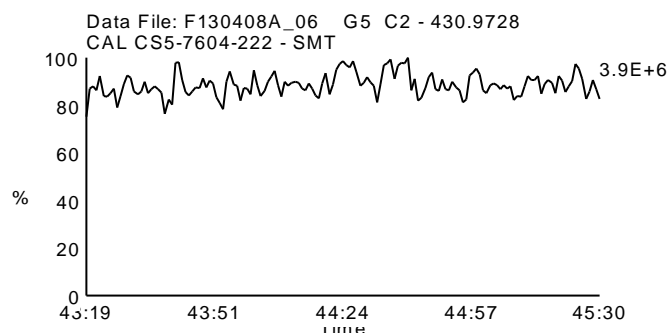
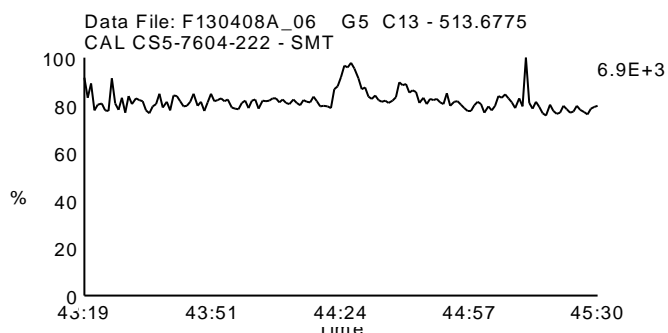
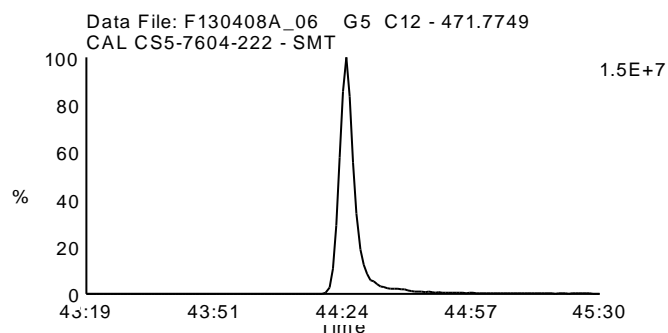
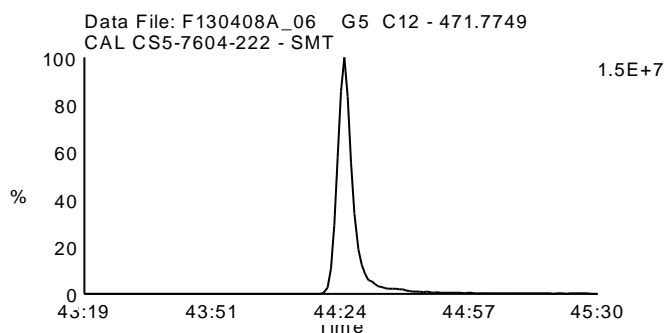
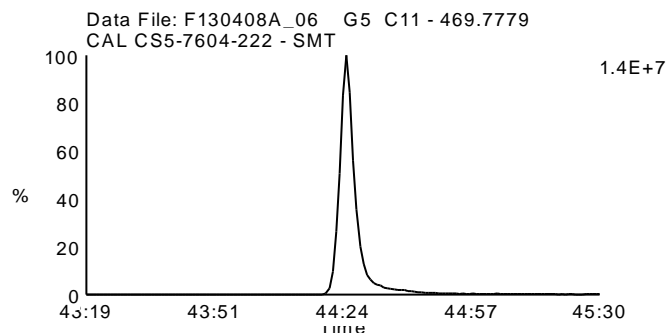
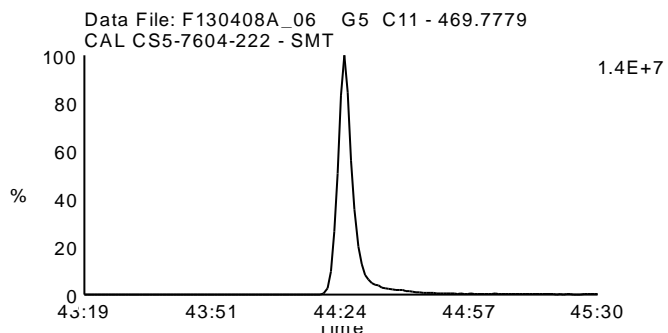
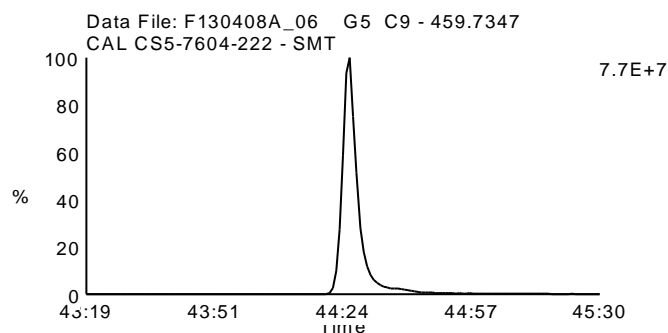
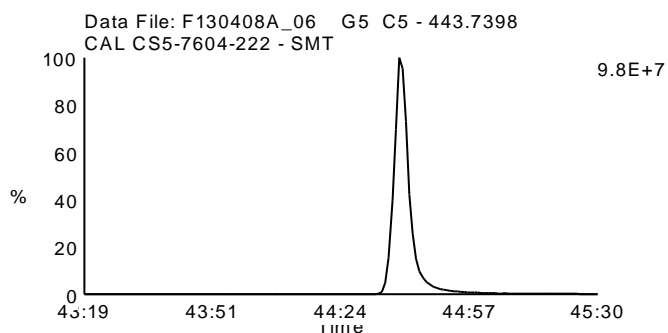
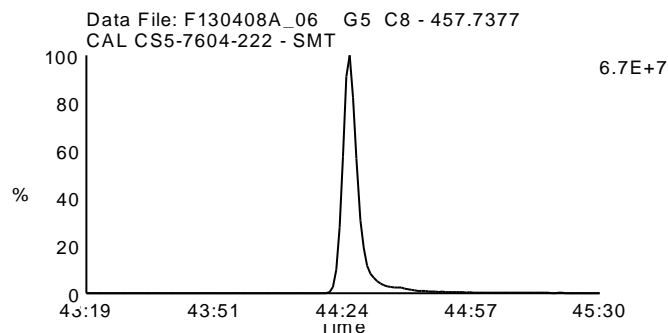
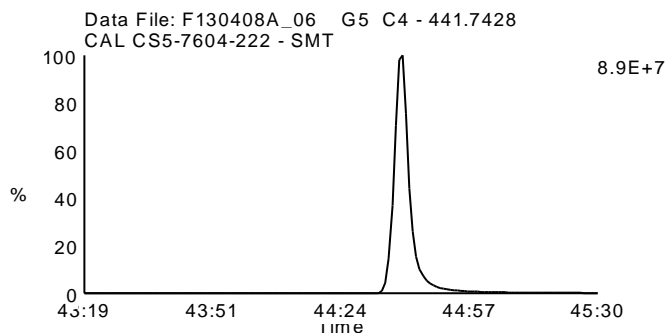
Date Acquired: 4/8/2013

Sample Description: CAL CS5-7604-222 - SMT

Lab Sample ID: CS5-7604-222

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Tetras

Data File Name: P121229A_06

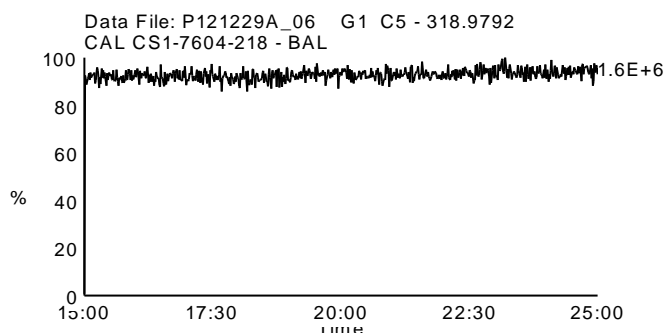
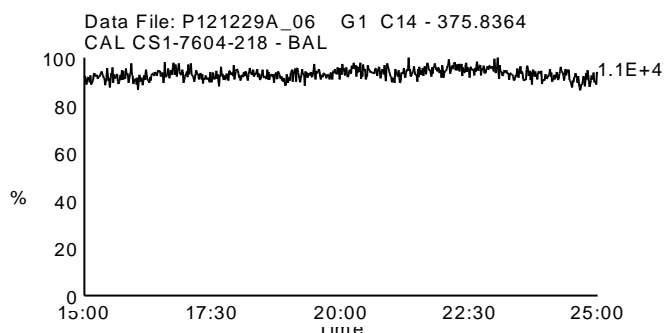
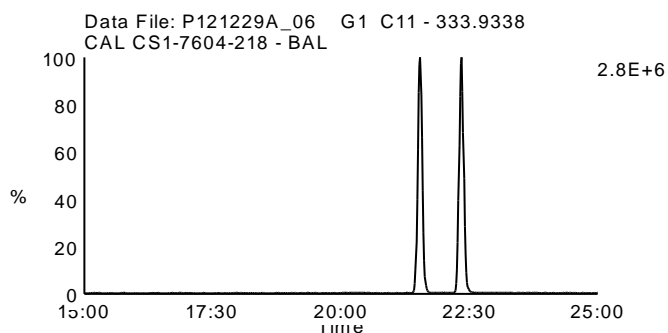
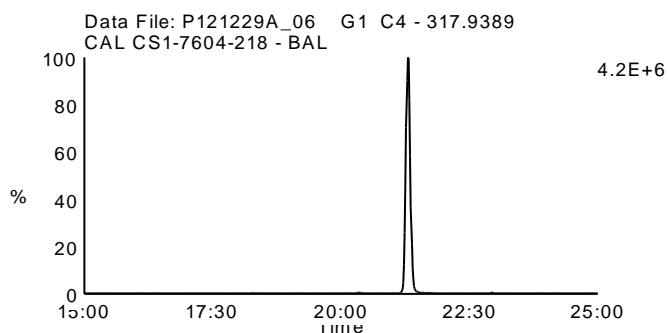
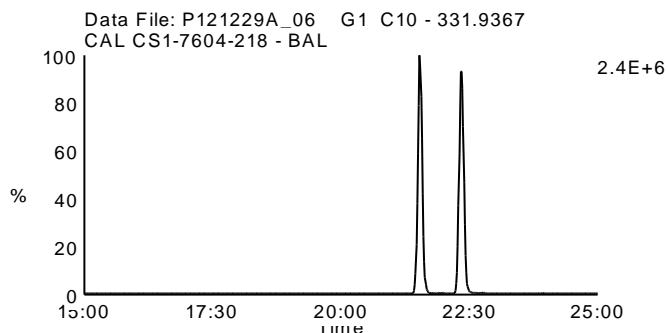
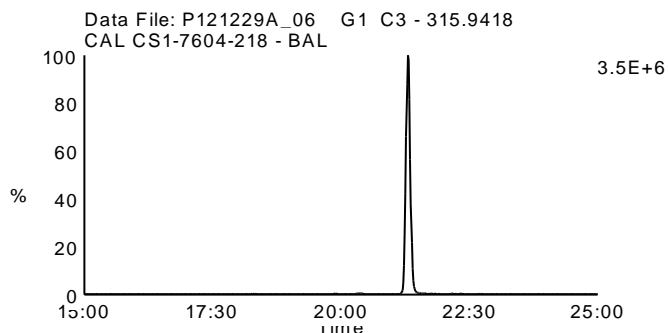
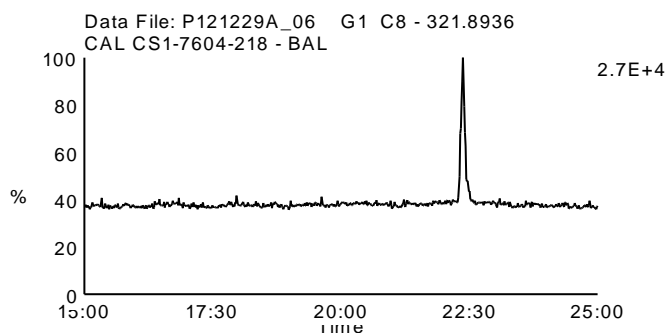
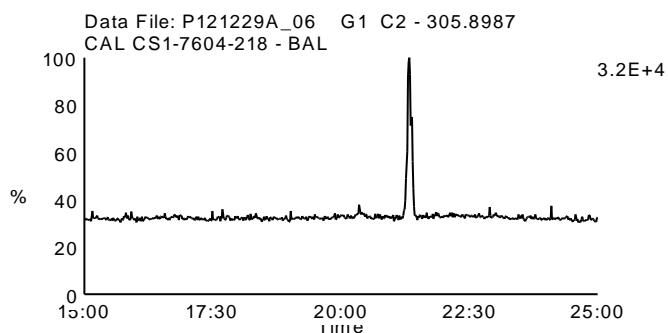
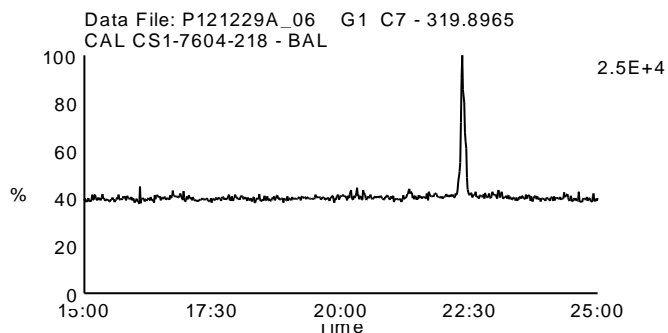
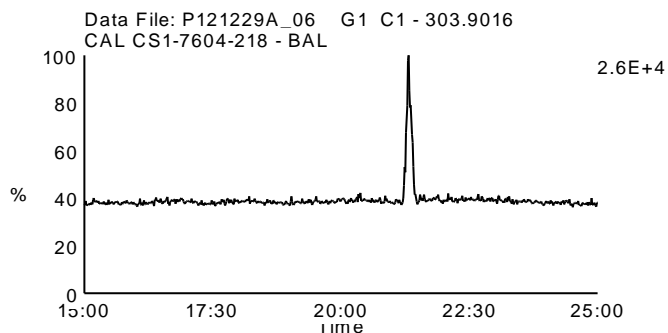
Date Acquired: 12/29/2012

Sample Description: CAL CS1-7604-218 - BAL

Lab Sample ID: CS1-7604-218

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Penta & Cleanup

Data File Name: P121229A_06

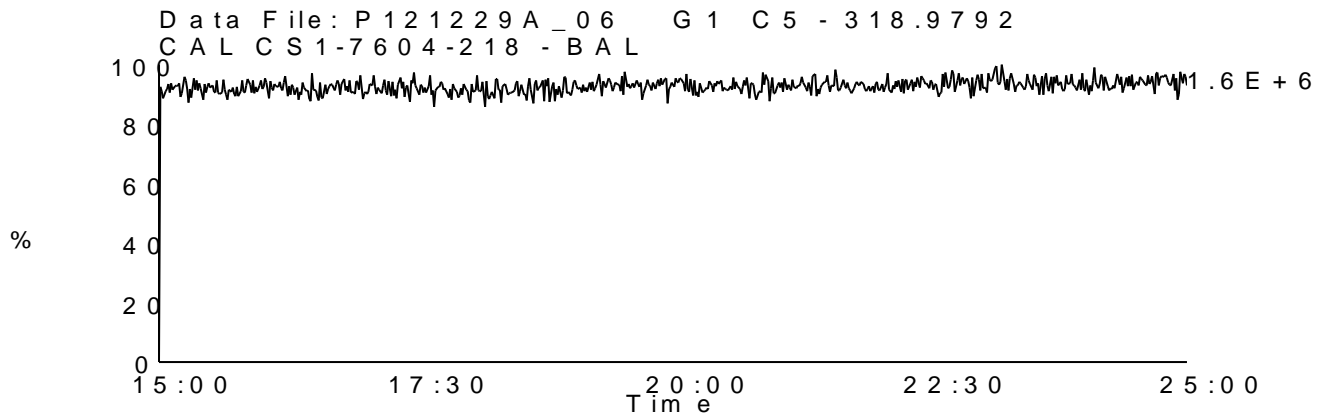
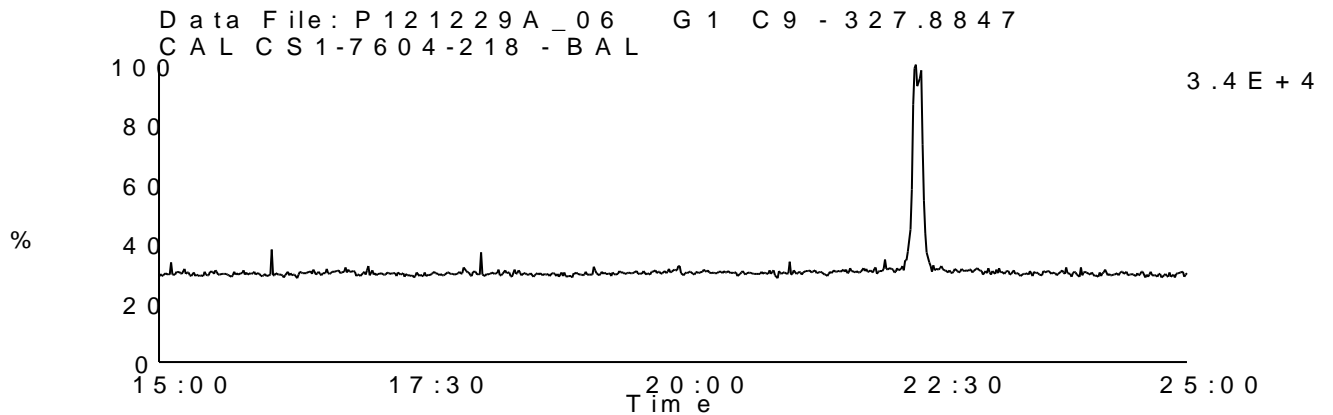
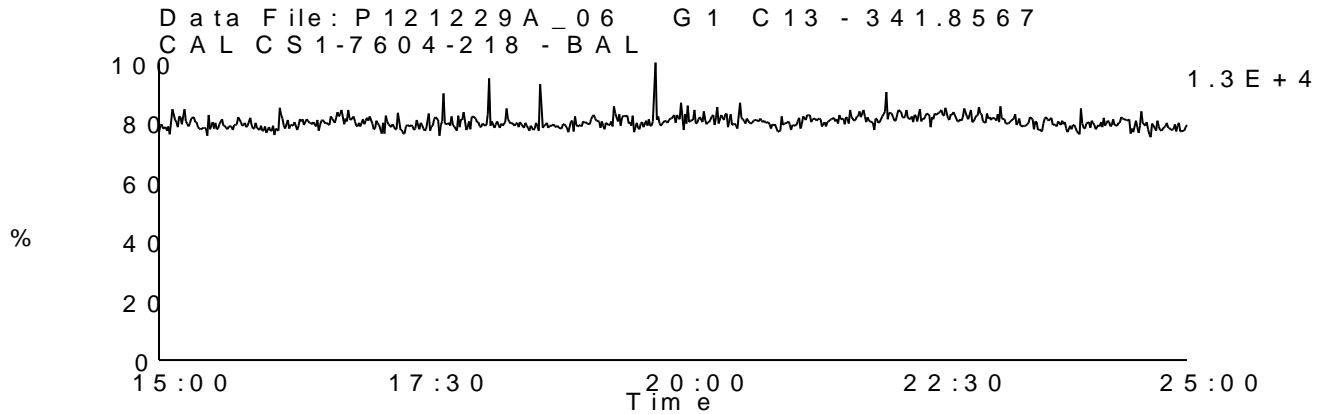
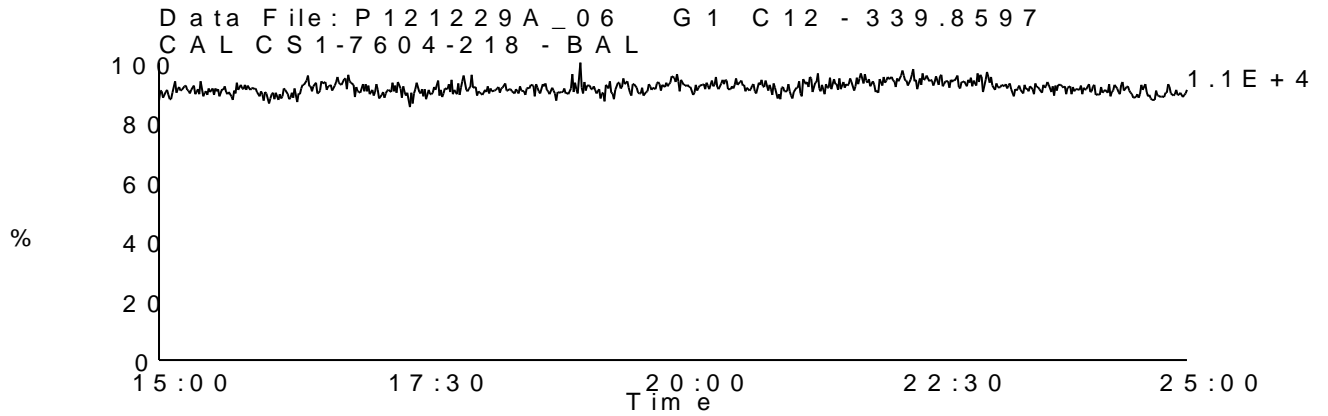
Lab Sample ID: CS1-7604-218

Date Acquired: 12/29/2012

Client Sample ID:

Sample Description: CAL CS1-7604-218 - BAL

Instrument: 10MSHR09 (P)



Homologue Group: Pentas

Data File Name: P121229A_06

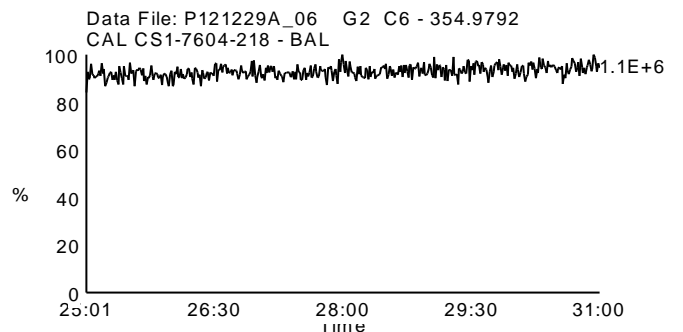
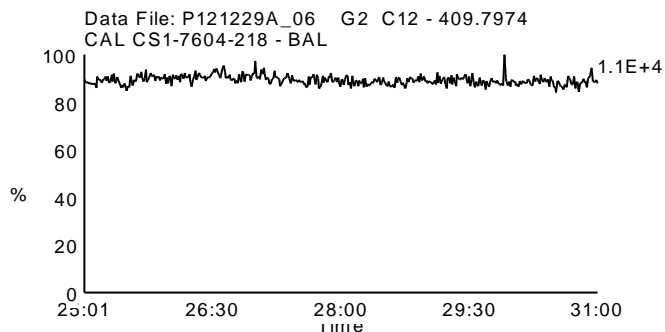
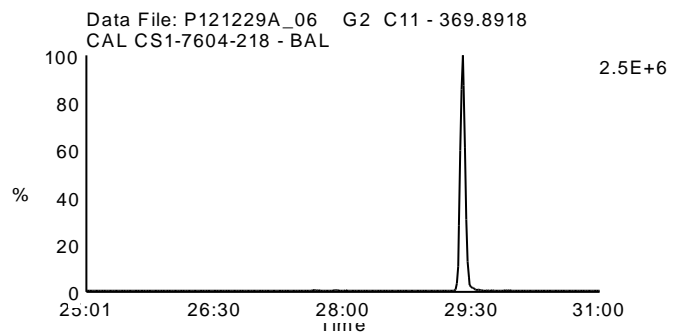
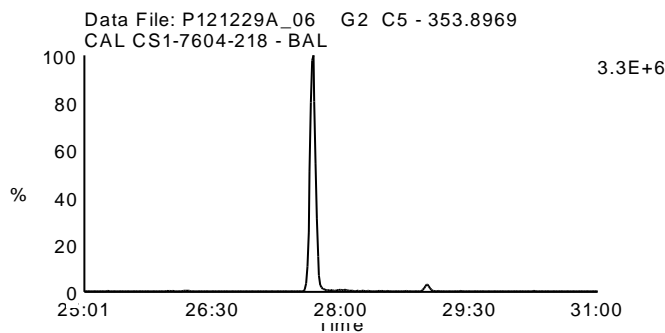
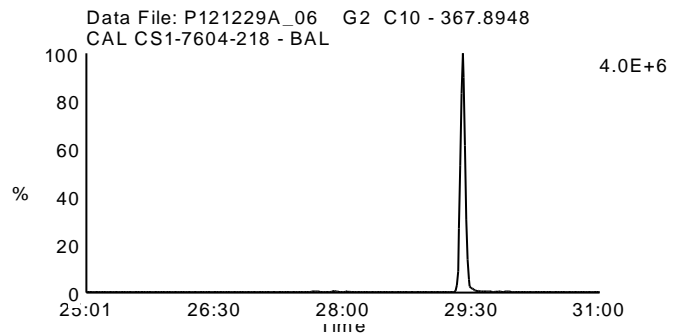
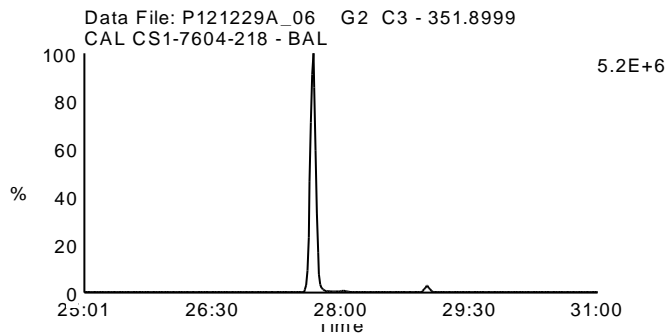
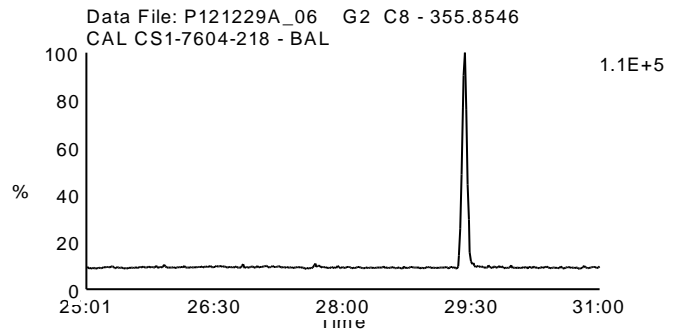
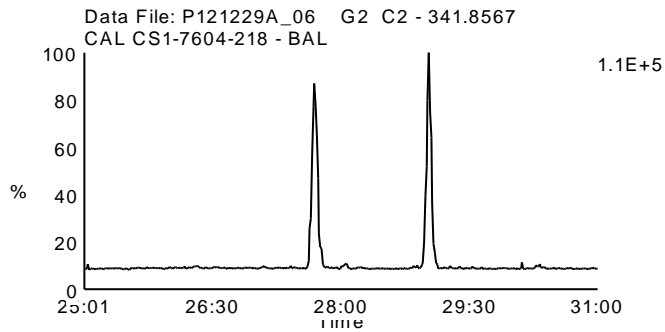
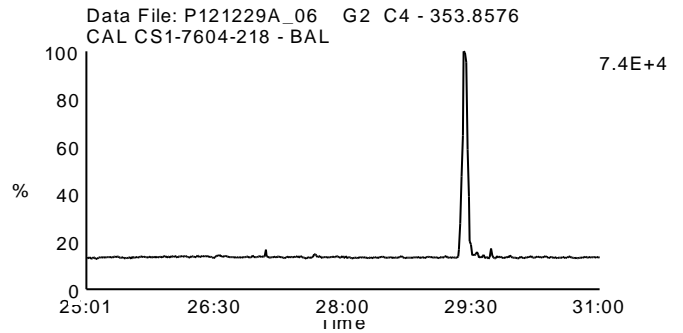
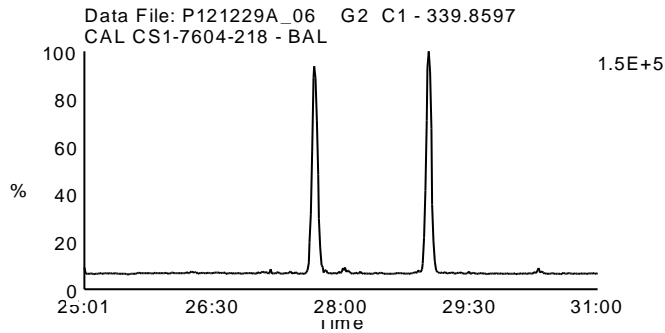
Date Acquired: 12/29/2012

Sample Description: CAL CS1-7604-218 - BAL

Lab Sample ID: CS1-7604-218

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Hexas

Data File Name: P121229A_06

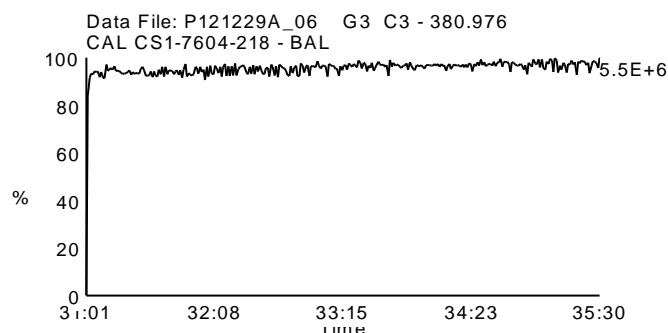
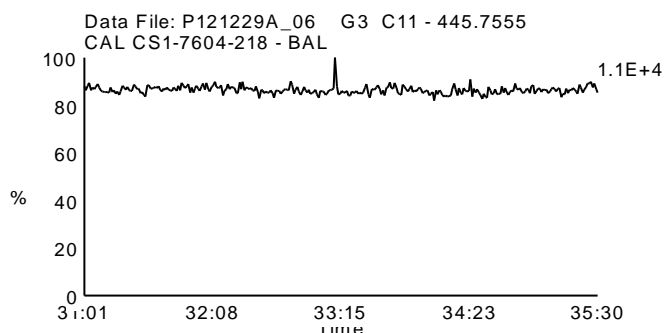
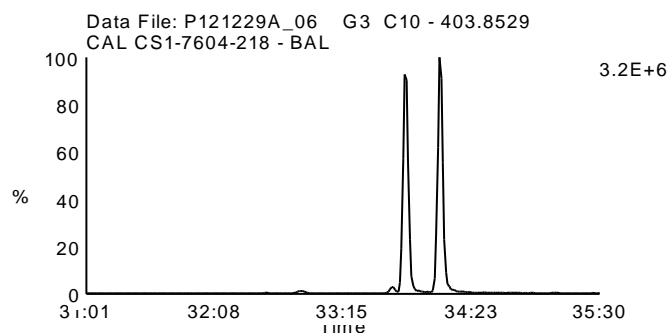
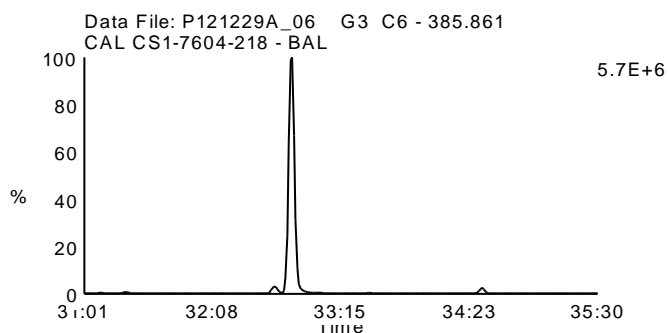
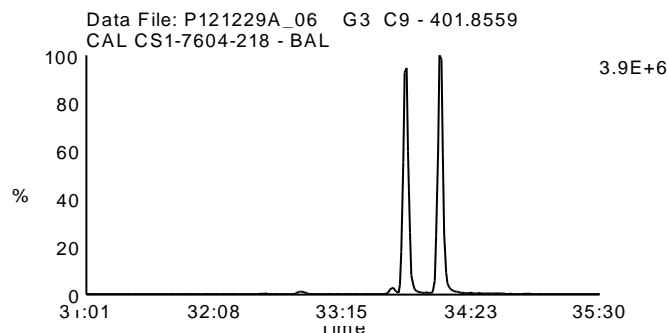
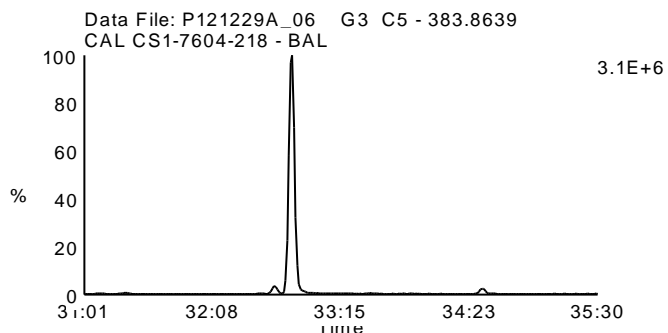
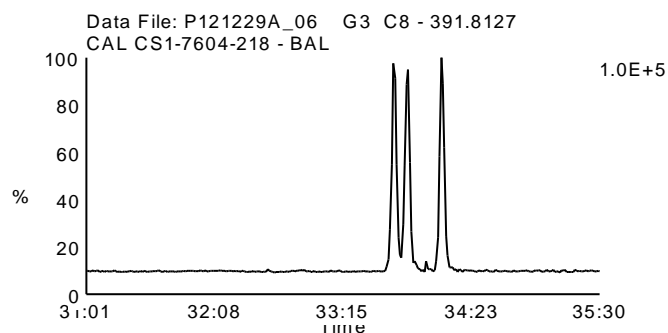
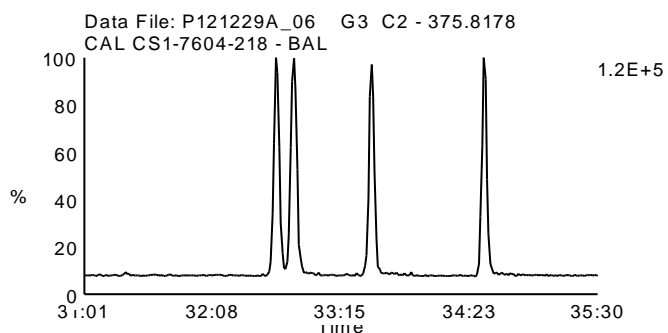
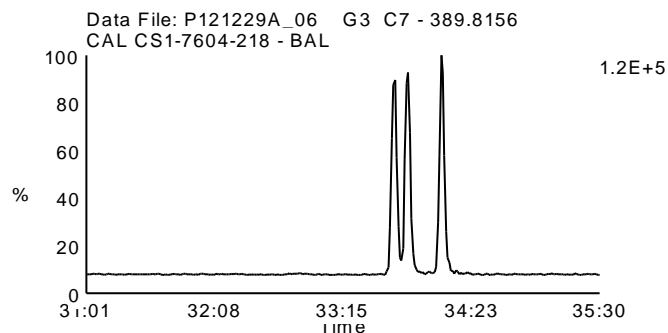
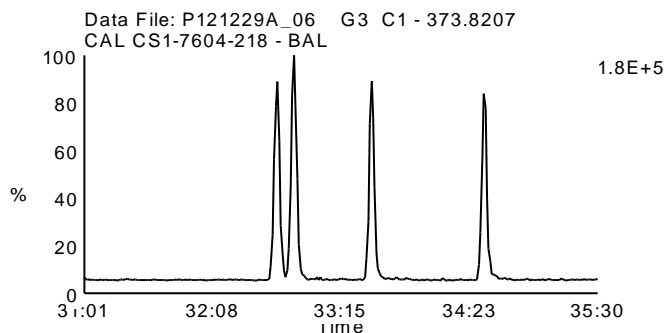
Date Acquired: 12/29/2012

Sample Description: CAL CS1-7604-218 - BAL

Lab Sample ID: CS1-7604-218

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Heptas

Data File Name: P121229A_06

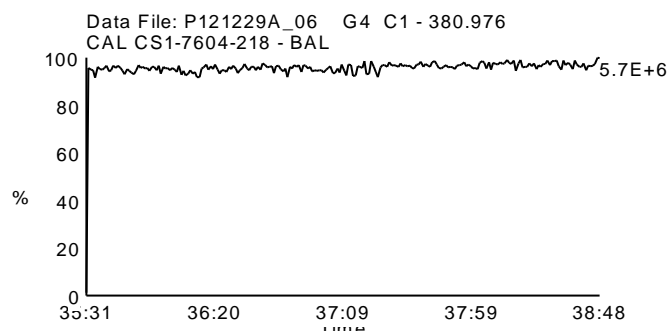
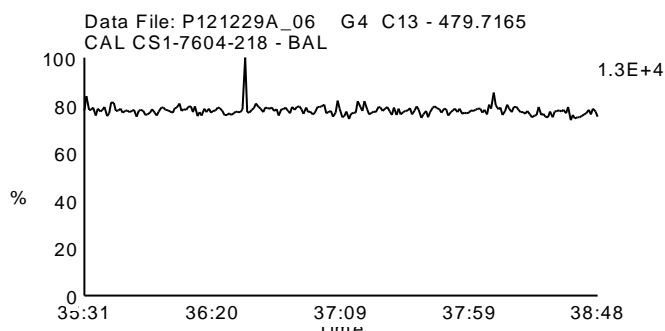
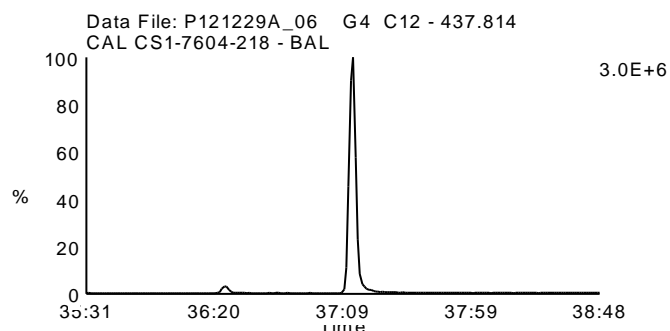
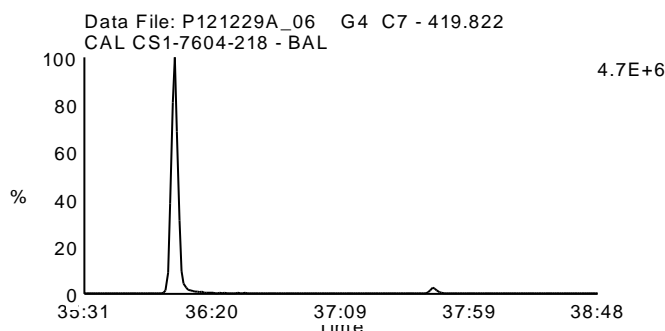
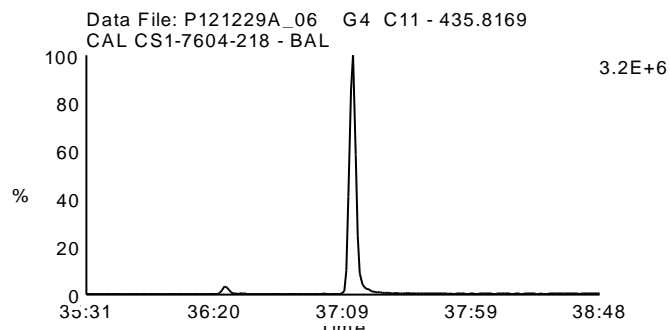
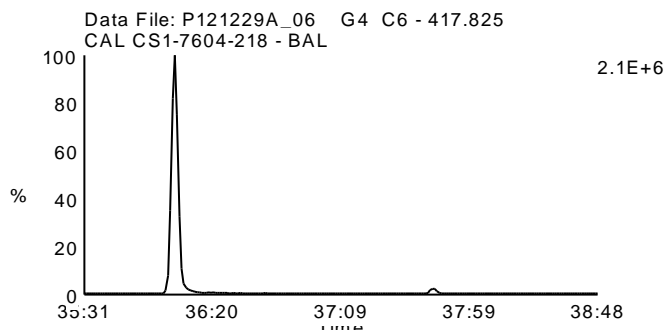
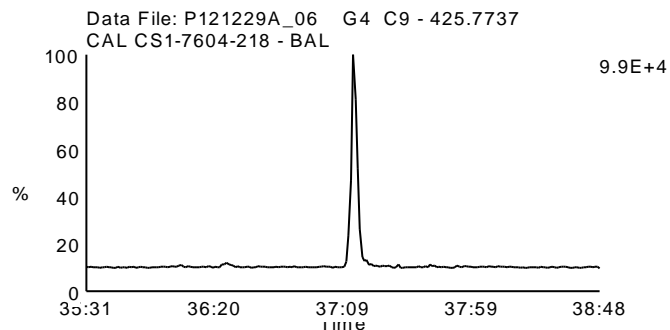
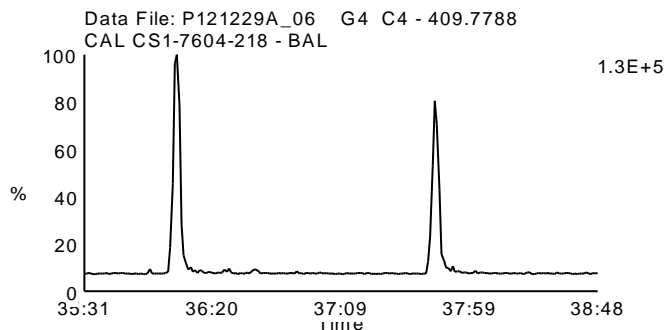
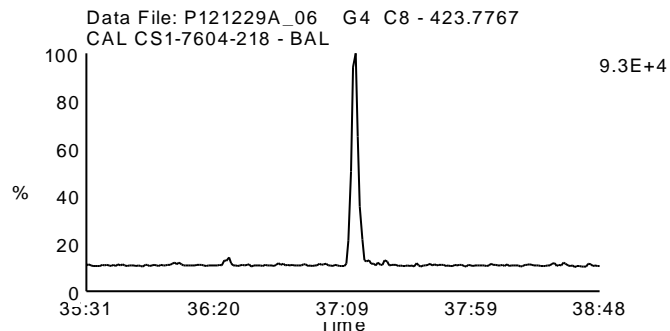
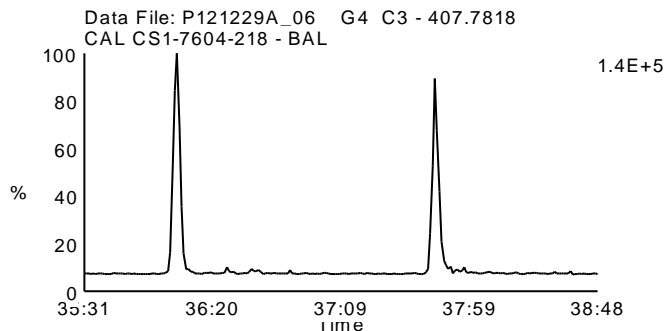
Date Acquired: 12/29/2012

Sample Description: CAL CS1-7604-218 - BAL

Lab Sample ID: CS1-7604-218

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Octas

Data File Name: P121229A_06

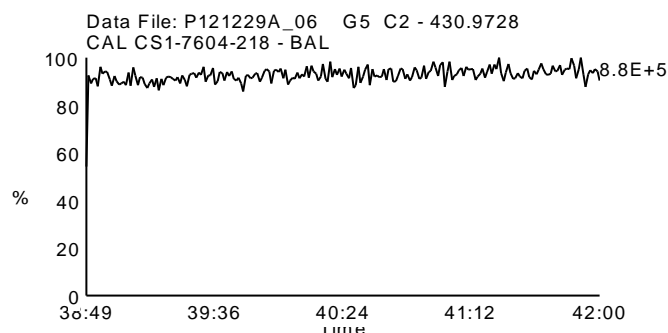
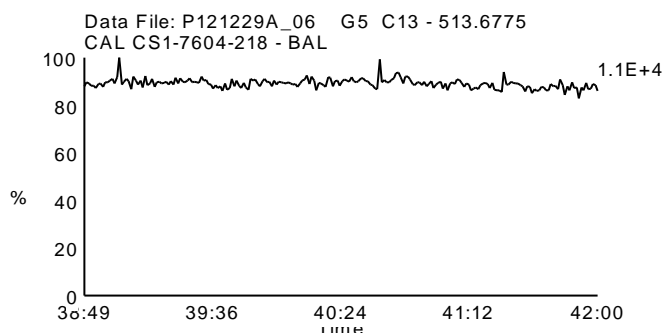
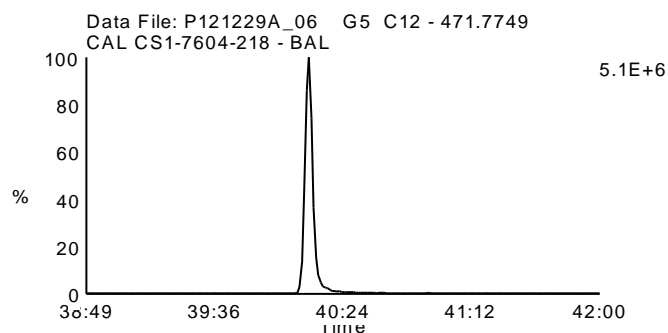
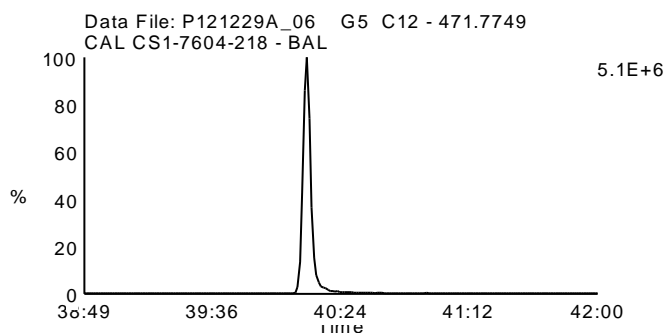
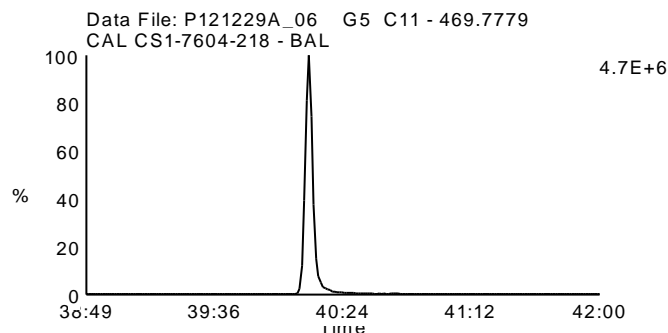
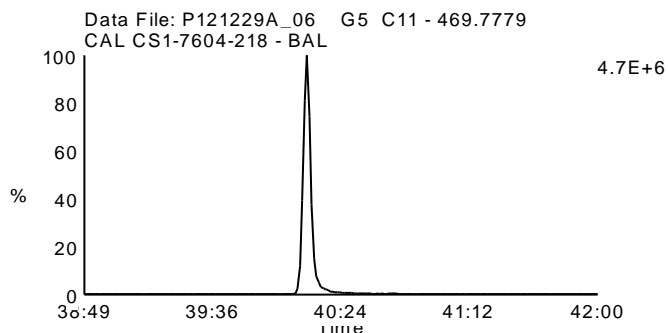
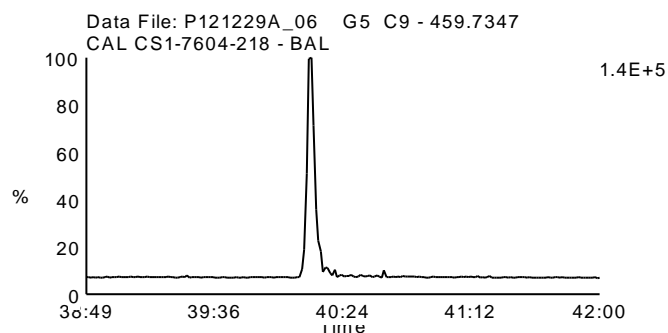
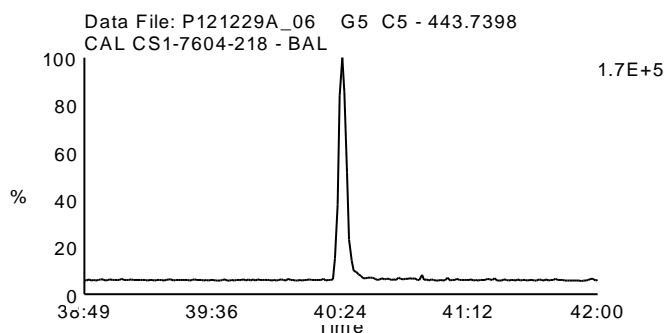
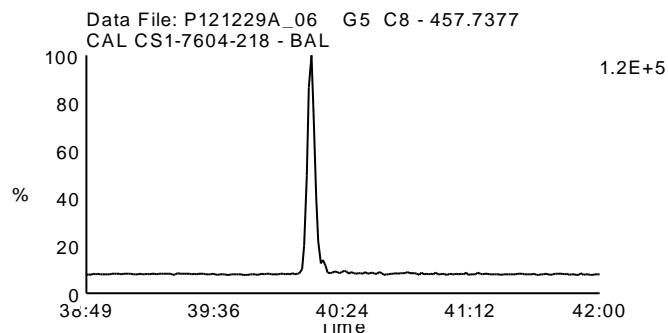
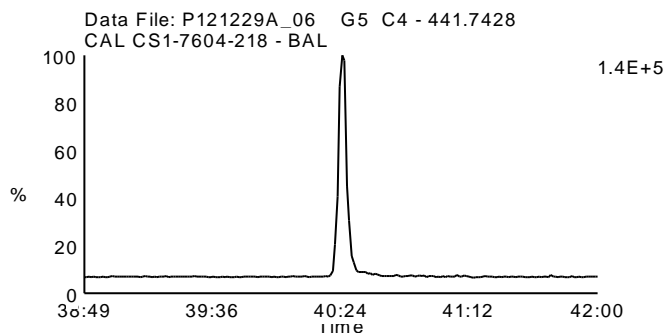
Date Acquired: 12/29/2012

Sample Description: CAL CS1-7604-218 - BAL

Lab Sample ID: CS1-7604-218

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Tetras

Data File Name: P121229A_05

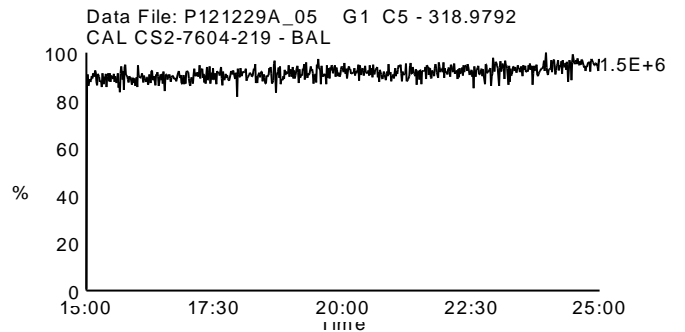
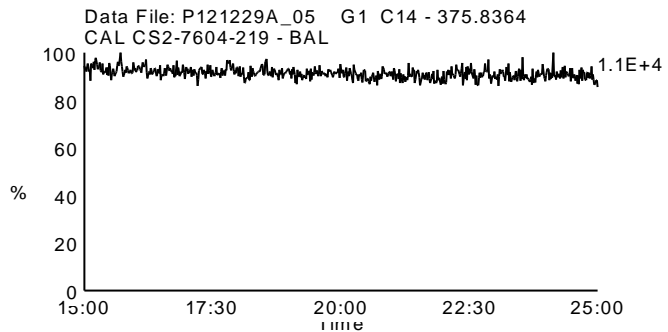
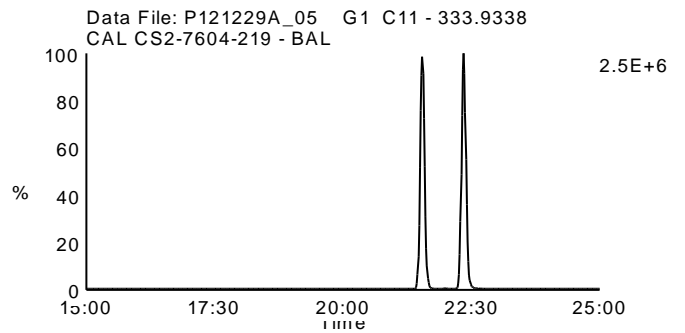
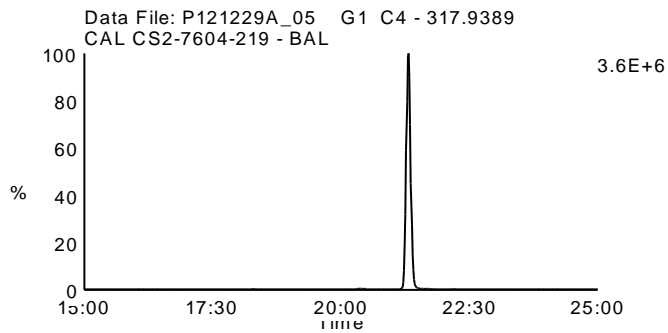
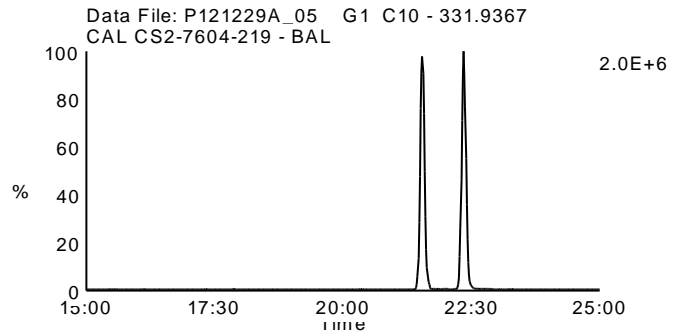
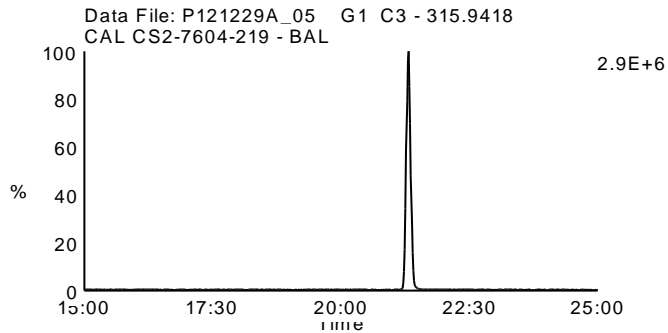
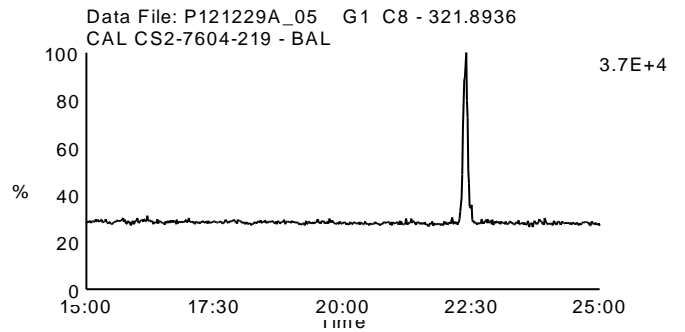
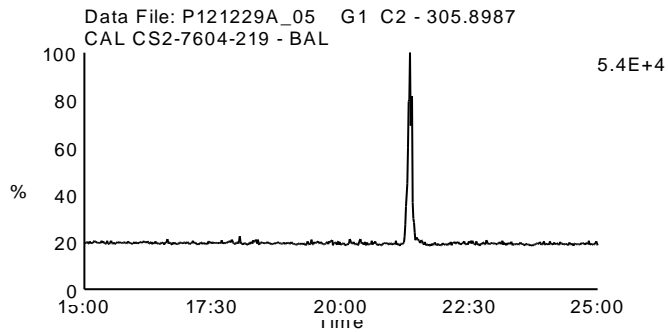
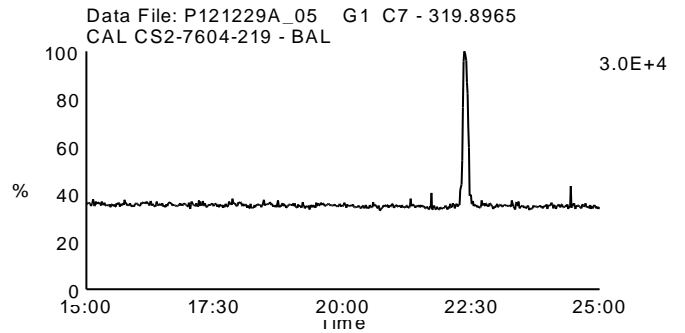
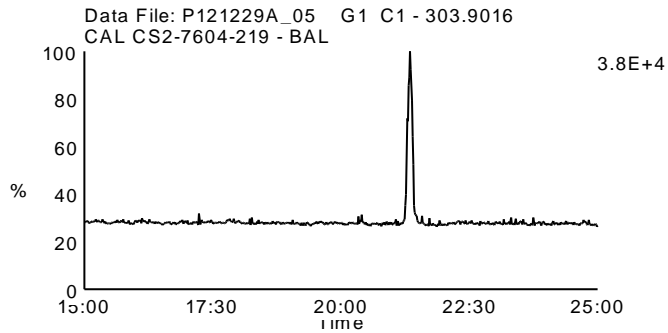
Date Acquired: 12/29/2012

Sample Description: CAL CS2-7604-219 - BAL

Lab Sample ID: CS2-7604-219

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Penta & Cleanup

Data File Name: P121229A_05

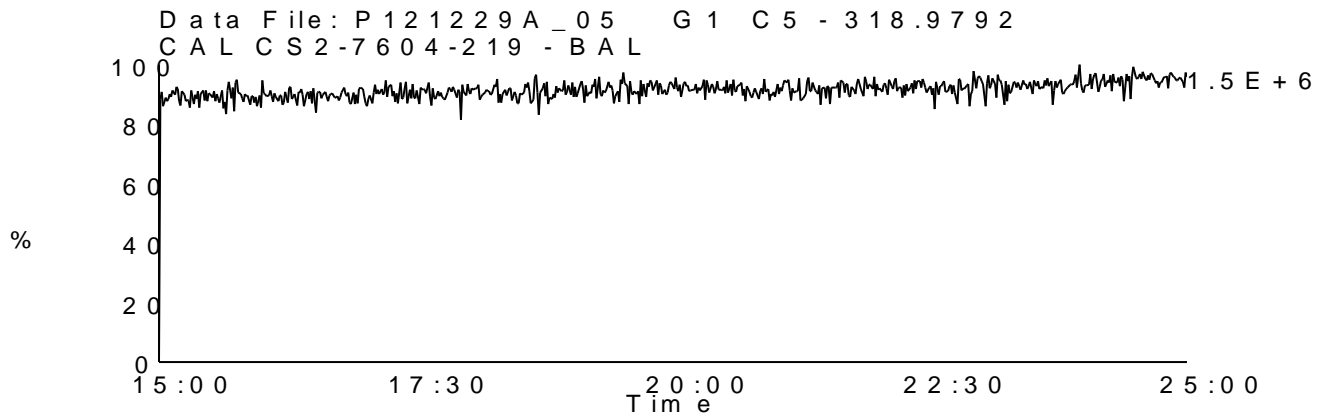
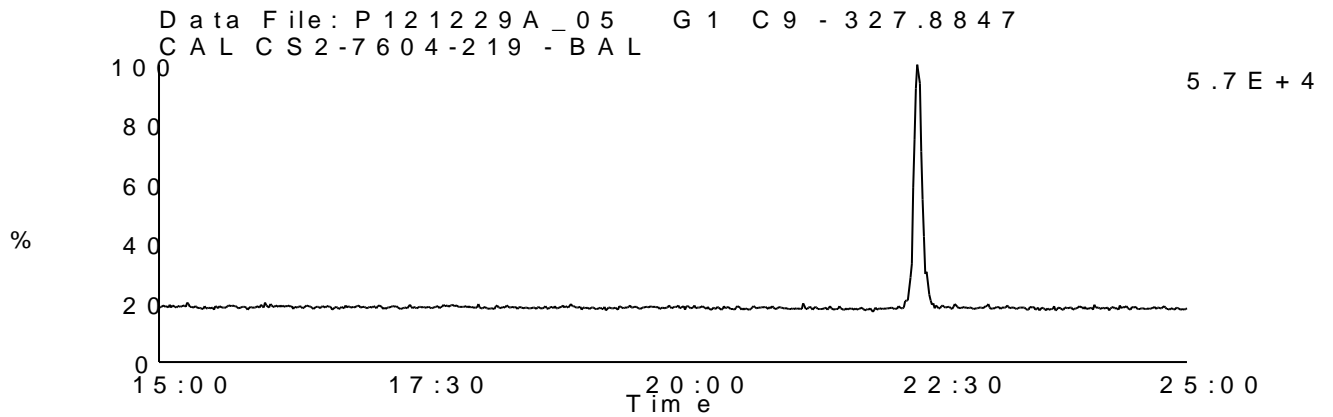
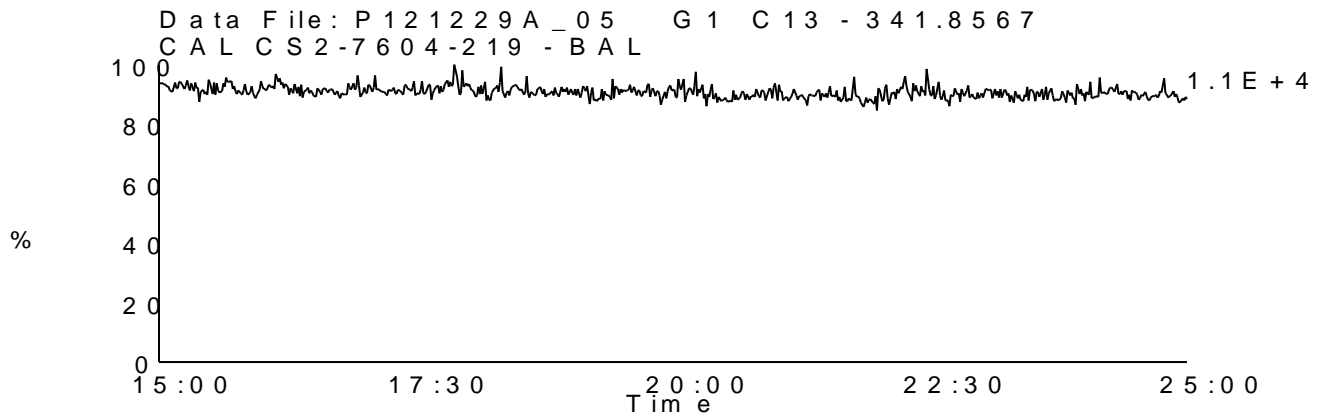
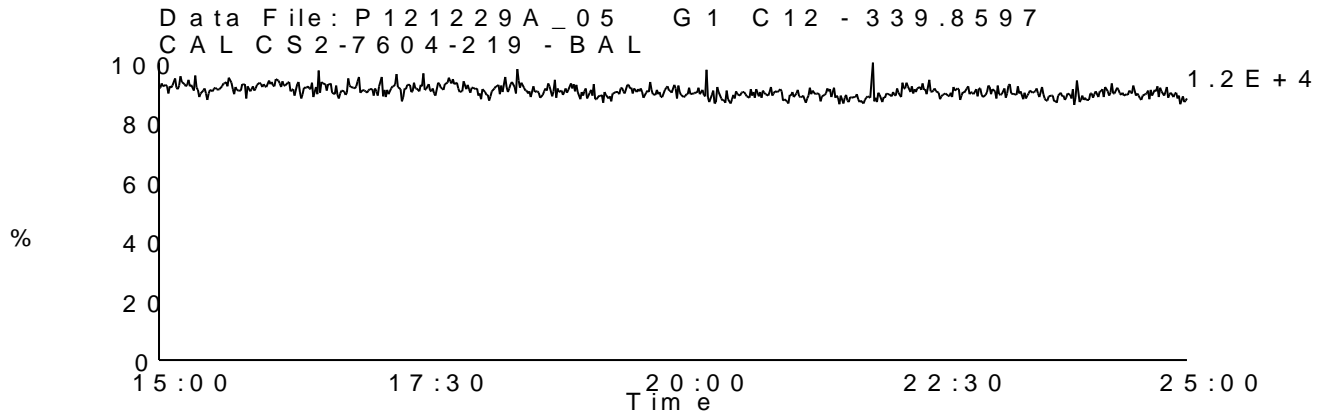
Date Acquired: 12/29/2012

Sample Description: CAL CS2-7604-219 - BAL

Lab Sample ID: CS2-7604-219

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Pentas

Data File Name: P121229A_05

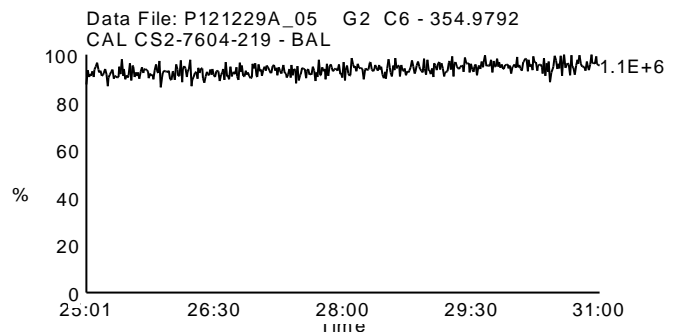
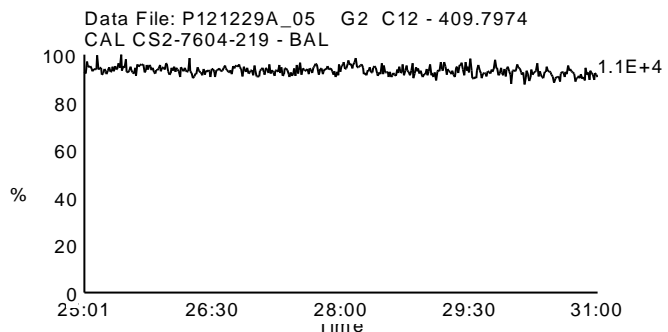
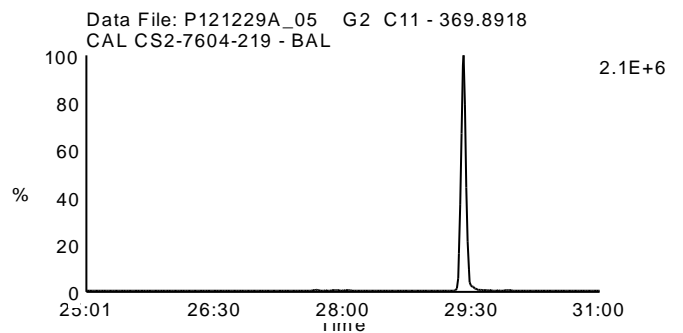
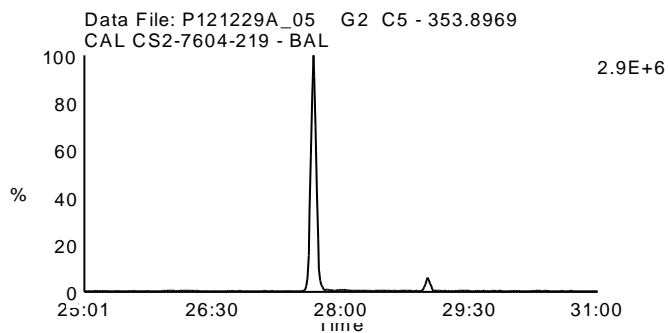
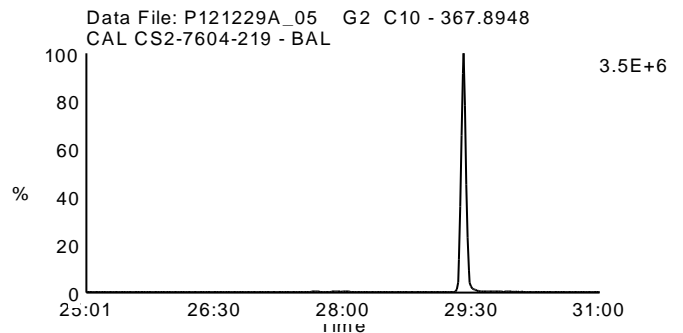
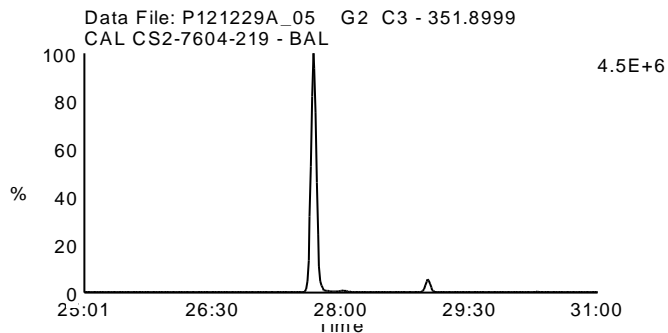
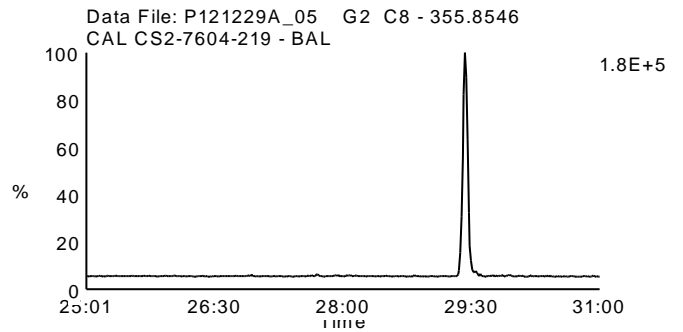
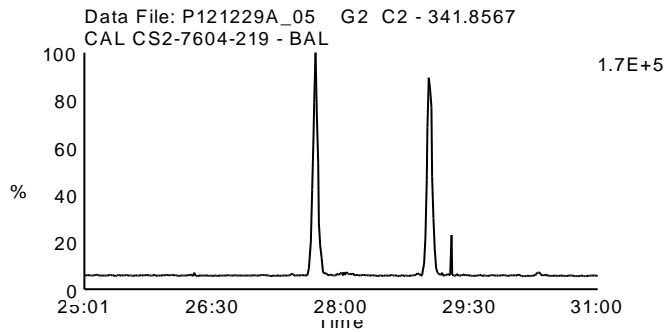
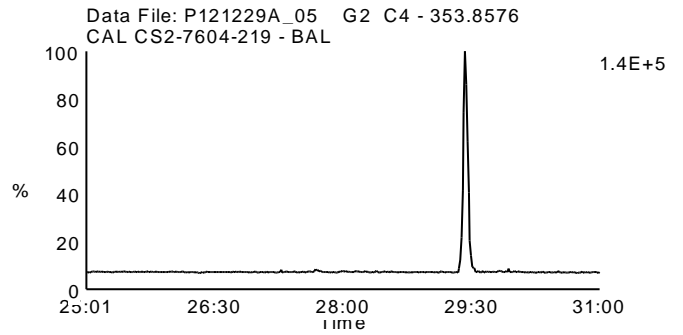
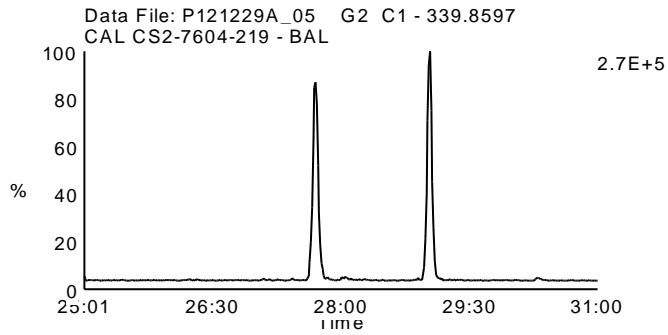
Date Acquired: 12/29/2012

Sample Description: CAL CS2-7604-219 - BAL

Lab Sample ID: CS2-7604-219

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Hexas

Data File Name: P121229A_05

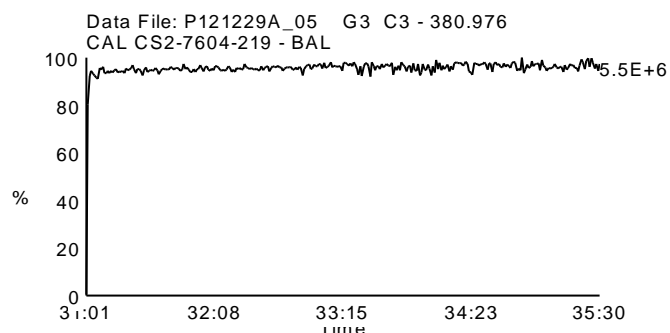
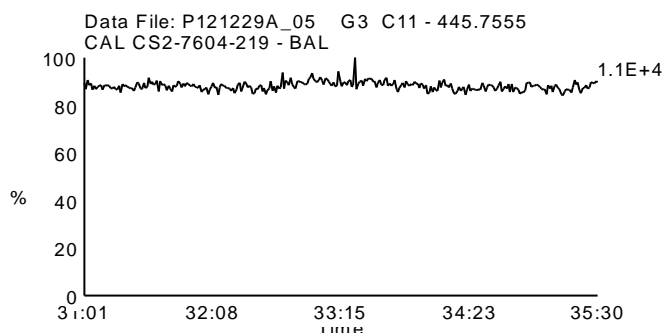
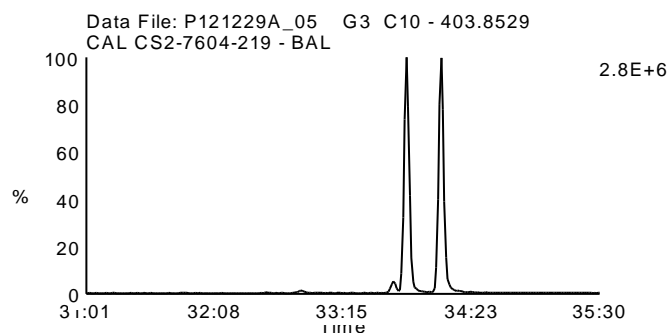
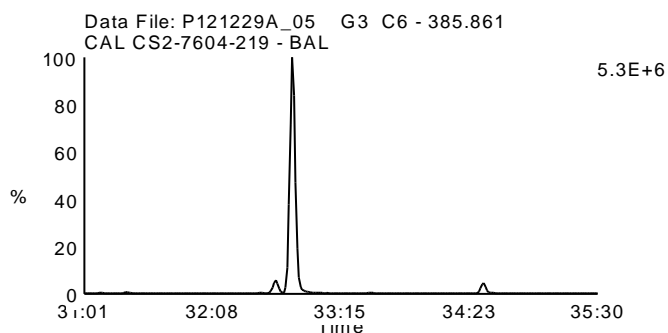
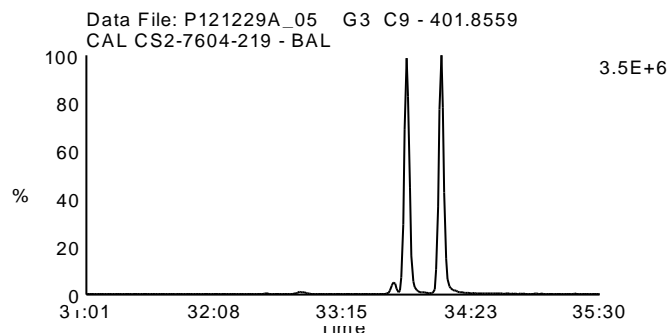
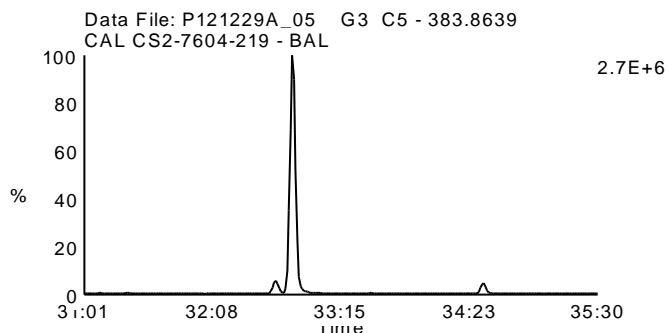
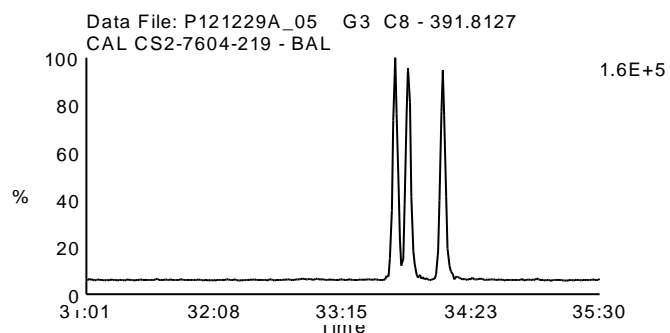
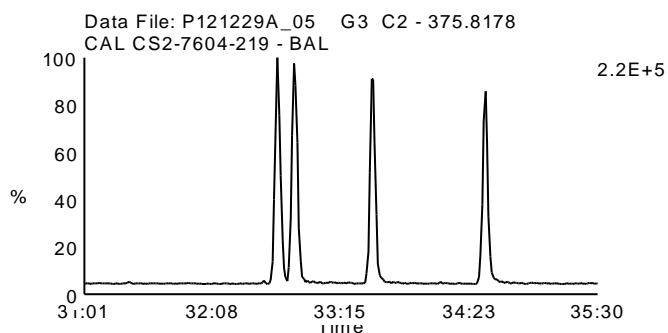
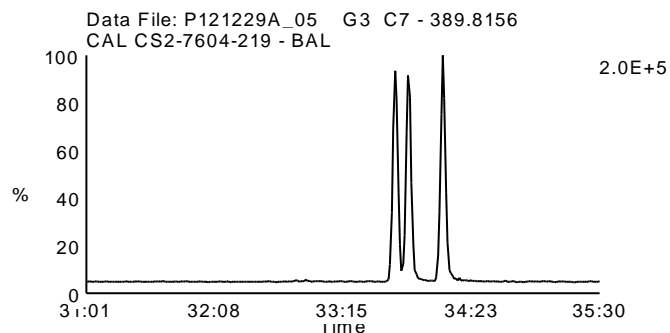
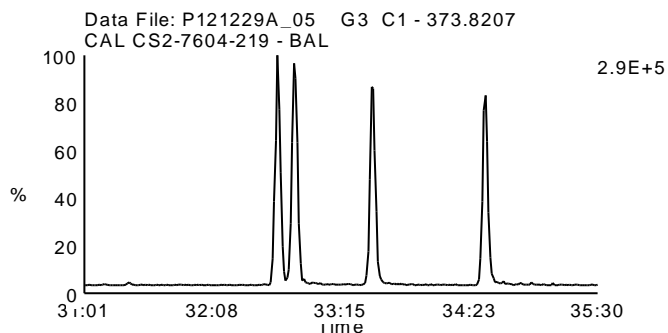
Date Acquired: 12/29/2012

Sample Description: CAL CS2-7604-219 - BAL

Lab Sample ID: CS2-7604-219

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Heptas

Data File Name: P121229A_05

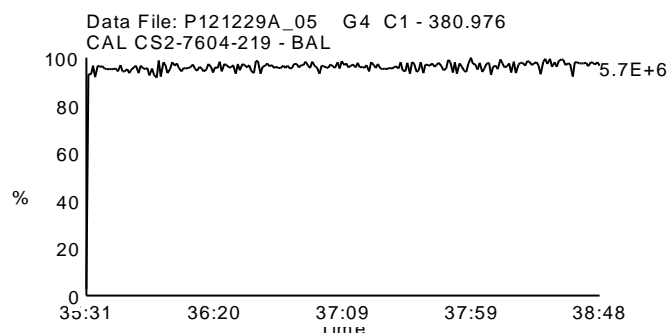
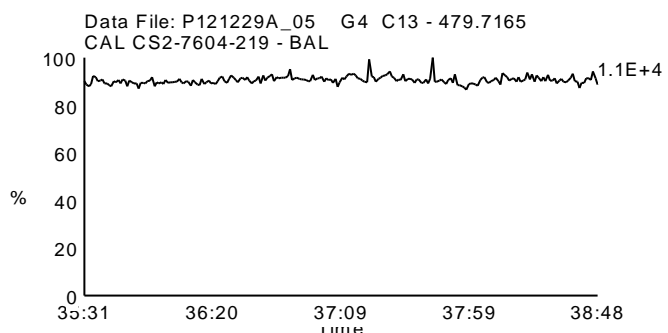
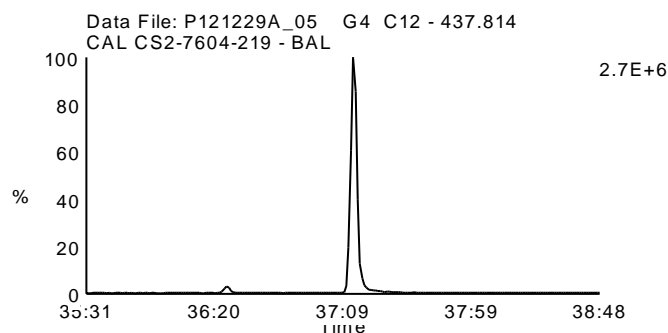
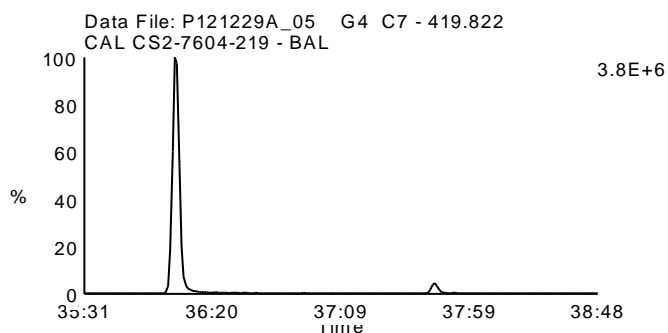
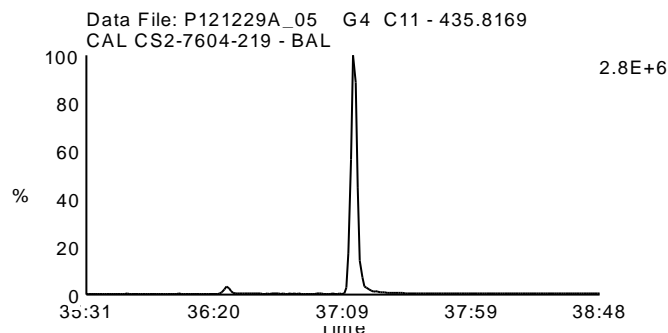
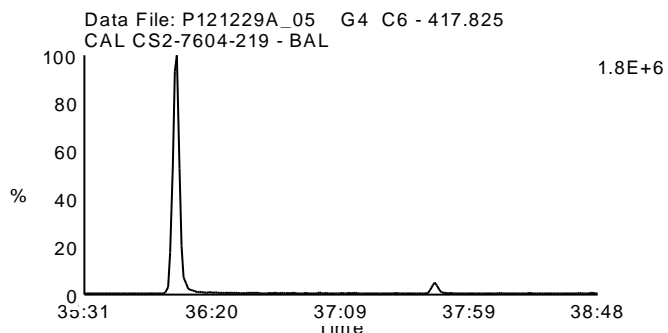
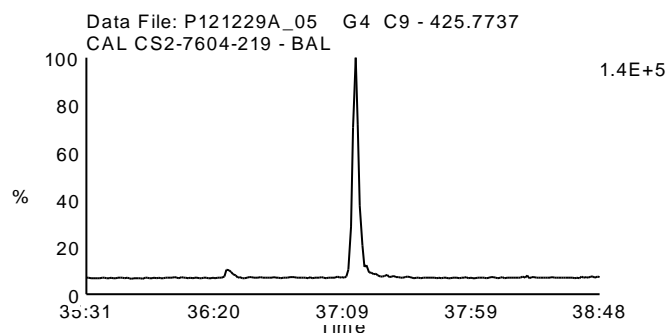
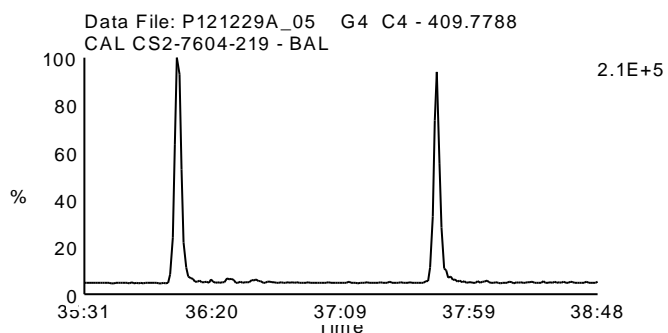
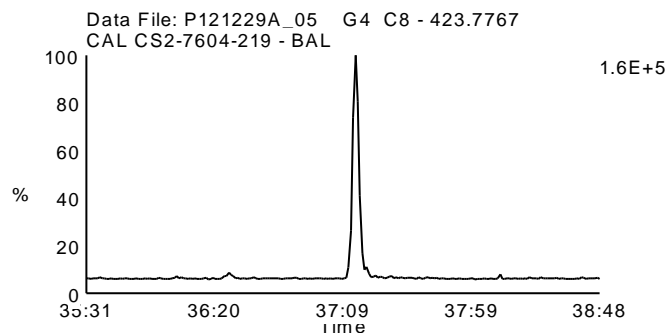
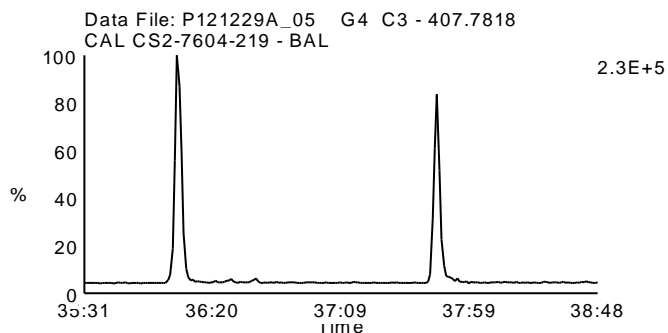
Date Acquired: 12/29/2012

Sample Description: CAL CS2-7604-219 - BAL

Lab Sample ID: CS2-7604-219

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Octas

Data File Name: P121229A_05

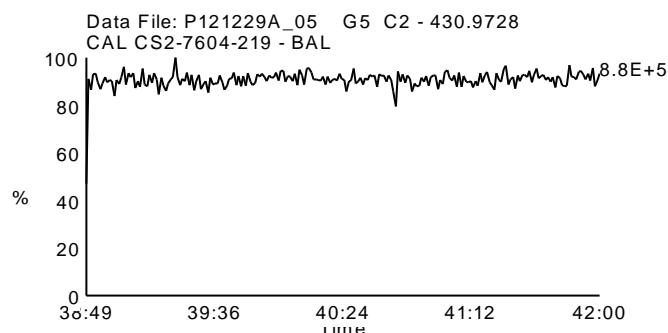
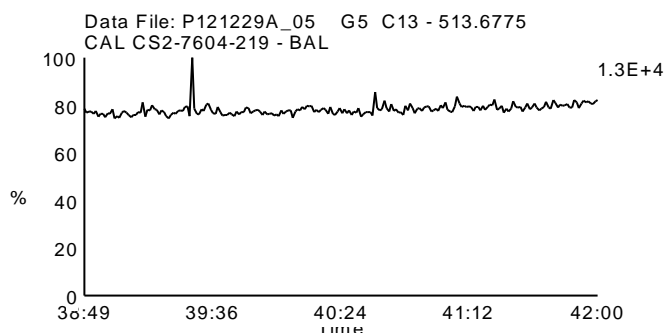
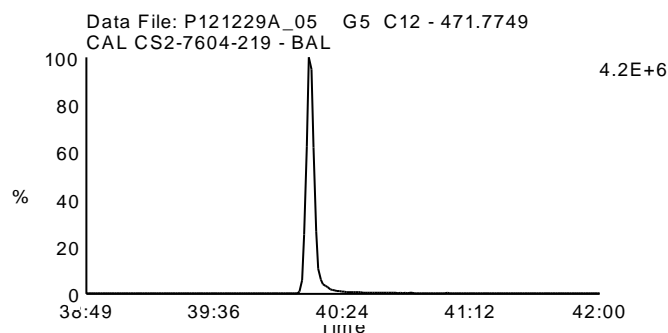
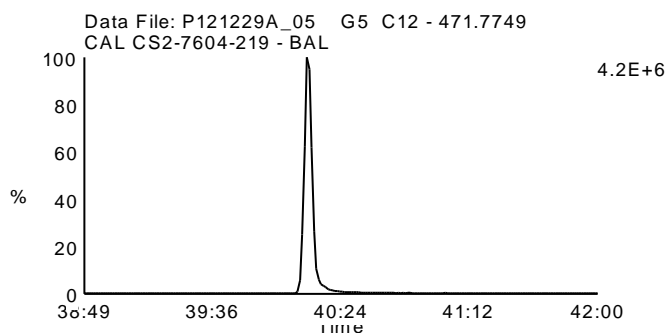
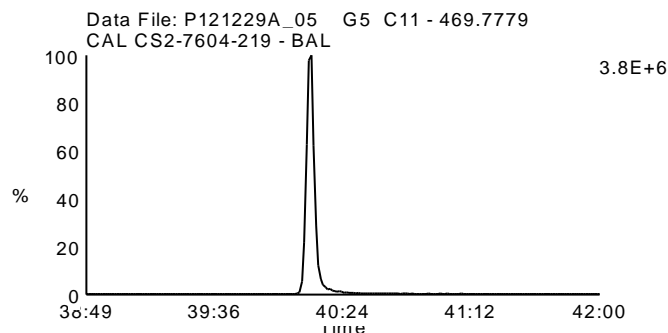
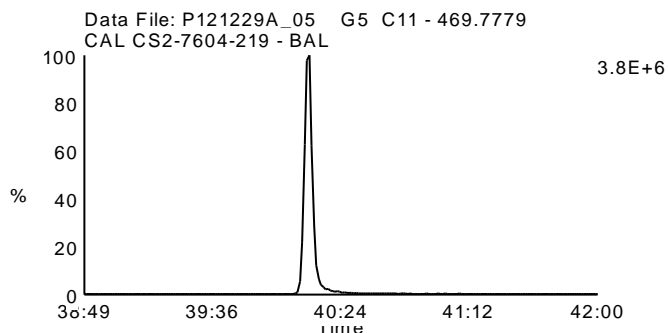
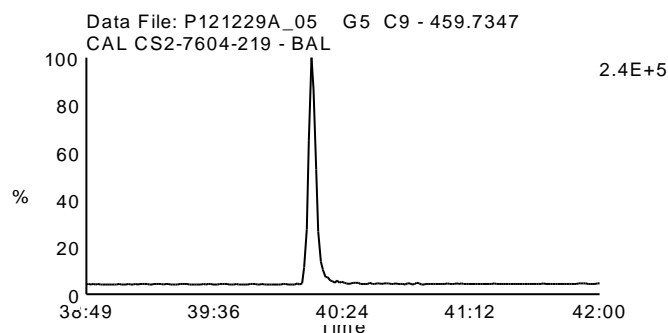
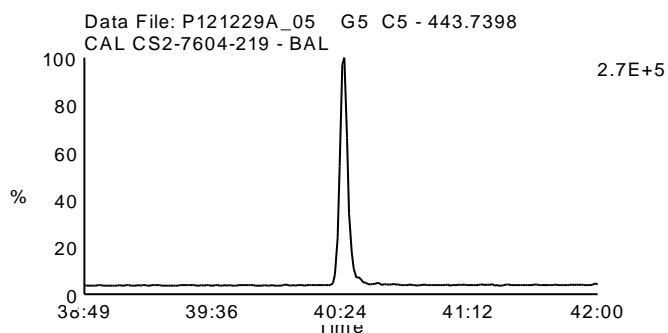
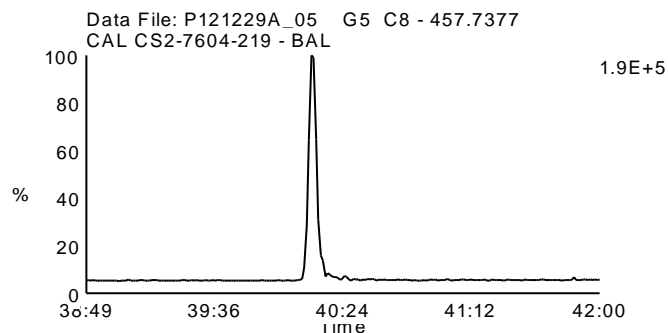
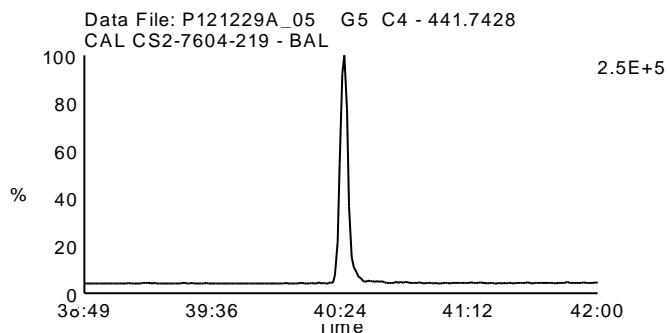
Date Acquired: 12/29/2012

