

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP11165 **HP #07**

Data Directory Path is - C:\msdchem\1\data\16oct11a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
em10340	GJ0370.D	DFTPP2586	10/11/2016	17:07		
em10340	GJ0370a.D	DFTPP2586	10/11/2016	17:19		
em10340	GJ0370b.D	DFTPP2586	10/11/2016	17:30		
em10340	GJ0370c.D	DFTPP2586	10/11/2016	17:41		
em10340	GJ0370d.D	DFTPP2586	10/11/2016	17:54		
em10340	GJ0371.D	STD2776	10/11/2016	18:10		
em10340	GJ0372.D	STD2776	10/11/2016	19:12		
em10340	GJ0373.D	STD2776	10/11/2016	19:37		
em10340	GJ0374.D	STD2776	10/11/2016	20:04		
em10340	GJ0375.D	STD2776	10/11/2016	20:30		
em10340	GJ0376.D	STD2776	10/11/2016	20:56		
em10340	GJ0377.D	STD2776	10/11/2016	21:22		
em10340	GJ0378.D	STD2776	10/11/2016	21:48		
em10340	GJ0379.D	MDL2776	10/11/2016	22:13		
em10340	GJ0380.D	MDLPAH2776	10/11/2016	22:39		
em10340	GJ0381.D	ICV2036	10/11/2016	23:04		
em10340	GJ0382.D	BASICV2516	10/11/2016	23:30		
em10340	GJ0383.D	SBLKLB284	10/11/2016	23:56	16284SLB	
em10340	GJ0384.D	284LBLCS	10/12/2016	00:22	16284SLB	
em10340	GJ0385.D	8623201	10/12/2016	00:47	16284SLB	
em10340	GJ0386.D	8623201	10/12/2016	01:12	16284SLB	
em10340	GJ0387.D	8623201	10/12/2016	01:38	16284SLB	
em10340	GJ0388.D	8623202	10/12/2016	02:03	16284SLB	
em10340	GJ0389.D	8609167	10/12/2016	02:29	16284SLB	
em10340	GJ0390.D	8614543	10/12/2016	02:55	16284SLB	
em10340	GJ0391.D	8614544	10/12/2016	03:21	16284SLB	
em10340	GJ0392.D	8614545	10/12/2016	03:46	16284SLB	
em10340	GJ0393.D	8614546	10/12/2016	04:11	16284SLB	

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Semi-Volatiles
Runlog for Agilent GC/MS System HP11165 **HP #07**

Data Directory Path is - C:\msdchem\1\data\16nov11\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
jmg00346	GK0500.D	DFTPP2586	11/11/2016	06:48		
jmg00346	GK0501.D	STD2776	11/11/2016	07:03		
jmg00346	GK0502.D	SBLKLF314	11/11/2016	08:18	16314SLF	
jmg00346	GK0503.D	314LFLCS	11/11/2016	08:42	16314SLF	
jmg00346	GK0504.D	8668440	11/11/2016	09:07	16314SLF	
jmg00346	GK0505.D	8668441	11/11/2016	09:32	16314SLF	
jmg00346	GK0506.D	8668442	11/11/2016	09:58	16314SLF	
jmg00346	GK0507.D	SBLKLF314	11/11/2016	10:23	16314SLF	
jmg00346	GK0508.D	SBLKLF314	11/11/2016	10:48	16314SLF	
jmg00346	GK0509.D	SBLKLF314	11/11/2016	11:13	16314SLF	
jmg00346	GK0510.D	SBLKLF314	11/11/2016	11:38	16314SLF	

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Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\16oct16a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
ceb05247	LJ1750.D	RVDFTPP2706	10/16/2016	19:12		
ceb05247	LJ1751.D	RVSTD2716	10/16/2016	19:27		
ceb05247	LJ1752.D	RVSTD2716	10/16/2016	19:55		
ceb05247	LJ1753.D	RVSTD2716	10/16/2016	20:23		
ceb05247	LJ1754.D	RVSTD2716	10/16/2016	20:51		
ceb05247	LJ1755.D	RVSTD2716	10/16/2016	21:19		
ceb05247	LJ1756.D	RVSTD2716	10/16/2016	21:47		
ceb05247	LJ1757.D	RVSTD2716	10/16/2016	22:15		
ceb05247	LJ1758.D	RVSTD2716	10/16/2016	22:44		
ceb05247	LJ1759.D	RVMDL2716	10/16/2016	23:12		
ceb05247	LJ1760.D	MDLPAH2716	10/16/2016	23:40		
ceb05247	LJ1761.D	RVICV2036	10/17/2016	00:08		
ceb05247	LJ1762.D	RVBASICV2516	10/17/2016	00:36		

Files LJ0750-0762 copied from 16oct16 directory and processed under rv8270d method

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Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\16nov01\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
ceb05247	LK0000.D	RVDFTPP2706	11/01/2016	05:46		
ceb05247	LK0000a.D	RVDFTPP2706	11/01/2016	06:45		
ceb05247	LK0001.D	RVSTD3006	11/01/2016	07:01		
ceb05247	LK0002.D	RVNND2286	11/01/2016	07:32		
ceb05247	LK0003.D	RVNND2286	11/01/2016	08:01		
ceb05247	LK0004.D	RVNND2286	11/01/2016	08:29		
ceb05247	LK0005.D	RVNND2286	11/01/2016	08:57		
ceb05247	LK0006.D	RVNND2286	11/01/2016	09:26		
ceb05247	LK0007.D	RVNND2286	11/01/2016	09:54		
ceb05247	LK0008.D	RVNND2286	11/01/2016	10:23		
ceb05247	LK0009.D	SBLKWK303	11/01/2016	10:52	16303WAK	
ceb05247	LK0010.D	303WKLCS	11/01/2016	11:19	16303WAK	
ceb05247	LK0011.D	303WKLCS	11/01/2016	11:47	16303WAK	
ceb05247	LK0012.D	8663485	11/01/2016	12:15	16303WAK	
ceb05247	LK0013.D	8667909	11/01/2016	12:43	16303WAK	
ceb05247	LK0023.D	8669031	11/01/2016	13:11	16303WAW	
ceb05247	LK0024.D	8669033	11/01/2016	13:39	16303WAW	
ceb05247	LK0013a.D	8667909	11/01/2016	14:07	16303WAK	5
ceb05247	LK0013b.D	8667909DL	11/01/2016	14:34	16303WAK	100
ceb05247	LK0014.D	8668414	11/01/2016	15:02	16303WAK	
ceb05247	LK0015.D	8668415	11/01/2016	15:30	16303WAK	
ceb05247	LK0016.D	8668416	11/01/2016	15:58	16303WAK	
ceb05247	LK0017.D	8668417	11/01/2016	16:26	16303WAK	
ceb05247	LK0018.D	8668418	11/01/2016	16:54	16303WAK	
ceb05247	LK0019.D	8668419	11/01/2016	17:22	16303WAK	
ceb05247	LK0020.D	8668420	11/01/2016	18:35	16303WAK	

Organic Extraction Batchlog

Assigned to: 9874 Kayla Yuditsky

Reviewed by: AB5247Start Date: 10/31/16Start time: 8:00

16303WAK026

Tech 1: BV 9121

Tech 2: _____

Dept: 26	Prep Analysis: 11010	8270D BNA Extraction	SVOAS 8270D MINI								
QC	Sample Code	Amt (mL)	SS/S Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
BLANKA	SBLKWK303	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	tap H ₂ O
LCSA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSALT	303WKLCS	250	SS1629526A	1.0	MS1629526A	1.0	1	✓	✓	7	
LCSDA	303WKLCS										

Solvent Used	Lot No.
10N NaOH	4605475
Methylene Chloride	166575
Sodium Sulfate	16300A
Sulfuric Acid	163621

Spike Solutions:

Witness: N/A

MS1621026A
MS1629926B
MS1629526A
MS1629526B
MS1629526C
MS1629526D
MS1629526E
MS1629526F
MS1629526G
MS1629526H
MS1629526I
MS1629526J
MS1629526K
MS1629526L
MS1629526M
MS1629526N
MS1629526O
MS1629526P
MS1629526Q
MS1629526R
MS1629526S
MS1629526T
MS1629526U
MS1629526V
MS1629526W
MS1629526X
MS1629526Y
MS1629526Z

ALTIMONT SPECIALS SPIKE
APPIX #1 MINI SPIKE
MINI SEP. LCS SPIKE #1
MINI SEP. LCS SPIKE #2
MINI SEP. BNA SURROGATE

Sample #	Sample Code	Amt (mL)	SS/S Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments	Analyses	List	Due Date	Prio
1 8663485	02D11	246	SS1629526A	1.0	1	✓	✓	153A	clear	14241	22445	11/07/2016	N
2 8667909	5444-	250	SS1629526A	1	1	✓	✓	153A	↓	14241	22191	11/08/2016	N
3 8668414	COO03	249	SS1629526A	1	1	✓	✓	153A	tan tint	14241	22149	11/09/2016	N
4 8668415	COO04	235	SS1629526A	1	1	✓	✓	153A	clear	14241	22149	11/09/2016	N
5 8668416	COO05	247	SS1629526A	1	1	✓	✓	153A	tan tint	14241	22149	11/09/2016	N
6 8668417	COO09	248	SS1629526A	1	1	✓	✓	153A	clear	14241	22149	11/09/2016	N
7 8668418	COO9D	234	SS1629526A	1	1	✓	✓	153A	clear	14241	22149	11/09/2016	N
8 8668419	COO15	250	SS1629526A	1	1	✓	✓	153A	clear	14241	22149	11/09/2016	N
9 8668420	COO13	238	SS1629526A	1	1	✓	✓	153A	clear	14241	22149	11/09/2016	N
10 8668421	COO14	249	SS1629526A	1	1	✓	✓	153A	clear	14241	22149	11/09/2016	N
11 8668422	COO16	232	SS1629526A	1	1	✓	✓	153A	clear	14241	22149	11/09/2016	N
12 8669031	N7411	241	SS1629526A	1	1	✓	✓	153A	clear	14241	22185	11/11/2016	N
13 8669033	N7413	224	SS1629526A	1	1	✓	✓	153A	clear	14241	22185	11/11/2016	N

Split to 16303WAK026. AB5247 n/11/16

MS1621026A
MS1629926B
MS1629526A
MS1629526B
MS1629526C
MS1629526D
MS1629526E
MS1629526F
MS1629526G
MS1629526H
MS1629526I
MS1629526J
MS1629526K
MS1629526L
MS1629526M
MS1629526N
MS1629526O
MS1629526P
MS1629526Q
MS1629526R
MS1629526S
MS1629526T
MS1629526U
MS1629526V
MS1629526W
MS1629526X
MS1629526Y
MS1629526Z

ALTIMONT SPECIALS SPIKE
APPIX #1 MINI SPIKE
MINI SEP. LCS SPIKE #1
MINI SEP. LCS SPIKE #2
MINI SEP. BNA SURROGATE

Bench#	Bench#	Bench#
Rack ID:	Work Station	Micro Temp
Internal Standard	Balance #	100?

R-VAP IDS	QO	C	R-VAP ID3	88	C	R-VAP ID2	88	C
S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	C

16303WAK026

DF = Dilution Factor FV = Final Volume

Page 1 of 2

Documented temps are NIST corrected.



Organic Extraction Batchlog

Assigned to: 6/740 Jessica Cook

Reviewed by: smoke 11-11-16Start Date: 11/10/16 Start time: 9:50

16314SLF026

Tech 1: Ky9874

Tech 2: _____

Dept 26			Prep Analysis: 10813 BNA Soil Microwave APP IX				SVQA 8270D (microwave)				
QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
8668441MS	02D24	30.16	SS1629326A	1.0	MS1629326A MS1630826C MS1631326A	1.0 1.0 1.0	5	Z	Z	301A	Soil, very dusty
8668442MSD	02D24	30.49	SS1629326A		MS1629326A MS1630826C MS1631326A	1.0 1.0 1.0	5	Z	Z	301A	↓
BLANKA	SBLKLF314	30.0	SS1629326A				1	Z	Z	7	Na ₂ SO ₄
LCSA	314LFLCS	30.0	SS1629326A		MS1629326A MS1630826C MS1631326A	1.0 1.0 1.0	1	Z	Z	7	Na ₂ SO ₄

⑧ Sample would not concentrate below 1 mL. kg 9874 11/10/16

Spike Solutions: _____ Witness: N/A

MS1630826C APPIX MIX #1
MS1629326A LCS SPIKE MIX #1
MS1631326A LCS SPIKE MIX #2
SS1629326A BNA SURROGATE STANDARD

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Soil: Brown	Comments	Analyses	List	Due Date	Prio
1	8668440BK6	02D24	30.02	SS1629326A	1.0	5	Z	Z	301A		10726	22431	11/18/2016	N

Bench#	Bench#	Bench#
Rack ID:	Work Station	Micro
Internal Standard	LC17296	Balance # 13
		Micro Temp 100? <input checked="" type="checkbox"/>

R-VAP ID	C	R-VAP ID	C	R-VAP ID	C
S-bath ID	6	98	C	S-bath ID	C
			C	N-Evap	C
			C	M-vap	C

N/A

DF = Dilution Factor FV = Final Volume

Page 1 of 1

Documented temps are NIST corrected.



Explosives Data

Case Narrative/Conformance Summary

Explosives

Case Narrative/Conformance Summary

CLIENT: CH2M Hill, Inc.
SDG: DWE02

Pesticide Residue Analysis

Fraction: Explosives

Nitroaromatics/Amines 8330B(s)

Nitroaromatics/Amines 8330B(s)

Sample #	Client ID	Matrix		DF	Comments
		Liquid	Solid		
8663469	DU-1-1-A		X	1	
8663470	DU-1-1-B		X	1	
8663471	DU-1-1-B-D		X	1	
8663472	DU-1-1-C		X	1	
8663473	DU-1-8-B		X	1	
8663474	DU-1-14-A		X	1	
8663475	DU-1-14-B		X	1	
8663476	DU-1-14-C		X	1	
8663482	DU-3-1-B		X	1	Unspiked
8663483	DU-3-1-B MS		X	1	Matrix Spike
8663484	DU-3-1-B MSD		X	1	Matrix Spike Duplicate
8663485	EB-1	X		1	Equipment Blank
8665231	Tetryl+1,3,5-TNB Blank		X	1	Blank
8665491	DU-1-13-A		X	1	
8665492	DU-1-13-B		X	1	
8665493	DU-1-13-C		X	1	
8665494	DU-1-4-A		X	1	
8665495	DU-1-4-B		X	1	
8665496	DU-1-4-C		X	1	
8665497	DU-2-2-C		X	1; 1	
8665498	DU-2-2-C MS		X	1; 1	Matrix Spike
8665499	DU-2-2-C MSD		X	1; 1	Matrix Spike Duplicate
8665500	Tetryl+1,3,5-TNB Blank		X	1	Blank
8668437	DU-2-4-A		X	1	
8668438	DU-2-4-B		X	1	
8668439	DU-2-4-C		X	1	
8668444	DU-2-4-B-D		X	1	Field Duplicate Sample
8668445	Tetryl+1,3,5-TNB Blank		X	1	Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

Case Narrative/Conformance Summary

CLIENT: CH2M Hill, Inc.
SDG: DWE02

Pesticide Residue Analysis

Fraction: Explosives

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

(Sample number(s): 8665498-8665499RE2: Analysis: 13413)

The analyte recoveries in the ms/msd were <10% which did not meet the project requirements.

The BKG/MS/MSD were reextracted and similar results were observed. The client was contacted

and a reduced aliquot was used to perform a third extraction. All the data sets are included

in the datapackage for review.

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

Batch#: 163270047A (Sample number(s): 8665497-8665499, UNSPK: 8665497)

The recovery(ies) for the following analyte(s) in the MS and MSD is outside the acceptance window: 1,3,5-Trinitrobenzene, Tetryl

Refer to the QC Summary forms for more information.

Batch#: 163190023A (Sample number(s): 8665497-8665500, UNSPK: 8665497)

The recovery(ies) for the following analyte(s) in the MS and MSD is outside the acceptance window: 1,3,5-Trinitrobenzene, Tetryl

Refer to the QC Summary forms for more information.

Batch#: 163080031A (Sample number(s): 8665493-8665499, 8668437-8668439, 8668444-8668445, UNSPK: 8665497)

The recovery(ies) for the following analyte(s) in the MS and MSD is outside the acceptance window: 1,3,5-Trinitrobenzene, Tetryl

Refer to the QC Summary forms for more information.

Case Narrative/Conformance Summary

CLIENT: CH2M Hill, Inc.
SDG: DWE02

Pesticide Residue Analysis

Fraction: Explosives

Batch#: 163080030A (Sample number(s): 8663469-8663476, 8663482-8663484, 8665231, 8665491-8665492, UNSPK: 8663482)

The recovery(ies) for the following analyte(s) in the MS is outside the acceptance window: 1,3,5-Trinitrobenzene

The recovery(ies) for the following analyte(s) in the MS and MSD is outside the acceptance window: Tetryl

Refer to the QC Summary forms for more information.

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Batch#: 163270047A (Sample number(s): 8665497-8665499, UNSPK: 8665497)

The recovery(ies) for the following surrogate(s) is below the acceptance window: 3,4-Dinitrotoluene (8665498RE2, 8665498RE2 MS, 8665499RE2, 8665499RE2 MSD)

Batch#: 163190023A (Sample number(s): 8665497-8665500, UNSPK: 8665497)

The recovery(ies) for the following surrogate(s) is below the acceptance window: 3,4-Dinitrotoluene (8665498RE, 8665498RE MS, 8665499RE, 8665499RE MSD)

Batch#: 163080031A (Sample number(s): 8665493-8665499, 8668437-8668439, 8668444-8668445, UNSPK: 8665497)

The recovery(ies) for the following surrogate(s) is below the acceptance window: 3,4-Dinitrotoluene (8665498, 8665499)

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Explosives

Quality Control Reference List Pesticide Residue Analysis

CLIENT: CH2M Hill, Inc.
SDG: DWE02

Fraction: Explosives

Analysis	Batch Number	Sample Number	Analysis Date
Nitroaromatics/Amines 8330B(s)	163080030A	PBLK30308	11/09/2016 02:36:00
		LCS3030Q	11/09/2016 04:01:00
		8663469	11/09/2016 04:43:00
		8663470	11/09/2016 06:50:00
		8663471	11/09/2016 07:33:00
		8663472	11/09/2016 08:15:00
		8663473	11/09/2016 08:57:00
		8663474	11/09/2016 10:22:00
		8663475	11/09/2016 11:05:00
		8663476	11/09/2016 11:47:00
		8663482 UNSPK	11/09/2016 12:30:00
		8663483 MS	11/09/2016 13:12:00
		8663484 MSD	11/09/2016 13:55:00
		8665231 BL	11/09/2016 14:37:00
		8665491	11/09/2016 15:19:00
		8665492	11/09/2016 16:02:00
Nitroaromatics/Amines 8330B(s)	163080031A	PBLK31308	11/09/2016 16:44:00
		LCS3130Q	11/09/2016 18:52:00
		8665493	11/09/2016 20:16:00
		8665494	11/09/2016 21:41:00
		8665495	11/09/2016 22:24:00
		8665496	11/09/2016 23:06:00
		8665497 UNSPK	11/09/2016 23:49:00
		8665498 MS	11/10/2016 00:31:00
		8665499 MSD	11/10/2016 01:56:00
		8668437	11/10/2016 03:21:00
		8668438	11/10/2016 04:03:00
		8668439	11/10/2016 04:46:00
		8668444	11/10/2016 05:28:00
		8668445 BL	11/10/2016 06:10:00
Nitroaromatics/Amines 8330B(s)	163190023A	PBLK23319	11/17/2016 21:25:00
		LCS2331Q	11/17/2016 22:08:00
		8665497RE UNSPK	11/18/2016 03:47:00
		8665498RE MS	11/18/2016 05:12:00
		8665499RE MSD	11/18/2016 05:54:00
		8665500 BL	11/18/2016 06:37:00
Nitroaromatics/Amines 8330B(s)	163270047A	PBLK47327	11/29/2016 20:49:00
		LCS4732Q	11/29/2016 22:56:00
		8665497RE2 UNSPK	11/30/2016 01:46:00
		8665498RE2 MS	11/30/2016 02:28:00
		8665499RE2 MSD	11/30/2016 03:11:00
Nitroaromatics/Amines 8330B(w)	163030041A	PBLK41303	11/02/2016 00:33:00



Lancaster Laboratories
Environmental

Quality Control Reference List
Pesticide Residue Analysis

CLIENT: CH2M Hill, Inc.
SDG: DWE02

Fraction: Explosives

Analysis	Batch Number	Sample Number	Analysis Date
		LCS41303	11/02/2016 01:15:00
		LCSD41303	11/02/2016 01:58:00
		8663485	11/02/2016 02:40:00

Fraction: Explosives

163080030A / PBLK30308 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,3,5-Trinitrobenzene	11/09/16	N.D.	ug/kg	40	120
Tetryl	11/09/16	N.D.	ug/kg	100	300

163080031A / PBLK31308 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,3,5-Trinitrobenzene	11/09/16	N.D.	ug/kg	40	120
Tetryl	11/09/16	N.D.	ug/kg	100	300

163190023A / PBLK23319 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,3,5-Trinitrobenzene	11/17/16	N.D.	ug/kg	40	120
Tetryl	11/17/16	N.D.	ug/kg	100	300

163270047A / PBLK47327 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,3,5-Trinitrobenzene	11/29/16	N.D.	ug/kg	40	120
Tetryl	11/29/16	N.D.	ug/kg	100	300

Fraction: Explosives

163030041A / PBLK41303					
Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,3,5-Trinitrobenzene	11/02/16	N.D.	ug/l	2.2	6.0
Tetryl	11/02/16	N.D.	ug/l	4.4	9.0

Fraction: Explosives

Sample	3,4-Dinitrotoluene	
	Spike Added	1000 ug/kg
	% Recovery	Limits
PBLK30308	120	62 - 133
LCS3030Q	118	62 - 133
8663469	110	62 - 133
8663470	119	62 - 133
8663471	116	62 - 133
8663472	111	62 - 133
8663473	116	62 - 133
8663474	118	62 - 133
8663475	119	62 - 133
8663476	114	62 - 133
8663482	121	62 - 133
UNSPK		
8663483 MS	71	62 - 133
8663484 MSD	78	62 - 133
8665231	119	62 - 133
8665491	116	62 - 133
8665492	109	62 - 133

Sample	3,4-Dinitrotoluene	
	Spike Added	1000 ug/kg
	% Recovery	Limits
PBLK31308	126	62 - 133
8665493	108	62 - 133
8665494	114	62 - 133
8665495	116	62 - 133
8665496	119	62 - 133
8665497	117	62 - 133
UNSPK		
8665498 MS	1 *	62 - 133
8665499 MSD	0 *	62 - 133
8668437	113	62 - 133
8668438	118	62 - 133
8668439	115	62 - 133
8668444	113	62 - 133
8668445	117	62 - 133

Sample	3,4-Dinitrotoluene	
	Spike Added	994 ug/kg
	% Recovery	Limits
PBLK23319	107	62 - 133
LCS2331Q	88	62 - 133
8665497RE	85	62 - 133

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Fraction: Explosives

Sample	3,4-Dinitrotoluene	
	Spike Added	994 ug/kg
	% Recovery	Limits
UNSPK		
8665498RE MS	0 *	62 - 133
8665498RE MS	0 *	62 - 133
8665499RE MSD	9 *	62 - 133
8665499RE MSD	9 *	62 - 133
8665500	83	62 - 133

Sample	3,4-Dinitrotoluene	
	Spike Added	994 ug/kg
	% Recovery	Limits
PBLK47327	110	62 - 133
8665497RE2 UNSPK	113	62 - 133
8665498RE2 MS	41 *	62 - 133
8665498RE2 MS	41 *	62 - 133
8665499RE2 MSD	37 *	62 - 133
8665499RE2 MSD	37 *	62 - 133

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Fraction: Explosives

Sample	3,4-Dinitrotoluene	
	Spike Added	200 ug/l
	% Recovery	Limits
PBLK41303	98	85 - 115
LCS41303	99	85 - 115
LCSD41303	100	85 - 115
8663485	95	85 - 115

Pesticide Residue Analysis

Fraction: Explosives

UNSPK: 8663482 MS: 8663483 MSD: 8663484 Analyte	Batch: 163080030A (Sample number(s): 8663469-8663476, 8663482-8663484, 8665231, 8665491-8665492)								
	Spike Added ug/kg MS/MSD	Unspiked Conc ug/kg	MS Conc ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
1,3,5-Trinitrobenzene	1920 / 1960	N.D.	874.13	955.35	46 *	49	48-141	9	50
Tetryl	1920 / 1960	N.D.	645.33	712.32	34 *	36 *	38-152	10	50

UNSPK: 8665497 MS: 8665498 MSD: 8665499 Analyte	Batch: 163080031A (Sample number(s): 8665493-8665499, 8668437-8668439, 8668444-8668445)								
	Spike Added ug/kg	Unspiked Conc ug/kg	MS Conc ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
1,3,5-Trinitrobenzene	1950	N.D.	N.D.	N.D.	0 *	0 *	48-141	0	50
Tetryl	1950	N.D.	N.D.	N.D.	0 *	0 *	38-152	0	50

UNSPK: 8665497RE MS: 8665498RE MSD: 8665499RE Analyte	Batch: 163190023A (Sample number(s): 8665497-8665500)								
	Spike Added ug/kg	Unspiked Conc ug/kg	MS Conc ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
1,3,5-Trinitrobenzene	1980	N.D.	N.D.	N.D.	0 *	0 *	48-141	0	50
Tetryl	1980	N.D.	N.D.	N.D.	0 *	0 *	38-152	0	50

UNSPK: 8665497RE2 MS: 8665498RE2 MSD: 8665499RE2 Analyte	Batch: 163270047A (Sample number(s): 8665497-8665499)								
	Spike Added ug/kg MS/MSD	Unspiked Conc ug/kg	MS Conc ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
1,3,5-Trinitrobenzene	4000 / 3921.56	N.D.	444.5	321.68	11 *	8 *	48-141	32	50
Tetryl	4000 / 3921.56	N.D.	737.68	678.	18 *	17 *	38-152	8	50

Comments:

(2) The unspiked sample result is greater than four times the spike added.

* = Out of Specification

Results are being reported on an as received basis.

SDG: DWE02
Matrix: SOLID

Pesticide Residue Analysis
Fraction: Explosives

LCS: LCS3030Q		Batch: 163080030A (Sample number(s): 8663469-8663476, 8663482-8663484, 8665231, 8665491-8665492)						
Analyte	Spike Added ug/kg	LCS Conc ug/kg	LCSD Conc ug/kg	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
1,3,5-Trinitrobenzene	2000	1990.42	NA	100	NA	48-141	NA	NA
Tetryl	2000	1880.2	NA	94	NA	38-152	NA	NA

LCS: LCS3130Q		Batch: 163080031A (Sample number(s): 8665493-8665499, 8668437-8668439, 8668444-8668445)						
Analyte	Spike Added ug/kg	LCS Conc ug/kg	LCSD Conc ug/kg	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
1,3,5-Trinitrobenzene	2000	2237.69	NA	112	NA	48-141	NA	NA
Tetryl	2000	2075.55	NA	104	NA	38-152	NA	NA

LCS: LCS2331Q		Batch: 163190023A (Sample number(s): 8665497-8665500)						
Analyte	Spike Added ug/kg	LCS Conc ug/kg	LCSD Conc ug/kg	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
1,3,5-Trinitrobenzene	2000	1431.9	NA	72	NA	48-141	NA	NA
Tetryl	2000	1223.24	NA	61	NA	38-152	NA	NA

LCS: LCS4732Q		Batch: 163270047A (Sample number(s): 8665497-8665499)						
Analyte	Spike Added ug/kg	LCS Conc ug/kg	LCSD Conc ug/kg	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
1,3,5-Trinitrobenzene	2000	2063.08	NA	103	NA	48-141	NA	NA
Tetryl	2000	1762.78	NA	88	NA	38-152	NA	NA

SDG: DWE02
Matrix: LIQUID

Pesticide Residue Analysis
Fraction: Explosives

LCS: LCS41303 LCSD: LCSD41303	Batch: 163030041A (Sample number(s): 8663485)							
	Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD Limits
	1,3,5-Trinitrobenzene	100	85.54	83.69	86	84	70-130	2 30
	Tetryl	100	102.36	94.64	102	95	70-130	8 30

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329ACalibration File: 12C83B1629501GC Column (3): CAPCELL CN ID: 250 (mm)ICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	RT OF STANDARDS					MIDPOINT RT level 5	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		FROM	TO
1,3,5-Trinitrobenzene	30.77	30.76	30.56	30.54	30.10	30.10	29.90	30.30
3,4-Dinitrotoluene	32.92	32.77	32.74	32.74	32.58	32.58	32.40	31.76
Tetryl	34.52	34.52	34.52	34.51	34.41	34.41	34.31	34.51

APC P. 9/15/16
JESSICA L. MOSE
Senior Chemist

OCT 25 2016

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329ACalibration File: 12C83B1629501GC Column (3): CAPCELL CN ID: 250 (mm)ICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
1,3,5-Trinitrobenzene	1.34E+02	1.72E+02	2.03E+02	2.09E+02	2.08E+02	1.85E+02	18
3,4-Dinitrotoluene	1.46E+02	1.32E+02	1.26E+02	1.20E+02	1.18E+02	1.28E+02	9
Tetryl	1.52E+02	1.55E+02	1.56E+02	1.54E+02	1.52E+02	1.54E+02	1

Average % RSD: 9


James H. Plano
Senior Chemist

OCT 26 2016

File Name: VACPI2\12C83B1629501.CAL
Version: 18

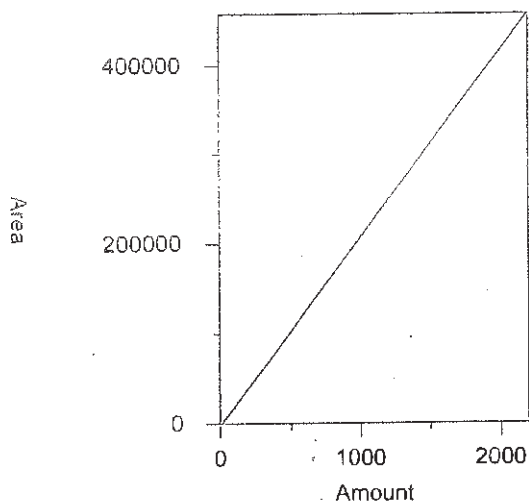
Creator:
Description:
Reason for change:

External standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: µg/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 1,3,5-TNB



Expected retention time: 30.101 minutes
Search window: 0.2 minutes
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

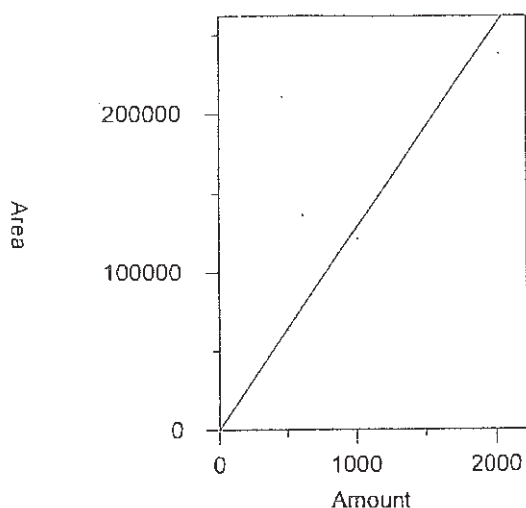
$$Y = 209.5954 X + -2628.346$$

Linear fit with equal weighting
Coefficient of determination: 0.9999409
Average error: 7.219%
Average CF: 185.0529
RSD: 17.525%

Level	Amount	Response	Cat Factor	Error, %	Source	Date and time
1	25	3343	133.72	28.009	Manual	10/25/2016 7:15:31 PM
2	100	17203.9	172.039	-6.150	Manual	10/25/2016 7:15:33 PM
3	500	101332	202.664	-0.820	Manual	10/25/2016 7:15:34 PM
4	1000	208920.3	208.9203	0.944	Manual	10/25/2016 7:15:37 PM
5	2000	415842.4	207.9212	-0.173	Manual	10/25/2016 7:15:42 PM

2 3,4-Dinitrotoluene

Chrom Perfect Calibration File



Expected retention time: 32.58 minutes
 Search window: 0.18 minutes
 No retention time reference component
 No response proxy component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

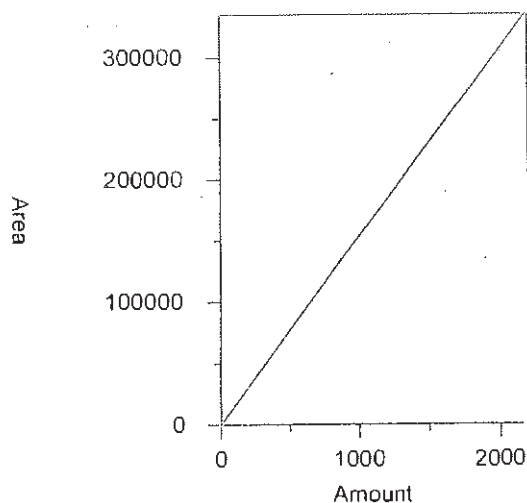
Single peak quantification by area

$$Y = 128.4892 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9861933
 Average error: 6.539%
 Average CF: 128.4892
 RSD: 8.797%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	3689	146.3889	13.931	Manual
2	100.8	13264.82	131.5954	2.417	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.01
3	504	63535	126.0615	-1.889	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.01
4	1008	121278.8	120.3163	-6.361	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.01
5	2016	238057.3	118.084	-8.098	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.01

3 Tetryl



Expected retention time: 34.412 minutes
 Search window: 0.1 minutes
 No retention time reference component
 No response proxy component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by area

$$Y = 153.6194 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9998744
 Average error: 0.819%
 Average CF: 153.6194
 RSD: 1.058%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	25	3796	151.84	-1.158	Manual	10/25/2016 7:15:54 PM
2	100	15454.38	154.5438	0.602	Manual	10/25/2016 7:15:56 PM
3	500	77919.69	155.8394	1.445	Manual	10/25/2016 7:15:57 PM
4	1000	153521.3	153.5213	-0.064	Manual	10/25/2016 7:15:59 PM
5	2000	304705.4	152.3527	-0.825	Manual	10/25/2016 7:16:08 PM

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329BCalibration File: 12C83B1629501BGC Column (4): CAPCELL CN ID: 250 (mm)

Update File:

Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	RT OF STANDARDS					MIDPOINT RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		FROM	TO
HMX						4.15	4.05	4.25
Nitroglycerin						9.20	9.10	9.30

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster LaboratoriesContract: Lab Code: Case No.: SAS No.: SDG No.: Instrument: Y6329BCalibration File: 12C83B1629501BGC Column (4): CAPCELL CN ID: 250 (mm)Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
HMX							0
Nitroglycerin							0

Average % RSD: 0

File Name: V:\CP12\12C83B16295001B.CAL
Version: 11

Creator:
Description:
Reason for change:

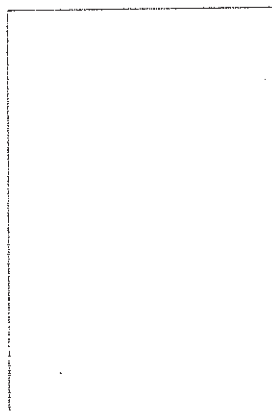
External standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 HMX

Area



Amount

Expected retention time: 4.146 minutes
Search window: 0.1 minutes
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

$Y = 0.0$

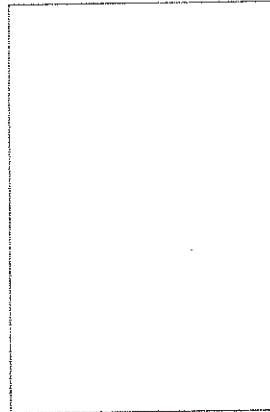
Average CF fit with equal weighting, forced to origin
Coefficient of determination: 1
Average error: 0.000%
Average CF: 0
RSD: 0.000%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.015	0	0	0.000	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001B.0009.BT
2	100.06	0	0	0.000	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001B.0010.BT
3	500.3	0	0	0.000	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001B.0011.BT
4	1000.6	0	0	0.000	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001B.0012.BT
5	2001.2	0	0	0.000	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001B.0013.BT

2 Nitroglycerin

Chrom Perfect Calibration File

Area



Amount

Expected retention time: 9.135 minutes
 Search window: 0.1 minutes
 No retention time reference component
 No response proxy component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by area

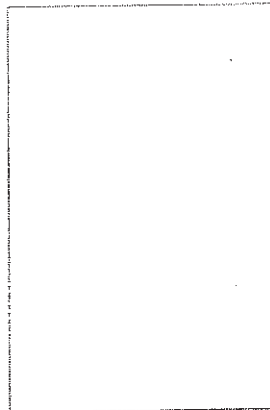
Y = 0.0

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 1
 Average error: 0.000%
 Average CF: 0
 RSD: 0.000%

Level	Amount	Response	Cal Factor	Error, %	Source
1	485.75	0	0	0.000	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001B.0001
2	1063.86	0	0	0.000	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001B.0001
3	1947.18	0	0	0.000	Manual
4	4857.82	0	0	0.000	Manual
5	9956.51	0	0	0.000	Manual

3 PETN

Area



Amount

Expected retention time: 26.255 minutes
 Search window: 0.21 minutes
 No retention time reference component
 No response proxy component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by area

Y = 0.0

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 1
 Average error: 0.000%
 Average CF: 0
 RSD: 0.000%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	484.69	0	0	0.000	Manual	10/24/2016 4:32:58 PM
2	1061.44	0	0	0.000	Manual	10/24/2016 4:33:00 PM
3	1942.16	0	0	0.000	Manual	10/24/2016 4:33:01 PM
4	4845.76	0	0	0.000	Manual	10/24/2016 4:33:05 PM
5	9931.88	0	0	0.000	Manual	10/24/2016 4:33:04 PM

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329ACalibration File: 12C83B1629502GC Column (3): CAPCELL CN ID: 250 (mm)ICAL 12E83B1629501ICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	RT OF STANDARDS					MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	RT	FROM	TO
1,3,5-Trinitrobenzene			29.78			29.78	29.58	29.98
3,4-Dinitrotoluene			32.41			32.41	32.23	32.59
Tetryl			34.32			34.32	34.22	34.42

applies to: 02C83B16295002.0009.7
old cal: 02C83B1629501
New cal: 02C83B1629502

By: 
JAMES H. PINEDA
Senior Chemist

OCT 20 2016


James H. Pineda
Senior Chemist

OCT 27 2016

Retention time update only using file(s) 12C83B16295002.0009.RAW analyzed on 10/24/2016 22:19

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

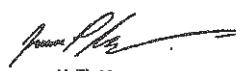
SAS No.:

SDG No.:

Instrument: Y6329ACalibration File: 12C83B1629502GC Column (3): CAPCELL CN ID: 250 (mm)ICAL 12E83B1629501ICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
1,3,5-Trinitrobenzene	1.34E+02	1.72E+02	2.03E+02	2.09E+02	2.08E+02	1.85E+02	18
3,4-Dinitrotoluene	1.46E+02	1.32E+02	1.26E+02	1.20E+02	1.18E+02	1.28E+02	9
Tetryl	1.52E+02	1.55E+02	1.56E+02	1.54E+02	1.52E+02	1.54E+02	1

Average % RSD: 9


James H. Place
Senior Chemist

OCT 27 2016

Retention time update only using file(s) 12C83B16295002.0009.RAW analyzed on 10/24/2016 22:19

File Name: V:\CP12\12C83B1629502.CAL
Version: 4

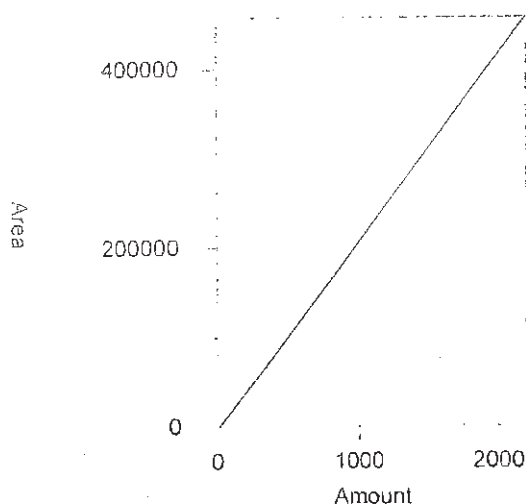
Creator:
Description:
Reason for change:

External standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 1,3,5-TNB



Expected retention time: 29.783 minutes
Search window: 0.2 minutes
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

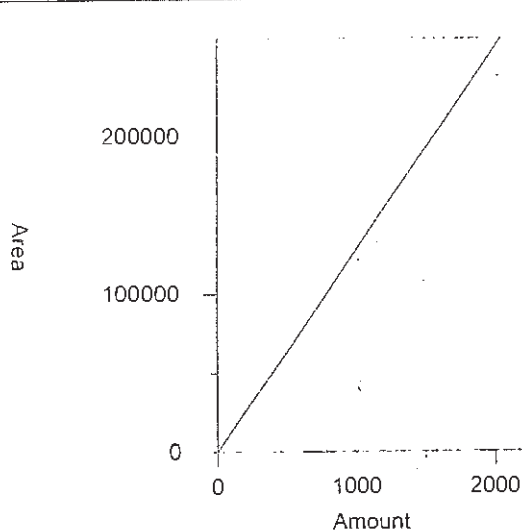
$$Y = 209.5954 X + -2628.346$$

Linear fit with equal weighting
Coefficient of determination: 0.9999409
Average error: 7.219%
Average CF: 185.0529
RSD: 17.525%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	25	3343	133.72	28.009	Manual	10/25/2016 7:15:31 PM
2	100	17203.9	172.039	-6.150	Manual	10/25/2016 7:15:33 PM
3	500	101332	202.664	-0.820	Manual	10/25/2016 7:15:34 PM
4	1000	208920.3	208.9203	0.944	Manual	10/25/2016 7:15:37 PM
5	2000	415842.4	207.9212	-0.173	Manual	10/25/2016 7:15:42 PM

2 3,4-Dinitrotoluene

Chrom Perfect Calibration File



Expected retention time: 32.412 minutes
Search window: 0.18 minutes
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

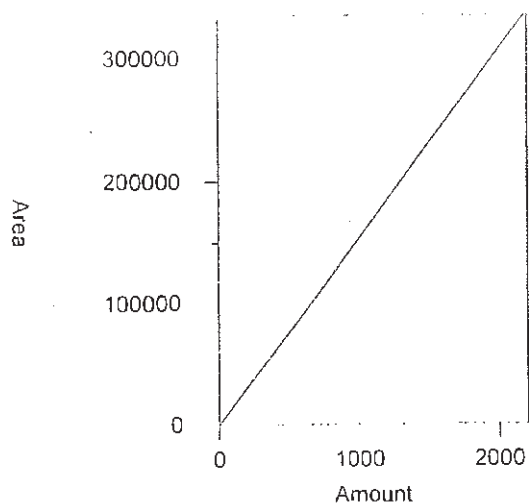
Single peak quantification by area

$$Y = 128.4892 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9861933
Average error: 6.539%
Average CF: 128.4892
RSD: 8.797%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	3689	146.3889	13.931	Manual
2	100.8	13264.82	131.5954	2.417	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.01
3	504	63535	126.0615	-1.889	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.01
4	1008	121278.8	120.3163	-6.361	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.01
5	2016	238057.3	118.084	-8.098	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.01

3 Tetrahydrocannabinol



Expected retention time: 34.322 minutes
Search window: 0.1 minutes
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

$$Y = 153.6194 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9998744
Average error: 0.819%
Average CF: 153.6194
RSD: 1.058%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	25	3796	151.84	-1.158	Manual	10/25/2016 7:15:54 PM
2	100	15454.38	154.5438	0.602	Manual	10/25/2016 7:15:56 PM
3	500	77919.69	155.8394	1.445	Manual	10/25/2016 7:15:57 PM
4	1000	153521.3	153.5213	-0.064	Manual	10/25/2016 7:15:59 PM
5	2000	304705.4	152.3527	-0.825	Manual	10/25/2016 7:16:08 PM

File Name: VACPI2\12C83B1629502B.CAL
Version: 3

Creator:
Description:
Reason for change:

No compounds on B-side

External standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component



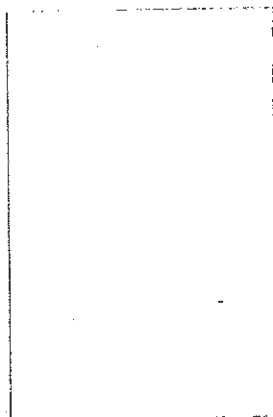
OCT 26 2016

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 HMX

Area



Expected retention time: 4.146 minutes
Search window: 0.1 minutes
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

Y = 0.0

Amount

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 1
Average error: 0.000%
Average CF: 0
RSD: 0.000%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.015	0	0	0.000	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001B.0009.I
2	100.06	0	0	0.000	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001B.0010.I
3	500.3	0	0	0.000	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001B.0011.I
4	1000.6	0	0	0.000	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001B.0012.I
5	2001.2	0	0	0.000	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001B.0013.I

2 Nitroglycerin

Chrom Perfect Calibration File

Area

Expected retention time: 9.135 minutes
Search window: 0.1 minutes
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

Y = 0.0

Amount

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 1
Average error: 0.000%
Average CF: 0
RSD: 0.000%

Level	Amount	Response	Cal Factor	Error, %	Source
1	485.75	0	0	0.000	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001B.
2	1063.86	0	0	0.000	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001B.
3	1947.18	0	0	0.000	Manual
4	4857.82	0	0	0.000	Manual
5	9956.51	0	0	0.000	Manual

3 PETN

Area

Expected retention time: 26.255 minutes
Search window: 0.21 minutes
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

Y = 0.0

Amount

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 1
Average error: 0.000%
Average CF: 0
RSD: 0.000%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	484.69	0	0	0.000	Manual	10/24/2016 4:32:58 PM
2	1061.44	0	0	0.000	Manual	10/24/2016 4:33:00 PM
3	1942.16	0	0	0.000	Manual	10/24/2016 4:33:01 PM
4	4845.76	0	0	0.000	Manual	10/24/2016 4:33:05 PM
5	9931.88	0	0	0.000	Manual	10/24/2016 4:33:04 PM

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329ACalibration File: 12E83B1629501GC Column (1): CHROMPACK ID: 100 (mm)

Update File:

Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	RT OF STANDARDS					MIDPOINT Level 5 RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		FROM	TO
1,3,5-Trinitrobenzene	5.10	5.12	5.11	5.10	5.19	5.19	5.09	5.29
Tetryl	8.36	8.37	8.37	8.36	8.50	8.50	8.36	8.64
3,4-Dinitrotoluene	11.36	11.35	11.34	11.34	11.52	11.52	11.28	11.76


James H. Place
Senior Chemist

OCT 24 2016

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329ACalibration File: 12E83B1629501GC Column (1): CHROMPACK ID: 100 (mm)ICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	CALIBRATION FACTORS					MEAN	%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		
1,3,5-Trinitrobenzene	2.31E+02	1.97E+02	2.00E+02	1.95E+02	1.92E+02	2.03E+02	8
Tetryl	1.27E+02	1.38E+02	1.49E+02	1.48E+02	1.46E+02	1.42E+02	6
3,4-Dinitrotoluene	1.11E+02	9.76E+01	1.14E+02	1.16E+02	1.10E+02	1.10E+02	7

Average % RSD: 7

Chrom Perfect Calibration File

File Name: V:\CP12\12E83B1629501.CAL

Version: 8

Creator:

Description:

Reason for change:

Internal standard calibration

Standard injection volume: 1

No sample weight correction

Area reject threshold: 0

Reference peak area reject threshold: 500

Amount units: ug/L

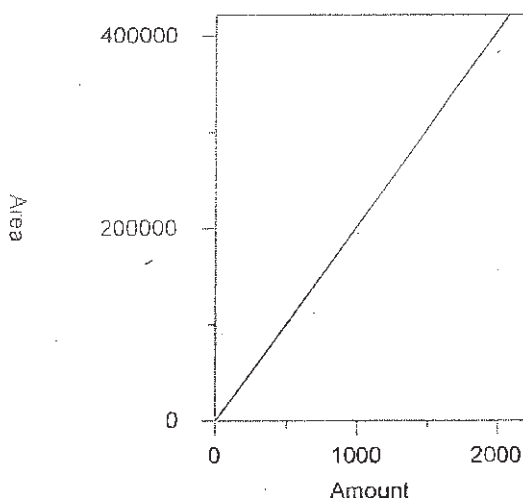
No default component

Method of calculating data point averages: Equal weight for all updates

Print calibration update report

All levels are normal data points.

1 1,3,5-TNB



Expected retention time: 5.194 minutes

Search window: 0.1 minutes

No internal standard component

No retention time reference component

No response proxy component

Group number: 0

High alarm limit: 0

Low alarm limit: 0

Component constant: 0

Single peak quantification by area

$$Y = 202.7578 X + 0$$

Average CF fit with equal weighting, forced to origin

Coefficient of determination: 0.994159

Average error: 5.617%

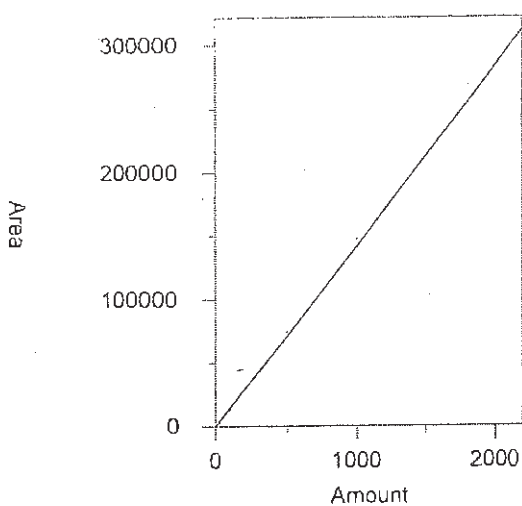
Average CF: 202.7578

RSD: 7.983%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25	5780.706	231.2282	14.042	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0009.BNI
2	100	19660.46	196.6046	-3.035	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0010.BNI
3	500	99873.61	199.7472	-1.485	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0011.BNI
4	1000	194538.7	194.5387	-4.054	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0012.BNI
5	2000	383340.2	191.6701	-5.468	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0013.BNI

2 Tetryl

Chrom Perfect Calibration File



Expected retention time: 8.502 minutes
 Search window: 0.14 minutes
 No internal standard component
 No retention time reference component
 No response proxy component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

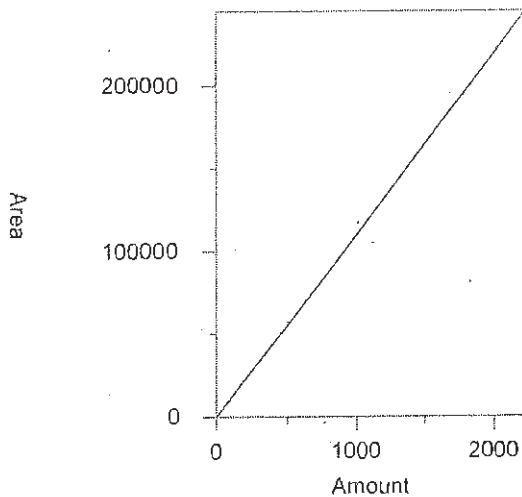
Single peak quantification by area

$$Y = 141.5316 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9975975
 Average error: 5.068%
 Average CF: 141.5316
 RSD: 6.356%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25	3186.354	127.4542	-9.947	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0009.1
2	100	13767.77	137.6777	-2.723	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0010.1
3	500	74417.88	148.8358	5.161	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0011.1
4	1000	147509.6	147.5096	4.224	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0012.1
5	2000	292362	146.181	3.285	Manual

3 3,4-Dinitrotoluene



Expected retention time: 11.519 minutes
 Search window: 0.242 minutes
 No internal standard component
 No retention time reference component
 No response proxy component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by area

$$Y = 109.7723 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9985371
 Average error: 4.440%
 Average CF: 109.7723
 RSD: 6.540%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	2797.115	110.9966	1.115	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0009.1
2	100.8	9836.875	97.58804	-11.100	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0010.1
3	504	57294.55	113.6797	3.560	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0011.1
4	1008	117062.3	116.1332	5.795	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0012.1
5	2016	222695.1	110.4638	0.630	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0013.1

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:


SDG No.:

Instrument: X6329BCalibration File: 12E83B1629501BGC Column (2): CHROMPACK ID: 100 (mm)

Update File:

Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	RT OF STANDARDS					MIDPOINT LEVEL 5 RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		FROM	TO
3,4-Dinitrotoluene	11.41	11.46	11.47	11.46	11.65	11.65	11.36	11.94


James H. Place
Senior Chemist

OCT 24 2016

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329BCalibration File: 12E83B1629501BGC Column (2): CHROMPACK ID: 100 (mm)ICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	CALIBRATION FACTORS					MEAN	%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		
3,4-Dinitrotoluene	8.80E+02	6.70E+02	8.31E+02	7.73E+02	8.13E+02	7.94E+02	10

Average % RSD: 10

File Name: V:\CP12\12E83B1629501B.CAL
Version: 9

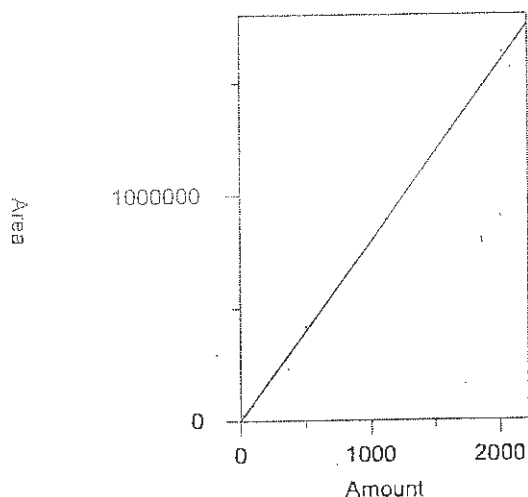
Creator:
Description:
Reason for change:

Internal standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 3,4-Dinitrotoluene



Expected retention time: 11.649 minutes
Search window: 0.286 minutes
No internal standard component
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

$$Y = 793.5834 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9986128
Average error: 7.236%
Average CF: 793.5834
RSD: 9.948%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	22181.26	880.2087	10.916	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0009.BT
2	100.8	67553.95	670.1781	-15.550	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0010.BT
3	504	418951.8	831.2536	4.747	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0011.BT
4	1008	779612	773.4246	-2.540	Manual
5	2016	1638710	812.8522	2.428	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0013.BT

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329ACalibration File: 12E83B1629502GC Column (1): CHROMPACK ID: 100 (mm)ICAL Date(s) Analyzed: 10/24/2016 10/24/2016

COMPOUND	RT OF STANDARDS					MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	RT	FROM	TO
1,3,5-Trinitrobenzene			5.33			5.33	5.23	5.43
Tetryl			8.72			8.72	8.58	8.86
3,4-Dinitrotoluene			11.82			11.82	11.58	12.06

applies to: 12E83B16295002.0009 -7
 old Cal: 12E83B1629501
 New Cal: 12E83B1629502

By:


 James H. Place
 Senior Chemist

OCT 20 2016

Audited By:


 James H. Place
 Senior Chemist

OCT 27 2016

Retention time update only using file(s) 12E83B16295002.0009.RAW analyzed on 10/24/2016 22:19

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329ACalibration File: 12E83B1629502GC Column (1): CHROMPACK ID: 100 (mm)ICAL Date(s) Analyzed: 10/24/2016 10/24/2016

COMPOUND	CALIBRATION FACTORS					MEAN	%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		
1,3,5-Trinitrobenzene	2.31E+02	1.97E+02	2.00E+02	1.95E+02	1.92E+02	2.03E+02	8
Tetryl	1.27E+02	1.38E+02	1.49E+02	1.48E+02	1.46E+02	1.42E+02	6
3,4-Dinitrotoluene	1.11E+02	9.76E+01	1.14E+02	1.16E+02	1.10E+02	1.10E+02	7

Average % RSD: 7

Retention time update only using file(s) 12E83B16295002.0009.RAW analyzed on 10/24/2016 22:19

File Name: V:\CP12\12E83B1629502.CAL
Version: 3

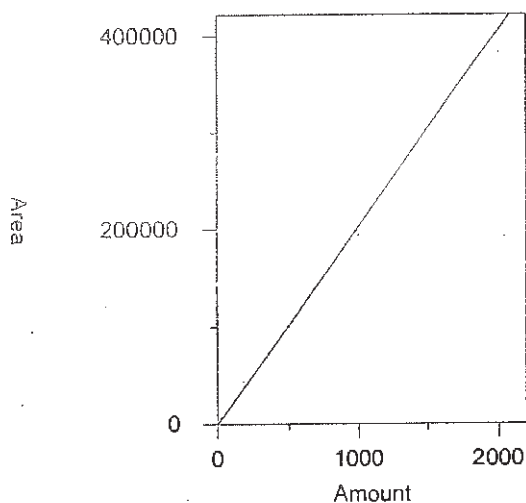
Creator:
Description:
Reason for change:

Internal standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 1,3,5-TNB



Expected retention time: 5.331 minutes
Search window: 0.1 minutes
No internal standard component
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

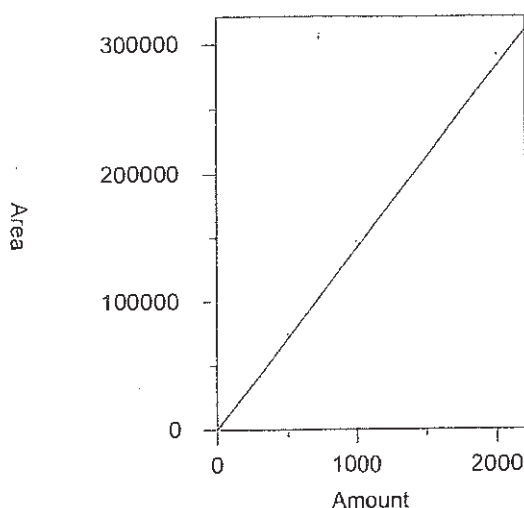
$$Y = 202.7578 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.994159
Average error: 5.617%
Average CF: 202.7578
RSD: 7.983%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25	5780.706	231.2282	14.042	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0009.BT
2	100	19660.46	196.6046	-3.035	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0010.BT
3	500	99873.61	199.7472	-1.485	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0011.BT
4	1000	194538.7	194.5387	-4.054	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0012.BT
5	2000	383340.2	191.6701	-5.468	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0013.BT

2 Tetryl

Chrom Perfect Calibration File



Expected retention time: 8.716 minutes
Search window: 0.14 minutes
No internal standard component
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

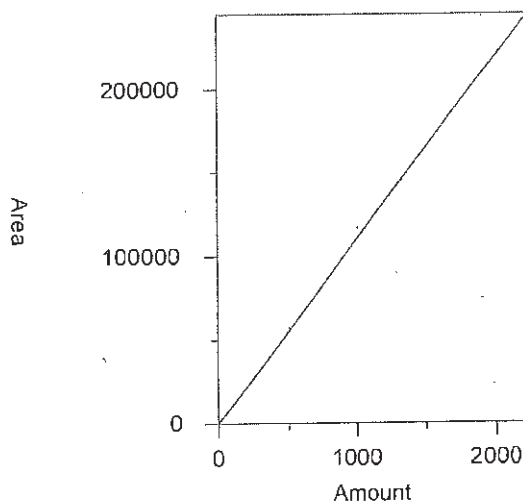
Single peak quantification by area

$$Y = 141.5316 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9975975
Average error: 5.068%
Average CF: 141.5316
RSD: 6.356%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25	3186.354	127.4542	-9.947	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.00
2	100	13767.77	137.6777	-2.723	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.00
3	500	74417.88	148.8358	5.161	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.00
4	1000	147509.6	147.5096	4.224	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.00
5	2000	292362	146.181	3.285	Manual

3 3,4-Dinitrotoluene



Expected retention time: 11.821 minutes
Search window: 0.242 minutes
No internal standard component
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

$$Y = 109.7723 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9985371
Average error: 4.440%
Average CF: 109.7723
RSD: 6.540%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	2797.115	110.9966	1.115	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.00
2	100.8	9836.875	97.58804	-11.100	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.00
3	504	57294.55	113.6797	3.560	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.00
4	1008	117062.3	116.1332	5.795	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.00
5	2016	222695.1	110.4638	0.630	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.00

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329BCalibration File: 12E83B1629502BGC Column (2): CHROMPACK ID: 100 (mm)ICAL Date(s) Analyzed: 10/24/2016 10/24/2016

COMPOUND	RT OF STANDARDS					MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	RT	FROM	TO
3,4-Dinitrotoluene			11.95			11.95	11.66	12.23

Retention time update only using file(s) 12E83B16295002B.0009.RAW analyzed on 10/24/2016 22:1

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329BCalibration File: 12E83B1629502BGC Column (2): CHROMPACK ID: 100 (mm)ICAL Date(s) Analyzed: 10/24/2016 10/24/2016

COMPOUND	CALIBRATION FACTORS					MEAN	%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		
3,4-Dinitrotoluene	8.80E+02	6.70E+02	8.31E+02	7.73E+02	8.13E+02	7.94E+02	10

Average % RSD: 10

Retention time update only using file(s) 12E83B16295002B.0009.RAW analyzed on 10/24/2016 22:1

File Name: VACPI2\12E83B1629502B.CAL
Version: 4

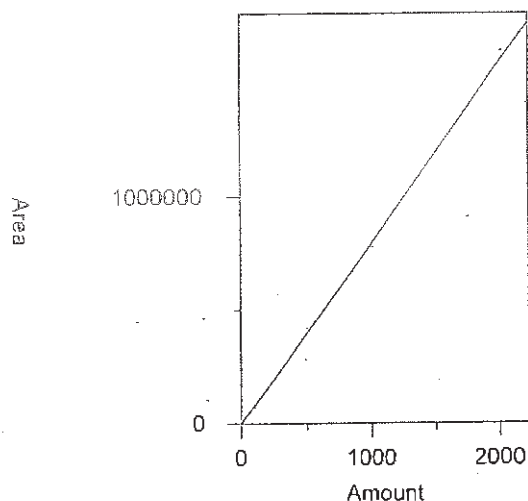
Creator:
Description:
Reason for change:

Internal standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 3,4-Dinitrotoluene



Expected retention time: 11.948 minutes
Search window: 0.286 minutes
No internal standard component
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

$$Y = 793.5834 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9986128
Average error: 7.236%
Average CF: 793.5834
RSD: 9.948%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	22181.26	880.2087	10.916	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0009.I
2	100.8	67553.95	670.1781	-15.550	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0010.I
3	504	418951.8	831.2536	4.747	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0011.I
4	1008	779612	773.4246	-2.540	Manual
5	2016	1638710	812.8522	2.428	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0013.I

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329ACalibration File: 12C83B1629503GC Column (3): CAPCELL CN ID: 250 (mm)ICAL 12C83B1629501ICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	RT OF STANDARDS					MIDPOINT RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		FROM	TO
1,3,5-Trinitrobenzene			29.89			29.89	29.68	30.08
3,4-Dinitrotoluene			32.45			32.45	32.26	32.63
Tetryl			34.31			34.31	34.21	34.41

applies: 12C83B16295004.0001 →
 Old Cal: 12C83B1629502
 New Cal: 12C83B1629503

By: *[Signature]* 2855
 10/20/16

[Signature]
 James H. Pizzo
 Senior Chemist

NOV 10 2016

Retention time update only using file(s) 12C83B16295004.0009.RAW analyzed on 11/9/2016 01:53:4

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329ACalibration File: 12C83B1629503GC Column (3) : CAPCELL CN ID: 250 (mm)ICAL 12C83B1629501ICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	CALIBRATION FACTORS					MEAN	%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		
1,3,5-Trinitrobenzene	1.34E+02	1.72E+02	2.03E+02	2.09E+02	2.08E+02	1.85E+02	18
3,4-Dinitrotoluene	1.46E+02	1.32E+02	1.26E+02	1.20E+02	1.18E+02	1.28E+02	9
Tetryl	1.52E+02	1.55E+02	1.56E+02	1.54E+02	1.52E+02	1.54E+02	1

Average % RSD: 9

linear
9/28/15
10/20/16

Retention time update only using file(s) 12C83B16295004.0009.RAW analyzed on 11/9/2016 01:53:4

File Name: V:\CP12\12c83B1629503.CAL
Version: 3

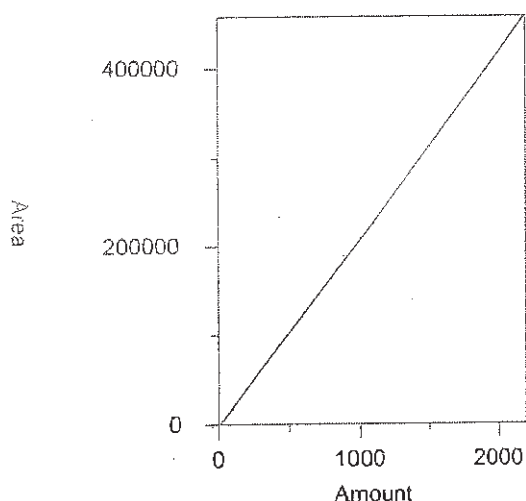
Creator:
Description:
Reason for change:

External standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 1,3,5-TNB



Expected retention time: 29.889 minutes
Search window: 0.2 minutes
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

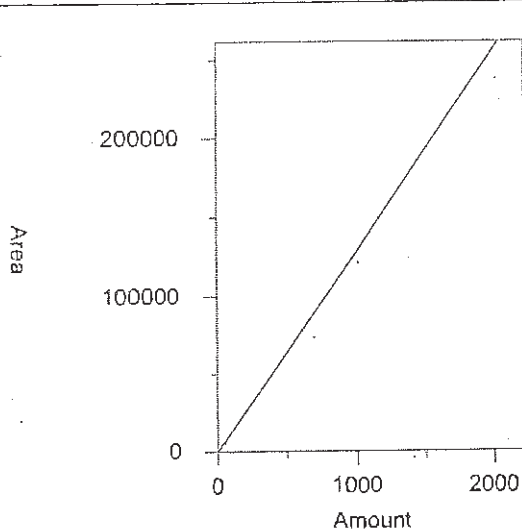
$$Y = 209.5954 X + -2628.346$$

Linear fit with equal weighting
Coefficient of determination: 0.9999409
Average error: 7.219%
Average CF: 185.0529
RSD: 17.525%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	25	3343	133.72	28.009	Manual	10/25/2016 7:15:31 PM
2	100	17203.9	172.039	-6.150	Manual	10/25/2016 7:15:33 PM
3	500	101332	202.664	-0.820	Manual	10/25/2016 7:15:34 PM
4	1000	208920.3	208.9203	0.944	Manual	10/25/2016 7:15:37 PM
5	2000	415842.4	207.9212	-0.173	Manual	10/25/2016 7:15:42 PM

2 3,4-Dinitrotoluene

Chrom Perfect Calibration File



Expected retention time: 32.447 minutes
 Search window: 0.18 minutes
 No retention time reference component
 No response proxy component
 Group number: 0

High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

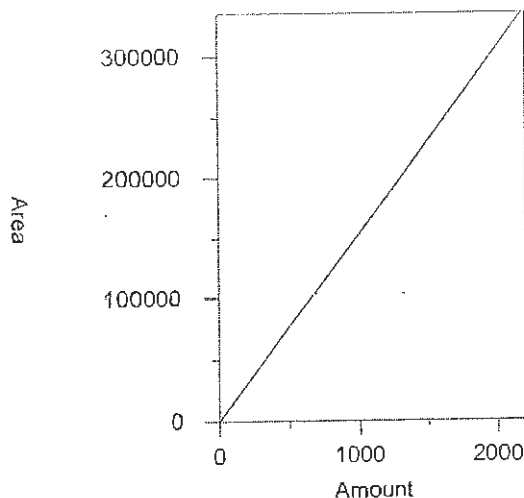
Single peak quantification by area

$$Y = 128.4892 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9861933
 Average error: 6.539%
 Average CF: 128.4892
 RSD: 8.797%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	3689	146.3889	13.931	Manual
2	100.8	13264.82	131.5954	2.417	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.0010...
3	504	63535	126.0615	-1.889	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.0011...
4	1008	121278.8	120.3163	-6.361	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.0012...
5	2016	238057.3	118.084	-8.098	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.0013...

3 Tetryl



Expected retention time: 34.309 minutes
 Search window: 0.1 minutes
 No retention time reference component
 No response proxy component
 Group number: 0

High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by area

$$Y = 153.6194 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9998744
 Average error: 0.819%
 Average CF: 153.6194
 RSD: 1.058%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	25	3796	151.84	-1.158	Manual	10/25/2016 7:15:54 PM
2	100	15454.38	154.5438	0.602	Manual	10/25/2016 7:15:56 PM
3	500	77919.69	155.8394	1.445	Manual	10/25/2016 7:15:57 PM
4	1000	153521.3	153.5213	-0.064	Manual	10/25/2016 7:15:59 PM
5	2000	304705.4	152.3527	-0.825	Manual	10/25/2016 7:16:08 PM

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329ACalibration File: 12E83B1629503GC Column (1): CHROMPACK ID: 100 (mm)ICAL 12E83B1629501ICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	RT OF STANDARDS					MIDPOINT RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		FROM	TO
1,3,5-Trinitrobenzene			5.14			5.14	5.04	5.24
Tetryl			8.34			8.34	8.20	8.48
3,4-Dinitrotoluene			11.43			11.43	11.19	11.67

applies to: 12E83B16295004.0001-7
 old cal: 12E83B1629502
 New Cal: 12E83B1629503
 By: *[Signature]* 2855 10/23/16

[Signature]
 James H. Paoa
 Senior Chemist

NOV 10 2016

Retention time update only using file(s) 12E83B16295004.0009.RAW analyzed on 11/9/2016 01:53:4

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329ACalibration File: 12E83B1629503GC Column (1): CHROMPACK ID: 100 (mm)ICAL Date(s) Analyzed: 11/9/2016 11/9/2016

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
1,3,5-Trinitrobenzene	2.31E+02	1.97E+02	2.00E+02	1.95E+02	1.92E+02	2.03E+02	8
Tetryl	1.27E+02	1.38E+02	1.49E+02	1.48E+02	1.46E+02	1.42E+02	6
3,4-Dinitrotoluene	1.11E+02	9.76E+01	1.14E+02	1.16E+02	1.10E+02	1.10E+02	7

Average % RSD: 7

Retention time update only using file(s) 12E83B16295004.0009.RAW analyzed on 11/9/2016 01:53:4

File Name: V:\CP12\12e83B1629503.CAL
Version: 4

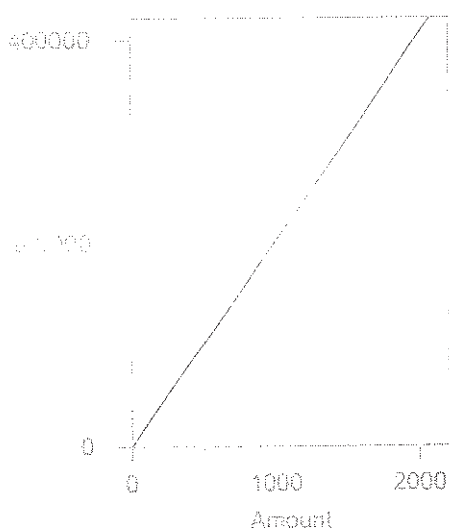
Creator:
Description:
Reason for change:

Internal standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 1,3,5-TNB



Expected retention time: 5.142 minutes
Search window: 0.1 minutes

No internal standard component
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

$$Y = 202.7578 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.994159
Average error: 5.617%
Average CF: 202.7578
RSD: 7.983%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25	5780.706	231.2282	14.042	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0009.BN[
2	100	19660.46	196.6046	-3.035	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0010.BN[
3	500	99873.61	199.7472	-1.485	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0011.BN[
4	1000	194538.7	194.5387	-4.054	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0012.BN[
5	2000	383340.2	191.6701	-5.468	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0013.BN[

2 Tetryl

File Name: V:\CP12\12e83B1629503.CAL
Version: 4

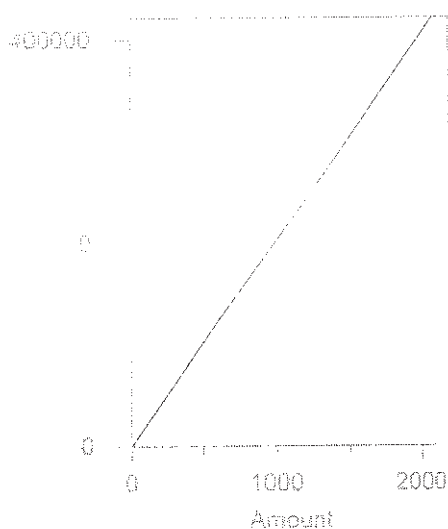
Creator:
Description:
Reason for change:

Internal standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 1,3,5-TNB



Expected retention time: 5.142 minutes
Search window: 0.1 minutes
No internal standard component
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

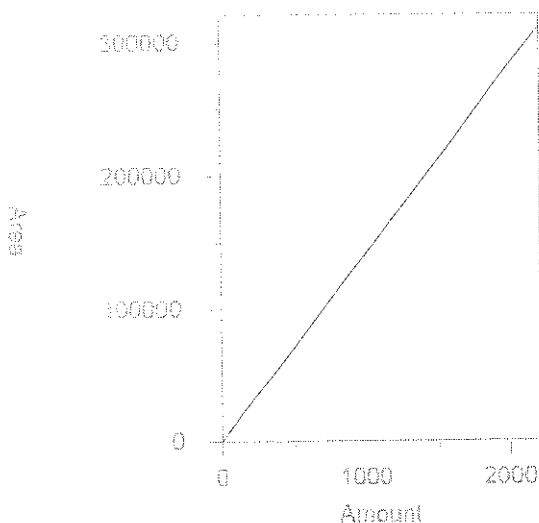
Single peak quantification by area

$$Y = 202.7578 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.994159
Average error: 5.617%
Average CF: 202.7578
RSD: 7.983%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25	5780.706	231.2282	14.042	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0009.BNI
2	100	19660.46	196.6046	-3.035	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0010.BNI
3	500	99873.61	199.7472	-1.485	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0011.BNI
4	1000	194538.7	194.5387	-4.054	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0012.BNI
5	2000	383340.2	191.6701	-5.468	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0013.BNI

2 Tetryl



Expected retention time: 8.342 minutes
Search window: 0.14 minutes
No internal standard component
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

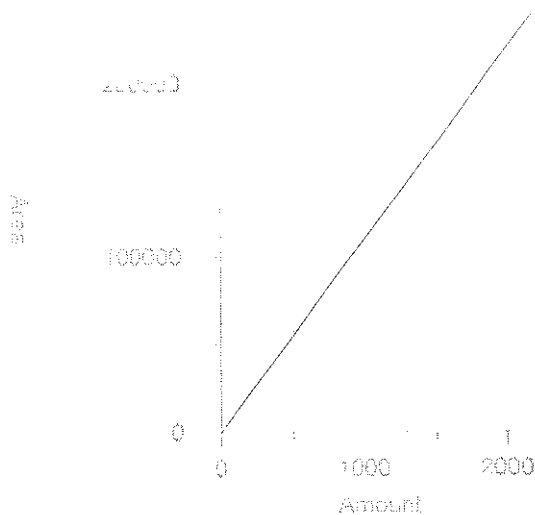
Single peak quantification by area

$$Y = 141.5316 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9975975
Average error: 5.068%
Average CF: 141.5316
RSD: 6.356%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25	3186.354	127.4542	-9.947	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0009.
2	100	13767.77	137.6777	-2.723	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0010.
3	500	74417.88	148.8358	5.161	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0011.
4	1000	147509.6	147.5096	4.224	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0012.
5	2000	292362	146.181	3.285	Manual

3 3,4-Dinitrotoluene



Expected retention time: 11.432 minutes
Search window: 0.242 minutes
No internal standard component
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

$$Y = 109.7723 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9985371
Average error: 4.440%
Average CF: 109.7723
RSD: 6.540%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	2797.115	110.9966	1.115	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0009.
2	100.8	9836.875	97.58804	-11.100	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0010.
3	504	57294.55	113.6797	3.560	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0014.
4	1008	117062.3	116.1332	5.795	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0012.
5	2016	222695.1	110.4638	0.630	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0013.

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329BCalibration File: 12E83B1629503BGC Column (2): CHROMPACK ID: 100 (mm)ICAL 12E83B1629501BICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	RT OF STANDARDS					MIDPOINT RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		FROM	TO
3,4-Dinitrotoluene			11.56			11.56	11.28	11.85

Retention time update only using file(s) 12E83B16295004B.0009.RAW analyzed on 11/9/2016 01:53

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: _____ Case No.: _____

SAS No.: _____

SDG No.: _____

Instrument: X6329BCalibration File: 12E83B1629503BGC Column (2): CHROMPACK ID: 100 (mm)ICAL Date(s) Analyzed: 11/9/2016 11/9/2016

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
3,4-Dinitrotoluene	8.80E+02	6.70E+02	8.31E+02	7.73E+02	8.13E+02	7.94E+02	10

Average % RSD: .10

File Name: V:\CP12\12e83B1629503b.CAL
Version: 2

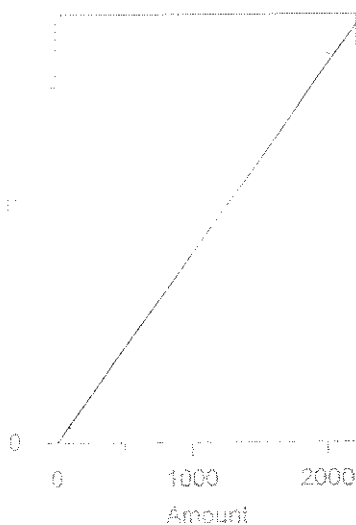
Creator:
Description:
Reason for change:

Internal standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 3,4-Dinitrotoluene



Expected retention time: 11.563 minutes
Search window: 0.286 minutes

No internal standard component
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

$$Y = 793.5834 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9986128
Average error: 7.236%
Average CF: 793.5834
RSD: 9.948%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	22181.26	880.2087	10.916	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0009.BN
2	100.8	67553.95	670.1781	-15.550	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0010.BN
3	504	418951.8	831.2536	4.747	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0011.BN
4	1008	779612	773.4246	-2.540	Manual
5	2016	1638710	812.8522	2.428	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0013.BN

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329ACalibration File: 12C83B1629504GC Column (3): CAPCELL CN ID: 250 (mm)ICAL 12C83B1629501ICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	RT OF STANDARDS					MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	RT	FROM	TO
1,3,5-Trinitrobenzene			30.19			30.19	29.99	30.39
3,4-Dinitrotoluene			32.59			32.59	32.41	32.77
Tetryl			34.39			34.39	34.29	34.49

applies to: 12C83B16295005.001 -7
old cal: 12C83B1629503
new cal: 12C83B1629504



NOV 21 2016

James H. Plazo
Senior Chemist

NOV 21 2016

Retention time update only using file(s) 12C83B16295005.0020.RAW analyzed on 11/18/2016 04:29

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329ACalibration File: 12C83B1629504GC Column (3): CAPCELL CN ID: 250 (mm)ICAL 12C83B1629501ICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
1,3,5-Trinitrobenzene	1.34E+02	1.72E+02	2.03E+02	2.09E+02	2.08E+02	1.85E+02	18
3,4-Dinitrotoluene	1.46E+02	1.32E+02	1.26E+02	1.20E+02	1.18E+02	1.28E+02	9
Tetryl	1.52E+02	1.55E+02	1.56E+02	1.54E+02	1.52E+02	1.54E+02	1

Average % RSD: 9

Handwritten signature
JANUARY 1, 2017
SUNNY CHANG

NOV 20 2016

Retention time update only using file(s) 12C83B16295005.0020.RAW analyzed on 11/18/2016 04:29

File Name: V:\CP12\12c83B1629504.CAL
Version: 3

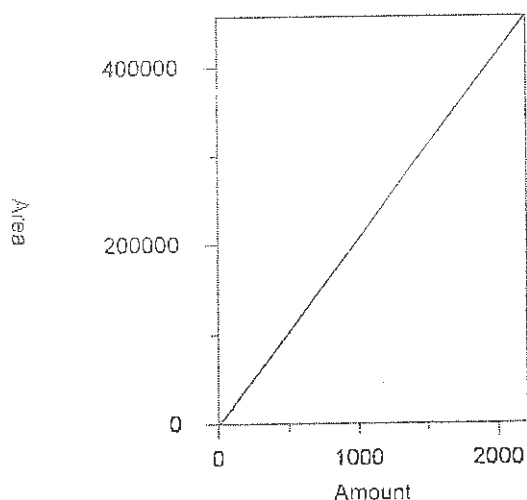
Creator:
Description:
Reason for change:

External standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 1,3,5-TNB



Expected retention time: 30.185 minutes
Search window: 0.2 minutes
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

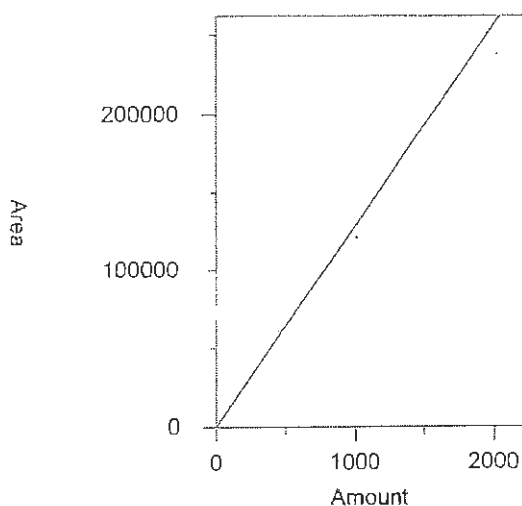
$$Y = 209.5954 X + -2628.346$$

Linear fit with equal weighting
Coefficient of determination: 0.9999409
Average error: 7.219%
Average CF: 185.0529
RSD: 17.525%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	25	3343	133.72	28.009	Manual	10/25/2016 7:15:31 PM
2	100	17203.9	172.039	-6.150	Manual	10/25/2016 7:15:33 PM
3	500	101332	202.664	-0.820	Manual	10/25/2016 7:15:34 PM
4	1000	208920.3	208.9203	0.944	Manual	10/25/2016 7:15:37 PM
5	2000	415842.4	207.9212	-0.173	Manual	10/25/2016 7:15:42 PM

2 3,4-Dinitrotoluene

Chrom Perfect Calibration File



Expected retention time: 32.589 minutes
Search window: 0.18 minutes
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

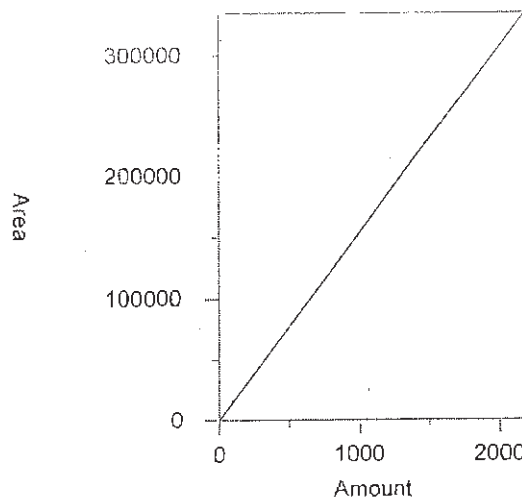
Single peak quantification by area

$$Y = 128.4892 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9861933
Average error: 6.539%
Average CF: 128.4892
RSD: 8.797%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	3689	146.3889	13.931	Manual
2	100.8	13264.82	131.5954	2.417	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.0010.
3	504	63535	126.0615	-1.889	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.0011.
4	1008	121278.8	120.3163	-6.361	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.0012.
5	2016	238057.3	118.084	-8.098	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.0013.

3 Tetra



Expected retention time: 34.393 minutes
Search window: 0.1 minutes
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

$$Y = 153.6194 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9998744
Average error: 0.819%
Average CF: 153.6194
RSD: 1.058%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	25	3796	151.84	-1.158	Manual	10/25/2016 7:15:54 PM
2	100	15454.38	154.5438	0.602	Manual	10/25/2016 7:15:56 PM
3	500	77919.69	155.8394	1.445	Manual	10/25/2016 7:15:57 PM
4	1000	153521.3	153.5213	-0.064	Manual	10/25/2016 7:15:59 PM
5	2000	304705.4	152.3527	-0.825	Manual	10/25/2016 7:16:08 PM

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329ACalibration File: 12E83B1629504GC Column (1): CHROMPACK ID: 100 (mm)ICAL Date(s) Analyzed: 11/18/2016 11/18/2016

COMPOUND	RT OF STANDARDS					MIDPOINT RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		FROM	TO
1,3,5-Trinitrobenzene			5.06			5.06	4.96	5.16
Tetryl			8.16			8.16	8.02	8.30
3,4-Dinitrotoluene			11.23			11.23	10.99	11.47

applies to: 12E83B16295005.0001-7

old cal: 12E83B1629503

New Cal: 12E83B1629504

By: *[Signature]* 2855 20 Nov 16

[Signature]
James H. Place
Senior Chemist

NOV 21 2016

Retention time update only using file(s) 12E83B16295005.0020.RAW analyzed on 11/18/2016 04:29:

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329ACalibration File: 12E83B1629504GC Column (1): CHROMPACK ID: 100 (mm)ICAL Date(s) Analyzed: 11/18/2016 11/18/2016

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
1,3,5-Trinitrobenzene	2.31E+02	1.97E+02	2.00E+02	1.95E+02	1.92E+02	2.03E+02	8
Tetryl	1.27E+02	1.38E+02	1.49E+02	1.48E+02	1.46E+02	1.42E+02	6
3,4-Dinitrotoluene	1.11E+02	9.76E+01	1.14E+02	1.16E+02	1.10E+02	1.10E+02	7

Average % RSD: 7

Retention time update only using file(s) 12E83B16295005.0020.RAW analyzed on 11/18/2016 04:29:

File Name: V:\CP12\12e83B1629504.CAL
Version: 3

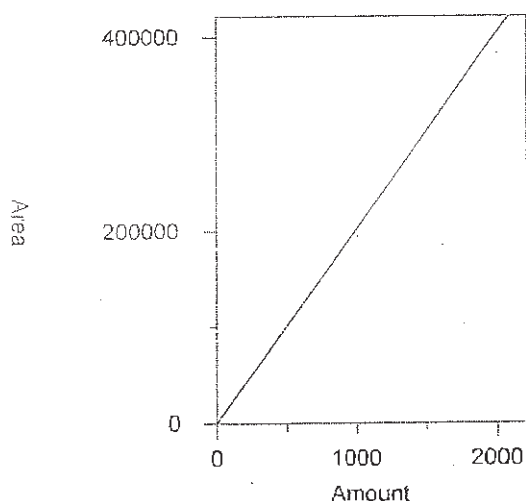
Creator:
Description:
Reason for change:

Internal standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 1,3,5-TNB



Expected retention time: 5.058 minutes
Search window: 0.1 minutes
No internal standard component
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

$$Y = 202.7578 X + 0$$

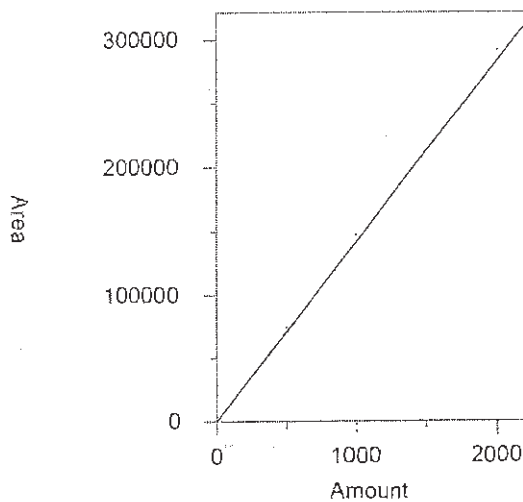
Average CF fit with equal weighting, forced to origin

Coefficient of determination: 0.994159
Average error: 5.617%
Average CF: 202.7578
RSD: 7.983%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25	5780.706	231.2282	14.042	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0009.BNI
2	100	19660.46	196.6046	-3.035	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0010.BNI
3	500	99873.61	199.7472	-1.485	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0011.BNI
4	1000	194538.7	194.5387	-4.054	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0012.BNI
5	2000	383340.2	191.6701	-5.468	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0013.BNI

2 Tetryl

Chrom Perfect Calibration File



Expected retention time: 8.164 minutes
 Search window: 0.14 minutes
 No internal standard component
 No retention time reference component
 No response proxy component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

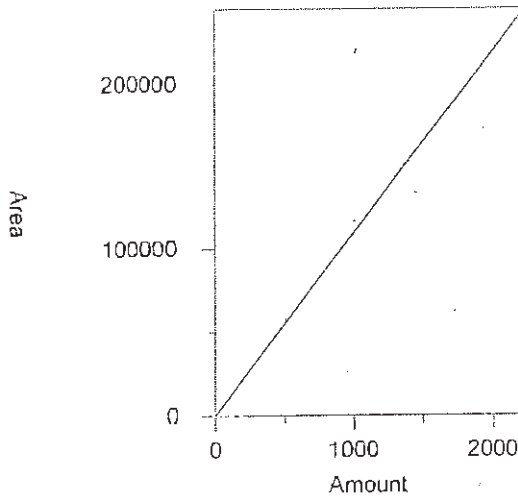
Single peak quantification by area

$$Y = 141.5316 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9975975
 Average error: 5.068%
 Average CF: 141.5316
 RSD: 6.356%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25	3186.354	127.4542	-9.947	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0009.
2	100	13767.77	137.6777	-2.723	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0010.
3	500	74417.88	148.8358	5.161	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0011.
4	1000	147509.6	147.5096	4.224	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0012.
5	2000	292362	146.181	3.285	Manual

3 3,4-Dinitrotoluene



Expected retention time: 11.228 minutes
 Search window: 0.242 minutes
 No internal standard component
 No retention time reference component
 No response proxy component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by area

$$Y = 109.7723 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9985371
 Average error: 4.440%
 Average CF: 109.7723
 RSD: 6.540%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	2797.115	110.9966	1.115	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0009.
2	100.8	9836.875	97.58804	-11.100	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0010.
3	504	57294.55	113.6797	3.560	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0011.
4	1008	117062.3	116.1332	5.795	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0012.
5	2016	222695.1	110.4638	0.630	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0013.

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329BCalibration File: 12E83B1629504BGC Column (2): CHROMPACK ID: 100 (mm)ICAL Date(s) Analyzed: 11/18/2016 11/18/2016

COMPOUND	RT OF STANDARDS					MIDPOINT RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		FROM	TO
3,4-Dinitrotoluene			11.35			11.35	11.06	11.64

Retention time update only using file(s) 12E83B16295005B.0020.RAW analyzed on 11/18/2016 04:2

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329BCalibration File: 12E83B1629504BGC Column (2): CHROMPACK ID: 100 (mm)ICAL Date(s) Analyzed: 11/18/2016 11/18/2016

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
3,4-Dinitrotoluene	8.80E+02	6.70E+02	8.31E+02	7.73E+02	8.13E+02	7.94E+02	10

Average % RSD: 10

Retention time update only using file(s) 12E83B16295005B.0020.RAW analyzed on 11/18/2016 04:2

Chrom Perfect Calibration File

File Name: V:\CP12\12e83B1629504b.CAL
Version: 2

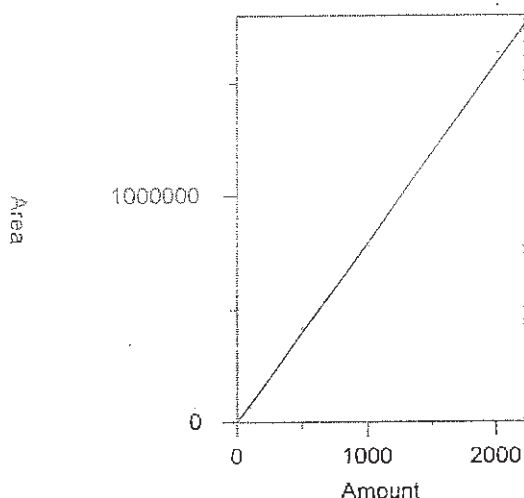
Creator:
Description:
Reason for change:

Internal standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount, units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 3,4-Dinitrotoluene



Expected retention time: 11.35 minutes
Search window: 0.286 minutes
No internal standard component
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

$$Y = 793.5834 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9986128
Average error: 7.236%
Average CF: 793.5834
RSD: 9.948%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	22181.26	880.2087	10.916	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0009.BT
2	100.8	67553.95	670.1781	-15.550	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0010.BT
3	504	418951.8	831.2536	4.747	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0011.BT
4	1008	779612	773.4246	-2.540	Manual
5	2016	1638710	812.8522	2.428	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0013.BT

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329ACalibration File: 12C83B1629505GC Column (3): CAPCELL CN ID: 250 (mm)ICAL Date(s) Analyzed: 11/29/2016 11/29/2016


COMPOUND	RT OF STANDARDS					MIDPOINT RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		FROM	TO
1,3,5-Trinitrobenzene			30.16			30.16	29.96	30.36
3,4-Dinitrotoluene			32.53			32.53	32.35	32.71
Tetryl			34.37			34.37	34.27	34.47

applies to: 12C83B1629506.0006 - ③
12C83B1629506.0001 - 7

old cal: 12C83B1629504
New cal: 12C83B1629505

By:  ③
James H. Place
Senior Chemist

NOV 30 2016


James H. Place
Senior Chemist

NOV 30 2016

Retention time update only using file(s) 12C83B16295006.0006.RAW analyzed on 11/29/2016 20:07

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329ACalibration File: 12C83B1629505GC Column (3): CAPCELL CN ID: 250 (mm)ICAL Date(s) Analyzed: 11/29/2016 11/29/2016

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
1,3,5-Trinitrobenzene	1.34E+02	1.72E+02	2.03E+02	2.09E+02	2.08E+02	1.85E+02	18
3,4-Dinitrotoluene	1.46E+02	1.32E+02	1.26E+02	1.20E+02	1.18E+02	1.28E+02	9
Tetryl	1.52E+02	1.55E+02	1.56E+02	1.54E+02	1.52E+02	1.54E+02	1

Average % RSD: 9

File Name: V:\CP12\12c83B1629505.CAL
Version: 5

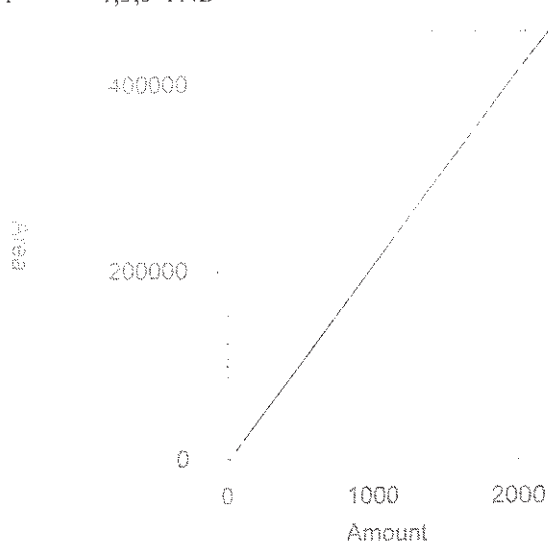
Creator:
Description:
Reason for change:

External standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 1,3,5-TNB



Expected retention time: 30.158 minutes
Search window: 0.2 minutes
No retention time reference component
No response proxy component
Group number: 0

High alarm limit: 0
Low alarm limit: 0
Component constant: 0

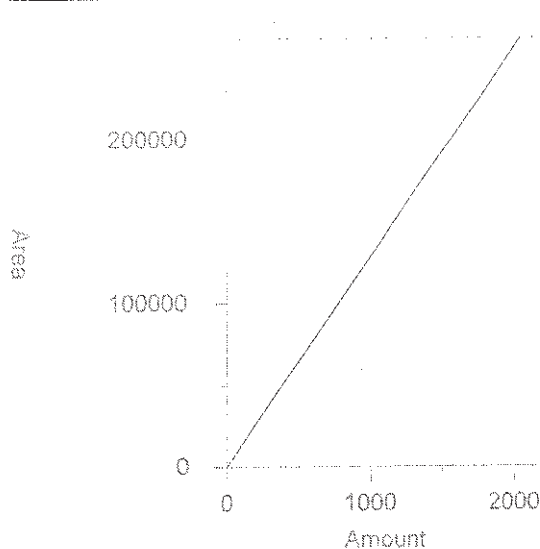
Single peak quantification by area

$$Y = 209.5954 X + -2628.346$$

Linear fit with equal weighting
Coefficient of determination: 0.9999409
Average error: 7.219%
Average CF: 185.0529
RSD: 17.525%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	25	3343	133.72	28.009	Manual	10/25/2016 7:15:31 PM
2	100	17203.9	172.039	-6.150	Manual	10/25/2016 7:15:33 PM
3	500	101332	202.664	-0.820	Manual	10/25/2016 7:15:34 PM
4	1000	208920.3	208.9203	0.944	Manual	10/25/2016 7:15:37 PM
5	2000	415842.4	207.9212	-0.173	Manual	10/25/2016 7:15:42 PM

2 3,4-Dinitrotoluene



Expected retention time: 32.534 minutes
 Search window: 0.18 minutes
 No retention time reference component
 No response proxy component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

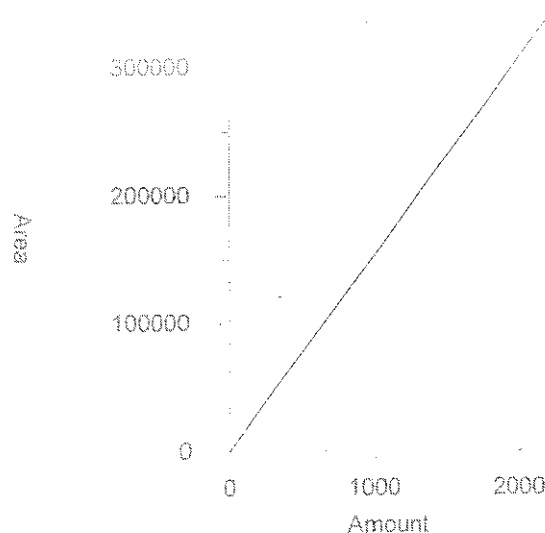
Single peak quantification by area

$$Y = 128.4892 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9861933
 Average error: 6.539%
 Average CF: 128.4892
 RSD: 8.797%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	3689	146.3889	13.931	Manual
2	100.8	13264.82	131.5954	2.417	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.0010.
3	504	63535	126.0615	-1.889	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.0011
4	1008	121278.8	120.3163	-6.361	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.0012
5	2016	238057.3	118.084	-8.098	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12C83B16295001.0013

3 Tetra



Expected retention time: 34.374 minutes
 Search window: 0.1 minutes
 No retention time reference component
 No response proxy component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by area

$$Y = 153.6194 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9998744
 Average error: 0.819%
 Average CF: 153.6194
 RSD: 1.058%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	25	3796	151.84	-1.158	Manual	10/25/2016 7:15:54 PM
2	100	15454.38	154.5438	0.602	Manual	10/25/2016 7:15:56 PM
3	500	77919.69	155.8394	1.445	Manual	10/25/2016 7:15:57 PM
4	1000	153521.3	153.5213	-0.064	Manual	10/25/2016 7:15:59 PM
5	2000	304705.4	152.3527	-0.825	Manual	10/25/2016 7:16:08 PM

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329ACalibration File: 12E83B1629505GC Column (1): CHROMPACK ID: 100 (mm)ICAL 12E83B1629501ICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	RT OF STANDARDS					MIDPOINT RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		FROM	TO
1,3,5-Trinitrobenzene			4.81			4.81	4.71	4.91
Tetryl			7.71			7.71	7.57	7.85
3,4-Dinitrotoluene			10.60			10.60	10.36	10.84

applies to: 12E83B16295006.0001 - 7
 old cal: 12E83B1629504
 New cal: ~~12E83B1629503~~ ③
 12E83B1629505

By:  ③
 James H. Place
 Senior Chemist

NOV 30 2016


 James H. Place
 Senior Chemist

NOV 30 2016

Retention time update only using file(s) 12E83B16295006.0006.RAW analyzed on 11/29/2016 20:07:

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329ACalibration File: 12E83B1629505GC Column (1): CHROMPACK ID: 100 (mm)ICAL 12E83B1629501ICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
1,3,5-Trinitrobenzene	2.31E+02	1.97E+02	2.00E+02	1.95E+02	1.92E+02	2.03E+02	8
Tetryl	1.27E+02	1.38E+02	1.49E+02	1.48E+02	1.46E+02	1.42E+02	6
3,4-Dinitrotoluene	1.11E+02	9.76E+01	1.14E+02	1.16E+02	1.10E+02	1.10E+02	7

Average % RSD: 7

File Name: V:\CP12\12e83B1629505.CAL
Version: 4

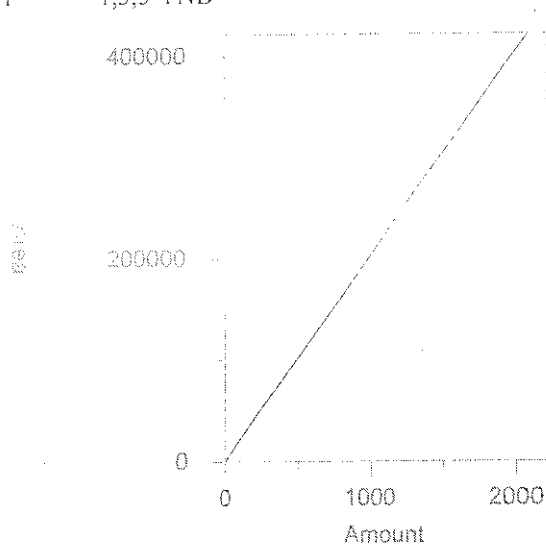
Creator:
Description:
Reason for change:

Internal standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 1,3,5-TNB



Expected retention time: 4.812 minutes
Search window: 0.1 minutes
No internal standard component
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

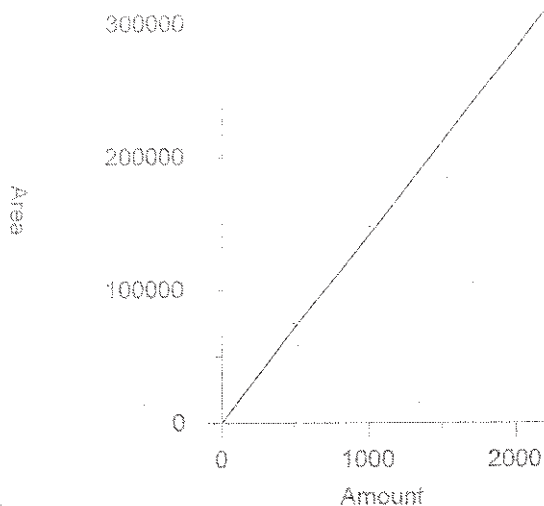
$$Y = 202.7578 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.994159
Average error: 5.617%
Average CF: 202.7578
RSD: 7.983%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25	5780.706	231.2282	14.042	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0009.BNI
2	100	19660.46	196.6046	-3.035	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0010.BNI
3	500	99873.61	199.7472	-1.485	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0011.BNI
4	1000	194538.7	194.5387	-4.054	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0012.BNI
5	2000	383340.2	191.6701	-5.468	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0013.BNI

2 Tetryl

Chrom Perfect Calibration File



Expected retention time: 7.706 minutes
Search window: 0.14 minutes

No internal standard component
No retention time reference component
No response proxy component

Group number: 0

High alarm limit: 0

Low alarm limit: 0

Component constant: 0

Single peak quantification by area

$$Y = 141.5316 X + 0$$

Average CF fit with equal weighting, forced to origin

Coefficient of determination: 0.9975975

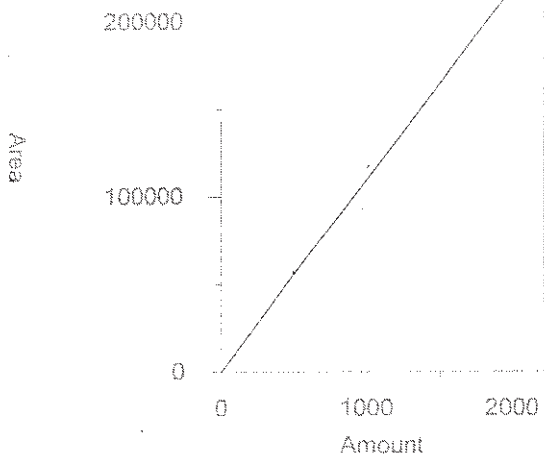
Average error: 5.068%

Average CF: 141.5316

RSD: 6.356%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25	3186.354	127.4542	-9.947	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0009
2	100	13767.77	137.6777	-2.723	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0010
3	500	74417.88	148.8358	5.161	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0011
4	1000	147509.6	147.5096	4.224	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0012
5	2000	292362	146.181	3.285	Manual

3,4-Dinitrotoluene



Expected retention time: 10.6 minutes
Search window: 0.242 minutes

No internal standard component
No retention time reference component
No response proxy component

Group number: 0

High alarm limit: 0

Low alarm limit: 0

Component constant: 0

Single peak quantification by area

$$Y = 109.7723 X + 0$$

Average CF fit with equal weighting, forced to origin

Coefficient of determination: 0.9985371

Average error: 4.440%

Average CF: 109.7723

RSD: 6.540%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	2797.115	110.9966	1.115	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0009
2	100.8	9836.875	97.58804	-11.100	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0010
3	504	57294.55	113.6797	3.560	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0011
4	1008	117062.3	116.1332	5.795	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0012
5	2016	222695.1	110.4638	0.630	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001.0013

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329BCalibration File: 12E83B1629505BGC Column (2) : CHROMPACK ID: 100 (mm)ICAL 12E83B1629501BICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	RT OF STANDARDS					MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	RT	FROM	TO
3,4-Dinitrotoluene			10.72			10.72	10.44	11.01

Retention time update only using file(s) 12E83B16295006B.0006.RAW analyzed on 11/29/2016 20:0

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329BCalibration File: 12E83B1629505BGC Column (2) : CHROMPACK ID: 100 (mm)ICAL 12E83B1629501BICAL Date(s) Analyzed: 10/23/2016 10/23/2016

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
3,4-Dinitrotoluene	8.80E+02	6.70E+02	8.31E+02	7.73E+02	8.13E+02	7.94E+02	10

Average % RSD: 10

File Name: V:\CP12\12e83B1629505b.CAL
Version: 3

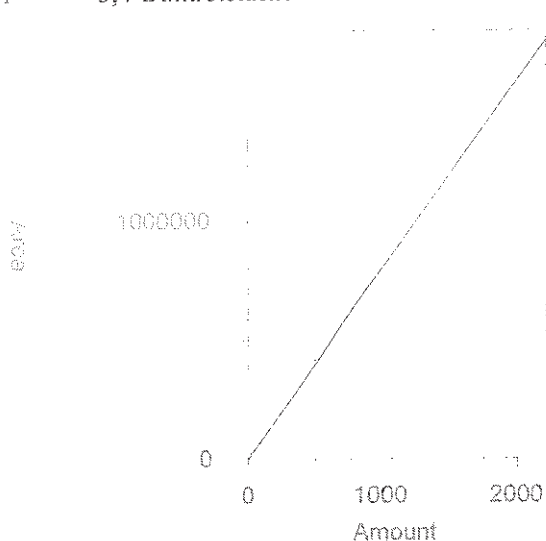
Creator:
Description:
Reason for change:

Internal standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 0
Reference peak area reject threshold: 500
Amount units: ug/L
No default component

Method of calculating data point averages: Equal weight for all updates
Print calibration update report

All levels are normal data points.

1 3,4-Dinitrotoluene



Expected retention time: 10.723 minutes
Search window: 0.286 minutes
No internal standard component
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by area

$$Y = 793.5834 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9986128
Average error: 7.236%
Average CF: 793.5834
RSD: 9.948%

Level	Amount	Response	Cal Factor	Error, %	Source
1	25.2	22181.26	880.2087	10.916	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0009.B>
2	100.8	67553.95	670.1781	-15.550	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0010.B>
3	504	418951.8	831.2536	4.747	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0011.B>
4	1008	779612	773.4246	-2.540	Manual
5	2016	1638710	812.8522	2.428	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\12E83B16295001B.0013.B>

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329A

Date Analyzed: 10/23/16

GC Column (3): CAPCELL CN ID: 250 (mm)

Time Analyzed: 23:44

Lab File ID: 12C83B16295001.0015.RAW

Initial Calibration: 12C83B1629501

Lab Standard ID: IC83XAA

Init. Calib Date(s): 10/23/16

10/23/16

Calibration: 12C83B1629501

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	29.86	30.26	30.66	499.71	501.00	0
3,4-Dinitrotoluene	32.45	32.14	32.50	487.71	504.00	-3
Tetryl	34.34	34.21	34.41	465.16	502.00	-7

Compounds 3

Average of %D: 3

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:
Lab Code: Case No.: SAS No.: SDG No.:
Instrument: X6329A Date Analyzed: 10/23/16
GC Column (1): CHROMPACK ID: 100 (mm) Time Analyzed: 23:44
Lab File ID: 12E83B16295001.0015.RAW Initial Calibration: 12E83B1629501
Lab Standard ID: IC83XAA Init. Calib Date(s): 10/23/16 10/23/16
Calibration: 12E83B1629501

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	5.33	5.13	5.33	495.75	501.00	-1
Tetryl	8.72	8.37	8.65	494.27	502.00	-2
3,4-Dinitrotoluene	11.81	11.55	12.03	420.21	504.00	-17

Compounds 3 Average of %D: 7

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329B

Date Analyzed: 10/23/16

GC Column (2): CHROMPACK ID: 100 (mm)

Time Analyzed: 23:44

Lab File ID: 12E83B16295001B.0015.RAW

Initial Calibration: 12E83B1629501B

Lab Standard ID: IC83XAA

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629501B

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
3,4-Dinitrotoluene	11.94	11.60	12.17	520.15	504.00	3

Compounds 1

Average of %D: 3

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329A

Date Analyzed: 11/01/16

GC Column (3): CAPCELL CN ID: 250 (mm)

Time Analyzed: 23:50

Lab File ID: 12C83B16295003.0007.RAW

Initial Calibration: 12C83B1629501

Lab Standard ID: 83303NT

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12C83B1629502

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	29.75	29.58	29.98	559.99	500.00	12
3,4-Dinitrotoluene	32.43	32.23	32.59	503.17	504.00	0
Tetryl	34.31	34.22	34.42	593.82	500.00	19

Compounds 3

Average of %D: 10

Retention time update only using file(s) 12C83B16295002.0009.RAW analyzed on 10/24/2016 22:19

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329A

Date Analyzed: 11/02/16

GC Column (3): CAPCELL CN ID: 250 (mm)

Time Analyzed: 3:22

Lab File ID: 12C83B16295003.0012.RAW

Initial Calibration: 12C83B1629501

Lab Standard ID: 83303NU

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12C83B1629502

COMPOUND	RT	RT WINDOW FROM TO	CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	29.72	29.58 29.98	551.80	500.00	10
3,4-Dinitrotoluene	32.45	32.23 32.59	496.77	504.00	-1
Tetryl	34.32	34.22 34.42	583.91	500.00	17

Compounds 3

Average of %D: 9

Retention time update only using file(s) 12C83B16295002.0009.RAW analyzed on 10/24/2016 22:19

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329A

Date Analyzed: 11/01/16

GC Column (1): CHROMPACK ID: 100 (mm)

Time Analyzed: 23:50

Lab File ID: 12E83B16295003.0007.RAW

Initial Calibration: 12E83B1629501

Lab Standard ID: 83303NT

Init. Calib Date(s): 10/23/16

10/23/16

Calibration: 12E83B1629502

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	5.28	5.23	5.43	502.67	500.00	1
Tetryl	8.59	8.58	8.86	511.54	500.00	2
3,4-Dinitrotoluene	11.68	11.58	12.06	492.18	504.00	-2
Compounds 3					Average of %D:	2

Retention time update only using file(s) 12E83B16295002.0009.RAW analyzed on 10/24/2016 22:19

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329B

Date Analyzed: 11/01/16

GC Column (2): CHROMPACK ID: 100 (mm)

Time Analyzed: 23:50

Lab File ID: 12E83B16295003B.0007.RAW

Initial Calibration: 12E83B1629501B

Lab Standard ID: 83303NT

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629502B

COMPOUND	RT	RT WINDOW FROM TO	CALC AMOUNT	NOM AMOUNT	%D
3,4-Dinitrotoluene	11.82	11.66 12.23	443.50	504.00	-12

Compounds 1

Average of %D: 12

Retention time update only using file(s) 12E83B16295002B.0009.RAW analyzed on 10/24/2016 22:1

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329A

Date Analyzed: 11/02/16

GC Column (1): CHROMPACK ID: 100 (mm)

Time Analyzed: 3:22

Lab File ID: 12E83B16295003.0012.RAW

Initial Calibration: 12E83B1629501

Lab Standard ID: 83303NU

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629502

COMPOUND	RT	RT WINDOW FROM TO	CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	5.29	5.23 5.43	487.68	500.00	-2
Tetryl	8.60	8.58 8.86	507.00	500.00	1
3,4-Dinitrotoluene	11.70	11.58 12.06	496.37	504.00	-2

Compounds 3.

Average of %D: 2

Retention time update only using file(s) 12E83B16295002.0009.RAW analyzed on 10/24/2016 22:19

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329B

Date Analyzed: 11/02/16

GC Column (2): CHROMPACK ID: 100 (mm)

Time Analyzed: 3:22

Lab File ID: 12E83B16295003B.0012.RAW

Initial Calibration: 12E83B1629501B

Lab Standard ID: 83303NU

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629502B

COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
3,4-Dinitrotoluene	11.84	11.66	12.23	445.87	504.00	-12

Compounds 1

Average of %D: 12

Retention time update only using file(s) 12E83B16295002B.0009.RAW analyzed on 10/24/2016 22:1

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329A

Date Analyzed: 11/17/16

GC Column (3) : CAPCELL CN ID: 250 (mm)

Time Analyzed: 20:43

Lab File ID: 12C83B16295005.0009.RAW

Initial Calibration: 12C83B1629501

Lab Standard ID: 83303OJ

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12C83B1629504

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	30.05	29.99	30.39	463.71	500.00	-7
3,4-Dinitrotoluene	32.54	32.41	32.77	503.58	504.00	0
Tetryl	34.37	34.29	34.49	528.70	500.00	6

Compounds 3

Average of %D: 4

Retention time update only using file(s) 12C83B16295005.0020.RAW analyzed on 11/18/2016 04:29

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329A

Date Analyzed: 11/18/16

GC Column (3): CAPCELL CN ID: 250 (mm)

Time Analyzed: 4:29

Lab File ID: 12C83B16295005.0020.RAW

Initial Calibration: 12C83B1629501

Lab Standard ID: 83303OL

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12C83B1629504

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	30.18	29.99	30.39	446.88	500.00	-11
3,4-Dinitrotoluene	32.59	32.41	32.77	485.29	504.00	-4
Tetryl	34.39	34.29	34.49	536.44	500.00	7

Compounds 3

Average of %D: 7

Retention time update only using file(s) 12C83B16295005.0020.RAW analyzed on 11/18/2016 04:29

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329A

Date Analyzed: 11/18/16

GC Column (3) : CAPCELL CN ID: 250 (mm)

Time Analyzed: 10:51

Lab File ID: 12C83B16295005.0029.RAW

Initial Calibration: 12C83B1629501

Lab Standard ID: 83303OK

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12C83B1629504

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	30.22	29.99	30.39	474.14	500.00	-5
3,4-Dinitrotoluene	32.58	32.41	32.77	475.07	504.00	-6
Tetryl	34.40	34.29	34.49	512.45	500.00	2

Compounds 3

Average of %D: 4

Retention time update only using file(s) 12C83B16295005.0020.RAW analyzed on 11/18/2016 04:29

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329A

Date Analyzed: 11/17/16

GC Column (1): CHROMPACK ID: 100 (mm)

Time Analyzed: 20:43

Lab File ID: 12E83B16295005.0009.RAW

Initial Calibration: 12E83B1629501

Lab Standard ID: 83303OJ

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629504

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	5.07	4.96	5.16	479.63	500.00	-4
Tetryl	8.17	8.02	8.30	520.19	500.00	4
3,4-Dinitrotoluene	11.23	10.99	11.47	515.09	504.00	2

Compounds 3

Average of %D: 3

Retention time update only using file(s) 12E83B16295005.0020.RAW analyzed on 11/18/2016 04:29

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329B

Date Analyzed: 11/17/16

GC Column (2): CHROMPACK ID: 100 (mm)

Time Analyzed: 20:43

Lab File ID: 12E83B16295005B.0009.RAW

Initial Calibration: 12E83B1629501B

Lab Standard ID: 83303OJ

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629504B

COMPOUND	RT	RT WINDOW FROM TO	CALC AMOUNT	NOM AMOUNT	%D
3,4-Dinitrotoluene	11.36	11.06 11.64	537.08	504.00	7

Compounds 1

Average of %D: 7

Retention time update only using file(s) 12E83B16295005B.0020.RAW analyzed on 11/18/2016 04:2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329A

Date Analyzed: 11/18/16

GC Column (1): CHROMPACK ID: 100 (mm)

Time Analyzed: 4:29

Lab File ID: 12E83B16295005.0020.RAW

Initial Calibration: 12E83B1629501

Lab Standard ID: 83303OL

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629504

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	5.06	4.96	5.16	490.98	500.00	-2
Tetryl	8.16	8.02	8.30	508.76	500.00	2
3,4-Dinitrotoluene	11.23	10.99	11.47	516.93	504.00	3
Compounds 3	Average of %D:					2

Retention time update only using file(s) 12E83B16295005.0020.RAW analyzed on 11/18/2016 04:29

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329B

Date Analyzed: 11/18/16

GC Column (2): CHROMPACK ID: 100 (mm)

Time Analyzed: 4:29

Lab File ID: 12E83B16295005B.0020.RAW

Initial Calibration: 12E83B1629501B

Lab Standard ID: 83303OL

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629504B

COMPOUND	RT	RT WINDOW FROM TO	CALC AMOUNT	NOM AMOUNT	%D
3,4-Dinitrotoluene	11.35	11.06 11.64	544.21	504.00	8

Compounds 1

Average of %D: 8

Retention time update only using file(s) 12E83B16295005B.0020.RAW analyzed on 11/18/2016 04:2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329A

Date Analyzed: 11/18/16

GC Column (1): CHROMPACK ID: 100 (mm)

Time Analyzed: 10:51

Lab File ID: 12E83B16295005.0029.RAW

Initial Calibration: 12E83B1629501

Lab Standard ID: 83303OK

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629504

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	5.03	4.96	5.16	483.50	500.00	-3
Tetryl	8.14	8.02	8.30	509.40	500.00	2
3,4-Dinitrotoluene	11.20	10.99	11.47	512.55	504.00	2
Compounds 3	Average of %D:					2

Retention time update only using file(s) 12E83B16295005.0020.RAW analyzed on 11/18/2016 04:29

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329B

Date Analyzed: 11/18/16

GC Column (2): CHROMPACK ID: 100 (mm)

Time Analyzed: 10:51

Lab File ID: 12E83B16295005B.0029.RAW

Initial Calibration: 12E83B1629501B

Lab Standard ID: 83303OK

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629504B

COMPOUND	RT	RT WINDOW FROM TO	CALC AMOUNT	NOM AMOUNT	%D
3,4-Dinitrotoluene	11.34	11.06 11.64	535.24	504.00	6

Compounds 1

Average of %D: 6

Retention time update only using file(s) 12E83B16295005B.0020.RAW analyzed on 11/18/2016 04:2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329A

Date Analyzed: 11/17/16

GC Column (1): CHROMPACK ID: 100 (mm)

Time Analyzed: 20:43

Lab File ID: 12E83B16295005.0009.RAW

Initial Calibration: 12E83B1629501

Lab Standard ID: 83303OJ

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629504

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	5.07	4.96	5.16	479.63	500.00	-4
Tetryl	8.17	8.02	8.30	520.19	500.00	4
3,4-Dinitrotoluene	11.23	10.99	11.47	515.09	504.00	2

Compounds 3

Average of %D: 3

Retention time update only using file(s) 12E83B16295005.0020.RAW analyzed on 11/18/2016 04:29

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329B

Date Analyzed: 11/17/16

GC Column (2): CHROMPACK ID: 100 (mm)

Time Analyzed: 20:43

Lab File ID: 12E83B16295005B.0009.RAW

Initial Calibration: 12E83B1629501B

Lab Standard ID: 83303OJ

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629504B

COMPOUND	RT	RT WINDOW FROM TO	CALC AMOUNT	NOM AMOUNT	%D
3,4-Dinitrotoluene	11.36	11.06 11.64	537.08	504.00	7

Compounds 1

Average of %D: 7

Retention time update only using file(s) 12E83B16295005B.0020.RAW analyzed on 11/18/2016 04:2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329A

Date Analyzed: 11/18/16

GC Column (1): CHROMPACK ID: 100 (mm)

Time Analyzed: 4:29

Lab File ID: 12E83B16295005.0020.RAW

Initial Calibration: 12E83B1629501

Lab Standard ID: 83303OL

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629504

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	5.06	4.96	5.16	490.98	500.00	-2
Tetryl	8.16	8.02	8.30	508.76	500.00	2
3,4-Dinitrotoluene	11.23	10.99	11.47	516.93	504.00	3
Compounds 3					Average of %D:	2

Retention time update only using file(s) 12E83B16295005.0020.RAW analyzed on 11/18/2016 04:29

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329B

Date Analyzed: 11/18/16

GC Column (2): CHROMPACK ID: 100 (mm)

Time Analyzed: 4:29

Lab File ID: 12E83B16295005B.0020.RAW

Initial Calibration: 12E83B1629501B

Lab Standard ID: 83303OL

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629504B

COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
3,4-Dinitrotoluene	11.35	11.06	11.64	544.21	504.00	8

Compounds 1

Average of %D: 8

Retention time update only using file(s) 12E83B16295005B.0020.RAW analyzed on 11/18/2016 04:2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329A

Date Analyzed: 11/18/16

GC Column (1): CHROMPACK ID: 100 (mm)

Time Analyzed: 10:51

Lab File ID: 12E83B16295005.0029.RAW

Initial Calibration: 12E83B1629501

Lab Standard ID: 83303OK

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629504

COMPOUND	RT	RT WINDOW FROM TO	CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	5.03	4.96 5.16	483.50	500.00	-3
Tetryl	8.14	8.02 8.30	509.40	500.00	2
3,4-Dinitrotoluene	11.20	10.99 11.47	512.55	504.00	2
Compounds 3				Average of %D:	2

Retention time update only using file(s) 12E83B16295005.0020.RAW analyzed on 11/18/2016 04:29

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329B

Date Analyzed: 11/18/16

GC Column (2): CHROMPACK ID: 100 (mm)

Time Analyzed: 10:51

Lab File ID: 12E83B16295005B.0029.RAW

Initial Calibration: 12E83B1629501B

Lab Standard ID: 83303OK

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629504B

COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
3,4-Dinitrotoluene	11.34	11.06	11.64	535.24	504.00	6

Compounds 1

Average of %D: 6

Retention time update only using file(s) 12E83B16295005B.0020.RAW analyzed on 11/18/2016 04:2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329A

Date Analyzed: 11/17/16

GC Column (3): CAPCELL CN ID: 250 (mm)

Time Analyzed: 20:43

Lab File ID: 12C83B16295005.0009.RAW

Initial Calibration: 12C83B1629501

Lab Standard ID: 83303OJ

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12C83B1629504

COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
1,3,5-Trinitrobenzene	30.05	29.99	30.39	463.71	500.00	-7
3,4-Dinitrotoluene	32.54	32.41	32.77	503.58	504.00	0
Tetryl	34.37	34.29	34.49	528.70	500.00	6

Compounds 3

Average of %D: 4

Retention time update only using file(s) 12C83B16295005.0020.RAW analyzed on 11/18/2016 04:29

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329A

Date Analyzed: 11/18/16

GC Column (3) : CAPCELL CN ID: 250 (mm)

Time Analyzed: 4:29

Lab File ID: 12C83B16295005.0020.RAW

Initial Calibration: 12C83B1629501

Lab Standard ID: 83303OL

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12C83B1629504

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	30.18	29.99	30.39	446.88	500.00	-11
3,4-Dinitrotoluene	32.59	32.41	32.77	485.29	504.00	-4
Tetryl	34.39	34.29	34.49	536.44	500.00	7

Average of %D: 7

Compounds 3

Retention time update only using file(s) 12C83B16295005.0020.RAW analyzed on 11/18/2016 04:29

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329A

Date Analyzed: 11/18/16

GC Column (3): CAPCELL CN ID: 250 (mm)

Time Analyzed: 10:51

Lab File ID: 12C83B16295005.0029.RAW

Initial Calibration: 12C83B1629501

Lab Standard ID: 83303OK

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12C83B1629504

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	30.22	29.99	30.39	474.14	500.00	-5
3,4-Dinitrotoluene	32.58	32.41	32.77	475.07	504.00	-6
Tetryl	34.40	34.29	34.49	512.45	500.00	2

Compounds 3

Average of %D: 4

Retention time update only using file(s) 12C83B16295005.0020.RAW analyzed on 11/18/2016 04:29

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329A

Date Analyzed: 11/29/16

GC Column (3): CAPCELL CN ID: 250 (mm)

Time Analyzed: 20:07

Lab File ID: 12C83B16295006.0006.RAW

Initial Calibration: 12C83B1629501

Lab Standard ID: 83303OM

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12C83B1629505

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	30.16	29.96	30.36	342.18	500.00	-32
3,4-Dinitrotoluene	32.53	32.35	32.71	436.40	504.00	-13
Tetryl	34.37	34.27	34.47	537.93	500.00	8

Compounds 3

Average of %D: 18

Retention time update only using file(s) 12C83B16295006.0006.RAW analyzed on 11/29/2016 20:07

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329A

Date Analyzed: 11/30/16

GC Column (3): CAPCELL CN ID: 250 (mm)

Time Analyzed: 3:53

Lab File ID: 12C83B16295006.0017.RAW

Initial Calibration: 12C83B1629501

Lab Standard ID: 83303ON

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12C83B1629505

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	30.69	29.96	30.36	336.30	500.00	-33
3,4-Dinitrotoluene	32.09	32.35	32.71	1630.69	504.00	224
Tetryl	33.71	34.27	34.47	395.60	500.00	-21

Compounds 3

Average of %D: 93

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: Y6329A

Date Analyzed: 11/30/16

GC Column (3): CAPCELL CN ID: 250 (mm)

Time Analyzed: 6:43

Lab File ID: 12C83B16295006.0021.RAW

Initial Calibration: 12C83B1629501

Lab Standard ID: 83303OO

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12C83B1629505

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	30.13	29.96	30.36	399.73	500.00	-20
3,4-Dinitrotoluene	32.60	32.35	32.71	409.69	504.00	-19
Tetryl	34.39	34.27	34.47	424.22	500.00	-15

Compounds 3

Average of %D: 18

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329A

Date Analyzed: 11/29/16

GC Column (1): CHROMPACK ID: 100 (mm)

Time Analyzed: 20:07

Lab File ID: 12E83B16295006.0006.RAW

Initial Calibration: 12E83B1629501

Lab Standard ID: 83303OM

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629505

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	4.81	4.82	5.02	476.33	500.00	-5
Tetryl	7.71	7.73	8.01	517.65	500.00	4
3,4-Dinitrotoluene	10.60	10.66	11.14	525.03	504.00	4

Compounds 3

Average of %D: 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329B

Date Analyzed: 11/29/16

GC Column (2): CHROMPACK ID: 100 (mm)

Time Analyzed: 20:07

Lab File ID: 12E83B16295006B.0006.RAW

Initial Calibration: 12E83B1629501B

Lab Standard ID: 83303OM

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629505B

COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
3,4-Dinitrotoluene	10.72	10.74	11.32	552.01	504.00	10

Compounds 1

Average of %D: 10

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329A

Date Analyzed: 11/30/16

GC Column (1): CHROMPACK ID: 100 (mm)

Time Analyzed: 3:53

Lab File ID: 12E83B16295006.0017.RAW

Initial Calibration: 12E83B1629501

Lab Standard ID: 83303ON

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629505

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	4.78	4.82	5.02	486.61	500.00	-3
Tetryl	7.67	7.73	8.01	508.62	500.00	2
3,4-Dinitrotoluene	10.57	10.66	11.14	511.12	504.00	1

Compounds 3

Average of %D: 2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329B

Date Analyzed: 11/30/16

GC Column (2) : CHROMPACK ID: 100 (mm)

Time Analyzed: 3:53

Lab File ID: 12E83B16295006B.0017.RAW

Initial Calibration: 12E83B1629501B

Lab Standard ID: 83303ON

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629505B

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
3,4-Dinitrotoluene	10.69	10.74	11.32	544.87	504.00	8
Compounds 1						Average of %D: 8

Retention time update only using file(s) 12E83B16295006B.0006.RAW analyzed on 11/29/2016 20:0

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329A

Date Analyzed: 11/30/16

GC Column (1): CHROMPACK ID: 100 (mm)

Time Analyzed: 6:43

Lab File ID: 12E83B16295006.0021.RAW

Initial Calibration: 12E83B1629501

Lab Standard ID: 83303OO

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629505

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
1,3,5-Trinitrobenzene	4.87	4.82	5.02	481.22	500.00	-4
Tetryl	7.81	7.73	8.01	506.82	500.00	1
3,4-Dinitrotoluene	10.76	10.66	11.14	513.73	504.00	2
Compounds 3	Average of %D:					2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: X6329B

Date Analyzed: 11/30/16

GC Column (2): CHROMPACK ID: 100 (mm)

Time Analyzed: 6:43

Lab File ID: 12E83B16295006B.0021.RAW

Initial Calibration: 12E83B1629501B

Lab Standard ID: 83303OO

Init. Calib Date(s): 10/23/16 10/23/16

Calibration: 12E83B1629505B

COMPOUND	RT	RT WINDOW FROM TO	CALC AMOUNT	NOM AMOUNT	%D
3,4-Dinitrotoluene	10.89	10.74 11.32	536.72	504.00	6

Compounds 1

Average of %D: 6

Retention time update only using file(s) 12E83B16295006B.0006.RAW analyzed on 11/29/2016 20:0

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 12C83B16295001
Instrument C12C--Y6329A

Data Directory Path is - \USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
1566	12C83B16295001.0001	CONDITIONER		10/23/16 13:49	1629499999	1.00
1566	12C83B16295001.0002	CONDITIONER		10/23/16 14:32	1629499999	1.00
1566	12C83B16295001.0003	CONDITIONER		10/23/16 15:14	1629499999	1.00
1566	12C83B16295001.0004	CONDITIONER		10/23/16 15:57	1629499999	1.00
1566	12C83B16295001.0005	CONDITIONER		10/23/16 16:39	1629499999	1.00
1566	12C83B16295001.0006	CONDITIONER		10/23/16 17:21	1629499999	1.00
1566	12C83B16295001.0007	CONDITIONER		10/23/16 18:04	1629499999	1.00
1566	12C83B16295001.0008	CONDITIONER		10/23/16 18:46	1629499999	1.00
1566	12C83B16295001.0009	833011624E	83301AA	10/23/16 19:29	1629499999	1.00
1566	12C83B16295001.0010	833021624E	83302AA	10/23/16 20:11	1629499999	1.00
1566	12C83B16295001.0011	833031624E	83303AA	10/23/16 20:54	1629499999	1.00
1566	12C83B16295001.0012	833041624E	83304AA	10/23/16 21:36	1629499999	1.00
1566	12C83B16295001.0013	833051624E	83305AA	10/23/16 22:18	1629499999	1.00
1566	12C83B16295001.0014	MD83X1624E	MD83XAA	10/23/16 23:01	1629499999	1.00
1566	12C83B16295001.0015	IC83X1624E	IC83XAA	10/23/16 23:44	1629499999	1.00

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 12C83B16295002
Instrument C12C--Y6329A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
1566	12C83B16295002.0001	CONDITIONER		10/24/16 16:40	1629799999	1.00
1566	12C83B16295002.0002	CONDITIONER		10/24/16 17:22	1629799999	1.00
1566	12C83B16295002.0003	CONDITIONER		10/24/16 18:05	1629799999	1.00
1566	12C83B16295002.0004	CONDITIONER		10/24/16 18:47	1629799999	1.00
1566	12C83B16295002.0005	CONDITIONER		10/24/16 19:29	1629799999	1.00
1566	12C83B16295002.0006	CONDITIONER		10/24/16 20:12	1629799999	1.00
1566	12C83B16295002.0007	CONDITIONER		10/24/16 20:54	1629799999	1.00
1566	12C83B16295002.0008	CONDITIONER		10/24/16 21:37	1629799999	1.00
1566	12C83B16295002.0009	833031624E	83303NI	10/24/16 22:19	1629799999	1.00
1566	12C83B16295002.0010	BLANKA 10/20/16	PBLK23293	10/24/16 23:02	162930023A	40.00
1566	12C83B16295002.0011	LCSA 10/20/16	LCS23293	10/24/16 23:44	162930023A	40.00
1566	12C83B16295002.0012	LCSDA 10/20/16	LCSD23293	10/25/16 0:26	162930023A	40.00
1566	12C83B16295002.0013	LCSISM 10/20/16	LCS23293	10/25/16 1:09	162930023A	40.00
1566	12C83B16295002.0014	LCSDISM 10/20/16	LCSD23293	10/25/16 1:51	162930023A	40.00
1566	12C83B16295002.0015	8645241	01D01	10/25/16 2:34	162930023A	40.00
1566	12C83B16295002.0016	8645241 10/20/16	01D01DUP	10/25/16 3:16	162930023A	40.00
1566	12C83B16295002.0017	8645241MS	01D01MS	10/25/16 3:59	162930023A	40.00
1566	12C83B16295002.0018	8645242	01D02	10/25/16 4:41	162930023A	40.00
1566	12C83B16295002.0019	8645244	01D04	10/25/16 5:23	162930023A	40.00
1566	12C83B16295002.0020	833031624E	83303NI	10/25/16 6:06	1629799999	1.00

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 12E83B16295001
Instrument CP12--X6329A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
1566	12E83B16295001.0001	CONDITIONER		10/23/16 13:49	1629499999	1.00
1566	12E83B16295001.0002	CONDITIONER		10/23/16 14:32	1629499999	1.00
1566	12E83B16295001.0003	CONDITIONER		10/23/16 15:14	1629499999	1.00
1566	12E83B16295001.0004	CONDITIONER		10/23/16 15:57	1629499999	1.00
1566	12E83B16295001.0005	CONDITIONER		10/23/16 16:39	1629499999	1.00
1566	12E83B16295001.0006	CONDITIONER		10/23/16 17:21	1629499999	1.00
1566	12E83B16295001.0007	CONDITIONER		10/23/16 18:04	1629499999	1.00
1566	12E83B16295001.0008	CONDITIONER		10/23/16 18:46	1629499999	1.00
1566	12E83B16295001.0009	833011624E	83301AA	10/23/16 19:29	1629499999	1.00
1566	12E83B16295001.0010	833021624E	83302AA	10/23/16 20:11	1629499999	1.00
1566	12E83B16295001.0011	833031624E	83303AA	10/23/16 20:54	1629499999	1.00
1566	12E83B16295001.0012	833041624E	83304AA	10/23/16 21:36	1629499999	1.00
1566	12E83B16295001.0013	833051624E	83305AA	10/23/16 22:18	1629499999	1.00
1566	12E83B16295001.0014	MD83X1624E	MD83XAA	10/23/16 23:01	1629499999	1.00
1566	12E83B16295001.0015	IC83X1624E	IC83XAA	10/23/16 23:44	1629499999	1.00

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 12E83B16295002
Instrument CP12--X6329A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
1566	12E83B16295002.0001	CONDITIONER		10/24/16	16:40 1629799999	1.00
1566	12E83B16295002.0002	CONDITIONER		10/24/16	17:22 1629799999	1.00
1566	12E83B16295002.0003	CONDITIONER		10/24/16	18:05 1629799999	1.00
1566	12E83B16295002.0004	CONDITIONER		10/24/16	18:47 1629799999	1.00
1566	12E83B16295002.0005	CONDITIONER		10/24/16	19:29 1629799999	1.00
1566	12E83B16295002.0006	CONDITIONER		10/24/16	20:12 1629799999	1.00
1566	12E83B16295002.0007	CONDITIONER		10/24/16	20:54 1629799999	1.00
1566	12E83B16295002.0008	CONDITIONER		10/24/16	21:37 1629799999	1.00
1566	12E83B16295002.0009	833031624E	83303NI	10/24/16	22:19 1629799999	1.00
1566	12E83B16295002.0010	BLANKA 10/20/16	PBLK23293	10/24/16	23:02 162930023A	40.00
1566	12E83B16295002.0011	LCSA 10/20/16	LCS23293	10/24/16	23:44 162930023A	40.00
1566	12E83B16295002.0012	LCSDA 10/20/16	LCSD23293	10/25/16	0:26 162930023A	40.00
1566	12E83B16295002.0013	LCSISM 10/20/16	LCS23293	10/25/16	1:09 162930023A	40.00
1566	12E83B16295002.0014	LCSDISM 10/20/16	LCSD23293	10/25/16	1:51 162930023A	40.00
1566	12E83B16295002.0015	8645241	01D01	10/25/16	2:34 162930023A	40.00
1566	12E83B16295002.0016	8645241 10/20/16	01D01DUP	10/25/16	3:16 162930023A	40.00
1566	12E83B16295002.0017	8645241MS	01D01MS	10/25/16	3:59 162930023A	40.00
1566	12E83B16295002.0018	8645242	01D02	10/25/16	4:41 162930023A	40.00
1566	12E83B16295002.0019	8645244	01D04	10/25/16	5:23 162930023A	40.00
1566	12E83B16295002.0020	833031624E	83303NI	10/25/16	6:06 1629799999	1.00

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 12C83B16295003
Instrument C12C--Y6329A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
1566	12C83B16295003.0001	CONDITIONER		11/1/16 19:36	1630599999	1.00
1566	12C83B16295003.0002	CONDITIONER		11/1/16 20:18	1630599999	1.00
1566	12C83B16295003.0003	CONDITIONER		11/1/16 21:01	1630599999	1.00
1566	12C83B16295003.0004	CONDITIONER		11/1/16 21:43	1630599999	1.00
1566	12C83B16295003.0005	CONDITIONER		11/1/16 22:25	1630599999	1.00
1566	12C83B16295003.0006	CONDITIONER		11/1/16 23:08	1630599999	1.00
1566	12C83B16295003.0007	833031624E	83303NT	11/1/16 23:50	1630599999	1.00
1566	12C83B16295003.0008	BLANKA 11/1/16	PBLK41303	11/2/16 0:33	163030041A	10.00
1566	12C83B16295003.0009	LCSA 11/1/16	LCS41303	11/2/16 1:15	163030041A	10.00
1566	12C83B16295003.0010	LCSDA 11/1/16	LCSD41303	11/2/16 1:58	163030041A	10.00
1566	12C83B16295003.0011	8663485	02D11	11/2/16 2:40	163030041A	10.00
1566	12C83B16295003.0012	833031624E	83303NU	11/2/16 3:22	1630599999	1.00

Eurolins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 12E83B16295003
Instrument CP12--X6329A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
1566	12E83B16295003.0001	CONDITIONER		11/1/16 19:36	1630599999	1.00
1566	12E83B16295003.0002	CONDITIONER		11/1/16 20:18	1630599999	1.00
1566	12E83B16295003.0003	CONDITIONER		11/1/16 21:01	1630599999	1.00
1566	12E83B16295003.0004	CONDITIONER		11/1/16 21:43	1630599999	1.00
1566	12E83B16295003.0005	CONDITIONER		11/1/16 22:25	1630599999	1.00
1566	12E83B16295003.0006	CONDITIONER		11/1/16 23:08	1630599999	1.00
1566	12E83B16295003.0007	833031624E	83303NT	11/1/16 23:50	1630599999	1.00
1566	12E83B16295003.0008	BLANKA 11/1/16	PBLK41303	11/2/16 0:33	163030041A	10.00
1566	12E83B16295003.0009	LCSA 11/1/16	LCS41303	11/2/16 1:15	163030041A	10.00
1566	12E83B16295003.0010	LCSDA 11/1/16	LCSD41303	11/2/16 1:58	163030041A	10.00
1566	12E83B16295003.0011	8663485	02D11	11/2/16 2:40	163030041A	10.00
1566	12E83B16295003.0012	833031624E	83303NU	11/2/16 3:22	1630599999	1.00

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 12C83B16295004
Instrument C12C--Y6329A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
1566	12C83B16295004.0001	CONDITIONER		11/8/16 20:14	1631299999	1.00
1566	12C83B16295004.0002	CONDITIONER		11/8/16 20:56	1631299999	1.00
1566	12C83B16295004.0003	CONDITIONER		11/8/16 21:39	1631299999	1.00
1566	12C83B16295004.0004	CONDITIONER		11/8/16 22:21	1631299999	1.00
1566	12C83B16295004.0005	CONDITIONER		11/8/16 23:03	1631299999	1.00
1566	12C83B16295004.0006	CONDITIONER		11/8/16 23:46	1631299999	1.00
1566	12C83B16295004.0007	CONDITIONER		11/9/16 0:28	1631299999	1.00
1566	12C83B16295004.0008	CONDITIONER		11/9/16 1:11	1631299999	1.00
1566	12C83B16295004.0009	833031624E	83303OI	11/9/16 1:53	1631299999	1.00
1566	12C83B16295004.0010	BLANKA 11/7/16	PBLK30308	11/9/16 2:36	163080030A	40.00
1566	12C83B16295004.0011	LCSA 11/7/16	LCS30308	11/9/16 3:18	163080030A	40.00
1566	12C83B16295004.0012	LCSISM 11/7/16	LCS30308	11/9/16 4:01	163080030A	40.00
1566	12C83B16295004.0013	8663469	02DW1	11/9/16 4:43	163080030A	40.00
1566	12C83B16295004.0014	8663469	02DW1DUP	11/9/16 5:25	163080030A	40.00
1566	12C83B16295004.0015	8663469MS	02DW1MS	11/9/16 6:08	163080030A	40.00
1566	12C83B16295004.0016	8663470	02DW2	11/9/16 6:50	163080030A	40.00
1566	12C83B16295004.0017	8663471	02DW3	11/9/16 7:33	163080030A	40.00
1566	12C83B16295004.0018	8663472	02DW4	11/9/16 8:15	163080030A	40.00
1566	12C83B16295004.0019	8663473	02DW5	11/9/16 8:57	163080030A	40.00
1566	12C83B16295004.0020	833031624E	83303OD	11/9/16 9:40	1631299999	1.00
1566	12C83B16295004.0021	8663474	02DW6	11/9/16 10:22	163080030A	40.00
1566	12C83B16295004.0022	8663475	02DW7	11/9/16 11:05	163080030A	40.00
1566	12C83B16295004.0023	8663476	02DW8	11/9/16 11:47	163080030A	40.00
1566	12C83B16295004.0024	8663482	02D10	11/9/16 12:30	163080030A	40.00
1566	12C83B16295004.0025	8663483MS	02D10	11/9/16 13:12	163080030A	40.00
1566	12C83B16295004.0026	8663484MSD	02D10	11/9/16 13:55	163080030A	40.00
1566	12C83B16295004.0027	8665231	026BL	11/9/16 14:37	163080030A	40.00
1566	12C83B16295004.0028	8665491	03D01	11/9/16 15:19	163080030A	40.00
1566	12C83B16295004.0029	8665492	03D02	11/9/16 16:02	163080030A	40.00
1566	12C83B16295004.0030	BLANKA 11/7/16	PBLK31308	11/9/16 16:44	163080031A	40.00
1566	12C83B16295004.0031	833031624E	83303OE	11/9/16 17:27	1631299999	1.00
1566	12C83B16295004.0032	LCSA 11/7/16	LCS31308	11/9/16 18:09	163080031A	40.00
1566	12C83B16295004.0033	LCSISM 11/7/16	LCS31308	11/9/16 18:52	163080031A	40.00
1566	12C83B16295004.0034	8665493	03D03DUP	11/9/16 19:34	163080031A	40.00
1566	12C83B16295004.0035	8665493	03D03	11/9/16 20:16	163080031A	40.00
1566	12C83B16295004.0036	8665493MS	03D03MS	11/9/16 20:59	163080031A	40.00
1566	12C83B16295004.0037	8665494	03D04	11/9/16 21:41	163080031A	40.00
1566	12C83B16295004.0038	8665495	03D05	11/9/16 22:24	163080031A	40.00
1566	12C83B16295004.0039	8665496	03D06	11/9/16 23:06	163080031A	40.00
1566	12C83B16295004.0040	8665497	03D07	11/9/16 23:49	163080031A	40.00
1566	12C83B16295004.0041	8665498MS	03D07	11/10/16 0:31	163080031A	40.00
1566	12C83B16295004.0042	833031624E	83303OF	11/10/16 1:13	1631299999	1.00
1566	12C83B16295004.0043	8665499MSD	03D07	11/10/16 1:56	163080031A	40.00
1566	12C83B16295004.0044	8665500	03D08	11/10/16 2:38	163080031A	40.00
1566	12C83B16295004.0045	8668437	02D21	11/10/16 3:21	163080031A	40.00
1566	12C83B16295004.0046	8668438	02D22	11/10/16 4:03	163080031A	40.00
1566	12C83B16295004.0047	8668439	02D23	11/10/16 4:46	163080031A	40.00
1566	12C83B16295004.0048	8668444	02D26	11/10/16 5:28	163080031A	40.00
1566	12C83B16295004.0049	8668445	02D27	11/10/16 6:10	163080031A	40.00
1566	12C83B16295004.0050	833031624E	83303OG	11/10/16 6:53	1631299999	1.00

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 12C83B16295005
Instrument C12C--Y6329A

Data Directory Path is - \USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
1566	12C83B16295005.0001	CONDITIONER		11/17/16 15:03	1632199999	1.00
1566	12C83B16295005.0002	CONDITIONER		11/17/16 15:46	1632199999	1.00
1566	12C83B16295005.0003	CONDITIONER		11/17/16 16:28	1632199999	1.00
1566	12C83B16295005.0004	CONDITIONER		11/17/16 17:11	1632199999	1.00
1566	12C83B16295005.0005	CONDITIONER		11/17/16 17:53	1632199999	1.00
1566	12C83B16295005.0006	CONDITIONER		11/17/16 18:36	1632199999	1.00
1566	12C83B16295005.0007	CONDITIONER		11/17/16 19:18	1632199999	1.00
1566	12C83B16295005.0008	CONDITIONER		11/17/16 20:00	1632199999	1.00
1566	12C83B16295005.0009	833031624E	83303OJ	11/17/16 20:43	1632199999	1.00
1566	12C83B16295005.0010	BLANKA 11/15/16	PBLK23319	11/17/16 21:25	163190023A	40.00
1566	12C83B16295005.0011	LCSISM 11/15/16	LCS23319	11/17/16 22:08	163190023A	40.00
1566	12C83B16295005.0012	LCSA 11/15/16	LCS23319	11/17/16 22:50	163190023A	40.00
1566	12C83B16295005.0013	8665493R	03D03DUP	11/17/16 23:32	163190023A	40.00
1566	12C83B16295005.0014	8665493R	03D03	11/18/16 0:15	163190023A	40.00
1566	12C83B16295005.0015	8665493RMS	03D03MS	11/18/16 0:57	163190023A	40.00
1566	12C83B16295005.0016	8665494R	03D04	11/18/16 1:40	163190023A	40.00
1566	12C83B16295005.0017	8665495R	03D05	11/18/16 2:22	163190023A	40.00
1566	12C83B16295005.0018	8665496R	03D06	11/18/16 3:05	163190023A	40.00
1566	12C83B16295005.0019	8665497R	03D07	11/18/16 3:47	163190023A	40.00
1566	12C83B16295005.0020	833031624E	83303OL	11/18/16 4:29	1632199999	1.00
1566	12C83B16295005.0021	8665498RMS	03D07	11/18/16 5:12	163190023A	40.00
1566	12C83B16295005.0022	8665499RMSD	03D07	11/18/16 5:54	163190023A	40.00
1566	12C83B16295005.0023	8665500R	03D08	11/18/16 6:37	163190023A	40.00
1566	12C83B16295005.0024	8668437R	02D21	11/18/16 7:19	163190023A	40.00
1566	12C83B16295005.0025	8668438R	02D22	11/18/16 8:02	163190023A	40.00
1566	12C83B16295005.0026	8668439R	02D23	11/18/16 8:44	163190023A	40.00
1566	12C83B16295005.0027	8668444R	02D26	11/18/16 9:26	163190023A	40.00
1566	12C83B16295005.0028	8668445R	02D27	11/18/16 10:09	163190023A	40.00
1566	12C83B16295005.0029	833031624E	83303OK	11/18/16 10:51	1632199999	1.00

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 12E83B16295005
Instrument CP12--X6329A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
1566	12E83B16295005.0001	CONDITIONER		11/17/16 15:03	1632199999	1.00
1566	12E83B16295005.0002	CONDITIONER		11/17/16 15:46	1632199999	1.00
1566	12E83B16295005.0003	CONDITIONER		11/17/16 16:28	1632199999	1.00
1566	12E83B16295005.0004	CONDITIONER		11/17/16 17:11	1632199999	1.00
1566	12E83B16295005.0005	CONDITIONER		11/17/16 17:53	1632199999	1.00
1566	12E83B16295005.0006	CONDITIONER		11/17/16 18:36	1632199999	1.00
1566	12E83B16295005.0007	CONDITIONER		11/17/16 19:18	1632199999	1.00
1566	12E83B16295005.0008	CONDITIONER		11/17/16 20:00	1632199999	1.00
1566	12E83B16295005.0009	833031624E	83303OJ	11/17/16 20:43	1632199999	1.00
1566	12E83B16295005.0010	BLANKA 11/15/16	PBLK23319	11/17/16 21:25	163190023A	40.00
1566	12E83B16295005.0011	LCSISM 11/15/16	LCS23319	11/17/16 22:08	163190023A	40.00
1566	12E83B16295005.0012	LCSA 11/15/16	LCS23319	11/17/16 22:50	163190023A	40.00
1566	12E83B16295005.0013	8665493R	03D03DUP	11/17/16 23:32	163190023A	40.00
1566	12E83B16295005.0014	8665493R	03D03	11/18/16 0:15	163190023A	40.00
1566	12E83B16295005.0015	8665493RMS	03D03MS	11/18/16 0:57	163190023A	40.00
1566	12E83B16295005.0016	8665494R	03D04	11/18/16 1:40	163190023A	40.00
1566	12E83B16295005.0017	8665495R	03D05	11/18/16 2:22	163190023A	40.00
1566	12E83B16295005.0018	8665496R	03D06	11/18/16 3:05	163190023A	40.00
1566	12E83B16295005.0019	8665497R	03D07	11/18/16 3:47	163190023A	40.00
1566	12E83B16295005.0020	833031624E	83303OL	11/18/16 4:29	1632199999	1.00
1566	12E83B16295005.0021	8665498RMS	03D07	11/18/16 5:12	163190023A	40.00
1566	12E83B16295005.0022	8665499RMSD	03D07	11/18/16 5:54	163190023A	40.00
1566	12E83B16295005.0023	8665500R	03D08	11/18/16 6:37	163190023A	40.00
1566	12E83B16295005.0024	8668437R	02D21	11/18/16 7:19	163190023A	40.00
1566	12E83B16295005.0025	8668438R	02D22	11/18/16 8:02	163190023A	40.00
1566	12E83B16295005.0026	8668439R	02D23	11/18/16 8:44	163190023A	40.00
1566	12E83B16295005.0027	8668444R	02D26	11/18/16 9:26	163190023A	40.00
1566	12E83B16295005.0028	8668445R	02D27	11/18/16 10:09	163190023A	40.00
1566	12E83B16295005.0029	833031624E	83303OK	11/18/16 10:51	1632199999	1.00

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 12C83B16295005
Instrument C12C--Y6329A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
1566	12C83B16295005.0001	CONDITIONER		11/17/16 15:03	1632199999	1.00
1566	12C83B16295005.0002	CONDITIONER		11/17/16 15:46	1632199999	1.00
1566	12C83B16295005.0003	CONDITIONER		11/17/16 16:28	1632199999	1.00
1566	12C83B16295005.0004	CONDITIONER		11/17/16 17:11	1632199999	1.00
1566	12C83B16295005.0005	CONDITIONER		11/17/16 17:53	1632199999	1.00
1566	12C83B16295005.0006	CONDITIONER		11/17/16 18:36	1632199999	1.00
1566	12C83B16295005.0007	CONDITIONER		11/17/16 19:18	1632199999	1.00
1566	12C83B16295005.0008	CONDITIONER		11/17/16 20:00	1632199999	1.00
1566	12C83B16295005.0009	833031624E	83303OJ	11/17/16 20:43	1632199999	1.00
1566	12C83B16295005.0010	BLANKA 11/15/16	PBLK23319	11/17/16 21:25	163190023A	40.00
1566	12C83B16295005.0011	LCSISM 11/15/16	LCS23319	11/17/16 22:08	163190023A	40.00
1566	12C83B16295005.0012	LCSA 11/15/16	LCS23319	11/17/16 22:50	163190023A	40.00
1566	12C83B16295005.0013	8665493R	03D03DUP	11/17/16 23:32	163190023A	40.00
1566	12C83B16295005.0014	8665493R	03D03	11/18/16 0:15	163190023A	40.00
1566	12C83B16295005.0015	8665493RMS	03D03MS	11/18/16 0:57	163190023A	40.00
1566	12C83B16295005.0016	8665494R	03D04	11/18/16 1:40	163190023A	40.00
1566	12C83B16295005.0017	8665495R	03D05	11/18/16 2:22	163190023A	40.00
1566	12C83B16295005.0018	8665496R	03D06	11/18/16 3:05	163190023A	40.00
1566	12C83B16295005.0019	8665497R	03D07	11/18/16 3:47	163190023A	40.00
1566	12C83B16295005.0020	833031624E	83303OL	11/18/16 4:29	1632199999	1.00
1566	12C83B16295005.0021	8665498RMS	03D07	11/18/16 5:12	163190023A	40.00
1566	12C83B16295005.0022	8665499RMSD	03D07	11/18/16 5:54	163190023A	40.00
1566	12C83B16295005.0023	8665500R	03D08	11/18/16 6:37	163190023A	40.00
1566	12C83B16295005.0024	8668437R	02D21	11/18/16 7:19	163190023A	40.00
1566	12C83B16295005.0025	8668438R	02D22	11/18/16 8:02	163190023A	40.00
1566	12C83B16295005.0026	8668439R	02D23	11/18/16 8:44	163190023A	40.00
1566	12C83B16295005.0027	8668444R	02D26	11/18/16 9:26	163190023A	40.00
1566	12C83B16295005.0028	8668445R	02D27	11/18/16 10:09	163190023A	40.00
1566	12C83B16295005.0029	833031624E	83303OK	11/18/16 10:51	1632199999	1.00

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 12E83B16295005
Instrument CP12--X6329A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
1566	12E83B16295005.0001	CONDITIONER		11/17/16 15:03	1632199999	1.00
1566	12E83B16295005.0002	CONDITIONER		11/17/16 15:46	1632199999	1.00
1566	12E83B16295005.0003	CONDITIONER		11/17/16 16:28	1632199999	1.00
1566	12E83B16295005.0004	CONDITIONER		11/17/16 17:11	1632199999	1.00
1566	12E83B16295005.0005	CONDITIONER		11/17/16 17:53	1632199999	1.00
1566	12E83B16295005.0006	CONDITIONER		11/17/16 18:36	1632199999	1.00
1566	12E83B16295005.0007	CONDITIONER		11/17/16 19:18	1632199999	1.00
1566	12E83B16295005.0008	CONDITIONER		11/17/16 20:00	1632199999	1.00
1566	12E83B16295005.0009	833031624E	83303OJ	11/17/16 20:43	1632199999	1.00
1566	12E83B16295005.0010	BLANKA 11/15/16	PBLK23319	11/17/16 21:25	163190023A	40.00
1566	12E83B16295005.0011	LCSISM 11/15/16	LCS23319	11/17/16 22:08	163190023A	40.00
1566	12E83B16295005.0012	LCSA 11/15/16	LCS23319	11/17/16 22:50	163190023A	40.00
1566	12E83B16295005.0013	8665493R	03D03DUP	11/17/16 23:32	163190023A	40.00
1566	12E83B16295005.0014	8665493R	03D03	11/18/16 0:15	163190023A	40.00
1566	12E83B16295005.0015	8665493RMS	03D03MS	11/18/16 0:57	163190023A	40.00
1566	12E83B16295005.0016	8665494R	03D04	11/18/16 1:40	163190023A	40.00
1566	12E83B16295005.0017	8665495R	03D05	11/18/16 2:22	163190023A	40.00
1566	12E83B16295005.0018	8665496R	03D06	11/18/16 3:05	163190023A	40.00
1566	12E83B16295005.0019	8665497R	03D07	11/18/16 3:47	163190023A	40.00
1566	12E83B16295005.0020	833031624E	83303OL	11/18/16 4:29	1632199999	1.00
1566	12E83B16295005.0021	8665498RMS	03D07	11/18/16 5:12	163190023A	40.00
1566	12E83B16295005.0022	8665499RMSD	03D07	11/18/16 5:54	163190023A	40.00
1566	12E83B16295005.0023	8665500R	03D08	11/18/16 6:37	163190023A	40.00
1566	12E83B16295005.0024	8668437R	02D21	11/18/16 7:19	163190023A	40.00
1566	12E83B16295005.0025	8668438R	02D22	11/18/16 8:02	163190023A	40.00
1566	12E83B16295005.0026	8668439R	02D23	11/18/16 8:44	163190023A	40.00
1566	12E83B16295005.0027	8668444R	02D26	11/18/16 9:26	163190023A	40.00
1566	12E83B16295005.0028	8668445R	02D27	11/18/16 10:09	163190023A	40.00
1566	12E83B16295005.0029	833031624E	83303OK	11/18/16 10:51	1632199999	1.00

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 12C83B16295006
Instrument C12C--Y6329A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
1566	12C83B16295006.0001	CONDITIONER		11/29/16 16:35	1633399999	1.00
1566	12C83B16295006.0002	CONDITIONER		11/29/16 17:17	1633399999	1.00
1566	12C83B16295006.0003	CONDITIONER		11/29/16 17:59	1633399999	1.00
1566	12C83B16295006.0004	CONDITIONER		11/29/16 18:42	1633399999	1.00
1566	12C83B16295006.0005	CONDITIONER		11/29/16 19:24	1633399999	1.00
1566	12C83B16295006.0006	833031624E	83303OM	11/29/16 20:07	1633399999	1.00
1566	12C83B16295006.0007	BLANKA 11/23/16	PBLK47327	11/29/16 20:49	163270047A	40.00
1566	12C83B16295006.0008	LCSA 11/23/16	LCS47327	11/29/16 21:31	163270047A	40.00
1566	12C83B16295006.0009	LCSB 11/23/16	LCS47327	11/29/16 22:14	163270047A	40.00
1566	12C83B16295006.0010	LCSISM 11/23/16	LCSD47327	11/29/16 22:56	163270047A	40.00
1566	12C83B16295006.0011	8665497R	03D07	11/29/16 23:39	163270047A	40.00
1566	12C83B16295006.0012	8665498RMS	03D07	11/30/16 0:21	163270047A	40.00
1566	12C83B16295006.0013	8665499RMSD	03D07	11/30/16 1:04	163270047A	40.00
1566	12C83B16295006.0014	8665497BKG2	AA	11/30/16 1:46	163270047A	40.00
1566	12C83B16295006.0015	8665498MS2	AA	11/30/16 2:28	163270047A	40.00
1566	12C83B16295006.0016	86659499MSD2	AA	11/30/16 3:11	163270047A	40.00
1566	12C83B16295006.0017	833031624E	83303ON	11/30/16 3:53	1633399999	1.00
1566	12C83B16295006.0018	8655497BKG3	AA	11/30/16 4:36	163270047A	40.00
1566	12C83B16295006.0019	8655498MS3	AA	11/30/16 5:18	163270047A	40.00
1566	12C83B16295006.0020	8655499MSD3	AA	11/30/16 6:01	163270047A	40.00
1566	12C83B16295006.0021	833031624E	83303OO	11/30/16 6:43	1633399999	1.00

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Pesticide Residue Analysis

Runlog for 12E83B16295006

Instrument CP12--X6329A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP12\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
2855	12E83B16295006.0001	CONDITIONER		11/29/16 16:35	1633399999	1.00
2855	12E83B16295006.0002	CONDITIONER		11/29/16 17:17	1633399999	1.00
2855	12E83B16295006.0003	CONDITIONER		11/29/16 17:59	1633399999	1.00
2855	12E83B16295006.0004	CONDITIONER		11/29/16 18:42	1633399999	1.00
2855	12E83B16295006.0005	CONDITIONER		11/29/16 19:24	1633399999	1.00
2855	12E83B16295006.0006	833031624E	83303OM	11/29/16 20:07	1633399999	1.00
2855	12E83B16295006.0007	BLANKA 11/23/16	PBLK47327	11/29/16 20:49	163270047A	40.00
2855	12E83B16295006.0008	LCSA 11/23/16	LCS47327	11/29/16 21:31	163270047A	40.00
2855	12E83B16295006.0009	LCSB 11/23/16	LCS47327	11/29/16 22:14	163270047A	40.00
2855	12E83B16295006.0010	LCSISM 11/23/16	LCSD47327	11/29/16 22:56	163270047A	40.00
2855	12E83B16295006.0011	8665497R	03D07	11/29/16 23:39	163270047A	40.00
2855	12E83B16295006.0012	8665498RMS	03D07	11/30/16 0:21	163270047A	40.00
2855	12E83B16295006.0013	8665499RMSD	03D07	11/30/16 1:04	163270047A	40.00
2855	12E83B16295006.0014	8665497BKG2	AA	11/30/16 1:46	163270047A	40.00
2855	12E83B16295006.0015	8665498MS2	AA	11/30/16 2:28	163270047A	40.00
2855	12E83B16295006.0016	86659499MSD2	AA	11/30/16 3:11	163270047A	40.00
2855	12E83B16295006.0017	833031624E	83303ON	11/30/16 3:53	1633399999	1.00
2855	12E83B16295006.0018	8655497BKG3	AA	11/30/16 4:36	163270047A	40.00
2855	12E83B16295006.0019	8655498MS3	AA	11/30/16 5:18	163270047A	40.00
2855	12E83B16295006.0020	8655499MSD3	AA	11/30/16 6:01	163270047A	40.00
2855	12E83B16295006.0021	833031624E	83303OO	11/30/16 6:43	1633399999	1.00

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

LCS41303

Lab Name: Lancaster Laboratories

Contract:

Batchnumber: 163030041A

Lab Code:

Case No.:

SAS No.:

SDG No.:

Lab Sample ID: LCSADate(s) Analyzed: 11/2/201611/2/2016Instrument ID (1): X6329AInstrument ID (2): X6329BGC Column (1): CHROMPAID: 100 (mm)

GC Column (2):

ID: (mm)

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%RSD
1,3,5-Trinitrobenzene	1	5.29	5.23	5.43	86	
Tetryl	1	8.60	8.58	8.86	240	

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

LCSD41303

Lab Name: Lancaster Laboratories

Contract:

Batchnumber: 163030041A

Lab Code:

Case No.:

SAS No.:

SDG No.:

Lab Sample ID: LCSDADate(s) Analyzed: 11/2/2016 11/2/2016Instrument ID (1): X6329AInstrument ID (2): X6329BGC Column (1): CHROMPAID: 100 (mm)

GC Column (2):

ID: (mm)

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%RSD
1,3,5-Trinitrobenzene	1	5.29	5.23	5.43	84	
Tetryl	1	8.59	8.58	8.86	240	

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

02D10MS

Lab Name: Lancaster Laboratories

Contract:

Batchnumber: 163080030A

Lab Code:

Case No.:

SAS No.:

SDG No.: DWE02Lab Sample ID: 8663483Date(s) Analyzed: 11/9/201611/9/2016Instrument ID (1): X6329AInstrument ID (2): X6329BGC Column (1): CHROMPAID: 100 (mm)

GC Column (2):

ID: (mm)

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%RSD
1,3,5-Trinitrobenzene	1	5.13	5.04	5.24	910	
	1	5.13	5.04	5.24	910	
	1	5.13	5.04	5.24	910	
Tetryl	1	8.30	8.20	8.48	670	
	1	8.30	8.20	8.48	670	
	1	8.30	8.20	8.48	670	

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

02D10MS

Lab Name: Lancaster Laboratories

Contract:

Batchnumber: 163080030A

Lab Code:

Case No.:

SAS No.:

SDG No.: DWE02Lab Sample ID: 8663483Date(s) Analyzed: 11/9/201611/9/2016Instrument ID (1): X6329AInstrument ID (2): X6329BGC Column (1): CHROMPAID: 100 (mm)

GC Column (2):

ID: (mm)

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%RSD
1,3,5-Trinitrobenzene	1	5.13	5.04	5.24	910	
	1	5.13	5.04	5.24	910	
	1	5.13	5.04	5.24	910	
Tetryl	1	8.30	8.20	8.48	670	
	1	8.30	8.20	8.48	670	
	1	8.30	8.20	8.48	670	

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

02D10MSD

Lab Name: Lancaster Laboratories

Contract:

Batchnumber: 163080030A

Lab Code:

Case No.:

SAS No.:

SDG No.: DWE02Lab Sample ID: 8663484Date(s) Analyzed: 11/9/201611/9/2016Instrument ID (1): X6329AInstrument ID (2): X6329BGC Column (1): CHROMPAID: 100 (mm)

GC Column (2):

ID: (mm)

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%RSD
1,3,5-Trinitrobenzene	1	5.12	5.04	5.24	960	
	1	5.12	5.04	5.24	960	
	1	5.12	5.04	5.24	960	
Tetryl	1	8.29	8.20	8.48	710	
	1	8.29	8.20	8.48	710	
	1	8.29	8.20	8.48	710	

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

02D10MSD

Lab Name: Lancaster Laboratories

Contract:

Batchnumber: 163080030A

Lab Code:

Case No.:

SAS No.:

SDG No.: DWE02Lab Sample ID: 8663484Date(s) Analyzed: 11/9/201611/9/2016Instrument ID (1): X6329AInstrument ID (2): X6329BGC Column (1): CHROMPAID: 100 (mm)

GC Column (2):

ID: (mm)

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%RSD
1,3,5-Trinitrobenzene	1	5.12	5.04	5.24	960	
	1	5.12	5.04	5.24	960	
	1	5.12	5.04	5.24	960	
Tetryl	1	8.29	8.20	8.48	710	
	1	8.29	8.20	8.48	710	
	1	8.29	8.20	8.48	710	

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

02D10MS

Lab Name: Lancaster Laboratories

Contract:

Batchnumber: 163080030A

Lab Code:

Case No.:

SAS No.:

SDG No.: DWE02Lab Sample ID: 8663483Date(s) Analyzed: 11/9/201611/9/2016Instrument ID (1): X6329AInstrument ID (2): X6329BGC Column (1): CHROMPAID: 100 (mm)

GC Column (2):

ID: (mm)

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%RSD
1,3,5-Trinitrobenzene	1	5.13	5.04	5.24	910	
	1	5.13	5.04	5.24	910	
	1	5.13	5.04	5.24	910	
Tetryl	1	8.30	8.20	8.48	670	
	1	8.30	8.20	8.48	670	
	1	8.30	8.20	8.48	670	

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

02D10MSD

Lab Name: Lancaster Laboratories

Contract:

Batchnumber: 163080030A

Lab Code:

Case No.:

SAS No.:

SDG No.: DWE02Lab Sample ID: 8663484Date(s) Analyzed: 11/9/201611/9/2016Instrument ID (1): X6329AInstrument ID (2): X6329BGC Column (1): CHROMPAID: 100 (mm)

GC Column (2):

ID: (mm)

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%RSD
1,3,5-Trinitrobenzene	1	5.12	5.04	5.24	960	
	1	5.12	5.04	5.24	960	
	1	5.12	5.04	5.24	960	
Tetryl	1	8.29	8.20	8.48	710	
	1	8.29	8.20	8.48	710	
	1	8.29	8.20	8.48	710	

Preparation and Run Logs

Explosives

Organic Extraction Batchlog Assigned to: 712 Wanda Oswald Reviewed by: Jim 1657 Start Date: 11-1-16 Start time: 09:00

Tech 1: Wanda Tech 2: _____

163030041A

Dept 24 Prep Analysis: 13432 Nitroaromatic/Amine Ext 8330B										Nitroaromatics/Amines 8330B(w)		
QC	Sample Code	Amt (μg)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	BC	Comments		
BLANKA	PBLK41303	500	SS1625724A	0.1	MS1627924A	0.5	10					
LCSA	LCS41303	500	SS1625724A	0.1	MS1627924A	0.5	10					
LCSDA	LCSD41303	500	SS1625724A	0.1	ST1614624B	0.1	10					
LCSDDIA	LCSD41303	500	SS1625724A	0.1	ST1614624B	0.1	10					
LCSDIA	LCS41303	500	SS1625724A	0.1	ST1614624B	0.1	10					

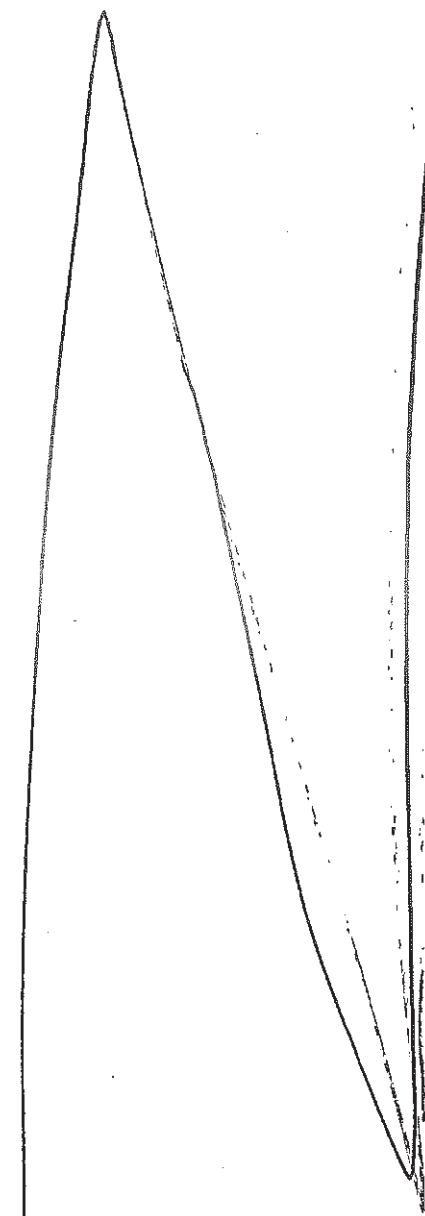
Wanda 11-1-16

ST changed to Wanda
ST1627924A 11-1-16

Spike Solutions: Witness: Wanda
~~ST1614624A~~ 2,4-Diamino-6-nitrotoluene
 ST1614624B 2,6-Diamino-4-nitrotoluene
 MS1627924A 8330B EXPLOSIVE SPIKE
 SS1625724A 8330B SURROGATE

Sample #	Sample Code	Amt (μg)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	BC	Comments	Analyses	List	Due Date	Prio
18663485	02D11	500	SS1625724A	0.1	10			100% clear	13395	22304	11/16/2016	N

Wanda 11-1-16



Wanda 11-1-16

Bench#	Bench#	Bench#
Rack ID:	Work Station	Micro Temp
Internal Standard	Balance #	100?

R-VAP ID	C	R-VAP ID	C	R-VAP ID	C
S-bath ID	C	S-bath ID	C	N-Evap	C
				M-vap	C

163030041A



Documented temps are NIST corrected.

Organic Extraction Batchlog Assigned to: 1429 David Hershey Reviewed by: Jim 765 Start Date: 11/7/16 Start time: 13:00
Tech 1: D.H.W. Tech 2: _____

163080030A

Dept: 24 Prep Analysis: 13433 Nitroaromatic/Amine Ext 8330B										Nitroaromatics/Amines 8330B(s)		
QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	BC	Comments		
8663469DUP	02DW1DUP	10.31	SS1625724A	0.1			40	Z	020a			
8663469MS	02DW1MS	10.03	SS1625724A				40	Z	020a			
8663483MS	02D10	10.41	SS1625724A		MS1630824A	2	40	Z	020a			
8663484MSD	02D10	10.22	SS1625724A		MS1630824A	2	40	Z	020a			
BLANKA	PBLK30308	10.0	SS1625724A				40	Z	Z			
LCSA	LCS30308	10.0	SS1625724A		MS1630824A	2	40	Z	Z			
LCSISM	LCS30308	10.0	SS1625724A	7			40	Z	Z			

Added 5ul of MS1630824C to 300grams of CLEAN soil
matrix to create CFM

Spike Solutions: MS1630824A 8330B LOD SPECIAL SPIKE
SS1625724A 8330B SURROGATE

Witness:

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1	8663469	10.30	SS1625724A	0.1	40	Z	Z	020a		13413	22303	11/16/2016	N
2	8663470	10.11	SS1625724A		40	Z	Z	020a		13413	22303	11/16/2016	N
3	8663471	10.51	SS1625724A		40	Z	Z	020a		13413	22303	11/16/2016	N
4	8663472	10.52	SS1625724A		40	Z	Z	020a		13413	22303	11/16/2016	N
5	8663473	10.04	SS1625724A		40	Z	Z	020a		13413	22430	11/16/2016	N
6	8663474	10.13	SS1625724A		40	Z	Z	020a		13413	22303	11/16/2016	N
7	8663475	10.14	SS1625724A		40	Z	Z	020a		13413	22303	11/16/2016	N
8	8663476	10.15	SS1625724A		40	Z	Z	020a		13413	22303	11/16/2016	N
9	8663482BKG	10.47	SS1625724A		40	Z	Z	020a		13413	22430	11/16/2016	N
10	8665231	10.23	SS1625724A		40	Z	Z	020a		13413	22302	11/16/2016	N
11	8665491	10.26	SS1625724A		40	Z	Z	020a	211A	13413	22303	11/17/2016	N
12	8665492	10.37	SS1625724A	7	40	Z	Z	020a	311A	13413	22303	11/17/2016	N

Started: 14:00 11-7-16
Stopped: 9:00 11-8-16

DHMM
11-7-16

Bench#	Bench#	Bench#
Rack ID:	Work Station	Micro Temp
Internal Standard	Balance #	100?

R-VAP ID	C	R-VAP ID	C	R-VAP ID	C
S-bath ID	C	S-bath ID	C	N-Evap	C

163080030A



DF = Dilution Factor FV = Final Volume

Page 1 of 1

Documented temps are NIST corrected.

eurofins		Lancaster Laboratories Environmental		Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Document Title:		Revision: 2		Historical Reference: Form 6103					
Eurofins Document Reference: 1-P-QM-FOR-9010529		Effective date: Feb 6, 2016		Status: Effective													
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Metal 0390	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Int./ Emp. #	Comments	
Sand Blank (1A)	13588															866523196a	
	13564	10.49											10/28/16	0500	30 189	sand blank (1A)	
	2203																
86663469	13588							40.22	12.04	sticks							
	13564	10.49	10.46	Y	N/A								10/28/16	0530	30 189		
	2203				34A												
86663470	13588							40.6	23.31	sticks							
	12564	10.34	10.31	Y	N/A								10/28/16	0730	30 189		
	2203				34A												
86663471	13588																
	12564	10.49	10.47	Y	N/A			38.1	16.83	sticks				10/28/16	0803	30 189	
	2203				34A												
86663472	13588																
	12564	10.94	10.92	Y	N/A			38.1	15.13	sticks				10/28/16	0900	30 189	
	2203				34A												

Reviewed by: 5500000000

Date: 10-30-16

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eurofins		Lancaster Laboratories Environmental		Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Document Title:		Revision: 2		Status: Effective	
Eurofins Document Reference:		1-P-QM-FOR-9010629		Effective date: Feb 5, 2016		Unsieved sample description		Unsieved sample Wt.		Total Sample Wt.		Moist 0111	
Metal 0390		Comp. Bottle Code		Final Wt <0.05 g (Y or N)		2 nd Wt of sample/drying dish		Wt of dried sample/drying dish		Analysis		Sample Number	
verified		entered		Date		Time		Init. / Emp. #		Comments			
13588													
13564		N/A		Y		10.48		10.51		328.48		10/23/16 0915	
2203		34A		↓		↓		↓		↓		↓	
13588													
13564		N/A		Y		10.03		10.05		380.28		10/23/16 0935	
2203		34A		↓		↓		↓		↓		↓	
13588													
12564		N/A		Y		10.06		10.10		418.62		10/23/16 10:00	
2203		34A		↓		↓		↓		↓		↓	
13588													
12564		N/A		Y		11.00		11.04		427.32		10/23/16 1025	
2203		34A		↓		↓		↓		↓		↓	
13588													
12564		N/A		Y		10.94		10.96		1063.74		10/23/16 1040	
2203		34A		↓		↓		↓		↓		↓	

Reviewed by: 5-2000042 Date: 10-20-16 237681 25

eurofins		Lancaster Laboratories' Environmental				Document Title: Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Eurofins Document Reference: 1-P-QM-FOR-9010529				Revision: 2		Historical Reference: Form 5103																	
Sample Number		Analysis		Wt of dried sample/ drying dish		2 nd Wt of sample/drying dish		Final Wt <0.05 g (Y or N)		Comp. Bottle Code		Metal 0390		Moist 0111		Total Sample Wt.		Unsieved sample Wt.		Unsieved Sample Description		entered		verified		Date		Time		Init/ Emp. #		Comments	
Sand Blank (A)		13588																															
		13564																															
		2203																															
8665491		13588																															
		13564		9.92	9.93	Y																											
		2203																															
8665492		13588																															
		12564		9.98	9.98	Y																											
		2203																															
8665493		13588																															
		12564		10.89	10.89	Y																											
		2203																															
8665494		13588																															
		12564		9.69	9.70	Y																											
		2203																															

Reviewed by: _____

Date: _____

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eurofins		Lancaster Laboratories Environmental		Document Title: Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Revision: 2		Historical Reference: Form 5103							
Eurofins Document Reference: 1-P-QM-FOR-9010529		Effective date: Feb 5, 2015				Status: Effective											
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Metal 0390	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init./ Emp. #	Comments	
8665495	13588													11/11/16	09106	30 189	
	13564	10.48	10.49	Y				443. 15	58. 35		X	X					
	2203																
8665496	13588													11/11/16	0930	30 189	
	13564	11.35	11.36	Y				429. 69	40. 45		X	X					
	2203																
8665497	13588													11/11/16	1030	30 189	
	12564	10.17	10.17	Y				1020. 88	123. 29		X	X					
	2203																
8665498	13588													11/11/16	1030	30 189	
	12564	10.17	10.17	Y				1020. 88	123. 29		X	X					
	2203																
8665499	13588																
	12564	10.17	10.17	Y				1020. 88	123. 29		X	X					
	2203																

Reviewed by: _____

Date: _____

eurofins		Lancaster Laboratories: Environmental				Document Title: Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Revision: 2		Historical Reference: Form 5103			
Eurofins Document Reference: 1-P-QM-FOR-9010529		Effective date: Feb 5, 2015				Status: Effective									
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init. Emp. #	Comments
Sand blank (B)	13588									X	X	11/11/16	1035	BQ 189	
	13564									X	X	11/11/16	1035	BQ 189	
	2203									X	X	11/11/16	1035	BQ 189	
8668437	13588									X	X	11/11/16	1040	BQ 189	composite sand blank
	12564									X	X	11/11/16	1040	BQ 189	composite sand blank
	2203									X	X	11/11/16	1040	BQ 189	composite sand blank
8668438	13588									X	X	11/12/16	0705	BQ 189	
	12564	11.29	11.28	Y			31.6 25	32. 46		X	X	11/12/16	0705	BQ 189	
	2203									X	X	11/12/16	0705	BQ 189	
8668438	13588									X	X	11/12/16	0725	BQ 189	
	12564	10.63	10.60	Y			50.4 26	44. 35		X	X	11/12/16	0725	BQ 189	
	2203									X	X	11/12/16	0725	BQ 189	

Reviewed by:

Date:

eurofins		Lancaster Laboratories. Environmental				Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Document Title:		Revision: 2		Historical Reference: Form 6103		Status: Effective									
Eurofins Document Reference: 1-P-QM-FOR-9010629		Effective date: Feb 6, 2016				Unsieved sample Wt.		Total Sample Wt.		Moist 0111		Metal 0390		Comp. Bottle Code		Final Wt <0.05 g (Y or N)		2nd Wt of sample/drying dish		Wt of dried sample/drying dish		Analysis		Sample Number	
Unsieved sample Description		entered		verified		Date		Time		Init./ Emp. #		Comments													
Sand blank (B)		X	→	X	→	11/11/16	→	1035	→	BQ	189	→													
8665500		X	→	X	→	11/11/16	→	1040	→	BQ	189	→	compos. Fe												
Sand blank (A)		X	→	X	→	11/12/16	→	0940	→	BQ	189	→	sand blank (A)												
8668437		X	→	X	→	11/12/16	→	0705	→	BQ	189	→													
8668438		X	→	X	→	11/12/16	→	0725	→	BQ	189	→													

Reviewed by:

Date:

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eurofins		Lancaster Laboratories Environmental				Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Document Title:		Revision: 2		Historical Reference: Form 5103		
Eurofins Document Reference:		1-P-QM-FOR-9010629				Effective date: Feb 6, 2016				Status: Effective						
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Metal 0390	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init./ Emp. #	Comments
8068439	13588										X					
	13564	9.98	9.97	Y				35.71	38.85		X		11/2/16	0745	38.85	
	2203										↓		↓	↓	↓	
8068440	13588										X					
	13564	10.16	10.16	Y				1286.93	80.92		X		11/2/16			
	2203										↓		↓	↓	↓	
8068441	13588										X					
	12564	10.16	10.16	Y				1286.93	80.92		X		11/2/16			
	2203										↓		↓	↓	↓	
8068442	13588										X					
	12564	10.16	10.16	Y				1286.93	80.92		X		11/2/16			
	2203										↓		↓	↓	↓	
8068444	13588										X					
	12564	9.66	9.65	Y				446.94	48.72		X		11/2/16	0815	38.85	
	2203										↓		↓	↓	↓	

Reviewed by:

Date:

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eurofins		Lancaster Laboratories: Environmental										Document Title: Sample Preparation of Solid Samples Using Incremental Sampling Methodology					Eurofins Document Reference: 1-P-QM-FOR-9010529		Revision: 2		Historical Reference: Form 5103	
		Effective date: Feb 6, 2016										Status: Effective										
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Metal 0390	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init./ Emp. #	Comments						
Sand Blank (B)	13588																sand blank (B)					
	13564																					
	2203																					
8668445	13588																composite sand blank					
	13564																					
	2203																					
1489#1 1489#2 1489#3	13588												11/3/16	0700	3089	10.32						
	12564													0702		10.29						
	2203													0704		10.29						
1489#4 1489#5 1489#6	13588													0704		11.20						
	12564													0708		12.36						
	2203													0710		11.72						
1489#7 1489#8 1489#9	13588													0712		10.66						
	12564													0714		11.40						
	2203													0716		10.88						

Reviewed by:

Date:

Organic Extraction Batchlog

Assigned to: 1429 David Hershey

Reviewed by: *DA 2655*Start Date: *11-7-16*Start time: *13:00***163080031A**Tech 1: *DA 2655*Tech 2: *—*

Dept: 24	QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	BC	Comments
	8665493DUP1	03D03DUP	10.10	SS1625724A	0.1			40	Z	020a	
	8665493MS001	03D03MS	10.10	SS1625724A				40	Z	020a	
	8665498MS01	03D07	10.15	SS1625724A		MS1630824A	2	40	Z	020a	
	8665499MSD11	03D07	10.26	SS1625724A		MS1630824A	2	40	Z	020a	
	BLANKA	14P PBLK31308	10.0	SS1625724A				40	Z		
	LCSA	11-7-16 LCS31308	10.0	SS1625724A		MS1630824A	2	40	Z		
	LCSISM	LCS31308	10.0	SS1625724A	4			40	Z		

*added sol of m>1630824C to 500grams of clean soil
matrix to create CLM*

Spike Solutions: Witness:

MS1630824A 8330B LOD SPECIAL SPIKE

SS1625724A 8330B SURROGATE

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	BC	Comments	Analyses	List	Due Date	Prio
1	8665493	10.10	SS1625724A	0.1	40	Z	020a		13413	22303	11/17/2016	N
2	8665494	10.21	SS1625724A		40	Z	020a		13413	22303	11/17/2016	N
3	8665495	10.24	SS1625724A		40	Z	020a		13413	22303	11/17/2016	N
4	8665496	10.11	SS1625724A		40	Z	020a		13413	22303	11/17/2016	N
5	8665497BKG	10.19	SS1625724A		40	Z	020a		13413	22302	11/17/2016	N
6	8665500	10.00	SS1625724A		40	Z	020a		13413	22302	11/17/2016	N
7	8668437	10.49	SS1625724A		40	Z	020a		13413	22303	11/18/2016	N
8	8668438	10.21	SS1625724A		40	Z	315a	Soil: Brown	13413	22303	11/18/2016	N
9	8668439	10.35	SS1625724A		40	Z	020a		13413	22303	11/18/2016	N
10	8668444	10.43	SS1625724A		40	Z	315a	Soil: Brown	13413	22303	11/18/2016	N
11	8668445	10.42	SS1625724A	4	40	Z	020a		13413	22302	11/18/2016	N

started: 14:00 11-7-16

stopped: 9:00 11-8-16

Bench#	Bench#	Bench#
Rack ID:	Work Station	Micro Temp
Internal Standard	Balance #	100?

R-VAP ID	C	R-VAP ID	C	R-VAP ID	C
S-bath ID	C	S-bath ID	C	N-Evap	C

M-vap

C

163080031A

eurofins		Lancaster Laboratories Environmental		Document Title: Sample Preparation of Solid Samples Using Incremental Sampling Methodology						Revision: 2		Historical Reference: Form 6103			
Eurofins Document Reference: 1-P-QM-FOR-9010629		Effective date: Feb 6, 2016		Status: Effective											
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init./ Emp. #	Comments
Sand Blank (A)	13588											11/11/16	0830	30 189	Sand Blank (A)
	13564						37	33				↓	↓	↓	
	2203														
8665491	13588														
	13564	9.92	9.93	Y	34		39.6	17.1		X	X	11/11/16	0715	30 189	
	2203						↓	83				↓	↓	↓	
8665492	13588														
	12564	9.98	9.98	Y	34		450	26		X	X	11/11/16	0710	30 189	
	2203						↓	54				↓	↓	↓	
8665493	13588														
	12564	10.89	10.89	Y	34		420	23		X	X	11/11/16	0800	30 189	
	2203						↓	35				↓	↓	↓	
8665494	13588														
	12564	9.69	9.70	Y	34		428	52		X	X	11/11/16	0830	30 189	
	2203						↓	75				↓	↓	↓	

eurofins		Lancaster Laboratories Environmental				Document Title: Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Revision: 2		Historical Reference: Form 5103			
Eurofins Document Reference: 1-P-QM-FOR-9010529		Effective date: Feb 6, 2016				Status: Effective									
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init./ Emp. #	Comments
Sand Blank (A)	13588											11/11/16	00:30	30 189	Sand Blank (A)
	13564						396.37	37.33		X	X	11/11/16	07:15	30 189	
	2203														
8665491	13588														
	13564	9.92	9.93	Y	34		396.37	37.33		X	X	11/11/16	07:15	30 189	
	2203														
8665492	13588														
	12564	9.98	9.98	Y	34		450.96	54.54		X	X	11/11/16	07:40	30 189	
	2203														
8665493	13588														
	12564	10.89	10.89	Y	34		420.06	55.55		X	X	11/11/16	08:00	30 189	
	2203														
8665494	13588														
	12564	9.69	9.70	Y	34		428.75	52.25		X	X	11/11/16	08:30	30 189	
	2203														

Reviewed by: _____

Date: _____

237681 27

eurofins		Lancaster Laboratories Environmental		Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Document Title:		Revision: 2		Historical Reference: Form 6103					
Eurofins Document Reference: 1-P-QM-FOR-9010629				Effective date: P#55, 2015				Status: Effective									
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Metal 0390	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init./ Emp. #	Comments	
8665495	13588													11/11/16	0906	BQ 189	
	13564	10.48	10.49	Y				443. 15	58. 35		X	X					
	2203																
8665496	13588													11/11/16	0930	BQ 189	
	13564	11.35	11.36	Y				424. 69	10. 45		X	X					
	2203																
8665497	13588													11/11/16	1030	BQ 189	
	12564	10.17	10.17	Y				1020. 88	123. 29		X	X					
	2203																
8665498	13588													11/11/16	1030	BQ 189	
	12564	10.17	10.17	Y				1020. 88	123. 29		X	X					
	2203																
8665499	13588													11/11/16	1030	BQ 189	
	12564	10.17	10.17	Y				1020. 88	123. 29		X	X					
	2203																

Reviewed by:

Date:

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eurofins		Lancaster Laboratories Environmental		Document Title: Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Revision: 2		Historical Reference: Form 5103						
Eurofins Document Reference: 1-P-QM-FOR-9010529				Effective date: Feb 6, 2015				Status: Effective								
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Metal 0390	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init./ Emp. #	Comments
Sand blank (B)	13588										X →	X →	11/11/16	1035	BQ 189	
	13564										X →	X →				
	2203														↓	
8665500	13588										X →	X →	11/11/16	1040	BQ 189	composite sand blank
	13564										X →	X →				
	2203														↓	
Sand blank (A)	13588										X →	X →	11/21/16	0640	BQ 189	sand blank (CA)
	12564										X →	X →				
	2203														↓	
8668437	13588										X →	X →	11/21/16	0705	BQ 189	
	12564	11.29	11.28	Y				36.75	32.46		X →	X →				
	2203														↓	
8668438	13588										X →	X →	11/21/16	0725	BQ 189	
	12564	10.03	10.00	Y				50.26	44.95		X →	X →				
	2203														↓	

Reviewed by: _____

Date: _____

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eurofins		Lancaster Laboratories Environmental				Document Title: Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Revision: 2		Historical Reference: Form 5103				
Eurofins Document Reference: 1-P-QM-FOR-9010529		Effective date: Feb 6, 2016				Status: Effective										
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Metal 0390	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init./ Emp. #	Comments
Sand blank (B)	13588										X	X	11/11/16	1035	BQ 189	
	13564										X	X	11/11/16	1035	BQ 189	
	2203										X	X	11/11/16	1035	BQ 189	
8665500	13588										X	X	11/11/16	1040	BQ 189	composite sand blank
	13564										X	X	11/11/16	1040	BQ 189	
	2203										X	X	11/11/16	1040	BQ 189	
Sand blank (A)	13588										X	X	11/12/16	0640	BQ 189	sand blank (CA)
	12564										X	X	11/12/16	0640	BQ 189	
	2203										X	X	11/12/16	0640	BQ 189	
8668437	13588										X	X	11/12/16	0705	BQ 189	
	12564	11.29	11.28	Y				316.2 2.5	32.46		X	X	11/12/16	0705	BQ 189	
	2203										X	X	11/12/16	0705	BQ 189	
8668438	13588										X	X	11/12/16	0705	BQ 189	
	12564	10.63	10.60	Y				304.26	32.85		X	X	11/12/16	0705	BQ 189	
	2203										X	X	11/12/16	0705	BQ 189	

Reviewed by: _____

Date: _____

eurofins		Lancaster Laboratories Environmental		Document Title: Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Revision: 2		Historical Reference: Form 5103						
Eurofins Document Reference: 1-P-QM-FOR-9040529				Effective date: Feb 8, 2016				Status: Effective								
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Metal 0390	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init./ Emp. #	Comments
860843A	13588															
	13564	9.98	9.97	Y				375.71	38.85		X	X	11/2/16	0745	BQ 189	↓
	2203															↓
860844D	13588															
	13564	10.16	10.16	Y				1286.93	80.92		X	X	11/2/16			↓
	2203															
860844I	13588															
	12564	10.16	10.16	Y				1286.93	80.92		X	X	11/2/16			↓
	2203															
860844Z	13588															
	12564	10.16	10.16	Y				1286.93	80.92		X	X	11/2/16			↓
	2203															
860844Y	13588															
	12564	9.66	9.65	Y				446.94	48.72		X	X	11/2/16	0815	BQ 189	↓
	2203															↓

Reviewed by:

Date:

eurofins		Lancaster Laboratories Environmental		Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Document Title:		Revision: 2		Historical Reference: Form 5103					
Eurofins Document Reference: 1-P-QM-FOR-9010829				Effective date: Feb 5, 2015				Status: Effective									
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Metal 0390	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init./ Emp. #	Comments	
Sand Blank (B)	13588																sand blank (B)
	13564																
	2203																
8668445	13588																composite sand blank
	13564																
	2203																
1489#1	13588												11/3/16	0700	30189	10.32	
1489#2	12564													0702		10.29	
1489#3	2203													0704		10.29	
1489#4	13588													0704		11.20	
1489#5	12564													0708		12.36	
1489#6	2203													0710		11.72	
1489#7	13588													0712		10.66	
1489#8	12564													0714		11.40	
1489#9	2203													0716		10.88	

Reviewed by:

Date:

Organic Extraction Batchlog

Assigned to: 1429 David Hershey

Reviewed by: JLM 2855

Start Date: 11/15/16

Start time: 16:00

163190023A

Tech 1: DHW

Tech 2:

Solvent Used	Lot No.
Acetonitrile	165131
CaCl2 Sol'n	712102616A
Syringe Filter	

Dept: 24	Prep Analysis: 13433 Nitroaromatic/Amine Ext 8330B	Nitroaromatics/Amines 8330B(s)									
QC 504 1114-34 012	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
8665493DUP1	03D03DUP	10.1	SS1631624A	0.1			40	Z	Z	20A	
8665493MS	03D03MS	10.4	SS1631624A				40	Z	Z	20A	
8665498MS	03D07	10.1	SS1631624A		MS1630824A	2	40	Z	Z	20A	
8665499MSD	03D07	10.1	SS1631624A		MS1630824A	2	40	Z	Z	20A	
BLANKA	PBLK23319	10.0	SS1631624A				40	Z	Z	7	
LCSA	LCS23319	10.0	SS1631624A		MS1630824A	2	40	Z	Z	7	
LCSISM	LCS23319	10.0	SS1631624A				40	Z	Z	7	

O-HAWA Sand - 213140-AC
MA-Don - 11315A
clean soil mat. - B22130317
NA

Spike Solutions:

Witness: DS 2491

MS1630824A 8330B LOD SPECIAL SPIKE
SS1631624A 8330B SURROGATE

DWE02

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
118665493	R 03D03	10.1	SS1631624A	0.1	40	Z	Z	20A	Soil: Grey 11-15-16	13413	22303	11/17/2016	N
218665494	R 03D04	10.1	SS1631624A		40	Z	Z	20A		13413	22303	11/17/2016	N
318665495	R 03D05	10.2	SS1631624A		40	Z	Z	20A		13413	22303	11/17/2016	N
418665496	R 03D06	10.2	SS1631624A		40	Z	Z	20A		13413	22303	11/17/2016	N
518665497BKGR	03D07	10.3	SS1631624A		40	Z	Z	20A		13413	22302	11/17/2016	N
618665500	R 03D08	10.4	SS1631624A		40	Z	Z	20A		13413	22302	11/17/2016	N
718668437	R 02D21	10.7	SS1631624A		40	Z	Z	20A	Soil: Brown 11-15-16	13413	22303	11/18/2016	N
818668438	R 02D22	10.8	SS1631624A		40	Z	Z	20A		13413	22303	11/18/2016	N
918668439	R 02D23	10.0	SS1631624A		40	Z	Z	20A		13413	22303	11/18/2016	N
1018668444	R 02D26	10.1	SS1631624A		40	Z	Z	20A		13413	22303	11/18/2016	N
1118668445	R 02D27	10.1	SS1631624A		40	Z	Z	20A		13413	22302	11/18/2016	N

Start: 16:00 11-15-16

Stop: 10:00 11-16-16

D.H. WJL
11/11/16

Bench#	Bench#	Bench#
Rack ID:	Work Station	Micro Temp
Internal Standard	Balance #	100?

R-VAP ID	C	R-VAP ID	C	R-VAP ID	C
S-bath ID	C	S-bath ID	C	N-Evap	C
				M-vap	C

163190023A



eurofins		Lancaster Laboratories Environmental				Document Title: Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Sample Preparation of Solid Samples Using Incremental Sampling Methodology		Historical Reference: Form 5103					
Eurofins Document Reference: 1-P-QM-FOR-9010529		Effective date: Feb 5, 2015				Revision: 2		Status: Effective									
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	*Comp. Bottle Code	Metal 0390	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init./ Emp. #	Comments	
Sand Blank (A)	13588							296.37	9.37					11/11/16	0630	32 189	Sand Blank (A)
	13564													↓	↓	↓	
	2203													↓	↓	↓	
8665491	13588							396.37	17.33					11/11/16	0715	32 189	
	13564	9.92	9.93	Y	34						X	X		↓	↓	↓	
	2203													↓	↓	↓	
8665492	13588							450.96	26.54					11/11/16	0740	32 189	
	12564	9.98	9.98	Y	34						X	X		↓	↓	↓	
	2203													↓	↓	↓	
8665493	13588							420.96	23.35					11/11/16	0800	32 189	
	12564	10.89	10.89	Y	34						X	X		↓	↓	↓	
	2203													↓	↓	↓	
8665494	13588							428.75	52.25					11/11/16	0830	32 189	
	12564	9.69	9.70	Y	34						X	X		↓	↓	↓	
	2203													↓	↓	↓	

eurofins		Document Title: Sample Preparation of Solid Samples Using Incremental Sampling Methodology														
Lancaster Laboratories Environmental		Eurofins Document Reference: 1-P-QM-FOR-90105.20		Revision: 2		Historical Reference: Form 5103		Status: Effective								
		Effective date: Feb 5, 2015														
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Metal 0390	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init./ Emp. #	Comments
sand blank (A)	13588							29.6	37	33			11/11/16	0630	32 189	sand blank (A)
	13564															
	2203															
8665491	13588							39.6	37	83			11/11/16	0715	32 189	
	13564	9.92	9.93	Y	34						X	X				
	2203															
8665492	13588							43.0	36	54			11/11/16	0740	32 189	
	12564	9.98	9.98	Y	34						X	X				
	2203															
8665493	13588							42.0	25	35			11/11/16	0800	32 189	
	12564	10.89	10.89	Y	34						X	X				
	2203															
8665494	13588							42.8	52	75			11/11/16	0830	32 189	
	12564	9.69	9.70	Y	34						X	X				
	2203															

Reviewed by:

Date:

eurofins		Lancaster Laboratories Environmental				Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Document Title:		Revision: 2		Historical Reference: Form 5103		
Eurofins Document Reference: 1-P-QM-FOR-9010529		Effective date: Feb 5, 2016				Status: Effective										
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Metal 0390	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init / Emp. #	Comments
8665495	13588							443.58	58		X	X	11/11/16	0905	BQ 189	
	13564	10.48	10.49	Y				15	35		X	X				
	2203															
8665496	13588							429.40	40		X	X	11/11/16	0930	BQ 189	
	13564	11.35	11.36	Y				69	45		X	X				
	2203															
8665497	13588							1030.123	123		X	X	11/11/16	1030	BQ 189	
	12564	10.17	10.17	Y				88	29		X	X				
	2203															
8665498	13588							1020.123	123		X	X	11/11/16	1030	BQ 189	
	12564	10.17	10.17	Y				88	29		X	X				
	2203															
8665499	13588							1020.123	123		X	X	11/11/16	1030	BQ 189	
	12564	10.17	10.17	Y				88	29		X	X				
	2203															

Reviewed by:

Date:

237681 28

Document Title: Sample Preparation of Solid Samples Using Incremental Sampling Methodology									
Lancaster Laboratories Environmental		Eurofins Document Reference: 1-P-QM-FOR-9011620		Revision: 2		Historical Reference: Form 5103			
Sample Number		Analysis		Wt of dried sample/ drying dish		2 nd Wt of sample/drying dish		Final Wt <0.05 g (Y or N)	
Sample Description		Comp. Bottle Code		Metal 0390		Moist 0111		Total Sample Wt.	
Unsieved sample Wt.		Unsieved Sample Description		entered		verified		Date	
Time		Init./ Emp. #		Comments					
Sand blank (B)	13588								
	13564								
	2203								
8665500	13588								
	13564								
	2203								
Sand blank (A)	13588								
	12564								
	2203								
8668437	13588								
	12564	11.29	11.28	Y					
	2203								
8668438	13588								
	12564	10.03	10.00	Y					
	2203								

Date:

Reviewed by:

eurofins		Lancaster Laboratories Environmental		Document Title: Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Revision: 2		Historical Reference: Form 5103						
Eurofins Document Reference: 1-P-QM-FQR-9010629				Effective date: Feb 5, 2015				Status: Effective								
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Metal 0390	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init./ Emp. #	Comments
860843A	13588										X	X	11/2/16	0745	BQ 189	
	13564	9.98	9.97	Y				35.71	38.55		X	X	11/2/16	0745	BQ 189	
	2203										X	X	11/2/16	0745	BQ 189	
8608440	13588										X	X	11/2/16			
	13564	10.16	10.16	Y				1286.93	80.92		X	X	11/2/16			
	2203										X	X	11/2/16			
8608441	13588										X	X	11/2/16			
	12564	10.16	10.16	Y				1286.93	80.92		X	X	11/2/16			
	2203										X	X	11/2/16			
8608442	13588										X	X	11/2/16			
	12564	10.16	10.16	Y				1286.93	80.92		X	X	11/2/16			
	2203										X	X	11/2/16			
8608444	13588										X	X	11/2/16			
	12564	9.66	9.65	Y				446.94	48.72		X	X	11/2/16	0815	BQ 189	
	2203										X	X	11/2/16	0815	BQ 189	

eurofins		Lancaster Laboratories Environmental										Document Title: Sample Preparation of Solid Samples Using Incremental Sampling Methodology				Revision: 2		Historical Reference: Form 5103	
Eurofins Document Reference: 1-P-QM-FOR-0010529		Effective date: Feb 5, 2015										Status: Effective							
Sample Number	Analysis	Wt of dried sample/ drying dish	2 nd Wt of sample/drying dish	Final Wt <0.05 g (Y or N)	Comp. Bottle Code	Metal 0390	Moist 0111	Total Sample Wt.	Unsieved sample Wt.	Unsieved Sample Description	entered	verified	Date	Time	Init./ Emp. #	Comments			
Sand Blank (B)	13588																		
	13564																sand blank (B)		
	2203																		
8608445	13588																		
	13564																composite		
	2203																sand blank		
1489#1	13588												11/3/16	0700	3989	10.32			
1489#2	12564													0702		10.29			
1489#3	2203													0704		10.29			
1489#4	13588													0704		11.20			
1489#5	12564													0708		12.36			
1489#6	2203													0710		11.72			
1489#7	13588													0712		10.06			
1489#8	12564													0714		11.40			
1489#9	2203													0716		10.88			

Reviewed by:

Date:

Wet Chemistry Data

Case Narrative/Conformance Summary

Wet Chemistry

Case Narrative/Conformance Summary

CLIENT: CH2M Hill, Inc.
SDG: DWE02

Water Quality

Fraction: Wet Chemistry

Sample #	Client ID	Matrix		Comments
		Liquid	Solid	
8663477	DU-3-1-B		X	Background/Unspiked
8663478	DU-3-1-B SS		X	Soluble Spike
8663479	DU-3-1-B IS		X	Insoluble Spike
8663480	DU-3-1-B PDS		X	Post Digestion Spike
8663481	DU-3-1-B DUP		X	Duplicate
8663485	EB-1	X		Equipment Blank
8668443	BGA-3		X	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Method defined actions are taken for any failed matrix QC.

Batch#: 16313042501A (Sample number(s): 8663477-8663481, 8668443, UNSPK: 8663477-8663478, BKG: 8663477)

The recovery(ies) for the following analyte(s) in the MS is outside the acceptance window: Hexavalent Chromium (SOLIDS)

Case Narrative/Conformance Summary

CLIENT: CH2M Hill, Inc.

SDG: DWE02

Water Quality

Fraction: Wet Chemistry

SAMPLE ANALYSIS:

Samples	Hexavalent Chromium	Hexavalent Chromium (SOLIDS)	Oxidation Reduction Potential	pH
8663477		UNSPK/ DF10	UNSPK/ DF1	UNSPK/ DF1
8663478		SS/ DF10		
8663479		IS/ DF10		
8663480		PDS/ DF10		
8663481		D/ DF10	D/ DF1	D/ DF1
8663485	UNSPK,D/ DF1			
8668443		DF20	DF1	DF1

(Sample number(s): 8663477, 8663481, 8668443: Analysis: 00394)

The pH was measured in water at 20.5 C.

(Sample number(s): 8663477, 8663481, 8668443: Analysis: 00425)

Reporting limits were raised due to interference from the sample matrix.

No other problems were encountered with the analysis of the samples.

Abbreviation Key

U = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
R = Matrix Spike (MS)	MDL = Method Detection Limit
M = Matrix Spike Duplicate (MSD)	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	NA = Not Applicable
HS = High Spike	ME = Method
LS = Low Spike	CO = Colorimetric
SS = Soluble Spike	G = Gravimetric
IS = Insoluble Spike	IR = Infrared Spectrophotometry
ISD = Insoluble Spike Duplicate	MTR = Meter
PDS = Post Digestion Spike	OD = Oven Dried
* = Out of Specification	TI = Titration
V = Visual	TOC = Total Organic Carbon
AK = Alpkem	IC = Ion Chromatography
TC = Total Carbon	RA = Rapid Analyzer

QC Summary

Wet Chemistry

Quality Control Reference List Water Quality

CLIENT: CH2M Hill, Inc.
SDG: DWE02

Fraction: Wet Chemistry

Analysis	Batch Number	Sample Number	Analysis Date
Hexavalent Chromium	16300027601A	P300027B	10/26/2016 12:02:00
		P300027Q	10/26/2016 12:02:00
		P300027Y	10/26/2016 12:02:00
		8663485 BKG,DUP	10/26/2016 12:02:00
Hexavalent Chromium (SOLIDS)	16313042501A	P313042B	11/09/2016 04:10:00
		P313042Q	11/09/2016 04:10:00
		8663478 SS	11/09/2016 04:10:00
		8663480 PDS	11/09/2016 04:10:00
		8663477 UNSPK/BKG	11/09/2016 04:10:00
		8663479 IS	11/09/2016 04:10:00
		8663481 DUP	11/09/2016 04:10:00
Oxidation Reduction Potential	16313182101A	8668443	11/09/2016 04:10:00
		P313182Q	11/08/2016 21:15:00
		8663477 BKG	11/08/2016 21:15:00
		8663481 DUP	11/08/2016 21:15:00
pH	16313039402A	8668443	11/08/2016 21:15:00
		P313039Q	11/08/2016 21:35:00
		8663477 BKG	11/08/2016 21:35:00
		8663481 DUP	11/08/2016 21:35:00
		8668443	11/08/2016 21:35:00

Fraction: Wet Chemistry

16300027601A / P300027B Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
Hexavalent Chromium	CO	10/26/16	N.D.	mg/l	0.0070	0.020

Fraction: Wet Chemistry

16313042501A / P313042B Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
Hexavalent Chromium (SOLIDS)	CO	11/09/16	N.D.	mg/kg	0.50	1.5

Water Quality

Fraction: Wet Chemistry

Hexavalent Chromium (SOLIDS) Parameter	Batch: 16313042501A (Sample number(s): 8663477-8663481, 8668443)									
	ME	Spike Added mg/kg	Unspiked Conc mg/kg	Spike Conc mg/kg	Spike Dup Conc mg/kg	Spike %Rec	Spike Dup %Rec	%Rec Limits	%RPD	%RPD Limits
UNSPK: 8663477 SS: 8663478	CO	40.3	N.D.	26.06	NA	65 *	NA	75-125	NA	NA
IS: 8663479	CO	803.97	N.D.	213.85	NA	27 *	NA	75-125	NA	NA
PDS: 8663477	CO	100	N.D.	97.36	NA	97	NA	85-115	NA	NA

Comments:

(2) The unspiked sample result is greater than four times the spike added.

* = Out of Specification

Results are being reported on an as received basis.

Water Quality

Fraction: Wet Chemistry

BKG: 8663485 DUP: 8663485	Batch: 16300027601A (Sample number(s): 8663485)				
Parameter	ME	Unspiked Conc mg/l	DUP Conc mg/l	%RPD	%RPD Limits
Hexavalent Chromium	CO	N.D.	N.D.	0 (1)	5

Comments:

(1) The sample and/or duplicate result is less than five times the LOQ.

* = Out of Specification

Results are being reported on an as received basis.

Water Quality

Fraction: Wet Chemistry

BKG: 8663477 DUP: 8663481	Batch: 16313039402A (Sample number(s): 8663477, 8663481, 8668443)				
Parameter	ME	Unspiked Conc Std. Units	DUP Conc Std. Units	%RPD	%RPD Limits
pH	MTR	4.62	4.7	2	3

BKG: 8663477 DUP: 8663481	Batch: 16313042501A (Sample number(s): 8663477-8663481, 8668443)				
Parameter	ME	Unspiked Conc mg/kg	DUP Conc mg/kg	%RPD	%RPD Limits
Hexavalent Chromium (SOLIDS)	CO	N.D.	N.D.	0 (1)	20

BKG: 8663477 DUP: 8663481	Batch: 16313182101A (Sample number(s): 8663477, 8663481, 8668443)				
Parameter	ME	Unspiked Conc mV	DUP Conc mV	%RPD	%RPD Limits
Oxidation Reduction Potential	TI	553.5	555.5	0	5

Comments:

(1) The sample and/or duplicate result is less than five times the LOQ.

* = Out of Specification

Results are being reported on an as received basis.

Water Quality
Fraction: Wet Chemistry

LCS: P300027Q LCSD: P300027Y	Batch: 16300027601A (Sample number(s): 8663485)								
Parameter	ME	Spike Added mg/l	LCS Conc mg/l	LCSD Conc mg/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Hexavalent Chromium	CO	0.200	0.208	0.202	104	101	90-110	3	4

SDG: DWE02
Matrix: SOLID

Water Quality
Fraction: Wet Chemistry

LCS: P313039Q	Batch: 16313039402A (Sample number(s): 8663477, 8663481, 8668443)								
Parameter	ME	Spike Added Std. Units	LCS Conc Std. Units	LCSD Conc Std. Units	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
pH	MTR	7.00	6.97	NA	100	NA	95-105	NA	NA

LCS: P313042Q	Batch: 16313042501A (Sample number(s): 8663477-8663481, 8668443)								
Parameter	ME	Spike Added mg/kg	LCS Conc mg/kg	LCSD Conc mg/kg	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Hexavalent Chromium (SOLIDS)	CO	5.00	4.59	NA	92	NA	80-120	NA	NA

LCS: P313182Q	Batch: 16313182101A (Sample number(s): 8663477, 8663481, 8668443)								
Parameter	ME	Spike Added mV	LCS Conc mV	LCSD Conc mV	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Oxidation Reduction Potential	TI	427	431	NA	101	NA	98-102	NA	NA

Moisture Data

MOISTURE

SAMPLE NUMBERS:

<u>Sample #</u>	<u>Sample Code</u>
8663469	02DW1
8663470	02DW2
8663471	02DW3
8663472	02DW4
8663473	02DW5
8663474	02DW6
8663475	02DW7
8663476	02DW8
8663477	02DW9BKG
8663478	02DW9SS
8663479	02DW9IS
8663480	02DW9PDS
8663481	02DW9DUP
8663482	02D10BKG
8663483	02D10MS
8663484	02D10MSD
8665491	03D01
8665492	03D02
8665493	03D03
8665494	03D04
8665495	03D05
8665496	03D06
8665497	03D07BKG
8665498	03D07MS
8665499	03D07MSD
8668437	02D21
8668438	02D22
8668439	02D23
8668440	02D24BKG
8668441	02D24MS
8668442	02D24MSD
8668443	02D25
8668444	02D26FD

COMMENTS:

Method defined actions are taken for any failed matrix QC.

MOISTURE

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>LCS</u> <u>%REC</u>	<u>LCSD</u> <u>%REC</u>	<u>LCS/LCSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 16322820017A			Sample number(s): 8663469-8663481, 8663469-8663481, 8663469-8663481, 8663469-8663481, 8663469-8663481, 8663469-8663481, 8663469-8663481, 8663469-8663481		
Moisture	100		99-101		
Moisture	100		99-101		
Moisture Duplicate	100		99-101		
Batch number: 16322820017B			Sample number(s): 8663482-8663484, 8663482-8663484, 8663482-8663484, 8663482-8663484, 8663482-8663484, 8663482-8663484, 8663482-8663484		
Moisture	100		99-101		
Moisture	100		99-101		
Moisture Duplicate	100		99-101		
Batch number: 16326820001B			Sample number(s): 8668443		
Moisture	100		99-101		
Batch number: 16326820004A			Sample number(s): 8665491-8665492, 8665491-8665492, 8668440-8668442		
Moisture	100		99-101		
Moisture	100		99-101		
Moisture Duplicate	100		99-101		
Batch number: 16334820002A			Sample number(s): 8665493-8665496, 8665493-8665496, 8668437-8668439, 8668444		
Moisture	100		99-101		
Batch number: 16336820006A			Sample number(s): 8665497-8665499, 8665497-8665499		
Moisture	100		99-101		
Moisture	100		99-101		
Moisture Duplicate	100		99-101		

MOISTURE

Sample Matrix Quality Control

<u>Analysis Name</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 16322820017A	Sample number(s): 8663469-8663481, 8663469-8663481, 8663469-8663481, 8663469-8663481, 8663469-8663481, 8663469-8663481, 8663469-8663481			
Moisture	3.3	3.0	7*	5
Moisture	3.3	3.0	7*	5
Moisture Duplicate	3.3	3.0	7*	5
Batch number: 16322820017B	Sample number(s): 8663482-8663484, 8663482-8663484, 8663482-8663484, 8663482-8663484, 8663482-8663484, 8663482-8663484			
Moisture	4.3	3.1	30*	5
Moisture	4.3	3.1	30*	5
Moisture Duplicate	4.3	3.1	30*	5
Batch number: 16326820001B	Sample number(s): 8668443			
Moisture	95.3	95.9	1	5
Batch number: 16326820004A	Sample number(s): 8665491-8665492, 8665491-8665492, 8668440-8668442			
Moisture	3.0	2.6	12*	5
Moisture	3.0	2.6	12*	5
Moisture Duplicate	3.0	2.6	12*	5
Batch number: 16334820002A	Sample number(s): 8665493-8665496, 8665493-8665496, 8668437-8668439, 8668444			
Moisture	10.6	11.4	8*	5
Batch number: 16336820006A	Sample number(s): 8665497-8665499, 8665497-8665499			
Moisture	6.6	7.5	13*	5
Moisture	6.6	7.5	13*	5
Moisture Duplicate	6.6	7.5	13*	5

* - Outside of specification

(1) - The result for one or both determinations was less than five times the LOQ.

MOISTURE

Moisture Data Report

Batch #: 16322820017

Sample ID	Batch ID	Analysis#	Sample		Dry Wt	%Moisture	Analysis	Verified
			Tare Wt	Wt			Date (Emp#)	Date (Emp#)
8663469	A	00111	1.1262	1.3080	2.4203	1.06	11/18/16 (835/LEB)	11/21/16 (236/CW)
8663470	A	00111	1.1600	1.0699	2.2095	1.91	11/18/16 (835/LEB)	11/21/16 (236/CW)
8663471	A	00111	1.1594	1.5026	2.6261	2.39	11/18/16 (835/LEB)	11/21/16 (236/CW)
8663472	A	00111	1.1493	1.1148	2.2330	2.79	11/18/16 (835/LEB)	11/21/16 (236/CW)
8663473	A	00111	1.1519	1.1413	2.2422	4.47	11/18/16 (835/LEB)	11/21/16 (236/CW)
8663474	A	00111	1.1576	1.3370	2.4478	3.50	11/18/16 (835/LEB)	11/21/16 (236/CW)
8663475	A	00111	1.1470	1.0914	2.1995	3.56	11/18/16 (835/LEB)	11/21/16 (236/CW)
8663476	A	00111	1.1502	1.2593	2.3669	3.38	11/18/16 (835/LEB)	11/21/16 (236/CW)
8663477BKG	A	00111	1.1712	5.2215	6.2229	3.25	11/18/16 (835/LEB)	11/21/16 (236/CW)
8663478SS	A	00118				3.25	11/18/16 (835/LEB)	11/21/16 (236/CW)
8663479IS	A	00118				3.25	11/18/16 (835/LEB)	11/21/16 (236/CW)
8663480PDS	A	00118				3.25	11/18/16 (835/LEB)	11/21/16 (236/CW)
8663481DUP	A	00118				3.25	11/18/16 (835/LEB)	11/21/16 (236/CW)
8663481DUP	A	00121	1.1590	5.2080	6.2097	3.02	11/18/16 (835/LEB)	11/21/16 (236/CW)
8663482BKG	B	00111	1.1667	5.4862	6.4194	4.26	11/18/16 (835/LEB)	11/22/16 (236/CW)
8663483MS	B	00118				4.26	11/18/16 (835/LEB)	11/22/16 (236/CW)
8663484MSD	B	00118				4.26	11/18/16 (835/LEB)	11/22/16 (236/CW)
8663484MSD	B	00121	1.1736	5.3461	6.3516	3.14	11/18/16 (835/LEB)	11/22/16 (236/CW)
LCS 89.5% Std.		00111	1.1440	5.0598	1.6782	89.44	11/18/16 (835/LEB)	11/21/16 (236/CW)

Batch #: 16326820001

Sample ID	Batch ID	Analysis#	Sample		Dry Wt	%Moisture	Analysis	Verified
			Tare Wt	Wt			Date (Emp#)	Date (Emp#)
8668443	B	00111	1.1109	5.5851	5.3982	23.24	11/21/16 (189/WCS)	11/21/16 (236/CW)
P705573BKG	B	00111	1.1509	6.2068	1.4398	95.35	11/21/16 (189/WCS)	11/21/16 (236/CW)
P705573DUP	B	00111	1.1229	6.0460	1.3680	95.95	11/21/16 (189/WCS)	11/21/16 (236/CW)
LCS 89.5% Std.		00111	1.1292	5.0082	1.6573	89.46	11/21/16 (189/WCS)	11/21/16 (236/CW)

Batch #: 16326820004

Sample ID	Batch ID	Analysis#	Sample		Dry Wt	%Moisture	Analysis	Verified
			Tare Wt	Wt			Date (Emp#)	Date (Emp#)
8665491	A	00111	1.1319	5.6088	6.6138	2.26	11/21/16 (835/LEB)	11/22/16 (236/CW)
8665492	A	00111	1.1165	5.4139	6.3589	3.17	11/21/16 (835/LEB)	11/22/16 (236/CW)
8668440BKG	A	00111	1.1330	5.4309	6.4025	2.97	11/21/16 (835/LEB)	11/22/16 (236/CW)
8668441MS	A	00118				2.97	11/21/16 (835/LEB)	11/22/16 (236/CW)
8668442MSD	A	00118				2.97	11/21/16 (835/LEB)	11/22/16 (236/CW)
8668442MSD	A	00121	1.1088	5.5424	6.5058	2.62	11/21/16 (835/LEB)	11/22/16 (236/CW)
LCS 89.5% Std.		00111	1.1184	5.0578	1.6577	89.34	11/21/16 (835/LEB)	11/22/16 (236/CW)

Batch #: 16334820002

Sample ID	Batch ID	Analysis#	Sample		Dry Wt	%Moisture	Analysis	Verified
			Tare Wt	Wt			Date (Emp#)	Date (Emp#)
8665493	A	00111	1.1342	5.2967	6.3681	1.19	11/29/16 (835/LEB)	11/30/16 (236/CW)
8665494	A	00111	1.1293	5.7689	6.8038	1.64	11/29/16 (835/LEB)	11/30/16 (236/CW)
8665495	A	00111	1.1366	5.5553	6.5960	1.73	11/29/16 (835/LEB)	11/30/16 (236/CW)
8665496	A	00111	1.1568	5.5071	6.5667	1.76	11/29/16 (835/LEB)	11/30/16 (236/CW)
8668437	A	00111	1.1650	5.2663	6.3108	2.29	11/29/16 (835/LEB)	11/30/16 (236/CW)
8668438	A	00111	1.1395	5.1105	6.0231	4.44	11/29/16 (835/LEB)	11/30/16 (236/CW)
8668439	A	00111	1.1560	5.4081	6.4254	2.56	11/29/16 (835/LEB)	11/30/16 (236/CW)
8668444FD	A	00111	1.1731	5.1539	6.1893	2.67	11/29/16 (835/LEB)	11/30/16 (236/CW)
P712899BKG	A	00111	1.1669	5.7592	6.3165	10.58	11/29/16 (835/LEB)	11/30/16 (236/CW)
P712899DUP	A	00111	1.1373	5.8858	6.3500	11.44	11/29/16 (835/LEB)	11/30/16 (236/CW)
LCS 89.5% Std.		00111	1.1067	5.0598	1.6410	89.44	11/29/16 (835/LEB)	11/30/16 (236/CW)

Batch #: 16336820006

MOISTURE

<u>Sample ID</u>	<u>Batch ID</u>	<u>Analysis#</u>	<u>Tare Wt</u>	<u>Sample Wt</u>	<u>Dry Wt</u>	<u>%Moisture</u>	<u>Analysis Date (Emp#)</u>	<u>Verified Date (Emp#)</u>
8665497BKG	A	00111	1.1170	5.2939	6.0619	6.59	12/ 1/16 (835/LEB)	12/ 2/16 (236/CW)
8665498MS	A	00118				6.59	12/ 1/16 (835/LEB)	12/ 2/16 (236/CW)
8665499MSD	A	00118				6.59	12/ 1/16 (835/LEB)	12/ 2/16 (236/CW)
8665499MSD	A	00121	1.1082	5.4025	6.1066	7.48	12/ 1/16 (835/LEB)	12/ 2/16 (236/CW)
LCS 89.5% Std.		00111	1.1589	5.0404	1.6914	89.44	12/ 1/16 (835/LEB)	12/ 2/16 (236/CW)



July 18, 2016

Vista Work Order No. 1600835

Mr. Mark Sherrill
CH2M Hill
400 Embassy Row NE, Suite 600
Atlanta, GA 30328

Dear Mr. Sherrill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on June 28, 2016. This sample set was analyzed on a standard turn-around time, under your Project Name 'Woodbine Special Event'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Analytical Laboratory 1104 Windfeld Way El Dorado Hills, CA 95762 ph: 916-673-1520 fx: 916-673-0106 www.vista-analytical.com

Vista Work Order No. 1600835**Case Narrative****Sample Condition on Receipt:**

Nine soil samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:**EPA Method 1613**

These samples were extracted and analyzed for tetra-through-octa chlorinated dioxins and furans by EPA Method 1613 using a ZB-5MS GC column.

Holding Times

These samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

As requested, MS/MSDs were performed on samples "DU-1-12-A" and "DU-3-1-B". The recoveries of 1,2,3,4,6,7,8-HpCDD were outside of the acceptance criteria in the MS/MSD associated with sample "DU-1-12-A", as well as OCDD in the MSD. The acceptance criteria were met for all other analytes.

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Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1600835-01	DU-1-15-A		21-Jun-16 10:15	28-Jun-16 09:00	Clear Glass Jar, 120mL
1600835-02	DU-1-15-B		21-Jun-16 10:40	28-Jun-16 09:00	Clear Glass Jar, 120mL
1600835-03	DU-1-15-C		21-Jun-16 11:35	28-Jun-16 09:00	Clear Glass Jar, 120mL
1600835-04	DU-1-12-A	MS/MSD	21-Jun-16 15:45	28-Jun-16 09:00	Clear Glass Jar, 120mL
		MS/MSD			Clear Glass Jar, 120mL
		MS/MSD			Clear Glass Jar, 120mL
1600835-05	DU-1-12-B		21-Jun-16 16:30	28-Jun-16 09:00	Clear Glass Jar, 120mL
1600835-06	DU-1-12-C		21-Jun-16 17:10	28-Jun-16 09:00	Clear Glass Jar, 120mL
1600835-07	DU-3-1-A		21-Jun-16 13:00	02-Jun-16 09:30	Amber Glass, 60 mL
1600835-08	DU-3-1-B	MS/MSD	21-Jun-16 14:15	02-Jun-16 09:30	Amber Glass, 60 mL
		MS/MSD			Amber Glass, 60 mL
		MS/MSD			Amber Glass, 60 mL
1600835-09	DU-3-1-C		21-Jun-16 14:50	02-Jun-16 09:30	Amber Glass, 60 mL

ANALYTICAL RESULTS

Sample ID: Method Blank				EPA Method 1613B				
Matrix: Solid		QC Batch: B6G0039		Lab Sample: B6G0039-BLK1				
Sample Size: 10.0 g		Date Extracted: 07-Jul-2016 15:12		Date Analyzed : 12-Jul-16 18:46	Column: ZB-5MS	Analyst: DB		
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0722			IS 13C-2,3,7,8-TCDD	80.9	25 - 164	
1,2,3,7,8-PeCDD	ND	0.126			13C-1,2,3,7,8-PeCDD	67.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.103			13C-1,2,3,4,7,8-HxCDD	84.7	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.101			13C-1,2,3,6,7,8-HxCDD	80.5	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.107			13C-1,2,3,7,8,9-HxCDD	84.7	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	0.0793			13C-1,2,3,4,6,7,8-HpCDD	69.8	23 - 140	
OCDD	ND	0.126			13C-OCDD	50.2	17 - 157	
2,3,7,8-TCDF	ND	0.0952			13C-2,3,7,8-TCDF	82.4	24 - 169	
1,2,3,7,8-PeCDF	ND	0.115			13C-1,2,3,7,8-PeCDF	67.6	24 - 185	
2,3,4,7,8-PeCDF	ND	0.113			13C-2,3,4,7,8-PeCDF	64.6	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0368			13C-1,2,3,4,7,8-HxCDF	82.9	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0387			13C-1,2,3,6,7,8-HxCDF	78.7	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0397			13C-2,3,4,6,7,8-HxCDF	84.0	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0602			13C-1,2,3,7,8,9-HxCDF	86.3	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0503			13C-1,2,3,4,6,7,8-HpCDF	70.2	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0484			13C-1,2,3,4,7,8,9-HpCDF	66.0	26 - 138	
OCDF	ND	0.184			13C-OCDF	50.2	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	80.7	35 - 197	
					Toxic Equivalent Quotient (TEQ) Data			
					TEQMinWHO2005Dioxin	0.00		
TOTALS								
Total TCDD	ND	0.0722						
Total PeCDD	ND	0.126						
Total HxCDD	ND	0.103						
Total HpCDD	ND	0.0793						
Total TCDF	ND	0.0952						
Total PeCDF	ND	0.114						
Total HxCDF	ND	0.0431						
Total HpCDF	ND	0.0495						

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

The results are reported in dry weight. The sample size is reported in wet weight.

Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: OPR					EPA Method 1613B			
Matrix: Solid		QC Batch: B6G0039			Lab Sample: B6G0039-BS1			
Sample Size: 10.0 g		Date Extracted: 07-Jul-2016 15:12			Date Analyzed: 12-Jul-16 17:09 Column: ZB-5MS Analyst: DB			
Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard		%R	LCL-UCL
2,3,7,8-TCDD	19.1	20.0	95.6	67 - 158	IS	13C-2,3,7,8-TCDD	89.5	20 - 175
1,2,3,7,8-PeCDD	97.1	100	97.1	70 - 142		13C-1,2,3,7,8-PeCDD	71.2	21 - 227
1,2,3,4,7,8-HxCDD	98.1	100	98.1	70 - 164		13C-1,2,3,4,7,8-HxCDD	88.0	21 - 193
1,2,3,6,7,8-HxCDD	94.4	100	94.4	76 - 134		13C-1,2,3,6,7,8-HxCDD	86.9	25 - 163
1,2,3,7,8,9-HxCDD	96.3	100	96.3	64 - 162		13C-1,2,3,7,8,9-HxCDD	89.3	21 - 193
1,2,3,4,6,7,8-HpCDD	101	100	101	70 - 140		13C-1,2,3,4,6,7,8-HpCDD	70.4	26 - 166
OCDD	201	200	101	78 - 144		13C-OCDD	52.6	13 - 199
2,3,7,8-TCDF	20.0	20.0	99.8	75 - 158		13C-2,3,7,8-TCDF	89.7	22 - 152
1,2,3,7,8-PeCDF	98.3	100	98.3	80 - 134		13C-1,2,3,7,8-PeCDF	71.5	21 - 192
2,3,4,7,8-PeCDF	98.7	100	98.7	68 - 160		13C-2,3,4,7,8-PeCDF	70.1	13 - 328
1,2,3,4,7,8-HxCDF	101	100	101	72 - 134		13C-1,2,3,4,7,8-HxCDF	86.5	19 - 202
1,2,3,6,7,8-HxCDF	96.6	100	96.6	84 - 130		13C-1,2,3,6,7,8-HxCDF	86.8	21 - 159
2,3,4,6,7,8-HxCDF	98.2	100	98.2	70 - 156		13C-2,3,4,6,7,8-HxCDF	86.7	22 - 176
1,2,3,7,8,9-HxCDF	97.8	100	97.8	78 - 130		13C-1,2,3,7,8,9-HxCDF	91.9	17 - 205
1,2,3,4,6,7,8-HpCDF	94.0	100	94.0	82 - 122		13C-1,2,3,4,6,7,8-HpCDF	74.6	21 - 158
1,2,3,4,7,8,9-HpCDF	95.5	100	95.5	78 - 138		13C-1,2,3,4,7,8,9-HpCDF	68.3	20 - 186
OCDF	192	200	95.9	63 - 170		13C-OCDF	55.3	13 - 199
					CRS	37Cl-2,3,7,8-TCDD	85.2	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: DU-1-15-A					EPA Method 1613B				
Client Data Name: CH2M Hill Project: Woodbine Special Event Date Collected: 21-Jun-2016 10:15			Sample Data Matrix: Soil Sample Size: 11.2 g % Solids: 90.3		Laboratory Data Lab Sample: 1600835-01 Date Received: 28-Jun-2016 9:00 QC Batch: B6G0039 Date Extracted: 30-Jun-2016 12:42 Date Analyzed : 12-Jul-16 19:35 Column: ZB-5MS Analyst: DB				
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
2,3,7,8-TCDD	ND		0.0954		IS 13C-2,3,7,8-TCDD	97.0	25 - 164		
1,2,3,7,8-PeCDD	0.453			J	13C-1,2,3,7,8-PeCDD	73.1	25 - 181		
1,2,3,4,7,8-HxCDD	0.660			J	13C-1,2,3,4,7,8-HxCDD	100	32 - 141		
1,2,3,6,7,8-HxCDD	1.56			J	13C-1,2,3,6,7,8-HxCDD	93.2	28 - 130		
1,2,3,7,8,9-HxCDD	1.35			J	13C-1,2,3,7,8,9-HxCDD	98.9	32 - 141		
1,2,3,4,6,7,8-HpCDD	29.9				13C-1,2,3,4,6,7,8-HpCDD	83.5	23 - 140		
OCDD	234				13C-OCDD	63.7	17 - 157		
2,3,7,8-TCDF	0.449			J	13C-2,3,7,8-TCDF	99.2	24 - 169		
1,2,3,7,8-PeCDF	ND	0.136			13C-1,2,3,7,8-PeCDF	74.5	24 - 185		
2,3,4,7,8-PeCDF	0.367			J	13C-2,3,4,7,8-PeCDF	71.7	21 - 178		
1,2,3,4,7,8-HxCDF	0.405			J	13C-1,2,3,4,7,8-HxCDF	97.6	26 - 152		
1,2,3,6,7,8-HxCDF	0.386			J	13C-1,2,3,6,7,8-HxCDF	91.8	26 - 123		
2,3,4,6,7,8-HxCDF	0.449			J	13C-2,3,4,6,7,8-HxCDF	94.0	28 - 136		
1,2,3,7,8,9-HxCDF	0.249			J	13C-1,2,3,7,8,9-HxCDF	104	29 - 147		
1,2,3,4,6,7,8-HpCDF	3.90				13C-1,2,3,4,6,7,8-HpCDF	86.6	28 - 143		
1,2,3,4,7,8,9-HpCDF	0.279			J	13C-1,2,3,4,7,8,9-HpCDF	85.5	26 - 138		
OCDF	8.24				13C-OCDF	63.8	17 - 157		
					CRS 37Cl-2,3,7,8-TCDD	87.5	35 - 197		
					Toxic Equivalent Quotient (TEQ) Data				
					TEQMinWHO2005Dioxin	1.53			
TOTALS									
Total TCDD	ND		0.903						
Total PeCDD	5.02		5.20						
Total HxCDD	19.3								
Total HpCDD	93.4								
Total TCDF	1.69		1.94						
Total PeCDF	3.55		3.77						
Total HxCDF	5.73		6.37						
Total HpCDF	9.38								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

The results are reported in dry weight. The sample size is reported in wet weight.

Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: DU-1-15-E					PMA Method 131BE			
Client Data		Sample Data			Laboratory Data			
Name:	CH25 Hill		5 attriM	Soil	Lab Sample:	160083R-02	Date y received:	28-Jun-2016 9:00
Project:	Woodbine Special Event		Sample Size:	11.R,	L C BatcQ	B6G0039	Date EMfracted:	30-Jun-2016 12:42
Date Collected:	21-Jun-2016 10:40		% Solids:	86.g	Date h nalAxed :	12-Jul-16 20:23	Column: ZB-R5 S h nalAst:	DB
Analyte	Conc. (pg/g)	DL	Ph MC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	0.184			J	IS 13C-2,3,7,8-TCDD	91.R	2R - 164	
1,2,3,7,8-PeCDD	0.g04			J	13C-1,2,3,7,8-PeCDD	g1.g	2R - 181	
1,2,3,7,8-HMCDD	0.8RR			J	13C-1,2,3,7,8-HMCDD	90.0	32 - 141	
1,2,3,7,8-HMCDD	1.61			J	13C-1,2,3,7,8-HMCDD	8R.2	28 - 130	
1,2,3,7,8,9-HMCDD	1.46			J	13C-1,2,3,7,8,9-HMCDD	8g.2	32 - 141	
1,2,3,7,8,9-HpCDD	44.3				13C-1,2,3,7,8,9-HpCDD	g4.3	23 - 140	
OCDD	3R8				13C-OCDD	Rg.0	1g - 1Rg	
2,3,7,8-TCDF	0.2g8			J	13C-2,3,7,8-TCDF	9R.3	24 - 169	
1,2,3,7,8-PeCDF	ND	0.121			13C-1,2,3,7,8-PeCDF	69.2	24 - 18R	
2,3,7,8-PeCDF	ND		0.268		13C-2,3,7,8-PeCDF	68.2	21 - 1g8	
1,2,3,7,8-HMCDF	0.38g			J	13C-1,2,3,7,8-HMCDF	8g.3	26 - 1R2	
1,2,3,7,8-HMCDF	0.386			J	13C-1,2,3,7,8-HMCDF	82.R	26 - 123	
2,3,7,8,9-HMCDF	0.442			J	13C-2,3,7,8,9-HMCDF	83.0	28 - 136	
1,2,3,7,8,9-HMCDF	0.222			J	13C-1,2,3,7,8,9-HMCDF	9R.2	29 - 14g	
1,2,3,7,8,9-HpCDF	4.80				13C-1,2,3,7,8,9-HpCDF	g9.9	28 - 143	
1,2,3,7,8,9-HpCDF	0.360			J	13C-1,2,3,7,8,9-HpCDF	g3.6	26 - 138	
OCDF	13.g				13C-OCDF	R6.8	1g - 1Rg	
					Cy S 3gCl-2,3,7,8-TCDD	86.4	3R - 19g	
					Toxic P equivalent Quotient (TPQ) Data			
					TEL 5 inWHO200RDioMn	2.06		
TOTALS								
Total TCDD	1.64		1.99					
Total PeCDD	6.R3		6.g4					
Total HMCDD	31.9							
Total HpCDD	2RR							
Total TCDF	1.6g		1.80					
Total PeCDF	3.20		3.4g					
Total HMCDF	g.28		g.39					
Total HpCDF	13.6							

Dz - Sample specific estimated detection limit

E5 PC - Estimated maMnum possible concentration

z Cz-UCz - z ower control limit - upper control limit

TQe results are reported in drAwei, Q. TQe sample sixe is reported in wet wei, Q.

5 in-TQe TEL is calculated usin, xero for tQe concentration of con, eners tQt are not detected.

Sample ID: DU-1-15-C					EPA Method 1613B				
Client Data Name: CH2M Hill Project: Woodbine Special Event Date Collected: 21-Jun-2016 11:35			Sample Data Matrix: Soil Sample Size: 11.0 g % Solids: 90.2		Laboratory Data Lab Sample: 1600835-03 Date Received: 28-Jun-2016 9:00 QC Batch: B6G0039 Date Extracted: 30-Jun-2016 12:42 Date Analyzed : 12-Jul-16 21:12 Column: ZB-5MS Analyst: DB				
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
2,3,7,8-TCDD	ND	0.0728			IS 13C-2,3,7,8-TCDD	81.8	25 - 164		
1,2,3,7,8-PeCDD	0.754			J	13C-1,2,3,7,8-PeCDD	61.5	25 - 181		
1,2,3,4,7,8-HxCDD	0.912			J	13C-1,2,3,4,7,8-HxCDD	79.2	32 - 141		
1,2,3,6,7,8-HxCDD	2.06			J	13C-1,2,3,6,7,8-HxCDD	77.4	28 - 130		
1,2,3,7,8,9-HxCDD	2.38			J	13C-1,2,3,7,8,9-HxCDD	80.1	32 - 141		
1,2,3,4,6,7,8-HpCDD	45.8				13C-1,2,3,4,6,7,8-HpCDD	70.0	23 - 140		
OCDD	382				13C-OCDD	55.7	17 - 157		
2,3,7,8-TCDF	ND		0.274		13C-2,3,7,8-TCDF	85.7	24 - 169		
1,2,3,7,8-PeCDF	0.196			J	13C-1,2,3,7,8-PeCDF	61.8	24 - 185		
2,3,4,7,8-PeCDF	0.390			J	13C-2,3,4,7,8-PeCDF	58.0	21 - 178		
1,2,3,4,7,8-HxCDF	0.414			J	13C-1,2,3,4,7,8-HxCDF	80.4	26 - 152		
1,2,3,6,7,8-HxCDF	0.377			J	13C-1,2,3,6,7,8-HxCDF	76.9	26 - 123		
2,3,4,6,7,8-HxCDF	0.563			J	13C-2,3,4,6,7,8-HxCDF	75.9	28 - 136		
1,2,3,7,8,9-HxCDF	0.202			J	13C-1,2,3,7,8,9-HxCDF	87.3	29 - 147		
1,2,3,4,6,7,8-HpCDF	5.93				13C-1,2,3,4,6,7,8-HpCDF	74.4	28 - 143		
1,2,3,4,7,8,9-HpCDF	0.375			J	13C-1,2,3,4,7,8,9-HpCDF	70.5	26 - 138		
OCDF	13.5				13C-OCDF	55.5	17 - 157		
					CRS 37Cl-2,3,7,8-TCDD	78.2	35 - 197		
					Toxic Equivalent Quotient (TEQ) Data				
					TEQMinWHO2005Dioxin	2.21			
TOTALS									
Total TCDD	0.351								
Total PeCDD	4.40								
Total HxCDD	22.4								
Total HpCDD	101								
Total TCDF	1.41		1.69						
Total PeCDF	4.47		4.70						
Total HxCDF	8.57								
Total HpCDF	14.7								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

The results are reported in dry weight. The sample size is reported in wet weight.

Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: DU-1-12-A					EPA Method 1613B				
Client Data Name: CH2M Hill Project: Woodbine Special Event Date Collected: 21-Jun-2016 15:45			Sample Data Matrix: Soil Sample Size: 10.4 g % Solids: 96.6		Laboratory Data Lab Sample: 1600835-04 Date Received: 28-Jun-2016 9:00 QC Batch: B6G0039 Date Extracted: 30-Jun-2016 12:42 Date Analyzed : 12-Jul-16 22:00 Column: ZB-5MS Analyst: DB 14-Jul-16 16:23 Column: DB-225 Analyst: ANP				
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		0.0920		IS	13C-2,3,7,8-TCDD	92.1	25 - 164	
1,2,3,7,8-PeCDD	1.07			J		13C-1,2,3,7,8-PeCDD	71.8	25 - 181	
1,2,3,4,7,8-HxCDD	1.55			J		13C-1,2,3,4,7,8-HxCDD	95.1	32 - 141	
1,2,3,6,7,8-HxCDD	5.31					13C-1,2,3,6,7,8-HxCDD	88.0	28 - 130	
1,2,3,7,8,9-HxCDD	3.18					13C-1,2,3,7,8,9-HxCDD	93.7	32 - 141	
1,2,3,4,6,7,8-HpCDD	270					13C-1,2,3,4,6,7,8-HpCDD	78.1	23 - 140	
OCDD	3680					13C-OCDD	67.4	17 - 157	
2,3,7,8-TCDF	2.89					13C-2,3,7,8-TCDF	99.2	24 - 169	
1,2,3,7,8-PeCDF	0.569			J		13C-1,2,3,7,8-PeCDF	73.0	24 - 185	
2,3,4,7,8-PeCDF	2.73					13C-2,3,4,7,8-PeCDF	71.5	21 - 178	
1,2,3,4,7,8-HxCDF	1.21			J		13C-1,2,3,4,7,8-HxCDF	96.2	26 - 152	
1,2,3,6,7,8-HxCDF	1.11			J		13C-1,2,3,6,7,8-HxCDF	88.1	26 - 123	
2,3,4,6,7,8-HxCDF	1.71			J		13C-2,3,4,6,7,8-HxCDF	90.9	28 - 136	
1,2,3,7,8,9-HxCDF	0.327			J		13C-1,2,3,7,8,9-HxCDF	104	29 - 147	
1,2,3,4,6,7,8-HpCDF	13.4					13C-1,2,3,4,6,7,8-HpCDF	79.1	28 - 143	
1,2,3,4,7,8,9-HpCDF	1.20			J		13C-1,2,3,4,7,8,9-HpCDF	78.2	26 - 138	
OCDF	38.7					13C-OCDF	62.4	17 - 157	
					CRS	37Cl-2,3,7,8-TCDD	86.5	35 - 197	
					Toxic Equivalent Quotient (TEQ) Data				
					TEQMinWHO2005Dioxin 7.60				
TOTALS									
Total TCDD	3.69		4.51						
Total PeCDD	11.7		13.3						
Total HxCDD	53.6								
Total HpCDD	551								
Total TCDF	15.6		16.0						
Total PeCDF	25.6		25.8						
Total HxCDF	30.6								
Total HpCDF	41.9								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

The results are reported in dry weight. The sample size is reported in wet weight.

Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: Matrix Spike								EPA Method 1613B					
Source Client ID: DU-1-12-A				QC Batch: B6G0039				Lab Sample: B6G0039-MS1/B6G0039-MSD1					
Source LabNumber: 1600835-04				Date Extracted: 07-Jul-2016 15:12				Date Analyzed: 13-Jul-16 13:09 Column: ZB-5MS Analyst: DB					
Matrix: Solid				13-Jul-16 13:58 Column: ZB-5MS Analyst: DB									
Sample Size: 10.4/10.3 g													
Analyte	Spike-MS (pg/g)	MS %R	MS Qualifiers	Spike-MSD (pg/g)	MSD %R	RPD	MSD Qualifiers	Labeled Standard		MS %R	MS Qualifiers	MSD %R	MSD Qualifiers
2,3,7,8-TCDD	19.9	99.3		20.0	94.9	4.53		IS	13C-2,3,7,8-TCDD	97.0		92.2	
1,2,3,7,8-PeCDD	99.6	99.7		100	97.2	2.54			13C-1,2,3,7,8-PeCDD	77.4		73.4	
1,2,3,4,7,8-HxCDD	99.6	101		100	96.4	4.66			13C-1,2,3,4,7,8-HxCDD	89.2		85.0	
1,2,3,6,7,8-HxCDD	99.6	97.3		100	93.8	3.66			13C-1,2,3,6,7,8-HxCDD	86.1		82.4	
1,2,3,7,8,9-HxCDD	99.6	102		100	95.2	6.90			13C-1,2,3,7,8,9-HxCDD	89.3		85.8	
1,2,3,4,6,7,8-HpCDD	99.6	155	H	100	128	19.1			13C-1,2,3,4,6,7,8-HpCDD	79.7		72.9	
OCDD	199	459	H	200	361	23.9	H		13C-OCDD	65.7		59.6	
2,3,7,8-TCDF	19.9	95.9		20.0	93.7	2.32			13C-2,3,7,8-TCDF	105		97.4	
1,2,3,7,8-PeCDF	99.6	99.8		100	96.6	3.26			13C-1,2,3,7,8-PeCDF	80.5		78.3	
2,3,4,7,8-PeCDF	99.6	99.5		100	97.8	1.72			13C-2,3,4,7,8-PeCDF	80.5		77.1	
1,2,3,4,7,8-HxCDF	99.6	96.7		100	93.2	3.69			13C-1,2,3,4,7,8-HxCDF	92.1		87.0	
1,2,3,6,7,8-HxCDF	99.6	97.2		100	94.3	3.03			13C-1,2,3,6,7,8-HxCDF	86.6		81.5	
2,3,4,6,7,8-HxCDF	99.6	97.8		100	92.2	5.89			13C-2,3,4,6,7,8-HxCDF	91.4		87.2	
1,2,3,7,8,9-HxCDF	99.6	96.1		100	94.8	1.36			13C-1,2,3,7,8,9-HxCDF	104		97.2	
1,2,3,4,6,7,8-HpCDF	99.6	97.9		100	95.9	2.06			13C-1,2,3,4,6,7,8-HpCDF	84.8		79.6	
1,2,3,4,7,8,9-HpCDF	99.6	97.5		100	97.2	0.308			13C-1,2,3,4,7,8,9-HpCDF	85.1		78.3	
OCDF	199	99.6		200	99.0	0.604			13C-OCDF	64.5		58.9	
								CRS	37Cl-2,3,7,8-TCDD	95.0		85.4	

Sample ID: DU-1-12-E					PMA Method 131E				
Client Data			Sample Data		Laboratory Data				
Name:	CH25 Hill		5 attriM	Soil	Lab Sample:	160083R-0R	Date y received:	28-Jun-2016 9:00	
Project:	Woodbine Special Event		Sample Size:	10.6 g	LC Batch:	B6G0039	Date EMfracted:	30-Jun-2016 12:42	
Date Collected:	21-Jun-2016 16:30		% Solids:	94.6	Date h nalAxed :	12-Jul-16 22:49	Column:	ZB-R5 S h nalAst:	DB
						14-Jul-16 16:R6	Column:	DB-22R h nalAst:	h NP
Analyte	Conc. (pg/g)	DL	Ph MC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
2,3,7,8-TCDD	ND	0.08R2			IS 13C-2,3,7,8-TCDD	90.7	2R - 164		
1,2,3,7,8-PeCDD	0.678			J	13C-1,2,3,7,8-PeCDD	6R7	2R - 181		
1,2,3,4,7,8-HMCDD	1.0R			J	13C-1,2,3,4,7,8-HMCDD	92.0	32 - 141		
1,2,3,6,7,8-HMCDD	4.17				13C-1,2,3,6,7,8-HMCDD	84.R	28 - 130		
1,2,3,7,8,9-HMCDD	2.R2				13C-1,2,3,7,8,9-HMCDD	90.0	32 - 141		
1,2,3,4,6,7,8-HpCDD	241				13C-1,2,3,4,6,7,8-HpCDD	7R8	23 - 140		
OCDD	34R0				13C-OCDD	61.R	17 - 1R7		
2,3,7,8-TCDF	1.83				13C-2,3,7,8-TCDF	96.8	24 - 169		
1,2,3,7,8-PeCDF	0.431			J	13C-1,2,3,7,8-PeCDF	68.2	24 - 18R		
2,3,4,7,8-PeCDF	1.18			J	13C-2,3,4,7,8-PeCDF	6R4	21 - 178		
1,2,3,4,7,8-HMCDF	0.939			J	13C-1,2,3,4,7,8-HMCDF	90.R	26 - 1R2		
1,2,3,6,7,8-HMCDF	0.630			J	13C-1,2,3,6,7,8-HMCDF	83.7	26 - 123		
2,3,4,6,7,8-HMCDF	1.01			J	13C-2,3,4,6,7,8-HMCDF	88.0	28 - 136		
1,2,3,7,8,9-HMCDF	0.2R2			J	13C-1,2,3,7,8,9-HMCDF	99.2	29 - 147		
1,2,3,4,6,7,8-HpCDF	11.3				13C-1,2,3,4,6,7,8-HpCDF	80.7	28 - 143		
1,2,3,4,7,8,9-HpCDF	1.06			J	13C-1,2,3,4,7,8,9-HpCDF	77.7	26 - 138		
OCDF	3R2				13C-OCDF	R8.2	17 - 1R7		
					Cy S 37Cl-2,3,7,8-TCDD	87.R	3R - 197		
					Toxic Pquivalent Quotient (TPQ) Data				
					TEL 5 inWHO200RDioMn R.86				
TOTALS									
Total TCDD	0.342		0.417						
Total PeCDD	6.48		6.7R						
Total HMCDD	40.9								
Total HpCDD	476								
Total TCDF	8.64		8.83						
Total PeCDF	11.9								
Total HMCDF	21.2								
Total HpCDF	36.2								

Dz - Sample specific estimated detection limit

E5 PC - Estimated maMnum possible concentration

z Cz -UCz - z ower control limit - upper control limit

TQe results are reported in drAweigQ. TQe sample sixe is reported in wet weigQ.

5 in-TQe TEL is calculated using xero for tQe concentration of congeners tQt are not detected.

Sample ID: DU-1-12-C					EPA Method 1613B				
Client Data Name: C. 2M . ill Project: Woodbine Special Event Date Collected: 21-Jun-2016 15:10			Sample Data Matrix: Soil Sample Size: 11g ⁴ , H Solid% 85g ⁸		Laboratory Data Lab Sample: 160083Z-06 Date Received: 28-Jun-2016 9:00 QC Batch: B6G0039 Date Extracted: 30-Jun-2016 12:42 Date Analyzed : 12-Jul-16 23:35 Column: s B-ZMS Analy% ⁶ DB				
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		0g ¹ 33		IS	13C-2,3,7,8-TCDD	91g ⁶	2Z - 164	
1,2,3,7,8-PeCDD	0g ³ 48			J		13C-1,2,3,7,8-PeCDD	50g ⁹	2Z - 181	
1,2,3,7,8,9-. xCDD	ND		0g ³ 53			13C-1,2,3,7,8,9-. xCDD	88g ⁹	32 - 141	
1,2,3,6,7,8,9-. xCDD	1g ⁰ 3			J		13C-1,2,3,6,7,8,9-. xCDD	82g ⁵	28 - 130	
1,2,3,7,8,9,10-. xCDD	0g ⁸ Z8			J		13C-1,2,3,7,8,9,10-. xCDD	8Zg ³	32 - 141	
1,2,3,7,8,9,10,11-. pCDD	13g ²					13C-1,2,3,7,8,9,10,11-. pCDD	52g ²	23 - 140	
OCDD	8Zg ⁶					13C-OCDD	ZZg ⁴	15 - 1Z5	
2,3,7,8-TCDF	0g ¹ 46			J		13C-2,3,7,8-TCDF	89g ⁰	24 - 169	
1,2,3,7,8-PeCDF	0g ⁰ 9Z2			J		13C-1,2,3,7,8-PeCDF	66g ⁴	24 - 18Z	
2,3,7,8,9-PeCDF	0g ¹ 8Z			J		13C-2,3,7,8,9-PeCDF	6Zg ⁵	21 - 158	
1,2,3,7,8,9,10-. xCDF	0g ² 25			J		13C-1,2,3,7,8,9,10-. xCDF	88g ⁹	26 - 1Z2	
1,2,3,6,7,8,9,10-. xCDF	0g ² 6Z			J		13C-1,2,3,6,7,8,9,10-. xCDF	82g ⁵	26 - 123	
2,3,7,8,9,10,11-. xCDF	0g ² 80			J		13C-2,3,7,8,9,10,11-. xCDF	8Zg ⁵	28 - 136	
1,2,3,7,8,9,10,11-. xCDF	ND	0g ⁰ 960				13C-1,2,3,7,8,9,10,11-. xCDF	92g ⁴	29 - 145	
1,2,3,7,8,9,10,11,12-. pCDF	2g ⁷ 4					13C-1,2,3,7,8,9,10,11,12-. pCDF	5Zg ⁵	28 - 143	
1,2,3,7,8,9,10,11,12,13-. pCDF	ND	0g ⁰ 9Z8				13C-1,2,3,7,8,9,10,11,12,13-. pCDF	54g ⁹	26 - 138	
OCDF	4g ⁰ 6			J		13C-OCDF	Z6g ⁴	15 - 1Z5	
					CRS	35Cl-2,3,7,8-TCDD	8Zg ²	3Z - 195	
					Toxic Equivalent Quotient (TEQ) Data				
					TEQMinW. O200ZDioxin		0g ⁸ 51		
TOTALS									
Total TCDD	1g ⁰ 6		1g ¹ 6						
Total PeCDD	3g ² 8		3g ² 6						
Total . xCDD	10g ⁹		11g ⁴						
Total . pCDD	28g ⁶								
Total TCDF	1g ² 4		2g ² Z						
Total PeCDF	1g ⁵ 3		2g ² 1						
Total . xCDF	3g ⁶ 4								
Total . pCDF	4g ⁰ 2								

DL - Sample %pecific e%imated detection limit

EMPC - E%imated maximum po%ible concentration

LCL-UCL- Lower control limit - upper control limit

The re%ult%are reported in dry wei, htgThe %ample %ze i%reported in wet wei, htg

Min-The TEQ i%calculated u%in, zero for the concentration of con, ener%hat are not detected g

Sample ID: DU-3-1-A					EPA Method 1613B			
Client Data			Sample Data		Laboratory Data			
Name:	CH2M Hill		Matrix:	Soil	Lab Sample:	1600835-07	Date Received:	28-Jun-2016 9:00
Project:	Woodbine Special Event		Sample Size:	11.4 g	QC Batch:	B6G0039	Date Extracted:	07-Jul-2016 15:12
Date Collected:	21-Jun-2016 13:00		% Solids:	86.7	Date Analyzed :	13-Jul-16 00:26	Column:	ZB-5MS Analyst: DB
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0909			IS 13C-2,3,7,8-TCDD	82.9	25 - 164	
1,2,3,7,8-PeCDD	ND		0.188		13C-1,2,3,7,8-PeCDD	63.4	25 - 181	
1,2,3,4,7,8-HxCDD	0.279			J	13C-1,2,3,4,7,8-HxCDD	82.2	32 - 141	
1,2,3,6,7,8-HxCDD	0.965			J	13C-1,2,3,6,7,8-HxCDD	79.5	28 - 130	
1,2,3,7,8,9-HxCDD	0.574			J	13C-1,2,3,7,8,9-HxCDD	83.5	32 - 141	
1,2,3,4,6,7,8-HpCDD	18.1				13C-1,2,3,4,6,7,8-HpCDD	67.1	23 - 140	
OCDD	227				13C-OCDD	52.3	17 - 157	
2,3,7,8-TCDF	ND	0.147			13C-2,3,7,8-TCDF	85.2	24 - 169	
1,2,3,7,8-PeCDF	0.165			J	13C-1,2,3,7,8-PeCDF	64.4	24 - 185	
2,3,4,7,8-PeCDF	ND		0.0930		13C-2,3,4,7,8-PeCDF	60.4	21 - 178	
1,2,3,4,7,8-HxCDF	0.309			J	13C-1,2,3,4,7,8-HxCDF	83.5	26 - 152	
1,2,3,6,7,8-HxCDF	0.186			J	13C-1,2,3,6,7,8-HxCDF	79.6	26 - 123	
2,3,4,6,7,8-HxCDF	0.219			J	13C-2,3,4,6,7,8-HxCDF	80.0	28 - 136	
1,2,3,7,8,9-HxCDF	0.432			J	13C-1,2,3,7,8,9-HxCDF	95.1	29 - 147	
1,2,3,4,6,7,8-HpCDF	2.32			J	13C-1,2,3,4,6,7,8-HpCDF	73.0	28 - 143	
1,2,3,4,7,8,9-HpCDF	0.166			J	13C-1,2,3,4,7,8,9-HpCDF	73.7	26 - 138	
OCDF	4.35			J	13C-OCDF	52.9	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	79.6	35 - 197	
					Toxic Equivalent Quotient (TEQ) Data			
					TEQMinWHO2005Dioxin	0.577		
TOTALS								
Total TCDD	0.834		0.951					
Total PeCDD	0.165		1.28					
Total HxCDD	10.1							
Total HpCDD	39.9							
Total TCDF	2.54		2.85					
Total PeCDF	1.58		1.88					
Total HxCDF	4.77							
Total HpCDF	6.06							

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

The results are reported in dry weight. The sample size is reported in wet weight.

Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: DU-3-1-B					EPA Method 1613B				
Client Data Name: CH2M Hill Project: Woodbine Special Event Date Collected: 21-Jun-2016 14:15			Sample Data Matrix: Soil Sample Size: 11.9 g % Solids: 84.8		Laboratory Data Lab Sample: 1600835-08 Date Received: 28-Jun-2016 9:00 QC Batch: B6G0039 Date Extracted: 07-Jul-2016 15:12 Date Analyzed : 13-Jul-16 01:14 Column: ZB-5MS Analyst: DB				
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
2,3,7,8-TCDD	ND	0.0850			IS 13C-2,3,7,8-TCDD	92.8	25 - 164		
1,2,3,7,8-PeCDD	ND		0.104		13C-1,2,3,7,8-PeCDD	68.4	25 - 181		
1,2,3,4,7,8-HxCDD	0.117			J	13C-1,2,3,4,7,8-HxCDD	87.9	32 - 141		
1,2,3,6,7,8-HxCDD	0.296			J	13C-1,2,3,6,7,8-HxCDD	81.3	28 - 130		
1,2,3,7,8,9-HxCDD	0.155			J	13C-1,2,3,7,8,9-HxCDD	88.0	32 - 141		
1,2,3,4,6,7,8-HpCDD	4.27				13C-1,2,3,4,6,7,8-HpCDD	69.3	23 - 140		
OCDD	36.8				13C-OCDD	52.9	17 - 157		
2,3,7,8-TCDF	ND	0.136			13C-2,3,7,8-TCDF	96.7	24 - 169		
1,2,3,7,8-PeCDF	ND	0.0966			13C-1,2,3,7,8-PeCDF	69.1	24 - 185		
2,3,4,7,8-PeCDF	ND	0.0996			13C-2,3,4,7,8-PeCDF	67.0	21 - 178		
1,2,3,4,7,8-HxCDF	ND		0.124		13C-1,2,3,4,7,8-HxCDF	85.6	26 - 152		
1,2,3,6,7,8-HxCDF	0.131			J	13C-1,2,3,6,7,8-HxCDF	83.5	26 - 123		
2,3,4,6,7,8-HxCDF	0.147			J	13C-2,3,4,6,7,8-HxCDF	85.2	28 - 136		
1,2,3,7,8,9-HxCDF	0.366			J	13C-1,2,3,7,8,9-HxCDF	92.8	29 - 147		
1,2,3,4,6,7,8-HpCDF	0.833			J	13C-1,2,3,4,6,7,8-HpCDF	76.5	28 - 143		
1,2,3,4,7,8,9-HpCDF	ND	0.108			13C-1,2,3,4,7,8,9-HpCDF	73.7	26 - 138		
OCDF	1.04			J	13C-OCDF	54.7	17 - 157		
					CRS 37Cl-2,3,7,8-TCDD	88.5	35 - 197		
					Toxic Equivalent Quotient (TEQ) Data				
					TEQMinWHO2005Dioxin		0.184		
TOTALS									
Total TCDD	0.877								
Total PeCDD	0.957	1.20							
Total HxCDD	3.84								
Total HpCDD	10.4								
Total TCDF	3.20	3.35							
Total PeCDF	1.21								
Total HxCDF	1.89	2.01							
Total HpCDF	1.55								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

The results are reported in dry weight. The sample size is reported in wet weight.

Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

Sample ID: Matrix Spike								EPA Method 1613B					
Source Client ID: DU-3-1-B				QC Batch: B6G0039				Lab Sample: B6G0039-MS2/B6G0039-MSD2					
Source LabNumber: 1600835-08				Date Extracted: 07-Jul-2016 15:12				Date Analyzed: 13-Jul-16 11:32 Column: ZB-5MS Analyst: DB					
Matrix: Solid								13-Jul-16 12:21 Column: ZB-5MS Analyst: DB					
Sample Size: 11.8/11.9 g													
Analyte	Spike-MS (pg/g)	MS %R	MS Qualifiers	Spike-MSD (pg/g)	MSD %R	RPD	MSD Qualifiers	Labeled Standard		MS %R	MS Qualifiers	MSD %R	MSD Qualifiers
2,3,7,8-TCDD	19.9	98.9		19.9	100	1.11		IS	13C-2,3,7,8-TCDD	91.6		80.1	
1,2,3,7,8-PeCDD	99.6	98.3		99.3	99.3	1.01			13C-1,2,3,7,8-PeCDD	73.1		65.4	
1,2,3,4,7,8-HxCDD	99.6	99.9		99.3	103	3.06			13C-1,2,3,4,7,8-HxCDD	87.2		73.6	
1,2,3,6,7,8-HxCDD	99.6	97.4		99.3	97.2	0.206			13C-1,2,3,6,7,8-HxCDD	84.4		71.8	
1,2,3,7,8,9-HxCDD	99.6	100		99.3	104	3.92			13C-1,2,3,7,8,9-HxCDD	87.3		73.5	
1,2,3,4,6,7,8-HpCDD	99.6	99.9		99.3	105	4.98			13C-1,2,3,4,6,7,8-HpCDD	74.7		62.0	
OCDD	199	103		199	102	0.976			13C-OCDD	55.1		48.6	
2,3,7,8-TCDF	19.9	95.7		19.9	95.5	0.209			13C-2,3,7,8-TCDF	93.7		80.6	
1,2,3,7,8-PeCDF	99.6	103		99.3	103	0			13C-1,2,3,7,8-PeCDF	74.3		66.9	
2,3,4,7,8-PeCDF	99.6	99.3		99.3	102	2.68			13C-2,3,4,7,8-PeCDF	73.1		63.7	
1,2,3,4,7,8-HxCDF	99.6	96.4		99.3	102	5.65			13C-1,2,3,4,7,8-HxCDF	89.3		76.8	
1,2,3,6,7,8-HxCDF	99.6	97.5		99.3	100	2.53			13C-1,2,3,6,7,8-HxCDF	84.7		71.3	
2,3,4,6,7,8-HxCDF	99.6	96.2		99.3	100	3.87			13C-2,3,4,6,7,8-HxCDF	88.3		74.2	
1,2,3,7,8,9-HxCDF	99.6	95.4		99.3	101	5.70			13C-1,2,3,7,8,9-HxCDF	97.6		83.8	
1,2,3,4,6,7,8-HpCDF	99.6	99.1		99.3	101	1.90			13C-1,2,3,4,6,7,8-HpCDF	79.4		68.9	
1,2,3,4,7,8,9-HpCDF	99.6	96.4		99.3	101	4.66			13C-1,2,3,4,7,8,9-HpCDF	79.1		73.3	
OCDF	199	100		199	101	0.995			13C-OCDF	59.8		52.1	
								CRS	37Cl-2,3,7,8-TCDD	88.6		76.2	

Sample ID: DU-3-1-C					EPA Method 1613B			
Client Data			Sample Data		Laboratory Data			
Name:	CH2M Hill		Matrix:	Soil	Lab Sample:	1600835-09	Date Received:	28-Jun-2016 9:00
Project:	Woodbine Special Event		Sample Size:	11.4 g	QC Batch:	B6G0039	Date Extracted:	07-Jul-2016 15:12
Date Collected:	21-Jun-2016 14:50		% Solids:	88.5	Date Analyzed :	13-Jul-16 02:03	Column:	ZB-5MS Analyst: DB
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0587			IS 13C-2,3,7,8-TCDD	94.7	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0924			13C-1,2,3,7,8-PeCDD	70.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND		0.193		13C-1,2,3,4,7,8-HxCDD	94.0	32 - 141	
1,2,3,6,7,8-HxCDD	1.56			J	13C-1,2,3,6,7,8-HxCDD	87.4	28 - 130	
1,2,3,7,8,9-HxCDD	0.450			J	13C-1,2,3,7,8,9-HxCDD	92.7	32 - 141	
1,2,3,4,6,7,8-HpCDD	47.6				13C-1,2,3,4,6,7,8-HpCDD	75.5	23 - 140	
OCDD	394				13C-OCDD	56.8	17 - 157	
2,3,7,8-TCDF	ND	0.0855			13C-2,3,7,8-TCDF	98.3	24 - 169	
1,2,3,7,8-PeCDF	0.159			J	13C-1,2,3,7,8-PeCDF	68.9	24 - 185	
2,3,4,7,8-PeCDF	0.152			J	13C-2,3,4,7,8-PeCDF	67.7	21 - 178	
1,2,3,4,7,8-HxCDF	0.225			J	13C-1,2,3,4,7,8-HxCDF	93.2	26 - 152	
1,2,3,6,7,8-HxCDF	0.156			J	13C-1,2,3,6,7,8-HxCDF	88.5	26 - 123	
2,3,4,6,7,8-HxCDF	0.275			J	13C-2,3,4,6,7,8-HxCDF	92.1	28 - 136	
1,2,3,7,8,9-HxCDF	0.556			J	13C-1,2,3,7,8,9-HxCDF	100	29 - 147	
1,2,3,4,6,7,8-HpCDF	7.06				13C-1,2,3,4,6,7,8-HpCDF	80.9	28 - 143	
1,2,3,4,7,8,9-HpCDF	0.393			J	13C-1,2,3,4,7,8,9-HpCDF	79.0	26 - 138	
OCDF	27.0				13C-OCDF	57.6	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	90.7	35 - 197	
					Toxic Equivalent Quotient (TEQ) Data			
					TEQMinWHO2005Dioxin		1.05	
TOTALS								
Total TCDD	0.751							
Total PeCDD	0.251		1.17					
Total HxCDD	8.63		9.27					
Total HpCDD	107							
Total TCDF	3.59		4.05					
Total PeCDF	1.69		1.94					
Total HxCDF	7.46							
Total HpCDF	24.6							

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

The results are reported in dry weight. The sample size is reported in wet weight.

Min-The TEQ is calculated using zero for the concentration of congeners that are not detected.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The associated compound concentration exceeded the calibration range of the instrument.
H	Recovery and/or RPD was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Reporting Limit/LOQ.
*	See Cover Letter
Conc.	Concentration
NA	Not applicable
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-004
Pennsylvania Department of Environmental Protection	012
South Carolina Department of Health	87002001
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	7923
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope	EPA 1613B

Dilution GC/HRMS	
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 11372 Group # 1674664 Sample # 8438321-80

COC # 501336

1600835

Client Information				Matrix		Analysis Requested										For Lab Use Only							
						Preservation Codes																	
Client: <u>CH2M HILL</u>				Acct. #:												FSC: <u>-1.8°C</u>							
Project Name/ID: <u>DOW WOODBINE</u>				PWSID #:												SCR#:							
Project Manager: <u>Mark Sherrill</u>				P.O. #:																			
Sampler: <u>J. Crostic / A. Schwartz</u>				Quote #:																			
State where samples were collected: <u>Georgia</u>				For Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>																			
Sample Identification				Collected		Grab		Composite		Soil		Sediment		Tissue		Other		Total # of Containers		Analysis Requested		Remarks	
DU-1-15-A				6-21-16 1015				X		X								6		Perchlorate			
DU-1-15-B				1040				X		X								6		Explosives			
DU-1-15-C				1135				X		X								6		Hex Chromium			
* DU-3-1-A				1300				X		X								3		Mercury/Metals			
* DU-3-1-B				1415				X		X								3		Mustards			
* DU-3-1-C				1450				X		X								3		orp/pt/			
DU-1-12-A				1545				X		X								16		SVOC			
DU-1-12-B				1630				X		X								6		VOC			
DU-1-12-C				1710				X		X								6		Cyanoide			

Turnaround Time (TAT) Requested (please circle)		Relinquished by		Date		Time		Received by		Date		Time	
Standard		J. Crostic		6-21-16		2000							
Rush													
(Rush TAT is subject to laboratory approval and surcharge.)													
Date results are needed:													
E-mail address:													

Data Package Options (circle if required)				EDD Required? Yes No		Relinquished by Commercial Carrier:	
Type I (EPA Level 3)	Type VI (Raw Data Only)					UPS _____ FedEx _____ Other _____	
Equivalent/non-CLP							
Type III (Reduced non-CLP)	NJ DKQP TX TRRP-13						
NYSDEC Category A or B	MA MCP CT RCP						

Preservation Codes
H=HCl T=Thiosulfate
N=HNO₃ B=NaOH
S=H₂SO₄ O=Other

Remarks
Dioxins to be repackaged to Vista Lab

MS/MSD
MS/MSD

* Samples Not received 06/28/16 P208

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The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

7044 0216

Relinquished by Kathy Binkley 6-21-16 1545 rec'd by: Beth Benedict 06/28/16 0908

SAMPLE LOG-IN CHECKLIST



Vista Project #:

1600835

TAT

Stel

Samples Arrival:	Date/Time 06/28/16 0900		Initials: VBB		Location: WR-2	
	Shelf/Rack: X1A					
Logged In:	Date/Time 06/28/16 1445		Initials: VBB		Location: WR-2	
	Shelf/Rack: F4					
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac	<input type="radio"/> DHL	<input type="radio"/> Hand Delivered	<input type="radio"/> Other
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice	<input type="radio"/> None		
Temp °C: -0.5 (uncorrected)	Time: 0906			Thermometer ID: IR-2		
Temp °C: -1.8 (corrected)						

		YES	NO	NA
Adequate Sample Volume Received?		<input checked="" type="checkbox"/>		
Holding Time Acceptable?		<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Shipping Custody Seals Intact?				<input checked="" type="checkbox"/>
Shipping Documentation Present?		<input checked="" type="checkbox"/>		
Airbill	Trk # 5035 4242 1458	<input checked="" type="checkbox"/>		
Sample Container Intact?		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Sample Custody Seals Intact?				<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?		<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?		<input checked="" type="checkbox"/>		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				<input checked="" type="checkbox"/>
Na ₂ S ₂ O ₃ Preservation Documented?	COC	Sample Container	<input checked="" type="radio"/> None	
Shipping Container	Vista	<input checked="" type="radio"/> Client	Retain	<input checked="" type="radio"/> Return
				<input checked="" type="radio"/> Dispose

Comments:

Sample label ID: DU-1-15-A Grab Soil
DU-1-15-B ↓
DU-1-15C ↓

DU-1-12-A Grab Soil
DU-1-12-A MS Grab Soil
MSD
↓
DU-1-12-B Grab Soil
DU-1-12-C ↓
VBB 6/28/16

Chain of Custody Anomaly/Sample Acceptance Form



Client: CH2M
 Contact: Mark Sherrill
 Email:
 Phone: (678) 938-0923

Workorder Number: 1600835
 Date Received: 28-Jun-16 09:00
 Documented by/date: B.Benedict 06/28/2016

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

<input type="checkbox"/> Complete Chain-of-Custody	<input type="checkbox"/> Preservative	<input type="checkbox"/> Collector's Name
<input type="checkbox"/> Test Method Requested	<input type="checkbox"/> Sample Identification	<input type="checkbox"/> Sample Type
<input type="checkbox"/> Analyte List Requested	<input type="checkbox"/> Sample Collection Date and/or Time	<input type="checkbox"/> Sample Location
<input checked="" type="checkbox"/> Other: Samples listed on COC, not received: DU-3-1-A DU-3-1-B DU-3-1-C		

The following anomalies were noted. Authorization is needed to proceed with analysis.

<input type="checkbox"/> Temperature outside < 6°C Range	Samples Affected: _____		
Temperature _____°C	Ice Present?	Yes	No Melted
<input type="checkbox"/> Sample ID Discrepancy	<input type="checkbox"/> Insufficient Sample Size		
<input type="checkbox"/> Sample Holding Time Missed	<input type="checkbox"/> Sample Container(s) Broken		
<input type="checkbox"/> Custody Seals Broken	<input type="checkbox"/> Incorrect Container Type		

Comments:

Client Authorization

Proceed with Analysis ☒ YES ☐ NO

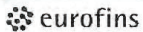
Signature and Date

MM 7/5/16

Client Comments/Instructions

Samples rec'd in second shipment, 7/2/16

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 11372 Group # 1674664 Sample # 8438321-80 ^{1 of 2}

COC # 501336

Client Information				Matrix				Analysis Requested												For Lab Use Only									
Client: <u>CH2M HILL</u>				Acct. #:				Preservation Codes												FSC: <u>1600835 0.0°C</u>									
Project Name/ #: <u>DOW WOODBINE</u>				PWSID #:																SCR#:									
Project Manager: <u>Mark Sherrill</u>				P.O. #:																Preservation Codes									
Sampler: <u>J. Crostic / A. Schwartz</u>				Quote #:																H=HCl T=Thiosulfate									
State where samples were collected: <u>Georgia</u>				For Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>																N=HNO ₃ B=NaOH									
																				S=H ₂ SO ₄ O=Other									
Sample Identification				Collected		Grab	Composite	Soil	Sediment	Potable	Ground	Surface	Water	NPDES	Other:	Total # of Containers													Remarks
				Date	Time																								
DU-1-15-A				6-21-16	1015		X	X								6	X	X	X	X	X	X	X	X	X	X			
DU-1-15-B					1040		X	X								6	X	X	X	X	X	X	X	X	X	X			
DU-1-15-C					1135		X	X								6	X	X	X	X	X	X	X	X	X	X			
DU-3-1-A					1300		X	X								3	X	X	X	X	X	X	X	X	X	X			
DU-3-1-B					1415		X	X								9	X	X	X	X	X	X	X	X	X	X		MS/MSD	
DU-3-1-C					1450		X	X								3	X	X	X	X	X	X	X	X	X	X			
DU-1-12-A					1545		X	X								10	X	X	X	X	X	X	X	X	X	X		MS/MSD	
DU-1-12-B					1630		X	X								6	X	X	X	X	X	X	X	X	X	X			
DU-1-12-C				✓	1710		X	X								6	X	X	X	X	X	X	X	X	X	X			

Turnaround Time (TAT) Requested (please circle)				Relinquished by		Date	Time	Received by		Date	Time
Standard				Rush		Q. Crostic		6-21-16		2000 A. Petersen	
(Rush TAT is subject to laboratory approval and surcharge.)				Relinquished by		Date	Time	Received by		Date	Time
Date results are needed: _____				Relinquished by		Date	Time	Received by		Date	Time
E-mail address: _____				Relinquished by		Date	Time	Received by		Date	Time
Data Package Options (circle if required)				Relinquished by		Date	Time	Received by		Date	Time
Type I (EPA Level 3 Equivalent/non-CLP)				Type VI (Raw Data Only)						6-22-16 720	
Type III (Reduced non-CLP)				NJ DKQP TX TRRP-13							
NYSDEC Category A or B				MA MCP CT RCP							
				EDD Required? Yes No				Relinquished by Commercial Carrier:			
				If yes, format: _____				UPS FedEx Other			
				Site-Specific QC (MS/MSD/Dup)? Yes No				Temperature upon receipt 1.5-1.7 °C			
				(If yes, indicate QC sample and submit triplicate sample volume.)							

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The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

7044 0216

Relinquished by Kathy Binkley 6/22/16 1625

SAMPLE LOG-IN CHECKLIST



Vista Project #:

1600835

TAT

Stel

Samples Arrival:	Date/Time 7/2/16 0930	Initials: CP	Location: WR-2
			Shelf/Rack: NA
Logged In:	Date/Time 07/05/16 1028	Initials: HSP	Location: WR-2
			Shelf/Rack: F4
Delivered By:	FedEx	UPS	On Trac
		DHL	Hand Delivered
Other			
Preservation:	Ice	Blue Ice	Dry Ice
			None
Temp °C: 0.8 (uncorrected)	Time: 0935		Thermometer ID: IR-2
Temp °C: 0.0 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill	Trk # 5035 4242 1642	✓	
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented?	COC	Sample Container	None
Shipping Container	Vista	Client	Retain
		Return	Dispose

Comments:

Sample Label ID DU-3-1-A

↓
-B
-C
-BMS
-BMSD

Missing samples from 6/20/16 Shipment

EXTRACTION INFORMATION

Process Sheet

Workorder: **1600835**

Prep Expiration: 06/21/2017

Client: CH2M Hill

Workorder Due: 19-Jul-16 00:00

TAT: 21

Method: **1613 Full List**Matrix: **Solid**

Client Matrix: Soil

Also run: **Percent Solids**

Prep Batch:

BGG0039

Prep Data Entered:

DBF 7/12/16
Date and Initials

Initial Sequence:

S6G000 7B 7/12/16

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1600835-01	"A" <input checked="" type="checkbox"/>	DU-1-15-A	28-Jun-16 09:00	WR-2 F-4	
1600835-02	"A" <input checked="" type="checkbox"/>	DU-1-15-B	28-Jun-16 09:00	WR-2 F-4	
1600835-03	"A" <input checked="" type="checkbox"/>	DU-1-15-C	28-Jun-16 09:00	WR-2 F-4	
1600835-04	"A" <input checked="" type="checkbox"/>	DU-1-12-A	28-Jun-16 09:00	WR-2 F-4	MS/MSD
1600835-05	"A" <input checked="" type="checkbox"/>	DU-1-12-B	28-Jun-16 09:00	WR-2 F-4	
1600835-06	"A" <input checked="" type="checkbox"/>	DU-1-12-C	28-Jun-16 09:00	WR-2 F-4	
1600835-07	"A" <input checked="" type="checkbox"/>	DU-3-1-A	02-Jun-16 09:30	WR-2 F-4	
1600835-08	"A" <input checked="" type="checkbox"/>	DU-3-1-B	02-Jun-16 09:30	WR-2 F-4	MS/MSD
1600835-09	"A" <input checked="" type="checkbox"/>	DU-3-1-C	02-Jun-16 09:30	WR-2 F-4	

Vista PM: Martha Maier

Vial Box ID:

Q

Sample Reconciled By:

S. Roughton7/7/2016

Page 1 of 1

D2216-90 BATCH ID B6G0025

Analyst: S.Roughton Test Code: %Moist/%Solids

Analyte: **Units:** %
Dried at 110°C+/-5°C

HRMS-8

<u>Date/Time IN:</u>	<u>Date/Time OUT</u>
7/7/16 0932	7/8/16 13:15

[illegible]

D2216-90 BATCH ID B6F0183

Analyst: BSS	Test Code: %Moist/%Solids
Analyte:	Units: %
Dried at 110°C +/- 5°C	

INST HRMS-8

Date/Time IN:		Date/Time OUT	
6/30/16	1340	7/5/16	1210

[illegible]

② Transferred Sample to secondary container to homogenize. 8/5/30

B6F0183

Dried at 110°C+/-5°C

6/30/16 13:40	7/5/16 12:10
---------------	--------------

6/30/16 13:40	7/5/16 12:10
---------------	--------------

[illegible]

Solids estimate

Actual

Batch: B6F0183

Lab ID	Analysis	% Solids	Entered	Target weight	Weigh this much
1600835-01	Percent Solids	90.28		10.00	11.08
1600835-02	Percent Solids	86.67		10.00	11.54
1600835-03	Percent Solids	90.21		10.00	11.08
1600835-04	Percent Solids	96.57		10.00	10.36
1600835-05	Percent Solids	94.58		10.00	10.57
1600835-06	Percent Solids	87.76		10.00	11.40

Batch: B6G0025

Lab ID	Analysis	% Solids	Entered	Target weight	Weigh this much
1600835-07	Percent Solids	87.61		10.00	11.41
1600835-08	Percent Solids	84.38		10.00	11.85
1600835-09	Percent Solids	87.56		10.00	11.42
1600847-01	Percent Solids	90.20		10.00	11.09
1600847-02	Percent Solids	91.11		10.00	10.98
1600847-03	Percent Solids	93.24		10.00	10.73
1600847-04	Percent Solids	70.42		10.00	14.20
1600847-05	Percent Solids	91.23		10.00	10.96
1600847-06	Percent Solids	91.16		10.00	10.97
1600848-01	Percent Solids	97.70		10.00	10.24
1600848-02	Percent Solids	100.00		10.00	10.00
1600848-03	Percent Solids	100.00		10.00	10.00
1600848-04	Percent Solids	99.52		10.00	10.05

PREPARATION BENCH SHEET

Matrix: Solid

Method: 1613 Full List

B6G0039

Chemist: INJ

Prep Date/Time: 07-Jul-16 15:12

Prepared using: HRMS - Soxhlet

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	C6G0043	C6G0044	C6G0044	C6G0045	RS CHEM/WIT DATE
						AP CHEM/DATE	ABSG CHEM/DATE	AA CHEM/DATE	Florisil CHEM/DATE	
<input type="checkbox"/>	B6G0039-BLK1	N/A	(10.00)	INJ OBS 7/8/16	OBS on 7/11/16	OBS 7/11/16	INJ 7/12/16	INJ 7/12/16	OBS 7/12/16	OBS INJ 7/12/16
<input type="checkbox"/>	B6G0039-BS1	↓	(10.00)							
<input type="checkbox"/>	B6G0039-MS1 1600835-04RE1	10.36	10.40							
<input type="checkbox"/>	B6G0039-MS2 (A) 1600835-08	11.85	11.84							
<input type="checkbox"/>	B6G0039-MSD1 1600835-04RE1	10.36	10.34							
<input type="checkbox"/>	B6G0039-MSD2 (A) 1600835-08	11.85	11.88							
<input type="checkbox"/>	1600835-01RE1	11.08	11.17							
<input type="checkbox"/>	1600835-02RE1	11.54	11.54							
<input type="checkbox"/>	1600835-03RE1	11.08	11.04							
<input type="checkbox"/>	1600835-04RE1	10.36	10.42							
<input type="checkbox"/>	1600835-05RE1	10.57	10.55							
<input type="checkbox"/>	1600835-06RE1	11.40	11.40							
<input type="checkbox"/>	1600835-07	11.41	11.42							
<input type="checkbox"/>	1600835-08 (B)	11.85	11.91							
<input type="checkbox"/>	1600835-09	11.42	11.41							

(A) Samples A, B, and C combined, homogenized prior to extraction (1600835-08) ^{INJ} 7/8/16

IS Name <u>V5</u>	NS Name <u>V11</u>	CRS Name <u>V5</u>	RS Name <u>V6</u>	Cycle Time	APP: SEFUN SOX <u>SDS</u>	Check Out: <u>INJ 7/8/16</u>
PCDD/F <u>15J1324, 10µL</u>	PCDD/F <u>15J1327, 10µL</u>	PCDD/F <u>15J1325, 10µL</u>	PCDD/F <u>15J1326, 10µL</u>	Start Date/Time <u>7/8/16 1636</u>	SOLV: <u>Tol</u>	Check In: <u>INJ 7/8/16</u>
PCB	PCB	PCB	PCB	Stop Date/Time <u>7/9/16 10:05</u>	Other <u>N/A</u>	Chemist/Date: <u>HRMS-8</u>
PAH	PAH	PAH	PAH		Final Volume(s) <u>20µL</u>	
					<u>C14</u>	

Comments:

Batch: B6G0039

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount
1600835-01RE1	11.17	90.27778	10.0840	20	30-Jun-16 12:42	BSS		
1600835-02RE1	11.54	86.66667	10.0013	20	30-Jun-16 12:42	BSS		
1600835-03RE1	11.04	90.21277	9.9595	20	30-Jun-16 12:42	BSS		
1600835-04RE1	10.42	96.56992	10.0626	20	30-Jun-16 12:42	BSS		
1600835-04RE2	10.42	96.56992	10.0626	20	30-Jun-16 12:42	BSS		
1600835-05RE1	10.55	94.58333	9.9785	20	30-Jun-16 12:42	BSS		
1600835-05RE2	10.55	94.58333	9.9785	20	30-Jun-16 12:42	BSS		
1600835-06RE1	11.4	87.7551	10.0041	20	30-Jun-16 12:42	BSS		
1600835-07	11.42	86.7	9.90	20	07-Jul-16 15:12	BSS		
1600835-08	11.91	84.8	10.10	20	07-Jul-16 15:12	BSS		
1600835-09	11.41	88.5	10.10	20	07-Jul-16 15:12	BSS		
B6G0039-BLK1	10			20	07-Jul-16 15:12	BSS		
B6G0039-BS1	10			20	07-Jul-16 15:12	BSS	15J1327	10
B6G0039-MS1	10.4	96.57	10.04	20	07-Jul-16 15:12	BSS	15J1327	10
B6G0039-MS2	11.84	84.8	10.04	20	07-Jul-16 15:12	BSS	15J1327	10
B6G0039-MSD1	10.34	96.57	9.985	20	07-Jul-16 15:12	BSS	15J1327	10
B6G0039-MSD2	11.88	84.8	10.07	20	07-Jul-16 15:12	BSS	15J1327	10

SAMPLE DATA – EPA METHOD 1613

Client ID: Method Blank
Lab ID: B6G0039-BLK1

Filename: 160712D1 S:4 Acq:12-JUL-16 18:46:29
GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16 wt/vol:10.000

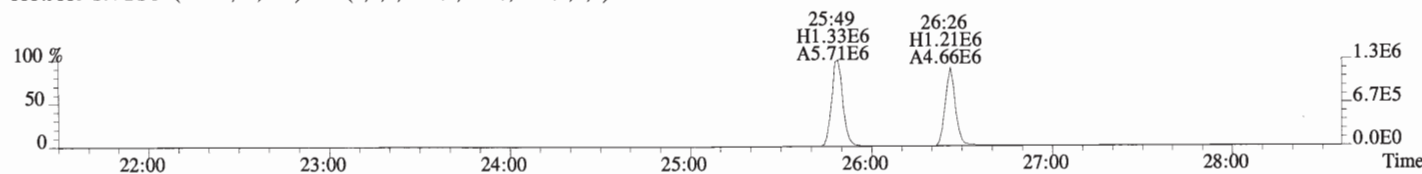
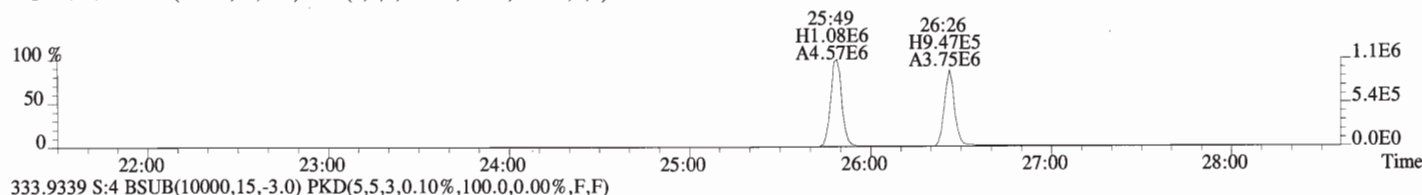
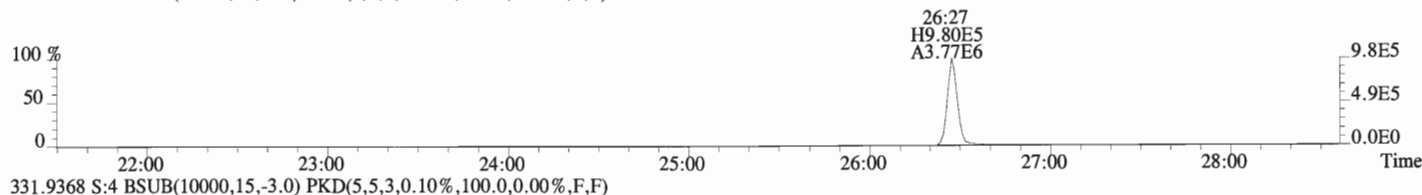
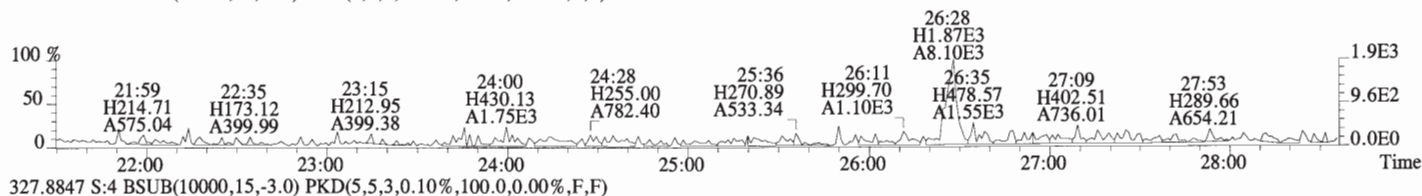
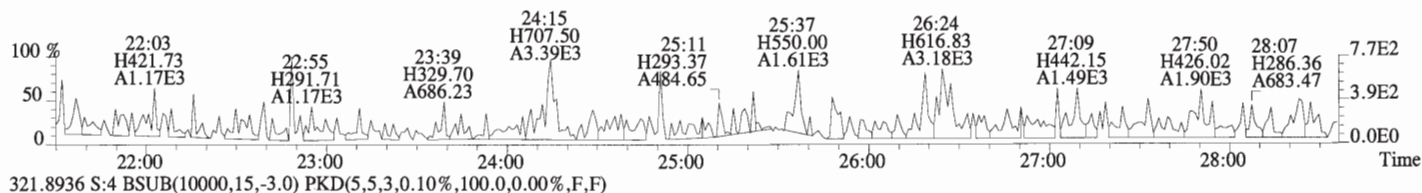
ConCal: ST160712D1-1
EndCAL: NA

Page 3 of 3

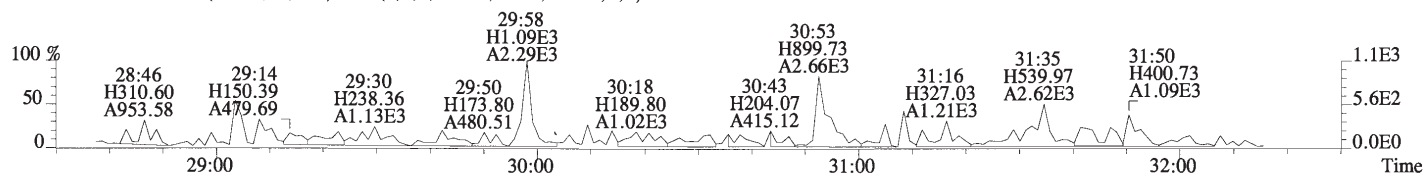
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2,3,7,8-TCDD	*	* n	1.13	Not F ₇	*	*	195	2.5	0.0722		Total Tetra-Dioxins	*	*		195	0.0722
1,2,3,7,8-PeCDD	*	* n	0.96	Not F ₇	*	*	327	2.5	0.126		Total Penta-Dioxins	*	*		327	0.126
1,2,3,4,7,8-HxCDD	*	* n	1.00	Not F ₇	*	*	174	2.5	0.103		Total Hexa-Dioxins	*	*		174	0.103
1,2,3,6,7,8-HxCDD	*	* n	1.10	Not F ₇	*	*	174	2.5	0.101		Total Hepta-Dioxins	*	*		108	0.0793
1,2,3,7,8,9-HxCDD	*	* n	1.05	Not F ₇	*	*	174	2.5	0.107		Total Tetra-Furans	*	*		325	0.0952
1,2,3,4,6,7,8-HpCDD	*	* n	1.05	Not F ₇	*	*	108	2.5	0.0793		Total Penta-Furans	0.0000	0.0000		298	0.114
OCDD	*	* n	0.96	Not F ₇	*	*	114	2.5	0.126		Total Hexa-Furans	*	*		170	0.0431
											Total Hepta-Furans	*	*		127	0.0495
2,3,7,8-TCDF	*	* n	1.12	Not F ₇	*	*	325	2.5	0.0952							
1,2,3,7,8-PeCDF	*	* n	1.01	Not F ₇	*	*	298	2.5	0.115							
2,3,4,7,8-PeCDF	*	* n	0.90	Not F ₇	*	*	298	2.5	0.113							
1,2,3,4,7,8-HxCDF	*	* n	1.16	Not F ₇	*	*	170	2.5	0.0368							
1,2,3,6,7,8-HxCDF	*	* n	1.16	Not F ₇	*	*	170	2.5	0.0387							
2,3,4,6,7,8-HxCDF	*	* n	1.23	Not F ₇	*	*	170	2.5	0.0397							
1,2,3,7,8,9-HxCDF	*	* n	1.13	Not F ₇	*	*	170	2.5	0.0602							
1,2,3,4,6,7,8-HpCDF	*	* n	1.44	Not F ₇	*	*	127	2.5	0.0503							
1,2,3,4,7,8,9-HpCDF	*	* n	1.31	Not F ₇	*	*	127	2.5	0.0484							
OCDF	*	* n	1.03	Not F ₇	*	*	207	2.5	0.184							
IS 13C-2,3,7,8-TCDD	8.41e+06	0.81 y	1.01	26:27	1.025	161.85					Rec	Qual				
IS 13C-1,2,3,7,8-PeCDD	7.65e+06	0.63 y	1.10	31:11	1.208	134.89					80.9					
IS 13C-1,2,3,4,7,8-HxCDD	6.47e+06	1.28 y	0.72	34:28	1.014	169.46					67.4					
IS 13C-1,2,3,6,7,8-HxCDD	6.20e+06	1.28 y	0.73	34:34	1.017	160.97					84.7					
IS 13C-1,2,3,7,8,9-HxCDD	6.30e+06	1.25 y	0.70	34:52	1.025	169.39					80.5					
IS 13C-1,2,3,4,6,7,8-HpCDD	4.92e+06	1.07 y	0.66	38:23	1.129	139.60					84.7					
IS 13C-OCDD	7.02e+06	0.90 y	0.66	41:34	1.223	200.73					69.8					
IS 13C-2,3,7,8-TCDF	1.23e+07	0.81 y	0.90	25:37	0.992	164.70					50.2					
IS 13C-1,2,3,7,8-PeCDF	1.10e+07	1.57 y	0.98	29:57	1.161	135.28					82.4					
IS 13C-2,3,4,7,8-PeCDF	1.22e+07	1.58 y	1.15	30:54	1.197	129.14					67.6					
IS 13C-1,2,3,4,7,8-HxCDF	8.91e+06	0.52 y	1.01	33:39	0.988	165.78					64.6					
IS 13C-1,2,3,6,7,8-HxCDF	9.16e+06	0.51 y	1.10	33:43	0.992	157.35					82.9					
IS 13C-2,3,4,6,7,8-HxCDF	8.48e+06	0.52 y	0.95	34:19	1.009	168.01					78.7					
IS 13C-1,2,3,7,8,9-HxCDF	7.56e+06	0.50 y	0.83	35:15	1.037	172.52					84.0					
IS 13C-1,2,3,4,6,7,8-HpCDF	5.21e+06	0.44 y	0.70	37:00	1.089	140.49					86.3					
IS 13C-1,2,3,4,7,8,9-HpCDF	5.04e+06	0.44 y	0.72	38:55	1.145	132.03					70.2					
IS 13C-OCDF	8.78e+06	0.92 y	0.82	41:48	1.229	200.97					66.0					
C/Up 37Cl-2,3,7,8-TCDD	3.77e+06		1.14	26:28	1.025	64.551					50.2					
RS/RT 13C-1,2,3,4-TCDD	1.03e+07	0.80 y	1.00	25:49	*	200.00										
RS 13C-1,2,3,4-TCDF	1.65e+07	0.83 y	1.00	24:14	*	200.00										
RS/RT 13C-1,2,3,4,6,9-HxCDF	1.06e+07	0.52 y	1.00	33:60	*	200.00										

Integrations
by DLB
Analyst: DLB
Date: 7/13/16
Reviewed
by 42
Analyst: 42
Date: 7/15/16

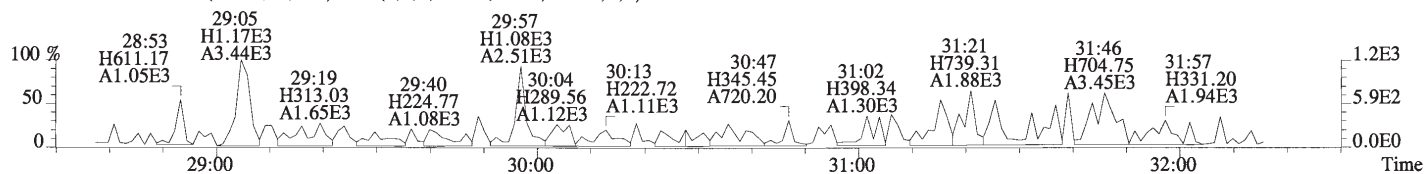
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 319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



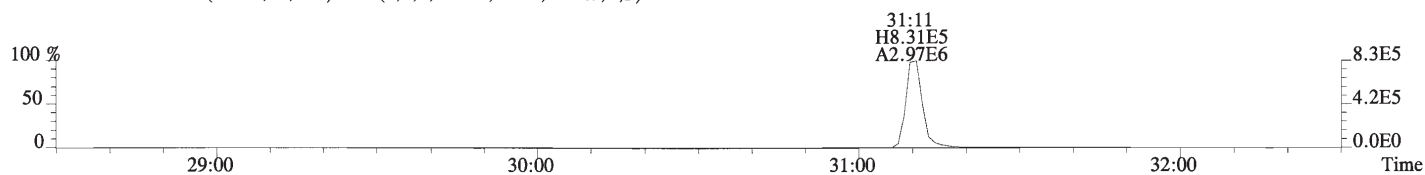
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 353.8576 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



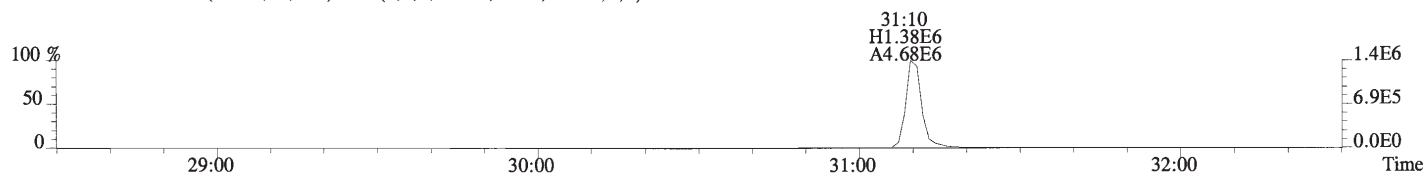
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



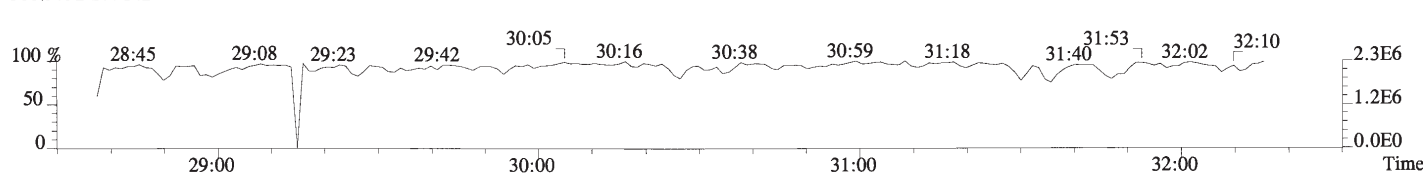
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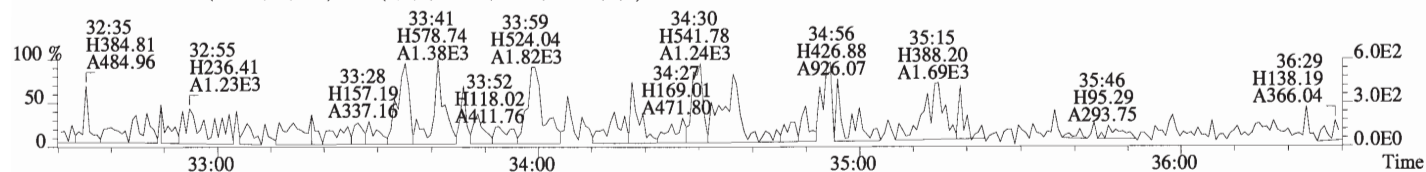
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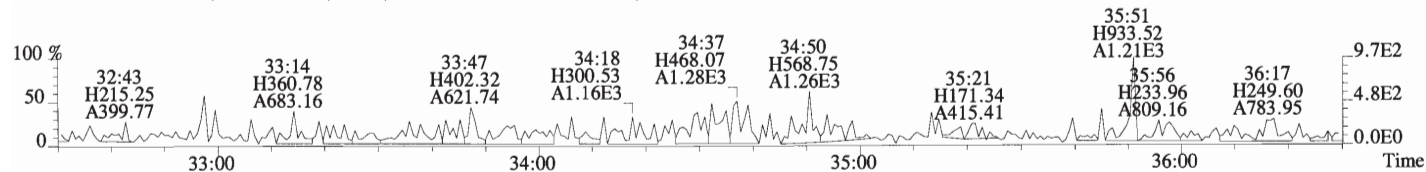
366.9792 S:4 F:2



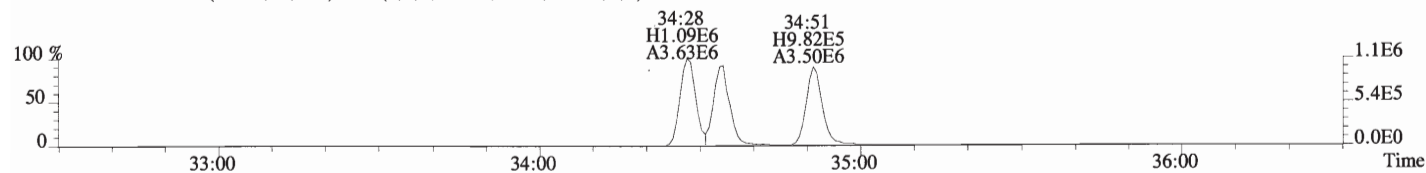
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389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



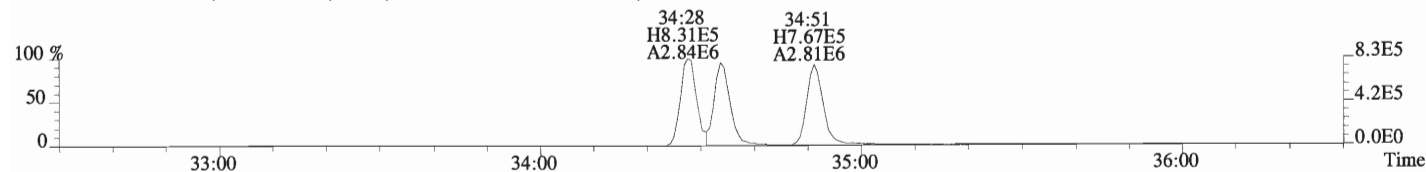
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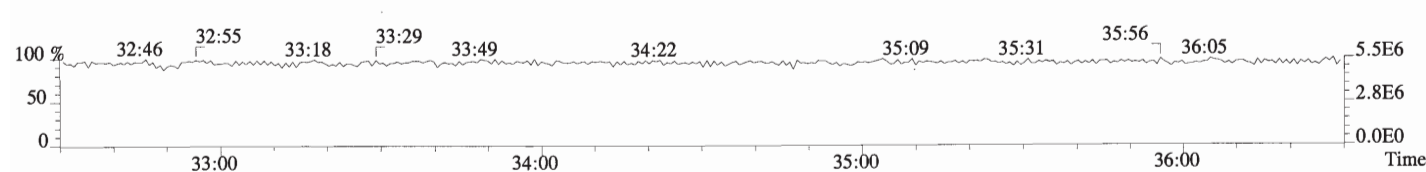
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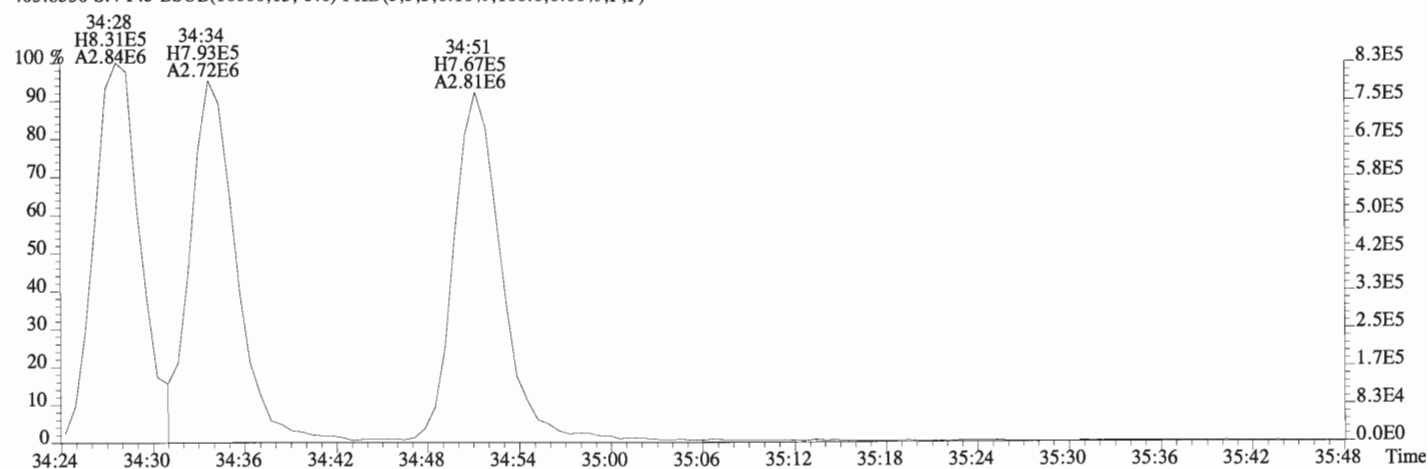
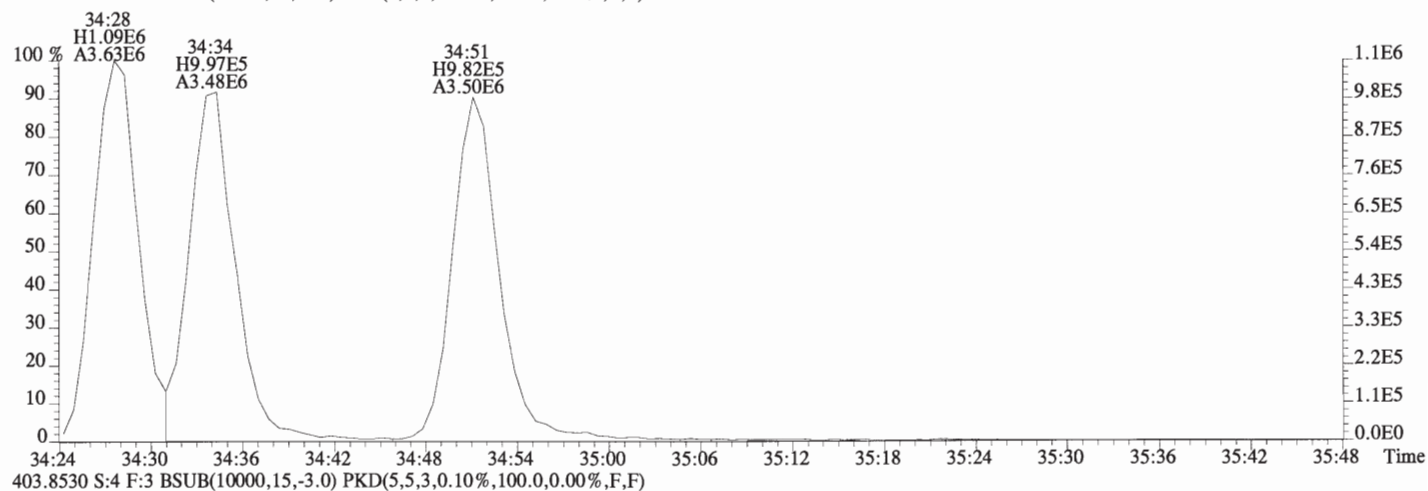
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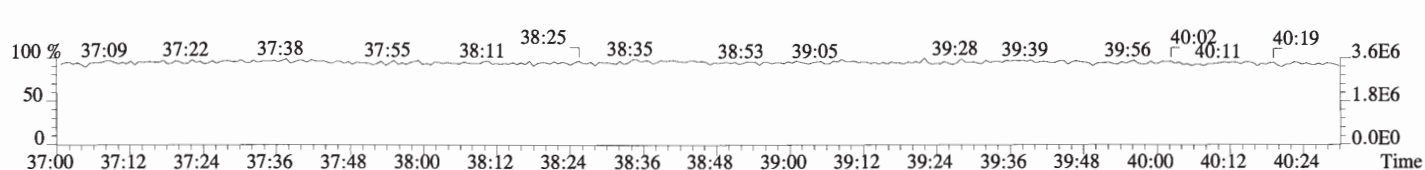
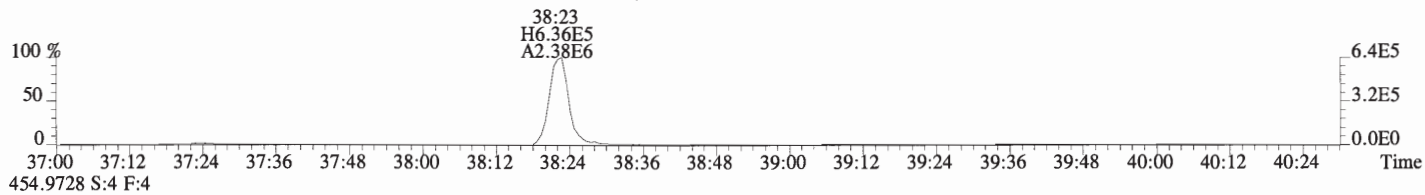
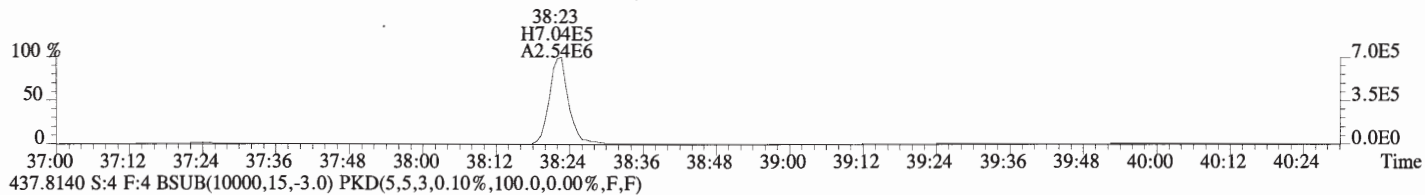
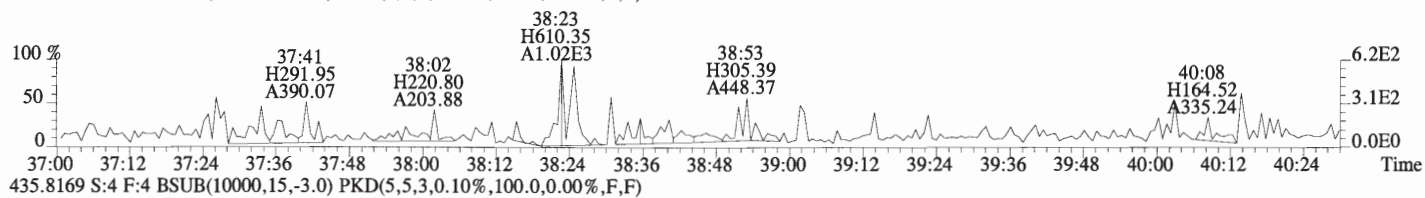
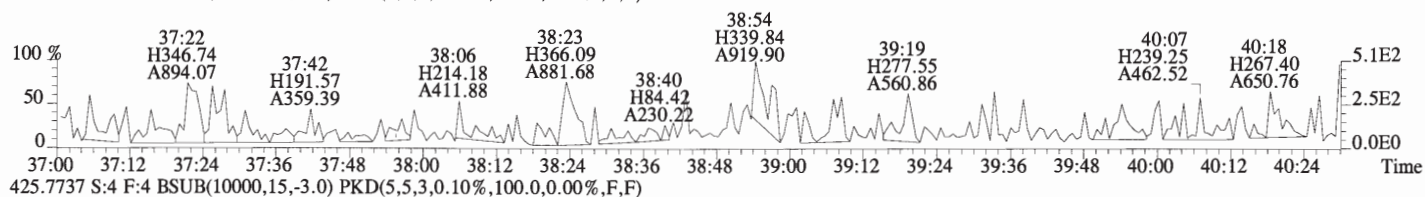
392.9760 S:4 F:3



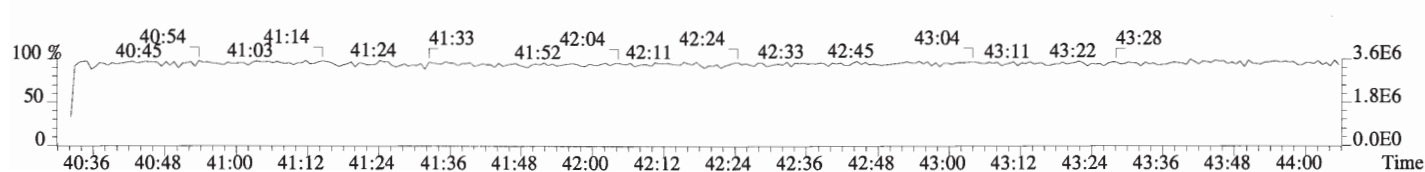
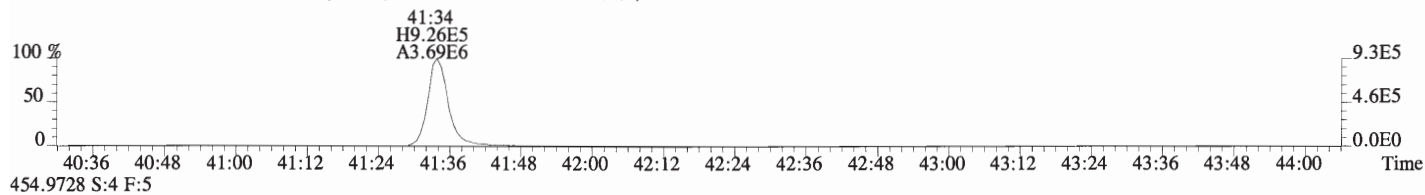
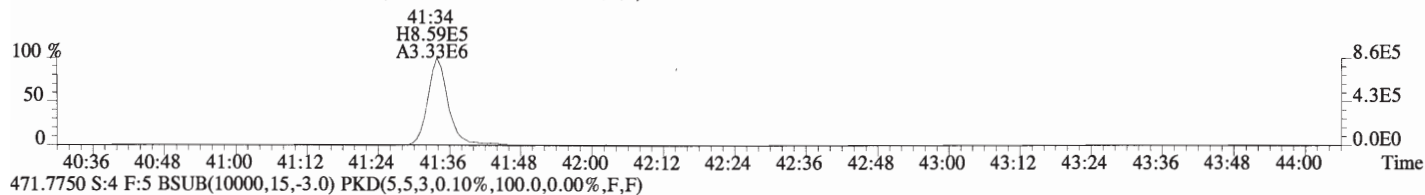
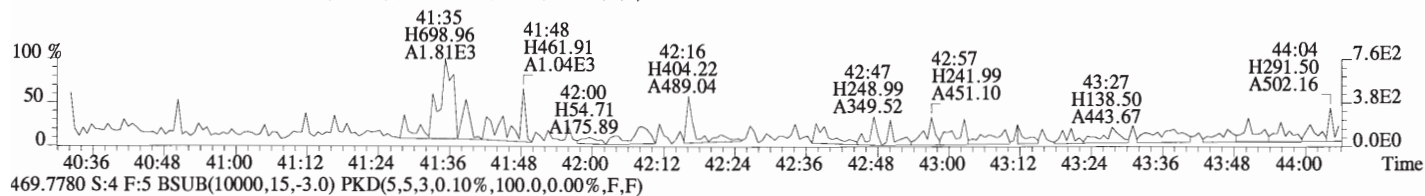
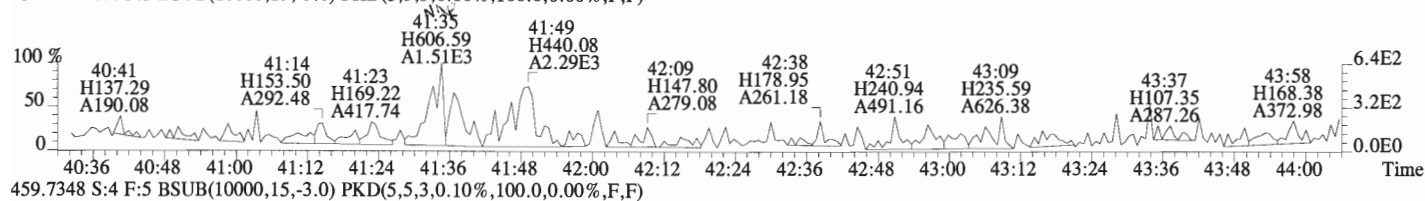
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 401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



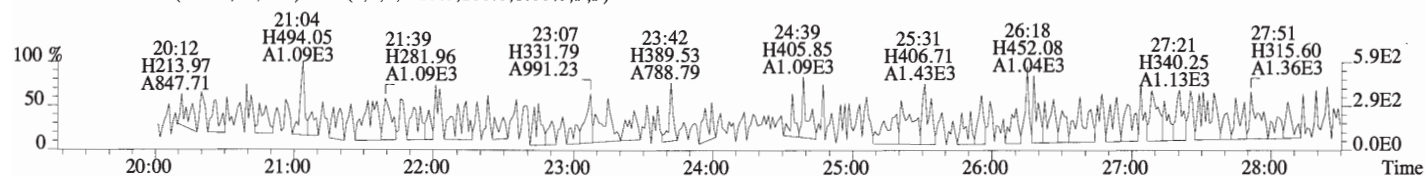
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 423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



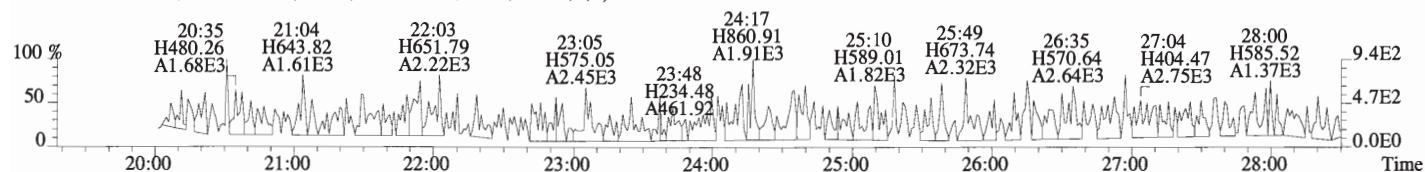
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457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



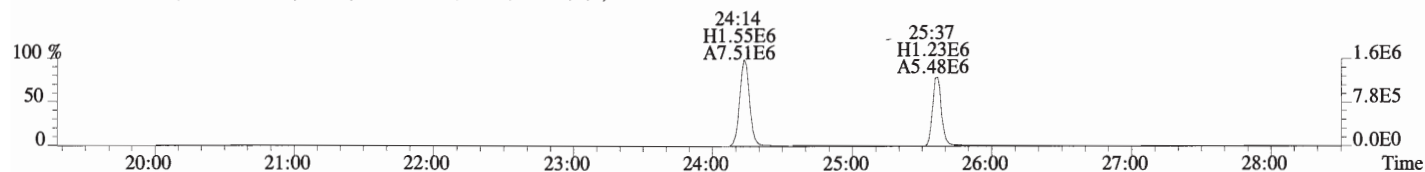
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303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



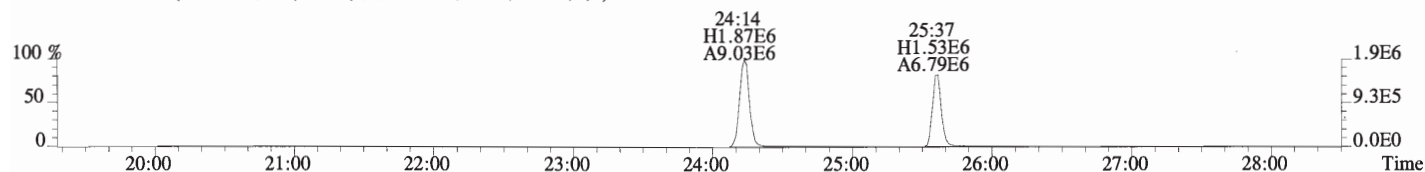
305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



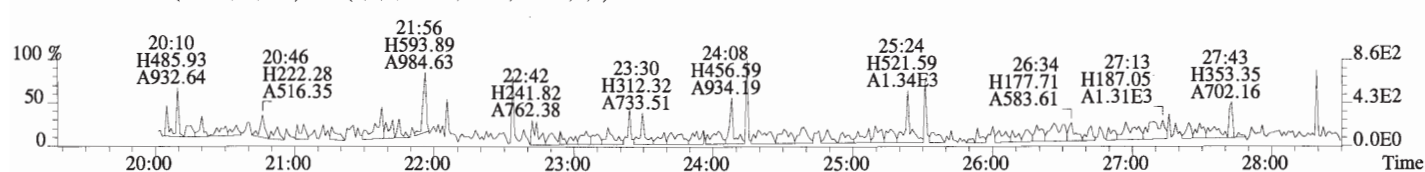
315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



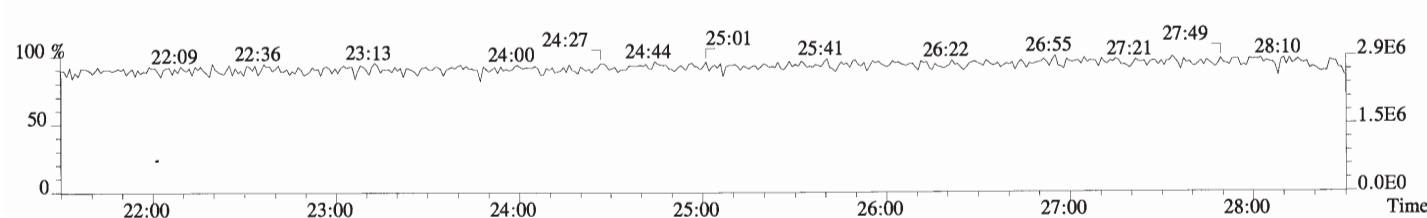
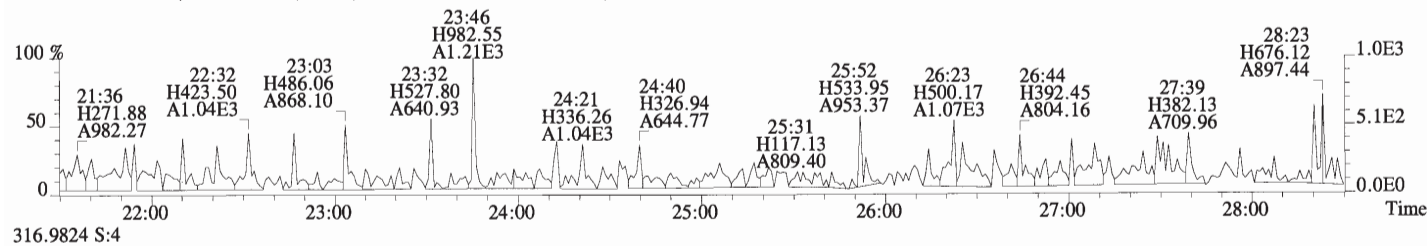
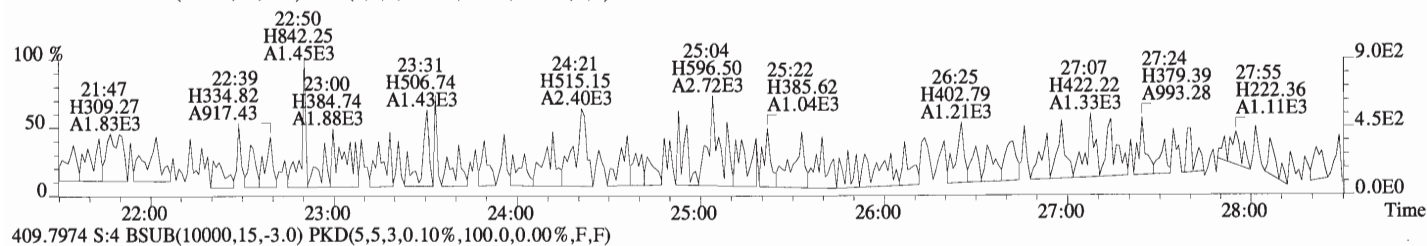
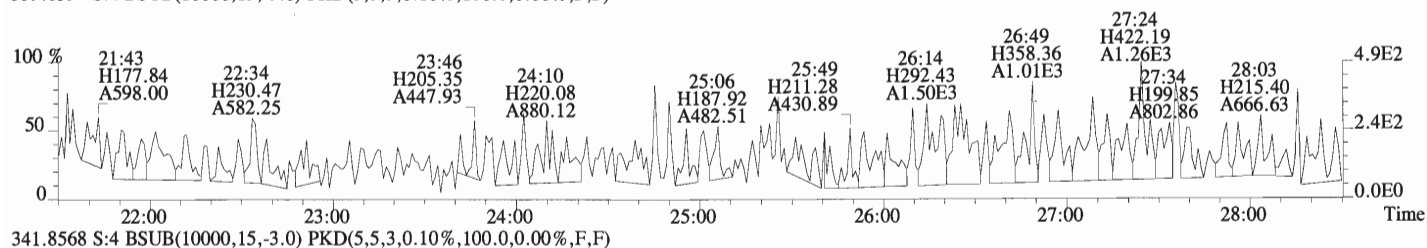
317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



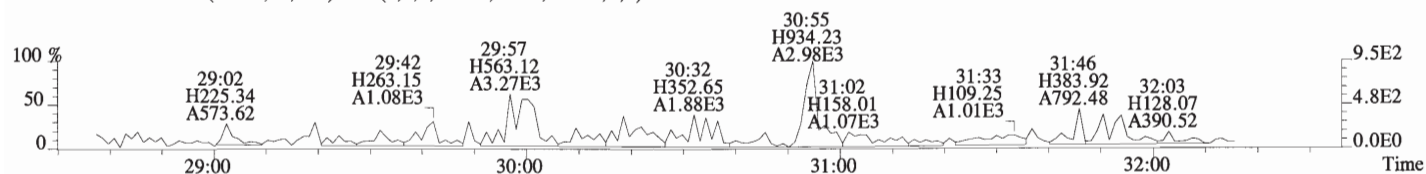
375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



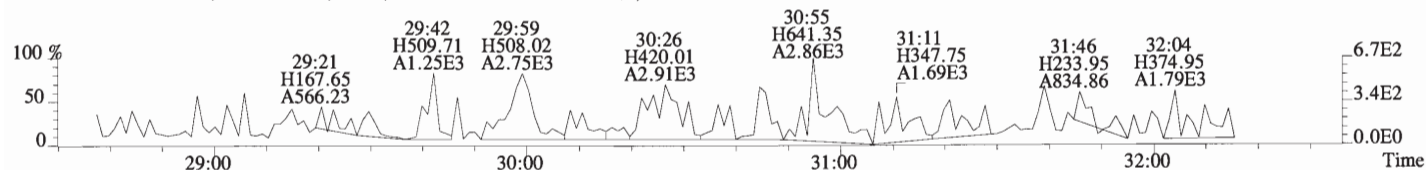
File:160712D1 #1-551 Acq:12-JUL-2016 18:46:29 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



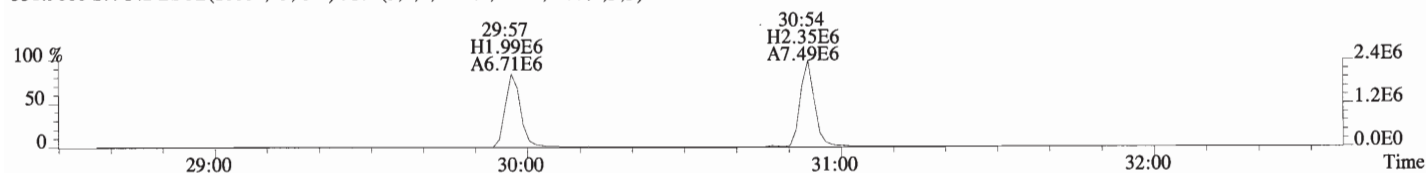
File:160712D1 #1-193 Acq:12-JUL-2016 18:46:29 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BLK1 Method Blank 10 Exp:OCDD_DB5
 339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



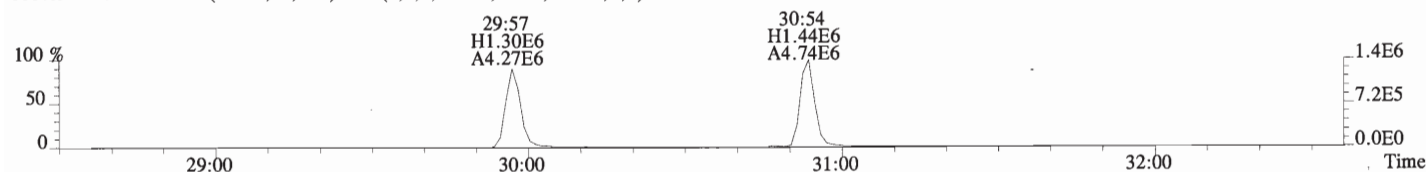
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



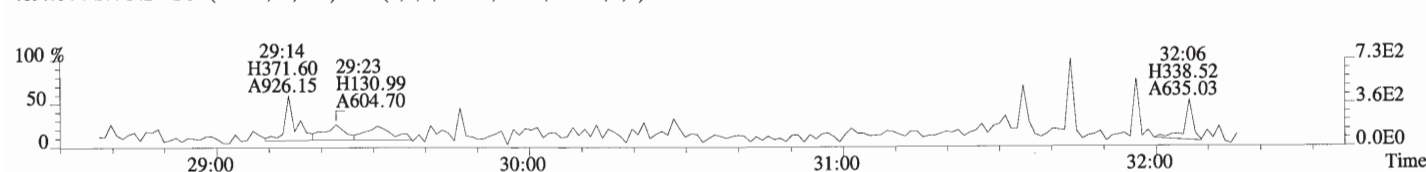
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



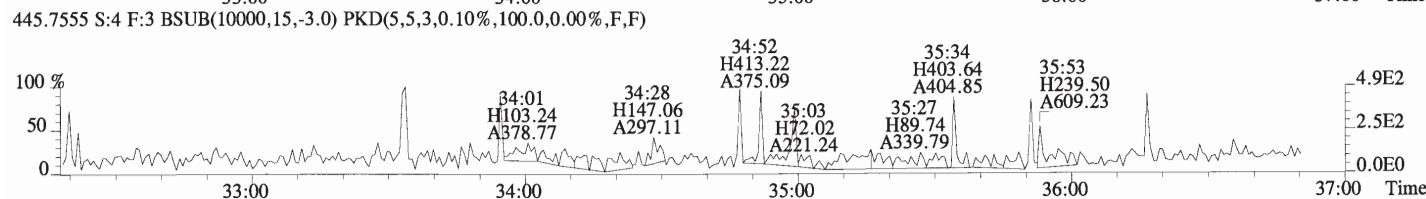
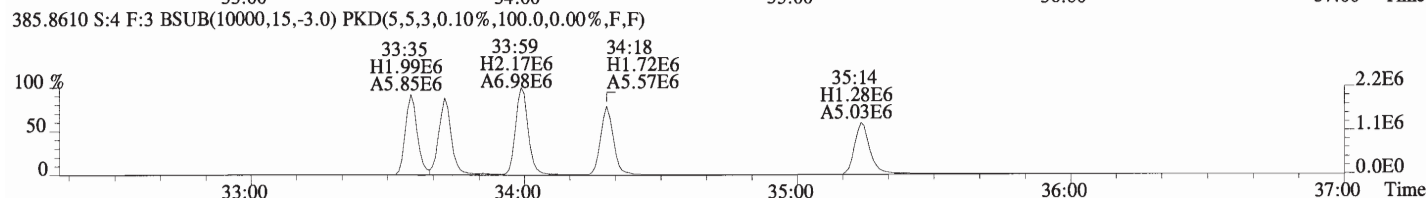
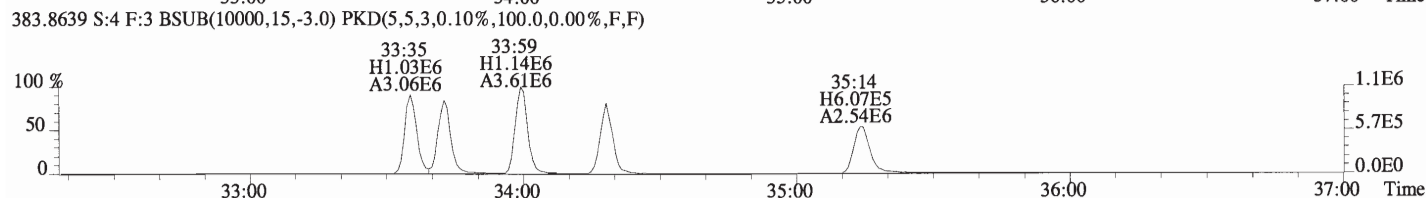
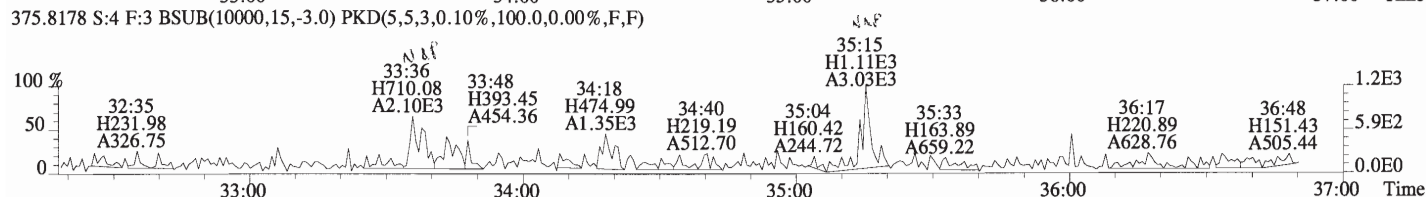
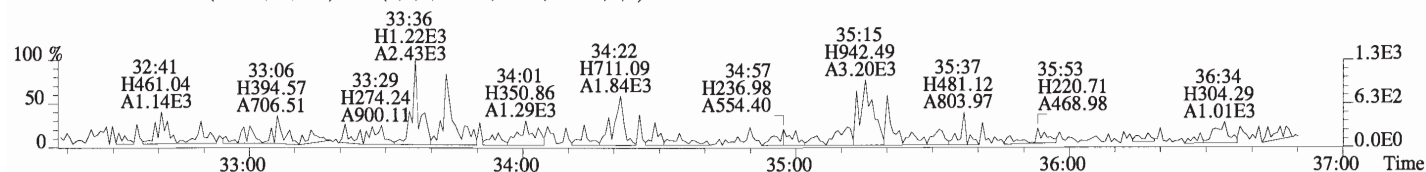
353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



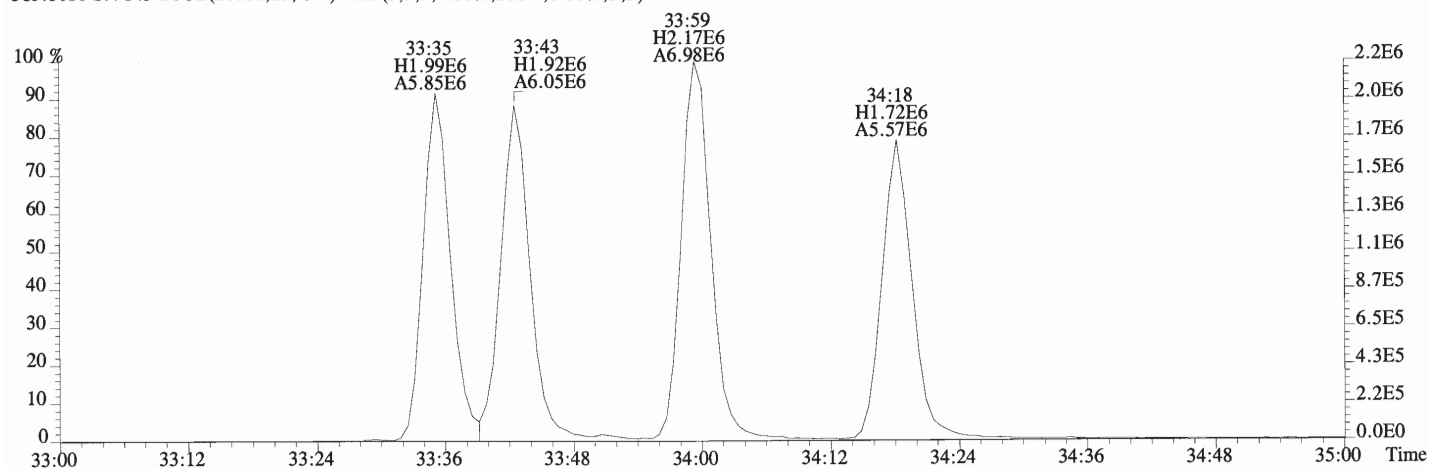
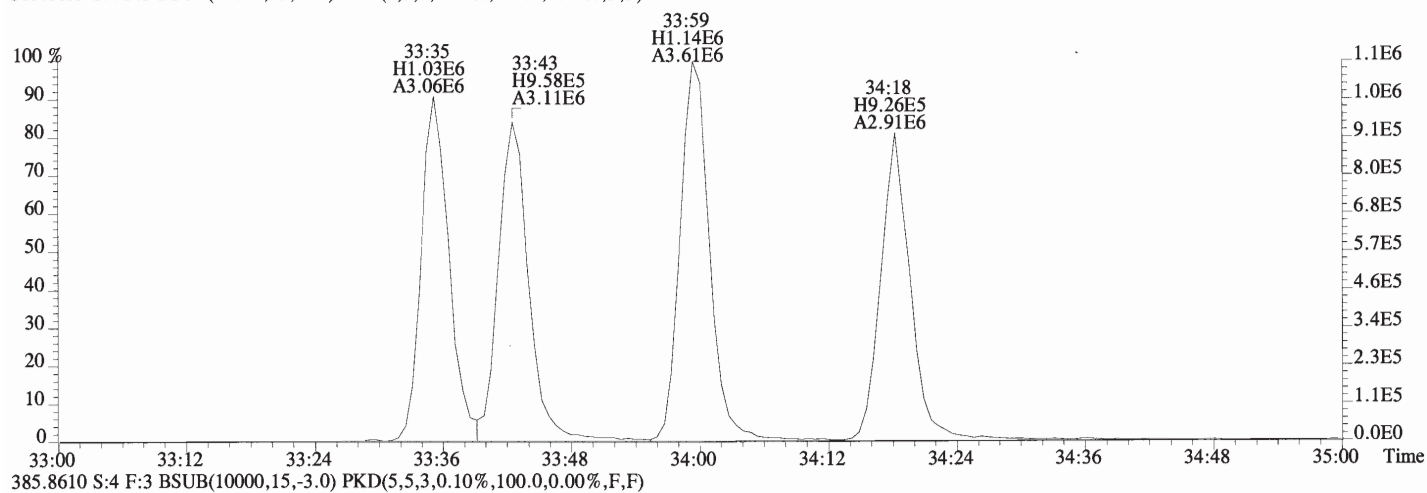
409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



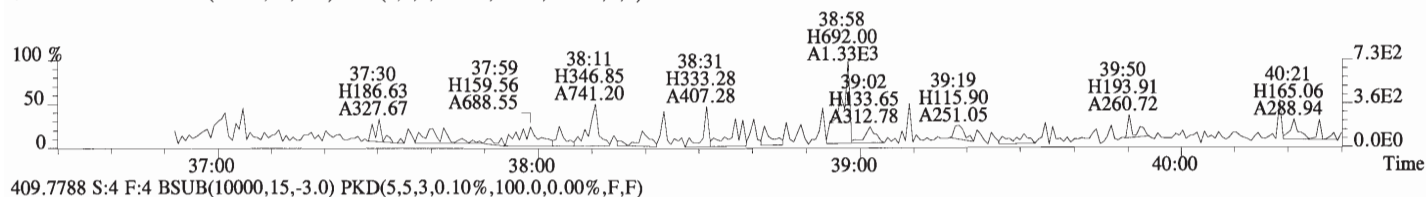
File:160712D1 #1-407 Acq:12-JUL-2016 18:46:29 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BLK1 Method Blank 10 Exp:OCDD_DB5
 373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



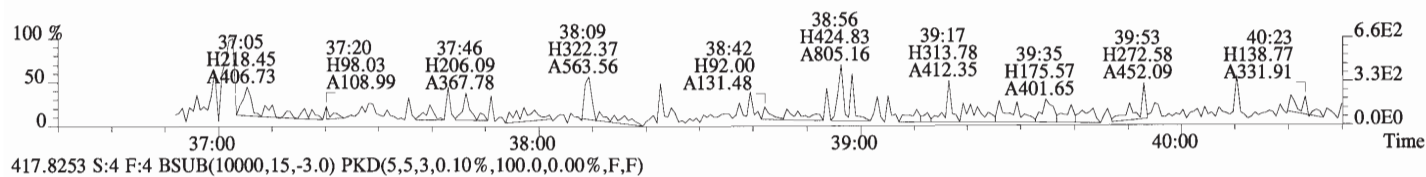
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 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BLK1 Method Blank 10 Exp:OCDD_DB5
 383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



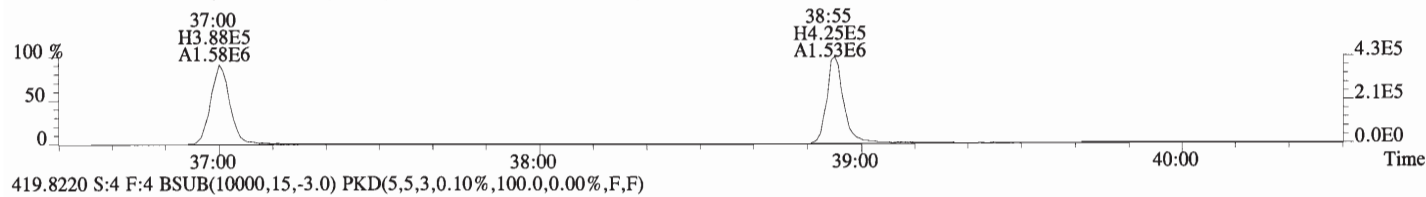
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 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BLK1 Method Blank 10 Exp:OCDD_DB5
 407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



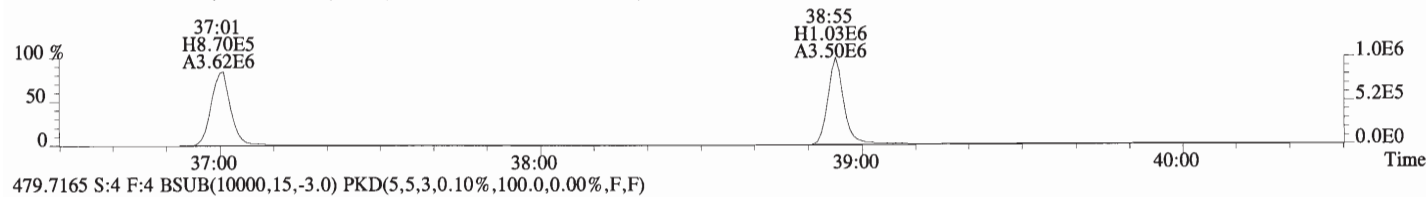
409.7788 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



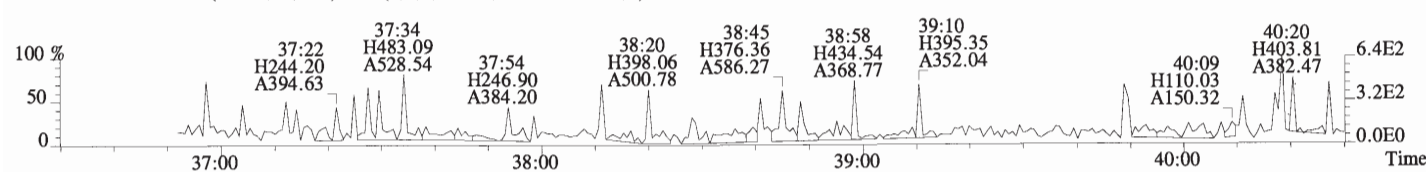
417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



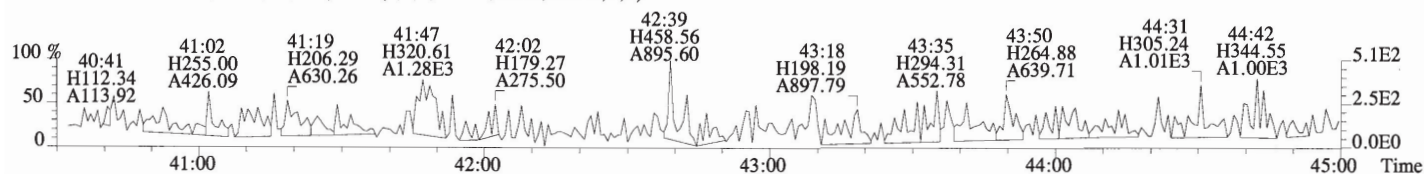
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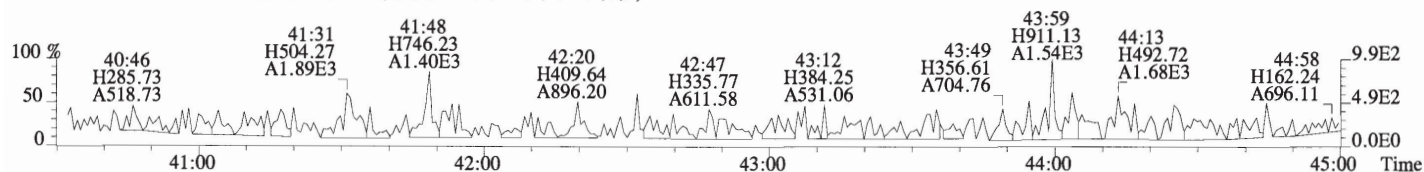
479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



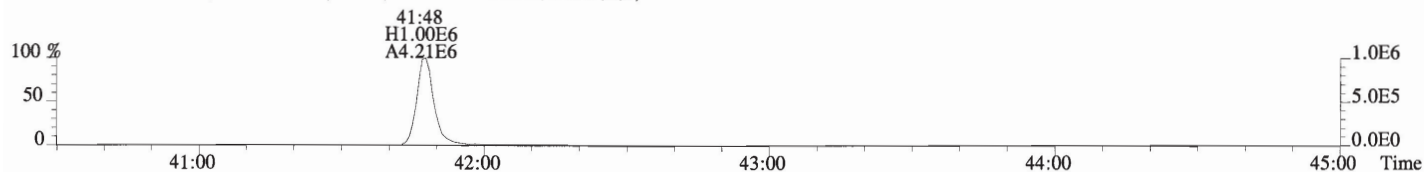
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 441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



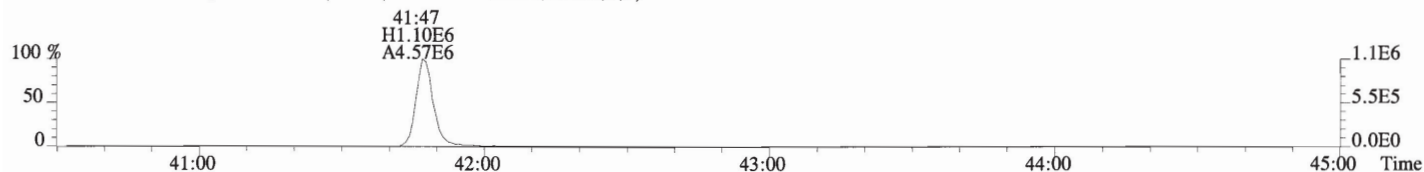
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



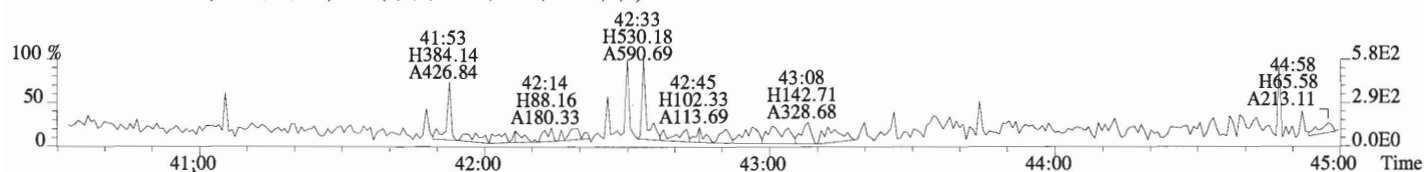
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



FORM 8A
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B6G0039-BS1
Contract No.: SAS No.:
Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 160712D1-2
Ext. Date: Shift: Day Analysis Date: 12-JUL-16 Time: 17:09:22

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
2,3,7,8-TCDD	10	9.56	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	48.6	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	49.0	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	47.2	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	48.2	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	50.3	35.0 - 70.0
OCDD	100	101	78.0 - 144.0
2,3,7,8-TCDF	10	9.98	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	49.1	40.0 - 67.0
2,3,4,7,8-PeCDF	50	49.4	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	50.6	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	48.3	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	49.1	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	48.9	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	47.0	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	47.7	39.0 - 69.0
OCDF	100	95.9	63.0 - 170.0

(1) Contract-required concentration limits for OPR
as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR
as specified in Table 6a, Method 1613. 10/94

Analyst: DB

Date: 7/13/16

FORM 8B
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B6G0039-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 160712D1-2

Ext. Date: Shift: Day Analysis Date: 12-JUL-16 Time: 17:09:22

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

LABELLED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
13C-2,3,7,8-TCDD	100	89.5	20.0 - 175.0 25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	71.2	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	88.0	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	86.9	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	89.3	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	70.4	26.0 - 166.0
13C-OCDD	200	105	26.0 - 397.0
13C-2,3,7,8-TCDF	100	89.7	22.0 - 152.0 26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	71.5	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	70.1	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	86.5	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	86.8	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	86.7	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	91.9	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	74.6	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	68.3	20.0 - 186.0
13C-OCDF	200	111	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	34.1	12.4 - 76.4

(1) Contract-required concentration limits for OPR
as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR
as specified in Table 6a, Method 1613. 10/94

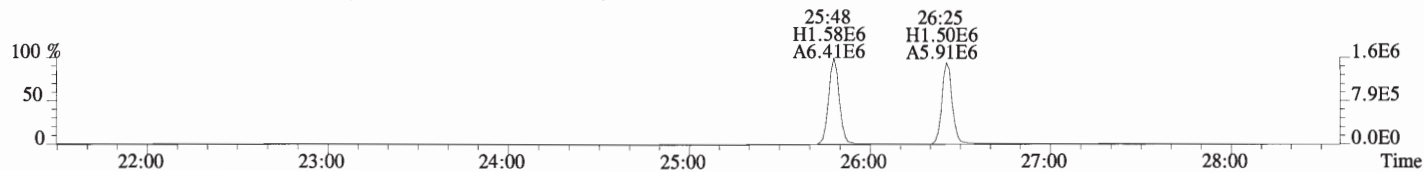
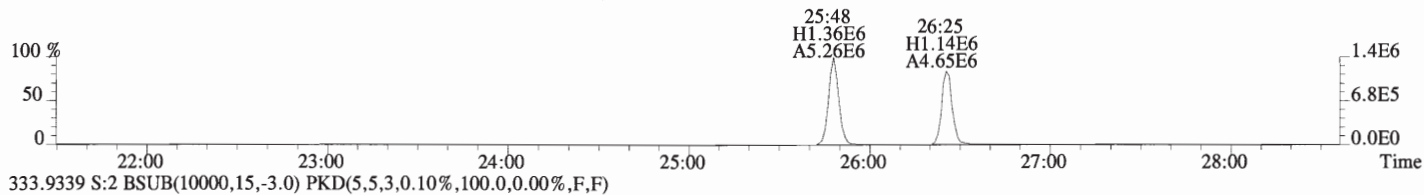
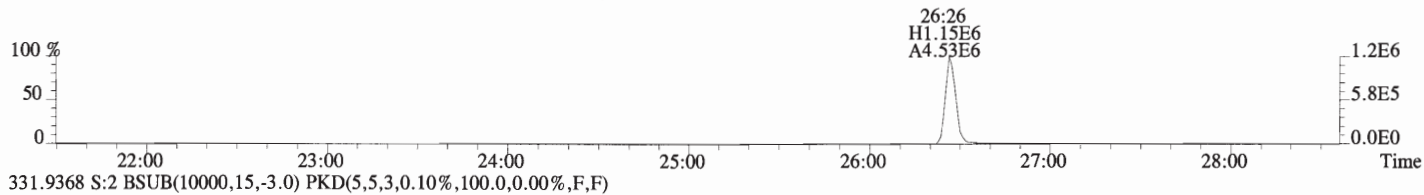
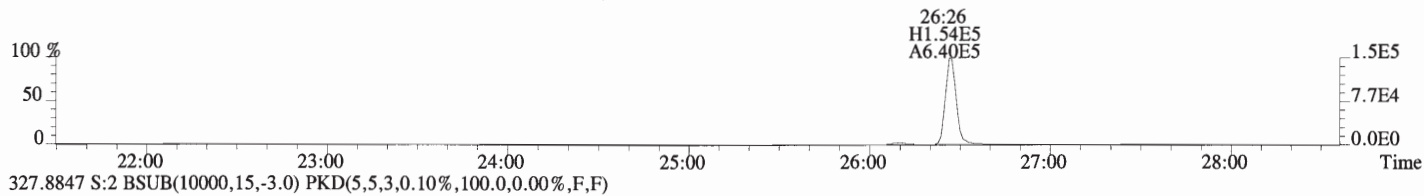
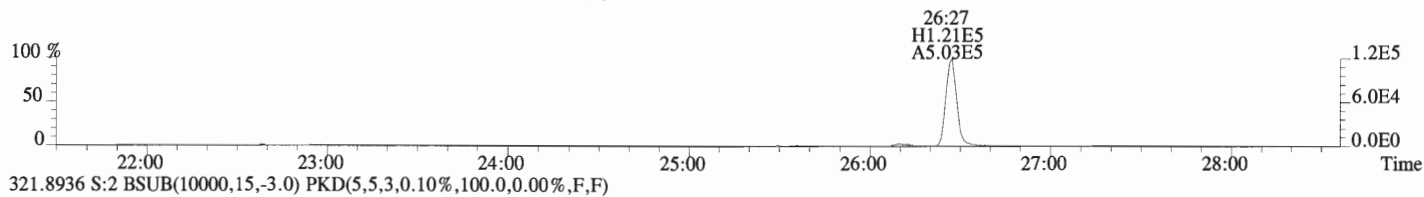
Analyst: DB

Date: 7/13/16

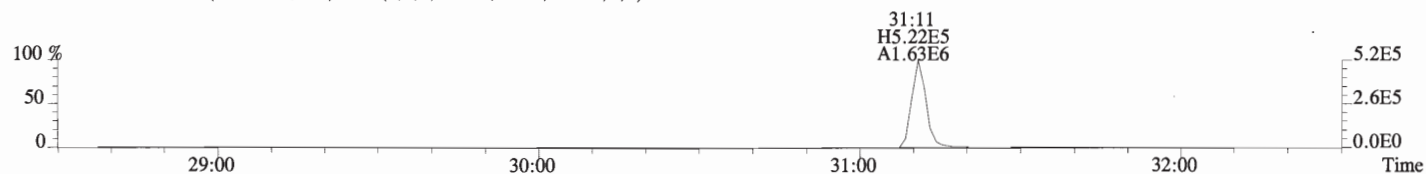
Client ID: OPR Filename: 160712D1 S:2 Acq:12-JUL-16 17:09:22 ConCal: ST160712D1-1 Page 2 of 2
 Lab ID: B6G0039-BS1 GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
	2,3,7,8-TCDD	1.14e+06	0.79 y	1.13	26:27	1.001	9.5606		*	2.5	*	Total Tetra-Dioxins	10.0	10.3		*	*
	1,2,3,7,8-PeCDD	4.29e+06	0.62 y	0.96	31:11	1.001	48.556		*	2.5	*	Total Penta-Dioxins	48.6	49.0		*	*
	1,2,3,4,7,8-HxCDD	3.73e+06	1.23 y	1.00	34:28	1.000	49.026		*	2.5	*	Total Hexa-Dioxins	144	145		*	*
	1,2,3,6,7,8-HxCDD	3.90e+06	1.21 y	1.10	34:35	1.001	47.201		*	2.5	*	Total Hepta-Dioxins	51.2	52.0		*	*
	1,2,3,7,8,9-HxCDD	3.78e+06	1.22 y	1.05	34:52	1.001	48.167		*	2.5	*	Total Tetra-Furans	10.00	10.4		*	*
	1,2,3,4,6,7,8-HpCDD	2.95e+06	1.05 y	1.05	38:23	1.000	50.314		*	2.5	*	Total Penta-Furans	98.878	100.66		*	*
	OCDD	4.02e+06	0.90 y	0.96	41:36	1.000	100.68		*	2.5	*	Total Hexa-Furans	197	198		*	*
												Total Hepta-Furans	96.0	97.5		*	*
	2,3,7,8-TCDF	1.72e+06	0.80 y	1.12	25:38	1.001	9.9765		*	2.5	*						
	1,2,3,7,8-PeCDF	6.62e+06	1.57 y	1.01	29:58	1.001	49.126		*	2.5	*						
	2,3,4,7,8-PeCDF	6.80e+06	1.61 y	0.90	30:54	1.001	49.375		*	2.5	*						
	1,2,3,4,7,8-HxCDF	6.16e+06	1.28 y	1.16	33:36	1.000	50.556		*	2.5	*						
	1,2,3,6,7,8-HxCDF	6.36e+06	1.27 y	1.16	33:43	1.000	48.320		*	2.5	*						
	2,3,4,6,7,8-HxCDF	5.94e+06	1.26 y	1.23	34:19	1.000	49.075		*	2.5	*						
	1,2,3,7,8,9-HxCDF	5.03e+06	1.24 y	1.13	35:15	1.000	48.876		*	2.5	*						
	1,2,3,4,6,7,8-HpCDF	4.22e+06	1.02 y	1.44	37:01	1.000	46.996		*	2.5	*						
	1,2,3,4,7,8,9-HpCDF	3.69e+06	1.05 y	1.31	38:56	1.000	47.748		*	2.5	*						
	OCDF	5.39e+06	0.90 y	1.03	41:49	1.000	95.902		*	2.5	*						
												Rec	Qual				
IS	13C-2,3,7,8-TCDD	1.06e+07	0.79 y	1.01	26:26	1.024	89.538					89.5					
IS	13C-1,2,3,7,8-PeCDD	9.18e+06	0.64 y	1.10	31:10	1.208	71.249					71.2					
IS	13C-1,2,3,4,7,8-HxCDD	7.58e+06	1.29 y	0.72	34:28	1.014	87.991					88.0					
IS	13C-1,2,3,6,7,8-HxCDD	7.55e+06	1.31 y	0.73	34:34	1.017	86.877					86.9					
IS	13C-1,2,3,7,8,9-HxCDD	7.49e+06	1.27 y	0.70	34:51	1.025	89.321					89.3					
IS	13C-1,2,3,4,6,7,8-HpCDD	5.59e+06	1.07 y	0.66	38:23	1.129	70.374					70.4					
IS	13C-OCDD	8.30e+06	0.90 y	0.66	41:35	1.223	105.22					52.6					
IS	13C-2,3,7,8-TCDF	1.54e+07	0.79 y	0.90	25:36	0.992	89.736					89.7					
IS	13C-1,2,3,7,8-PeCDF	1.34e+07	1.63 y	0.98	29:57	1.161	71.531					71.5					
IS	13C-2,3,4,7,8-PeCDF	1.53e+07	1.58 y	1.15	30:53	1.197	70.095					70.1					
IS	13C-1,2,3,4,7,8-HxCDF	1.05e+07	0.51 y	1.01	33:35	0.988	86.475					86.5					
IS	13C-1,2,3,6,7,8-HxCDF	1.14e+07	0.52 y	1.10	33:43	0.992	86.836					86.8					
IS	13C-2,3,4,6,7,8-HxCDF	9.87e+06	0.52 y	0.95	34:18	1.009	86.717					86.7					
IS	13C-1,2,3,7,8,9-HxCDF	9.09e+06	0.52 y	0.83	35:15	1.037	91.886					91.9					
IS	13C-1,2,3,4,6,7,8-HpCDF	6.24e+06	0.42 y	0.70	37:00	1.089	74.640					74.6					
IS	13C-1,2,3,4,7,8,9-HpCDF	5.88e+06	0.41 y	0.72	38:55	1.145	68.306					68.3					
IS	13C-OCDF	1.09e+07	0.91 y	0.82	41:48	1.230	110.60					55.3					
C/Up	37Cl-2,3,7,8-TCDD	4.53e+06		1.14	26:27	1.025	34.094					85.2					
RS/RT	13C-1,2,3,4-TCDD	1.17e+07	0.82 y	1.00	25:48	*	100.00						Integrations				Reviewed
RS	13C-1,2,3,4-TCDF	1.91e+07	0.81 y	1.00	24:13	*	100.00						by DB				by
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.19e+07	0.52 y	1.00	33:59	*	100.00						Analyst:				Analyst:
													Date: 7/13/16				Date: 7/15/16

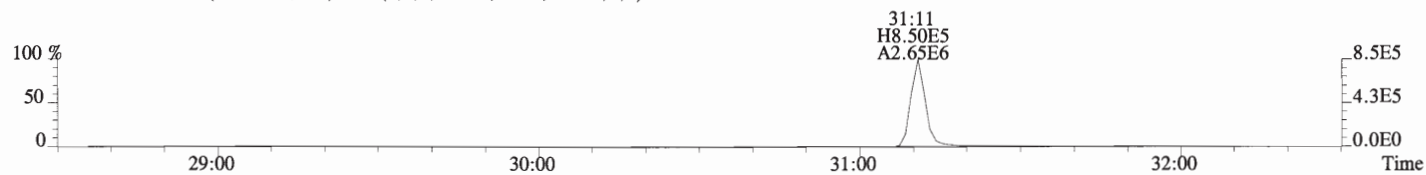
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Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BS1 OPR 10 Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



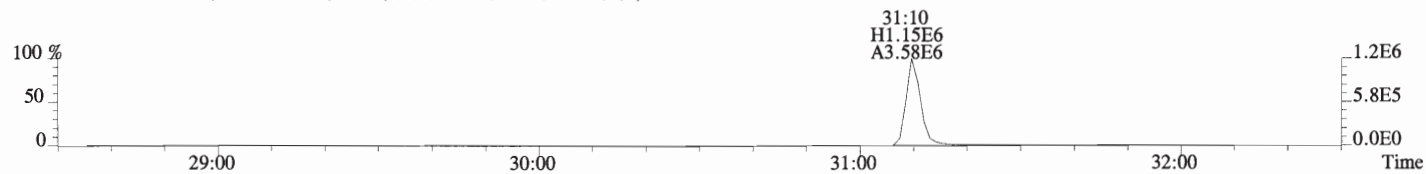
File:160712D1 #1-193 Acq:12-JUL-2016 17:09:22 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BS1 OPR 10 Exp:OCDD_DB5
 353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



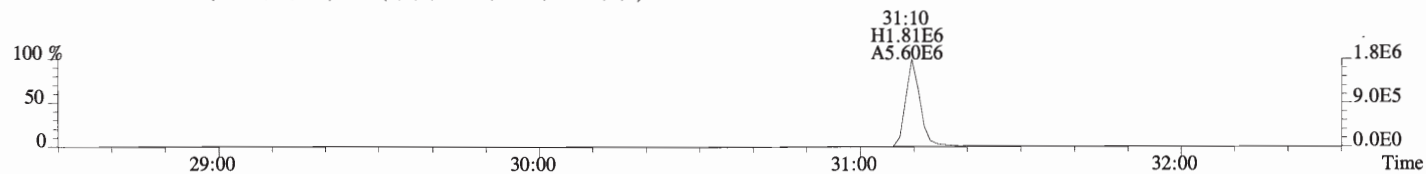
355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



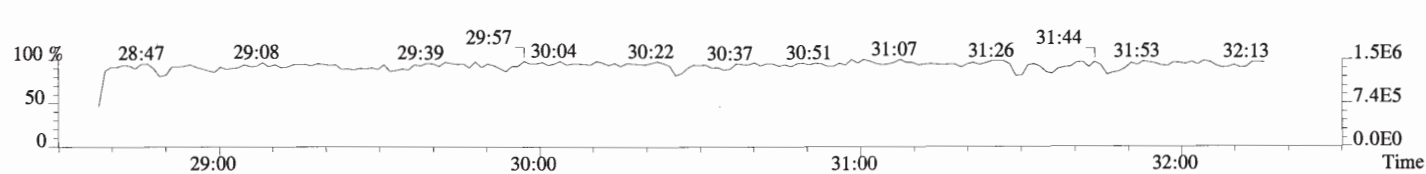
365.8978 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



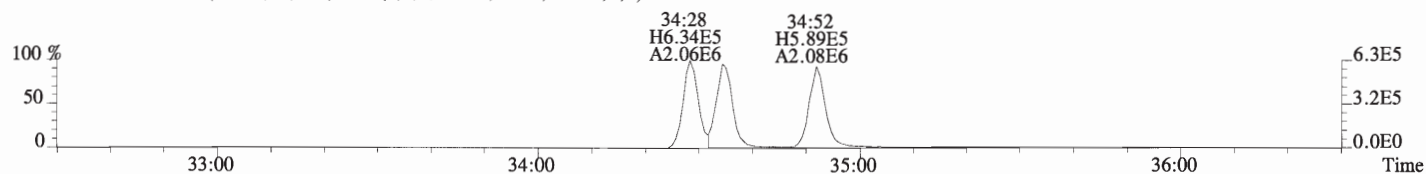
367.8949 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



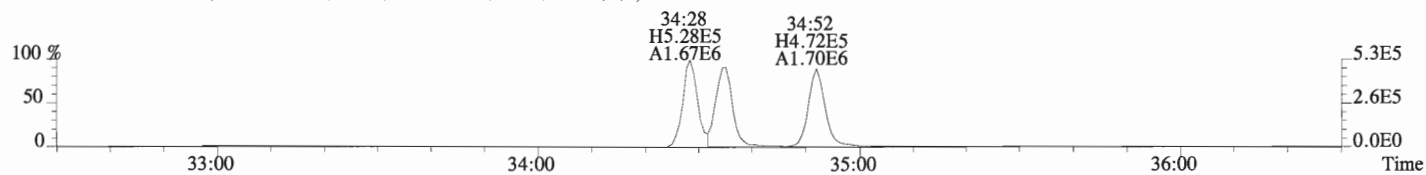
366.9792 S:2 F:2



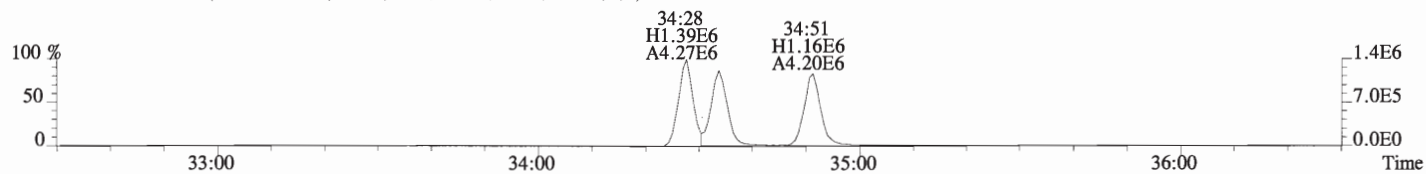
File:160712D1 #1-407 Acq:12-JUL-2016 17:09:22 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BS1 OPR 10 Exp:OCDD_DB5
 389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



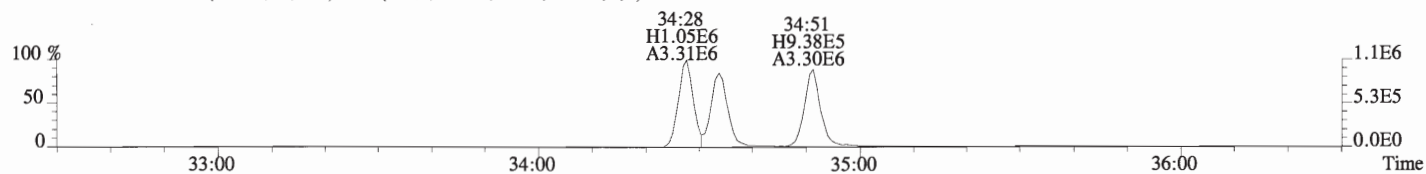
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



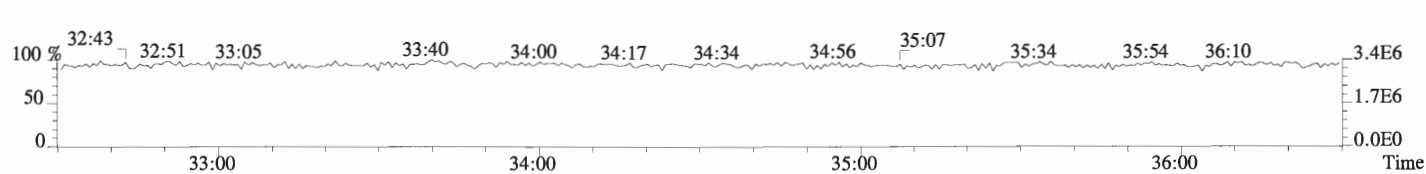
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



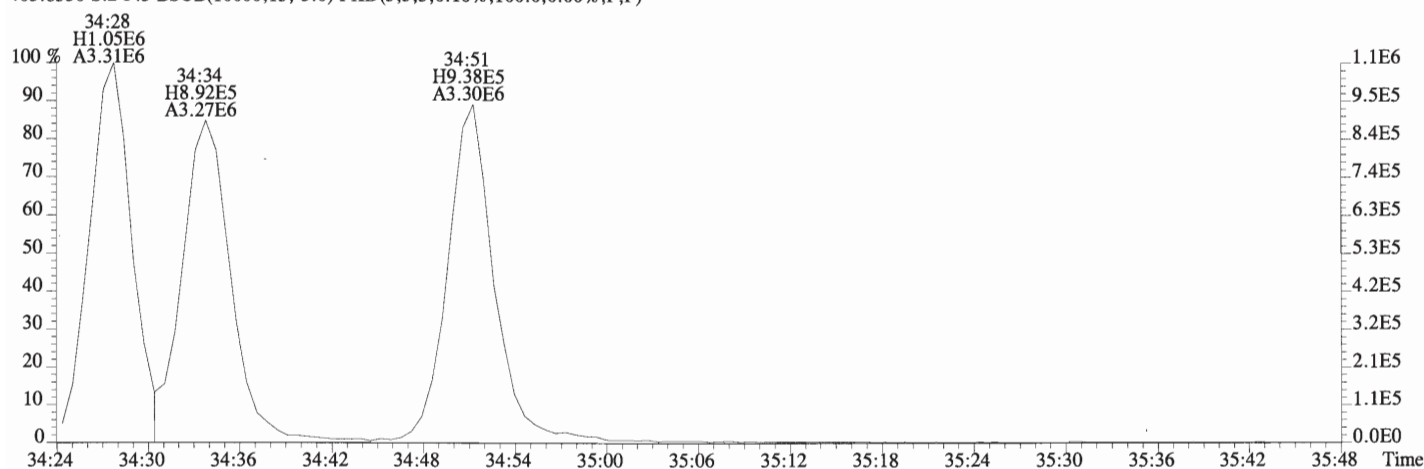
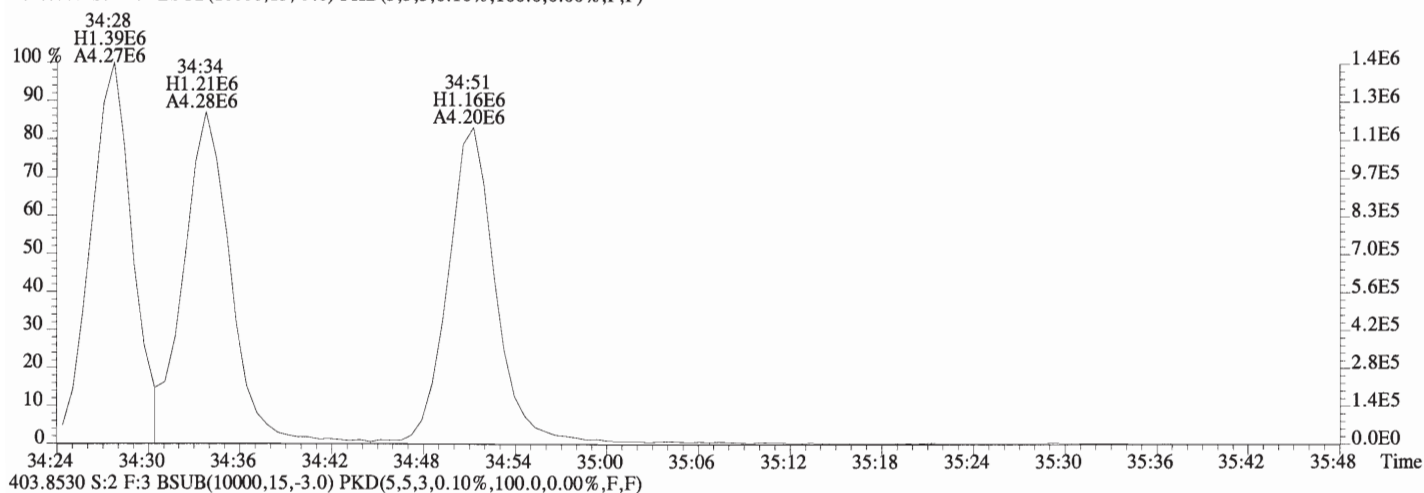
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



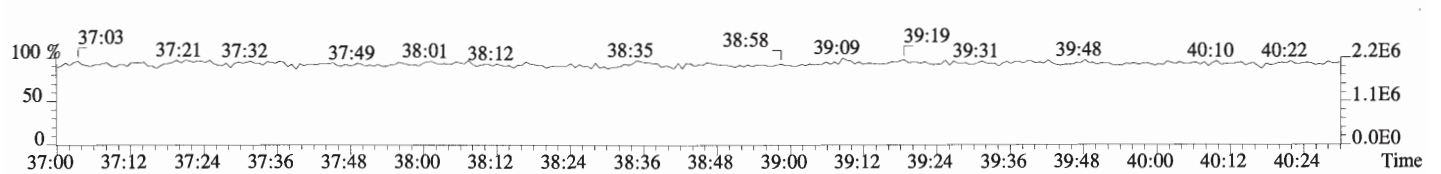
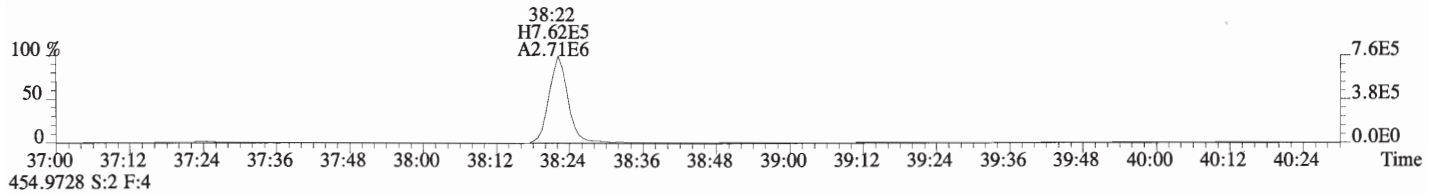
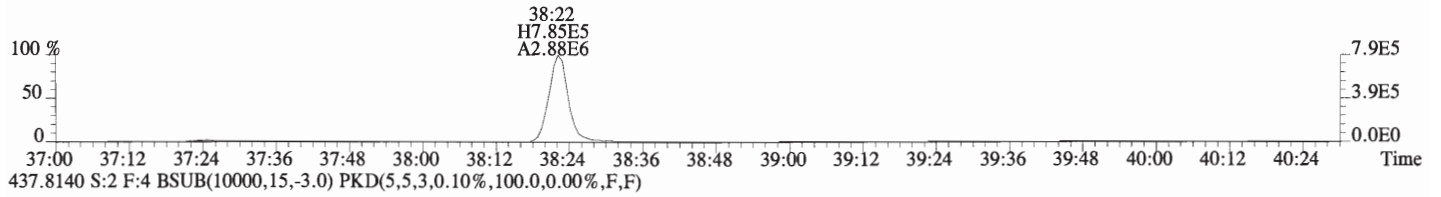
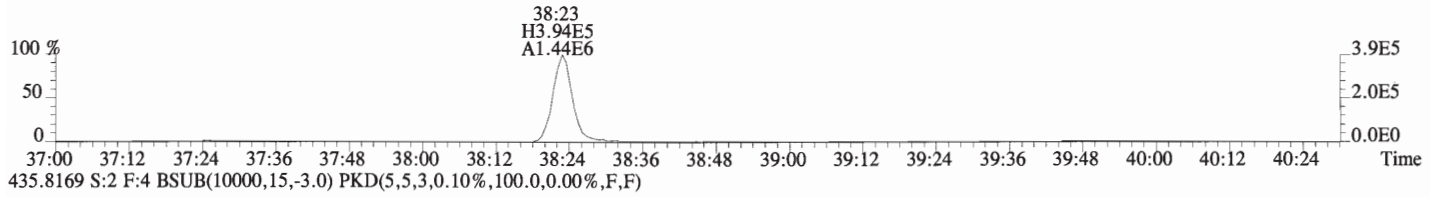
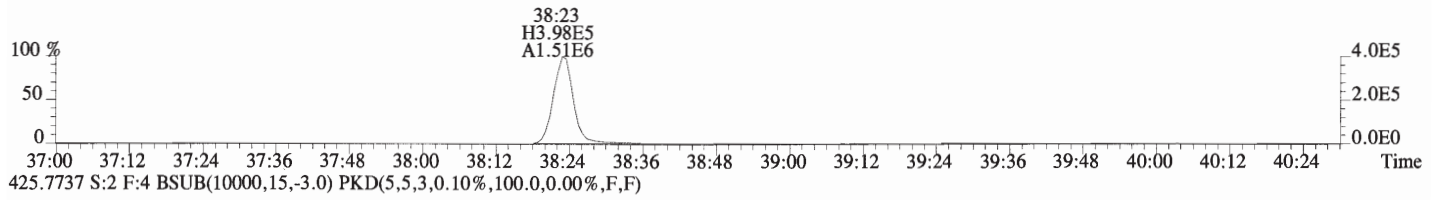
392.9760 S:2 F:3



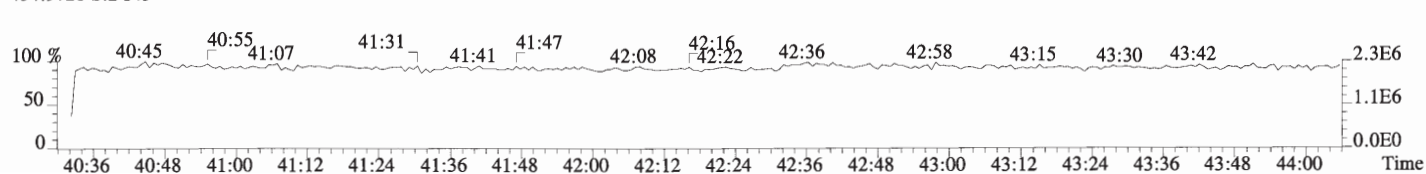
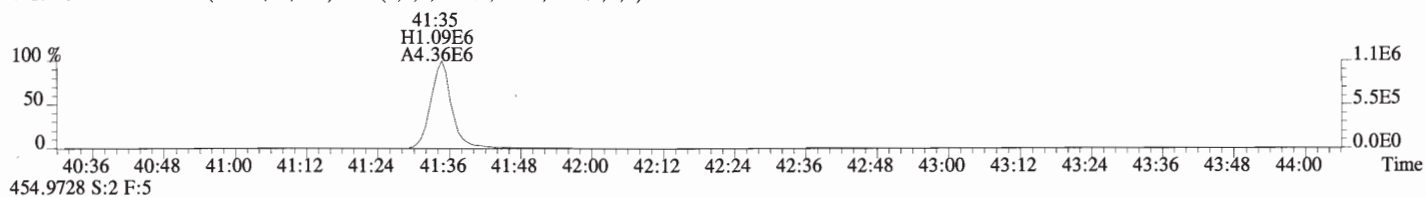
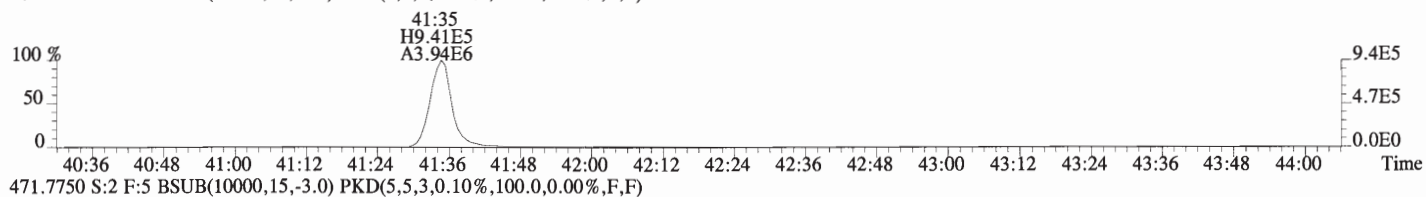
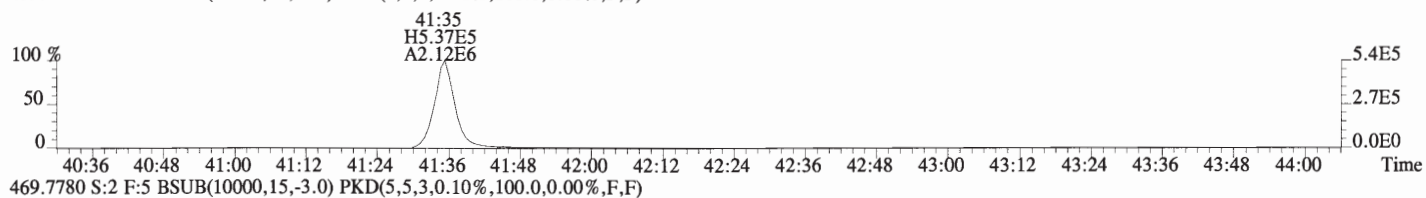
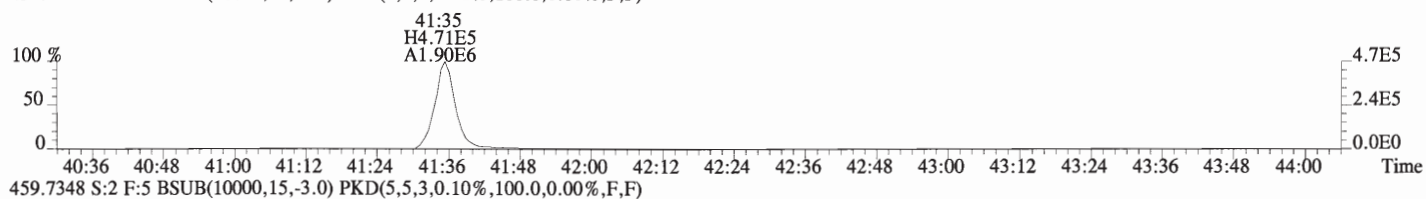
File:160712D1 #1-407 Acq:12-JUL-2016 17:09:22 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BS1 OPR 10 Exp:OCDD_DB5
 401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



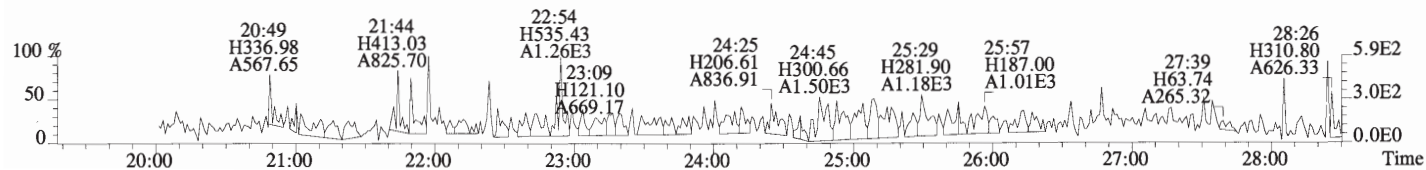
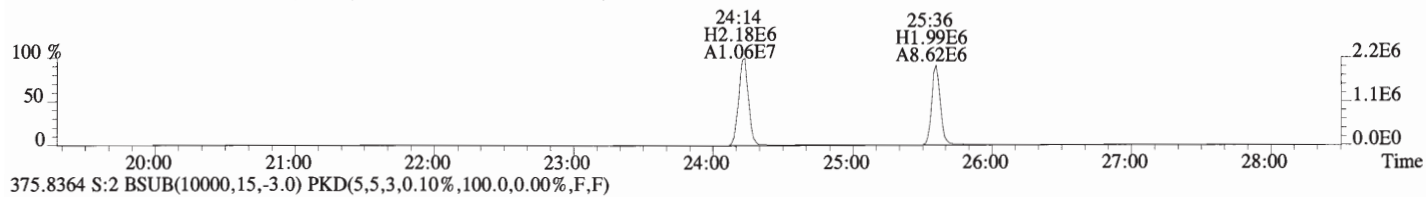
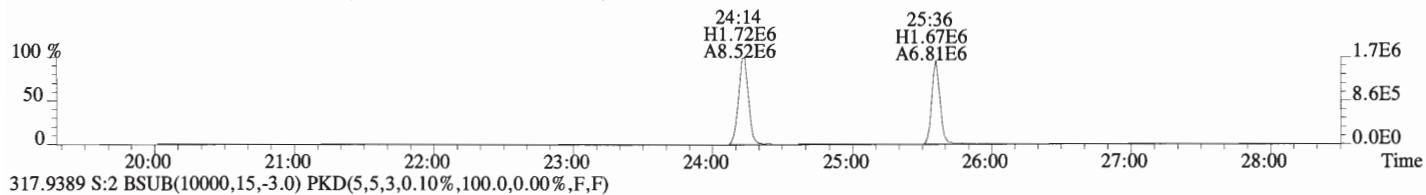
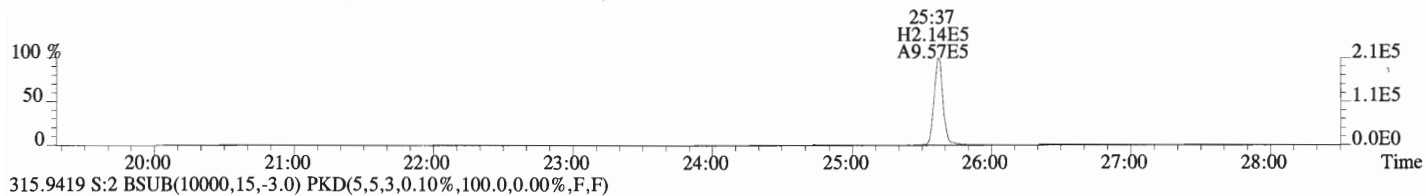
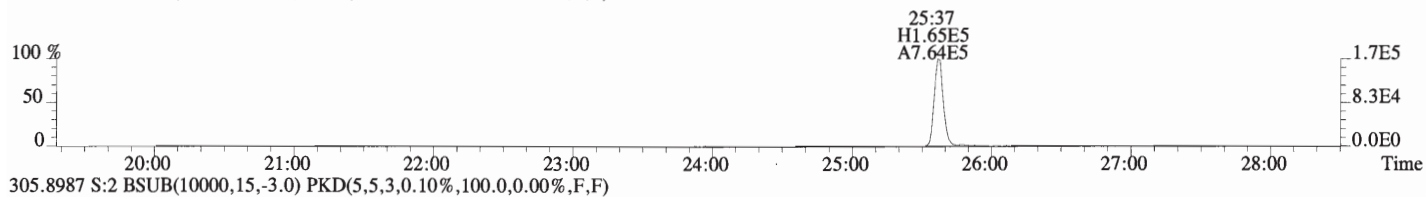
File:160712D1 #1-326 Acq:12-JUL-2016 17:09:22 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BS1 OPR 10 Exp:OCDD_DB5
 423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



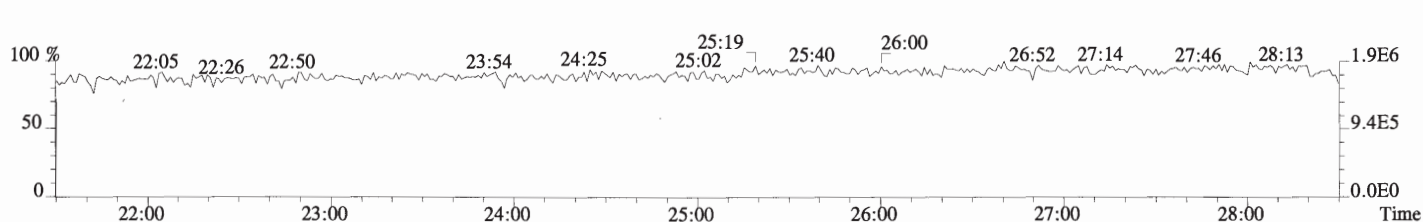
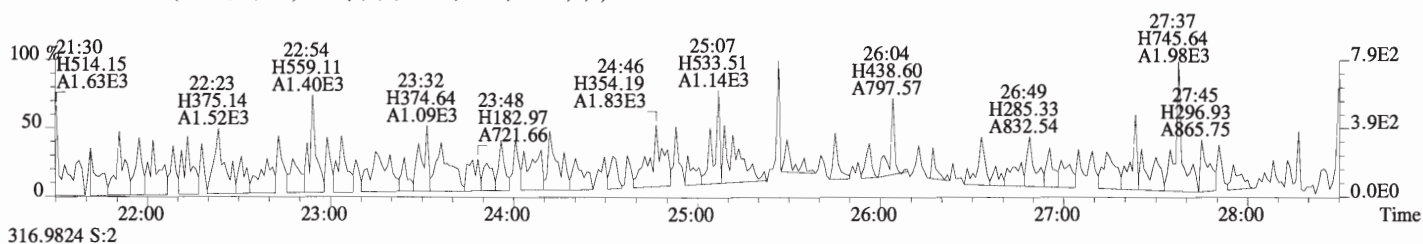
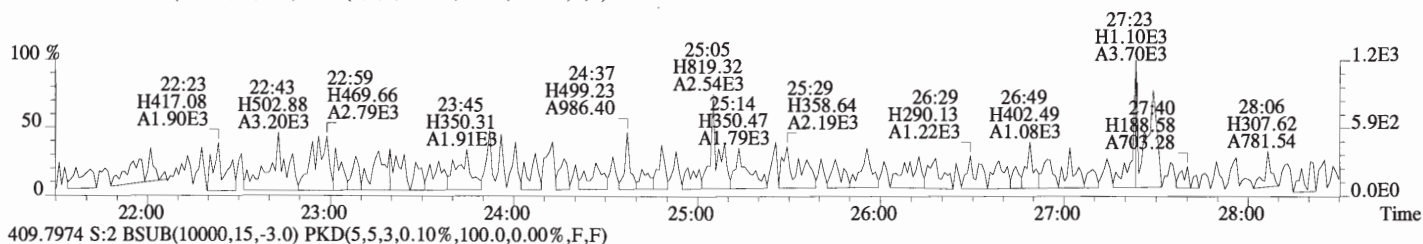
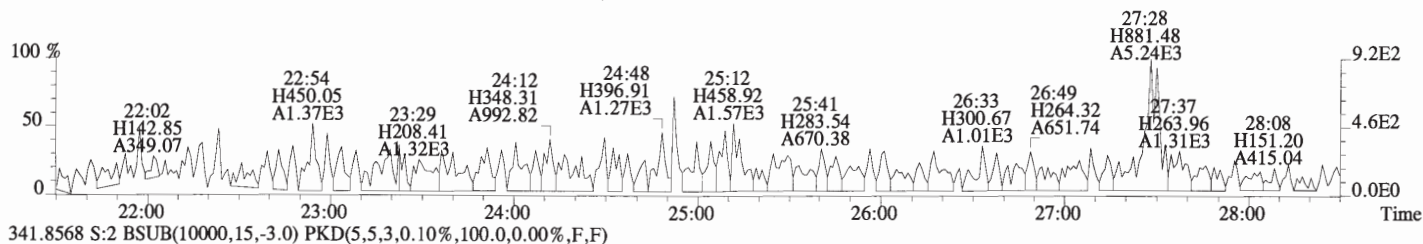
File:160712D1 #1-388 Acq:12-JUL-2016 17:09:22 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BS1 OPR 10 Exp:OCDD_DB5
 457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



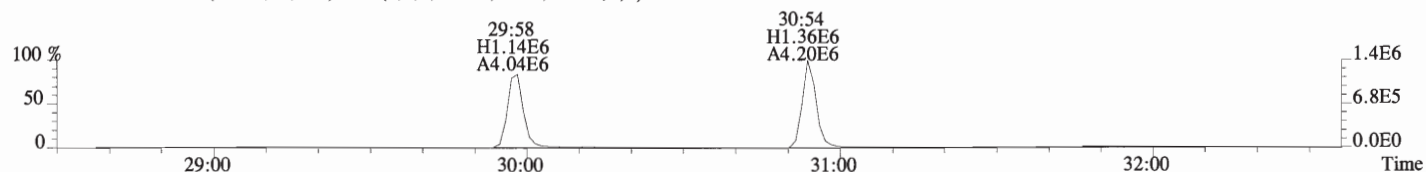
File:160712D1 #1-551 Acq:12-JUL-2016 17:09:22 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BS1 OPR 10 Exp:OCDD_DB5
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



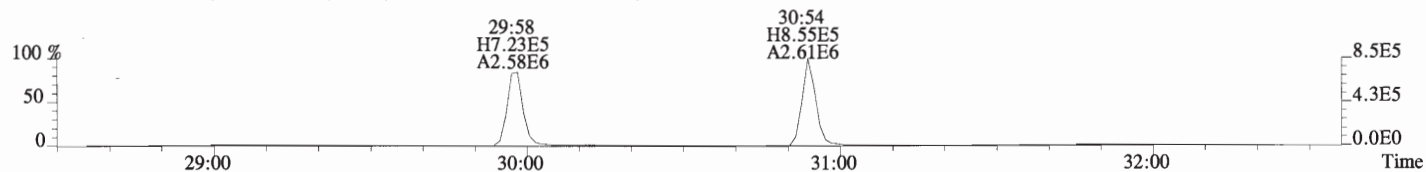
File:160712D1 #1-551 Acq:12-JUL-2016 17:09:22 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BS1 OPR 10 Exp:OCDD_DB5
 339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



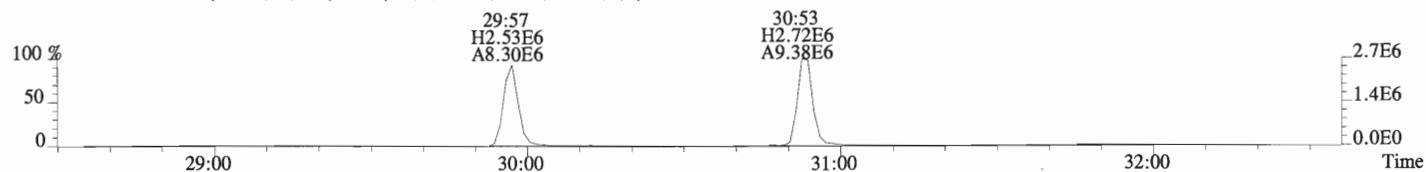
File:160712D1 #1-193 Acq:12-JUL-2016 17:09:22 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BS1 OPR 10 Exp:OCDD_DB5
 339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



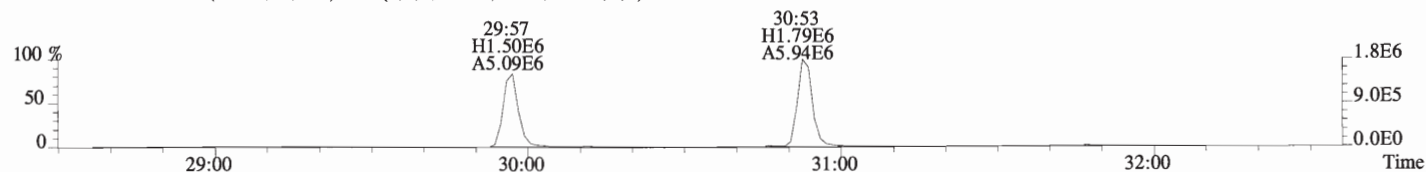
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



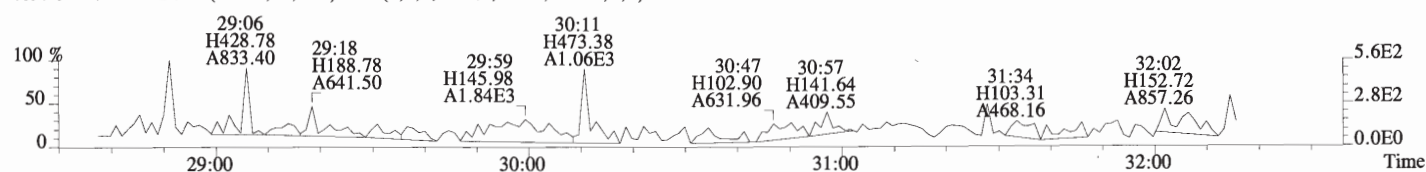
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



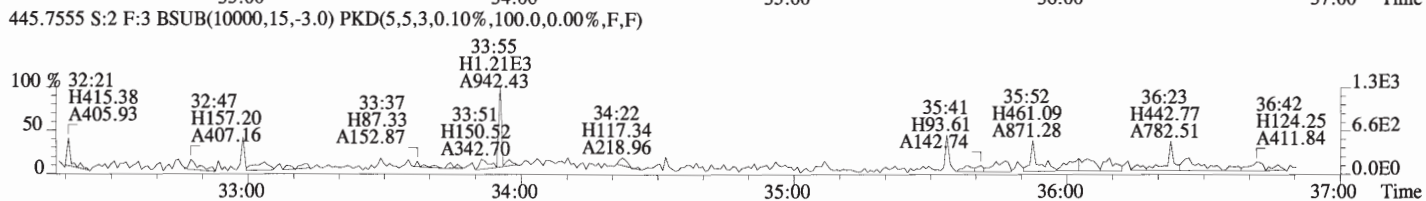
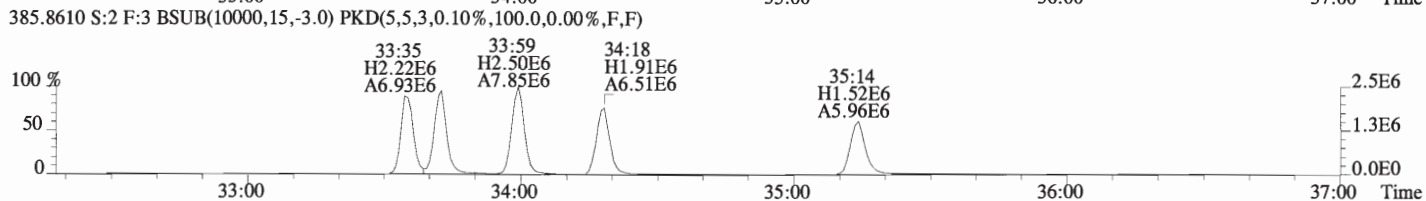
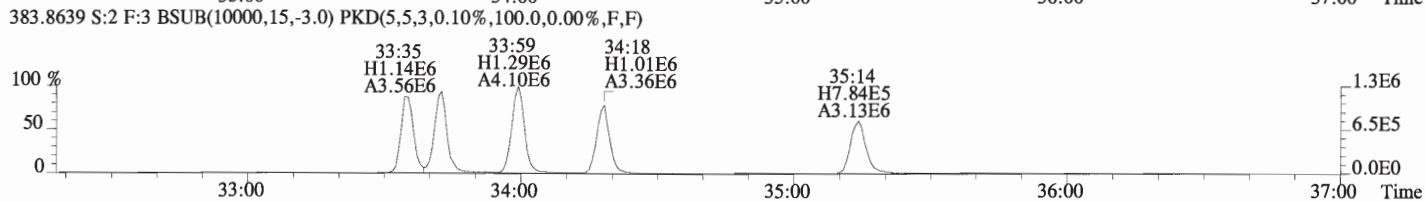
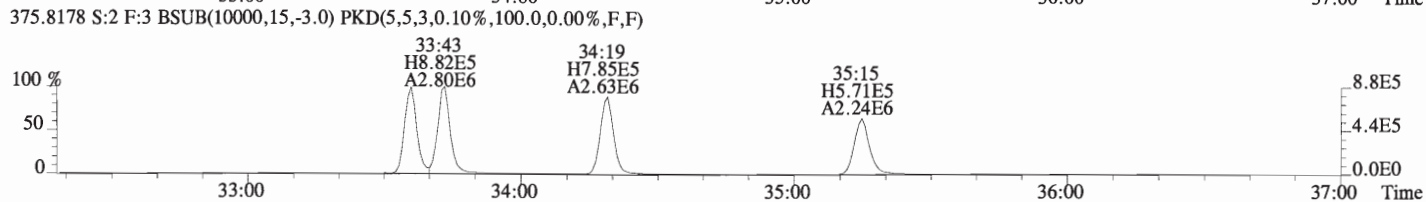
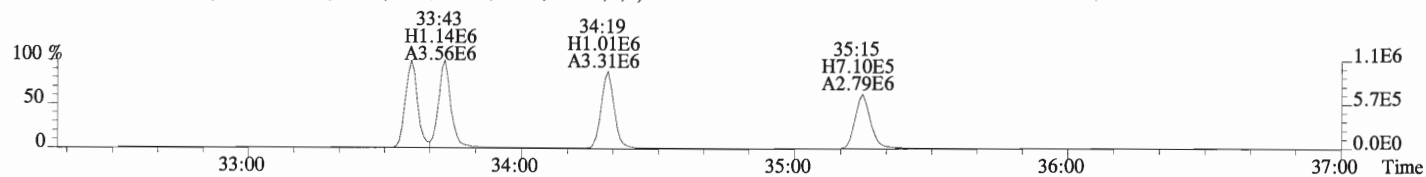
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



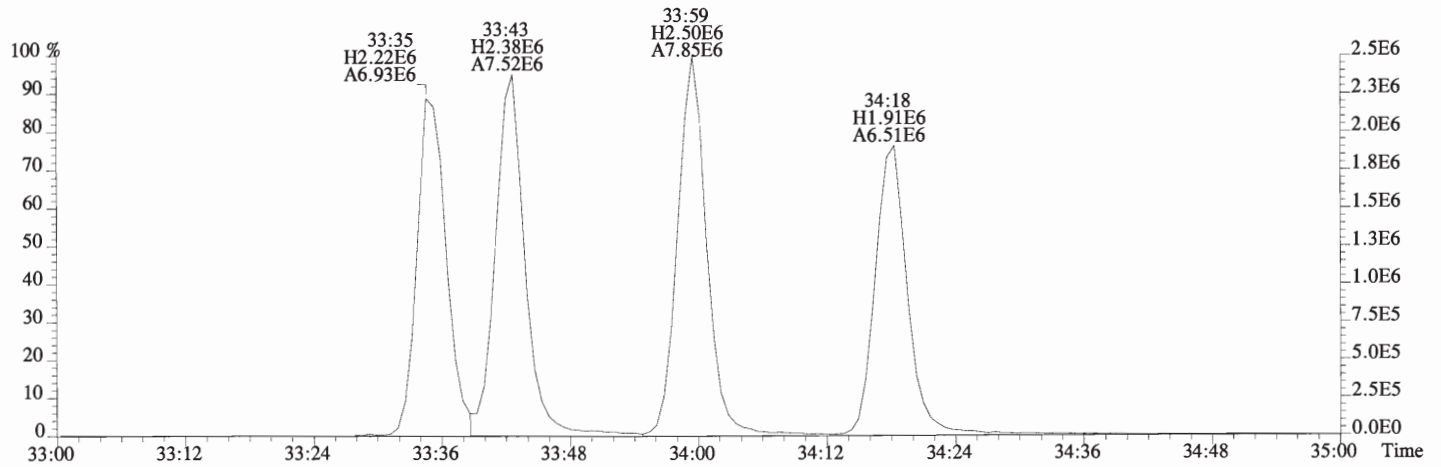
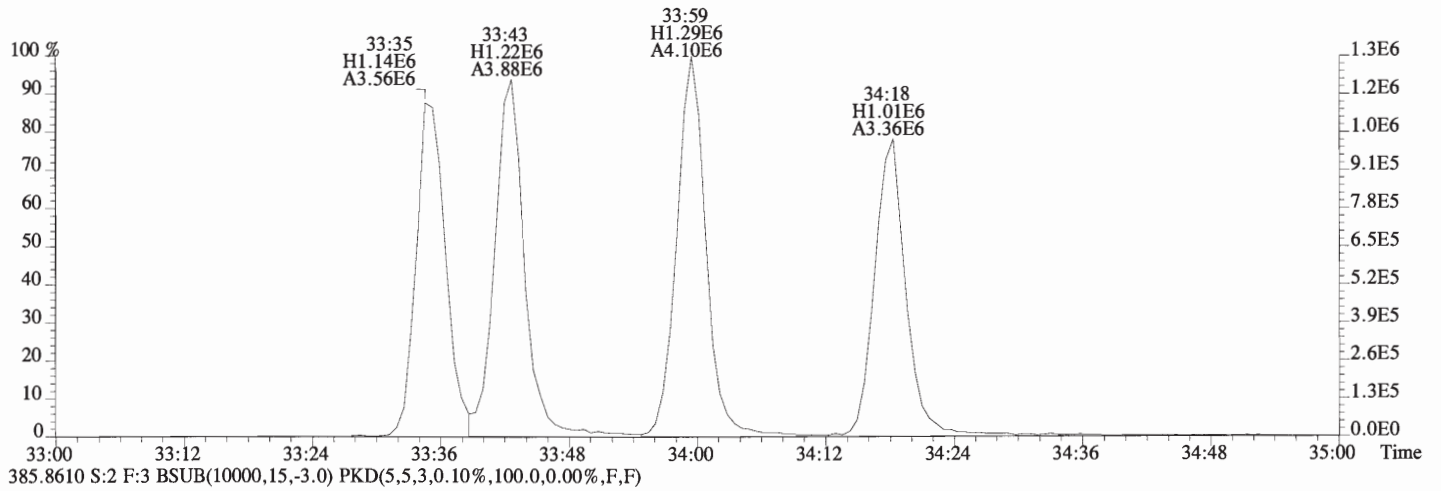
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



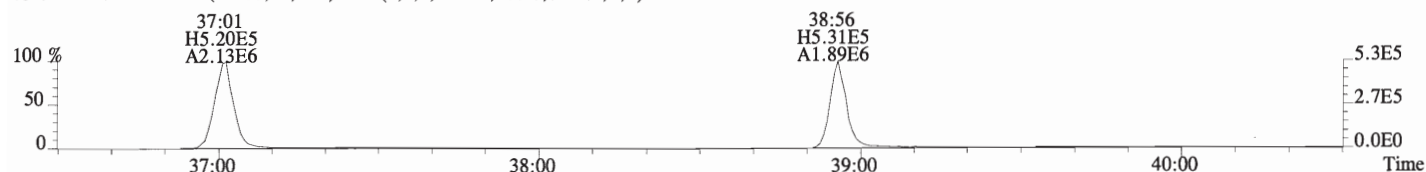
File:160712D1 #1-407 Acq:12-JUL-2016 17:09:22 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BS1 OPR 10 Exp:OCDD_DB5
 373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



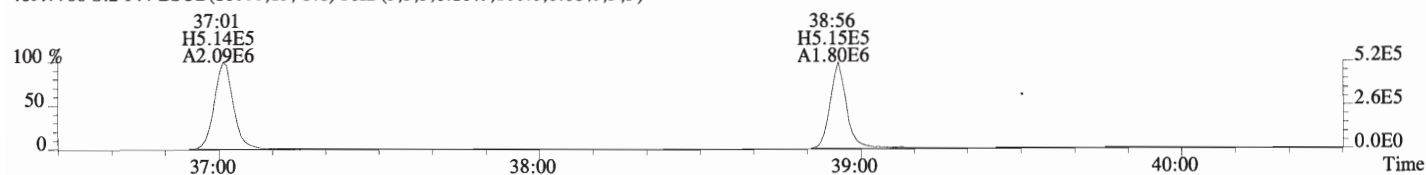
File:160712D1 #1-407 Acq:12-JUL-2016 17:09:22 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BS1 OPR 10 Exp:OCDD_DB5
 383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



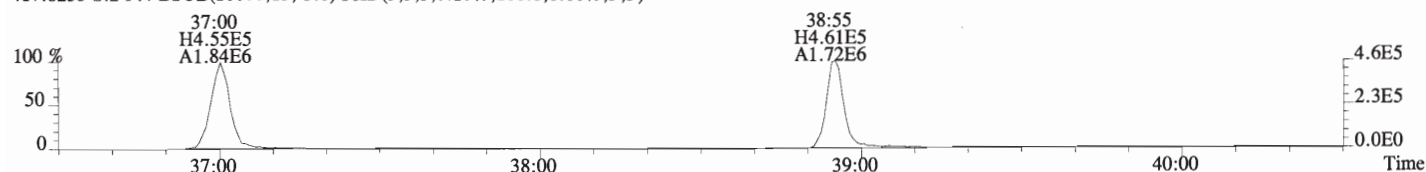
File:160712D1 #1-326 Acq:12-JUL-2016 17:09:22 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BS1 OPR 10 Exp:OCDD_DB5
 407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



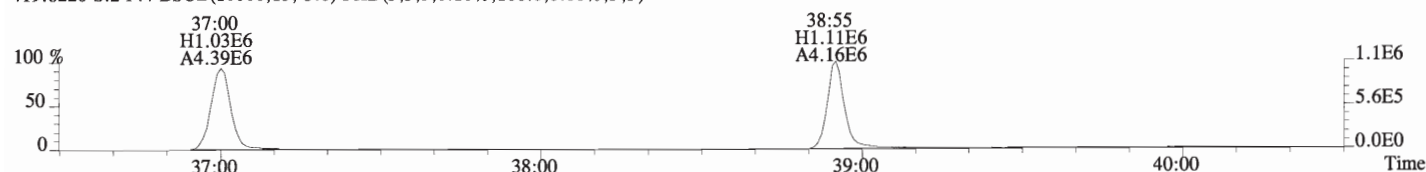
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



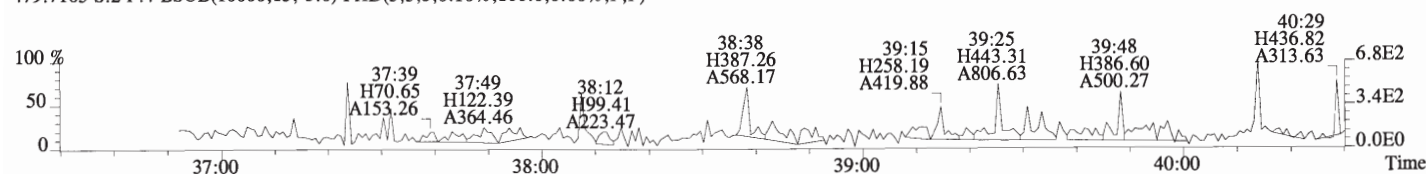
417.8253 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



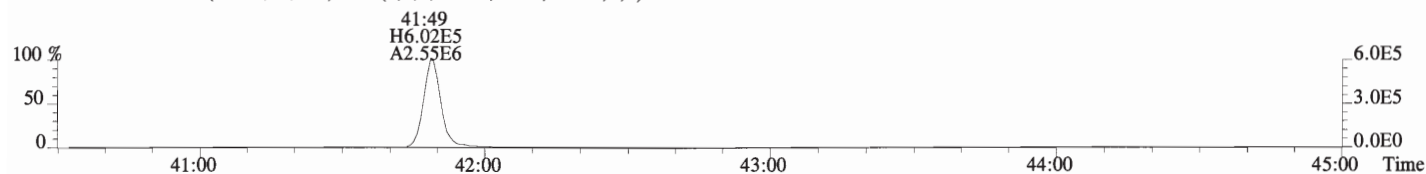
419.8220 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



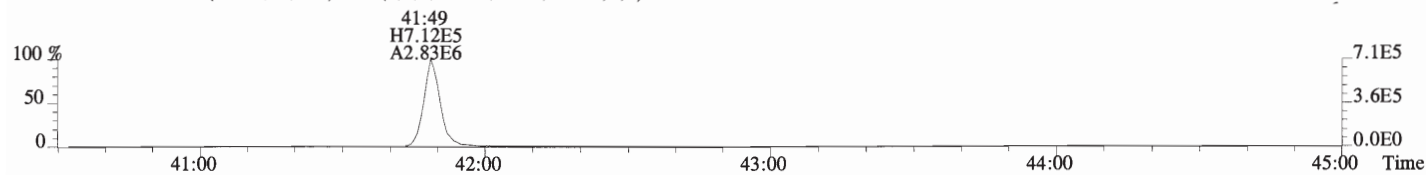
479.7165 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



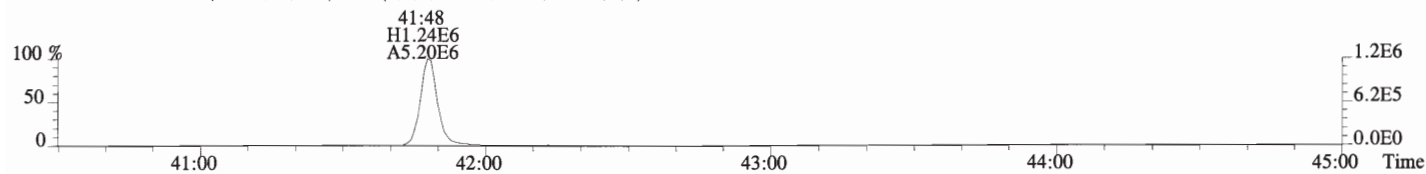
File:160712D1 #1-388 Acq:12-JUL-2016 17:09:22 GC EI+ Voltage SIR Autospec-Ultimate
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-BS1 OPR 10 Exp:OCDD_DB5
 441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



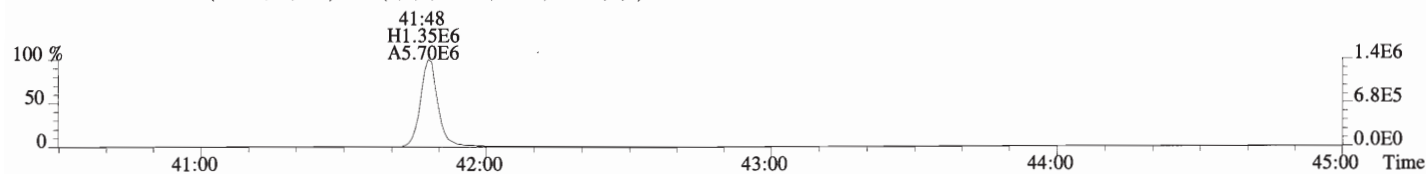
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



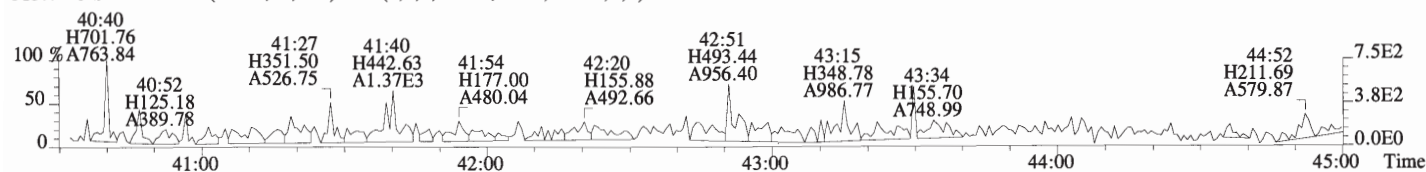
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: DU-1-15-A
Lab ID: 1600835-01RE1

Filename: 160712D1 S:5 Acq:12-JUL-16 19:35:02
GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16

wt/vol:10.084

ConCal: ST160712D1-1
EndCAL: NA

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	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
	2,3,7,8-TCDD	5.87e+03	0.35	n	1.13	26:25	1.000	0.095428	*	2.5	*	Total Tetra-Dioxins	*	0.903		*	*
	1,2,3,7,8-PeCDD	1.95e+04	0.61	y	0.96	31:10	1.000	0.45255	*	2.5	*	Total Penta-Dioxins	5.02	5.20		*	*
	1,2,3,4,7,8-HxCDD	2.57e+04	1.28	y	1.00	34:28	1.000	0.65993	*	2.5	*	Total Hexa-Dioxins	19.3	19.3		*	*
	1,2,3,6,7,8-HxCDD	6.21e+04	1.06	y	1.10	34:34	1.000	1.5599	*	2.5	*	Total Hepta-Dioxins	93.4	93.4		*	*
	1,2,3,7,8,9-HxCDD	5.28e+04	1.26	y	1.05	34:51	1.000	1.3528	*	2.5	*	Total Tetra-Furans	1.69	1.94		*	*
	1,2,3,4,6,7,8-HpCDD	9.35e+05	1.06	y	1.05	38:22	1.000	29.894	*	2.5	*	Total Penta-Furans	3.5476	3.7724		*	*
	OCDD	5.07e+06	0.90	y	0.96	41:35	1.000	233.50	*	2.5	*	Total Hexa-Furans	5.73	6.37		*	*
												Total Hepta-Furans	9.38	9.38		*	*
	2,3,7,8-TCDF	4.01e+04	0.77	y	1.12	25:37	1.001	0.44916	*	2.5	*						
	1,2,3,7,8-PeCDF	*	*	n	1.01	Not F ₇	*	*	412	2.5	0.136						
	2,3,4,7,8-PeCDF	2.42e+04	1.74	y	0.90	30:54	1.001	0.36656	*	2.5	*						
	1,2,3,4,7,8-HxCDF	2.50e+04	1.19	y	1.16	33:35	1.000	0.40457	*	2.5	*						
	1,2,3,6,7,8-HxCDF	2.41e+04	1.40	y	1.16	33:43	1.000	0.38571	*	2.5	*						
	2,3,4,6,7,8-HxCDF	2.64e+04	1.17	y	1.23	34:18	1.000	0.44886	*	2.5	*						
	1,2,3,7,8,9-HxCDF	1.30e+04	1.35	y	1.13	35:16	1.001	0.24866	*	2.5	*						
	1,2,3,4,6,7,8-HpCDF	1.82e+05	1.10	y	1.44	37:00	1.000	3.9040	*	2.5	*						
	1,2,3,4,7,8,9-HpCDF	1.21e+04	0.90	y	1.31	38:56	1.000	0.27906	*	2.5	*						
	OCDF	2.40e+05	0.96	y	1.03	41:49	1.000	8.2411	*	2.5	*						
												Rec	Qual				
IS	13C-2,3,7,8-TCDD	1.08e+07	0.78	y	1.01	26:25	1.024	192.33				97.0					
IS	13C-1,2,3,7,8-PeCDD	8.88e+06	0.63	y	1.10	31:10	1.208	144.99				73.1					
IS	13C-1,2,3,4,7,8-HxCDD	7.69e+06	1.29	y	0.72	34:27	1.014	198.96				100					
IS	13C-1,2,3,6,7,8-HxCDD	7.21e+06	1.28	y	0.73	34:34	1.017	184.78				93.2					
IS	13C-1,2,3,7,8,9-HxCDD	7.39e+06	1.28	y	0.70	34:51	1.026	196.21				98.9					
IS	13C-1,2,3,4,6,7,8-HpCDD	5.90e+06	1.09	y	0.66	38:22	1.129	165.61				83.5					
IS	13C-OCDD	8.95e+06	0.93	y	0.66	41:34	1.223	252.85				63.7					
IS	13C-2,3,7,8-TCDF	1.58e+07	0.80	y	0.90	25:36	0.992	196.69				99.2					
IS	13C-1,2,3,7,8-PeCDF	1.30e+07	1.59	y	0.98	29:57	1.161	147.68				74.5					
IS	13C-2,3,4,7,8-PeCDF	1.46e+07	1.59	y	1.15	30:53	1.197	142.26				71.7					
IS	13C-1,2,3,4,7,8-HxCDF	1.05e+07	0.51	y	1.01	33:35	0.988	193.65				97.6					
IS	13C-1,2,3,6,7,8-HxCDF	1.07e+07	0.52	y	1.10	33:42	0.992	182.05				91.8					
IS	13C-2,3,4,6,7,8-HxCDF	9.52e+06	0.51	y	0.95	34:18	1.009	186.43				94.0					
IS	13C-1,2,3,7,8,9-HxCDF	9.18e+06	0.52	y	0.83	35:14	1.037	206.97				104					
IS	13C-1,2,3,4,6,7,8-HpCDF	6.44e+06	0.43	y	0.70	36:59	1.088	171.71				86.6					
IS	13C-1,2,3,4,7,8,9-HpCDF	6.55e+06	0.45	y	0.72	38:55	1.145	169.53				85.5					
IS	13C-OCDF	1.12e+07	0.90	y	0.82	41:48	1.230	253.20				63.8					
C/Up	37Cl-2,3,7,8-TCDD	4.38e+06			1.14	26:26	1.025	69.454				87.5					
RS/RT	13C-1,2,3,4-TCDD	1.10e+07	0.81	y	1.00	25:48	*	198.33									
RS	13C-1,2,3,4-TCDF	1.77e+07	0.81	y	1.00	24:13	*	198.33									
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.06e+07	0.51	y	1.00	33:59	*	198.33									
												Integrations		Reviewed			
												by		by			
												Analyst: DB		Analyst: A2			
												Date: 7/15/16		Date: 7/15/16			

Totals class: TCDD EMPC

Entry #: 19

Run: 10 File: 160712D1 S: 5 I: 1 F: 1
Acquired: 12-JUL-16 19:35:02 Processed: 13-JUL-16 11:12:53

Total Concentration: 0.90299 Unnamed Concentration: 0.808

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
22:38	1.041e+04	9.431e+03	1.10 n	1.669e+04	0.27132
23:04	6.524e+03	6.427e+03	1.02 n	1.138e+04	0.18491
24:38	5.231e+03	4.400e+03	1.19 n	7.787e+03	0.12657
25:47	4.907e+03	4.963e+03	0.99 n	8.785e+03	0.14279
26:25	2.554e+03	7.299e+03	0.35 n	5.871e+03	0.095428 2,3,7,8-TCDD
26:44	2.720e+03	2.849e+03	0.95 n	5.043e+03	0.081967

Totals class: PeCDD EMPC

Entry #: 21

Run: 10 File: 160712D1 S: 5 I: 1 F: 2
Acquired: 12-JUL-16 19:35:02 Processed: 13-JUL-16 11:12:53

Total Concentration: 5.1988

Unnamed Concentration: 4.746

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:03	2.359e+04	3.401e+04	0.69 y	5.760e+04	1.3376
29:30	1.045e+04	1.948e+04	0.54 y	2.992e+04	0.69488
29:58	9.826e+03	1.558e+04	0.63 y	2.541e+04	0.59003
30:08	7.770e+03	1.433e+04	0.54 y	2.210e+04	0.51323
30:14	6.906e+03	9.943e+03	0.69 y	1.685e+04	0.39127
30:27	1.279e+04	2.322e+04	0.55 y	3.601e+04	0.83624
30:46	4.332e+03	4.766e+03	0.91 n	7.769e+03	0.18042
31:10	7.398e+03	1.209e+04	0.61 y	1.949e+04	0.45255 1,2,3,7,8-PeCDD
31:32	3.072e+03	5.653e+03	0.54 y	8.724e+03	0.20259

Totals class: HxCDD EMPC

Entry #: 23

Run: 10

File: 160712D1

S: 5 I: 1 F: 3

Acquired: 12-JUL-16 19:35:02

Processed: 13-JUL-16 11:12:53

Total Concentration: 19.340

Unnamed Concentration: 15.767

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:57	1.364e+05	1.139e+05	1.20 y	2.504e+05	6.3750
33:31	2.718e+04	2.167e+04	1.25 y	4.885e+04	1.2438
33:46	1.428e+05	1.208e+05	1.18 y	2.636e+05	6.7126
33:53	2.137e+04	1.736e+04	1.23 y	3.873e+04	0.98623
34:28	1.441e+04	1.124e+04	1.28 y	2.565e+04	0.65993 1,2,3,4,7,8-HxCDD
34:34	3.200e+04	3.009e+04	1.06 y	6.209e+04	1.5599 1,2,3,6,7,8-HxCDD
34:46	9.935e+03	7.715e+03	1.29 y	1.765e+04	0.44941
34:51	2.942e+04	2.339e+04	1.26 y	5.281e+04	1.3528 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 10 File: 160712D1 S: 5 I: 1 F: 4
Acquired: 12-JUL-16 19:35:02 Processed: 13-JUL-16 11:12:53

Total Concentration: 93.405

Unnamed Concentration: 63.511

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:24	1.011e+06	9.745e+05	1.04 y	1.986e+06	63.511
38:22	4.808e+05	4.538e+05	1.06 y	9.346e+05	29.894

1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 10 File: 160712D1 S: 5 I: 1 F: 1
Acquired: 12-JUL-16 19:35:02 Processed: 13-JUL-16 11:12:53

Total Concentration: 1.9444

Unnamed Concentration: 1.495

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
21:39	2.187e+04	2.866e+04	0.76 y	5.053e+04	0.56565
24:09	1.451e+04	1.269e+04	1.14 n	2.246e+04	0.25146
24:43	7.478e+03	8.875e+03	0.84 y	1.635e+04	0.18306
25:37	1.746e+04	2.266e+04	0.77 y	4.012e+04	0.44916
25:57	2.008e+04	2.415e+04	0.83 y	4.422e+04	0.49506

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 10 File: 160712D1 S: 5 I: 1 F: 1
Acquired: 12-JUL-16 19:35:02 Processed: 13-JUL-16 11:12:53

Total Concentration: 1.4013 Unnamed Concentration: 1.401

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:28	5.336e+04	3.888e+04	1.37 y	9.224e+04	1.4013

Totals class: PeCDF EMPC

Entry #: 31

Run: 10

File: 160712D1

S: 5 I: 1 F: 2

Acquired: 12-JUL-16 19:35:02

Processed: 13-JUL-16 11:12:53

Total Concentration: 2.3711

Unnamed Concentration: 2.005

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28:51	1.126e+04	8.121e+03	1.39 y	1.938e+04	0.29446
29:00	4.290e+04	2.844e+04	1.51 y	7.133e+04	1.0837
29:34	1.635e+04	1.008e+04	1.62 y	2.643e+04	0.40161
30:12	8.992e+03	8.446e+03	1.06 n	1.479e+04	0.22474
30:54	1.537e+04	8.841e+03	1.74 y	2.421e+04	0.36656

2,3,4,7,8-PeCDF

Totals class: HxCDF EMPC

Entry #: 33

Run: 10 File: 160712D1 S: 5 I: 1 F: 3
Acquired: 12-JUL-16 19:35:02 Processed: 13-JUL-16 11:12:53

Total Concentration: 6.3687

Unnamed Concentration: 4.881

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
32:25	2.081e+04	2.134e+04	0.97 n	3.759e+04	0.63815	
32:35	7.238e+04	5.784e+04	1.25 y	1.302e+05	2.2110	
32:56	3.490e+03	2.946e+03	1.18 y	6.436e+03	0.10927	
33:08	5.549e+04	5.027e+04	1.10 y	1.058e+05	1.7957	
33:29	4.051e+03	3.416e+03	1.19 y	7.468e+03	0.12679	
33:35	1.356e+04	1.139e+04	1.19 y	2.496e+04	0.40457	1,2,3,4,7,8-HxCDF
33:43	1.404e+04	1.006e+04	1.40 y	2.409e+04	0.38571	1,2,3,6,7,8-HxCDF
34:18	1.426e+04	1.215e+04	1.17 y	2.641e+04	0.44886	2,3,4,6,7,8-HxCDF
35:16	7.489e+03	5.554e+03	1.35 y	1.304e+04	0.24866	1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC

Entry #: 35

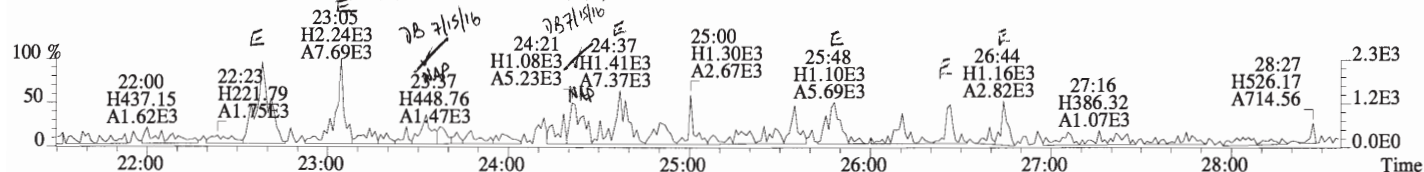
Run: 10 File: 160712D1 S: 5 I: 1 F: 4
Acquired: 12-JUL-16 19:35:02 Processed: 13-JUL-16 11:12:53

Total Concentration: 9.3786

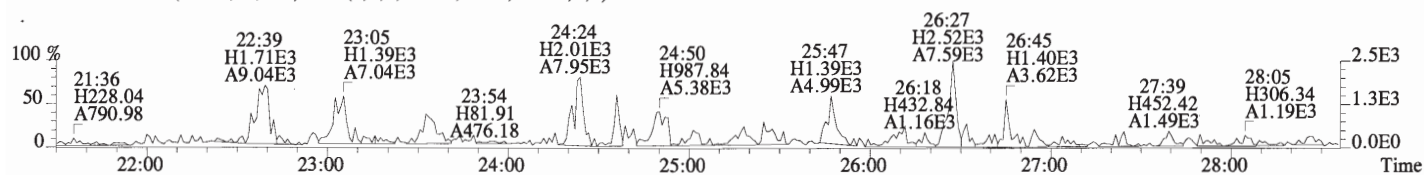
Unnamed Concentration: 5.196

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
37:00	9.544e+04	8.700e+04	1.10	y	1.824e+05	3.9040 1,2,3,4,6,7,8-HpCDF
37:38	1.184e+05	1.155e+05	1.03	y	2.339e+05	5.1956
38:56	5.736e+03	6.357e+03	0.90	y	1.209e+04	0.27906 1,2,3,4,7,8,9-HpCDF

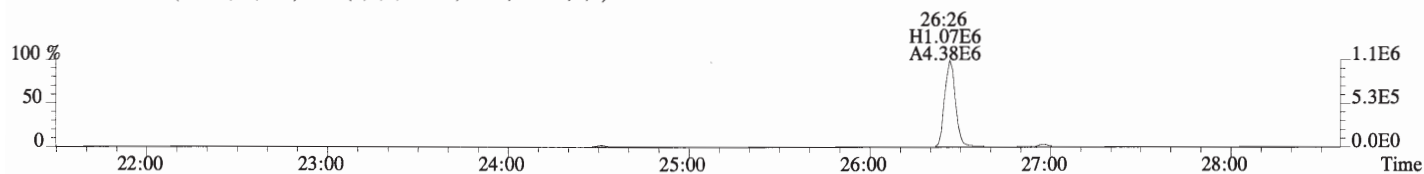
File:160712D1 #1-551 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



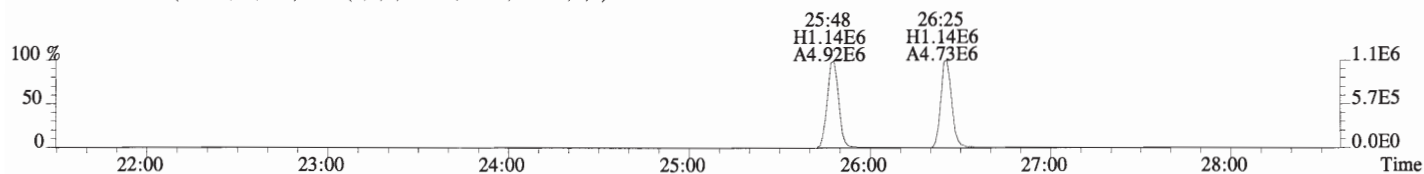
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



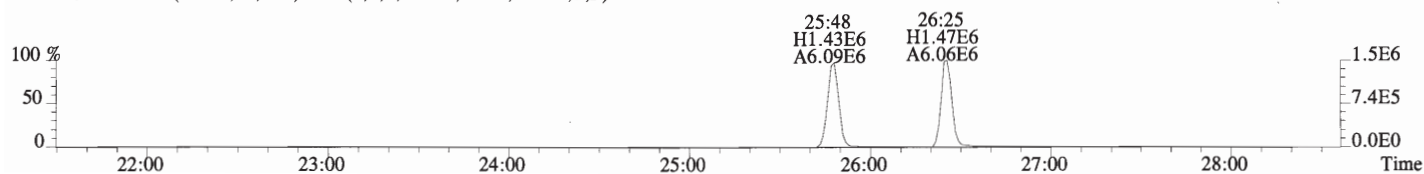
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



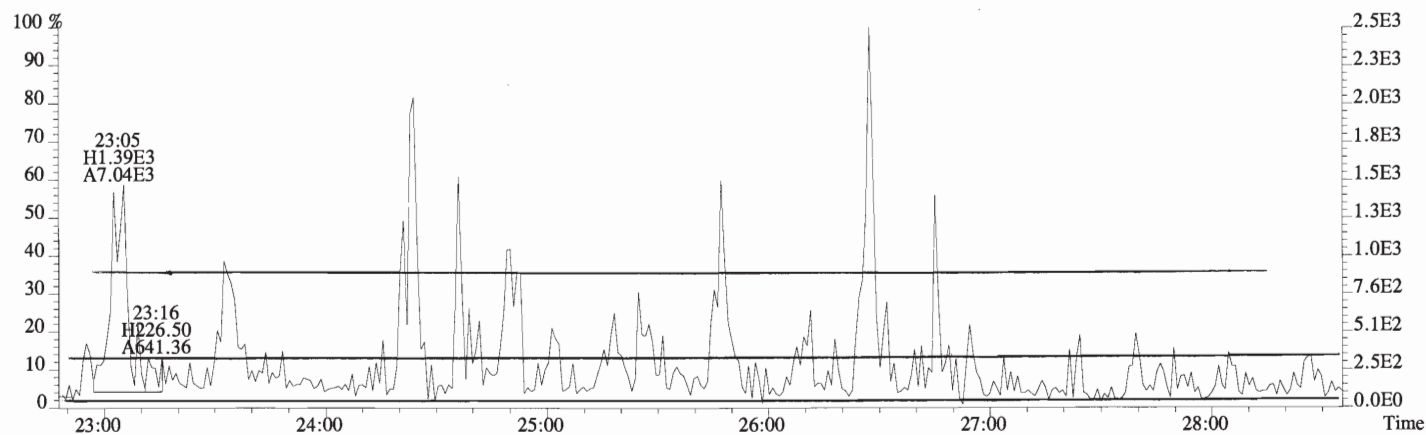
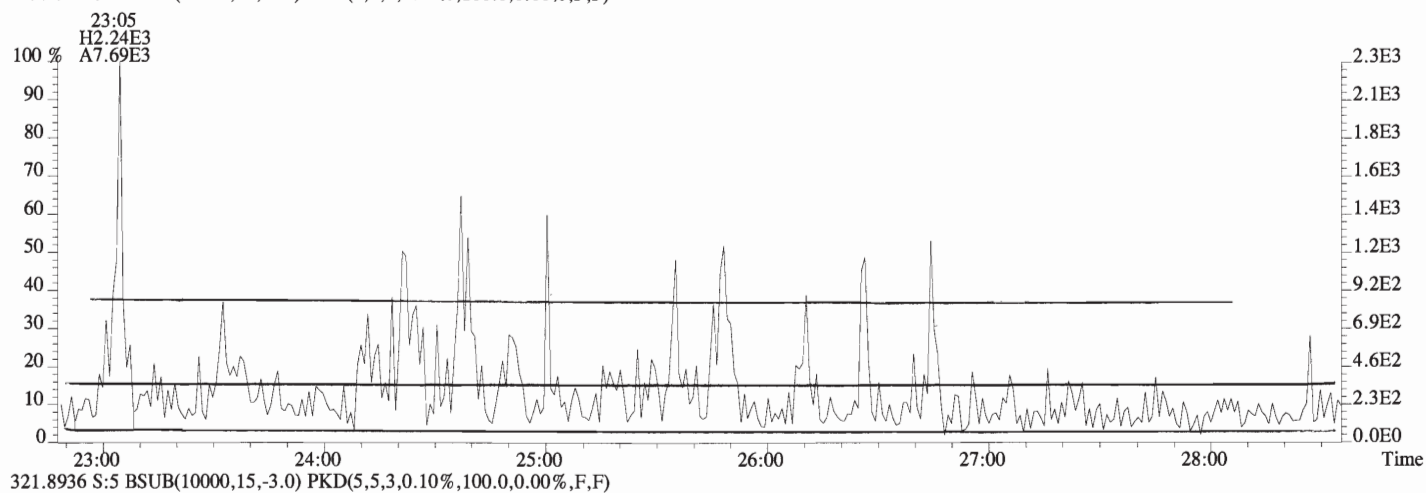
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



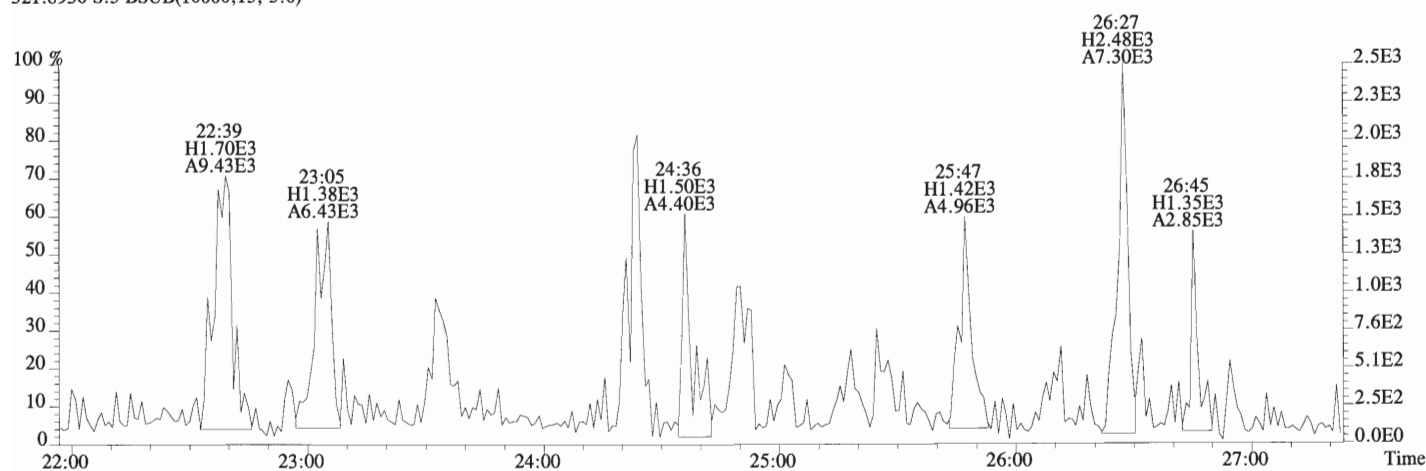
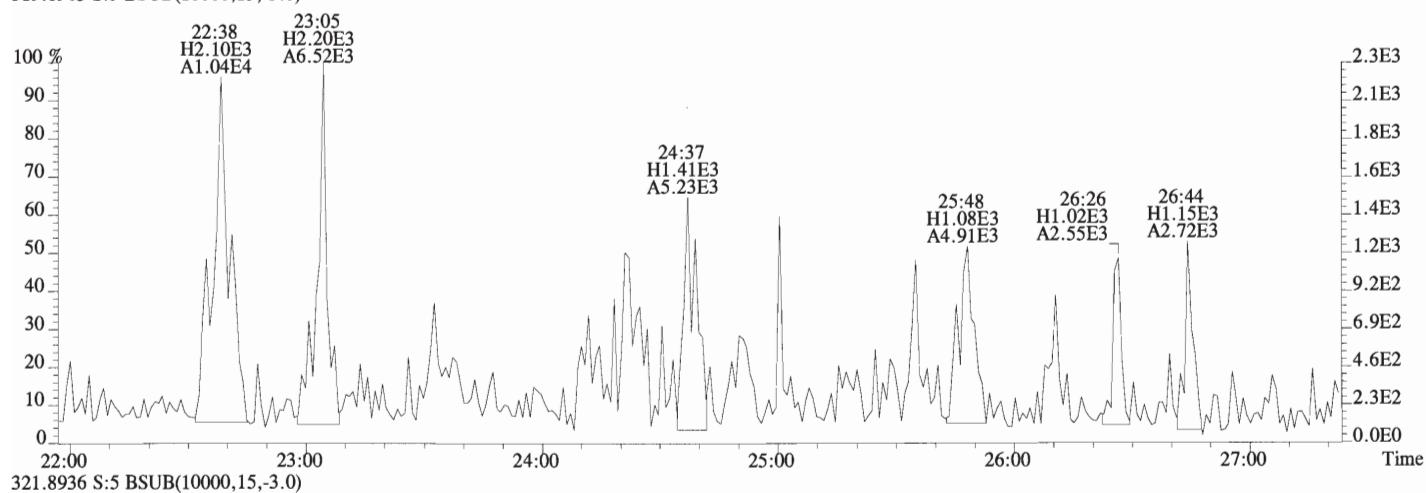
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



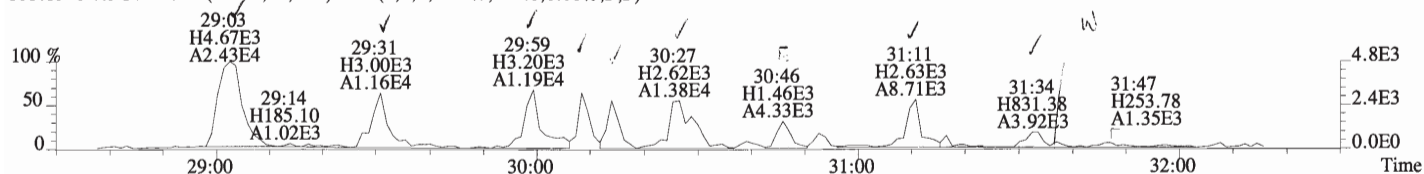
File:160712D1 #1-551 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



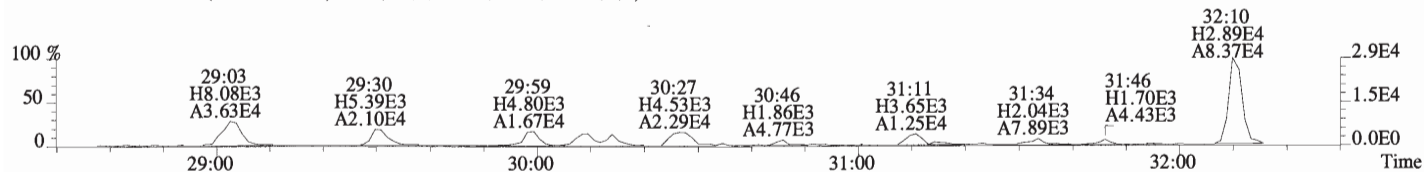
File:160712D1 #1-551 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0)



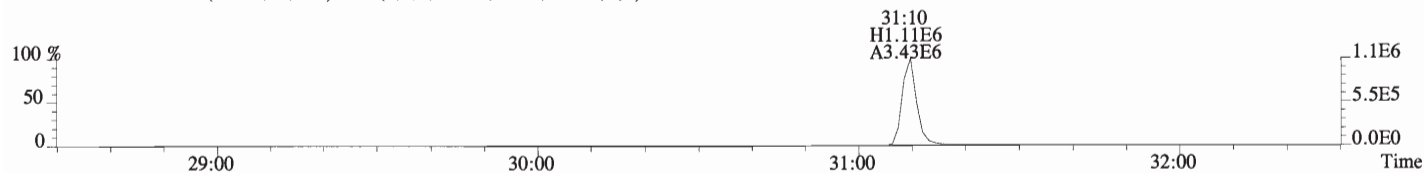
File:160712D1 #1-193 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



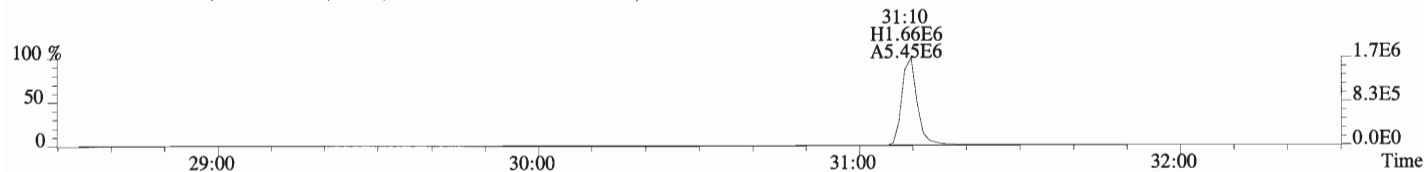
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



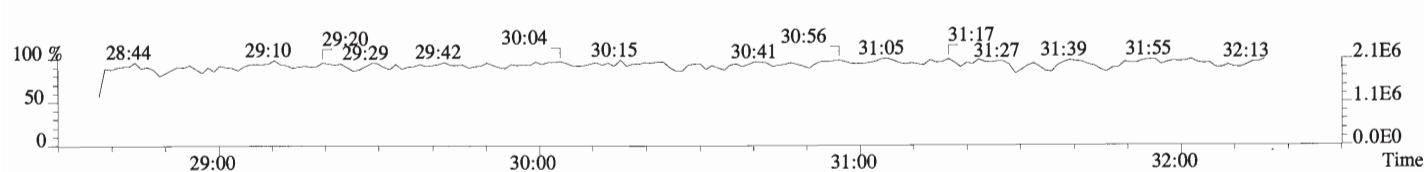
365.8978 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



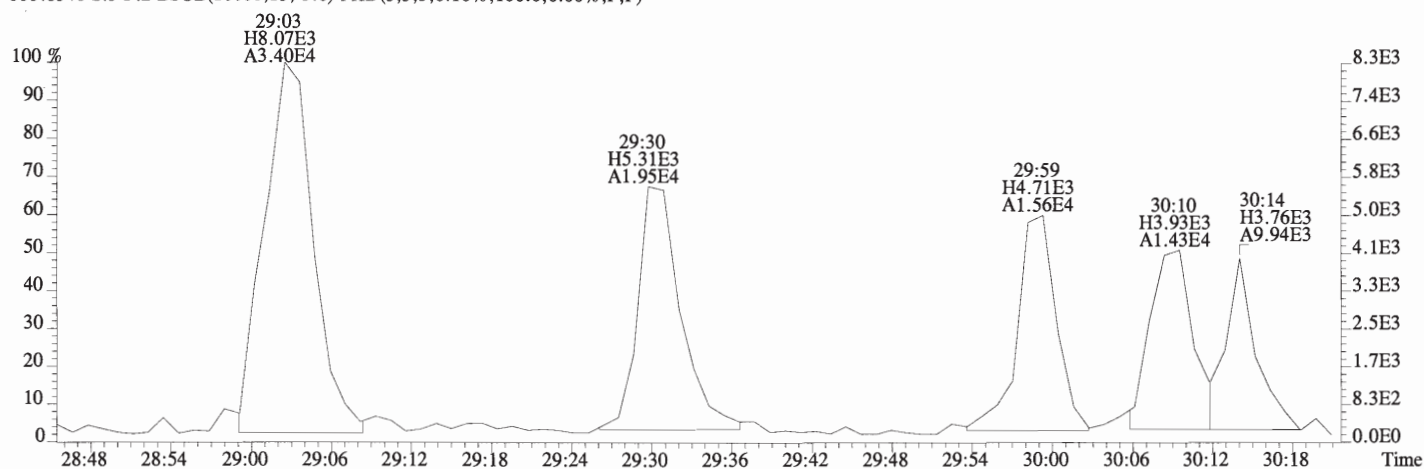
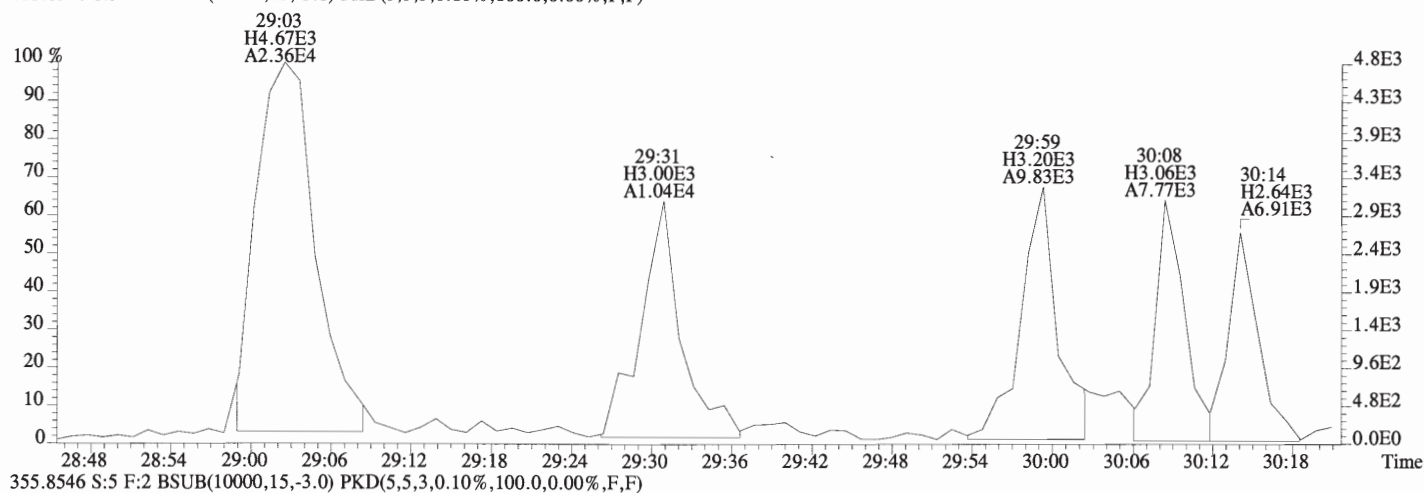
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



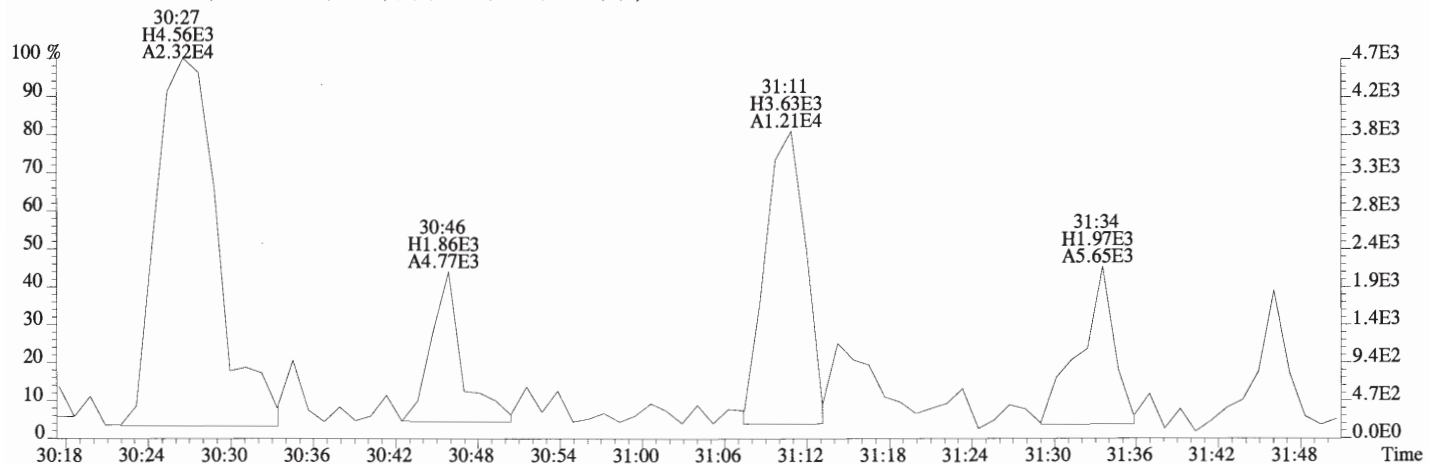
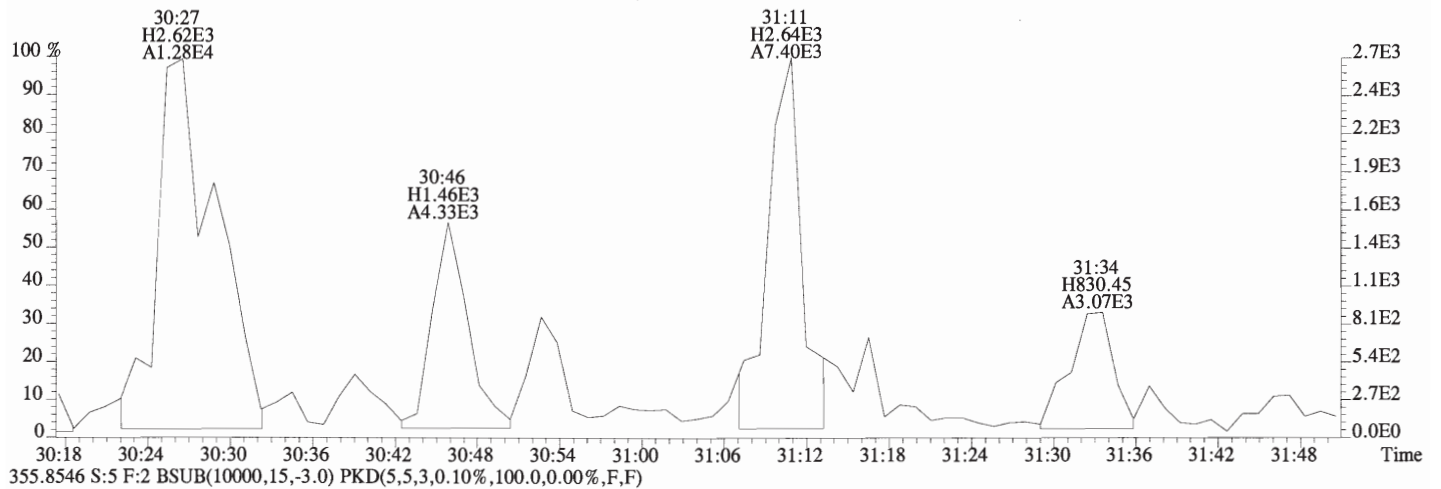
366.9792 S:5 F:2



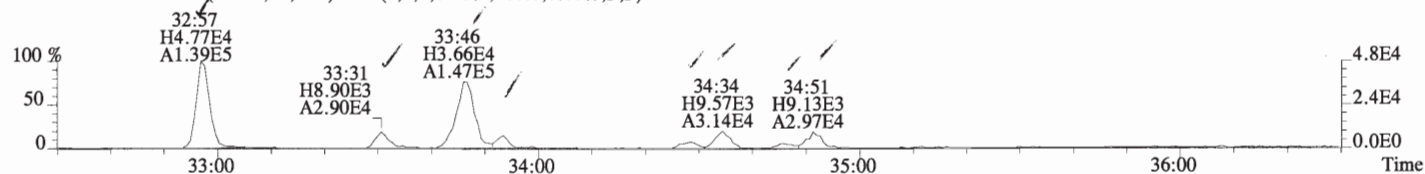
File:160712D1 #1-193 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



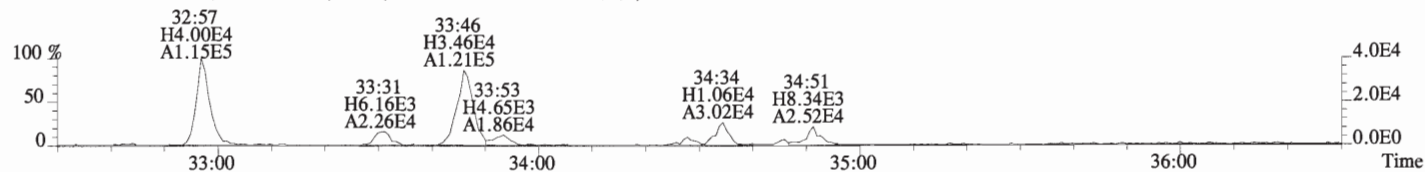
File:160712D1 #1-193 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



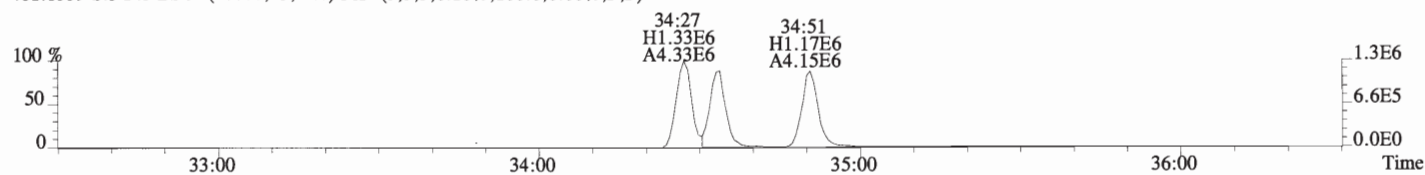
File:160712D1 #1-407 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



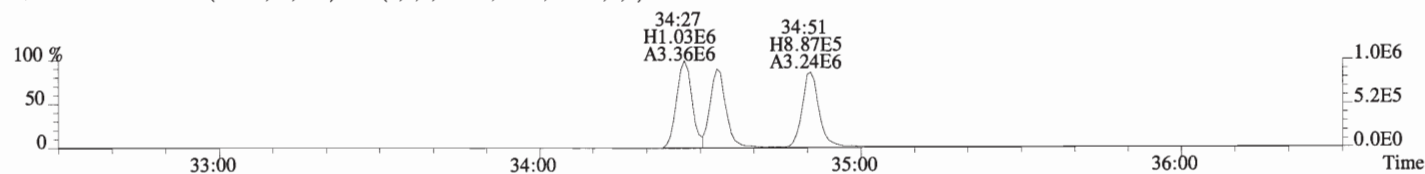
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



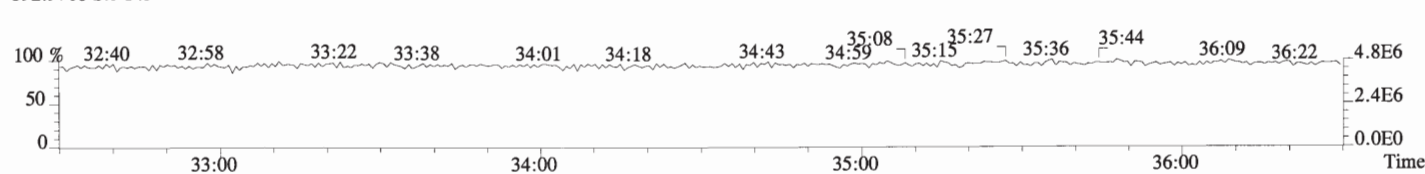
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



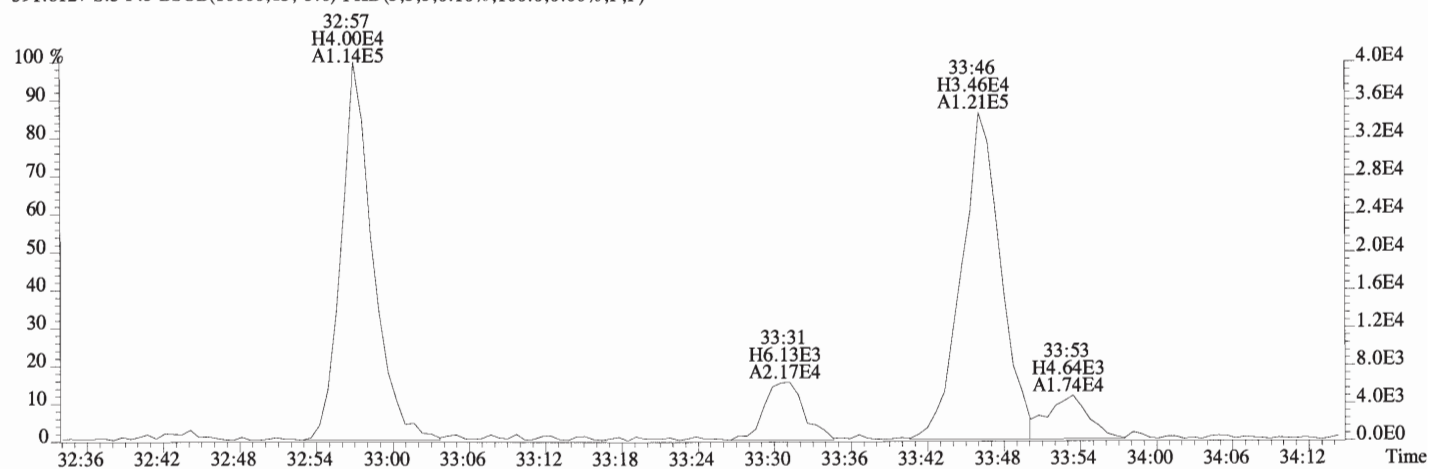
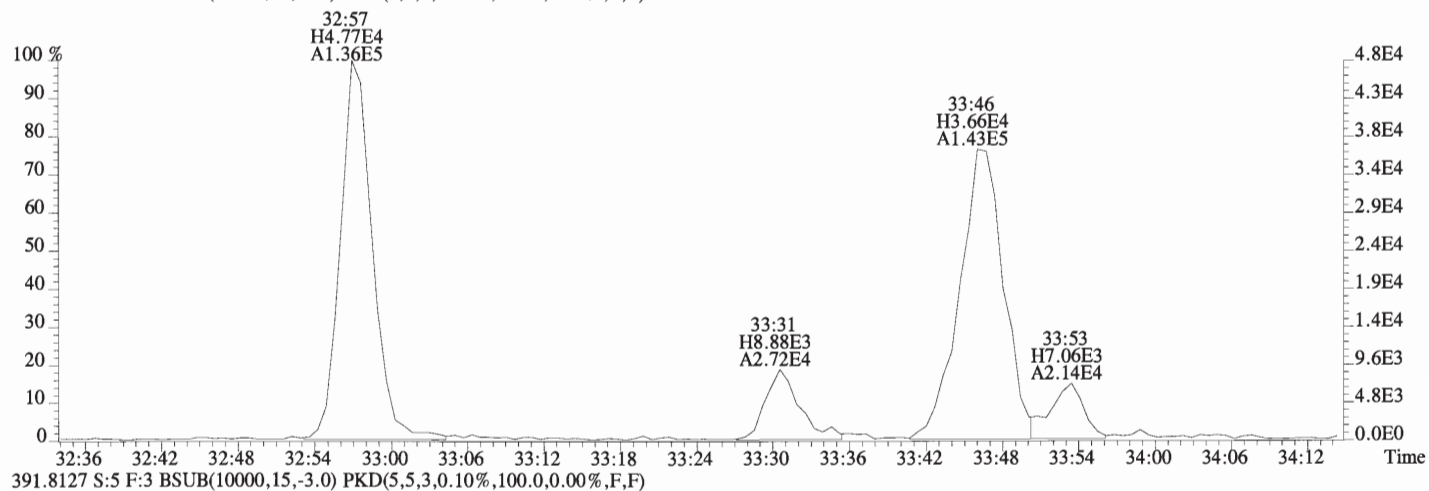
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



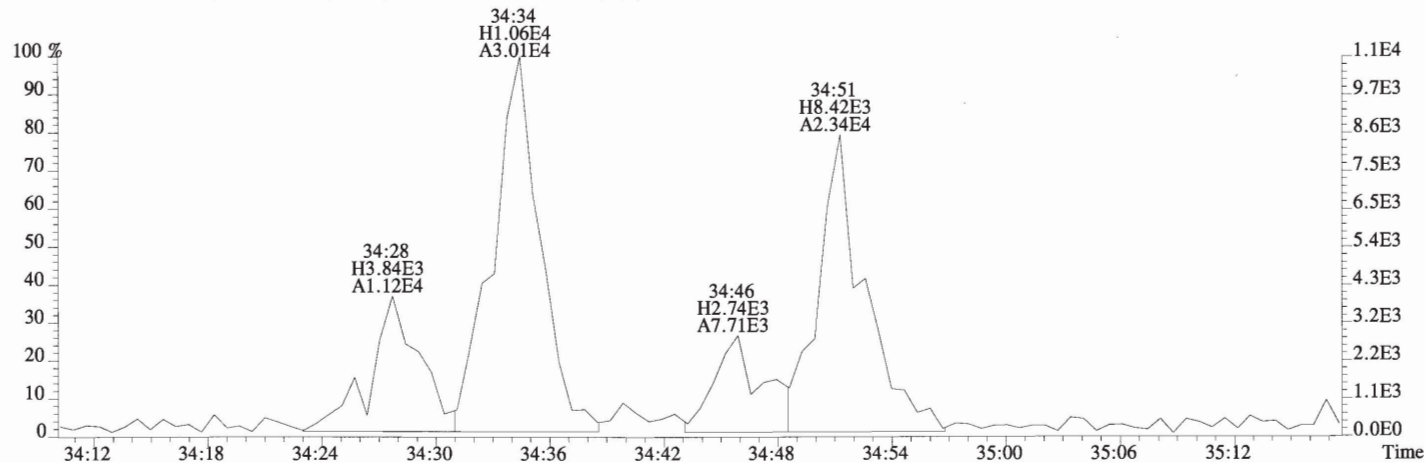
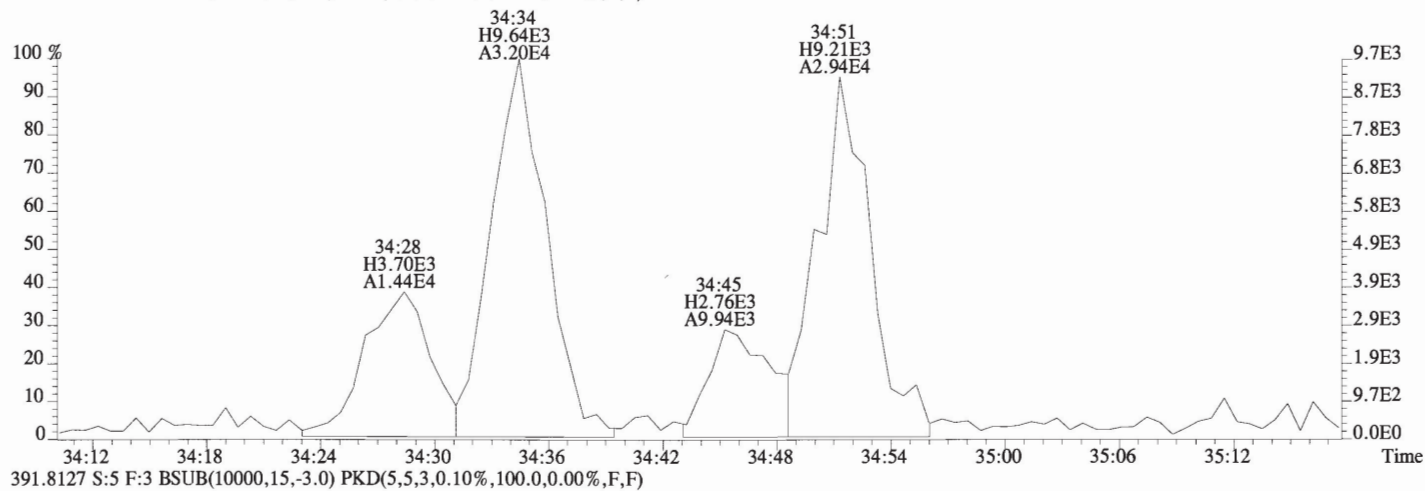
392.9760 S:5 F:3



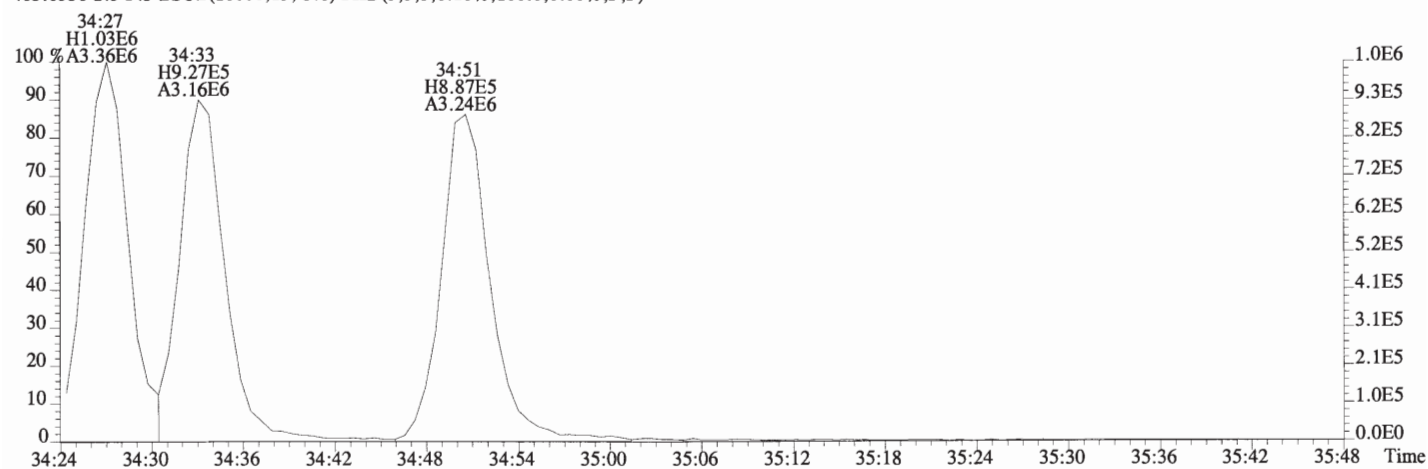
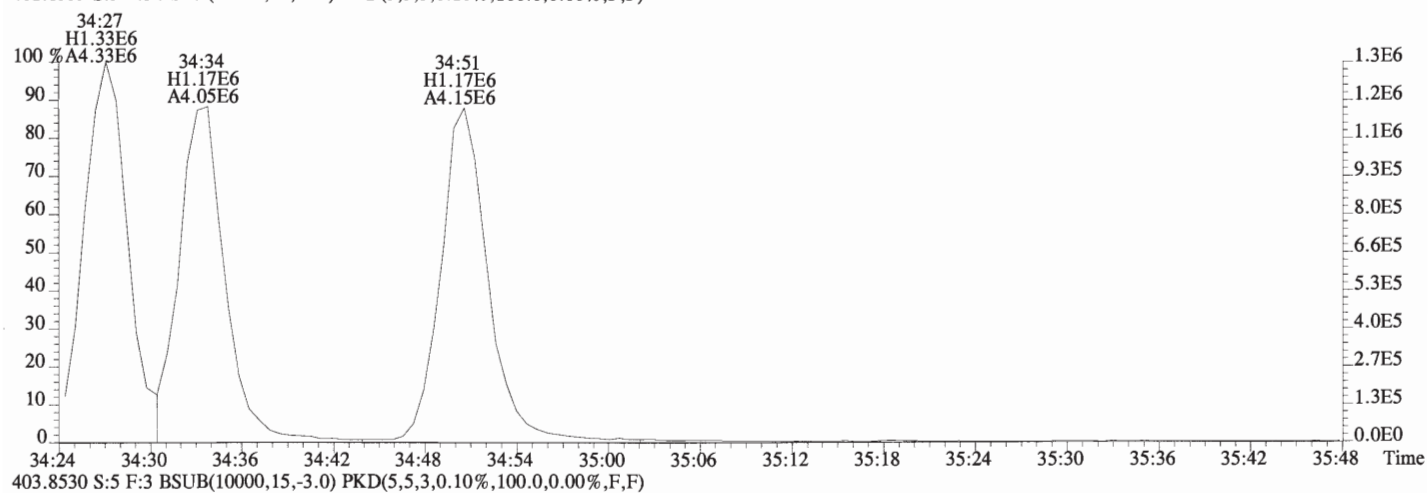
File:160712D1 #1-407 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



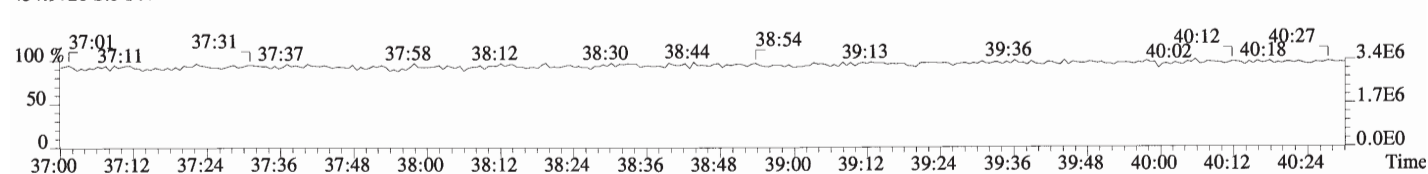
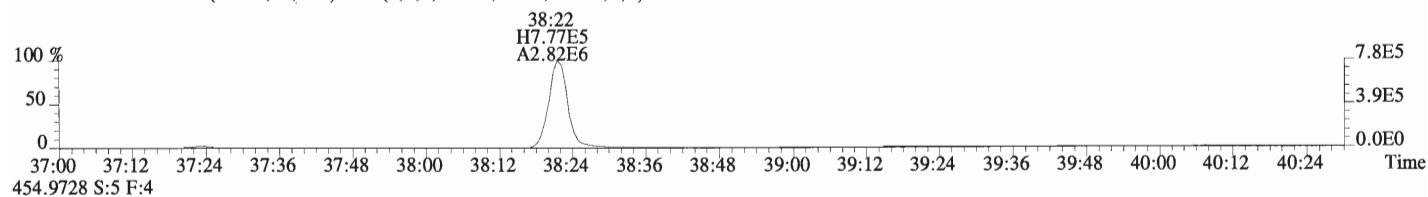
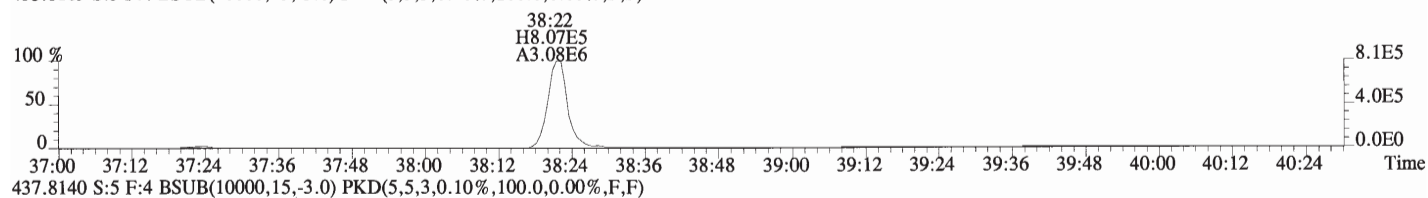
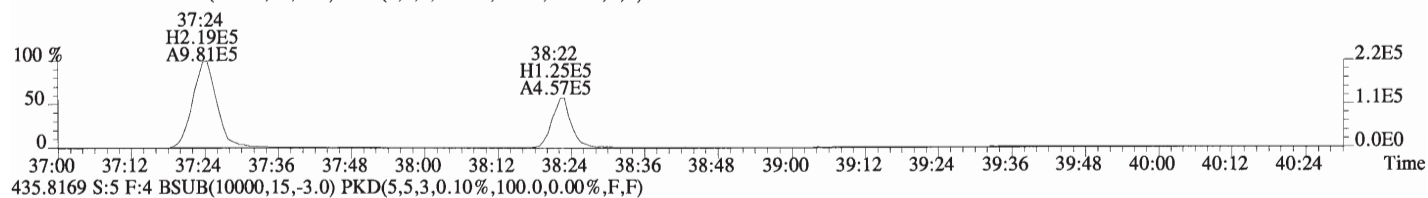
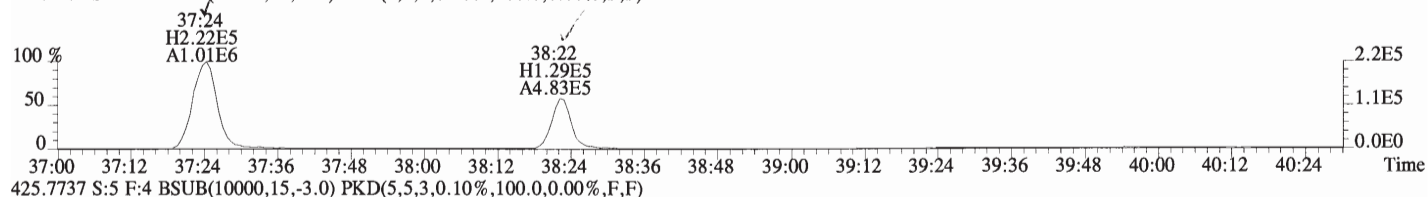
File:160712D1 #1-407 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



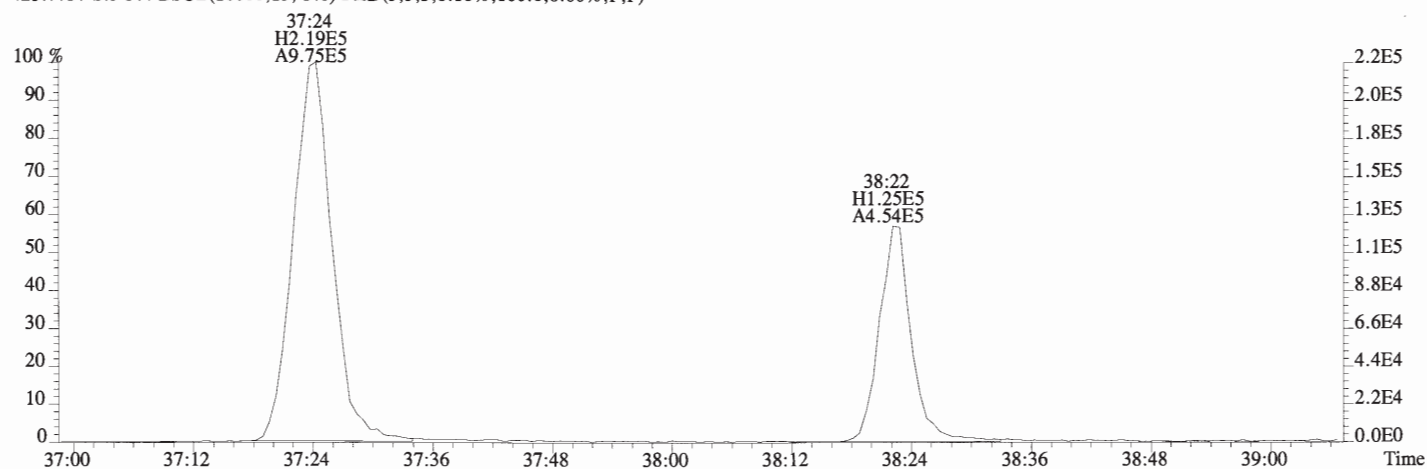
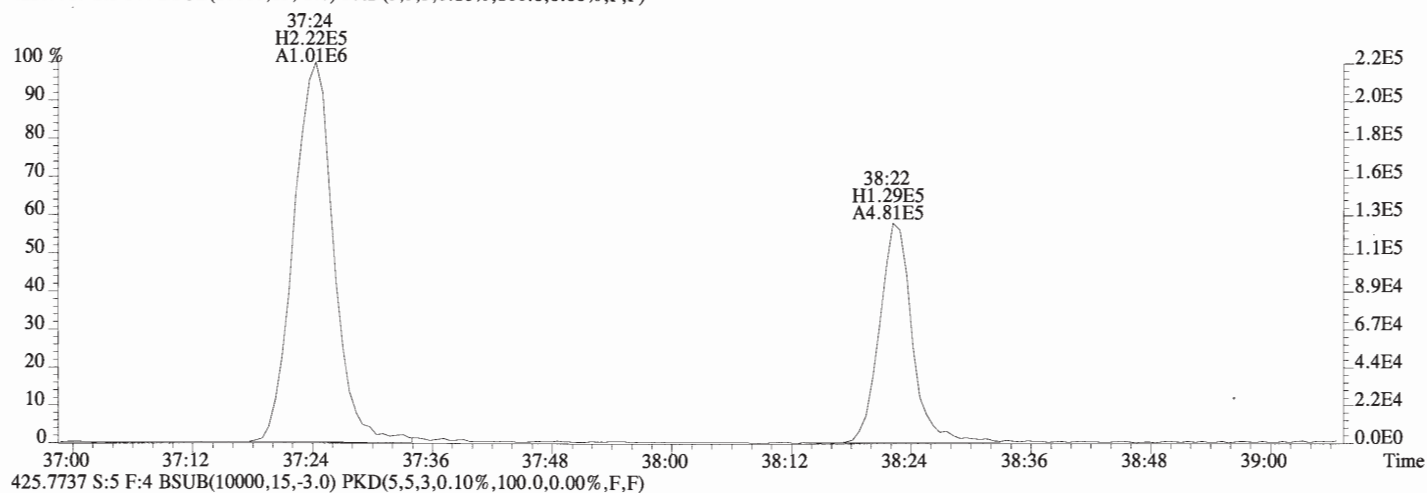
File:160712D1 #1-407 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



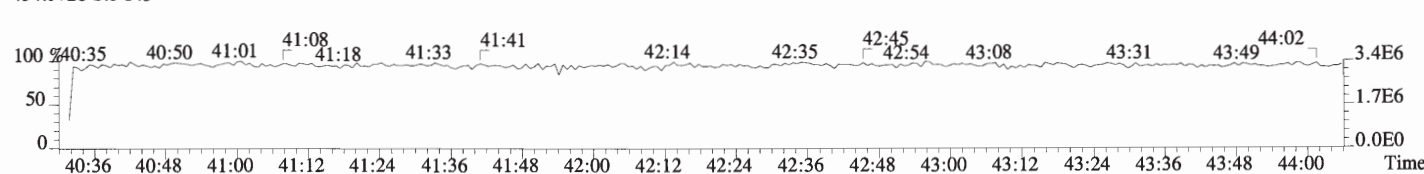
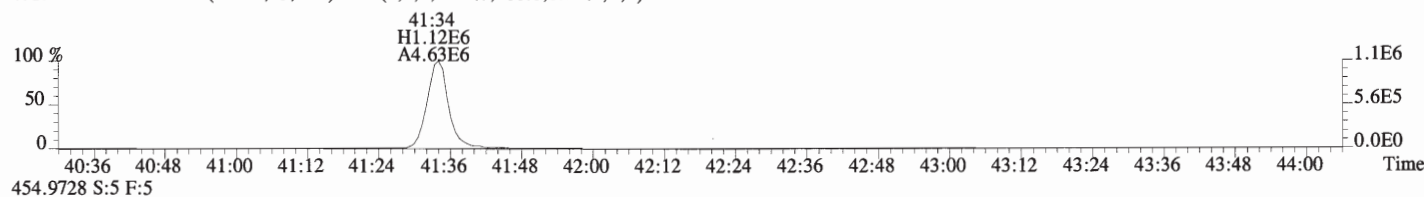
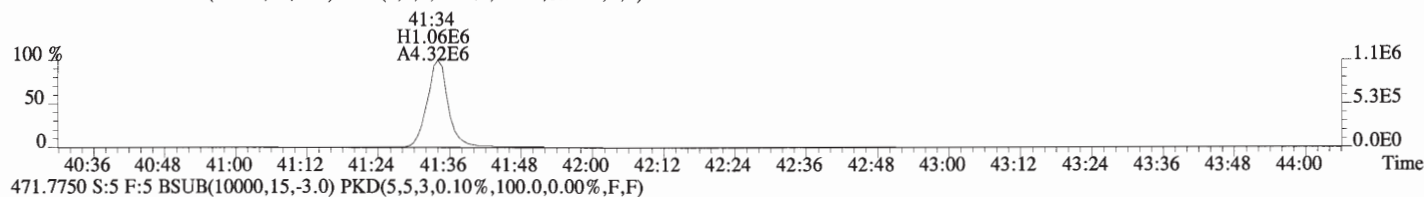
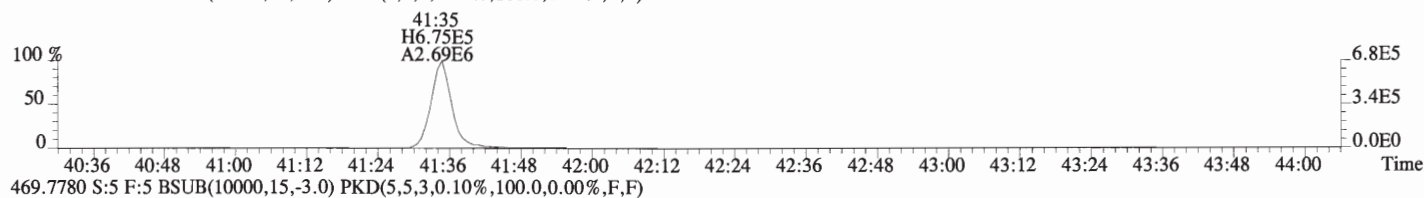
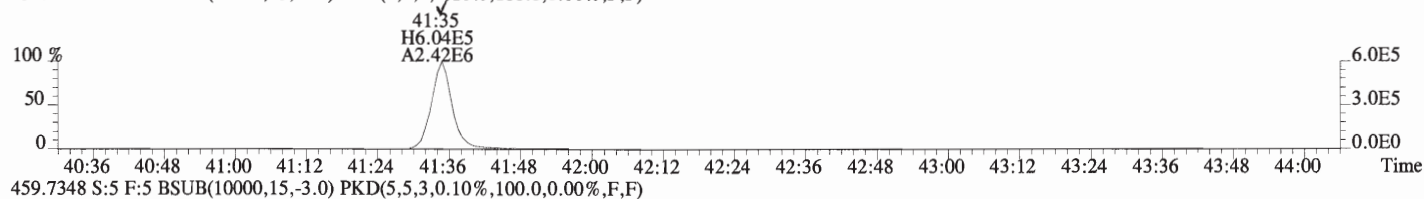
File:160712D1 #1-325 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



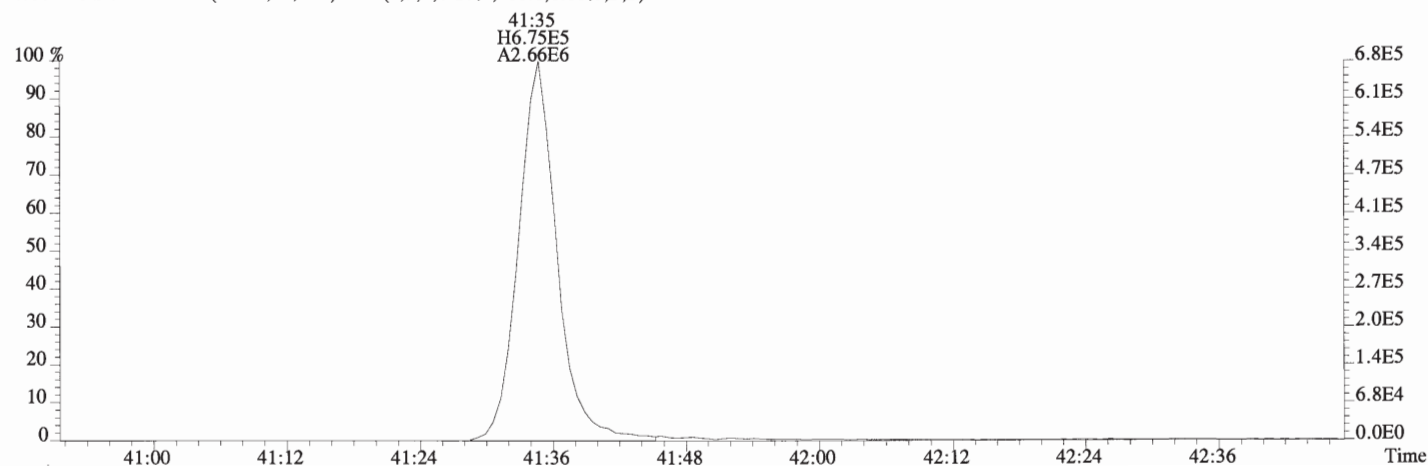
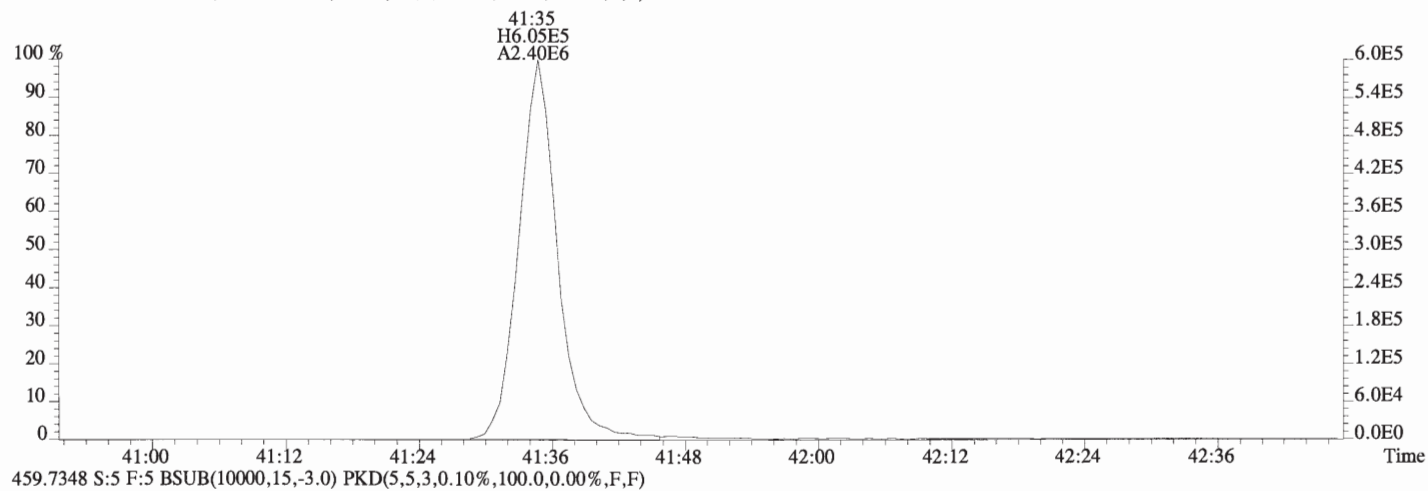
File:160712D1 #1-325 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



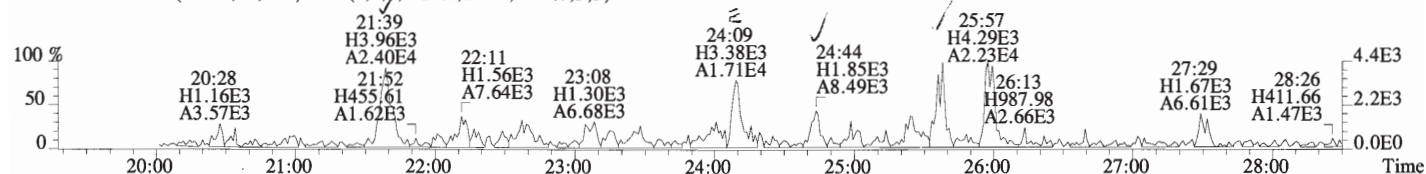
File:160712D1 #1-389 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



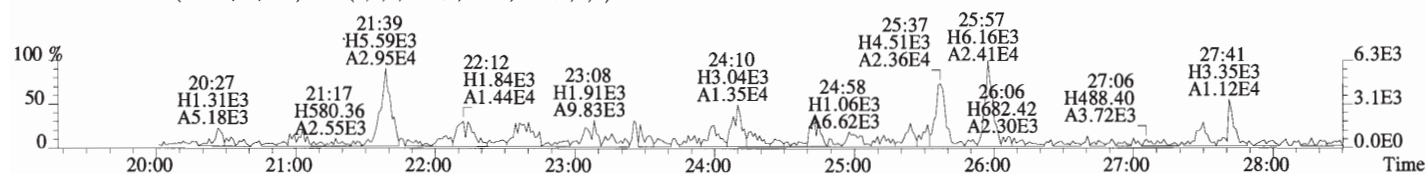
File:160712D1 #1-389 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



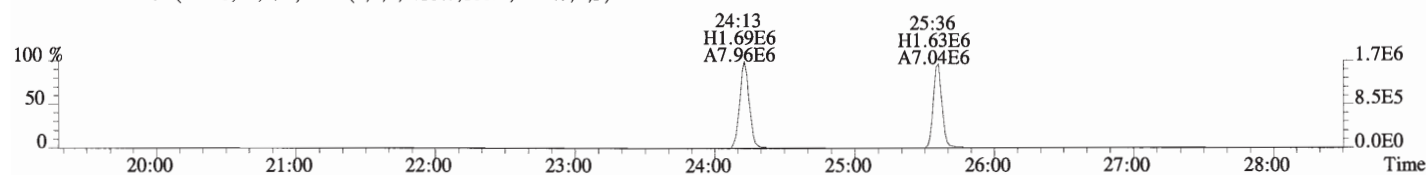
File:160712D1 #1-551 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



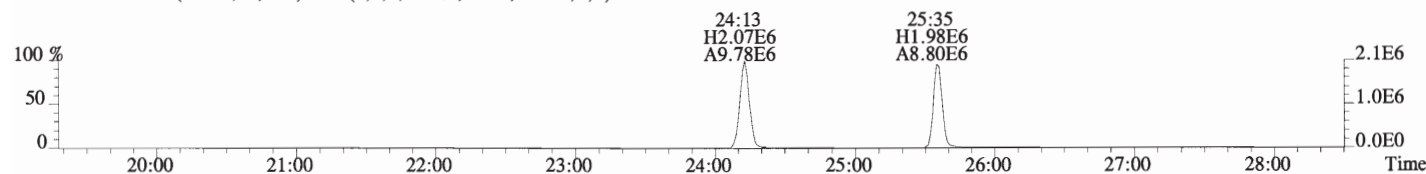
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



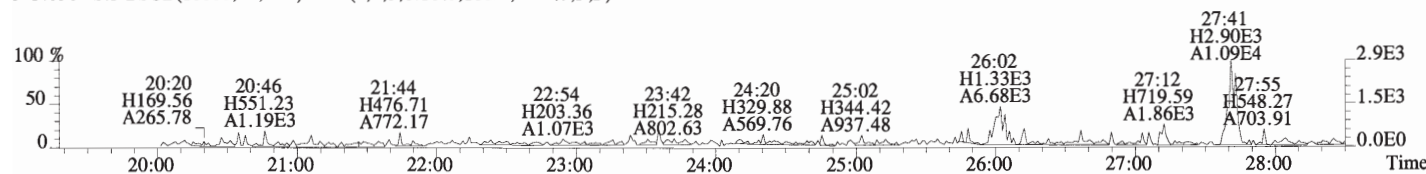
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



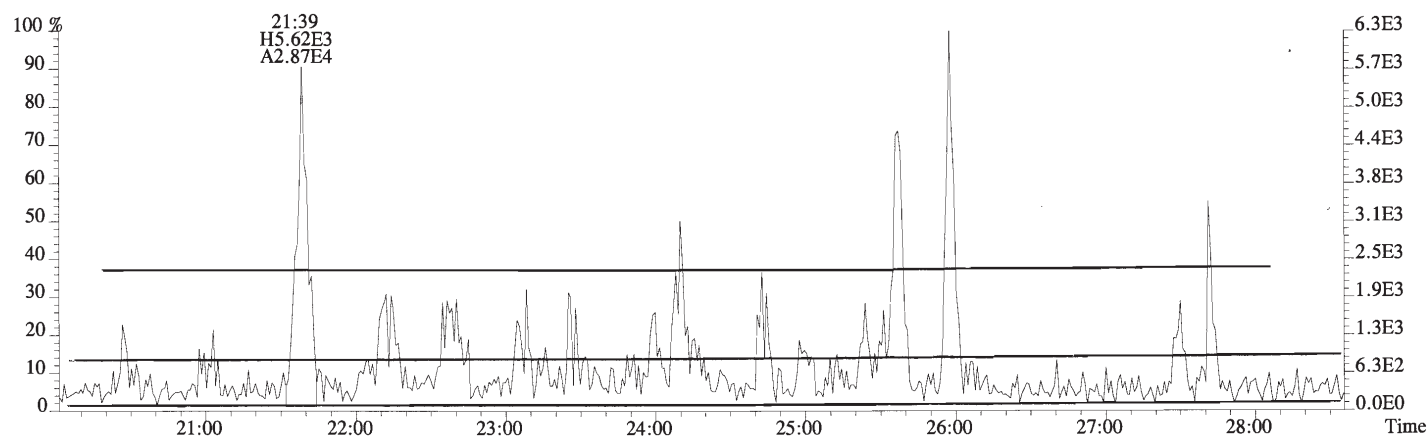
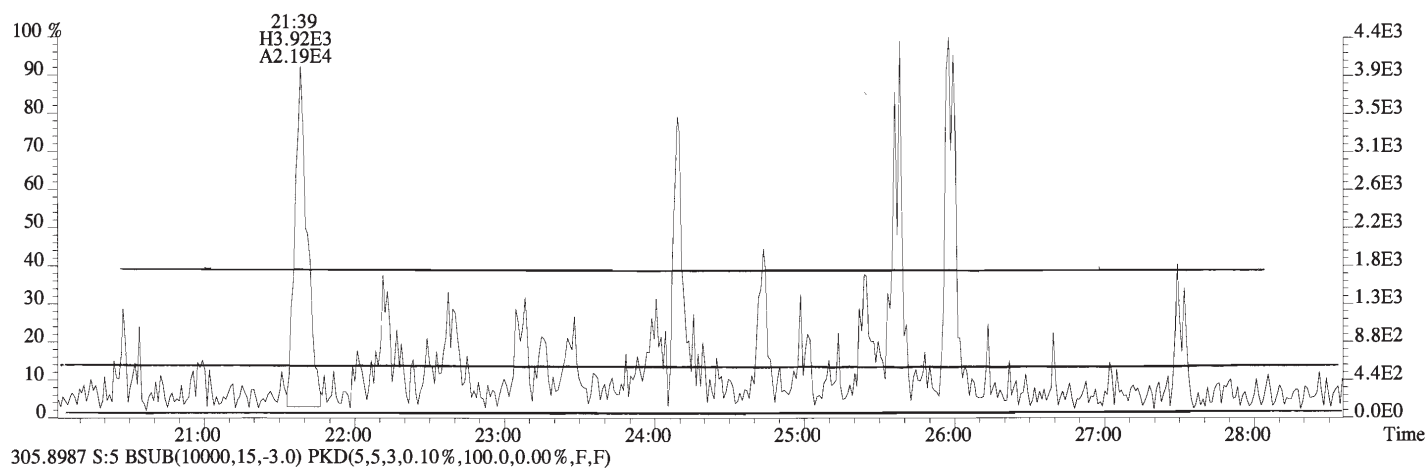
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



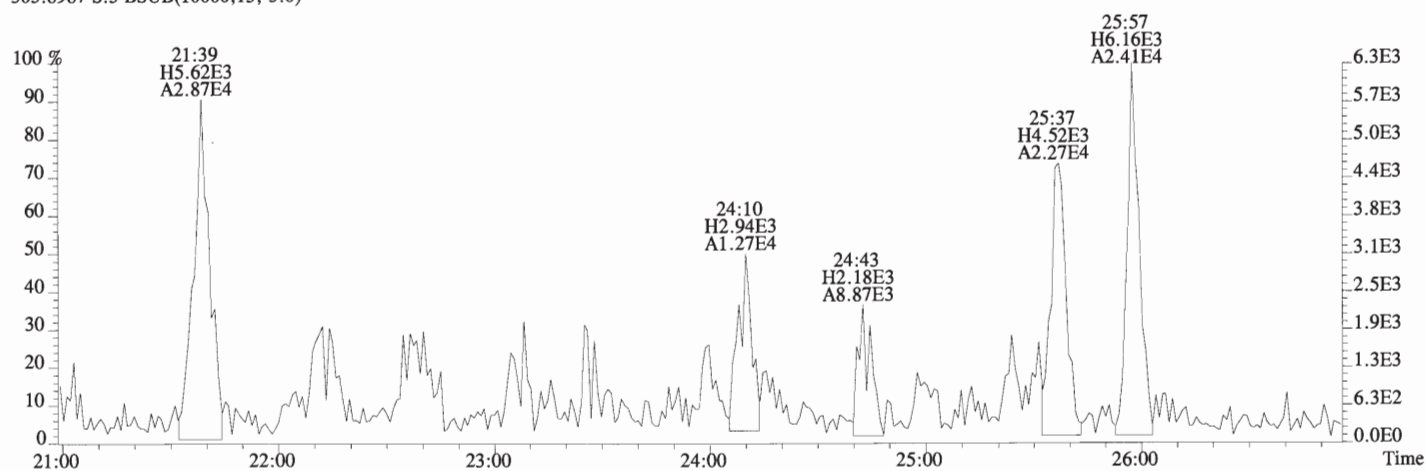
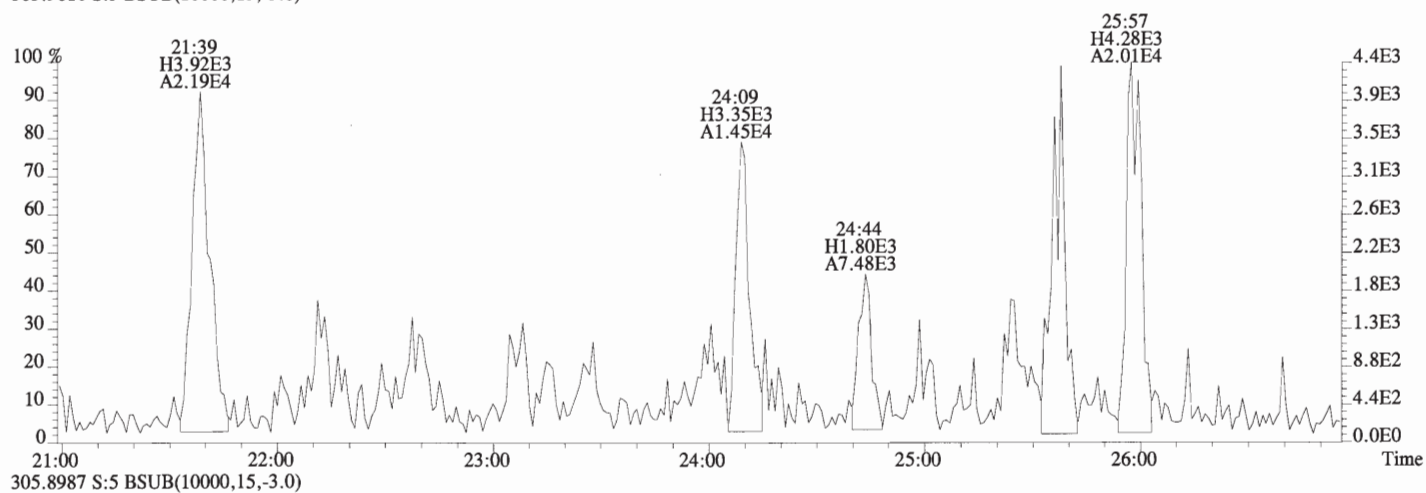
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



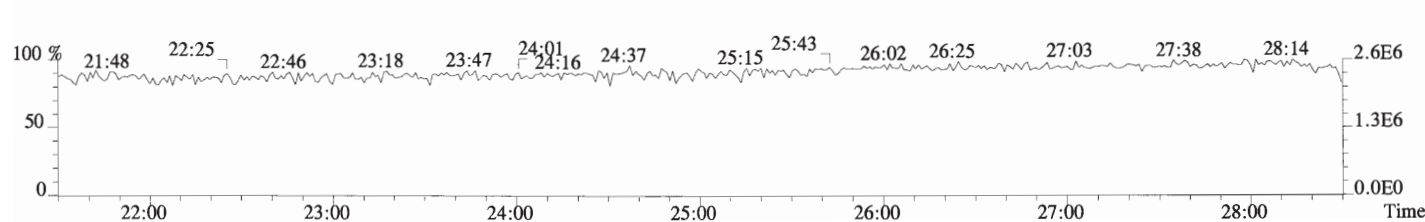
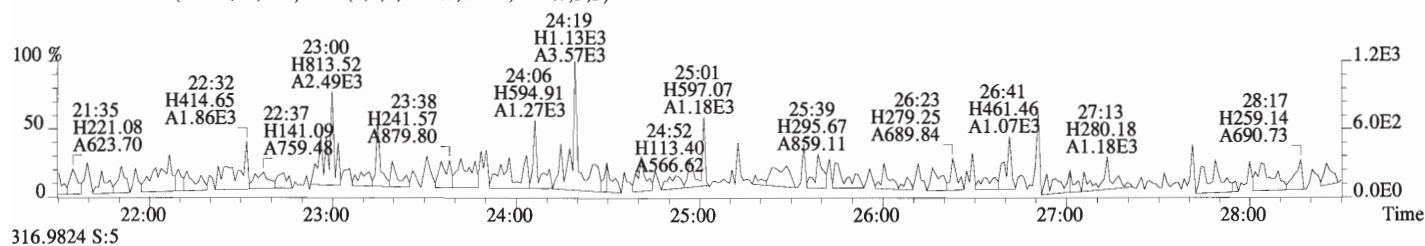
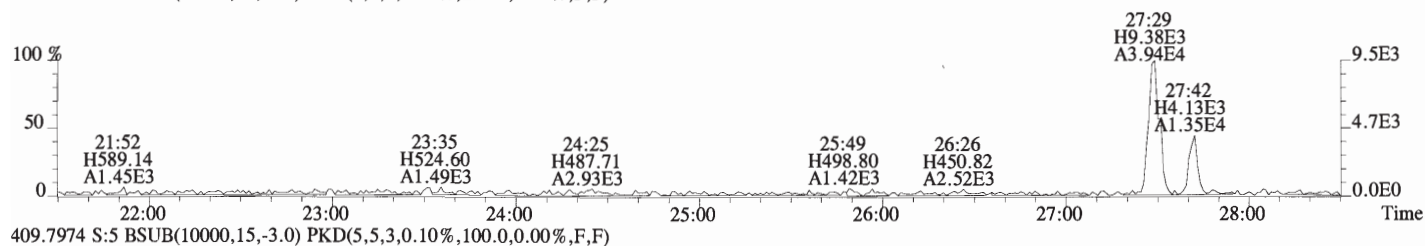
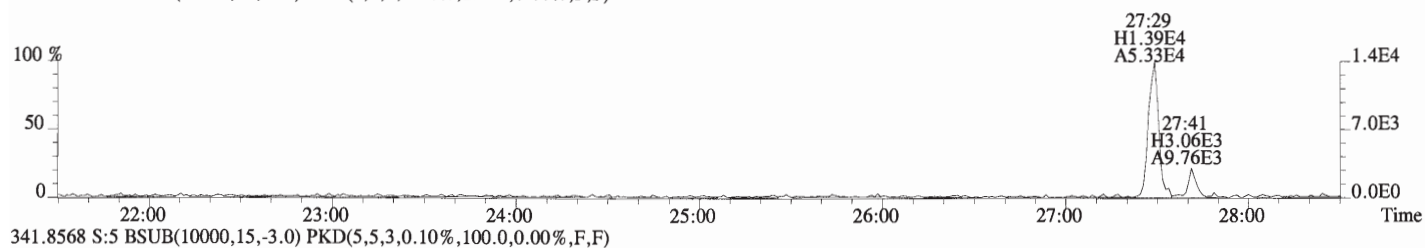
File:160712D1 #1-551 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text: Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



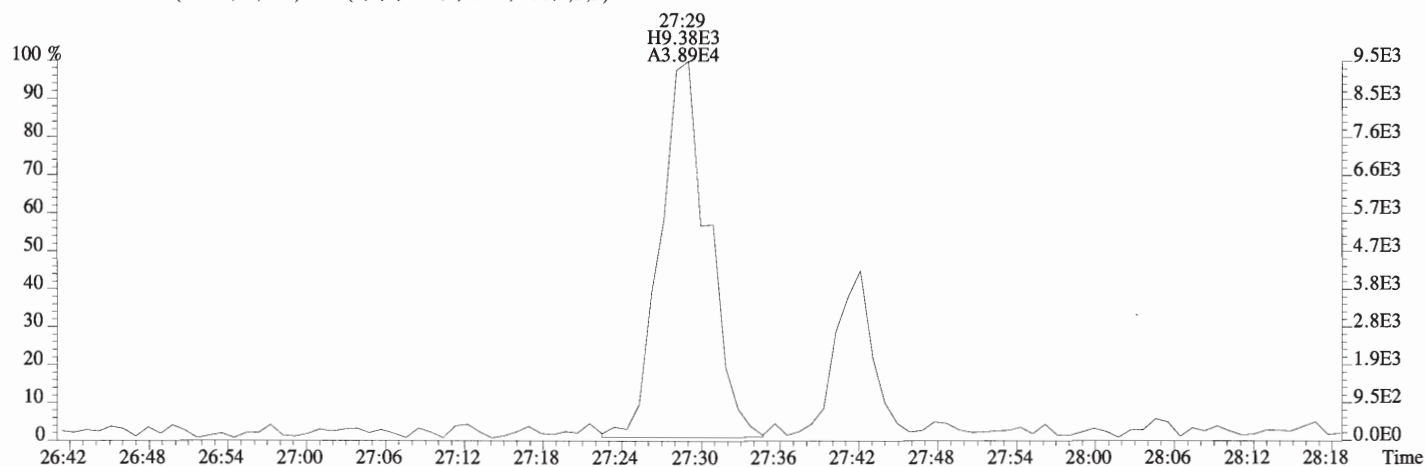
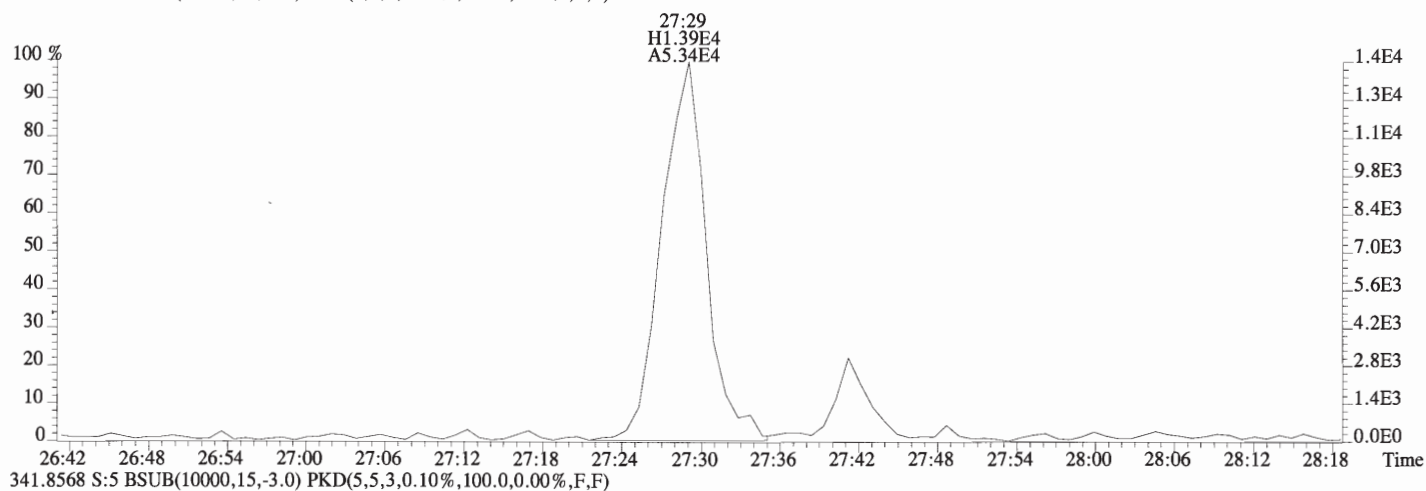
File:160712D1 #1-551 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 303.9016 S:5 BSUB(10000,15,-3.0)



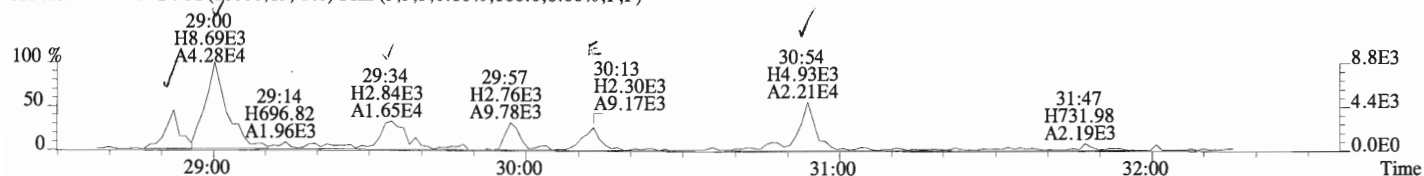
File:160712D1 #1-551 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



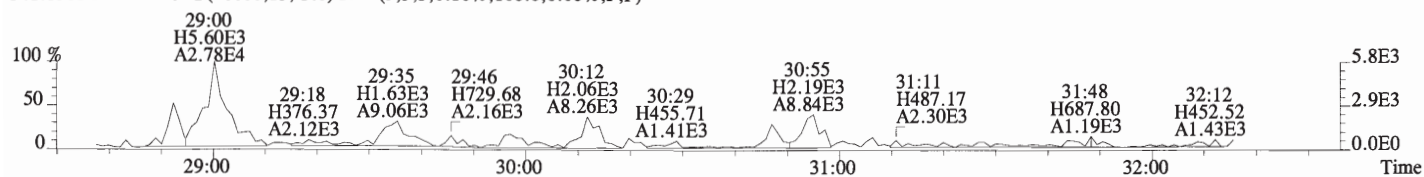
File:160712D1 #1-551 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



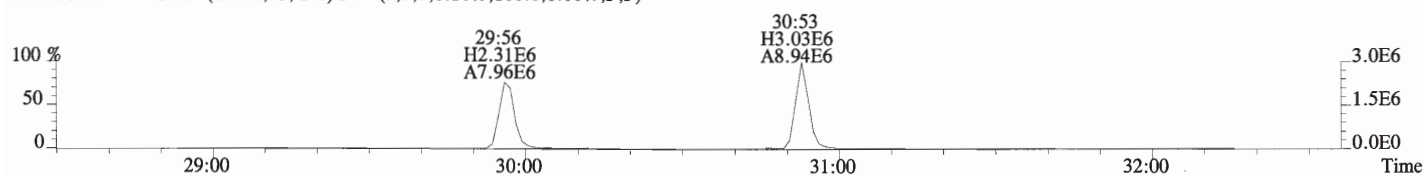
File:160712D1 #1-193 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



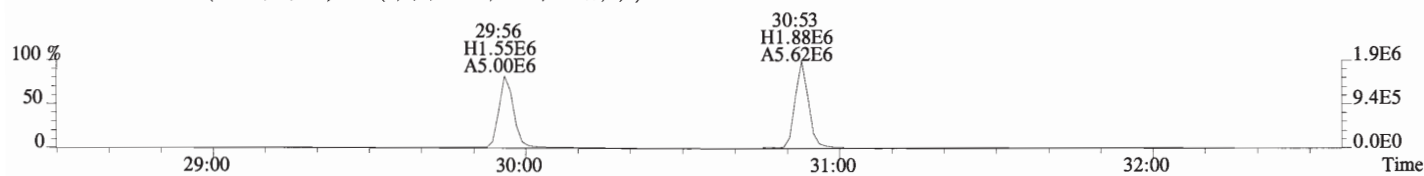
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



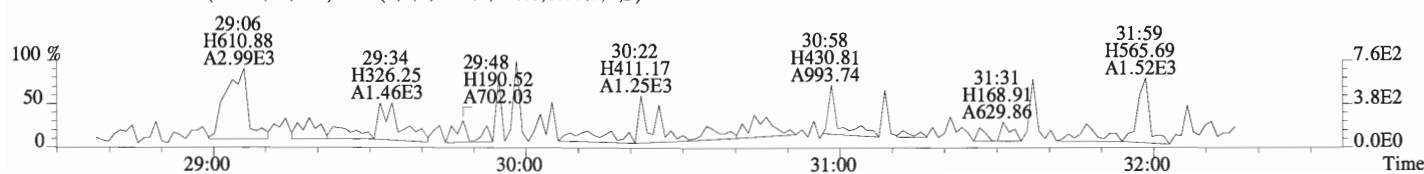
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



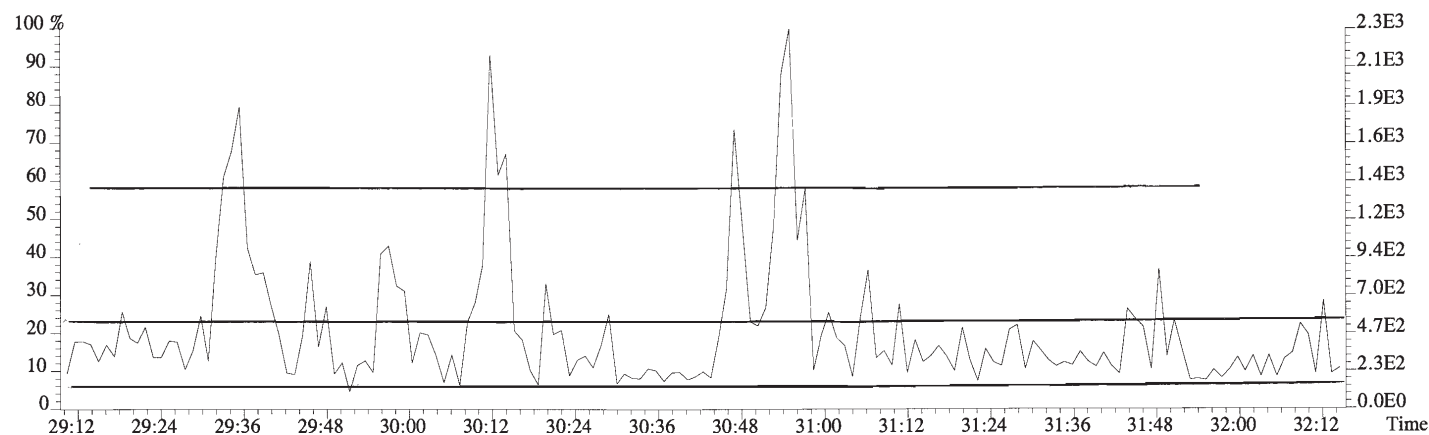
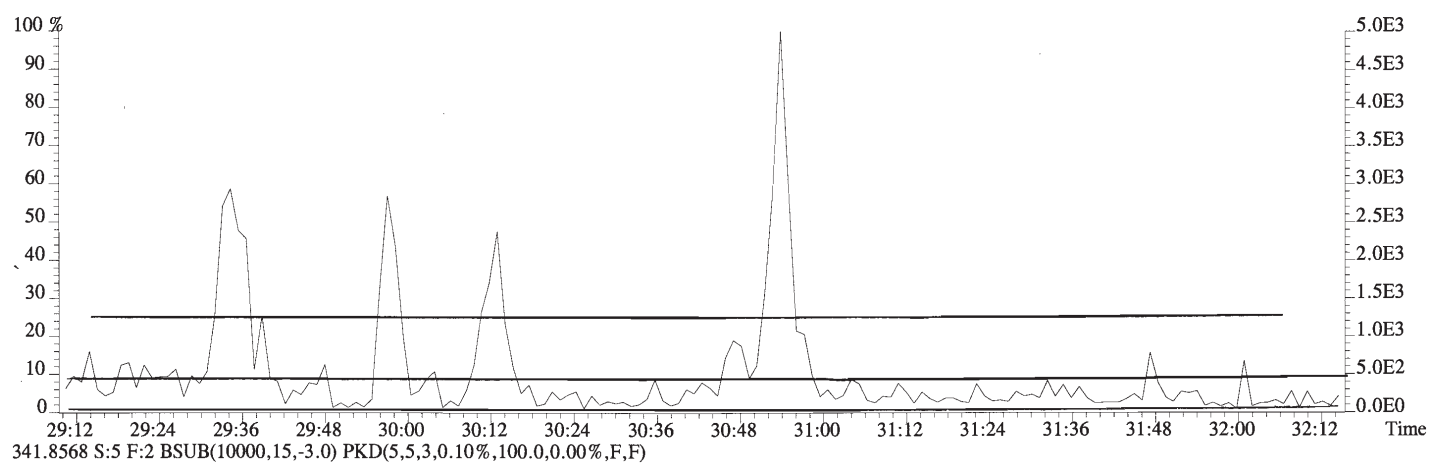
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



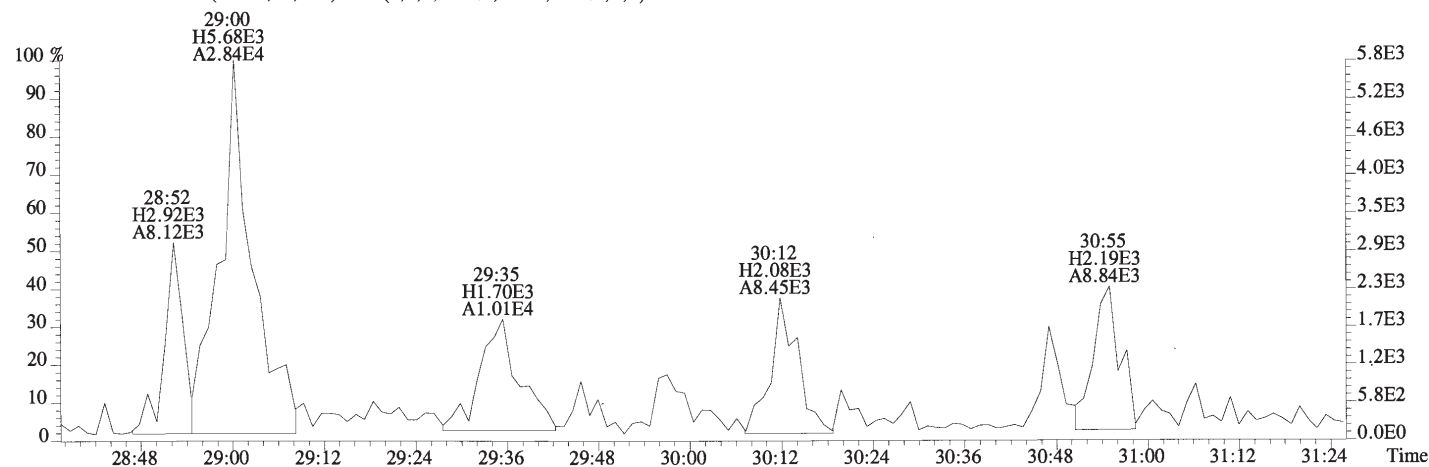
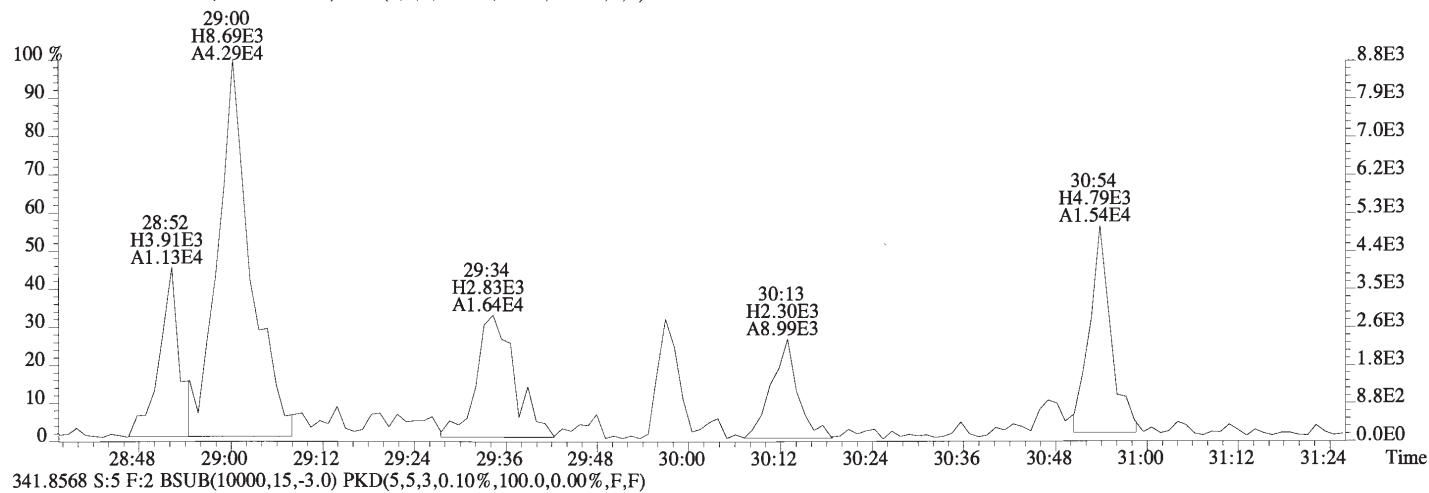
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



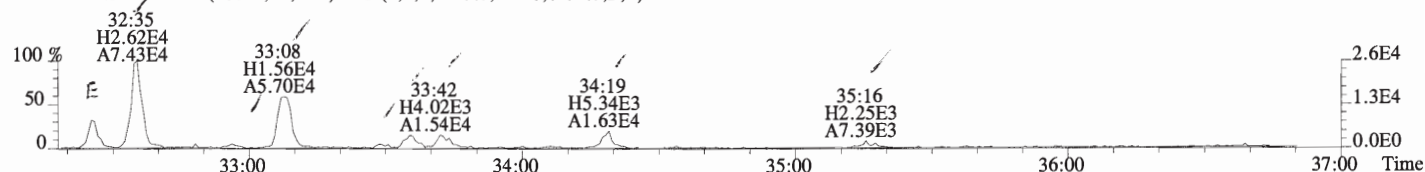
File:160712D1 #1-193 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



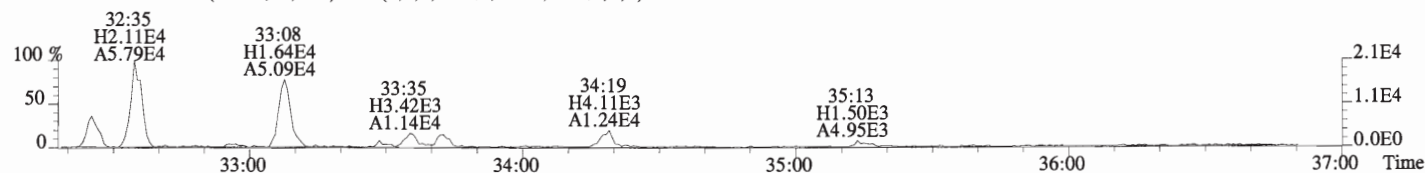
File:160712D1 #1-193 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



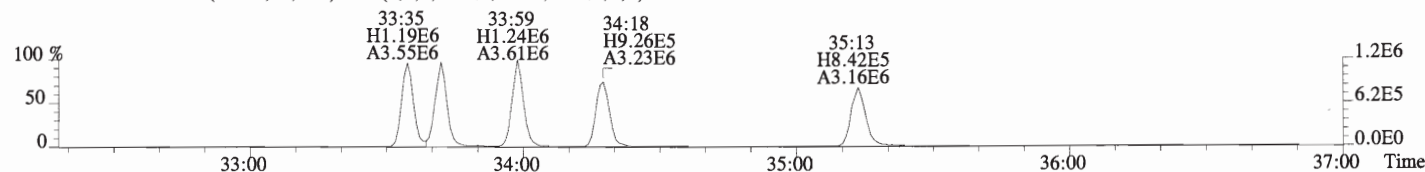
File:160712D1 #1-407 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



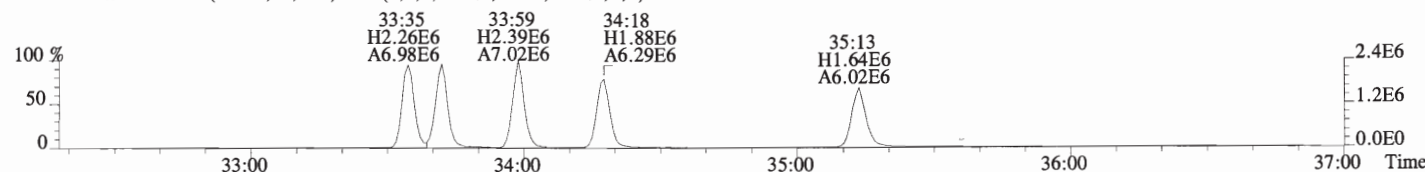
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



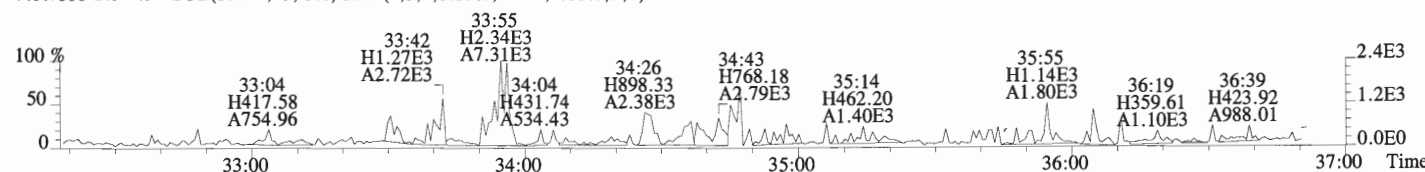
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



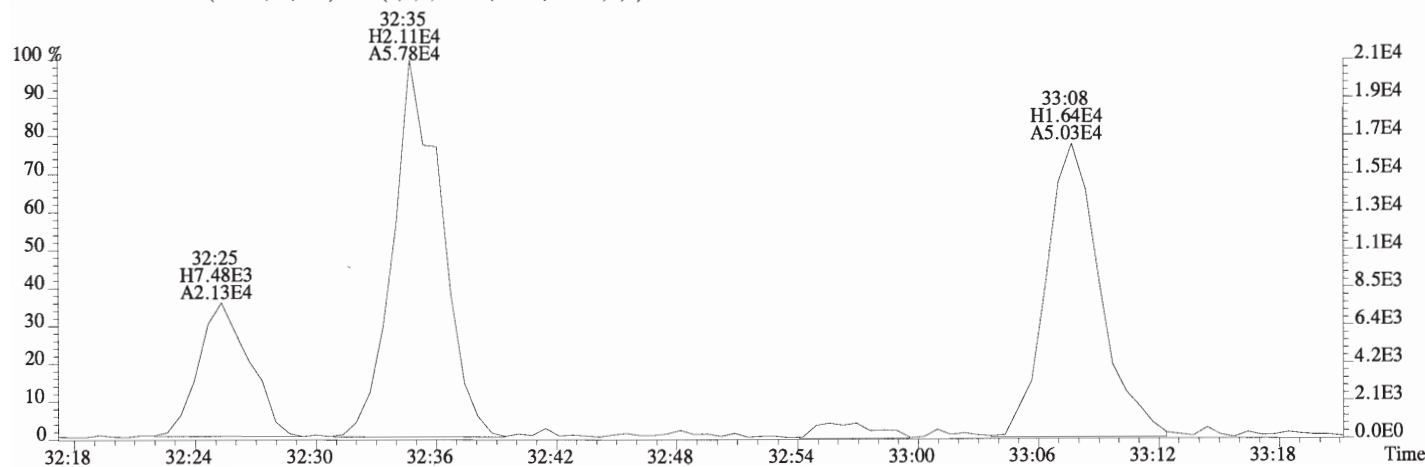
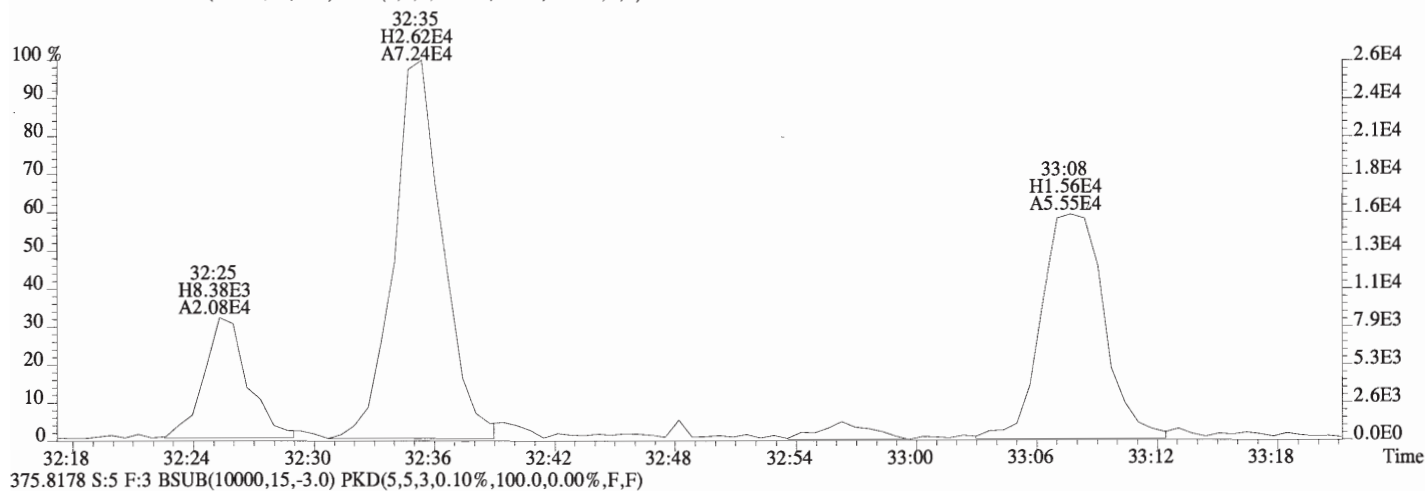
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



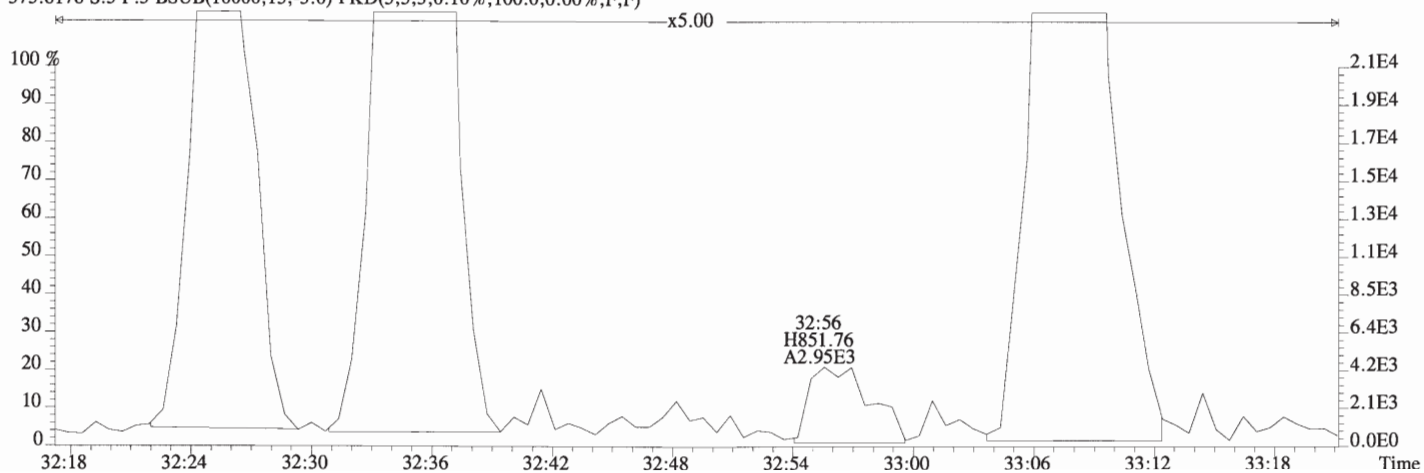
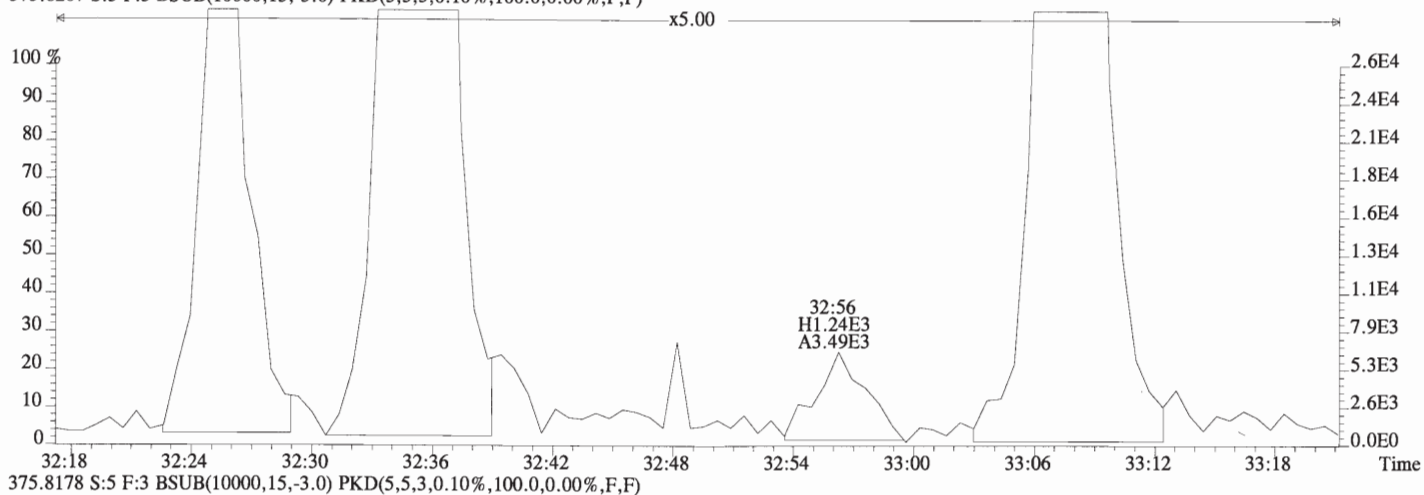
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



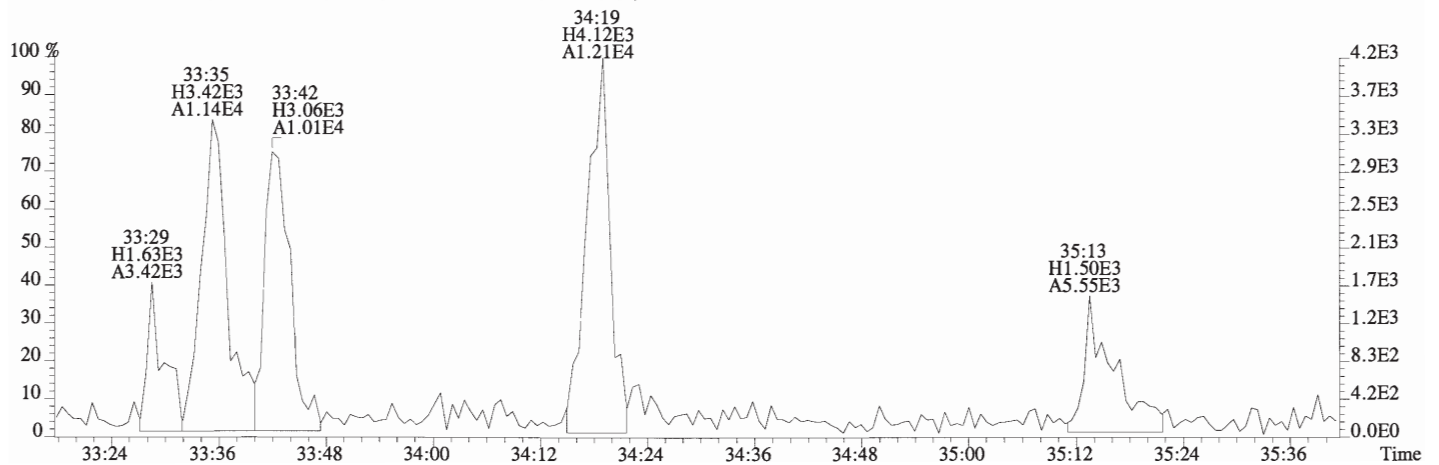
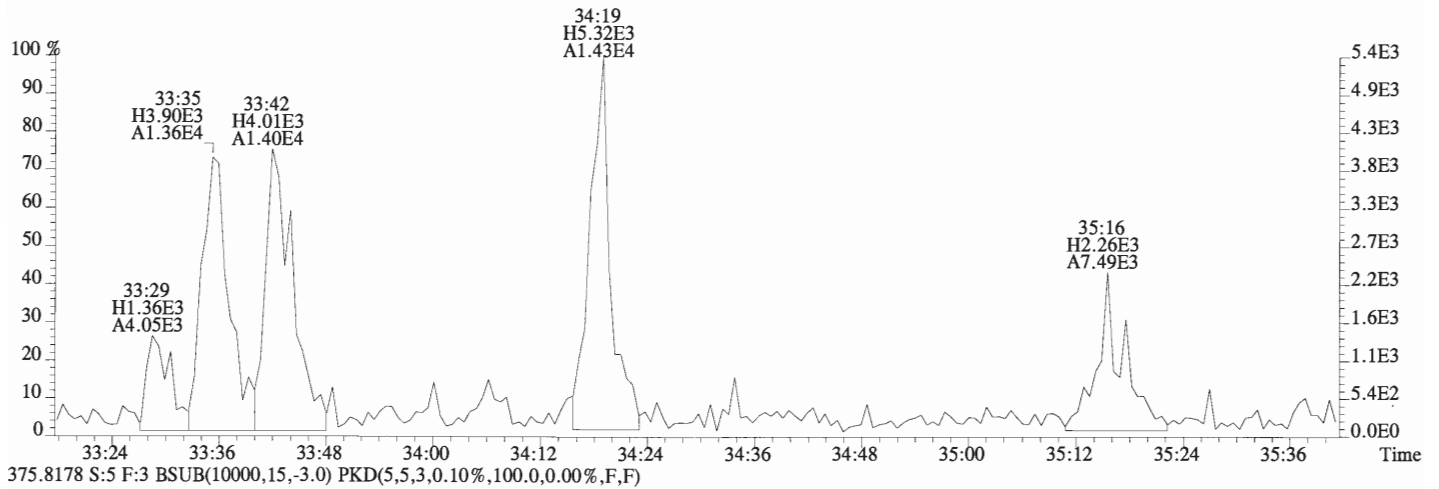
File:160712D1 #1-407 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



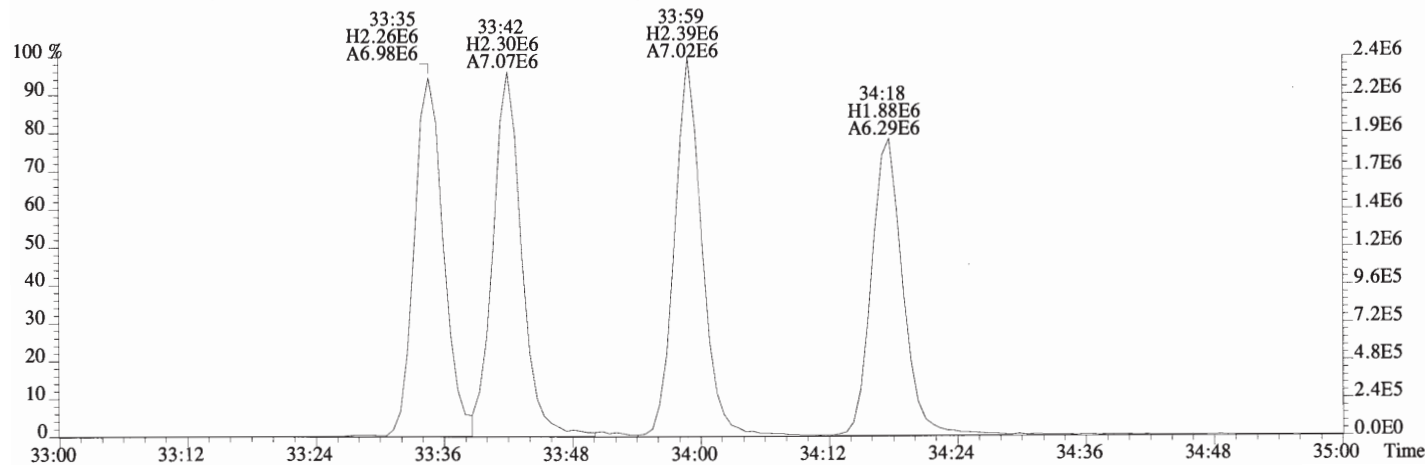
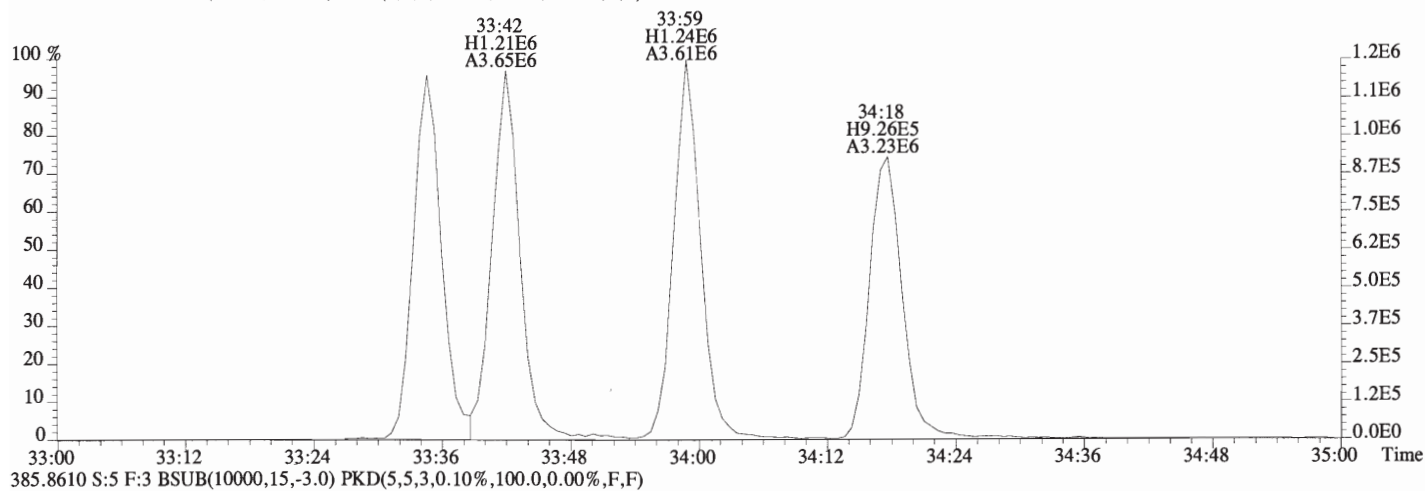
File:160712D1 #1-407 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



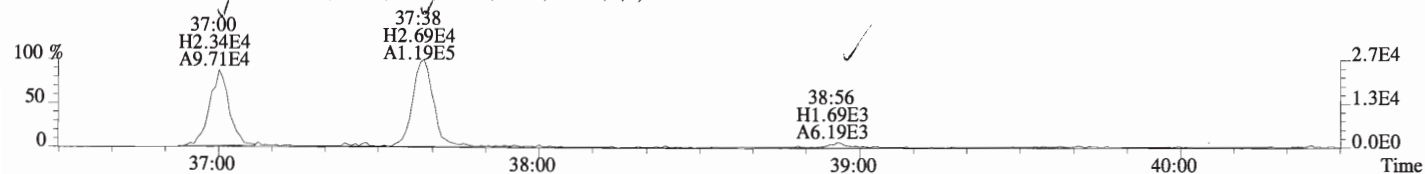
File:160712D1 #1-407 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



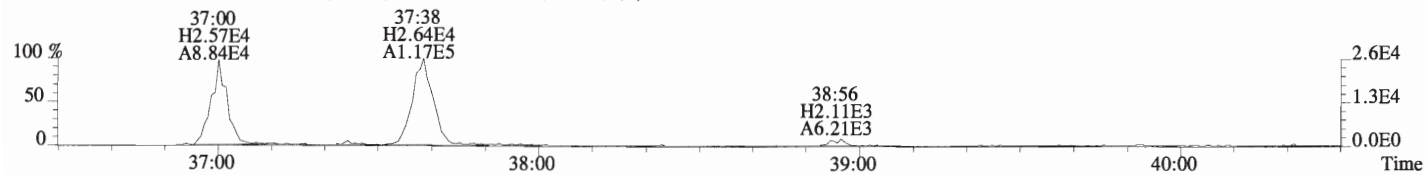
File:160712D1 #1-407 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



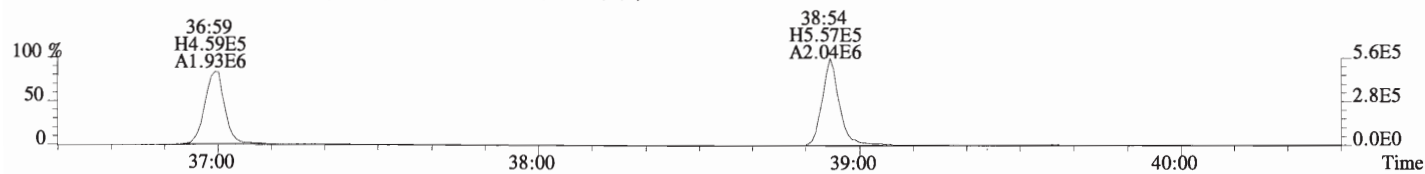
File:160712D1 #1-325 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



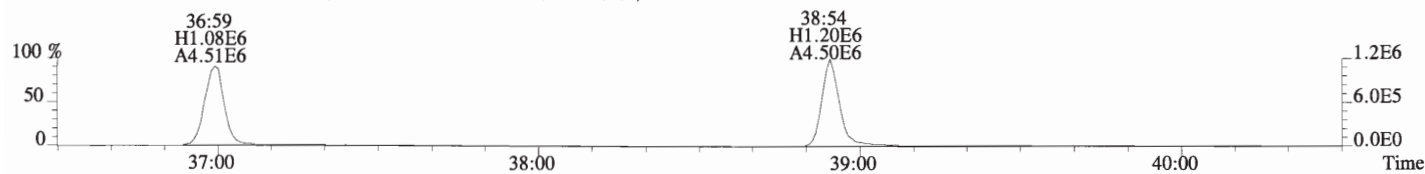
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



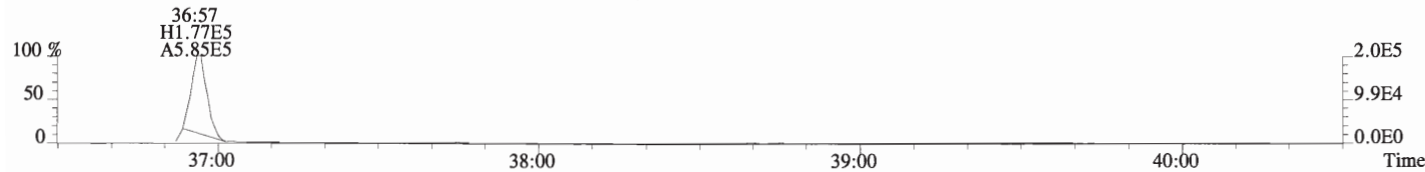
417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



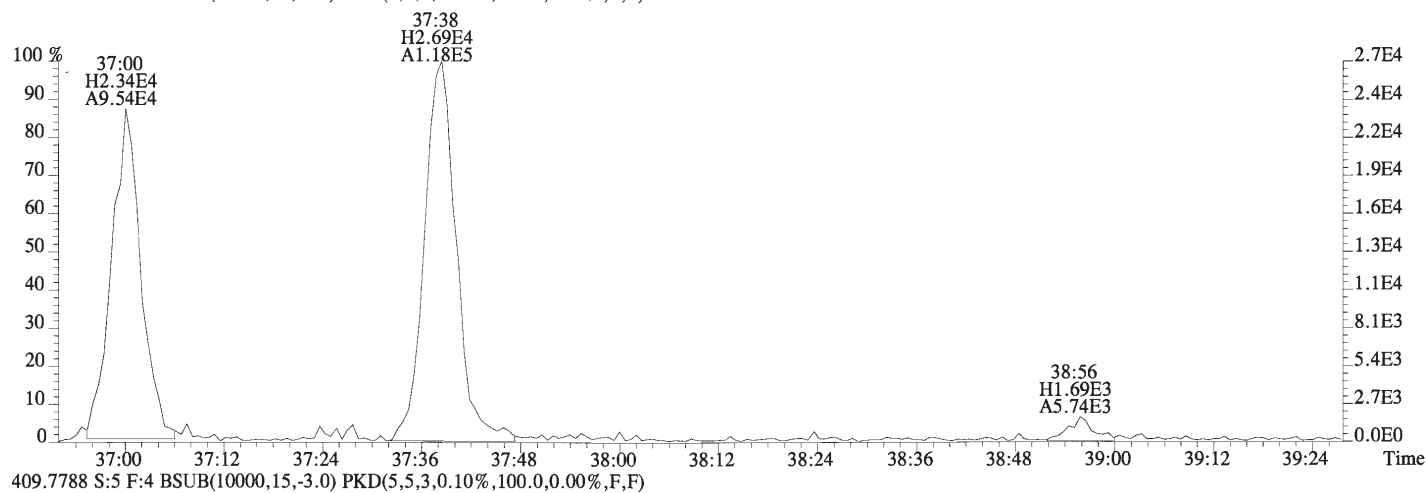
419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



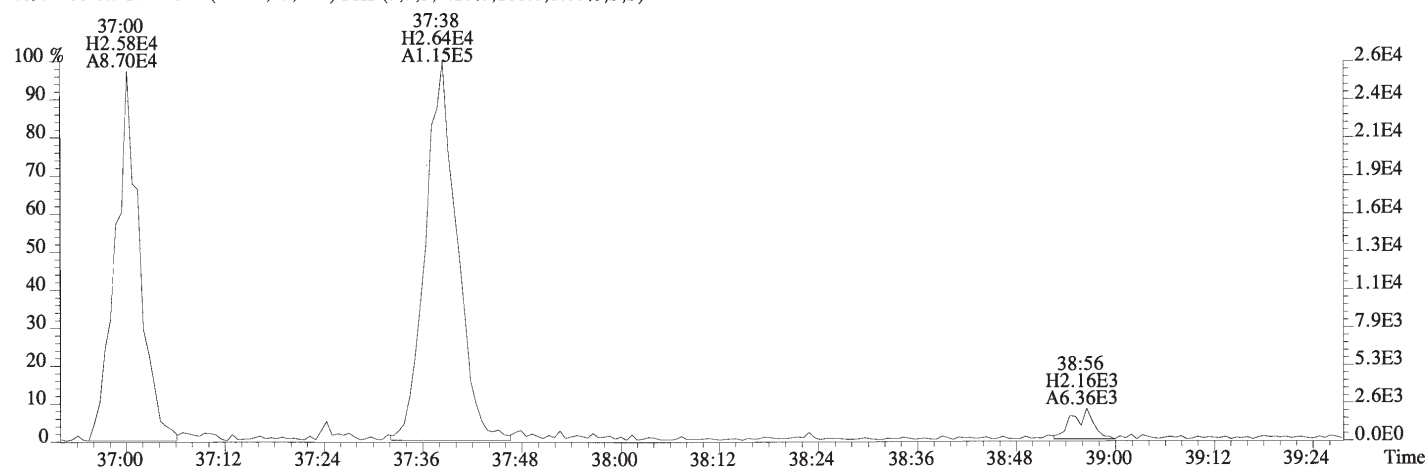
479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



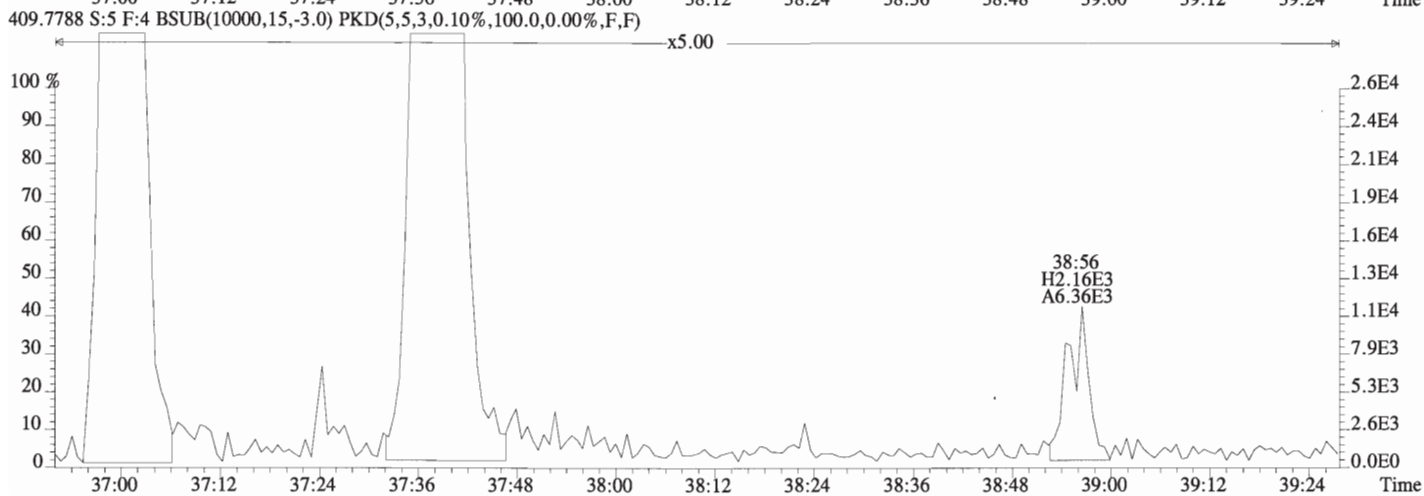
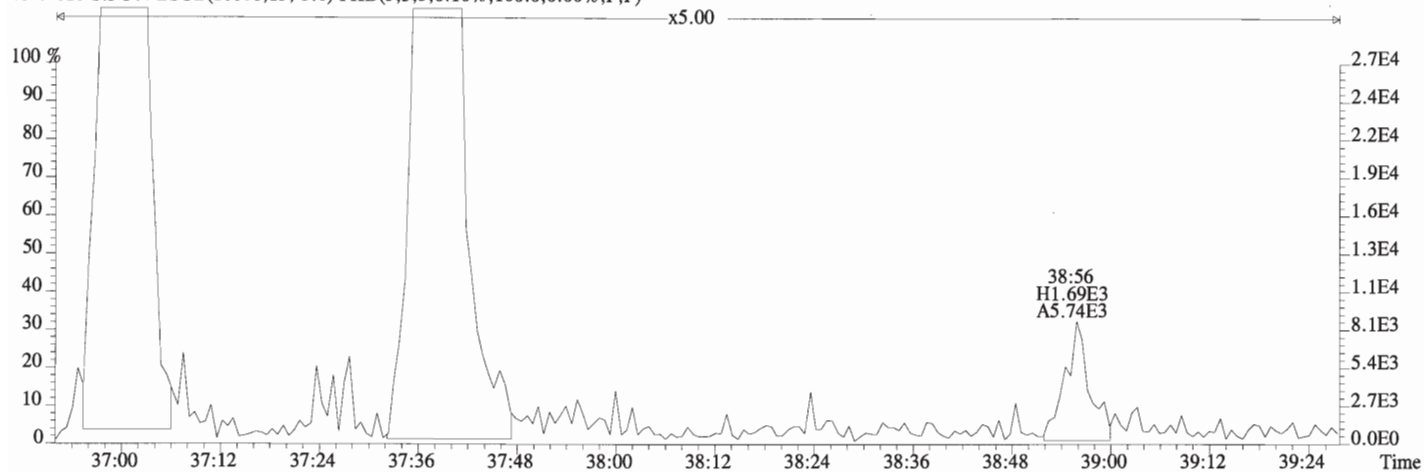
File:160712D1 #1-325 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
 407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



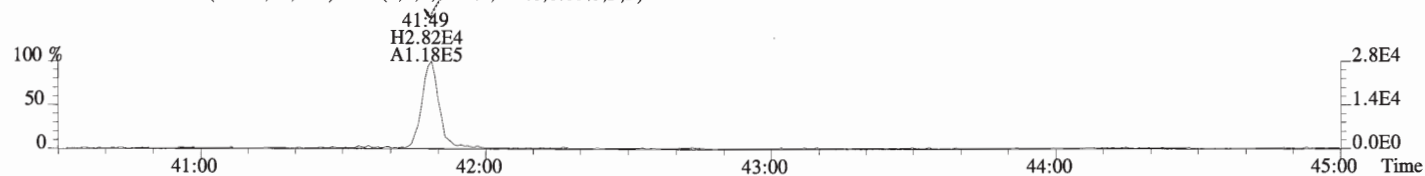
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



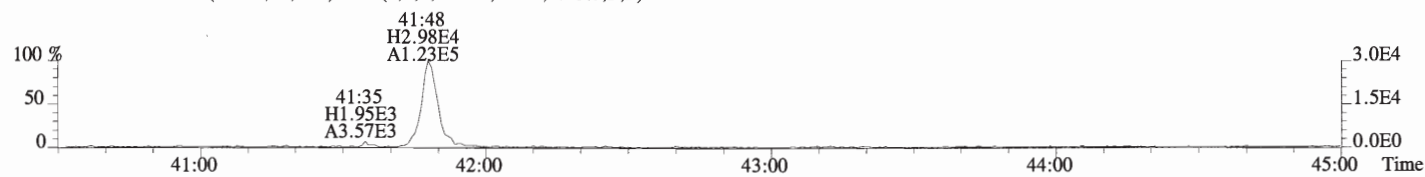
File:160712D1 #1-325 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



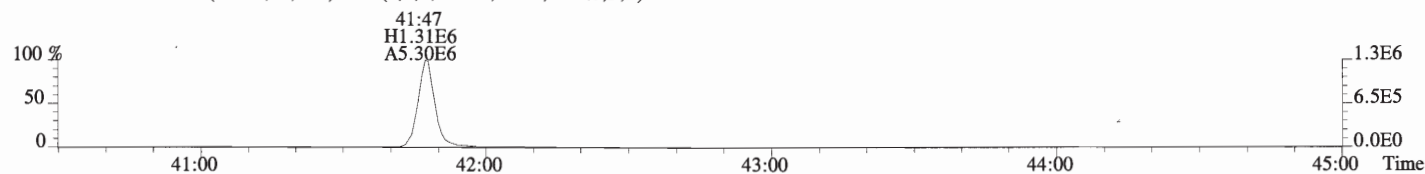
File:160712D1 #1-389 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



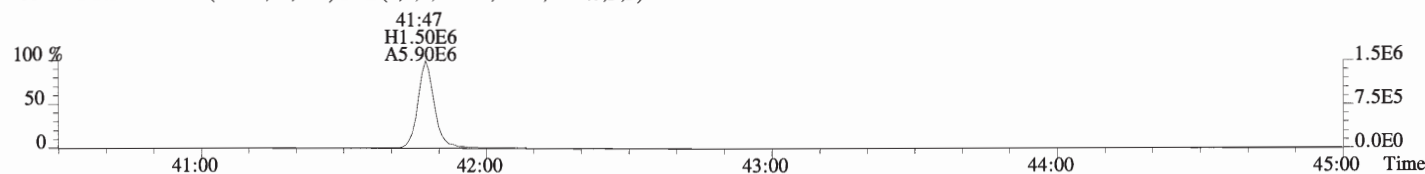
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



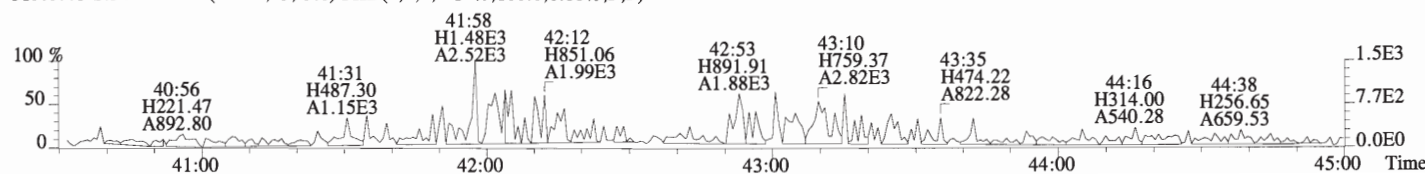
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



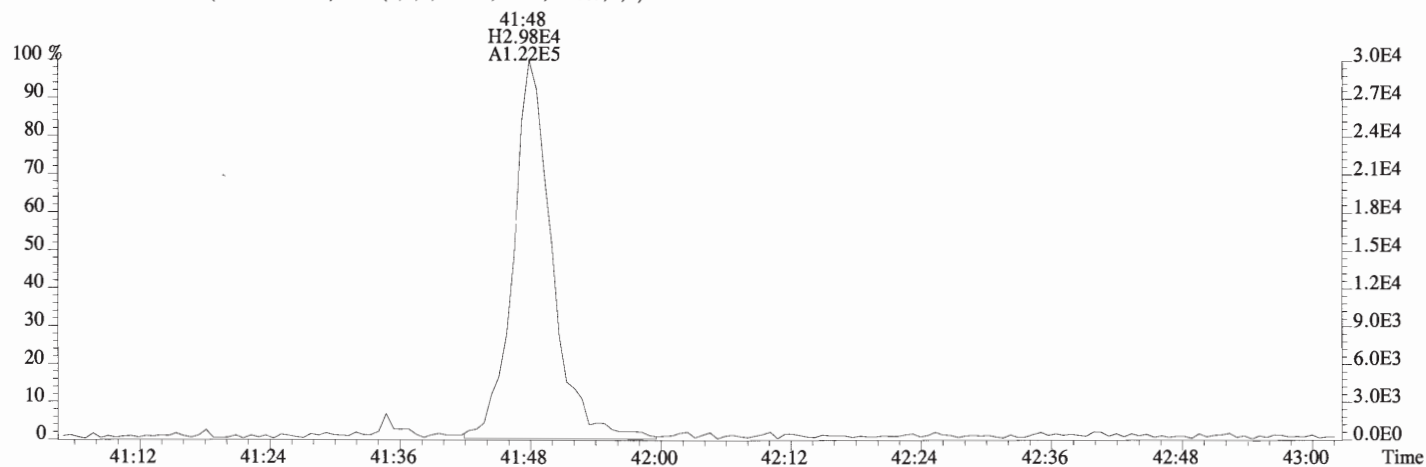
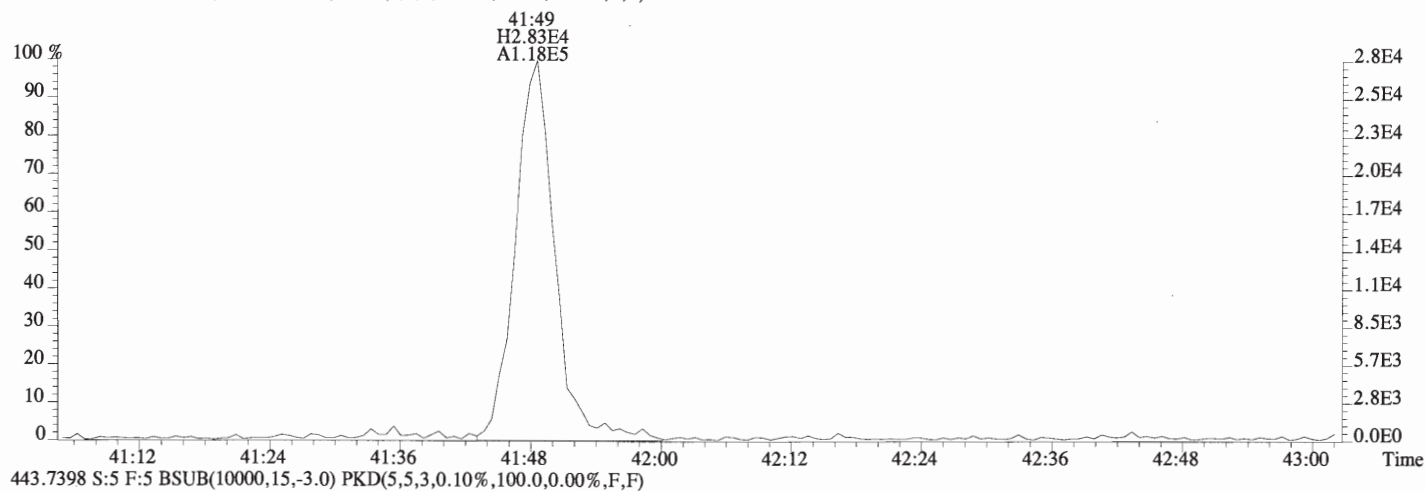
455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160712D1 #1-389 Acq:12-JUL-2016 19:35:02 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:1600835-01RE1 DU-1-15-A 11.14 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: DU-1-15-B
Lab ID: 1600835-02RE1

Filename: 160712D1 .S:6 Acq:12-JUL-16 20:23:34
GC Column ID: ZB-5MS ICAL: 1613VG7-4-7-16

wt/vol:10.002

ConCal: ST160712D1-1
EndCAL: NA

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	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Pac	DL	Name	Conc	EMPC	Qual	noise	DL
	2,3,7,8-TCDD	1.09e+04	0.66 y	1.13	26:26	1.001	0.18388		*	2.5	*	Total Tetra-Dioxins	1.64	1.99		*	*
	1,2,3,7,8-PeCDD	3.04e+04	0.63 y	0.96	31:10	1.000	0.70384		*	2.5	*	Total Penta-Dioxins	6.53	6.74		*	*
	1,2,3,4,7,8-HxCDD	3.19e+04	1.11 y	1.00	34:27	1.000	0.85484		*	2.5	*	Total Hexa-Dioxins	31.9	31.9		*	*
	1,2,3,6,7,8-HxCDD	6.26e+04	1.17 y	1.10	34:34	1.000	1.6092		*	2.5	*	Total Hepta-Dioxins	255	255		*	*
	1,2,3,7,8,9-HxCDD	5.36e+04	1.24 y	1.05	34:51	1.000	1.4583		*	2.5	*	Total Tetra-Furans	1.67	1.80		*	*
	1,2,3,4,6,7,8-HpCDD	1.32e+06	1.05 y	1.05	38:22	1.000	44.267		*	2.5	*	Total Penta-Furans	3.2031	3.4708		*	*
	OCDD	7.42e+06	0.89 y	0.96	41:34	1.000	357.85		*	2.5	*	Total Hexa-Furans	7.28	7.39		*	*
												Total Hepta-Furans	13.6	13.6		*	*
	2,3,7,8-TCDF	2.50e+04	0.71 y	1.12	25:35	1.000	0.27773		*	2.5	*						
	1,2,3,7,8-PeCDF	*	* n	1.01	Not F _{ij}	*	*	353	2.5	0.121							
	2,3,4,7,8-PeCDF	1.76e+04	1.18 n	0.90	30:54	1.001	0.26773		*	2.5	*						
	1,2,3,4,7,8-HxCDF	2.28e+04	1.26 y	1.16	33:35	1.000	0.38744		*	2.5	*						
	1,2,3,6,7,8-HxCDF	2.31e+04	1.06 y	1.16	33:42	1.000	0.38603		*	2.5	*						
	2,3,4,6,7,8-HxCDF	2.46e+04	1.14 y	1.23	34:18	1.000	0.44207		*	2.5	*						
	1,2,3,7,8,9-HxCDF	1.13e+04	1.17 y	1.13	35:15	1.001	0.22153		*	2.5	*						
	1,2,3,4,6,7,8-HpCDF	2.21e+05	1.02 y	1.44	37:00	1.001	4.7997		*	2.5	*						
	1,2,3,4,7,8,9-HpCDF	1.44e+04	0.92 y	1.31	38:55	1.000	0.36040		*	2.5	*						
	OCDF	3.78e+05	0.87 y	1.03	41:48	1.000	13.690		*	2.5	*						
IS	13C-2,3,7,8-TCDD	1.05e+07	0.80 y	1.01	26:25	1.024	183.02					Rec			Qual		
IS	13C-1,2,3,7,8-PeCDD	8.97e+06	0.63 y	1.10	31:10	1.208	143.29					91.5					
IS	13C-1,2,3,4,7,8-HxCDD	7.43e+06	1.26 y	0.72	34:26	1.014	179.94					71.7					
IS	13C-1,2,3,6,7,8-HxCDD	7.10e+06	1.28 y	0.73	34:33	1.017	170.29					90.0					
IS	13C-1,2,3,7,8,9-HxCDD	7.01e+06	1.26 y	0.70	34:50	1.025	174.39					85.2					
IS	13C-1,2,3,4,6,7,8-HpCDD	5.66e+06	1.05 y	0.66	38:22	1.129	148.59					87.2					
IS	13C-OCDD	8.62e+06	0.89 y	0.66	41:34	1.223	227.97					74.3					
IS	13C-2,3,7,8-TCDF	1.61e+07	0.79 y	0.90	25:35	0.992	190.53					57.0					
IS	13C-1,2,3,7,8-PeCDF	1.27e+07	1.60 y	0.98	29:56	1.161	138.43					95.3					
IS	13C-2,3,4,7,8-PeCDF	1.46e+07	1.56 y	1.15	30:53	1.197	136.43					69.2					
IS	13C-1,2,3,4,7,8-HxCDF	1.01e+07	0.51 y	1.01	33:34	0.988	174.58					68.2					
IS	13C-1,2,3,6,7,8-HxCDF	1.04e+07	0.52 y	1.10	33:42	0.992	164.91					87.3					
IS	13C-2,3,4,6,7,8-HxCDF	9.06e+06	0.52 y	0.95	34:17	1.009	166.06					82.5					
IS	13C-1,2,3,7,8,9-HxCDF	9.03e+06	0.52 y	0.83	35:14	1.037	190.42					83.0					
IS	13C-1,2,3,4,6,7,8-HpCDF	6.40e+06	0.43 y	0.70	36:59	1.088	159.78					95.2					
IS	13C-1,2,3,4,7,8,9-HpCDF	6.07e+06	0.43 y	0.72	38:55	1.145	147.18					79.9					
IS	13C-OCDF	1.07e+07	0.89 y	0.82	41:47	1.230	227.05					73.6					
C/Up	37Cl-2,3,7,8-TCDD	4.46e+06		1.14	26:26	1.025	69.139					56.8					
RS/RT	13C-1,2,3,4-TCDD	1.13e+07	0.78 y	1.00	25:47	*	199.97					86.4					
RS	13C-1,2,3,4-TCDF	1.87e+07	0.81 y	1.00	24:12	*	199.97					Integrations					
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.15e+07	0.52 y	1.00	33:59	*	199.97					by					
												Analyst: DB					
												Analyst: [Signature]					
												Date: 7/13/16					
												Date: 7/15/16					

Totals class: TCDD EMPC

Entry #: 19

Run: 11 File: 160712D1 S: 6 I: 1 F: 1
Acquired: 12-JUL-16 20:23:34 Processed: 13-JUL-16 12:06:14

Total Concentration: 1.9944

Unnamed Concentration: 1.811

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
22:38	1.379e+04	1.831e+04	0.75 y	3.210e+04	0.54083
23:03	6.234e+03	8.081e+03	0.77 y	1.431e+04	0.24119
23:32	6.254e+03	6.293e+03	0.99 n	1.114e+04	0.18768
24:21	7.145e+03	8.071e+03	0.89 y	1.522e+04	0.25637
24:35	5.957e+03	7.826e+03	0.76 y	1.378e+04	0.23222
24:48	7.626e+03	5.583e+03	1.37 n	9.882e+03	0.16651
25:47	5.086e+03	5.937e+03	0.86 y	1.102e+04	0.18572
26:26	4.355e+03	6.559e+03	0.66 y	1.091e+04	0.18388 2,3,7,8-TCDD

Totals class: PeCDD EMPC

Entry #: 21

Run: 11 File: 160712D1 S: 6 I: 1 F: 2
Acquired: 12-JUL-16 20:23:34 Processed: 13-JUL-16 12:06:14

Total Concentration: 6.7424

Unnamed Concentration: 6.039

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:01	2.624e+04	4.581e+04	0.57 y	7.204e+04	1.6699
29:30	1.409e+04	2.160e+04	0.65 y	3.569e+04	0.82728
29:58	1.513e+04	2.635e+04	0.57 y	4.148e+04	0.96145
30:08	1.050e+04	1.489e+04	0.71 y	2.539e+04	0.58847
30:13	1.060e+04	1.496e+04	0.71 y	2.556e+04	0.59235
30:26	1.554e+04	2.689e+04	0.58 y	4.242e+04	0.98333
30:45	5.575e+03	5.526e+03	1.01 n	9.007e+03	0.20878
31:10	1.172e+04	1.864e+04	0.63 y	3.037e+04	0.70384 1,2,3,7,8-PeCDD
31:14	3.183e+03	5.746e+03	0.55 y	8.929e+03	0.20696

Totals class: HxCDD EMPC

Entry #: 23

Run: 11 File: 160712D1 S: 6 I: 1 F: 3
Acquired: 12-JUL-16 20:23:34 Processed: 13-JUL-16 12:06:14

Total Concentration: 31.900

Unnamed Concentration: 27.978

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:57	2.438e+05	1.936e+05	1.26 y	4.374e+05	11.615
33:30	4.848e+04	3.968e+04	1.22 y	8.816e+04	2.3409
33:45	2.150e+05	1.676e+05	1.28 y	3.826e+05	10.160
33:53	6.671e+04	5.044e+04	1.32 y	1.172e+05	3.1109
34:27	1.676e+04	1.510e+04	1.11 y	3.185e+04	0.85484 1,2,3,4,7,8-HxCDD
34:34	3.370e+04	2.886e+04	1.17 y	6.256e+04	1.6092 1,2,3,6,7,8-HxCDD
34:45	1.637e+04	1.192e+04	1.37 y	2.829e+04	0.75116
34:51	2.964e+04	2.398e+04	1.24 y	5.362e+04	1.4583 1,2,3,7,8,9-HxCDD

Totals class: HPCDD EMPC

Entry #: 25

Run: 11 File: 160712D1 S: 6 I: 1 F: 4
Acquired: 12-JUL-16 20:23:34 Processed: 13-JUL-16 12:06:14

Total Concentration: 254.64

Unnamed Concentration: 210.371

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:23	3.141e+06	3.113e+06	1.01 y	6.254e+06	210.37
38:22	6.738e+05	6.422e+05	1.05 y	1.316e+06	44.267

1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC Entry #: 27

Run: 11 File: 160712D1 S: 6 I: 1 F: 1

Acquired: 12-JUL-16 20:23:34 Processed: 13-JUL-16 12:06:14

Total Concentration: 1.8004 Unnamed Concentration: 1.523

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
21:37	2.253e+04	3.083e+04	0.73 y	5.336e+04	0.59393
24:09	1.199e+04	1.572e+04	0.76 y	2.771e+04	0.30848
24:43	6.177e+03	7.402e+03	0.83 y	1.358e+04	0.15115
25:35	1.035e+04	1.461e+04	0.71 y	2.495e+04	0.27773
25:57	1.416e+04	1.602e+04	0.88 y	3.018e+04	0.33594
27:28	1.075e+04	6.757e+03	1.59 n	1.196e+04	0.13314

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 11 File: 160712D1 S: 6 I: 1 F: 1
Acquired: 12-JUL-16 20:23:34 Processed: 13-JUL-16 12:06:14

Total Concentration: 1.5090 Unnamed Concentration: 1.509

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:27	5.786e+04	3.999e+04	1.45 y	9.785e+04	1.5090

Totals class: PeCDF EMPC

Entry #: 31

Run: 11

File: 160712D1

S: 6 I: 1 F: 2

Acquired: 12-JUL-16 20:23:34

Processed: 13-JUL-16 12:06:14

Total Concentration: 1.9618

Unnamed Concentration: 1.694

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28:51	1.375e+04	7.731e+03	1.78 y	2.148e+04	0.33127
28:59	3.205e+04	2.319e+04	1.38 y	5.524e+04	0.85199
29:34	1.356e+04	8.355e+03	1.62 y	2.192e+04	0.33805
30:12	6.623e+03	4.578e+03	1.45 y	1.120e+04	0.17275
30:54	1.070e+04	9.038e+03	1.18 n	1.761e+04	0.26773
					2,3,4,7,8-PeCDF

Totals class: HxCDF EMPC

Entry #: 33

Run: 11 File: 160712D1 S: 6 I: 1 F: 3
Acquired: 12-JUL-16 20:23:34 Processed: 13-JUL-16 12:06:14

Total Concentration: 7.3867

Unnamed Concentration: 5.950

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:25	2.650e+04	2.205e+04	1.20 y	4.855e+04	0.86001
32:35	7.944e+04	6.573e+04	1.21 y	1.452e+05	2.5716
32:56	5.378e+03	4.739e+03	1.13 y	1.012e+04	0.17922
33:07	6.870e+04	5.703e+04	1.20 y	1.257e+05	2.2273
33:29	3.484e+03	4.437e+03	0.79 n	6.294e+03	0.11150
33:35	1.272e+04	1.012e+04	1.26 y	2.284e+04	0.38744
33:42	1.189e+04	1.126e+04	1.06 y	2.315e+04	0.38603
34:18	1.310e+04	1.145e+04	1.14 y	2.455e+04	0.44207
35:15	6.100e+03	5.230e+03	1.17 y	1.133e+04	0.22153

Totals class: HpCDF EMPC

Entry #: 35

Run: 11 File: 160712D1 S: 6 I: 1 F: 4

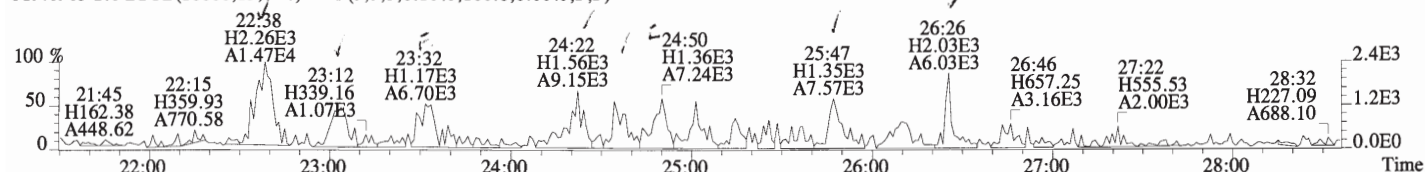
Acquired: 12-JUL-16 20:23:34 Processed: 13-JUL-16 12:06:14

Total Concentration: 13.629

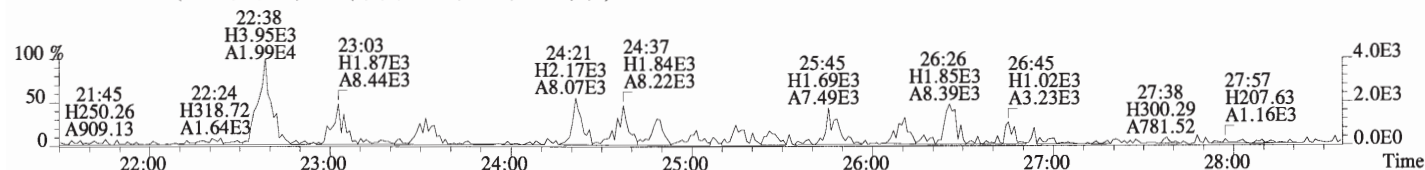
Unnamed Concentration: 8.469

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name	
37:00	1.119e+05	1.093e+05	1.02 y	2.212e+05	4.7997	1,2,3,4,6,7,8-HpCDF
37:38	1.853e+05	1.779e+05	1.04 y	3.632e+05	8.4692	
38:55	6.893e+03	7.478e+03	0.92 y	1.437e+04	0.36040	1,2,3,4,7,8,9-HpCDF

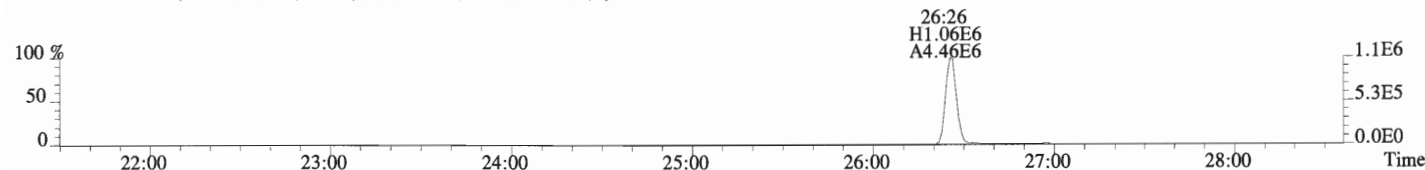
File:160712D1 #1-551 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



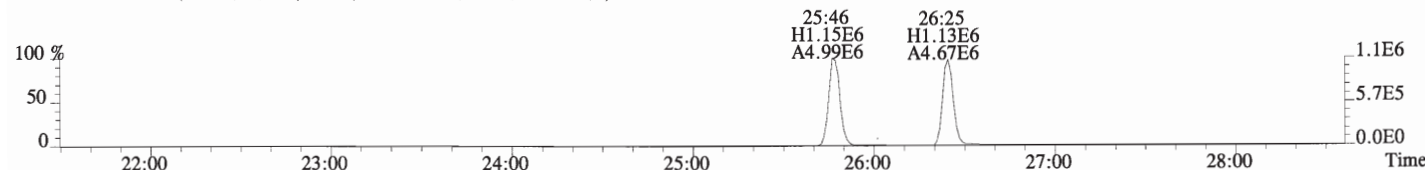
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



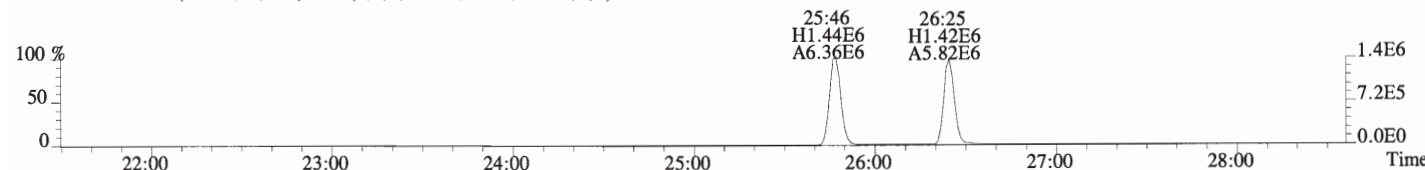
327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



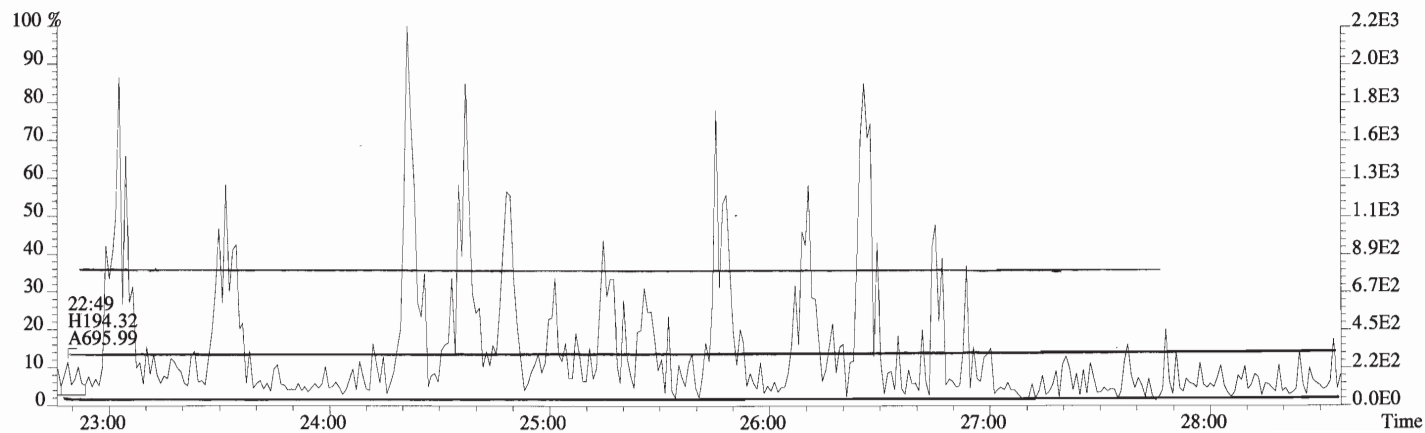
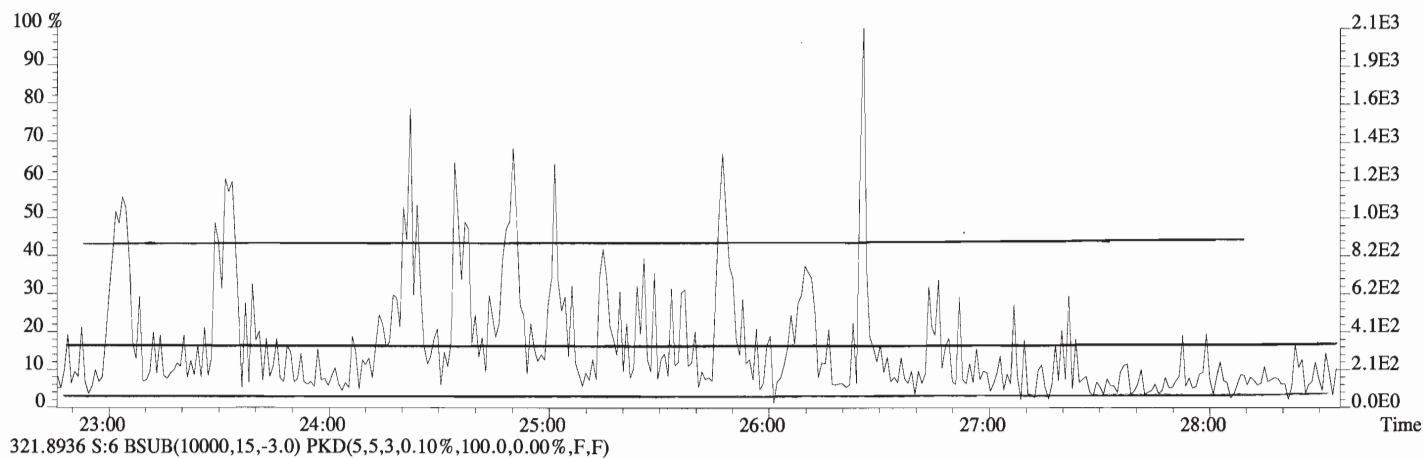
331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



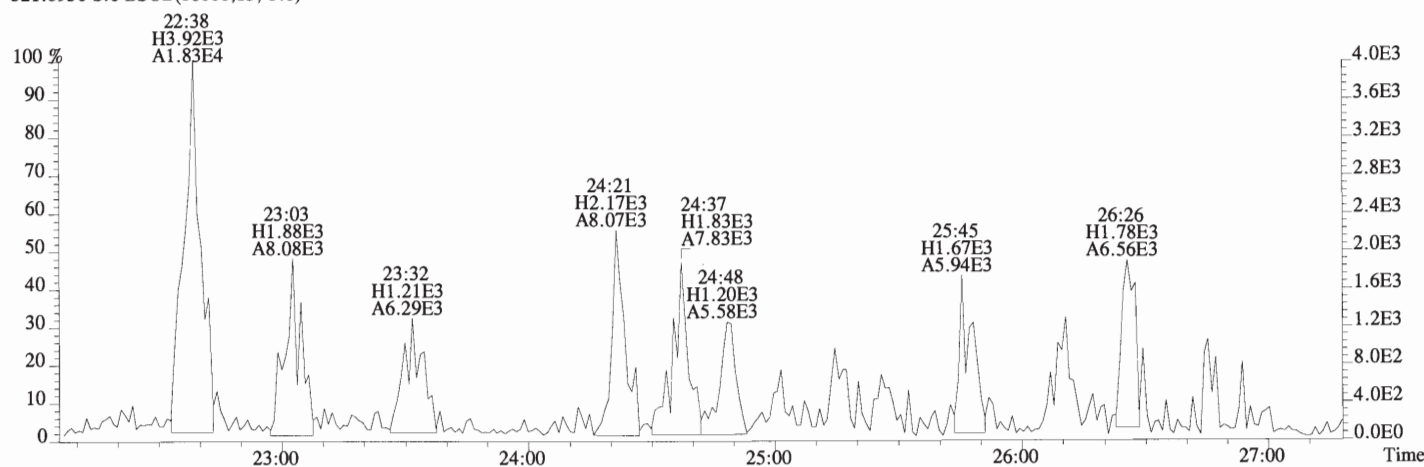
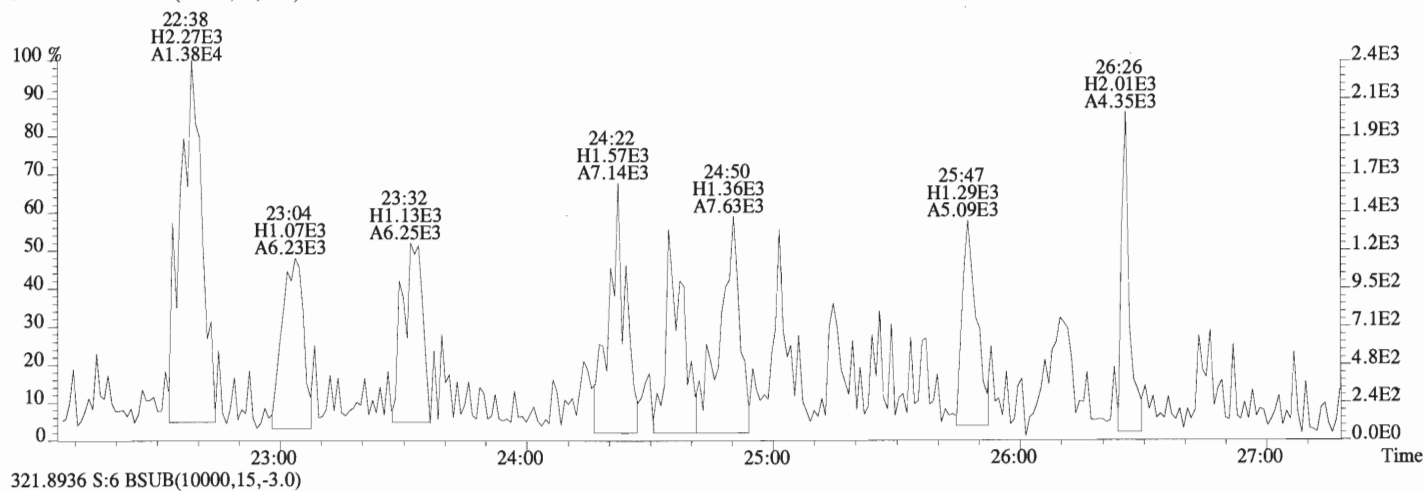
333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



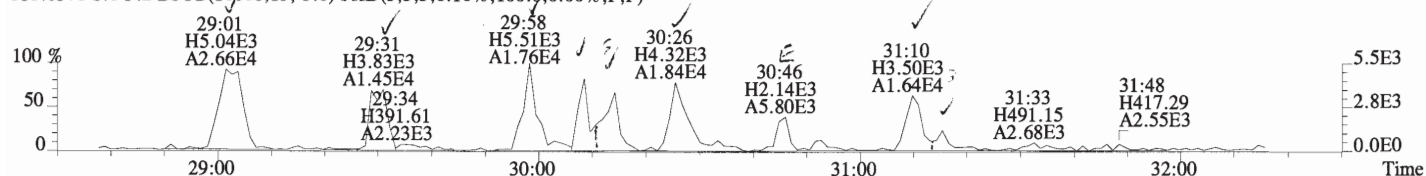
File:160712D1 #1-551 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



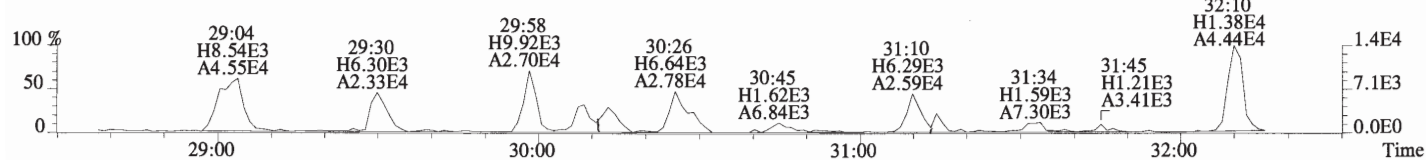
File:160712D1 #1-551 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 319.8965 S:6 BSUB(10000,15,-3.0)



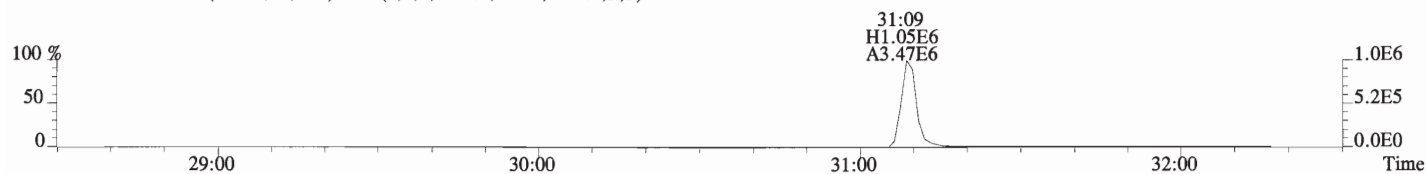
File:160712D1 #1-193 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



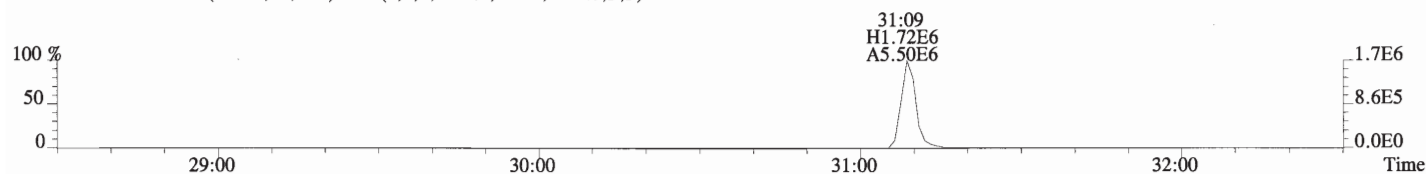
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



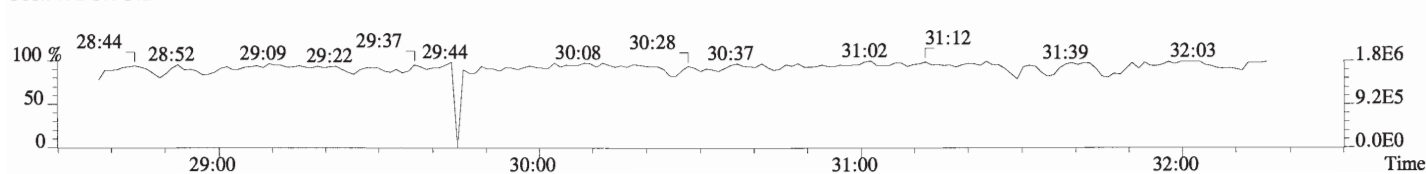
365.8978 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



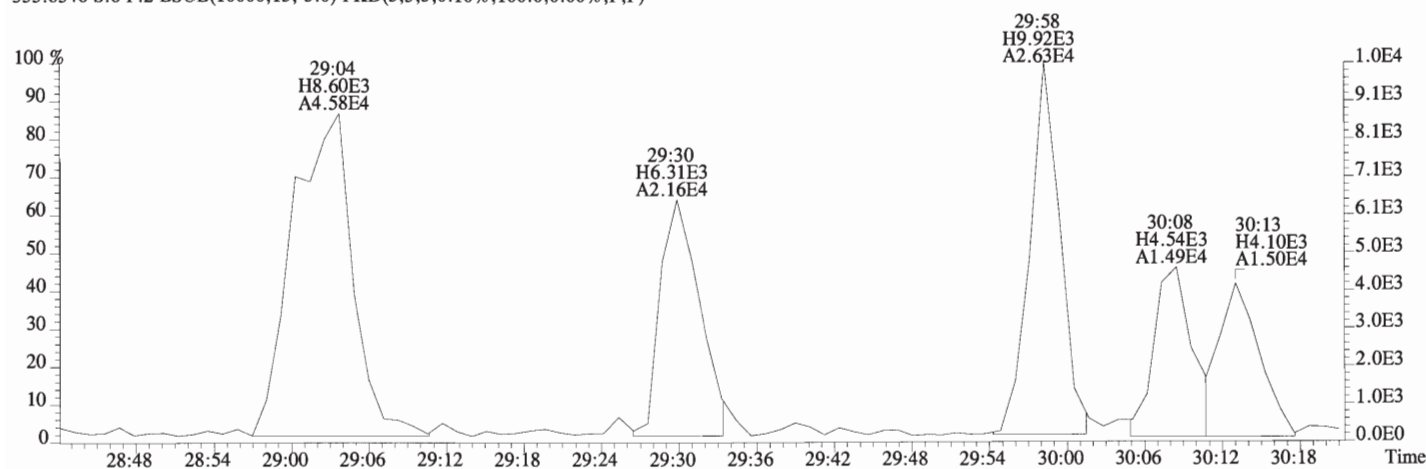
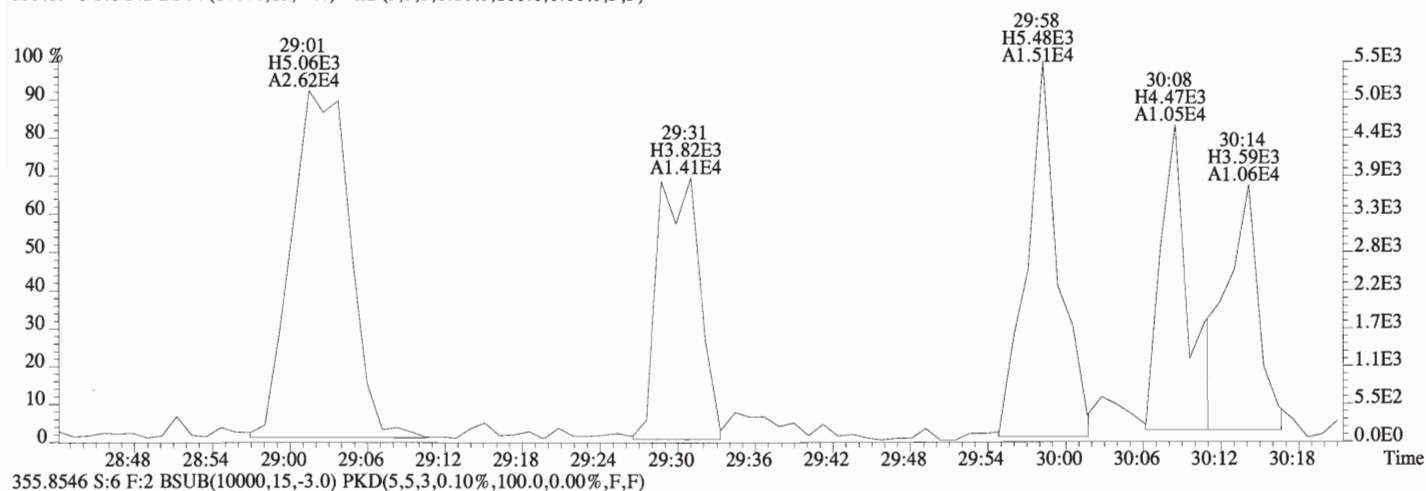
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



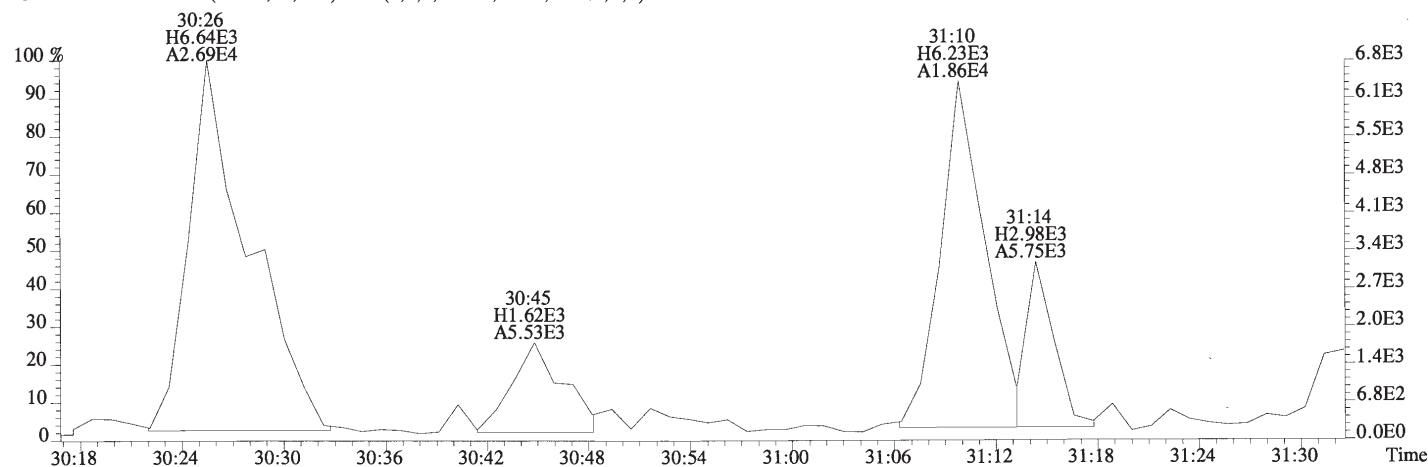
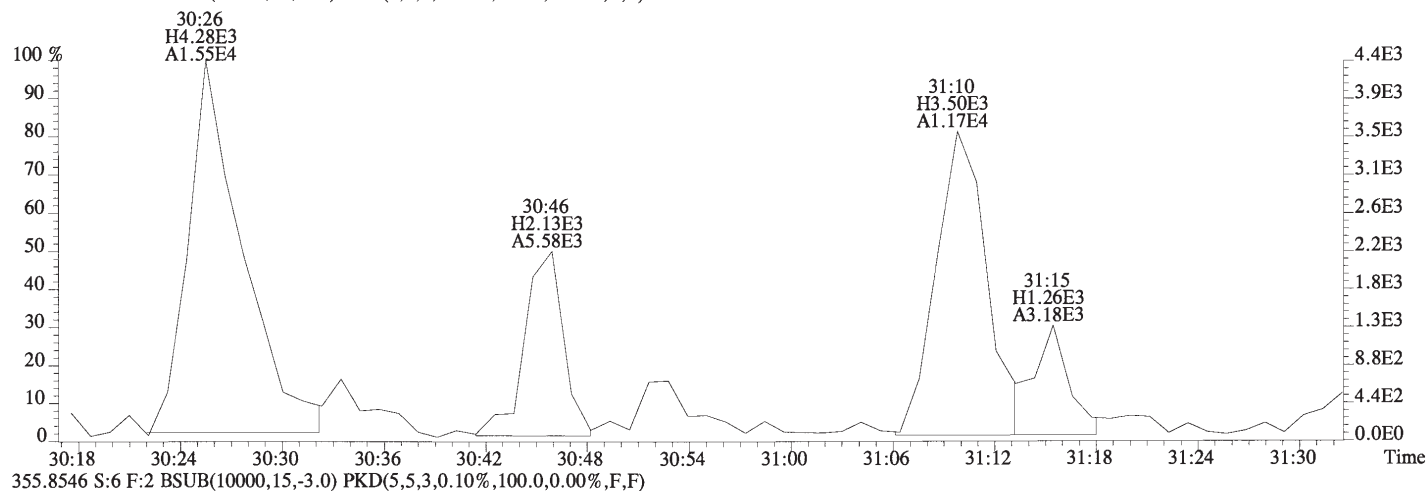
366.9792 S:6 F:2



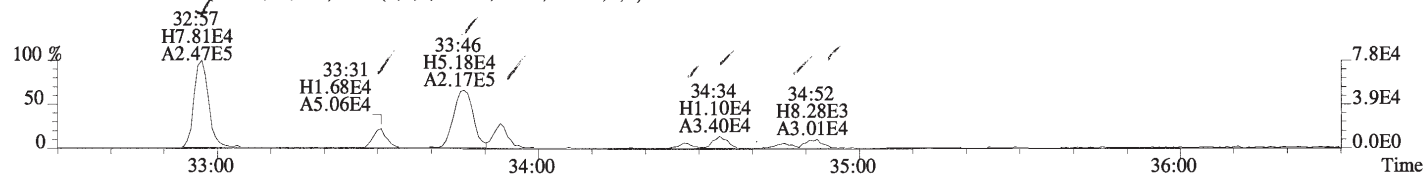
File:160712D1 #1-193 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



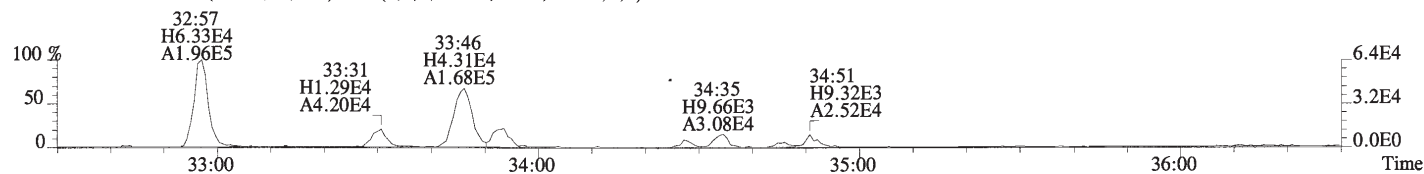
File:160712D1 #1-193 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



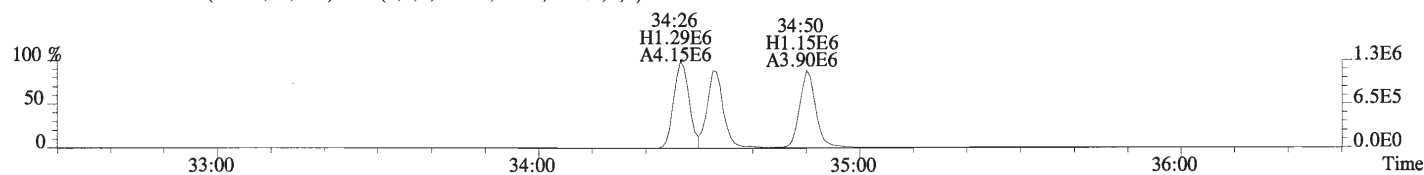
File:160712D1 #1-407 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text: Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



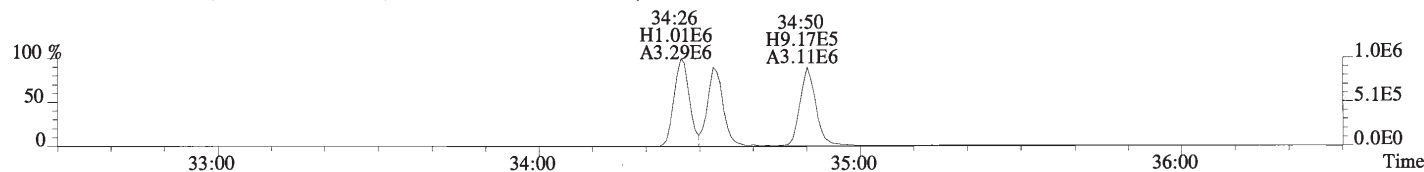
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



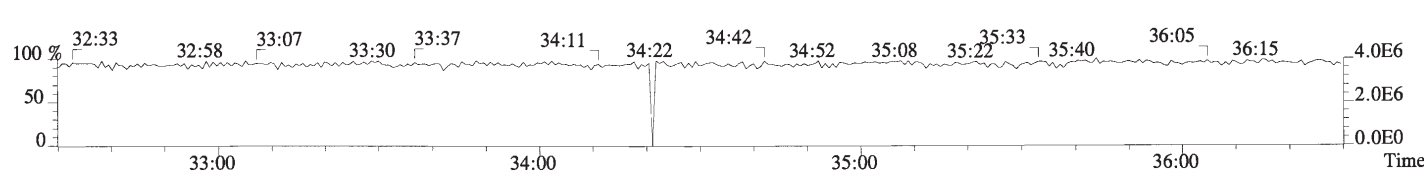
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



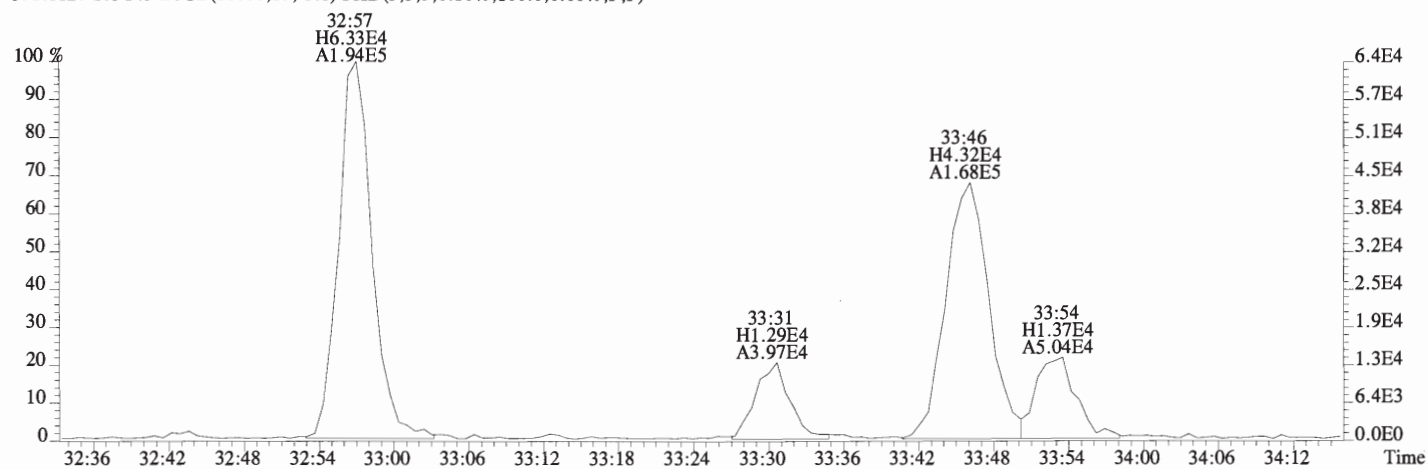
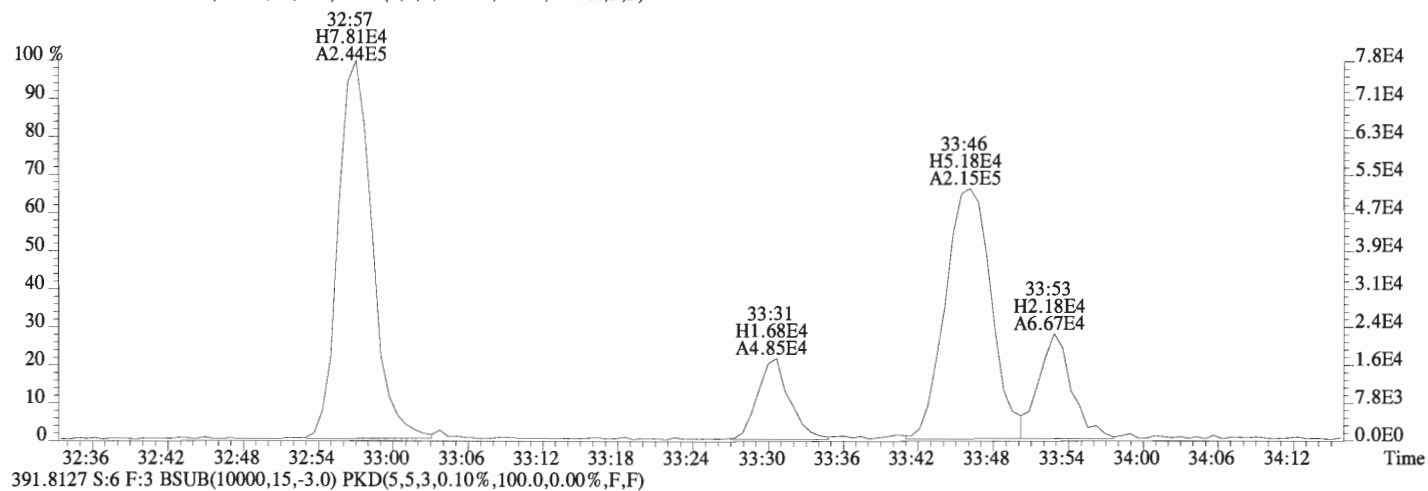
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



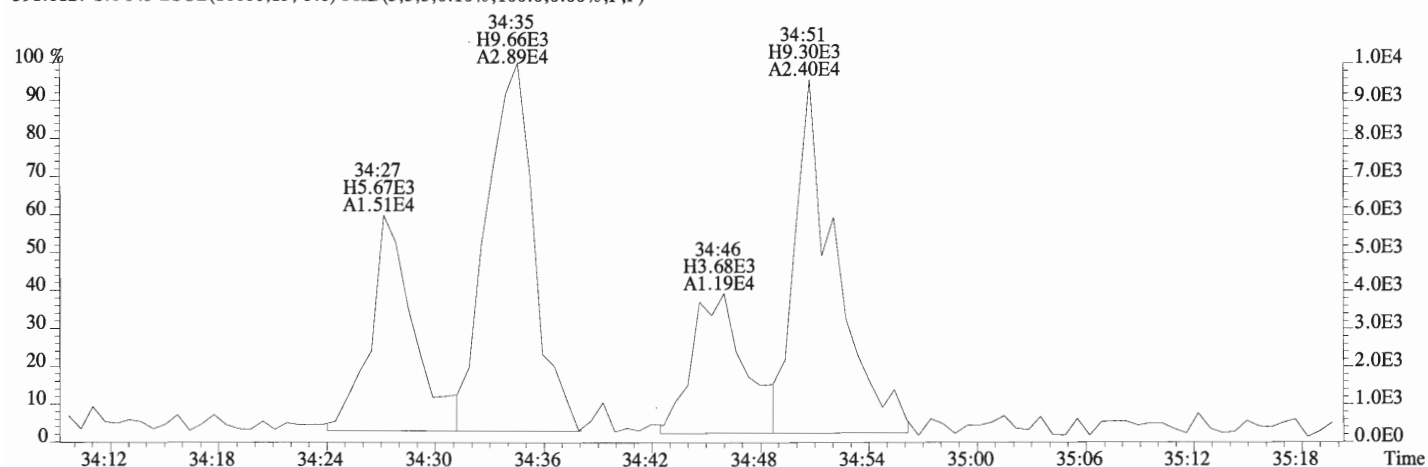
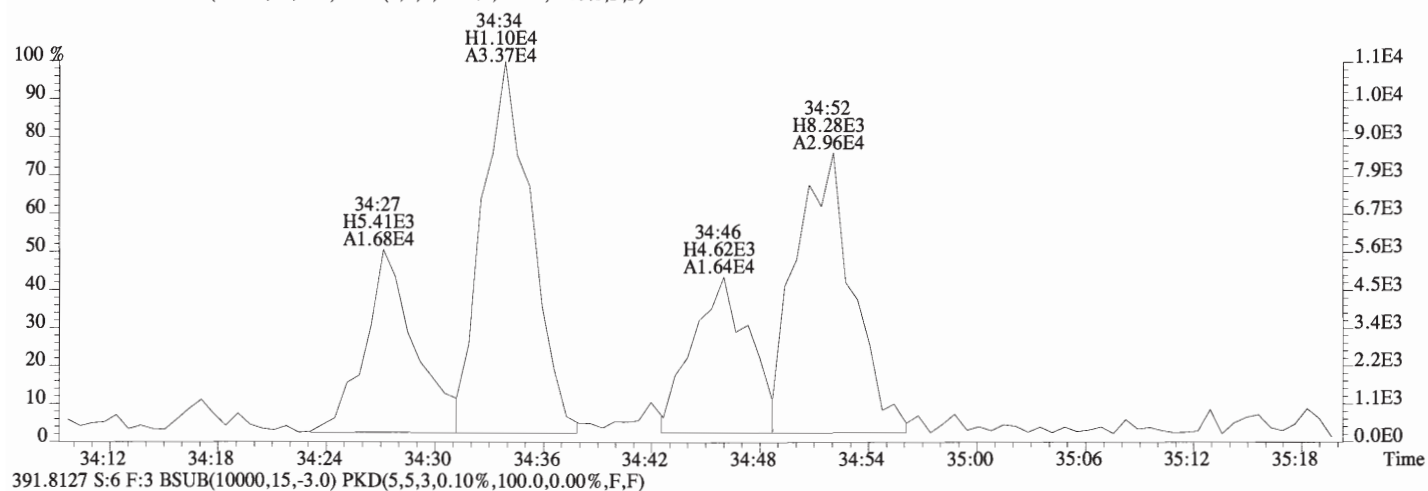
392.9760 S:6 F:3



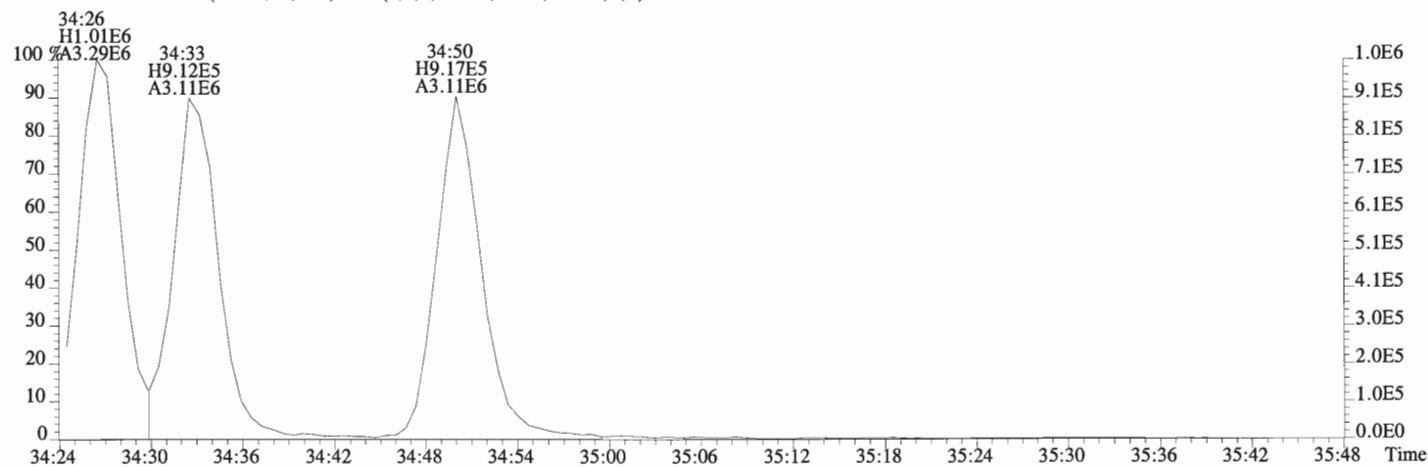
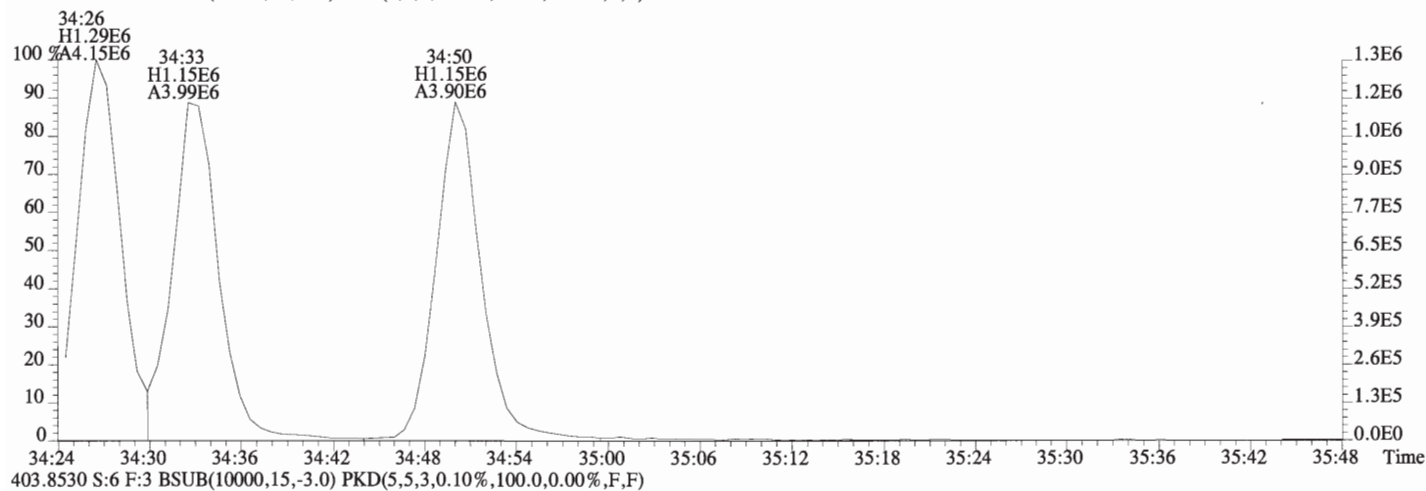
File:160712D1 #1-407 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



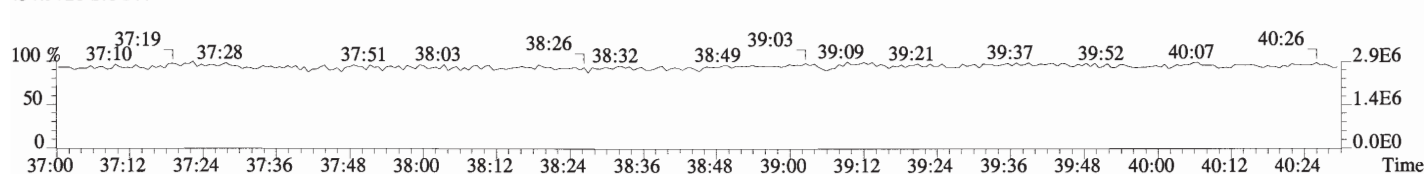
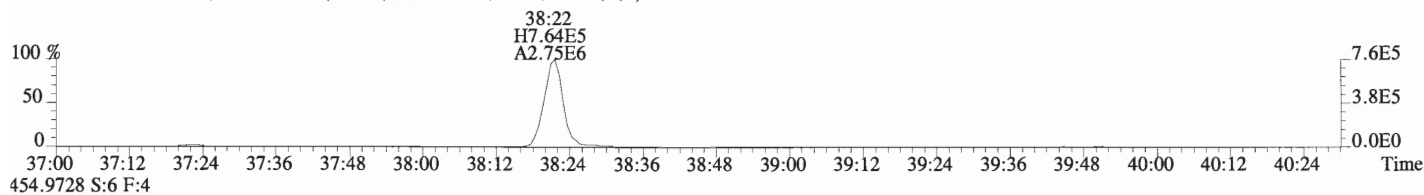
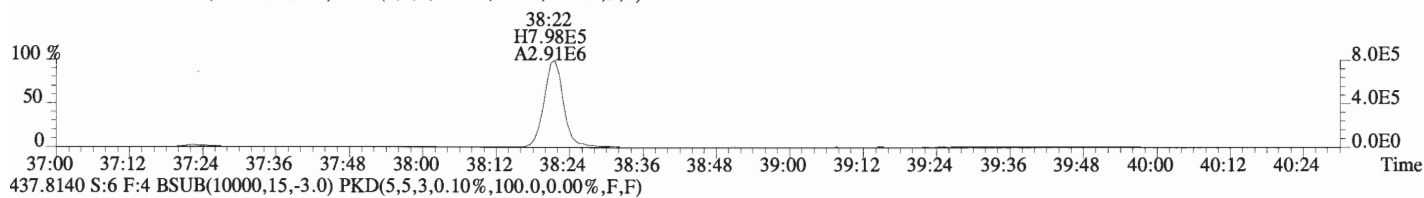
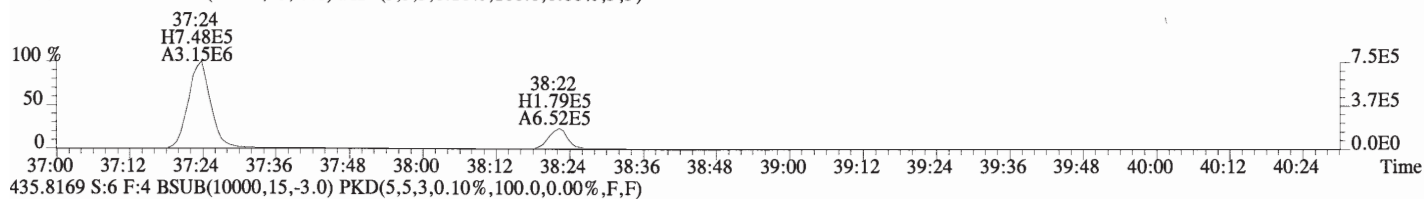
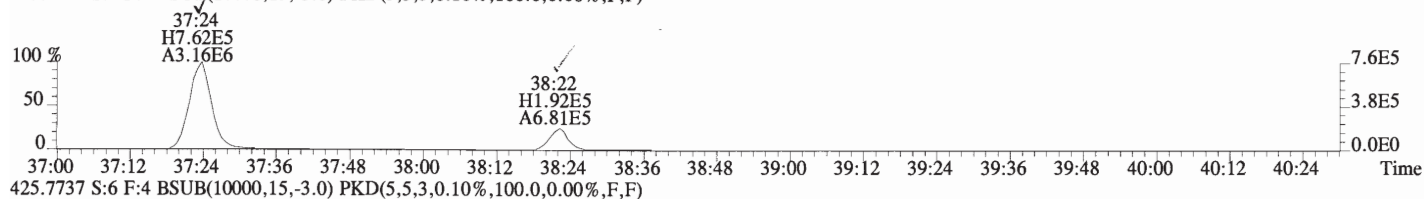
File:160712D1 #1-407 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



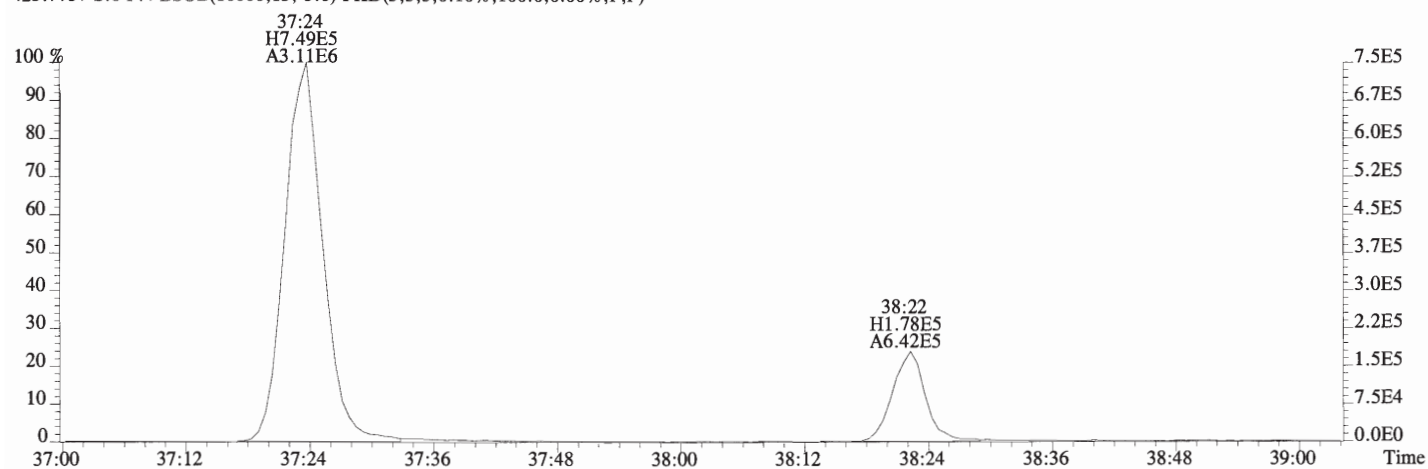
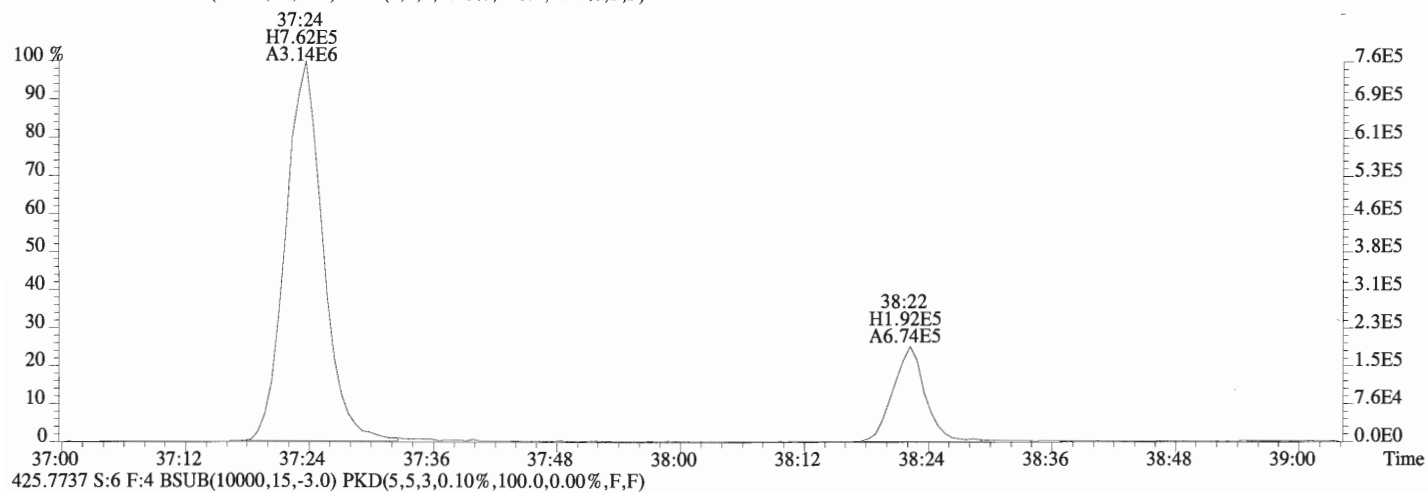
File:160712D1 #1-407 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



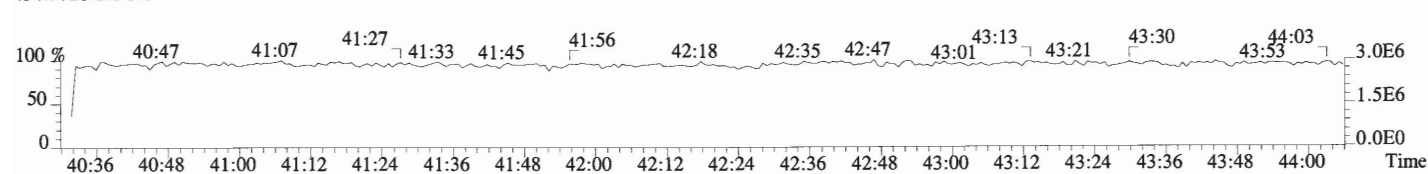
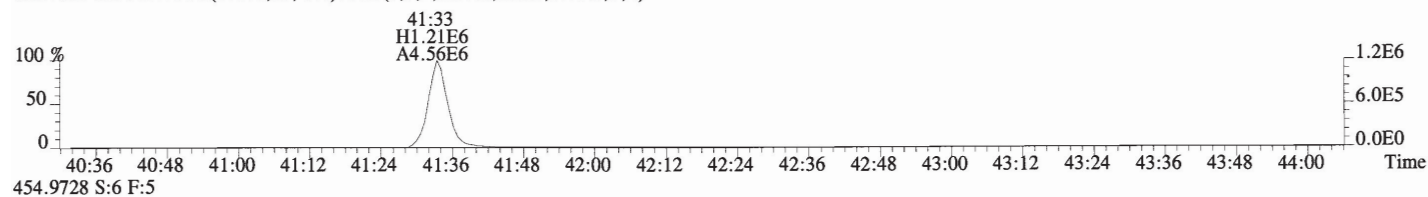
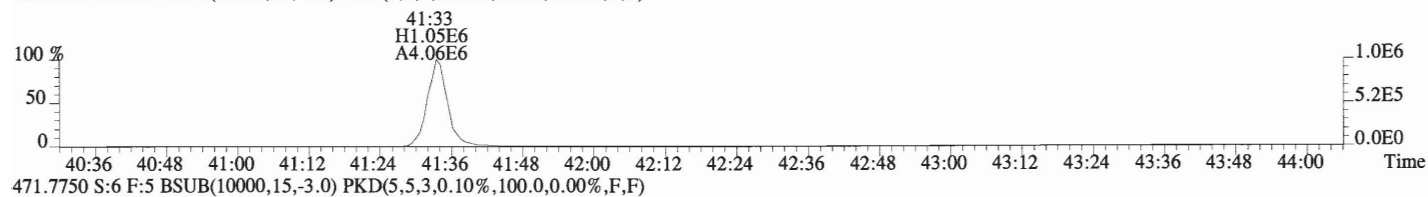
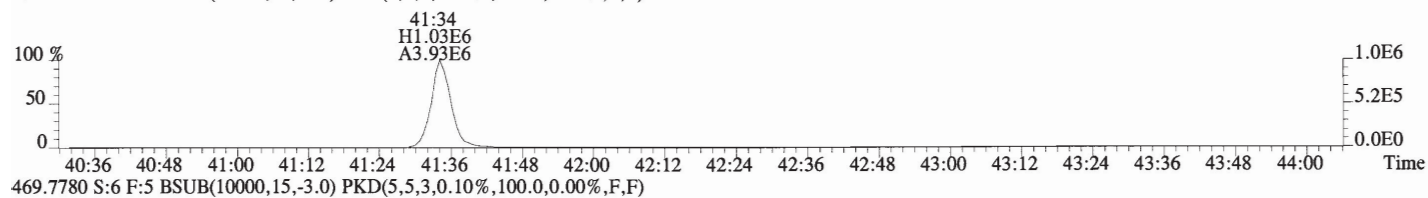
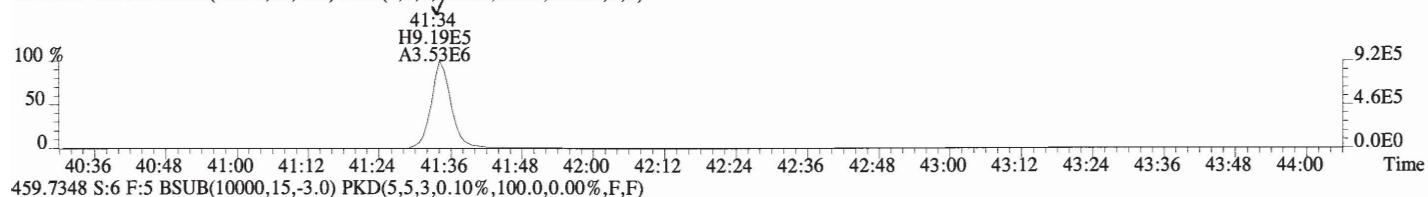
File:160712D1 #1-325 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



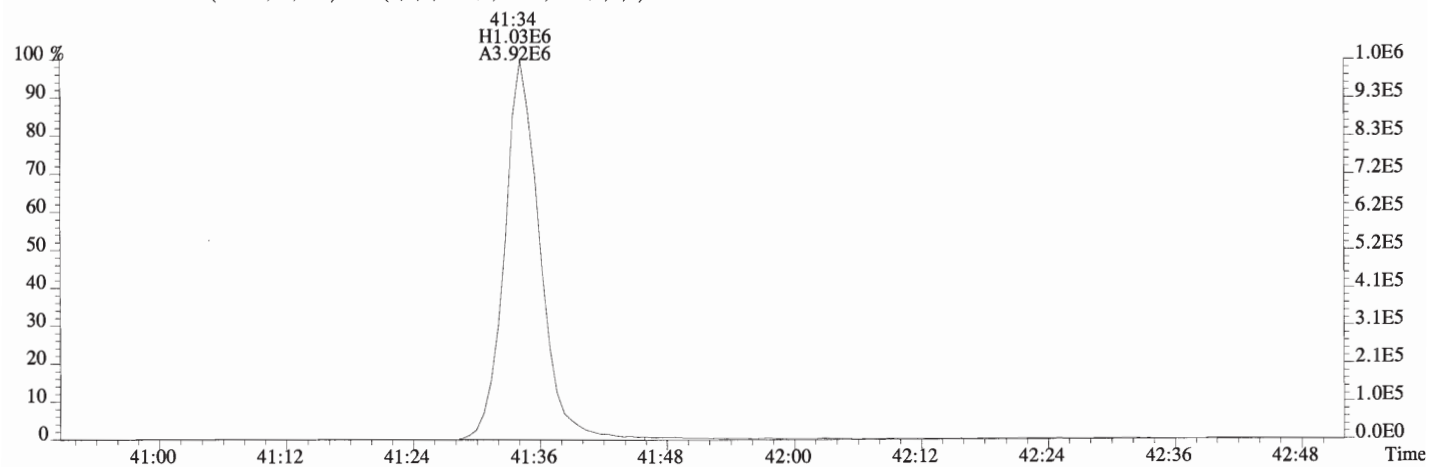
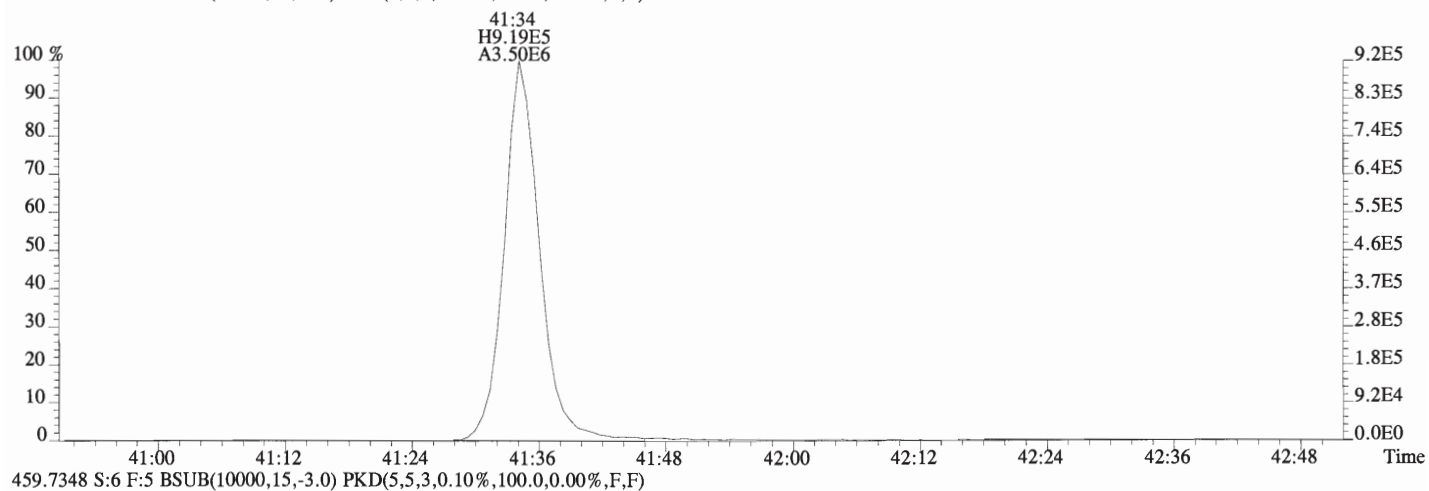
File:160712D1 #1-325 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



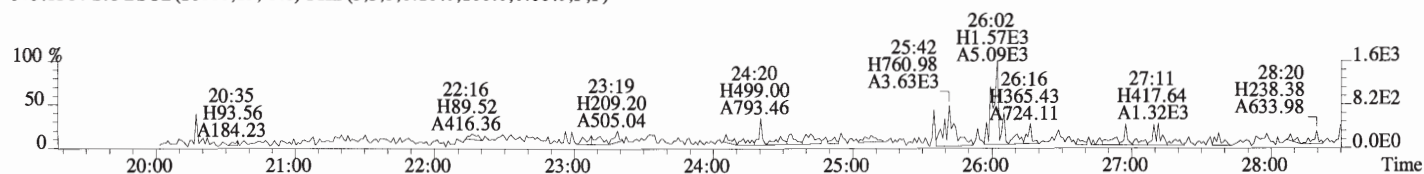
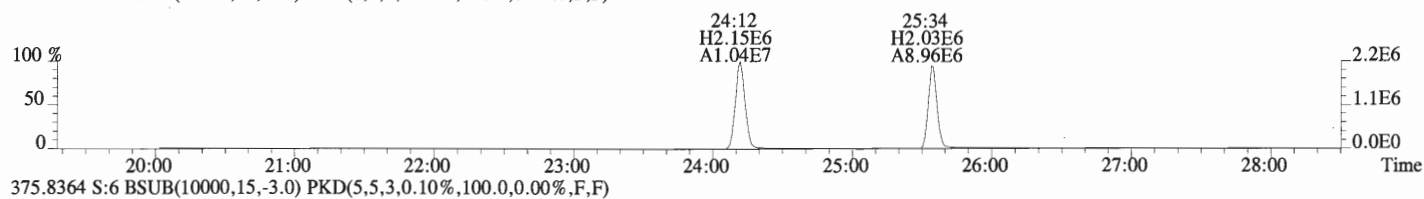
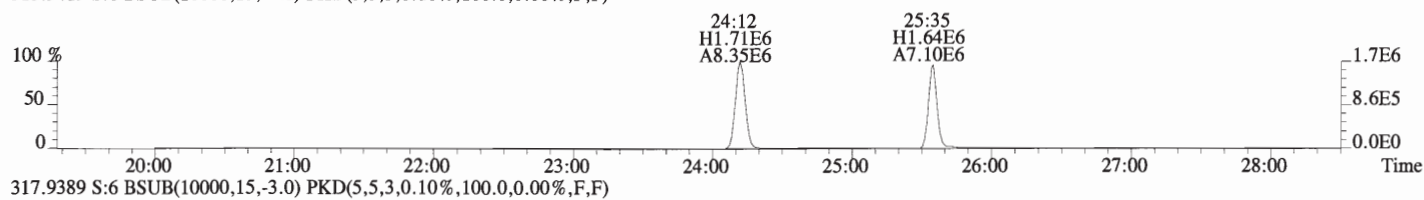
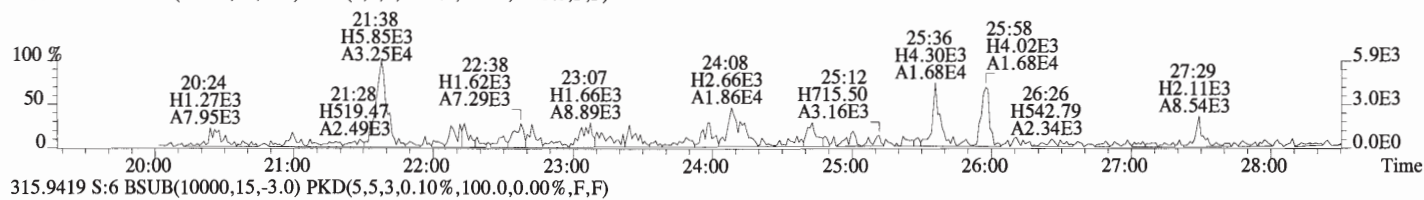
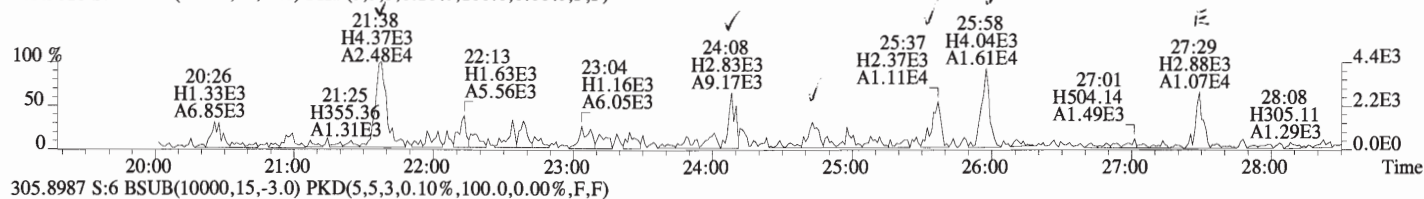
File:160712D1 #1-389 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



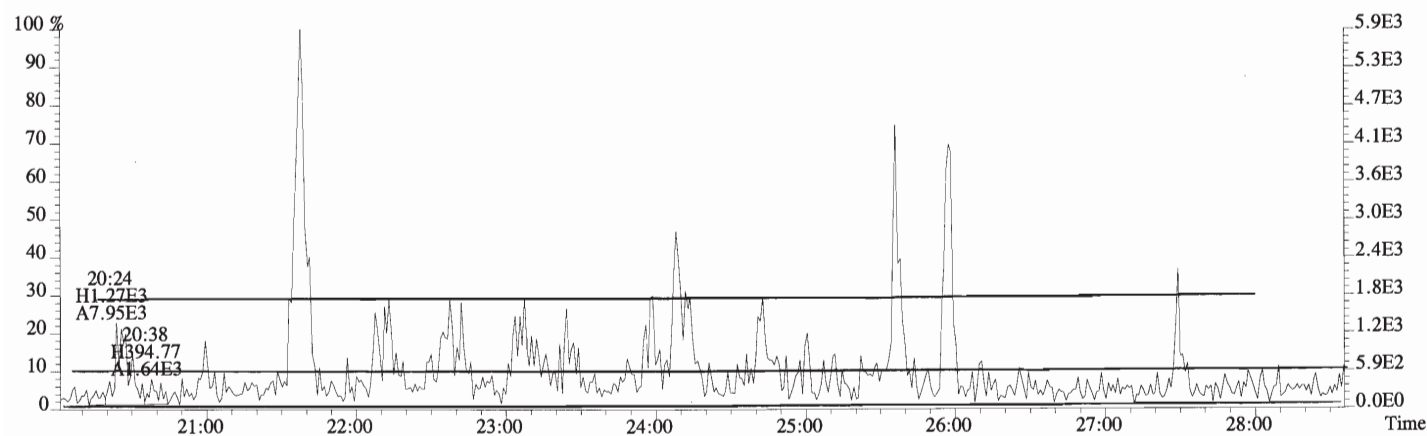
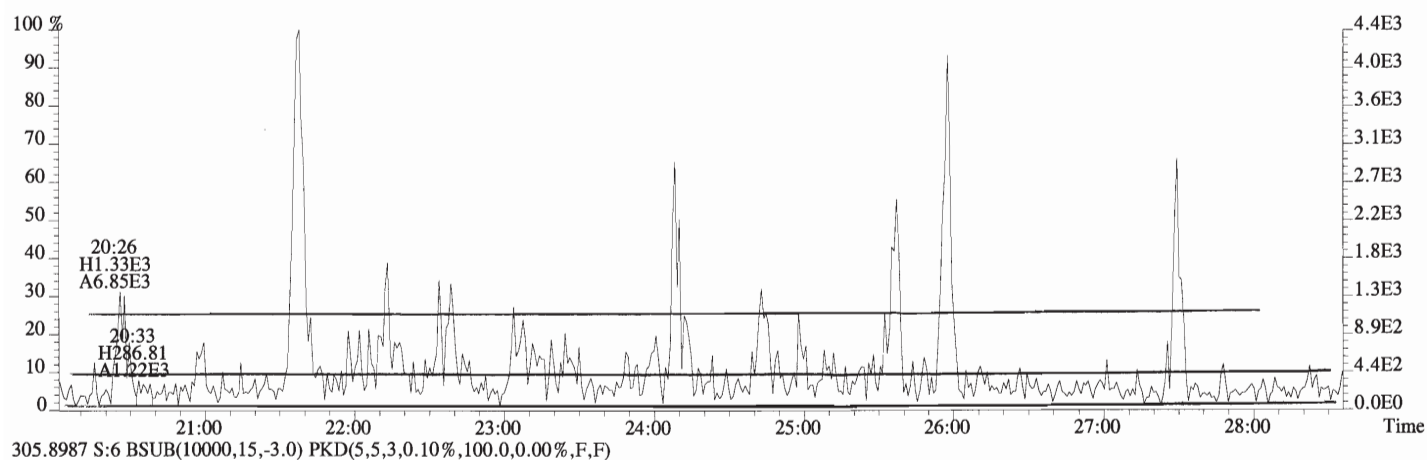
File:160712D1 #1-389 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



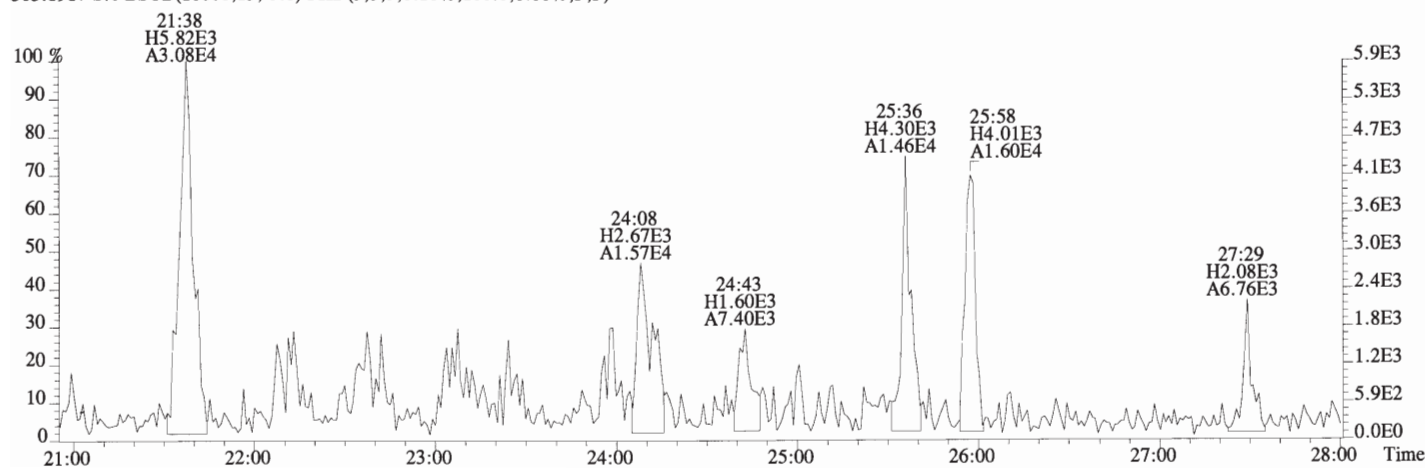
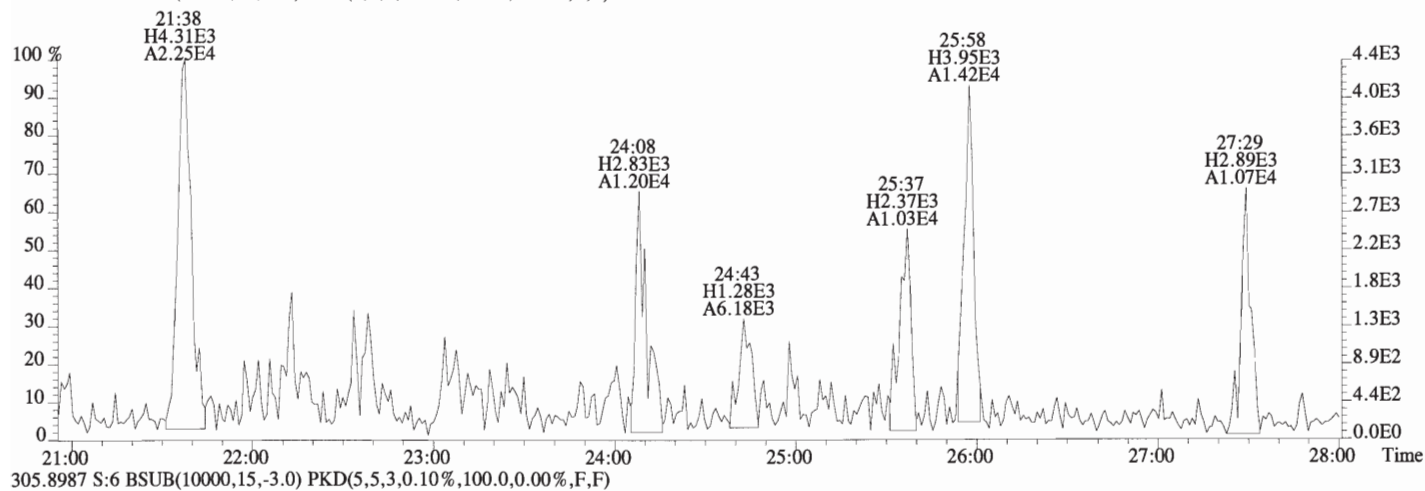
File:160712D1 #1-551 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text: Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



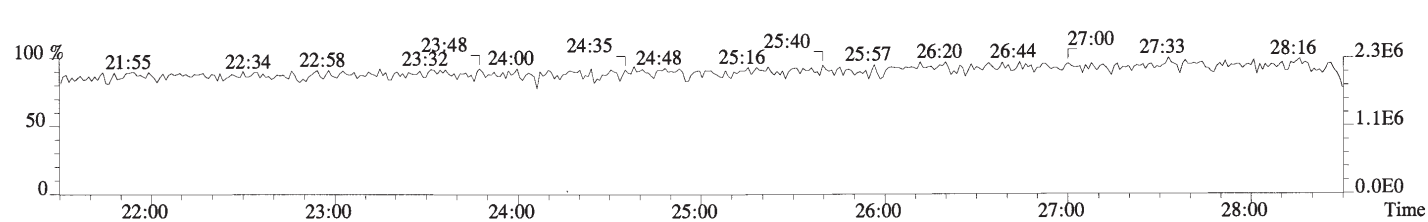
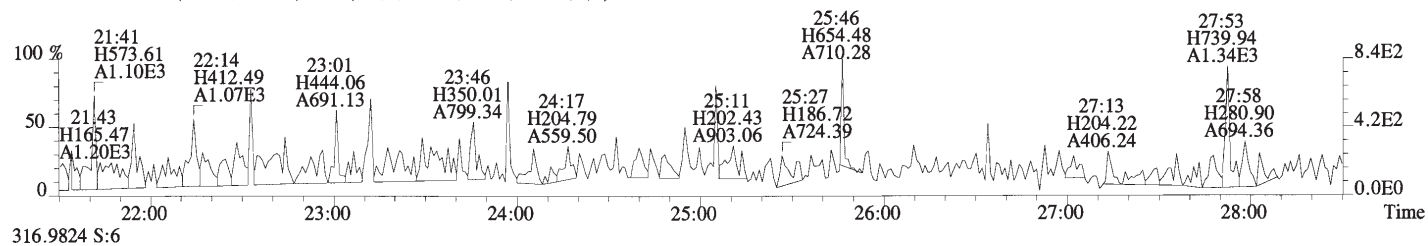
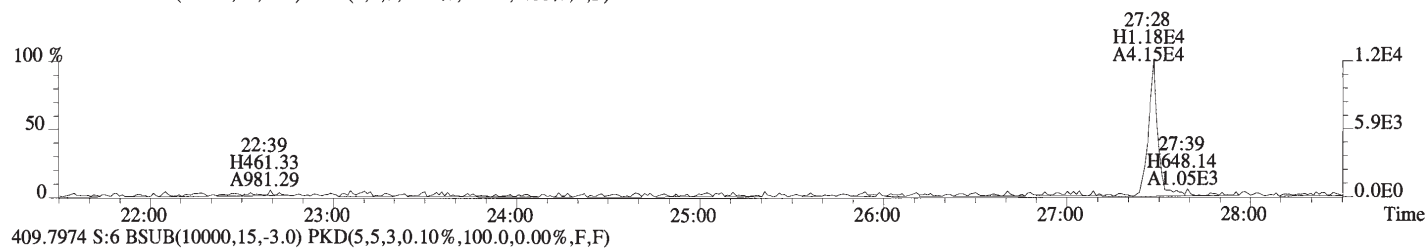
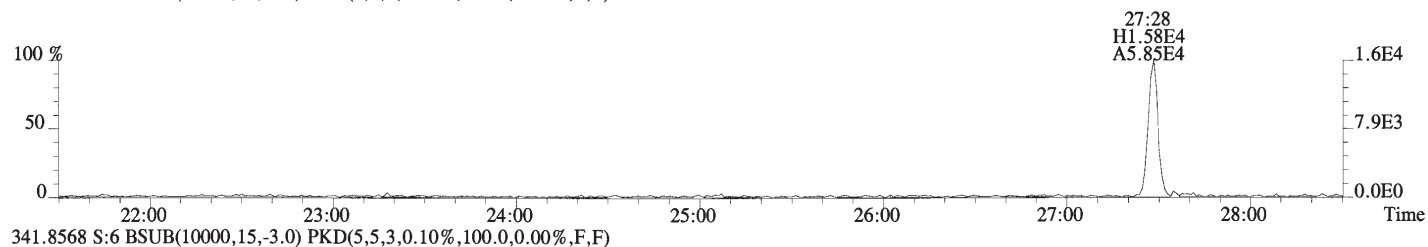
File:160712D1 #1-551 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



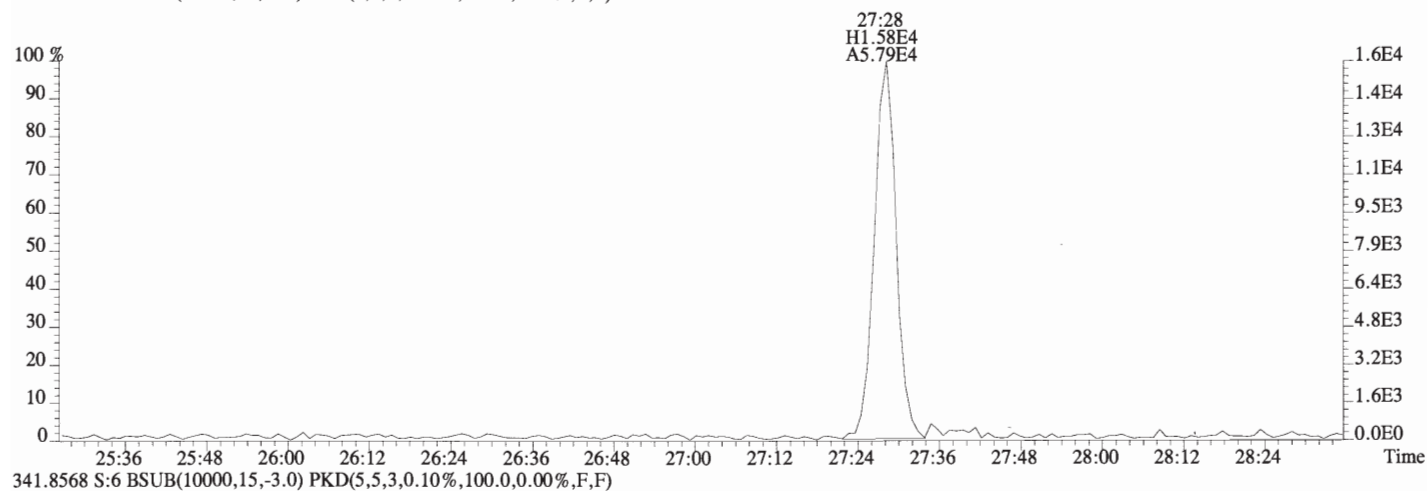
File:160712D1 #1-551 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



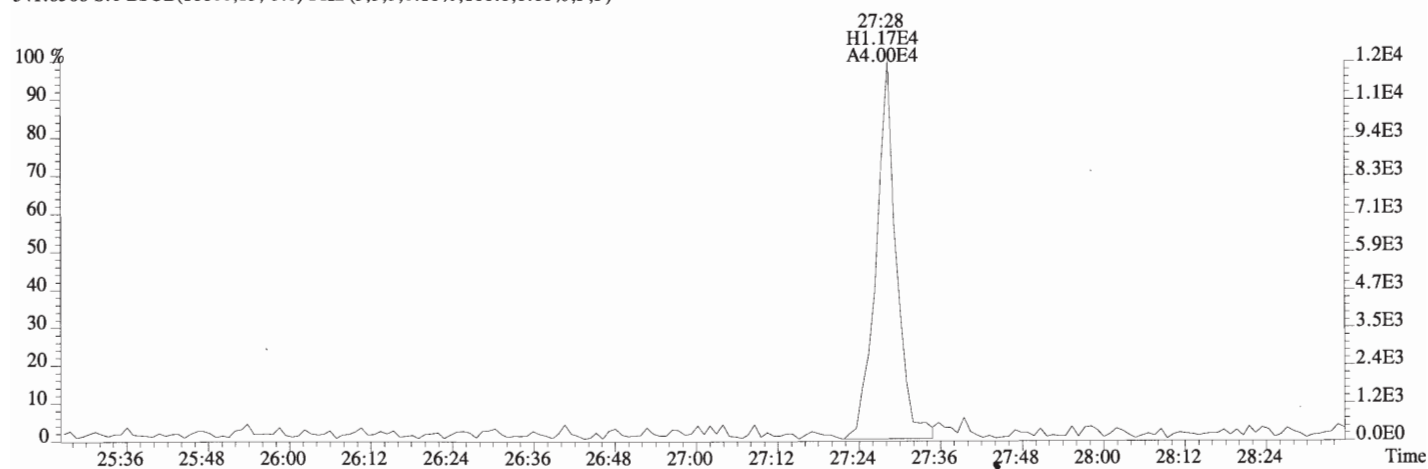
File:160712D1 #1-551 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



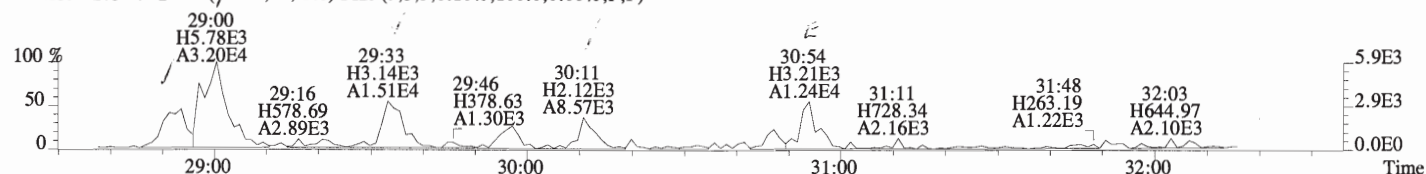
File:160712D1 #1-551 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



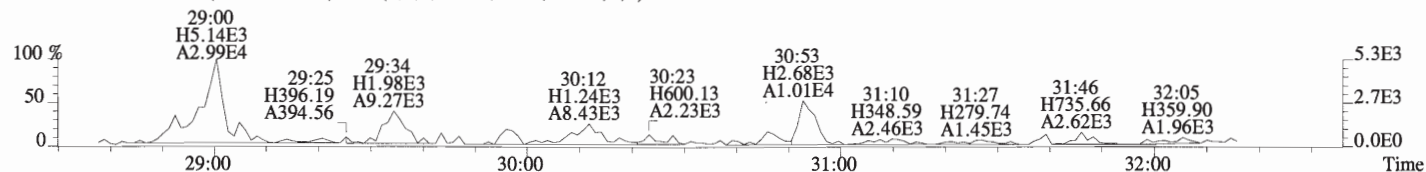
341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



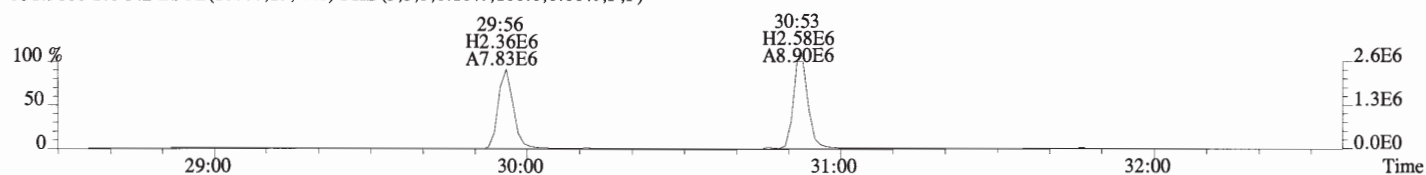
File:160712D1 #1-193 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



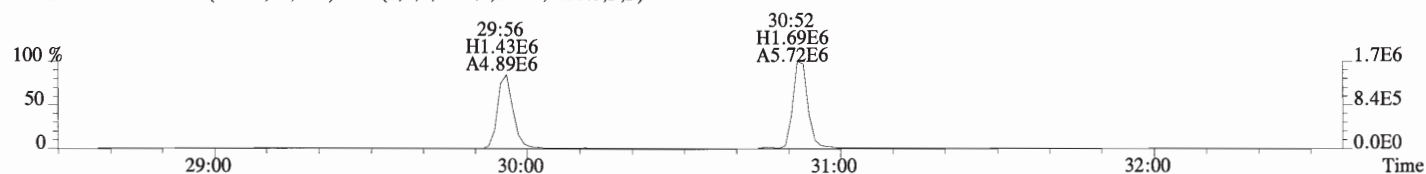
341.8568 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



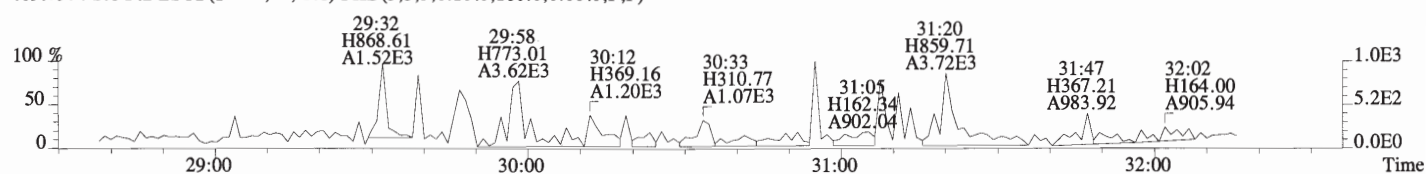
351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



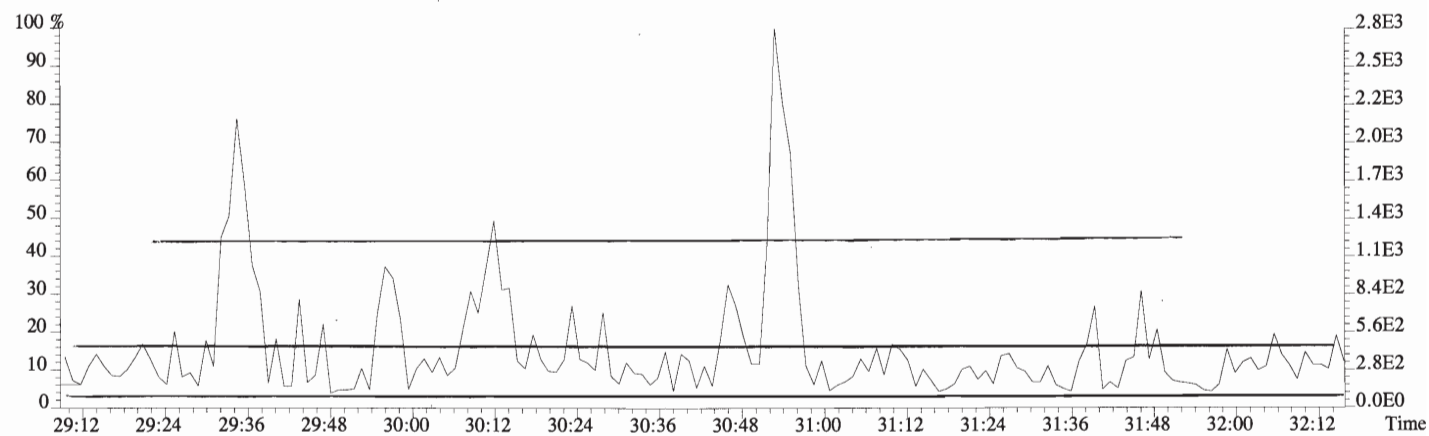
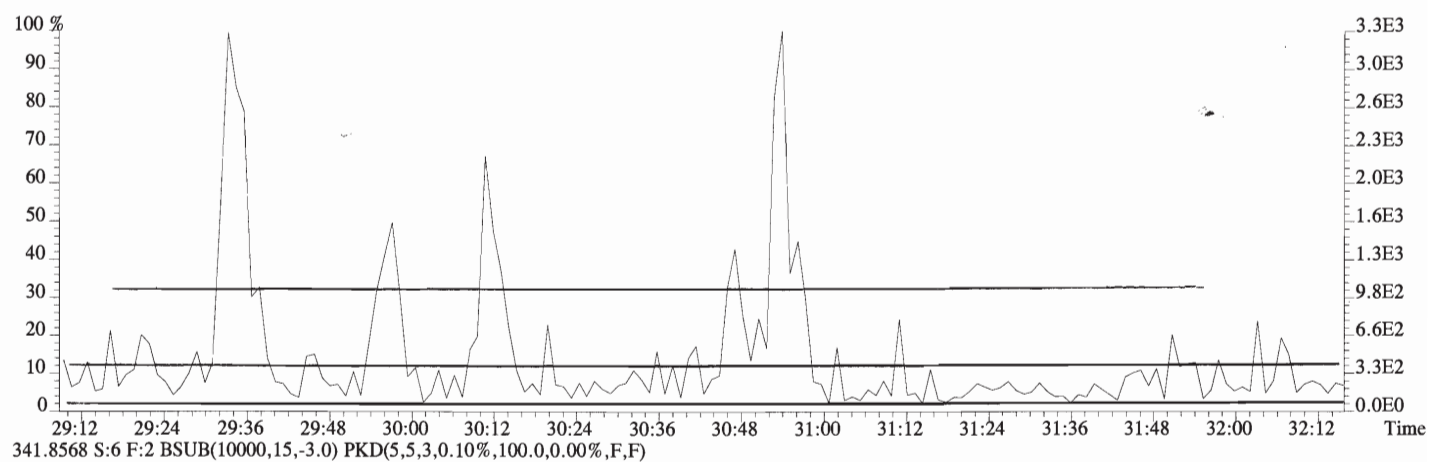
353.8970 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



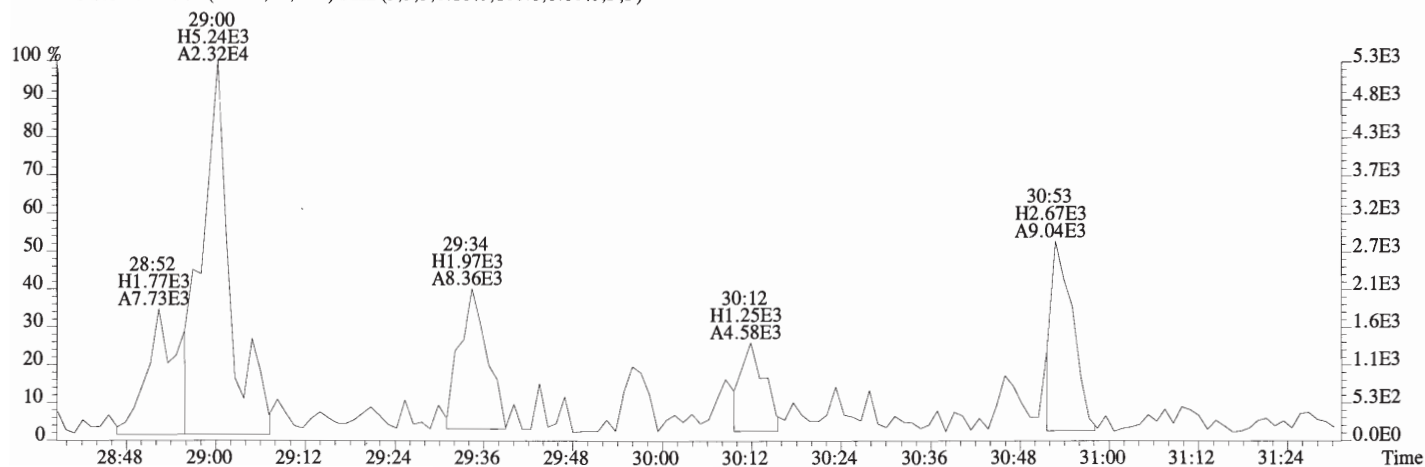
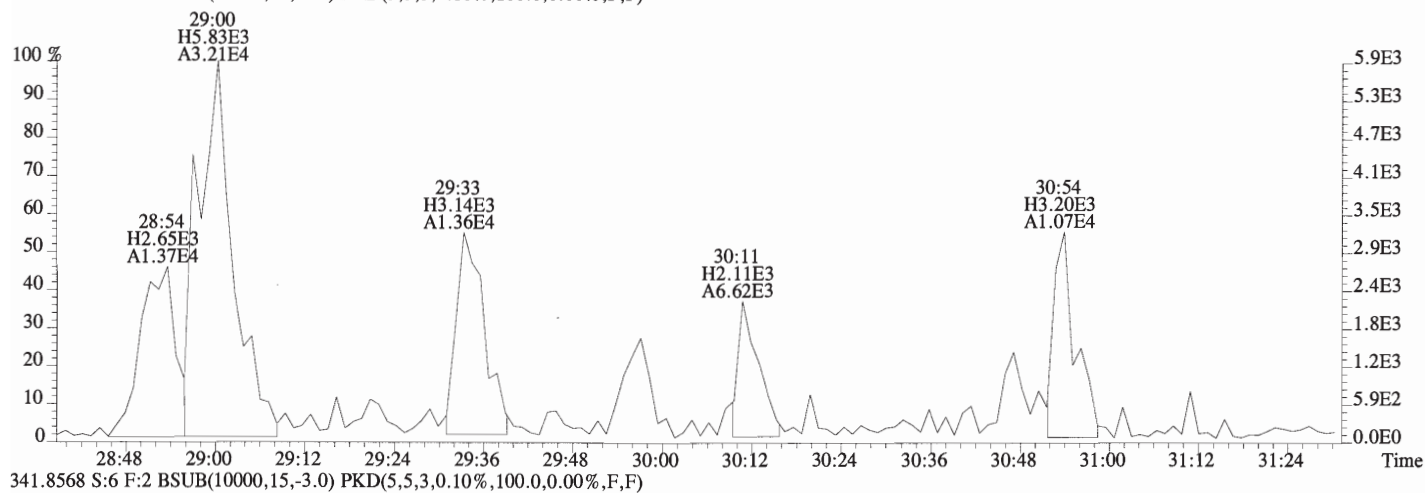
409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



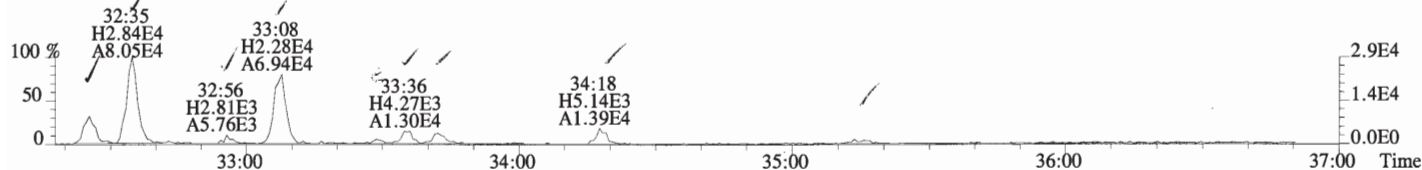
File:160712D1 #1-193 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



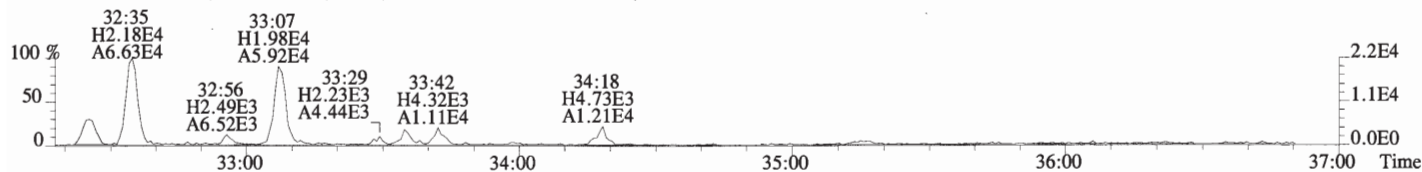
File:160712D1 #1-193 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



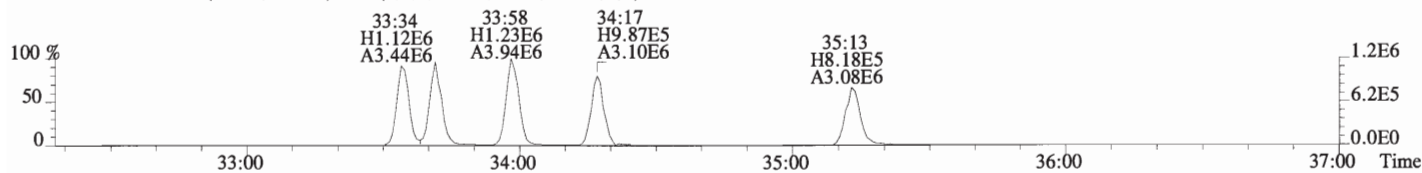
File:160712D1 #1-407 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



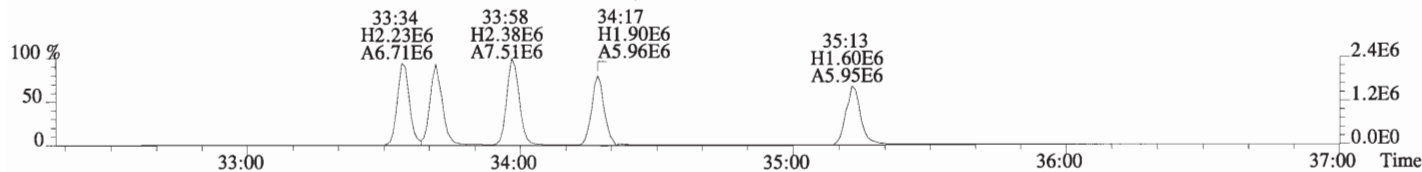
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



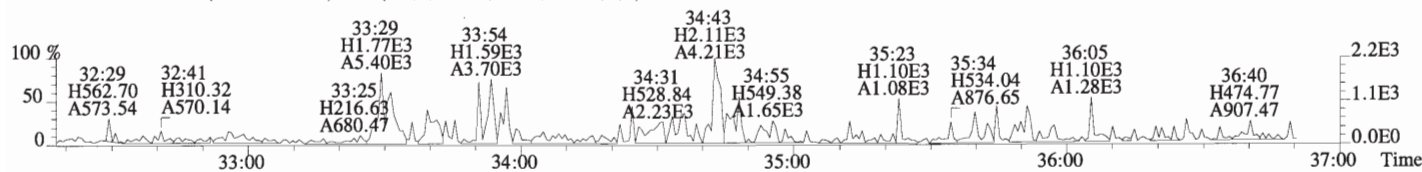
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



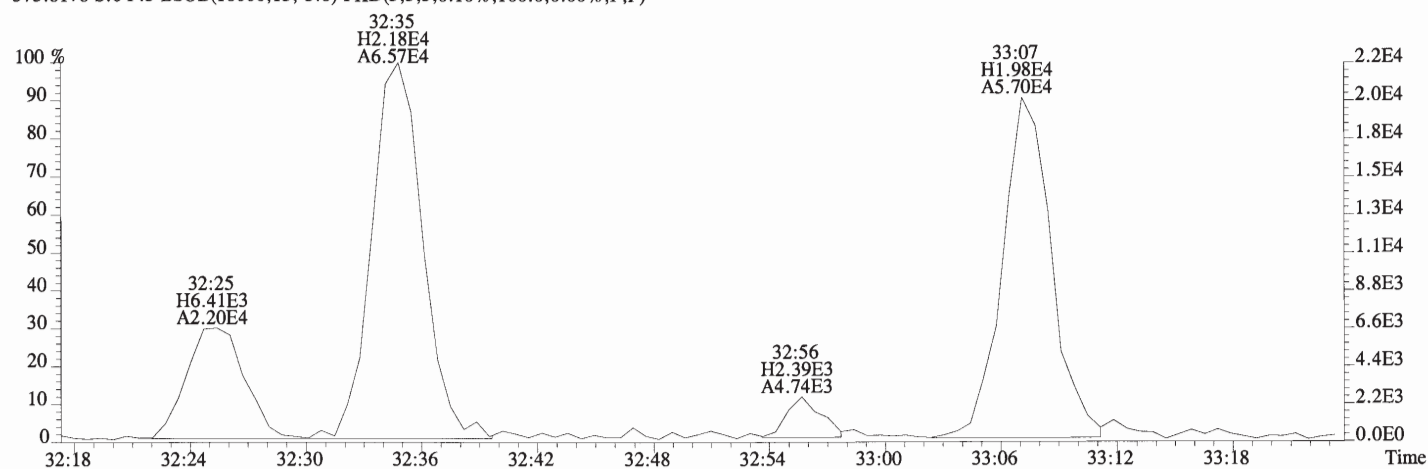
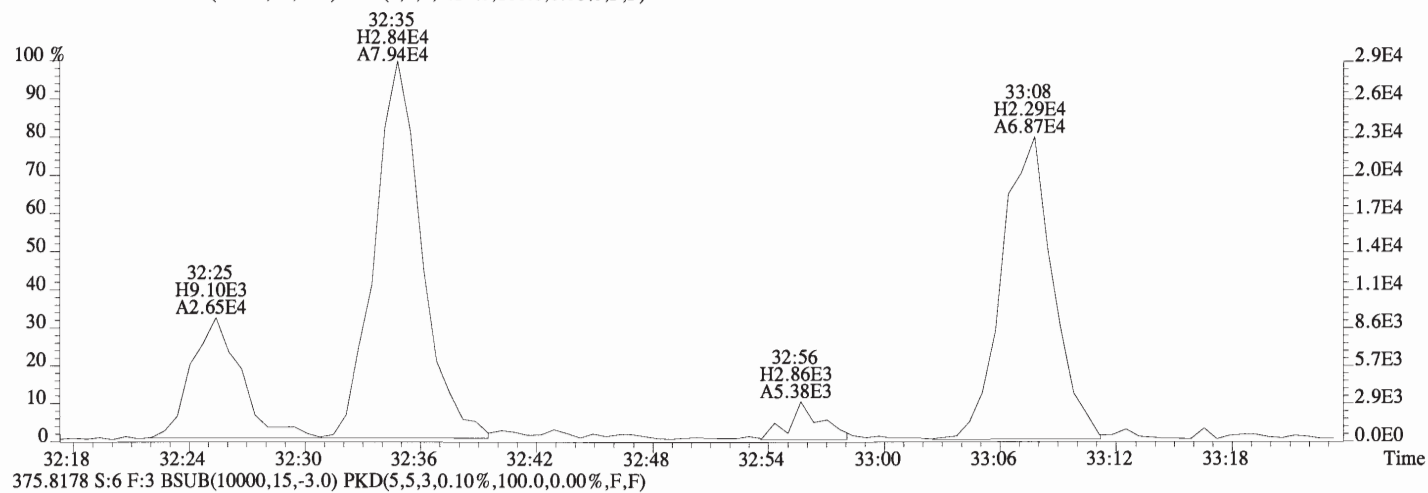
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



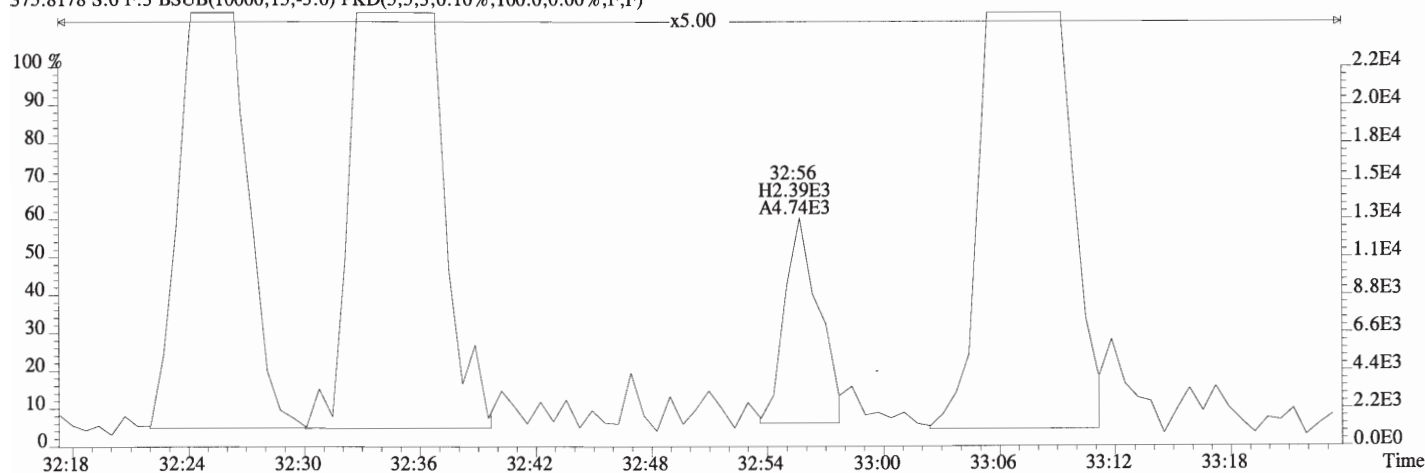
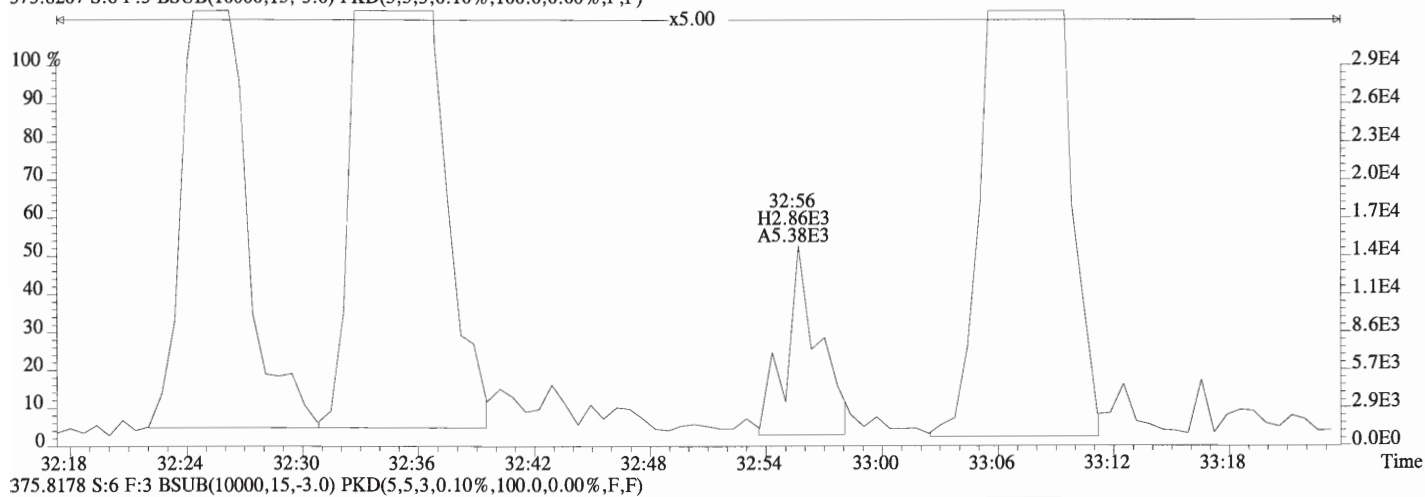
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



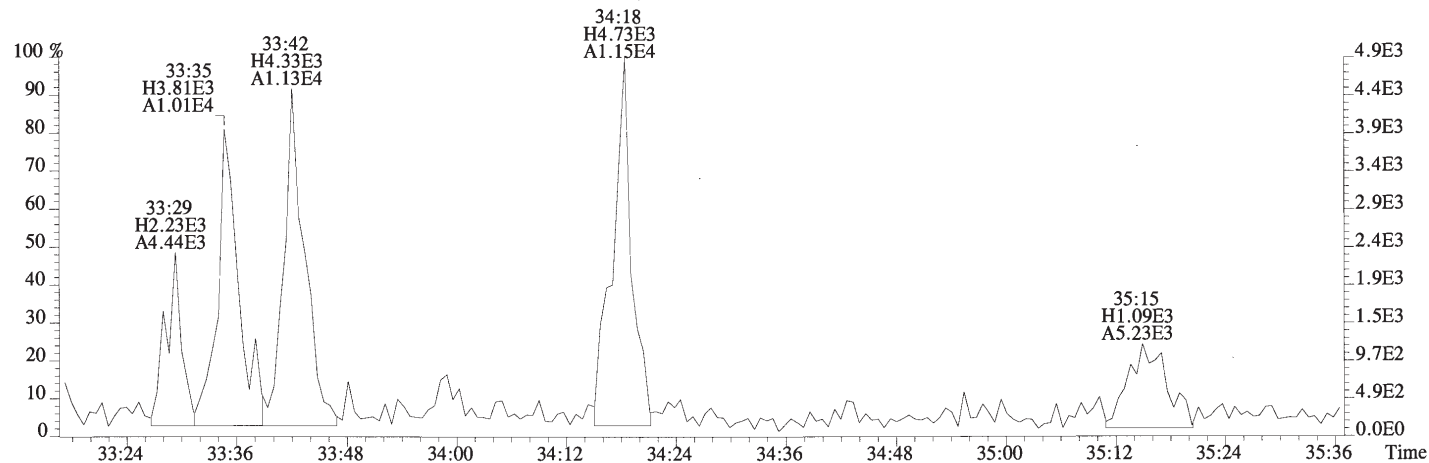
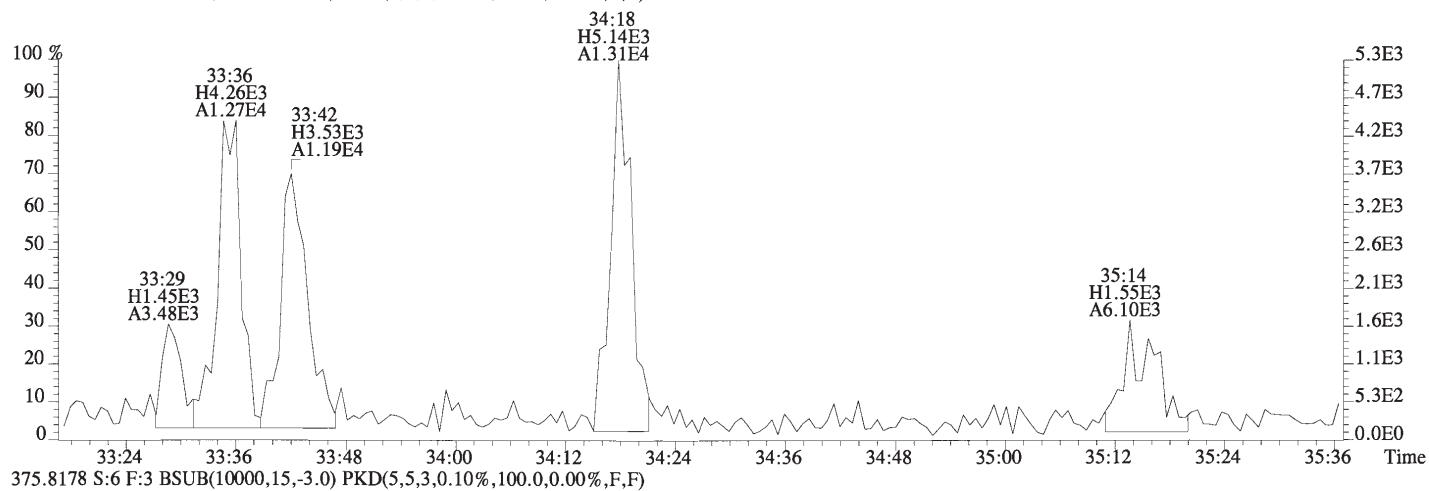
File:160712D1 #1-407 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