Sample Description: CAL CS2-7604-219 - BAL

Lab Sample ID: CS2-7604-219

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Tetras

Data File Name: P121229A_07

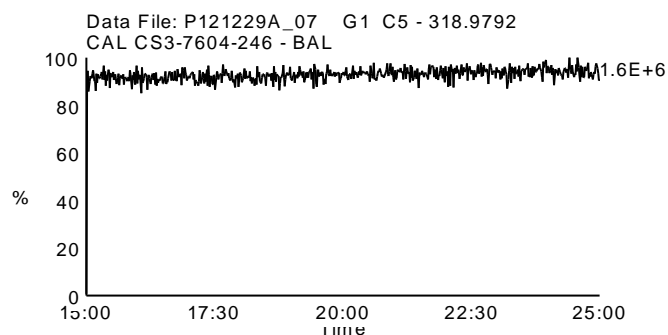
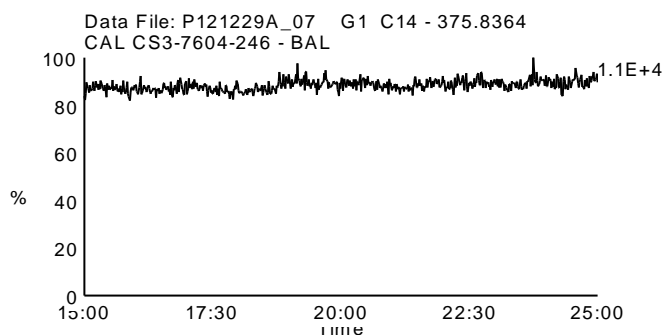
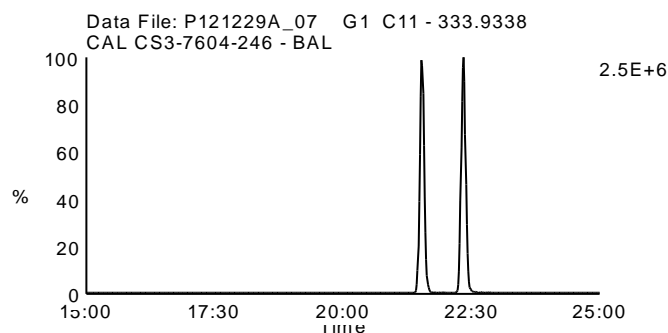
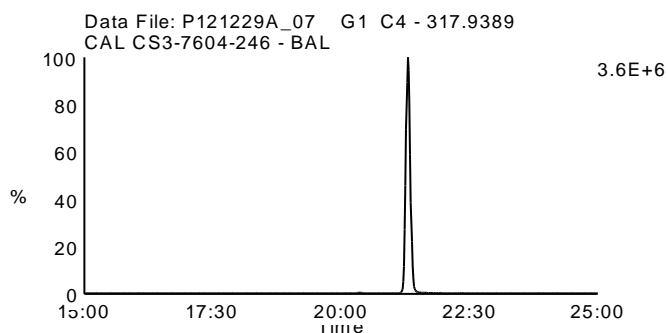
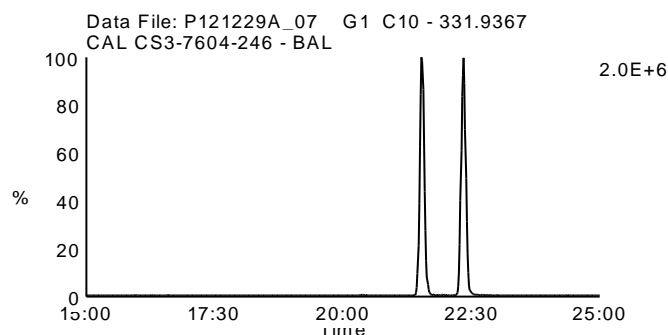
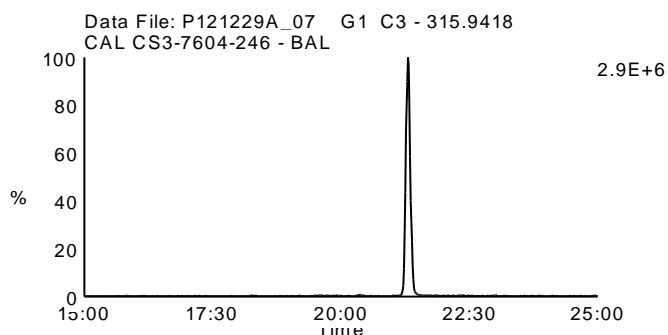
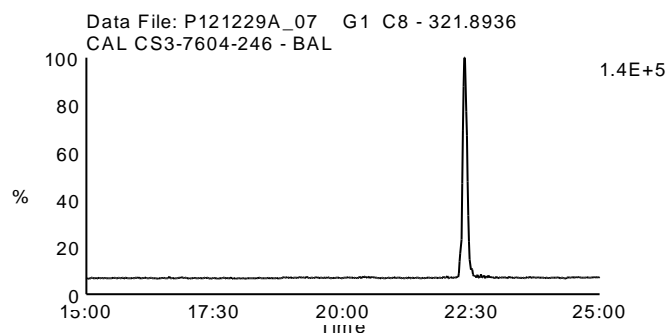
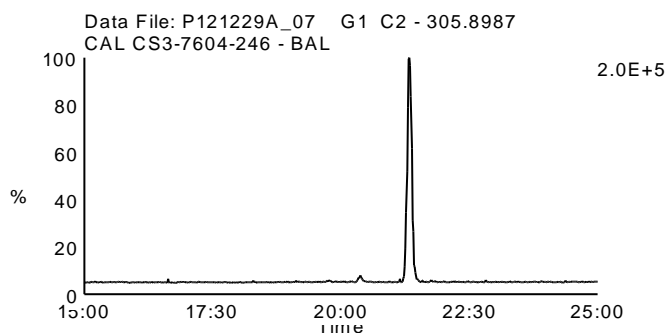
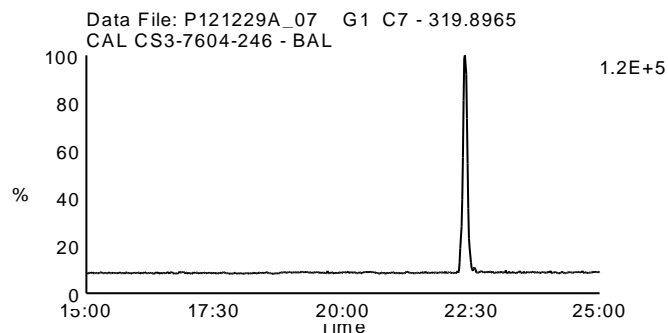
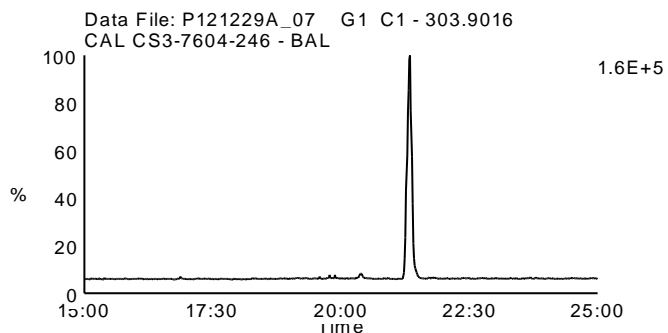
Date Acquired: 12/29/2012

Sample Description: CAL CS3-7604-246 - BAL

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Penta & Cleanup

Data File Name: P121229A_07

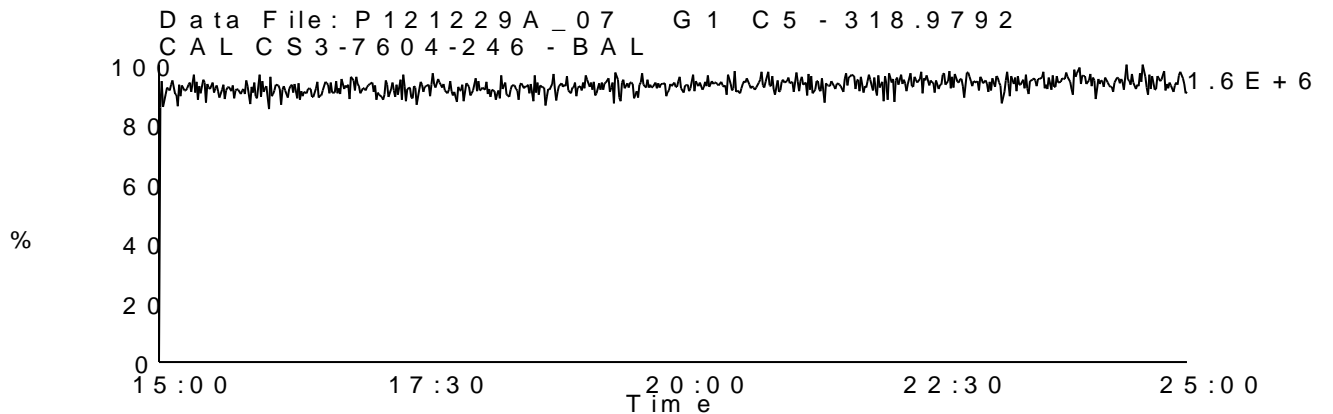
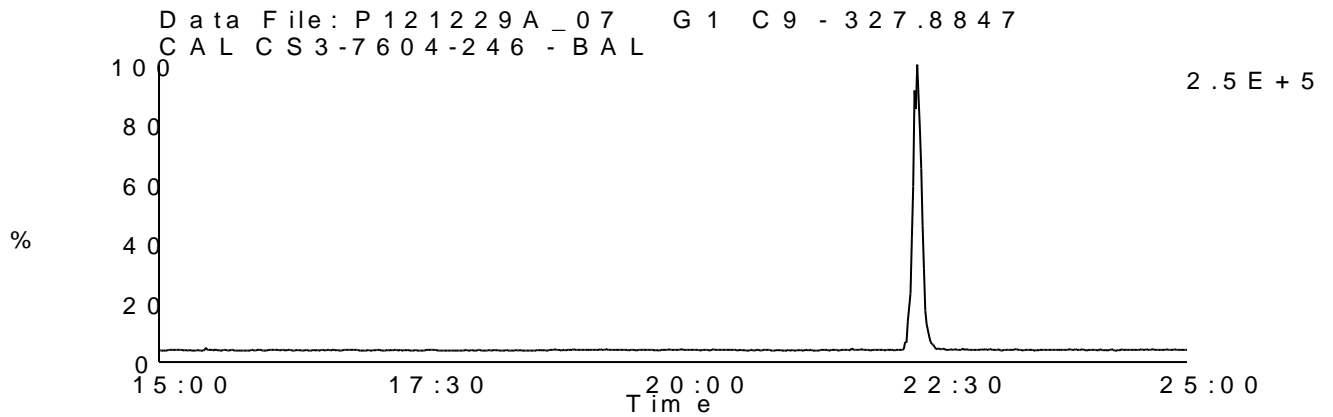
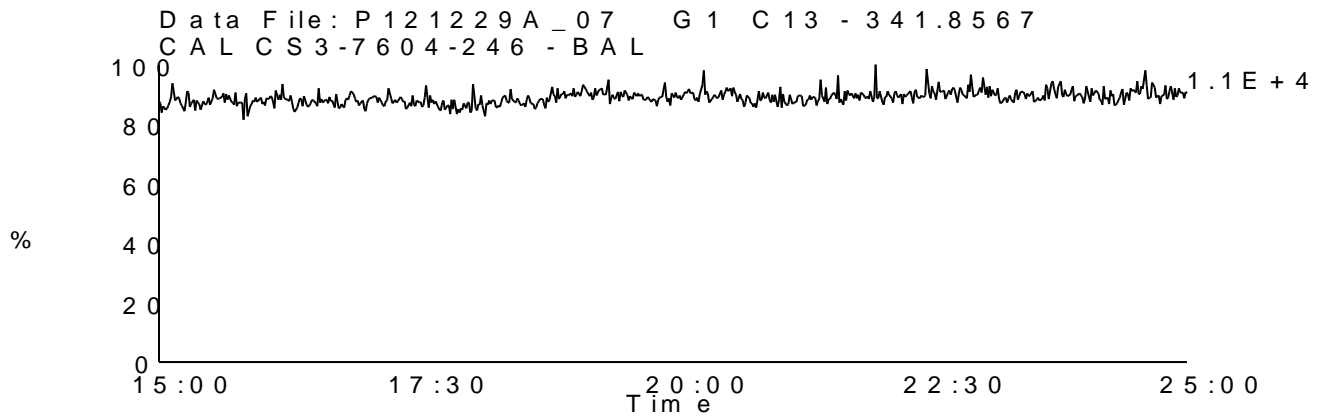
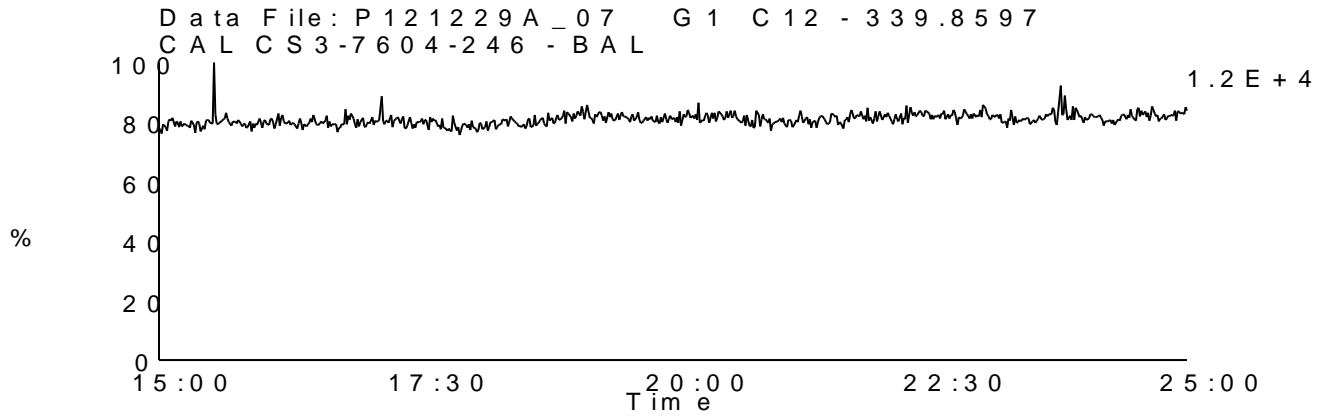
Date Acquired: 12/29/2012

Sample Description: CAL CS3-7604-246 - BAL

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Pentas

Data File Name: P121229A_07

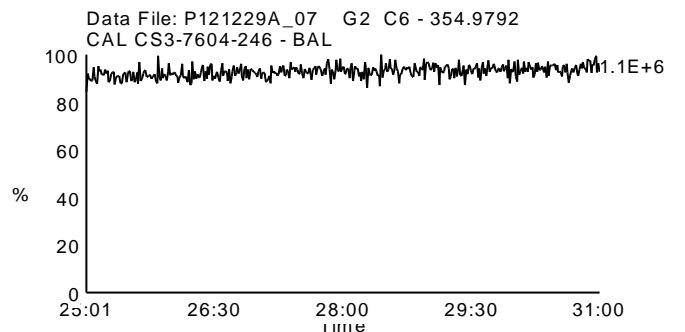
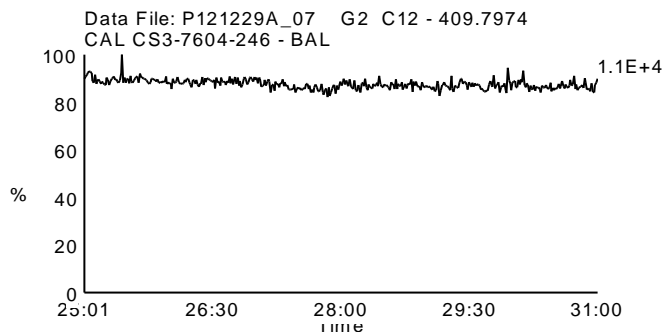
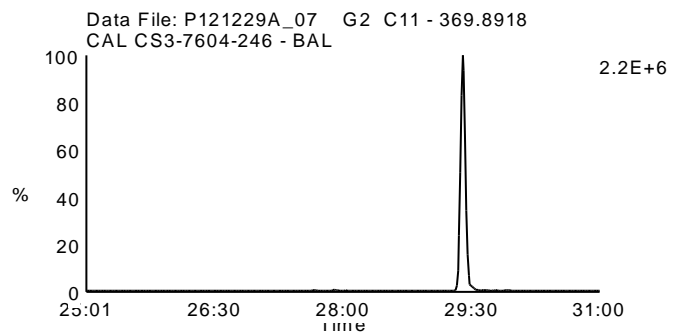
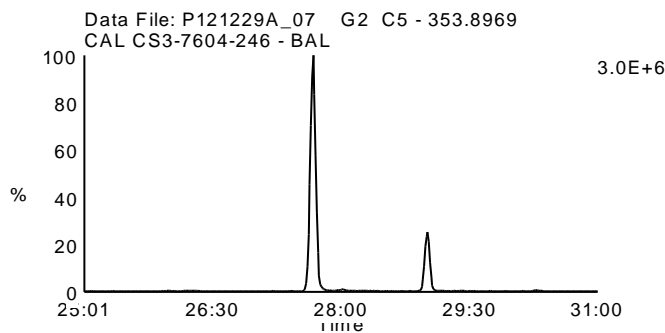
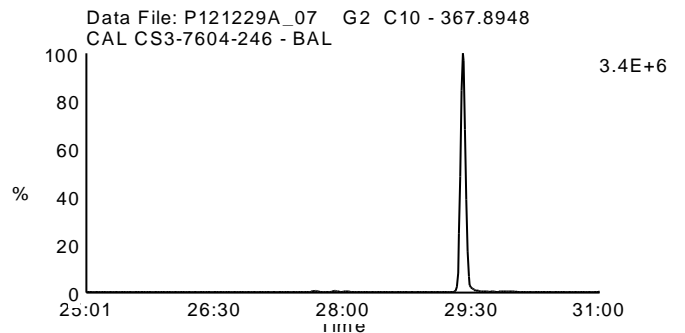
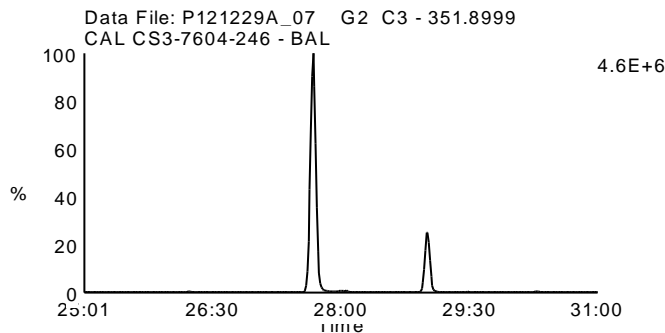
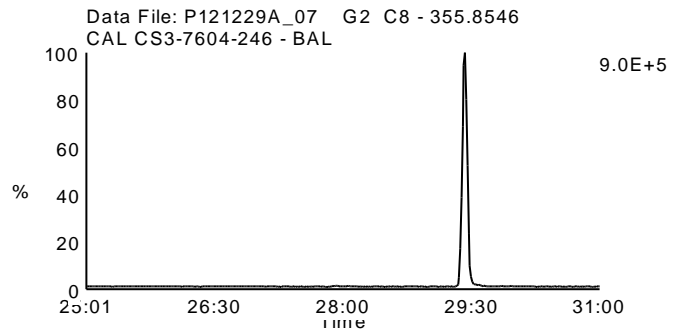
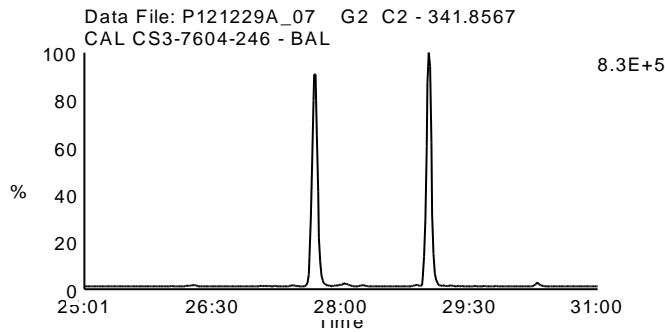
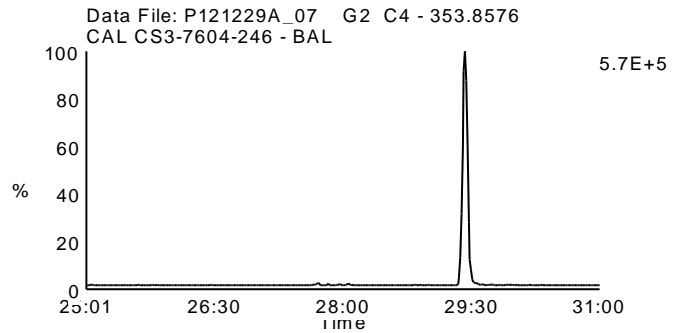
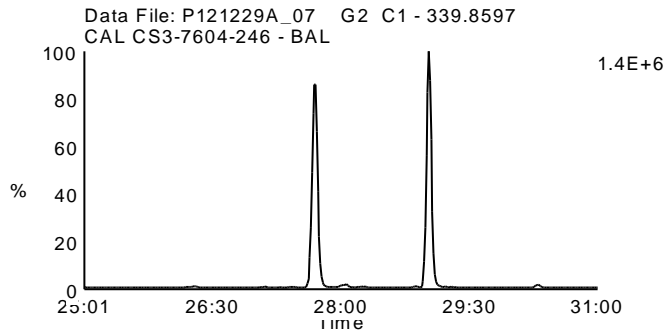
Date Acquired: 12/29/2012

Sample Description: CAL CS3-7604-246 - BAL

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Hexas

Data File Name: P121229A_07

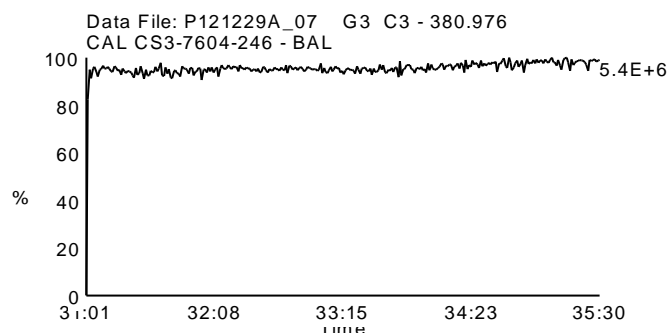
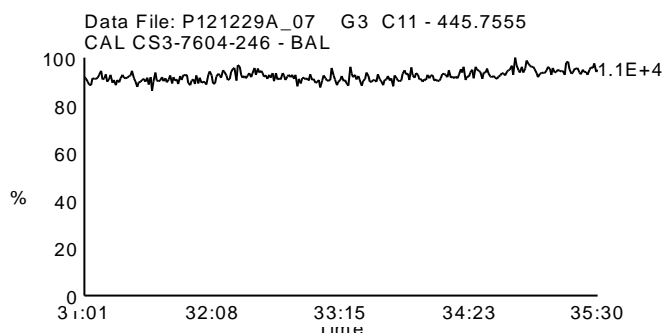
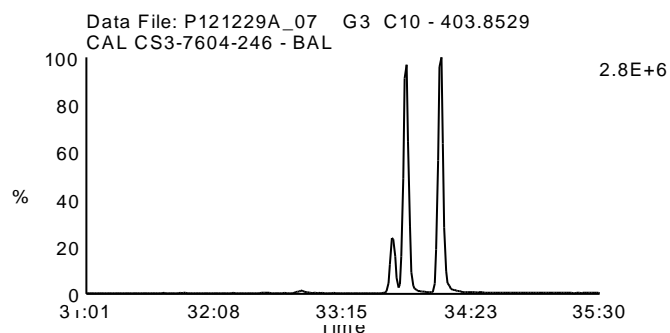
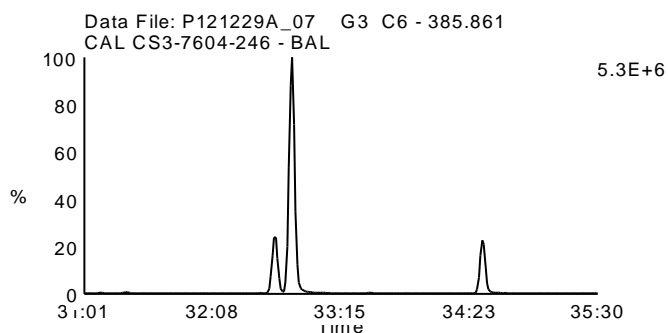
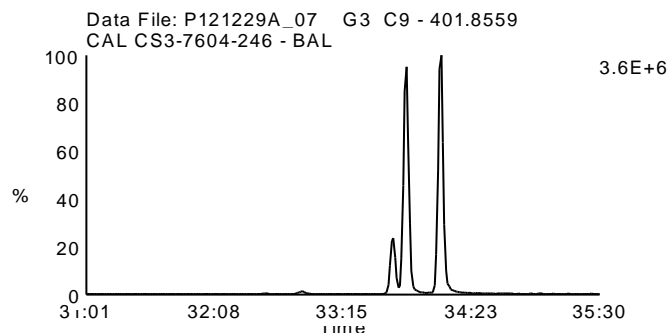
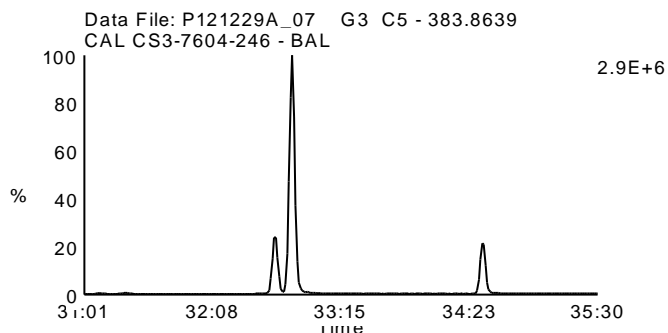
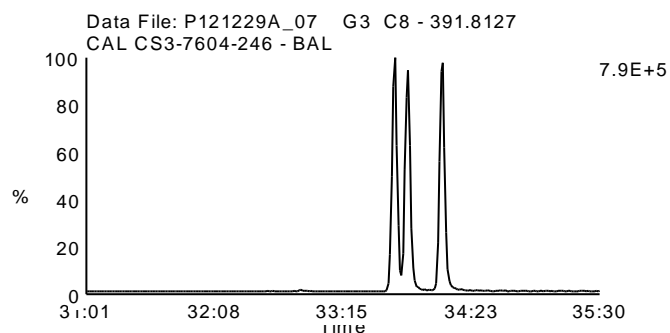
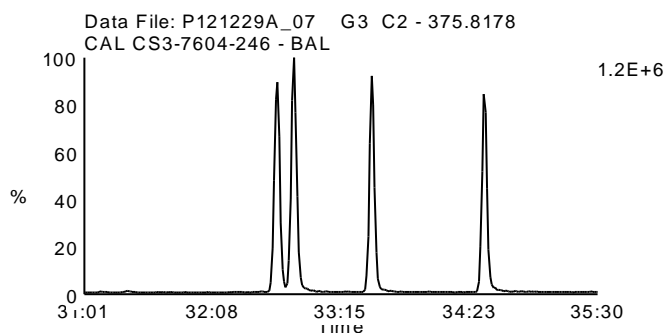
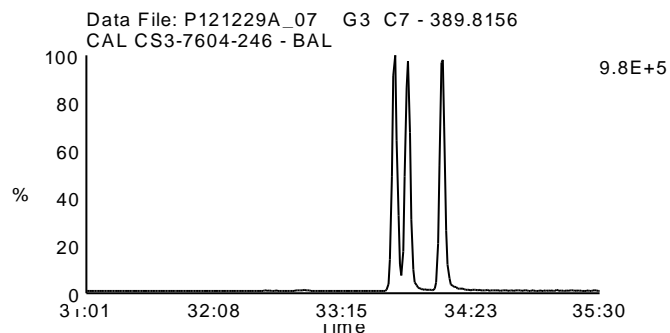
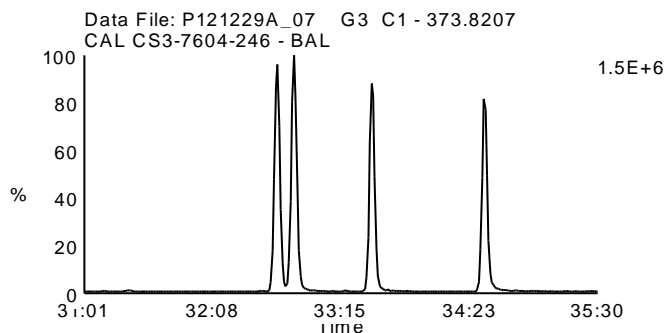
Date Acquired: 12/29/2012

Sample Description: CAL CS3-7604-246 - BAL

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Heptas

Data File Name: P121229A_07

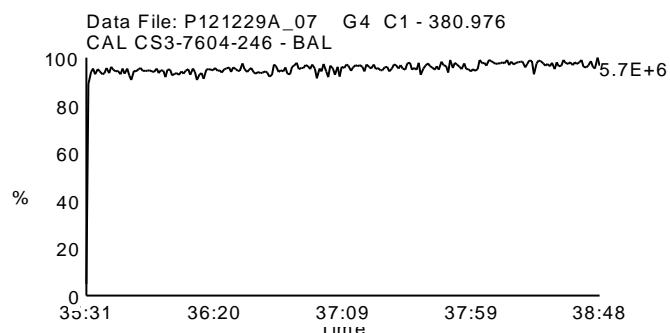
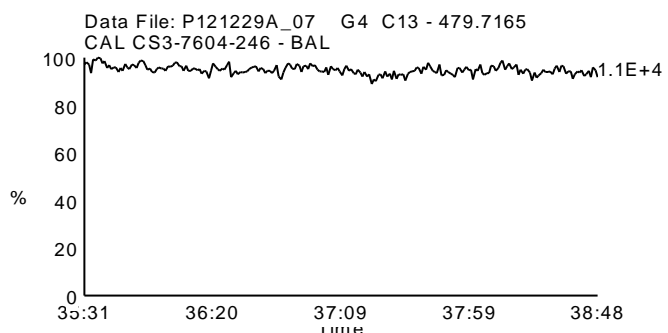
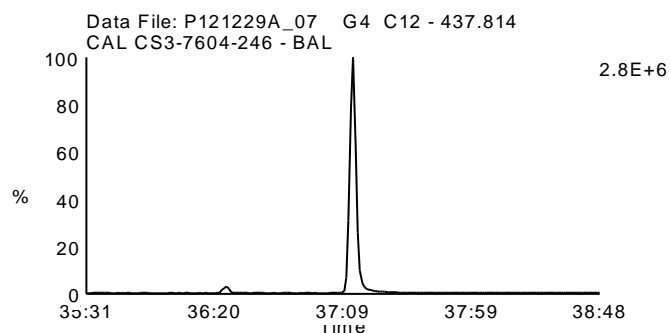
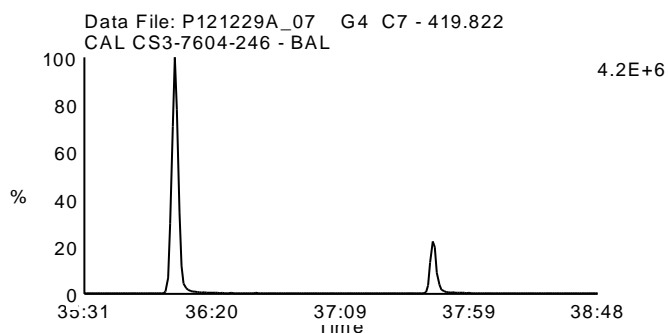
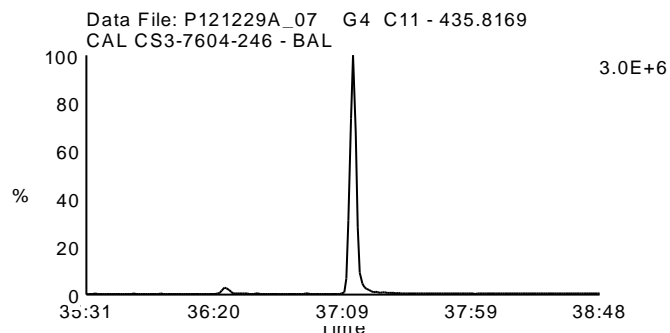
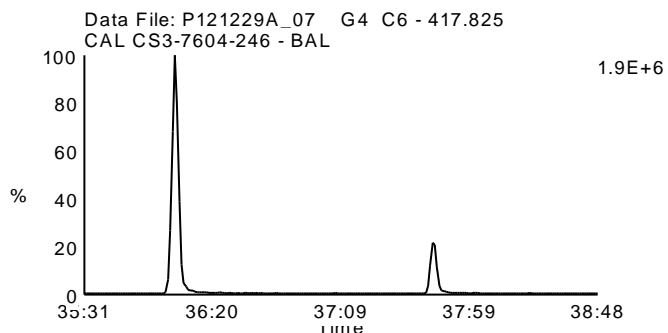
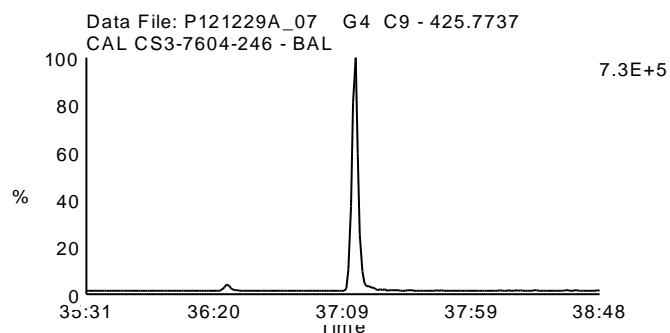
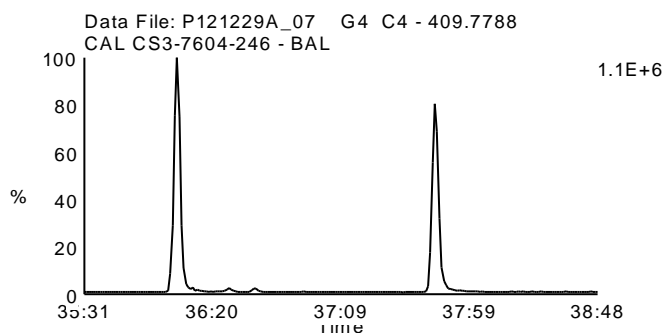
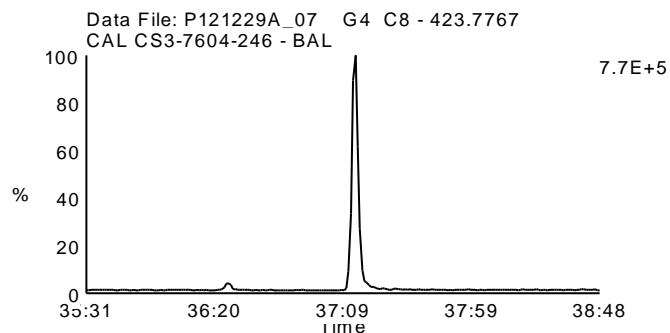
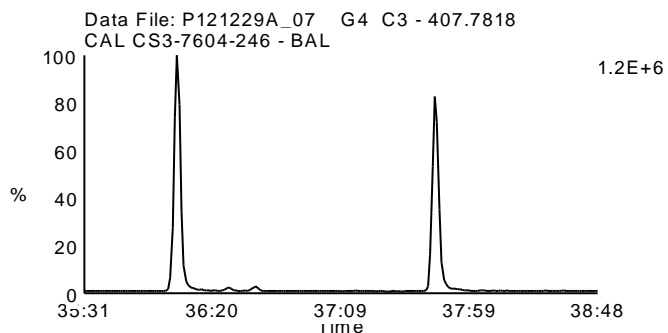
Date Acquired: 12/29/2012

Sample Description: CAL CS3-7604-246 - BAL

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Octas

Data File Name: P121229A_07

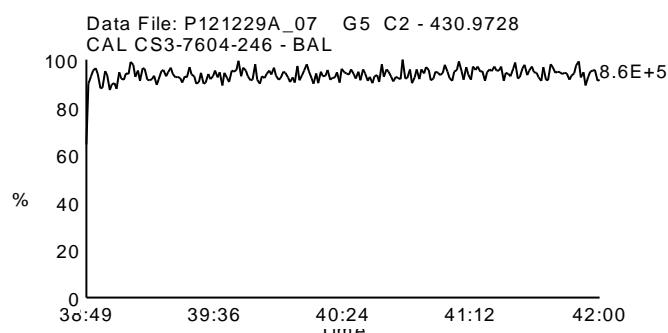
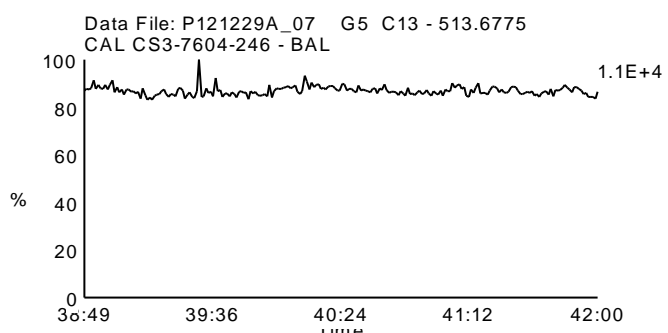
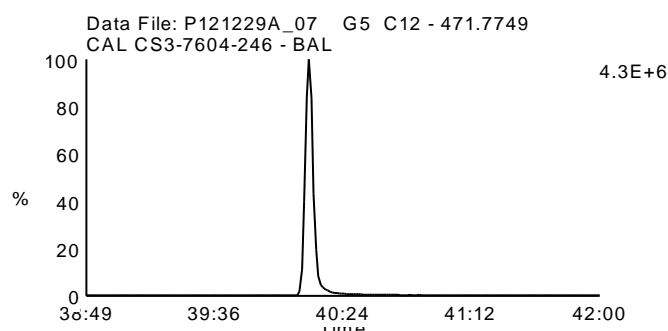
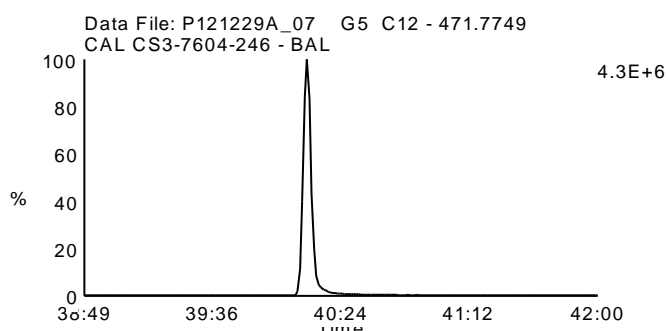
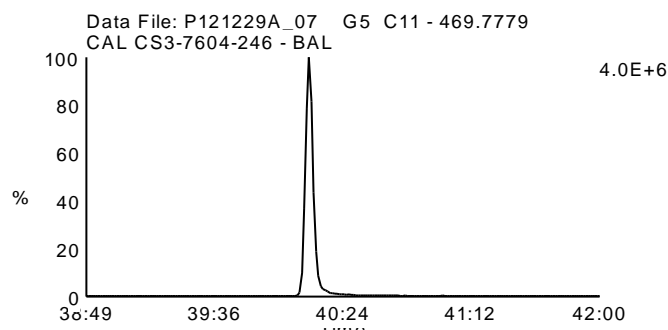
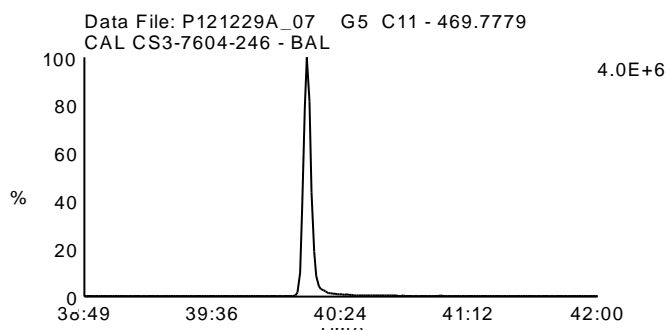
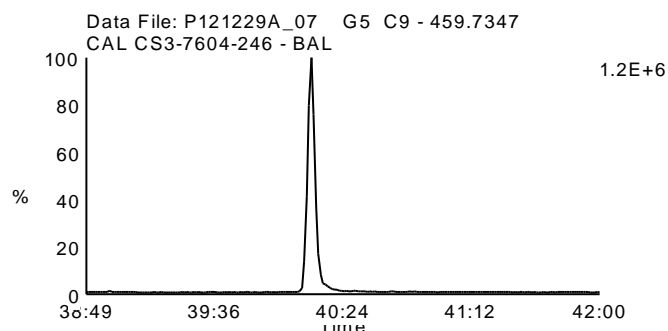
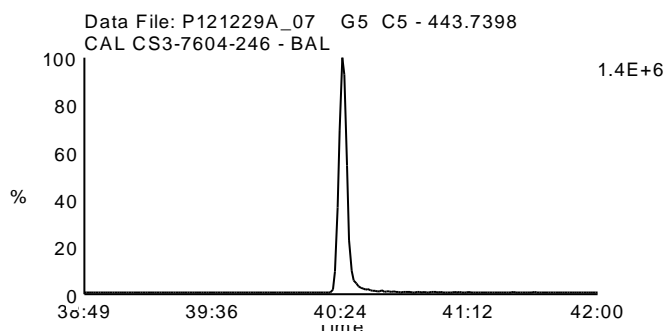
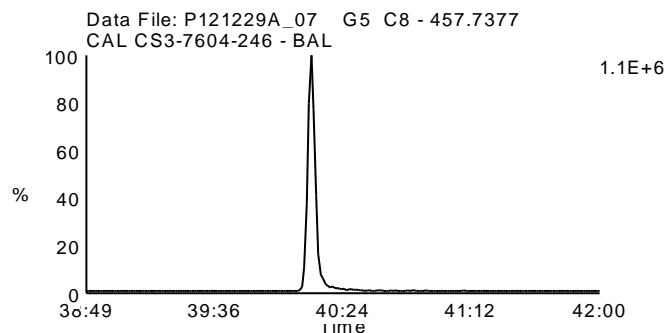
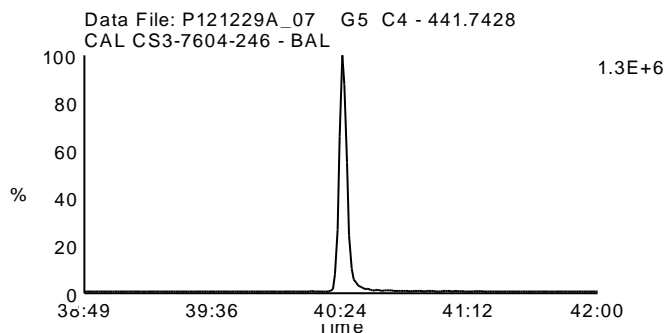
Date Acquired: 12/29/2012

Sample Description: CAL CS3-7604-246 - BAL

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Tetras

Data File Name: P121229A_09

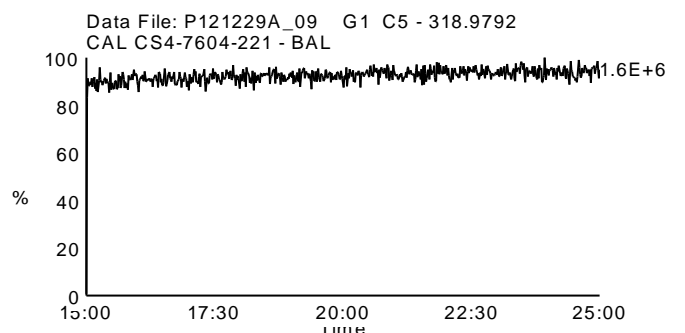
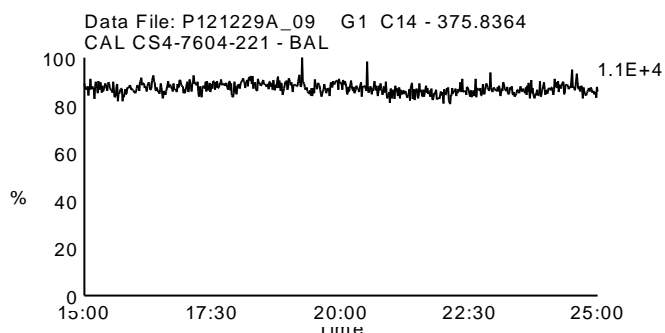
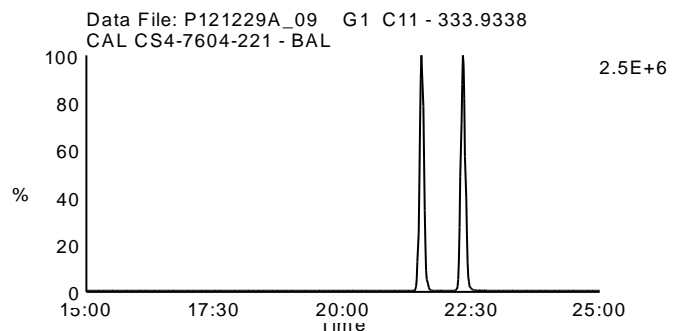
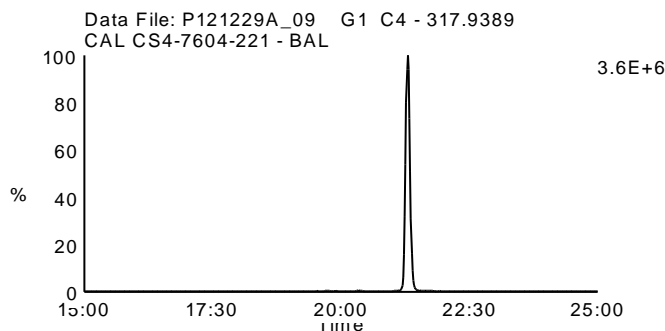
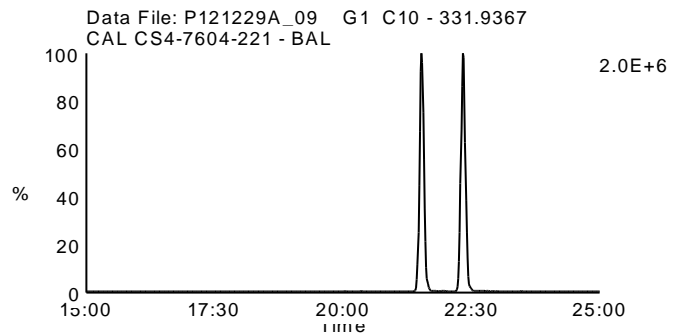
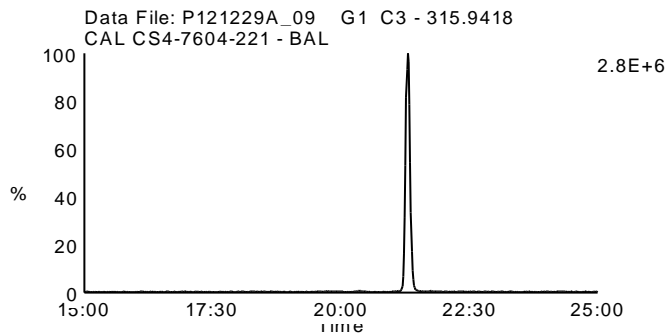
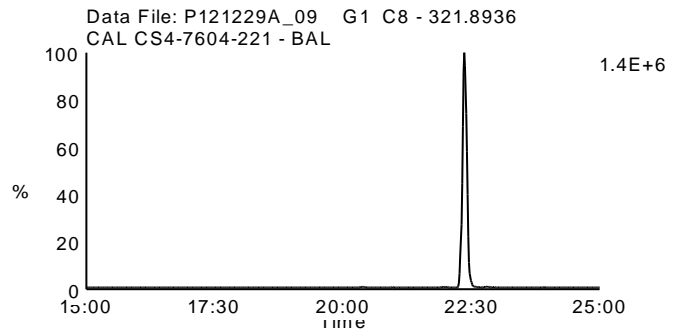
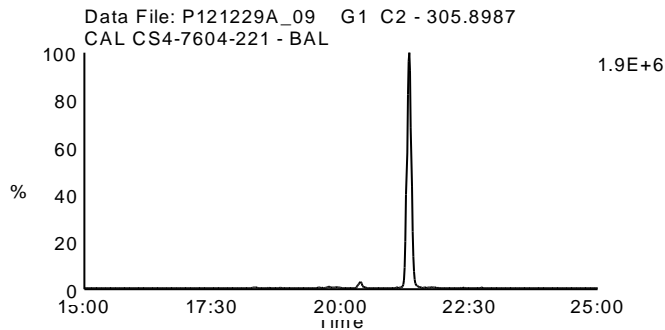
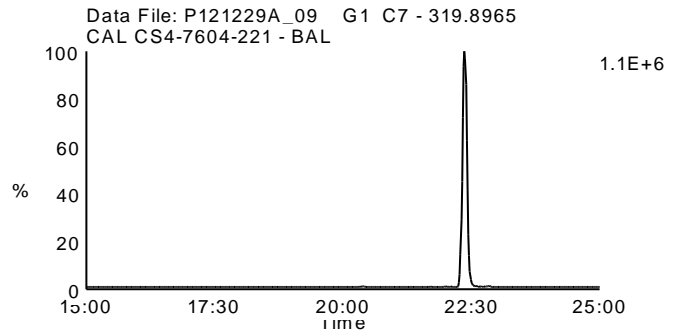
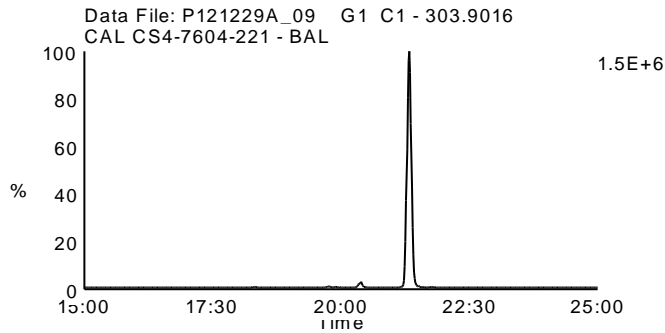
Date Acquired: 12/29/2012

Sample Description: CAL CS4-7604-221 - BAL

Lab Sample ID: CS4-7604-221

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Penta & Cleanup

Data File Name: P121229A_09

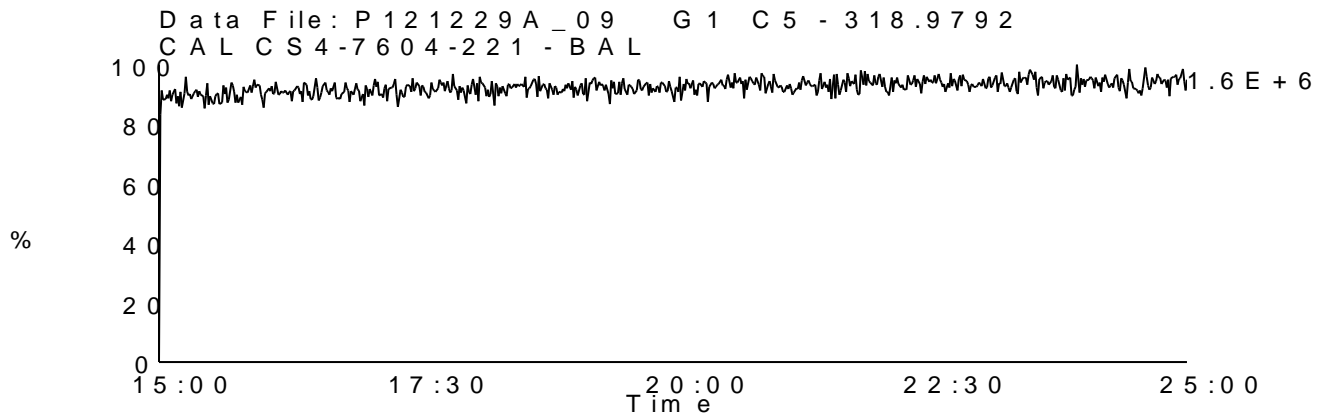
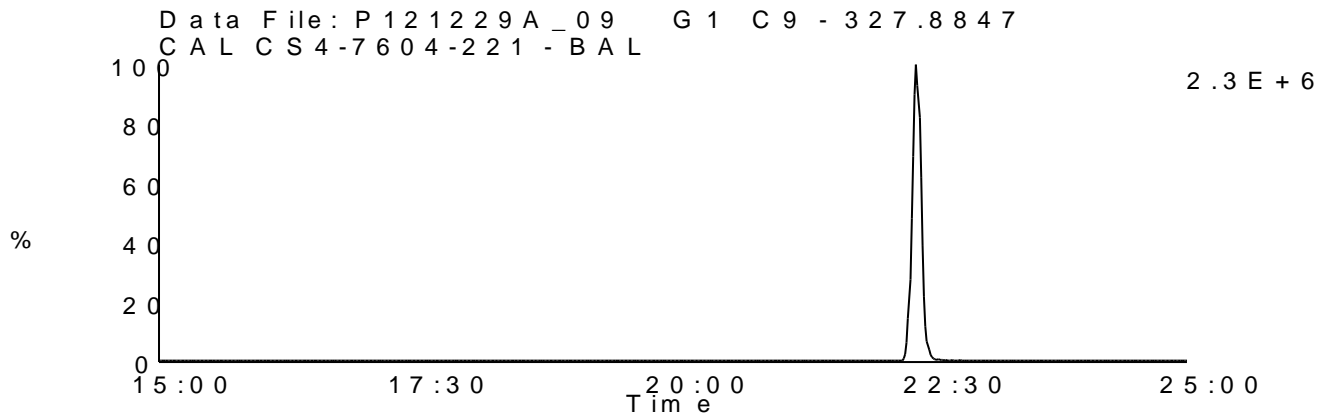
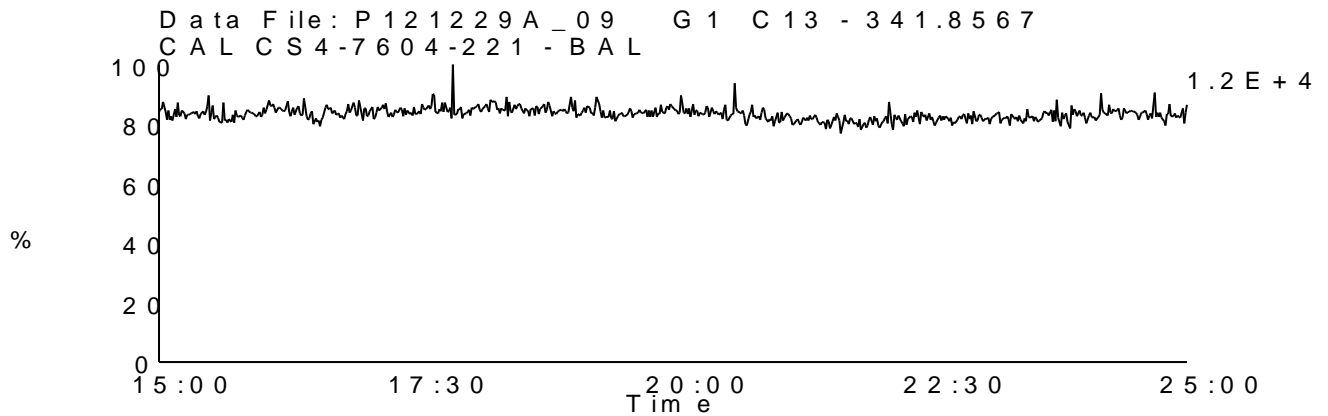
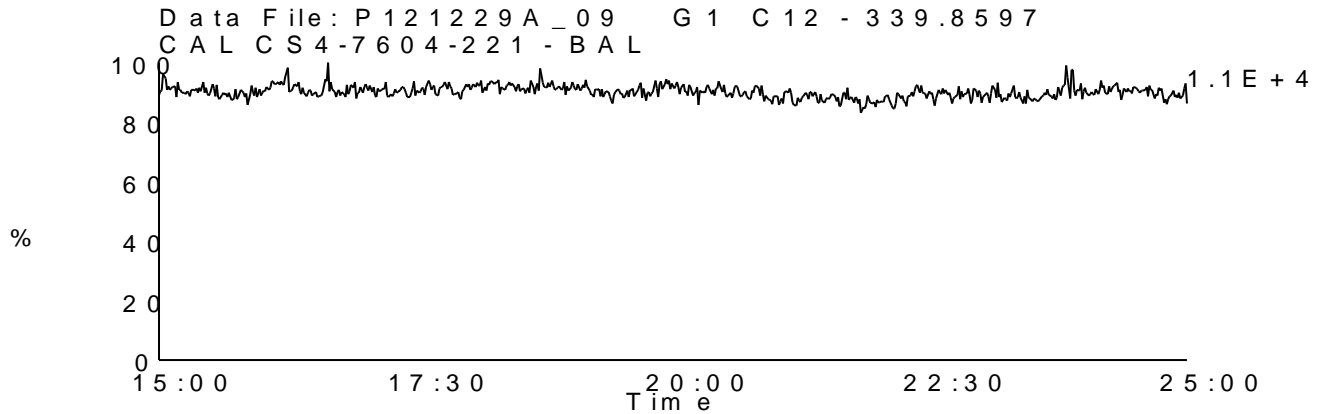
Date Acquired: 12/29/2012

Sample Description: CAL CS4-7604-221 - BAL

Lab Sample ID: CS4-7604-221

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Pentas

Data File Name: P121229A_09

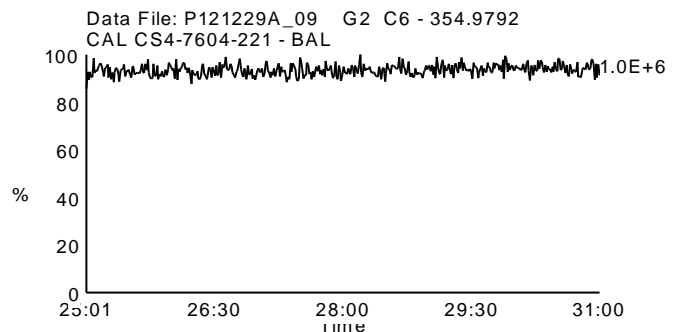
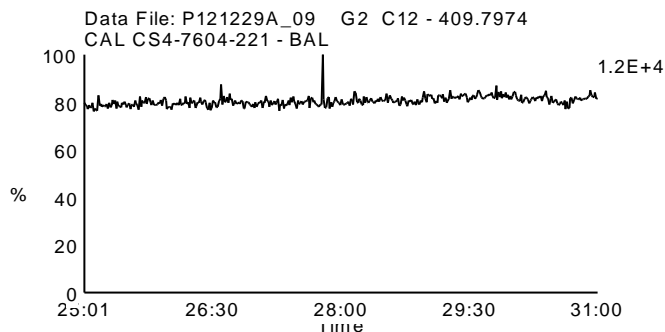
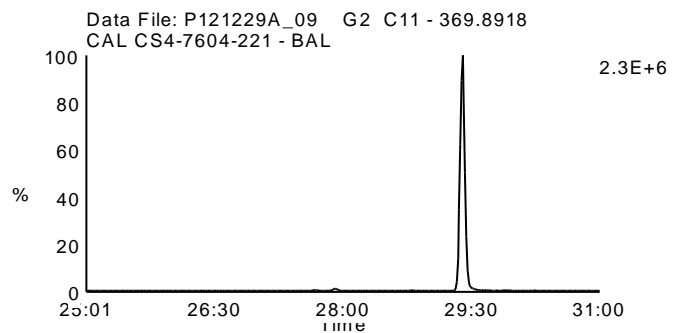
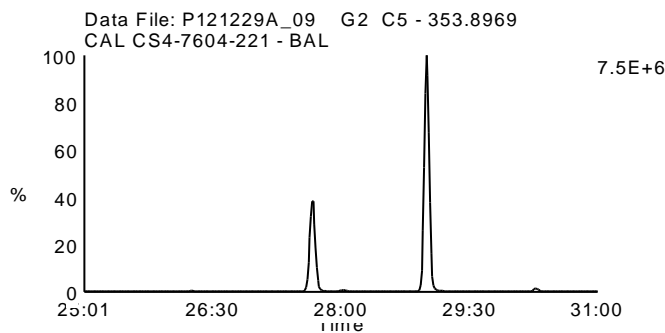
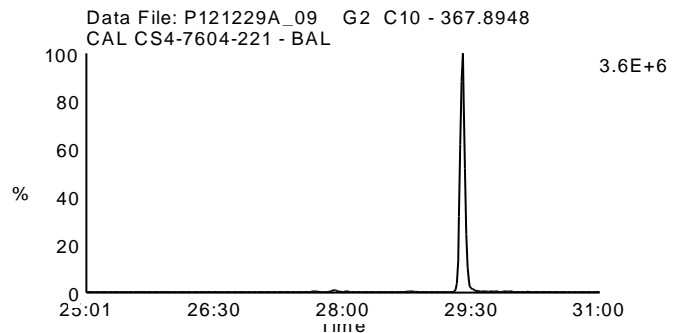
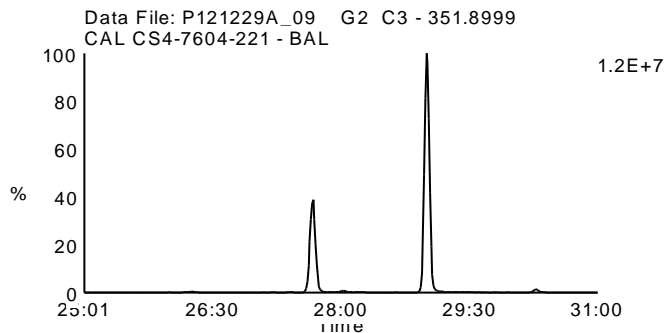
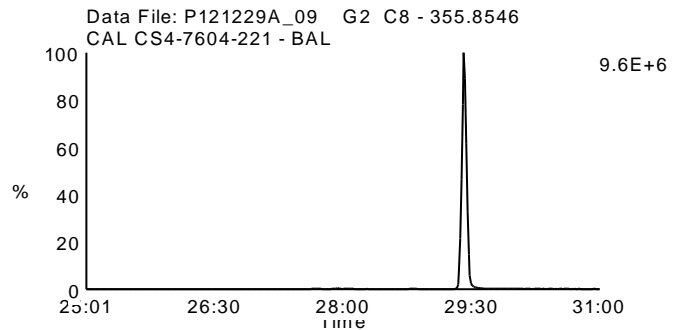
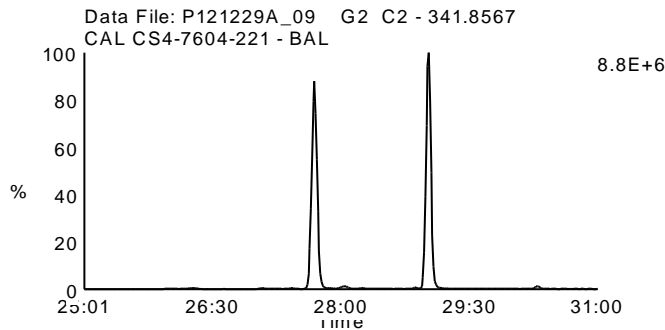
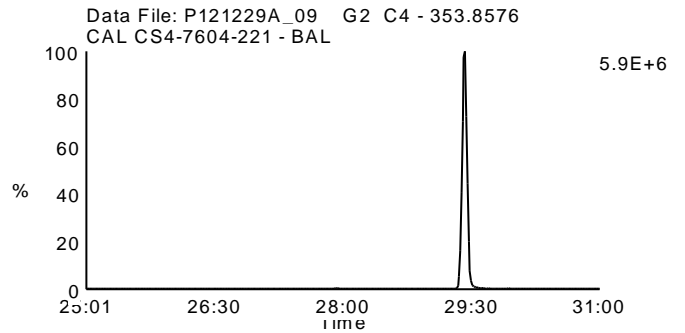
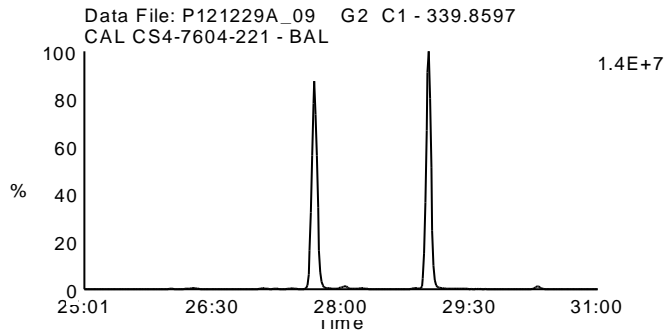
Date Acquired: 12/29/2012

Sample Description: CAL CS4-7604-221 - BAL

Lab Sample ID: CS4-7604-221

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Hexas

Data File Name: P121229A_09

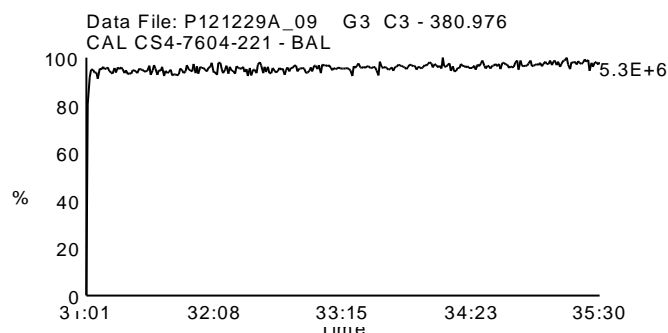
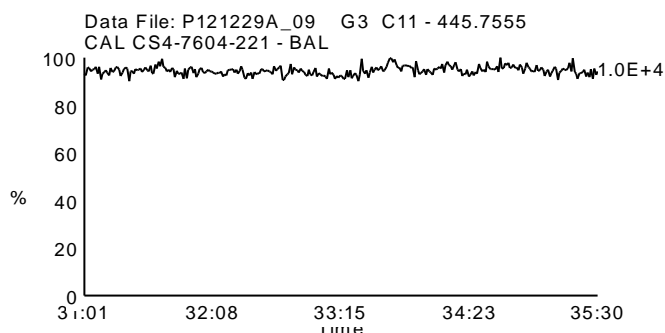
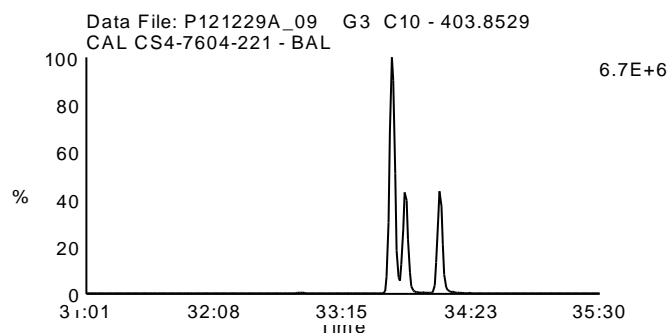
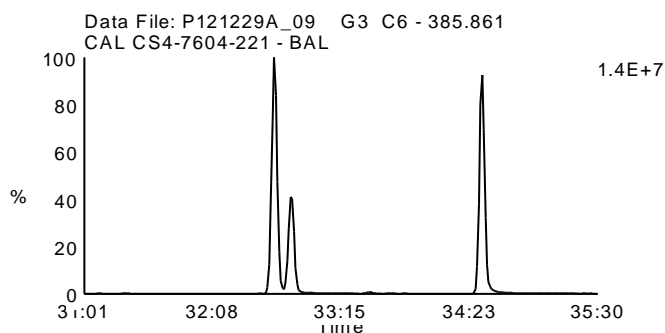
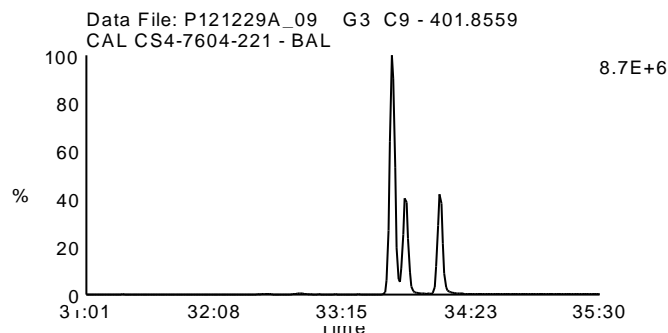
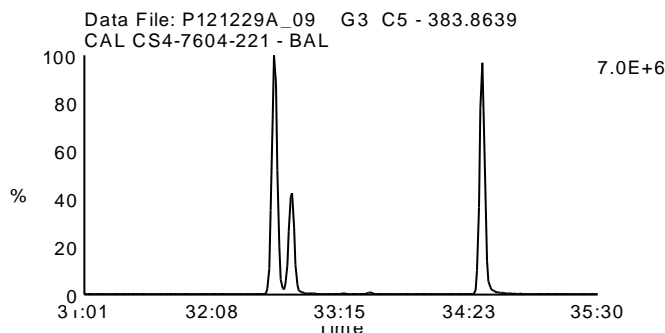
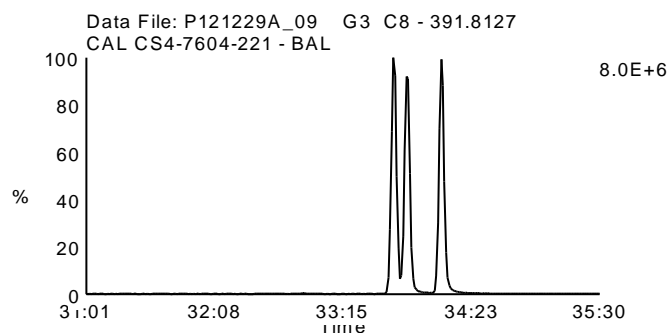
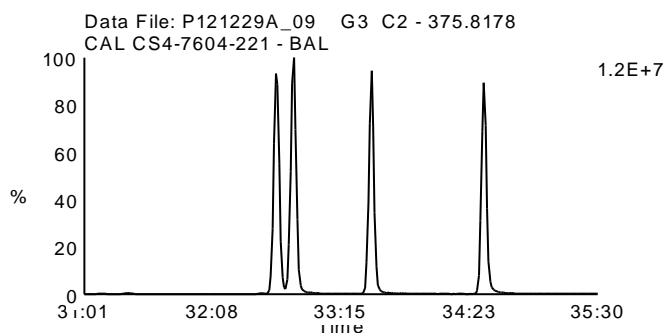
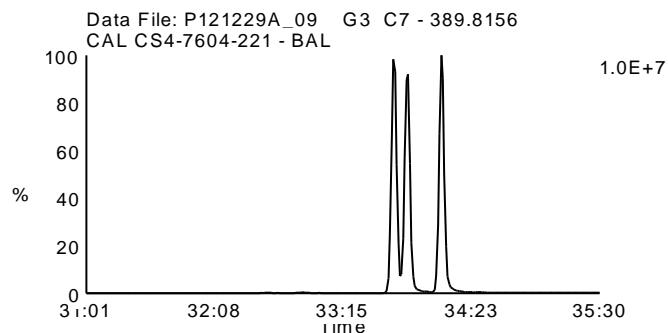
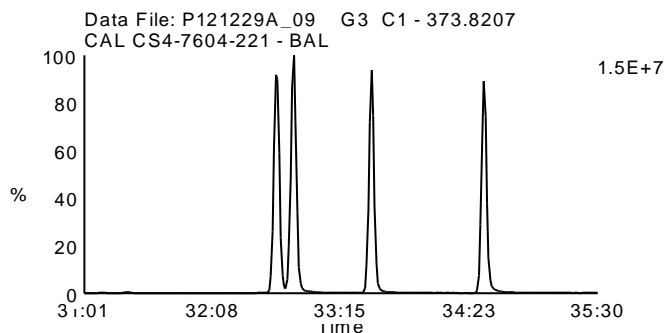
Date Acquired: 12/29/2012

Sample Description: CAL CS4-7604-221 - BAL

Lab Sample ID: CS4-7604-221

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Heptas

Data File Name: P121229A_09

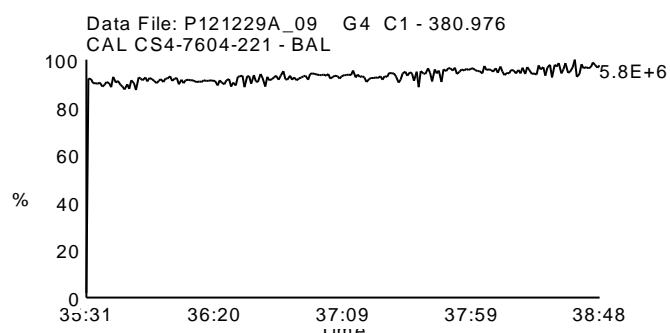
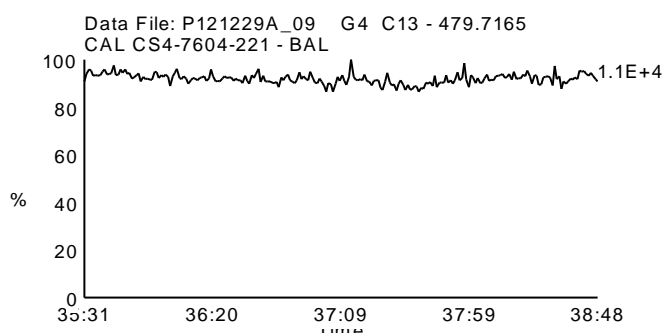
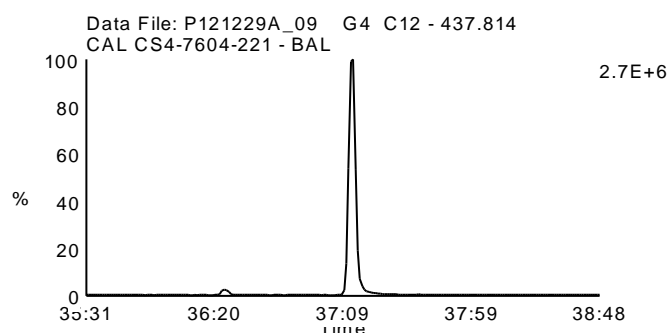
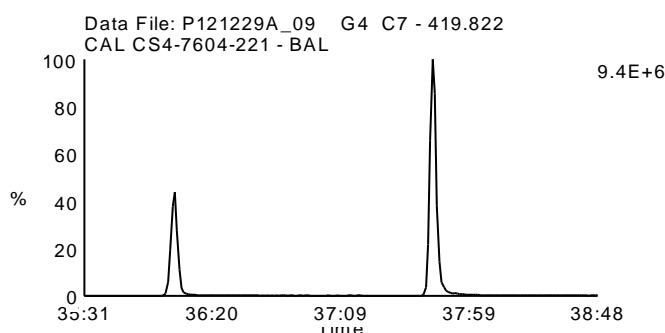
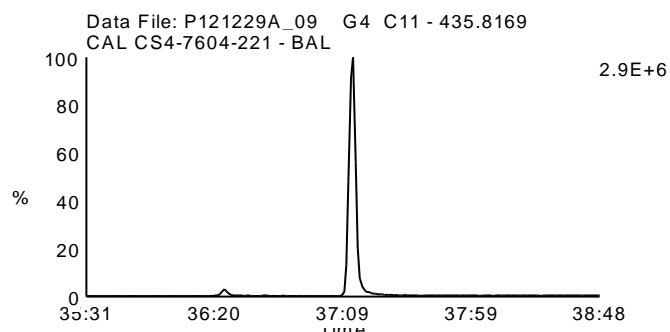
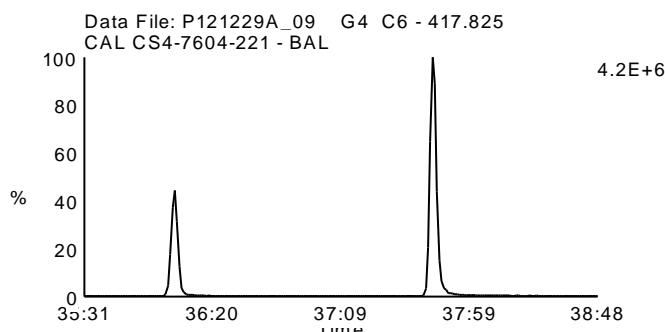
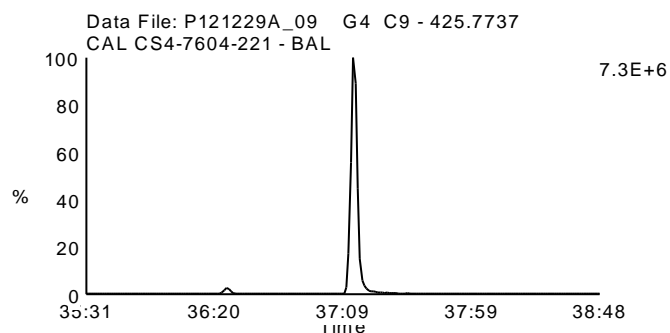
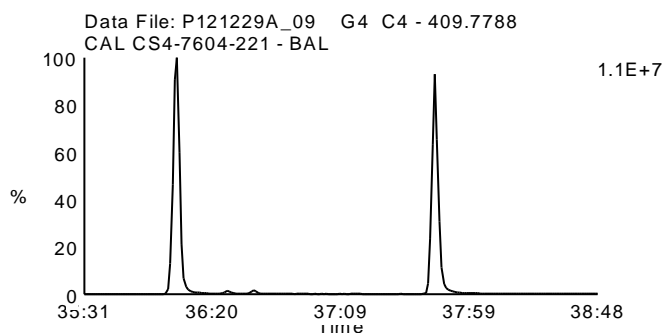
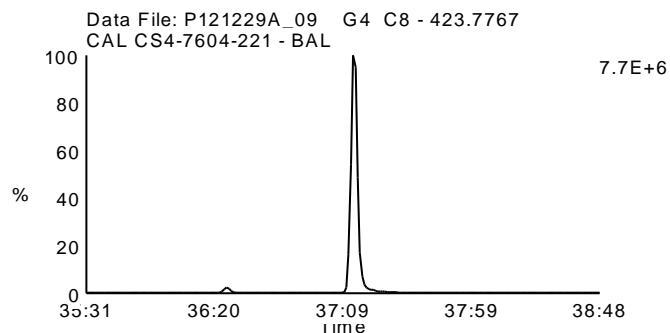
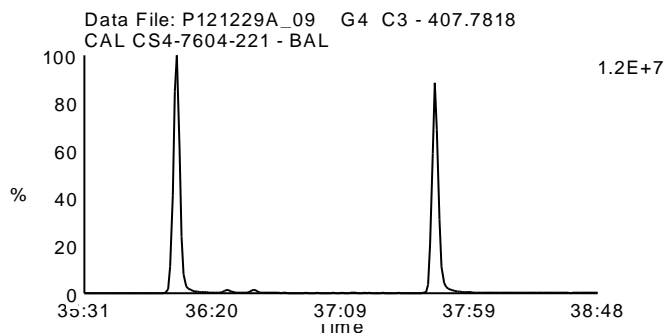
Date Acquired: 12/29/2012

Sample Description: CAL CS4-7604-221 - BAL

Lab Sample ID: CS4-7604-221

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Octas

Data File Name: P121229A_09

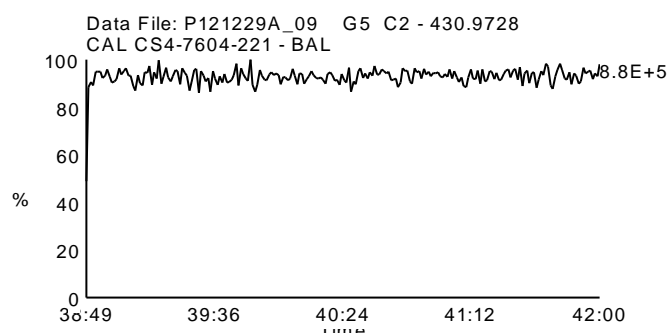
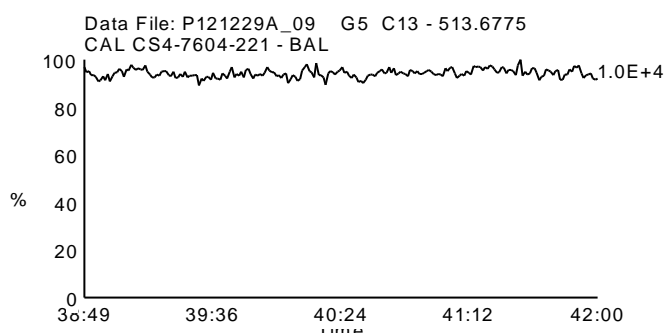
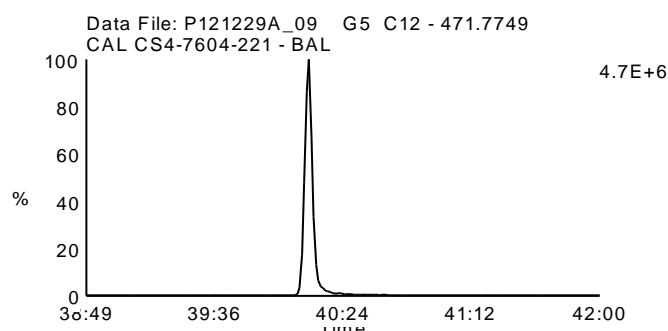
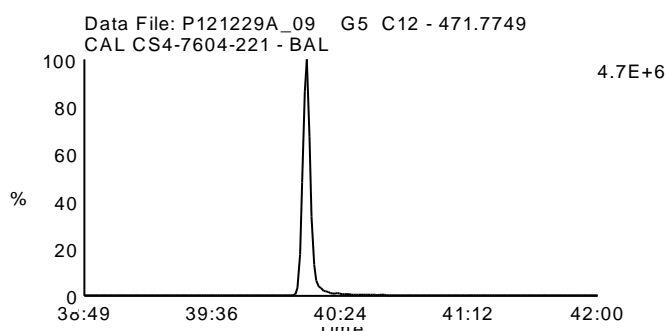
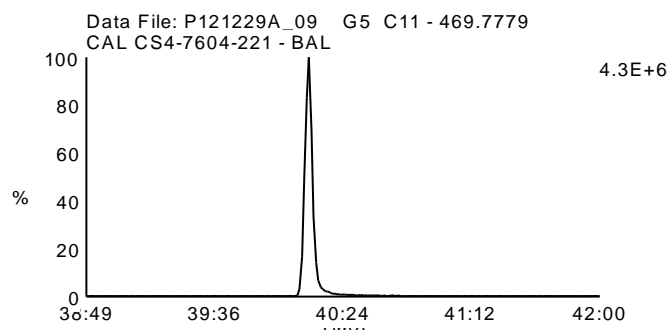
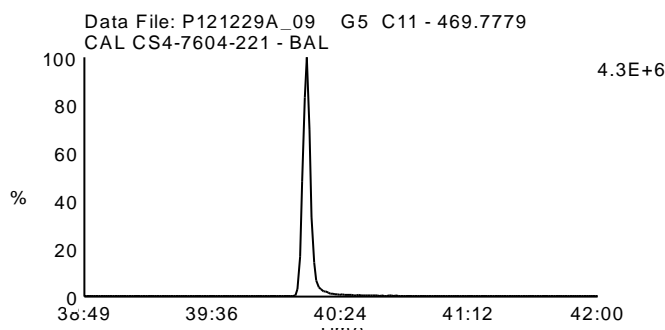
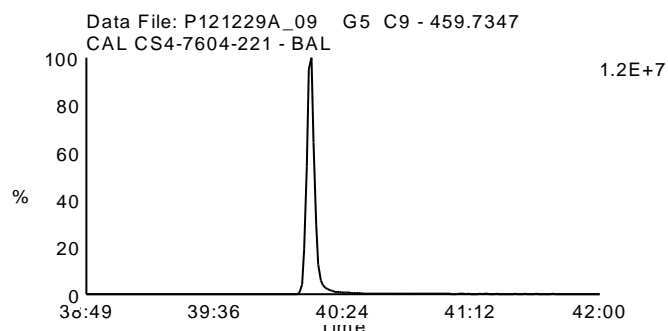
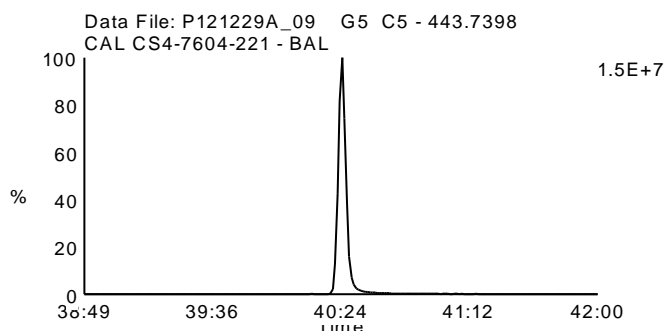
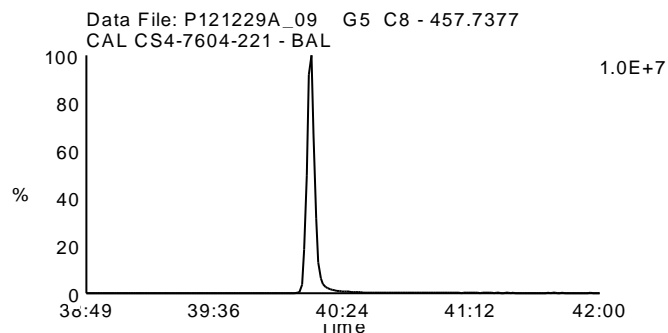
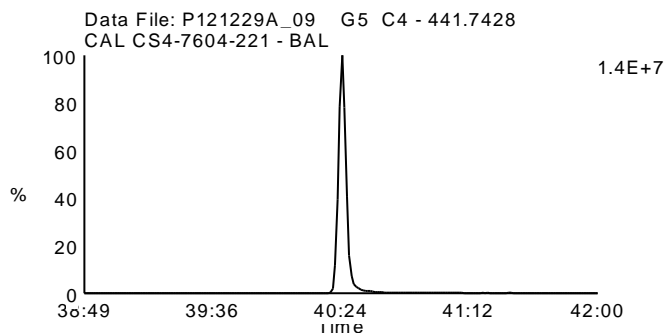
Date Acquired: 12/29/2012