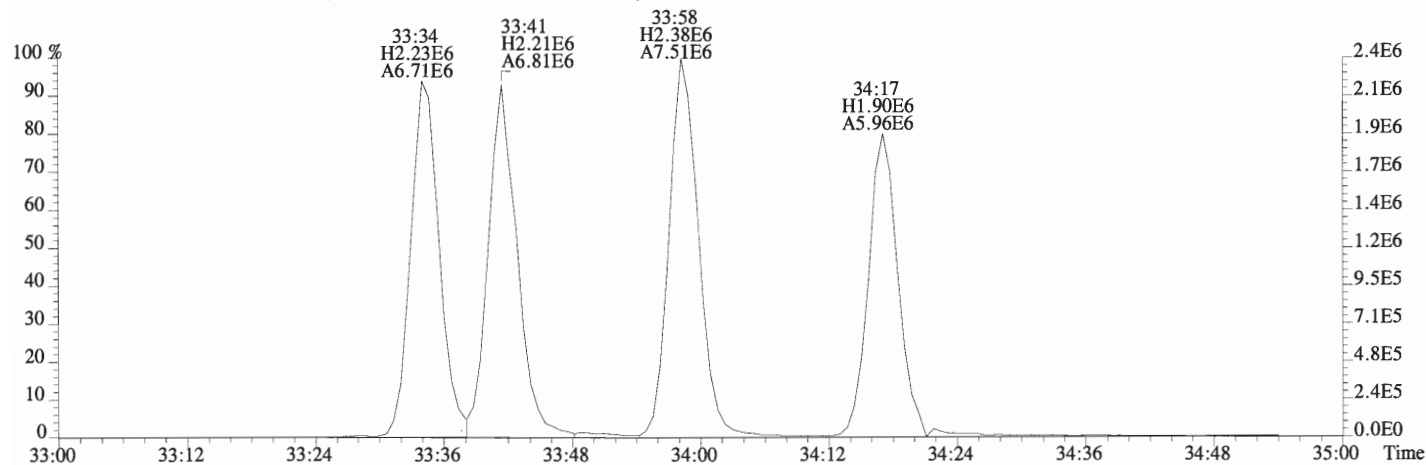
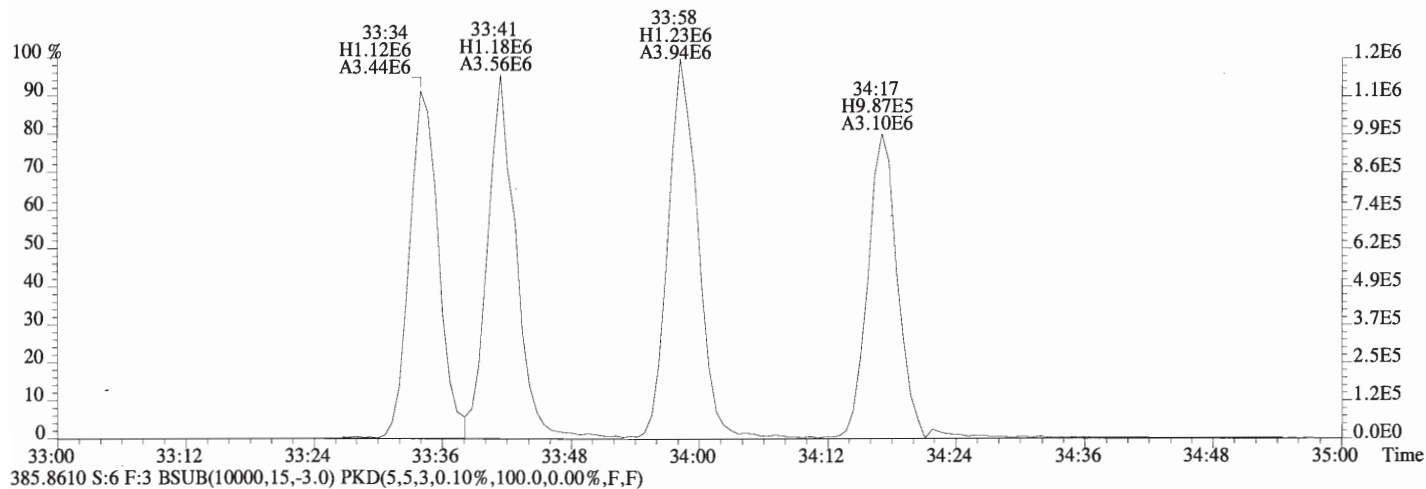
File:160712D1 #1-407 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



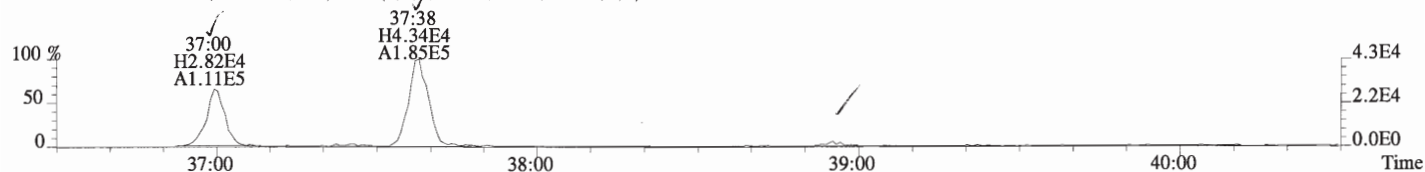
File:160712D1 #1-407 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



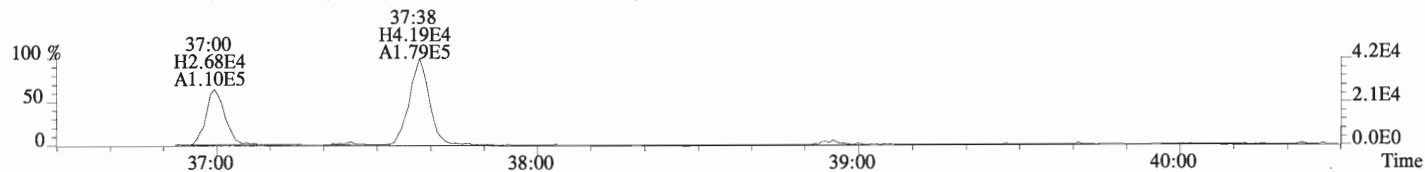
File:160712D1 #1-407 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



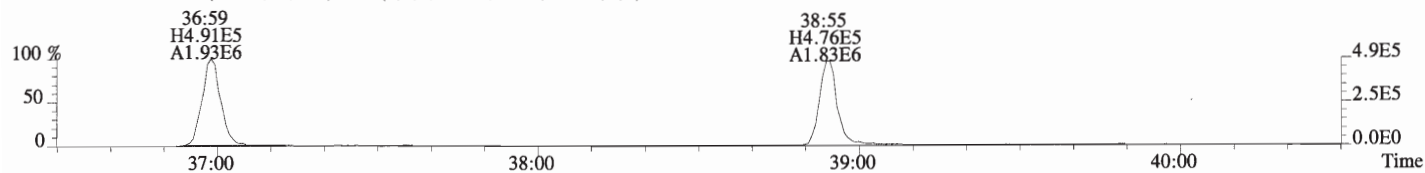
File:160712D1 #1-325 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



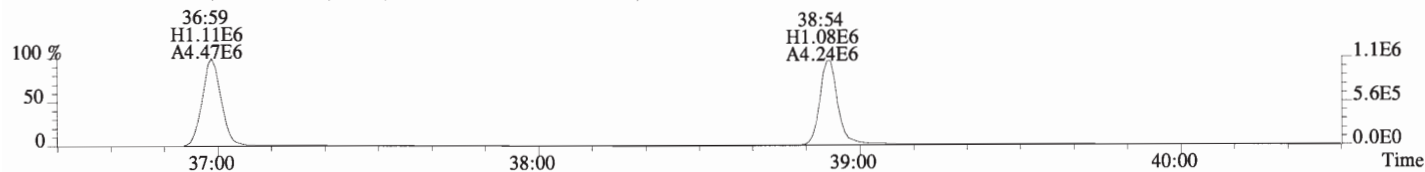
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



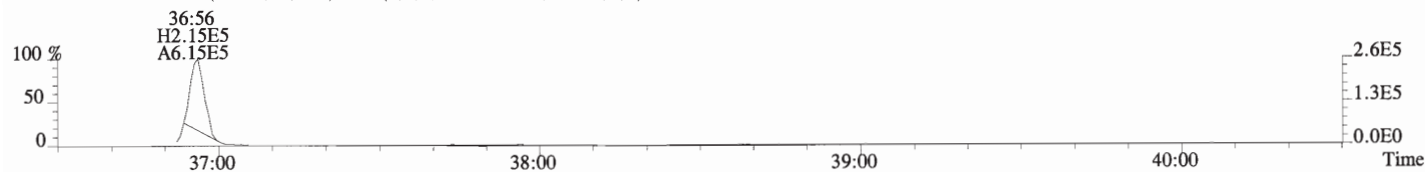
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



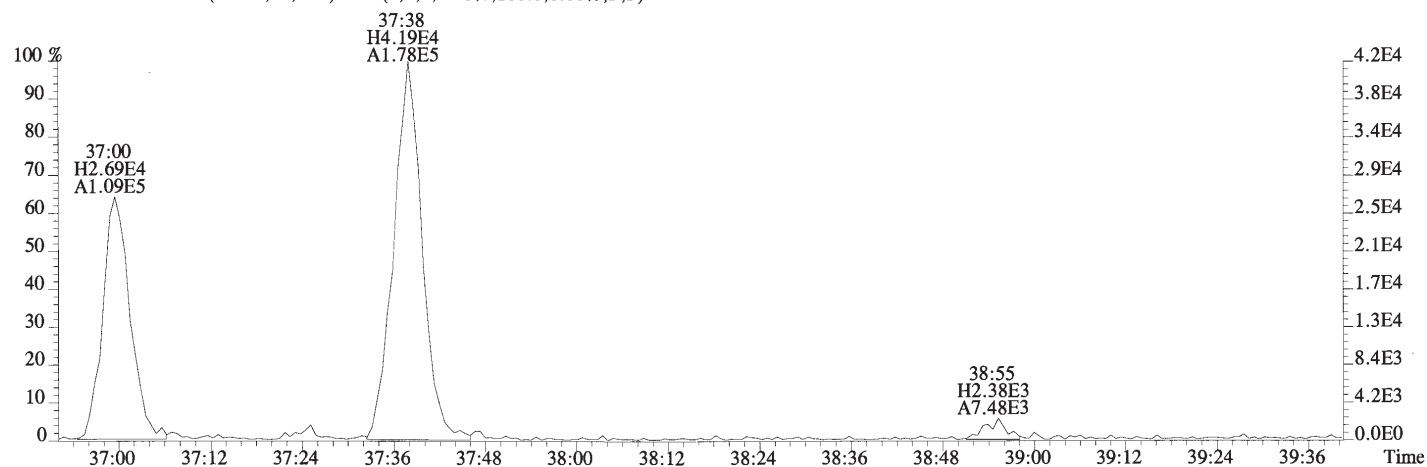
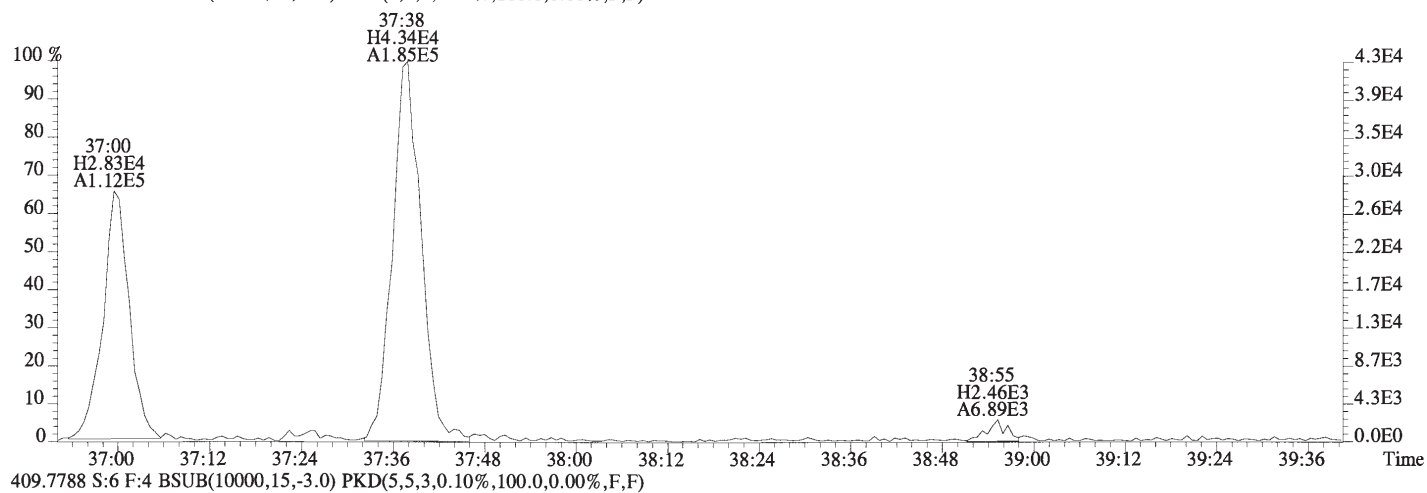
419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



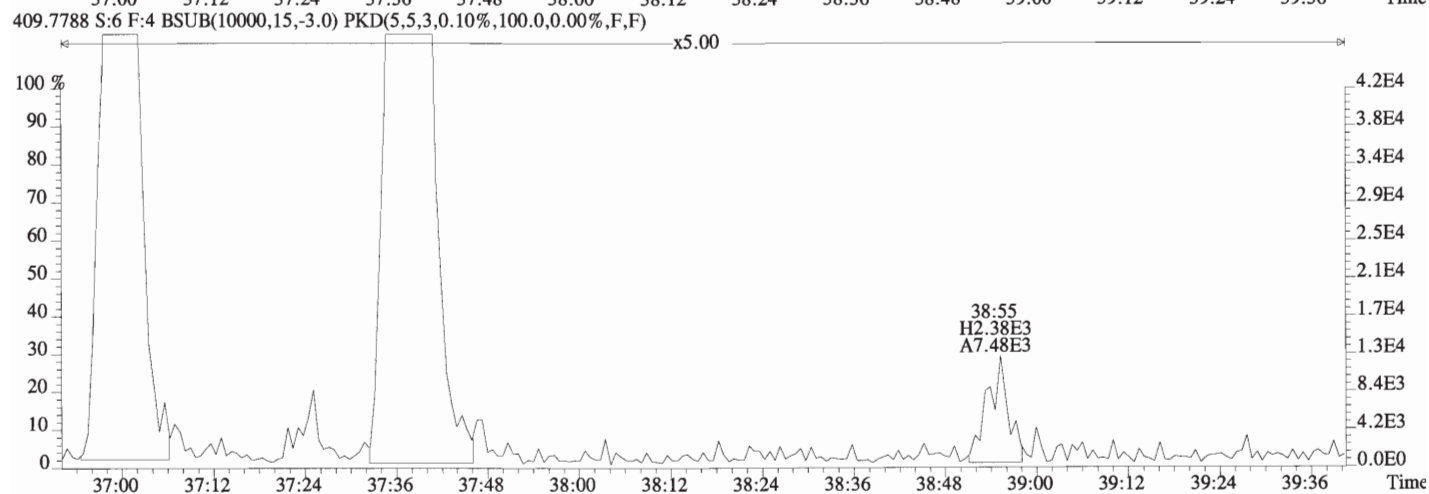
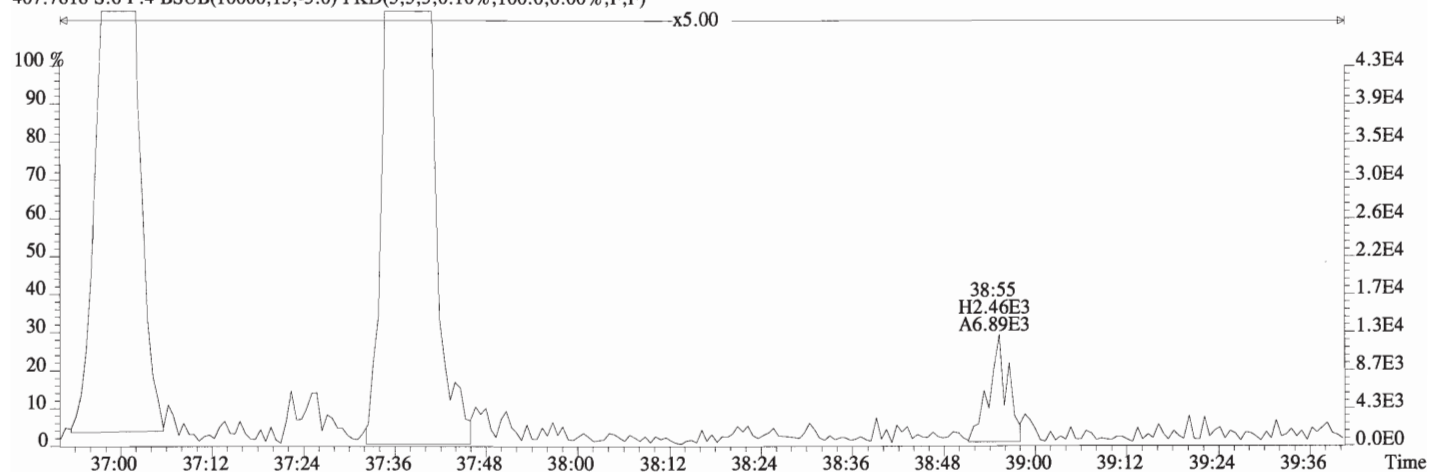
479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



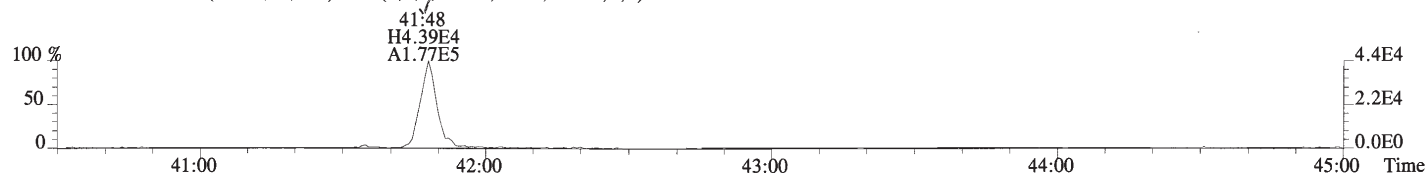
File:160712D1 #1-325 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



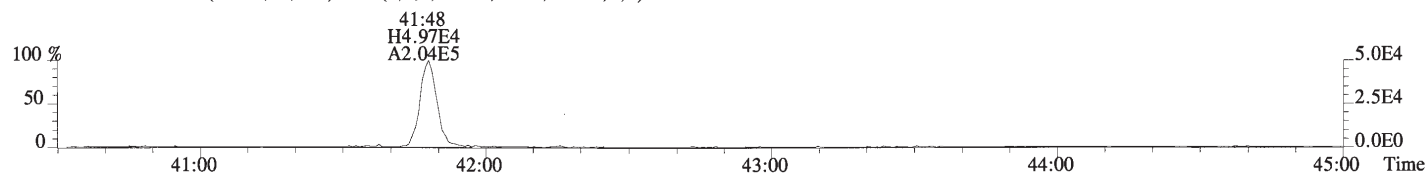
File:160712D1 #1-325 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
407.7818 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



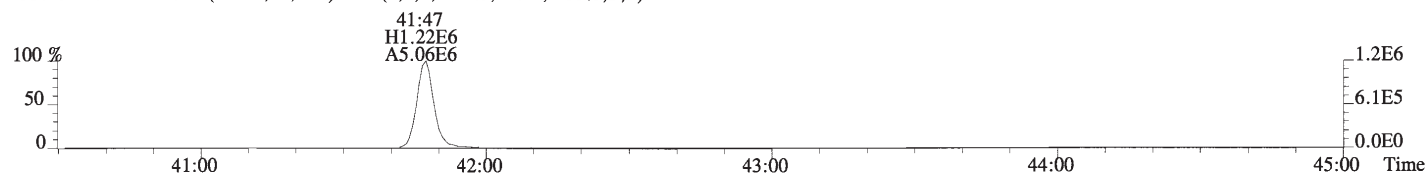
File:160712D1 #1-389 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
 441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



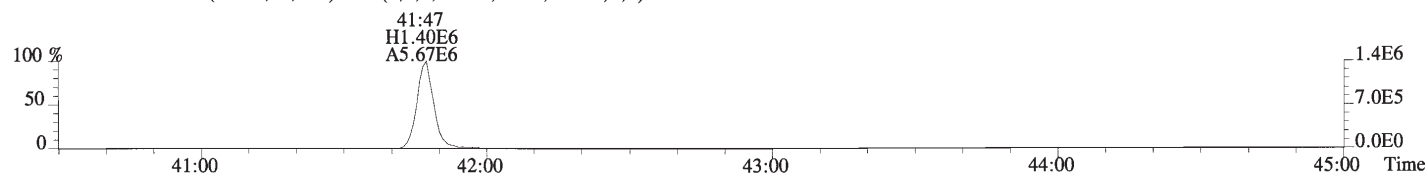
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



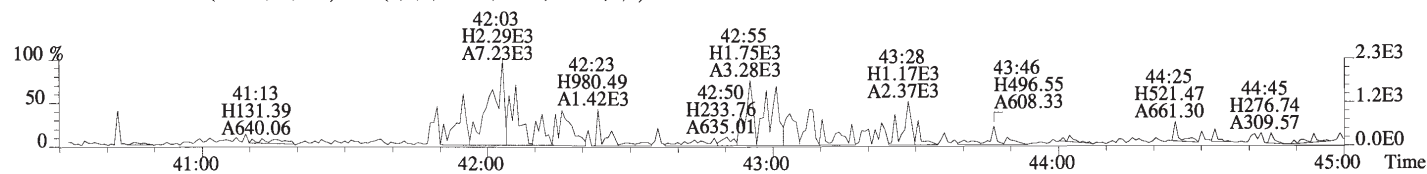
453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



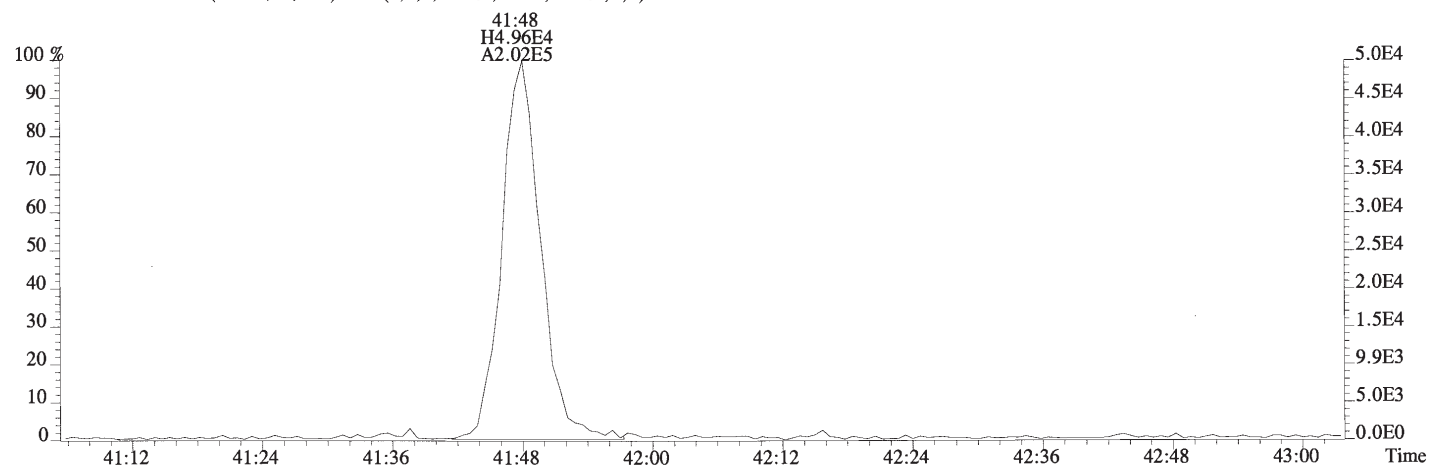
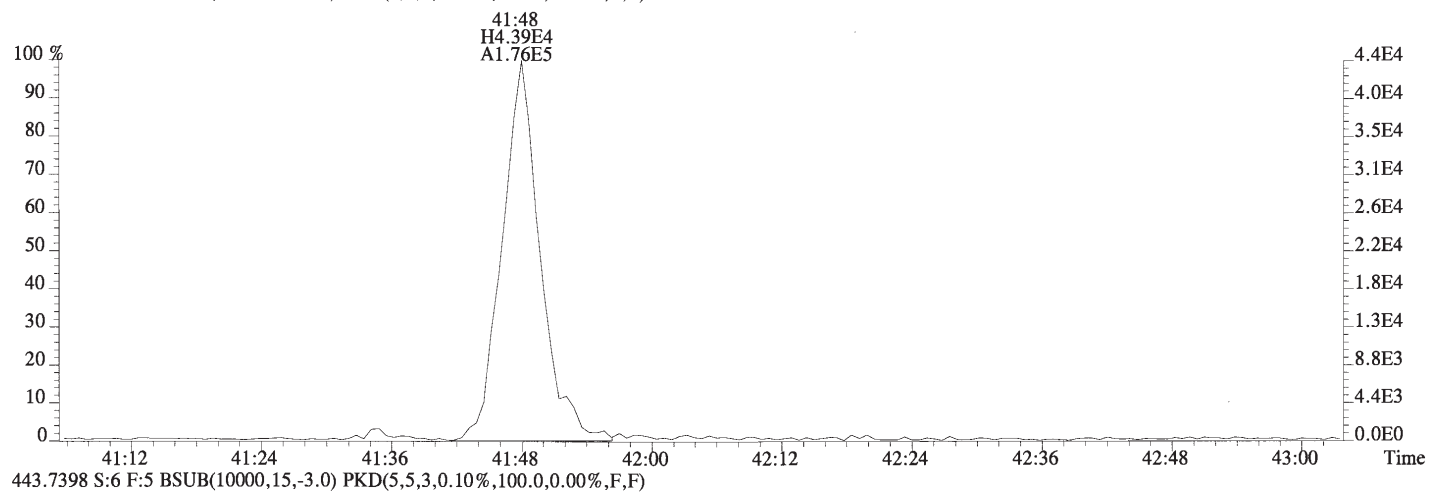
455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160712D1 #1-389 Acq:12-JUL-2016 20:23:34 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:1600835-02RE1 DU-1-15-B 11.34 Exp:OCDD_DB5
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: DU-1-15-C
Lab ID: 1600835-03RE1

Filename: 160712D1 S:7 Acq:12-JUL-16 21:12:05
GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16

wt/vol: 9.959

ConCal: ST160712D1-1
EndCAL: NA

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Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	1.13	Not F ₁₁	*	*		220	2.5	0.0728	Total Tetra-Dioxins	0.351	0.351		*	*
1,2,3,7,8-PeCDD	2.85e+04	0.72 y	0.96	31:11	1.000	0.75364	*		2.5	*	Total Penta-Dioxins	4.40	4.40		*	*
1,2,3,4,7,8-HxCDD	2.95e+04	1.08 y	1.00	34:29	1.001	0.91242	*		2.5	*	Total Hexa-Dioxins	22.4	22.4		*	*
1,2,3,6,7,8-HxCDD	7.20e+04	1.42 y	1.10	34:35	1.000	2.0625	*		2.5	*	Total Hepta-Dioxins	101	101		*	*
1,2,3,7,8,9-HxCDD	7.92e+04	1.17 y	1.05	34:52	1.000	2.3750	*		2.5	*	Total Tetra-Furans	1.41	1.69		*	*
1,2,3,4,6,7,8-HpCDD	1.27e+06	1.03 y	1.05	38:23	1.000	45.791	*		2.5	*	Total Penta-Furans	4.4668	4.6969		*	*
OCDD	7.64e+06	0.89 y	0.96	41:35	1.000	381.61	*		2.5	*	Total Hexa-Furans	8.57	8.57		*	*
											Total Hepta-Furans	14.7	14.7		*	*
2,3,7,8-TCDF	2.28e+04	0.99 n	1.12	25:37	1.000	0.27442	*		2.5	*						
1,2,3,7,8-PeCDF	1.15e+04	1.32 y	1.01	29:57	1.000	0.19586	*		2.5	*						
2,3,4,7,8-PeCDF	2.24e+04	1.33 y	0.90	30:55	1.001	0.39023	*		2.5	*						
1,2,3,4,7,8-HxCDF	2.22e+04	1.41 y	1.16	33:36	1.000	0.41413	*		2.5	*						
1,2,3,6,7,8-HxCDF	2.09e+04	1.23 y	1.16	33:43	1.000	0.37736	*		2.5	*						
2,3,4,6,7,8-HxCDF	2.82e+04	1.17 y	1.23	34:19	1.000	0.56271	*		2.5	*						
1,2,3,7,8,9-HxCDF	9.34e+03	1.34 y	1.13	35:15	1.000	0.20159	*		2.5	*						
1,2,3,4,6,7,8-HpCDF	2.51e+05	1.03 y	1.44	37:00	1.000	5.9293	*		2.5	*						
1,2,3,4,7,8,9-HpCDF	1.42e+04	1.08 y	1.31	38:56	1.000	0.37522	*		2.5	*						
OCDF	3.62e+05	0.87 y	1.03	41:49	1.000	13.548	*		2.5	*						
IS	13C-2,3,7,8-TCDD	9.62e+06	0.76 y	1.01	26:26	1.025	164.23				Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	7.91e+06	0.64 y	1.10	31:11	1.208	123.60				81.8					
IS	13C-1,2,3,4,7,8-HxCDD	6.49e+06	1.28 y	0.72	34:28	1.014	158.97				61.5					
IS	13C-1,2,3,6,7,8-HxCDD	6.40e+06	1.28 y	0.73	34:34	1.017	155.41				79.2					
IS	13C-1,2,3,7,8,9-HxCDD	6.39e+06	1.22 y	0.70	34:52	1.025	160.80				77.4					
IS	13C-1,2,3,4,6,7,8-HpCDD	5.29e+06	1.03 y	0.66	38:23	1.129	140.55				80.1					
IS	13C-OCDD	8.36e+06	0.89 y	0.66	41:35	1.223	223.69				70.0					
IS	13C-2,3,7,8-TCDF	1.49e+07	0.81 y	0.90	25:37	0.993	172.18				55.7					
IS	13C-1,2,3,7,8-PeCDF	1.17e+07	1.62 y	0.98	29:57	1.161	124.17				85.7					
IS	13C-2,3,4,7,8-PeCDF	1.28e+07	1.59 y	1.15	30:54	1.197	116.54				61.8					
IS	13C-1,2,3,4,7,8-HxCDF	9.27e+06	0.51 y	1.01	33:35	0.988	161.39				58.0					
IS	13C-1,2,3,6,7,8-HxCDF	9.60e+06	0.52 y	1.10	33:43	0.992	154.46				80.4					
IS	13C-2,3,4,6,7,8-HxCDF	8.21e+06	0.52 y	0.95	34:18	1.009	152.34				76.9					
IS	13C-1,2,3,7,8,9-HxCDF	8.21e+06	0.53 y	0.83	35:15	1.037	175.37				75.9					
IS	13C-1,2,3,4,6,7,8-HpCDF	5.92e+06	0.42 y	0.70	37:00	1.088	149.44				87.3					
IS	13C-1,2,3,4,7,8,9-HpCDF	5.77e+06	0.44 y	0.72	38:55	1.145	141.62				74.4					
IS	13C-OCDF	1.04e+07	0.93 y	0.82	41:48	1.230	222.96				70.5					
C/Up	37Cl-2,3,7,8-TCDD	4.14e+06		1.14	26:28	1.025	62.779				55.5					
RS/RT	13C-1,2,3,4-TCDD	1.16e+07	0.77 y	1.00	25:48	*	200.82				78.2					
RS	13C-1,2,3,4-TCDF	1.93e+07	0.80 y	1.00	24:14	*	200.82					Integrations				
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.14e+07	0.52 y	1.00	33:60	*	200.82					by				
												Analyst: 7/13				
												Date: 7/13/16				
													Reviewed			
													by			
													Analyst: 7/15/16			
													Date: 7/15/16			

Totals class: TCDD EMPC

Entry #: 19

Run: 12 File: 160712D1 S: 7 I: 1 F: 1

Acquired: 12-JUL-16 21:12:05 Processed: 13-JUL-16 13:43:41

Total Concentration: 0.35059

Unnamed Concentration: 0.351

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
22:40	8.241e+03	1.076e+04	0.77 y	1.900e+04	0.35059

Totals class: PeCDD EMPC

Entry #: 21

Run: 12 File: 160712D1 S: 7 I: 1 F: 2
Acquired: 12-JUL-16 21:12:05 Processed: 13-JUL-16 13:43:41

Total Concentration: 4.4008

Unnamed Concentration: 3.647

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:03	1.561e+04	2.901e+04	0.54 y	4.462e+04	1.1784
29:31	4.574e+03	8.111e+03	0.56 y	1.268e+04	0.33498
29:59	8.157e+03	1.130e+04	0.72 y	1.946e+04	0.51395
30:09	1.090e+04	1.520e+04	0.72 y	2.610e+04	0.68916
30:14	6.431e+03	9.106e+03	0.71 y	1.554e+04	0.41031
30:28	8.120e+03	1.158e+04	0.70 y	1.970e+04	0.52036
31:11	1.191e+04	1.662e+04	0.72 y	2.854e+04	0.75364 1,2,3,7,8-PeCDD

Totals class: HxCDD EMPC

Entry #: 23

Run: 12

File: 160712D1

S: 7 I: 1 F: 3

Acquired: 12-JUL-16 21:12:05

Processed: 13-JUL-16 13:43:41

Total Concentration: 22.411

Unnamed Concentration: 17.061

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:58	1.261e+05	1.091e+05	1.16 y	2.353e+05	7.0116
33:32	2.172e+04	1.625e+04	1.34 y	3.797e+04	1.1316
33:47	1.503e+05	1.180e+05	1.27 y	2.683e+05	7.9968
33:54	1.093e+04	8.583e+03	1.27 y	1.951e+04	0.58143
34:29	1.537e+04	1.418e+04	1.08 y	2.955e+04	0.91242
34:35	4.222e+04	2.976e+04	1.42 y	7.198e+04	2.0625
34:46	6.672e+03	4.728e+03	1.41 y	1.140e+04	0.33976
34:52	4.268e+04	3.654e+04	1.17 y	7.922e+04	2.3750

Totals class: HpCDD EMPC

Entry #: 25

Run: 12 File: 160712D1 S: 7 I: 1 F: 4
Acquired: 12-JUL-16 21:12:05 Processed: 13-JUL-16 13:43:41

Total Concentration: 101.16

Unnamed Concentration: 55.367

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:25	7.727e+05	7.590e+05	1.02 y	1.532e+06	55.367
38:23	6.440e+05	6.228e+05	1.03 y	1.267e+06	45.791 1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 12 File: 160712D1 S: 7 I: 1 F: 1
Acquired: 12-JUL-16 21:12:05 Processed: 13-JUL-16 13:43:41

Total Concentration: 1.6877

Unnamed Concentration: 1.413

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
21:39	2.284e+04	3.014e+04	0.76 y	5.298e+04	0.63829
24:12	1.309e+04	1.591e+04	0.82 y	2.900e+04	0.34934
25:37	1.276e+04	1.287e+04	0.99 n	2.278e+04	0.27442
25:59	1.643e+04	1.890e+04	0.87 y	3.533e+04	0.42565

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 12 File: 160712D1 S: 7 I: 1 F: 1
Acquired: 12-JUL-16 21:12:05 Processed: 13-JUL-16 13:43:41

Total Concentration: 2.0531 Unnamed Concentration: 2.053

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:29	7.268e+04	4.629e+04	1.57 y	1.190e+05	2.0531

Totals class: PeCDF EMPC

Entry #: 31

Run: 12 File: 160712D1 S: 7 I: 1 F: 2
Acquired: 12-JUL-16 21:12:05 Processed: 13-JUL-16 13:43:41

Total Concentration: 2.6439 Unnamed Concentration: 2.058

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28:53	1.055e+04	5.229e+03	2.02 n	1.334e+04	0.23011
29:01	4.126e+04	2.690e+04	1.53 y	6.816e+04	1.1761
29:35	1.487e+04	8.372e+03	1.78 y	2.324e+04	0.40110
29:57	6.545e+03	4.948e+03	1.32 y	1.149e+04	0.19586 1,2,3,7,8-PeCDF
30:12	8.512e+03	5.999e+03	1.42 y	1.451e+04	0.25040
30:55	1.278e+04	9.632e+03	1.33 y	2.241e+04	0.39023 2,3,4,7,8-PeCDF

Totals class: HxCDF EMPC

Entry #: 33

Run: 12 File: 160712D1 S: 7 I: 1 F: 3

Acquired: 12-JUL-16 21:12:05 Processed: 13-JUL-16 13:43:41

Total Concentration: 8.5735

Unnamed Concentration: 7.018

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:26	2.858e+04	2.350e+04	1.22 y	5.208e+04	1.0136
32:36	9.568e+04	7.769e+04	1.23 y	1.734e+05	3.3740
32:58	5.152e+03	3.842e+03	1.34 y	8.994e+03	0.17504
33:09	6.708e+04	5.189e+04	1.29 y	1.190e+05	2.3153
33:30	4.189e+03	2.996e+03	1.40 y	7.185e+03	0.13983
33:36	1.298e+04	9.216e+03	1.41 y	2.220e+04	0.41413
33:43	1.150e+04	9.350e+03	1.23 y	2.085e+04	0.37736
34:19	1.519e+04	1.301e+04	1.17 y	2.820e+04	0.56271
35:15	5.343e+03	3.998e+03	1.34 y	9.341e+03	0.20159

Totals class: HpCDF EMPC

Entry #: 35

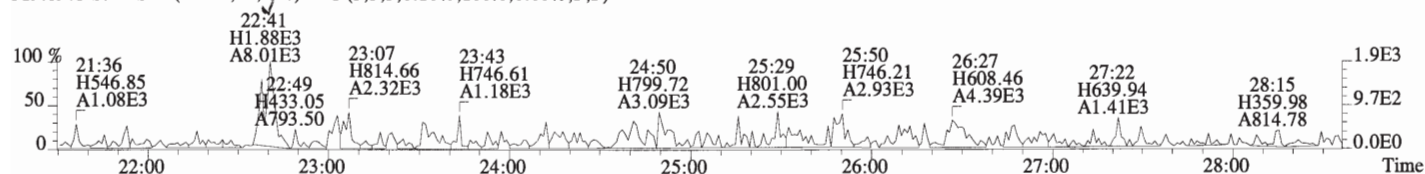
Run: 12 File: 160712D1 S: 7 I: 1 F: 4
Acquired: 12-JUL-16 21:12:05 Processed: 13-JUL-16 13:43:41

Total Concentration: 14.686

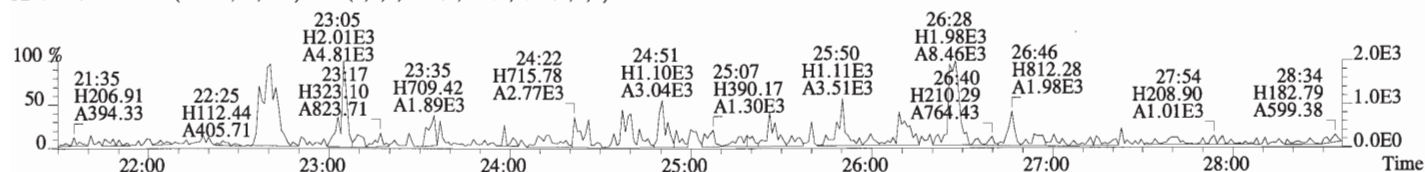
Unnamed Concentration: 8.381

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:00	1.273e+05	1.242e+05	1.03 y	2.514e+05	5.9293 1,2,3,4,6,7,8-HpCDF
37:39	1.749e+05	1.605e+05	1.09 y	3.354e+05	8.3813
38:56	7.341e+03	6.822e+03	1.08 y	1.416e+04	0.37522 1,2,3,4,7,8,9-HpCDF

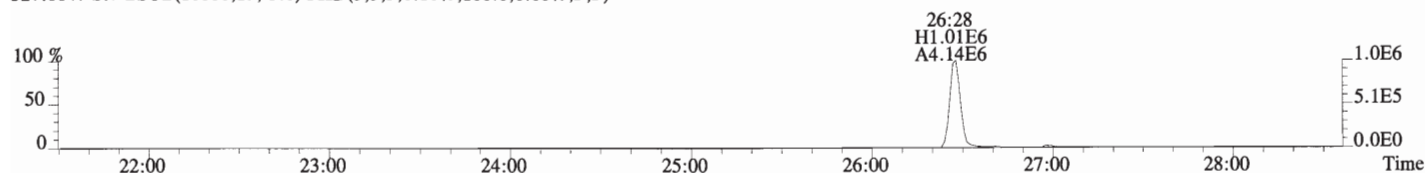
File:160712D1 #1-551 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



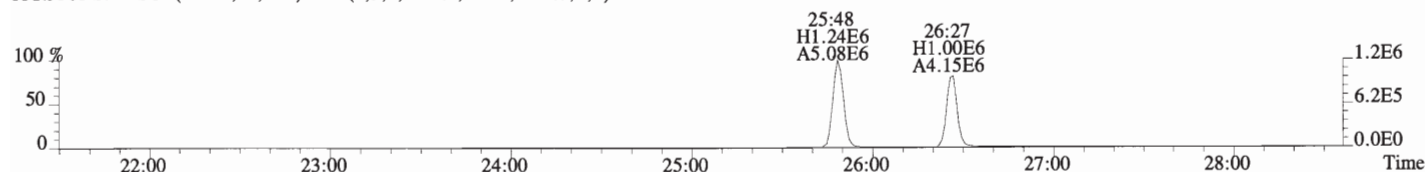
321.8936 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



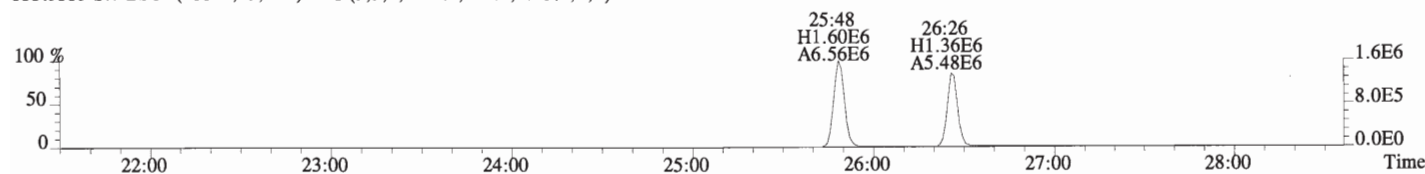
327.8847 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



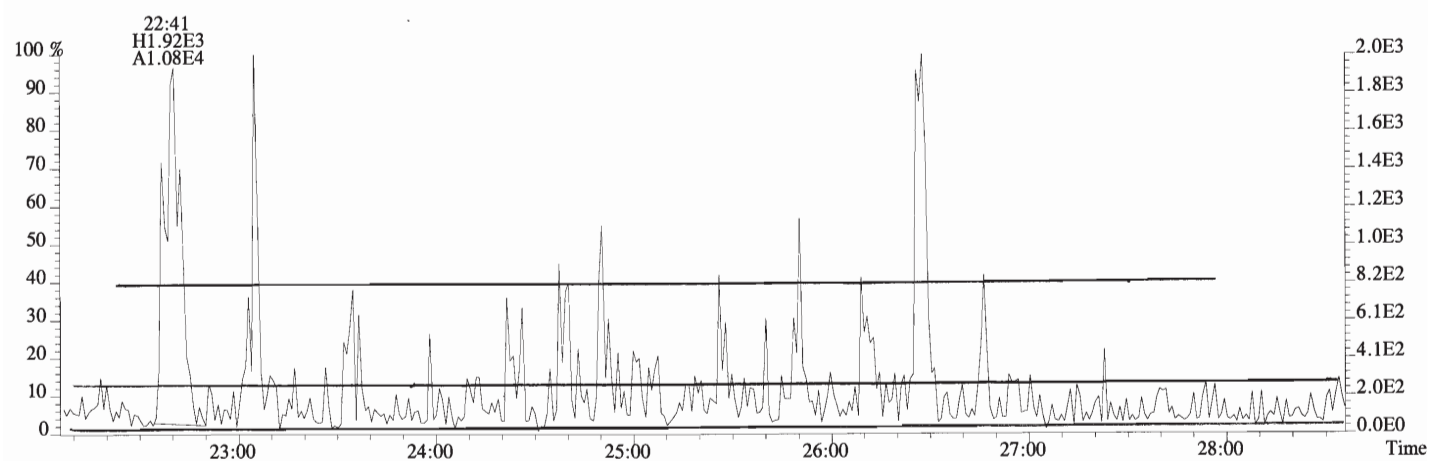
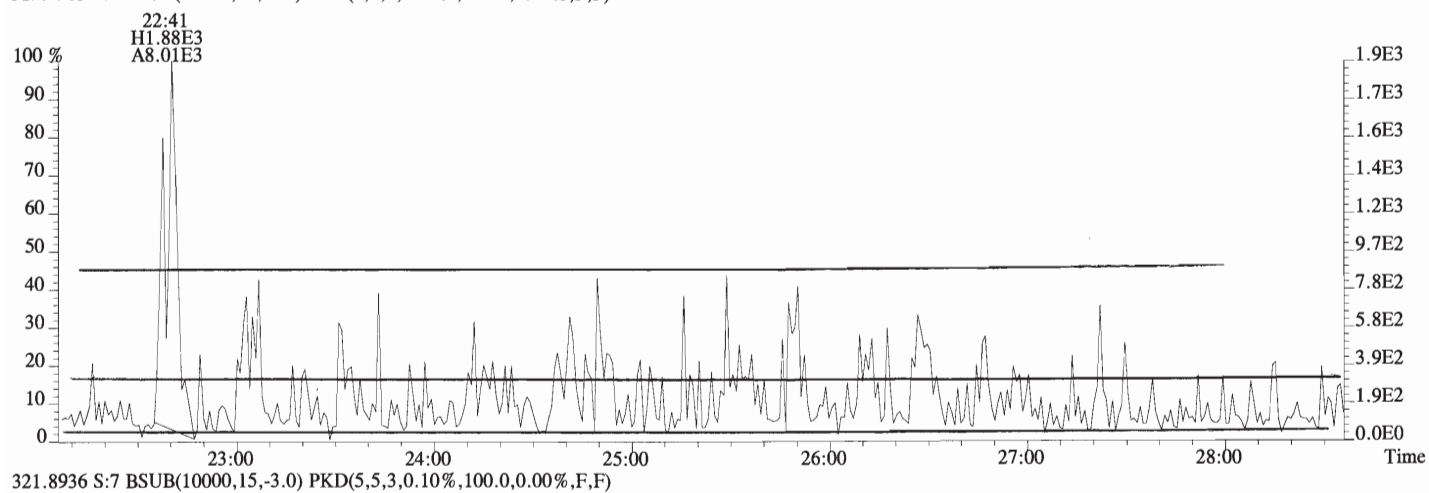
331.9368 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



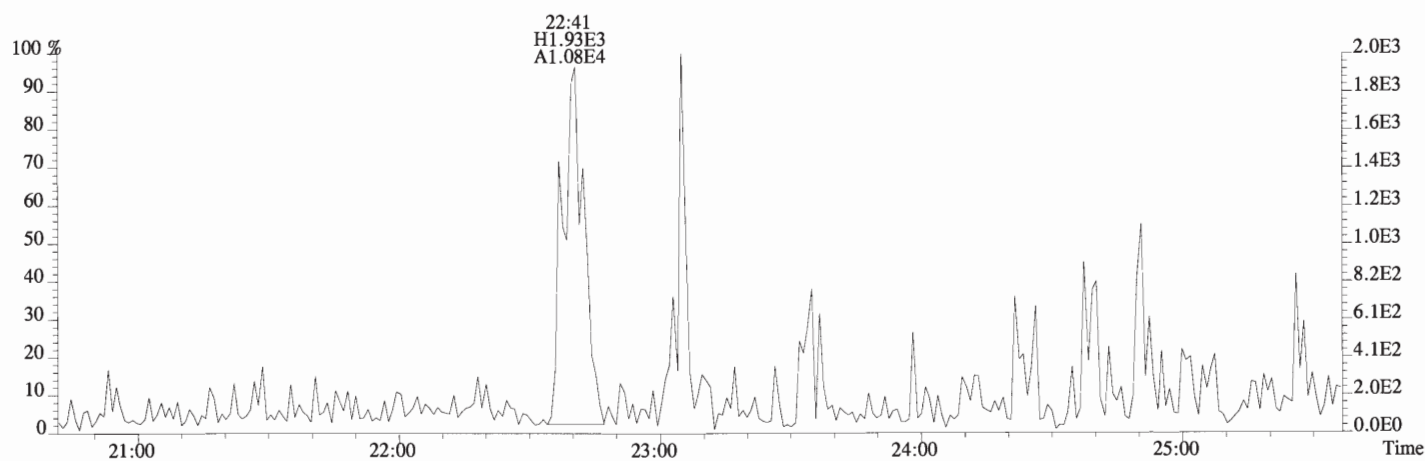
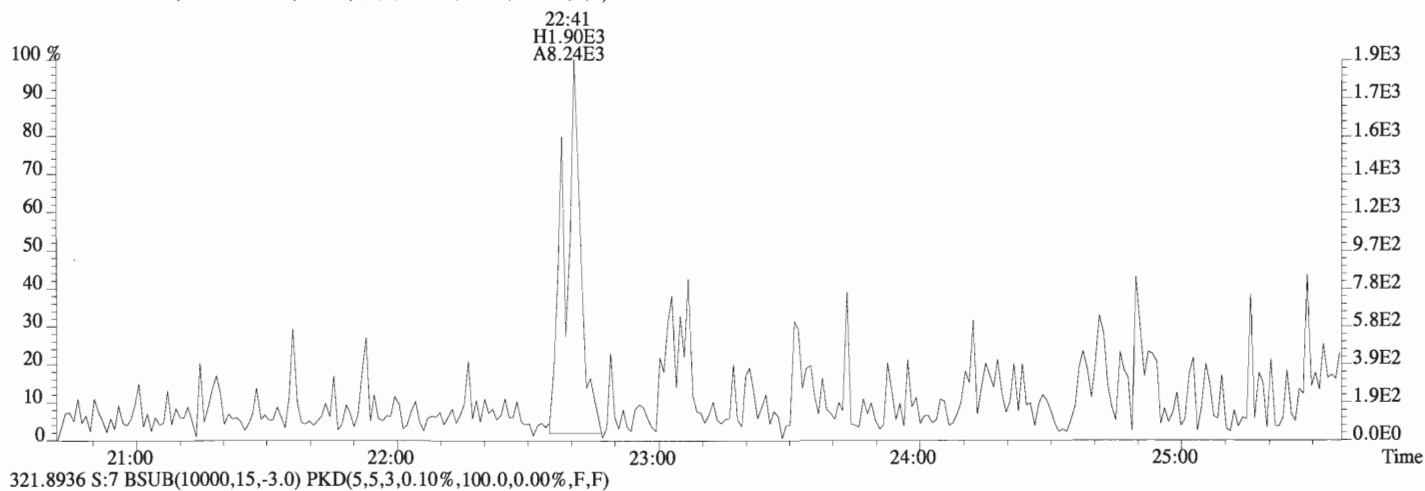
333.9339 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



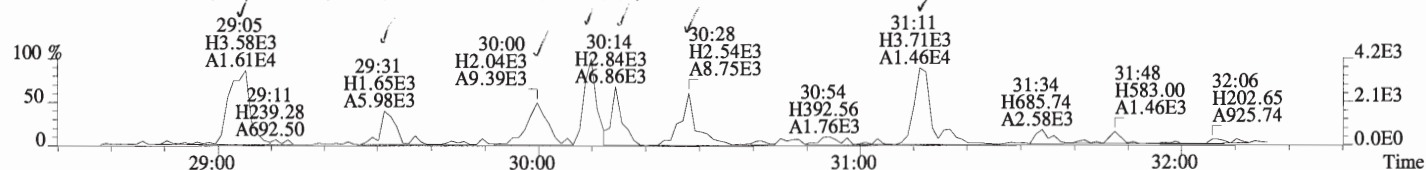
File:160712D1 #1-551 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



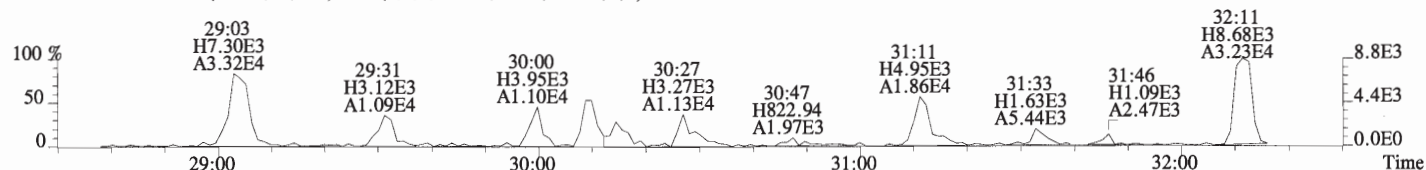
File:160712D1 #1-551 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



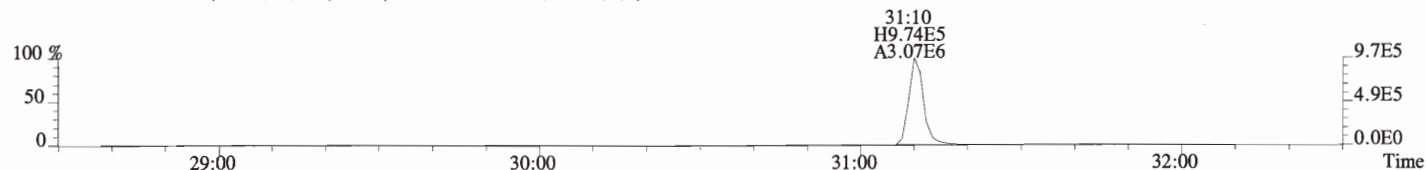
File:160712D1 #1-193 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
 353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



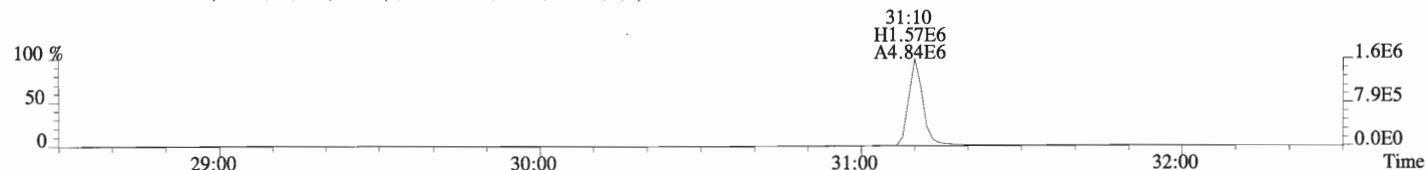
355.8546 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



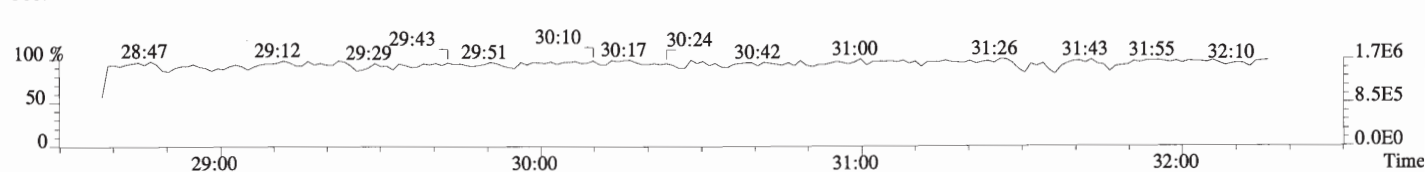
365.8978 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



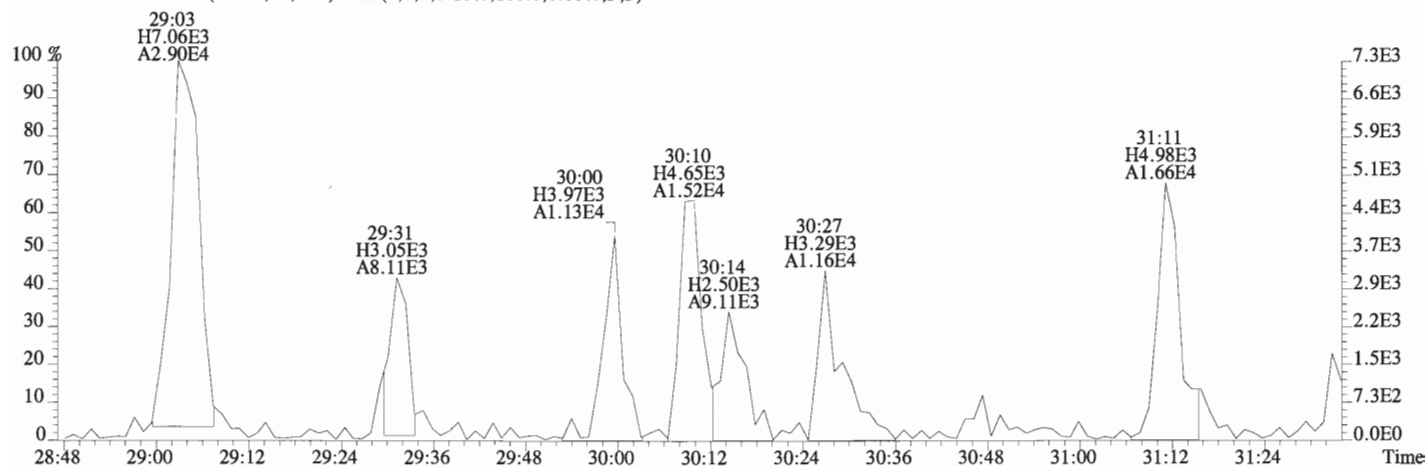
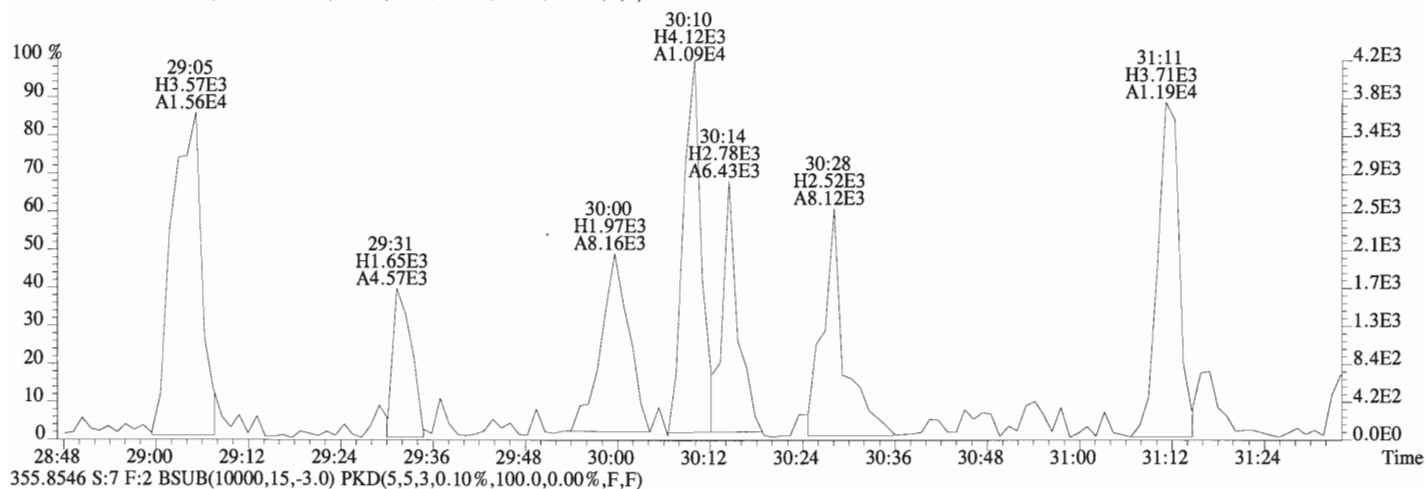
367.8949 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



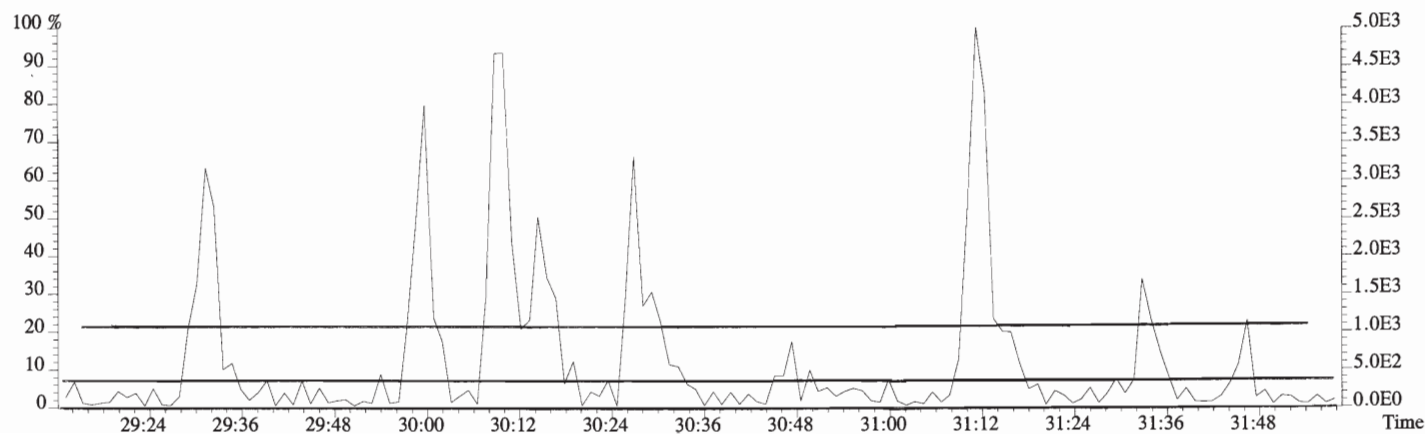
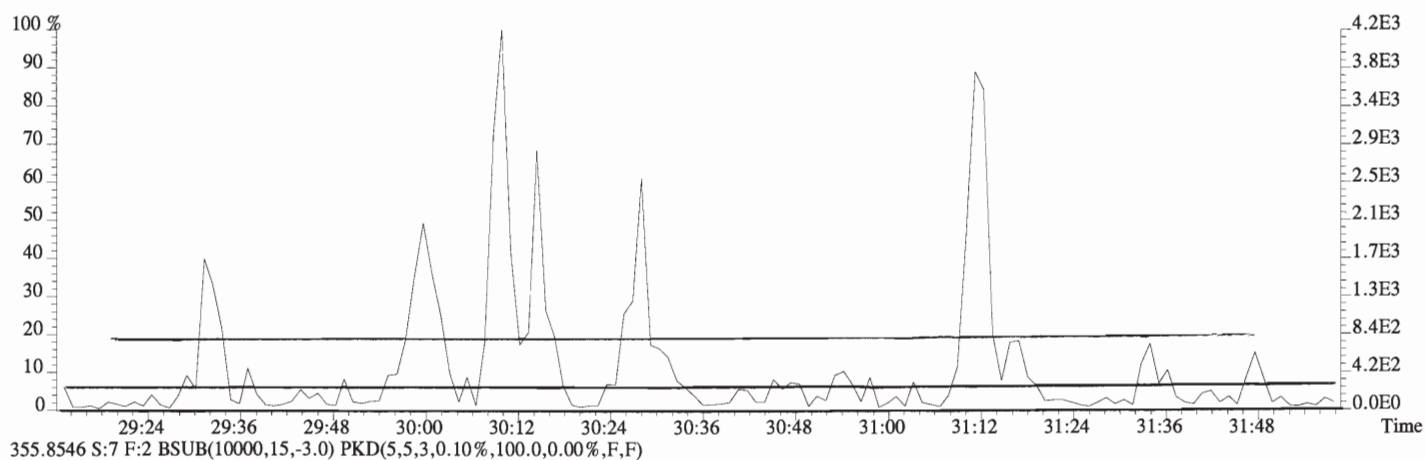
366.9792 S:7 F:2



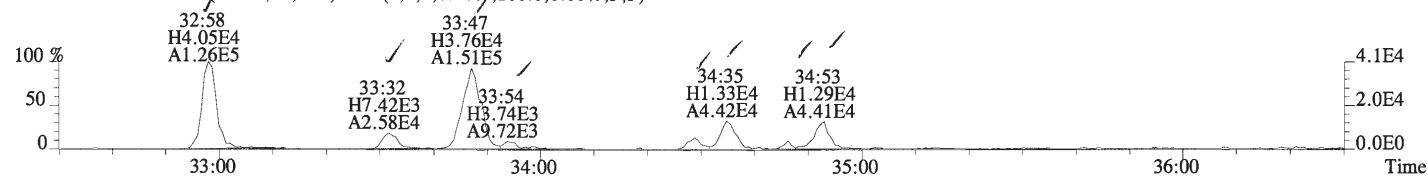
File:160712D1 #1-193 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



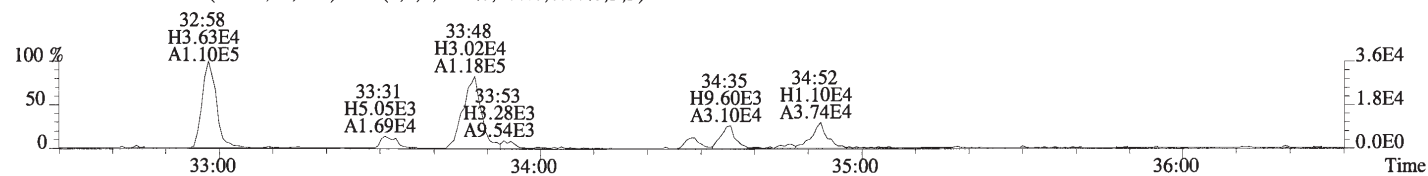
File:160712D1 #1-193 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



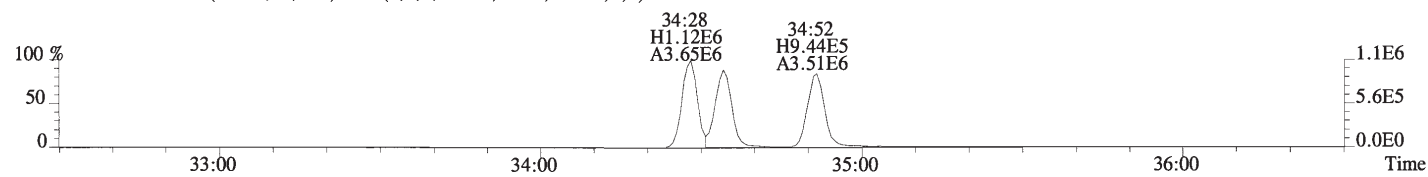
File:160712D1 #1-406 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
 389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



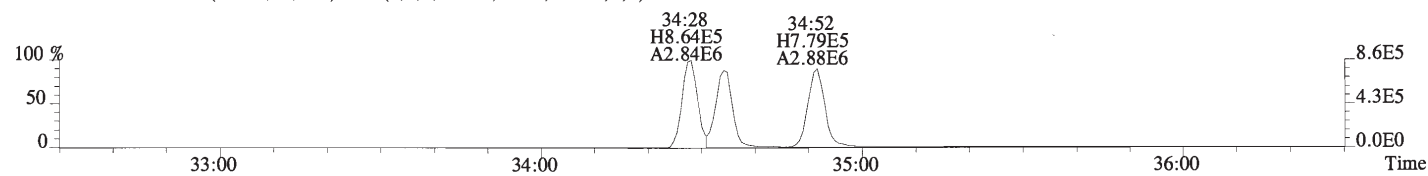
391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



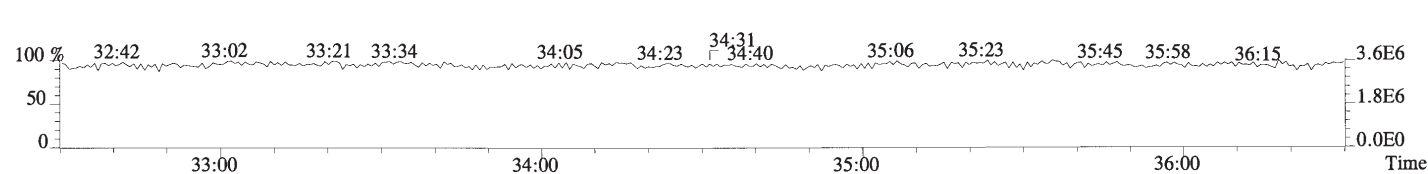
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



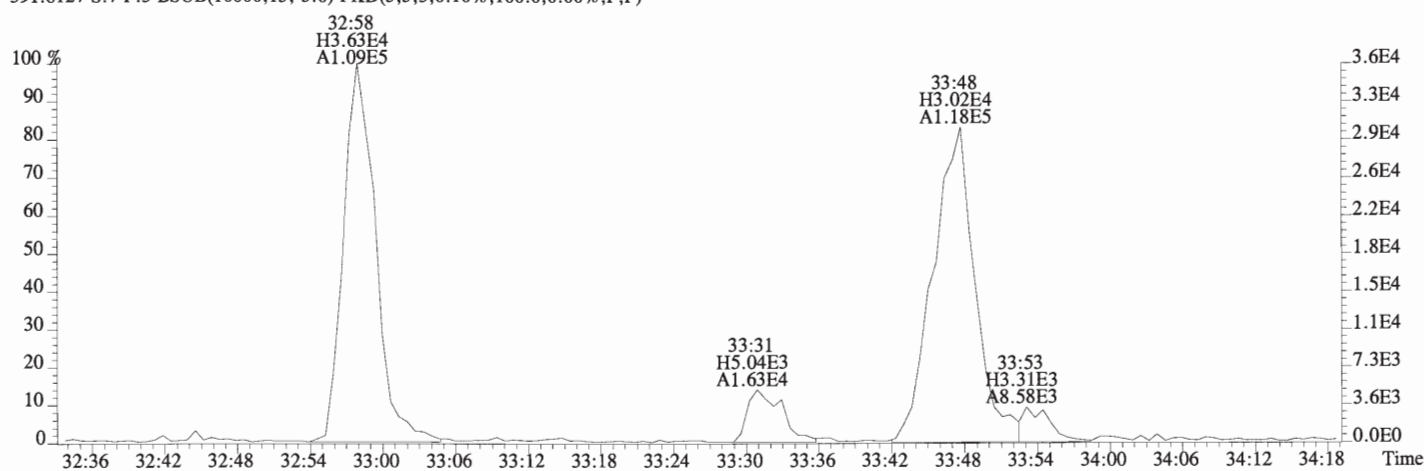
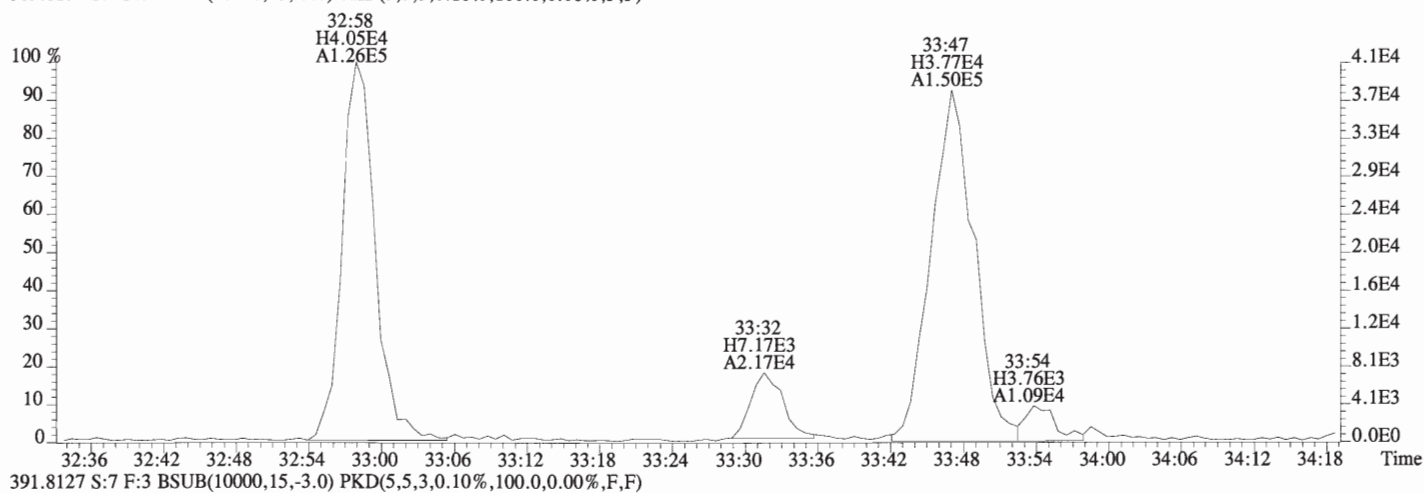
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



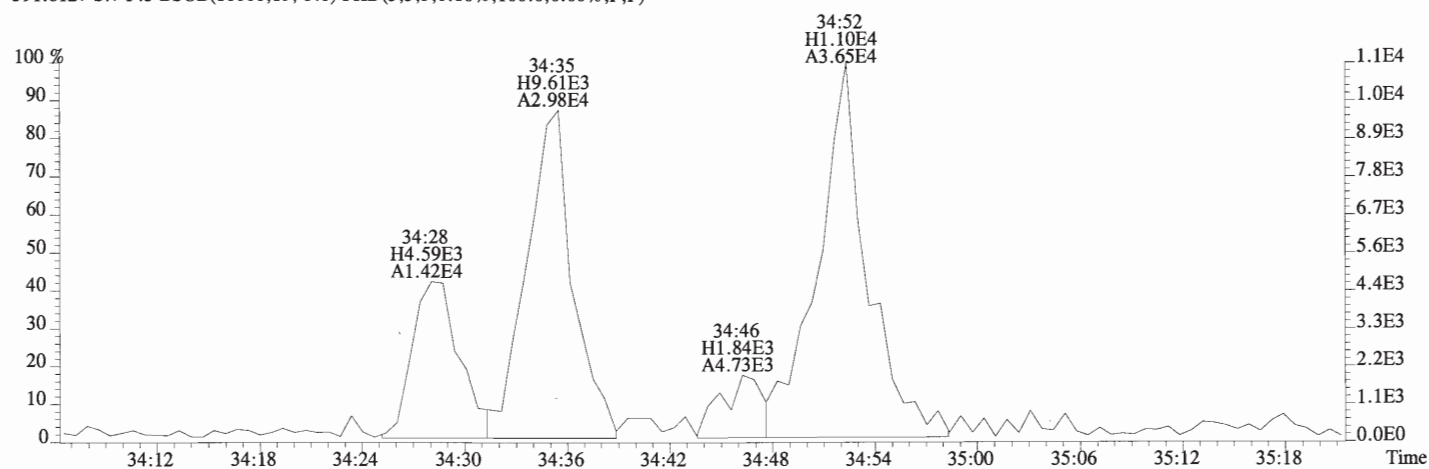
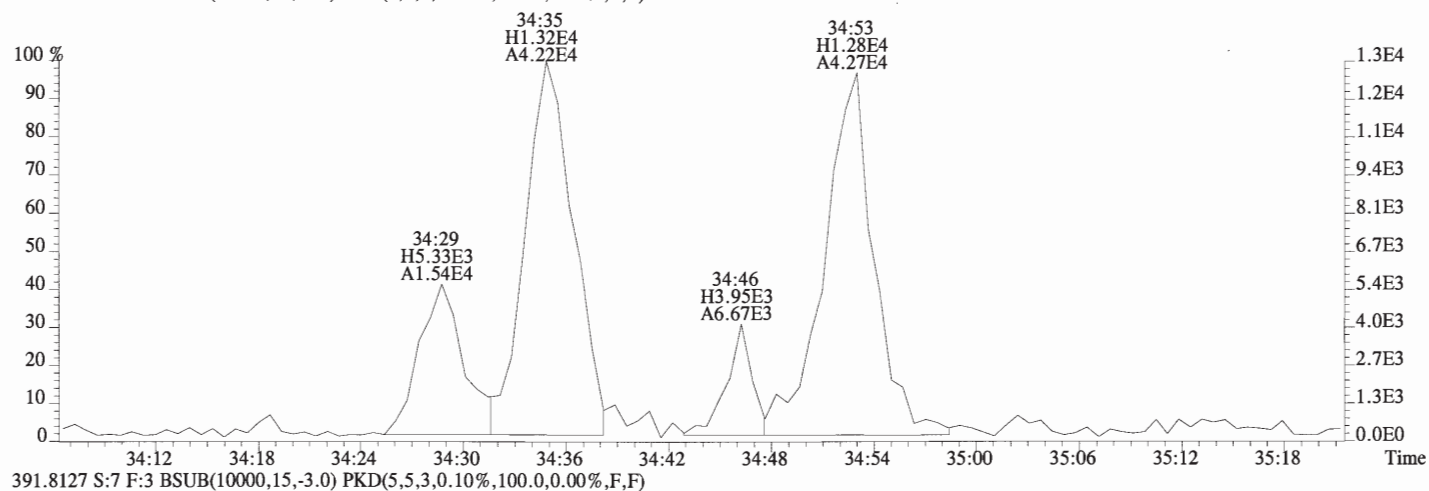
392.9760 S:7 F:3



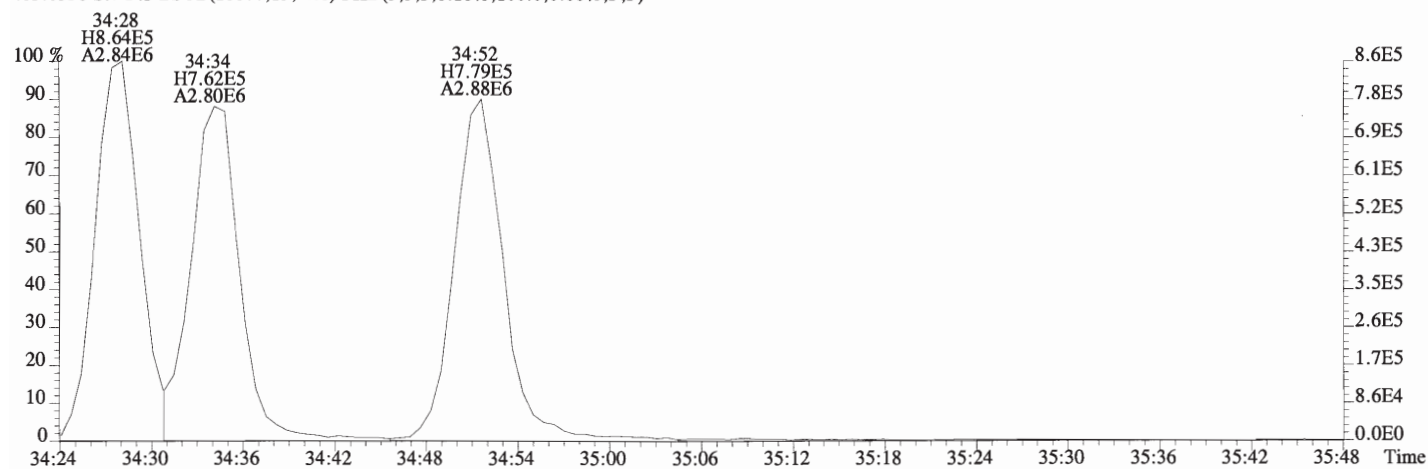
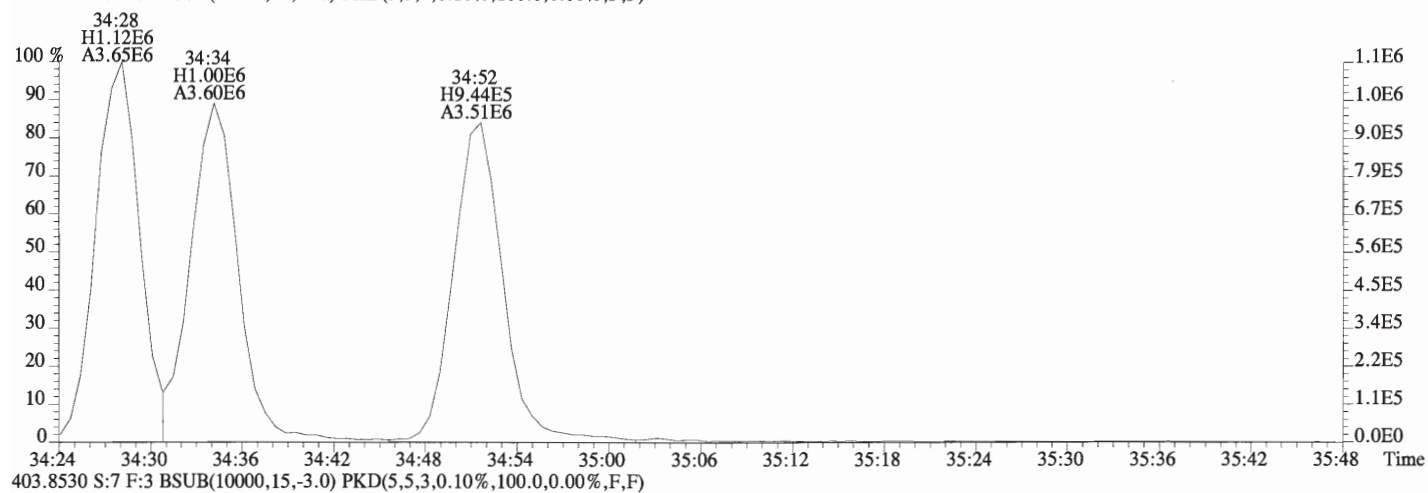
File:160712D1 #1-406 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
 389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



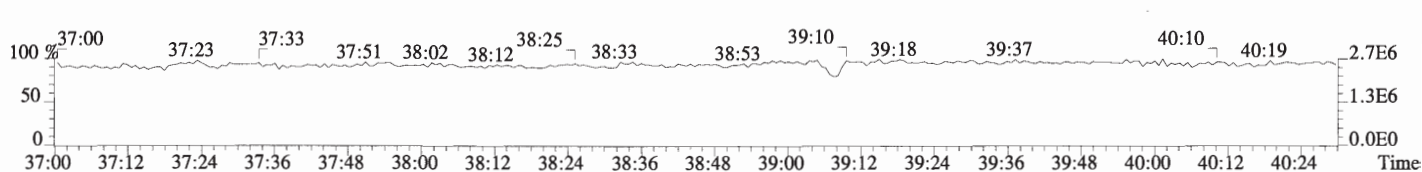
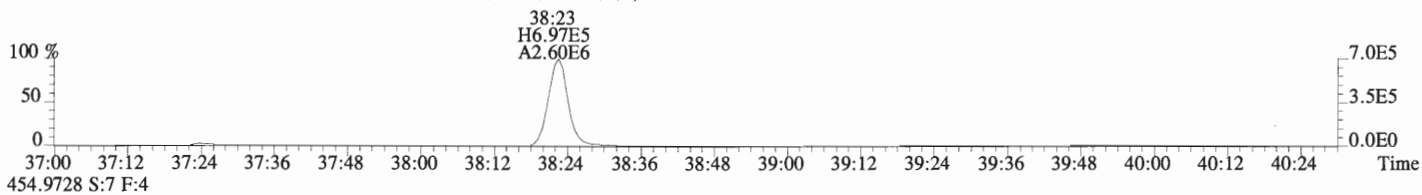
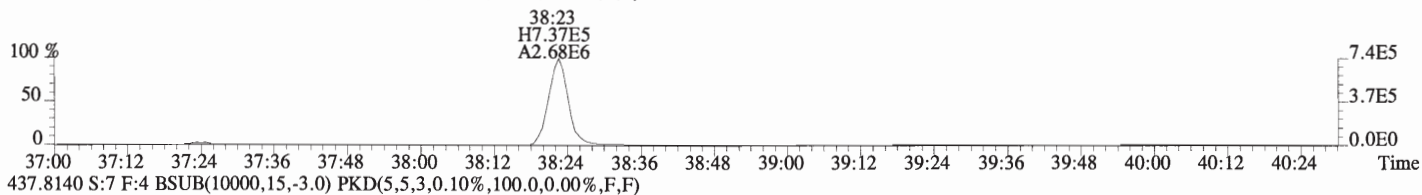
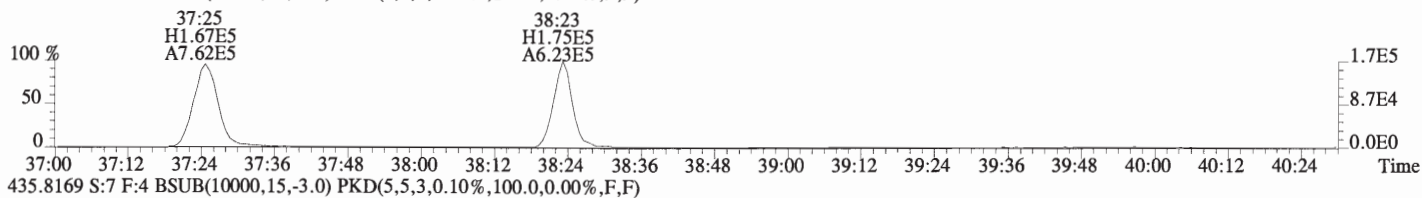
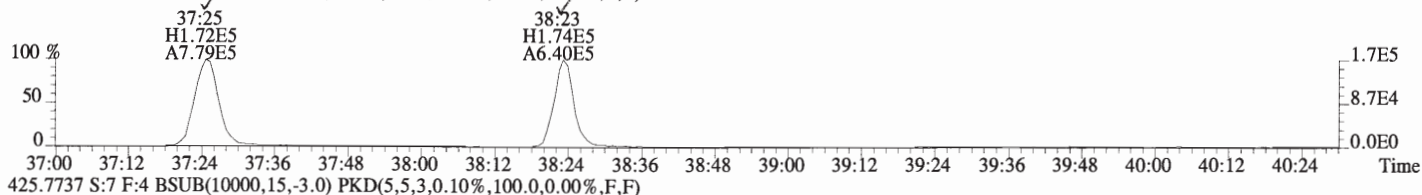
File:160712D1 #1-406 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
 389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



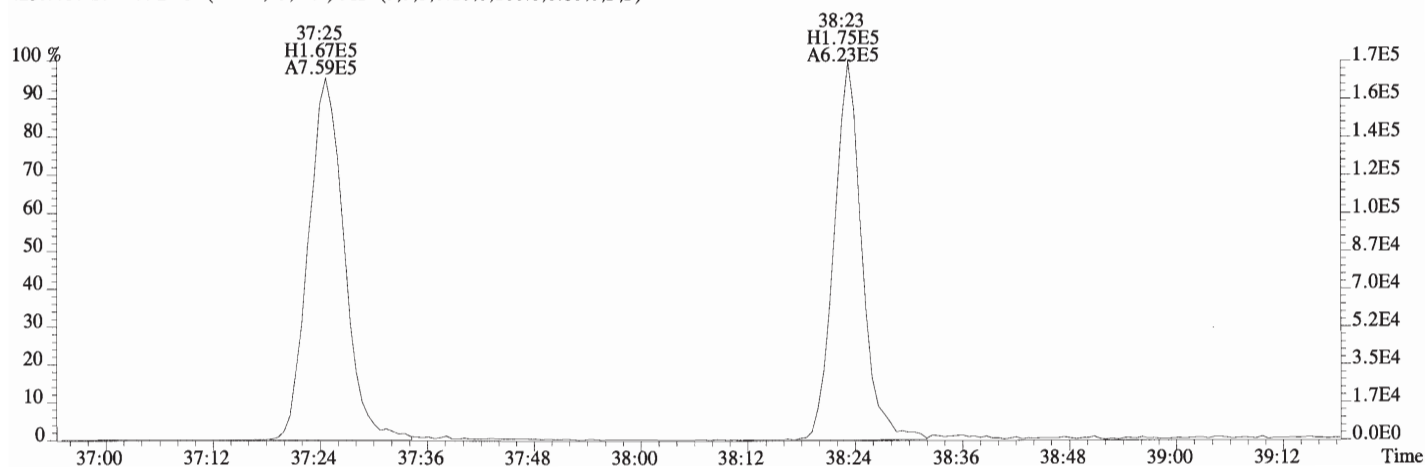
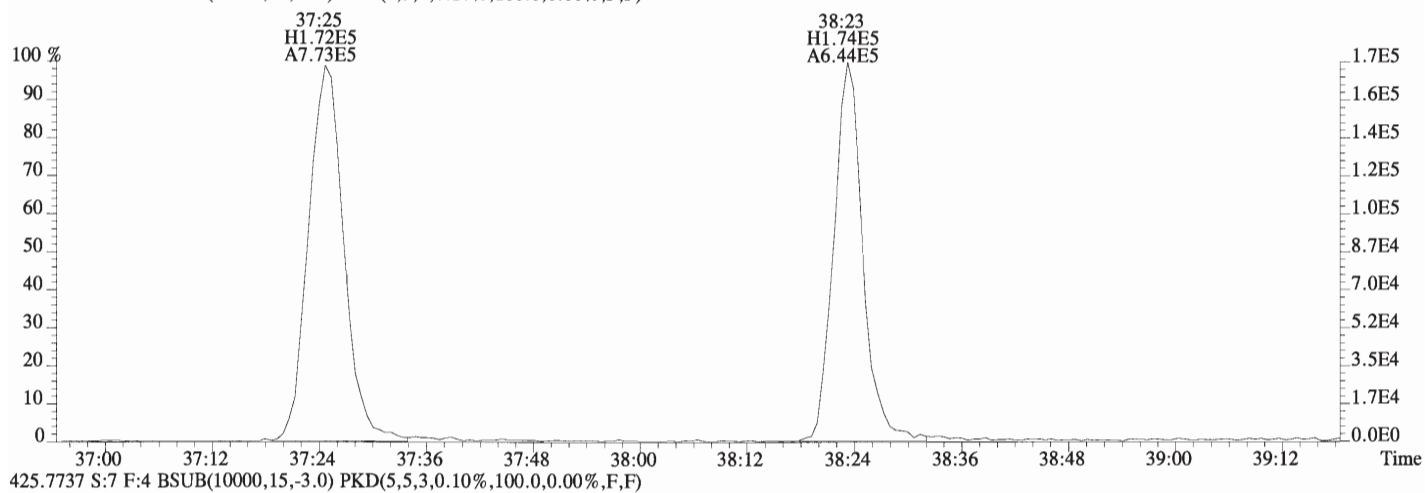
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 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
 401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



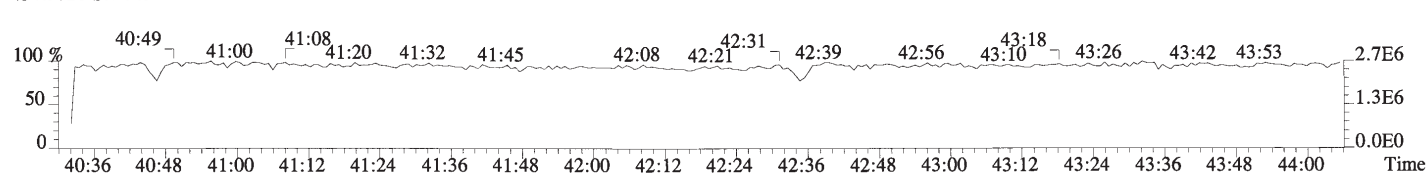
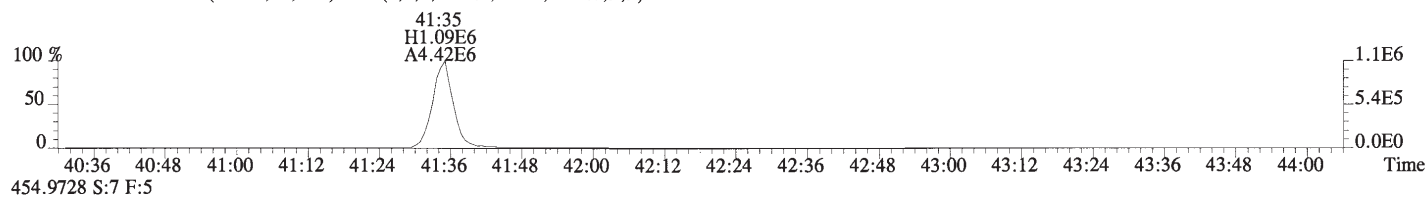
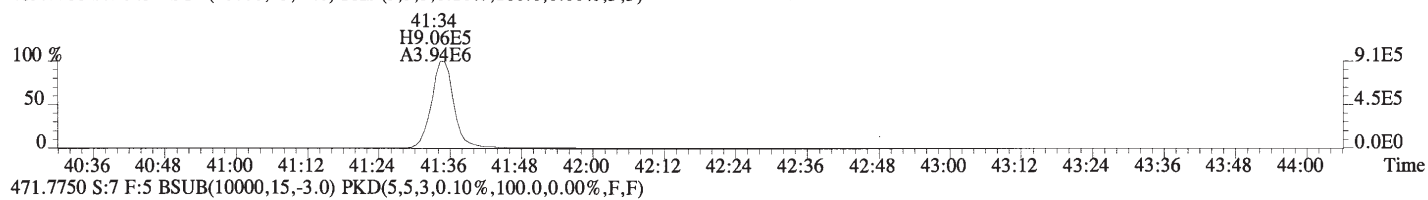
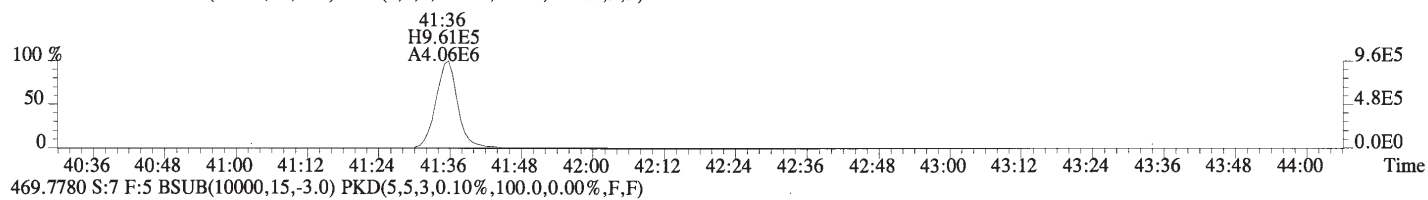
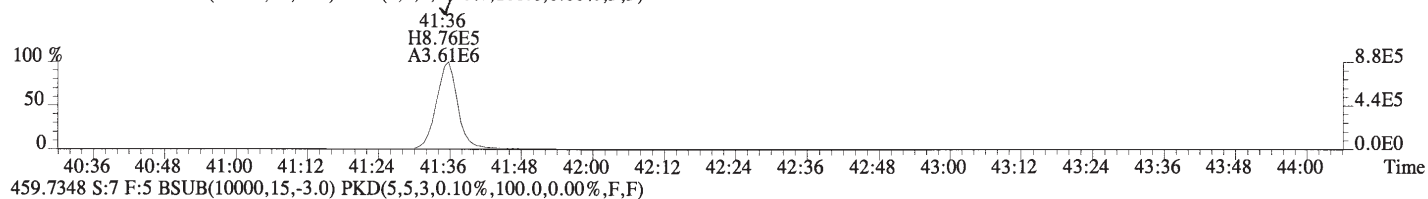
File:160712D1 #1-326 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



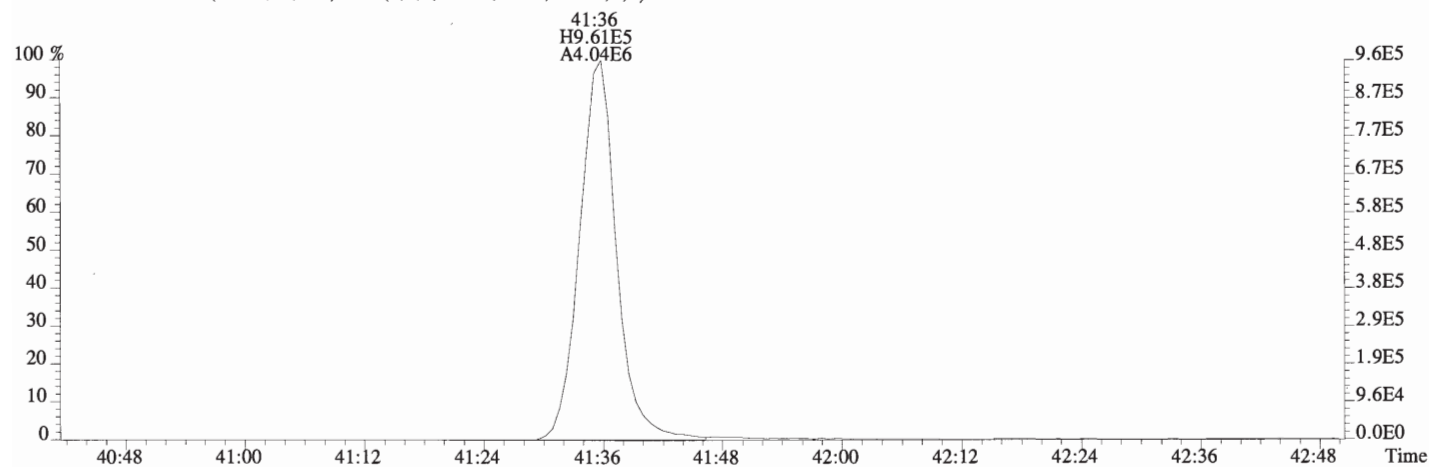
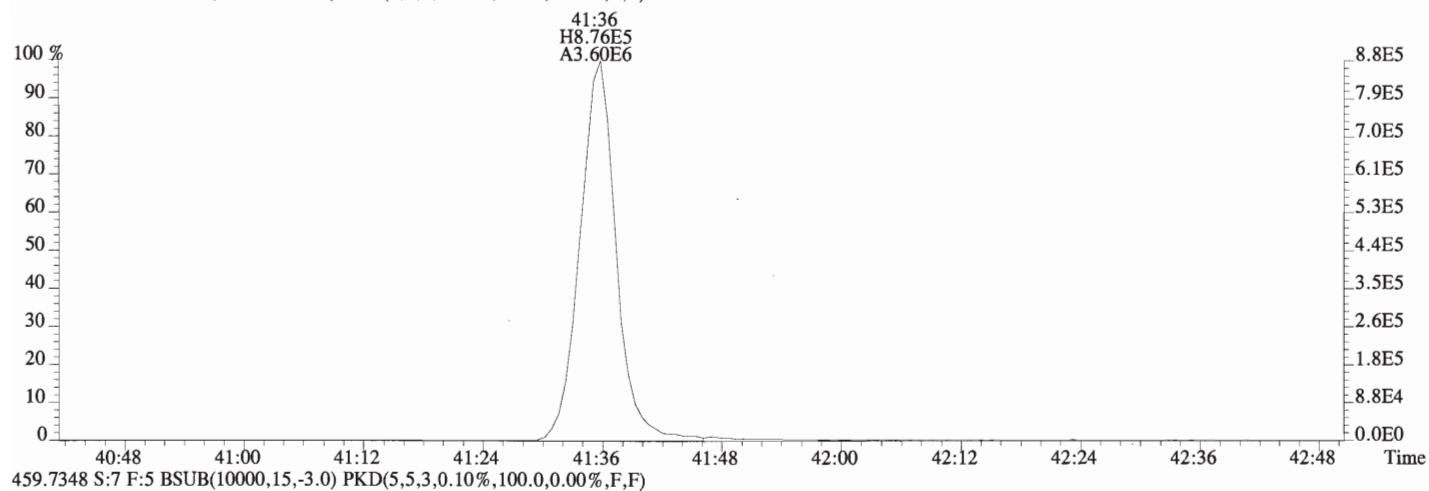
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Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



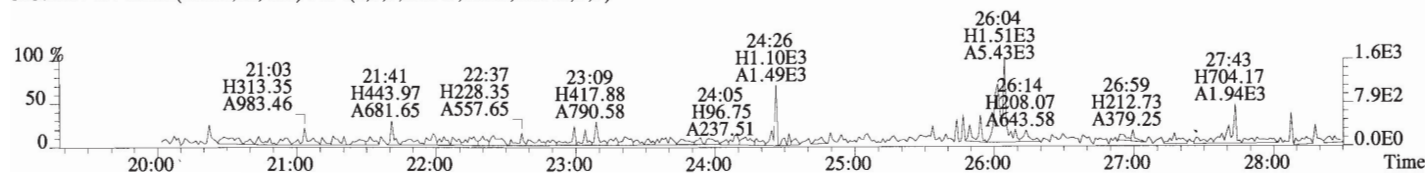
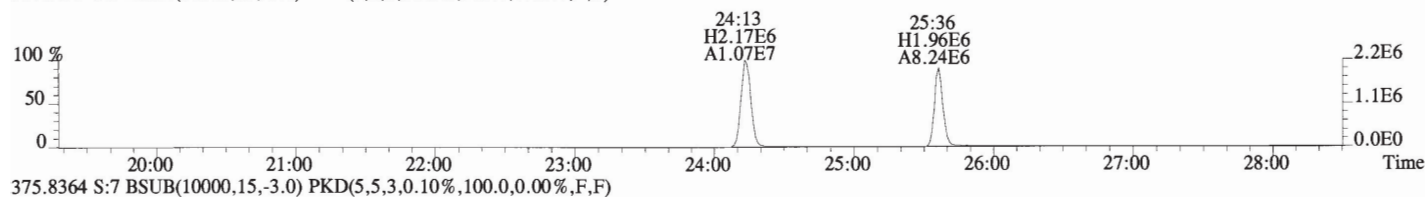
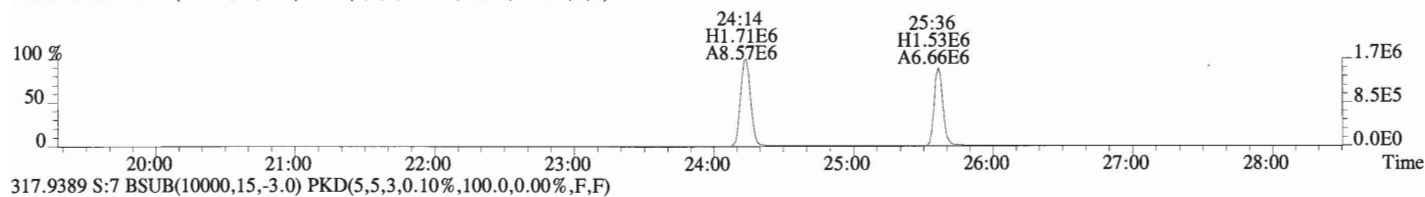
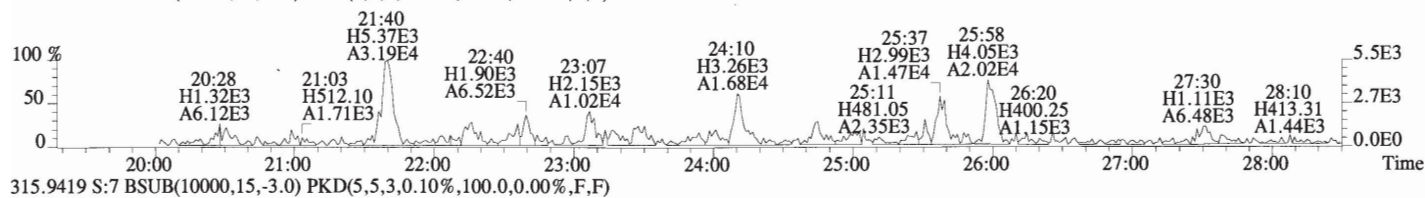
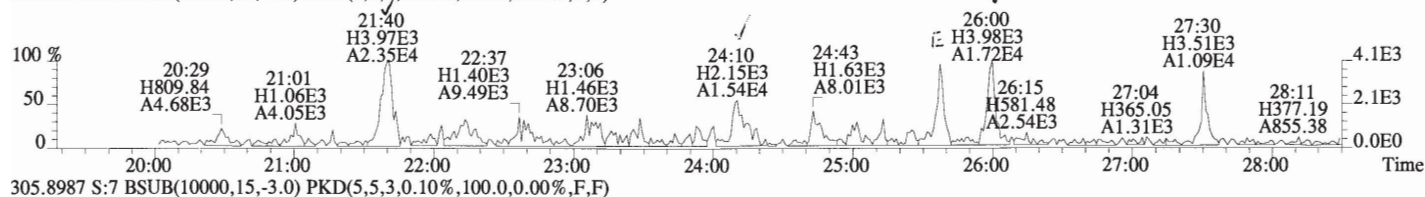
File:160712D1 #1-388 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F)



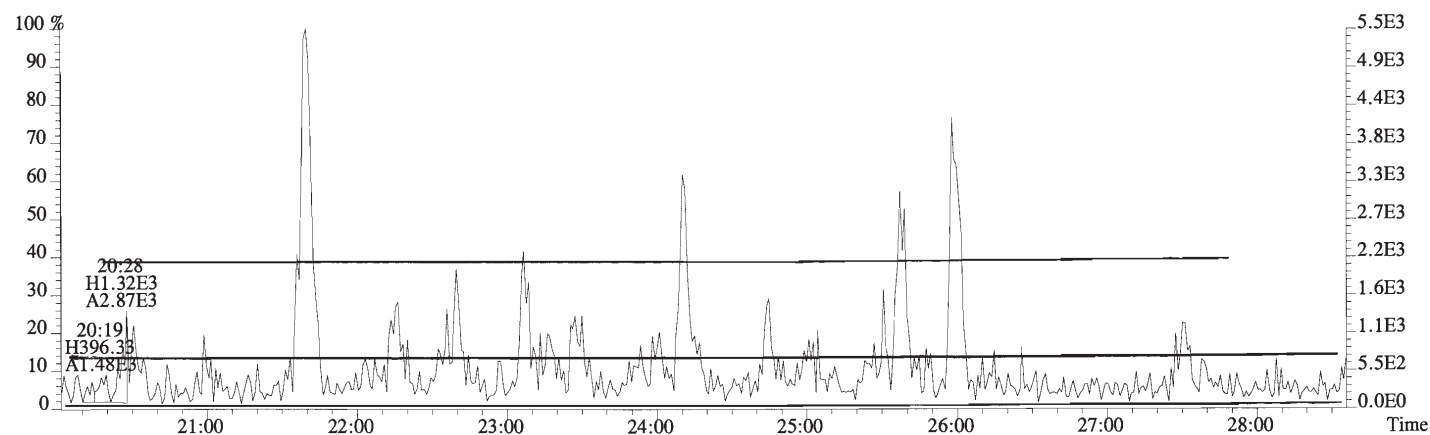
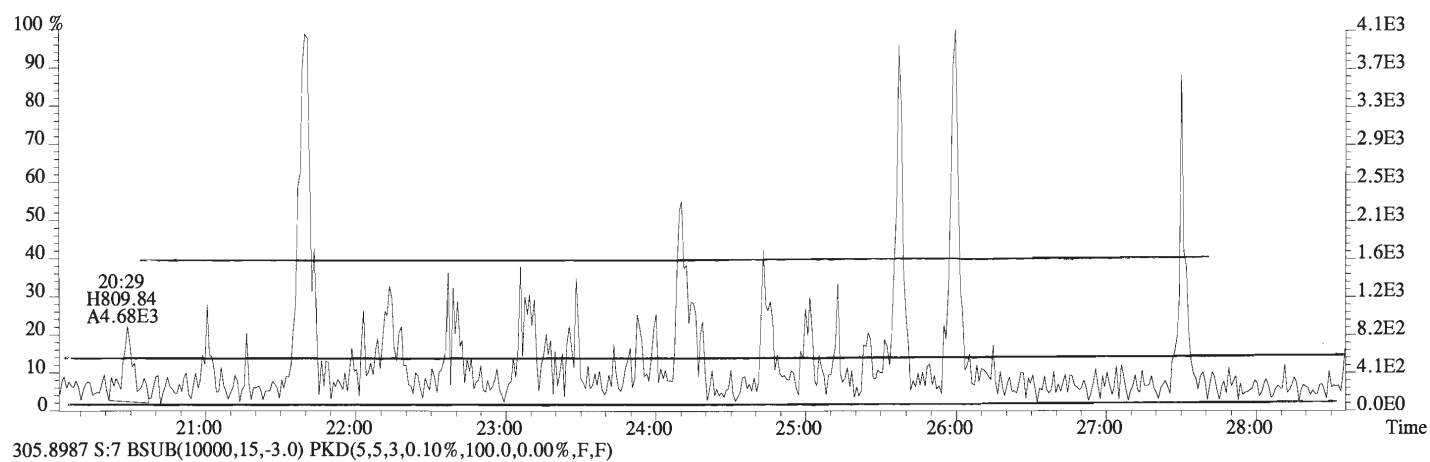
File:160712D1 #1-388 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



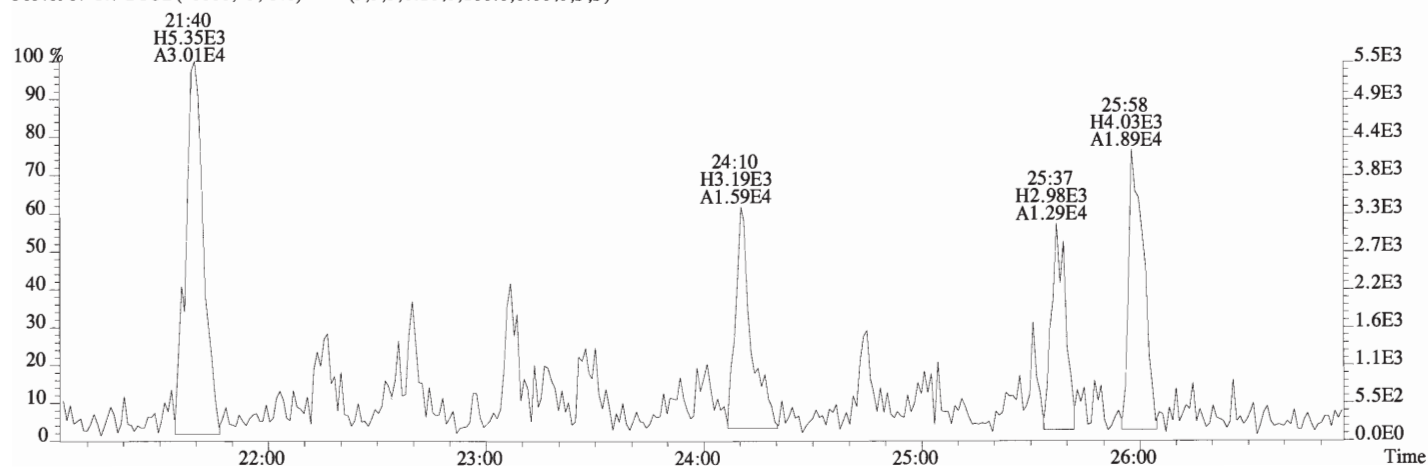
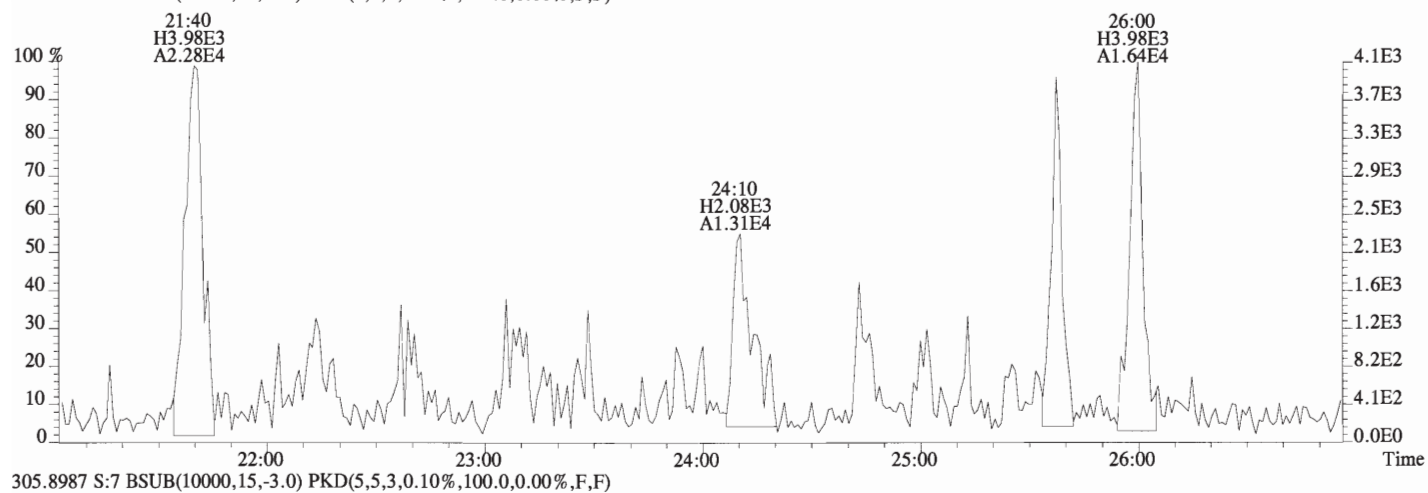
File:160712D1 #1-551 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
 303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



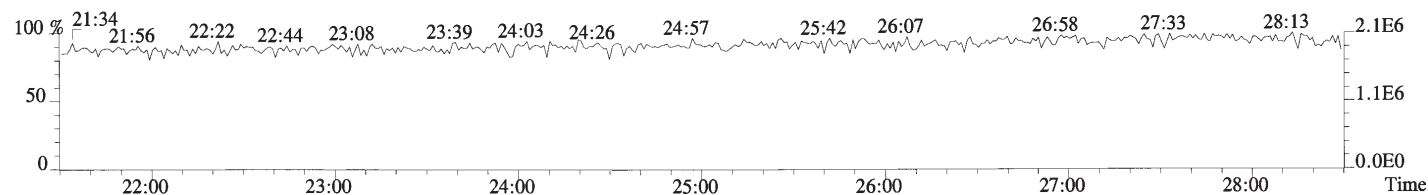
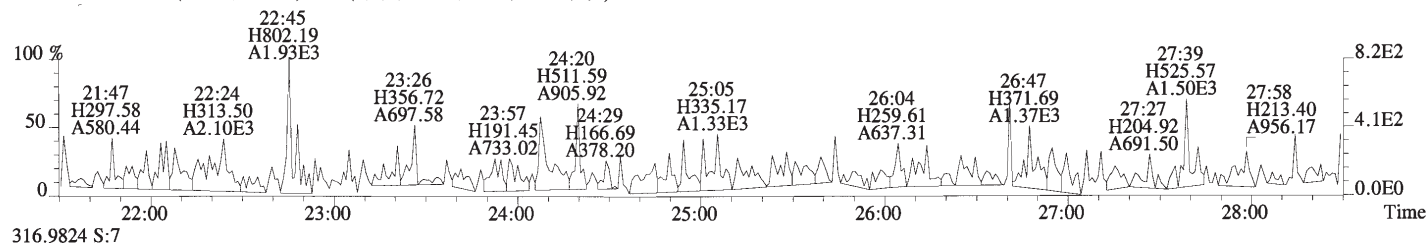
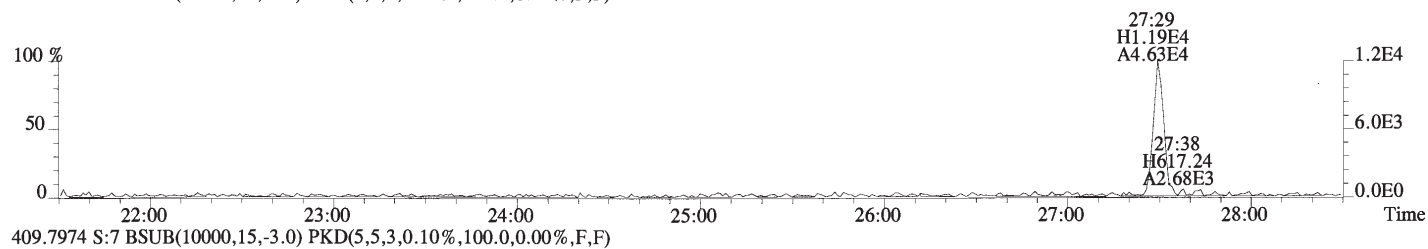
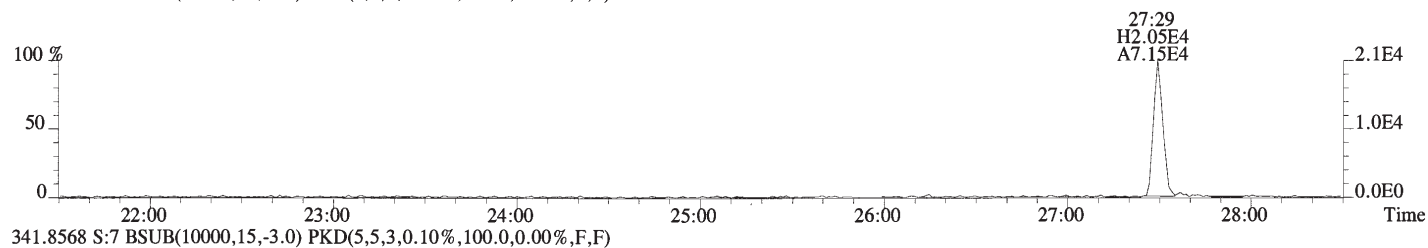
File:160712D1 #1-551 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



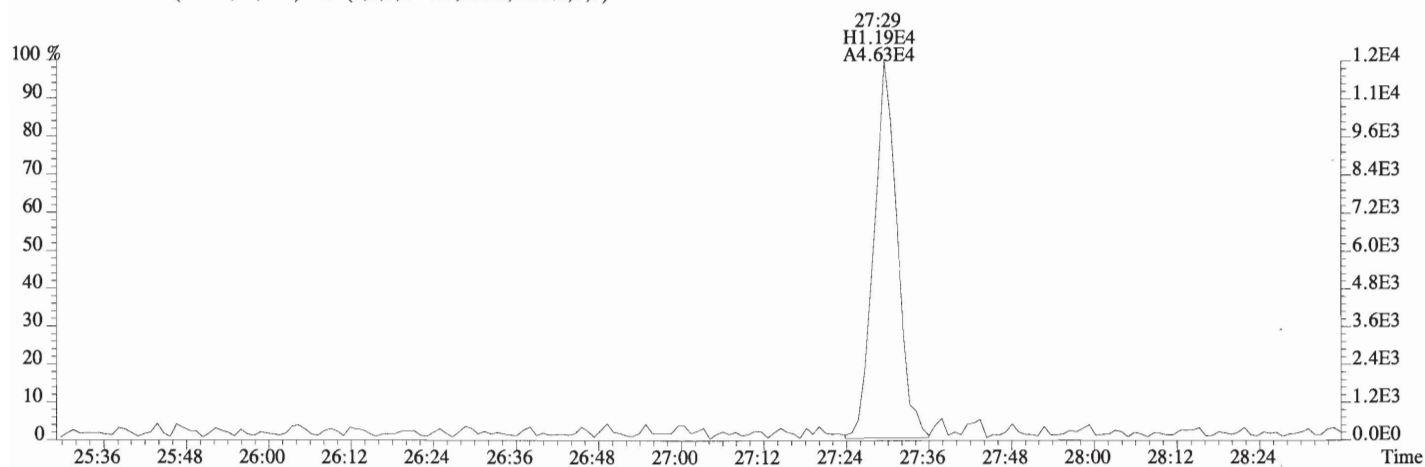
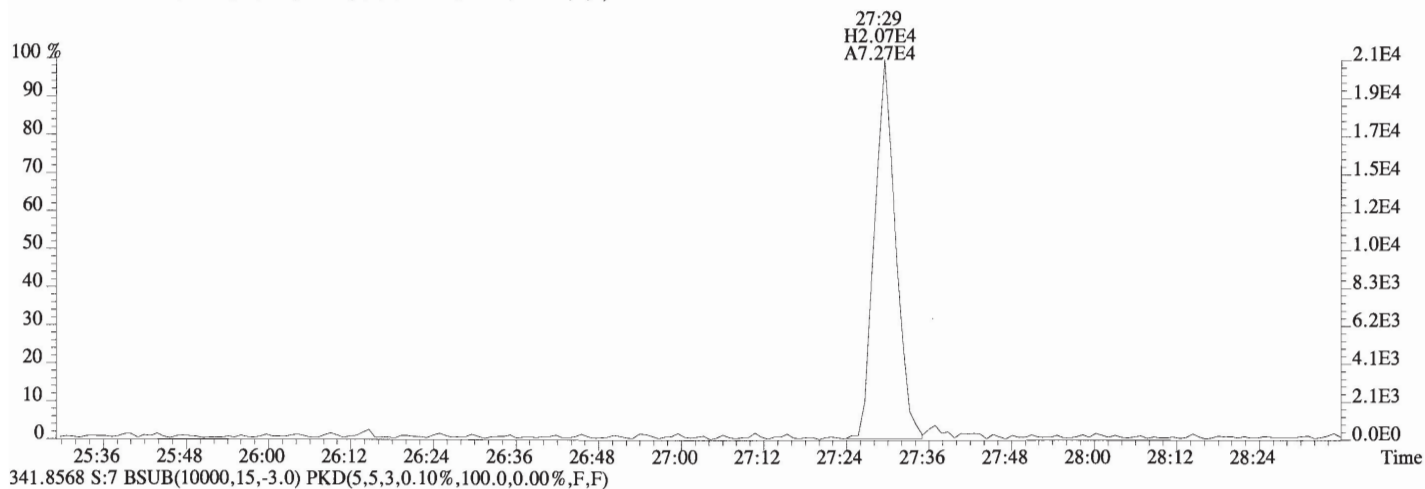
File:160712D1 #1-551 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
 303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



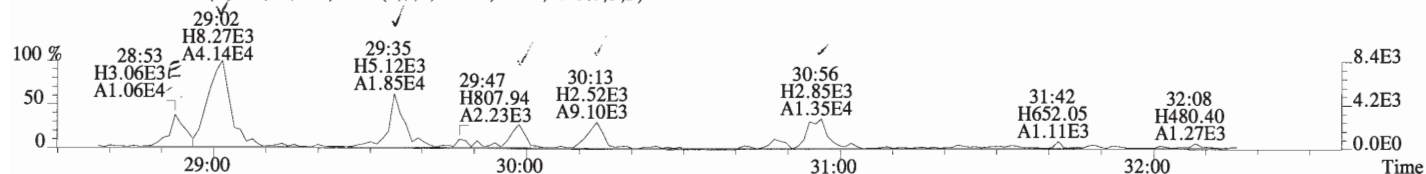
File:160712D1 #1-551 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



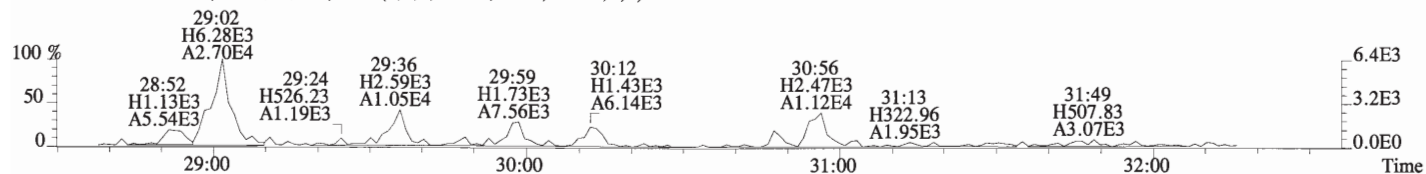
File:160712D1 #1-551 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



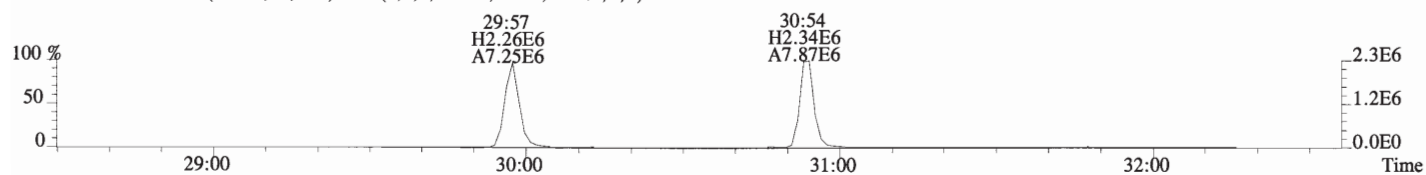
File:160712D1 #1-193 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



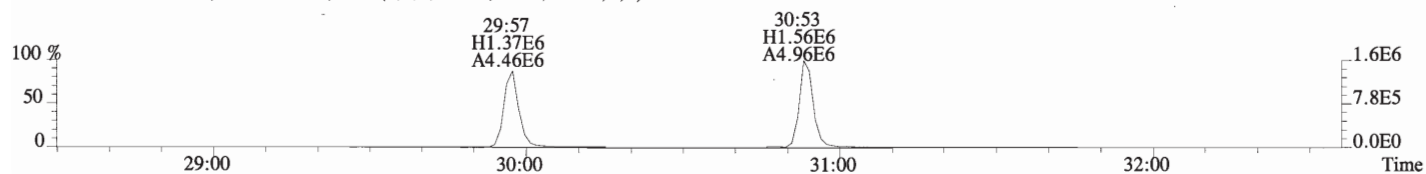
341.8568 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



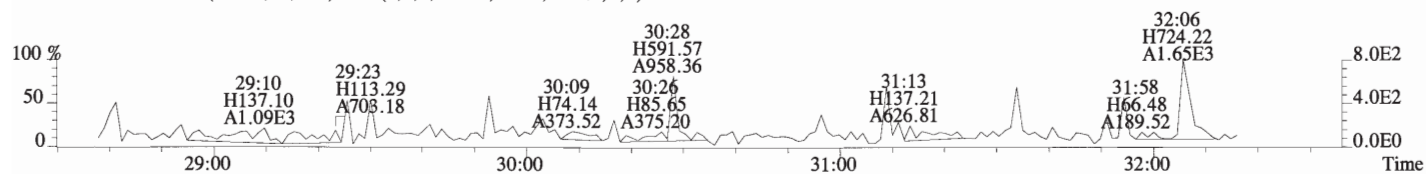
351.9000 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



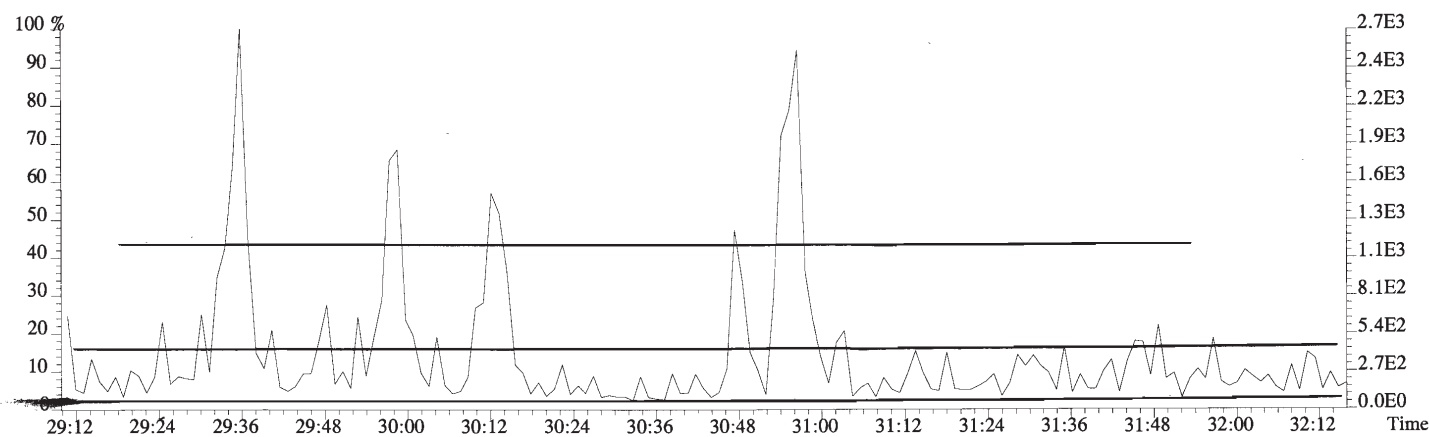
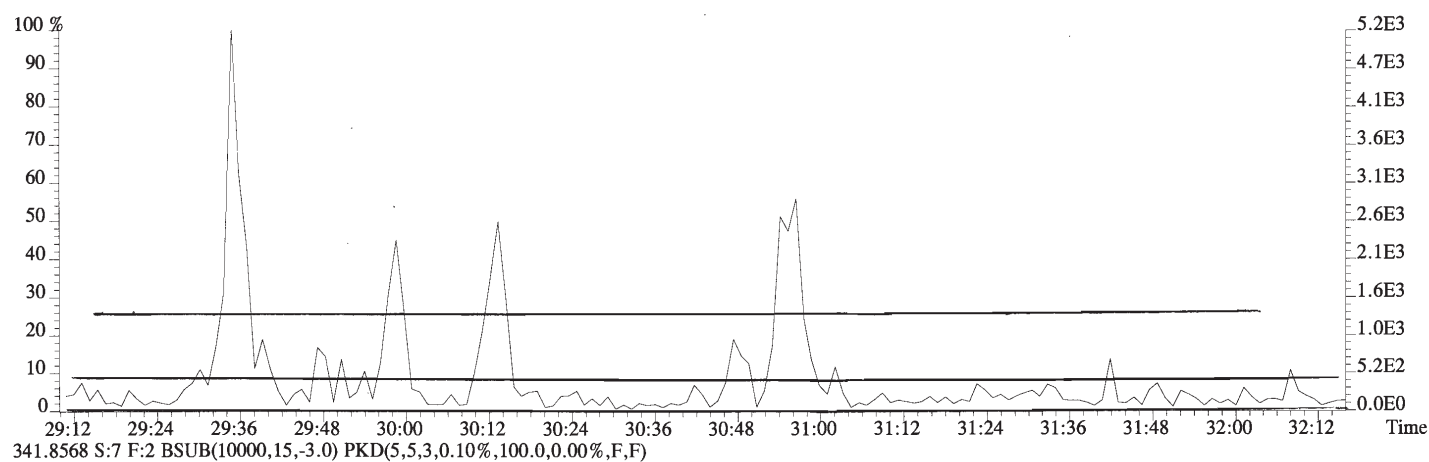
353.8970 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



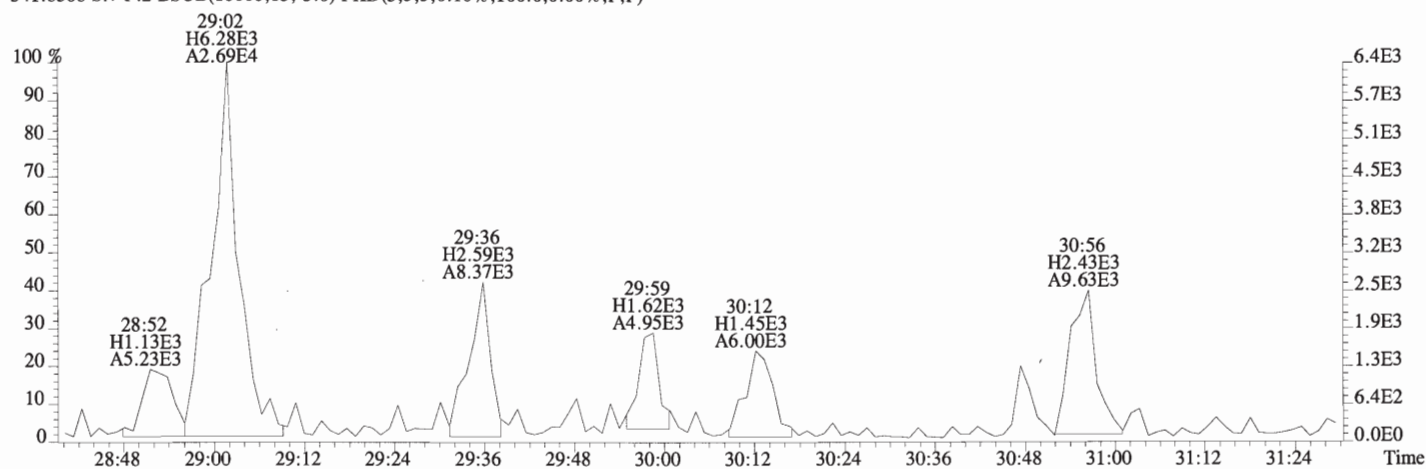
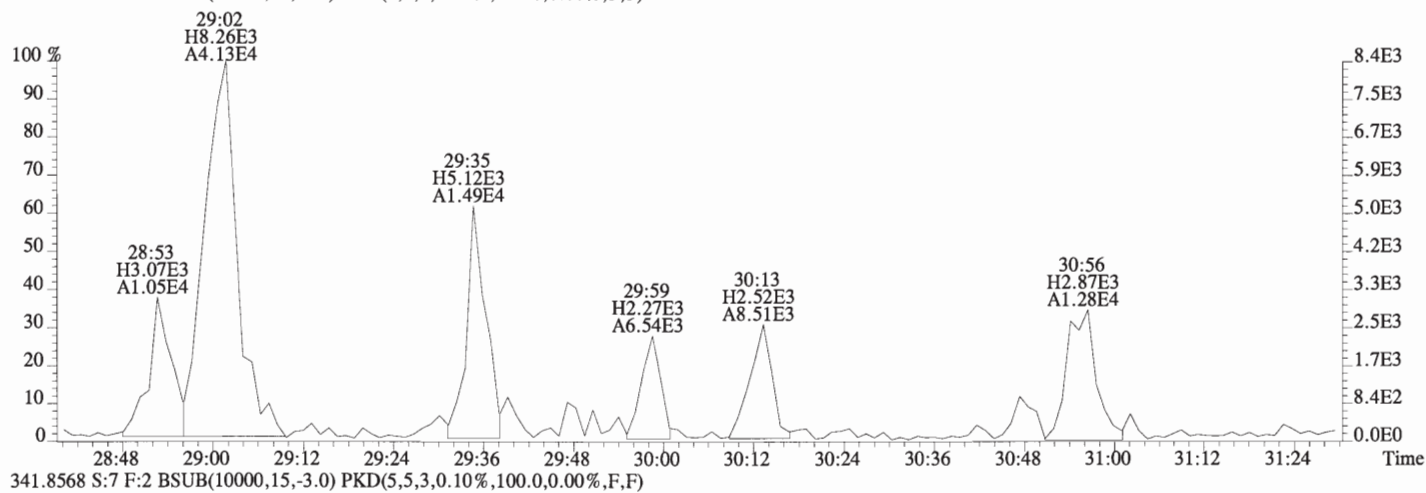
409.7974 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



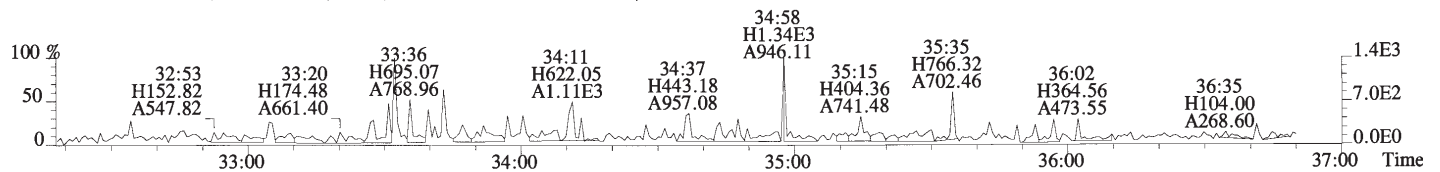
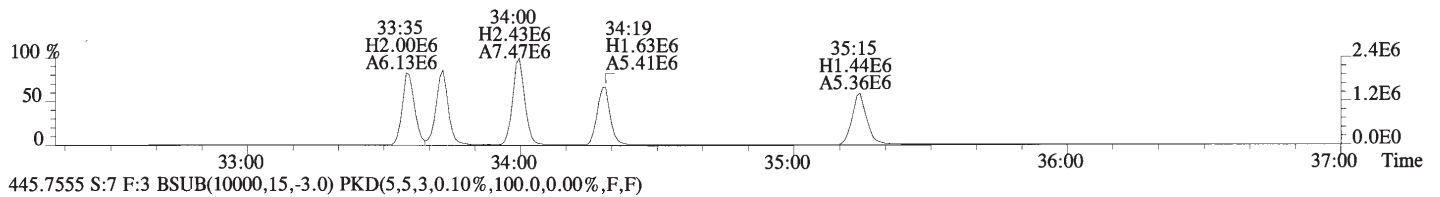
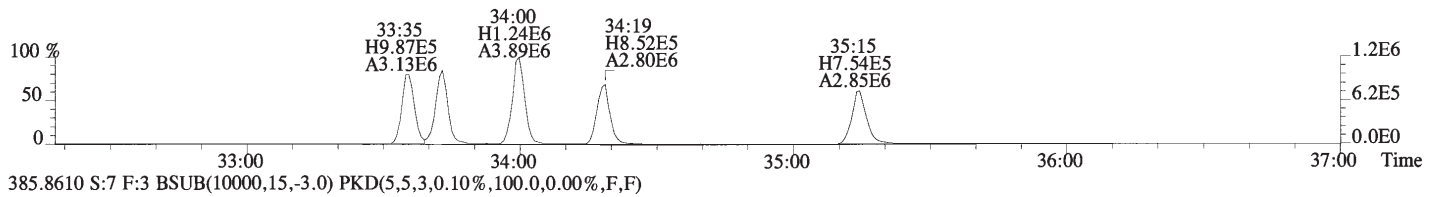
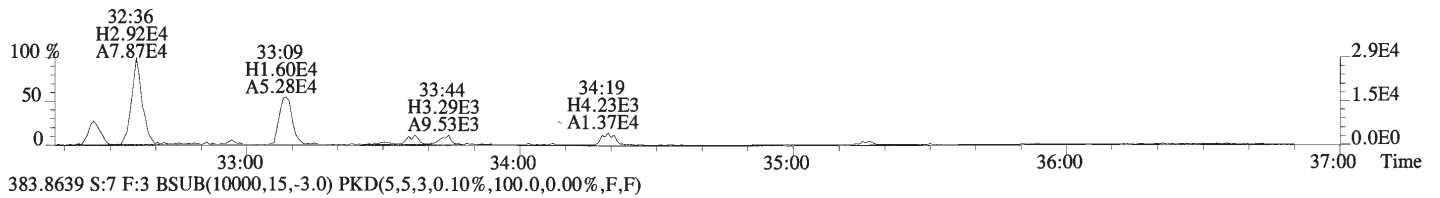
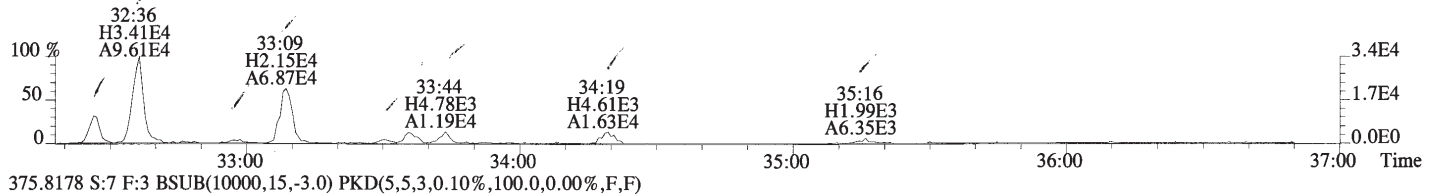
File:160712D1 #1-193 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



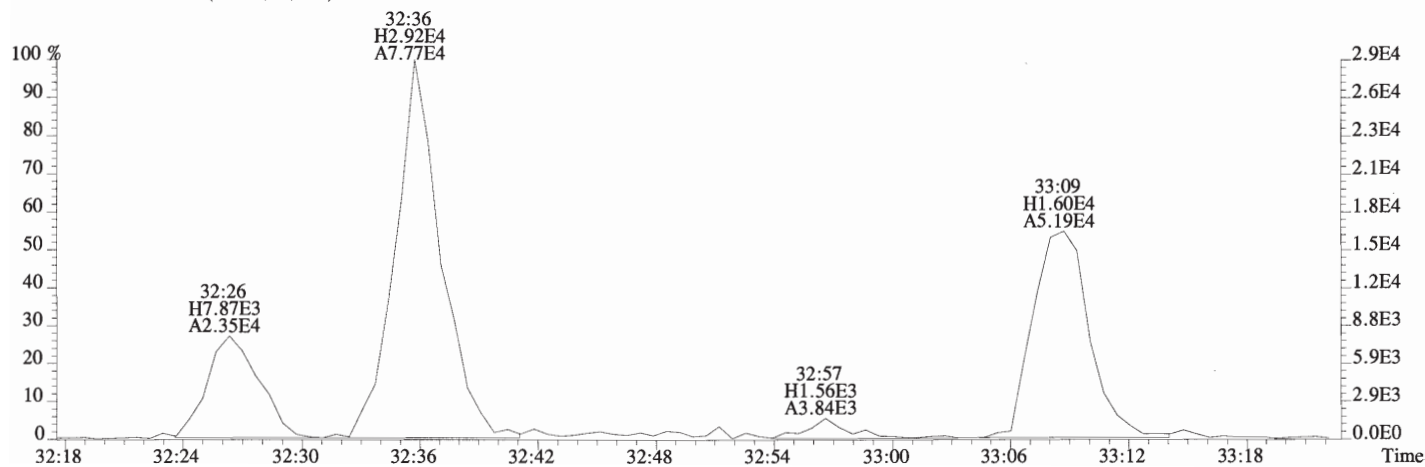
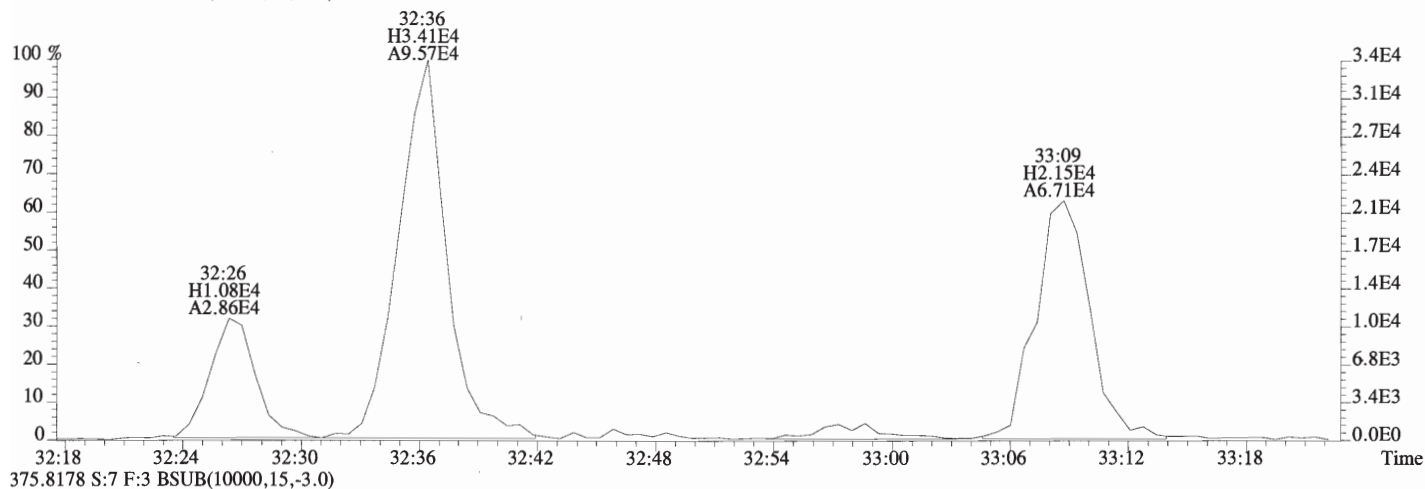
File:160712D1 #1-193 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



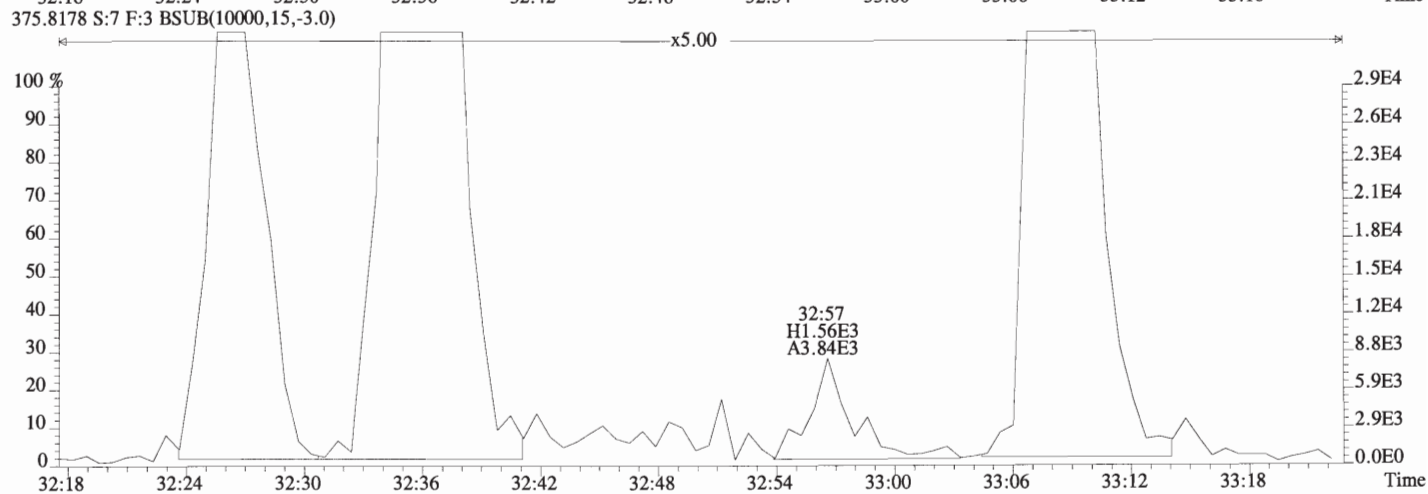
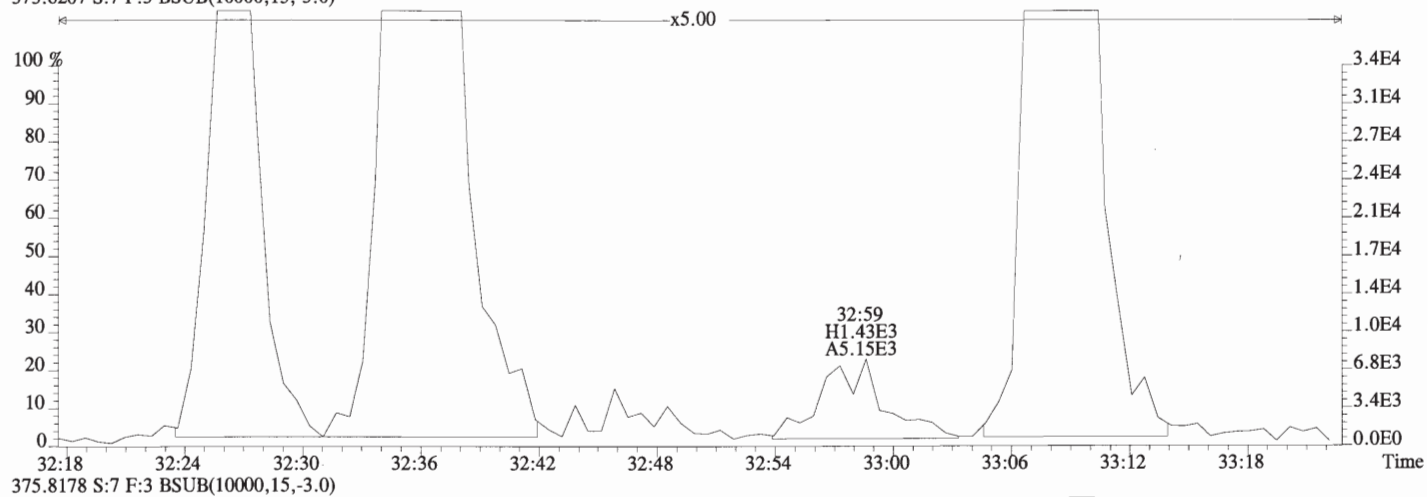
File:160712D1 #1-406 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



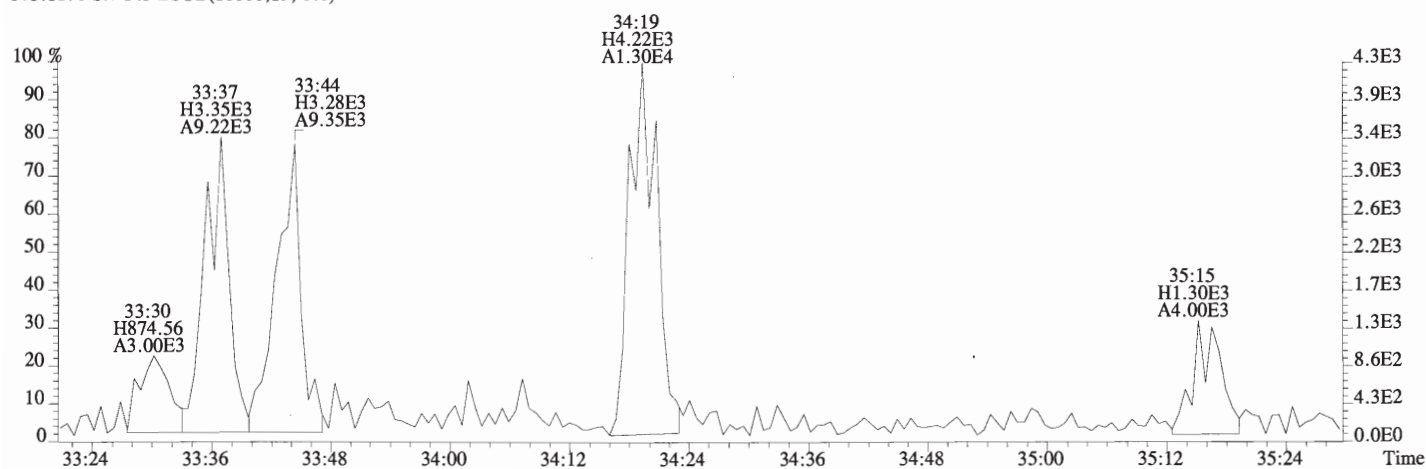
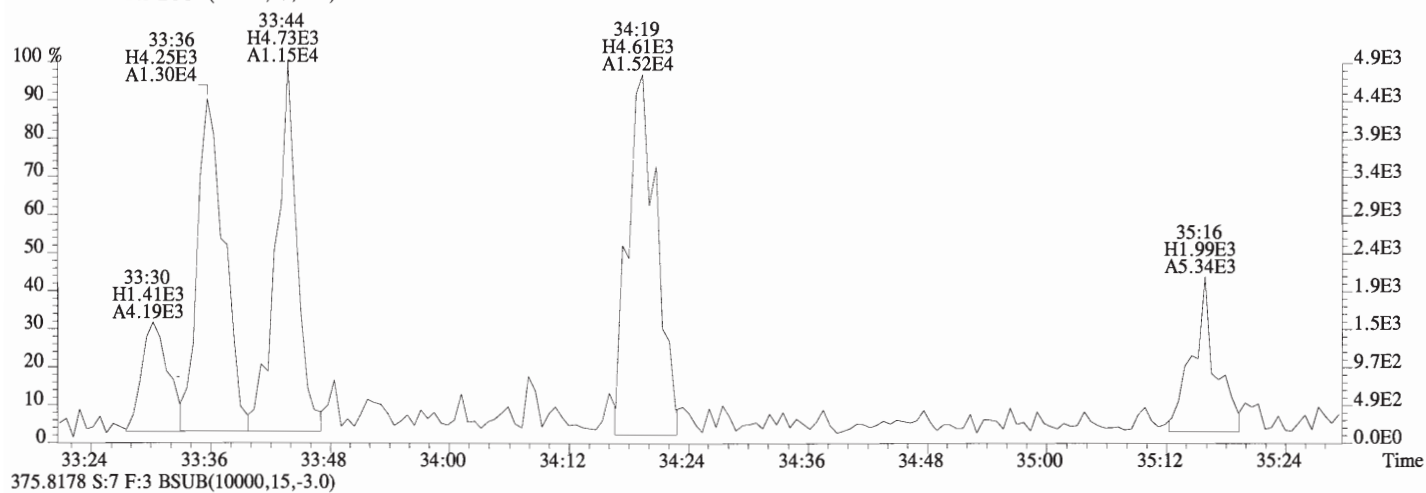
File:160712D1 #1-406 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
 373.8207 S:7 F:3 BSUB(10000,15,-3.0)



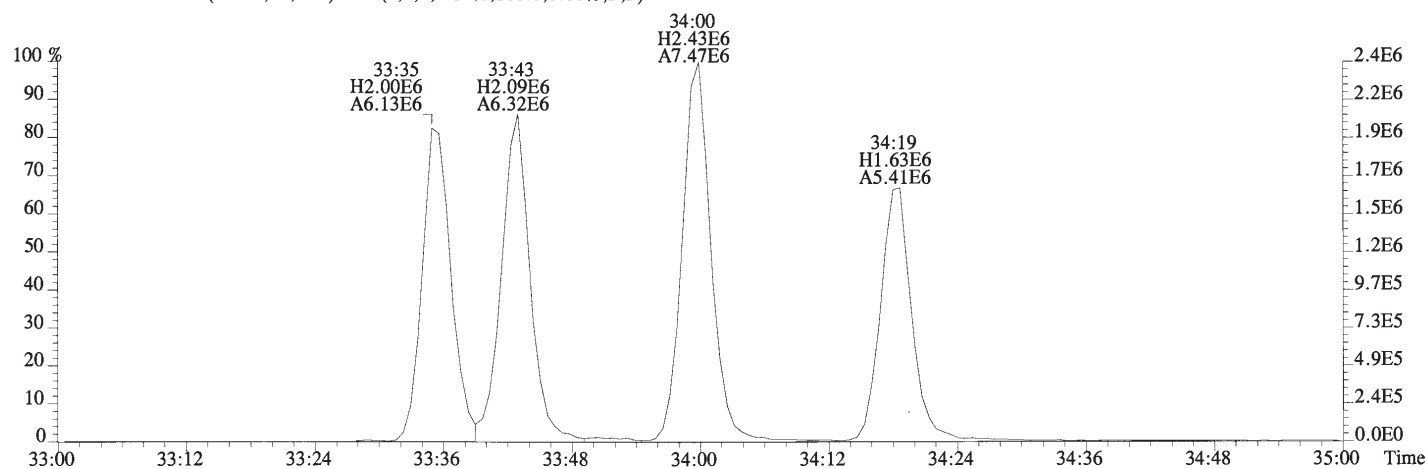
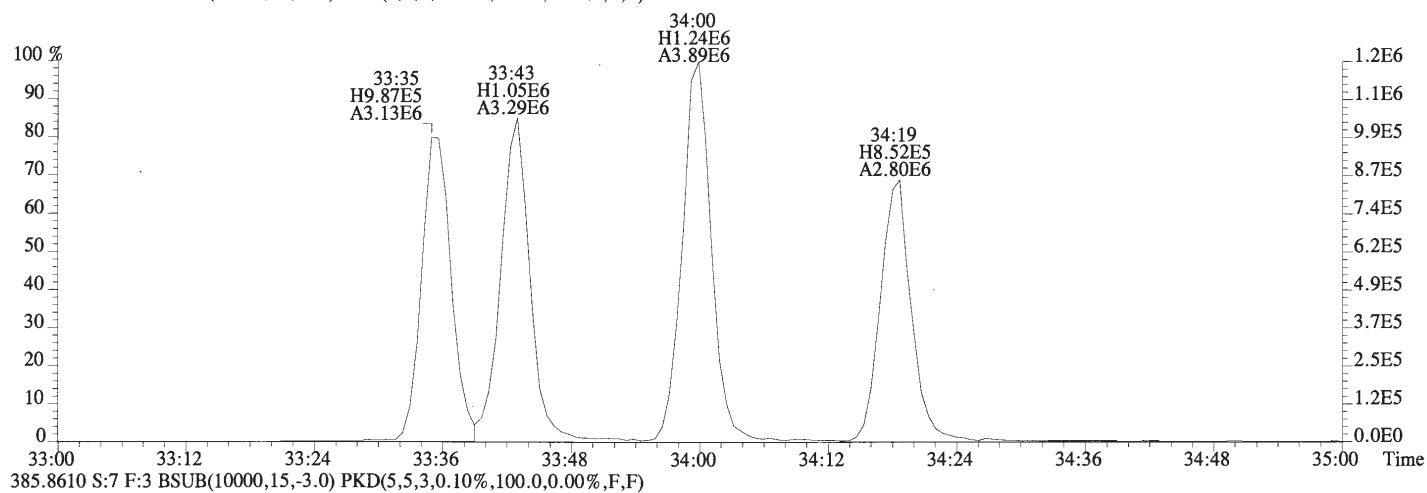
File:160712D1 #1-406 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0)



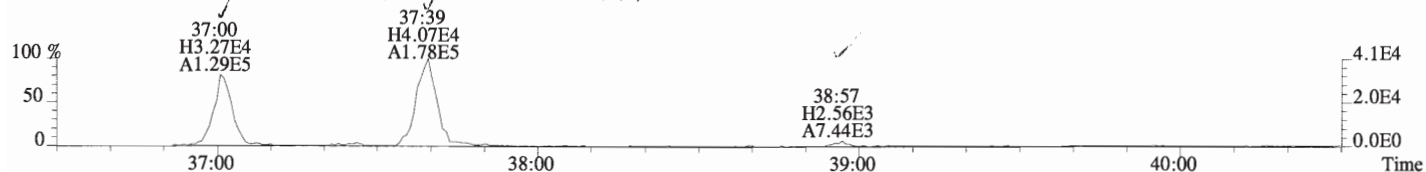
File:160712D1 #1-406 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
 373.8207 S:7 F:3 BSUB(10000,15,-3.0)



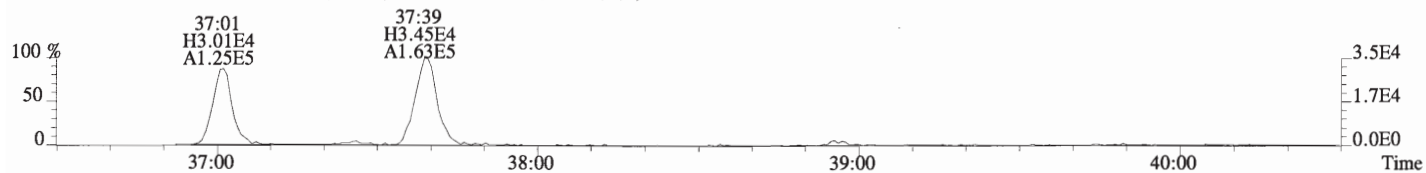
File:160712D1 #1-406 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



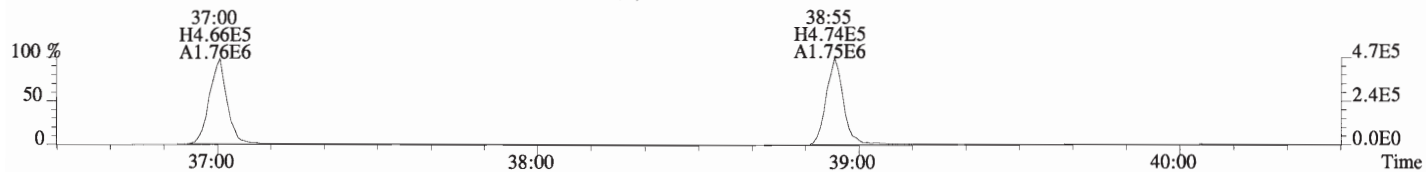
File:160712D1 #1-326 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



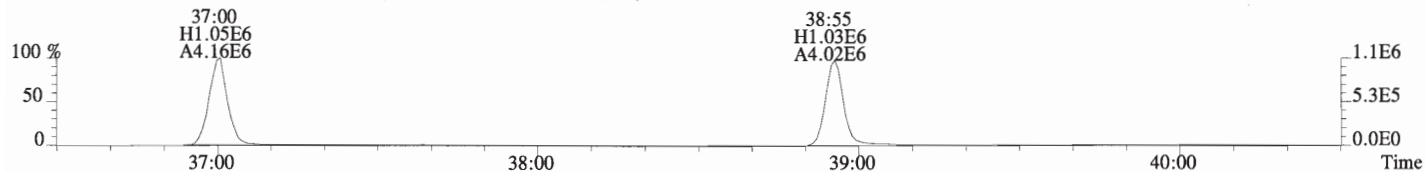
409.7788 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



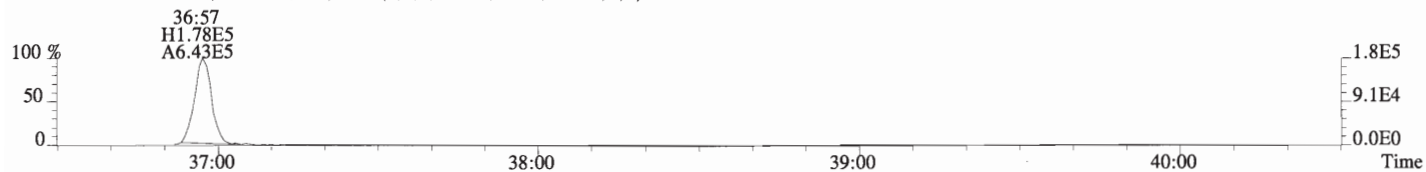
417.8253 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



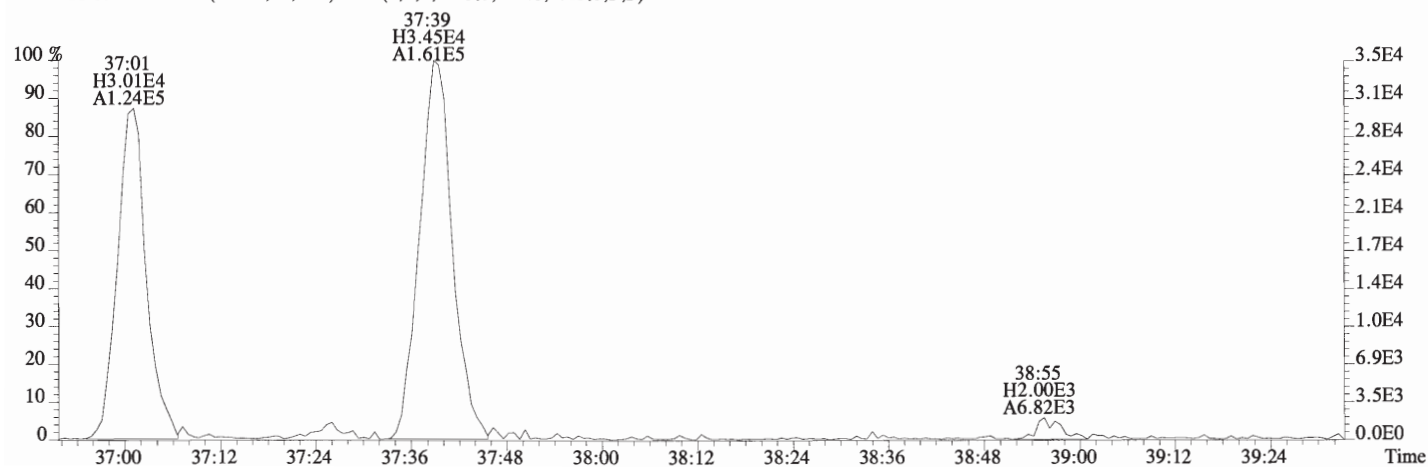
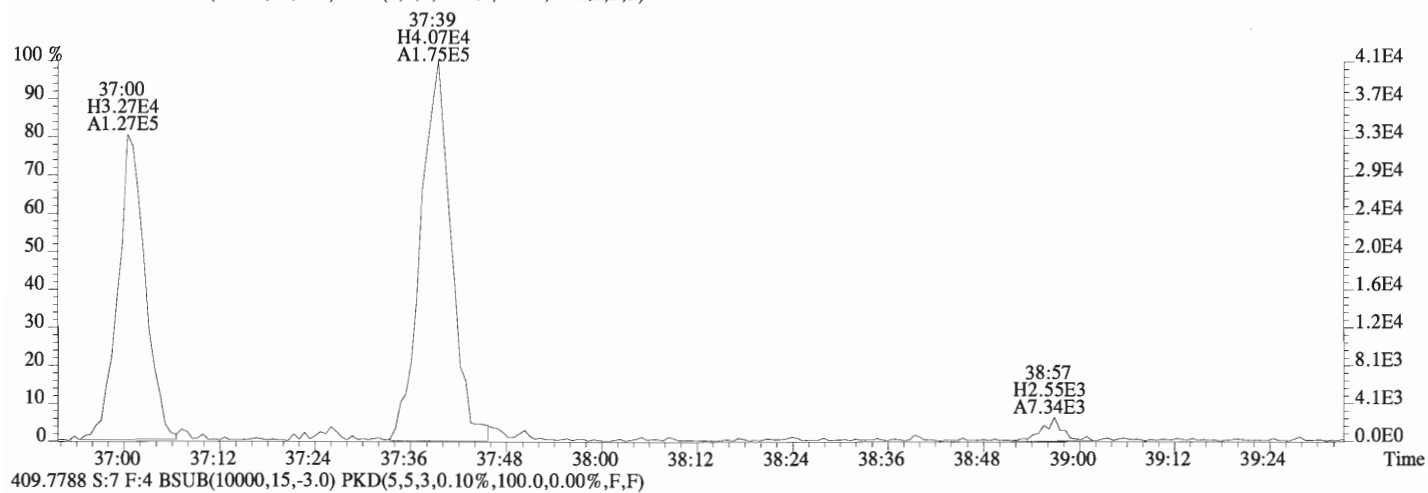
419.8220 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



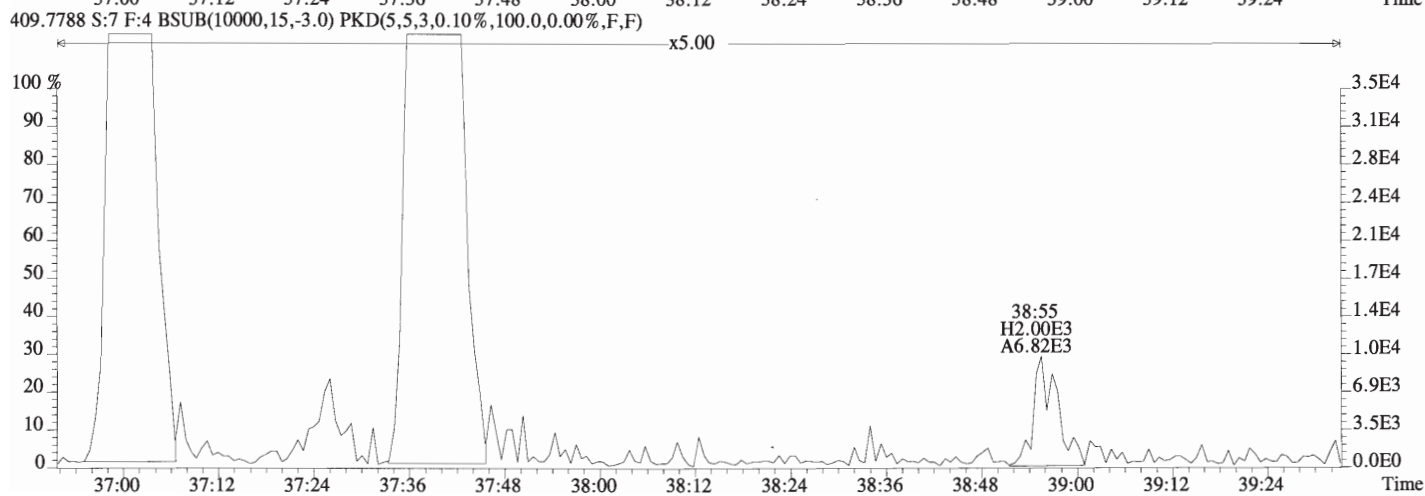
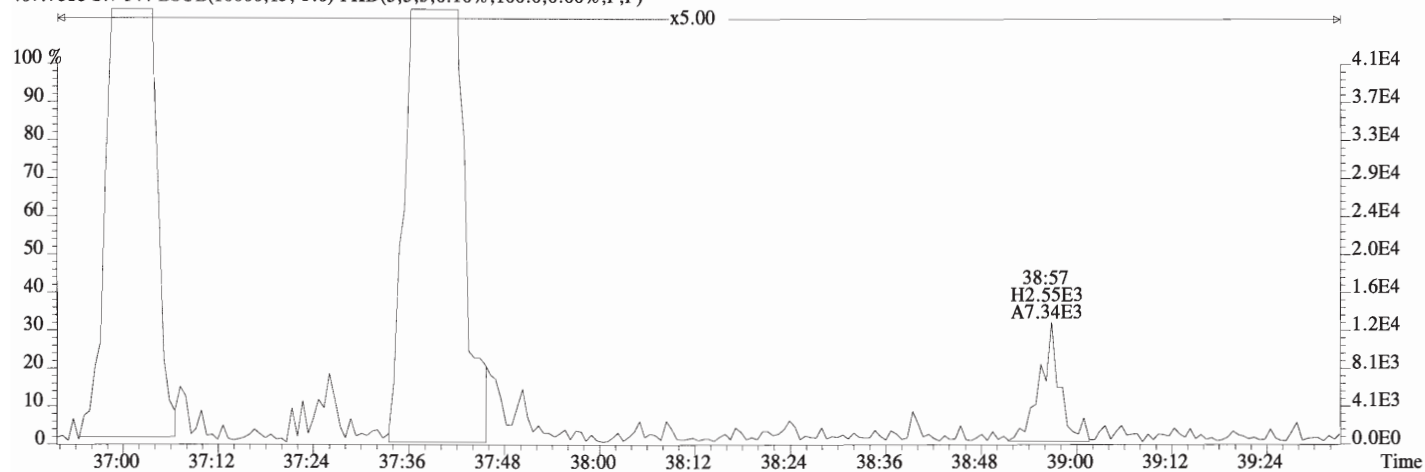
479.7165 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



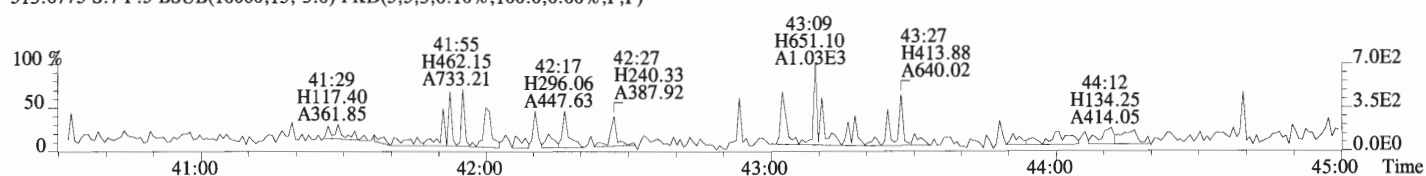
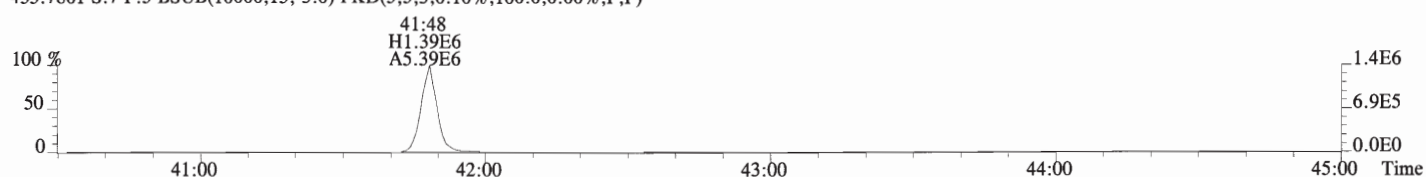
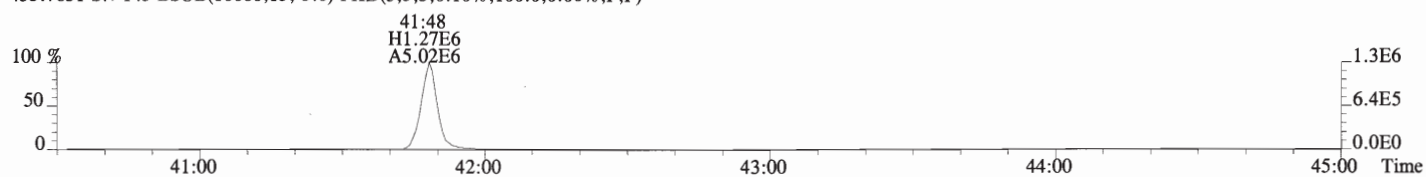
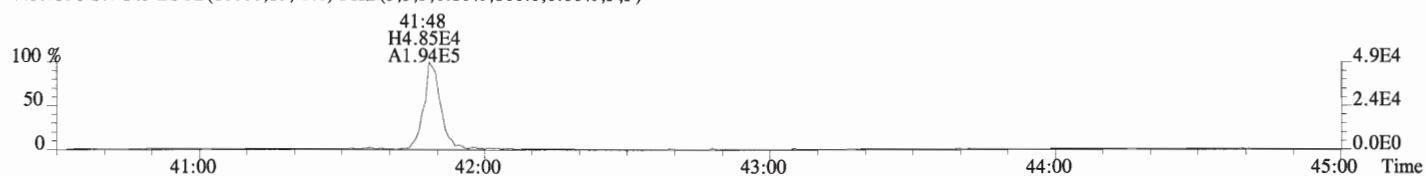
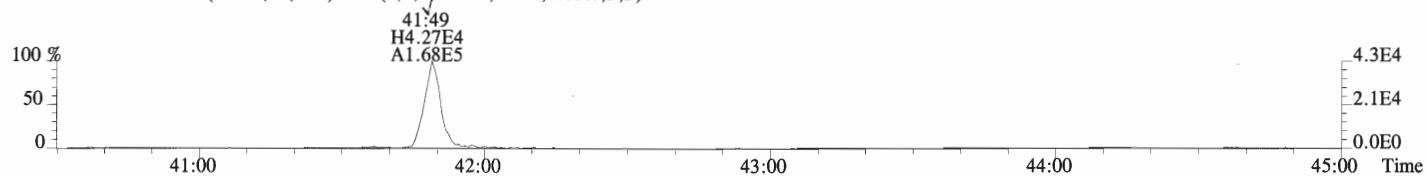
File:160712D1 #1-326 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
 407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



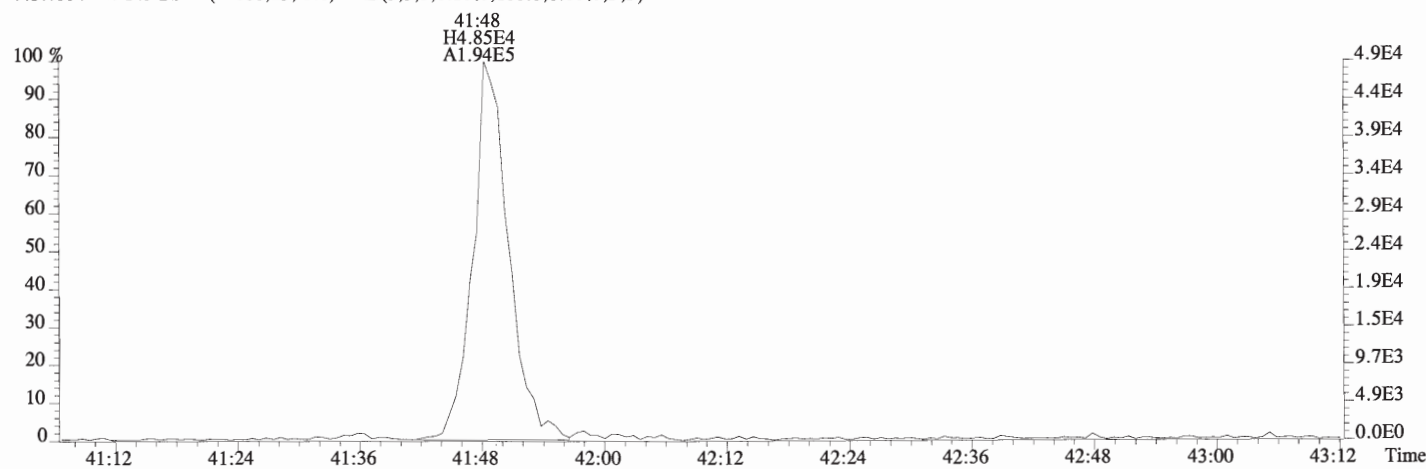
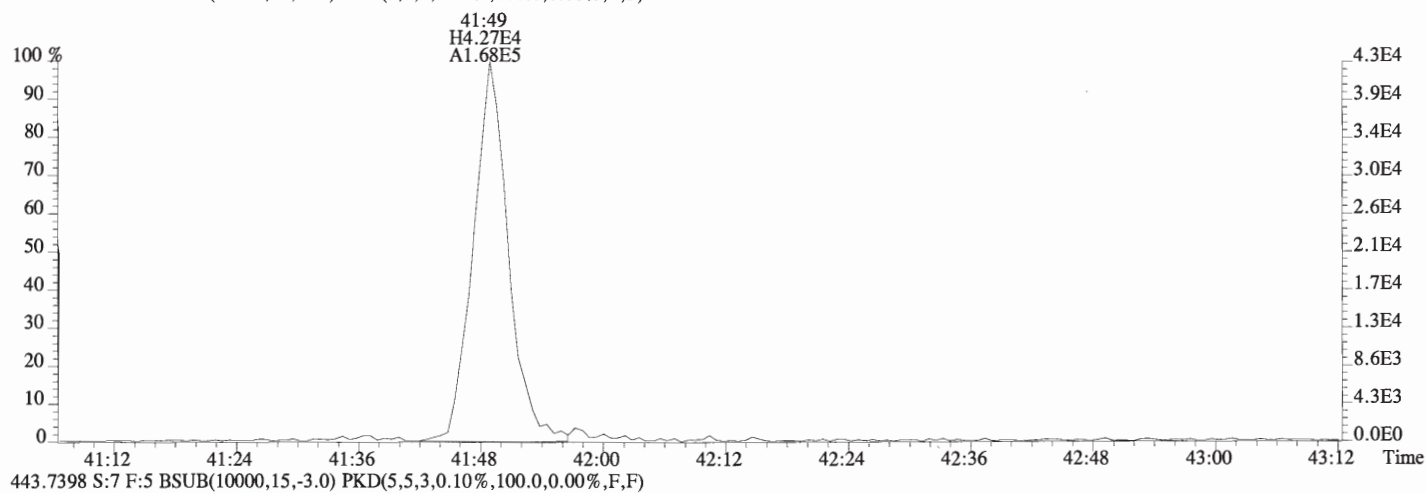
File:160712D1 #1-326 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160712D1 #1-388 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
 441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160712D1 #1-388 Acq:12-JUL-2016 21:12:05 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:1600835-03RE1 DU-1-15-C 11.16 Exp:OCDD_DB5
441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: DU-1-12-A
Lab ID: 1600835-04RE1

Filename: 160712D1 S:8 Acq:12-JUL-16 22:00:36
GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16

wt/vol:10.063

ConCal: ST160712D1-1
EndCAL: NA

Page 7 of 7

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
	2,3,7,8-TCDD	6.04e+03	0.24	n	1.13	26:27	1.001	0.091961	*	2.5	*	Total Tetra-Dioxins	3.69	4.51		*	*
	1,2,3,7,8-PeCDD	5.07e+04	0.66	y	0.96	31:10	1.000	1.0664	*	2.5	*	Total Penta-Dioxins	11.7	13.3		*	*
	1,2,3,4,7,8-HxCDD	6.44e+04	1.29	y	1.00	34:28	1.001	1.5547	*	2.5	*	Total Hexa-Dioxins	53.6	53.6		*	*
	1,2,3,6,7,8-HxCDD	2.25e+05	1.24	y	1.10	34:34	1.000	5.3123	*	2.5	*	Total Hepta-Dioxins	551	551		*	*
	1,2,3,7,8,9-HxCDD	1.32e+05	1.29	y	1.05	34:51	1.000	3.1761	*	2.5	*	Total Tetra-Furans	15.6	16.0		*	*
	1,2,3,4,6,7,8-HpCDD	8.86e+06	1.03	y	1.05	38:22	1.000	269.63	*	2.5	*	Total Penta-Furans	25.636	25.754		*	*
	OCDD	9.49e+07	0.90	y	0.96	41:35	1.000	3675.4	*	2.5	*	Total Hexa-Furans	30.6	30.6		*	*
												Total Hepta-Furans	41.9	41.9		*	*
	2,3,7,8-TCDF	2.85e+05	0.85	y	1.12	25:37	1.000	2.8919	OK	*	2.5	*					
	1,2,3,7,8-PeCDF	4.06e+04	1.55	y	1.01	29:56	1.000	0.56908	*	2.5	*						
	2,3,4,7,8-PeCDF	1.99e+05	1.45	y	0.90	30:54	1.000	2.7318	*	2.5	*						
	1,2,3,4,7,8-HxCDF	8.28e+04	1.36	y	1.16	33:35	1.000	1.2112	*	2.5	*						
	1,2,3,6,7,8-HxCDF	7.50e+04	1.26	y	1.16	33:42	1.000	1.1136	*	2.5	*						
	2,3,4,6,7,8-HxCDF	1.09e+05	1.26	y	1.23	34:18	1.000	1.7119	*	2.5	*						
	1,2,3,7,8,9-HxCDF	1.92e+04	1.28	y	1.13	35:16	1.001	0.32676	*	2.5	*						
	1,2,3,4,6,7,8-HpCDF	6.41e+05	1.09	y	1.44	37:00	1.000	13.359	*	2.5	*						
	1,2,3,4,7,8,9-HpCDF	5.36e+04	1.08	y	1.31	38:55	1.000	1.2011	*	2.5	*						
	OCDF	1.24e+06	0.93	y	1.03	41:48	1.000	38.745	*	2.5	*						
IS	13C-2,3,7,8-TCDD	1.15e+07	0.80	y	1.01	26:26	1.024	183.06				Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	9.83e+06	0.63	y	1.10	31:10	1.208	142.73				92.1					
IS	13C-1,2,3,4,7,8-HxCDD	8.22e+06	1.31	y	0.72	34:27	1.014	189.07				71.8					
IS	13C-1,2,3,6,7,8-HxCDD	7.67e+06	1.29	y	0.73	34:34	1.017	174.90				95.1					
IS	13C-1,2,3,7,8,9-HxCDD	7.88e+06	1.26	y	0.70	34:51	1.025	186.23				88.0					
IS	13C-1,2,3,4,6,7,8-HpCDD	6.22e+06	1.05	y	0.66	38:22	1.129	155.22				93.7					
IS	13C-OCDD	1.07e+07	0.91	y	0.66	41:34	1.223	268.12				78.1					
IS	13C-2,3,7,8-TCDF	1.75e+07	0.81	y	0.90	25:36	0.992	197.12				67.4					
IS	13C-1,2,3,7,8-PeCDF	1.41e+07	1.55	y	0.98	29:56	1.160	145.18				99.2					
IS	13C-2,3,4,7,8-PeCDF	1.61e+07	1.62	y	1.15	30:53	1.197	142.08				73.0					
IS	13C-1,2,3,4,7,8-HxCDF	1.17e+07	0.52	y	1.01	33:35	0.988	191.24				71.5					
IS	13C-1,2,3,6,7,8-HxCDF	1.16e+07	0.53	y	1.10	33:42	0.992	175.03				96.2					
IS	13C-2,3,4,6,7,8-HxCDF	1.04e+07	0.52	y	0.95	34:17	1.009	180.61				88.1					
IS	13C-1,2,3,7,8,9-HxCDF	1.03e+07	0.52	y	0.83	35:14	1.037	207.06				90.9					
IS	13C-1,2,3,4,6,7,8-HpCDF	6.63e+06	0.43	y	0.70	36:59	1.088	157.17				104					
IS	13C-1,2,3,4,7,8,9-HpCDF	6.75e+06	0.45	y	0.72	38:55	1.145	155.48				79.1					
IS	13C-OCDF	1.23e+07	0.91	y	0.82	41:47	1.230	247.89				78.2					
C/Up	37Cl-2,3,7,8-TCDD	4.88e+06			1.14	26:27	1.025	68.749				62.4					
RS/RT	13C-1,2,3,4-TCDD	1.24e+07	0.81	y	1.00	25:48	*	198.76				Integrations					
RS	13C-1,2,3,4-TCDF	1.96e+07	0.79	y	1.00	24:13	*	198.76				by					
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.20e+07	0.52	y	1.00	33:59	*	198.76				Analyst: <i>DK</i>					
												Date: <i>7/13/16</i>					
												Reviewed					
												by					
												Analyst: <i>AK</i>					
												Date: <i>7/15/16</i>					

Totals class: TCDD EMPC

Entry #: 19

Run: 13

File: 160712D1

S: 8 I: 1 F: 1

Acquired: 12-JUL-16 22:00:36

Processed: 13-JUL-16 15:19:02

Total Concentration: 4.5102

Unnamed Concentration: 4.418

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
22:39	3.551e+04	4.588e+04	0.77	y	8.138e+04	1.2392
23:04	2.572e+04	2.685e+04	0.96	n	4.752e+04	0.72352
23:32	6.886e+03	8.425e+03	0.82	y	1.531e+04	0.23313
24:24	5.334e+03	7.457e+03	0.72	y	1.279e+04	0.19477
24:38	1.379e+04	1.565e+04	0.88	y	2.943e+04	0.44818
24:50	1.063e+04	1.312e+04	0.81	y	2.375e+04	0.36156
25:02	5.166e+03	6.081e+03	0.85	y	1.125e+04	0.17125
25:26	4.774e+03	6.519e+03	0.73	y	1.129e+04	0.17195
25:47	7.476e+03	1.064e+04	0.70	y	1.812e+04	0.27584
26:10	1.281e+04	1.600e+04	0.80	y	2.881e+04	0.43866
26:27	2.627e+03	1.090e+04	0.24	n	6.040e+03	0.091961
26:46	4.921e+03	5.604e+03	0.88	y	1.052e+04	0.16025

2,3,7,8-TCDD

Totals class: PeCDD EMPC

Entry #: 21

Run: 13

File: 160712D1

S: 8 I: 1 F: 2

Acquired: 12-JUL-16 22:00:36

Processed: 13-JUL-16 15:19:02

Total Concentration: 13.286

Unnamed Concentration: 12.219

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:02	7.203e+04	1.066e+05	0.68 y	1.786e+05	3.7567
29:30	1.842e+04	3.112e+04	0.59 y	4.954e+04	1.0420
29:59	4.256e+04	6.048e+04	0.70 y	1.030e+05	2.1672
30:09	2.589e+04	3.253e+04	0.80 n	5.302e+04	1.1151
30:13	2.238e+04	3.271e+04	0.68 y	5.508e+04	1.1586
30:27	3.145e+04	4.945e+04	0.64 y	8.090e+04	1.7015
30:45	8.496e+03	1.381e+04	0.62 y	2.231e+04	0.46919
31:10	2.021e+04	3.050e+04	0.66 y	5.070e+04	1.0664 1,2,3,7,8-PeCDD
31:15	1.101e+04	1.294e+04	0.85 n	2.109e+04	0.44367
31:32	7.241e+03	1.012e+04	0.72 y	1.736e+04	0.36518

Totals class: HxCDD EMPC

Entry #: 23

Run: 13 File: 160712D1 S: 8 I: 1 F: 3
Acquired: 12-JUL-16 22:00:36 Processed: 13-JUL-16 15:19:02

Total Concentration: 53.630 Unnamed Concentration: 43.586

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:57	3.468e+05	2.937e+05	1.18 y	6.406e+05	15.325
33:30	7.515e+04	5.979e+04	1.26 y	1.349e+05	3.2282
33:46	5.478e+05	4.247e+05	1.29 y	9.725e+05	23.266
33:54	2.036e+04	1.565e+04	1.30 y	3.601e+04	0.86144
34:28	3.631e+04	2.812e+04	1.29 y	6.443e+04	1.5547 1,2,3,4,7,8-HxCDD
34:34	1.242e+05	1.003e+05	1.24 y	2.245e+05	5.3123 1,2,3,6,7,8-HxCDD
34:45	2.167e+04	1.619e+04	1.34 y	3.786e+04	0.90578
34:51	7.433e+04	5.768e+04	1.29 y	1.320e+05	3.1761 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 13 File: 160712D1 S: 8 I: 1 F: 4
Acquired: 12-JUL-16 22:00:36 Processed: 13-JUL-16 15:19:02

Total Concentration: 551.23 Unnamed Concentration: 281.606

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:23	4.679e+06	4.578e+06	1.02 y	9.257e+06	281.61
38:22	4.498e+06	4.366e+06	1.03 y	8.863e+06	269.63 1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 13 File: 160712D1 S: 8 I: 1 F: 1
 Acquired: 12-JUL-16 22:00:36 Processed: 13-JUL-16 15:19:02

Total Concentration: 15.988

Unnamed Concentration: 13.096

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
21:01	9.861e+03	1.263e+04	0.78 y	2.249e+04	0.22786
21:39	6.286e+04	8.488e+04	0.74 y	1.477e+05	1.4967
22:13	2.833e+04	3.472e+04	0.82 y	6.305e+04	0.63870
22:37	4.331e+04	4.978e+04	0.87 y	9.309e+04	0.94302
23:07	3.537e+04	5.002e+04	0.71 y	8.539e+04	0.86500
23:14	1.514e+04	2.287e+04	0.66 y	3.802e+04	0.38512
23:27	3.293e+04	4.538e+04	0.73 y	7.831e+04	0.79333
23:51	5.108e+03	6.002e+03	0.85 y	1.111e+04	0.11255
23:59	1.251e+04	1.837e+04	0.68 y	3.088e+04	0.31281
24:10	7.056e+04	8.921e+04	0.79 y	1.598e+05	1.6186
24:44	3.782e+04	4.589e+04	0.82 y	8.370e+04	0.84793
25:00	1.858e+04	2.520e+04	0.74 y	4.379e+04	0.44356
25:24	9.655e+03	1.124e+04	0.86 y	2.090e+04	0.21168
25:30	9.794e+03	1.414e+04	0.69 y	2.393e+04	0.24245
25:37	1.311e+05	1.544e+05	0.85 y	2.855e+05	2.8919
25:58	1.559e+05	1.989e+05	0.78 y	3.548e+05	3.5939
27:30	2.396e+04	2.026e+04	1.18 n	3.587e+04	0.36334

2,3,7,8-TCDF

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 13 File: 160712D1 S: 8 I: 1 F: 1
Acquired: 12-JUL-16 22:00:36 Processed: 13-JUL-16 15:19:02

Total Concentration: 10.538 Unnamed Concentration: 10.538

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:29	4.467e+05	3.116e+05	1.43 y	7.583e+05	10.538

Totals class: PeCDF EMPC

Entry #: 31

Run: 13 File: 160712D1 S: 8 I: 1 F: 2
Acquired: 12-JUL-16 22:00:36 Processed: 13-JUL-16 15:19:02

Total Concentration: 15.216 Unnamed Concentration: 11.915

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28:52	5.558e+04	3.957e+04	1.40 y	9.515e+04	1.3223
29:00	2.935e+05	1.857e+05	1.58 y	4.792e+05	6.6593
29:22	1.063e+04	8.030e+03	1.32 y	1.866e+04	0.25928
29:35	8.385e+04	5.518e+04	1.52 y	1.390e+05	1.9321
29:46	5.161e+03	6.596e+03	0.78 n	8.491e+03	0.11801
29:56	2.468e+04	1.588e+04	1.55 y	4.055e+04	0.56908
30:12	4.568e+04	3.419e+04	1.34 y	7.987e+04	1.1100
30:47	2.287e+04	1.410e+04	1.62 y	3.698e+04	0.51390
30:54	1.176e+05	8.117e+04	1.45 y	1.987e+05	2.7318

Totals class: HxCDF EMPC

Entry #: 33

Run: 13 File: 160712D1 S: 8 I: 1 F: 3

Acquired: 12-JUL-16 22:00:36 Processed: 13-JUL-16 15:19:02

Total Concentration: 30.575

Unnamed Concentration: 26.212

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
32:26	8.386e+04	6.776e+04	1.24	y	1.516e+05	2.3438
32:35	3.646e+05	2.887e+05	1.26	y	6.534e+05	10.100
32:47	1.134e+04	8.370e+03	1.36	y	1.971e+04	0.30473
32:56	1.694e+05	1.352e+05	1.25	y	3.046e+05	4.7090
33:07	3.048e+05	2.393e+05	1.27	y	5.441e+05	8.4112
33:29	1.155e+04	1.064e+04	1.09	y	2.218e+04	0.34295
33:35	4.766e+04	3.511e+04	1.36	y	8.277e+04	1.2112 1,2,3,4,7,8-HxCDF
33:42	4.189e+04	3.314e+04	1.26	y	7.503e+04	1.1136 1,2,3,6,7,8-HxCDF
34:18	6.104e+04	4.842e+04	1.26	y	1.095e+05	1.7119 2,3,4,6,7,8-HxCDF
35:16	1.079e+04	8.444e+03	1.28	y	1.924e+04	0.32676 1,2,3,7,8,9-HxCDF

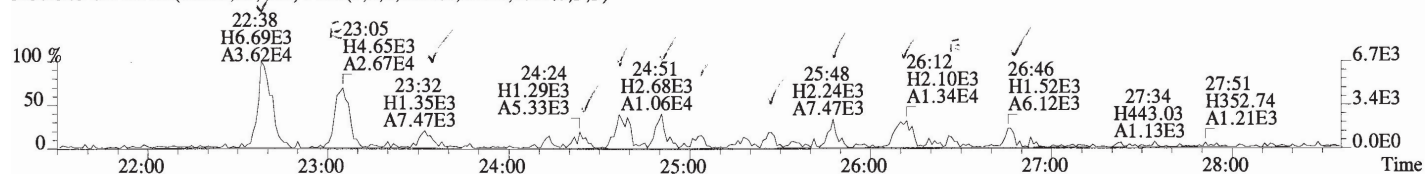
Totals class: Total Hepta-Furans Entry #: 34

Run: 13 File: 160712D1 S: 8 I: 1 F: 4
Acquired: 12-JUL-16 22:00:36 Processed: 13-JUL-16 15:19:02

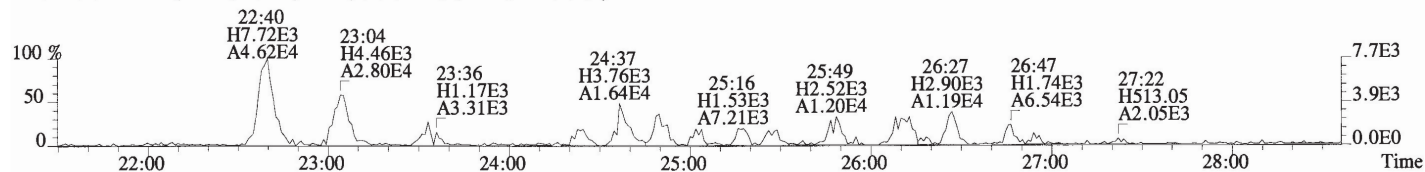
Total Concentration: 41.948 Unnamed Concentration: 27.387

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
37:00	3.336e+05	3.074e+05	1.09	y	6.411e+05	13.359	1,2,3,4,6,7,8-HpCDF
37:24	8.961e+03	9.207e+03	0.97	y	1.817e+04	0.39269	
37:38	6.278e+05	6.211e+05	1.01	y	1.249e+06	26.995	
38:55	2.781e+04	2.575e+04	1.08	y	5.356e+04	1.2011	1,2,3,4,7,8,9-HpCDF

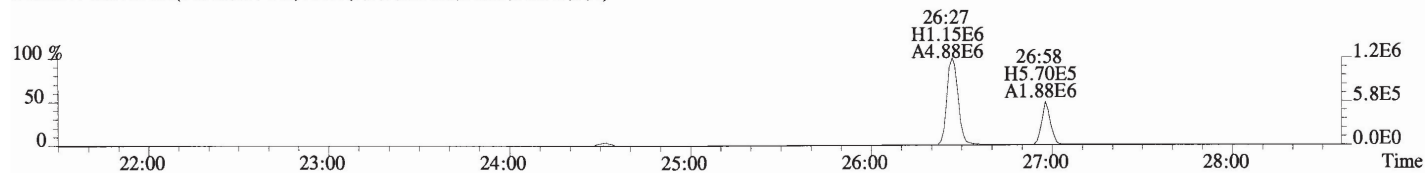
File:160712D1 #1-552 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text: Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



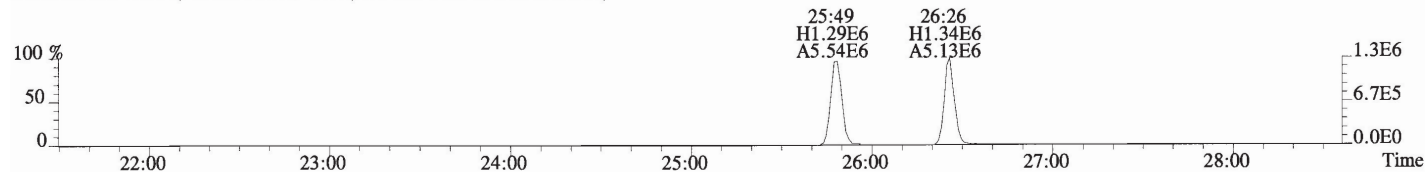
321.8936 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



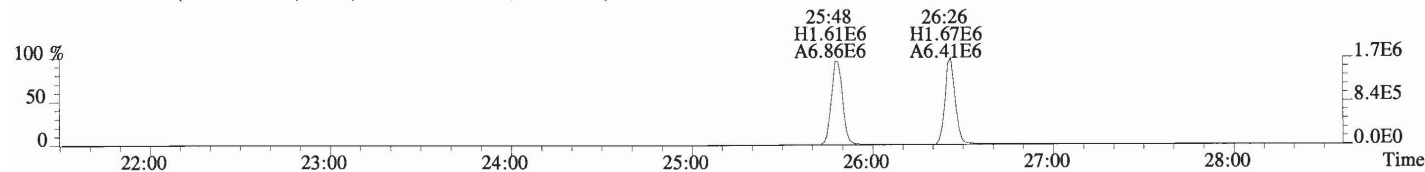
327.8847 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



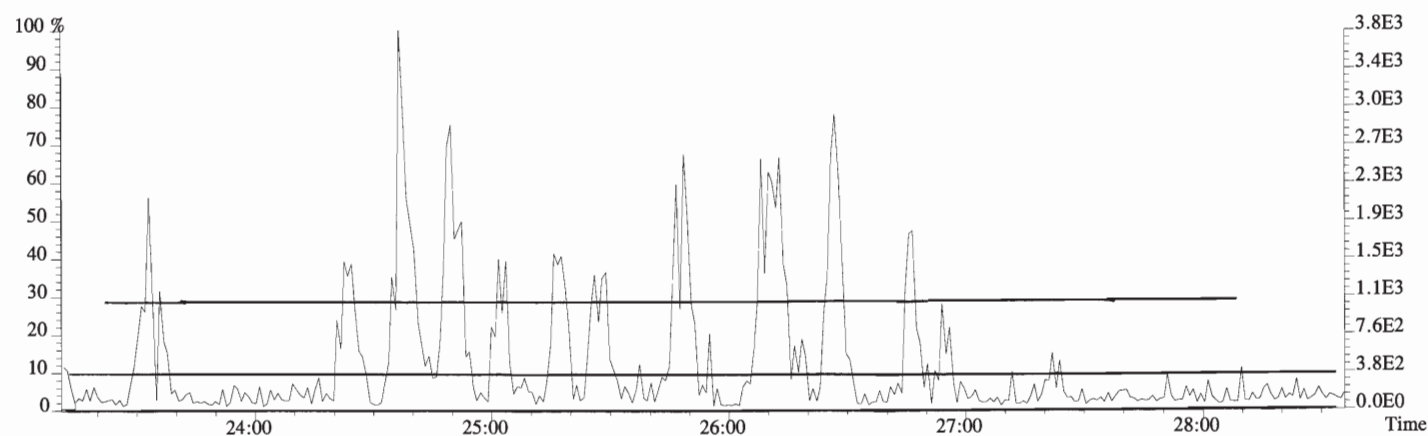
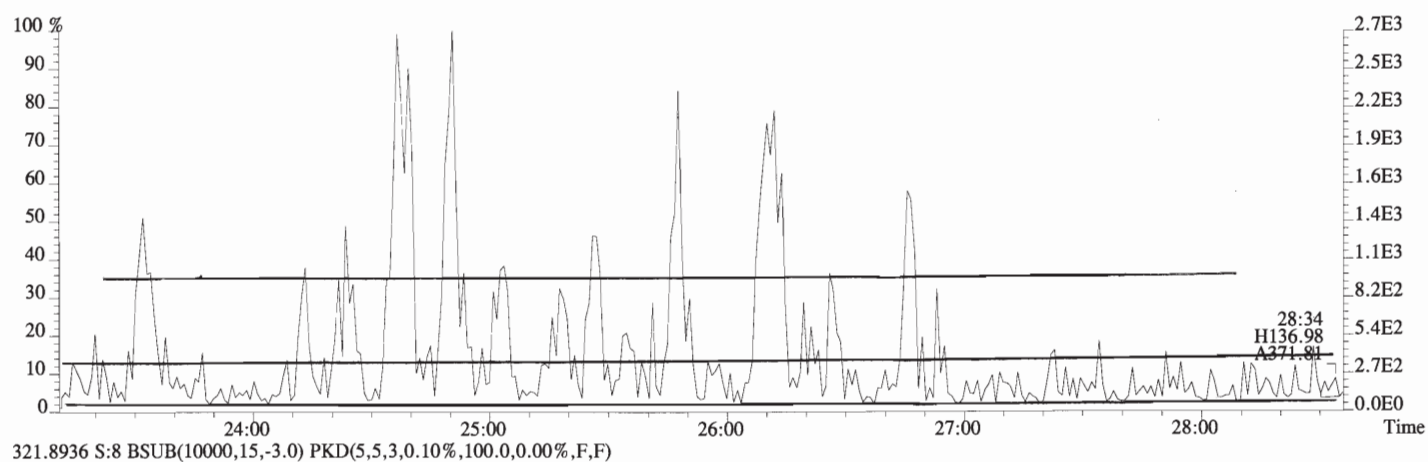
331.9368 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



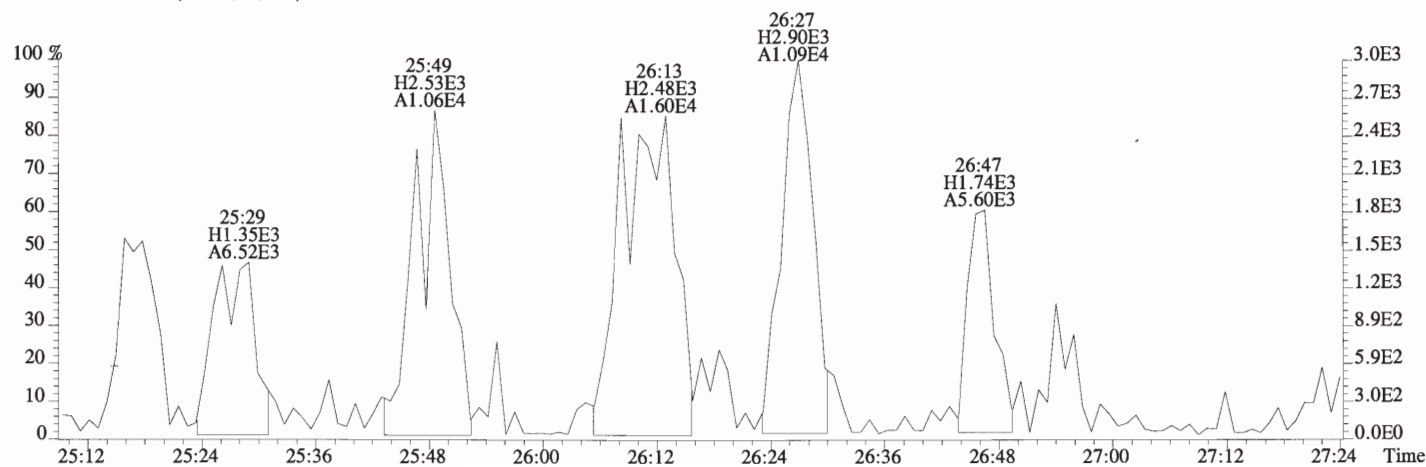
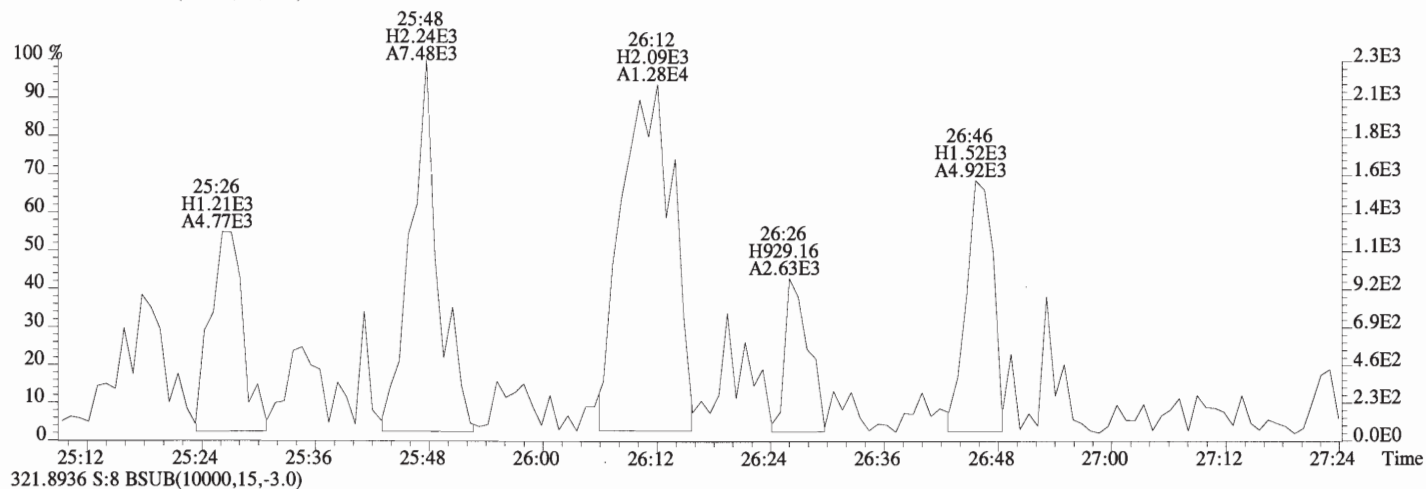
333.9339 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



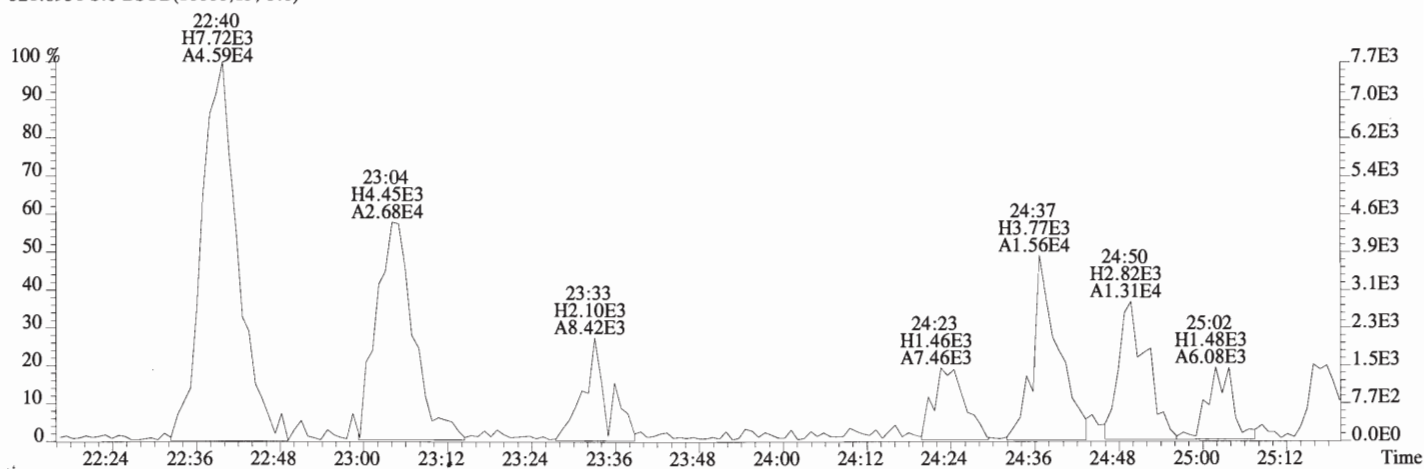
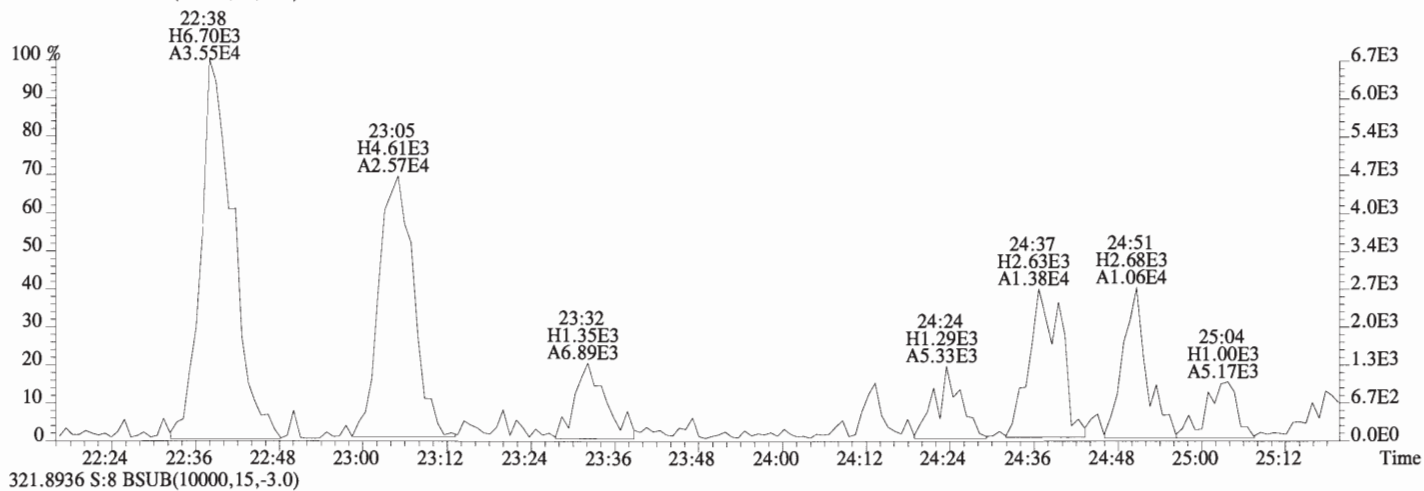
File:160712D1 #1-552 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



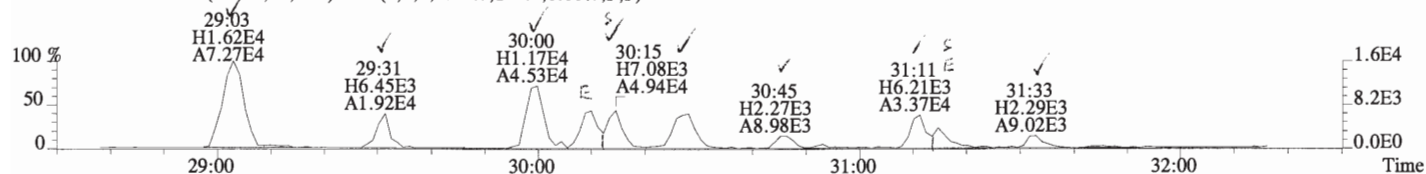
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 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 319.8965 S:8 BSUB(10000,15,-3.0)



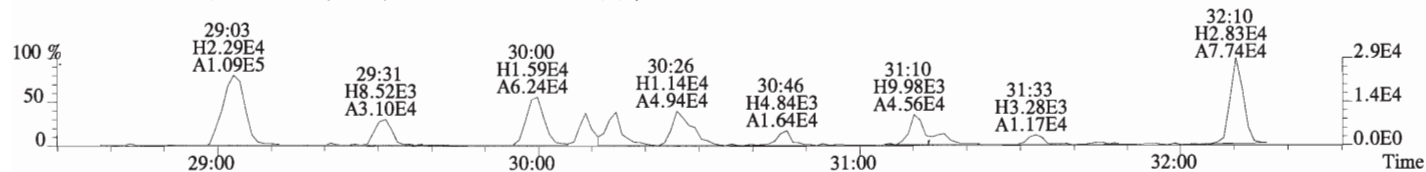
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 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 319.8965 S:8 BSUB(10000,15,-3.0)



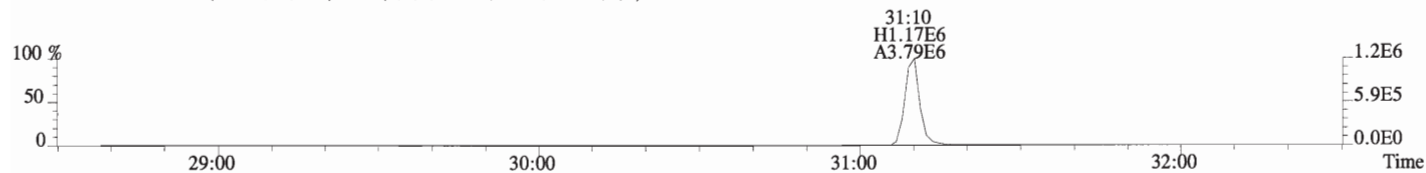
File:160712D1 #1-193 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



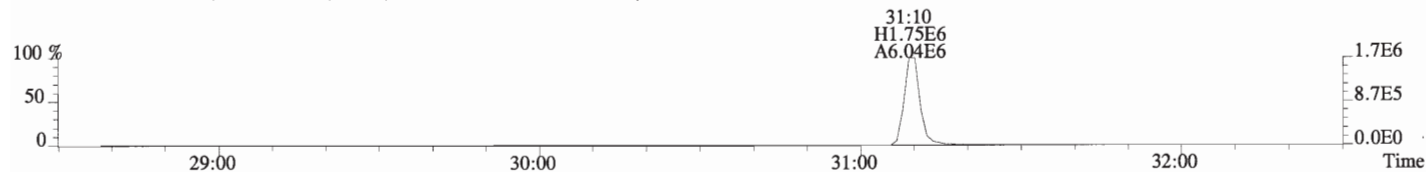
355.8546 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



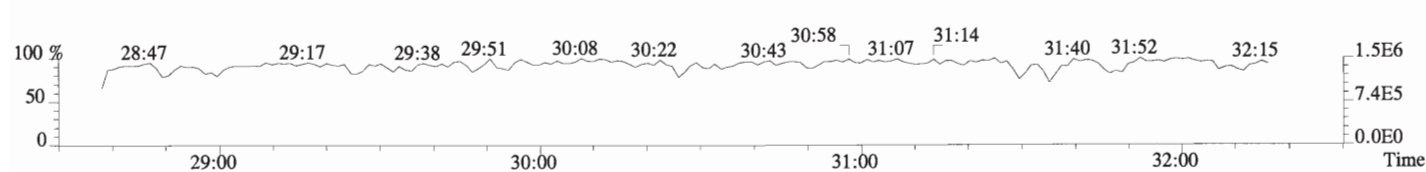
365.8978 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



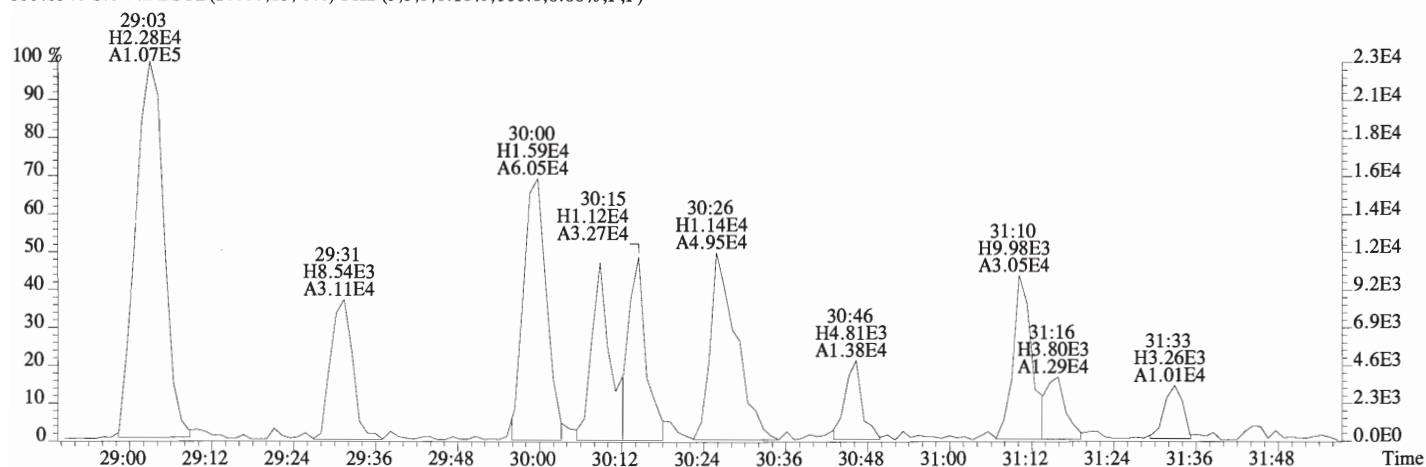
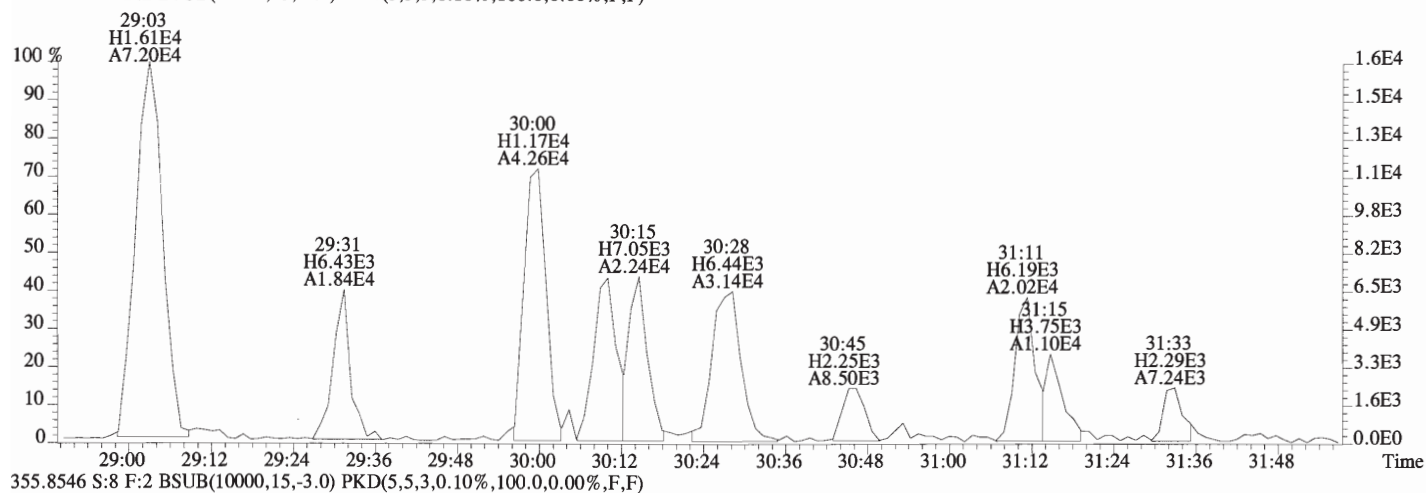
367.8949 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



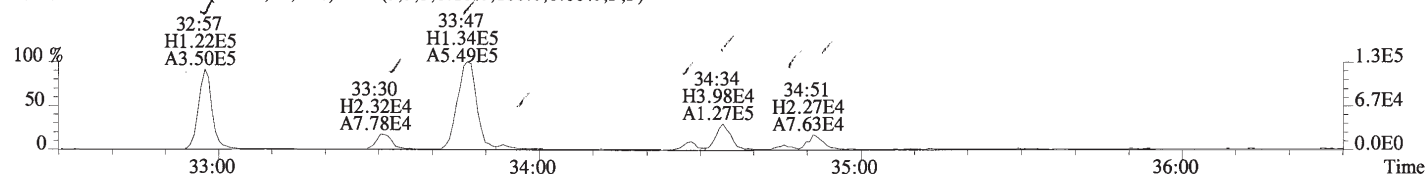
366.9792 S:8 F:2



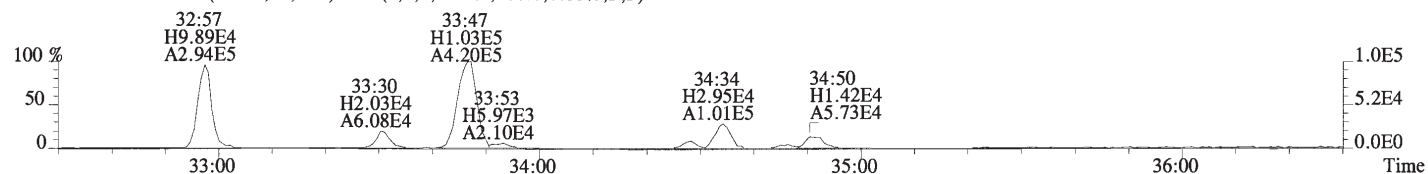
File:160712D1 #1-193 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



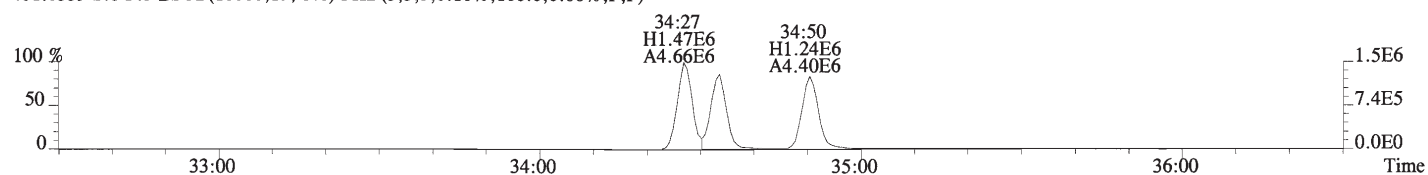
File:160712D1 #1-406 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



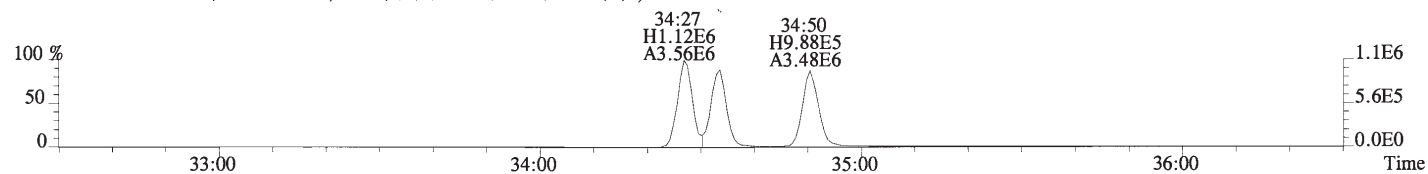
391.8127 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



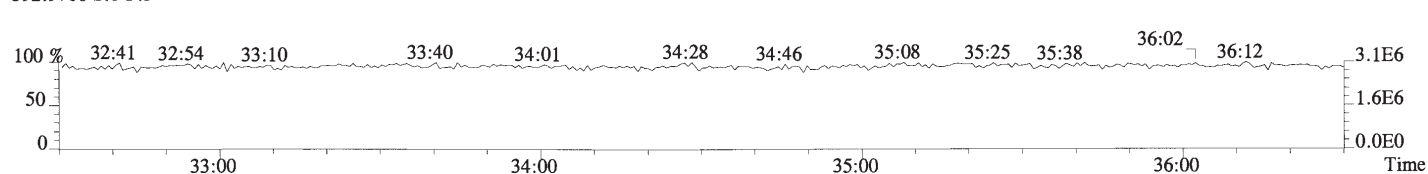
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



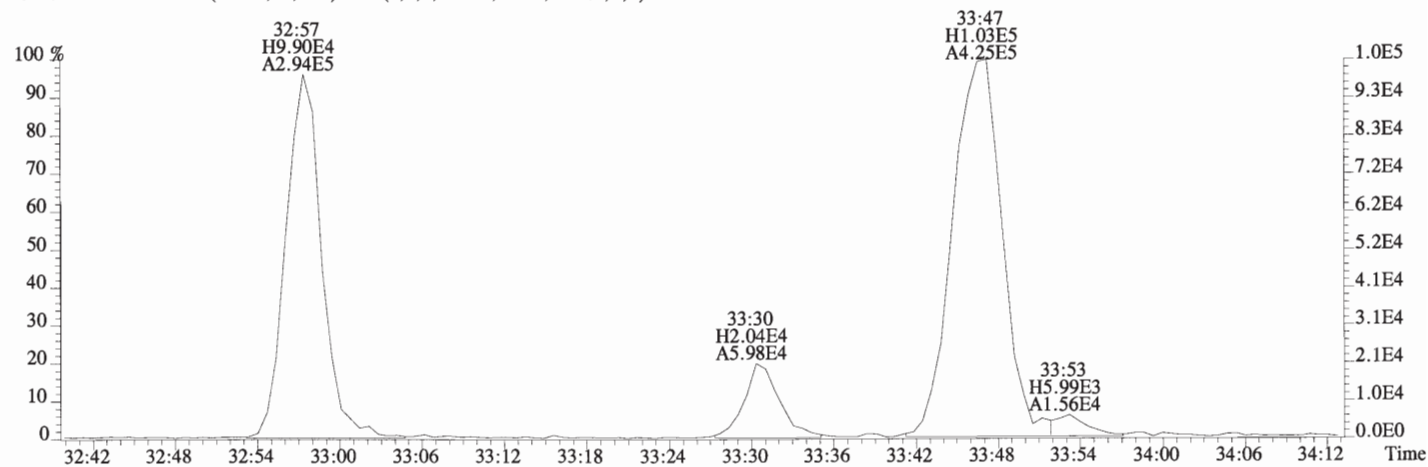
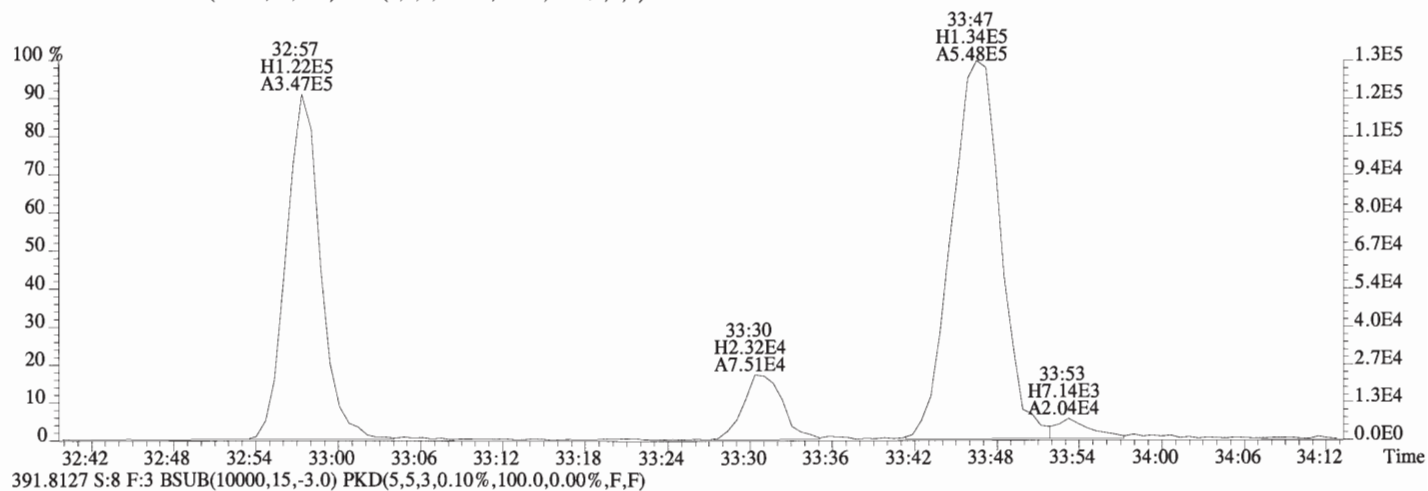
403.8530 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



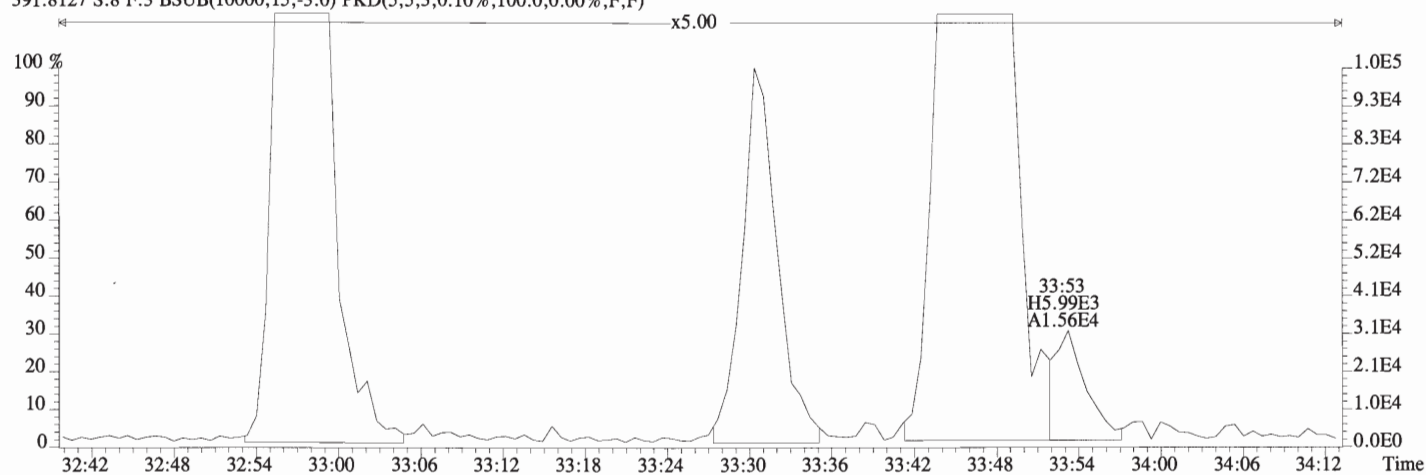
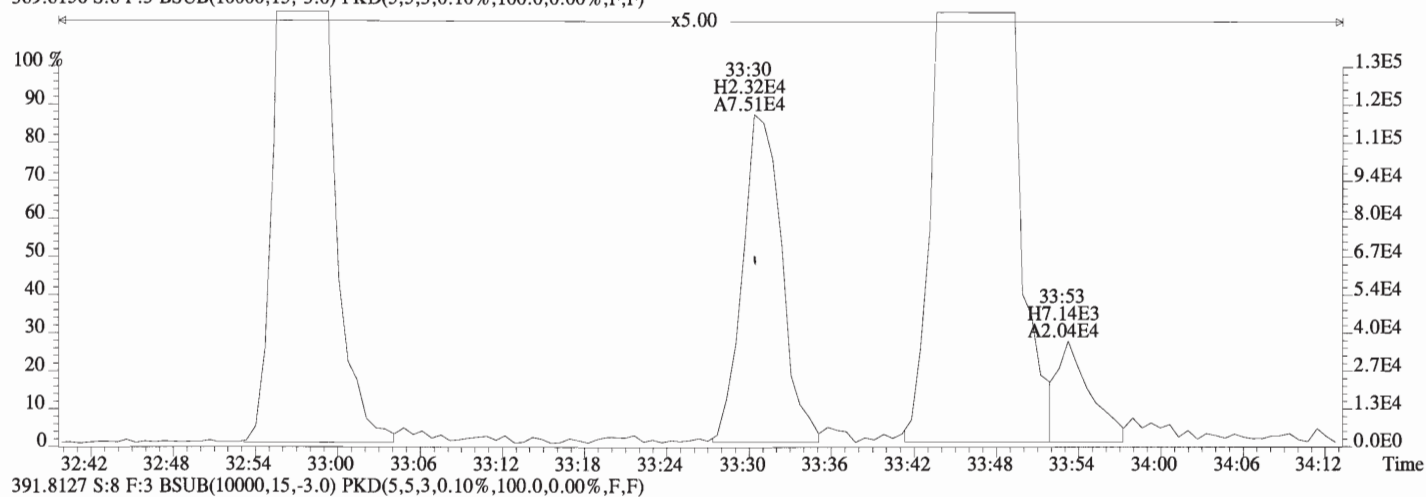
392.9760 S:8 F:3



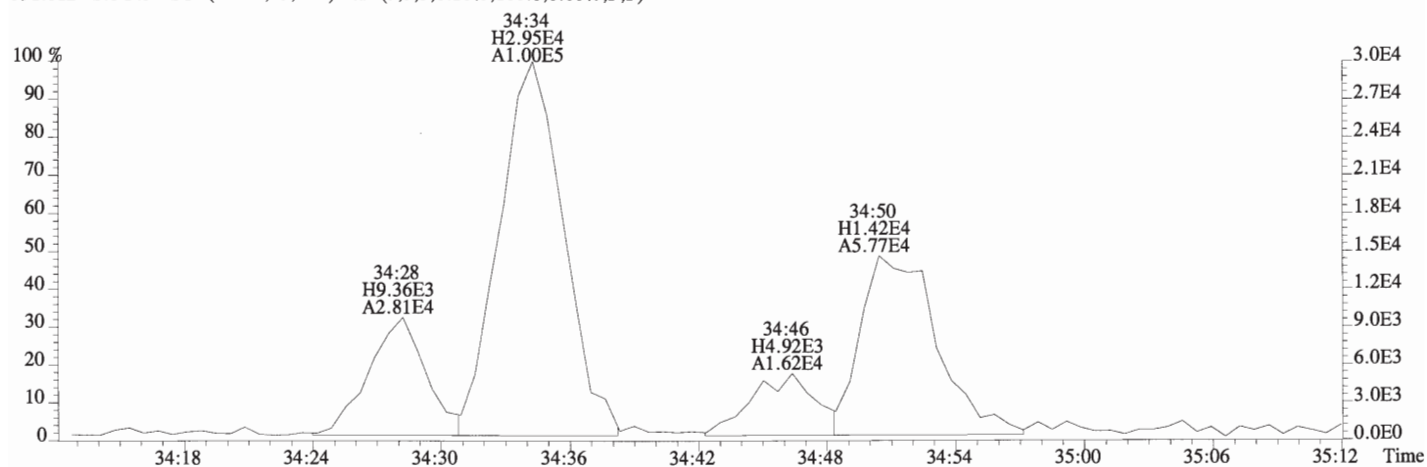
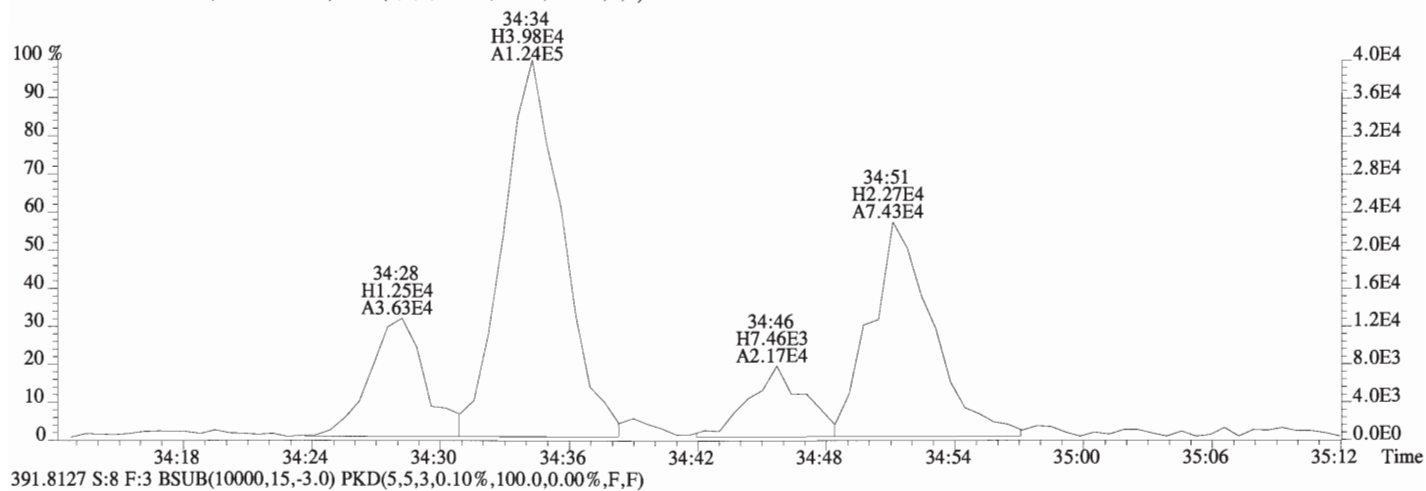
File:160712D1 #1-406 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



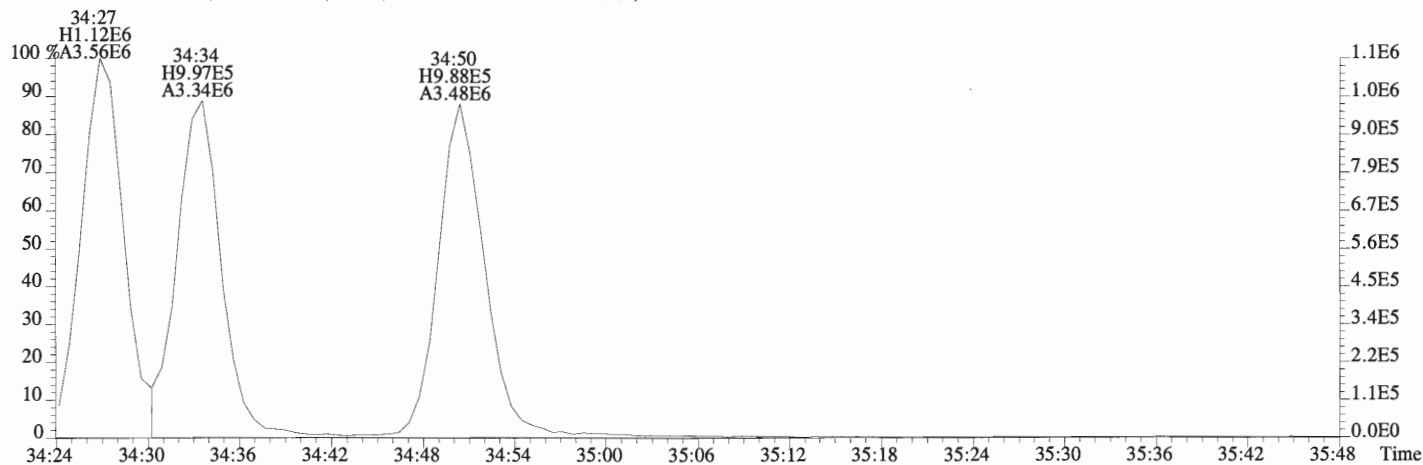
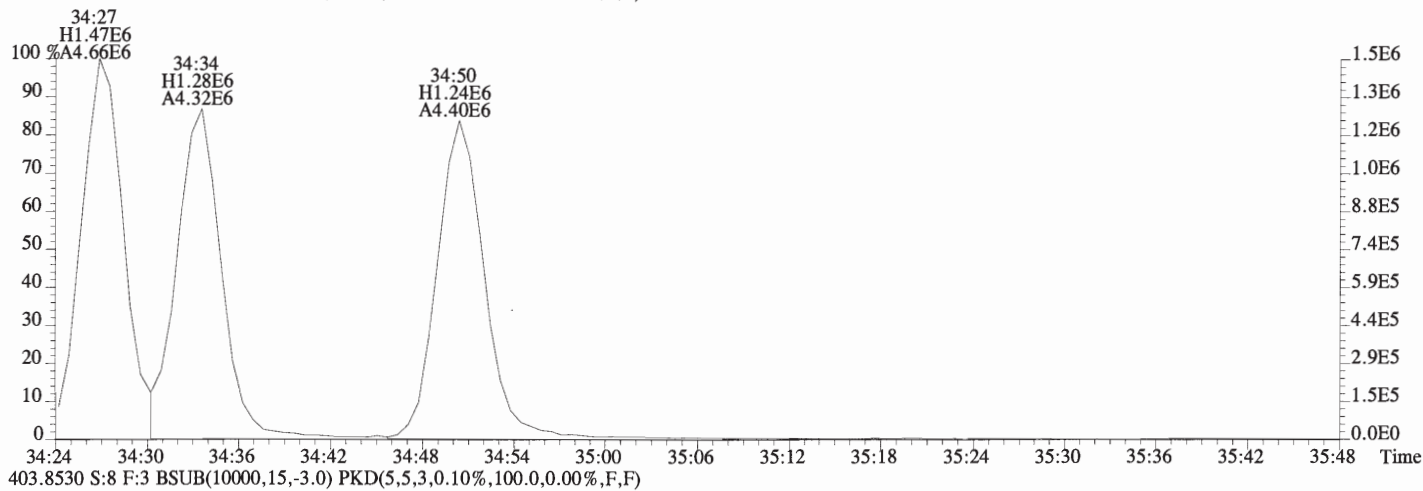
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Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



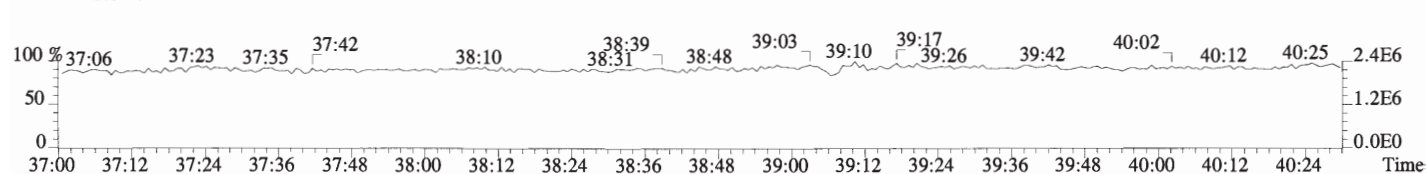
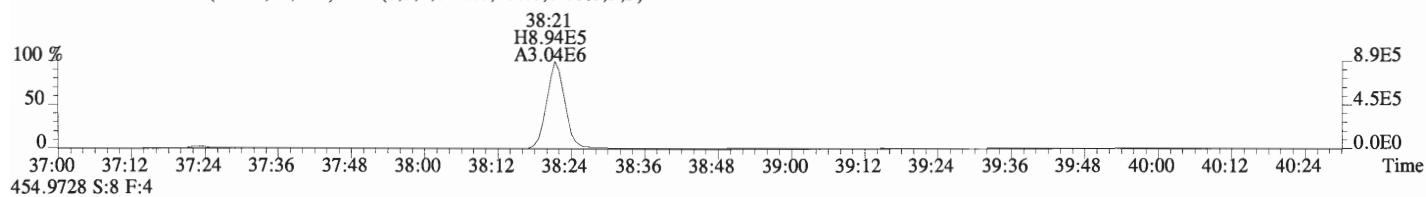
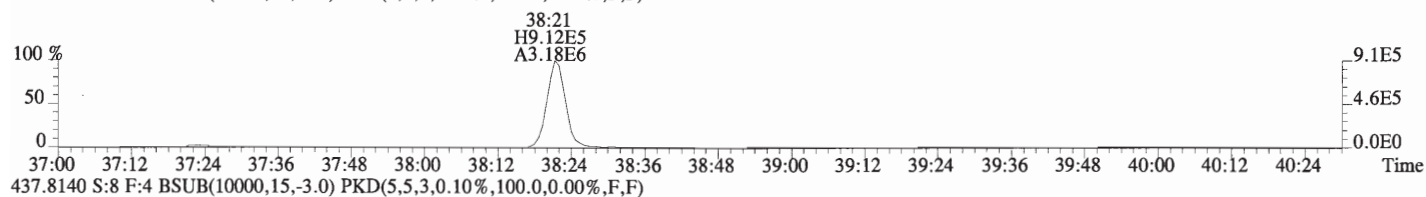
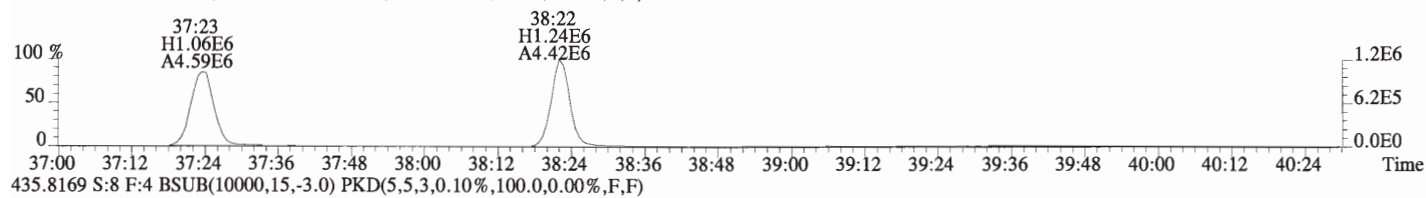
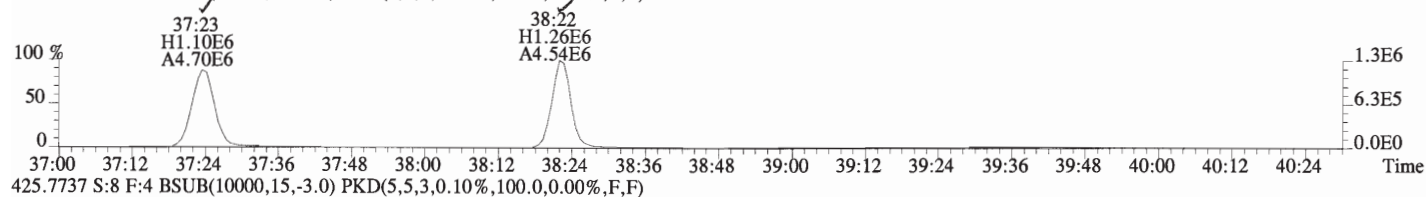
File:160712D1 #1-406 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



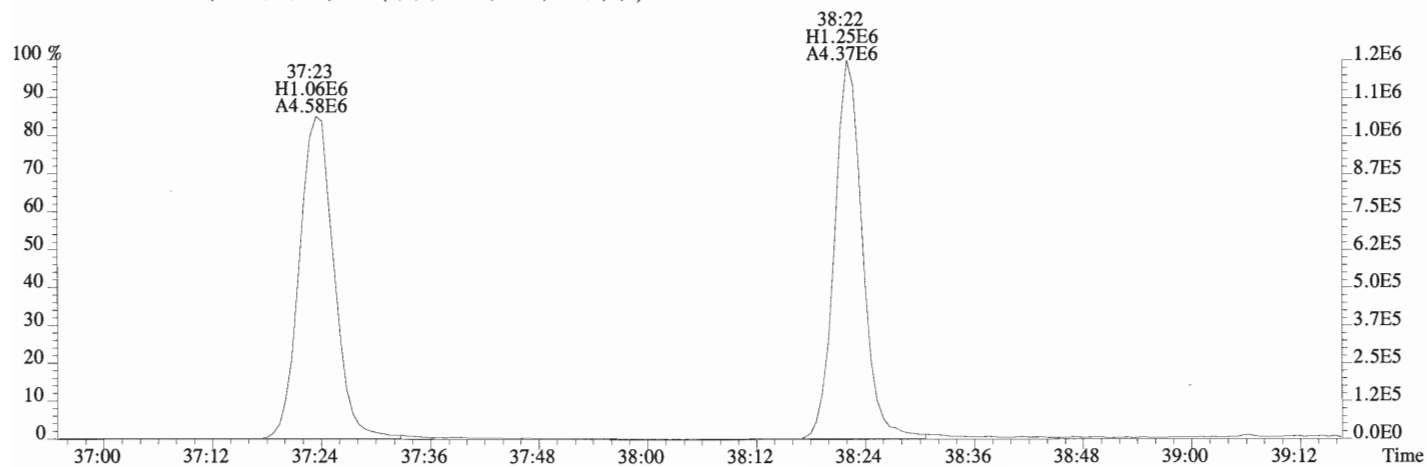
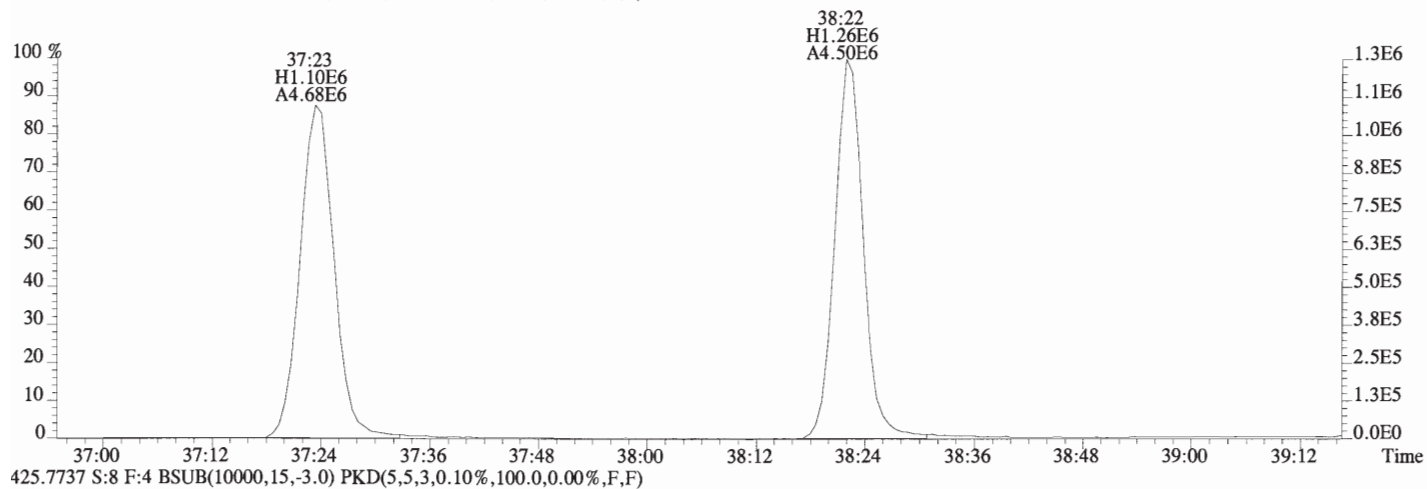
File:160712D1 #1-406 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



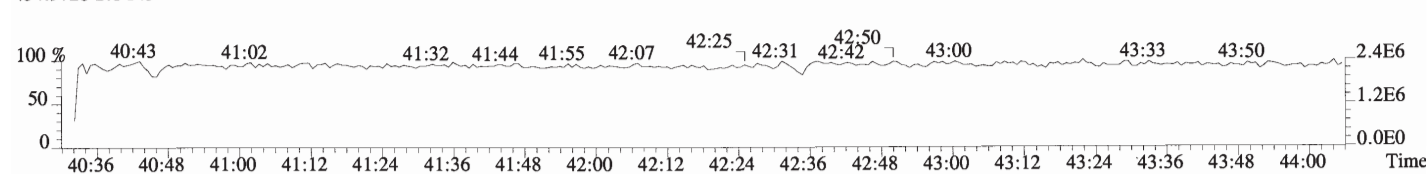
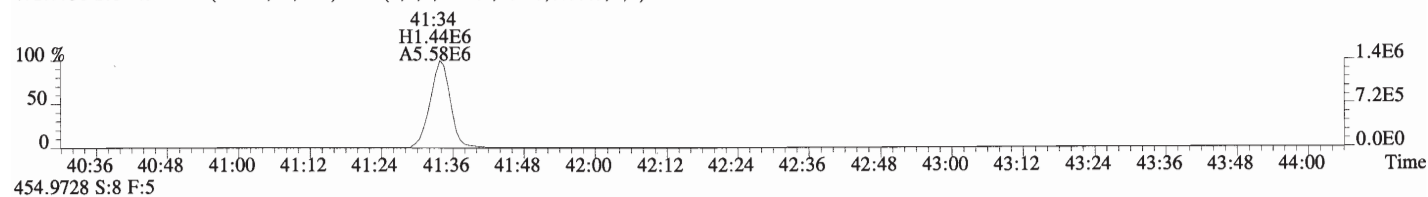
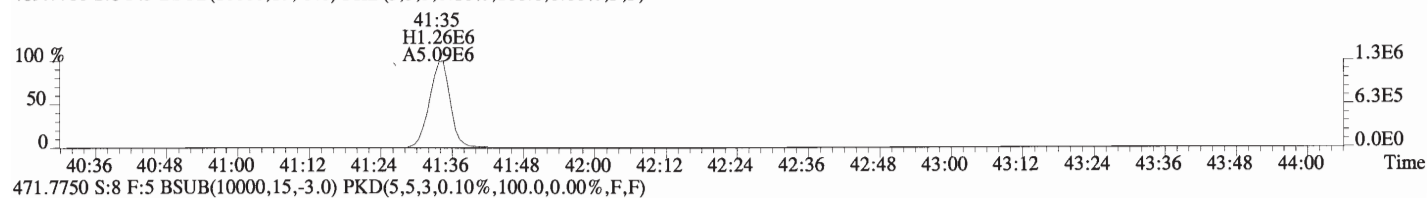
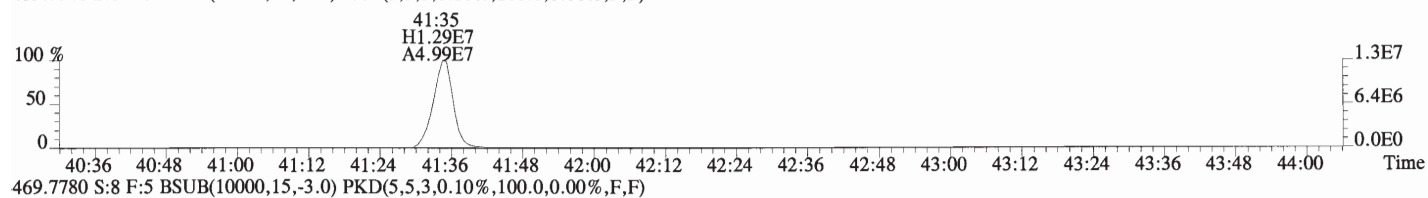
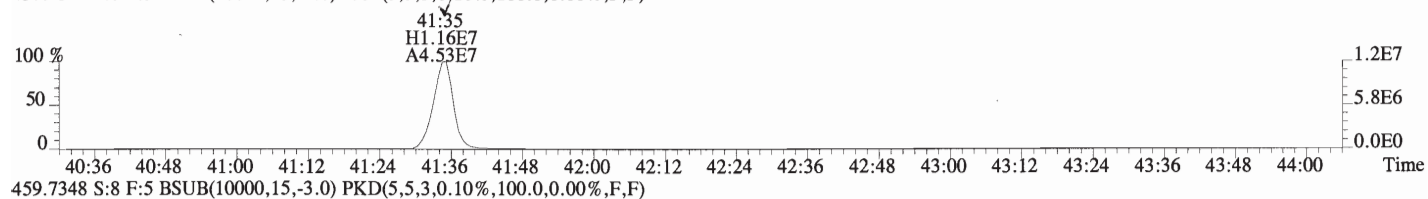
File:160712D1 #1-326 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



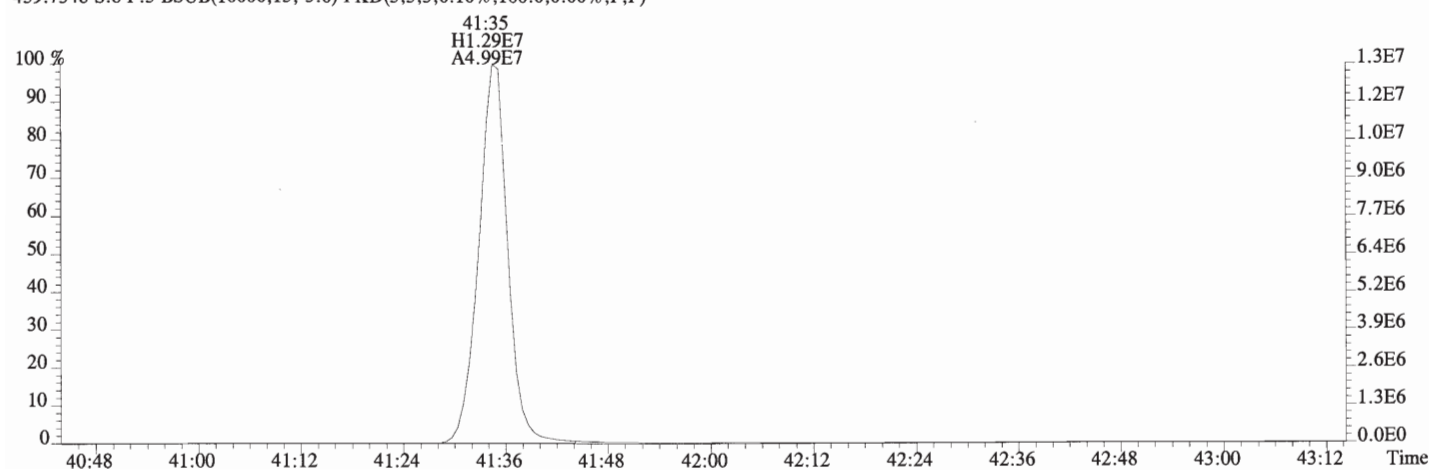
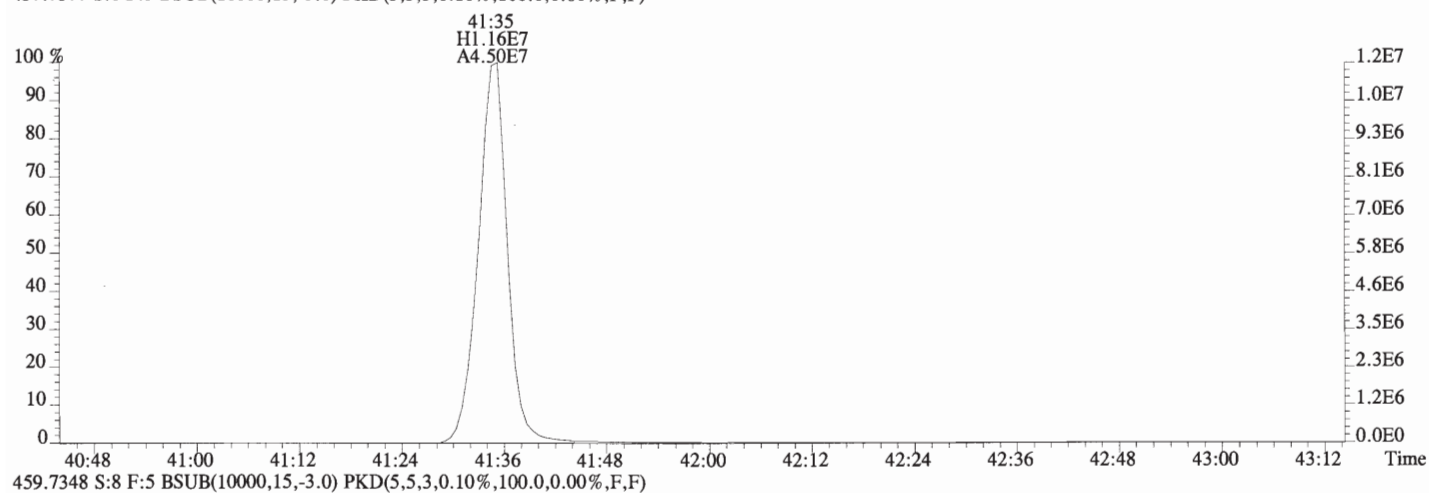
File:160712D1 #1-326 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



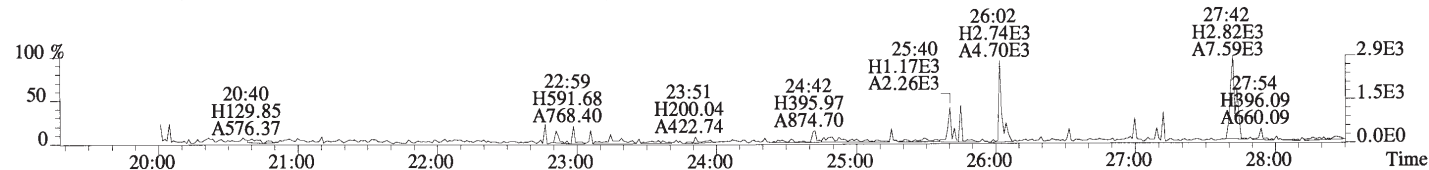
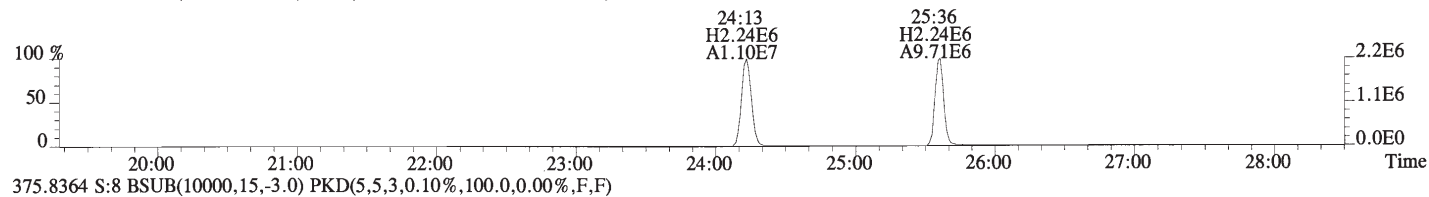
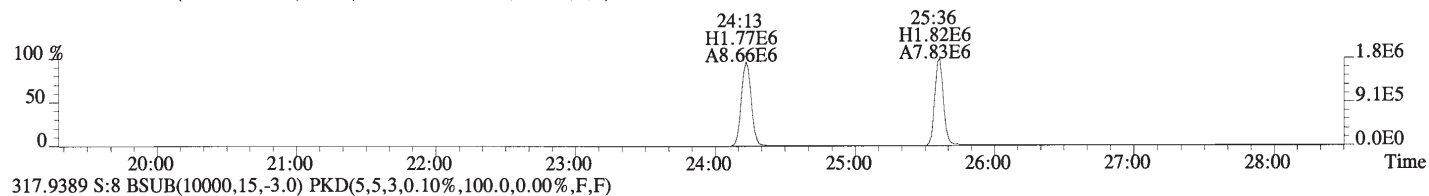
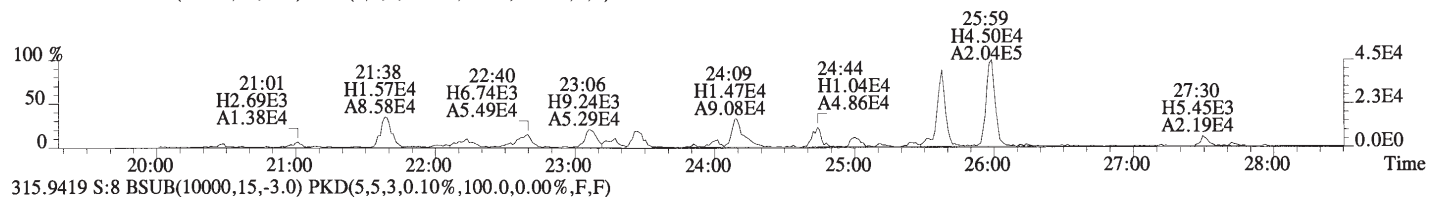
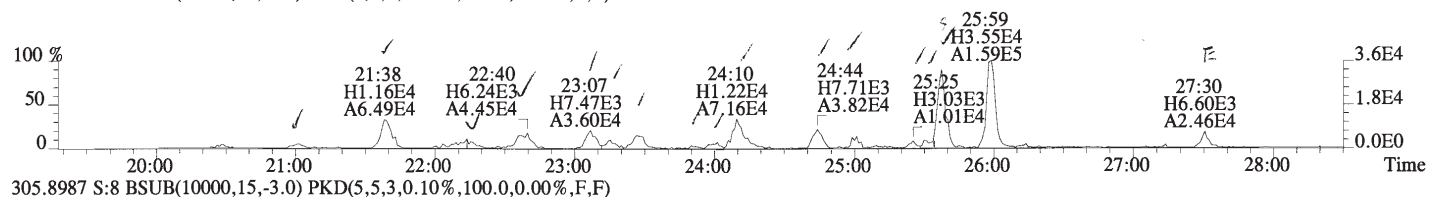
File:160712D1 #1-388 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F)



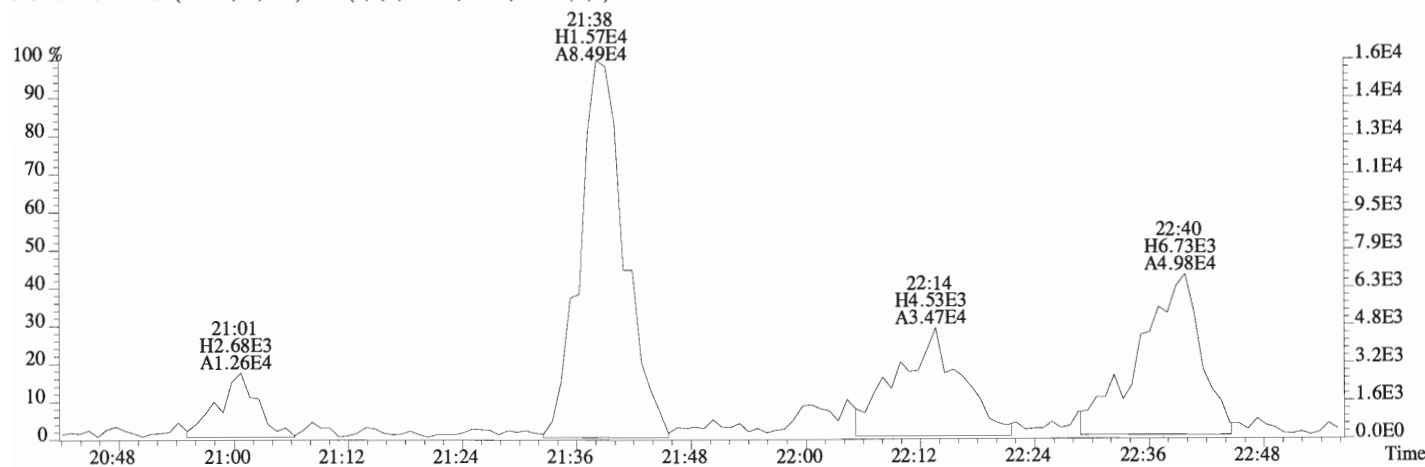
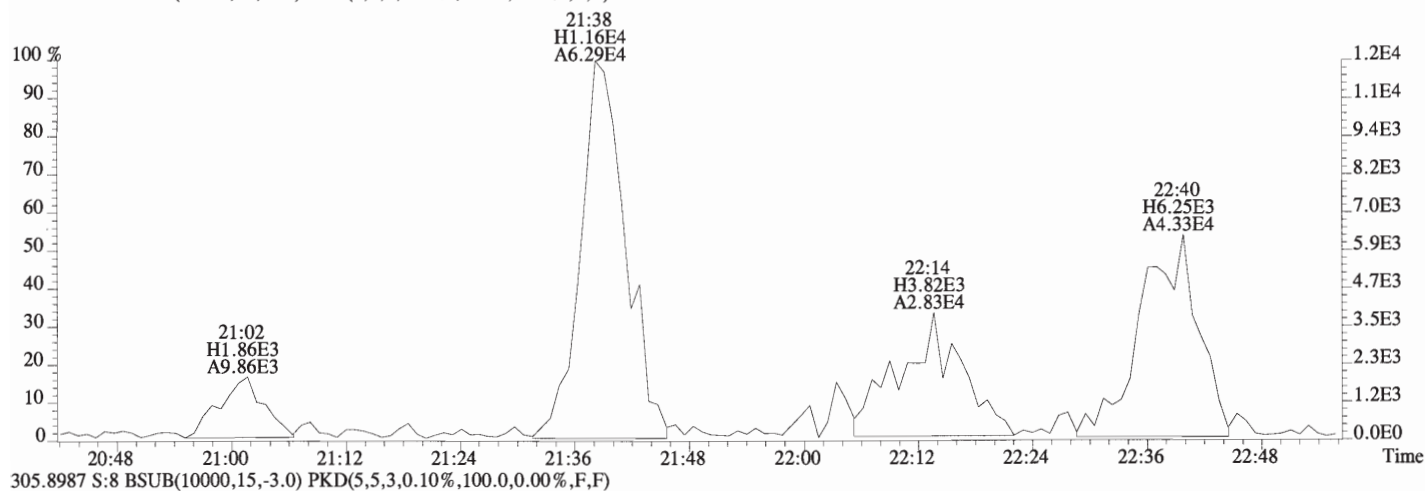
File:160712D1 #1-388 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



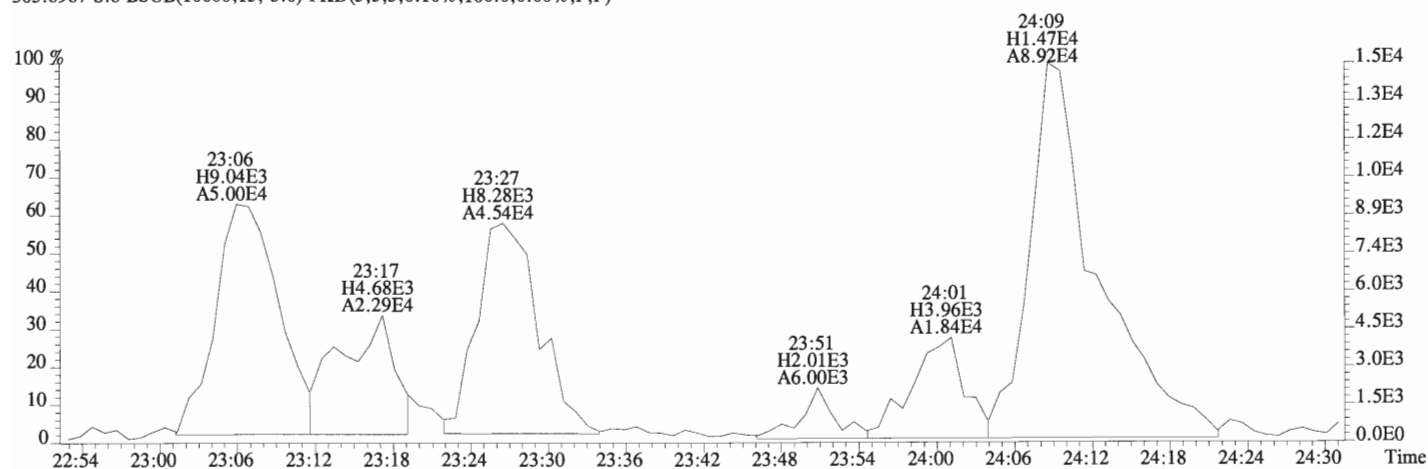
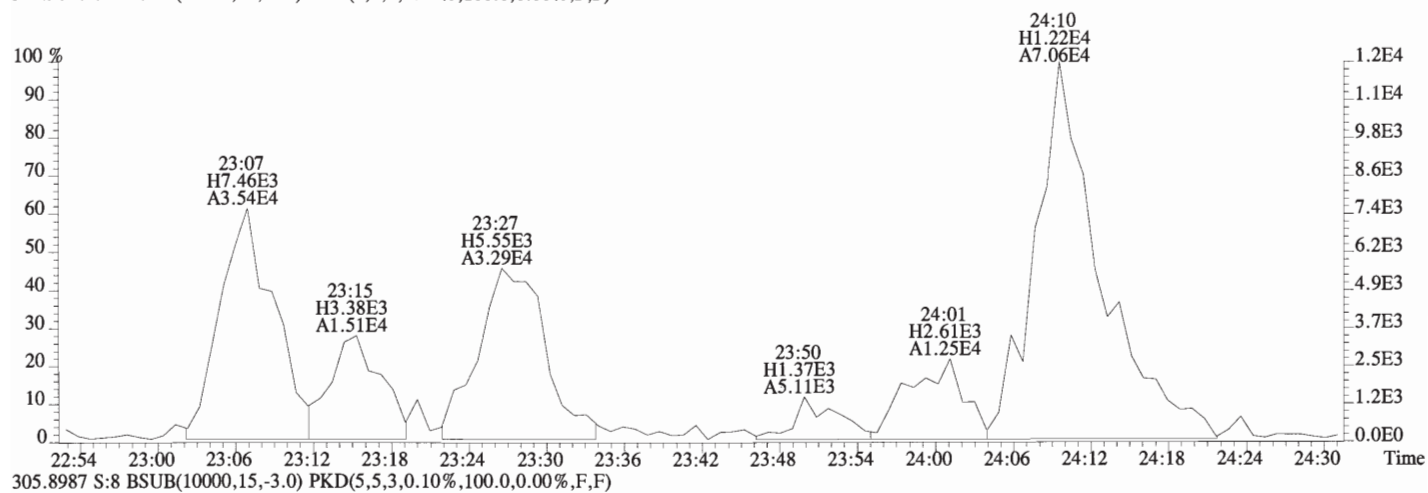
File:160712D1 #1-552 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



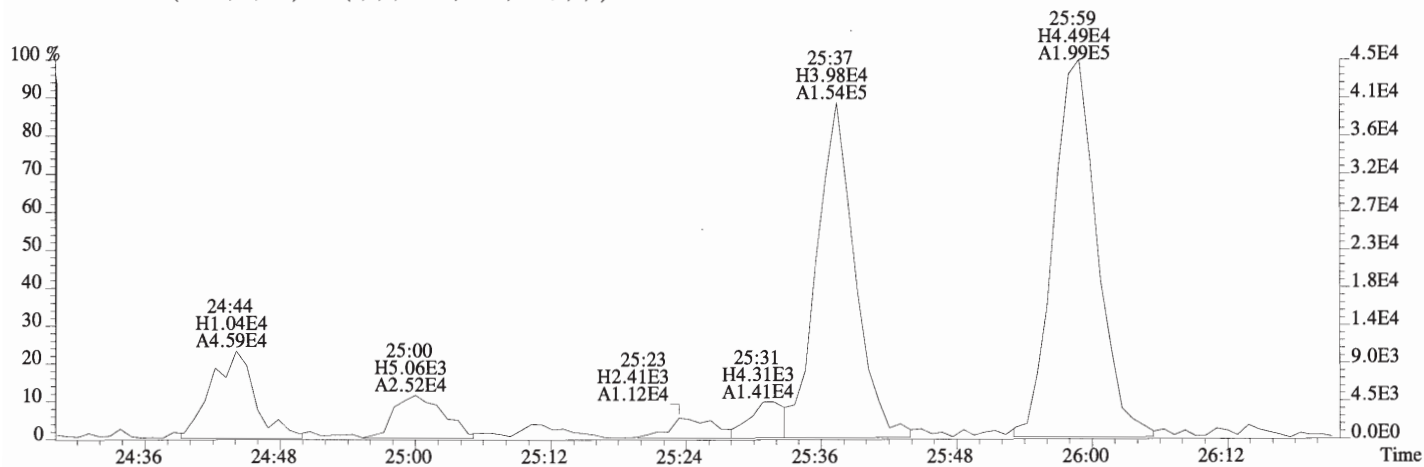
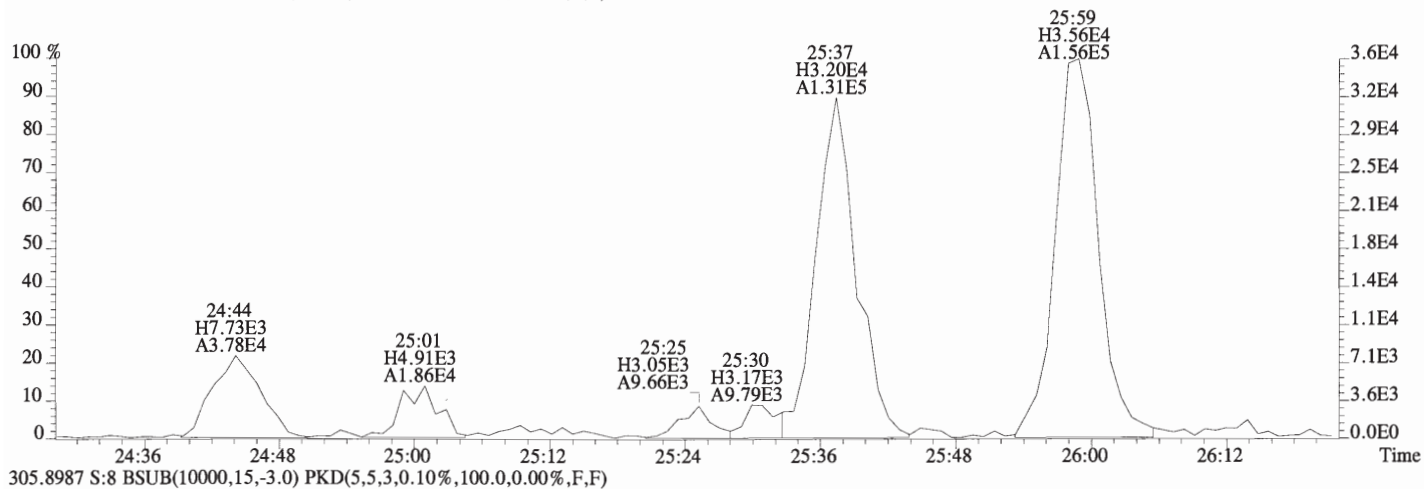
File:160712D1 #1-552 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



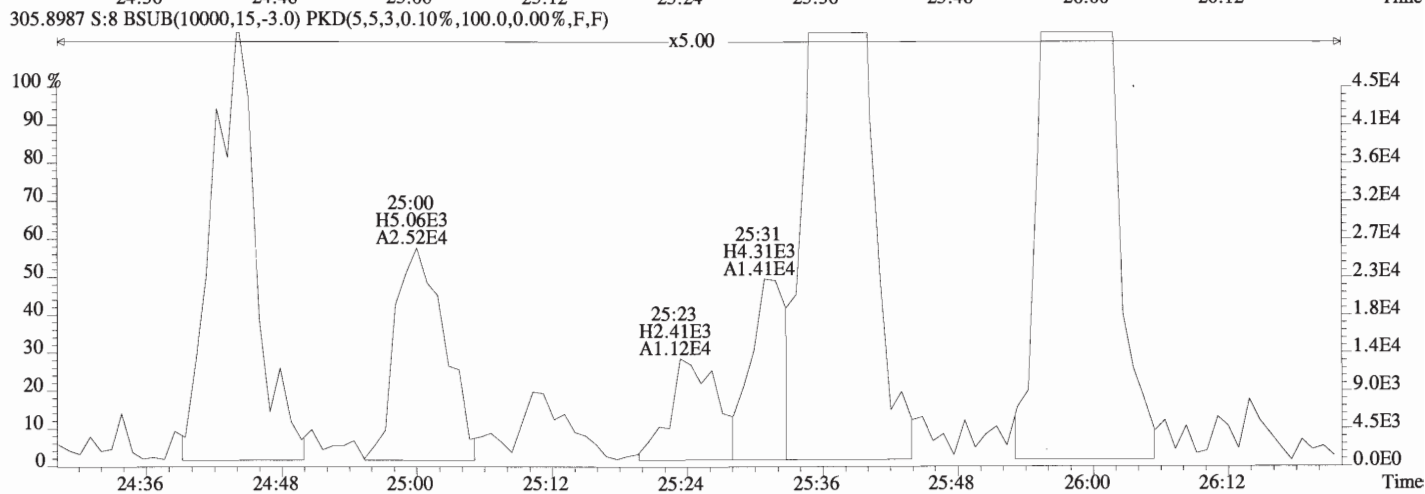
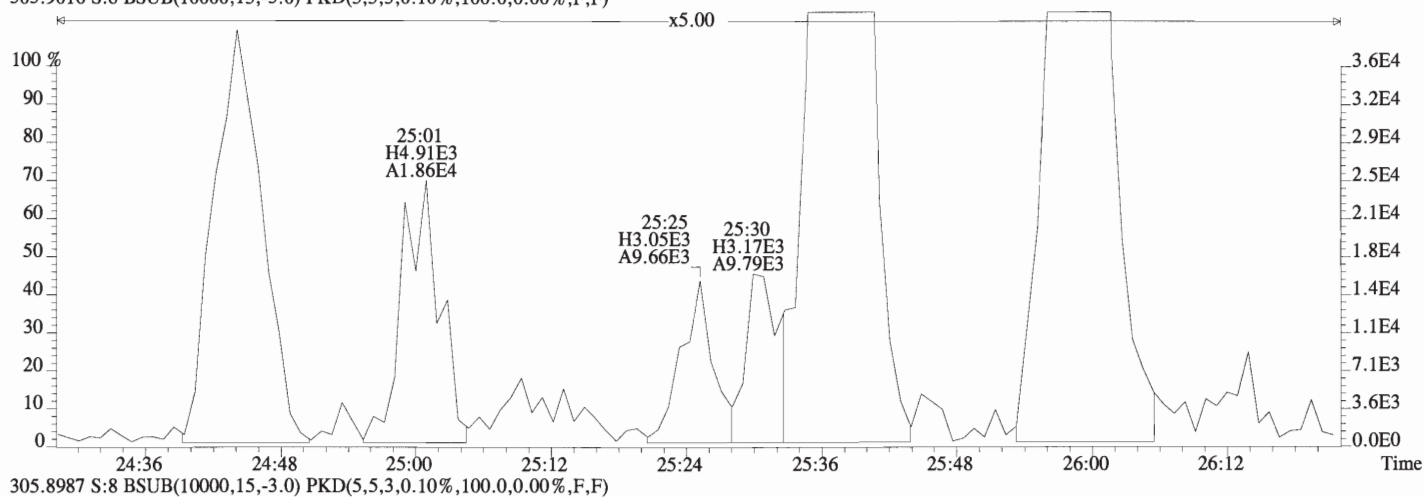
File:160712D1 #1-552 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



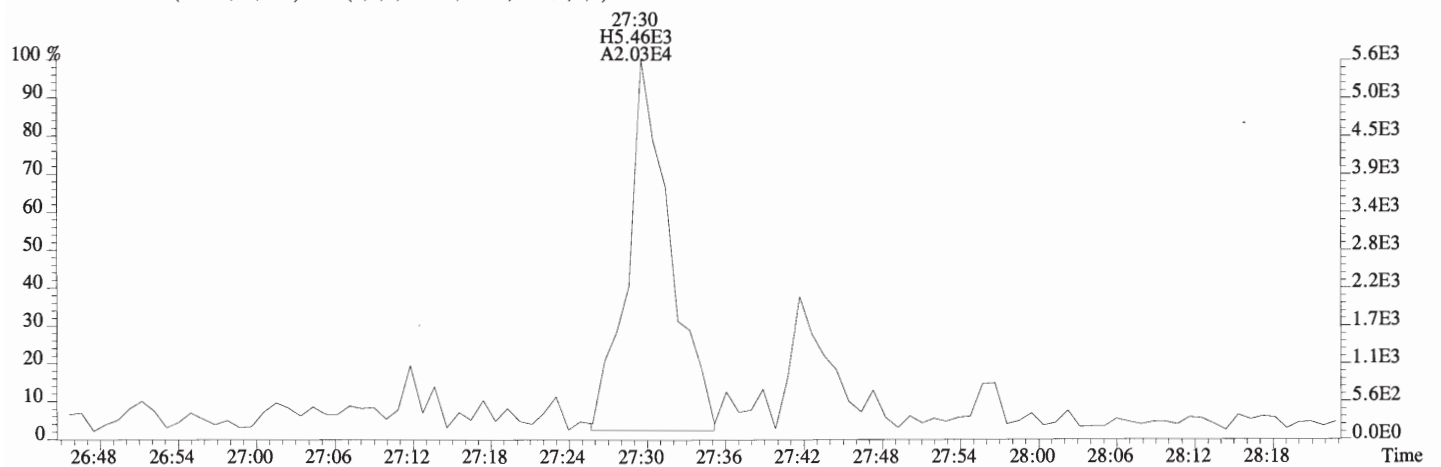
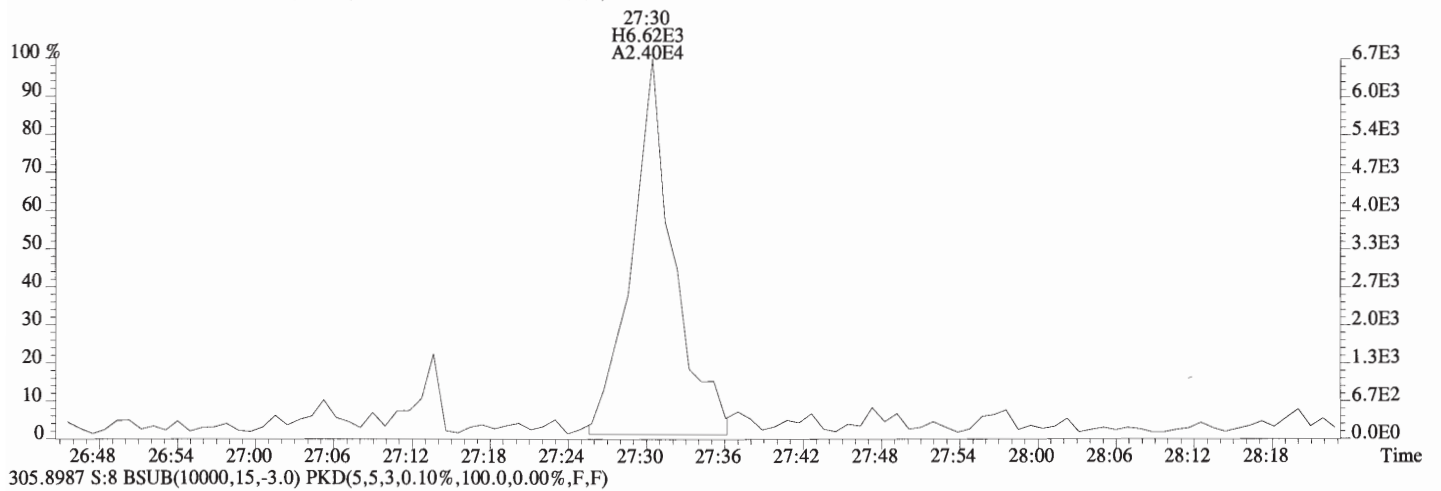
File:160712D1 #1-552 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



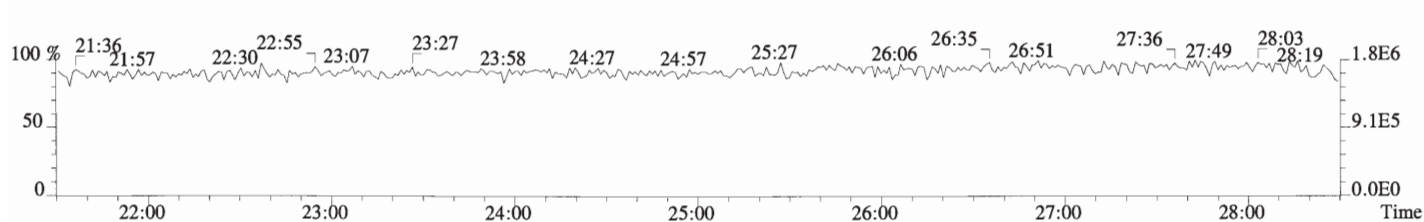
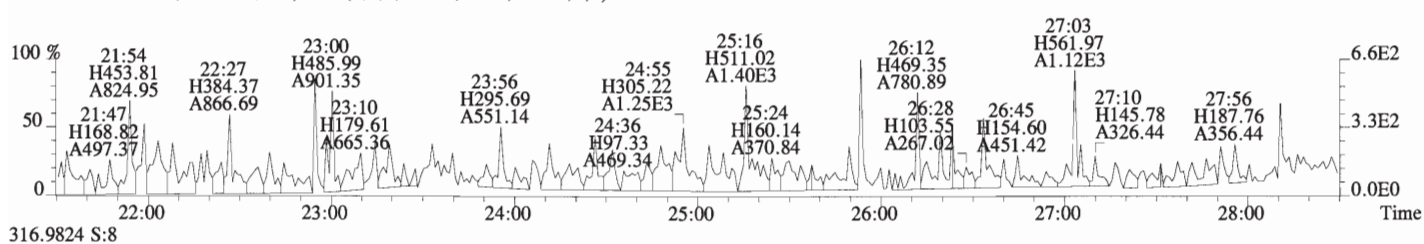
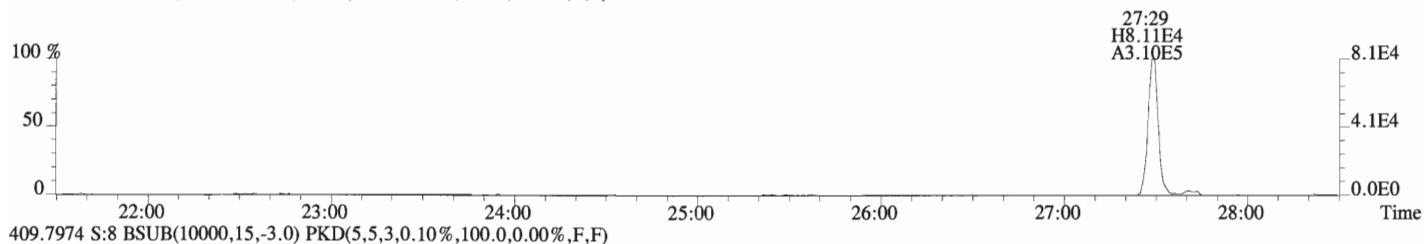
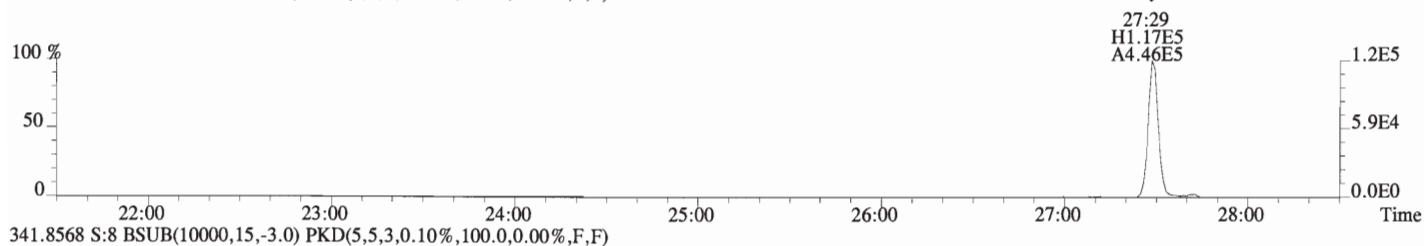
File:160712D1 #1-552 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



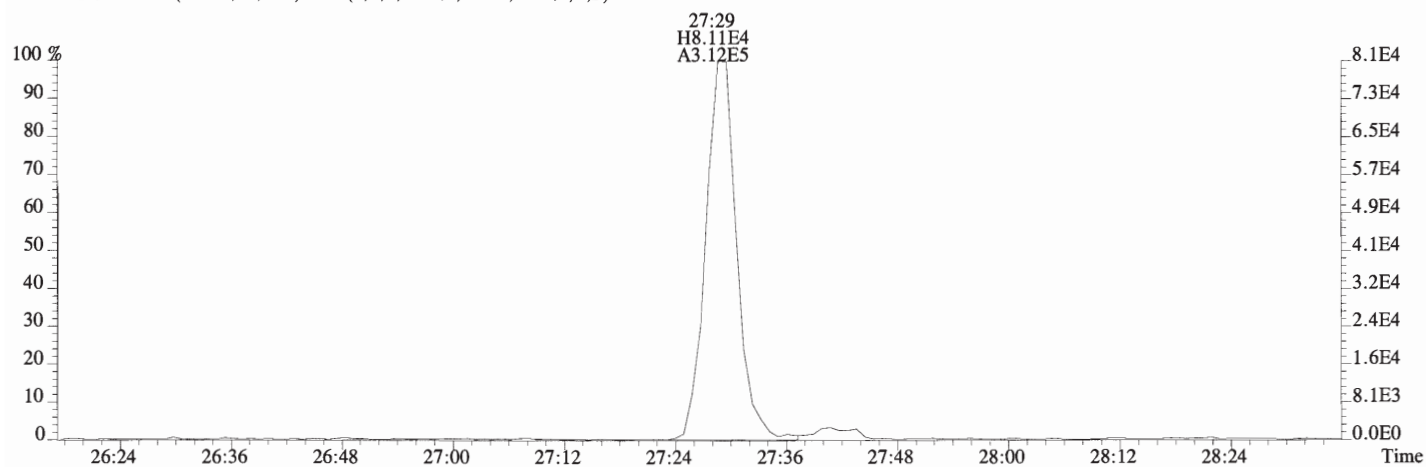
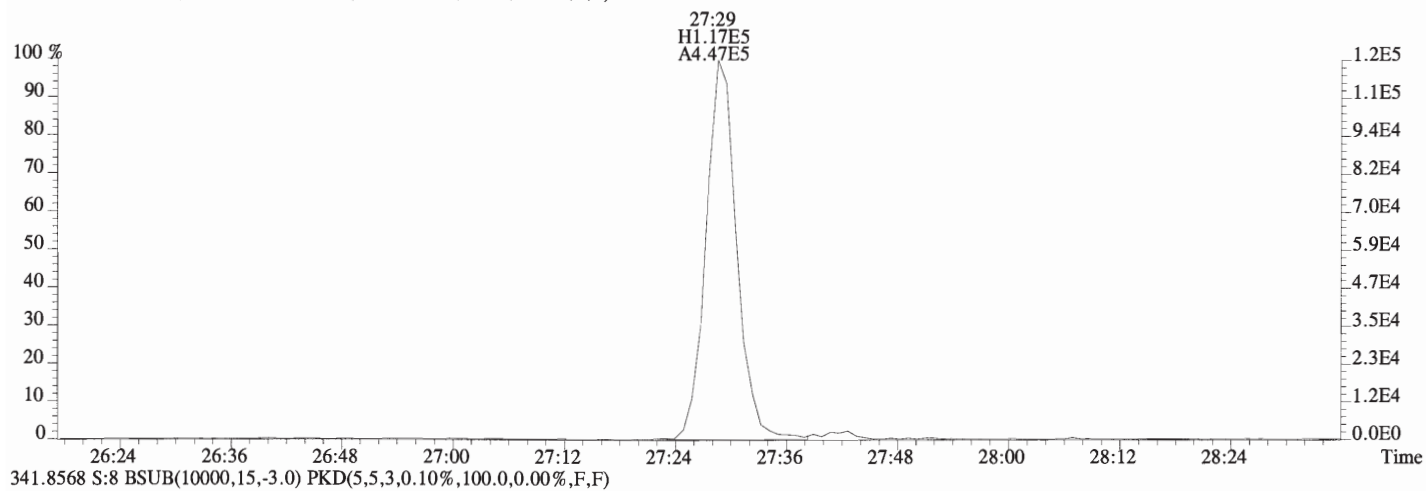
File:160712D1 #1-552 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



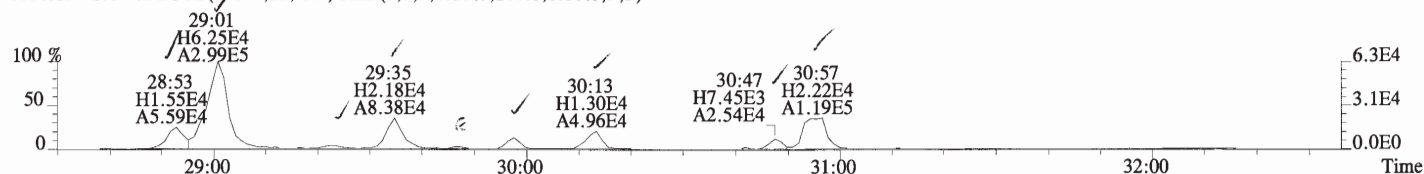
File:160712D1 #1-552 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



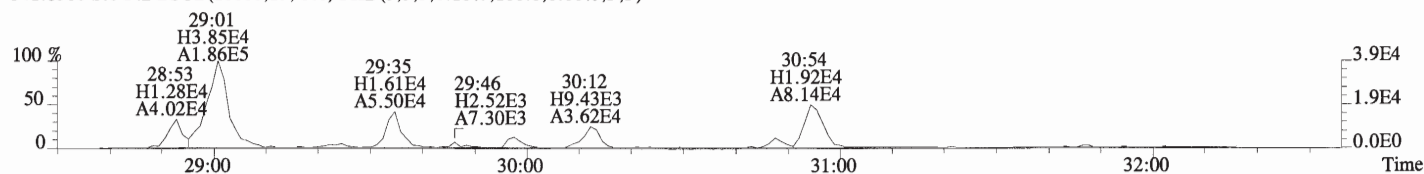
File:160712D1 #1-552 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



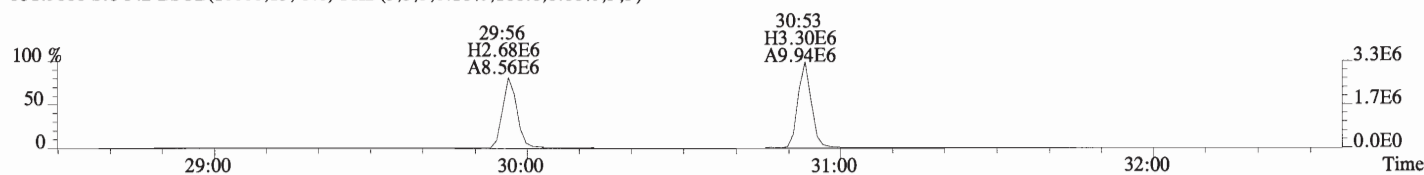
File:160712D1 #1-193 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



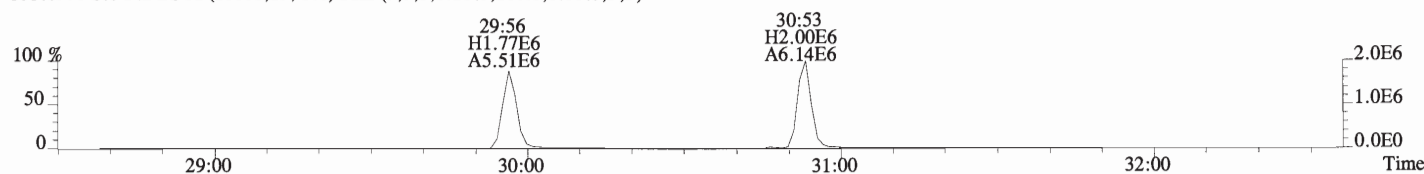
341.8568 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



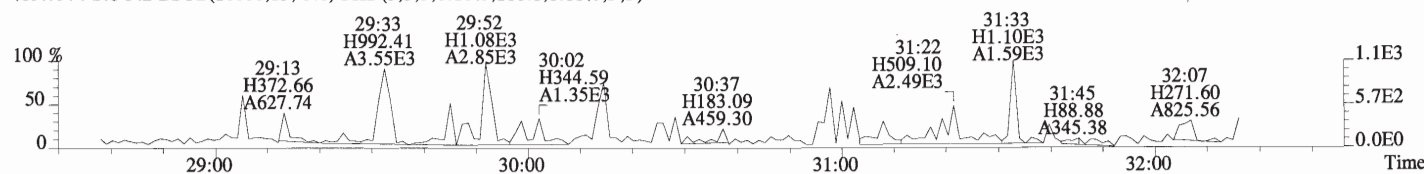
351.9000 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



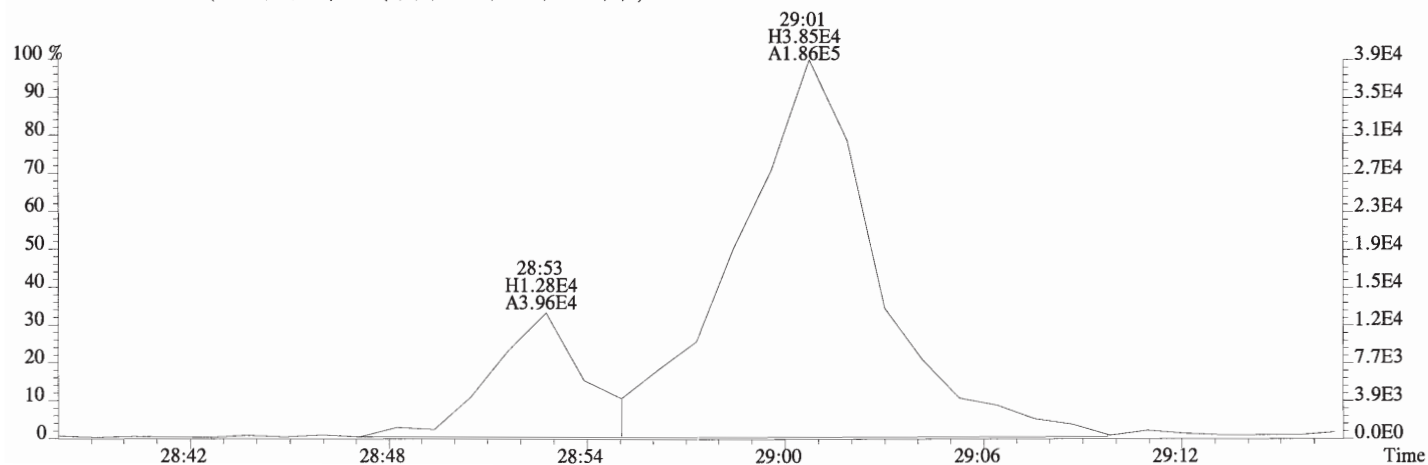
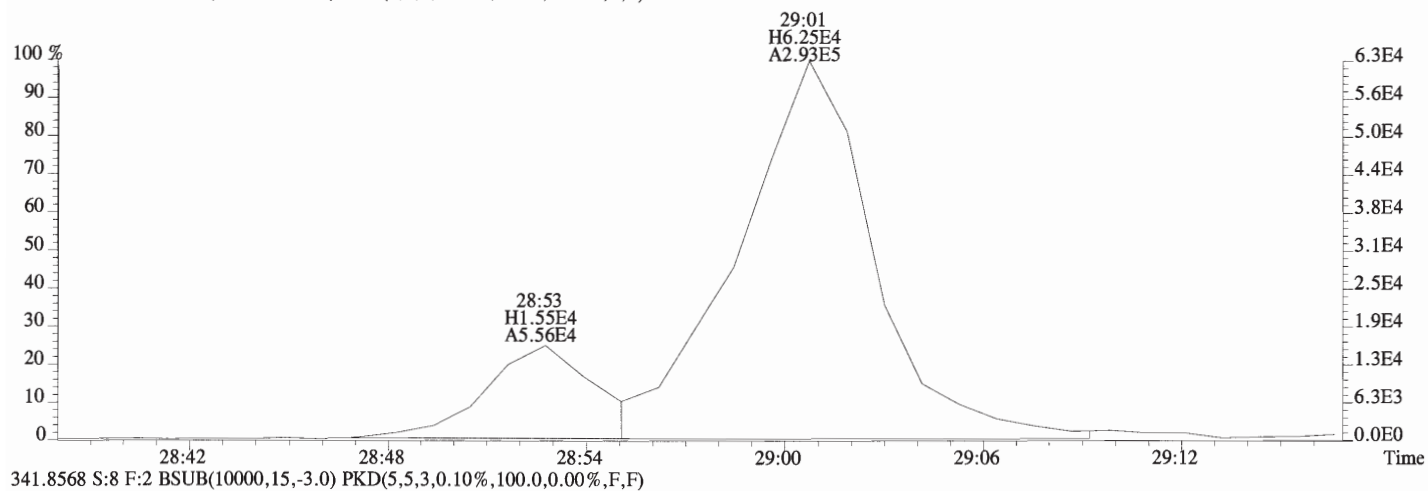
353.8970 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



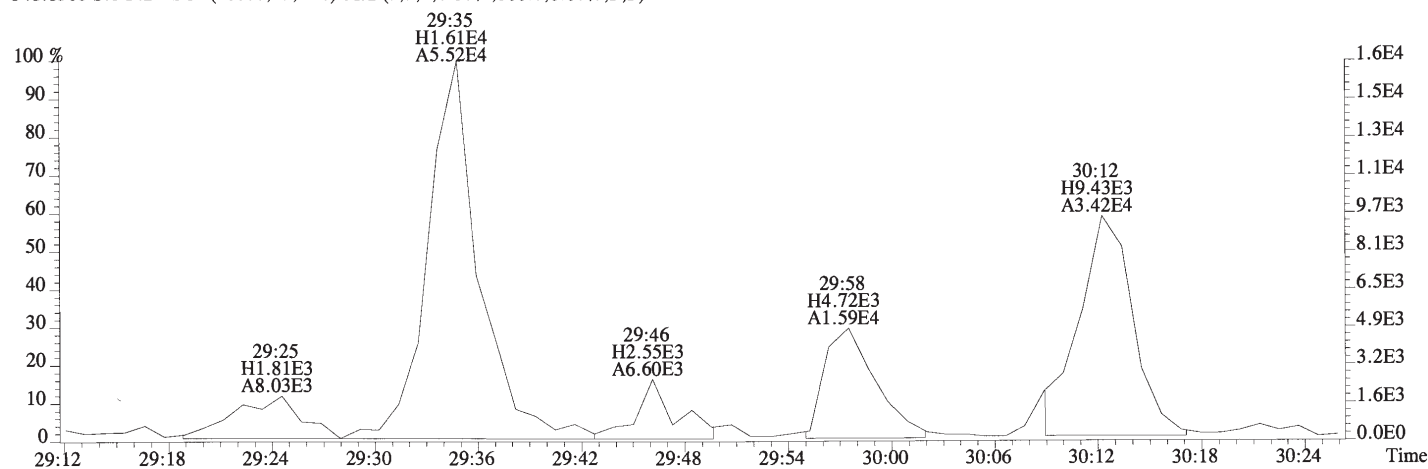
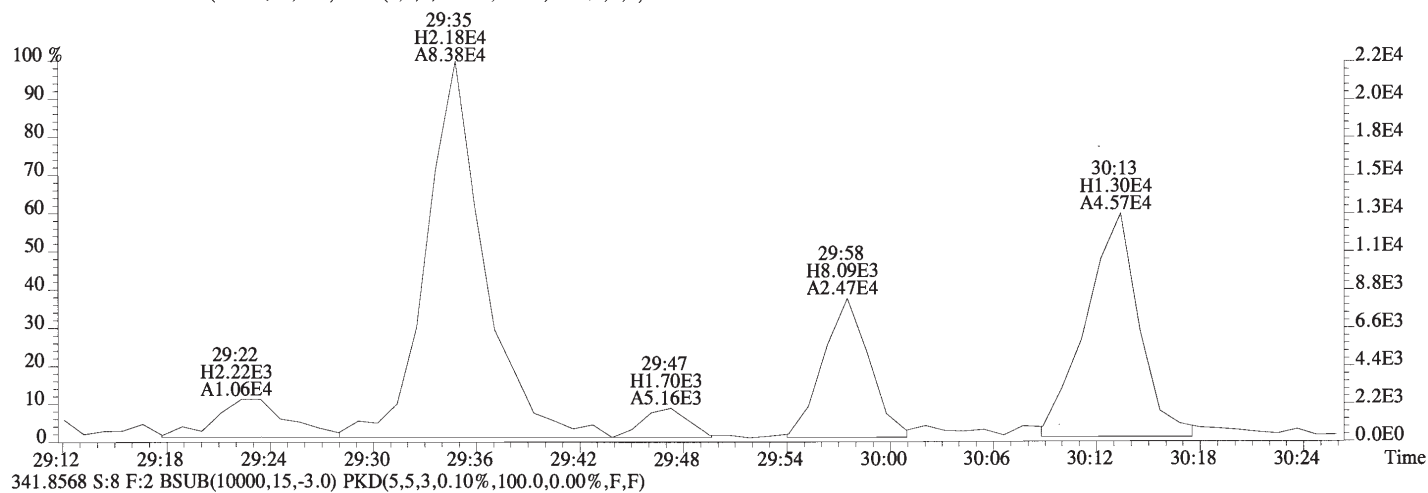
409.7974 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



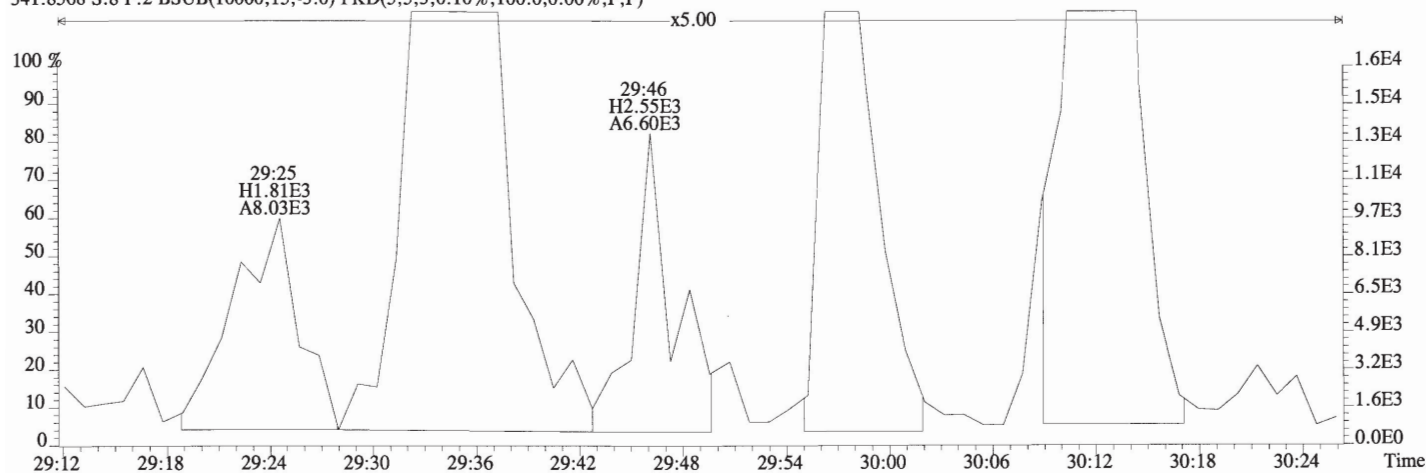
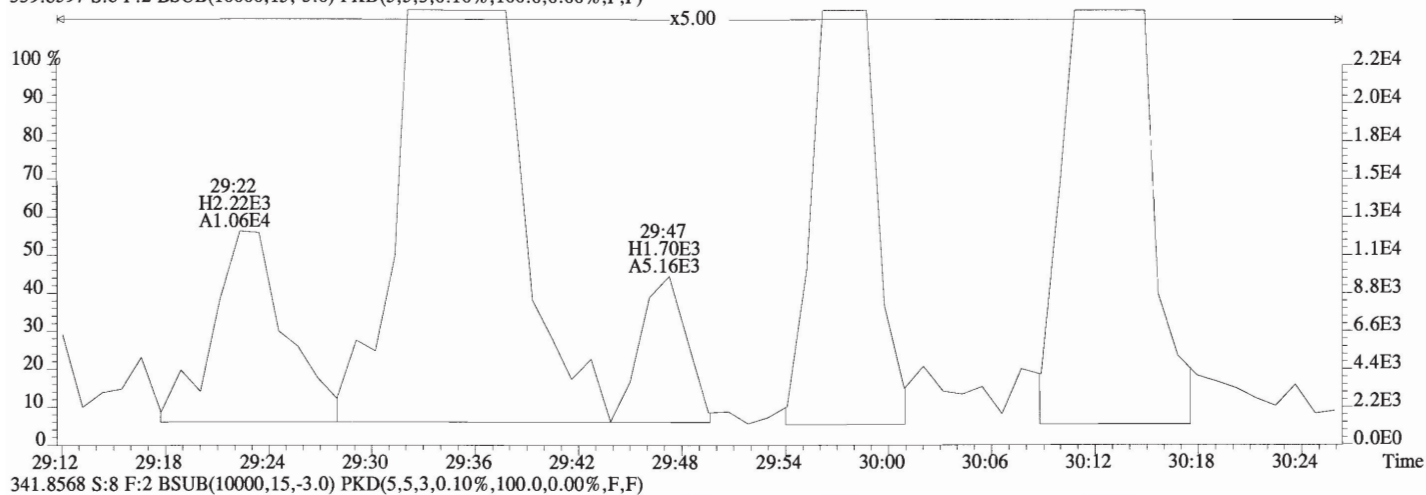
File:160712D1 #1-193 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



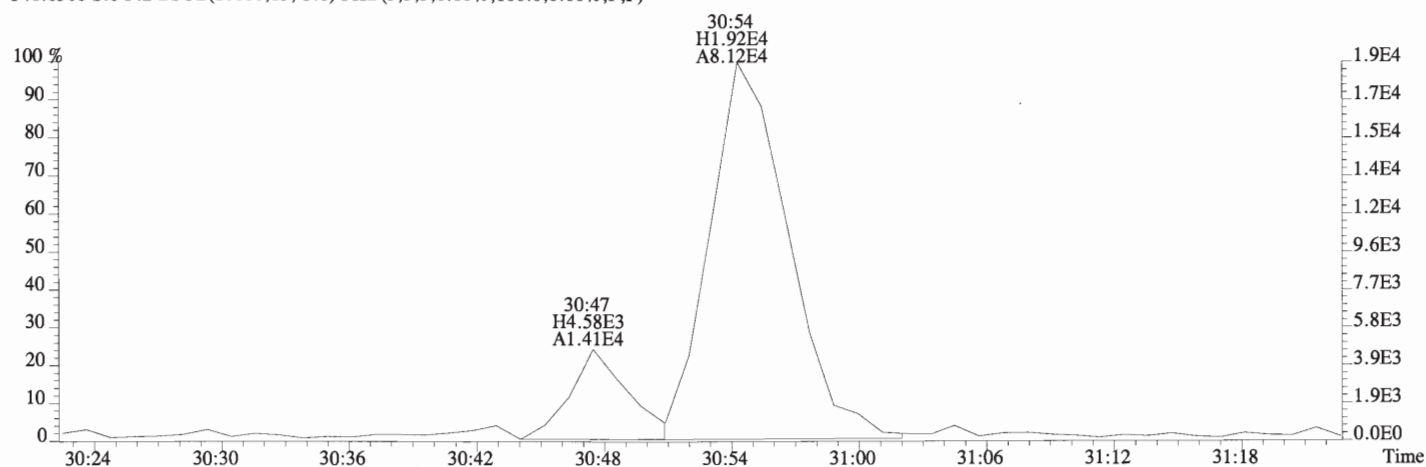
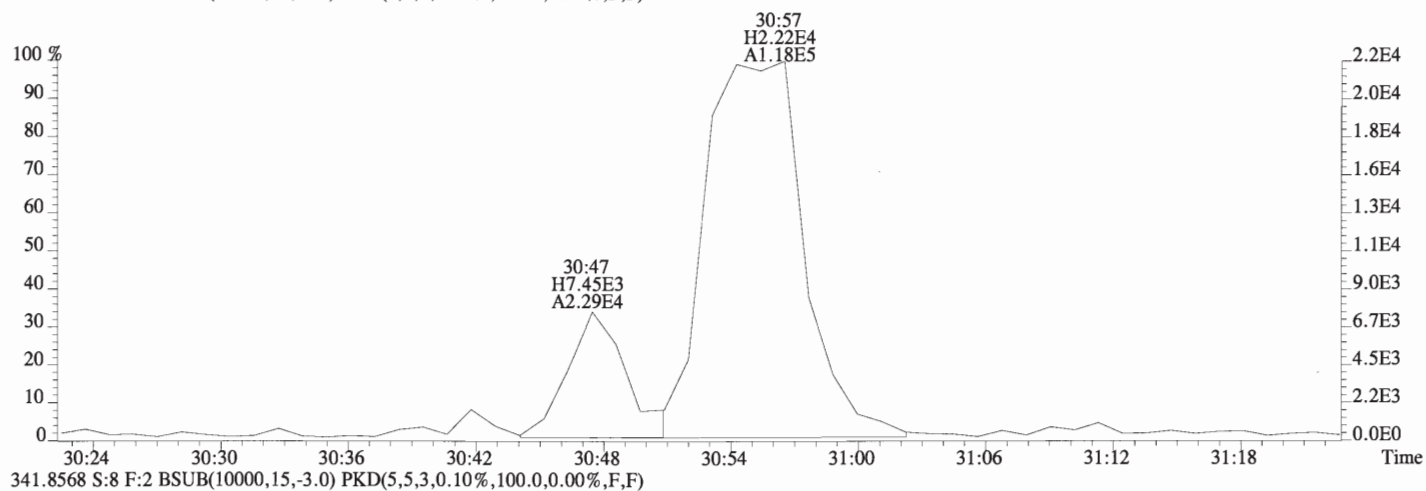
File:160712D1 #1-193 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



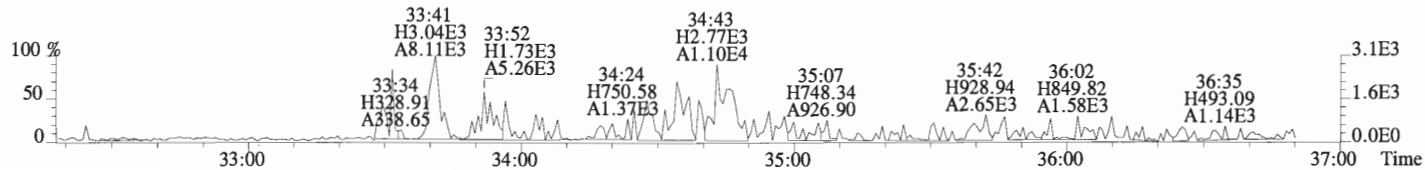
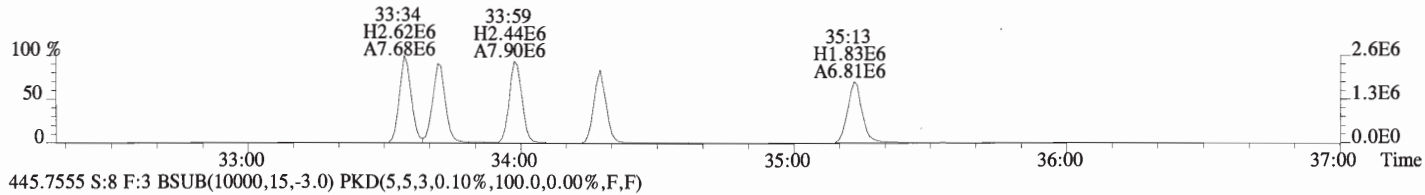
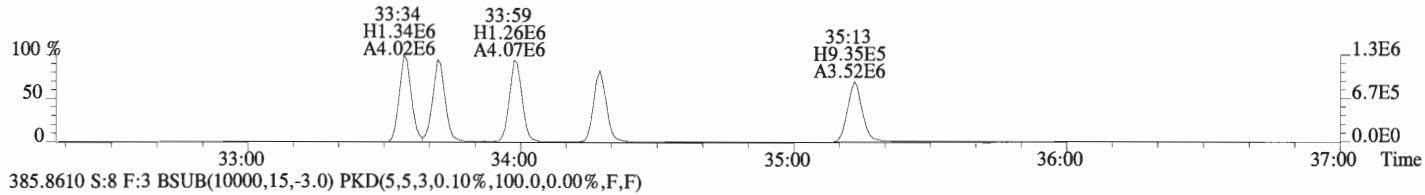
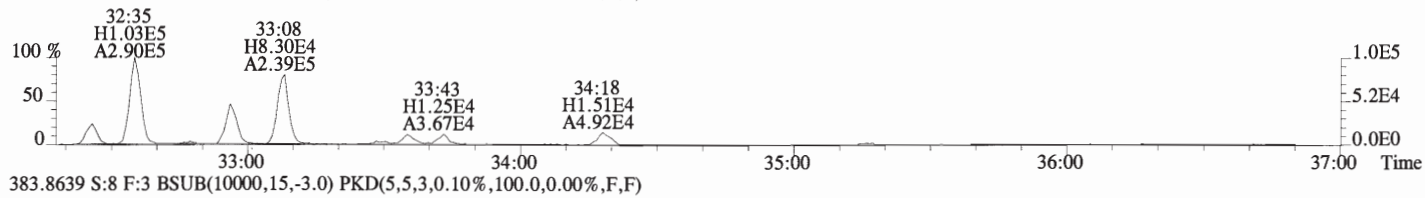
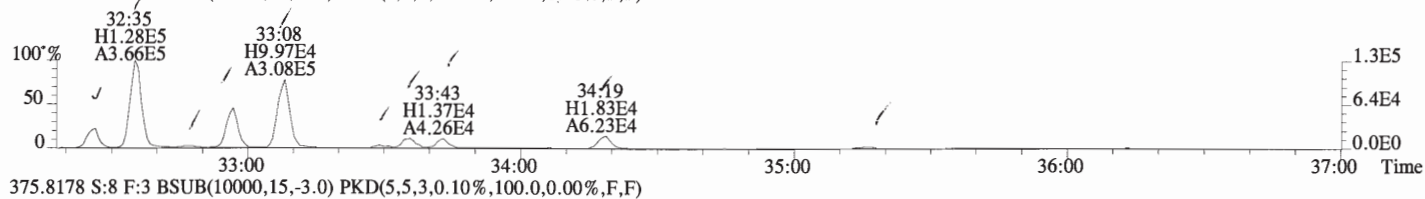
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Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



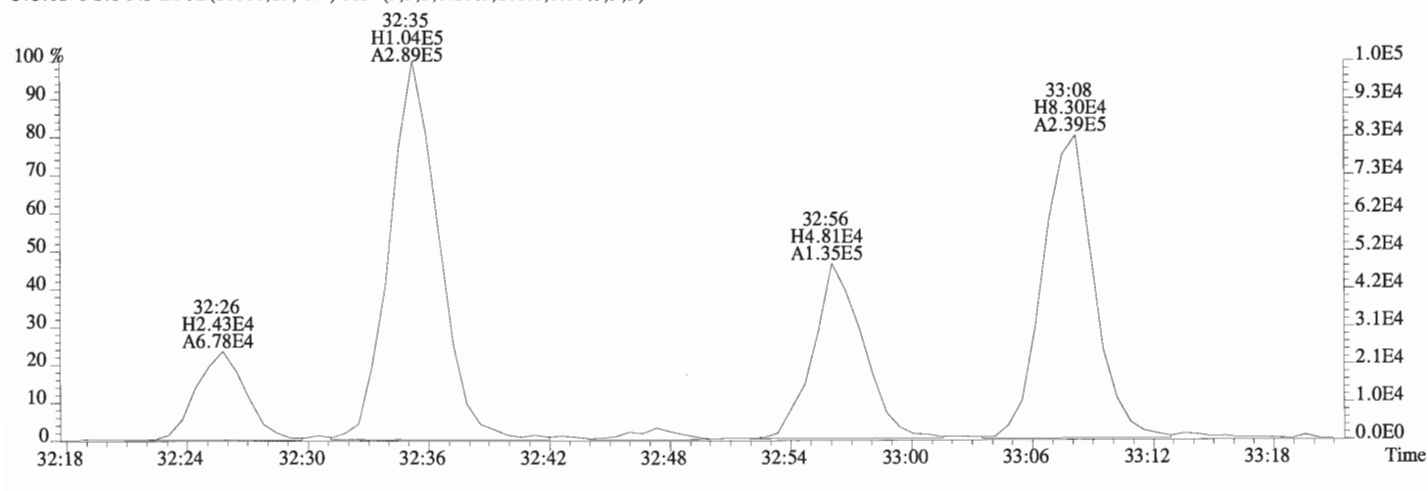
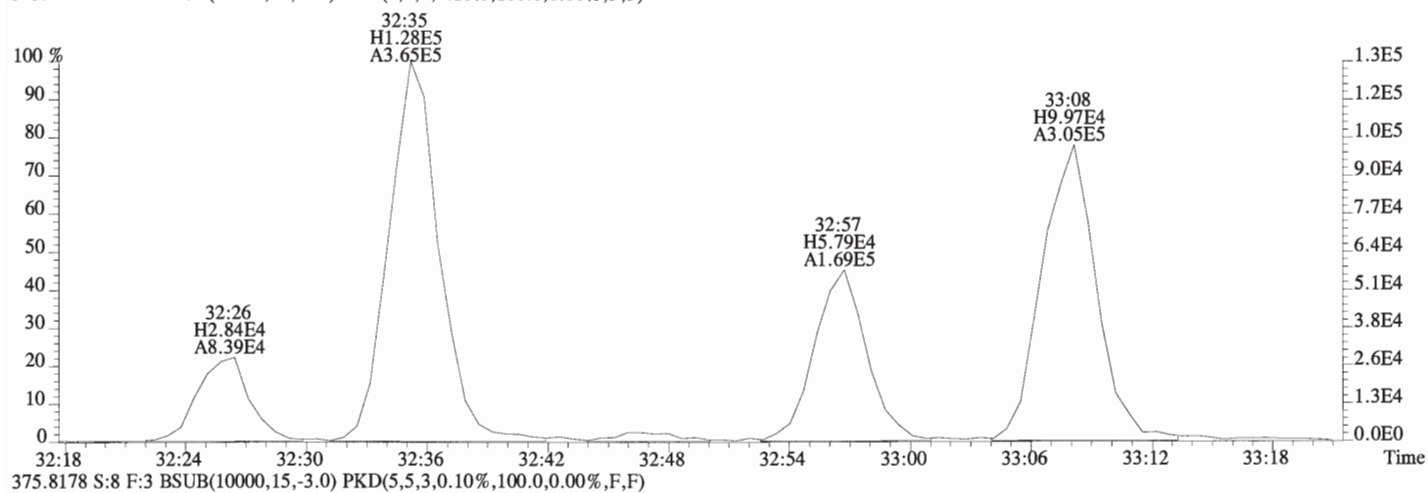
File:160712D1 #1-193 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



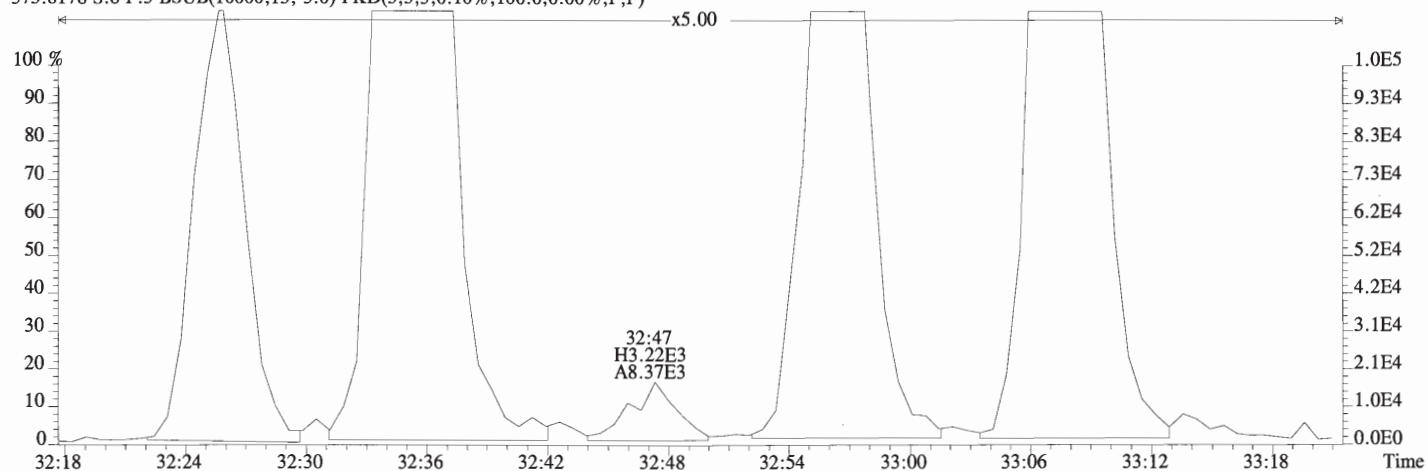
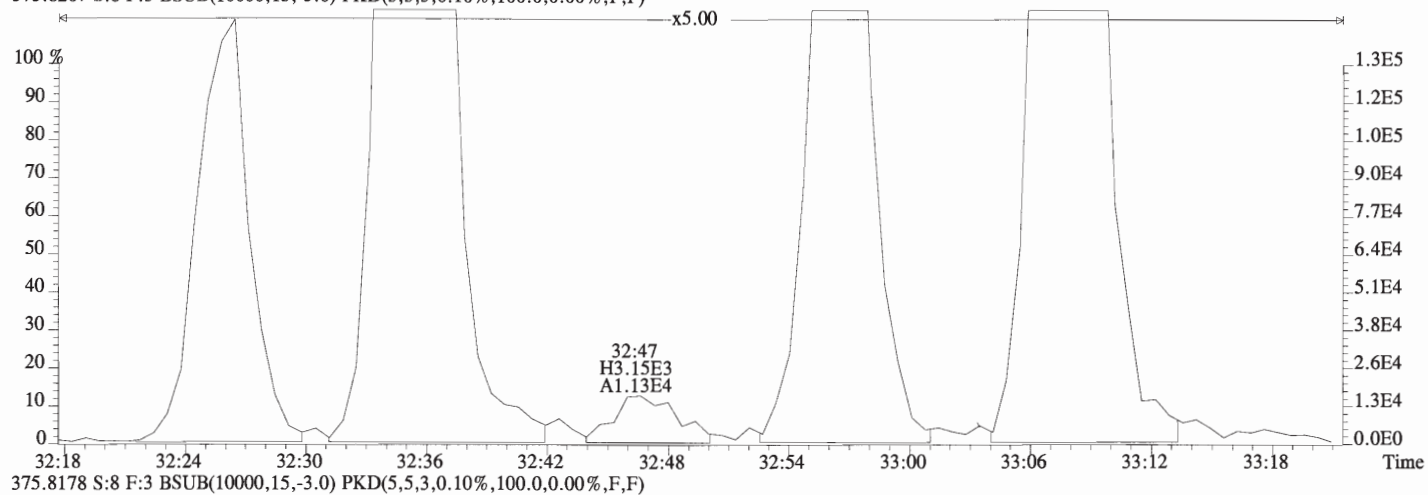
File:160712D1 #1-406 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



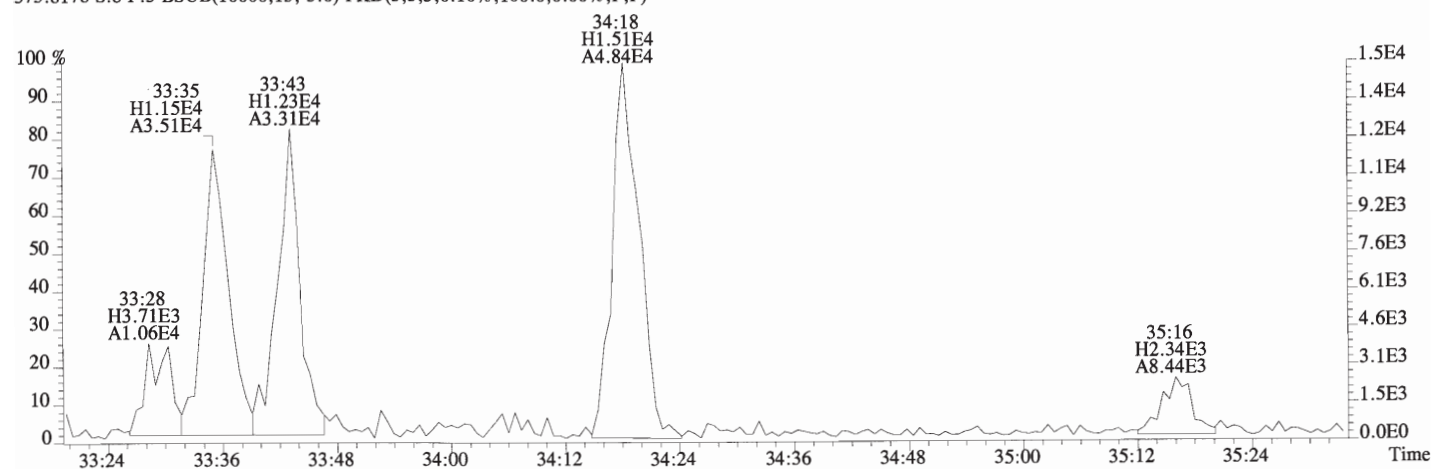
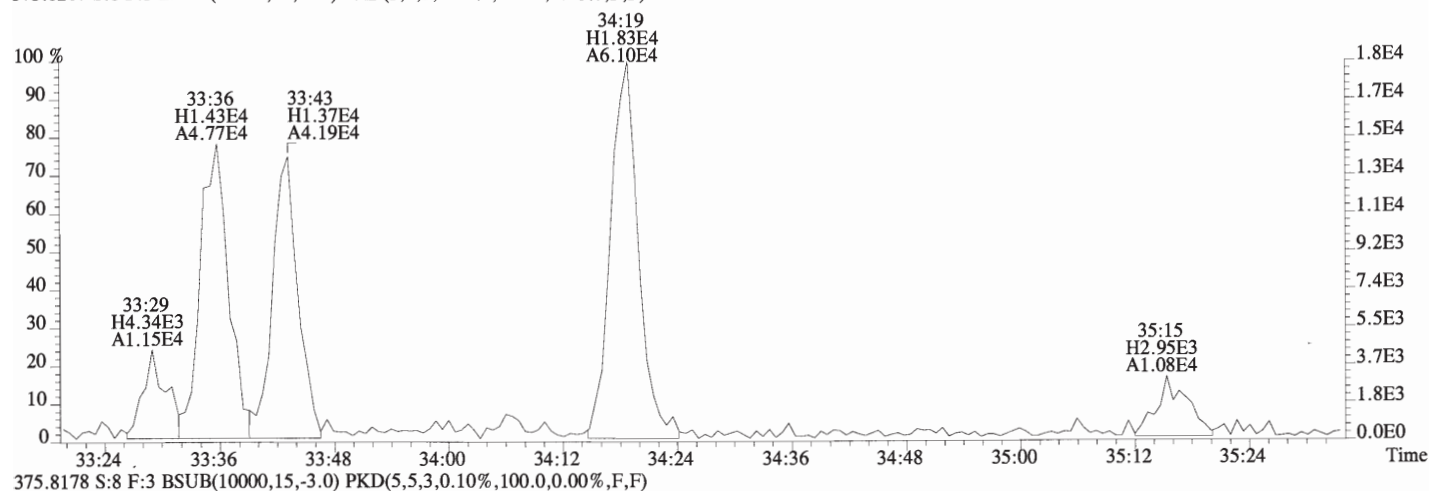
File:160712D1 #1-406 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



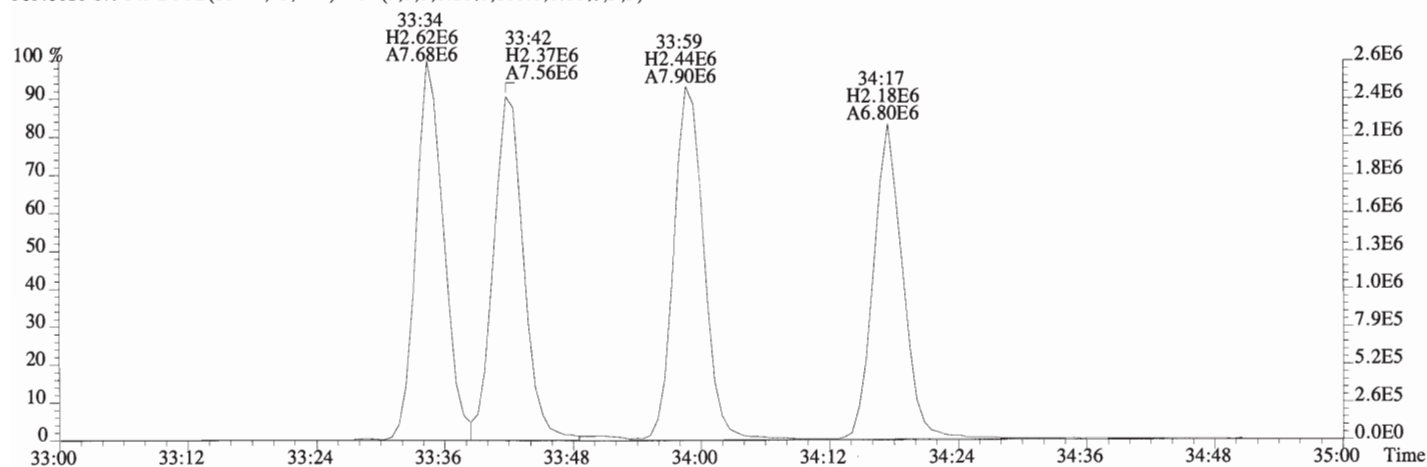
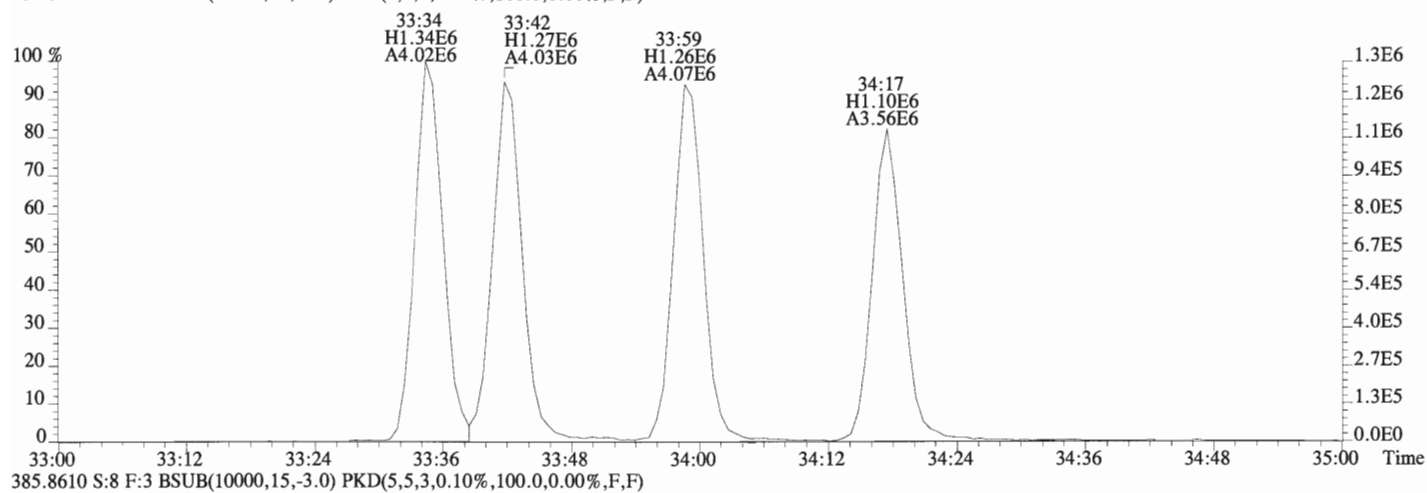
File:160712D1 #1-406 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



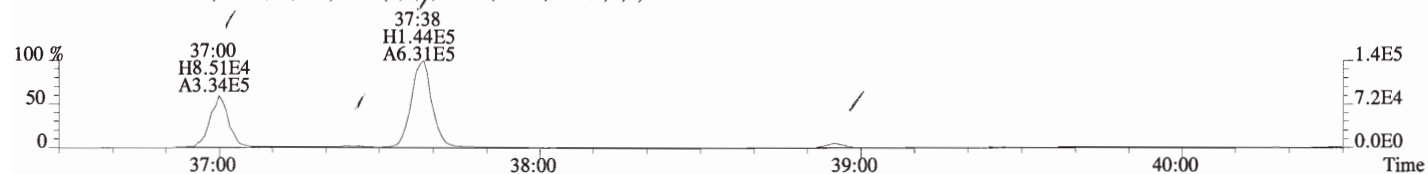
File:160712D1 #1-406 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



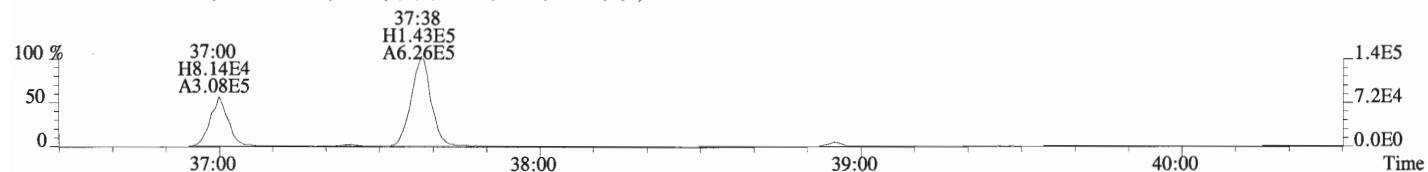
File:160712D1 #1-406 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text: Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



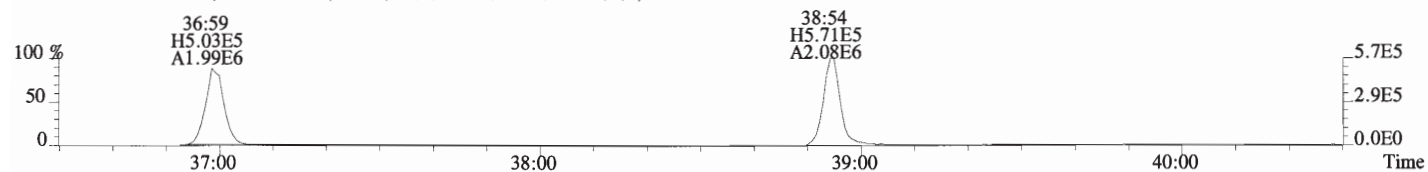
File:160712D1 #1-326 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 407.7818 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



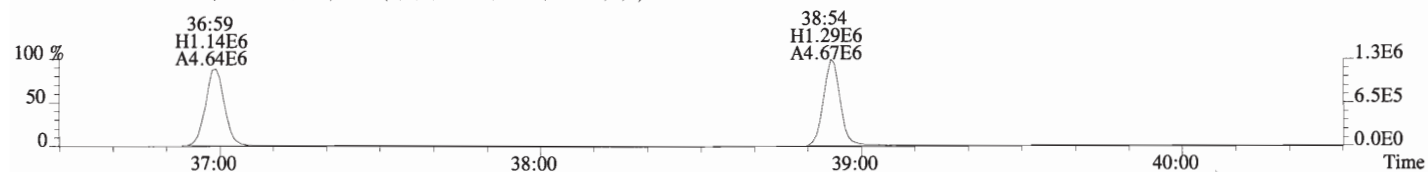
409.7788 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



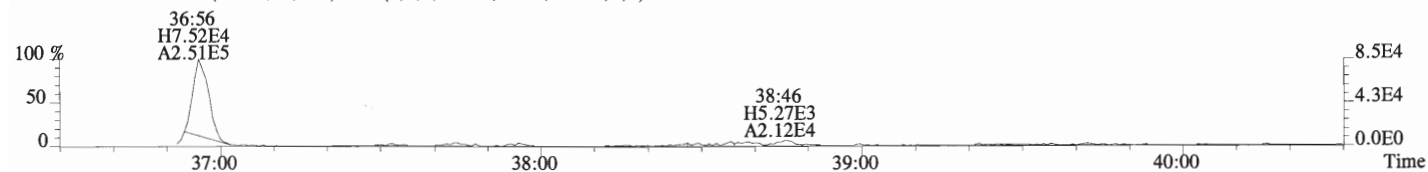
417.8253 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