Sample Description: CAL CS4-7604-221 - BAL

Lab Sample ID: CS4-7604-221

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Tetras

Data File Name: P121229A_10

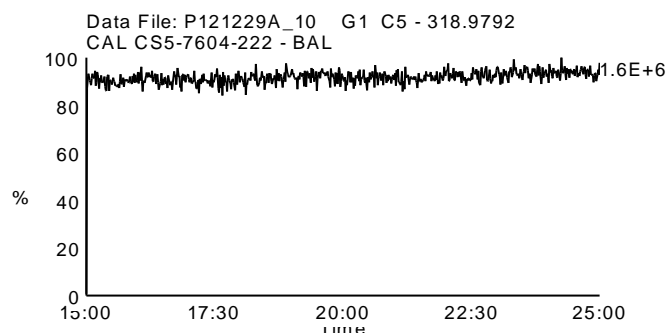
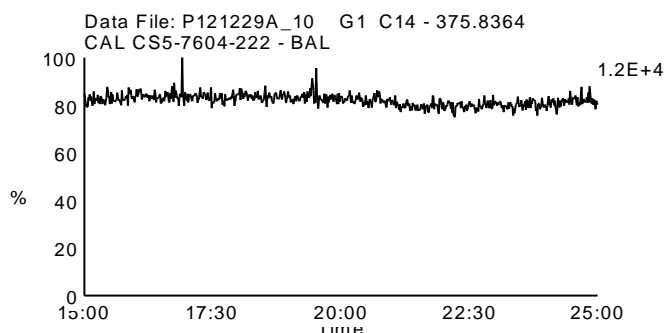
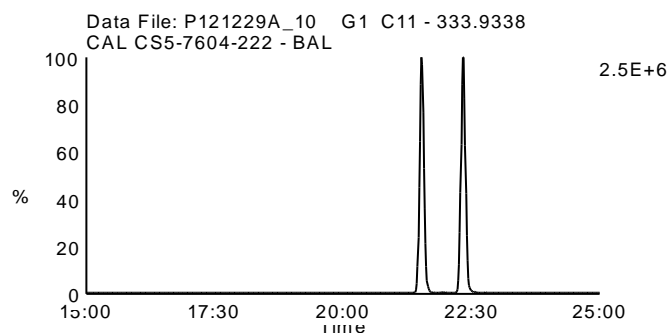
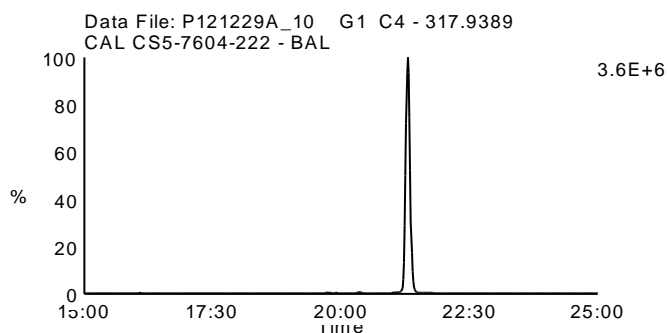
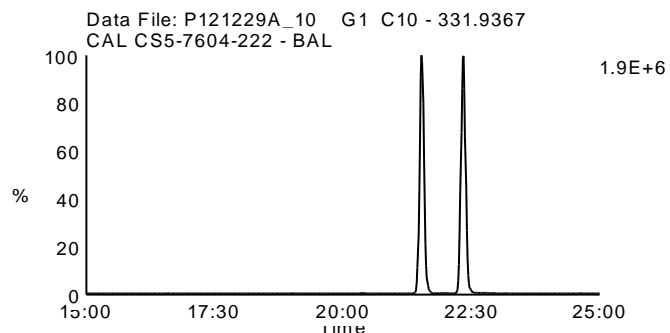
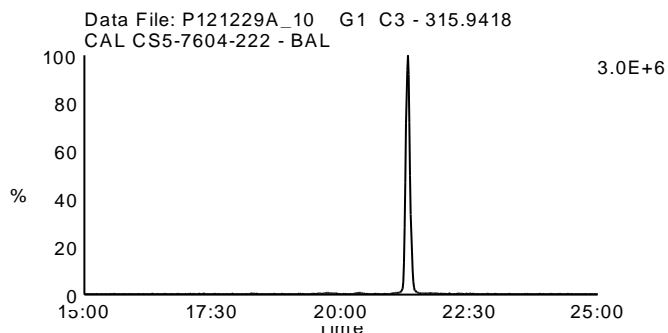
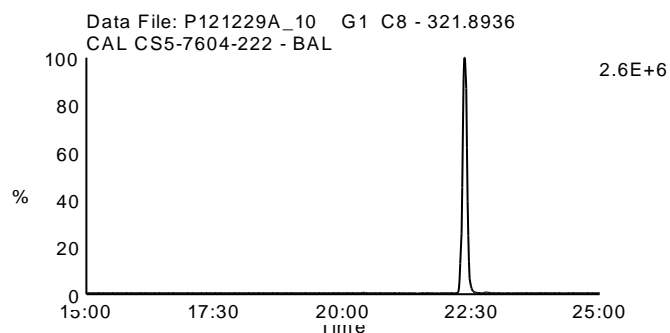
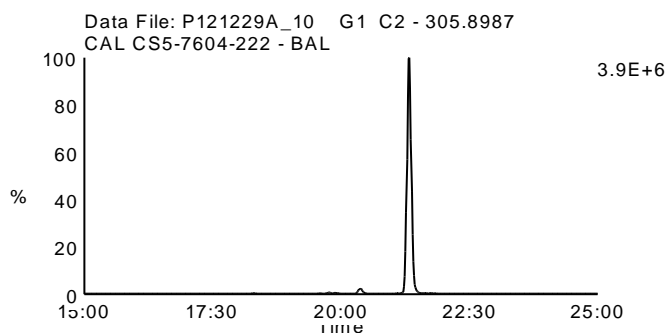
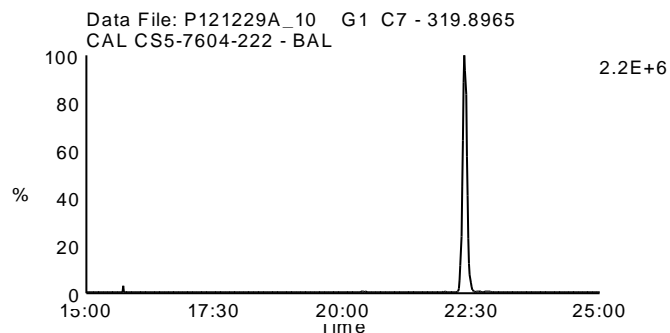
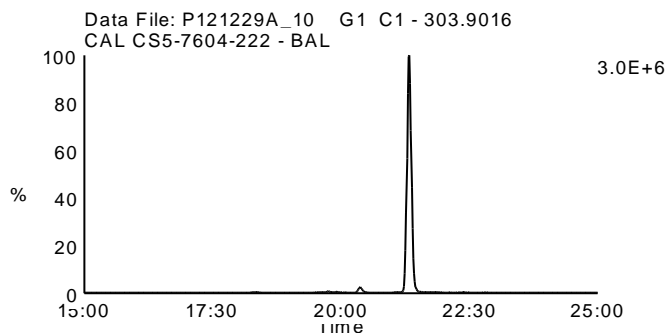
Date Acquired: 12/29/2012

Sample Description: CAL CS5-7604-222 - BAL

Lab Sample ID: CS5-7604-222

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Penta & Cleanup

Data File Name: P121229A_10

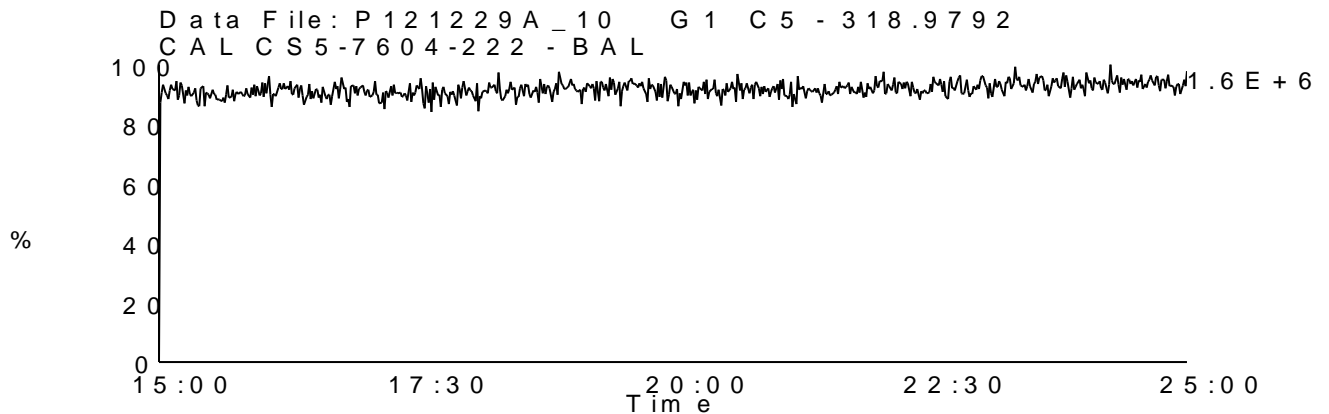
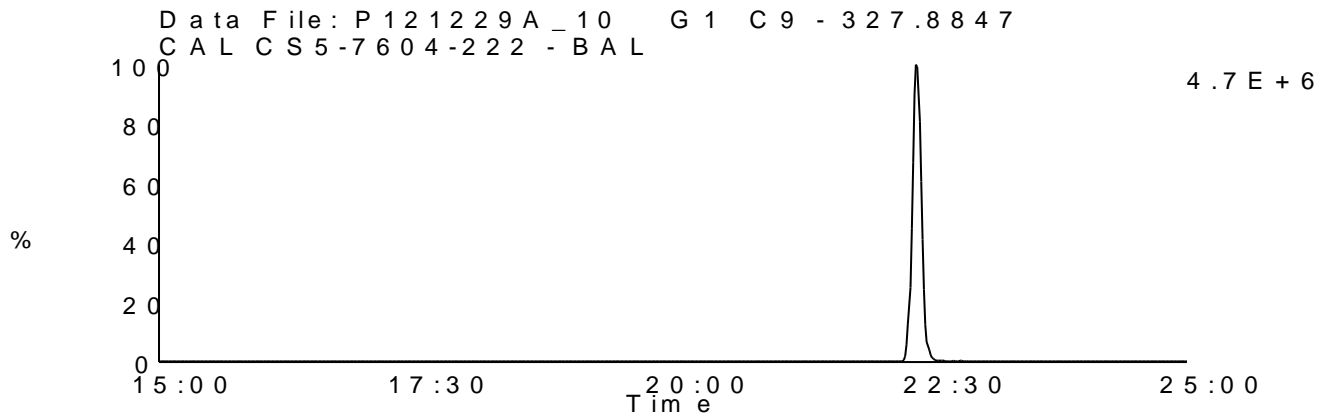
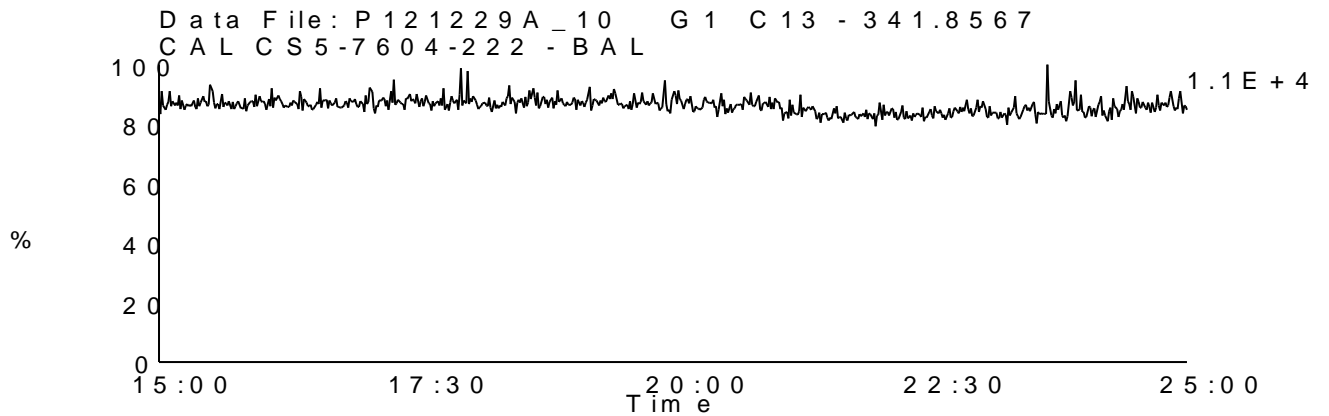
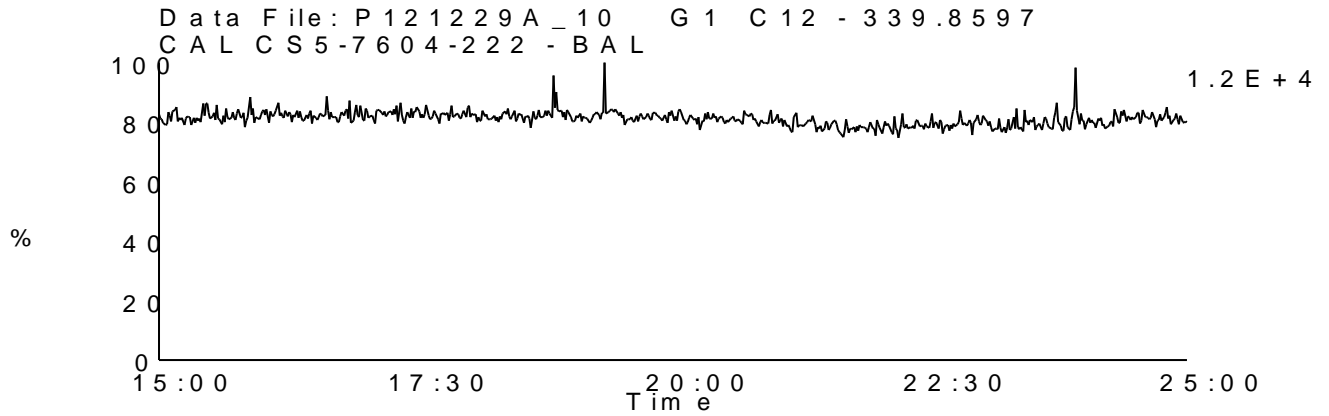
Lab Sample ID: CS5-7604-222

Date Acquired: 12/29/2012

Client Sample ID:

Sample Description: CAL CS5-7604-222 - BAL

Instrument: 10MSHR09 (P)



Homologue Group: Pentas

Data File Name: P121229A_10

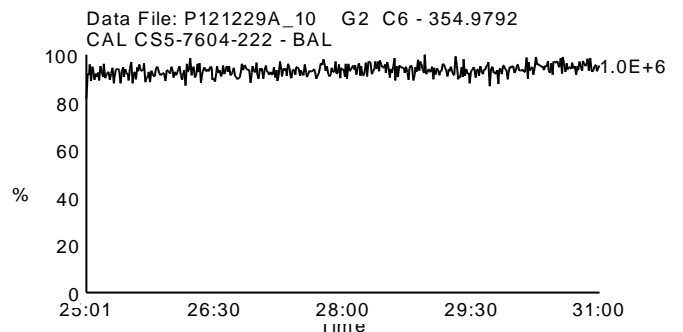
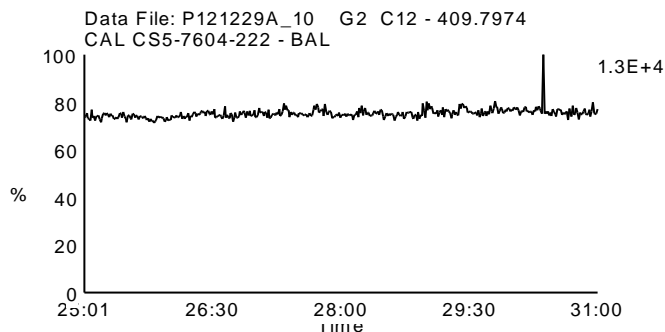
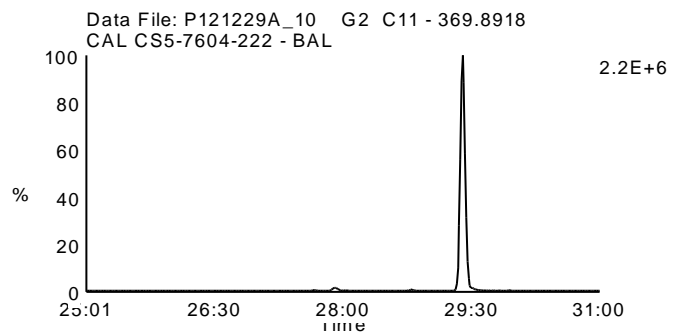
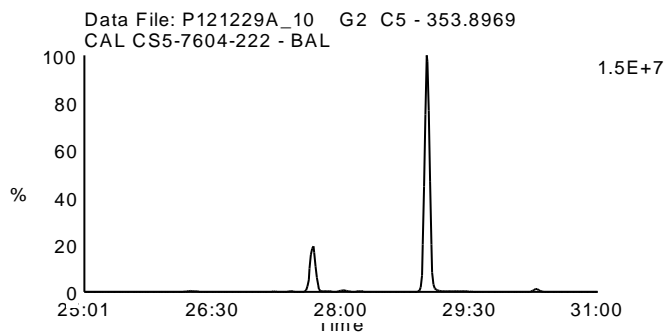
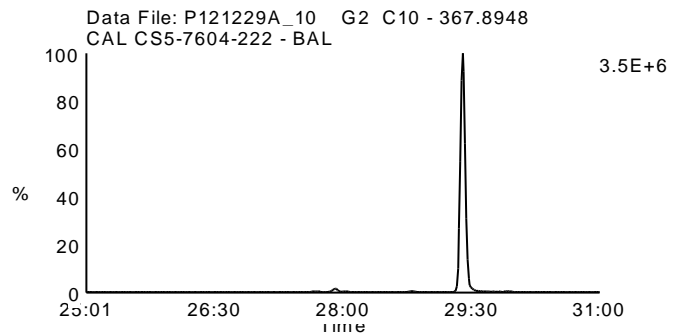
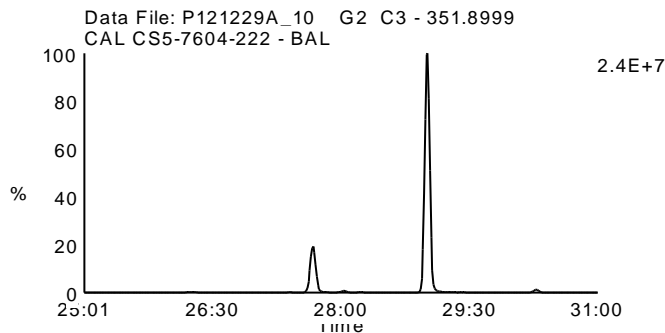
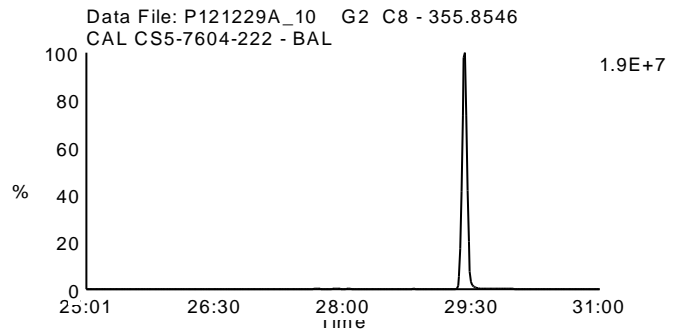
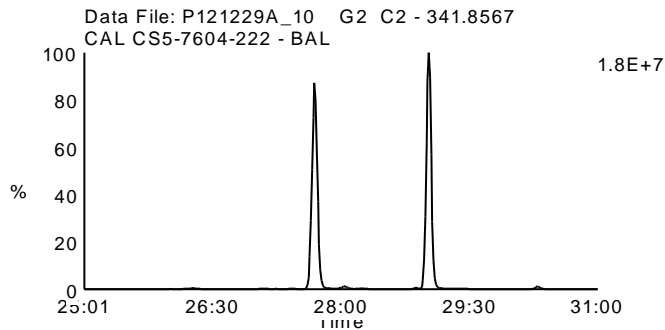
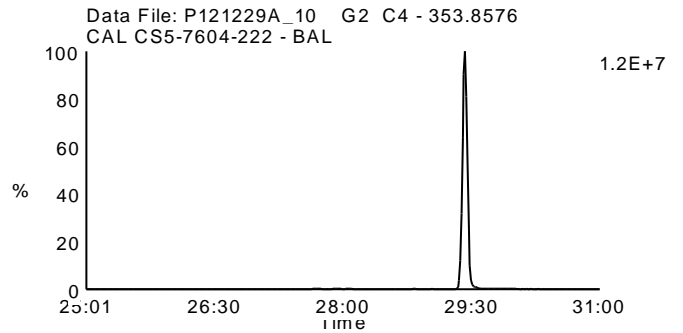
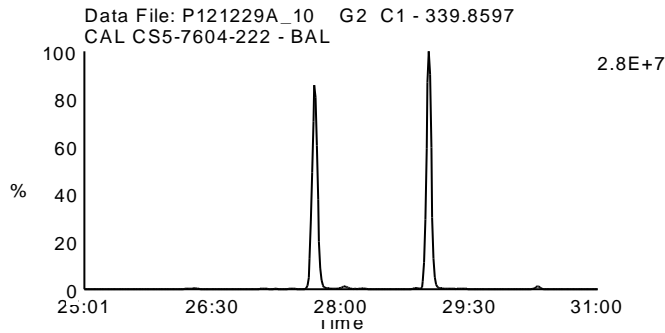
Date Acquired: 12/29/2012

Sample Description: CAL CS5-7604-222 - BAL

Lab Sample ID: CS5-7604-222

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Hexas

Data File Name: P121229A_10

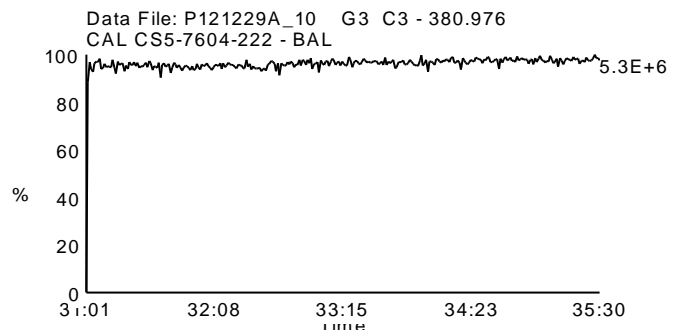
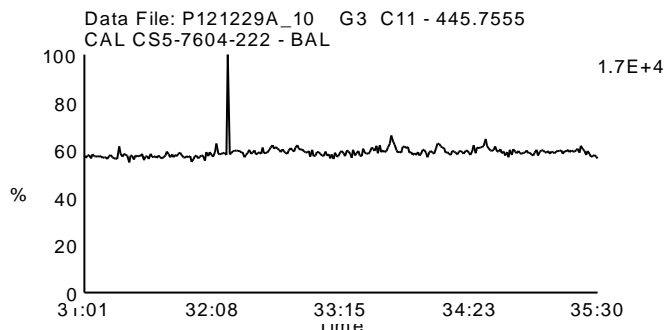
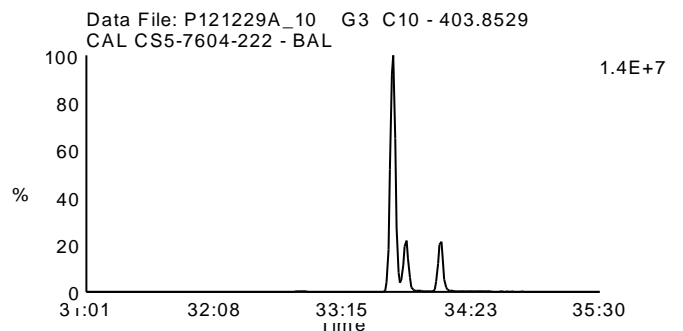
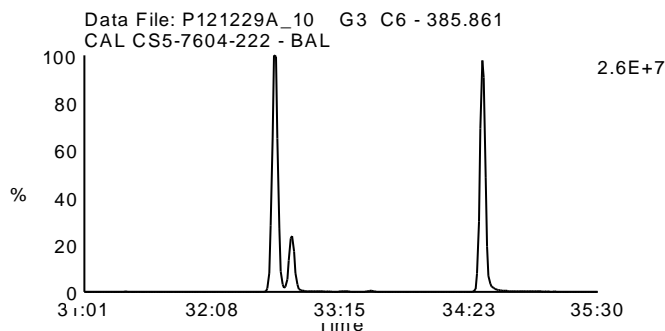
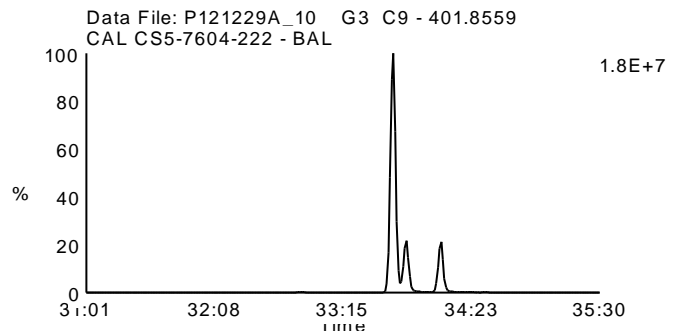
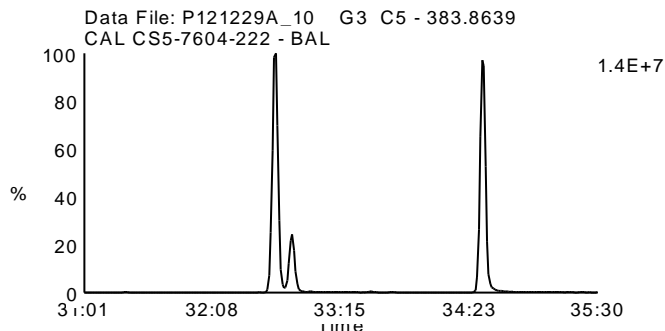
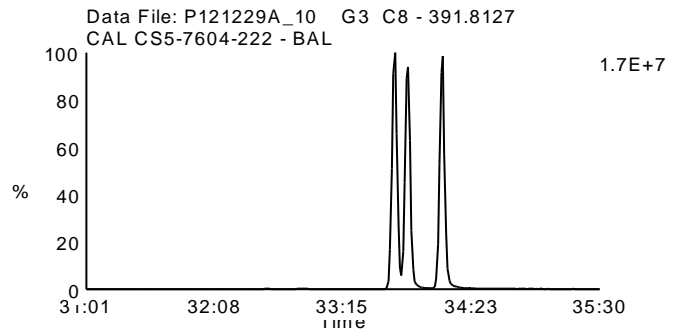
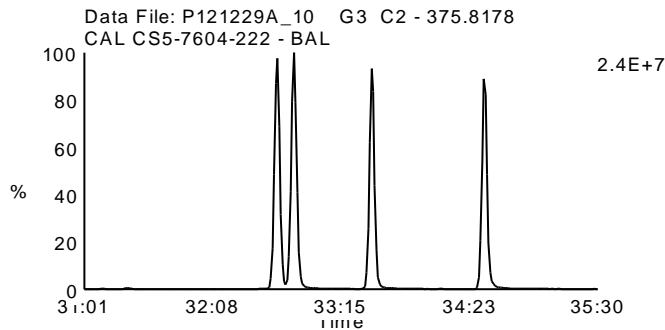
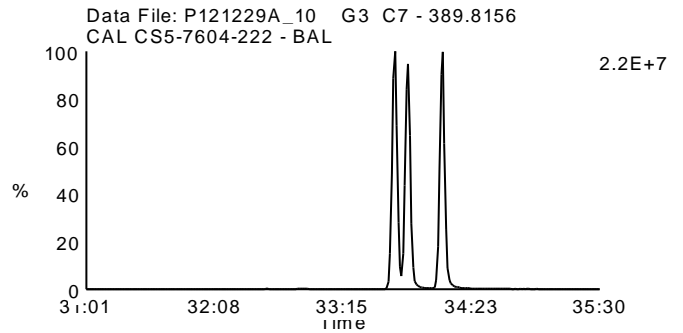
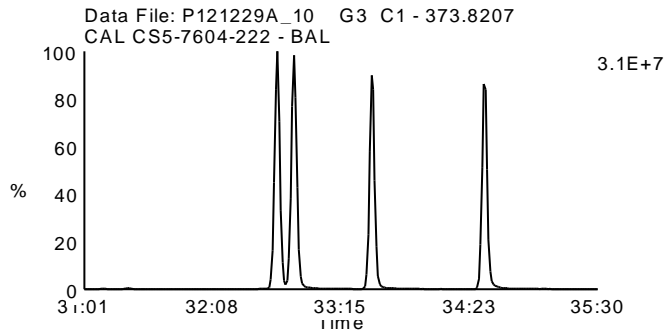
Date Acquired: 12/29/2012

Sample Description: CAL CS5-7604-222 - BAL

Lab Sample ID: CS5-7604-222

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Heptas

Data File Name: P121229A_10

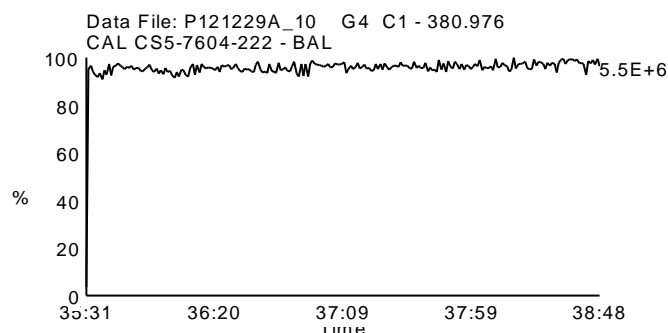
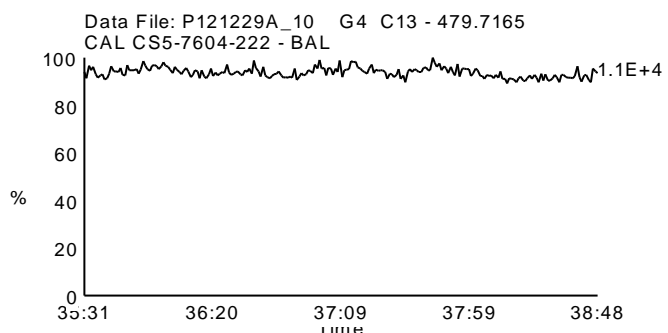
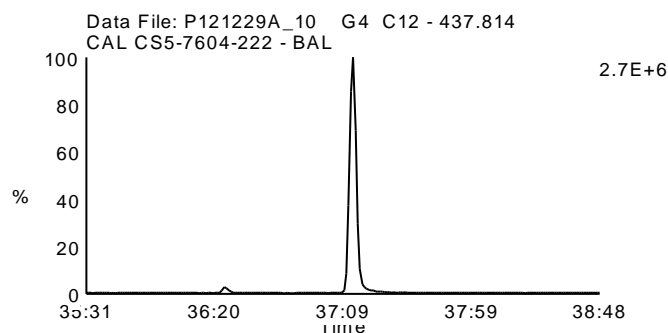
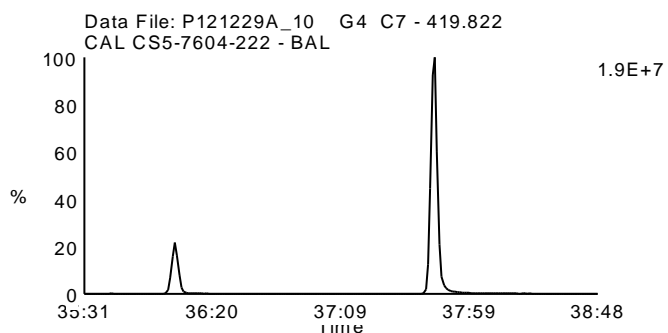
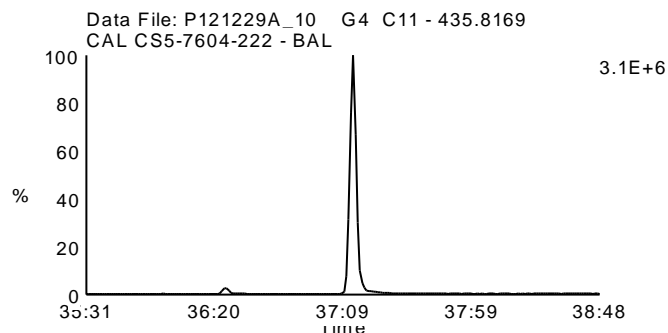
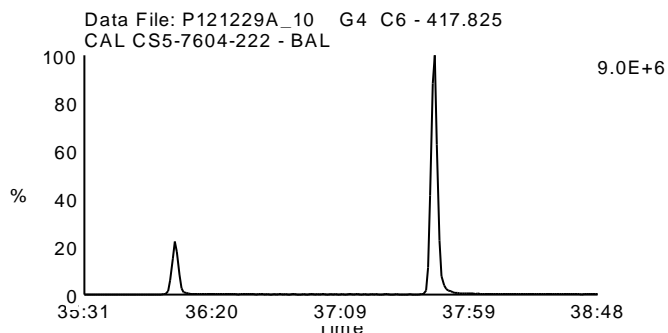
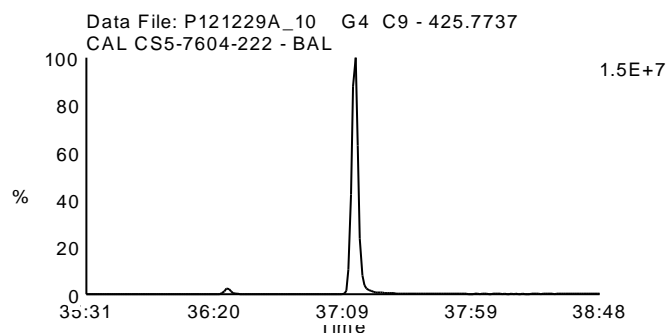
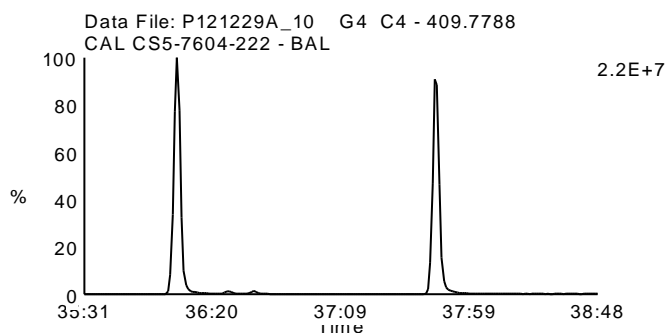
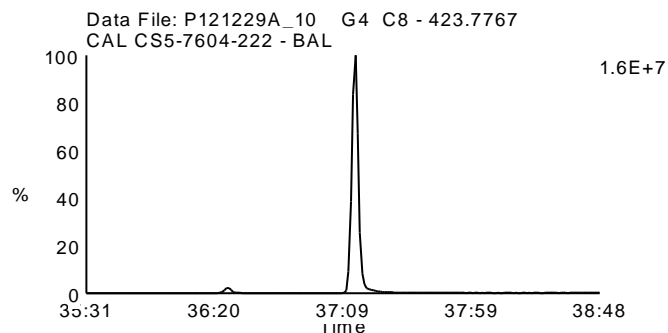
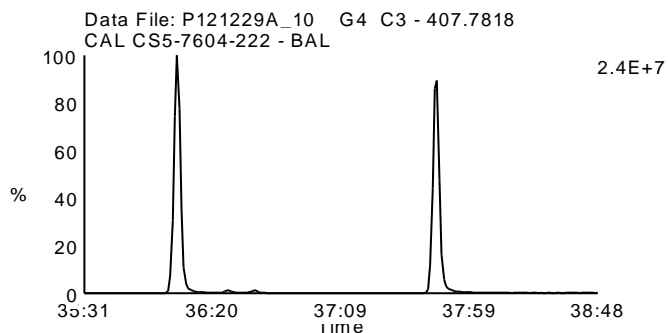
Date Acquired: 12/29/2012

Sample Description: CAL CS5-7604-222 - BAL

Lab Sample ID: CS5-7604-222

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Octas

Data File Name: P121229A_10

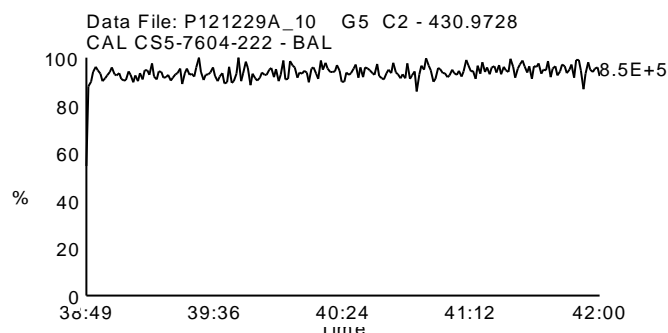
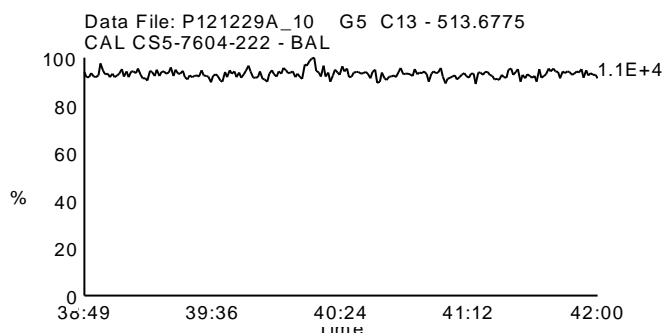
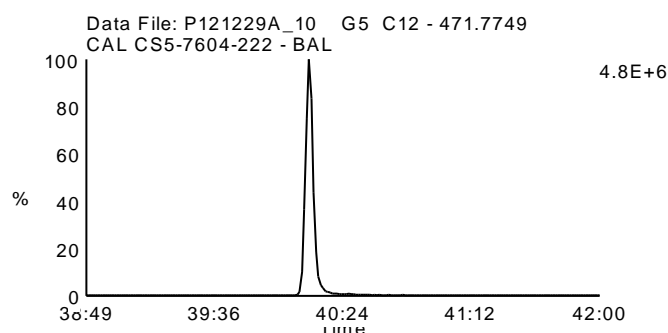
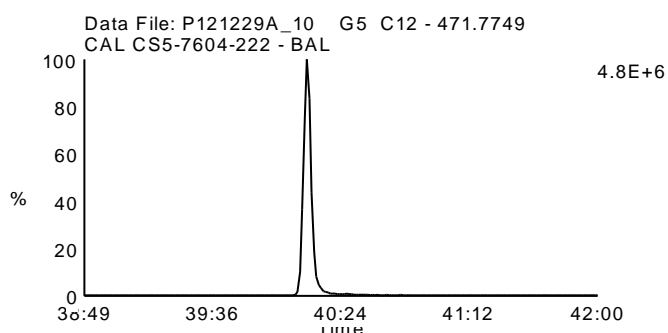
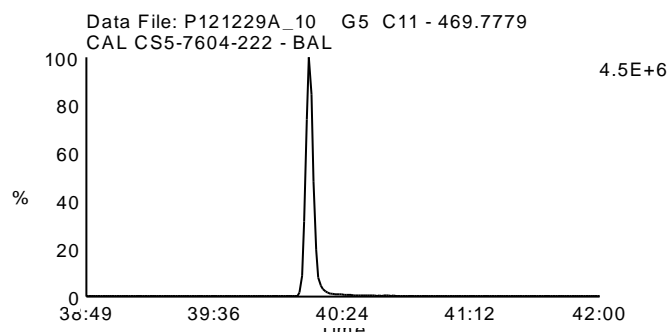
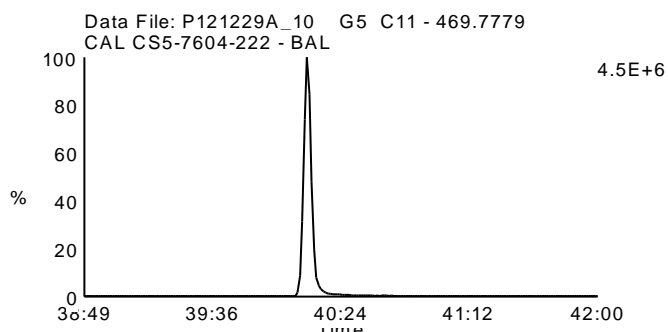
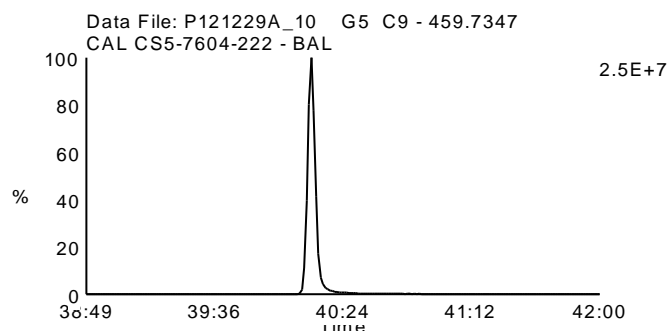
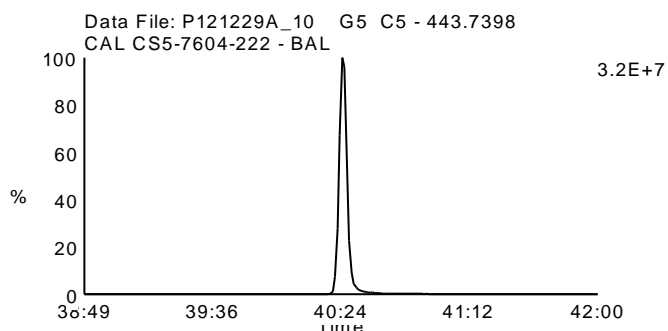
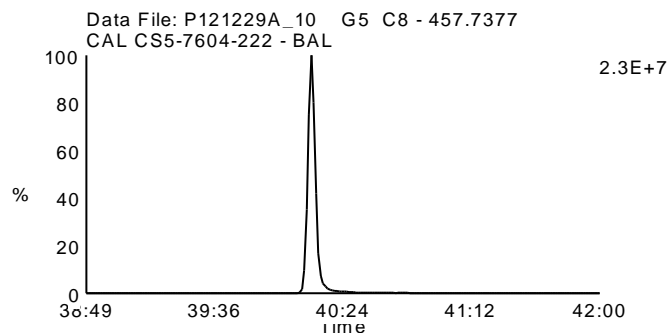
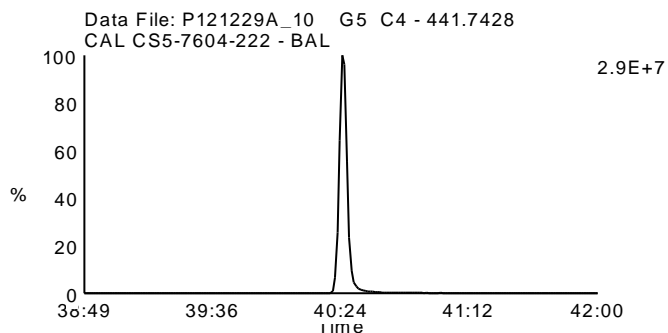
Date Acquired: 12/29/2012

Sample Description: CAL CS5-7604-222 - BAL

Lab Sample ID: CS5-7604-222

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Tetras

Data File Name: F130703A_01

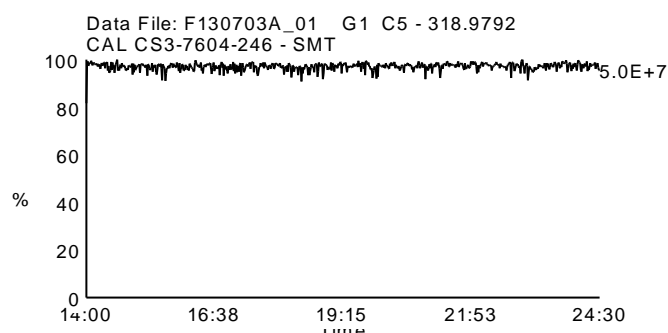
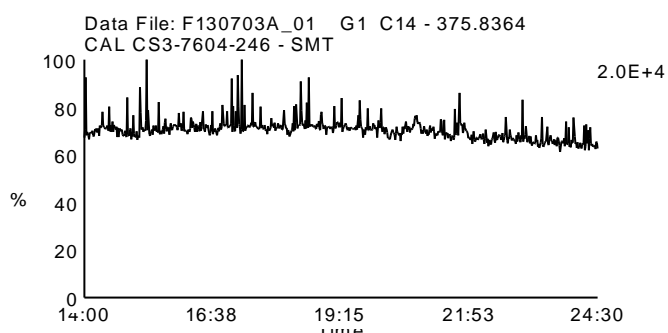
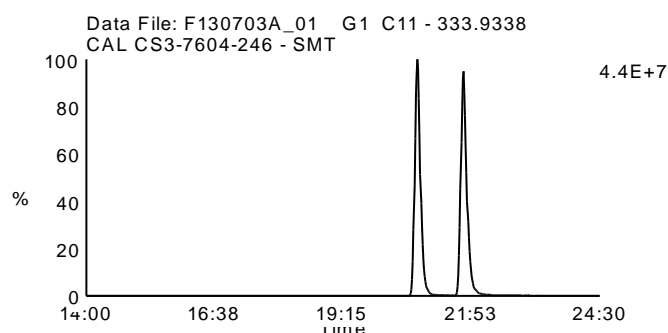
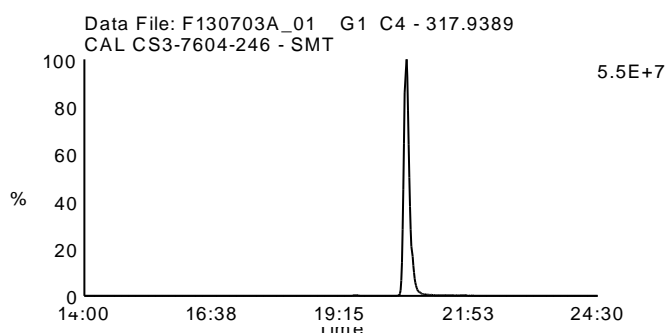
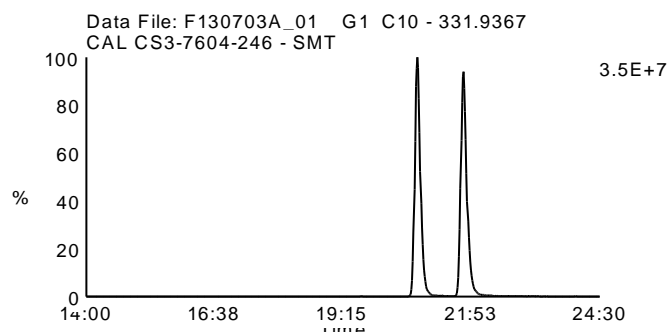
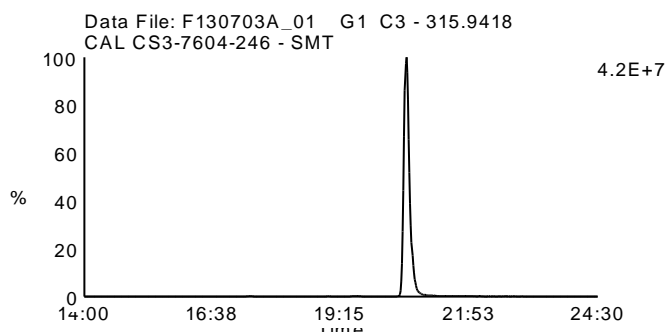
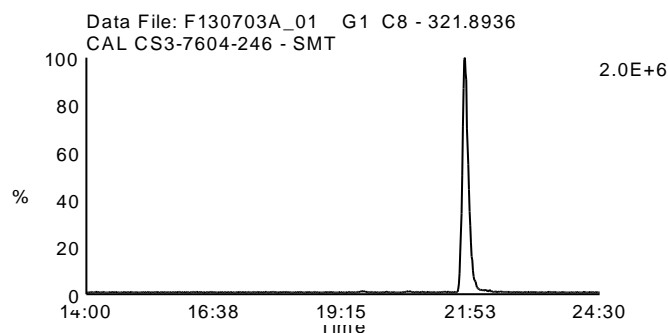
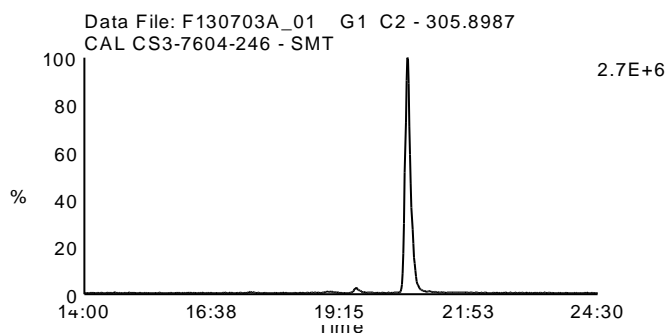
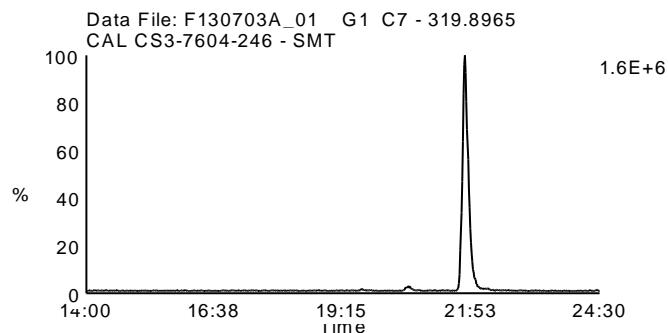
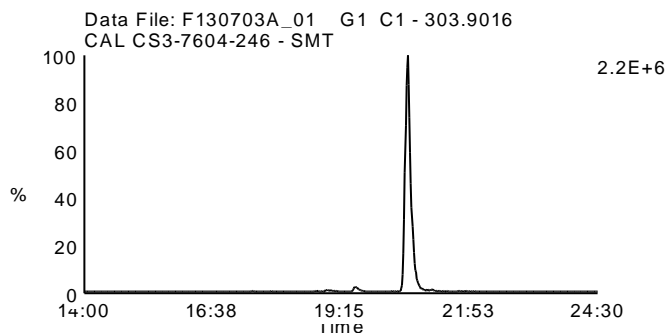
Date Acquired: 7/3/2013

Sample Description: CAL CS3-7604-246 - SMT

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Penta & Cleanup

Data File Name: F130703A_01

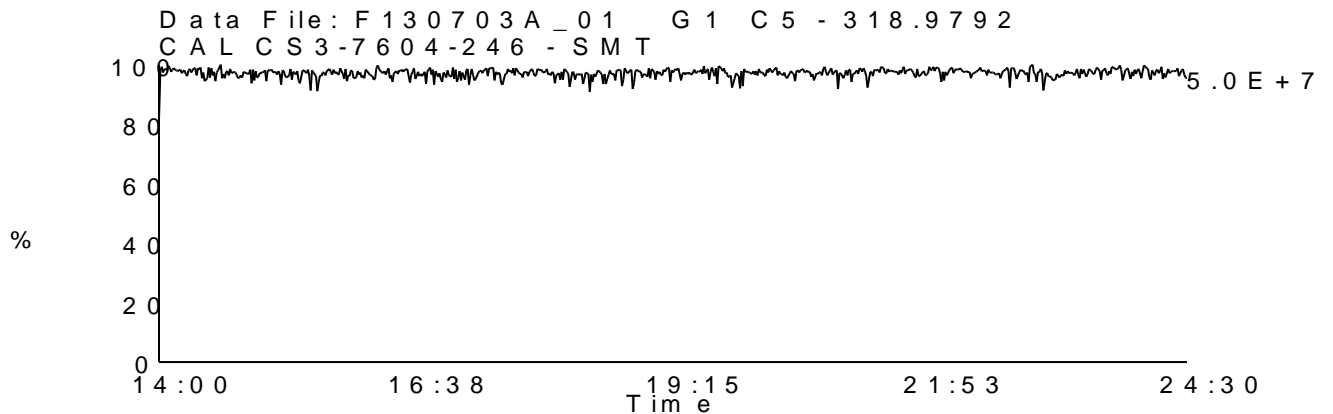
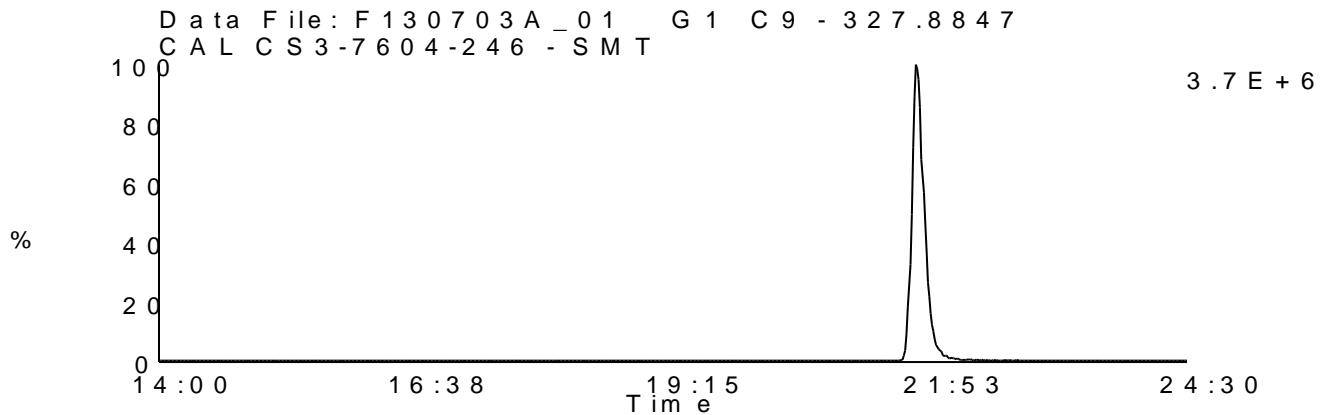
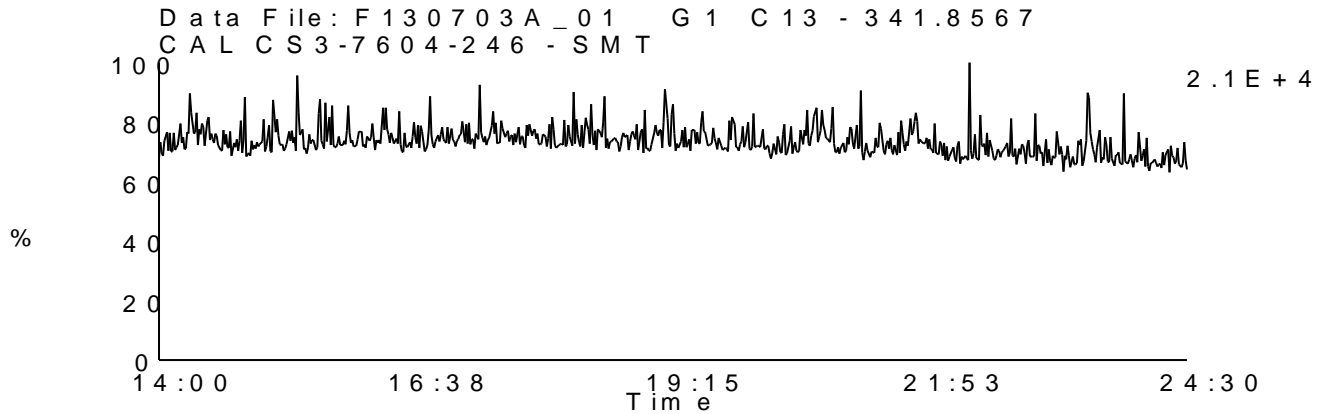
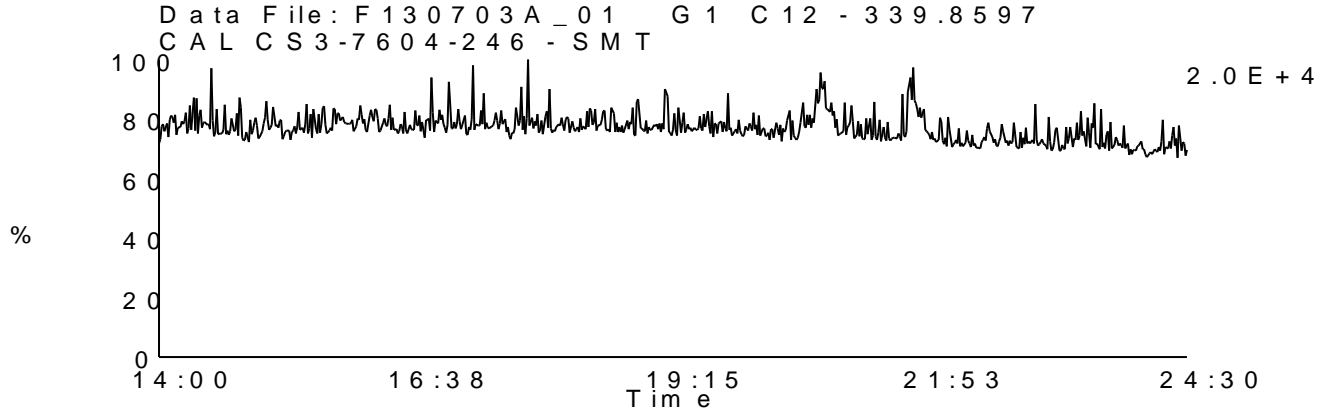
Date Acquired: 7/3/2013

Sample Description: CAL CS3-7604-246 - SMT

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Pentas

Data File Name: F130703A_01

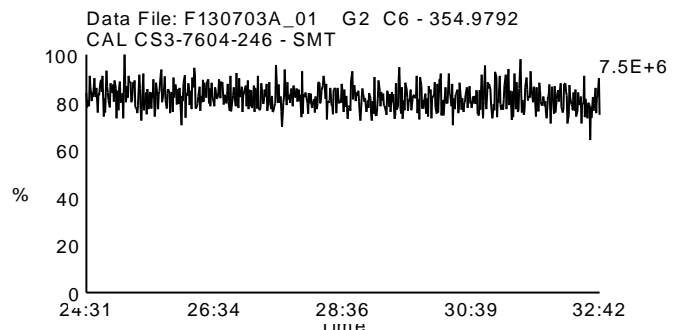
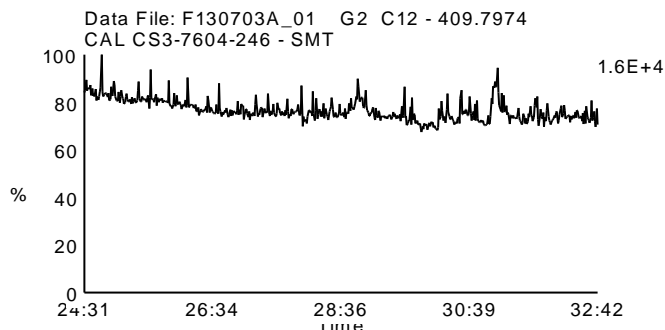
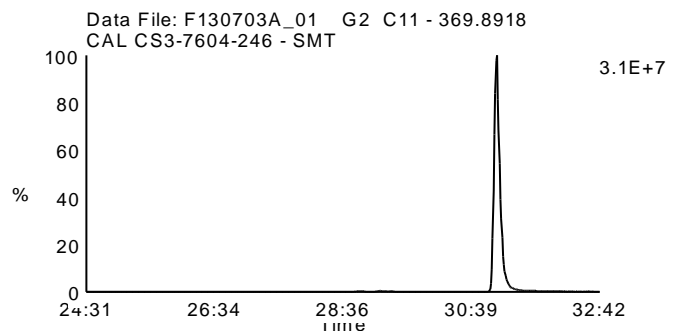
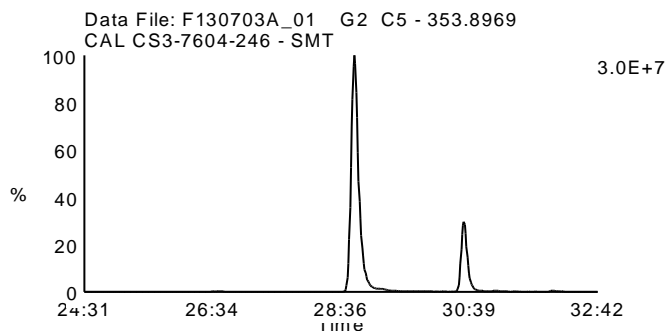
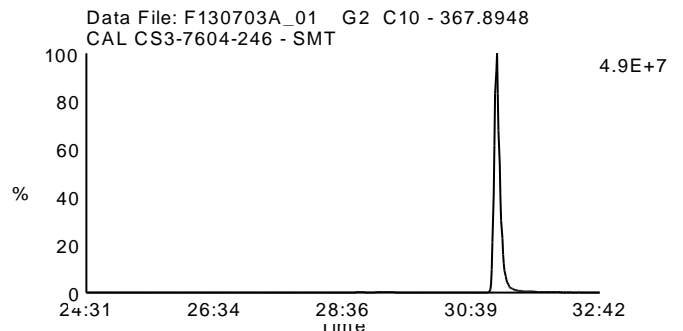
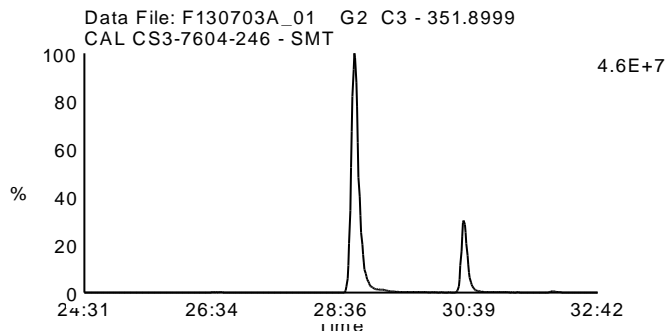
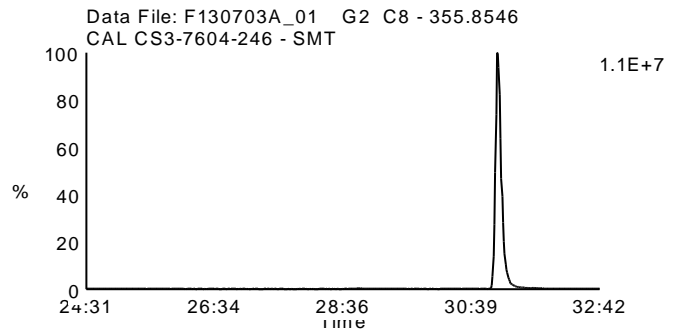
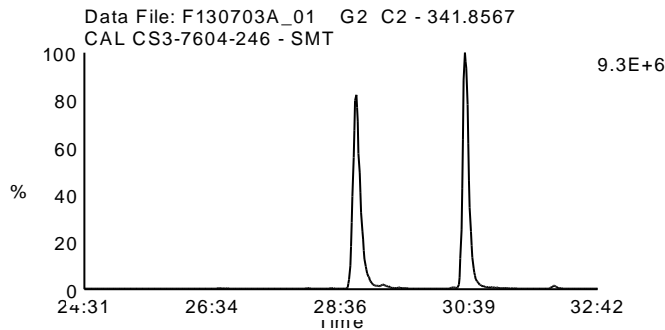
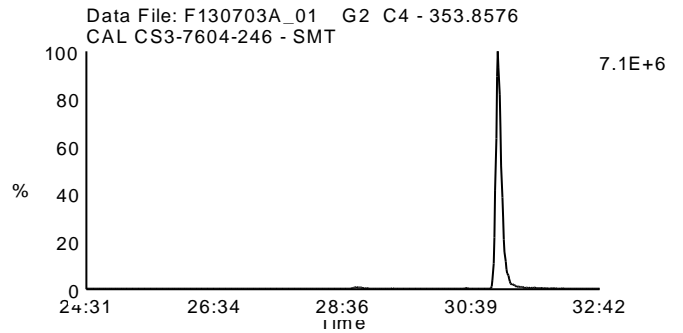
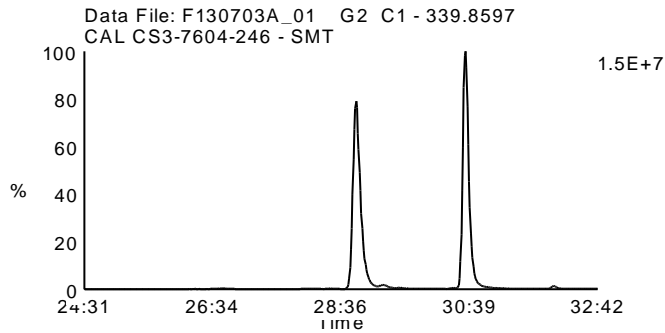
Date Acquired: 7/3/2013

Sample Description: CAL CS3-7604-246 - SMT

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Hexas

Data File Name: F130703A_01

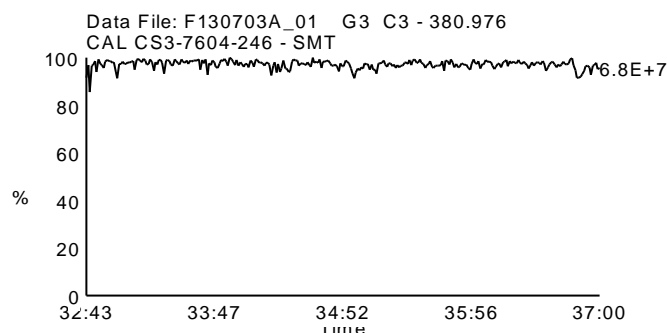
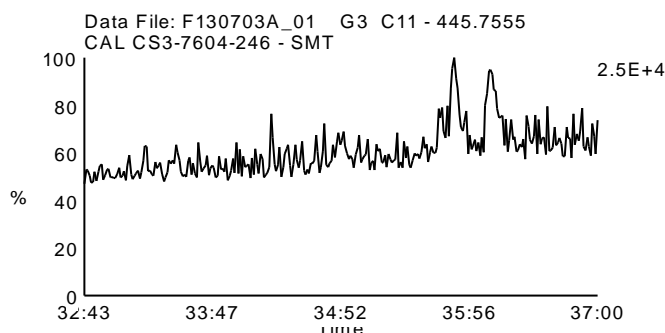
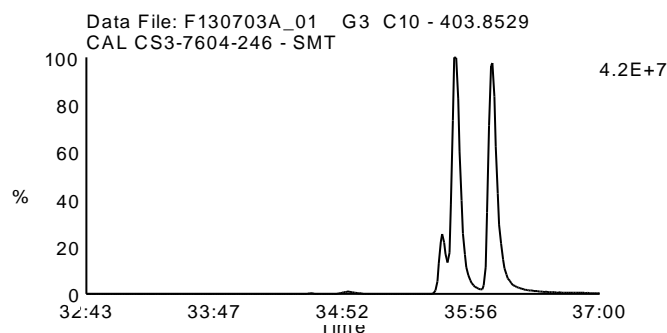
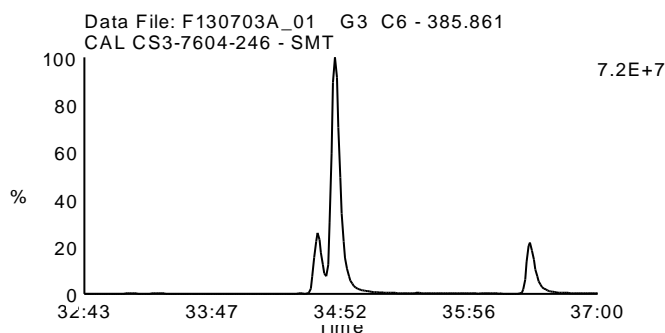
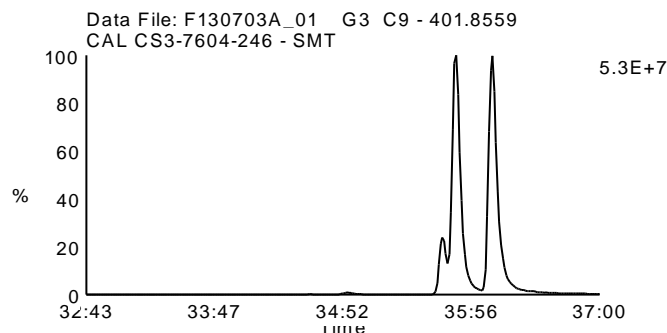
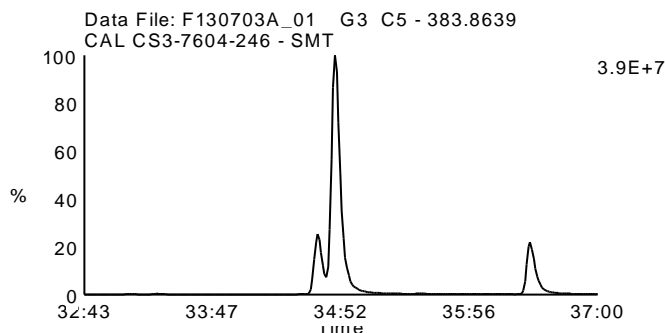
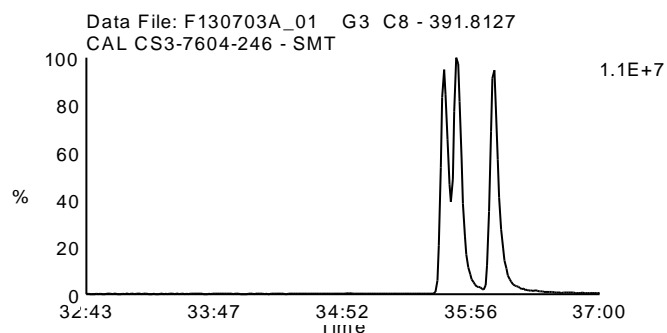
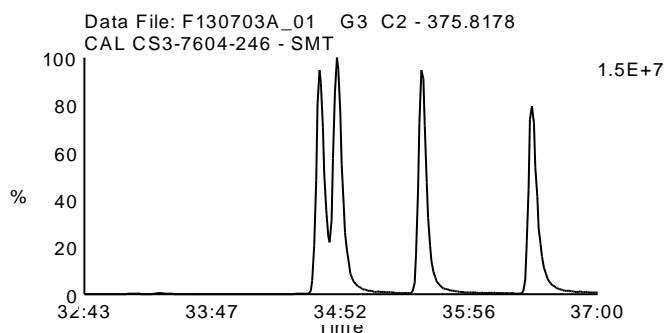
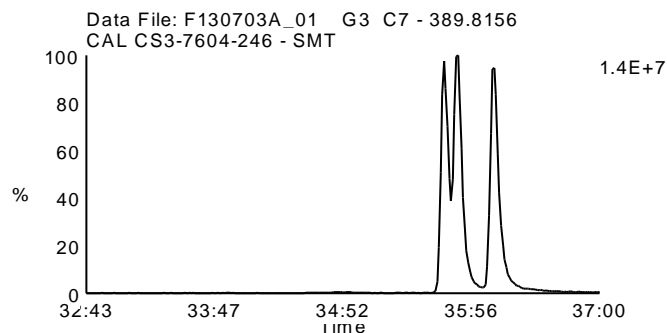
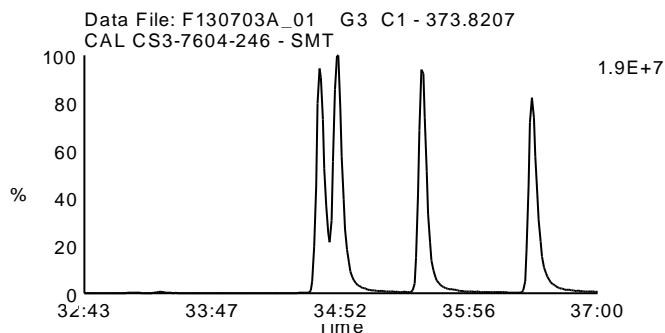
Date Acquired: 7/3/2013

Sample Description: CAL CS3-7604-246 - SMT

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Heptas

Data File Name: F130703A_01

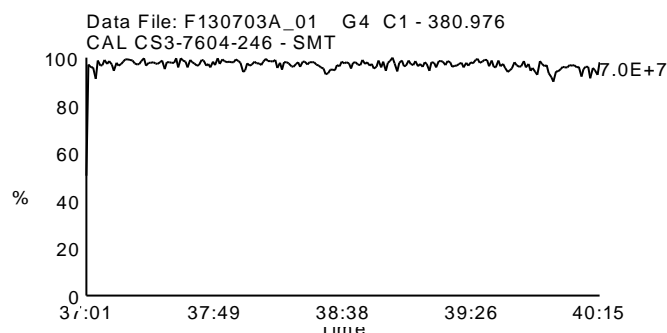
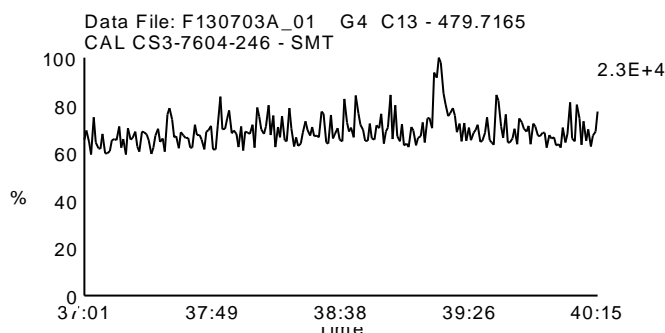
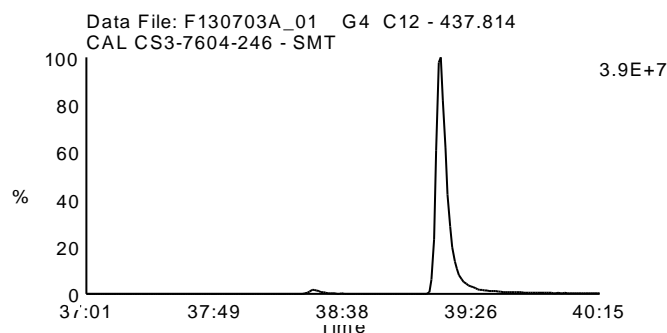
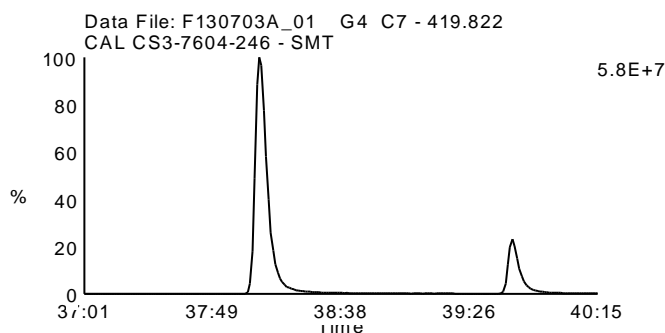
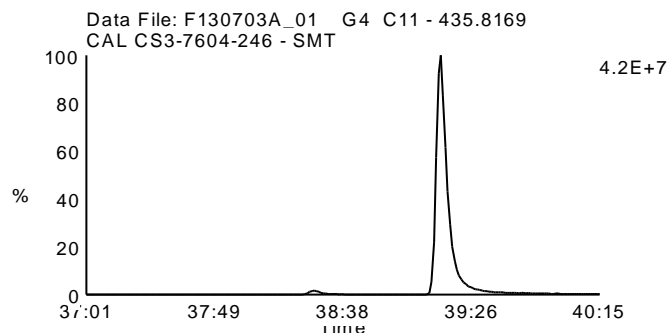
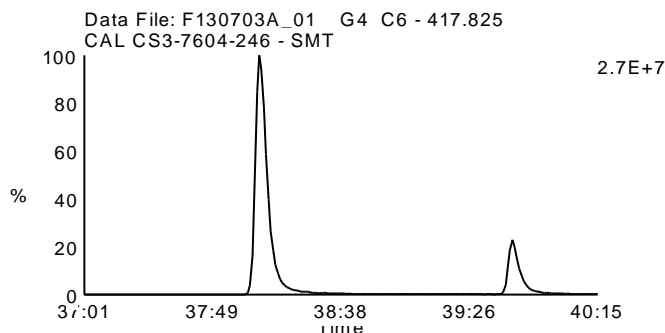
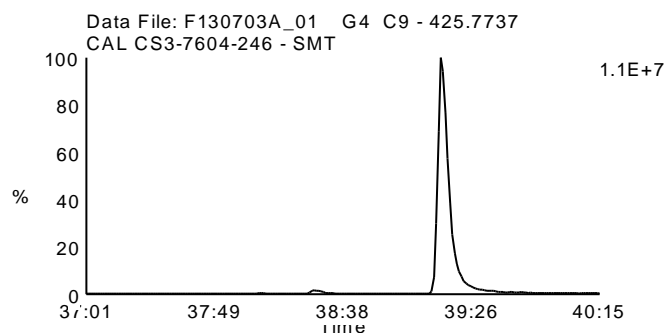
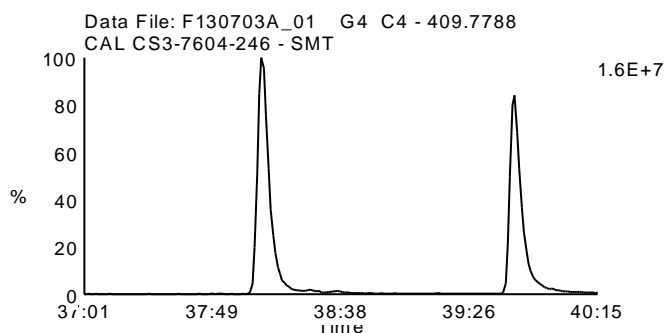
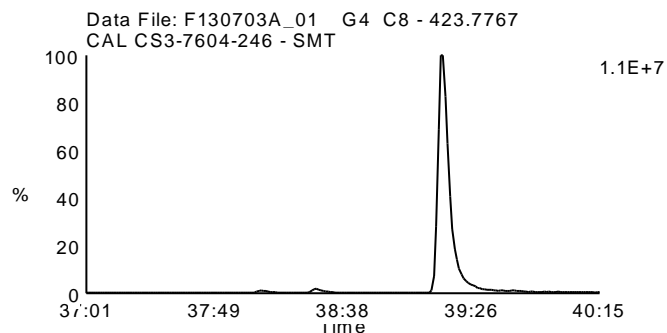
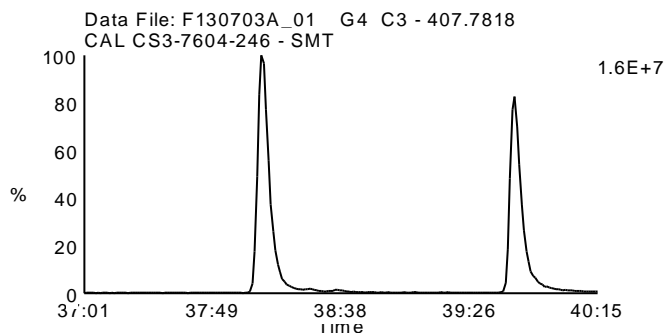
Date Acquired: 7/3/2013

Sample Description: CAL CS3-7604-246 - SMT

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Octas

Data File Name: F130703A_01

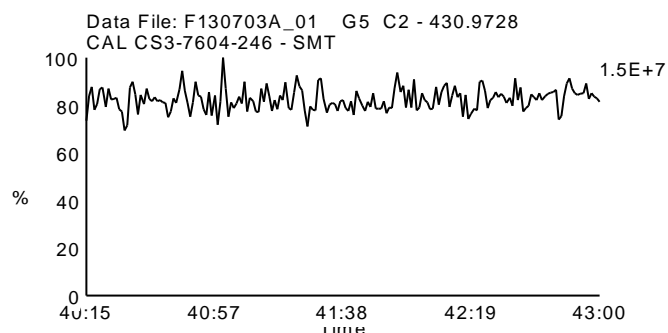
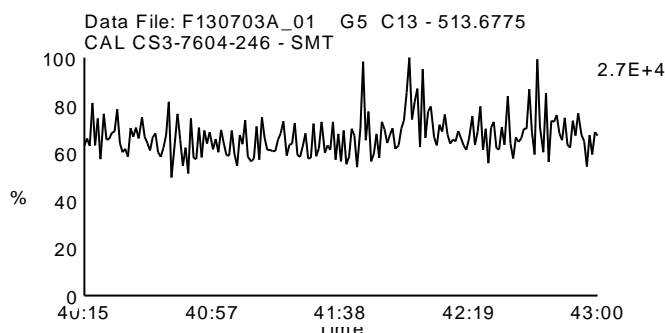
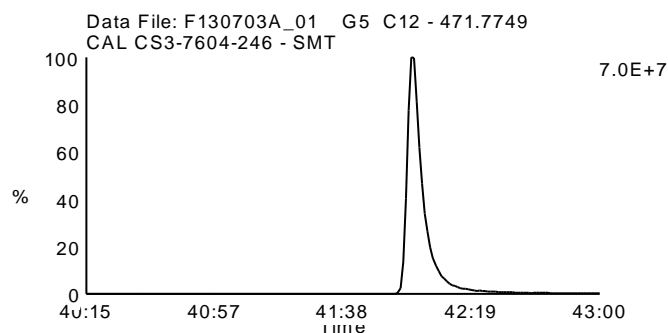
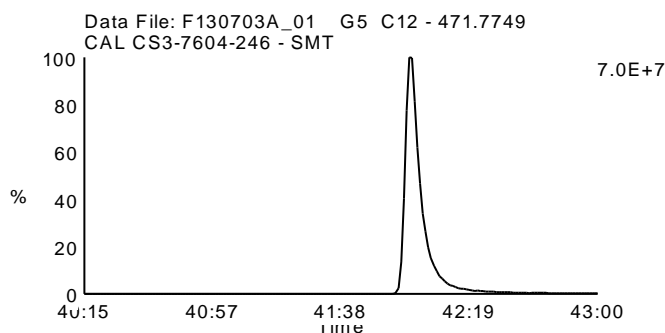
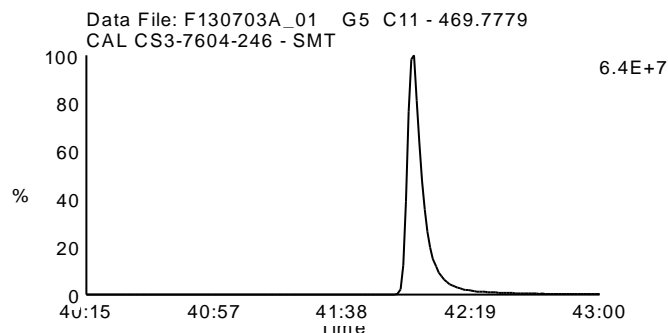
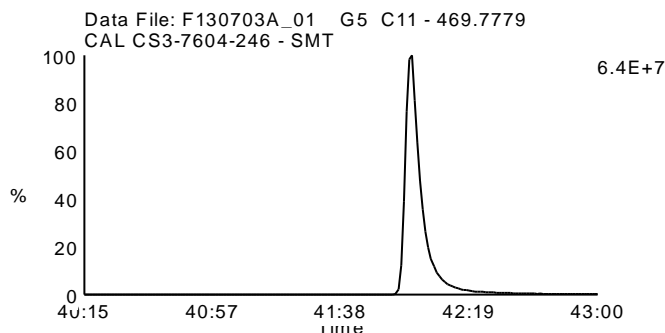
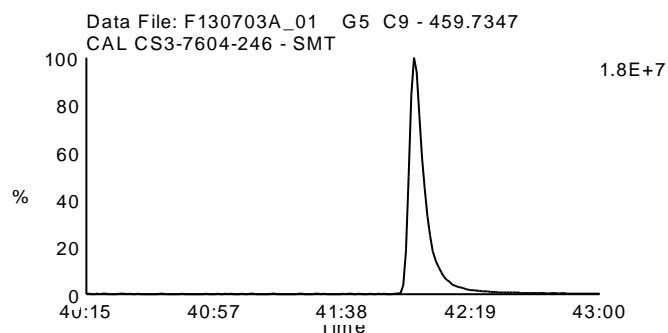
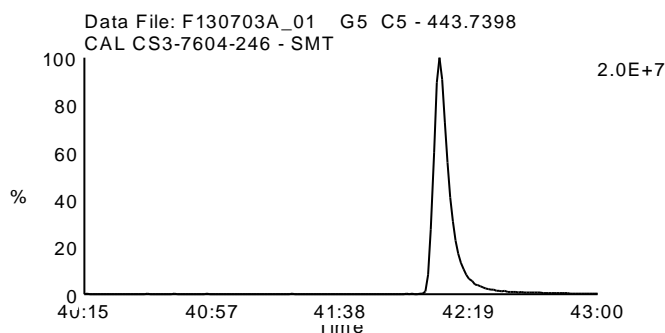
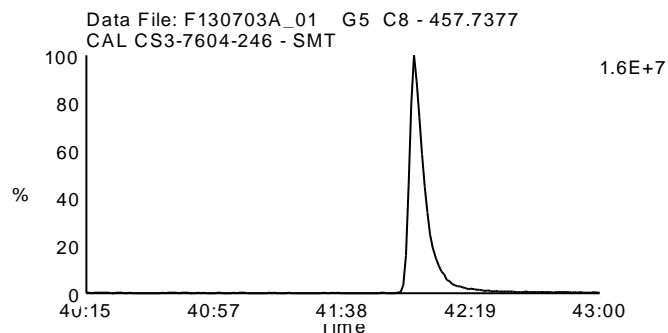
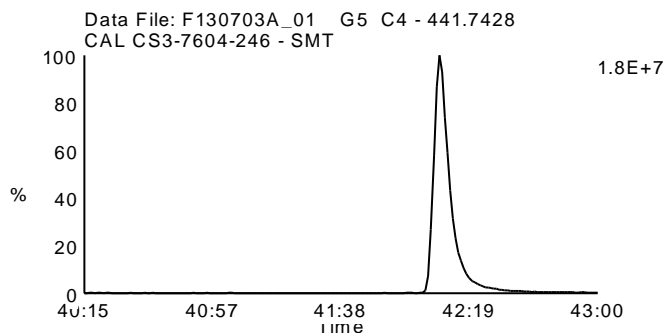
Date Acquired: 7/3/2013

Sample Description: CAL CS3-7604-246 - SMT

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Tetras

Data File Name: P130706B_03

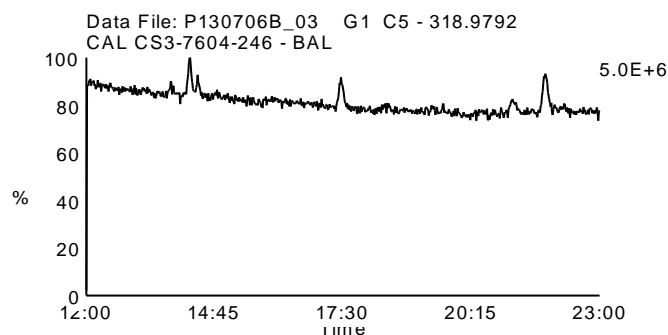
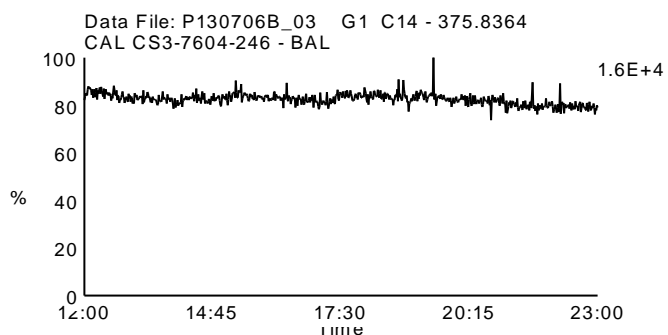
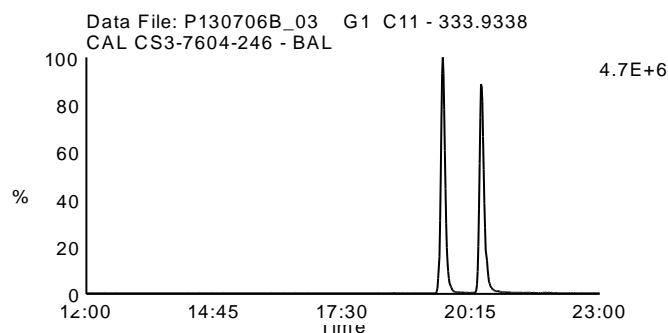
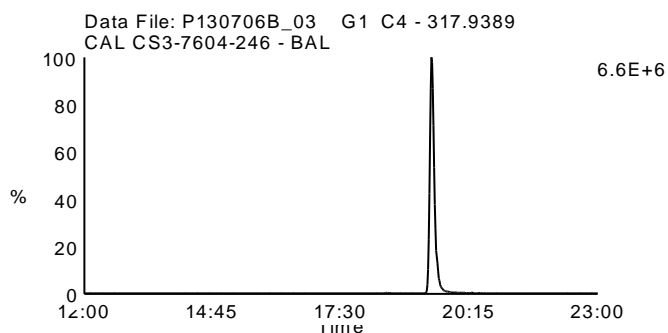
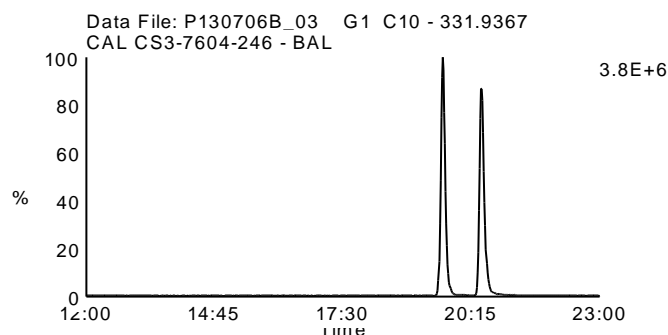
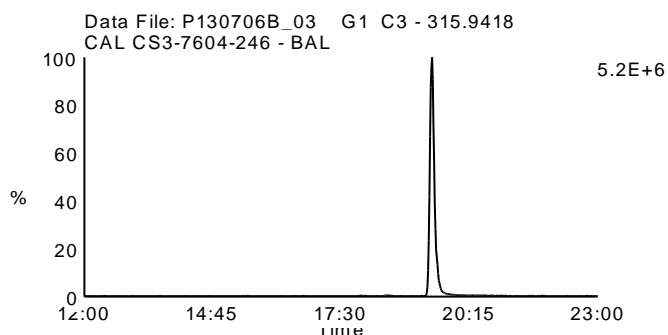
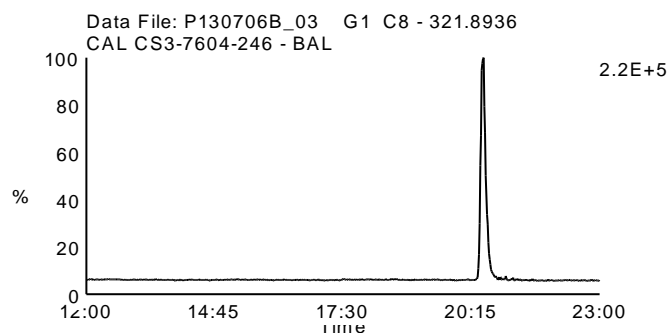
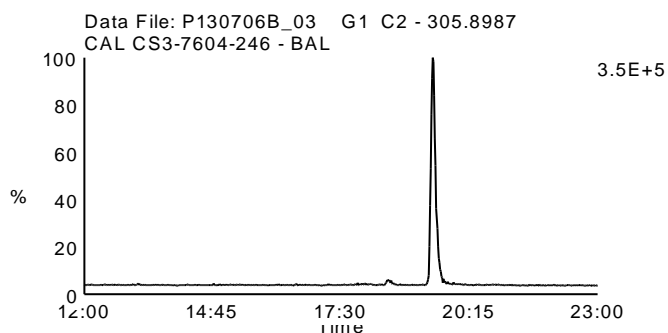
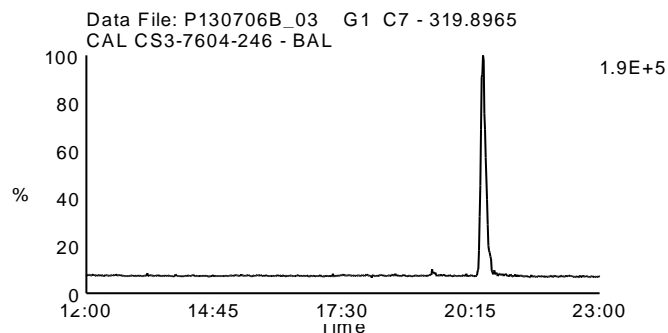
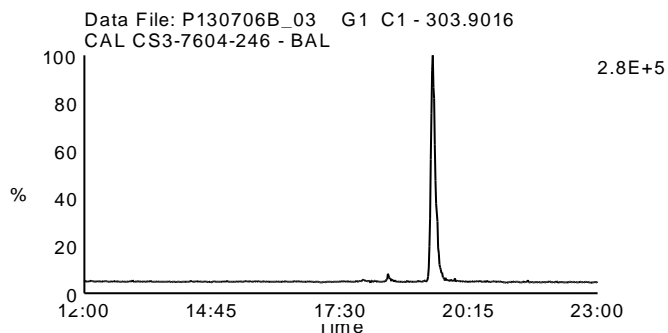
Date Acquired: 7/6/2013

Sample Description: CAL CS3-7604-246 - BAL

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Penta & Cleanup

Data File Name: P130706B_03

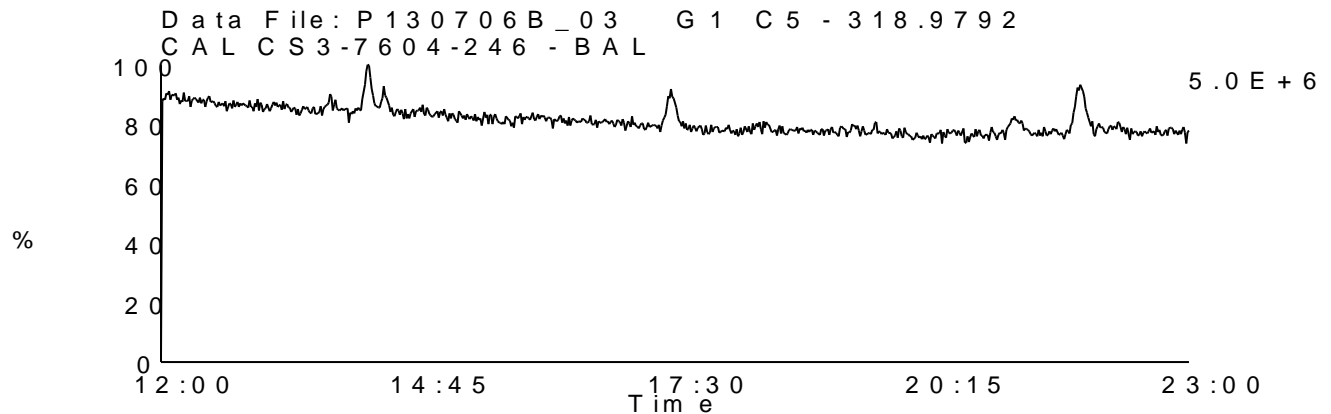
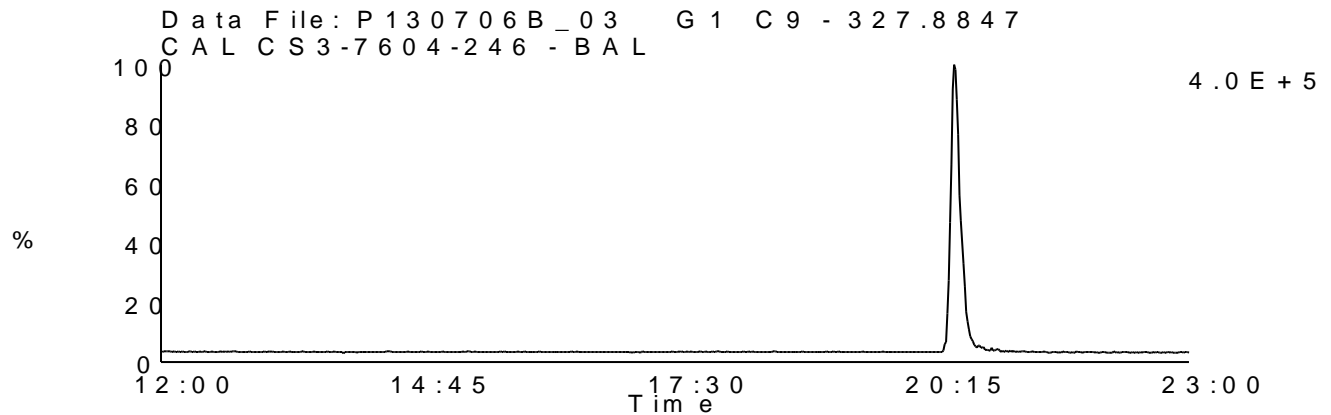
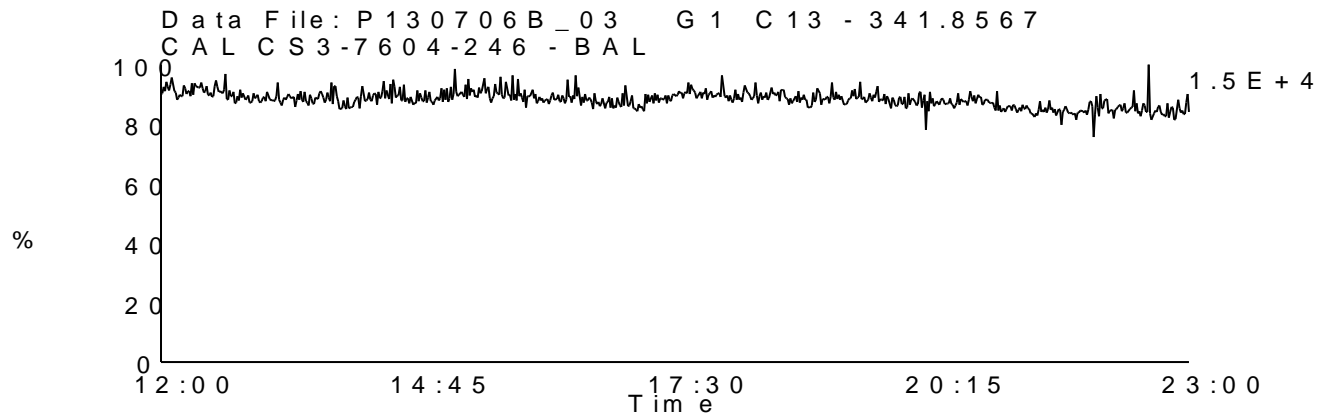
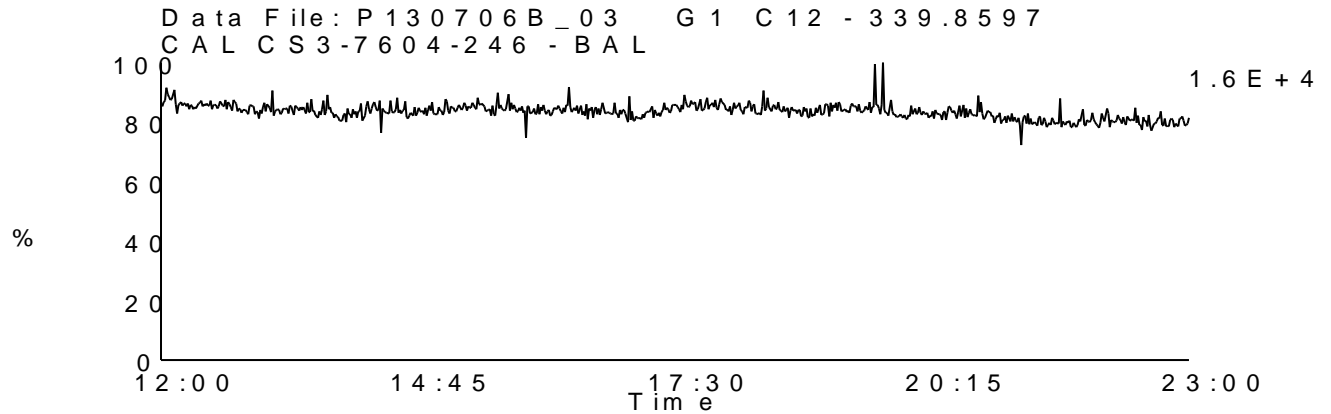
Date Acquired: 7/6/2013

Sample Description: CAL CS3-7604-246 - BAL

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Pentas

Data File Name: P130706B_03

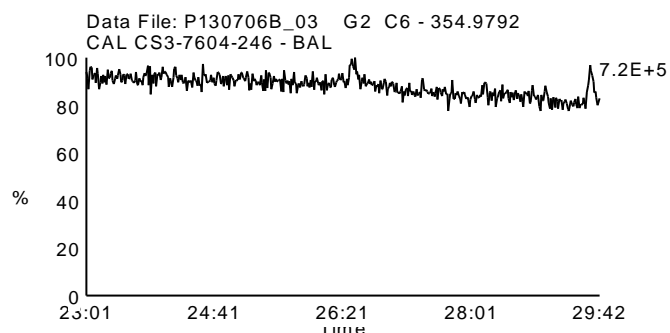
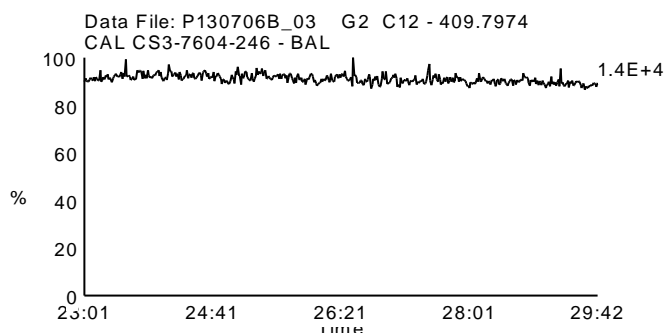
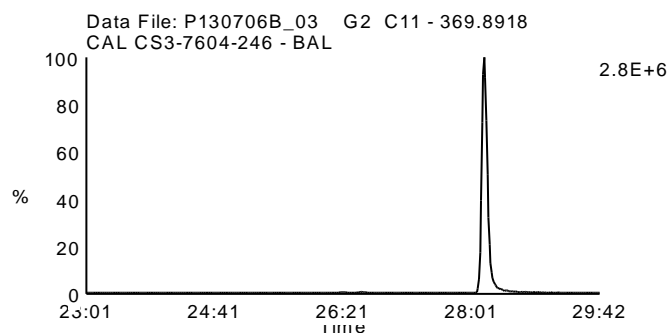
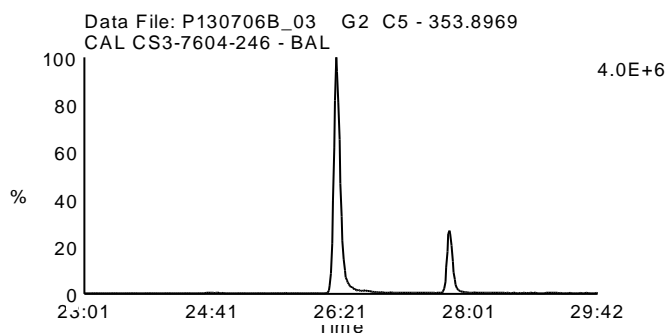
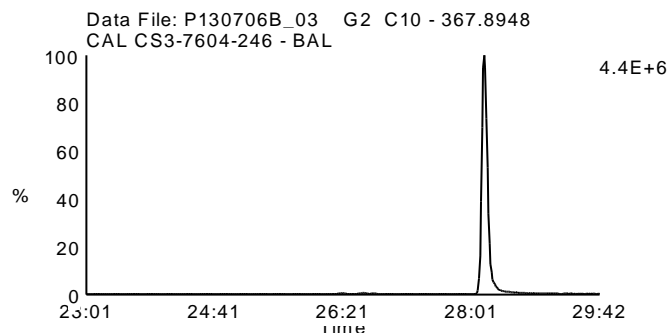
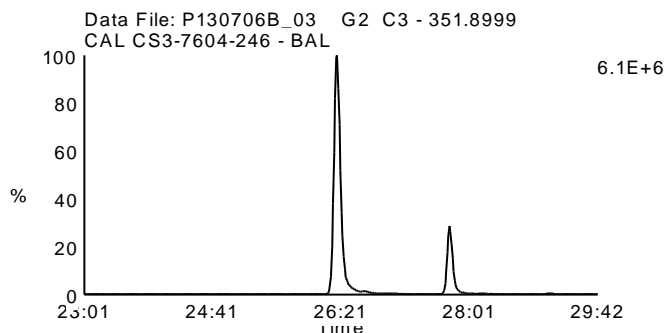
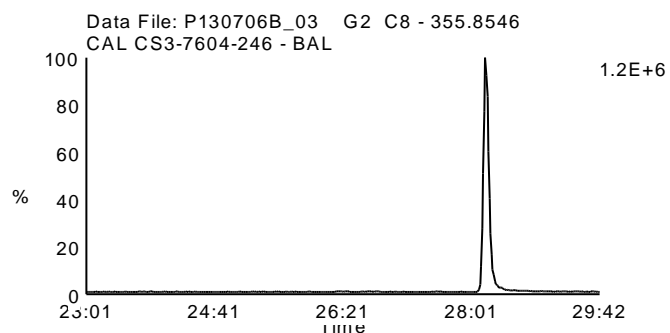
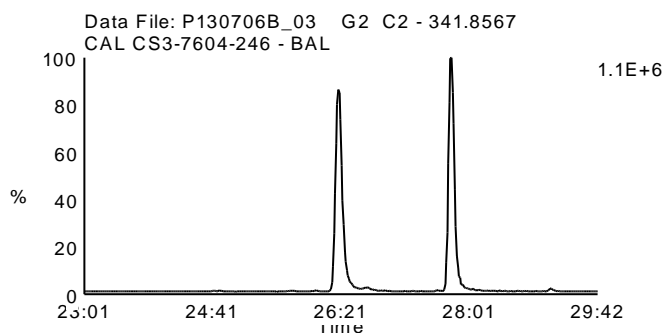
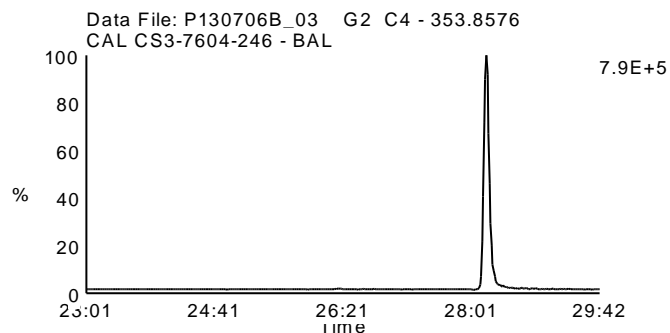
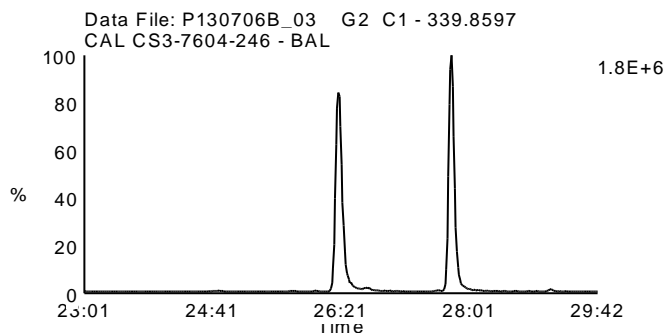
Date Acquired: 7/6/2013

Sample Description: CAL CS3-7604-246 - BAL

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Hexas

Data File Name: P130706B_03

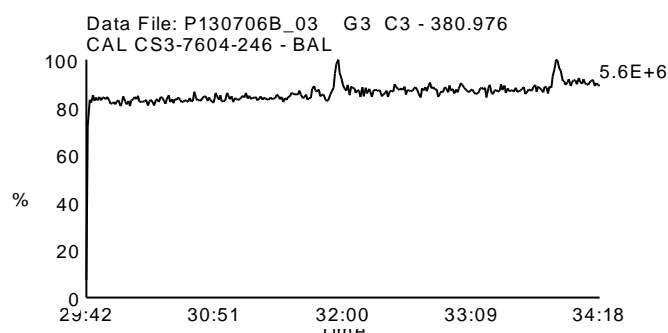
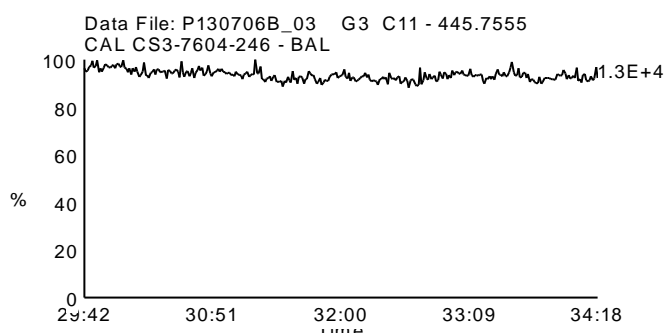
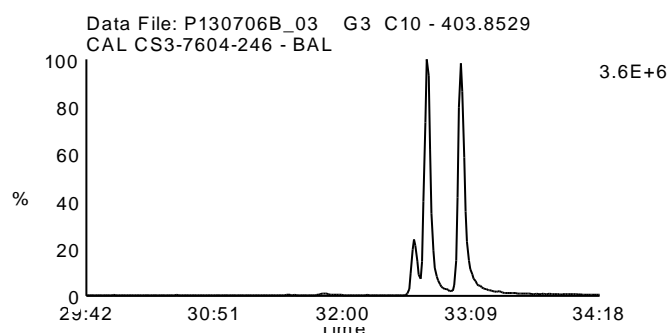
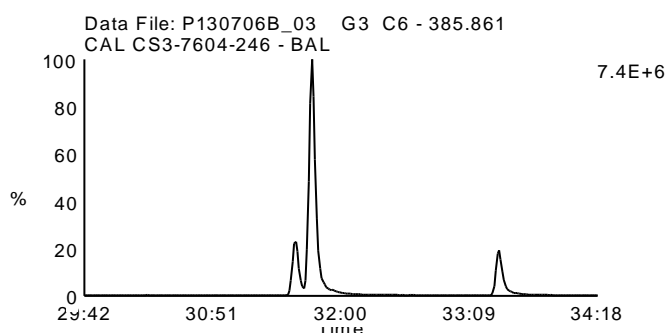
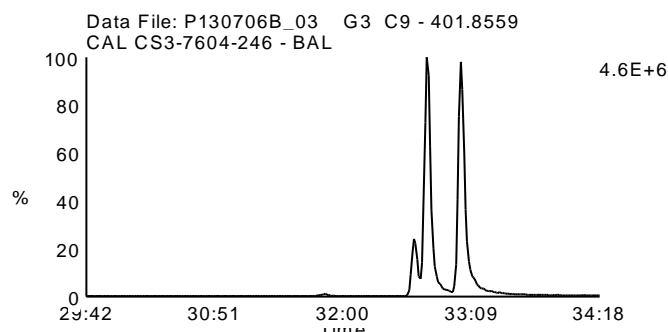
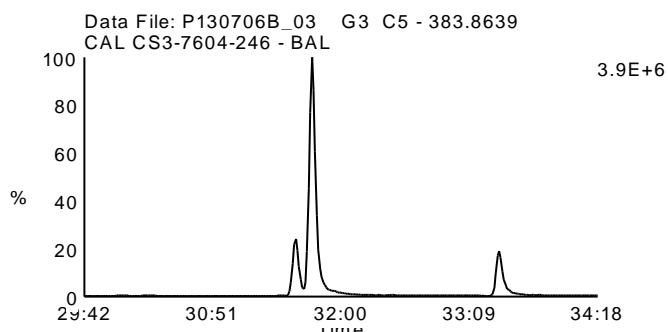
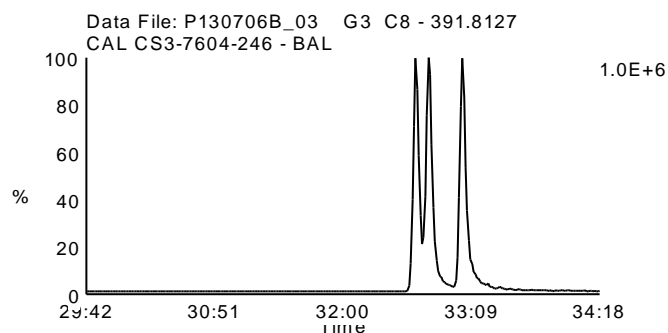
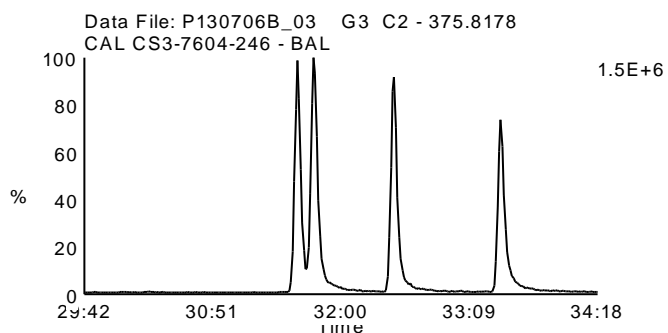
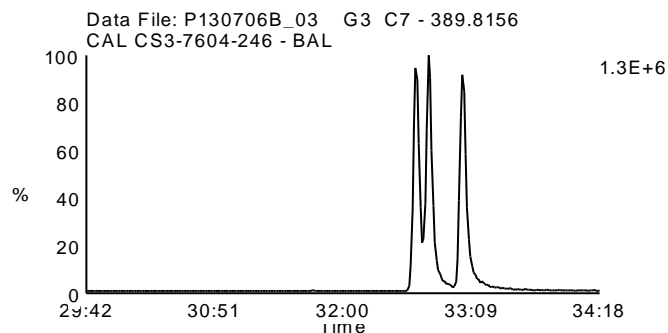
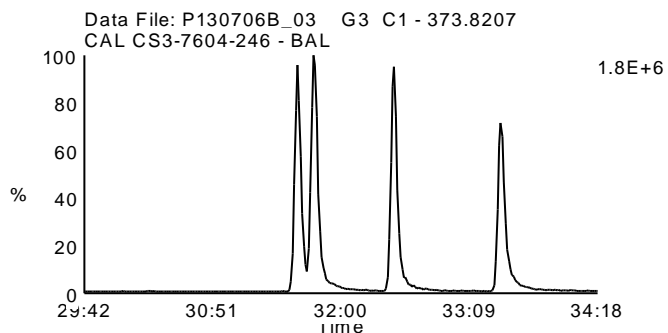
Date Acquired: 7/6/2013

Sample Description: CAL CS3-7604-246 - BAL

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Heptas

Data File Name: P130706B_03

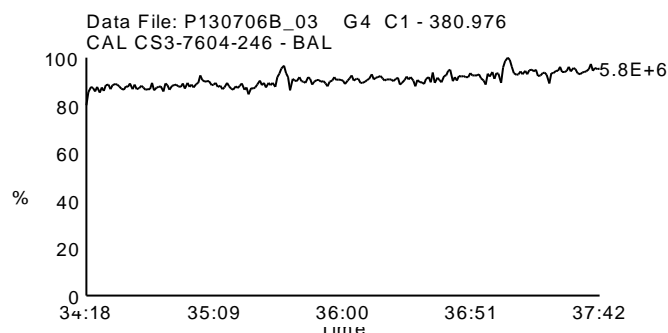
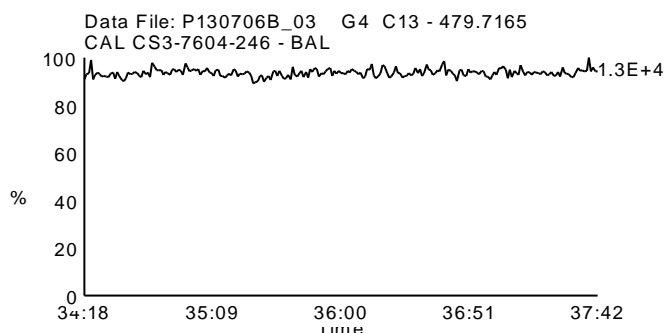
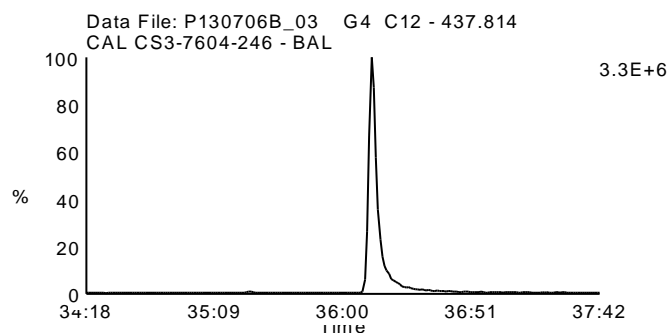
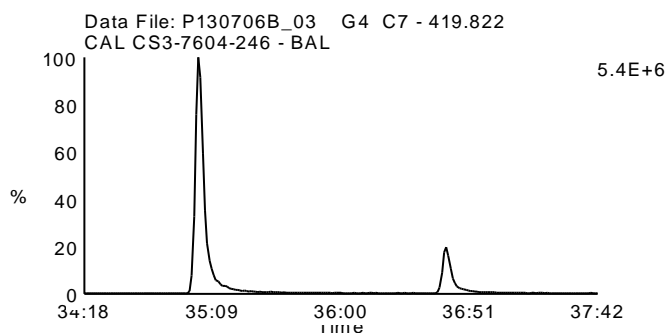
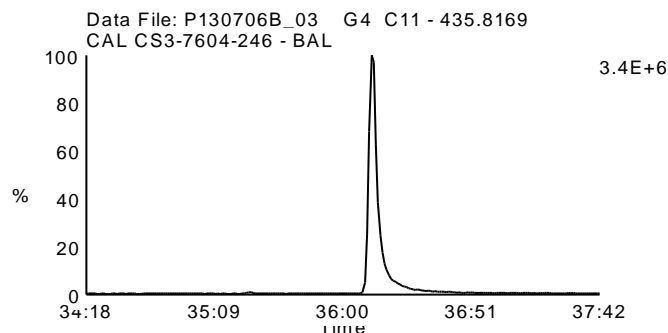
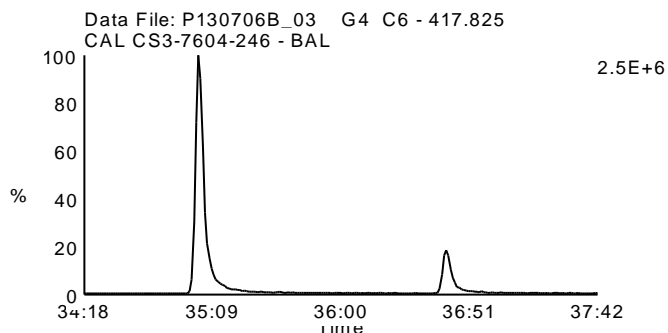
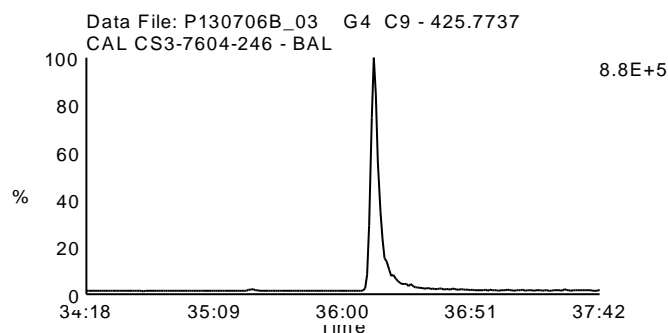
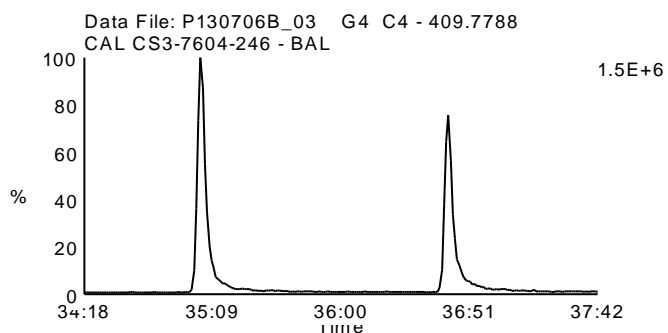
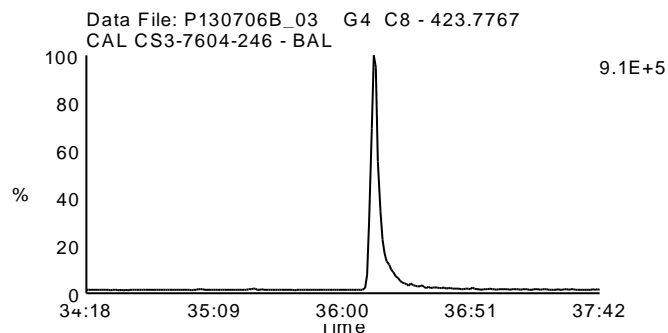
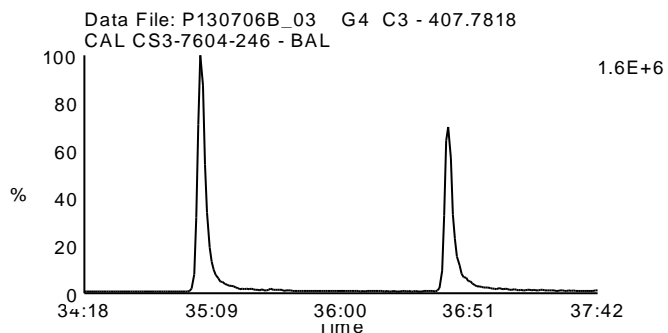
Date Acquired: 7/6/2013

Sample Description: CAL CS3-7604-246 - BAL

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR09 (P)



Homologue Group: Octas

Data File Name: P130706B_03

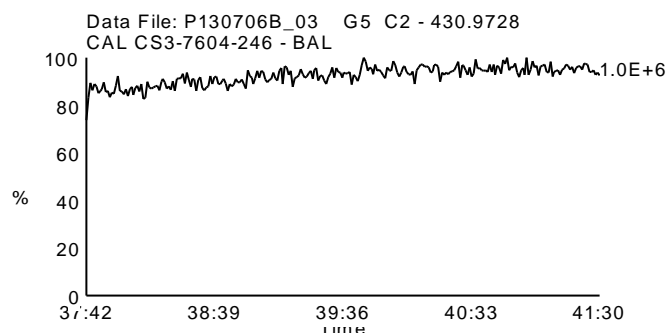
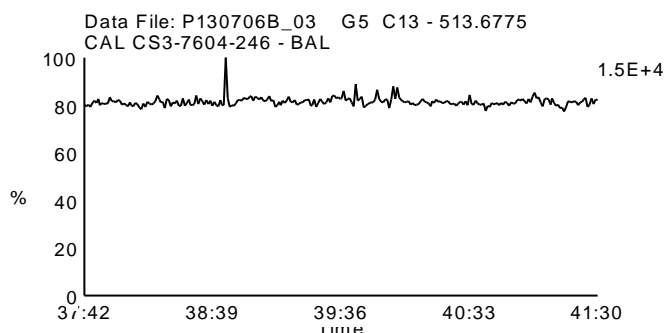
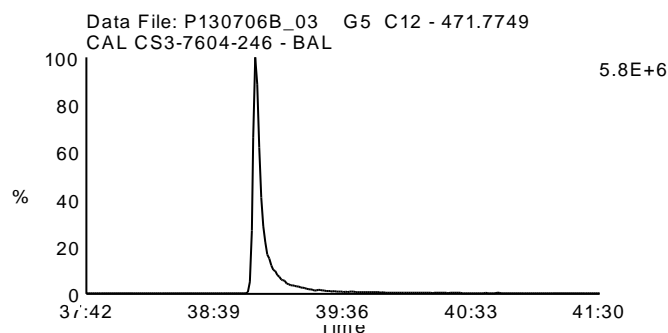
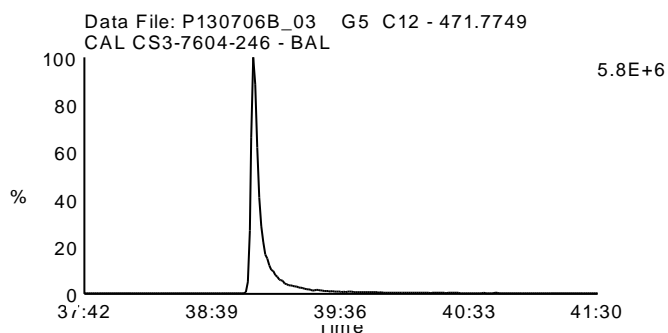
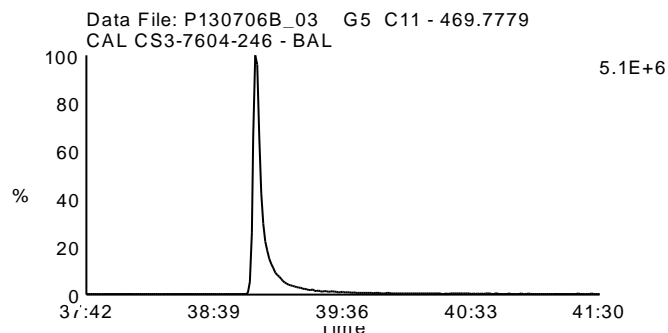
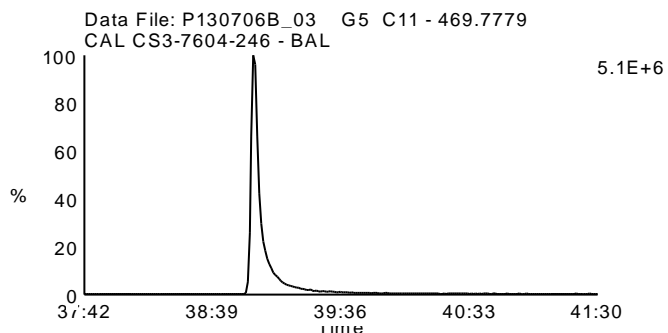
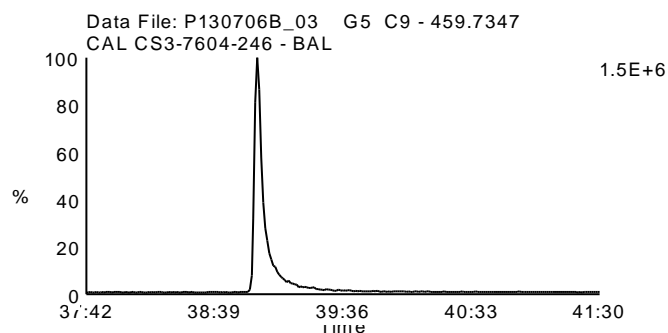
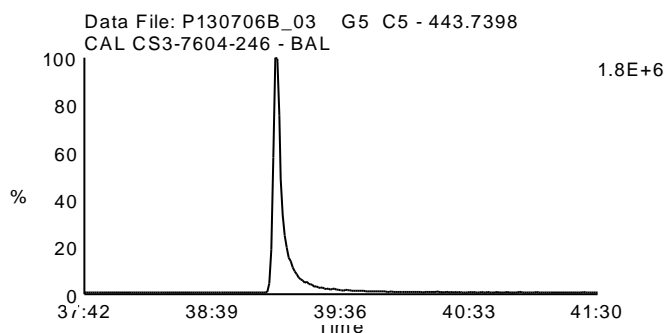
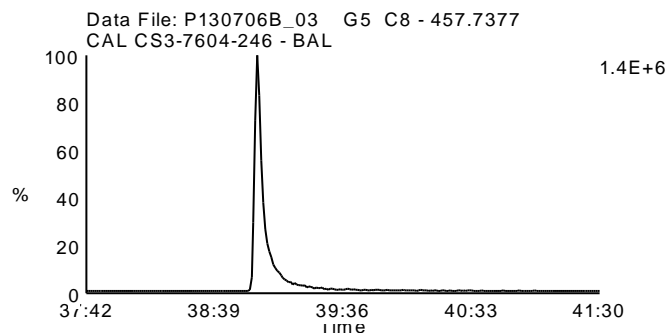
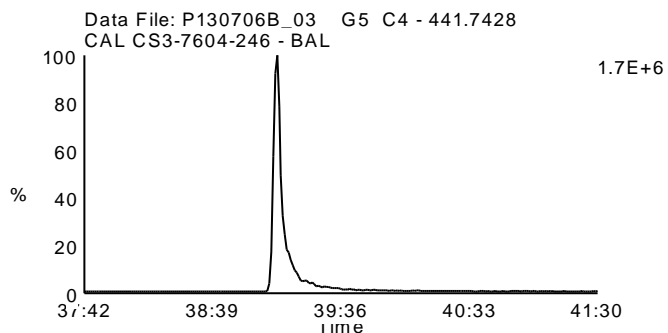
Date Acquired: 7/6/2013

Sample Description: CAL CS3-7604-246 - BAL

Lab Sample ID: CS3-7604-246

Client Sample ID:

Instrument: 10MSHR09 (P)



PCDD/PCDF Detected Peak List

Client ID		Injected By	SMT
Lab ID	CS1-7604-218	Instrument ID	10MSHR05 (F)
Filename	F130408A_05	GC Column ID	USC508227H
Analyzed	04/08/2013 15:19	ICAL ID	F130408

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:36	6.56e7	8.22e7	9.04e6	1.11e7	2.710e3	1.164e3	0.80	
2,3,7,8-TCDF	23:36	2.92e5	3.90e5	4.13e4	5.13e4	7.166e2	8.406e2	0.75	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:51	4.50e7	5.61e7	6.50e6	8.22e6	3.662e3	9.561e2	0.80	
2,3,7,8-TCDD-13C	24:46	4.49e7	5.55e7	6.15e6	7.48e6	5.352e3	1.222e3	0.81	
2,3,7,8-TCDD-37Cl4	24:47	4.37e5		6.98e4		7.620e2	----		
2,3,7,8-TCDD	24:48	2.07e5	2.61e5	3.16e4	4.20e4	6.770e2	6.181e2	0.79	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:51	7.24e7	4.59e7	1.22e7	7.41e6	8.332e3	9.014e3	1.58	
2,3,4,7,8-PeCDF-13C	32:22	1.71e6	1.13e6	3.41e5	2.39e5	7.150e3	3.019e3	1.51	
1,2,3,7,8-PeCDF	30:53	1.64e6	1.06e6	2.82e5	1.88e5	1.133e3	1.819e3	1.55	
2,3,4,7,8-PeCDF	32:23	1.59e6	1.01e6	3.13e5	2.06e5	1.893e3	2.257e3	1.57	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:49	4.81e7	3.04e7	9.24e6	5.90e6	2.309e3	9.244e2	1.58	
1,2,3,7,8-PeCDD	32:49	6.97e5	1.05e6	1.14e4	2.19e5	1.168e3	9.202e2	0.66	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	36:23	7.92e5	1.58e6	1.98e5	4.10e5	1.115e3	3.966e2	0.50	
1,2,3,6,7,8-HxCDF-13C	36:33	3.34e7	6.47e7	7.34e6	1.43e7	9.677e2	7.791e2	0.52	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	1.115e3	7.791e2		
1,2,3,7,8,9-HxCDF-13C	38:19	6.77e5	1.29e6	1.43e5	3.03e5	3.030e3	2.582e3	0.52	
1,2,3,4,7,8-HxCDF	36:25	1.40e6	1.03e6	3.38e5	2.20e5	1.246e3	5.956e2	1.36	
1,2,3,6,7,8-HxCDF	36:34	1.60e6	1.31e6	3.64e5	2.98e5	9.318e2	6.505e2	1.22	
2,3,4,6,7,8-HxCDF	37:18	1.28e6	1.02e6	2.94e5	2.37e5	1.693e3	2.452e3	1.25	
1,2,3,7,8,9-HxCDF	38:20	1.16e6	9.83e5	2.58e5	2.26e5	1.486e3	2.302e3	1.18	

REPORT OF LABORATORY ANALYSIS

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	37:28	8.00e5	6.78e5	9.35e6	7.34e6	9.404e3	5.049e3	1.18	
1,2,3,6,7,8-HxCDD-13C	37:36	3.81e7	3.01e7	9.32e6	7.34e6	2.383e4	1.185e4	1.27	
1,2,3,7,8,9-HxCDD-13C	37:55	4.27e7	3.40e7	9.51e6	7.65e6	5.643e3	1.472e3	1.26	
1,2,3,4,7,8-HxCDD	37:30	8.44e5	6.77e5	2.44e5	1.72e5	1.467e3	1.301e3	1.25	
1,2,3,6,7,8-HxCDD	37:37	1.00e6	7.81e5	2.68e5	1.81e5	1.171e3	4.901e2	1.28	
1,2,3,7,8,9-HxCDD	37:56	9.82e5	8.38e5	2.39e5	1.92e5	1.171e3	5.693e2	1.17	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	40:01	2.24e7	4.90e7	5.49e6	1.19e7	1.938e3	2.908e3	0.46	
1,2,3,4,7,8,9-HpCDF-13C	41:45	4.08e5	9.62e5	9.16e4	2.22e5	1.660e3	4.674e3	0.42	
1,2,3,4,6,7,8-HpCDF	40:01	1.36e6	1.28e6	3.18e5	3.46e5	1.420e3	2.223e3	1.06	
1,2,3,4,7,8,9-HpCDF	41:46	9.98e5	9.20e5	2.36e5	2.48e5	7.054e2	2.223e3	1.09	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	41:12	2.95e7	2.78e7	7.11e6	6.51e6	9.696e3	6.952e3	1.06	
1,2,3,4,6,7,8-HpCDD	41:12	8.48e5	7.49e5	1.91e5	1.96e5	1.592e3	9.798e2	1.13	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	44:40	1.65e6	1.92e6	3.39e5	3.66e5	2.092e2	6.520e2	0.86	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	44:26	6.08e7	6.85e7	1.22e7	1.32e7	2.886e4	9.159e3	0.89	
OCDD	44:27	1.42e6	1.60e6	2.88e5	3.29e5	5.582e2	6.124e2	0.89	

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PCDD/PCDF Detected Peak List

Client ID		Injected By	SMT
Lab ID	CS2-7604-219	Instrument ID	10MSHR05 (F)
Filename	F130408A_04	GC Column ID	USC508227H
Analyzed	04/08/2013 14:31	ICAL ID	F130408

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:36	6.18e7	7.89e7	8.58e6	1.09e7	----	----	0.78	
2,3,7,8-TCDF	23:38	5.51e5	7.52e5	8.65e4	1.04e5	----	----	0.73	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:52	4.45e7	5.39e7	6.22e6	7.80e6	----	----	0.83	
2,3,7,8-TCDD-13C	24:45	4.34e7	5.37e7	5.73e6	6.91e6	----	----	0.81	
2,3,7,8-TCDD-37Cl4	24:47	9.44e5		1.29e5		----	----		
2,3,7,8-TCDD	24:48	4.29e5	4.92e5	6.37e4	8.18e4	----	----	0.87	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:51	6.70e7	4.28e7	1.17e7	7.44e6	----	----	1.56	
2,3,4,7,8-PeCDF-13C	32:22	3.21e6	2.02e6	6.23e5	3.93e5	----	----	1.59	
1,2,3,7,8-PeCDF	30:53	3.17e6	2.07e6	5.59e5	3.44e5	----	----	1.53	
2,3,4,7,8-PeCDF	32:23	2.99e6	1.98e6	6.07e5	3.84e5	----	----	1.51	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:49	4.65e7	2.96e7	8.54e6	5.61e6	----	----	1.57	
1,2,3,7,8-PeCDD	32:50	1.35e6	2.25e6	2.92e5	4.21e5	----	----	0.60	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	36:23	1.46e6	3.02e6	3.74e5	7.28e5	----	----	0.48	
1,2,3,6,7,8-HxCDF-13C	36:33	3.24e7	6.15e7	7.42e6	1.37e7	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	----	----		
1,2,3,7,8,9-HxCDF-13C	38:19	1.37e6	2.56e6	2.91e5	5.38e5	----	----	0.53	
1,2,3,4,7,8-HxCDF	36:25	2.50e6	2.07e6	6.32e5	4.66e5	----	----	1.21	
1,2,3,6,7,8-HxCDF	36:34	3.22e6	2.51e6	7.27e5	5.53e5	----	----	1.28	
2,3,4,6,7,8-HxCDF	37:18	2.61e6	2.09e6	6.11e5	4.95e5	----	----	1.25	
1,2,3,7,8,9-HxCDF	38:21	2.26e6	1.86e6	5.27e5	4.03e5	----	----	1.22	

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	37:28	1.73e6	1.34e6	4.67e5	3.65e5	----	----	1.29	
1,2,3,6,7,8-HxCDD-13C	37:36	3.82e7	3.06e7	8.88e6	7.32e6	----	----	1.25	
1,2,3,7,8,9-HxCDD-13C	37:55	4.20e7	3.27e7	9.13e6	7.16e6	----	----	1.29	
1,2,3,4,7,8-HxCDD	37:29	1.64e6	1.40e6	4.23e5	3.63e5	----	----	1.17	
1,2,3,6,7,8-HxCDD	37:37	2.09e6	1.55e6	4.64e5	3.59e5	----	----	1.34	
1,2,3,7,8,9-HxCDD	37:56	2.06e6	1.51e6	4.72e5	3.48e5	----	----	1.37	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	40:01	2.13e7	4.85e7	5.21e6	1.14e7	----	----	0.44	
1,2,3,4,7,8,9-HpCDF-13C	41:44	9.18e5	1.97e6	2.18e5	4.82e5	----	----	0.47	
1,2,3,4,6,7,8-HpCDF	40:02	2.71e6	2.39e6	6.54e5	6.32e5	----	----	1.13	
1,2,3,4,7,8,9-HpCDF	41:46	2.08e6	2.06e6	4.80e5	4.76e5	----	----	1.01	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	41:11	2.98e7	2.68e7	6.99e6	6.28e6	----	----	1.11	
1,2,3,4,6,7,8-HpCDD	41:12	1.63e6	1.51e6	4.05e5	3.46e5	----	----	1.08	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	44:40	3.38e6	3.86e6	6.84e5	7.29e5	----	----	0.88	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	44:26	6.02e7	6.46e7	1.17e7	1.24e7	----	----	0.93	
OCDD	44:27	2.81e6	3.39e6	6.08e5	6.81e5	----	----	0.83	

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PCDD/PCDF Detected Peak List

Client ID		Injected By	SMT
Lab ID	CS3-7604-246	Instrument ID	10MSHR05 (F)
Filename	F130408A_03	GC Column ID	USC508227H
Analyzed	04/08/2013 13:45	ICAL ID	F130408

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:36	1.09e8	1.39e8	1.50e7	1.93e7	----	----	0.78	
2,3,7,8-TCDF	23:38	5.10e6	6.69e6	7.13e5	9.90e5	----	----	0.76	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:51	7.93e7	9.67e7	1.09e7	1.29e7	----	----	0.82	
2,3,7,8-TCDD-13C	24:45	7.90e7	9.93e7	1.06e7	1.32e7	----	----	0.80	
2,3,7,8-TCDD-37Cl4	24:47	9.08e6		1.29e6		----	----		
2,3,7,8-TCDD	24:47	3.86e6	4.93e6	4.97e5	6.62e5	----	----	0.78	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:51	1.33e8	8.54e7	2.25e7	1.41e7	----	----	1.55	
2,3,4,7,8-PeCDF-13C	32:22	3.01e7	1.91e7	5.94e6	3.71e6	----	----	1.58	
1,2,3,7,8-PeCDF	30:53	3.21e7	2.04e7	5.31e6	3.37e6	----	----	1.57	
2,3,4,7,8-PeCDF	32:24	3.00e7	1.94e7	5.64e6	3.72e6	----	----	1.54	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:49	8.79e7	5.64e7	1.70e7	1.09e7	----	----	1.56	
1,2,3,7,8-PeCDD	32:50	1.34e7	2.16e7	2.73e6	4.39e6	----	----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	36:24	1.38e7	2.68e7	3.23e6	6.16e6	----	----	0.51	
1,2,3,6,7,8-HxCDF-13C	36:33	6.73e7	1.28e8	1.41e7	2.71e7	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	----	----		
1,2,3,7,8,9-HxCDF-13C	38:20	1.29e7	2.50e7	2.59e6	5.06e6	----	----	0.52	
1,2,3,4,7,8-HxCDF	36:25	2.53e7	2.05e7	5.55e6	4.65e6	----	----	1.24	
1,2,3,6,7,8-HxCDF	36:34	3.38e7	2.70e7	7.38e6	5.83e6	----	----	1.25	
2,3,4,6,7,8-HxCDF	37:18	2.59e7	2.02e7	5.95e6	4.56e6	----	----	1.28	
1,2,3,7,8,9-HxCDF	38:21	2.35e7	1.83e7	4.87e6	3.75e6	----	----	1.28	

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	37:29	1.67e7	1.24e7	4.11e6	3.35e6	----	----	1.35	
1,2,3,6,7,8-HxCDD-13C	37:36	7.39e7	5.98e7	1.73e7	1.41e7	----	----	1.24	
1,2,3,7,8,9-HxCDD-13C	37:55	8.14e7	6.39e7	1.67e7	1.35e7	----	----	1.27	
1,2,3,4,7,8-HxCDD	37:30	1.75e7	1.36e7	4.47e6	3.58e6	----	----	1.28	
1,2,3,6,7,8-HxCDD	37:37	2.05e7	1.63e7	4.61e6	3.74e6	----	----	1.26	
1,2,3,7,8,9-HxCDD	37:56	2.08e7	1.68e7	4.34e6	3.53e6	----	----	1.24	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	40:01	4.31e7	9.62e7	1.09e7	2.33e7	----	----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	41:45	9.42e6	2.00e7	2.12e6	4.38e6	----	----	0.47	
1,2,3,4,6,7,8-HpCDF	40:02	2.63e7	2.58e7	6.68e6	6.39e6	----	----	1.02	
1,2,3,4,7,8,9-HpCDF	41:46	2.17e7	2.04e7	4.83e6	4.64e6	----	----	1.07	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	41:11	5.80e7	5.46e7	1.35e7	1.30e7	----	----	1.06	
1,2,3,4,6,7,8-HpCDD	41:12	1.63e7	1.57e7	3.88e6	3.75e6	----	----	1.04	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	44:40	3.67e7	4.01e7	6.73e6	7.45e6	----	----	0.92	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	44:26	1.17e8	1.30e8	2.29e7	2.52e7	----	----	0.90	
OCDD	44:27	2.96e7	3.22e7	5.83e6	6.71e6	----	----	0.92	

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PCDD/PCDF Detected Peak List

Client ID		Injected By	SMT
Lab ID	CS4-7604-221	Instrument ID	10MSHR05 (F)
Filename	F130408A_07	GC Column ID	USC508227H
Analyzed	04/08/2013 16:53	ICAL ID	F130408

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:34	5.70e7	7.23e7	8.07e6	1.02e7	----	----	0.79	
2,3,7,8-TCDF	23:37	2.72e7	3.55e7	4.02e6	5.05e6	----	----	0.77	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:50	3.92e7	4.94e7	5.76e6	7.20e6	----	----	0.79	
2,3,7,8-TCDD-13C	24:44	4.10e7	5.02e7	5.53e6	6.71e6	----	----	0.82	
2,3,7,8-TCDD-37Cl4	24:47	4.72e7		6.19e6		----	----		
2,3,7,8-TCDD	24:46	2.05e7	2.62e7	2.80e6	3.64e6	----	----	0.78	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:50	6.84e7	4.38e7	1.18e7	7.40e6	----	----	1.56	
2,3,4,7,8-PeCDF-13C	32:21	1.66e8	1.05e8	3.23e7	2.07e7	----	----	1.58	
1,2,3,7,8-PeCDF	30:51	1.62e8	1.04e8	2.83e7	1.77e7	----	----	1.56	
2,3,4,7,8-PeCDF	32:22	1.69e8	1.11e8	3.40e7	2.16e7	----	----	1.52	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:48	4.55e7	3.03e7	9.12e6	5.92e6	----	----	1.50	
1,2,3,7,8-PeCDD	32:49	7.02e7	1.14e8	1.41e7	2.31e7	----	----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	36:23	7.78e7	1.47e8	1.87e7	3.52e7	----	----	0.53	
1,2,3,6,7,8-HxCDF-13C	36:33	3.71e7	7.13e7	8.37e6	1.58e7	----	----	0.52	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	----	----		
1,2,3,7,8,9-HxCDF-13C	38:19	7.23e7	1.39e8	1.68e7	3.18e7	----	----	0.52	
1,2,3,4,7,8-HxCDF	36:24	1.49e8	1.18e8	3.73e7	2.93e7	----	----	1.26	
1,2,3,6,7,8-HxCDF	36:33	1.64e8	1.32e8	3.80e7	3.01e7	----	----	1.24	
2,3,4,6,7,8-HxCDF	37:18	1.40e8	1.12e8	3.30e7	2.64e7	----	----	1.25	
1,2,3,7,8,9-HxCDF	38:20	1.36e8	1.05e8	3.24e7	2.54e7	----	----	1.29	

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	37:28	9.20e7	7.06e7	2.35e7	1.85e7	----	----	1.30	
1,2,3,6,7,8-HxCDD-13C	37:35	4.18e7	3.56e7	9.96e6	8.06e6	----	----	1.17	
1,2,3,7,8,9-HxCDD-13C	37:55	4.07e7	3.25e7	9.19e6	7.35e6	----	----	1.25	
1,2,3,4,7,8-HxCDD	37:28	9.95e7	7.93e7	2.54e7	1.99e7	----	----	1.25	
1,2,3,6,7,8-HxCDD	37:36	1.05e8	8.38e7	2.51e7	2.03e7	----	----	1.25	
1,2,3,7,8,9-HxCDD	37:55	1.07e8	8.56e7	2.47e7	1.96e7	----	----	1.25	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	40:00	2.09e7	4.64e7	5.14e6	1.11e7	----	----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	41:44	5.20e7	1.14e8	1.28e7	2.80e7	----	----	0.46	
1,2,3,4,6,7,8-HpCDF	40:01	1.34e8	1.28e8	3.50e7	3.21e7	----	----	1.05	
1,2,3,4,7,8,9-HpCDF	41:45	1.20e8	1.17e8	2.84e7	2.80e7	----	----	1.03	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	41:11	2.86e7	2.72e7	7.15e6	7.03e6	----	----	1.05	
1,2,3,4,6,7,8-HpCDD	41:11	8.06e7	7.47e7	2.09e7	1.93e7	----	----	1.08	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	44:39	1.96e8	2.17e8	4.15e7	4.64e7	----	----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	44:25	6.07e7	6.48e7	1.23e7	1.32e7	----	----	0.94	
OCDD	44:26	1.56e8	1.74e8	3.18e7	3.53e7	----	----	0.90	

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PCDD/PCDF Detected Peak List

Client ID		Injected By	SMT
Lab ID	CS5-7604-222	Instrument ID	10MSHR05 (F)
Filename	F130408A_06	GC Column ID	USC508227H
Analyzed	04/08/2013 16:06	ICAL ID	F130408

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:35	5.64e7	7.23e7	7.93e6	1.01e7	----	----	0.78	
2,3,7,8-TCDF	23:37	5.31e7	6.95e7	7.43e6	9.61e6	----	----	0.76	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:50	3.92e7	4.85e7	5.69e6	7.09e6	----	----	0.81	
2,3,7,8-TCDD-13C	24:45	3.98e7	4.95e7	5.31e6	6.70e6	----	----	0.80	
2,3,7,8-TCDD-37Cl4	24:47	9.29e7		1.26e7		----	----		
2,3,7,8-TCDD	24:47	4.00e7	5.17e7	5.43e6	7.07e6	----	----	0.77	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:50	6.95e7	4.47e7	1.21e7	7.82e6	----	----	1.55	
2,3,4,7,8-PeCDF-13C	32:21	3.37e8	2.12e8	7.05e7	4.34e7	----	----	1.59	
1,2,3,7,8-PeCDF	30:52	3.21e8	2.12e8	5.78e7	3.74e7	----	----	1.51	
2,3,4,7,8-PeCDF	32:22	3.52e8	2.28e8	7.29e7	4.65e7	----	----	1.55	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:48	4.70e7	2.98e7	9.57e6	6.06e6	----	----	1.58	
1,2,3,7,8-PeCDD	32:49	1.40e8	2.26e8	2.83e7	4.47e7	----	----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	36:23	1.60e8	3.09e8	3.85e7	7.47e7	----	----	0.52	
1,2,3,6,7,8-HxCDF-13C	36:33	4.29e7	8.15e7	9.07e6	1.74e7	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	----	----		
1,2,3,7,8,9-HxCDF-13C	38:19	1.49e8	2.86e8	3.54e7	6.62e7	----	----	0.52	
1,2,3,4,7,8-HxCDF	36:24	3.08e8	2.46e8	7.92e7	6.33e7	----	----	1.25	
1,2,3,6,7,8-HxCDF	36:33	3.40e8	2.67e8	8.15e7	6.51e7	----	----	1.27	
2,3,4,6,7,8-HxCDF	37:18	2.90e8	2.29e8	6.97e7	5.56e7	----	----	1.27	
1,2,3,7,8,9-HxCDF	38:20	2.74e8	2.22e8	6.63e7	5.30e7	----	----	1.24	

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	37:28	1.90e8	1.53e8	5.02e7	4.09e7	----	----	1.24	
1,2,3,6,7,8-HxCDD-13C	37:35	4.79e7	3.78e7	1.11e7	8.94e6	----	----	1.27	
1,2,3,7,8,9-HxCDD-13C	37:55	4.26e7	3.40e7	9.74e6	7.60e6	----	----	1.25	
1,2,3,4,7,8-HxCDD	37:29	2.07e8	1.67e8	5.62e7	4.49e7	----	----	1.24	
1,2,3,6,7,8-HxCDD	37:36	2.13e8	1.70e8	5.18e7	4.18e7	----	----	1.25	
1,2,3,7,8,9-HxCDD	37:55	2.15e8	1.73e8	4.96e7	4.04e7	----	----	1.24	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	40:00	2.18e7	4.83e7	6.09e6	1.33e7	----	----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	41:45	1.07e8	2.35e8	2.80e7	6.11e7	----	----	0.45	
1,2,3,4,6,7,8-HpCDF	40:00	2.72e8	2.66e8	7.11e7	6.83e7	----	----	1.02	
1,2,3,4,7,8,9-HpCDF	41:45	2.49e8	2.46e8	6.19e7	6.08e7	----	----	1.01	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	41:11	3.00e7	2.81e7	7.80e6	7.17e6	----	----	1.07	
1,2,3,4,6,7,8-HpCDD	41:12	1.66e8	1.56e8	4.28e7	4.22e7	----	----	1.07	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	44:40	4.16e8	4.51e8	8.88e7	9.77e7	----	----	0.92	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	44:26	6.26e7	6.87e7	1.35e7	1.48e7	----	----	0.91	
OCDD	44:26	3.15e8	3.60e8	6.65e7	7.70e7	----	----	0.87	

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PCDD/PCDF Detected Peak List

Client ID		Injected By	BAL
Lab ID	CS1-7604-218	Instrument ID	10MSHR09 (P)
Filename	P121229A_06	GC Column ID	USC473217H
Analyzed	12/29/2012 19:55	ICAL ID	P121229M23

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:19	2.07e7	2.58e7	3.45e6	4.21e6	----	----	0.80	
2,3,7,8-TCDF	21:20	1.11e5	1.35e5	1.66e4	2.18e4	----	----	0.83	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:32	1.40e7	1.72e7	2.37e6	2.84e6	----	----	0.81	
2,3,7,8-TCDD-13C	22:22	1.43e7	1.80e7	2.21e6	2.84e6	----	----	0.80	
2,3,7,8-TCDD-37Cl4	22:22	1.66e5		2.37e4		----	----		
2,3,7,8-TCDD	22:22	7.86e4	8.91e4	1.51e4	1.65e4	----	----	0.88	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	27:41	2.42e7	1.54e7	5.23e6	3.28e6	----	----	1.57	
2,3,4,7,8-PeCDF-13C	29:01	5.76e5	3.90e5	1.46e5	9.59e4	----	----	1.47	
1,2,3,7,8-PeCDF	27:42	6.23e5	4.09e5	1.31e5	8.88e4	----	----	1.52	
2,3,4,7,8-PeCDF	29:02	6.22e5	3.98e5	1.41e5	1.03e5	----	----	1.57	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	29:25	1.60e7	1.01e7	3.97e6	2.47e6	----	----	1.59	
1,2,3,7,8-PeCDD	29:25	2.70e5	4.03e5	6.43e4	1.00e5	----	----	0.67	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	32:41	3.32e5	5.87e5	1.00e5	1.72e5	----	----	0.56	
1,2,3,6,7,8-HxCDF-13C	32:50	1.10e7	2.07e7	3.10e6	5.73e6	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	----	----		
1,2,3,7,8,9-HxCDF-13C	34:30	2.52e5	4.62e5	6.35e4	1.40e5	----	----	0.55	
1,2,3,4,7,8-HxCDF	32:43	5.05e5	3.88e5	1.47e5	1.14e5	----	----	1.30	
1,2,3,6,7,8-HxCDF	32:51	5.67e5	4.37e5	1.66e5	1.14e5	----	----	1.30	
2,3,4,6,7,8-HxCDF	33:32	4.78e5	3.85e5	1.47e5	1.10e5	----	----	1.24	
1,2,3,7,8,9-HxCDF	34:31	4.53e5	3.55e5	1.38e5	1.14e5	----	----	1.28	

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	33:42	3.50e5	2.61e5	1.02e5	8.36e4	----	----	1.34	
1,2,3,6,7,8-HxCDD-13C	33:49	1.26e7	9.97e6	3.69e6	2.97e6	----	----	1.26	
1,2,3,7,8,9-HxCDD-13C	34:07	1.33e7	1.08e7	3.90e6	3.21e6	----	----	1.23	
1,2,3,4,7,8-HxCDD	33:43	3.46e5	2.73e5	1.01e5	8.90e4	----	----	1.27	
1,2,3,6,7,8-HxCDD	33:50	3.51e5	2.72e5	1.05e5	8.63e4	----	----	1.29	
1,2,3,7,8,9-HxCDD	34:07	3.63e5	2.84e5	1.14e5	9.15e4	----	----	1.28	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:06	6.56e6	1.43e7	2.11e6	4.66e6	----	----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	37:45	1.39e5	3.46e5	4.23e4	1.13e5	----	----	0.40	
1,2,3,4,6,7,8-HpCDF	36:07	3.97e5	4.03e5	1.26e5	1.24e5	----	----	0.99	
1,2,3,4,7,8,9-HpCDF	37:46	3.17e5	3.08e5	1.12e5	9.84e4	----	----	1.03	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:14	9.60e6	9.11e6	3.24e6	2.99e6	----	----	1.05	
1,2,3,4,6,7,8-HpCDD	37:15	2.60e5	2.46e5	8.29e4	8.87e4	----	----	1.06	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:25	5.02e5	5.56e5	1.33e5	1.57e5	----	----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	40:12	1.61e7	1.76e7	4.73e6	5.07e6	----	----	0.92	
OCDD	40:13	3.84e5	4.52e5	1.13e5	1.28e5	----	----	0.85	

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PCDD/PCDF Detected Peak List

Client ID		Injected By	BAL
Lab ID	CS2-7604-219	Instrument ID	10MSHR09 (P)
Filename	P121229A_05	GC Column ID	USC473217H
Analyzed	12/29/2012 19:11	ICAL ID	P121229M23

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:20	1.75e7	2.17e7	2.87e6	3.59e6	----	----	0.81	
2,3,7,8-TCDF	21:21	1.75e5	2.30e5	2.74e4	4.41e4	----	----	0.76	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:33	1.19e7	1.48e7	1.97e6	2.47e6	----	----	0.80	
2,3,7,8-TCDD-13C	22:22	1.21e7	1.54e7	2.02e6	2.50e6	----	----	0.79	
2,3,7,8-TCDD-37Cl4	22:23	2.73e5		4.69e4		----	----		
2,3,7,8-TCDD	22:22	1.44e5	1.67e5	1.96e4	2.70e4	----	----	0.86	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	27:41	2.04e7	1.26e7	4.48e6	2.84e6	----	----	1.61	
2,3,4,7,8-PeCDF-13C	29:02	9.70e5	6.31e5	2.37e5	1.59e5	----	----	1.54	
1,2,3,7,8-PeCDF	27:43	1.02e6	6.47e5	2.24e5	1.63e5	----	----	1.57	
2,3,4,7,8-PeCDF	29:03	1.03e6	6.40e5	2.58e5	1.45e5	----	----	1.60	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	29:25	1.37e7	8.64e6	3.44e6	2.13e6	----	----	1.59	
1,2,3,7,8-PeCDD	29:26	4.66e5	6.89e5	1.28e5	1.74e5	----	----	0.68	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	32:42	4.96e5	9.45e5	1.46e5	2.94e5	----	----	0.53	
1,2,3,6,7,8-HxCDF-13C	32:50	9.20e6	1.76e7	2.69e6	5.25e6	----	----	0.52	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	----	----		
1,2,3,7,8,9-HxCDF-13C	34:31	4.21e5	7.56e5	1.22e5	2.25e5	----	----	0.56	
1,2,3,4,7,8-HxCDF	32:43	8.64e5	6.79e5	2.75e5	2.09e5	----	----	1.27	
1,2,3,6,7,8-HxCDF	32:51	9.28e5	7.16e5	2.66e5	2.04e5	----	----	1.30	
2,3,4,6,7,8-HxCDF	33:32	8.31e5	6.53e5	2.37e5	1.90e5	----	----	1.27	
1,2,3,7,8,9-HxCDF	34:32	7.96e5	5.94e5	2.27e5	1.78e5	----	----	1.34	

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	33:42	5.24e5	4.22e5	1.72e5	1.40e5	----	----	1.24	
1,2,3,6,7,8-HxCDD-13C	33:49	1.10e7	8.73e6	3.48e6	2.78e6	----	----	1.26	
1,2,3,7,8,9-HxCDD-13C	34:07	1.17e7	9.31e6	3.52e6	2.77e6	----	----	1.26	
1,2,3,4,7,8-HxCDD	33:43	5.63e5	4.68e5	1.80e5	1.53e5	----	----	1.20	
1,2,3,6,7,8-HxCDD	33:50	5.78e5	4.84e5	1.76e5	1.46e5	----	----	1.19	
1,2,3,7,8,9-HxCDD	34:08	6.28e5	4.84e5	1.93e5	1.44e5	----	----	1.30	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:07	5.54e6	1.20e7	1.79e6	3.75e6	----	----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	37:46	2.37e5	4.97e5	8.04e4	1.60e5	----	----	0.48	
1,2,3,4,6,7,8-HpCDF	36:07	6.70e5	6.25e5	2.19e5	1.97e5	----	----	1.07	
1,2,3,4,7,8,9-HpCDF	37:47	5.01e5	5.24e5	1.81e5	1.85e5	----	----	0.96	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:14	8.44e6	7.93e6	2.83e6	2.69e6	----	----	1.06	
1,2,3,4,6,7,8-HpCDD	37:15	4.52e5	3.87e5	1.52e5	1.34e5	----	----	1.17	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:26	8.57e5	9.31e5	2.36e5	2.63e5	----	----	0.92	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	40:13	1.40e7	1.50e7	3.83e6	4.18e6	----	----	0.93	
OCDD	40:13	6.41e5	7.72e5	1.79e5	2.30e5	----	----	0.83	

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PCDD/PCDF Detected Peak List

Client ID		Injected By	BAL
Lab ID	CS3-7604-246	Instrument ID	10MSHR09 (P)
Filename	P121229A_07	GC Column ID	USC473217H
Analyzed	12/29/2012 20:40	ICAL ID	P121229M23

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:19	1.81e7	2.22e7	2.91e6	3.62e6	----	----	0.81	
2,3,7,8-TCDF	21:21	9.75e5	1.20e6	1.54e5	1.86e5	----	----	0.81	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:32	1.24e7	1.51e7	1.99e6	2.50e6	----	----	0.82	
2,3,7,8-TCDD-13C	22:22	1.27e7	1.58e7	1.99e6	2.53e6	----	----	0.80	
2,3,7,8-TCDD-37Cl4	22:23	1.43e6		2.38e5		----	----		
2,3,7,8-TCDD	22:23	6.61e5	8.53e5	1.06e5	1.35e5	----	----	0.78	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	27:41	2.08e7	1.36e7	4.58e6	2.96e6	----	----	1.53	
2,3,4,7,8-PeCDF-13C	29:02	4.84e6	3.13e6	1.15e6	7.42e5	----	----	1.55	
1,2,3,7,8-PeCDF	27:42	5.55e6	3.46e6	1.18e6	7.47e5	----	----	1.60	
2,3,4,7,8-PeCDF	29:02	5.51e6	3.43e6	1.37e6	8.22e5	----	----	1.60	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	29:25	1.39e7	8.88e6	3.35e6	2.16e6	----	----	1.56	
1,2,3,7,8-PeCDD	29:26	2.31e6	3.67e6	5.60e5	8.86e5	----	----	0.63	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	32:42	2.39e6	4.38e6	6.80e5	1.26e6	----	----	0.54	
1,2,3,6,7,8-HxCDF-13C	32:50	9.66e6	1.82e7	2.89e6	5.30e6	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	----	----		
1,2,3,7,8,9-HxCDF-13C	34:30	2.13e6	4.07e6	6.09e5	1.20e6	----	----	0.52	
1,2,3,4,7,8-HxCDF	32:43	4.68e6	3.59e6	1.39e6	1.05e6	----	----	1.30	
1,2,3,6,7,8-HxCDF	32:51	4.99e6	3.95e6	1.44e6	1.17e6	----	----	1.26	
2,3,4,6,7,8-HxCDF	33:32	4.33e6	3.45e6	1.27e6	1.08e6	----	----	1.26	
1,2,3,7,8,9-HxCDF	34:31	4.09e6	3.18e6	1.18e6	9.86e5	----	----	1.29	

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	33:42	2.70e6	2.13e6	8.53e5	6.62e5	----	----	1.27	
1,2,3,6,7,8-HxCDD-13C	33:49	1.14e7	8.97e6	3.46e6	2.74e6	----	----	1.27	
1,2,3,7,8,9-HxCDD-13C	34:07	1.22e7	9.59e6	3.63e6	2.83e6	----	----	1.27	
1,2,3,4,7,8-HxCDD	33:43	3.08e6	2.42e6	9.75e5	7.82e5	----	----	1.27	
1,2,3,6,7,8-HxCDD	33:50	3.15e6	2.44e6	9.52e5	7.40e5	----	----	1.29	
1,2,3,7,8,9-HxCDD	34:08	3.38e6	2.58e6	9.56e5	7.65e5	----	----	1.31	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:06	5.75e6	1.25e7	1.92e6	4.19e6	----	----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	37:45	1.25e6	2.75e6	4.10e5	9.24e5	----	----	0.46	
1,2,3,4,6,7,8-HpCDF	36:07	3.45e6	3.29e6	1.16e6	1.12e6	----	----	1.05	
1,2,3,4,7,8,9-HpCDF	37:46	2.89e6	2.71e6	9.58e5	8.97e5	----	----	1.06	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:14	8.44e6	8.08e6	2.96e6	2.83e6	----	----	1.04	
1,2,3,4,6,7,8-HpCDD	37:15	2.28e6	2.07e6	7.63e5	7.23e5	----	----	1.10	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:25	4.56e6	4.99e6	1.33e6	1.36e6	----	----	0.91	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	40:12	1.41e7	1.54e7	4.03e6	4.27e6	----	----	0.91	
OCDD	40:13	3.63e6	4.01e6	1.06e6	1.17e6	----	----	0.90	

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PCDD/PCDF Detected Peak List

Client ID		Injected By	BAL
Lab ID	CS4-7604-221	Instrument ID	10MSHR09 (P)
Filename	P121229A_09	GC Column ID	USC473217H
Analyzed	12/29/2012 22:09	ICAL ID	P121229M23

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:19	1.75e7	2.17e7	2.77e6	3.56e6	----	----	0.81	
2,3,7,8-TCDF	21:20	9.03e6	1.17e7	1.48e6	1.91e6	----	----	0.77	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:32	1.19e7	1.47e7	2.00e6	2.49e6	----	----	0.81	
2,3,7,8-TCDD-13C	22:21	1.25e7	1.55e7	2.00e6	2.49e6	----	----	0.81	
2,3,7,8-TCDD-37Cl4	22:22	1.44e7		2.31e6		----	----		
2,3,7,8-TCDD	22:22	6.67e6	8.46e6	1.04e6	1.39e6	----	----	0.79	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	27:41	2.15e7	1.35e7	4.58e6	2.88e6	----	----	1.59	
2,3,4,7,8-PeCDF-13C	29:01	4.99e7	3.09e7	1.18e7	7.52e6	----	----	1.62	
1,2,3,7,8-PeCDF	27:42	5.42e7	3.46e7	1.22e7	7.69e6	----	----	1.57	
2,3,4,7,8-PeCDF	29:02	5.60e7	3.60e7	1.39e7	8.75e6	----	----	1.55	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	29:25	1.42e7	8.93e6	3.55e6	2.26e6	----	----	1.59	
1,2,3,7,8-PeCDD	29:26	2.36e7	3.68e7	5.91e6	9.59e6	----	----	0.64	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	32:41	2.36e7	4.45e7	7.03e6	1.35e7	----	----	0.53	
1,2,3,6,7,8-HxCDF-13C	32:50	1.09e7	1.99e7	2.97e6	5.53e6	----	----	0.55	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	----	----		
1,2,3,7,8,9-HxCDF-13C	34:30	2.22e7	4.18e7	6.82e6	1.25e7	----	----	0.53	
1,2,3,4,7,8-HxCDF	32:42	4.75e7	3.76e7	1.35e7	1.09e7	----	----	1.26	
1,2,3,6,7,8-HxCDF	32:51	5.00e7	3.94e7	1.47e7	1.16e7	----	----	1.27	
2,3,4,6,7,8-HxCDF	33:32	4.45e7	3.54e7	1.38e7	1.10e7	----	----	1.26	
1,2,3,7,8,9-HxCDF	34:31	4.34e7	3.42e7	1.31e7	1.04e7	----	----	1.27	

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	33:41	2.80e7	2.20e7	8.74e6	6.73e6	----	----	1.28	
1,2,3,6,7,8-HxCDD-13C	33:48	1.20e7	9.62e6	3.50e6	2.89e6	----	----	1.24	
1,2,3,7,8,9-HxCDD-13C	34:07	1.25e7	9.78e6	3.65e6	2.91e6	----	----	1.28	
1,2,3,4,7,8-HxCDD	33:42	3.25e7	2.57e7	9.97e6	8.02e6	----	----	1.26	
1,2,3,6,7,8-HxCDD	33:50	3.23e7	2.56e7	9.32e6	7.38e6	----	----	1.26	
1,2,3,7,8,9-HxCDD	34:07	3.38e7	2.64e7	1.01e7	7.97e6	----	----	1.28	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:06	5.63e6	1.26e7	1.83e6	4.11e6	----	----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	37:45	1.29e7	2.86e7	4.15e6	9.38e6	----	----	0.45	
1,2,3,4,6,7,8-HpCDF	36:07	3.47e7	3.35e7	1.18e7	1.10e7	----	----	1.04	
1,2,3,4,7,8,9-HpCDF	37:46	3.10e7	2.94e7	1.05e7	1.02e7	----	----	1.06	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:14	8.99e6	8.36e6	2.91e6	2.67e6	----	----	1.07	
1,2,3,4,6,7,8-HpCDD	37:14	2.38e7	2.21e7	7.67e6	7.34e6	----	----	1.08	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:25	4.89e7	5.31e7	1.43e7	1.55e7	----	----	0.92	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	40:12	1.47e7	1.59e7	4.24e6	4.68e6	----	----	0.92	
OCDD	40:13	3.65e7	4.10e7	1.05e7	1.16e7	----	----	0.89	

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PCDD/PCDF Detected Peak List

Client ID		Injected By	BAL
Lab ID	CS5-7604-222	Instrument ID	10MSHR09 (P)
Filename	P121229A_10	GC Column ID	USC473217H
Analyzed	12/29/2012 22:54	ICAL ID	P121229M23

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:19	1.75e7	2.19e7	2.97e6	3.63e6	----	----	0.80	
2,3,7,8-TCDF	21:20	1.84e7	2.33e7	3.02e6	3.91e6	----	----	0.79	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:32	1.17e7	1.45e7	1.94e6	2.44e6	----	----	0.81	
2,3,7,8-TCDD-13C	22:22	1.24e7	1.52e7	1.93e6	2.44e6	----	----	0.82	
2,3,7,8-TCDD-37Cl4	22:22	2.92e7		4.69e6		----	----		
2,3,7,8-TCDD	22:22	1.32e7	1.66e7	2.15e6	2.63e6	----	----	0.80	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	27:41	2.21e7	1.38e7	4.66e6	2.93e6	----	----	1.60	
2,3,4,7,8-PeCDF-13C	29:02	1.03e8	6.41e7	2.41e7	1.53e7	----	----	1.60	
1,2,3,7,8-PeCDF	27:42	1.11e8	6.89e7	2.43e7	1.55e7	----	----	1.61	
2,3,4,7,8-PeCDF	29:02	1.17e8	7.26e7	2.83e7	1.78e7	----	----	1.61	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	29:25	1.45e7	9.03e6	3.54e6	2.24e6	----	----	1.60	
1,2,3,7,8-PeCDD	29:26	4.71e7	7.46e7	1.18e7	1.86e7	----	----	0.63	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	32:42	4.84e7	9.16e7	1.37e7	2.59e7	----	----	0.53	
1,2,3,6,7,8-HxCDF-13C	32:50	1.21e7	2.18e7	3.34e6	6.09e6	----	----	0.55	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	----	----		
1,2,3,7,8,9-HxCDF-13C	34:30	4.64e7	8.68e7	1.33e7	2.53e7	----	----	0.53	
1,2,3,4,7,8-HxCDF	32:43	9.82e7	7.70e7	3.09e7	2.36e7	----	----	1.27	
1,2,3,6,7,8-HxCDF	32:51	1.04e8	8.22e7	3.04e7	2.42e7	----	----	1.26	
2,3,4,6,7,8-HxCDF	33:32	8.99e7	7.30e7	2.78e7	2.25e7	----	----	1.23	
1,2,3,7,8,9-HxCDF	34:31	8.92e7	7.06e7	2.66e7	2.15e7	----	----	1.26	

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	33:42	5.67e7	4.44e7	1.80e7	1.40e7	----	----	1.28	
1,2,3,6,7,8-HxCDD-13C	33:49	1.34e7	1.03e7	3.91e6	3.04e6	----	----	1.30	
1,2,3,7,8,9-HxCDD-13C	34:07	1.26e7	1.01e7	3.79e6	2.97e6	----	----	1.24	
1,2,3,4,7,8-HxCDD	33:43	6.81e7	5.42e7	2.15e7	1.70e7	----	----	1.26	
1,2,3,6,7,8-HxCDD	33:50	6.59e7	5.23e7	2.04e7	1.59e7	----	----	1.26	
1,2,3,7,8,9-HxCDD	34:08	6.90e7	5.42e7	2.14e7	1.67e7	----	----	1.27	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:06	5.90e6	1.26e7	1.97e6	4.15e6	----	----	0.47	
1,2,3,4,7,8,9-HpCDF-13C	37:46	2.73e7	5.94e7	8.98e6	1.92e7	----	----	0.46	
1,2,3,4,6,7,8-HpCDF	36:07	7.22e7	6.79e7	2.39e7	2.22e7	----	----	1.06	
1,2,3,4,7,8,9-HpCDF	37:47	6.48e7	6.20e7	2.13e7	2.01e7	----	----	1.04	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:14	9.19e6	8.37e6	3.13e6	2.72e6	----	----	1.10	
1,2,3,4,6,7,8-HpCDD	37:15	4.71e7	4.57e7	1.57e7	1.49e7	----	----	1.03	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:25	1.01e8	1.13e8	2.91e7	3.18e7	----	----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	40:12	1.53e7	1.67e7	4.45e6	4.80e6	----	----	0.92	
OCDD	40:13	7.87e7	8.66e7	2.34e7	2.51e7	----	----	0.91	

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PCDD/PCDF Detected Peak List

Client ID		Injected By	SMT
Lab ID	CS3-7604-246	Instrument ID	10MSHR05 (F)
Filename	F130703A_01	GC Column ID	USC508227H
Analyzed	07/03/2013 08:45	ICAL ID	F130408

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	20:36	3.51e8	4.51e8	4.24e7	5.50e7	----	----	0.78	
2,3,7,8-TCDF	20:38	1.75e7	2.18e7	2.15e6	2.70e6	----	----	0.80	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	20:47	2.86e8	3.55e8	3.48e7	4.36e7	----	----	0.81	
2,3,7,8-TCDD-13C	21:43	2.86e8	3.58e8	3.27e7	4.14e7	----	----	0.80	
2,3,7,8-TCDD-37Cl4	21:44	3.32e7		3.67e6		----	----		
2,3,7,8-TCDD	21:45	1.37e7	1.74e7	1.58e6	1.96e6	----	----	0.78	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	28:50	4.02e8	2.56e8	4.62e7	2.98e7	----	----	1.57	
2,3,4,7,8-PeCDF-13C	30:35	9.79e7	6.31e7	1.39e7	8.86e6	----	----	1.55	
1,2,3,7,8-PeCDF	28:51	1.01e8	6.52e7	1.18e7	7.65e6	----	----	1.55	
2,3,4,7,8-PeCDF	30:36	1.03e8	6.57e7	1.50e7	9.30e6	----	----	1.57	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:04	3.17e8	2.03e8	4.86e7	3.09e7	----	----	1.56	
1,2,3,7,8-PeCDD	31:05	4.65e7	7.45e7	7.12e6	1.11e7	----	----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	34:40	4.51e7	8.59e7	9.71e6	1.87e7	----	----	0.52	
1,2,3,6,7,8-HxCDF-13C	34:49	2.11e8	3.98e8	3.86e7	7.22e7	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	----	----		
1,2,3,7,8,9-HxCDF-13C	36:27	4.58e7	8.87e7	8.39e6	1.56e7	----	----	0.52	
1,2,3,4,7,8-HxCDF	34:41	8.87e7	7.08e7	1.82e7	1.47e7	----	----	1.25	
1,2,3,6,7,8-HxCDF	34:51	1.10e8	8.77e7	1.93e7	1.55e7	----	----	1.26	
2,3,4,6,7,8-HxCDF	35:32	9.53e7	7.49e7	1.81e7	1.46e7	----	----	1.27	
1,2,3,7,8,9-HxCDF	36:28	8.83e7	7.03e7	1.59e7	1.23e7	----	----	1.26	

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	35:42	5.04e7	4.08e7	1.26e7	1.05e7	----	----	1.24	
1,2,3,6,7,8-HxCDD-13C	35:49	2.69e8	2.16e8	5.29e7	4.18e7	----	----	1.24	
1,2,3,7,8,9-HxCDD-13C	36:07	2.95e8	2.26e8	5.28e7	4.07e7	----	----	1.30	
1,2,3,4,7,8-HxCDD	35:43	5.89e7	4.71e7	1.38e7	1.08e7	----	----	1.25	
1,2,3,6,7,8-HxCDD	35:50	7.61e7	6.03e7	1.41e7	1.14e7	----	----	1.26	
1,2,3,7,8,9-HxCDD	36:08	7.61e7	5.95e7	1.33e7	1.08e7	----	----	1.28	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:07	1.46e8	3.20e8	2.70e7	5.78e7	----	----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	39:43	3.20e7	7.00e7	6.19e6	1.34e7	----	----	0.46	
1,2,3,4,6,7,8-HpCDF	38:08	8.53e7	8.29e7	1.60e7	1.56e7	----	----	1.03	
1,2,3,4,7,8,9-HpCDF	39:44	6.99e7	6.89e7	1.32e7	1.31e7	----	----	1.01	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:15	2.16e8	2.03e8	4.22e7	3.91e7	----	----	1.06	
1,2,3,4,6,7,8-HpCDD	39:15	5.94e7	5.56e7	1.12e7	1.10e7	----	----	1.07	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:09	1.09e8	1.22e8	1.79e7	1.98e7	----	----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:01	3.90e8	4.25e8	6.35e7	6.97e7	----	----	0.92	
OCDD	42:01	9.13e7	1.05e8	1.58e7	1.75e7	----	----	0.87	

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PCDD/PCDF Detected Peak List

Client ID		Injected By	BAL
Lab ID	CS3-7604-246	Instrument ID	10MSHR09 (P)
Filename	P130706B_03	GC Column ID	USC473217H
Analyzed	07/06/2013 15:09	ICAL ID	P121229M23

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	19:28	3.77e7	4.67e7	5.19e6	6.56e6	----	----	0.81	
2,3,7,8-TCDF	19:29	1.85e6	2.46e6	2.65e5	3.36e5	----	----	0.75	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	19:39	2.55e7	3.17e7	3.76e6	4.68e6	----	----	0.81	
2,3,7,8-TCDD-13C	20:28	2.45e7	3.04e7	3.27e6	4.15e6	----	----	0.80	
2,3,7,8-TCDD-37Cl4	20:30	2.93e6		3.85e5		----	----		
2,3,7,8-TCDD	20:31	1.34e6	1.66e6	1.73e5	2.10e5	----	----	0.81	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	26:19	3.74e7	2.39e7	6.10e6	4.00e6	----	----	1.56	
2,3,4,7,8-PeCDF-13C	27:46	8.85e6	5.79e6	1.73e6	1.06e6	----	----	1.53	
1,2,3,7,8-PeCDF	26:20	9.59e6	6.16e6	1.53e6	9.60e5	----	----	1.56	
2,3,4,7,8-PeCDF	27:48	9.59e6	6.07e6	1.81e6	1.11e6	----	----	1.58	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	28:12	2.39e7	1.51e7	4.41e6	2.82e6	----	----	1.58	
1,2,3,7,8-PeCDD	28:14	4.01e6	6.32e6	7.75e5	1.21e6	----	----	0.63	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	31:36	3.70e6	6.94e6	9.34e5	1.68e6	----	----	0.53	
1,2,3,6,7,8-HxCDF-13C	31:45	1.72e7	3.22e7	3.93e6	7.38e6	----	----	0.54	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	----	----		
1,2,3,7,8,9-HxCDF-13C	33:25	3.41e6	6.73e6	7.34e5	1.41e6	----	----	0.51	
1,2,3,4,7,8-HxCDF	31:37	7.01e6	5.61e6	1.76e6	1.47e6	----	----	1.25	
1,2,3,6,7,8-HxCDF	31:46	8.67e6	7.03e6	1.83e6	1.49e6	----	----	1.23	
2,3,4,6,7,8-HxCDF	32:29	7.35e6	5.87e6	1.75e6	1.36e6	----	----	1.25	
1,2,3,7,8,9-HxCDF	33:26	6.47e6	5.11e6	1.31e6	1.09e6	----	----	1.27	

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	32:39	4.12e6	3.23e6	1.09e6	8.49e5	----	----	1.28	
1,2,3,6,7,8-HxCDD-13C	32:46	1.94e7	1.50e7	4.57e6	3.60e6	----	----	1.30	
1,2,3,7,8,9-HxCDD-13C	33:04	2.03e7	1.66e7	4.48e6	3.54e6	----	----	1.22	
1,2,3,4,7,8-HxCDD	32:39	4.64e6	3.62e6	1.24e6	1.02e6	----	----	1.28	
1,2,3,6,7,8-HxCDD	32:46	5.64e6	4.63e6	1.31e6	1.02e6	----	----	1.22	
1,2,3,7,8,9-HxCDD	33:05	5.68e6	4.46e6	1.20e6	1.02e6	----	----	1.27	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	35:04	1.06e7	2.29e7	2.50e6	5.38e6	----	----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	36:42	2.10e6	4.88e6	4.53e5	1.05e6	----	----	0.43	
1,2,3,4,6,7,8-HpCDF	35:05	6.47e6	6.14e6	1.60e6	1.48e6	----	----	1.05	
1,2,3,4,7,8,9-HpCDF	36:43	5.16e6	4.85e6	1.11e6	1.11e6	----	----	1.06	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	36:12	1.51e7	1.39e7	3.35e6	3.29e6	----	----	1.09	
1,2,3,4,6,7,8-HpCDD	36:13	3.80e6	3.62e6	8.93e5	8.71e5	----	----	1.05	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	39:08	8.08e6	9.29e6	1.64e6	1.79e6	----	----	0.87	