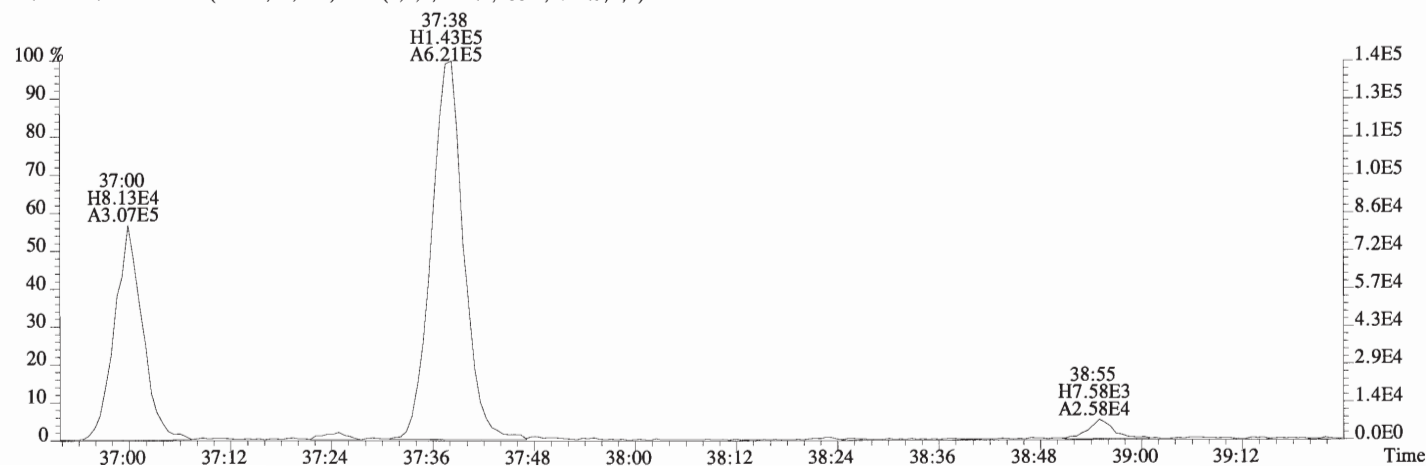
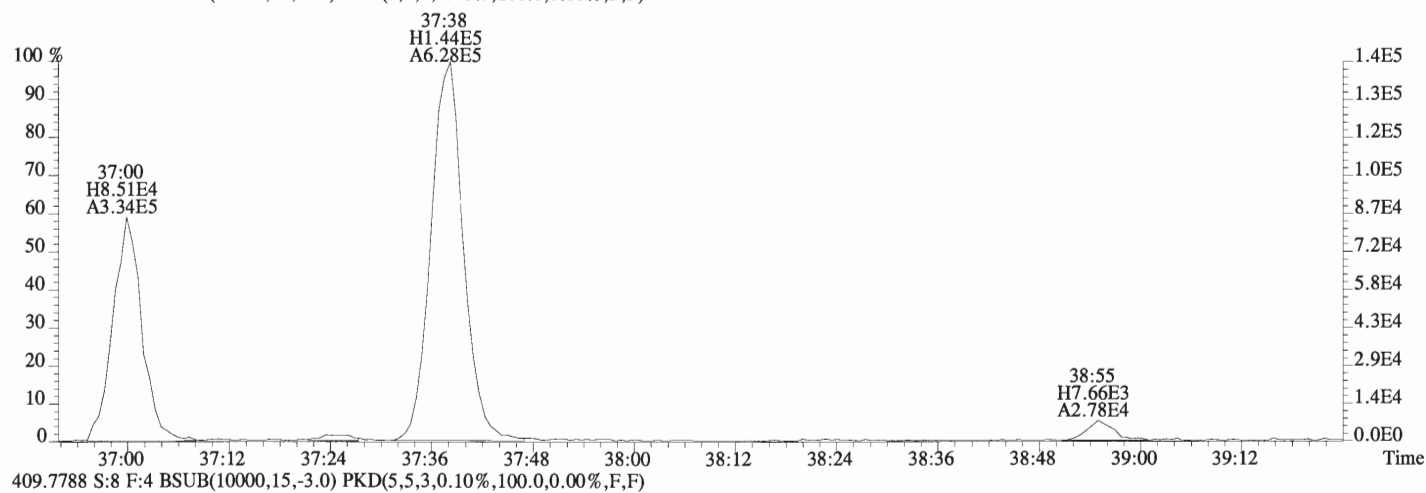
419.8220 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



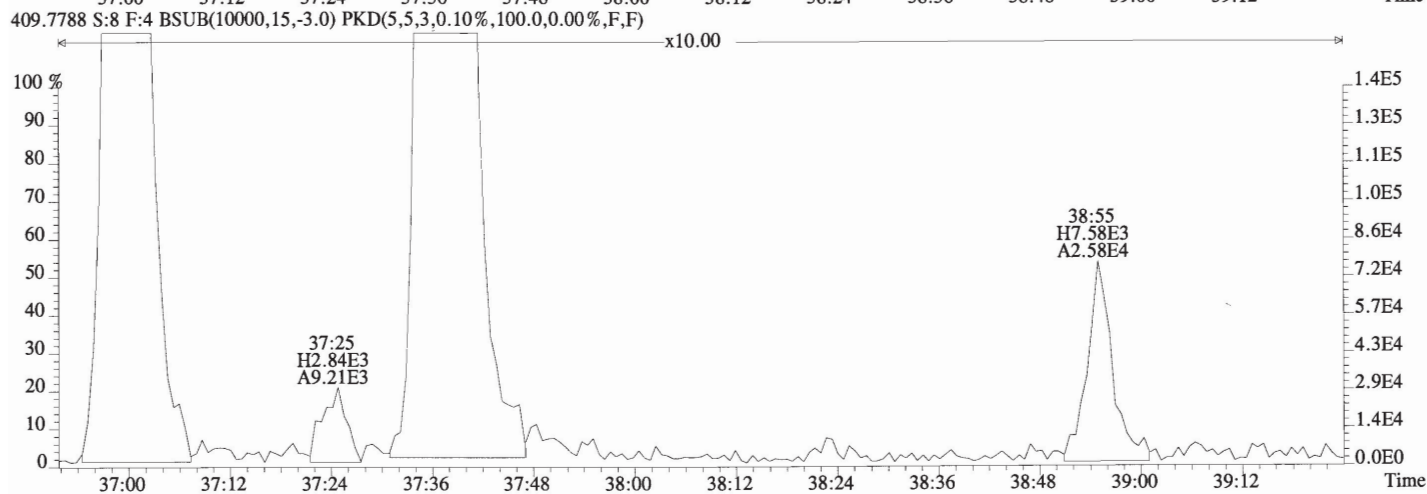
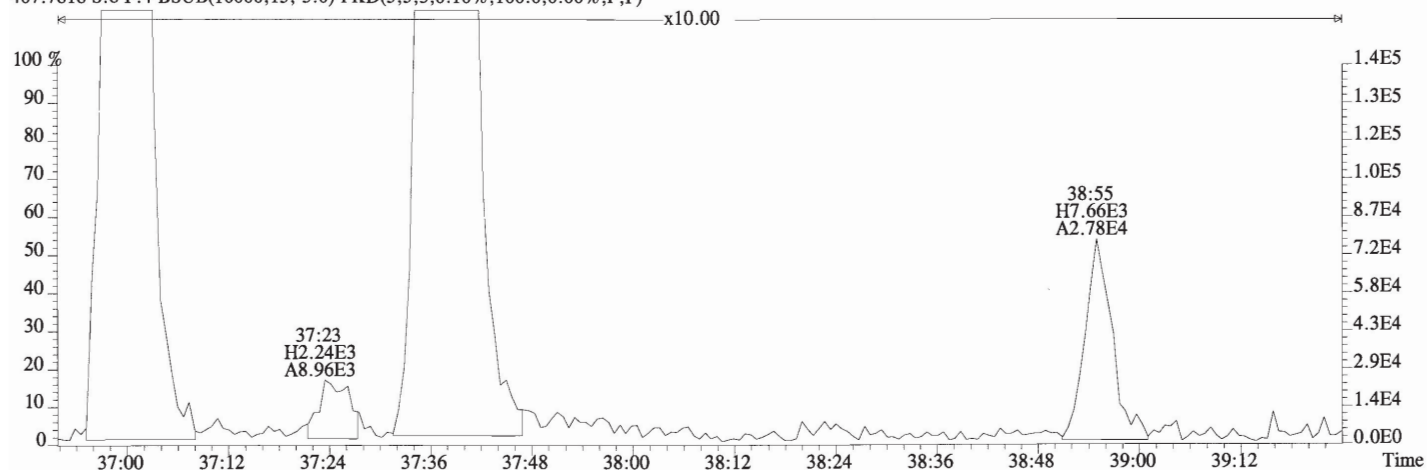
479.7165 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



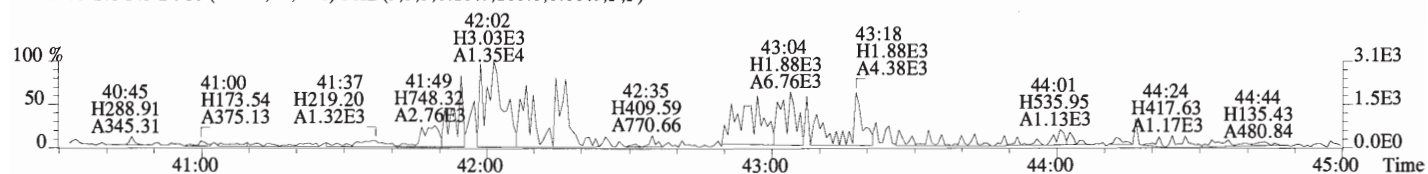
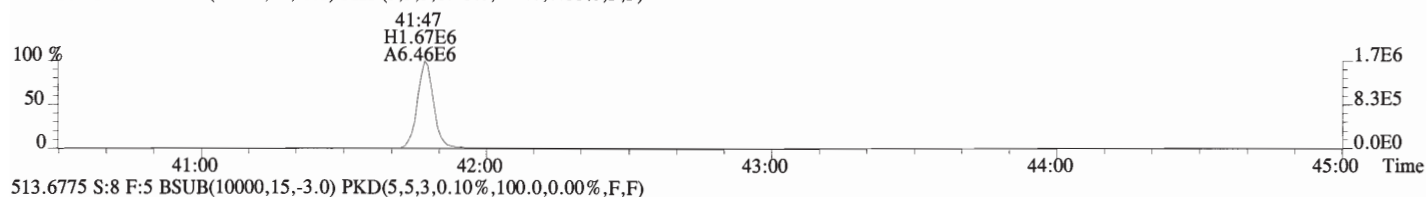
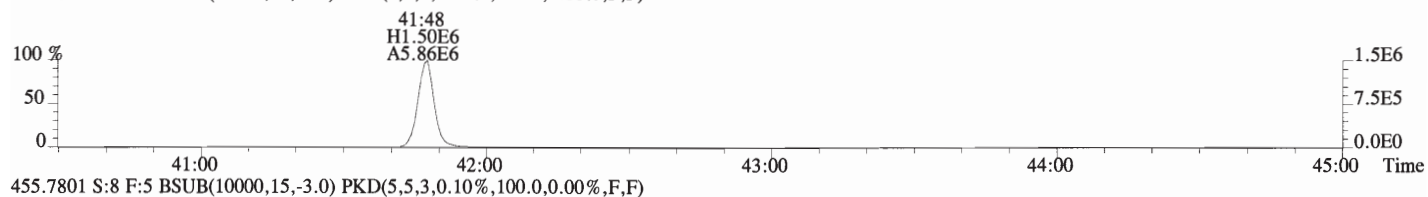
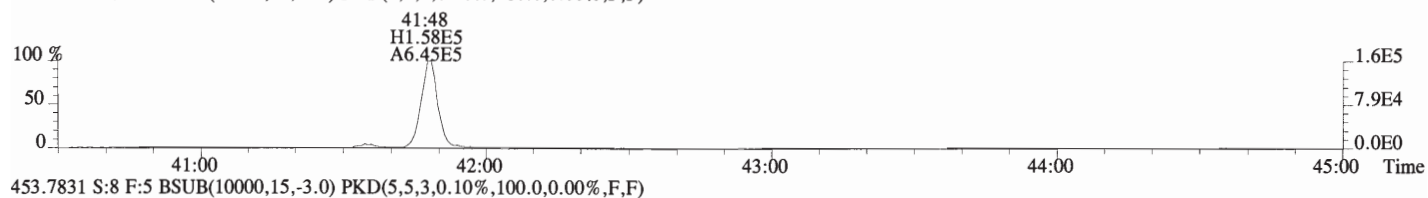
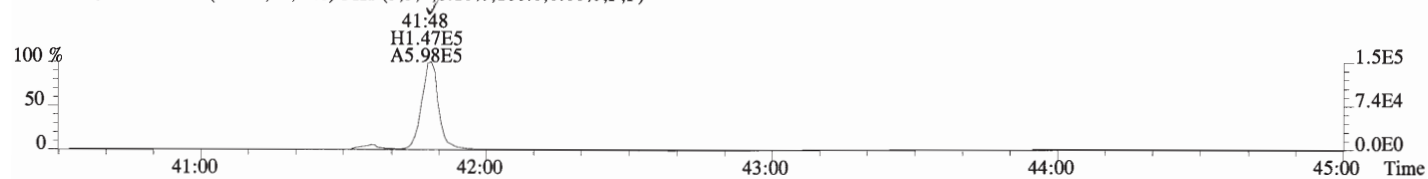
File:160712D1 #1-326 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
407.7818 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



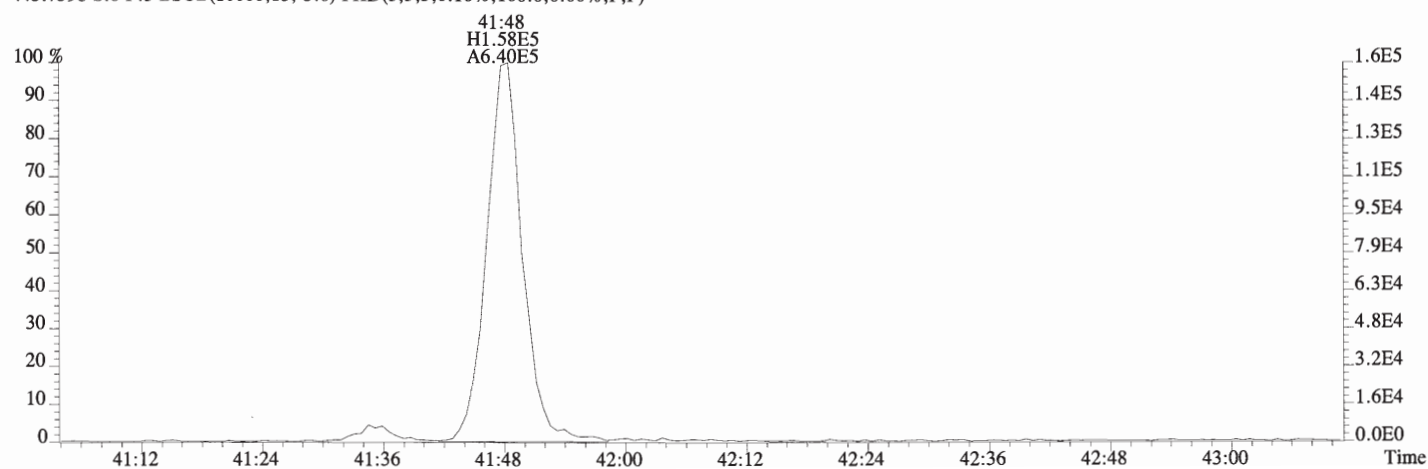
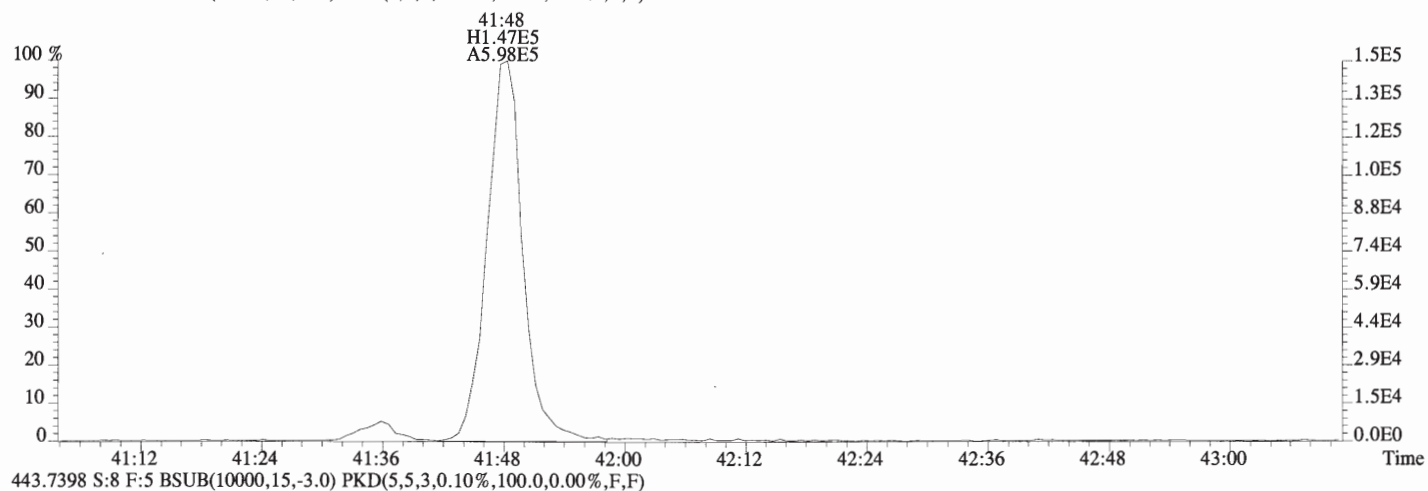
File:160712D1 #1-326 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
 407.7818 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160712D1 #1-388 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
441.7428 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160712D1 #1-388 Acq:12-JUL-2016 22:00:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#8 File Text:Vista Analytical Laboratory VG7 Text:1600835-04RE1 DU-1-12-A 10.39 Exp:OCDD_DB5
441.7428 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: Matrix Spike
Lab ID: B6G0039-MS1

Filename: 160713D1 S:6 Acq:13-JUL-16 13:09:55
GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16

wt/vol:10.043

ConCal: ST160713D1-1
EndCAL: NA

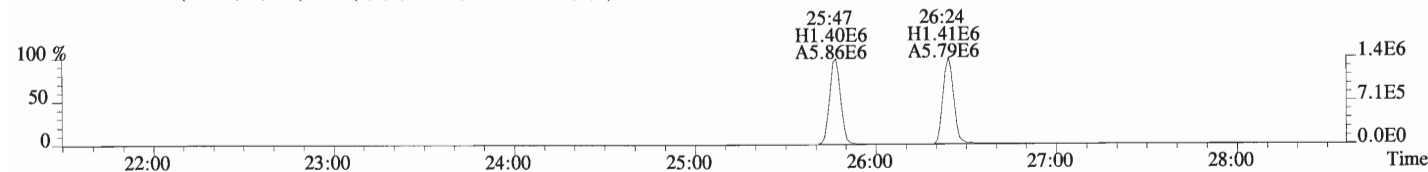
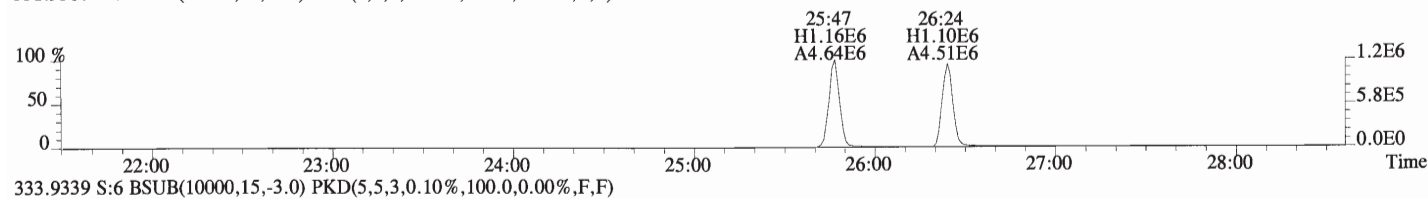
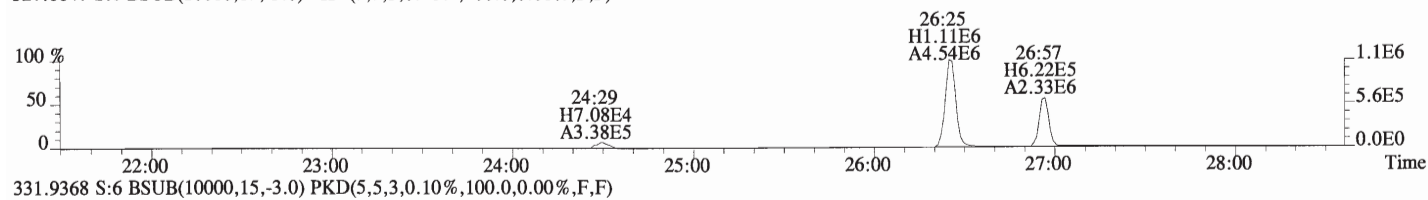
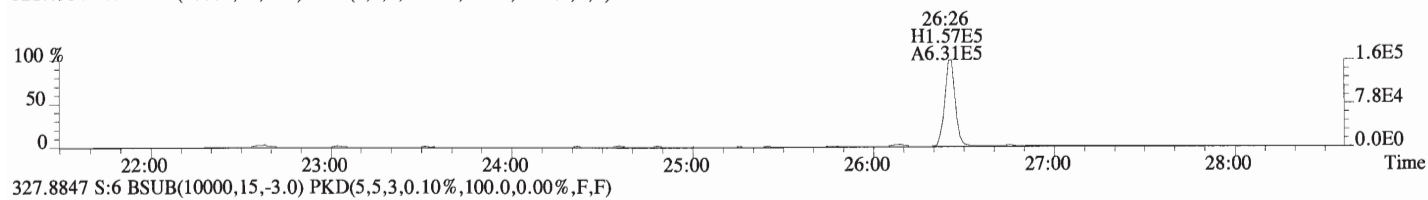
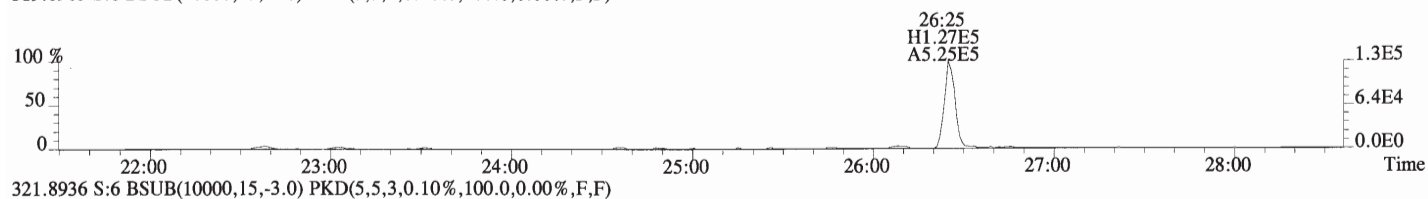
Page 5 of 6

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
	2,3,7,8-TCDD	1.16e+06	0.83 y	1.13	26:26	1.001	19.758		*	2.5	*	Total Tetra-Dioxins	23.8	25.1		*	*
	1,2,3,7,8-PeCDD	4.35e+06	0.63 y	0.96	31:10	1.001	100.37		*	2.5	*	Total Penta-Dioxins	110	113		*	*
	1,2,3,4,7,8-HxCDD	4.41e+06	1.26 y	1.00	34:27	1.000	102.46		*	2.5	*	Total Hexa-Dioxins	358	361		*	*
	1,2,3,6,7,8-HxCDD	4.69e+06	1.24 y	1.10	34:33	1.001	102.27		*	2.5	*	Total Hepta-Dioxins	745	759		*	*
	1,2,3,7,8,9-HxCDD	4.59e+06	1.23 y	1.05	34:50	1.000	104.36		*	2.5	*	Total Tetra-Furans	33.3	36.4		*	*
	1,2,3,4,6,7,8-HpCDD	1.58e+07	1.02 y	1.05	38:22	1.000	424.04		*	2.5	*	Total Penta-Furans	227.33	230.24		*	*
	OCDD	1.28e+08	0.91 y	0.96	41:34	1.000	4588.7		*	2.5	*	Total Hexa-Furans	418	419		*	*
												Total Hepta-Furans	242	244		*	*
	2,3,7,8-TCDF	2.01e+06	0.83 y	1.12	25:35	1.001	21.984		*	2.5	*						
	1,2,3,7,8-PeCDF	6.88e+06	1.60 y	1.01	29:56	1.001	99.992		*	2.5	*						
	2,3,4,7,8-PeCDF	7.31e+06	1.61 y	0.90	30:53	1.001	101.84		*	2.5	*						
	1,2,3,4,7,8-HxCDF	7.07e+06	1.22 y	1.16	33:34	1.000	97.515		*	2.5	*						
	1,2,3,6,7,8-HxCDF	7.20e+06	1.22 y	1.16	33:42	1.000	97.968		*	2.5	*						
	2,3,4,6,7,8-HxCDF	7.07e+06	1.25 y	1.23	34:17	1.000	99.169		*	2.5	*						
	1,2,3,7,8,9-HxCDF	6.23e+06	1.25 y	1.13	35:13	1.000	96.054		*	2.5	*						
	1,2,3,4,6,7,8-HpCDF	6.32e+06	1.01 y	1.44	36:59	1.000	110.84		*	2.5	*						
	1,2,3,4,7,8,9-HpCDF	5.29e+06	1.04 y	1.31	38:55	1.001	98.329		*	2.5	*						
	OCDF	8.67e+06	0.93 y	1.03	41:47	1.000	236.88		*	2.5	*						
IS	13C-2,3,7,8-TCDD	1.03e+07	0.78 y	1.01	26:24	1.024	193.24					Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	8.98e+06	0.65 y	1.10	31:09	1.208	154.22					97.0					
IS	13C-1,2,3,4,7,8-HxCDD	8.56e+06	1.33 y	0.72	34:26	1.014	177.56					77.4					
IS	13C-1,2,3,6,7,8-HxCDD	8.33e+06	1.33 y	0.73	34:32	1.017	171.45					89.2					
IS	13C-1,2,3,7,8,9-HxCDD	8.35e+06	1.31 y	0.70	34:50	1.025	177.91					86.1					
IS	13C-1,2,3,4,6,7,8-HpCDD	7.05e+06	1.05 y	0.66	38:21	1.129	158.76					89.3					
IS	13C-OCDD	1.16e+07	0.90 y	0.66	41:33	1.223	261.87					79.7					
IS	13C-2,3,7,8-TCDF	1.63e+07	0.81 y	0.90	25:35	0.992	208.80					65.7					
IS	13C-1,2,3,7,8-PeCDF	1.36e+07	1.62 y	0.98	29:55	1.161	160.29					105					
IS	13C-2,3,4,7,8-PeCDF	1.59e+07	1.58 y	1.15	30:52	1.197	160.34					80.5					
IS	13C-1,2,3,4,7,8-HxCDF	1.24e+07	0.51 y	1.01	33:34	0.988	183.38					80.5					
IS	13C-1,2,3,6,7,8-HxCDF	1.27e+07	0.52 y	1.10	33:41	0.992	172.45					92.1					
IS	13C-2,3,4,6,7,8-HxCDF	1.16e+07	0.52 y	0.95	34:17	1.009	182.00					86.6					
IS	13C-1,2,3,7,8,9-HxCDF	1.14e+07	0.53 y	0.83	35:13	1.037	206.28					91.4					
IS	13C-1,2,3,4,6,7,8-HpCDF	7.89e+06	0.43 y	0.70	36:58	1.089	168.84					104					
IS	13C-1,2,3,4,7,8,9-HpCDF	8.16e+06	0.44 y	0.72	38:54	1.145	169.55					84.8					
IS	13C-OCDF	1.42e+07	0.91 y	0.82	41:46	1.230	256.78					85.1					
C/Up	37C1-2,3,7,8-TCDD	4.54e+06		1.14	26:26	1.025	75.668					64.5					
RS/RT	13C-1,2,3,4-TCDD	1.05e+07	0.79 y	1.00	25:47	*	199.14					95.0					
RS	13C-1,2,3,4-TCDF	1.72e+07	0.82 y	1.00	24:11	*	199.14										
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.33e+07	0.52 y	1.00	33:58	*	199.14										

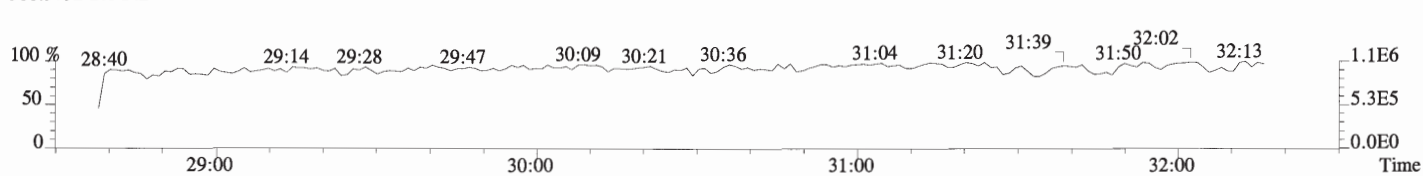
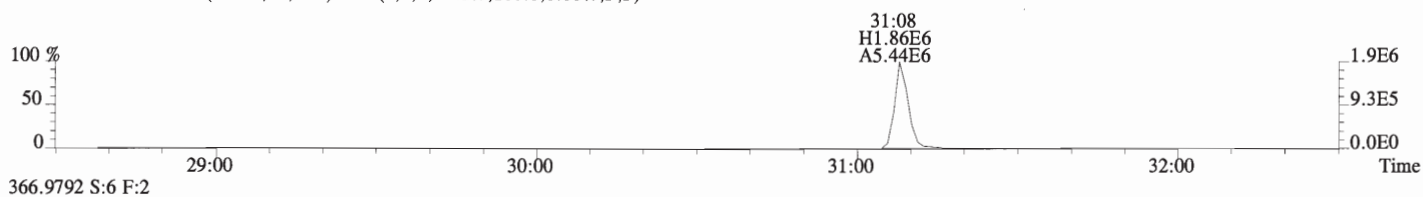
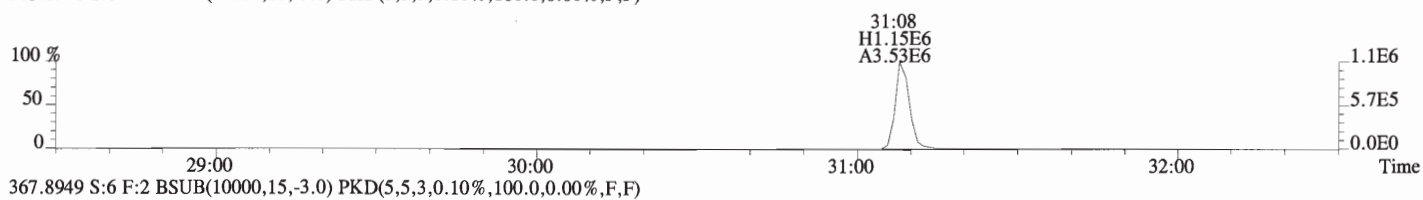
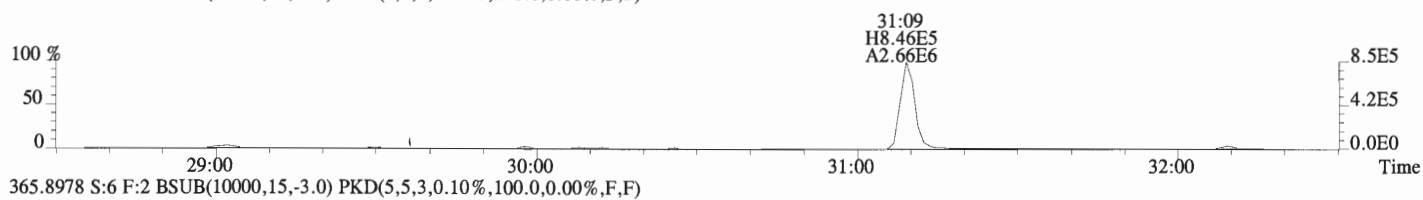
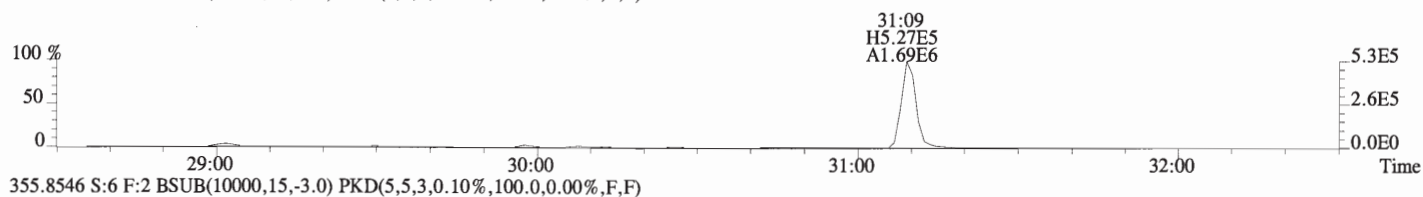
Integrations
by 7/15/16
Analyst: 7/15/16
Date: 7/15/16

Reviewed
by 7/15/16
Analyst: 7/15/16
Date: 7/15/16

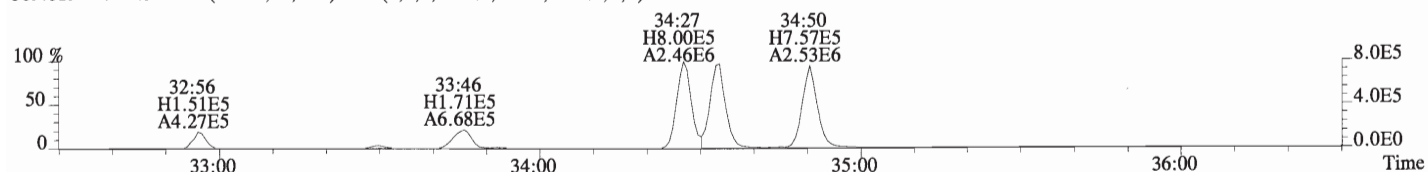
File:160713D1 #1-552 Acq:13-JUL-2016 13:09:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS1 Matrix Spike 10 Exp:OCDD_DB5
 319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



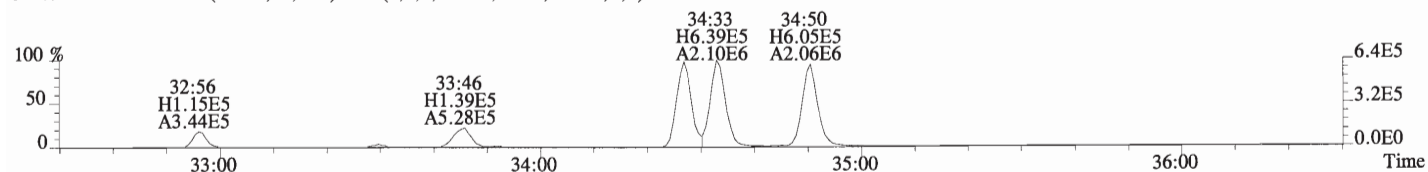
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Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS1 Matrix Spike 10 Exp:OCDD_DB5
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



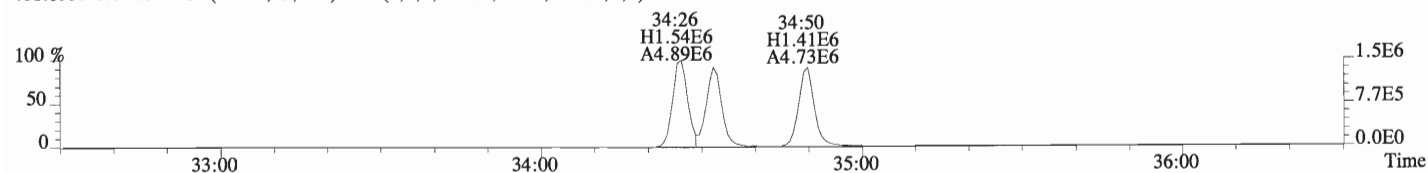
File:160713D1 #1-406 Acq:13-JUL-2016 13:09:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS1 Matrix Spike 10 Exp:OCDD_DB5
 389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



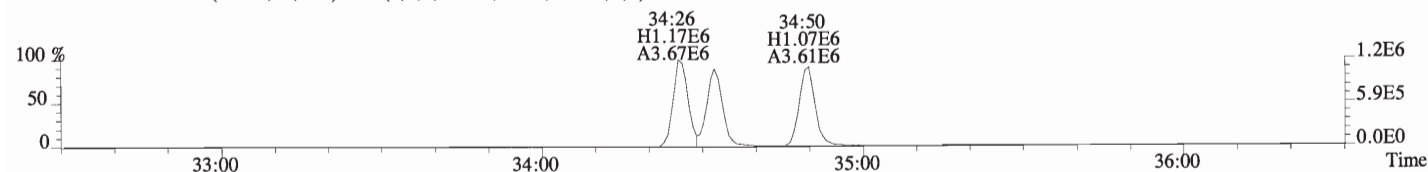
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



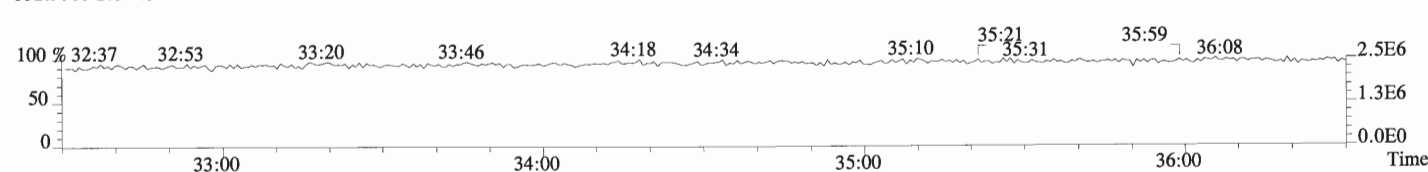
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



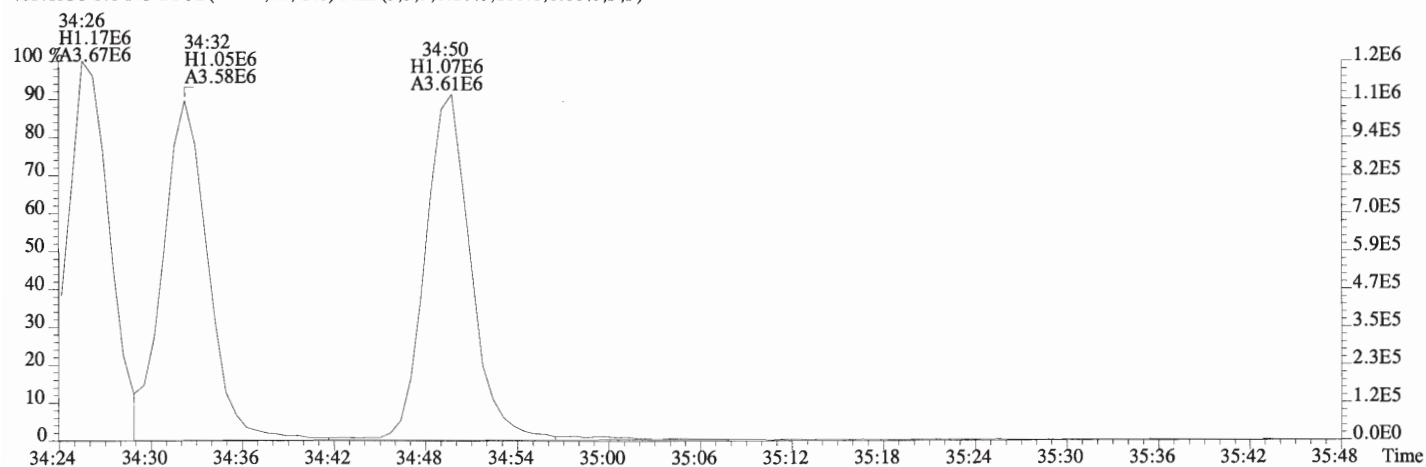
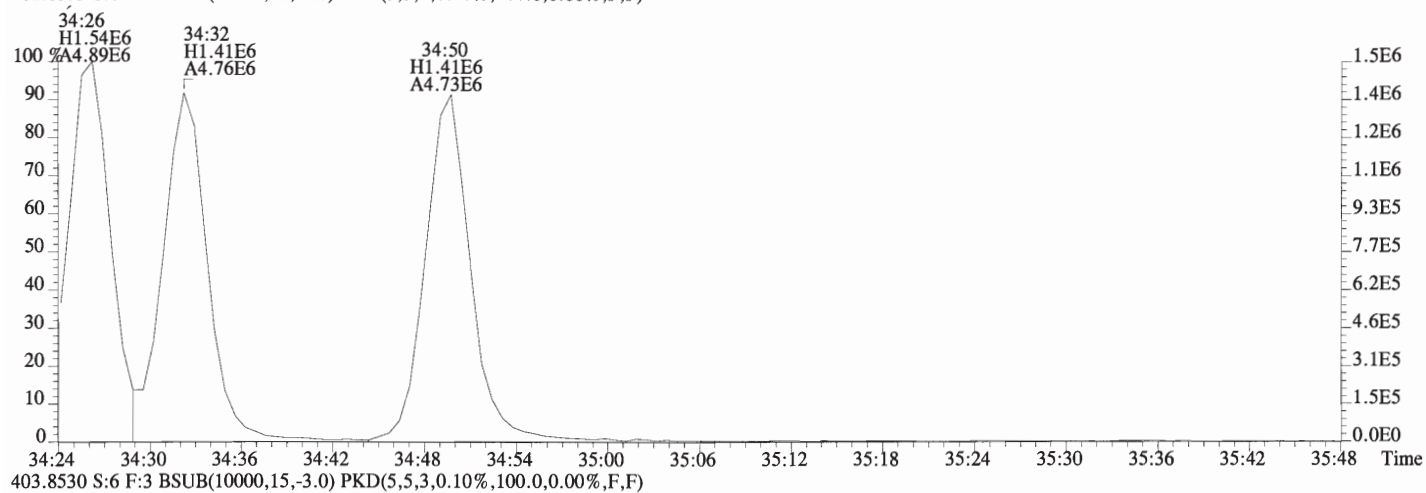
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



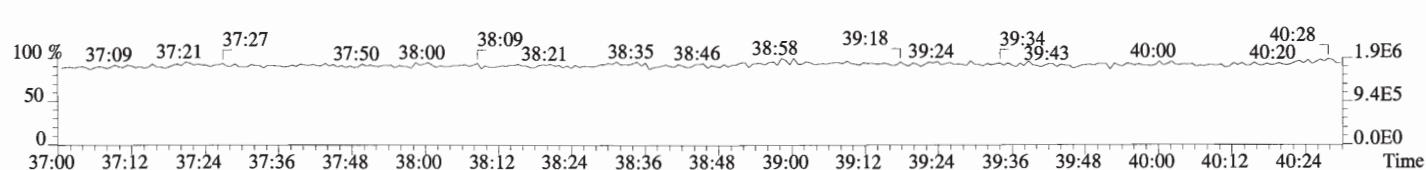
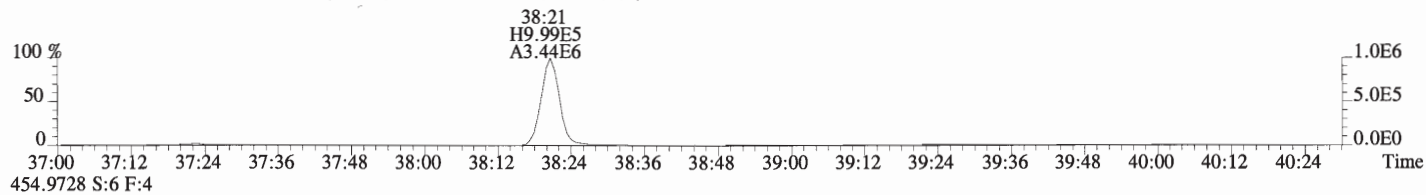
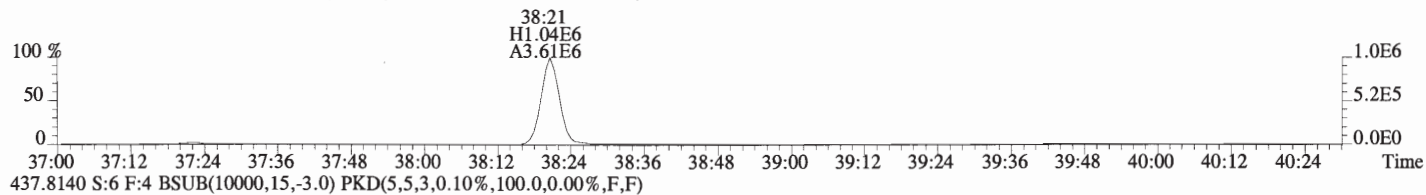
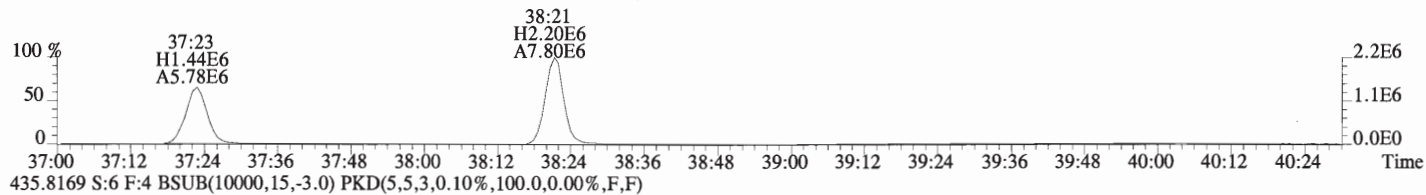
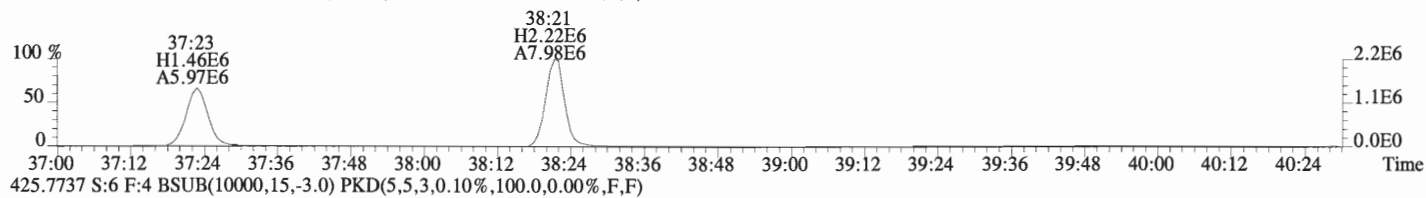
392.9760 S:6 F:3



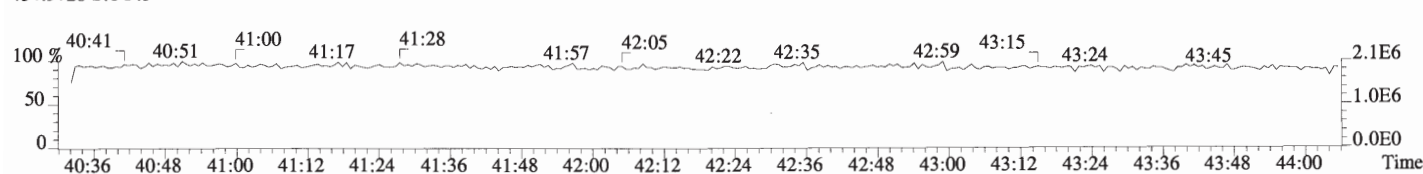
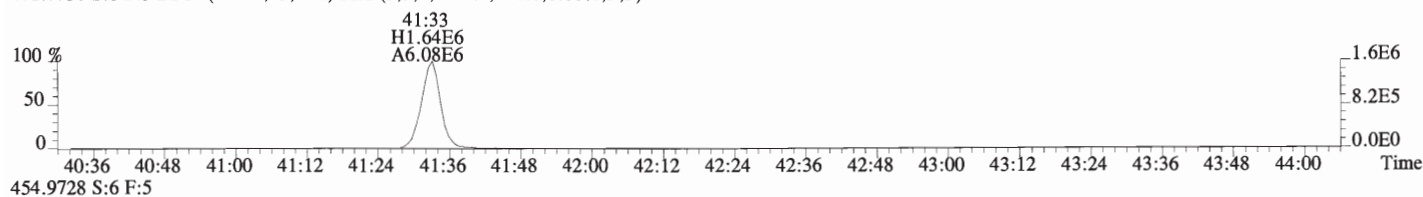
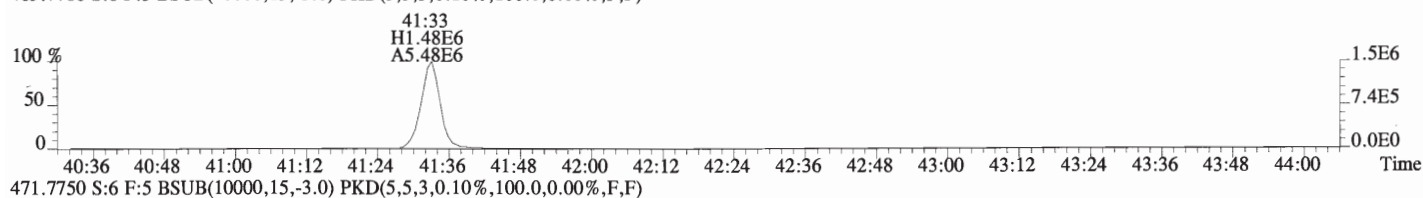
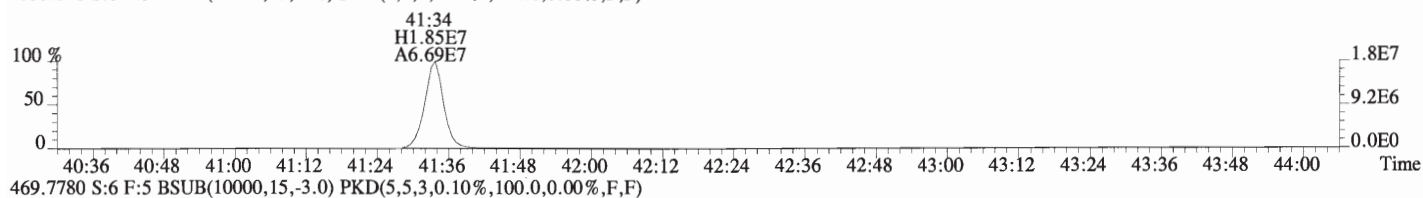
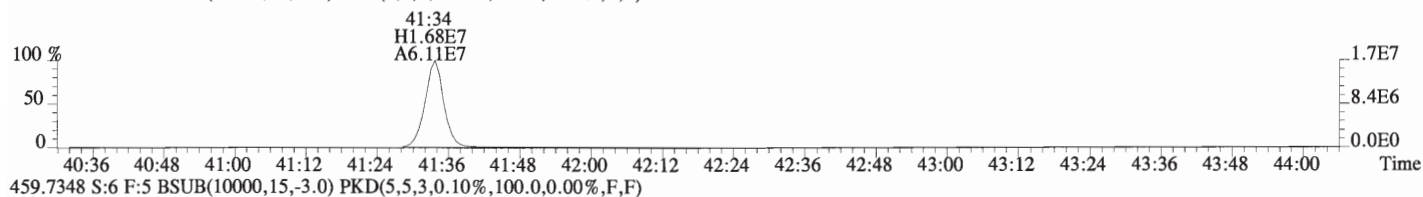
File:160713D1 #1-406 Acq:13-JUL-2016 13:09:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS1 Matrix Spike 10 Exp:OCDD_DB5
 401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



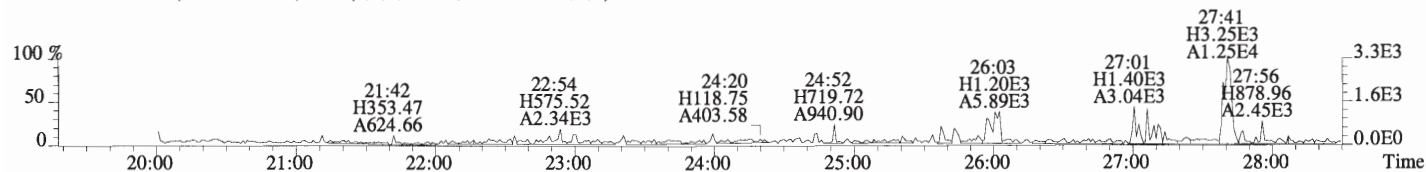
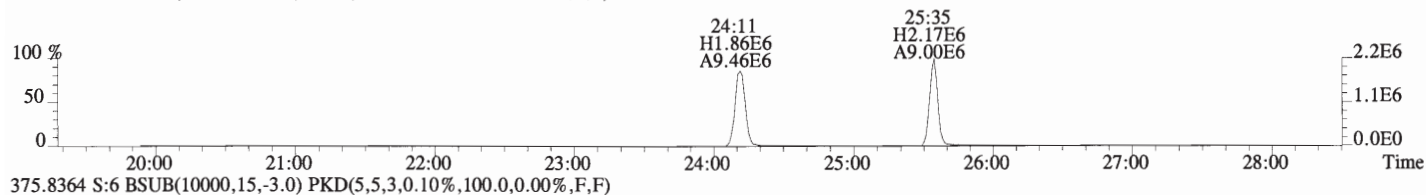
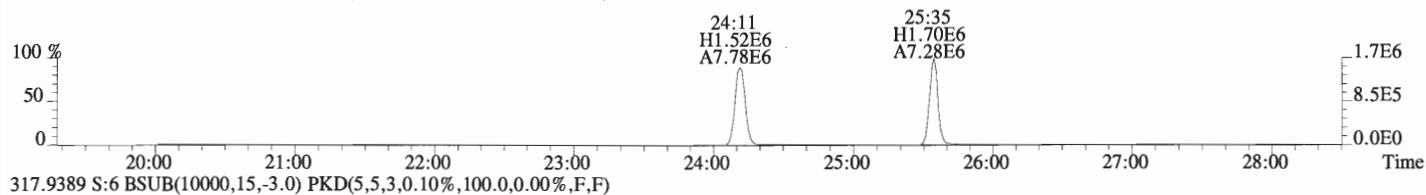
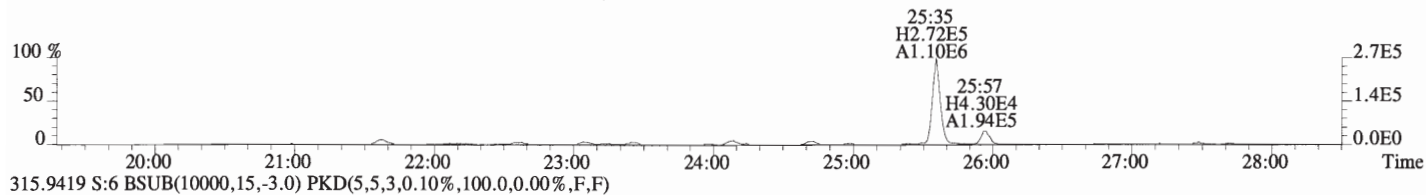
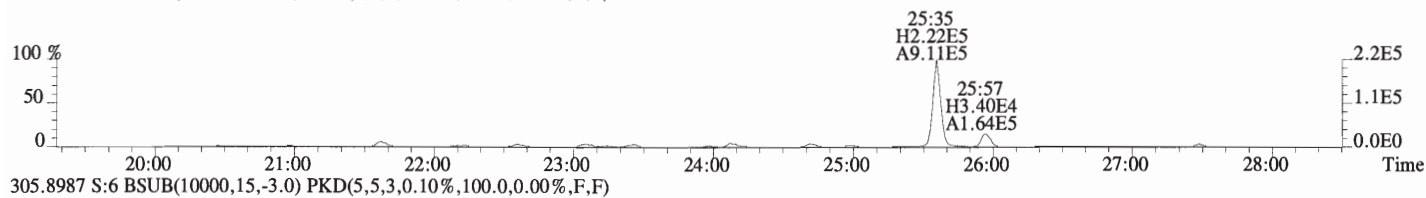
File:160713D1 #1-326 Acq:13-JUL-2016 13:09:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS1 Matrix Spike 10 Exp:OCDD_DB5
 423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



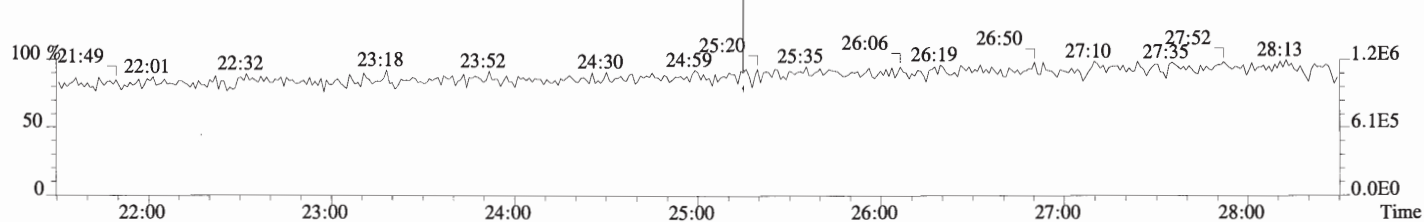
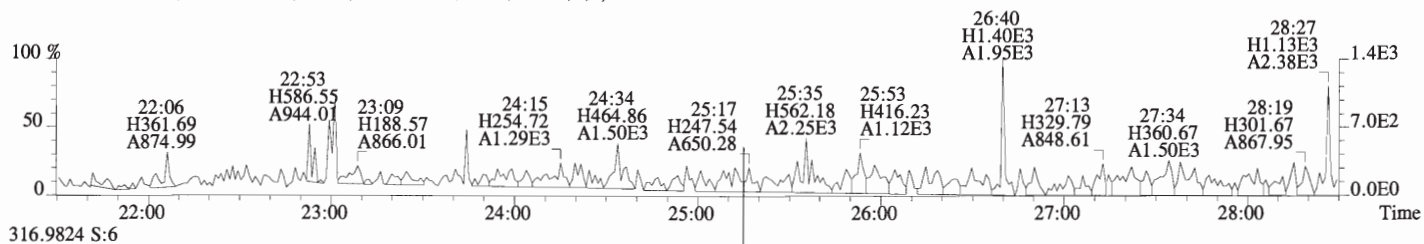
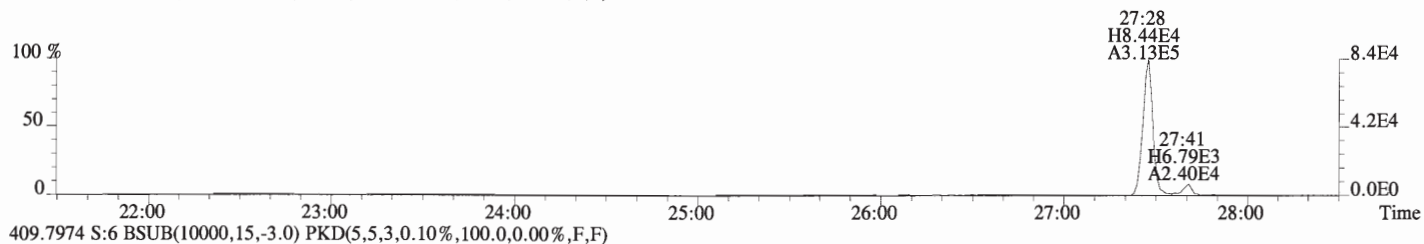
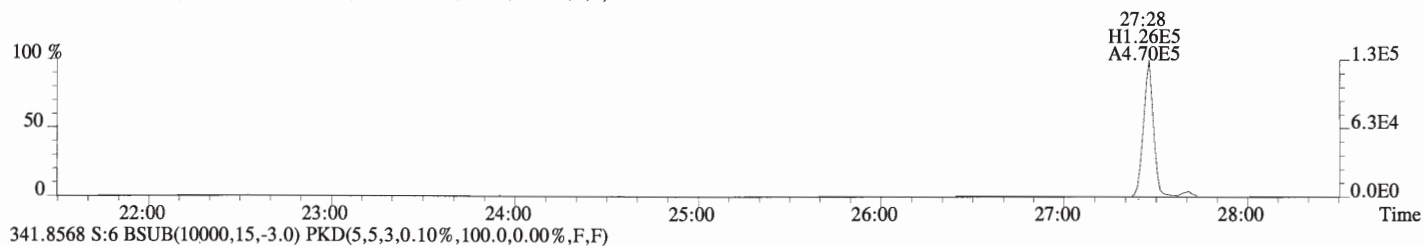
File:160713D1 #1-388 Acq:13-JUL-2016 13:09:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS1 Matrix Spike 10 Exp:OCDD_DB5
 457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



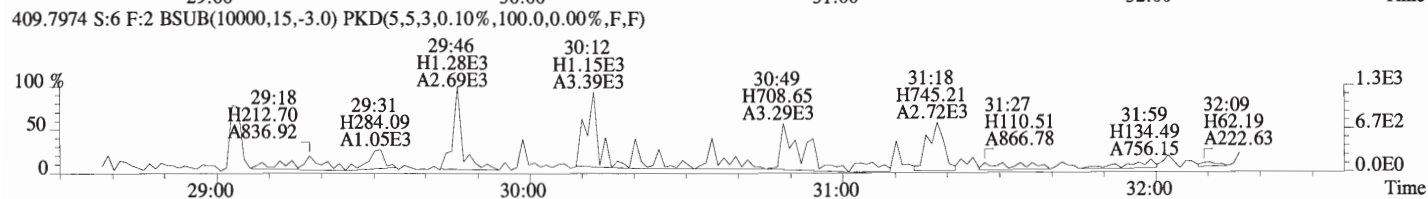
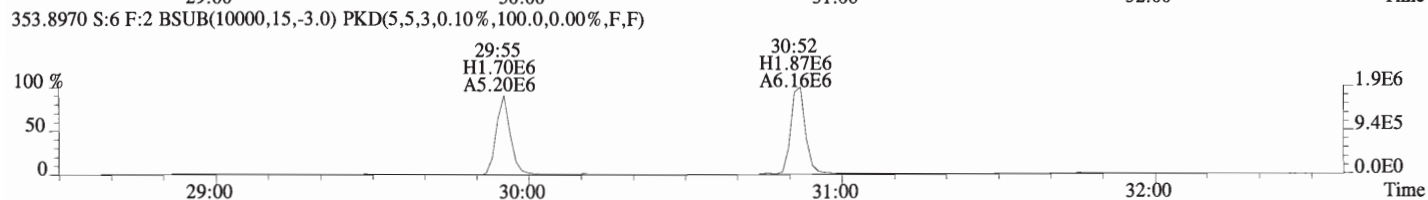
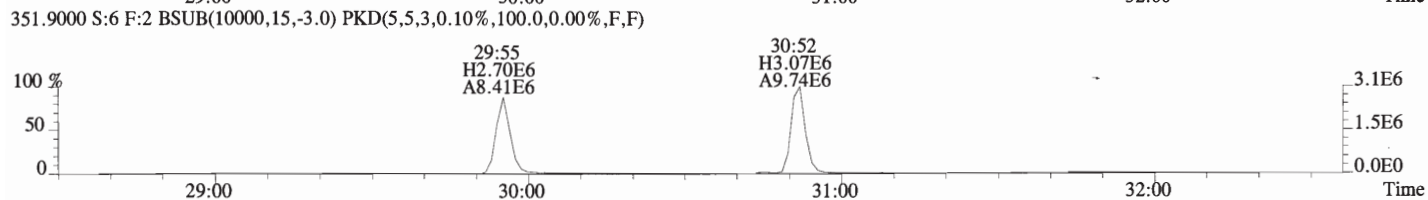
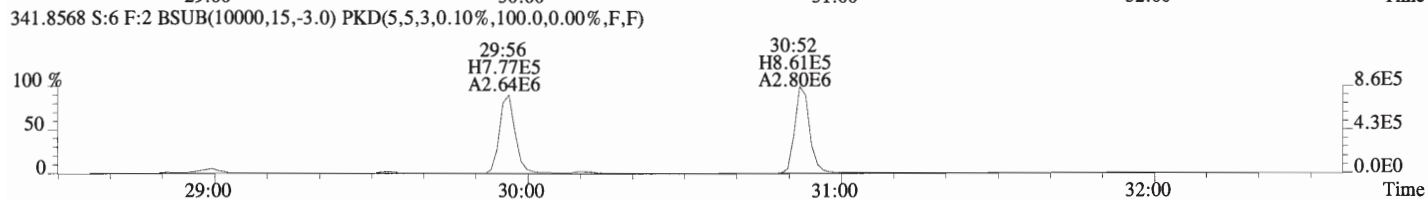
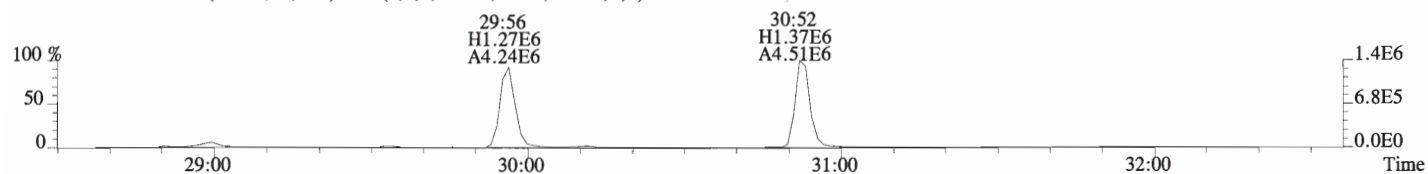
File:160713D1 #1-552 Acq:13-JUL-2016 13:09:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text: Vista Analytical Laboratory VG7 Text:B6G0039-MS1 Matrix Spike 10 Exp:OCDD_DB5
 303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



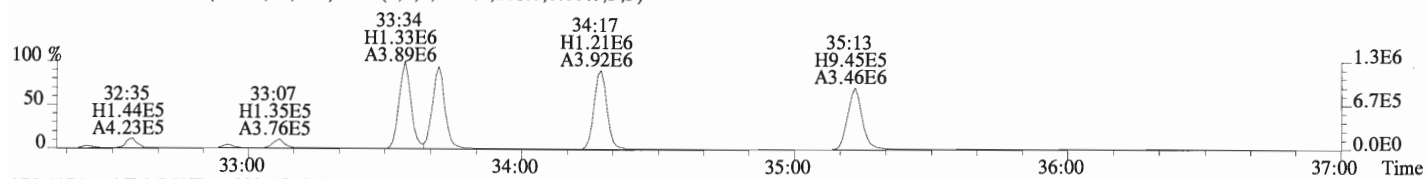
File:160713D1 #1-552 Acq:13-JUL-2016 13:09:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text: Vista Analytical Laboratory VG7 Text:B6G0039-MS1 Matrix Spike 10 Exp:OCDD_DB5
 339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



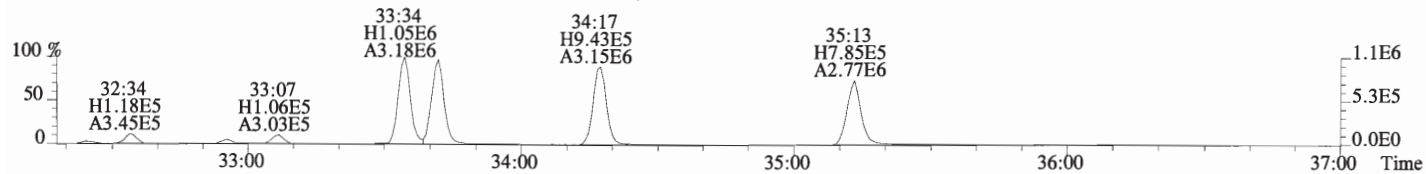
File:160713D1 #1-193 Acq:13-JUL-2016 13:09:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS1 Matrix Spike 10 Exp:OCDD_DB5
 339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



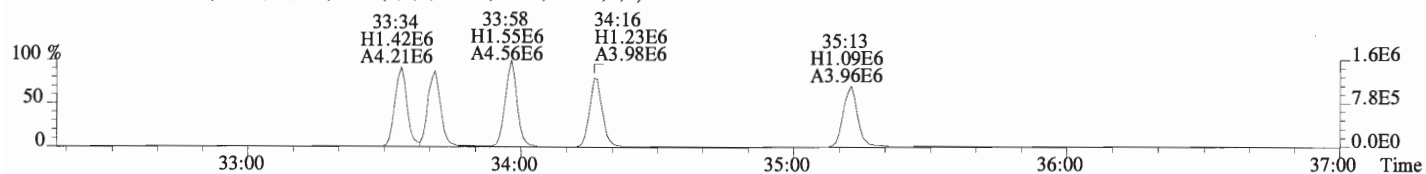
File:160713D1 #1-406 Acq:13-JUL-2016 13:09:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS1 Matrix Spike 10 Exp:OCDD_DB5
 373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



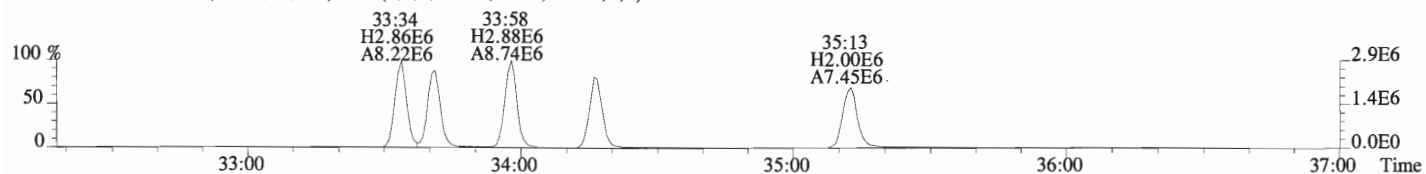
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



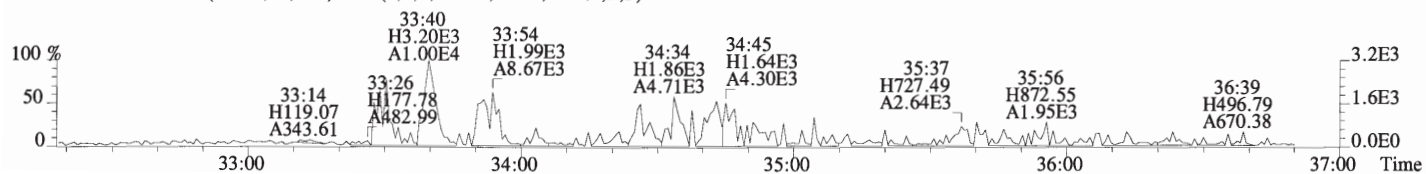
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



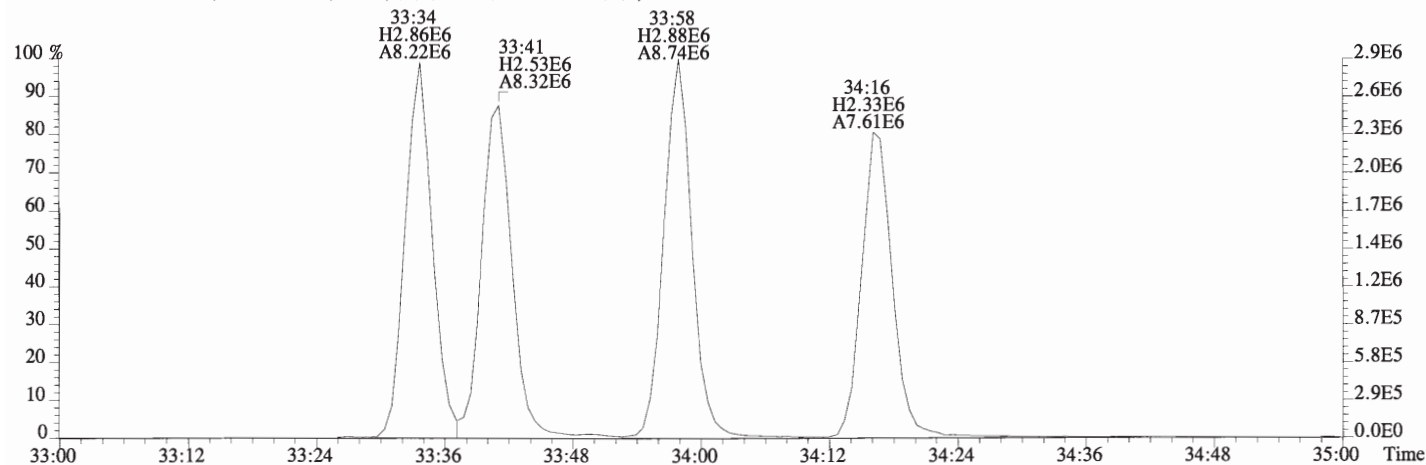
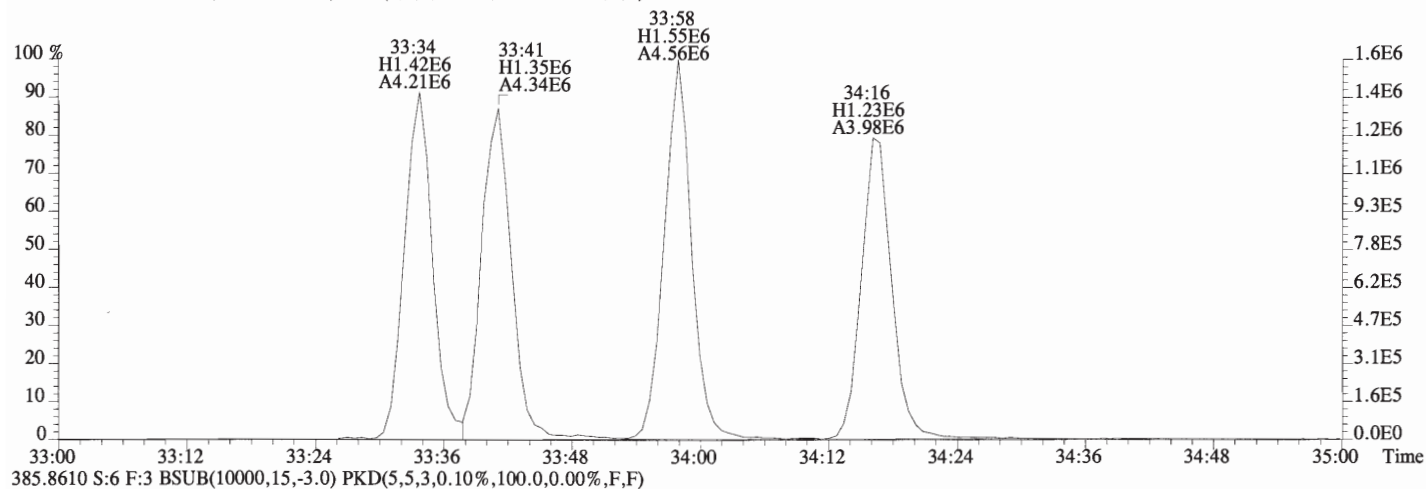
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



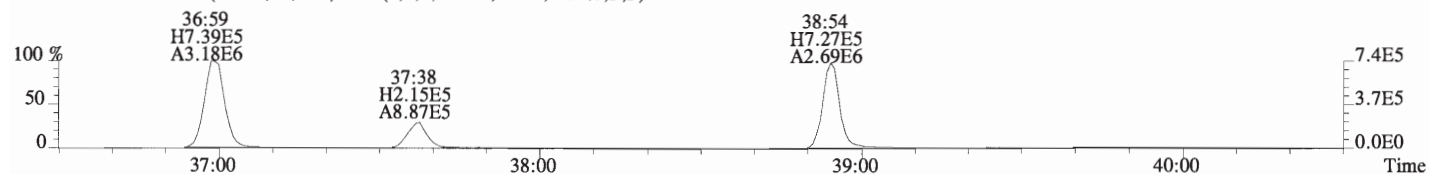
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



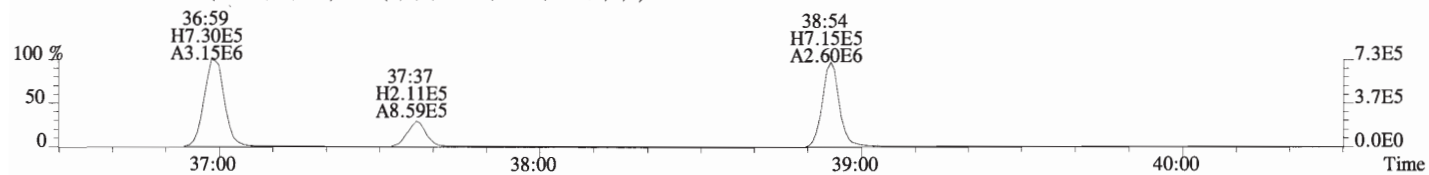
File:160713D1 #1-406 Acq:13-JUL-2016 13:09:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS1 Matrix Spike 10 Exp:OCDD_DB5
 383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



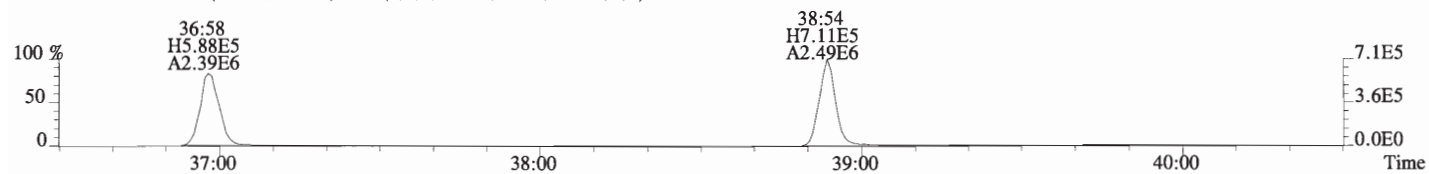
File:160713D1 #1-326 Acq:13-JUL-2016 13:09:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS1 Matrix Spike 10 Exp:OCDD_DB5
 407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



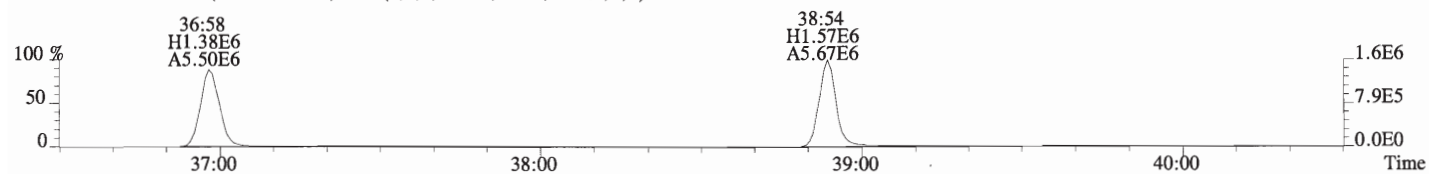
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



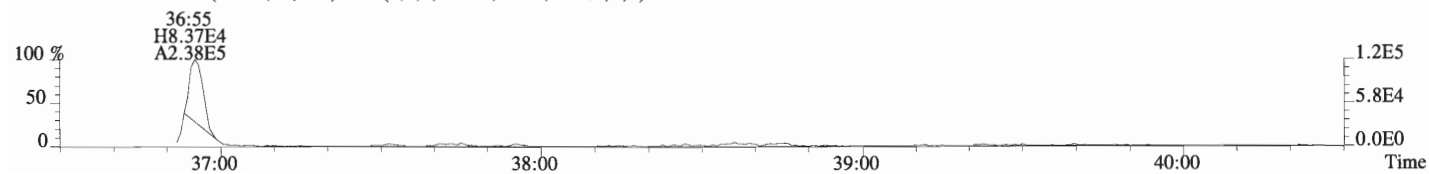
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



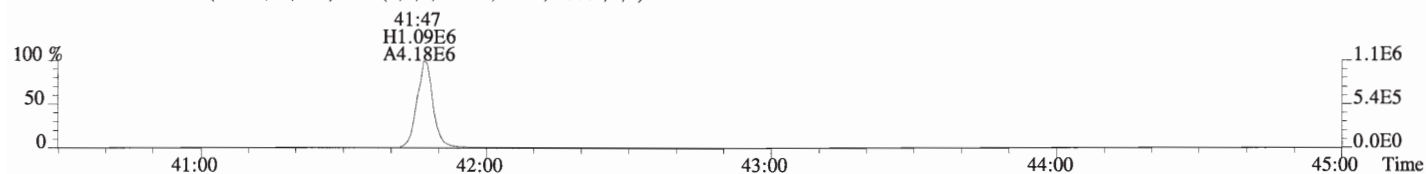
419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



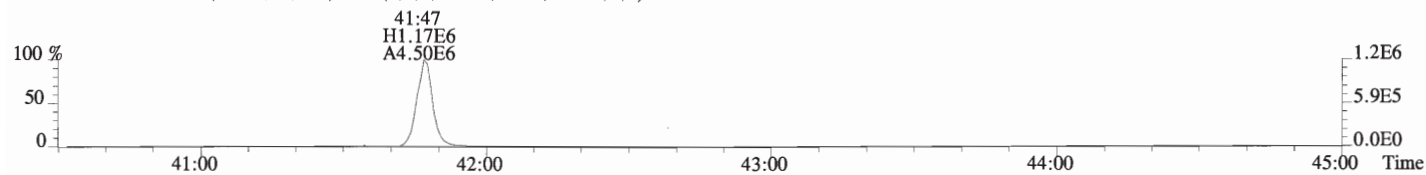
479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



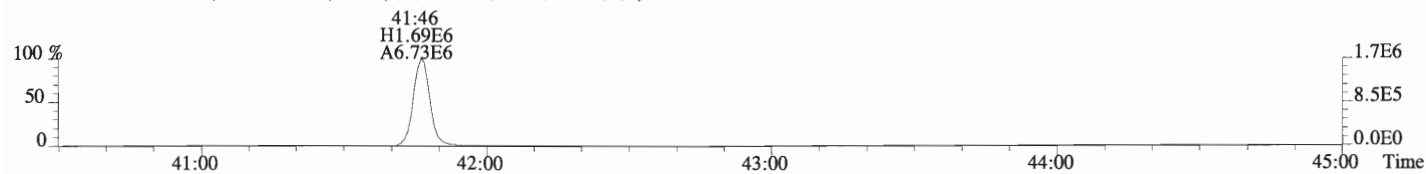
File:160713D1 #1-388 Acq:13-JUL-2016 13:09:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS1 Matrix Spike 10 Exp:OCDD_DB5
 441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



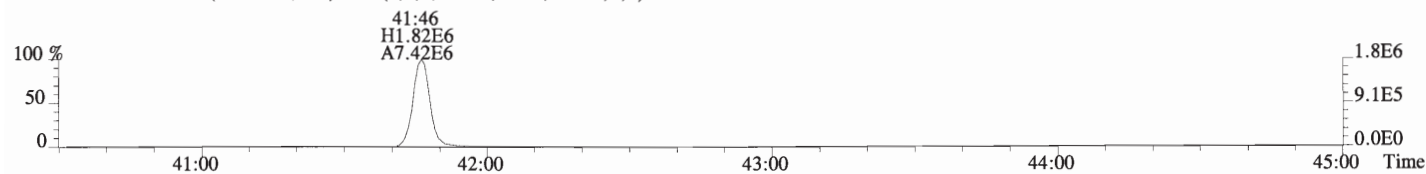
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



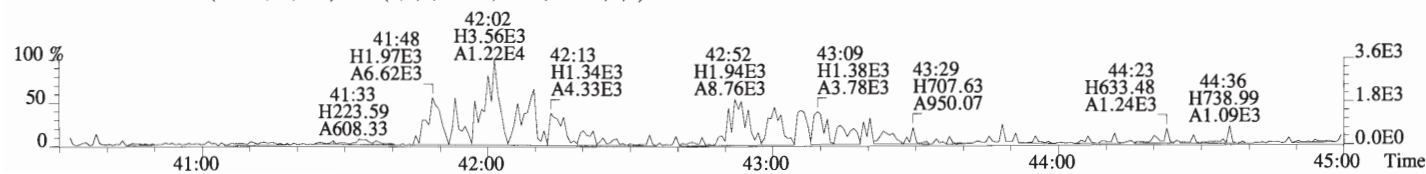
453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)





Client ID: Matrix Spike Dup
Lab ID: B6G0039-MSD1

Filename: 160713D1 S:7 Acq:13-JUL-16 13:58:30
GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16

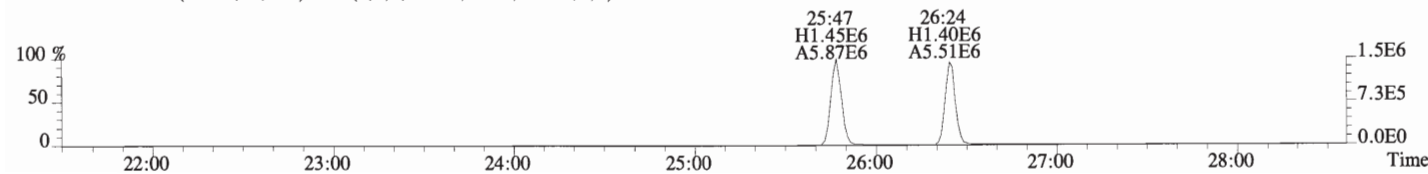
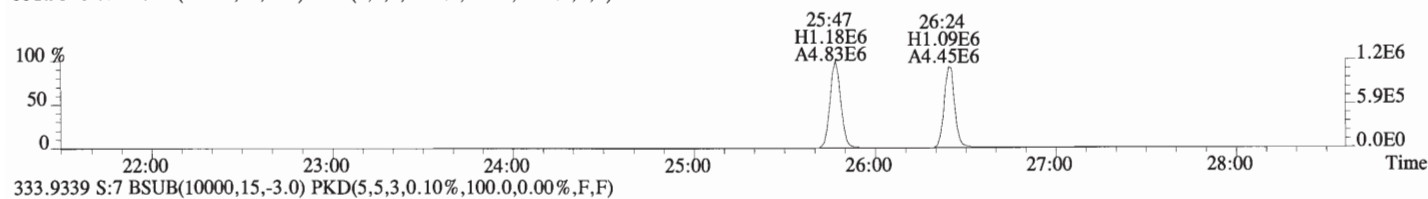
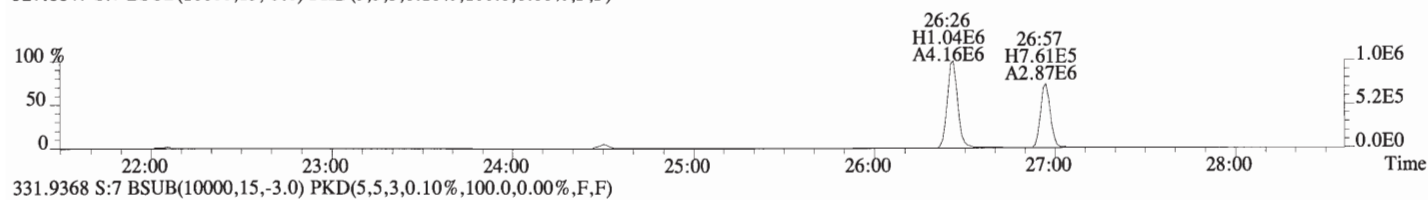
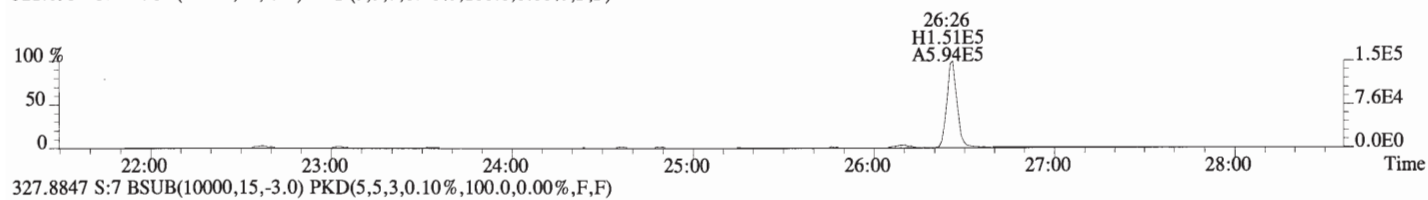
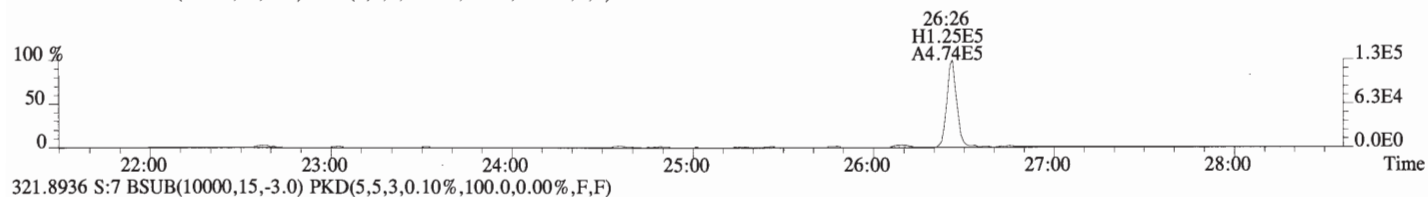
wt/vol: 9.985

ConCal: ST160713D1-1
EndCAL: NA

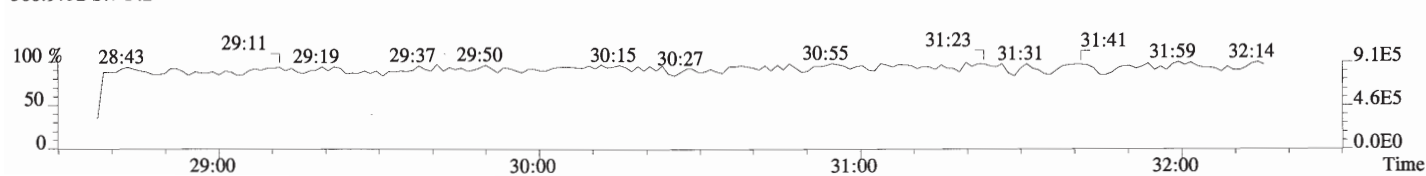
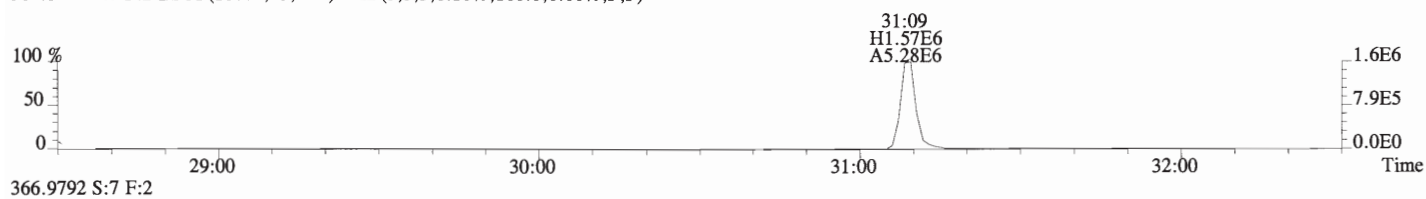
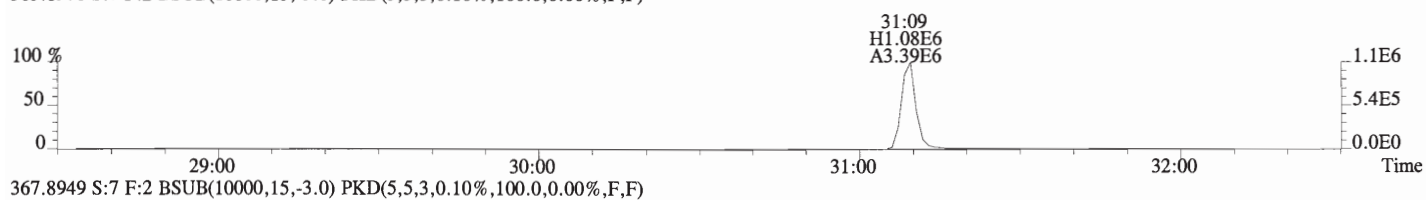
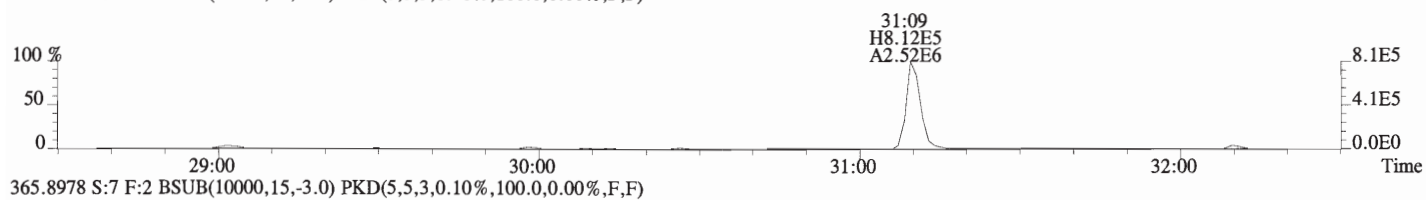
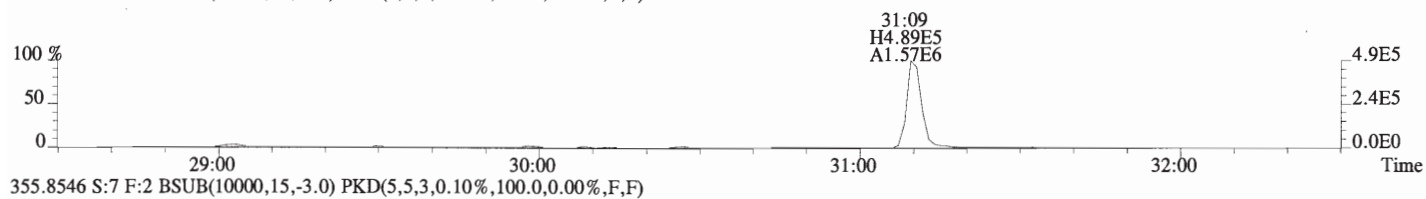
Page 6 of 6

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
	2,3,7,8-TCDD	1.07e+06	0.80 y	1.13	26:26	1.001	18.974		*	2.5	*	Total Tetra-Dioxins	21.3	23.7		*	*
	1,2,3,7,8-PeCDD	4.09e+06	0.63 y	0.96	31:10	1.001	98.289		*	2.5	*	Total Penta-Dioxins	107	111		*	*
	1,2,3,4,7,8-HxCDD	4.07e+06	1.22 y	1.00	34:27	1.000	97.997		*	2.5	*	Total Hexa-Dioxins	340	344		*	*
	1,2,3,6,7,8-HxCDD	4.40e+06	1.23 y	1.10	34:34	1.001	99.158		*	2.5	*	Total Hepta-Dioxins	696	700		*	*
	1,2,3,7,8,9-HxCDD	4.20e+06	1.19 y	1.05	34:51	1.000	98.328		*	2.5	*	Total Tetra-Furans	32.7	36.4		*	*
	1,2,3,4,6,7,8-HpCDD	1.37e+07	1.05 y	1.05	38:23	1.000	397.67		*	2.5	*	Total Penta-Furans	214.86	223.62		*	*
	OCDD	1.12e+08	0.90 y	0.96	41:35	1.000	4397.9		*	2.5	*	Total Hexa-Furans	405	407		*	*
												Total Hepta-Furans	240	242		*	*
	2,3,7,8-TCDF	1.84e+06	0.83 y	1.12	25:36	1.001	21.624		*	2.5	*						
	1,2,3,7,8-PeCDF	6.53e+06	1.60 y	1.01	29:57	1.001	97.212		*	2.5	*						
	2,3,4,7,8-PeCDF	6.93e+06	1.57 y	0.90	30:54	1.001	100.54		*	2.5	*						
	1,2,3,4,7,8-HxCDF	6.54e+06	1.23 y	1.16	33:35	1.000	94.375		*	2.5	*						
	1,2,3,6,7,8-HxCDF	6.67e+06	1.20 y	1.16	33:42	1.000	95.408		*	2.5	*						
	2,3,4,6,7,8-HxCDF	6.46e+06	1.23 y	1.23	34:18	1.000	93.890		*	2.5	*						
	1,2,3,7,8,9-HxCDF	5.86e+06	1.25 y	1.13	35:14	1.001	95.100		*	2.5	*						
	1,2,3,4,6,7,8-HpCDF	5.91e+06	1.01 y	1.44	36:60	1.000	109.21		*	2.5	*						
	1,2,3,4,7,8,9-HpCDF	4.93e+06	0.99 y	1.31	38:56	1.000	98.451		*	2.5	*						
	OCDF	8.02e+06	0.93 y	1.03	41:48	1.000	236.70		*	2.5	*						
												Rec	Qual				
IS	13C-2,3,7,8-TCDD	9.97e+06	0.81 y	1.01	26:25	1.025	184.65					92.2					
IS	13C-1,2,3,7,8-PeCDD	8.67e+06	0.64 y	1.10	31:09	1.208	147.02					73.4					
IS	13C-1,2,3,4,7,8-HxCDD	8.30e+06	1.32 y	0.72	34:27	1.014	170.28					85.0					
IS	13C-1,2,3,6,7,8-HxCDD	8.11e+06	1.29 y	0.73	34:33	1.017	165.00					82.4					
IS	13C-1,2,3,7,8,9-HxCDD	8.15e+06	1.25 y	0.70	34:50	1.025	171.78					85.8					
IS	13C-1,2,3,4,6,7,8-HpCDD	6.56e+06	1.05 y	0.66	38:22	1.129	146.04					72.9					
IS	13C-OCDD	1.07e+07	0.90 y	0.66	41:34	1.223	238.70					59.6					
IS	13C-2,3,7,8-TCDF	1.53e+07	0.78 y	0.90	25:35	0.992	195.15					97.4					
IS	13C-1,2,3,7,8-PeCDF	1.34e+07	1.62 y	0.98	29:56	1.161	156.83					78.3					
IS	13C-2,3,4,7,8-PeCDF	1.53e+07	1.64 y	1.15	30:52	1.197	154.36					77.1					
IS	13C-1,2,3,4,7,8-HxCDF	1.19e+07	0.51 y	1.01	33:34	0.988	174.18					87.0					
IS	13C-1,2,3,6,7,8-HxCDF	1.21e+07	0.51 y	1.10	33:42	0.992	163.30					81.5					
IS	13C-2,3,4,6,7,8-HxCDF	1.12e+07	0.50 y	0.95	34:17	1.009	174.60					87.2					
IS	13C-1,2,3,7,8,9-HxCDF	1.09e+07	0.51 y	0.83	35:13	1.037	194.63					97.2					
IS	13C-1,2,3,4,6,7,8-HpCDF	7.54e+06	0.42 y	0.70	36:59	1.089	159.40					79.6					
IS	13C-1,2,3,4,7,8,9-HpCDF	7.64e+06	0.43 y	0.72	38:55	1.145	156.87					78.3					
IS	13C-OCDF	1.32e+07	0.88 y	0.82	41:48	1.230	236.14					58.9					
C/Up	37Cl-2,3,7,8-TCDD	4.16e+06		1.14	26:26	1.025	68.407					85.4					
RS/RT	13C-1,2,3,4-TCDD	1.07e+07	0.82 y	1.00	25:47	*	200.29						Integrations				
RS	13C-1,2,3,4-TCDF	1.74e+07	0.81 y	1.00	24:12	*	200.29					Analyst: 	Reviewed by				
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.35e+07	0.53 y	1.00	33:59	*	200.29					Date: 7/13/16	Analyst: 				
												Date: 7/15/16					

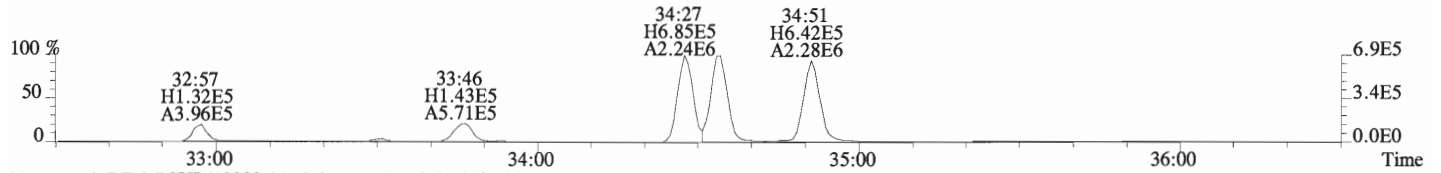
File:160713D1 #1-551 Acq:13-JUL-2016 13:58:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD1 Matrix Spike Dup 10 Exp:OCDD_DB5
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



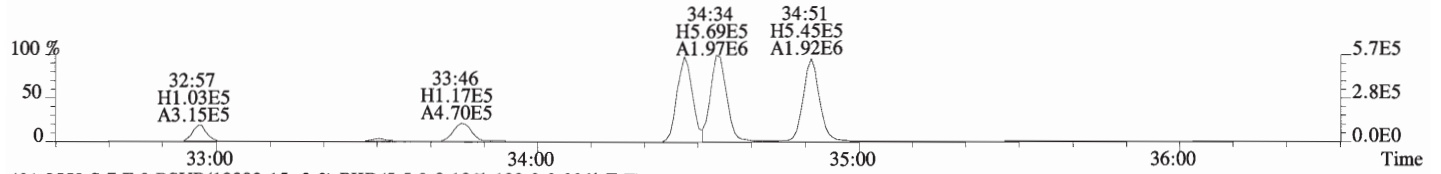
File:160713D1 #1-193 Acq:13-JUL-2016 13:58:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD1 Matrix Spike Dup 10 Exp:OCDD_DB5
353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



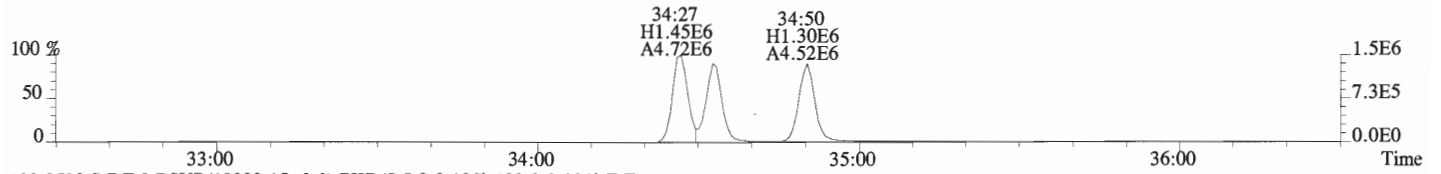
File:160713D1 #1-407 Acq:13-JUL-2016 13:58:30 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD1 Matrix Spike Dup 10 Exp:OCDD_DB5
 389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



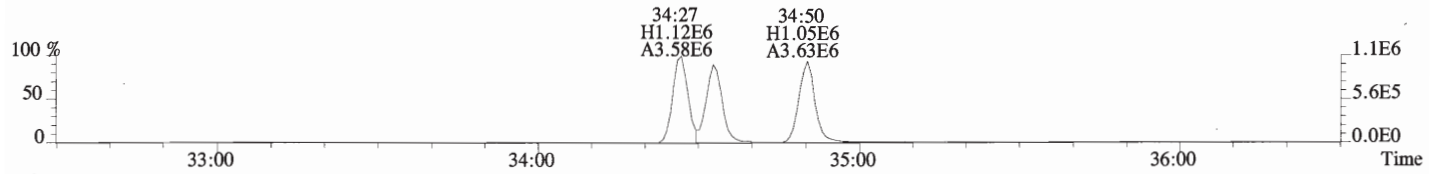
391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



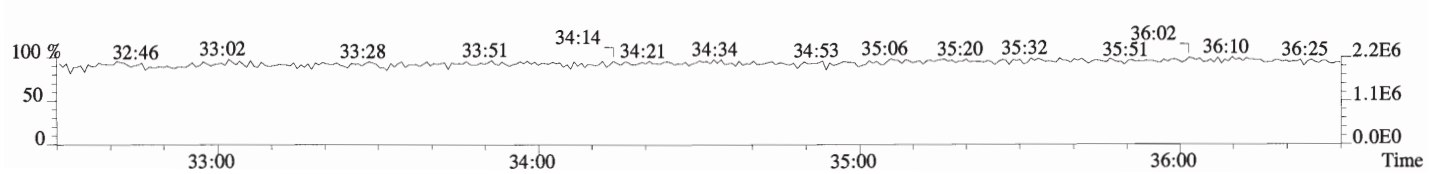
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



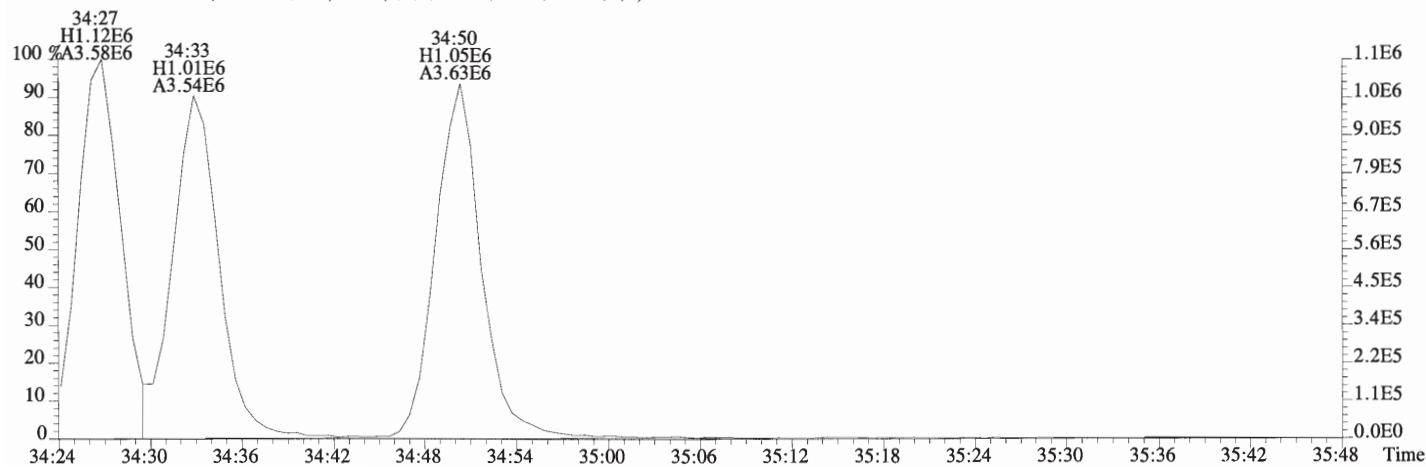
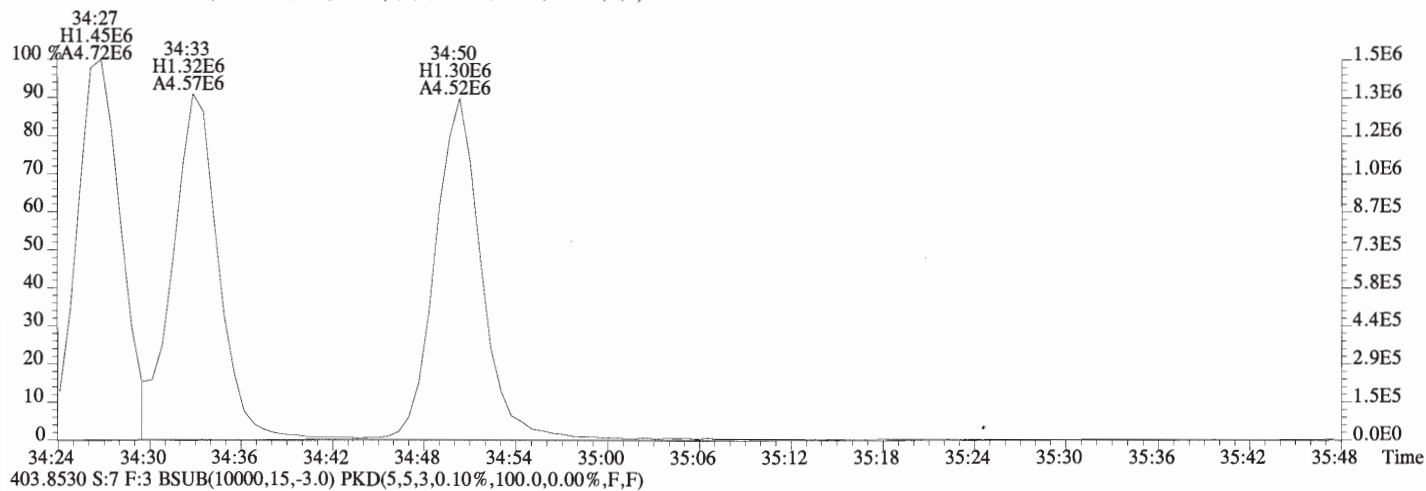
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



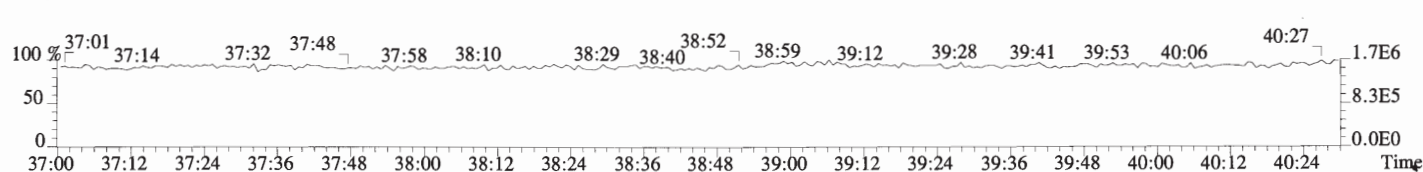
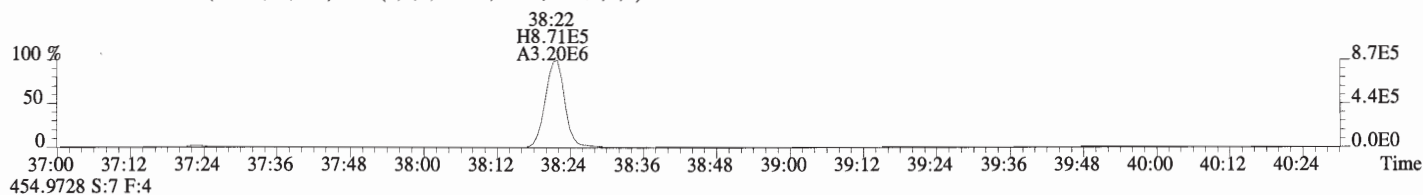
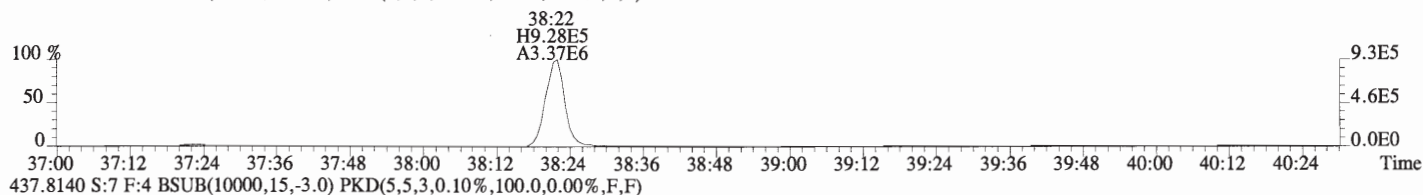
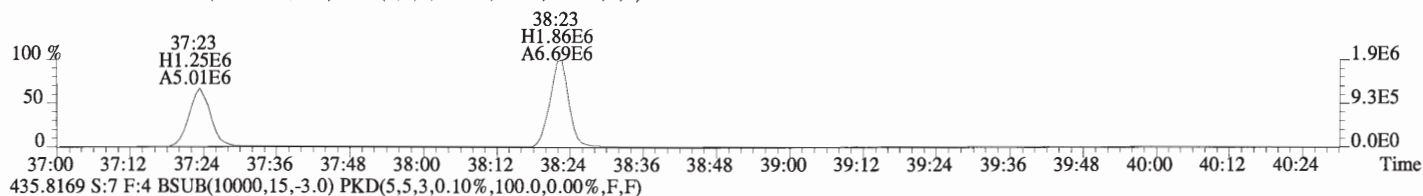
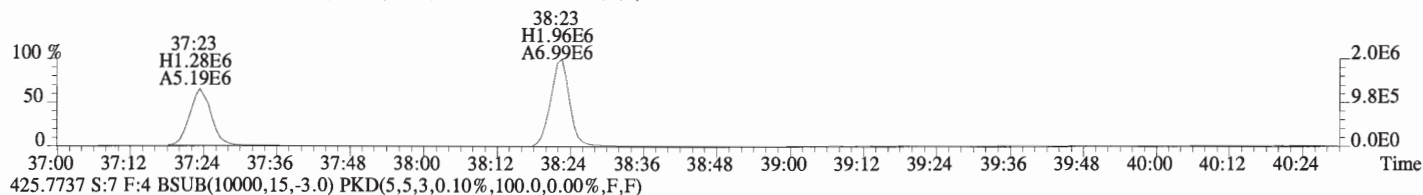
392.9760 S:7 F:3



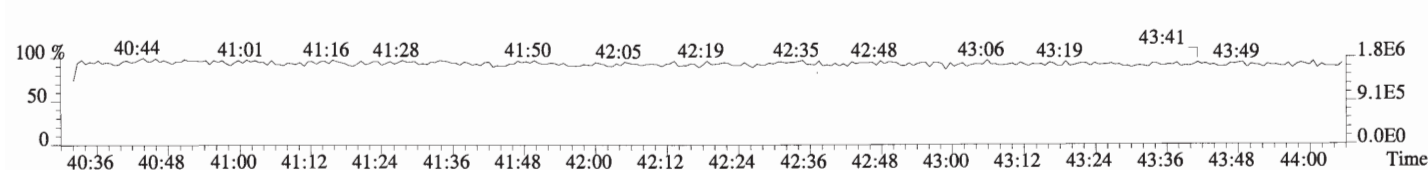
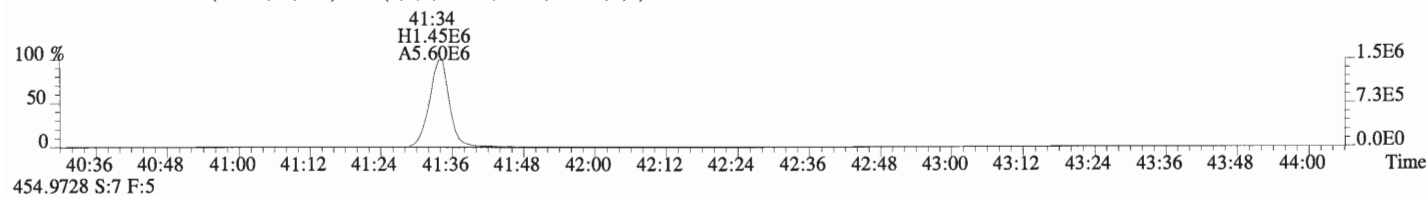
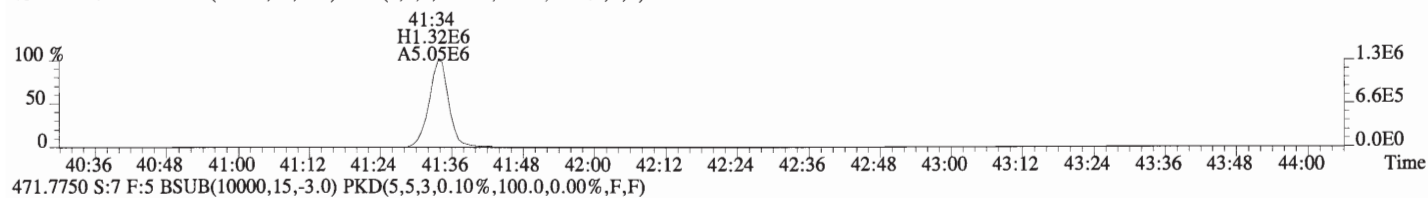
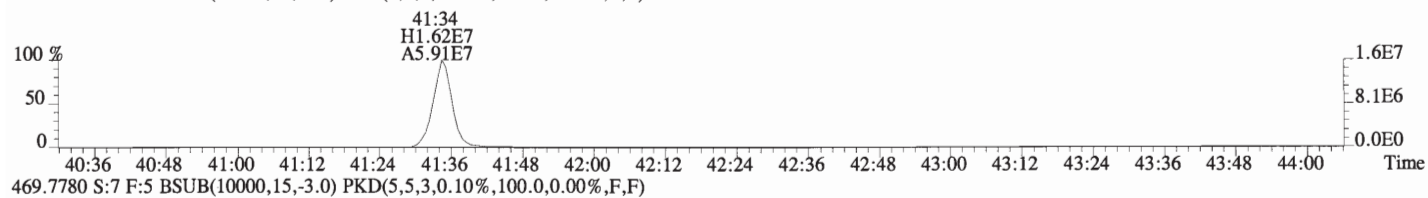
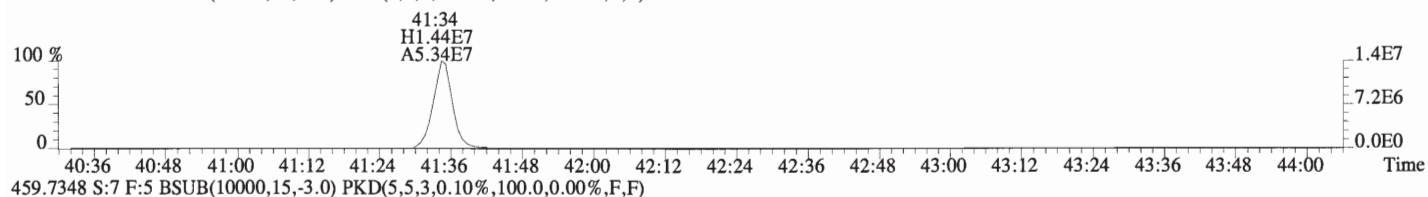
File:160713D1 #1-407 Acq:13-JUL-2016 13:58:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD1 Matrix Spike Dup 10 Exp:OCDD_DB5
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



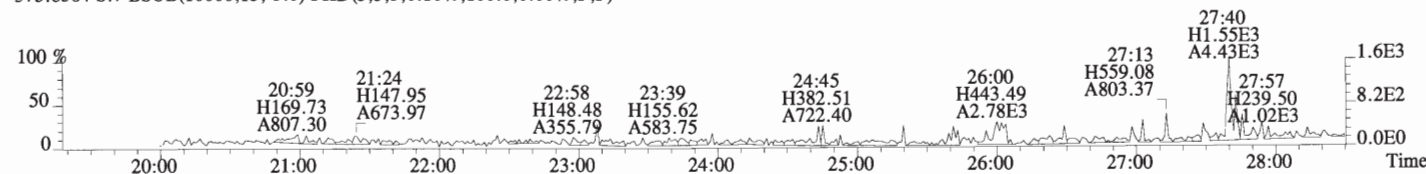
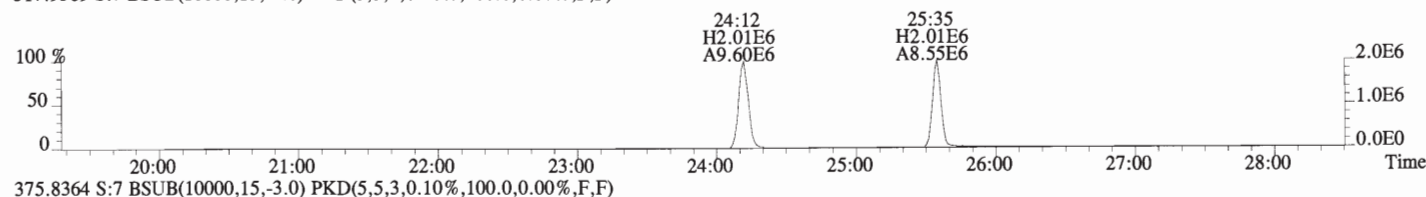
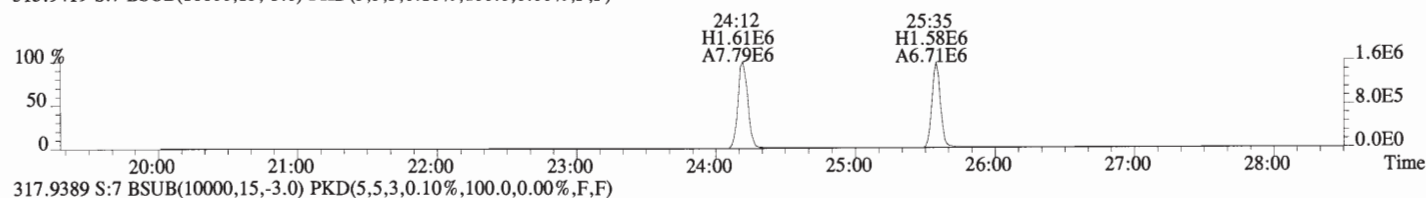
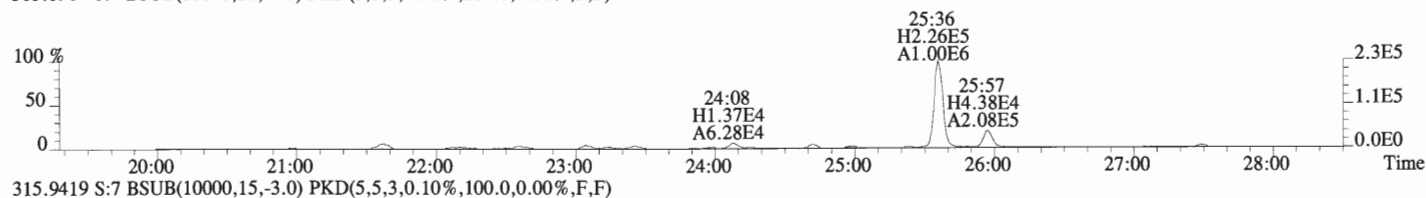
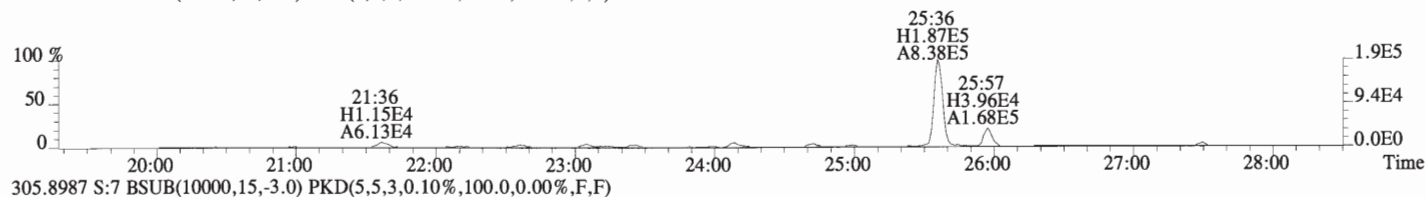
File:160713D1 #1-326 Acq:13-JUL-2016 13:58:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD1 Matrix Spike Dup 10 Exp:OCDD_DB5
423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



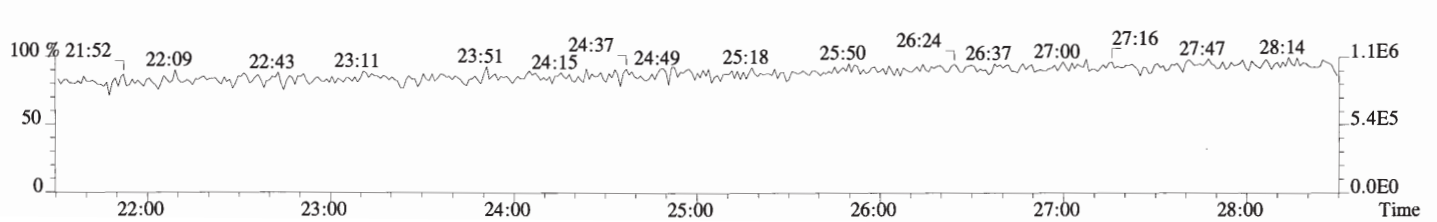
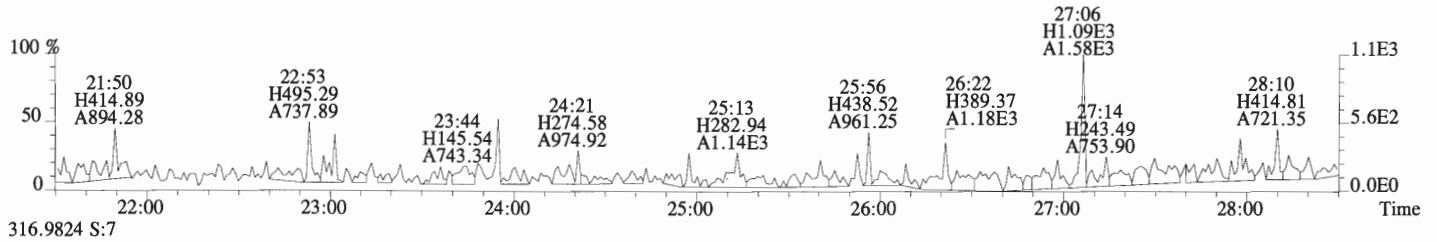
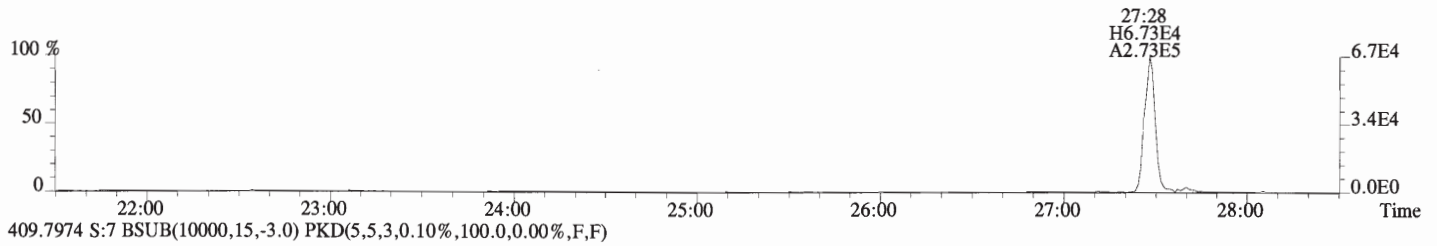
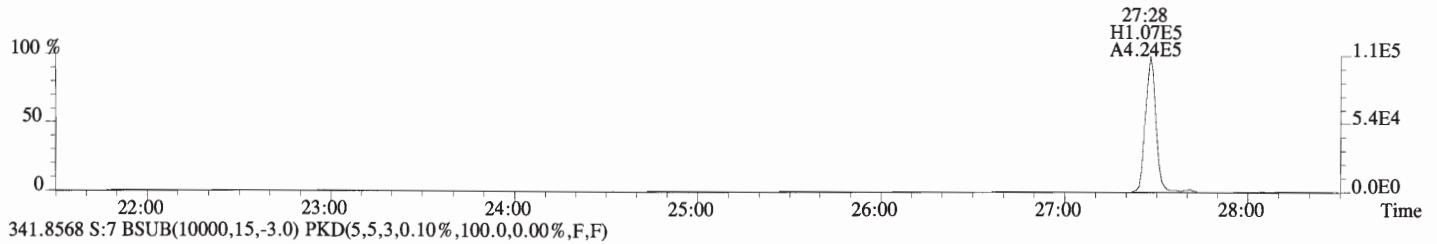
File:160713D1 #1-388 Acq:13-JUL-2016 13:58:30 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD1 Matrix Spike Dup 10 Exp:OCDD_DB5
 457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



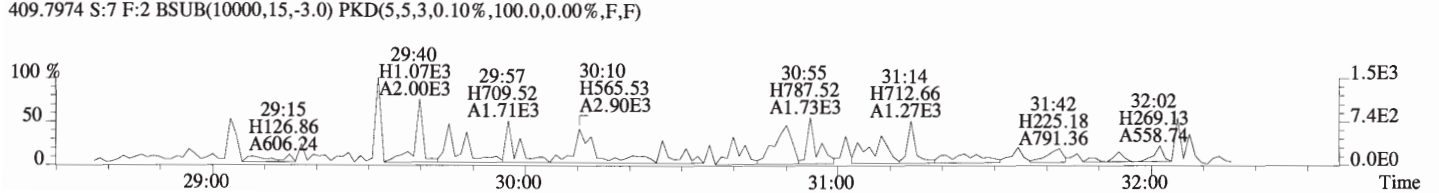
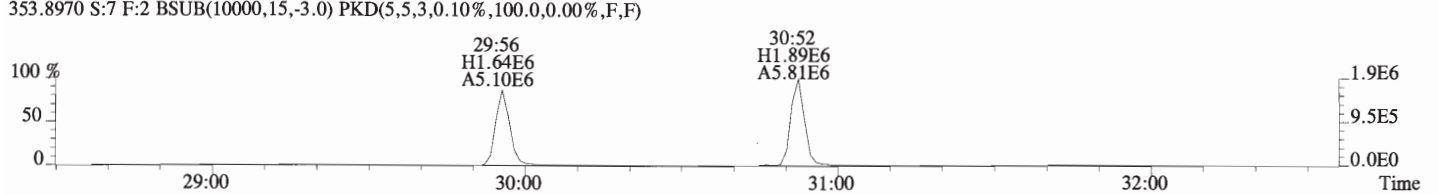
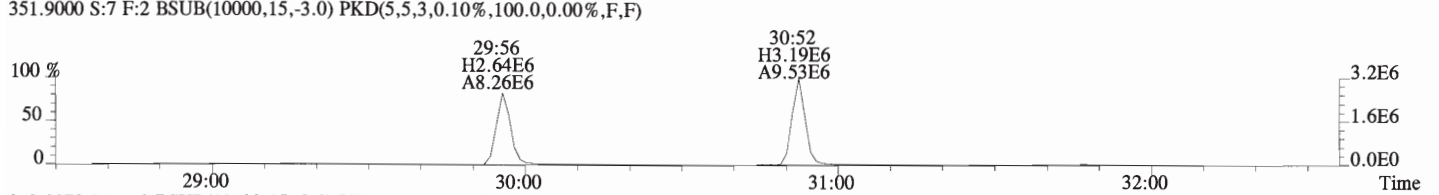
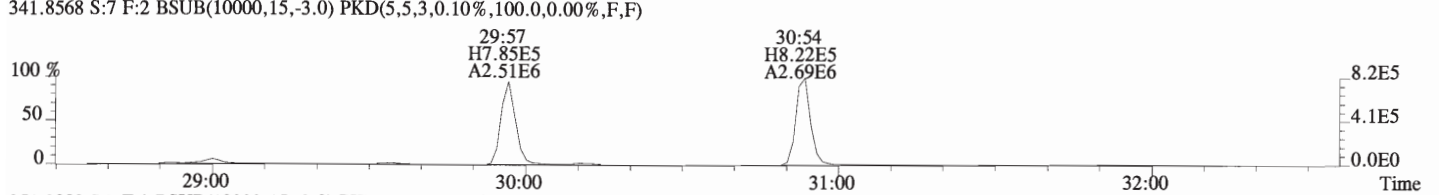
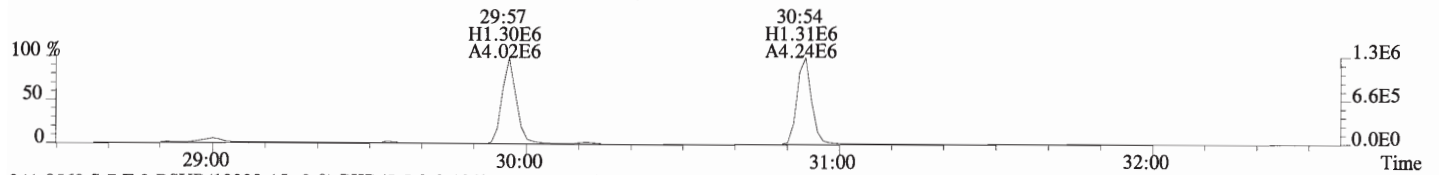
File:160713D1 #1-551 Acq:13-JUL-2016 13:58:30 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD1 Matrix Spike Dup 10 Exp:OCDD_DB5
 303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



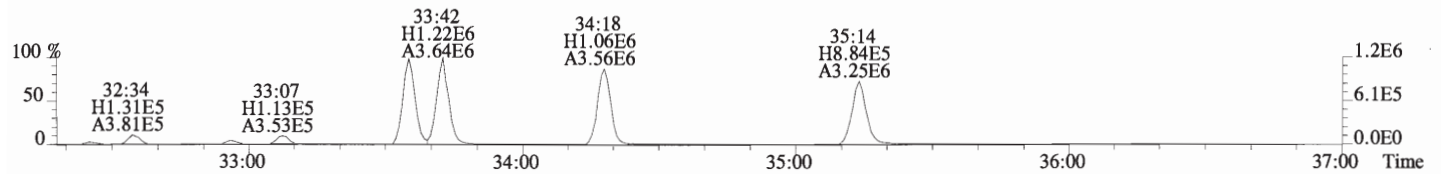
File:160713D1 #1-551 Acq:13-JUL-2016 13:58:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD1 Matrix Spike Dup 10 Exp:OCDD_DB5
339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



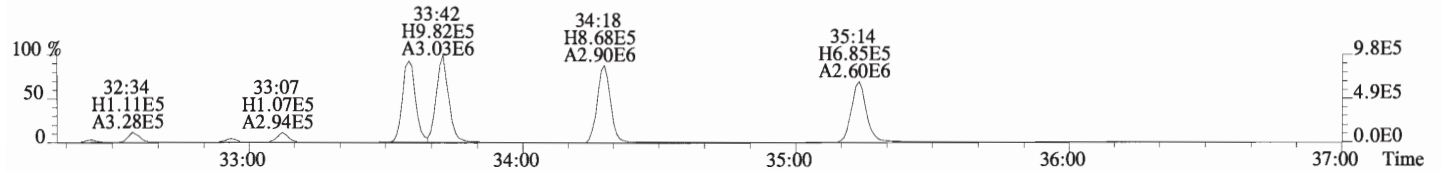
File:160713D1 #1-193 Acq:13-JUL-2016 13:58:30 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD1 Matrix Spike Dup 10 Exp:OCDD_DB5
 339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



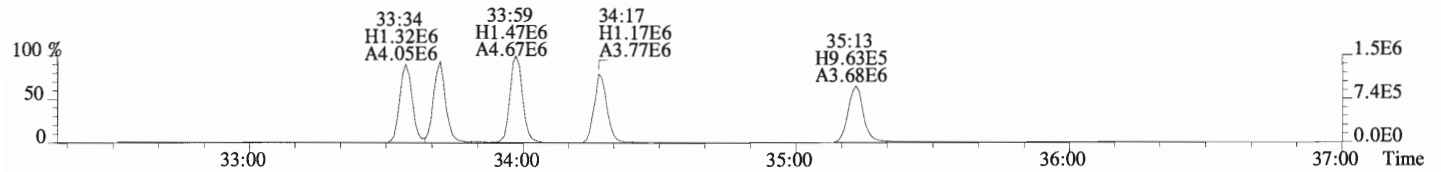
File:160713D1 #1-407 Acq:13-JUL-2016 13:58:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD1 Matrix Spike Dup 10 Exp:OCDD_DB5
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



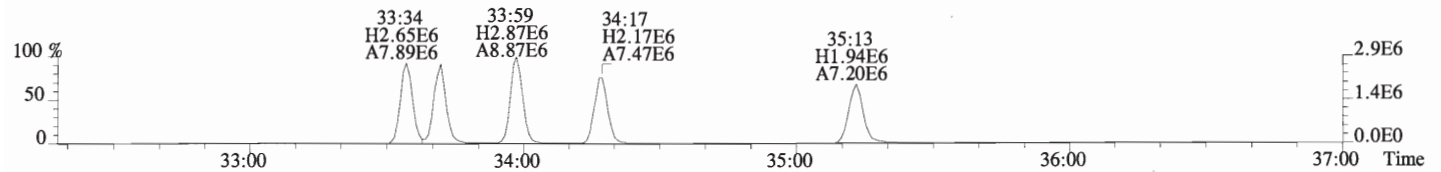
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



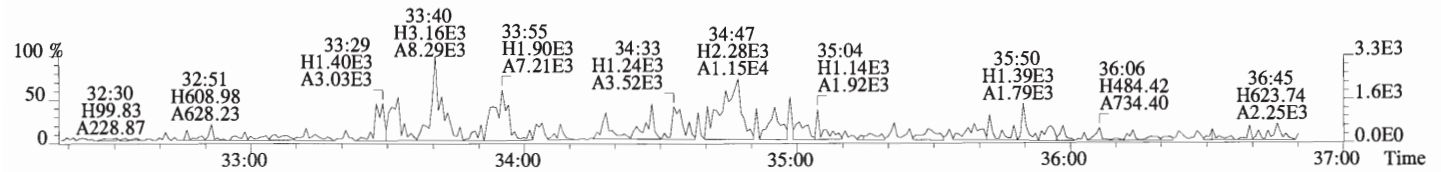
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



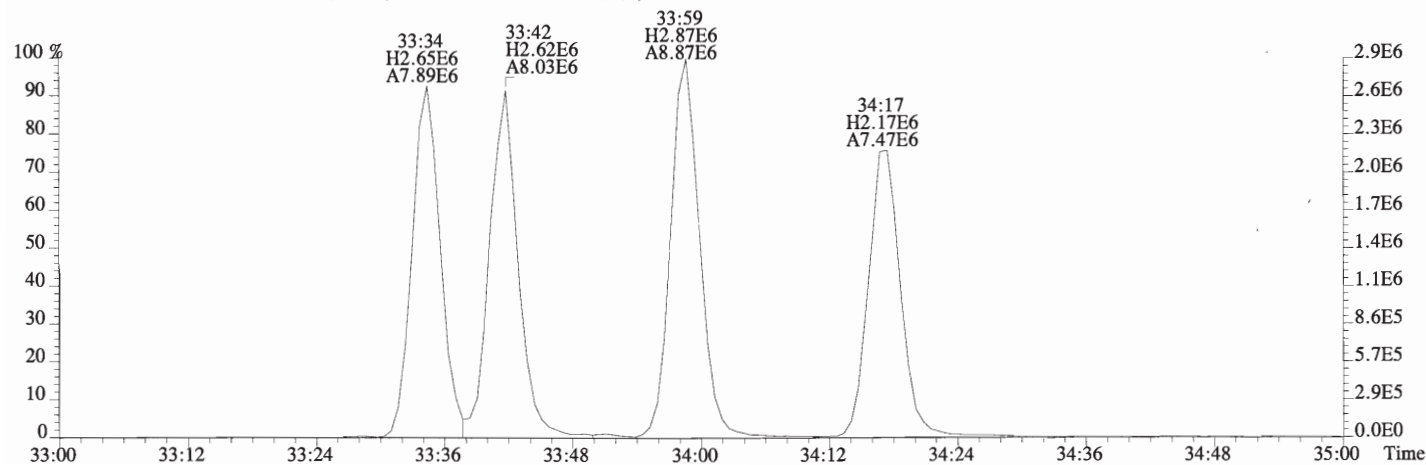
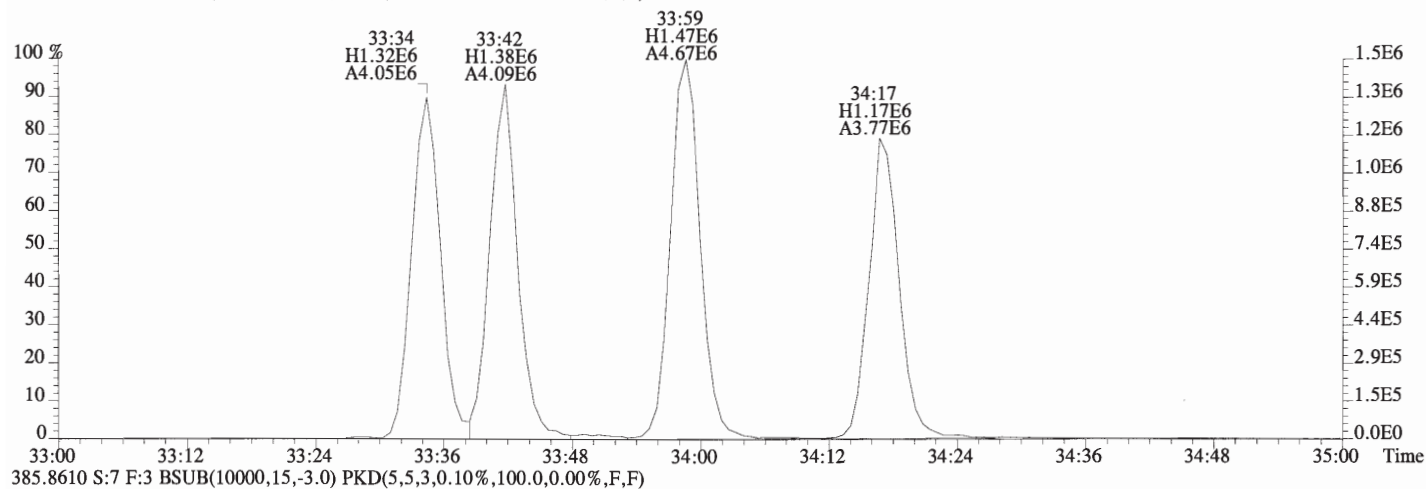
385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



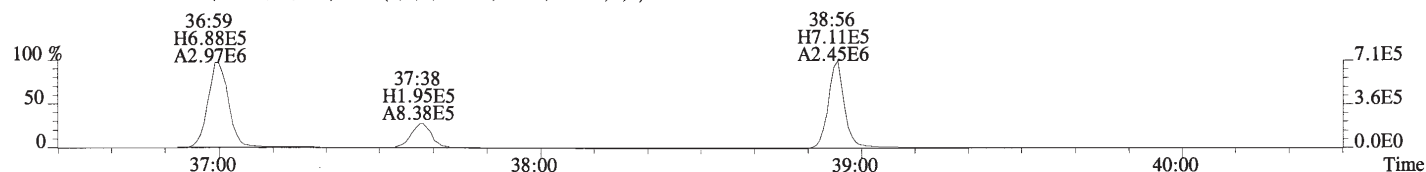
445.7555 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



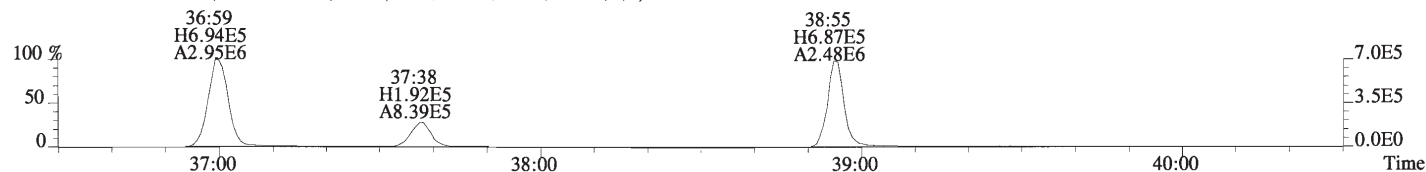
File:160713D1 #1-407 Acq:13-JUL-2016 13:58:30 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD1 Matrix Spike Dup 10 Exp:OCDD_DB5
 383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



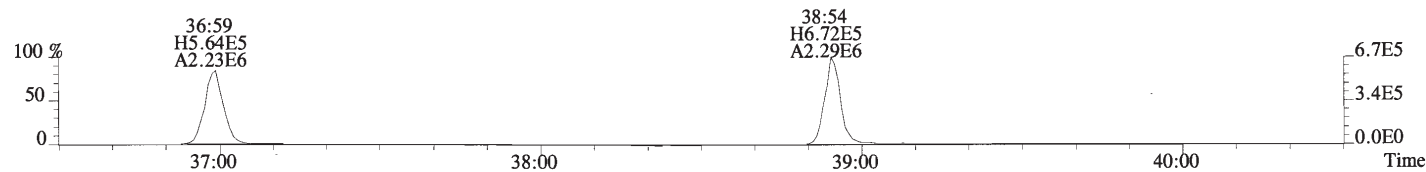
File:160713D1 #1-326 Acq:13-JUL-2016 13:58:30 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD1 Matrix Spike Dup 10 Exp:OCDD_DB5
 407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



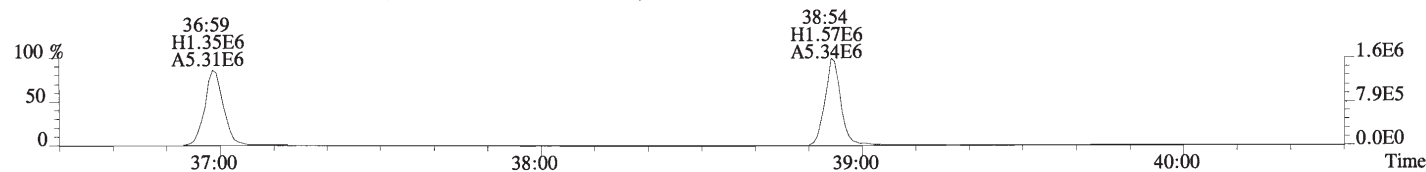
409.7788 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



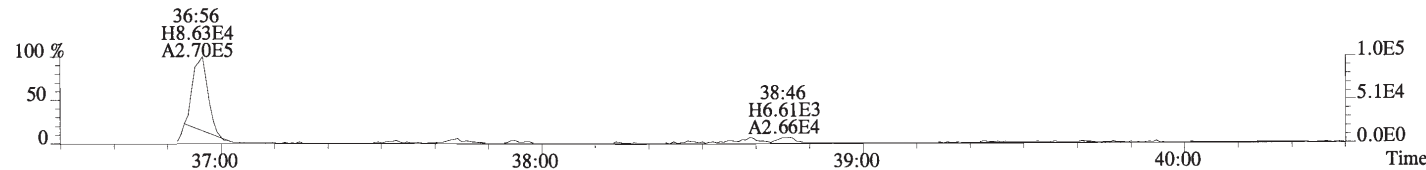
417.8253 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



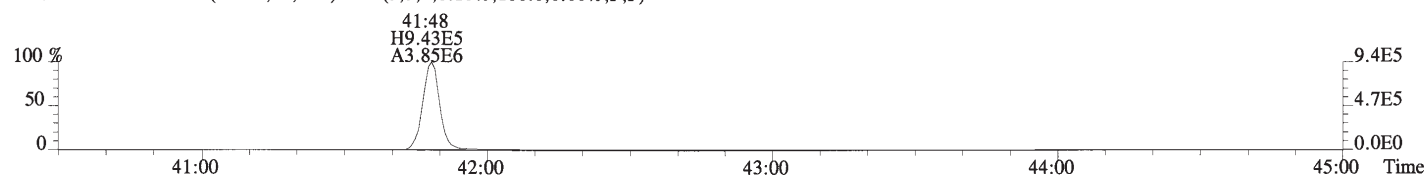
419.8220 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



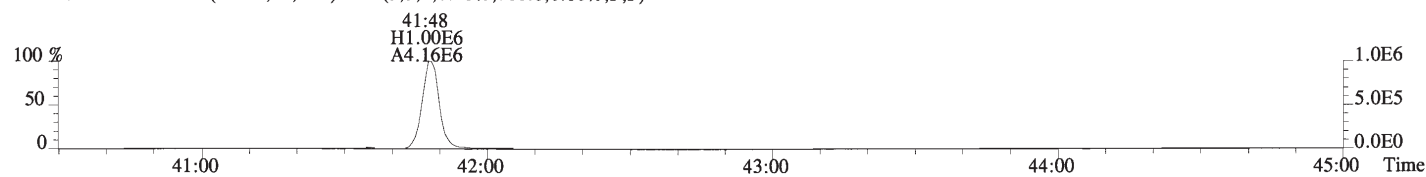
479.7165 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



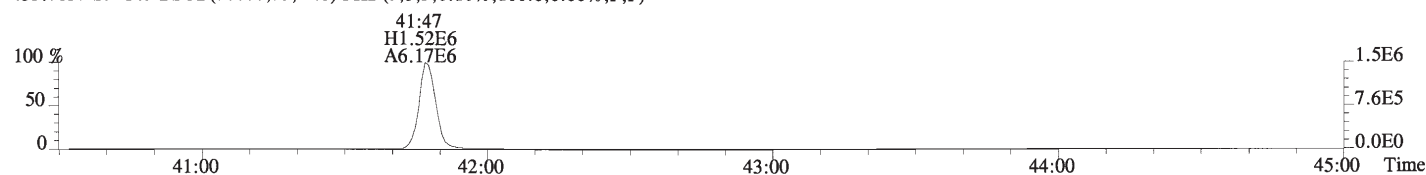
File:160713D1 #1-388 Acq:13-JUL-2016 13:58:30 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD1 Matrix Spike Dup 10 Exp:OCDD_DB5
441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



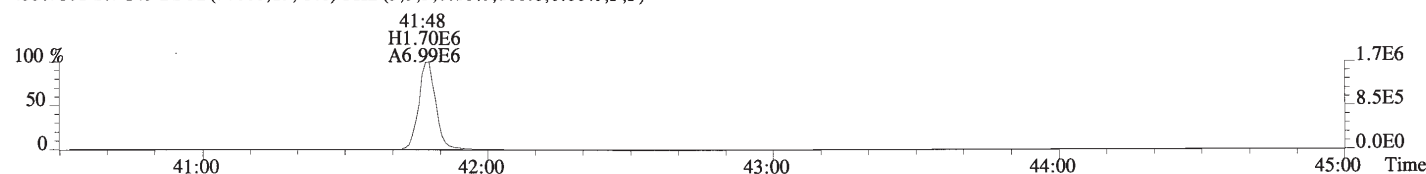
443.7398 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



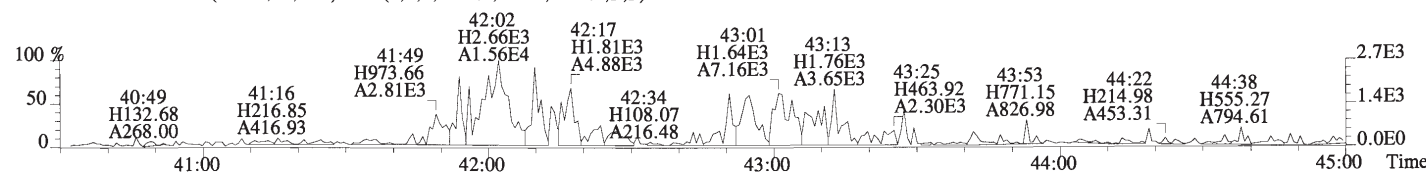
453.7831 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: DU-1-12-B
Lab ID: 1600835-05RE1

Filename: 160712D1 S:9 Acq:12-JUL-16 22:49:07
GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16

wt/vol: 9.978

ConCal: ST160712D1-1
EndCAL: NA

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Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	1.13	Not Fq	*	*	*	293	2.5	0.0852	Total Tetra-Dioxins	0.342	0.417	*	*	*
1,2,3,7,8-PeCDD	2.79e+04	0.71 y	0.96	31:10	1.000	0.67767	*	2.5	*	*	Total Penta-Dioxins	6.48	6.75	*	*	*
1,2,3,4,7,8-HxCDD	3.93e+04	1.06 y	1.00	34:27	1.000	1.0540	*	2.5	*	*	Total Hexa-Dioxins	40.9	40.9	*	*	*
1,2,3,6,7,8-HxCDD	1.57e+05	1.30 y	1.10	34:34	1.000	4.1668	*	2.5	*	*	Total Hepta-Dioxins	476	476	*	*	*
1,2,3,7,8,9-HxCDD	9.35e+04	1.21 y	1.05	34:51	1.000	2.5215	*	2.5	*	*	Total Tetra-Furans	8.64	8.83	*	*	*
1,2,3,4,6,7,8-HpCDD	7.15e+06	1.03 y	1.05	38:22	1.000	241.10	*	2.5	*	*	Total Penta-Furans	11.888	11.888	*	*	*
OCDD	7.55e+07	0.90 y	0.96	41:34	1.000	3450.2	*	2.5	*	*	Total Hexa-Furans	21.2	21.2	*	*	*
2,3,7,8-TCDF	1.70e+05	0.79 y	1.12	25:36	1.001	1.8344	*	2.5	*	*	Total Hepta-Furans	36.2	36.2	*	*	*
1,2,3,7,8-PeCDF	2.76e+04	1.34 y	1.01	29:56	1.000	0.43135	*	2.5	*	*						
2,3,4,7,8-PeCDF	7.53e+04	1.48 y	0.90	30:54	1.001	1.1756	*	2.5	*	*						
1,2,3,4,7,8-HxCDF	5.61e+04	1.22 y	1.16	33:35	1.000	0.93863	*	2.5	*	*						
1,2,3,6,7,8-HxCDF	3.75e+04	1.17 y	1.16	33:42	1.000	0.63014	*	2.5	*	*						
2,3,4,6,7,8-HxCDF	5.81e+04	1.06 y	1.23	34:18	1.000	1.0105	*	2.5	*	*						
1,2,3,7,8,9-HxCDF	1.31e+04	1.07 y	1.13	35:15	1.000	0.25229	*	2.5	*	*						
1,2,3,4,6,7,8-HpCDF	5.15e+05	1.05 y	1.44	37:00	1.000	11.329	*	2.5	*	*						
1,2,3,4,7,8,9-HpCDF	4.37e+04	1.07 y	1.31	38:55	1.000	1.0618	*	2.5	*	*						
OCDF	9.77e+05	0.90 y	1.03	41:48	1.000	35.233	*	2.5	*	*						
IS	13C-2,3,7,8-TCDD	1.08e+07	0.81 y	1.01	26:26	1.025	181.73				Rec					
IS	13C-1,2,3,7,8-PeCDD	8.57e+06	0.65 y	1.10	31:10	1.208	131.76				Qual					
IS	13C-1,2,3,4,7,8-HxCDD	7.45e+06	1.29 y	0.72	34:27	1.014	184.43				90.7					
IS	13C-1,2,3,6,7,8-HxCDD	6.90e+06	1.27 y	0.73	34:33	1.017	169.27				65.7					
IS	13C-1,2,3,7,8,9-HxCDD	7.09e+06	1.28 y	0.70	34:50	1.025	180.31				92.0					
IS	13C-1,2,3,4,6,7,8-HpCDD	5.66e+06	1.07 y	0.66	38:22	1.129	151.93				84.5					
IS	13C-OCDD	9.12e+06	0.91 y	0.66	41:34	1.223	246.55				90.0					
IS	13C-2,3,7,8-TCDF	1.66e+07	0.81 y	0.90	25:35	0.992	194.02				75.8					
IS	13C-1,2,3,7,8-PeCDF	1.27e+07	1.58 y	0.98	29:56	1.160	136.63				61.5					
IS	13C-2,3,4,7,8-PeCDF	1.43e+07	1.61 y	1.15	30:53	1.197	131.12				96.8					
IS	13C-1,2,3,4,7,8-HxCDF	1.03e+07	0.52 y	1.01	33:34	0.988	181.38				68.2					
IS	13C-1,2,3,6,7,8-HxCDF	1.03e+07	0.52 y	1.10	33:42	0.992	167.78				65.4					
IS	13C-2,3,4,6,7,8-HxCDF	9.41e+06	0.52 y	0.95	34:17	1.009	176.32				90.5					
IS	13C-1,2,3,7,8,9-HxCDF	9.22e+06	0.52 y	0.83	35:14	1.037	198.81				83.7					
IS	13C-1,2,3,4,6,7,8-HpCDF	6.34e+06	0.44 y	0.70	36:59	1.088	161.68				88.0					
IS	13C-1,2,3,4,7,8,9-HpCDF	6.29e+06	0.44 y	0.72	38:55	1.145	155.76				99.2					
IS	13C-OCDF	1.08e+07	0.91 y	0.82	41:47	1.230	233.39				80.7					
C/Up	37Cl-2,3,7,8-TCDD	4.70e+06		1.14	26:27	1.025	70.167				77.7					
RS/RT	13C-1,2,3,4-TCDD	1.18e+07	0.78 y	1.00	25:48	*	200.44				58.2					
RS	13C-1,2,3,4-TCDF	1.91e+07	0.79 y	1.00	24:13	*	200.44									
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.12e+07	0.52 y	1.00	33:59	*	200.44									

Integrations
by DB
Analyst: DB
Date: 7/15/16
Reviewed
by AK
Analyst: AK
Date: 7/15/16

Totals class: TCDD EMPC

Entry #: 19

Run: 14 File: 160712D1 S: 9 I: 1 F: 1
Acquired: 12-JUL-16 22:49:07 Processed: 13-JUL-16 17:04:04

Total Concentration: 0.41691 Unnamed Concentration: 0.417

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
22:38	9.649e+03	1.121e+04	0.86 y	2.086e+04	0.34157
26:09	3.279e+03	2.599e+03	1.26 n	4.601e+03	0.075349

Totals class: PeCDD EMPC

Entry #: 21

Run: 14 File: 160712D1 S: 9 I: 1 F: 2
Acquired: 12-JUL-16 22:49:07 Processed: 13-JUL-16 17:04:04

Total Concentration: 6.7458 Unnamed Concentration: 6.068

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:02	3.405e+04	6.358e+04	0.54 y	9.763e+04	2.3751
29:30	1.085e+04	1.672e+04	0.65 y	2.757e+04	0.67063
29:59	1.088e+04	1.521e+04	0.72 y	2.609e+04	0.63461
30:09	1.033e+04	1.907e+04	0.54 y	2.940e+04	0.71522
30:13	6.274e+03	9.444e+03	0.66 y	1.572e+04	0.38239
30:26	8.414e+03	1.524e+04	0.55 y	2.366e+04	0.57547
30:29	4.117e+03	7.628e+03	0.54 y	1.175e+04	0.28573
30:45	3.489e+03	3.660e+03	0.95 n	5.966e+03	0.14514
31:10	1.159e+04	1.626e+04	0.71 y	2.786e+04	0.67767
31:15	2.482e+03	4.144e+03	0.60 y	6.625e+03	0.16118
31:32	1.950e+03	5.424e+03	0.36 n	5.045e+03	0.12273

Totals class: HxCDD EMPC

Entry #: 23

Run: 14 File: 160712D1 S: 9 I: 1 F: 3

Acquired: 12-JUL-16 22:49:07 Processed: 13-JUL-16 17:04:04

Total Concentration: 40.907

Unnamed Concentration: 33.164

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:57	2.995e+05	2.354e+05	1.27 y	5.350e+05	14.306
33:30	3.864e+04	3.213e+04	1.20 y	7.076e+04	1.8924
33:46	3.210e+05	2.703e+05	1.19 y	5.912e+05	15.811
33:53	9.682e+03	8.523e+03	1.14 y	1.820e+04	0.48682
34:27	2.025e+04	1.903e+04	1.06 y	3.927e+04	1.0540 1,2,3,4,7,8-HxCDD
34:34	8.873e+04	6.837e+04	1.30 y	1.571e+05	4.1668 1,2,3,6,7,8-HxCDD
34:46	1.457e+04	1.042e+04	1.40 y	2.499e+04	0.66828
34:51	5.123e+04	4.230e+04	1.21 y	9.353e+04	2.5215 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 14

File: 160712D1

S: 9 I: 1 F: 4

Acquired: 12-JUL-16 22:49:07

Processed: 13-JUL-16 17:04:04

Total Concentration: 475.84

Unnamed Concentration: 234.744

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:23	3.544e+06	3.418e+06	1.04 y	6.962e+06	234.74
38:22	3.628e+06	3.523e+06	1.03 y	7.150e+06	241.10

1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 14 File: 160712D1 S: 9 I: 1 F: 1
 Acquired: 12-JUL-16 22:49:07 Processed: 13-JUL-16 17:04:04

Total Concentration: 8.8286 Unnamed Concentration: 6.994

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
20:26	3.991e+03	6.034e+03	0.66 y	1.003e+04	0.10816
21:00	4.881e+03	7.273e+03	0.67 y	1.215e+04	0.13113
21:38	5.390e+04	6.119e+04	0.88 y	1.151e+05	1.2417
22:36	1.994e+04	2.509e+04	0.79 y	4.504e+04	0.48590
23:06	1.639e+04	2.184e+04	0.75 y	3.823e+04	0.41243
23:14	9.596e+03	1.111e+04	0.86 y	2.071e+04	0.22342
23:26	1.515e+04	2.237e+04	0.68 y	3.752e+04	0.40481
23:58	7.166e+03	1.073e+04	0.67 y	1.789e+04	0.19307
24:10	3.120e+04	3.667e+04	0.85 y	6.787e+04	0.73223
24:43	2.196e+04	2.710e+04	0.81 y	4.906e+04	0.52936
25:00	9.729e+03	1.460e+04	0.67 y	2.433e+04	0.26254
25:29	4.985e+03	7.569e+03	0.66 y	1.255e+04	0.13544
25:36	7.481e+04	9.522e+04	0.79 y	1.700e+05	1.8344
25:58	7.619e+04	1.045e+05	0.73 y	1.807e+05	1.9498
27:30	1.303e+04	9.644e+03	1.35 n	1.707e+04	0.18417

2,3,7,8-TCDF

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 14 File: 160712D1 S: 9 I: 1 F: 1
Acquired: 12-JUL-16 22:49:07 Processed: 13-JUL-16 17:04:04

Total Concentration: 4.5340 Unnamed Concentration: 4.534

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:29	1.739e+05	1.160e+05	1.50 y	2.899e+05	4.5340

Totals class: PeCDF EMPC

Entry #: 31

Run: 14 File: 160712D1 S: 9 I: 1 F: 2
Acquired: 12-JUL-16 22:49:07 Processed: 13-JUL-16 17:04:04

Total Concentration: 7.3536 Unnamed Concentration: 5.747

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28:52	2.609e+04	1.751e+04	1.49 y	4.359e+04	0.68191
29:01	1.127e+05	7.168e+04	1.57 y	1.843e+05	2.8835
29:22	6.716e+03	4.395e+03	1.53 y	1.111e+04	0.17380
29:35	3.683e+04	2.445e+04	1.51 y	6.127e+04	0.95845
29:46	5.081e+03	3.156e+03	1.61 y	8.238e+03	0.12886
29:56	1.579e+04	1.181e+04	1.34 y	2.760e+04	0.43135 1,2,3,7,8-PeCDF
30:11	2.313e+04	1.486e+04	1.56 y	3.799e+04	0.59422
30:46	1.200e+04	8.836e+03	1.36 y	2.084e+04	0.32592
30:54	4.491e+04	3.037e+04	1.48 y	7.529e+04	1.1756 2,3,4,7,8-PeCDF

Totals class: HxCDF EMPC

Entry #: 33

Run: 14

File: 160712D1

S: 9 I: 1 F: 3

Acquired: 12-JUL-16 22:49:07

Processed: 13-JUL-16 17:04:04

Total Concentration: 21.211

Unnamed Concentration: 18.380

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:25	4.645e+04	3.956e+04	1.17 y	8.601e+04	1.5020
32:35	1.859e+05	1.520e+05	1.22 y	3.379e+05	5.9007
32:47	6.660e+03	5.828e+03	1.14 y	1.249e+04	0.21807
32:56	1.368e+05	1.036e+05	1.32 y	2.403e+05	4.1969
33:07	2.015e+05	1.586e+05	1.27 y	3.600e+05	6.2869
33:29	9.025e+03	6.735e+03	1.34 y	1.576e+04	0.27521
33:35	3.085e+04	2.523e+04	1.22 y	5.608e+04	0.93863
33:42	2.023e+04	1.728e+04	1.17 y	3.751e+04	0.63014
34:18	2.995e+04	2.820e+04	1.06 y	5.815e+04	1.0105
35:15	6.801e+03	6.343e+03	1.07 y	1.314e+04	0.25229

Totals class: HpCDF EMPC

Entry #: 35

Run: 14

File: 160712D1

S: 9 I: 1 F: 4

Acquired: 12-JUL-16 22:49:07

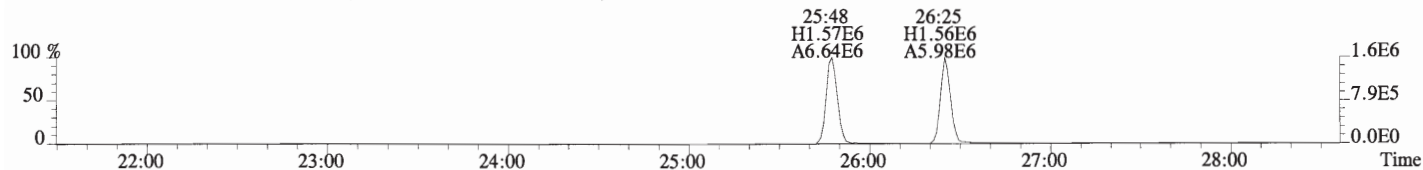
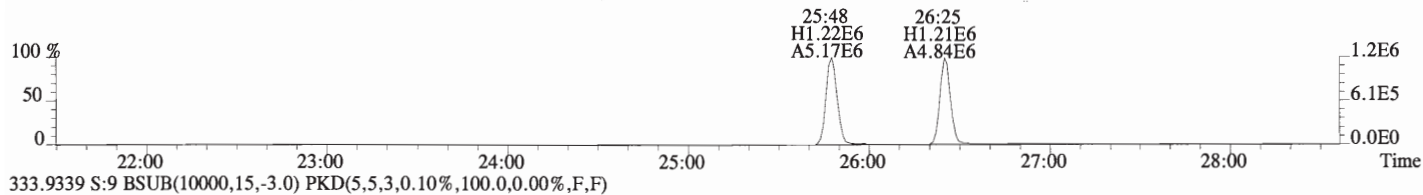
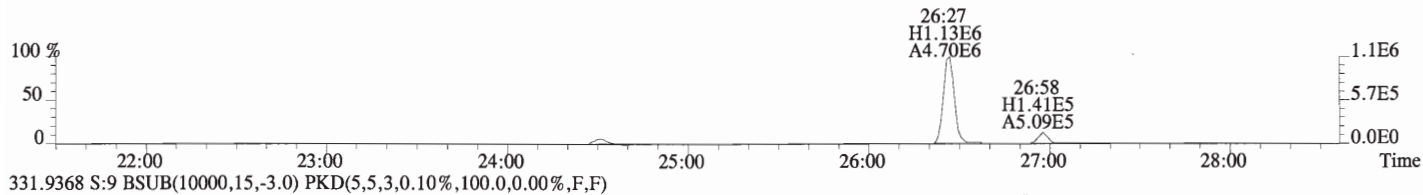
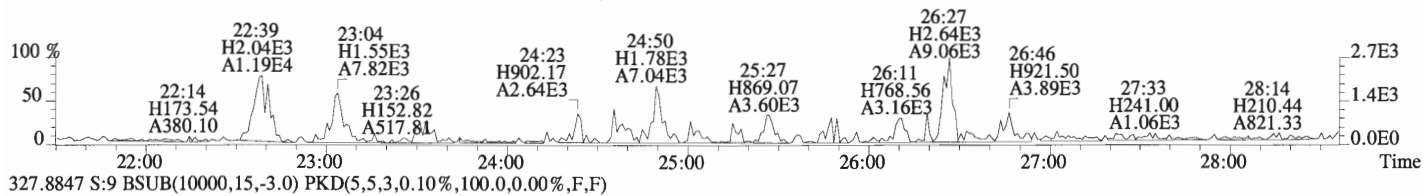
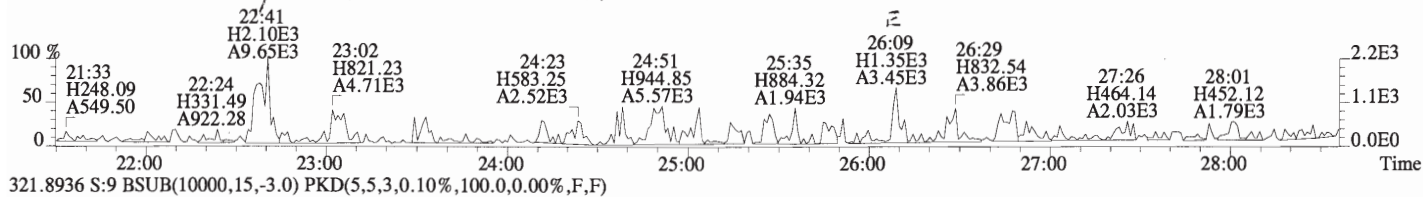
Processed: 13-JUL-16 17:04:04

Total Concentration: 36.219

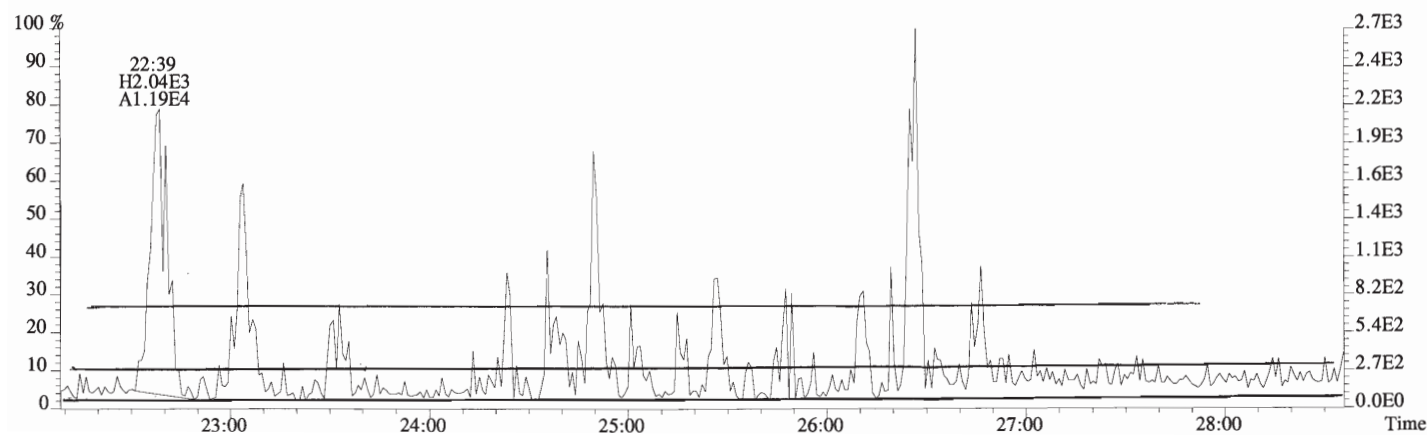
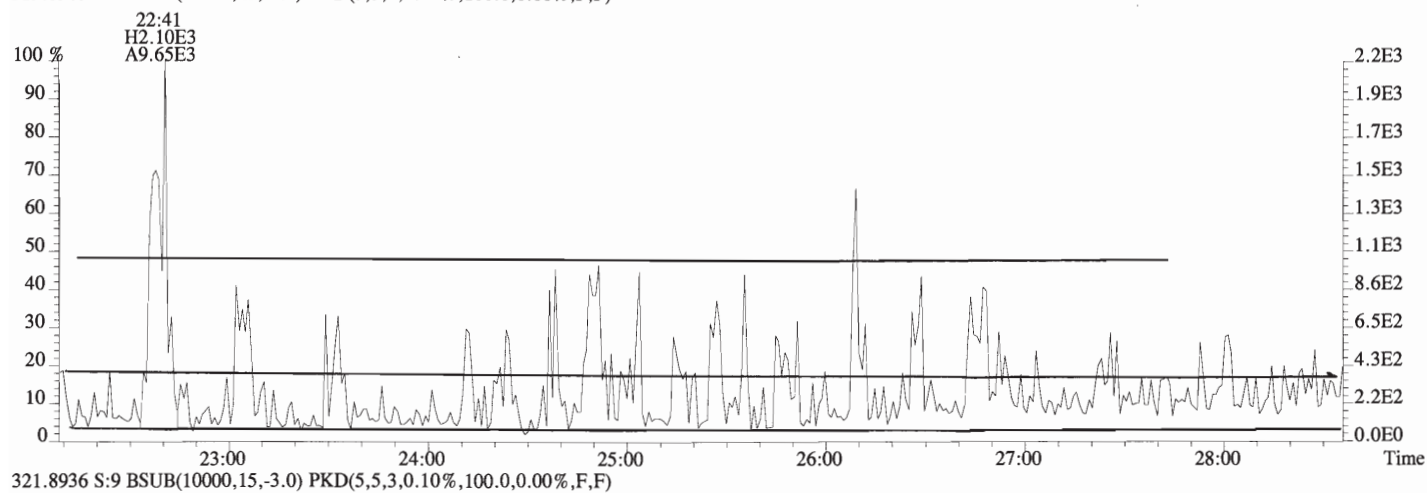
Unnamed Concentration: 23.827

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
37:00	2.644e+05	2.511e+05	1.05	y	5.155e+05	11.329	1,2,3,4,6,7,8-HpCDF
37:23	4.889e+03	4.165e+03	1.17	y	9.054e+03	0.20915	
37:37	5.179e+05	5.045e+05	1.03	y	1.022e+06	23.618	
38:55	2.259e+04	2.113e+04	1.07	y	4.372e+04	1.0618	1,2,3,4,7,8,9-HpCDF

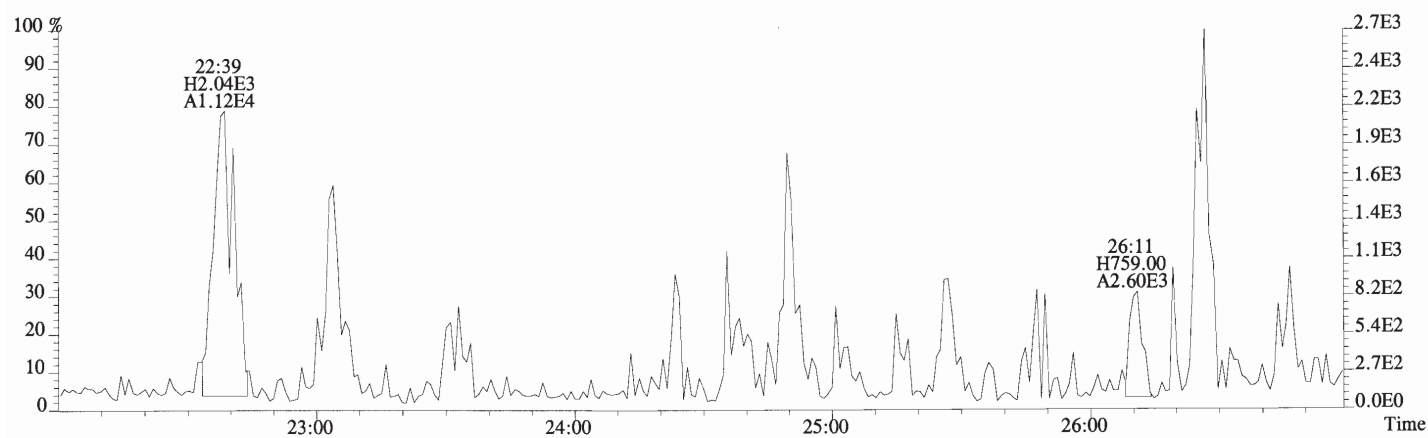
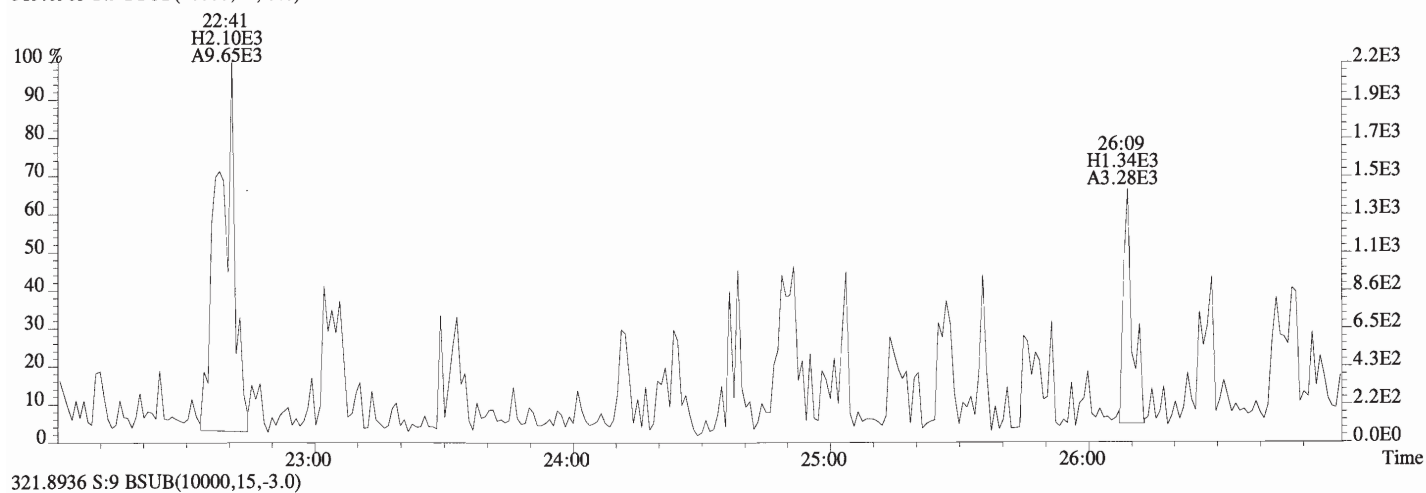
File:160712D1 #1-551 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 319.8965 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



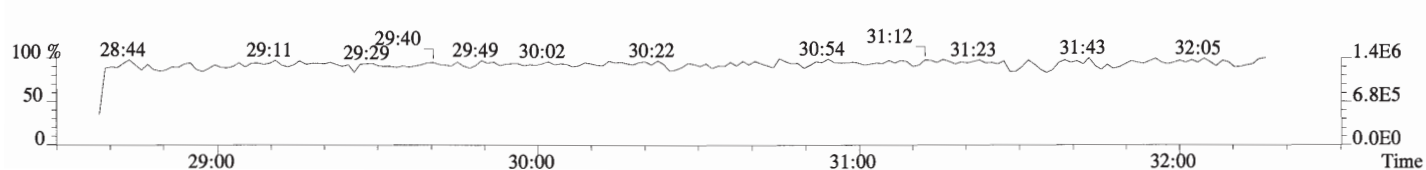
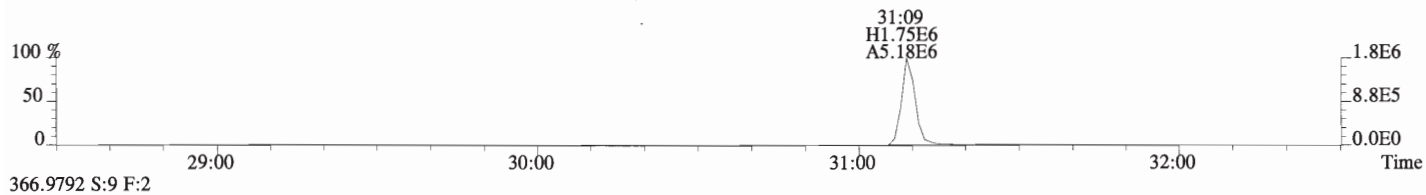
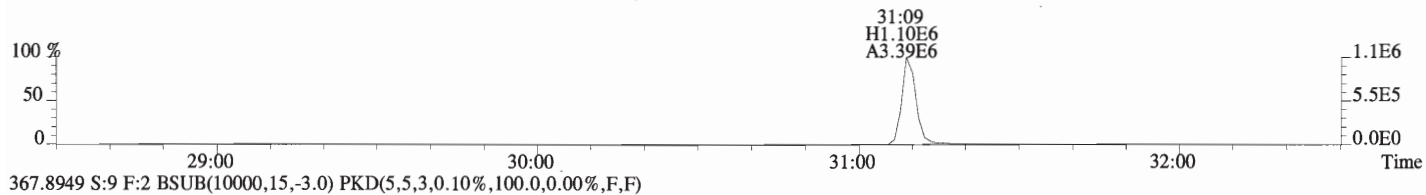
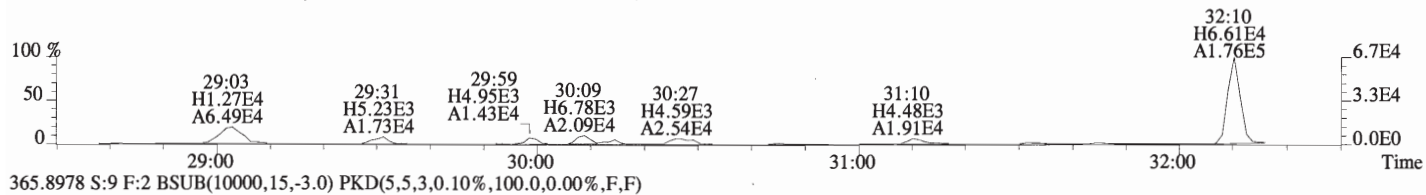
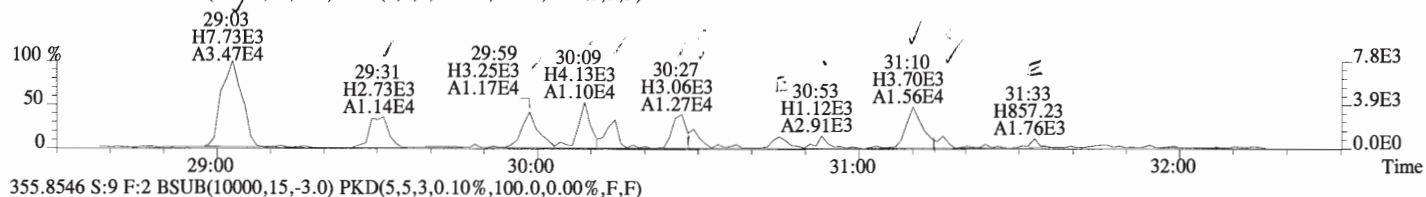
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Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
319.8965 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



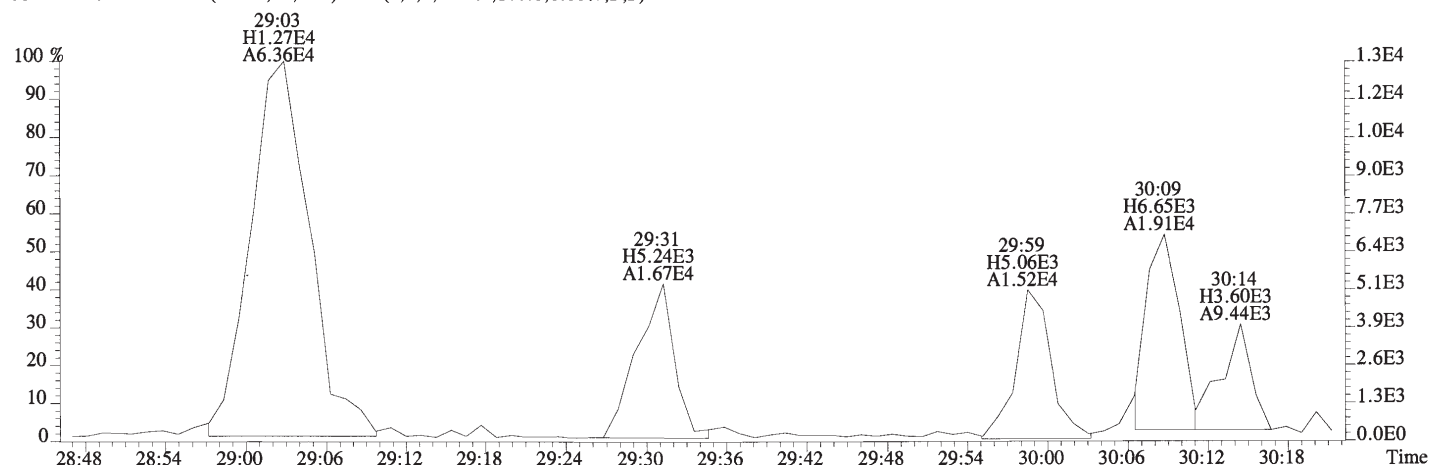
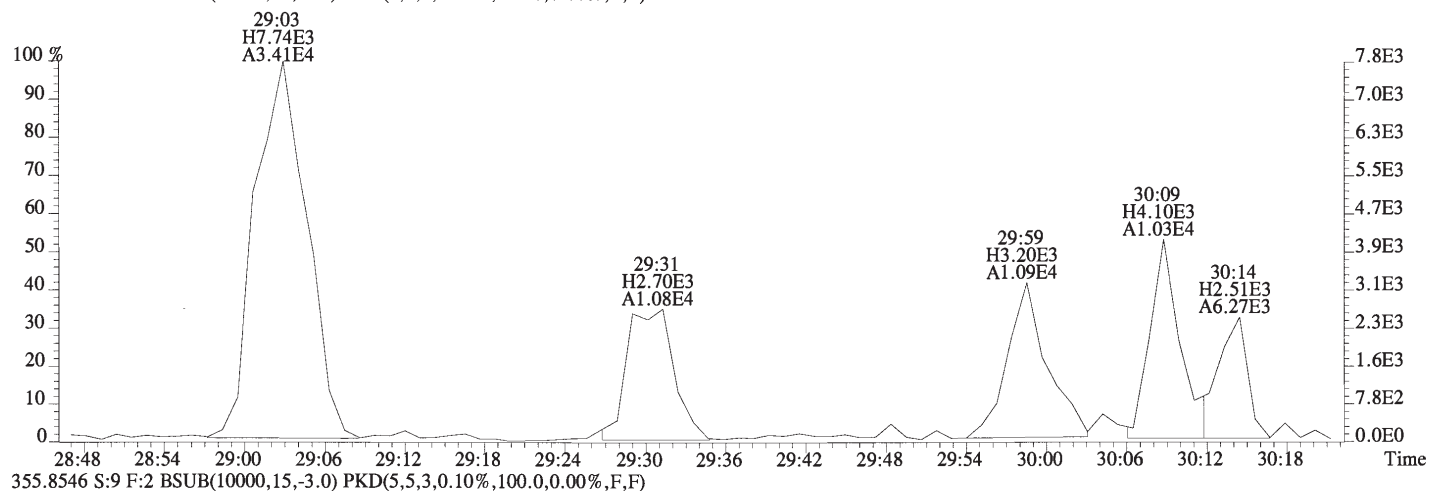
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319.8965 S:9 BSUB(10000,15,-3.0)



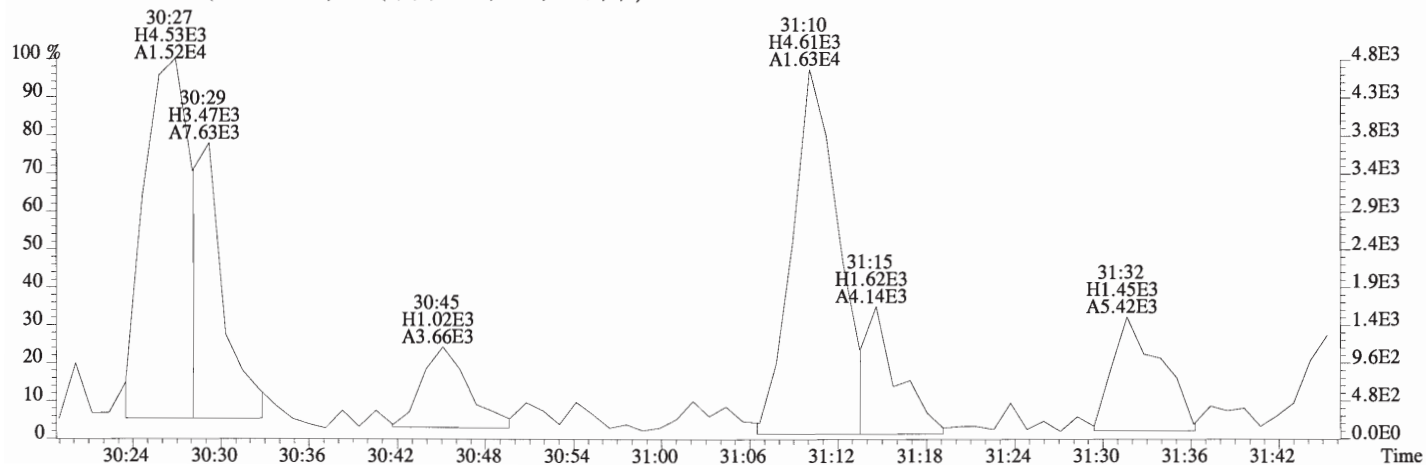
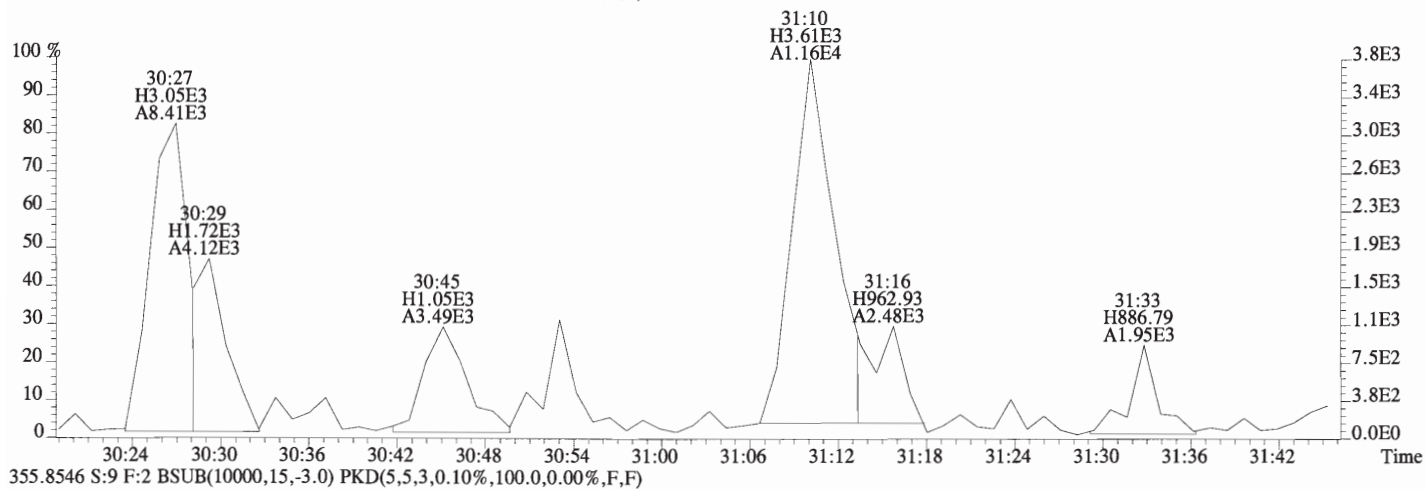
File:160712D1 #1-193 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 353.8576 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



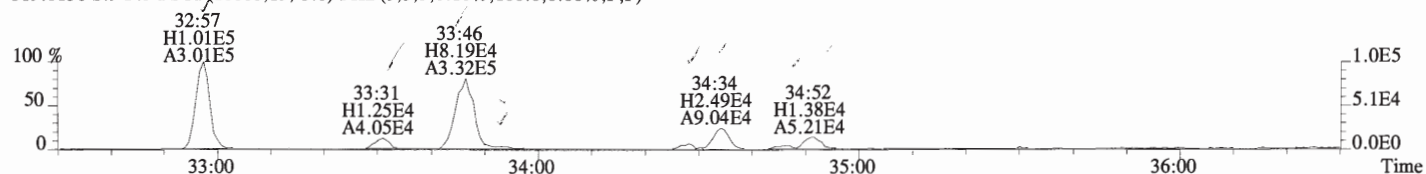
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 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 353.8576 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



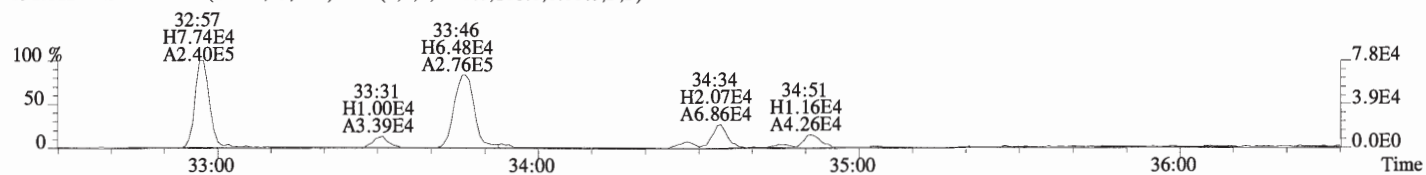
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Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
353.8576 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



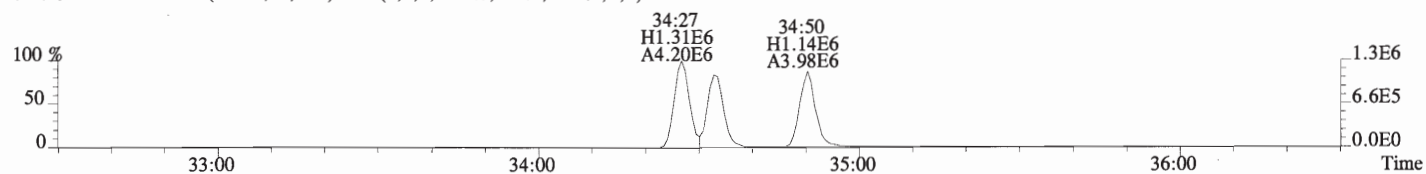
File:160712D1 #1-406 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



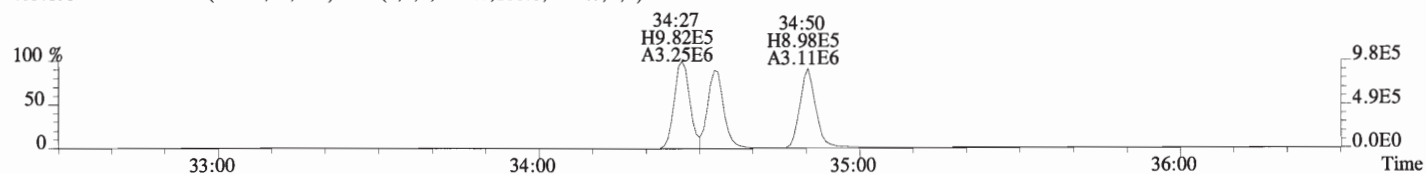
391.8127 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



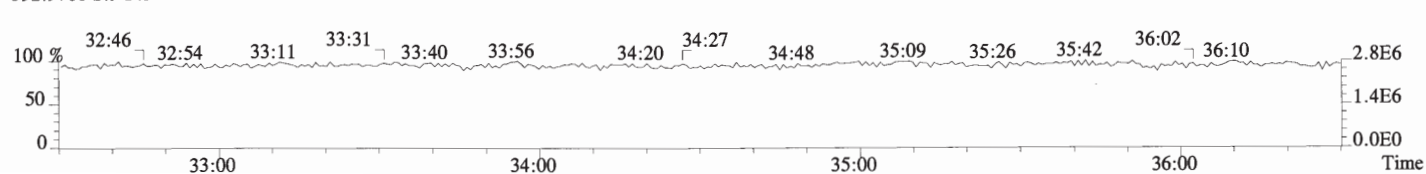
401.8559 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



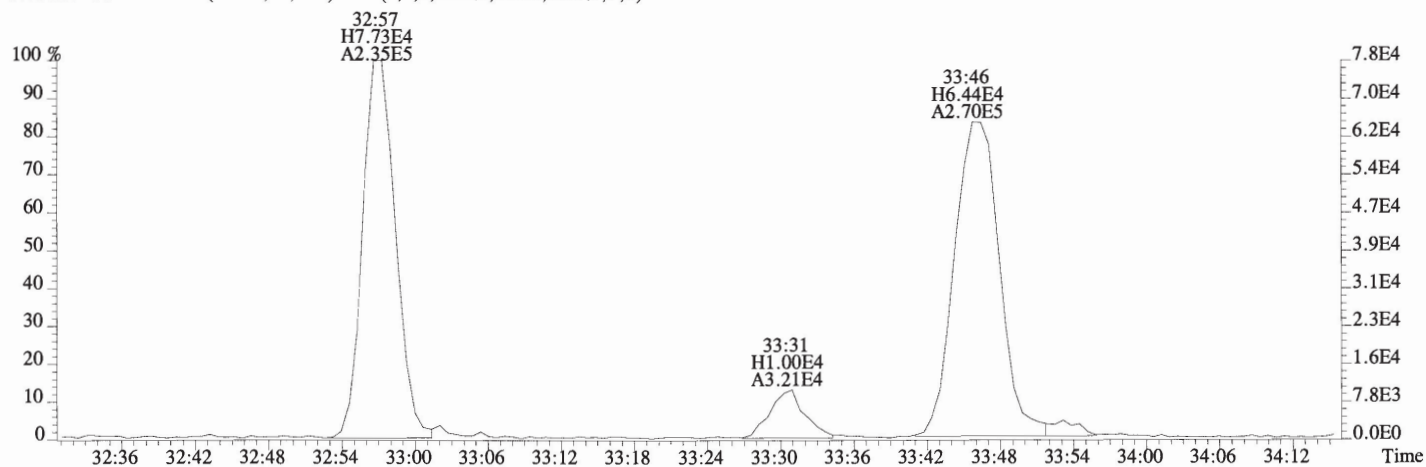
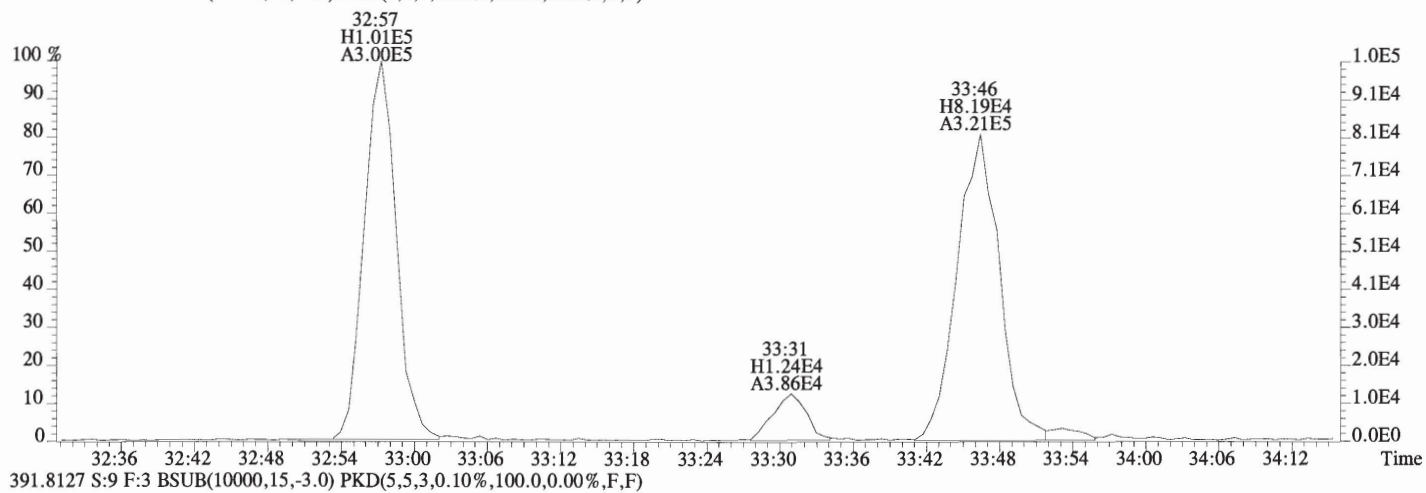
403.8530 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



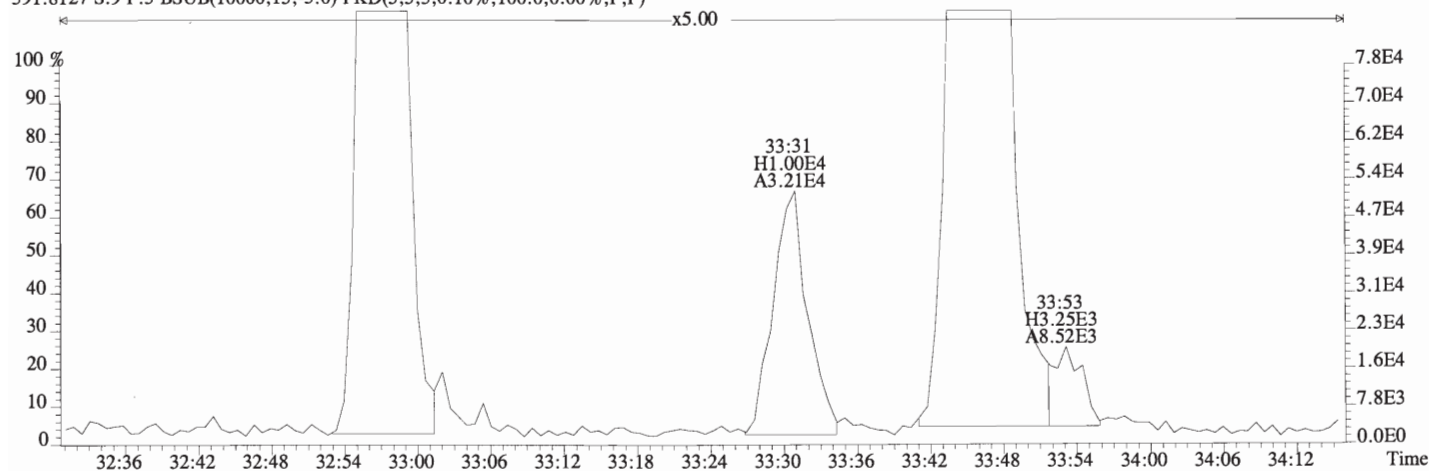
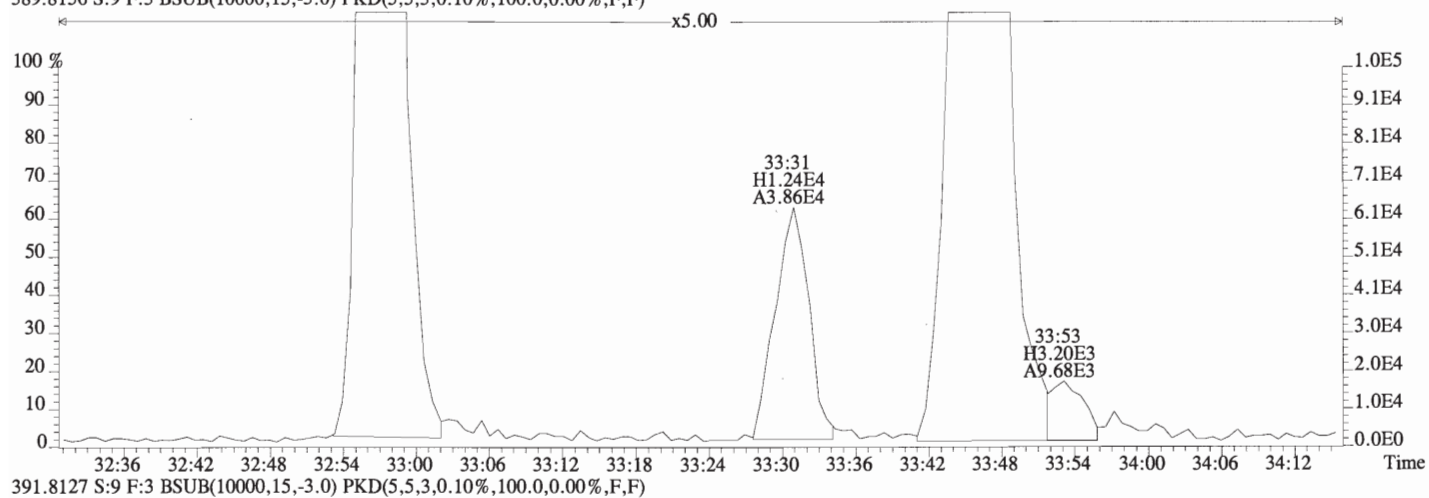
392.9760 S:9 F:3



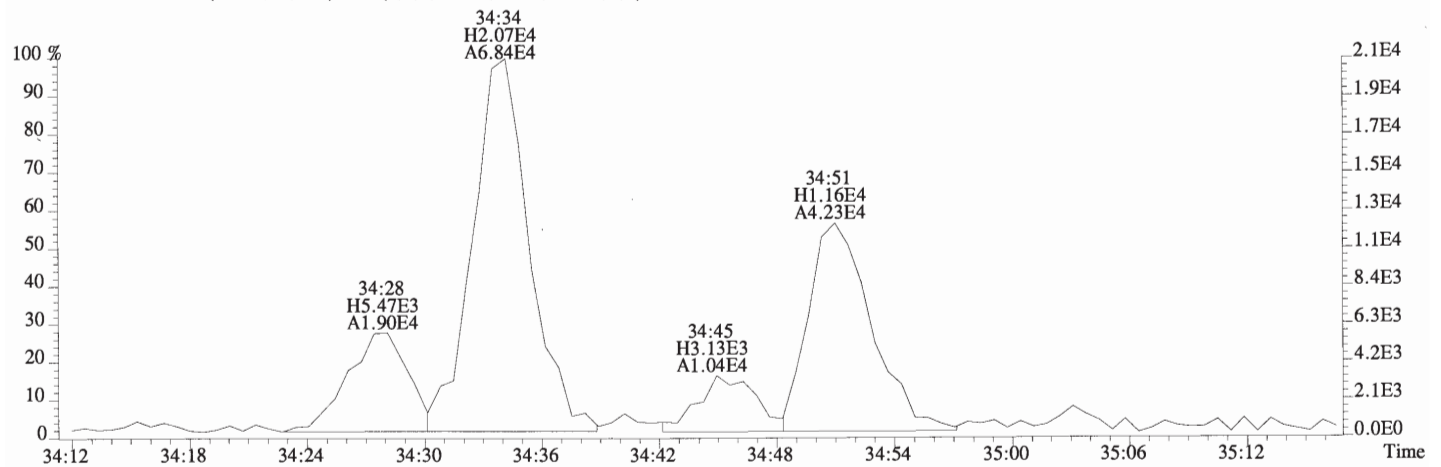
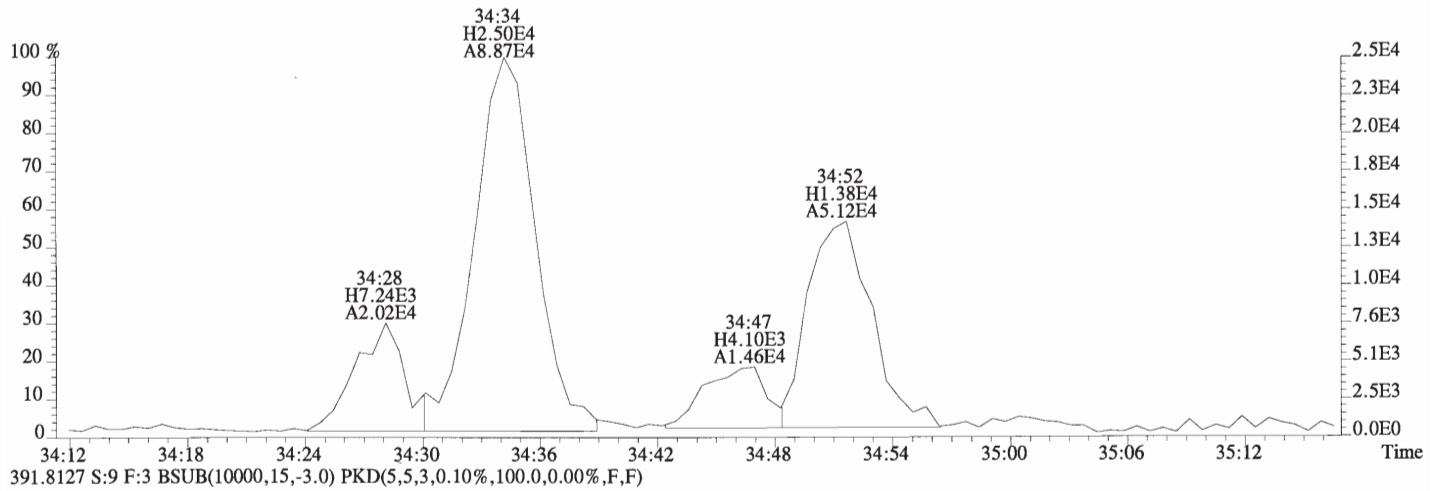
File:160712D1_#1-406 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



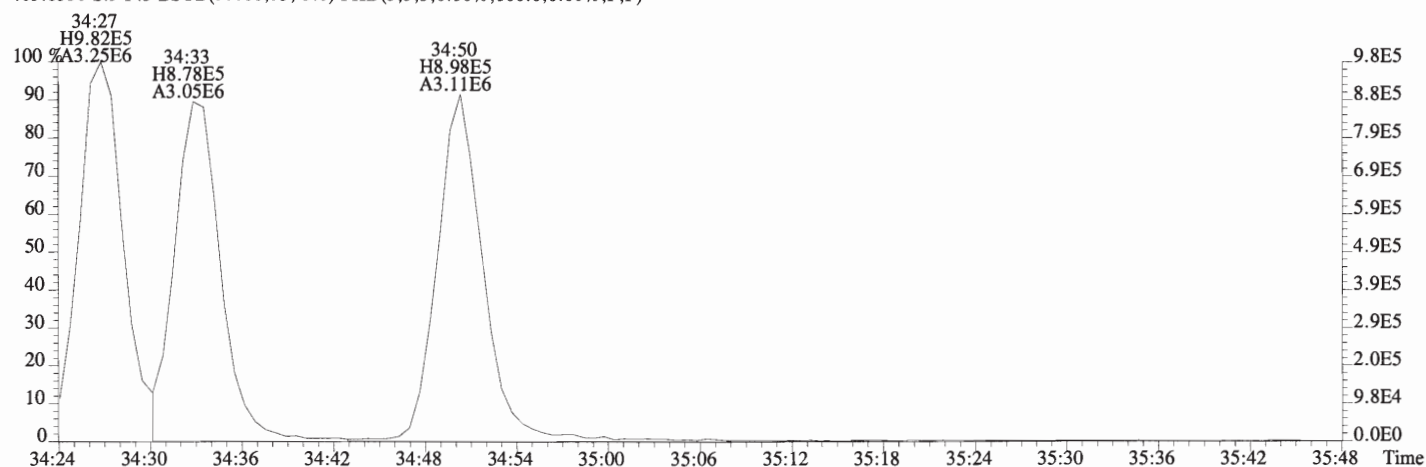
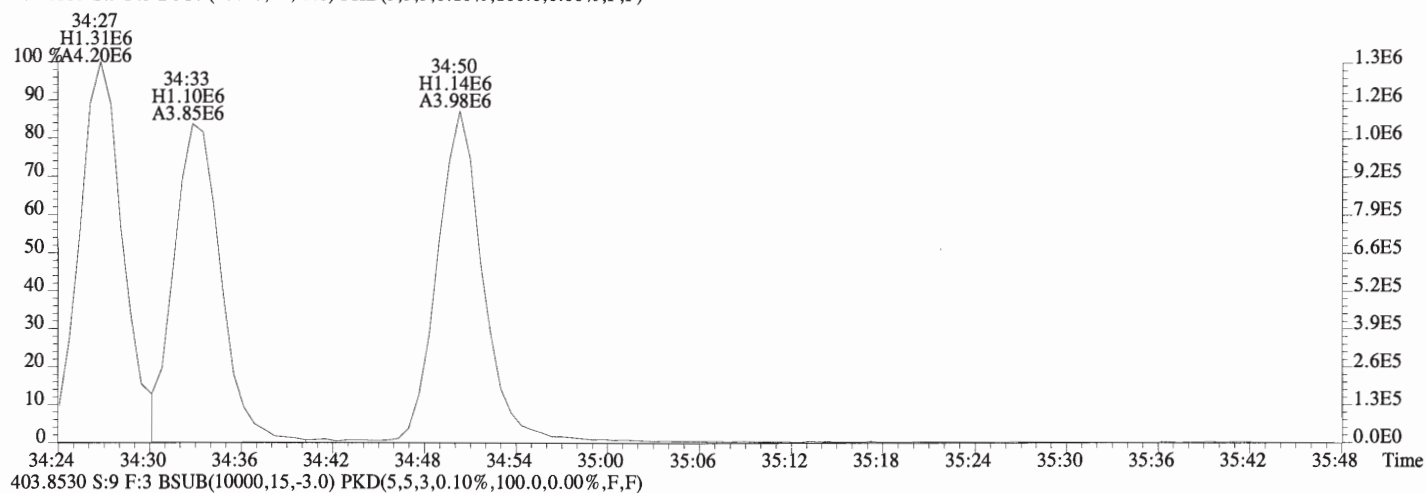
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Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



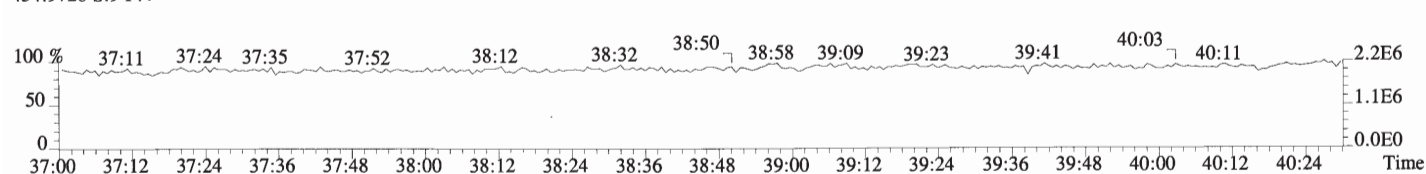
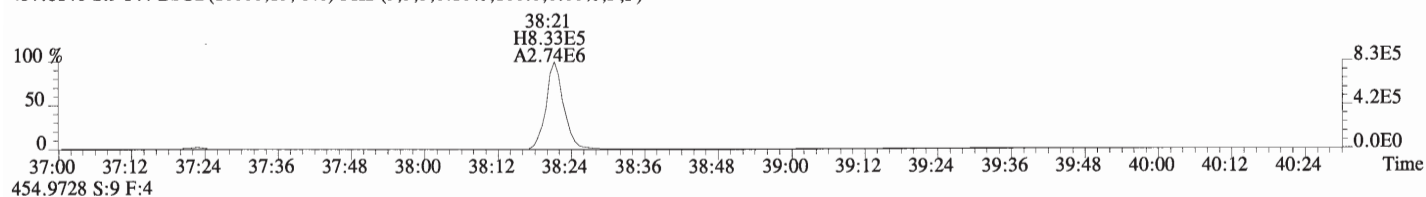
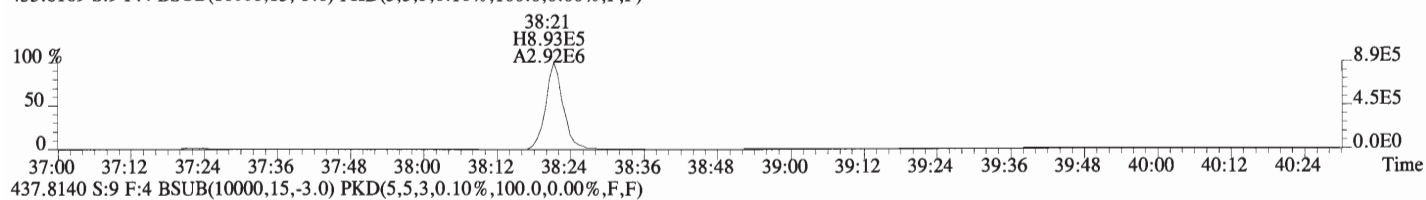
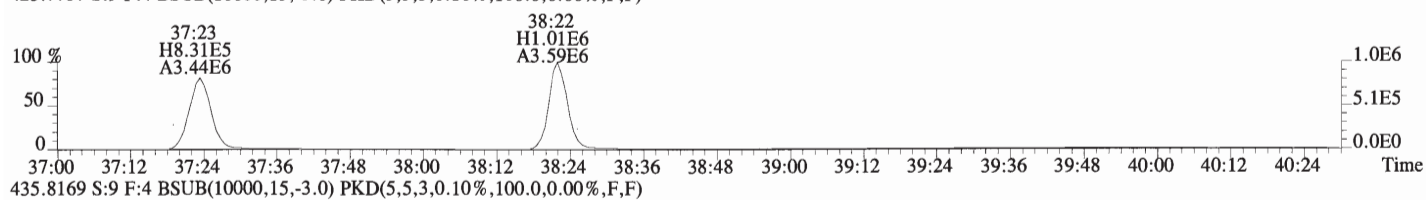
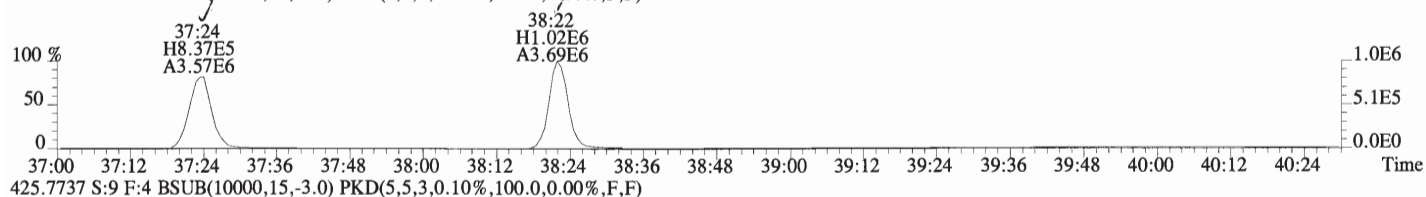
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Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



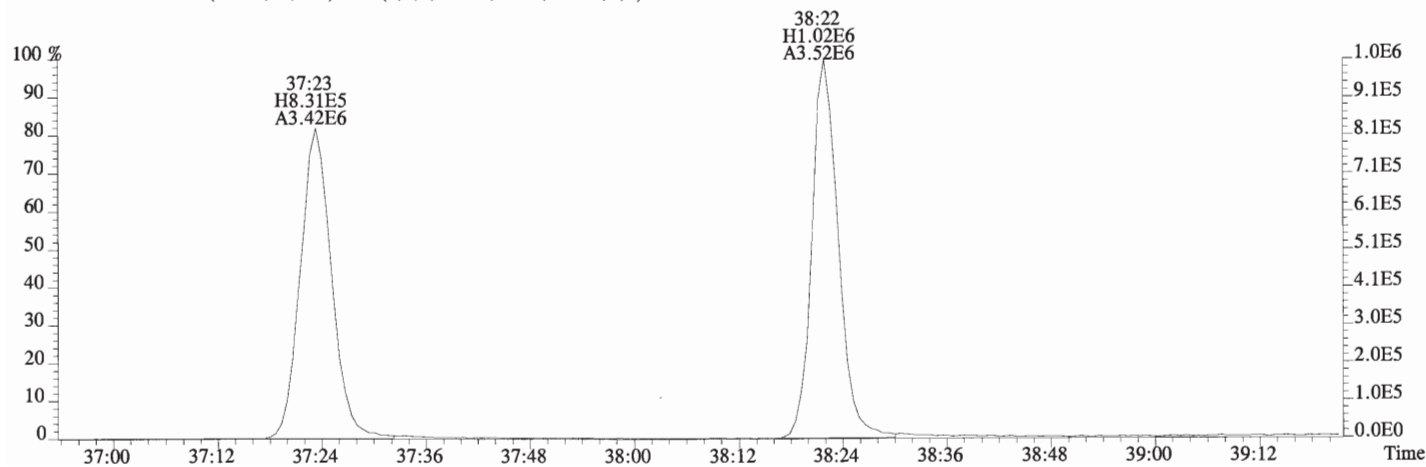
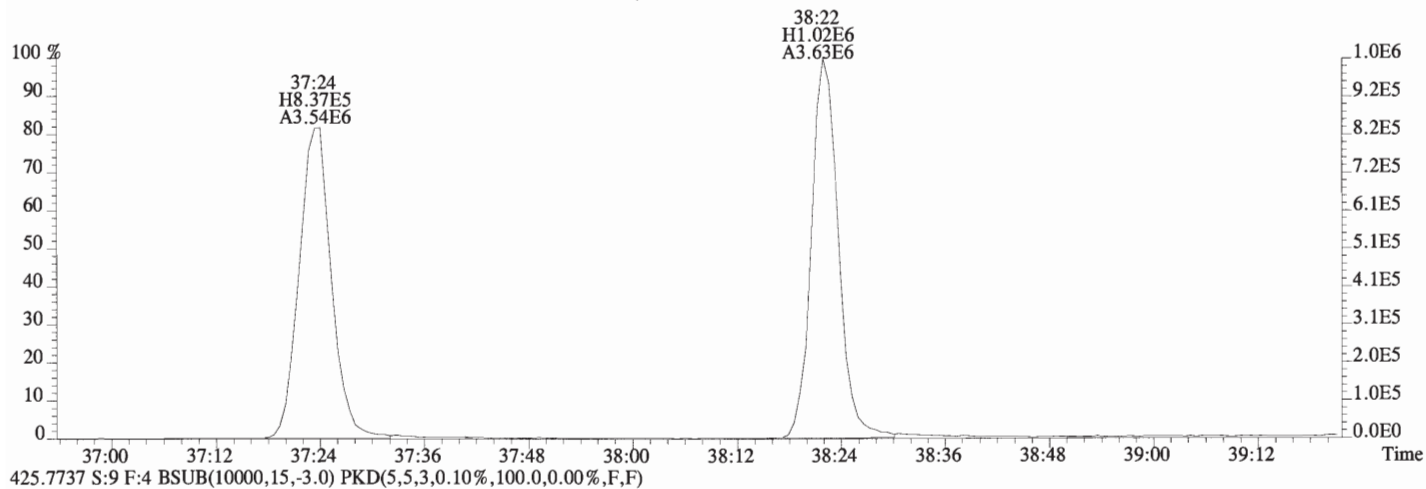
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 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 401.8559 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



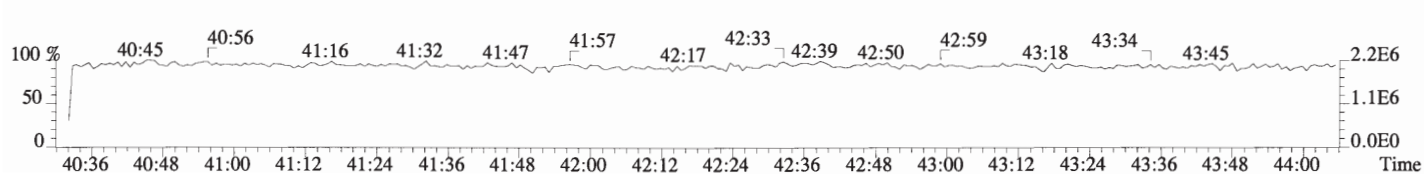
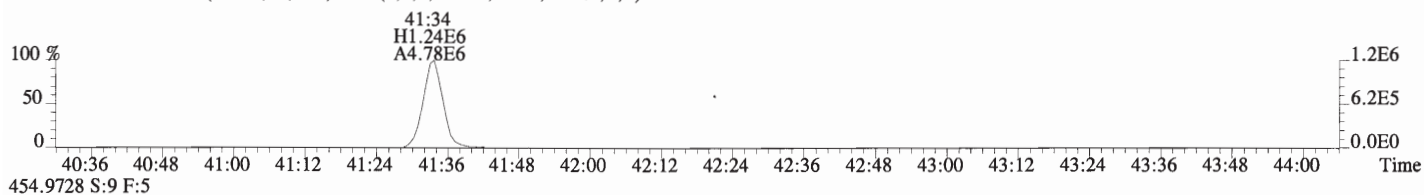
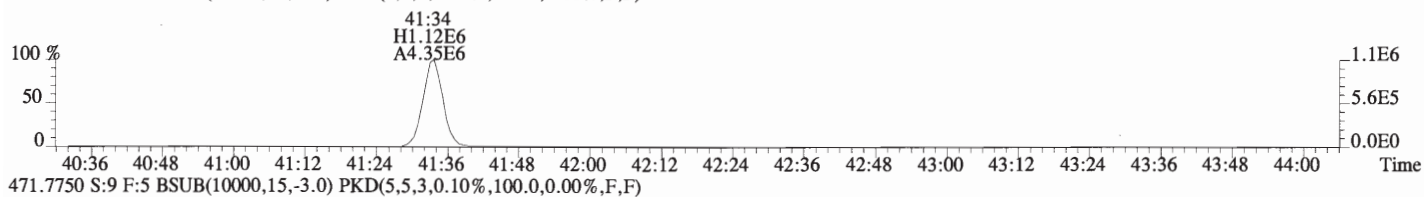
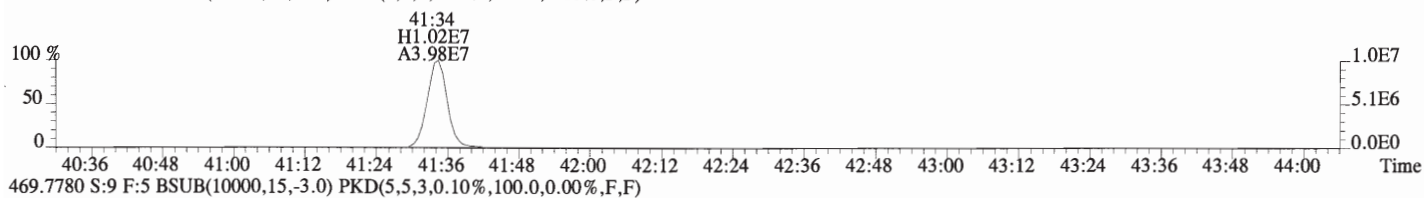
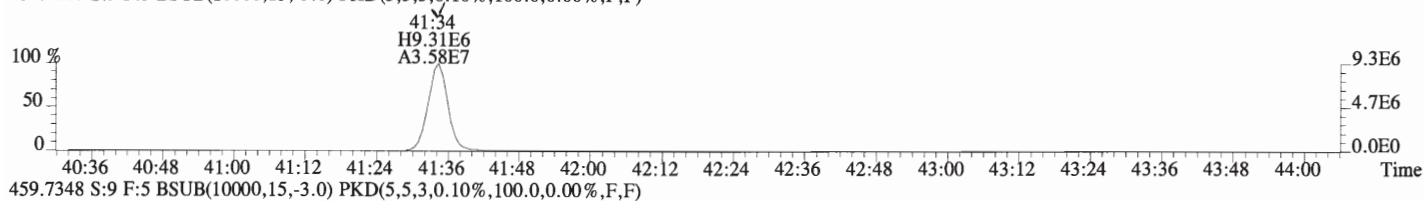
File:160712D1 #1-326 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text: Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 423.7767 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



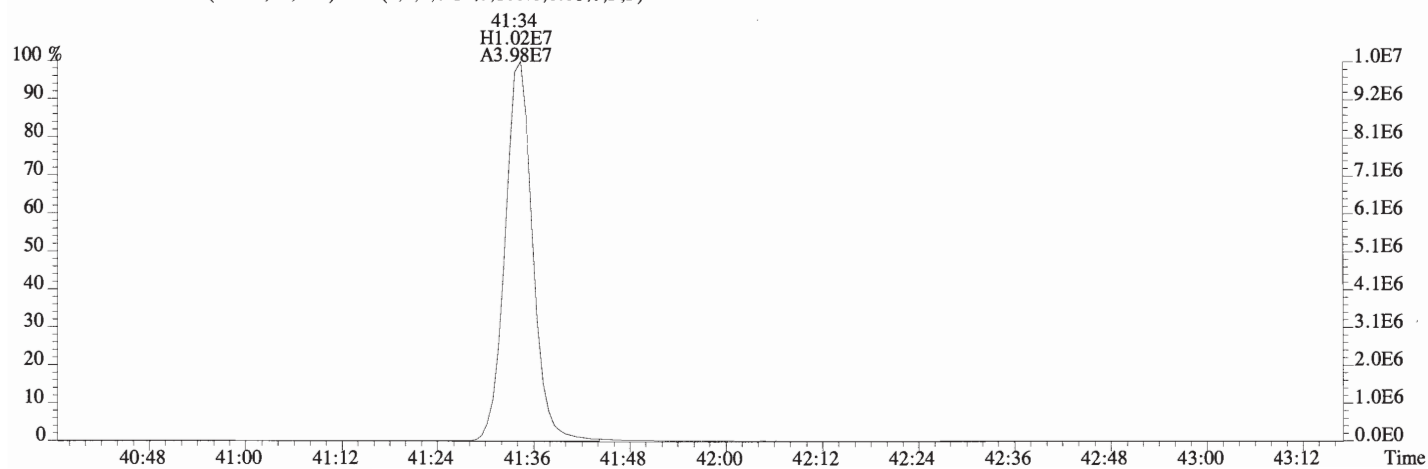
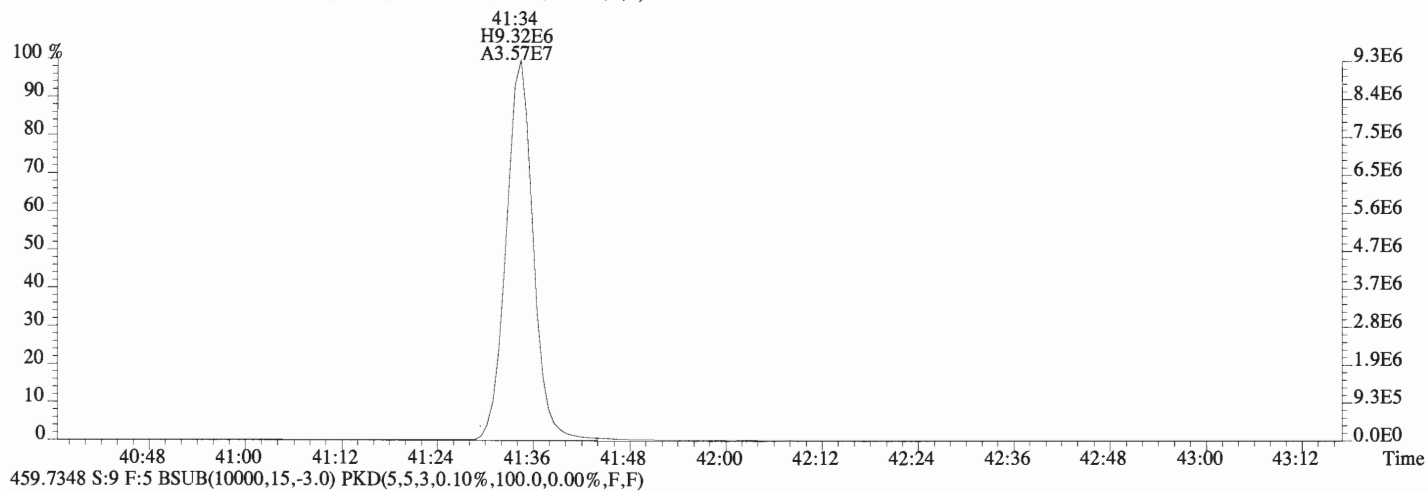
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 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 423.7767 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



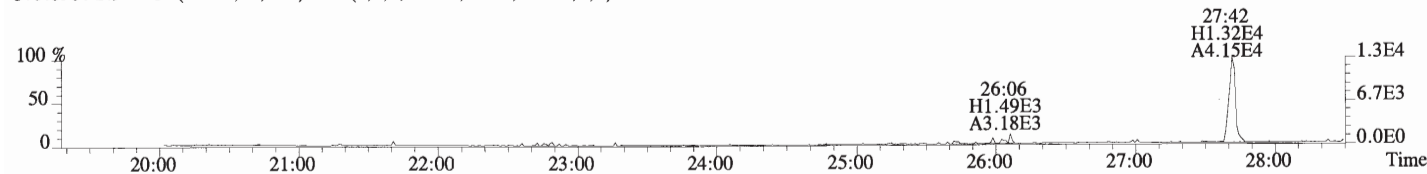
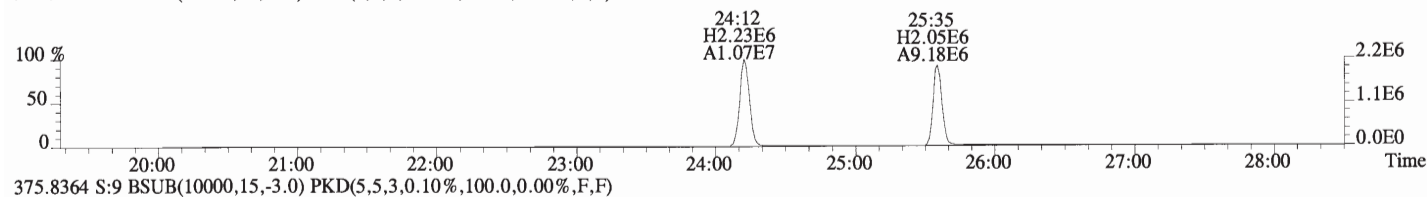
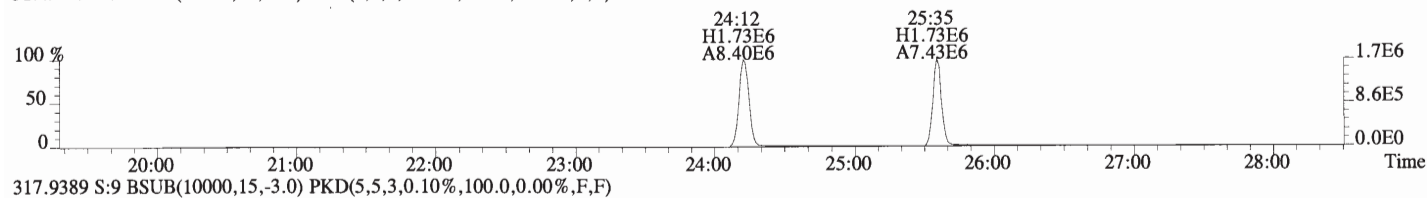
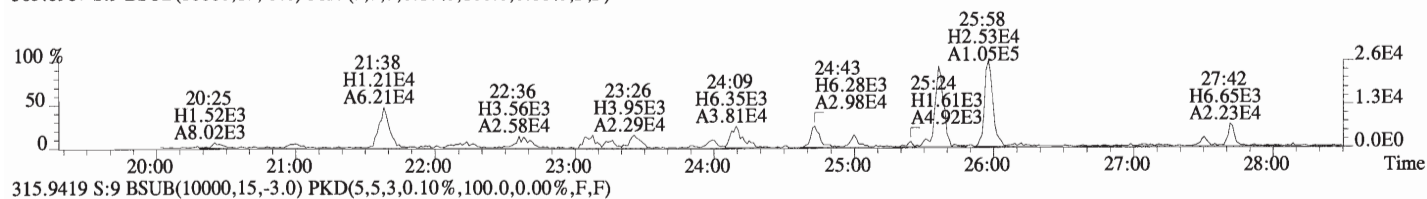
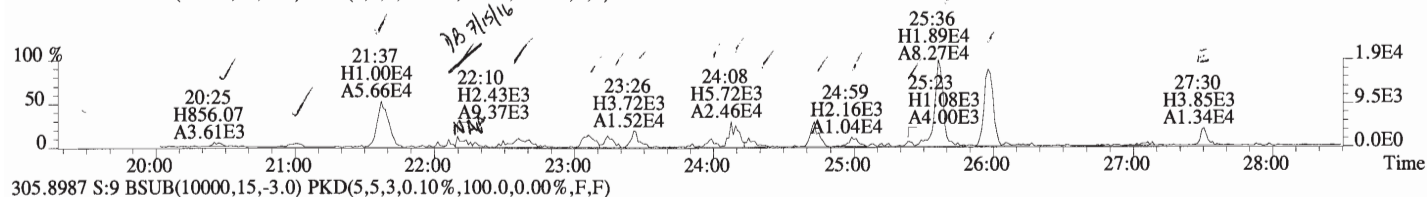
File:160712D1 #1-388 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
457.7377 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



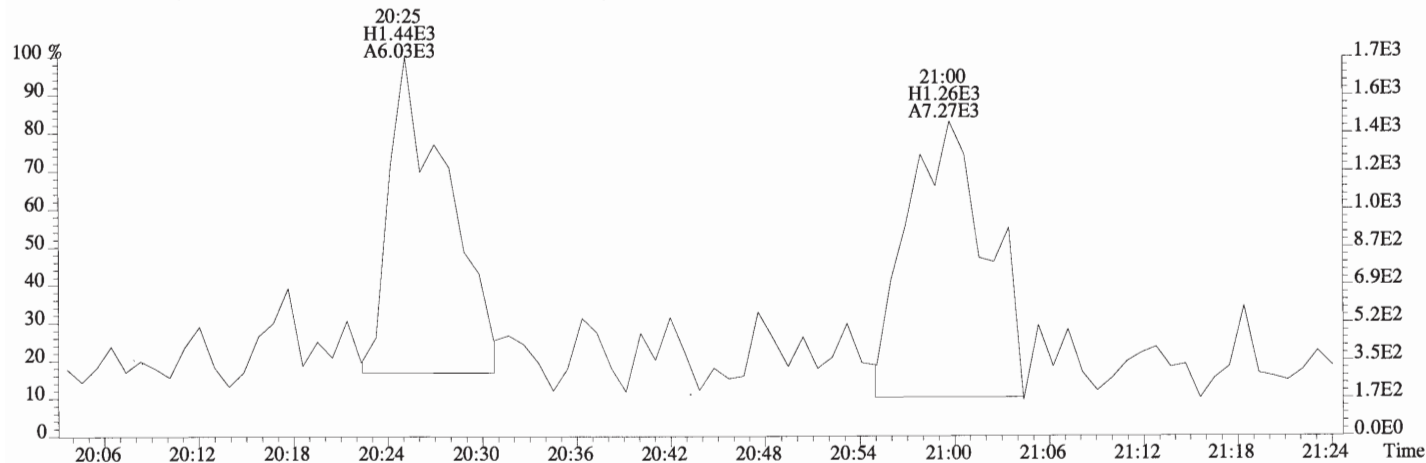
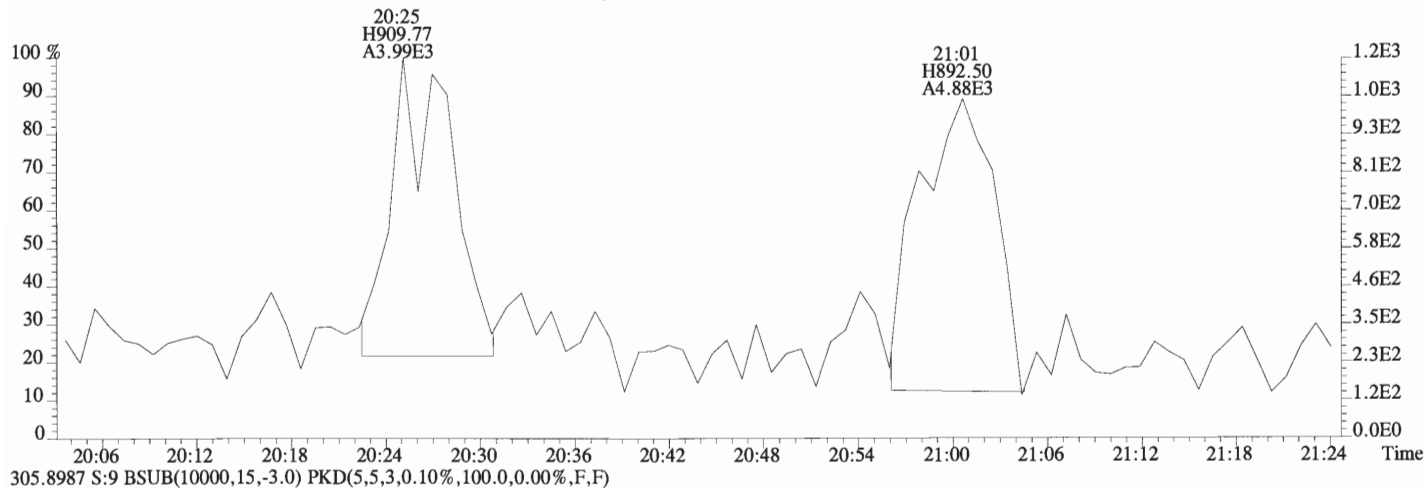
File:160712D1 #1-388 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
457.7377 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



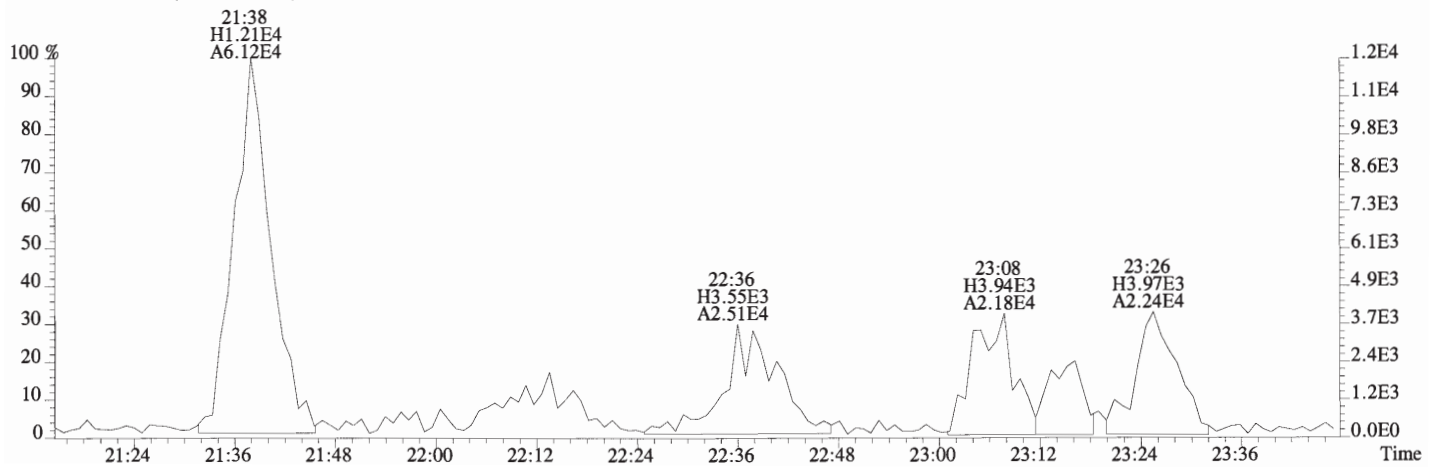
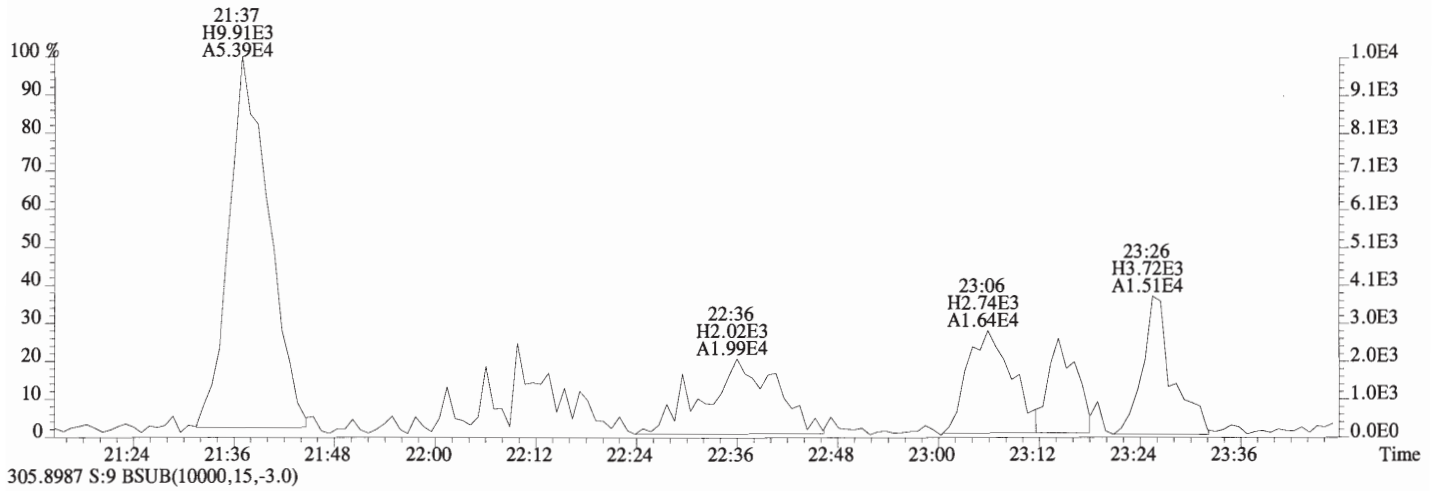
File:160712D1 #1-551 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text: Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



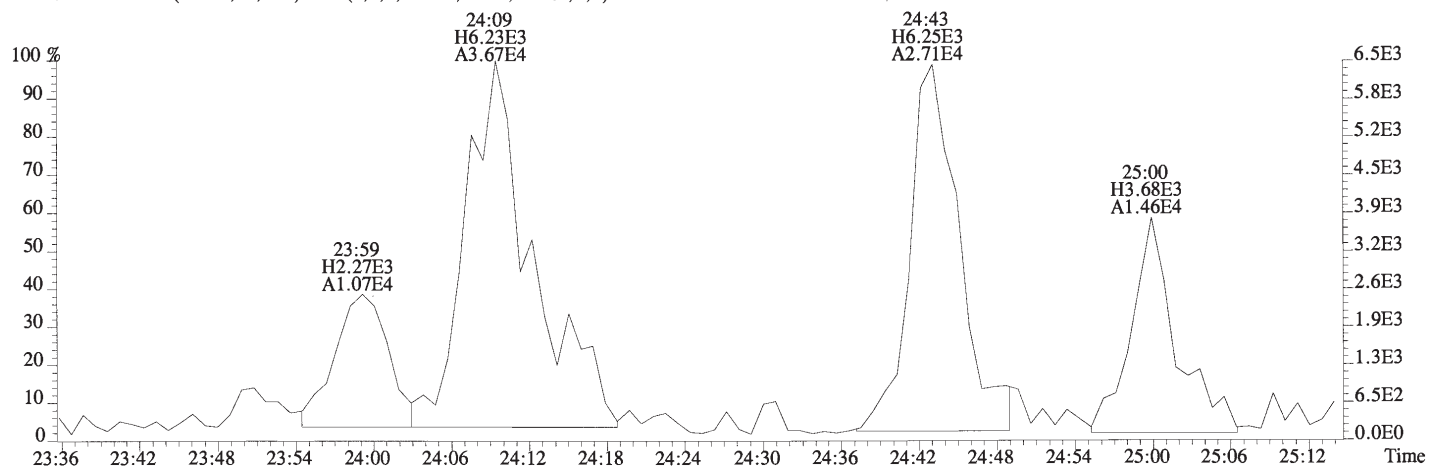
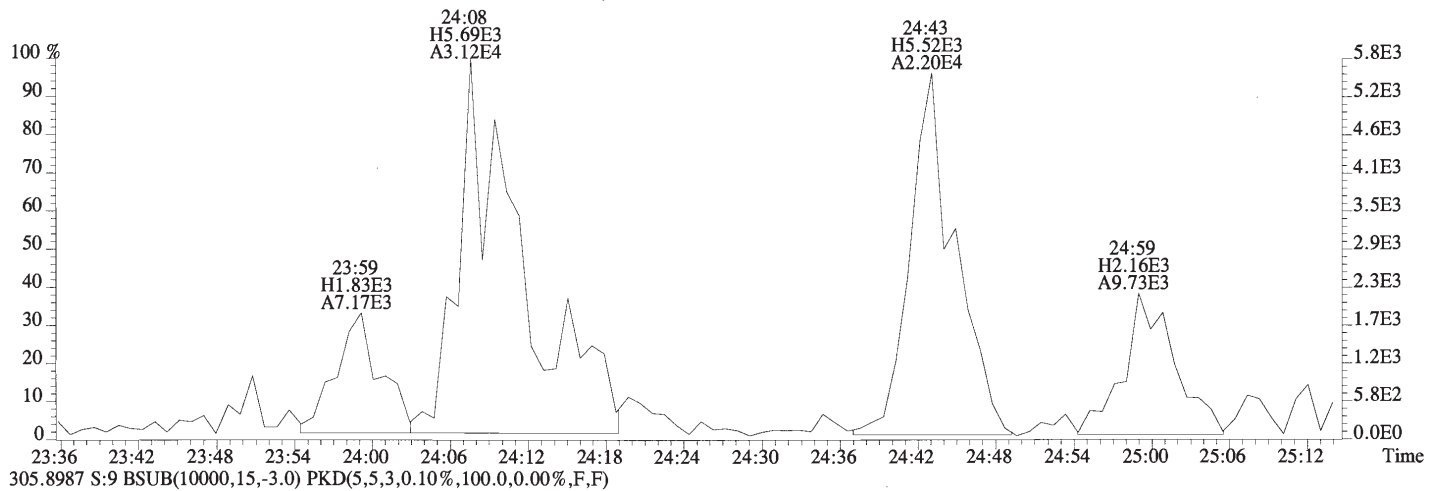
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Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



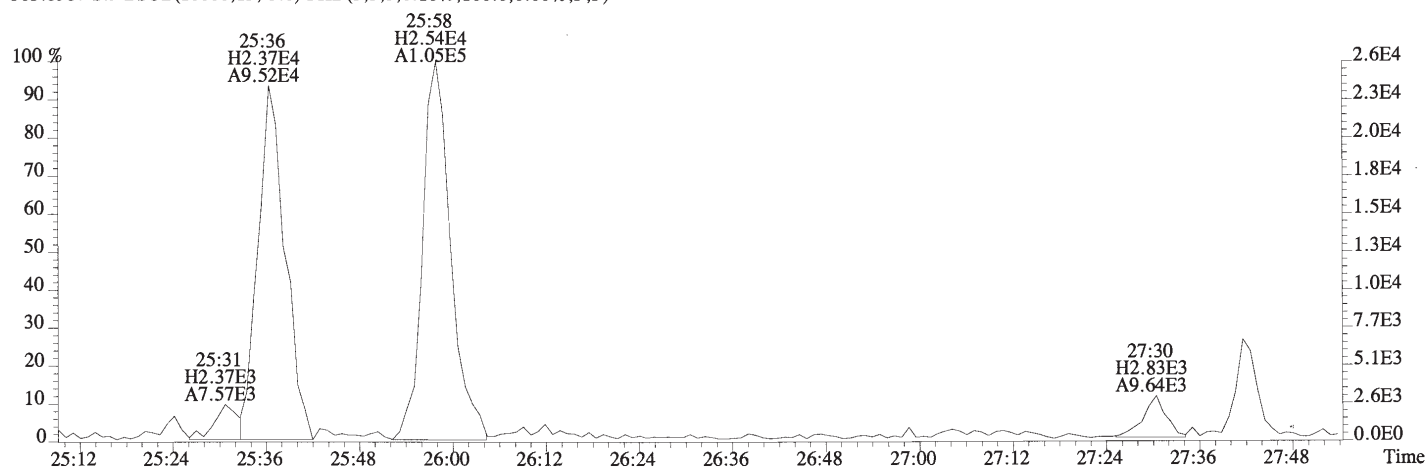
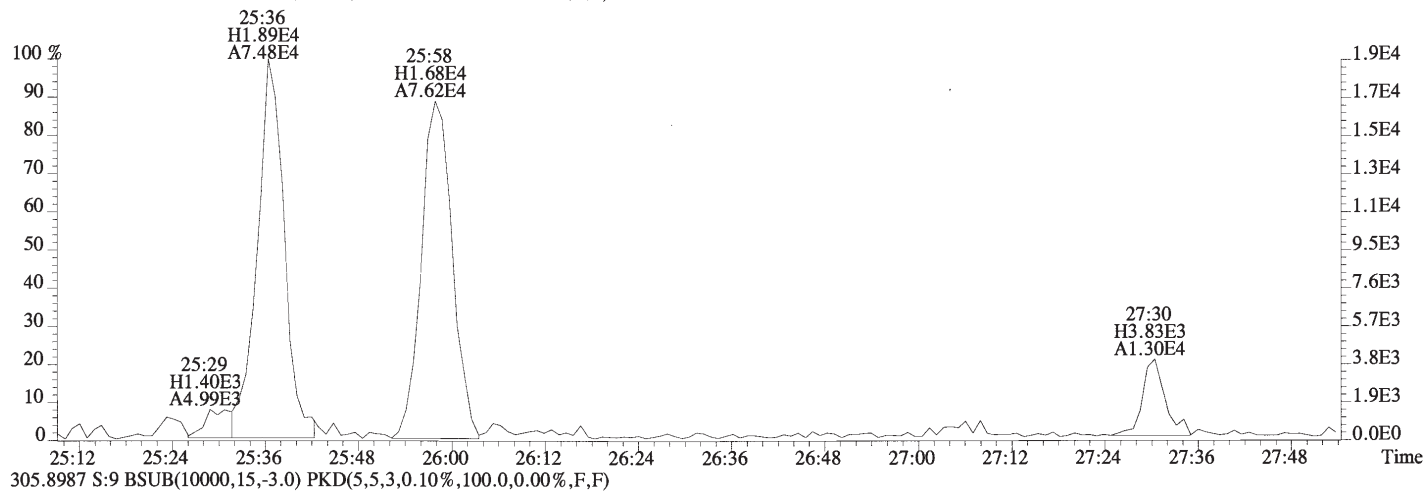
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 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 303.9016 S:9 BSUB(10000,15,-3.0)



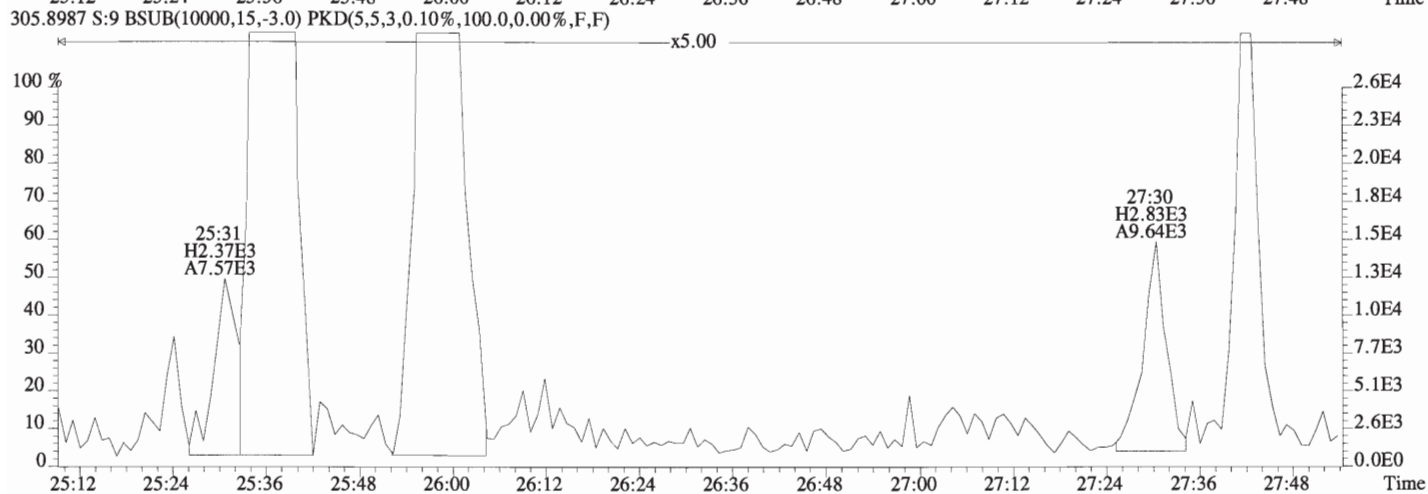
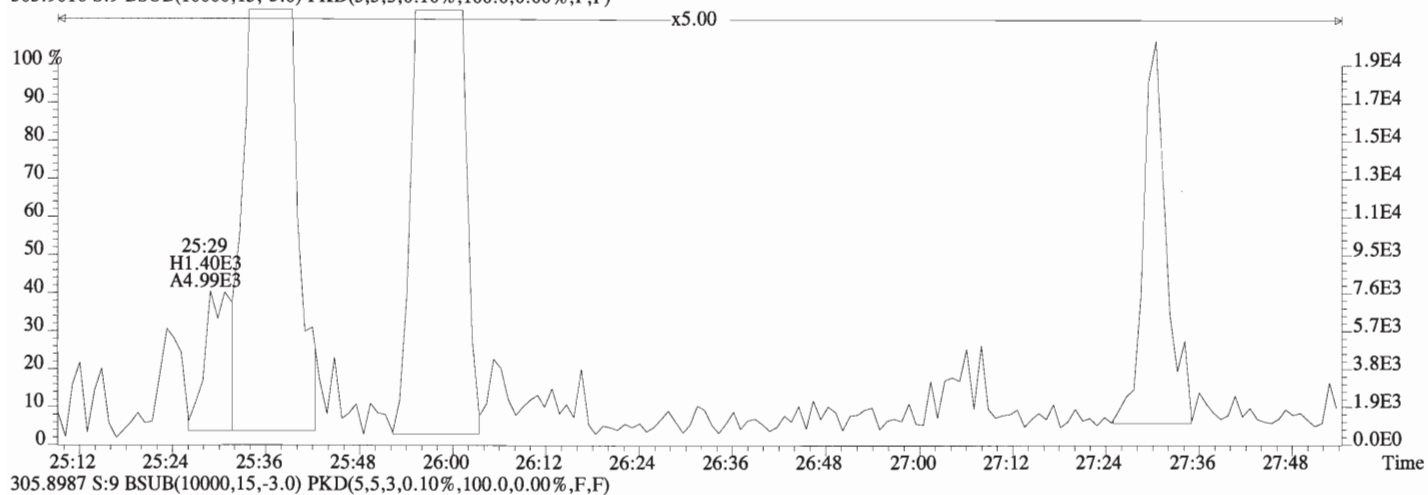
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 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



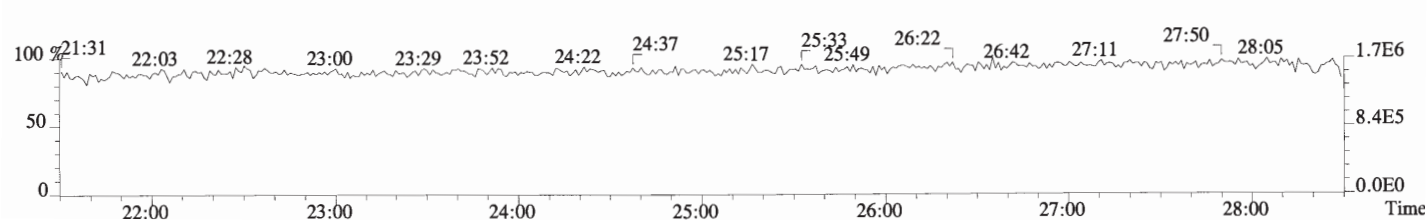
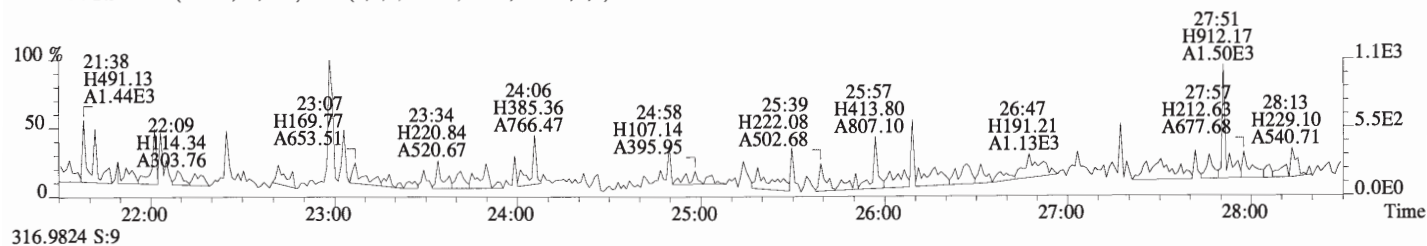
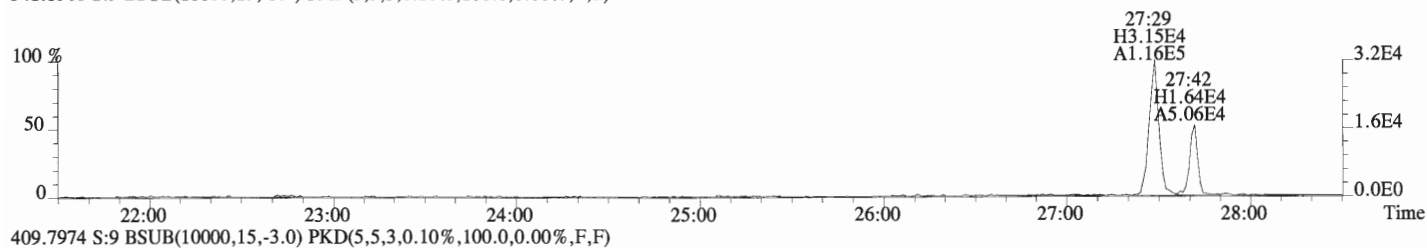
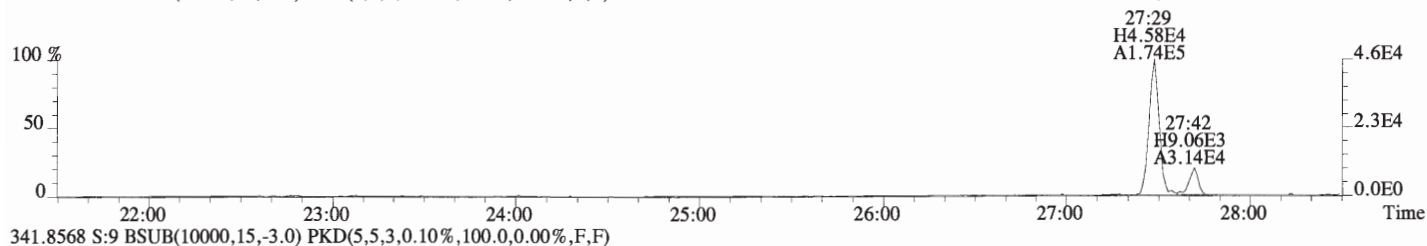
File:160712D1 #1-551 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



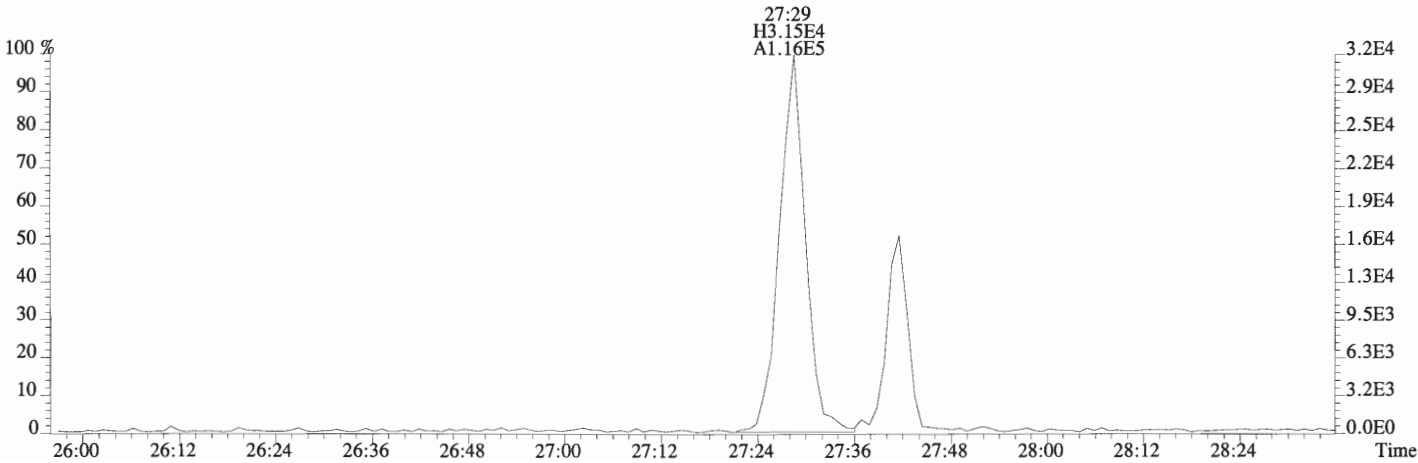
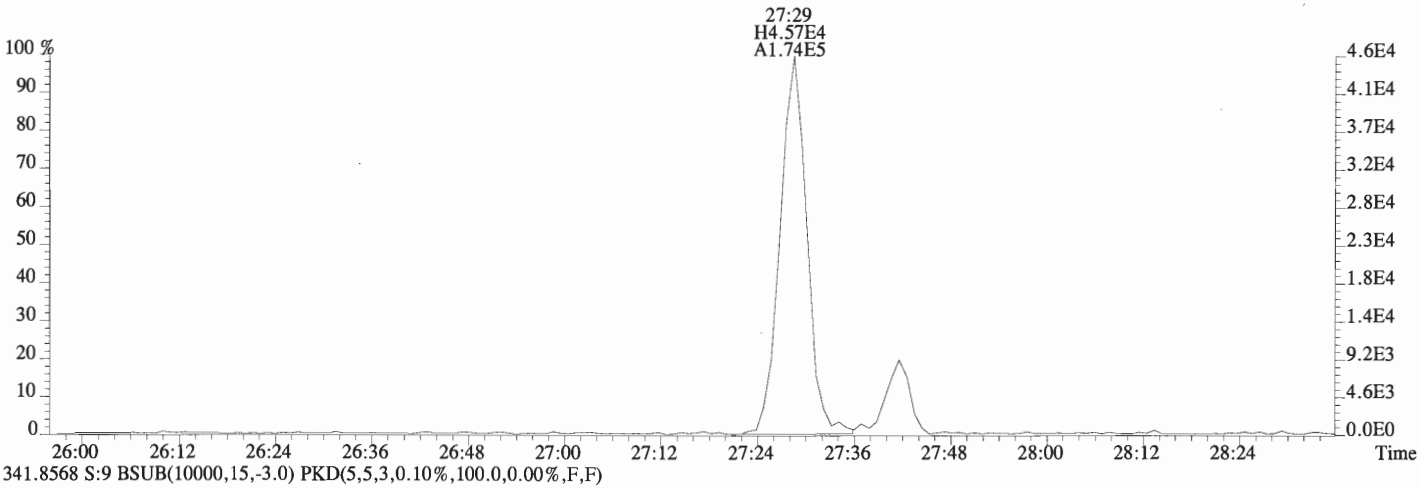
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 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



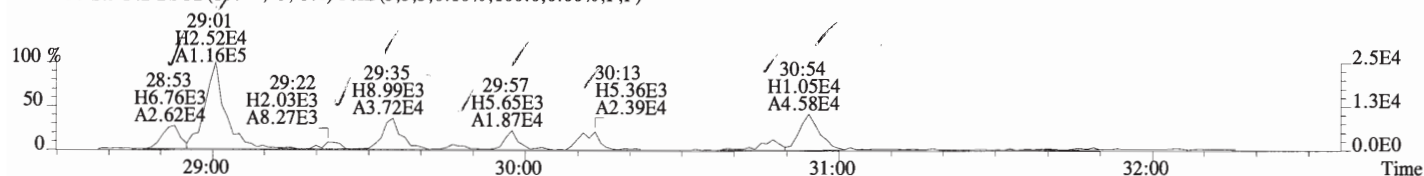
File:160712D1 #1-551 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 339.8597 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



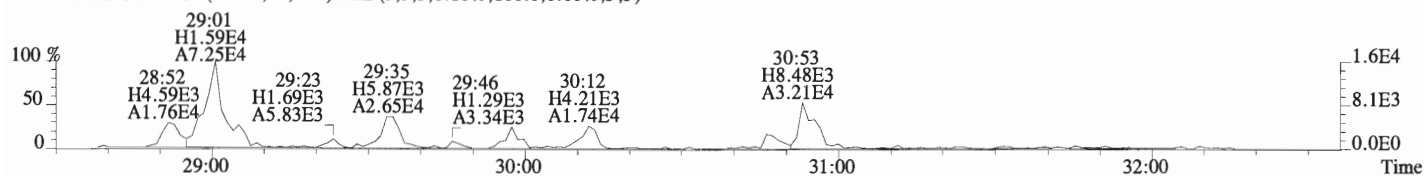
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Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
339.8597 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



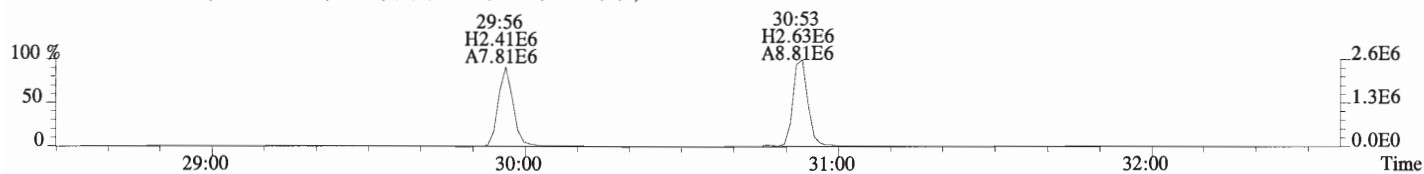
File:160712D1 #1-193 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



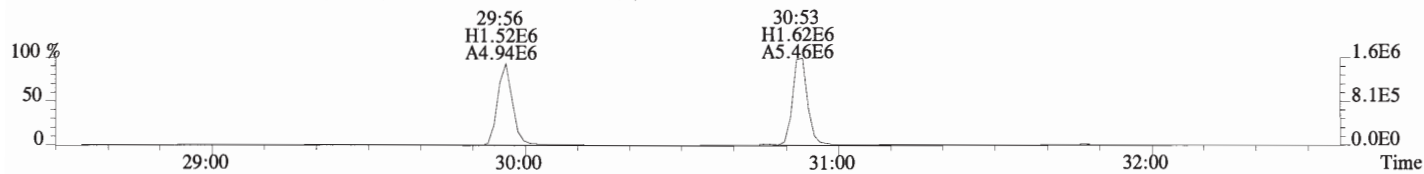
341.8568 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



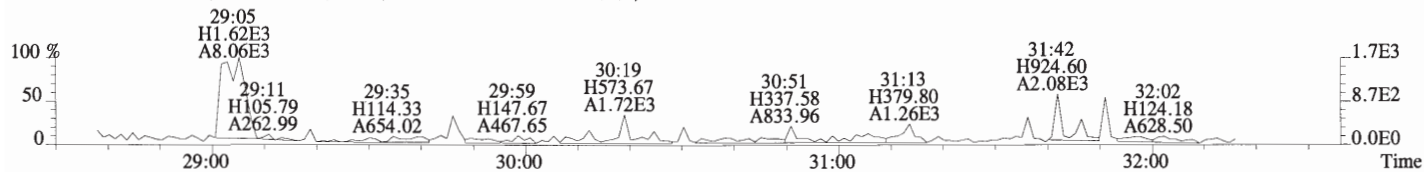
351.9000 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



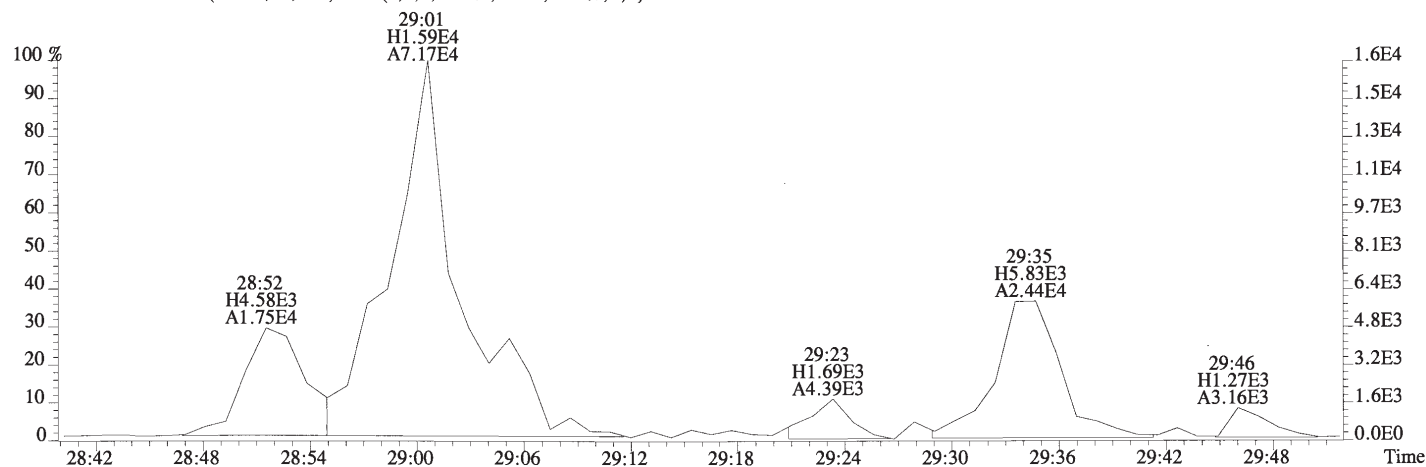
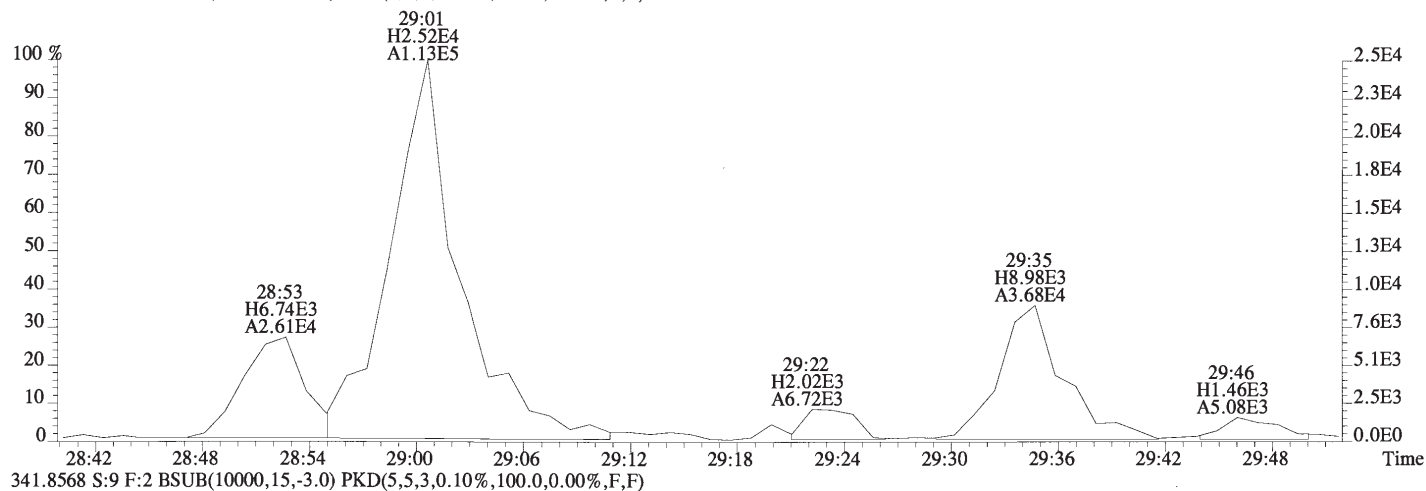
353.8970 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



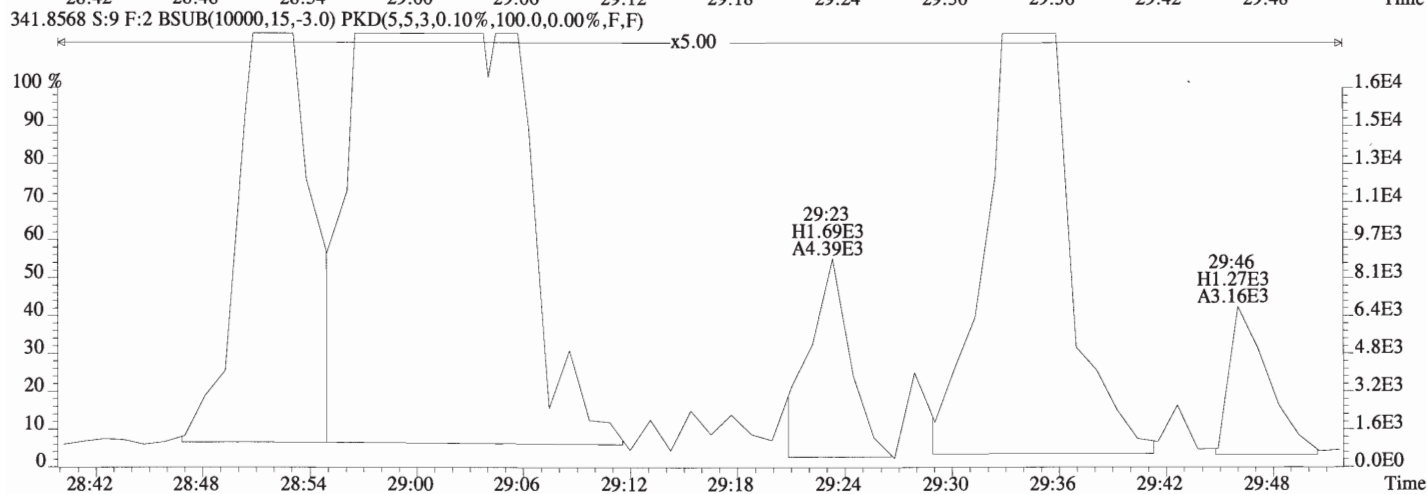
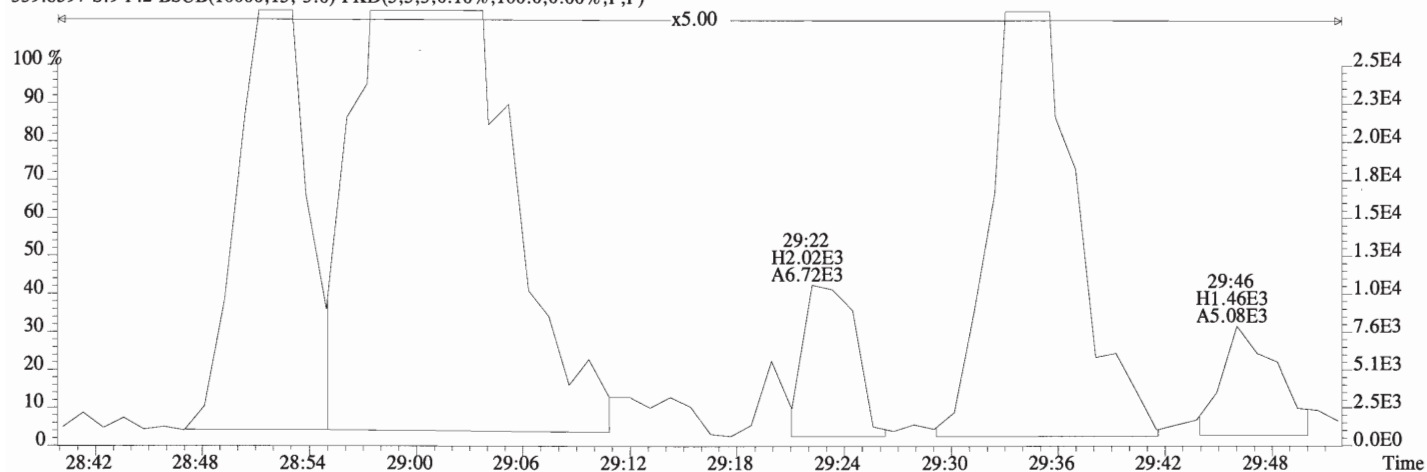
409.7974 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



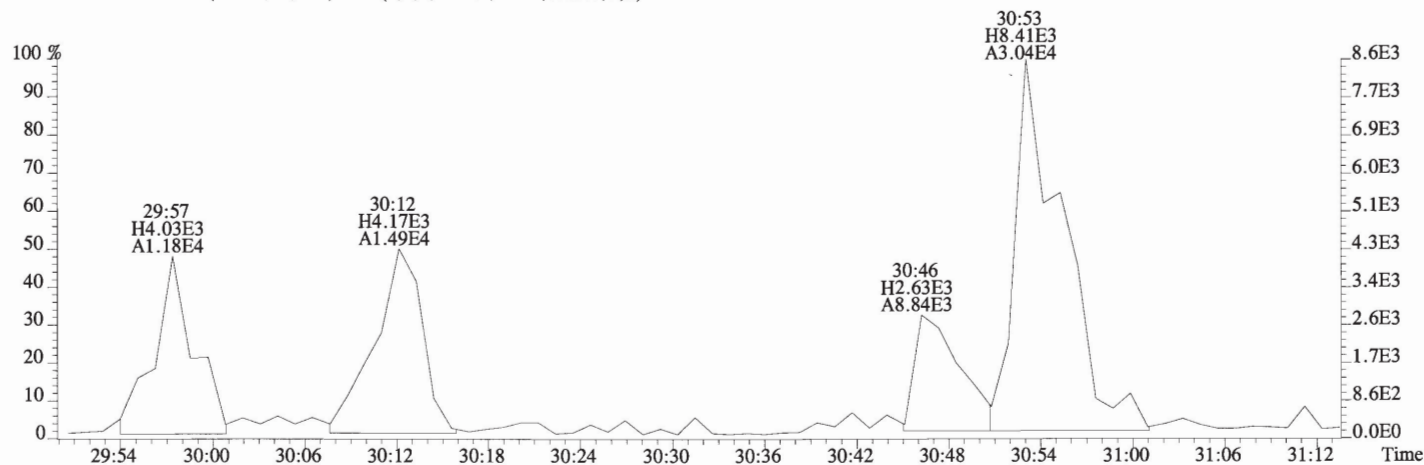
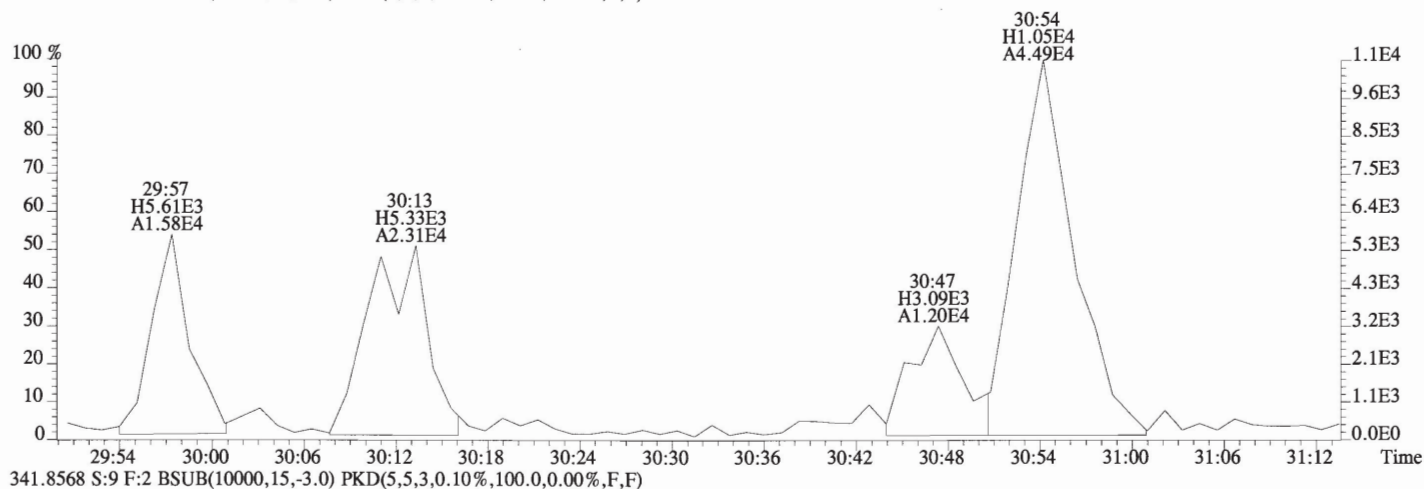
File:160712D1 #1-193 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



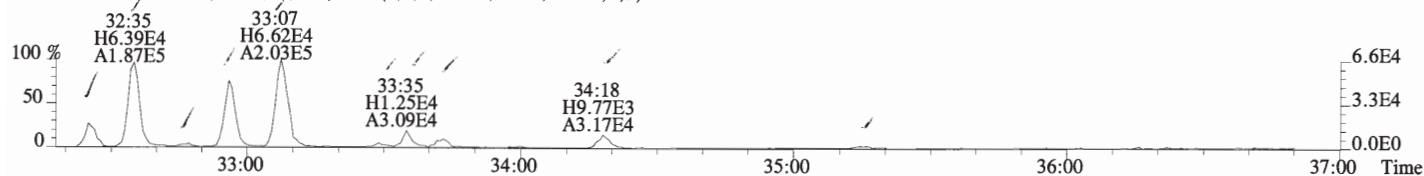
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 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



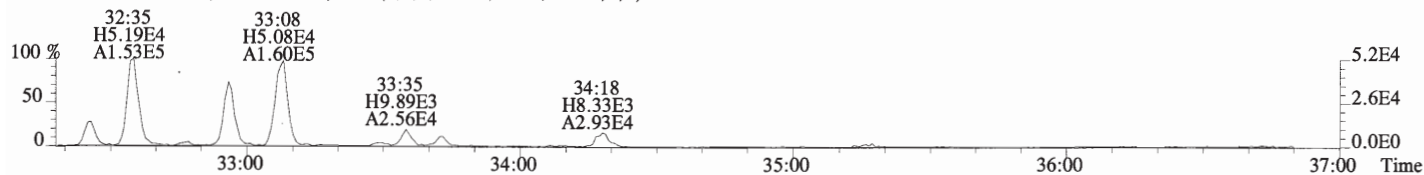
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 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



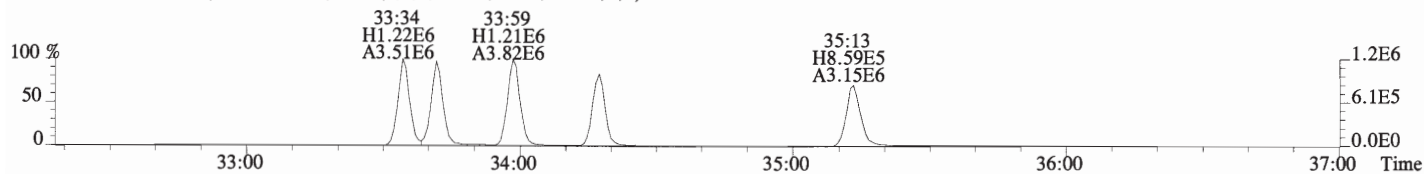
File:160712D1 #1-406 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



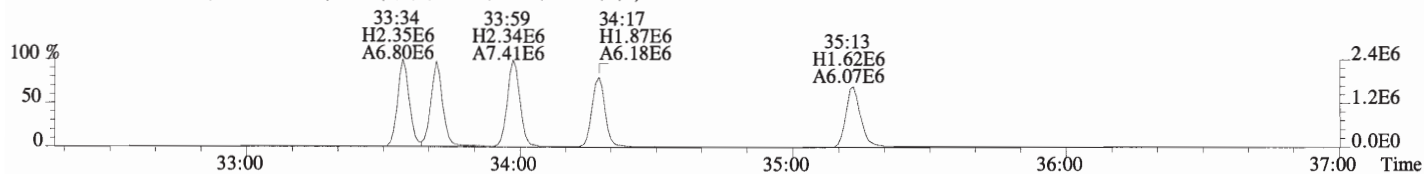
375.8178 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



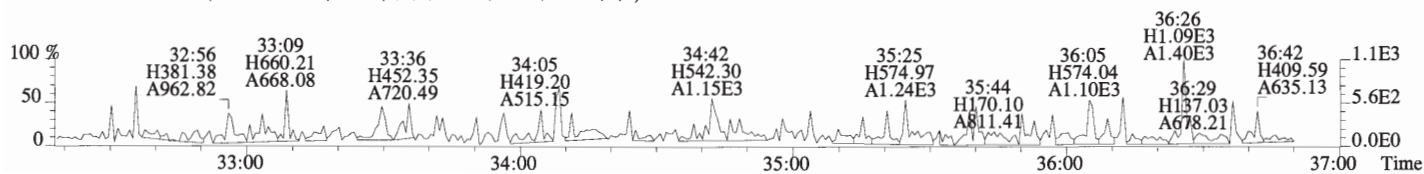
383.8639 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



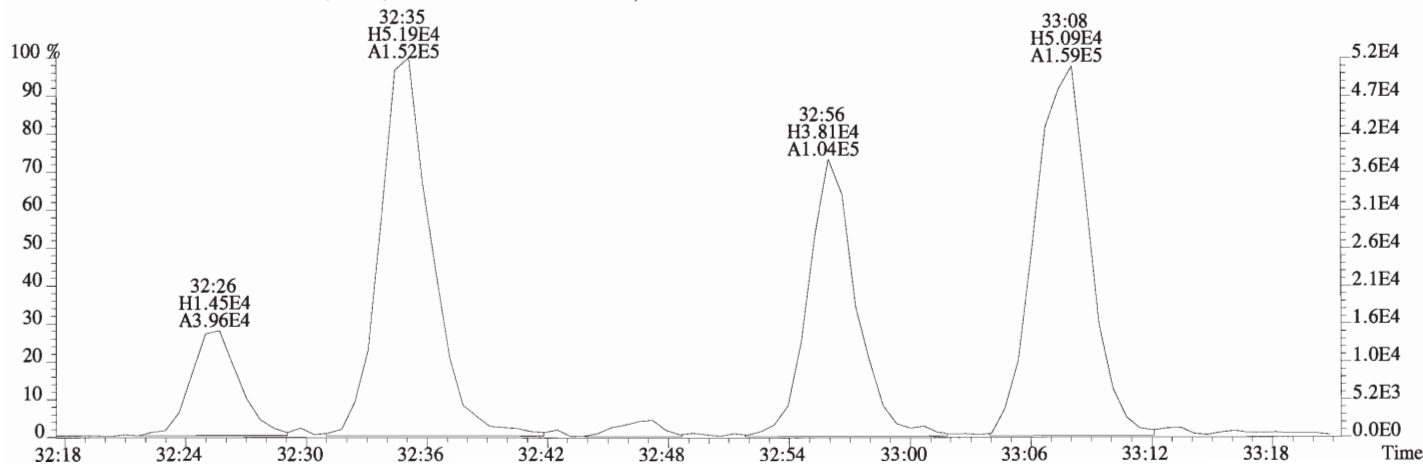
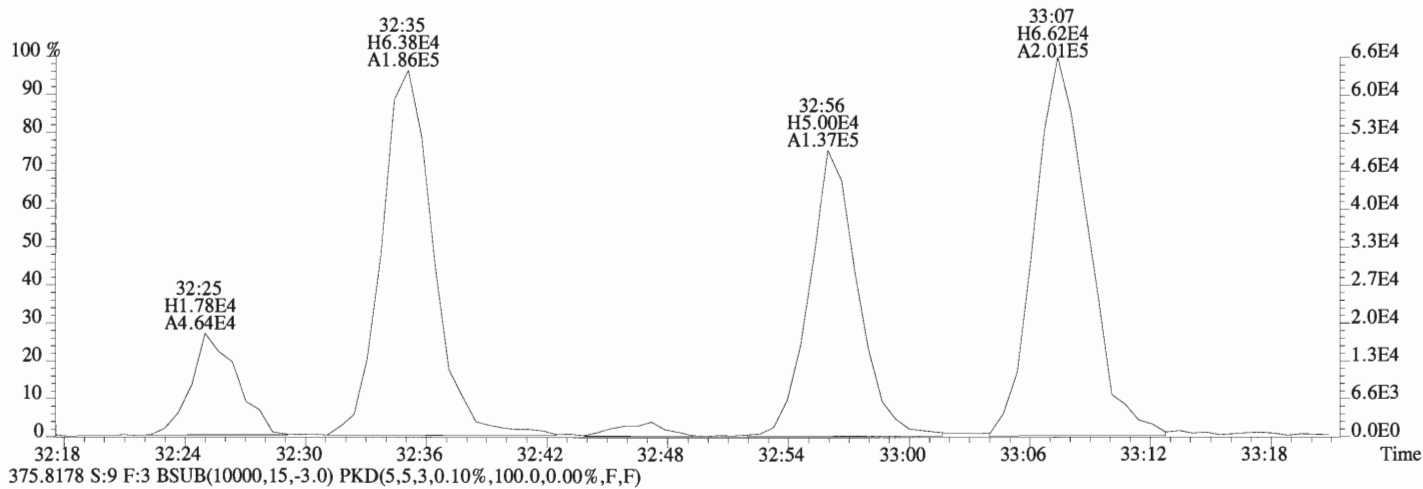
385.8610 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



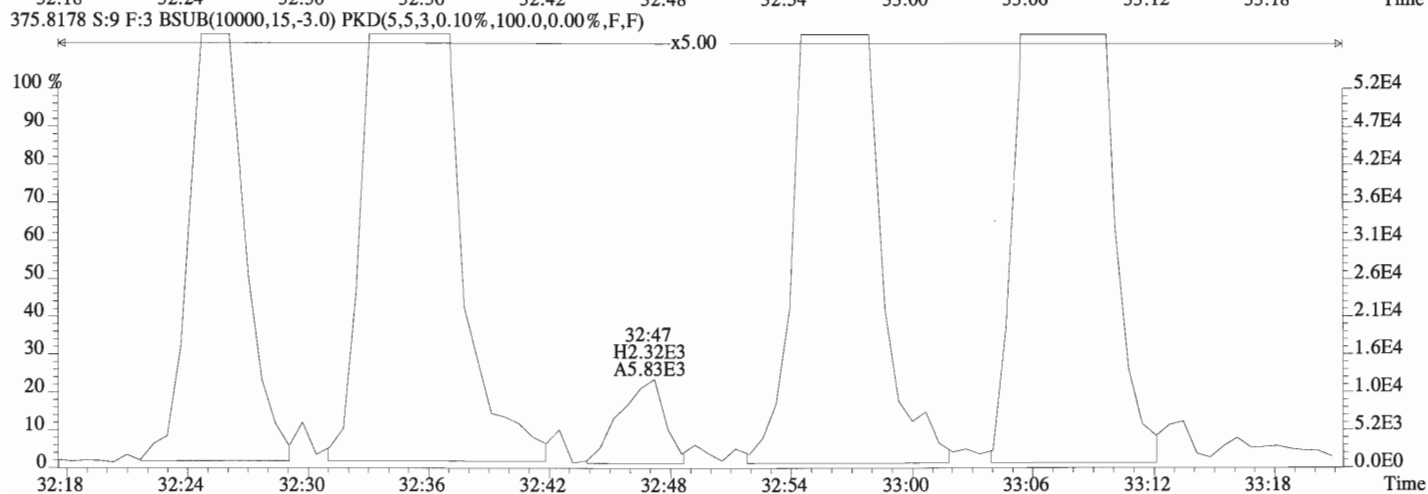
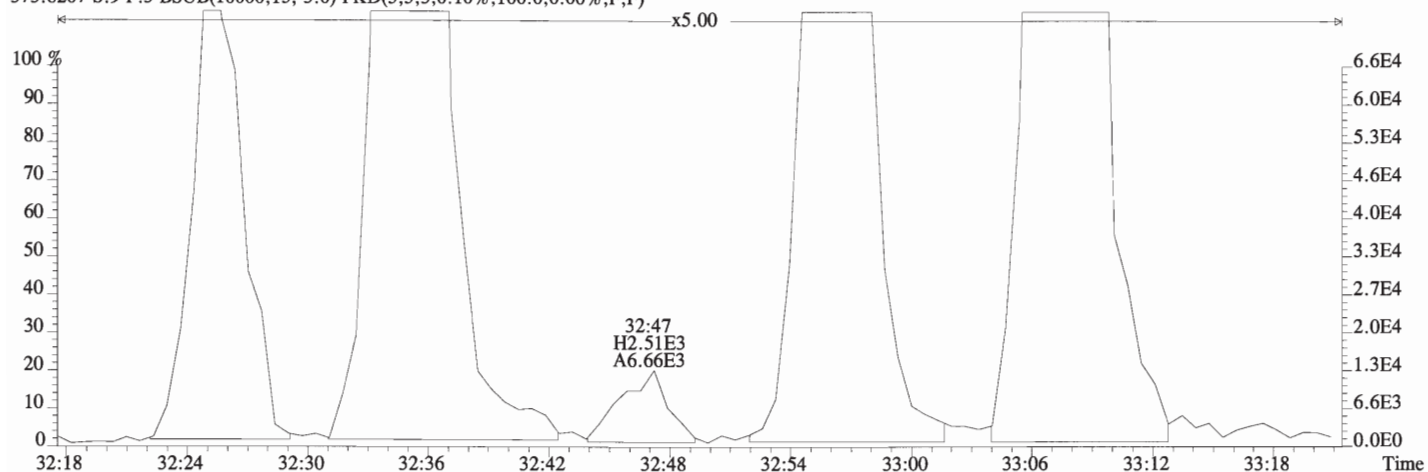
445.7555 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



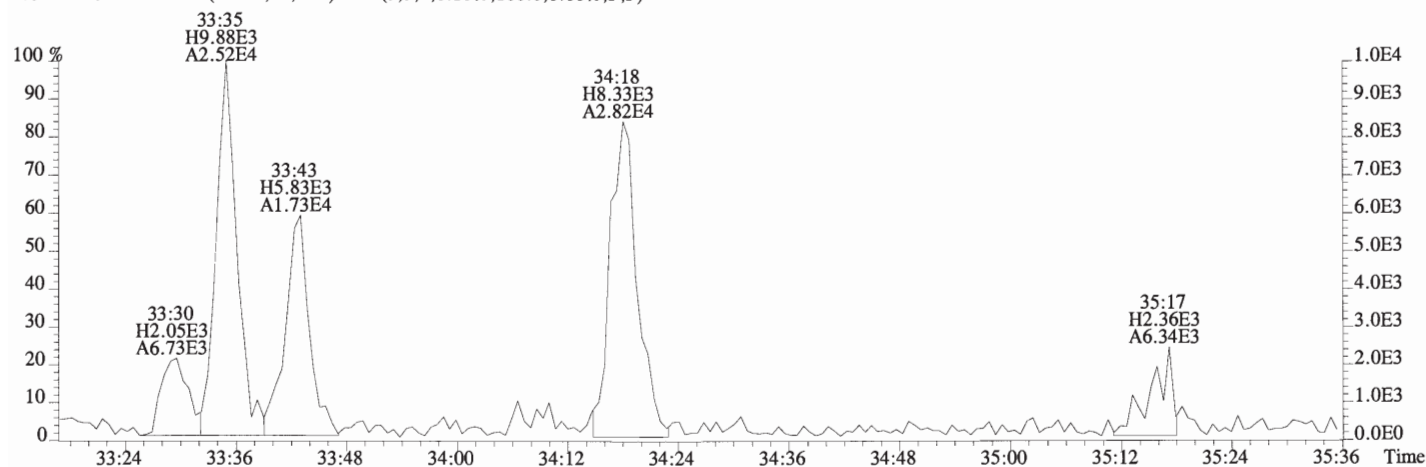
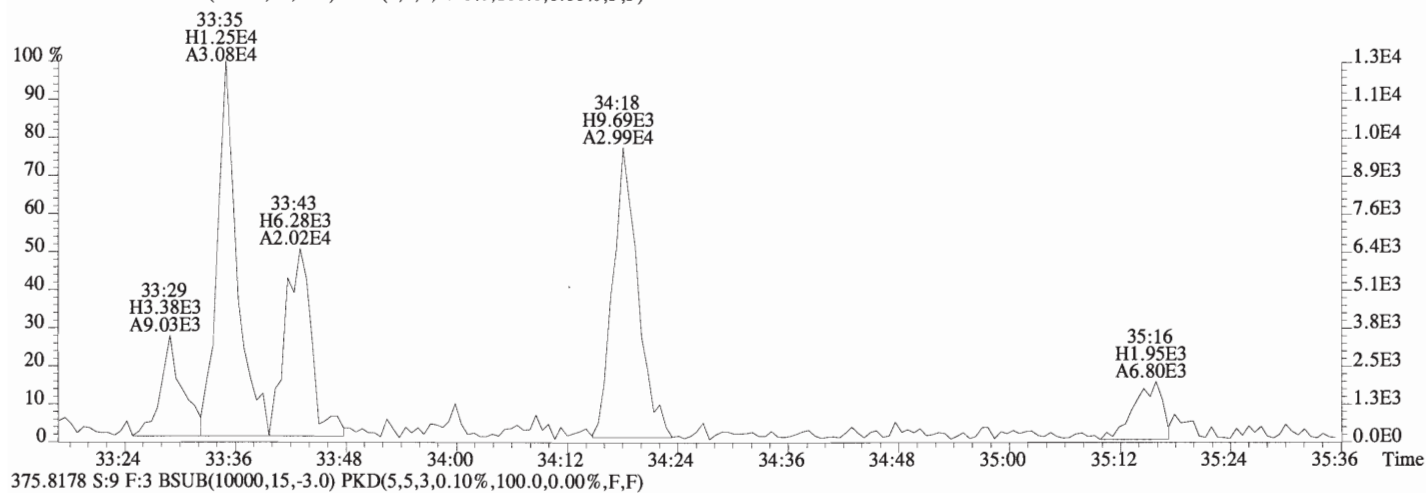
File:160712D1 #1-406 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



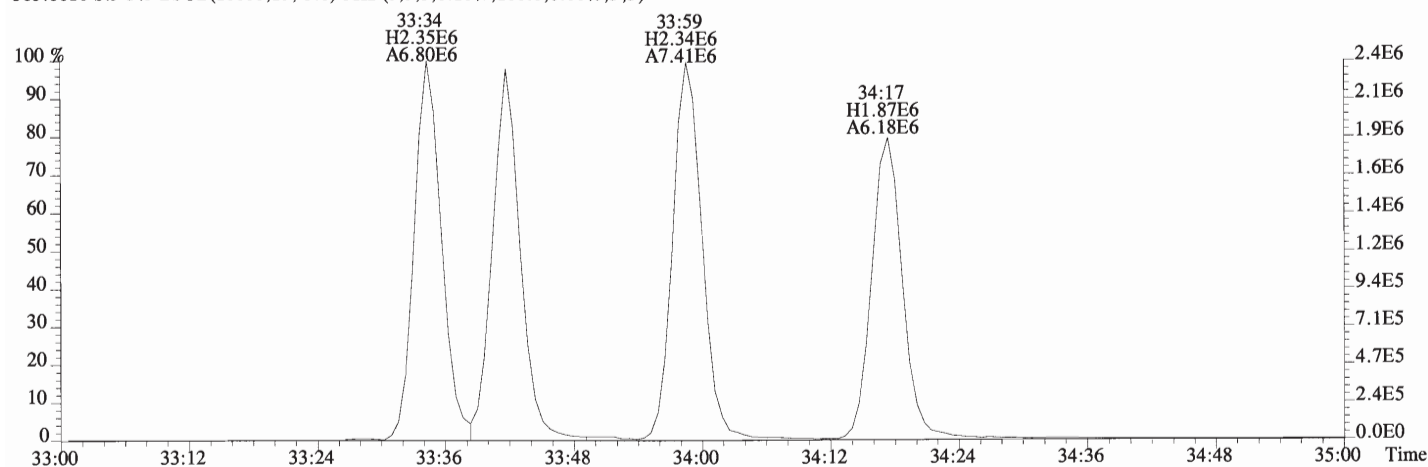
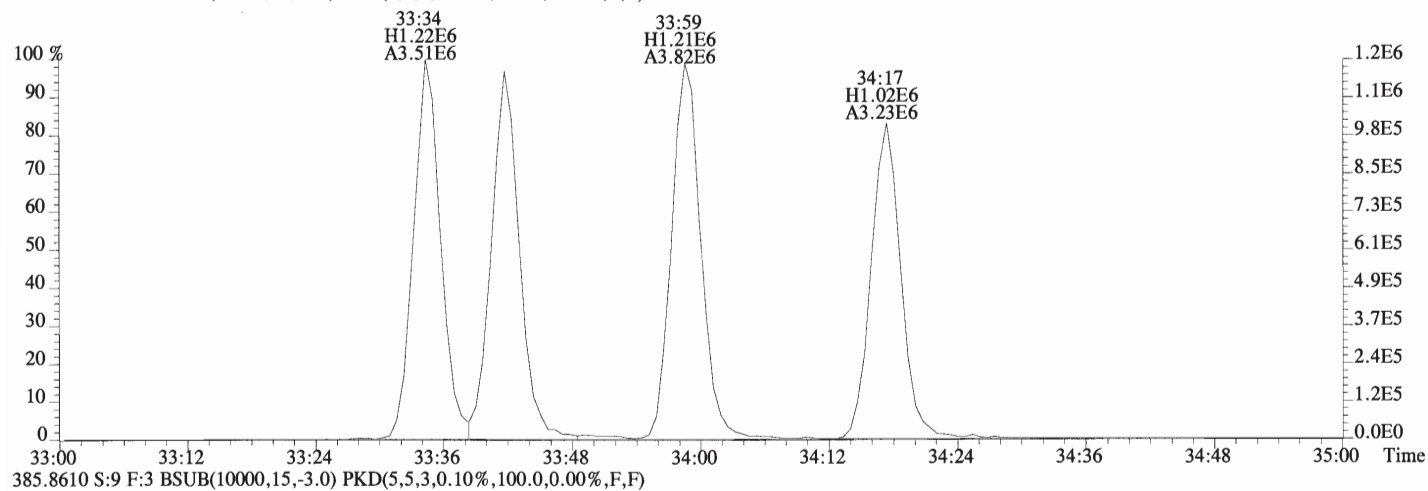
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 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



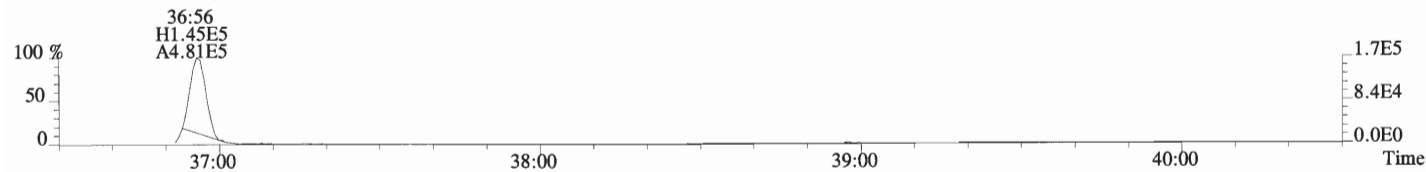
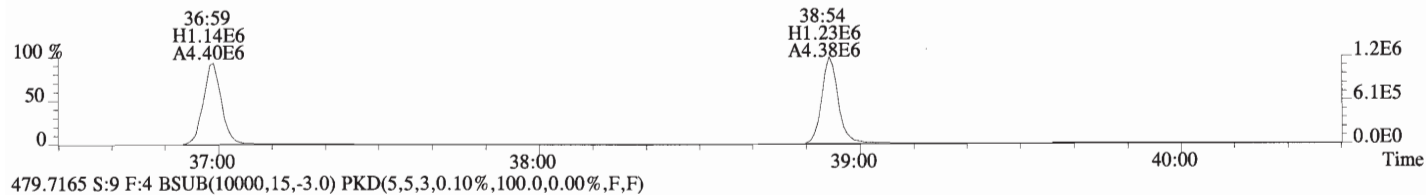
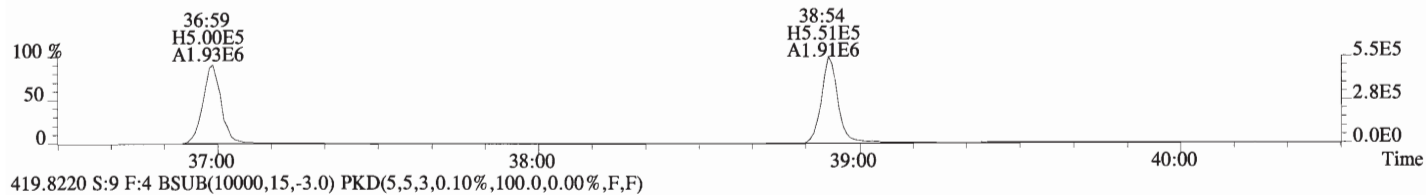
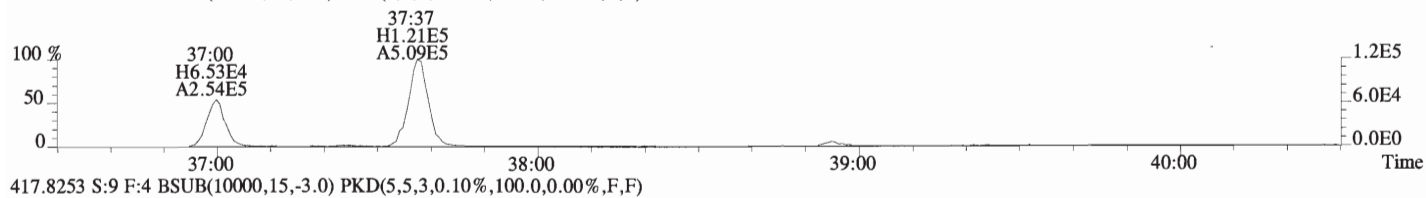
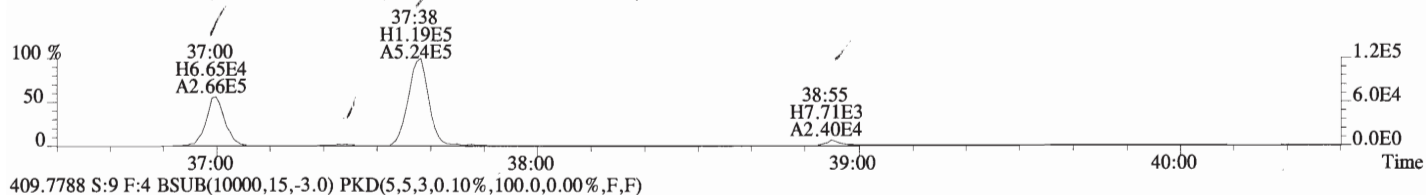
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 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



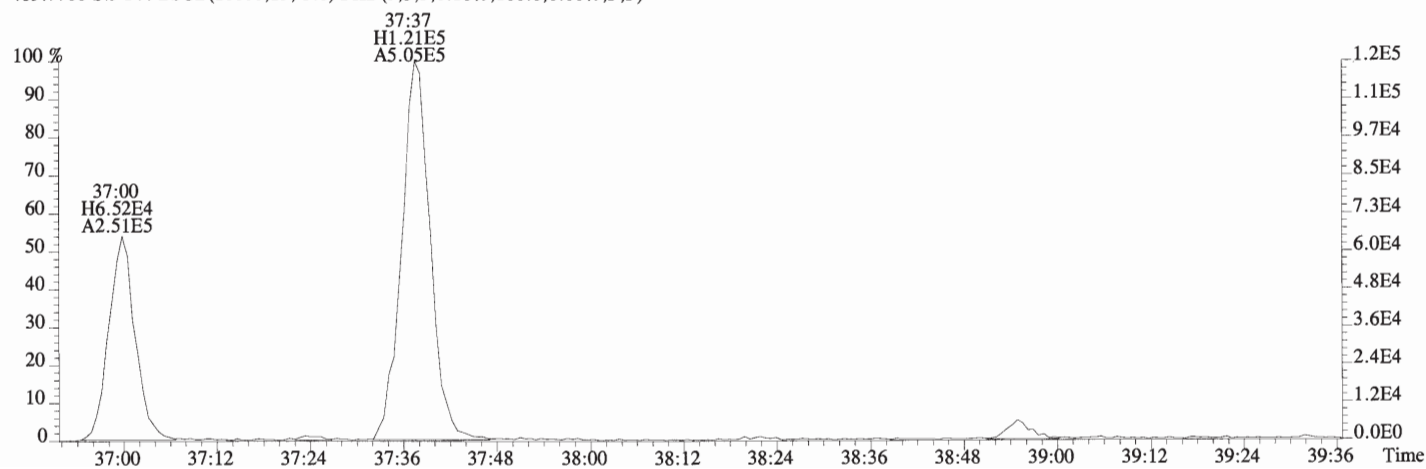
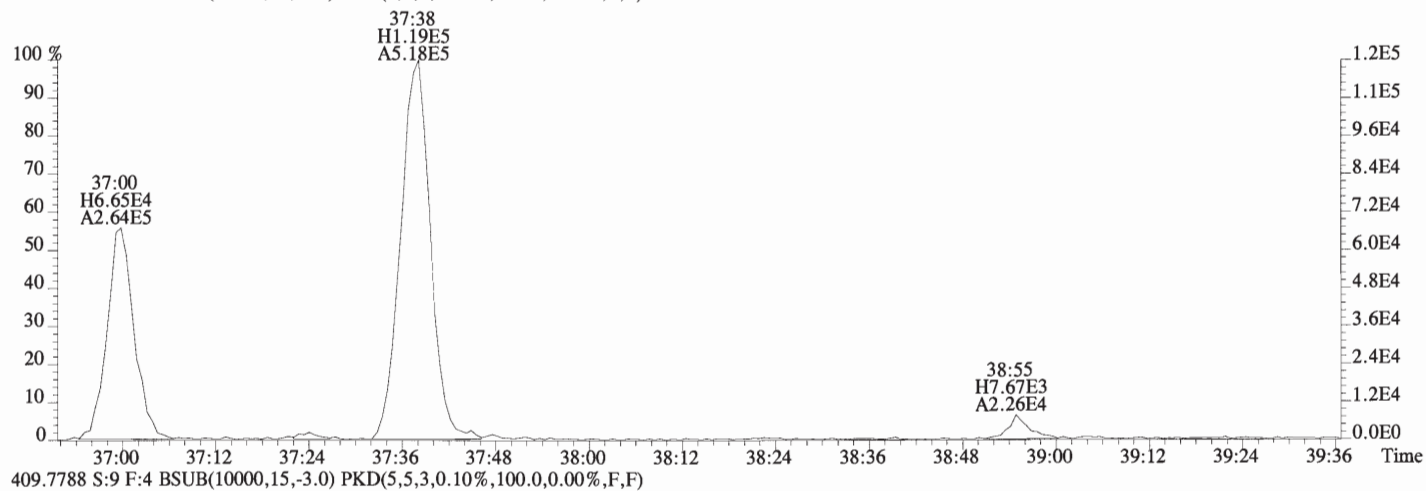
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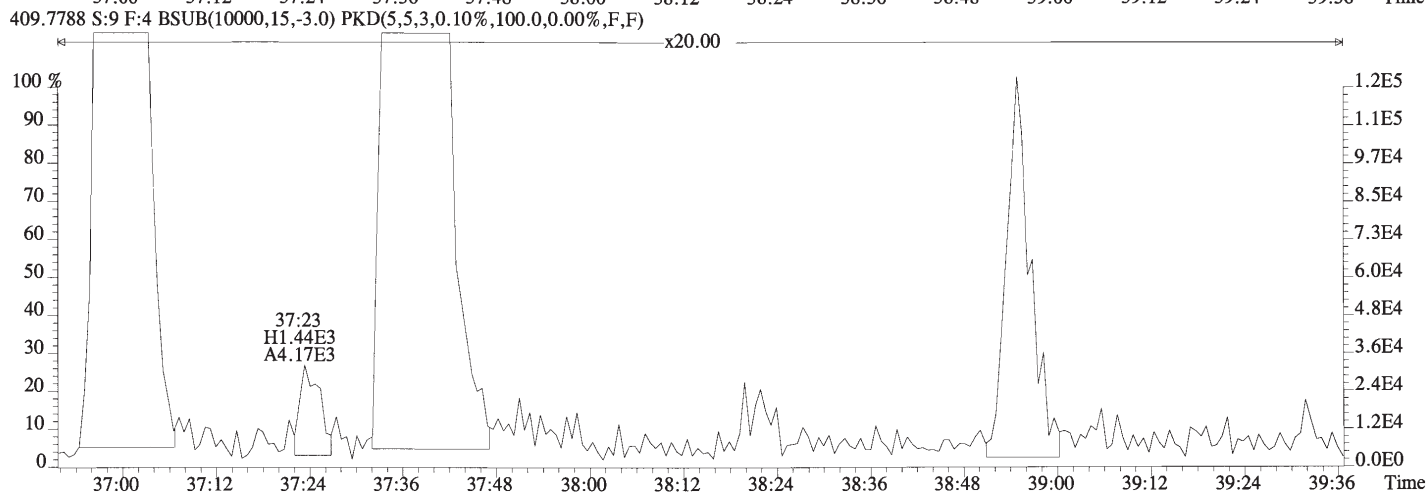
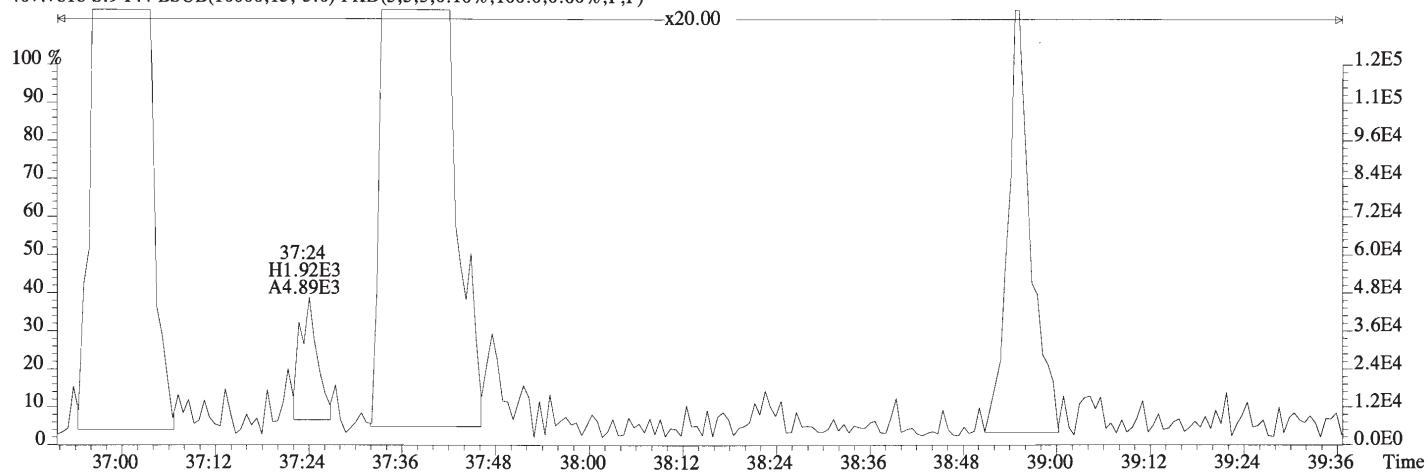
File:160712D1 #1-326 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 407.7818 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



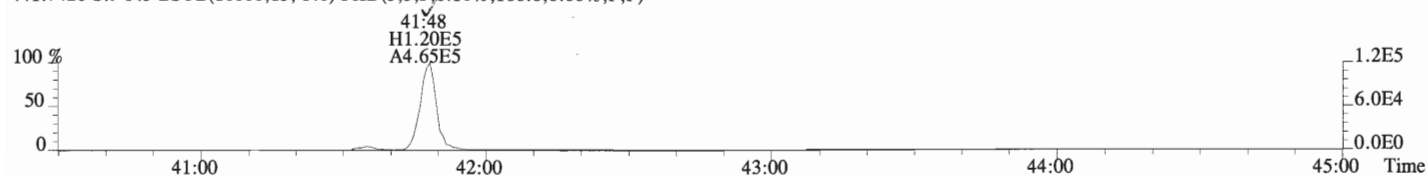
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 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 407.7818 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



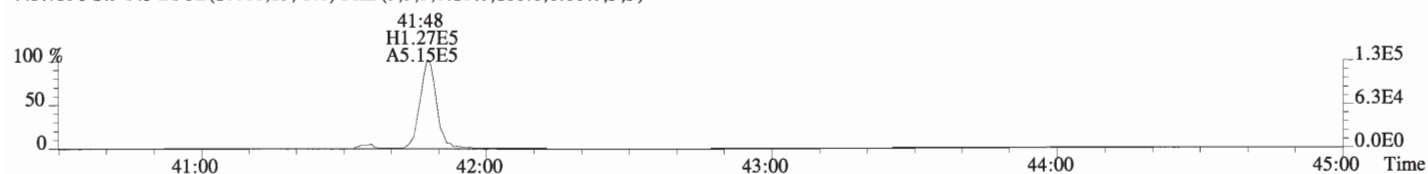
File:160712D1 #1-326 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 407.7818 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



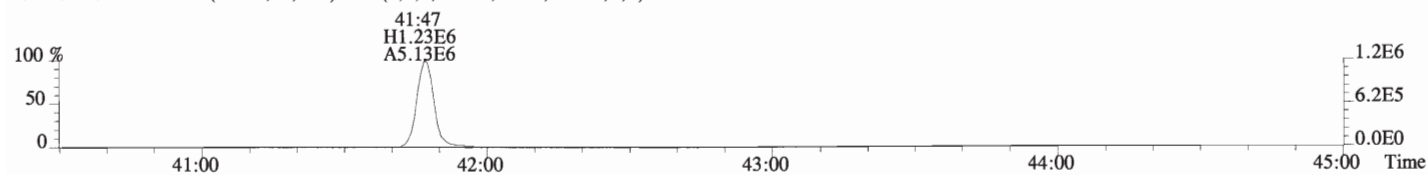
File:160712D1 #1-388 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
 441.7428 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



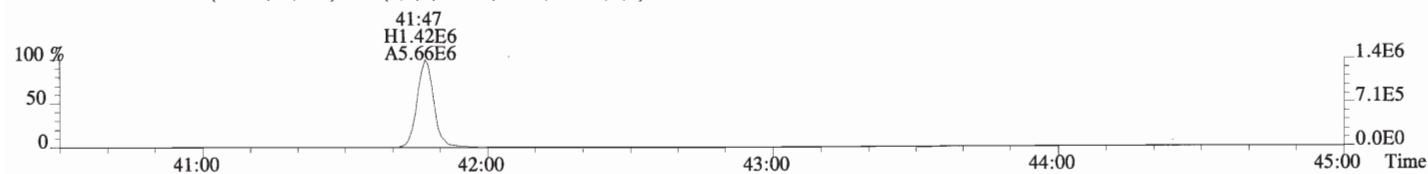
443.7398 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



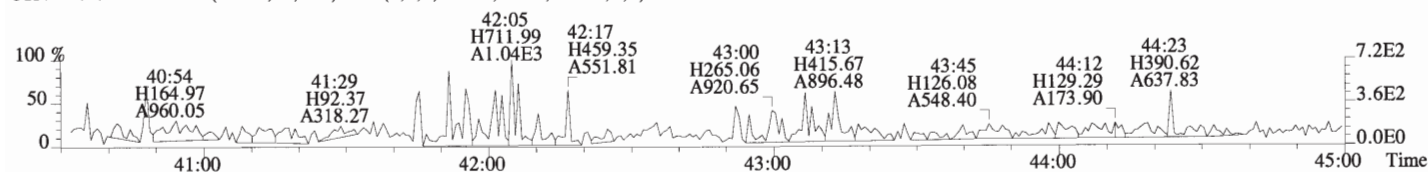
453.7831 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



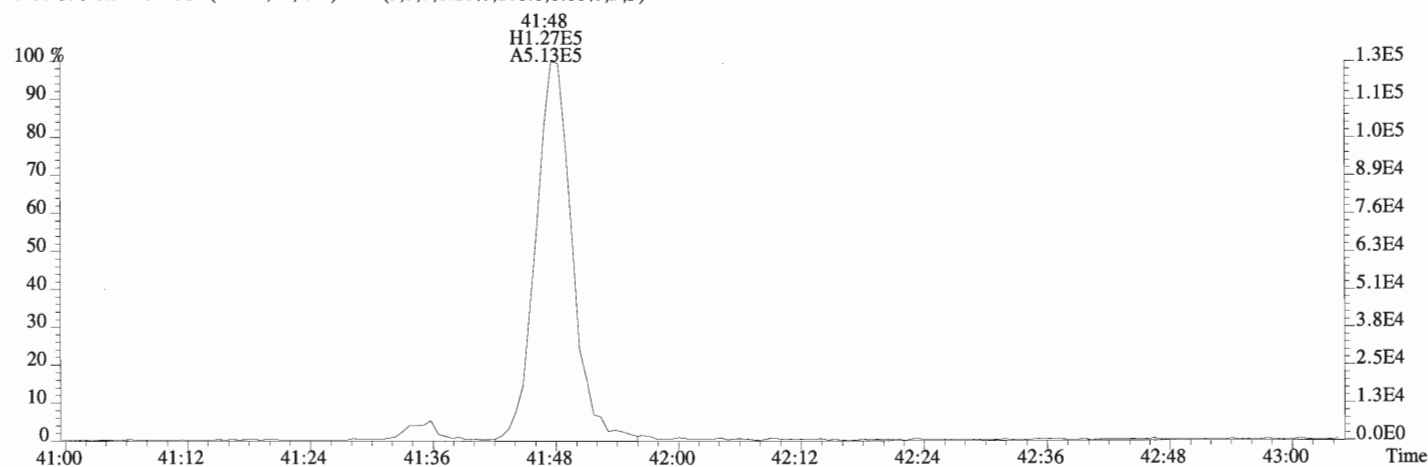
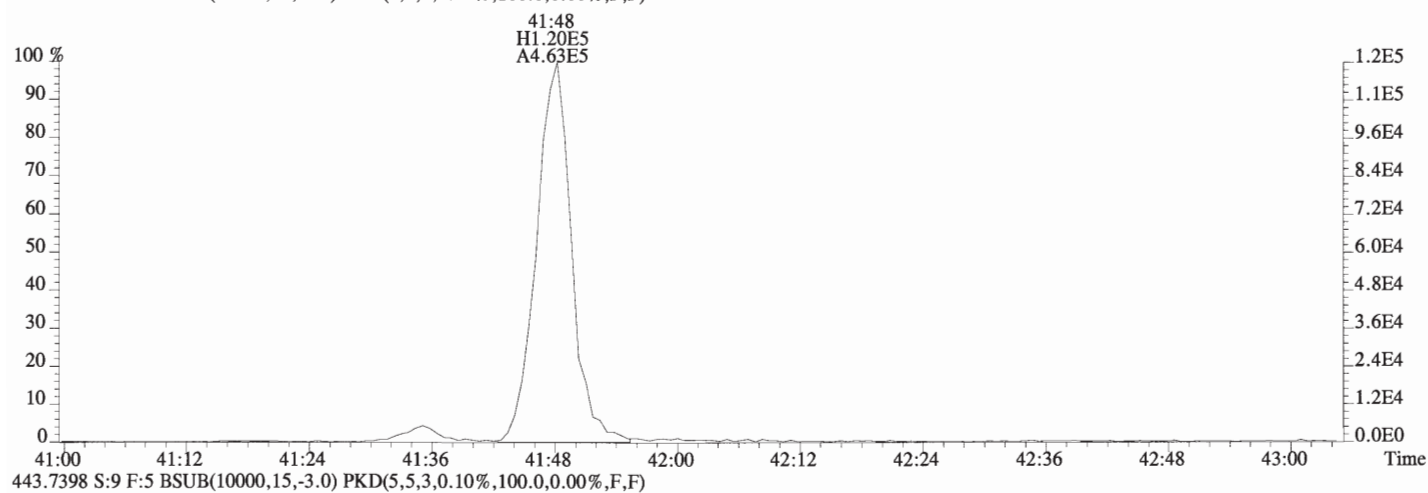
455.7801 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160712D1 #1-388 Acq:12-JUL-2016 22:49:07 GC EI+ Voltage SIR Autospec-UltimaE
Sample#9 File Text:Vista Analytical Laboratory VG7 Text:1600835-05RE1 DU-1-12-B 10.6 Exp:OCDD_DB5
441.7428 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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Integrations
by
Analyst: D/S

Reviewed
by
Analyst: gk

Date: 7/14/16

Date: 7/15/16

Totals class: TCDD EMPC

Entry #: 19

Run: 15 File: 160712D1 S: 10 I: 1 F: 1
Acquired: 12-JUL-16 23:37:38 Processed: 14-JUL-16 09:23:17

Total Concentration: 1.3627

Unnamed Concentration: 1.230

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
22:38	1.731e+04	1.986e+04	0.87 y	3.717e+04	0.61469
23:03	6.141e+03	5.780e+03	1.06 n	1.023e+04	0.16918
24:22	2.433e+03	3.357e+03	0.72 y	5.790e+03	0.095738
24:37	2.688e+03	3.670e+03	0.73 y	6.358e+03	0.10514
24:49	3.793e+03	4.916e+03	0.77 y	8.709e+03	0.14401
25:48	2.702e+03	3.396e+03	0.80 y	6.099e+03	0.10085
26:26	3.501e+03	6.806e+03	0.51 n	8.047e+03	0.13307 2,3,7,8-TCDD

Totals class: PeCDD EMPC

Entry #: 21

Run: 15

File: 160712D1

S: 10 I: 1 F: 2

Acquired: 12-JUL-16 23:37:38

Processed: 14-JUL-16 09:23:17

Total Concentration: 3.6588

Unnamed Concentration: 3.310

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:02	1.709e+04	3.119e+04	0.55 y	4.828e+04	1.1103
29:30	6.239e+03	1.047e+04	0.60 y	1.671e+04	0.38435
29:57	1.185e+04	1.016e+04	1.17 n	1.657e+04	0.38098
30:08	5.265e+03	8.045e+03	0.65 y	1.331e+04	0.30610
30:13	4.909e+03	8.780e+03	0.56 y	1.369e+04	0.31483
30:26	1.001e+04	1.456e+04	0.69 y	2.456e+04	0.56494
31:10	6.342e+03	8.807e+03	0.72 y	1.515e+04	0.34840
31:15	2.020e+03	2.862e+03	0.71 y	4.882e+03	0.11228
31:32	2.267e+03	3.673e+03	0.62 y	5.941e+03	0.13662

Totals class: HxCDD EMPC

Entry #: 23

Run: 15

File: 160712D1

S: 10 I: 1 F: 3

Acquired: 12-JUL-16 23:37:38

Processed: 14-JUL-16 09:23:17

Total Concentration: 11.439

Unnamed Concentration: 9.174

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:57	7.003e+04	6.118e+04	1.14 y	1.312e+05	3.5640
33:30	2.145e+04	1.605e+04	1.34 y	3.750e+04	1.0186
33:46	8.448e+04	6.856e+04	1.23 y	1.530e+05	4.1570
33:54	3.900e+03	5.029e+03	0.78 n	7.045e+03	0.19135
34:27	7.595e+03	8.309e+03	0.91 n	1.372e+04	0.37342
34:34	2.032e+04	1.866e+04	1.09 y	3.897e+04	1.0340
34:45	4.856e+03	4.100e+03	1.18 y	8.956e+03	0.24325
34:51	1.593e+04	1.488e+04	1.07 y	3.081e+04	0.85785

Totals class: HpCDD EMPC

Entry #: 25

Run: 15 File: 160712D1 S: 10 I: 1 F: 4
Acquired: 12-JUL-16 23:37:38 Processed: 14-JUL-16 09:23:17

Total Concentration: 28.649 Unnamed Concentration: 15.442

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:23	2.292e+05	2.159e+05	1.06 y	4.451e+05	15.442
38:22	1.981e+05	1.826e+05	1.08 y	3.807e+05	13.206

1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 15

File: 160712D1

S: 10 I: 1 F: 1

Acquired: 12-JUL-16 23:37:38

Processed: 14-JUL-16 09:23:17

Total Concentration: 2.2471

Unnamed Concentration: 2.101

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
21:37	4.241e+04	5.266e+04	0.81 y	9.507e+04	1.0951
25:35	5.204e+03	7.492e+03	0.69 y	1.270e+04	0.14625
25:58	6.225e+03	6.092e+03	1.02 n	1.078e+04	0.12422
27:29	7.174e+04	4.323e+04	1.66 n	7.653e+04	0.88150

Totals class: PeCDF EMPC

Entry #: 31

Run: 15 File: 160712D1 S: 10 I: 1 F: 2
Acquired: 12-JUL-16 23:37:38 Processed: 14-JUL-16 09:23:17

Total Concentration: 1.5452 Unnamed Concentration: 1.265

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28:52	9.890e+03	5.719e+03	1.73 y	1.561e+04	0.24205
28:58	1.522e+04	9.835e+03	1.55 y	2.505e+04	0.38847
29:04	1.605e+04	2.173e+04	0.74 n	2.640e+04	0.40939
29:57	3.791e+03	2.252e+03	1.68 y	6.043e+03	0.095185 1,2,3,7,8-PeCDF
30:11	5.937e+03	3.696e+03	1.61 y	9.634e+03	0.14939
30:46	2.962e+03	3.453e+03	0.86 n	4.872e+03	0.075555
30:53	7.035e+03	5.100e+03	1.38 y	1.213e+04	0.18517 2,3,4,7,8-PeCDF

Totals class: HxCDF EMPC

Entry #: 33

Run: 15

File: 160712D1

S: 10 I: 1 F: 3

Acquired: 12-JUL-16 23:37:38

Processed: 14-JUL-16 09:23:17

Total Concentration: 3.6417

Unnamed Concentration: 2.870

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:26	1.507e+04	1.080e+04	1.40 y	2.586e+04	0.45608
32:35	4.487e+04	3.421e+04	1.31 y	7.908e+04	1.3945
32:56	4.387e+03	3.659e+03	1.20 y	8.046e+03	0.14189
33:07	2.111e+04	1.769e+04	1.19 y	3.879e+04	0.68407
33:29	6.384e+03	4.601e+03	1.39 y	1.098e+04	0.19371
33:35	7.801e+03	5.794e+03	1.35 y	1.359e+04	0.22690 1,2,3,4,7,8-HxCDF
33:42	9.117e+03	6.783e+03	1.34 y	1.590e+04	0.26491 1,2,3,6,7,8-HxCDF
34:18	8.875e+03	7.126e+03	1.25 y	1.600e+04	0.27962 2,3,4,6,7,8-HxCDF

Totals class: HpCDF EMPC

Entry #: 35

Run: 15

File: 160712D1

S: 10 I: 1 F: 4

Acquired: 12-JUL-16 23:37:38

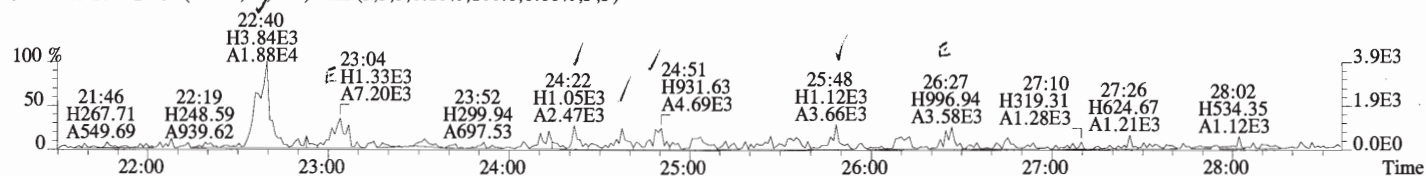
Processed: 14-JUL-16 09:23:17

Total Concentration: 4.9158

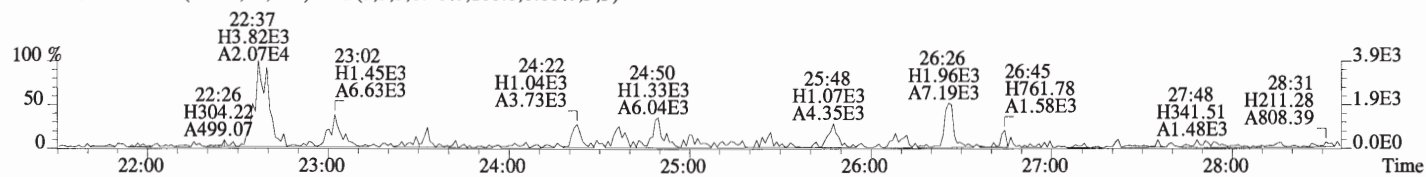
Unnamed Concentration: 2.381

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name	
37:00	5.762e+04	5.293e+04	1.09 y	1.105e+05	2.5351	1,2,3,4,6,7,8-HpCDF
37:38	4.932e+04	5.074e+04	0.97 y	1.001e+05	2.3807	

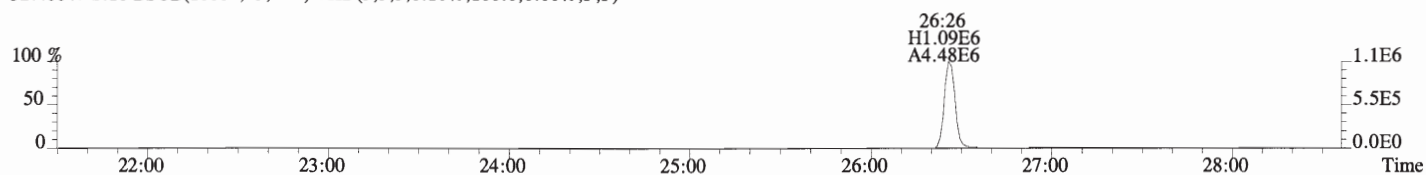
File:160712D1 #1-551 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 319.8965 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



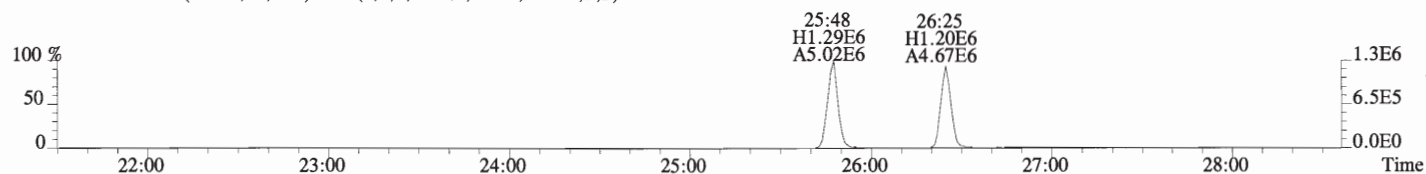
321.8936 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



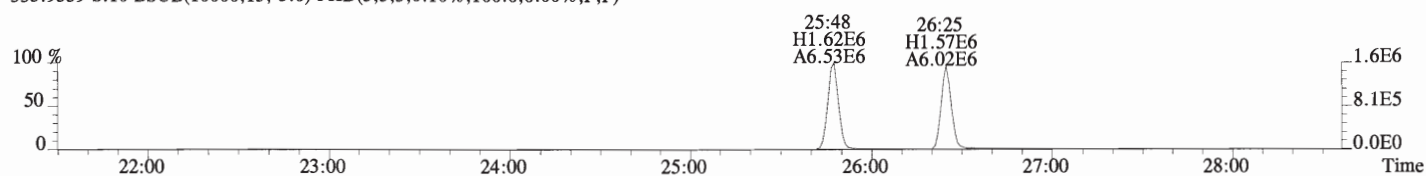
327.8847 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



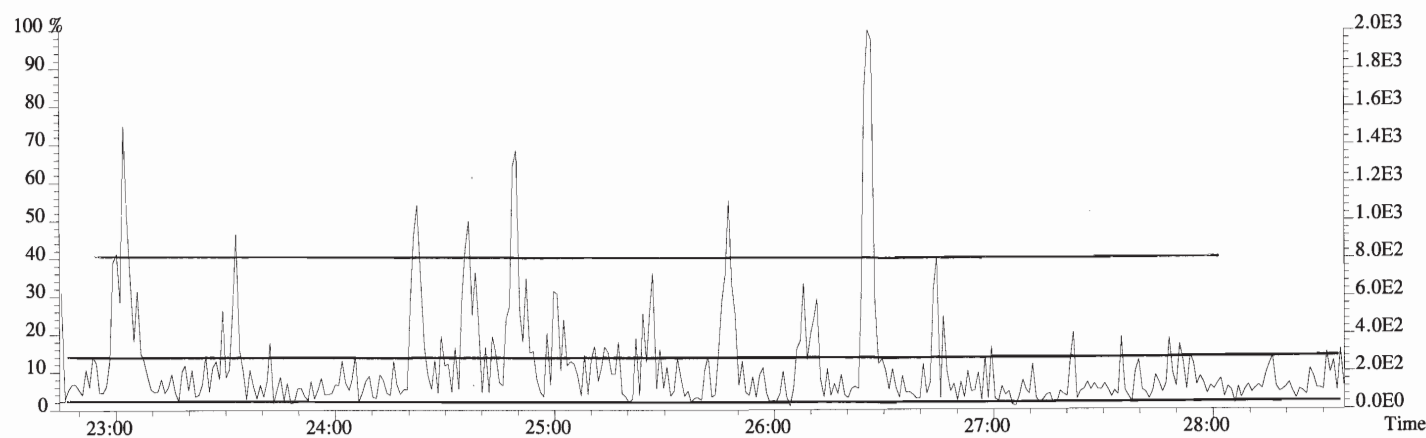
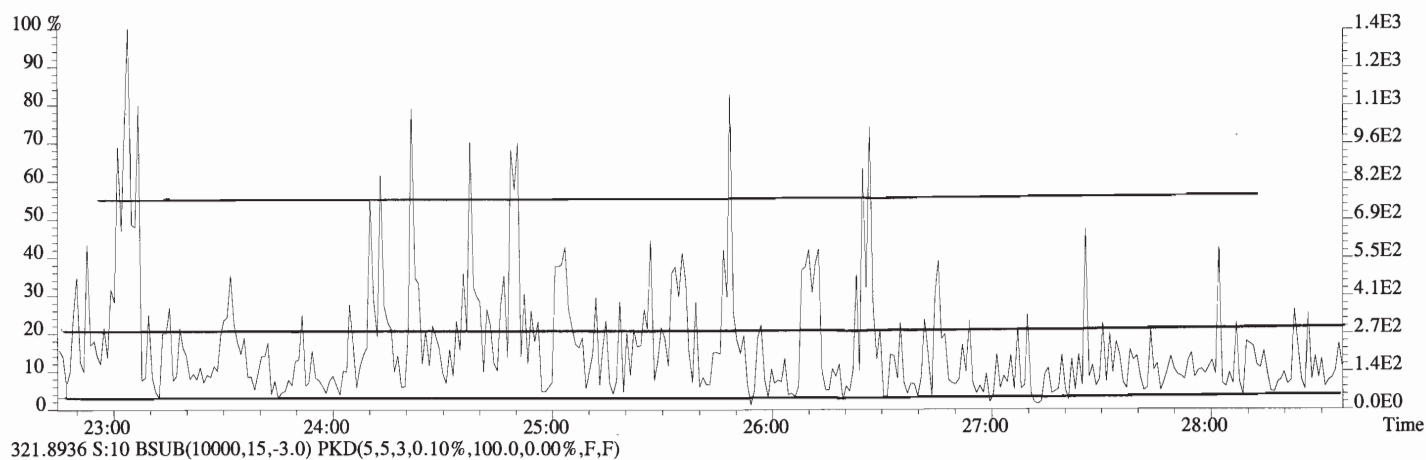
331.9368 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



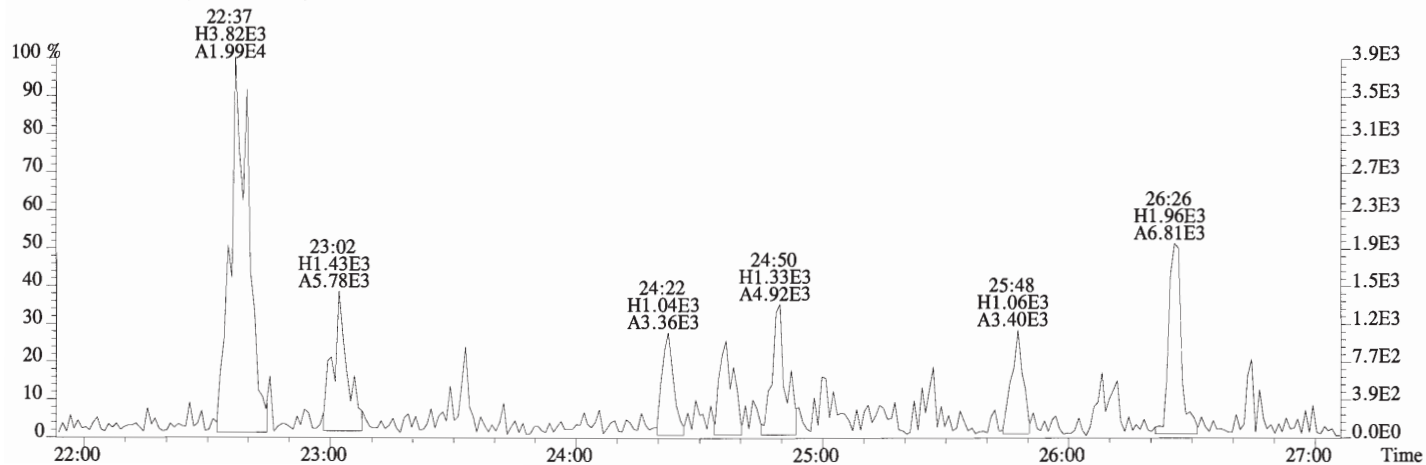
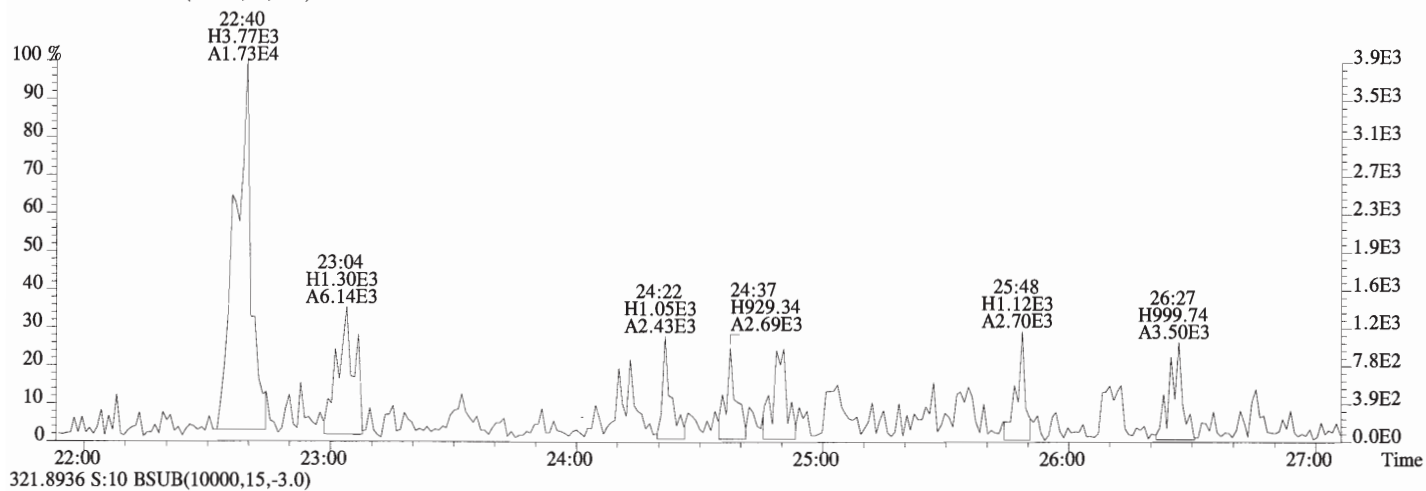
333.9339 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



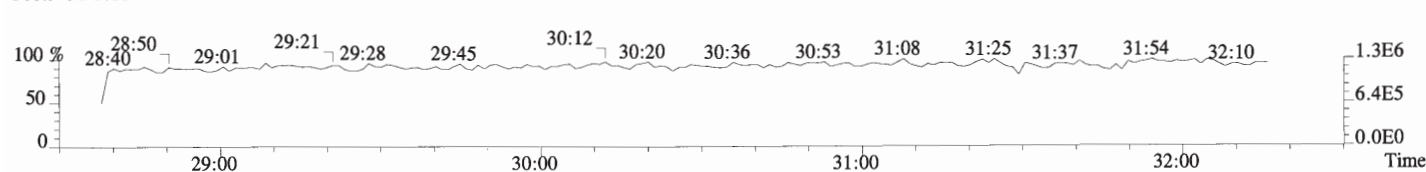
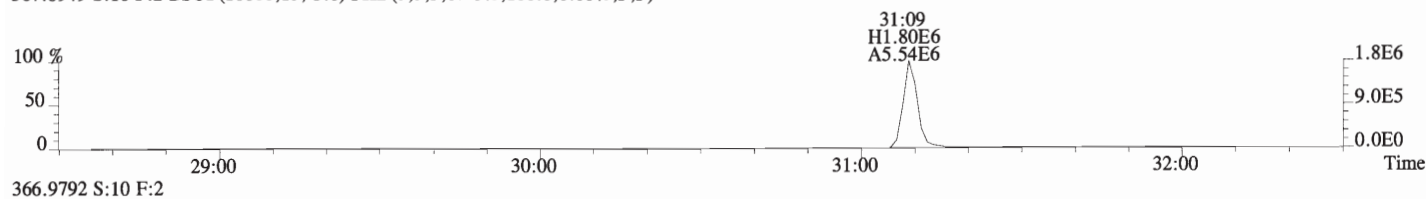
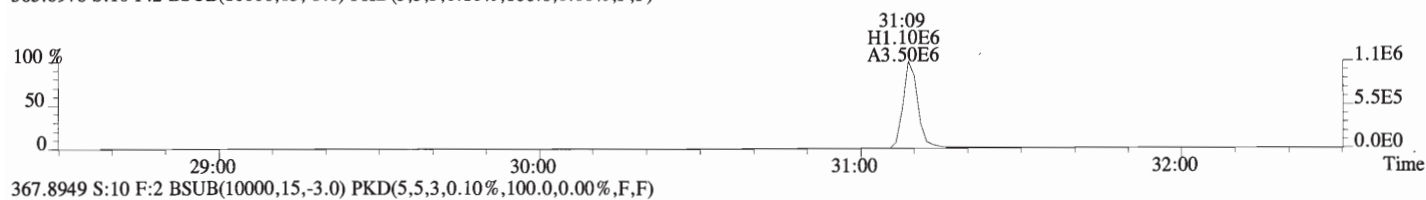
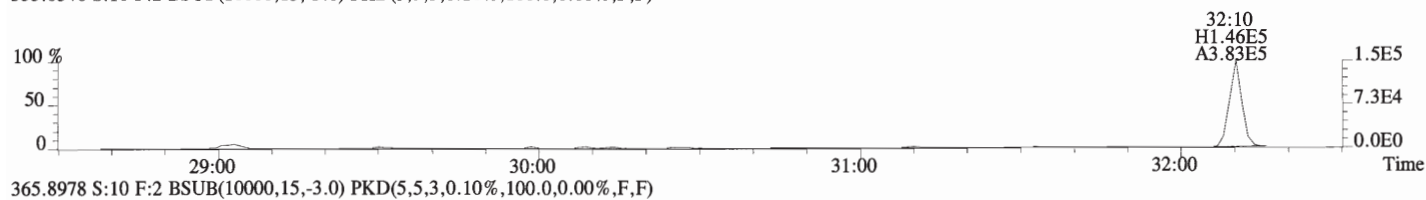
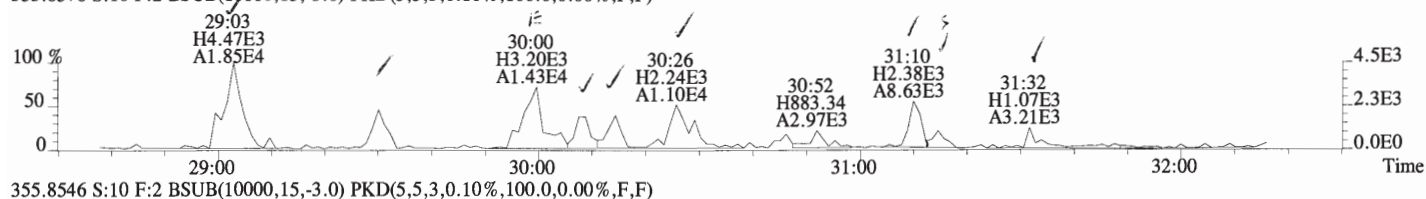
File:160712D1 #1-551 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 Exp:OCDD DB5
319.8965 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