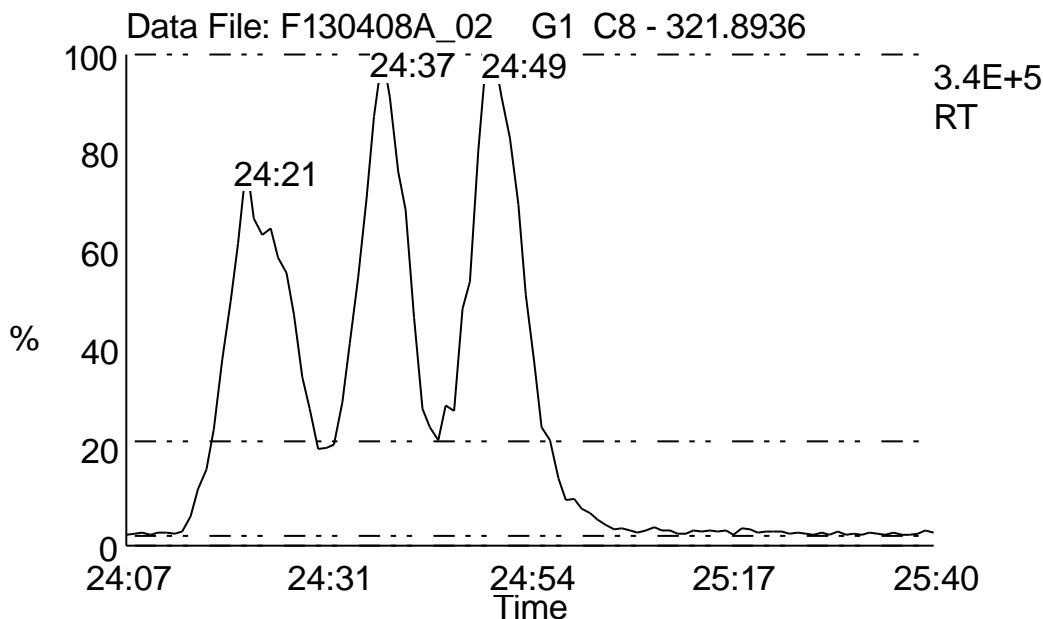
Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	38:58	2.61e7	2.89e7	5.08e6	5.79e6	----	----	0.90	
OCDD	38:59	6.60e6	7.28e6	1.37e6	1.46e6	----	----	0.91	

REPORT OF LABORATORY ANALYSIS

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Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID	CS3/CPM-7604-254	Injected By	SMT
Raw Data File	F130408A_02	Instrument ID	10MSHR05 (F)
Date Analyzed	4/8/2013	GC Column Type	DB-5MS 0.25 uM
Time Analyzed	12:46	GC Column S/N	USC508227H
Resolution	19.8%		



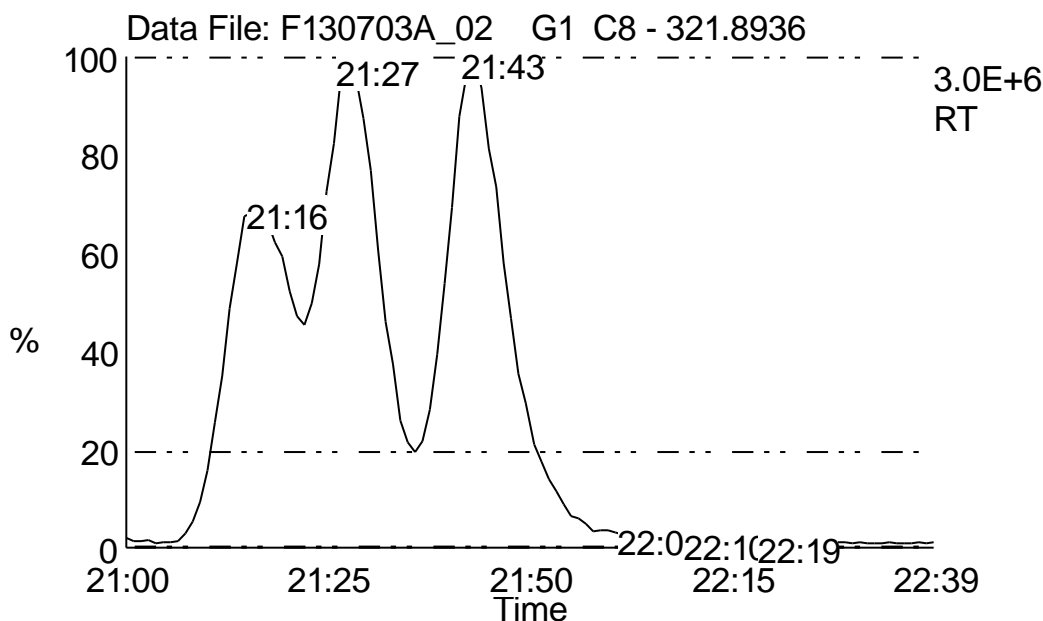
Group	Mass	First Eluter	Last Eluter
TCDF	305.8987	18:55	26:46
PeCDF	341.8567	26:32	33:48
HxCDF	373.8207	34:46	38:21
HpCDF	407.7818	40:01	41:47
OCDF	441.7428	44:41	0:00
TCDD	321.8936	20:30	26:22
PeCDD	357.8517	29:16	33:25
HxCDD	391.8127	35:32	37:56
HpCDD	425.7737	40:21	41:13
OCDD	459.7347	44:28	0:00
1234-TCDD-13C(RS)	331.9367	23:53	0:00
123789-HxCDD-13C(RS)	401.8559	37:55	0:00

REPORT OF LABORATORY ANALYSIS

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Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID	CS3/CPM-7604-272	Injected By	SMT
Raw Data File	F130703A_02	Instrument ID	10MSHR05 (F)
Date Analyzed	7/3/2013	GC Column Type	DB-5MS 0.25 uM
Time Analyzed	09:29	GC Column S/N	USC508227H
Resolution	19.2%		



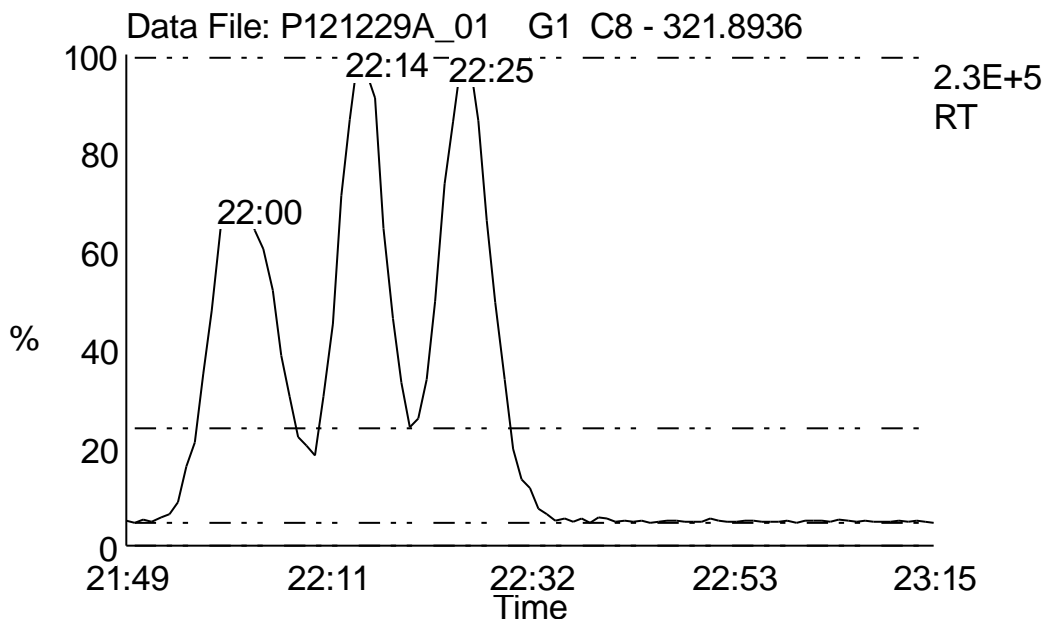
Group	Mass	First Eluter	Last Eluter
TCDF	305.8987	16:05	23:26
PeCDF	341.8567	23:25	31:58
HxCDF	373.8207	33:06	36:26
HpCDF	407.7818	38:07	39:42
OCDF	441.7428	42:08	0:00
TCDD	321.8936	17:38	23:09
PeCDD	357.8517	26:45	31:38
HxCDD	391.8127	33:51	36:06
HpCDD	425.7737	38:27	39:15
OCDD	459.7347	41:59	0:00
1234-TCDD-13C(RS)	331.9367	20:45	0:00
123789-HxCDD-13C(RS)	401.8559	36:06	0:00

REPORT OF LABORATORY ANALYSIS

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Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID	CS3/CPM-7604-248	Injected By	BAL
Raw Data File	P121229A_01	Instrument ID	10MSHR09 (P)
Date Analyzed	12/29/2012	GC Column Type	DB-5MS 0.25 uM
Time Analyzed	15:57	GC Column S/N	USC473217H
Resolution	20.2%		



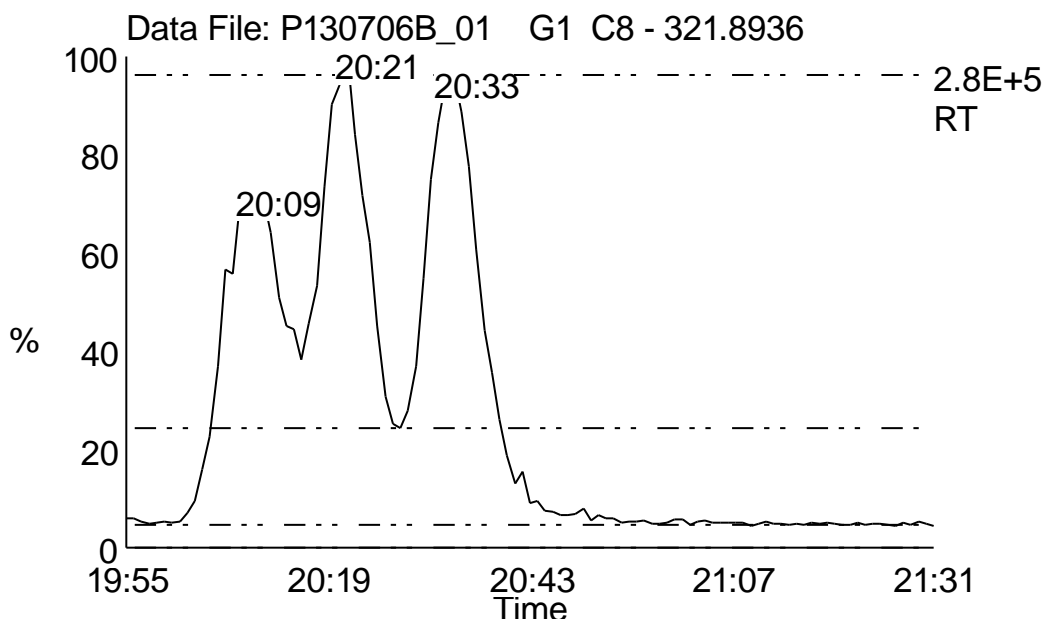
Group	Mass	First Eluter	Last Eluter
TCDF	305.8987	17:07	24:08
PeCDF	341.8567	23:56	30:19
HxCDF	373.8207	31:12	34:32
HpCDF	407.7818	36:07	37:46
OCDF	441.7428	40:26	0:00
TCDD	321.8936	18:33	23:50
PeCDD	357.8517	26:20	29:58
HxCDD	391.8127	31:54	34:09
HpCDD	425.7737	36:25	37:15
OCDD	459.7347	40:13	0:00
1234-TCDD-13C(RS)	331.9367	21:35	0:00
123789-HxCDD-13C(RS)	401.8559	34:08	0:00

REPORT OF LABORATORY ANALYSIS

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Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID	CS3/CPM-7604-274	Injected By	BAL
Raw Data File	P130706B_01	Instrument ID	10MSHR09 (P)
Date Analyzed	7/6/2013	GC Column Type	DB-5MS 0.25 uM
Time Analyzed	13:37	GC Column S/N	USC473217H
Resolution	21.6%		



Group	Mass	First Eluter	Last Eluter
TCDF	305.8987	15:24	22:10
PeCDF	341.8567	22:04	29:07
HxCDF	373.8207	30:06	33:27
HpCDF	407.7818	35:06	36:43
OCDF	441.7428	39:09	0:00
TCDD	321.8936	16:49	21:53
PeCDD	357.8517	24:52	28:46
HxCDD	391.8127	30:50	33:06
HpCDD	425.7737	35:25	36:13
OCDD	459.7347	38:59	0:00
1234-TCDD-13C(RS)	331.9367	19:42	0:00
123789-HxCDD-13C(RS)	401.8559	33:05	0:00

REPORT OF LABORATORY ANALYSIS

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Homologue Group: Tetras

Data File Name: F130408A_02

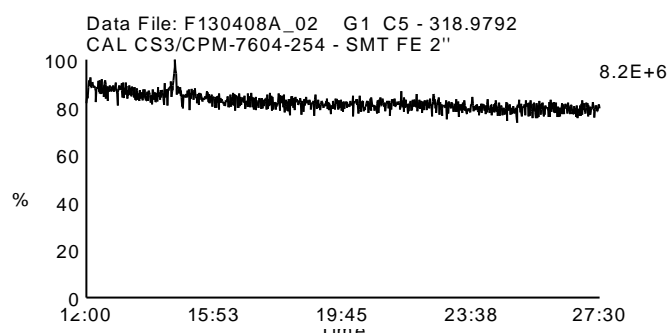
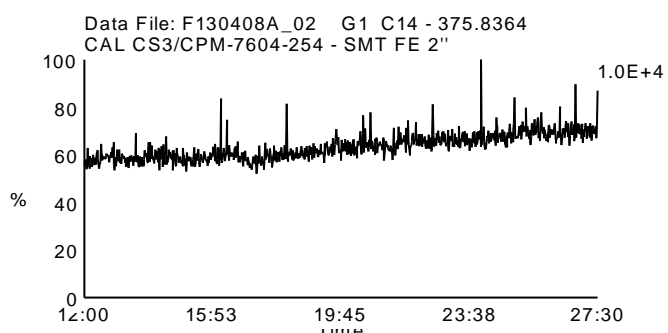
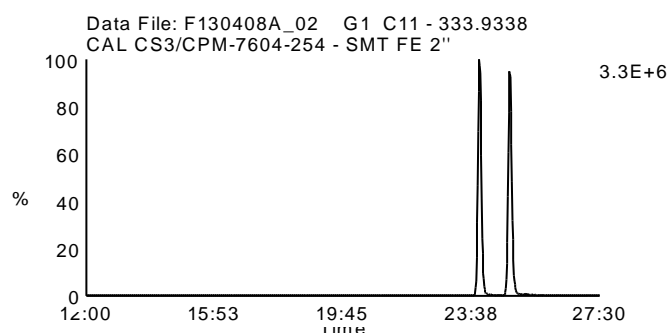
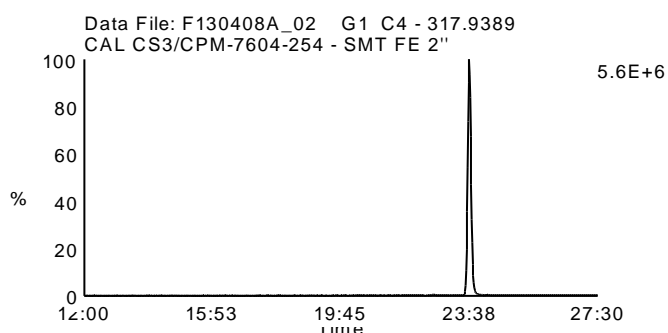
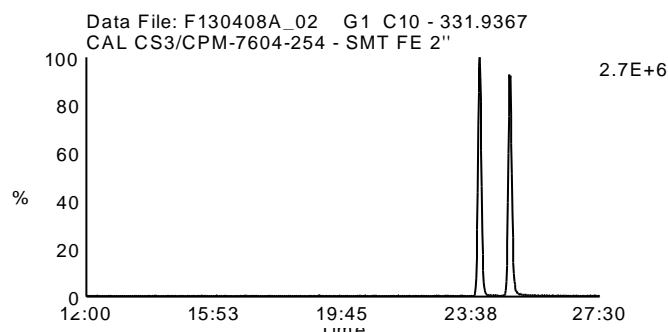
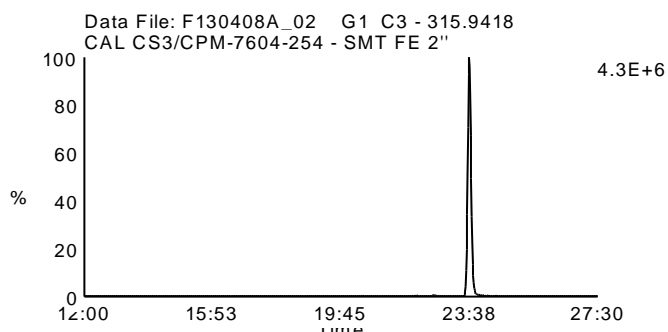
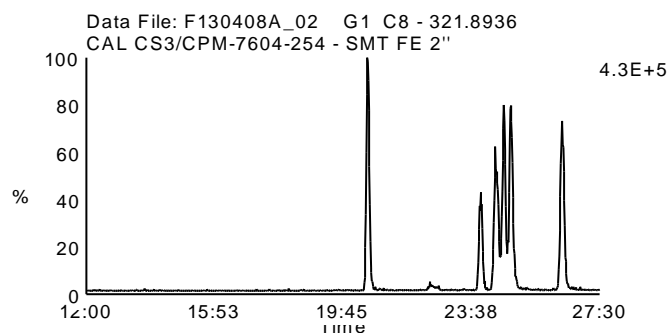
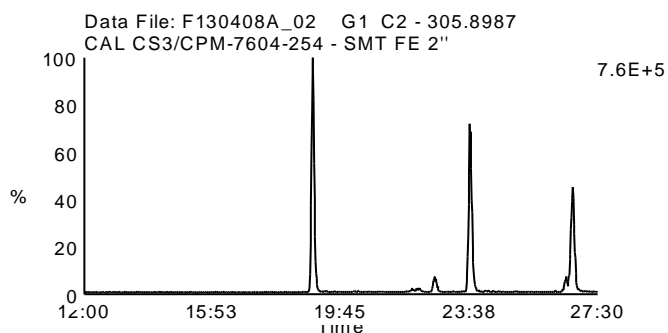
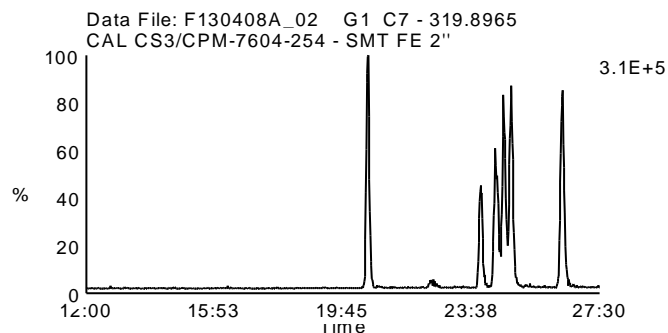
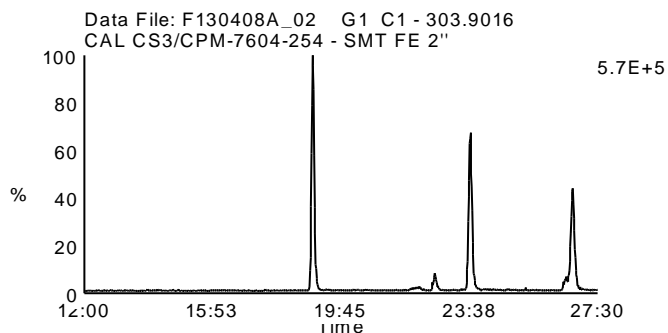
Date Acquired: 4/8/2013

Sample Description: CAL CS3/CPM-7604-254 - SMT FE 2"

Lab Sample ID: CS3/CPM-7604-254

Client Sample ID: CPM/WDM

Instrument: 10MSHR05 (F)



Homologue Group: Penta & Cleanup

Data File Name: F130408A_02

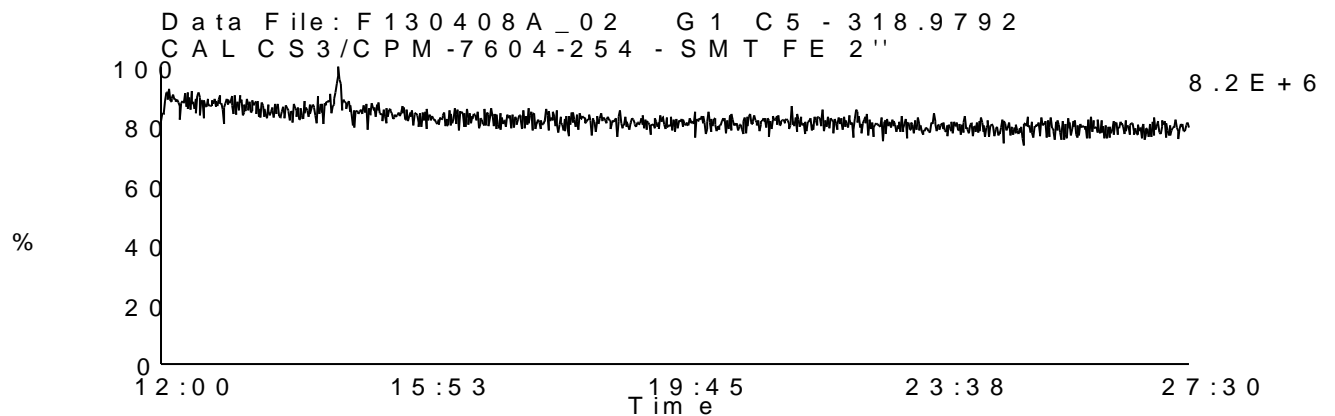
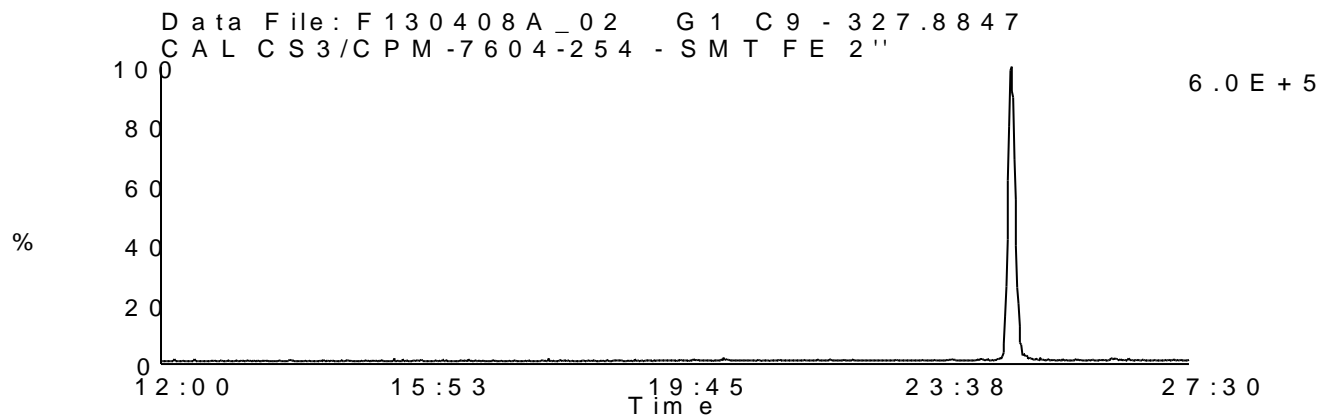
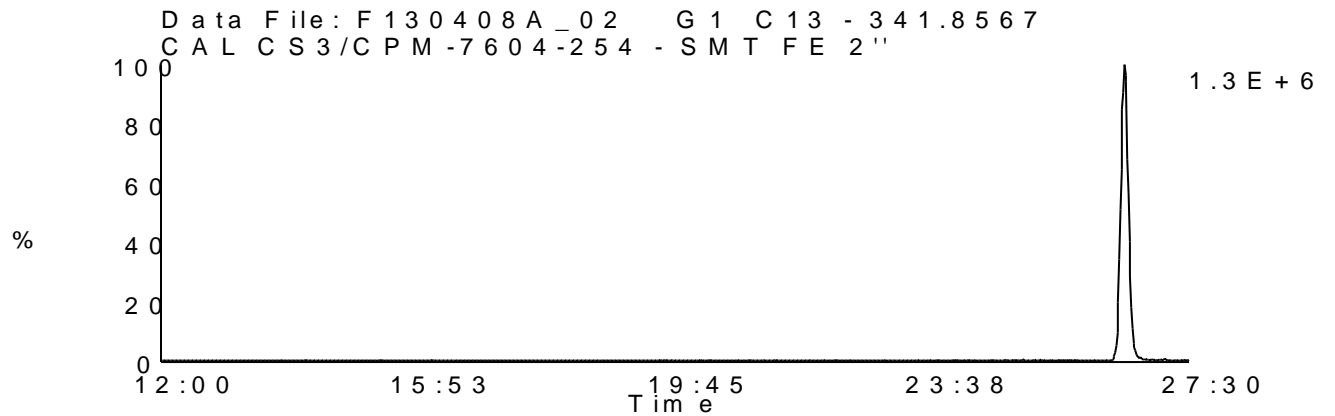
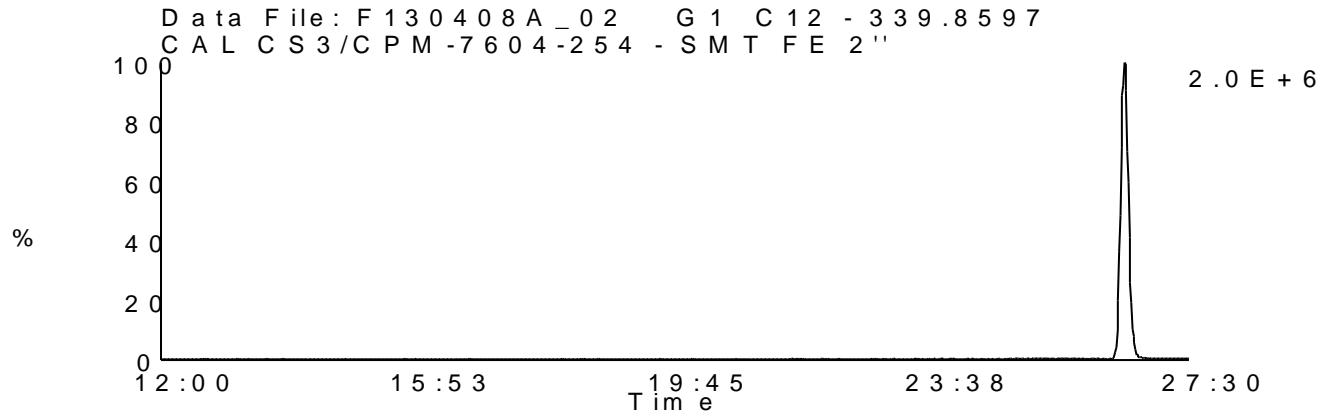
Lab Sample ID: CS3/CPM-7604-254

Date Acquired: 4/8/2013

Client Sample ID: CPM/WDM

Sample Description: CAL CS3/CPM-7604-254 - SMT FE 2"

Instrument: 10MSHR05 (F)



Homologue Group: Pentas

Data File Name: F130408A_02

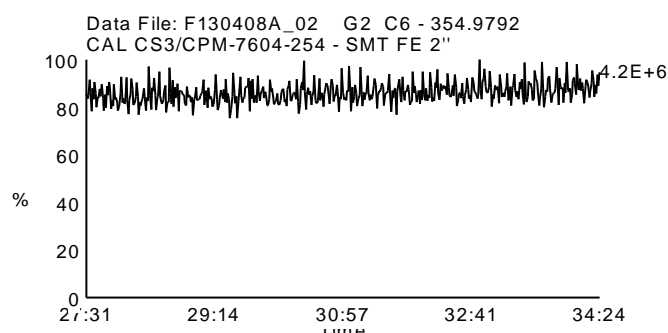
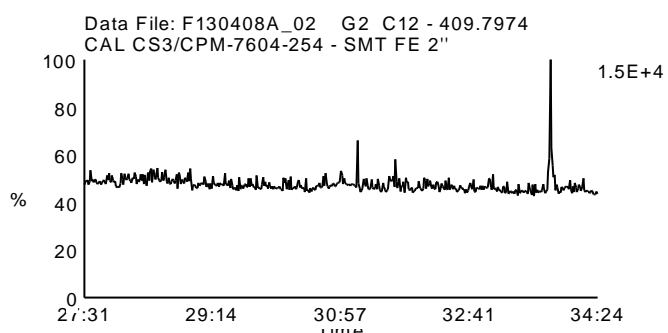
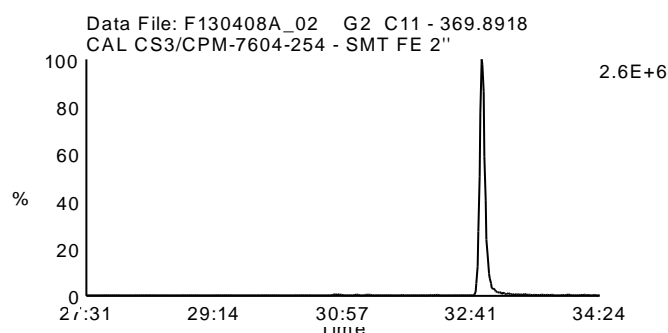
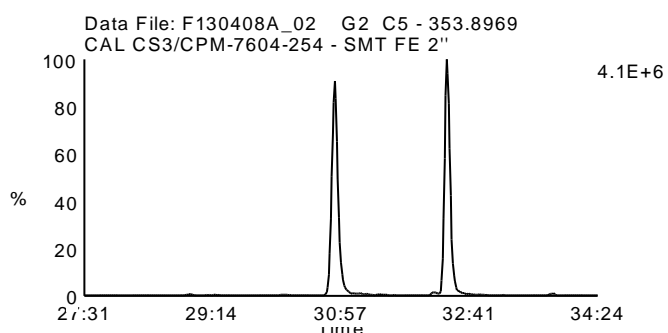
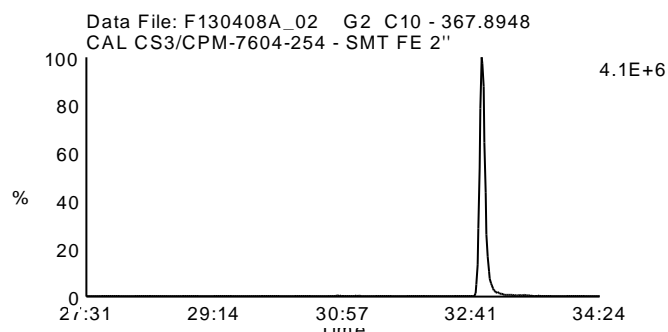
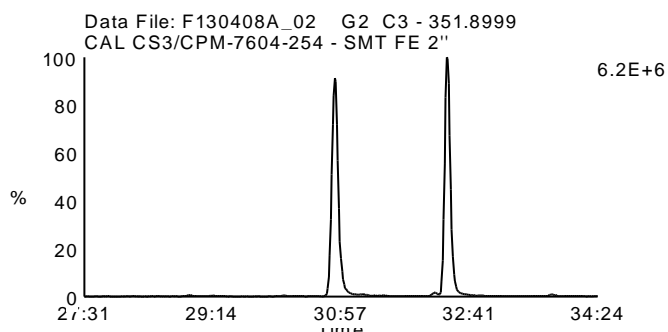
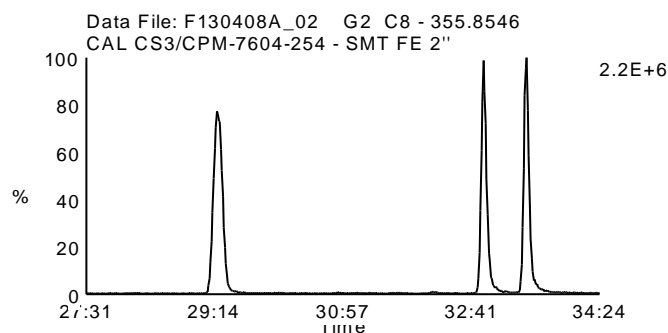
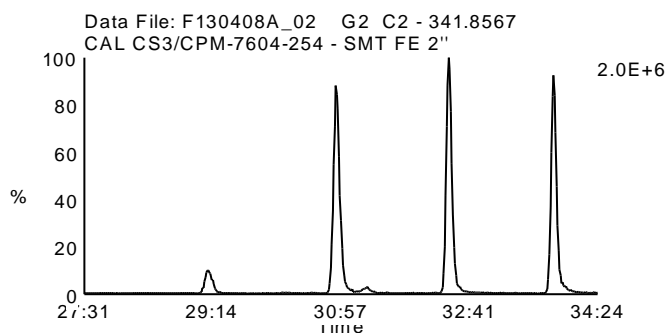
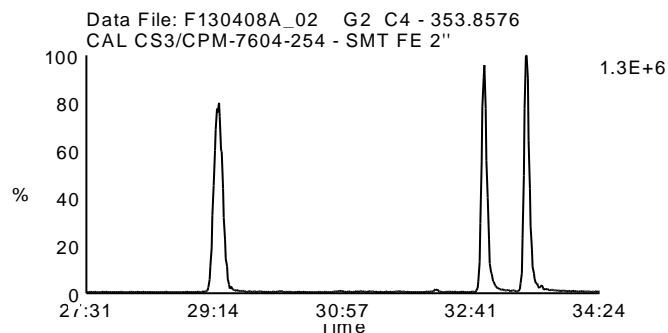
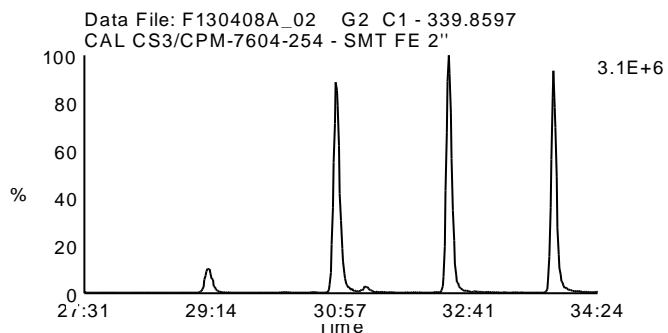
Date Acquired: 4/8/2013

Sample Description: CAL CS3/CPM-7604-254 - SMT FE 2"

Lab Sample ID: CS3/CPM-7604-254

Client Sample ID: CPM/WDM

Instrument: 10MSHR05 (F)



Homologue Group: Hexas

Data File Name: F130408A_02

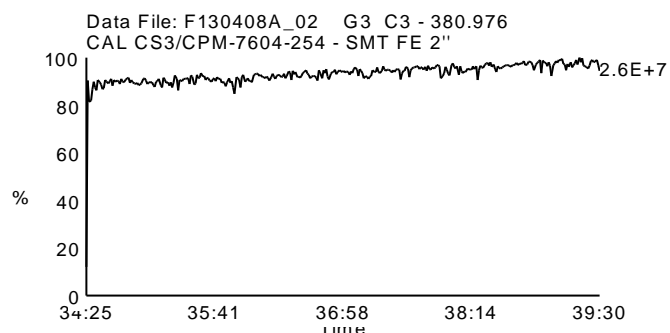
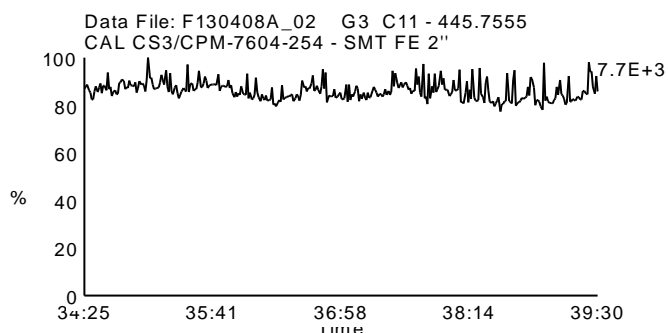
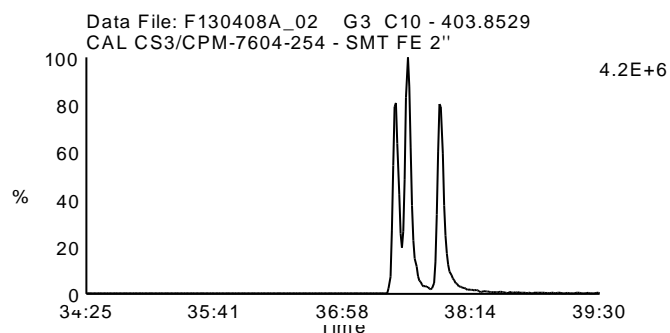
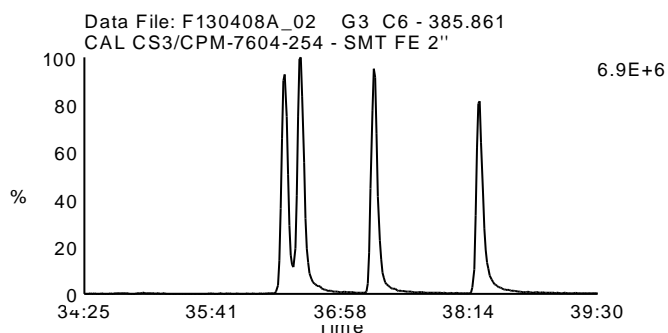
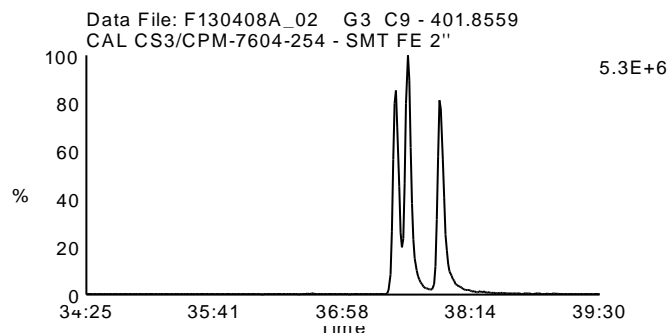
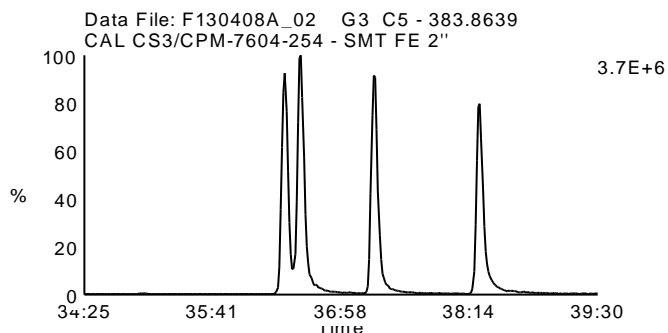
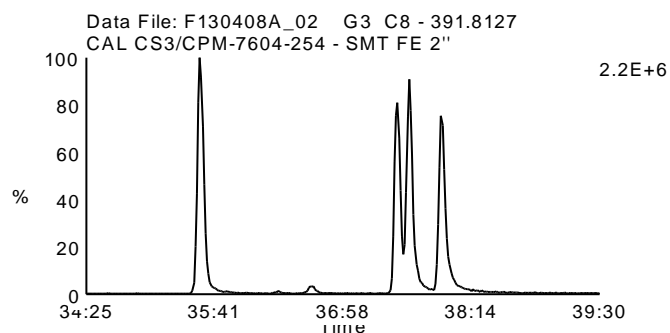
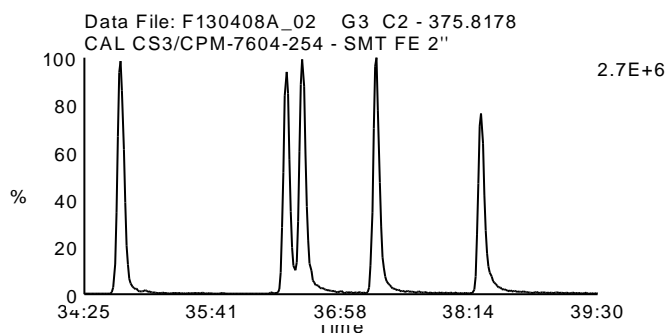
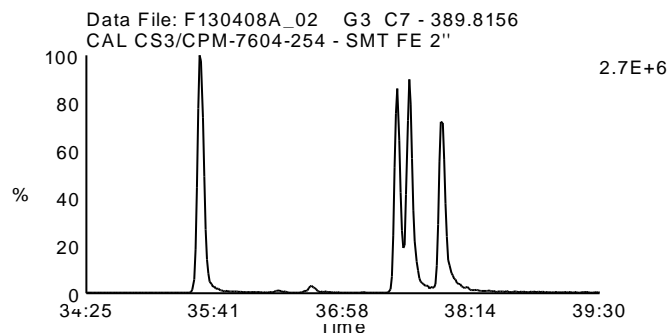
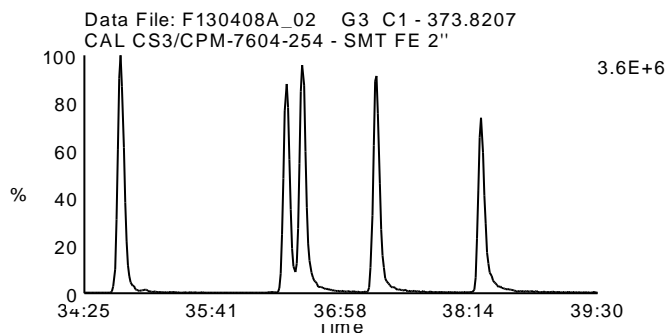
Date Acquired: 4/8/2013

Sample Description: CAL CS3/CPM-7604-254 - SMT FE 2"

Lab Sample ID: CS3/CPM-7604-254

Client Sample ID: CPM/WDM

Instrument: 10MSHR05 (F)



Homologue Group: Heptas

Data File Name: F130408A_02

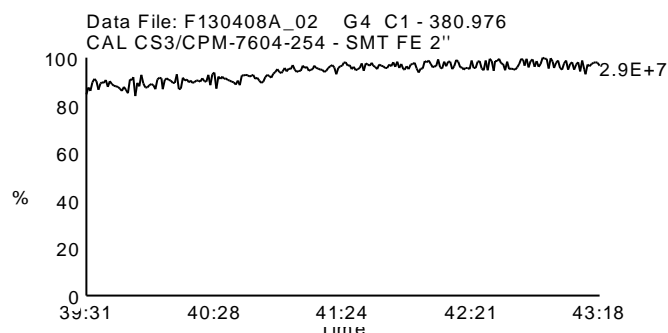
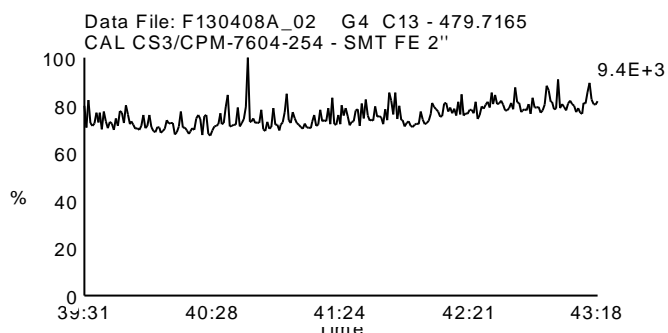
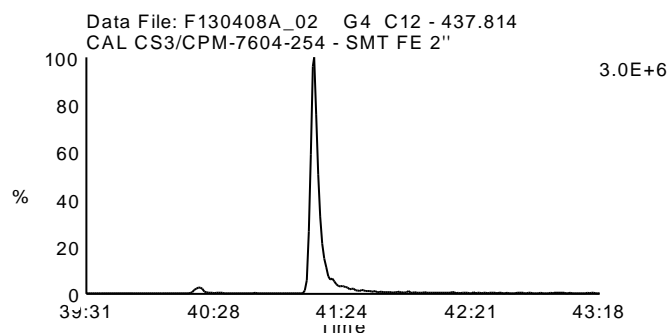
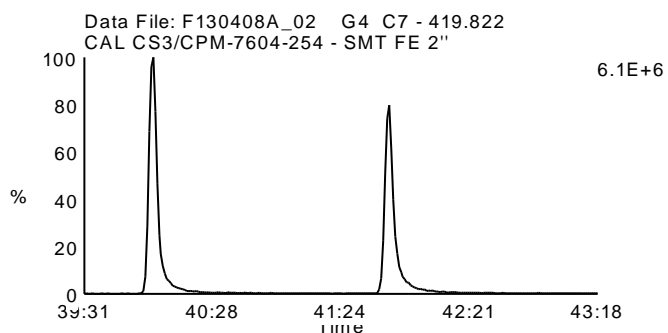
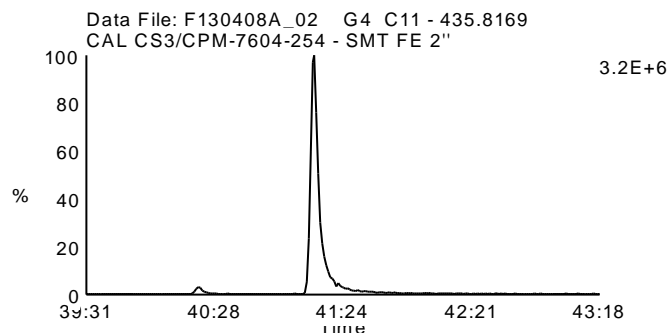
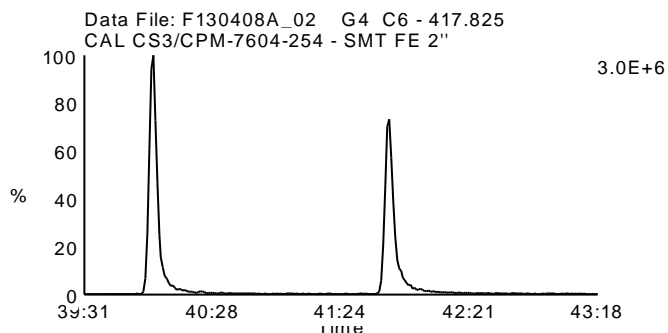
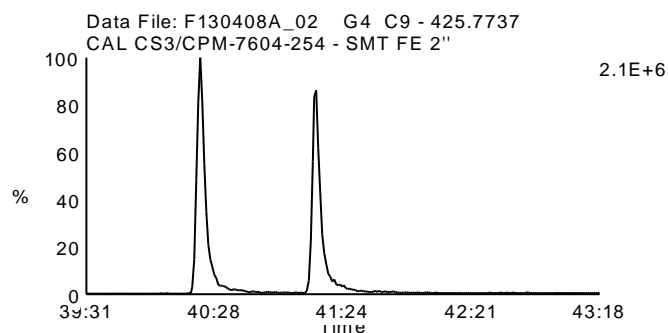
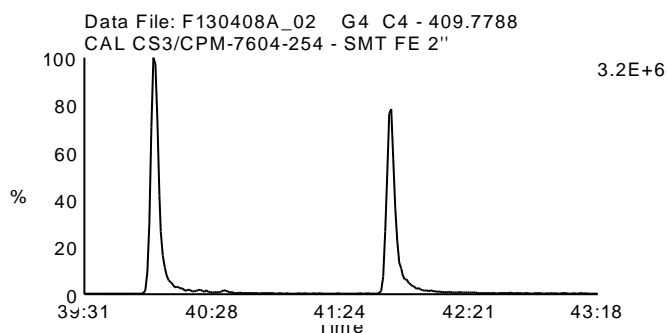
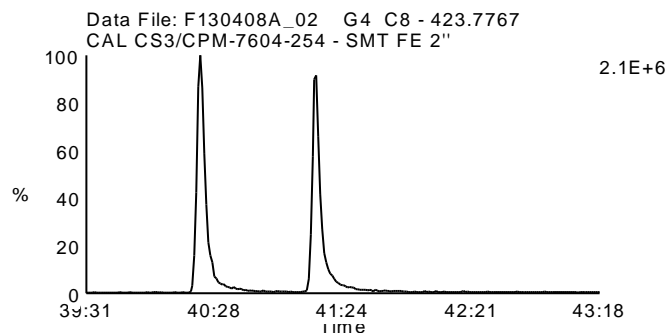
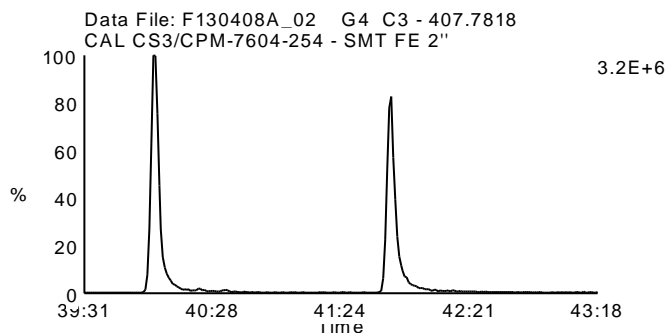
Date Acquired: 4/8/2013

Sample Description: CAL CS3/CPM-7604-254 - SMT FE 2"

Lab Sample ID: CS3/CPM-7604-254

Client Sample ID: CPM/WDM

Instrument: 10MSHR05 (F)



Homologue Group: Octas

Data File Name: F130408A_02

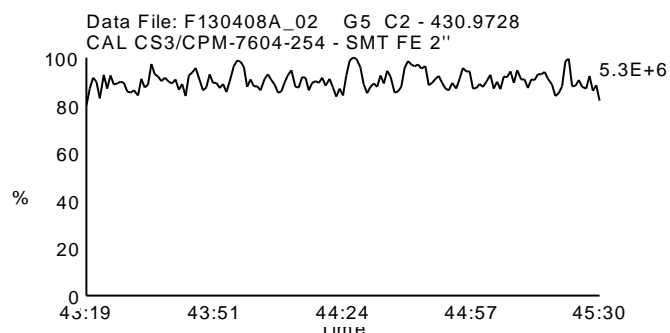
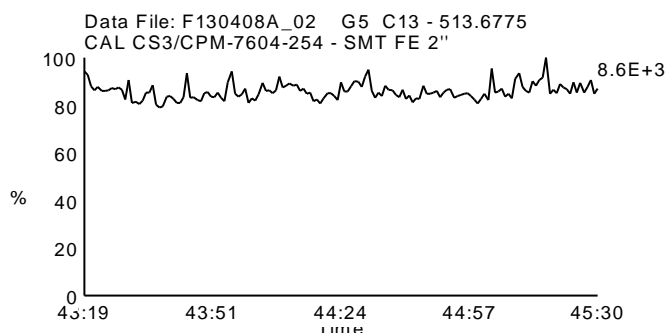
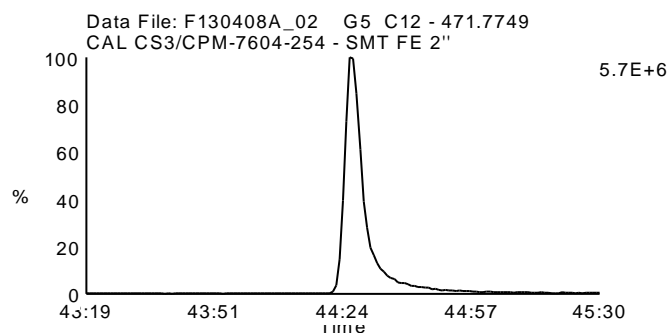
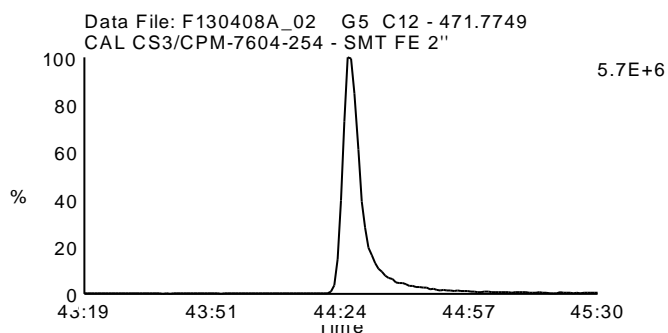
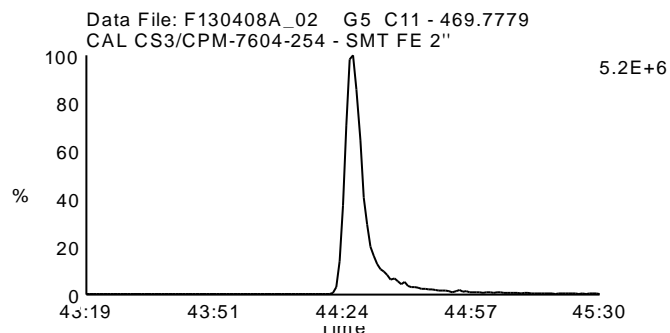
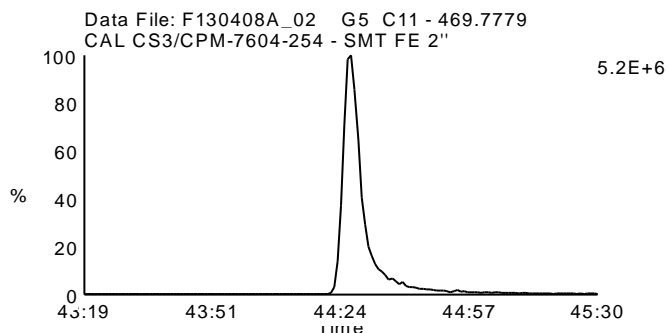
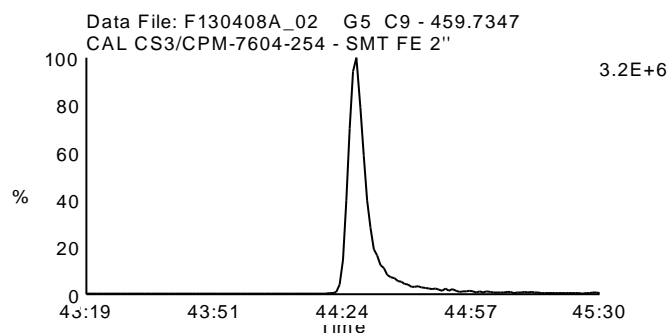
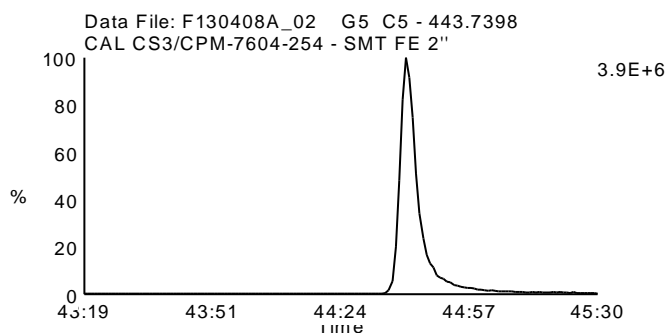
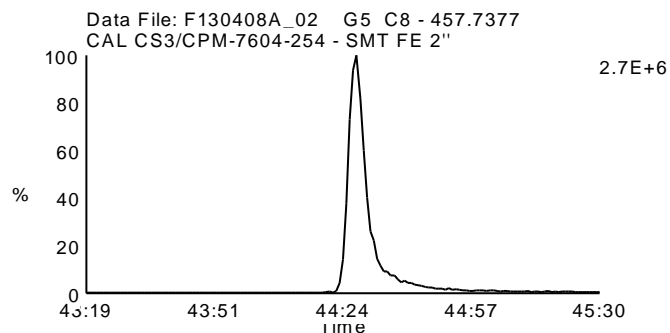
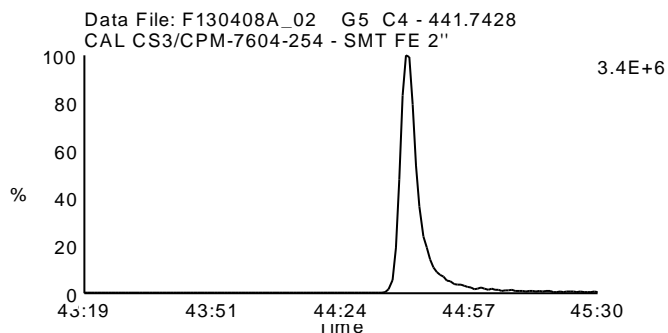
Date Acquired: 4/8/2013

Sample Description: CAL CS3/CPM-7604-254 - SMT FE 2"

Lab Sample ID: CS3/CPM-7604-254

Client Sample ID: CPM/WDM

Instrument: 10MSHR05 (F)



Homologue Group: Tetras

Data File Name: F130703A_02

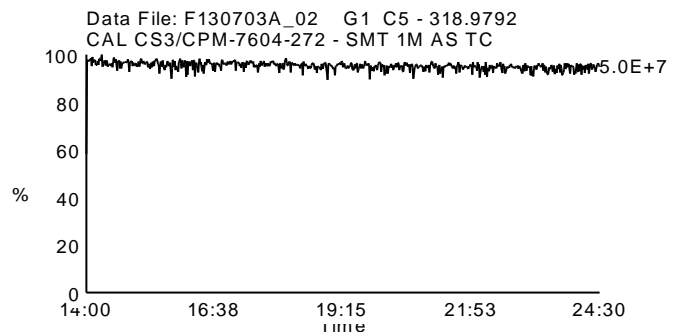
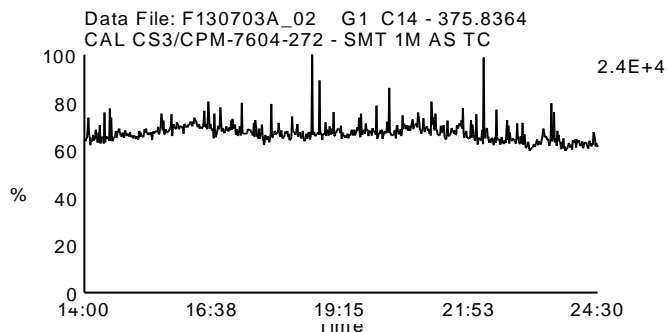
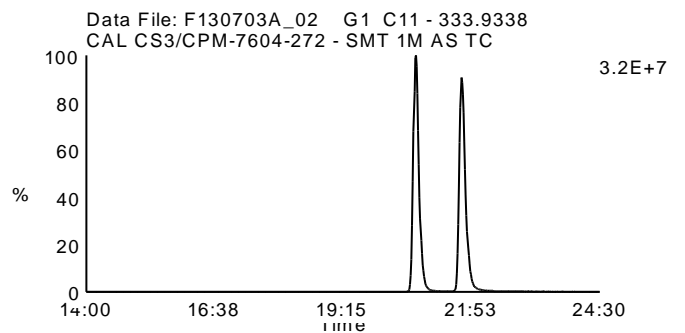
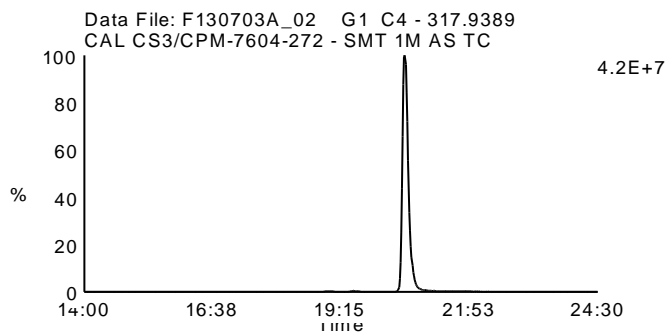
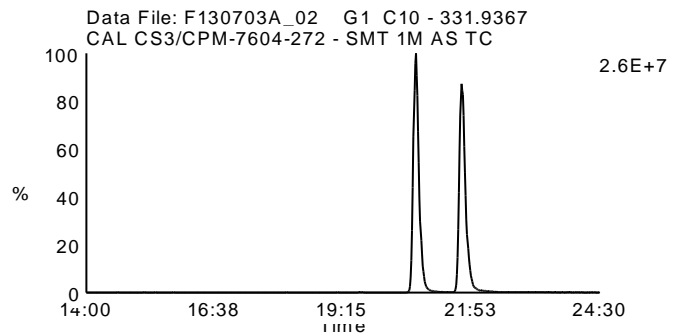
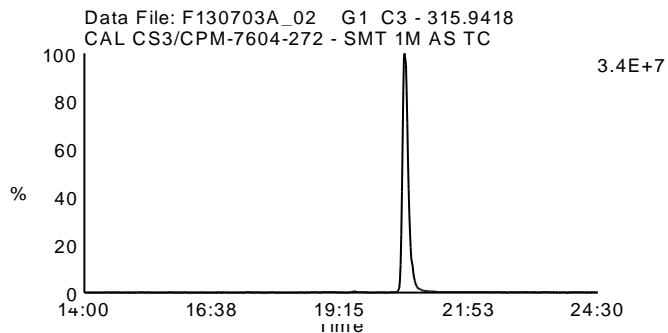
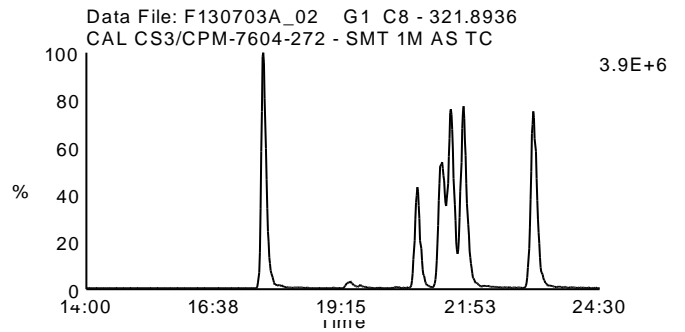
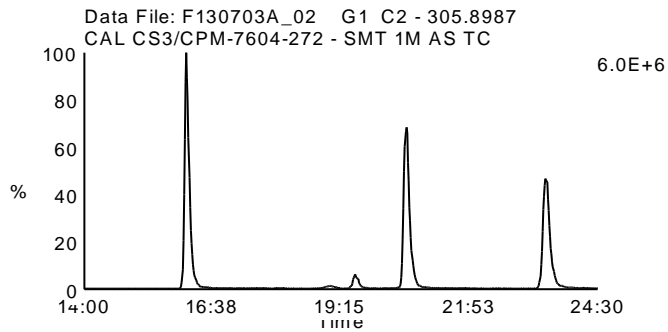
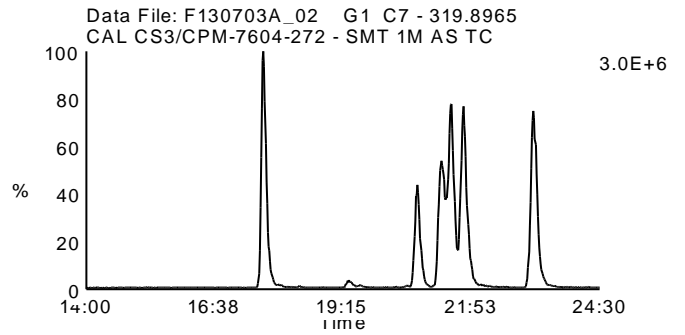
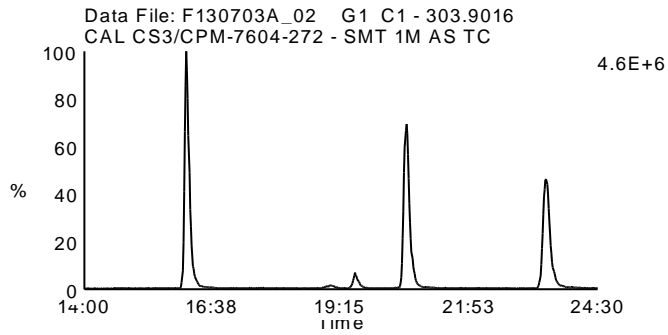
Lab Sample ID: CS3/CPM-7604-272

Date Acquired: 7/3/2013

Client Sample ID: CPM/WDM

Sample Description: CAL CS3/CPM-7604-272 - SMT 1M AS TC

Instrument: 10MSHR05 (F)



Homologue Group: Penta & Cleanup

Data File Name: F130703A_02

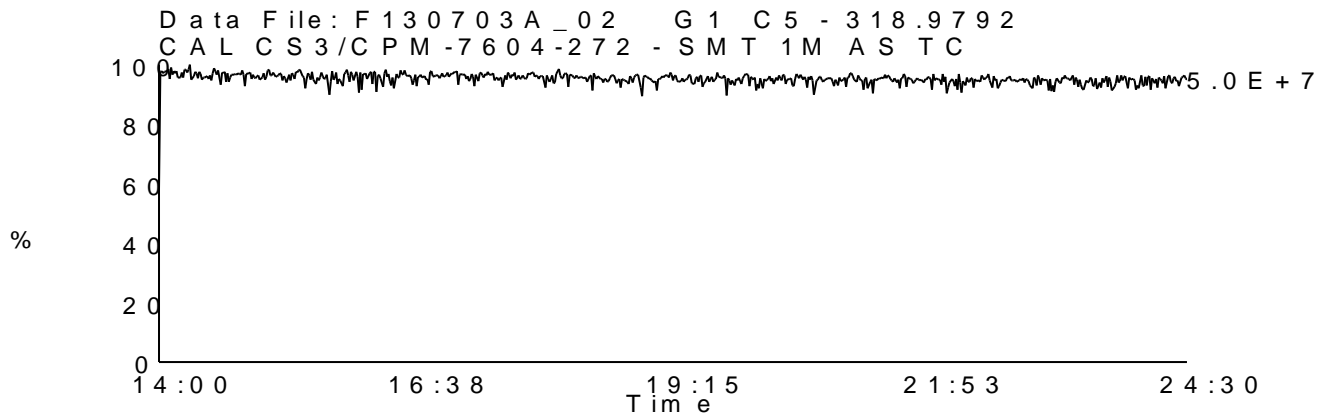
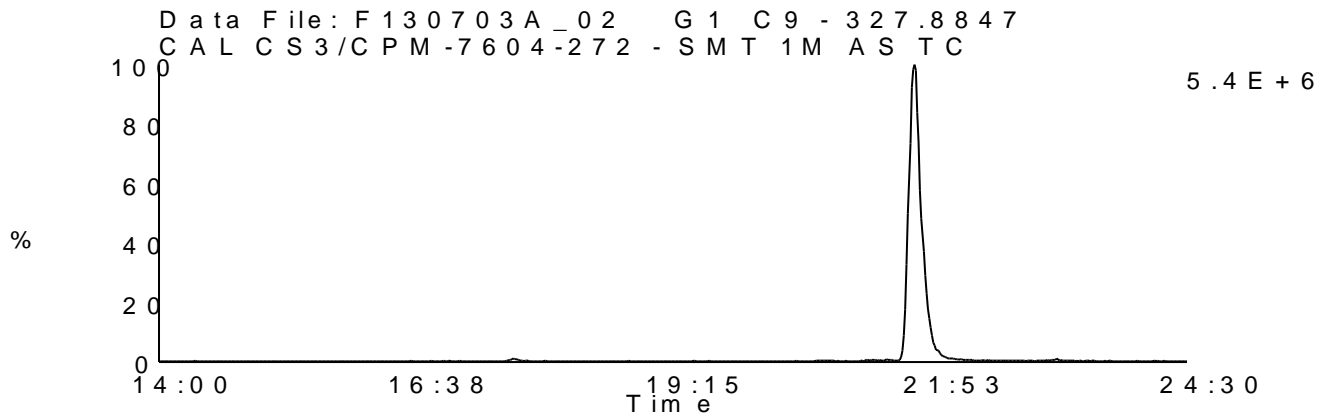
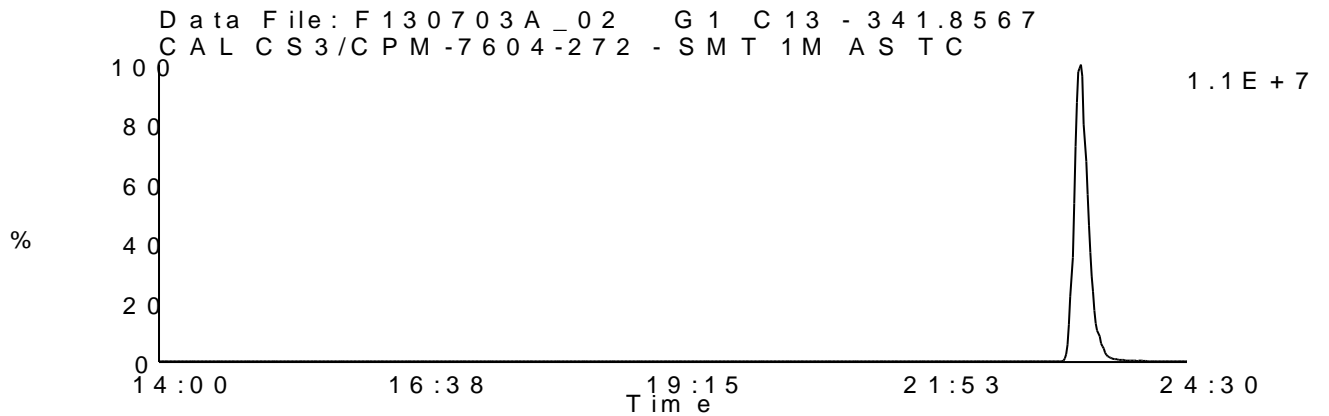
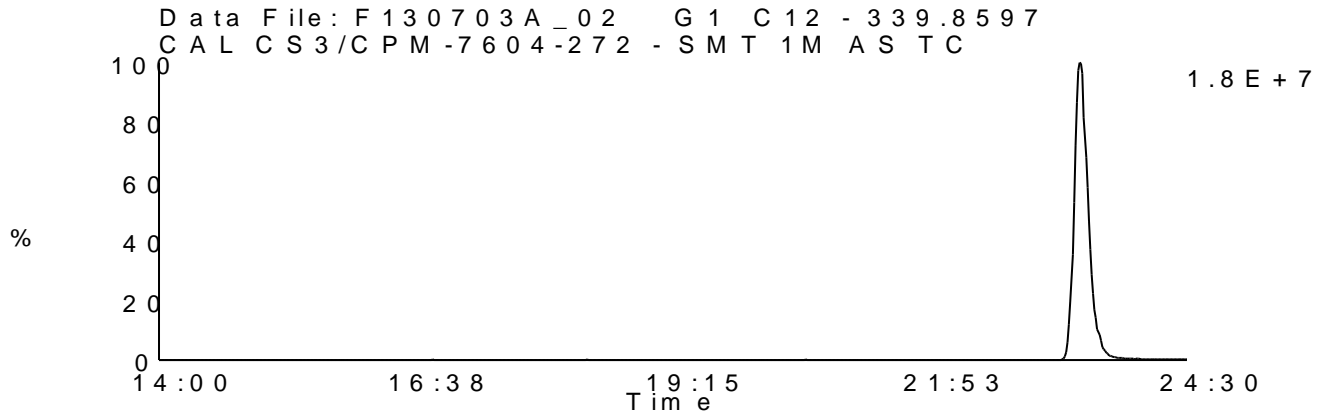
Lab Sample ID: CS3/CPM-7604-272

Date Acquired: 7/3/2013

Client Sample ID: CPM/WDM

Sample Description: CAL CS3/CPM-7604-272 - SMT 1M AS TC

Instrument: 10MSHR05 (F)



Homologue Group: Pentas

Data File Name: F130703A_02

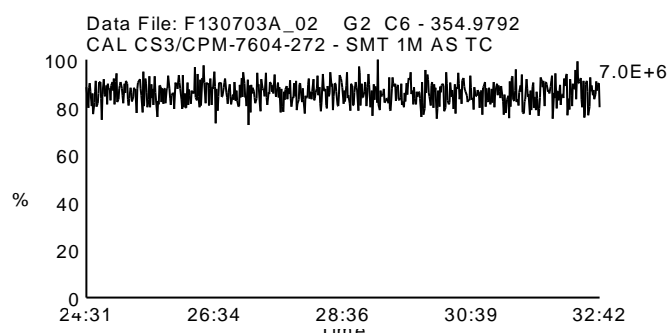
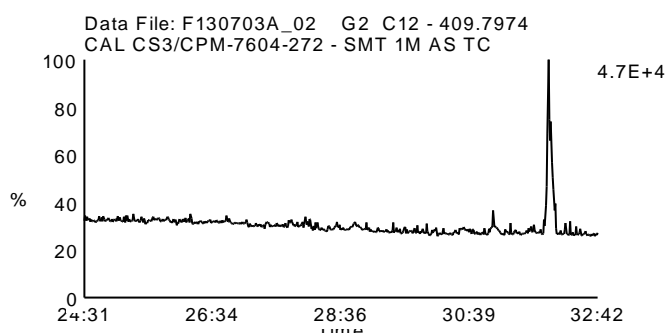
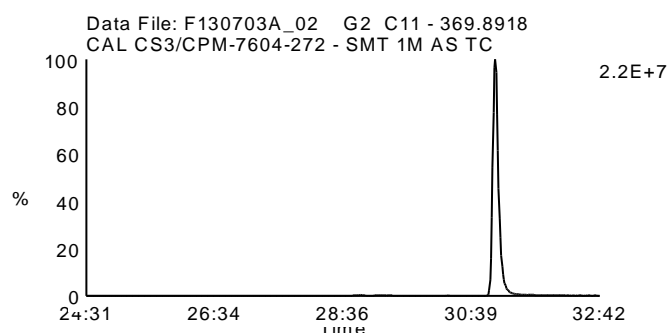
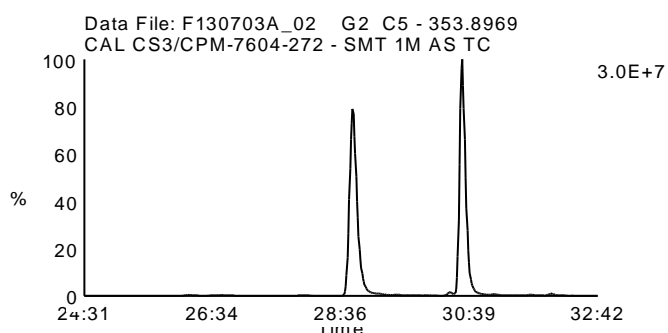
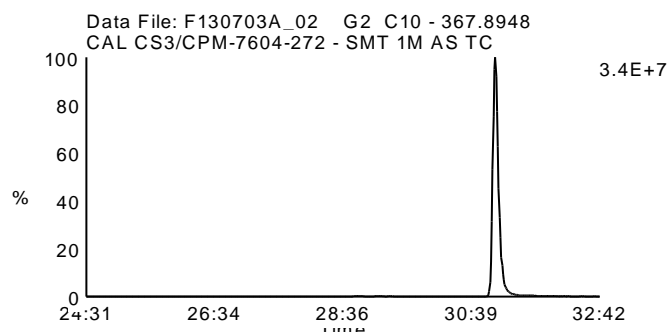
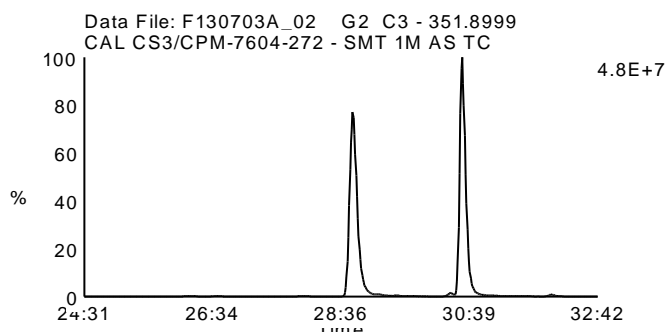
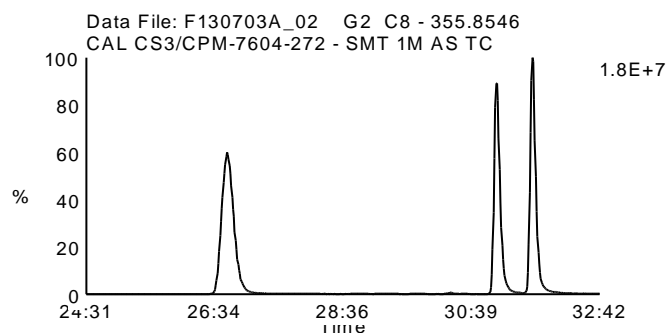
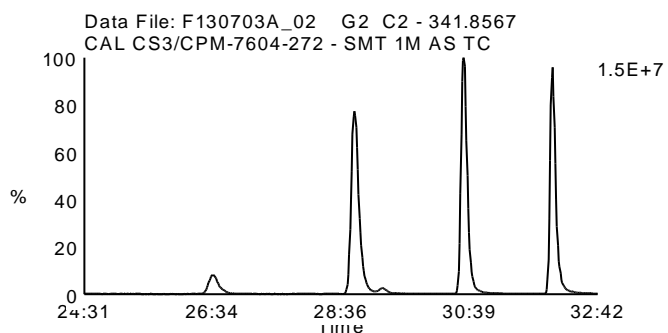
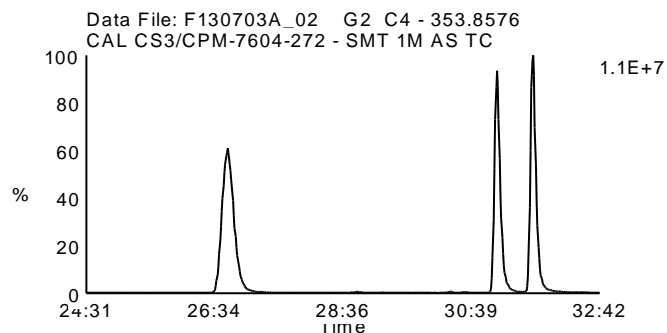
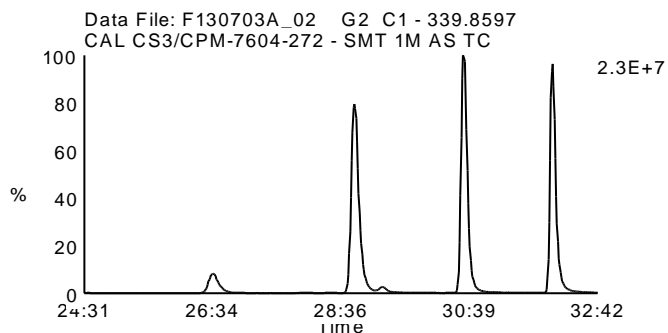
Lab Sample ID: CS3/CPM-7604-272

Date Acquired: 7/3/2013

Client Sample ID: CPM/WDM

Sample Description: CAL CS3/CPM-7604-272 - SMT 1M AS TC

Instrument: 10MSHR05 (F)



Homologue Group: Hexas

Data File Name: F130703A_02

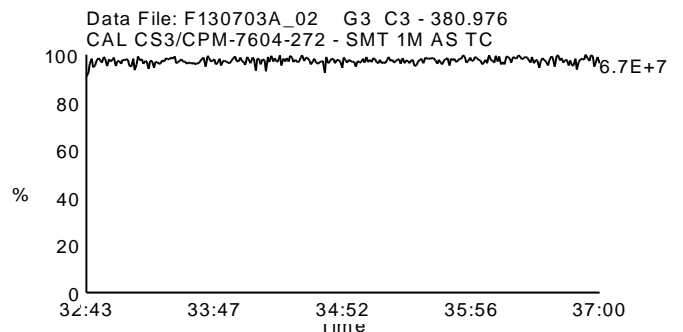
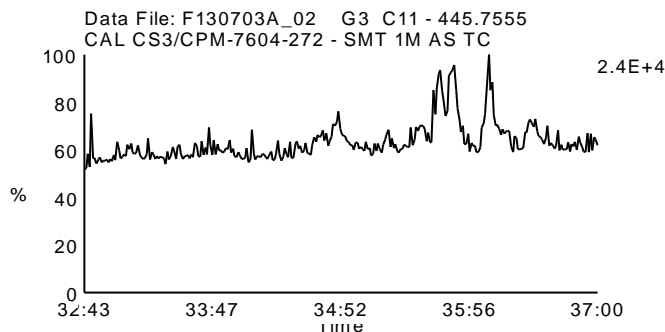
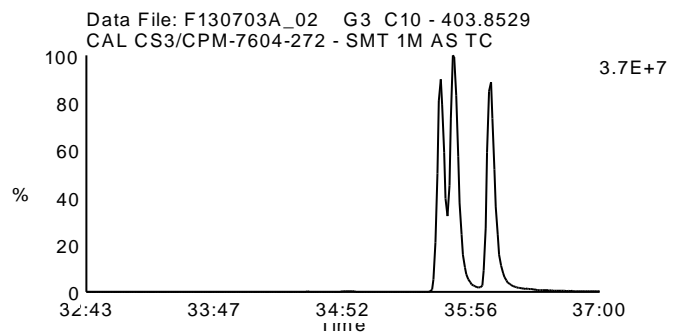
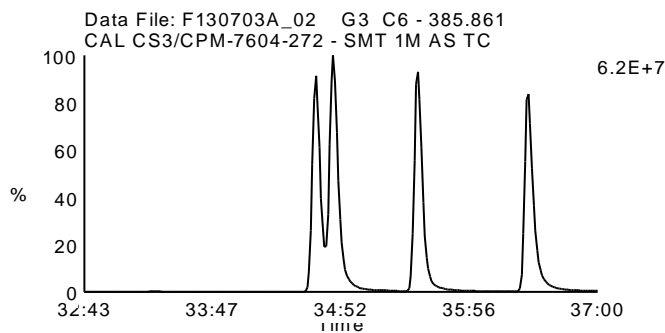
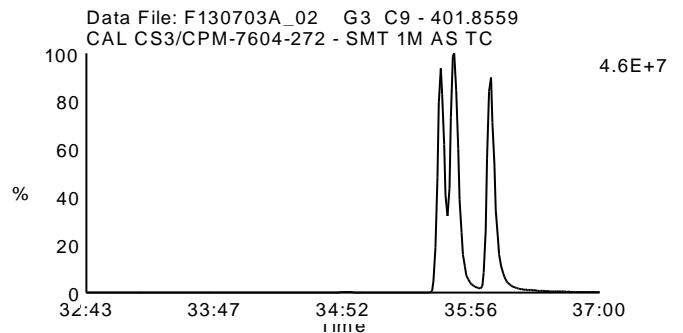
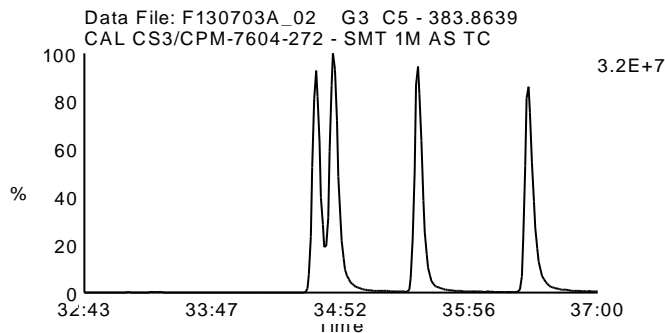
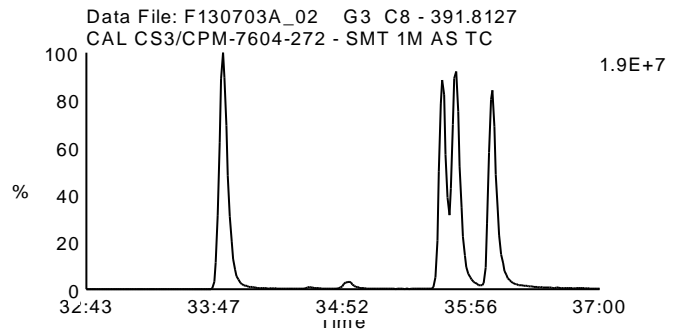
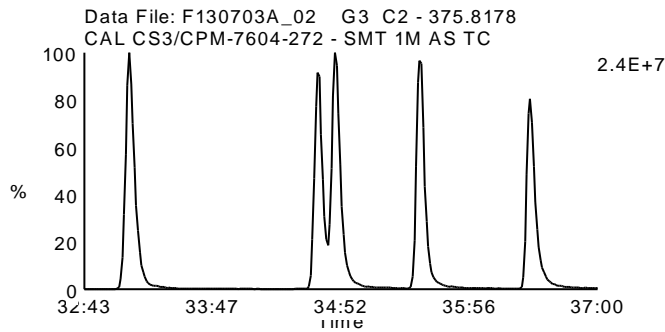
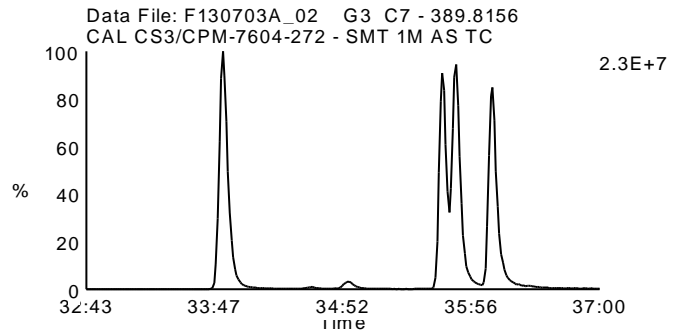
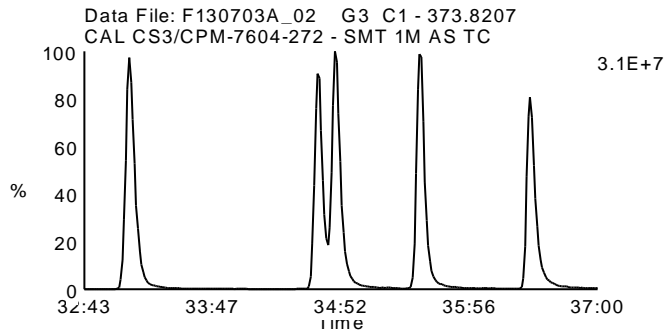
Date Acquired: 7/3/2013

Sample Description: CAL CS3/CPM-7604-272 - SMT 1M AS TC

Lab Sample ID: CS3/CPM-7604-272

Client Sample ID: CPM/WDM

Instrument: 10MSHR05 (F)



Homologue Group: Heptas

Data File Name: F130703A_02

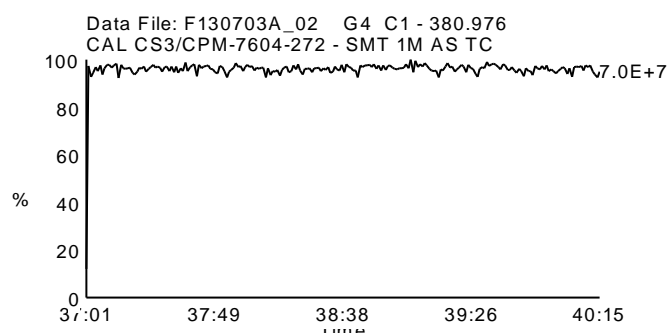
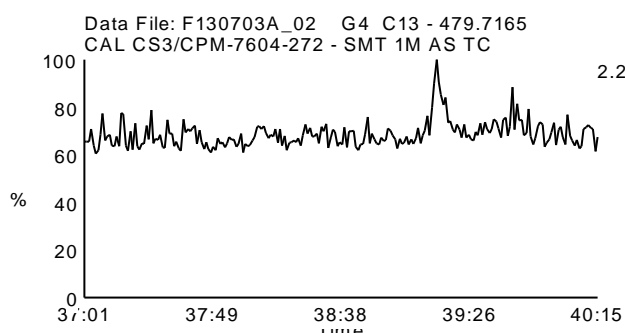
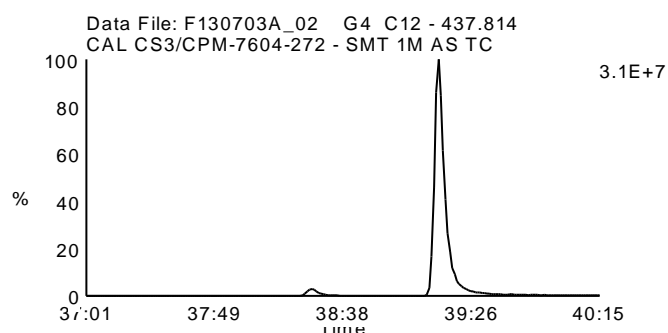
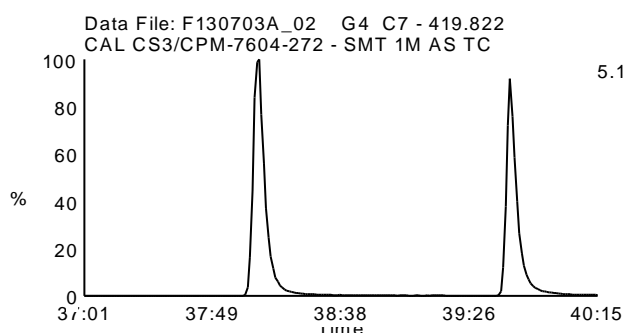
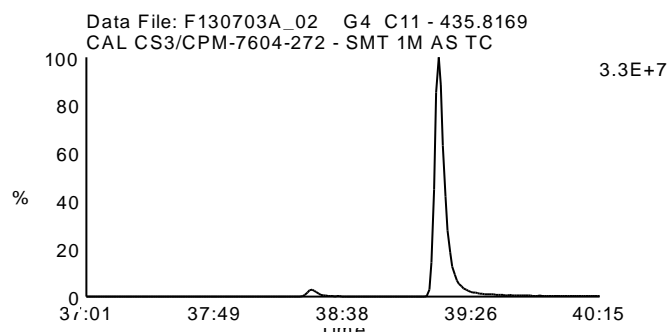
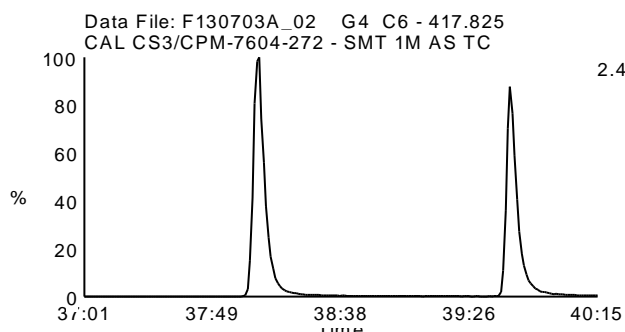
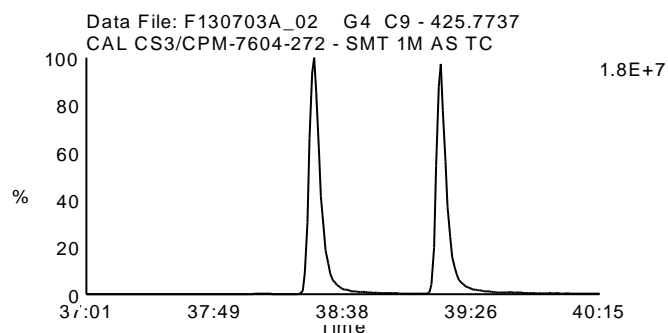
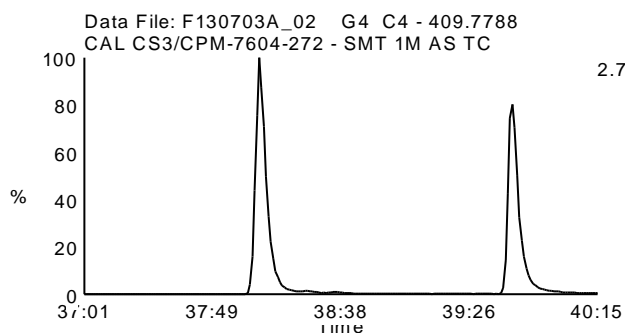
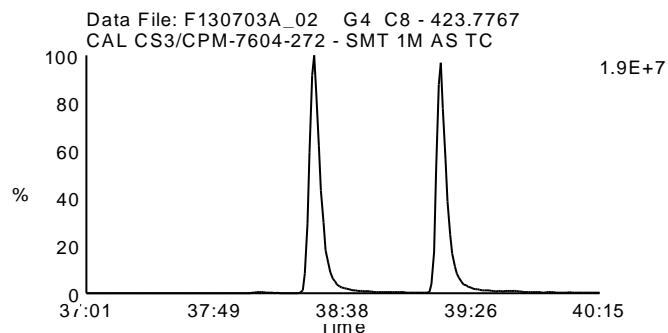
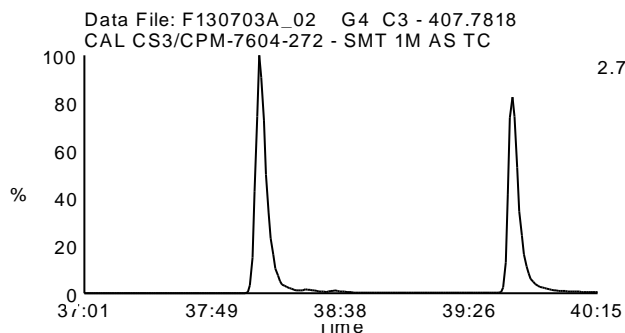
Date Acquired: 7/3/2013