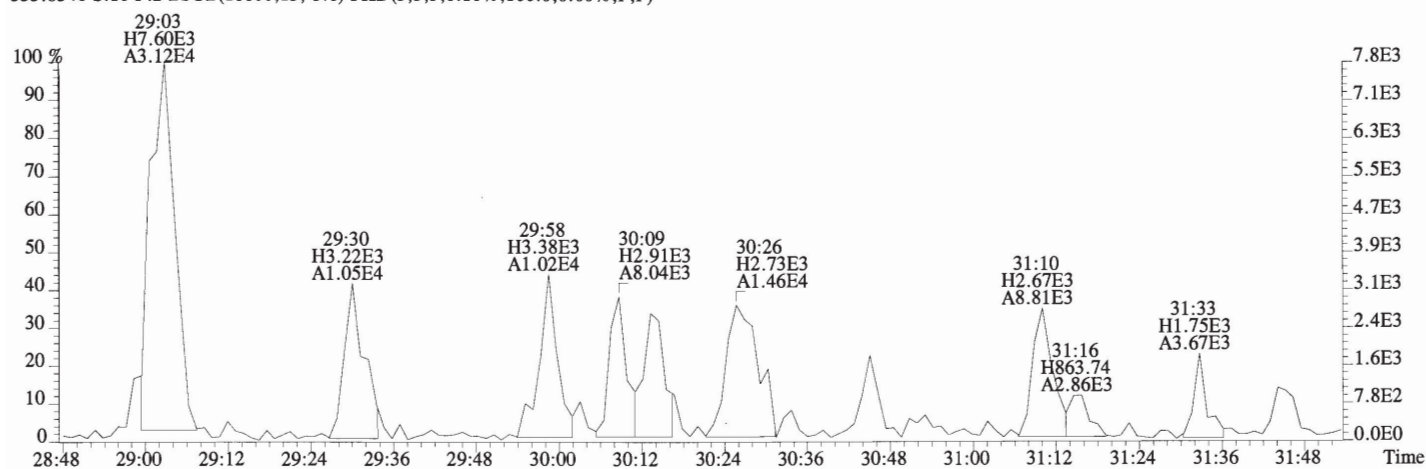
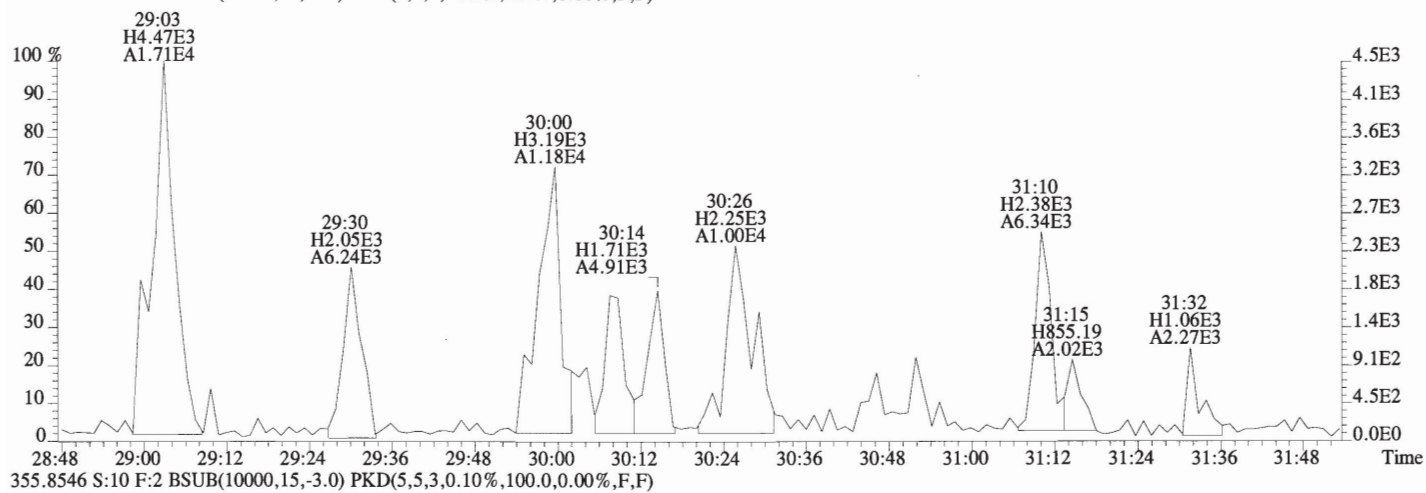
File:160712D1 #1-551 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 Exp:OCDD_DB5
 319.8965 S:10 BSUB(10000,15,-3.0)



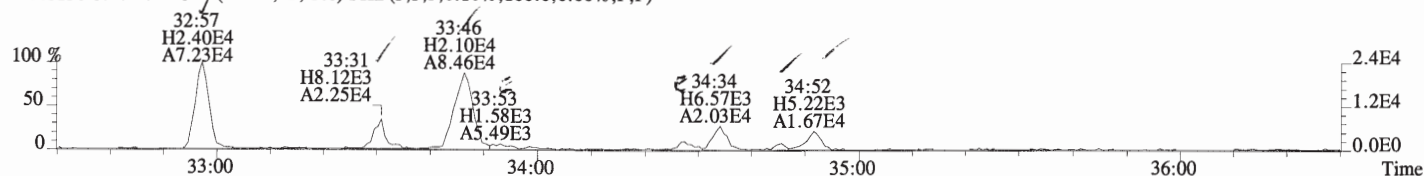
File:160712D1 #1-193 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 353.8576 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



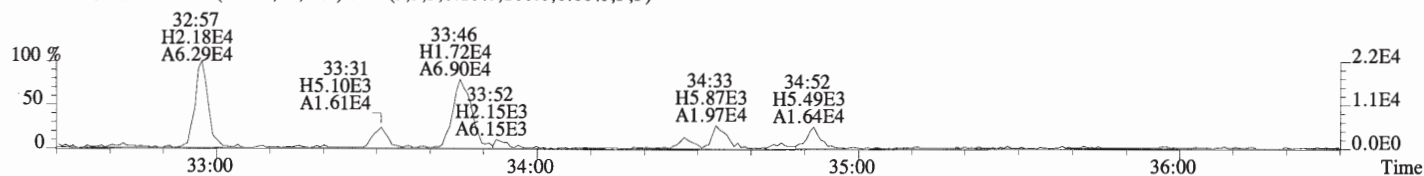
File:160712D1 #1-193 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 Exp:OCDD DB5
 353.8576 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



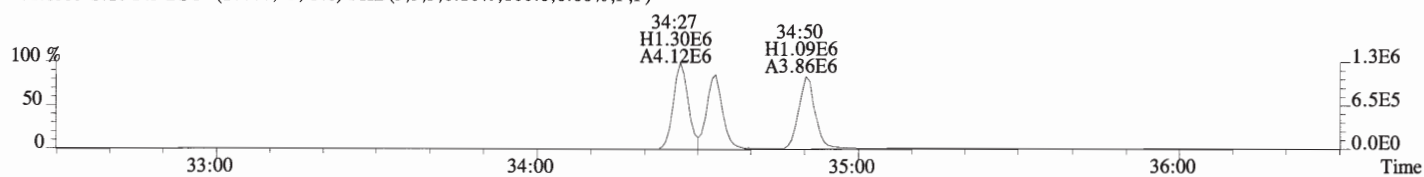
File:160712D1 #1-406 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 389.8156 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



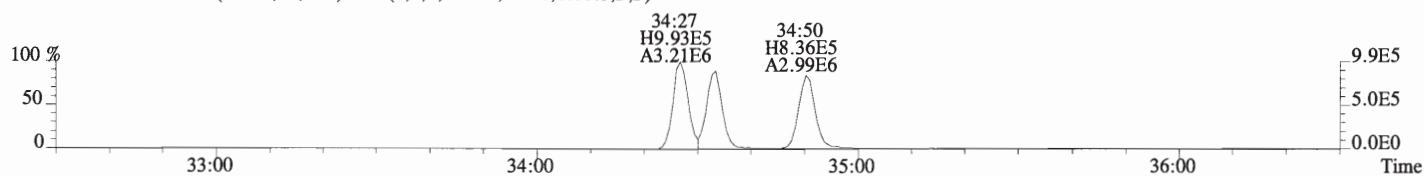
391.8127 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



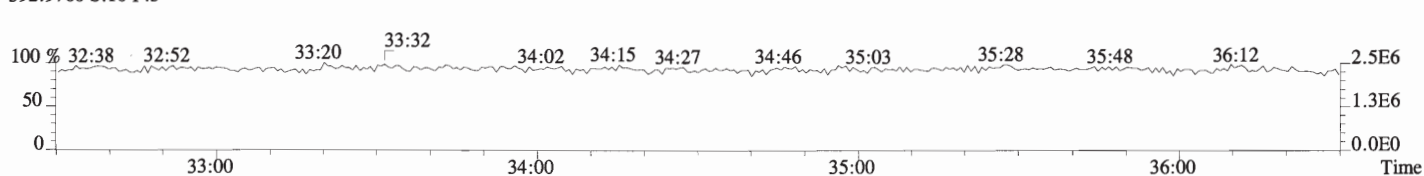
401.8559 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



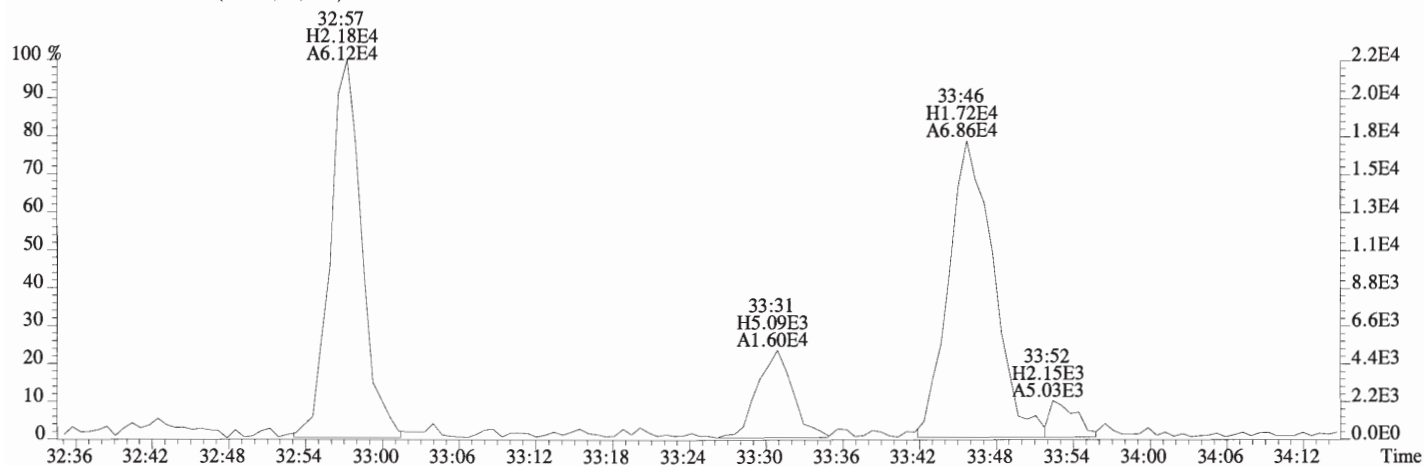
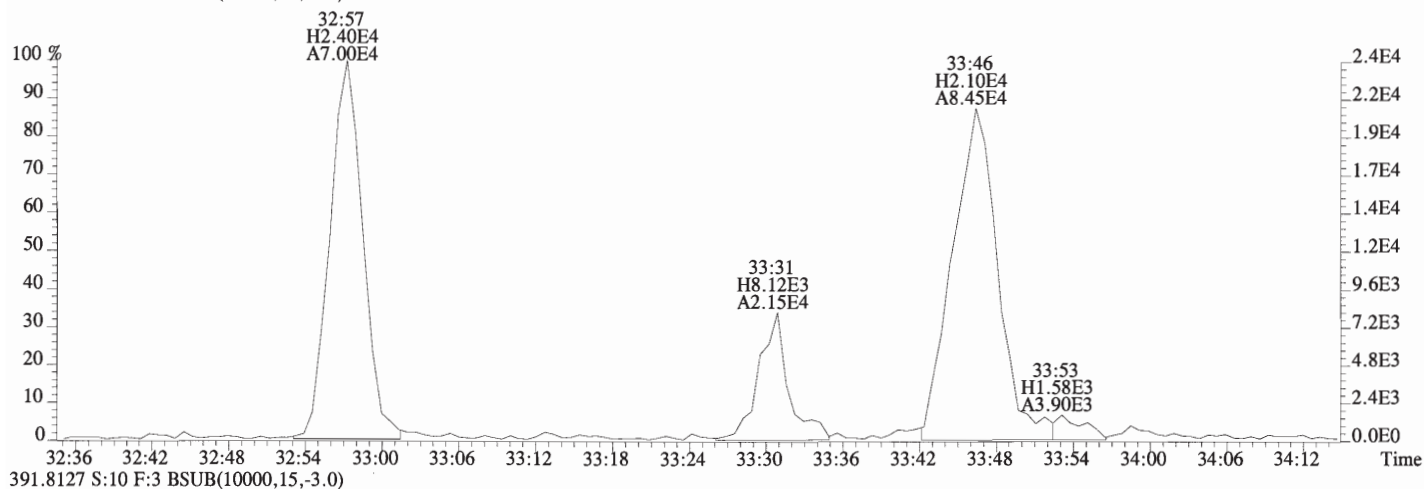
403.8530 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



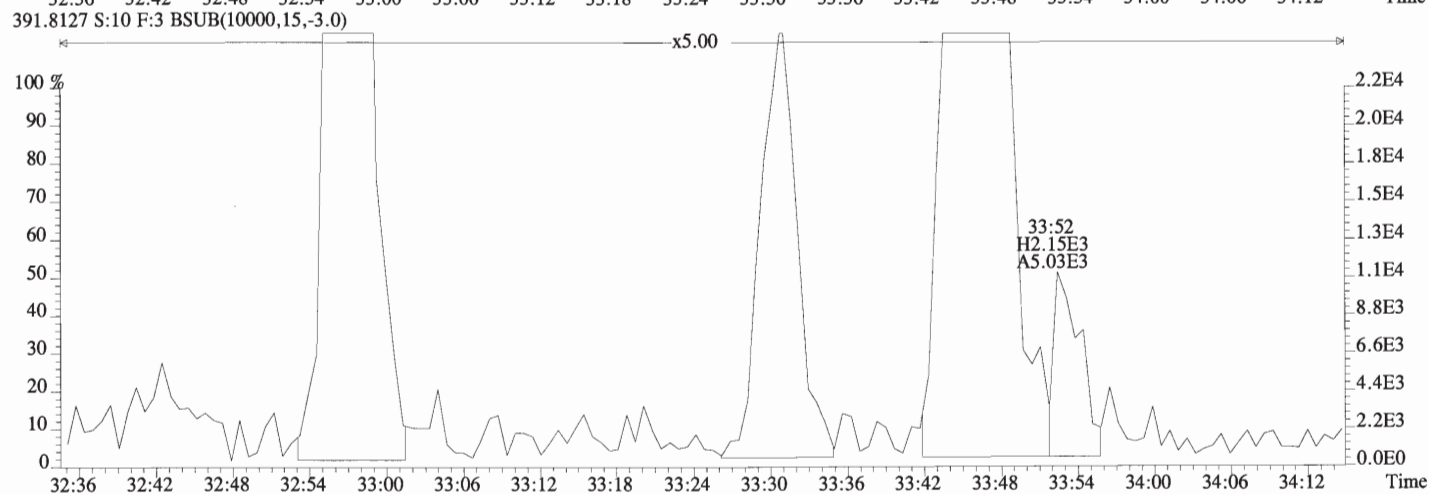
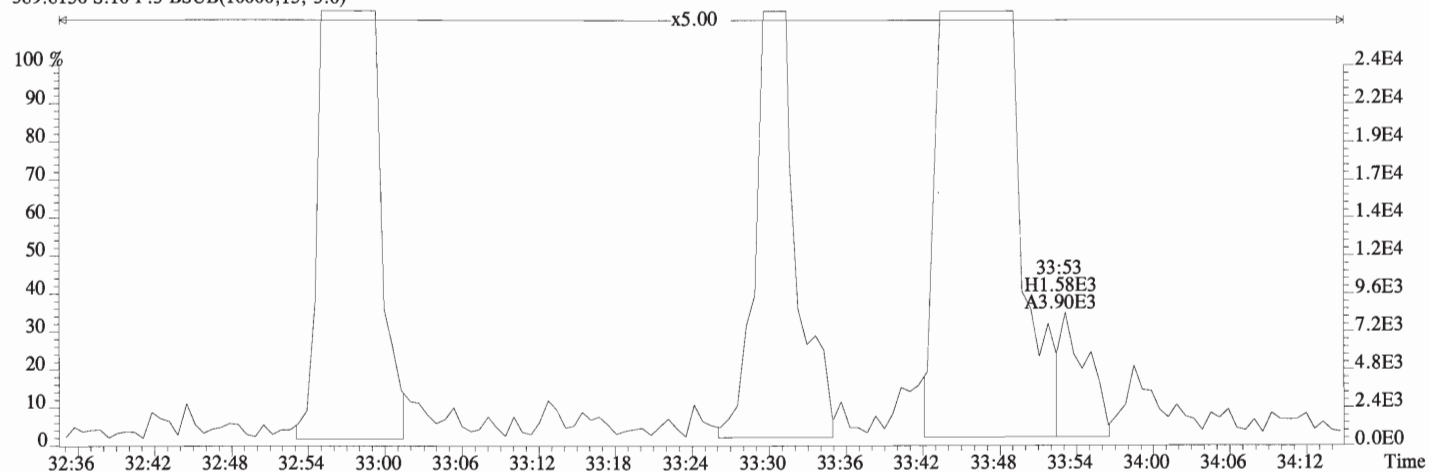
392.9760 S:10 F:3



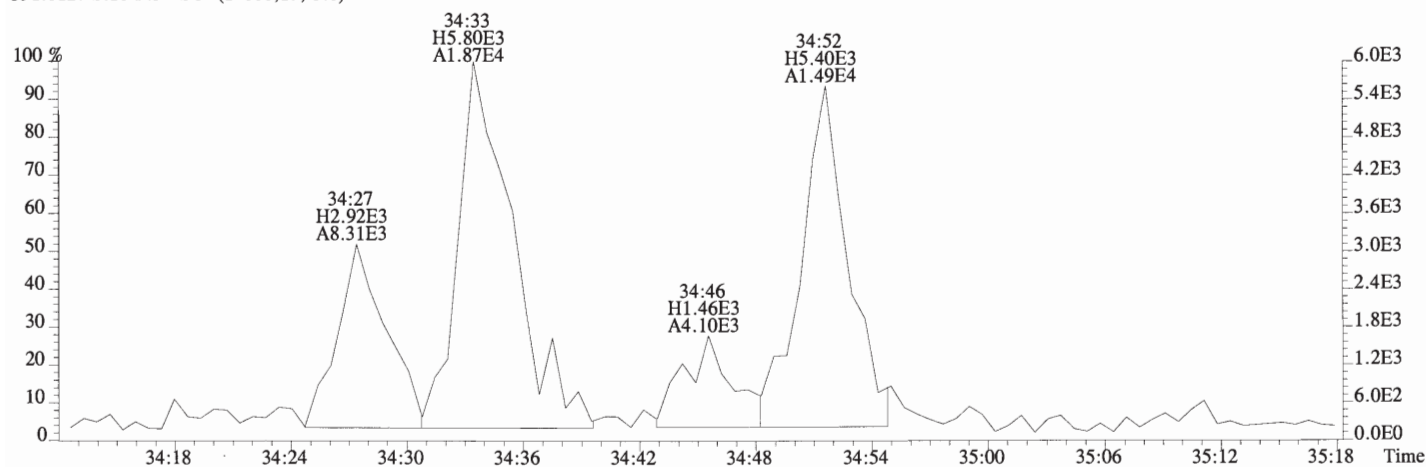
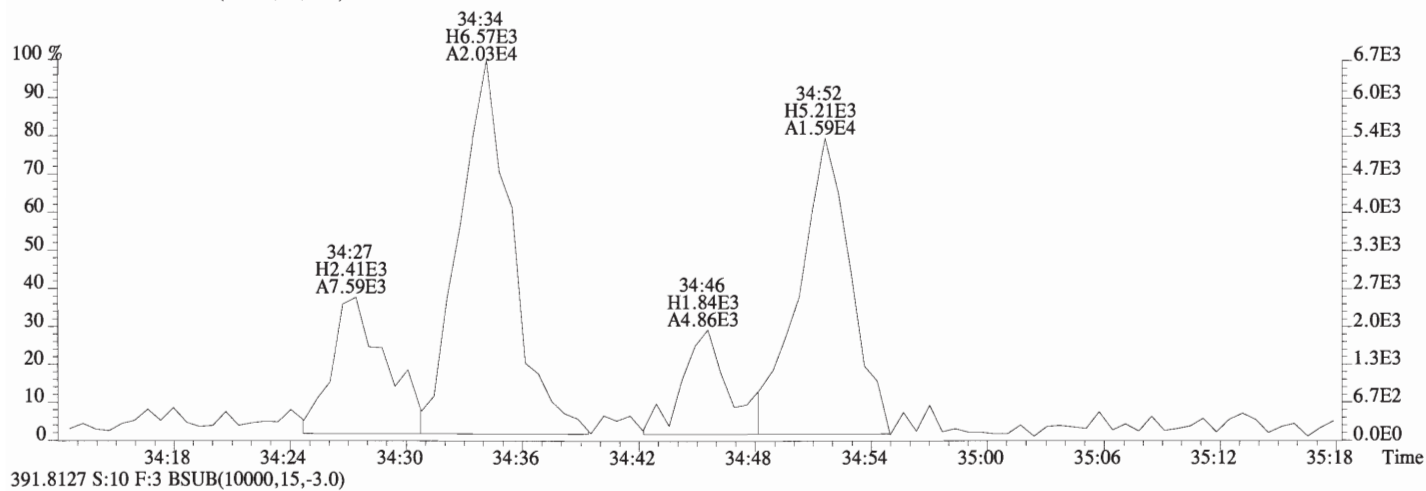
File:160712D1 #1-406 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 389.8156 S:10 F:3 BSUB(10000,15,-3.0)



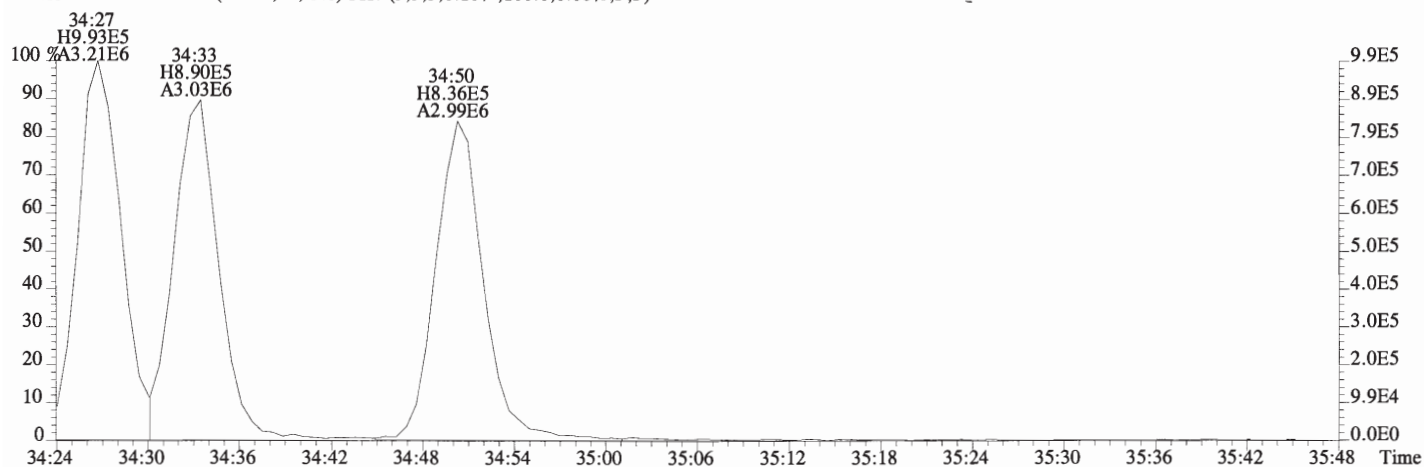
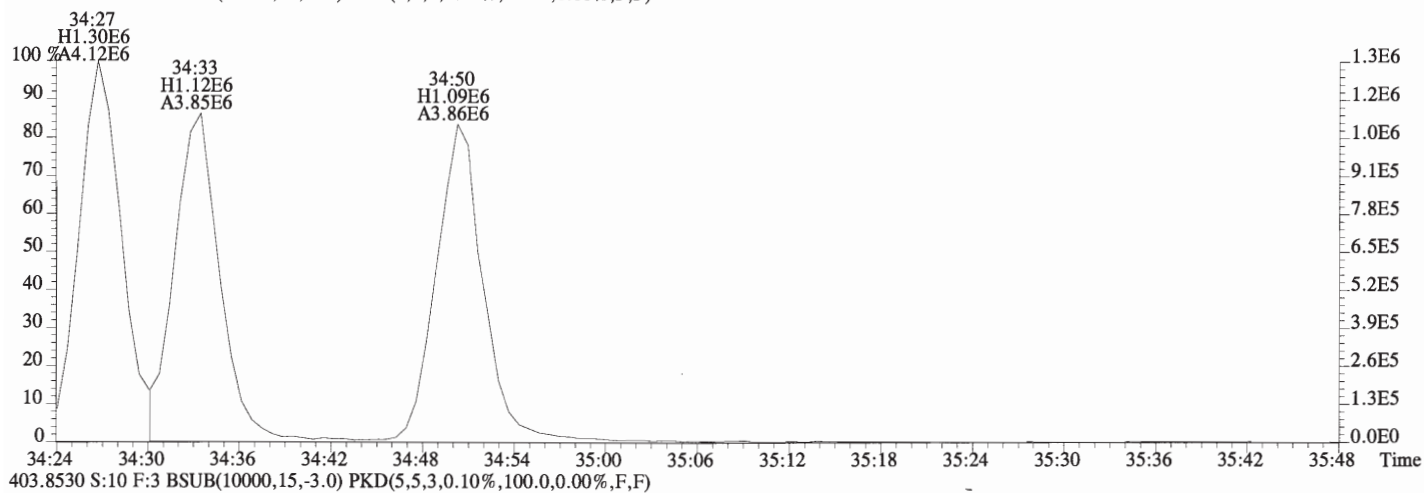
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 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 389.8156 S:10 F:3 BSUB(10000,15,-3.0)



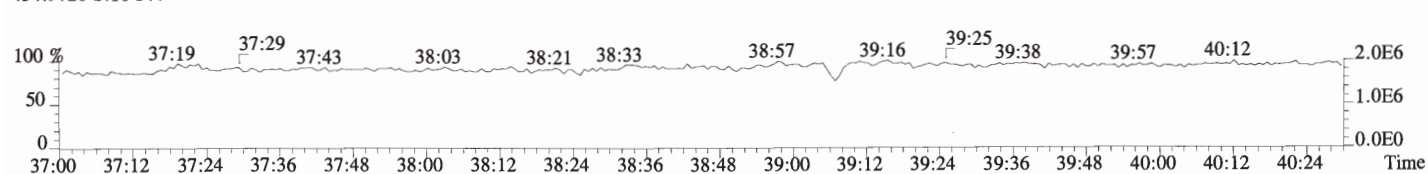
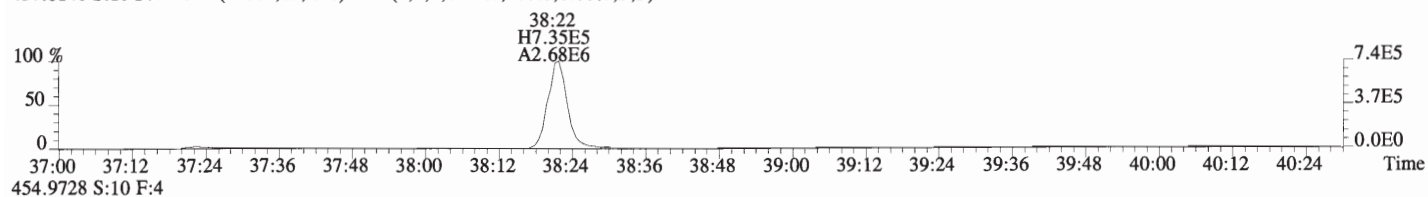
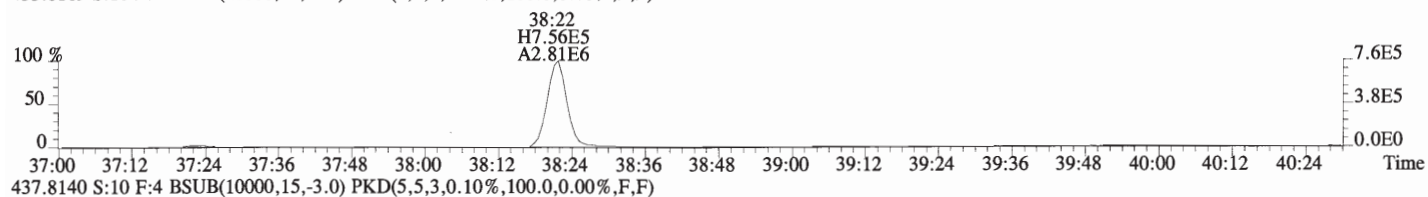
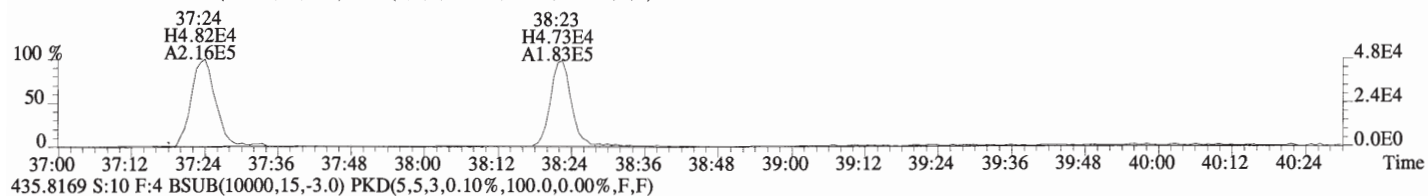
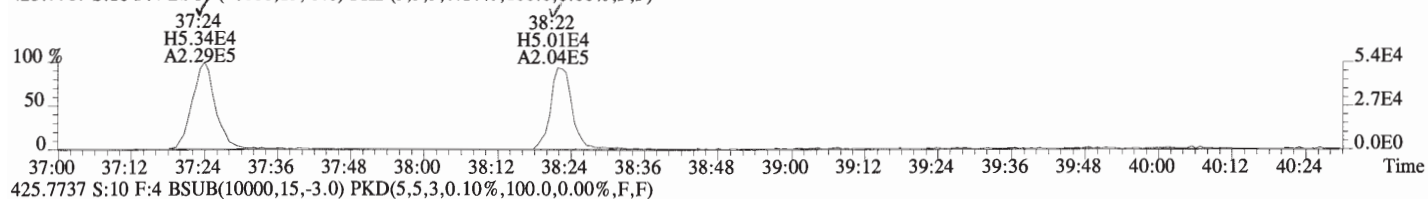
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Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
389.8156 S:10 F:3 BSUB(10000,15,-3.0)



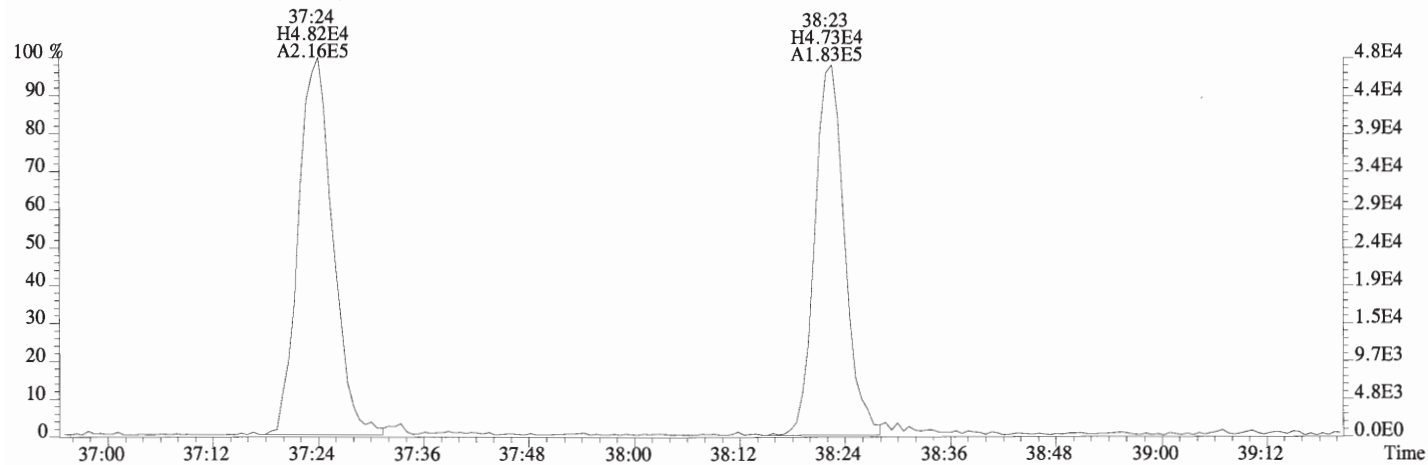
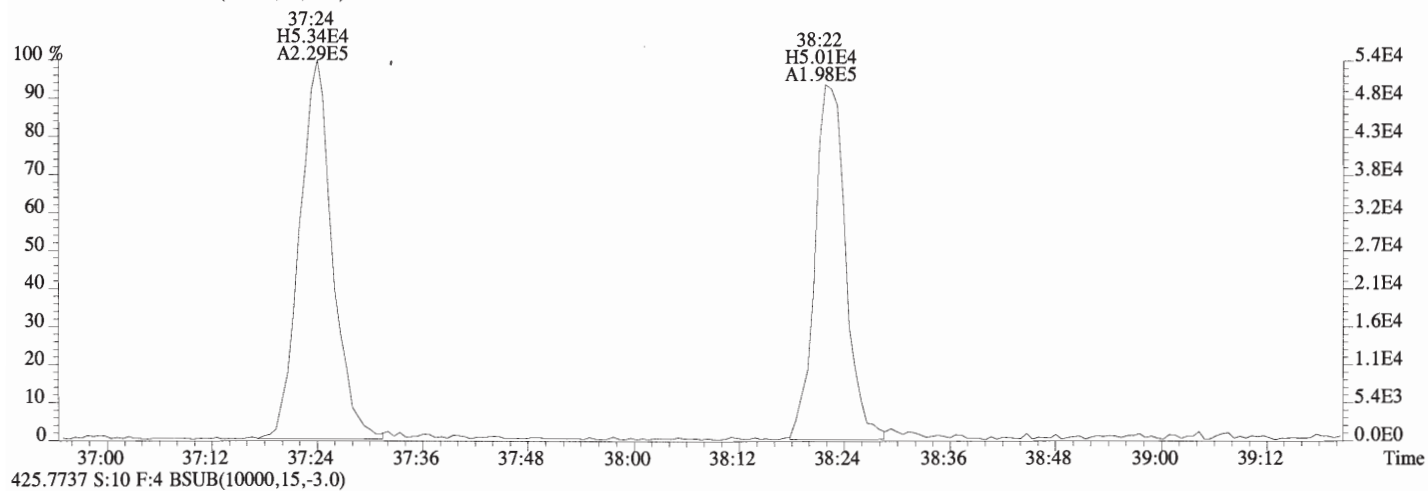
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 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 401.8559 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



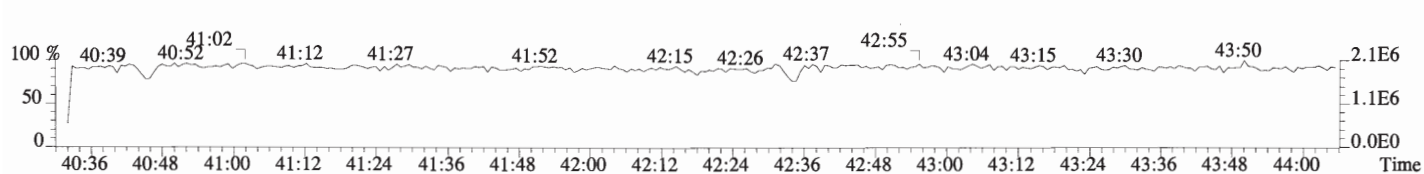
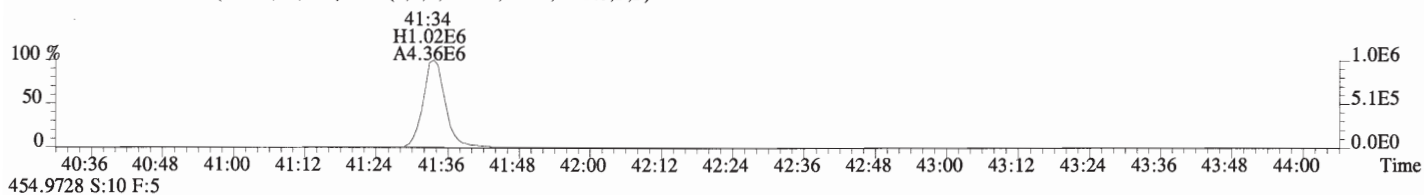
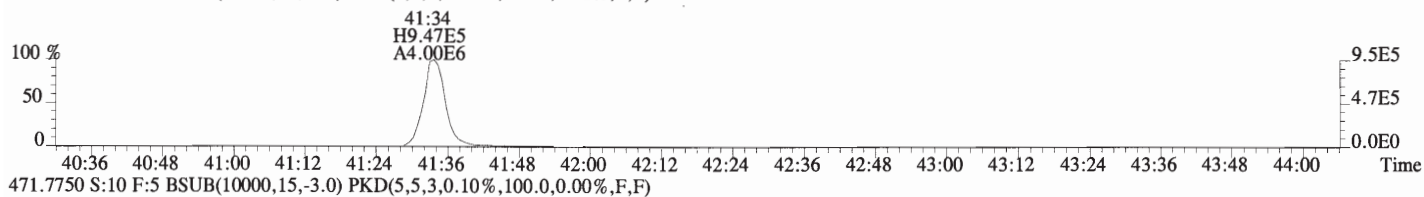
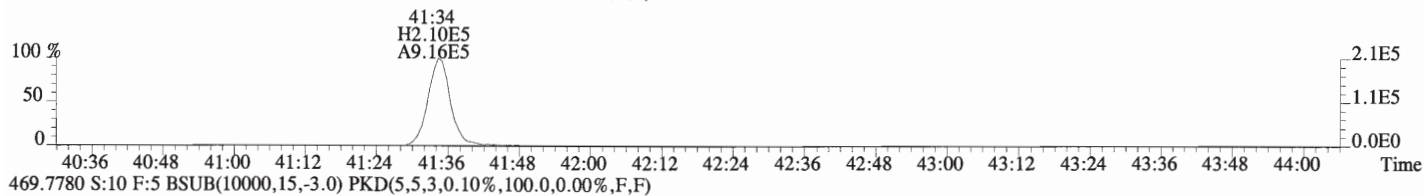
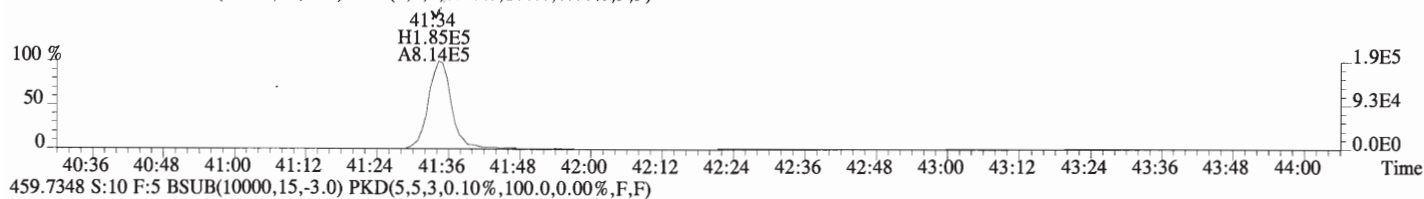
File:160712D1 #1-326 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 423.7767 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



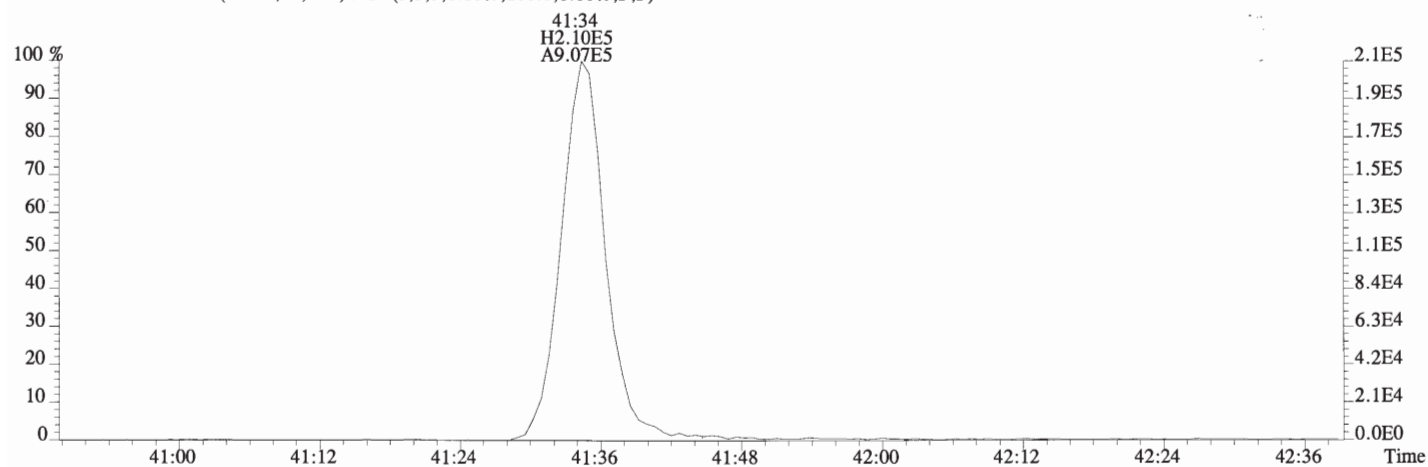
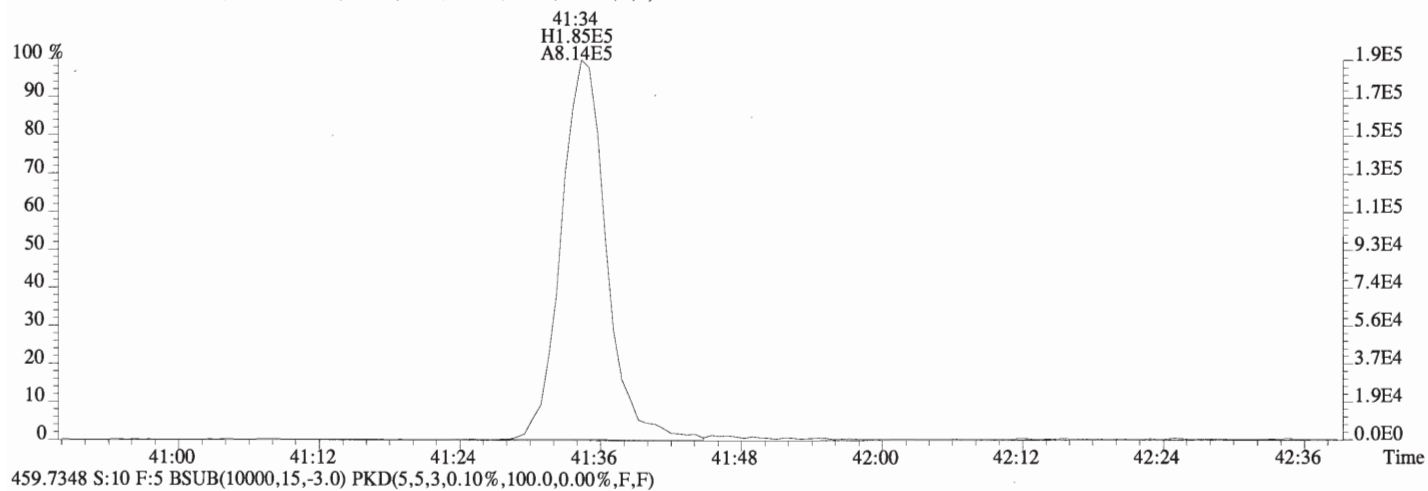
File:160712D1 #1-326 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
423.7767 S:10 F:4 BSUB(10000,15,-3.0)



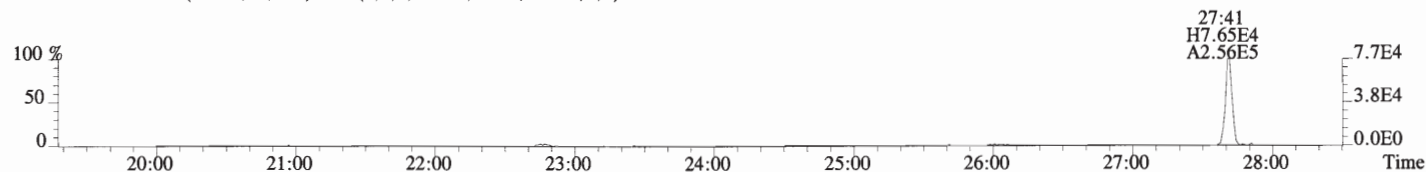
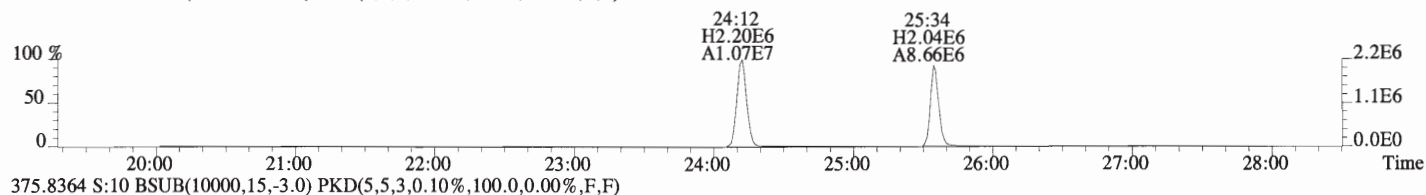
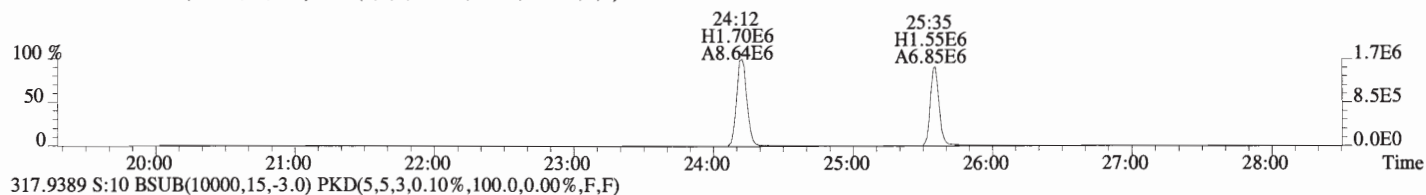
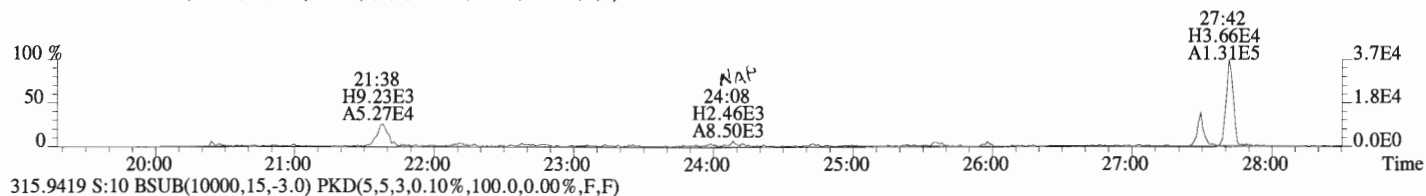
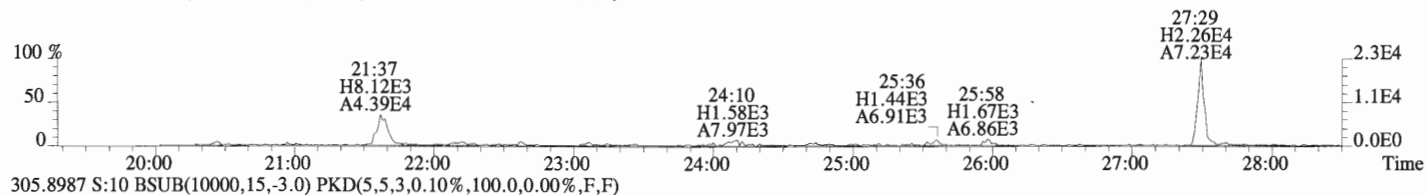
File:160712D1 #1-388 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
457.7377 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



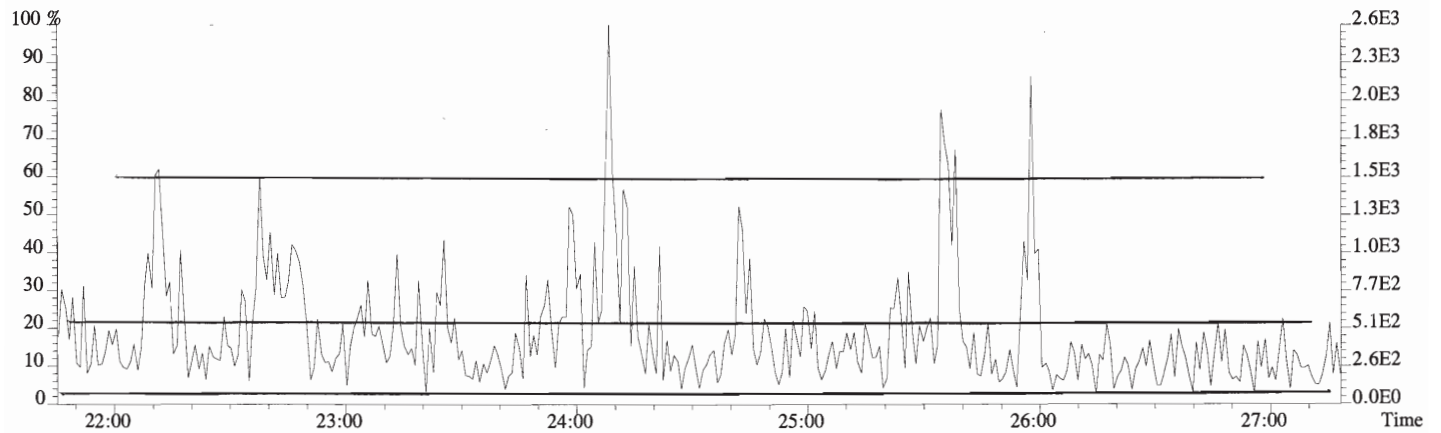
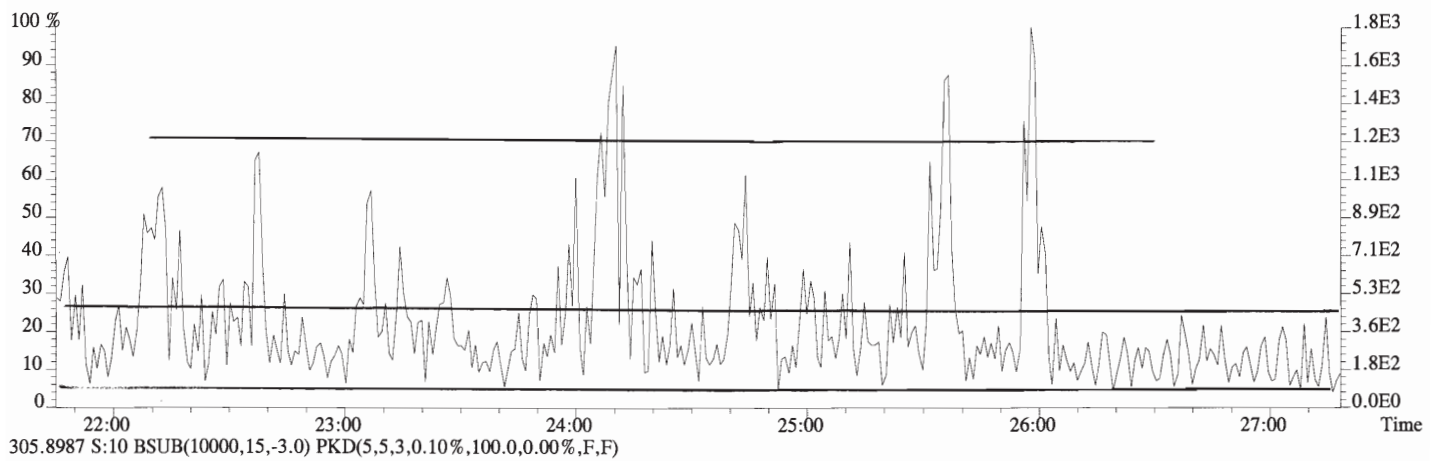
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Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
457.7377 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



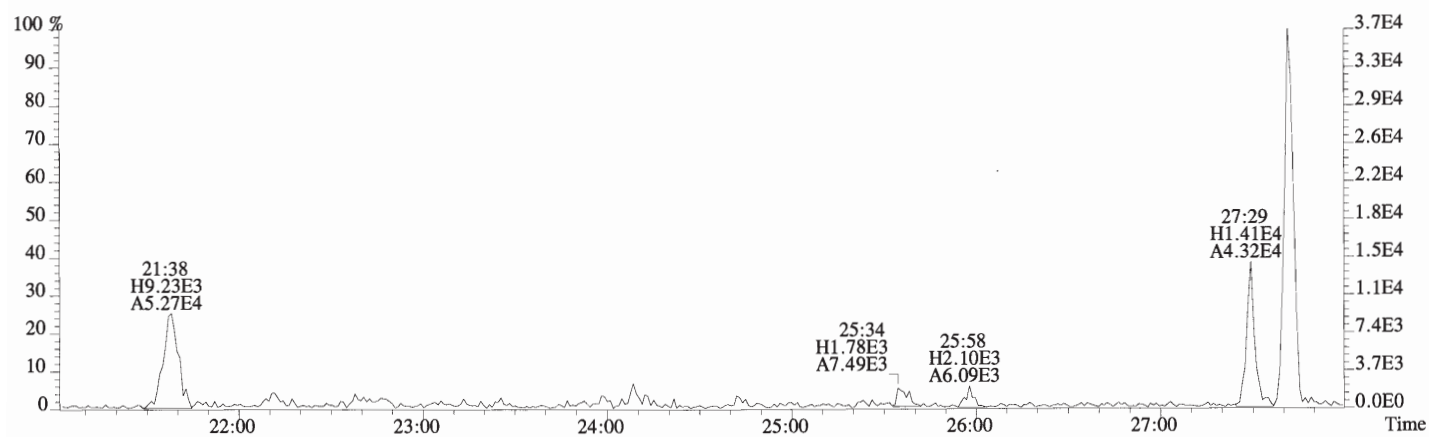
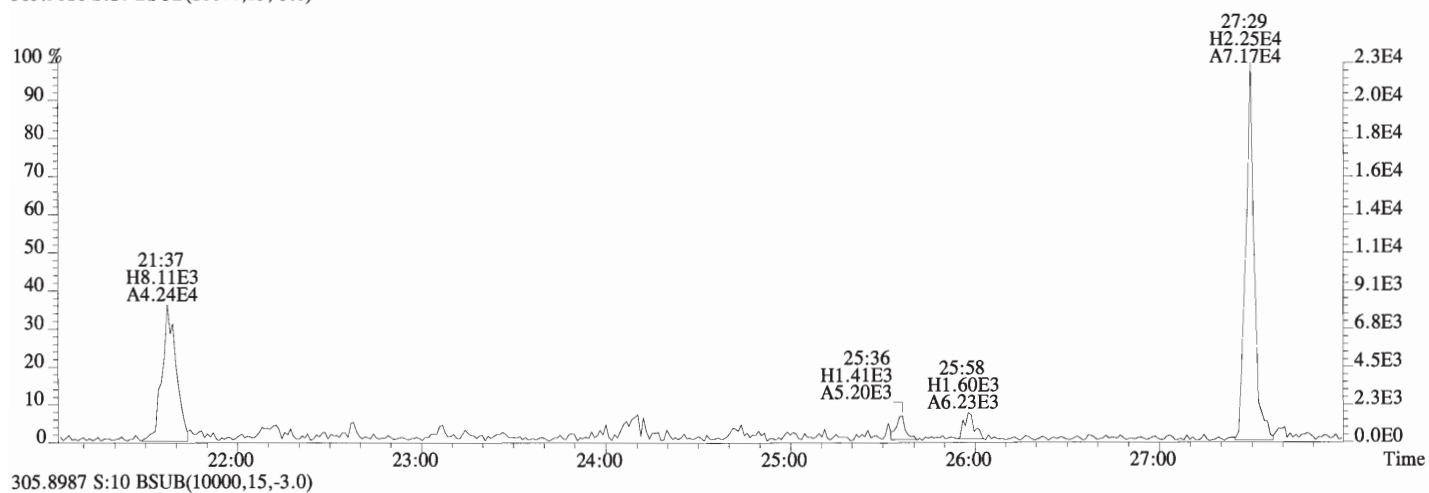
File:160712D1 #1-551 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 303.9016 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



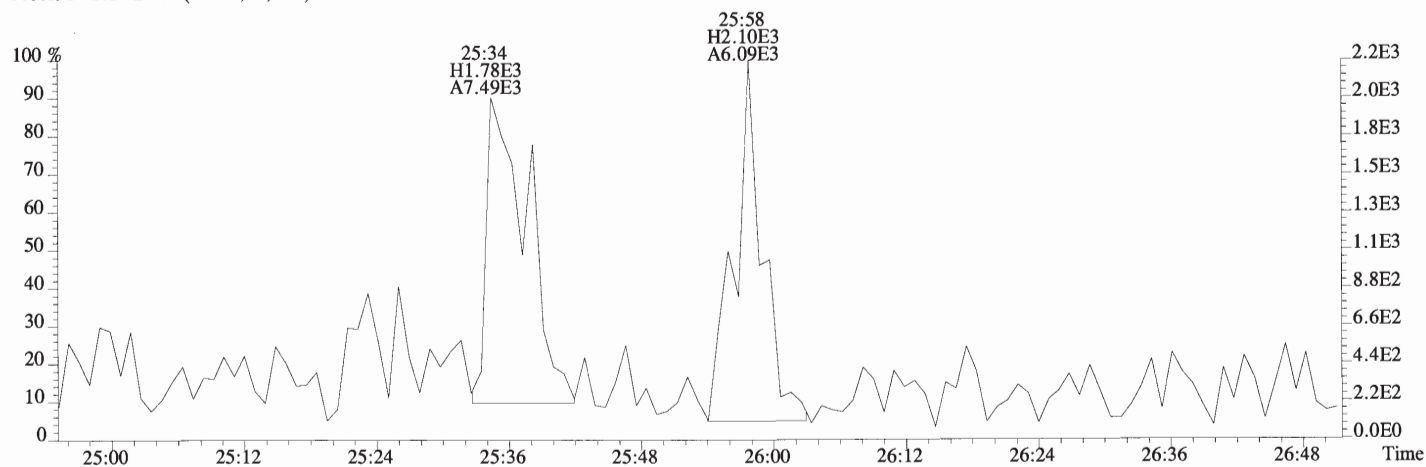
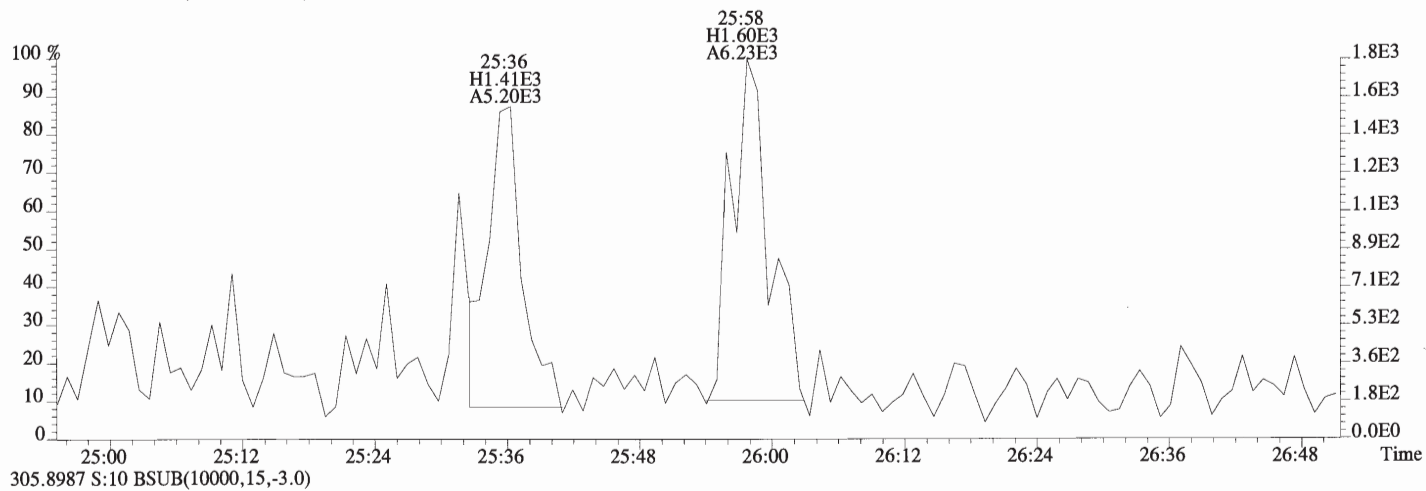
File:160712D1 #1-551 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
303.9016 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



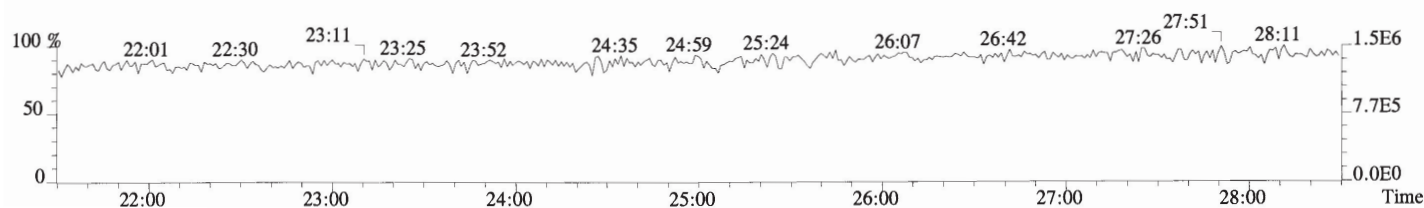
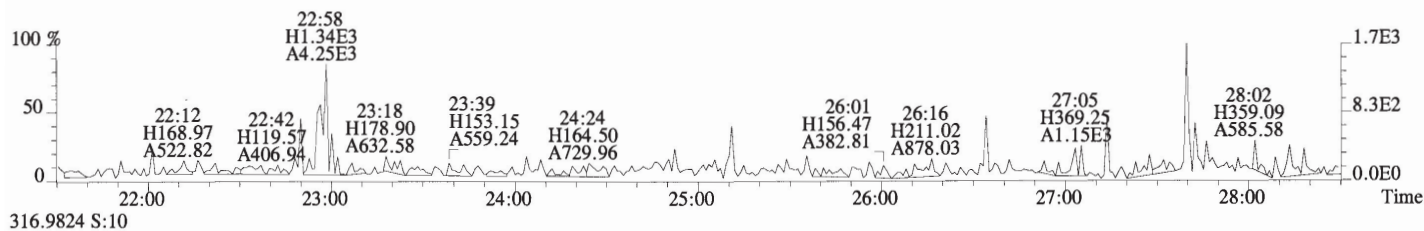
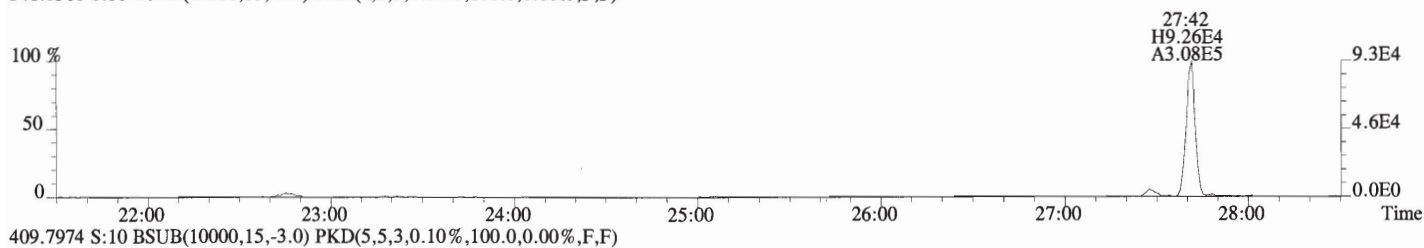
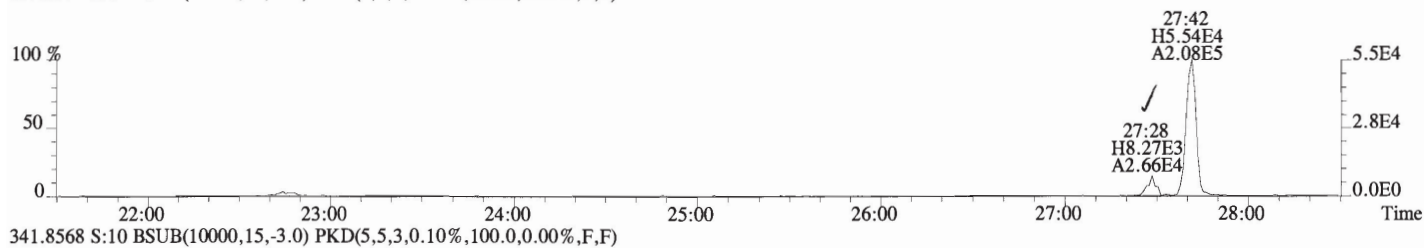
File:160712D1 #1-551 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
303.9016 S:10 BSUB(10000,15,-3.0)



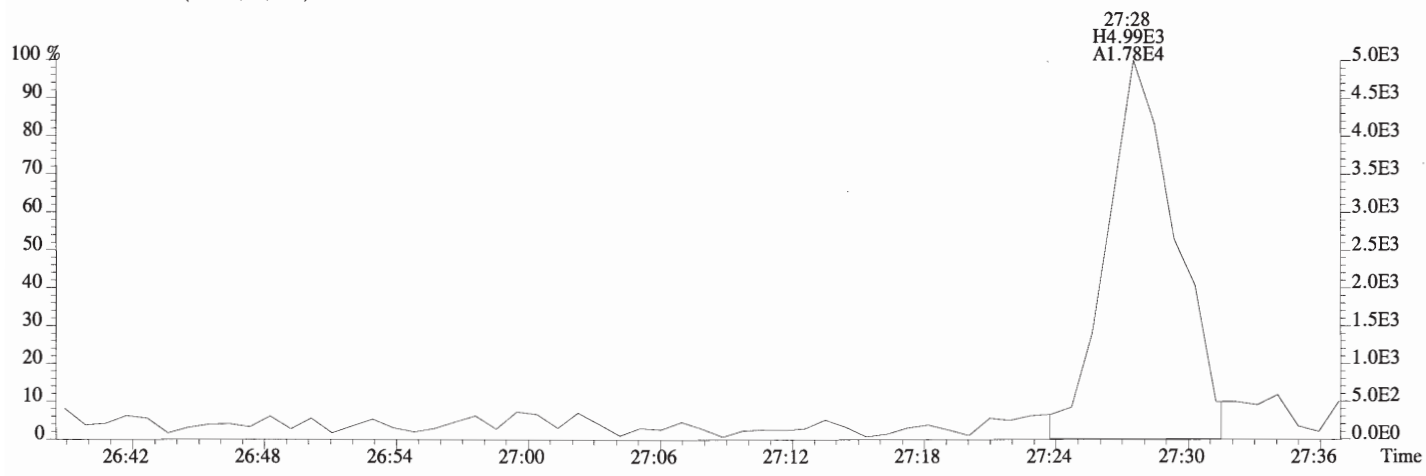
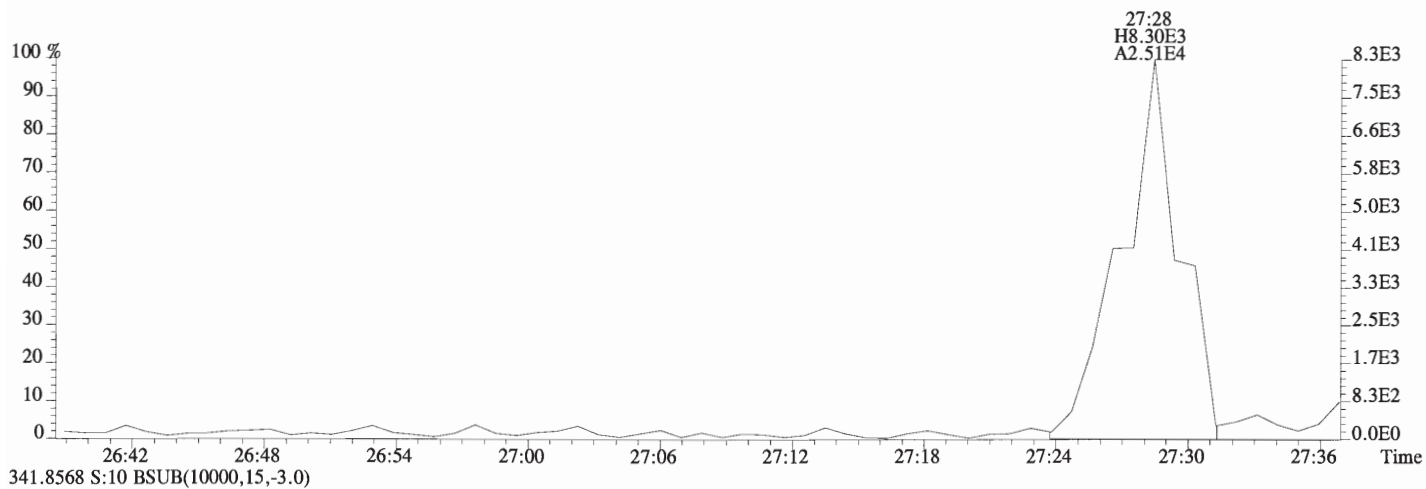
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 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DÜ-1-12-C 11.32 Exp:OCDD_DB5
 303.9016 S:10 BSUB(10000,15,-3.0)



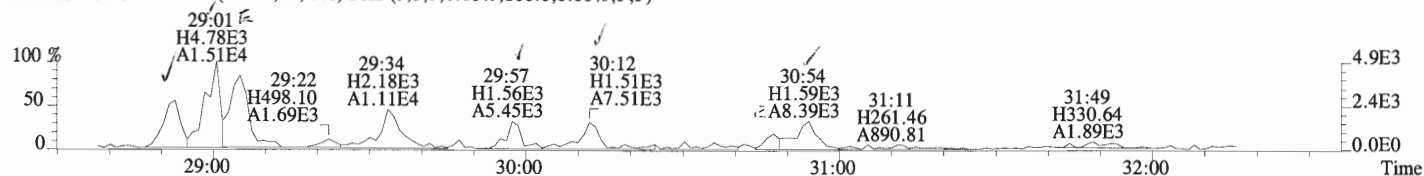
File:160712D1 #1-551 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 339.8597 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



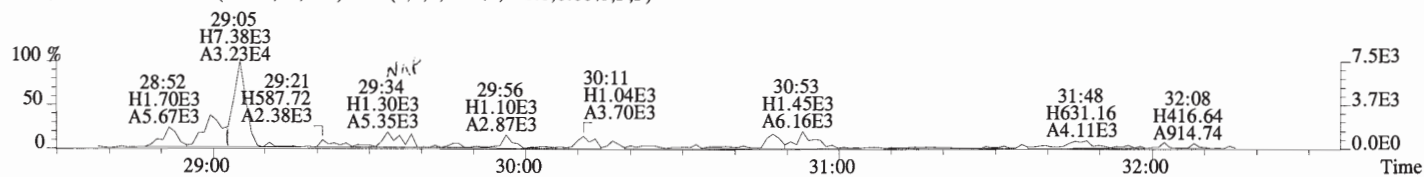
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Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
339.8597 S:10 BSUB(10000,15,-3.0)



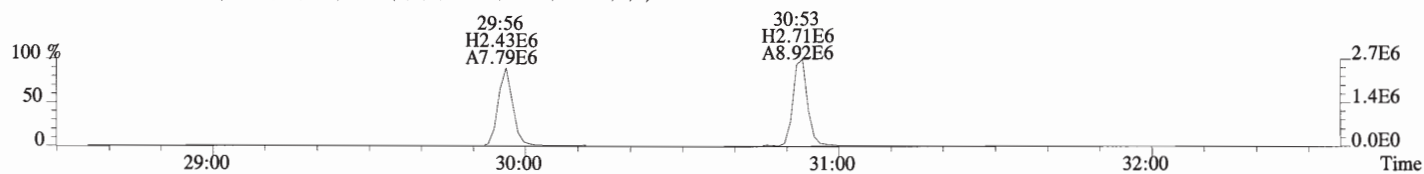
File:160712D1 #1-193 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 339.8597 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



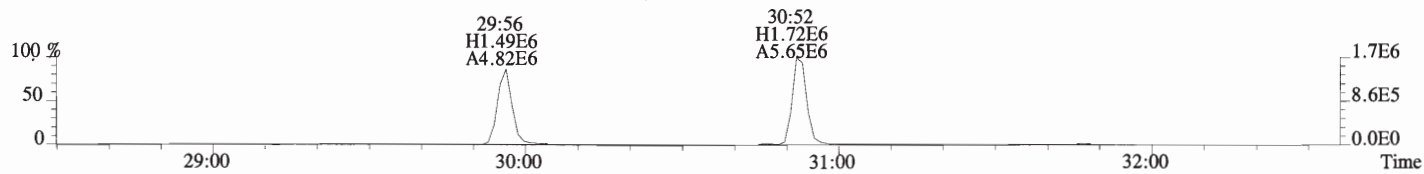
341.8568 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



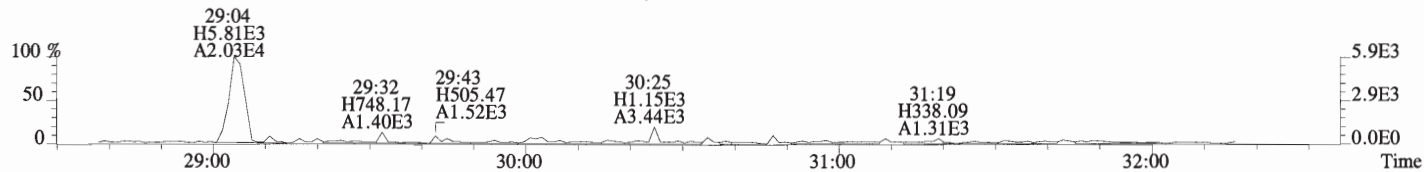
351.9000 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



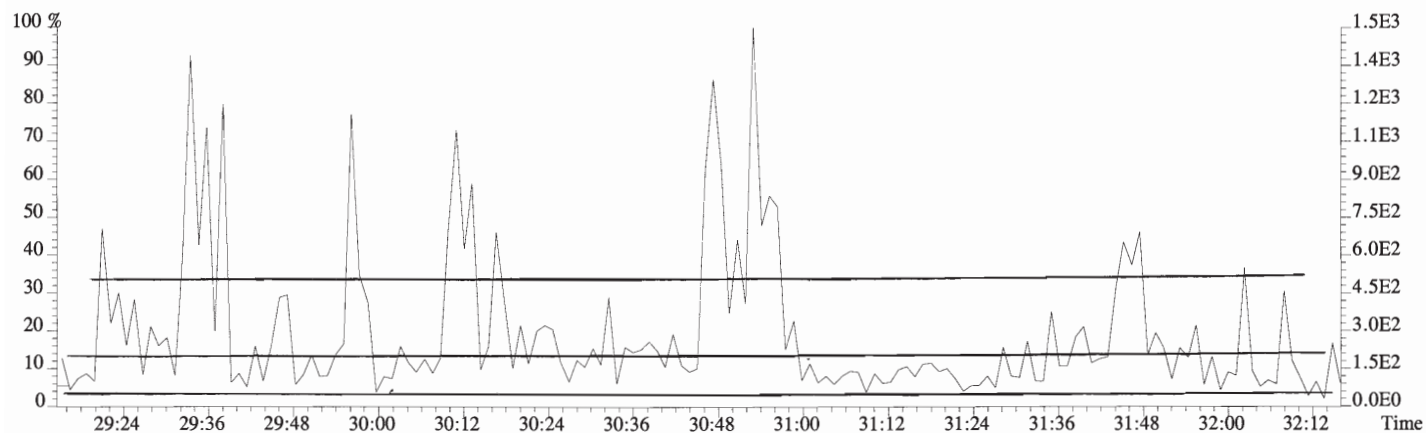
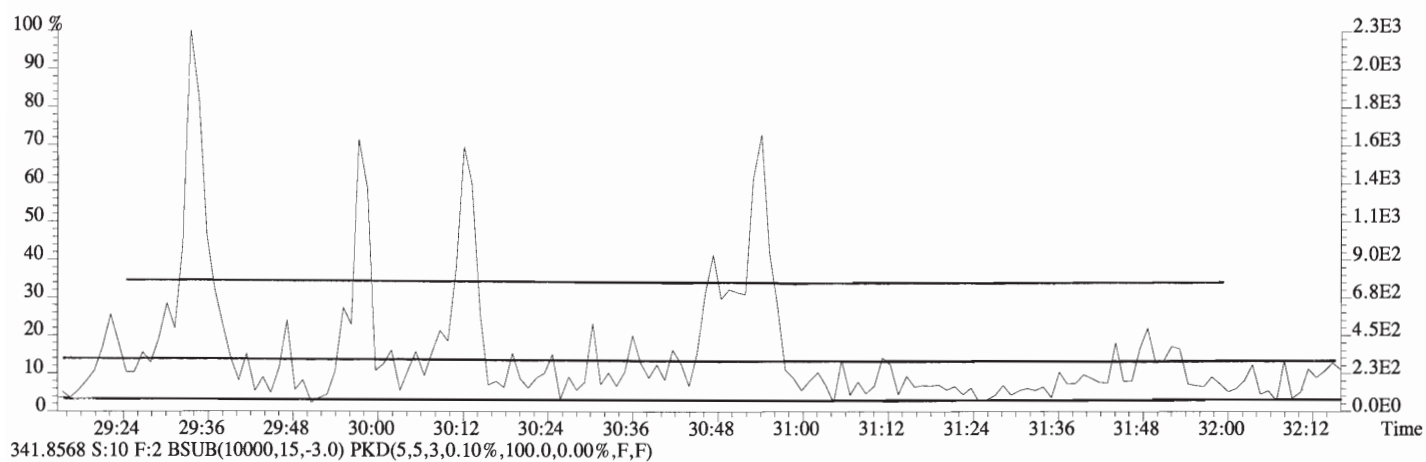
353.8970 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



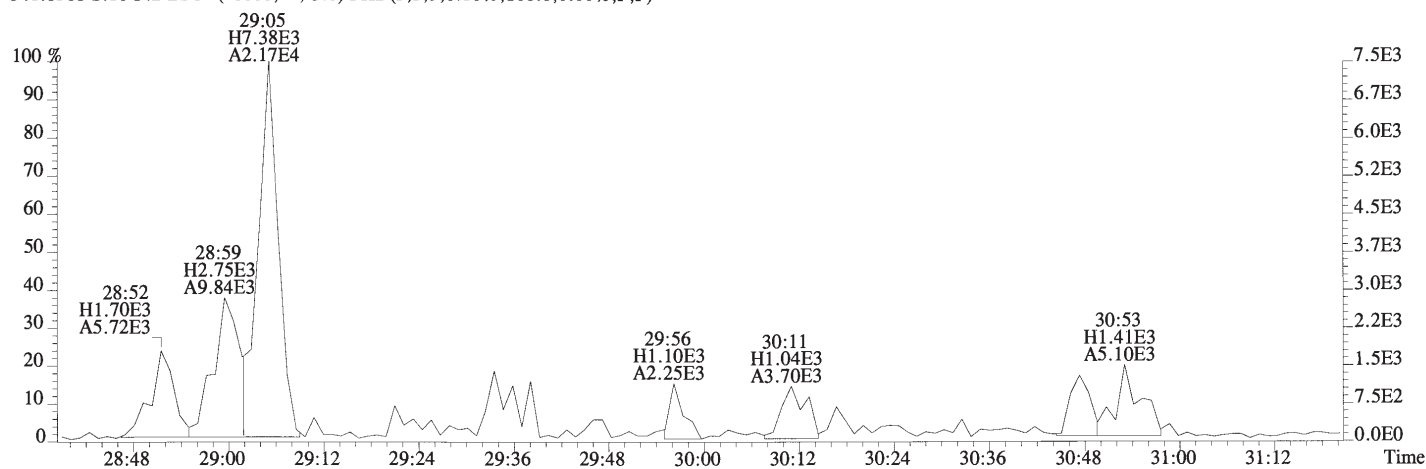
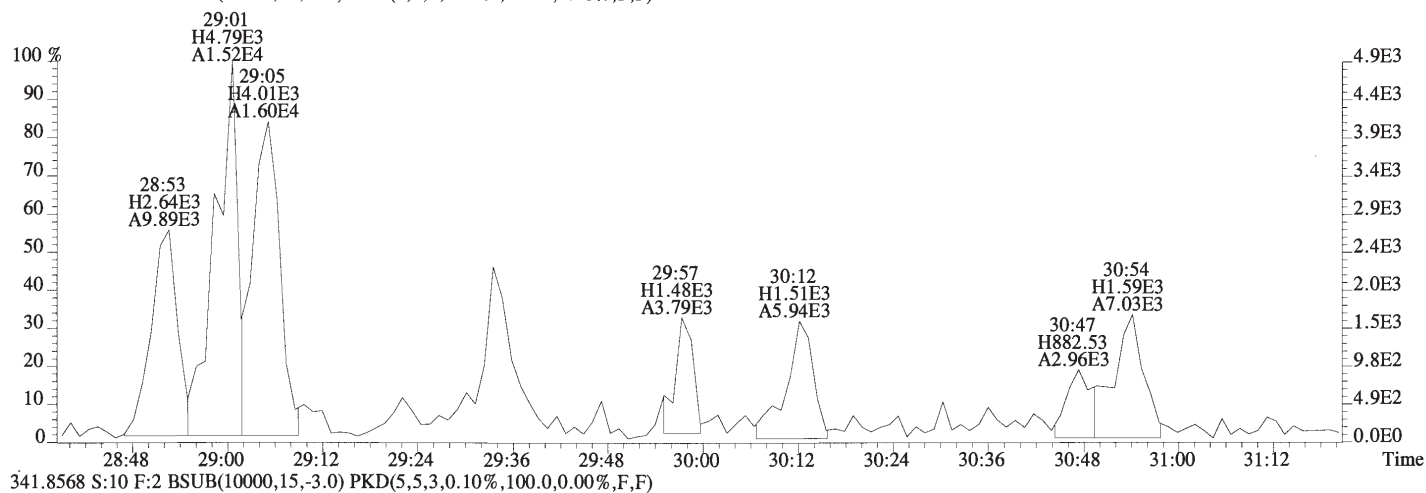
409.7974 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



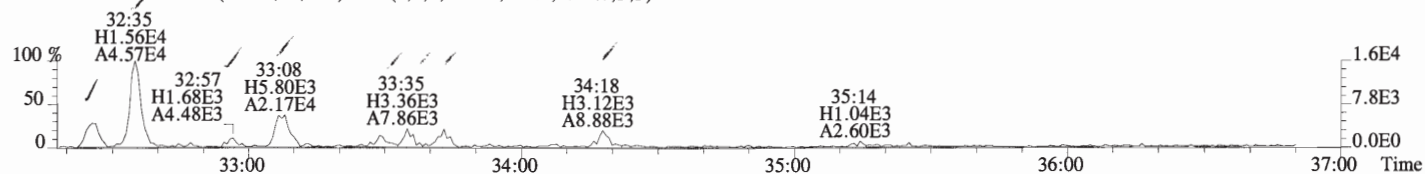
File:160712D1 #1-193 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
339.8597 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



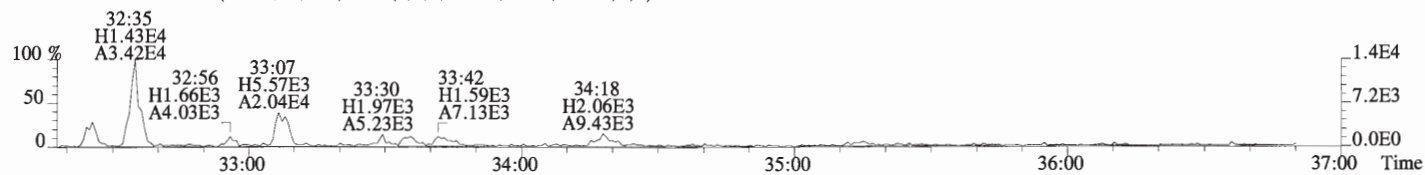
File:160712D1 #1-193 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 339.8597 S:10 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



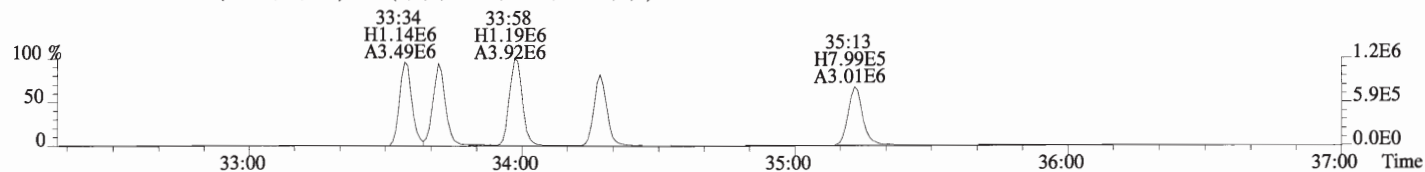
File:160712D1 #1-406 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
373.8207 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



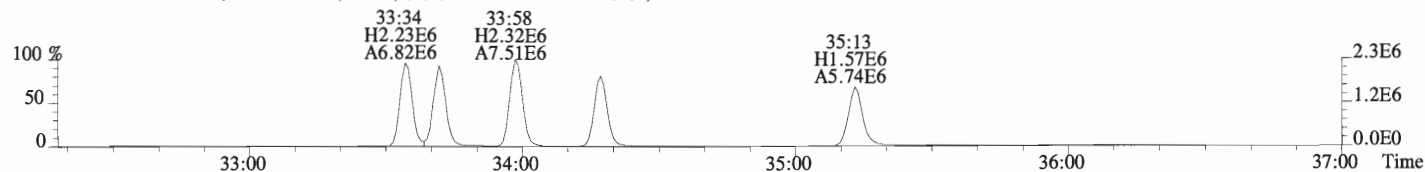
375.8178 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



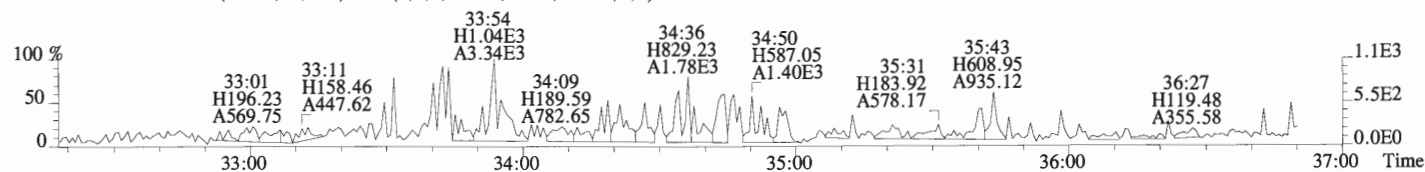
383.8639 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



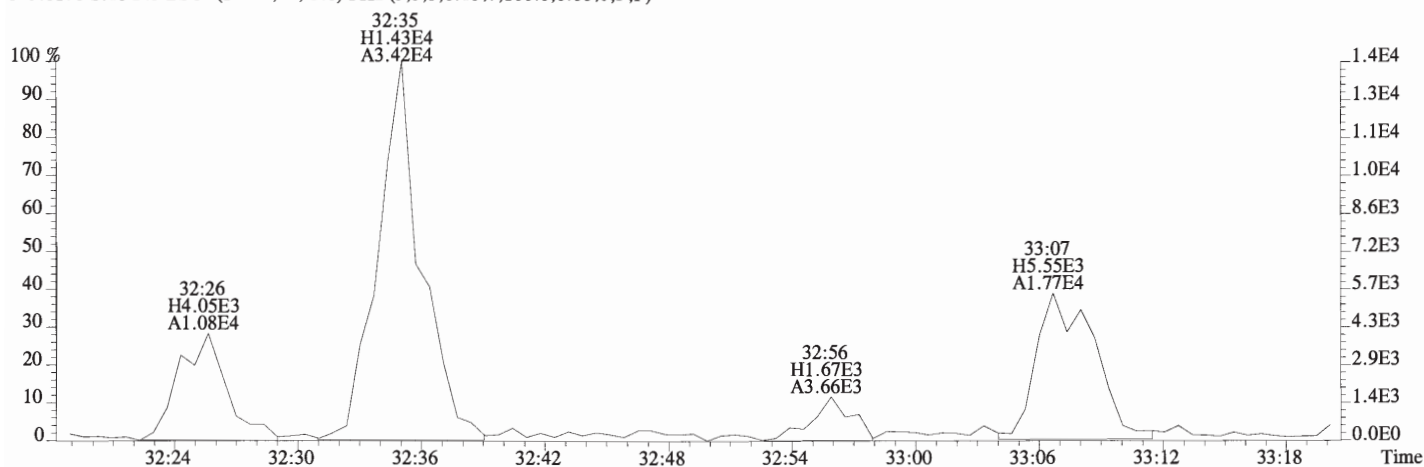
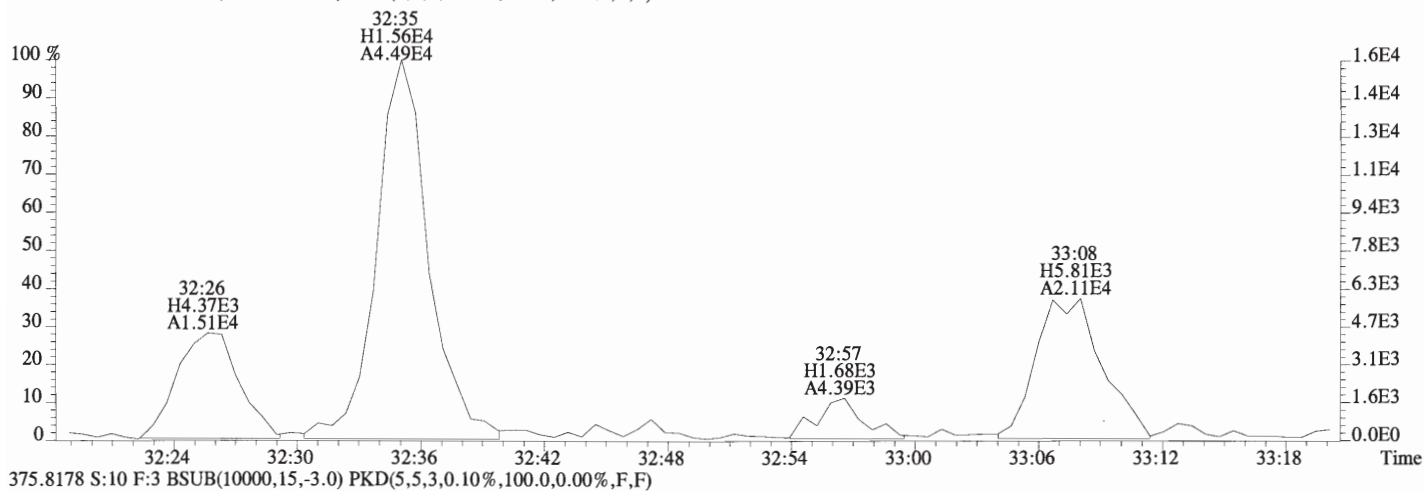
385.8610 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



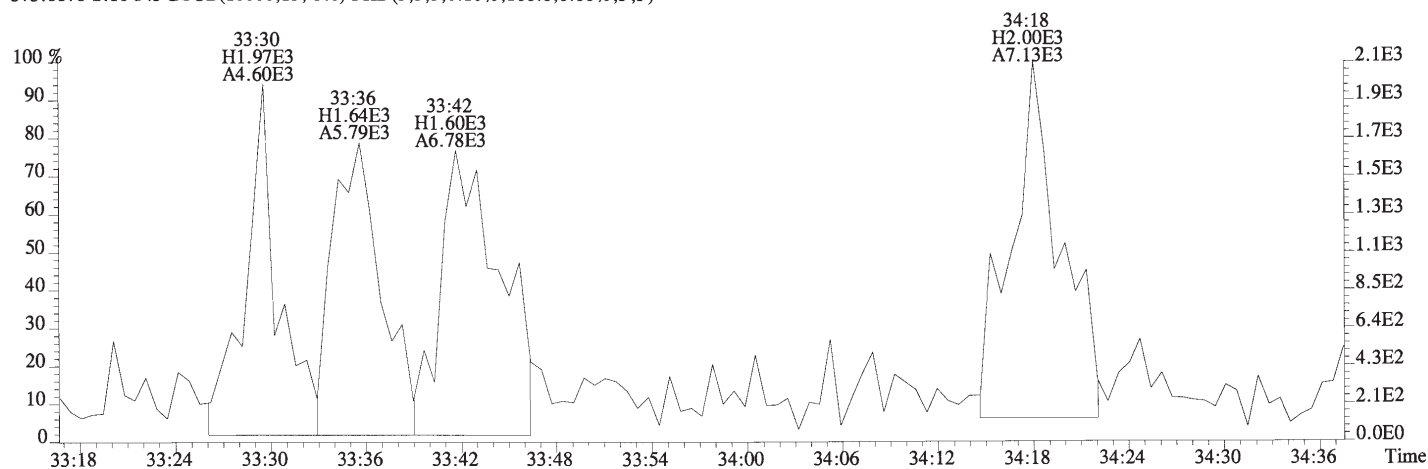
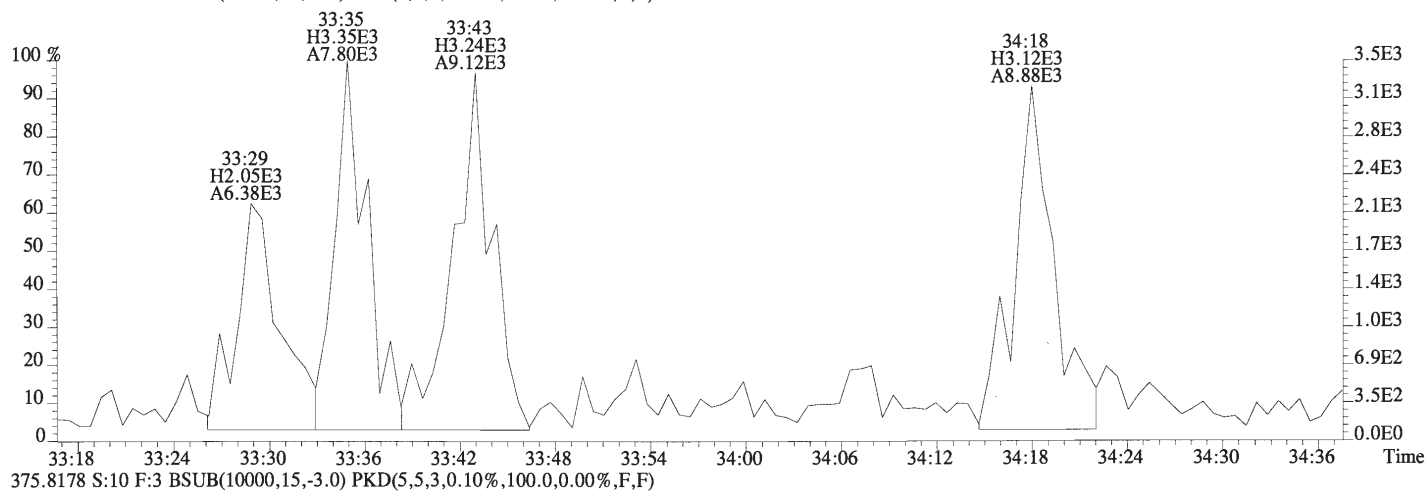
445.7555 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



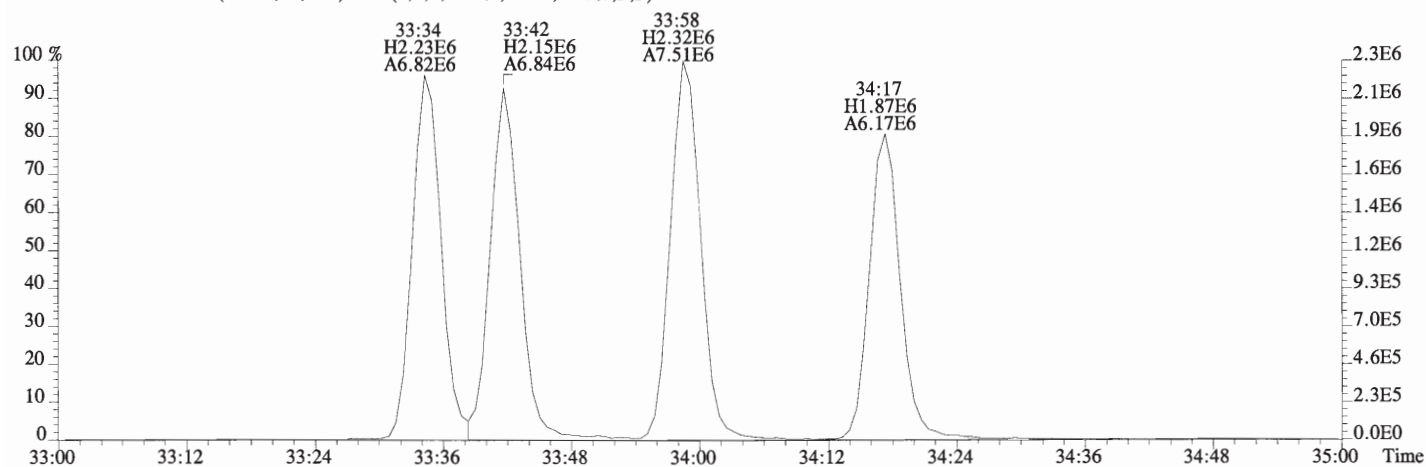
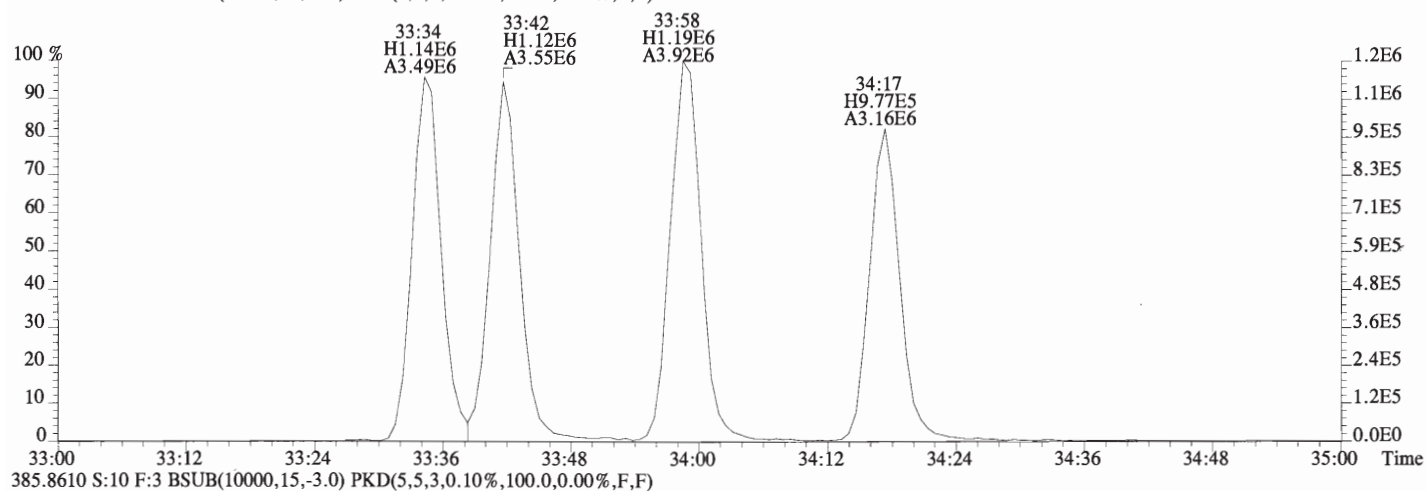
File:160712D1 #1-406 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 373.8207 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



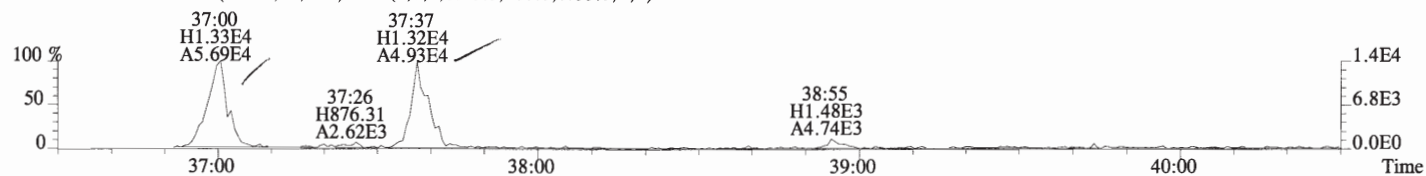
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 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 373.8207 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



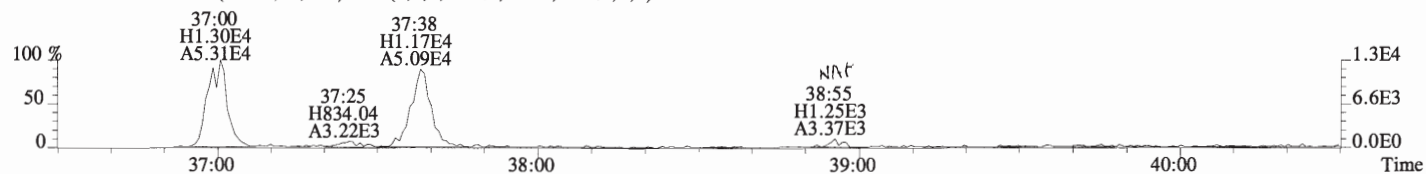
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 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 383.8639 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



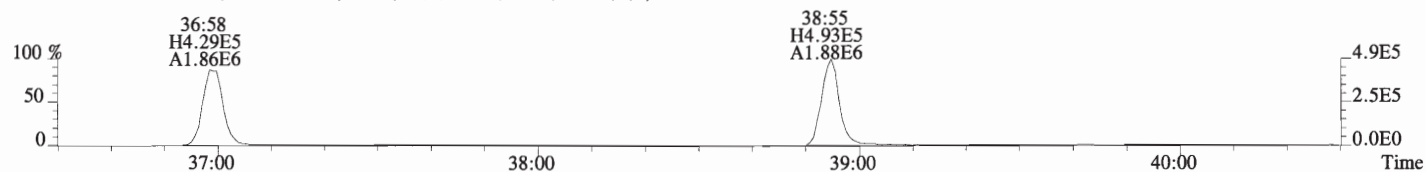
File:160712D1 #1-326 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 407.7818 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



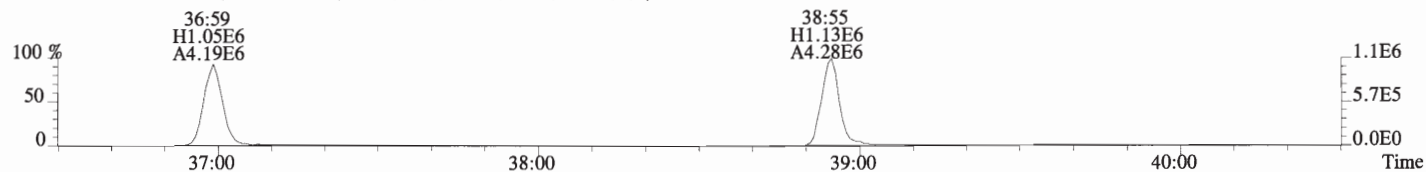
409.7788 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



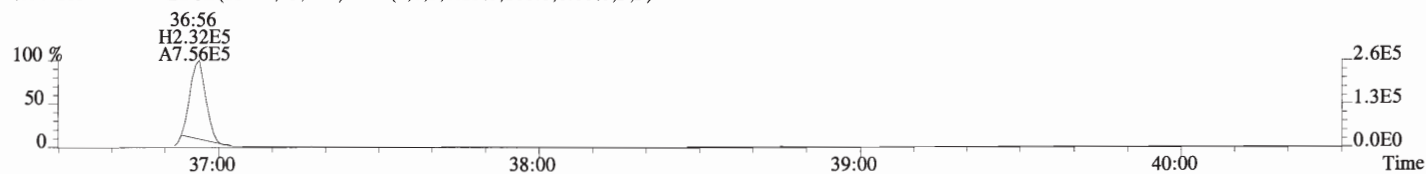
417.8253 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



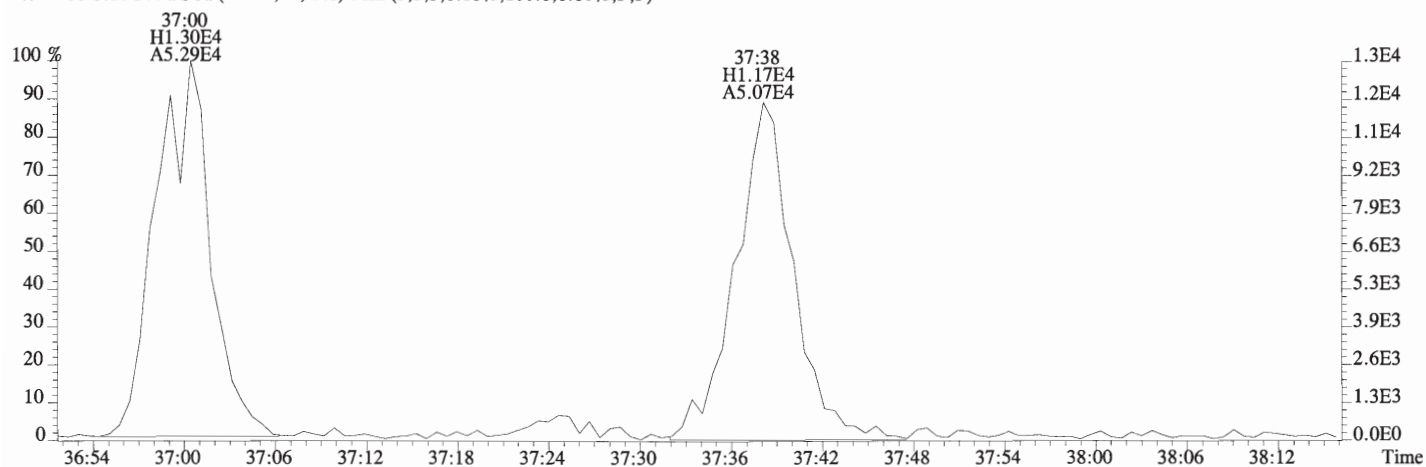
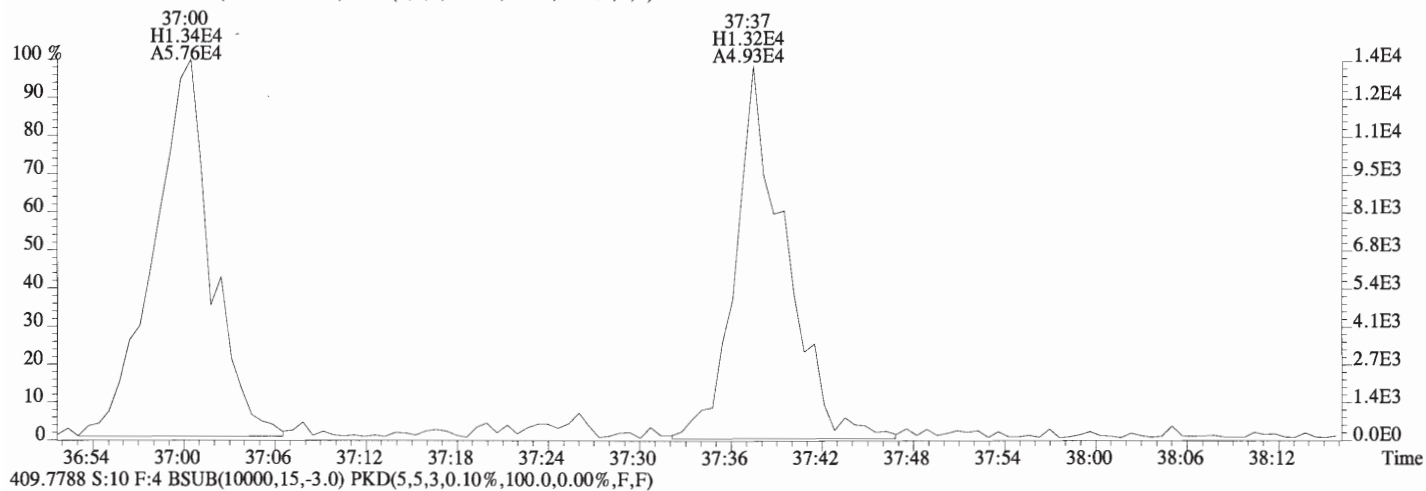
419.8220 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



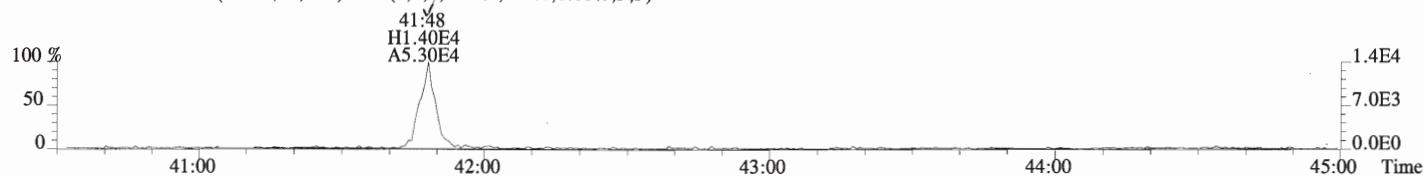
479.7165 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



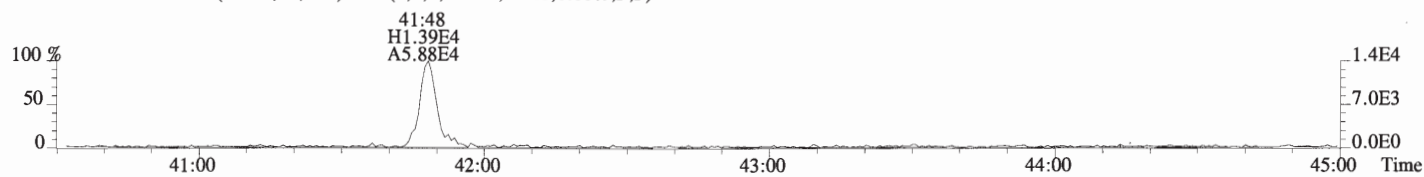
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 Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
 407.7818 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



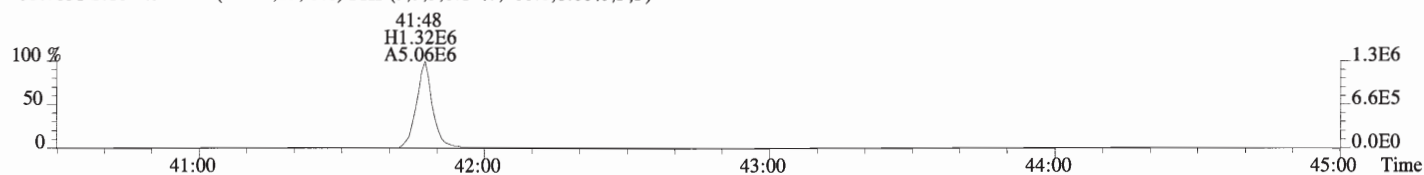
File:160712D1 #1-388 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
441.7428 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



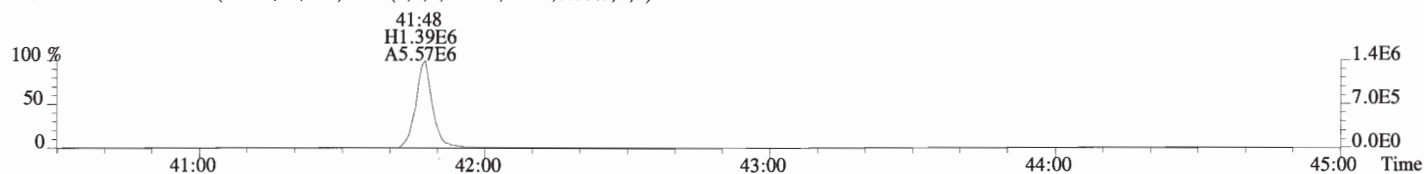
443.7398 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



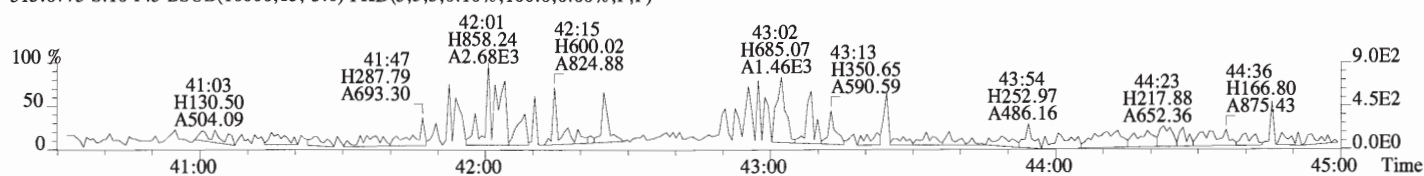
453.7831 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



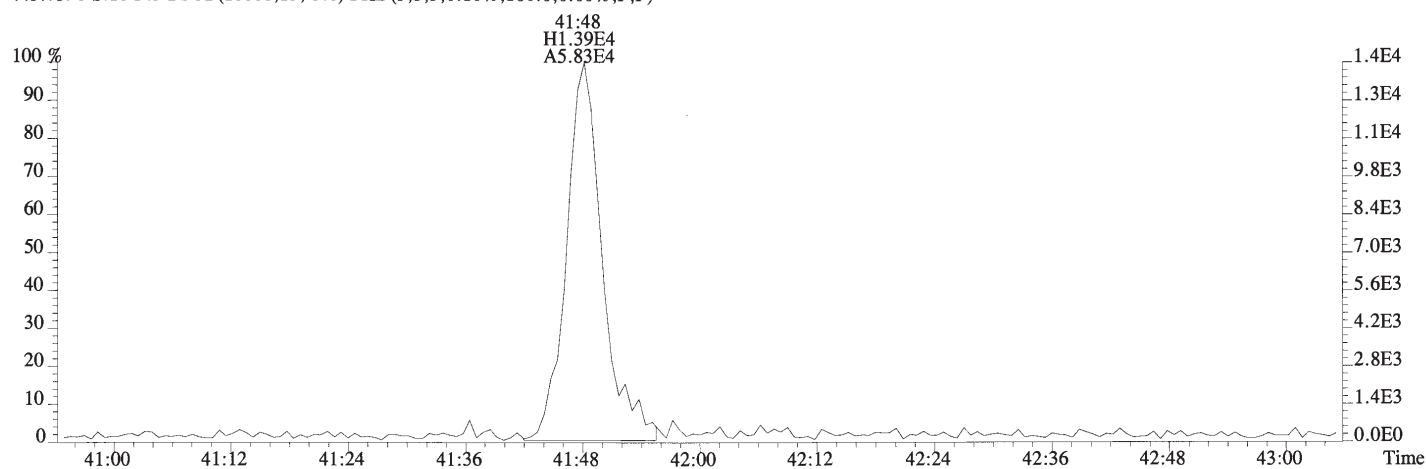
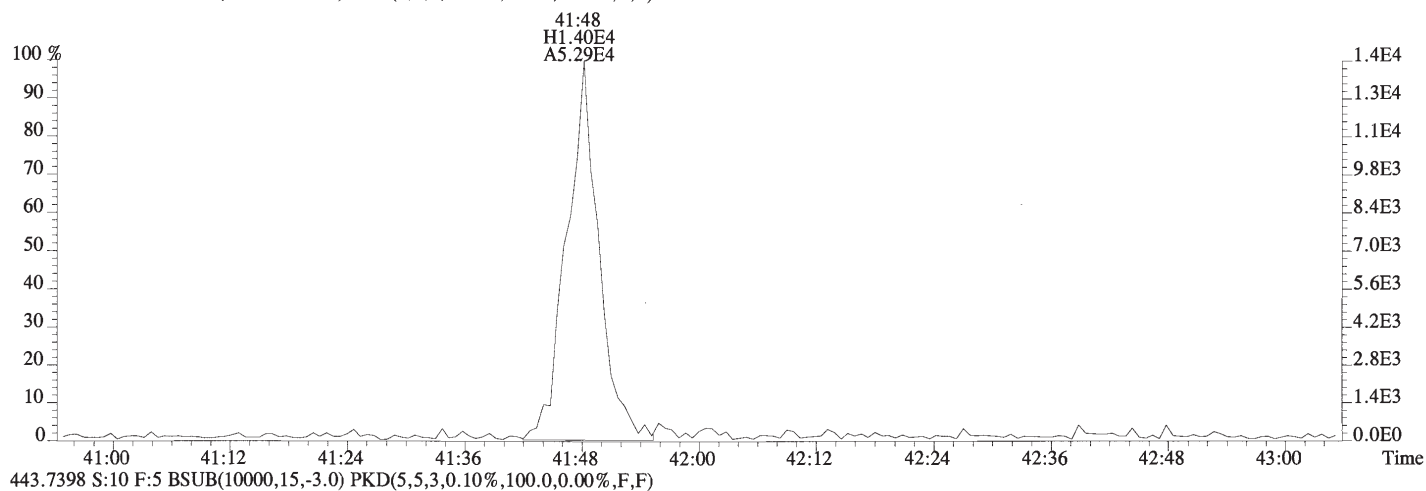
455.7801 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160712D1 #1-388 Acq:12-JUL-2016 23:37:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#10 File Text:Vista Analytical Laboratory VG7 Text:1600835-06RE1 DU-1-12-C 11.32 Exp:OCDD_DB5
441.7428 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: DU-3-1-A
Lab ID: 1600835-07

Filename: 160712D1 S:11 Acq:13-JUL-16 00:26:09
GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16

wt/vol: 9.900

ConCal: ST160712D1-1
EndCAL: NA

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Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	1.13	NotF _q	*	*	*	294	2.5	0.0909	Total Tetra-Dioxins	0.834	0.951		*	*
1,2,3,7,8-PeCDD	7.69e+03	0.83 n	0.96	31:10	1.000	0.18800	*	*	2.5	*	Total Penta-Dioxins	0.165	1.28		*	*
1,2,3,4,7,8-HxCDD	9.58e+03	1.06 y	1.00	34:28	1.000	0.27948	*	*	2.5	*	Total Hexa-Dioxins	10.1	10.1		*	*
1,2,3,6,7,8-HxCDD	3.52e+04	1.34 y	1.10	34:34	1.000	0.96454	*	*	2.5	*	Total Hepta-Dioxins	39.9	39.9		*	*
1,2,3,7,8,9-HxCDD	2.03e+04	1.06 y	1.05	34:52	1.000	0.57360	*	*	2.5	*	Total Tetra-Furans	2.54	2.85		*	*
1,2,3,4,6,7,8-HpCDD	4.88e+05	1.00 y	1.05	38:23	1.000	18.062	*	*	2.5	*	Total Penta-Furans	1.5757	1.8777		*	*
OCDD	4.35e+06	0.89 y	0.96	41:34	1.000	227.06	*	*	2.5	*	Total Hexa-Furans	4.77	4.77		*	*
											Total Hepta-Furans	6.06	6.06		*	*
2,3,7,8-TCDF	*	* n	1.12	NotF _q	*	*	*	629	2.5	0.147						
1,2,3,7,8-PeCDF	1.04e+04	1.65 y	1.01	29:57	1.001	0.16511	*	*	2.5	*						
2,3,4,7,8-PeCDF	5.72e+03	0.94 n	0.90	30:54	1.001	0.093026	*	*	2.5	*						
1,2,3,4,7,8-HxCDF	1.75e+04	1.24 y	1.16	33:35	1.000	0.30906	*	*	2.5	*						
1,2,3,6,7,8-HxCDF	1.08e+04	1.19 y	1.16	33:42	1.000	0.18608	*	*	2.5	*						
2,3,4,6,7,8-HxCDF	1.18e+04	1.06 y	1.23	34:18	1.000	0.21898	*	*	2.5	*						
1,2,3,7,8,9-HxCDF	2.22e+04	1.40 y	1.13	35:14	1.000	0.43162	*	*	2.5	*						
1,2,3,4,6,7,8-HpCDF	9.83e+04	1.05 y	1.44	37:00	1.000	2.3184	*	*	2.5	*						
1,2,3,4,7,8,9-HpCDF	6.69e+03	1.17 y	1.31	38:55	1.000	0.16645	*	*	2.5	*						
OCDF	1.13e+05	0.93 y	1.03	41:48	1.000	4.3529	*	*	2.5	*						
IS	13C-2,3,7,8-TCDD	1.03e+07	0.77 y	1.01	26:26	1.025	167.41				Rec					
IS	13C-1,2,3,7,8-PeCDD	8.59e+06	0.64 y	1.10	31:10	1.208	128.04				Qual					
IS	13C-1,2,3,4,7,8-HxCDD	6.91e+06	1.27 y	0.72	34:27	1.014	166.11				82.9					
IS	13C-1,2,3,6,7,8-HxCDD	6.74e+06	1.27 y	0.73	34:33	1.017	160.60				63.4					
IS	13C-1,2,3,7,8,9-HxCDD	6.83e+06	1.27 y	0.70	34:51	1.026	168.71				82.2					
IS	13C-1,2,3,4,6,7,8-HpCDD	5.20e+06	1.09 y	0.66	38:22	1.129	135.51				79.5					
IS	13C-OCDD	8.05e+06	0.92 y	0.66	41:34	1.223	211.45				83.5					
IS	13C-2,3,7,8-TCDF	1.53e+07	0.80 y	0.90	25:35	0.992	172.12				67.1					
IS	13C-1,2,3,7,8-PeCDF	1.26e+07	1.62 y	0.98	29:56	1.160	130.17				52.3					
IS	13C-2,3,4,7,8-PeCDF	1.38e+07	1.57 y	1.15	30:53	1.197	122.10				85.2					
IS	13C-1,2,3,4,7,8-HxCDF	9.87e+06	0.52 y	1.01	33:35	0.988	168.60				64.4					
IS	13C-1,2,3,6,7,8-HxCDF	1.02e+07	0.52 y	1.10	33:42	0.992	160.77				60.4					
IS	13C-2,3,4,6,7,8-HxCDF	8.88e+06	0.53 y	0.95	34:18	1.009	161.68				83.5					
IS	13C-1,2,3,7,8,9-HxCDF	9.17e+06	0.54 y	0.83	35:14	1.037	192.16				79.6					
IS	13C-1,2,3,4,6,7,8-HpCDF	5.95e+06	0.44 y	0.70	37:00	1.089	147.45				80.0					
IS	13C-1,2,3,4,7,8,9-HpCDF	6.18e+06	0.45 y	0.72	38:55	1.145	148.85				95.1					
IS	13C-OCDF	1.02e+07	0.88 y	0.82	41:48	1.230	213.70				73.0					
C/Up	37Cl-2,3,7,8-TCDD	4.45e+06		1.14	26:27	1.025	64.307				73.7					
											52.9					
RS/RT	13C-1,2,3,4-TCDD	1.23e+07	0.78 y	1.00	25:48	*	202.02									
RS	13C-1,2,3,4-TCDF	2.00e+07	0.81 y	1.00	24:13	*	202.02									
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.16e+07	0.52 y	1.00	33:59	*	202.02									

Integrations
by DB
Analyst: DB
Date: 7/15/16
Reviewed
by MP
Analyst: MP
Date: 7/15/16

Totals class: TCDD\EMPC

Entry #: 19

Run: 16 File: 160712D1 S: 11 I: 1 F: 1
Acquired: 13-JUL-16 00:26:09 Processed: 14-JUL-16 10:27:44

Total Concentration: 0.95082 Unnamed Concentration: 0.951

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
22:38	1.125e+04	1.703e+04	0.66 y	2.828e+04	0.49105
23:04	5.374e+03	6.072e+03	0.89 y	1.145e+04	0.19875
24:36	3.726e+03	4.585e+03	0.81 y	8.311e+03	0.14432
25:48	4.050e+03	3.797e+03	1.07 n	6.721e+03	0.11670

Totals class: PeCDD EMPC Entry #: 21

Run: 16 File: 160712D1 S: 11 I: 1 F: 2
Acquired: 13-JUL-16 00:26:09 Processed: 14-JUL-16 10:27:44

Total Concentration: 1.2772 Unnamed Concentration: 1.089

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
29:02	1.028e+04	2.111e+04	0.49	n	2.659e+04	0.65009
29:30	6.479e+03	6.871e+03	0.94	n	1.120e+04	0.27386
30:14	2.731e+03	4.025e+03	0.68	y	6.756e+03	0.16520
31:10	3.938e+03	4.717e+03	0.83	n	7.688e+03	0.18800
						1,2,3,7,8-PeCDD

Totals class: HxCDD EMPC

Entry #: 23

Run: 16

File: 160712D1

S: 11 I: 1 F: 3

Acquired: 13-JUL-16 00:26:09

Processed: 14-JUL-16 10:27:44

Total Concentration: 10.102

Unnamed Concentration: 8.284

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:57	7.231e+04	5.562e+04	1.30 y	1.279e+05	3.6108
33:30	9.067e+03	7.135e+03	1.27 y	1.620e+04	0.45732
33:46	7.686e+04	5.867e+04	1.31 y	1.355e+05	3.8254
33:54	3.472e+03	2.848e+03	1.22 y	6.320e+03	0.17839
34:28	4.931e+03	4.648e+03	1.06 y	9.579e+03	0.27948 1,2,3,4,7,8-HxCDD
34:34	2.016e+04	1.508e+04	1.34 y	3.524e+04	0.96454 1,2,3,6,7,8-HxCDD
34:46	3.872e+03	3.652e+03	1.06 y	7.524e+03	0.21238
34:52	1.045e+04	9.882e+03	1.06 y	2.033e+04	0.57360 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 16 File: 160712D1 S: 11 I: 1 F: 4
Acquired: 13-JUL-16 00:26:09 Processed: 14-JUL-16 10:27:44

Total Concentration: 39.911 Unnamed Concentration: 21.849

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:24	3.019e+05	2.884e+05	1.05 y	5.903e+05	21.849
38:23	2.440e+05	2.440e+05	1.00 y	4.880e+05	18.062

1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 16 File: 160712D1 S: 11 I: 1 F: 1
Acquired: 13-JUL-16 00:26:09 Processed: 14-JUL-16 10:27:44

Total Concentration: 2.8482 Unnamed Concentration: 2.848

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
20:26	1.752e+04	2.481e+04	0.71 y	4.233e+04	0.49923
21:38	7.611e+04	9.732e+04	0.78 y	1.734e+05	2.0454
27:29	2.156e+04	1.454e+04	1.48 n	2.574e+04	0.30358

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 16 File: 160712D1 S: 11 I: 1 F: 1
Acquired: 13-JUL-16 00:26:09 Processed: 14-JUL-16 10:27:44

Total Concentration: 0.69059 Unnamed Concentration: 0.691

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:28	2.554e+04	1.732e+04	1.47 y	4.286e+04	0.69059

Totals class: PeCDF EMPC Entry #: 31

Run: 16 File: 160712D1 S: 11 I: 1 F: 2
Acquired: 13-JUL-16 00:26:09 Processed: 14-JUL-16 10:27:44

Total Concentration: 1.1871 Unnamed Concentration: 0.929

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28:52	7.884e+03	7.838e+03	1.01 n	1.297e+04	0.20900
28:59	1.661e+04	1.249e+04	1.33 y	2.911e+04	0.46900
29:35	8.871e+03	6.704e+03	1.32 y	1.557e+04	0.25096
29:57	6.457e+03	3.921e+03	1.65 y	1.038e+04	0.16511 1,2,3,7,8-PeCDF
30:54	3.477e+03	3.707e+03	0.94 n	5.721e+03	0.093026 2,3,4,7,8-PeCDF

Totals class: HxCDF EMPC

Entry #: 33

Run: 16 File: 160712D1 S: 11 I: 1 F: 3
Acquired: 13-JUL-16 00:26:09 Processed: 14-JUL-16 10:27:44

Total Concentration: 4.7721

Unnamed Concentration: 3.626

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:26	1.044e+04	9.825e+03	1.06 y	2.027e+04	0.36756
32:35	3.454e+04	2.945e+04	1.17 y	6.398e+04	1.1604
32:48	2.624e+03	2.293e+03	1.14 y	4.917e+03	0.089179
32:57	1.133e+04	1.017e+04	1.11 y	2.150e+04	0.38985
33:07	4.592e+04	3.697e+04	1.24 y	8.289e+04	1.5033
33:30	3.533e+03	2.865e+03	1.23 y	6.398e+03	0.11604
33:35	9.719e+03	7.811e+03	1.24 y	1.753e+04	0.30906
33:42	5.881e+03	4.960e+03	1.19 y	1.084e+04	0.18608
34:18	6.082e+03	5.718e+03	1.06 y	1.180e+04	0.21898
35:14	1.297e+04	9.232e+03	1.40 y	2.220e+04	0.43162

Totals class: HpCDF EMPC

Entry #: 35

Run: 16 File: 160712D1 S: 11 I: 1 F: 4

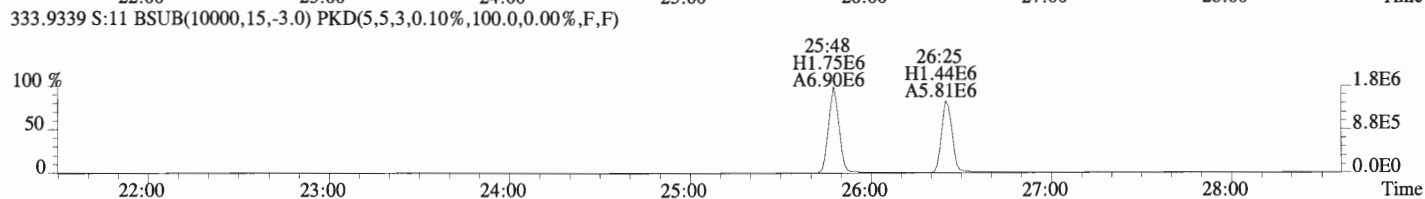
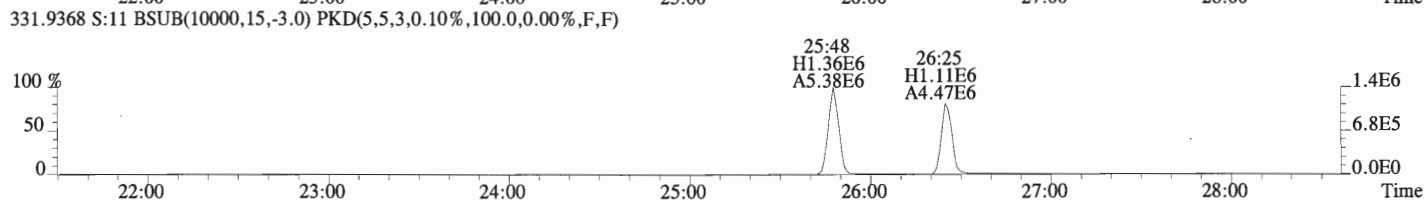
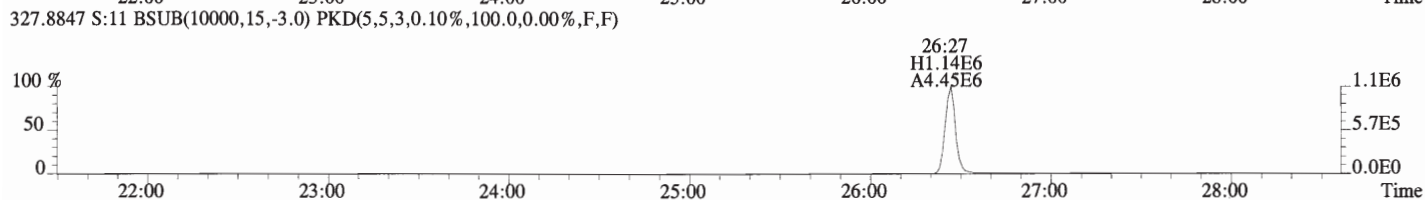
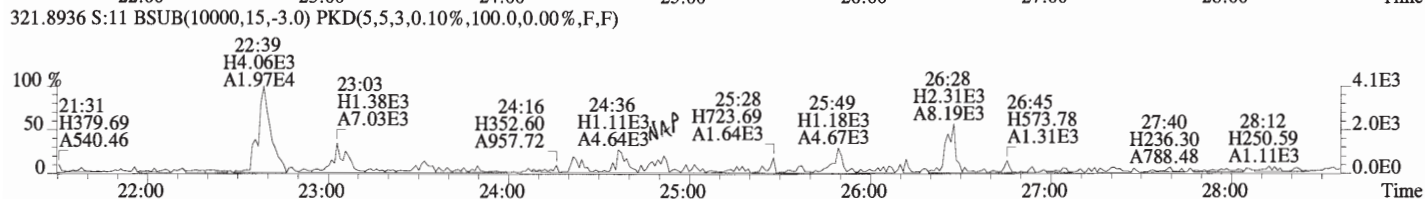
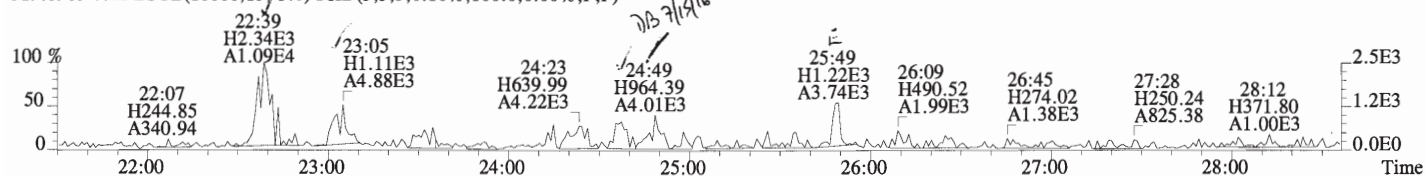
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Total Concentration: 6.0572

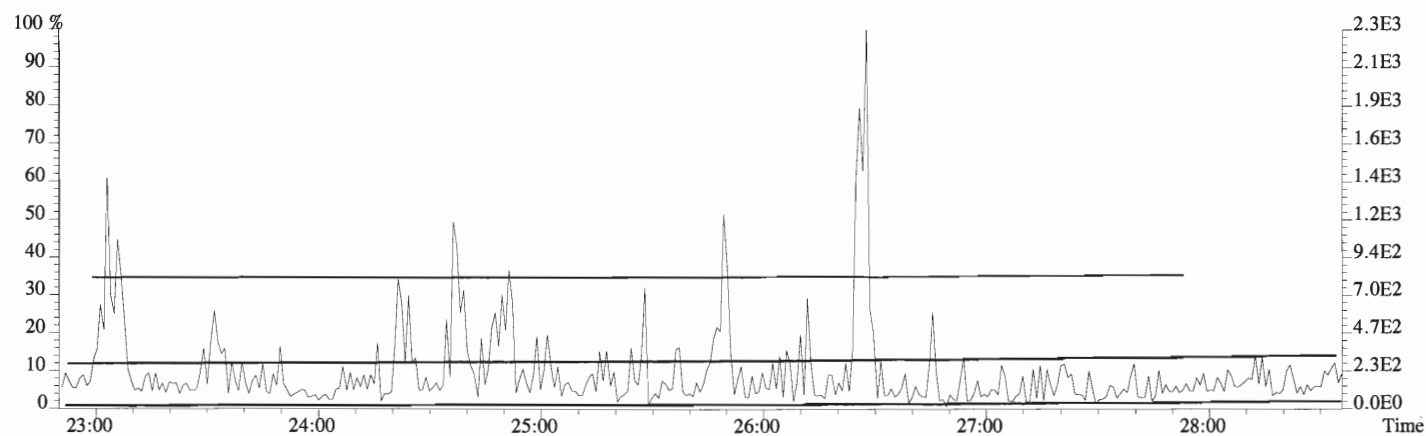
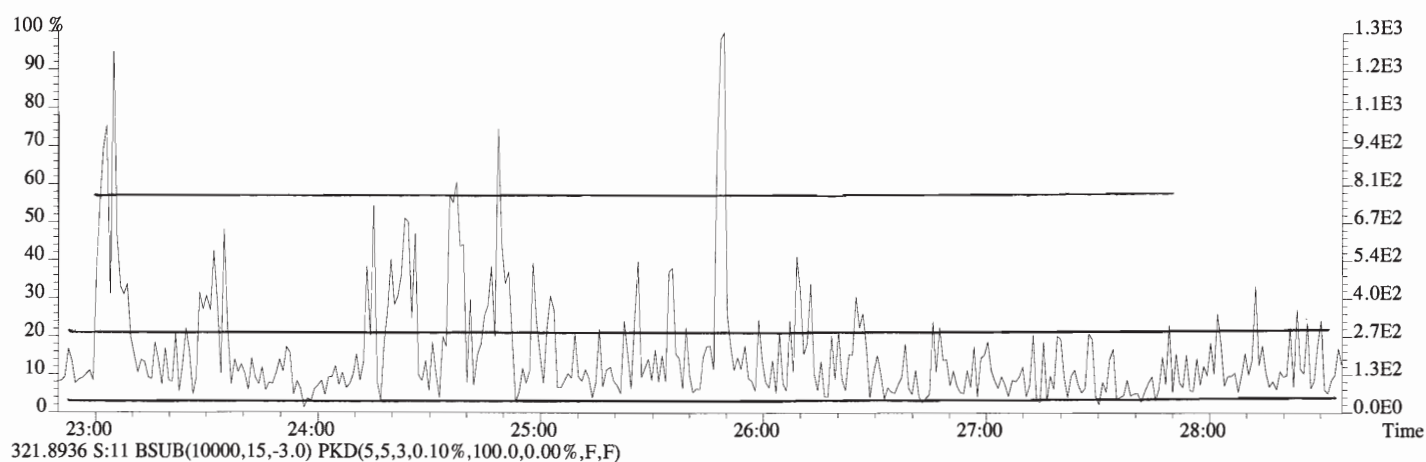
Unnamed Concentration: 3.572

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
37:00	5.042e+04	4.784e+04	1.05	y	9.826e+04	2.3184	1,2,3,4,6,7,8-HpCDF
37:38	7.671e+04	7.076e+04	1.08	y	1.475e+05	3.5723	
38:55	3.602e+03	3.087e+03	1.17	y	6.689e+03	0.16645	1,2,3,4,7,8,9-HpCDF

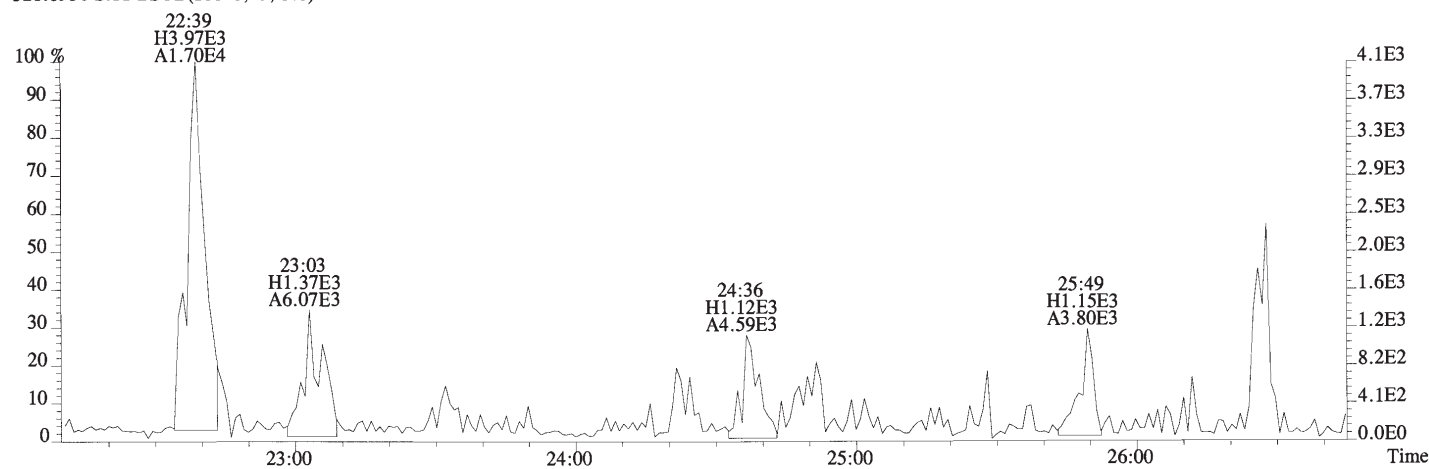
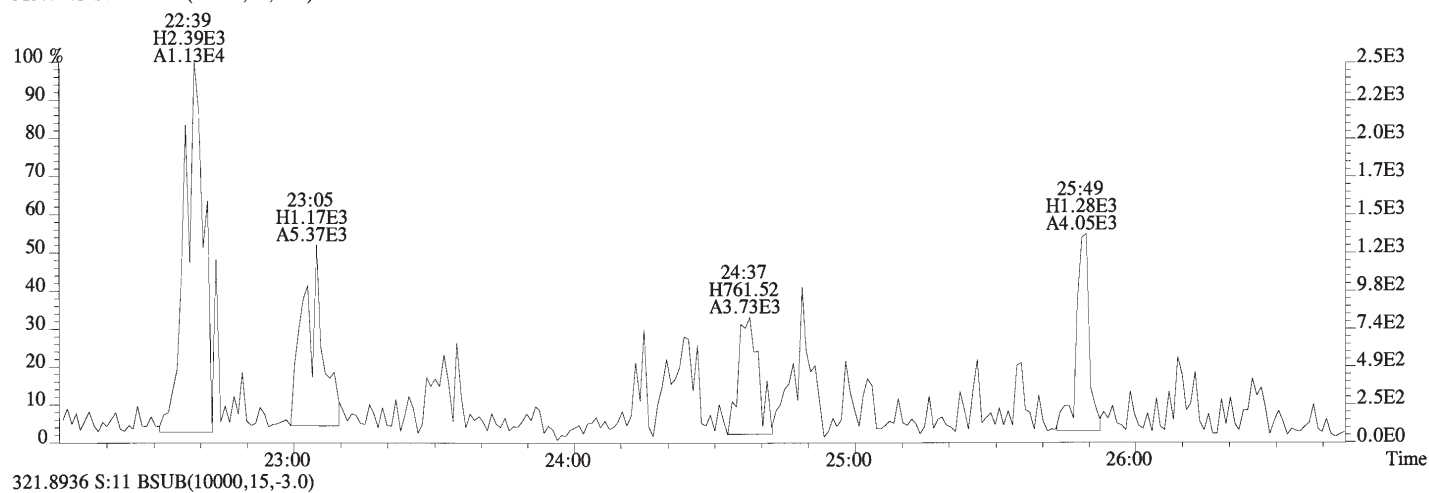
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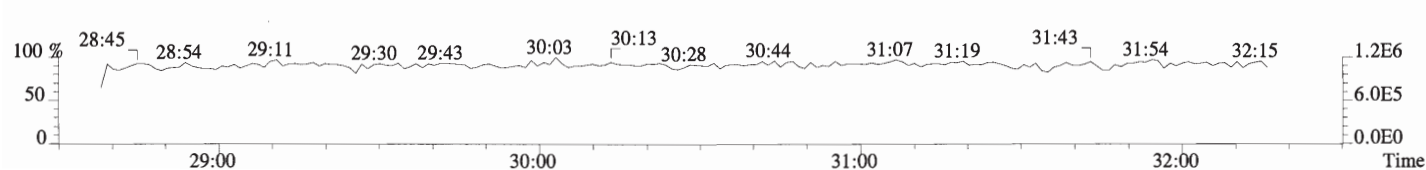
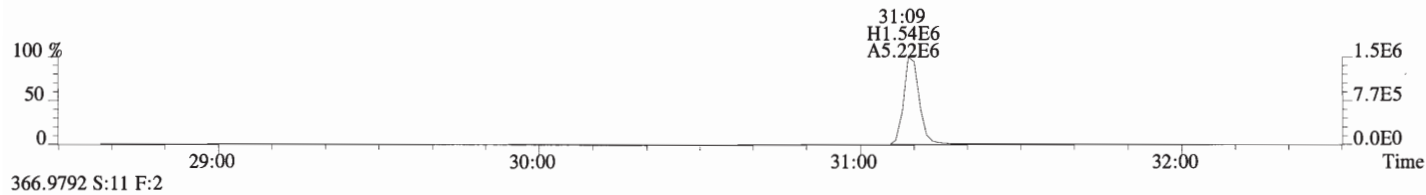
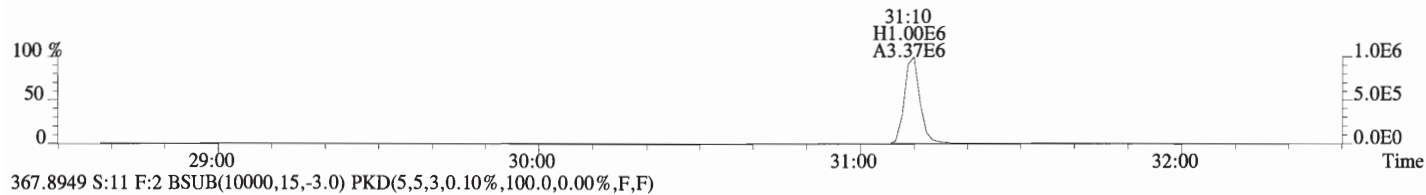
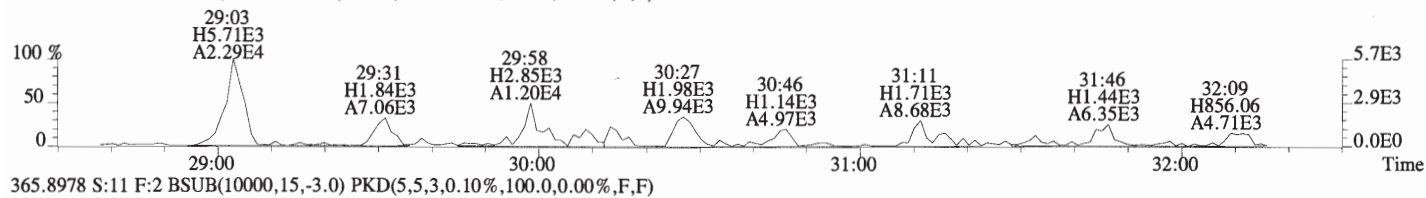
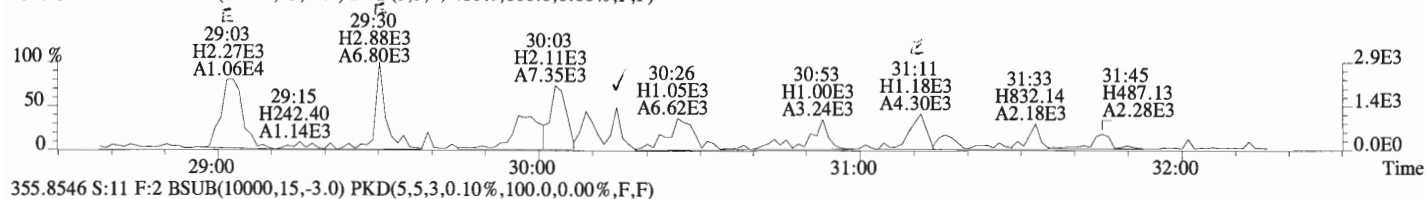
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Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
319.8965 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



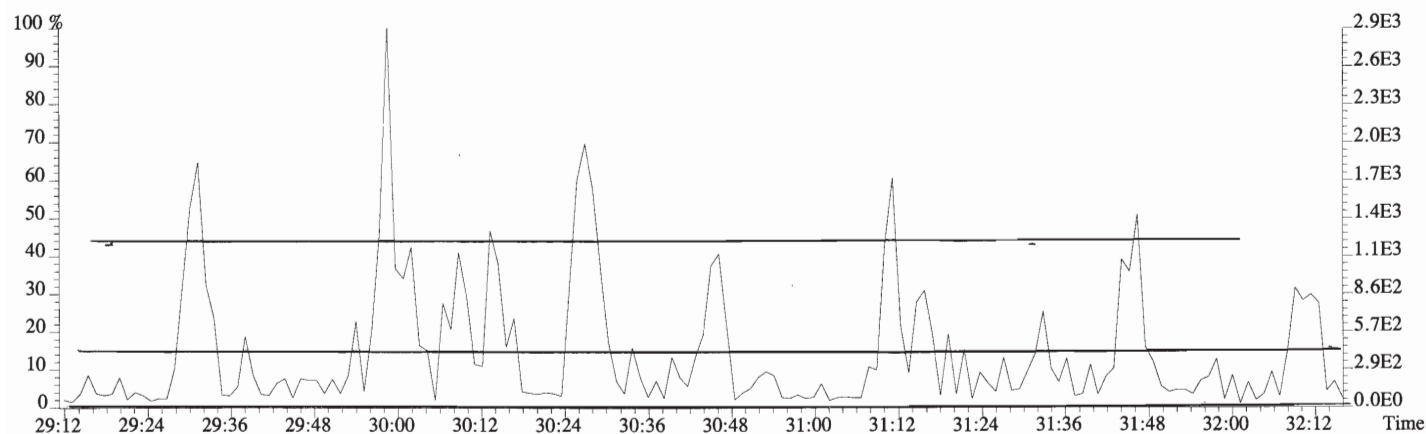
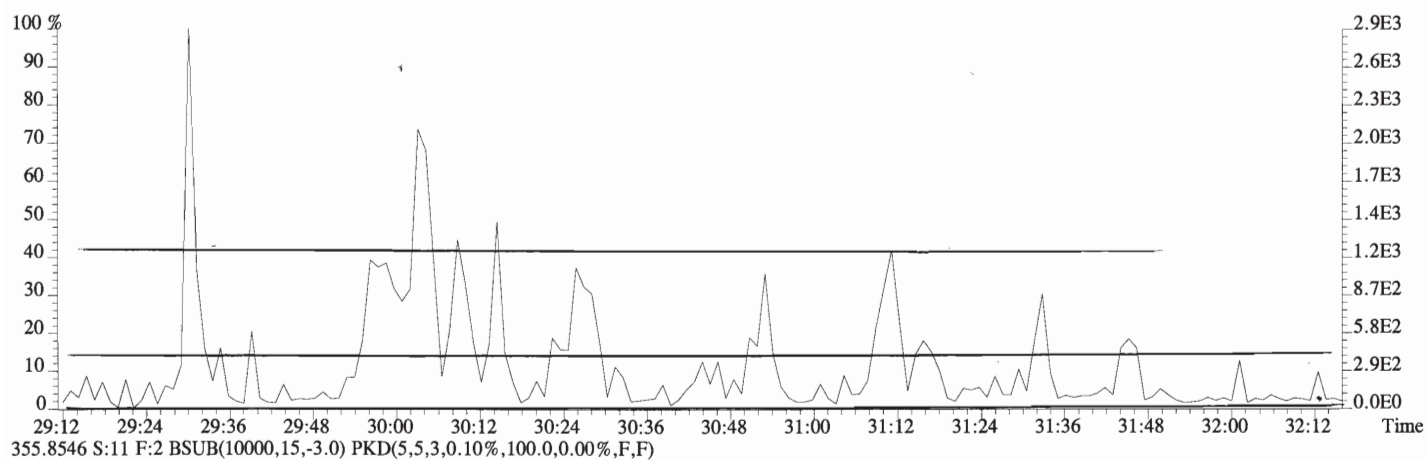
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 319.8965 S:11 BSUB(10000,15,-3.0)



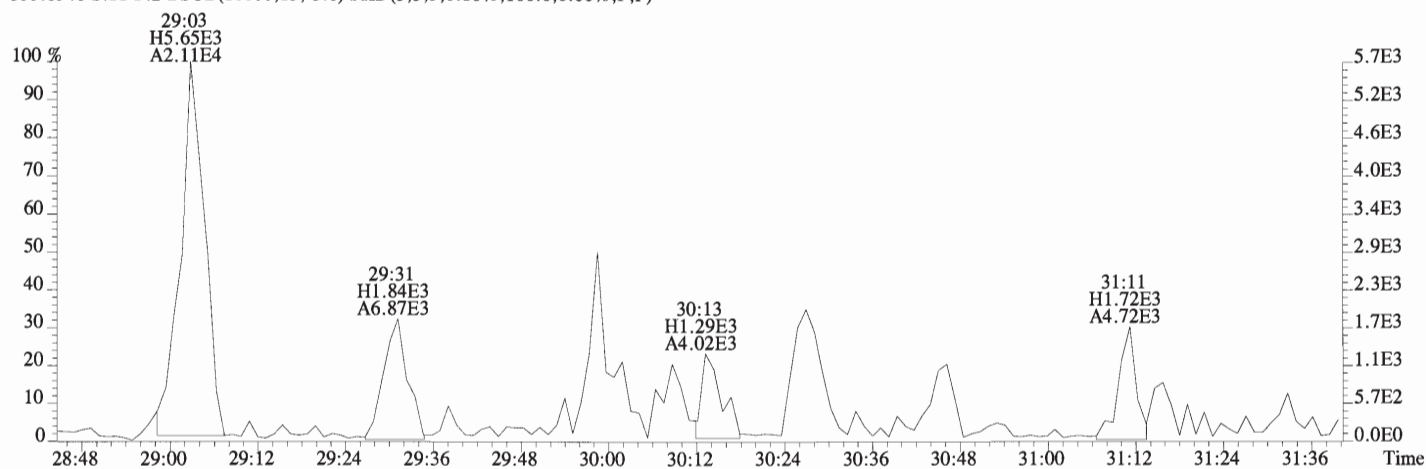
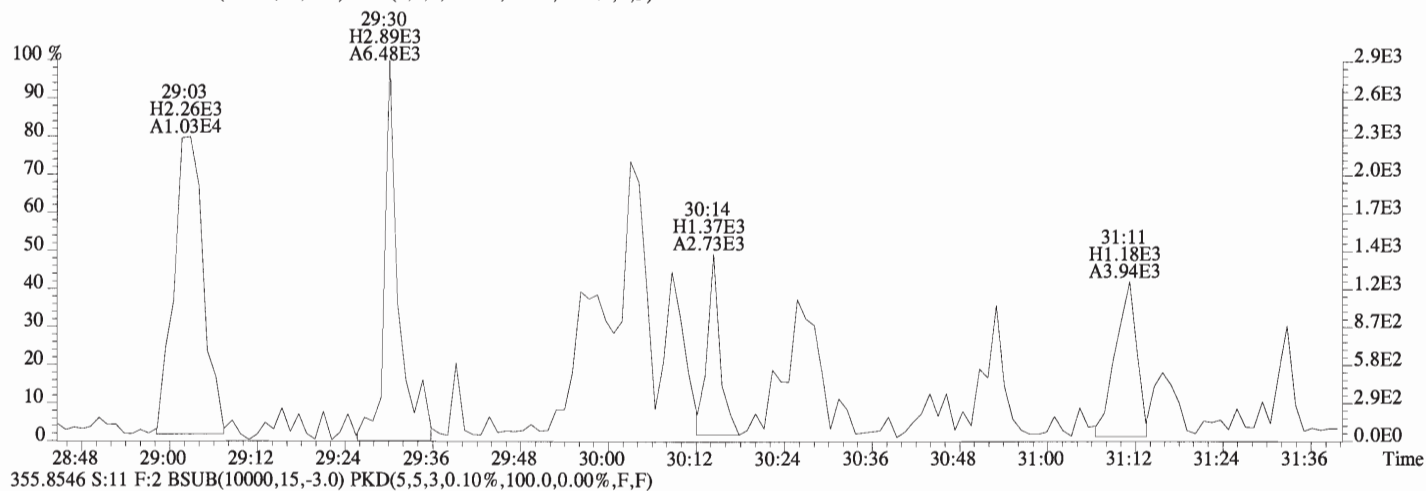
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 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 353.8576 S:11 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



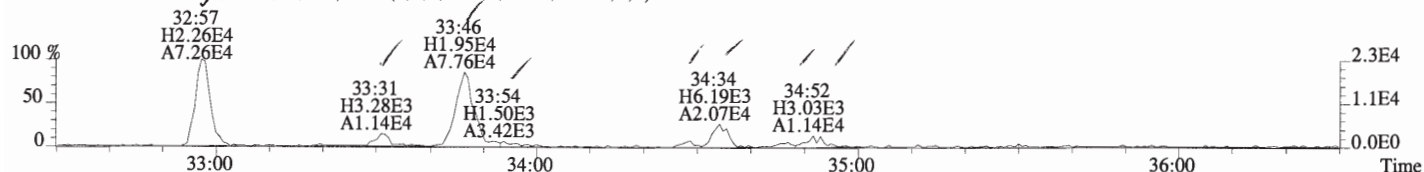
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353.8576 S:11 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



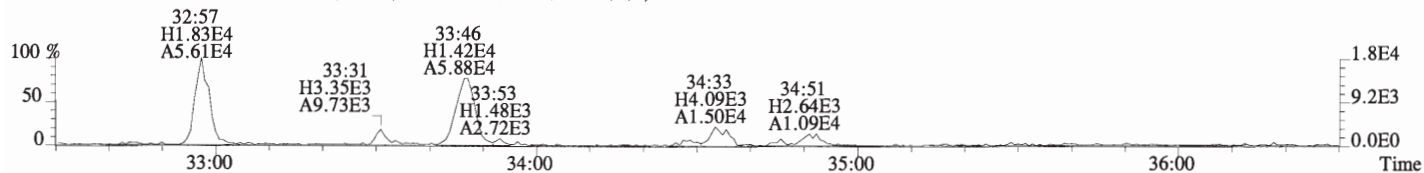
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 353.8576 S:11 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



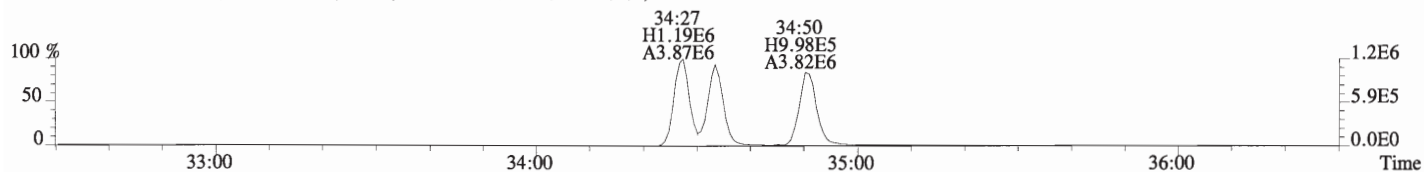
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 389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



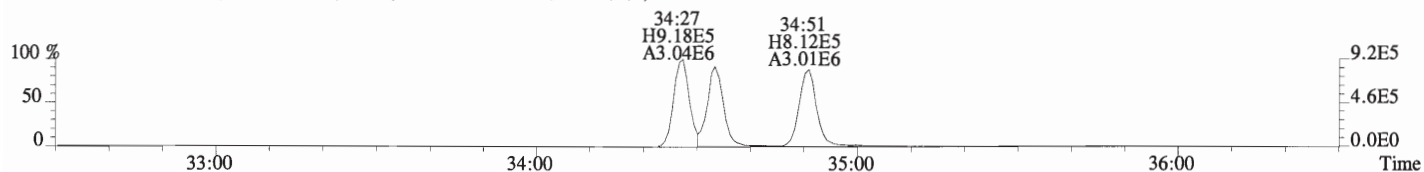
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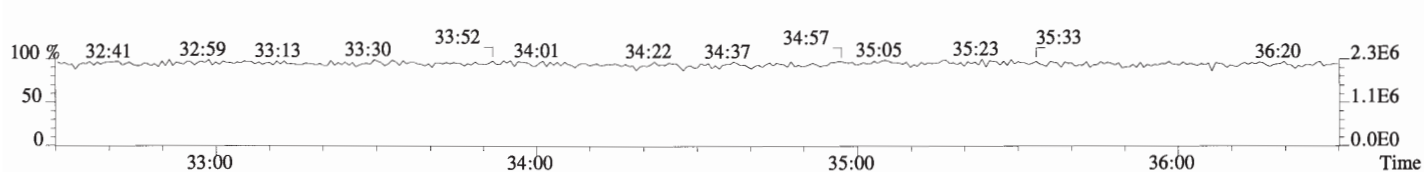
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



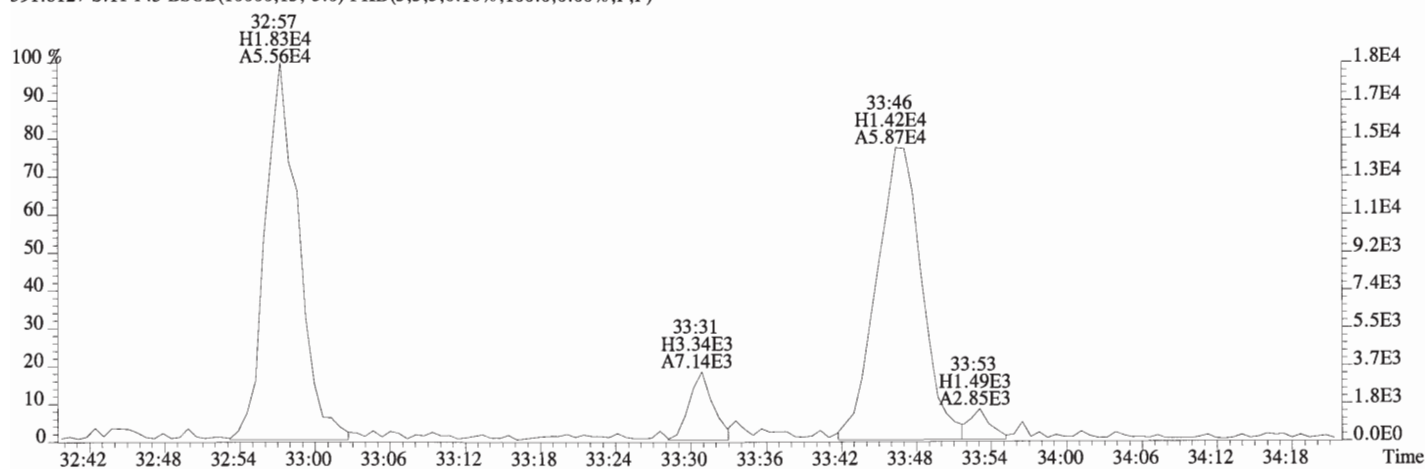
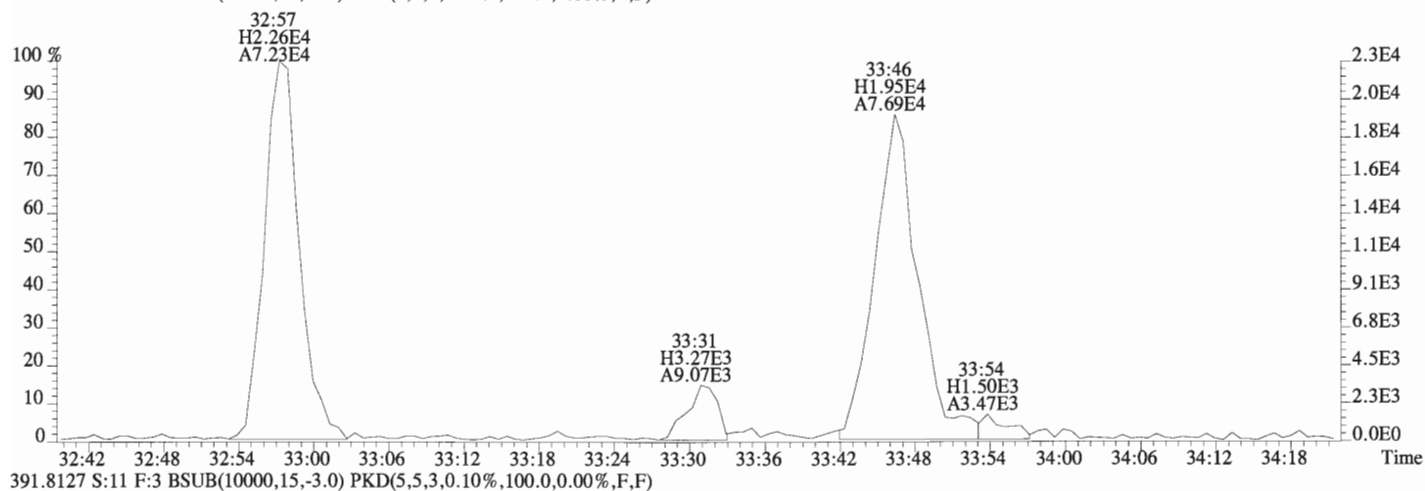
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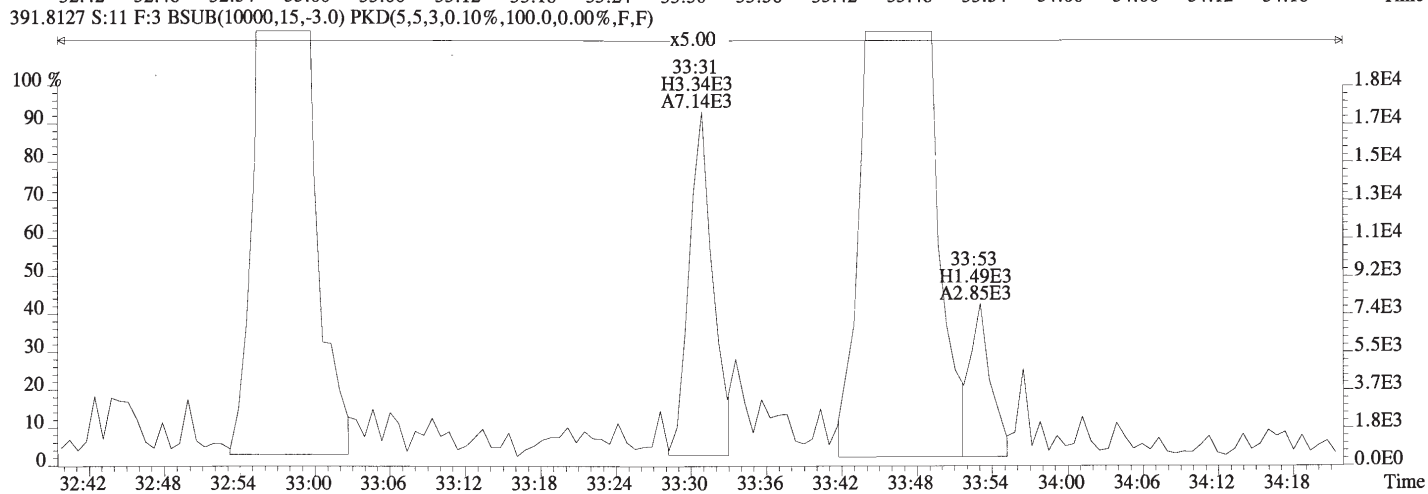
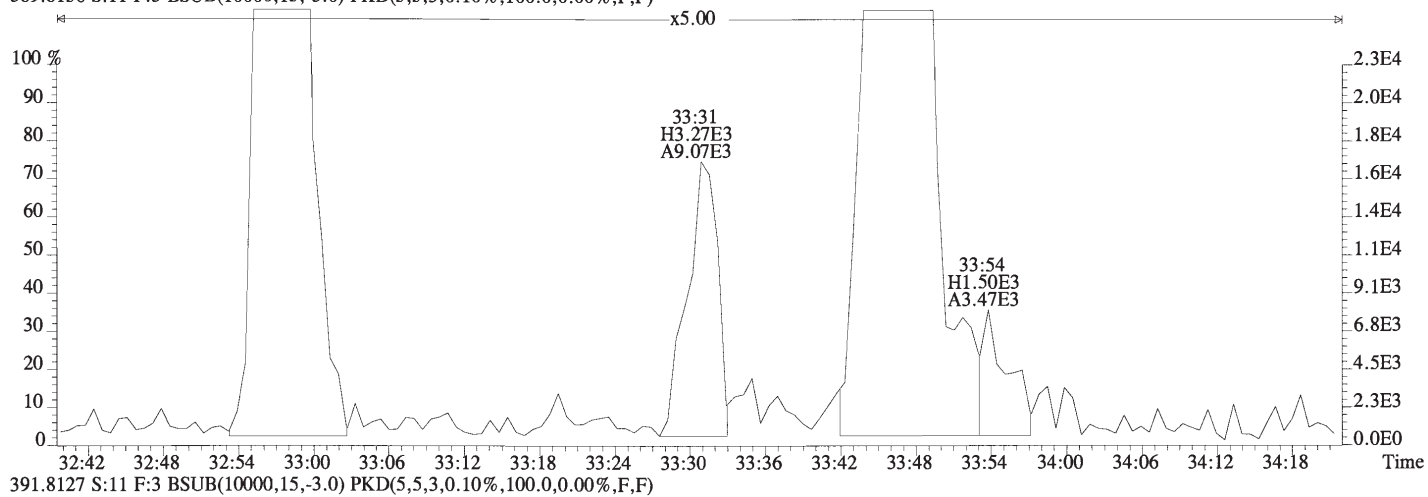
392.9760 S:11 F:3



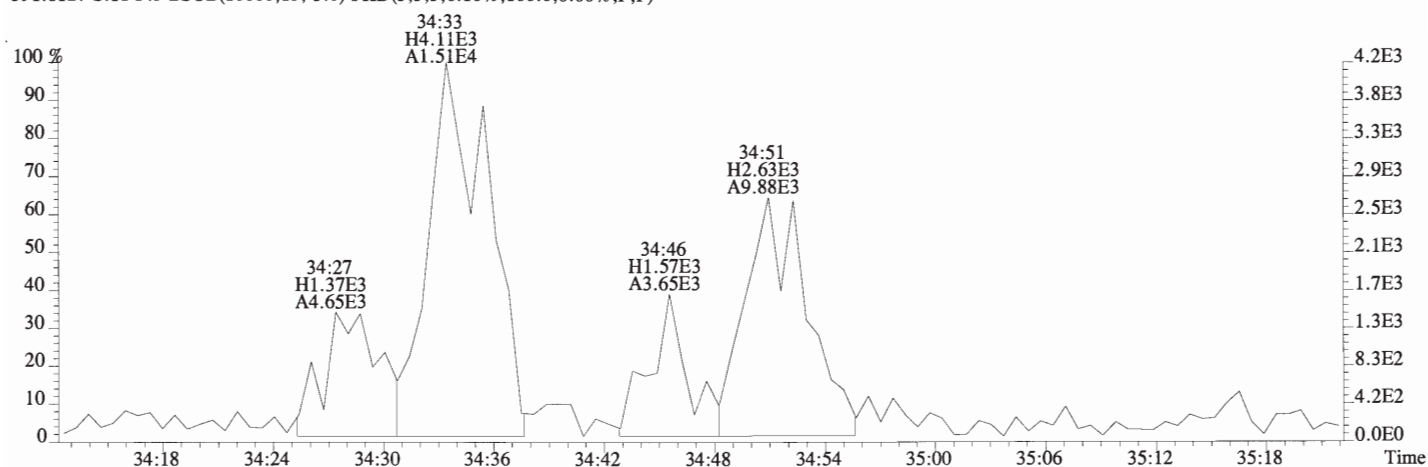
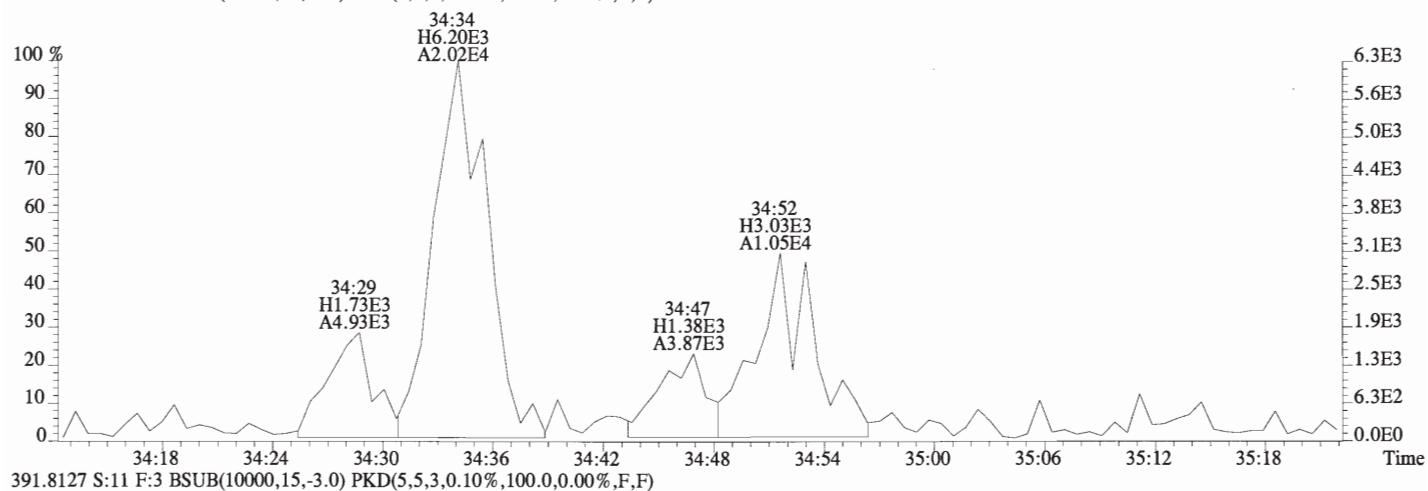
File:160712D1 #1-406 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



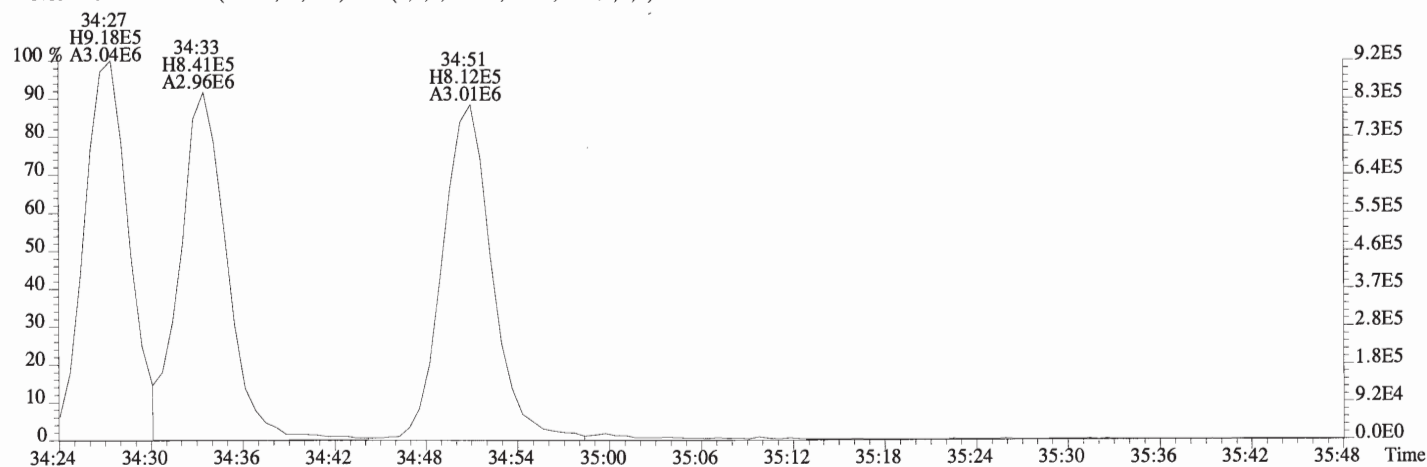
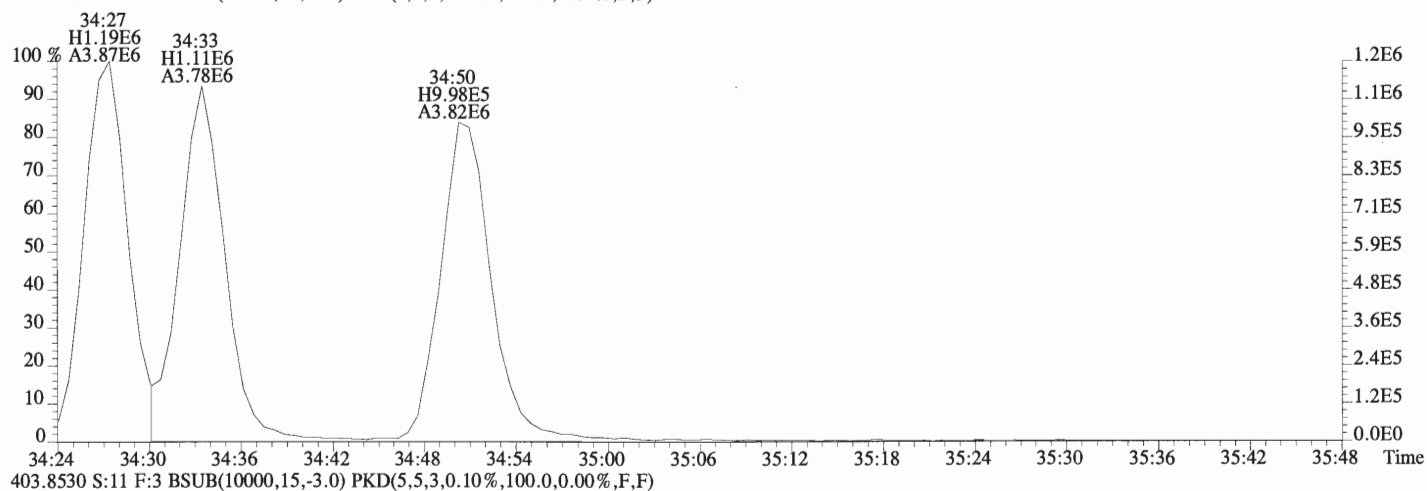
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 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



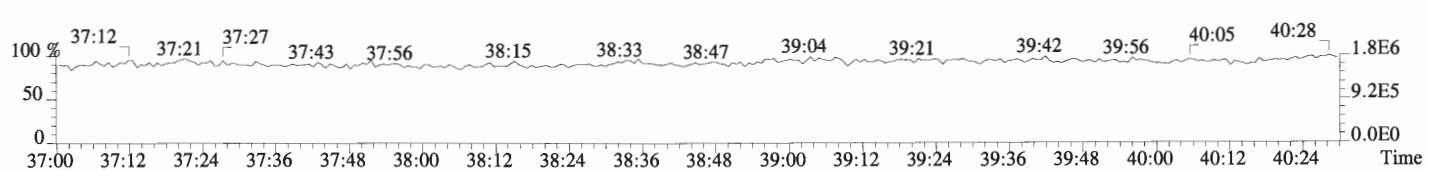
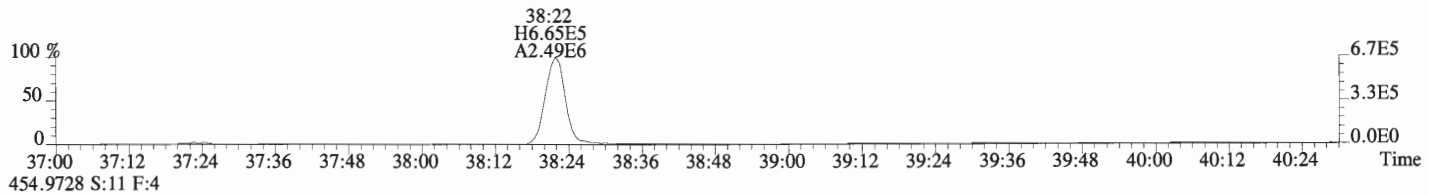
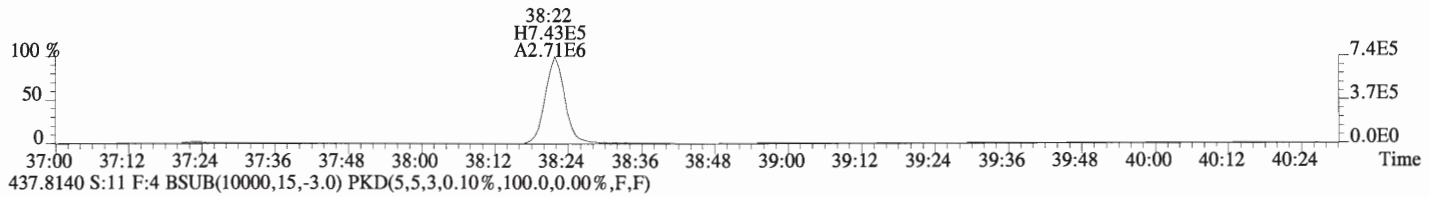
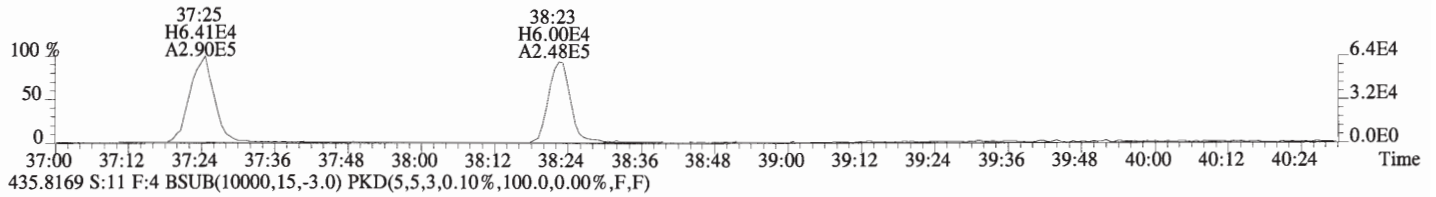
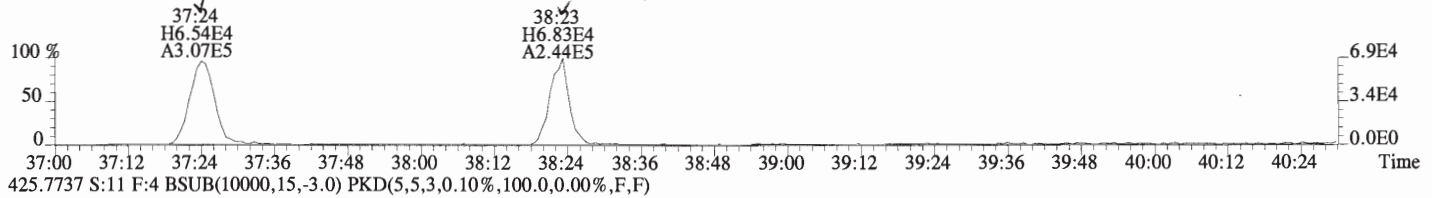
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 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



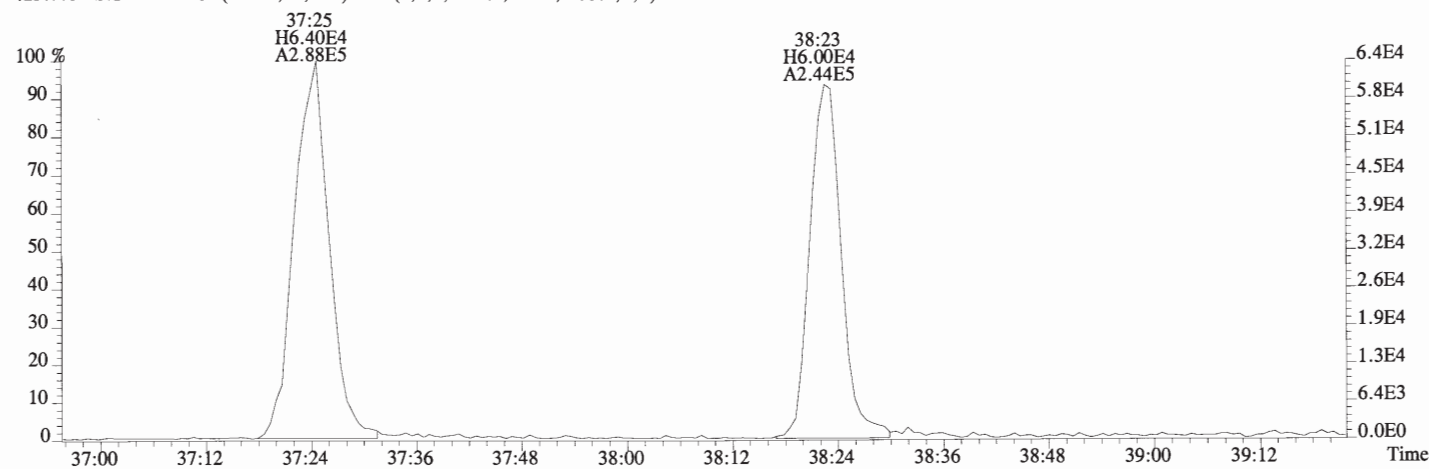
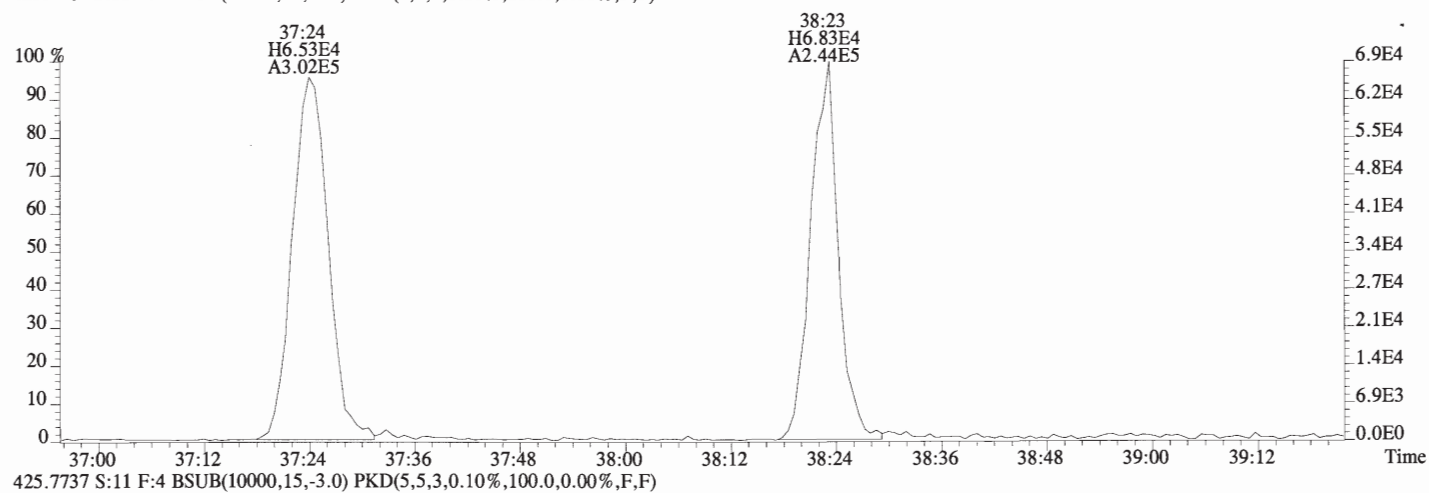
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 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



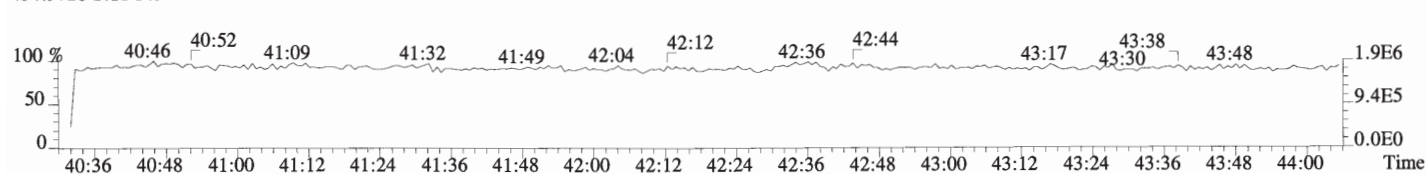
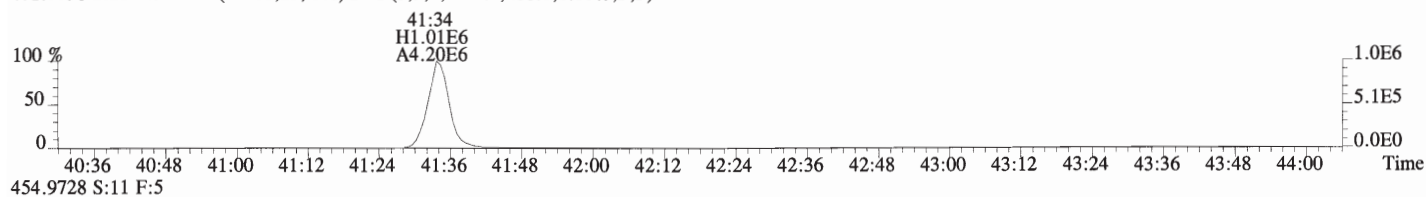
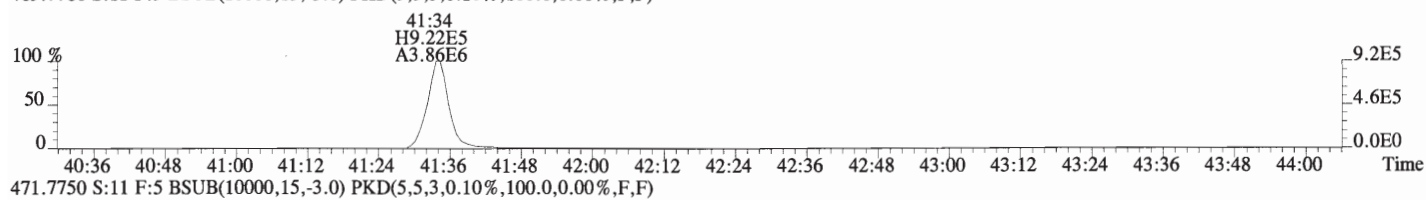
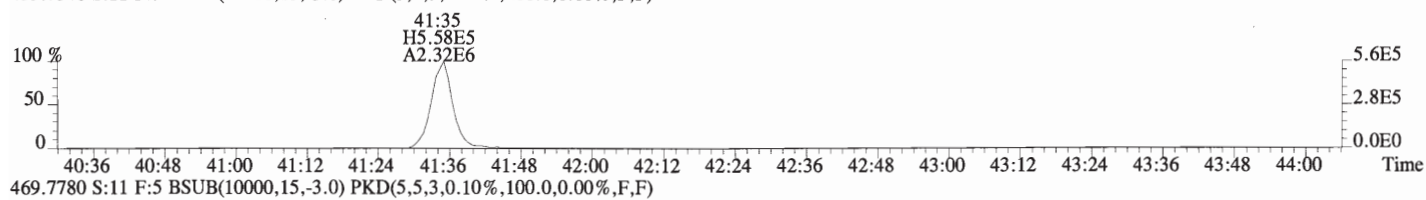
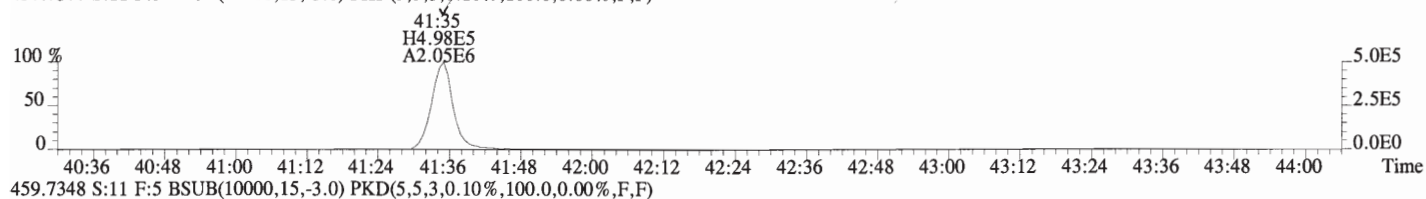
File:160712D1 #1-326 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



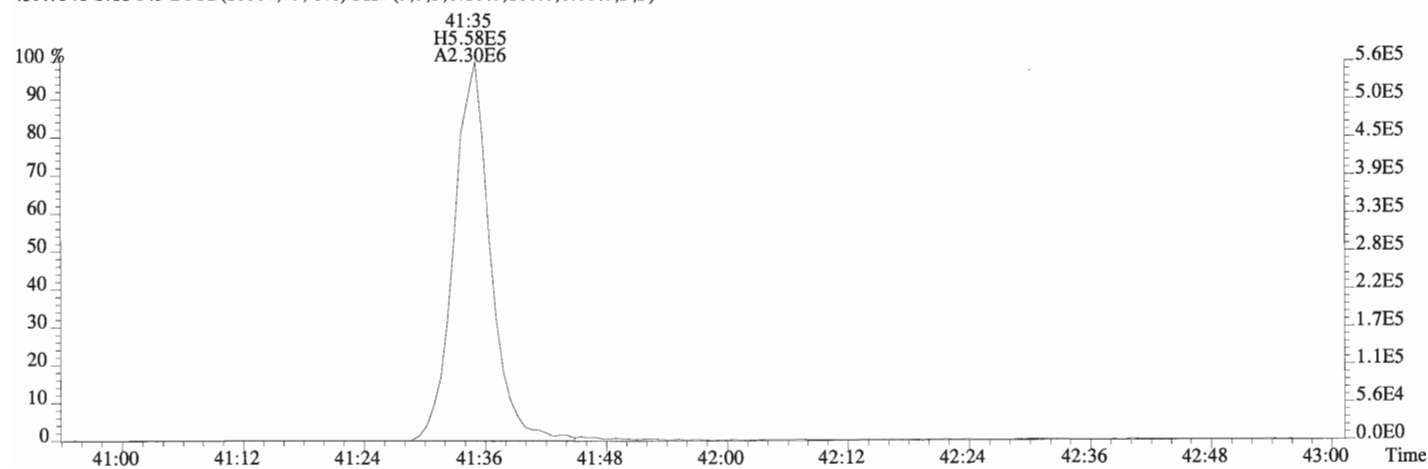
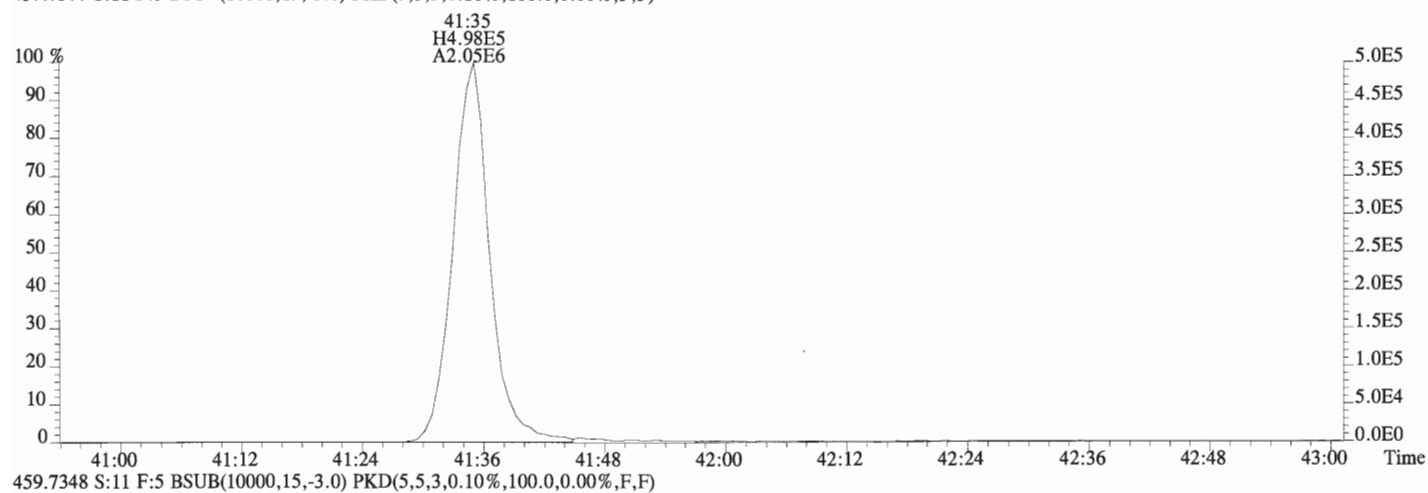
File:160712D1 #1-326 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



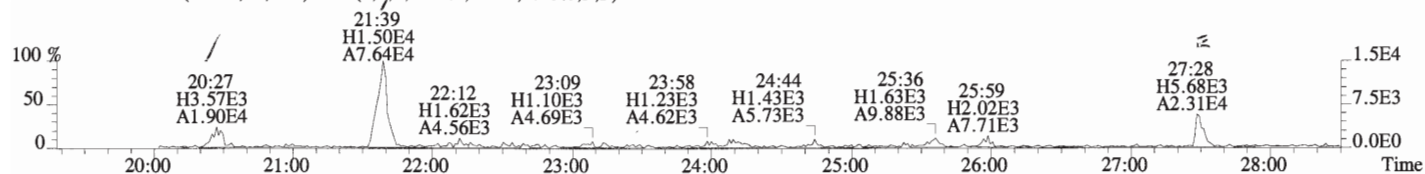
File:160712D1 #1-388 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
457.7377 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



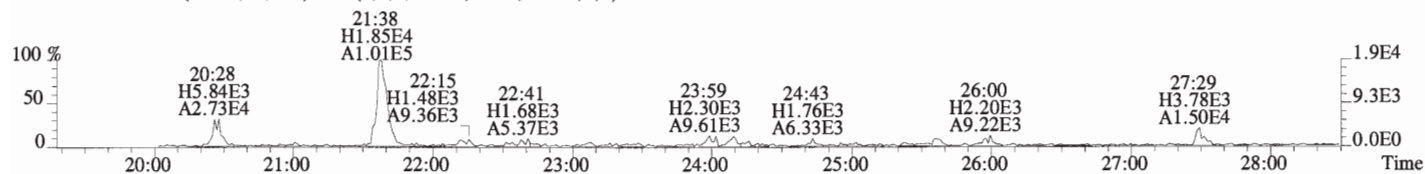
File:160712D1 #1-388 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
457.7377 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



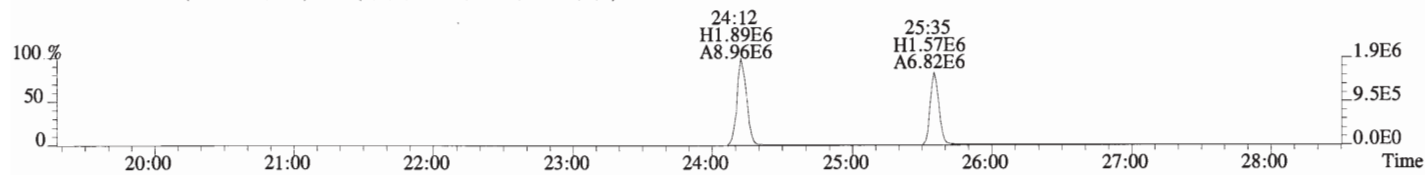
File:160712D1 #1-551 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



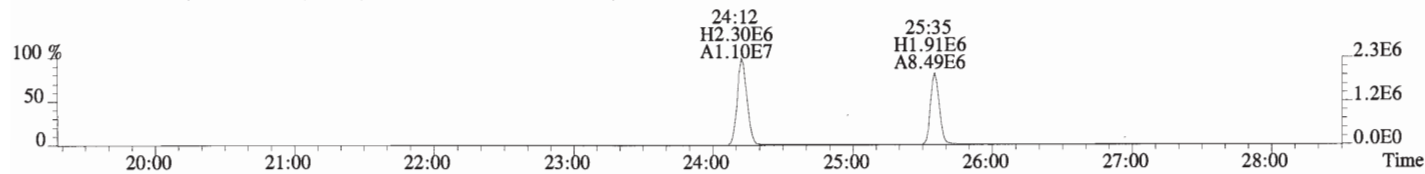
305.8987 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



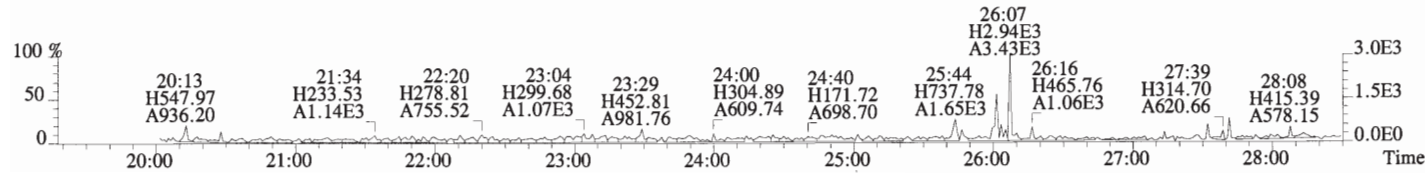
315.9419 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



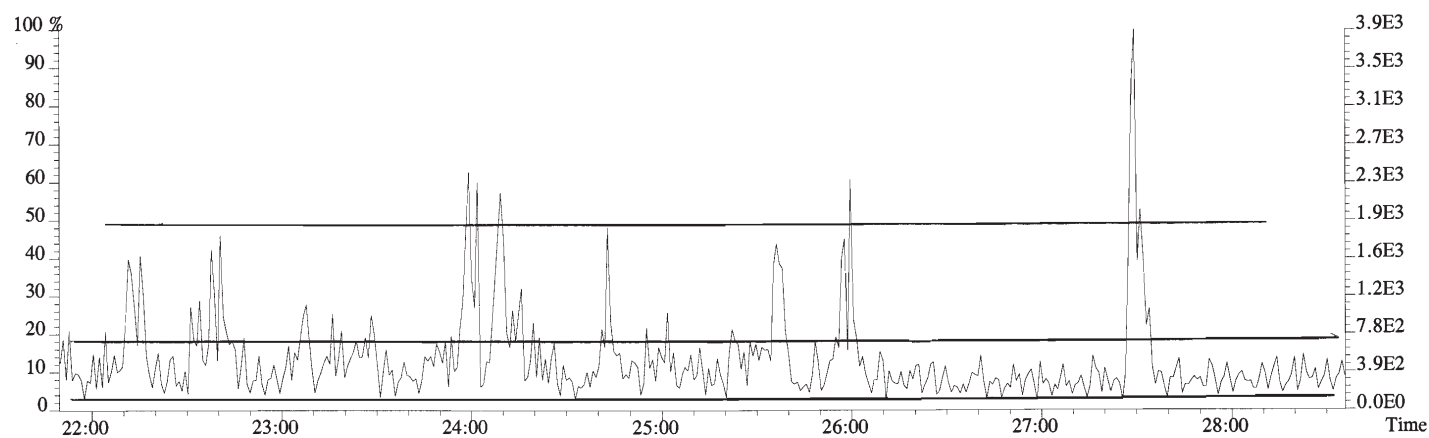
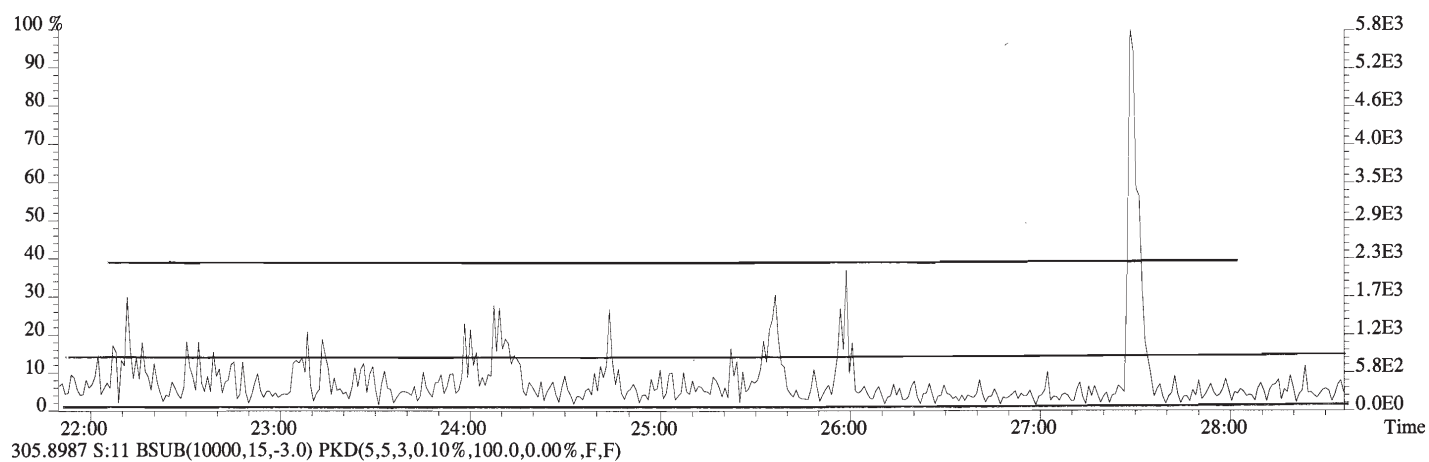
317.9389 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



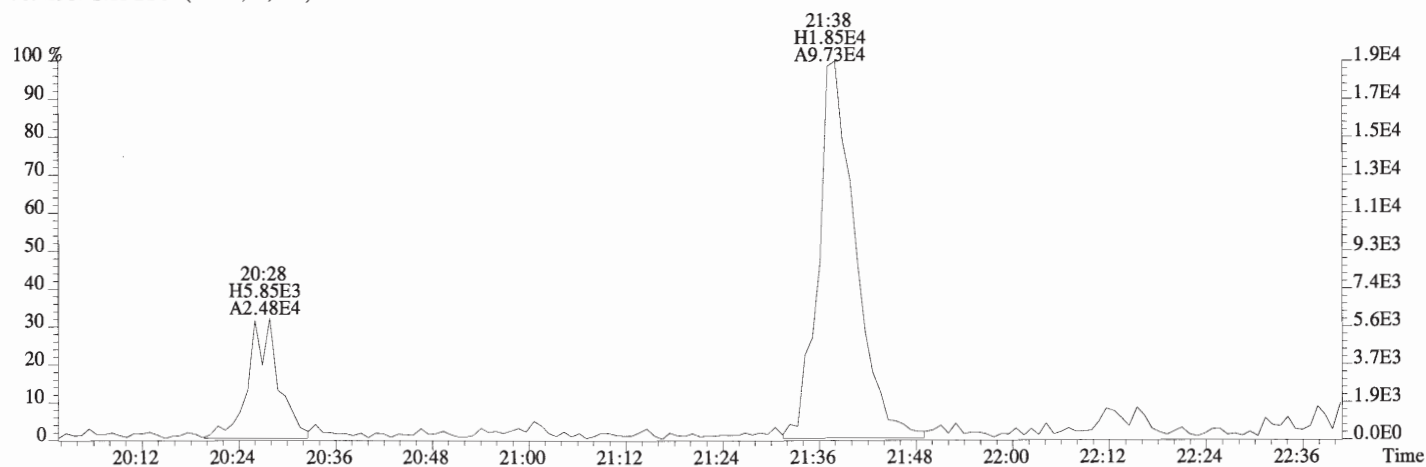
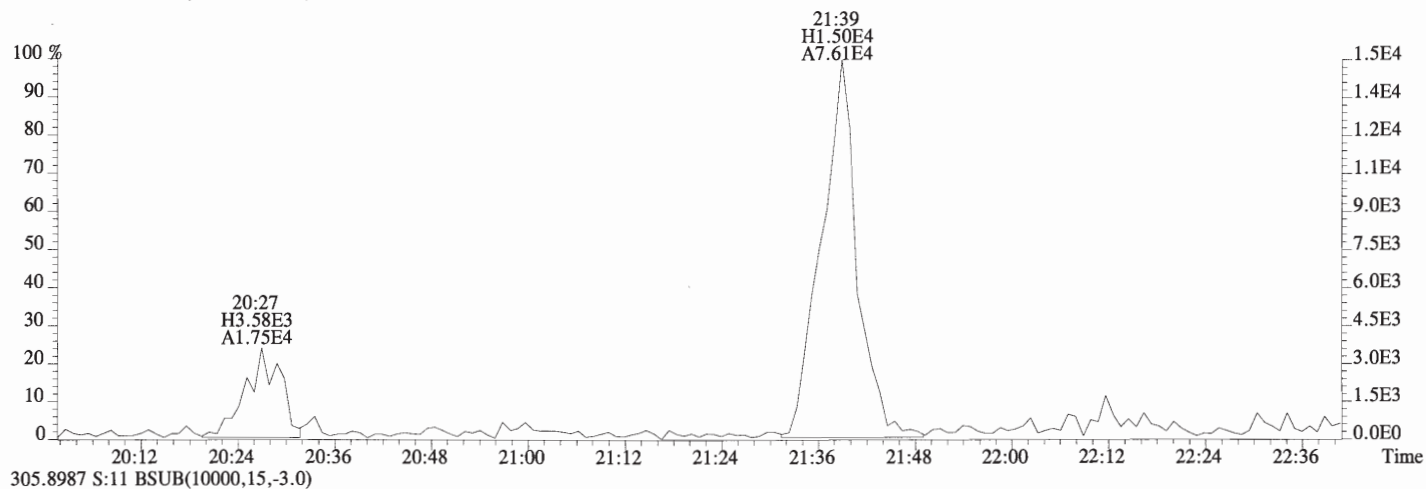
375.8364 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



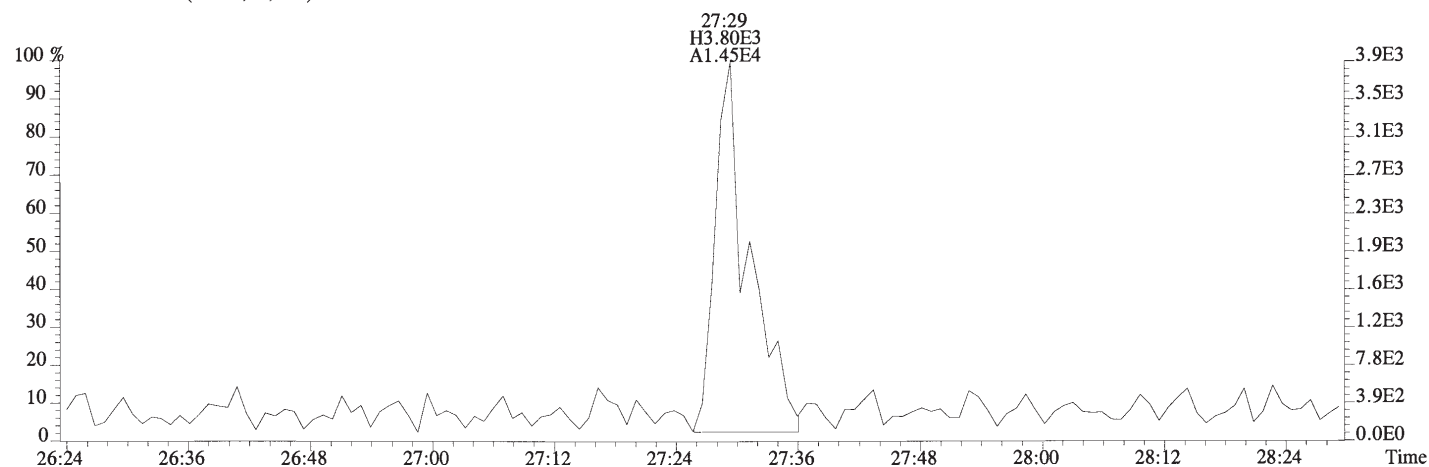
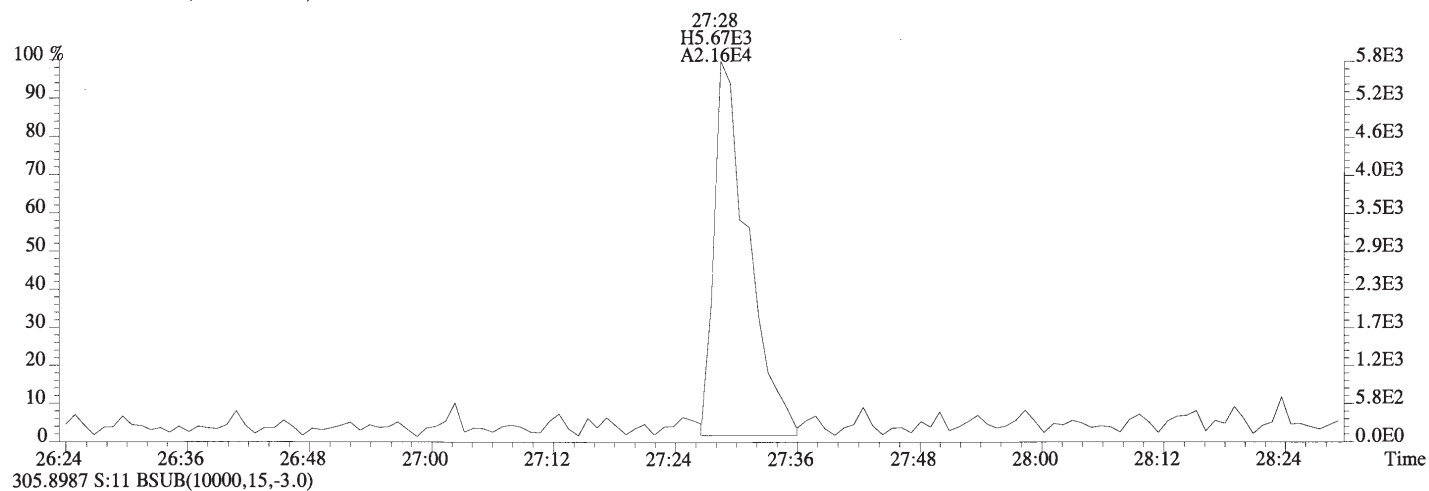
File:160712D1 #1-551 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



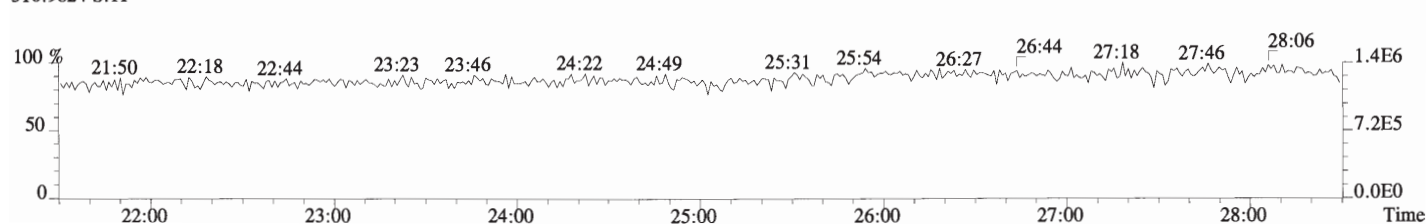
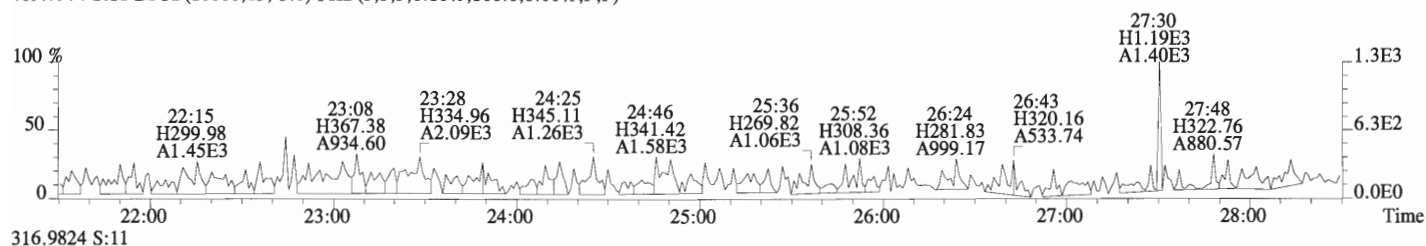
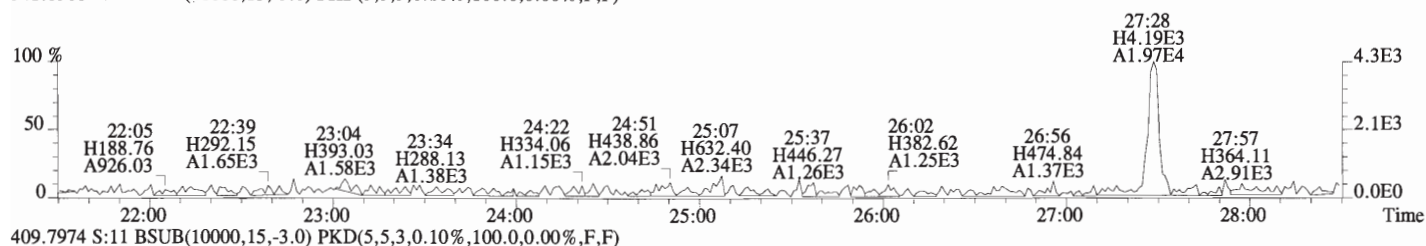
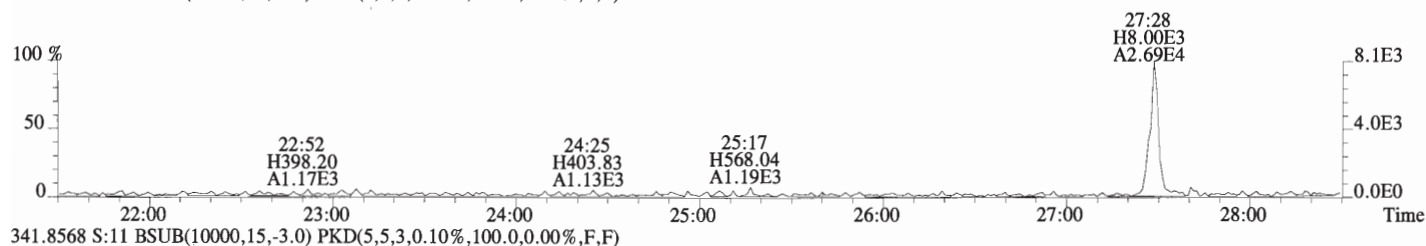
File:160712D1 #1-551 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
303.9016 S:11 BSUB(10000,15,-3.0)



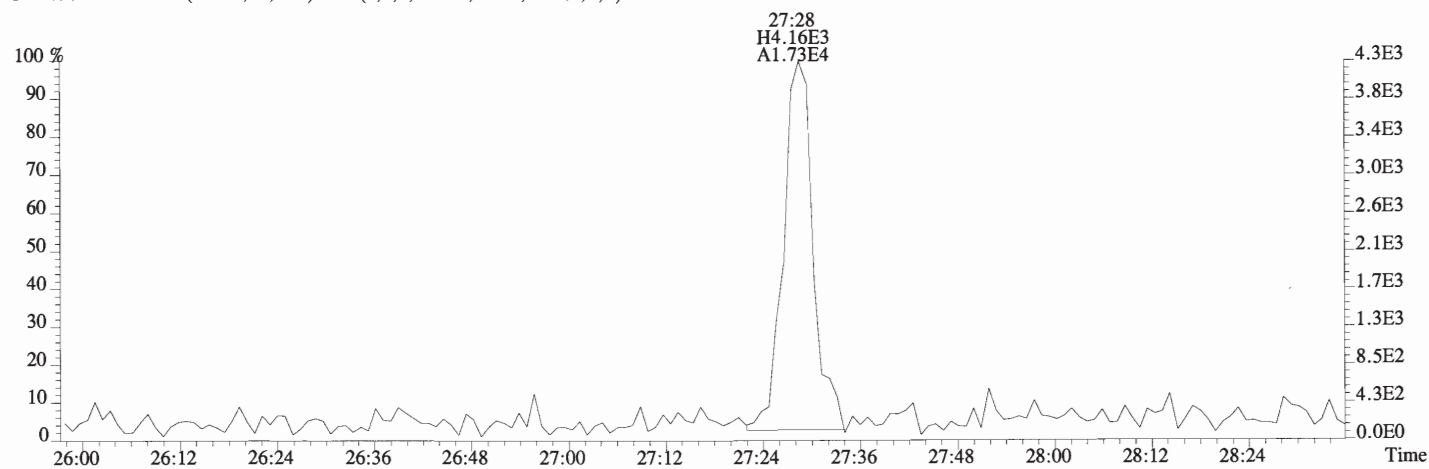
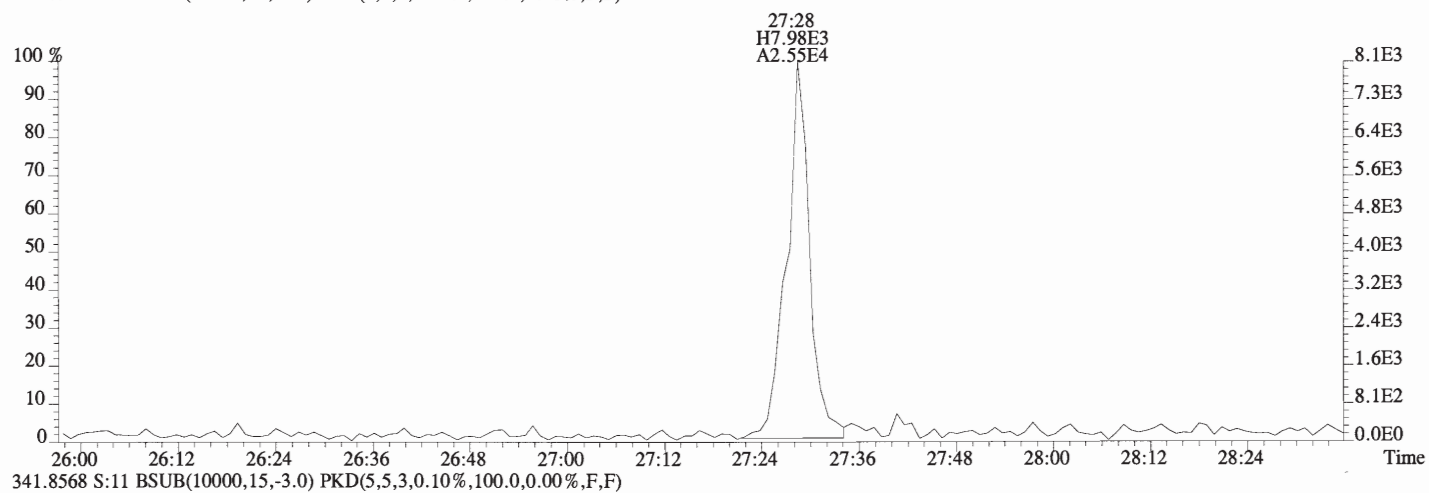
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Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
303.9016 S:11 BSUB(10000,15,-3.0)



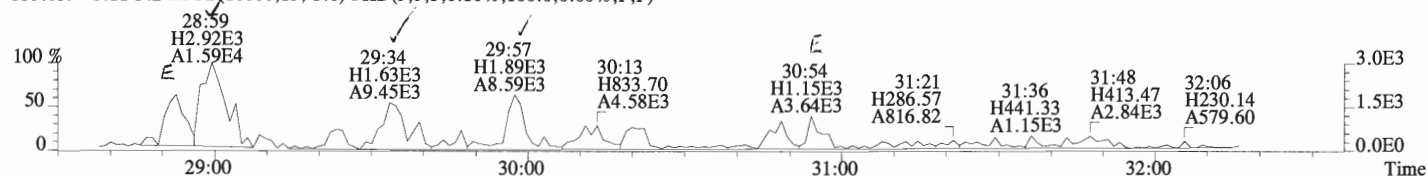
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 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 339.8597 S:11 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



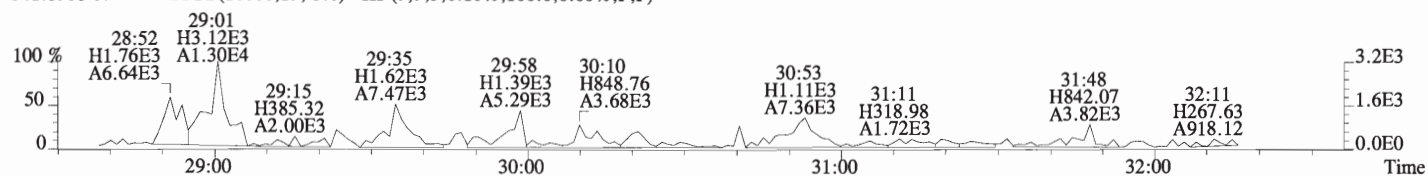
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Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
339.8597 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



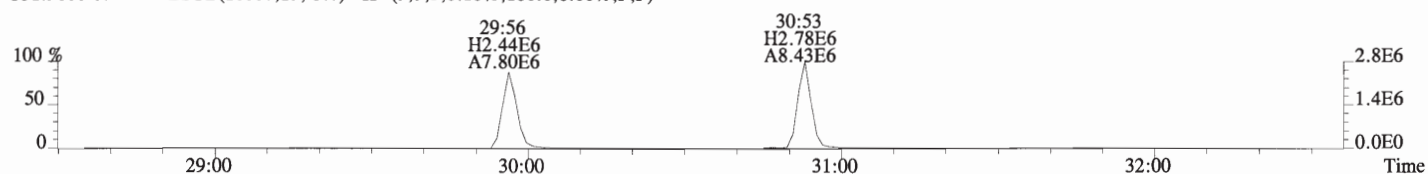
File:160712D1 #1-193 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



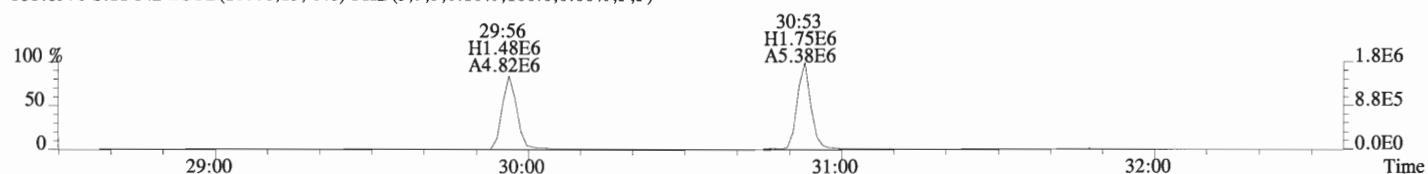
341.8568 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



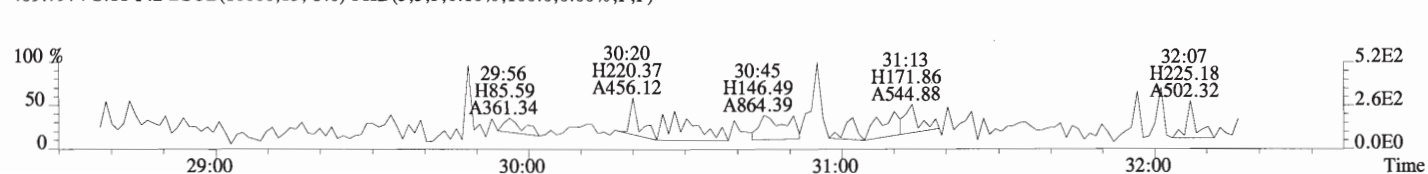
351.9000 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



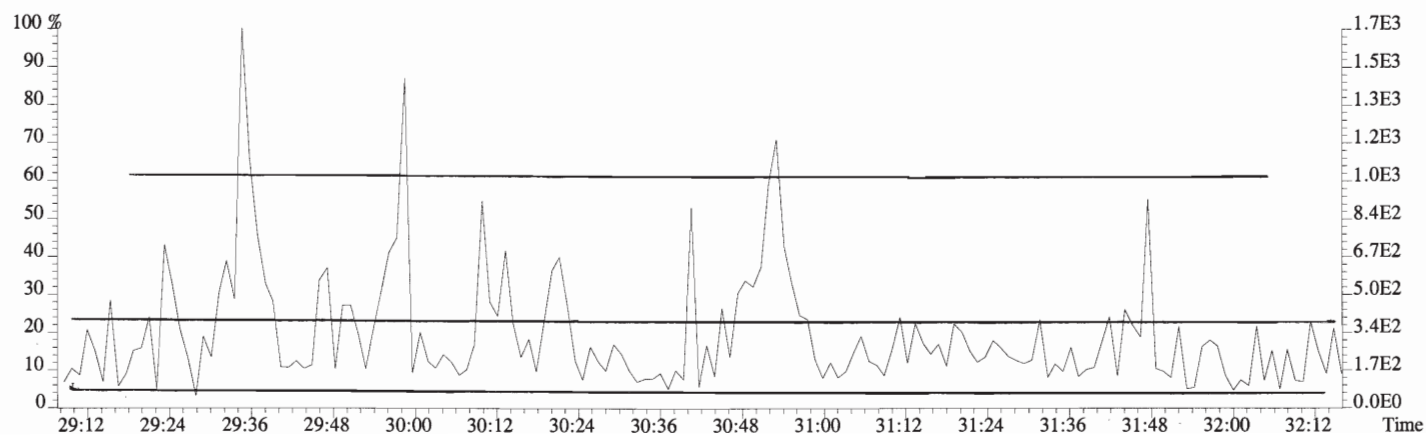
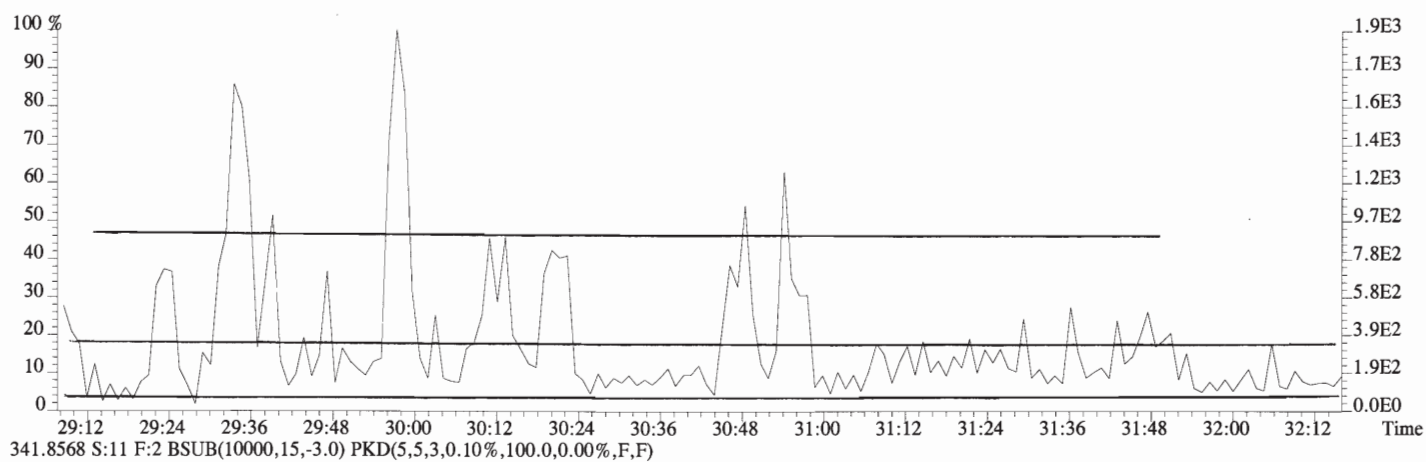
353.8970 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



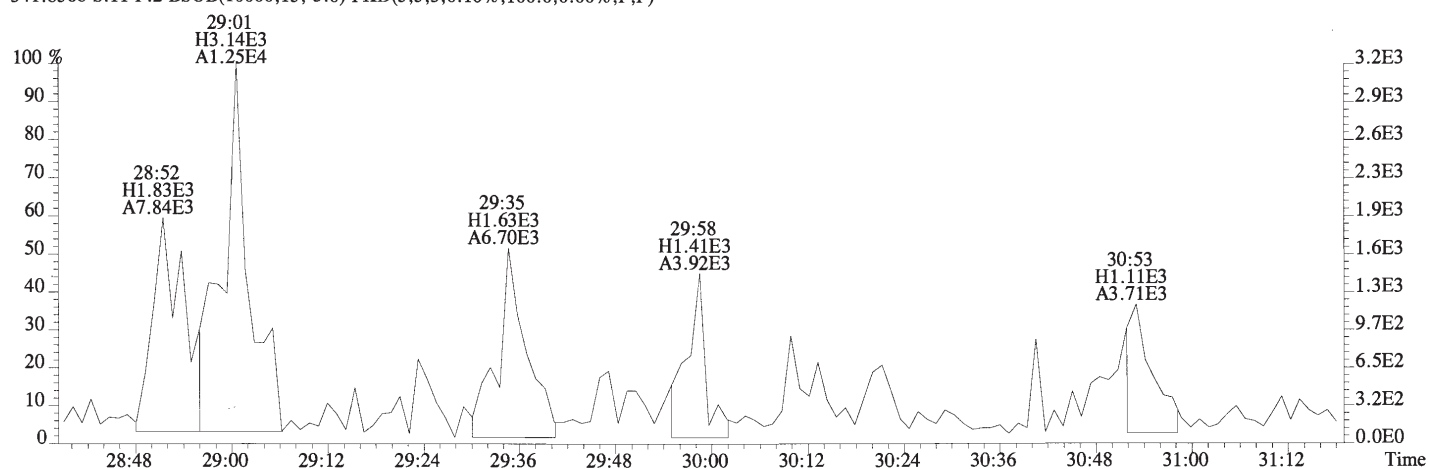
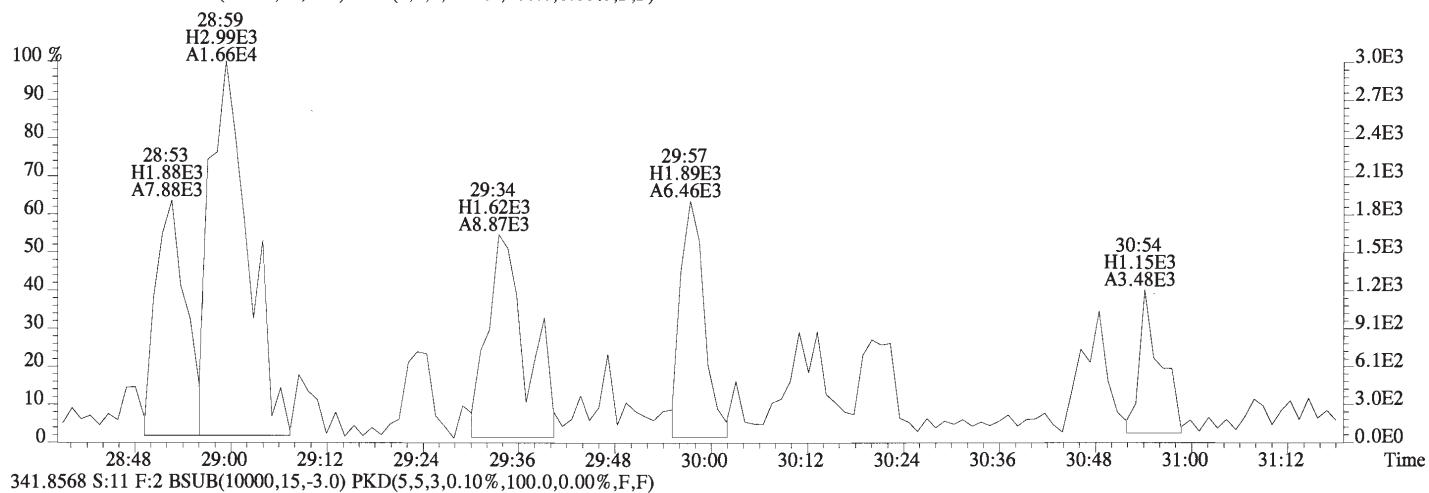
409.7974 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



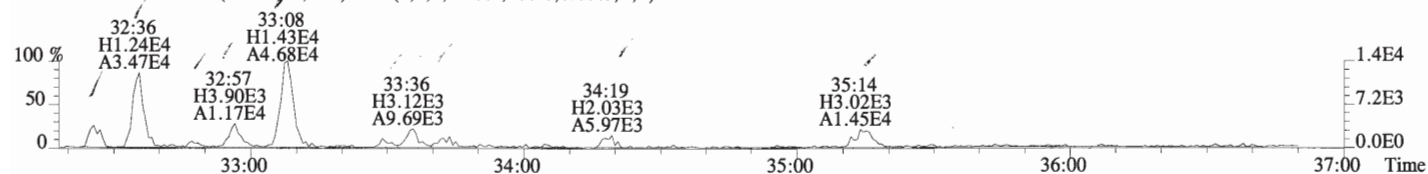
File:160712D1 #1-193 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



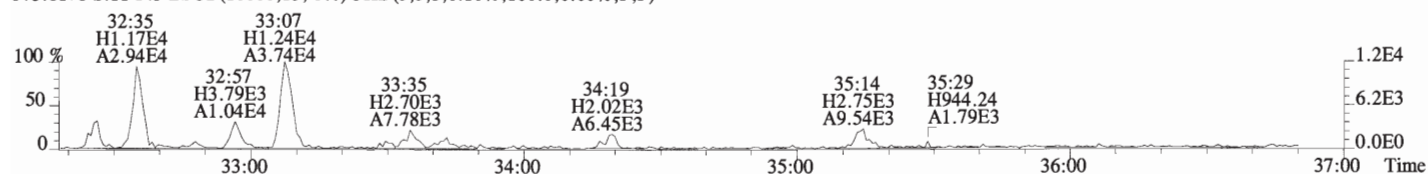
File:160712D1 #1-193 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 339.8597 S:11 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



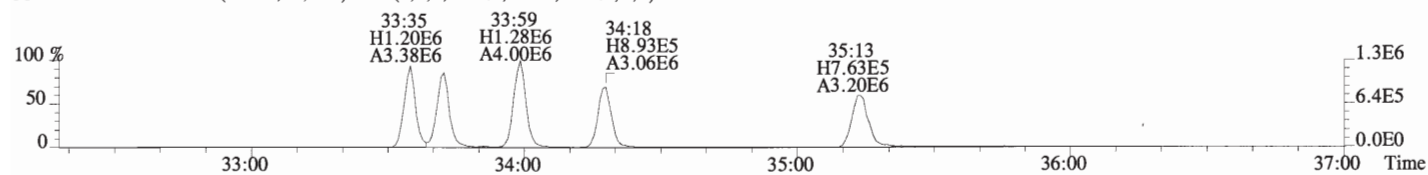
File:160712D1 #1-406 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



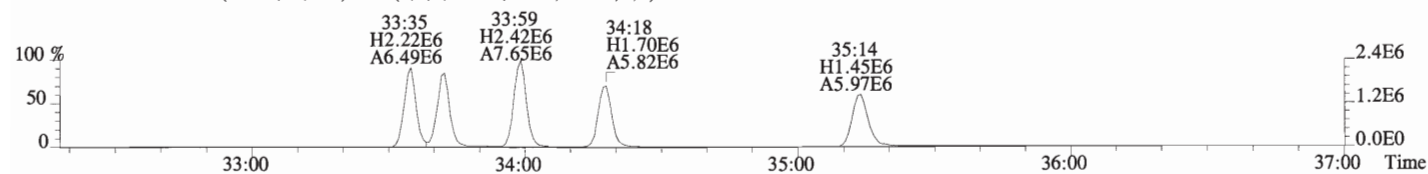
375.8178 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



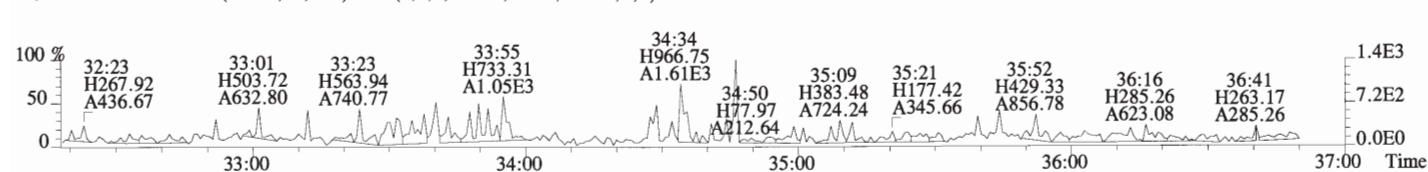
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



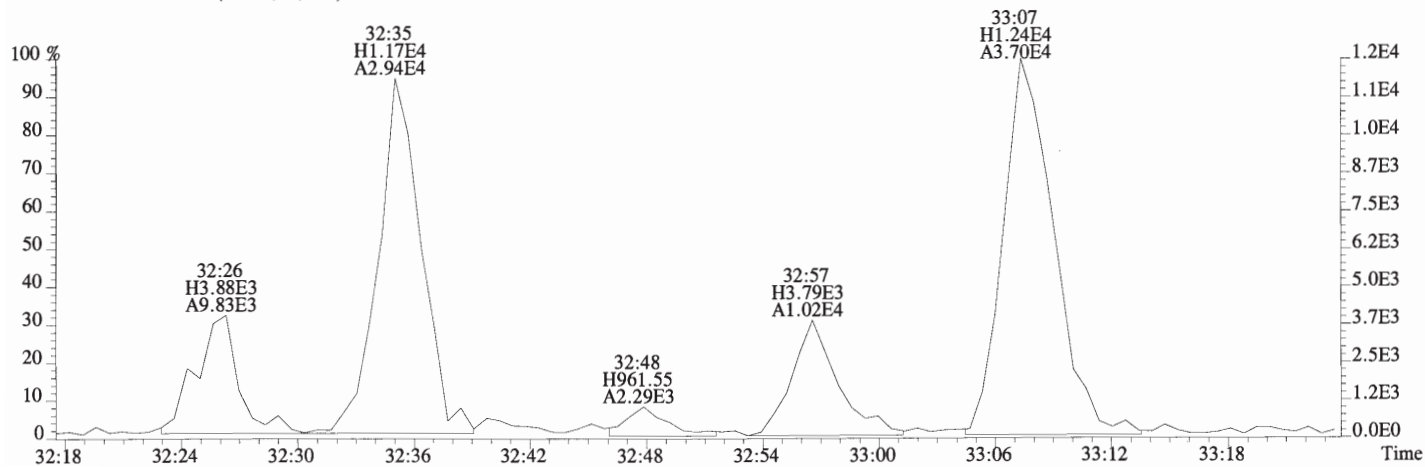
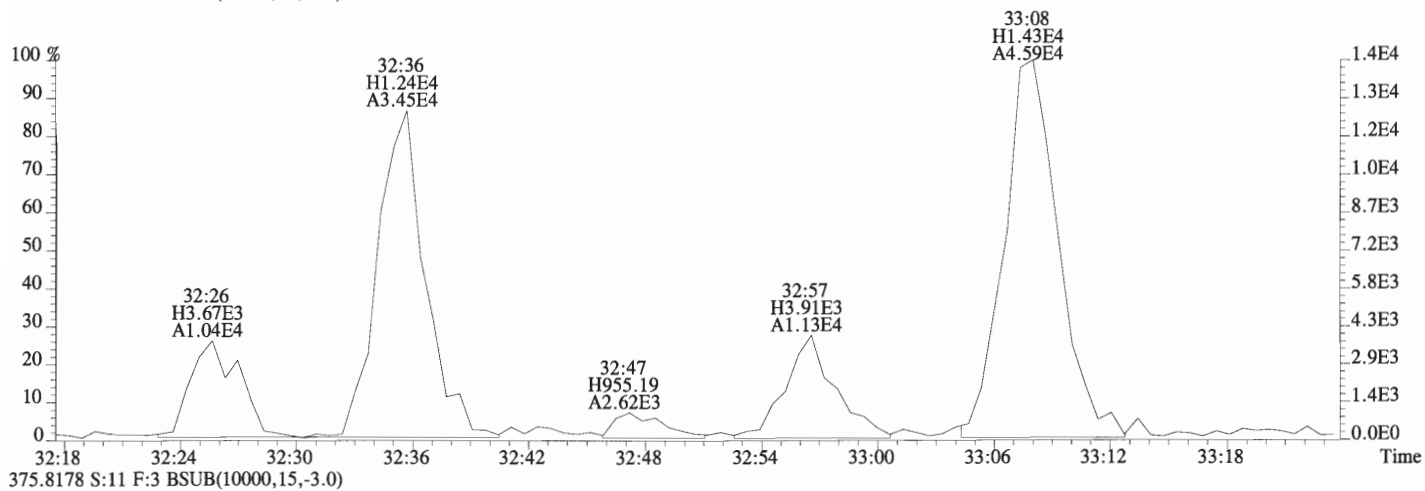
385.8610 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



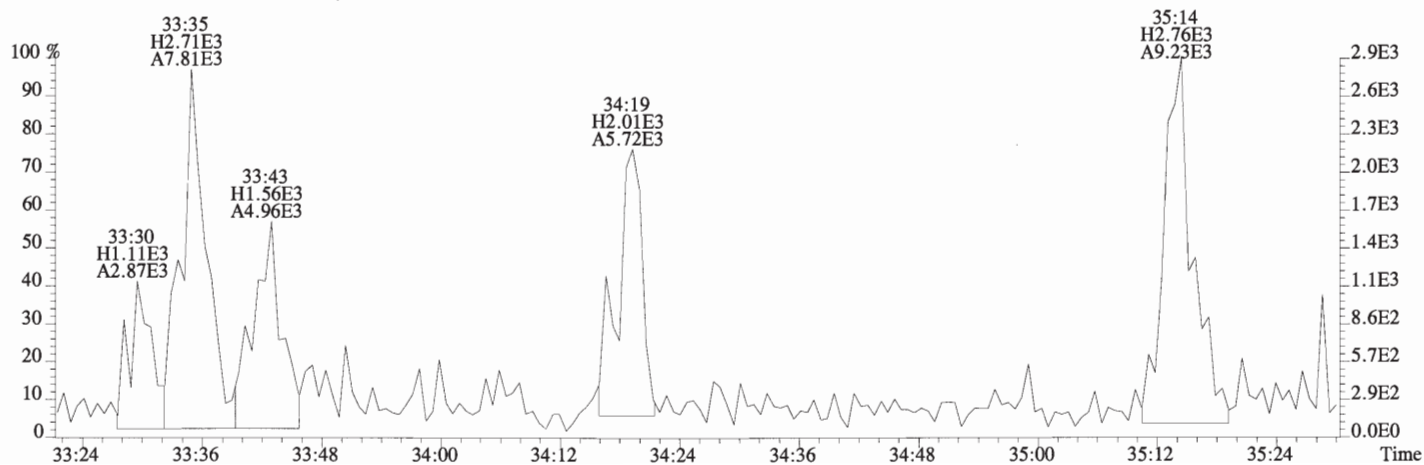
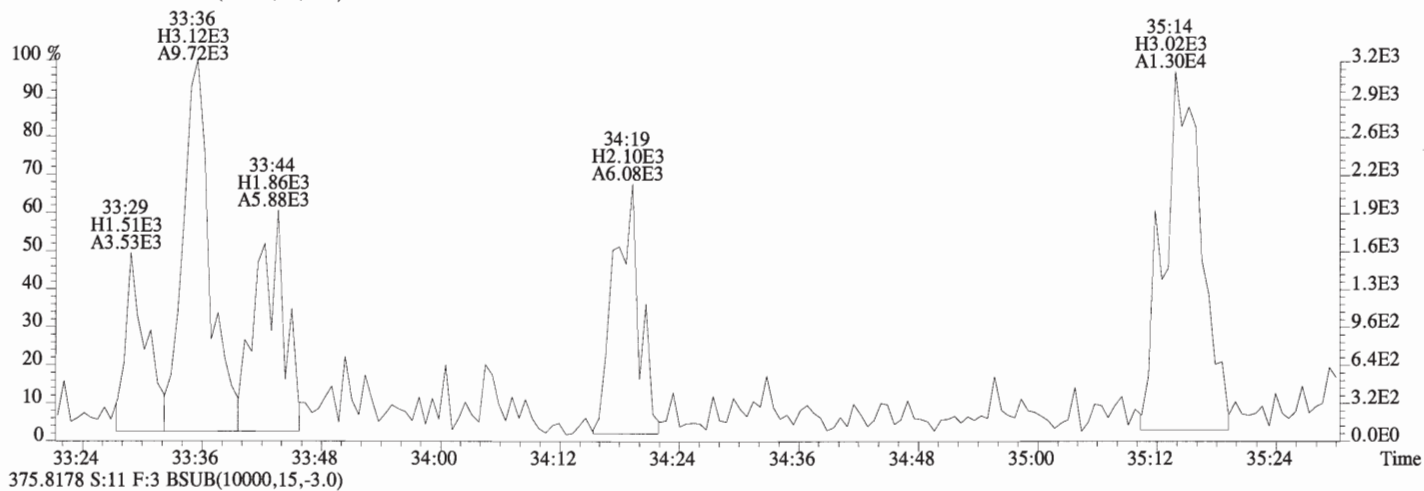
445.7555 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



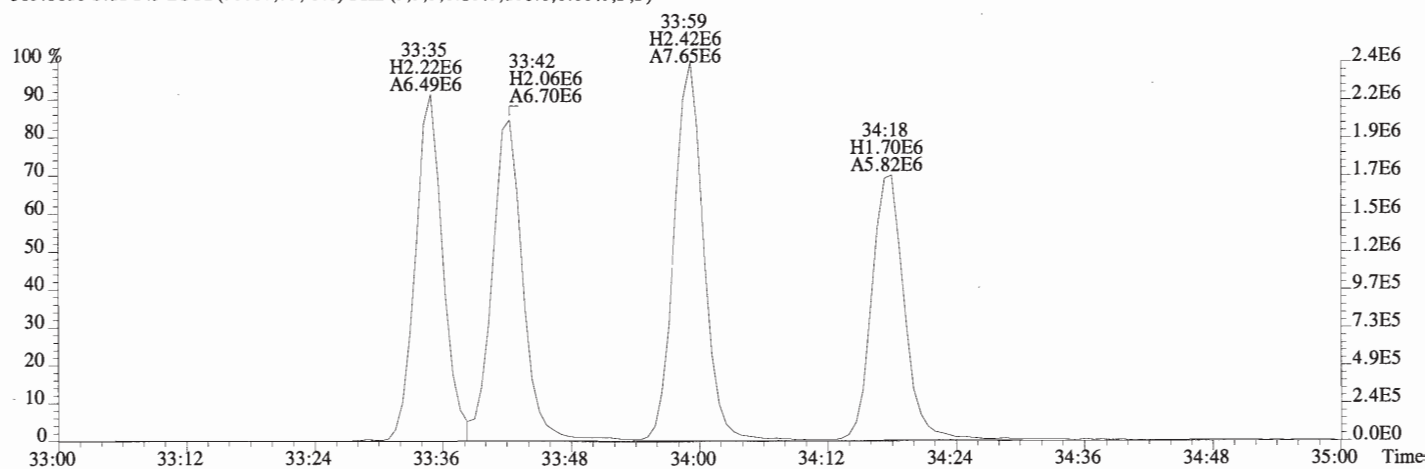
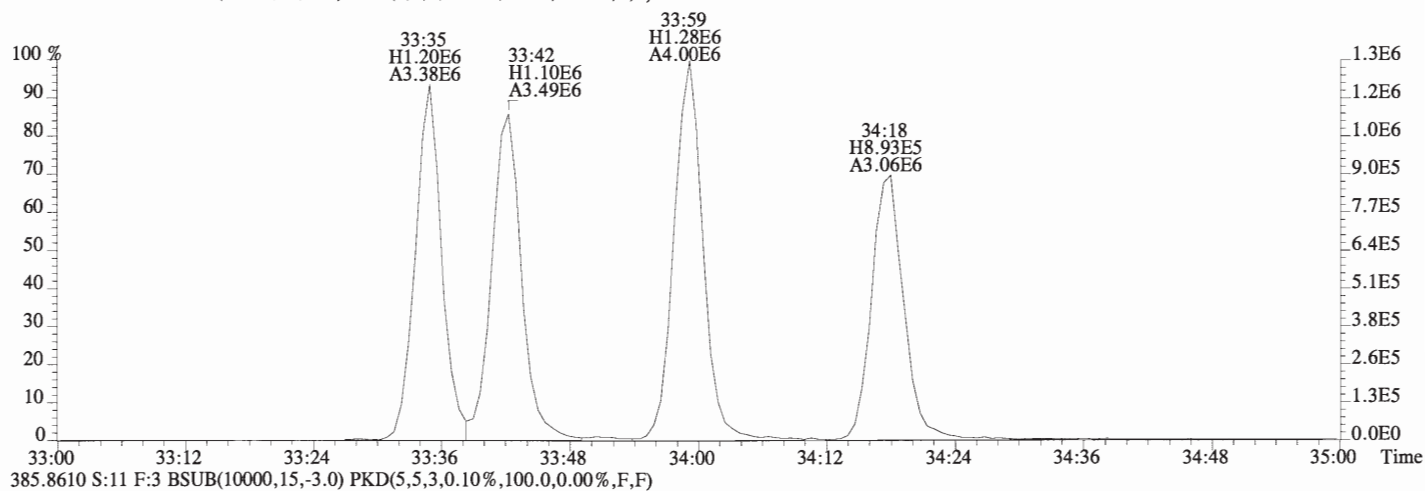
File:160712D1 #1-406 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-Ultima
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 373.8207 S:11 F:3 BSUB(10000,15,-3.0)



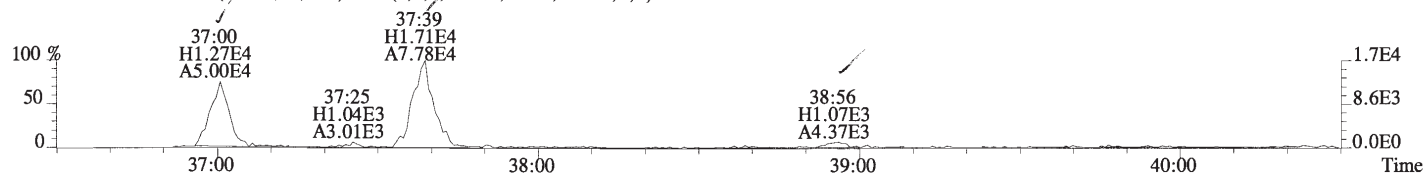
File:160712D1 #1-406 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 373.8207 S:11 F:3 BSUB(10000,15,-3.0)



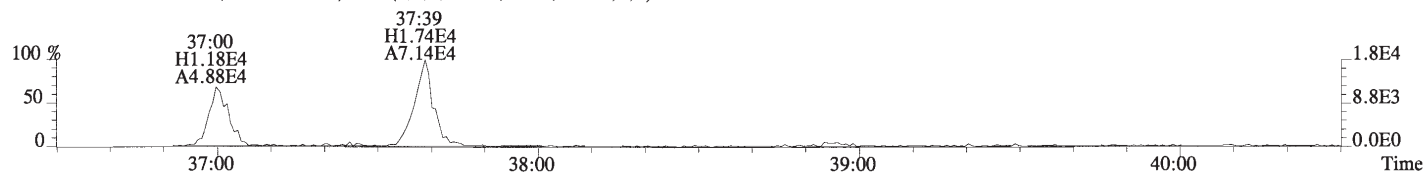
File:160712D1 #1-406 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



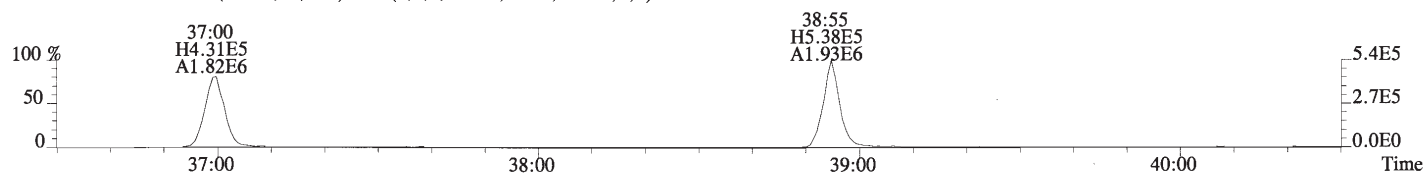
File:160712D1 #1-326 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



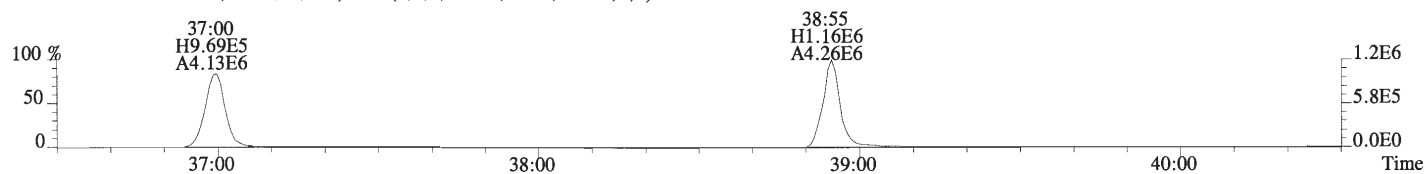
409.7788 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



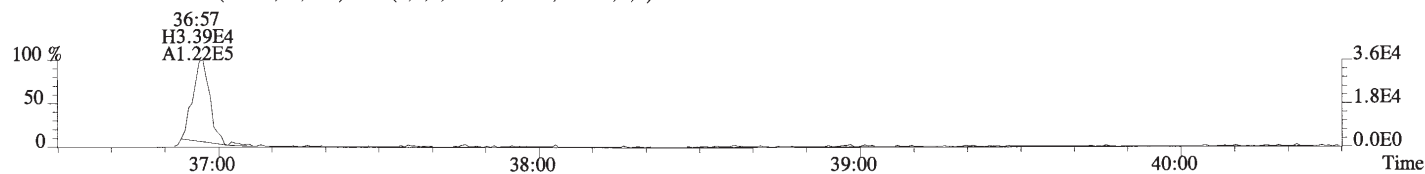
417.8253 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



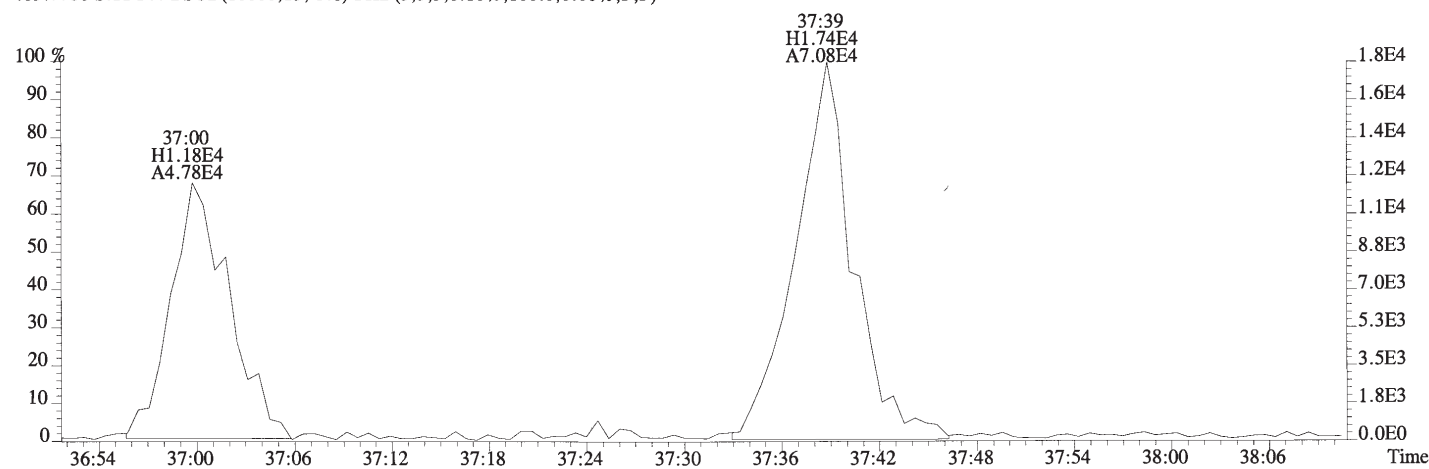
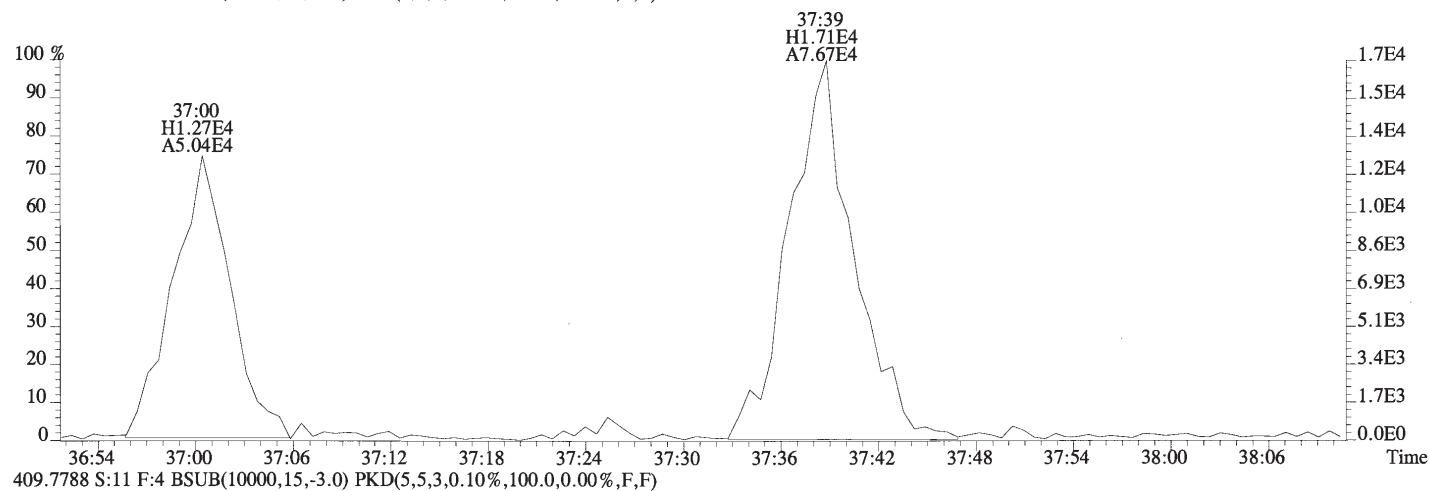
419.8220 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



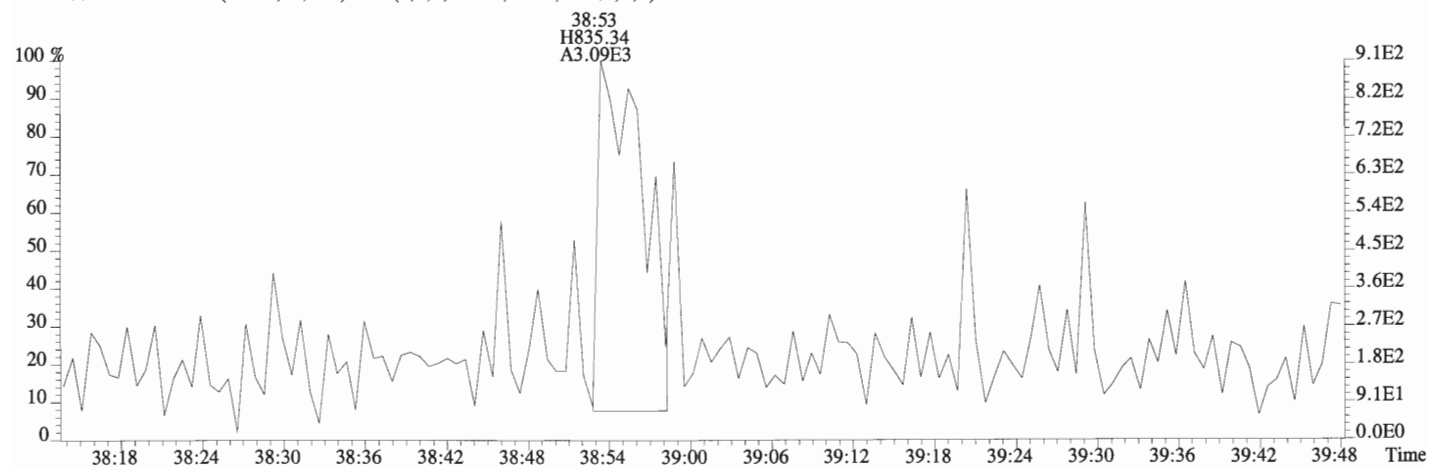
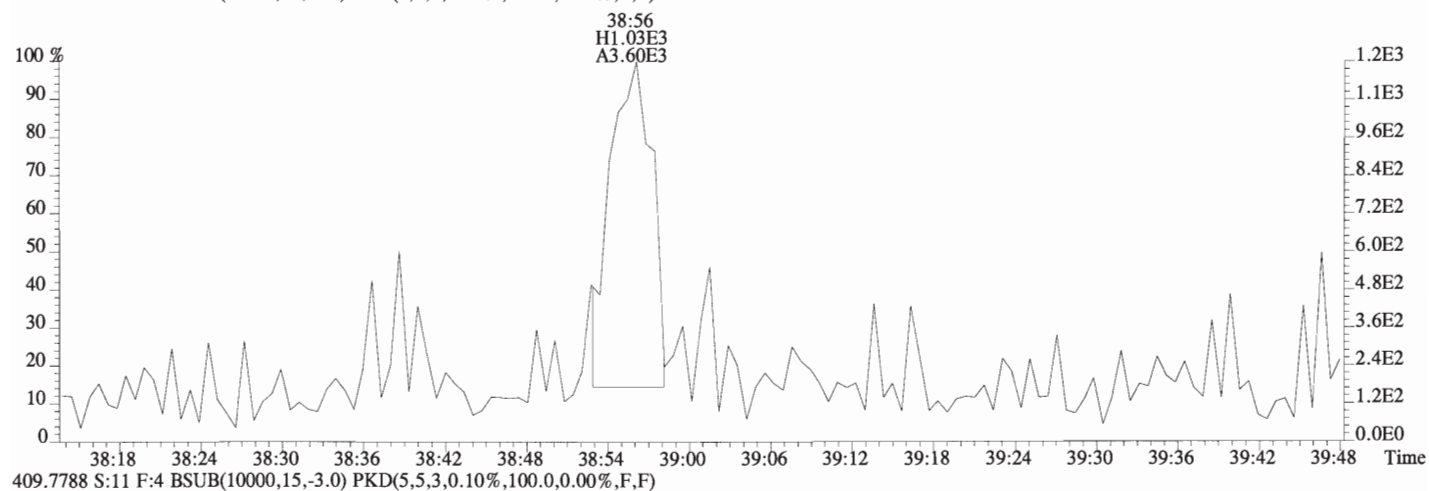
479.7165 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



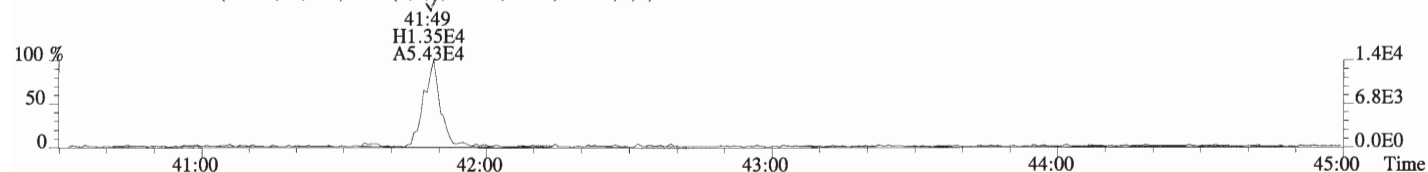
File:160712D1 #1-326 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 407.7818 S:11 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



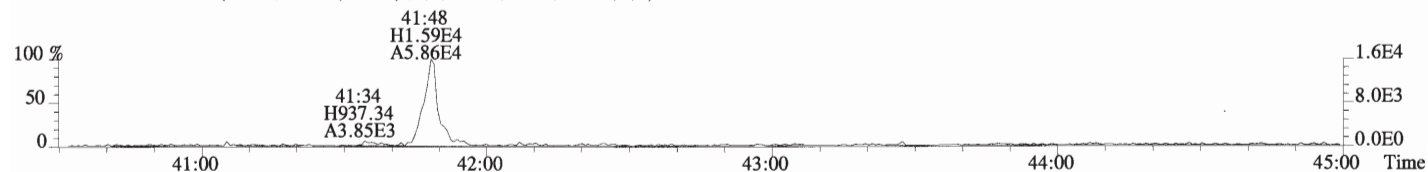
File:160712D1 #1-326 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



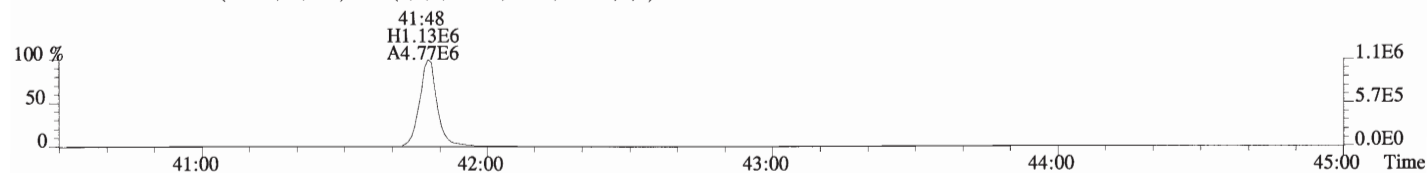
File:160712D1 #1-388 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
 441.7428 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



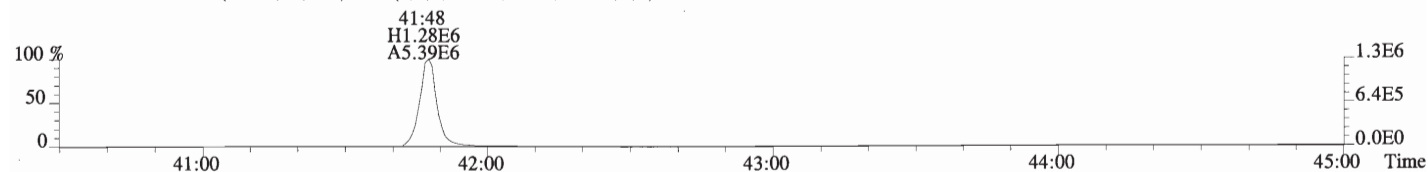
443.7398 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



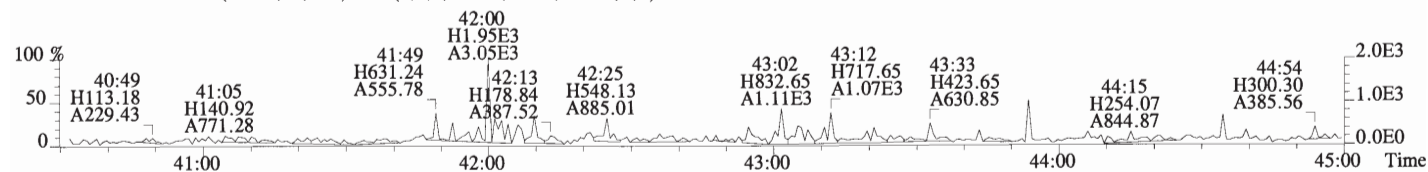
453.7831 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



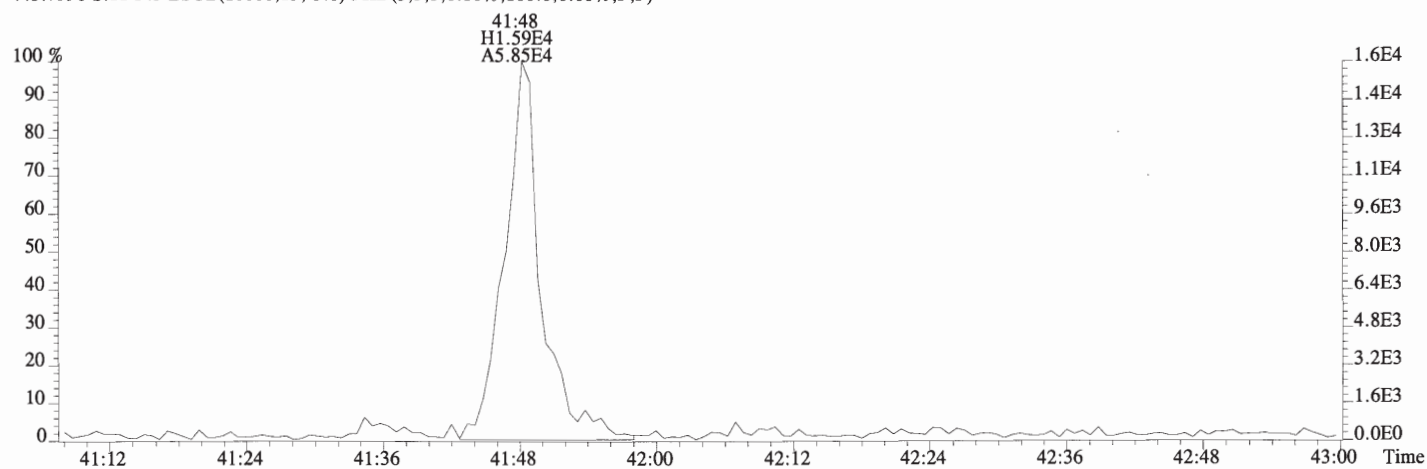
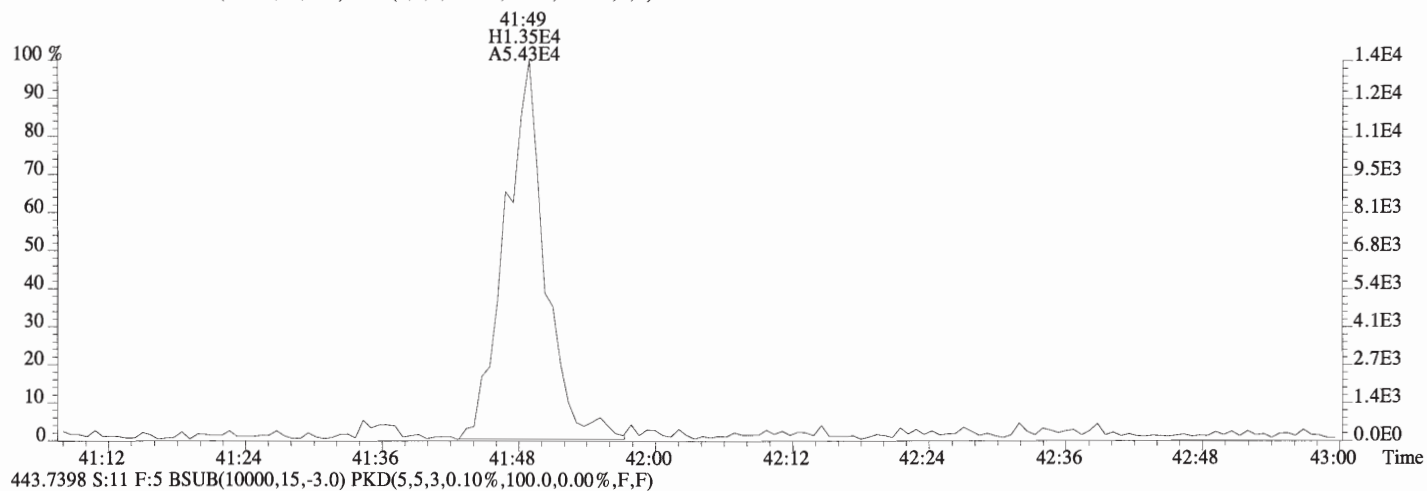
455.7801 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160712D1 #1-388 Acq:13-JUL-2016 00:26:09 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600835-07 DU-3-1-A 10 Exp:OCDD_DB5
441.7428 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: DU-3-1-B
Lab ID: 1600835-08

Filename: 160712D1 S:12 Acq:13-JUL-16 01:14:39
GC Column ID: ZB-SMS ICal: 1613VG7-4-7-16

wt/vol:10.100

ConCal: ST160712D1-1
EndCAL: NA

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	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
	2,3,7,8-TCDD	*	* n	1.13	NotFq	*	*		304	2.5	0.0850	Total Tetra-Dioxins	0.877	0.877		*	*
	1,2,3,7,8-PeCDD	4.35e+03	0.89 n	0.96	31:10	1.000	0.10447		*	2.5	*	Total Penta-Dioxins	0.957	1.20		*	*
	1,2,3,4,7,8-HxCDD	4.11e+03	1.08 y	1.00	34:27	1.000	0.11687		*	2.5	*	Total Hexa-Dioxins	3.84	3.84		*	*
	1,2,3,6,7,8-HxCDD	1.06e+04	1.06 y	1.10	34:34	1.000	0.29603		*	2.5	*	Total Hepta-Dioxins	10.4	10.4		*	*
	1,2,3,7,8,9-HxCDD	5.55e+03	1.09 y	1.05	34:51	1.000	0.15467		*	2.5	*	Total Tetra-Furans	3.20	3.35		*	*
	1,2,3,4,6,7,8-HpCDD	1.14e+05	1.03 y	1.05	38:23	1.000	4.2660		*	2.5	*	Total Penta-Furans	1.2115	1.2115		*	*
	OCDD	6.86e+05	0.90 y	0.96	41:34	1.000	36.829		*	2.5	*	Total Hexa-Furans	1.89	2.01		*	*
												Total Hepta-Furans	1.55	1.55		*	*
	2,3,7,8-TCDF	*	* n	1.12	NotFq	*	*		638	2.5	0.136						
	1,2,3,7,8-PeCDF	*	* n	1.01	NotFq	*	*		303	2.5	0.0966						
	2,3,4,7,8-PeCDF	*	* n	0.90	NotFq	*	*		303	2.5	0.0996						
	1,2,3,4,7,8-HxCDF	6.93e+03	0.81 n	1.16	33:36	1.000	0.12391		*	2.5	*						
	1,2,3,6,7,8-HxCDF	7.69e+03	1.31 y	1.16	33:43	1.000	0.13097		*	2.5	*						
	2,3,4,6,7,8-HxCDF	8.09e+03	1.19 y	1.23	34:18	1.000	0.14676		*	2.5	*						
	1,2,3,7,8,9-HxCDF	1.77e+04	1.14 y	1.13	35:14	1.000	0.36629		*	2.5	*						
	1,2,3,4,6,7,8-HpCDF	3.56e+04	1.18 y	1.44	37:00	1.000	0.83313		*	2.5	*						
	OCDF	2.68e+04	1.02 y	1.03	41:48	1.000	1.0393		*	2.5	*						
IS	13C-2,3,7,8-TCDD	1.06e+07	0.78 y	1.01	26:25	1.024	183.76					Rec		Qual			
IS	13C-1,2,3,7,8-PeCDD	8.57e+06	0.64 y	1.10	31:10	1.208	135.43					92.8					
IS	13C-1,2,3,4,7,8-HxCDD	6.95e+06	1.25 y	0.72	34:27	1.014	174.00					68.4					
IS	13C-1,2,3,6,7,8-HxCDD	6.49e+06	1.28 y	0.73	34:33	1.017	161.07					87.9					
IS	13C-1,2,3,7,8,9-HxCDD	6.78e+06	1.29 y	0.70	34:51	1.026	174.20					81.3					
IS	13C-1,2,3,4,6,7,8-HpCDD	5.06e+06	1.09 y	0.66	38:22	1.129	137.30					88.0					
IS	13C-OCDD	7.67e+06	0.91 y	0.66	41:34	1.223	209.61					69.3					
IS	13C-2,3,7,8-TCDF	1.61e+07	0.81 y	0.90	25:35	0.992	191.52					52.9					
IS	13C-1,2,3,7,8-PeCDF	1.25e+07	1.59 y	0.98	29:56	1.160	136.90					96.7					
IS	13C-2,3,4,7,8-PeCDF	1.42e+07	1.61 y	1.15	30:53	1.197	132.76					69.1					
IS	13C-1,2,3,4,7,8-HxCDF	9.53e+06	0.51 y	1.01	33:35	0.988	169.54					67.0					
IS	13C-1,2,3,6,7,8-HxCDF	1.01e+07	0.52 y	1.10	33:42	0.992	165.30					85.6					
IS	13C-2,3,4,6,7,8-HxCDF	8.91e+06	0.52 y	0.95	34:18	1.009	168.80					83.5					
IS	13C-1,2,3,7,8,9-HxCDF	8.43e+06	0.51 y	0.83	35:14	1.037	183.76					85.2					
IS	13C-1,2,3,4,6,7,8-HpCDF	5.87e+06	0.44 y	0.70	36:59	1.088	151.51					92.8					
IS	13C-1,2,3,4,7,8,9-HpCDF	5.83e+06	0.44 y	0.72	38:55	1.145	146.00					76.5					
IS	13C-OCDF	9.90e+06	0.90 y	0.82	41:48	1.230	216.53					73.7					
C/Up	37Cl-2,3,7,8-TCDD	4.57e+06		1.14	26:27	1.025	70.086					54.7					
RS/RT	13C-1,2,3,4-TCDD	1.14e+07	0.79 y	1.00	25:48	*	198.02					88.5					
RS	13C-1,2,3,4-TCDF	1.85e+07	0.81 y	1.00	24:13	*	198.02					Integrations		Reviewed			
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.10e+07	0.52 y	1.00	33:59	*	198.02					by		by			
												Analyst: DB		Analyst: 212			
												Date: 7/15/16		Date: 7/15/16			

Totals class: TCDD EMPC Entry #: 19

Run: 17 File: 160712D1 S: 12 I: 1 F: 1

Acquired: 13-JUL-16 01:14:39 Processed: 14-JUL-16 10:27:46

Total Concentration: 0.87665 Unnamed Concentration: 0.877

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
22:39	1.321e+04	1.665e+04	0.79 y	2.986e+04	0.49095
23:03	6.598e+03	7.602e+03	0.87 y	1.420e+04	0.23346
24:37	4.177e+03	5.084e+03	0.82 y	9.261e+03	0.15225

Totals class: PeCDD EMPC

Entry #: 21

Run: 17 File: 160712D1 S: 12 I: 1 F: 2
Acquired: 13-JUL-16 01:14:39 Processed: 14-JUL-16 10:27:46

Total Concentration: 1.1997

Unnamed Concentration: 1.095

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:02	9.590e+03	1.386e+04	0.69 y	2.345e+04	0.56336
29:30	2.469e+03	3.488e+03	0.71 y	5.957e+03	0.14311
29:57	4.101e+03	3.529e+03	1.16 n	5.752e+03	0.13821
30:26	4.345e+03	6.084e+03	0.71 y	1.043e+04	0.25056
31:10	2.376e+03	2.668e+03	0.89 n	4.348e+03	0.10447 1,2,3,7,8-PeCDD

Totals class: HxCDD EMPC

Entry #: 23

Run: 17

File: 160712D1

S: 12 I: 1 F: 3

Acquired: 13-JUL-16 01:14:39

Processed: 14-JUL-16 10:27:46

Total Concentration: 3.8417

Unnamed Concentration: 3.274

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:57	2.776e+04	2.442e+04	1.14 y	5.218e+04	1.4615
33:30	7.456e+03	5.282e+03	1.41 y	1.274e+04	0.35678
33:46	2.439e+04	1.848e+04	1.32 y	4.287e+04	1.2007
33:53	3.066e+03	2.227e+03	1.38 y	5.293e+03	0.14826
34:27	2.135e+03	1.978e+03	1.08 y	4.114e+03	0.11687 1,2,3,4,7,8-HxCDD
34:34	5.462e+03	5.172e+03	1.06 y	1.063e+04	0.29603 1,2,3,6,7,8-HxCDD
34:46	2.173e+03	1.645e+03	1.32 y	3.818e+03	0.10694
34:51	2.892e+03	2.659e+03	1.09 y	5.550e+03	0.15467 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 17 File: 160712D1 S: 12 I: 1 F: 4
Acquired: 13-JUL-16 01:14:39 Processed: 14-JUL-16 10:27:46

Total Concentration: 10.381

Unnamed Concentration: 6.115

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:24	7.959e+04	8.451e+04	0.94 y	1.641e+05	6.1149
38:23	5.797e+04	5.651e+04	1.03 y	1.145e+05	4.2660

1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 17 File: 160712D1 S: 12 I: 1 F: 1
Acquired: 13-JUL-16 01:14:39 Processed: 14-JUL-16 10:27:46

Total Concentration: 3.3498

Unnamed Concentration: 3.350

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
20:27	1.978e+04	2.239e+04	0.88	y	4.218e+04	0.46412
21:38	8.081e+04	1.054e+05	0.77	y	1.862e+05	2.0493
23:59	9.225e+03	1.106e+04	0.83	y	2.029e+04	0.22322
24:09	1.115e+04	1.387e+04	0.80	y	2.502e+04	0.27536
25:57	8.006e+03	9.163e+03	0.87	y	1.717e+04	0.18893
27:29	1.708e+04	7.640e+03	2.24	n	1.352e+04	0.14882

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 17 File: 160712D1 S: 12 I: 1 F: 1
Acquired: 13-JUL-16 01:14:39 Processed: 14-JUL-16 10:27:46

Total Concentration: 0.39770 Unnamed Concentration: 0.398

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:29	1.454e+04	1.090e+04	1.33 y	2.544e+04	0.39770

Totals class: PeCDF EMPC Entry #: 31

Run: 17 File: 160712D1 S: 12 I: 1 F: 2

Acquired: 13-JUL-16 01:14:39 Processed: 14-JUL-16 10:27:46

Total Concentration: 0.81380 Unnamed Concentration: 0.814

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28:52	6.516e+03	3.763e+03	1.73 y	1.028e+04	0.16066
29:00	1.635e+04	1.118e+04	1.46 y	2.752e+04	0.43020
29:34	8.785e+03	5.478e+03	1.60 y	1.426e+04	0.22294

Totals class: HxCDF EMPC

Entry #: 33

Run: 17 File: 160712D1 S: 12 I: 1 F: 3

Acquired: 13-JUL-16 01:14:39 Processed: 14-JUL-16 10:27:46

Total Concentration: 2.0128

Unnamed Concentration: 1.245

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:26	6.186e+03	5.189e+03	1.19 y	1.137e+04	0.20860
32:34	1.693e+04	1.531e+04	1.11 y	3.224e+04	0.59130
33:07	1.025e+04	7.829e+03	1.31 y	1.807e+04	0.33146
33:29	3.426e+03	2.764e+03	1.24 y	6.189e+03	0.11351
33:36	3.836e+03	4.732e+03	0.81 n	6.929e+03	0.12391 1,2,3,4,7,8-HxCDF
33:43	4.360e+03	3.331e+03	1.31 y	7.691e+03	0.13097 1,2,3,6,7,8-HxCDF
34:18	4.391e+03	3.704e+03	1.19 y	8.095e+03	0.14676 2,3,4,6,7,8-HxCDF
35:14	9.427e+03	8.235e+03	1.14 y	1.766e+04	0.36629 1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC

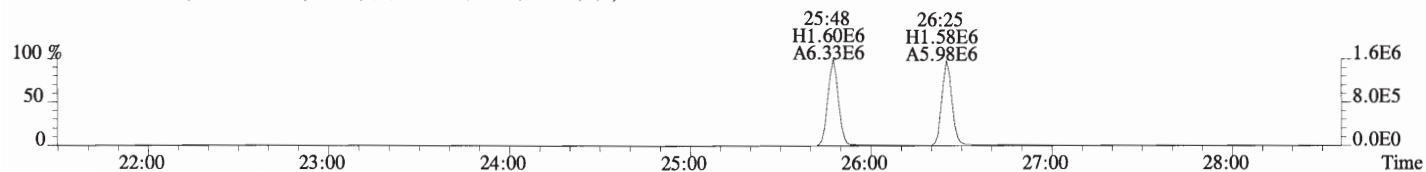
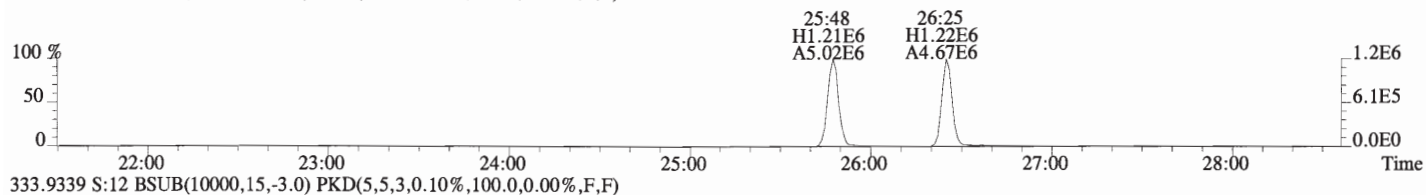
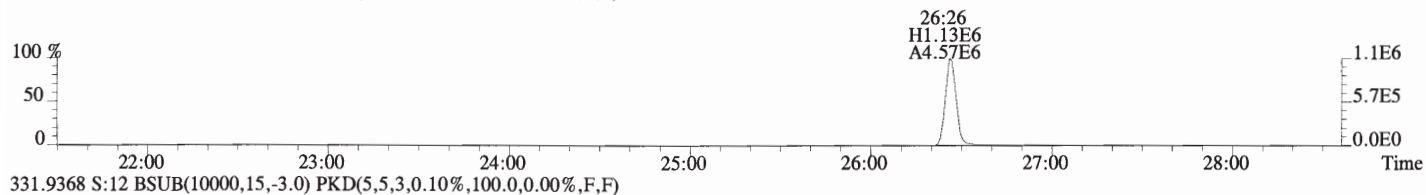
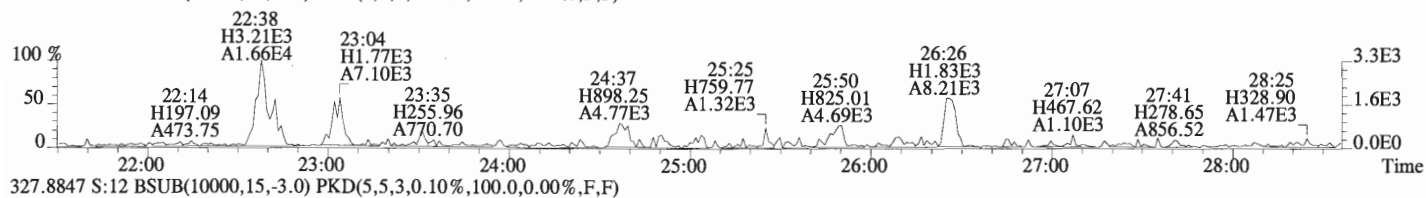
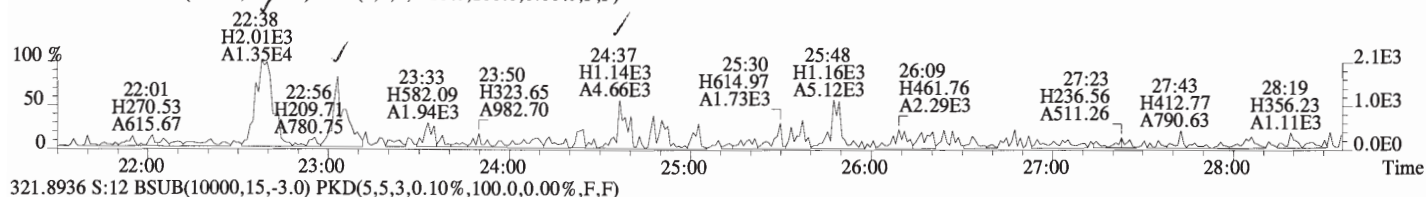
Entry #: 35

Run: 17 File: 160712D1 S: 12 I: 1 F: 4
Acquired: 13-JUL-16 01:14:39 Processed: 14-JUL-16 10:27:46

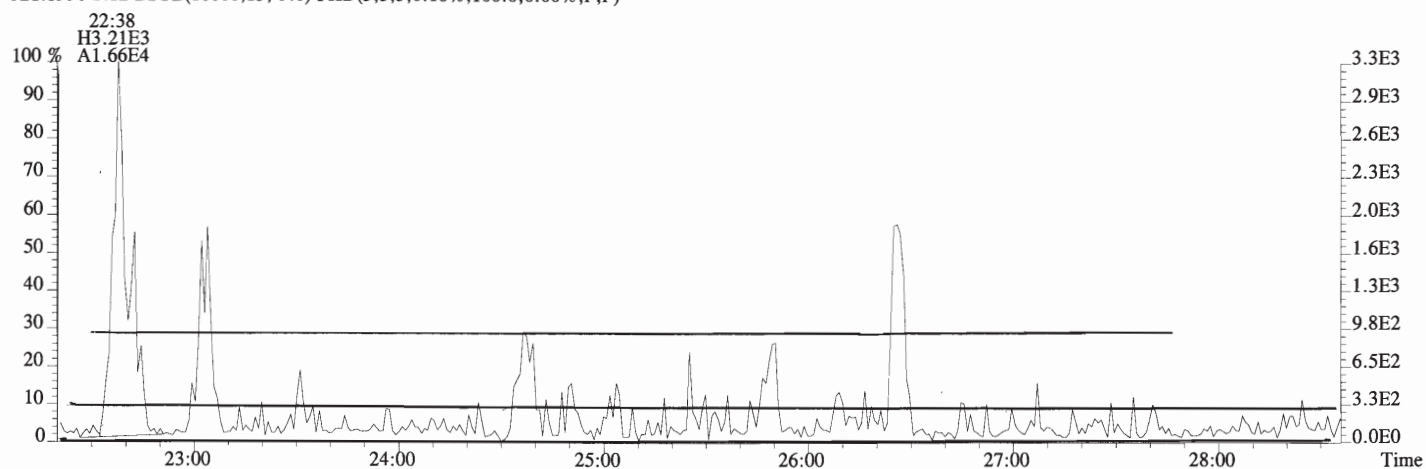
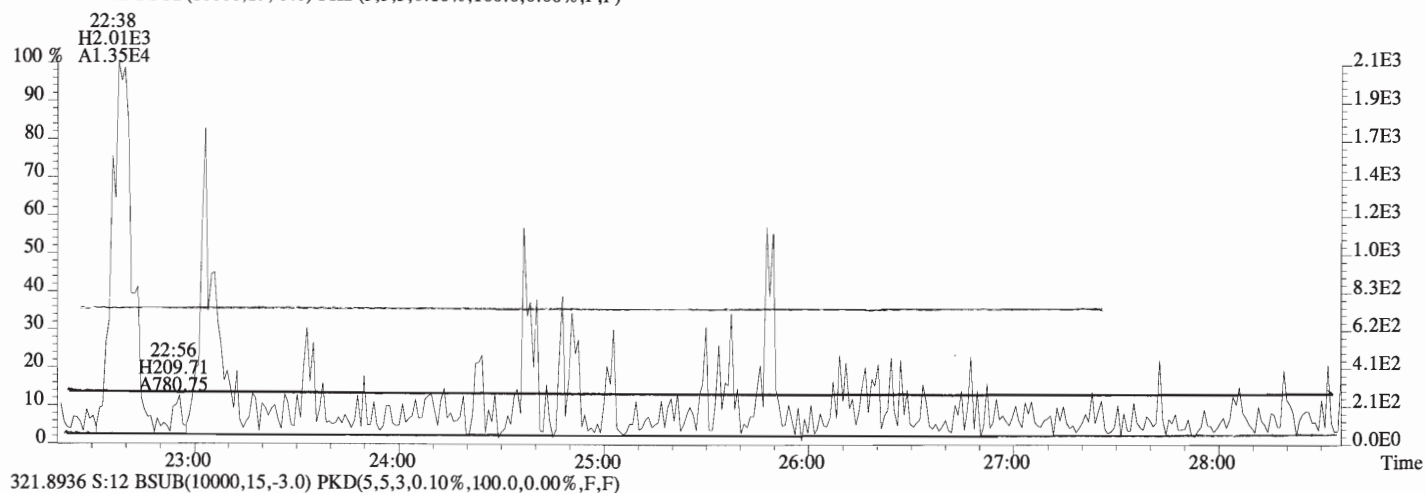
Total Concentration: 1.5497 Unnamed Concentration: 0.717

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Resp Concentration	Name
37:00	1.922e+04	1.635e+04	1.18 y	3.557e+04	0.83313	1,2,3,4,6,7,8-HpCDF
37:38	1.536e+04	1.375e+04	1.12 y	2.911e+04	0.71654	

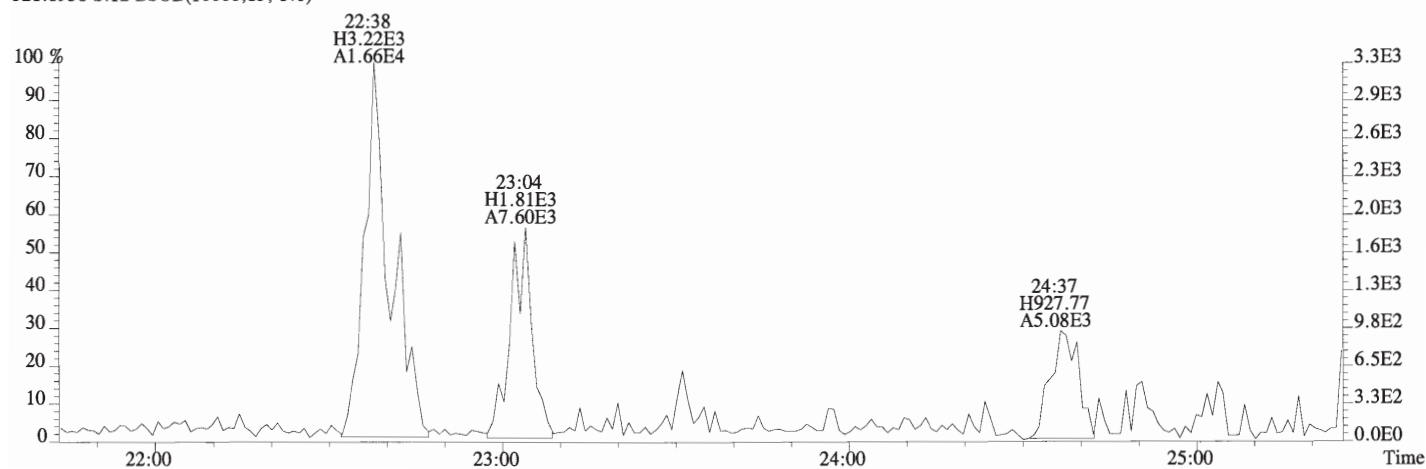
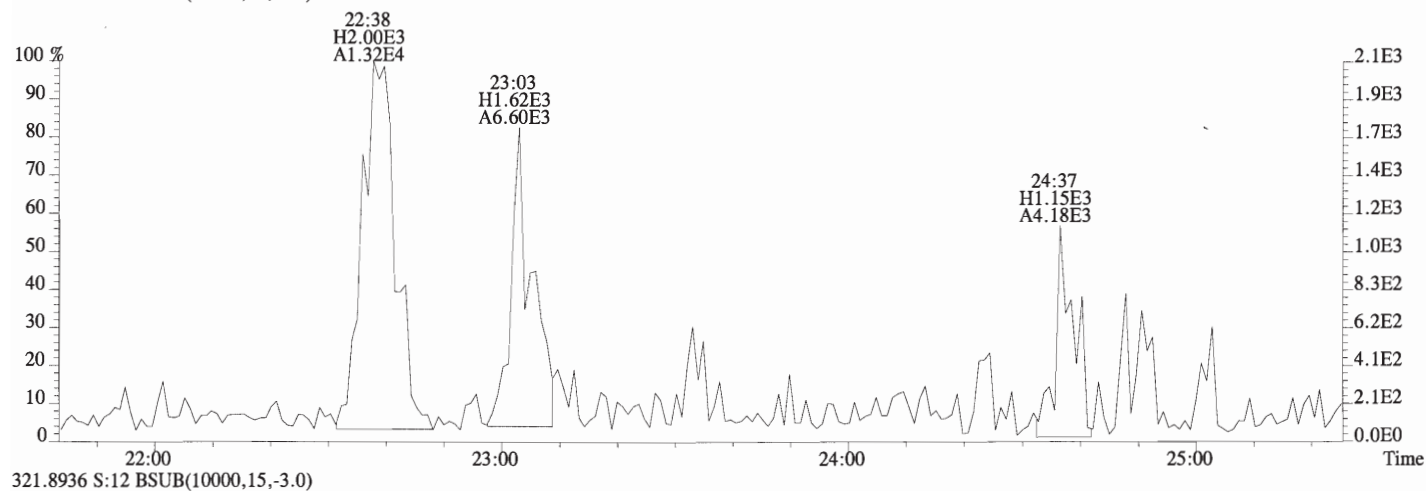
File:160712D1 #1-551 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 319.8965 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



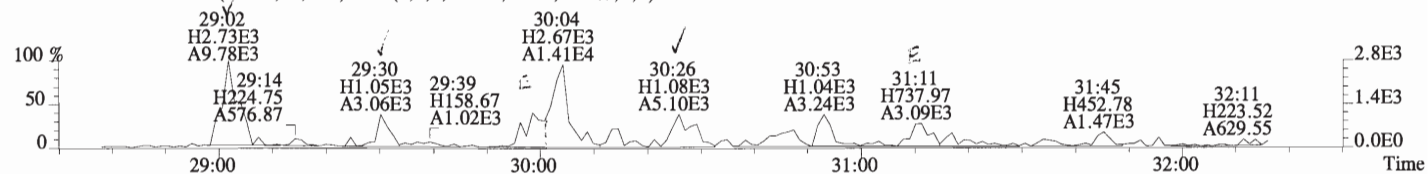
File:160712D1 #1-551 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
319.8965 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



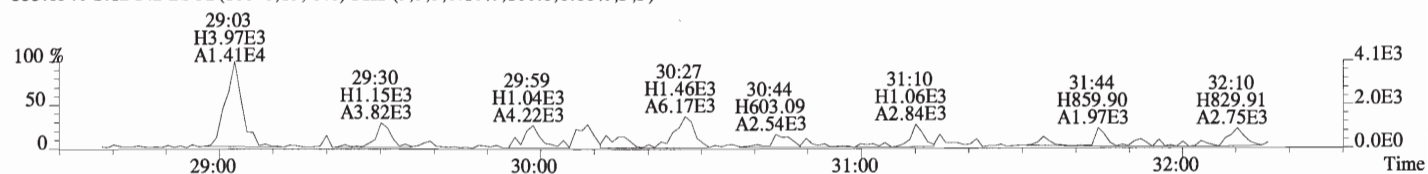
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Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
319.8965 S:12 BSUB(10000,15,-3.0)



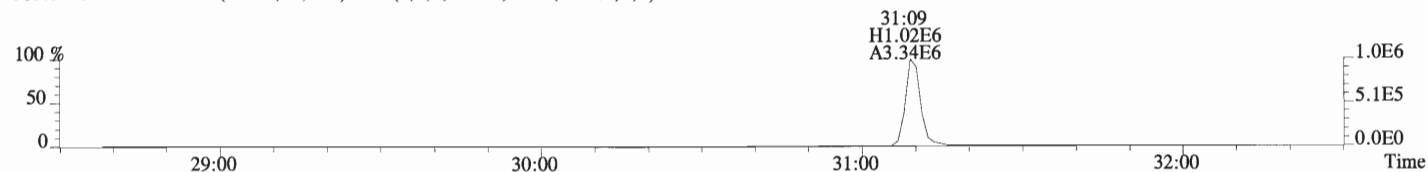
File:160712D1 #1-193 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 353.8576 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



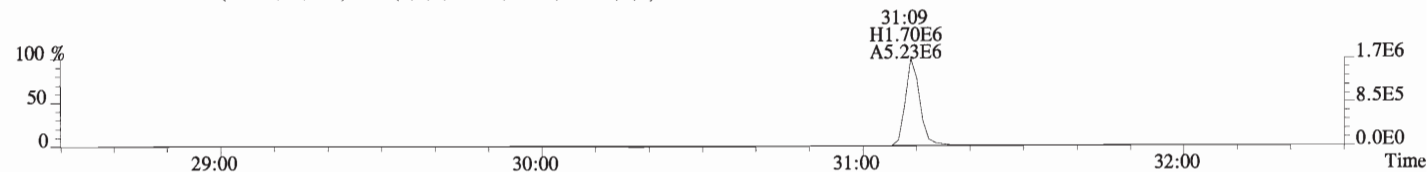
355.8546 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



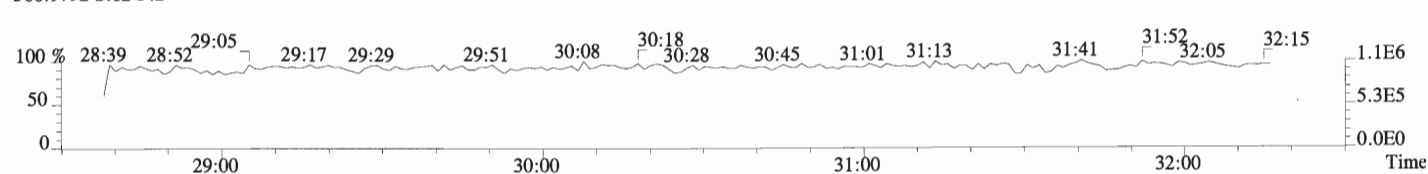
365.8978 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



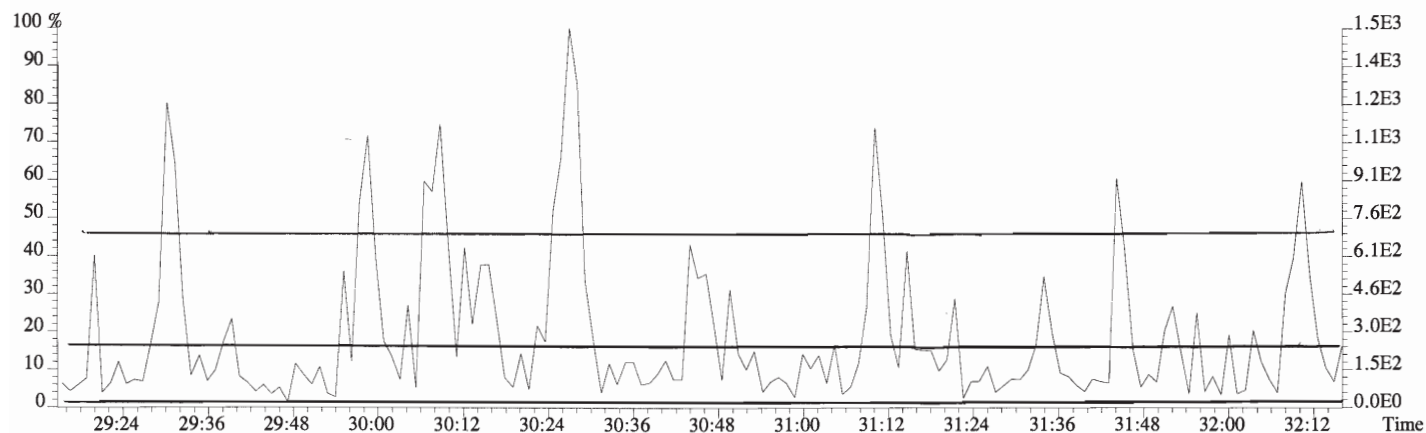
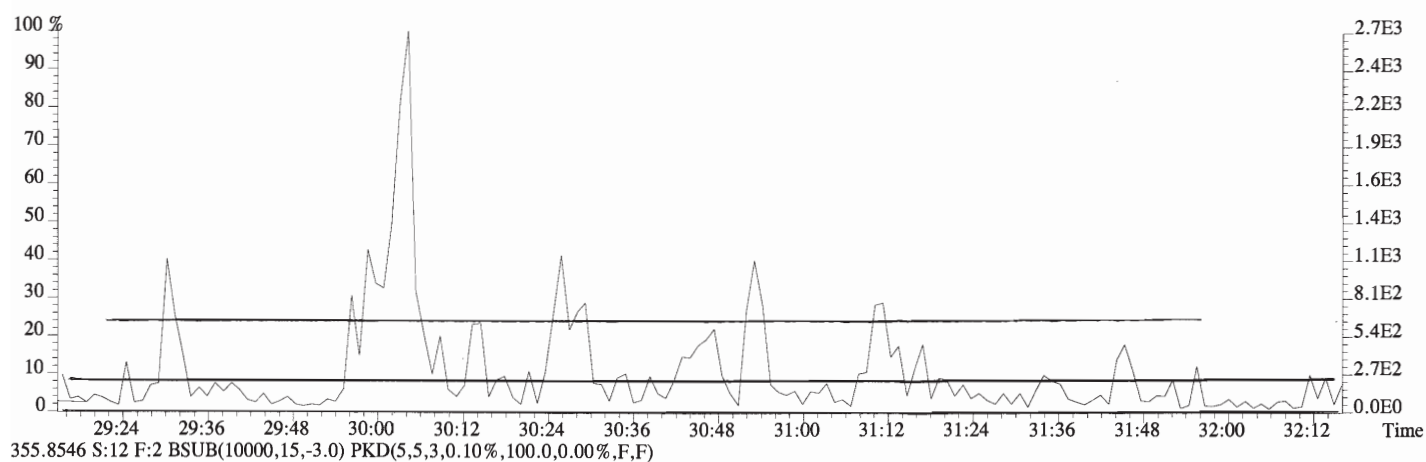
367.8949 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



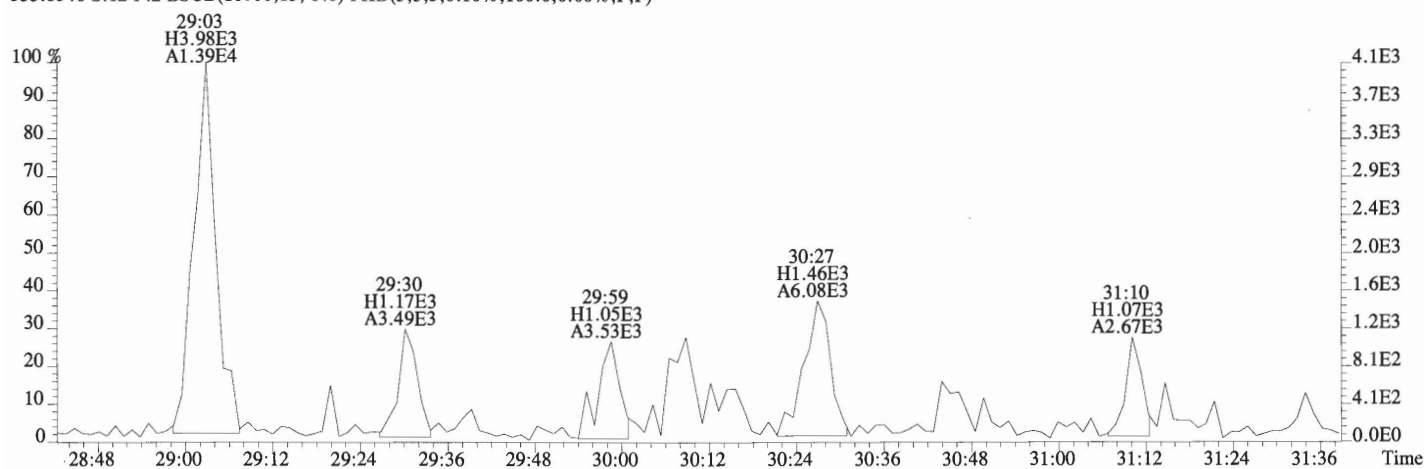
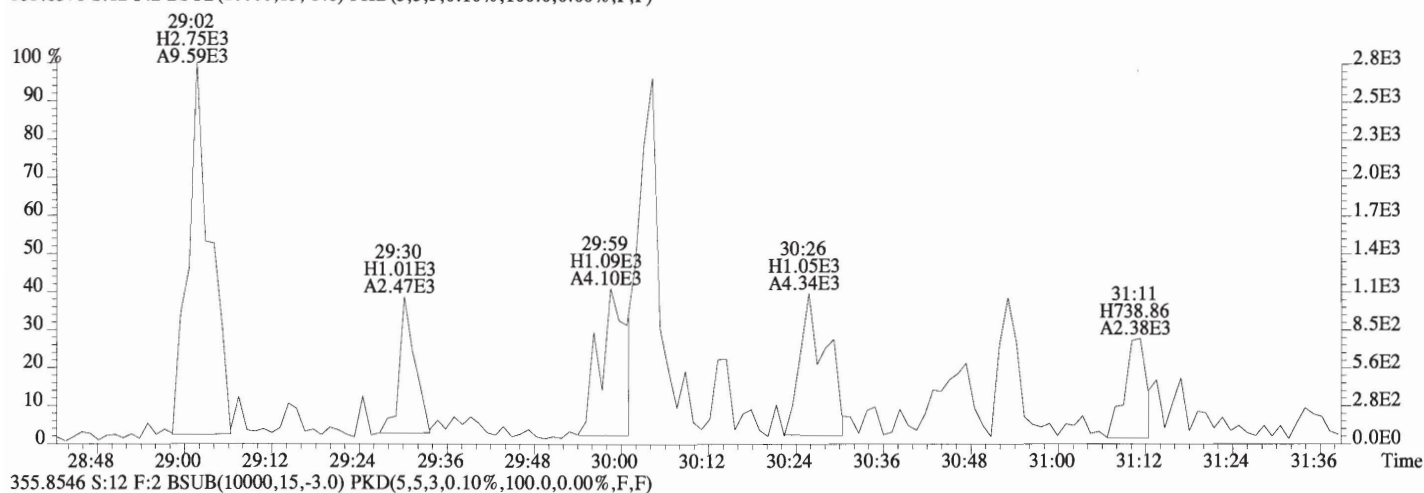
366.9792 S:12 F:2



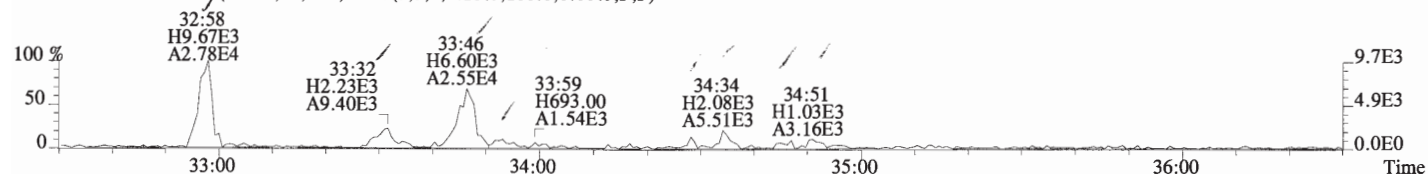
File:160712D1 #1-193 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
353.8576 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



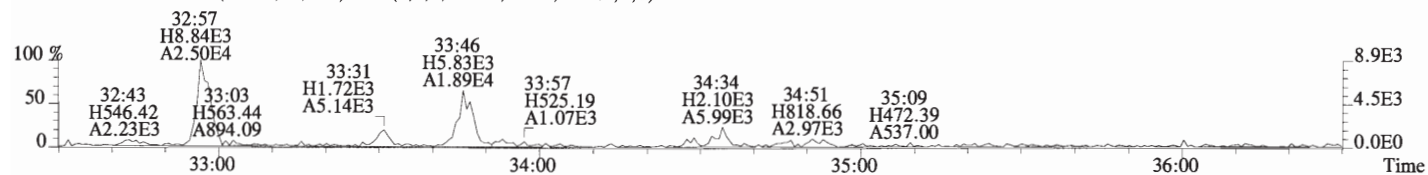
File:160712D1 #1-193 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 353.8576 S:12 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



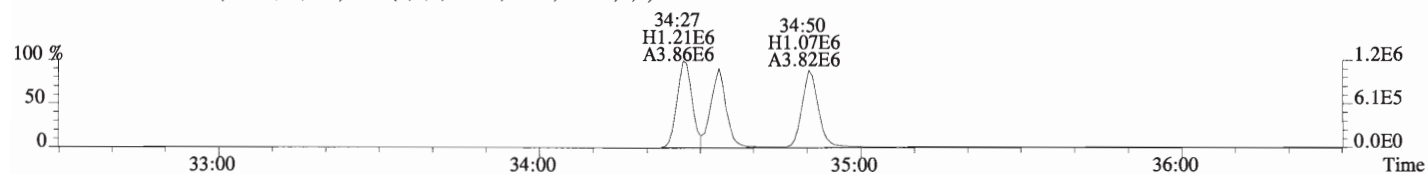
File:160712D1 #1-406 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



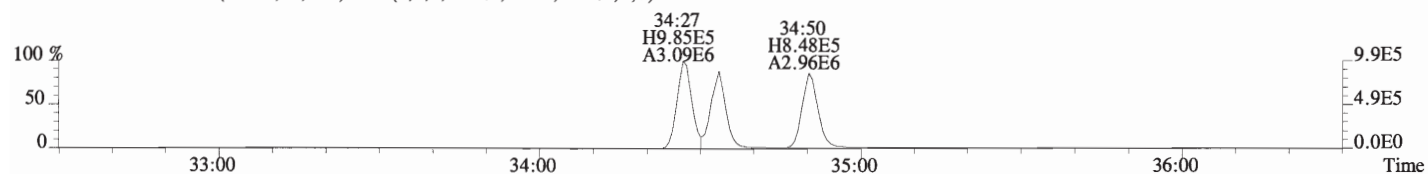
391.8127 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



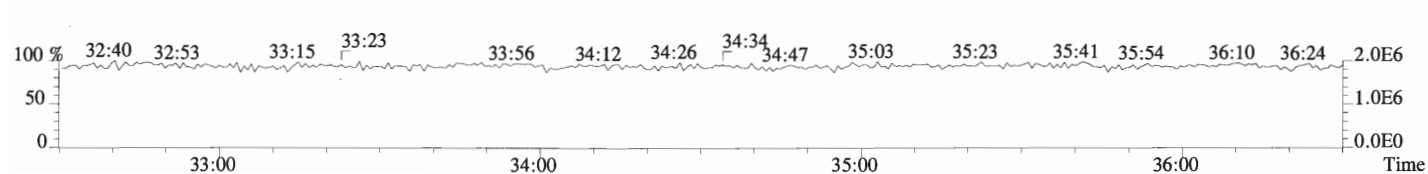
401.8559 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



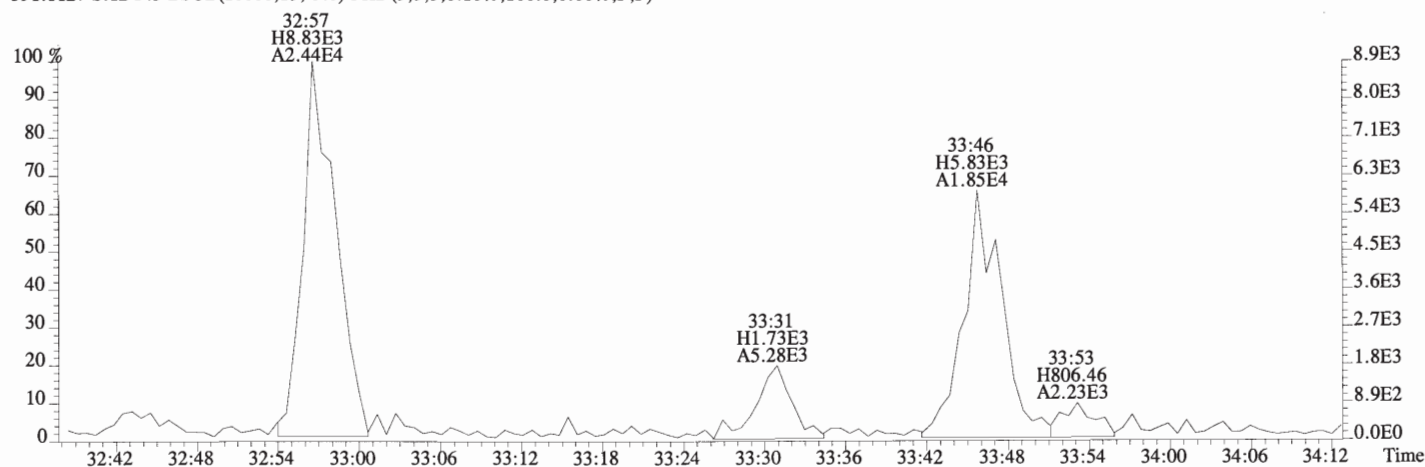
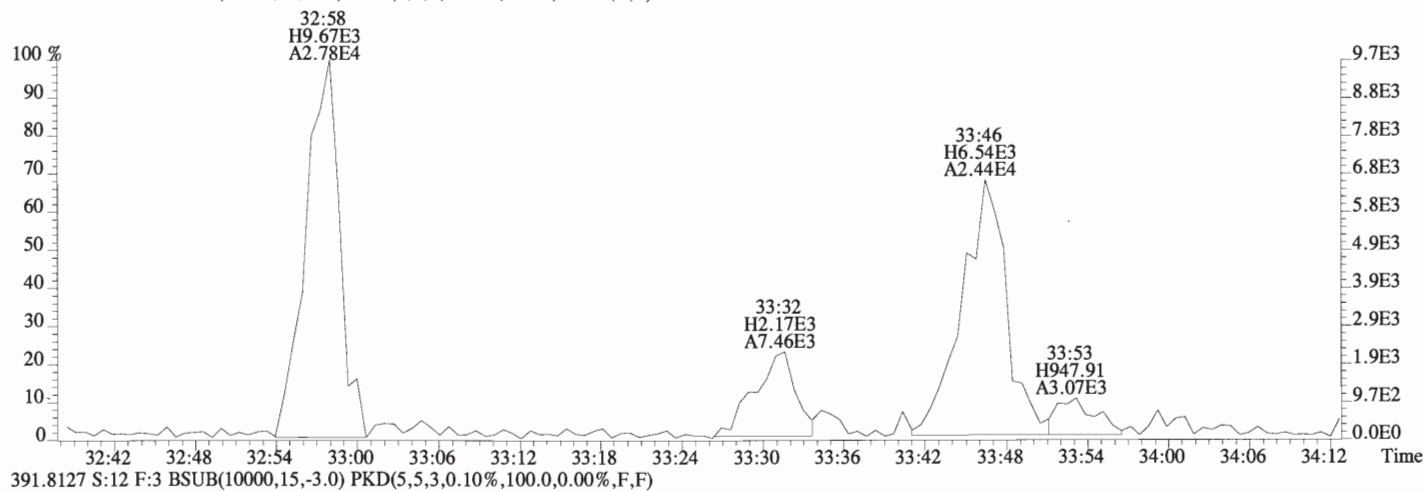
403.8530 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



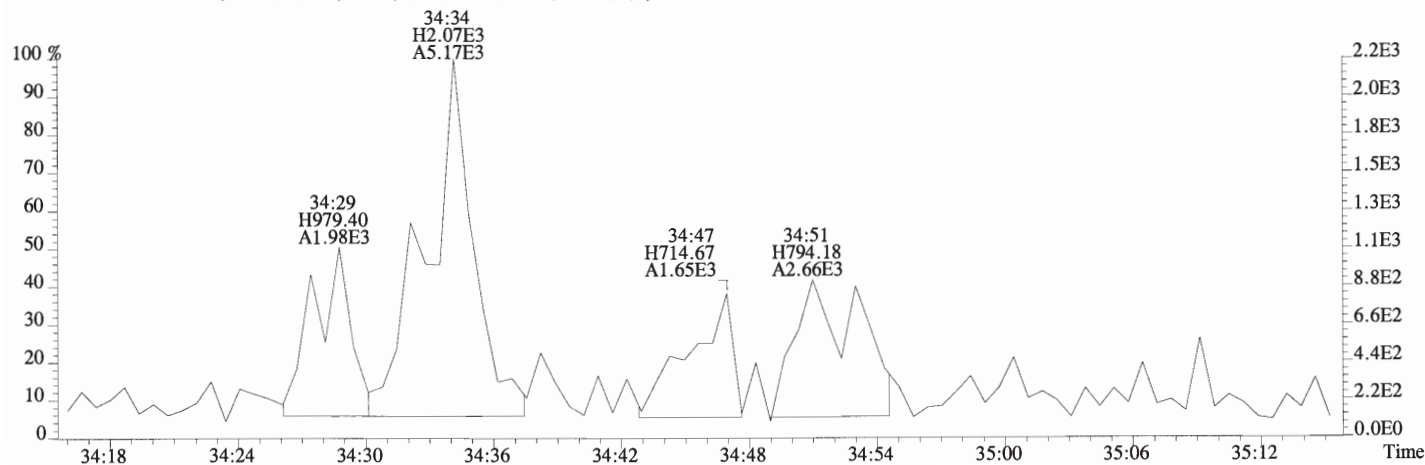
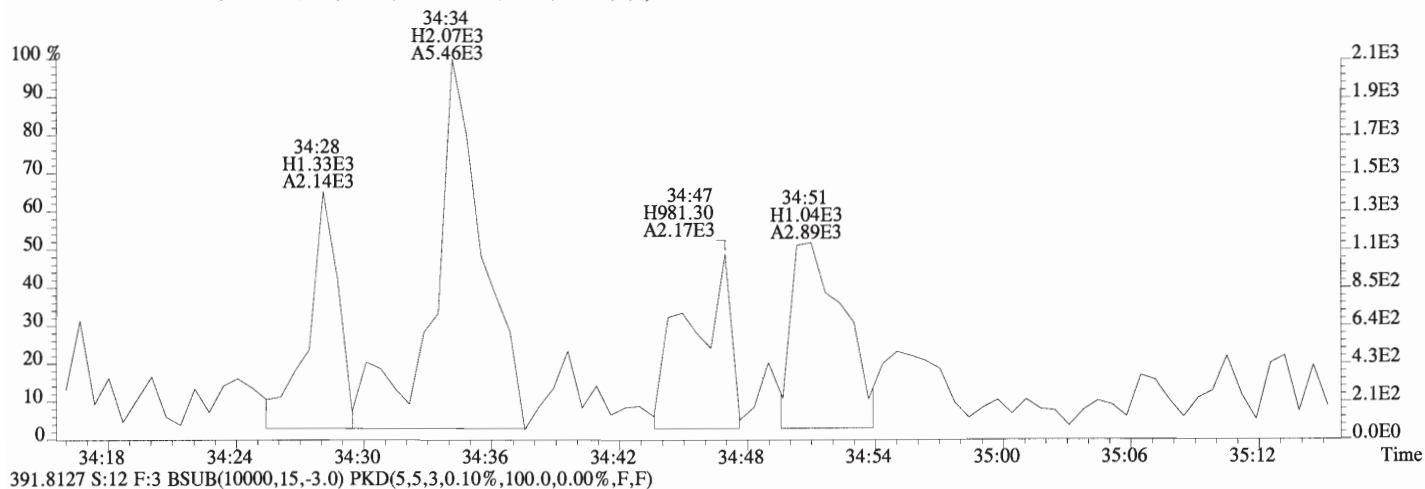
392.9760 S:12 F:3



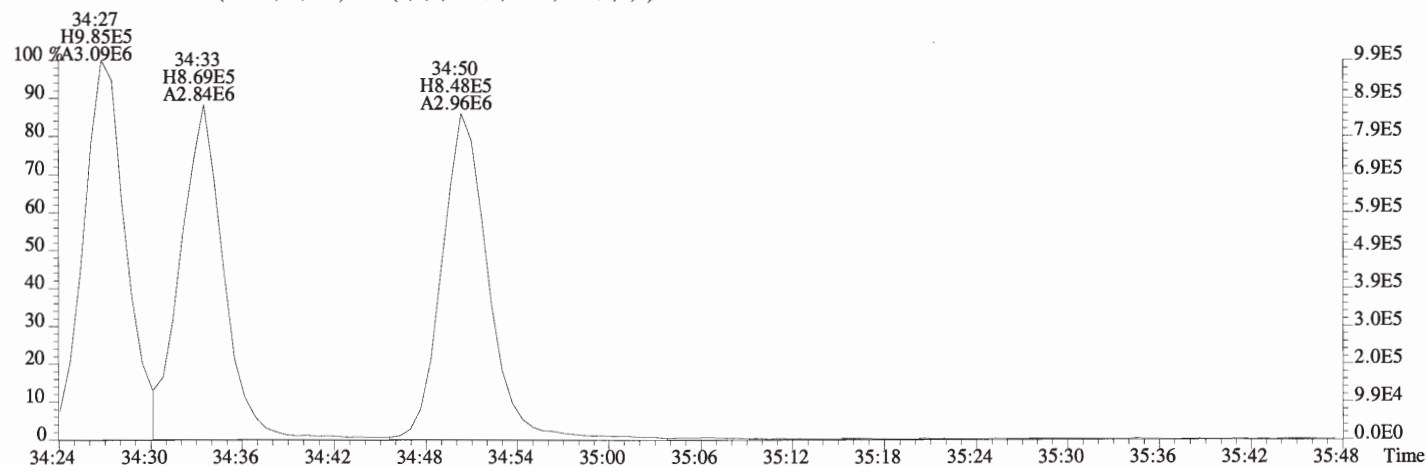
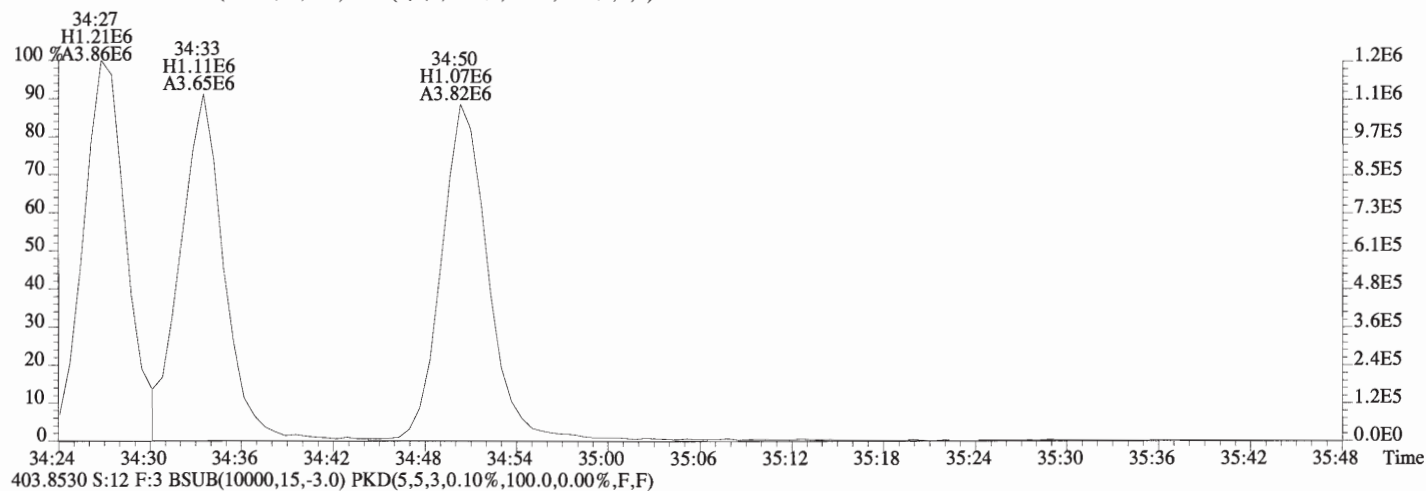
File:160712D1 #1-406 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



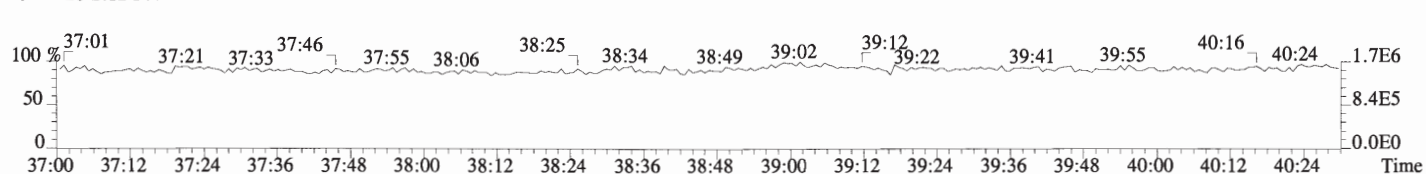
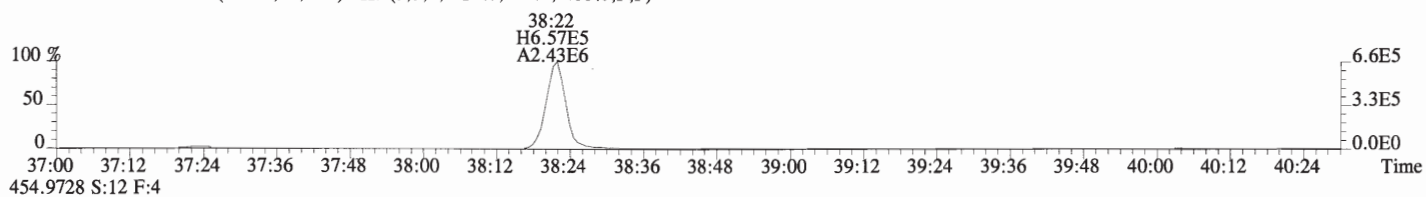
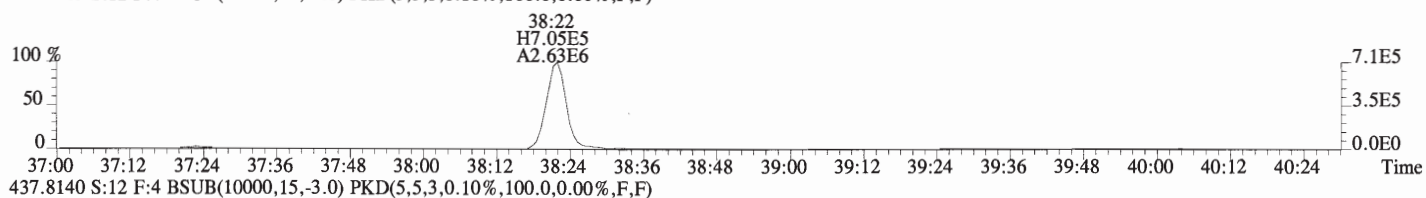
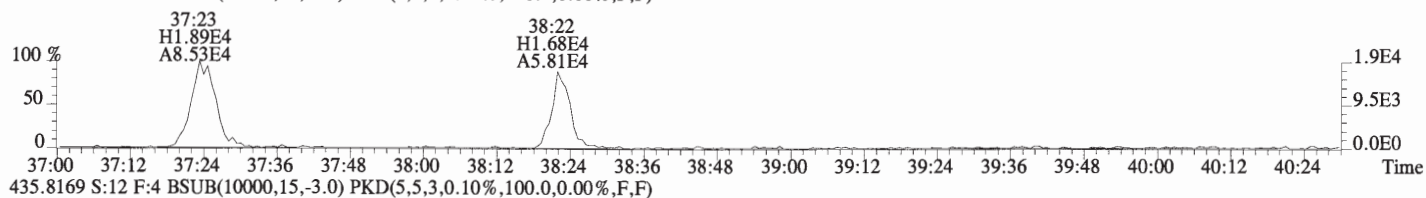
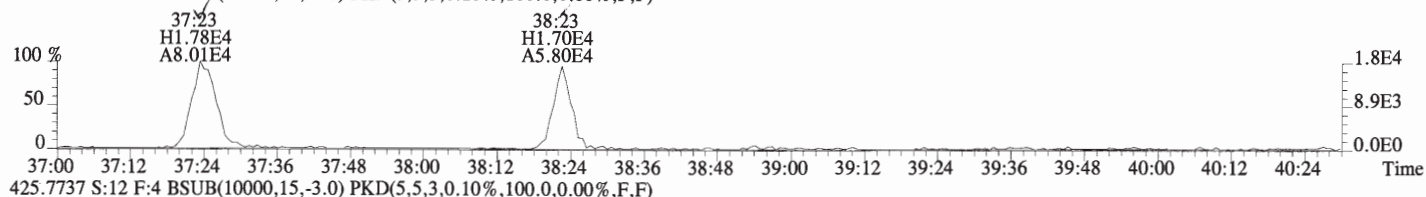
File:160712D1 #1-406 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



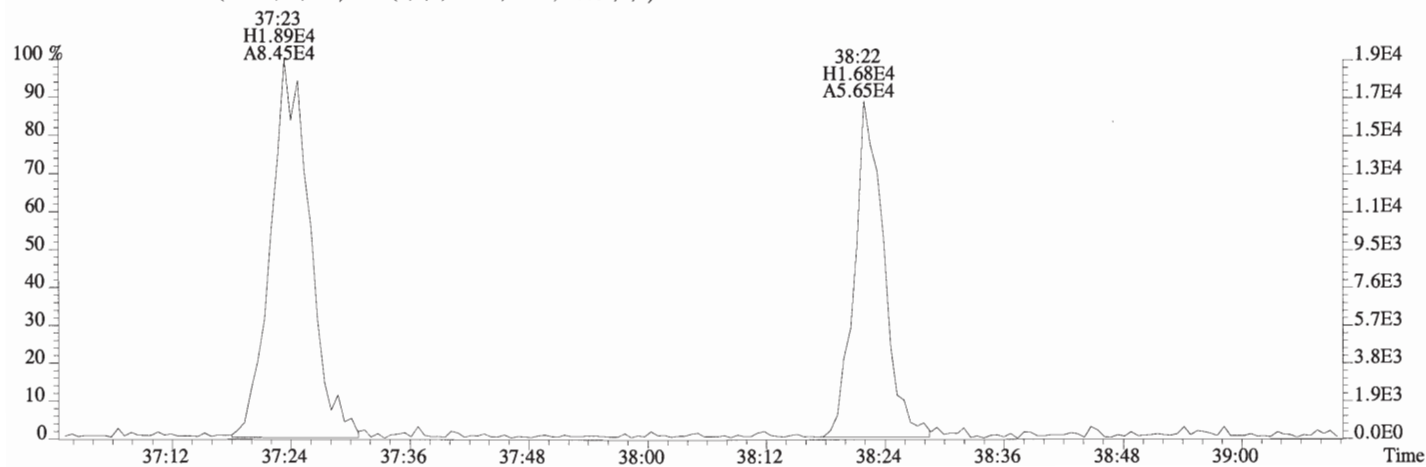
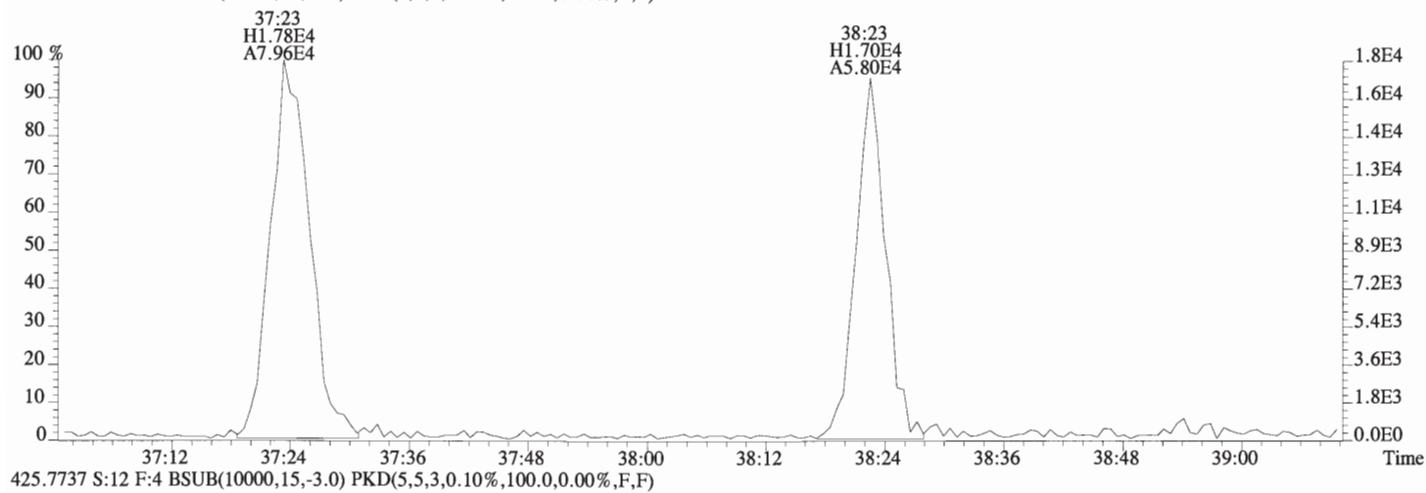
File:160712D1 #1-406 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 401.8559 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



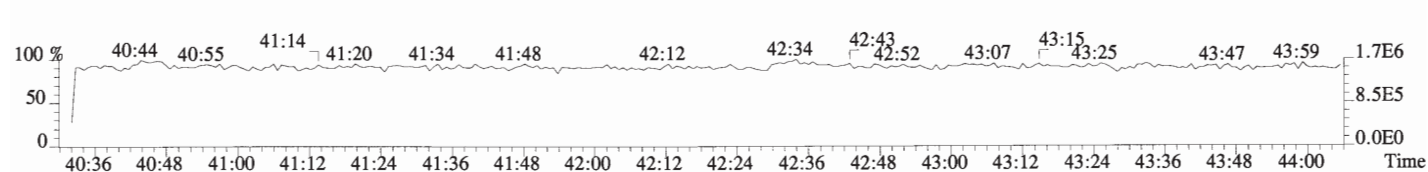
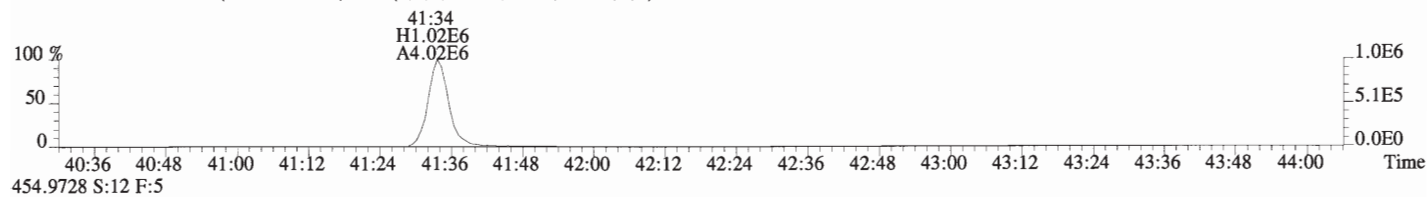
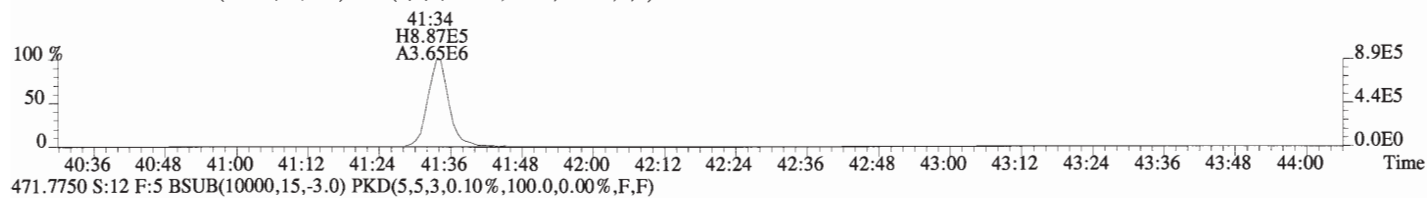
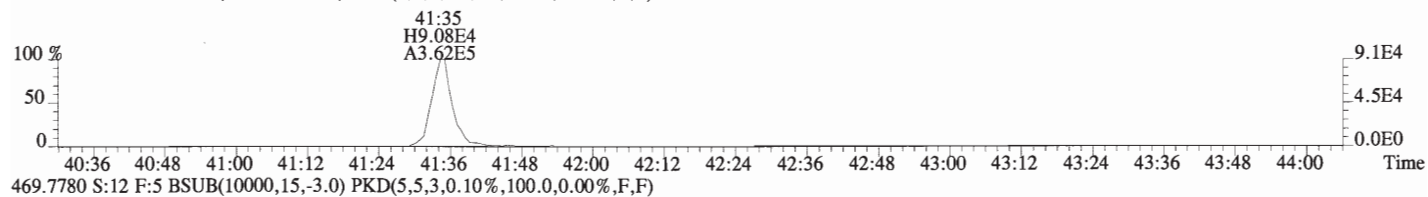
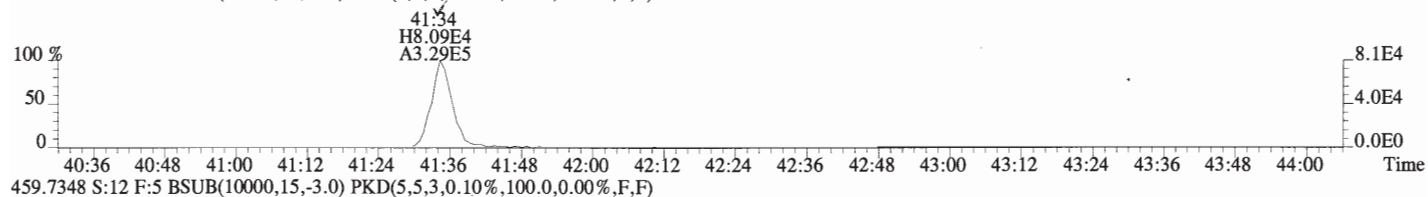
File:160712D1 #1-326 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 423.7767 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



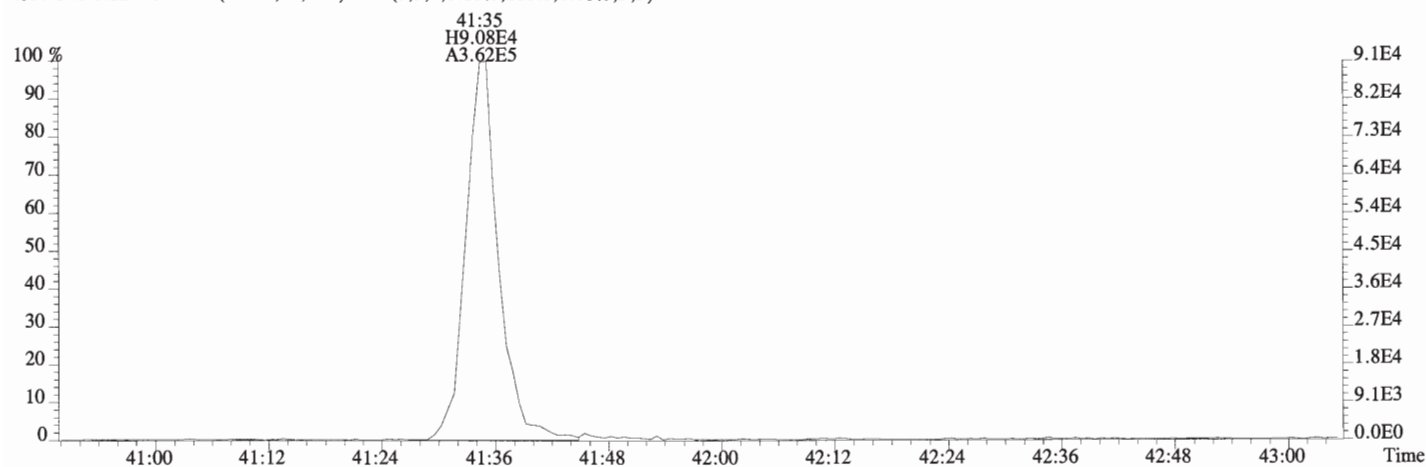
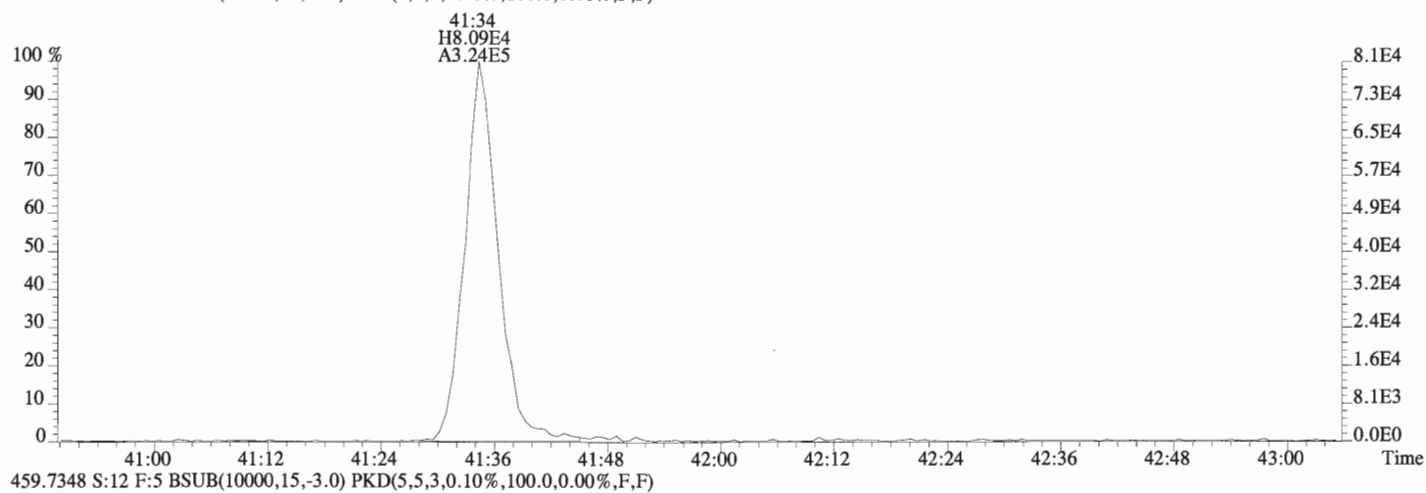
File:160712D1 #1-326 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
423.7767 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



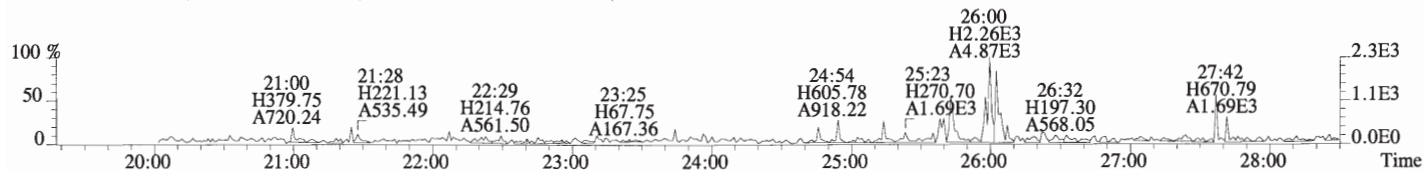
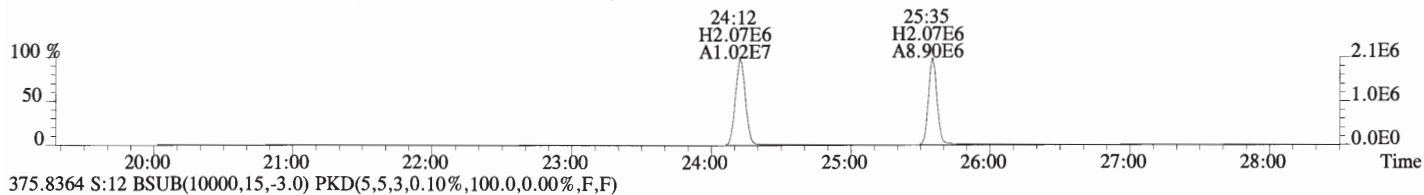
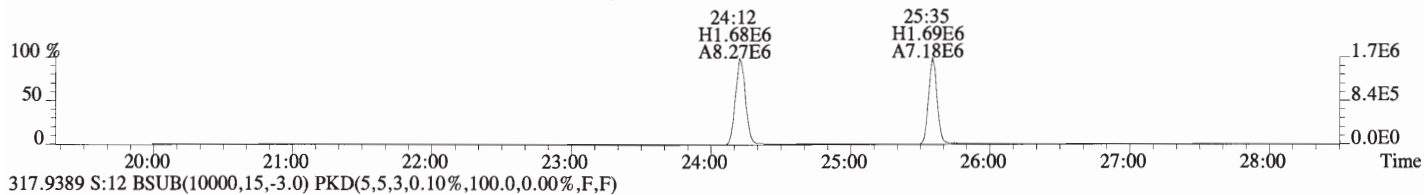
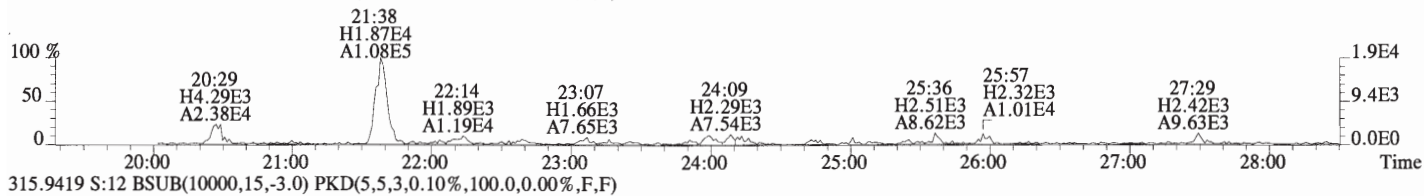
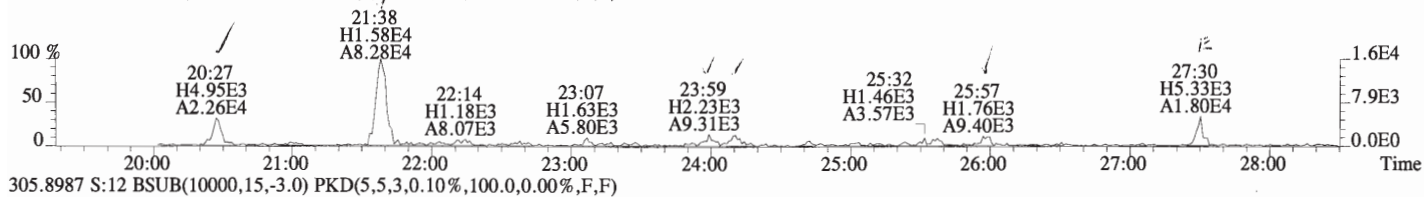
File:160712D1 #1-388 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 457.7377 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



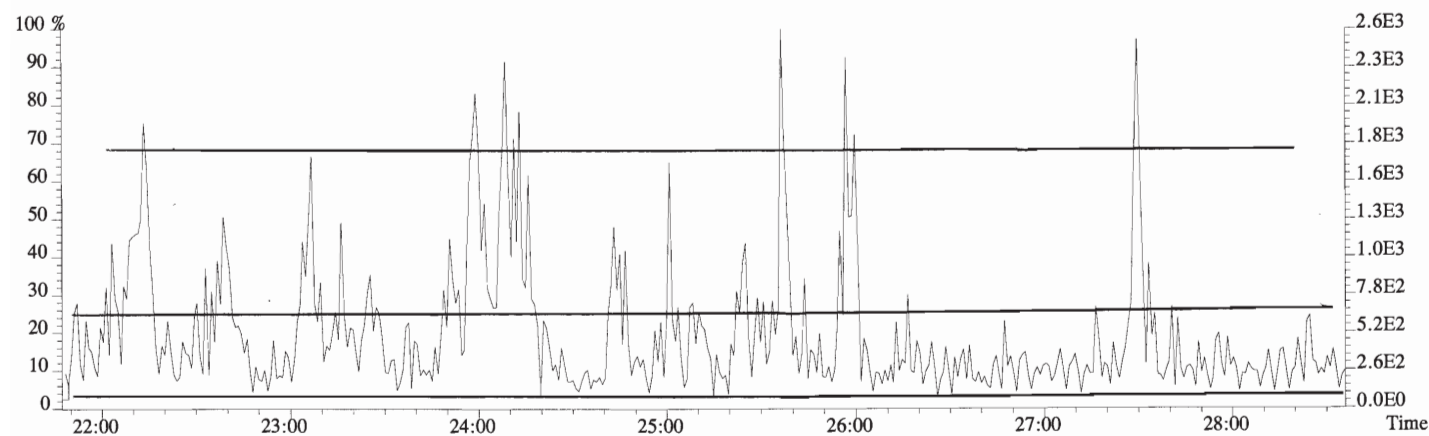
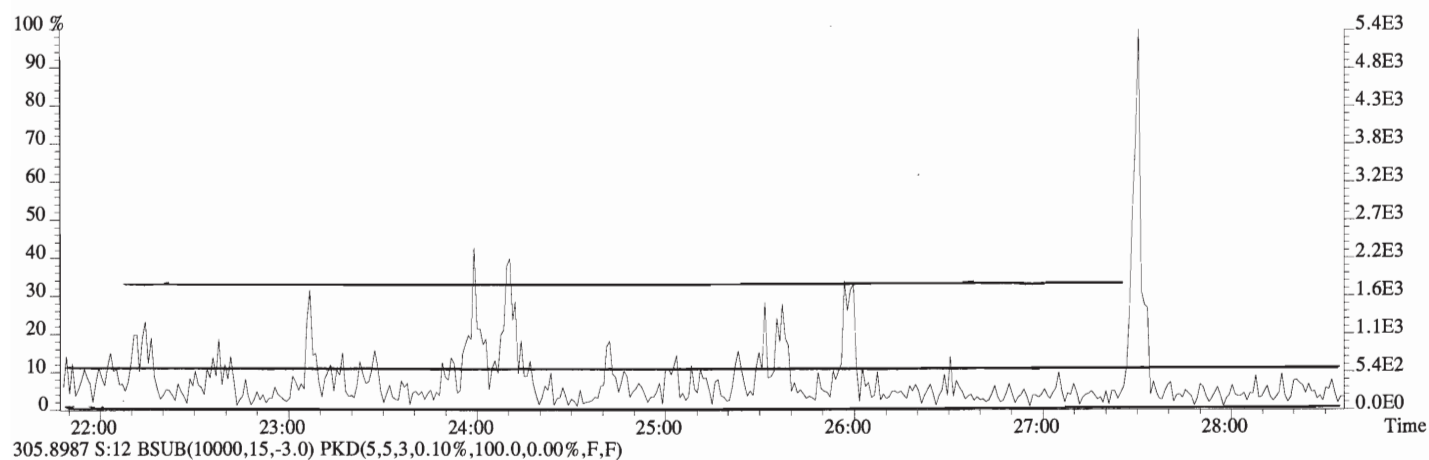
File:160712D1 #1-388 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
457.7377 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



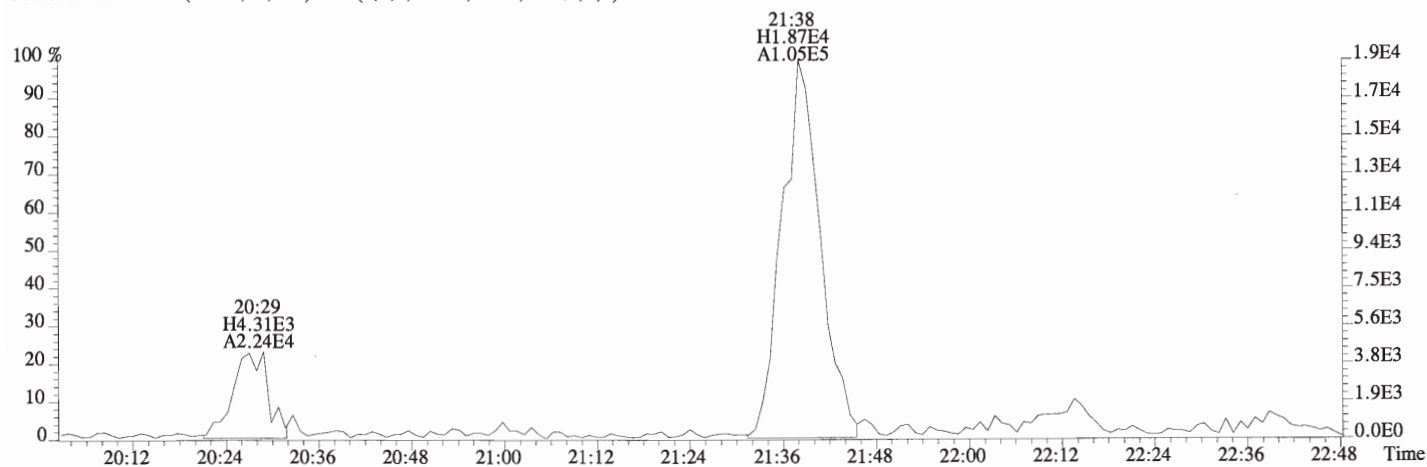
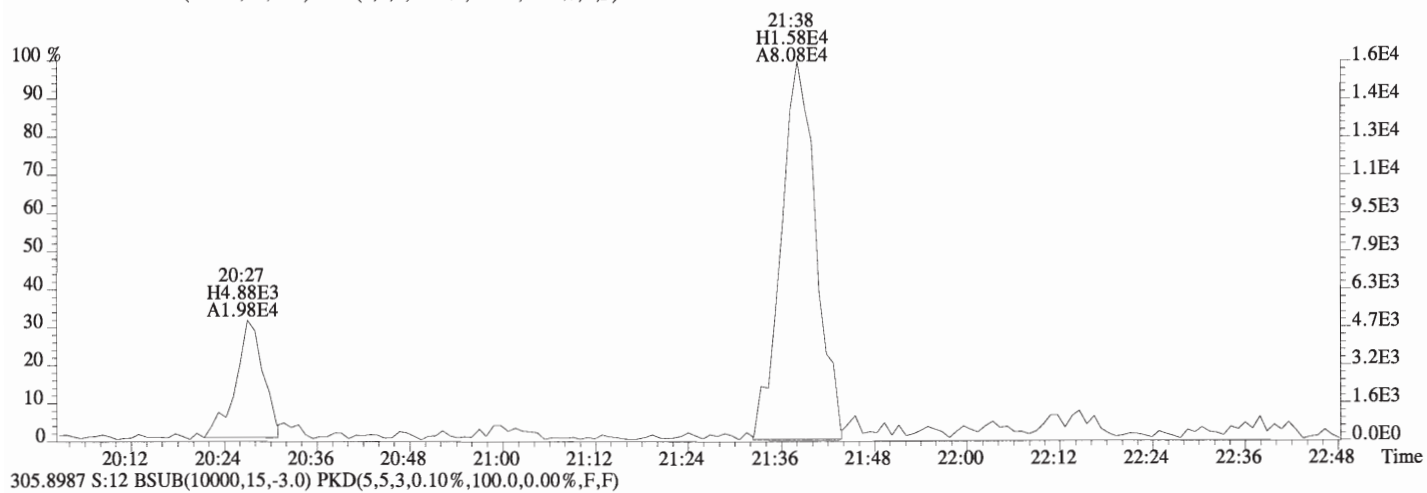
File:160712D1 #1-551 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



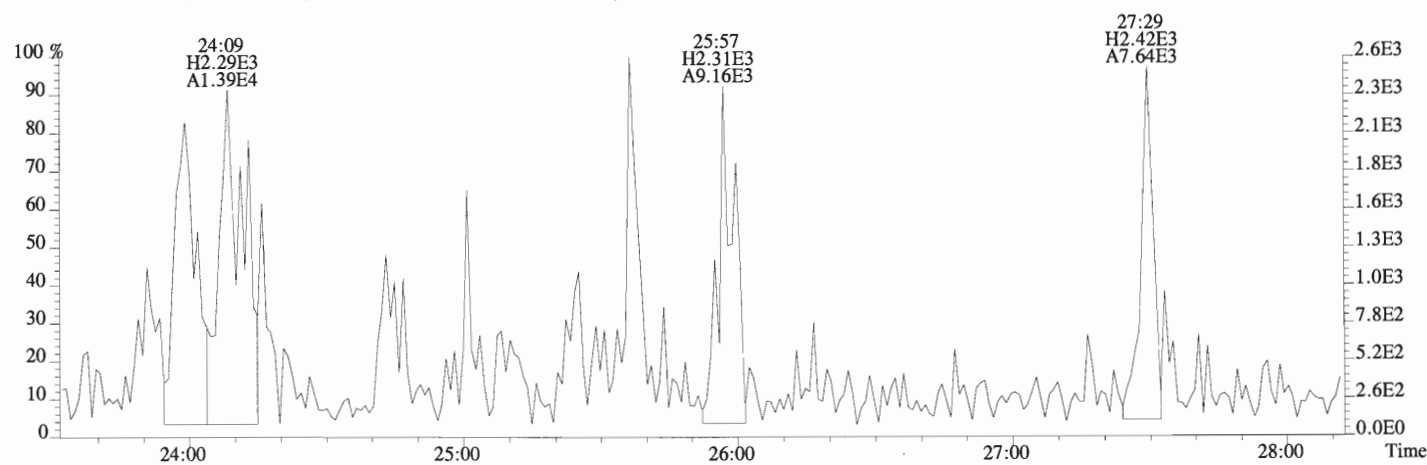
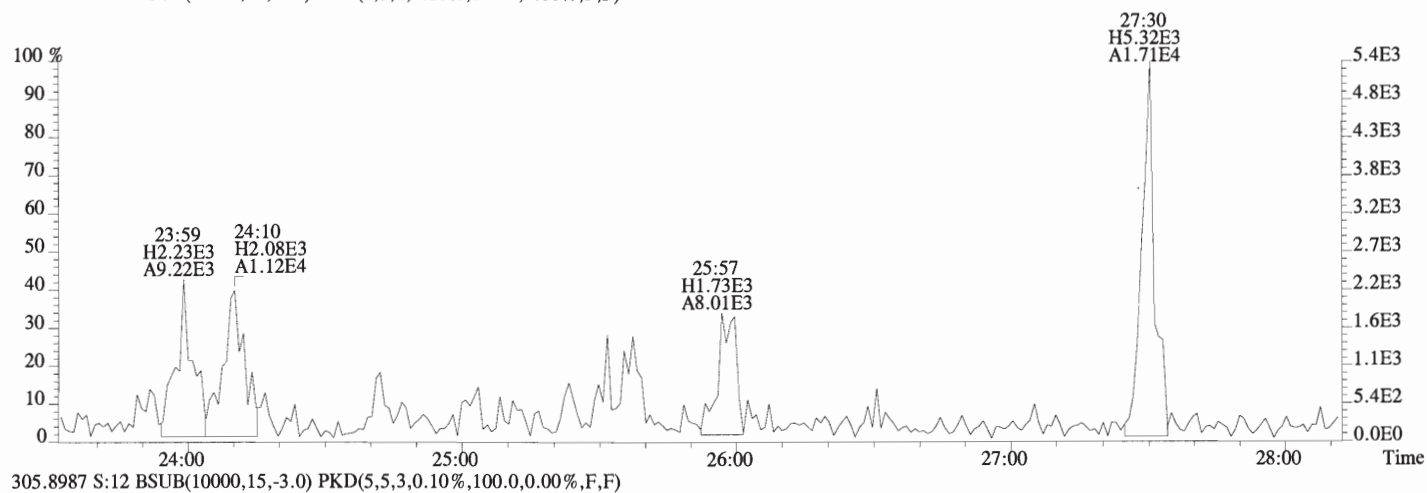
File:160712D1 #1-551 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



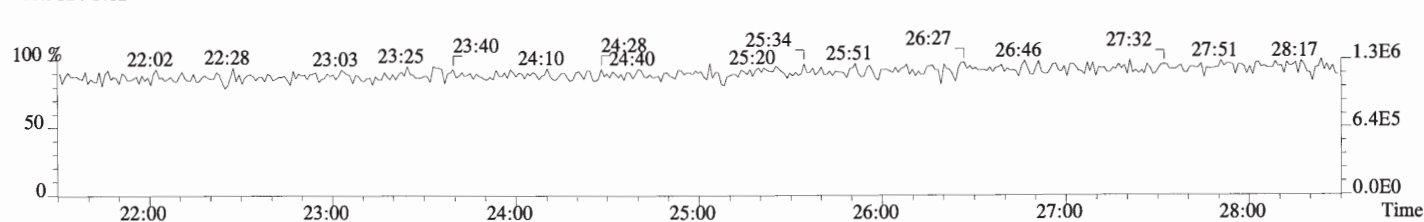
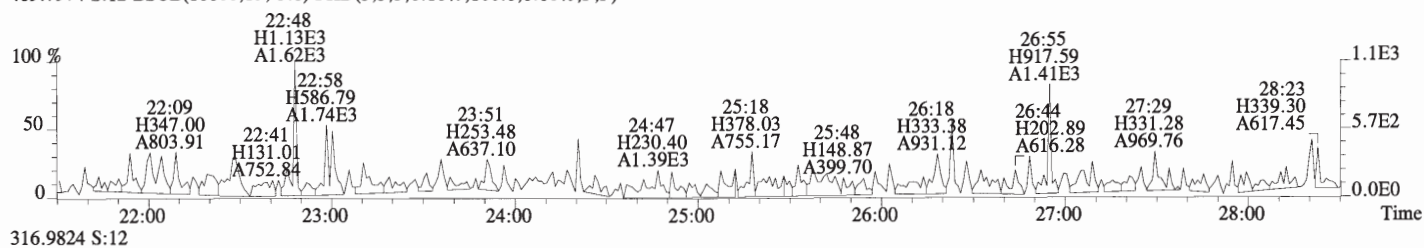
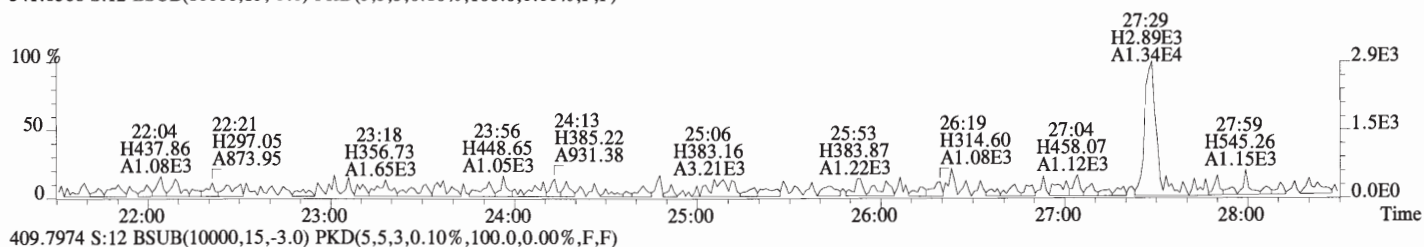
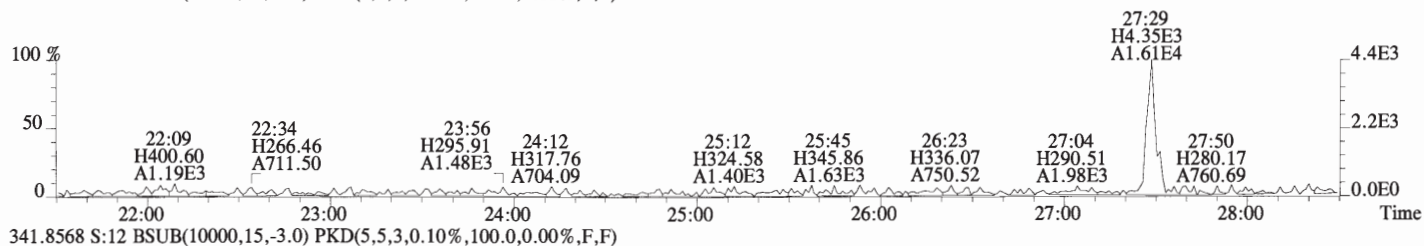
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 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



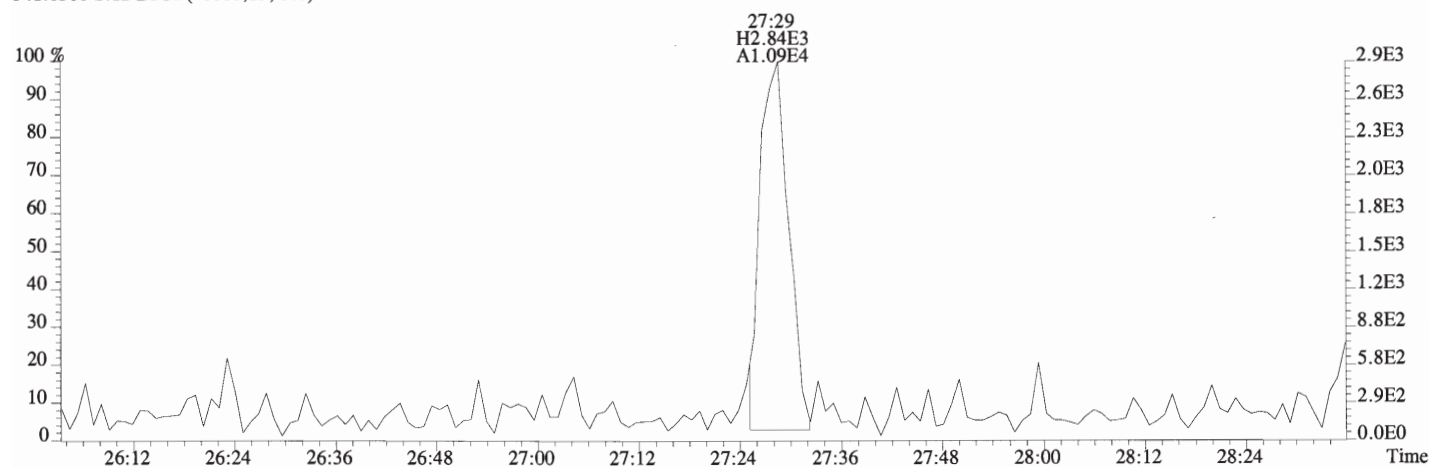
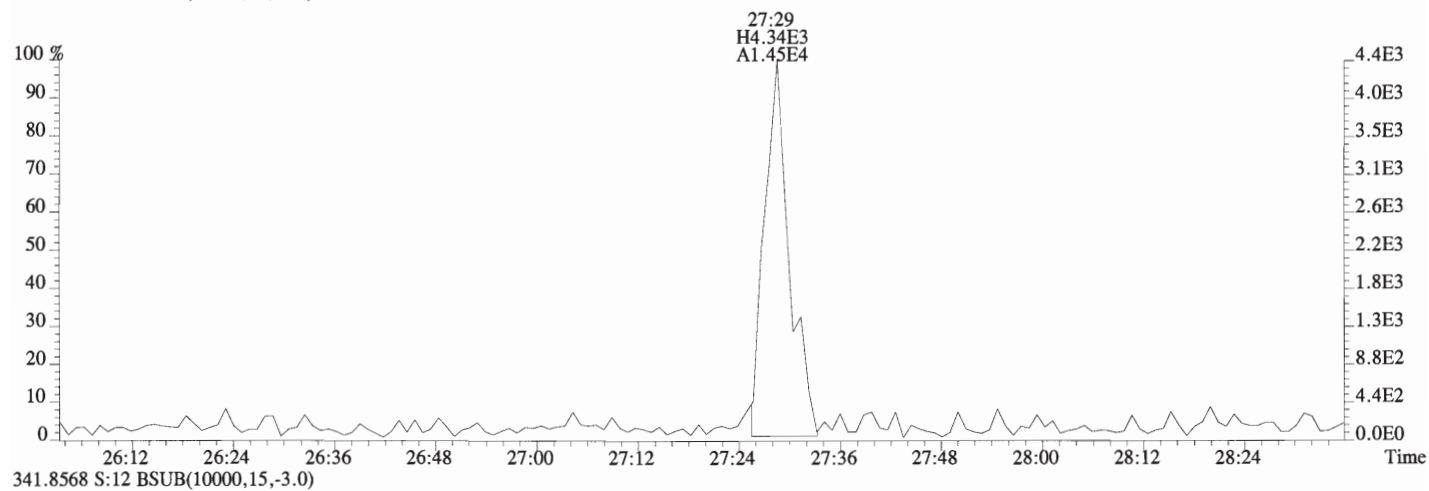
File:160712D1 #1-551 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



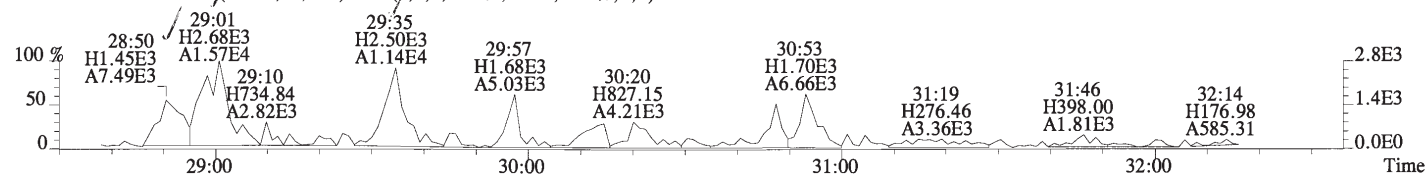
File:160712D1 #1-551 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 339.8597 S:12 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



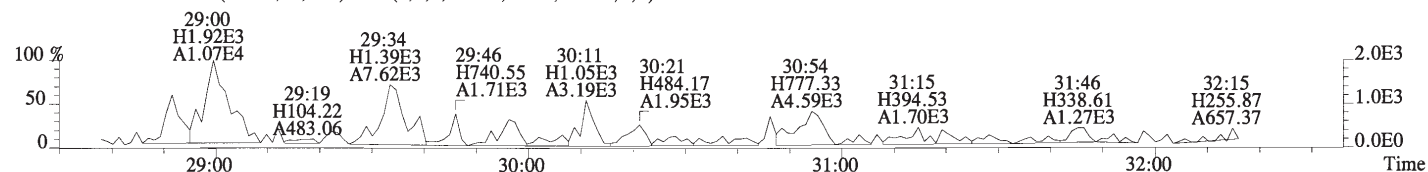
File:160712D1 #1-551 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
339.8597 S:12 BSUB(10000,15,-3.0)



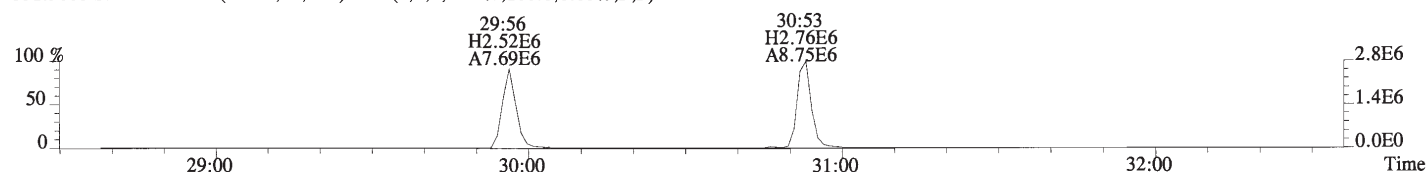
File:160712D1 #1-193 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



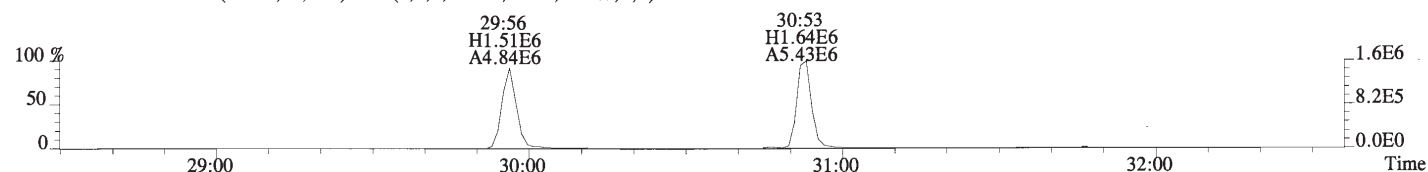
341.8568 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



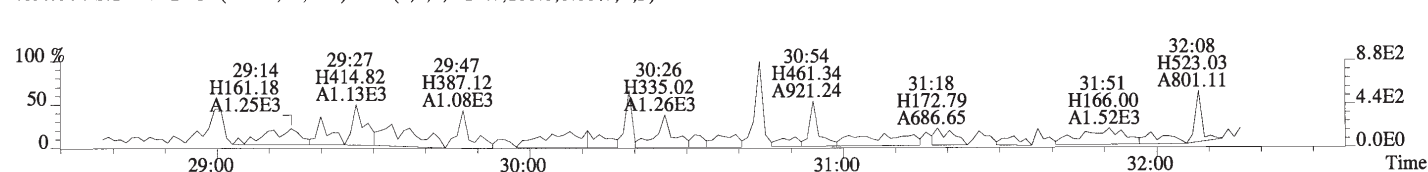
351.9000 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



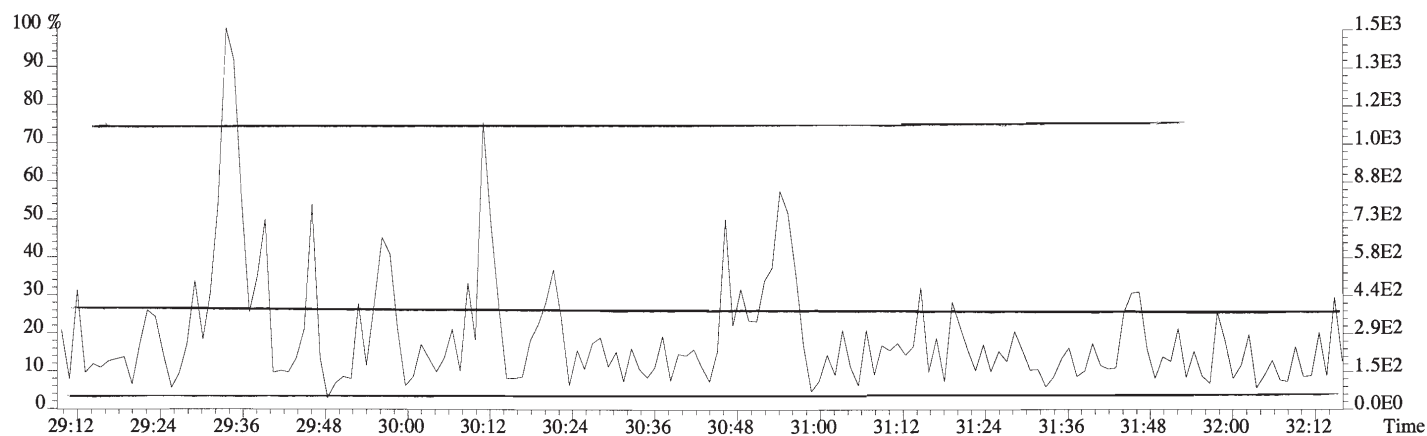
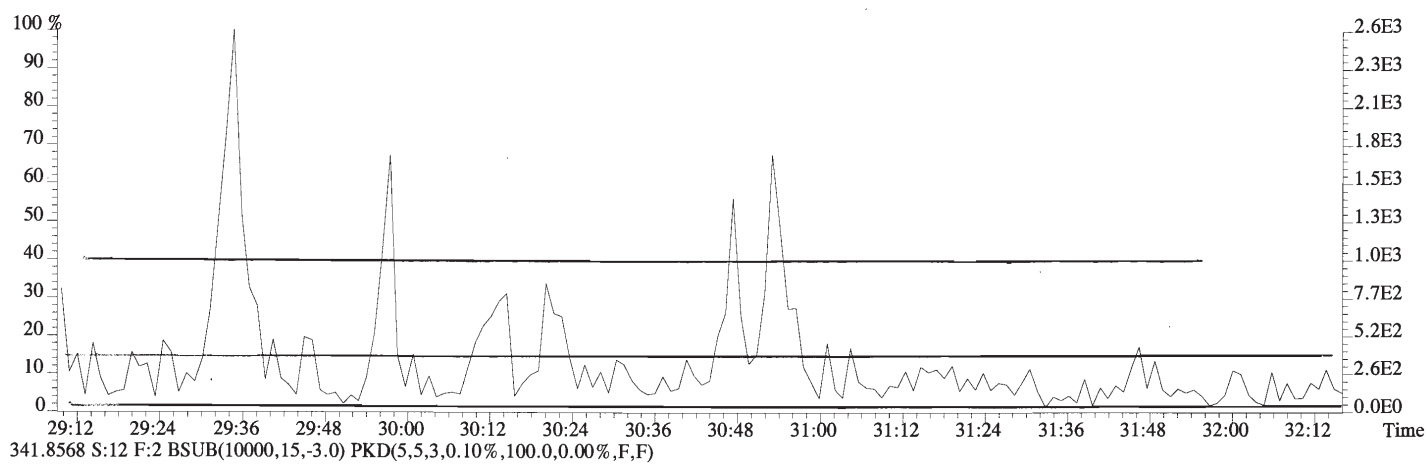
353.8970 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



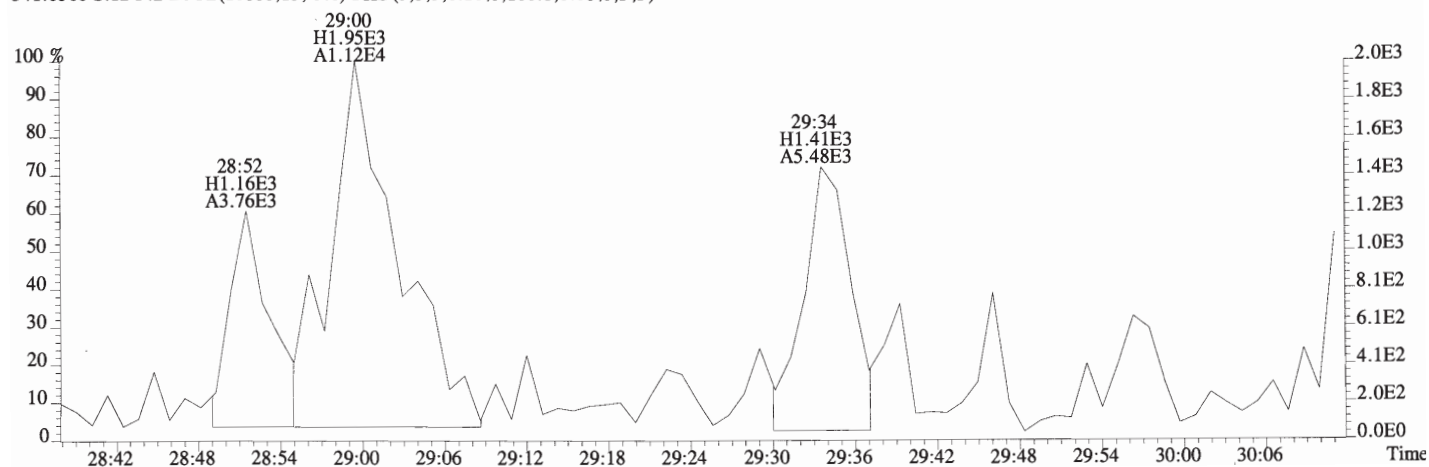
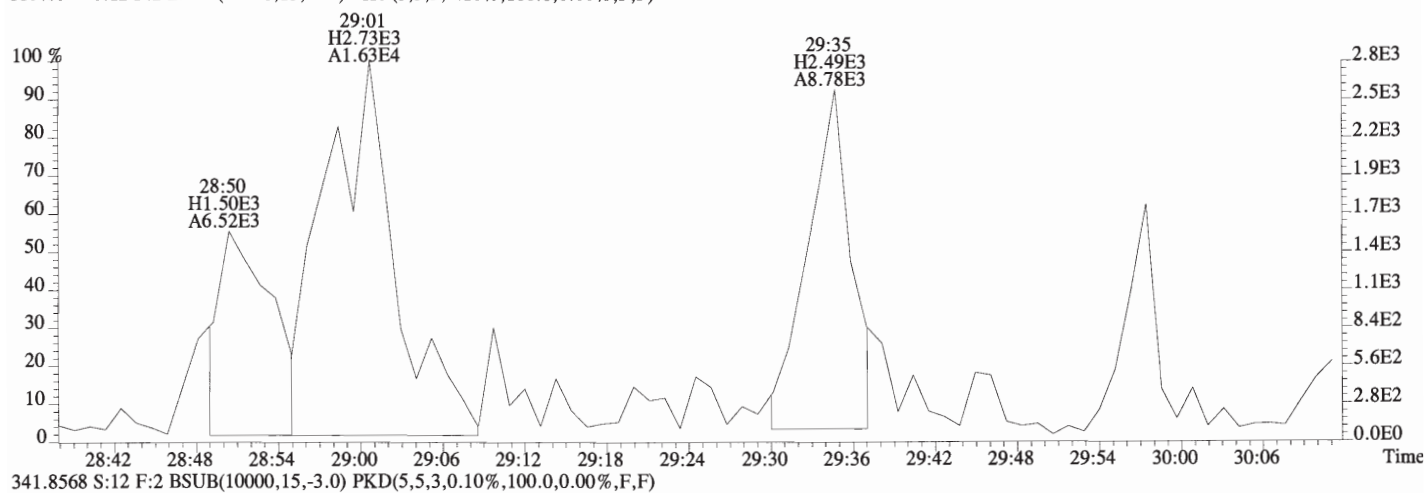
409.7974 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



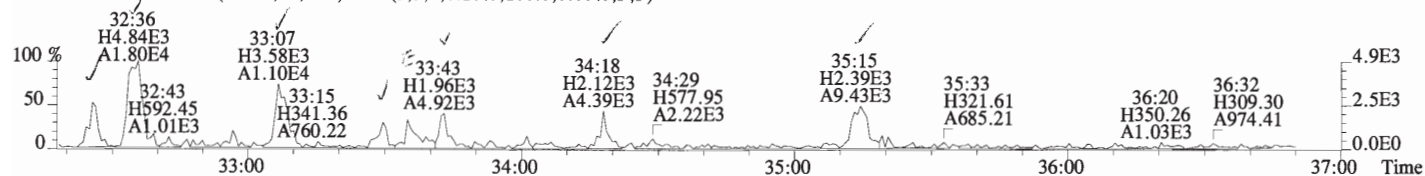
File:160712D1 #1-193 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



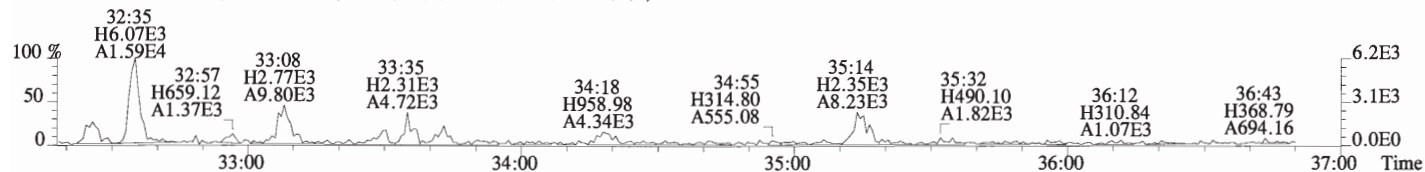
File:160712D1 #1-193 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 339.8597 S:12 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



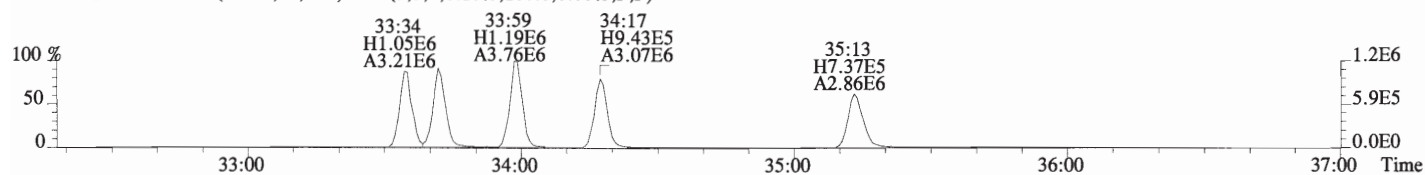
File:160712D1 #1-406 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



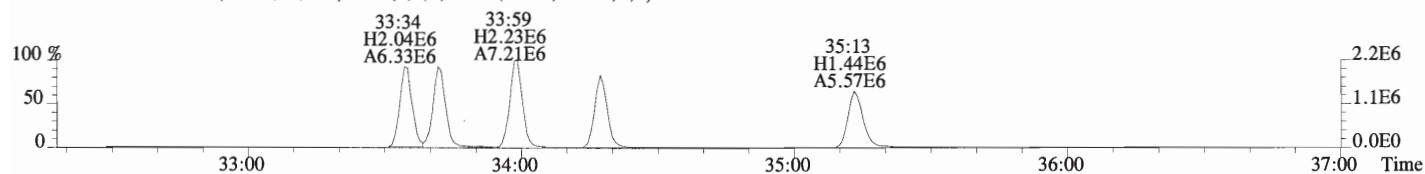
375.8178 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



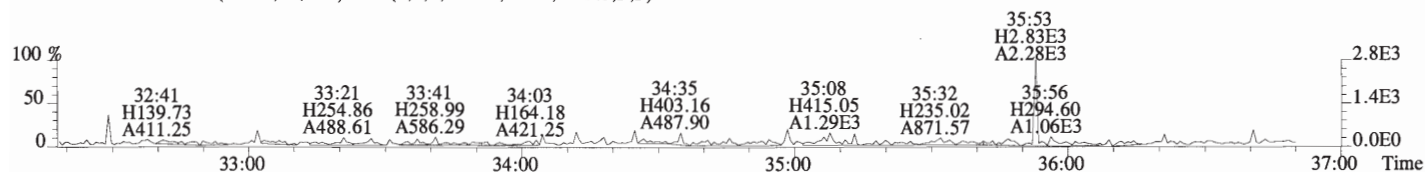
383.8639 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



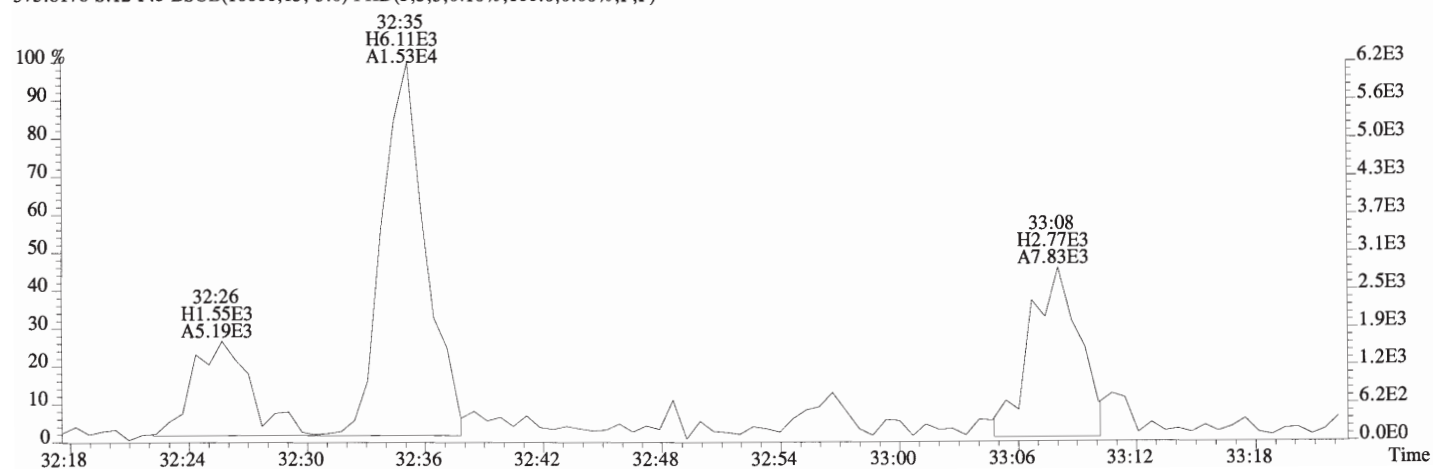
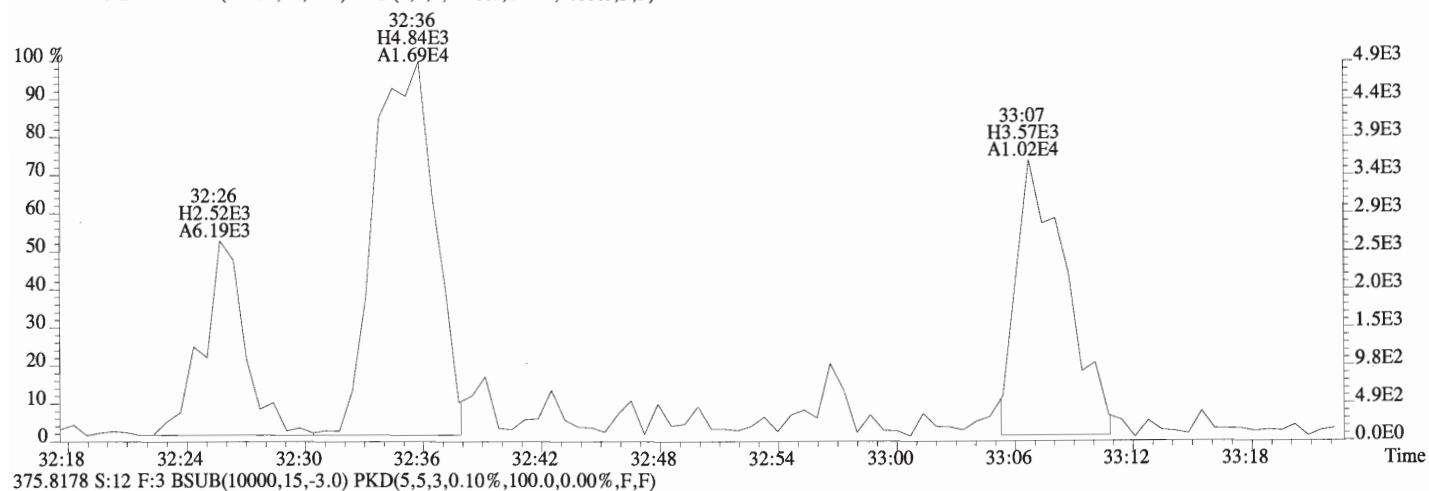
385.8610 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



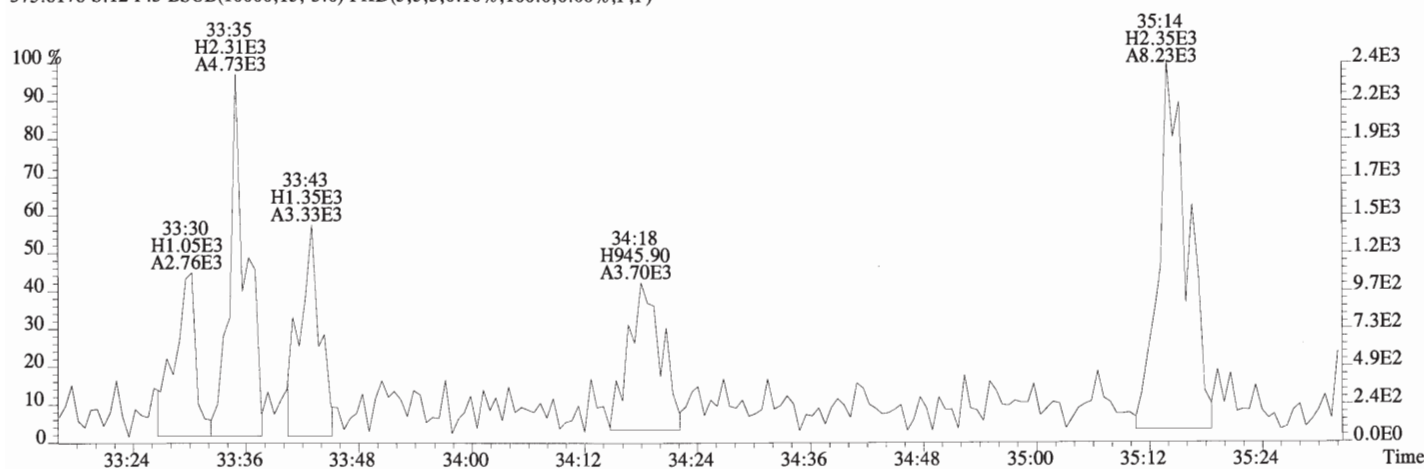
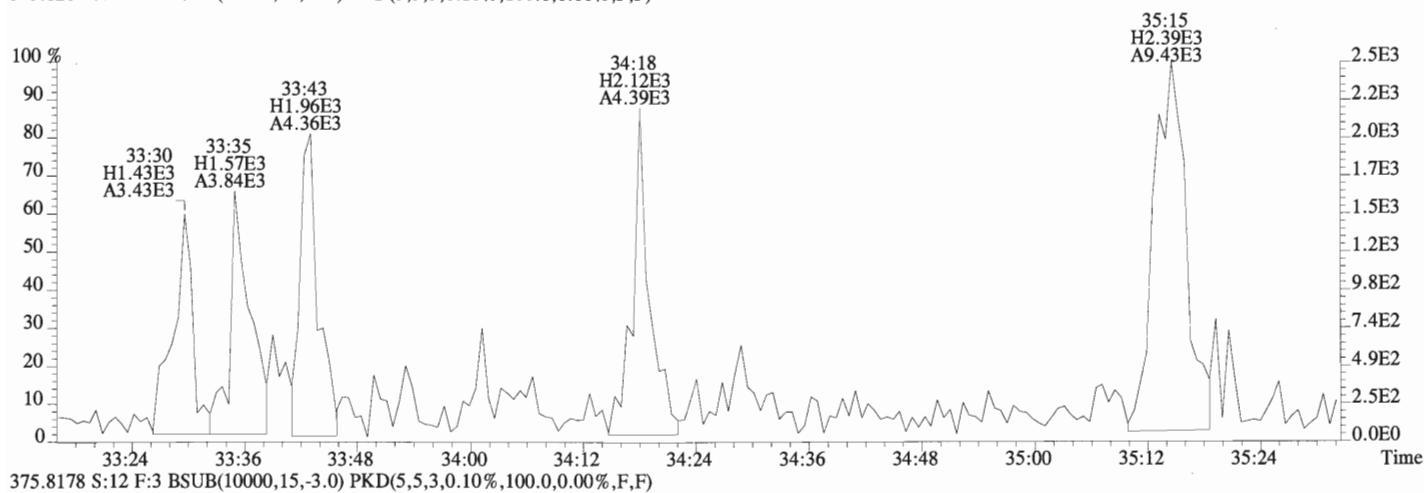
445.7555 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



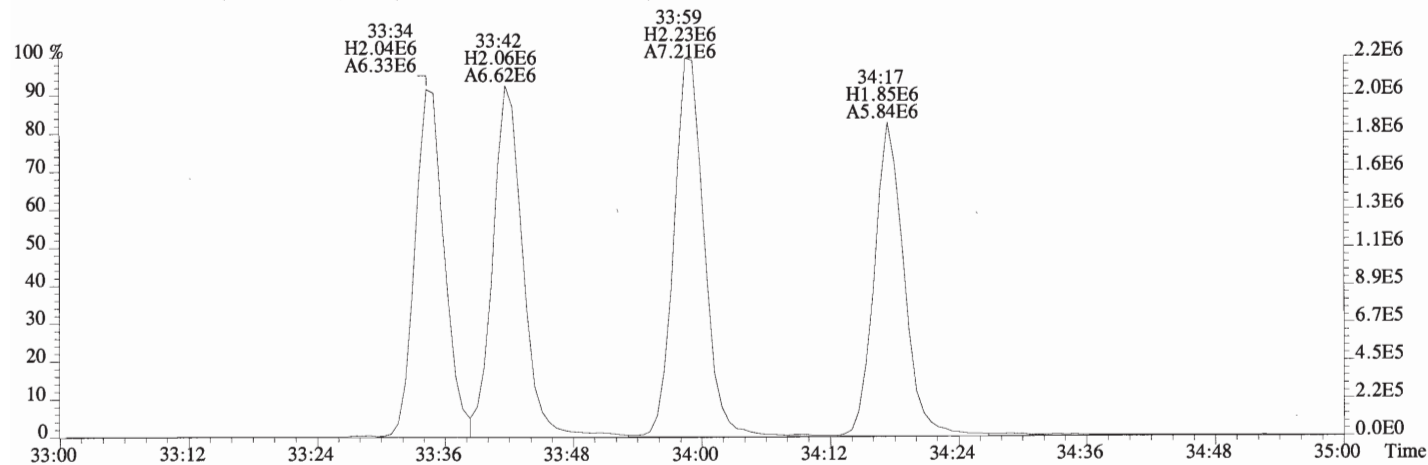
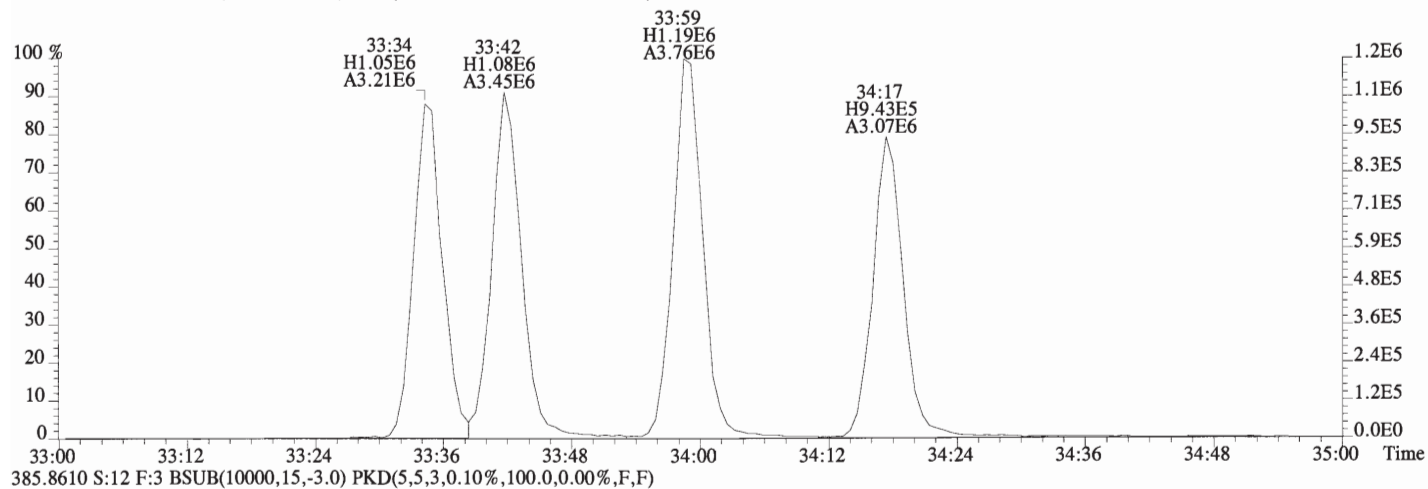
File:160712D1 #1-406 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
373.8207 S:12 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



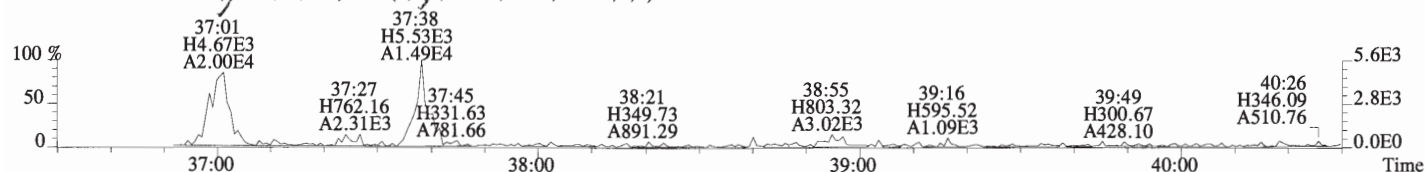
File:160712D1 #1-406 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text: Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 373.8207 S:12 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



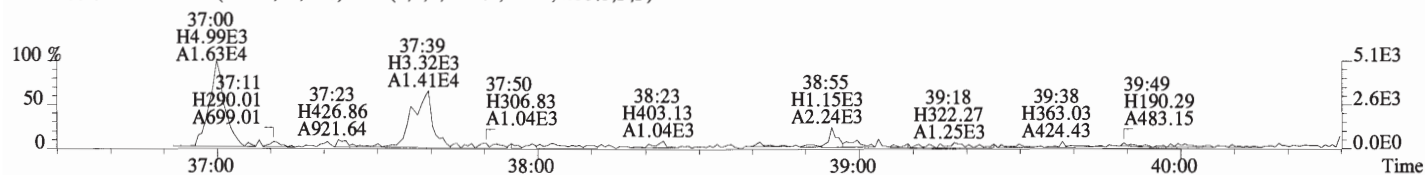
File:160712D1 #1-406 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 383.8639 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



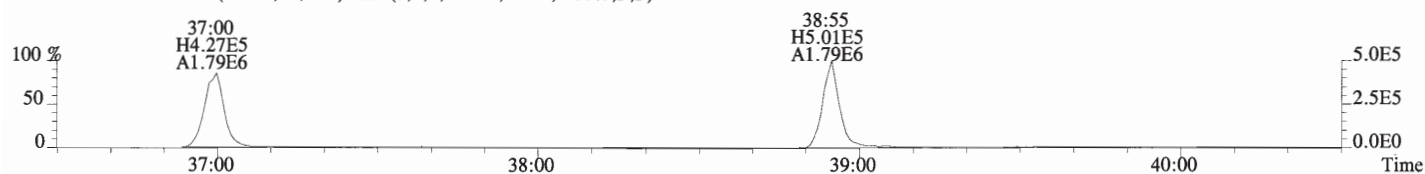
File:160712D1 #1-326 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 407.7818 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



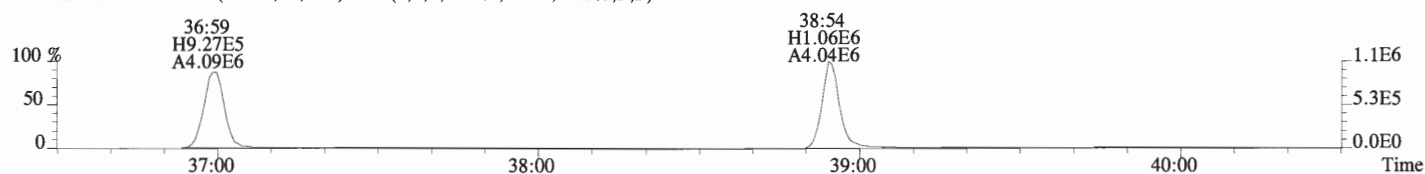
409.7788 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



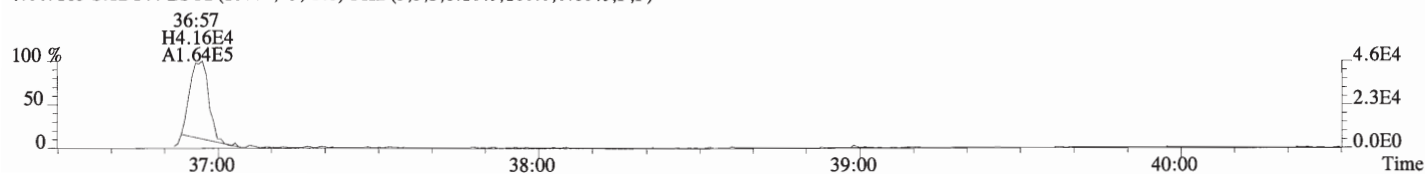
417.8253 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



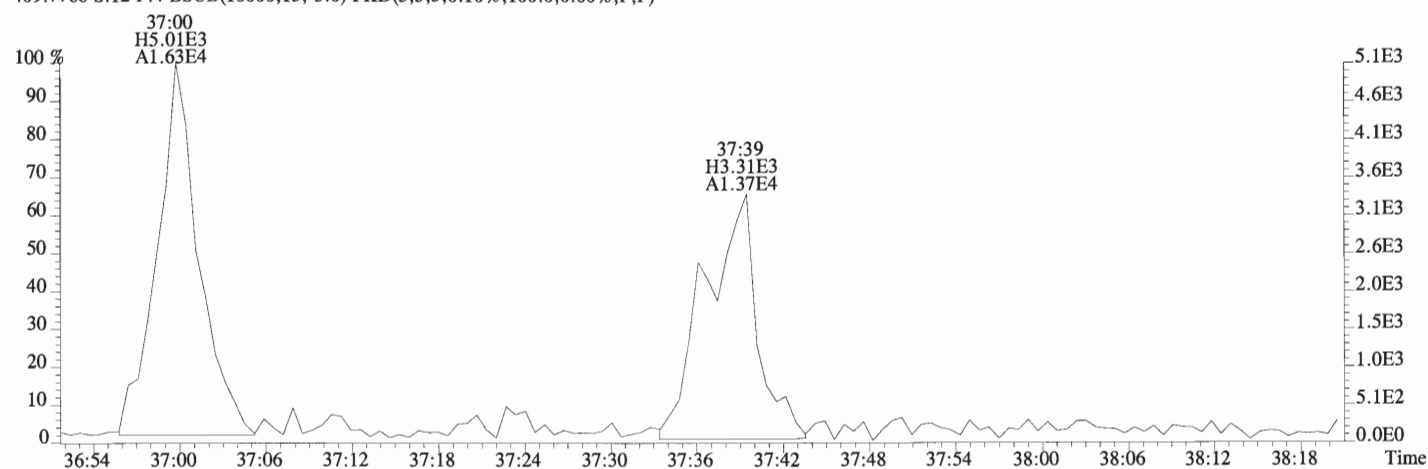
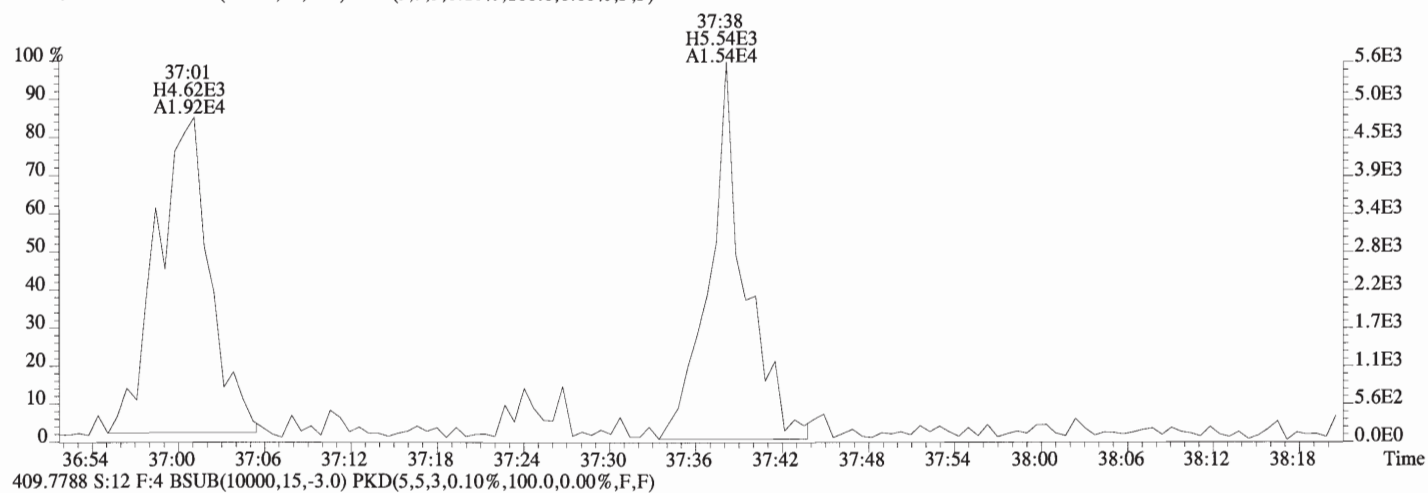
419.8220 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



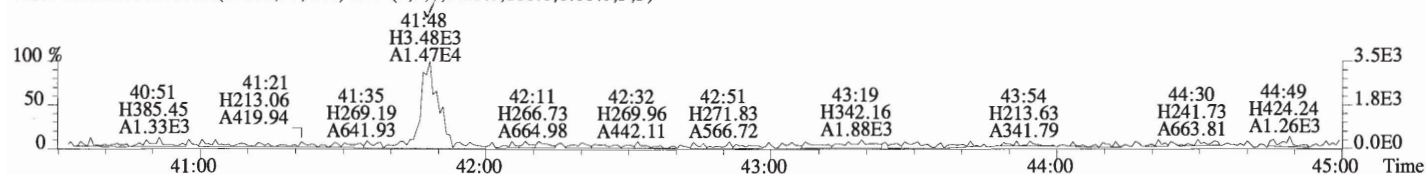
479.7165 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



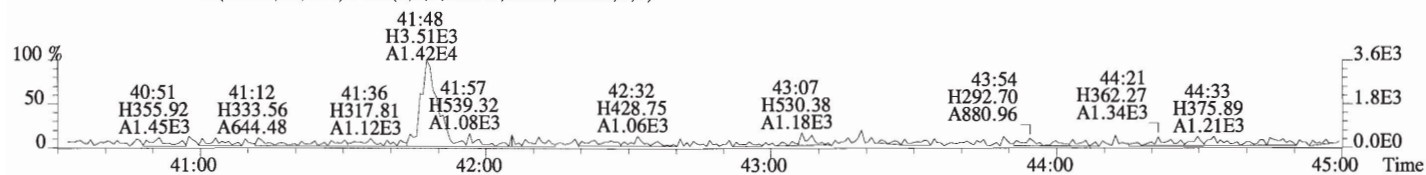
File:160712D1 #1-326 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
407.7818 S:12 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



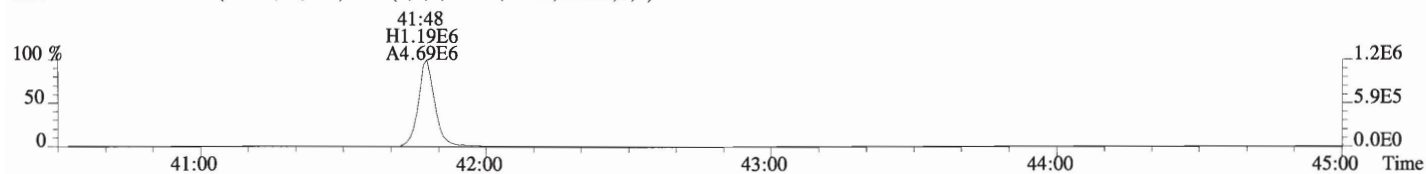
File:160712D1 #1-388 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
 441.7428 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



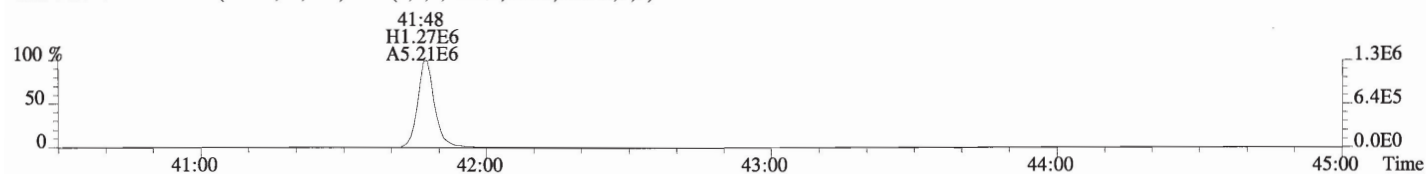
443.7398 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



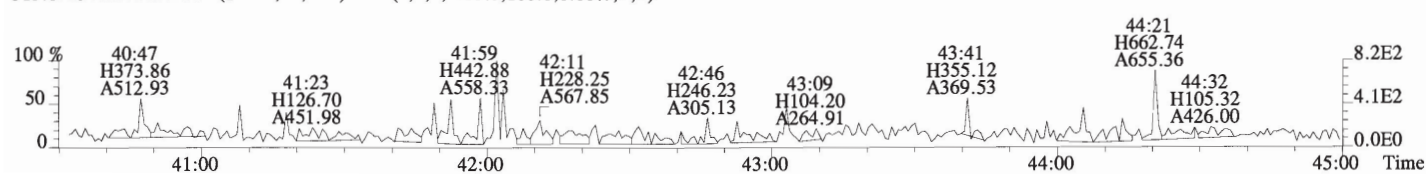
453.7831 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



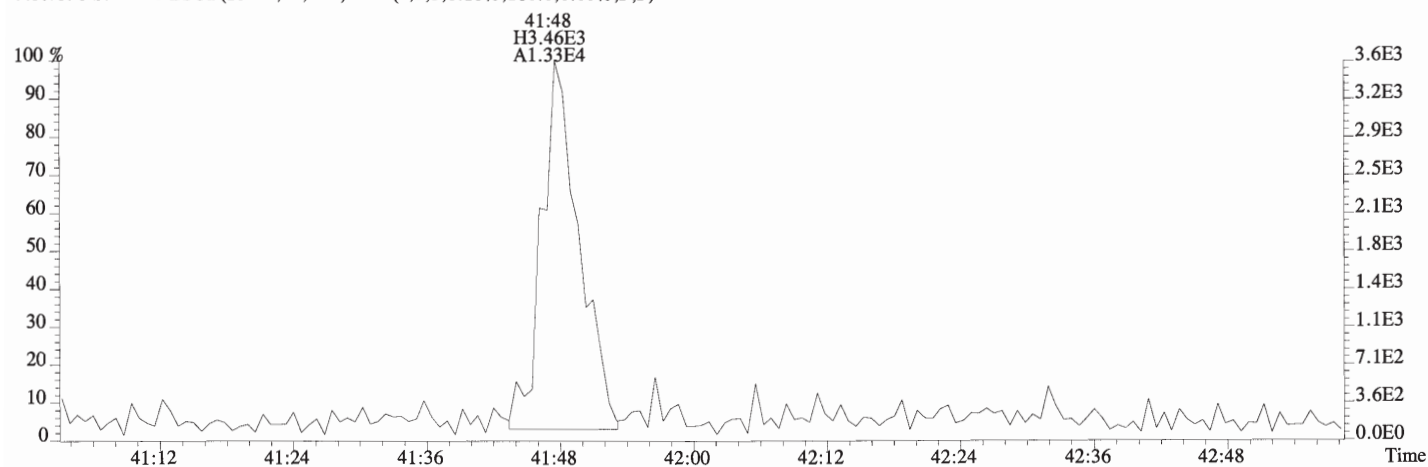
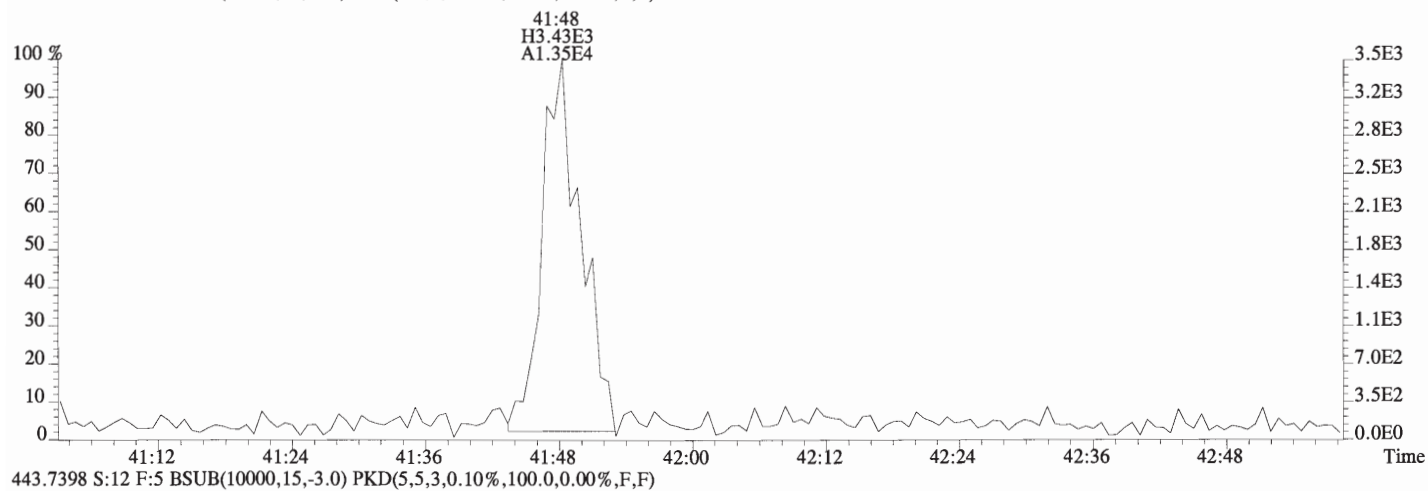
455.7801 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160712D1 #1-388 Acq:13-JUL-2016 01:14:39 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600835-08 DU-3-1-B 10 Exp:OCDD_DB5
441.7428 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: Matrix Spike
Lab ID: B6G0039-MS2

Filename: 160713D1 S:4 Acq:13-JUL-16 11:32:44
GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16

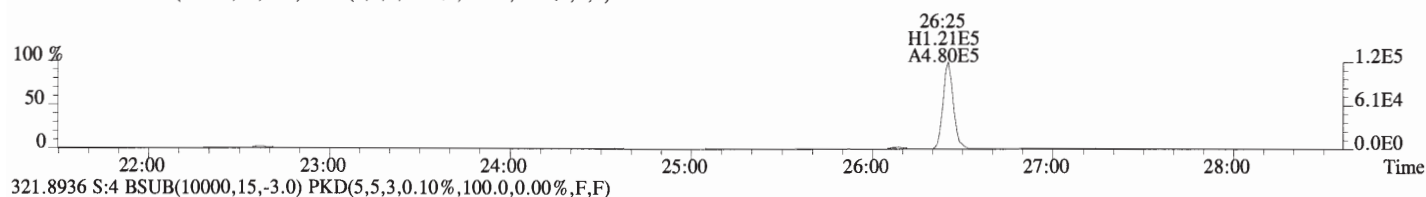
wt/vol:10.040

ConCal: ST160713D1-1
EndCAL: NA

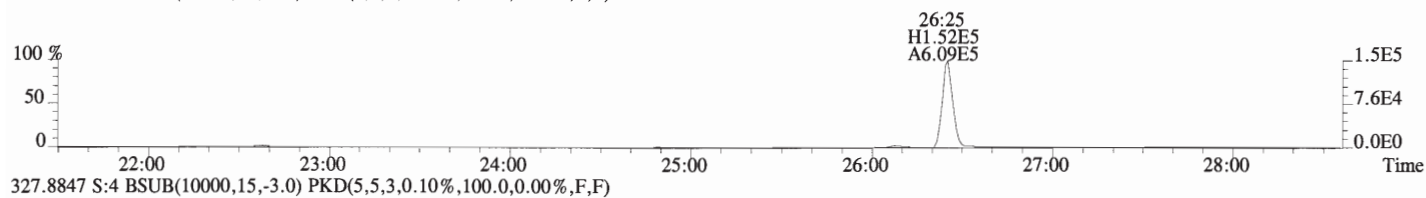
Page 3 of 6

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
	2,3,7,8-TCDD	1.09e+06	0.79 y	1.13	26:25	1.001	19.684		*	2.5	*	Total Tetra-Dioxins	21.3	22.4		*	*
	1,2,3,7,8-PeCDD	4.02e+06	0.64 y	0.96	31:10	1.001	97.919		*	2.5	*	Total Penta-Dioxins	98.1	100		*	*
	1,2,3,4,7,8-HxCDD	4.01e+06	1.23 y	1.00	34:27	1.000	99.605		*	2.5	*	Total Hexa-Dioxins	299	301		*	*
	1,2,3,6,7,8-HxCDD	4.19e+06	1.25 y	1.10	34:34	1.001	97.342		*	2.5	*	Total Hepta-Dioxins	111	113		*	*
	1,2,3,7,8,9-HxCDD	4.10e+06	1.24 y	1.05	34:51	1.001	99.872		*	2.5	*	Total Tetra-Furans	21.9	24.1		*	*
	1,2,3,4,6,7,8-HpCDD	3.46e+06	1.03 y	1.05	38:22	1.000	103.79		*	2.5	*	Total Penta-Furans	205.50	207.90		*	*
	OCDD	5.39e+06	0.92 y	0.96	41:34	1.000	240.95		*	2.5	*	Total Hexa-Furans	386	387		*	*
												Total Hepta-Furans	197	198		*	*
	2,3,7,8-TCDF	1.59e+06	0.78 y	1.12	25:36	1.001	19.045		*	2.5	*						
	1,2,3,7,8-PeCDF	6.64e+06	1.58 y	1.01	29:56	1.001	102.50		*	2.5	*						
	2,3,4,7,8-PeCDF	6.58e+06	1.61 y	0.90	30:53	1.000	98.866		*	2.5	*						
	1,2,3,4,7,8-HxCDF	6.47e+06	1.24 y	1.16	33:34	1.000	96.059		*	2.5	*						
	1,2,3,6,7,8-HxCDF	6.69e+06	1.22 y	1.16	33:42	1.000	97.218		*	2.5	*						
	2,3,4,6,7,8-HxCDF	6.33e+06	1.22 y	1.23	34:18	1.000	96.009		*	2.5	*						
	1,2,3,7,8,9-HxCDF	5.58e+06	1.20 y	1.13	35:14	1.001	95.411		*	2.5	*						
	1,2,3,4,6,7,8-HpCDF	5.09e+06	1.01 y	1.44	36:59	1.000	99.536		*	2.5	*						
	1,2,3,4,7,8,9-HpCDF	4.59e+06	1.02 y	1.31	38:55	1.000	95.975		*	2.5	*						
	OCDF	6.51e+06	0.93 y	1.03	41:48	1.000	200.21		*	2.5	*						
												Rec	Qual				
IS	13C-2,3,7,8-TCDD	9.74e+06	0.81 y	1.01	26:24	1.025	182.37					91.6					
IS	13C-1,2,3,7,8-PeCDD	8.50e+06	0.63 y	1.10	31:08	1.208	145.65					73.1					
IS	13C-1,2,3,4,7,8-HxCDD	8.01e+06	1.30 y	0.72	34:26	1.014	173.69					87.2					
IS	13C-1,2,3,6,7,8-HxCDD	7.82e+06	1.30 y	0.73	34:32	1.017	168.08					84.4					
IS	13C-1,2,3,7,8,9-HxCDD	7.81e+06	1.29 y	0.70	34:50	1.025	173.94					87.3					
IS	13C-1,2,3,4,6,7,8-HpCDD	6.32e+06	1.04 y	0.66	38:21	1.129	148.76					74.7					
IS	13C-OCDD	9.28e+06	0.91 y	0.66	41:33	1.223	219.63					55.1					
IS	13C-2,3,7,8-TCDF	1.48e+07	0.79 y	0.90	25:34	0.992	186.59					93.7					
IS	13C-1,2,3,7,8-PeCDF	1.28e+07	1.59 y	0.98	29:56	1.161	147.93					74.3					
IS	13C-2,3,4,7,8-PeCDF	1.47e+07	1.59 y	1.15	30:52	1.198	145.64					73.1					
IS	13C-1,2,3,4,7,8-HxCDF	1.15e+07	0.53 y	1.01	33:34	0.988	177.92					89.3					
IS	13C-1,2,3,6,7,8-HxCDF	1.19e+07	0.50 y	1.10	33:41	0.992	168.76					84.7					
IS	13C-2,3,4,6,7,8-HxCDF	1.07e+07	0.52 y	0.95	34:17	1.009	175.87					88.3					
IS	13C-1,2,3,7,8,9-HxCDF	1.03e+07	0.52 y	0.83	35:13	1.037	194.37					97.6					
IS	13C-1,2,3,4,6,7,8-HpCDF	7.07e+06	0.42 y	0.70	36:58	1.089	158.15					79.4					
IS	13C-1,2,3,4,7,8,9-HpCDF	7.26e+06	0.42 y	0.72	38:54	1.145	157.66					79.1					
IS	13C-OCDF	1.26e+07	0.91 y	0.82	41:47	1.230	238.24					59.8					
C/Up	37Cl-2,3,7,8-TCDD	4.25e+06		1.14	26:25	1.025	70.624					88.6					
RS/RT	13C-1,2,3,4-TCDD	1.05e+07	0.80 y	1.00	25:46	*	199.20										
RS	13C-1,2,3,4-TCDF	1.76e+07	0.81 y	1.00	24:11	*	199.20										
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.27e+07	0.51 y	1.00	33:58	*	199.20										
												Integrations	Reviewed				
												by	by				
												Analyst: DB	Analyst: M2				
												Date: 7/15/16	Date: 7/15/16				

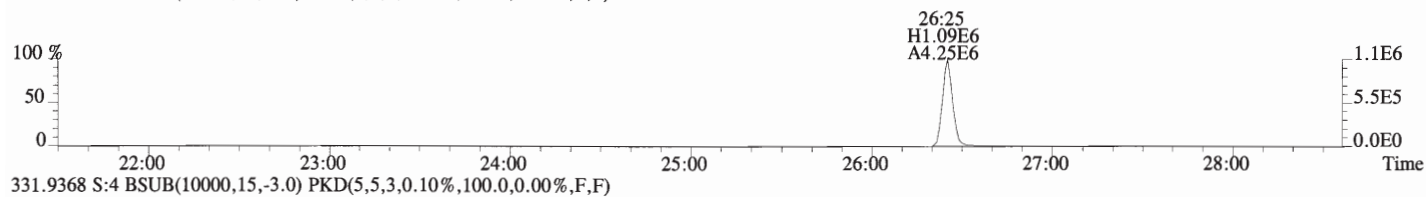
File:160713D1 #1-551 Acq:13-JUL-2016 11:32:44 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS2 Matrix Spike 10 Exp:OCDD_DB5
 319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



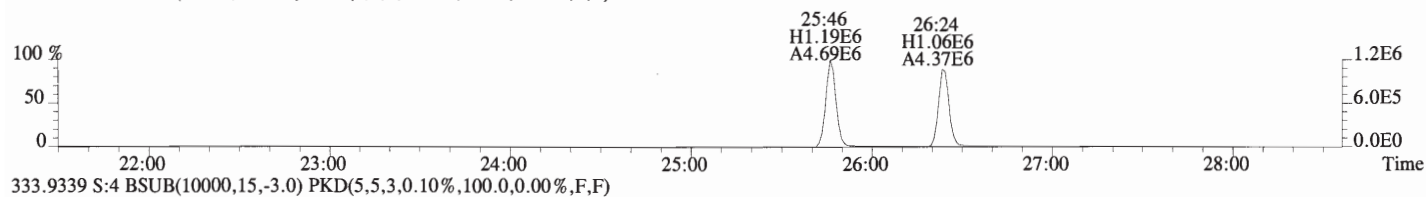
321.8936 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



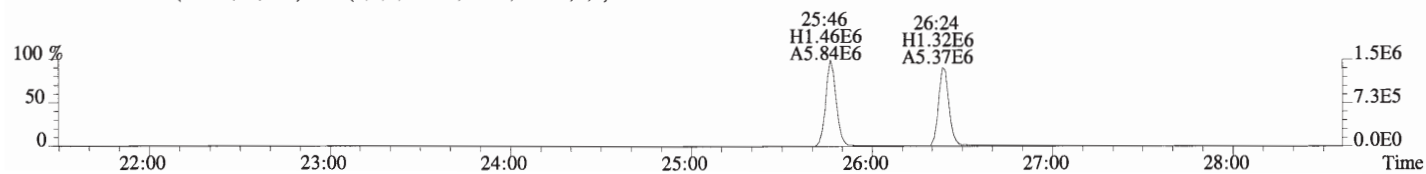
327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



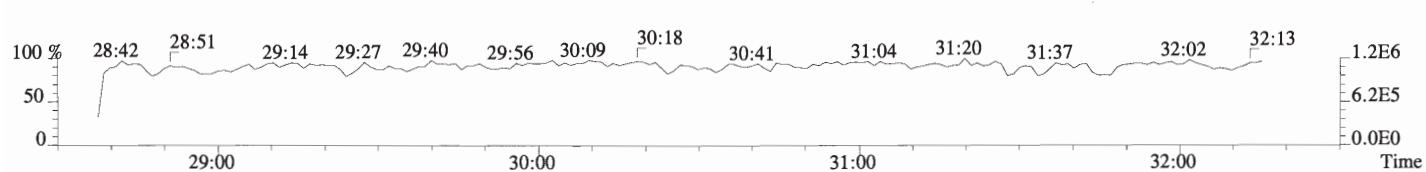
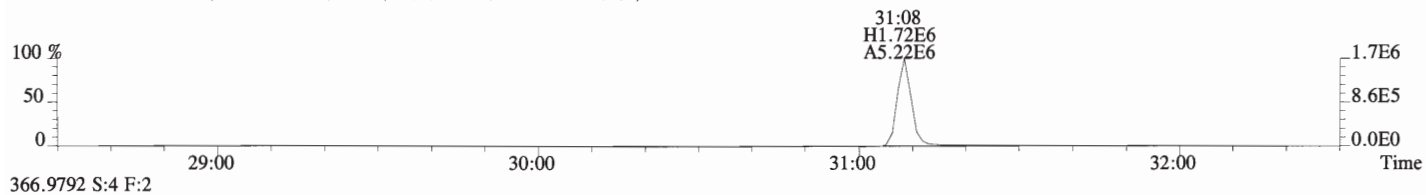
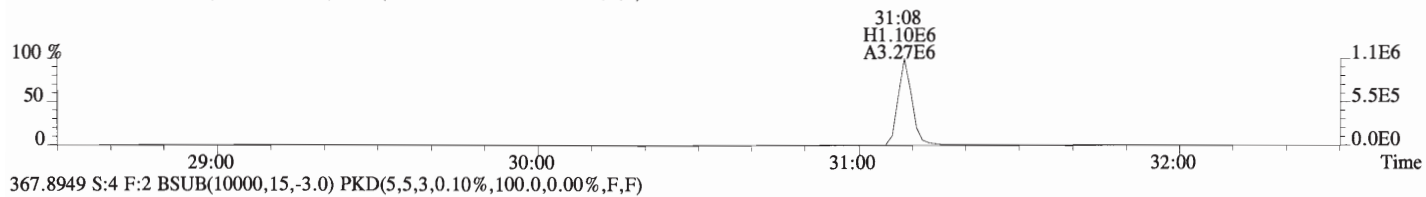
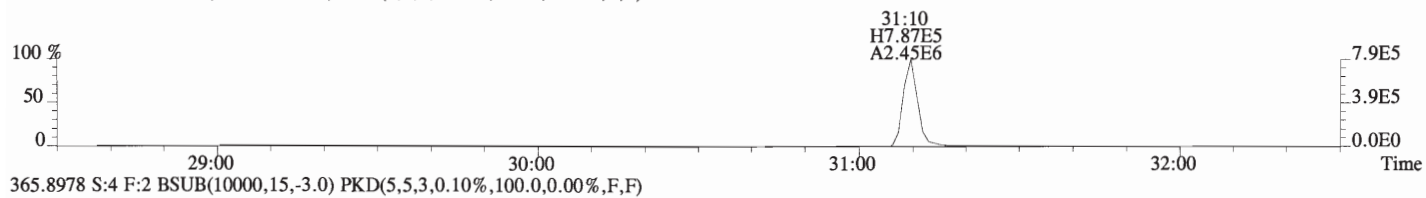
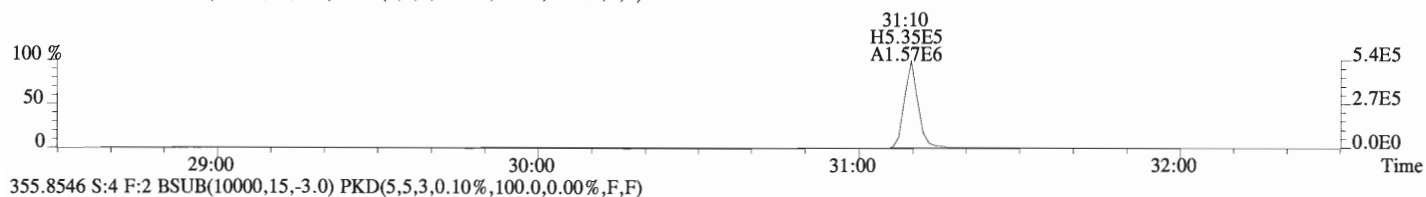
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



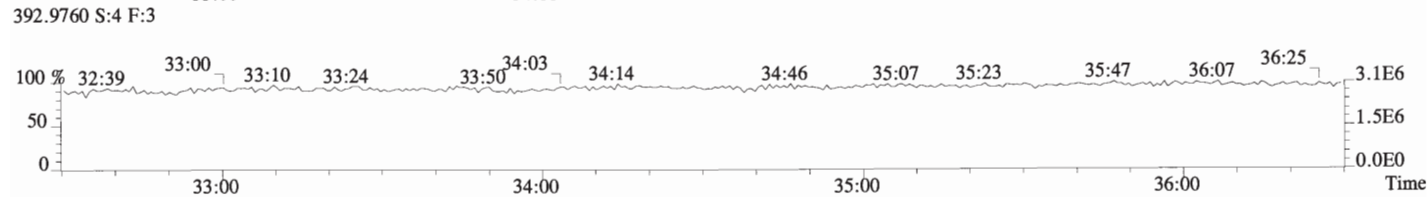
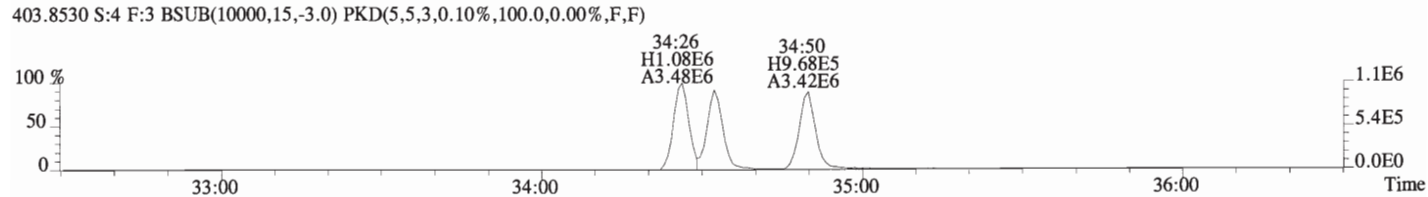
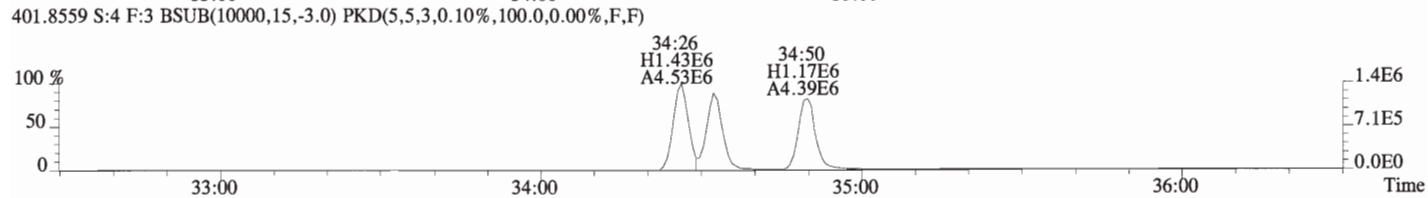
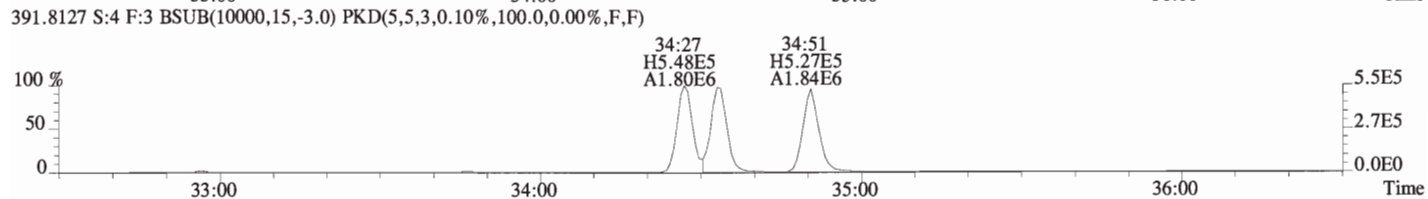
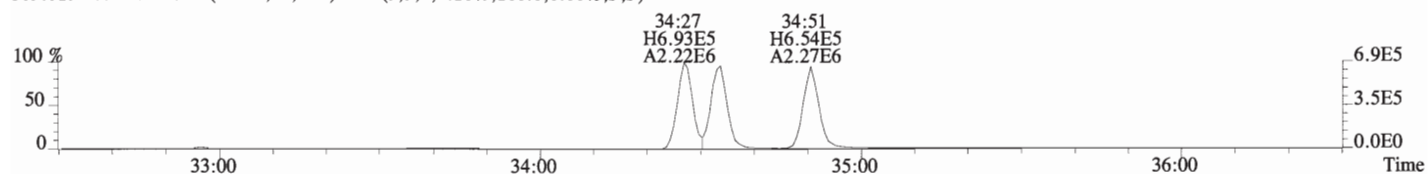
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



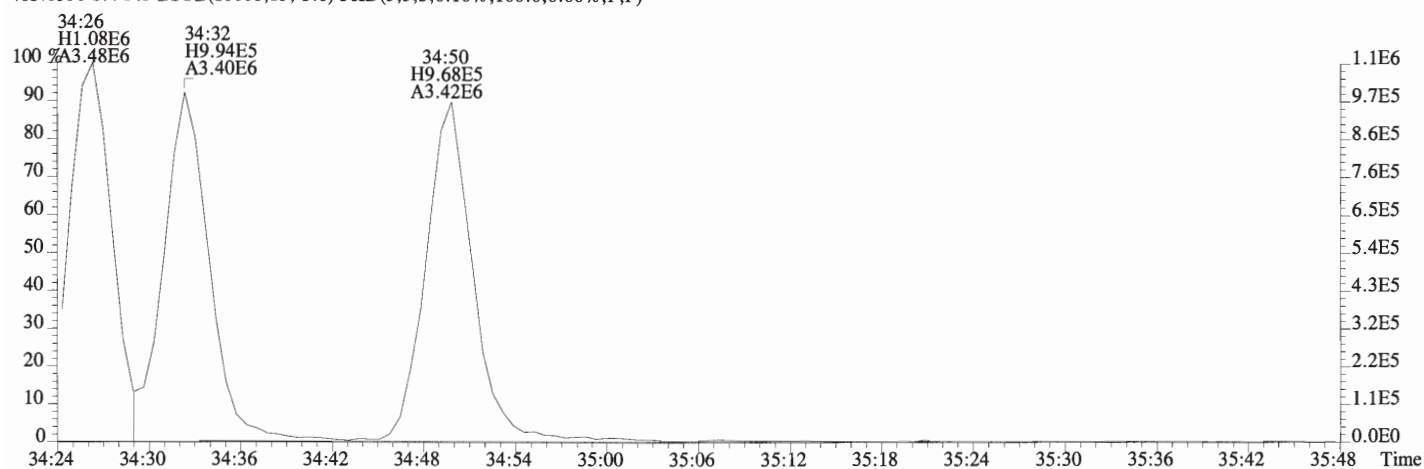
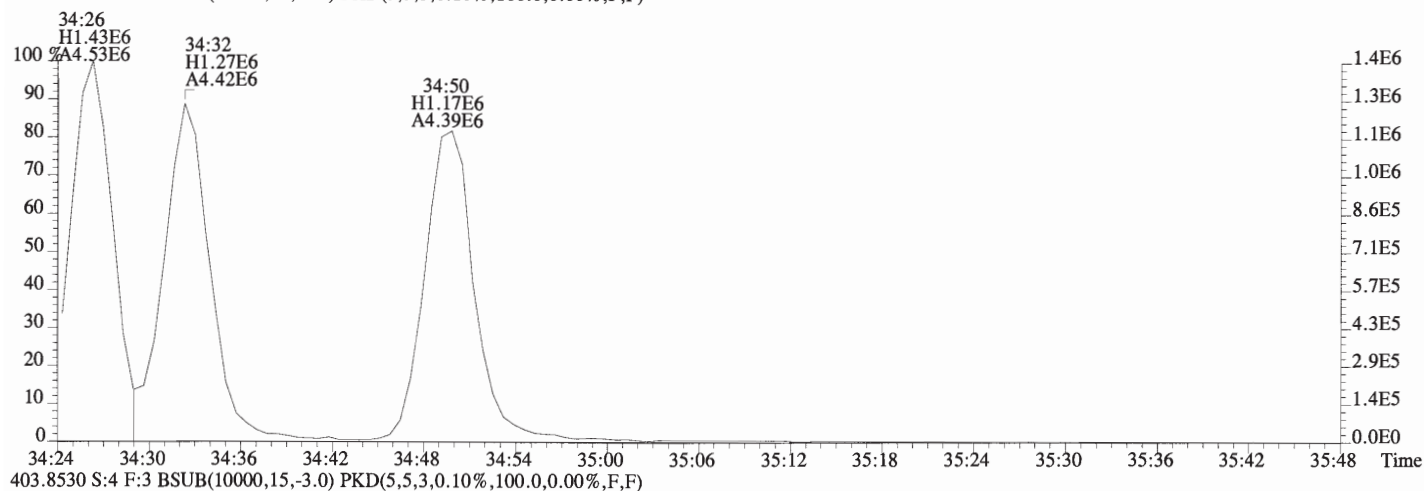
File:160713D1 #1-193 Acq:13-JUL-2016 11:32:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS2 Matrix Spike 10 Exp:OCDD_DB5
353.8576 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



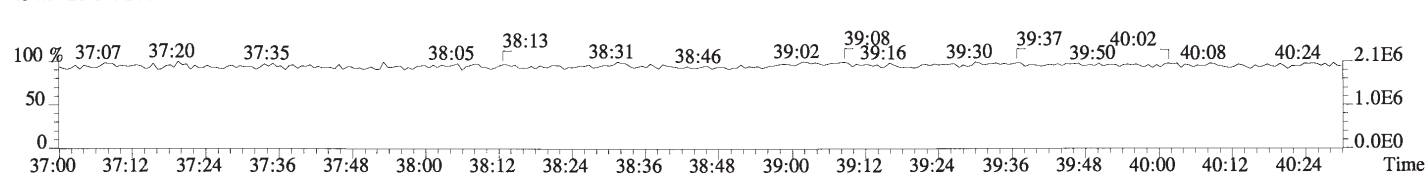
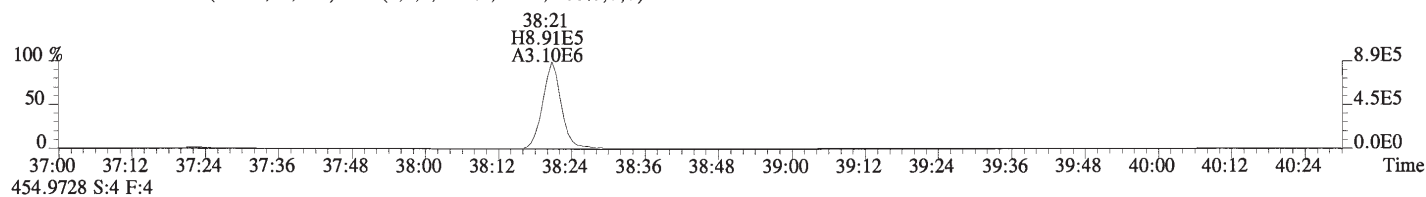
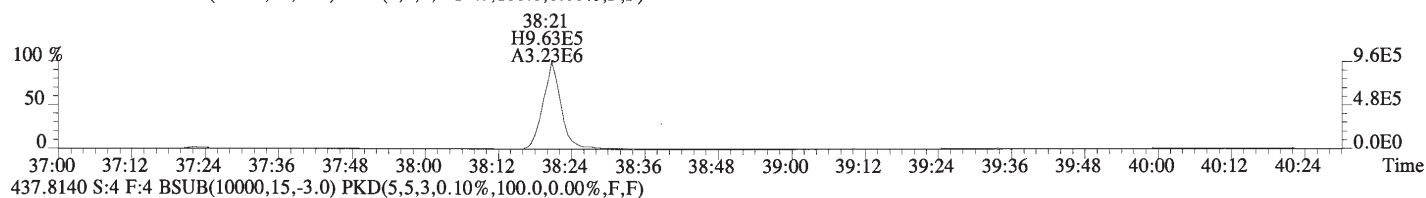
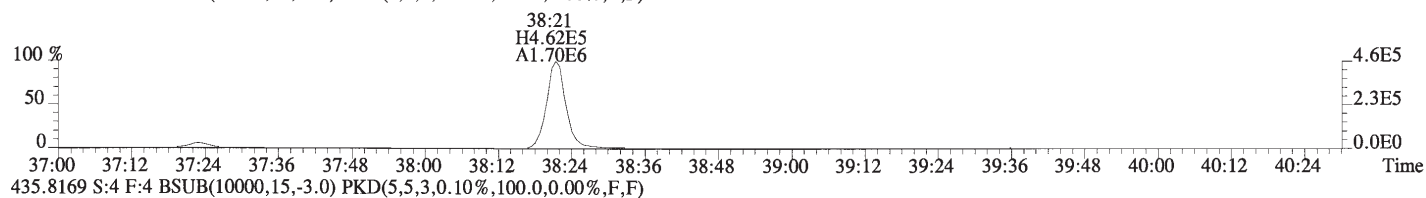
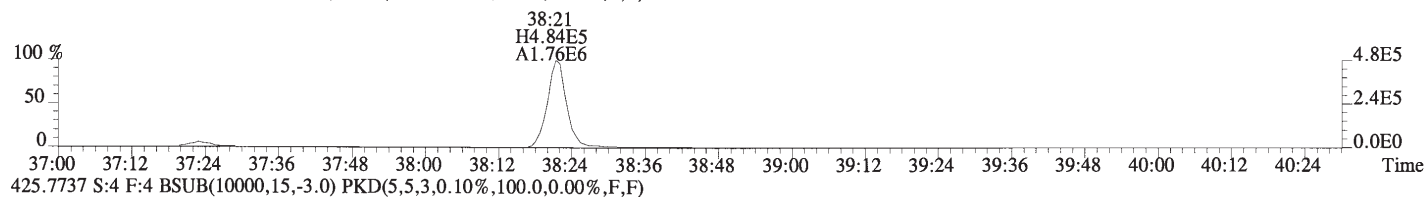
File:160713D1 #1-407 Acq:13-JUL-2016 11:32:44 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS2 Matrix Spike 10 Exp:OCDD_DB5
 389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



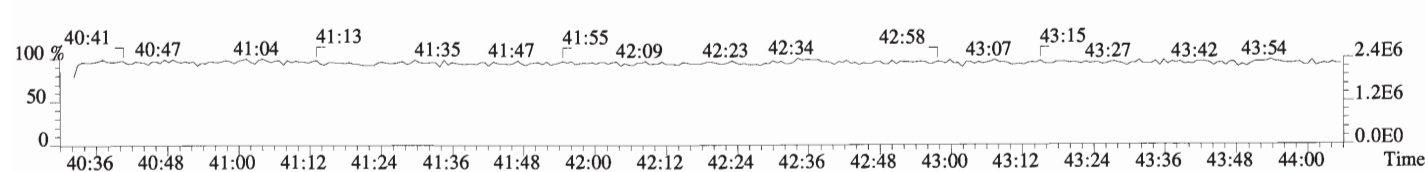
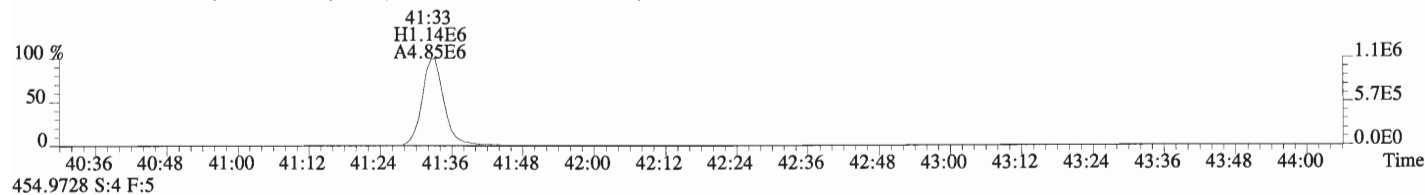
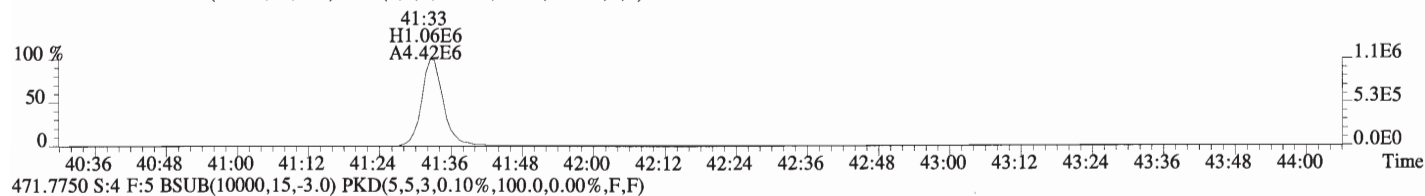
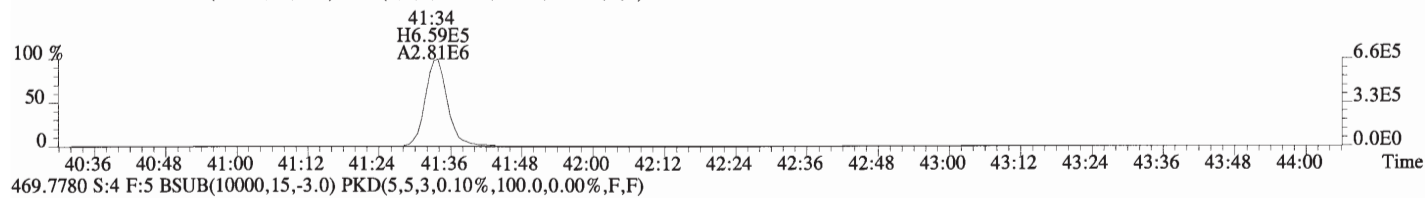
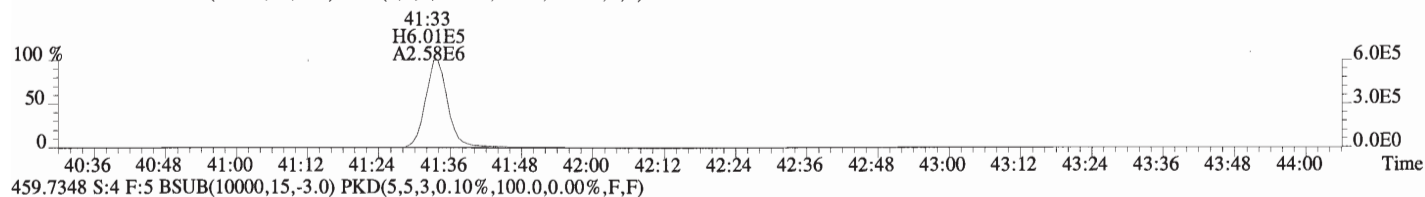
File:160713D1 #1-407 Acq:13-JUL-2016 11:32:44 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS2 Matrix Spike 10 Exp:OCDD_DB5
 401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



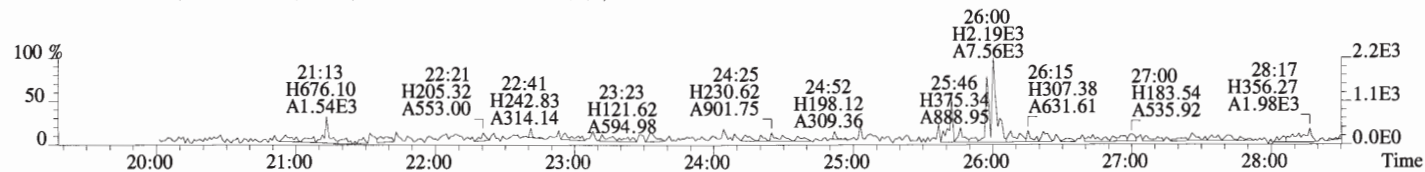
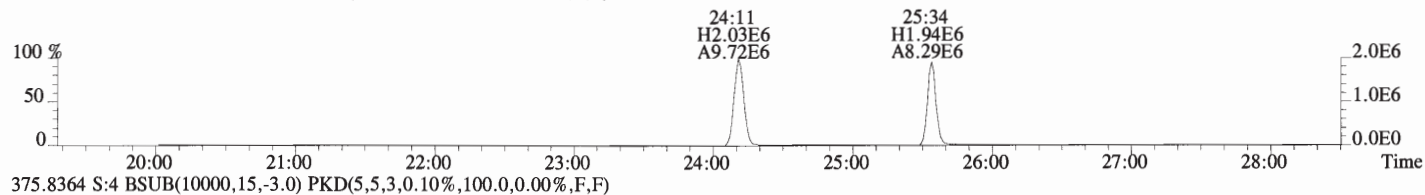
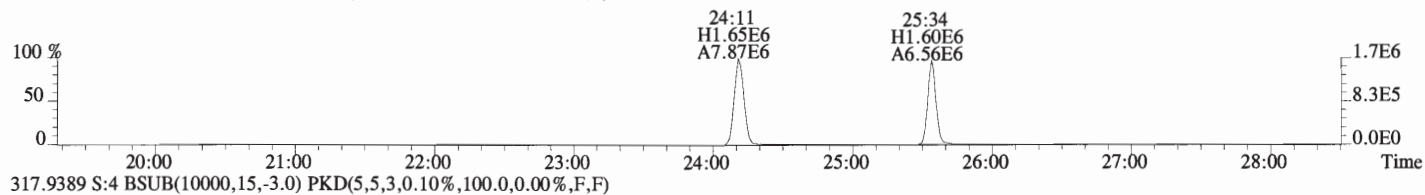
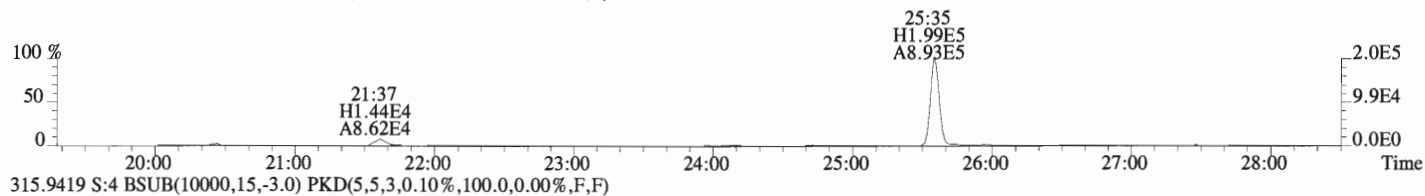
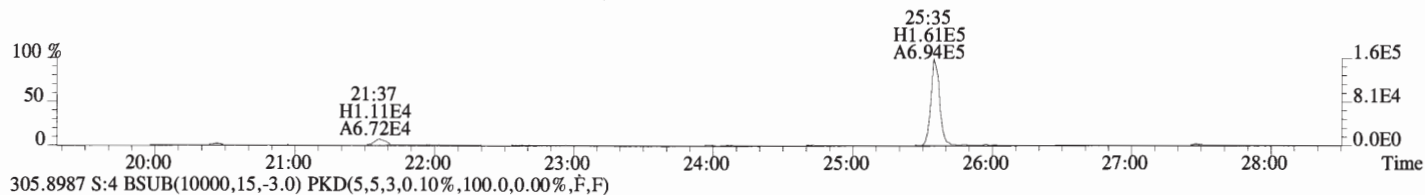
File:160713D1 #1-326 Acq:13-JUL-2016 11:32:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS2 Matrix Spike 10 Exp:OCDD_DB5
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



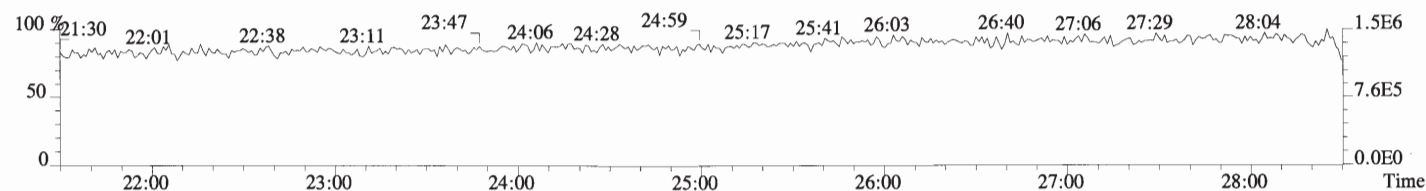
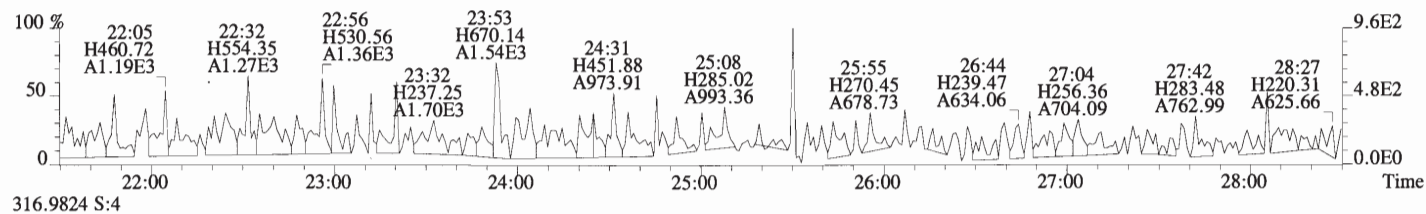
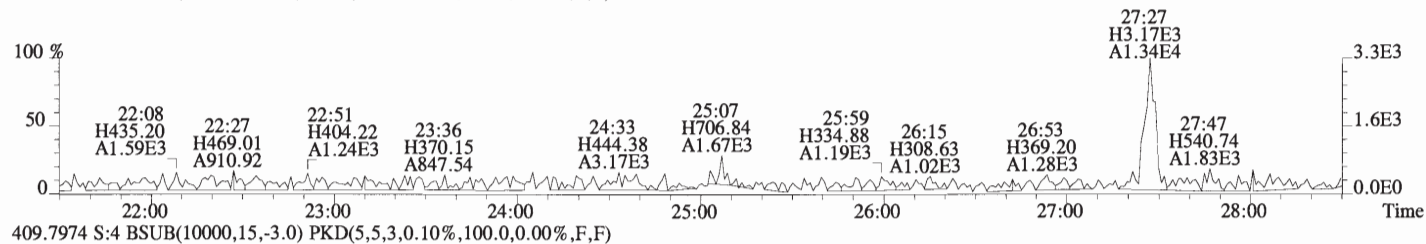
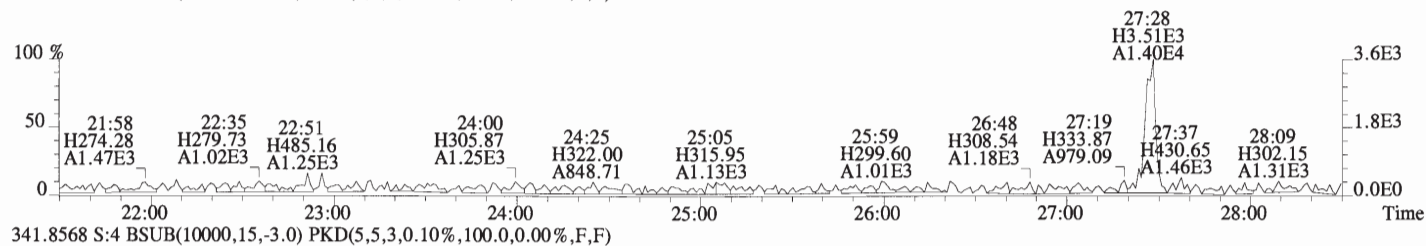
File:160713D1 #1-388 Acq:13-JUL-2016 11:32:44 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS2 Matrix Spike 10 Exp:OCDD_DB5
 457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



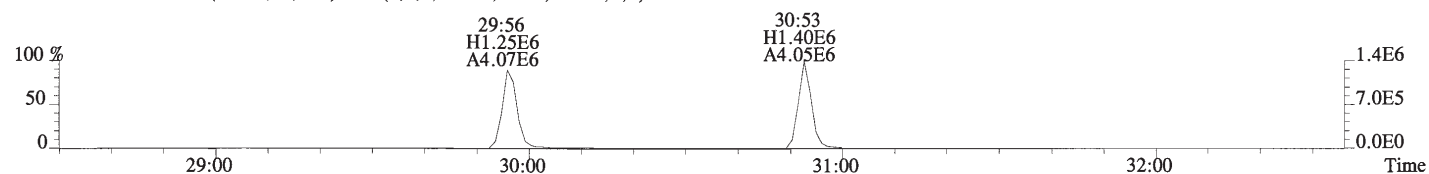
File:160713D1 #1-551 Acq:13-JUL-2016 11:32:44 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS2 Matrix Spike 10 Exp:OCDD_DB5
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



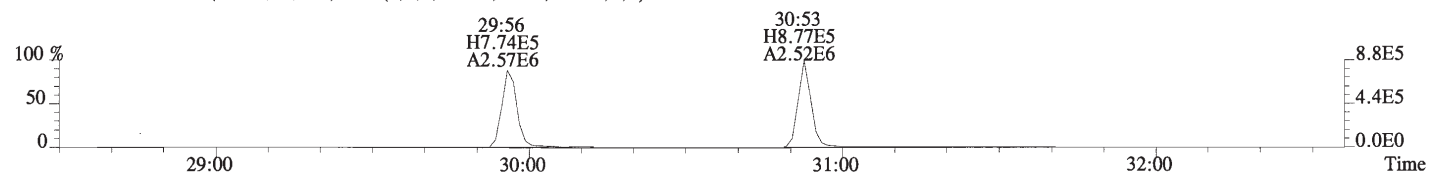
File:160713D1 #1-551 Acq:13-JUL-2016 11:32:44 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS2 Matrix Spike 10 Exp:OCDD_DB5
 339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



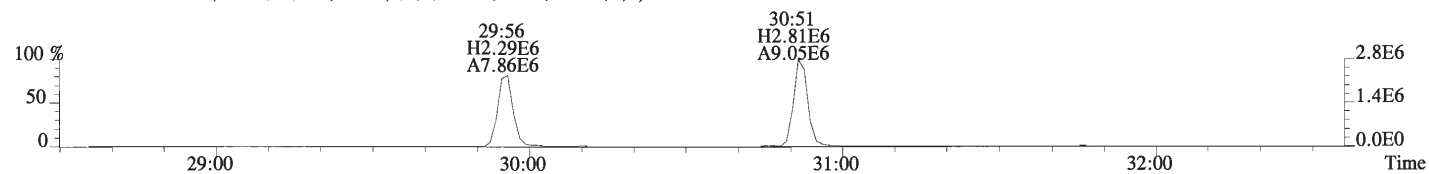
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Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS2 Matrix Spike 10 Exp:OCDD_DB5
339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



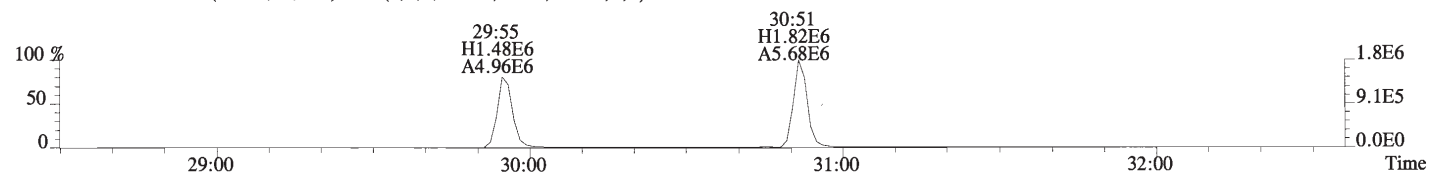
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



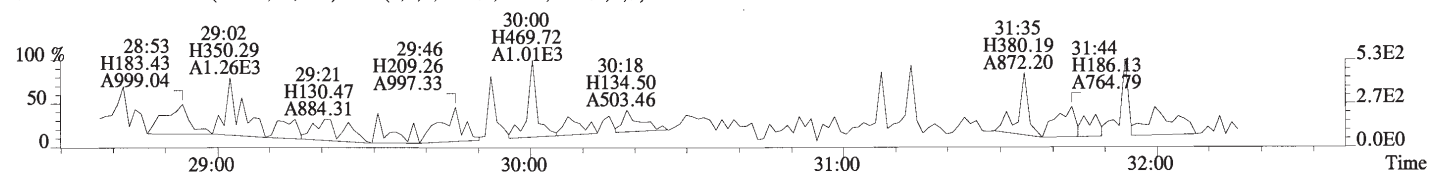
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



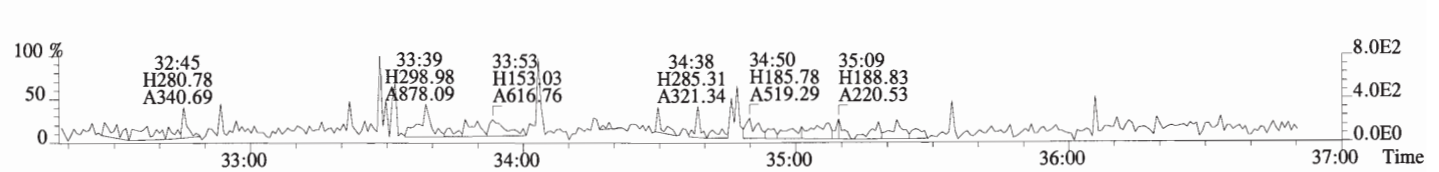
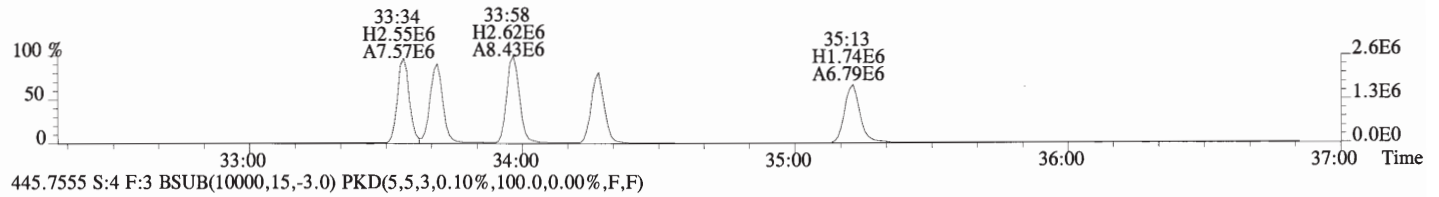
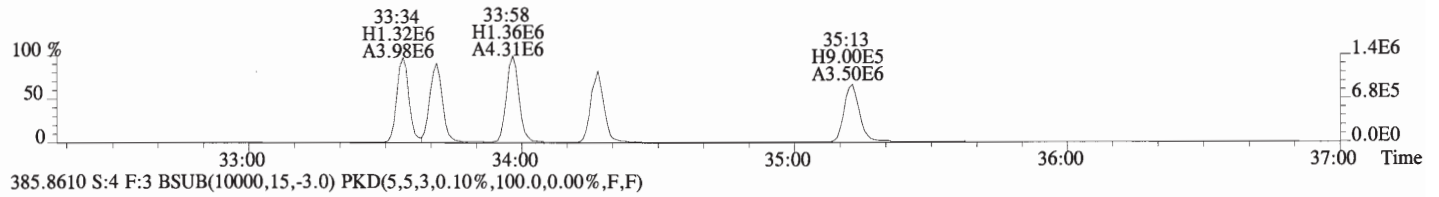
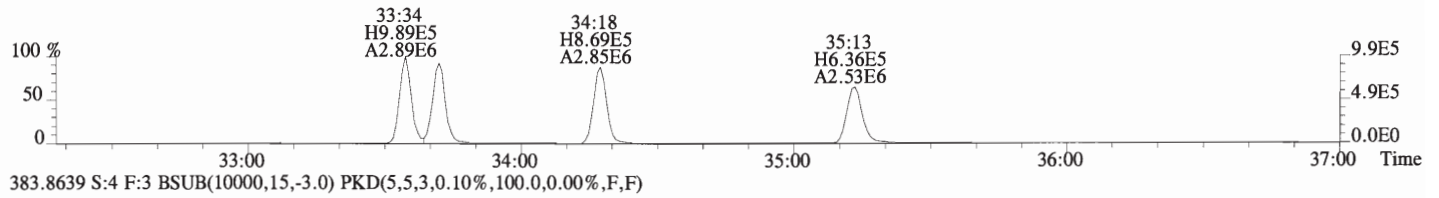
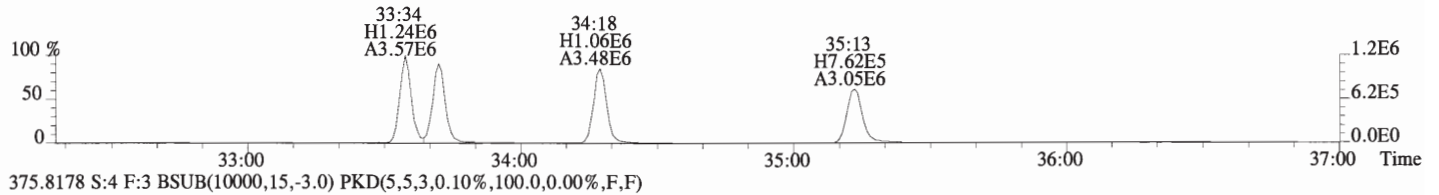
353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



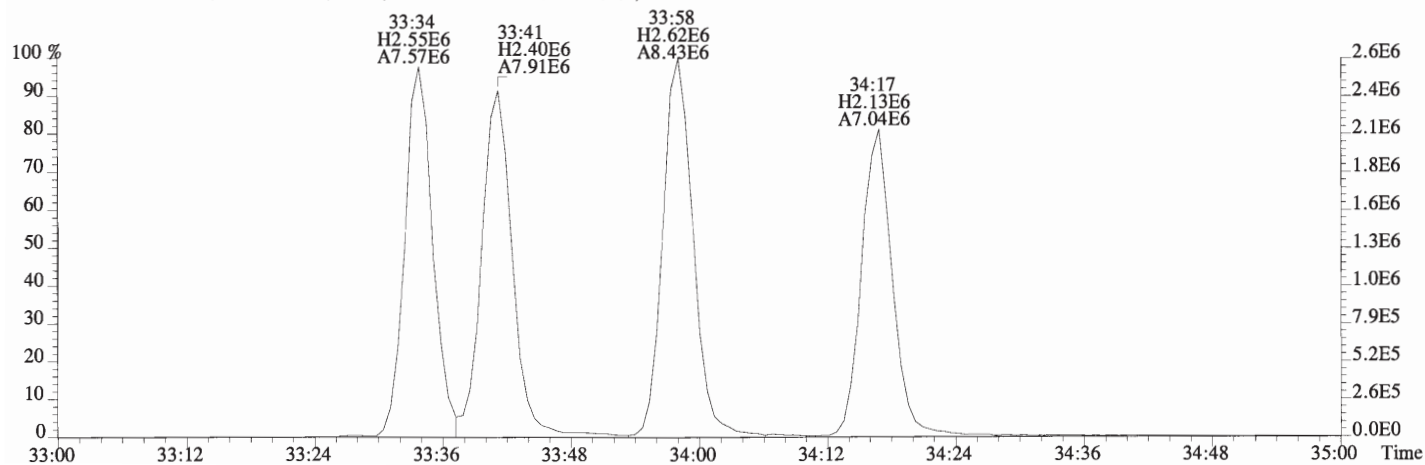
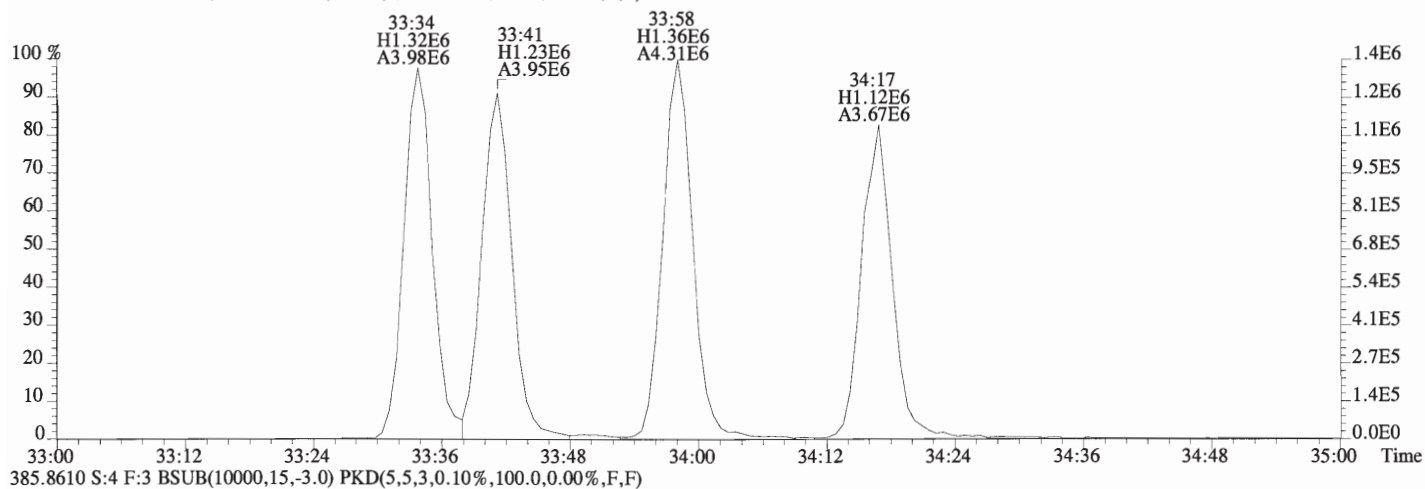
409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



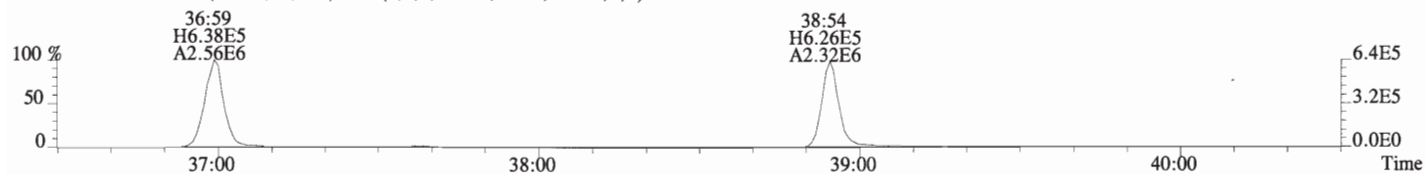
File:160713D1 #1-407 Acq:13-JUL-2016 11:32:44 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS2 Matrix Spike 10 Exp:OCDD_DB5
 373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



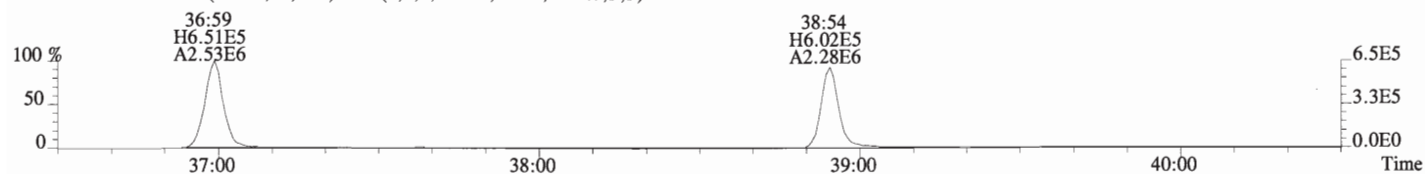
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 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS2 Matrix Spike 10 Exp:OCDD_DB5
 383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



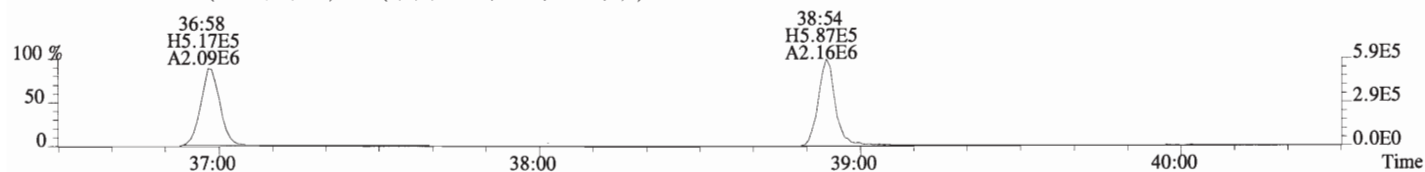
File:160713D1 #1-326 Acq:13-JUL-2016 11:32:44 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS2 Matrix Spike 10 Exp:OCDD_DB5
 407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



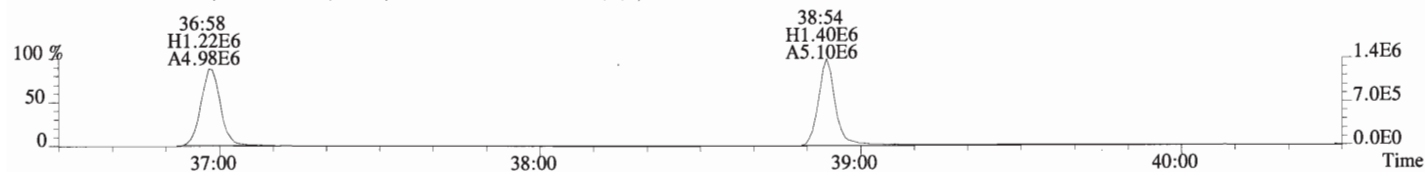
409.7788 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



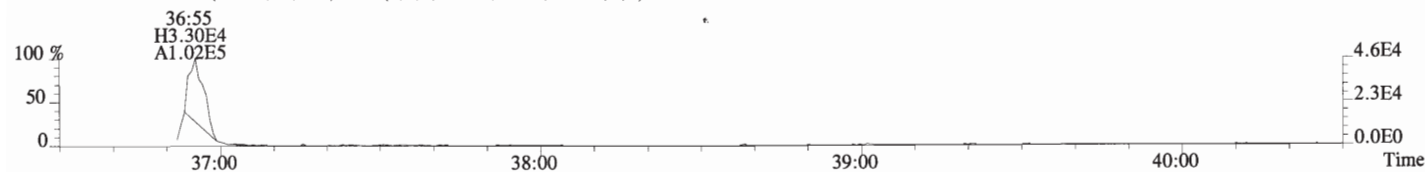
417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



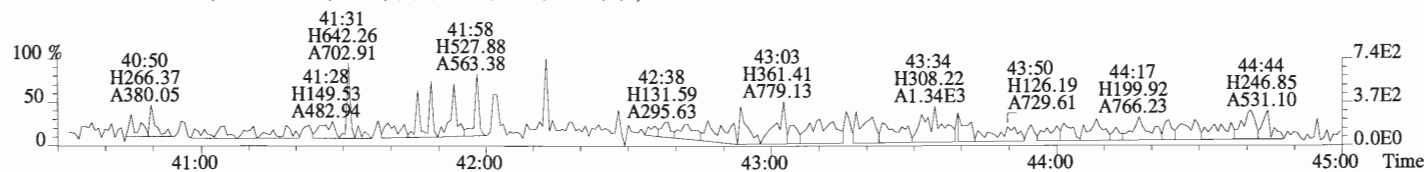
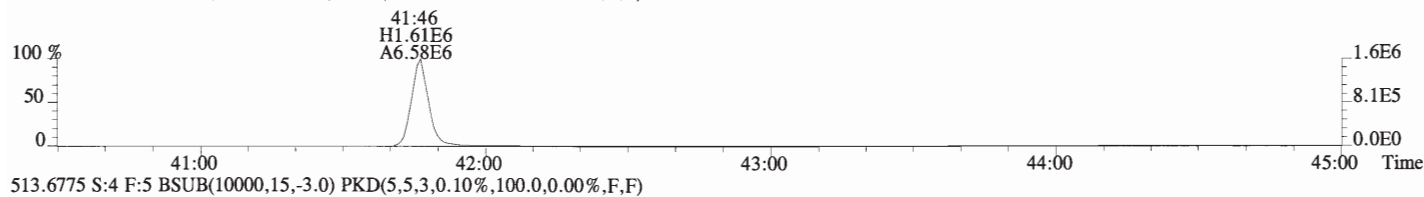
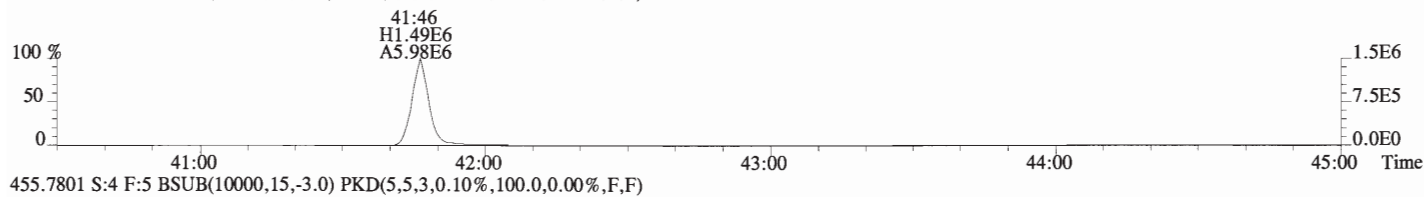
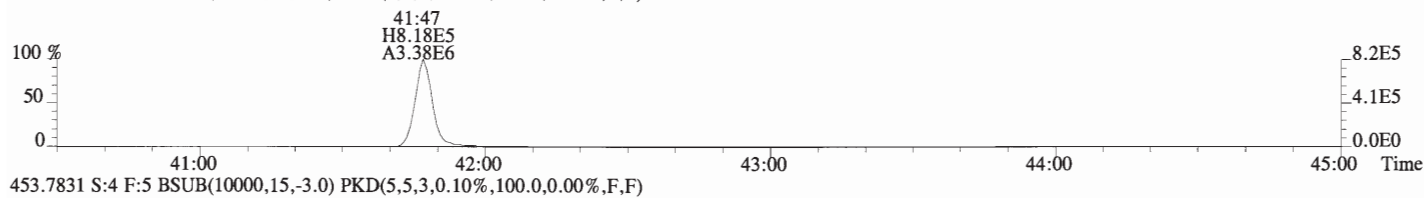
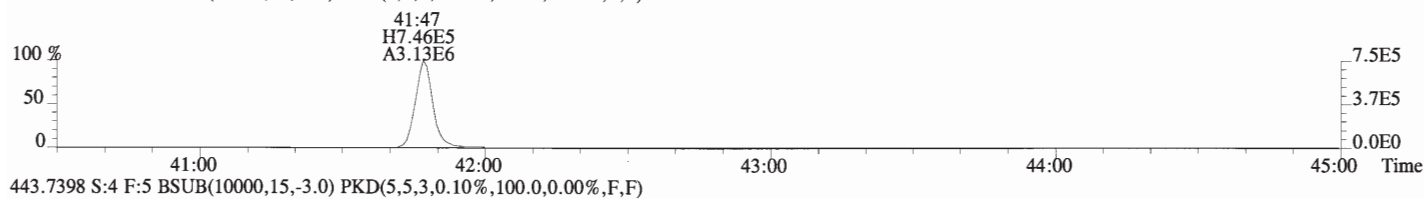
419.8220 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160713D1 #1-388 Acq:13-JUL-2016 11:32:44 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MS2 Matrix Spike 10 Exp:OCDD_DB5
 441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: Matrix Spike Dup
Lab ID: B6G0039-MSD2

Filename: 160713D1 S:5 Acq:13-JUL-16 12:21:17
GC Column ID: ZB-5MS ICAL: 1613VG7-4-7-16 wt/vol:10.070

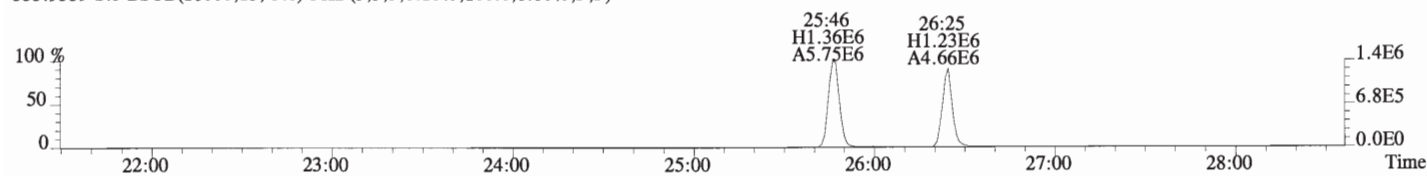
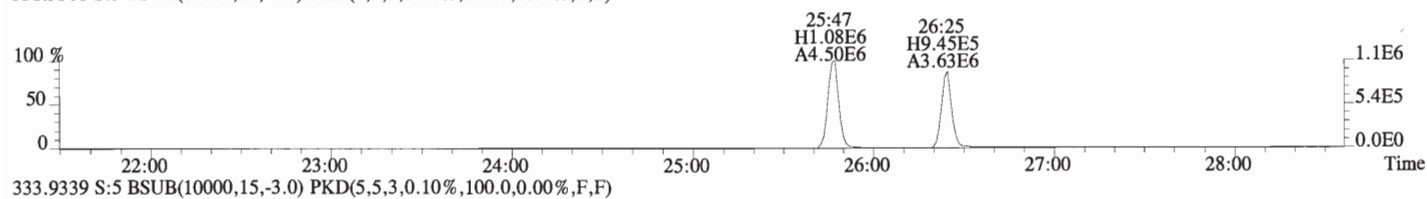
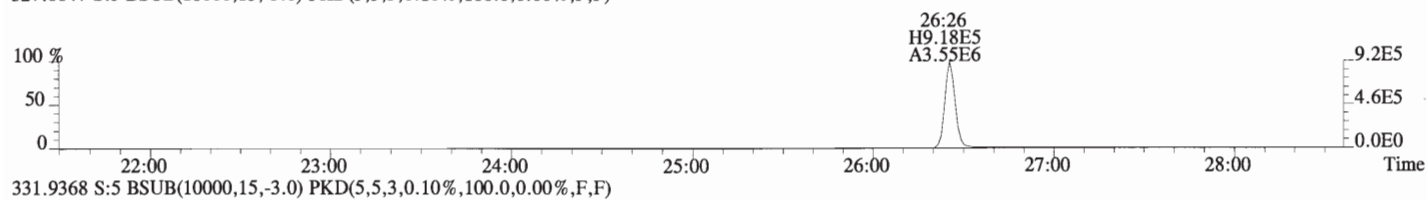
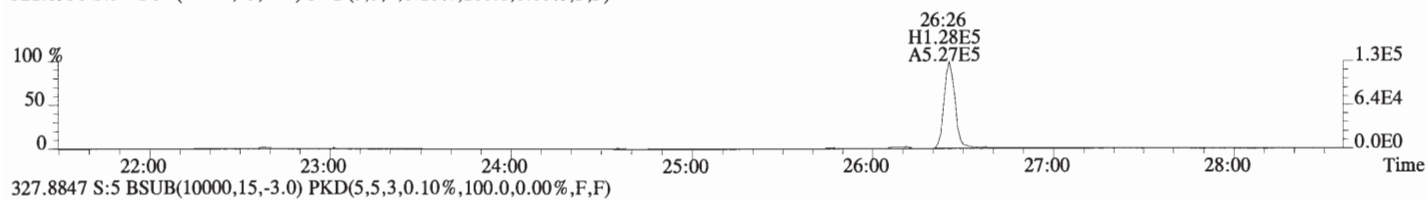
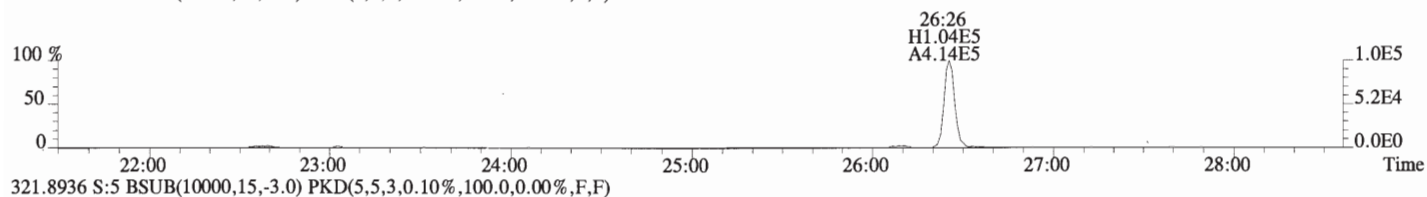
ConCal: ST160713D1-1
EndCAL: NA

Page 4 of 6

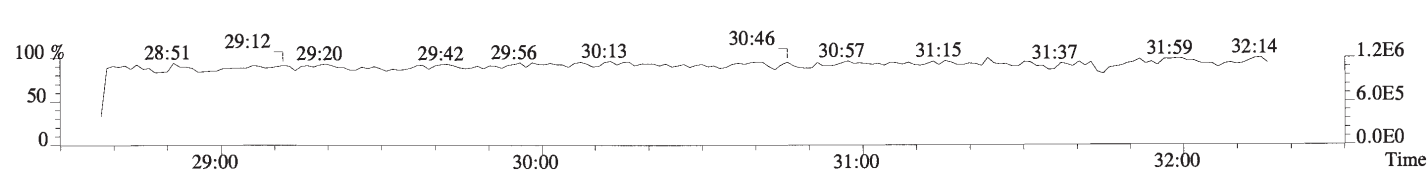
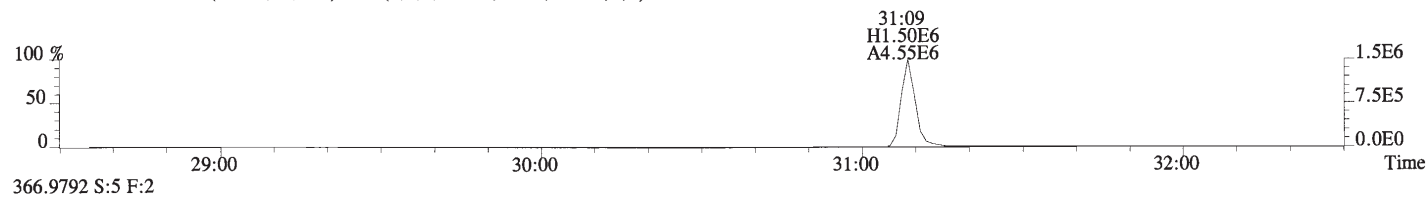
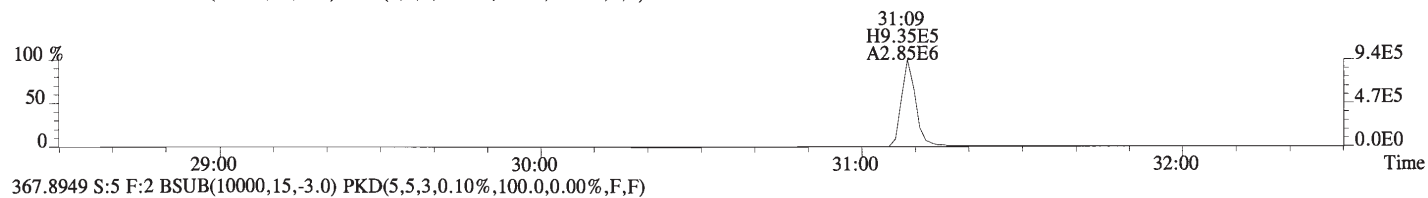
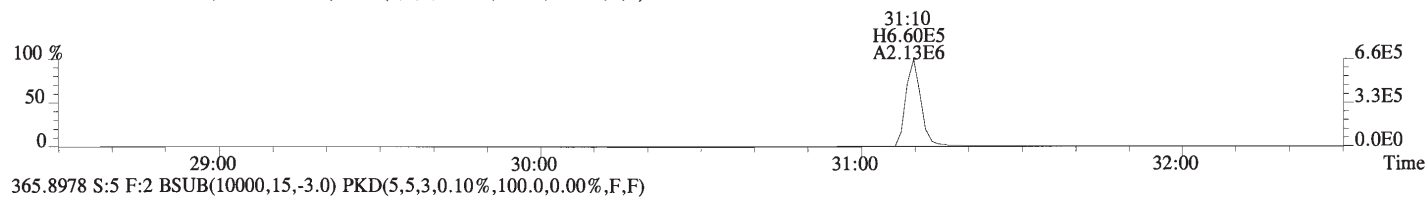
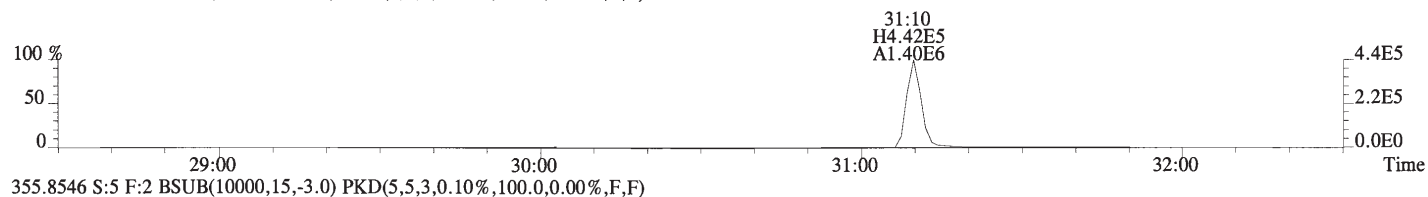
										Name	Conc	EMPC	Qual	noise	DL									
										2,3,7,8-TCDD	9.41e+05	0.79 y	1.13	26:26	1.001	19.930	*	2.5	*	Total Tetra-Dioxins	21.3	22.4	*	*
										1,2,3,7,8-PeCDD	3.53e+06	0.66 y	0.96	31:10	1.000	98.627	*	2.5	*	Total Penta-Dioxins	99.7	100	*	*
										1,2,3,4,7,8-HxCDD	3.55e+06	1.23 y	1.00	34:27	1.000	102.19	*	2.5	*	Total Hexa-Dioxins	305	307	*	*
										1,2,3,6,7,8-HxCDD	3.62e+06	1.23 y	1.10	34:34	1.000	96.770	*	2.5	*	Total Hepta-Dioxins	116	118	*	*
										1,2,3,7,8,9-HxCDD	3.65e+06	1.24 y	1.05	34:51	1.001	103.20	*	2.5	*	Total Tetra-Furans	20.0	23.8	*	*
										1,2,3,4,6,7,8-HpCDD	3.06e+06	1.02 y	1.05	38:22	1.001	108.14	*	2.5	*	Total Penta-Furans	206.52	208.80	*	*
										OCDD	4.82e+06	0.90 y	0.96	41:34	1.000	238.92	*	2.5	*	Total Hexa-Furans	403	405	*	*
																			Total Hepta-Furans	203	205	*	*	
										2,3,7,8-TCDF	1.37e+06	0.81 y	1.12	25:36	1.001	18.997	*	2.5	*					
										1,2,3,7,8-PeCDF	5.98e+06	1.64 y	1.01	29:57	1.000	101.88	*	2.5	*					
										2,3,4,7,8-PeCDF	5.92e+06	1.63 y	0.90	30:53	1.000	101.41	*	2.5	*					
										1,2,3,4,7,8-HxCDF	5.95e+06	1.24 y	1.16	33:35	1.000	100.79	*	2.5	*					
										1,2,3,6,7,8-HxCDF	5.91e+06	1.23 y	1.16	33:42	1.000	99.899	*	2.5	*					
										2,3,4,6,7,8-HxCDF	5.65e+06	1.27 y	1.23	34:18	1.000	99.827	*	2.5	*					
										1,2,3,7,8,9-HxCDF	5.15e+06	1.22 y	1.13	35:14	1.000	100.43	*	2.5	*					
										1,2,3,4,6,7,8-HpCDF	4.59e+06	1.02 y	1.44	36:59	1.000	101.24	*	2.5	*					
										1,2,3,4,7,8,9-HpCDF	4.55e+06	1.01 y	1.31	38:55	1.000	100.45	*	2.5	*					
										OCDF	5.86e+06	0.94 y	1.03	41:48	1.000	202.51	*	2.5	*					
																			Rec	Qual				
IS	13C-2,3,7,8-TCDD	8.29e+06	0.78 y	1.01	26:25	1.024	159.03			80.1	65.4													
IS	13C-1,2,3,7,8-PeCDD	7.39e+06	0.63 y	1.10	31:09	1.208	129.88			65.4	60.1													
IS	13C-1,2,3,4,7,8-HxCDD	6.88e+06	1.30 y	0.72	34:26	1.014	146.11			73.6	71.8													
IS	13C-1,2,3,6,7,8-HxCDD	6.78e+06	1.32 y	0.73	34:33	1.017	142.64			71.8	73.5													
IS	13C-1,2,3,7,8,9-HxCDD	6.69e+06	1.28 y	0.70	34:50	1.025	145.99			73.5	62.0													
IS	13C-1,2,3,4,6,7,8-HpCDD	5.34e+06	1.06 y	0.66	38:21	1.129	123.11			62.0	48.6													
IS	13C-OCDD	8.33e+06	0.93 y	0.66	41:33	1.223	193.12			48.6	80.6													
IS	13C-2,3,7,8-TCDF	1.28e+07	0.80 y	0.90	25:35	0.992	160.09			80.6	66.9													
IS	13C-1,2,3,7,8-PeCDF	1.16e+07	1.59 y	0.98	29:56	1.161	132.81			66.9	63.7													
IS	13C-2,3,4,7,8-PeCDF	1.29e+07	1.60 y	1.15	30:52	1.197	126.58			63.7	76.8													
IS	13C-1,2,3,4,7,8-HxCDF	1.01e+07	0.51 y	1.01	33:34	0.988	152.44			76.8	71.3													
IS	13C-1,2,3,6,7,8-HxCDF	1.02e+07	0.50 y	1.10	33:41	0.992	141.66			71.3	74.2													
IS	13C-2,3,4,6,7,8-HxCDF	9.17e+06	0.53 y	0.95	34:17	1.009	147.42			74.2	83.8													
IS	13C-1,2,3,7,8,9-HxCDF	8.99e+06	0.52 y	0.83	35:13	1.037	166.35			83.8	68.9													
IS	13C-1,2,3,4,6,7,8-HpCDF	6.25e+06	0.42 y	0.70	36:59	1.089	136.85			68.9	73.3													
IS	13C-1,2,3,4,7,8,9-HpCDF	6.85e+06	0.43 y	0.72	38:54	1.145	145.66			73.3	52.1													
IS	13C-OCDF	1.11e+07	0.89 y	0.82	41:47	1.230	206.96			52.1														
C/Up	37C1-2,3,7,8-TCDD	3.55e+06		1.14	26:26	1.025	60.558			76.2														
RS/RT	13C-1,2,3,4-TCDD	1.02e+07	0.78 y	1.00	25:47	*	198.61																	
RS	13C-1,2,3,4-TCDF	1.76e+07	0.81 y	1.00	24:12	*	198.61																	
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.30e+07	0.51 y	1.00	33:58	*	198.61																	

Integrations
by DB
Analyst: DB
Date: 7/15/16
Reviewed
by [Signature]
Analyst: [Signature]
Date: 7/15/16

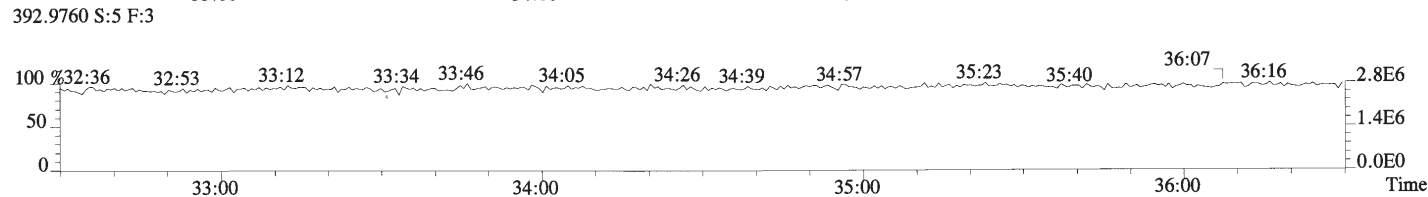
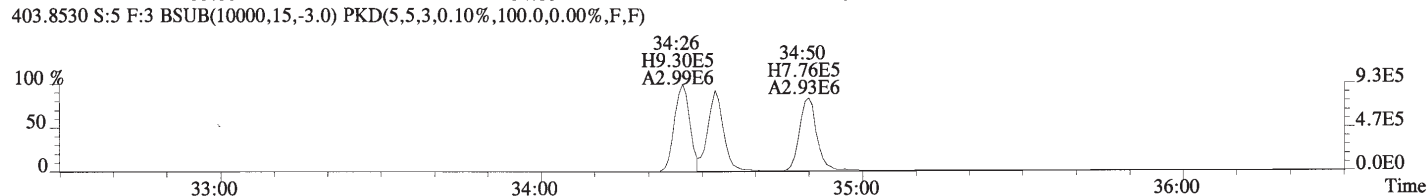
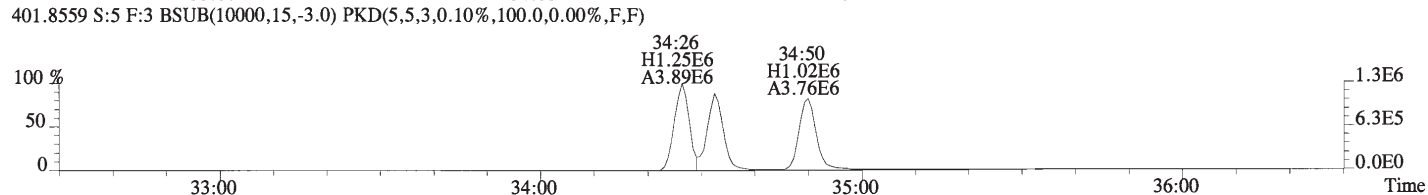
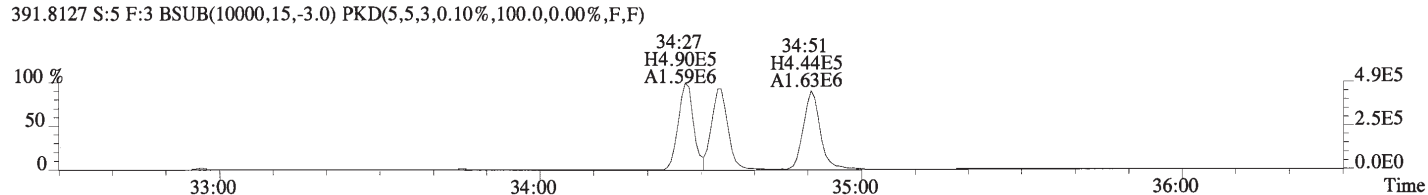
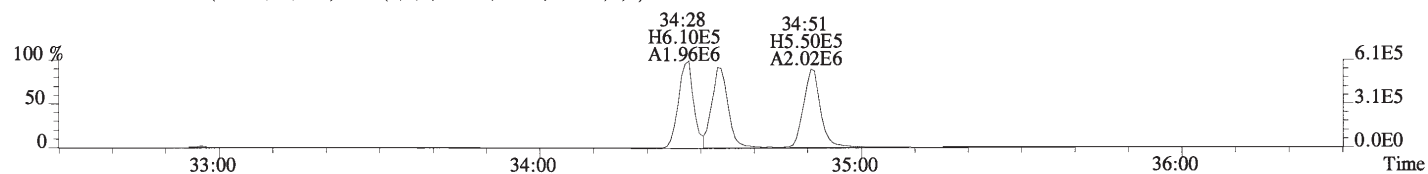
File:160713D1 #1-551 Acq:13-JUL-2016 12:21:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD2 Matrix Spike Dup 10 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



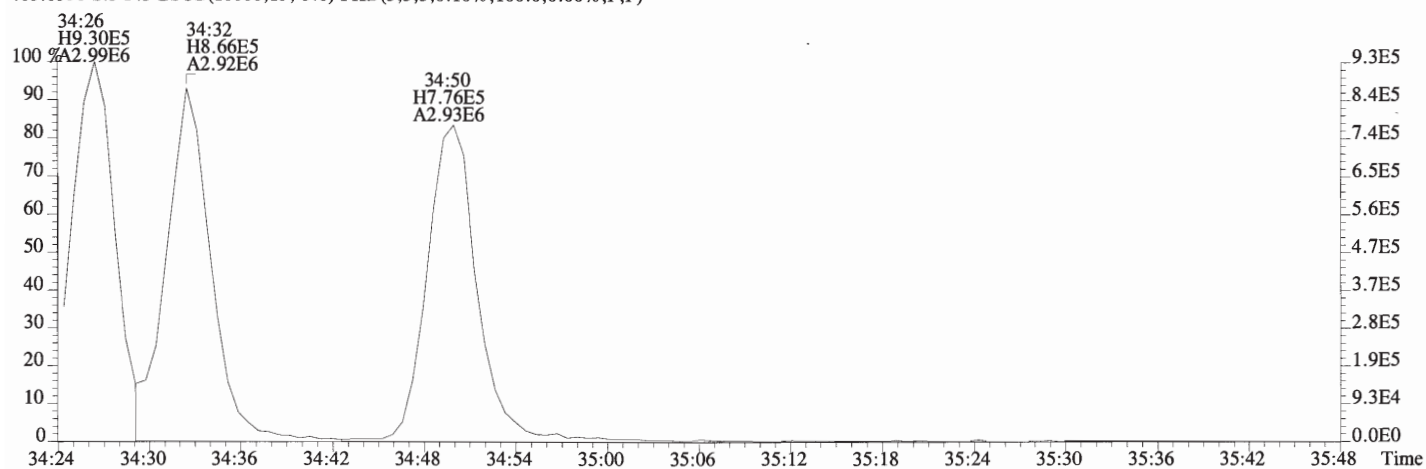
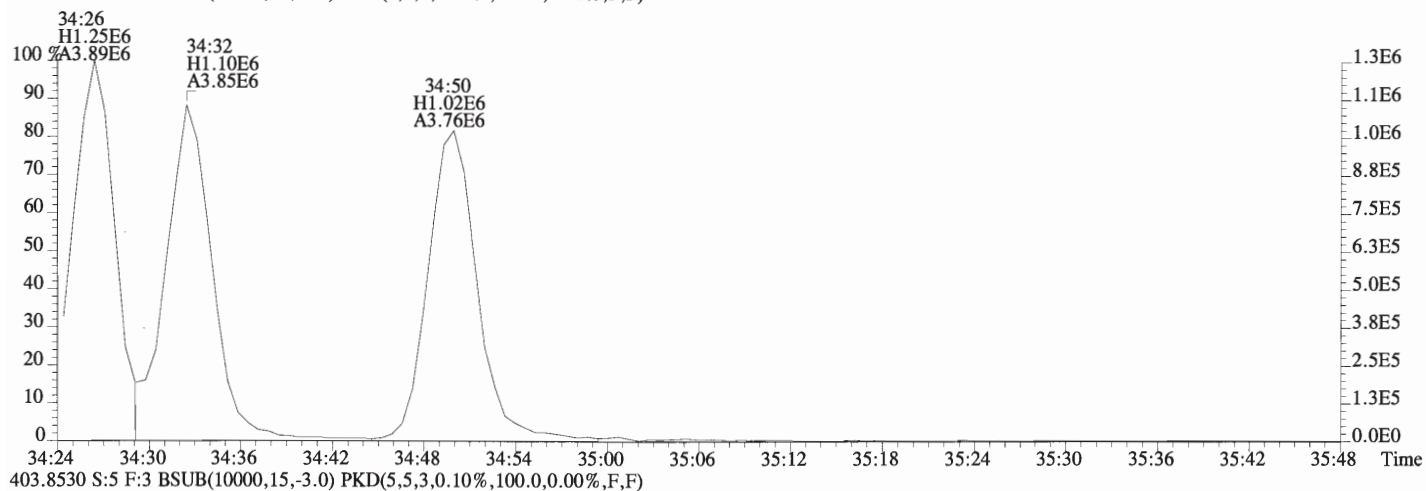
File:160713D1 #1-193 Acq:13-JUL-2016 12:21:17 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD2 Matrix Spike Dup 10 Exp:OCDD_DB5
 353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



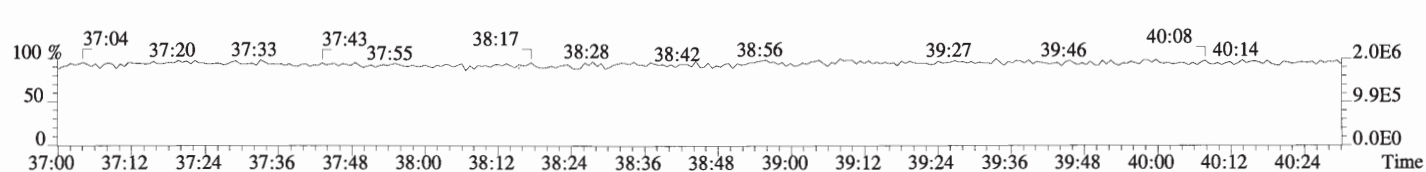
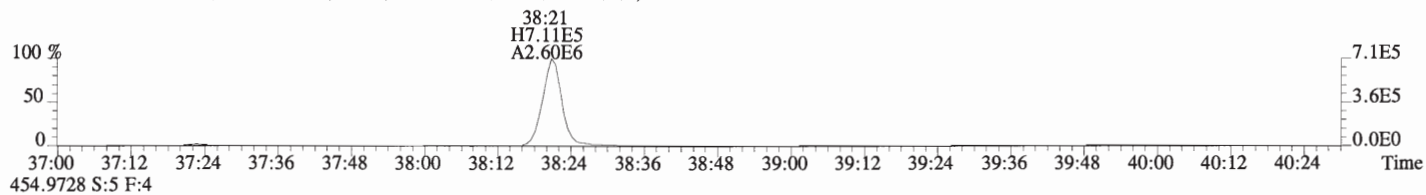
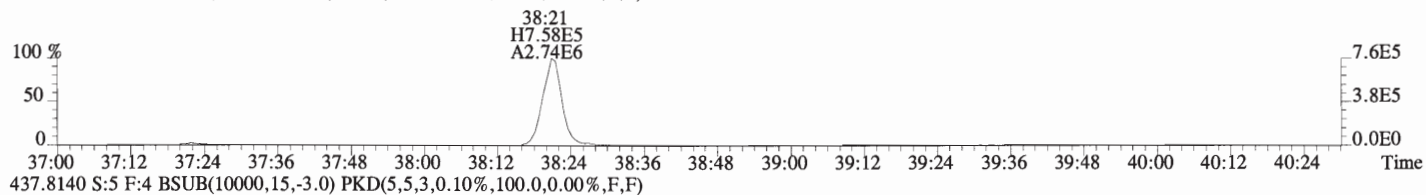
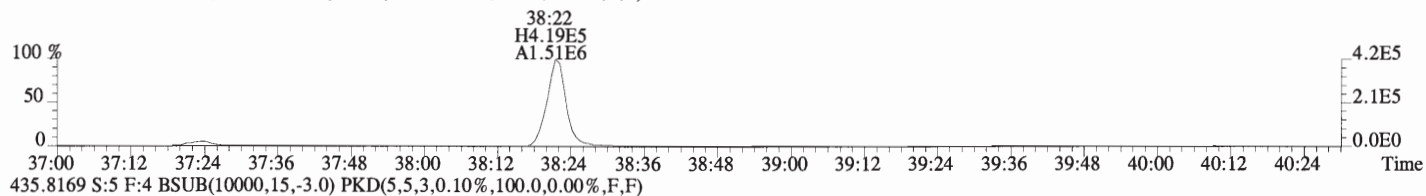
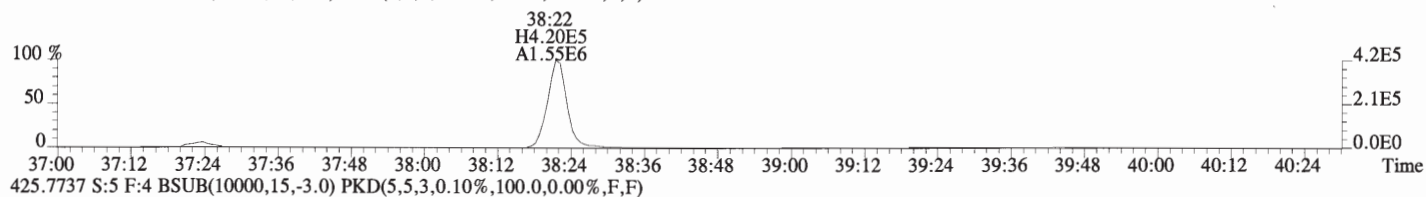
File:160713D1 #1-407 Acq:13-JUL-2016 12:21:17 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD2 Matrix Spike Dup 10 Exp:OCDD_DB5
 389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



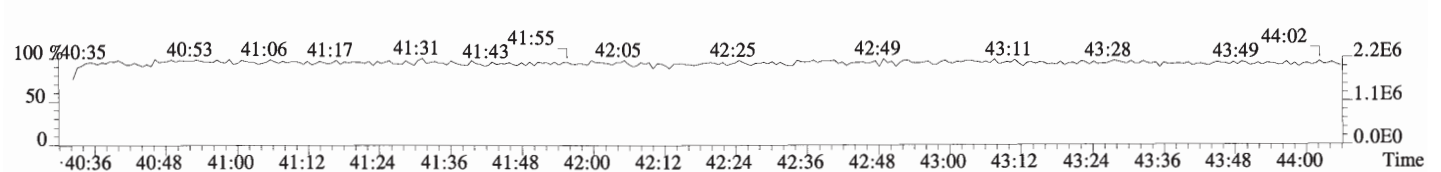
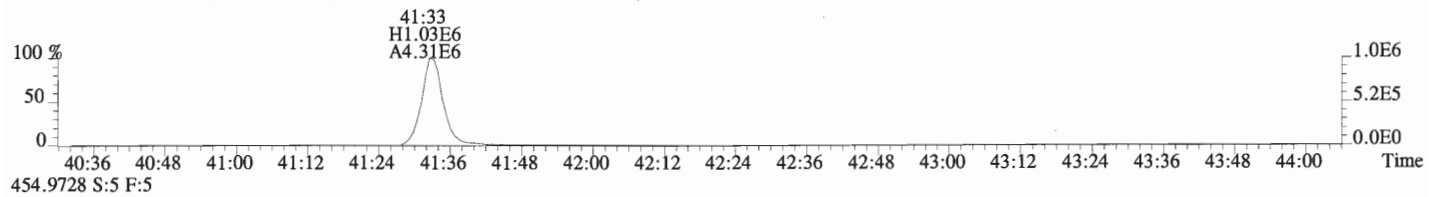
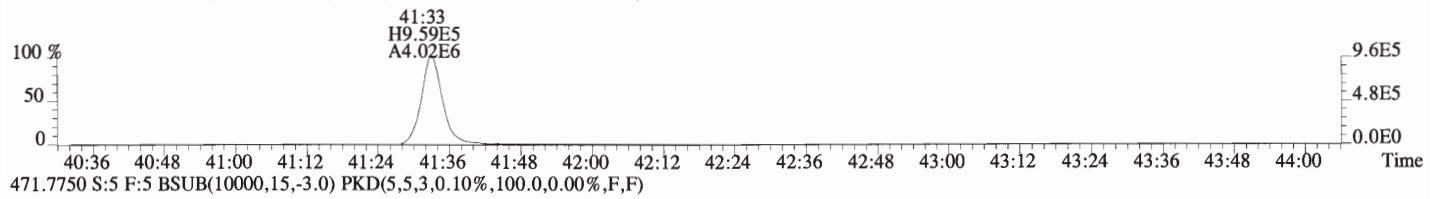
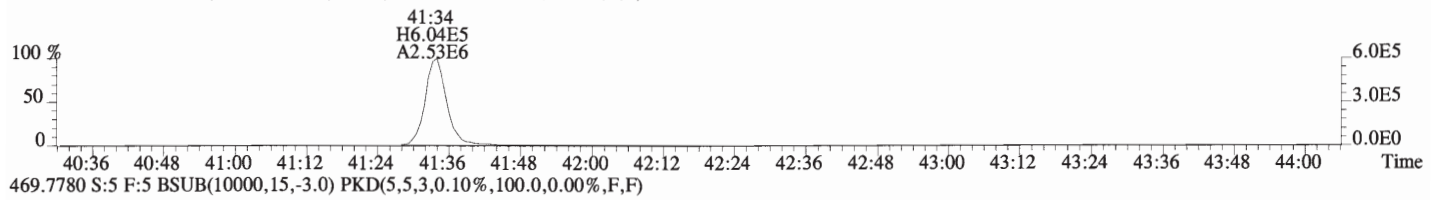
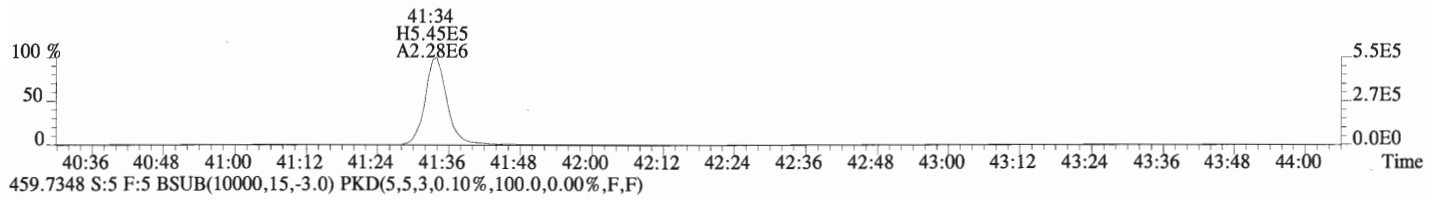
File:160713D1 #1-407 Acq:13-JUL-2016 12:21:17 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD2 Matrix Spike Dup 10 Exp:OCDD_DB5
 401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



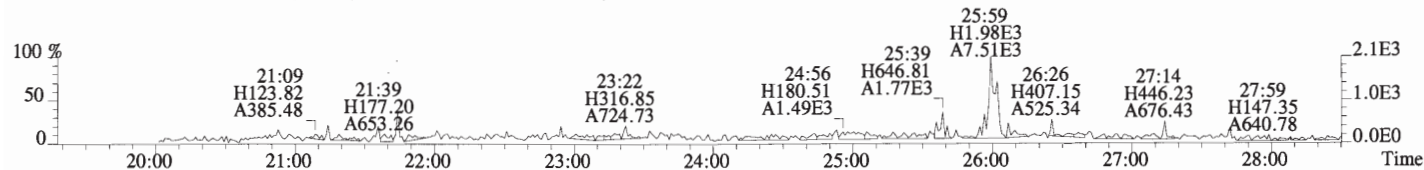
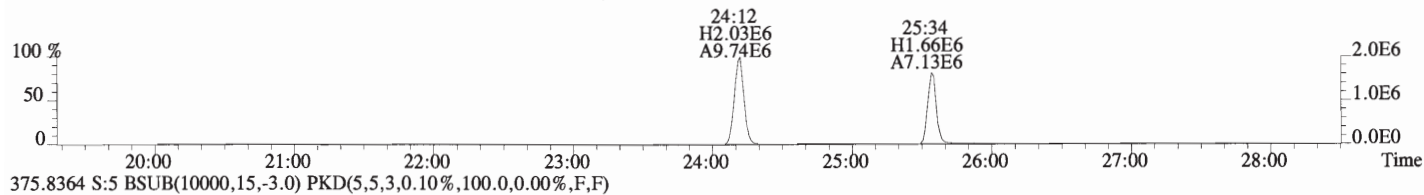
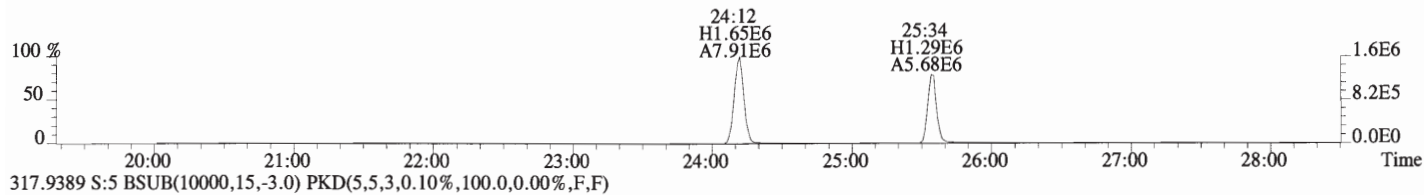
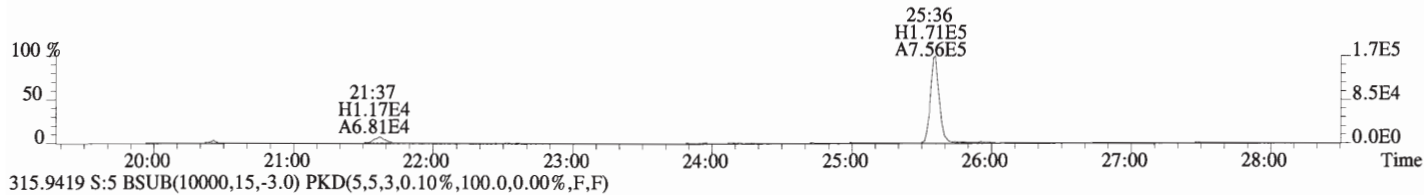
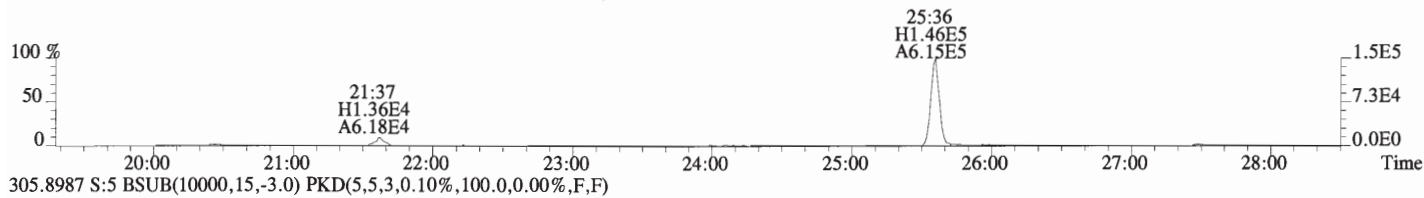
File:160713D1 #1-326 Acq:13-JUL-2016 12:21:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD2 Matrix Spike Dup 10 Exp:OCDD_DB5
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



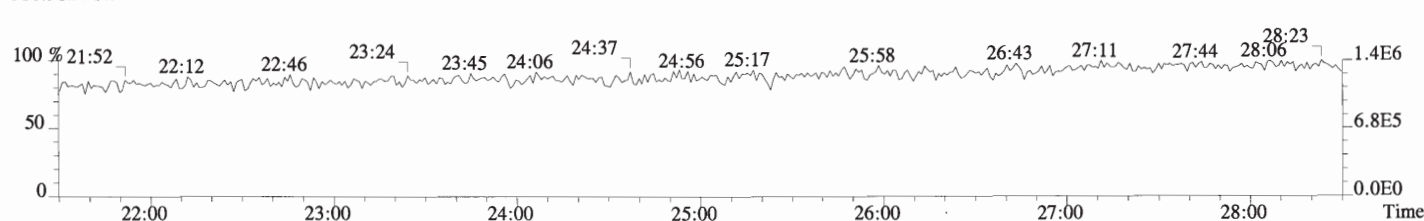
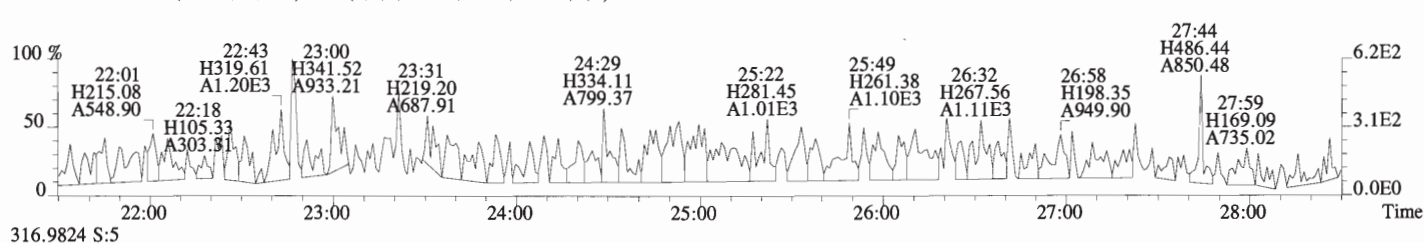
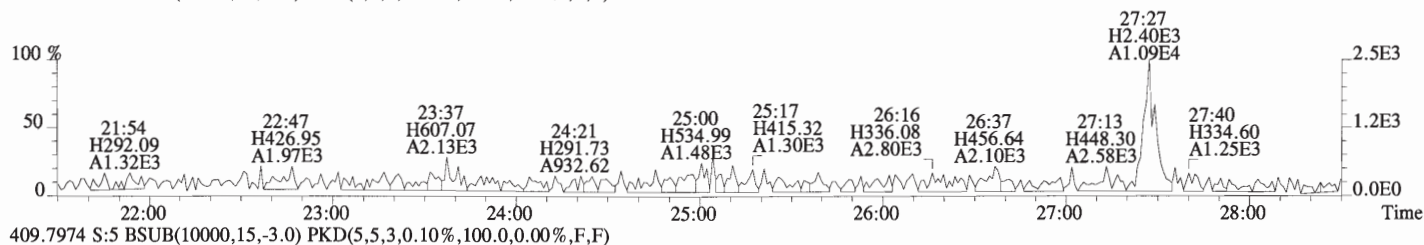
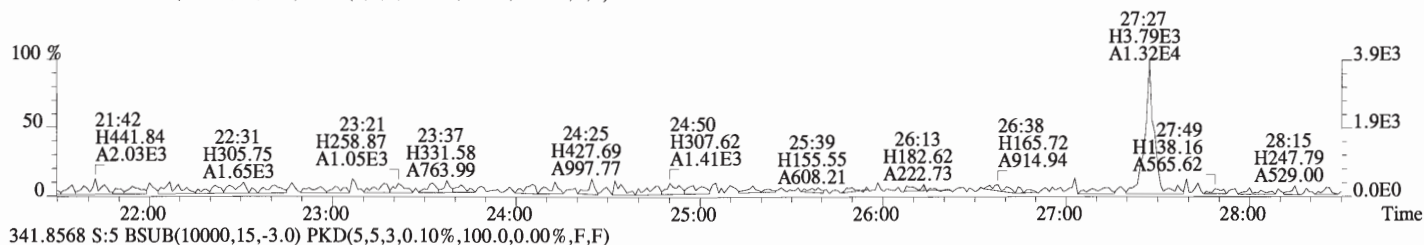
File:160713D1 #1-388 Acq:13-JUL-2016 12:21:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD2 Matrix Spike Dup 10 Exp:OCDD_DB5
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



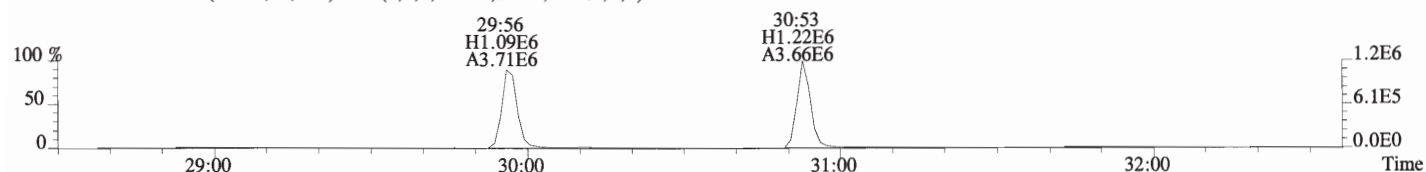
File:160713D1 #1-551 Acq:13-JUL-2016 12:21:17 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD2 Matrix Spike Dup 10 Exp:OCDD_DB5
 303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



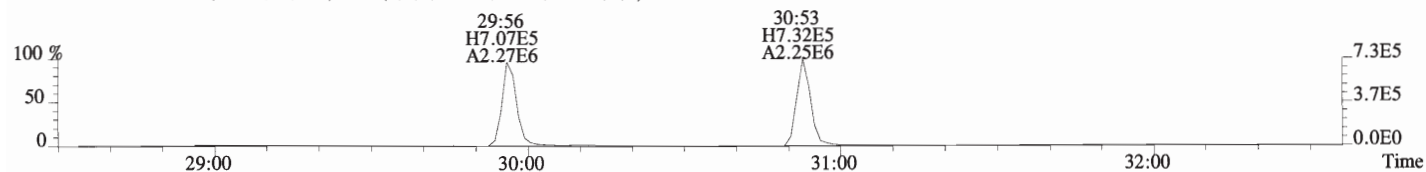
File:160713D1 #1-551 Acq:13-JUL-2016 12:21:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD2 Matrix Spike Dup 10 Exp:OCDD_DB5
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



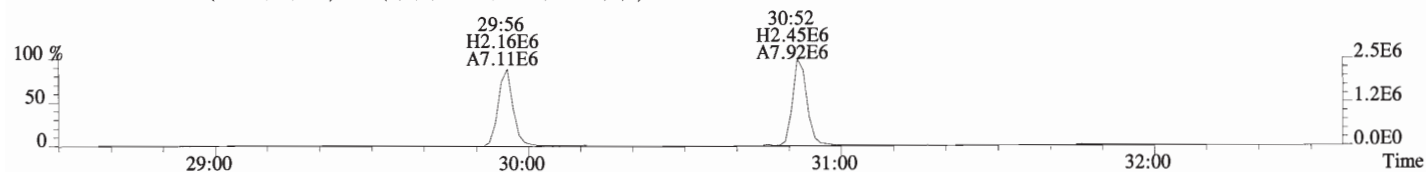
File:160713D1_#1-193 Acq:13-JUL-2016 12:21:17 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD2 Matrix Spike Dup 10 Exp:OCDD_DB5
 339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



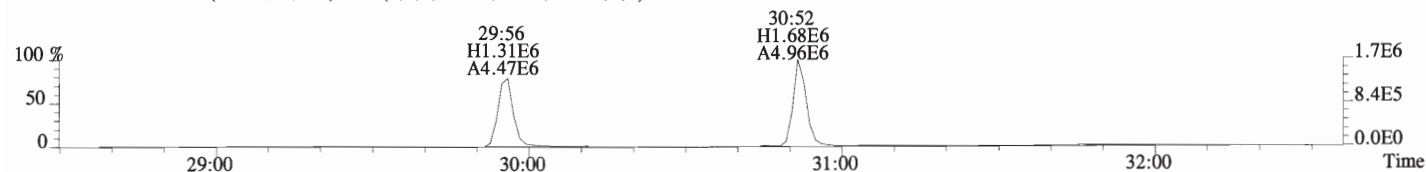
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



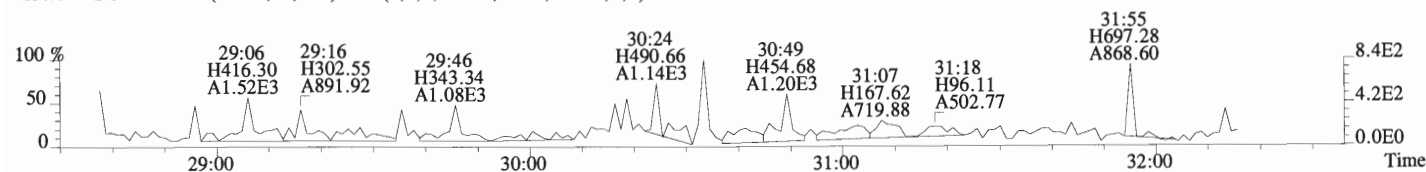
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



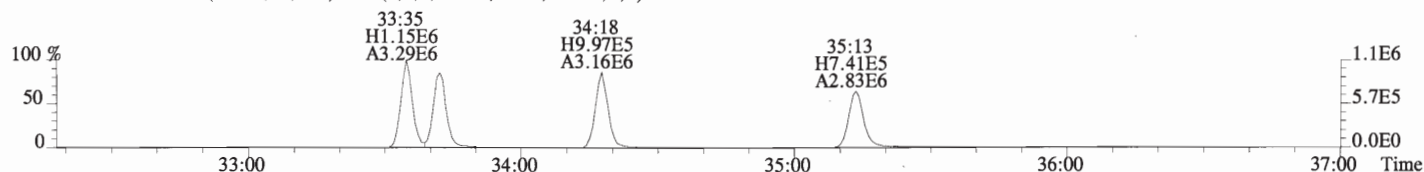
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



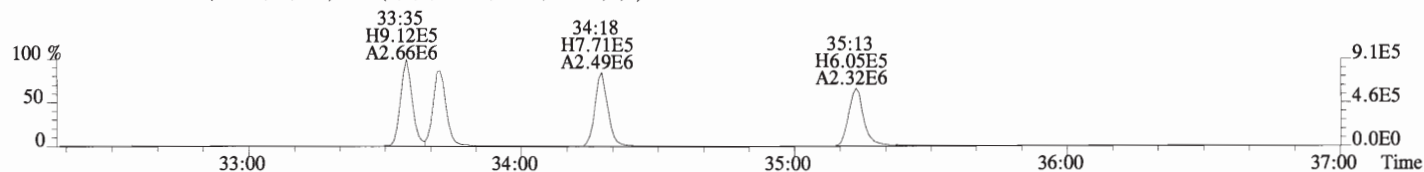
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



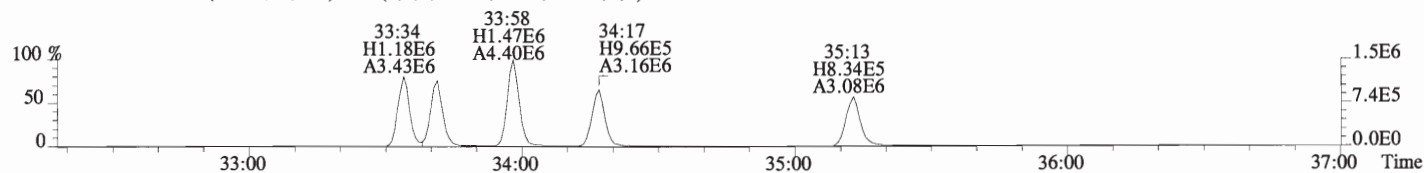
File:160713D1 #1-407 Acq:13-JUL-2016 12:21:17 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text: Vista Analytical Laboratory VG7 Text:B6G0039-MSD2 Matrix Spike Dup 10 Exp:OCDD_DB5
 373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



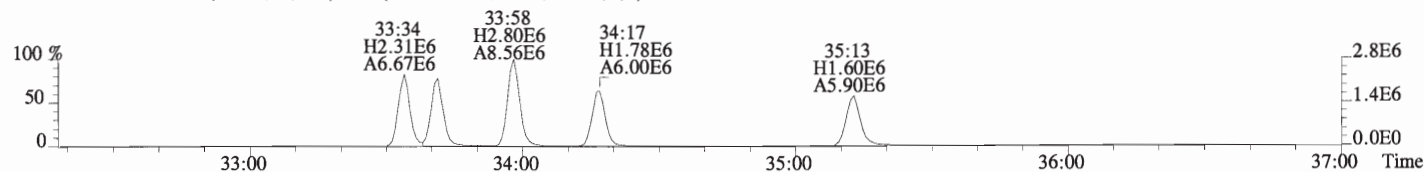
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



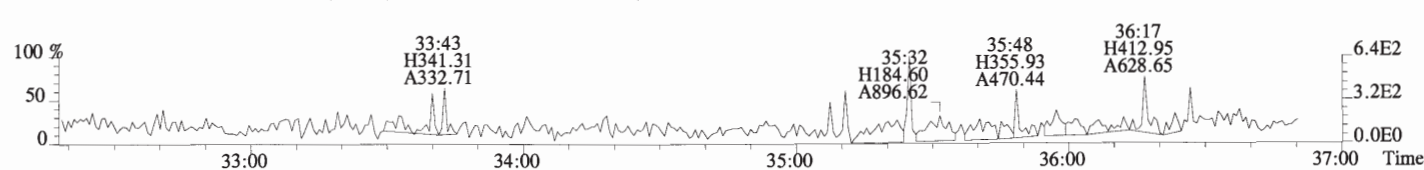
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



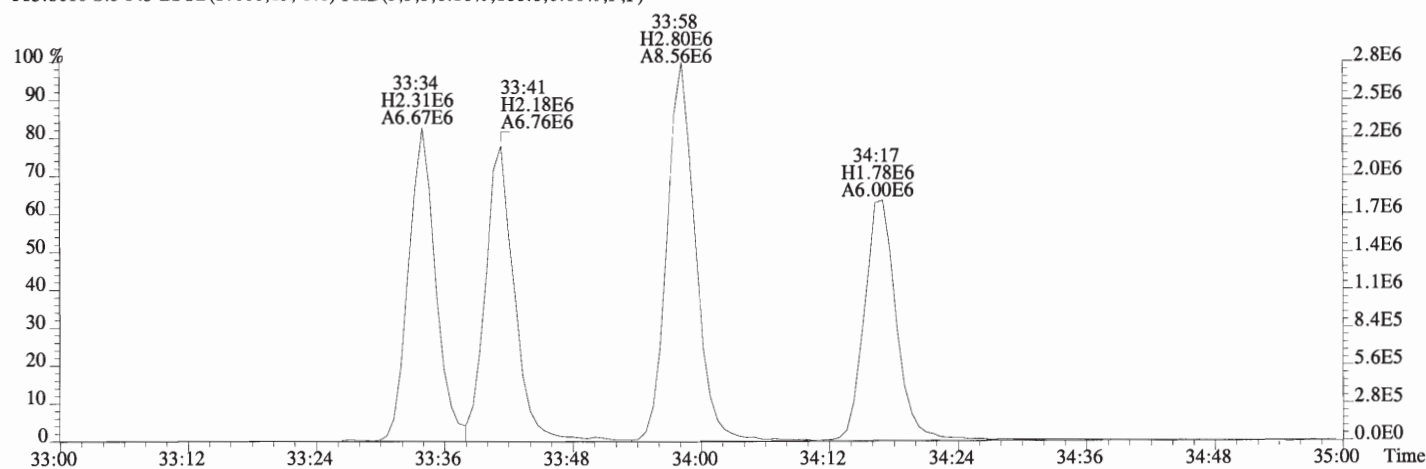
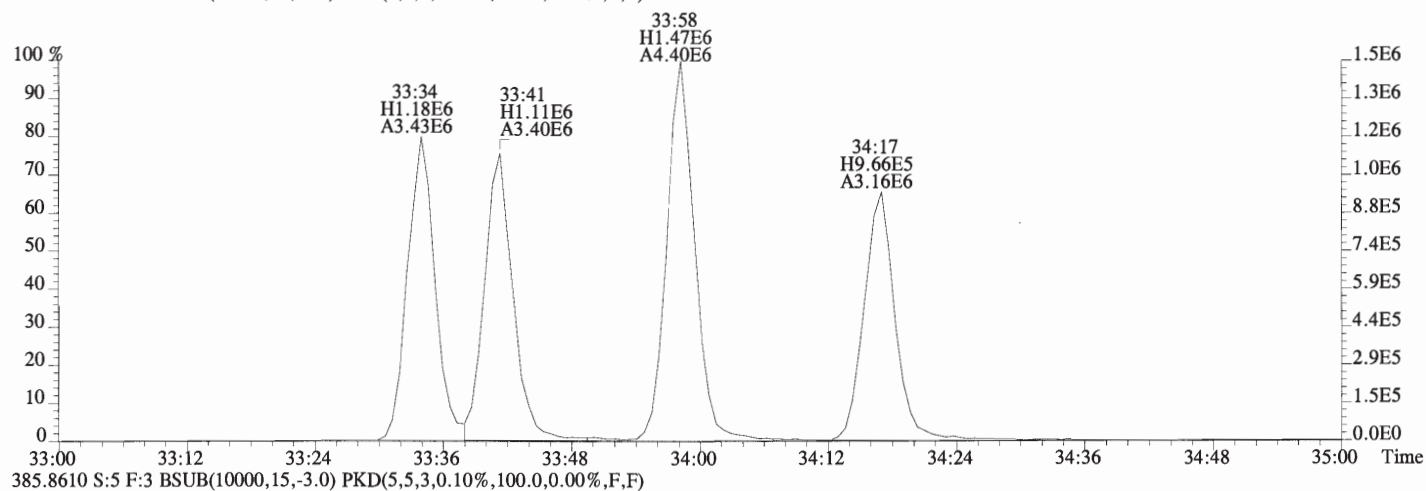
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



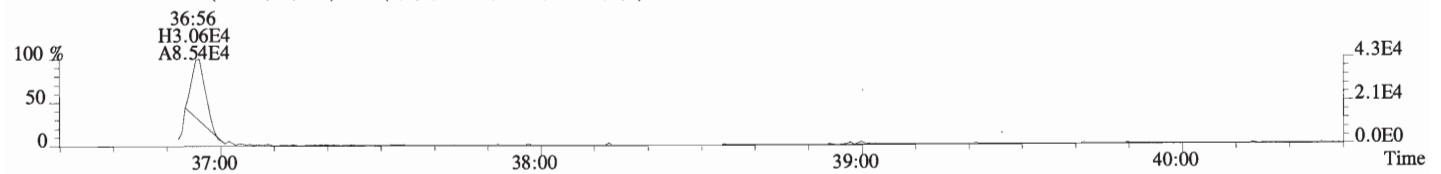
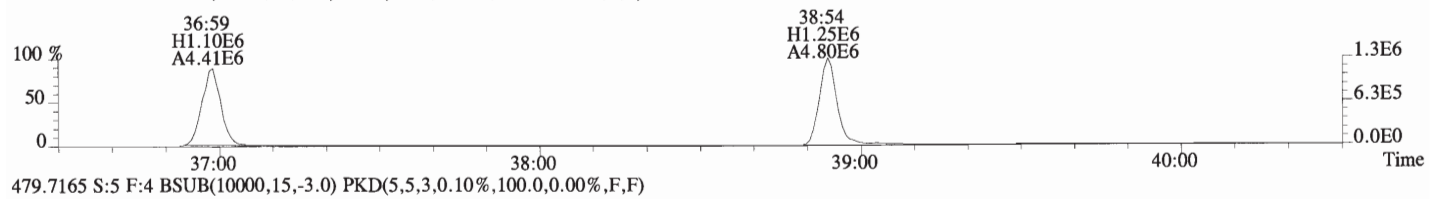
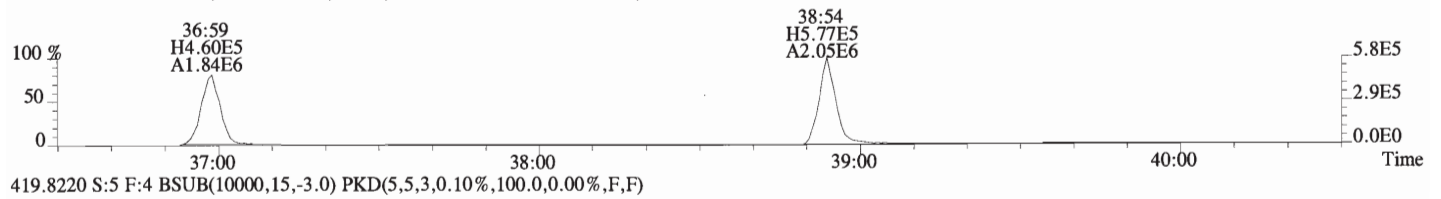
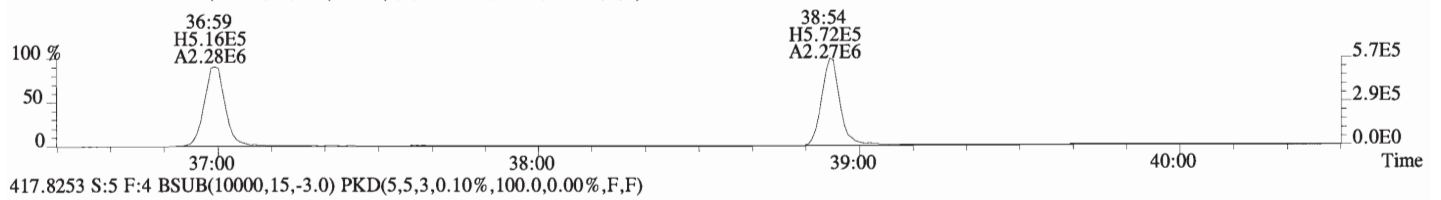
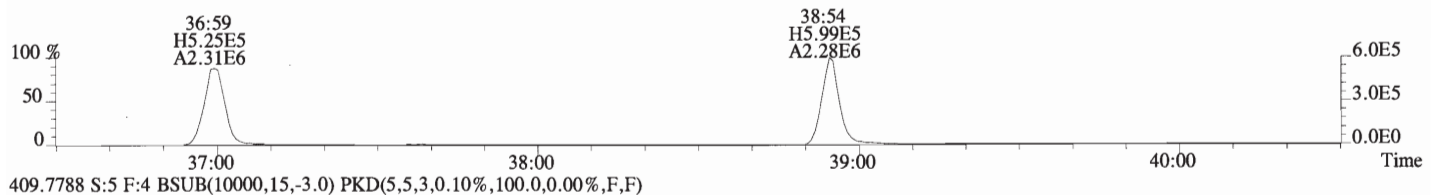
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



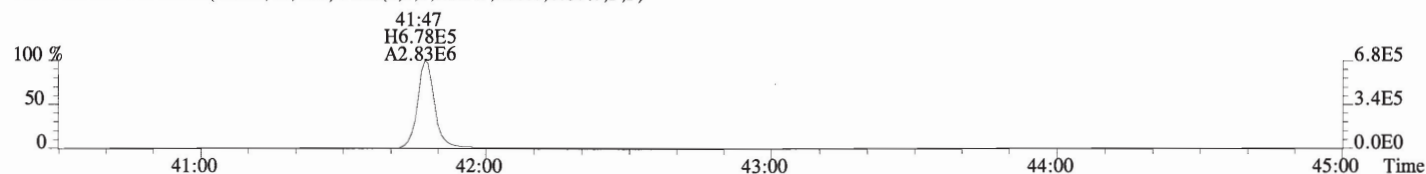
File:160713D1 #1-407 Acq:13-JUL-2016 12:21:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD2 Matrix Spike Dup 10 Exp:OCDD_DB5
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



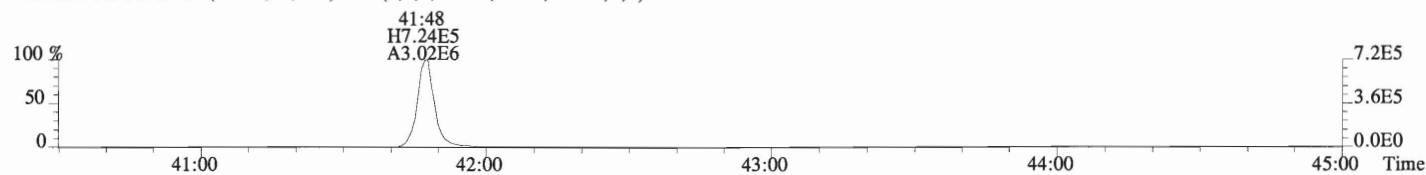
File:160713D1 #1-326 Acq:13-JUL-2016 12:21:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD2 Matrix Spike Dup 10 Exp:OCDD_DB5
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



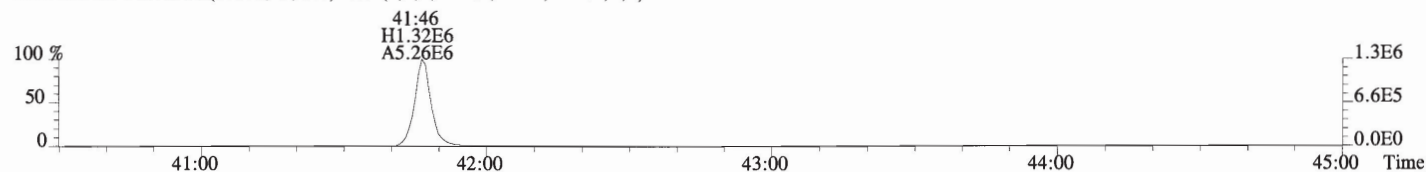
File:160713D1 #1-388 Acq:13-JUL-2016 12:21:17 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:B6G0039-MSD2 Matrix Spike Dup 10 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



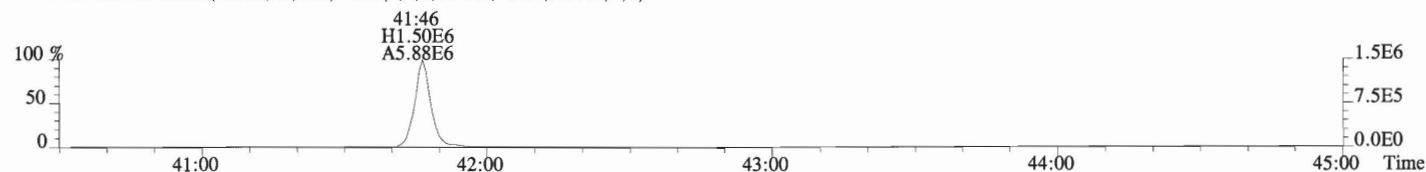
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



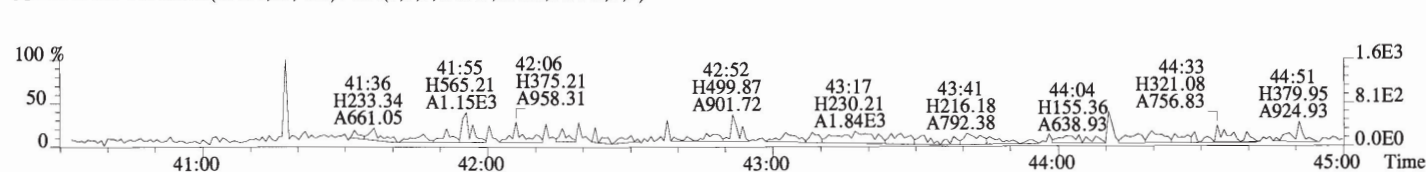
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: DU-3-1-C
Lab ID: 1600835-09

Filename: 160712D1 S:13 Acq:13-JUL-16 02:03:11
GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16

wt/vol:10.100

ConCal: ST160712D1-1
EndCAL: NA

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Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	1.13	NotF ₇	*	*	*	229	2.5	0.0587	Total Tetra-Dioxins	0.751	0.751	*	*	*
1,2,3,7,8-PeCDD	*	* n	0.96	NotF ₇	*	*	*	337	2.5	0.0924	Total Penta-Dioxins	0.251	1.17	*	*	*
1,2,3,4,7,8-HxCDD	7.55e+03	0.78 n	1.00	34:27	1.000	0.19308	*	2.5	*	*	Total Hexa-Dioxins	8.63	9.27	*	*	*
1,2,3,6,7,8-HxCDD	6.25e+04	1.32 y	1.10	34:34	1.000	1.5591	*	2.5	*	*	Total Hepta-Dioxins	107	107	*	*	*
1,2,3,7,8,9-HxCDD	1.77e+04	1.24 y	1.05	34:51	1.000	0.44969	*	2.5	*	*	Total Tetra-Furans	3.59	4.05	*	*	*
1,2,3,4,6,7,8-HpCDD	1.44e+06	1.04 y	1.05	38:22	1.000	47.568	*	2.5	*	*	Total Penta-Furans	1.6909	1.9389	*	*	*
OCDD	8.18e+06	0.89 y	0.96	41:34	1.000	394.26	*	2.5	*	*	Total Hexa-Furans	7.46	7.46	*	*	*
											Total Hepta-Furans	24.6	24.6	*	*	*
2,3,7,8-TCDF	*	* n	1.12	NotF ₇	*	*	*	446	2.5	0.0855						
1,2,3,7,8-PeCDF	1.10e+04	1.61 y	1.01	29:57	1.001	0.15926	*	2.5	*	*						
2,3,4,7,8-PeCDF	1.08e+04	1.48 y	0.90	30:53	1.000	0.15242	*	2.5	*	*						
1,2,3,4,7,8-HxCDF	1.42e+04	1.07 y	1.16	33:35	1.000	0.22487	*	2.5	*	*						
1,2,3,6,7,8-HxCDF	1.01e+04	1.41 y	1.16	33:42	1.000	0.15580	*	2.5	*	*						
2,3,4,6,7,8-HxCDF	1.70e+04	1.10 y	1.23	34:18	1.000	0.27545	*	2.5	*	*						
1,2,3,7,8,9-HxCDF	3.01e+04	1.39 y	1.13	35:14	1.000	0.55613	*	2.5	*	*						
1,2,3,4,6,7,8-HpCDF	3.31e+05	1.08 y	1.44	37:00	1.000	7.0575	*	2.5	*	*						
1,2,3,4,7,8,9-HpCDF	1.69e+04	1.15 y	1.31	38:55	1.000	0.39282	*	2.5	*	*						
OCDF	7.61e+05	0.90 y	1.03	41:48	1.000	27.024	*	2.5	*	*						
IS	13C-2,3,7,8-TCDD	1.17e+07	0.77 y	1.01	26:25	1.025	187.52				Rec	94.7				
IS	13C-1,2,3,7,8-PeCDD	9.54e+06	0.63 y	1.10	31:10	1.209	139.62				Qual	70.5				
IS	13C-1,2,3,4,7,8-HxCDD	7.73e+06	1.24 y	0.72	34:27	1.014	186.21					94.0				
IS	13C-1,2,3,6,7,8-HxCDD	7.24e+06	1.29 y	0.73	34:33	1.017	173.00					87.4				
IS	13C-1,2,3,7,8,9-HxCDD	7.42e+06	1.26 y	0.70	34:50	1.025	183.62					92.7				
IS	13C-1,2,3,4,6,7,8-HpCDD	5.72e+06	1.08 y	0.66	38:22	1.129	149.54					75.5				
IS	13C-OCDD	8.54e+06	0.92 y	0.66	41:34	1.223	224.77					56.8				
IS	13C-2,3,7,8-TCDF	1.78e+07	0.79 y	0.90	25:35	0.992	194.56					98.3				
IS	13C-1,2,3,7,8-PeCDF	1.36e+07	1.61 y	0.98	29:56	1.161	136.46					68.9				
IS	13C-2,3,4,7,8-PeCDF	1.56e+07	1.62 y	1.15	30:53	1.198	134.10					67.7				
IS	13C-1,2,3,4,7,8-HxCDF	1.08e+07	0.52 y	1.01	33:34	0.988	184.61					93.2				
IS	13C-1,2,3,6,7,8-HxCDF	1.11e+07	0.52 y	1.10	33:42	0.992	175.21					88.5				
IS	13C-2,3,4,6,7,8-HxCDF	1.00e+07	0.53 y	0.95	34:17	1.009	182.40					92.1				
IS	13C-1,2,3,7,8,9-HxCDF	9.46e+06	0.52 y	0.83	35:14	1.037	198.70					100				
IS	13C-1,2,3,4,6,7,8-HpCDF	6.45e+06	0.43 y	0.70	36:59	1.088	160.21					80.9				
IS	13C-1,2,3,4,7,8,9-HpCDF	6.48e+06	0.43 y	0.72	38:54	1.145	156.40					79.0				
IS	13C-OCDF	1.08e+07	0.89 y	0.82	41:47	1.230	228.06					57.6				
C/Up	37Cl-2,3,7,8-TCDD	5.06e+06		1.14	26:26	1.025	71.804					90.7				
RS/RT	13C-1,2,3,4-TCDD	1.23e+07	0.81 y	1.00	25:47	*	198.02				Integrations					
RS	13C-1,2,3,4-TCDF	2.02e+07	0.81 y	1.00	24:12	*	198.02				by					
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.14e+07	0.52 y	1.00	33:59	*	198.02				Analyst: DB					
											Date: 7/15/16					
											Reviewed					
											by					
											Analyst: [Signature]					
											Date: 7/15/16					

Totals class: TCDD EMPC

Entry #: 19

Run: 18 File: 160712D1 S: 13 I: 1 F: 1

Acquired: 13-JUL-16 02:03:11 Processed: 14-JUL-16 10:27:48

Total Concentration: 0.75123

Unnamed Concentration: 0.751

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
22:38	1.671e+04	2.016e+04	0.83 y	3.687e+04	0.55021
23:04	6.302e+03	7.168e+03	0.88 y	1.347e+04	0.20102

Totals class: PeCDD EMPC

Entry #: 21

Run: 18

File: 160712D1

S: 13 I: 1 F: 2

Acquired: 13-JUL-16 02:03:11

Processed: 14-JUL-16 10:27:48

Total Concentration: 1.1659

Unnamed Concentration: 1.166

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:02	1.336e+04	1.601e+04	0.83 n	2.610e+04	0.56344
30:08	3.065e+03	3.044e+03	1.01 n	4.961e+03	0.10710
30:13	1.960e+03	3.580e+03	0.55 y	5.540e+03	0.11958
30:25	9.599e+03	6.954e+03	1.38 n	1.134e+04	0.24468
30:46	2.319e+03	3.755e+03	0.62 y	6.074e+03	0.13111

Totals class: HxCDD EMPC

Entry #: 23

Run: 18

File: 160712D1

S: 13 I: 1 F: 3

Acquired: 13-JUL-16 02:03:11

Processed: 14-JUL-16 10:27:48

Total Concentration: 9.2705

Unnamed Concentration: 7.069

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:57	5.933e+04	4.826e+04	1.23 y	1.076e+05	2.7220
33:30	9.865e+03	1.182e+04	0.83 n	1.782e+04	0.45088
33:46	6.591e+04	5.387e+04	1.22 y	1.198e+05	3.0303
33:53	1.364e+04	1.113e+04	1.23 y	2.477e+04	0.62660
34:27	4.181e+03	5.388e+03	0.78 n	7.553e+03	0.19308
34:34	3.557e+04	2.689e+04	1.32 y	6.247e+04	1.5591
34:45	5.162e+03	4.278e+03	1.21 y	9.440e+03	0.23883
34:51	9.792e+03	7.872e+03	1.24 y	1.766e+04	0.44969

Totals class: HpCDD EMPC

Entry #: 25

Run: 18 File: 160712D1 S: 13 I: 1 F: 4
Acquired: 13-JUL-16 02:03:11 Processed: 14-JUL-16 10:27:48

Total Concentration: 106.53 Unnamed Concentration: 58.961

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:23	9.093e+05	8.804e+05	1.03 y	1.790e+06	58.961
38:22	7.368e+05	7.071e+05	1.04 y	1.444e+06	47.568 1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 18

File: 160712D1

S: 13 I: 1 F: 1

Acquired: 13-JUL-16 02:03:11

Processed: 14-JUL-16 10:27:48

Total Concentration: 4.0461

Unnamed Concentration: 4.046

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
20:26	2.921e+04	3.303e+04	0.88 y	6.224e+04	0.61768
21:38	1.112e+05	1.420e+05	0.78 y	2.533e+05	2.5135
23:59	7.865e+03	1.325e+04	0.59 n	1.808e+04	0.17943
24:10	1.418e+04	1.754e+04	0.81 y	3.172e+04	0.31482
25:57	6.667e+03	8.313e+03	0.80 y	1.498e+04	0.14868
27:29	2.421e+04	1.548e+04	1.56 n	2.741e+04	0.27202

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 18 File: 160712D1 S: 13 I: 1 F: 1
Acquired: 13-JUL-16 02:03:11 Processed: 14-JUL-16 10:27:48

Total Concentration: 0.65231 Unnamed Concentration: 0.652

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:27	2.606e+04	1.967e+04	1.33 y	4.573e+04	0.65231

Totals class: PeCDF EMPC

Entry #: 31

Run: 18 File: 160712D1 S: 13 I: 1 F: 2
Acquired: 13-JUL-16 02:03:11 Processed: 14-JUL-16 10:27:48

Total Concentration: 1.2866

Unnamed Concentration: 0.975

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28:51	6.055e+03	4.013e+03	1.51 y	1.007e+04	0.14364
28:59	1.895e+04	1.426e+04	1.33 y	3.321e+04	0.47380
29:33	7.949e+03	3.512e+03	2.26 n	8.956e+03	0.12777
29:57	6.809e+03	4.223e+03	1.61 y	1.103e+04	0.15926
30:11	4.525e+03	3.146e+03	1.44 y	7.671e+03	0.10943
30:20	5.126e+03	4.803e+03	1.07 n	8.433e+03	0.12030
30:53	6.450e+03	4.373e+03	1.48 y	1.082e+04	0.15242

Totals class: HxCDF EMPC

Entry #: 33

Run: 18 File: 160712D1 S: 13 I: 1 F: 3
Acquired: 13-JUL-16 02:03:11 Processed: 14-JUL-16 10:27:48

Total Concentration: 7.4572

Unnamed Concentration: 6.245

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:26	1.603e+04	1.455e+04	1.10 y	3.058e+04	0.50121
32:35	6.393e+04	5.069e+04	1.26 y	1.146e+05	1.8789
32:56	7.892e+03	7.008e+03	1.13 y	1.490e+04	0.24425
33:07	1.249e+05	9.602e+04	1.30 y	2.209e+05	3.6206
33:35	7.353e+03	6.866e+03	1.07 y	1.422e+04	0.22487 1,2,3,4,7,8-HxCDF
33:42	5.900e+03	4.172e+03	1.41 y	1.007e+04	0.15580 1,2,3,6,7,8-HxCDF
34:18	8.935e+03	8.113e+03	1.10 y	1.705e+04	0.27545 2,3,4,6,7,8-HxCDF
35:14	1.751e+04	1.260e+04	1.39 y	3.011e+04	0.55613 1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC

Entry #: 35

Run: 18

File: 160712D1

S: 13 I: 1 F: 4

Acquired: 13-JUL-16 02:03:11

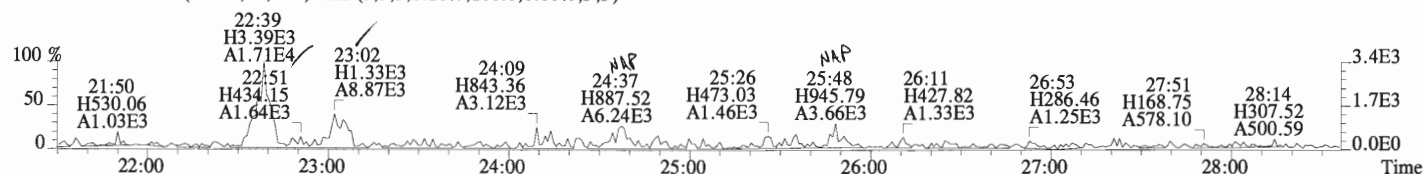
Processed: 14-JUL-16 10:27:48

Total Concentration: 24.588

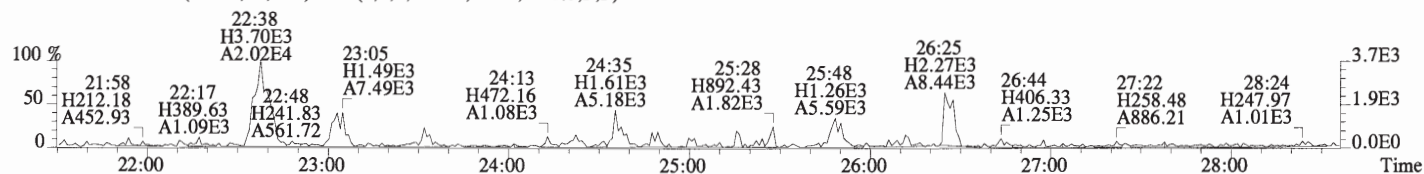
Unnamed Concentration: 17.137

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
37:00	1.717e+05	1.592e+05	1.08	y	3.309e+05	7.0575	1,2,3,4,6,7,8-HpCDF
37:37	3.875e+05	3.820e+05	1.01	y	7.695e+05	17.137	
38:55	9.046e+03	7.841e+03	1.15	y	1.689e+04	0.39282	1,2,3,4,7,8,9-HpCDF

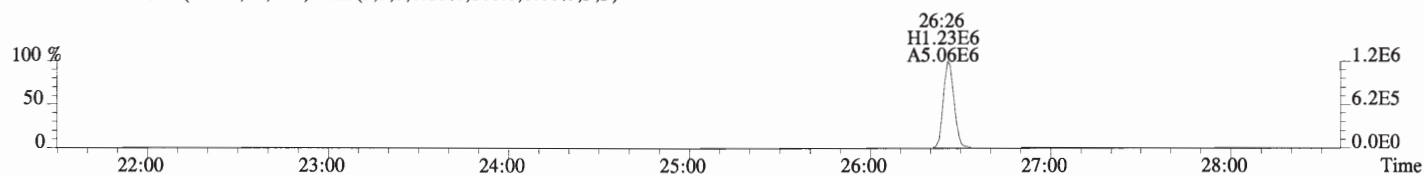
File:160712D1 #1-551 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 319.8965 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



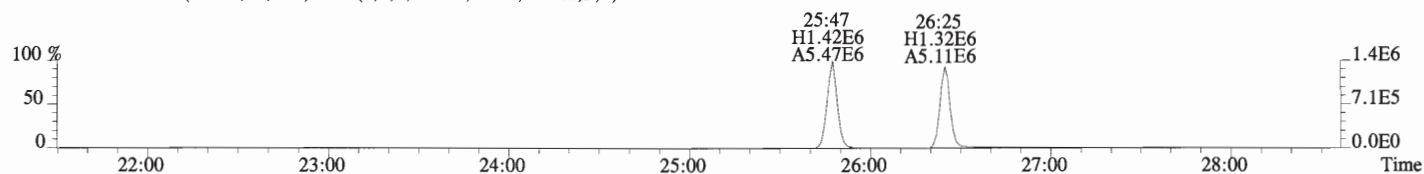
321.8936 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



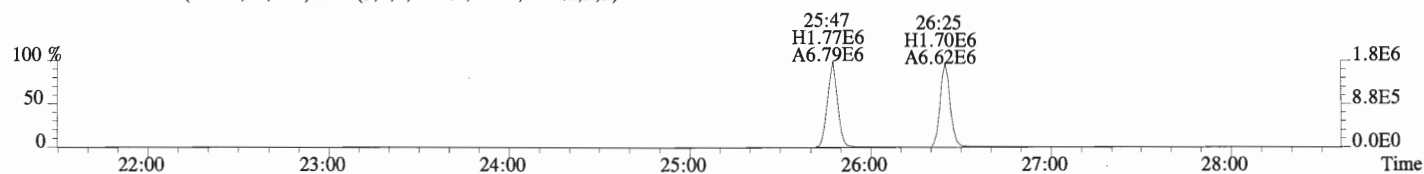
327.8847 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



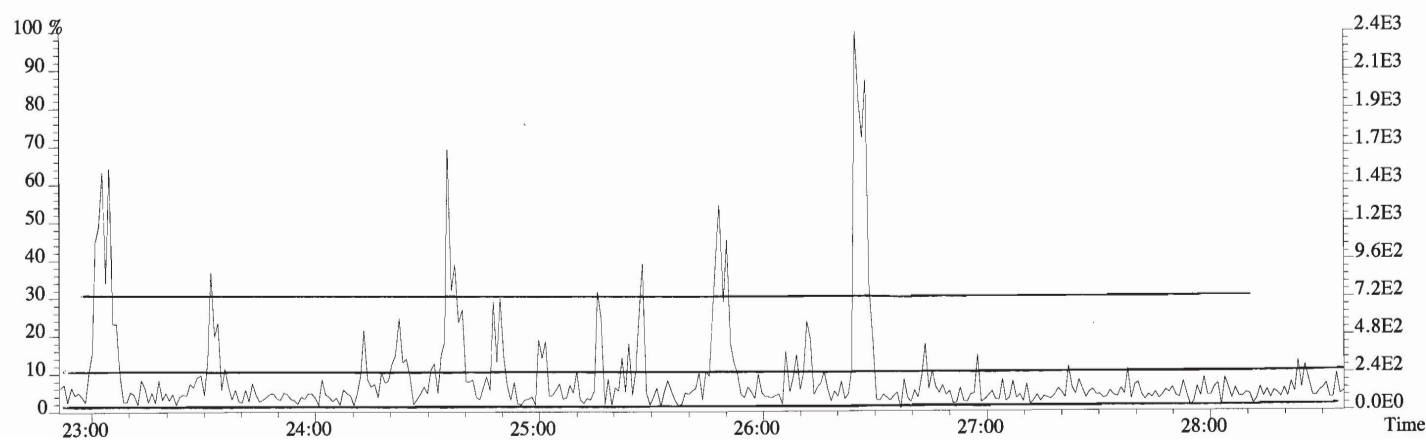
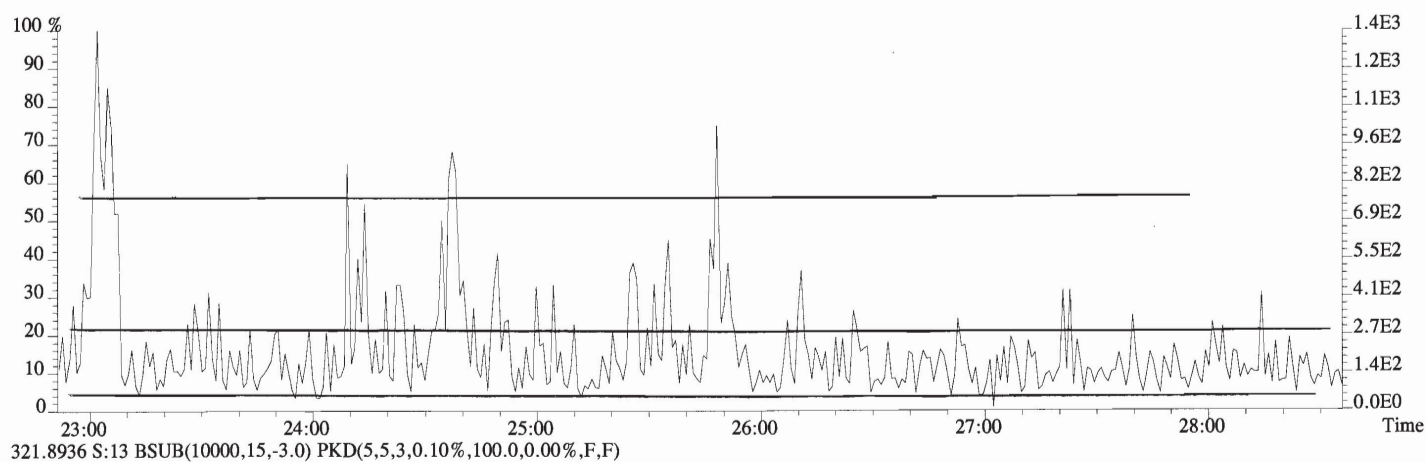
331.9368 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



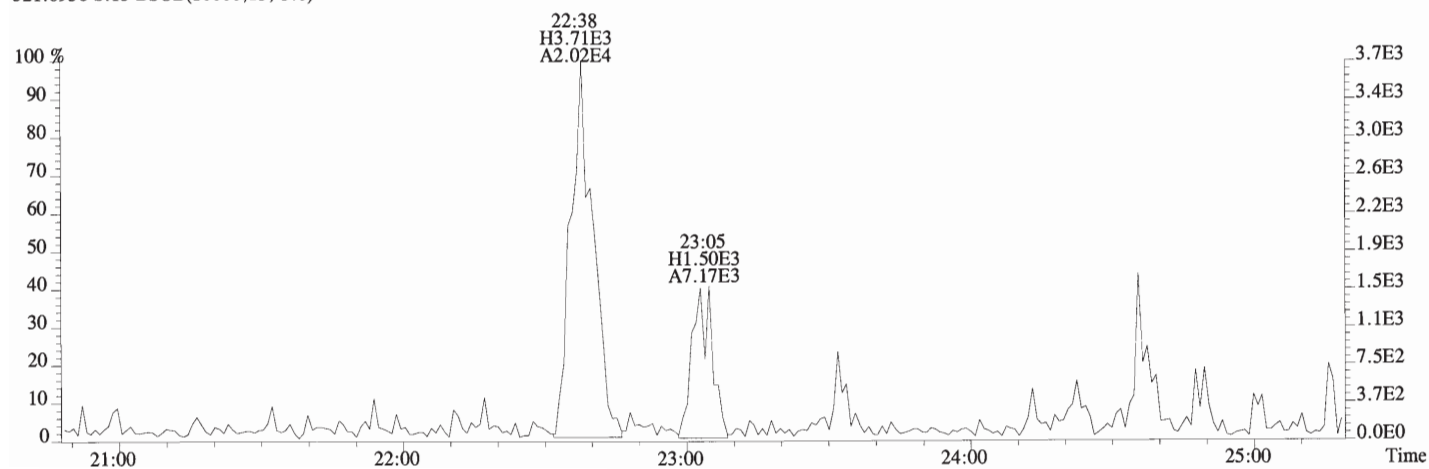
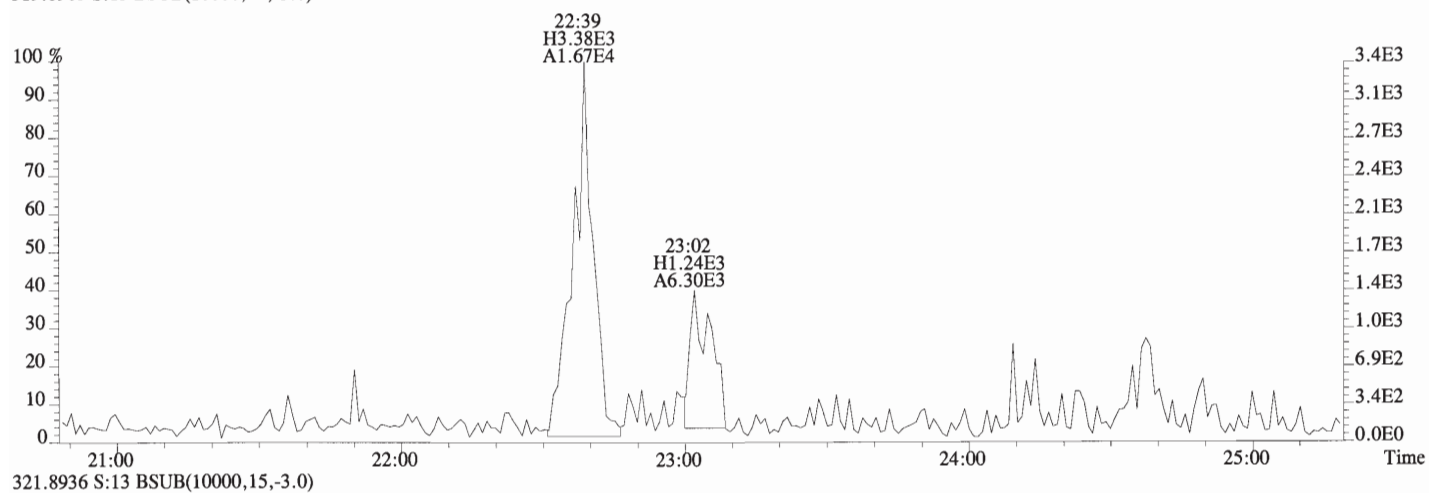
333.9339 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



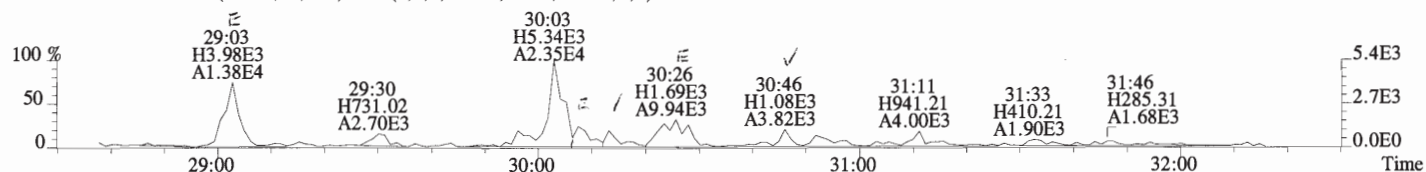
File:160712D1 #1-551 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
319.8965 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



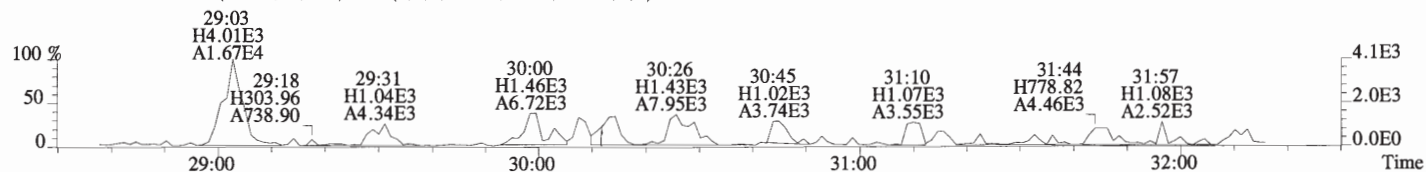
File:160712D1 #1-551 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
319.8965 S:13 BSUB(10000,15,-3.0)



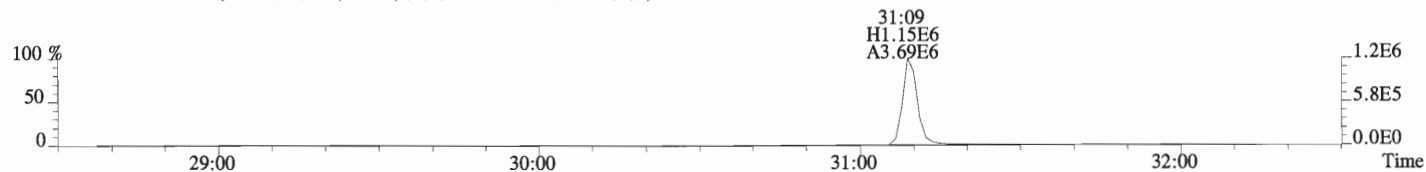
File:160712D1 #1-193 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 353.8576 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



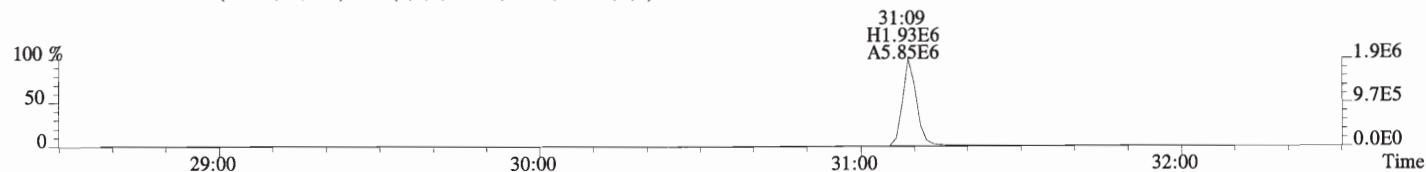
355.8546 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



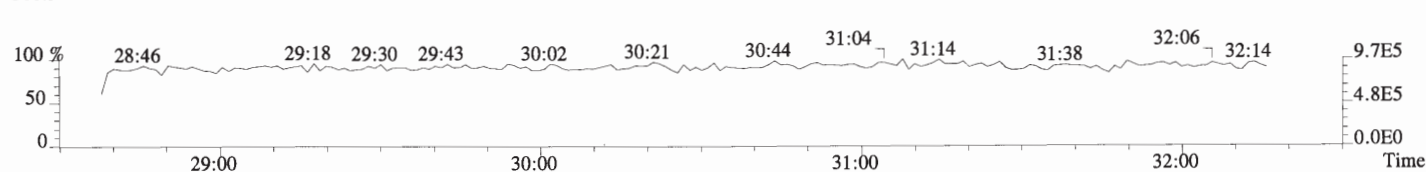
365.8978 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



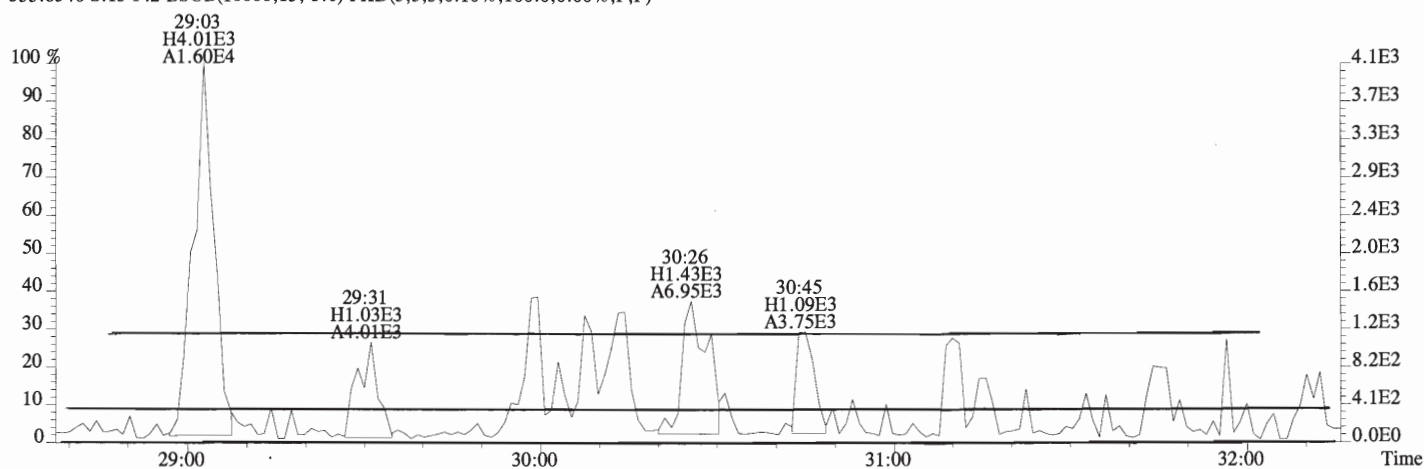
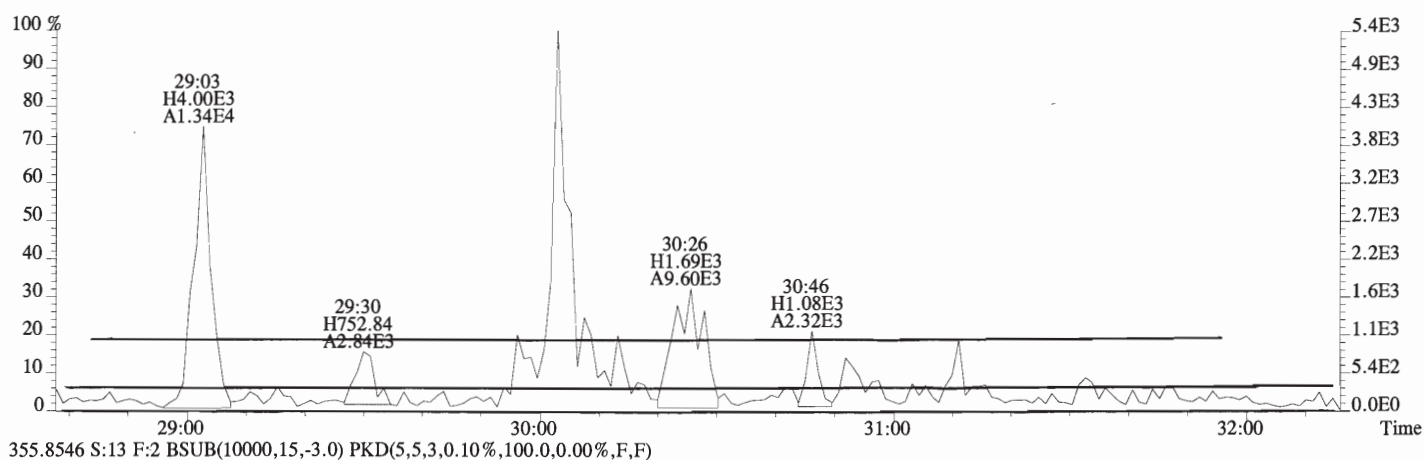
367.8949 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



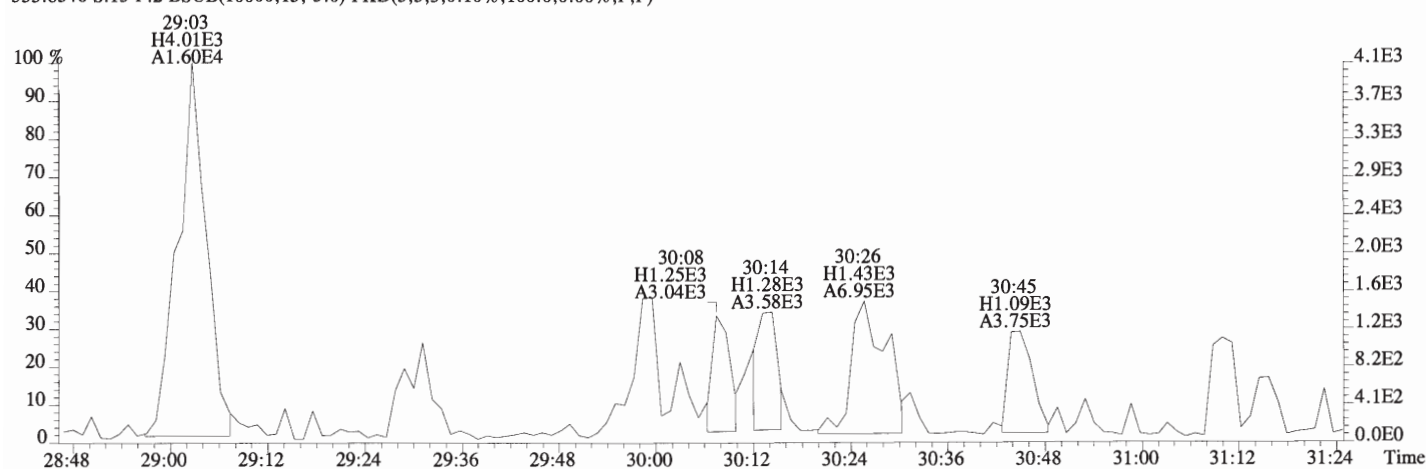
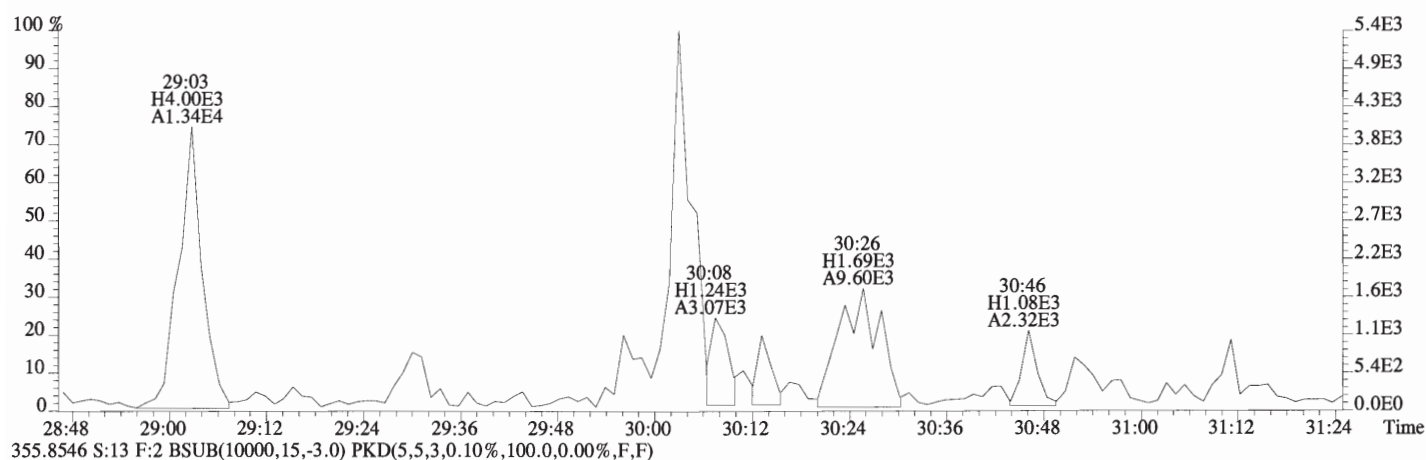
366.9792 S:13 F:2



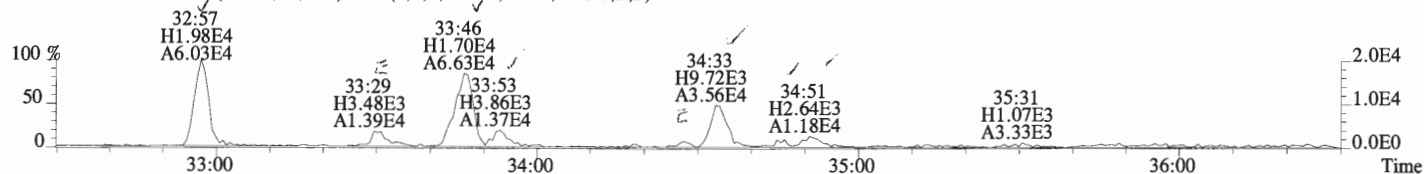
File:160712D1 #1-193 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 353.8576 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



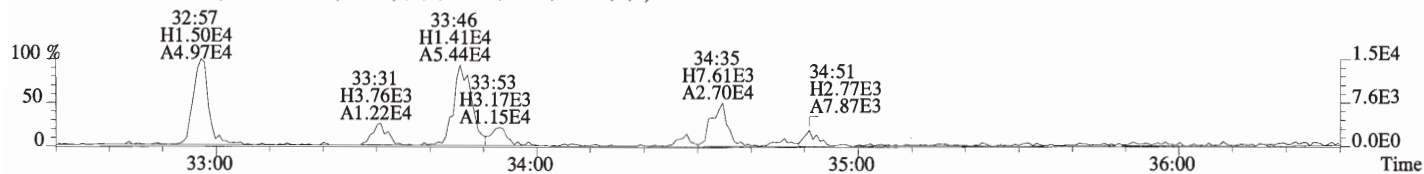
File:160712D1 #1-193 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 353.8576 S:13 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



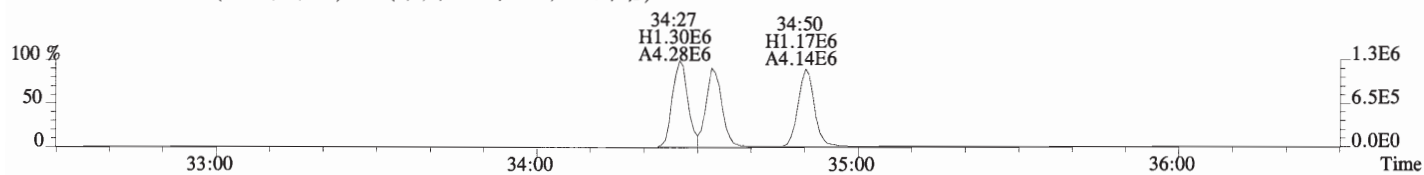
File:160712D1 #1-407 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 389.8156 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



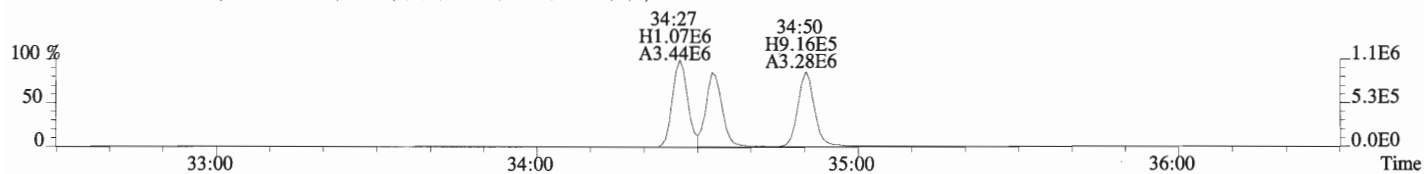
391.8127 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



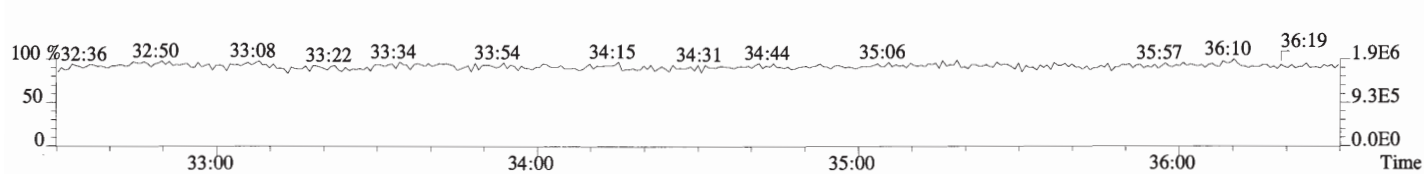
401.8559 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



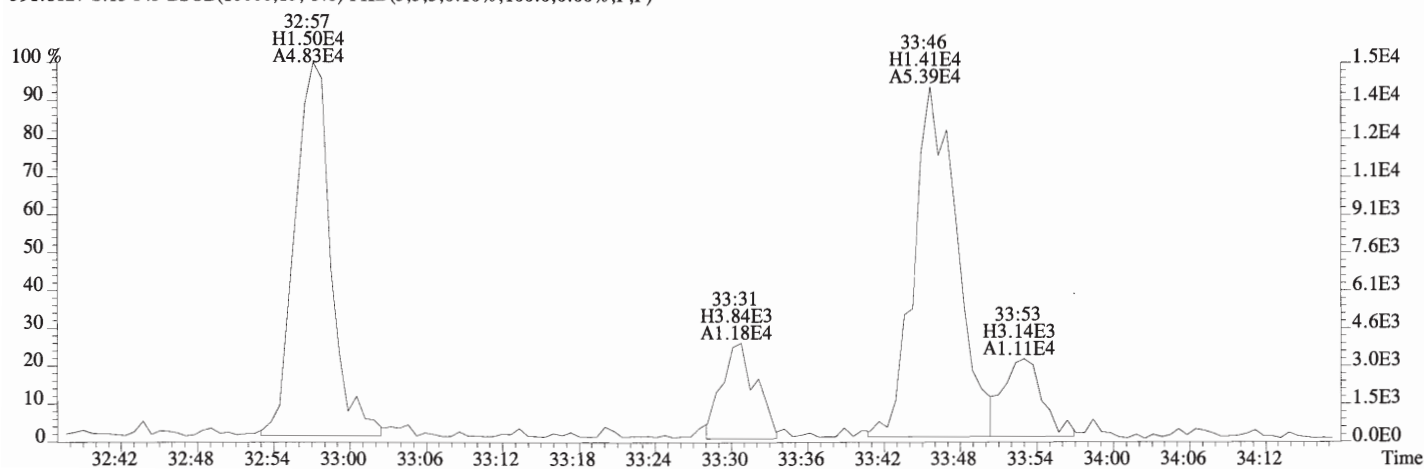
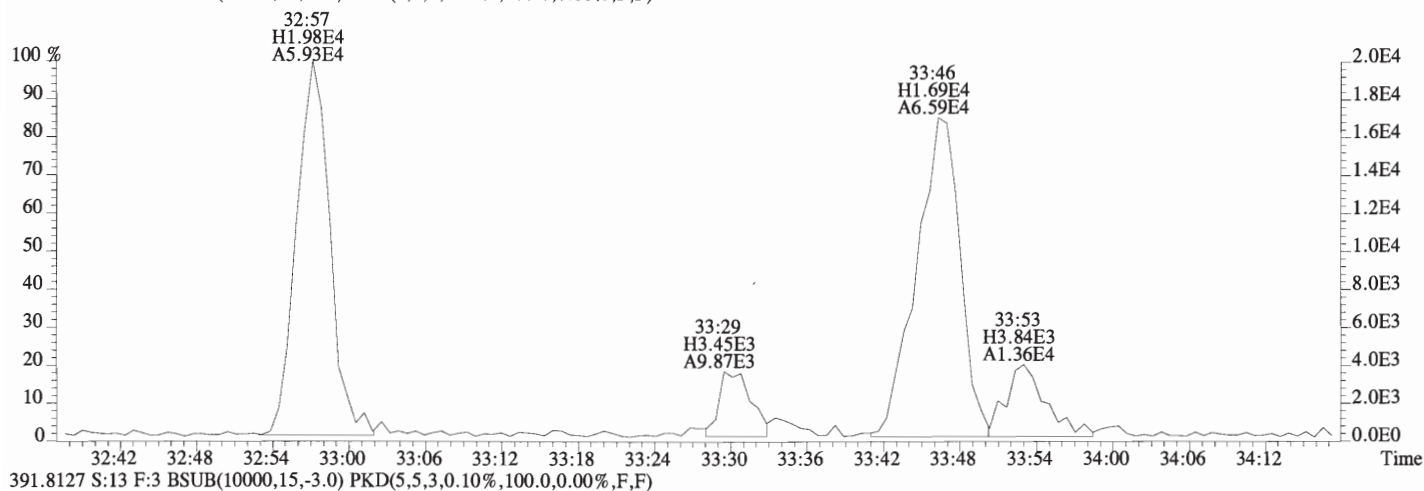
403.8530 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



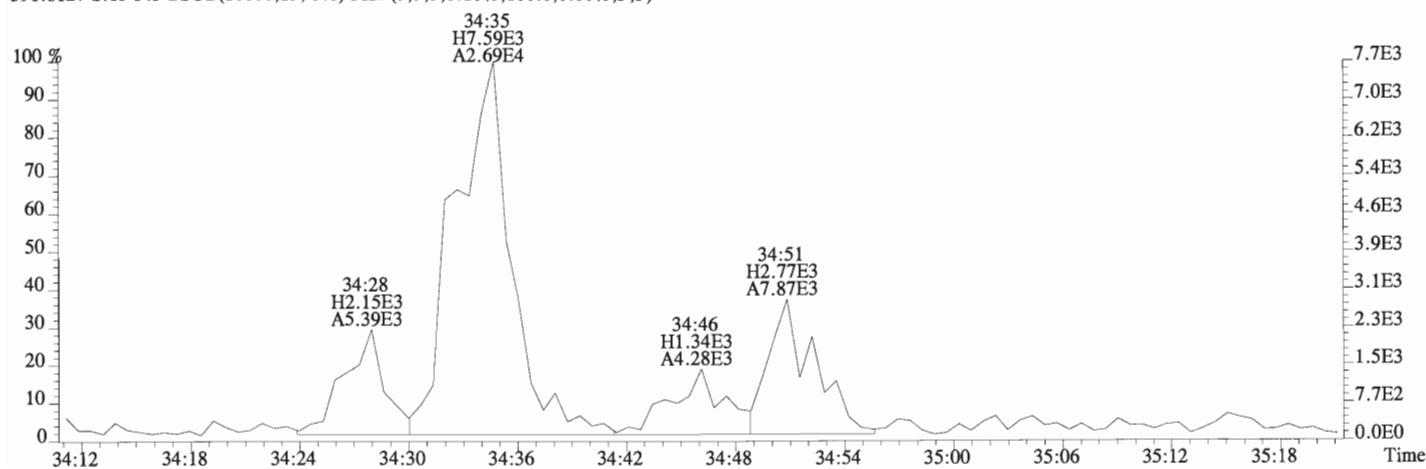
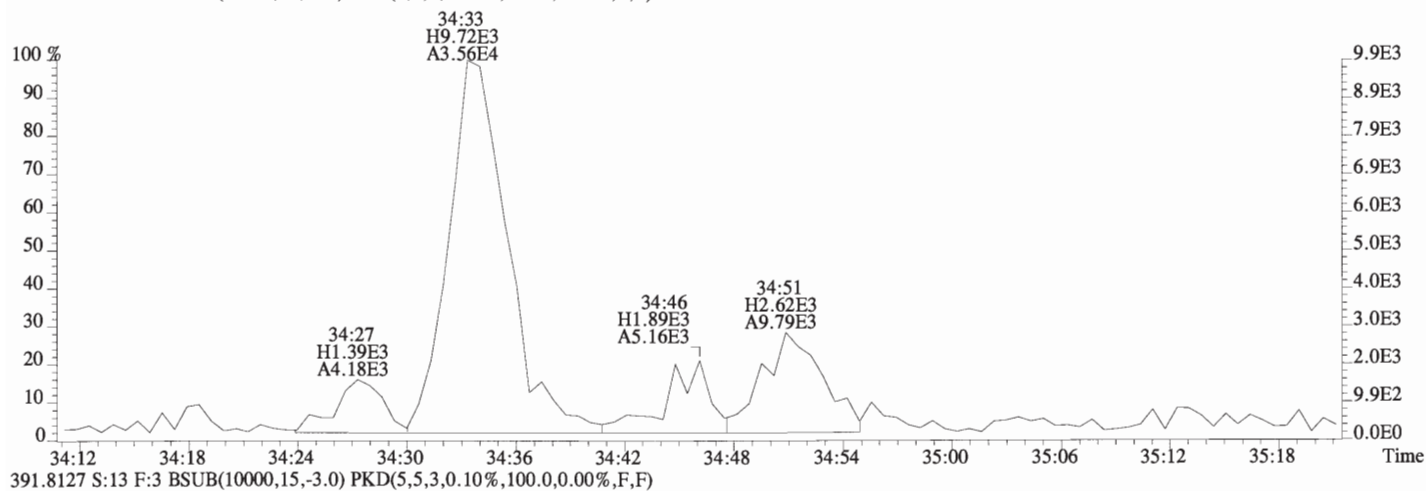
392.9760 S:13 F:3



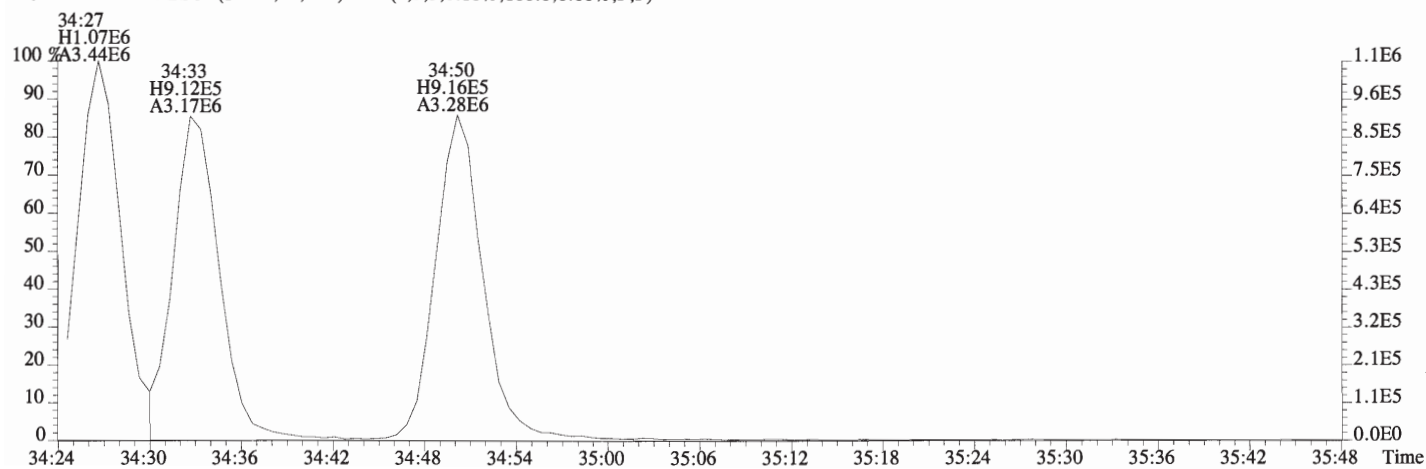
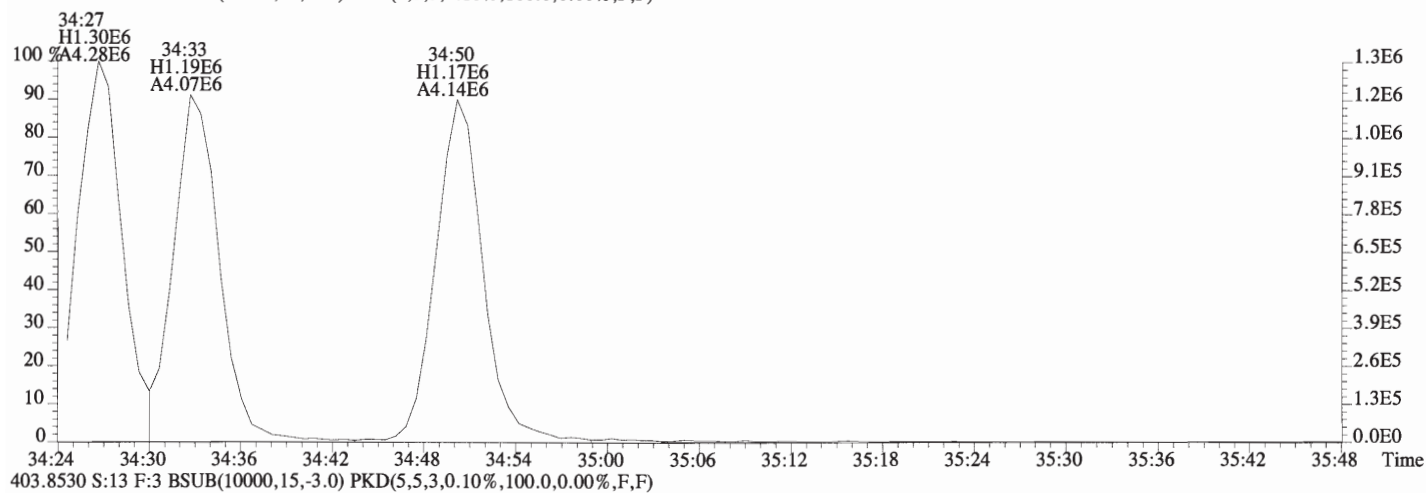
File:160712D1 #1-407 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 389.8156 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



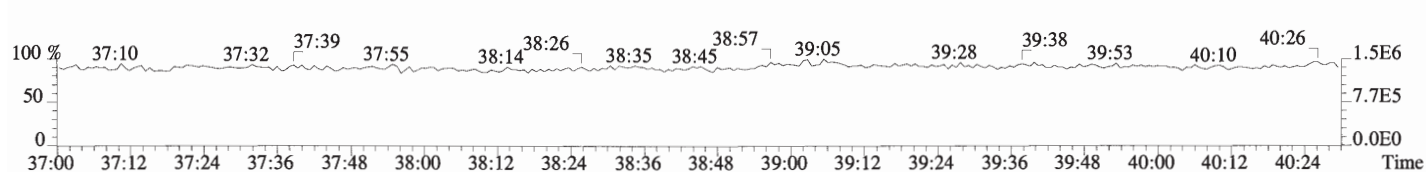
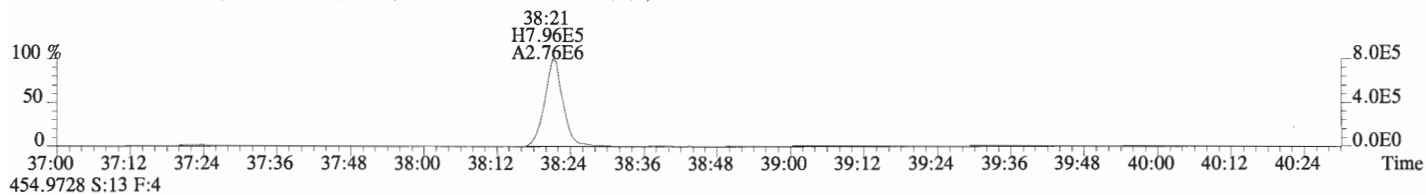
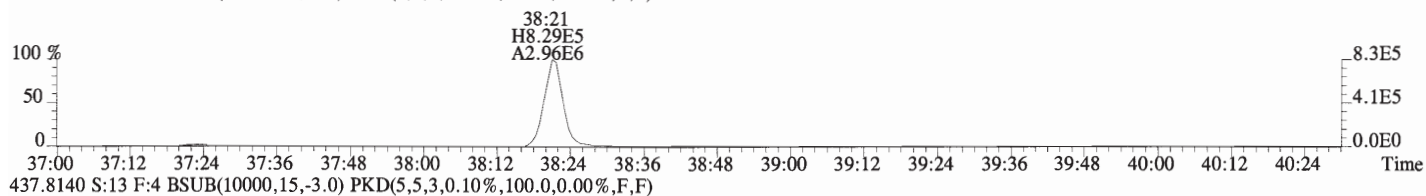
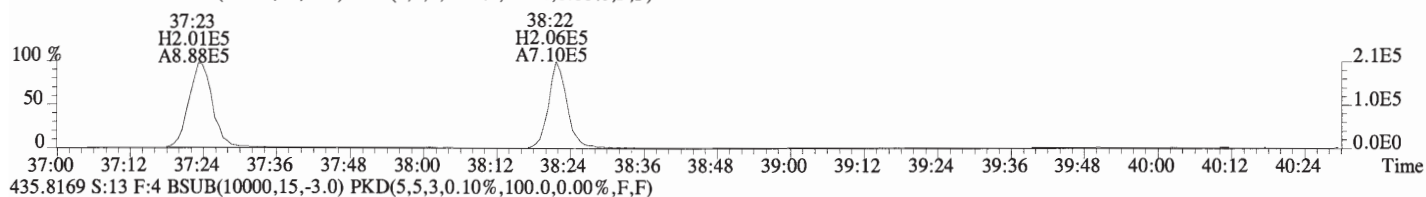
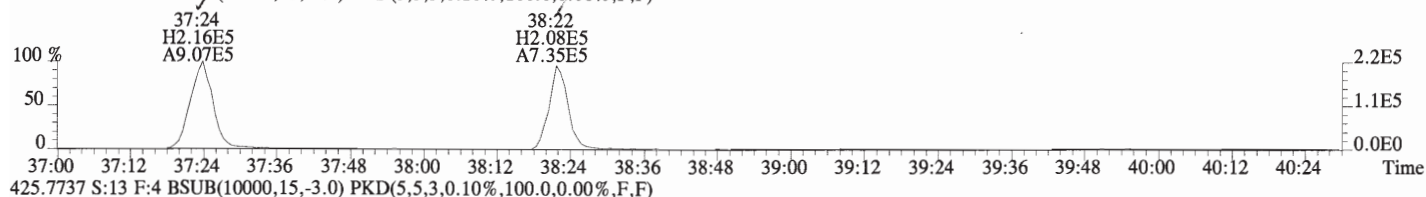
File:160712D1 #1-407 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
389.8156 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



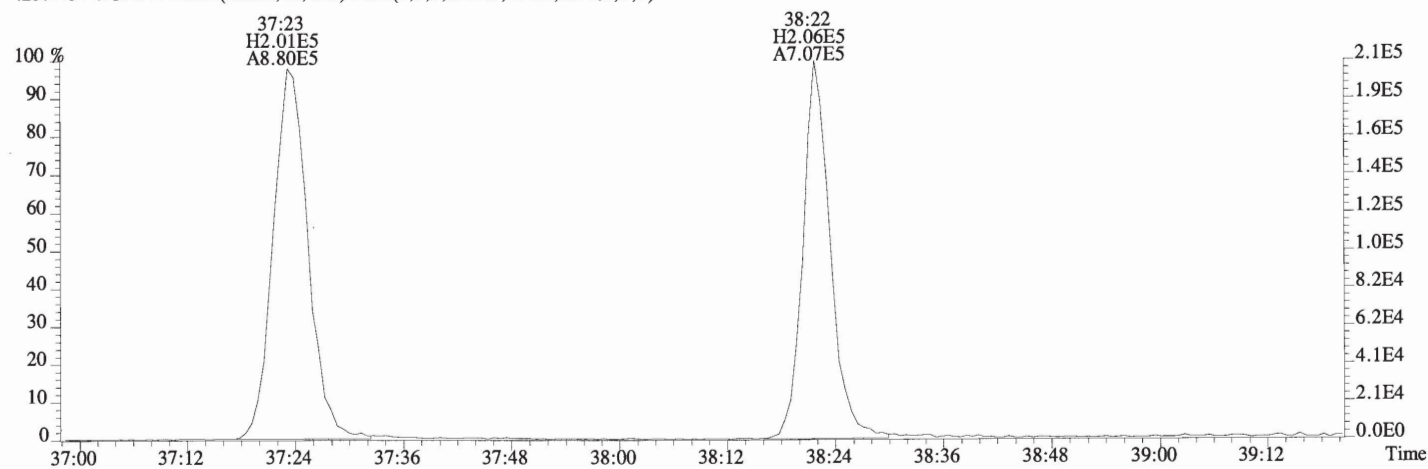
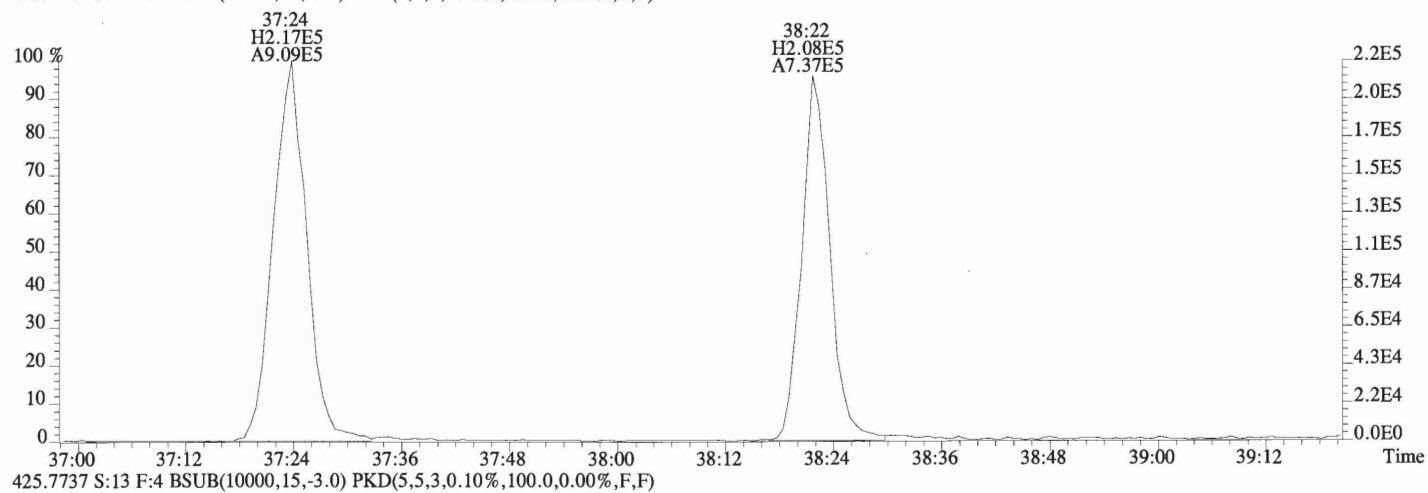
File:160712D1 #1-407 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 401.8559 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



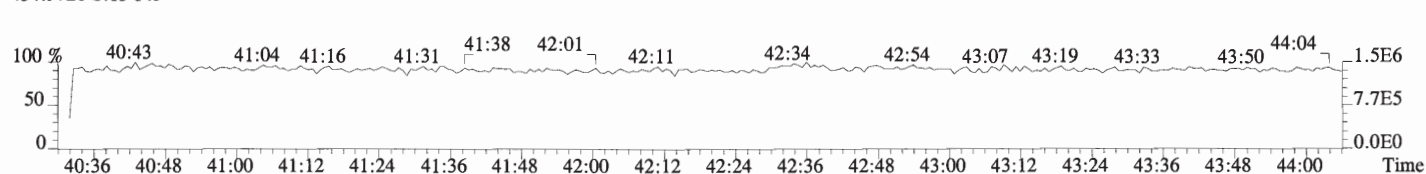
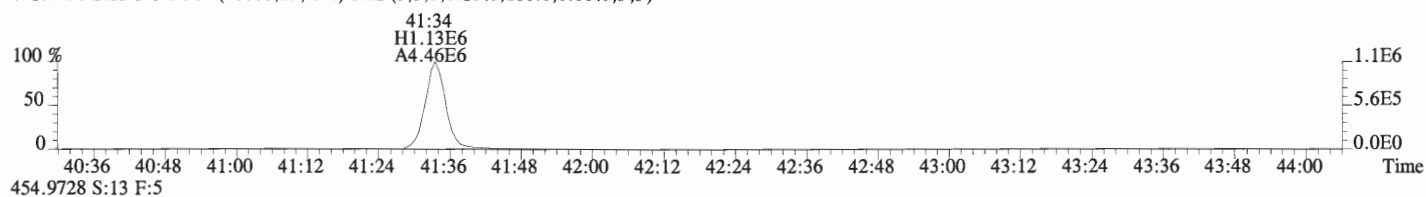
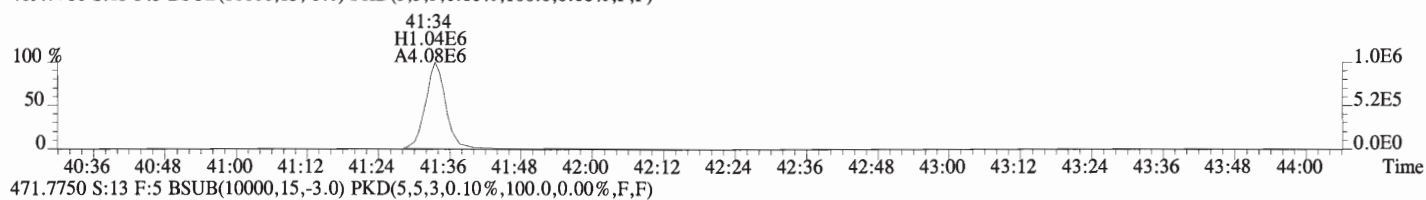
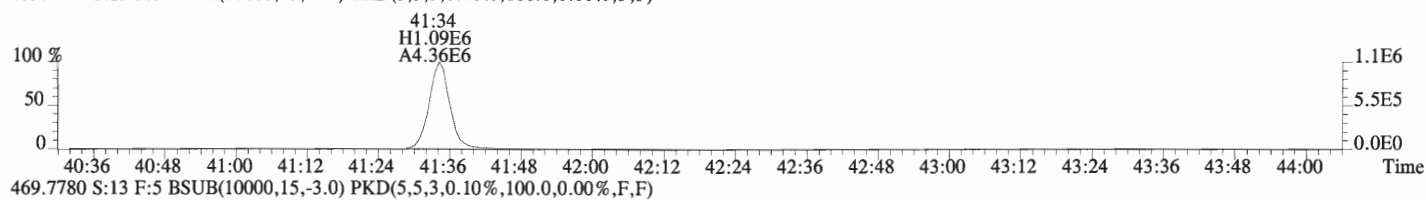
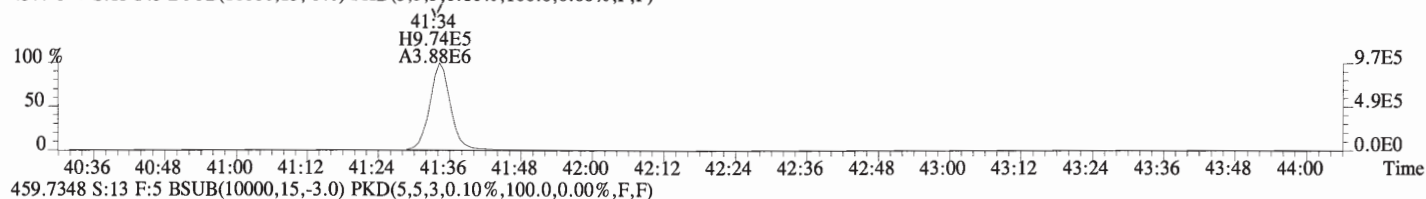
File:160712D1 #1-325 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
423.7767 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



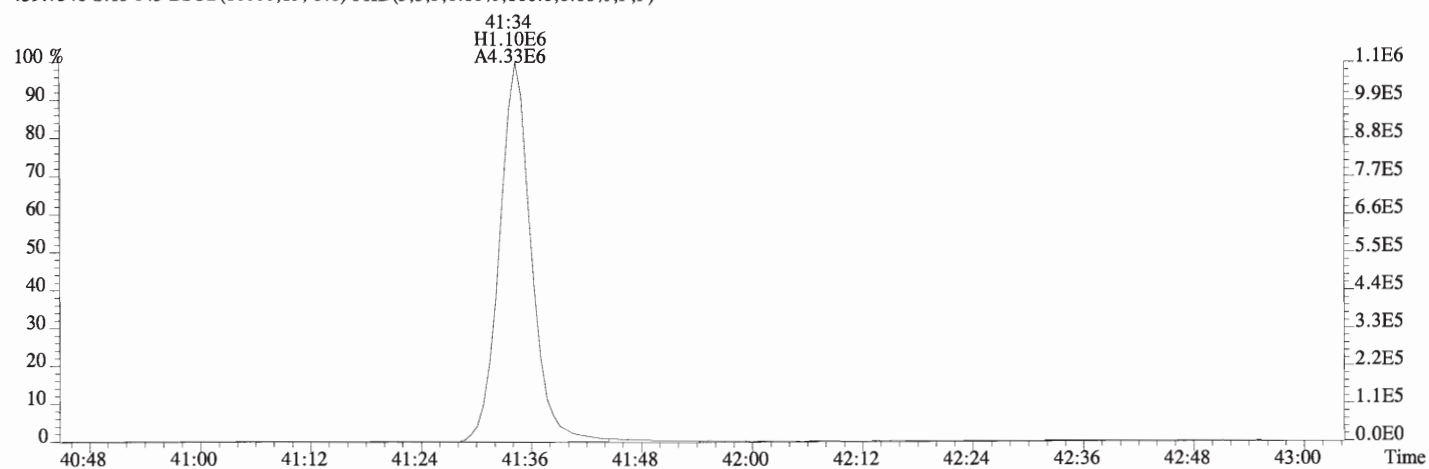
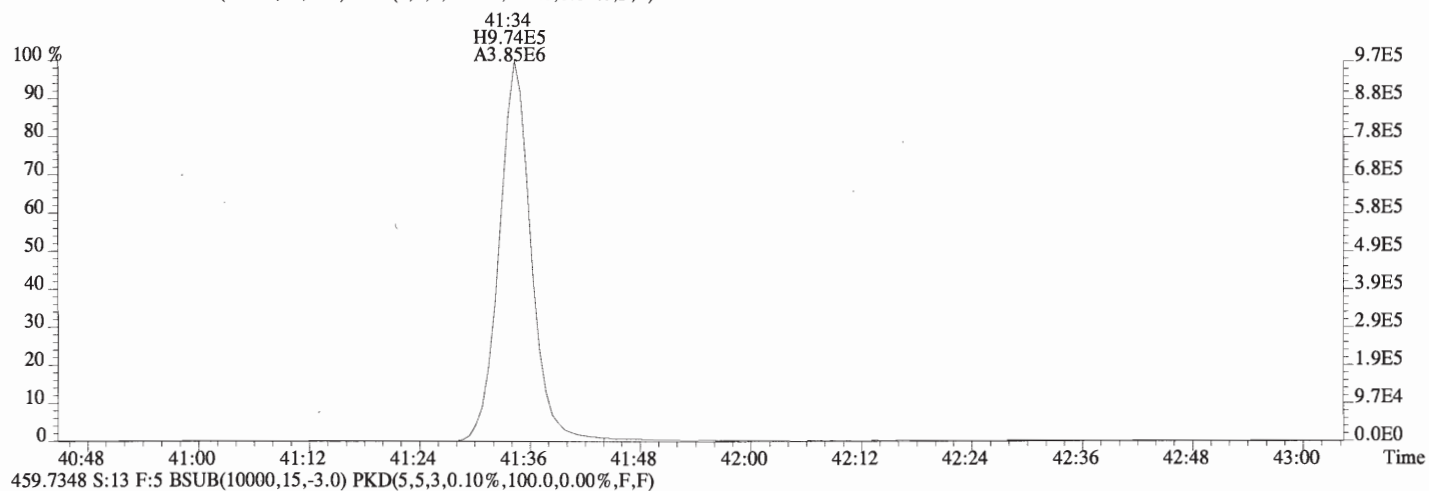
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 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 423.7767 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



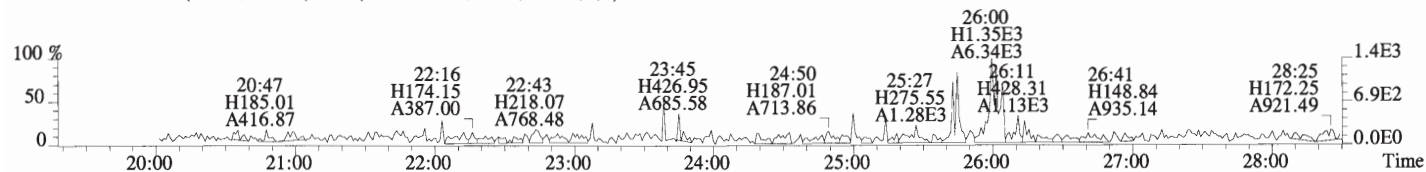
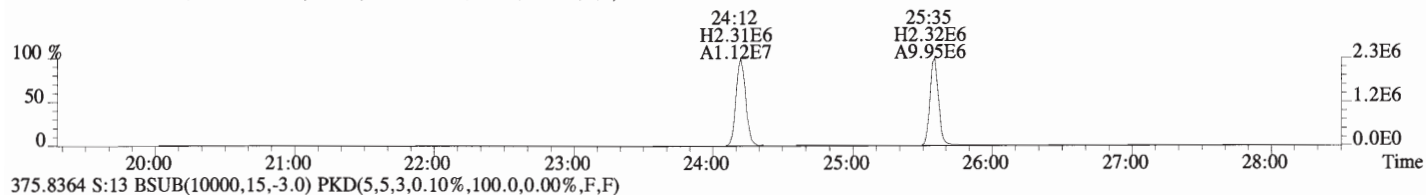
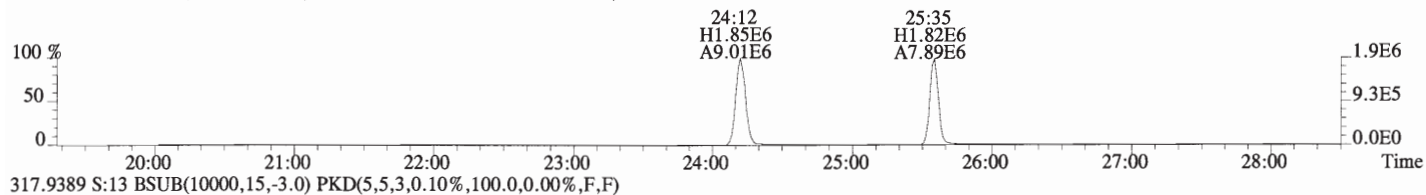
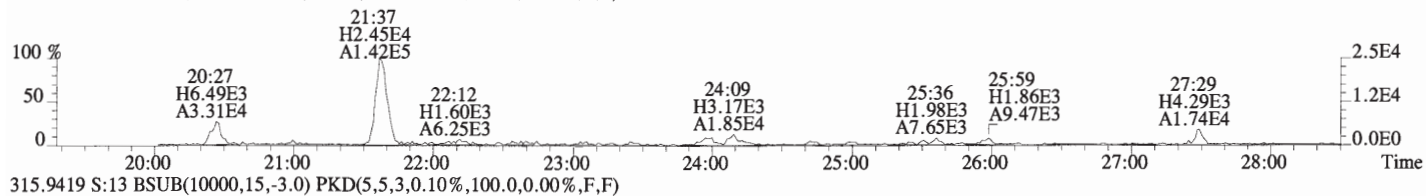
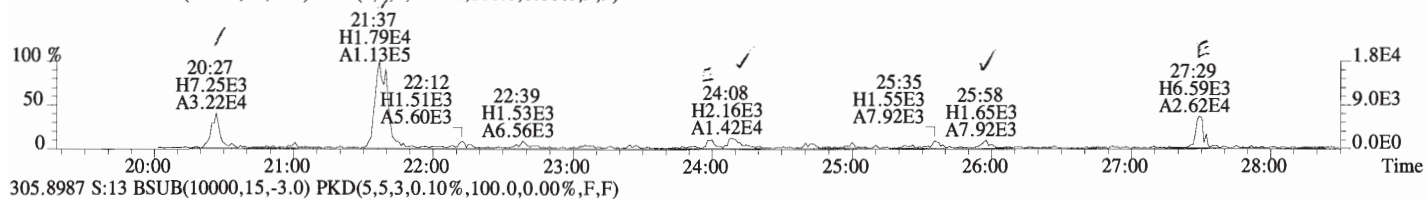
File:160712D1 #1-389 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
457.7377 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



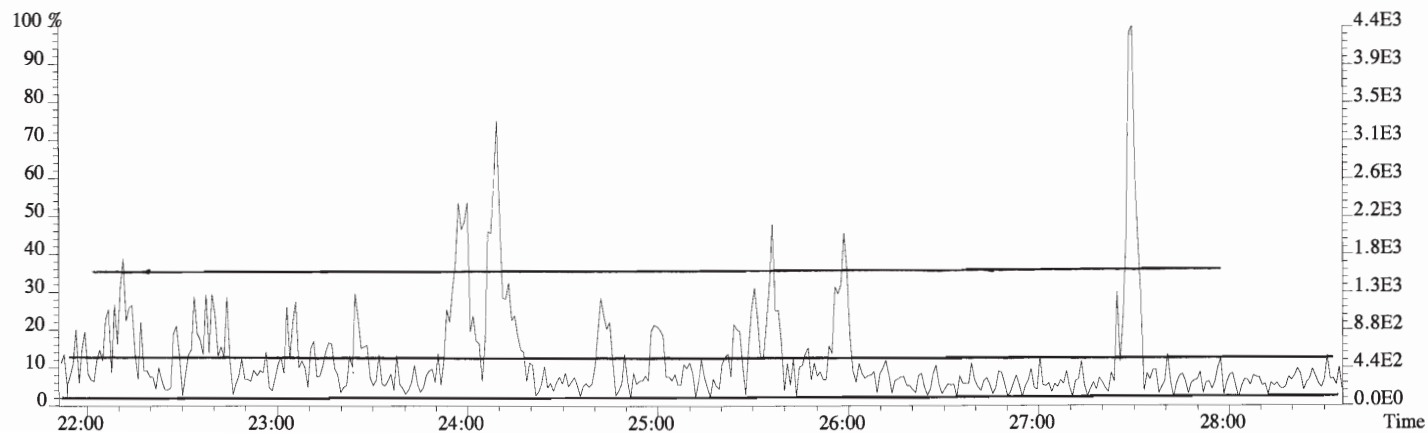
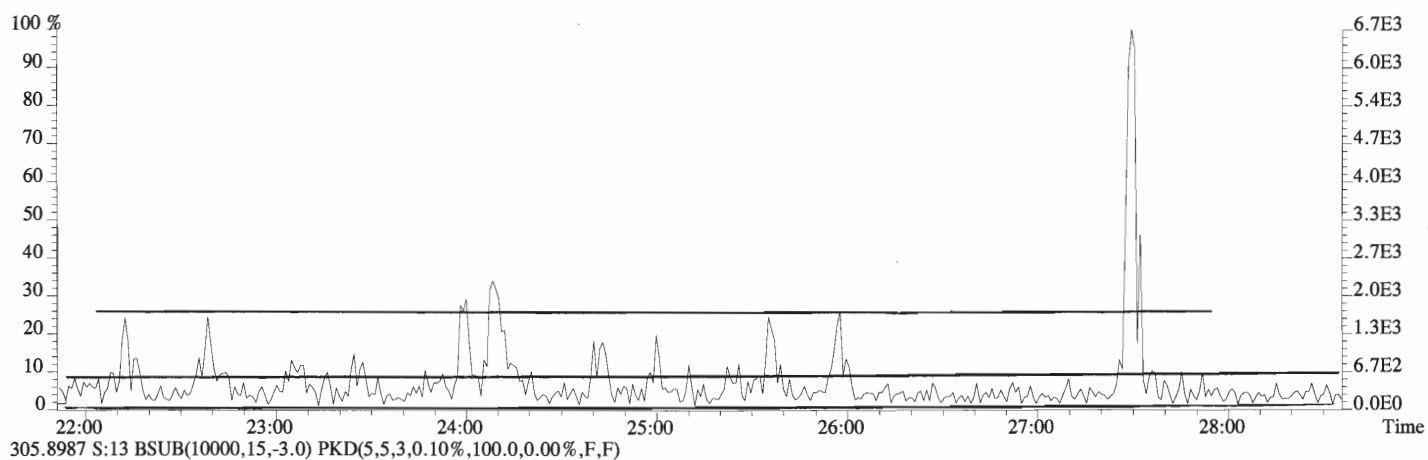
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Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
457.7377 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



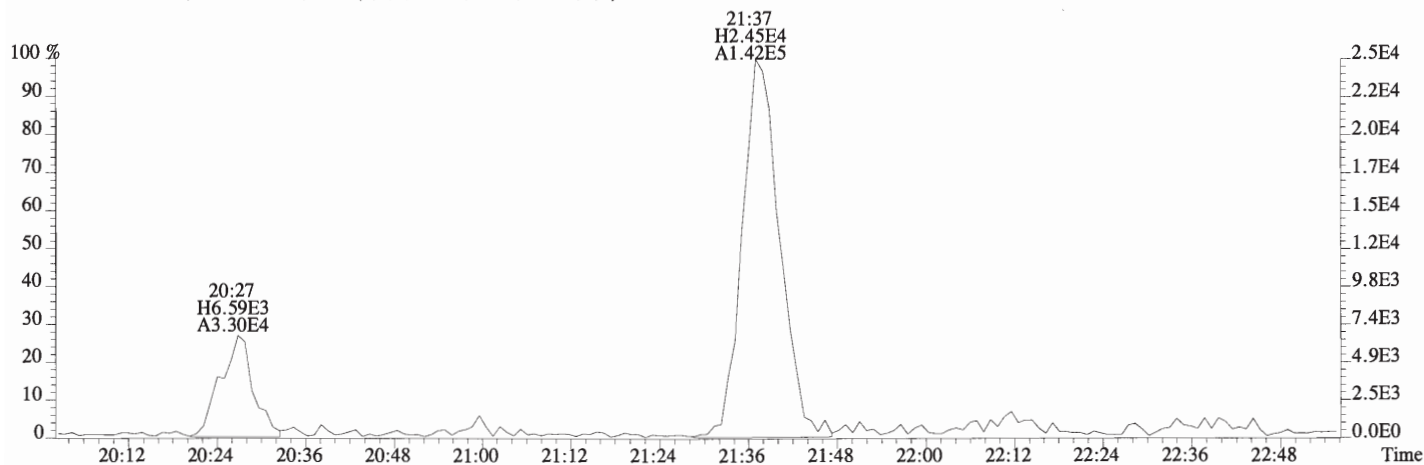
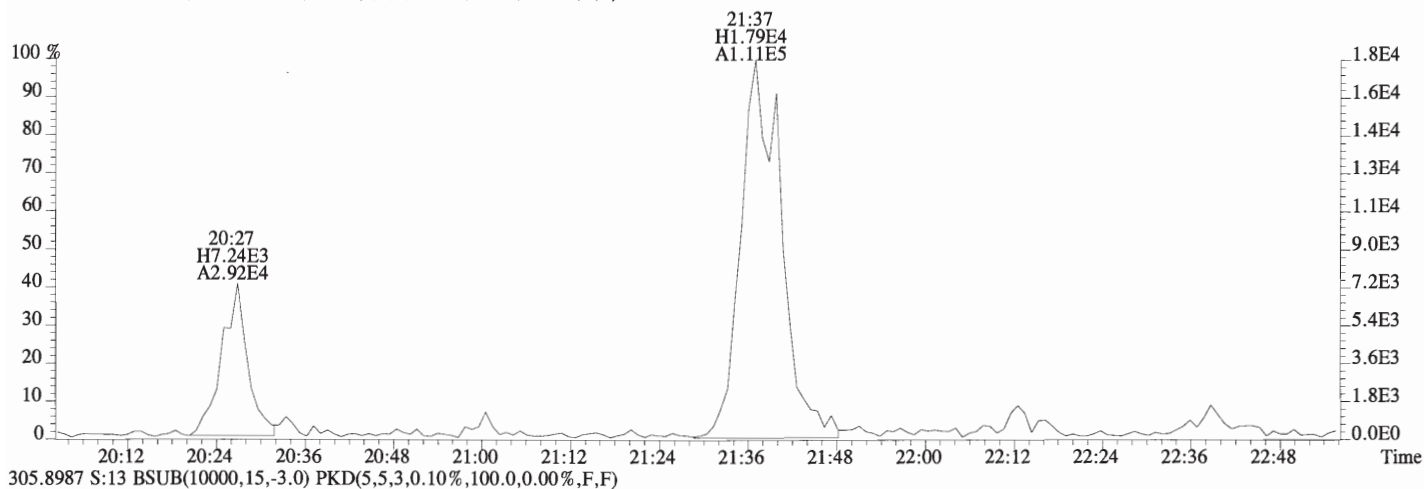
File:160712D1 #1-551 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



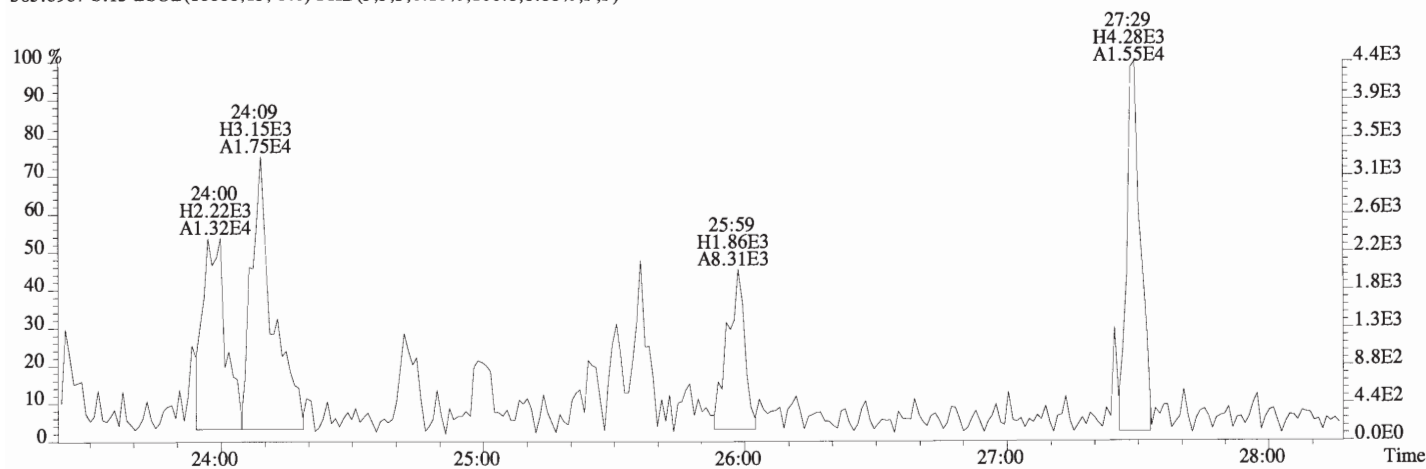
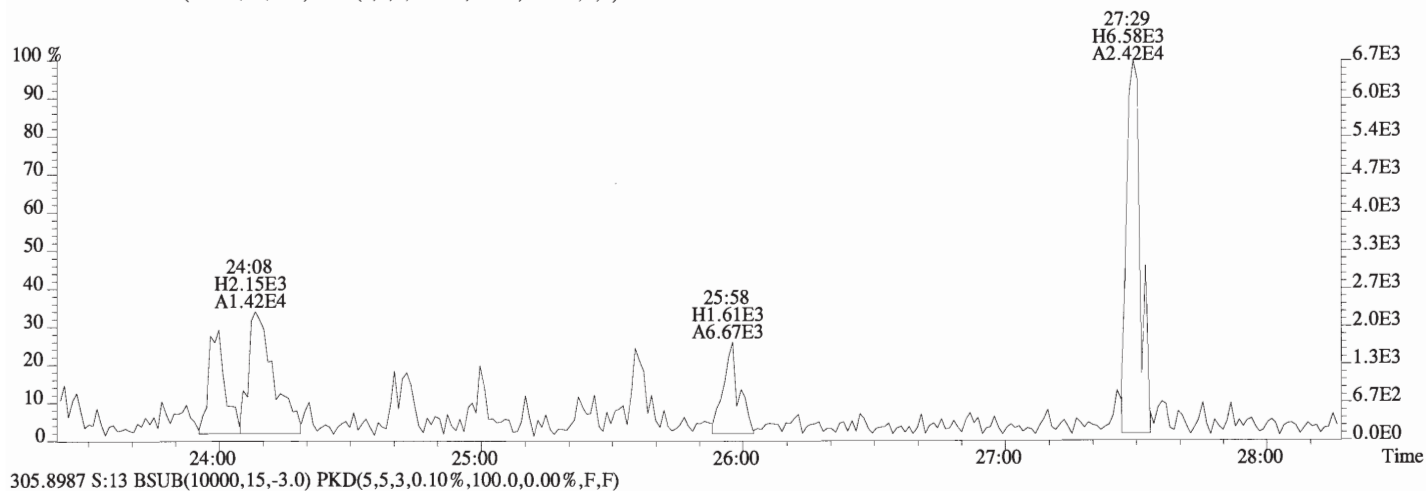
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Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



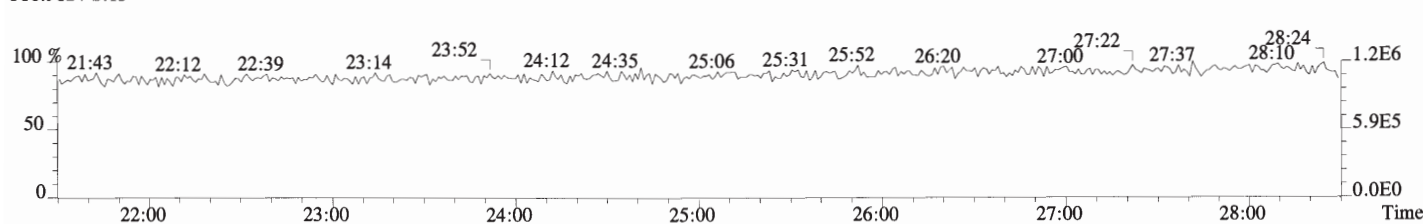
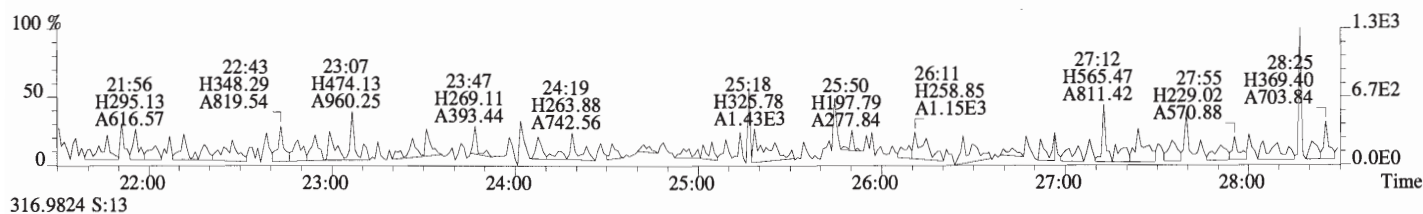
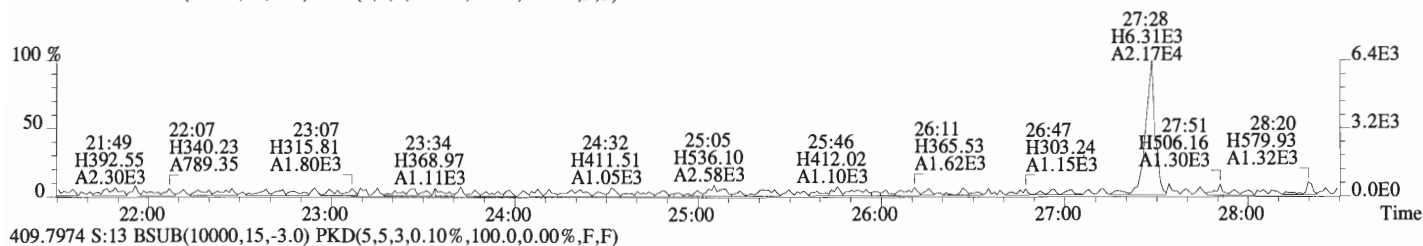
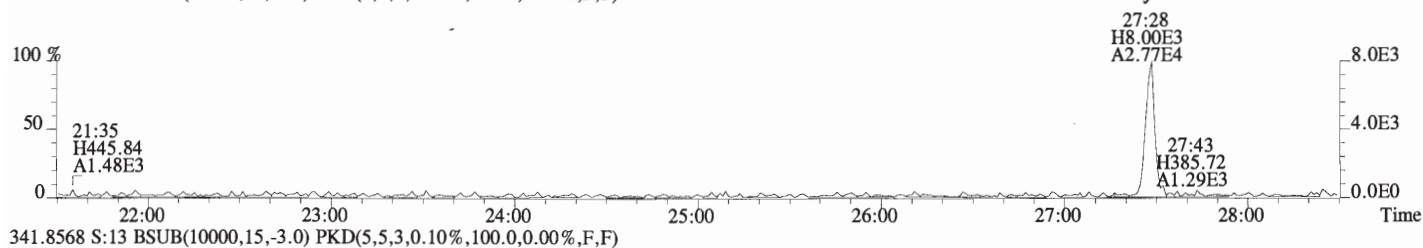
File:160712D1 #1-551 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



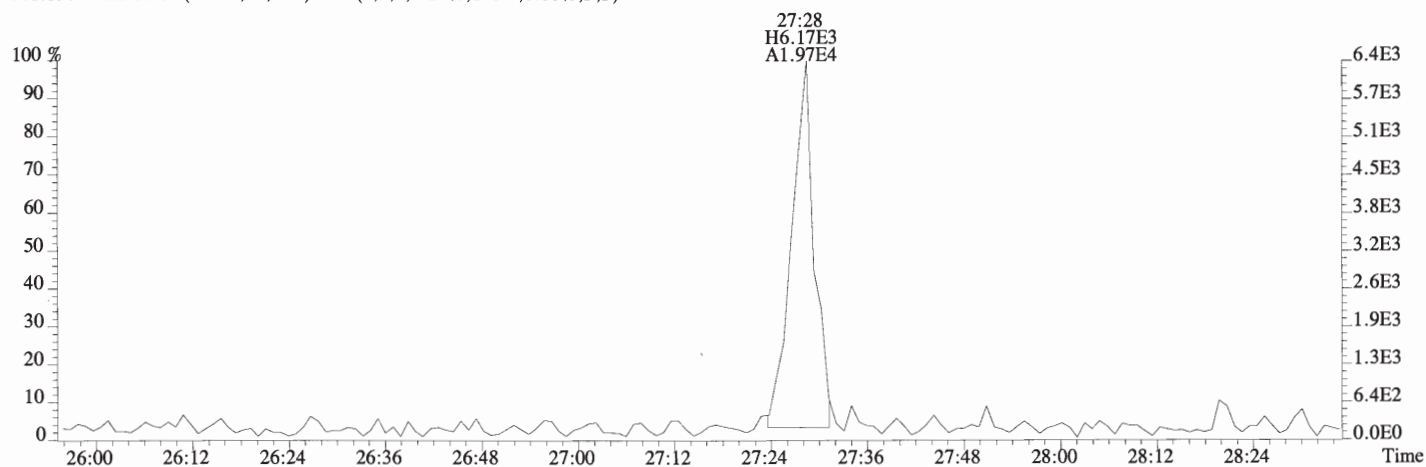
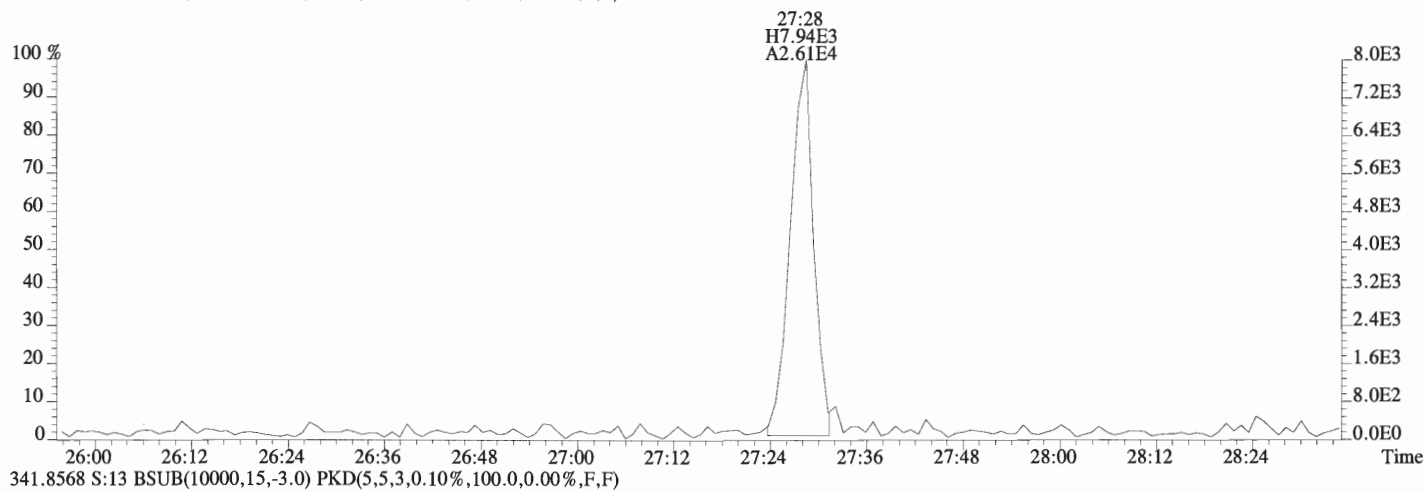
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 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 303.9016 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



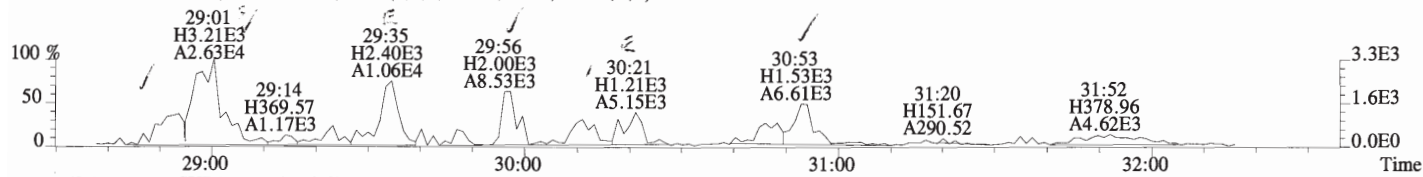
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 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 339.8597 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



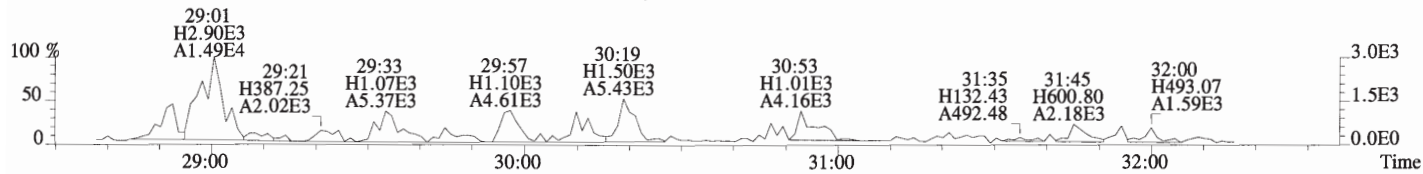
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Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
339.8597 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



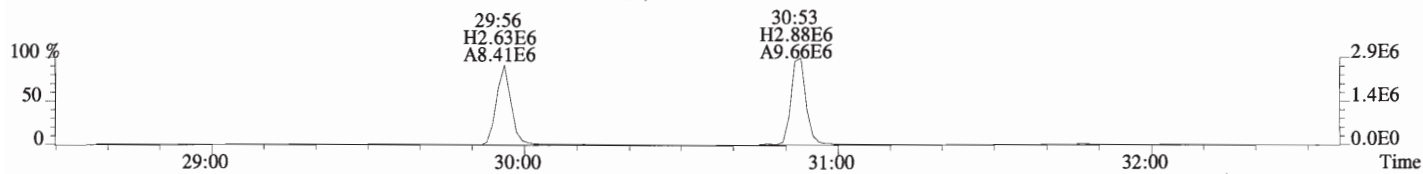
File:160712D1 #1-193 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



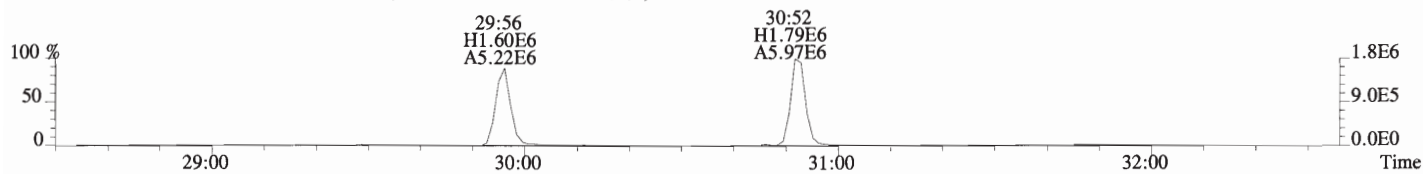
341.8568 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



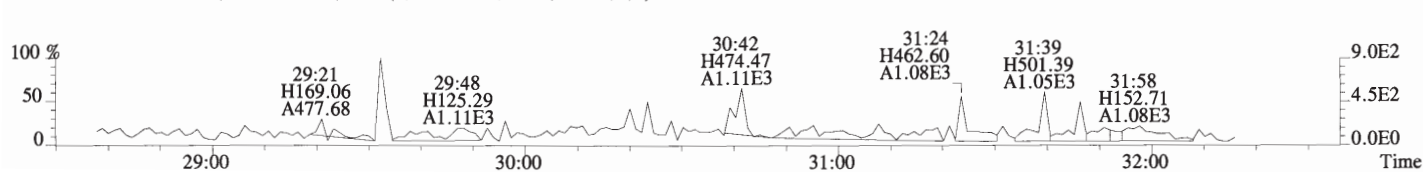
351.9000 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



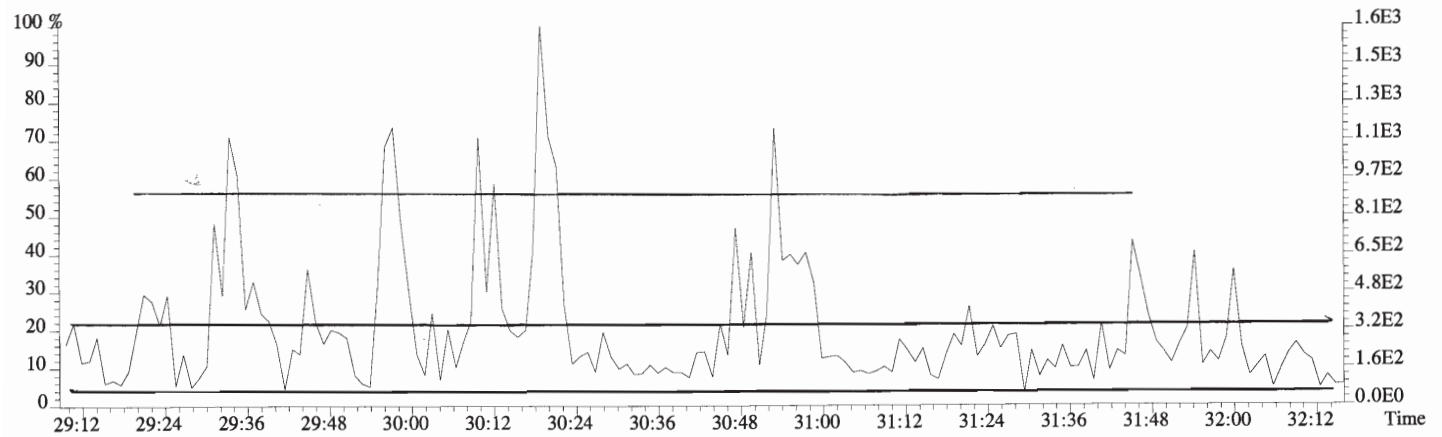
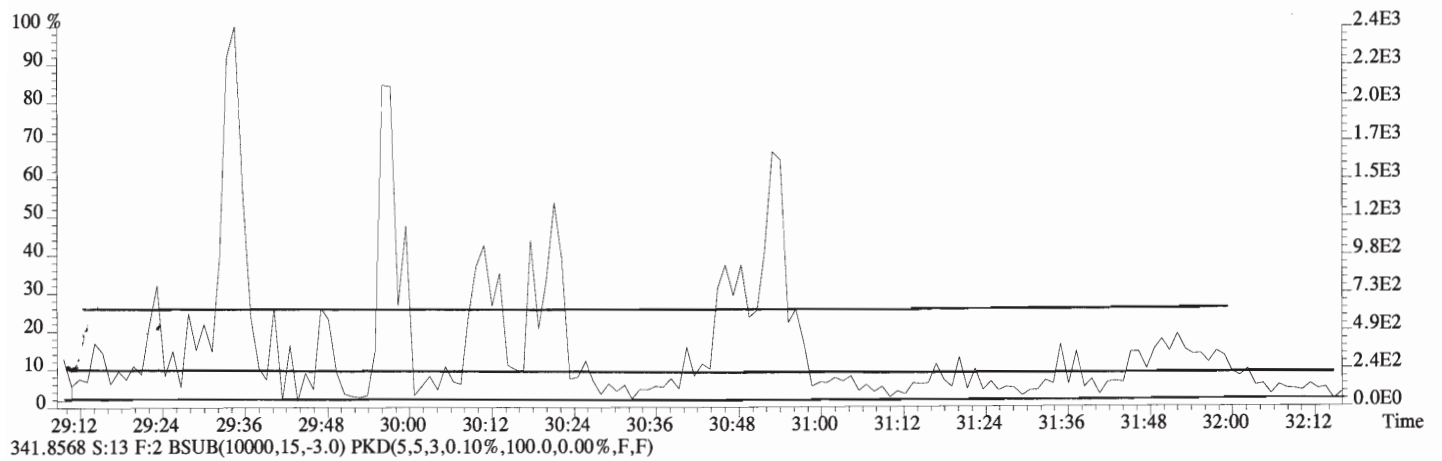
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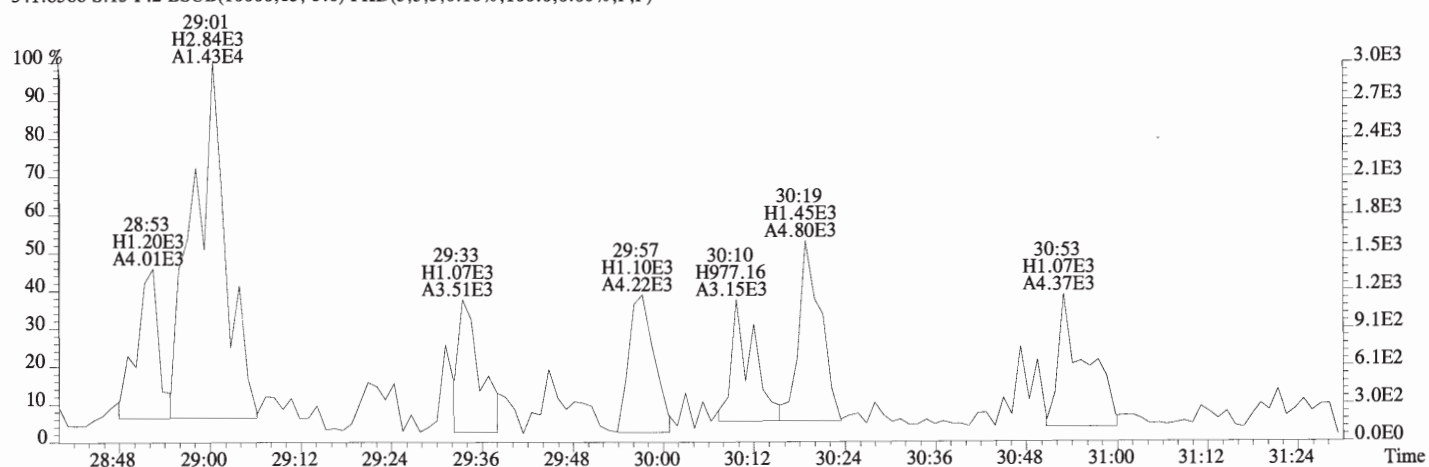
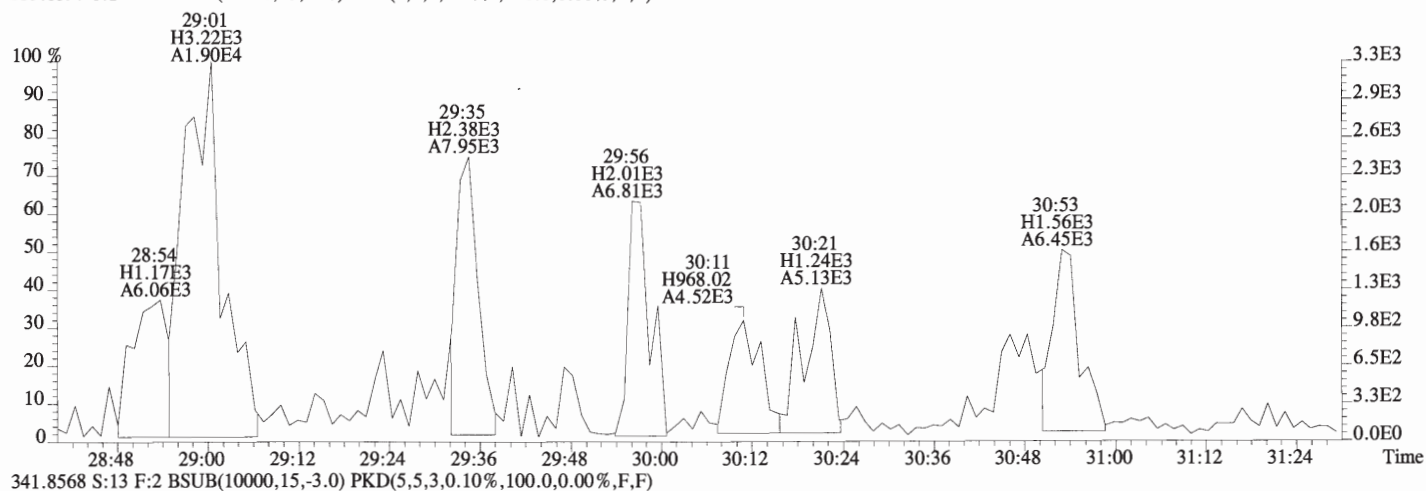
409.7974 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



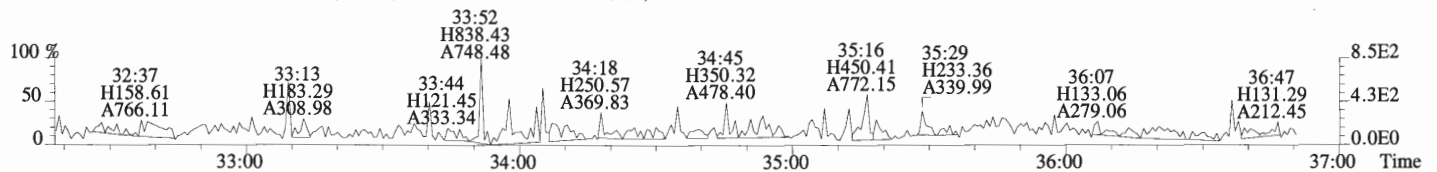
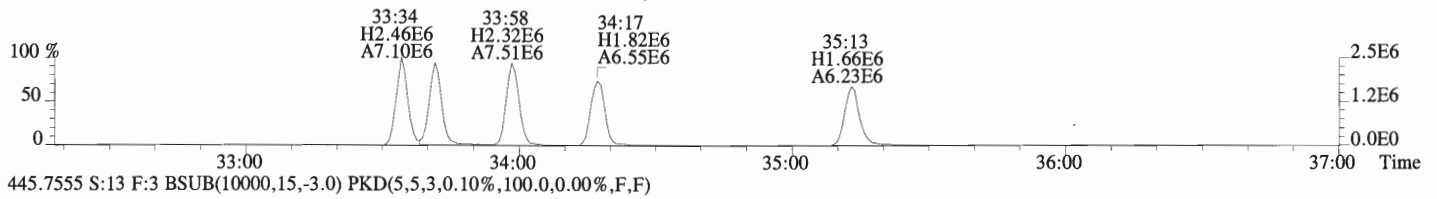
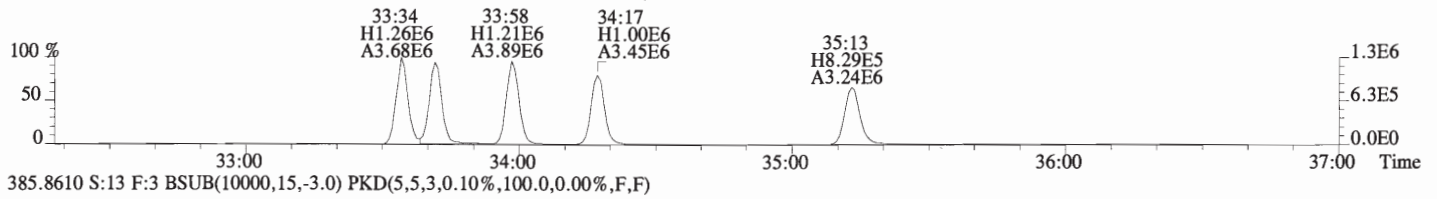
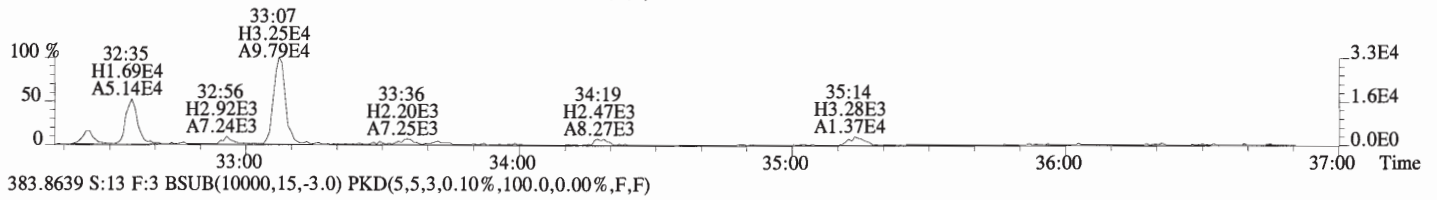
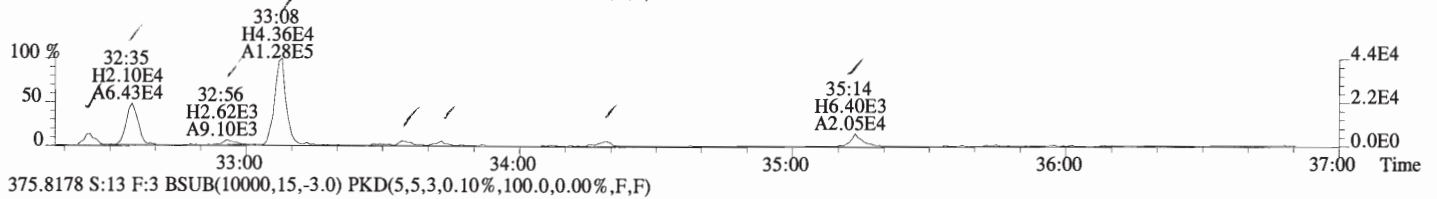
File:160712D1 #1-193 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
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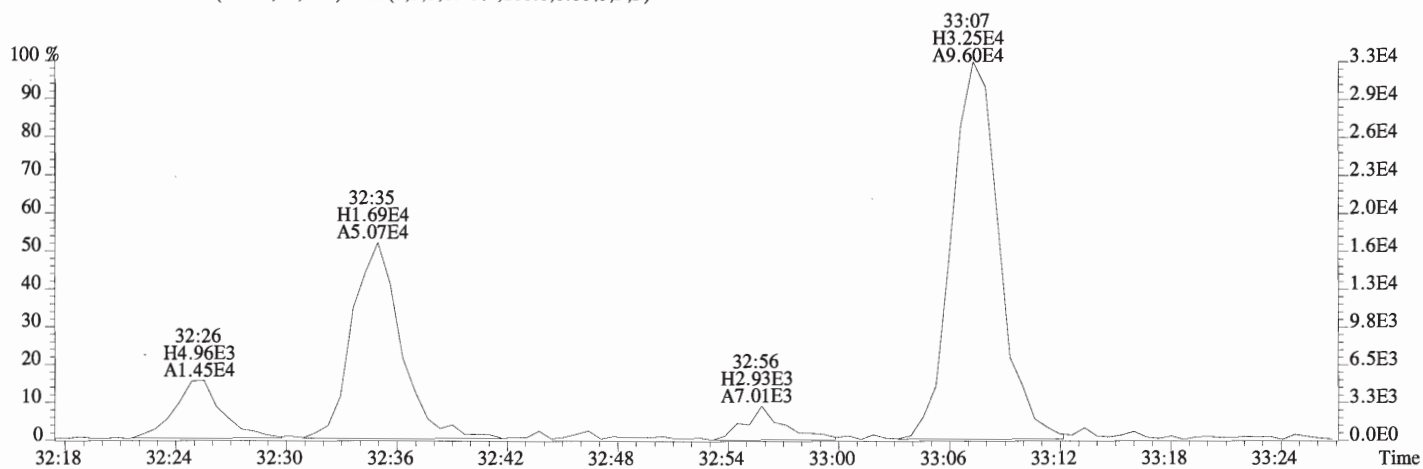
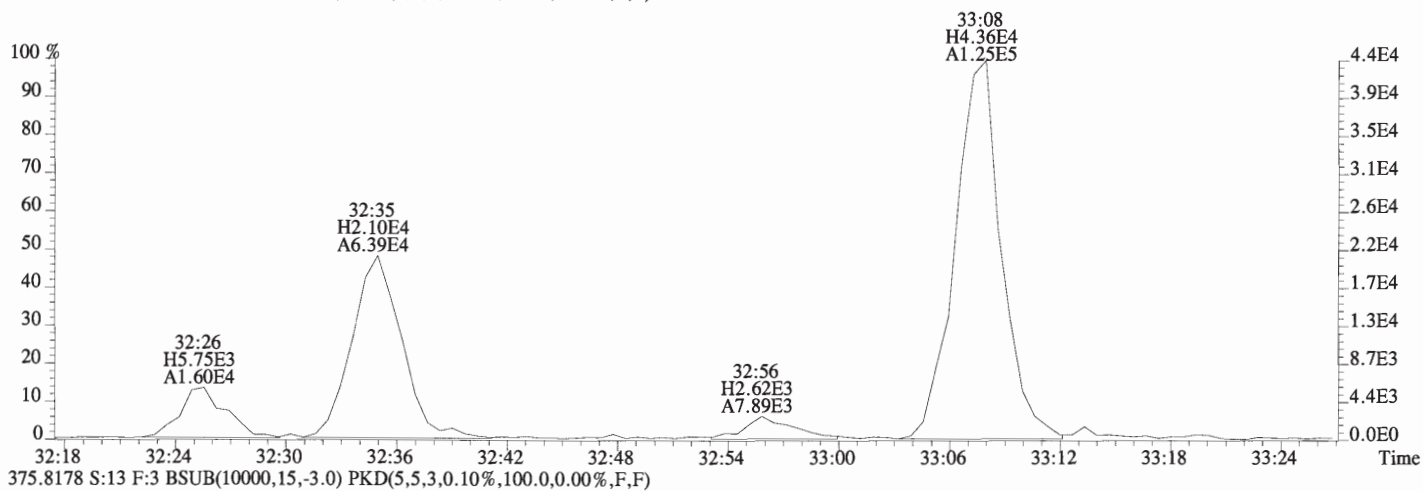
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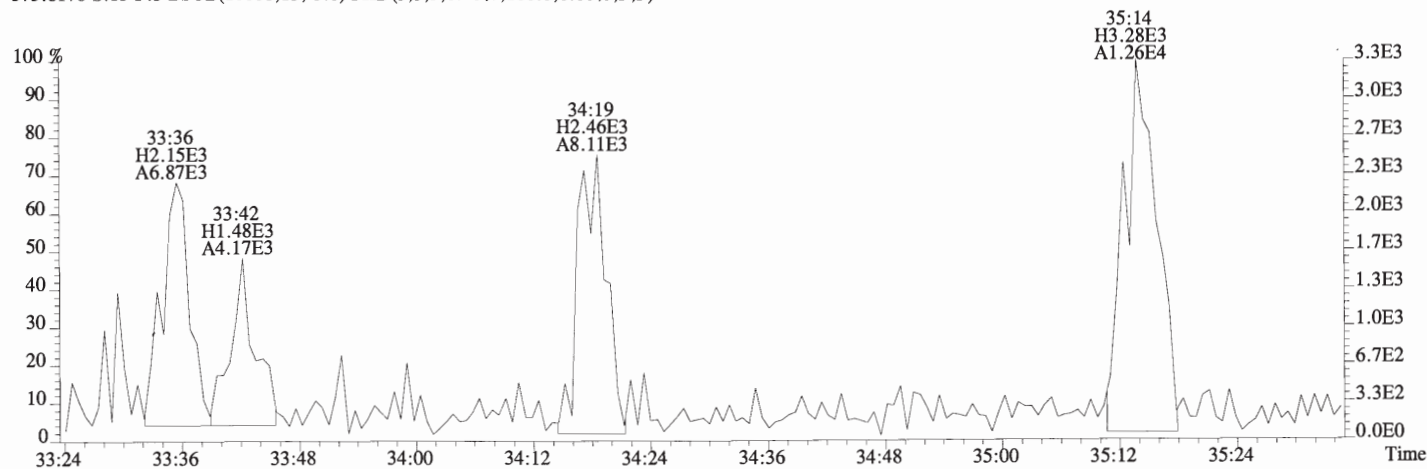
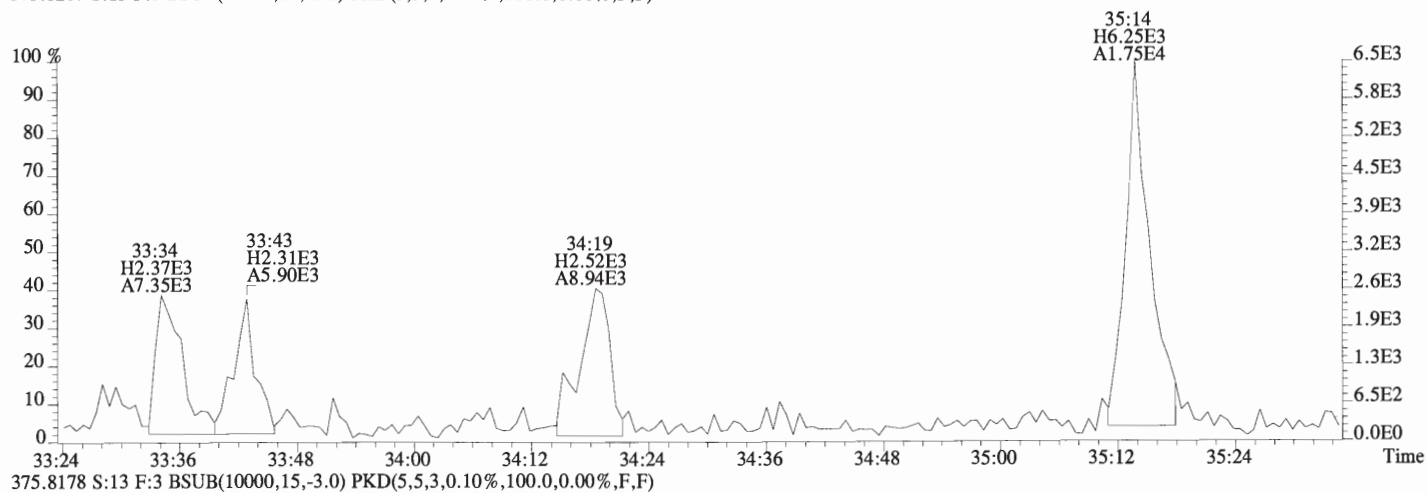
File:160712D1 #1-407 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



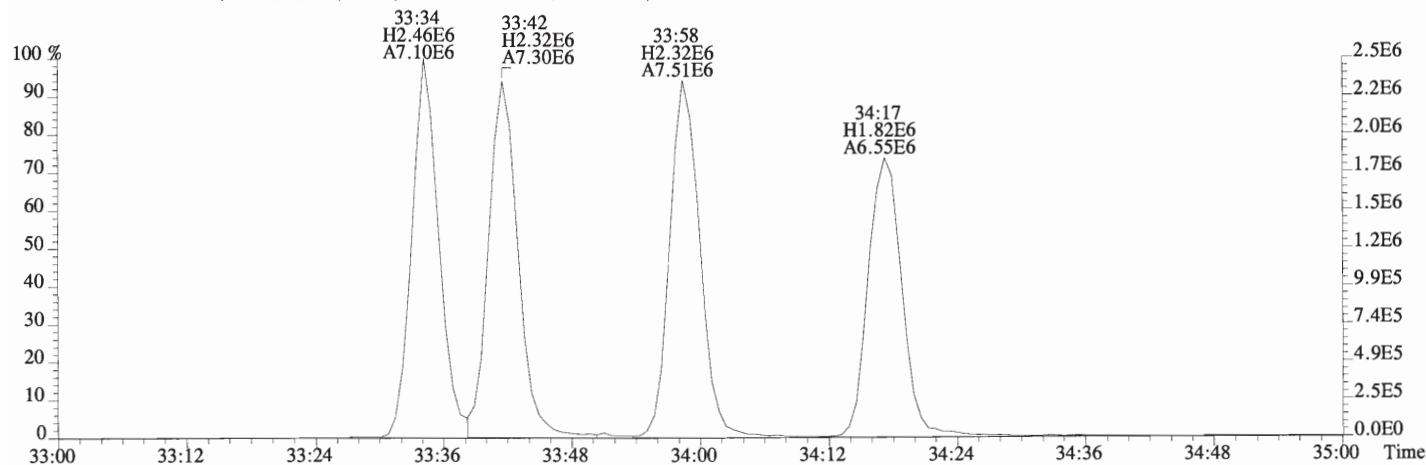
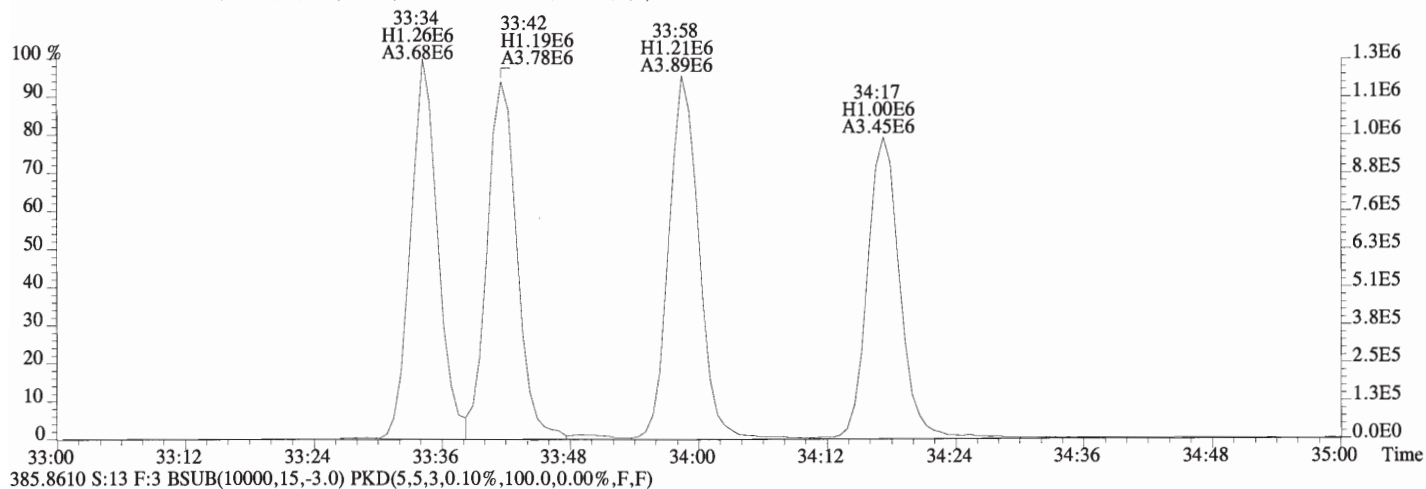
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 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



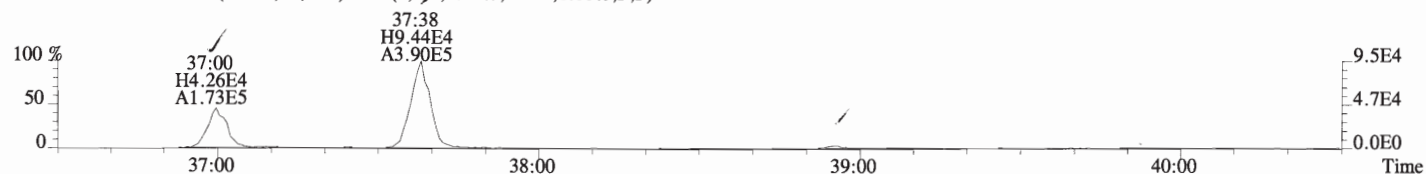
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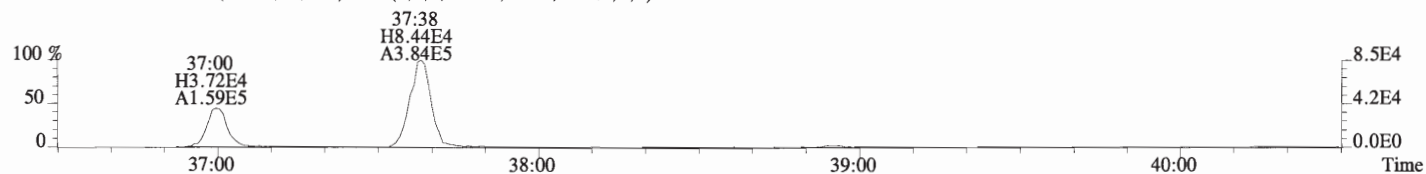
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 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
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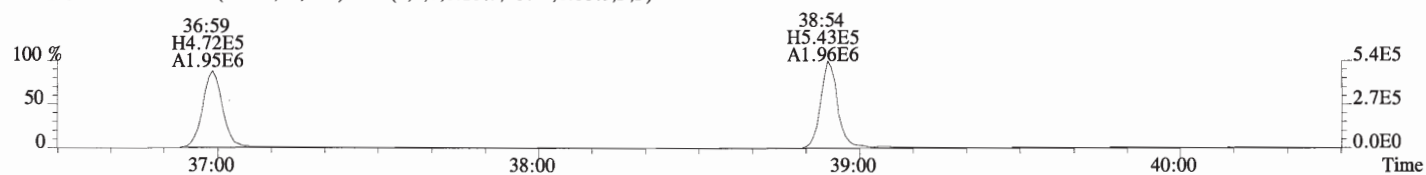
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 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 407.7818 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



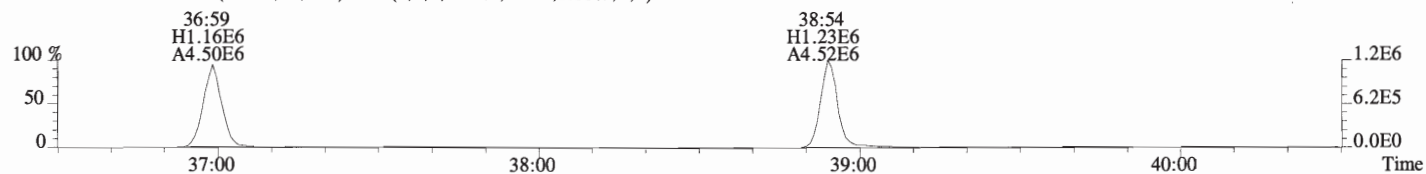
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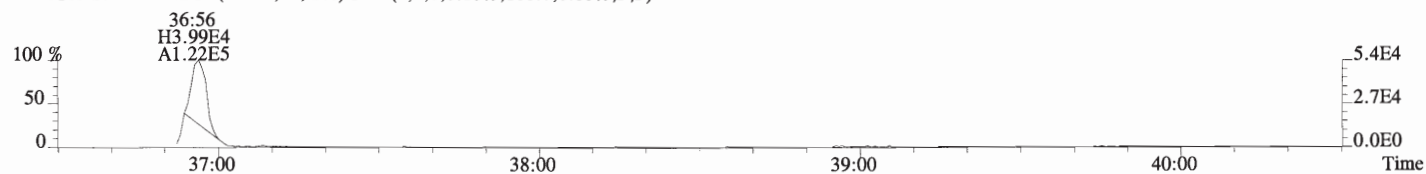
417.8253 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



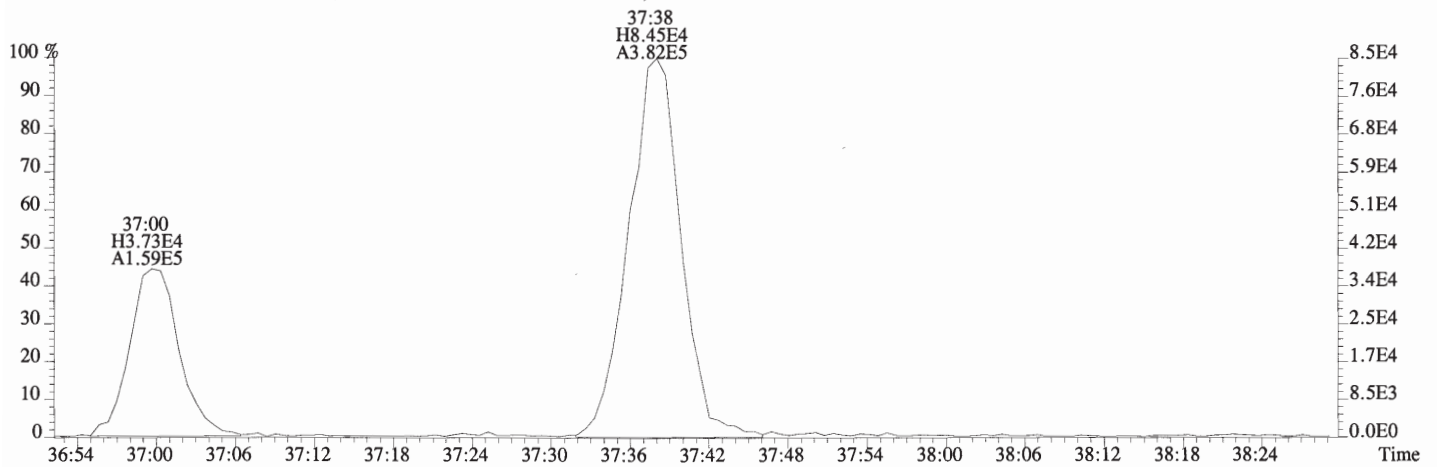
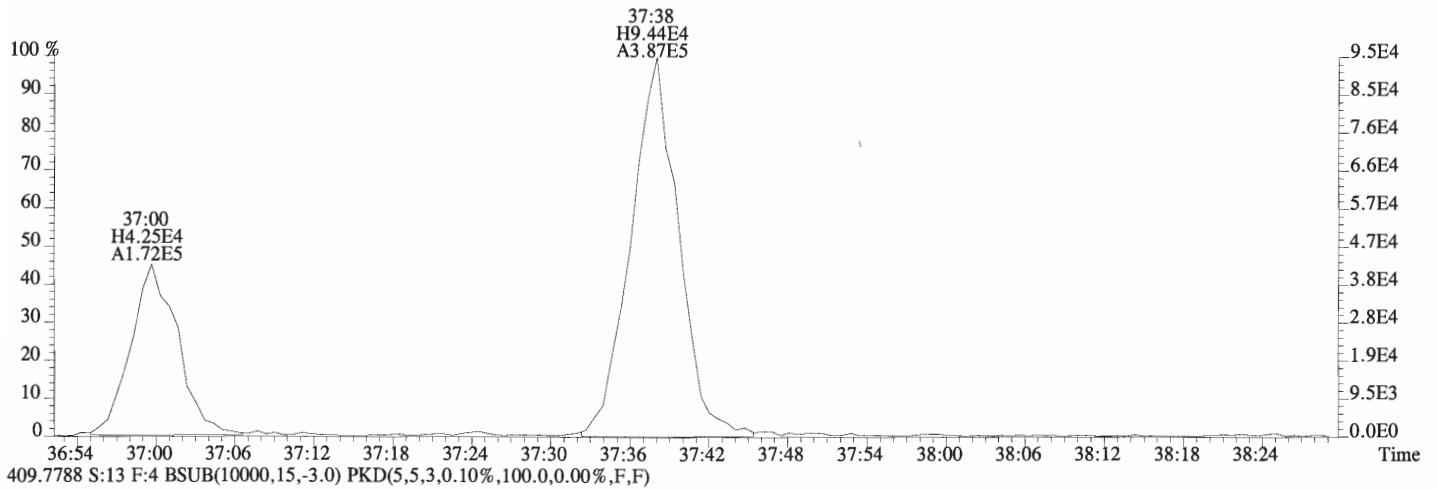
419.8220 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



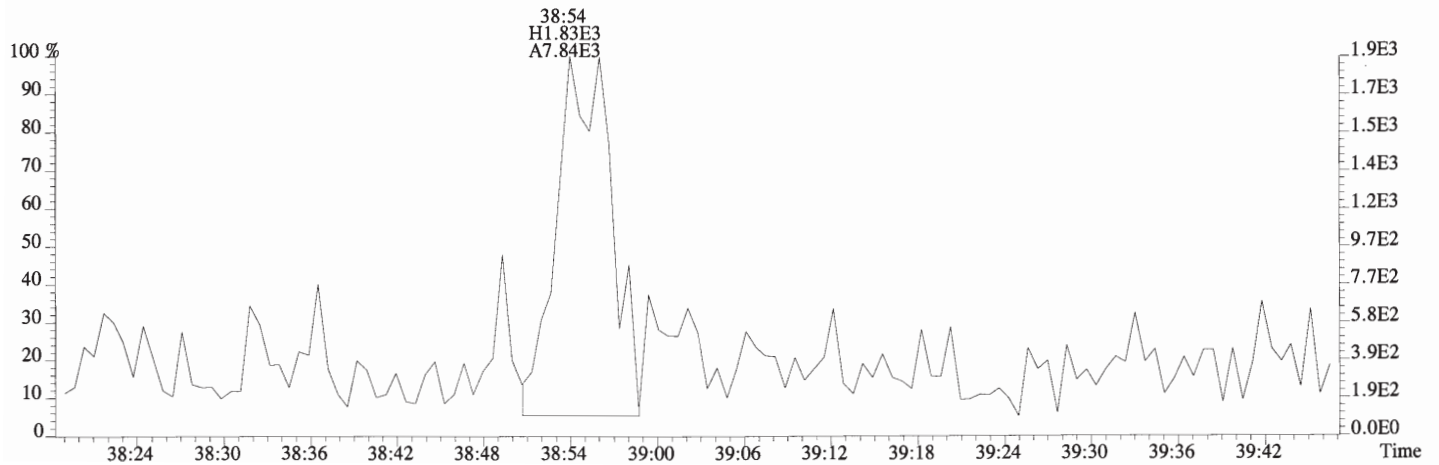
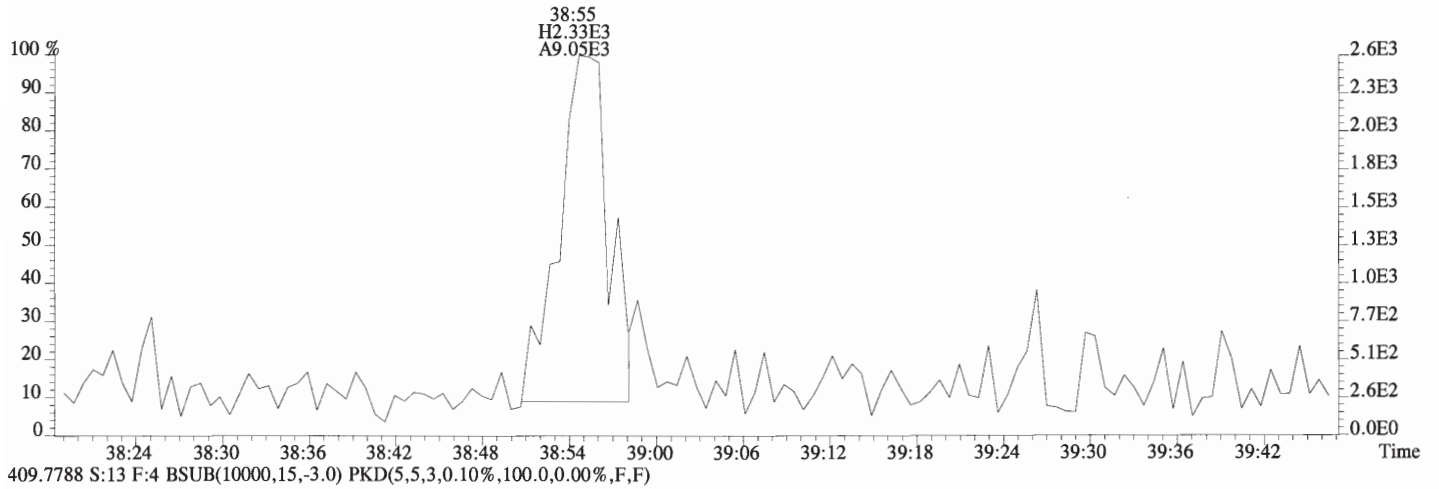
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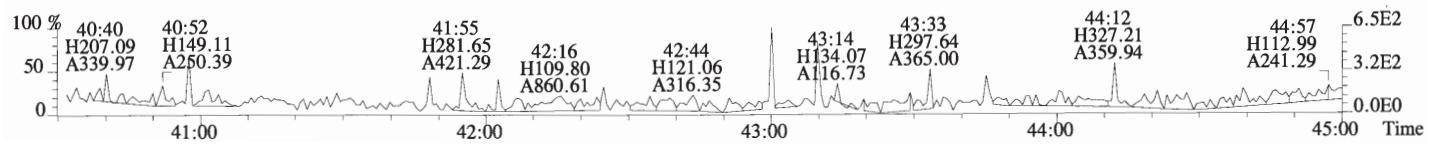
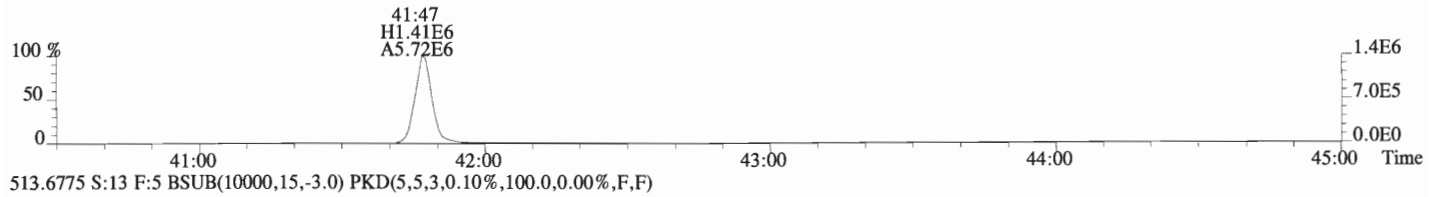
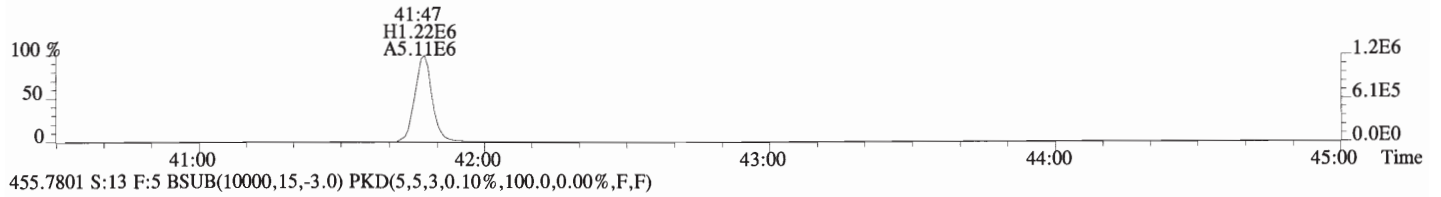
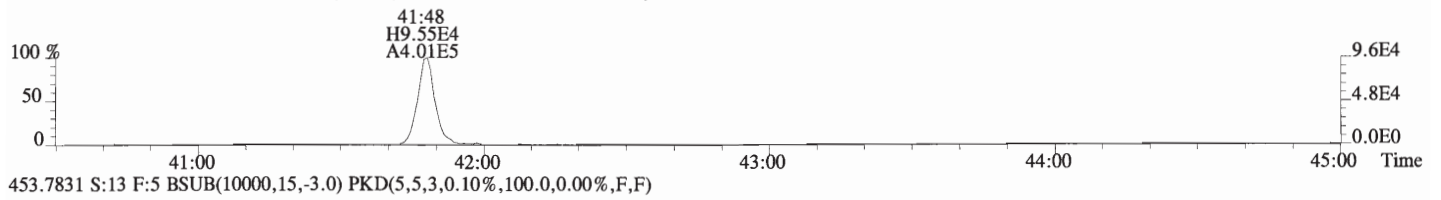
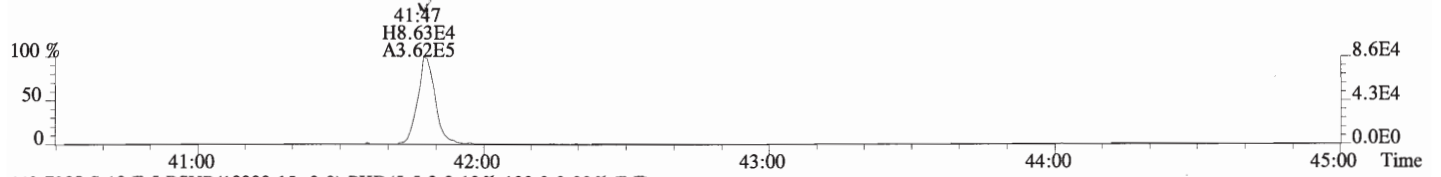
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Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
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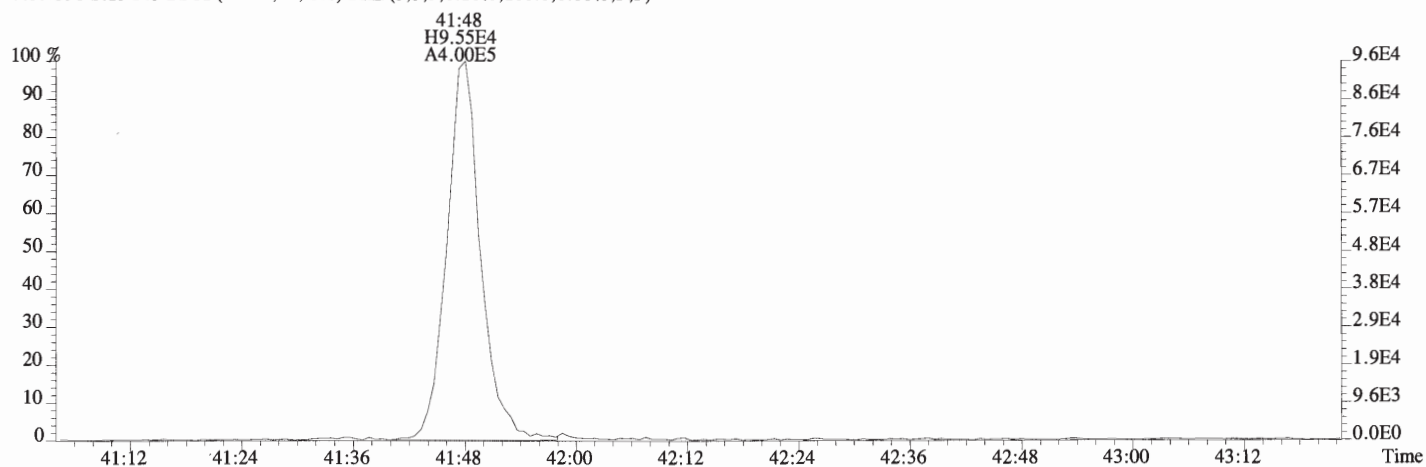
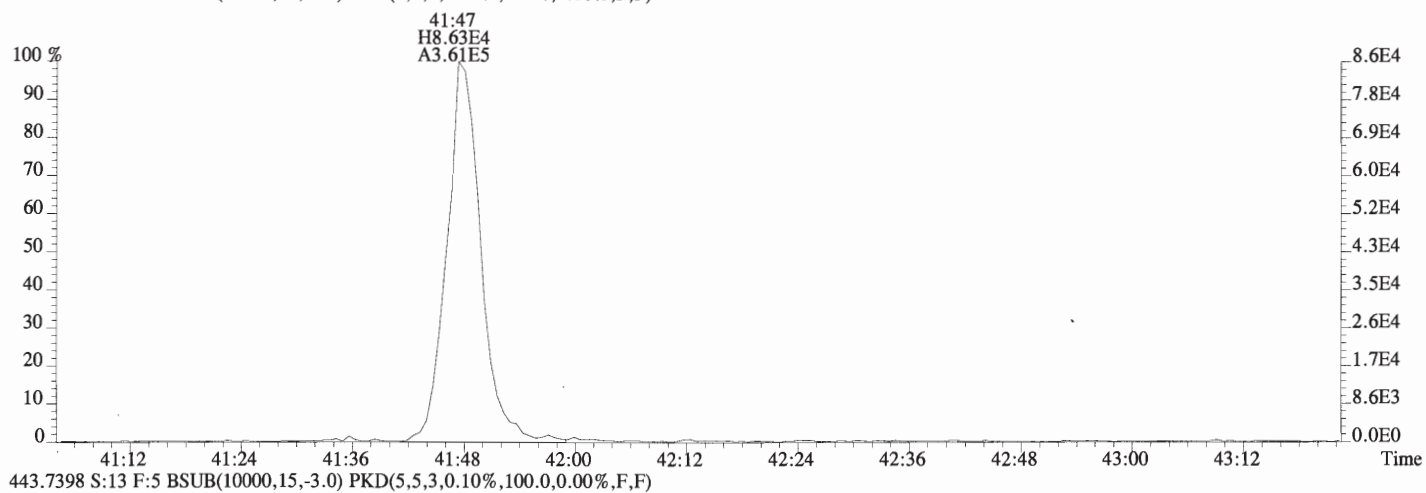
File:160712D1 #1-325 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
407.7818 S:13 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160712D1 #1-389 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
 441.7428 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160712D1 #1-389 Acq:13-JUL-2016 02:03:11 GC EI+ Voltage SIR Autospec-UltimaE
Sample#13 File Text:Vista Analytical Laboratory VG7 Text:1600835-09 DU-3-1-C 10 Exp:OCDD_DB5
441.7428 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



CONFIRMATION

Dataset: C:\MassLynx\Default.pro\Results\160714K2\160714K2-4.qld

Last Altered: Friday, July 15, 2016 9:00:21 AM Pacific Daylight Time

Printed: Friday, July 15, 2016 9:48:10 AM Pacific Daylight Time

Method: C:\MassLynx\Default.pro\MethDB\tcdf.mdb 14 Jul 2016 15:49:38

Calibration: C:\MassLynx\Default.pro\CurveDB\db225_1613TCDFvg11-2-8-16.cdb 08 Feb 2016 15:29:41

Name: 160714K2_4, Date: 14-Jul-2016, Time: 16:23:02, ID: 1600835-04RE2 DU-1-12-A CF 10.42, Description: DU-1-12-A CF

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1	1 2,3,7,8-TCDF	2.23e4	0.78	NO	1.07	10.063	16.61	3.0215		0.0997
2	2 13C-2,3,7,8-TCDF	1.37e6	0.78	NO	0.929	10.063	16.59	183.82	92.5	0.262
3	3 13C-1,2,3,4-TCDF	1.60e6	0.79	NO	1.00	10.063	14.62	198.76	100	0.262

CP 7/15/16
7/15/16

Dataset: C:\MassLynx\Default.pro\Results\160714K2\160714K2-4.qld

Last Altered: Friday, July 15, 2016 9:00:21 AM Pacific Daylight Time

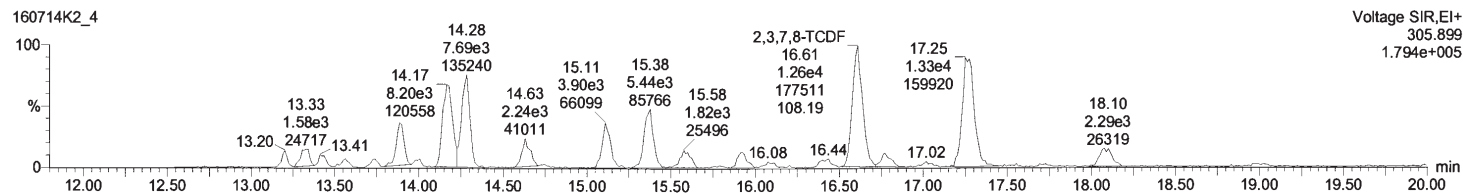
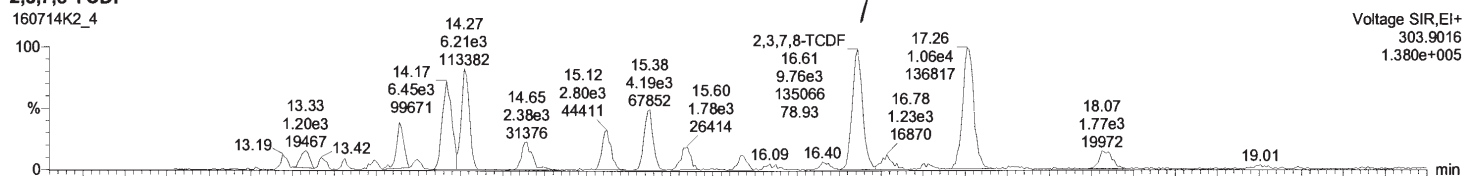
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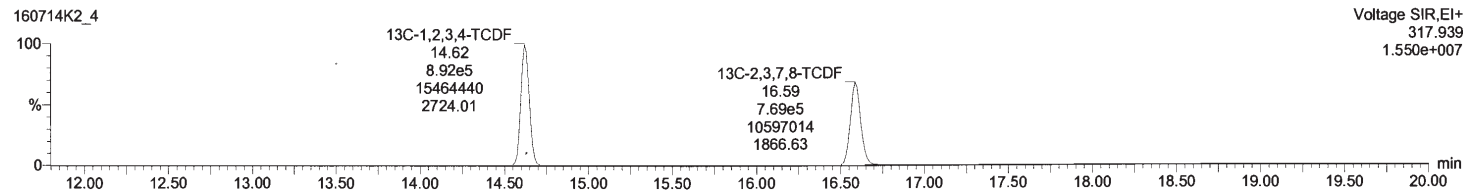
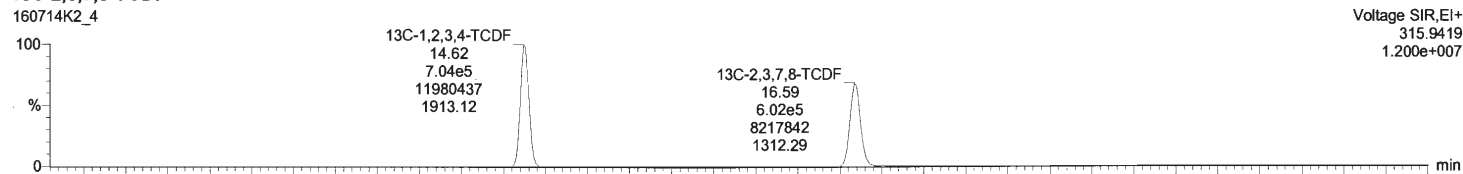
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Name: 160714K2_4, Date: 14-Jul-2016, Time: 16:23:02, ID: 1600835-04RE2 DU-1-12-A CF 10.42, Description: DU-1-12-A CF

2,3,7,8-TCDF



13C-2,3,7,8-TCDF



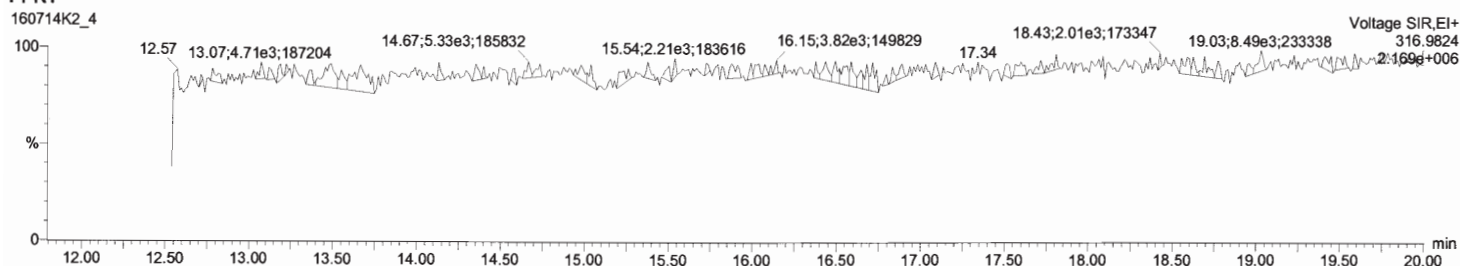
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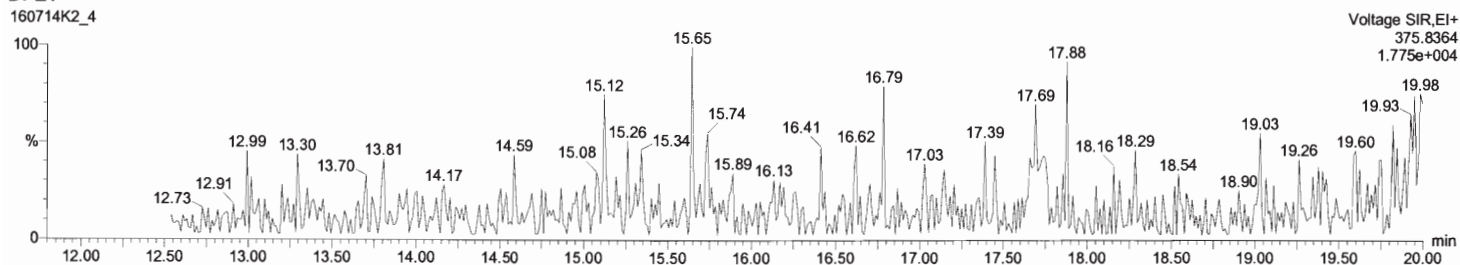
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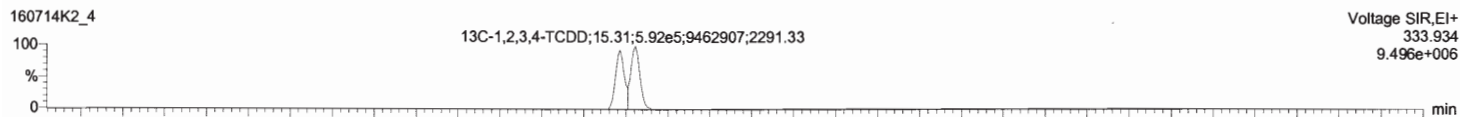
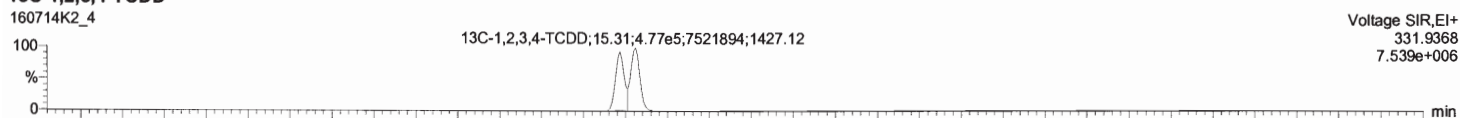
PFK1



DPE1



13C-1,2,3,4-TCDD



Dataset: C:\MassLynx\Default.pro\Results\160714K2\160714K2-5.qld

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Calibration: C:\MassLynx\Default.pro\CurveDB\db225_1613TCDFvg11-2-8-16.cdb 08 Feb 2016 15:29:41

CP 7/15/16
W 7/15/16

Name: 160714K2_5, Date: 14-Jul-2016, Time: 16:56:07, ID: 1600835-05RE2 DU-1-12-B CF 10.55, Description: DU-1-12-B CF

	#-Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc	%Rec	DL
1	1 2,3,7,8-TCDF	1.40e4	0.79	NO	1.07	9.979	16.61	1.8996		0.103
2	2 13C-2,3,7,8-TCDF	1.38e6	0.78	NO	0.929	9.979	16.59	181.31	90.5	0.237
3	3 13C-1,2,3,4-TCDF	1.64e6	0.79	NO	1.00	9.979	14.62	200.43	100	0.220

Dataset: C:\MassLynx\Default.pro\Results\160714K2\160714K2-5.qld

Last Altered: Friday, July 15, 2016 9:06:59 AM Pacific Daylight Time

Printed: Friday, July 15, 2016 9:08:20 AM Pacific Daylight Time

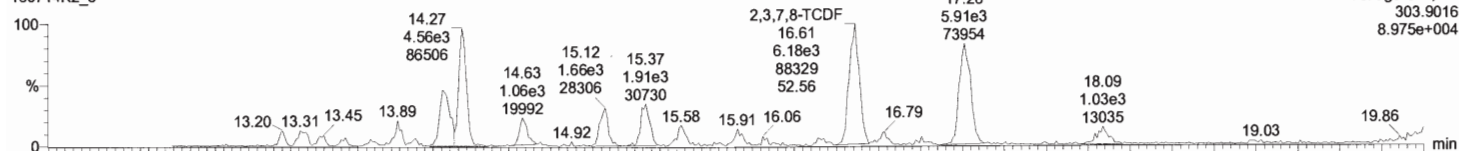
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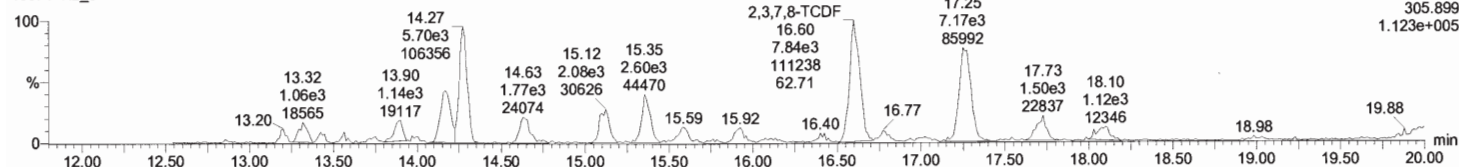
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2,3,7,8-TCDF

160714K2_5

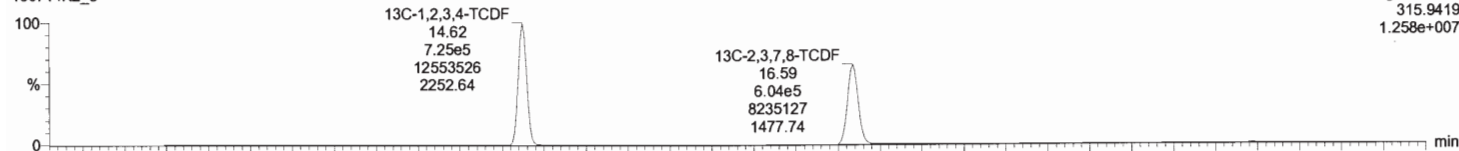


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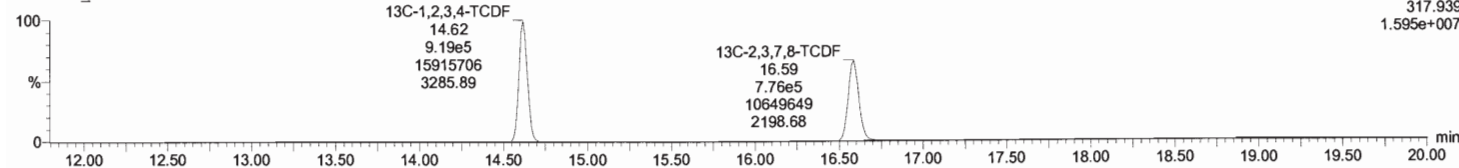


13C-2,3,7,8-TCDF

160714K2_5



160714K2_5



Dataset: C:\MassLynx\Default.pro\Results\160714K2\160714K2-5.qld

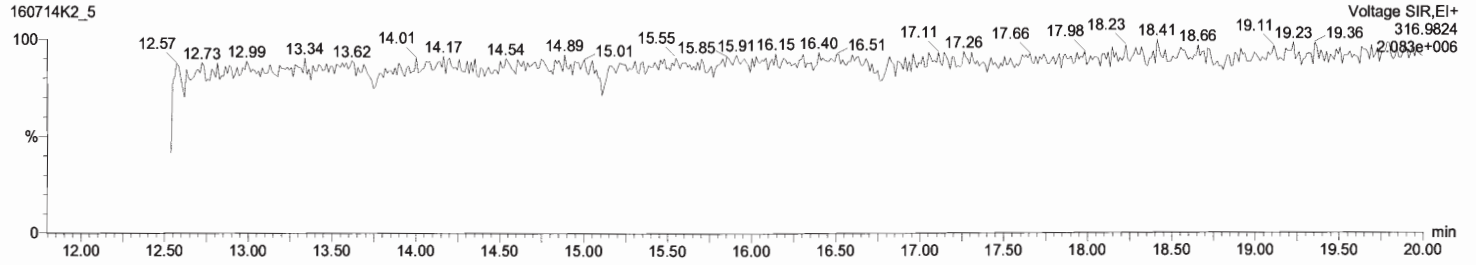
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Name: 160714K2_5, Date: 14-Jul-2016, Time: 16:56:07, ID: 1600835-05RE2 DU-1-12-B CF 10.55, Description: DU-1-12-B CF

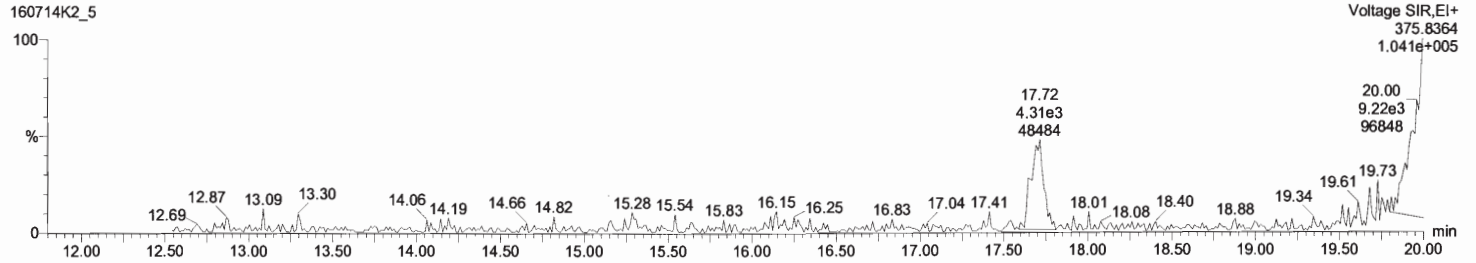
PFK1

160714K2_5



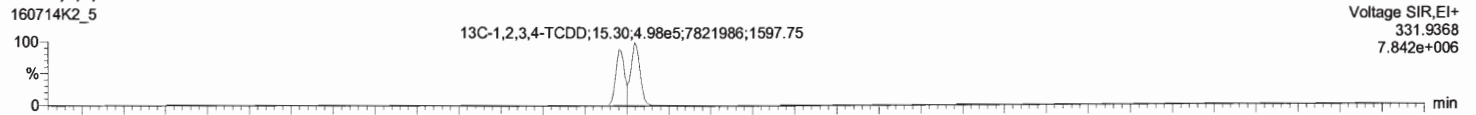
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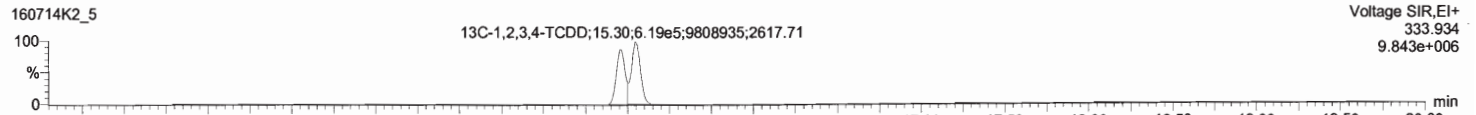


13C-1,2,3,4-TCDD

160714K2_5



160714K2_5



CONTINUING CALIBRATION

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

CCAL ID: ST160712D1-1

Contract No.: SAS No.:

Initial Calibration Date: 4-7-16

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 160712D1 S#1 Analysis Date: 12-JUL-16 Time: 16:20:50

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	y	10.6	7.8 - 12.9
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	50.7	8.2 - 12.3 (4) 39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	48.7	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	49.7	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	49.6	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	49.7	43.0 - 58.0
OCDD	M+2/M+4	0.90	0.76-1.02	y	102	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	y	10.2	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	50.4	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	50.3	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	50.3	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	51.8	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	50.2	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.24	1.05-1.43	y	49.6	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.02	0.88-1.20	y	49.6	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	y	49.4	43.0 - 58.0
OCDF	M+2/M+4	0.93	0.76-1.02	y	98.7	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: DB

Date: 7/12/16

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 4-7-16

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 160712D1 S#1 Analysis Date: 12-JUL-16 Time: 16:20:50

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	y	103	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	76.8	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	98.7	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	97.7	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.22	1.05-1.43	y	99.4	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.14	0.88-1.20	y	82.0	72.0 - 138.0
13C-OCDD	M/M+2	0.89	0.76-1.02	y	147	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.82	0.65-0.89	y	106	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	y	79.4	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	y	77.4	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	98.9	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	96.7	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	97.6	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	103	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.43	0.37-0.51	y	88.3	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.41	0.37-0.51	y	77.9	77.0 - 129.0
13C-OCDF	M+2/M+4	0.91	0.76-1.02	y	147	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					9.83	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: DB

Date: 7/12/16

FORM 5
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 4-7-16

RT Window Data Filename: 160712D1 S#1 Analysis Date: 12-JUL-16 Time: 16:20:50

ZB-5MS IS Data Filename: 160712D1 S#1 Analysis Date: 12-JUL-16 Time: 16:20:50

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	22:38	1,3,6,8-TCDF (F)	20:26
1,2,8,9-TCDD (L)	27:21	1,2,8,9-TCDF (L)	27:31
1,2,4,7,9-PeCDD (F)	29:02	1,3,4,6,8-PeCDF (F)	27:26
1,2,3,8,9-PeCDD (L)	31:33	1,2,3,8,9-PeCDF (L)	31:47
1,2,4,6,7,9-HxCDD (F)	32:57	1,2,3,4,6,8-HxCDF (F)	32:25
1,2,3,7,8,9-HxCDD (L)	34:52	1,2,3,7,8,9-HxCDF (L)	35:15
1,2,3,4,6,7,9-HpCDD (F)	37:24	1,2,3,4,6,7,8-HpCDF (F)	37:00
1,2,3,4,6,7,8-HpCDD (L)	38:23	1,2,3,4,7,8,9-HpCDF (L)	38:56

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

<25%

(1) To meet contract requirements, %Valley Height Between Compared
Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).Analyst: DBDate: 2/12/16

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 4-7-16

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 160712D1 S#1 Analysis Date: 12-JUL-16 Time: 16:20:50

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002

(1) Contract-required limits for
Relative Retention Times (RRT)
as specified in Table 2, Method 1613. 10/94

LABELED COMPOUNDS

13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.025	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.209	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.993	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.161	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.198	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.025	0.989-1.052

Analyst: DBDate: 7/12/16

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 4-7-16

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 160712D1 S#1 Analysis Date: 12-JUL-16 Time: 16:20:50

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.001	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001

(1) Contract-required limits for
Relative Retention Times (RRT)
as specified in Table 2, Method 1613. 10/94

LABELED COMPOUNDS

13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.991	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.037	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.025	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.089	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.145	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.129	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.223	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.230	1.091-1.371

Analyst: DLB

Date: 7/12/16

Client ID: 1613 CS3 16C3101
Lab ID: ST160712D1-1

Filename: 160712D1 S:1 Acq:12-JUL-16 16:20:50
GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16 wt/vol: 1.000

ConCal: ST160712D1-1
EndCAL: NA

Page 1 of 1

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
	2,3,7,8-TCDD	8.01e+05	0.80 y	1.13	26:26	1.001	10.607		*	2.5	*	Total Tetra-Dioxins	57.2	57.9		*	*
	1,2,3,7,8-PeCDD	2.65e+06	0.63 y	0.96	31:10	1.000	50.680		*	2.5	*	Total Penta-Dioxins	160	161		*	*
	1,2,3,4,7,8-HxCDD	2.26e+06	1.24 y	1.00	34:28	1.001	48.704		*	2.5	*	Total Hexa-Dioxins	194	195		*	*
	1,2,3,6,7,8-HxCDD	2.52e+06	1.24 y	1.10	34:34	1.000	49.744		*	2.5	*	Total Hepta-Dioxins	129	131		*	*
	1,2,3,7,8,9-HxCDD	2.35e+06	1.23 y	1.05	34:52	1.000	49.559		*	2.5	*	Total Tetra-Furans	30.4	32.0		*	*
	1,2,3,4,6,7,8-HpCDD	1.85e+06	1.03 y	1.05	38:23	1.000	49.735		*	2.5	*	Total Penta-Furans	206.74	207.32		*	*
	OCDD	3.10e+06	0.90 y	0.96	41:35	1.000	102.23		*	2.5	*	Total Hexa-Furans	253	255		*	*
												Total Hepta-Furans	99.9	102		*	*
	2,3,7,8-TCDF	1.14e+06	0.79 y	1.12	25:36	1.001	10.169		*	2.5	*						
	1,2,3,7,8-PeCDF	4.16e+06	1.60 y	1.01	29:57	1.001	50.424		*	2.5	*						
	2,3,4,7,8-PeCDF	4.22e+06	1.54 y	0.90	30:53	1.000	50.285		*	2.5	*						
	1,2,3,4,7,8-HxCDF	3.81e+06	1.25 y	1.16	33:35	1.000	50.341		*	2.5	*						
	1,2,3,6,7,8-HxCDF	4.13e+06	1.26 y	1.16	33:43	1.001	51.797		*	2.5	*						
	2,3,4,6,7,8-HxCDF	3.71e+06	1.27 y	1.23	34:18	1.000	50.182		*	2.5	*						
	1,2,3,7,8,9-HxCDF	3.13e+06	1.24 y	1.13	35:15	1.001	49.640		*	2.5	*						
	1,2,3,4,6,7,8-HpCDF	2.86e+06	1.02 y	1.44	37:00	1.000	49.564		*	2.5	*						
	1,2,3,4,7,8,9-HpCDF	2.36e+06	1.04 y	1.31	38:56	1.001	49.367		*	2.5	*						
	OCDF	4.01e+06	0.93 y	1.03	41:49	1.000	98.687		*	2.5	*						
												Rec	Qual				
IS	13C-2,3,7,8-TCDD	6.68e+06	0.78 y	1.01	26:25	1.025	102.85					103					
IS	13C-1,2,3,7,8-PeCDD	5.45e+06	0.63 y	1.10	31:10	1.209	76.784					76.8					
IS	13C-1,2,3,4,7,8-HxCDD	4.62e+06	1.28 y	0.72	34:27	1.014	98.666					98.7					
IS	13C-1,2,3,6,7,8-HxCDD	4.62e+06	1.27 y	0.73	34:33	1.017	97.725					97.7					
IS	13C-1,2,3,7,8,9-HxCDD	4.53e+06	1.22 y	0.70	34:51	1.025	99.426					99.4					
IS	13C-1,2,3,4,6,7,8-HpCDD	3.54e+06	1.14 y	0.66	38:22	1.129	81.976					82.0					
IS	13C-OCDD	6.31e+06	0.89 y	0.66	41:34	1.223	147.09					73.5					
IS	13C-2,3,7,8-TCDF	1.00e+07	0.82 y	0.90	25:35	0.993	105.83					106					
IS	13C-1,2,3,7,8-PeCDF	8.20e+06	1.62 y	0.98	29:56	1.161	79.393					79.4					
IS	13C-2,3,4,7,8-PeCDF	9.34e+06	1.62 y	1.15	30:53	1.198	77.427					77.4					
IS	13C-1,2,3,4,7,8-HxCDF	6.51e+06	0.51 y	1.01	33:34	0.988	98.892					98.9					
IS	13C-1,2,3,6,7,8-HxCDF	6.89e+06	0.50 y	1.10	33:42	0.991	96.667					96.7					
IS	13C-2,3,4,6,7,8-HxCDF	6.03e+06	0.52 y	0.95	34:18	1.009	97.553					97.6					
IS	13C-1,2,3,7,8,9-HxCDF	5.56e+06	0.51 y	0.83	35:14	1.037	103.44					103					
IS	13C-1,2,3,4,6,7,8-HpCDF	4.01e+06	0.43 y	0.70	36:60	1.089	88.288					88.3					
IS	13C-1,2,3,4,7,8,9-HpCDF	3.65e+06	0.41 y	0.72	38:55	1.145	77.947					77.9					
IS	13C-OCDF	7.88e+06	0.91 y	0.82	41:48	1.230	147.25					73.6					
C/Up	37Cl-2,3,7,8-TCDD	7.19e+05		1.14	26:26	1.025	9.8348					98.3					
RS/RT	13C-1,2,3,4-TCDD	6.43e+06	0.81 y	1.00	25:47	*	100.00										
RS	13C-1,2,3,4-TCDF	1.05e+07	0.78 y	1.00	24:12	*	100.00										
RS/RT	13C-1,2,3,4,6,9-HxCDF	6.49e+06	0.51 y	1.00	33:59	*	100.00										
												Integrations		Reviewed			
												by		by			
												Analyst: <u>DB</u>		Analyst: _____			
												Date: <u>7/12/16</u>		Date: _____			

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
160712D1	1	ST160712D1-1	DB	12-JUL-16	16:20:50	ST160712D1-1	NA
160712D1	2	B6G0039-BS1	DB	12-JUL-16	17:09:22	ST160712D1-1	NA
160712D1	3	SOLVENT BLANK	DB	12-JUL-16	17:57:56	ST160712D1-1	NA
160712D1	4	B6G0039-BLK1	DB	12-JUL-16	18:46:29	ST160712D1-1	NA
160712D1	5	1600835-01RE1	DB	12-JUL-16	19:35:02	ST160712D1-1	NA
160712D1	6	1600835-02RE1	DB	12-JUL-16	20:23:34	ST160712D1-1	NA
160712D1	7	1600835-03RE1	DB	12-JUL-16	21:12:05	ST160712D1-1	NA
160712D1	8	1600835-04RE1	DB	12-JUL-16	22:00:36	ST160712D1-1	NA
160712D1	9	1600835-05RE1	DB	12-JUL-16	22:49:07	ST160712D1-1	NA
160712D1	10	1600835-06RE1	DB	12-JUL-16	23:37:38	ST160712D1-1	NA
160712D1	11	1600835-07	DB	13-JUL-16	00:26:09	ST160712D1-1	NA
160712D1	12	1600835-08	DB	13-JUL-16	01:14:39	ST160712D1-1	NA
160712D1	13	1600835-09	DB	13-JUL-16	02:03:11	ST160712D1-1	NA
160712D1	14	SOLVENT BLANK	DB	13-JUL-16	02:51:43	ST160712D1-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST



Beg. Calibration ID: ST160712D1-1

End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	NA
Concentration within range?	<input checked="" type="checkbox"/>	1
First and last eluters present?	<input checked="" type="checkbox"/>	
Retention Times within criteria?	<input checked="" type="checkbox"/>	
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	<input checked="" type="checkbox"/>	
Forms signed and dated?	<input checked="" type="checkbox"/>	
Correct ICAL referenced?	<input checked="" type="checkbox"/>	
Run Log:		
-Data file matches Conc Cal ID?	<input checked="" type="checkbox"/>	
-Correct instrument listed?	<input checked="" type="checkbox"/>	
-Samples within 12-hour clock?	y	n

Mass resolution > 10,000?
 ■ Method 1614 > 5,000; CARB 429 > 8,000

TCDD/TCDF valleys < 25%?