Sample Description: CAL CS3/CPM-7604-272 - SMT 1M AS TC

Lab Sample ID: CS3/CPM-7604-272

Client Sample ID: CPM/WDM

Instrument: 10MSHR05 (F)



Homologue Group: Octas

Data File Name: F130703A_02

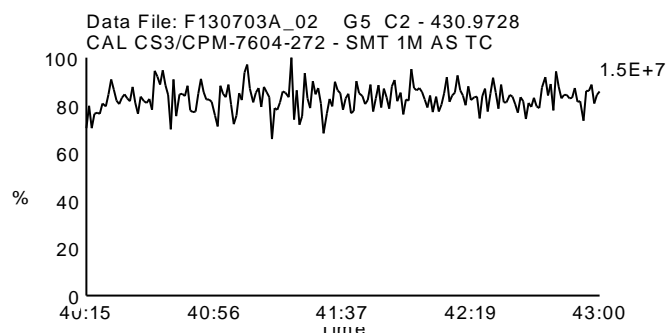
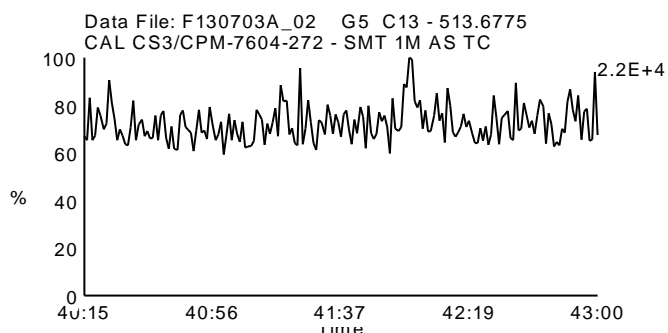
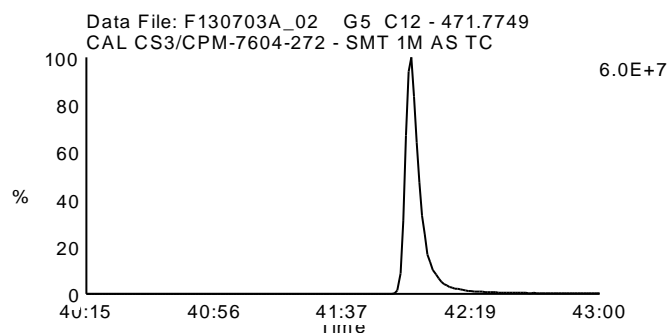
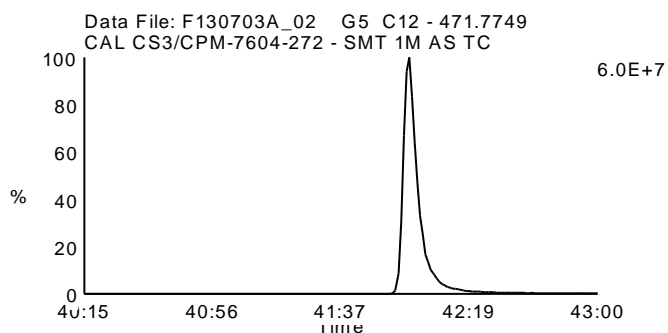
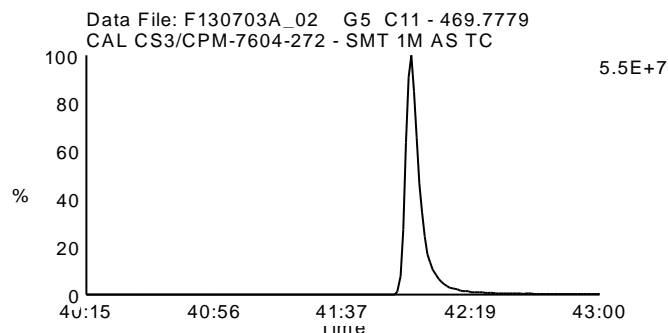
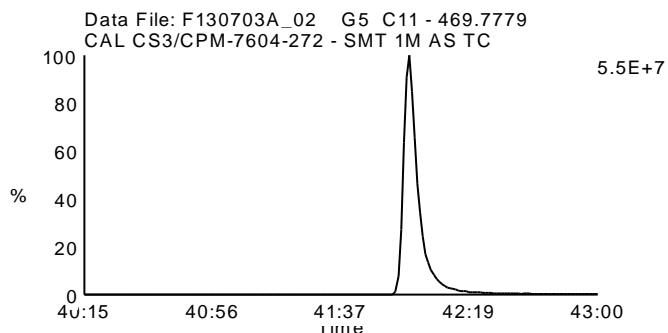
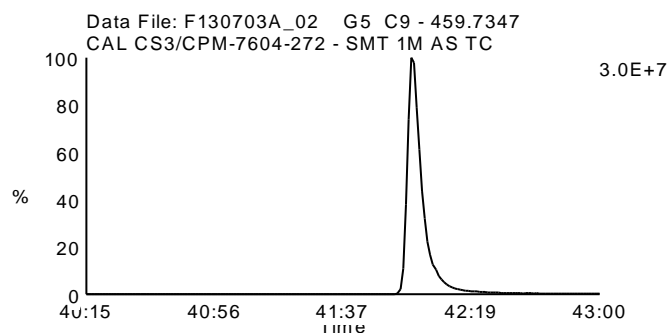
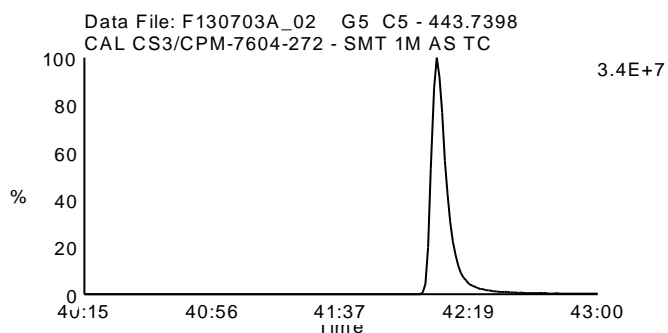
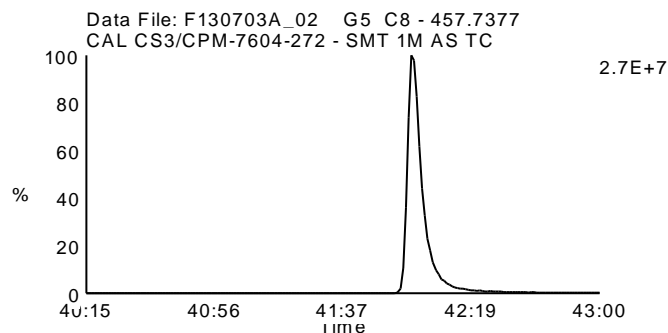
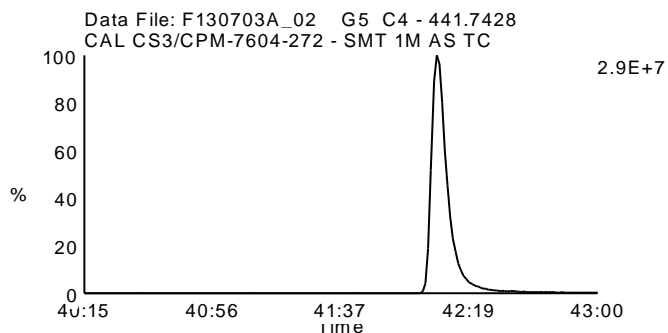
Date Acquired: 7/3/2013

Sample Description: CAL CS3/CPM-7604-272 - SMT 1M AS TC

Lab Sample ID: CS3/CPM-7604-272

Client Sample ID: CPM/WDM

Instrument: 10MSHR05 (F)



Homologue Group: Tetras

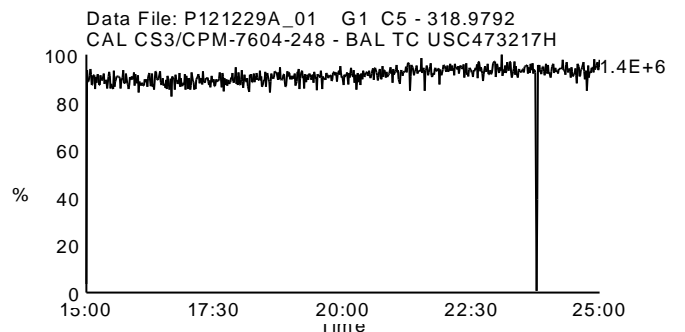
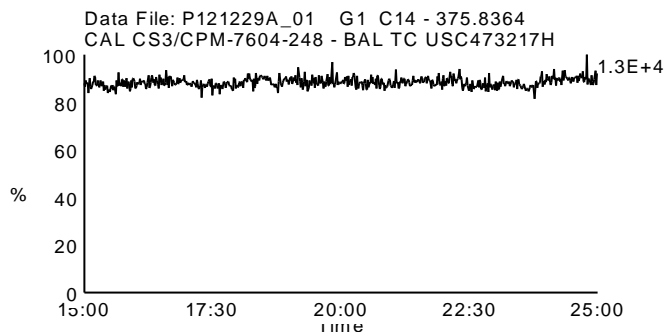
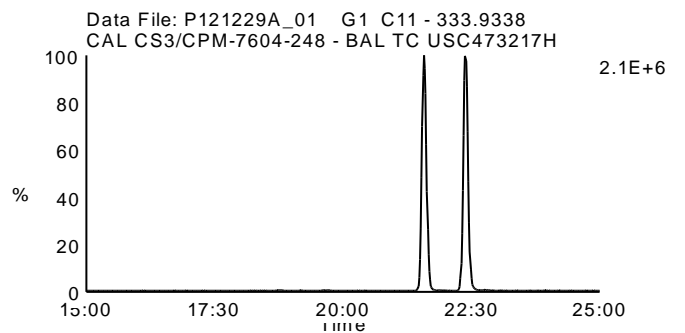
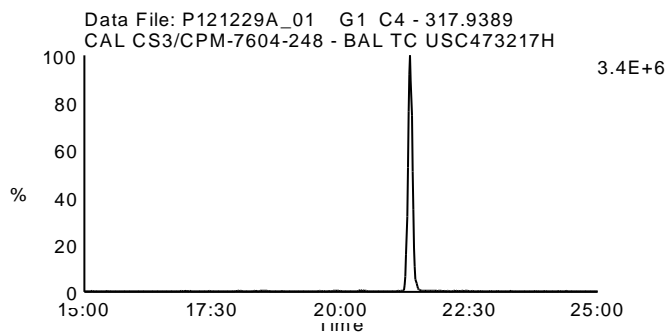
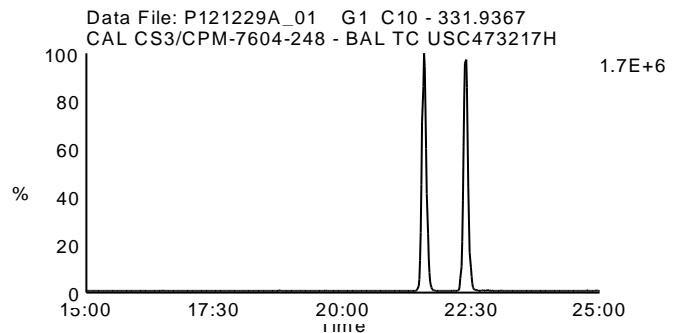
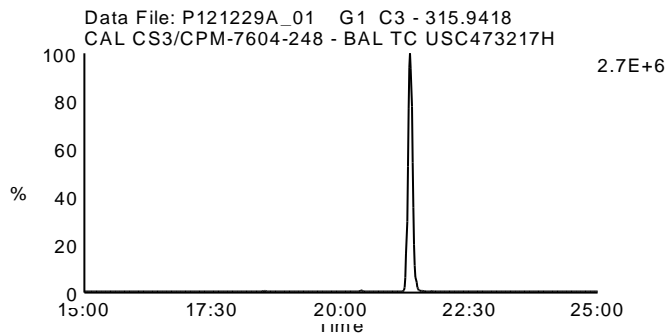
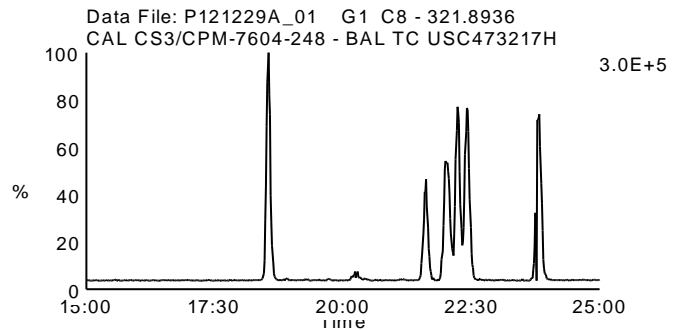
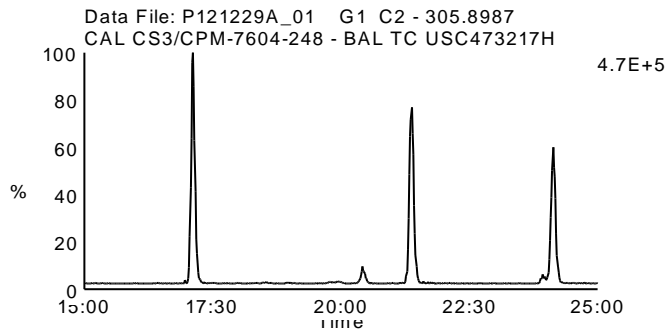
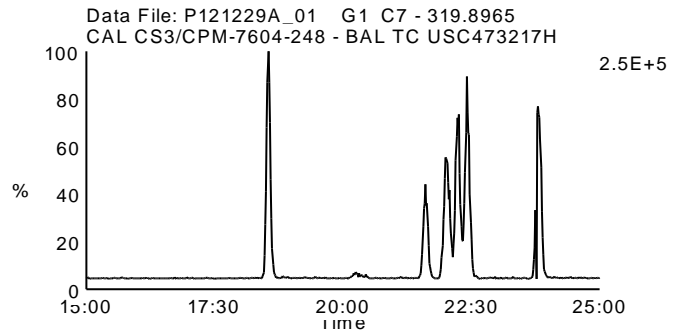
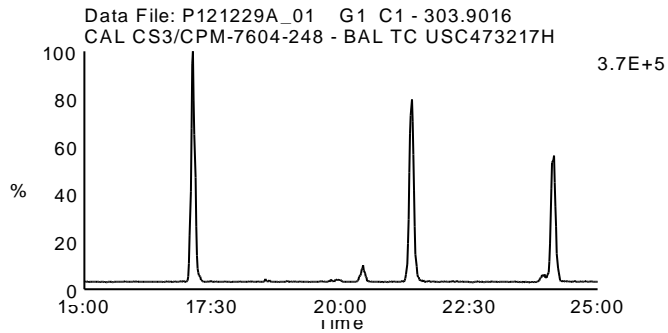
Data File Name: P121229A_01

Lab Sample ID: CS3/CPM-7604-248

Date Acquired: 12/29/2012

Client Sample ID: CPM/WDM

Sample Description: CAL CS3/CPM-7604-248 - BAL TC USC473217H Instrument: 10MSHR09 (P)



Homologue Group: Penta & Cleanup

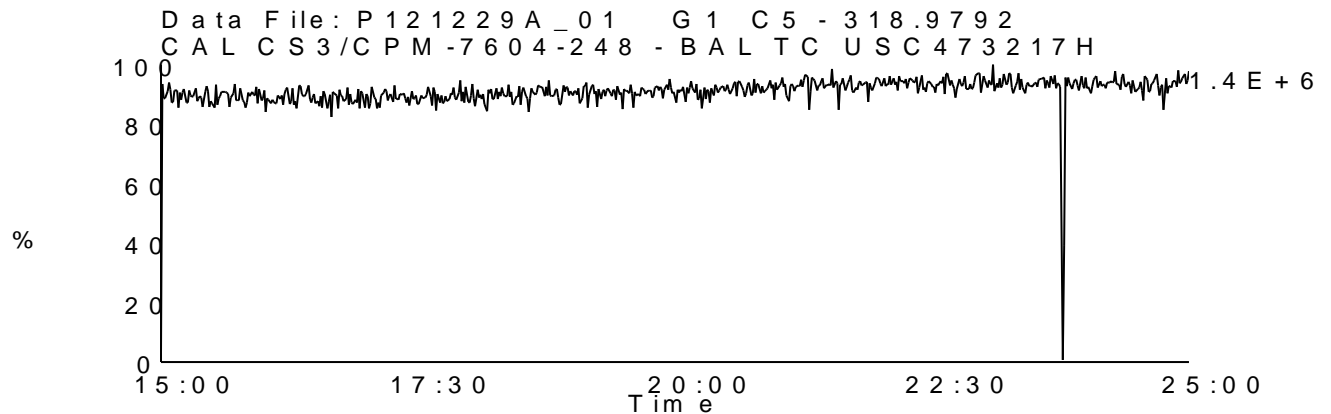
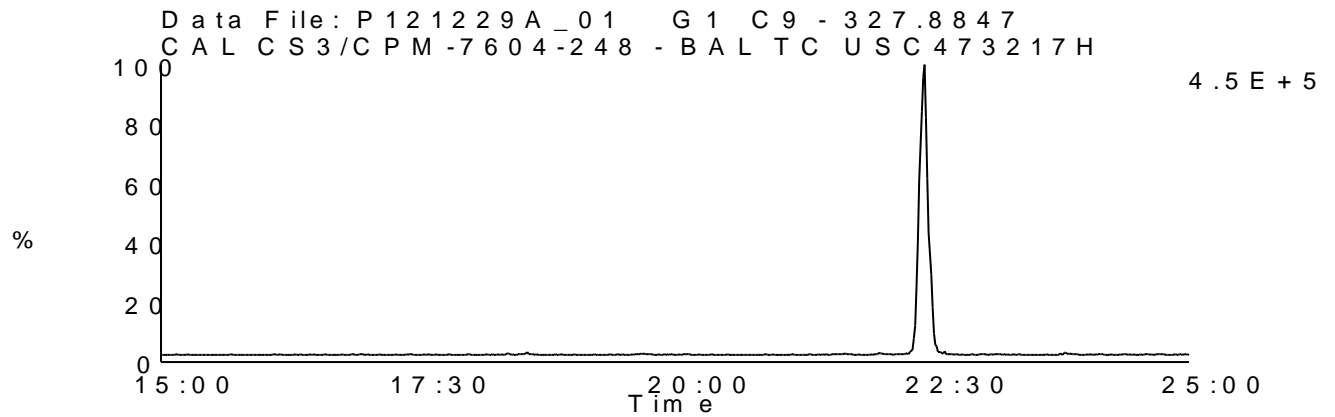
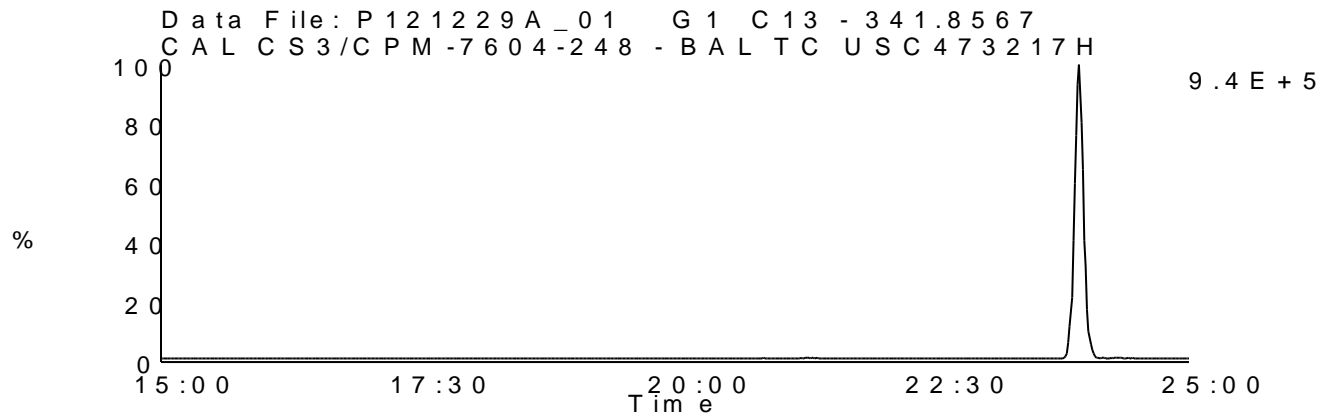
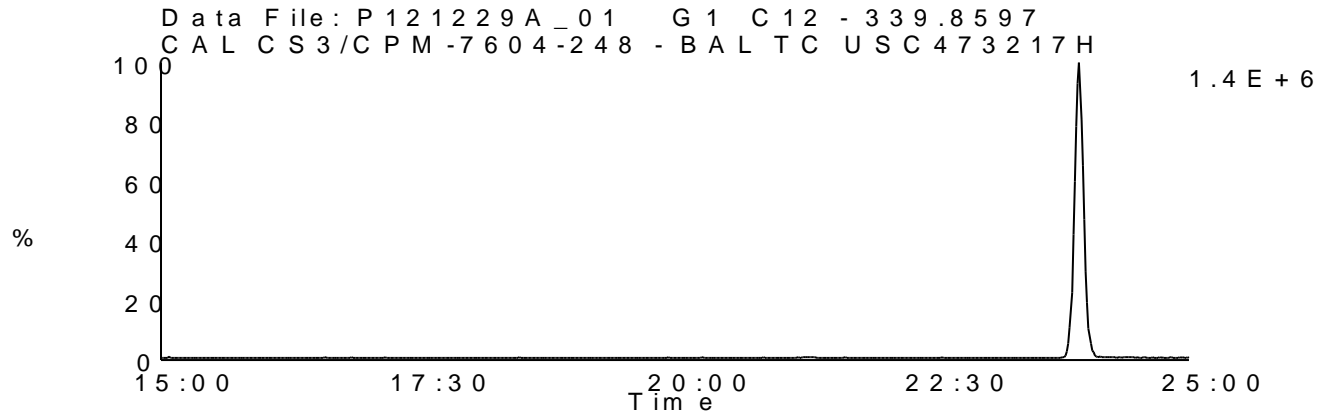
Data File Name: P121229A_01

Lab Sample ID: CS3/CPM-7604-248

Date Acquired: 12/29/2012

Client Sample ID: CPM/WDM

Sample Description: CAL CS3/CPM-7604-248 - BAL TC USC473217H Instrument: 10MSHR09 (P)



Homologue Group: Pentas

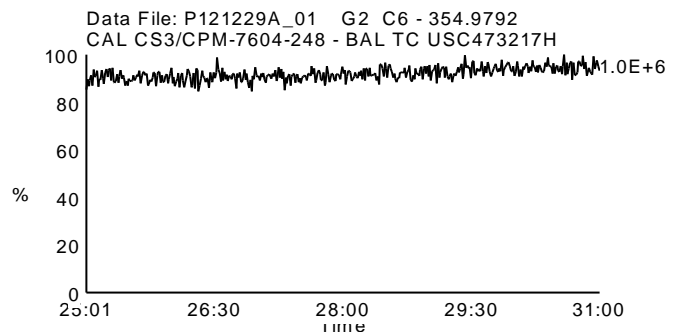
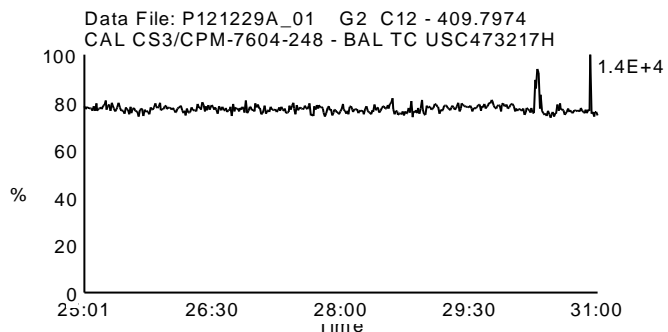
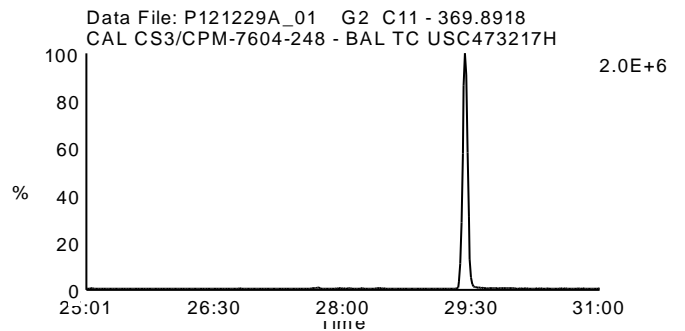
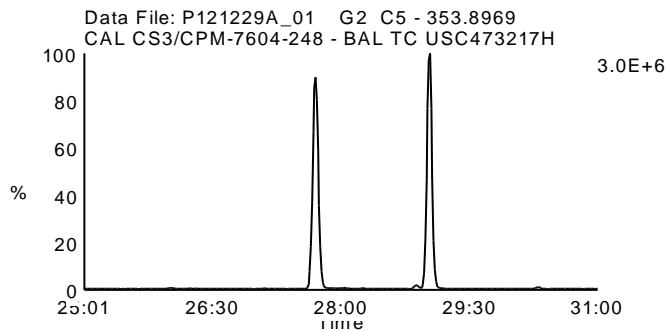
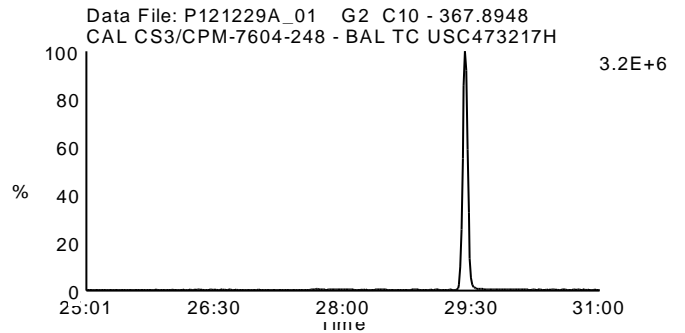
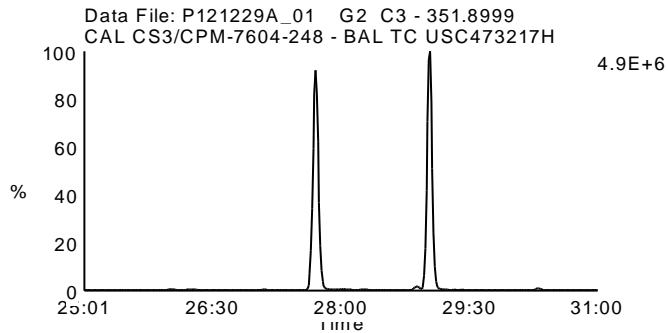
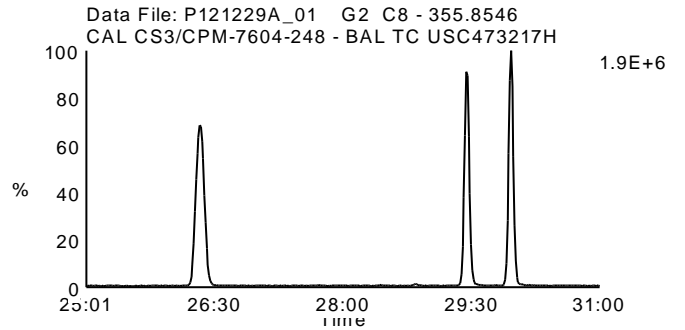
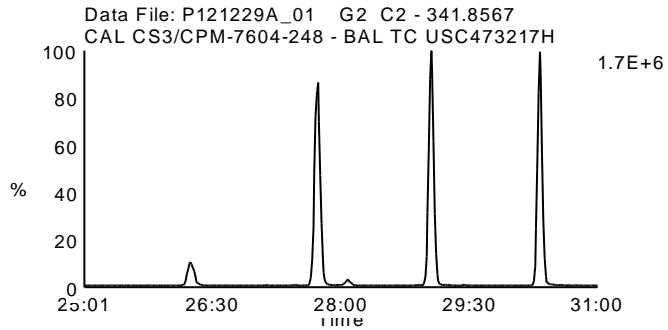
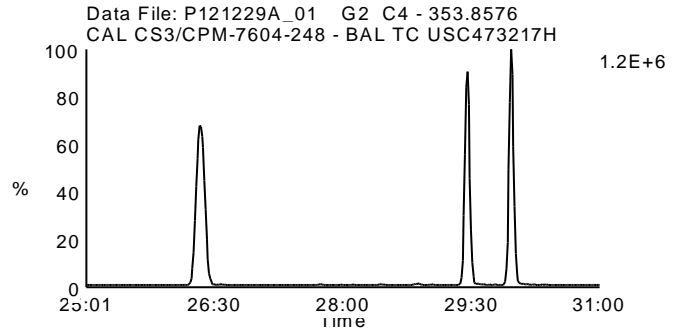
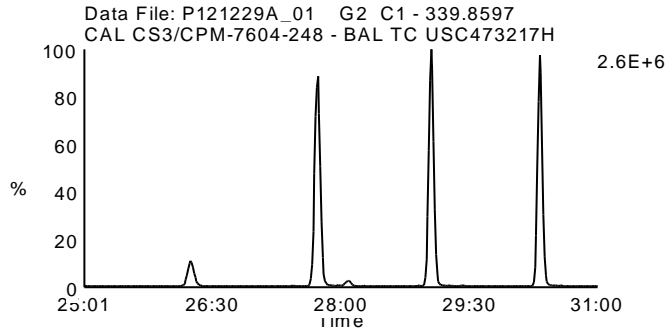
Data File Name: P121229A_01

Lab Sample ID: CS3/CPM-7604-248

Date Acquired: 12/29/2012

Client Sample ID: CPM/WDM

Sample Description: CAL CS3/CPM-7604-248 - BAL TC USC473217H Instrument: 10MSHR09 (P)



Homologue Group: Hexas

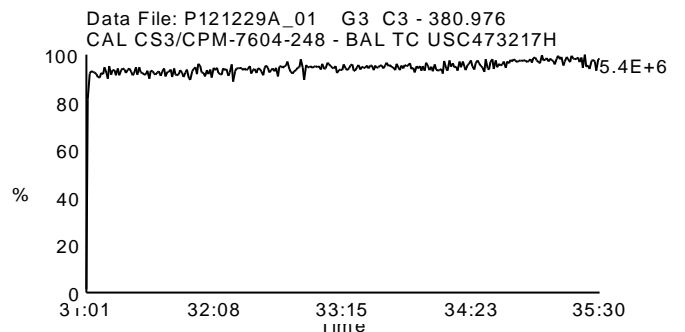
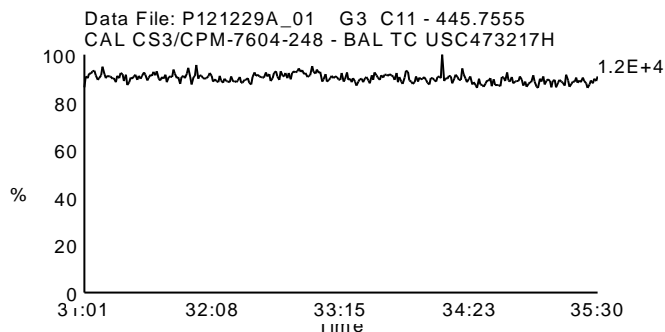
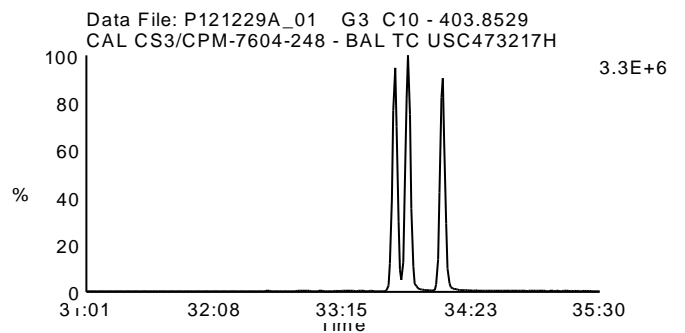
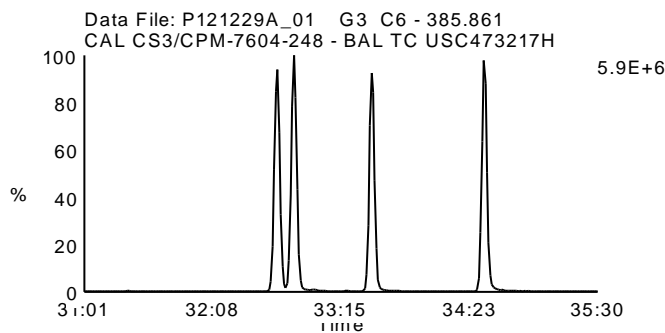
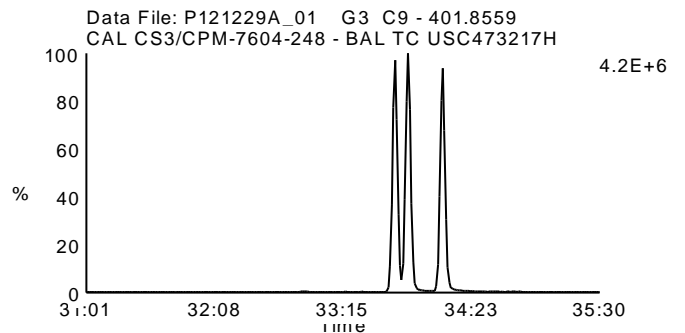
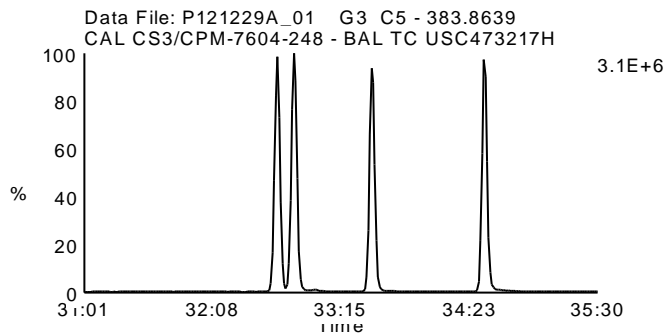
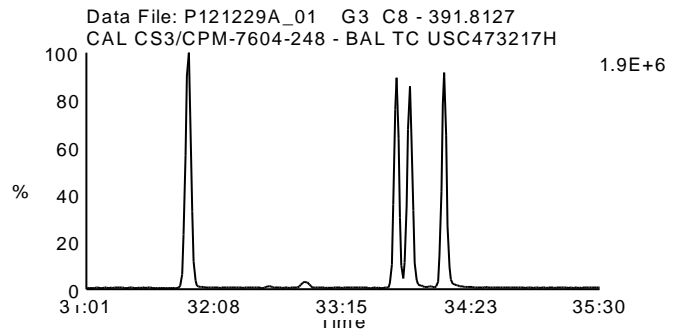
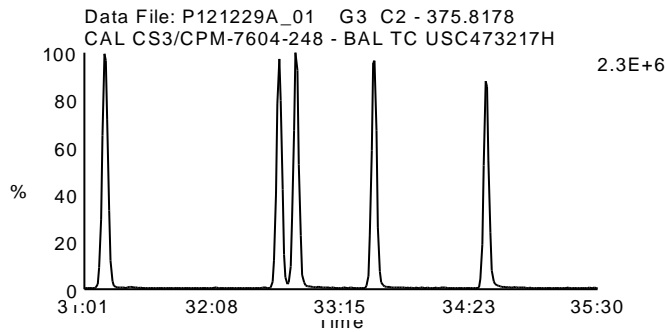
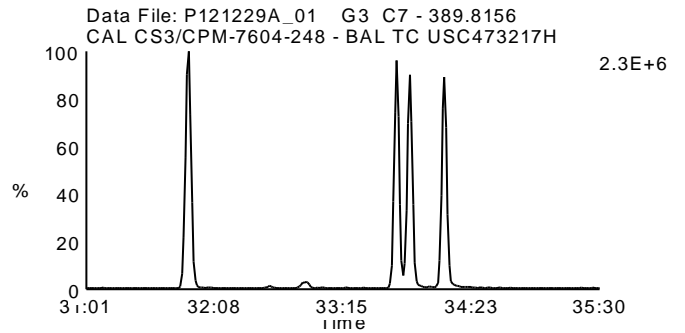
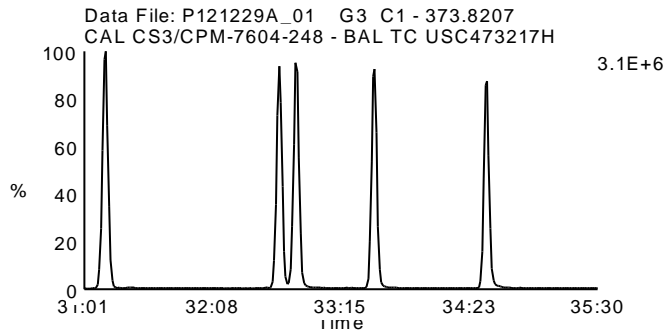
Data File Name: P121229A_01

Lab Sample ID: CS3/CPM-7604-248

Date Acquired: 12/29/2012

Client Sample ID: CPM/WDM

Sample Description: CAL CS3/CPM-7604-248 - BAL TC USC473217H Instrument: 10MSHR09 (P)



Homologue Group: Heptas

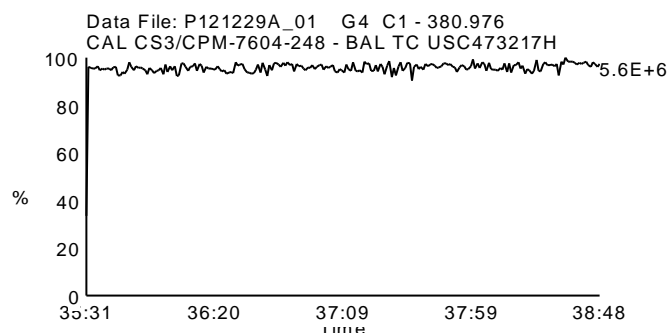
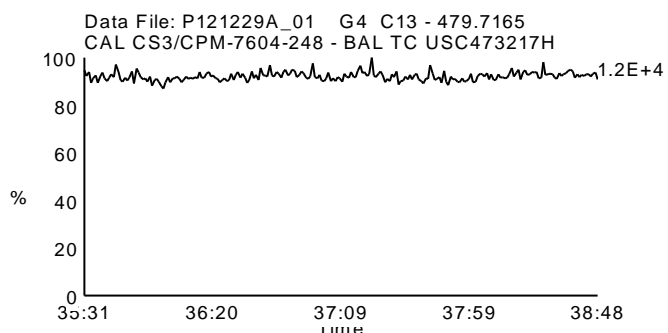
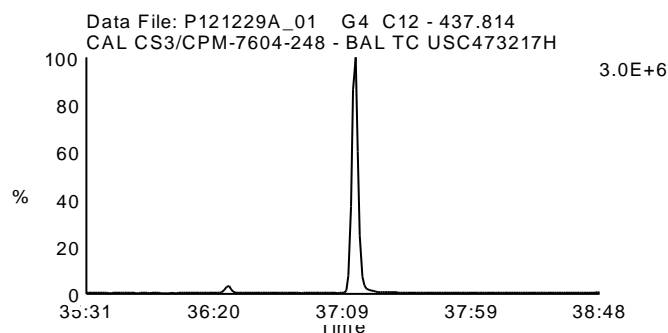
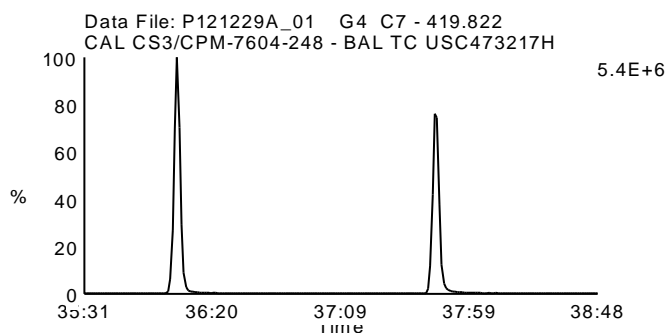
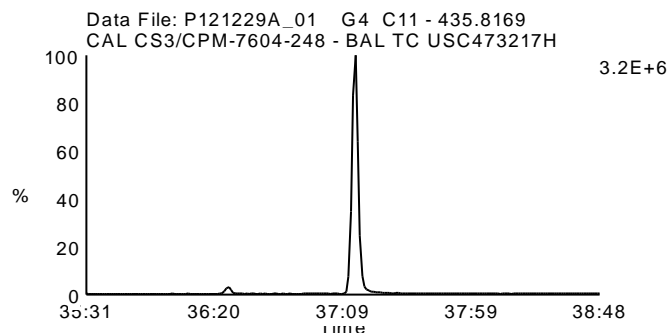
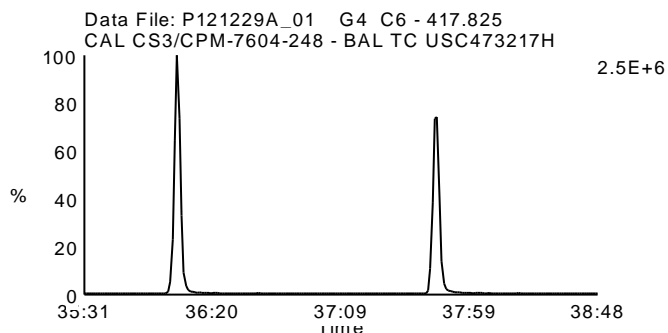
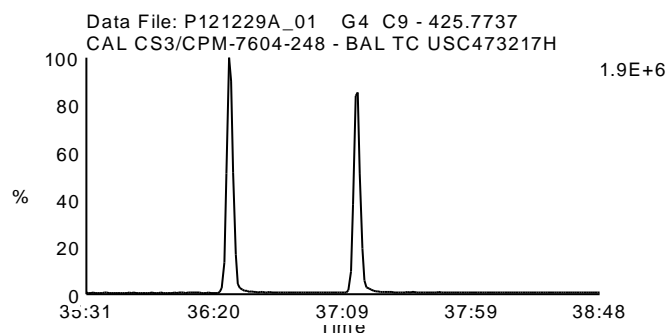
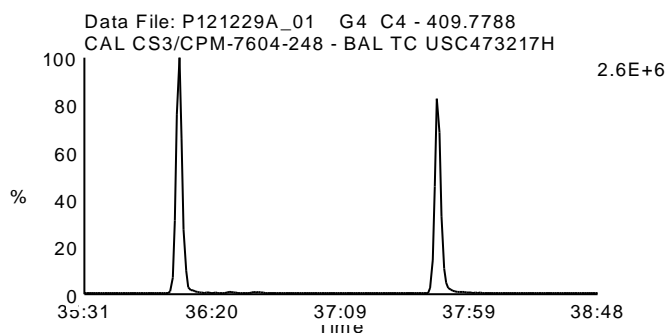
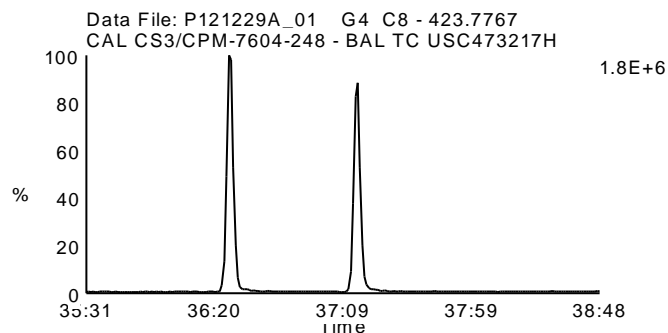
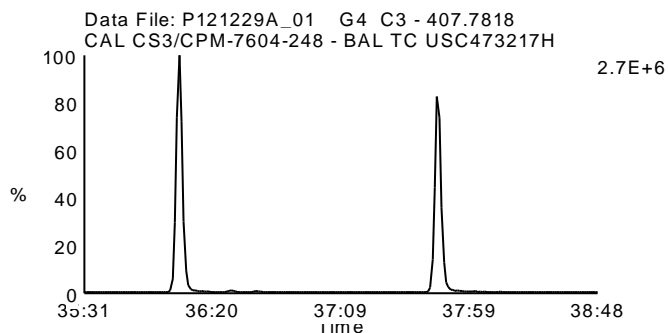
Data File Name: P121229A_01

Lab Sample ID: CS3/CPM-7604-248

Date Acquired: 12/29/2012

Client Sample ID: CPM/WDM

Sample Description: CAL CS3/CPM-7604-248 - BAL TC USC473217H Instrument: 10MSHR09 (P)



Homologue Group: Octas

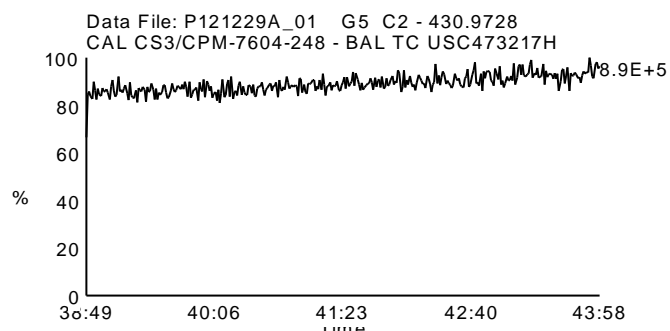
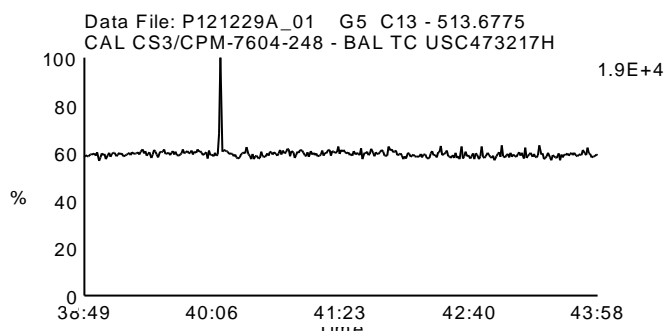
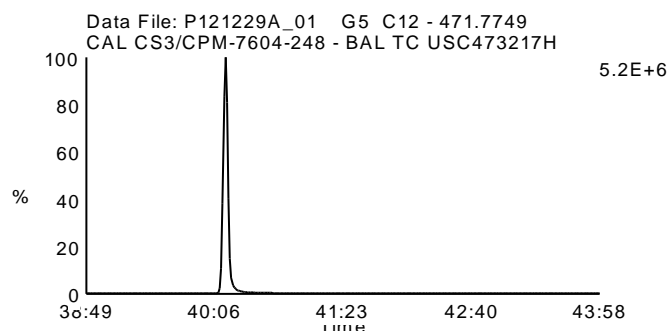
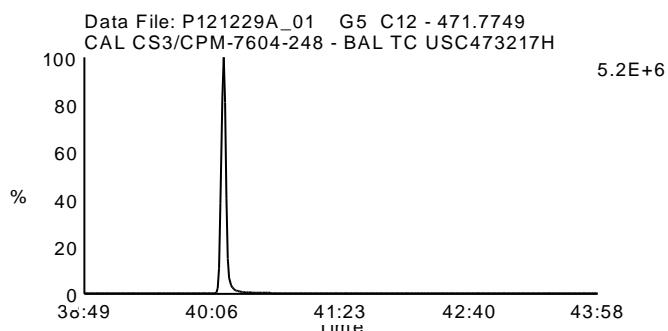
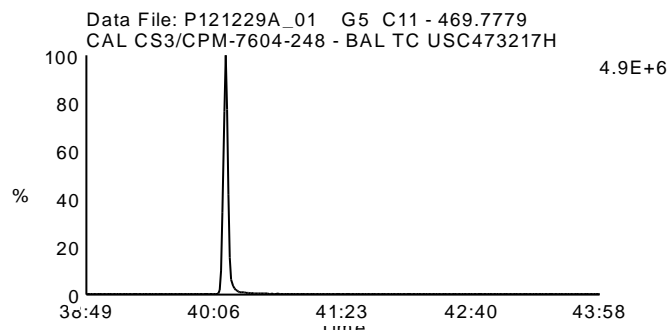
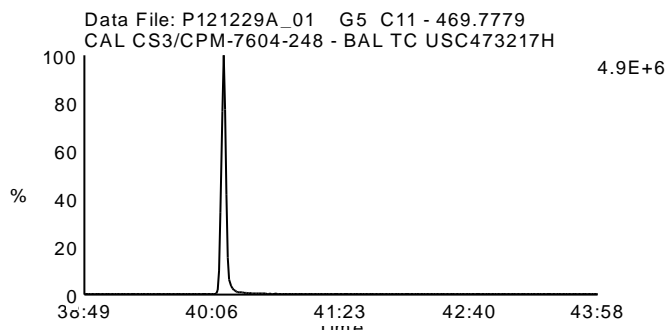
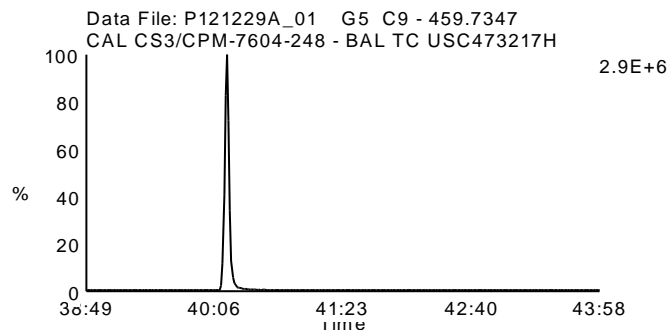
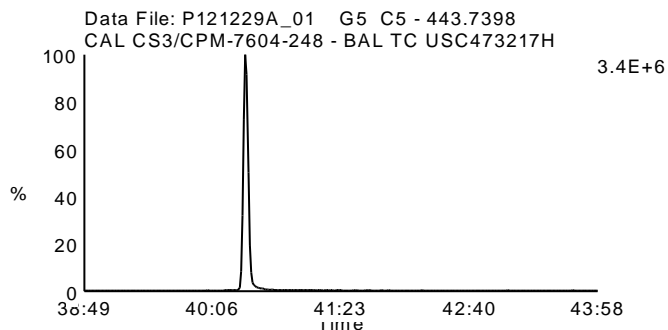
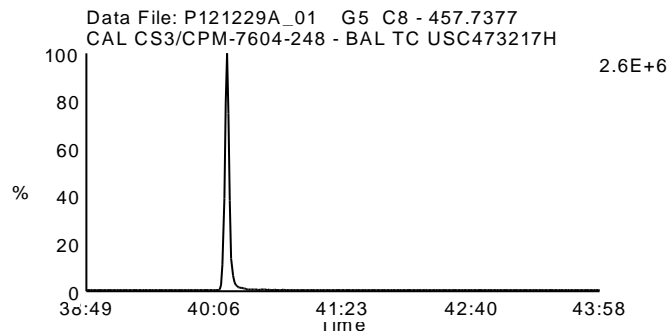
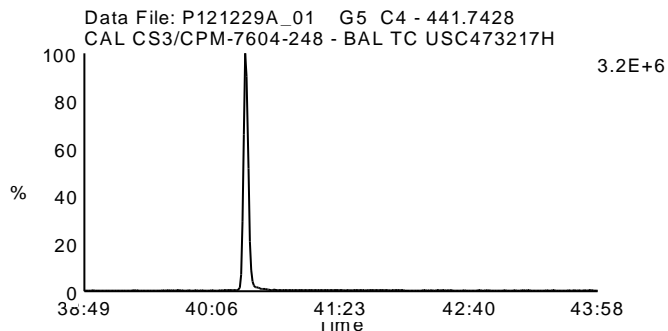
Data File Name: P121229A_01

Lab Sample ID: CS3/CPM-7604-248

Date Acquired: 12/29/2012

Client Sample ID: CPM/WDM

Sample Description: CAL CS3/CPM-7604-248 - BAL TC USC473217H Instrument: 10MSHR09 (P)



Homologue Group: Tetras

Data File Name: P130706B_01

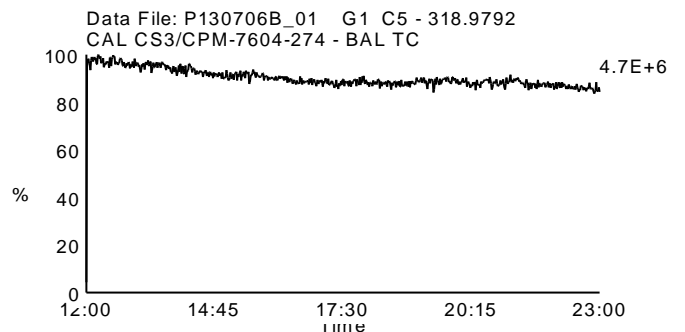
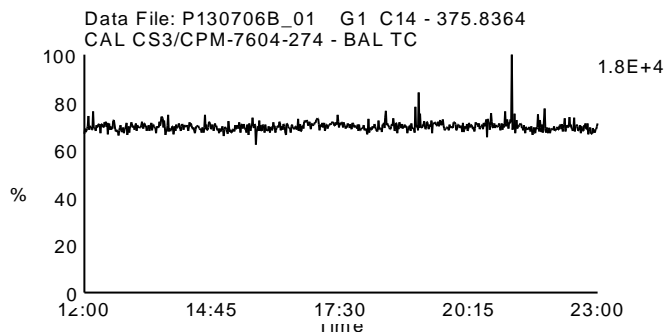
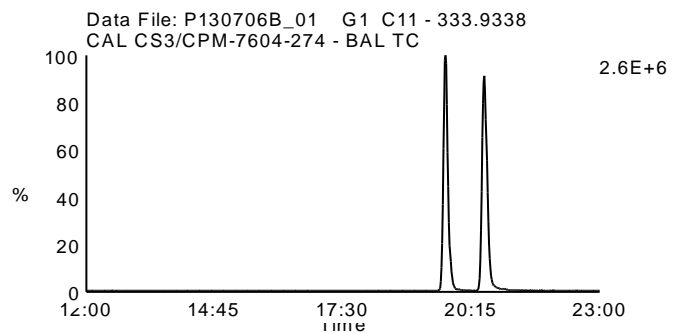
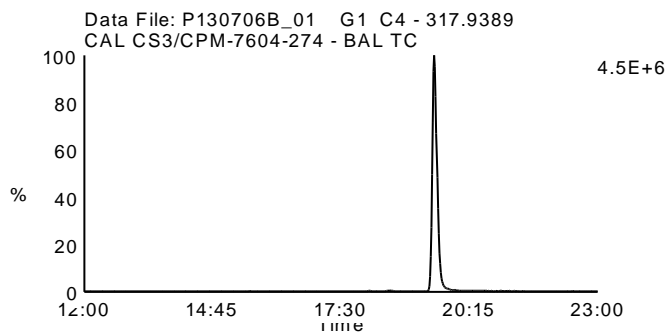
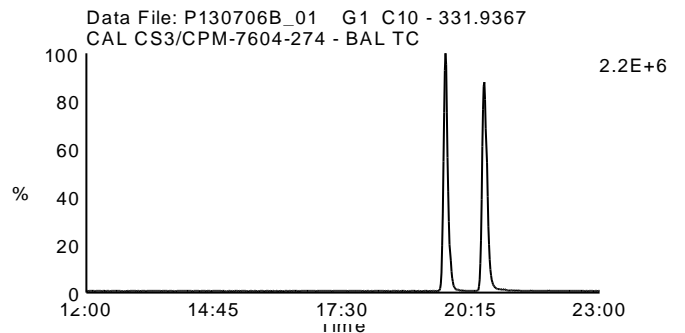
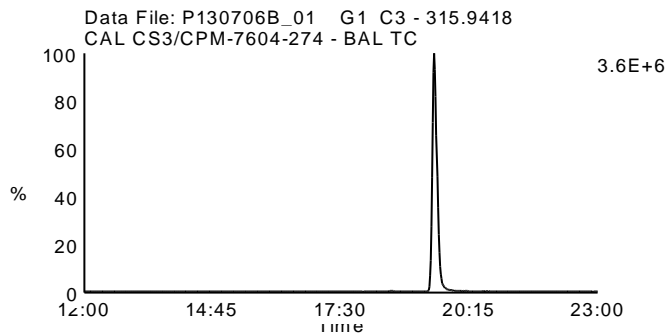
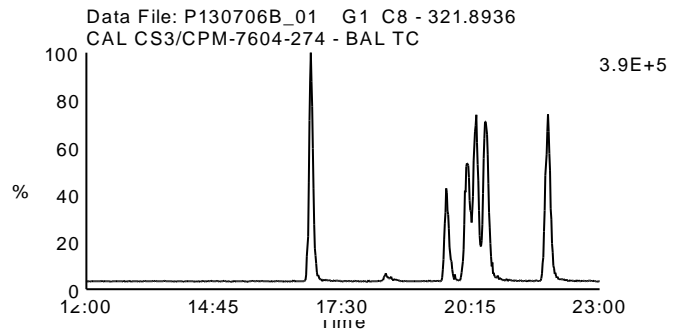
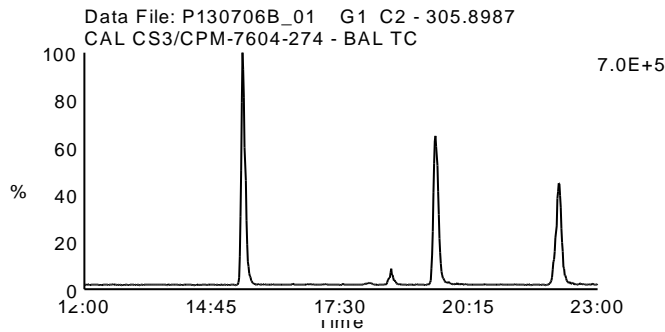
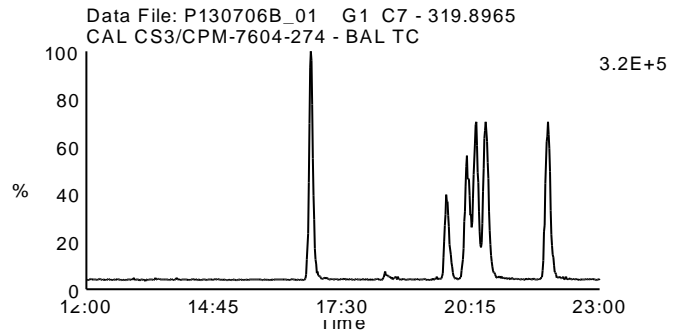
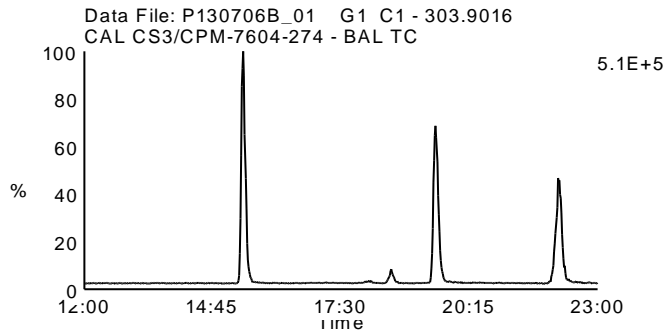
Date Acquired: 7/6/2013

Sample Description: CAL CS3/CPM-7604-274 - BAL TC

Lab Sample ID: CS3/CPM-7604-274

Client Sample ID: CPM/WDM

Instrument: 10MSHR09 (P)



Homologue Group: Penta & Cleanup

Data File Name: P130706B_01

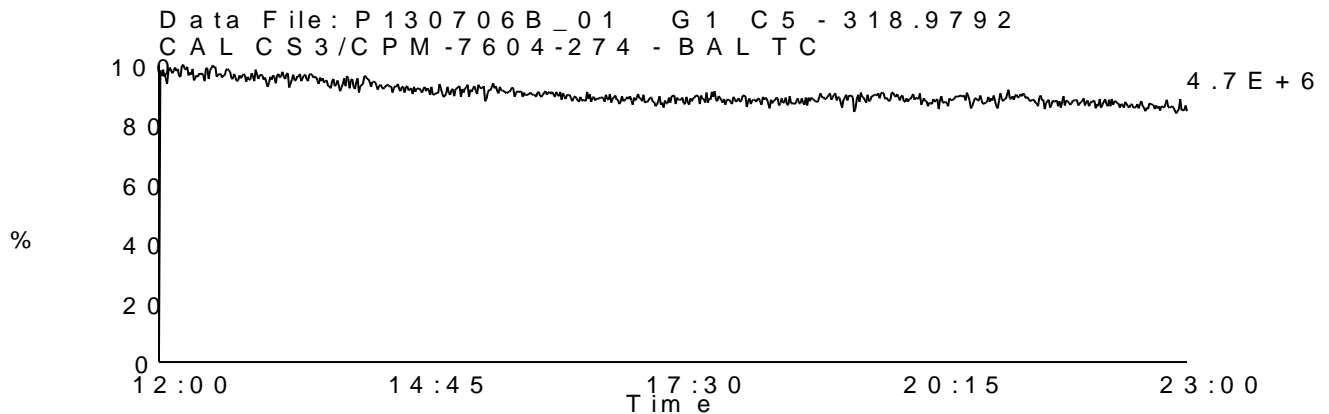
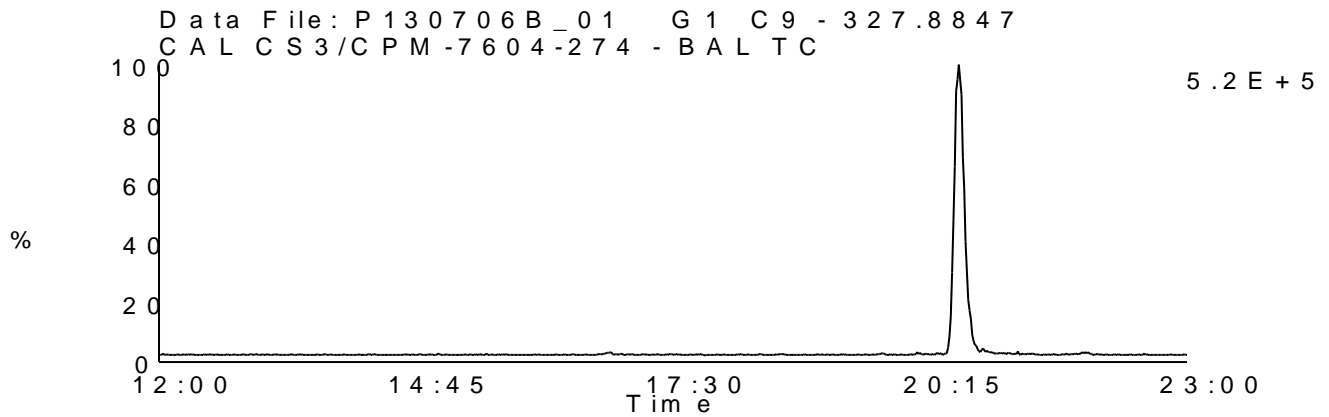
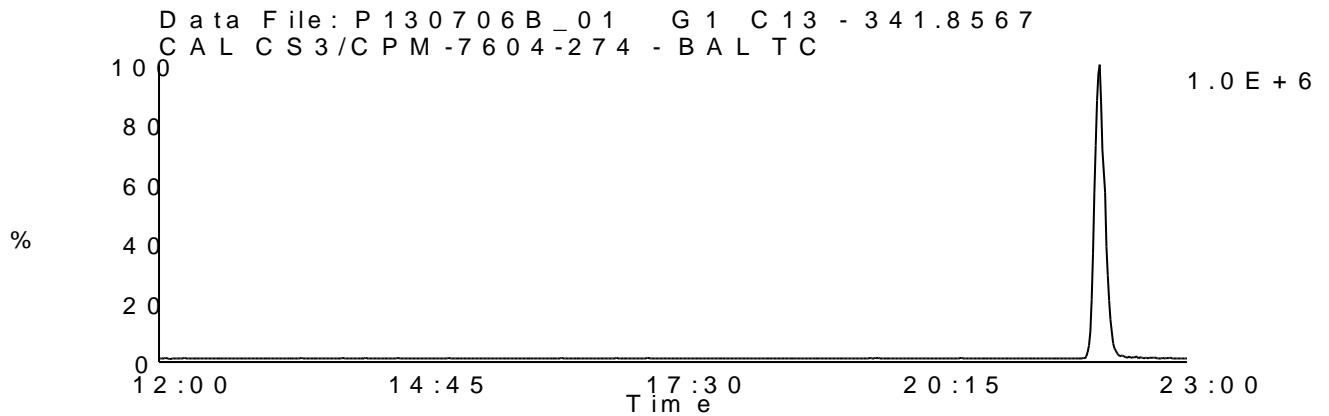
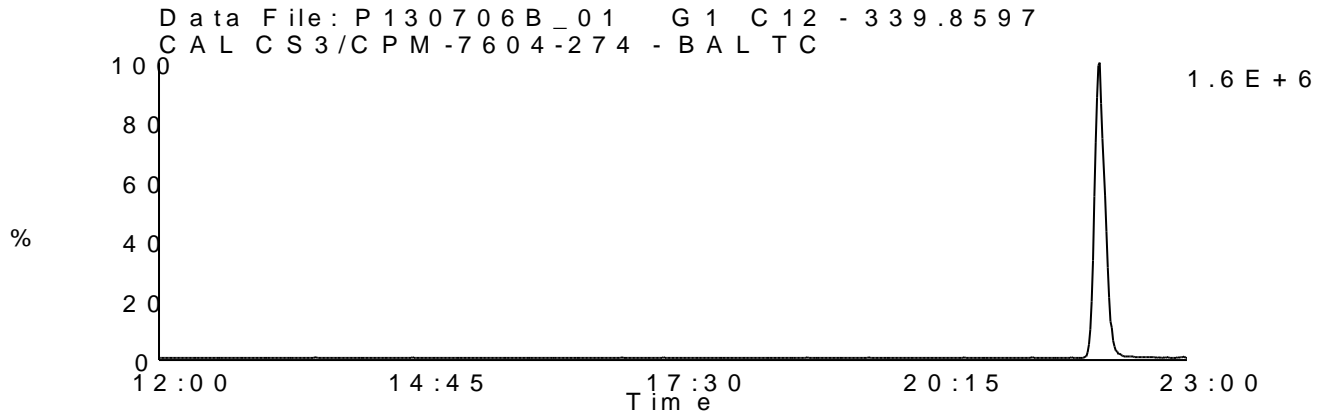
Date Acquired: 7/6/2013

Sample Description: CAL CS3/CPM-7604-274 - BAL TC

Lab Sample ID: CS3/CPM-7604-274

Client Sample ID: CPM/WDM

Instrument: 10MSHR09 (P)



Homologue Group: Pentas

Data File Name: P130706B_01

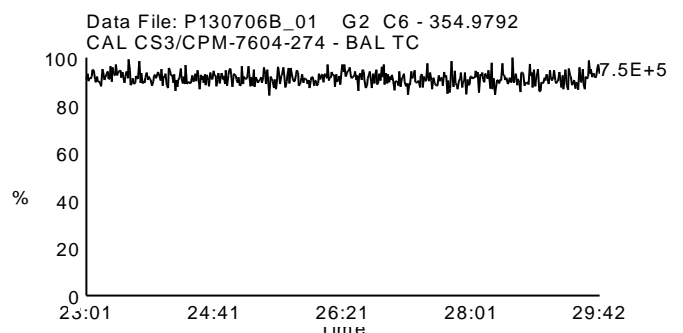
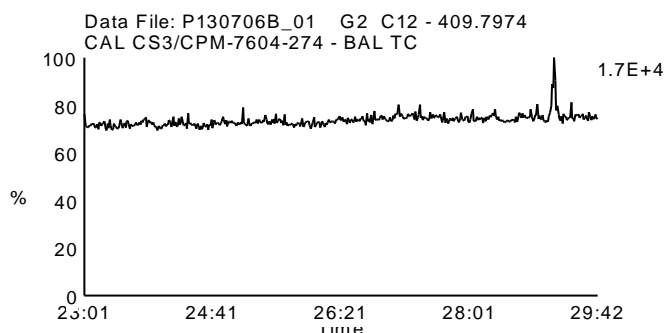
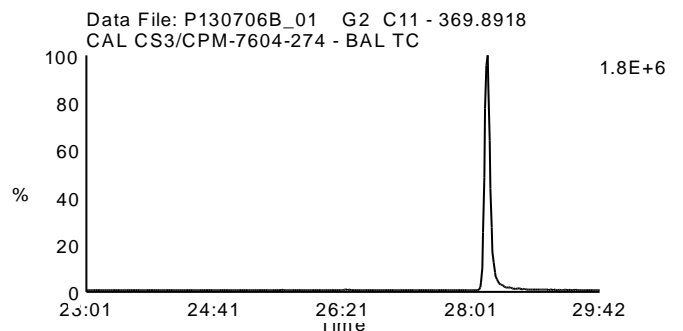
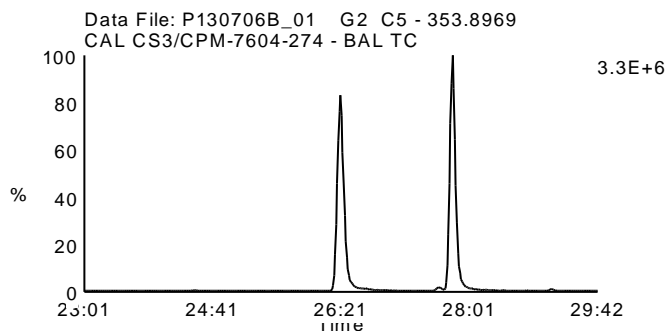
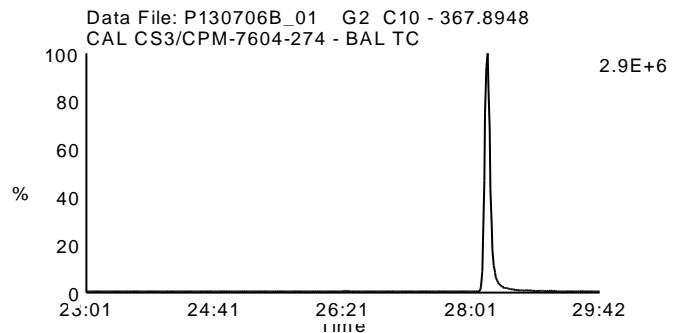
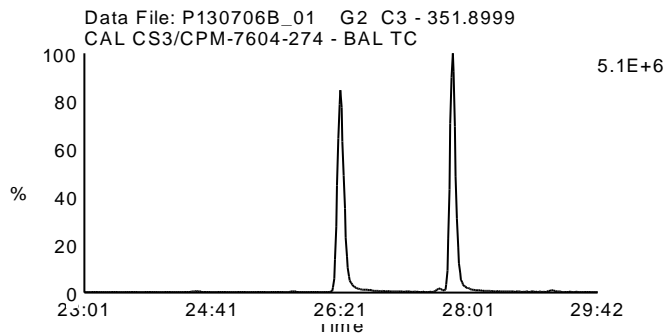
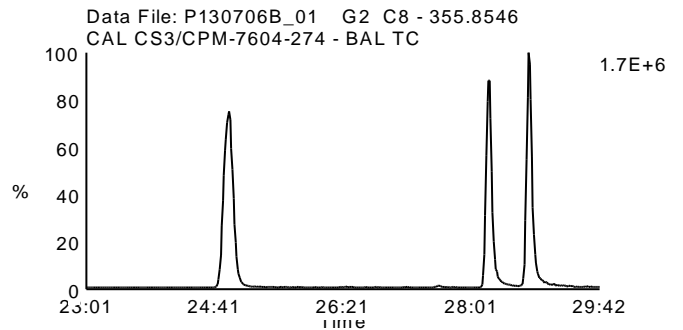
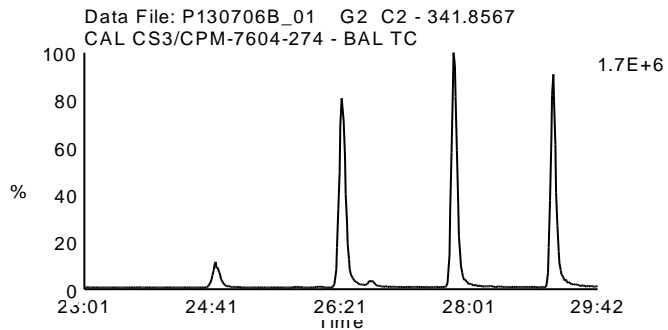
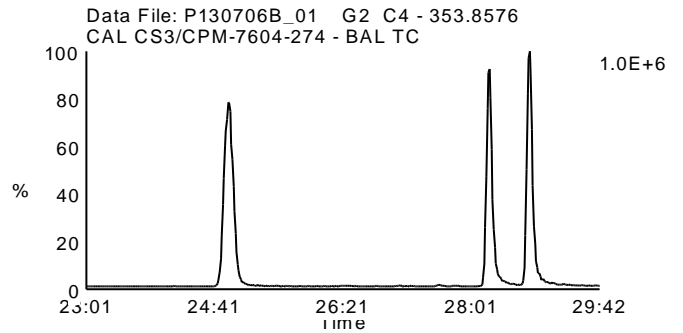
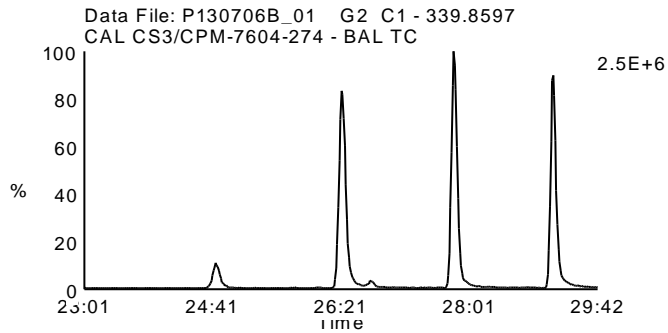
Date Acquired: 7/6/2013

Sample Description: CAL CS3/CPM-7604-274 - BAL TC

Lab Sample ID: CS3/CPM-7604-274

Client Sample ID: CPM/WDM

Instrument: 10MSHR09 (P)



Homologue Group: Hexas

Data File Name: P130706B_01

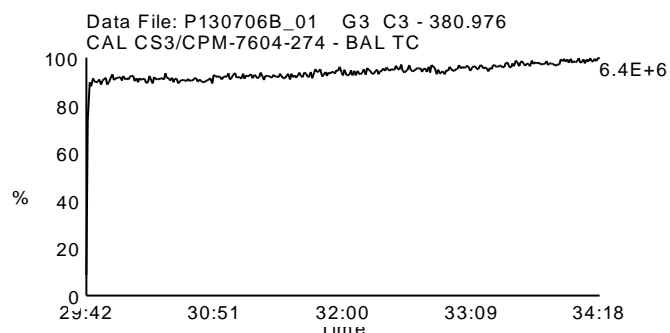
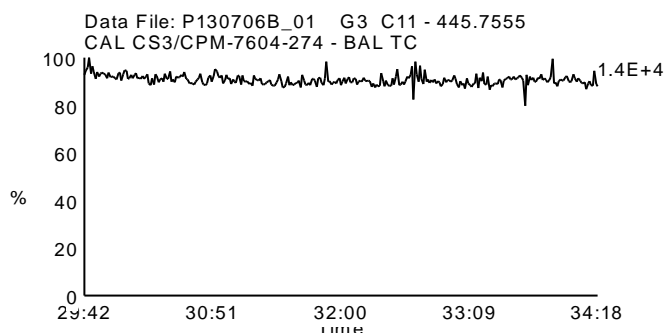
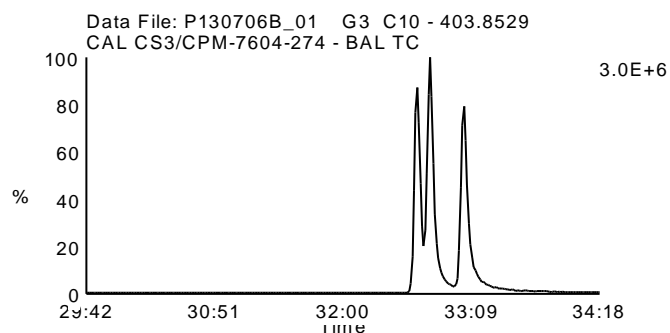
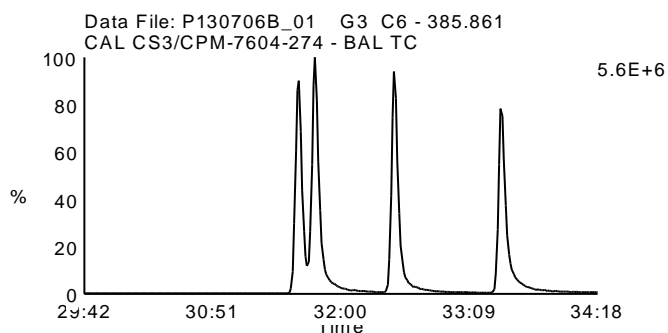
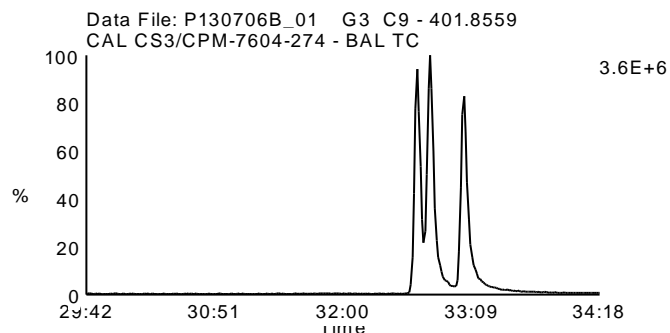
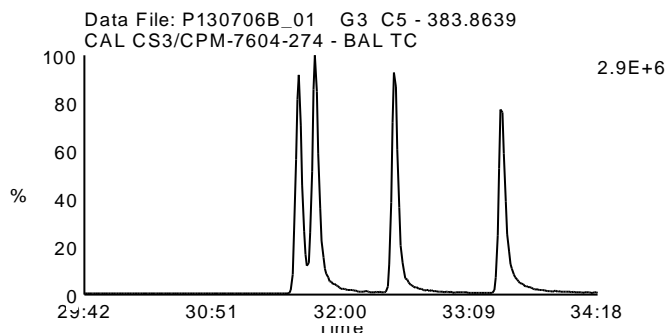
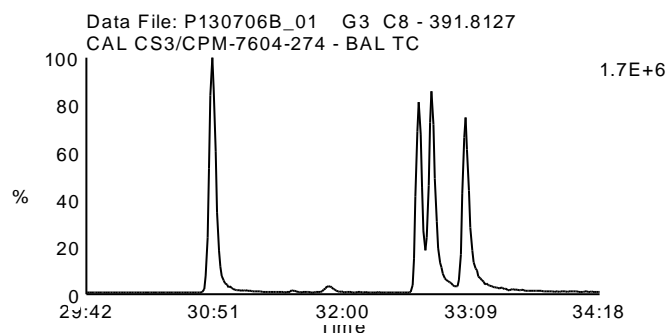
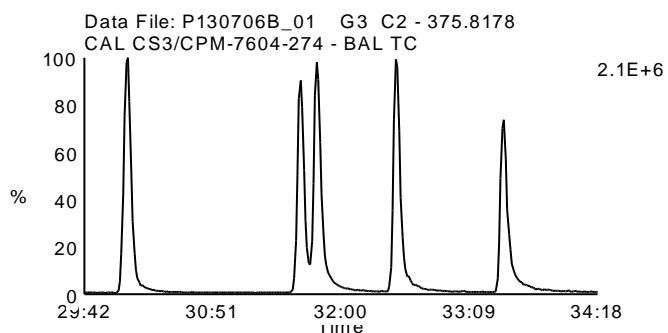
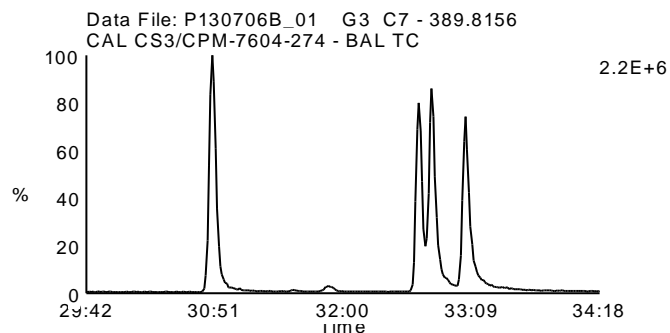
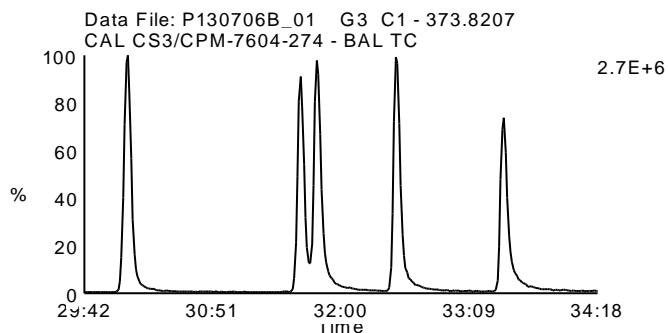
Date Acquired: 7/6/2013

Sample Description: CAL CS3/CPM-7604-274 - BAL TC

Lab Sample ID: CS3/CPM-7604-274

Client Sample ID: CPM/WDM

Instrument: 10MSHR09 (P)



Homologue Group: Heptas

Data File Name: P130706B_01

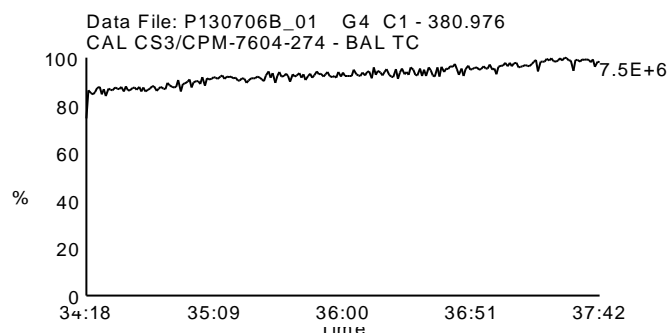
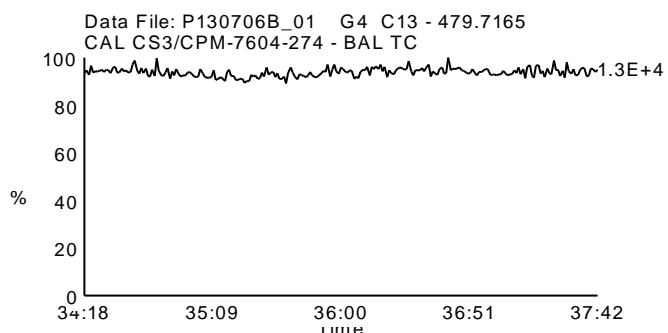
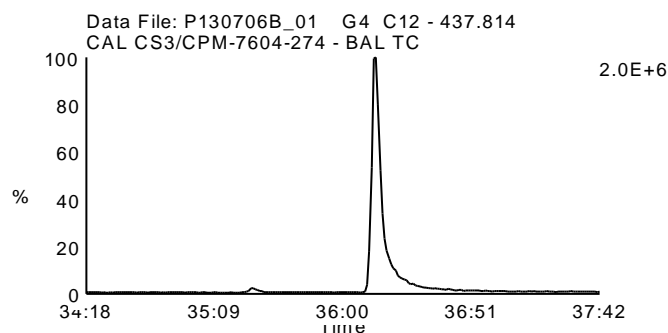
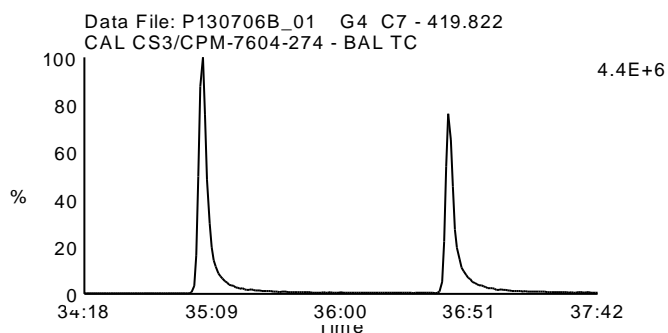
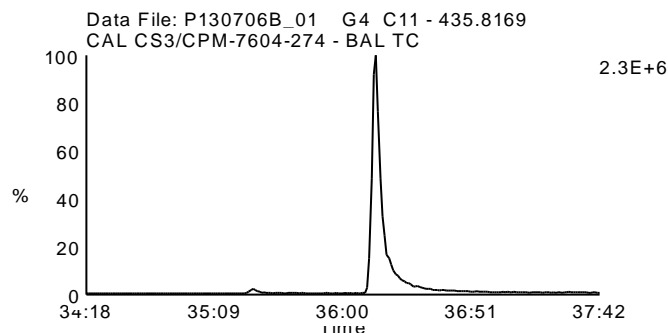
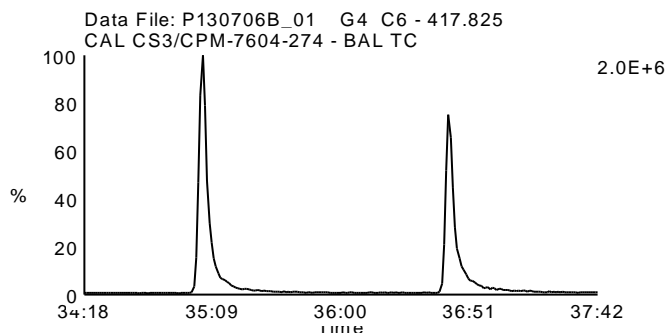
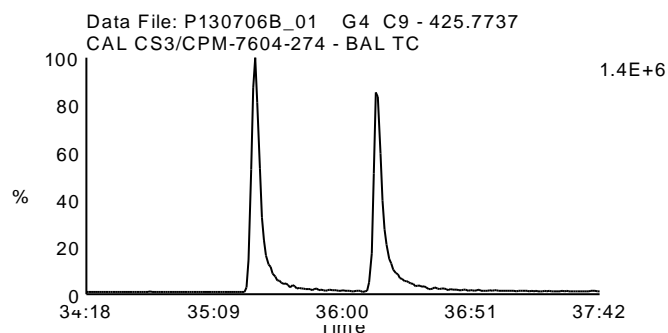
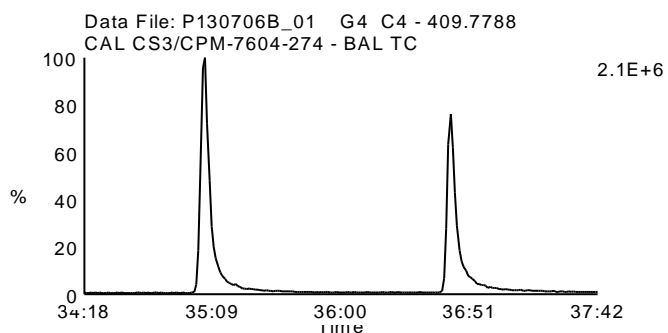
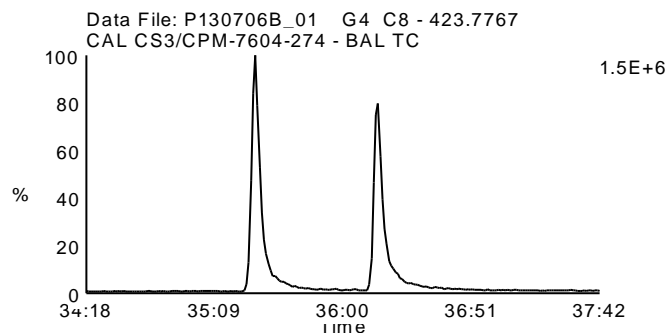
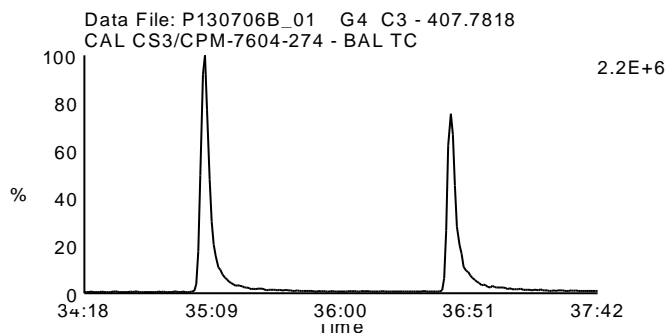
Date Acquired: 7/6/2013