Peaks integrated correctly?

Manual integrations included?

8280 CS1 Ending Standard

-Ratios within limits

-S/N > 2.5:1

-CS1 within 12-hour clock

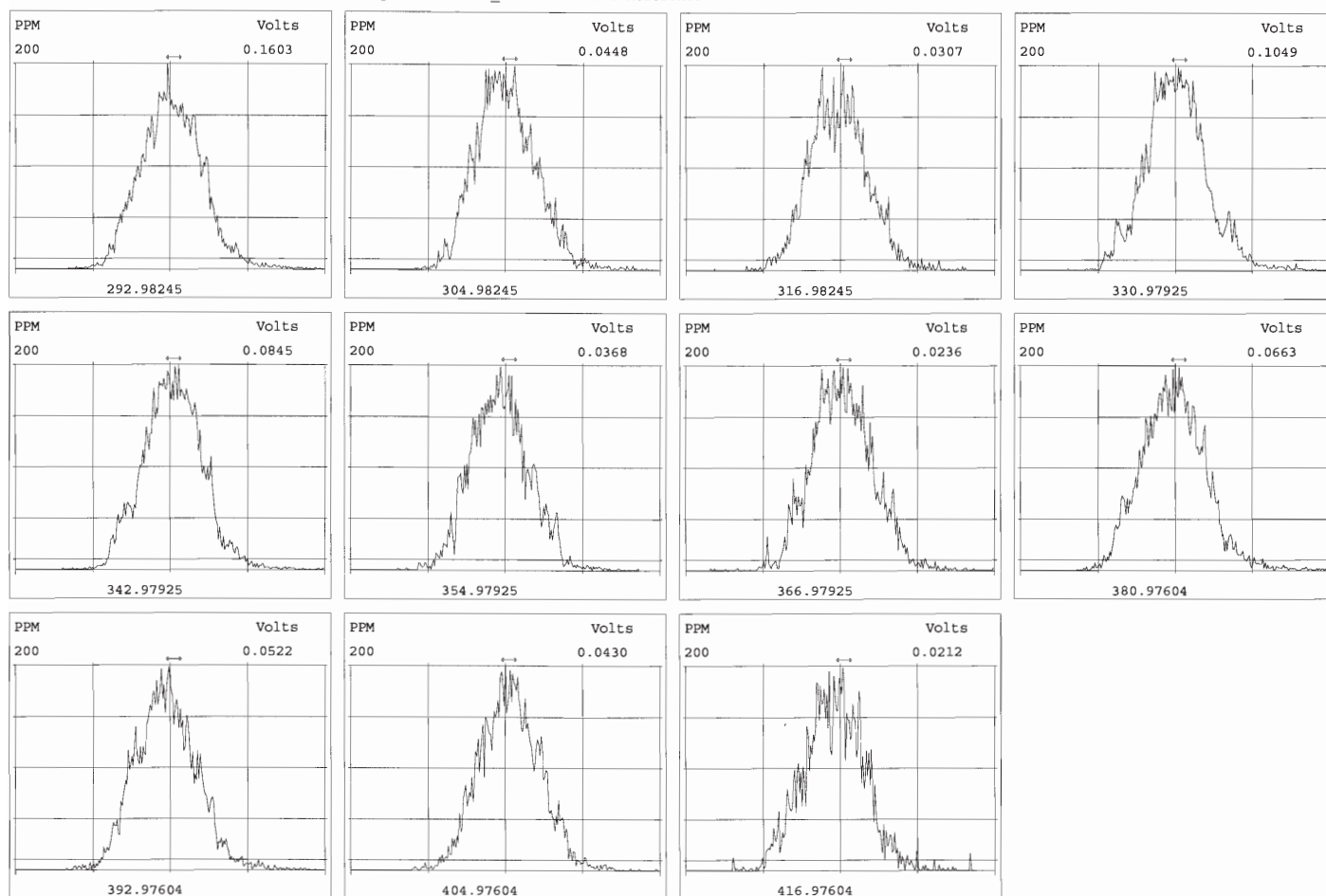
Comments:

Reviewed by: mw 7/14/16
 Initials & Date

* Ending standard criteria applicable to 8290 only.

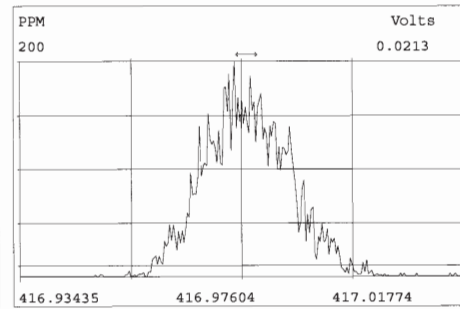
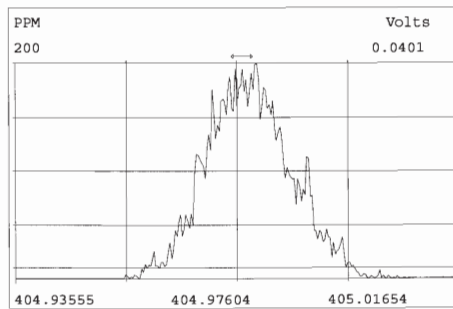
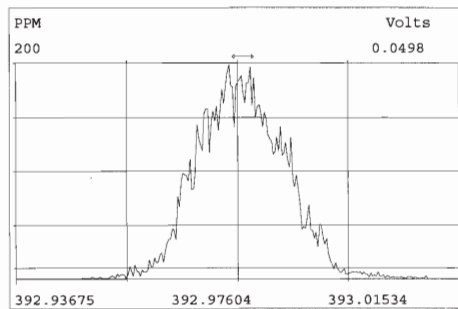
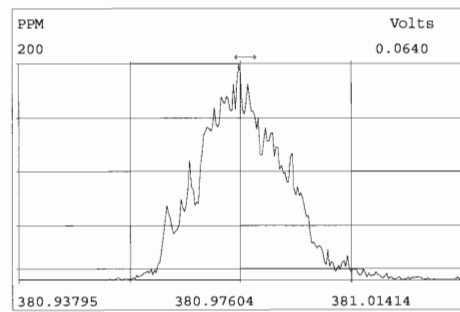
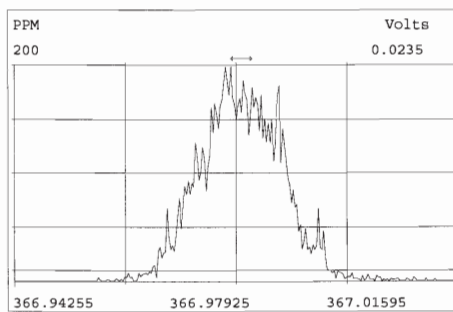
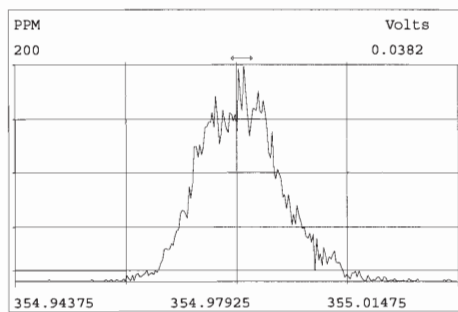
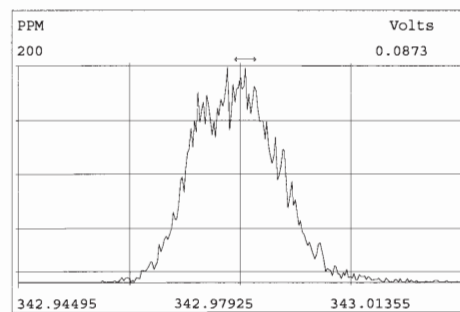
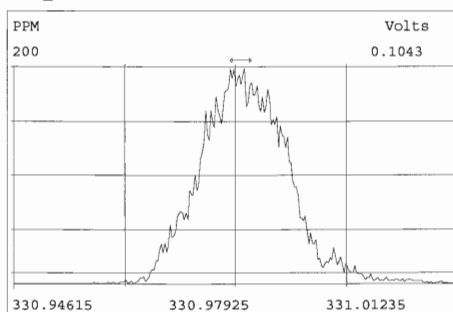
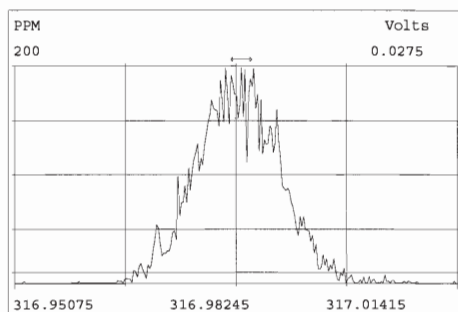
Peak Locate Examination:12-JUL-2016:16:18 File:160712D1

Experiment:OCDD_DB5 Function:1 Reference:PFK

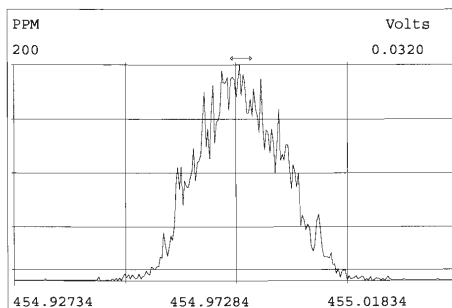
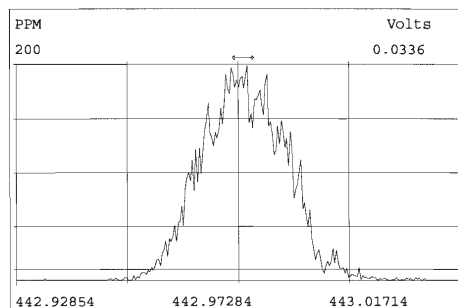
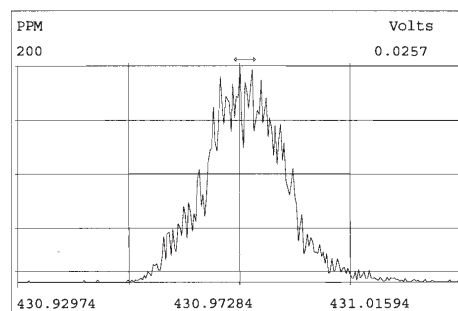
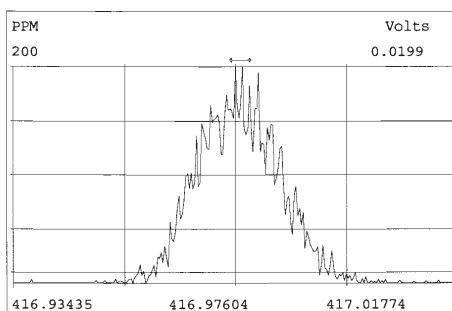
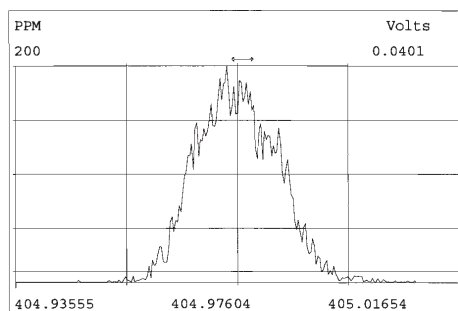
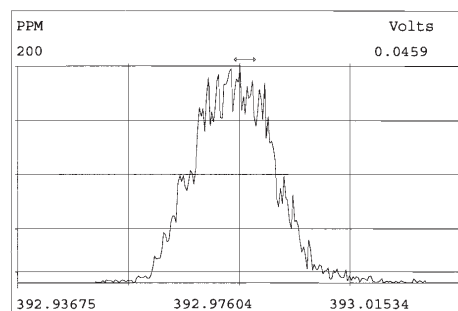
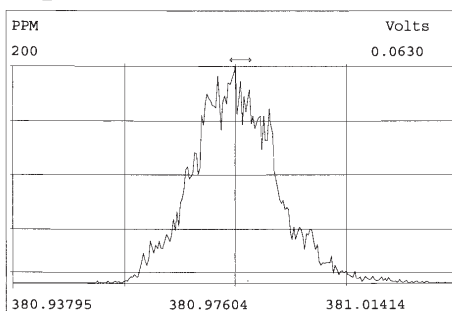
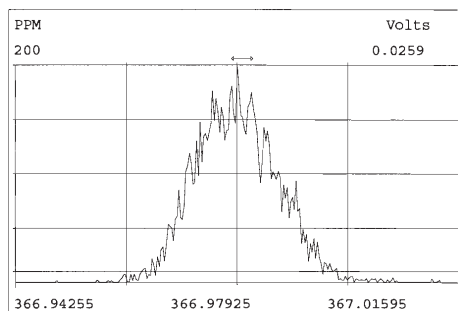


Peak Locate Examination:12-JUL-2016:16:18 File:160712D1

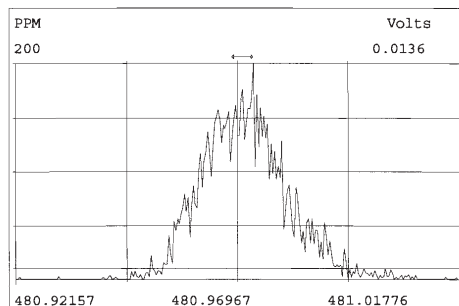
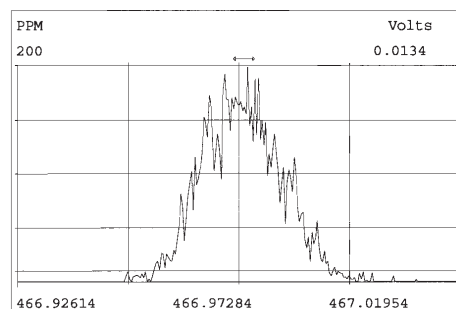
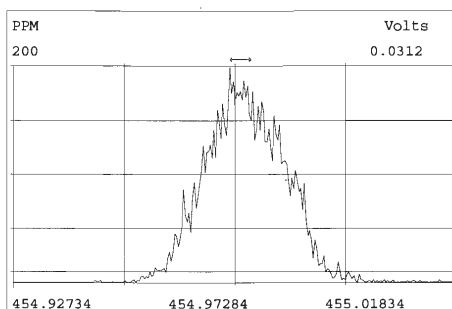
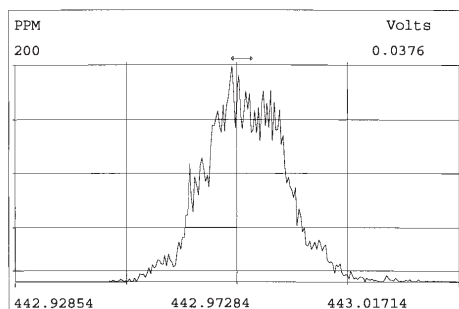
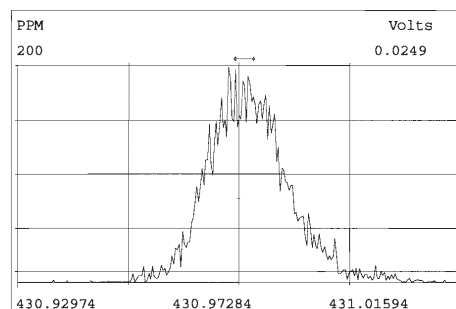
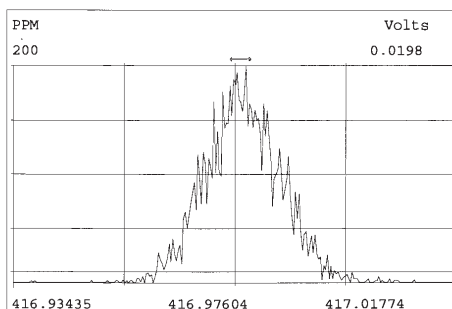
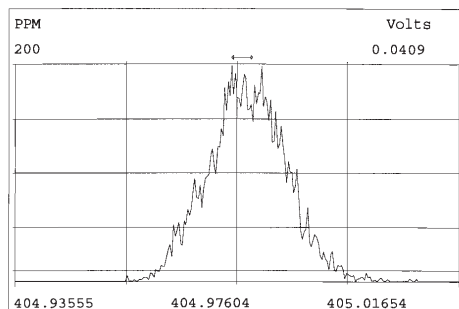
Experiment:OCDD_DB5 Function:2 Reference:PFK



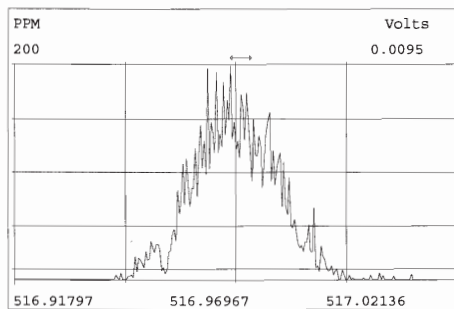
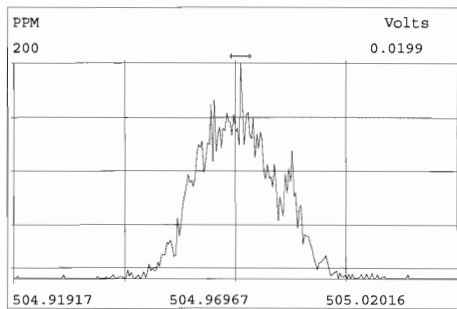
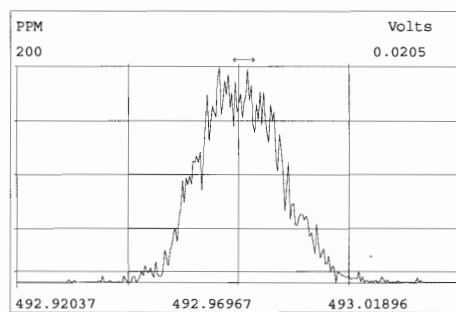
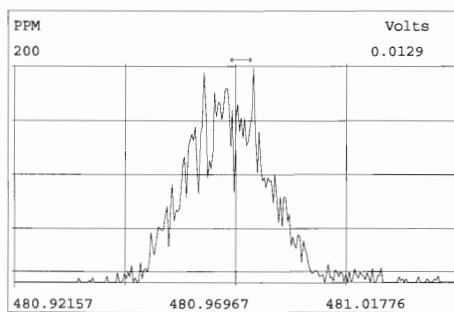
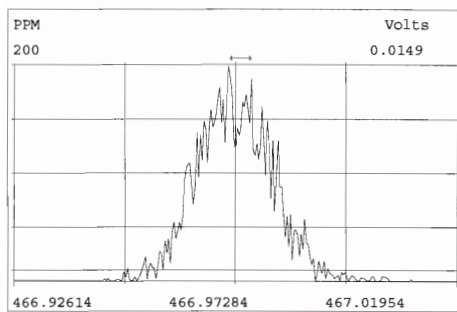
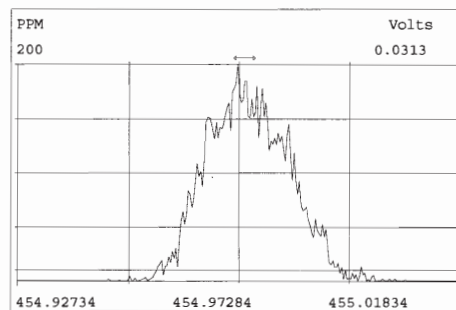
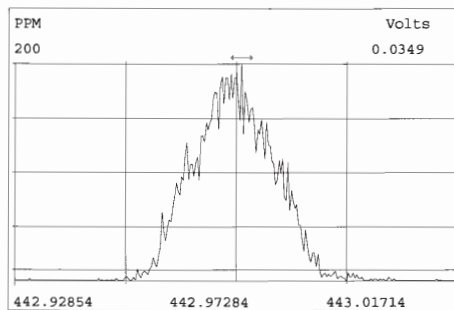
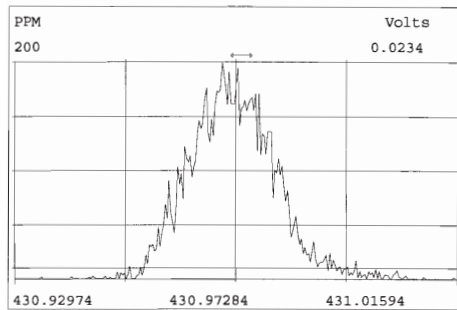
Peak Locate Examination:12-JUL-2016:16:19 File:160712D1
Experiment:OCDD_DB5 Function:3 Reference:PFK



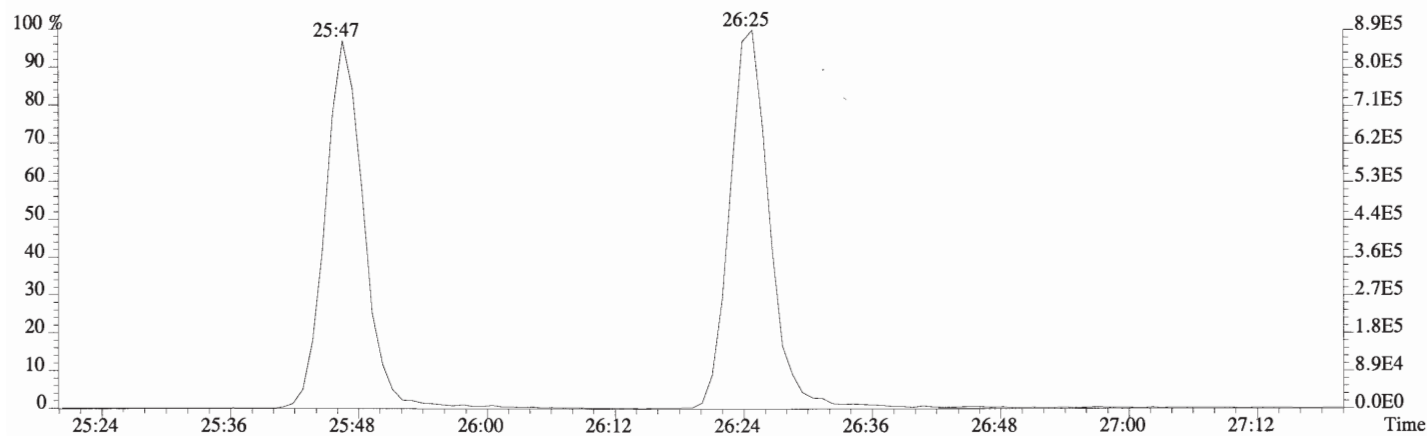
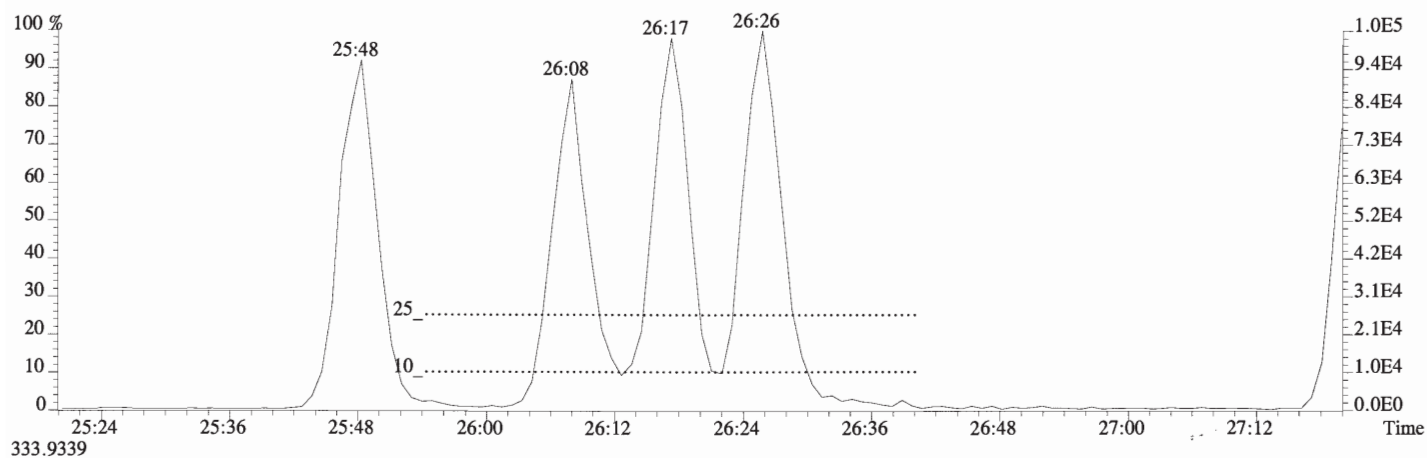
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Experiment:OCDD_DB5 Function:4 Reference:PFK



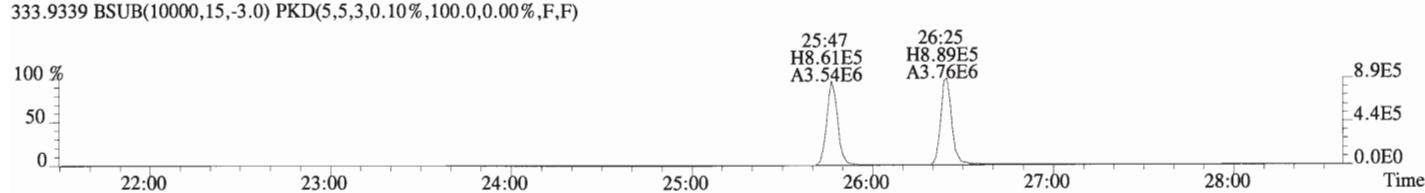
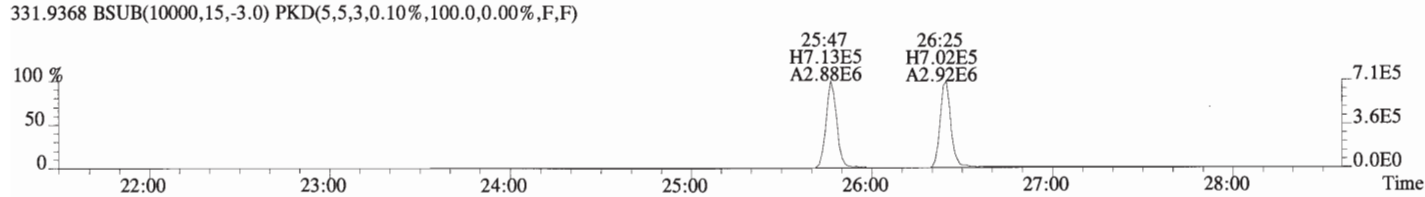
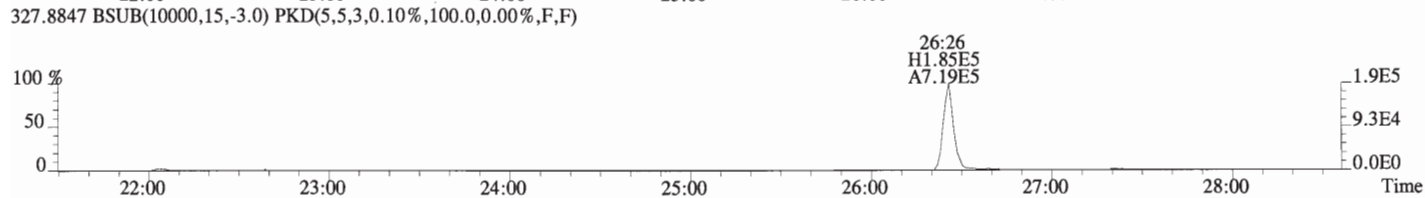
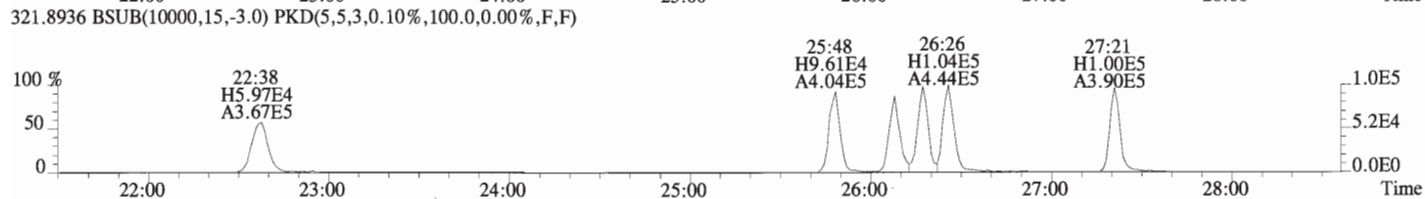
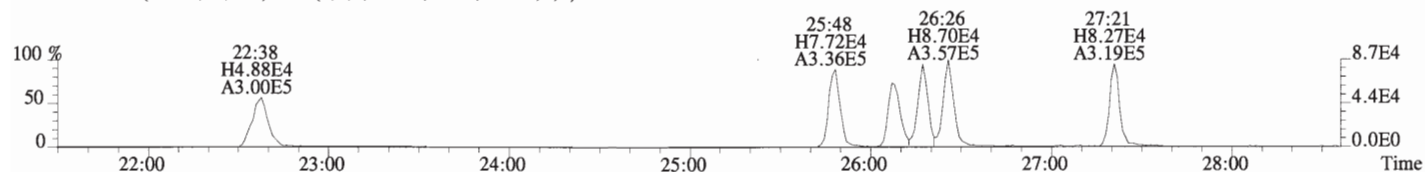
Peak Locate Examination:12-JUL-2016:16:20 File:160712D1
Experiment:OCDD_DB5 Function:5 Reference:PFK



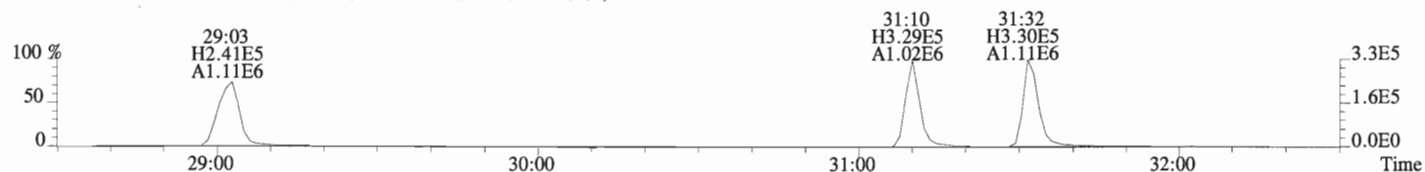
File:160712D1 #1-551 Acq:12-JUL-2016 16:20:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160712D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
321.8936



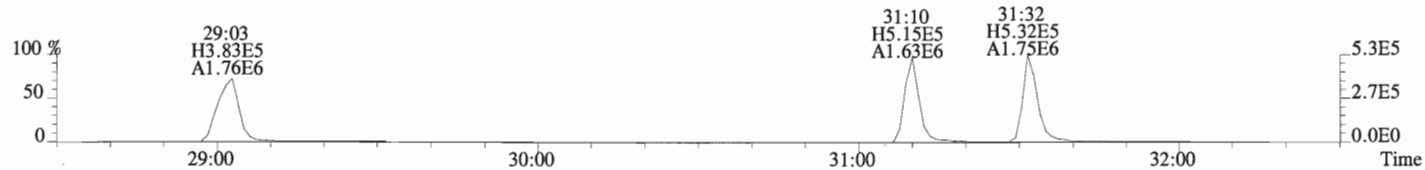
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 319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



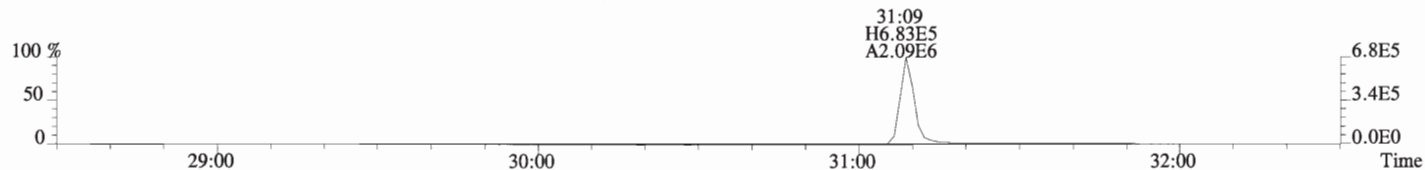
File:160712D1 #1-193 Acq:12-JUL-2016 16:20:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160712D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



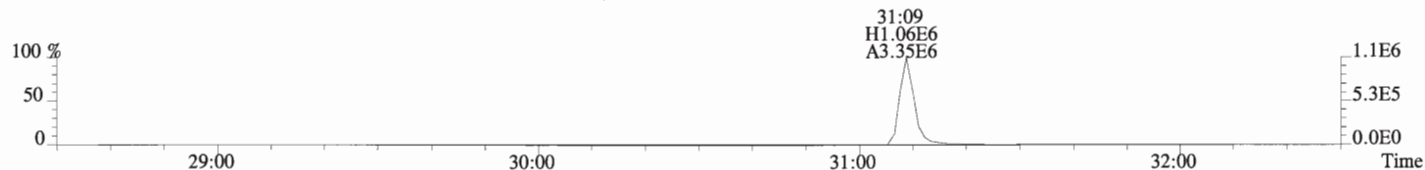
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



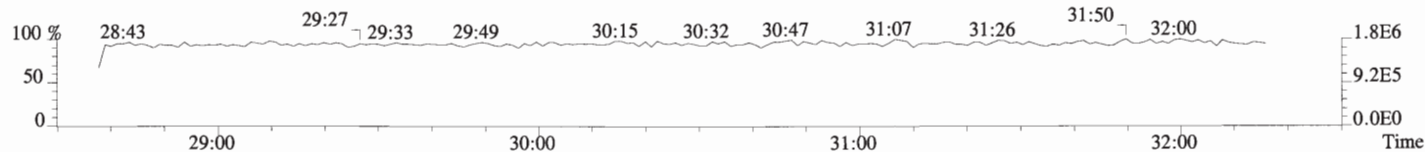
365.8978 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



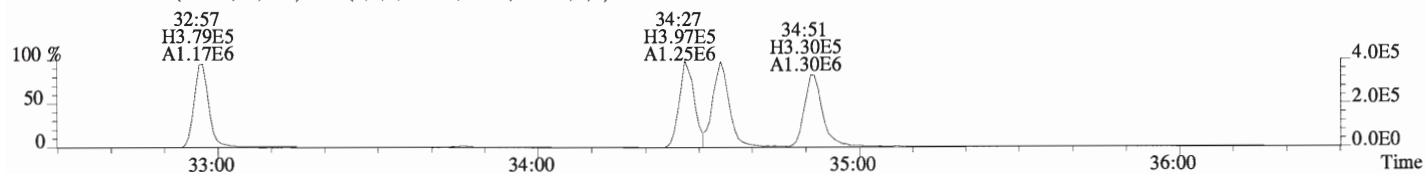
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



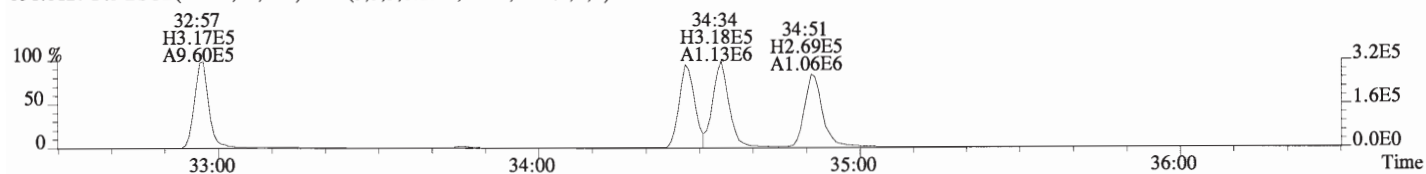
366.9792 F:2



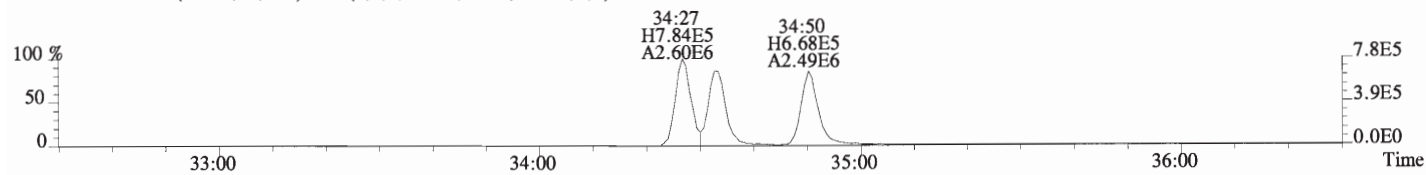
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 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160712D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



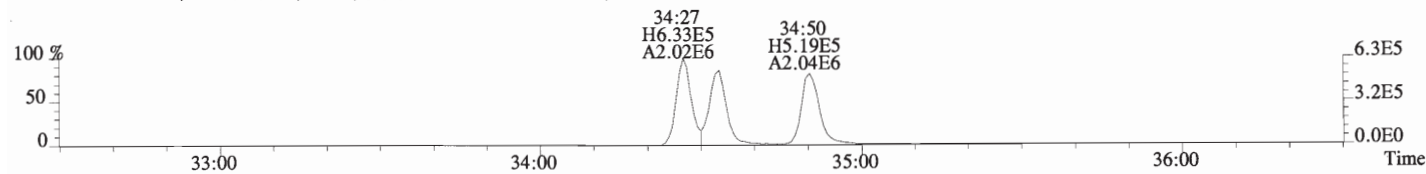
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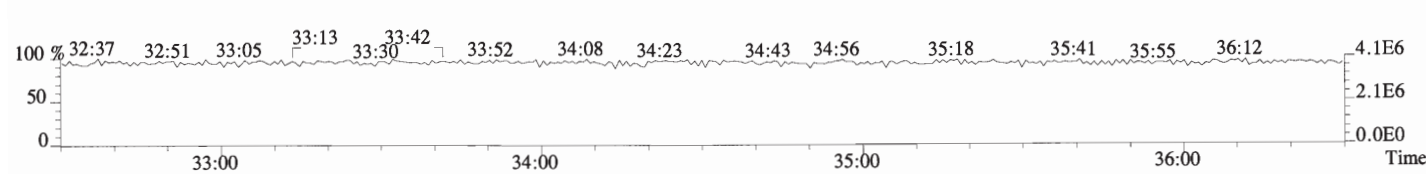
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



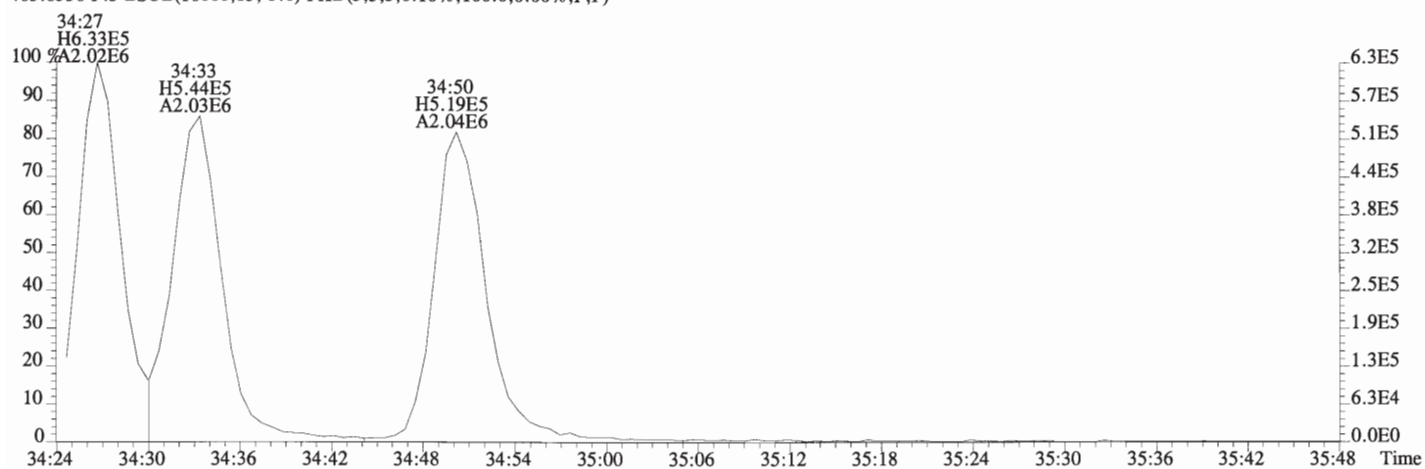
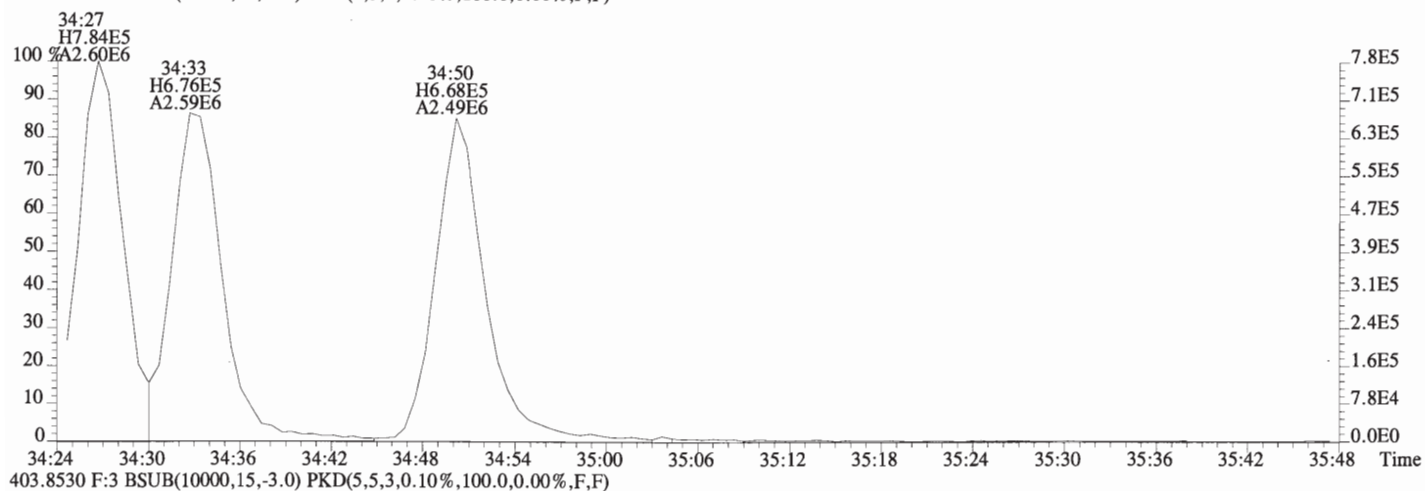
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



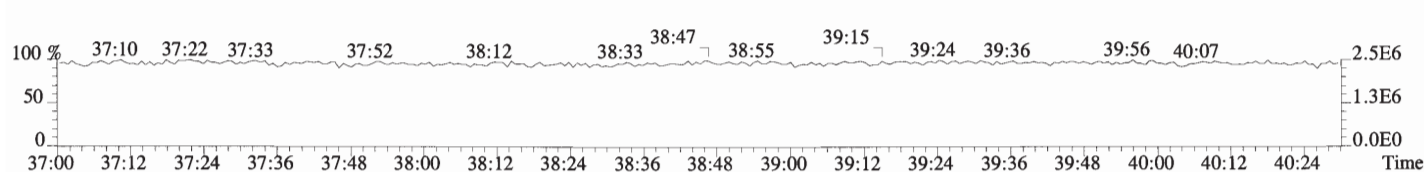
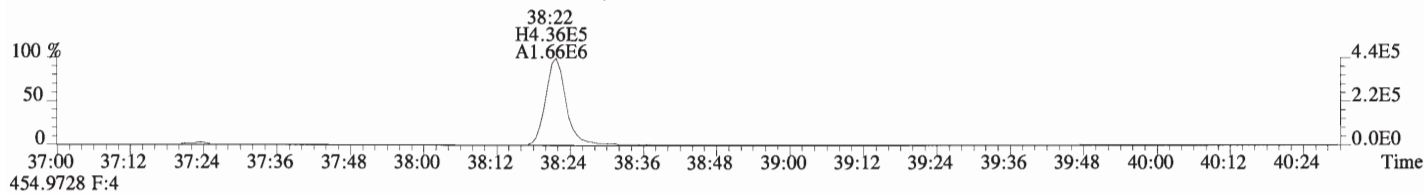
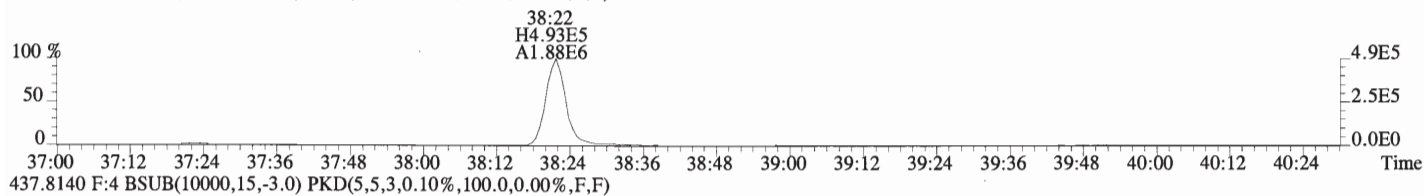
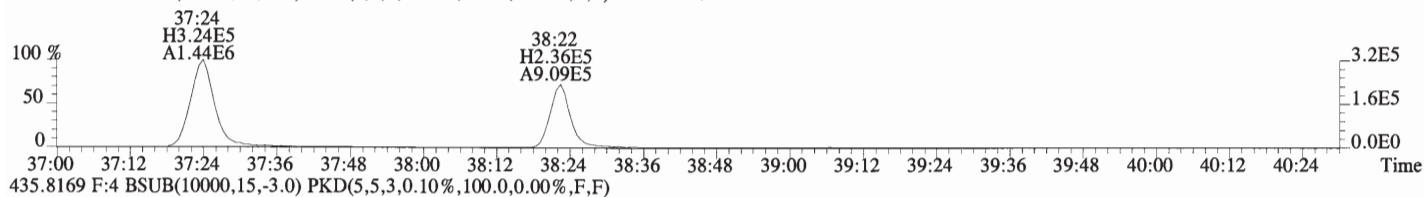
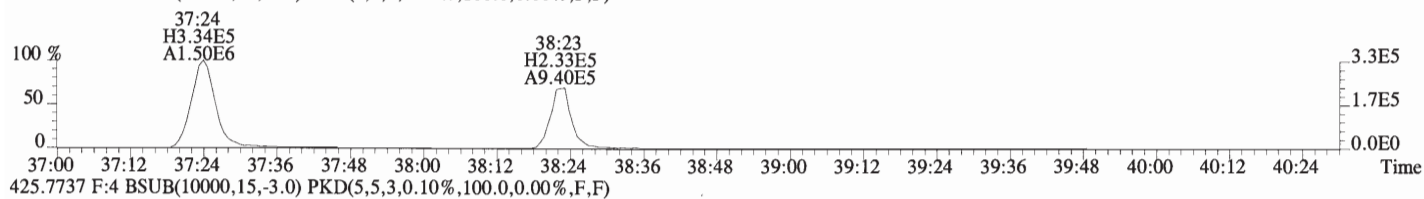
392.9760 F:3



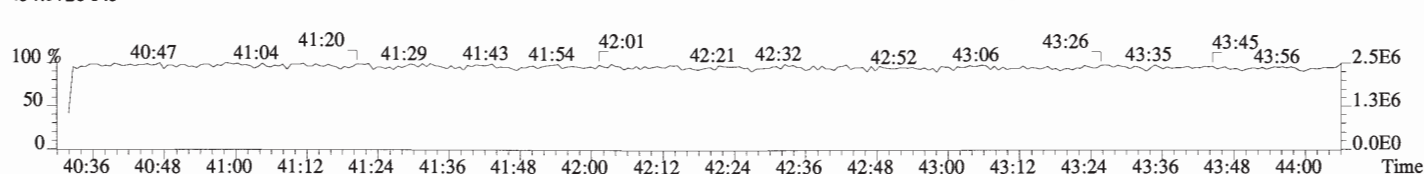
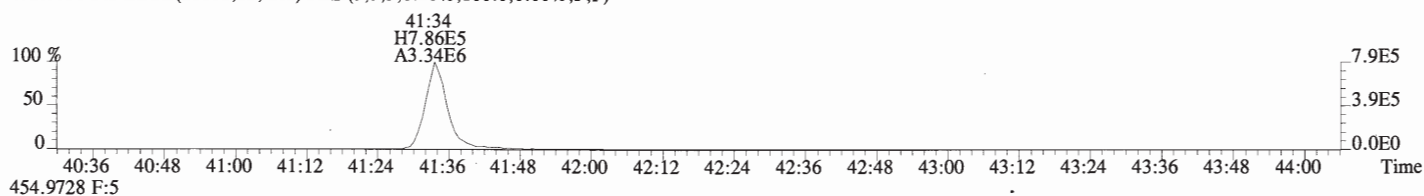
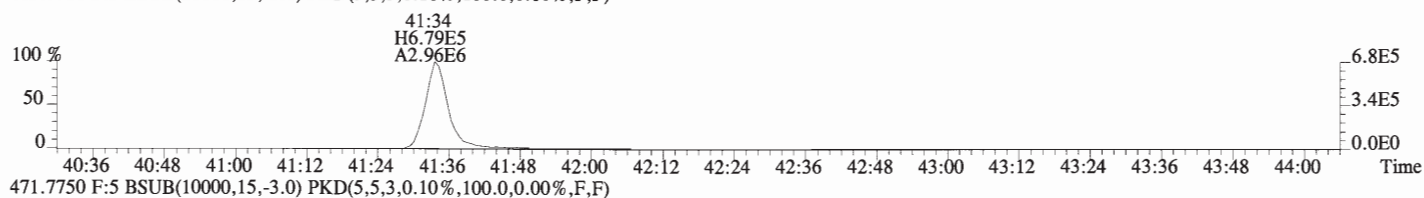
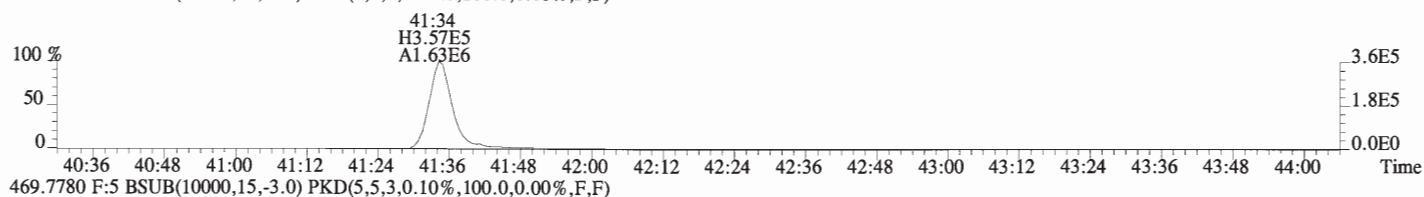
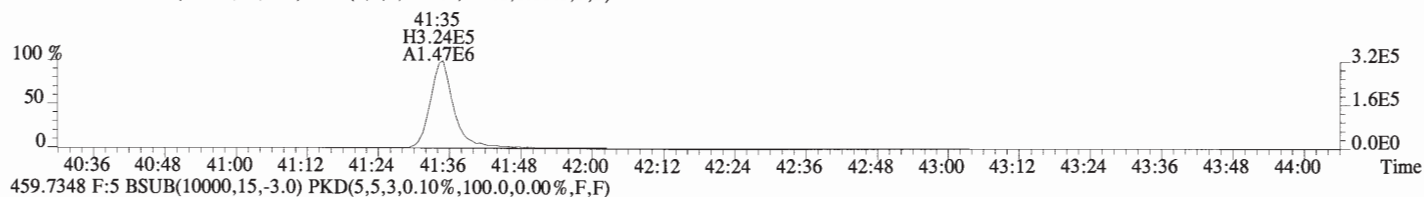
File:160712D1 #1.407 Acq:12-JUL-2016 16:20:50 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160712D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



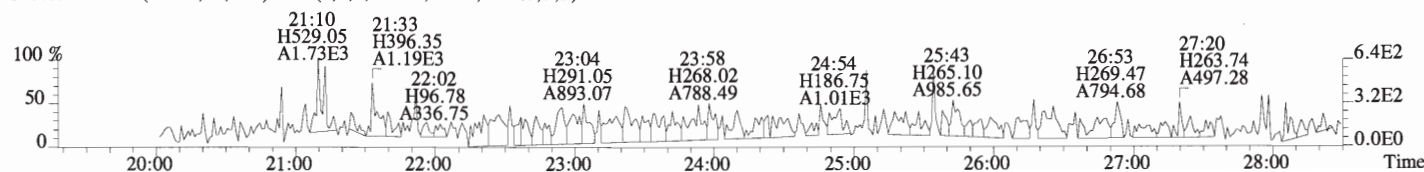
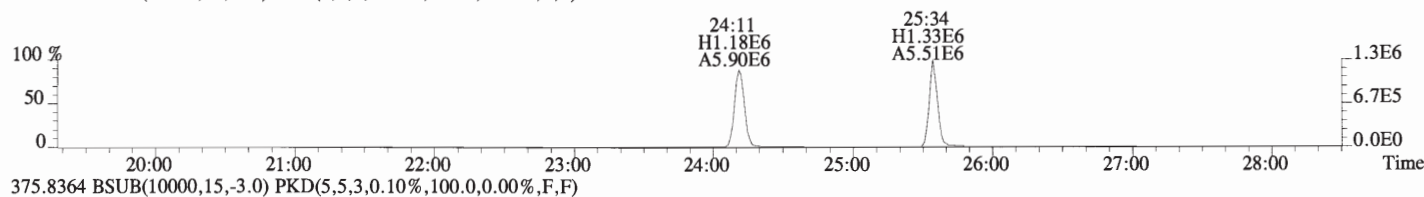
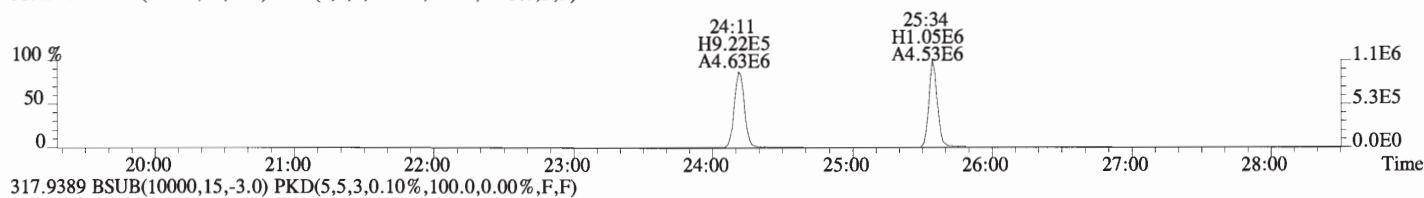
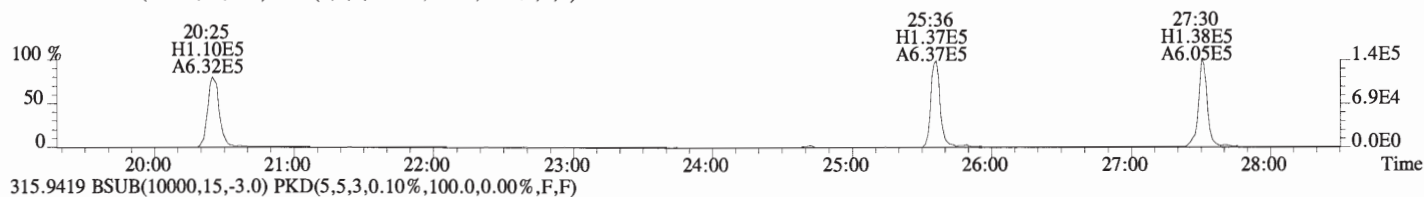
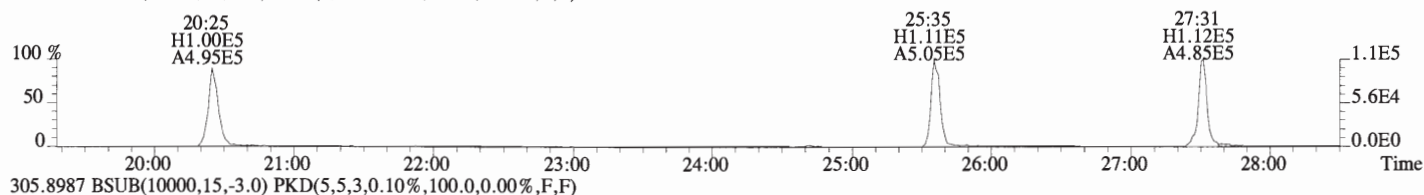
File:160712D1 #1-325 Acq:12-JUL-2016 16:20:50 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160712D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



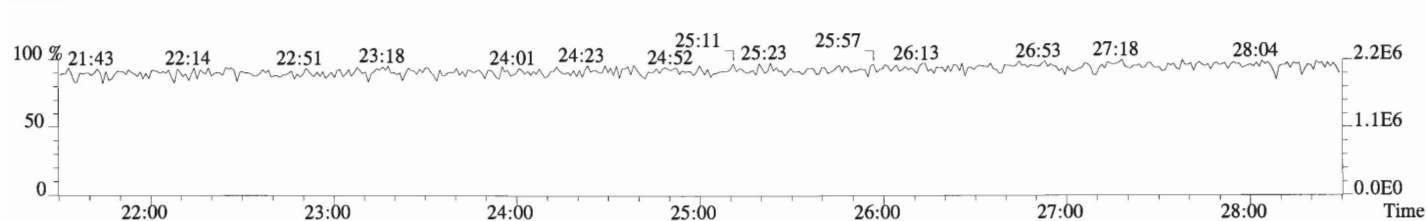
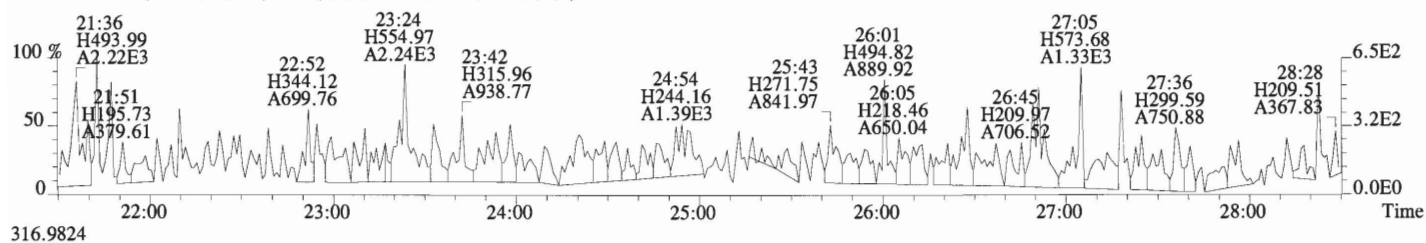
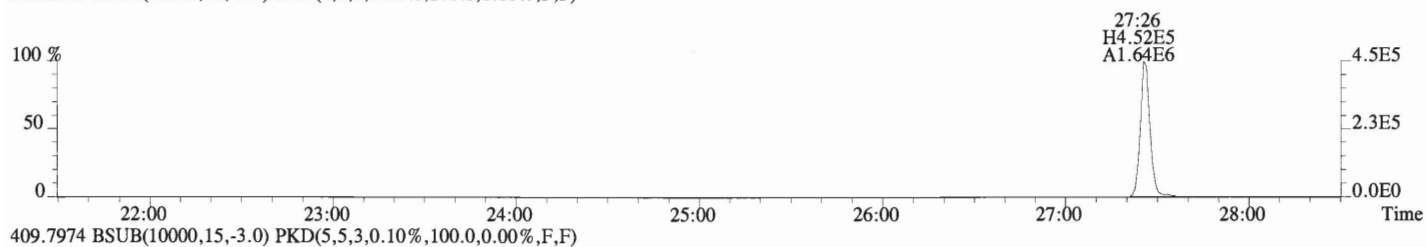
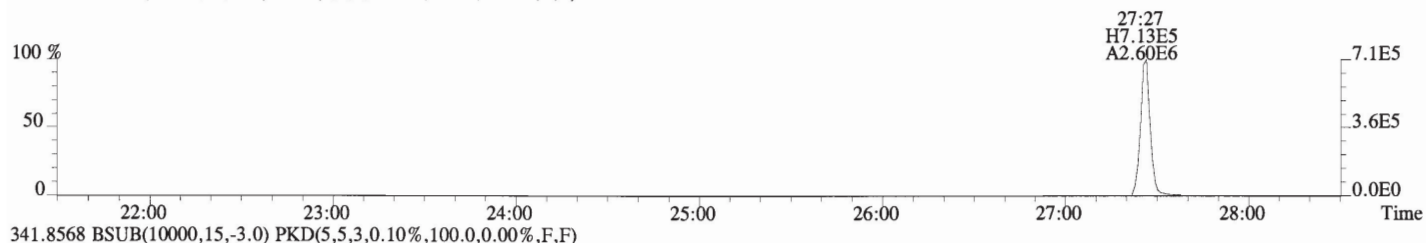
File:160712D1 #1-388 Acq:12-JUL-2016 16:20:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160712D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



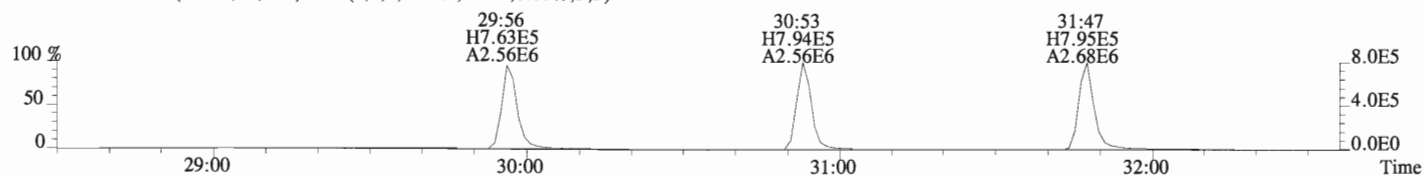
File:160712D1 #1-551 Acq:12-JUL-2016 16:20:50 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text: Vista Analytical Laboratory VG7 Text:ST160712D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



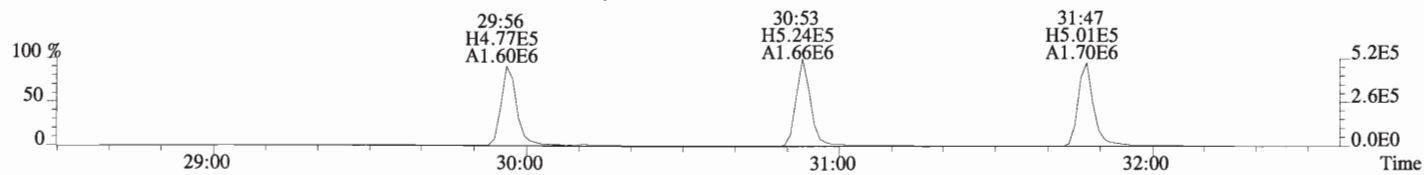
File:160712D1 #1-551 Acq:12-JUL-2016 16:20:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160712D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



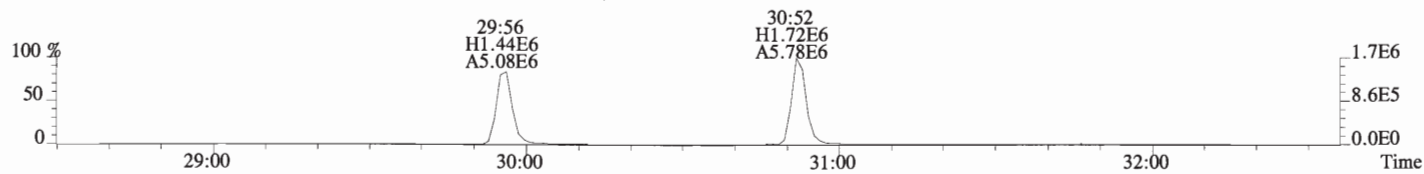
File:160712D1 #1-193 Acq:12-JUL-2016 16:20:50 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160712D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



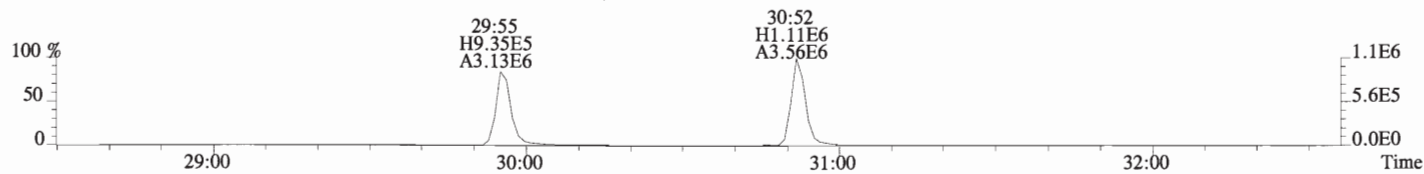
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



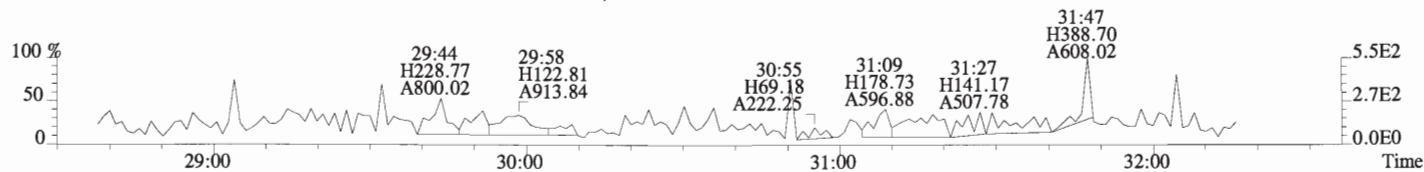
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



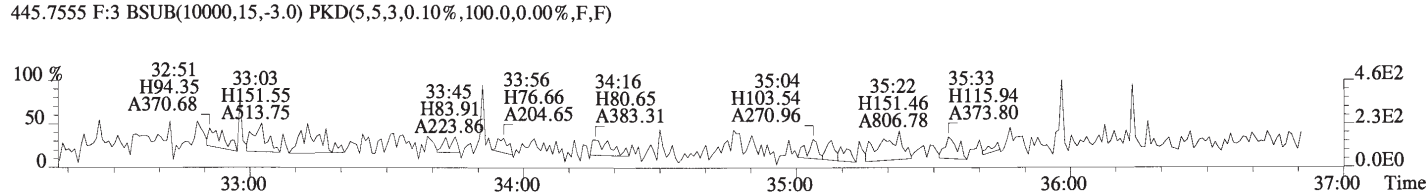
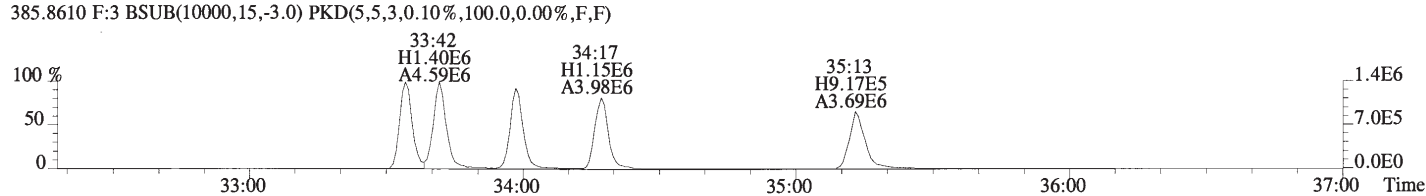
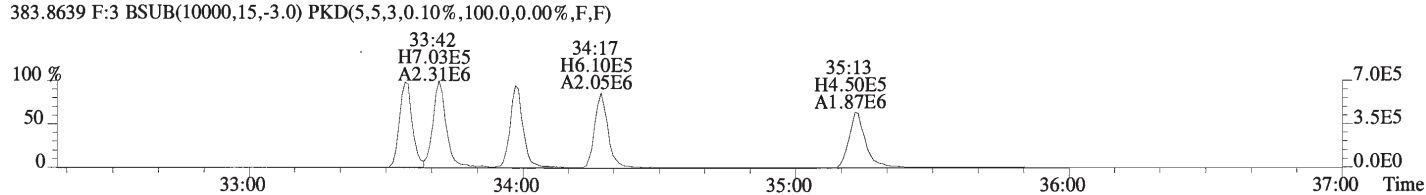
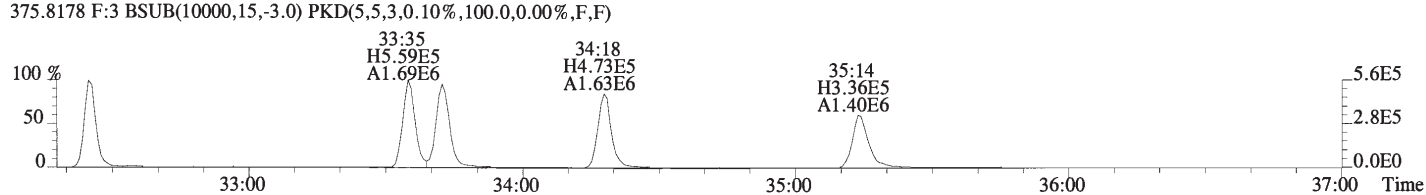
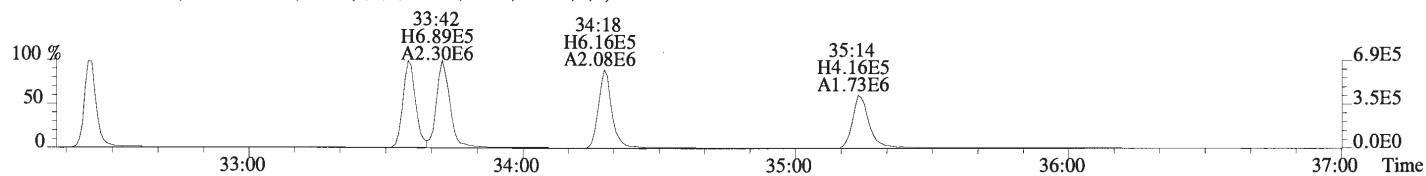
353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



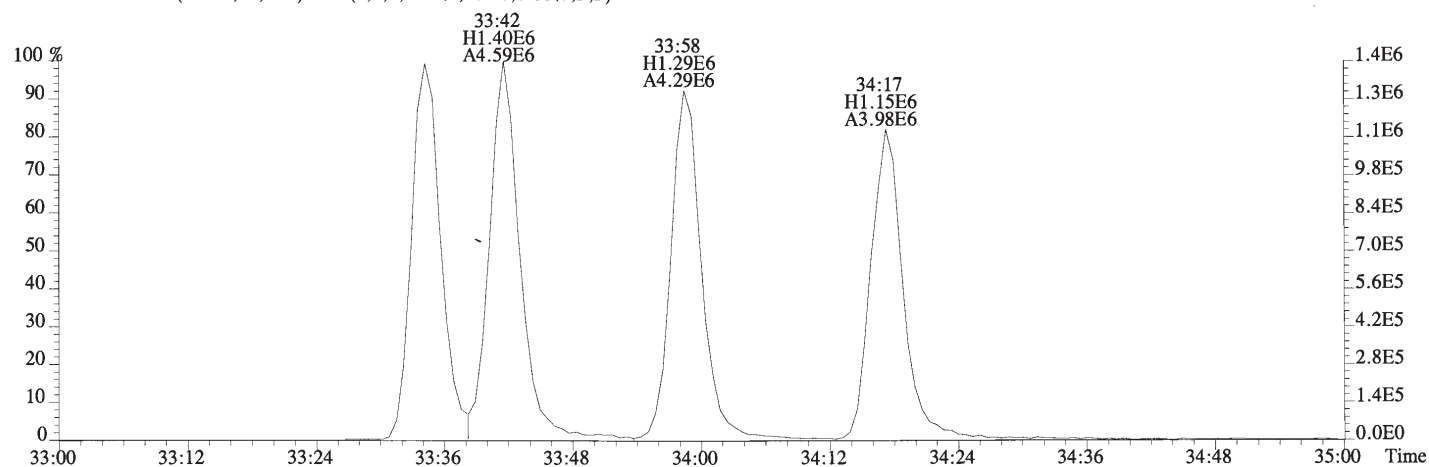
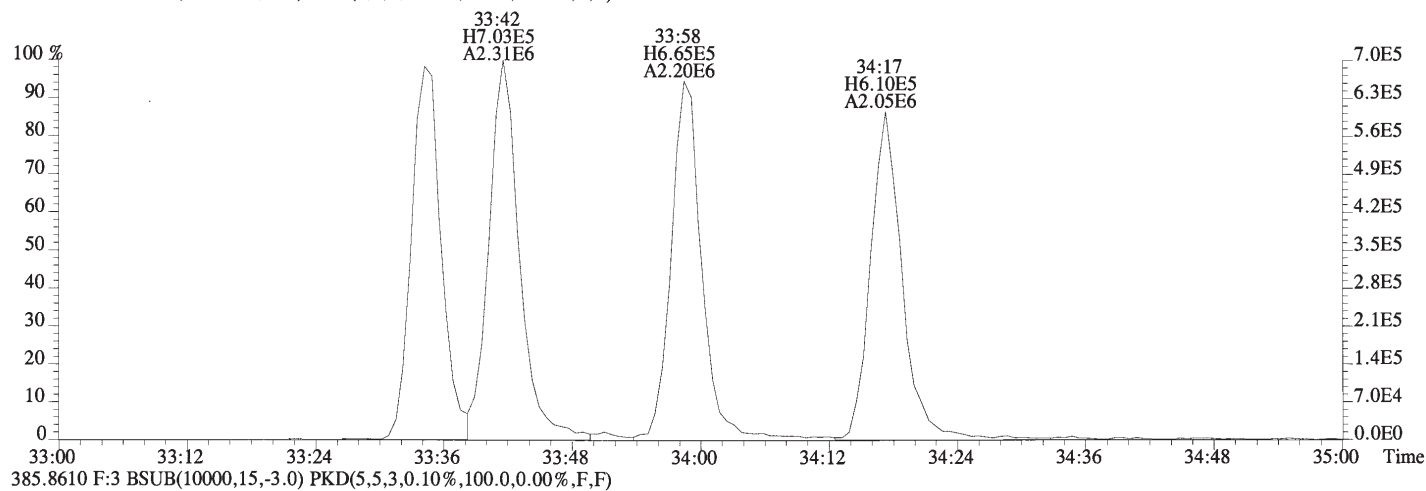
409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



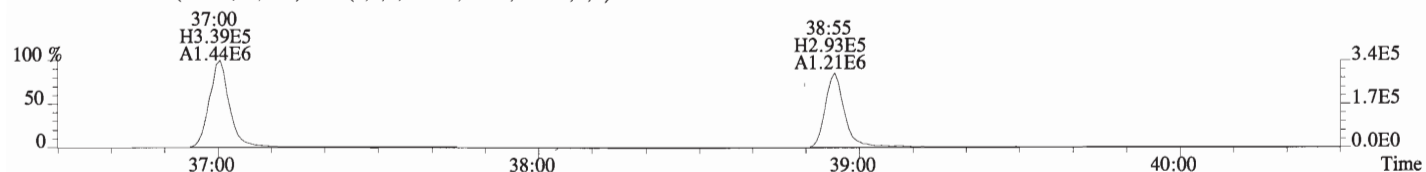
File:160712D1 #1-407 Acq:12-JUL-2016 16:20:50 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text: Vista Analytical Laboratory VG7 Text:ST160712D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



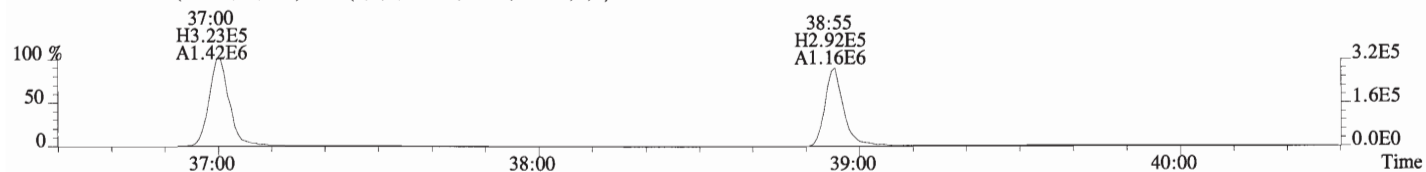
File:160712D1 #1-407 Acq:12-JUL-2016 16:20:50 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160712D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



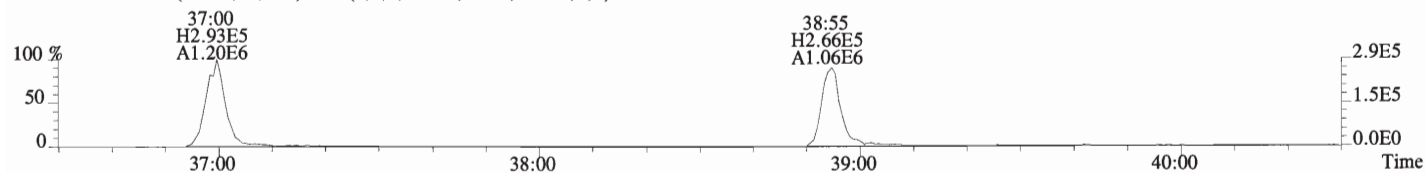
File:160712D1 #1-325 Acq:12-JUL-2016 16:20:50 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160712D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



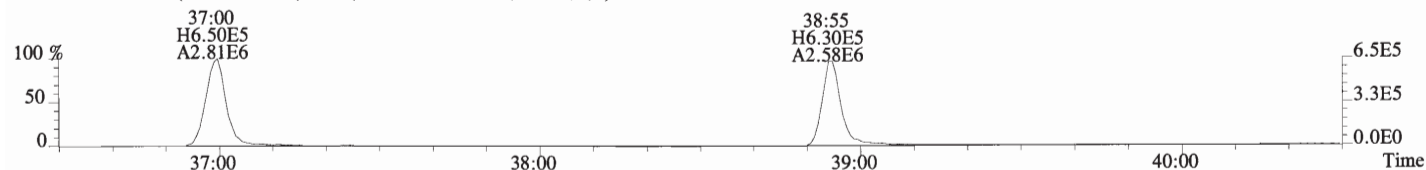
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



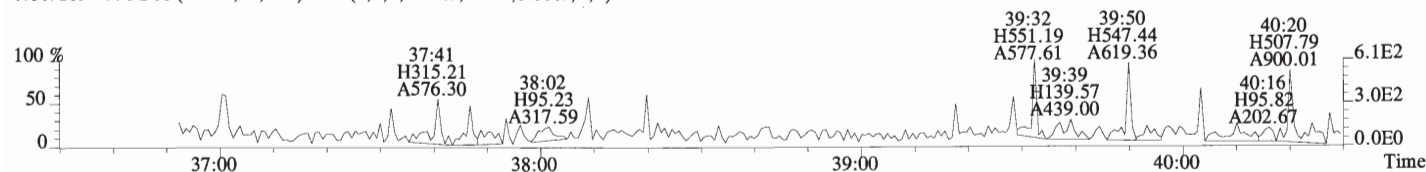
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



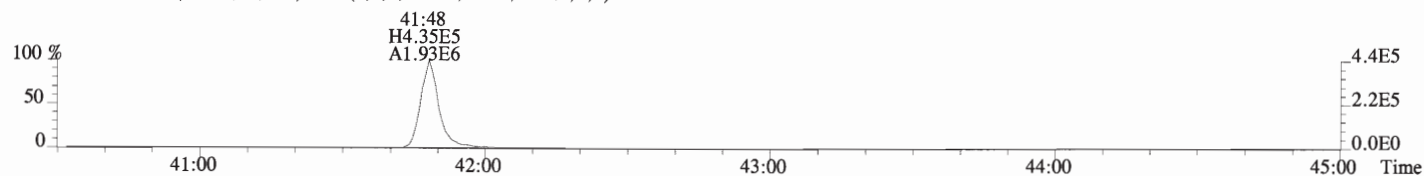
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



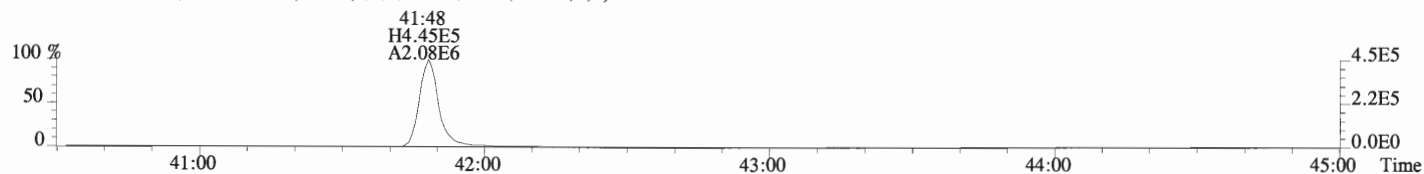
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



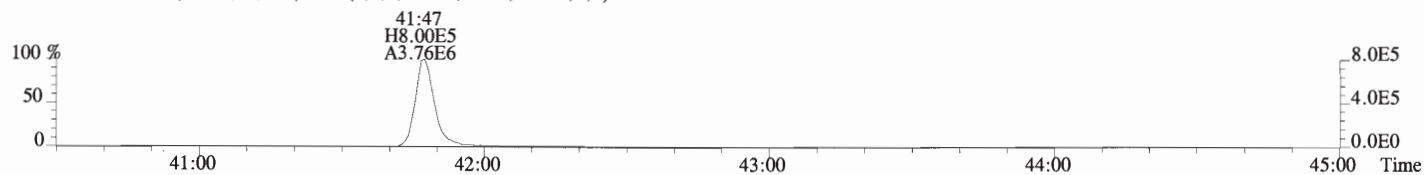
File:160712D1 #1-388 Acq:12-JUL-2016 16:20:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160712D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



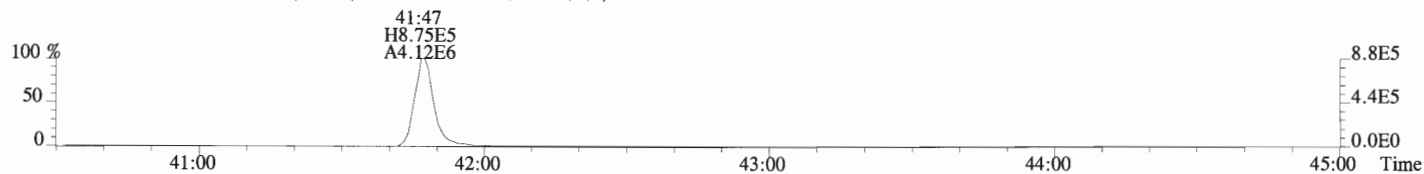
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



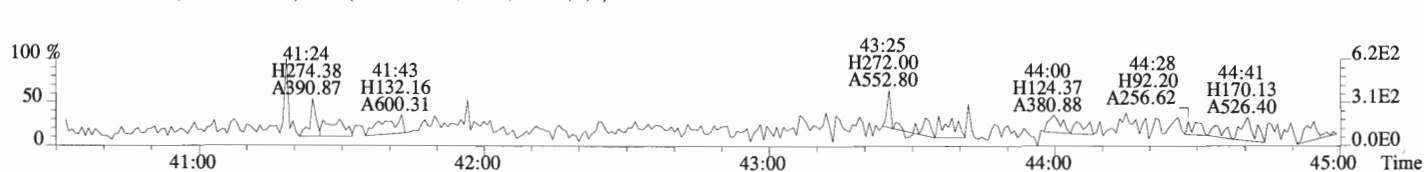
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

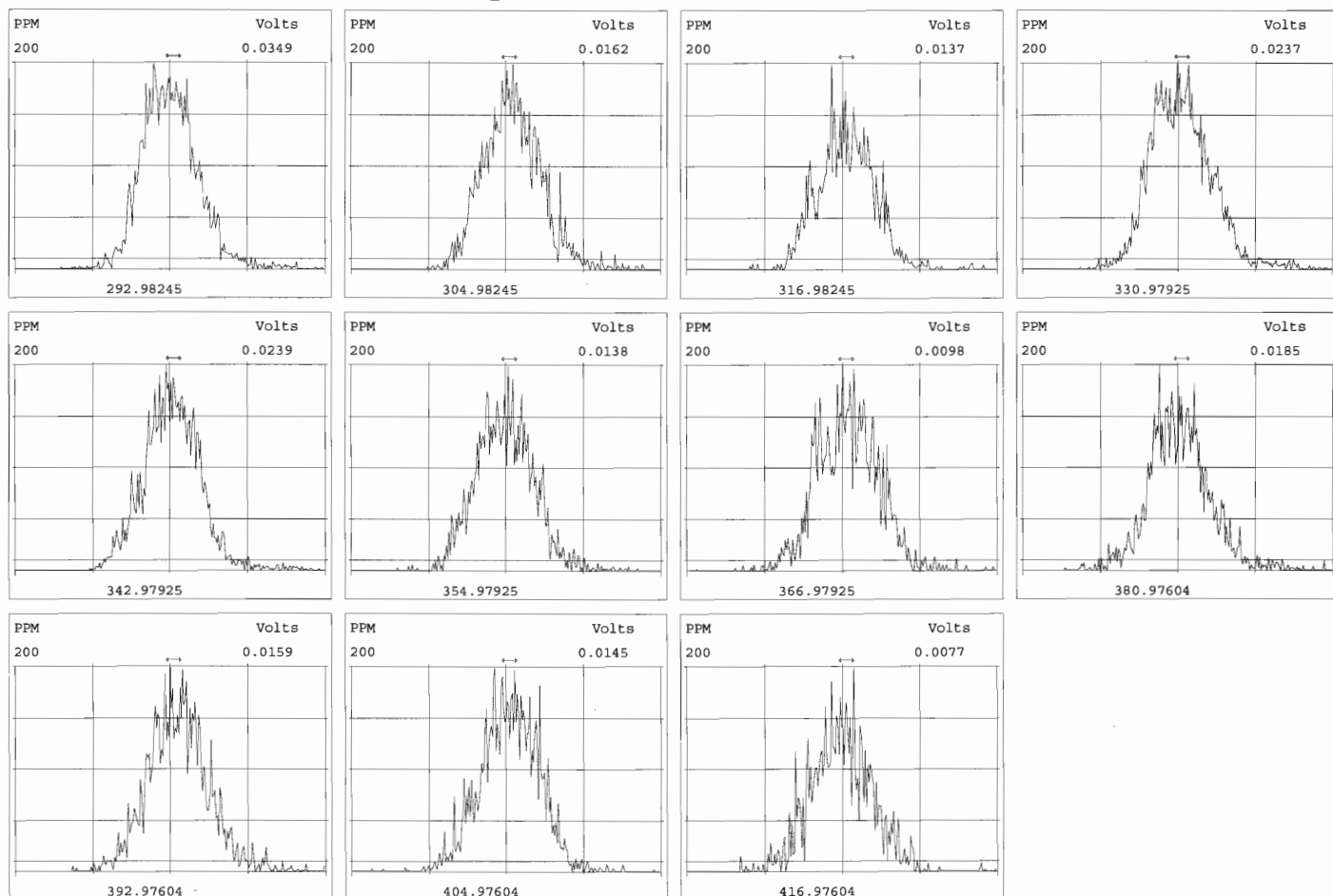


513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



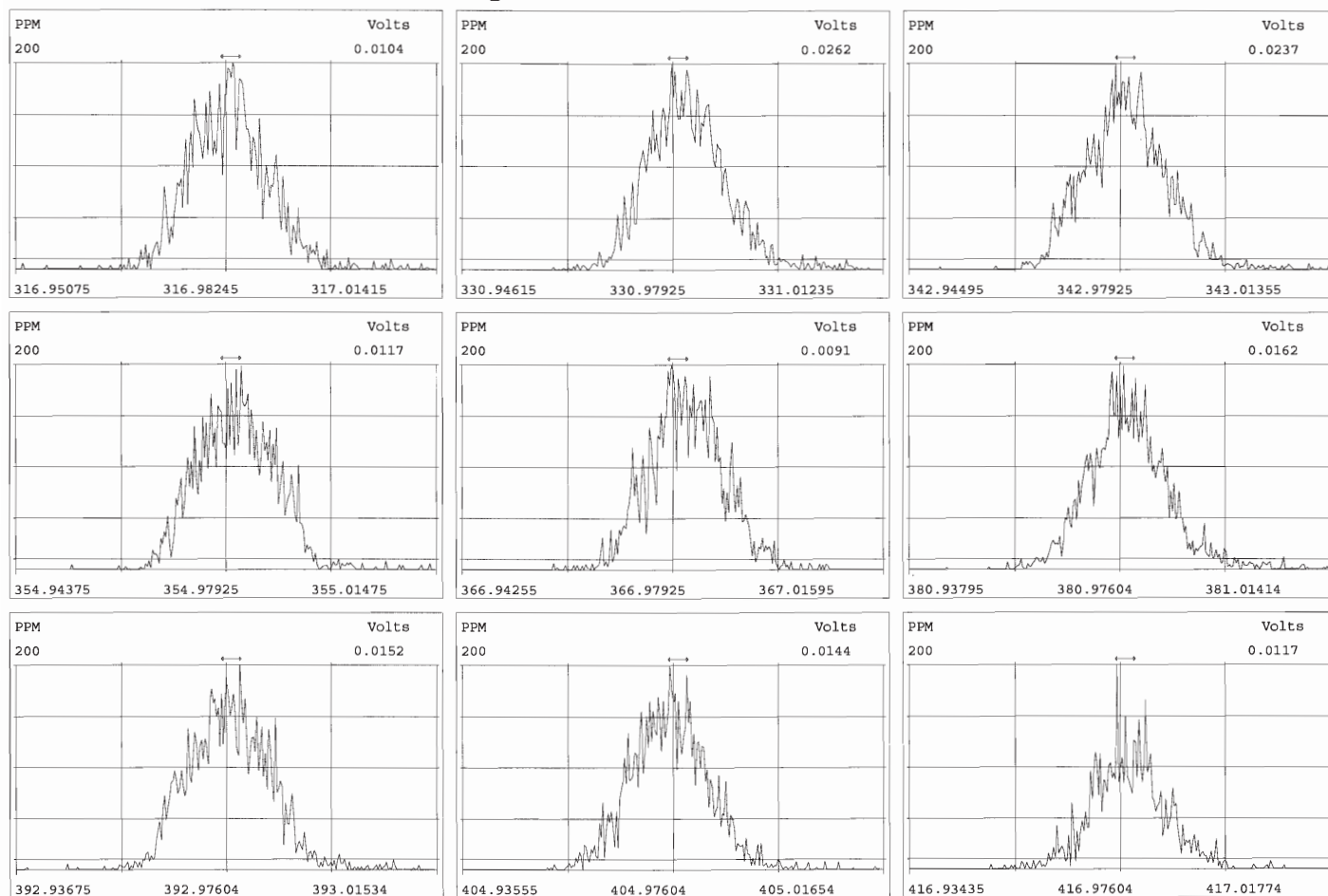
Peak Locate Examination:13-JUL-2016:03:49 File:RES_CHECK

Experiment:OCDD_DB5 Function:1 Reference:PFK



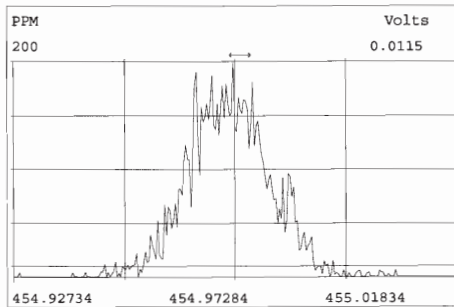
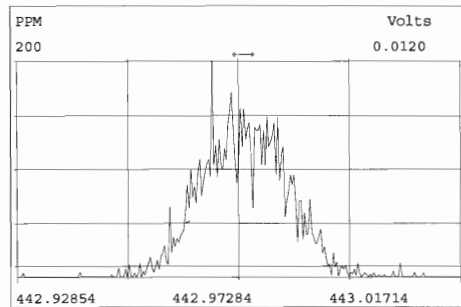
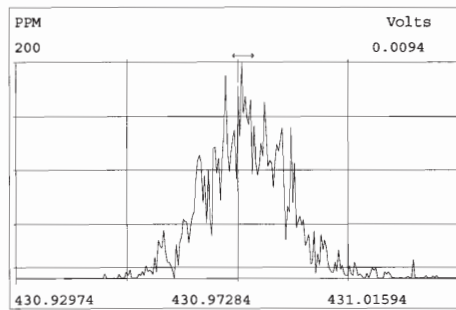
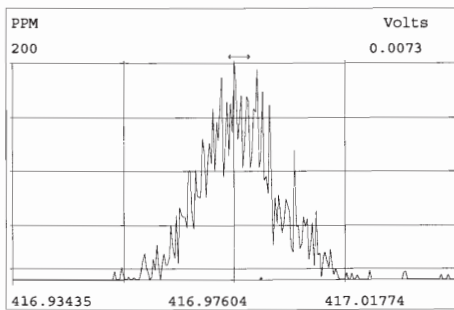
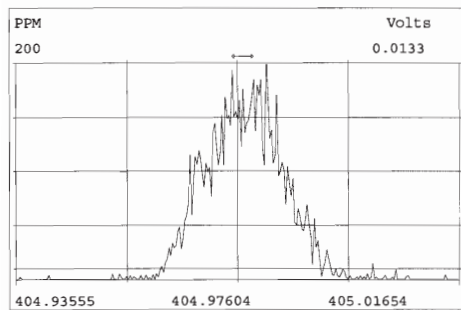
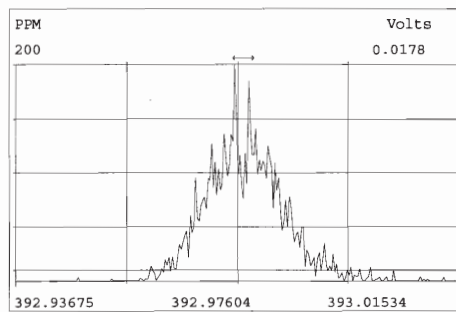
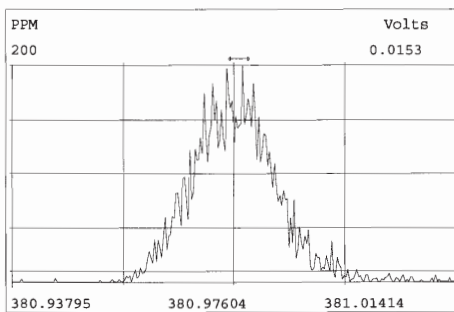
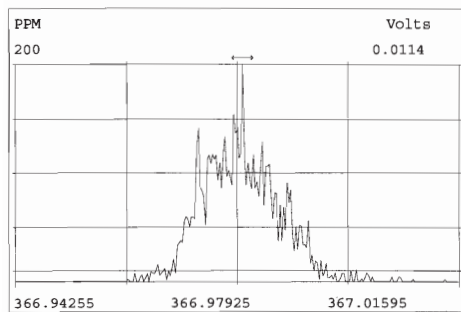
Peak Locate Examination:13-JUL-2016:03:50 File:RES_CHECK

Experiment:OCDD_DB5 Function:2 Reference:PFK



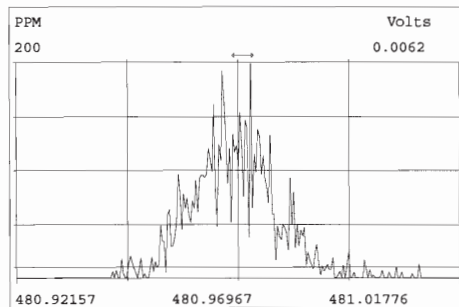
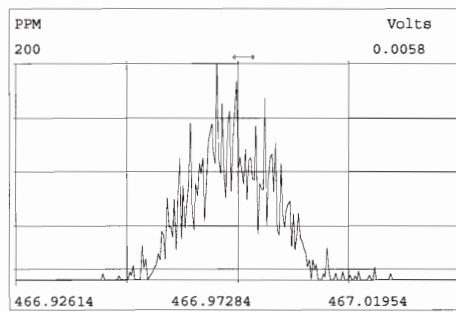
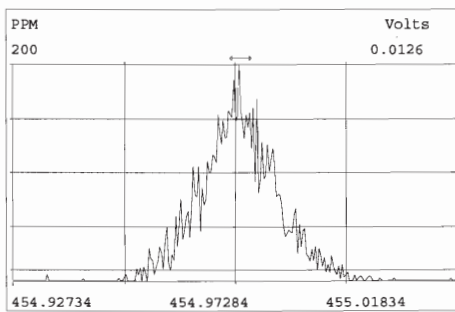
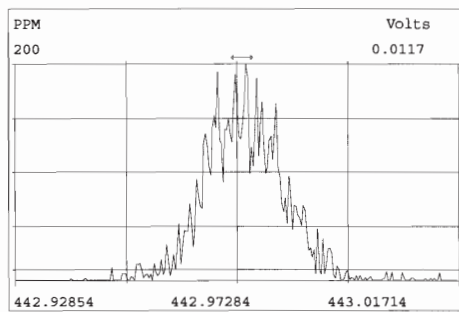
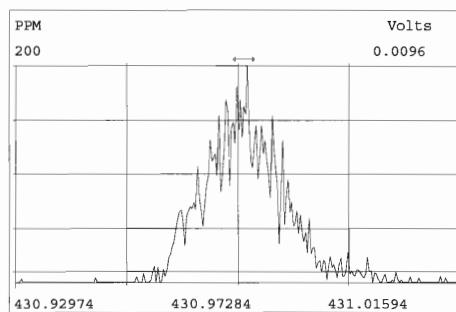
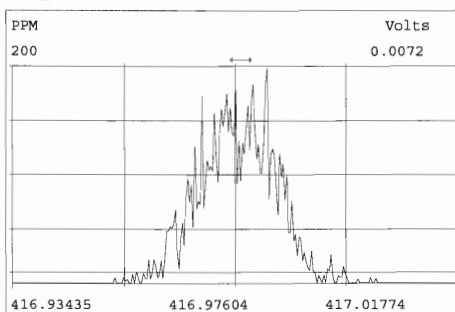
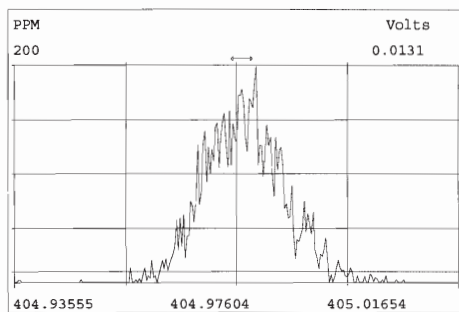
Peak Locate Examination:13-JUL-2016:03:51 File:RES_CHECK

Experiment:OCDD_DB5 Function:3 Reference:PFK

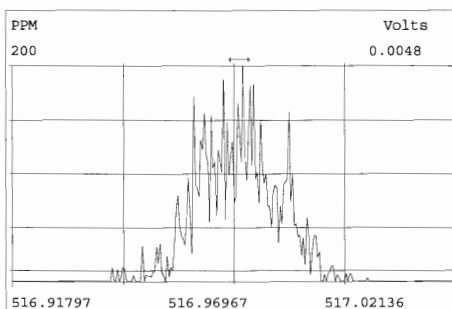
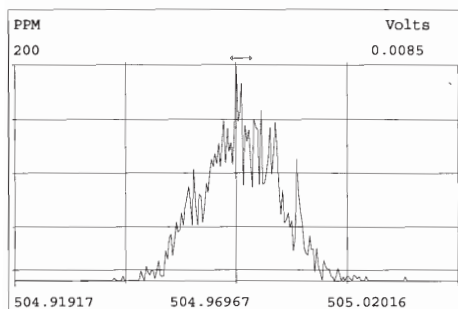
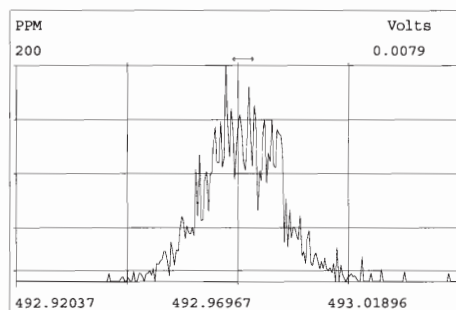
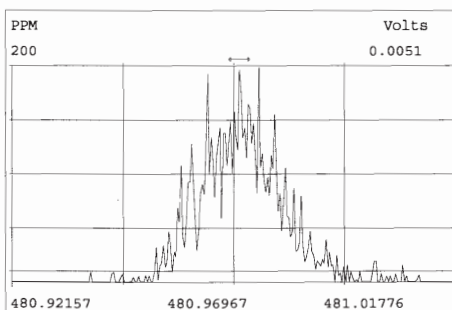
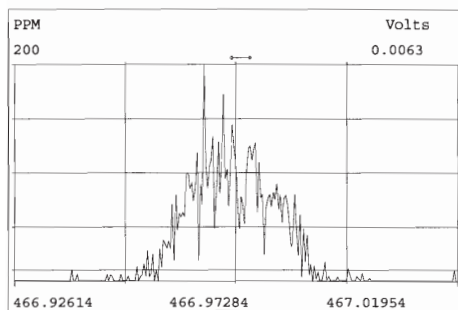
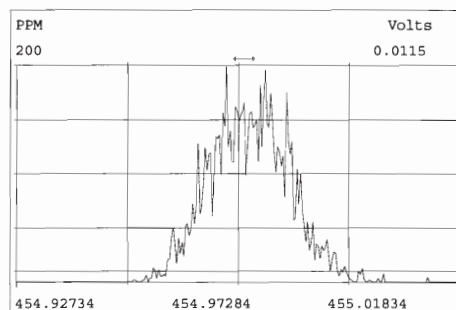
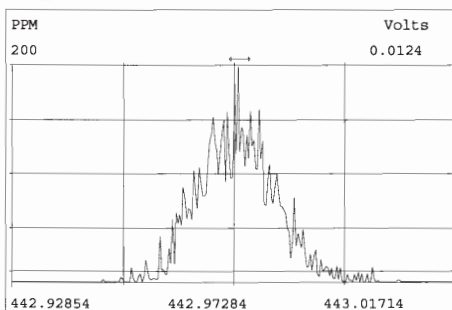
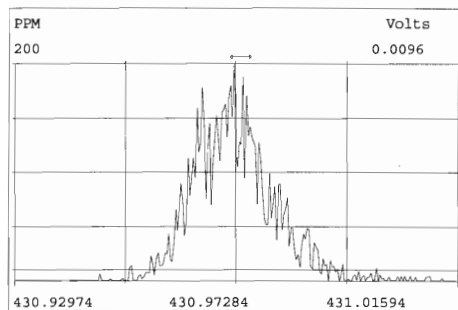


Peak Locate Examination:13-JUL-2016:03:52 File:RES_CHECK

Experiment:OCDD_DB5 Function:4 Reference:PFK



Peak Locate Examination:13-JUL-2016:03:53 File:RES_CHECK
Experiment:OCDD_DB5 Function:5 Reference:PFK



FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

CCAL ID: ST160713D1-1

Contract No.: SAS No.:

Initial Calibration Date: 4-7-16

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 160713D1 S#1 Analysis Date: 13-JUL-16 Time: 09:07:08

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	y	10.7	7.8 - 12.9
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	51.0	8.2 - 12.3 (4) 39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	50.1	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	52.2	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.19	1.05-1.43	y	51.8	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	50.2	43.0 - 58.0
OCDD	M+2/M+4	0.87	0.76-1.02	y	102	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.85	0.65-0.89	y	9.57	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	52.0	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	51.3	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.21	1.05-1.43	y	49.2	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	51.6	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	49.4	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	50.5	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.01	0.88-1.20	y	49.7	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.00	0.88-1.20	y	52.4	43.0 - 58.0
OCDF	M+2/M+4	0.93	0.76-1.02	y	104	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: DB

Date: 7/13/16

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 4-7-16

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 160713D1 S#1 Analysis Date: 13-JUL-16 Time: 09:07:08

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	y	104	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	86.3	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.31	1.05-1.43	y	100	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.30	1.05-1.43	y	95.8	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.33	1.05-1.43	y	99.7	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	83.5	72.0 - 138.0
13C-OCDD	M/M+2	0.91	0.76-1.02	y	161	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.82	0.65-0.89	y	109	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.63	1.32-1.78	y	90.1	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.63	1.32-1.78	y	89.4	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	93.8	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	93.6	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	104	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.54	0.43-0.59	y	104	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.43	0.37-0.51	y	95.7	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.45	0.37-0.51	y	86.4	77.0 - 129.0
13C-OCDF	M+2/M+4	0.89	0.76-1.02	y	165	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					9.93	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: DK

Date: 7/13/16

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 4-7-16

RT Window Data Filename: 160713D1 S#1 Analysis Date: 13-JUL-16 Time: 09:07:08

ZB-5MS IS Data Filename: 160713D1 S#1 Analysis Date: 13-JUL-16 Time: 09:07:08

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	22:36	1,3,6,8-TCDF (F)	20:24
1,2,8,9-TCDD (L)	27:21	1,2,8,9-TCDF (L)	27:31
1,2,4,7,9-PeCDD (F)	29:02	1,3,4,6,8-PeCDF (F)	27:26
1,2,3,8,9-PeCDD (L)	31:33	1,2,3,8,9-PeCDF (L)	31:48
1,2,4,6,7,9-HxCDD (F)	32:57	1,2,3,4,6,8-HxCDF (F)	32:25
1,2,3,7,8,9-HxCDD (L)	34:52	1,2,3,7,8,9-HxCDF (L)	35:15
1,2,3,4,6,7,9-HpCDD (F)	37:24	1,2,3,4,6,7,8-HpCDF (F)	37:00
1,2,3,4,6,7,8-HpCDD (L)	38:23	1,2,3,4,7,8,9-HpCDF (L)	38:56

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

<25%

(1) To meet contract requirements, %Valley Height Between Compared
Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: DBDate: 7/13/16

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 4-7-16

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 160713D1 S#1 Analysis Date: 13-JUL-16 Time: 09:07:08

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002

(1) Contract-required limits for
Relative Retention Times (RRT)
as specified in Table 2, Method 1613. 10/94

LABELED COMPOUNDS

13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.024	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.209	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.161	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.198	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.025	0.989-1.052

Analyst: DBDate: 7/15/16

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 4-7-16

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 160713D1 S#1 Analysis Date: 13-JUL-16 Time: 09:07:08

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001

(1) Contract-required limits for
Relative Retention Times (RRT)
as specified in Table 2, Method 1613. 10/94

LABELED COMPOUNDS

13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.037	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.025	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.089	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.145	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.129	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.224	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.230	1.091-1.371

Analyst: DK

Date: 7/13/16

Client ID: 1613 CS3 16C3101 Filename: 160713D1 S:1 Acq:13-JUL-16 09:07:08 ConCal: ST160713D1-1 Page 1 of 1
 Lab ID: ST160713D1-1 GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16 wt/vol: 1.000 EndCAL: NA

	Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
	2,3,7,8-TCDD	6.93e+05	0.81 y	1.13	26:26	1.001	10.720		*	2.5	*	Total Tetra-Dioxins	58.0	59.3		*	*
	1,2,3,7,8-PeCDD	2.54e+06	0.63 y	0.96	31:10	1.001	50.999		*	2.5	*	Total Penta-Dioxins	159	160		*	*
	1,2,3,4,7,8-HxCDD	2.70e+06	1.23 y	1.00	34:27	1.000	50.137		*	2.5	*	Total Hexa-Dioxins	199	200		*	*
	1,2,3,6,7,8-HxCDD	2.96e+06	1.23 y	1.10	34:34	1.000	52.250		*	2.5	*	Total Hepta-Dioxins	136	138		*	*
	1,2,3,7,8,9-HxCDD	2.83e+06	1.19 y	1.05	34:52	1.000	51.837		*	2.5	*	Total Tetra-Furans	30.5	31.3		*	*
	1,2,3,4,6,7,8-HpCDD	2.18e+06	1.05 y	1.05	38:23	1.000	50.243		*	2.5	*	Total Penta-Furans	204.82	206.65		*	*
	OCDD	3.88e+06	0.87 y	0.96	41:36	1.000	102.18		*	2.5	*	Total Hexa-Furans	248	250		*	*
												Total Hepta-Furans	103	105		*	*
	2,3,7,8-TCDF	9.36e+05	0.85 y	1.12	25:36	1.001	9.5737		*	2.5	*						
	1,2,3,7,8-PeCDF	4.13e+06	1.57 y	1.01	29:57	1.001	52.027		*	2.5	*						
	2,3,4,7,8-PeCDF	4.22e+06	1.61 y	0.90	30:53	1.001	51.307		*	2.5	*						
	1,2,3,4,7,8-HxCDF	4.05e+06	1.21 y	1.16	33:35	1.001	49.226		*	2.5	*						
	1,2,3,6,7,8-HxCDF	4.56e+06	1.25 y	1.16	33:43	1.000	51.622		*	2.5	*						
	2,3,4,6,7,8-HxCDF	4.47e+06	1.23 y	1.23	34:19	1.000	49.437		*	2.5	*						
	1,2,3,7,8,9-HxCDF	3.66e+06	1.27 y	1.13	35:15	1.001	50.453		*	2.5	*						
	1,2,3,4,6,7,8-HpCDF	3.56e+06	1.01 y	1.44	37:00	1.000	49.749		*	2.5	*						
	1,2,3,4,7,8,9-HpCDF	3.18e+06	1.00 y	1.31	38:56	1.000	52.359		*	2.5	*						
	OCDF	5.45e+06	0.93 y	1.03	41:49	1.000	104.46		*	2.5	*						
												Rec	Qual				
IS	13C-2,3,7,8-TCDD	5.72e+06	0.78 y	1.01	26:24	1.024	103.97					104					
IS	13C-1,2,3,7,8-PeCDD	5.18e+06	0.63 y	1.10	31:09	1.209	86.285					86.3					
IS	13C-1,2,3,4,7,8-HxCDD	5.37e+06	1.31 y	0.72	34:27	1.014	100.13					100					
IS	13C-1,2,3,6,7,8-HxCDD	5.18e+06	1.30 y	0.73	34:33	1.017	95.798					95.8					
IS	13C-1,2,3,7,8,9-HxCDD	5.20e+06	1.33 y	0.70	34:51	1.025	99.692					99.7					
IS	13C-1,2,3,4,6,7,8-HpCDD	4.13e+06	1.03 y	0.66	38:22	1.129	83.495					83.5					
IS	13C-OCDD	7.91e+06	0.91 y	0.66	41:35	1.224	161.03					80.5					
IS	13C-2,3,7,8-TCDF	8.74e+06	0.82 y	0.90	25:34	0.992	108.77					109					
IS	13C-1,2,3,7,8-PeCDF	7.89e+06	1.63 y	0.98	29:56	1.161	90.150					90.1					
IS	13C-2,3,4,7,8-PeCDF	9.14e+06	1.63 y	1.15	30:52	1.198	89.435					89.4					
IS	13C-1,2,3,4,7,8-HxCDF	7.08e+06	0.52 y	1.01	33:34	0.988	93.842					93.8					
IS	13C-1,2,3,6,7,8-HxCDF	7.65e+06	0.52 y	1.10	33:42	0.992	93.642					93.6					
IS	13C-2,3,4,6,7,8-HxCDF	7.38e+06	0.51 y	0.95	34:18	1.009	104.27					104					
IS	13C-1,2,3,7,8,9-HxCDF	6.41e+06	0.54 y	0.83	35:14	1.037	104.23					104					
IS	13C-1,2,3,4,6,7,8-HpCDF	4.98e+06	0.43 y	0.70	36:60	1.089	95.730					95.7					
IS	13C-1,2,3,4,7,8,9-HpCDF	4.63e+06	0.45 y	0.72	38:55	1.145	86.443					86.4					
IS	13C-OCDF	1.01e+07	0.89 y	0.82	41:48	1.230	165.17					82.6					
C/Up	37Cl-2,3,7,8-TCDD	6.15e+05		1.14	26:26	1.025	9.9323					99.3					
RS/RT	13C-1,2,3,4-TCDD	5.44e+06	0.80 y	1.00	25:46	*	100.00										
RS	13C-1,2,3,4-TCDF	8.92e+06	0.83 y	1.00	24:11	*	100.00										
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.43e+06	0.51 y	1.00	33:59	*	100.00										
												Integrations	Reviewed				
												by	by				
												Analyst: <u>DB</u>	Analyst: _____				
												Date: <u>7/13/16</u>	Date: _____				

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
160713D1	1	ST160713D1-1	DB	13-JUL-16	09:07:08	ST160713D1-1	NA
160713D1	2	SOLVENT BLANK	DB	13-JUL-16	09:55:39	ST160713D1-1	NA
160713D1	3	B6G0040-MSD1	DB	13-JUL-16	10:44:12	ST160713D1-1	NA
160713D1	4	B6G0039-MS2	DB	13-JUL-16	11:32:44	ST160713D1-1	NA
160713D1	5	B6G0039-MSD2	DB	13-JUL-16	12:21:17	ST160713D1-1	NA
160713D1	6	B6G0039-MS1	DB	13-JUL-16	13:09:55	ST160713D1-1	NA
160713D1	7	B6G0039-MSD1	DB	13-JUL-16	13:58:30	ST160713D1-1	NA
160713D1	8	SOLVENT BLANK	DB	13-JUL-16	14:47:03	ST160713D1-1	NA

CALIBRATION STANDARDS REVIEW CHECKLIST



Beg. Calibration ID: ST160713D1-1

End Calibration ID: NA

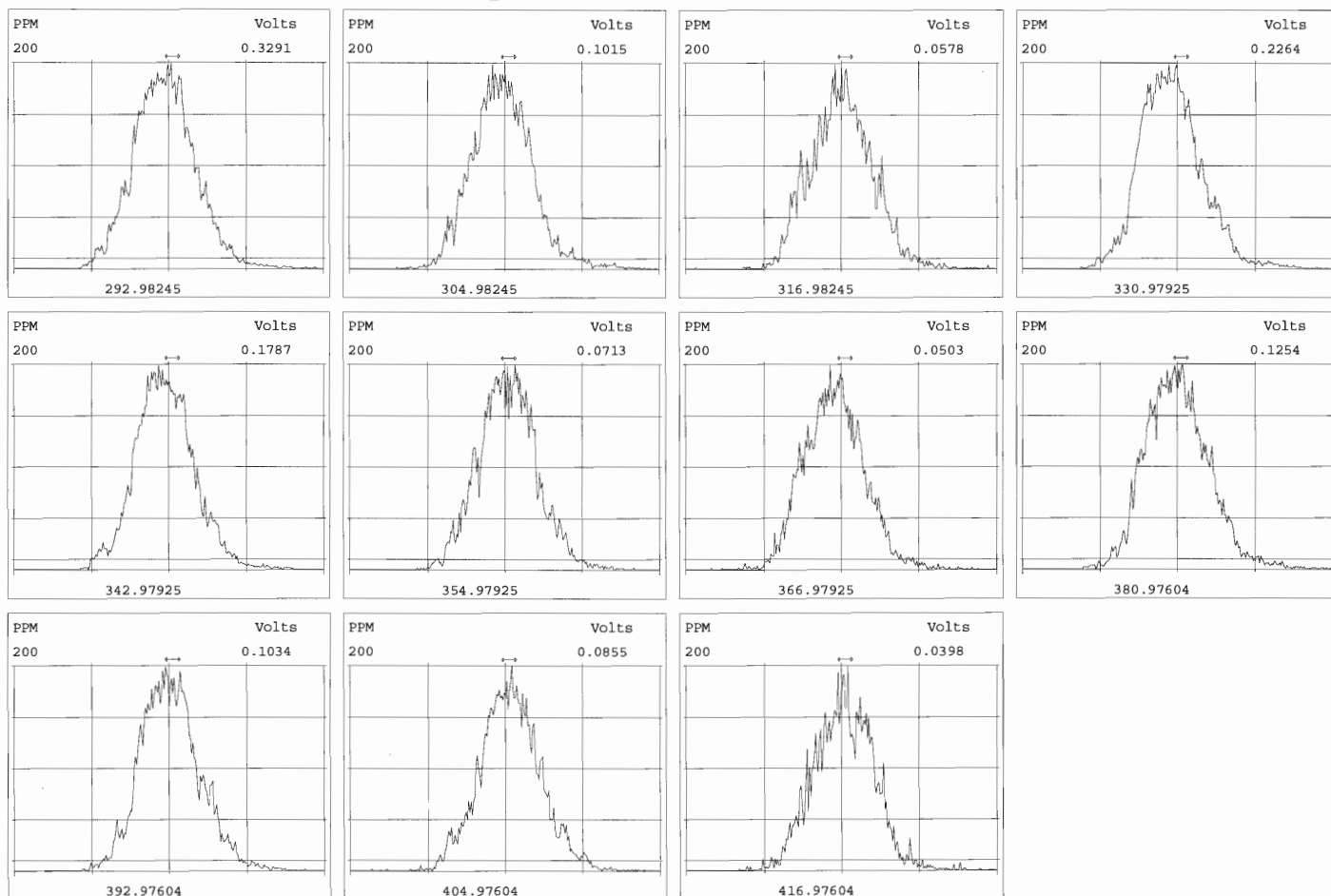
	<u>Beg.</u>	<u>End</u>		<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA	Mass resolution > 10,000?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Concentration within range?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▪ Method 1614 > 5,000; CARB 429 > 8,000	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
First and last eluters present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TCDD/TCDF valleys < 25%?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Retention Times within criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Peaks integrated correctly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	<input type="checkbox"/>	<input type="checkbox"/>	Manual integrations included?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Forms signed and dated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8280 CS1 Ending Standard		<input type="checkbox"/>
Correct ICAL referenced?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-Ratios within limits		<input type="checkbox"/>
Run Log:			-S/N > 2.5:1		<input type="checkbox"/>
-Data file matches Conc Cal ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-CS1 within 12-hour clock		<input checked="" type="checkbox"/>
-Correct instrument listed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Comments:		
-Samples within 12-hour clock?	<input checked="" type="checkbox"/> y	<input type="checkbox"/> n			

Reviewed by: mh 7/14/16
Initials & Date

* Ending standard criteria applicable to 8290 only.

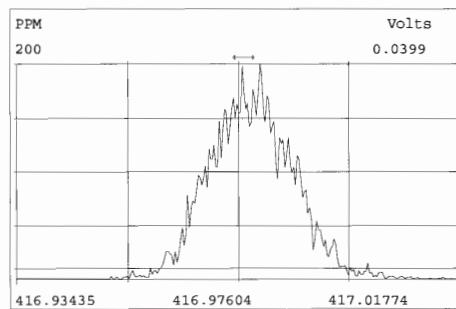
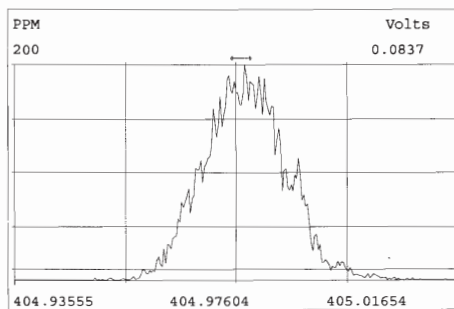
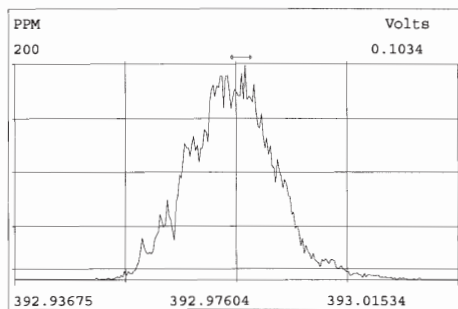
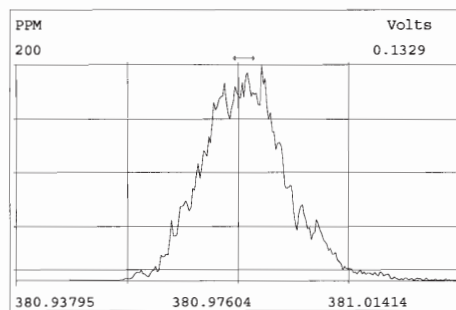
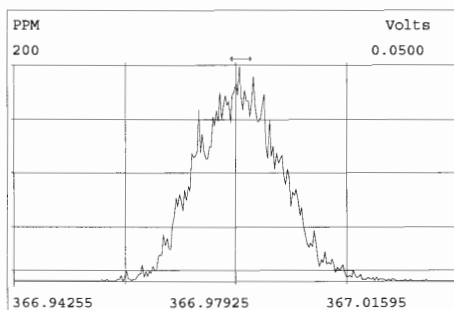
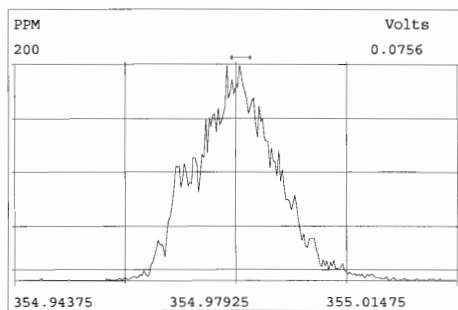
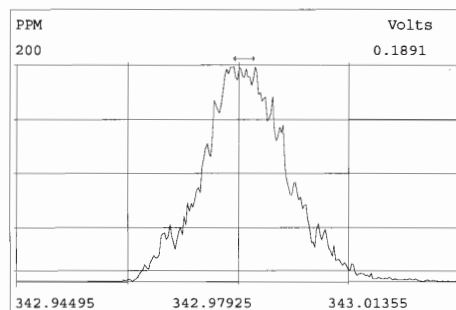
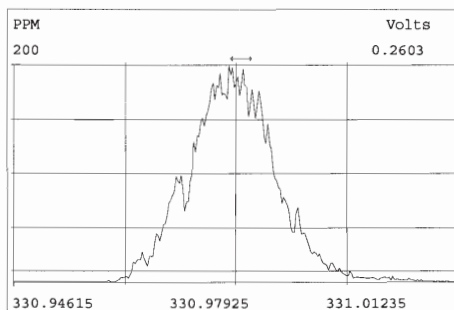
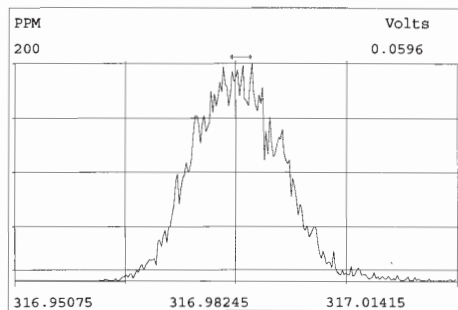
Peak Locate Examination:13-JUL-2016:09:04 File:160713D1

Experiment:OCDD_DB5 Function:1 Reference:PFK

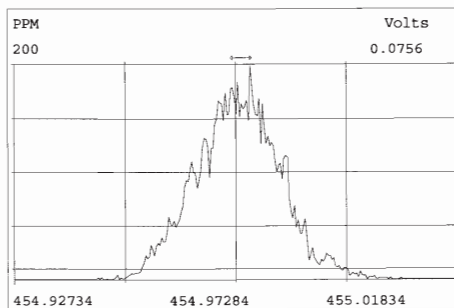
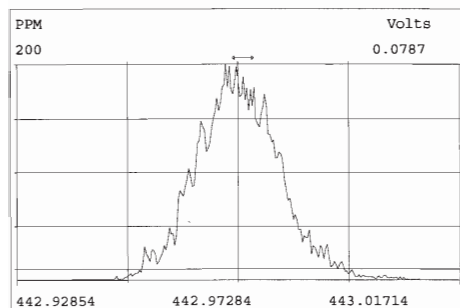
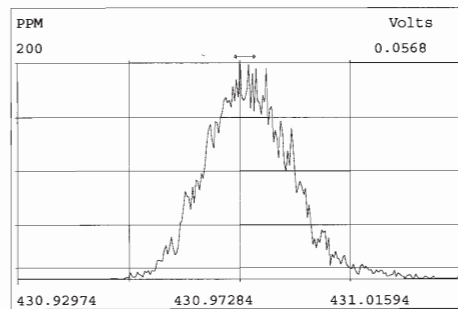
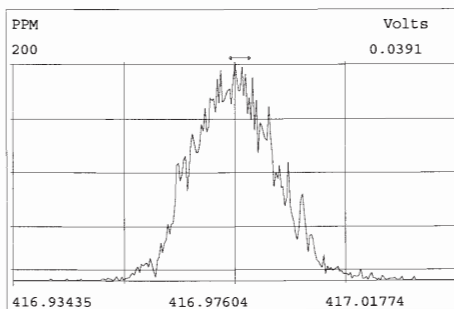
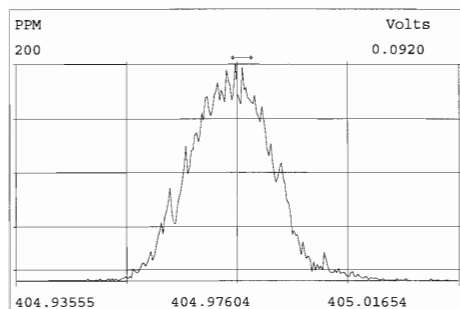
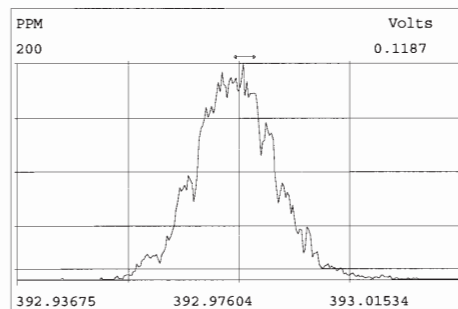
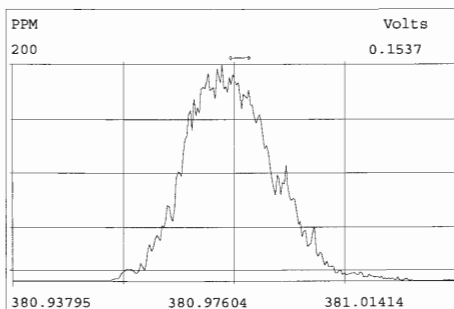
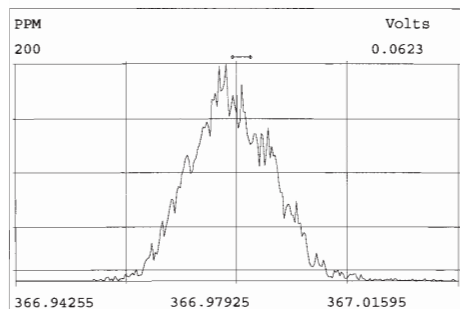


Peak Locate Examination:13-JUL-2016:09:04 File:160713D1

Experiment:OCDD_DB5 Function:2 Reference:PFK

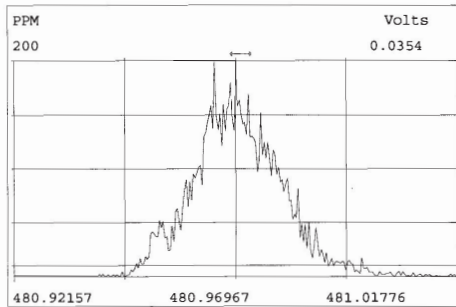
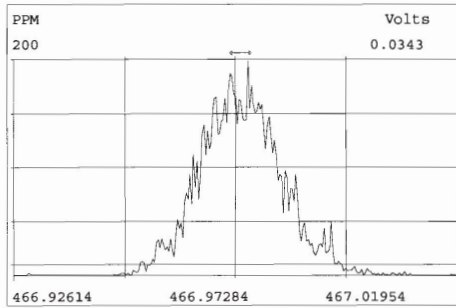
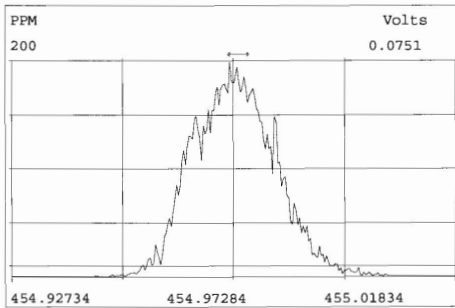
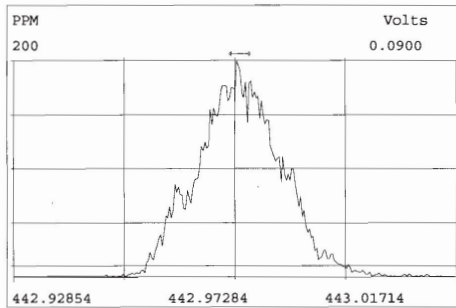
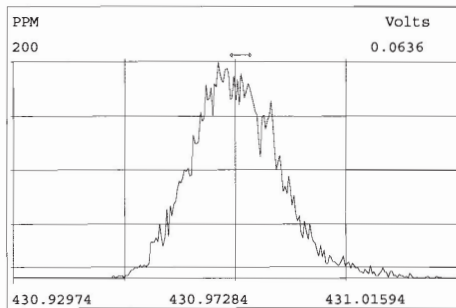
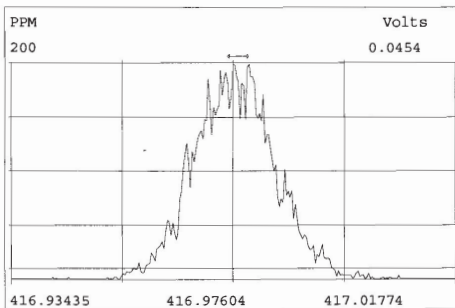
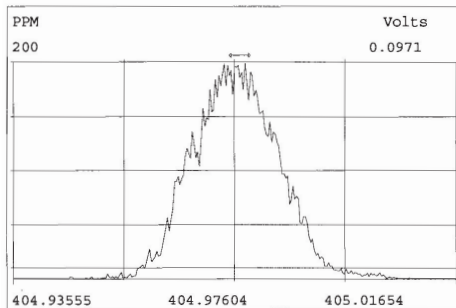


Peak Locate Examination:13-JUL-2016:09:05 File:160713D1
Experiment:OCDD_DB5 Function:3 Reference:PFK

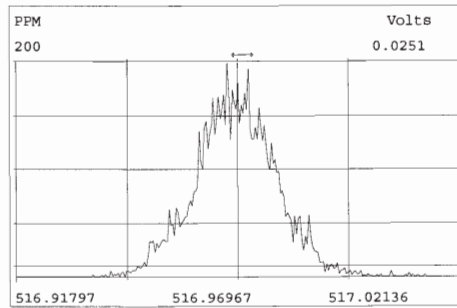
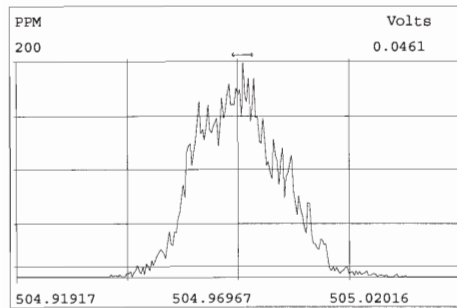
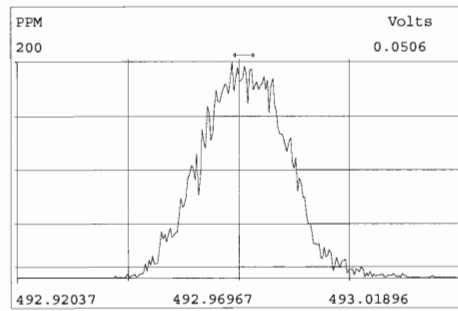
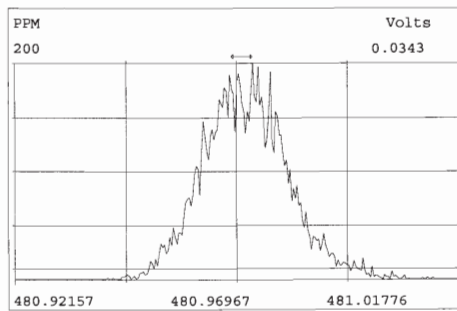
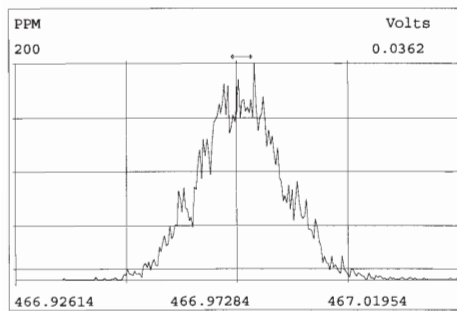
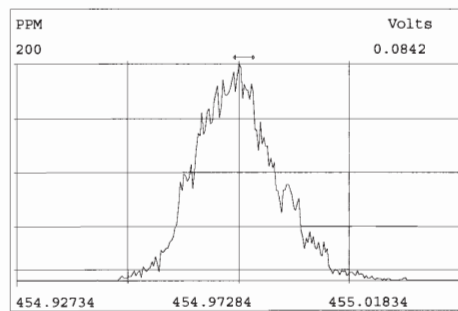
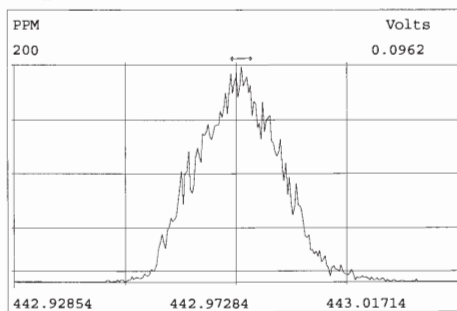
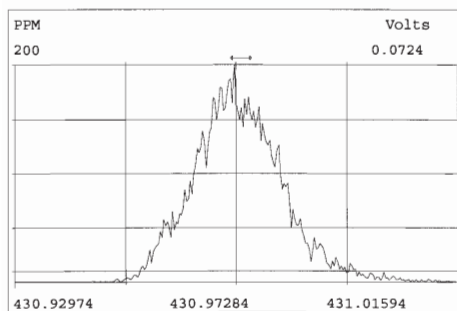


Peak Locate Examination:13-JUL-2016:09:05 File:160713D1

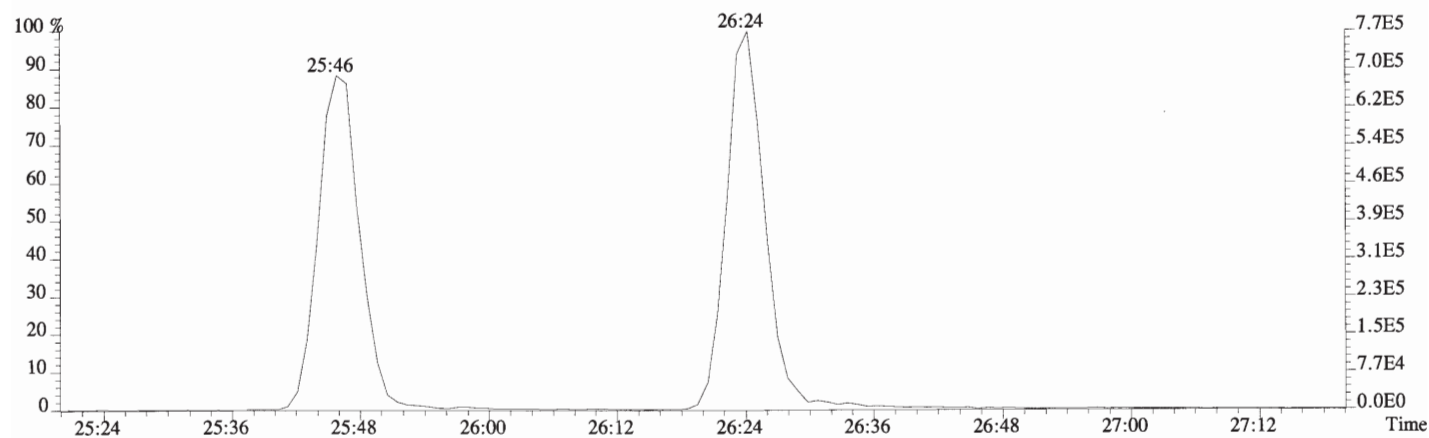
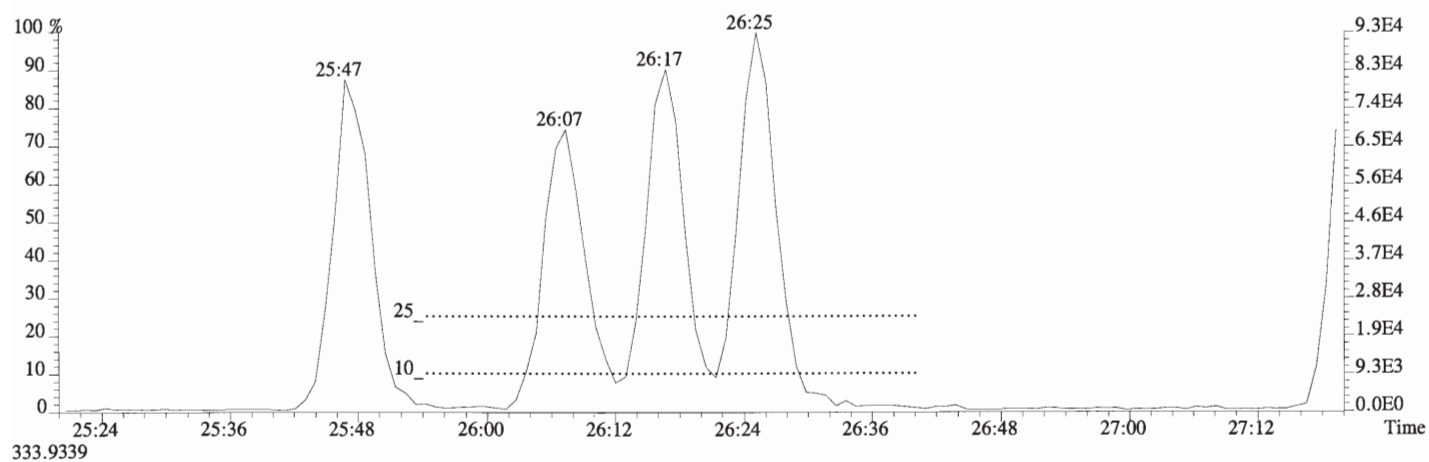
Experiment:OCDD_DB5 Function:4 Reference:PFK



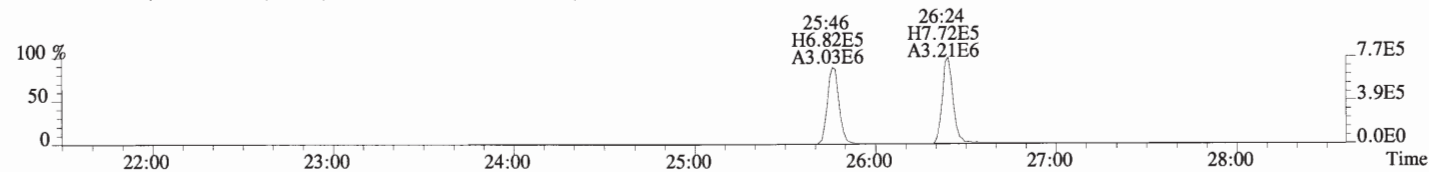
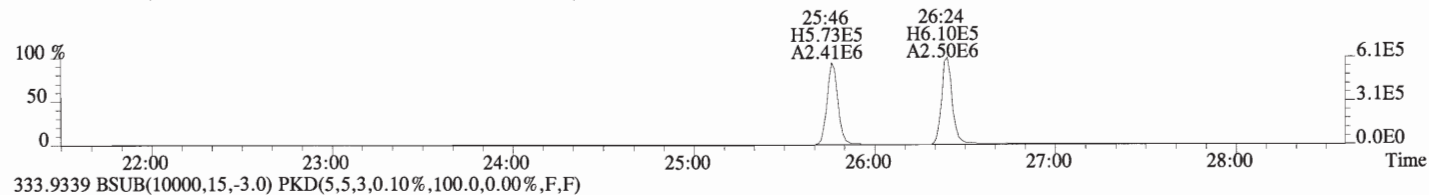
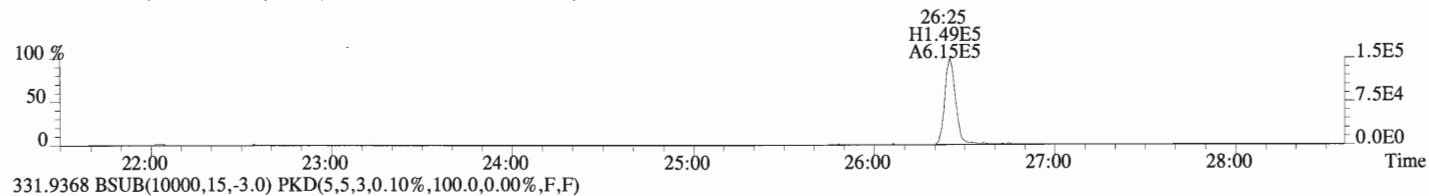
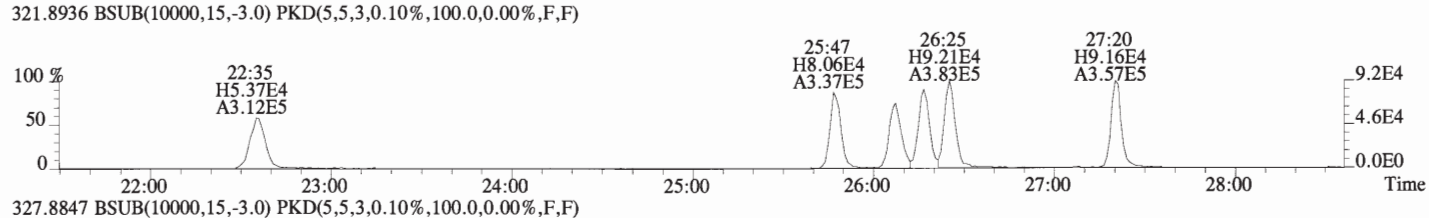
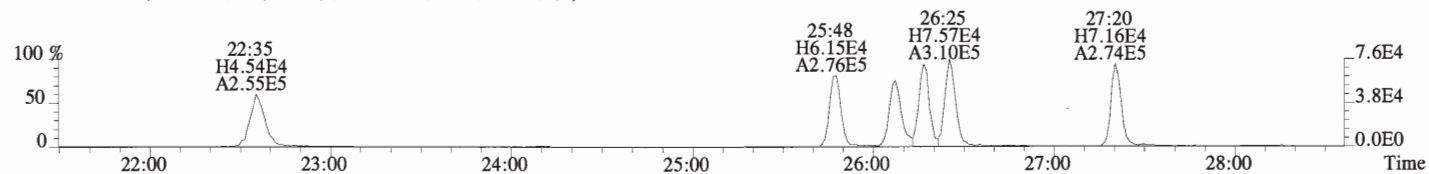
Peak Locate Examination:13-JUL-2016:09:06 File:160713D1
Experiment:OCDD_DB5 Function:5 Reference:PFK



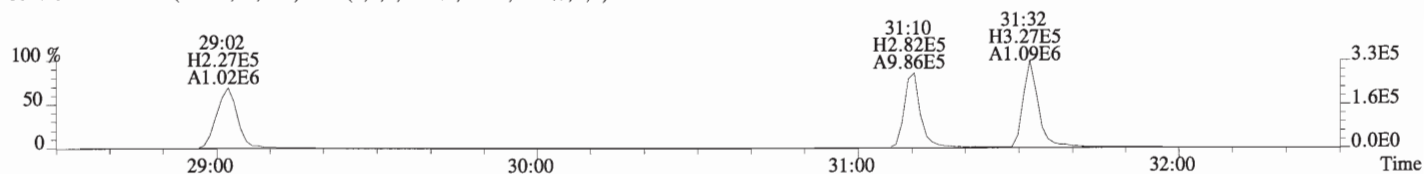
File:160713D1 #1-551 Acq:13-JUL-2016 09:07:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160713D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
321.8936



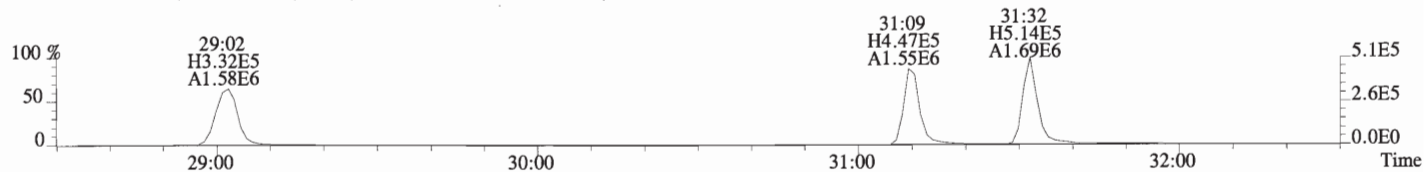
File:160713D1 #1-551 Acq:13-JUL-2016 09:07:08 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160713D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



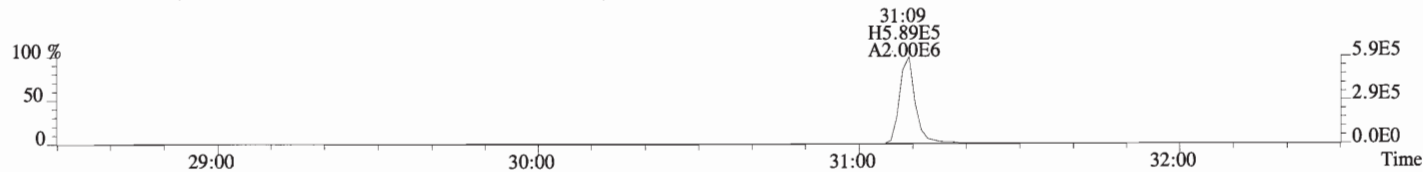
File:160713D1 #1-193 Acq:13-JUL-2016 09:07:08 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160713D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



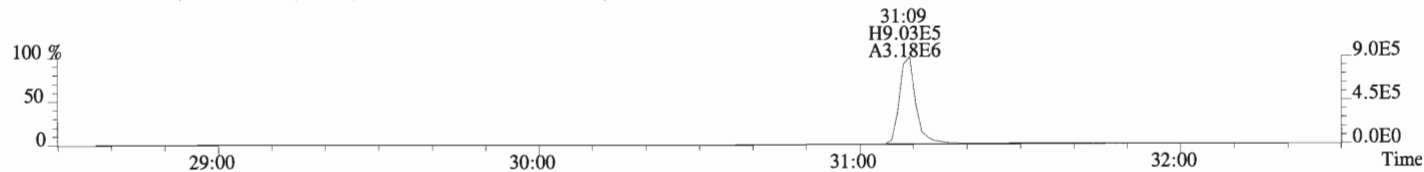
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



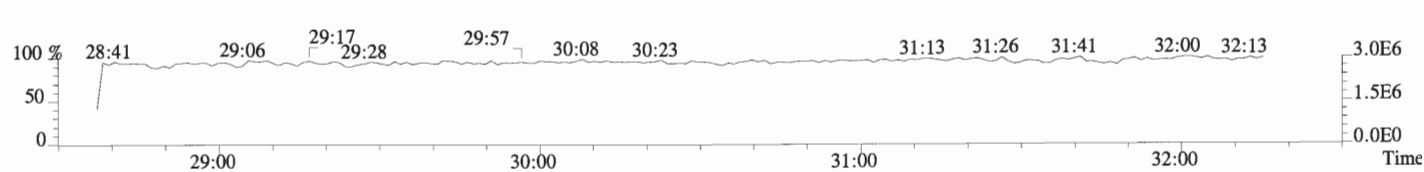
365.8978 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



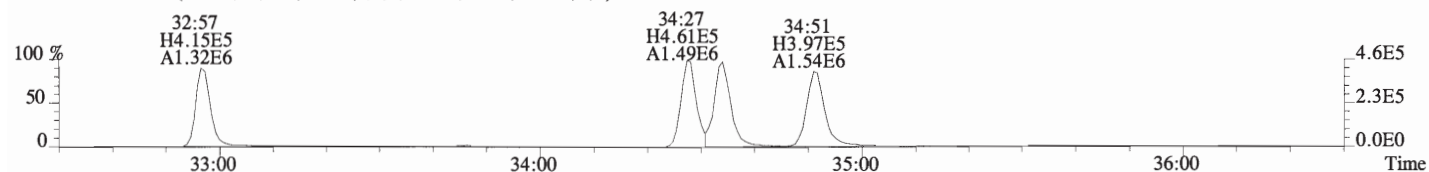
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



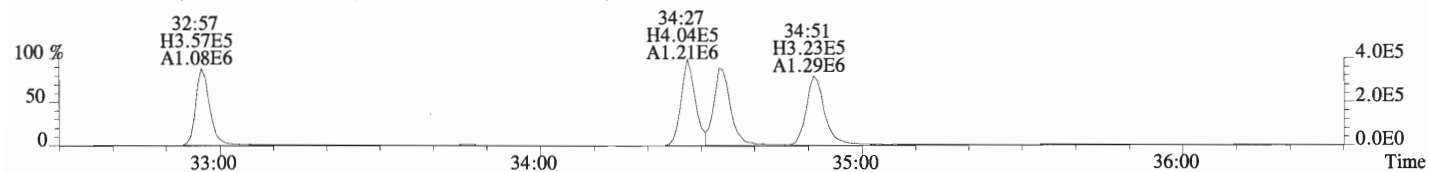
366.9792 F:2



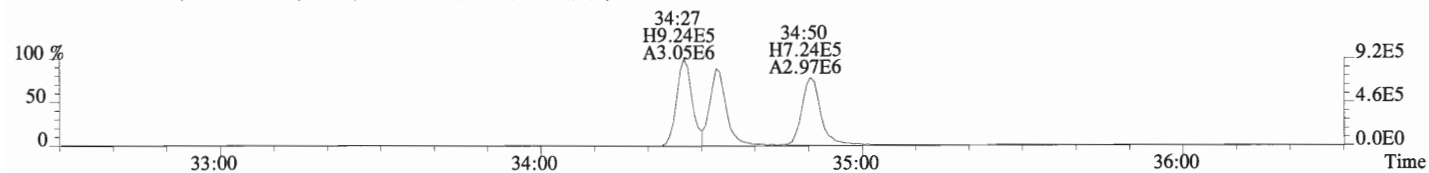
File:160713D1 #1-407 Acq:13-JUL-2016 09:07:08 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160713D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



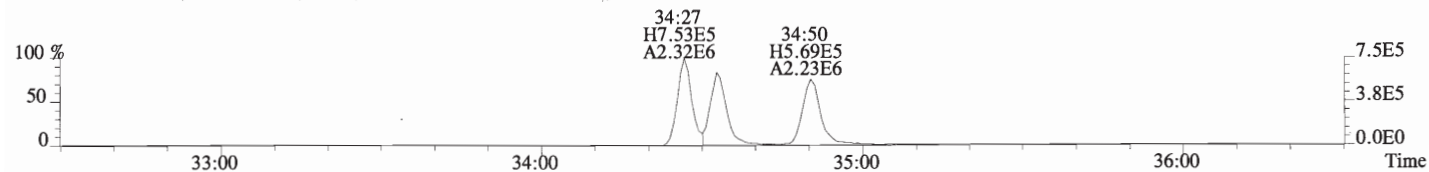
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



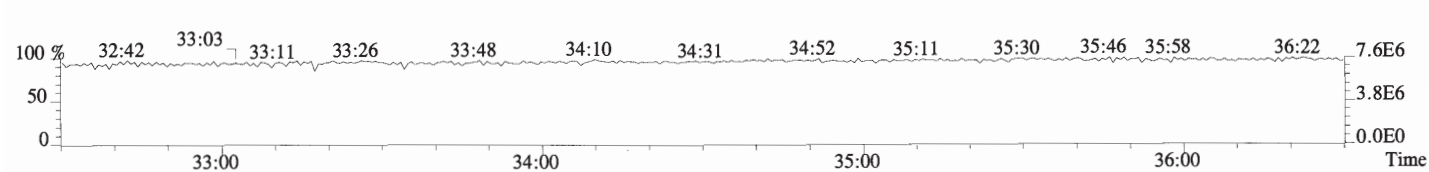
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



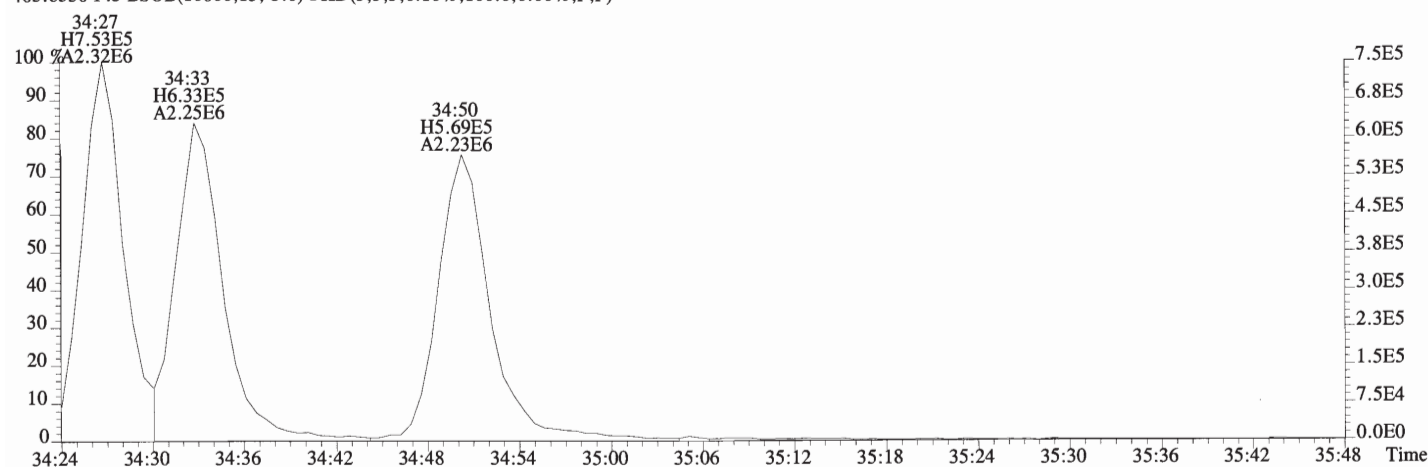
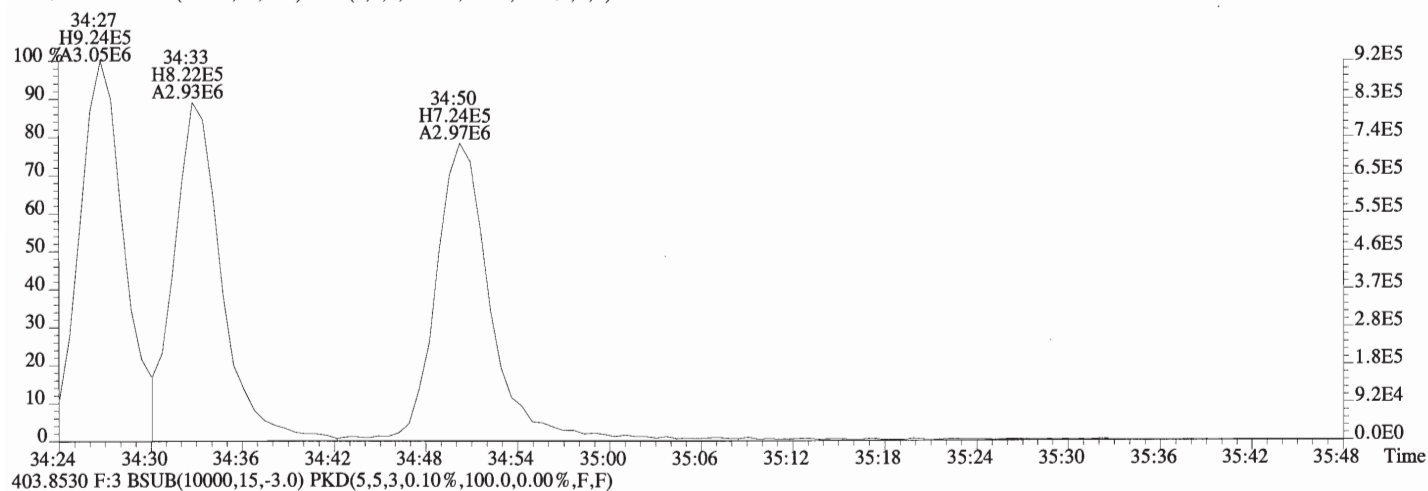
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



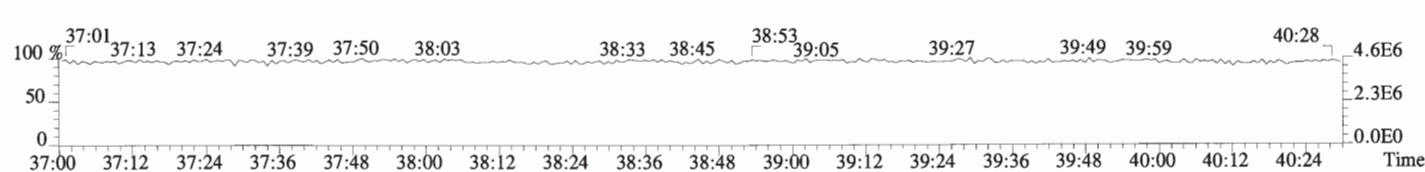
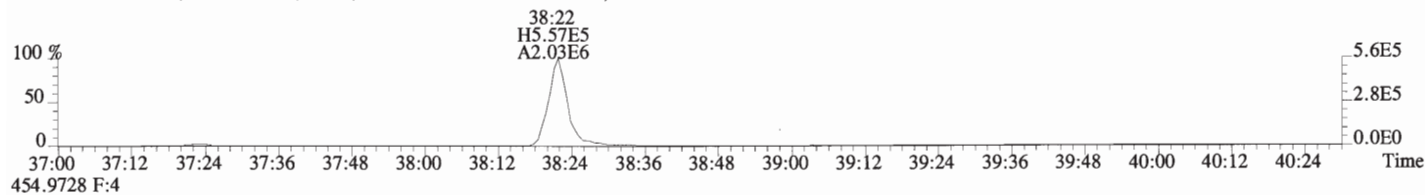
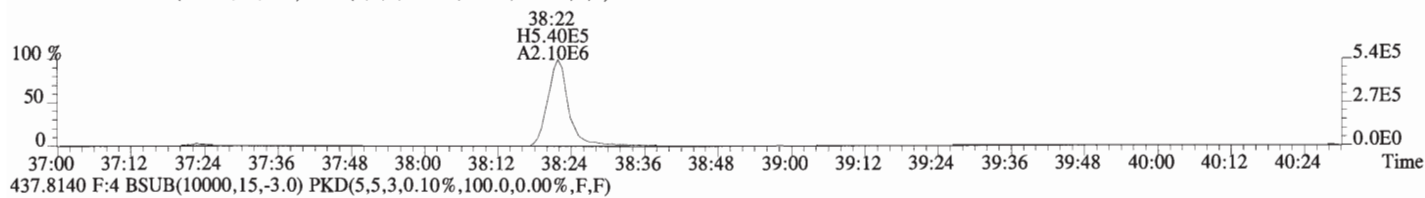
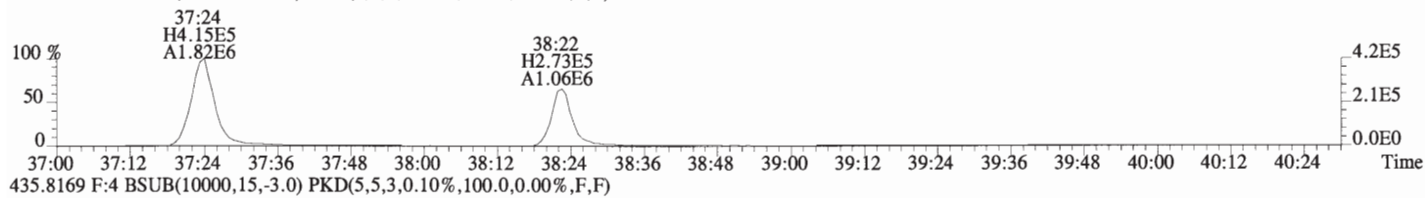
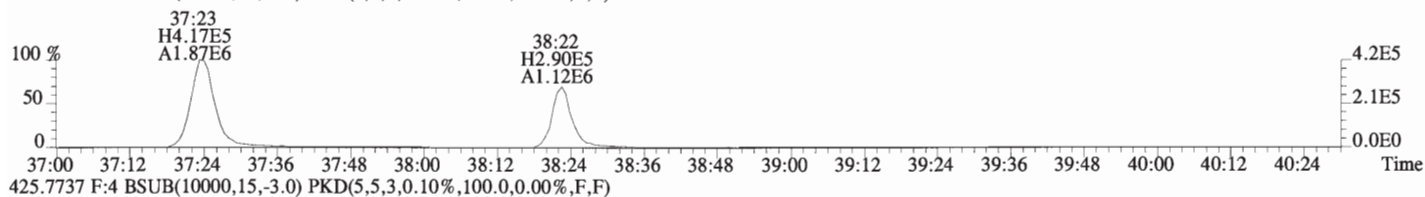
392.9760 F:3



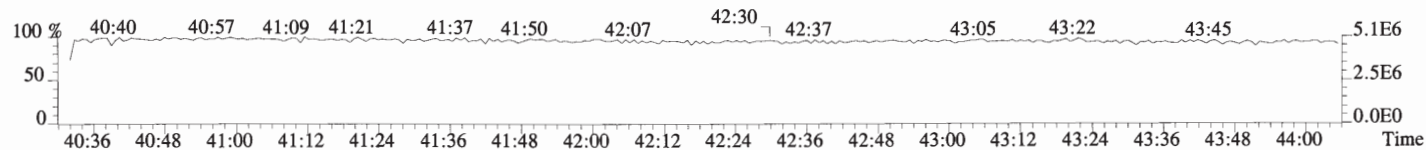
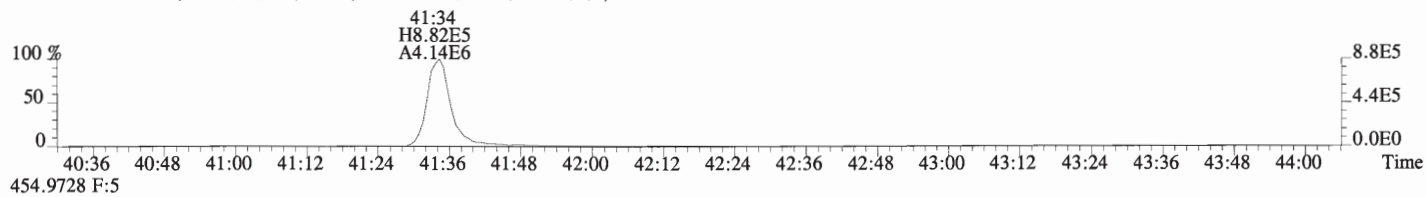
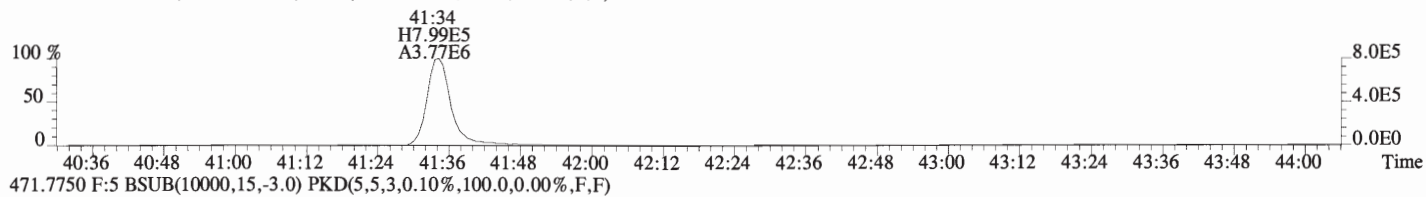
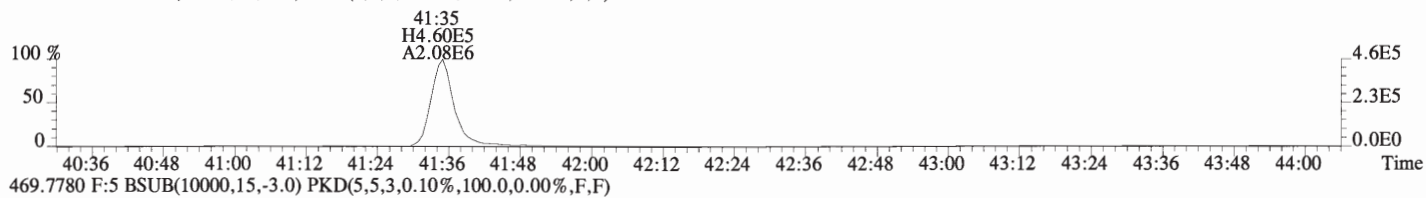
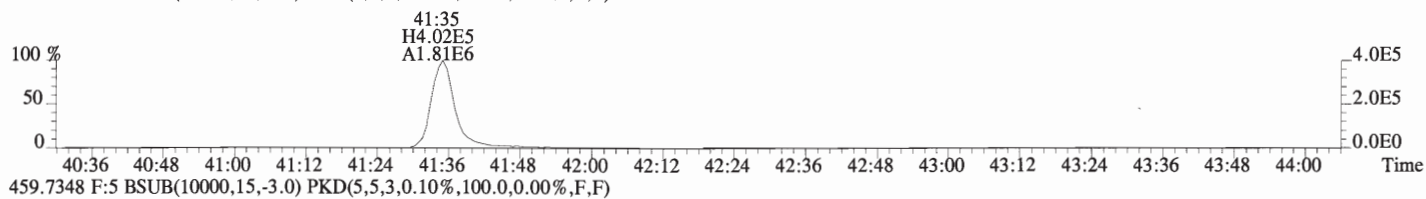
File:160713D1 #1-407 Acq:13-JUL-2016 09:07:08 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160713D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



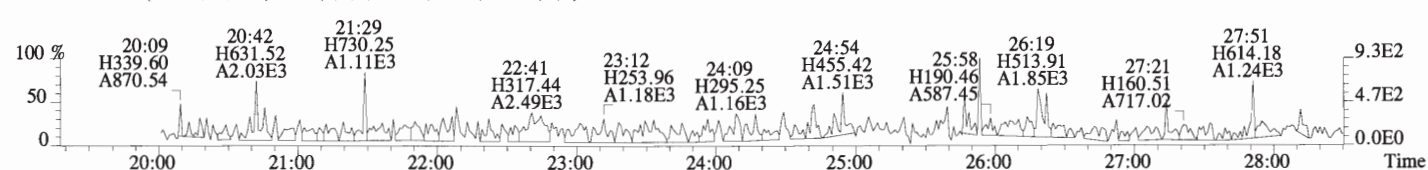
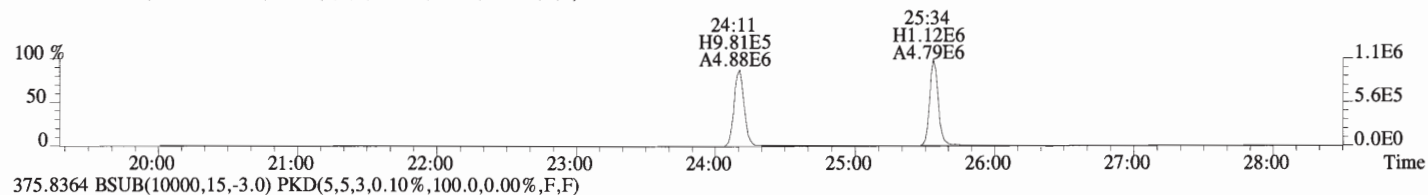
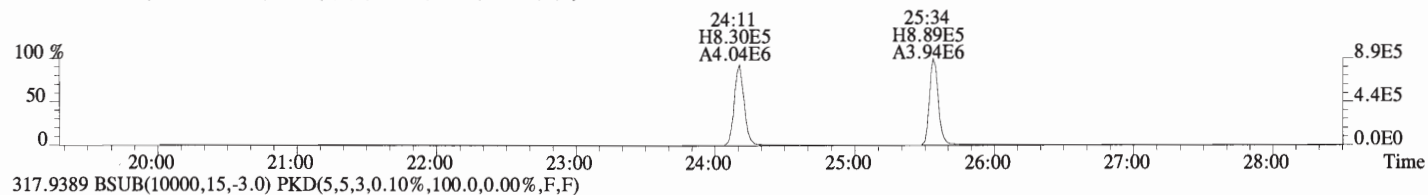
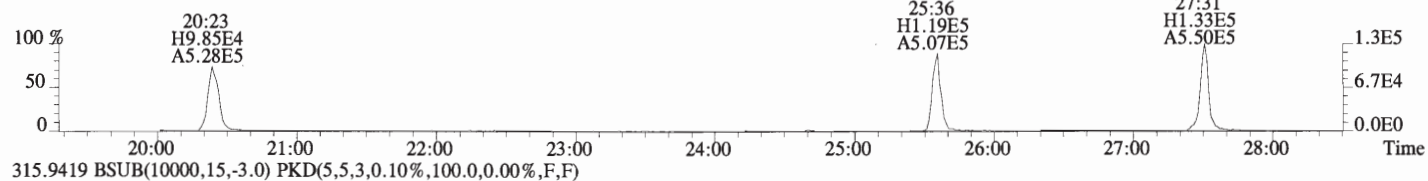
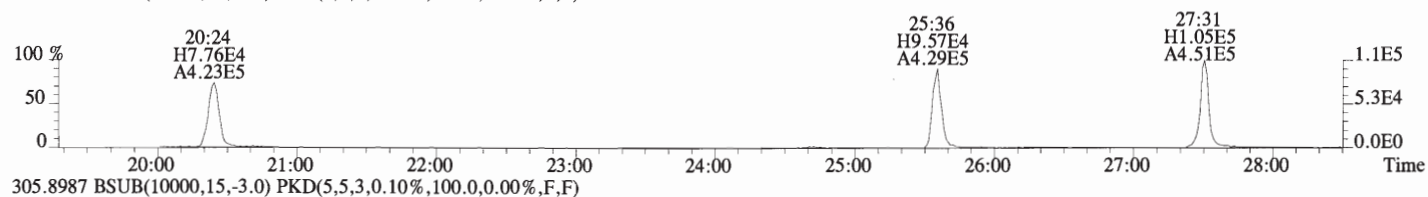
File:160713D1 #1-326 Acq:13-JUL-2016 09:07:08 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160713D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



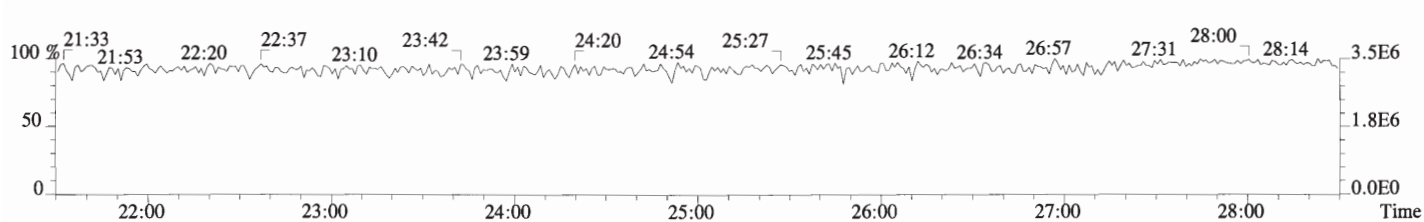
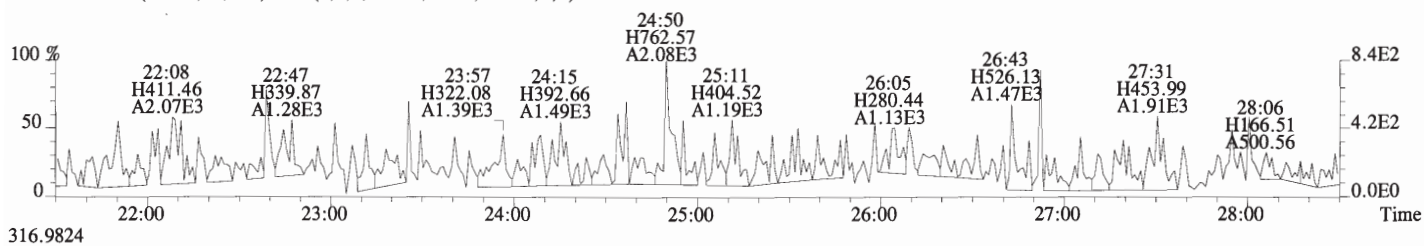
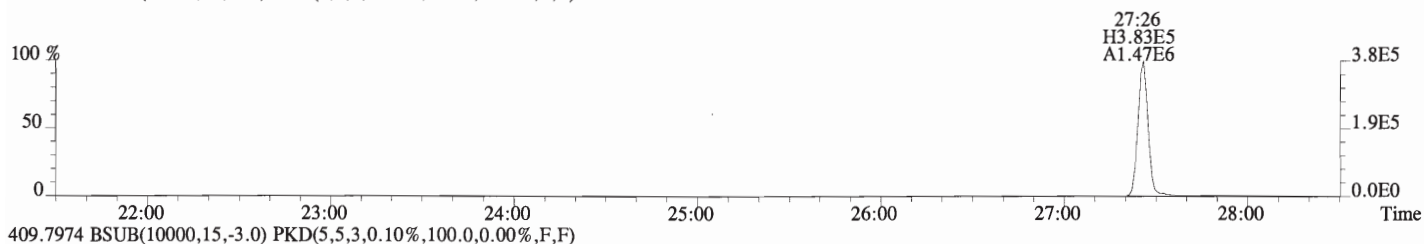
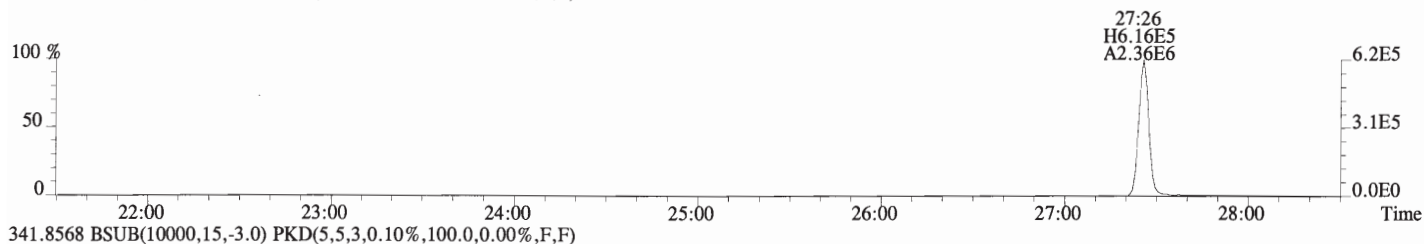
File:160713D1 #1-388 Acq:13-JUL-2016 09:07:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160713D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



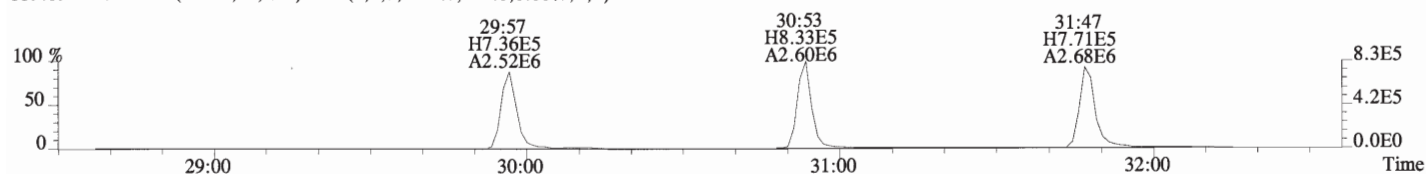
File:160713D1 #1-551 Acq:13-JUL-2016 09:07:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160713D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



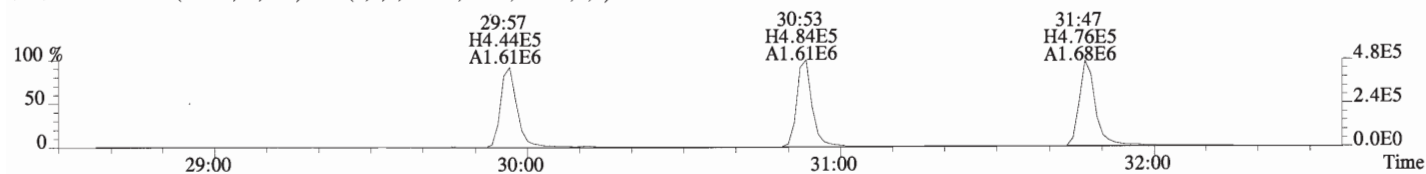
File:160713D1 #1-551 Acq:13-JUL-2016 09:07:08 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160713D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



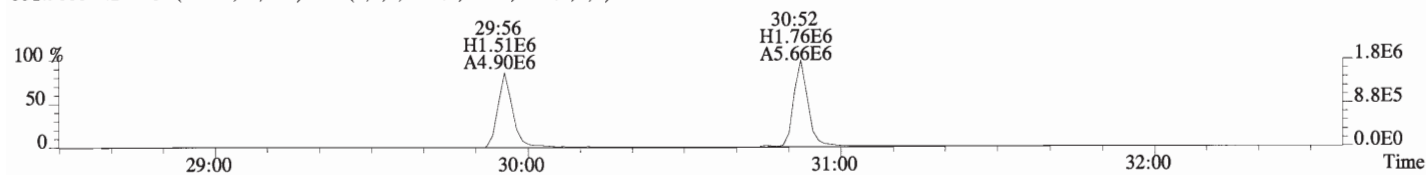
File:160713D1 #1-193 Acq:13-JUL-2016 09:07:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160713D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



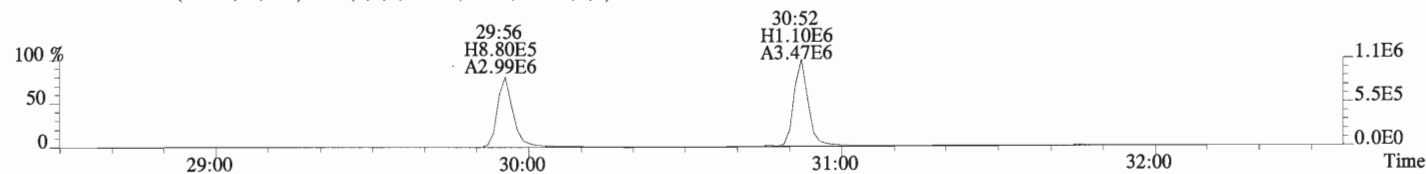
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



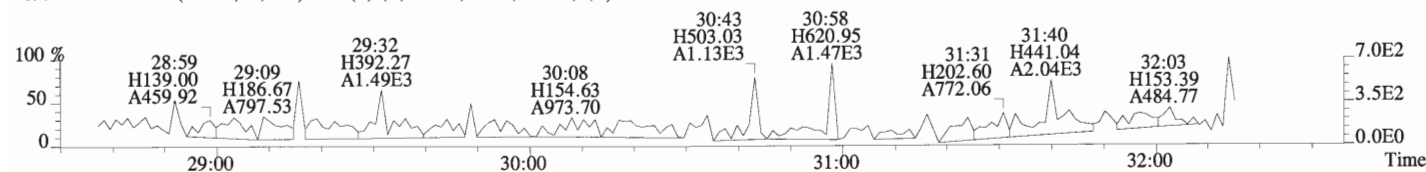
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



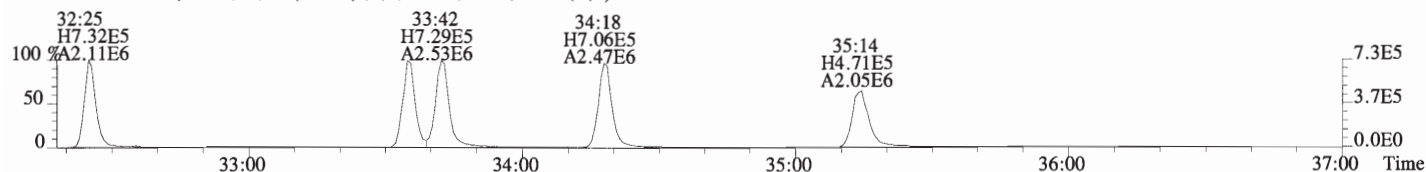
353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



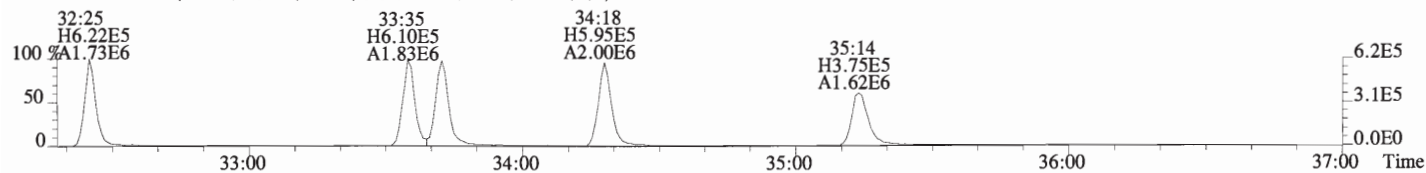
409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



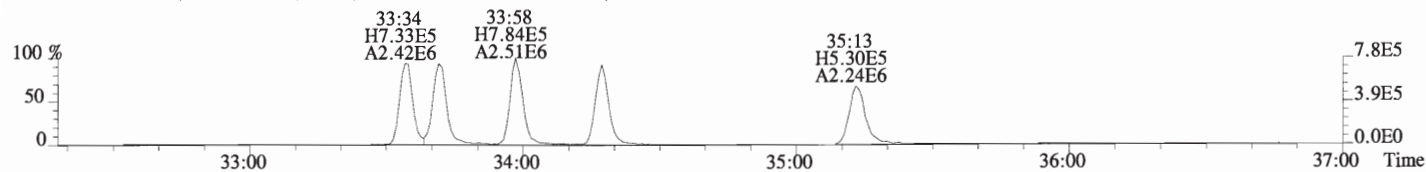
File:160713D1 #1-407 Acq:13-JUL-2016 09:07:08 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160713D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



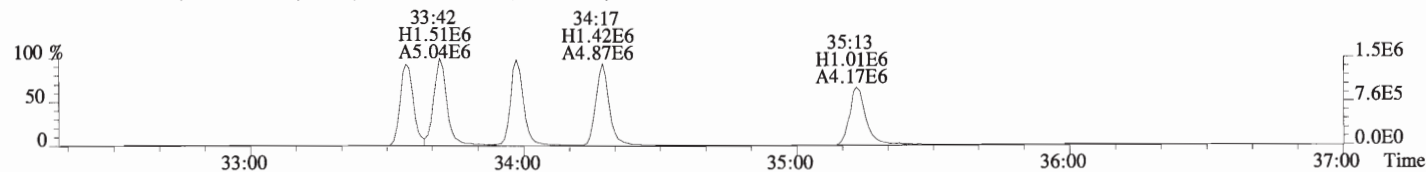
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



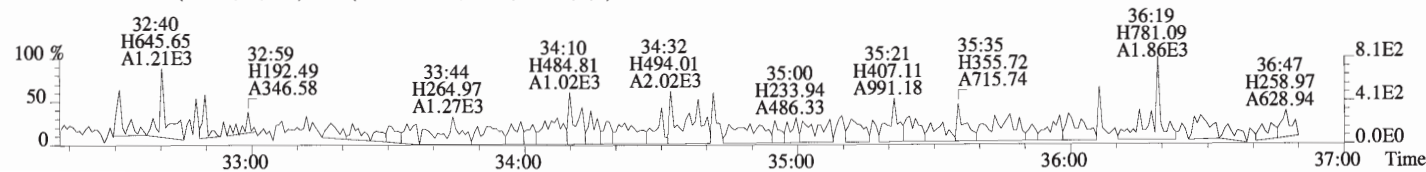
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



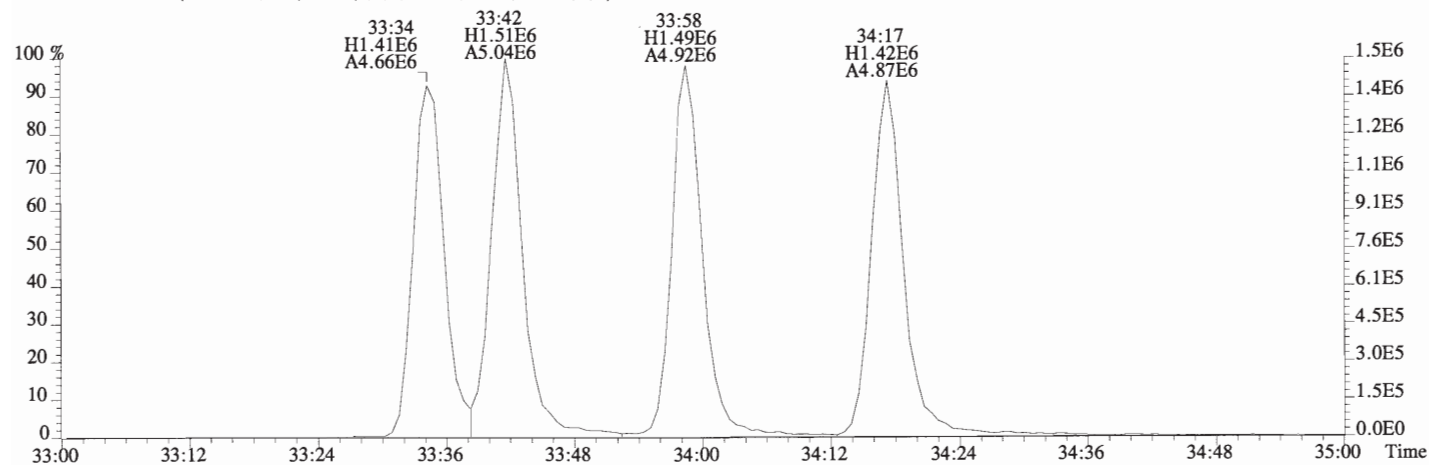
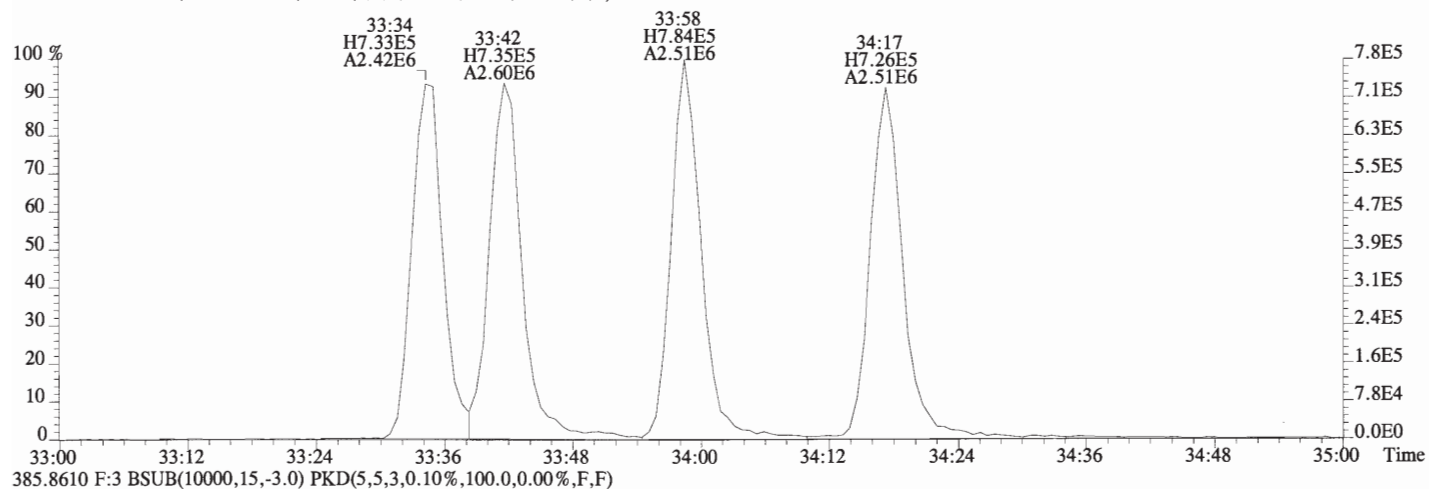
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



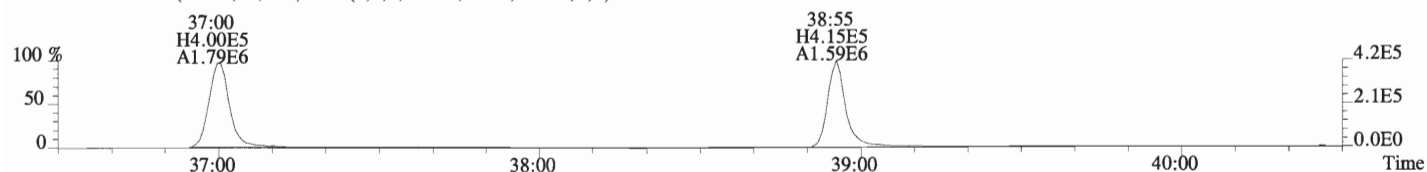
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



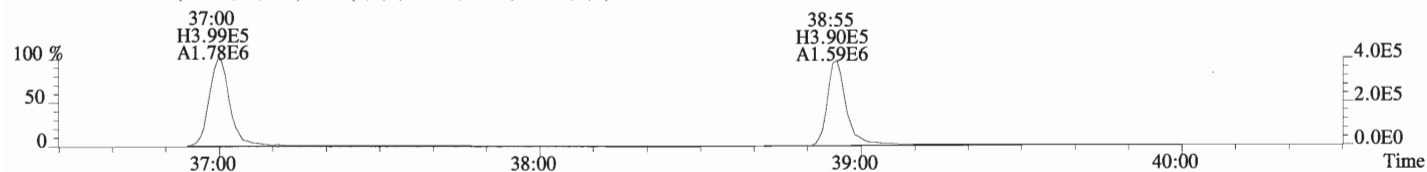
File:160713D1 #1-407 Acq:13-JUL-2016 09:07:08 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160713D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



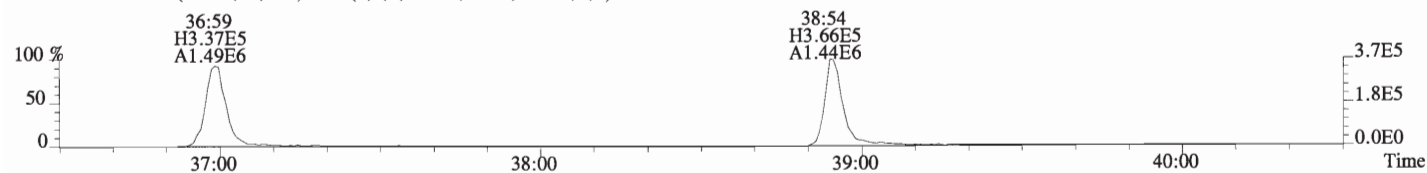
File:160713D1 #1-326 Acq:13-JUL-2016 09:07:08 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160713D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
 407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



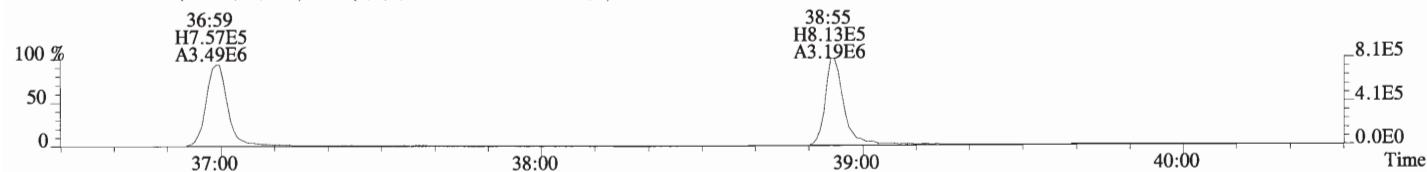
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



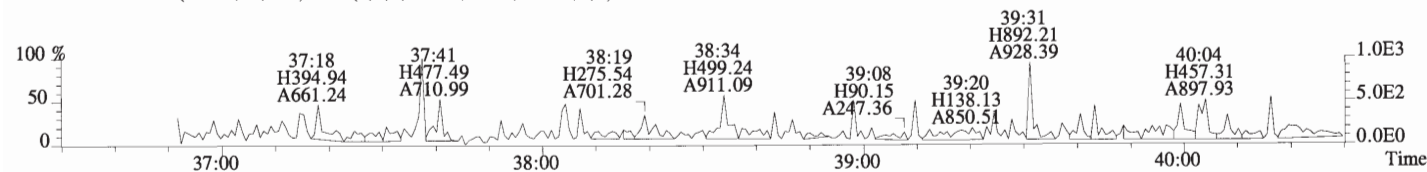
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



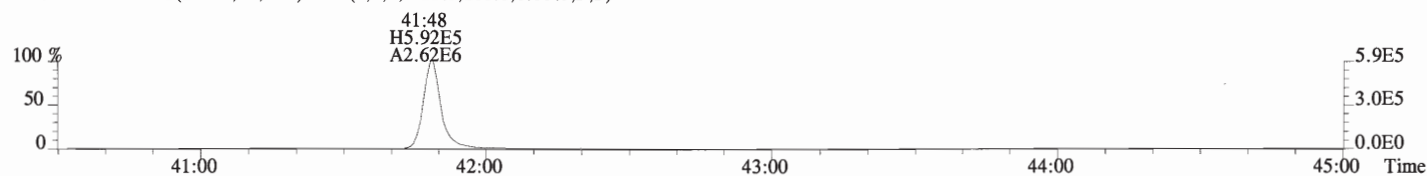
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



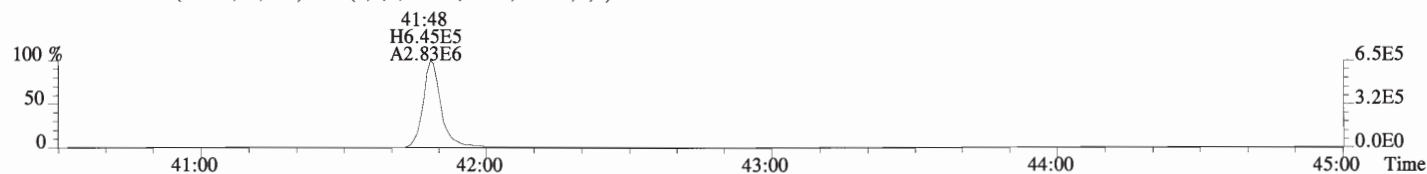
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



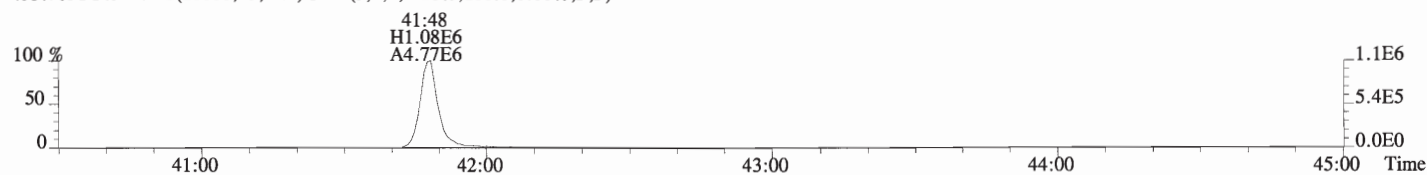
File:160713D1 #1-388 Acq:13-JUL-2016 09:07:08 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160713D1-1 1613 CS3 16C3101 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



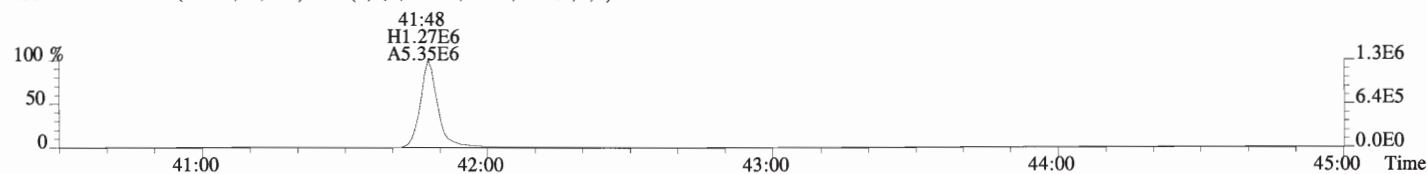
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



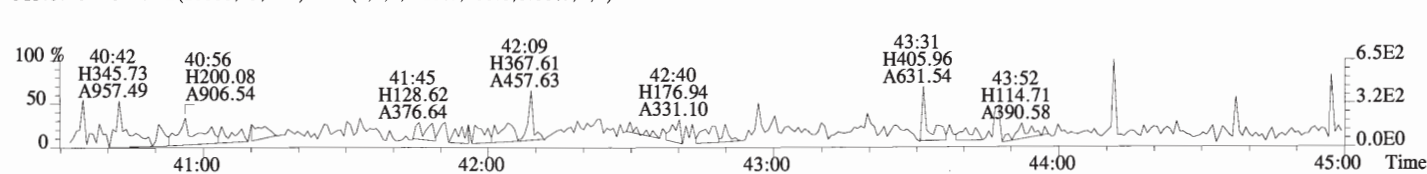
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

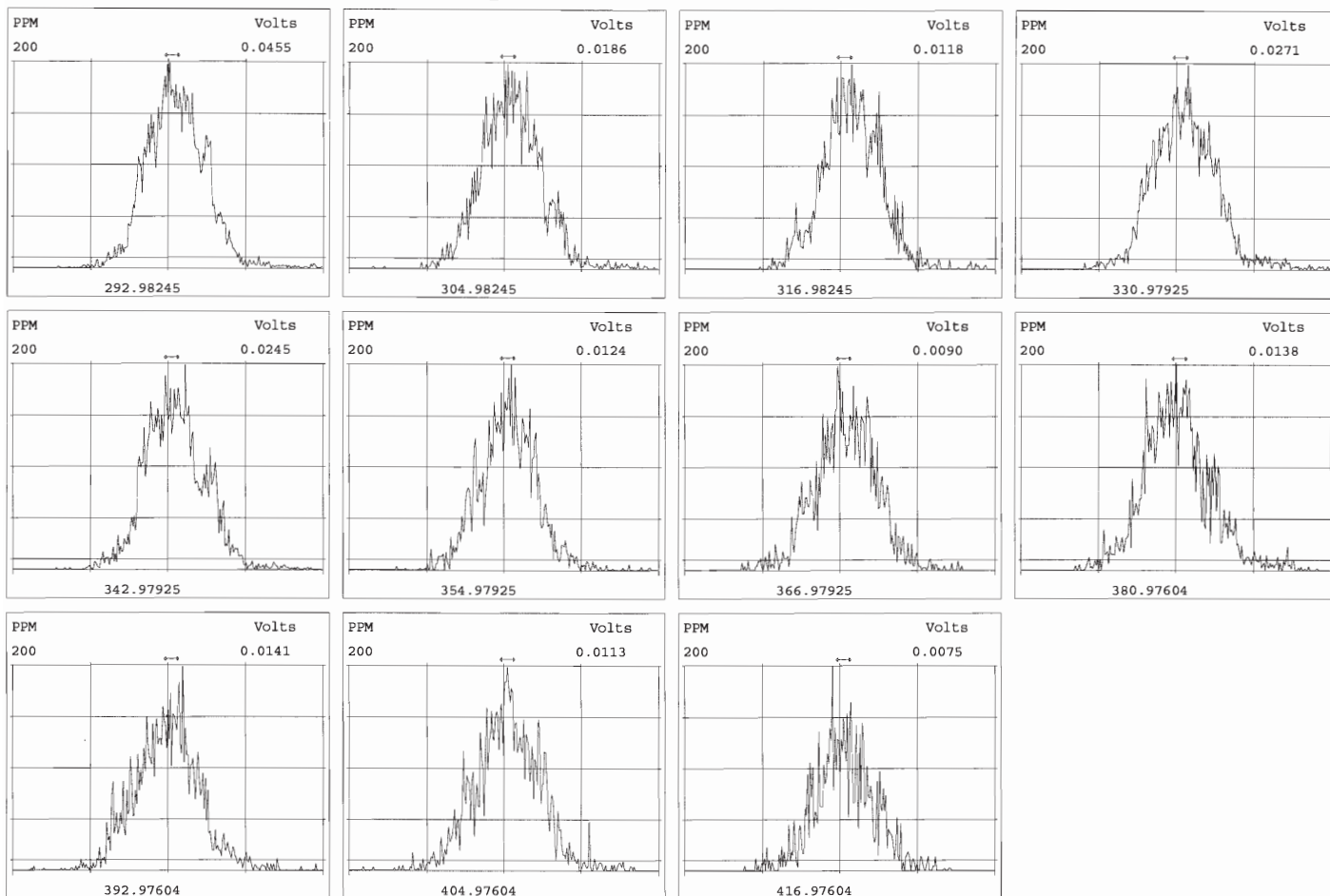


513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

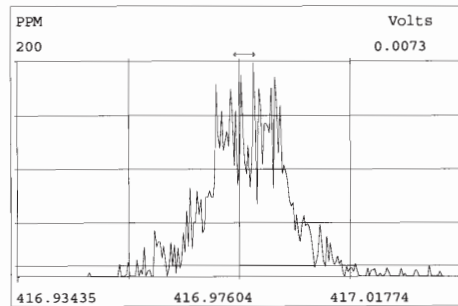
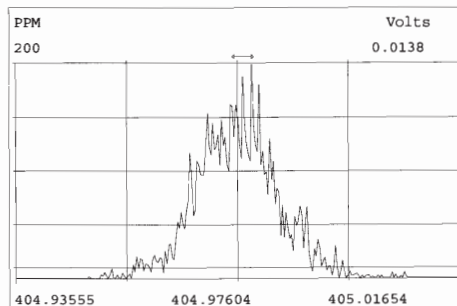
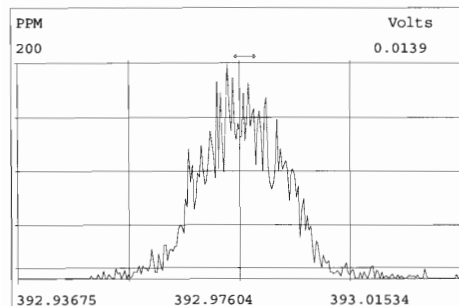
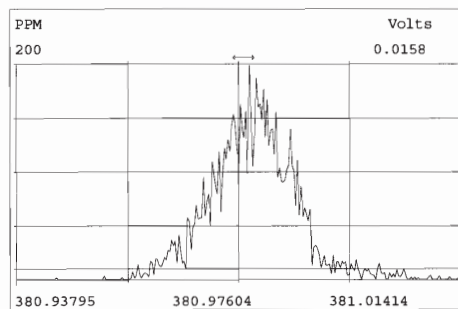
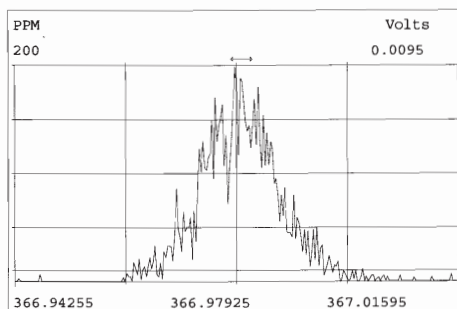
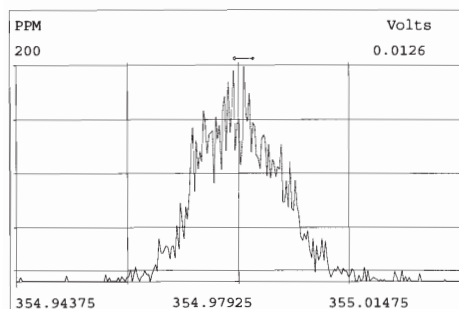
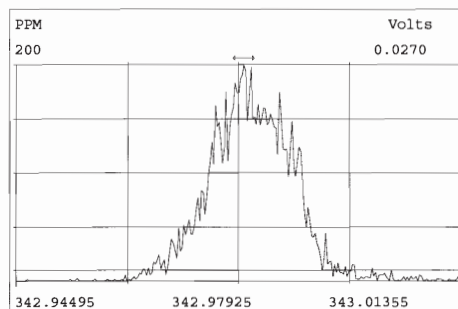
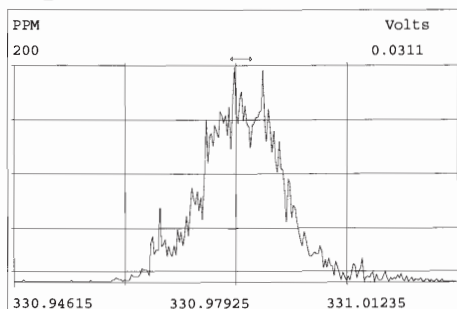
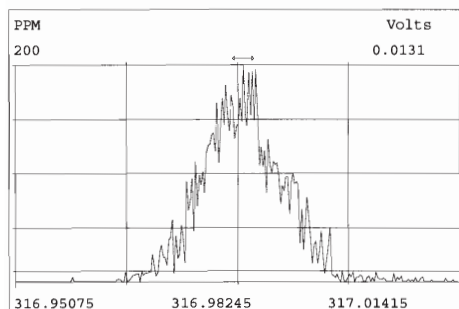


Peak Locate Examination:13-JUL-2016:15:45 File:RES_CHECK

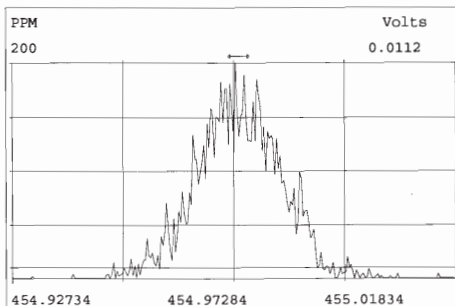
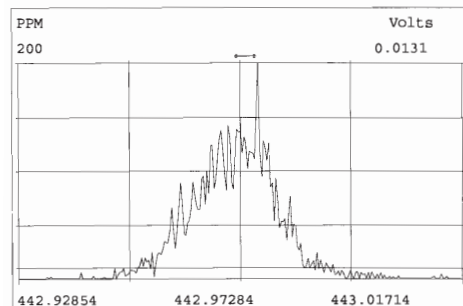
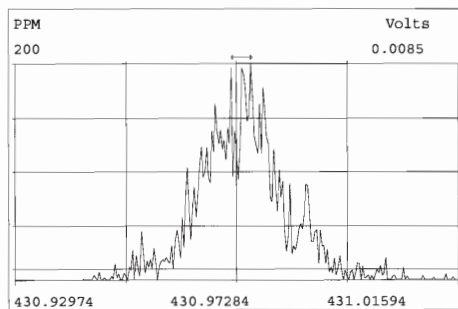
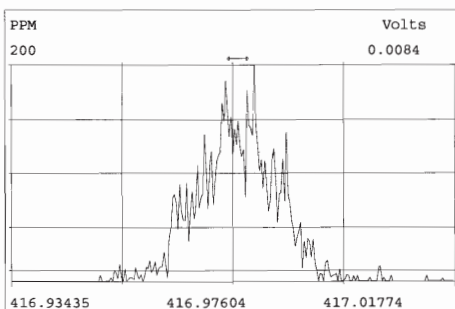
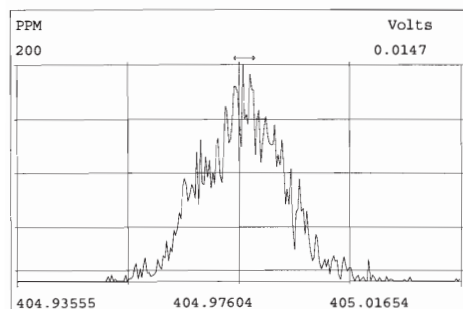
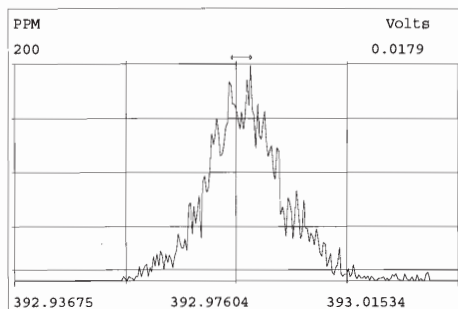
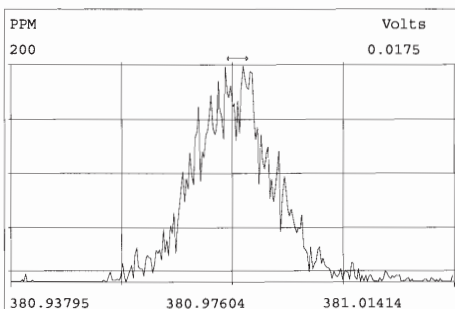
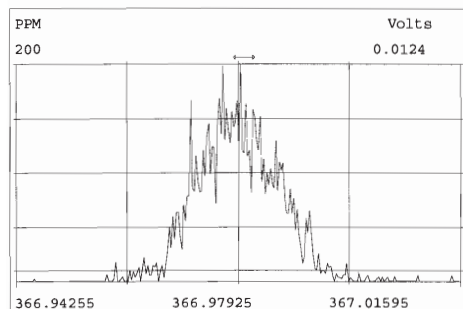
Experiment:OCDD_DB5 Function:1 Reference:PFK



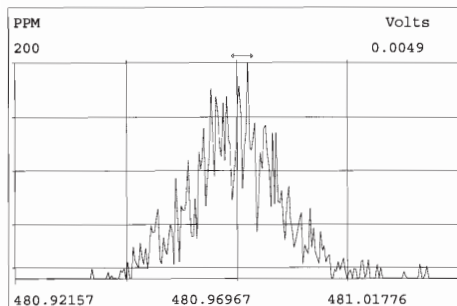
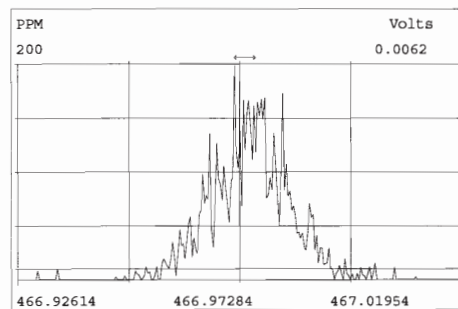
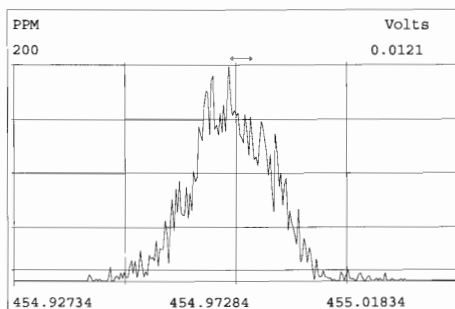
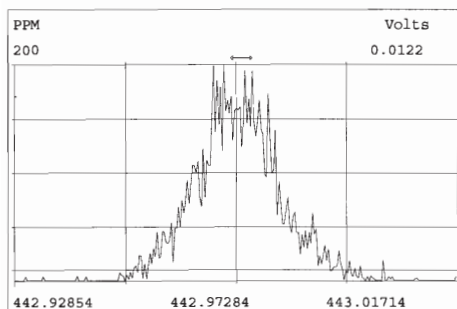
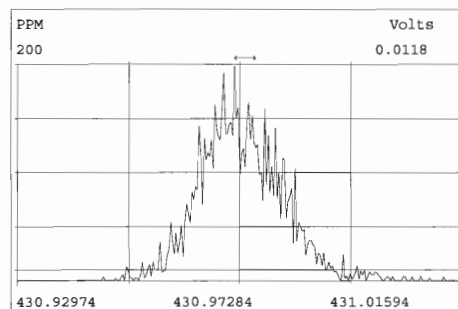
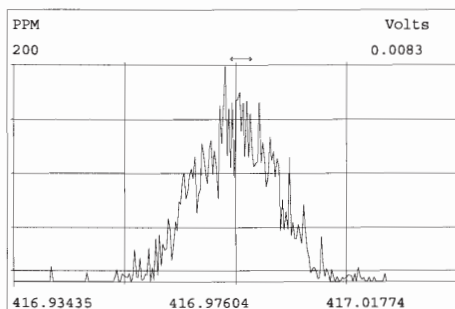
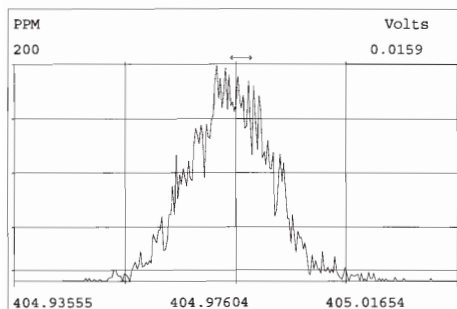
Peak Locate Examination:13-JUL-2016:15:46 File:RES_CHECK
Experiment:OCDD_DB5 Function:2 Reference:PFK



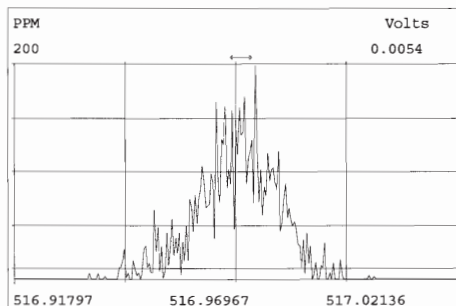
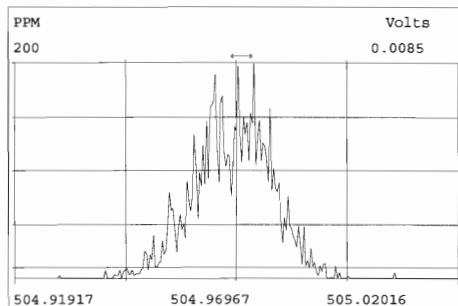
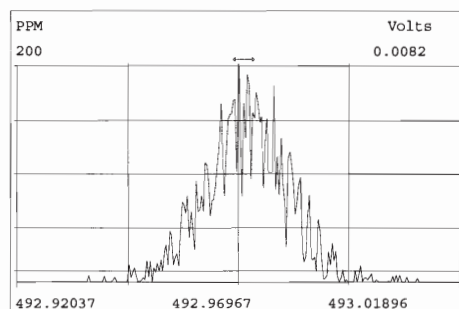
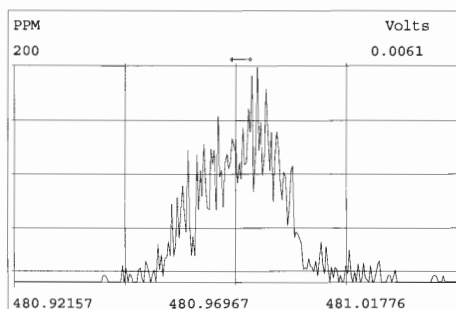
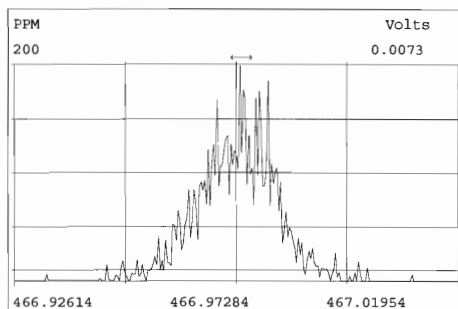
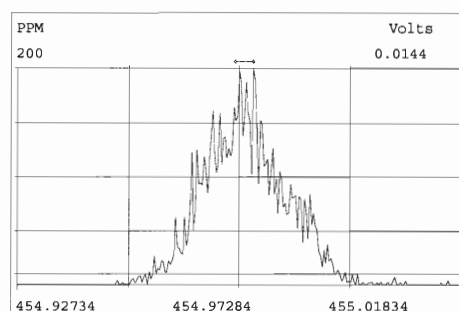
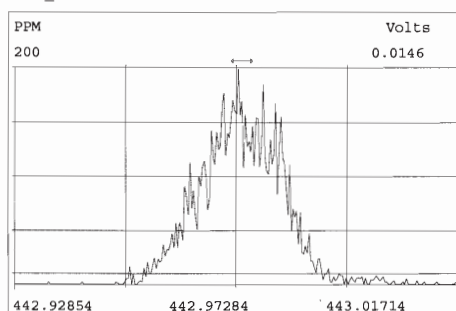
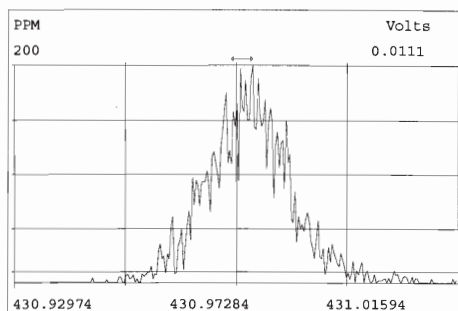
Peak Locate Examination:13-JUL-2016:15:47 File:RES_CHECK
Experiment:OCDD_DB5 Function:3 Reference:PFK



Peak Locate Examination:13-JUL-2016:15:48 File:RES_CHECK
Experiment:OCDD_DB5 Function:4 Reference:PFK



Peak Locate Examination:13-JUL-2016:15:49 File:RES_CHECK
Experiment:OCDD_DB5 Function:5 Reference:PFK



Dataset: C:\MassLynx\Default.pro\Results\160714K1\160714K2-2.qld

Last Altered: Thursday, July 14, 2016 15:49:42 Pacific Daylight Time

Printed: Thursday, July 14, 2016 15:55:58 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\MethDB\tcdf.mdb 14 Jul 2016 15:49:38

Calibration: C:\MassLynx\Default.pro\CurveDB\db225_1613TCDFvg11-2-8-16.cdb 08 Feb 2016 15:29:41

CP 7/14/16

Name: 160714K2_2, Date: 14-Jul-2016, Time: 15:16:46, ID: ST160714K2-1 1613 CS3 16C3101, Description: 1613 CS3 16C3101, Task: ST160714K2-1

	#-Name	Resp	RA	n/y	RRF	wt/vol	RT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDF	1.69e5	0.77	NO	1.07	1.000	16.61	1.001	10.721	107 <i>84-120</i>	0.0506	10.7
2	2 13C-2,3,7,8-TCDF	1.47e6	0.79	NO	0.929	1.000	16.60	1.135	100.38	100 <i>71-140</i>	0.123	
3	3 13C-1,2,3,4-TCDF	1.58e6	0.79	NO	1.00	1.000	14.62	1.000	100.00	100	0.114	

CALIBRATION STANDARDS REVIEW CHECKLIST



Beg. Calibration ID: ST160714KT-1 ^{2 AC 7/15/16}

End Calibration ID: NA

	Beg.	End
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Concentration within range?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
First and last eluters present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Retention Times within criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Forms signed and dated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Correct ICAL referenced?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Run Log:		
-Data file matches Conc Cal ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-Correct instrument listed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-Samples within 12-hour clock?	<input checked="" type="checkbox"/> y	<input type="checkbox"/> n

	Beg.	End
Mass resolution > 10,000? ▪ Method 1614 > 5,000; CARB 429 > 8,000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TCDD/TCDF valleys < 25%?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Peaks integrated correctly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Manual integrations included?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8280 CS1 Ending Standard		
-Ratios within limits		<input type="checkbox"/>
-S/N > 2.5:1		<input type="checkbox"/>
-CS1 within 12-hour clock		<input type="checkbox"/>

Comments:

Reviewed by: AC 7/15/16
Initials & Date

* Ending standard criteria applicable to 8290 only.

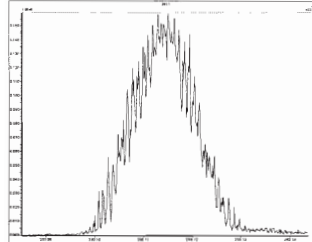
Experiment Calibration Report**MassLynx 4.1 SCN815**

Page 1 of 1

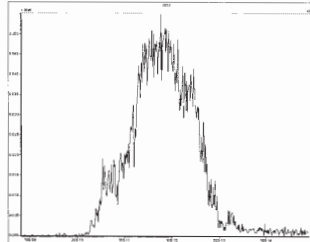
File: Experiment: tcdf_db225.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, July 14, 2016 14:45:01 Pacific Daylight Time

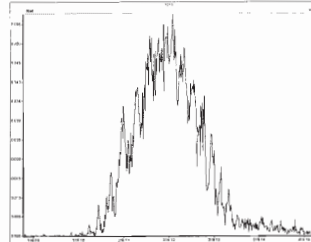
M 292.9824 R 11467



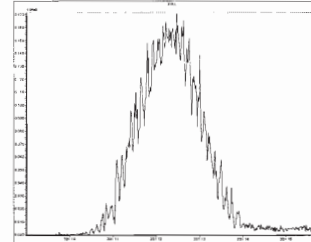
M 304.9824 R 11679



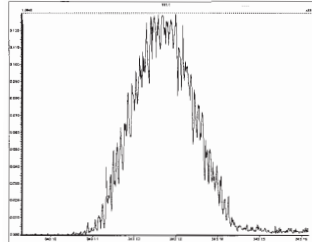
M 318.9792 R 11207



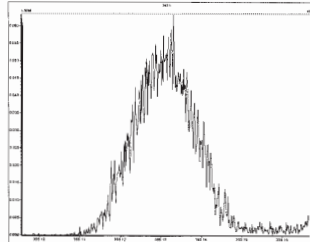
M 330.9792 R 11160



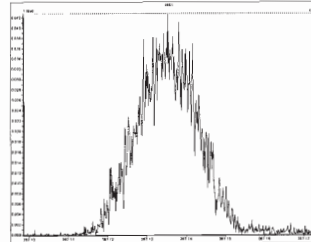
M 342.9792 R 11315



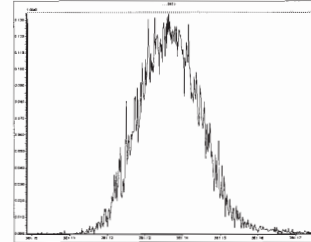
M 354.9792 R 11360



M 366.9792 R 11057



M 380.9760 R 11311



225 CPSM

160714K2_1

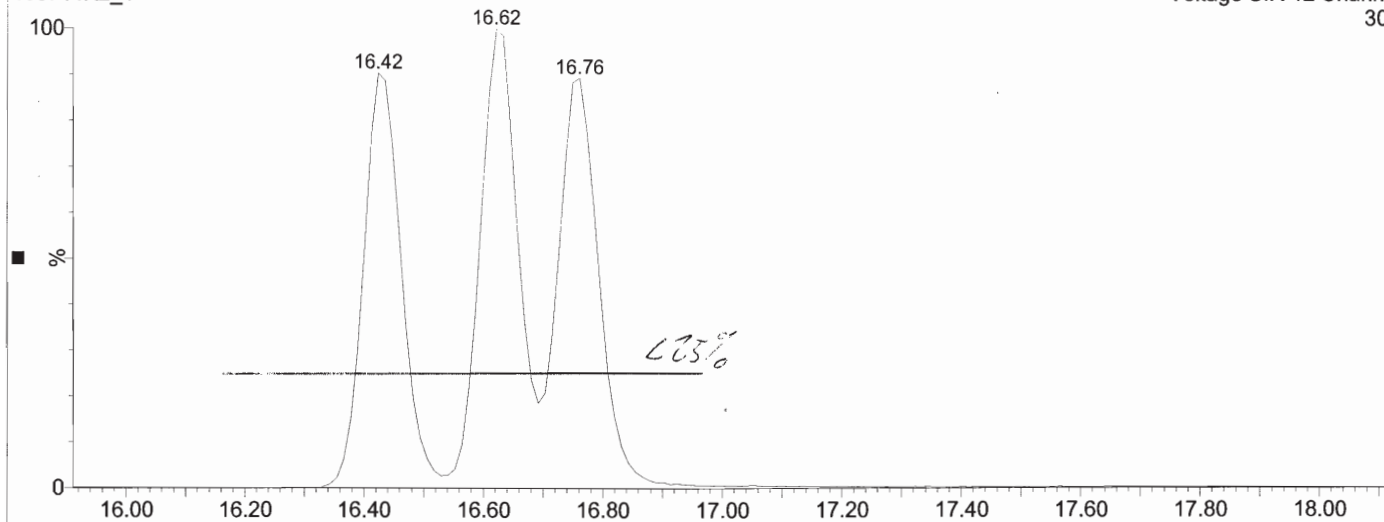
M658

14-Jul-2016 14:45:48

Voltage SIR 12 Channels EI+

303.9016

4.30e6

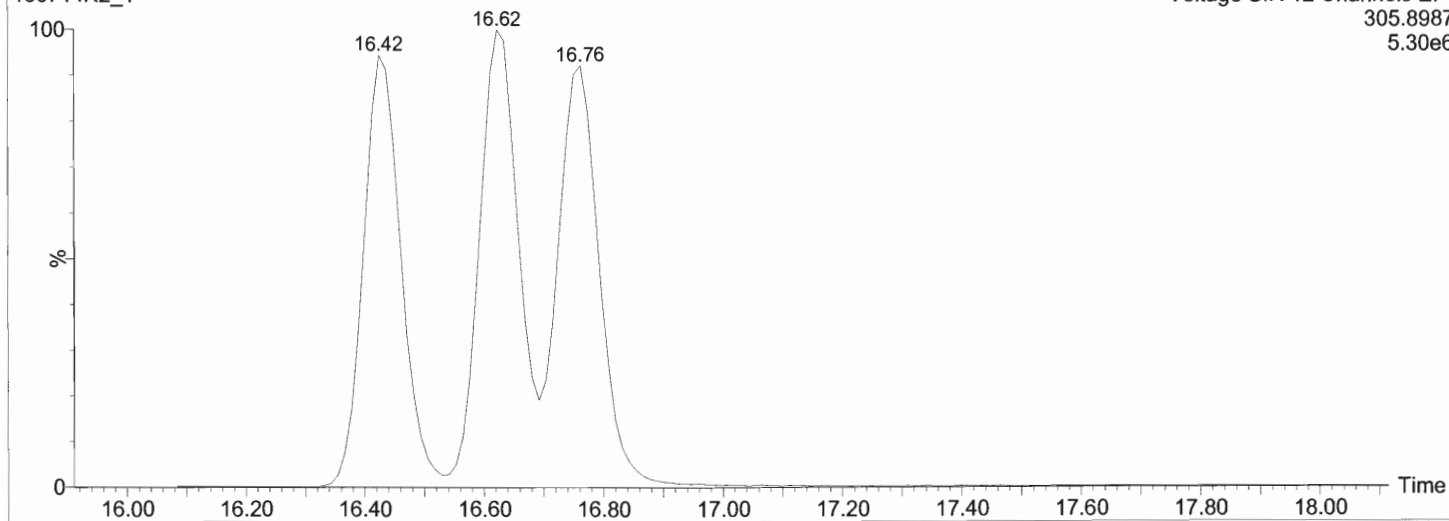


160714K2_1

Voltage SIR 12 Channels EI+

305.8987

5.30e6



Dataset: C:\MassLynx\Default.pro\Results\160714K1\160714K2-2.qld

Last Altered: Thursday, July 14, 2016 15:49:42 Pacific Daylight Time

Printed: Thursday, July 14, 2016 15:54:23 Pacific Daylight Time

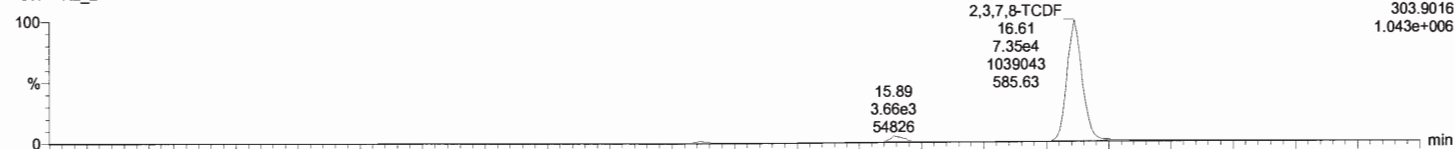
Method: C:\MassLynx\Default.pro\MethDB\tcdf.mdb 14 Jul 2016 15:49:38

Calibration: C:\MassLynx\Default.pro\CurveDB\db225_1613TCDFvg11-2-8-16.cdb 08 Feb 2016 15:29:41

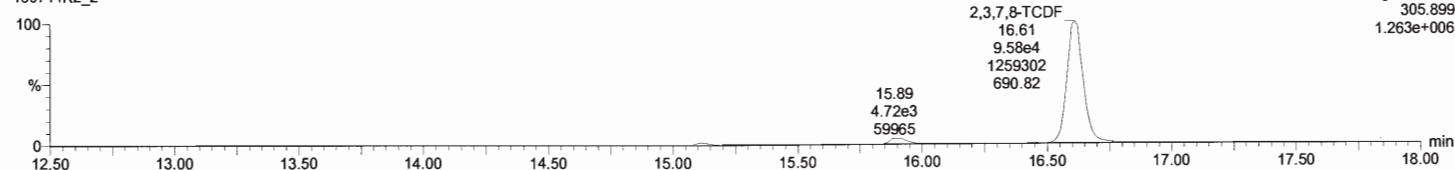
Name: 160714K2_2, Date: 14-Jul-2016, Time: 15:16:46, ID: ST160714K2-1 1613 CS3 16C3101, Description: 1613 CS3 16C3101

2,3,7,8-TCDF

160714K2_2

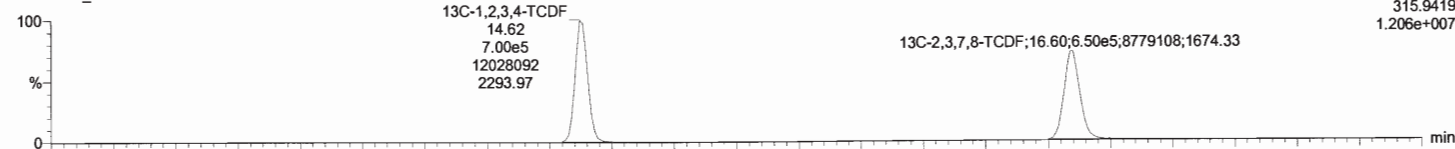


160714K2_2

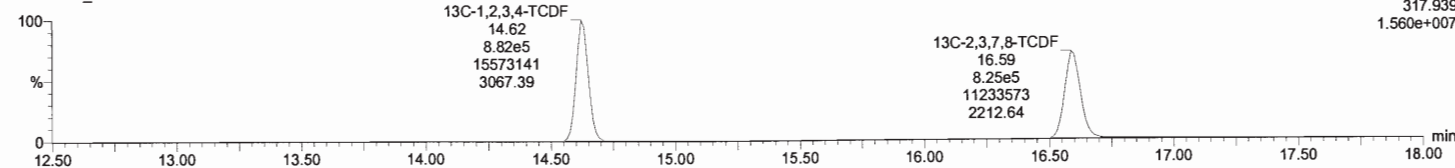


13C-2,3,7,8-TCDF

160714K2_2



160714K2_2



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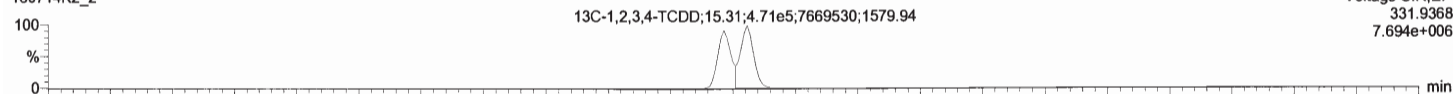
Last Altered: Thursday, July 14, 2016 15:49:42 Pacific Daylight Time

Printed: Thursday, July 14, 2016 15:54:23 Pacific Daylight Time

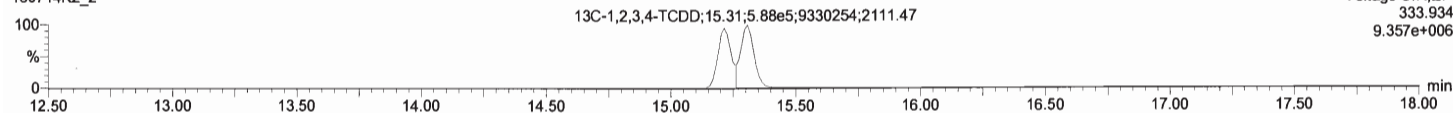
Name: 160714K2_2, Date: 14-Jul-2016, Time: 15:16:46, ID: ST160714K2-1 1613 CS3 16C3101, Description: 1613 CS3 16C3101

13C-1,2,3,4-TCDD

160714K2_2

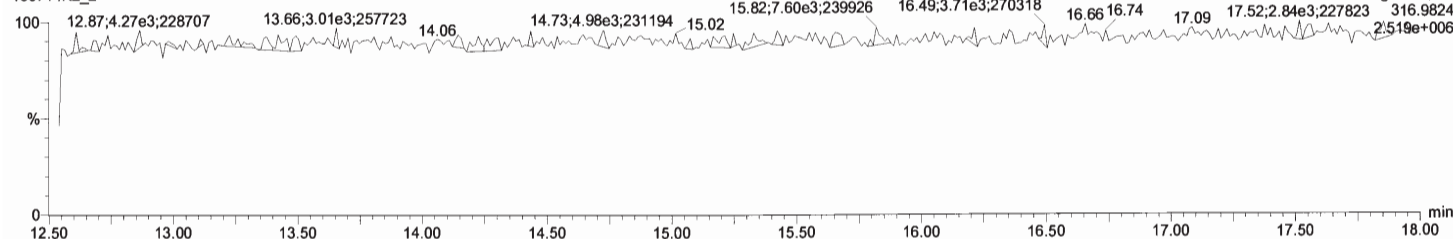


160714K2_2



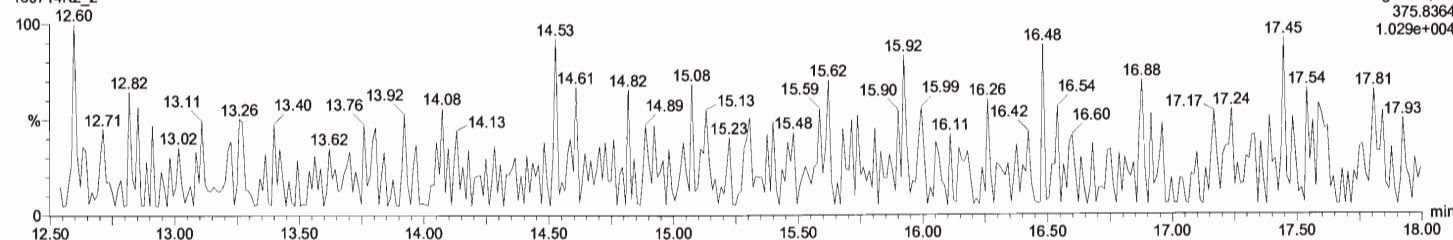
PFK1

160714K2_2



DPE1

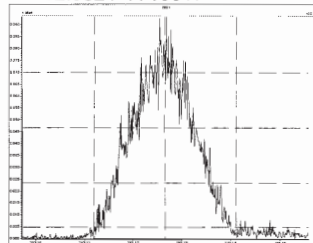
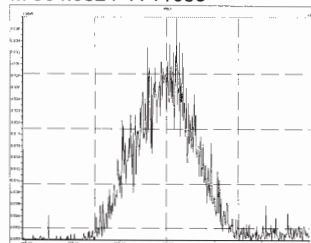
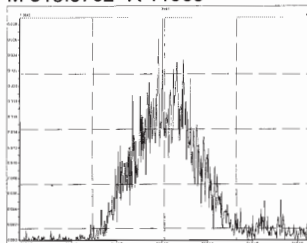
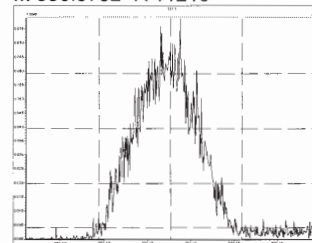
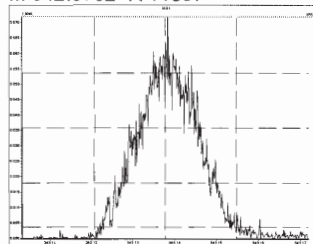
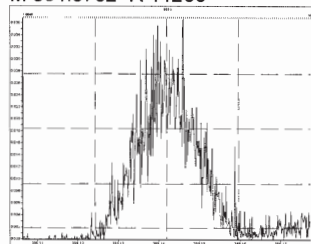
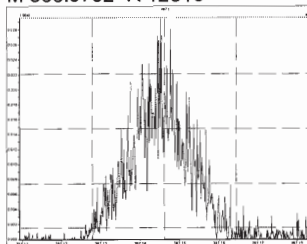
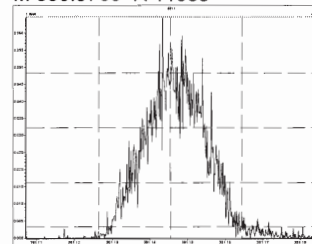
160714K2_2



Resolution Check Report**MassLynx 4.1 SCN815**

Page 1 of 1

Printed: Thursday, July 14, 2016 21:22:51 Pacific Daylight Time

M 292.9824 R 10917**M 304.9824 R 11683****M 318.9792 R 11969****M 330.9792 R 11210****M 342.9792 R 11337****M 354.9792 R 11266****M 366.9792 R 12316****M 380.9760 R 11683**

INITIAL CALIBRATION

Initial Calibration RRF Summary (ICAL) Vista Analytical Laboratory
 Run: 160407D1 Analyte: Cal: 1613VG7-4-7-16 Inst. ID. VG-7

Data filename: 160407D1 Samp# 1 * Samp# 2 Samp# 3 Samp# 4 Samp# 5 Samp# 6
 0.25 0.50 2.0 10 40 300

Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
2,3,7,8-TCDD	1.13	6.05 %	1.21	1.11	1.01	1.13	1.14	1.19
1,2,3,7,8-PeCDD	0.96	4.14 %	1.01	0.95	0.90	0.94	0.98	0.99
1,2,3,4,7,8-HxCDD	1.00	3.55 %	1.02	0.99	0.95	0.97	1.05	1.03
1,2,3,6,7,8-HxCDD	1.10	4.36 %	1.09	1.09	1.01	1.10	1.13	1.15
1,2,3,7,8,9-HxCDD	1.05	3.52 %	1.01	1.05	1.01	1.05	1.08	1.10
1,2,3,4,6,7,8-HpCDD	1.05	4.28 %	1.00	1.05	0.99	1.06	1.11	1.09
OCDD	0.96	4.67 %	0.94	0.93	0.90	0.97	1.02	1.00
2,3,7,8-TCDF	1.12	4.96 %	1.20	1.09	1.05	1.09	1.12	1.16
1,2,3,7,8-PeCDF	1.01	2.01 %	1.04	0.99	0.99	1.00	1.02	1.00
2,3,4,7,8-PeCDF	0.90	3.35 %	0.94	0.89	0.86	0.88	0.90	0.93
1,2,3,4,7,8-HxCDF	1.16	3.34 %	1.13	1.18	1.10	1.16	1.20	1.19
1,2,3,6,7,8-HxCDF	1.16	3.66 %	1.11	1.13	1.11	1.18	1.21	1.19
2,3,4,6,7,8-HxCDF	1.23	3.25 %	1.25	1.24	1.16	1.21	1.23	1.27
1,2,3,7,8,9-HxCDF	1.13	2.81 %	1.14	1.12	1.08	1.13	1.16	1.16
1,2,3,4,6,7,8-HpCDF	1.44	3.38 %	1.44	1.40	1.38	1.43	1.49	1.50
1,2,3,4,7,8,9-HpCDF	1.31	4.33 %	1.22	1.32	1.27	1.33	1.37	1.37
OCDF	1.03	2.66 %	1.03	1.02	0.99	1.03	1.07	1.06
13C-2,3,7,8-TCDD	1.01	3.68 %	0.99	1.02	0.99	1.00	0.98	1.08
13C-1,2,3,7,8-PeCDD	1.10	6.49 %	1.06	1.09	1.06	1.08	1.08	1.25
13C-1,2,3,4,7,8-HxCDD	0.72	8.45 %	0.68	0.70	0.69	0.71	0.71	0.84
13C-1,2,3,6,7,8-HxCDD	0.73	6.41 %	0.70	0.71	0.72	0.70	0.72	0.82
13C-1,2,3,7,8,9-HxCDD	0.70	6.70 %	0.69	0.68	0.68	0.68	0.69	0.80
13C-1,2,3,4,6,7,8-HpCDD	0.66	17.12 %	0.60	0.66	0.59	0.60	0.64	0.89
13C-OCDD	0.66	14.47 %	0.60	0.59	0.60	0.64	0.68	0.84
13C-2,3,7,8-TCDF	0.90	1.91 %	0.90	0.91	0.89	0.89	0.89	0.93
13C-1,2,3,7,8-PeCDF	0.98	6.38 %	0.97	0.98	0.93	0.94	0.97	1.10
13C-2,3,4,7,8-PeCDF	1.15	5.20 %	1.12	1.16	1.11	1.08	1.13	1.25
13C-1,2,3,4,7,8-HxCDF	1.01	4.97 %	0.99	0.98	1.01	0.99	1.00	1.12
13C-1,2,3,6,7,8-HxCDF	1.10	4.96 %	1.06	1.09	1.07	1.07	1.09	1.21
13C-2,3,4,6,7,8-HxCDF	0.95	6.13 %	0.90	0.93	0.93	0.94	0.94	1.07
13C-1,2,3,7,8,9-HxCDF	0.83	8.06 %	0.79	0.80	0.79	0.80	0.81	0.96
13C-1,2,3,4,6,7,8-HpCDF	0.70	10.51 %	0.65	0.74	0.65	0.65	0.68	0.83
13C-1,2,3,4,7,8,9-HpCDF	0.72	10.56 %	0.69	0.66	0.67	0.70	0.74	0.87
13C-OCDF	0.82	15.35 %	0.75	0.74	0.74	0.79	0.86	1.07
37Cl-2,3,7,8-TCDD	1.14	17.92 %	1.43	1.29	1.12	1.06	1.09	0.83
13C-1,2,3,4-TCDD	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4-TCDF	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4,6,9-HxCDF	1.00	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

DB
 4/8/16
 W/ 4/11/15

Filename: 160407D1 S: 1 Acquired: 7-APR-16 14:10:55
 Run: 160407D1 Analyte: Cal: 1613VG7-4-7-16 Results:
 Sample text: ST160407D1-1 1613 CS0 15J1904

Name	Amount	Resp	RA	RT	RF	RRF
2,3,7,8-TCDD	0.250	4.19e+04	0.88 y	26:40	-	1.21
1,2,3,7,8-PeCDD	1.25	1.88e+05	0.65 y	31:16	-	1.01
1,2,3,4,7,8-HxCDD	1.25	1.65e+05	1.21 y	34:36	-	1.02
1,2,3,6,7,8-HxCDD	1.25	1.80e+05	1.10 y	34:43	-	1.09
1,2,3,7,8,9-HxCDD	1.25	1.66e+05	1.31 y	35:00	-	1.01
1,2,3,4,6,7,8-HpCDD	1.25	1.44e+05	1.10 y	38:30	-	1.00
OCDD	2.50	2.69e+05	0.87 y	41:46	-	0.94
2,3,7,8-TCDF	0.250	6.20e+04	0.71 y	25:52	-	1.20
1,2,3,7,8-PeCDF	1.25	2.90e+05	1.52 y	30:05	-	1.04
2,3,4,7,8-PeCDF	1.25	3.04e+05	1.58 y	30:59	-	0.94
1,2,3,4,7,8-HxCDF	1.25	2.65e+05	1.27 y	33:42	-	1.13
1,2,3,6,7,8-HxCDF	1.25	2.81e+05	1.25 y	33:50	-	1.11
2,3,4,6,7,8-HxCDF	1.25	2.69e+05	1.25 y	34:26	-	1.25
1,2,3,7,8,9-HxCDF	1.25	2.16e+05	1.25 y	35:24	-	1.14
1,2,3,4,6,7,8-HpCDF	1.25	2.22e+05	1.10 y	37:13	-	1.44
1,2,3,4,7,8,9-HpCDF	1.25	2.00e+05	1.00 y	39:03	-	1.22
OCDF	2.50	3.67e+05	0.93 y	42:00	-	1.03
Total Tetra-Dioxins	0.00	-	- n	-	-	1.21
TCDD EMPC	0.00	-	- n	-	-	1.21
Total Penta-Dioxins	0.00	-	- n	-	-	1.01
PeCDD EMPC	0.00	-	- n	-	-	1.01
Total Hexa-Dioxins	0.00	-	- n	-	-	1.04
HxCDD EMPC	0.00	-	- n	-	-	1.04
Total Hepta-Dioxins	0.00	-	- n	-	-	1.00
HpCDD EMPC	0.00	-	- n	-	-	1.00
Total Tetra-Furans	0.00	-	- n	-	-	1.20
TCDF EMPC	0.00	-	- n	-	-	1.20
1st Func. Penta-Furans	0.00	-	- n	-	-	0.99
1st Func. PeCDF EMPC	0.00	-	- n	-	-	0.99
Total Penta-Furans	0.00	-	- n	-	-	0.99
PeCDF EMPC	0.00	-	- n	-	-	0.99
Total Hexa-Furans	0.00	-	- n	-	-	1.16
HxCDF EMPC	0.00	-	- n	-	-	1.16
Total Hepta-Furans	0.00	-	- n	-	-	1.33
HpCDF EMPC	0.00	-	- n	-	-	1.33
13C-2,3,7,8-TCDD	100	1.39e+07	0.80 y	26:39	-	0.99
13C-1,2,3,7,8-PeCDD	100	1.50e+07	0.62 y	31:16	-	1.06
13C-1,2,3,4,7,8-HxCDD	100	1.29e+07	1.31 y	34:35	-	0.68
13C-1,2,3,6,7,8-HxCDD	100	1.32e+07	1.23 y	34:42	-	0.70
13C-1,2,3,7,8,9-HxCDD	100	1.32e+07	1.28 y	35:00	-	0.69

13C-1,2,3,4,6,7,8-HpCDD	100	1.15e+07	1.06 y	38:30	-	0.60
13C-OCDD	200	2.30e+07	0.88 y	41:46	-	0.60
13C-2,3,7,8-TCDF	100	2.07e+07	0.82 y	25:51	-	0.90
13C-1,2,3,7,8-PeCDF	100	2.23e+07	1.59 y	30:04	-	0.97
13C-2,3,4,7,8-PeCDF	100	2.59e+07	1.58 y	30:59	-	1.12
13C-1,2,3,4,7,8-HxCDF	100	1.88e+07	0.51 y	33:42	-	0.99
13C-1,2,3,6,7,8-HxCDF	100	2.02e+07	0.52 y	33:50	-	1.06
13C-2,3,4,6,7,8-HxCDF	100	1.72e+07	0.52 y	34:25	-	0.90
13C-1,2,3,7,8,9-HxCDF	100	1.51e+07	0.52 y	35:24	-	0.79
13C-1,2,3,4,6,7,8-HpCDF	100	1.23e+07	0.43 y	37:13	-	0.65
13C-1,2,3,4,7,8,9-HpCDF	100	1.31e+07	0.44 y	39:03	-	0.69

13C-OCDF	200	2.85e+07	0.89 y	41:60	-	0.75
37Cl-2,3,7,8-TCDD	0.250	5.04e+04		26:40	-	1.43
13C-1,2,3,4-TCDD	100	1.41e+07	0.80 y	26:03	-	1.00
13C-1,2,3,4-TCDF	100	2.31e+07	0.81 y	24:33	-	1.00
13C-1,2,3,4,6,9-HxCDF	100	1.90e+07	0.52 y	34:07	-	1.00

Filename: 160407D1 S: 2 Acquired: 7-APR-16 14:59:18

Run: 160407D1 Analyte: Cal: Results:

Sample text: ST160407D1-2 1613 CS1 15J1905

Name	Amount	Resp	RA	RT	RF	RRF
2,3,7,8-TCDD	0.500	8.26e+04	0.68 y	26:41	-	1.11
1,2,3,7,8-PeCDD	2.50	3.79e+05	0.65 y	31:16	-	0.95
1,2,3,4,7,8-HxCDD	2.50	3.49e+05	1.25 y	34:36	-	0.99
1,2,3,6,7,8-HxCDD	2.50	3.92e+05	1.26 y	34:42	-	1.09
1,2,3,7,8,9-HxCDD	2.50	3.60e+05	1.18 y	35:00	-	1.05
1,2,3,4,6,7,8-HpCDD	2.50	3.52e+05	1.06 y	38:30	-	1.05
OCDD	5.00	5.62e+05	0.93 y	41:46	-	0.93
2,3,7,8-TCDF	0.500	1.18e+05	0.88 y	25:52	-	1.09
1,2,3,7,8-PeCDF	2.50	5.84e+05	1.52 y	30:04	-	0.99
2,3,4,7,8-PeCDF	2.50	6.16e+05	1.65 y	31:00	-	0.89
1,2,3,4,7,8-HxCDF	2.50	5.88e+05	1.26 y	33:42	-	1.18
1,2,3,6,7,8-HxCDF	2.50	6.24e+05	1.24 y	33:50	-	1.13
2,3,4,6,7,8-HxCDF	2.50	5.85e+05	1.24 y	34:26	-	1.24
1,2,3,7,8,9-HxCDF	2.50	4.53e+05	1.17 y	35:23	-	1.12
1,2,3,4,6,7,8-HpCDF	2.50	5.24e+05	1.04 y	37:13	-	1.40
1,2,3,4,7,8,9-HpCDF	2.50	4.42e+05	1.02 y	39:03	-	1.32
OCDF	5.00	7.58e+05	0.91 y	42:00	-	1.02
Total Tetra-Dioxins	0.00	-	- n	-	-	1.11
TCDD EMPC	0.00	-	- n	-	-	1.11
Total Penta-Dioxins	0.00	-	- n	-	-	0.95
PeCDD EMPC	0.00	-	- n	-	-	0.95
Total Hexa-Dioxins	0.00	-	- n	-	-	1.04
HxCDD EMPC	0.00	-	- n	-	-	1.04
Total Hepta-Dioxins	0.00	-	- n	-	-	1.05
HpCDD EMPC	0.00	-	- n	-	-	1.05
Total Tetra-Furans	0.00	-	- n	-	-	1.09
TCDF EMPC	0.00	-	- n	-	-	1.09
1st Func. Penta-Furans	0.00	-	- n	-	-	0.94
1st Func. PeCDF EMPC	0.00	-	- n	-	-	0.94
Total Penta-Furans	0.00	-	- n	-	-	0.94
PeCDF EMPC	0.00	-	- n	-	-	0.94
Total Hexa-Furans	0.00	-	- n	-	-	1.17
HxCDF EMPC	0.00	-	- n	-	-	1.17
Total Hepta-Furans	0.00	-	- n	-	-	1.36
HpCDF EMPC	0.00	-	- n	-	-	1.36
13C-2,3,7,8-TCDD	100	1.49e+07	0.80 y	26:40	-	1.02
13C-1,2,3,7,8-PeCDD	100	1.59e+07	0.62 y	31:16	-	1.09
13C-1,2,3,4,7,8-HxCDD	100	1.41e+07	1.25 y	34:35	-	0.70
13C-1,2,3,6,7,8-HxCDD	100	1.44e+07	1.29 y	34:42	-	0.71
13C-1,2,3,7,8,9-HxCDD	100	1.37e+07	1.27 y	34:60	-	0.68

13C-1,2,3,4,6,7,8-HpCDD	100	1.34e+07	1.06 y	38:30	-	0.66
13C-OCDD	200	2.41e+07	0.90 y	41:46	-	0.59
13C-2,3,7,8-TCDF	100	2.18e+07	0.79 y	25:51	-	0.91
13C-1,2,3,7,8-PeCDF	100	2.35e+07	1.59 y	30:04	-	0.98
13C-2,3,4,7,8-PeCDF	100	2.78e+07	1.59 y	30:59	-	1.16
13C-1,2,3,4,7,8-HxCDF	100	1.99e+07	0.51 y	33:41	-	0.98
13C-1,2,3,6,7,8-HxCDF	100	2.21e+07	0.52 y	33:49	-	1.09
13C-2,3,4,6,7,8-HxCDF	100	1.89e+07	0.51 y	34:25	-	0.93
13C-1,2,3,7,8,9-HxCDF	100	1.62e+07	0.51 y	35:23	-	0.80
13C-1,2,3,4,6,7,8-HpCDF	100	1.50e+07	0.43 y	37:13	-	0.74
13C-1,2,3,4,7,8,9-HpCDF	100	1.34e+07	0.44 y	39:03	-	0.66

13C-OCDF	200	2.99e+07	0.90 y	42:00	-	0.74
37Cl-2,3,7,8-TCDD	0.500	9.35e+04		26:41	-	1.29
13C-1,2,3,4-TCDD	100	1.45e+07	0.81 y	26:04	-	1.00
13C-1,2,3,4-TCDF	100	2.39e+07	0.80 y	24:34	-	1.00
13C-1,2,3,4,6,9-HxCDF	100	2.02e+07	0.52 y	34:06	-	1.00

Filename: 160407D1 S: 3 Acquired: 7-APR-16 15:47:38

Run: 160407D1 Analyte: Cal: Results:

Sample text: ST160407D1-3 1613 CS2 15J1906

Name	Amount	Resp	RA	RT	RF	RRF
2,3,7,8-TCDD	2.00	3.11e+05	0.77 y	26:40	-	1.01
1,2,3,7,8-PeCDD	10.0	1.49e+06	0.66 y	31:17	-	0.90
1,2,3,4,7,8-HxCDD	10.0	1.35e+06	1.25 y	34:36	-	0.95
1,2,3,6,7,8-HxCDD	10.0	1.49e+06	1.22 y	34:43	-	1.01
1,2,3,7,8,9-HxCDD	10.0	1.40e+06	1.24 y	35:00	-	1.01
1,2,3,4,6,7,8-HpCDD	10.0	1.21e+06	1.05 y	38:30	-	0.99
OCDD	20.0	2.21e+06	0.88 y	41:46	-	0.90
2,3,7,8-TCDF	2.00	4.78e+05	0.86 y	25:53	-	1.05
1,2,3,7,8-PeCDF	10.0	2.35e+06	1.64 y	30:05	-	0.99
2,3,4,7,8-PeCDF	10.0	2.46e+06	1.62 y	30:60	-	0.86
1,2,3,4,7,8-HxCDF	10.0	2.27e+06	1.19 y	33:42	-	1.10
1,2,3,6,7,8-HxCDF	10.0	2.43e+06	1.21 y	33:50	-	1.11
2,3,4,6,7,8-HxCDF	10.0	2.20e+06	1.23 y	34:26	-	1.16
1,2,3,7,8,9-HxCDF	10.0	1.75e+06	1.24 y	35:24	-	1.08
1,2,3,4,6,7,8-HpCDF	10.0	1.82e+06	1.02 y	37:13	-	1.38
1,2,3,4,7,8,9-HpCDF	10.0	1.73e+06	1.09 y	39:03	-	1.27
OCDF	20.0	3.01e+06	0.91 y	42:00	-	0.99
Total Tetra-Dioxins	0.00	-	- n	-	-	1.01
TCDD EMPC	0.00	-	- n	-	-	1.01
Total Penta-Dioxins	0.00	-	- n	-	-	0.90
PeCDD EMPC	0.00	-	- n	-	-	0.90
Total Hexa-Dioxins	0.00	-	- n	-	-	0.99
HxCDD EMPC	0.00	-	- n	-	-	0.99
Total Hepta-Dioxins	0.00	-	- n	-	-	0.99
HpCDD EMPC	0.00	-	- n	-	-	0.99
Total Tetra-Furans	0.00	-	- n	-	-	1.05
TCDF EMPC	0.00	-	- n	-	-	1.05
1st Func. Penta-Furans	0.00	-	- n	-	-	0.92
1st Func. PeCDF EMPC	0.00	-	- n	-	-	0.92
Total Penta-Furans	0.00	-	- n	-	-	0.92
PeCDF EMPC	0.00	-	- n	-	-	0.92
Total Hexa-Furans	0.00	-	- n	-	-	1.11
HxCDF EMPC	0.00	-	- n	-	-	1.11
Total Hepta-Furans	0.00	-	- n	-	-	1.32
HpCDF EMPC	0.00	-	- n	-	-	1.32
13C-2,3,7,8-TCDD	100	1.54e+07	0.78 y	26:39	-	0.99
13C-1,2,3,7,8-PeCDD	100	1.66e+07	0.62 y	31:16	-	1.06
13C-1,2,3,4,7,8-HxCDD	100	1.42e+07	1.28 y	34:35	-	0.69
13C-1,2,3,6,7,8-HxCDD	100	1.47e+07	1.27 y	34:42	-	0.72
13C-1,2,3,7,8,9-HxCDD	100	1.38e+07	1.29 y	34:60	-	0.68

13C-1,2,3,4,6,7,8-HpCDD	100	1.21e+07	1.06 y	38:30	-	0.59
13C-OCDD	200	2.45e+07	0.88 y	41:46	-	0.60
13C-2,3,7,8-TCDF	100	2.29e+07	0.82 y	25:52	-	0.89
13C-1,2,3,7,8-PeCDF	100	2.39e+07	1.57 y	30:04	-	0.93
13C-2,3,4,7,8-PeCDF	100	2.86e+07	1.57 y	30:59	-	1.11
13C-1,2,3,4,7,8-HxCDF	100	2.06e+07	0.52 y	33:41	-	1.01
13C-1,2,3,6,7,8-HxCDF	100	2.19e+07	0.52 y	33:49	-	1.07
13C-2,3,4,6,7,8-HxCDF	100	1.90e+07	0.53 y	34:25	-	0.93
13C-1,2,3,7,8,9-HxCDF	100	1.62e+07	0.49 y	35:23	-	0.79
13C-1,2,3,4,6,7,8-HpCDF	100	1.32e+07	0.44 y	37:12	-	0.65
13C-1,2,3,4,7,8,9-HpCDF	100	1.36e+07	0.43 y	39:03	-	0.67

13C-OCDF	200	3.04e+07	0.89 y	41:60	-	0.74
37Cl-2,3,7,8-TCDD	2.00	3.49e+05		26:40	-	1.12
13C-1,2,3,4-TCDD	100	1.56e+07	0.80 y	26:04	-	1.00
13C-1,2,3,4-TCDF	100	2.57e+07	0.80 y	24:34	-	1.00
13C-1,2,3,4,6,9-HxCDF	100	2.04e+07	0.52 y	34:06	-	1.00

Filename: 160407D1 S: 4 Acquired: 7-APR-16 16:35:58

Run: 160407D1 Analyte: Cal: Results:

Sample text: ST160407D1-4 1613 CS3 16C3101

Name	Amount	Resp	RA	RT	RF	RRF
2,3,7,8-TCDD	10.0	1.64e+06	0.83 y	26:41	-	1.13
1,2,3,7,8-PeCDD	50.0	7.30e+06	0.62 y	31:17	-	0.94
1,2,3,4,7,8-HxCDD	50.0	6.71e+06	1.24 y	34:36	-	0.97
1,2,3,6,7,8-HxCDD	50.0	7.50e+06	1.23 y	34:43	-	1.10
1,2,3,7,8,9-HxCDD	50.0	6.93e+06	1.26 y	35:01	-	1.05
1,2,3,4,6,7,8-HpCDD	50.0	6.22e+06	1.03 y	38:30	-	1.06
OCDD	100	1.22e+07	0.90 y	41:47	-	0.97
2,3,7,8-TCDF	10.0	2.36e+06	0.76 y	25:53	-	1.09
1,2,3,7,8-PeCDF	50.0	1.14e+07	1.64 y	30:05	-	1.00
2,3,4,7,8-PeCDF	50.0	1.16e+07	1.62 y	31:00	-	0.88
1,2,3,4,7,8-HxCDF	50.0	1.13e+07	1.23 y	33:42	-	1.16
1,2,3,6,7,8-HxCDF	50.0	1.23e+07	1.23 y	33:50	-	1.18
2,3,4,6,7,8-HxCDF	50.0	1.10e+07	1.24 y	34:26	-	1.21
1,2,3,7,8,9-HxCDF	50.0	8.87e+06	1.26 y	35:24	-	1.13
1,2,3,4,6,7,8-HpCDF	50.0	9.13e+06	1.03 y	37:13	-	1.43
1,2,3,4,7,8,9-HpCDF	50.0	9.11e+06	1.06 y	39:04	-	1.33
OCDF	100	1.60e+07	0.91 y	42:01	-	1.03
Total Tetra-Dioxins	0.00	-	- n	-	-	1.13
TCDD EMPC	0.00	-	- n	-	-	1.13
Total Penta-Dioxins	0.00	-	- n	-	-	0.94
PeCDD EMPC	0.00	-	- n	-	-	0.94
Total Hexa-Dioxins	0.00	-	- n	-	-	1.04
HxCDD EMPC	0.00	-	- n	-	-	1.04
Total Hepta-Dioxins	0.00	-	- n	-	-	1.06
HpCDD EMPC	0.00	-	- n	-	-	1.06
Total Tetra-Furans	0.00	-	- n	-	-	1.09
TCDF EMPC	0.00	-	- n	-	-	1.09
1st Func. Penta-Furans	0.00	-	- n	-	-	0.93
1st Func. PeCDF EMPC	0.00	-	- n	-	-	0.93
Total Penta-Furans	0.00	-	- n	-	-	0.93
PeCDF EMPC	0.00	-	- n	-	-	0.93
Total Hexa-Furans	0.00	-	- n	-	-	1.17
HxCDF EMPC	0.00	-	- n	-	-	1.17
Total Hepta-Furans	0.00	-	- n	-	-	1.38
HpCDF EMPC	0.00	-	- n	-	-	1.38
13C-2,3,7,8-TCDD	100	1.45e+07	0.77 y	26:40	-	1.00
13C-1,2,3,7,8-PeCDD	100	1.56e+07	0.62 y	31:16	-	1.08
13C-1,2,3,4,7,8-HxCDD	100	1.38e+07	1.27 y	34:35	-	0.71
13C-1,2,3,6,7,8-HxCDD	100	1.36e+07	1.28 y	34:42	-	0.70
13C-1,2,3,7,8,9-HxCDD	100	1.32e+07	1.30 y	35:00	-	0.68

13C-1,2,3,4,6,7,8-HpCDD	100	1.18e+07	1.06 y	38:30	-	0.60
13C-OCDD	200	2.51e+07	0.90 y	41:47	-	0.64
13C-2,3,7,8-TCDF	100	2.16e+07	0.80 y	25:52	-	0.89
13C-1,2,3,7,8-PeCDF	100	2.29e+07	1.60 y	30:04	-	0.94
13C-2,3,4,7,8-PeCDF	100	2.63e+07	1.55 y	30:59	-	1.08
13C-1,2,3,4,7,8-HxCDF	100	1.94e+07	0.51 y	33:41	-	0.99
13C-1,2,3,6,7,8-HxCDF	100	2.09e+07	0.51 y	33:49	-	1.07
13C-2,3,4,6,7,8-HxCDF	100	1.83e+07	0.52 y	34:26	-	0.94
13C-1,2,3,7,8,9-HxCDF	100	1.56e+07	0.53 y	35:23	-	0.80
13C-1,2,3,4,6,7,8-HpCDF	100	1.27e+07	0.43 y	37:12	-	0.65
13C-1,2,3,4,7,8,9-HpCDF	100	1.37e+07	0.42 y	39:03	-	0.70

13C-OCDF	200	3.10e+07	0.89 y	42:00	-	0.79
37Cl-2,3,7,8-TCDD	10.0	1.54e+06		26:41	-	1.06
13C-1,2,3,4-TCDD	100	1.44e+07	0.79 y	26:04	-	1.00
13C-1,2,3,4-TCDF	100	2.43e+07	0.81 y	24:35	-	1.00
13C-1,2,3,4,6,9-HxCDF	100	1.95e+07	0.53 y	34:06	-	1.00

Filename: 160407D1 S: 5 Acquired: 7-APR-16 17:24:18

Run: 160407D1 Analyte: Cal:

Results:

Sample text: ST160407D1-5 1613 CS4 15J1908

Name	Amount	Resp	RA	RT	RF	RRF
2,3,7,8-TCDD	40.0	5.64e+06	0.79 y	26:40	-	1.14
1,2,3,7,8-PeCDD	200	2.65e+07	0.63 y	31:17	-	0.98
1,2,3,4,7,8-HxCDD	200	2.56e+07	1.25 y	34:35	-	1.05
1,2,3,6,7,8-HxCDD	200	2.82e+07	1.25 y	34:42	-	1.13
1,2,3,7,8,9-HxCDD	200	2.57e+07	1.23 y	35:00	-	1.08
1,2,3,4,6,7,8-HpCDD	200	2.43e+07	1.01 y	38:30	-	1.11
OCDD	400	4.79e+07	0.89 y	41:47	-	1.02
2,3,7,8-TCDF	40.0	8.26e+06	0.80 y	25:53	-	1.12
1,2,3,7,8-PeCDF	200	4.09e+07	1.64 y	30:05	-	1.02
2,3,4,7,8-PeCDF	200	4.25e+07	1.62 y	30:60	-	0.90
1,2,3,4,7,8-HxCDF	200	4.15e+07	1.24 y	33:41	-	1.20
1,2,3,6,7,8-HxCDF	200	4.55e+07	1.24 y	33:50	-	1.21
2,3,4,6,7,8-HxCDF	200	4.01e+07	1.22 y	34:26	-	1.23
1,2,3,7,8,9-HxCDF	200	3.27e+07	1.23 y	35:23	-	1.16
1,2,3,4,6,7,8-HpCDF	200	3.49e+07	1.01 y	37:12	-	1.49
1,2,3,4,7,8,9-HpCDF	200	3.47e+07	1.02 y	39:03	-	1.37
OCDF	400	6.31e+07	0.91 y	41:60	-	1.07
Total Tetra-Dioxins	0.00	-	- n	-	-	1.14
TCDD EMPC	0.00	-	- n	-	-	1.14
Total Penta-Dioxins	0.00	-	- n	-	-	0.98
PeCDD EMPC	0.00	-	- n	-	-	0.98
Total Hexa-Dioxins	0.00	-	- n	-	-	1.08
HxCDD EMPC	0.00	-	- n	-	-	1.08
Total Hepta-Dioxins	0.00	-	- n	-	-	1.11
HpCDD EMPC	0.00	-	- n	-	-	1.11
Total Tetra-Furans	0.00	-	- n	-	-	1.12
TCDF EMPC	0.00	-	- n	-	-	1.12
1st Func. Penta-Furans	0.00	-	- n	-	-	0.96
1st Func. PeCDF EMPC	0.00	-	- n	-	-	0.96
Total Penta-Furans	0.00	-	- n	-	-	0.96
PeCDF EMPC	0.00	-	- n	-	-	0.96
Total Hexa-Furans	0.00	-	- n	-	-	1.20
HxCDF EMPC	0.00	-	- n	-	-	1.20
Total Hepta-Furans	0.00	-	- n	-	-	1.43
HpCDF EMPC	0.00	-	- n	-	-	1.43
13C-2,3,7,8-TCDD	100	1.23e+07	0.80 y	26:39	-	0.98
13C-1,2,3,7,8-PeCDD	100	1.35e+07	0.63 y	31:15	-	1.08
13C-1,2,3,4,7,8-HxCDD	100	1.22e+07	1.31 y	34:34	-	0.71
13C-1,2,3,6,7,8-HxCDD	100	1.25e+07	1.23 y	34:41	-	0.72
13C-1,2,3,7,8,9-HxCDD	100	1.19e+07	1.23 y	34:59	-	0.69

13C-1,2,3,4,6,7,8-HpCDD	100	1.10e+07	1.07 y	38:29	-	0.64
13C-OCDD	200	2.35e+07	0.88 y	41:45	-	0.68
13C-2,3,7,8-TCDF	100	1.84e+07	0.81 y	25:51	-	0.89
13C-1,2,3,7,8-PeCDF	100	2.01e+07	1.62 y	30:04	-	0.97
13C-2,3,4,7,8-PeCDF	100	2.35e+07	1.56 y	30:58	-	1.13
13C-1,2,3,4,7,8-HxCDF	100	1.73e+07	0.52 y	33:41	-	1.00
13C-1,2,3,6,7,8-HxCDF	100	1.88e+07	0.52 y	33:49	-	1.09
13C-2,3,4,6,7,8-HxCDF	100	1.63e+07	0.52 y	34:25	-	0.94
13C-1,2,3,7,8,9-HxCDF	100	1.41e+07	0.53 y	35:22	-	0.81
13C-1,2,3,4,6,7,8-HpCDF	100	1.17e+07	0.42 y	37:12	-	0.68
13C-1,2,3,4,7,8,9-HpCDF	100	1.27e+07	0.44 y	39:02	-	0.74

13C-OCDF	200	2.96e+07	0.89 y	41:59	-	0.86
37Cl-2,3,7,8-TCDD	40.0	5.49e+06		26:40	-	1.09
13C-1,2,3,4-TCDD	100	1.25e+07	0.79 y	26:04	-	1.00
13C-1,2,3,4-TCDF	100	2.07e+07	0.80 y	24:34	-	1.00
13C-1,2,3,4,6,9-HxCDF	100	1.73e+07	0.52 y	34:06	-	1.00

Filename: 160407D1 S: 6 Acquired: 7-APR-16 18:12:36
 Run: 160407D1 Analyte: Cal: 1613VG7-4-7-16 Results:
 Sample text: ST160407D1-6 1613 CSS 15J1909

Name	Amount	Resp	RA	RT	RF	RRF
2,3,7,8-TCDD	300	5.22e+07	0.78 y	26:42	-	1.19
1,2,3,7,8-PeCDD	1500	2.52e+08	0.63 y	31:18	-	0.99
1,2,3,4,7,8-HxCDD	1500	2.49e+08	1.24 y	34:36	-	1.03
1,2,3,6,7,8-HxCDD	1500	2.71e+08	1.25 y	34:43	-	1.15
1,2,3,7,8,9-HxCDD	1500	2.53e+08	1.24 y	35:01	-	1.10
1,2,3,4,6,7,8-HpCDD	1500	2.79e+08	1.02 y	38:31	-	1.09
OCDD	3000	4.88e+08	0.90 y	41:47	-	1.00
2,3,7,8-TCDF	300	7.38e+07	0.79 y	25:54	-	1.16
1,2,3,7,8-PeCDF	1500	3.76e+08	1.62 y	30:05	-	1.00
2,3,4,7,8-PeCDF	1500	3.95e+08	1.59 y	31:01	-	0.93
1,2,3,4,7,8-HxCDF	1500	3.84e+08	1.24 y	33:43	-	1.19
1,2,3,6,7,8-HxCDF	1500	4.13e+08	1.20 y	33:50	-	1.19
2,3,4,6,7,8-HxCDF	1500	3.92e+08	1.24 y	34:27	-	1.27
1,2,3,7,8,9-HxCDF	1500	3.22e+08	1.24 y	35:24	-	1.16
1,2,3,4,6,7,8-HpCDF	1500	3.58e+08	1.02 y	37:14	-	1.50
1,2,3,4,7,8,9-HpCDF	1500	3.42e+08	1.02 y	39:04	-	1.37
OCDF	3000	6.49e+08	0.92 y	42:01	-	1.06
Total Tetra-Dioxins	0.00	-	- n	-	-	1.19
TCDD EMPC	0.00	-	- n	-	-	1.19
Total Penta-Dioxins	0.00	-	- n	-	-	0.99
PeCDD EMPC	0.00	-	- n	-	-	0.99
Total Hexa-Dioxins	0.00	-	- n	-	-	1.09
HxCDD EMPC	0.00	-	- n	-	-	1.09
Total Hepta-Dioxins	0.00	-	- n	-	-	1.09
HpCDD EMPC	0.00	-	- n	-	-	1.09
Total Tetra-Furans	0.00	-	- n	-	-	1.16
TCDF EMPC	0.00	-	- n	-	-	1.16
1st Func. Penta-Furans	0.00	-	- n	-	-	0.96
1st Func. PeCDF EMPC	0.00	-	- n	-	-	0.96
Total Penta-Furans	0.00	-	- n	-	-	0.96
PeCDF EMPC	0.00	-	- n	-	-	0.96
Total Hexa-Furans	0.00	-	- n	-	-	1.20
HxCDF EMPC	0.00	-	- n	-	-	1.20
Total Hepta-Furans	0.00	-	- n	-	-	1.43
HpCDF EMPC	0.00	-	- n	-	-	1.43
13C-2,3,7,8-TCDD	100	1.47e+07	0.80 y	26:40	-	1.08
13C-1,2,3,7,8-PeCDD	100	1.69e+07	0.62 y	31:17	-	1.25
13C-1,2,3,4,7,8-HxCDD	100	1.62e+07	1.30 y	34:36	-	0.84
13C-1,2,3,6,7,8-HxCDD	100	1.57e+07	1.28 y	34:42	-	0.82
13C-1,2,3,7,8,9-HxCDD	100	1.53e+07	1.26 y	35:00	-	0.80

13C-1,2,3,4,6,7,8-HpCDD	100	1.71e+07	1.06 y	38:30	-	0.89
13C-OCDD	200	3.24e+07	0.89 y	41:46	-	0.84
13C-2,3,7,8-TCDF	100	2.11e+07	0.80 y	25:52	-	0.93
13C-1,2,3,7,8-PeCDF	100	2.50e+07	1.59 y	30:05	-	1.10
13C-2,3,4,7,8-PeCDF	100	2.85e+07	1.58 y	30:60	-	1.25
13C-1,2,3,4,7,8-HxCDF	100	2.14e+07	0.52 y	33:42	-	1.12
13C-1,2,3,6,7,8-HxCDF	100	2.32e+07	0.52 y	33:50	-	1.21
13C-2,3,4,6,7,8-HxCDF	100	2.05e+07	0.52 y	34:25	-	1.07
13C-1,2,3,7,8,9-HxCDF	100	1.85e+07	0.52 y	35:23	-	0.96
13C-1,2,3,4,6,7,8-HpCDF	100	1.60e+07	0.43 y	37:13	-	0.83
13C-1,2,3,4,7,8,9-HpCDF	100	1.66e+07	0.43 y	39:03	-	0.87

13C-OCDF	200	4.10e+07	0.90 y	42:01	-	1.07
37Cl-2,3,7,8-TCDD	300	3.39e+07		26:42	-	0.83
13C-1,2,3,4-TCDD	100	1.36e+07	0.80 y	26:05	-	1.00
13C-1,2,3,4-TCDF	100	2.27e+07	0.81 y	24:35	-	1.00
13C-1,2,3,4,6,9-HxCDF	100	1.92e+07	0.52 y	34:07	-	1.00

Filename: 160407D1 S: 1 Acquired: 7-APR-16 14:10:55

Run: 160407D1 Analyte: Cal: 1613VG7-4-7-16

Sample text: ST160407D1-1 1613 CS0 15J1904

Results:

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.25	4.19e+04	0.88 y	26:40	-	1.21
2	Unk	1,2,3,7,8-PeCDD	1.25	1.88e+05	0.65 y	31:16	-	1.01
3	Unk	1,2,3,4,7,8-HxCDD	1.25	1.65e+05	1.21 y	34:36	-	1.02
4	Unk	1,2,3,6,7,8-HxCDD	1.25	1.80e+05	1.10 y	34:43	-	1.09
5	Unk	1,2,3,7,8,9-HxCDD	1.25	1.66e+05	1.31 y	35:00	-	1.01
6	Unk	1,2,3,4,6,7,8-HpCDD	1.25	1.44e+05	1.10 y	38:30	-	1.00
7	Unk	OCDD	2.50	2.69e+05	0.87 y	41:46	-	0.94
8	Unk	2,3,7,8-TCDF	0.25	6.20e+04	0.71 y	25:52	-	1.20
9	Unk	1,2,3,7,8-PeCDF	1.25	2.90e+05	1.52 y	30:05	-	1.04
10	Unk	2,3,4,7,8-PeCDF	1.25	3.04e+05	1.58 y	30:59	-	0.94
11	Unk	1,2,3,4,7,8-HxCDF	1.25	2.65e+05	1.27 y	33:42	-	1.13
12	Unk	1,2,3,6,7,8-HxCDF	1.25	2.81e+05	1.25 y	33:50	-	1.11
13	Unk	2,3,4,6,7,8-HxCDF	1.25	2.69e+05	1.25 y	34:26	-	1.25
14	Unk	1,2,3,7,8,9-HxCDF	1.25	2.16e+05	1.25 y	35:24	-	1.14
15	Unk	1,2,3,4,6,7,8-HpCDF	1.25	2.22e+05	1.10 y	37:13	-	1.44
16	Unk	1,2,3,4,7,8,9-HpCDF	1.25	2.00e+05	1.00 y	39:03	-	1.22
17	Unk	OCDF	2.50	3.67e+05	0.93 y	42:00	-	1.03
36	IS	13C-2,3,7,8-TCDD	100.00	1.39e+07	0.80 y	26:39	-	0.99
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.50e+07	0.62 y	31:16	-	1.06
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.29e+07	1.31 y	34:35	-	0.68
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.32e+07	1.23 y	34:42	-	0.70
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.32e+07	1.28 y	35:00	-	0.69
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.15e+07	1.06 y	38:30	-	0.60
42	IS	13C-OCDD	200.00	2.30e+07	0.88 y	41:46	-	0.60
43	IS	13C-2,3,7,8-TCDF	100.00	2.07e+07	0.82 y	25:51	-	0.90
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.23e+07	1.59 y	30:04	-	0.97
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.59e+07	1.58 y	30:59	-	1.12
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.88e+07	0.51 y	33:42	-	0.99
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.02e+07	0.52 y	33:50	-	1.06
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.72e+07	0.52 y	34:25	-	0.90
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.51e+07	0.52 y	35:24	-	0.79
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.23e+07	0.43 y	37:13	-	0.65
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.31e+07	0.44 y	39:03	-	0.69
52	IS	13C-OCDF	200.00	2.85e+07	0.89 y	41:60	-	0.75
53	C/Up	37Cl-2,3,7,8-TCDD	0.25	5.04e+04		26:40	-	1.43
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.41e+07	0.80 y	26:03	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.31e+07	0.81 y	24:33	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.90e+07	0.52 y	34:07	-	1.00

Filename: 160407D1 S: 2 Acquired: 7-APR-16 14:59:18

Run: 160407D1 Analyte:

Cal:

Results:

Sample text: ST160407D1-2 1613 CS1 15J1905

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.50	8.26e+04	0.68 y	26:41	-	1.11
2	Unk	1,2,3,7,8-PeCDD	2.50	3.79e+05	0.65 y	31:16	-	0.95
3	Unk	1,2,3,4,7,8-HxCDD	2.50	3.49e+05	1.25 y	34:36	-	0.99
4	Unk	1,2,3,6,7,8-HxCDD	2.50	3.92e+05	1.26 y	34:42	-	1.09
5	Unk	1,2,3,7,8,9-HxCDD	2.50	3.60e+05	1.18 y	35:00	-	1.05
6	Unk	1,2,3,4,6,7,8-HpCDD	2.50	3.52e+05	1.06 y	38:30	-	1.05
7	Unk	OCDD	5.00	5.62e+05	0.93 y	41:46	-	0.93
8	Unk	2,3,7,8-TCDF	0.50	1.18e+05	0.88 y	25:52	-	1.09
9	Unk	1,2,3,7,8-PeCDF	2.50	5.84e+05	1.52 y	30:04	-	0.99
10	Unk	2,3,4,7,8-PeCDF	2.50	6.16e+05	1.65 y	31:00	-	0.89
11	Unk	1,2,3,4,7,8-HxCDF	2.50	5.88e+05	1.26 y	33:42	-	1.18
12	Unk	1,2,3,6,7,8-HxCDF	2.50	6.24e+05	1.24 y	33:50	-	1.13
13	Unk	2,3,4,6,7,8-HxCDF	2.50	5.85e+05	1.24 y	34:26	-	1.24
14	Unk	1,2,3,7,8,9-HxCDF	2.50	4.53e+05	1.17 y	35:23	-	1.12
15	Unk	1,2,3,4,6,7,8-HpCDF	2.50	5.24e+05	1.04 y	37:13	-	1.40
16	Unk	1,2,3,4,7,8,9-HpCDF	2.50	4.42e+05	1.02 y	39:03	-	1.32
17	Unk	OCDF	5.00	7.58e+05	0.91 y	42:00	-	1.02
36	IS	13C-2,3,7,8-TCDD	100.00	1.49e+07	0.80 y	26:40	-	1.02
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.59e+07	0.62 y	31:16	-	1.09
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.41e+07	1.25 y	34:35	-	0.70
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.44e+07	1.29 y	34:42	-	0.71
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.37e+07	1.27 y	34:60	-	0.68
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.34e+07	1.06 y	38:30	-	0.66
42	IS	13C-OCDD	200.00	2.41e+07	0.90 y	41:46	-	0.59
43	IS	13C-2,3,7,8-TCDF	100.00	2.18e+07	0.79 y	25:51	-	0.91
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.35e+07	1.59 y	30:04	-	0.98
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.78e+07	1.59 y	30:59	-	1.16
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.99e+07	0.51 y	33:41	-	0.98
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.21e+07	0.52 y	33:49	-	1.09
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.89e+07	0.51 y	34:25	-	0.93
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.62e+07	0.51 y	35:23	-	0.80
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.50e+07	0.43 y	37:13	-	0.74
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.34e+07	0.44 y	39:03	-	0.66
52	IS	13C-OCDF	200.00	2.99e+07	0.90 y	42:00	-	0.74
53	C/Up	37Cl-2,3,7,8-TCDD	0.50	9.35e+04		26:41	-	1.29
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.45e+07	0.81 y	26:04	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.39e+07	0.80 y	24:34	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	2.02e+07	0.52 y	34:06	-	1.00

Filename: 160407D1 S: 3 Acquired: 7-APR-16 15:47:38

Run: 160407D1 Analyte:

Cal:

Results:

Sample text: ST160407D1-3 1613 CS2 15J1906

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	2.00	3.11e+05	0.77 y	26:40	-	1.01
2	Unk	1,2,3,7,8-PeCDD	10.00	1.49e+06	0.66 y	31:17	-	0.90
3	Unk	1,2,3,4,7,8-HxCDD	10.00	1.35e+06	1.25 y	34:36	-	0.95
4	Unk	1,2,3,6,7,8-HxCDD	10.00	1.49e+06	1.22 y	34:43	-	1.01
5	Unk	1,2,3,7,8,9-HxCDD	10.00	1.40e+06	1.24 y	35:00	-	1.01
6	Unk	1,2,3,4,6,7,8-HpCDD	10.00	1.21e+06	1.05 y	38:30	-	0.99
7	Unk	OCDD	20.00	2.21e+06	0.88 y	41:46	-	0.90
8	Unk	2,3,7,8-TCDF	2.00	4.78e+05	0.86 y	25:53	-	1.05
9	Unk	1,2,3,7,8-PeCDF	10.00	2.35e+06	1.64 y	30:05	-	0.99
10	Unk	2,3,4,7,8-PeCDF	10.00	2.46e+06	1.62 y	30:60	-	0.86
11	Unk	1,2,3,4,7,8-HxCDF	10.00	2.27e+06	1.19 y	33:42	-	1.10
12	Unk	1,2,3,6,7,8-HxCDF	10.00	2.43e+06	1.21 y	33:50	-	1.11
13	Unk	2,3,4,6,7,8-HxCDF	10.00	2.20e+06	1.23 y	34:26	-	1.16
14	Unk	1,2,3,7,8,9-HxCDF	10.00	1.75e+06	1.24 y	35:24	-	1.08
15	Unk	1,2,3,4,6,7,8-HpCDF	10.00	1.82e+06	1.02 y	37:13	-	1.38
16	Unk	1,2,3,4,7,8,9-HpCDF	10.00	1.73e+06	1.09 y	39:03	-	1.27
17	Unk	OCDF	20.00	3.01e+06	0.91 y	42:00	-	0.99
36	IS	13C-2,3,7,8-TCDD	100.00	1.54e+07	0.78 y	26:39	-	0.99
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.66e+07	0.62 y	31:16	-	1.06
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.42e+07	1.28 y	34:35	-	0.69
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.47e+07	1.27 y	34:42	-	0.72
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.38e+07	1.29 y	34:60	-	0.68
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.21e+07	1.06 y	38:30	-	0.59
42	IS	13C-OCDD	200.00	2.45e+07	0.88 y	41:46	-	0.60
43	IS	13C-2,3,7,8-TCDF	100.00	2.29e+07	0.82 y	25:52	-	0.89
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.39e+07	1.57 y	30:04	-	0.93
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.86e+07	1.57 y	30:59	-	1.11
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	2.06e+07	0.52 y	33:41	-	1.01
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.19e+07	0.52 y	33:49	-	1.07
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.90e+07	0.53 y	34:25	-	0.93
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.62e+07	0.49 y	35:23	-	0.79
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.32e+07	0.44 y	37:12	-	0.65
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.36e+07	0.43 y	39:03	-	0.67
52	IS	13C-OCDF	200.00	3.04e+07	0.89 y	41:60	-	0.74
53	C/Up	37Cl-2,3,7,8-TCDD	2.00	3.49e+05		26:40	-	1.12
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.56e+07	0.80 y	26:04	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.57e+07	0.80 y	24:34	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	2.04e+07	0.52 y	34:06	-	1.00

Filename: 160407D1 S: 4 Acquired: 7-APR-16 16:35:58

Run: 160407D1 Analyte: Cal: Results:
 Sample text: ST160407D1-4 1613 CS3 16C3101

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	10.00	1.64e+06	0.83 y	26:41	-	1.13
2	Unk	1,2,3,7,8-PeCDD	50.00	7.30e+06	0.62 y	31:17	-	0.94
3	Unk	1,2,3,4,7,8-HxCDD	50.00	6.71e+06	1.24 y	34:36	-	0.97
4	Unk	1,2,3,6,7,8-HxCDD	50.00	7.50e+06	1.23 y	34:43	-	1.10
5	Unk	1,2,3,7,8,9-HxCDD	50.00	6.93e+06	1.26 y	35:01	-	1.05
6	Unk	1,2,3,4,6,7,8-HpCDD	50.00	6.22e+06	1.03 y	38:30	-	1.06
7	Unk	OCDD	100.00	1.22e+07	0.90 y	41:47	-	0.97
8	Unk	2,3,7,8-TCDF	10.00	2.36e+06	0.76 y	25:53	-	1.09
9	Unk	1,2,3,7,8-PeCDF	50.00	1.14e+07	1.64 y	30:05	-	1.00
10	Unk	2,3,4,7,8-PeCDF	50.00	1.16e+07	1.62 y	31:00	-	0.88
11	Unk	1,2,3,4,7,8-HxCDF	50.00	1.13e+07	1.23 y	33:42	-	1.16
12	Unk	1,2,3,6,7,8-HxCDF	50.00	1.23e+07	1.23 y	33:50	-	1.18
13	Unk	2,3,4,6,7,8-HxCDF	50.00	1.10e+07	1.24 y	34:26	-	1.21
14	Unk	1,2,3,7,8,9-HxCDF	50.00	8.87e+06	1.26 y	35:24	-	1.13
15	Unk	1,2,3,4,6,7,8-HpCDF	50.00	9.13e+06	1.03 y	37:13	-	1.43
16	Unk	1,2,3,4,7,8,9-HpCDF	50.00	9.11e+06	1.06 y	39:04	-	1.33
17	Unk	OCDF	100.00	1.60e+07	0.91 y	42:01	-	1.03
36	IS	13C-2,3,7,8-TCDD	100.00	1.45e+07	0.77 y	26:40	-	1.00
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.56e+07	0.62 y	31:16	-	1.08
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.38e+07	1.27 y	34:35	-	0.71
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.36e+07	1.28 y	34:42	-	0.70
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.32e+07	1.30 y	35:00	-	0.68
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.18e+07	1.06 y	38:30	-	0.60
42	IS	13C-OCDD	200.00	2.51e+07	0.90 y	41:47	-	0.64
43	IS	13C-2,3,7,8-TCDF	100.00	2.16e+07	0.80 y	25:52	-	0.89
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.29e+07	1.60 y	30:04	-	0.94
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.63e+07	1.55 y	30:59	-	1.08
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.94e+07	0.51 y	33:41	-	0.99
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.09e+07	0.51 y	33:49	-	1.07
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.83e+07	0.52 y	34:26	-	0.94
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.56e+07	0.53 y	35:23	-	0.80
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.27e+07	0.43 y	37:12	-	0.65
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.37e+07	0.42 y	39:03	-	0.70
52	IS	13C-OCDF	200.00	3.10e+07	0.89 y	42:00	-	0.79
53	C/Up	37Cl-2,3,7,8-TCDD	10.00	1.54e+06		26:41	-	1.06
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.44e+07	0.79 y	26:04	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.43e+07	0.81 y	24:35	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.95e+07	0.53 y	34:06	-	1.00

Filename: 160407D1 S: 5 Acquired: 7-APR-16 17:24:18

Run: 160407D1 Analyte:

Cal:

Results:

Sample text: ST160407D1-5 1613 CS4 15J1908

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	40.00	5.64e+06	0.79 y	26:40	-	1.14
2	Unk	1,2,3,7,8-PeCDD	200.00	2.65e+07	0.63 y	31:17	-	0.98
3	Unk	1,2,3,4,7,8-HxCDD	200.00	2.56e+07	1.25 y	34:35	-	1.05
4	Unk	1,2,3,6,7,8-HxCDD	200.00	2.82e+07	1.25 y	34:42	-	1.13
5	Unk	1,2,3,7,8,9-HxCDD	200.00	2.57e+07	1.23 y	35:00	-	1.08
6	Unk	1,2,3,4,6,7,8-HpCDD	200.00	2.43e+07	1.01 y	38:30	-	1.11
7	Unk	OCDD	400.00	4.79e+07	0.89 y	41:47	-	1.02
8	Unk	2,3,7,8-TCDF	40.00	8.26e+06	0.80 y	25:53	-	1.12
9	Unk	1,2,3,7,8-PeCDF	200.00	4.09e+07	1.64 y	30:05	-	1.02
10	Unk	2,3,4,7,8-PeCDF	200.00	4.25e+07	1.62 y	30:60	-	0.90
11	Unk	1,2,3,4,7,8-HxCDF	200.00	4.15e+07	1.24 y	33:41	-	1.20
12	Unk	1,2,3,6,7,8-HxCDF	200.00	4.55e+07	1.24 y	33:50	-	1.21
13	Unk	2,3,4,6,7,8-HxCDF	200.00	4.01e+07	1.22 y	34:26	-	1.23
14	Unk	1,2,3,7,8,9-HxCDF	200.00	3.27e+07	1.23 y	35:23	-	1.16
15	Unk	1,2,3,4,6,7,8-HpCDF	200.00	3.49e+07	1.01 y	37:12	-	1.49
16	Unk	1,2,3,4,7,8,9-HpCDF	200.00	3.47e+07	1.02 y	39:03	-	1.37
17	Unk	OCDF	400.00	6.31e+07	0.91 y	41:60	-	1.07
36	IS	13C-2,3,7,8-TCDD	100.00	1.23e+07	0.80 y	26:39	-	0.98
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.35e+07	0.63 y	31:15	-	1.08
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.22e+07	1.31 y	34:34	-	0.71
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.25e+07	1.23 y	34:41	-	0.72
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.19e+07	1.23 y	34:59	-	0.69
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.10e+07	1.07 y	38:29	-	0.64
42	IS	13C-OCDD	200.00	2.35e+07	0.88 y	41:45	-	0.68
43	IS	13C-2,3,7,8-TCDF	100.00	1.84e+07	0.81 y	25:51	-	0.89
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.01e+07	1.62 y	30:04	-	0.97
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.35e+07	1.56 y	30:58	-	1.13
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	1.73e+07	0.52 y	33:41	-	1.00
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	1.88e+07	0.52 y	33:49	-	1.09
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	1.63e+07	0.52 y	34:25	-	0.94
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.41e+07	0.53 y	35:22	-	0.81
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.17e+07	0.42 y	37:12	-	0.68
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.27e+07	0.44 y	39:02	-	0.74
52	IS	13C-OCDF	200.00	2.96e+07	0.89 y	41:59	-	0.86
53	C/Up	37Cl-2,3,7,8-TCDD	40.00	5.49e+06		26:40	-	1.09
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.25e+07	0.79 y	26:04	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.07e+07	0.80 y	24:34	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.73e+07	0.52 y	34:06	-	1.00

Filename: 160407D1 S: 6 Acquired: 7-APR-16 18:12:36

Run: 160407D1 Analyte: Cal: 1613VG7-4-7-16

Sample text: ST160407D1-6 1613 CS5 15J1909

Results:

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	300.00	5.22e+07	0.78 y	26:42	-	1.19
2	Unk	1,2,3,7,8-PeCDD	1500.00	2.52e+08	0.63 y	31:18	-	0.99
3	Unk	1,2,3,4,7,8-HxCDD	1500.00	2.49e+08	1.24 y	34:36	-	1.03
4	Unk	1,2,3,6,7,8-HxCDD	1500.00	2.71e+08	1.25 y	34:43	-	1.15
5	Unk	1,2,3,7,8,9-HxCDD	1500.00	2.53e+08	1.24 y	35:01	-	1.10
6	Unk	1,2,3,4,6,7,8-HpCDD	1500.00	2.79e+08	1.02 y	38:31	-	1.09
7	Unk	OCDD	3000.00	4.88e+08	0.90 y	41:47	-	1.00
8	Unk	2,3,7,8-TCDF	300.00	7.38e+07	0.79 y	25:54	-	1.16
9	Unk	1,2,3,7,8-PeCDF	1500.00	3.76e+08	1.62 y	30:05	-	1.00
10	Unk	2,3,4,7,8-PeCDF	1500.00	3.95e+08	1.59 y	31:01	-	0.93
11	Unk	1,2,3,4,7,8-HxCDF	1500.00	3.84e+08	1.24 y	33:43	-	1.19
12	Unk	1,2,3,6,7,8-HxCDF	1500.00	4.13e+08	1.20 y	33:50	-	1.19
13	Unk	2,3,4,6,7,8-HxCDF	1500.00	3.92e+08	1.24 y	34:27	-	1.27
14	Unk	1,2,3,7,8,9-HxCDF	1500.00	3.22e+08	1.24 y	35:24	-	1.16
15	Unk	1,2,3,4,6,7,8-HpCDF	1500.00	3.58e+08	1.02 y	37:14	-	1.50
16	Unk	1,2,3,4,7,8,9-HpCDF	1500.00	3.42e+08	1.02 y	39:04	-	1.37
17	Unk	OCDF	3000.00	6.49e+08	0.92 y	42:01	-	1.06
36	IS	13C-2,3,7,8-TCDD	100.00	1.47e+07	0.80 y	26:40	-	1.08
37	IS	13C-1,2,3,7,8-PeCDD	100.00	1.69e+07	0.62 y	31:17	-	1.25
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.62e+07	1.30 y	34:36	-	0.84
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.57e+07	1.28 y	34:42	-	0.82
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	1.53e+07	1.26 y	35:00	-	0.80
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.71e+07	1.06 y	38:30	-	0.89
42	IS	13C-OCDD	200.00	3.24e+07	0.89 y	41:46	-	0.84
43	IS	13C-2,3,7,8-TCDF	100.00	2.11e+07	0.80 y	25:52	-	0.93
44	IS	13C-1,2,3,7,8-PeCDF	100.00	2.50e+07	1.59 y	30:05	-	1.10
45	IS	13C-2,3,4,7,8-PeCDF	100.00	2.85e+07	1.58 y	30:60	-	1.25
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	2.14e+07	0.52 y	33:42	-	1.12
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.32e+07	0.52 y	33:50	-	1.21
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.05e+07	0.52 y	34:25	-	1.07
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.85e+07	0.52 y	35:23	-	0.96
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	1.60e+07	0.43 y	37:13	-	0.83
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.66e+07	0.43 y	39:03	-	0.87
52	IS	13C-OCDF	200.00	4.10e+07	0.90 y	42:01	-	1.07
53	C/Up	37Cl-2,3,7,8-TCDD	300.00	3.39e+07		26:42	-	0.83
54	RS/RT	13C-1,2,3,4-TCDD	100.00	1.36e+07	0.80 y	26:05	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	2.27e+07	0.81 y	24:35	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	1.92e+07	0.52 y	34:07	-	1.00

Run: 160407D1 Analyte: Cal: 1613VG7-4-7-16 Inst. ID. VG-7

Data filename: 160407D1

Samp# 1 Samp# 2 Samp# 3 Samp# 4 Samp# 5 Samp# 6
0.25 0.50 2.0 10 40 300

Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
Total Tetra-Dioxins	1.13	6.05 %	1.21	1.11	1.01	1.13	1.14	1.19
TCDD EMPC	1.13	6.05 %	1.21	1.11	1.01	1.13	1.14	1.19
Total Penta-Dioxins	0.96	4.14 %	1.01	0.95	0.90	0.94	0.98	0.99
PeCDD EMPC	0.96	4.14 %	1.01	0.95	0.90	0.94	0.98	0.99
Total Hexa-Dioxins	1.05	3.43 %	1.04	1.04	0.99	1.04	1.08	1.09
HxCDD EMPC	1.05	3.43 %	1.04	1.04	0.99	1.04	1.08	1.09
Total Hepta-Dioxins	1.05	4.28 %	1.00	1.05	0.99	1.06	1.11	1.09
HpCDD EMPC	1.05	4.28 %	1.00	1.05	0.99	1.06	1.11	1.09
Total Tetra-Furans	1.12	4.96 %	1.20	1.09	1.05	1.09	1.12	1.16
TCDF EMPC	1.12	4.96 %	1.20	1.09	1.05	1.09	1.12	1.16
1st Func. Penta-Furans	0.95	2.61 %	0.99	0.94	0.92	0.93	0.96	0.96
1st Func. PeCDF EMPC	0.95	2.61 %	0.99	0.94	0.92	0.93	0.96	0.96
Total Penta-Furans	0.95	2.61 %	0.99	0.94	0.92	0.93	0.96	0.96
PeCDF EMPC	0.95	2.61 %	0.99	0.94	0.92	0.93	0.96	0.96
Total Hexa-Furans	1.17	2.86 %	1.16	1.17	1.11	1.17	1.20	1.20
HxCDF EMPC	1.17	2.86 %	1.16	1.17	1.11	1.17	1.20	1.20
Total Hepta-Furans	1.37	3.43 %	1.33	1.36	1.32	1.38	1.43	1.43
HpCDF EMPC	1.37	3.43 %	1.33	1.36	1.32	1.38	1.43	1.43

Initial Calibration RRF Summary (ICAL)
Run: 160407D1

Analyte:

Vista Analytical Laboratory
Cal: 1613VG7-4-7-16

Inst. ID: VG-7

Page 1 of 1

Data filename: 160407D1		Samp# 1	Samp# 2	Samp# 3	Samp# 4	Samp# 5	Samp# 6
		0.25	0.50	2.0	10	40	300
RRT Limits							
Name	Lower Upper	RRT#1	RRT#2	RRT#3	RRT#4	RRT#5	RRT#6
2,3,7,8-TCDD	0.999 -1.002	1.001	1.001	1.001	1.001	1.001	1.001
1,2,3,7,8-PeCDD	0.999 -1.002	1.000	1.000	1.000	1.001	1.001	1.001
1,2,3,4,7,8-HxCDD	0.999 -1.001	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,6,7,8-HxCDD	0.998 -1.004	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,7,8,9-HxCDD	0.998 -1.004	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,4,6,7,8-HpCDD	0.999 -1.001	1.000	1.000	1.000	1.000	1.000	1.000
OCDD	0.999 -1.001	1.000	1.000	1.000	1.000	1.000	1.000
2,3,7,8-TCDF	0.999 -1.003	1.001	1.000	1.001	1.001	1.001	1.001
1,2,3,7,8-PeCDF	0.999 -1.002	1.000	1.000	1.001	1.001	1.000	1.000
2,3,4,7,8-PeCDF	0.999 -1.002	1.000	1.001	1.000	1.000	1.001	1.000
1,2,3,4,7,8-HxCDF	0.999 -1.001	1.000	1.000	1.000	1.001	1.000	1.000
1,2,3,6,7,8-HxCDF	0.997 -1.005	1.000	1.000	1.000	1.000	1.000	1.000
2,3,4,6,7,8-HxCDF	0.999 -1.001	1.000	1.000	1.000	1.000	1.000	1.001
1,2,3,7,8,9-HxCDF	0.999 -1.001	1.000	1.000	1.000	1.001	1.001	1.000
1,2,3,4,6,7,8-HpCDF	0.999 -1.001	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,4,7,8,9-HpCDF	0.999 -1.001	1.000	1.000	1.000	1.001	1.000	1.000
OCDF	0.999 -1.001	1.000	1.000	1.000	1.000	1.000	1.000
13C-2,3,7,8-TCDD	0.976 -1.043	1.023	1.023	1.023	1.023	1.023	1.023
13C-1,2,3,7,8-PeCDD	1.000 -1.567	1.200	1.199	1.200	1.200	1.199	1.199
13C-1,2,3,4,7,8-HxCDD	1.002 -1.026	1.014	1.014	1.014	1.014	1.014	1.014
13C-1,2,3,6,7,8-HxCDD	1.007 -1.029	1.017	1.017	1.017	1.017	1.017	1.017
13C-1,2,3,7,8,9-HxCDD	1.014 -1.038	1.026	1.026	1.026	1.026	1.026	1.026
13C-1,2,3,4,6,7,8-HpCDD	1.117 -1.141	1.129	1.129	1.129	1.129	1.129	1.128
13C-OCDD	1.085 -1.365	1.225	1.225	1.225	1.225	1.225	1.224
13C-2,3,7,8-TCDF	0.923 -1.103	0.992	0.992	0.992	0.992	0.992	0.992
13C-1,2,3,7,8-PeCDF	1.000 -1.425	1.154	1.154	1.154	1.153	1.154	1.153
13C-2,3,4,7,8-PeCDF	1.011 -1.526	1.189	1.189	1.189	1.189	1.189	1.188
13C-1,2,3,4,7,8-HxCDF	0.975 -1.001	0.988	0.988	0.988	0.988	0.988	0.988
13C-1,2,3,6,7,8-HxCDF	0.979 -1.005	0.992	0.992	0.992	0.992	0.992	0.992
13C-2,3,4,6,7,8-HxCDF	1.001 -1.020	1.009	1.009	1.009	1.009	1.009	1.009
13C-1,2,3,7,8,9-HxCDF	1.002 -1.072	1.038	1.038	1.037	1.037	1.037	1.037
13C-1,2,3,4,6,7,8-HpCDF	1.069 -1.111	1.091	1.091	1.091	1.091	1.091	1.091
13C-1,2,3,4,7,8,9-HpCDF	1.098 -1.192	1.145	1.145	1.145	1.145	1.145	1.145
13C-OCDF	1.091 -1.371	1.231	1.231	1.231	1.232	1.231	1.231
37Cl-2,3,7,8-TCDD	0.989 -1.052	1.023	1.023	1.023	1.024	1.024	1.023
13C-1,2,3,4-TCDD	0.000 -0.000	*	*	*	*	*	*
13C-1,2,3,4-TCDF	0.000 -0.000	*	*	*	*	*	*
13C-1,2,3,4,6,9-HxCDF	0.000 -0.000	*	*	*	*	*	*