Sample Description: CAL CS3/CPM-7604-274 - BAL TC

Lab Sample ID: CS3/CPM-7604-274

Client Sample ID: CPM/WDM

Instrument: 10MSHR09 (P)



Homologue Group: Octas

Data File Name: P130706B_01

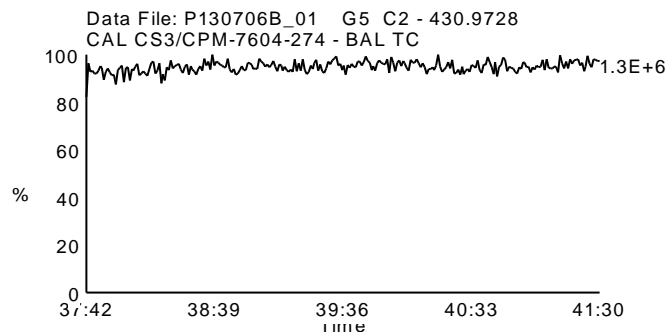
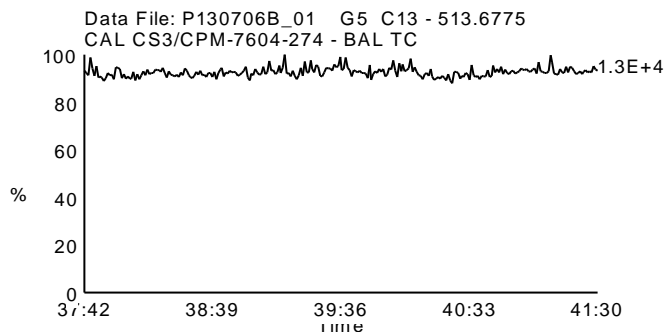
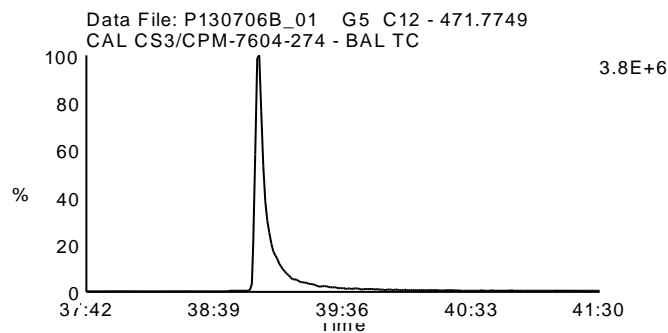
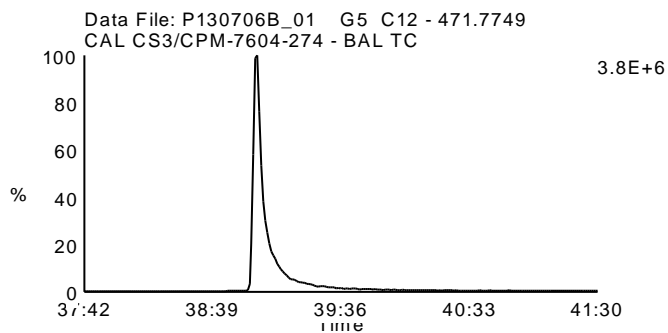
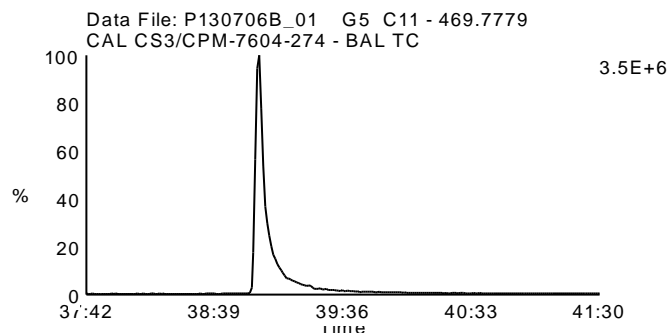
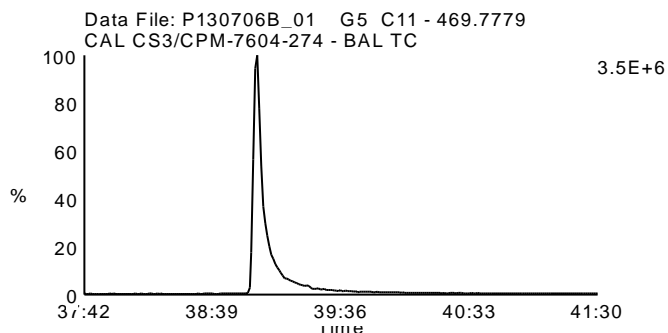
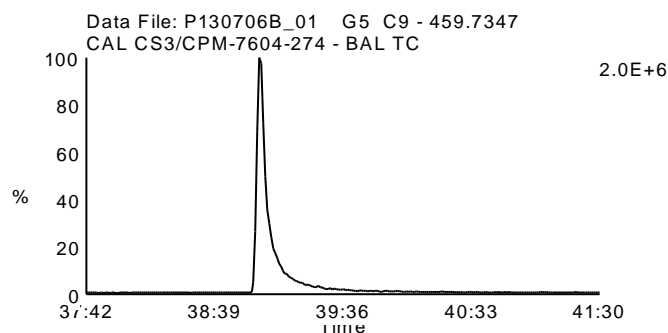
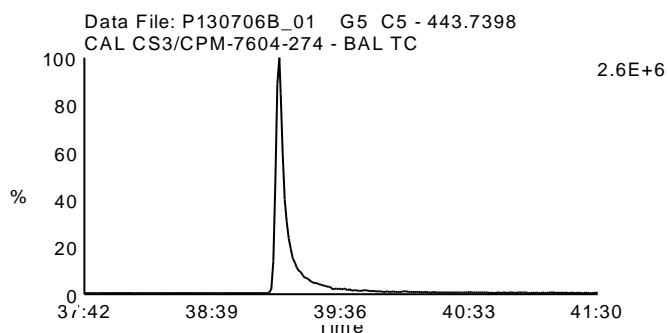
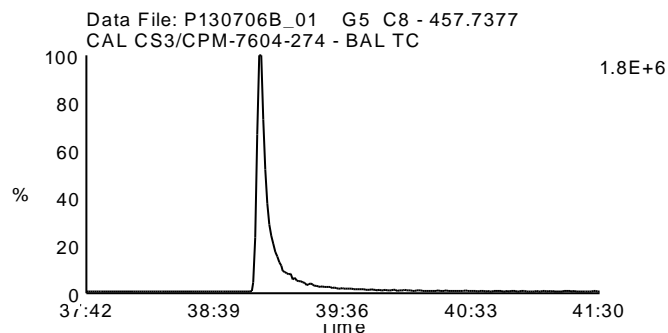
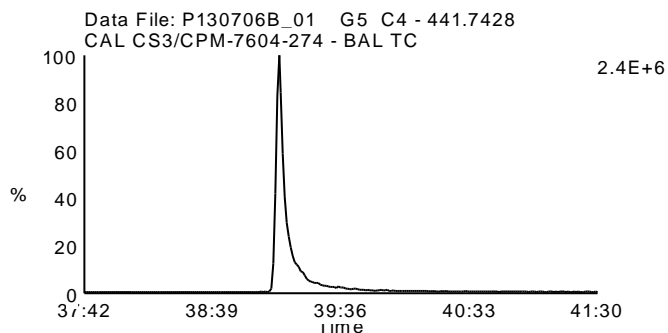
Date Acquired: 7/6/2013

Sample Description: CAL CS3/CPM-7604-274 - BAL TC

Lab Sample ID: CS3/CPM-7604-274

Client Sample ID: CPM/WDM

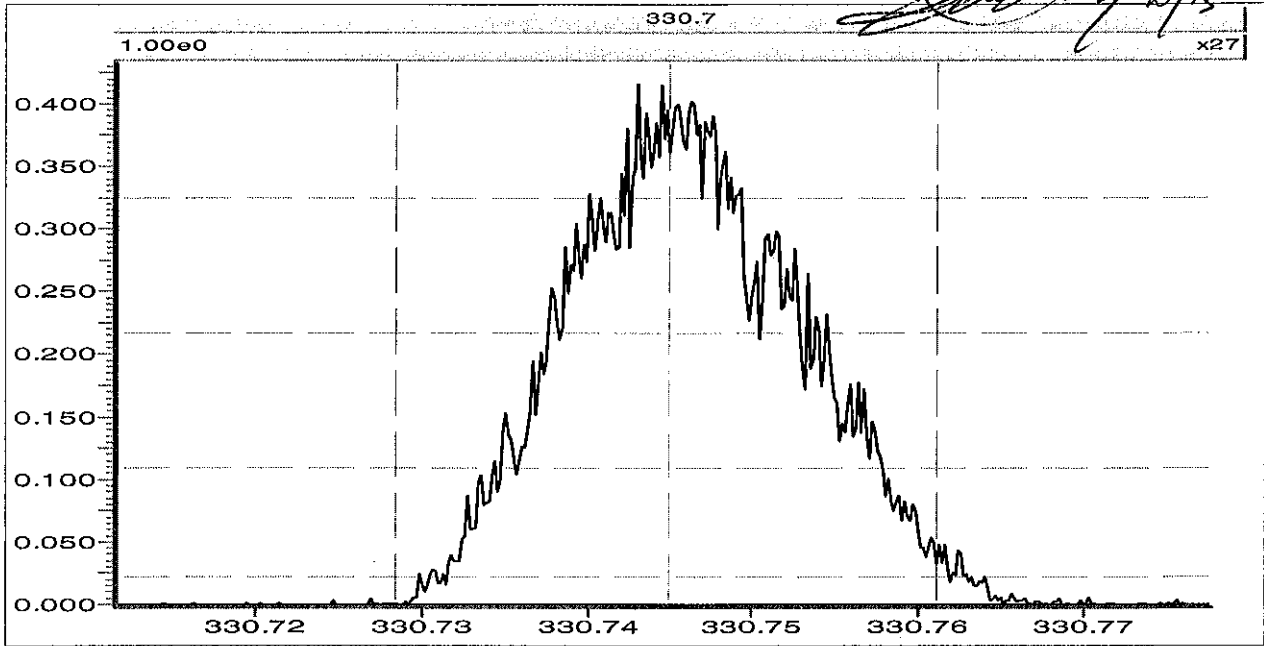
Instrument: 10MSHR09 (P)



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Printed: Monday, April 08, 2013 10:54:15 Central Daylight Time

Handwritten signature and date: 04/08/13



*ACE
4/8/13*

Source (EI+)

Ion Repeller (V)	-6.49
Focus 1	734
Beam Centre	-47.6
Focus 2	4331
Temperature (C)	290
Elec Energy (eV)	36.0
Trap Current (uA)	450.0
Y Deflect 1	-21.9
Z Deflect 1	19.9
Z Deflect 2	-4.7
Z Focus 2	2520
Z Focus 3	0
Z Deflect 3	23.4
Y Focus	3545
Rotate 2	-14.5
Curve 2	10.9
Curve 3	-1.4
Rotate 3	-23.0
Rotate 4	-3.4
V Acc (V)	7991.40
Magnet Mass	330.7
Source Slit	23.58
Collector Slit	18.18
MIKES Slit	100.00
Alpha	40.00
Detector Voltage	350
Ion Energy	-4.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser

No information

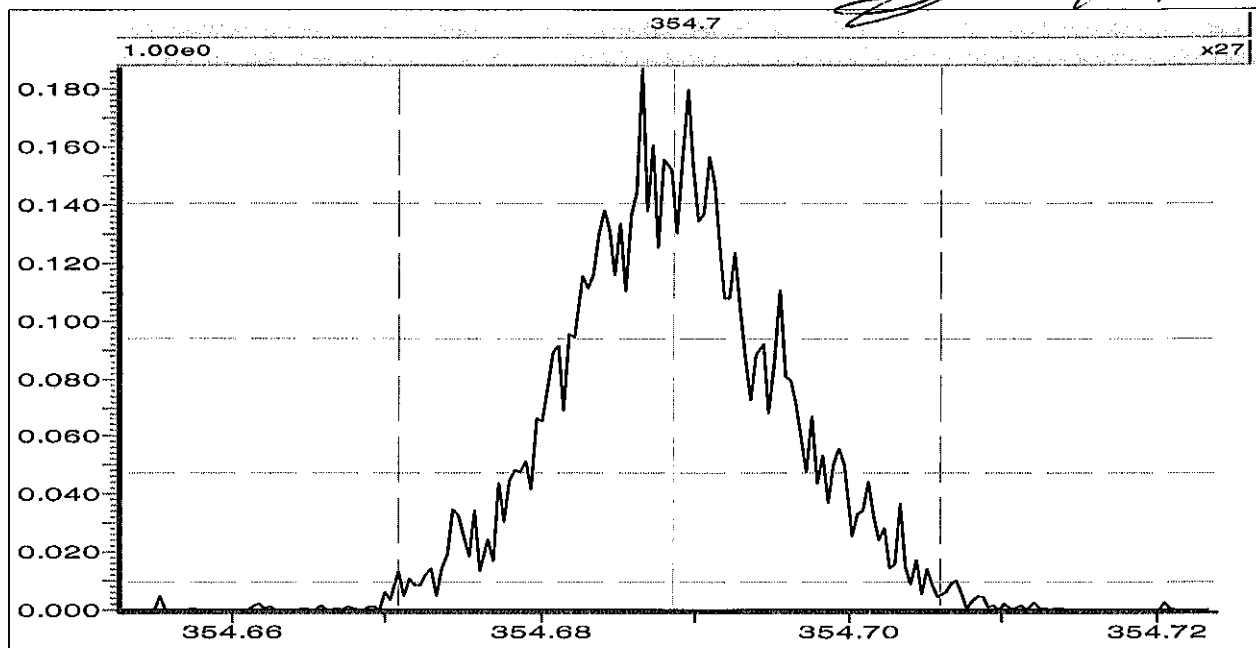
Engineer

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Printed: Tuesday, April 09, 2013 06:50:05 Central Daylight Time

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4/9/13



Sum
4/9/13

Source (EI+)

Ion Repeller (V)	-6.49
Focus 1	734
Beam Centre	-47.6
Focus 2	4331
Temperature (C)	290
Elec Energy (eV)	36.0
Trap Current (uA)	450.0
Y Deflect 1	-21.9
Z Deflect 1	19.9
Z Deflect 2	-4.7
Z Focus 2	2520
Z Focus 3	0
Z Deflect 3	23.4
Y Focus	3545
Rotate 2	-14.5
Curve 2	10.9
Curve 3	-1.4
Rotate 3	-23.0
Rotate 4	-3.4
V Acc (V)	7991.40
Magnet Mass	330.7
Source Slit	23.58
Collector Slit	18.18
MIKES Slit	100.00
Alpha	40.00
Detector Voltage	350
Ion Energy	-4.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser

No information

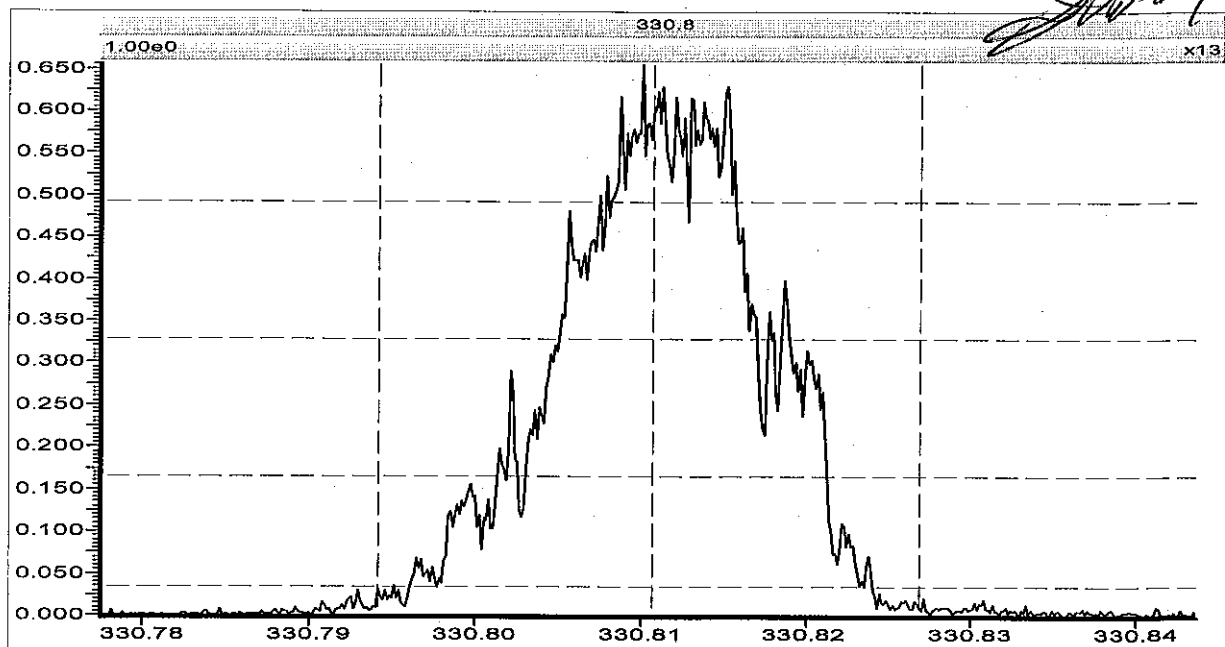
Engineer

No information

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Printed: Wednesday, July 03, 2013 08:37:23 Central Daylight Time

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07/03/13
Sum
7/3/13



Source (EI+)

Ion Repeller (V)	-11.53
Focus 1	955
Beam Centre	-41.4
Focus 2	4525
Temperature (C)	280
Elec Energy (eV)	36.0
Trap Current (uA)	500.0
Y Deflect 1	18.9
Z Deflect 1	-49.5
Z Deflect 2	35.2
Z Focus 2	2122
Z Focus 3	1948
Z Deflect 3	16.6
Y Focus	3296
Rotate 2	-7.9
Curve 2	14.4
Curve 3	12.8
Rotate 3	-0.5
Rotate 4	17.1
V Acc (V)	7988.46
Magnet Mass	330.8
Source Slit	22.64
Collector Slit	19.60
MIKES Slit	100.00
Alpha	50.00
Detector Voltage	350
Ion Energy	-4.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser

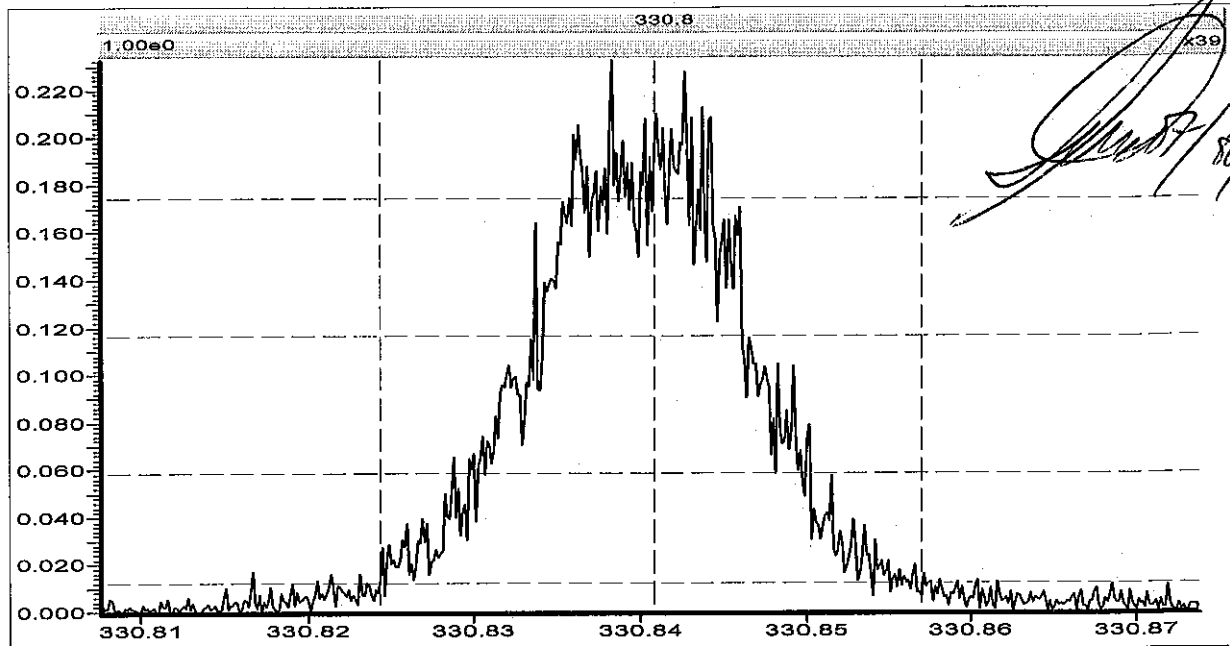
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Engineer

No information

File: C:\MassLynx\Default.pro\Acqudb\M488MW1_10K.ipr

Printed: Friday, July 05, 2013 10:49:11 Central Daylight Time



Source (EI+)

Ion Repeller (V)	-9.51
Focus 1	815
Beam Centre	-44.1
Focus 2	4389
Temperature (C)	280
Elec Energy (eV)	36.0
Trap Current (uA)	500.0
Y Deflect 1	20.3
Z Deflect 1	14.4
Z Deflect 2	26.6
Z Focus 2	2348
Z Focus 3	1496
Z Deflect 3	6.4
Y Focus	3236
Rotate 2	-13.3
Curve 2	12.0
Curve 3	12.4
Rotate 3	-8.8
Rotate 4	2.5
V Acc (V)	7986.20
Magnet Mass	330.8
Source Slit	23.76
Collector Slit	18.48
MIKES Slit	100.00
Alpha	50.00
Detector Voltage	350
Ion Energy	-4.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser

No information

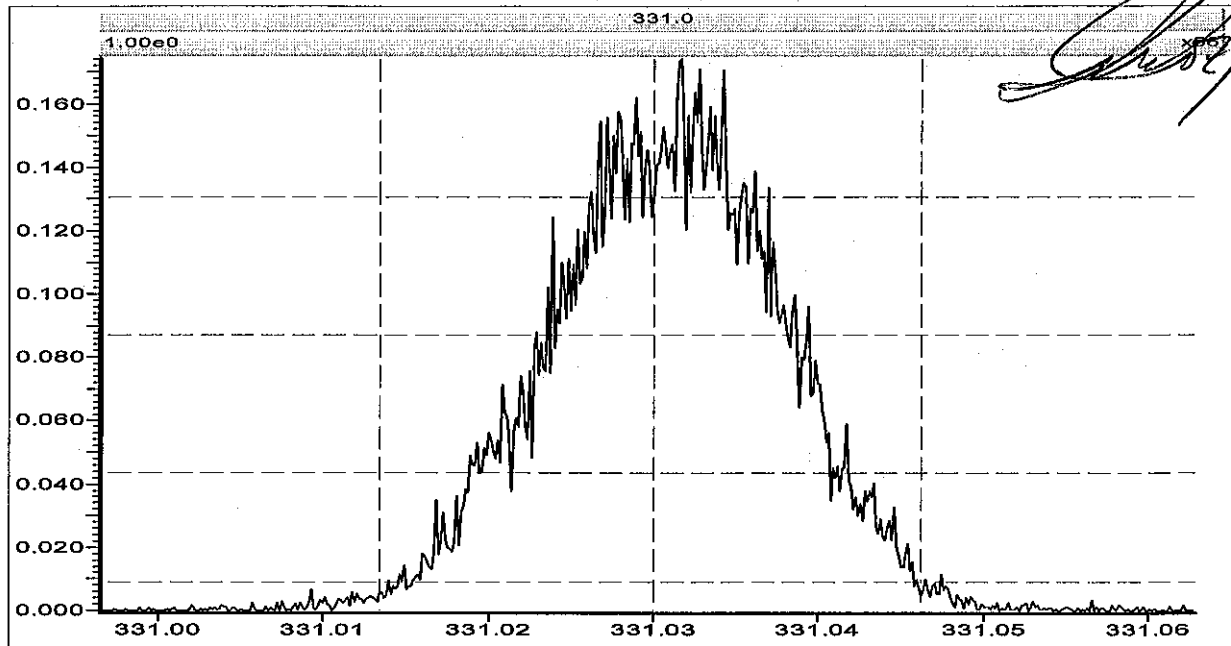
Engineer

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File: C:\MassLynx\Default.pro\Acqudb\P10MSHR09.ipr

Printed: Saturday, July 06, 2013 13:31:14 Central Daylight Time

BAK 7/6/13
[Signature]
5/8/13



Source (EI+)

Ion Repeller (V)	-7.14
Focus 1	712
Beam Centre	18.3
Focus 2	4021
Temperature (C)	280
Elec Energy (eV)	35.0
Trap Current (uA)	500.0
Y Deflect 1	-70.2
Z Deflect 1	-69.9
Z Deflect 2	-34.8
Z Focus 2	2320
Z Focus 3	0
Z Deflect 3	-5.2
Y Focus	3755
Rotate 2	10.5
Curve 2	0.5
Curve 3	4.9
Rotate 3	-49.6
Rotate 4	0.2
V Acc (V)	7989.84
Magnet Mass	331.0
Source Slit	19.40
Collector Slit	12.96
MIKES Slit	100.00
Alpha	50.00
Detector Voltage	350
Ion Energy	1.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser

No information

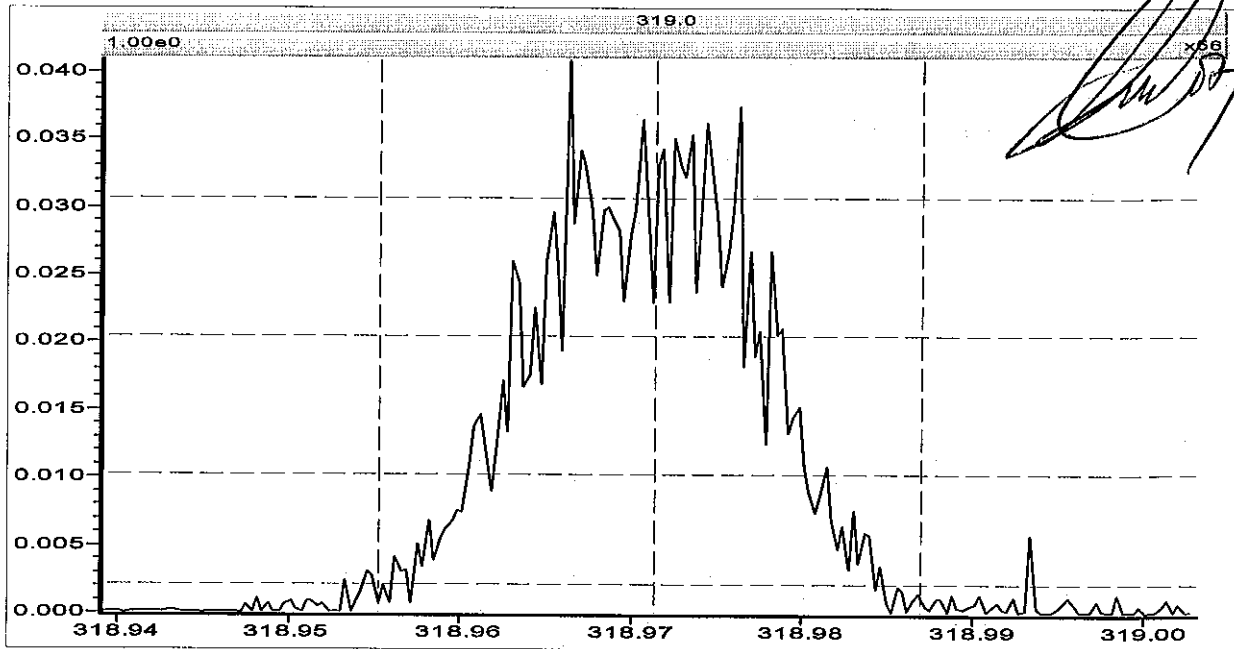
Engineer

No information

File: C:\MassLynx\Default.PRO\ACQUDB\IP10MSHR09.ipr

BAZ 7/7/13

Printed: Sunday, July 07, 2013 12:04:08 Central Daylight Time



Source (EI+)

Ion Repeller (V)	-7.14
Focus 1	712
Beam Centre	18.3
Focus 2	4021
Temperature (C)	280
Elec Energy (eV)	35.0
Trap Current (uA)	500.0
Y Deflect 1	-70.2
Z Deflect 1	-69.9
Z Deflect 2	-34.8
Z Focus 2	2320
Z Focus 3	0
Z Deflect 3	-5.2
Y Focus	3737
Rotate 2	10.5
Curve 2	0.5
Curve 3	4.9
Rotate 3	-49.6
Rotate 4	0.2
V Acc (V)	7989.84
Magnet Mass	331.0
Source Slit	19.40
Collector Slit	12.96
MIKES Slit	100.00
Alpha	50.00
Detector Voltage	350
Ion Energy	1.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser

No information

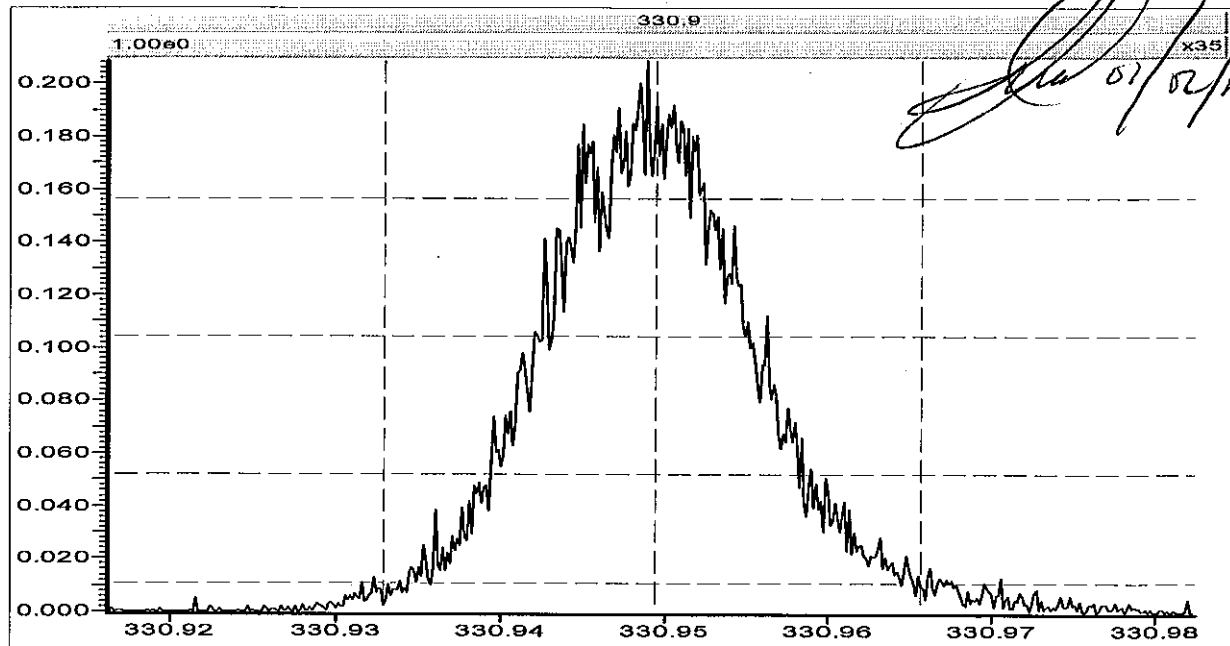
Engineer

No information

File: C:\MassLynx\Default.pro\Acqudb\P10MSHR09.ipr

Printed: Saturday, December 29, 2012 15:47:58 Central Standard Time

Bar 12/29/12



Source (EI+)

Ion Repeller (V)	-12.36
Focus 1	1060
Beam Centre	-9.6
Focus 2	3769
Temperature (C)	280
Elec Energy (eV)	35.0
Trap Current (uA)	500.0
Y Deflect 1	23.1
Z Deflect 1	6.3
Z Deflect 2	-26.2
Z Focus 2	2390
Z Focus 3	0
Z Deflect 3	34.5
Y Focus	3523
Rotate 2	9.9
Curve 2	-5.7
Curve 3	-1.7
Rotate 3	-51.8
Rotate 4	-3.0
V Acc (V)	7991.30
Magnet Mass	330.9
Source Slit	43.00
Collector Slit	15.14
MIKES Slit	100.00
Alpha	45.00
Detector Voltage	350
Ion Energy	0.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser

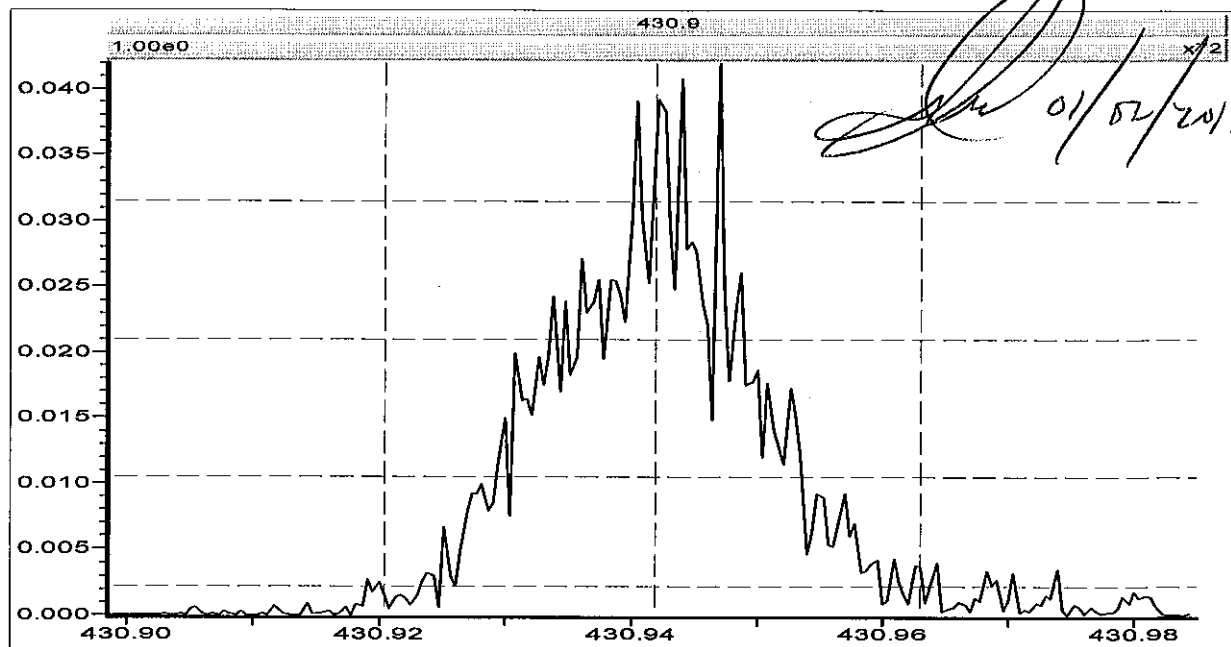
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Engineer

No information

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 Printed: Sunday, December 30, 2012 12:41:42 Central Standard Time

*BAL 12/30/12
 end of shift*



Source (EI+)

Ion Repeller (V)	-12.36
Focus 1	1060
Beam Centre	-9.6
Focus 2	3769
Temperature (C)	280
Elec Energy (eV)	35.0
Trap Current (uA)	500.0
Y Deflect 1	23.1
Z Deflect 1	6.3
Z Deflect 2	-26.2
Z Focus 2	2390
Z Focus 3	0
Z Deflect 3	34.5
Y Focus	3523
Rotate 2	9.9
Curve 2	-5.7
Curve 3	-1.7
Rotate 3	-51.8
Rotate 4	-3.0
V Acc (V)	7991.30
Magnet Mass	330.9
Source Slit	43.00
Collector Slit	15.14
MIKES Slit	100.00
Alpha	45.00
Detector Voltage	350
Ion Energy	0.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser

No information

Engineer

No information

Appendix F

QC Raw Data

Homologue Group: Tetras

Data File Name: F130703A_09

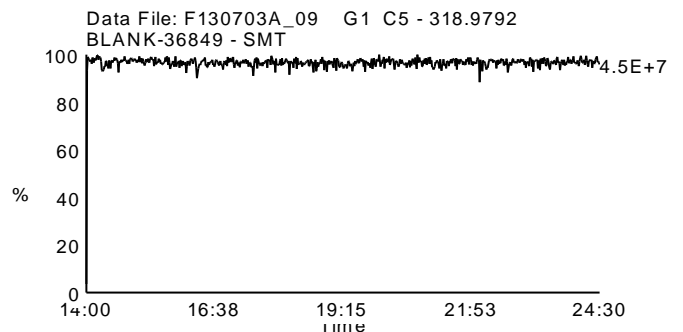
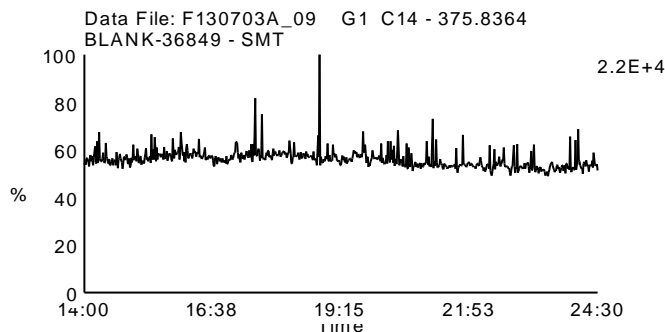
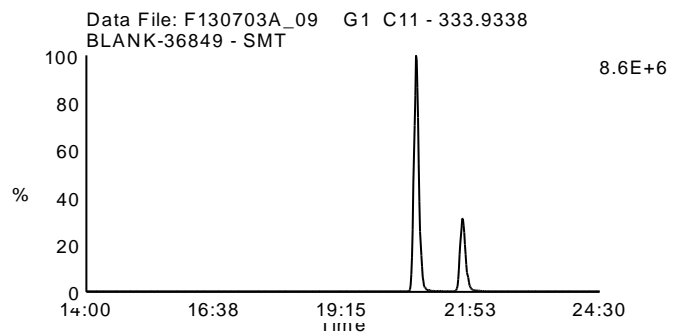
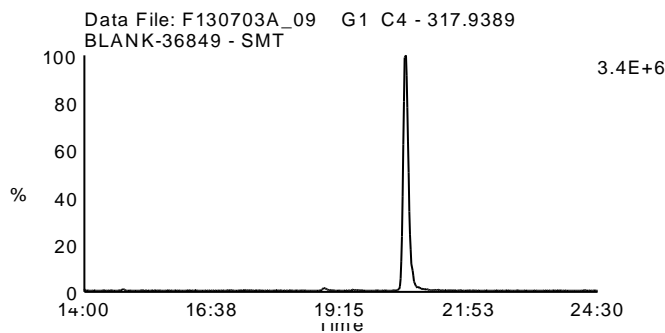
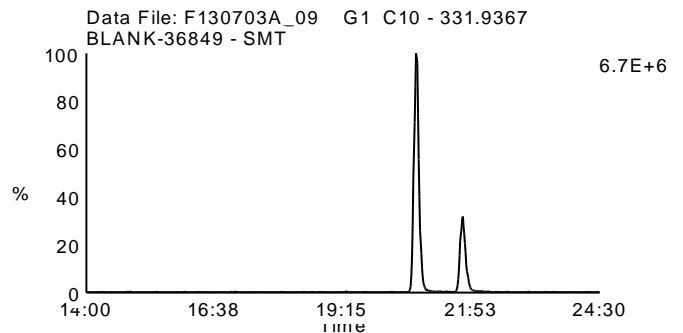
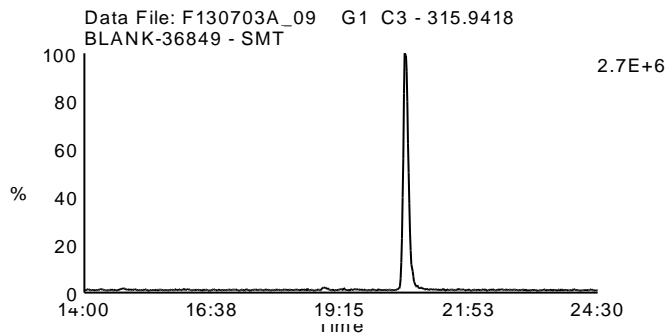
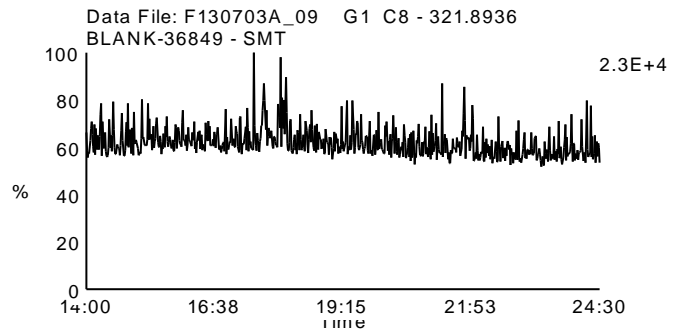
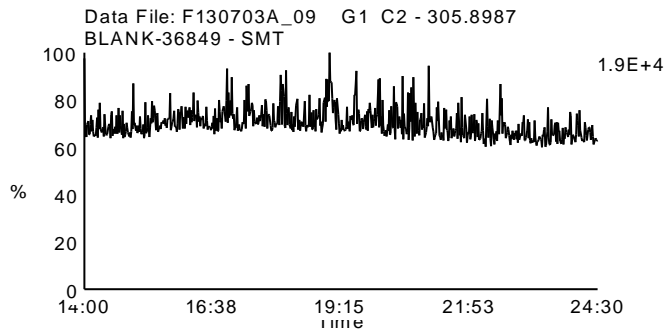
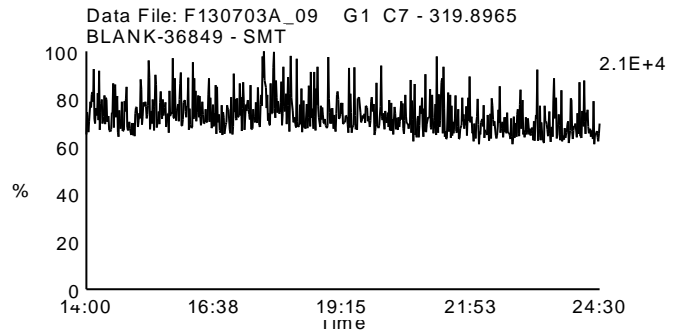
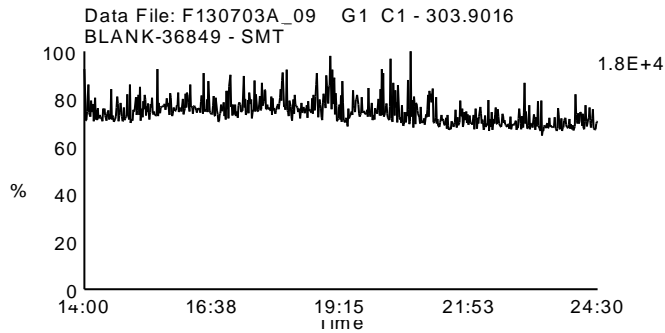
Date Acquired: 7/3/2013

Sample Description: BLANK-36849 - SMT

Lab Sample ID: BLANK-36849

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Penta & Cleanup

Data File Name: F130703A_09

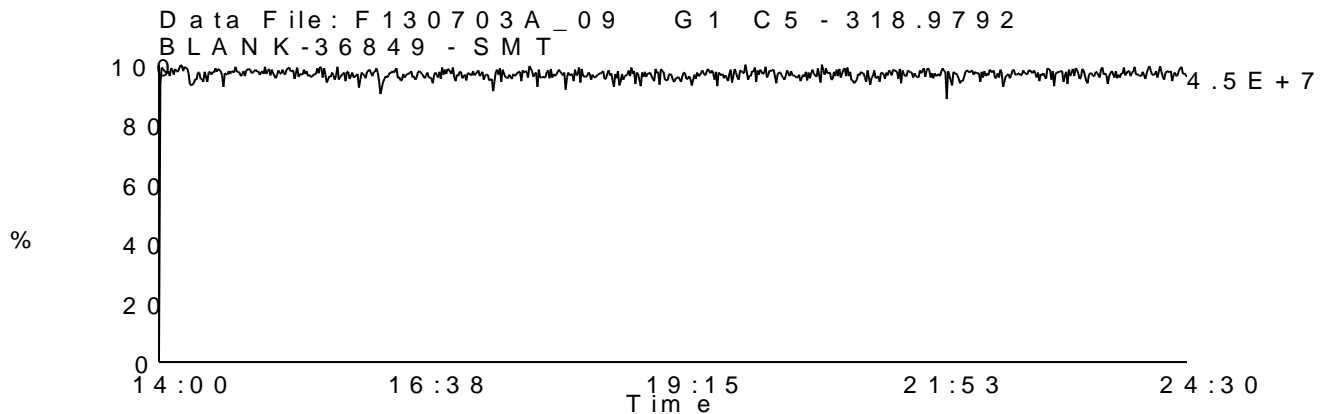
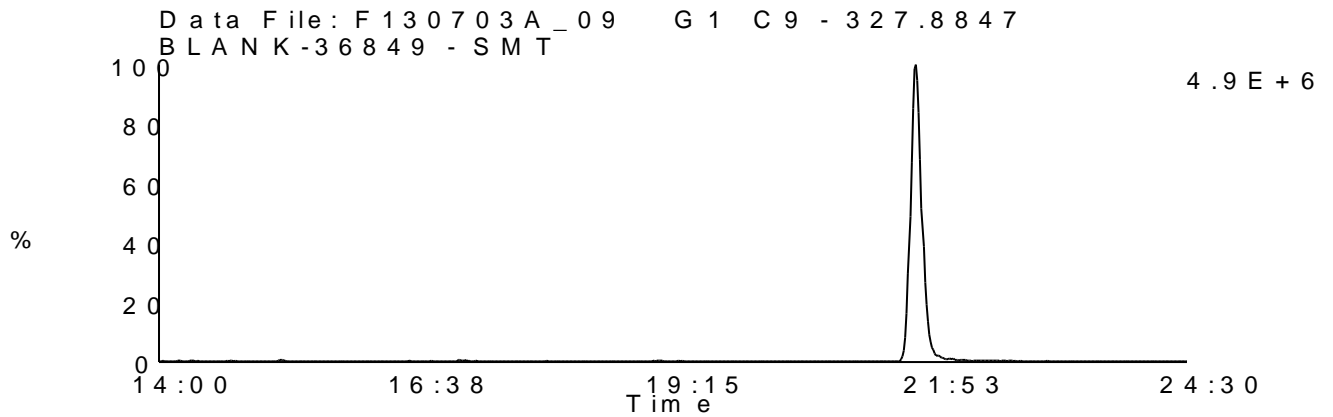
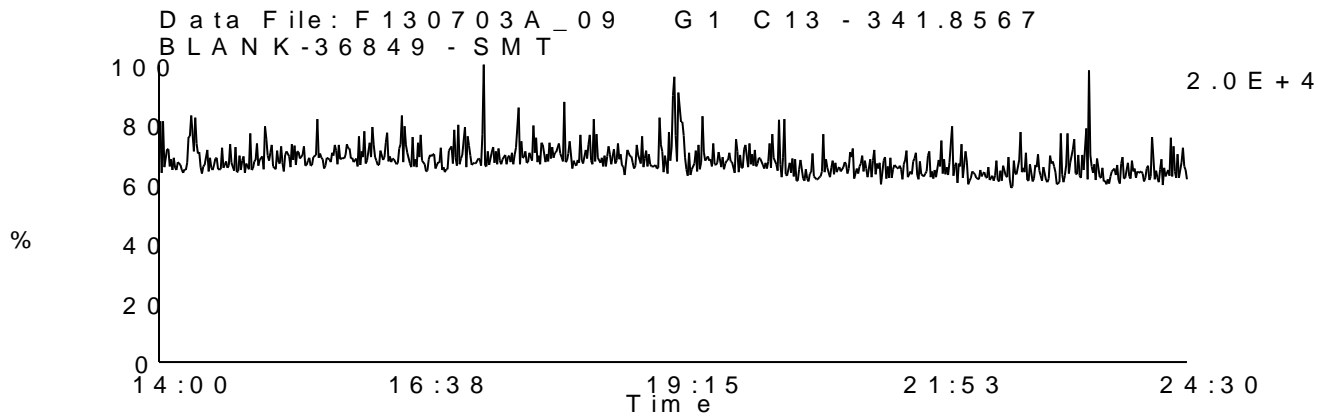
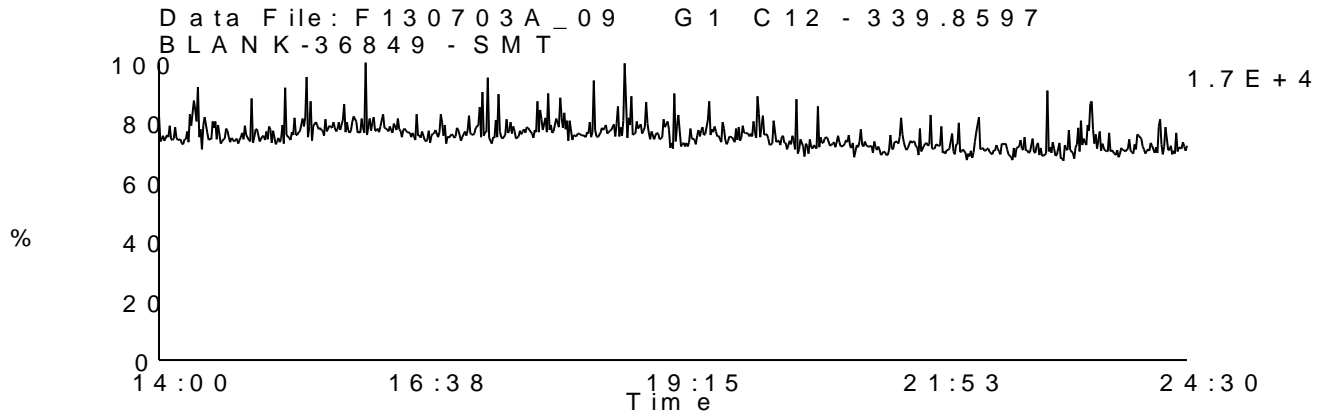
Date Acquired: 7/3/2013

Sample Description: BLANK-36849 - SMT

Lab Sample ID: BLANK-36849

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Pentas

Data File Name: F130703A_09

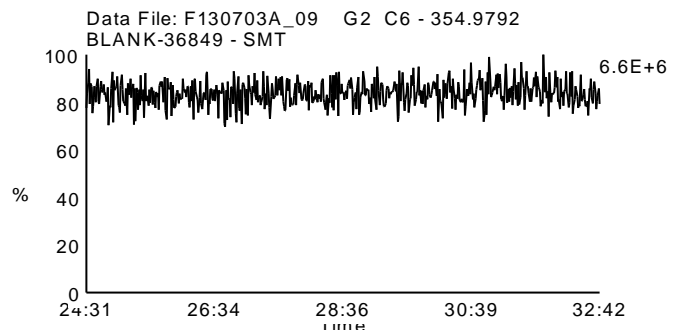
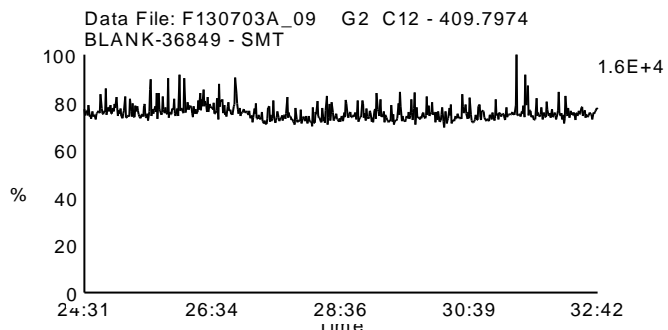
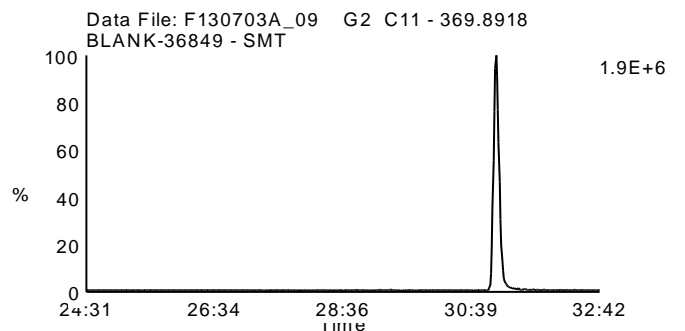
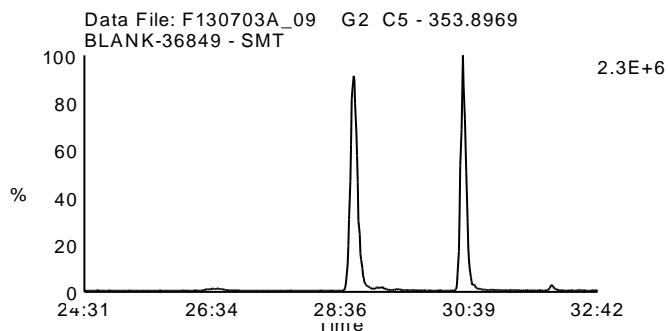
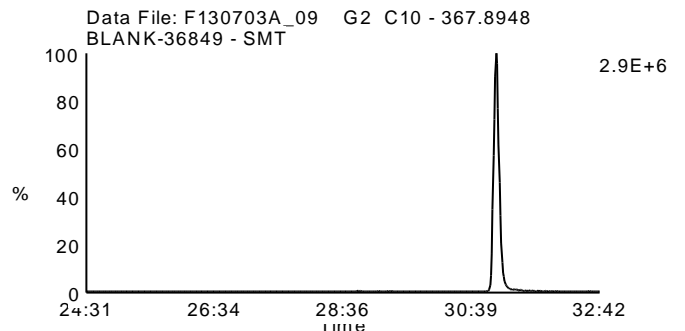
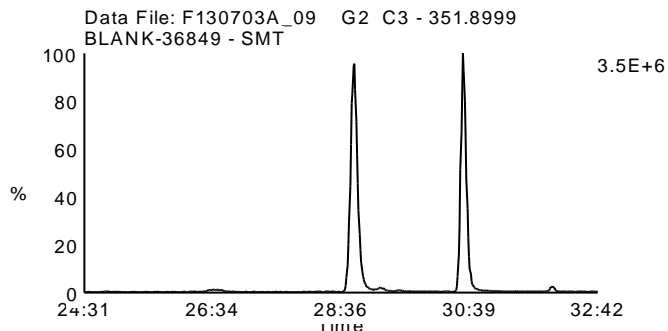
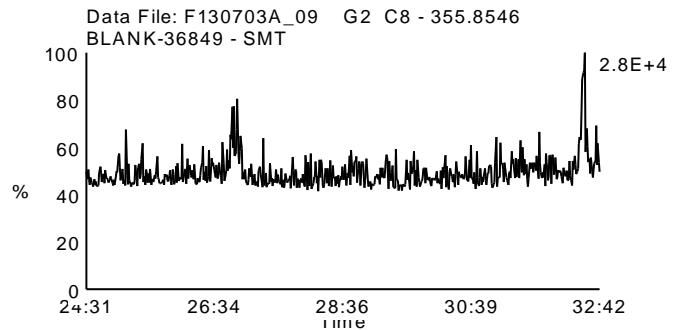
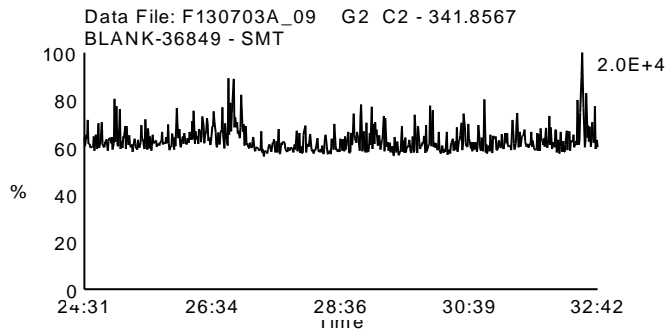
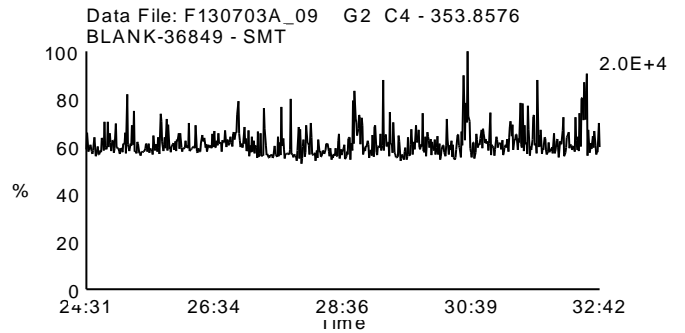
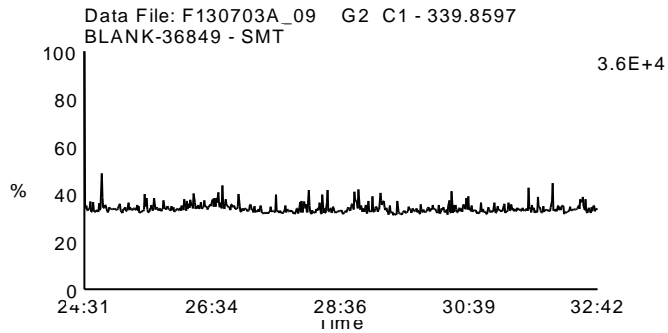
Date Acquired: 7/3/2013

Sample Description: BLANK-36849 - SMT

Lab Sample ID: BLANK-36849

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Hexas

Data File Name: F130703A_09

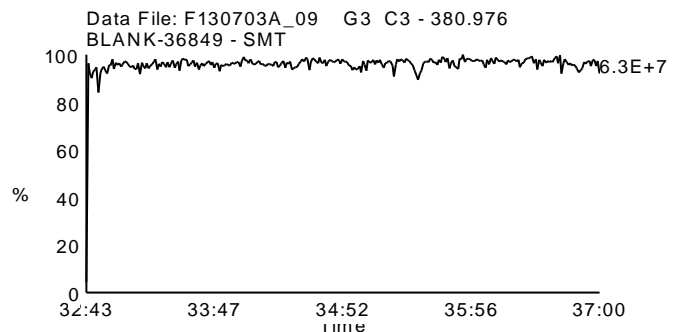
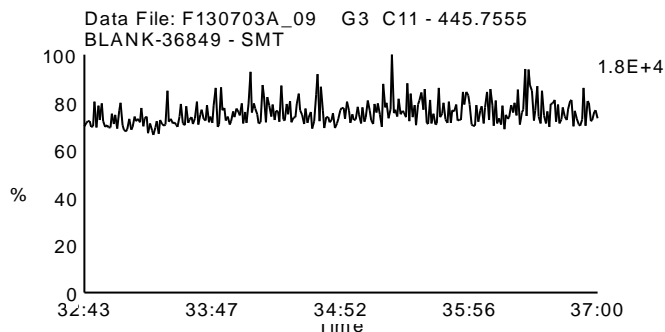
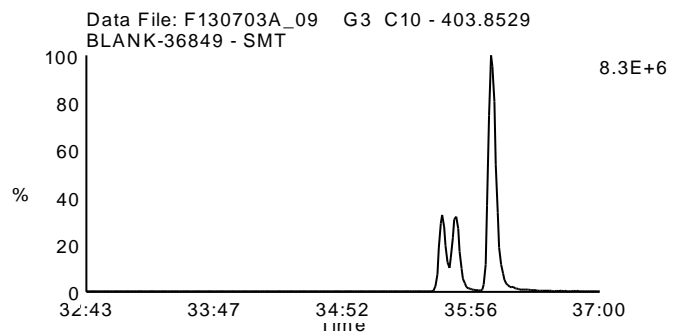
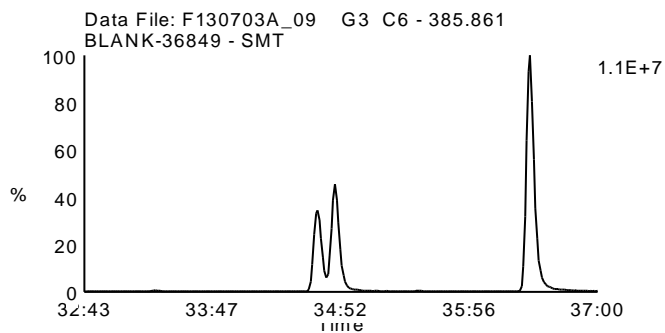
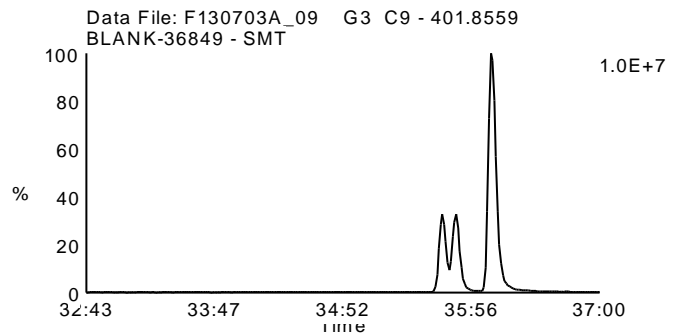
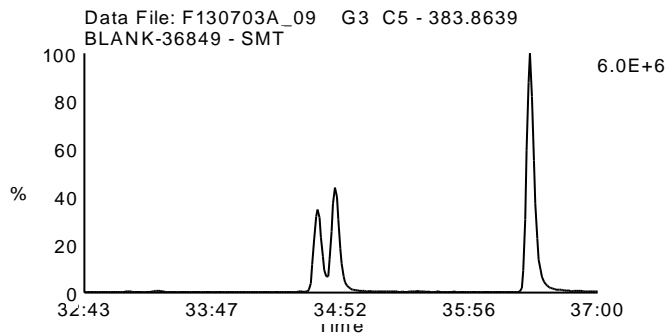
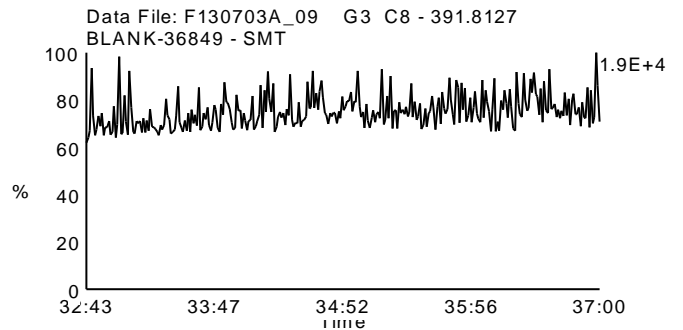
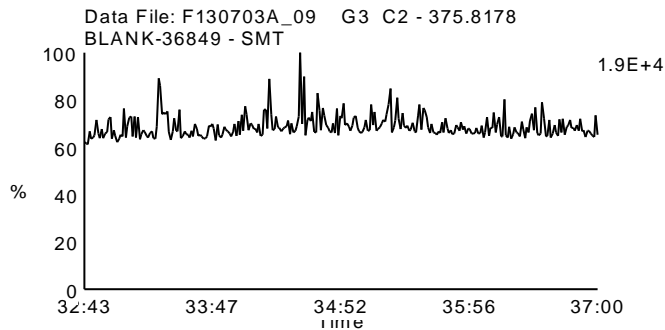
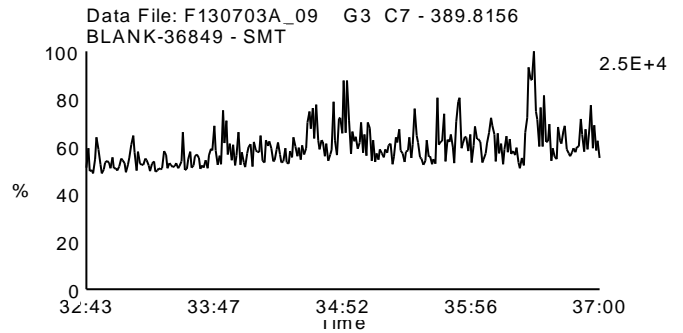
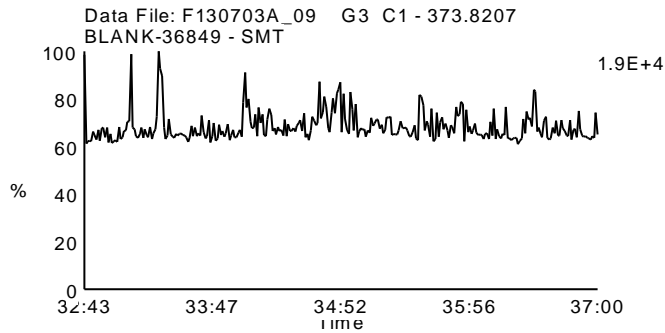
Date Acquired: 7/3/2013

Sample Description: BLANK-36849 - SMT

Lab Sample ID: BLANK-36849

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Heptas

Data File Name: F130703A_09

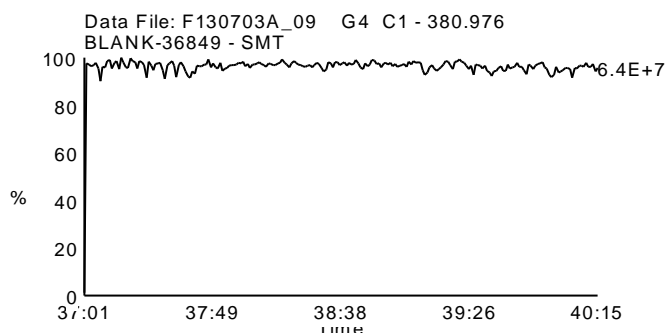
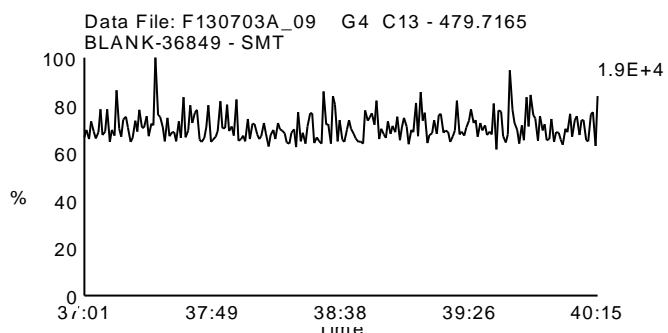
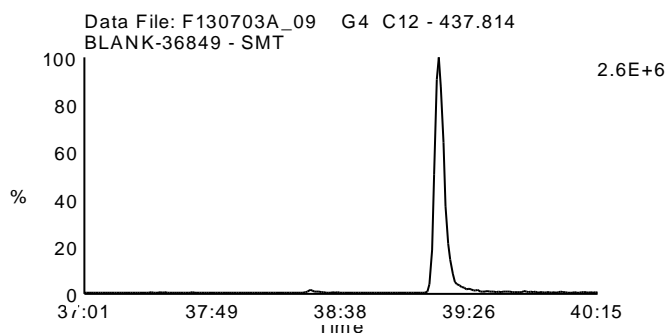
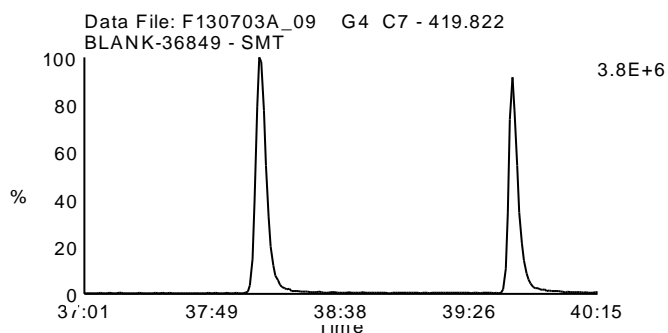
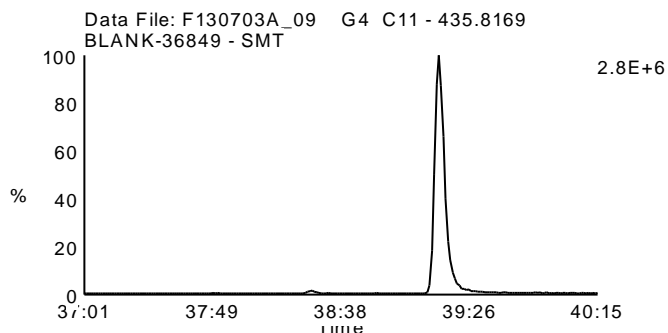
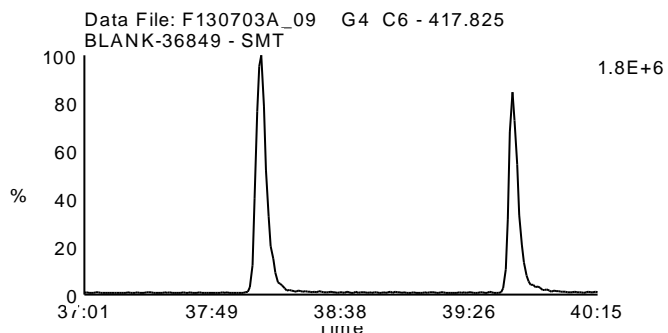
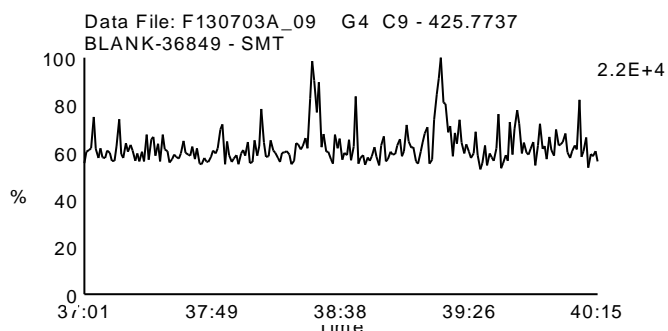
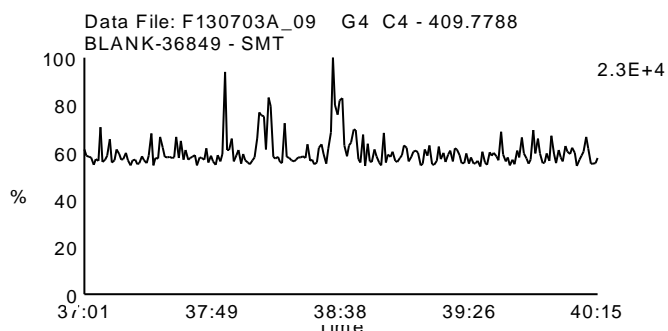
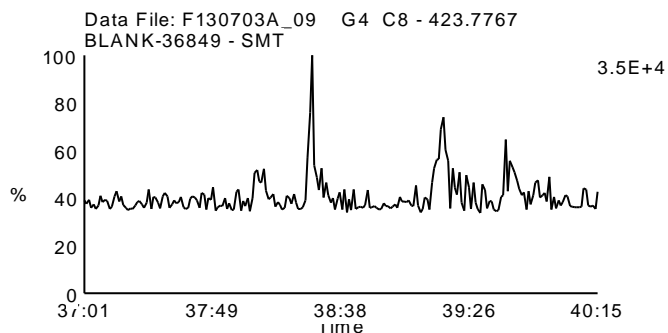
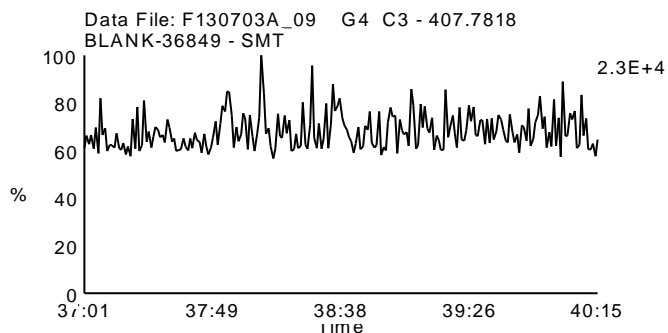
Date Acquired: 7/3/2013

Sample Description: BLANK-36849 - SMT

Lab Sample ID: BLANK-36849

Client Sample ID:

Instrument: 10MSHR05 (F)



Homologue Group: Octas

Data File Name: F130703A_09

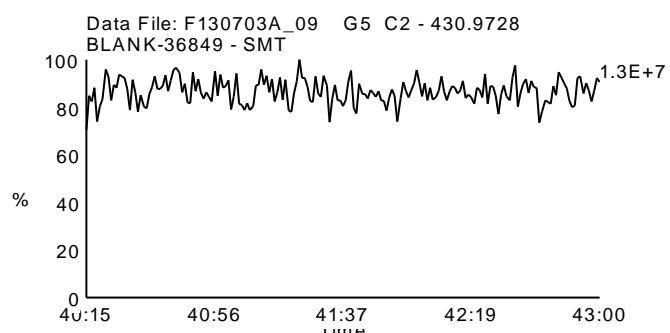
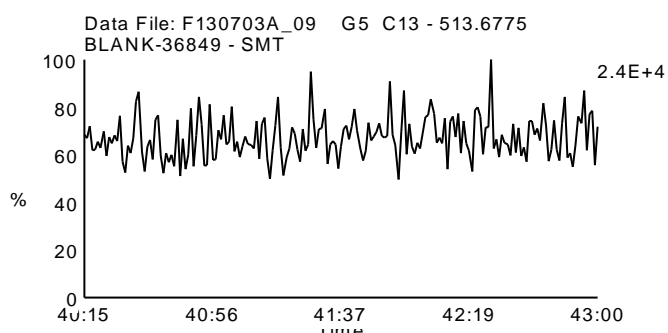
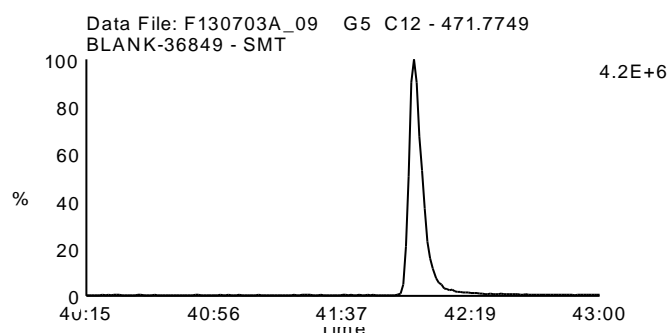
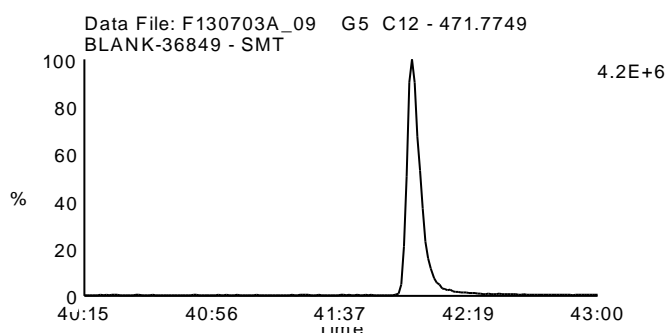
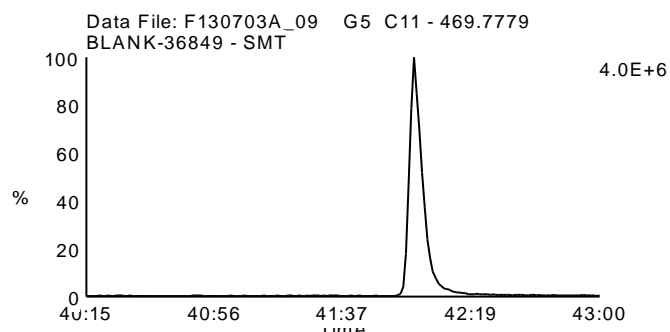
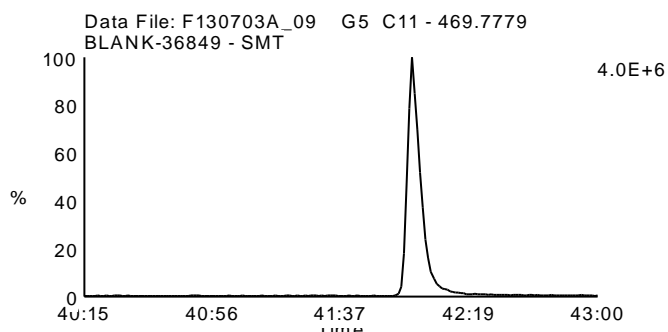
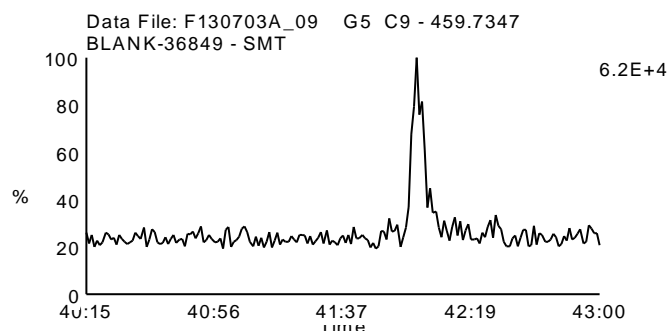
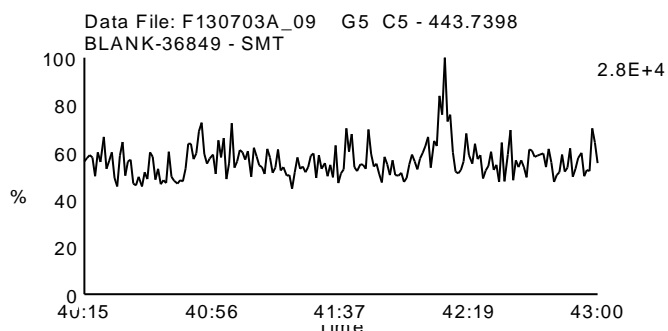
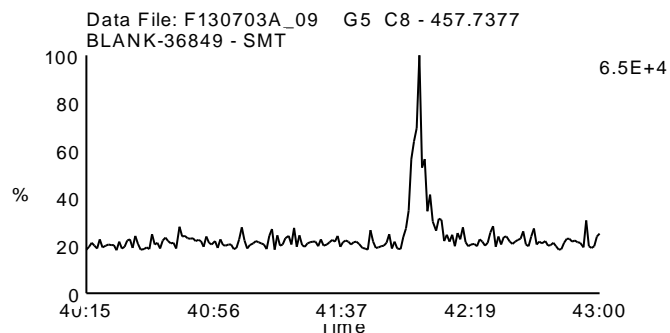
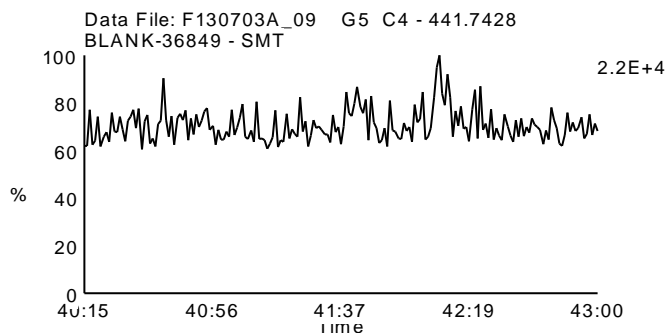
Date Acquired: 7/3/2013

Sample Description: BLANK-36849 - SMT

Lab Sample ID: BLANK-36849

Client Sample ID:

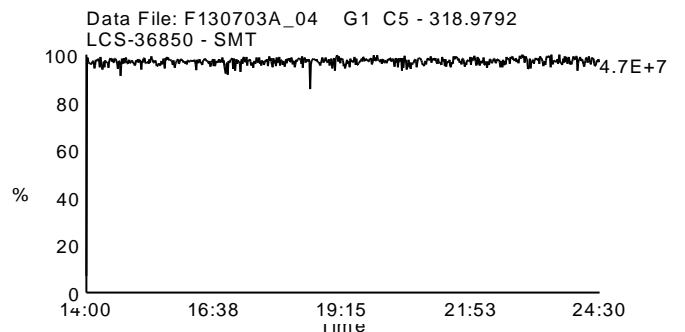
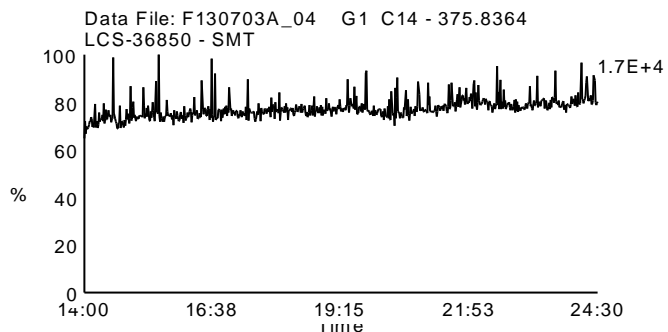
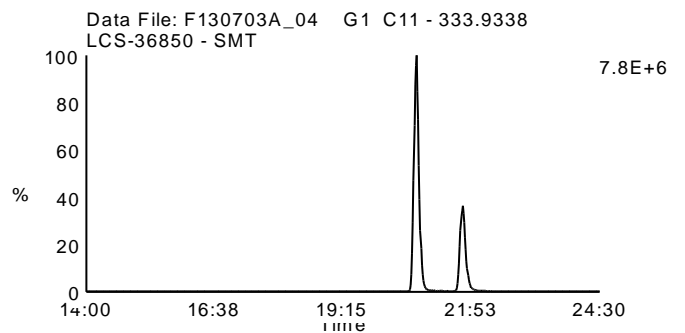
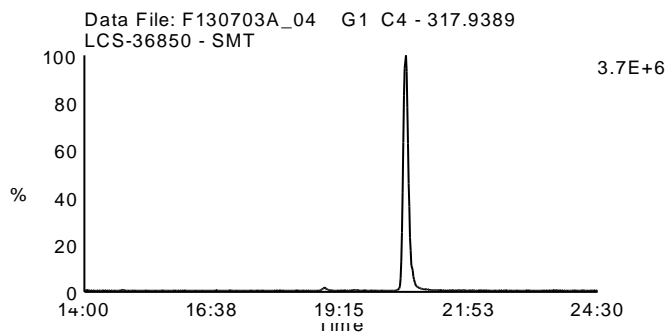
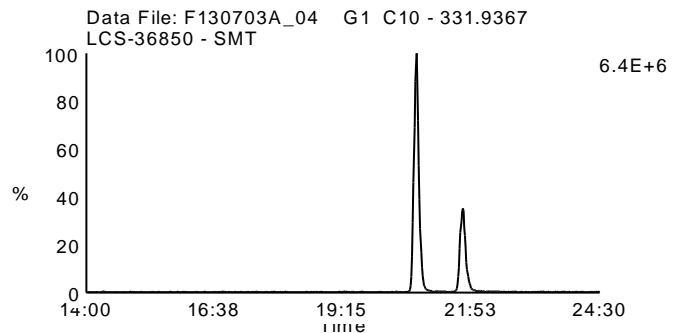
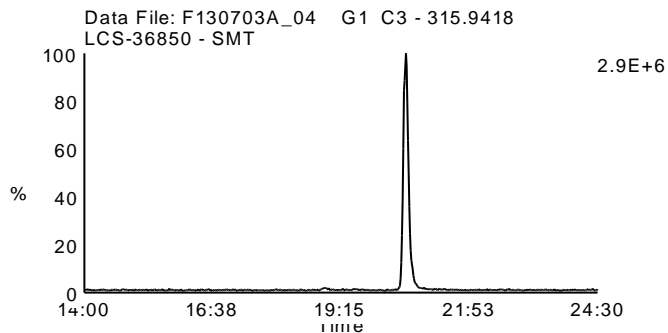
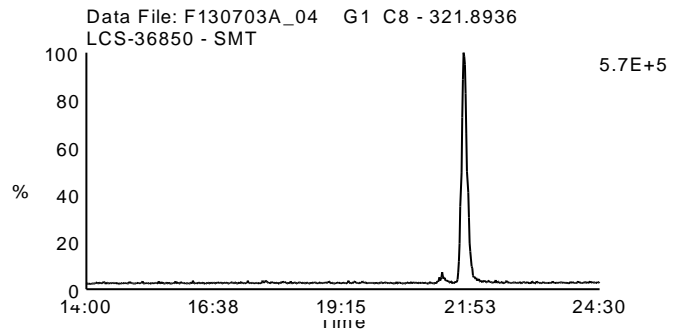
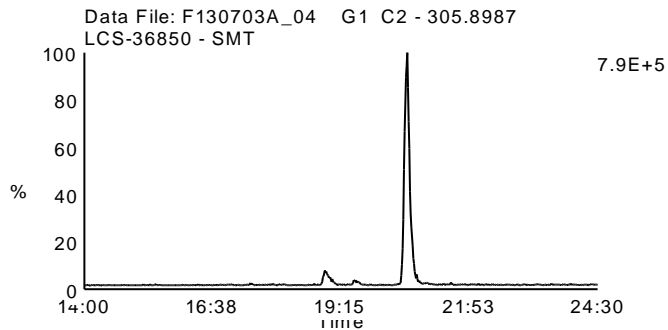
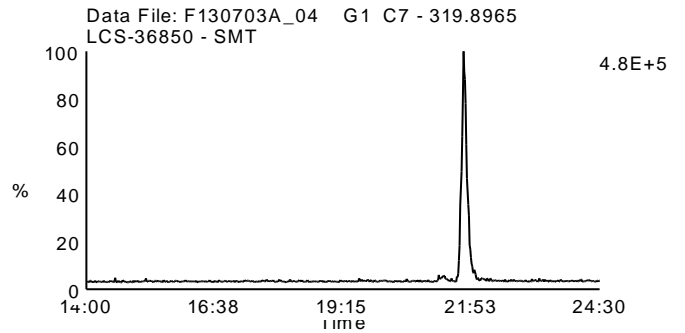
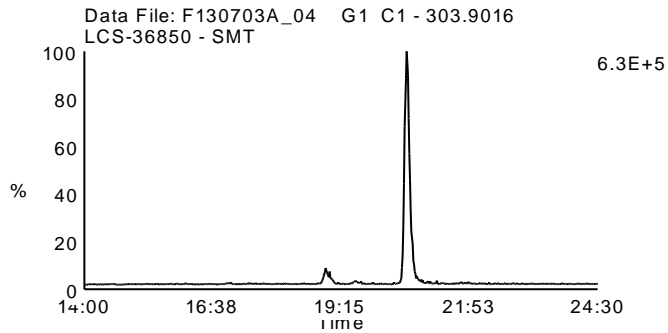
Instrument: 10MSHR05 (F)



Homologue Group: Tetras

Data File Name: F130703A_04
Date Acquired: 7/3/2013
Sample Description: LCS-36850 - SMT

Lab Sample ID: LCS-36850
Client Sample ID: LCSLF
Instrument: 10MSHR05 (F)



Homologue Group: Penta & Cleanup

Data File Name: F130703A_04

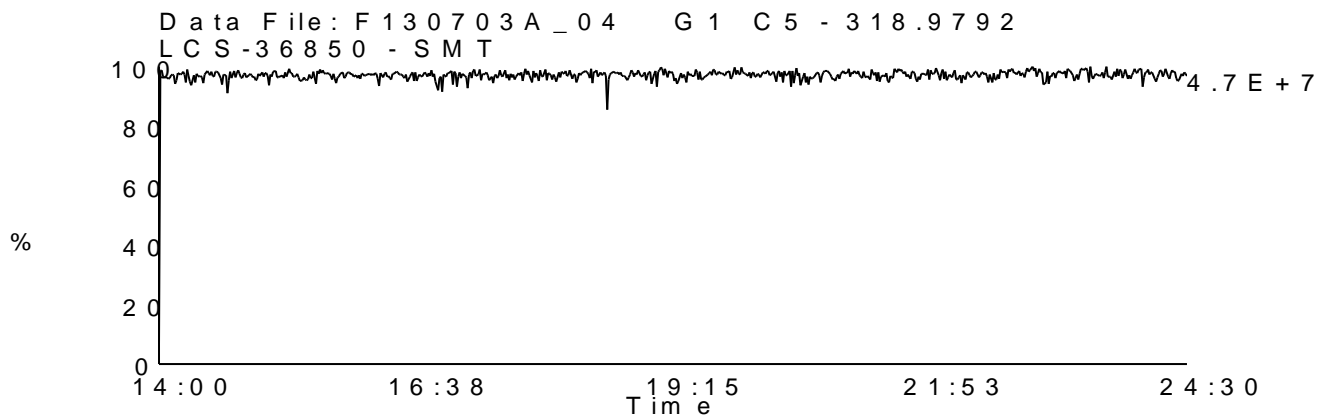
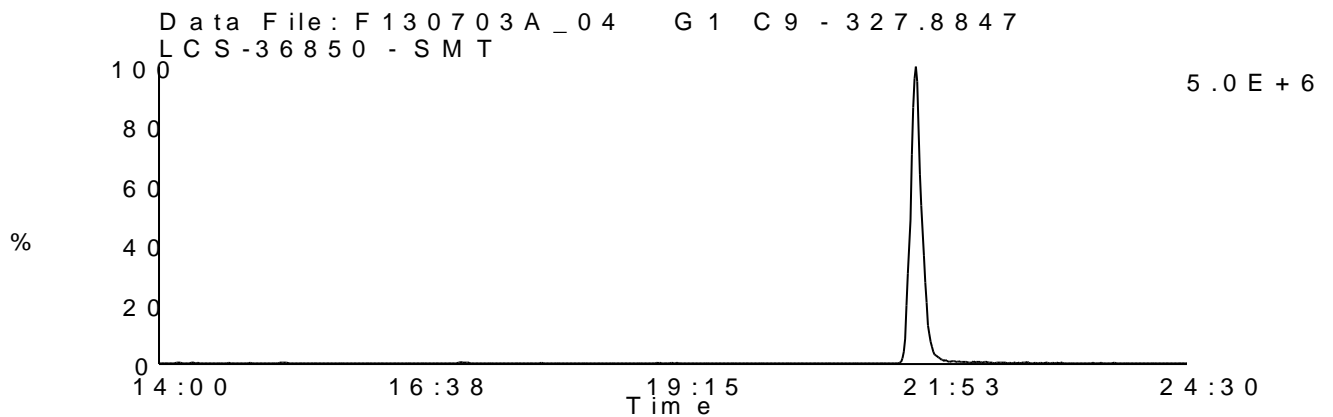
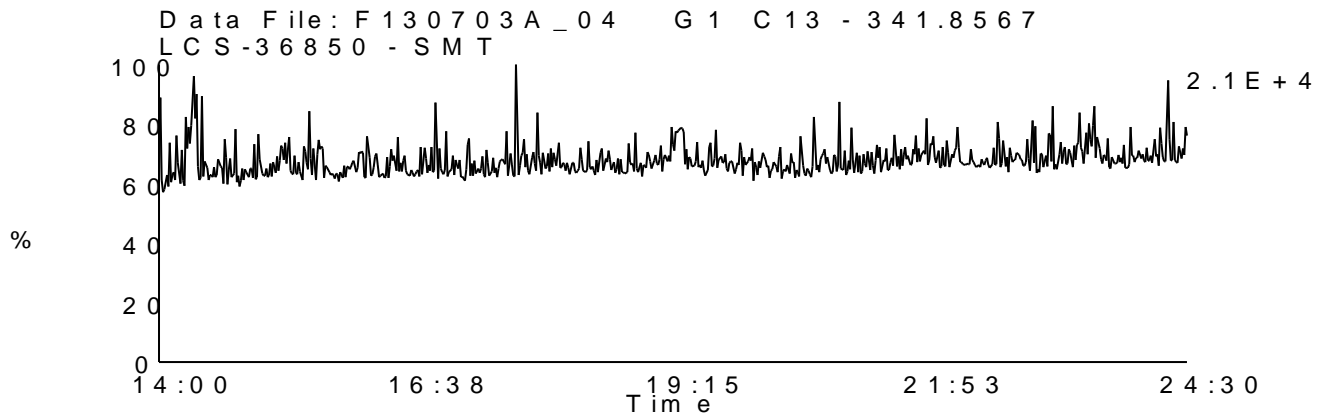
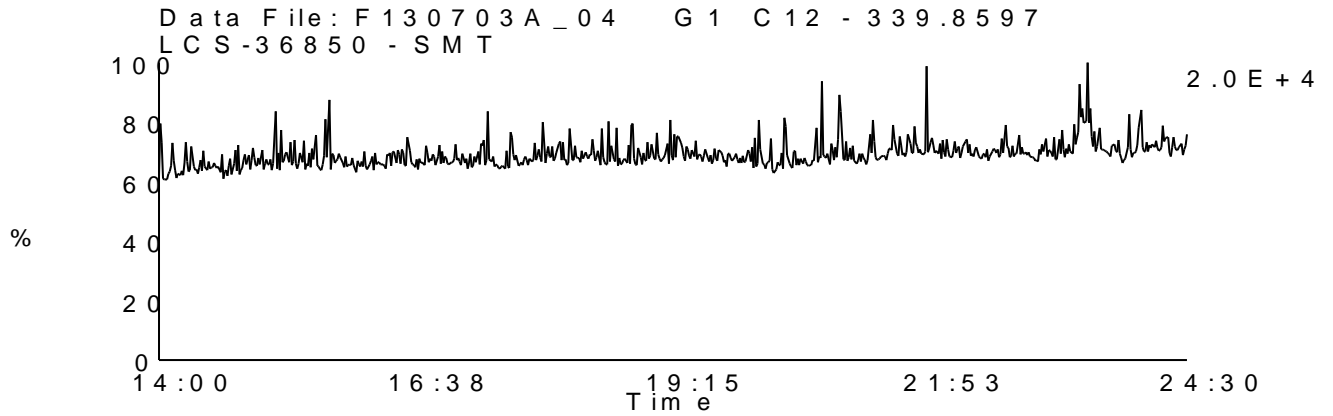
Date Acquired: 7/3/2013

Sample Description: LCS-36850 - SMT

Lab Sample ID: LCS-36850

Client Sample ID: LCSLF

Instrument: 10MSHR05 (F)



Homologue Group: Pentas

Data File Name: F130703A_04

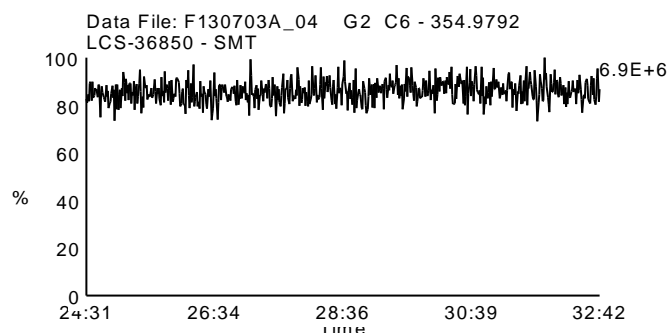
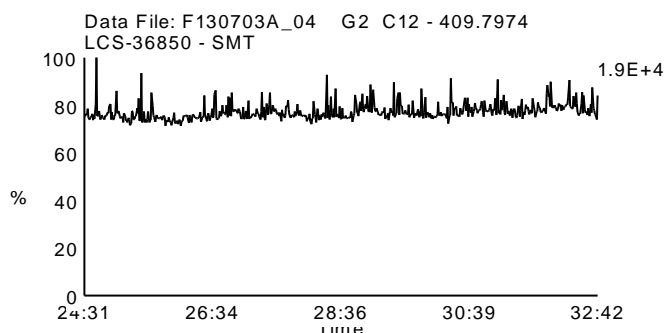
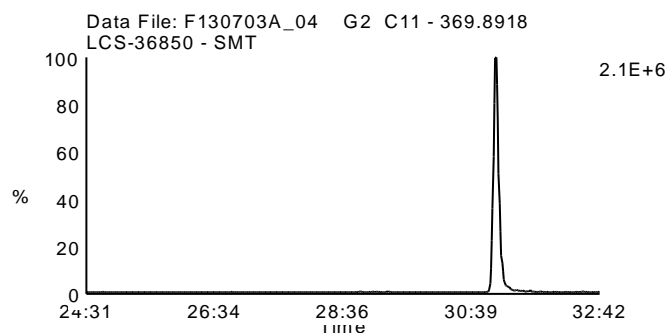
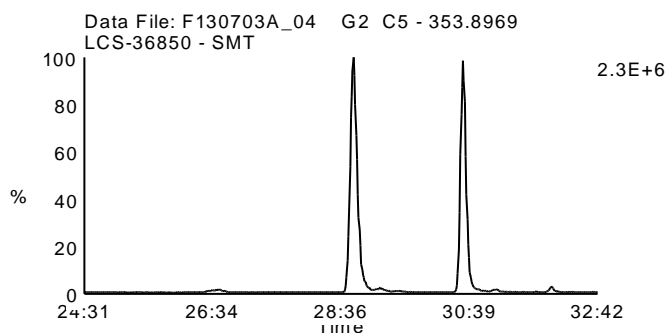
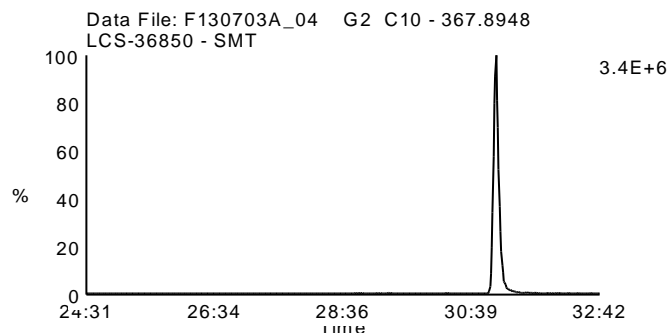
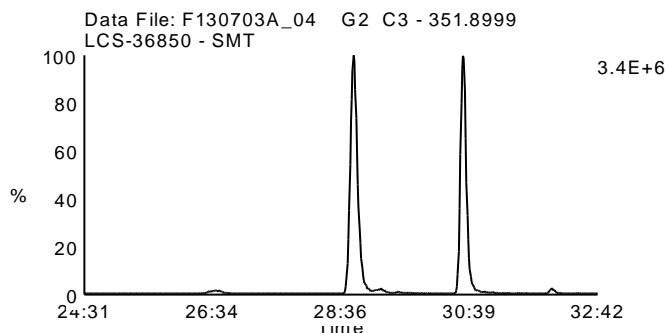
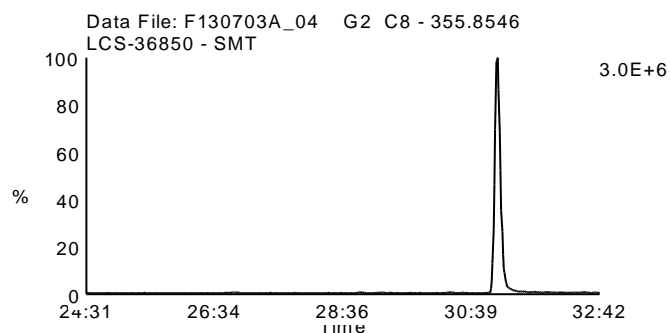
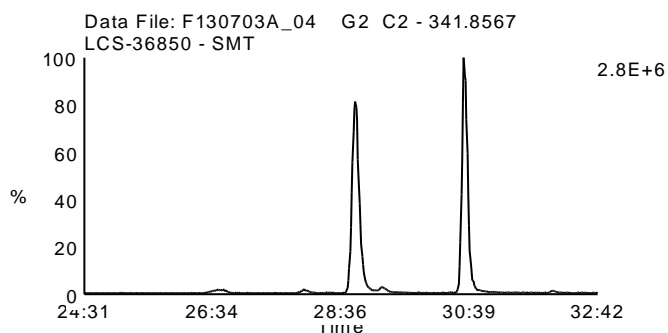
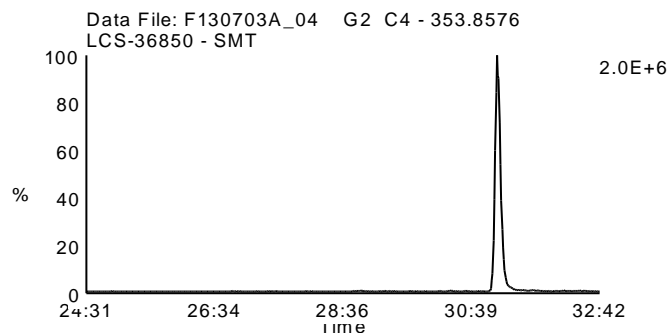
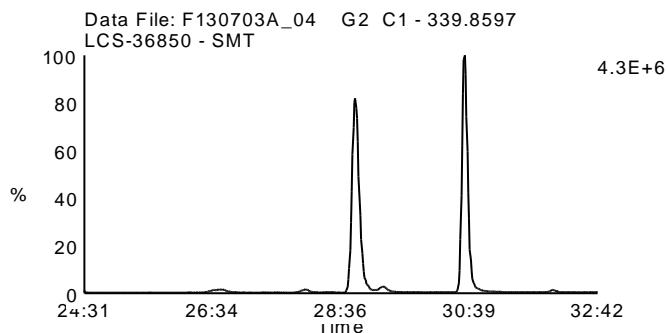
Date Acquired: 7/3/2013

Sample Description: LCS-36850 - SMT

Lab Sample ID: LCS-36850

Client Sample ID: LCSLF

Instrument: 10MSHR05 (F)



Homologue Group: Hexas

Data File Name: F130703A_04

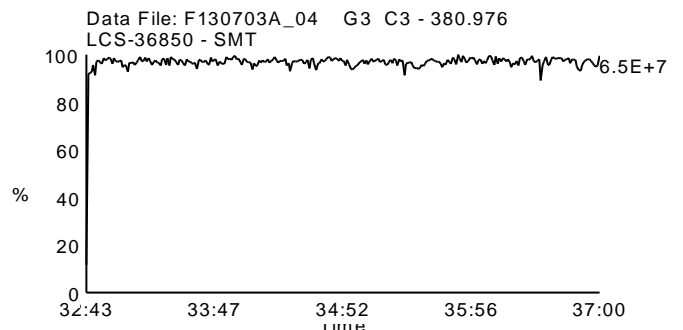
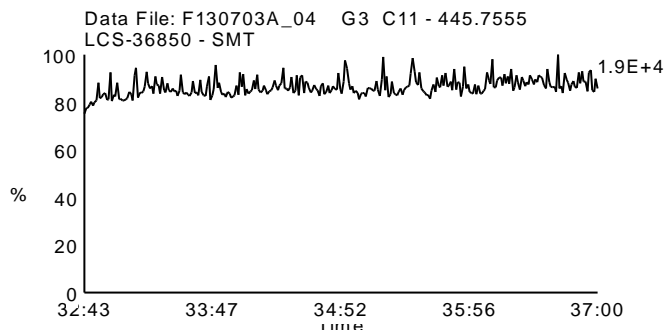
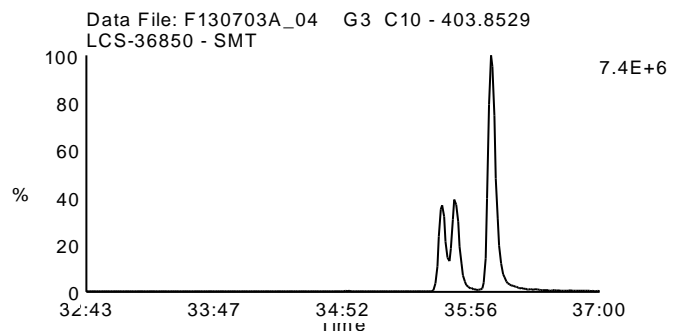
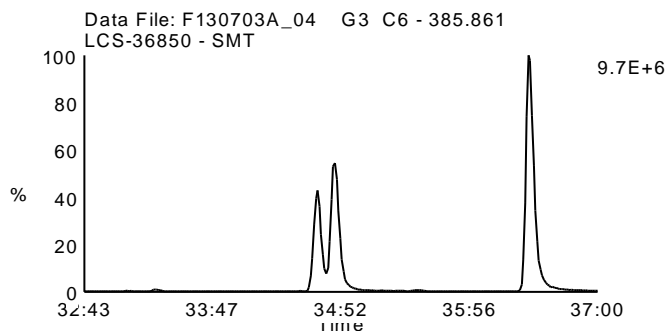
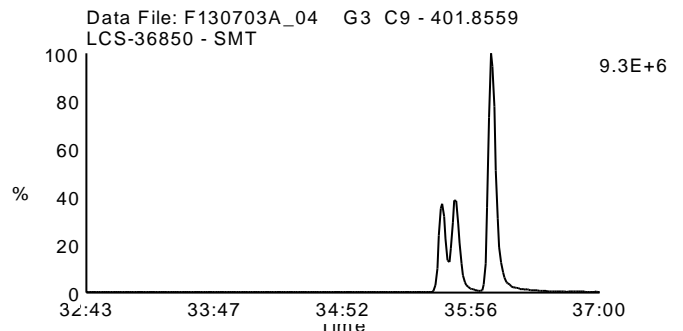
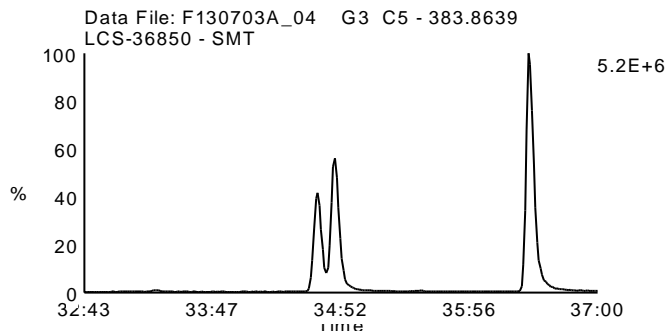
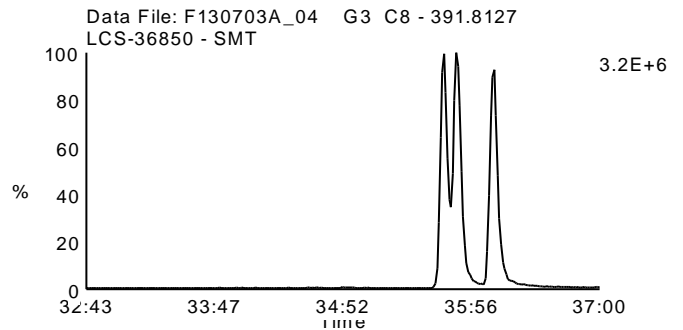
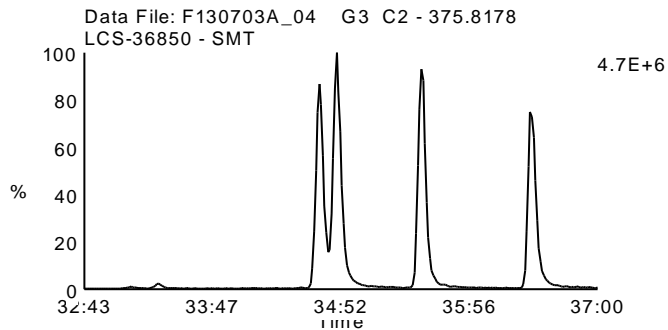
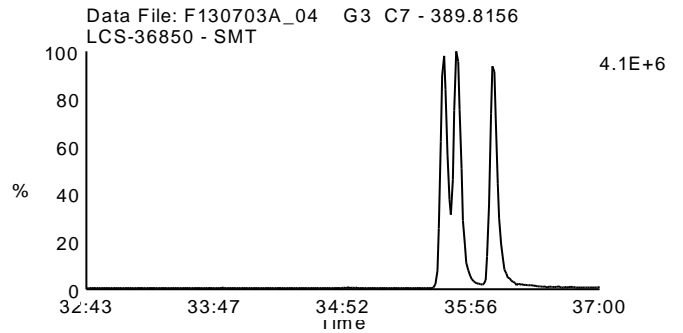
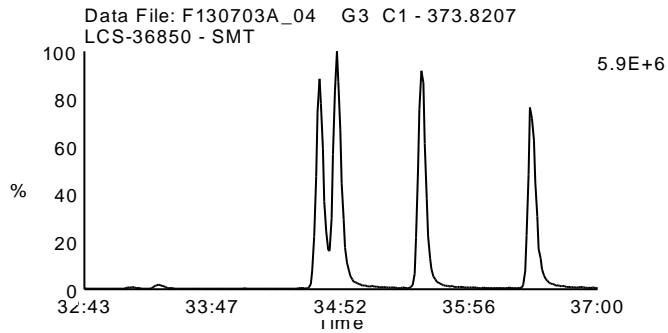
Date Acquired: 7/3/2013

Sample Description: LCS-36850 - SMT

Lab Sample ID: LCS-36850

Client Sample ID: LCSLF

Instrument: 10MSHR05 (F)



Homologue Group: Heptas

Data File Name: F130703A_04

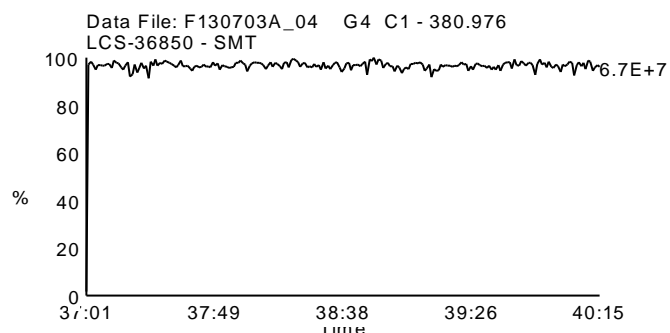
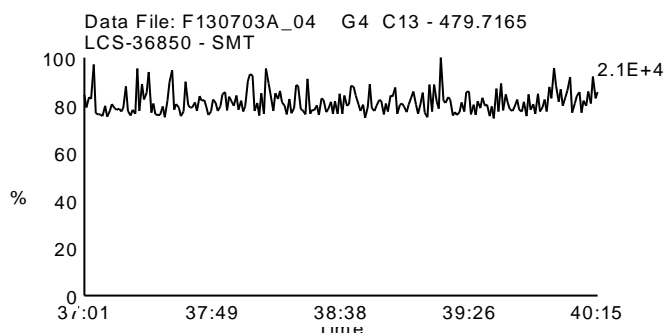
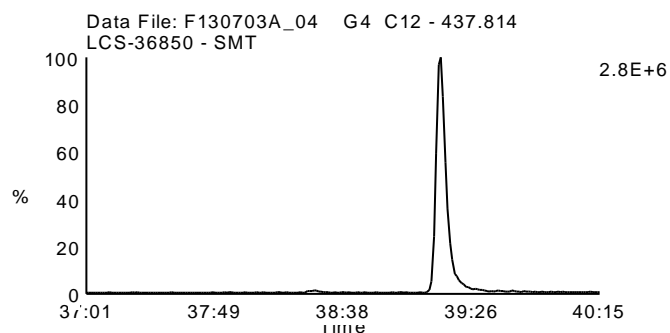
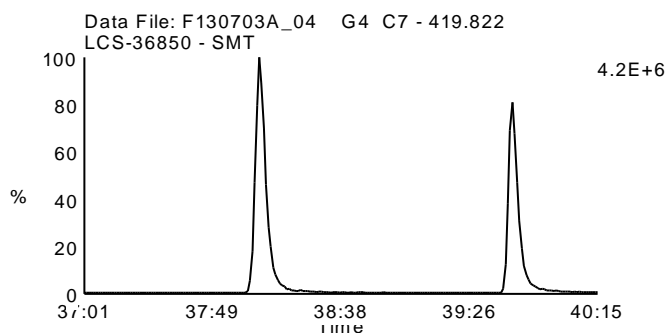
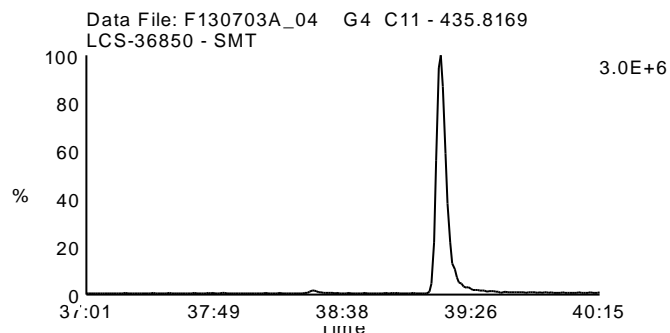
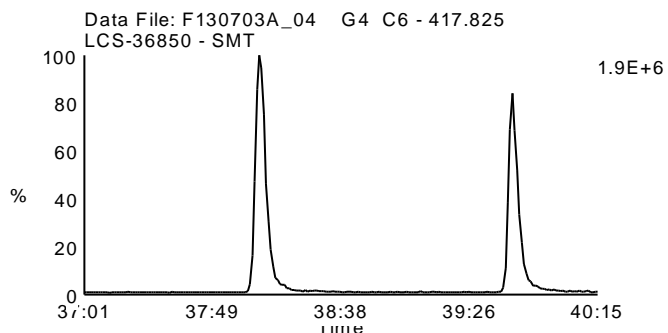
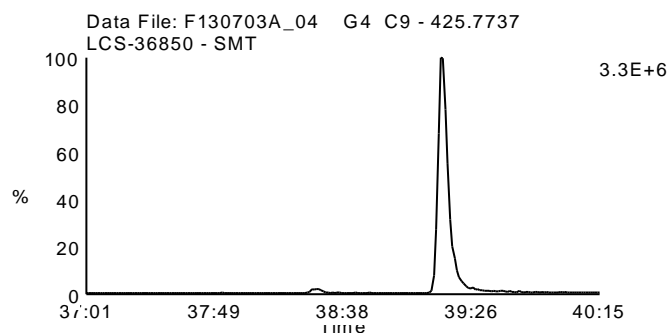
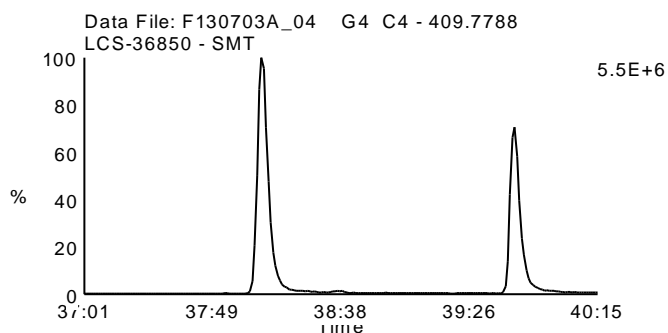
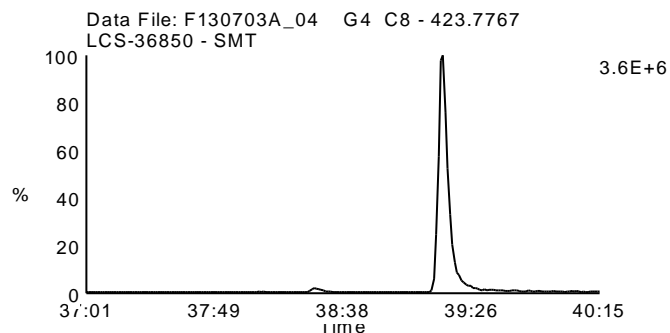
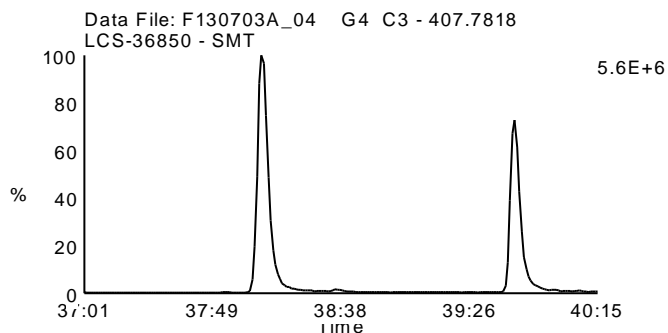
Date Acquired: 7/3/2013

Sample Description: LCS-36850 - SMT

Lab Sample ID: LCS-36850

Client Sample ID: LCSLF

Instrument: 10MSHR05 (F)



Homologue Group: Octas

Data File Name: F130703A_04

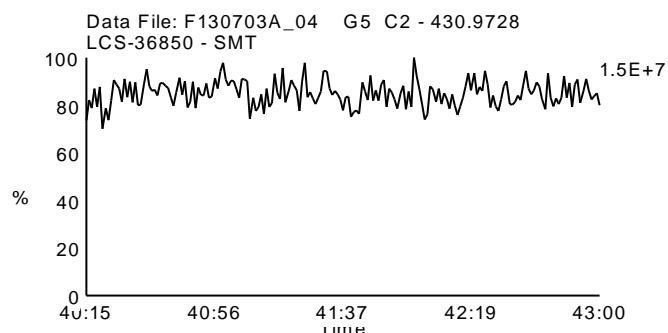
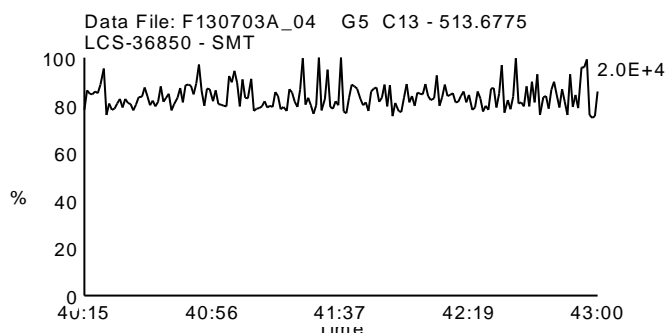
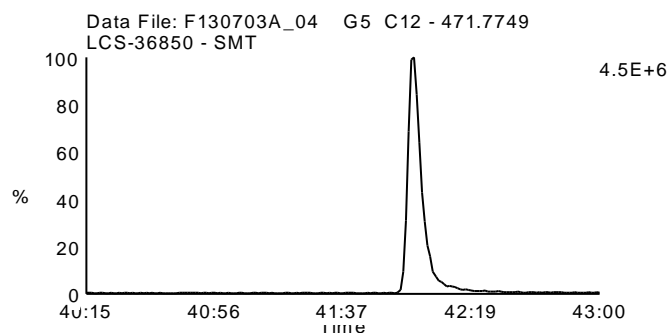
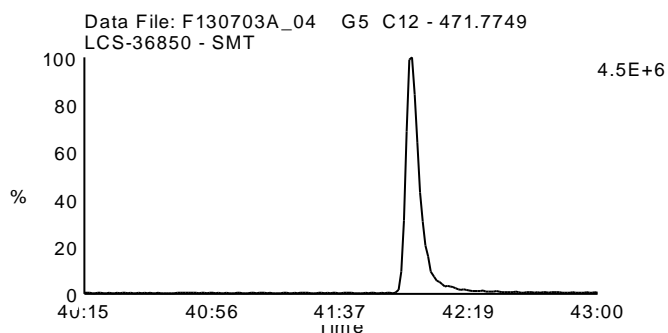
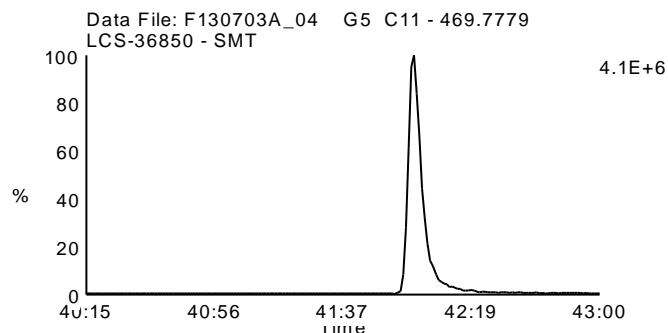
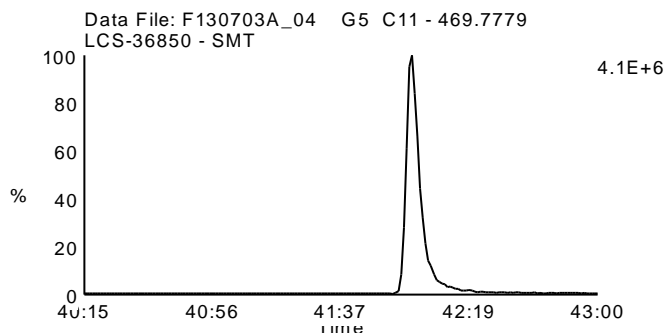
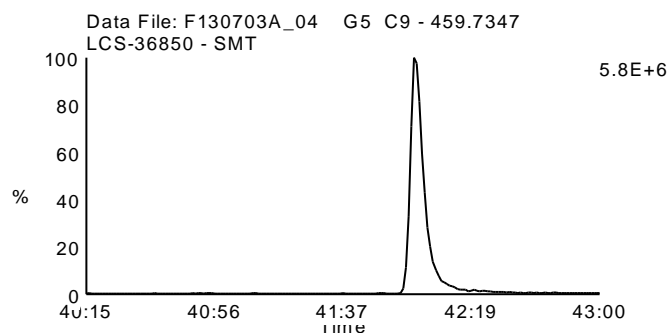
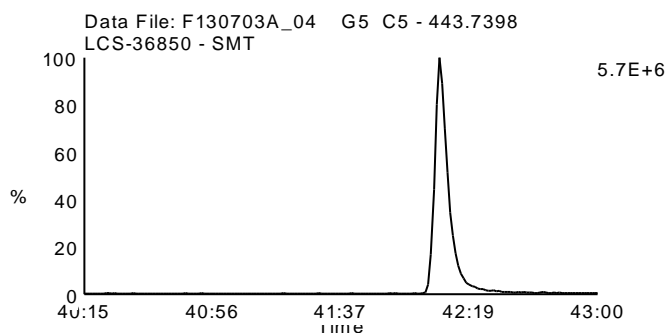
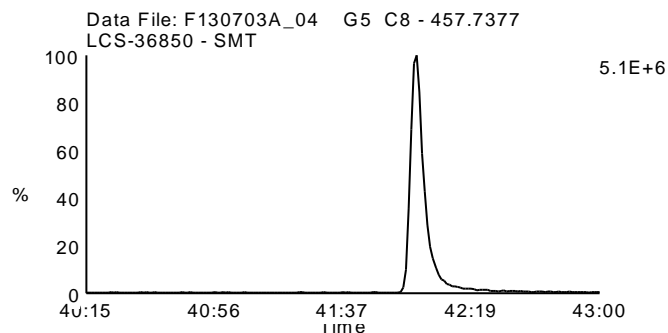
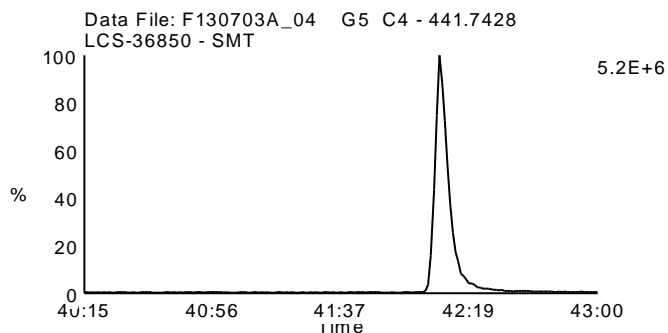
Date Acquired: 7/3/2013

Sample Description: LCS-36850 - SMT

Lab Sample ID: LCS-36850

Client Sample ID: LCSLF

Instrument: 10MSHR05 (F)



Homologue Group: Tetras

Data File Name: F130703A_05

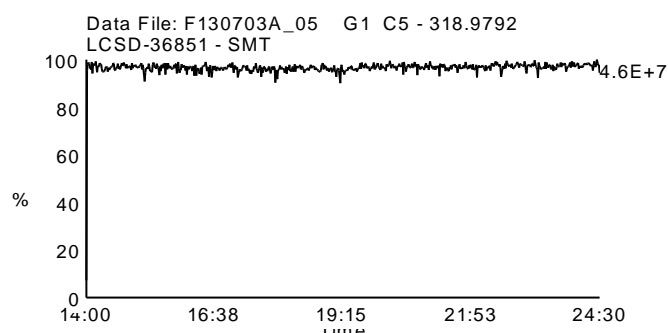
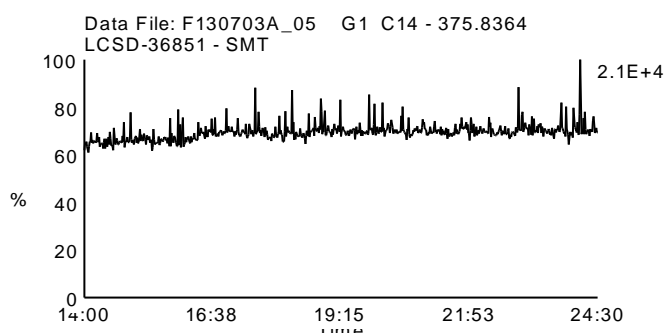
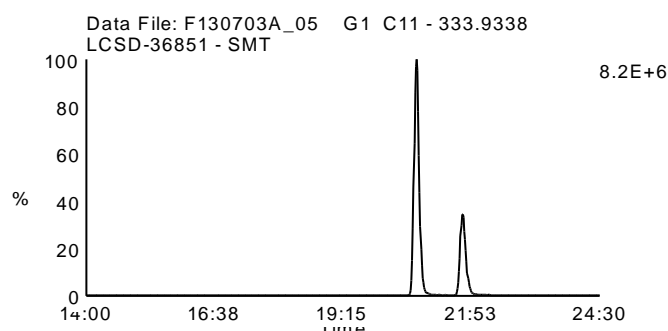
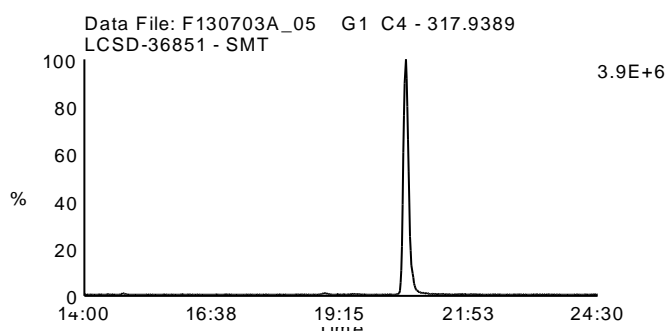
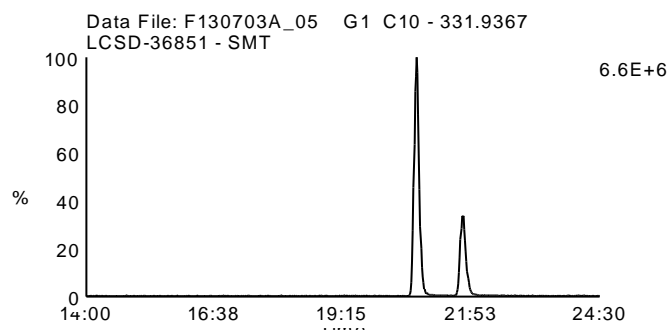
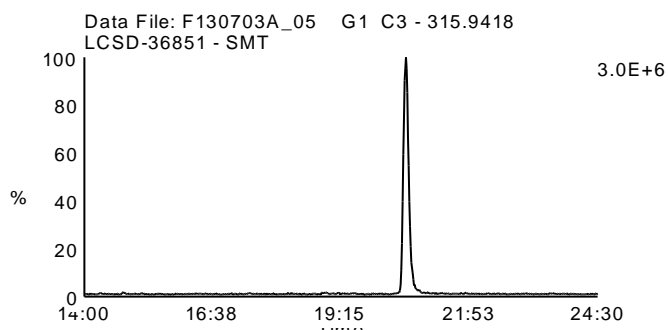
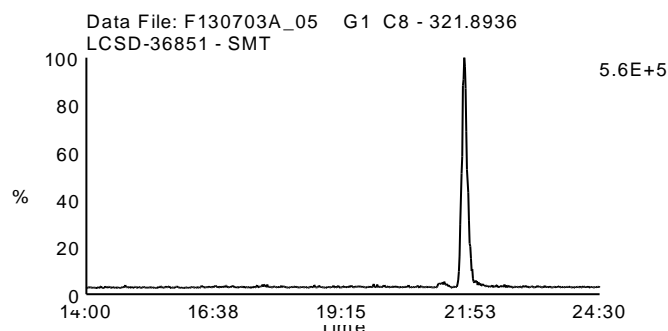
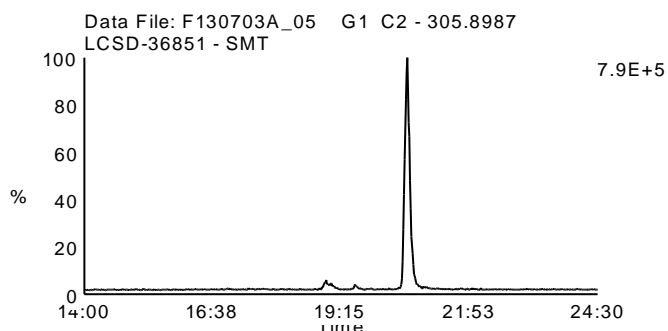
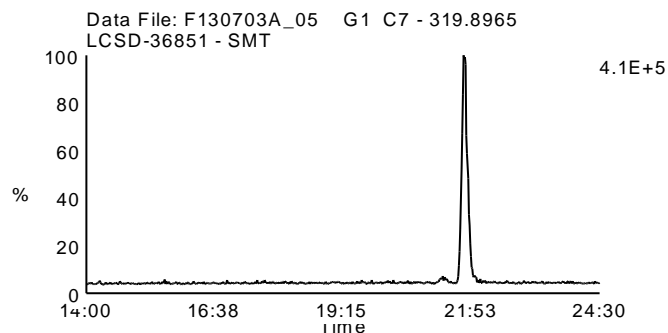
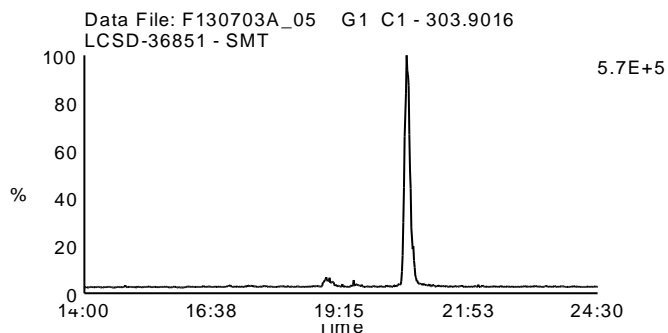
Date Acquired: 7/3/2013

Sample Description: LCSD-36851 - SMT

Lab Sample ID: LCSD-36851

Client Sample ID: LCSLG

Instrument: 10MSHR05 (F)



Homologue Group: Penta & Cleanup

Data File Name: F130703A_05

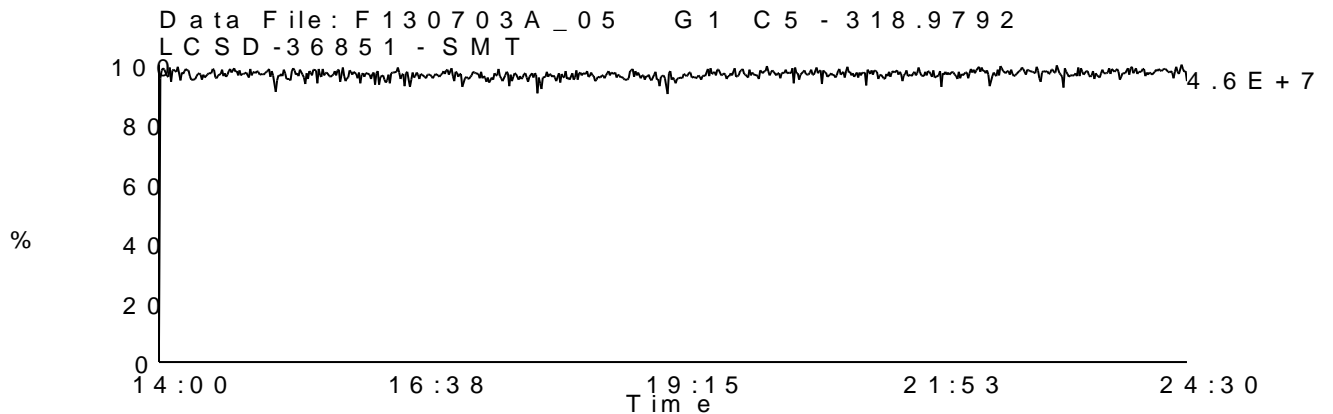
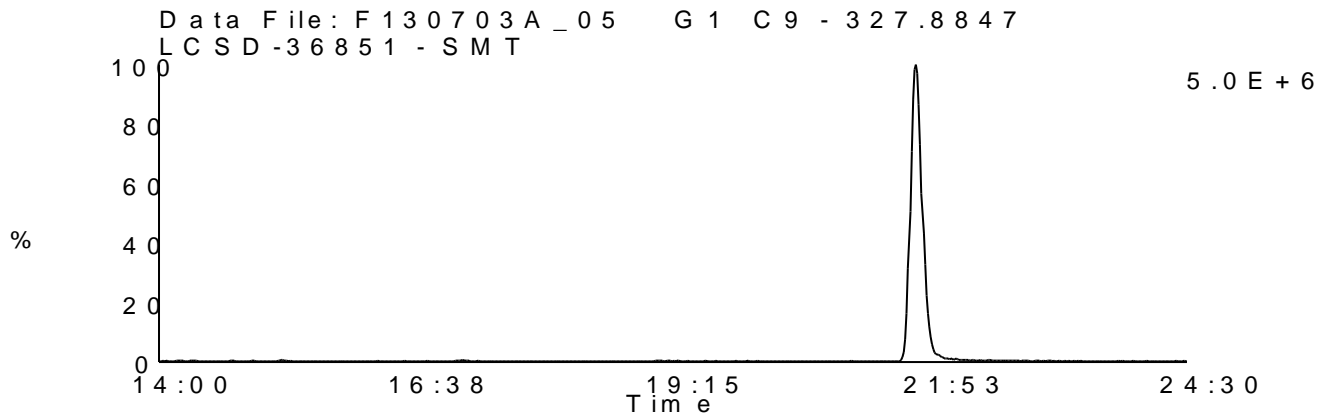
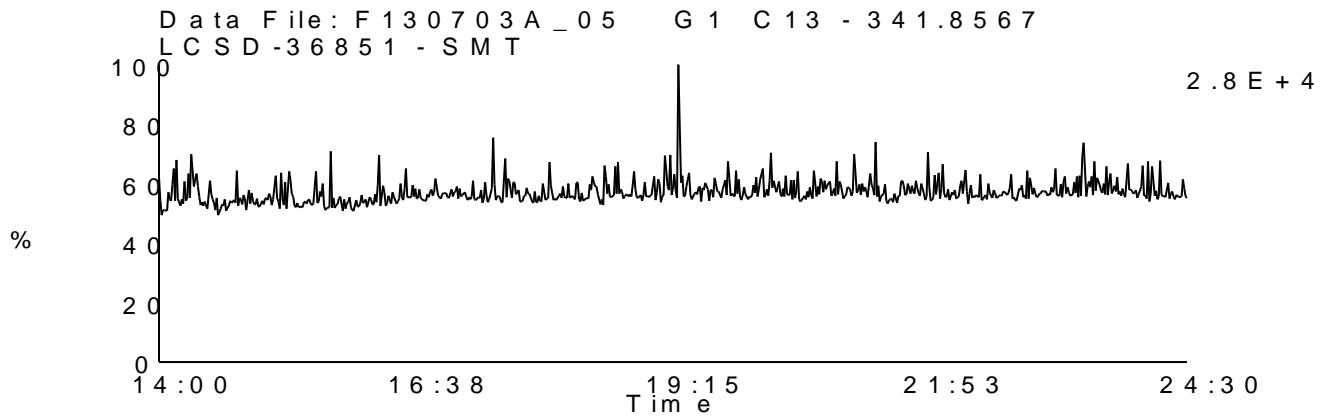
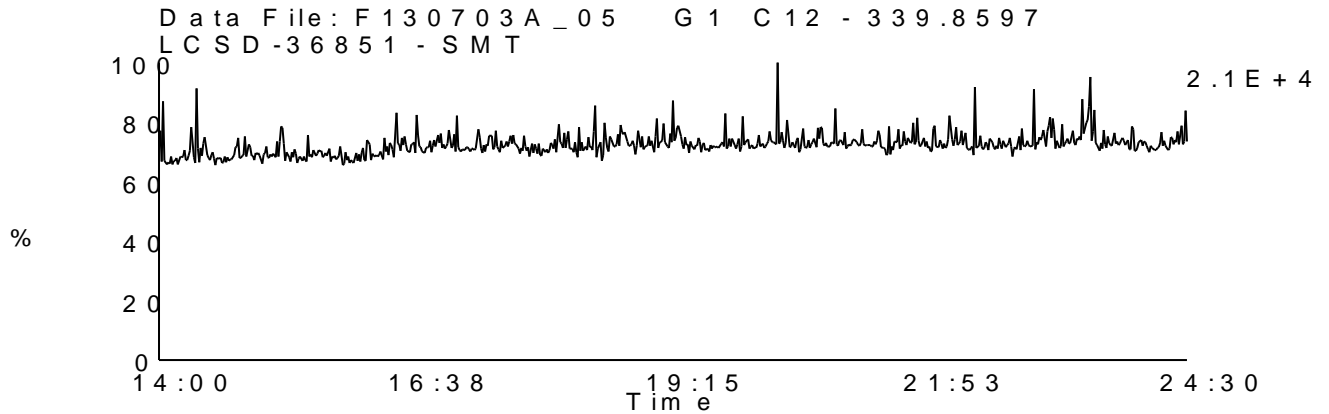
Date Acquired: 7/3/2013

Sample Description: LCSD-36851 - SMT

Lab Sample ID: LCSD-36851

Client Sample ID: LCSLG

Instrument: 10MSHR05 (F)



Homologue Group: Pentas

Data File Name: F130703A_05

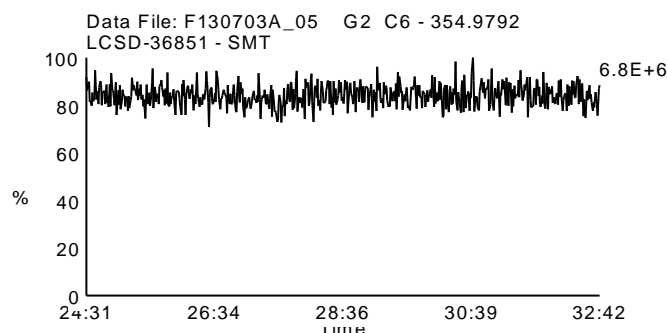
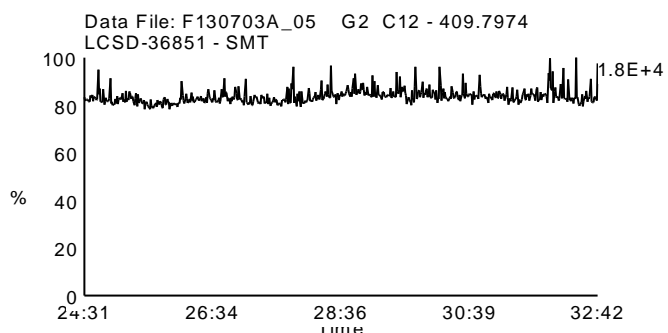
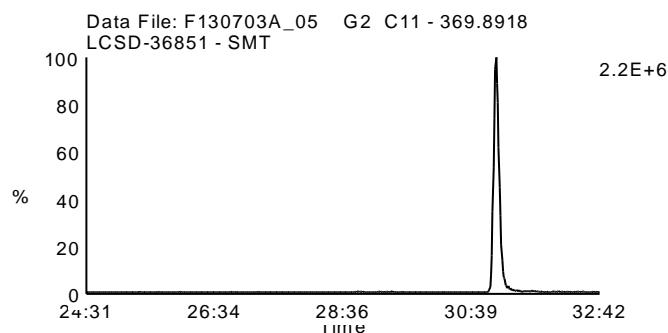
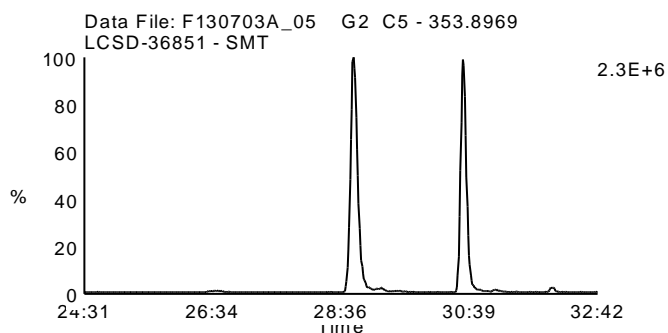
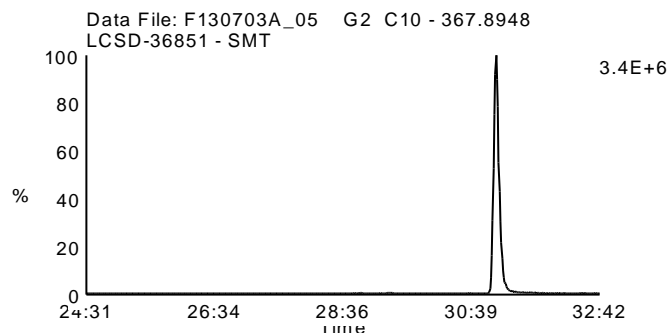
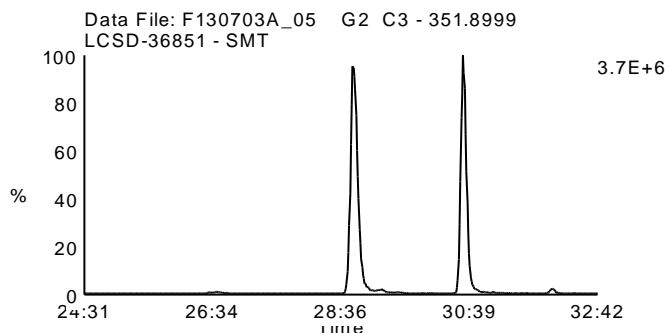
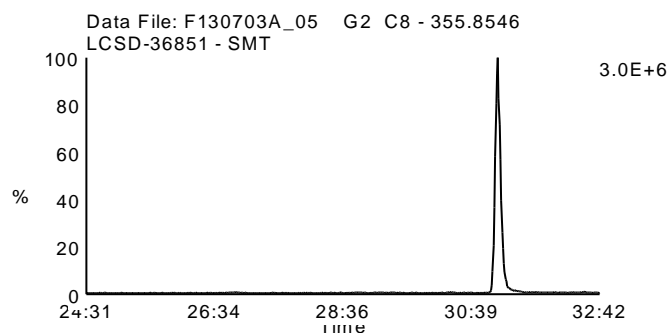
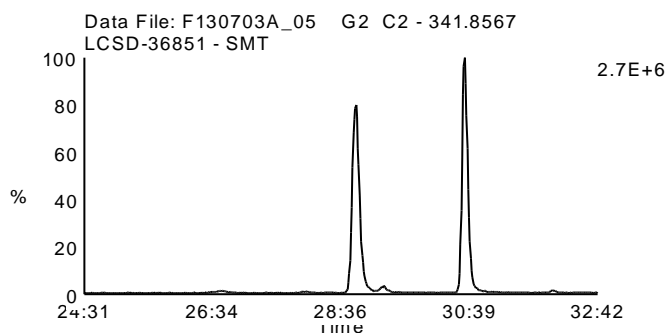
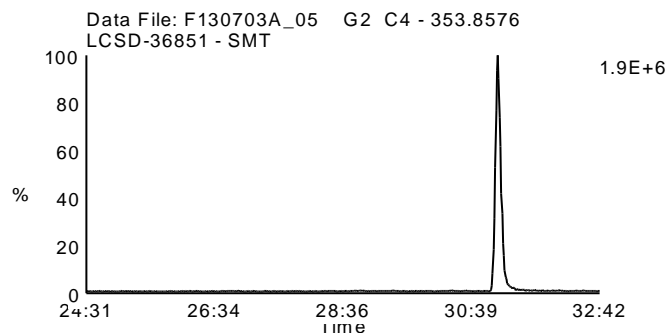
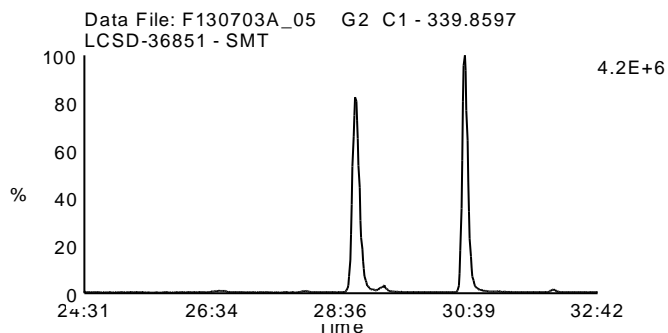
Date Acquired: 7/3/2013

Sample Description: LCSD-36851 - SMT

Lab Sample ID: LCSD-36851

Client Sample ID: LCSLG

Instrument: 10MSHR05 (F)



Homologue Group: Hexas

Data File Name: F130703A_05

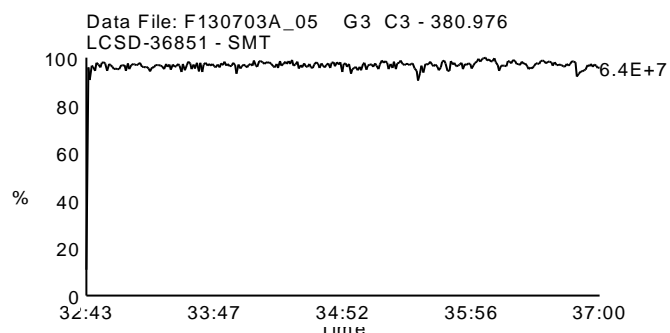
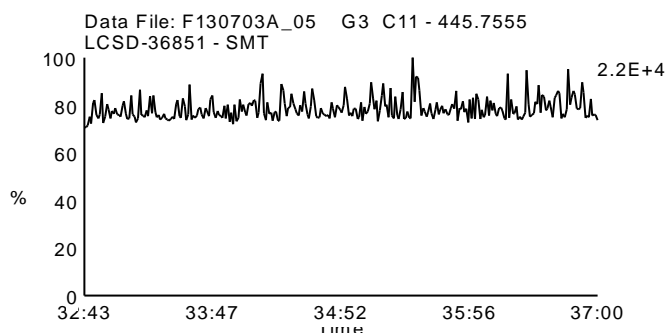
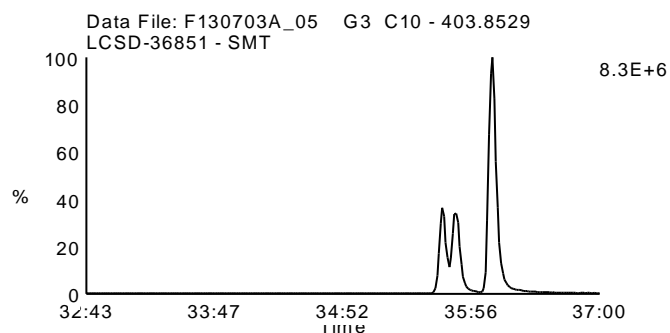
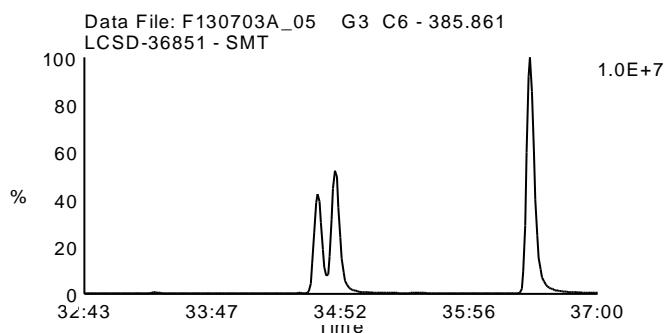
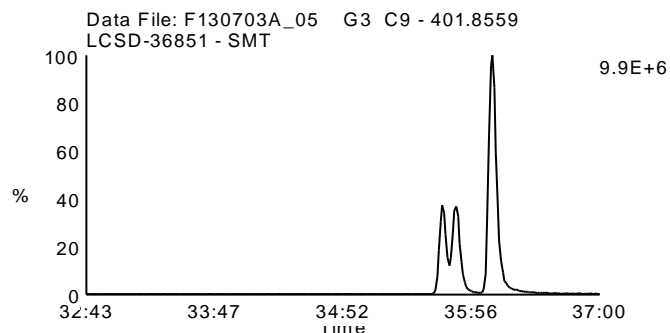
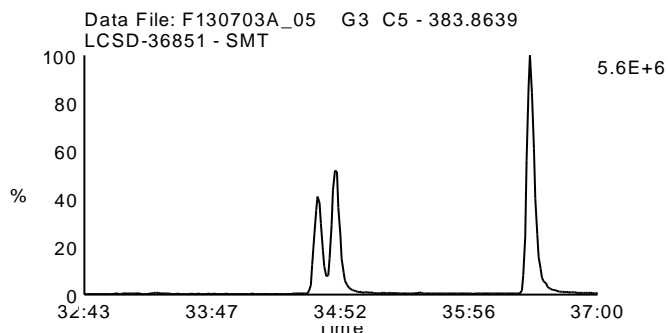
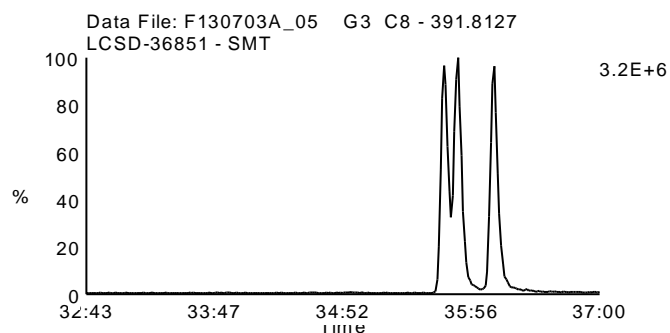
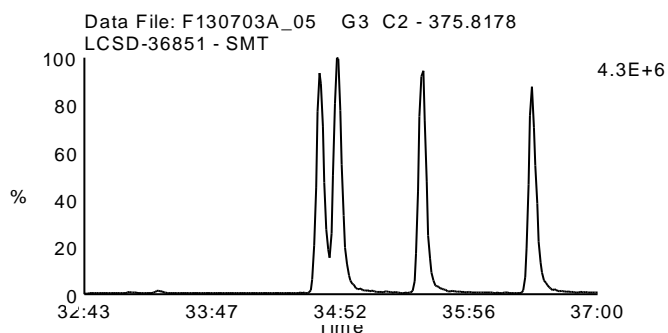
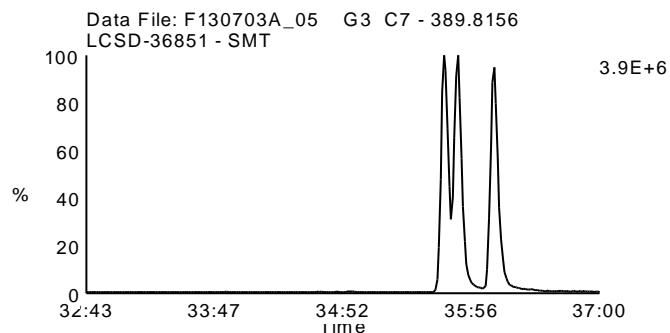
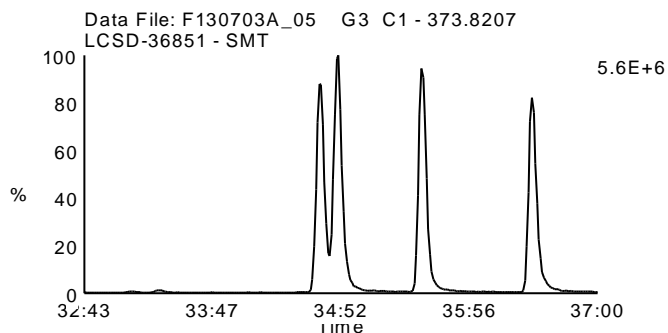
Date Acquired: 7/3/2013

Sample Description: LCSD-36851 - SMT

Lab Sample ID: LCSD-36851

Client Sample ID: LCSLG

Instrument: 10MSHR05 (F)



Homologue Group: Heptas

Data File Name: F130703A_05

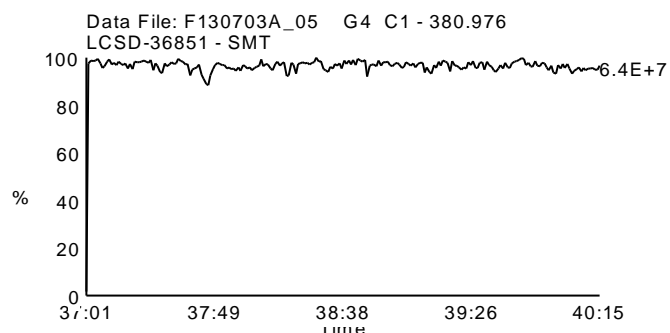
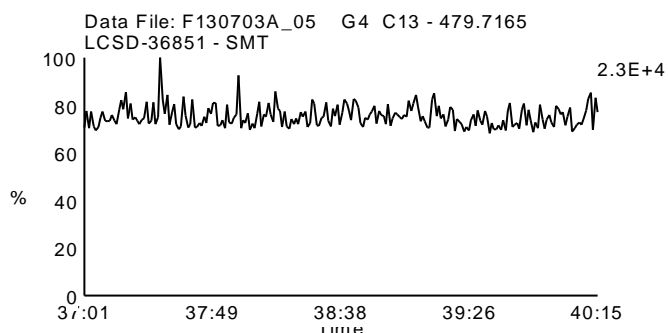
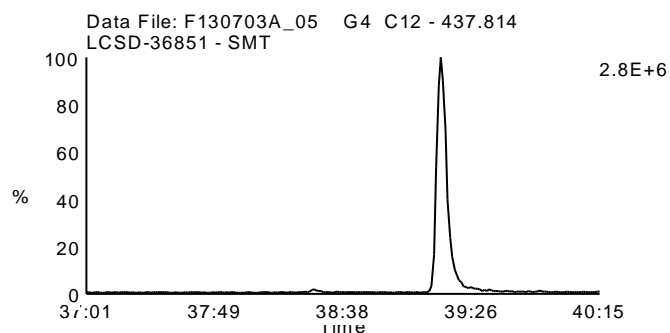
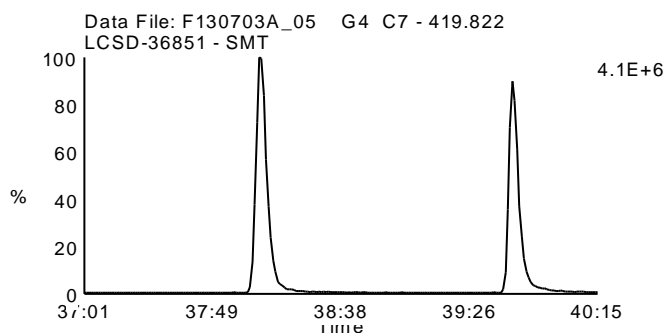
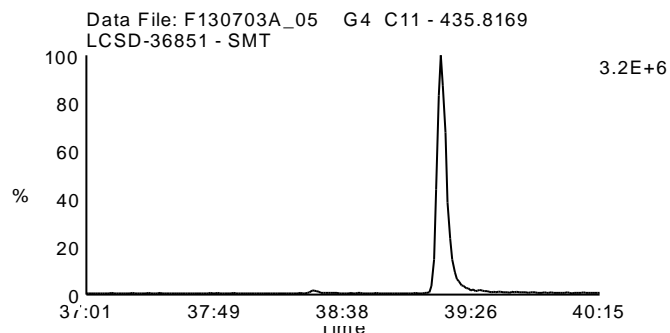
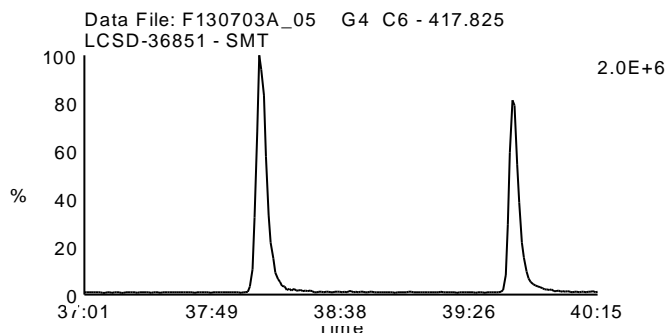
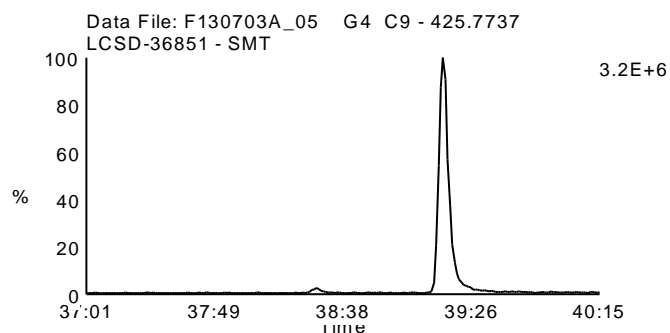
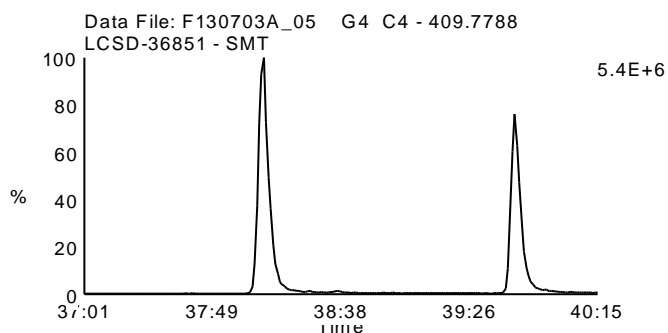
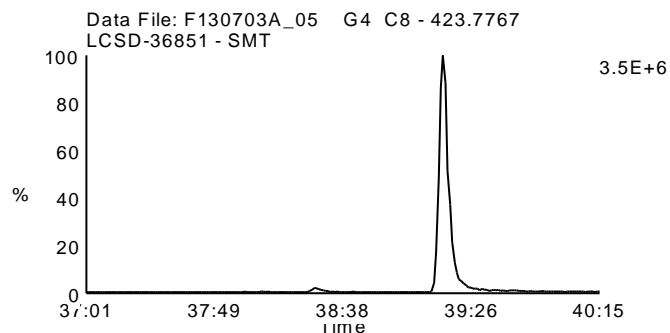
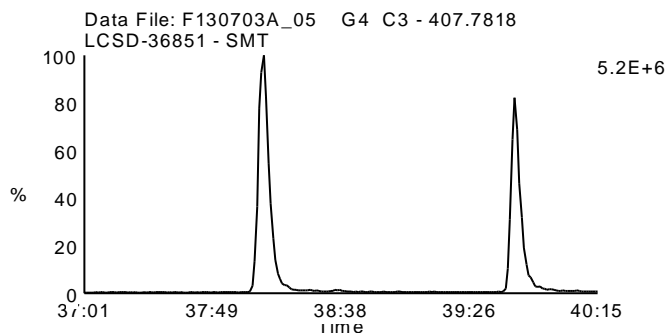
Date Acquired: 7/3/2013

Sample Description: LCSD-36851 - SMT

Lab Sample ID: LCSD-36851

Client Sample ID: LCSLG

Instrument: 10MSHR05 (F)



Homologue Group: Octas

Data File Name: F130703A_05

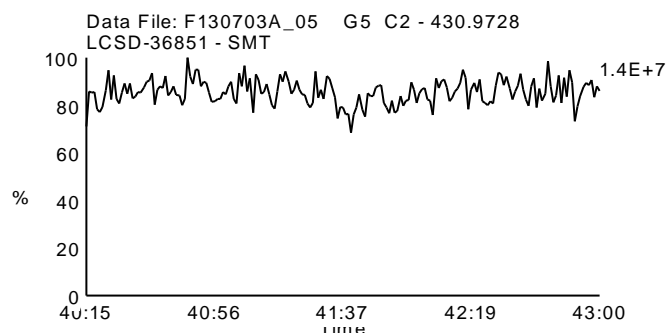
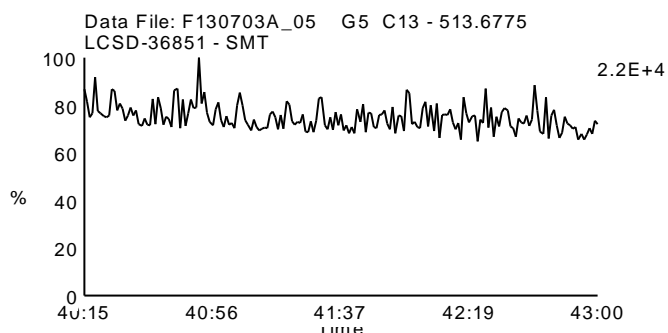
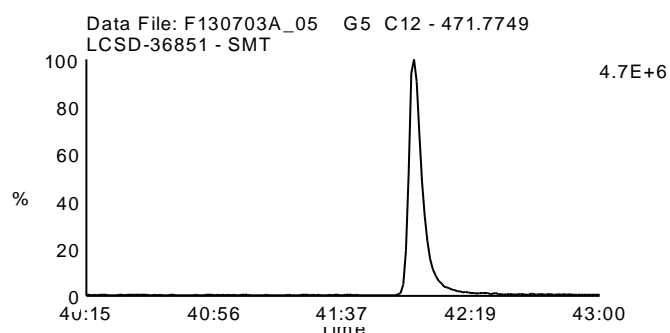
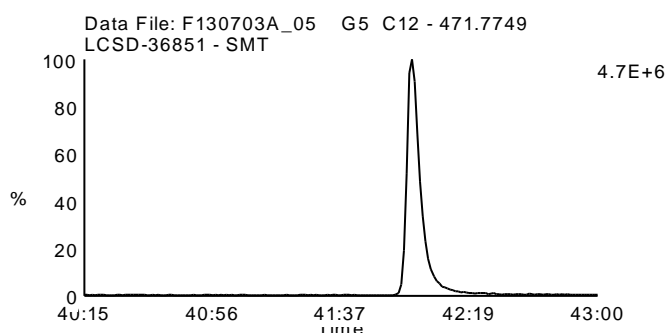
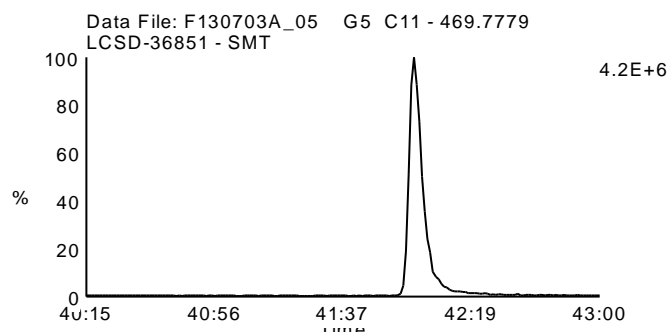
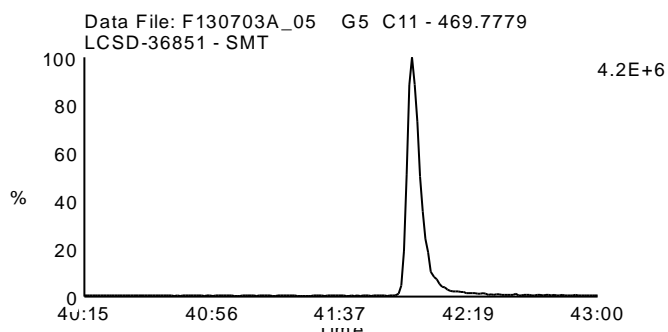
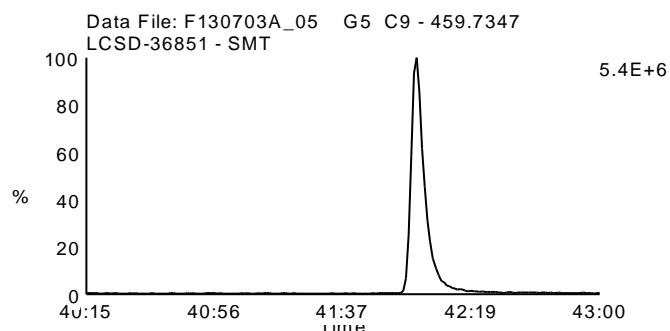
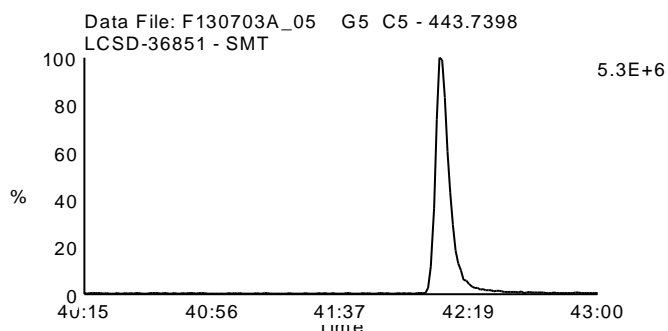
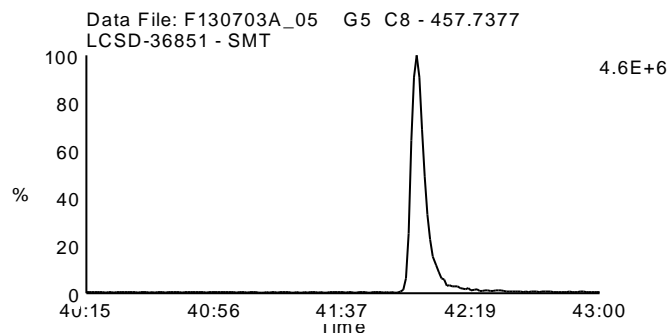
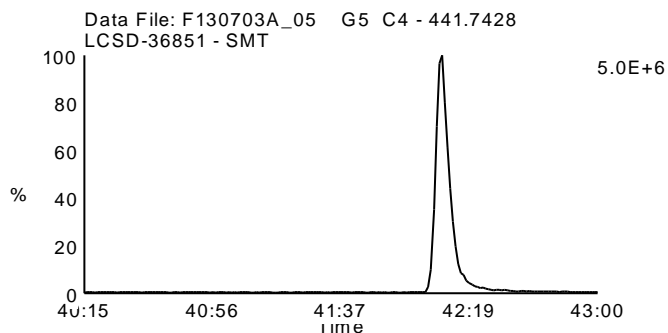
Date Acquired: 7/3/2013

Sample Description: LCSD-36851 - SMT

Lab Sample ID: LCSD-36851

Client Sample ID: LCSLG

Instrument: 10MSHR05 (F)



PCDD/PCDF Detected Peak List

Client ID		Injected By	SMT
Lab ID	BLANK-36849	Instrument ID	10MSHR05 (F)
Filename	F130703A_09	GC Column ID	USC508227H
Analyzed	07/03/2013 14:49	ICAL ID	F130408

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	20:34	2.05e7	2.53e7	2.68e6	3.37e6	1.080e4	4.796e3	0.81	
2,3,7,8-TCDF	20:36	ND	ND	ND	ND	1.368e3	1.759e3		
Other TCDF	1 19:03	3.41e4	4.32e4					0.79	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	20:45	4.85e7	6.05e7	6.68e6	8.59e6	8.050e3	2.947e3	0.80	
2,3,7,8-TCDD-13C	21:43	1.68e7	2.14e7	2.12e6	2.66e6	6.149e3	5.113e3	0.79	
2,3,7,8-TCDD-37Cl4	21:44	3.94e7		4.84e6		1.303e3	-----		
2,3,7,8-TCDD	21:44	ND	ND	ND	ND	2.537e3	2.232e3		

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	28:50	2.62e7	1.69e7	3.28e6	2.05e6	3.251e4	1.946e4	1.55	
2,3,4,7,8-PeCDF-13C	30:34	2.14e7	1.35e7	3.44e6	2.26e6	1.921e4	3.910e3	1.59	
1,2,3,7,8-PeCDF	28:51	ND	ND	ND	ND	1.477e3	1.801e3		
2,3,4,7,8-PeCDF	30:36	ND	ND	ND	ND	1.559e3	1.596e3		

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:04	1.80e7	1.21e7	2.89e6	1.91e6	8.530e2	5.320e2	1.49	
1,2,3,7,8-PeCDD	31:04	ND	ND	ND	ND	1.671e3	2.214e3		

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	34:40	9.58e6	1.81e7	2.08e6	3.85e6	2.768e3	1.203e3	0.53	
1,2,3,6,7,8-HxCDF-13C	34:49	1.29e7	2.50e7	2.63e6	5.12e6	1.845e3	6.808e2	0.52	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	9.719e2	1.067e3		
1,2,3,7,8,9-HxCDF-13C	36:27	2.81e7	5.23e7	6.01e6	1.12e7	2.475e3	9.523e2	0.54	
1,2,3,4,7,8-HxCDF	34:41	ND	ND	ND	ND	1.680e3	1.428e3		
1,2,3,6,7,8-HxCDF	34:51	ND	ND	ND	ND	1.680e3	1.301e3		
2,3,4,6,7,8-HxCDF	35:32	ND	ND	ND	ND	1.561e3	1.390e3		
1,2,3,7,8,9-HxCDF	36:28	ND	ND	ND	ND	1.753e3	1.421e3		

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	35:42	1.38e7	1.10e7	3.36e6	2.68e6	6.911e3	1.315e3	1.26	
1,2,3,6,7,8-HxCDD-13C	35:49	1.56e7	1.26e7	3.35e6	2.63e6	2.229e3	9.342e2	1.24	
1,2,3,7,8,9-HxCDD-13C	36:06	4.92e7	4.01e7	1.03e7	8.28e6	4.433e3	1.252e3	1.23	
1,2,3,4,7,8-HxCDD	35:43	ND	ND	ND	ND	3.007e3	1.854e3		
1,2,3,6,7,8-HxCDD	35:50	ND	ND	ND	ND	2.727e3	2.416e3		
1,2,3,7,8,9-HxCDD	36:07	ND	ND	ND	ND	2.717e3	2.226e3		

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:08	8.49e6	1.86e7	1.78e6	3.82e6	2.095e3	6.337e2	0.46	
1,2,3,4,7,8,9-HpCDF-13C	39:43	6.42e6	1.47e7	1.50e6	3.49e6	9.718e2	3.053e3	0.44	
1,2,3,4,6,7,8-HpCDF	38:08	2.11e4	2.56e4	7.38e3	5.94e3	2.520e3	2.537e3	0.83	I
1,2,3,4,7,8,9-HpCDF	39:44	ND	ND	ND	ND	2.100e3	2.075e3		

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:15	1.28e7	1.19e7	2.81e6	2.63e6	4.172e3	1.364e3	1.08	
1,2,3,4,6,7,8-HpCDD	39:17	5.98e4	4.05e4	1.28e4	8.95e3	2.670e3	2.144e3	1.47	I

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:09	3.10e4	4.21e4	6.96e3	1.21e4	2.865e3	2.634e3	0.74	I

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:01	2.00e7	2.20e7	3.97e6	4.19e6	3.840e3	2.163e3	0.91	
OCDD	42:02	2.16e5	2.49e5	5.06e4	4.82e4	2.998e3	3.610e3	0.87	

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PCDD/PCDF Detected Peak List

Client ID	LCSLF	Injected By	SMT
Lab ID	LCS-36850	Instrument ID	10MSHR05 (F)
Filename	F130703A_04	GC Column ID	USC508227H
Analyzed	07/03/2013 11:00	ICAL ID	F130408

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	20:35	2.21e7	2.84e7	2.91e6	3.72e6	----	----	0.78	
2,3,7,8-TCDF	20:36	4.56e6	5.73e6	6.16e5	7.71e5	----	----	0.80	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	20:46	4.49e7	5.56e7	6.33e6	7.75e6	----	----	0.81	
2,3,7,8-TCDD-13C	21:43	1.84e7	2.30e7	2.22e6	2.81e6	----	----	0.80	
2,3,7,8-TCDD-37Cl4	21:44	4.13e7		5.02e6		----	----		
2,3,7,8-TCDD	21:43	3.61e6	4.64e6	4.63e5	5.57e5	----	----	0.78	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	28:49	2.80e7	1.80e7	3.41e6	2.25e6	----	----	1.56	
2,3,4,7,8-PeCDF-13C	30:34	2.26e7	1.43e7	3.40e6	2.22e6	----	----	1.58	
1,2,3,7,8-PeCDF	28:51	2.91e7	1.84e7	3.48e6	2.28e6	----	----	1.58	
2,3,4,7,8-PeCDF	30:36	2.74e7	1.77e7	4.24e6	2.79e6	----	----	1.55	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:04	2.07e7	1.31e7	3.42e6	2.09e6	----	----	1.59	
1,2,3,7,8-PeCDD	31:04	1.21e7	1.97e7	1.94e6	2.99e6	----	----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	34:40	9.93e6	1.87e7	2.14e6	4.13e6	----	----	0.53	
1,2,3,6,7,8-HxCDF-13C	34:49	1.48e7	2.77e7	2.89e6	5.26e6	----	----	0.54	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	----	----		
1,2,3,7,8,9-HxCDF-13C	36:26	2.48e7	4.71e7	5.16e6	9.69e6	----	----	0.53	
1,2,3,4,7,8-HxCDF	34:41	2.35e7	1.80e7	5.22e6	4.02e6	----	----	1.30	
1,2,3,6,7,8-HxCDF	34:50	2.90e7	2.33e7	5.91e6	4.64e6	----	----	1.25	
2,3,4,6,7,8-HxCDF	35:32	2.57e7	2.03e7	5.43e6	4.32e6	----	----	1.26	
1,2,3,7,8,9-HxCDF	36:27	2.21e7	1.72e7	4.52e6	3.47e6	----	----	1.28	

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	35:42	1.46e7	1.15e7	3.42e6	2.69e6	----	----	1.26	
1,2,3,6,7,8-HxCDD-13C	35:48	1.72e7	1.35e7	3.55e6	2.86e6	----	----	1.28	
1,2,3,7,8,9-HxCDD-13C	36:06	4.48e7	3.57e7	9.25e6	7.36e6	----	----	1.25	
1,2,3,4,7,8-HxCDD	35:43	1.71e7	1.37e7	4.03e6	3.21e6	----	----	1.25	
1,2,3,6,7,8-HxCDD	35:49	1.95e7	1.54e7	4.12e6	3.23e6	----	----	1.26	
1,2,3,7,8,9-HxCDD	36:07	1.86e7	1.54e7	3.86e6	2.99e6	----	----	1.21	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:07	8.99e6	1.98e7	1.85e6	4.19e6	----	----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	39:43	6.91e6	1.49e7	1.55e6	3.38e6	----	----	0.46	
1,2,3,4,6,7,8-HpCDF	38:08	2.79e7	2.69e7	5.57e6	5.48e6	----	----	1.04	
1,2,3,4,7,8,9-HpCDF	39:44	1.82e7	1.76e7	4.04e6	3.87e6	----	----	1.03	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:15	1.37e7	1.28e7	2.94e6	2.74e6	----	----	1.07	
1,2,3,4,6,7,8-HpCDD	39:16	1.62e7	1.52e7	3.56e6	3.24e6	----	----	1.06	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:09	2.66e7	2.87e7	5.16e6	5.66e6	----	----	0.93	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:01	2.14e7	2.35e7	4.06e6	4.46e6	----	----	0.91	
OCDD	42:02	2.70e7	3.07e7	5.06e6	5.74e6	----	----	0.88	

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PCDD/PCDF Detected Peak List

Client ID	LCSLG	Injected By	SMT
Lab ID	LCSD-36851	Instrument ID	10MSHR05 (F)
Filename	F130703A_05	GC Column ID	USC508227H
Analyzed	07/03/2013 11:46	ICAL ID	F130408

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	20:35	2.27e7	2.92e7	2.95e6	3.86e6	----	----	0.78	
2,3,7,8-TCDF	20:36	4.38e6	5.82e6	5.50e5	7.80e5	----	----	0.75	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	20:46	4.75e7	6.04e7	6.55e6	8.18e6	----	----	0.79	
2,3,7,8-TCDD-13C	21:43	1.84e7	2.35e7	2.20e6	2.81e6	----	----	0.78	
2,3,7,8-TCDD-37Cl4	21:44	4.30e7		5.02e6		----	----		
2,3,7,8-TCDD	21:43	3.34e6	4.36e6	3.97e5	5.44e5	----	----	0.77	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	28:48	2.89e7	1.88e7	3.55e6	2.33e6	----	----	1.54	
2,3,4,7,8-PeCDF-13C	30:34	2.37e7	1.49e7	3.72e6	2.31e6	----	----	1.59	
1,2,3,7,8-PeCDF	28:51	2.80e7	1.77e7	3.44e6	2.14e6	----	----	1.58	
2,3,4,7,8-PeCDF	30:36	2.74e7	1.72e7	4.17e6	2.67e6	----	----	1.59	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:04	2.09e7	1.36e7	3.38e6	2.15e6	----	----	1.53	
1,2,3,7,8-PeCDD	31:05	1.16e7	1.83e7	1.84e6	3.00e6	----	----	0.63	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	34:40	1.06e7	2.05e7	2.28e6	4.36e6	----	----	0.52	
1,2,3,6,7,8-HxCDF-13C	34:49	1.48e7	2.78e7	2.89e6	5.40e6	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C		ND	ND	ND	ND	----	----		
1,2,3,7,8,9-HxCDF-13C	36:27	2.65e7	5.11e7	5.61e6	1.04e7	----	----	0.52	
1,2,3,4,7,8-HxCDF	34:41	2.35e7	1.88e7	4.87e6	4.01e6	----	----	1.25	
1,2,3,6,7,8-HxCDF	34:51	2.80e7	2.18e7	5.54e6	4.29e6	----	----	1.28	
2,3,4,6,7,8-HxCDF	35:32	2.48e7	1.93e7	5.23e6	4.05e6	----	----	1.28	
1,2,3,7,8,9-HxCDF	36:28	2.21e7	1.74e7	4.55e6	3.76e6	----	----	1.27	

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Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	35:42	1.50e7	1.20e7	3.69e6	3.01e6	----	----	1.25	
1,2,3,6,7,8-HxCDD-13C	35:49	1.81e7	1.41e7	3.63e6	2.80e6	----	----	1.29	
1,2,3,7,8,9-HxCDD-13C	36:07	4.91e7	3.99e7	9.91e6	8.28e6	----	----	1.23	
1,2,3,4,7,8-HxCDD	35:43	1.63e7	1.29e7	3.91e6	3.07e6	----	----	1.26	
1,2,3,6,7,8-HxCDD	35:50	1.85e7	1.52e7	3.91e6	3.17e6	----	----	1.21	
1,2,3,7,8,9-HxCDD	36:08	1.81e7	1.45e7	3.72e6	3.06e6	----	----	1.25	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:07	9.44e6	2.02e7	1.98e6	4.05e6	----	----	0.47	
1,2,3,4,7,8,9-HpCDF-13C	39:43	7.32e6	1.63e7	1.61e6	3.64e6	----	----	0.45	
1,2,3,4,6,7,8-HpCDF	38:09	2.59e7	2.51e7	5.18e6	5.34e6	----	----	1.03	
1,2,3,4,7,8,9-HpCDF	39:44	1.78e7	1.77e7	4.25e6	4.06e6	----	----	1.01	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:15	1.40e7	1.28e7	3.17e6	2.73e6	----	----	1.10	
1,2,3,4,6,7,8-HpCDD	39:16	1.53e7	1.43e7	3.49e6	3.17e6	----	----	1.06	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:10	2.59e7	2.83e7	4.96e6	5.33e6	----	----	0.92	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:01	2.21e7	2.45e7	4.23e6	4.67e6	----	----	0.90	
OCDD	42:02	2.48e7	2.79e7	4.59e6	5.36e6	----	----	0.89	

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