Filename: 160407D1 S: 1 Acquired: 7-APR-16 14:10:55

Run: 160407D1 Analyte: Cal: 1613VG7-4-7-16

Sample text: ST160407D1-1 1613 CS0 15J1904

Results:

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.21
19	Tot	TCDD EMPC	0.00	-	- n	-	-	1.21
20	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	1.01
21	Tot	PeCDD EMPC	0.00	-	- n	-	-	1.01
22	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.04
23	Tot	HxCDD EMPC	0.00	-	- n	-	-	1.04
24	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.00
25	Tot	HpCDD EMPC	0.00	-	- n	-	-	1.00
26	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.20
27	Tot	TCDF EMPC	0.00	-	- n	-	-	1.20
28	Tot	1st Func. Penta-Furans	0.00	-	- n	-	-	0.99
29	Tot	1st Func. PeCDF EMPC	0.00	-	- n	-	-	0.99
30	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.99
31	Tot	PeCDF EMPC	0.00	-	- n	-	-	0.99
32	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.16
33	Tot	HxCDF EMPC	0.00	-	- n	-	-	1.16
34	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.33
35	Tot	HpCDF EMPC	0.00	-	- n	-	-	1.33

Filename: 160407D1 S: 2 Acquired: 7-APR-16 14:59:18

Run: 160407D1 Analyte: Cal:

Results:

Sample text: ST160407D1-2 1613 CS1 15J1905

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.11
19	Tot	TCDD EMPC	0.00	-	- n	-	-	1.11
20	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.95
21	Tot	PeCDD EMPC	0.00	-	- n	-	-	0.95
22	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.04
23	Tot	HxCDD EMPC	0.00	-	- n	-	-	1.04
24	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.05
25	Tot	HpCDD EMPC	0.00	-	- n	-	-	1.05
26	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.09
27	Tot	TCDF EMPC	0.00	-	- n	-	-	1.09
28	Tot	1st Func. Penta-Furans	0.00	-	- n	-	-	0.94
29	Tot	1st Func. PeCDF EMPC	0.00	-	- n	-	-	0.94
30	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.94
31	Tot	PeCDF EMPC	0.00	-	- n	-	-	0.94
32	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.17
33	Tot	HxCDF EMPC	0.00	-	- n	-	-	1.17
34	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.36
35	Tot	HpCDF EMPC	0.00	-	- n	-	-	1.36

Filename: 160407D1 S: 3 Acquired: 7-APR-16 15:47:38

Run: 160407D1 Analyte: Cal:

Sample text: ST160407D1-3 1613 CS2 15J1906

Results:

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.01
19	Tot	TCDD EMPC	0.00	-	- n	-	-	1.01
20	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.90
21	Tot	PeCDD EMPC	0.00	-	- n	-	-	0.90
22	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	0.99
23	Tot	HxCDD EMPC	0.00	-	- n	-	-	0.99
24	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	0.99
25	Tot	HpCDD EMPC	0.00	-	- n	-	-	0.99
26	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.05
27	Tot	TCDF EMPC	0.00	-	- n	-	-	1.05
28	Tot	1st Func. Penta-Furans	0.00	-	- n	-	-	0.92
29	Tot	1st Func. PeCDF EMPC	0.00	-	- n	-	-	0.92
30	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.92
31	Tot	PeCDF EMPC	0.00	-	- n	-	-	0.92
32	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.11
33	Tot	HxCDF EMPC	0.00	-	- n	-	-	1.11
34	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.32
35	Tot	HpCDF EMPC	0.00	-	- n	-	-	1.32

Filename: 160407D1 S: 4 Acquired: 7-APR-16 16:35:58

Run: 160407D1 Analyte:

Cal:

Results:

Sample text: ST160407D1-4 1613 CS3 16C3101

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.13
19	Tot	TCDD EMPC	0.00	-	- n	-	-	1.13
20	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.94
21	Tot	PeCDD EMPC	0.00	-	- n	-	-	0.94
22	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.04
23	Tot	HxCDD EMPC	0.00	-	- n	-	-	1.04
24	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.06
25	Tot	HpCDD EMPC	0.00	-	- n	-	-	1.06
26	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.09
27	Tot	TCDF EMPC	0.00	-	- n	-	-	1.09
28	Tot	1st Func. Penta-Furans	0.00	-	- n	-	-	0.93
29	Tot	1st Func. PeCDF EMPC	0.00	-	- n	-	-	0.93
30	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.93
31	Tot	PeCDF EMPC	0.00	-	- n	-	-	0.93
32	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.17
33	Tot	HxCDF EMPC	0.00	-	- n	-	-	1.17
34	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.38
35	Tot	HpCDF EMPC	0.00	-	- n	-	-	1.38

Filename: 160407D1 S: 5 Acquired: 7-APR-16 17:24:18

Run: 160407D1 Analyte:

Cal:

Results:

Sample text: ST160407D1-5 1613 CS4 15J1908

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.14
19	Tot	TCDD EMPC	0.00	-	- n	-	-	1.14
20	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.98
21	Tot	PeCDD EMPC	0.00	-	- n	-	-	0.98
22	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.08
23	Tot	HxCDD EMPC	0.00	-	- n	-	-	1.08
24	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.11
25	Tot	HpCDD EMPC	0.00	-	- n	-	-	1.11
26	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.12
27	Tot	TCDF EMPC	0.00	-	- n	-	-	1.12
28	Tot	1st Func. Penta-Furans	0.00	-	- n	-	-	0.96
29	Tot	1st Func. PeCDF EMPC	0.00	-	- n	-	-	0.96
30	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.96
31	Tot	PeCDF EMPC	0.00	-	- n	-	-	0.96
32	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.20
33	Tot	HxCDF EMPC	0.00	-	- n	-	-	1.20
34	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.43
35	Tot	HpCDF EMPC	0.00	-	- n	-	-	1.43

Filename: 160407D1 S: 6 Acquired: 7-APR-16 18:12:36

Run: 160407D1 Analyte: Cal: 1613VG7-4-7-16

Sample text: ST160407D1-6 1613 CS5 15J1909

Results:

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
18	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.19
19	Tot	TCDD EMPC	0.00	-	- n	-	-	1.19
20	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.99
21	Tot	PeCDD EMPC	0.00	-	- n	-	-	0.99
22	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.09
23	Tot	HxCDD EMPC	0.00	-	- n	-	-	1.09
24	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.09
25	Tot	HpCDD EMPC	0.00	-	- n	-	-	1.09
26	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.16
27	Tot	TCDF EMPC	0.00	-	- n	-	-	1.16
28	Tot	1st Func. Penta-Furans	0.00	-	- n	-	-	0.96
29	Tot	1st Func. PeCDF EMPC	0.00	-	- n	-	-	0.96
30	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.96
31	Tot	PeCDF EMPC	0.00	-	- n	-	-	0.96
32	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.20
33	Tot	HxCDF EMPC	0.00	-	- n	-	-	1.20
34	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.43
35	Tot	HpCDF EMPC	0.00	-	- n	-	-	1.43

FORM 5
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 4-7-16

RT Window Data Filename: 160407D1 S#4 Analysis Date: 7-APR-16 Time: 16:35:58

ZB-5MS IS Data Filename: 160407D1 S#4 Analysis Date: 7-APR-16 Time: 16:35:58

DB_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	23:07	1,3,6,8-TCDF (F)	20:55
1,2,8,9-TCDD (L)	27:34	1,2,8,9-TCDF (L)	27:43
1,2,4,7,9-PeCDD (F)	29:12	1,3,4,6,8-PeCDF (F)	27:39
1,2,3,8,9-PeCDD (L)	31:39	1,2,3,8,9-PeCDF (L)	31:54
1,2,4,6,7,9-HxCDD (F)	33:04	1,2,3,4,6,8-HxCDF (F)	32:31
1,2,3,7,8,9-HxCDD (L)	35:01	1,2,3,7,8,9-HxCDF (L)	35:24
1,2,3,4,6,7,9-HpCDD (F)	37:37	1,2,3,4,6,7,8-HpCDF (F)	37:13
1,2,3,4,6,7,8-HpCDD (L)	38:30	1,2,3,4,7,8,9-HpCDF (L)	39:04

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

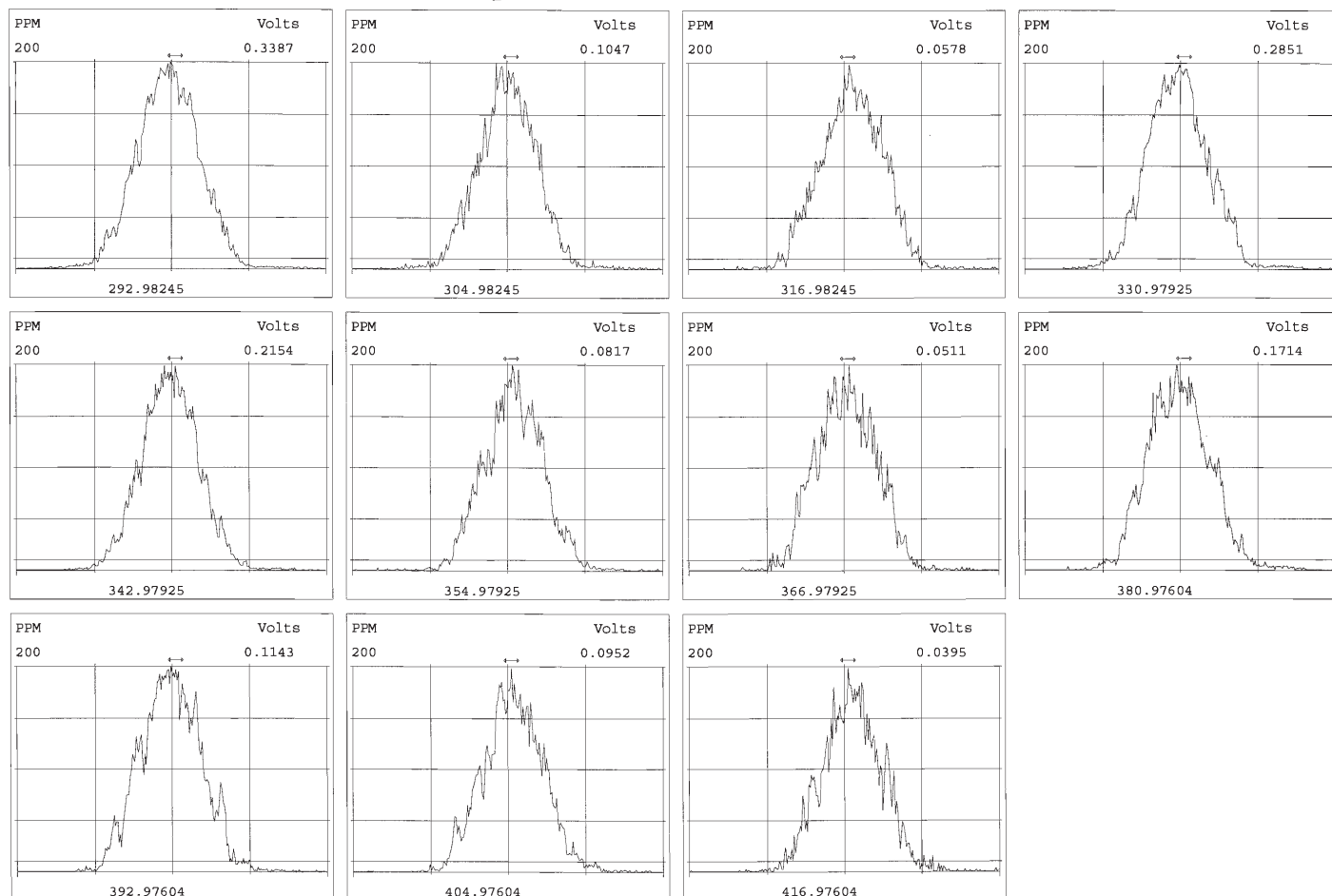
<25%

Analyst: JBDate: 4/8/16(1) To meet contract requirements, %Valley Height Between Compared
Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
160407D1	1	ST160407D1-1	DB	7-APR-16	14:10:55	ST160407D1-4	NA
160407D1	2	ST160407D1-2	DB	7-APR-16	14:59:18	ST160407D1-4	NA
160407D1	3	ST160407D1-3	DB	7-APR-16	15:47:38	ST160407D1-4	NA
160407D1	4	ST160407D1-4	DB	7-APR-16	16:35:58	ST160407D1-4	NA
160407D1	5	ST160407D1-5	DB	7-APR-16	17:24:18	ST160407D1-4	NA
160407D1	6	ST160407D1-6	DB	7-APR-16	18:12:36	ST160407D1-4	NA
160407D1	7	SOLVENT BLANK	DB	7-APR-16	19:00:55	ST160407D1-4	NA

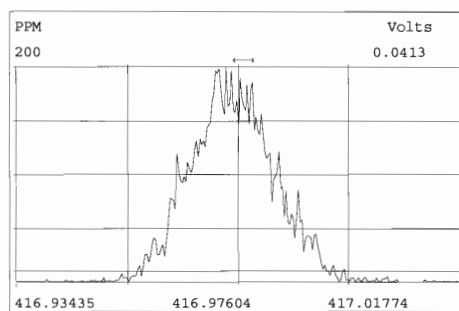
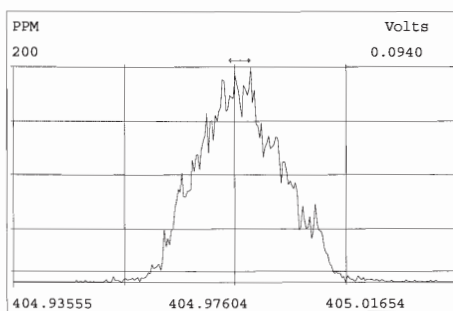
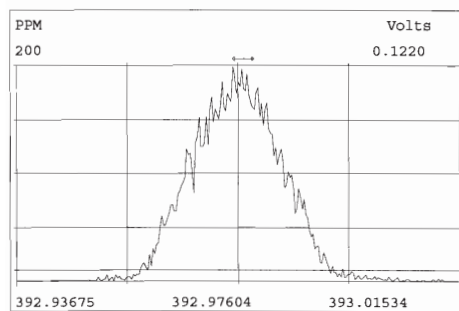
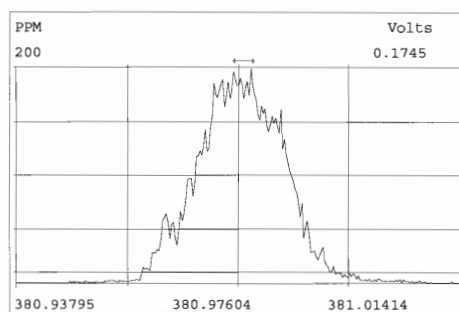
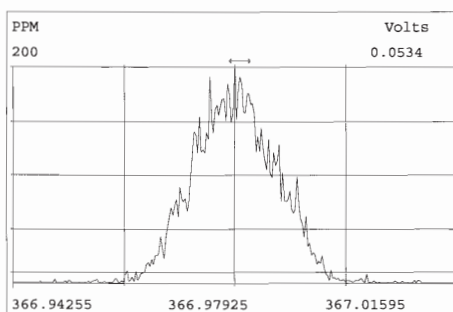
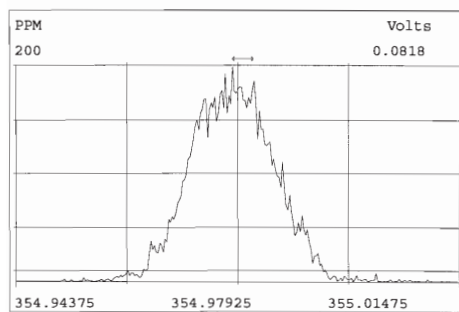
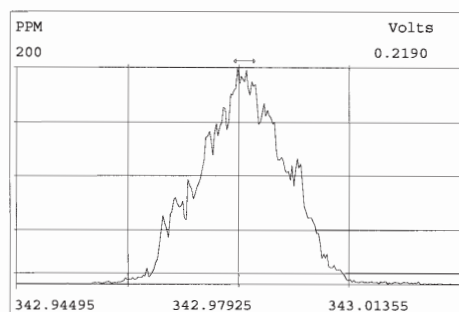
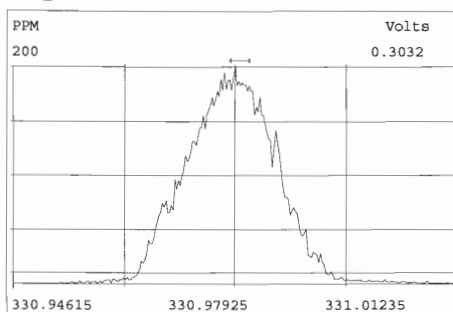
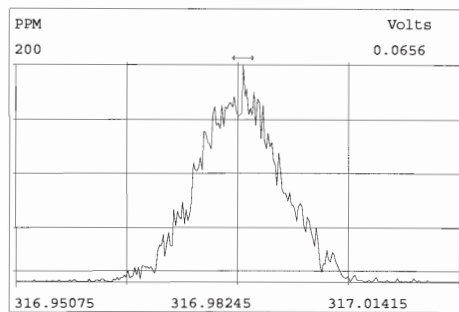
Peak Locate Examination: 7-APR-2016:14:08 File:160407D1

Experiment:OCDD_DB5 Function:1 Reference:PFK

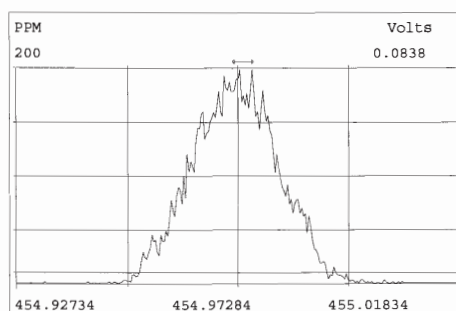
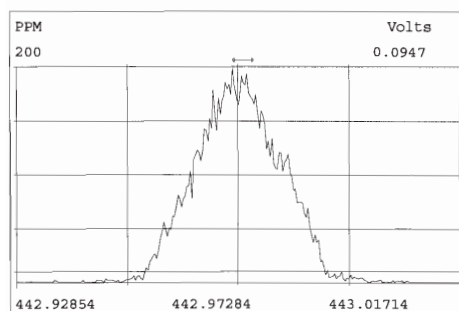
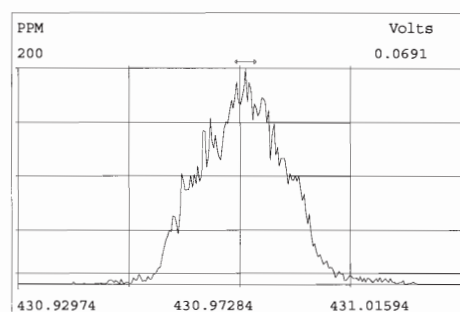
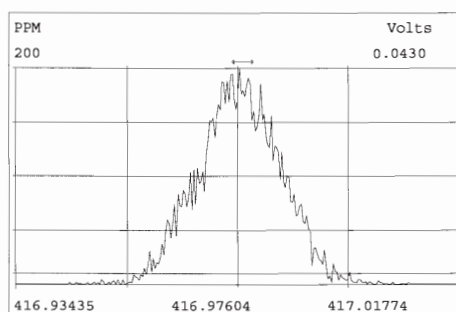
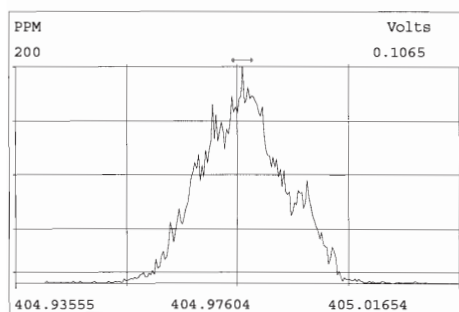
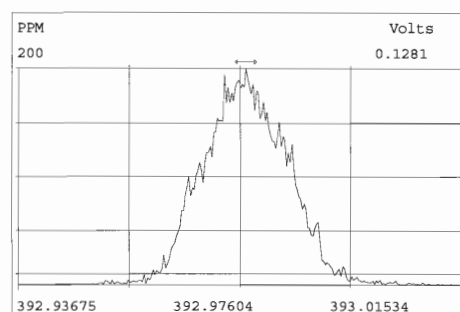
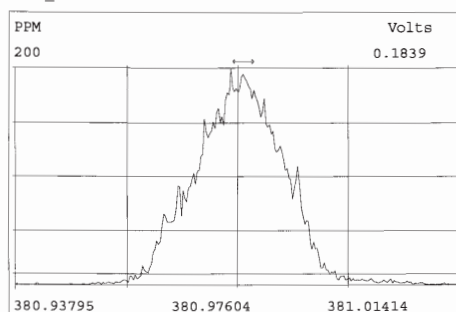
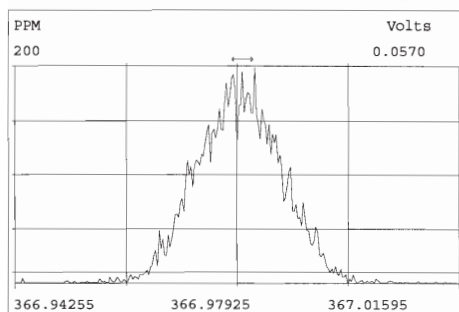


Peak Locate Examination: 7-APR-2016:14:08 File:160407D1

Experiment:OCDD_DB5 Function:2 Reference:PFK

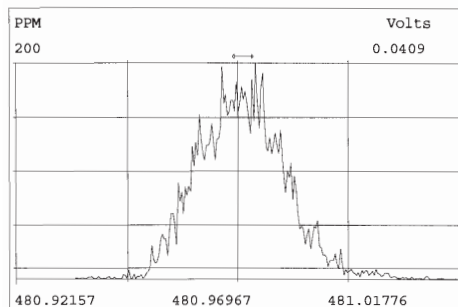
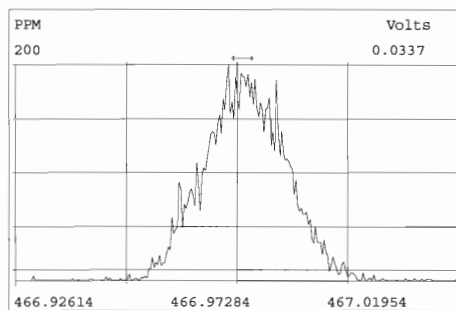
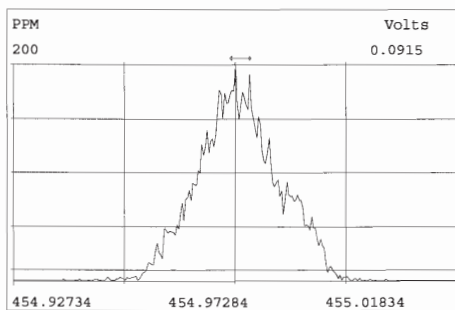
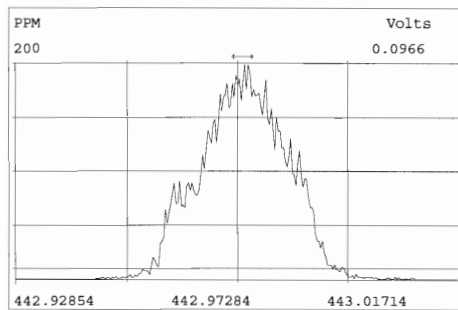
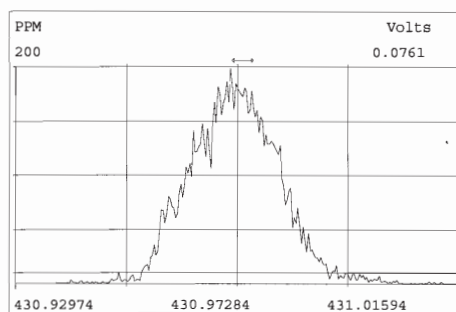
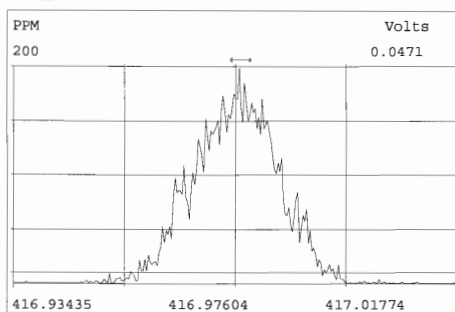
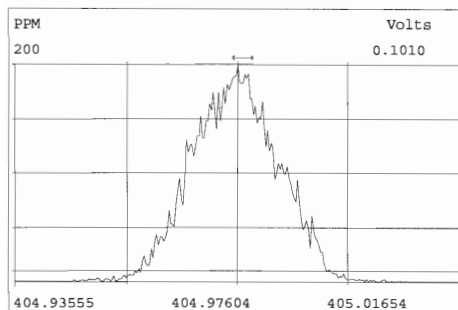


Peak Locate Examination: 7-APR-2016:14:09 File:160407D1
Experiment:OCDD_DB5 Function:3 Reference:PFK



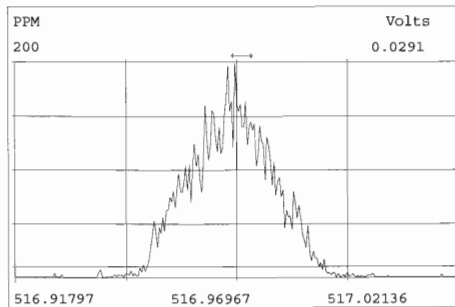
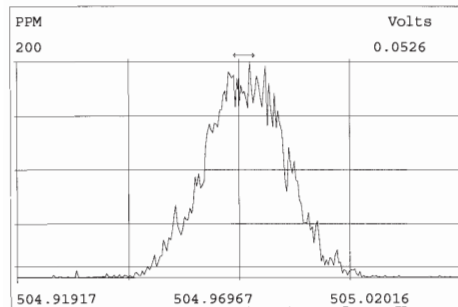
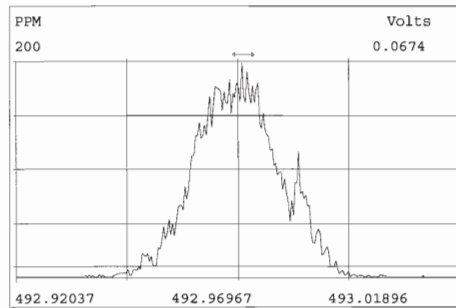
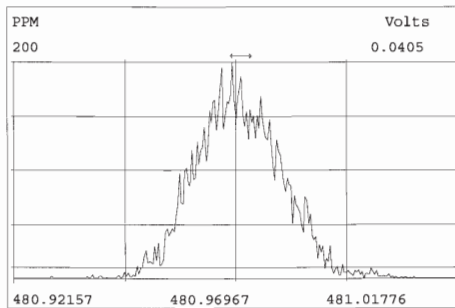
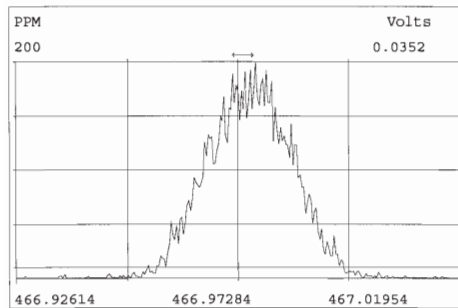
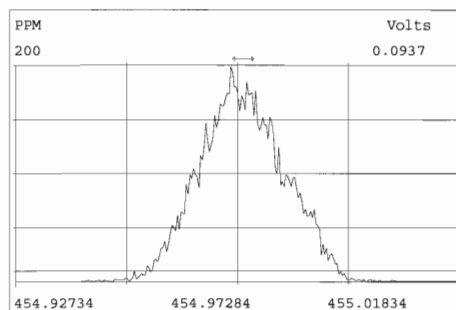
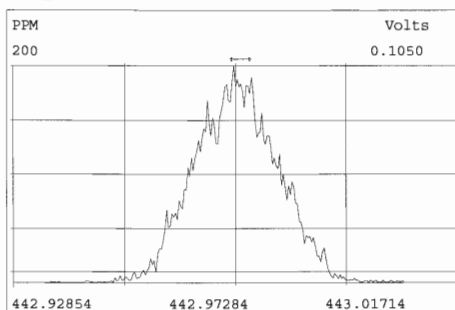
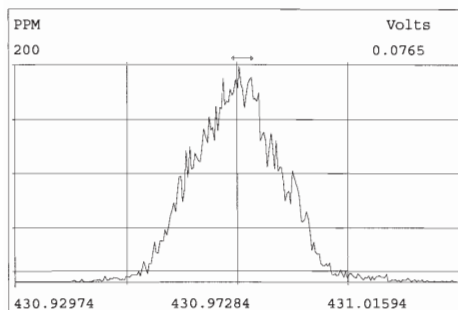
Peak Locate Examination: 7-APR-2016:14:09 File:160407D1

Experiment:OCDD_DB5 Function:4 Reference:PFK

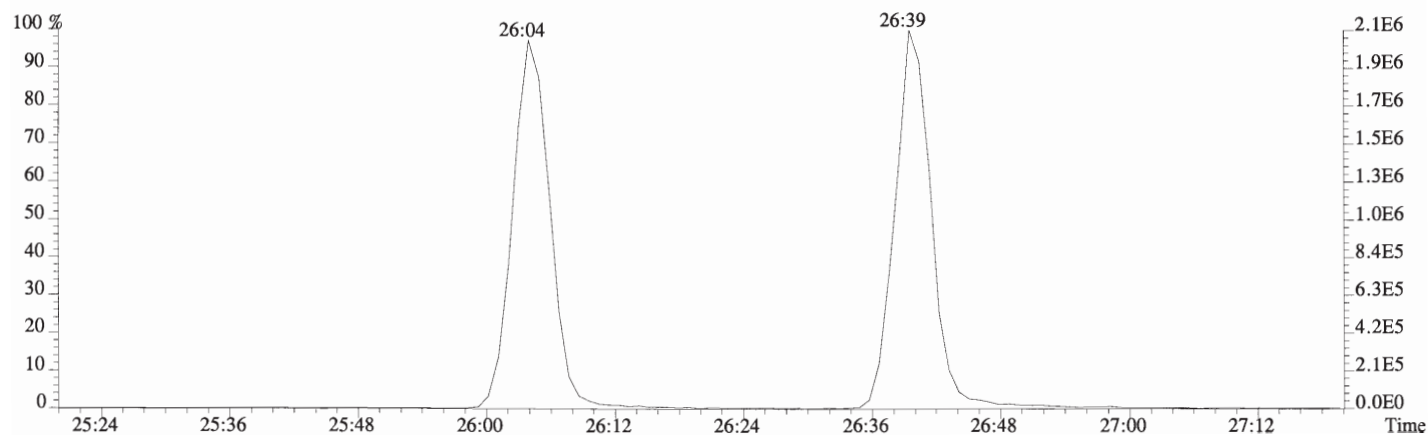
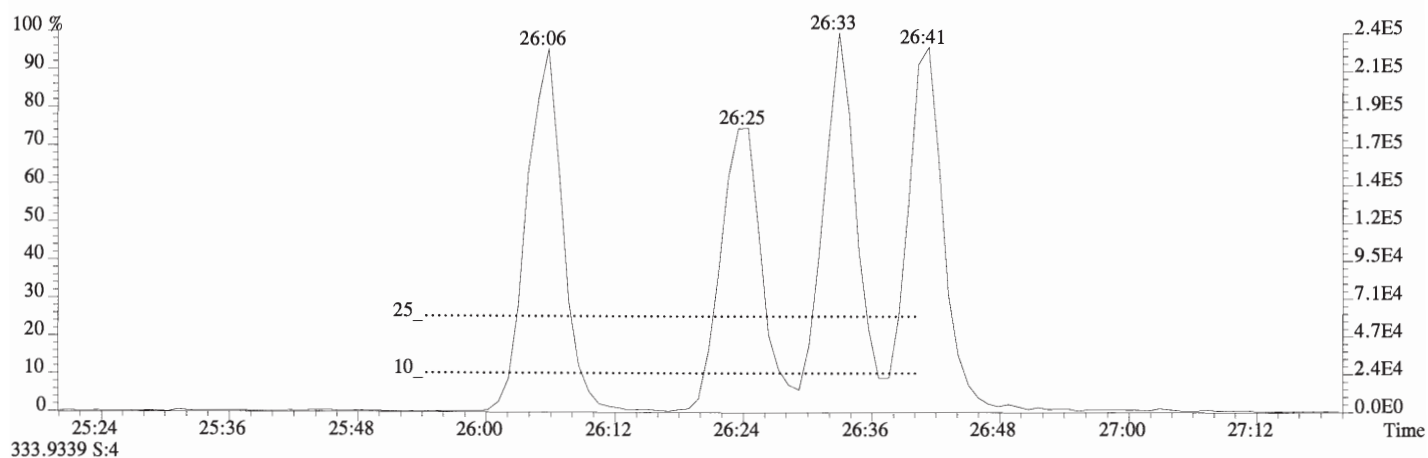


Peak Locate Examination: 7-APR-2016:14:10 File:160407D1

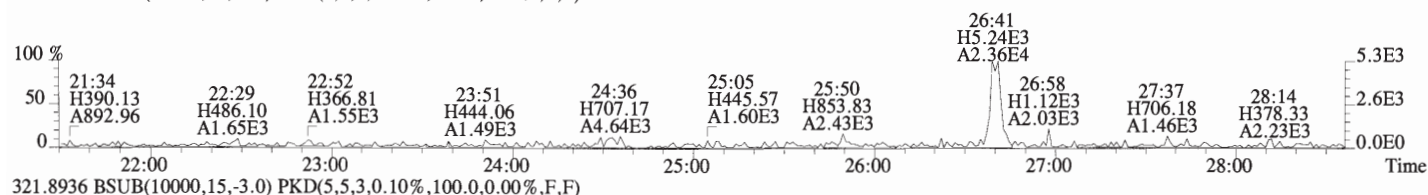
Experiment:OCDD_DB5 Function:5 Reference:PFK



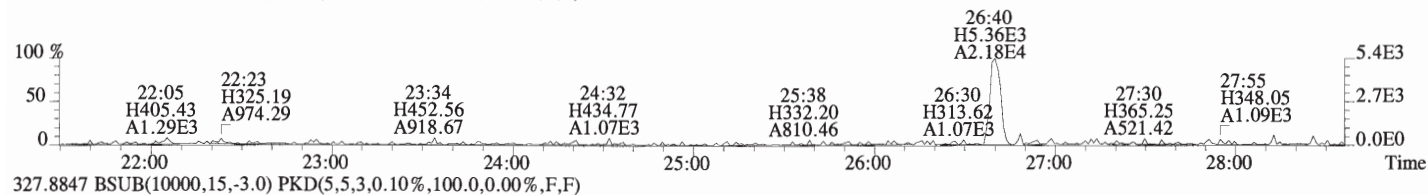
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Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-4 1613 CS3 16C3101 Exp:OCDD_DB5
321.8936 S:4



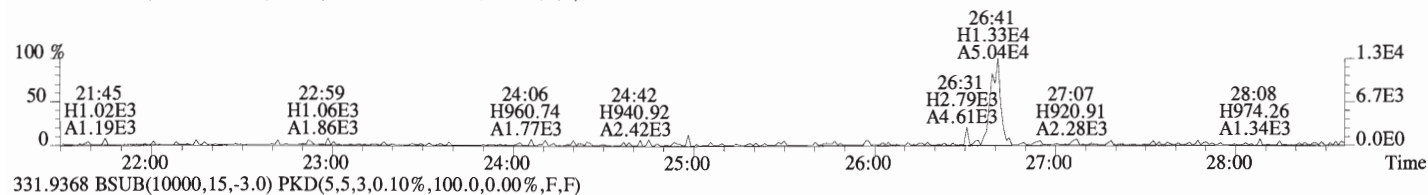
File:160407D1 #1-568 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text: Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
 319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



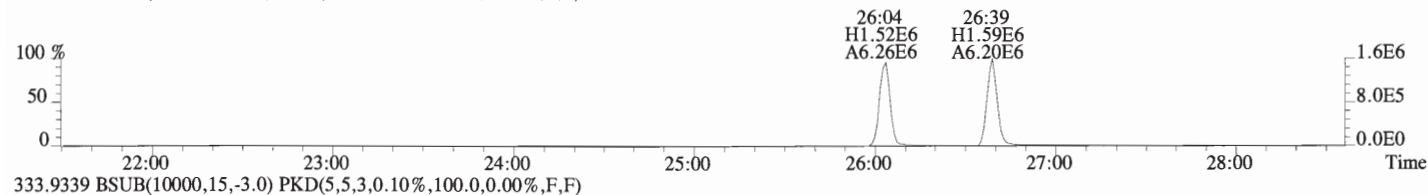
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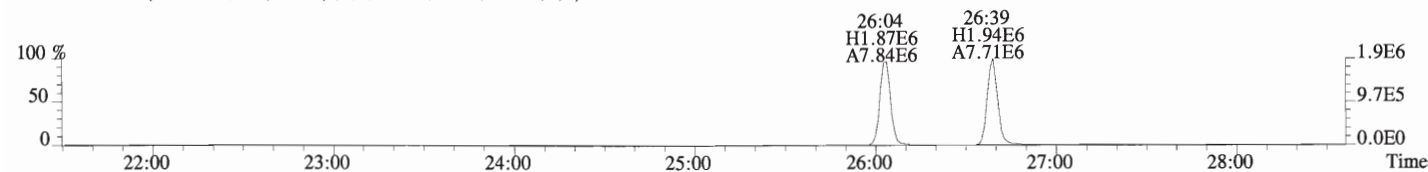
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



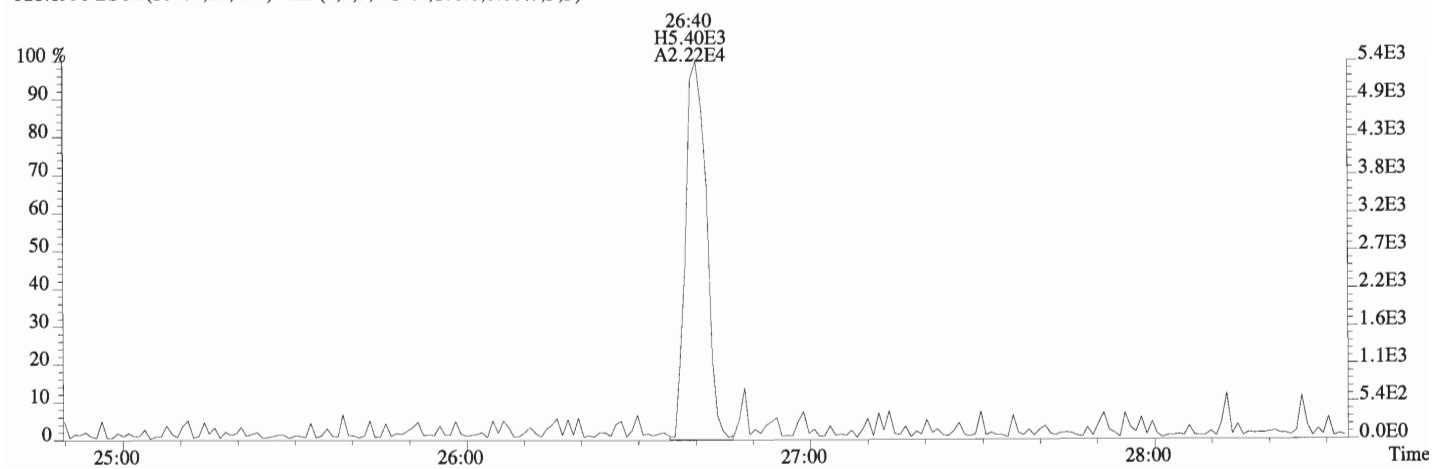
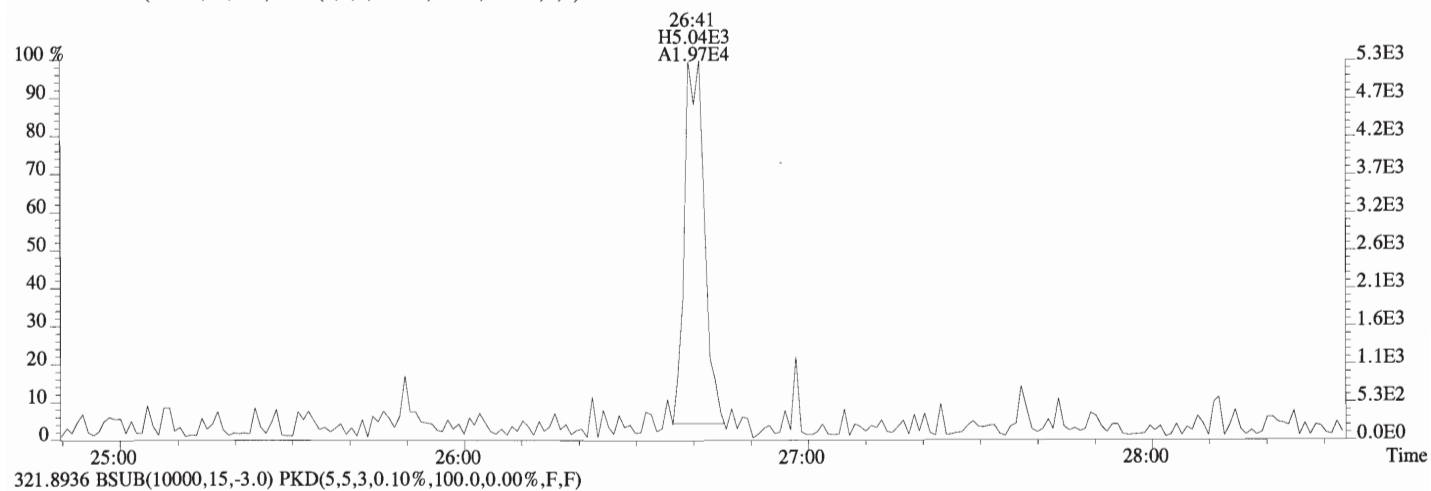
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



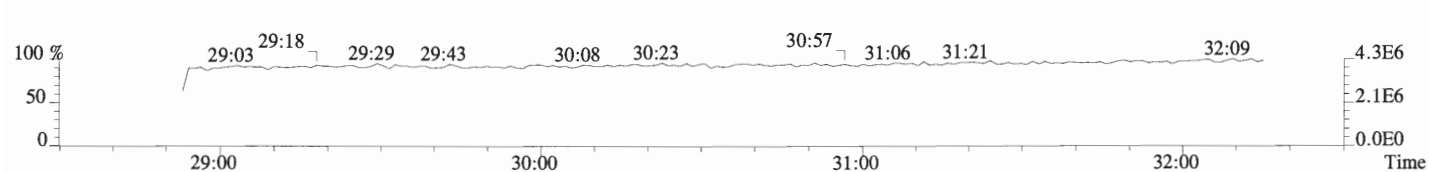
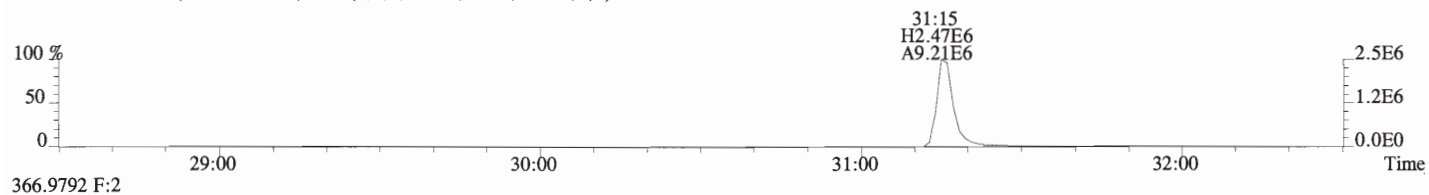
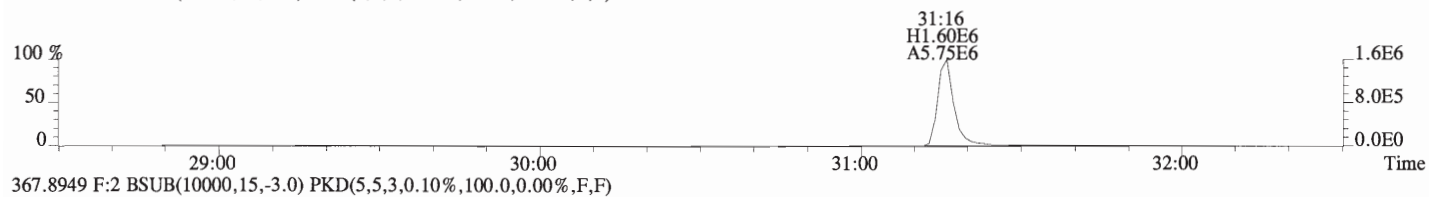
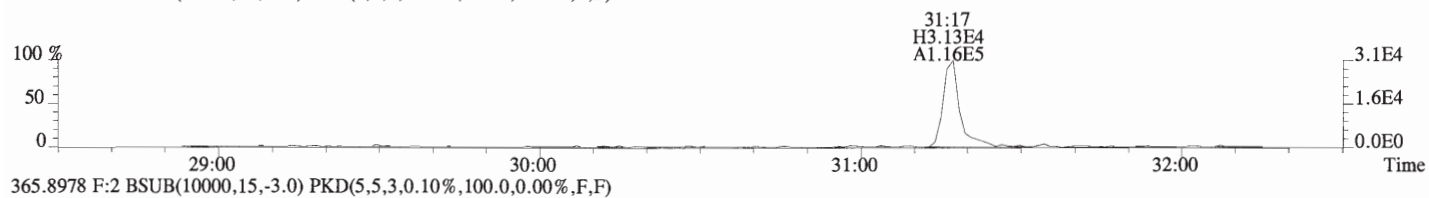
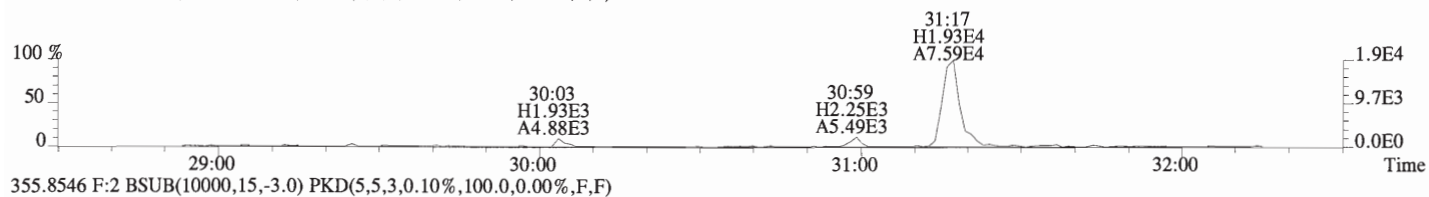
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



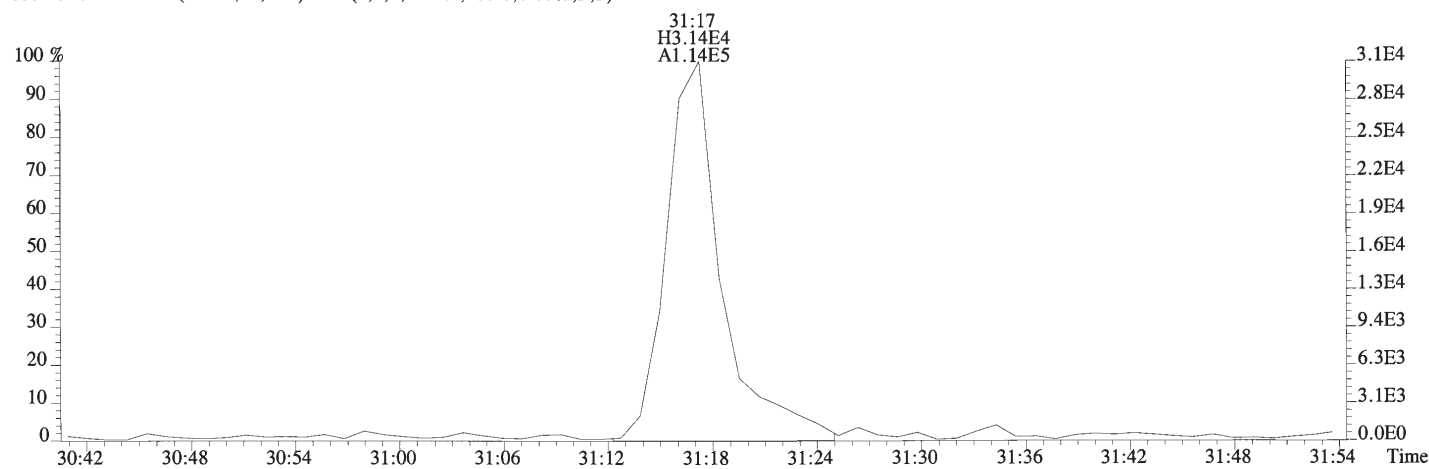
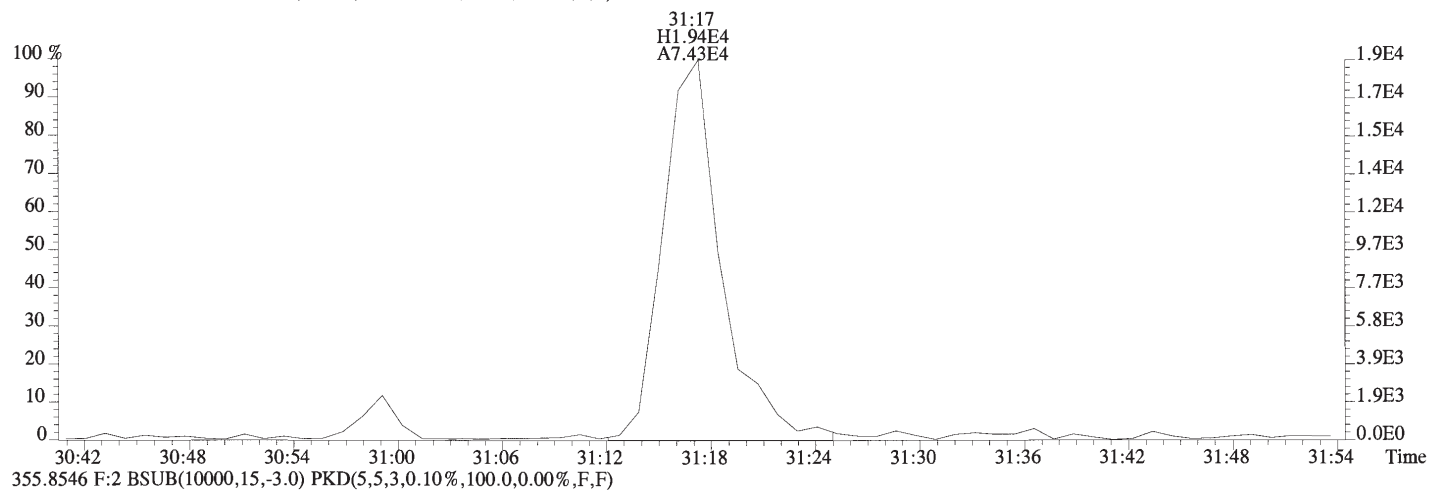
File:160407D1 #1-568 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 Exp:OCDD_DB5
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



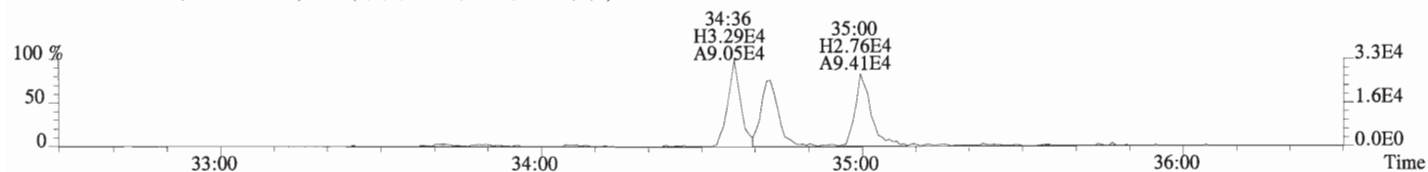
File:160407D1 #1-179 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



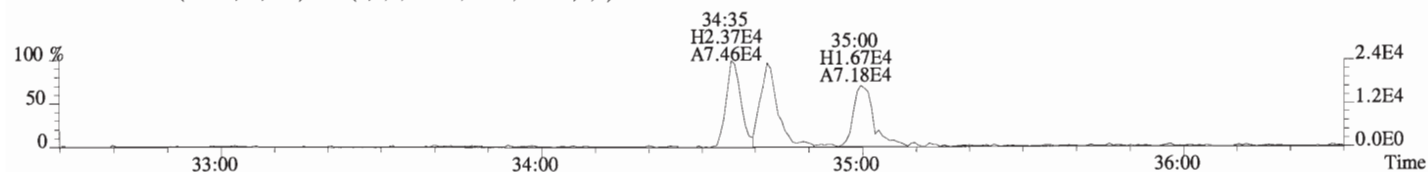
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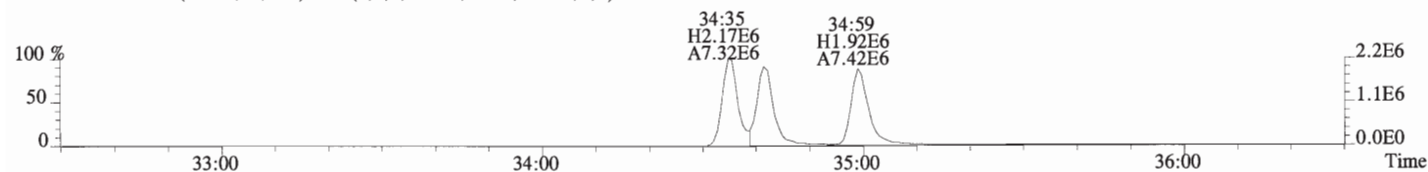
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 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
 389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



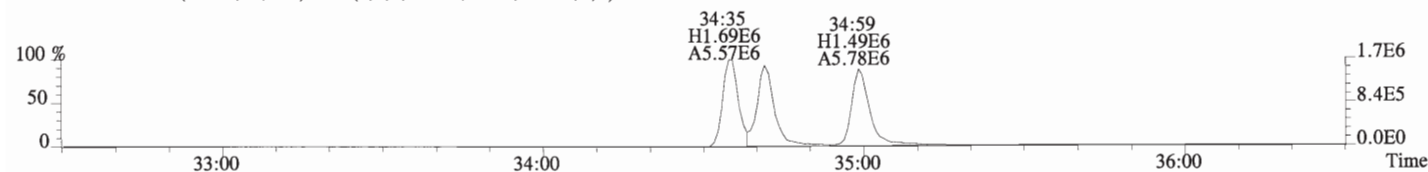
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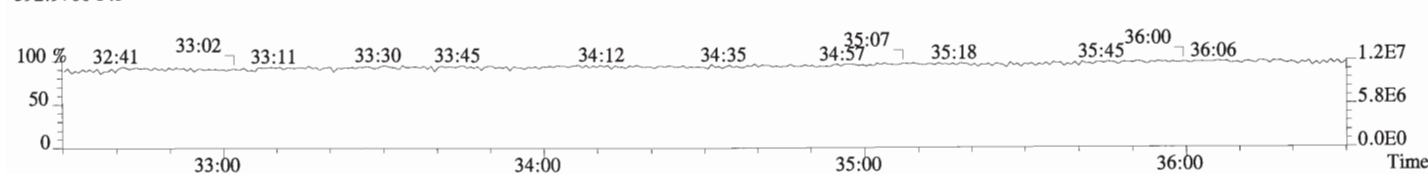
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



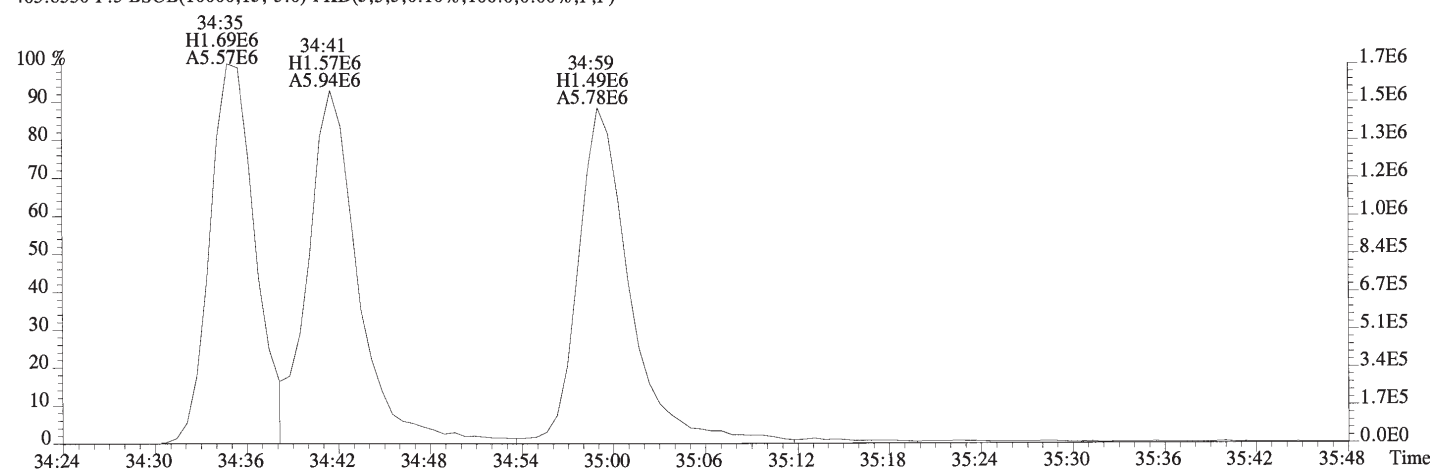
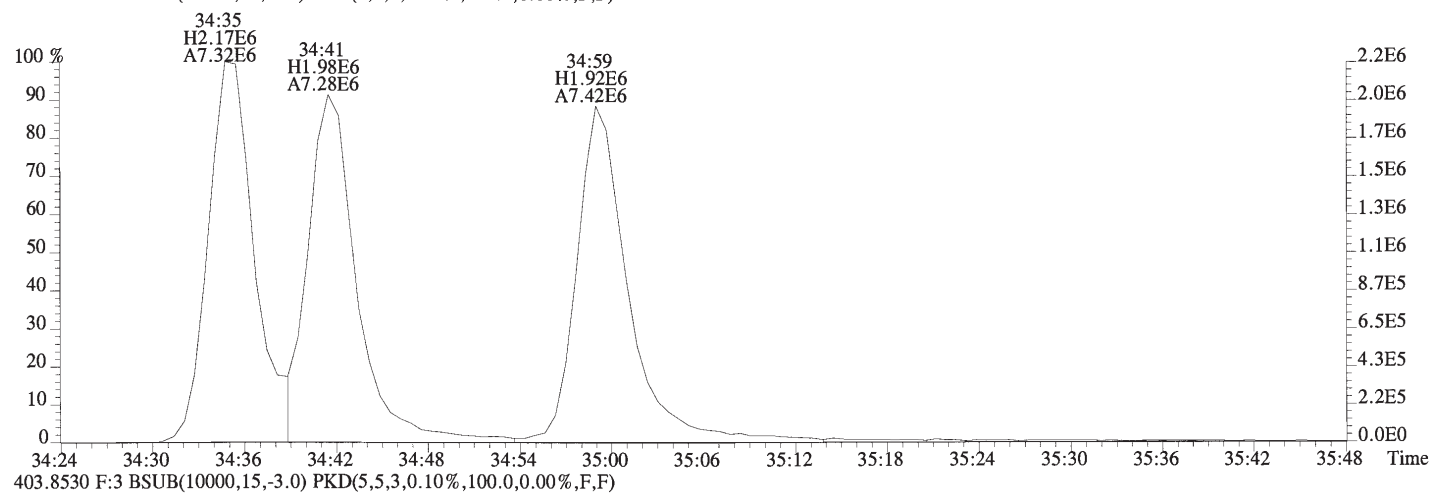
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



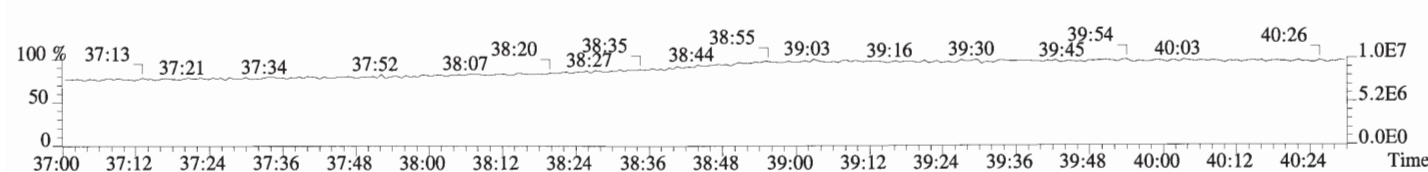
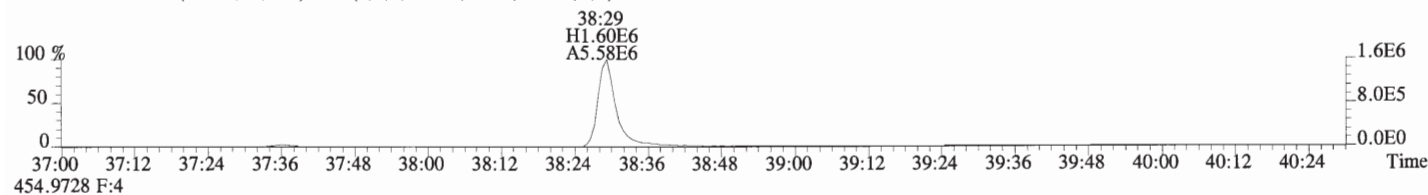
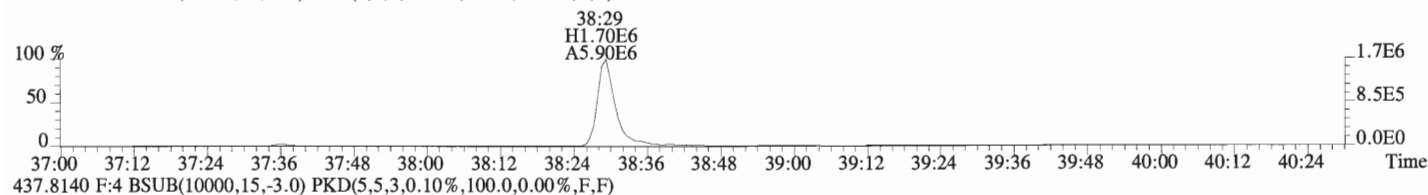
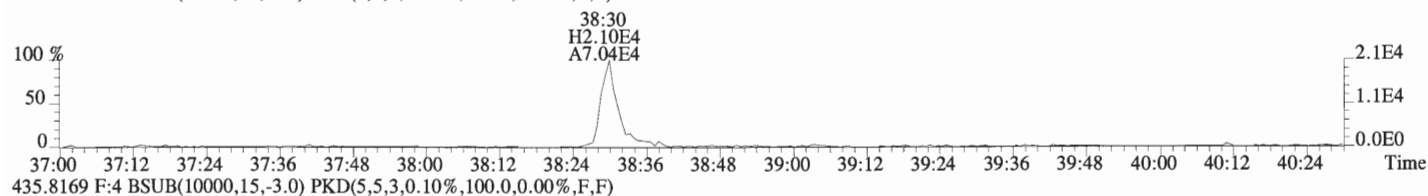
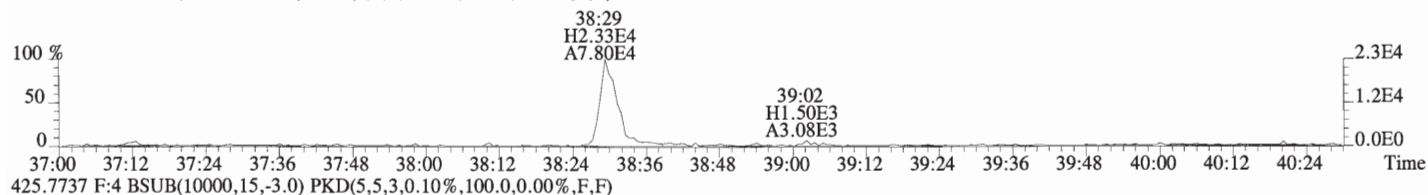
392.9760 F:3



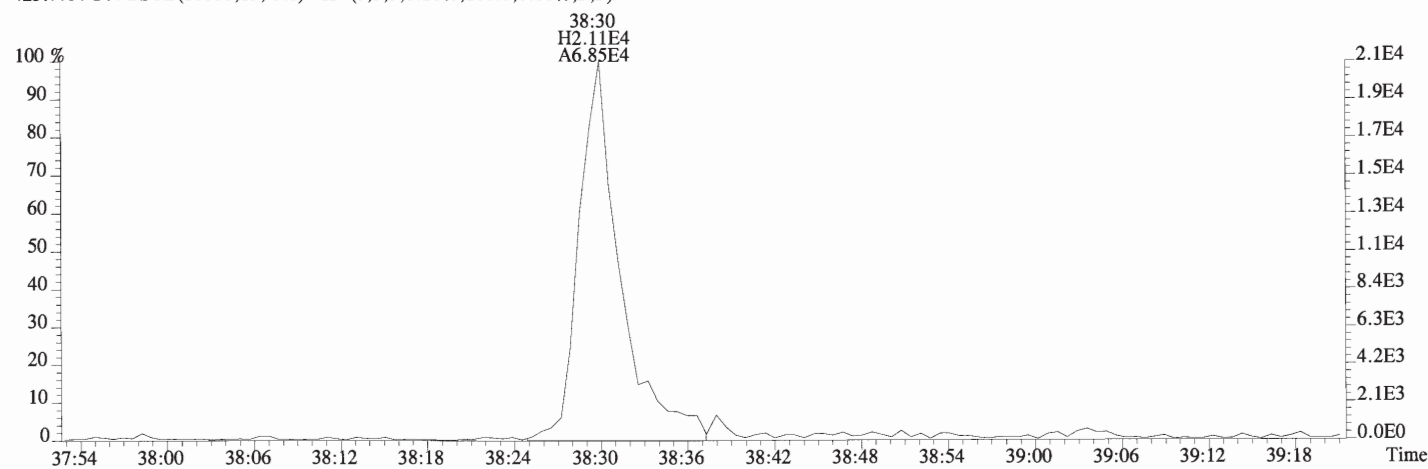
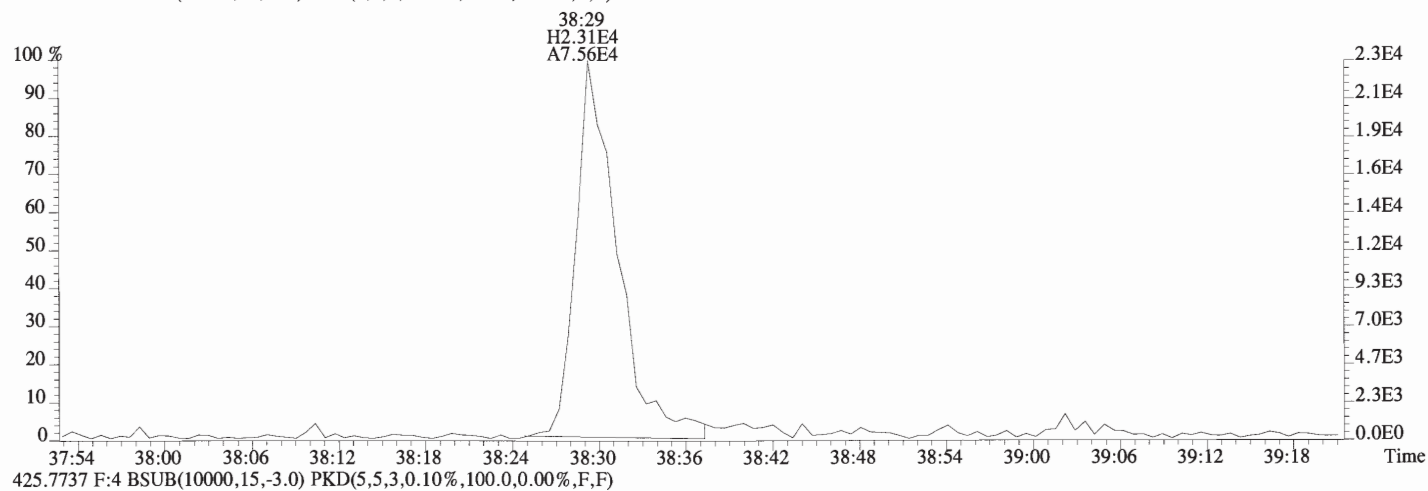
File:160407D1 #1-408 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
 401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



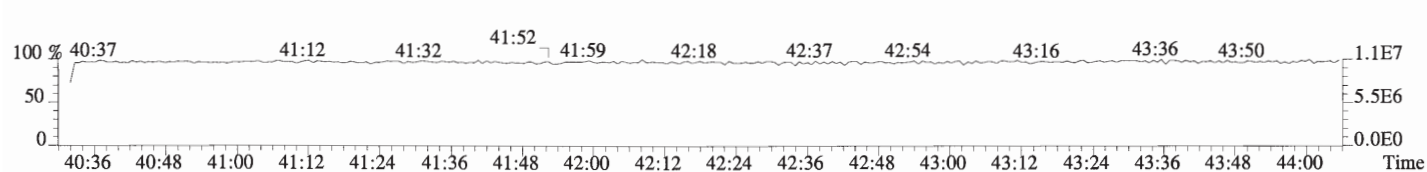
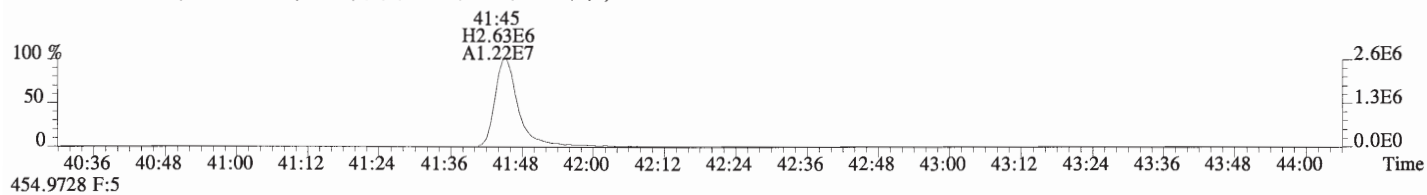
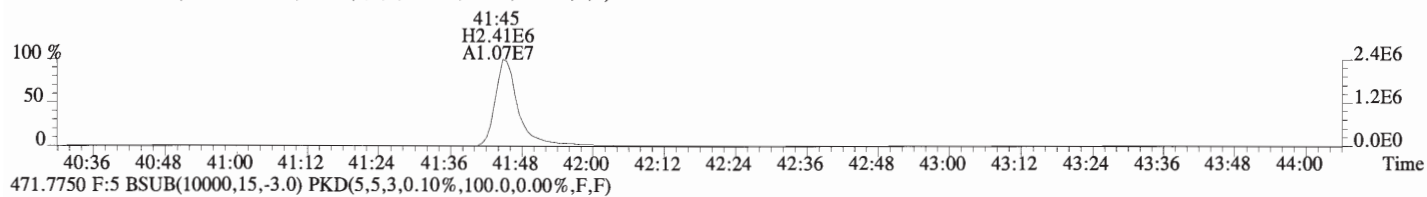
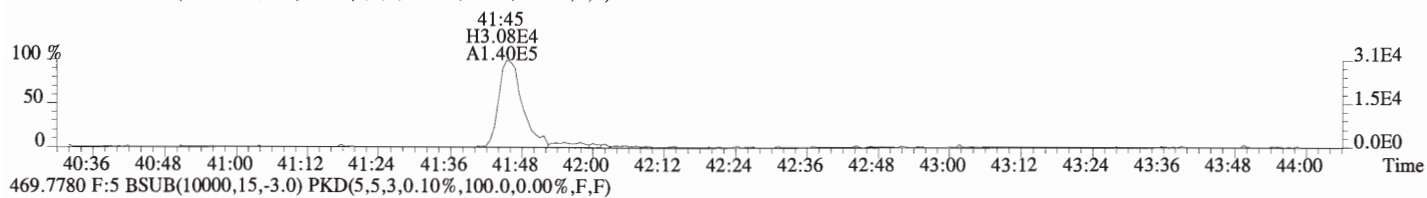
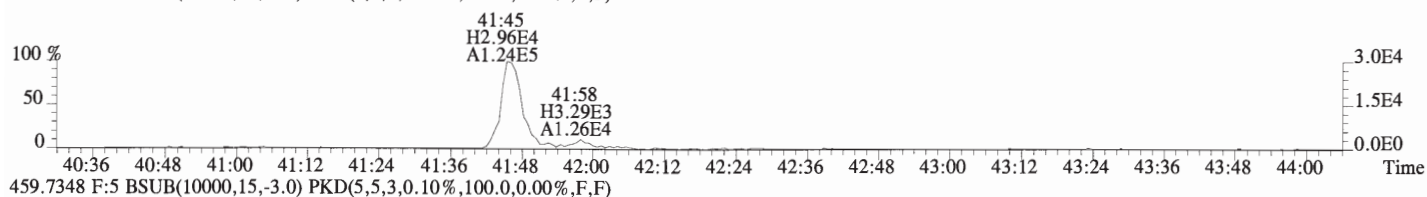
File:160407D1 #1-325 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



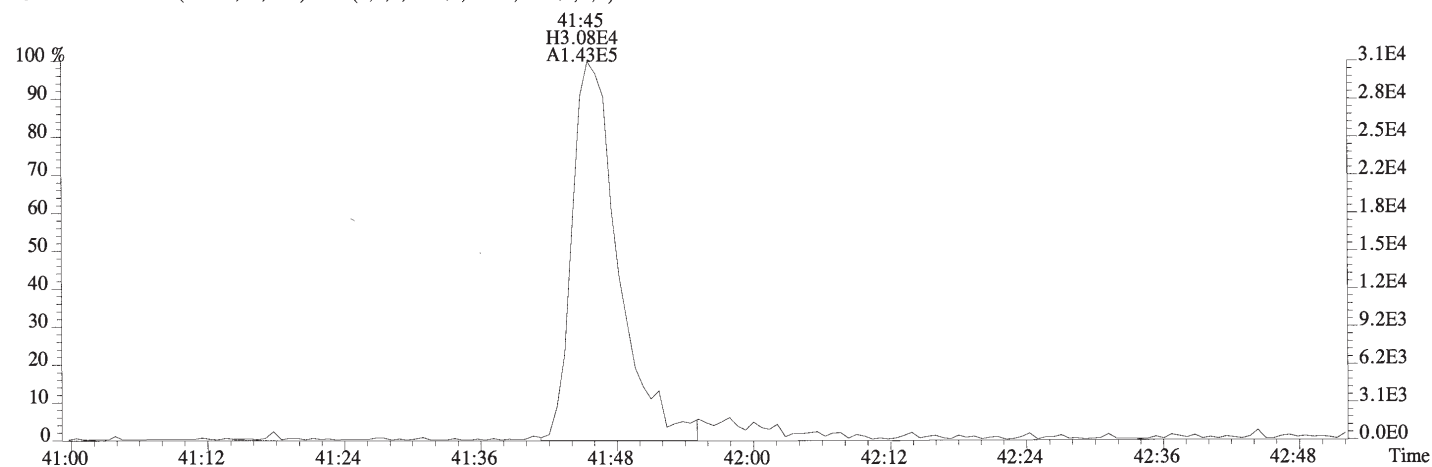
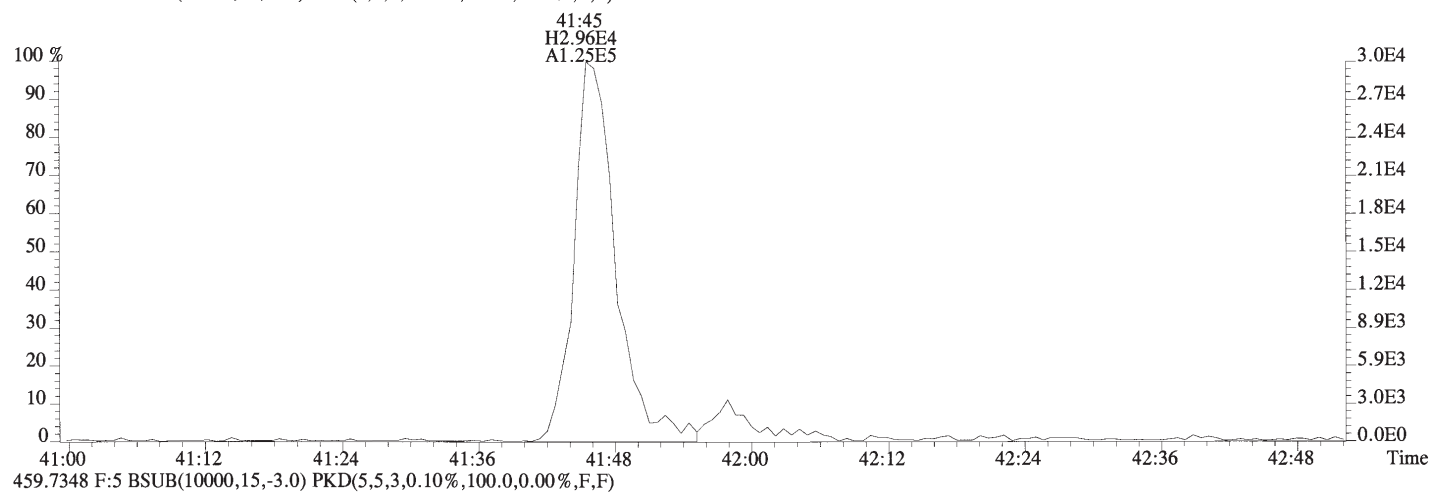
File:160407D1 #1-325 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



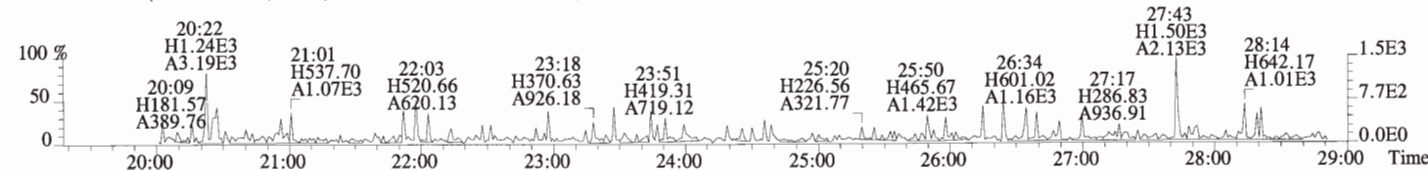
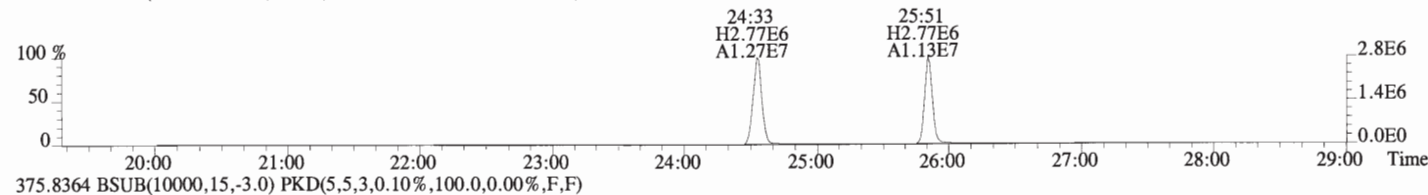
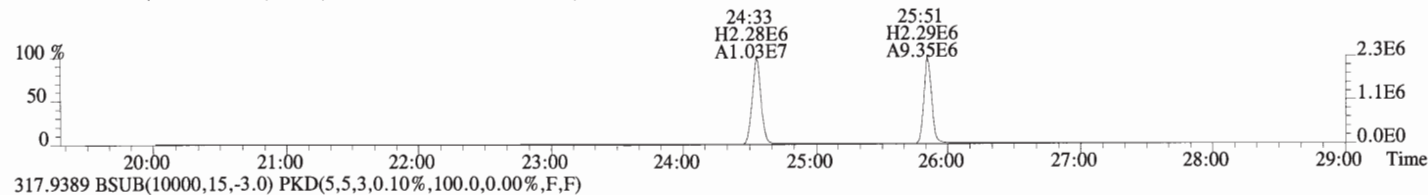
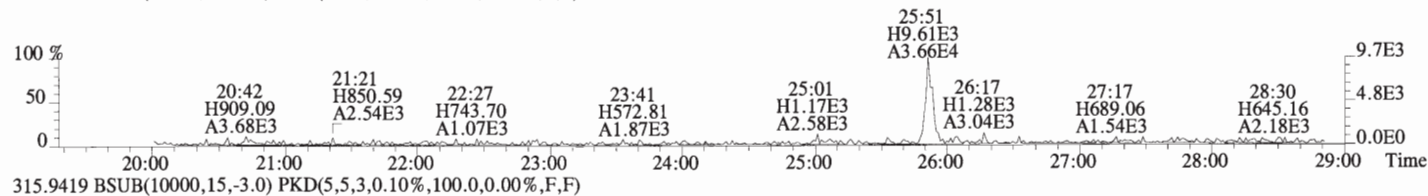
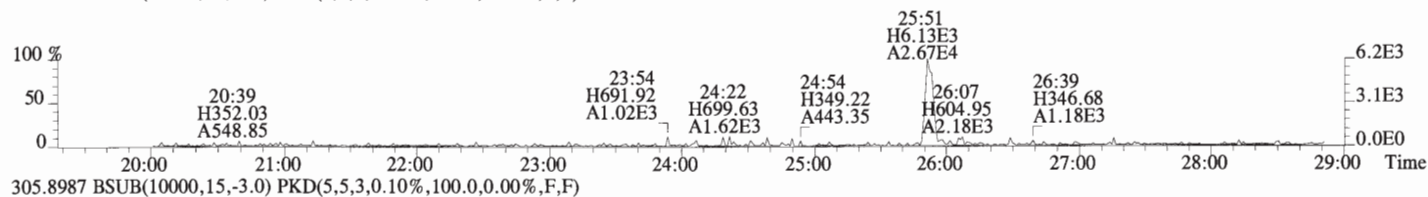
File:160407D1 #1-388 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
 457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



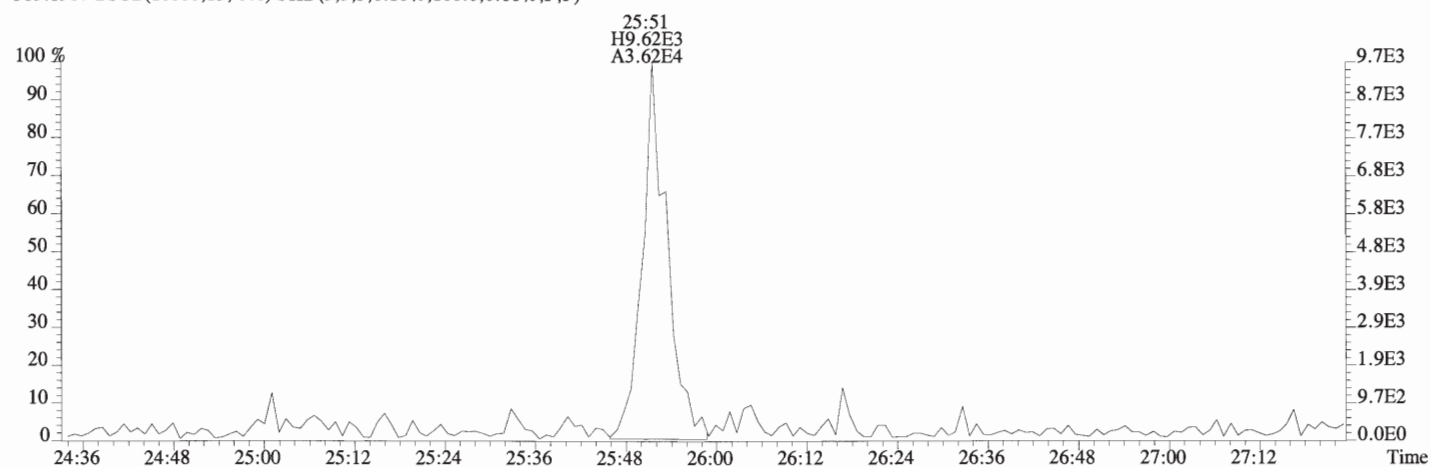
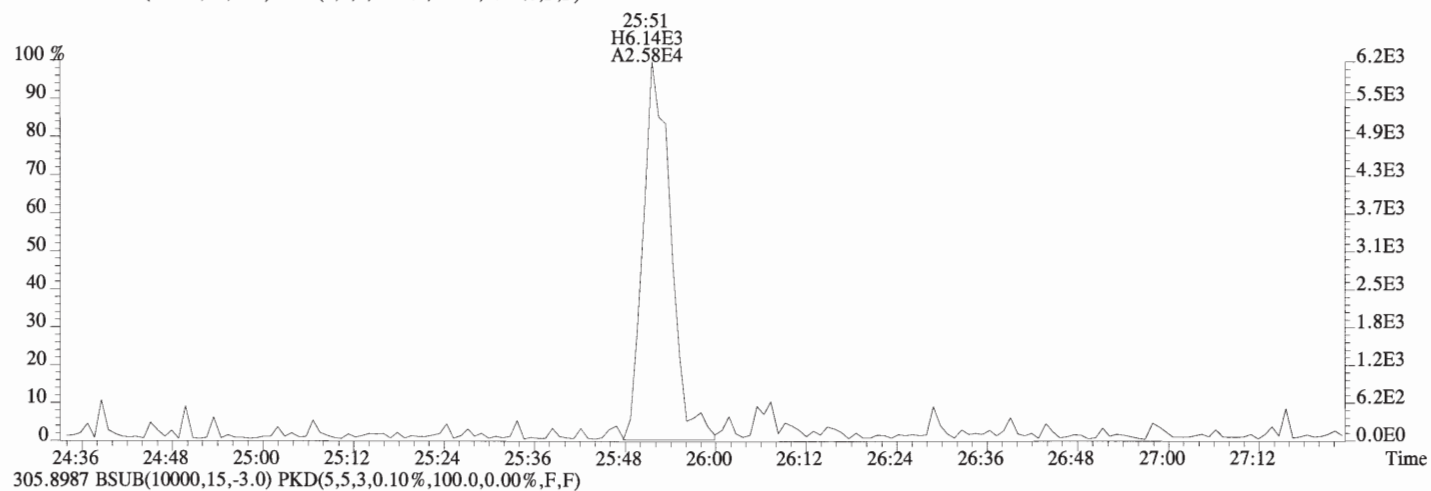
File:160407D1 #1-388 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



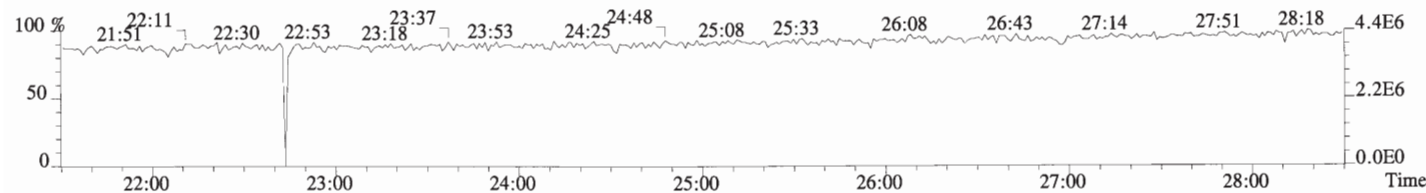
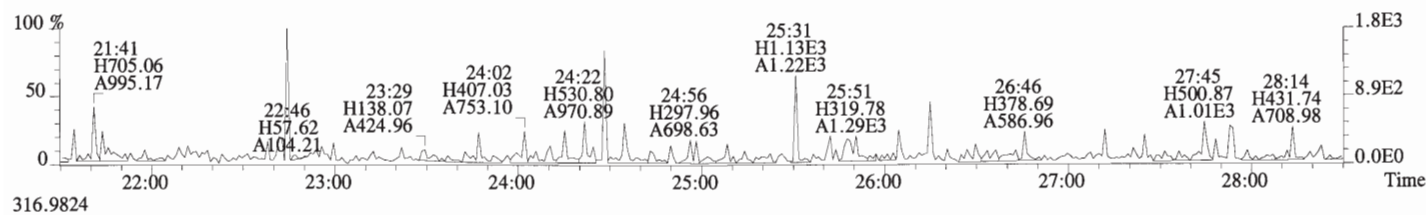
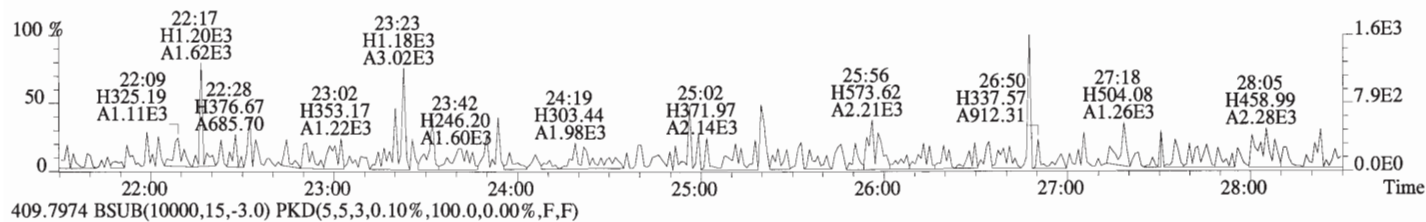
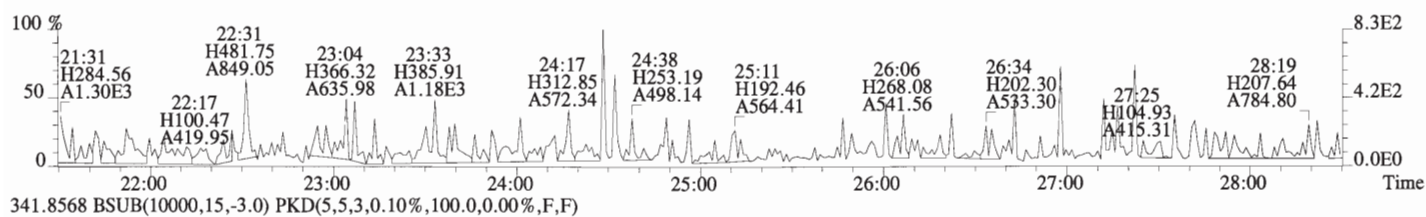
File:160407D1 #1-568 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



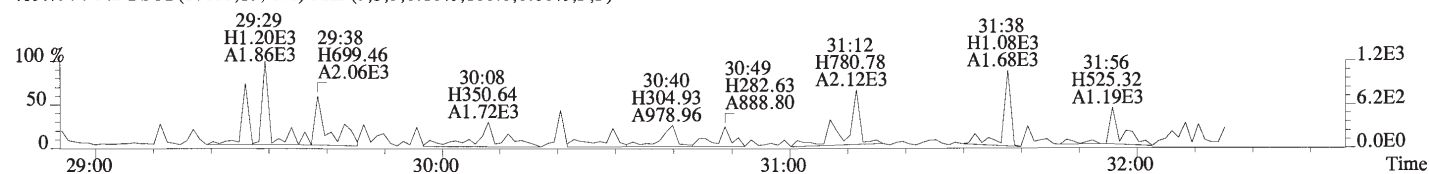
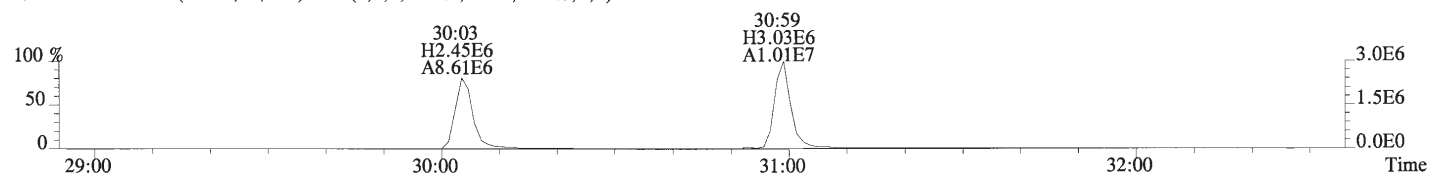
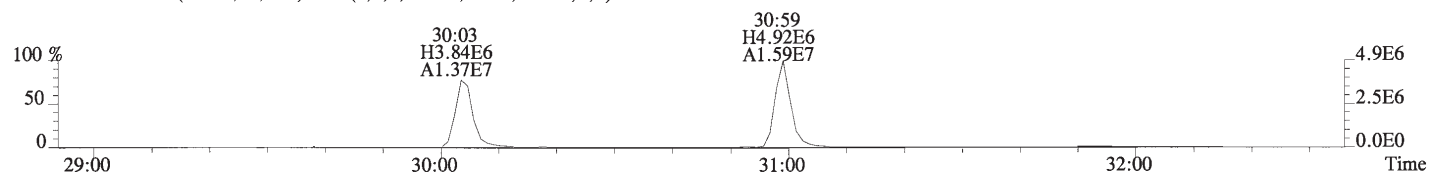
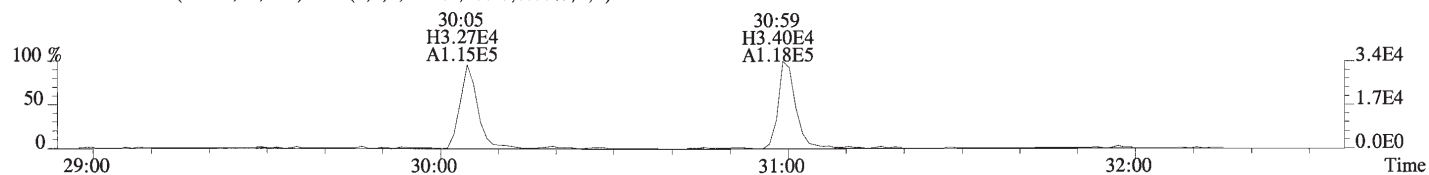
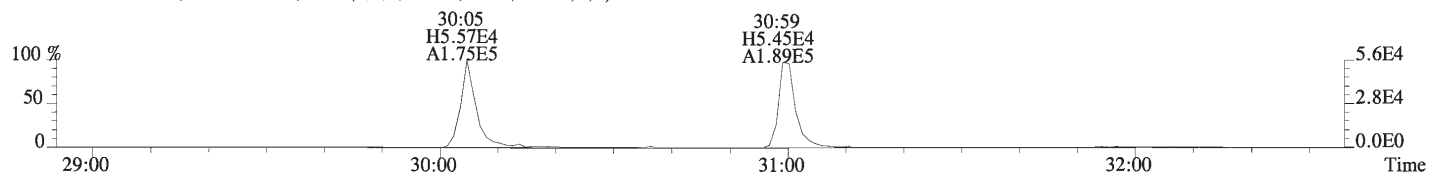
File:160407D1 #1-568 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



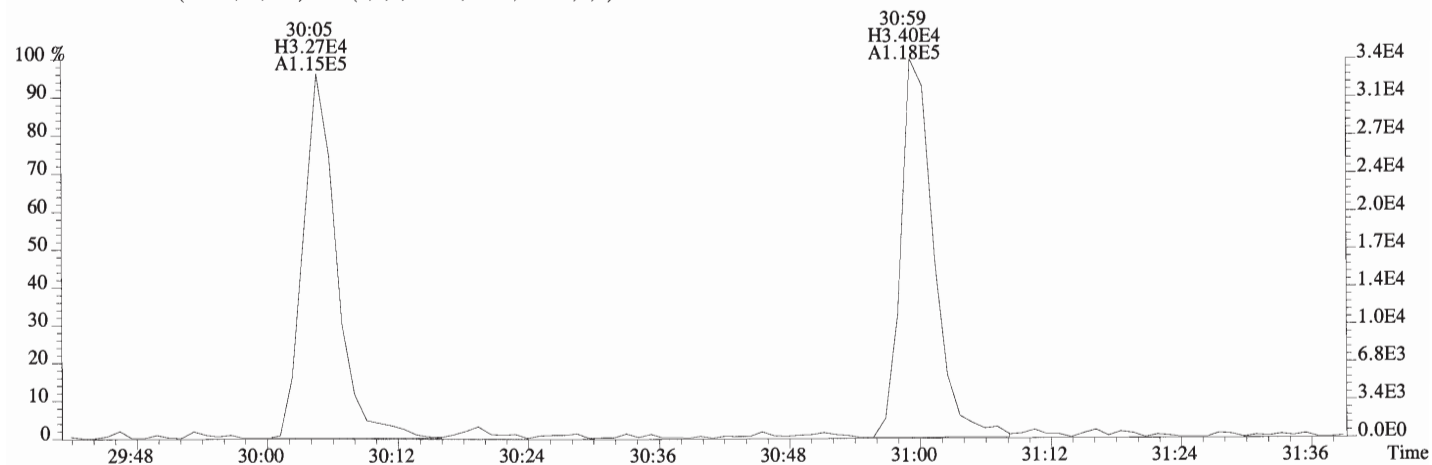
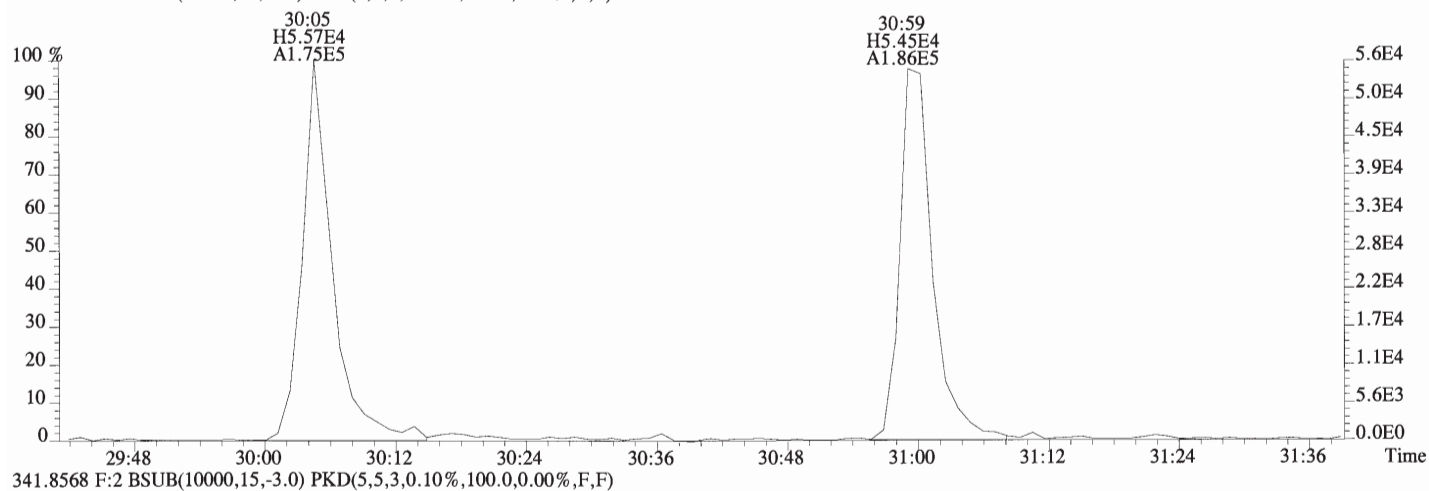
File:160407D1 #1-568 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



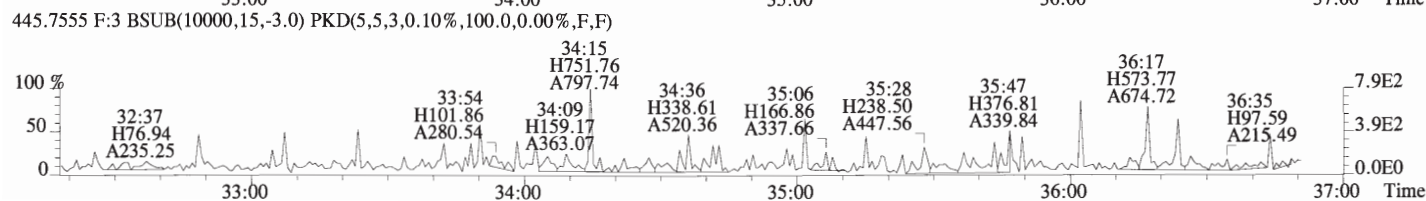
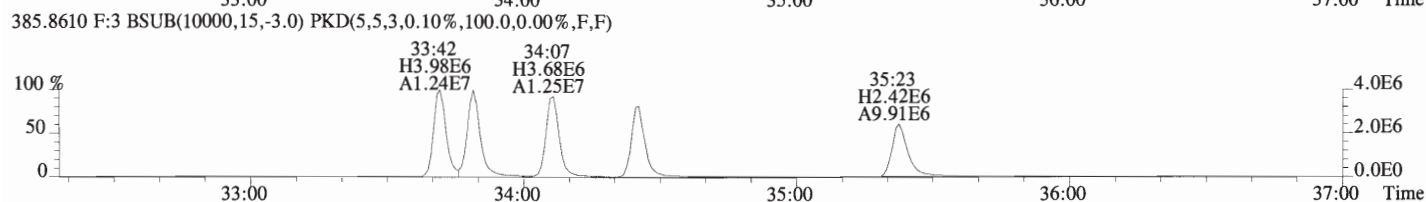
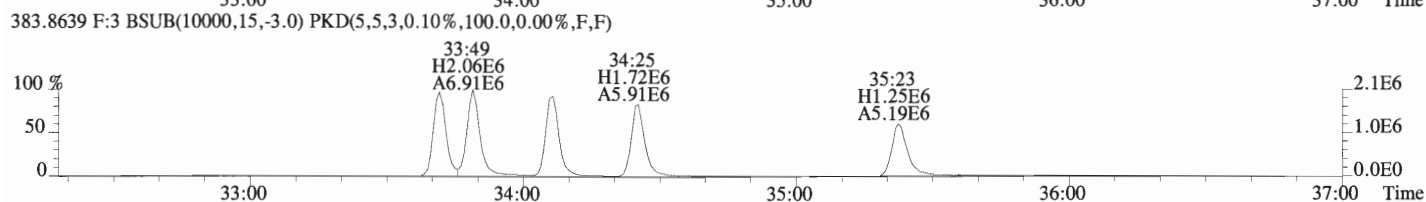
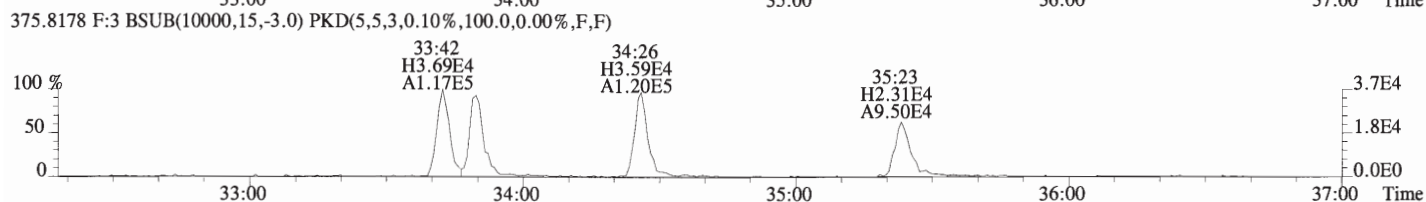
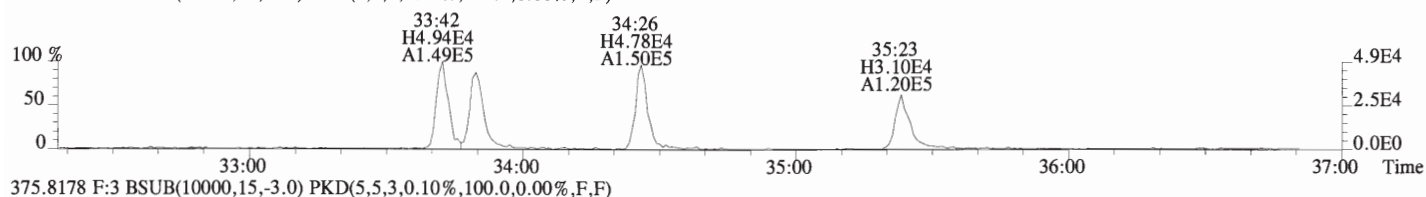
File:160407D1 #1-179 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
 339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



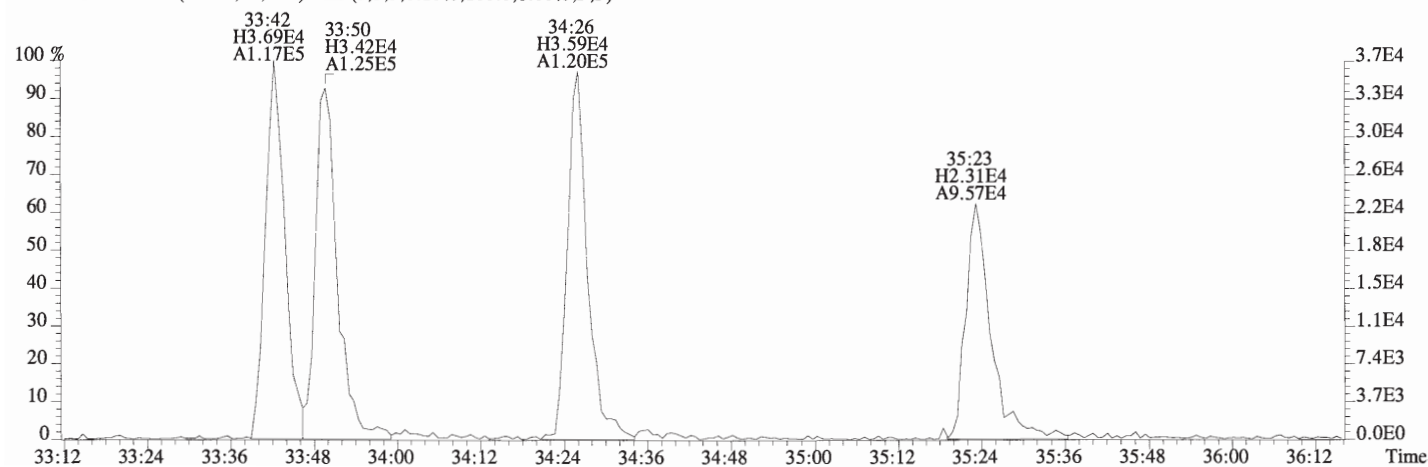
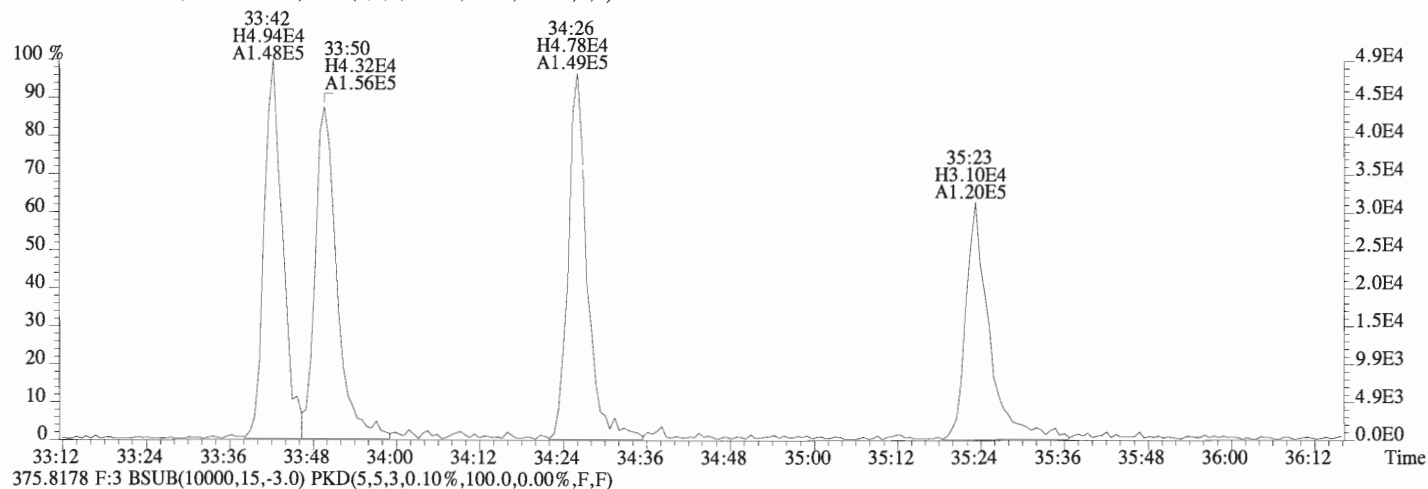
File:160407D1 #1-179 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
 339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



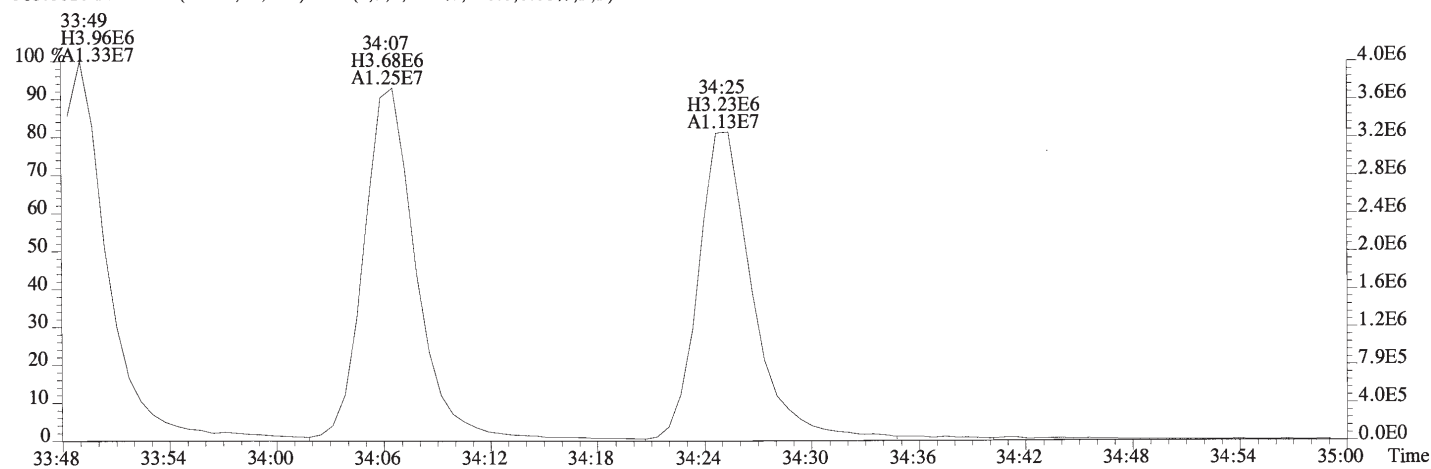
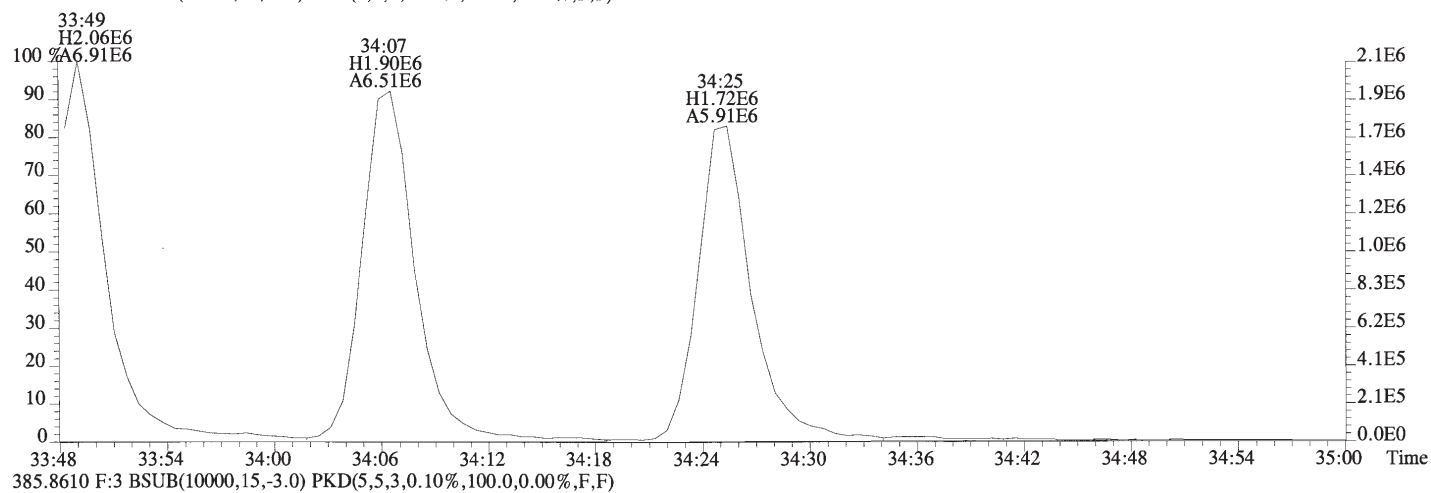
File:160407D1 #1-408 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



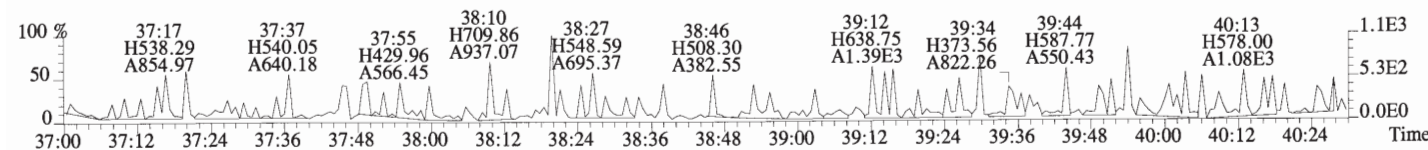
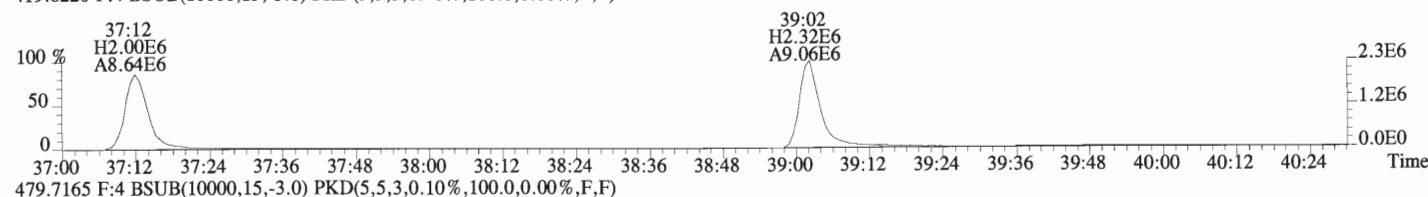
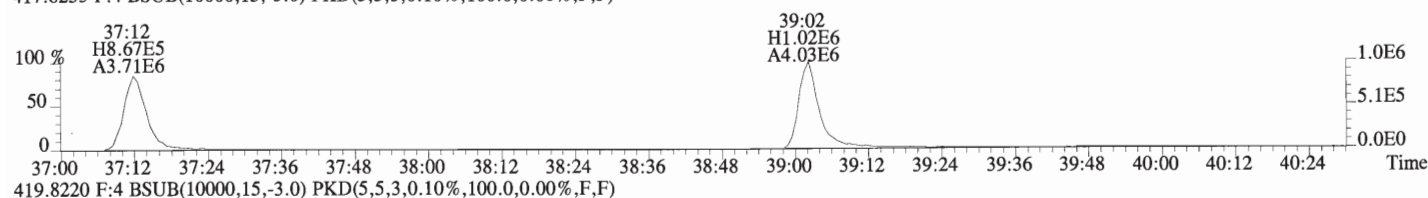
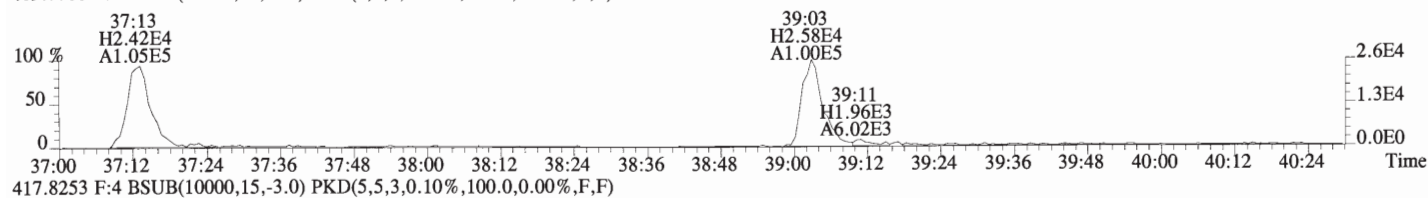
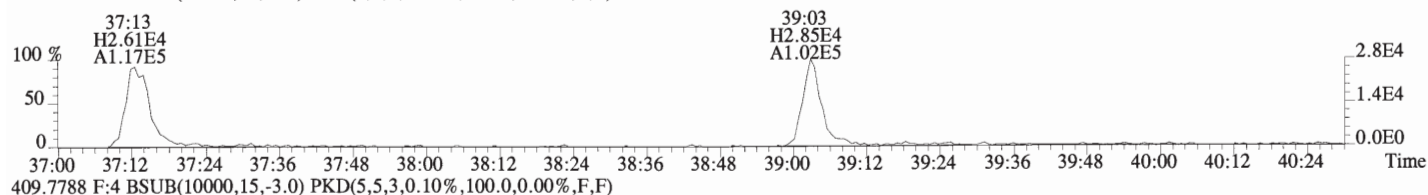
File:160407D1 #1-408 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



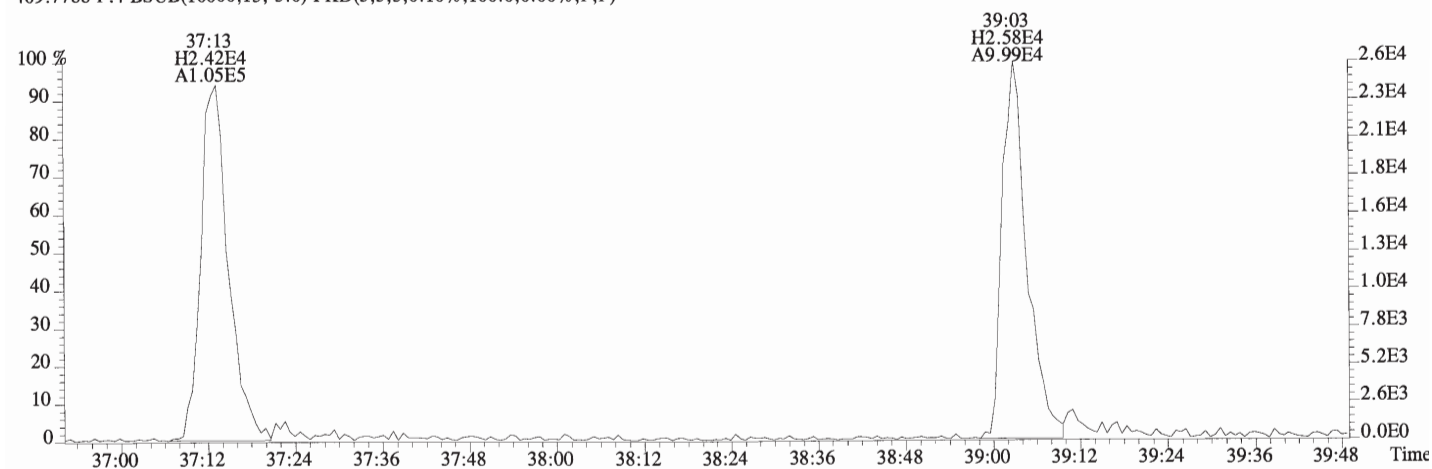
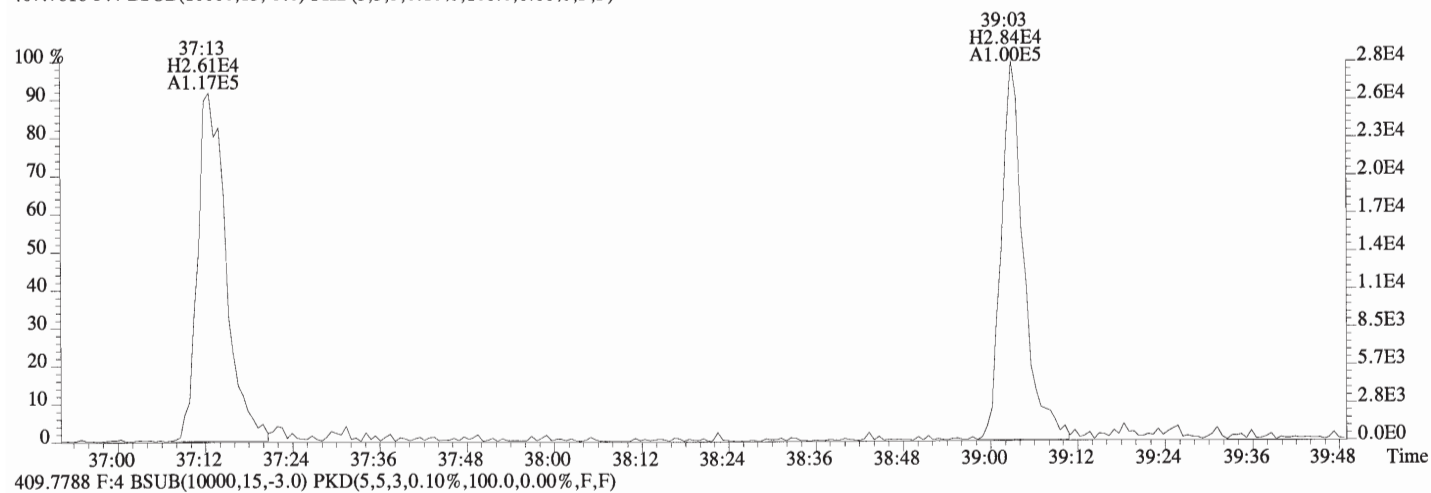
File:160407D1 #1-408 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
 383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



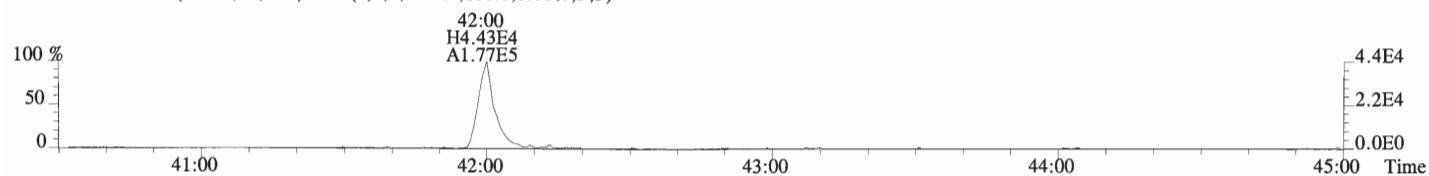
File:160407D1 #1-325 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
 407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



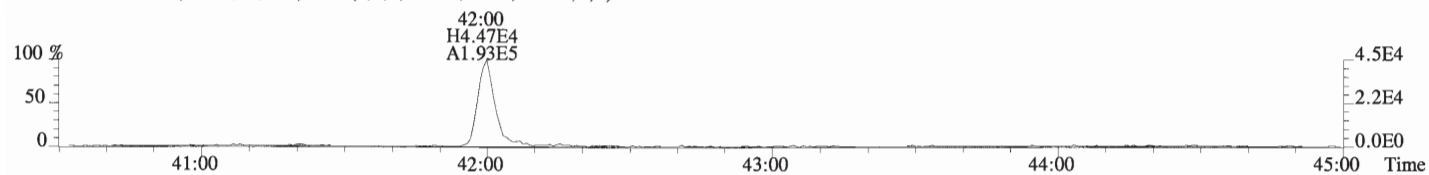
File:160407D1 #1-325 Acq; 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



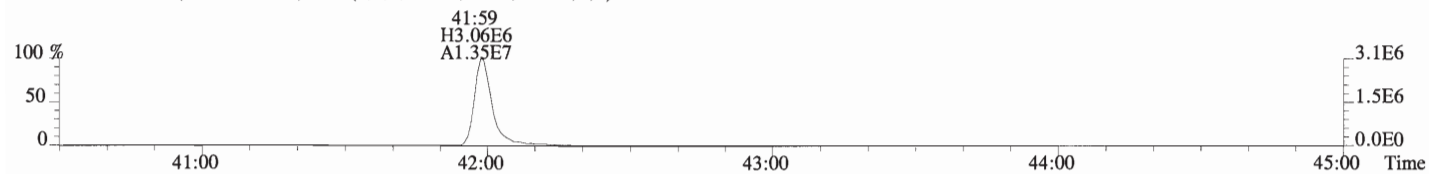
File:160407D1 #1-388 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



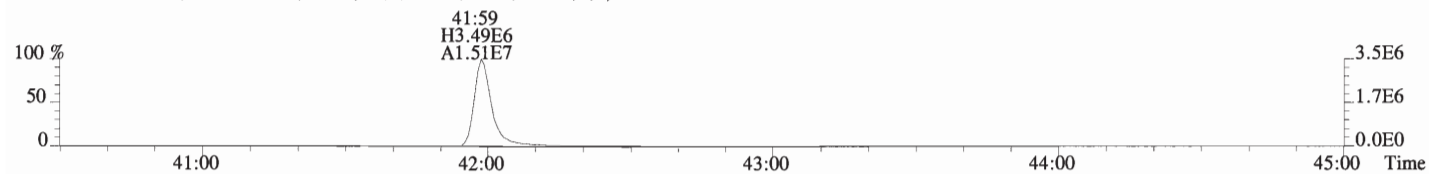
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



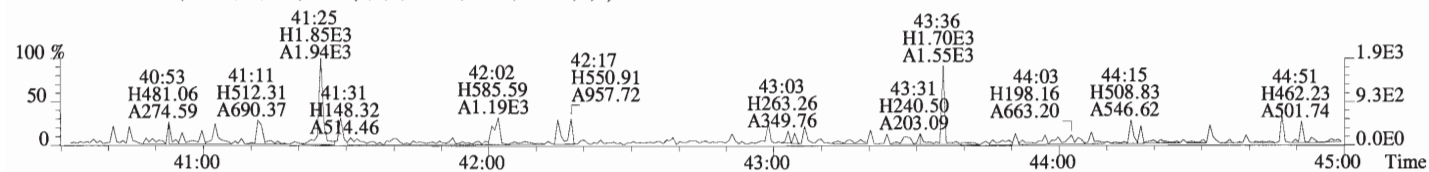
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



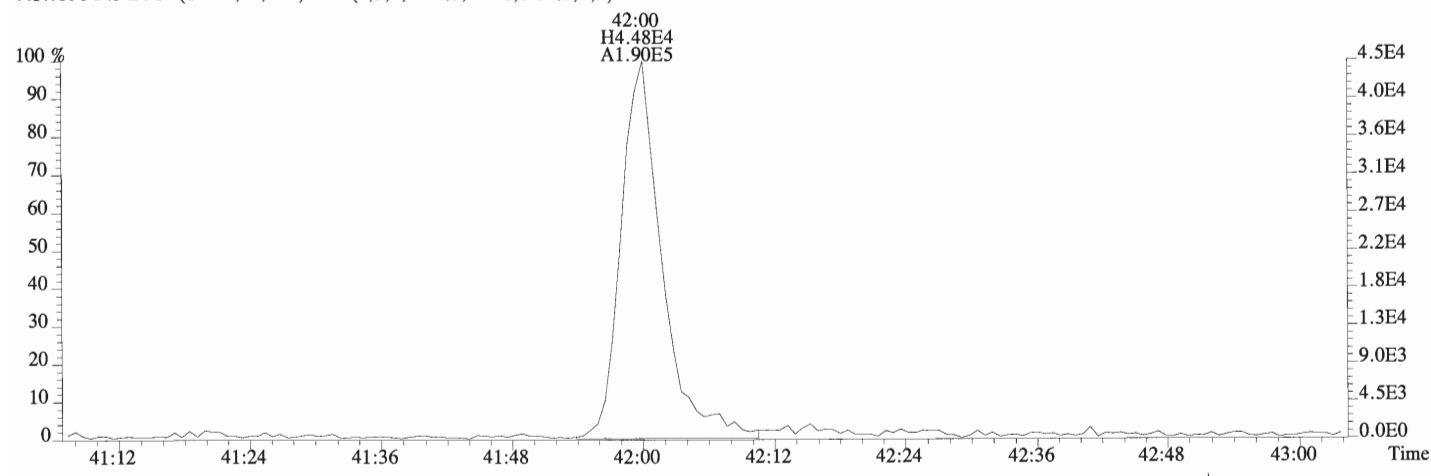
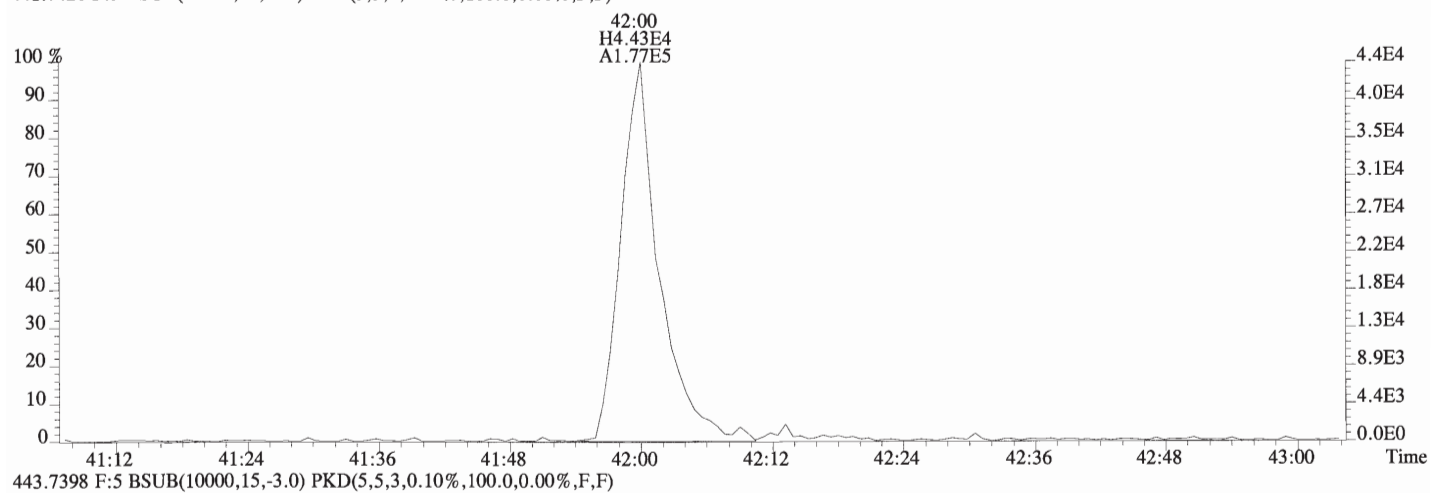
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



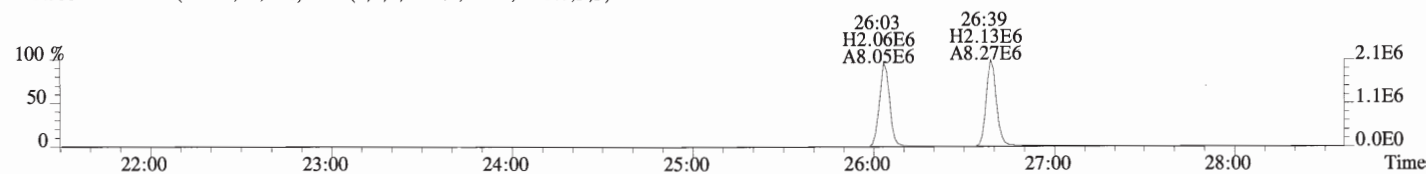
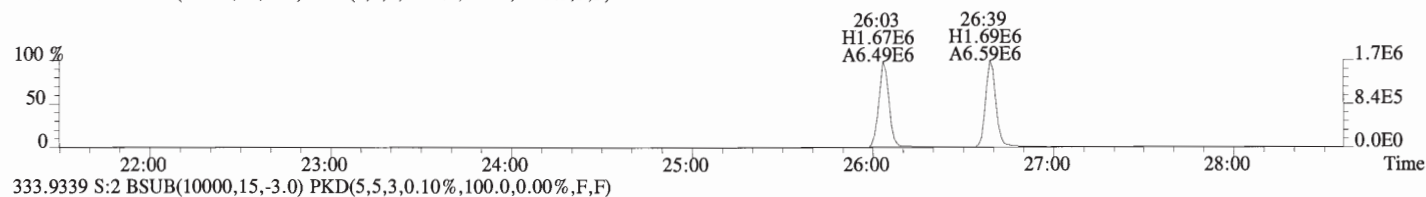
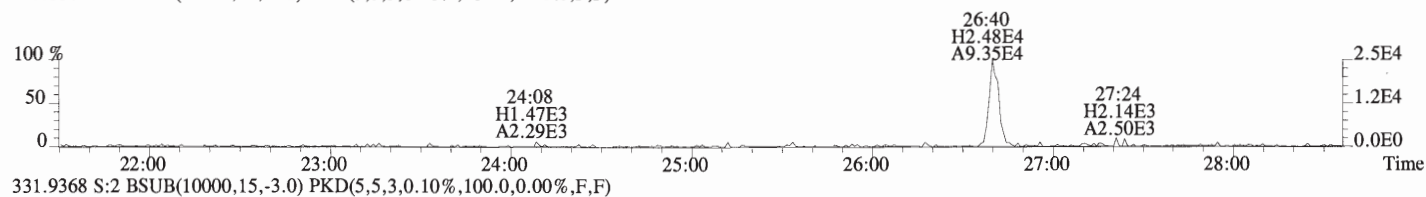
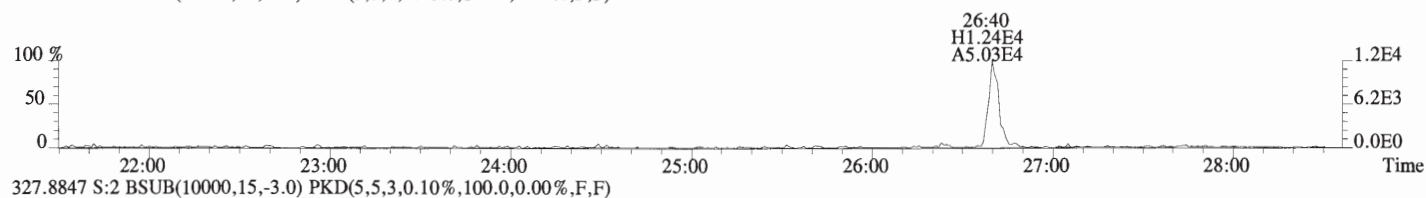
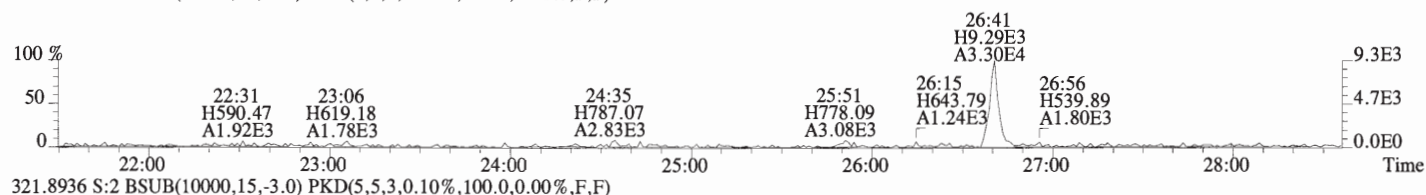
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



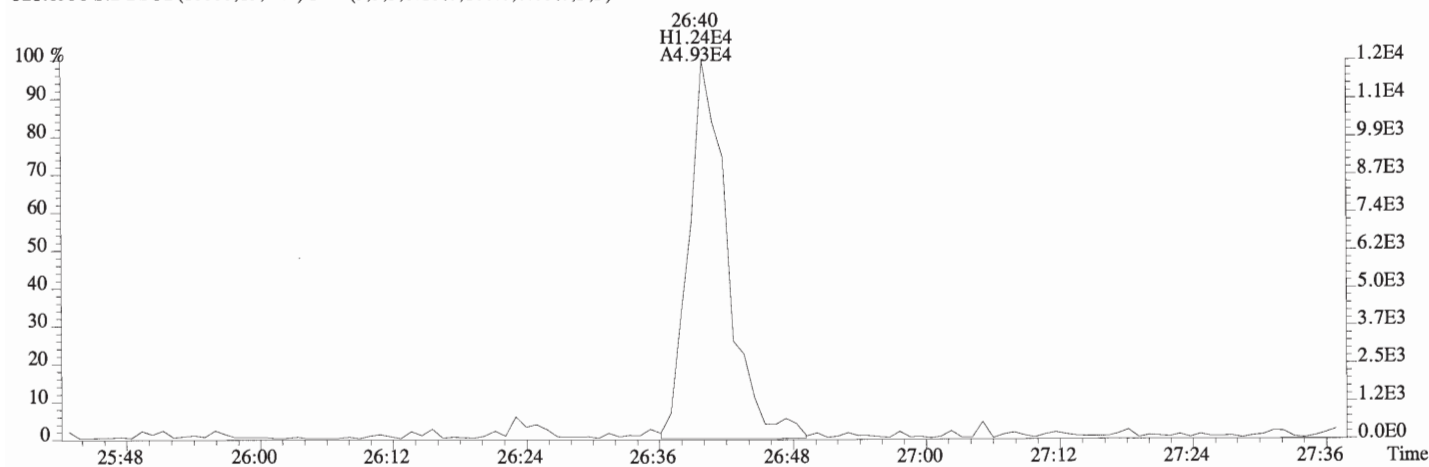
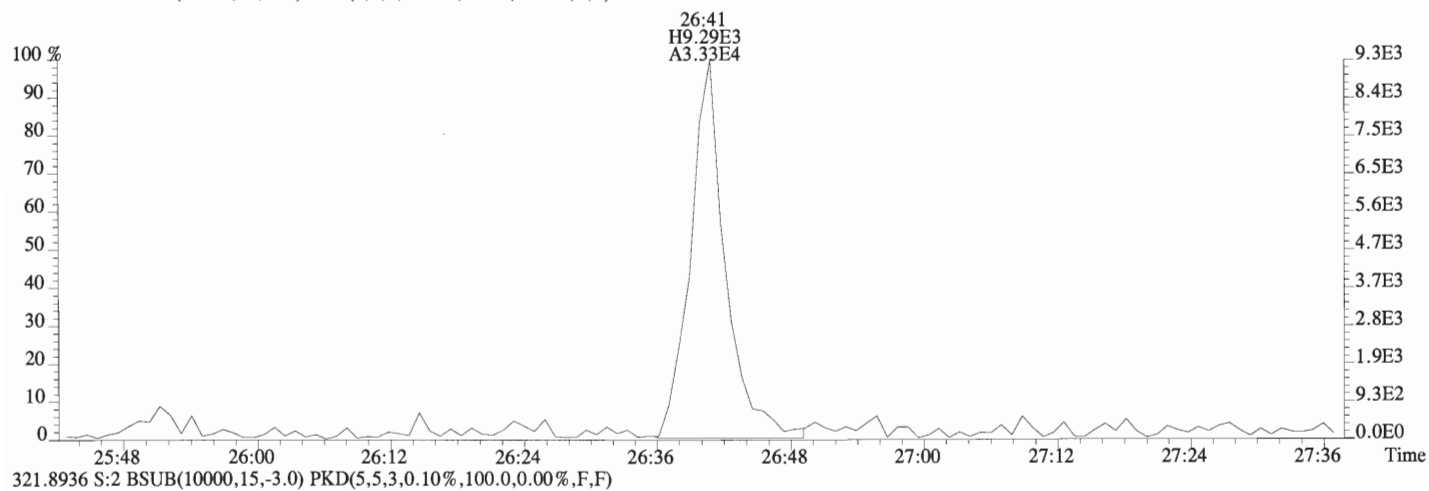
File:160407D1 #1-388 Acq: 7-APR-2016 14:10:55 GC EI+ Voltage SIR Autospec-UltimaE
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-1 1613 CS0 15J1904 Exp:OCDD_DB5
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



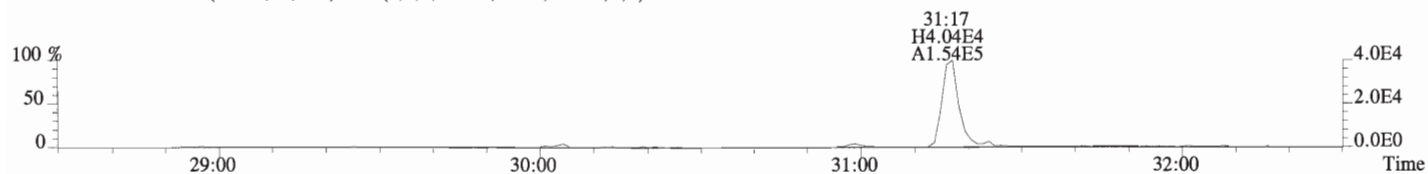
File:160407D1 #1-567 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text: Vista Analytical Laboratory VG7 Text: ST160407D1-2 1613 CS1 15J1905 Exp: OCDD_DB5
 319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



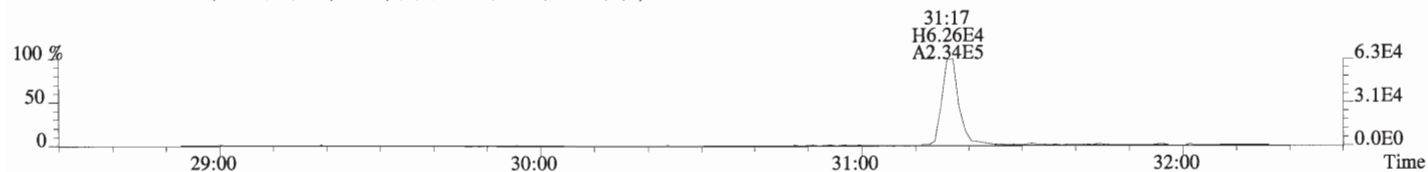
File:160407D1 #1-567 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



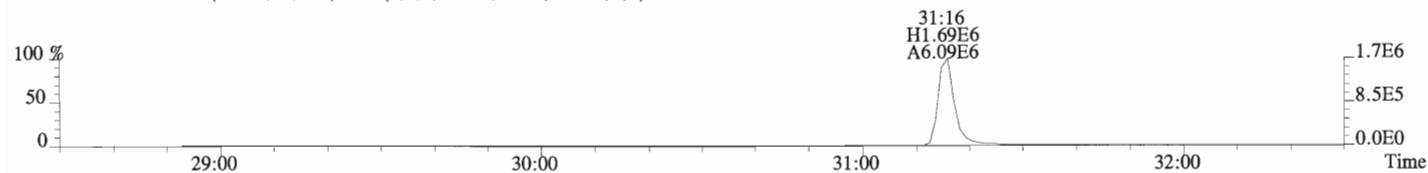
File:160407D1 #1-180 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



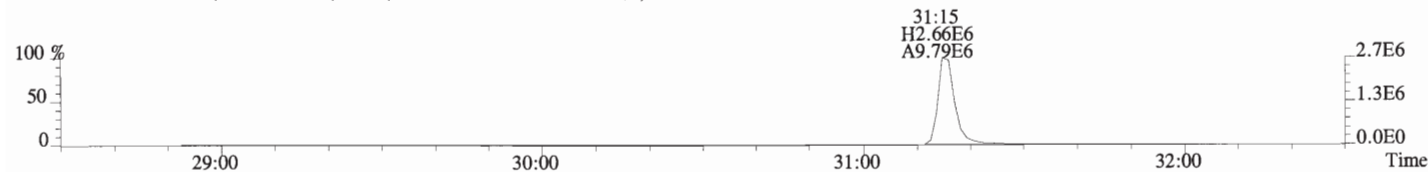
355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



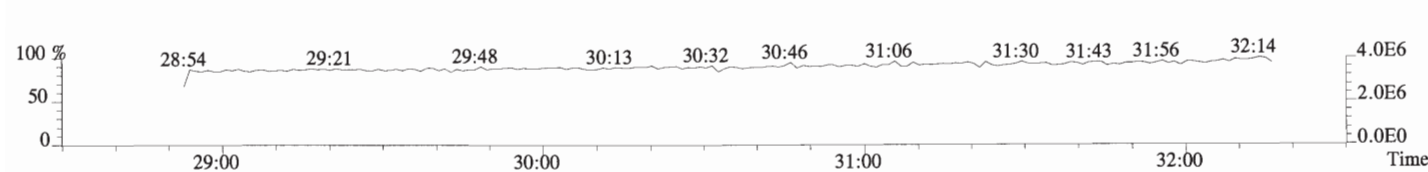
365.8978 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



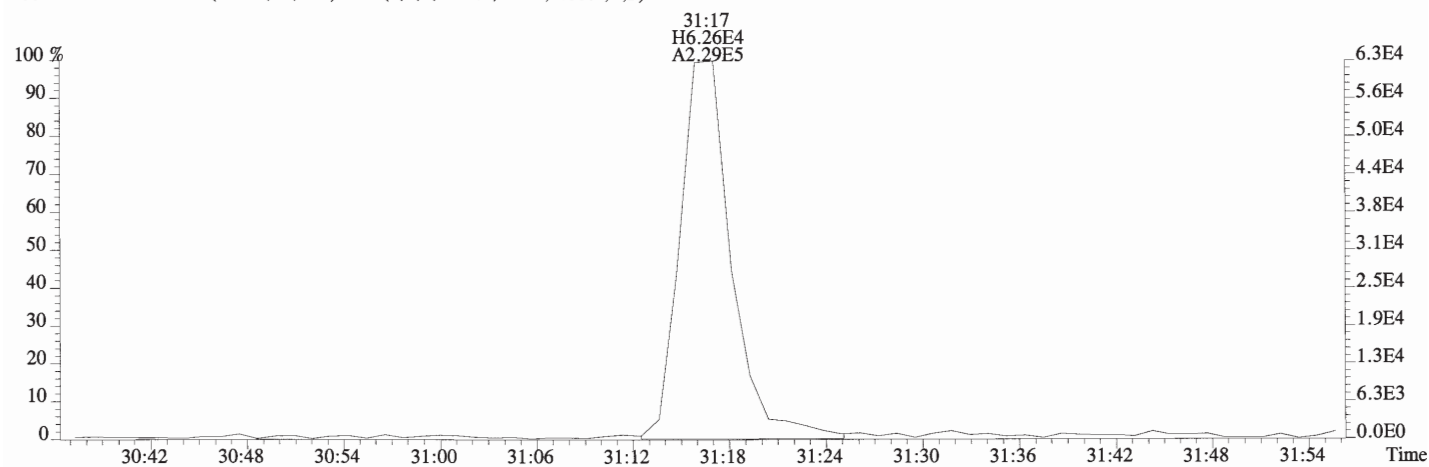
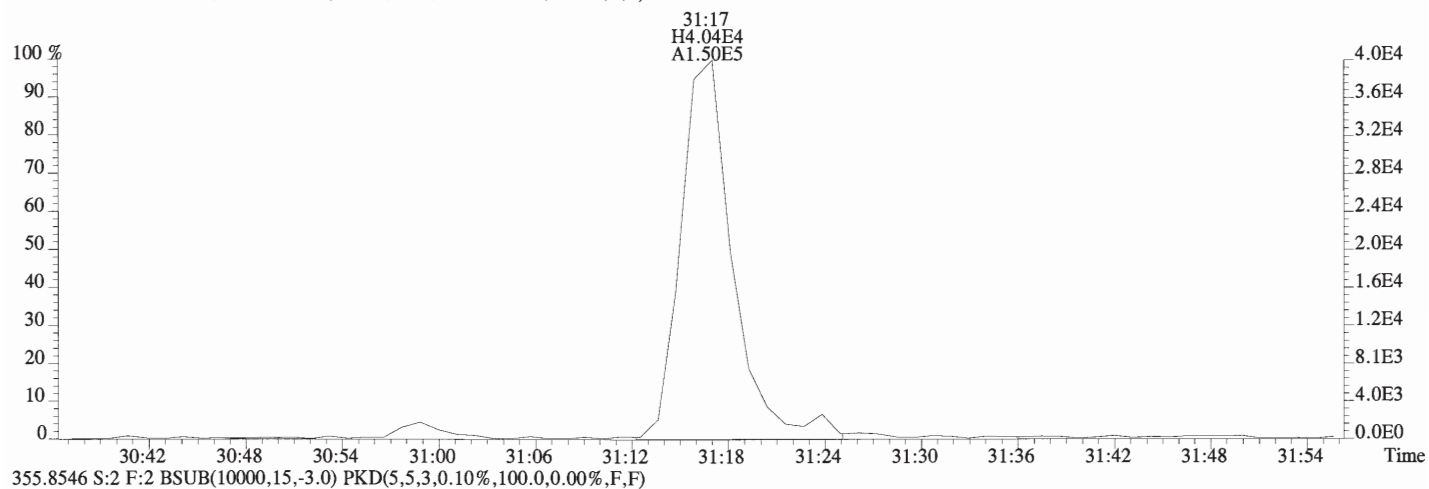
367.8949 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



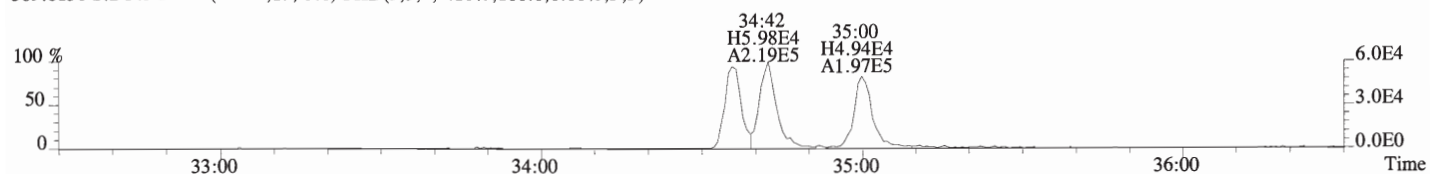
366.9792 S:2 F:2



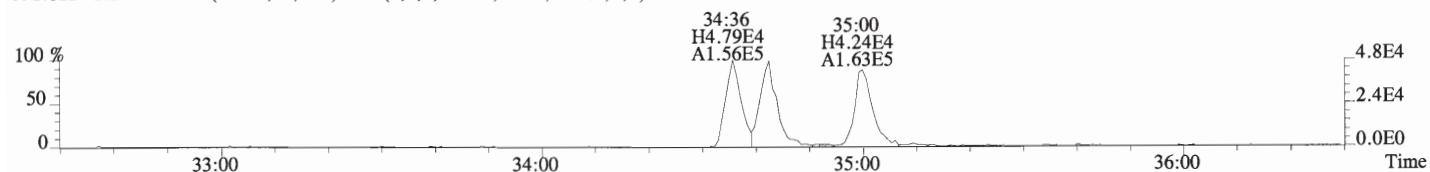
File:160407D1 #1-180 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



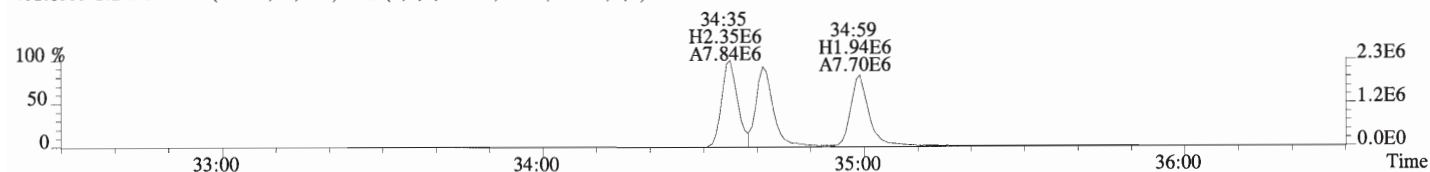
File:160407D1 #1-406 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
 389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



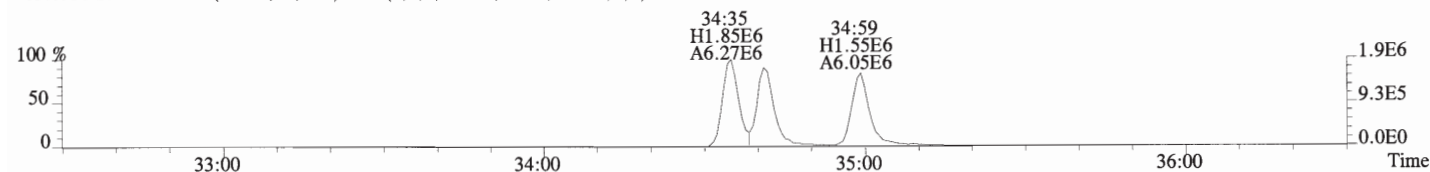
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



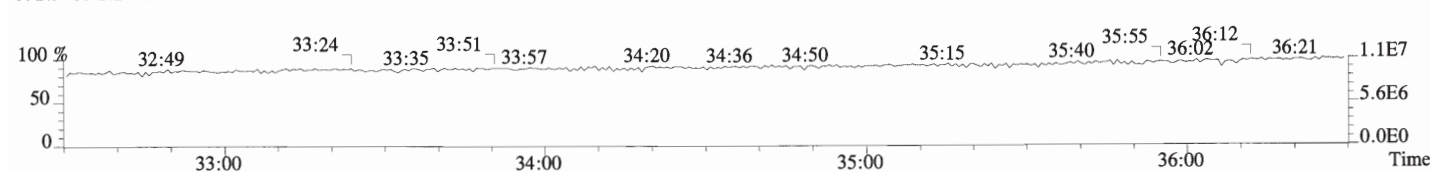
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



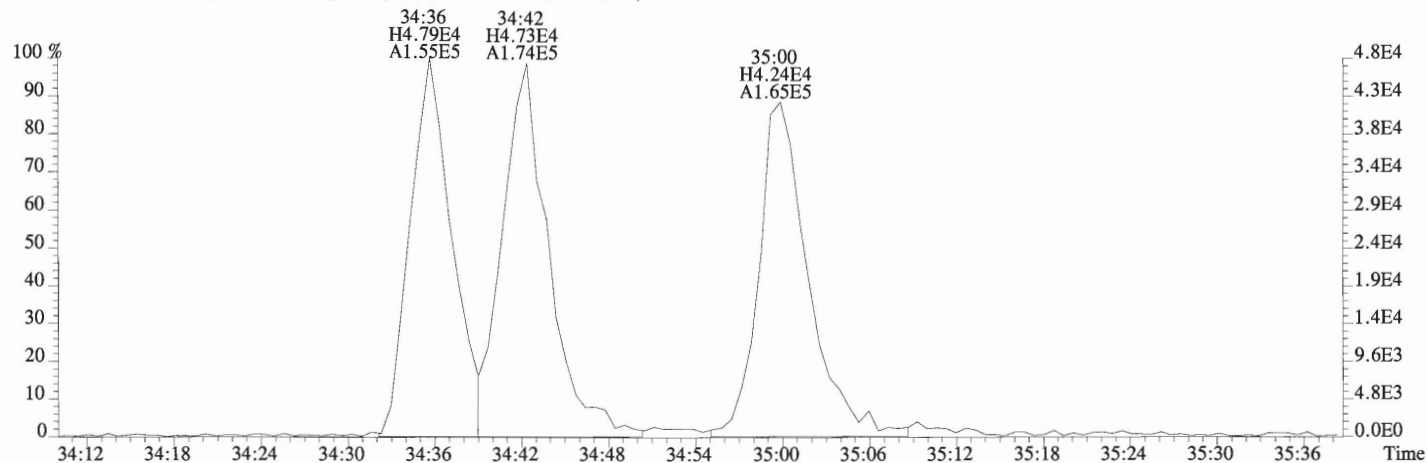
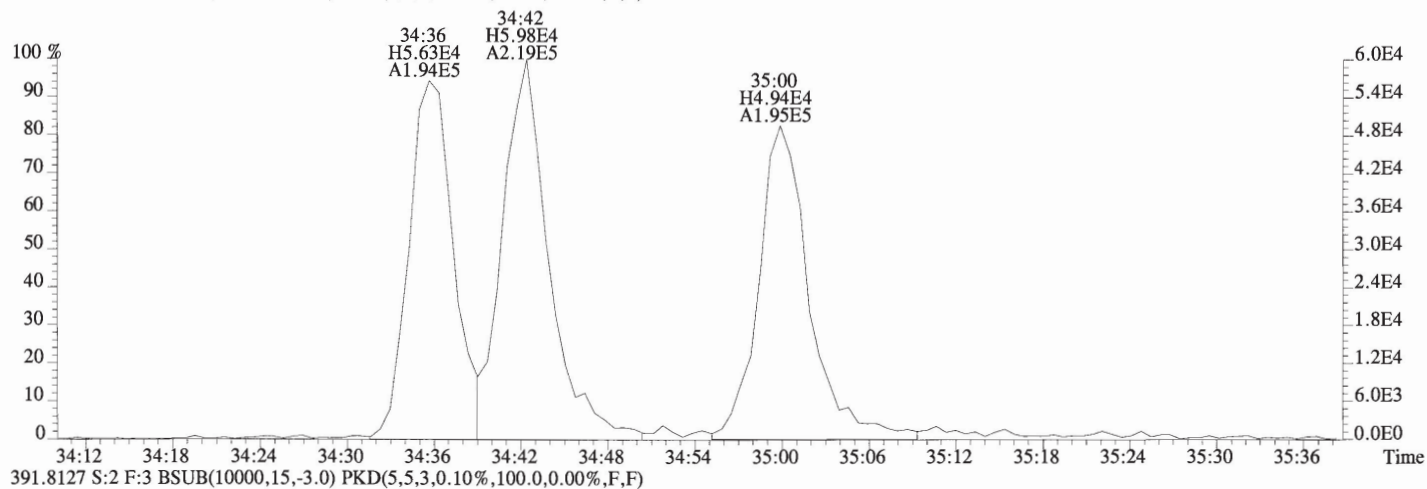
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



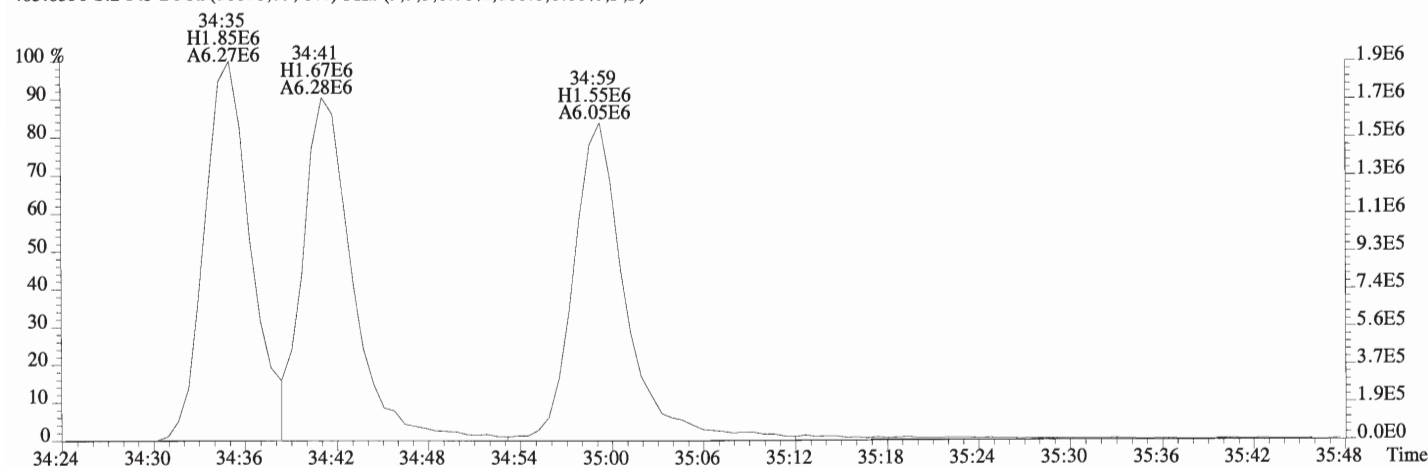
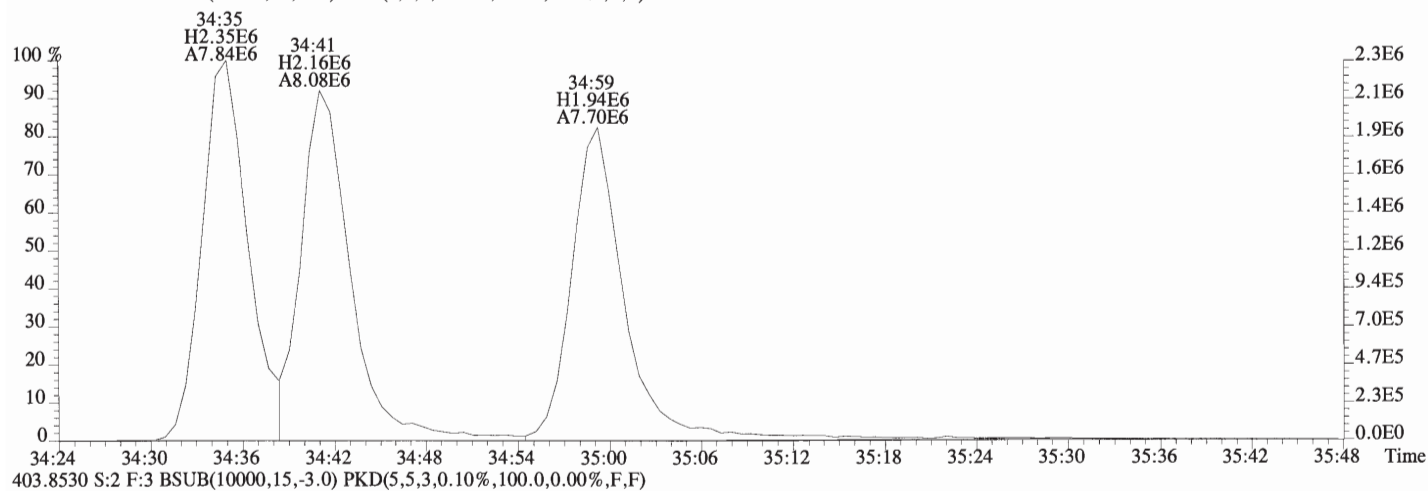
392.9760 S:2 F:3



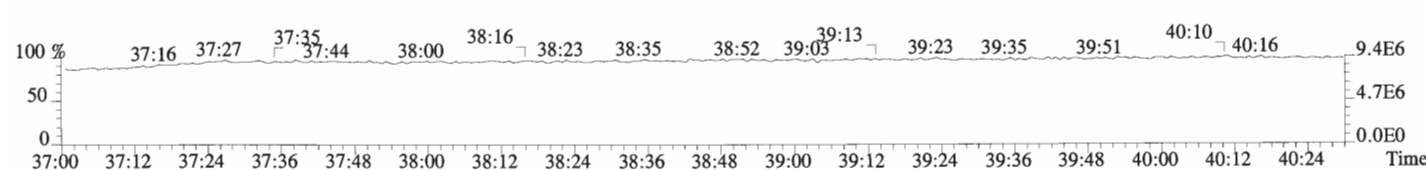
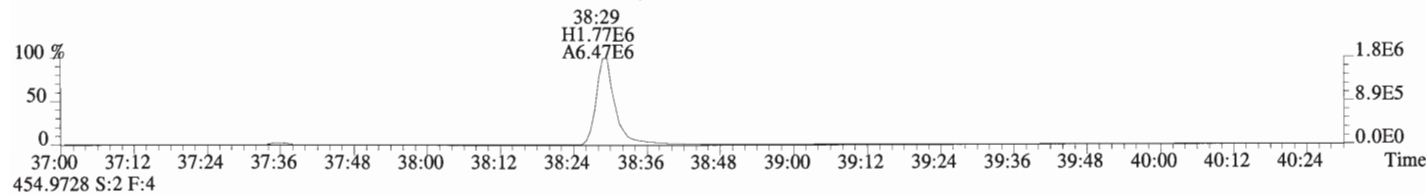
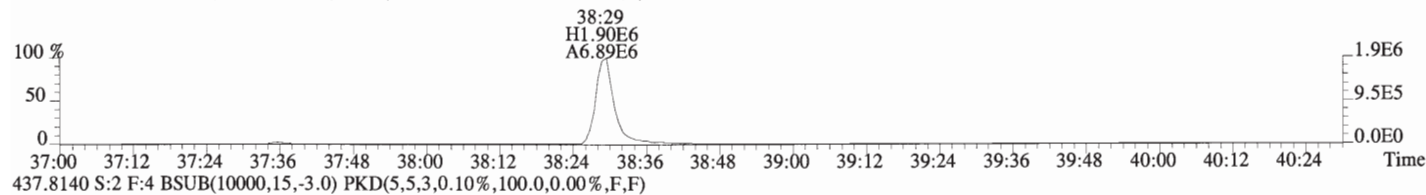
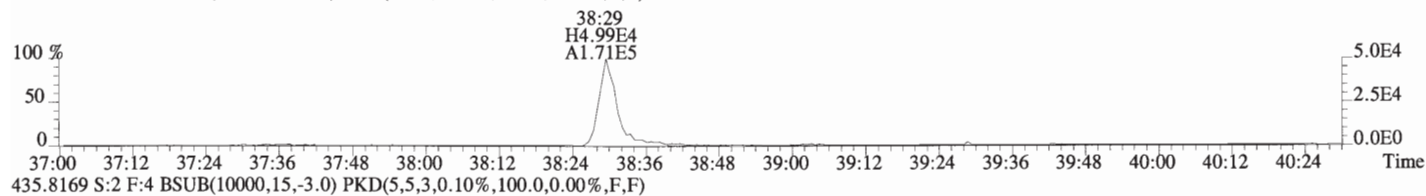
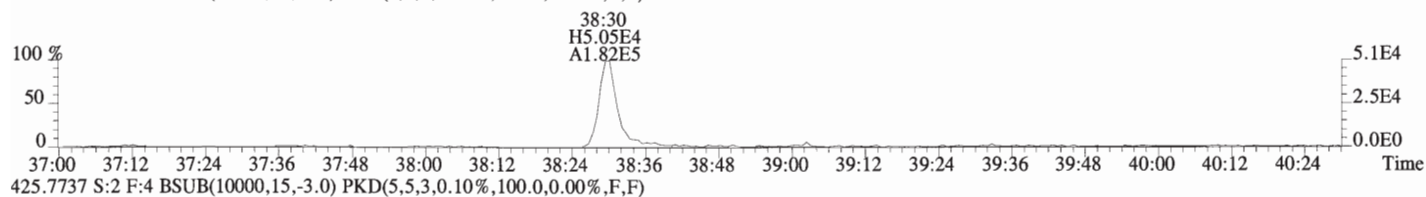
File:160407D1 #1-406 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text: Vista Analytical Laboratory VG7 Text: ST160407D1-2 1613 CS1 15J1905 Exp: OCDD_DB5
 389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



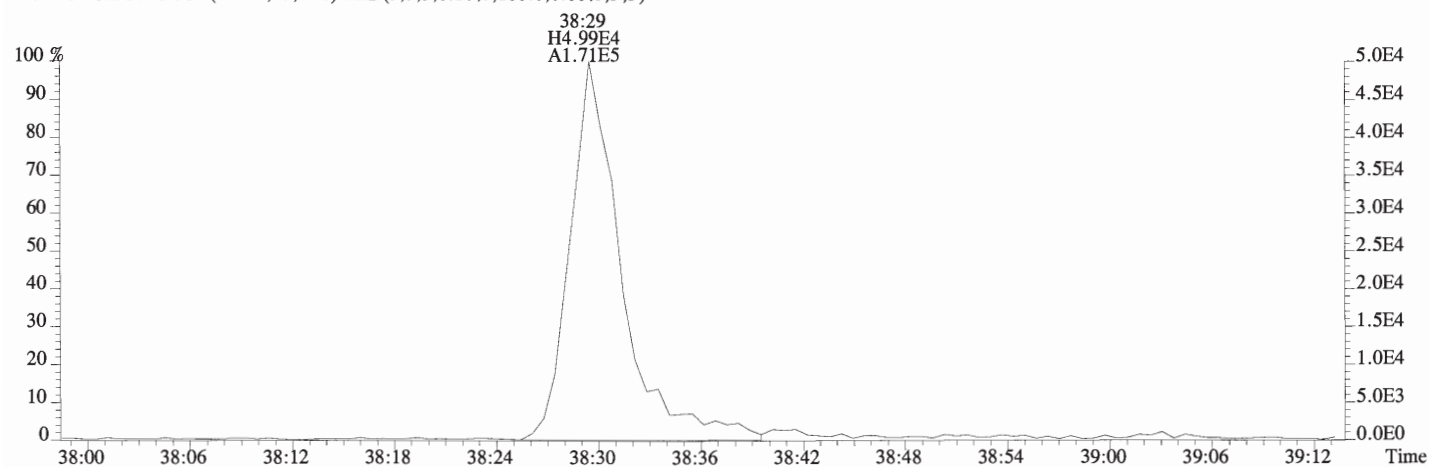
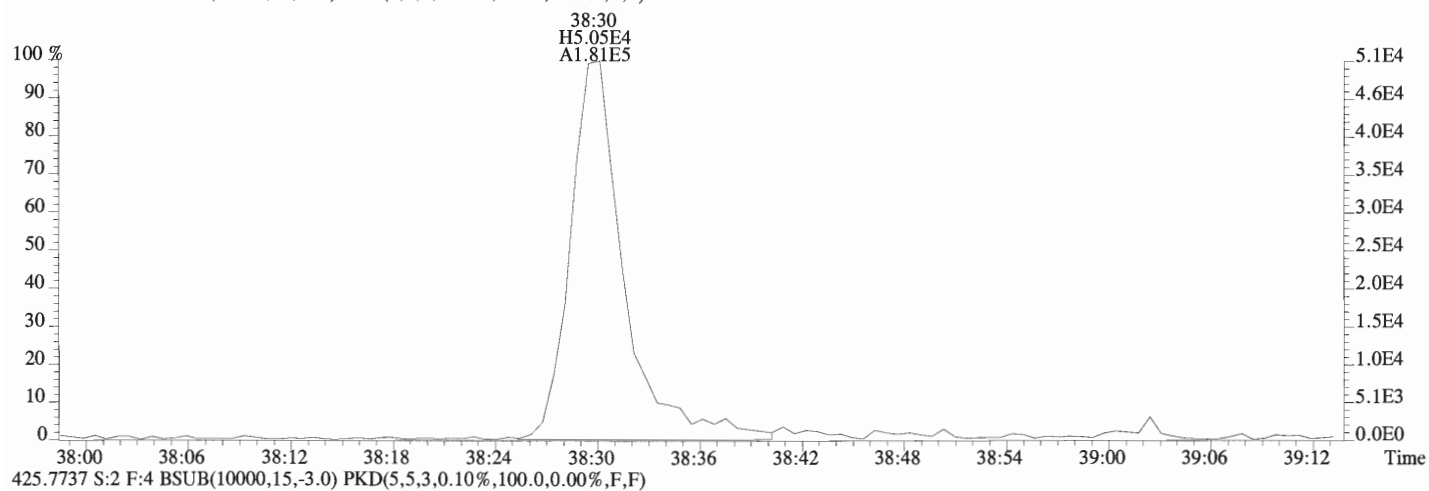
File:160407D1 #1-406 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
 401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



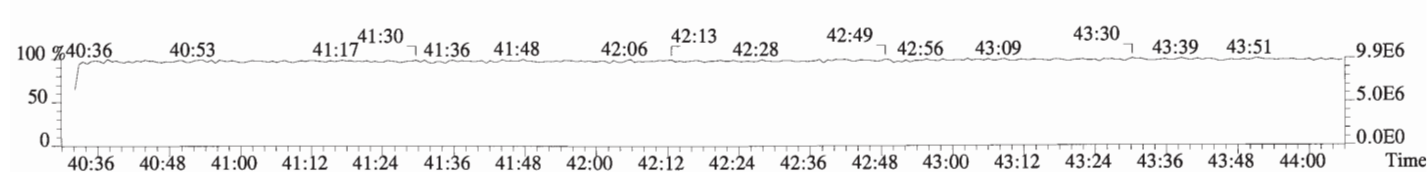
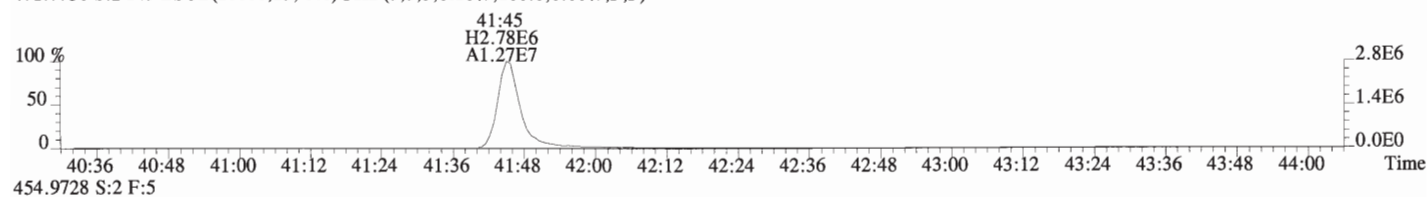
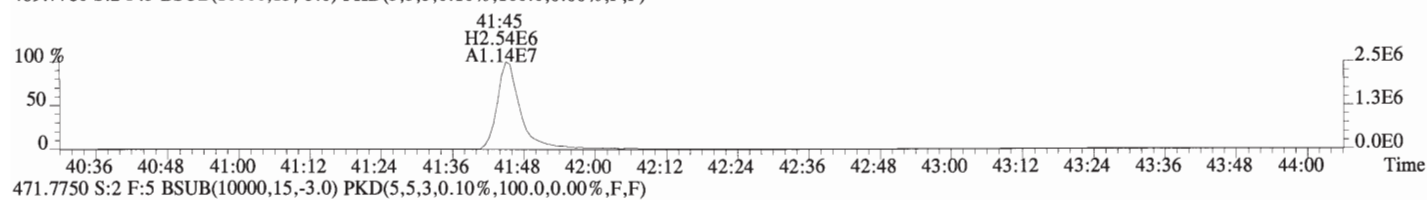
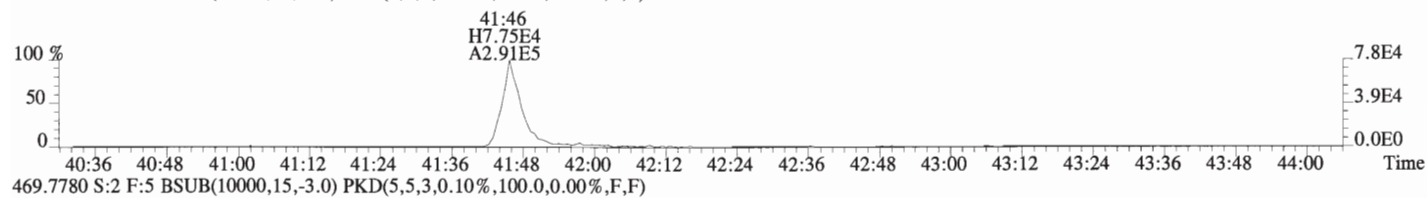
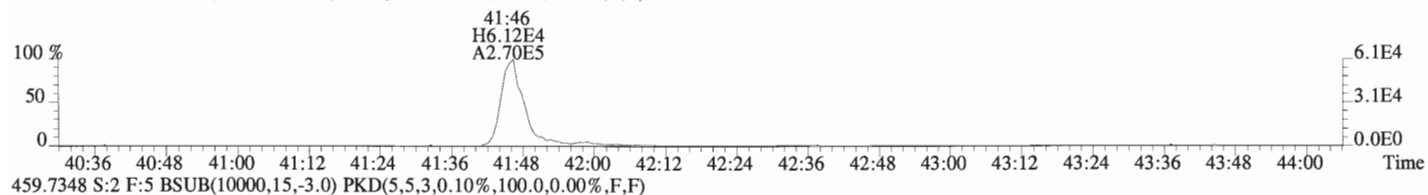
File:160407D1 #1-326 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
 423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



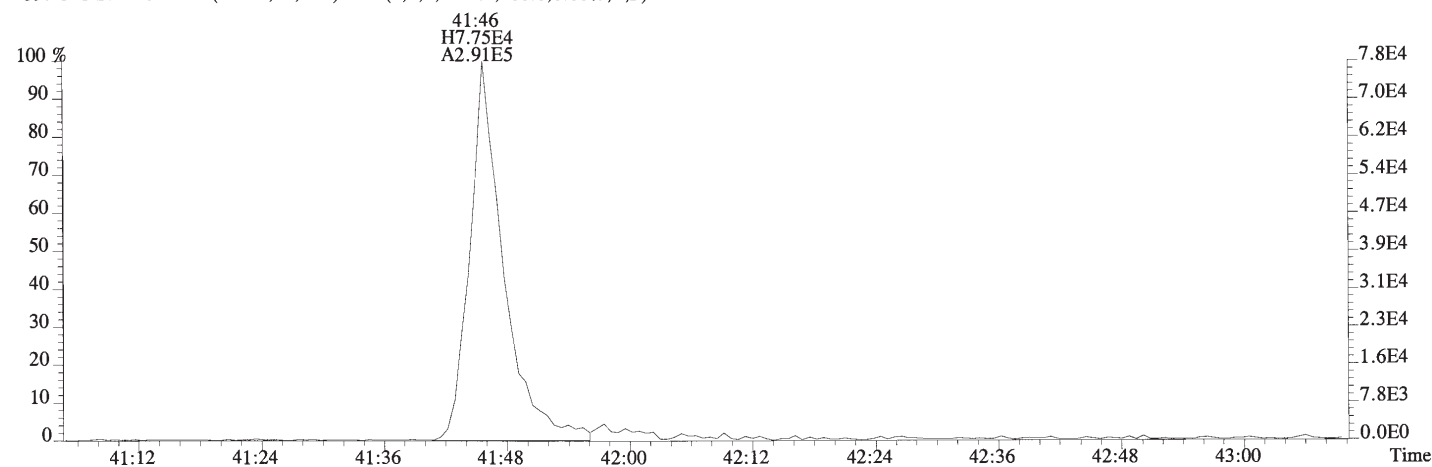
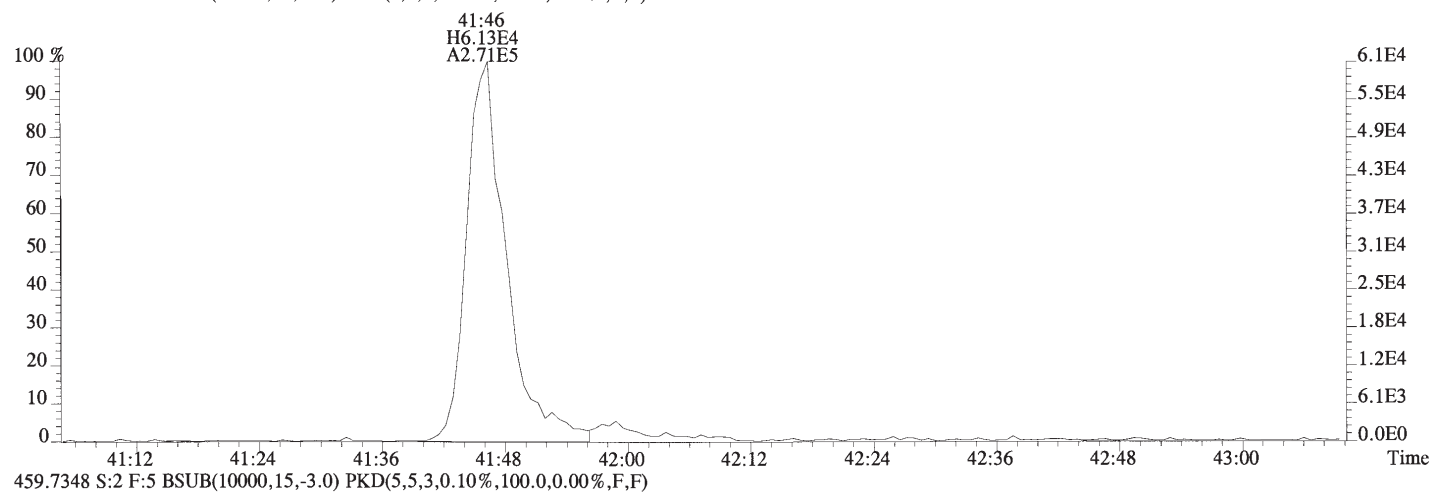
File:160407D1 #1-326 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG7 Text: ST160407D1-2 1613 CS1 15J1905 Exp: OCDD_DB5
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



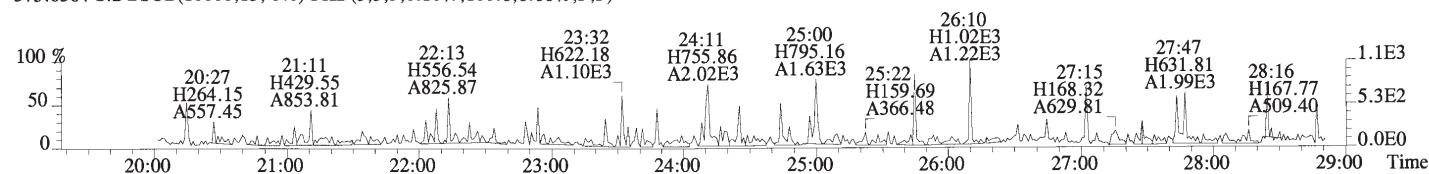
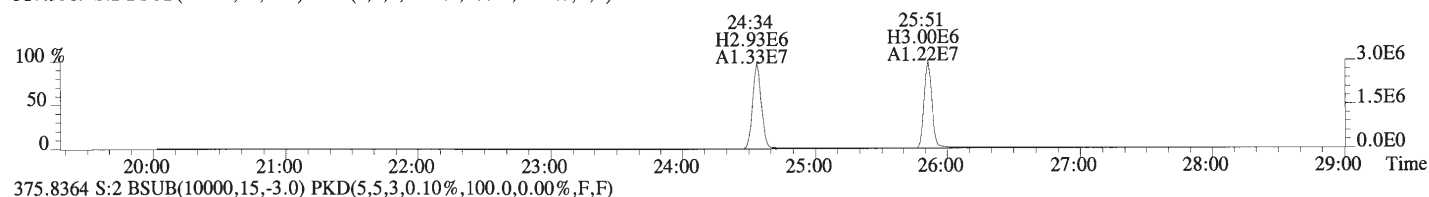
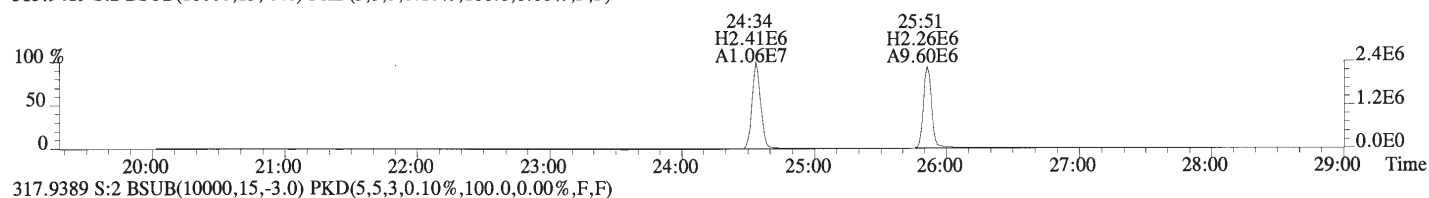
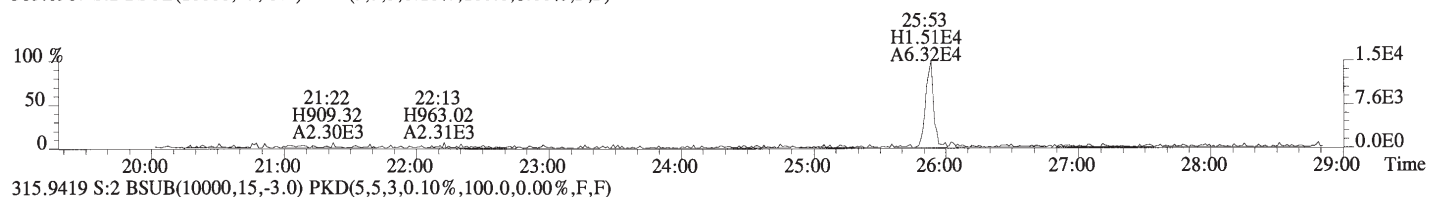
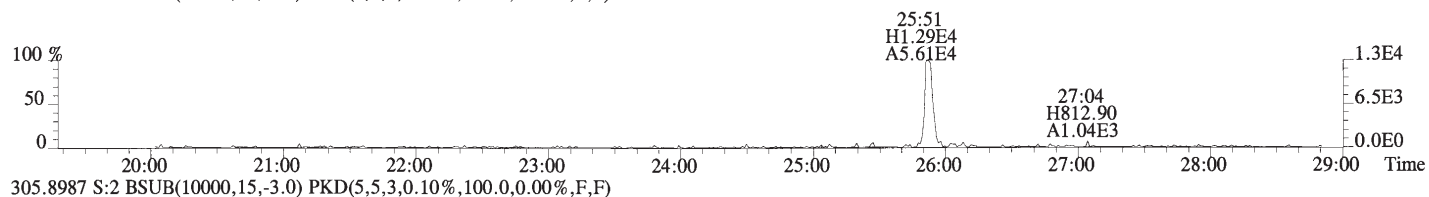
File:160407D1 #1-388 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
 457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



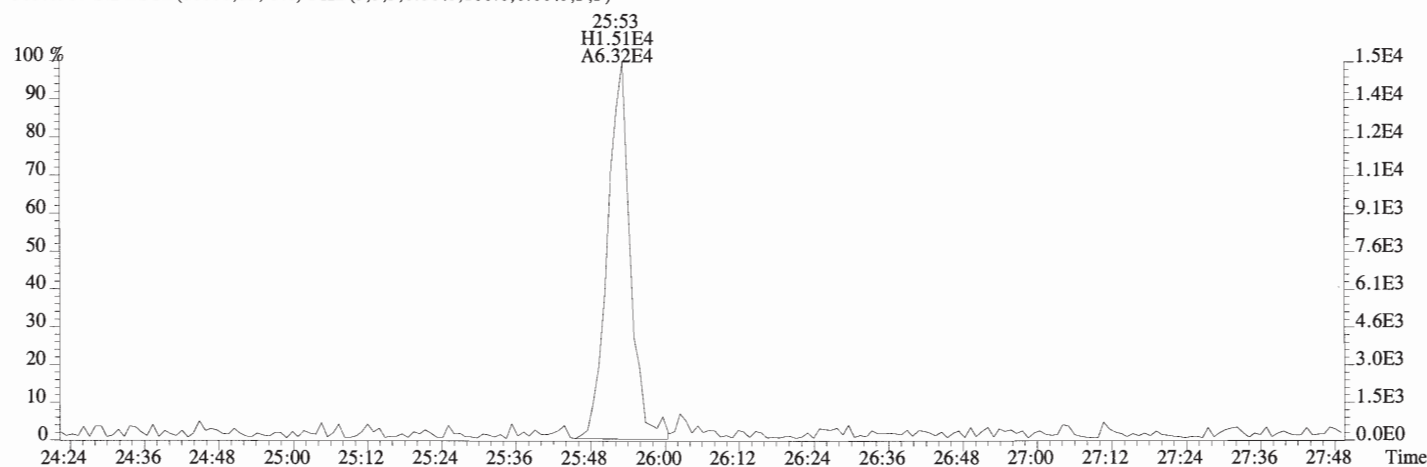
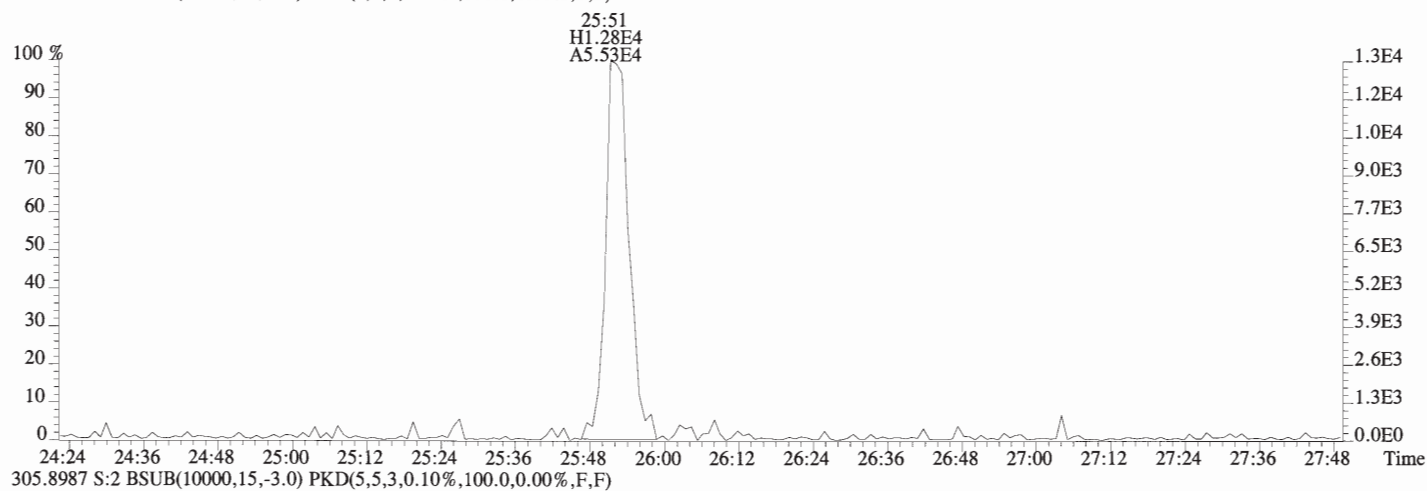
File:160407D1 #1-388 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



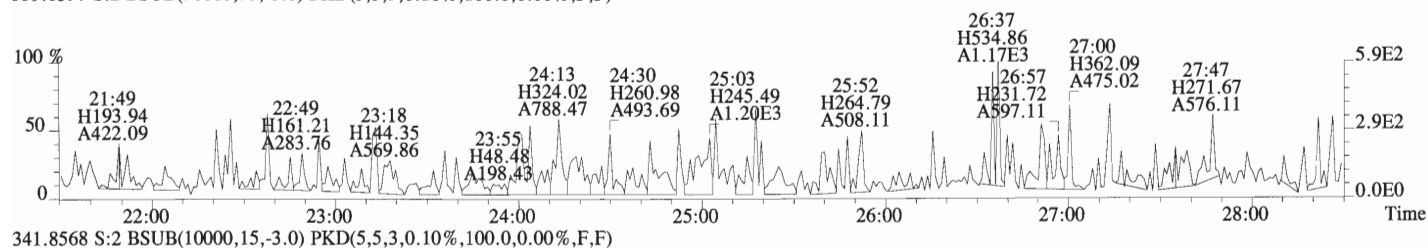
File:160407D1 #1-567 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text: Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
 303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



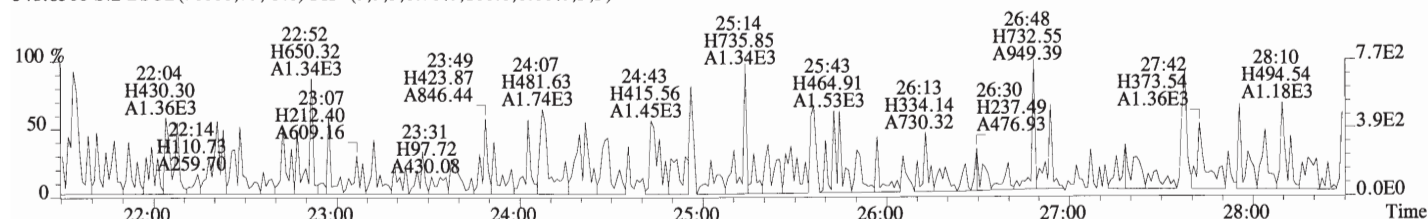
File:160407D1 #1-567 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



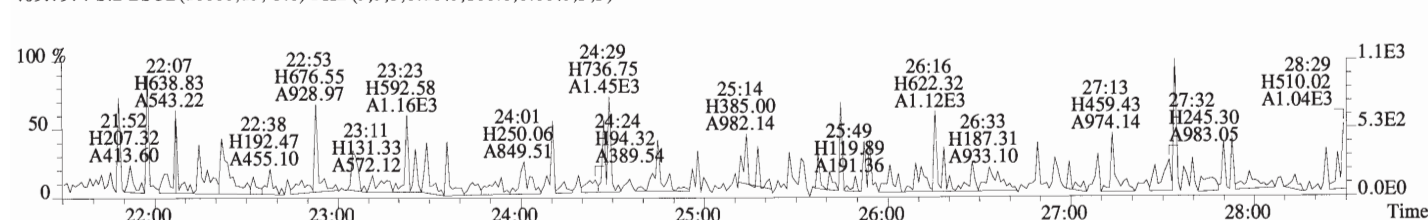
File:160407D1 #1-567 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



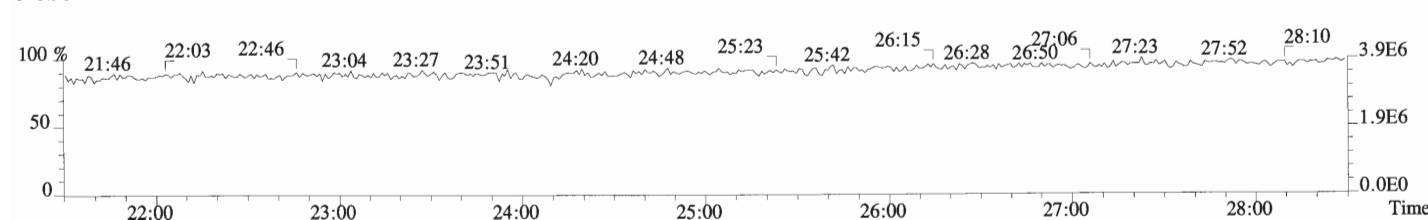
341.8568 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



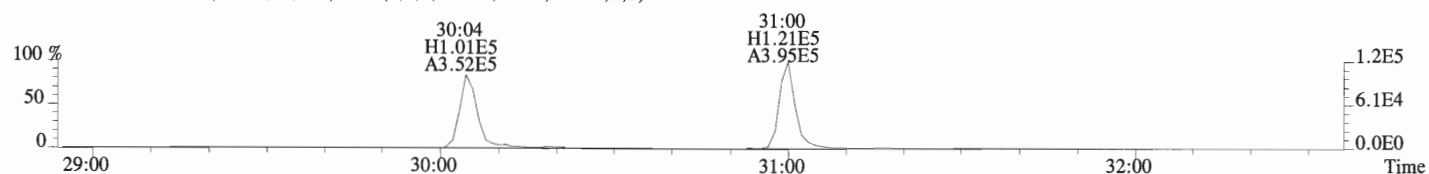
409.7974 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



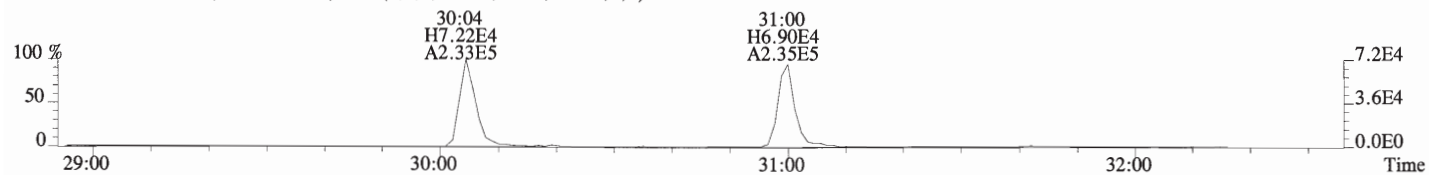
316.9824 S:2



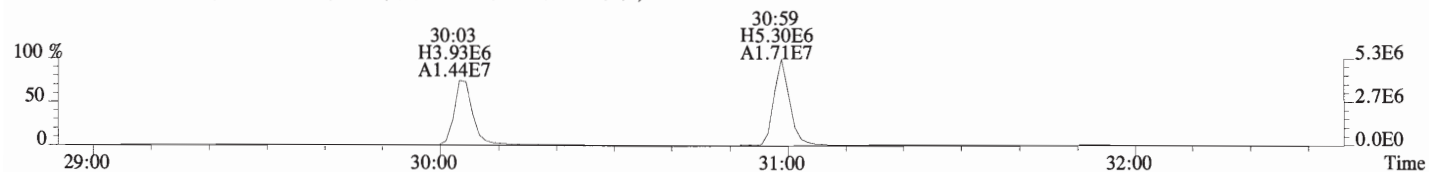
File:160407D1 #1-180 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



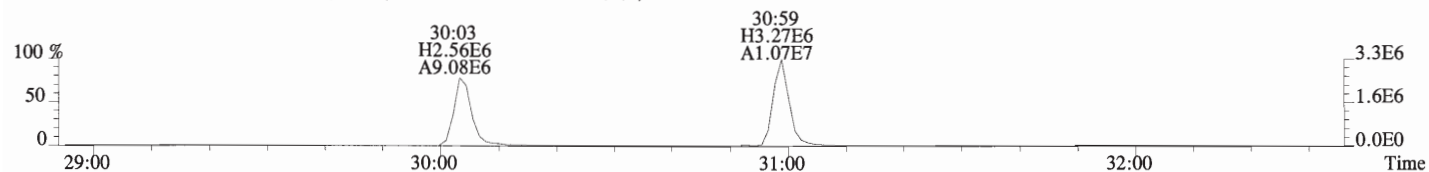
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



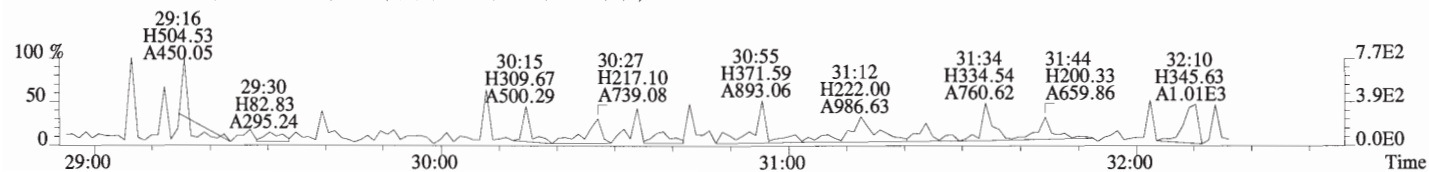
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



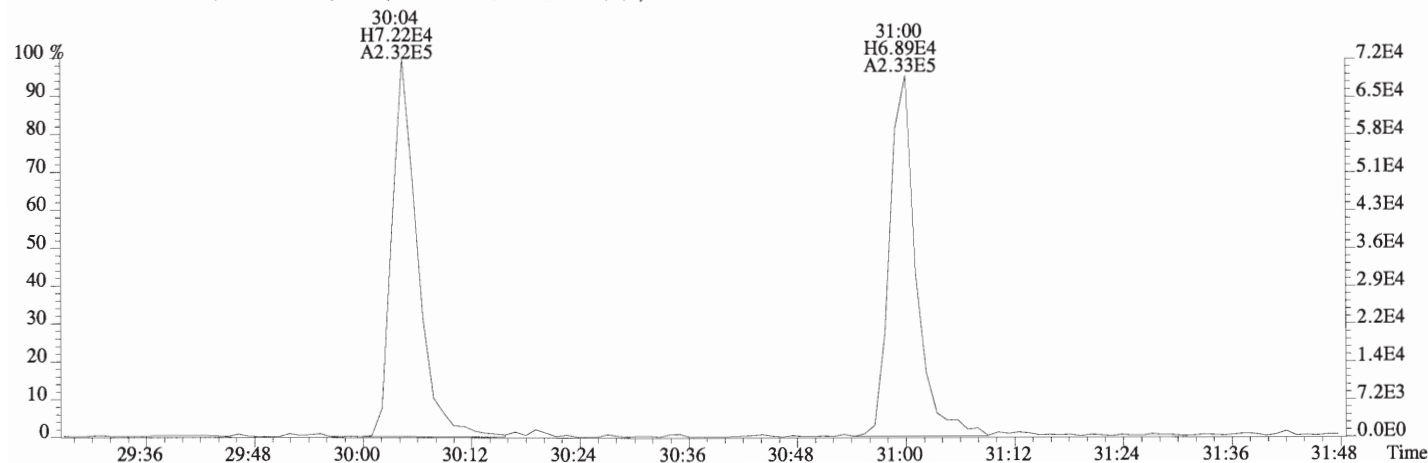
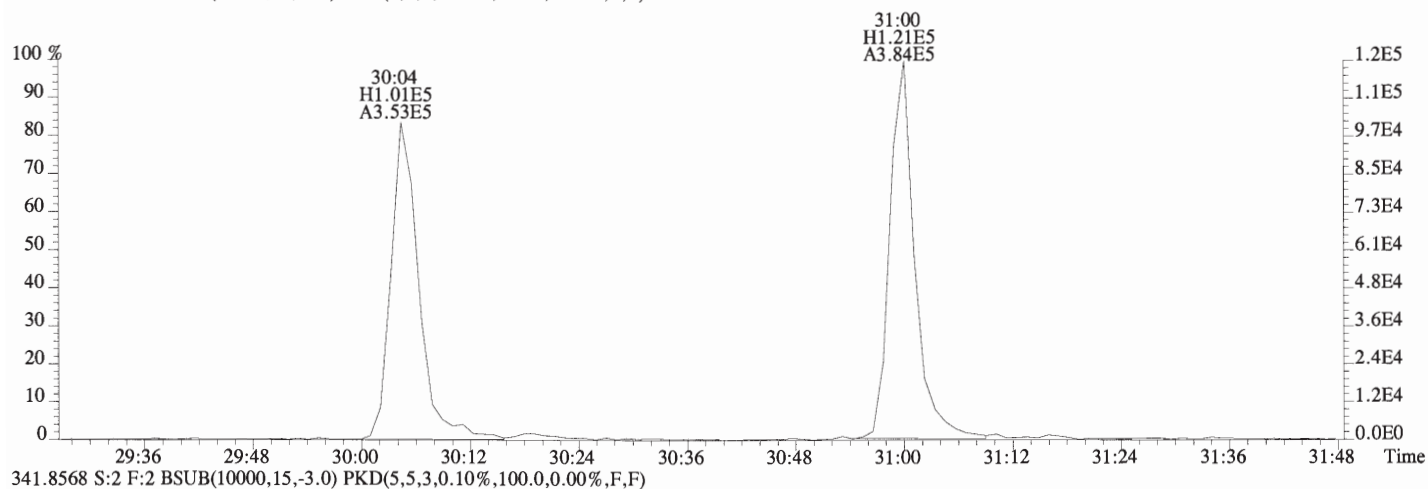
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



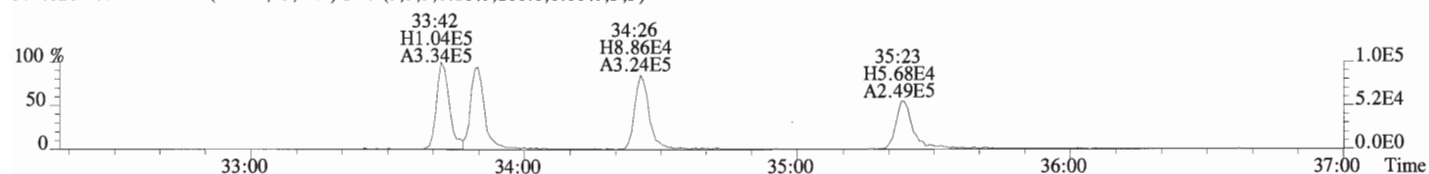
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



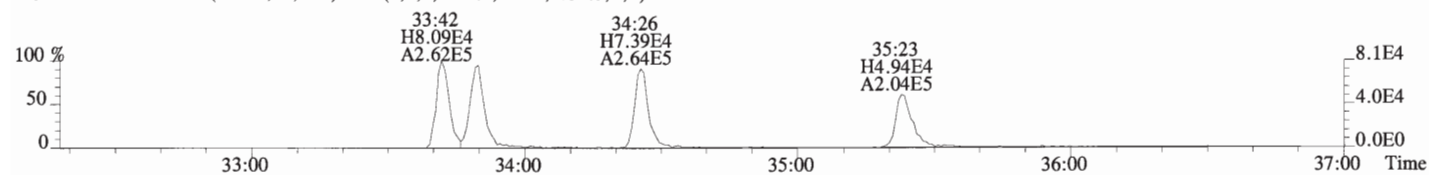
File:160407D1 #1-180 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
 339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



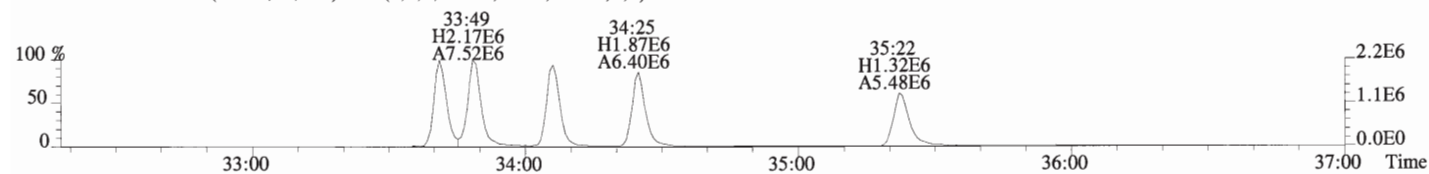
File:160407D1 #1-406 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



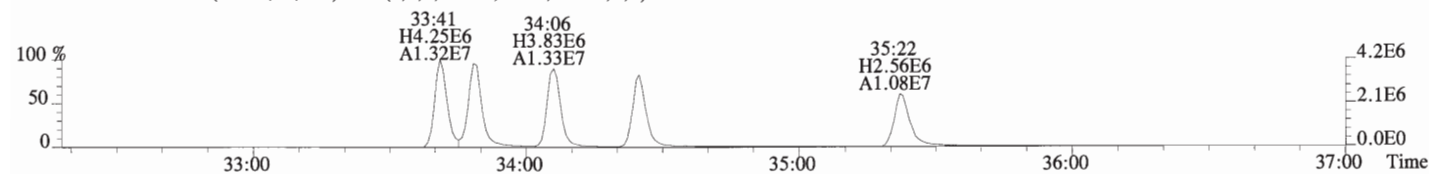
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



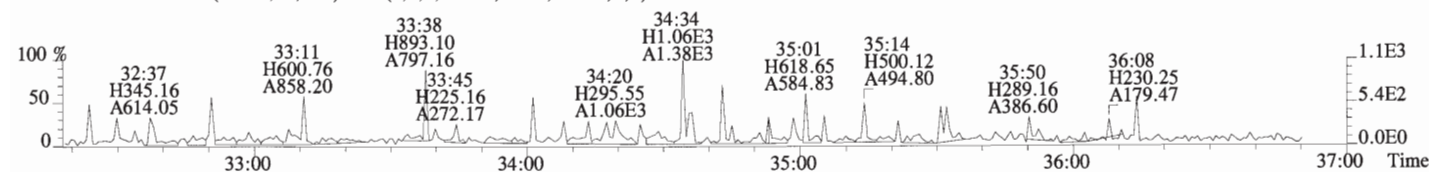
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



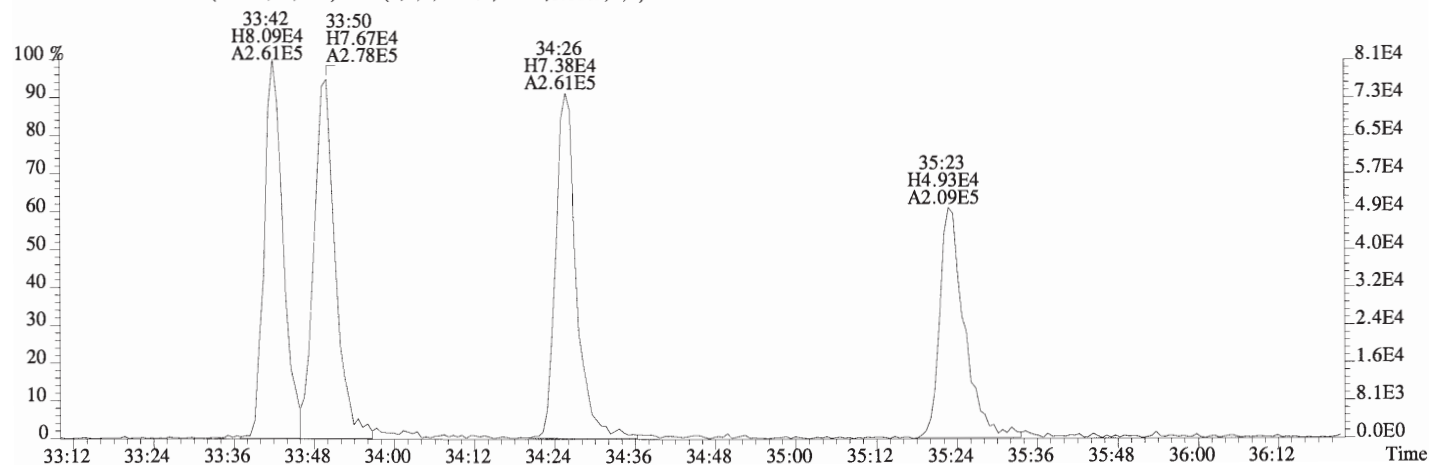
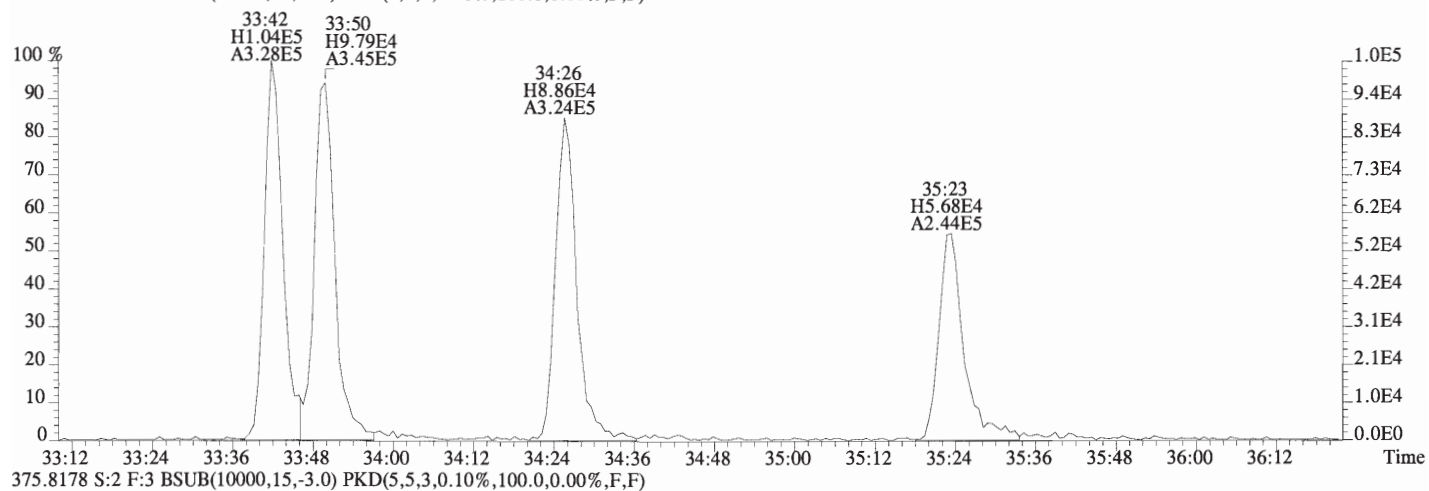
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



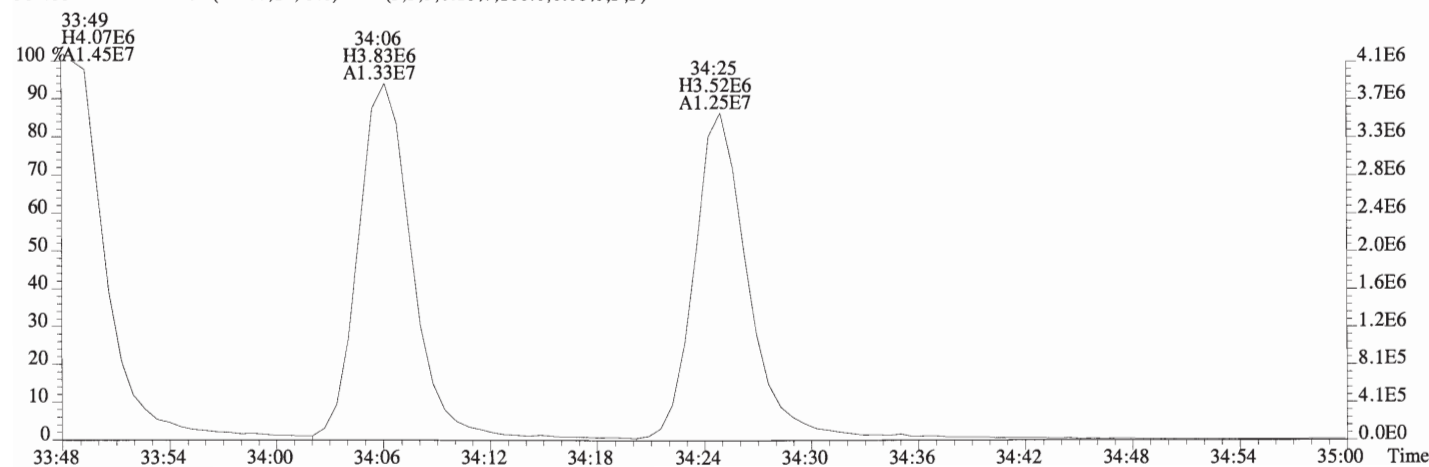
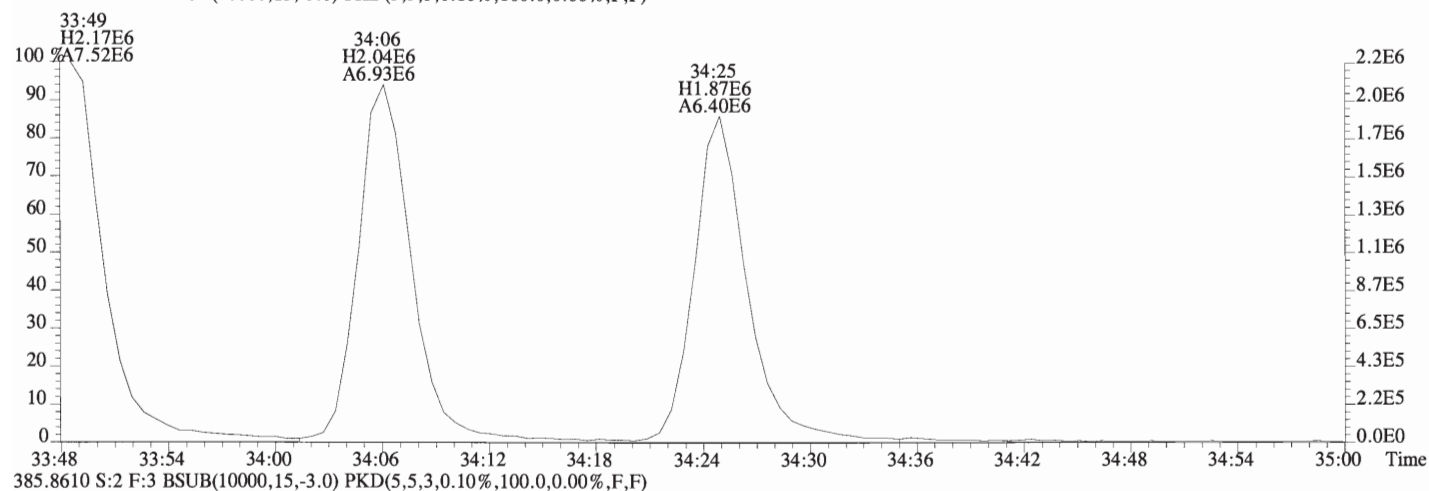
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



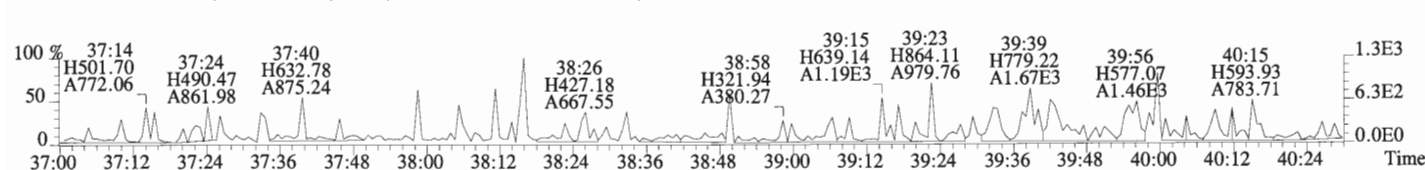
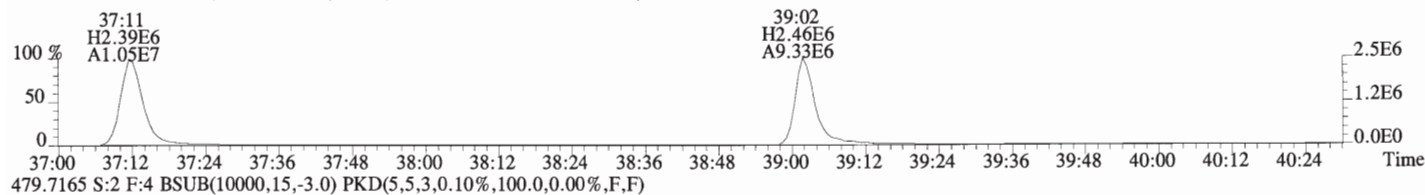
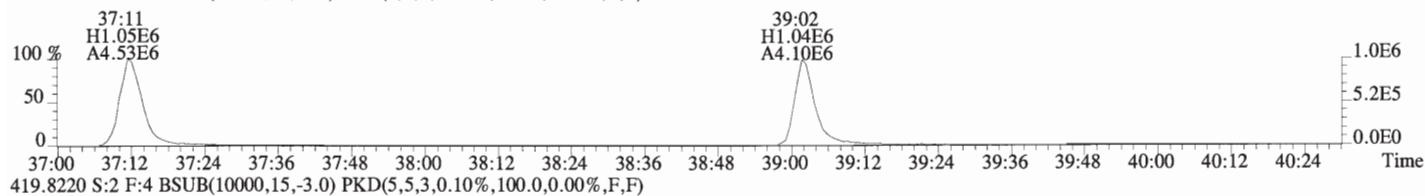
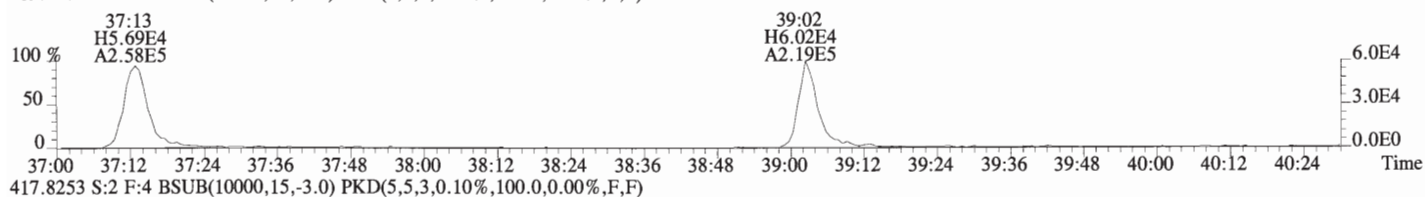
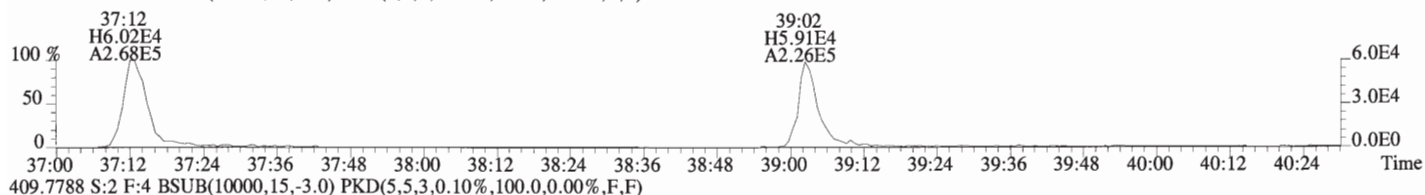
File:160407D1 #1-406 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
 373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



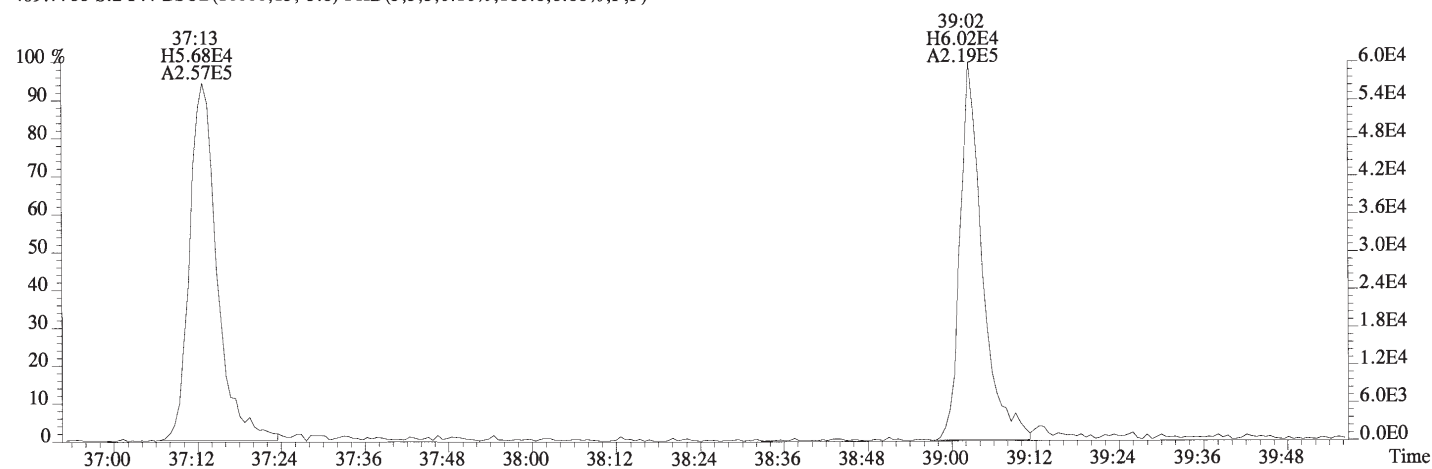
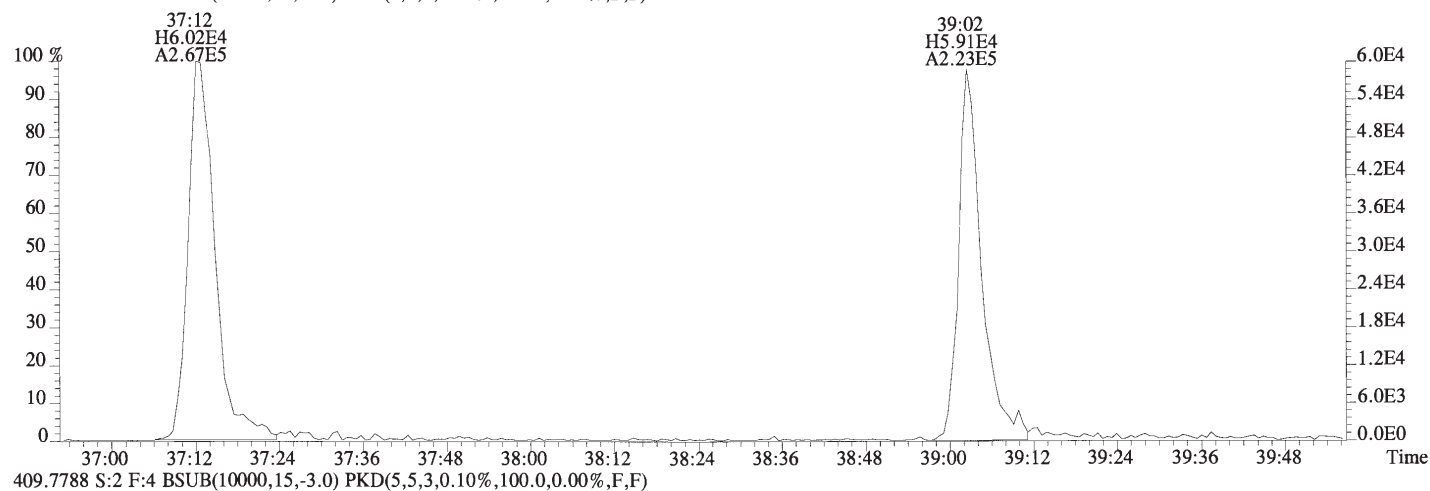
File:160407D1 #1-406 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
 383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



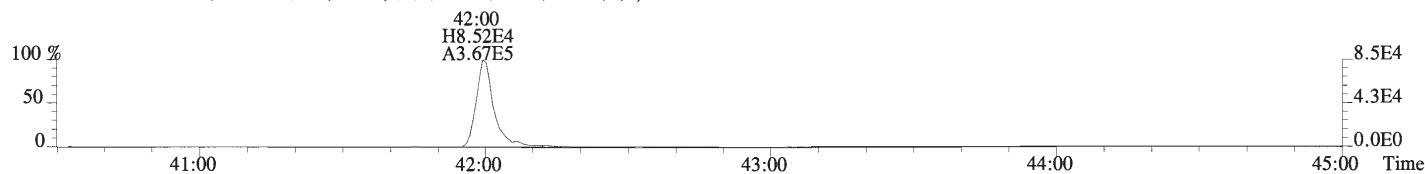
File:160407D1 #1-326 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
 407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



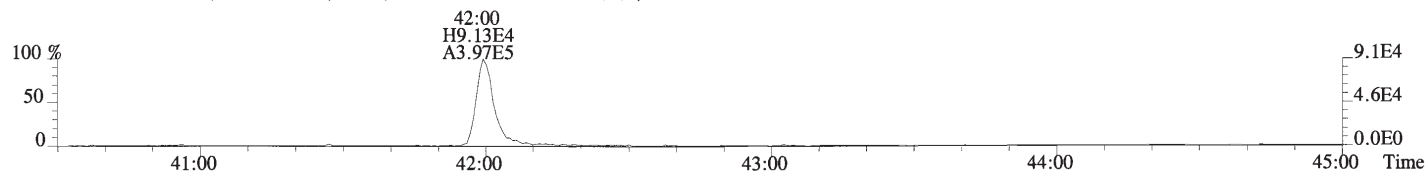
File:160407D1 #1-326 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



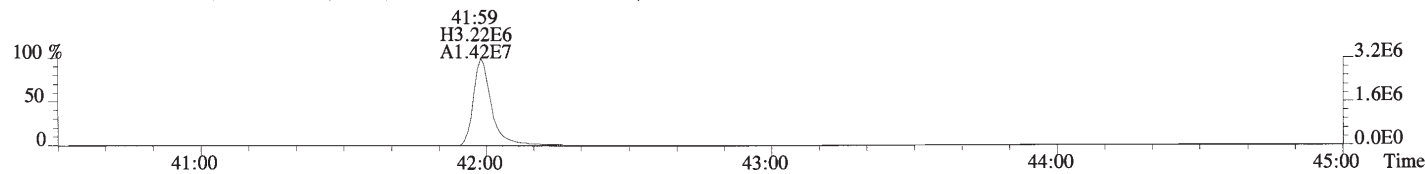
File:160407D1 #1-388 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
 441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



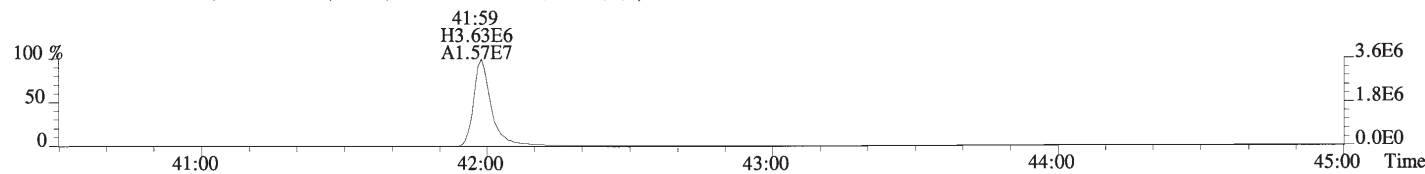
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



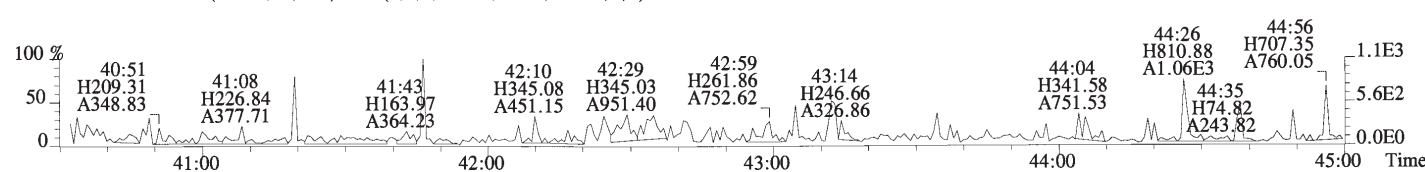
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



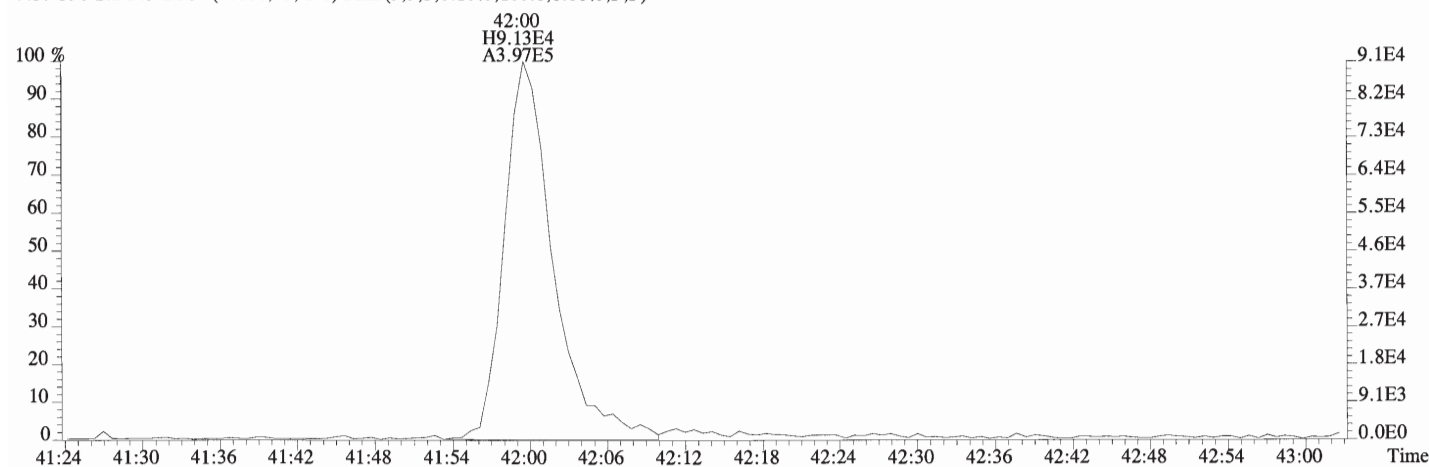
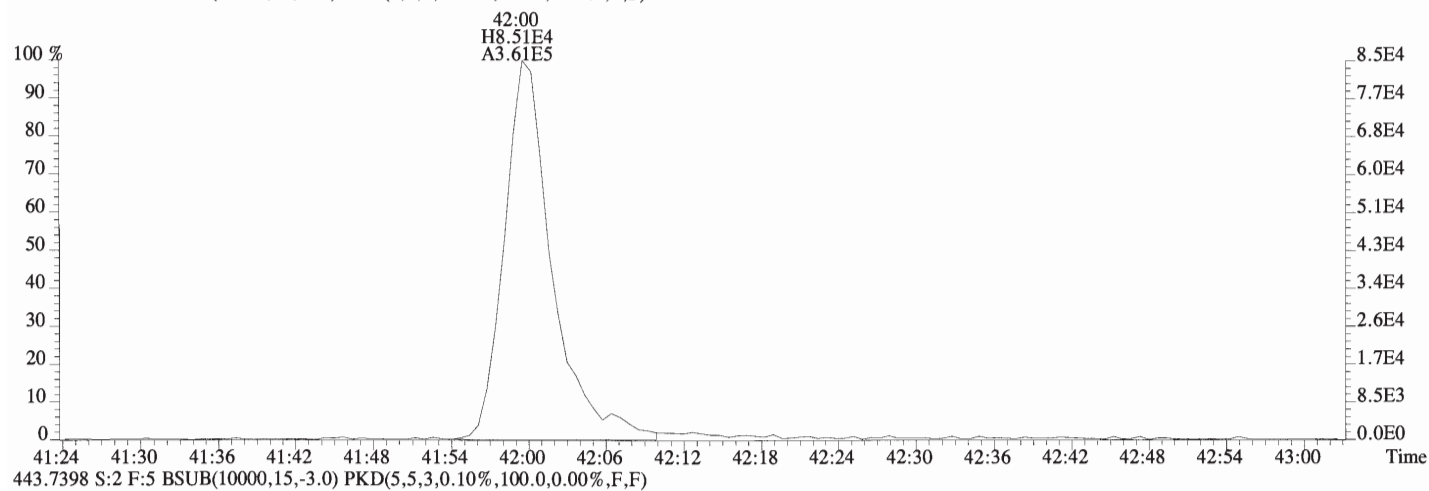
455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



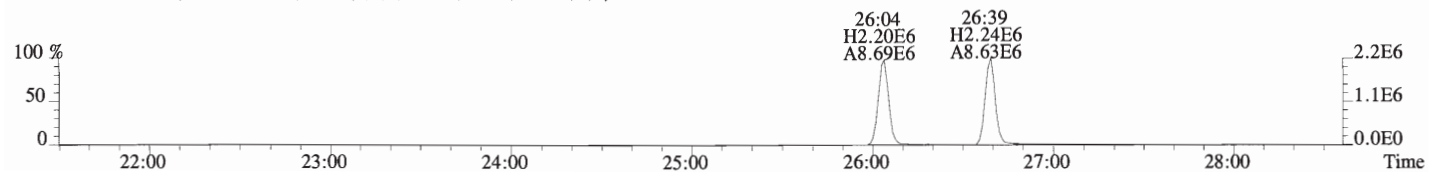
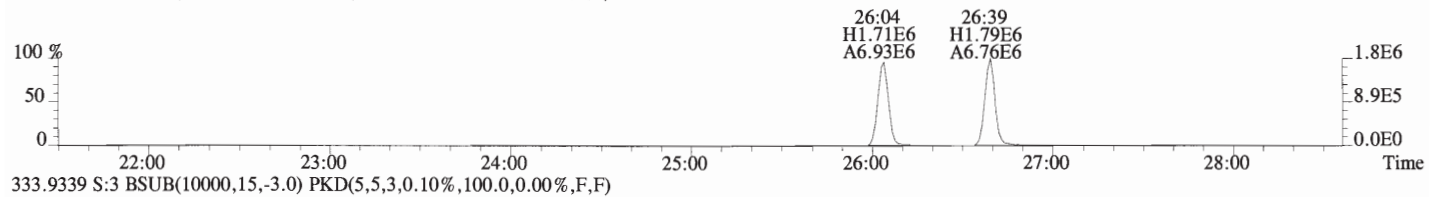
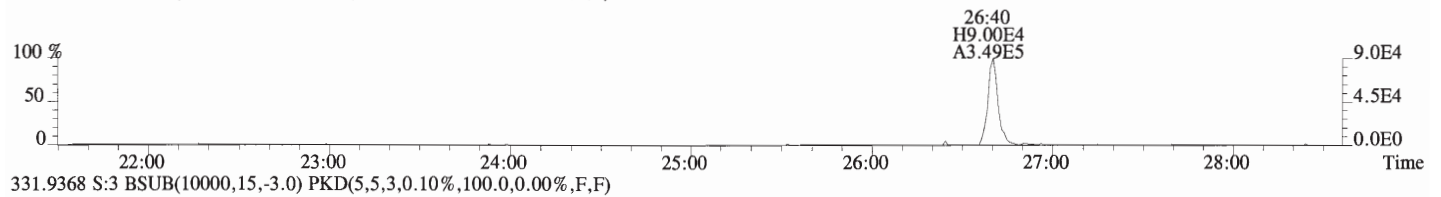
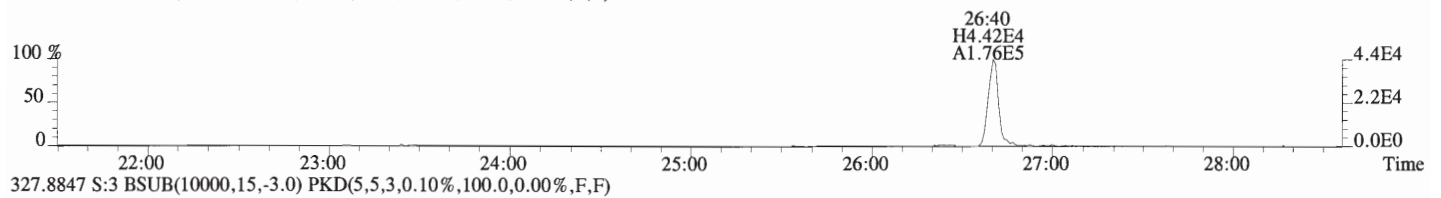
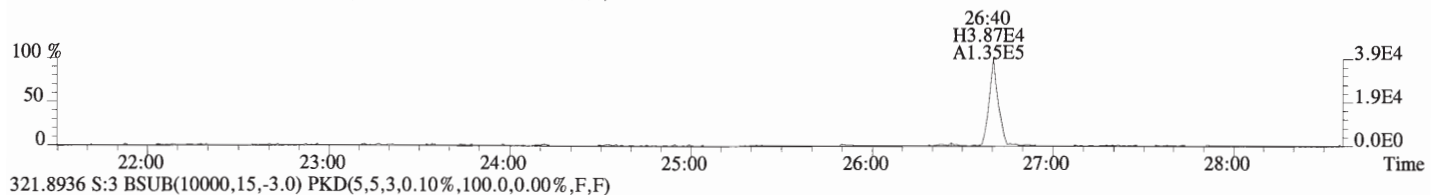
513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



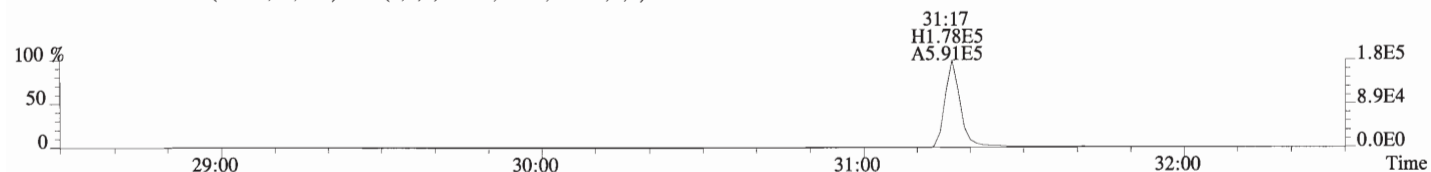
File:160407D1 #1-388 Acq: 7-APR-2016 14:59:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-2 1613 CS1 15J1905 Exp:OCDD_DB5
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



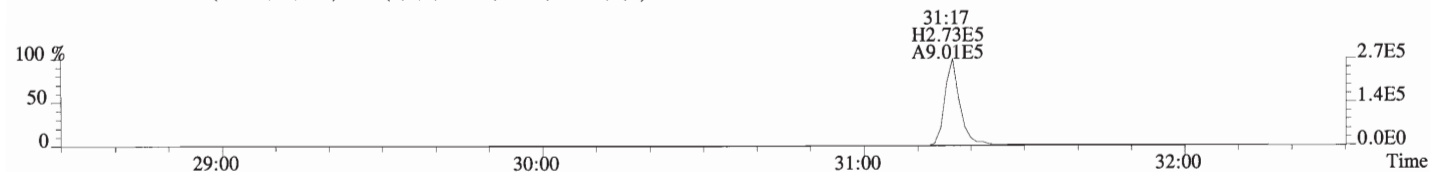
File:160407D1 #1-567 Acq: 7-APR-2016 15:47:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-3 1613 CS2 15J1906 Exp:OCDD_DB5
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



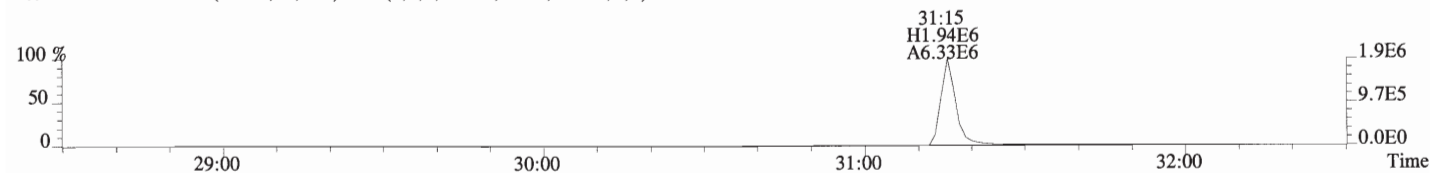
File:160407D1 #1-180 Acq: 7-APR-2016 15:47:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-3 1613 CS2 15J1906 Exp:OCDD_DB5
 353.8576 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



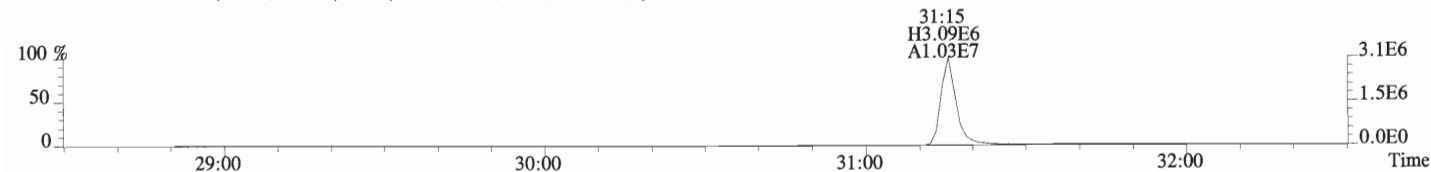
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



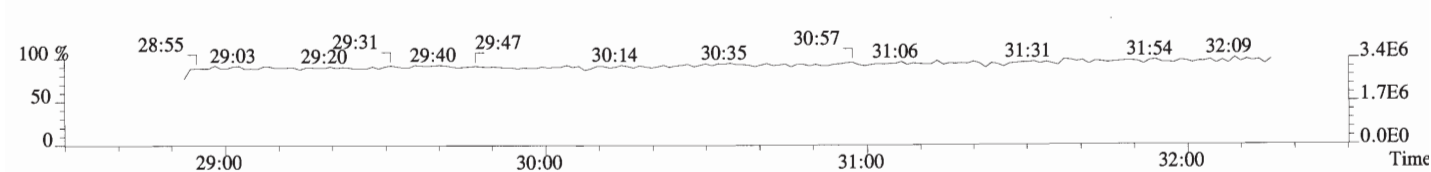
365.8978 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



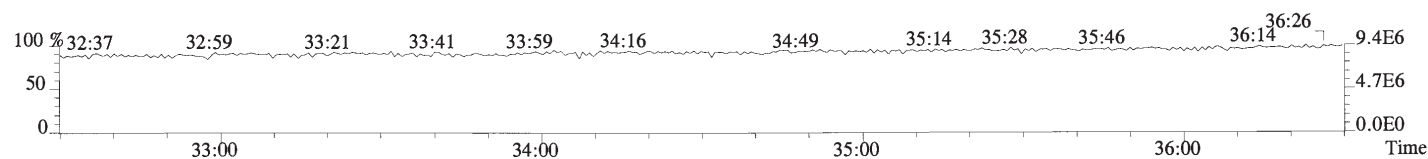
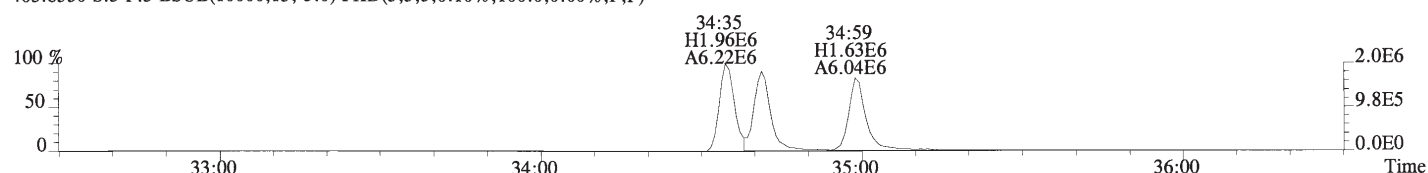
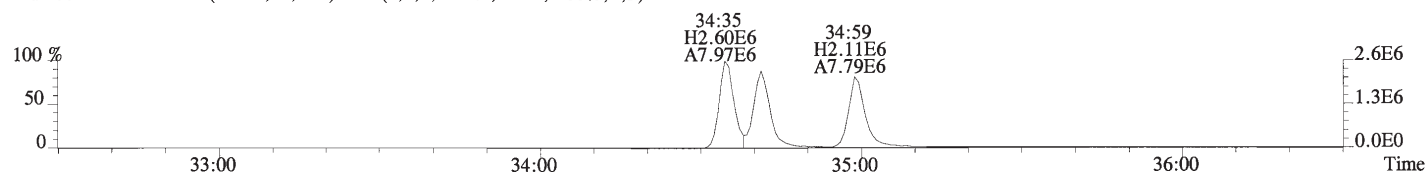
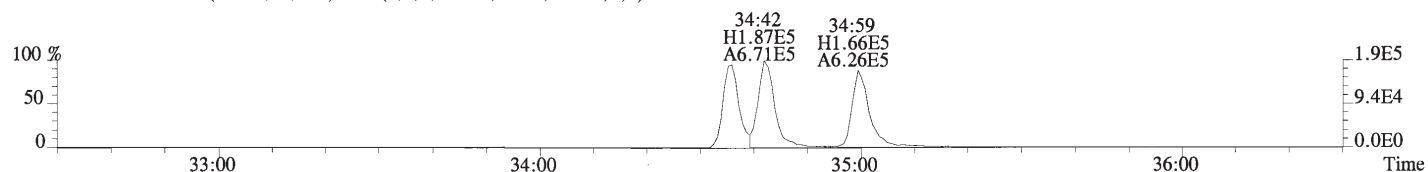
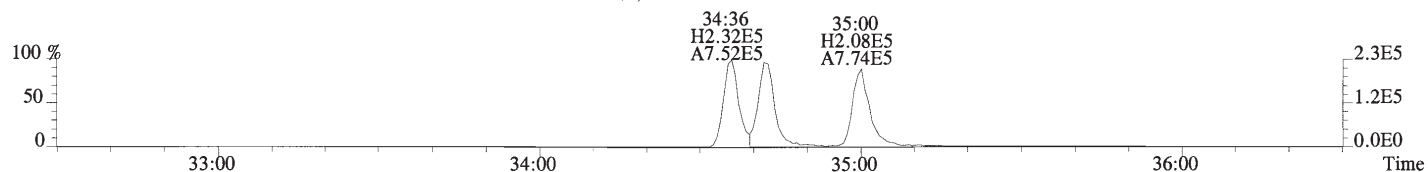
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



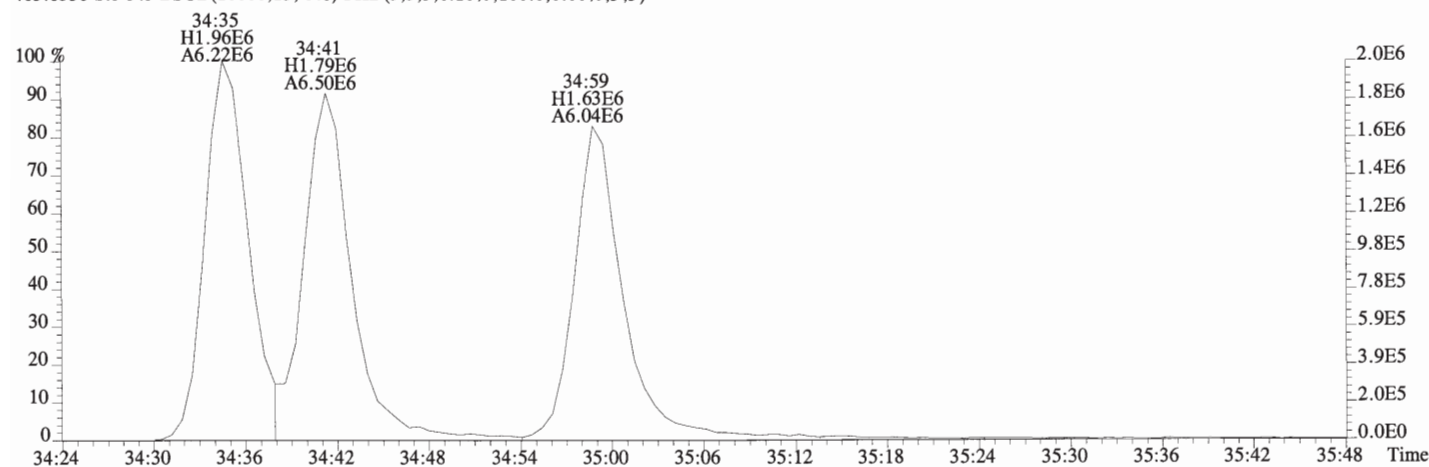
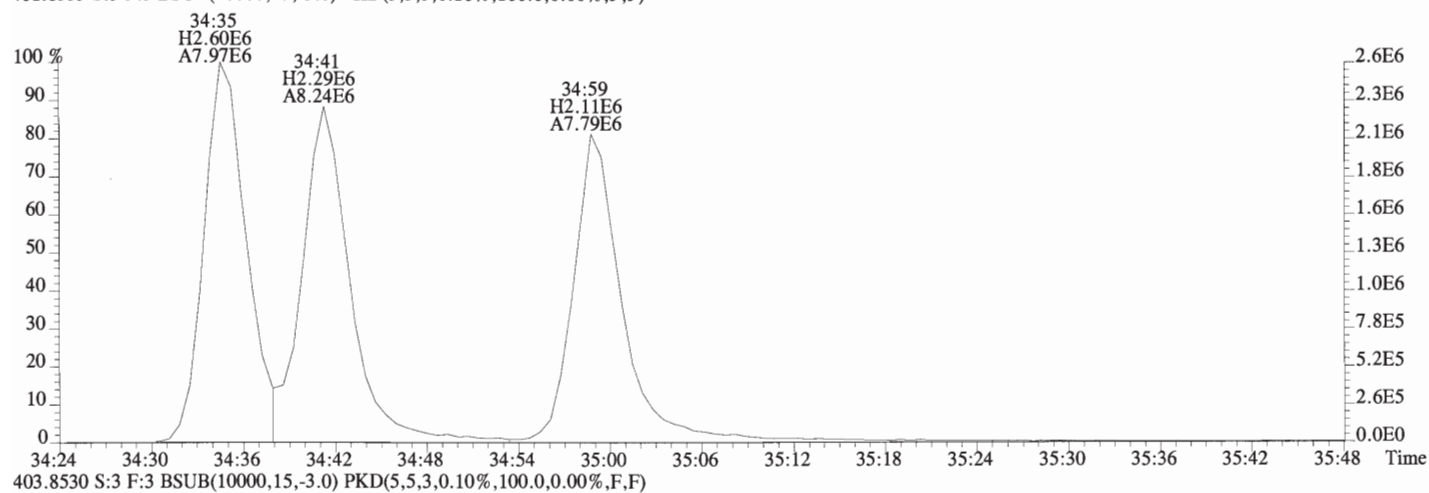
366.9792 S:3 F:2



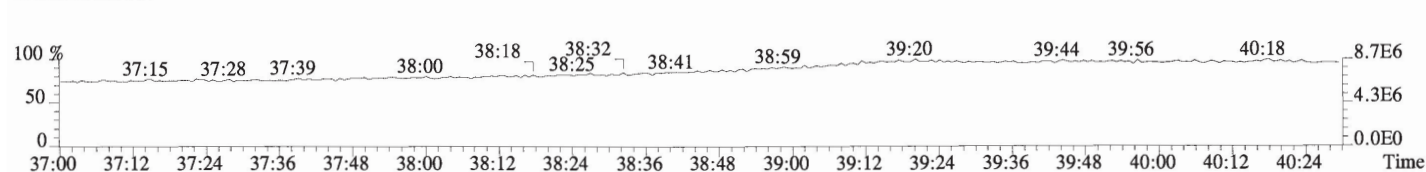
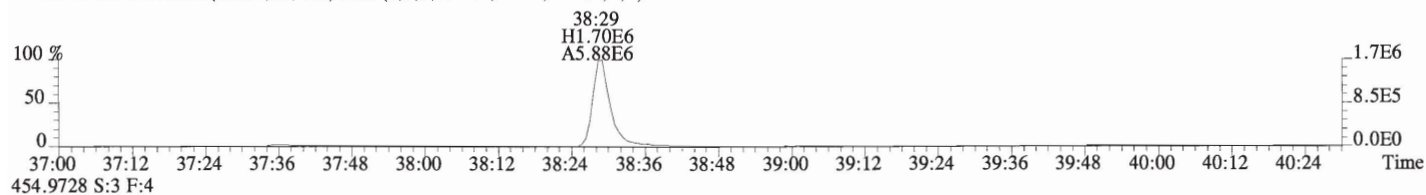
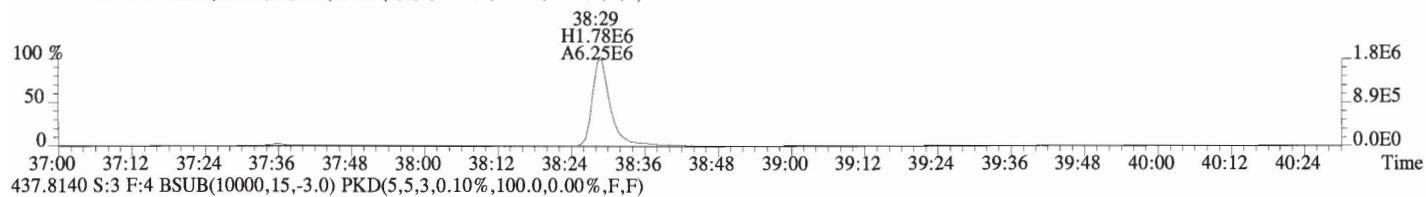
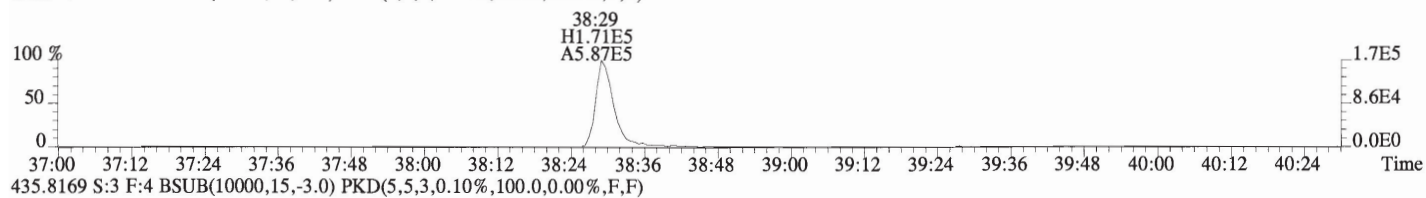
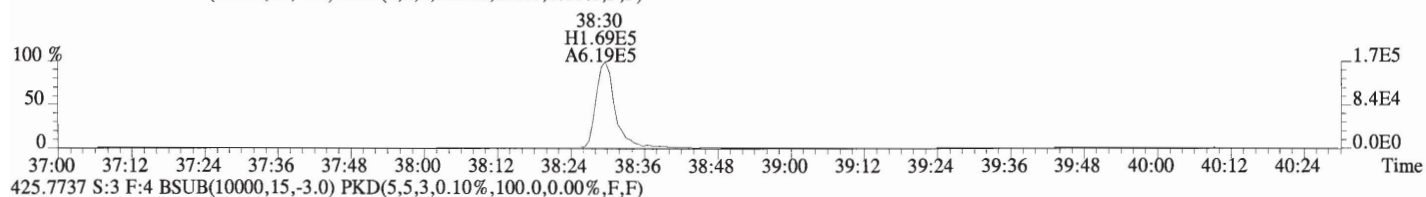
File:160407D1 #1-407 Acq: 7-APR-2016 15:47:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text: Vista Analytical Laboratory VG7 Text:ST160407D1-3 1613 CS2 15J1906 Exp:OCDD_DB5
 389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



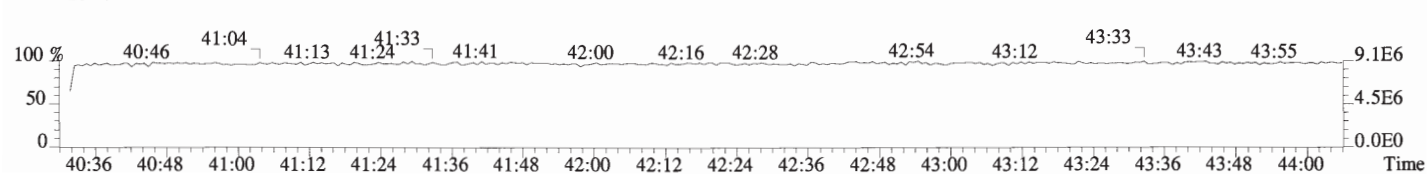
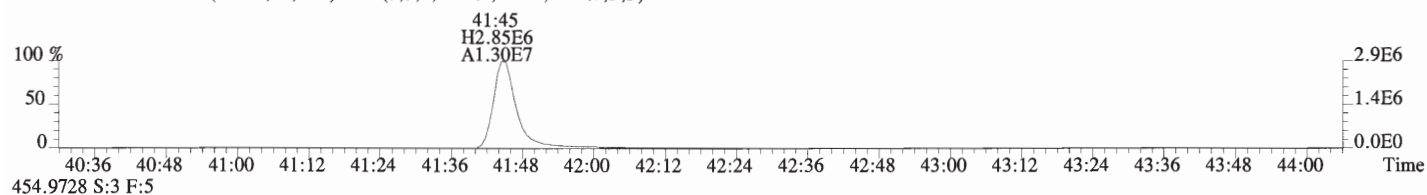
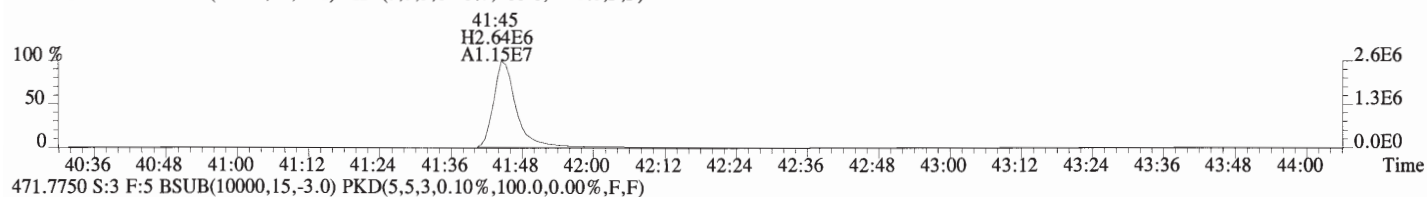
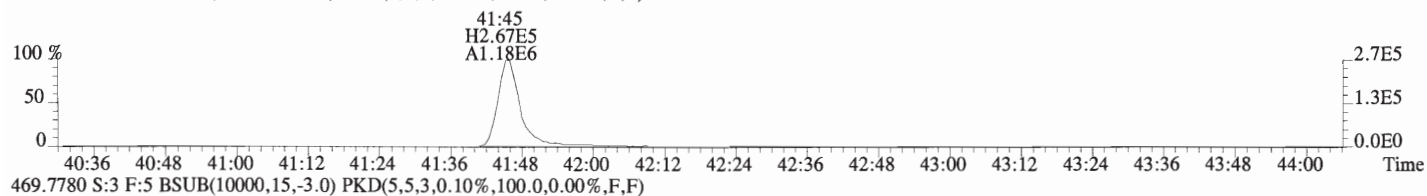
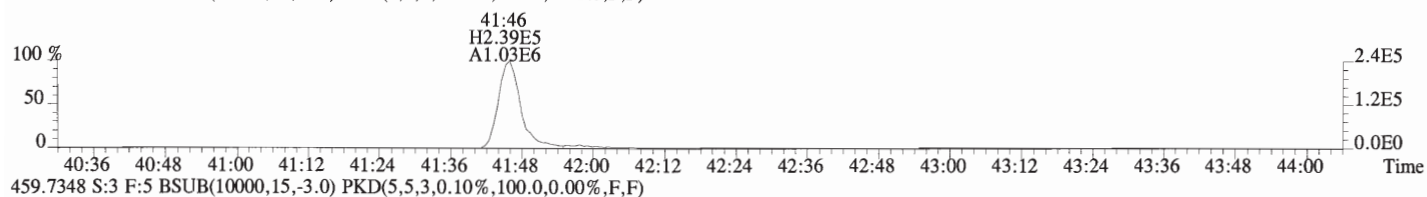
File:160407D1 #1-407 Acq: 7-APR-2016 15:47:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-3 1613 CS2 15J1906 Exp:OCDD_DB5
 401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



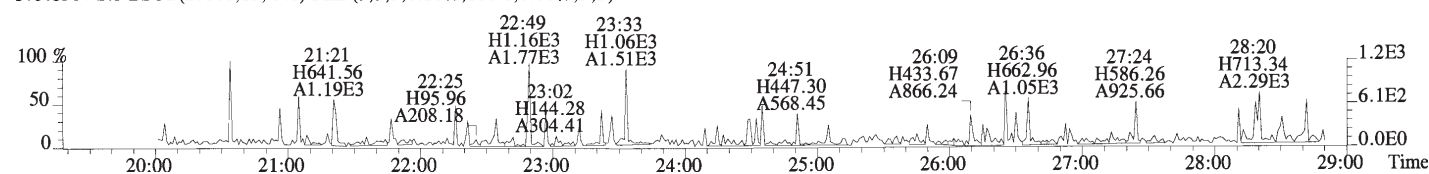
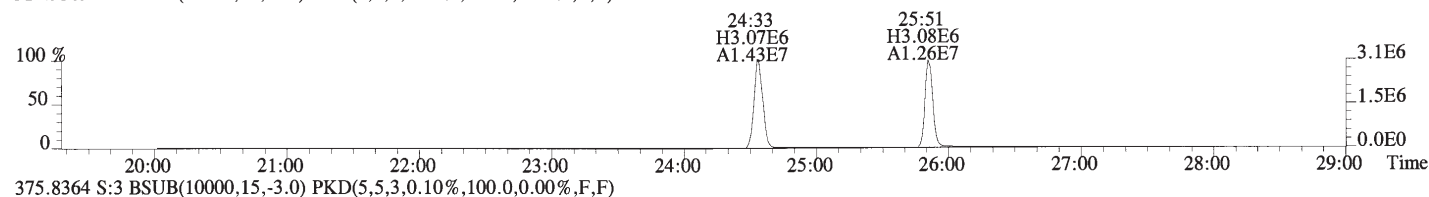
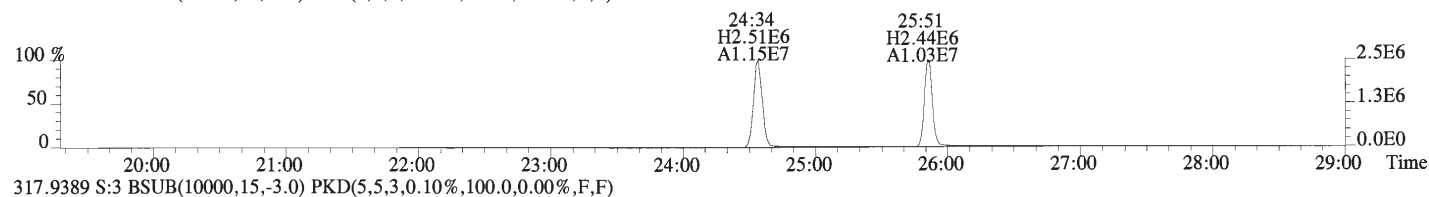
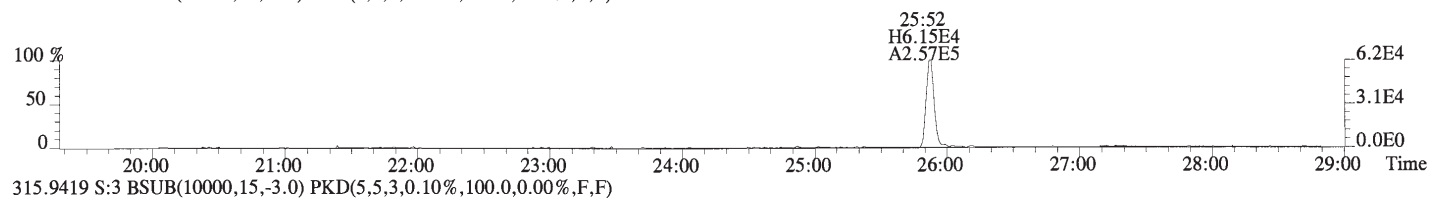
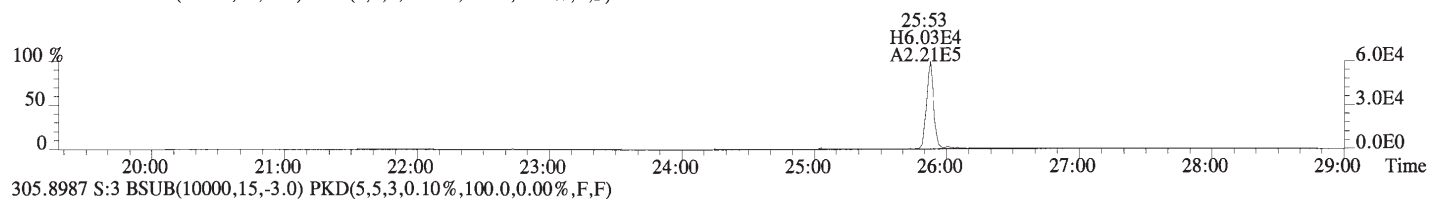
File:160407D1 #1-325 Acq: 7-APR-2016 15:47:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-3 1613 CS2 15J1906 Exp:OCDD_DB5
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



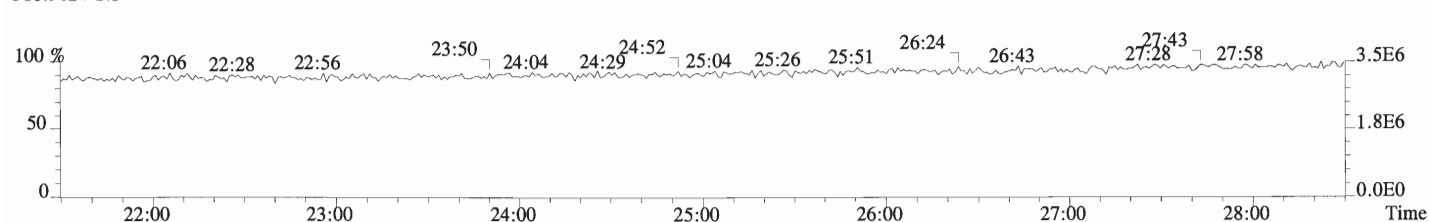
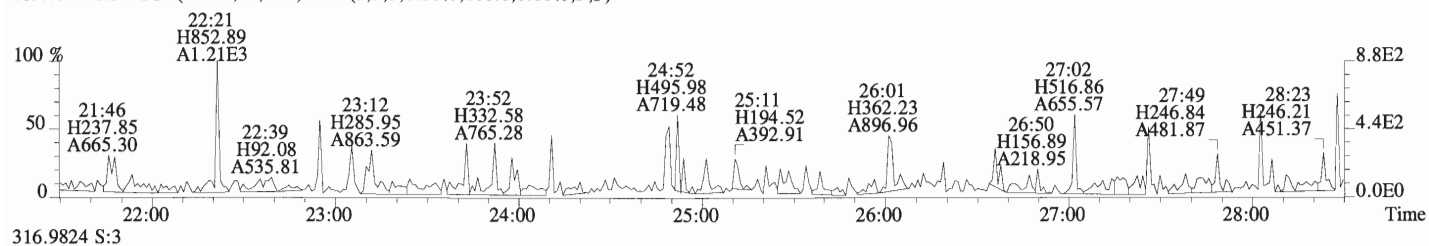
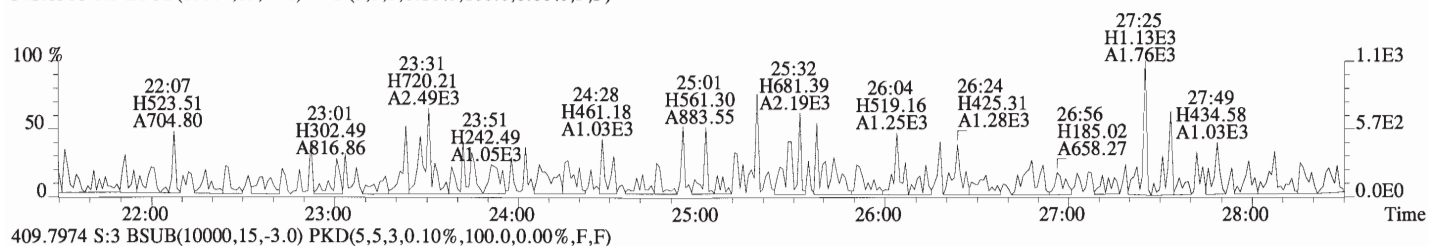
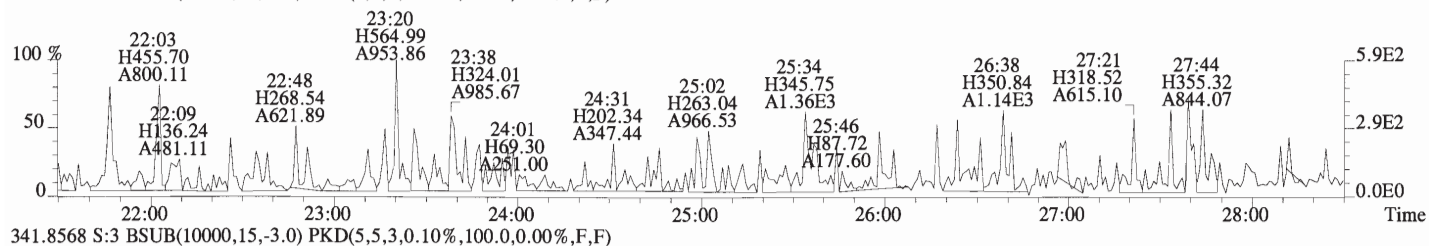
File:160407D1 #1-389 Acq: 7-APR-2016 15:47:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-3 1613 CS2 15J1906 Exp:OCDD_DB5
 457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



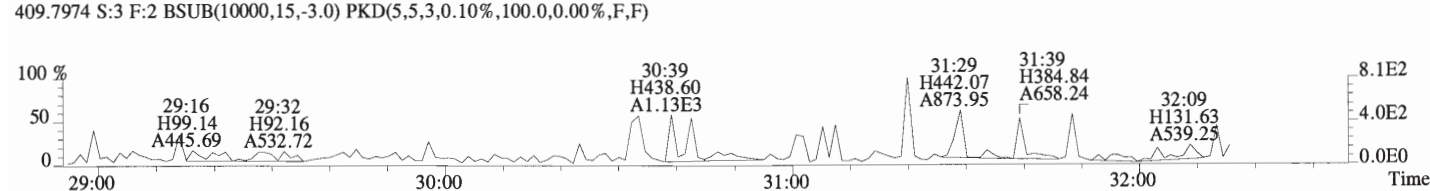
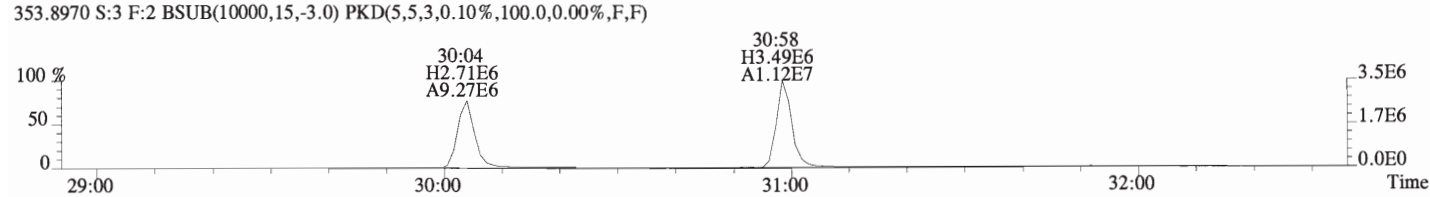
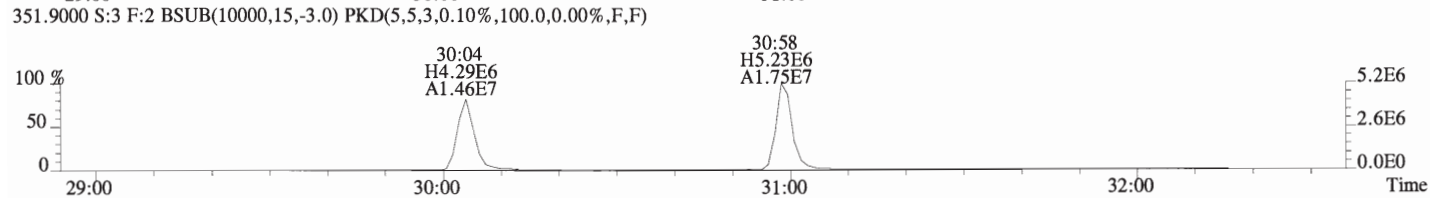
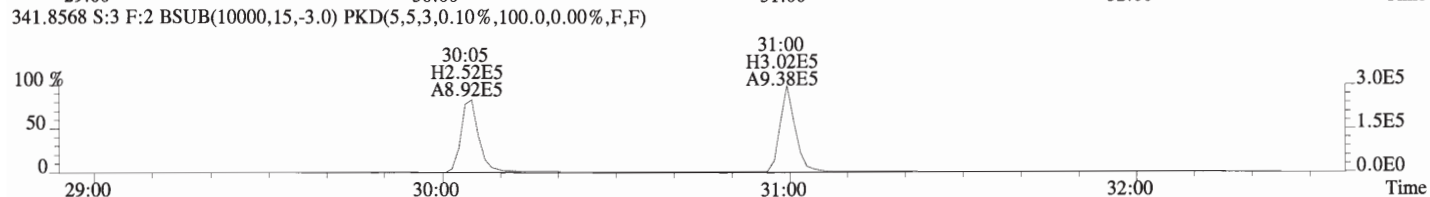
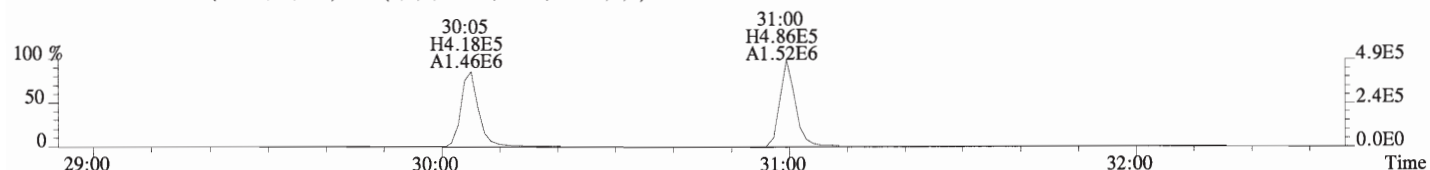
File:160407D1 #1-567 Acq: 7-APR-2016 15:47:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-3 1613 CS2 15J1906 Exp:OCDD_DB5
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



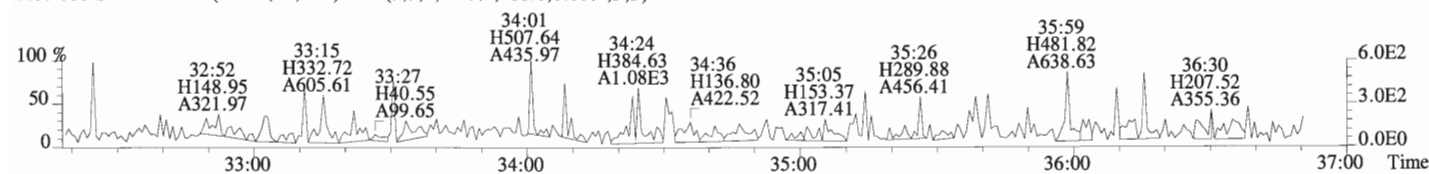
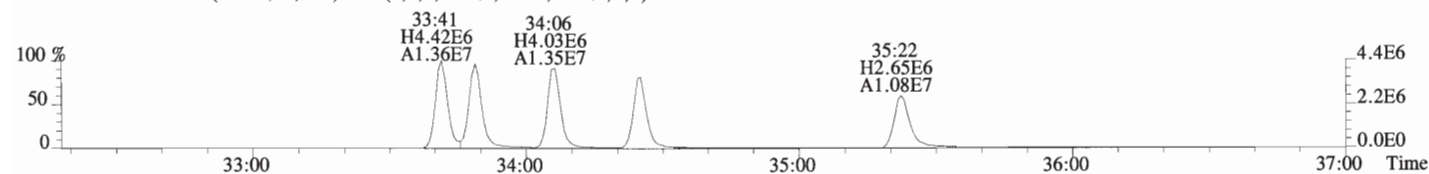
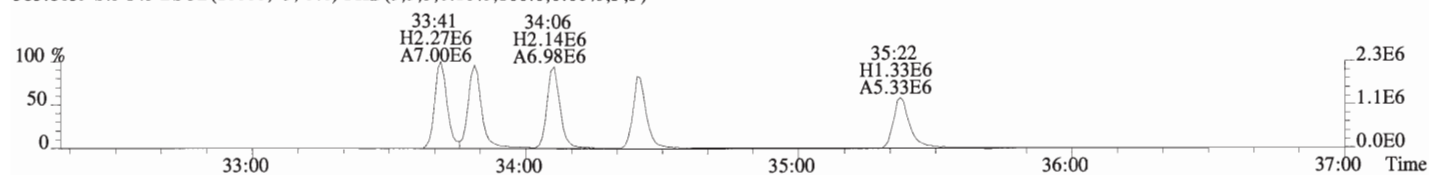
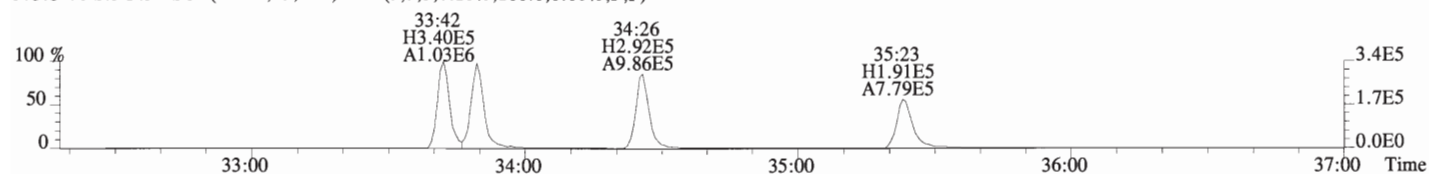
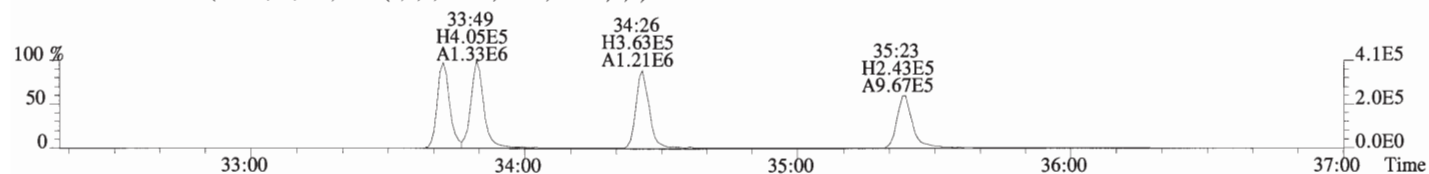
File:160407D1 #1-567 Acq: 7-APR-2016 15:47:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-3 1613 CS2 15J1906 Exp:OCDD_DB5
 339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



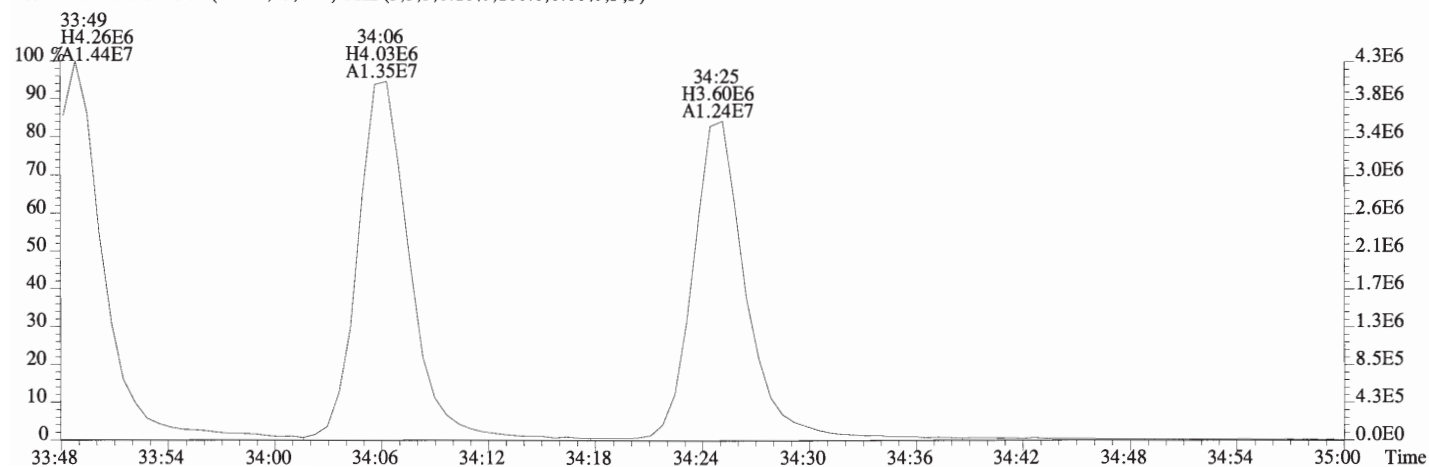
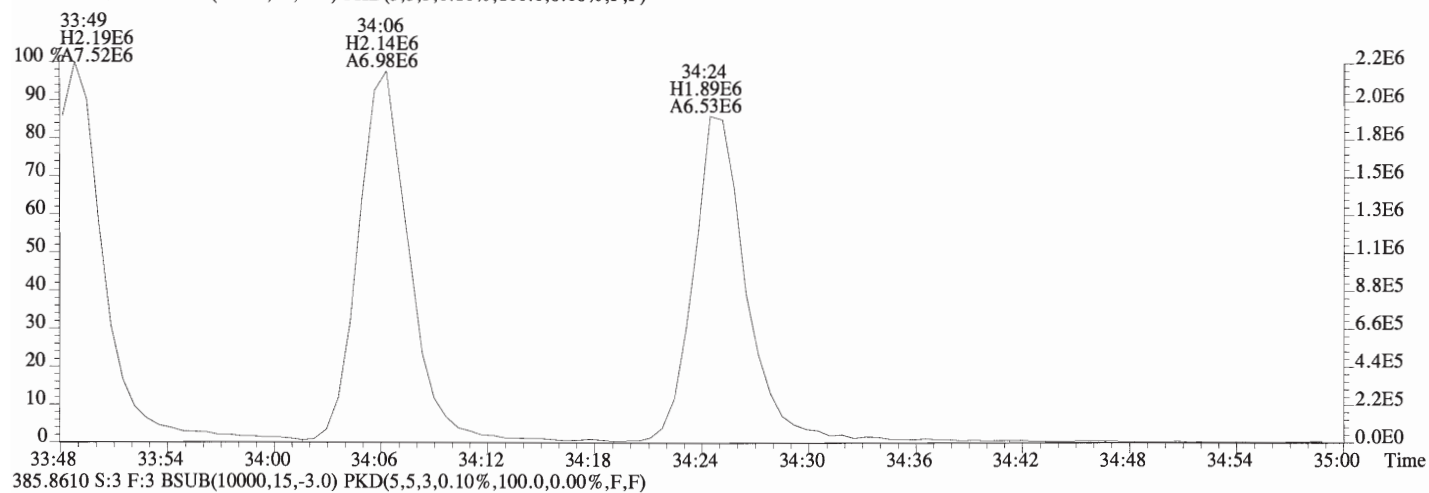
File:160407D1 #1-180 Acq: 7-APR-2016 15:47:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-3 1613 CS2 15J1906 Exp:OCDD_DB5
339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



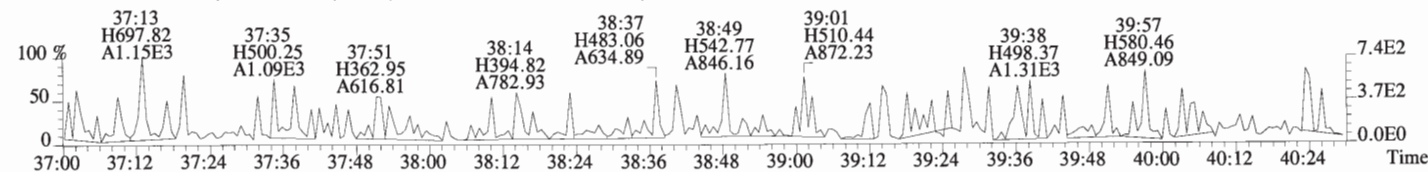
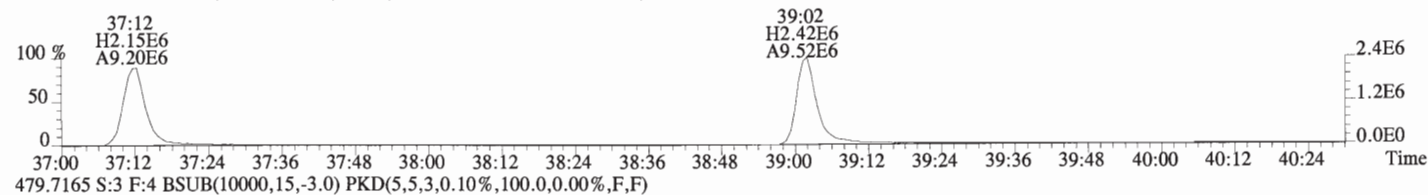
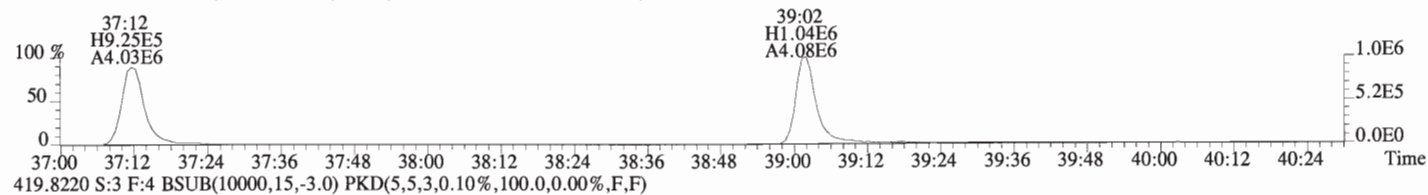
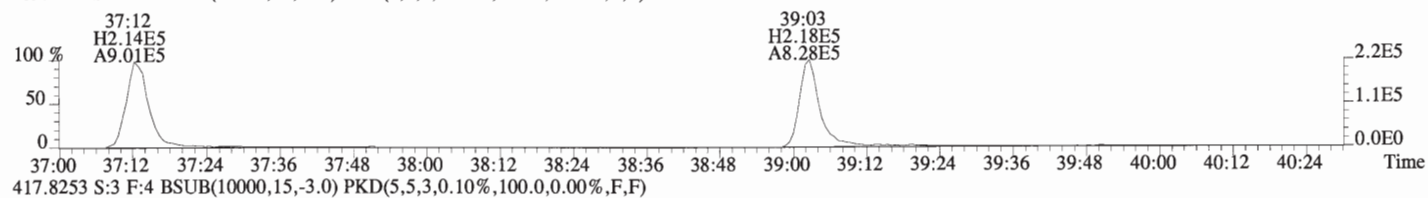
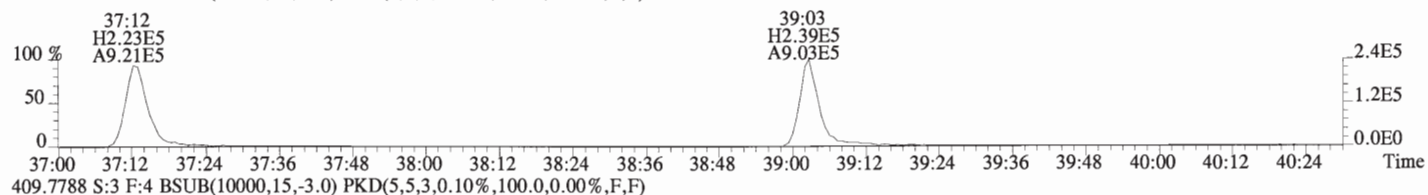
File:160407D1 #1-407 Acq: 7-APR-2016 15:47:38 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-3 1613 CS2 1511906 Exp:OCDD_DB5
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



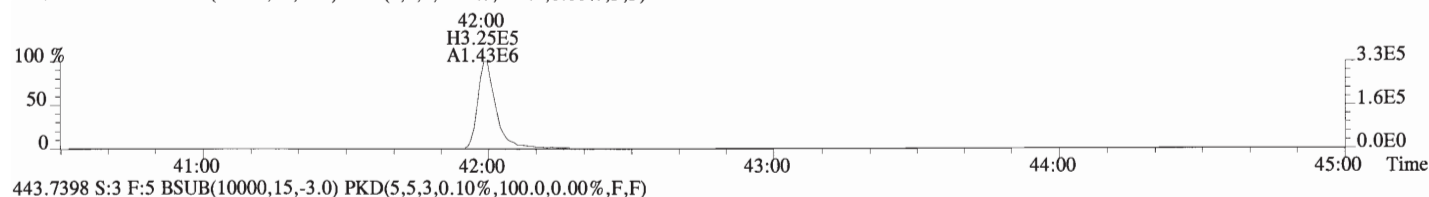
File:160407D1 #1-407 Acq: 7-APR-2016 15:47:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-3 1613 CS2 15J1906 Exp:OCDD_DB5
 383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



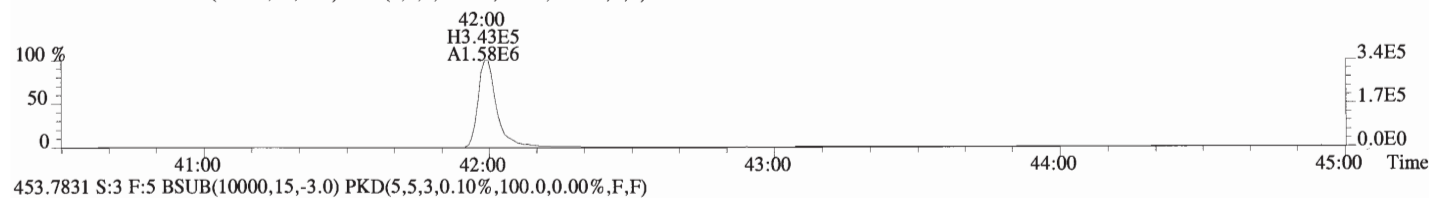
File:160407D1 #1-325 Acq: 7-APR-2016 15:47:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-3 1613 CS2 15J1906 Exp:OCDD_DB5
 407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



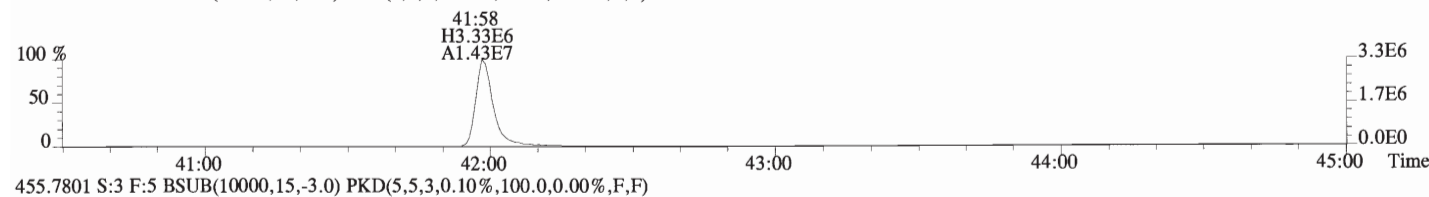
File:160407D1 #1-389 Acq: 7-APR-2016 15:47:38 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-3 1613 CS2 15J1906 Exp:OCDD_DB5
 441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



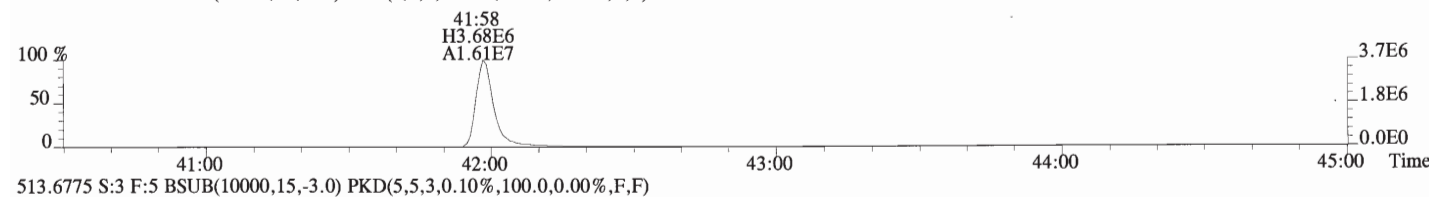
443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



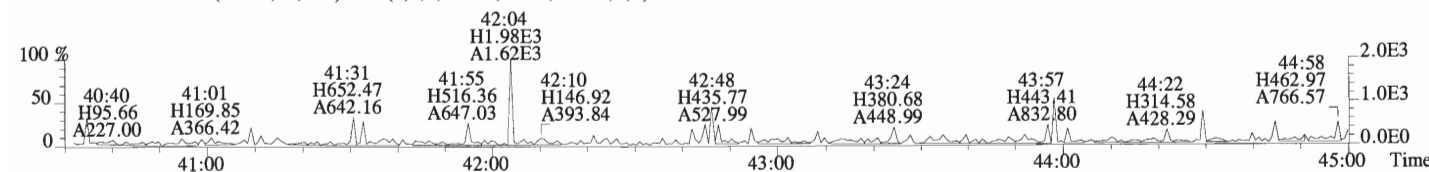
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



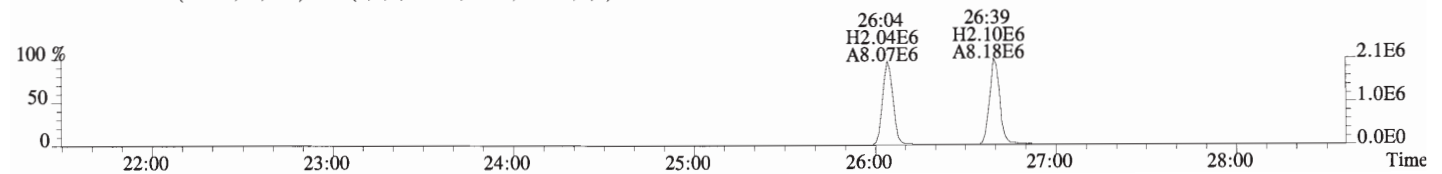
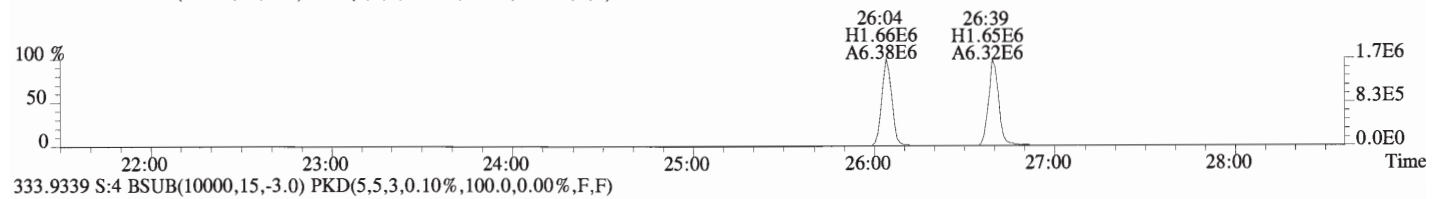
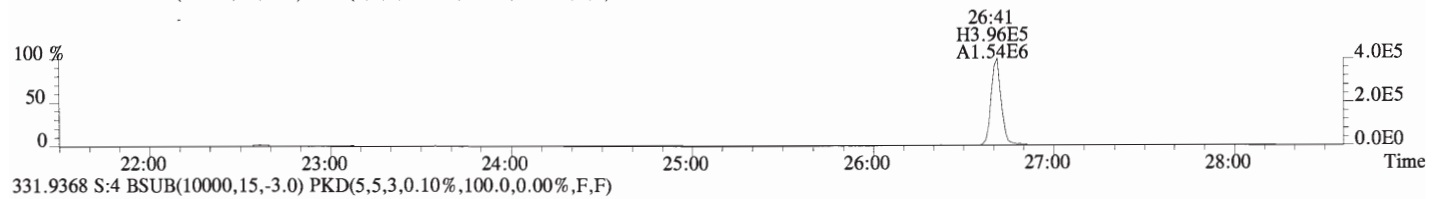
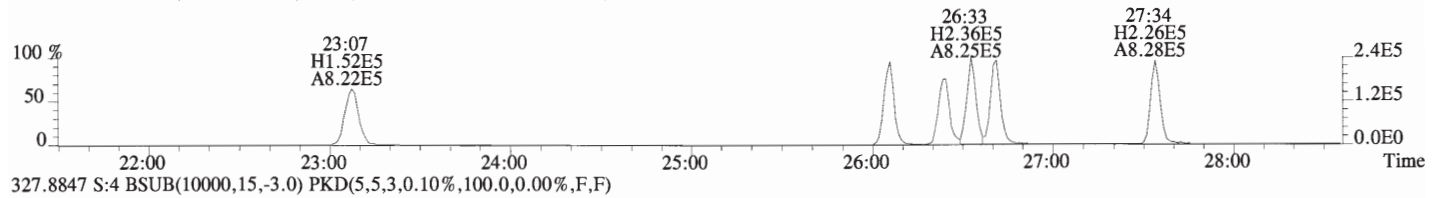
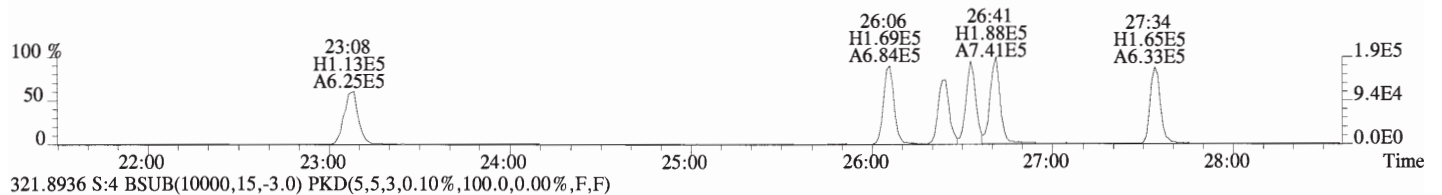
455.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



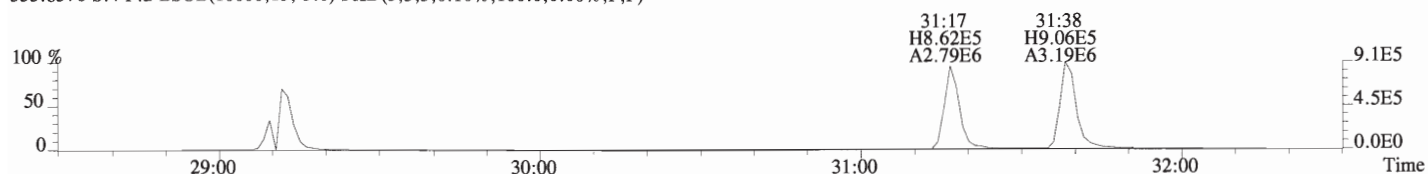
513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



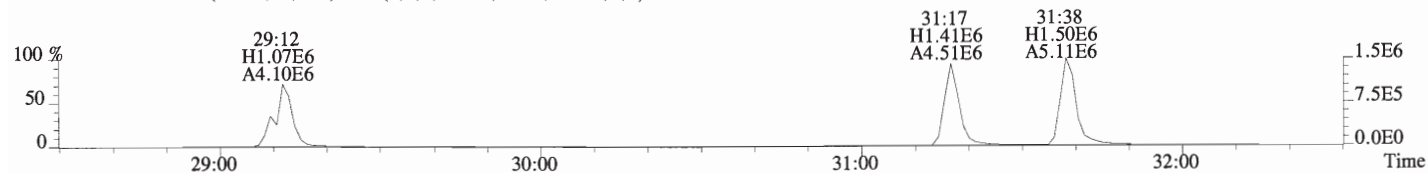
File:160407D1 #1-567 Acq: 7-APR-2016 16:35:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-4 1613 CS3 16C3101 Exp:OCDD_DB5
 319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



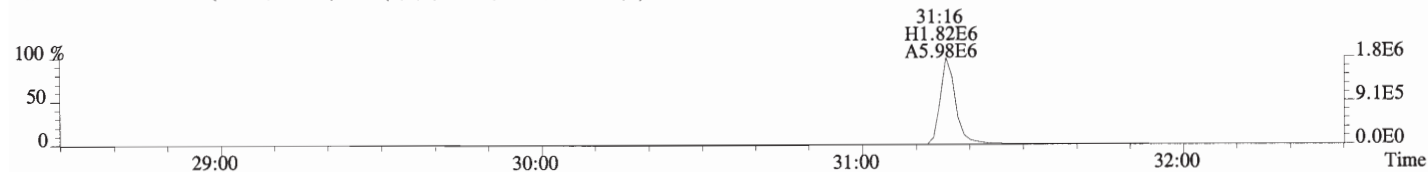
File:160407D1 #1-180 Acq: 7-APR-2016 16:35:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-4 1613 CS3 16C3101 Exp:OCDD_DB5
 353.8576 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



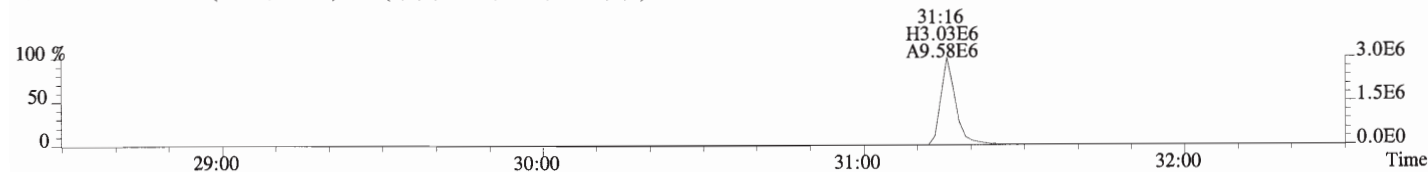
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



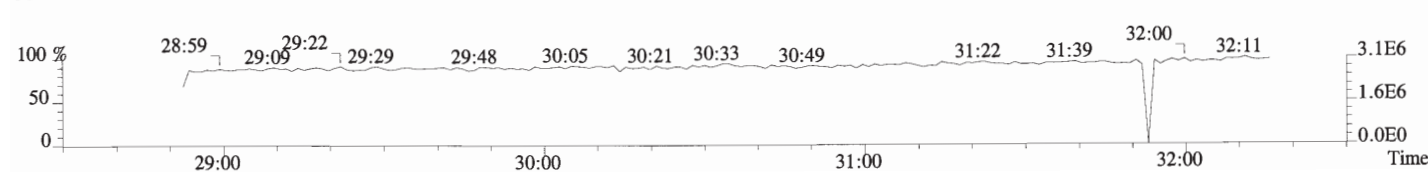
365.8978 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



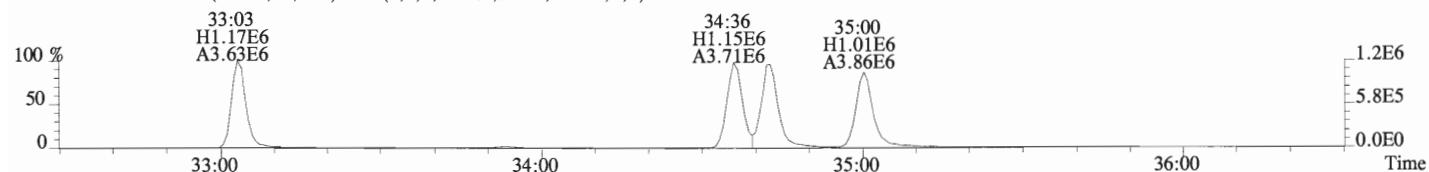
367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



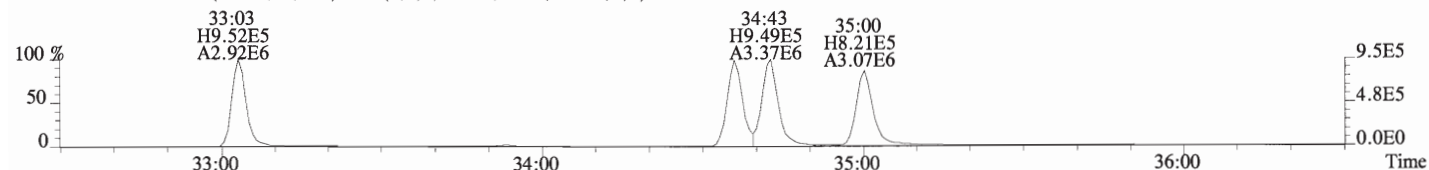
366.9792 S:4 F:2



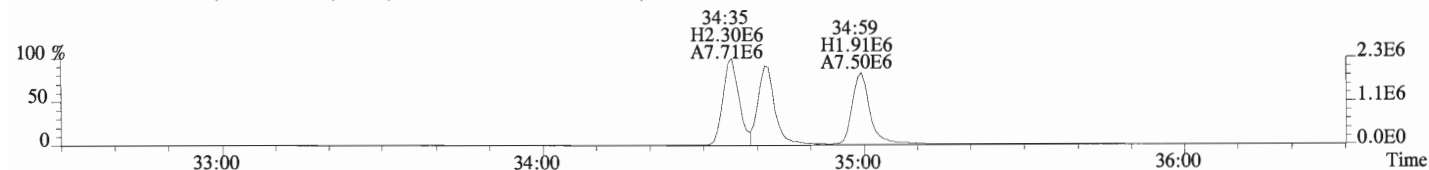
File:160407D1 #1-407 Acq: 7-APR-2016 16:35:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-4 1613 CS3 16C3101 Exp:OCDD_DB5
 389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



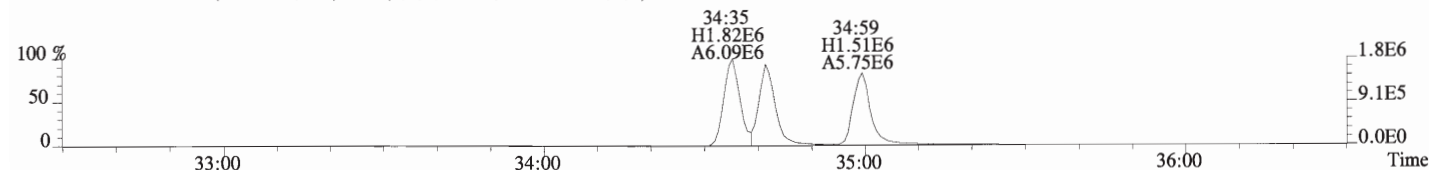
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



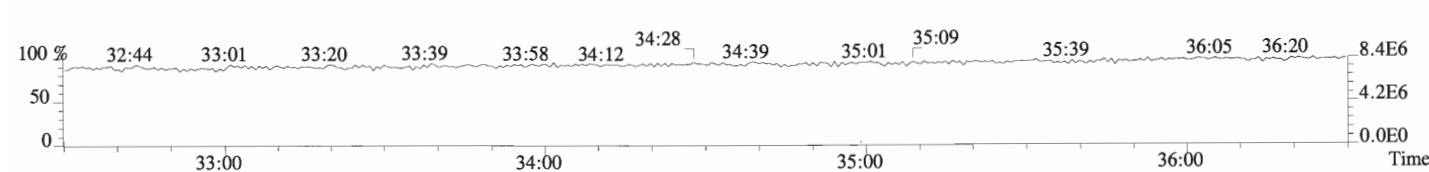
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



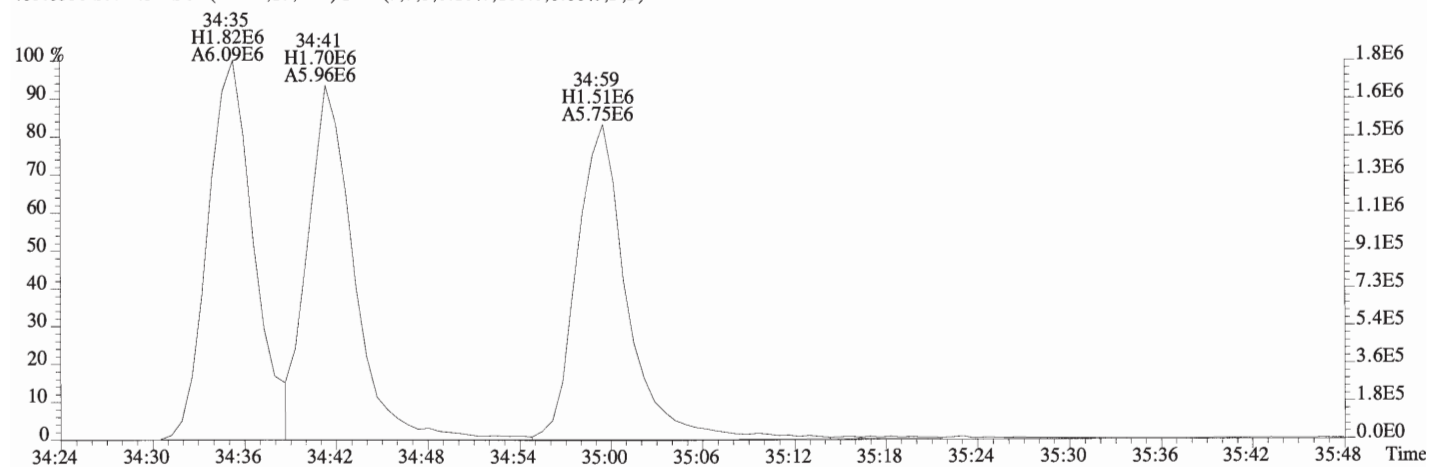
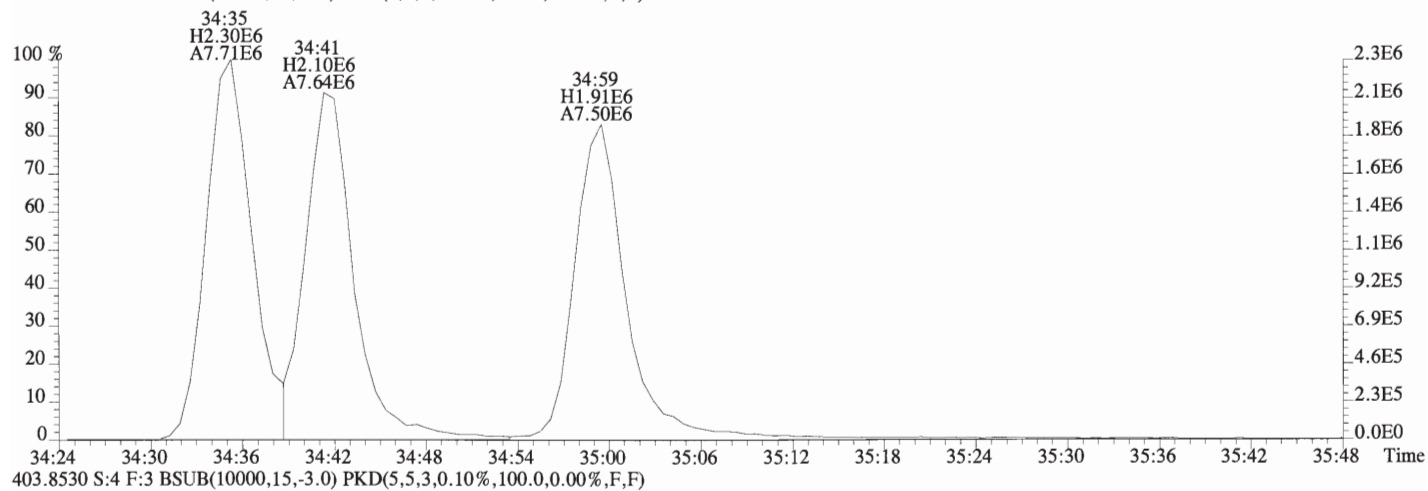
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



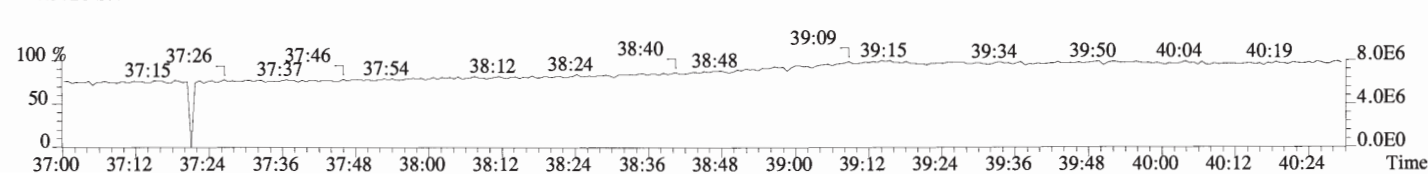
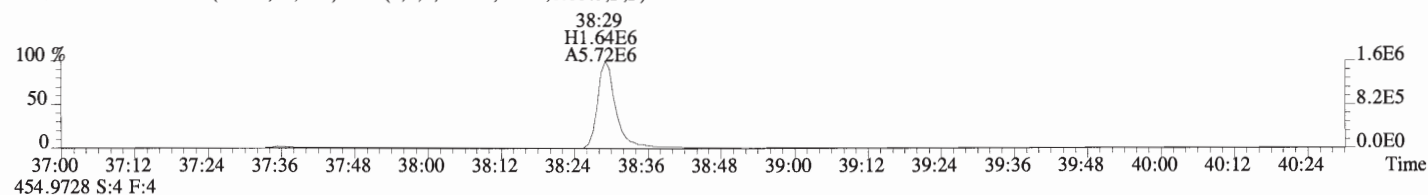
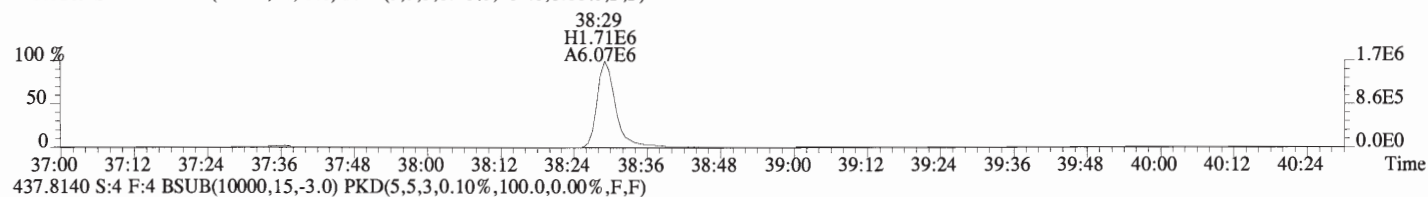
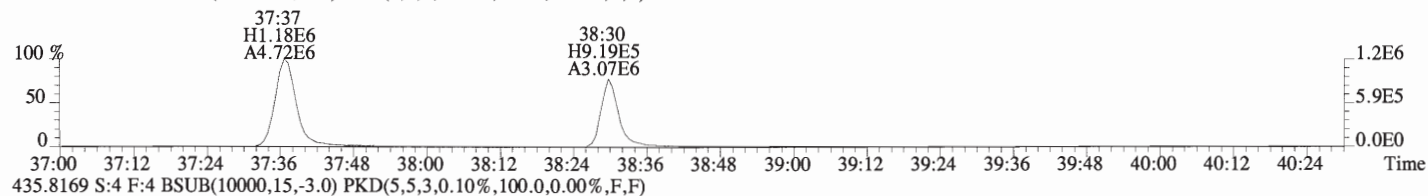
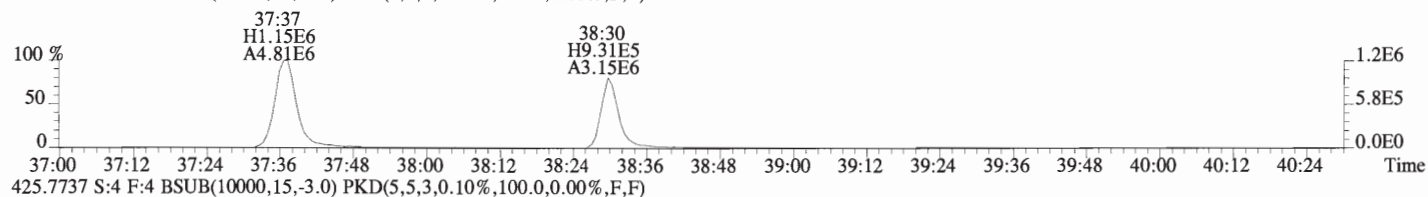
392.9760 S:4 F:3



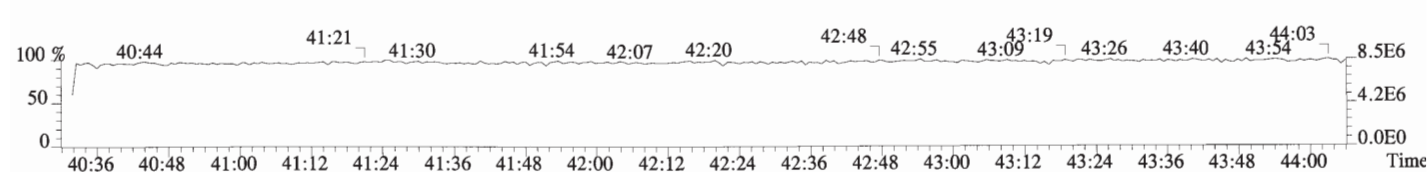
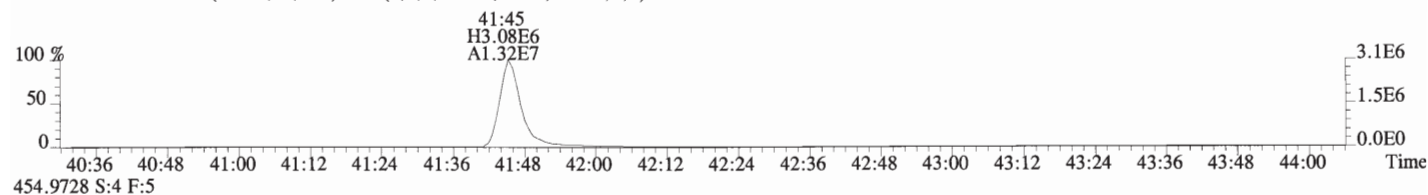
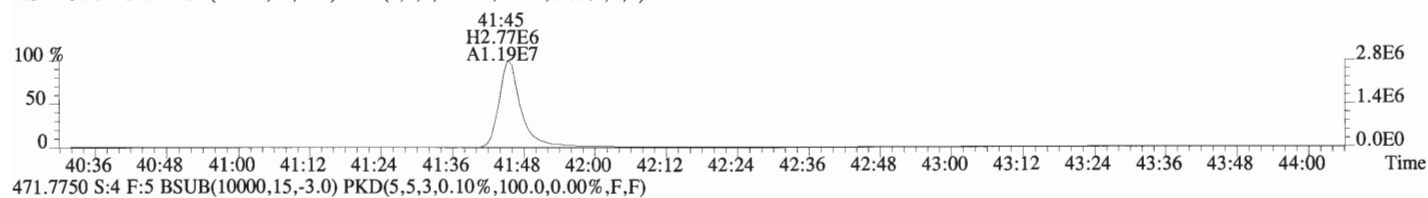
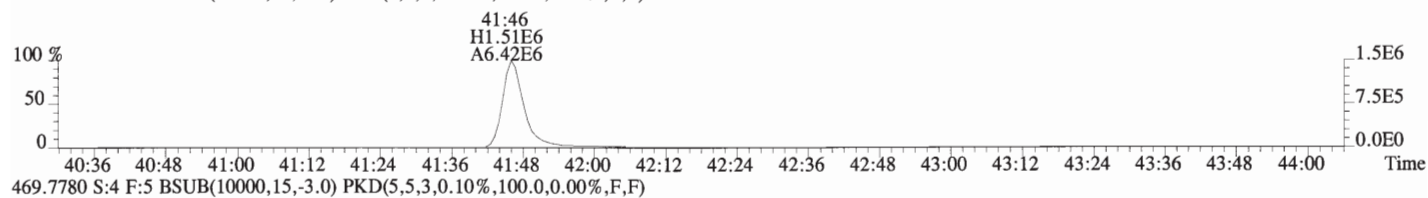
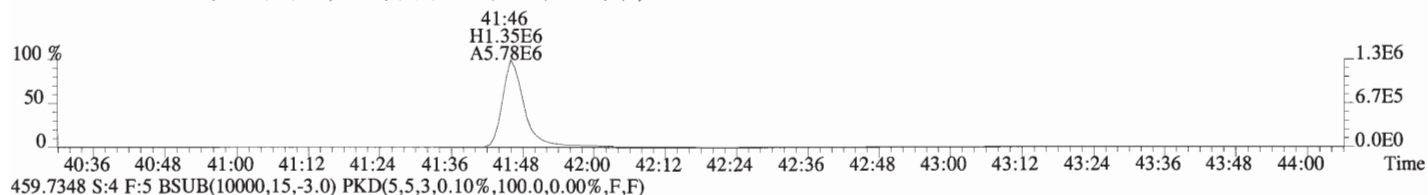
File:160407D1 #1-407 Acq: 7-APR-2016 16:35:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-4 1613 CS3 16C3101 Exp:OCDD_DB5
 401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



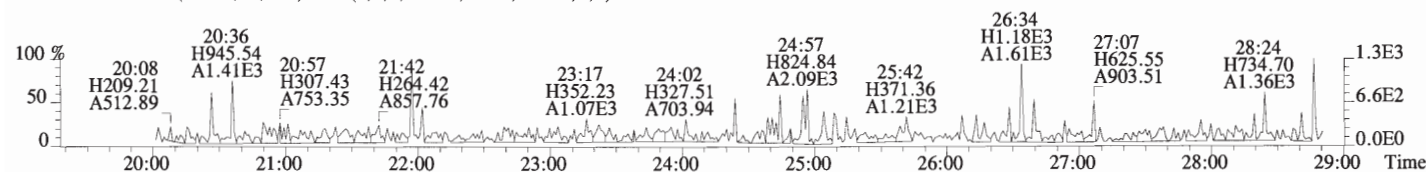
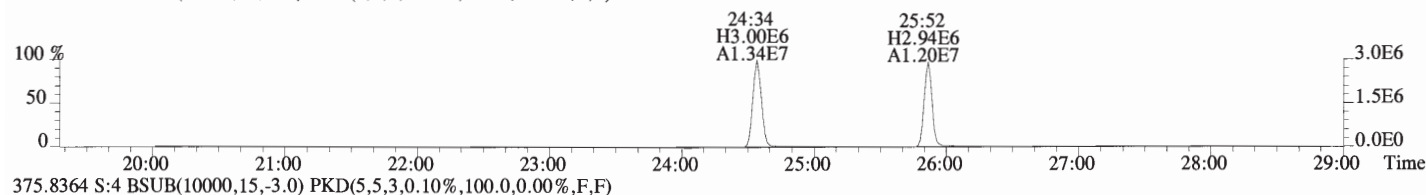
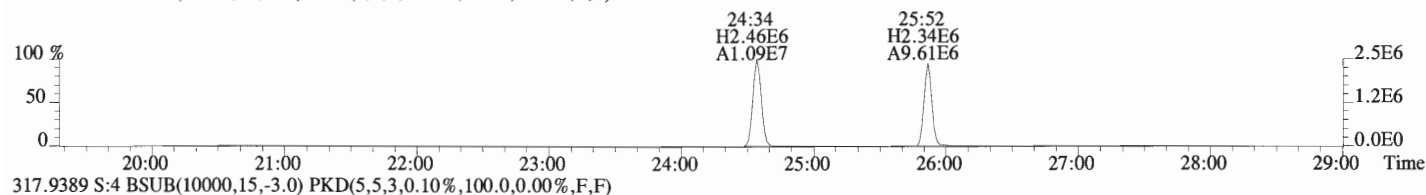
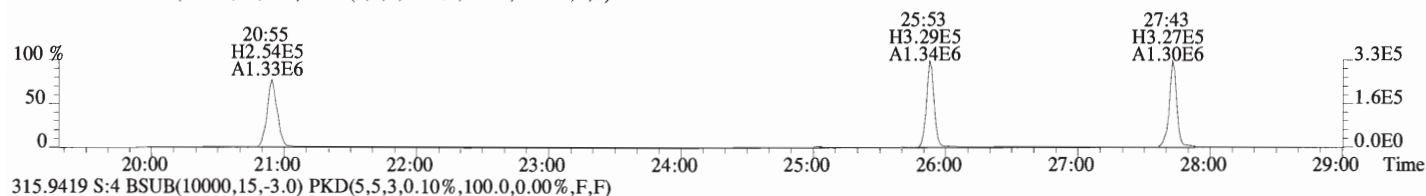
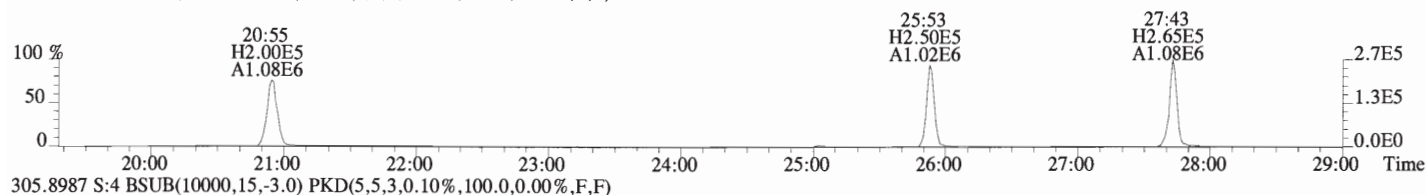
File:160407D1 #1-325 Acq: 7-APR-2016 16:35:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-4 1613 CS3 16C3101 Exp:OCDD_DB5
 423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



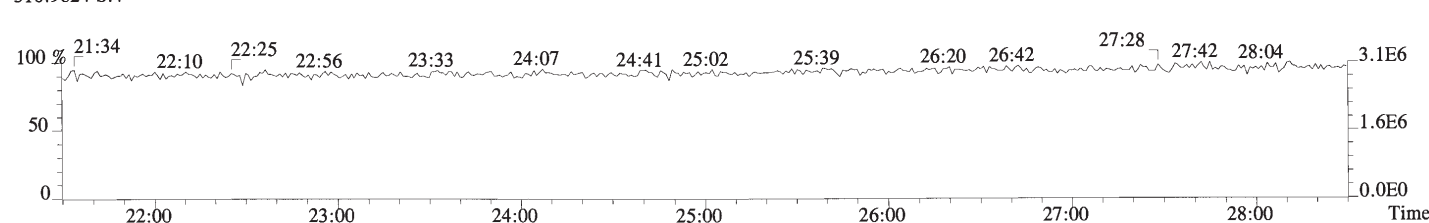
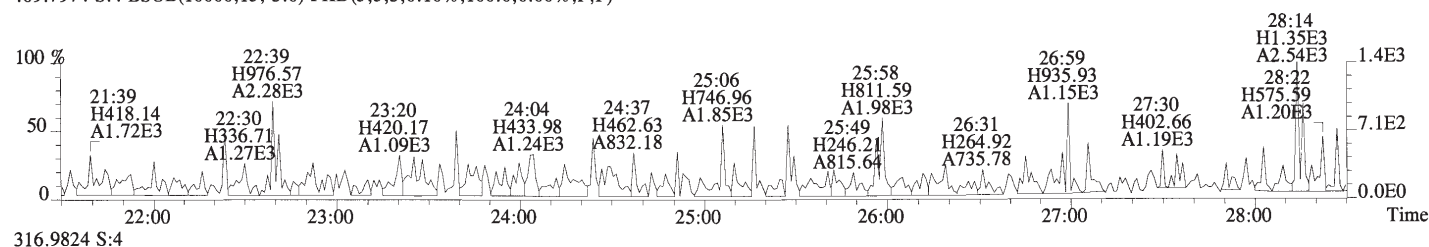
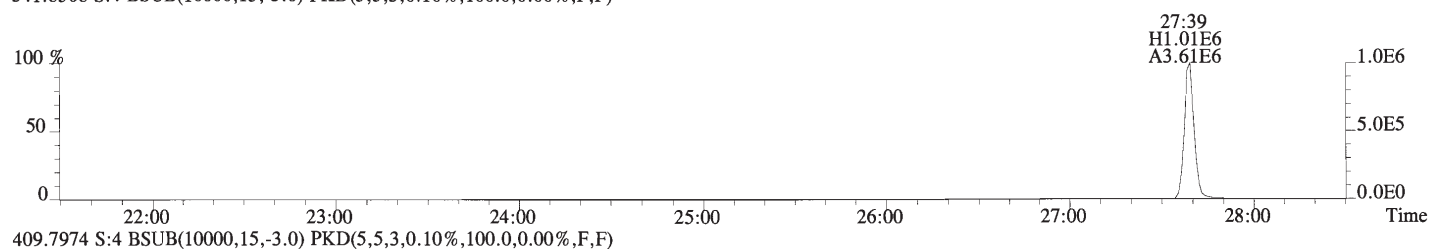
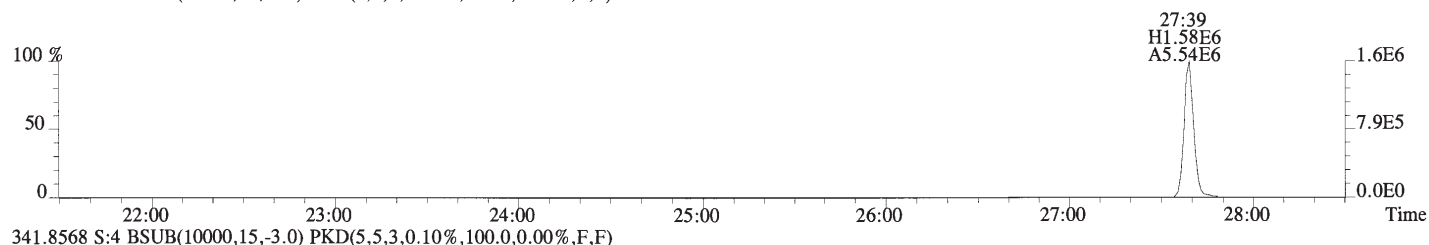
File:160407D1 #1-389 Acq: 7-APR-2016 16:35:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-4 1613 CS3 16C3101 Exp:OCDD_DB5
 457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



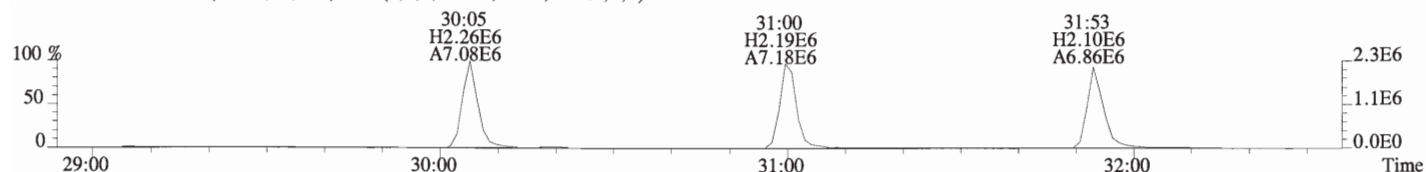
File:160407D1 #1-567 Acq: 7-APR-2016 16:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-4 1613 CS3 16C3101 Exp:OCDD_DB5
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



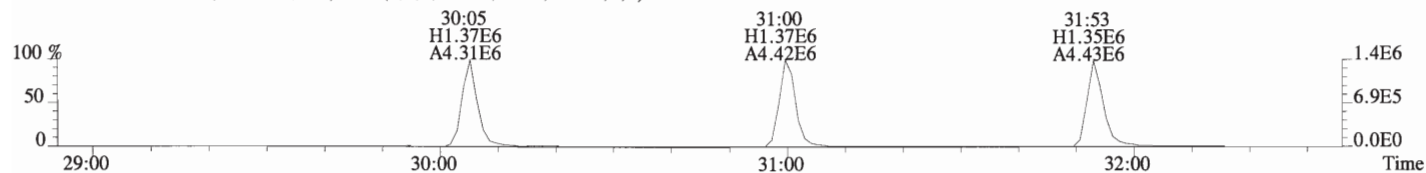
File:160407D1 #1-567 Acq: 7-APR-2016 16:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-4 1613 CS3 16C3101 Exp:OCDD_DB5
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



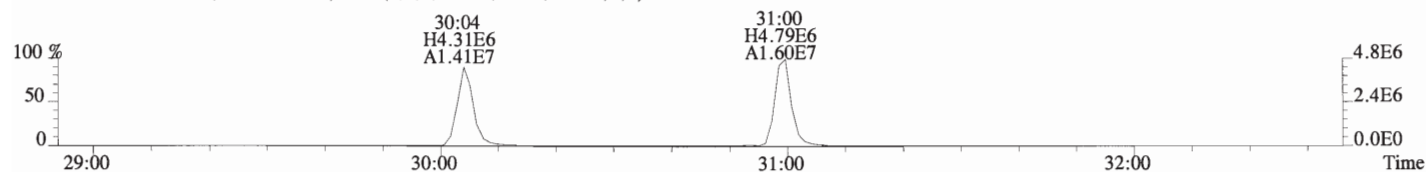
File:160407D1 #1-180 Acq: 7-APR-2016 16:35:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-4 1613 CS3 16C3101 Exp:OCDD_DB5
 339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



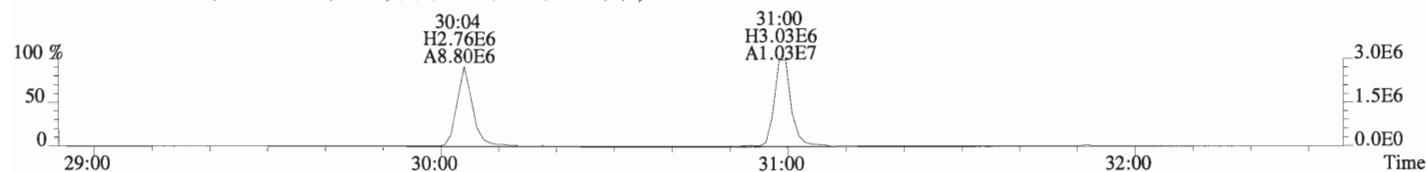
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



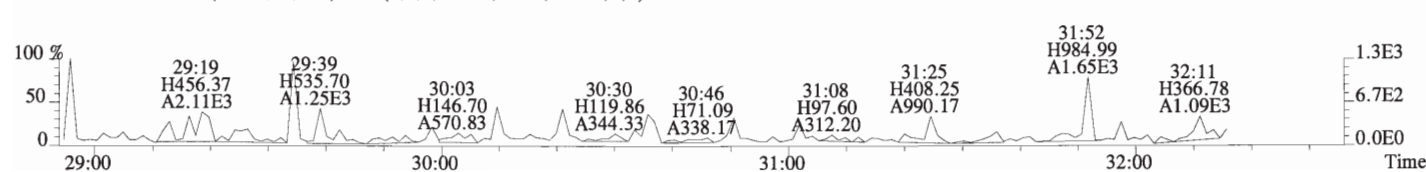
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



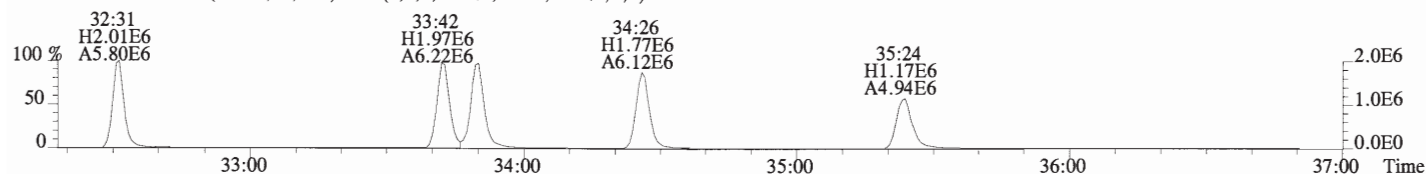
353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



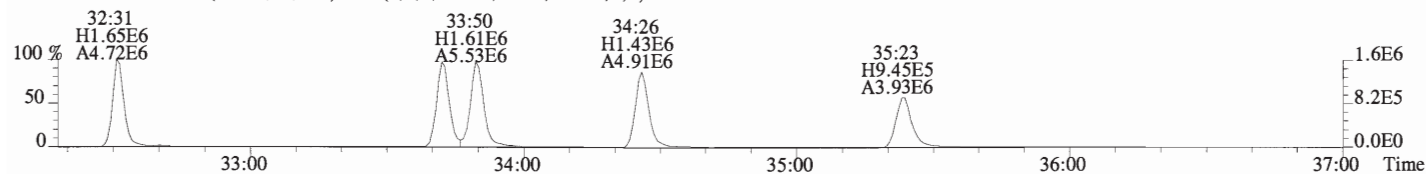
409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



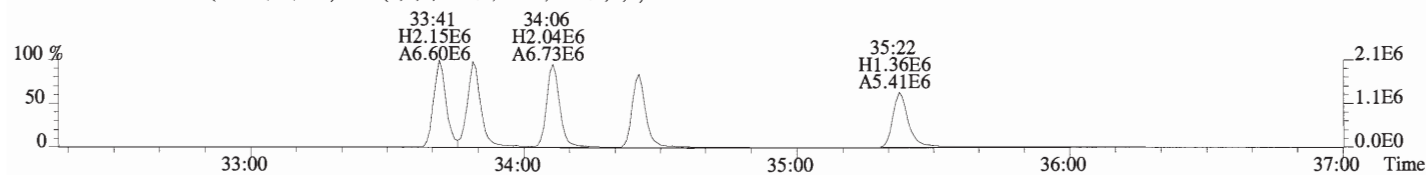
File:160407D1 #1-407 Acq: 7-APR-2016 16:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-4 1613 CS3 16C3101 Exp:OCDD_DB5
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



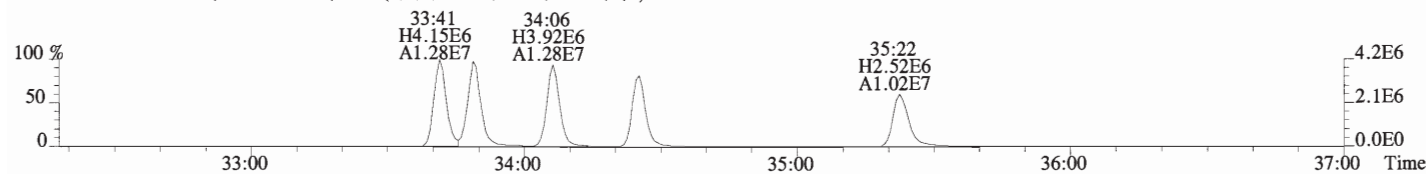
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



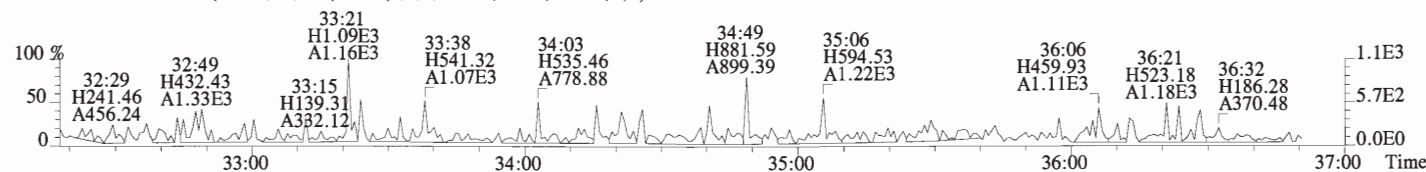
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



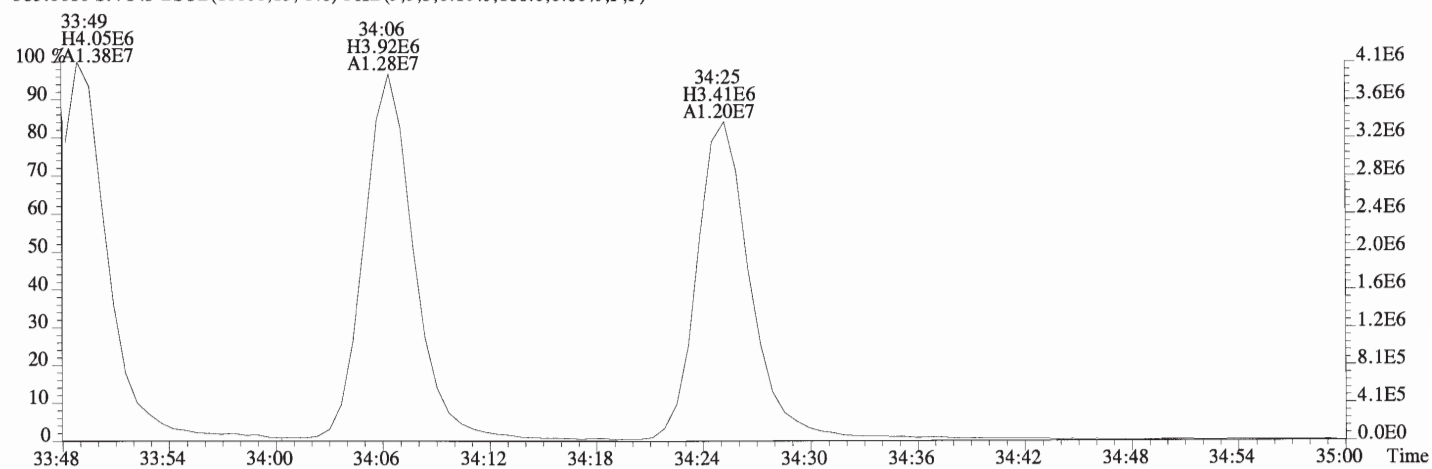
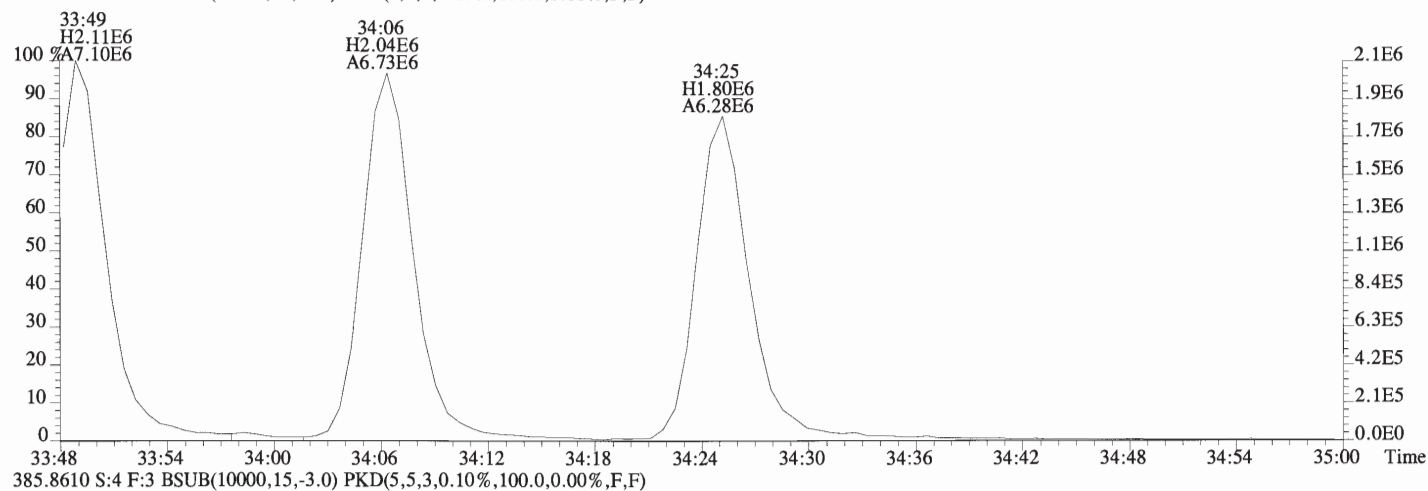
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



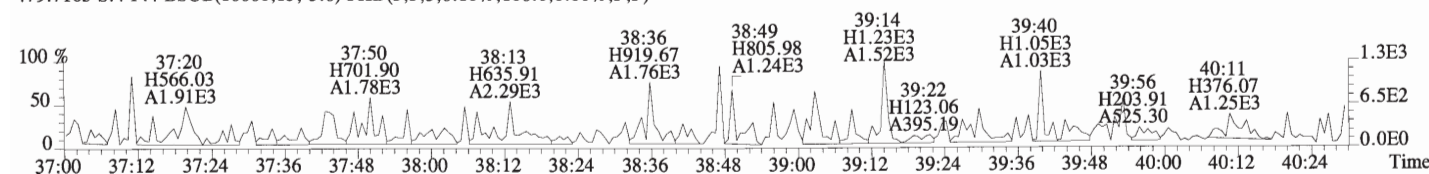
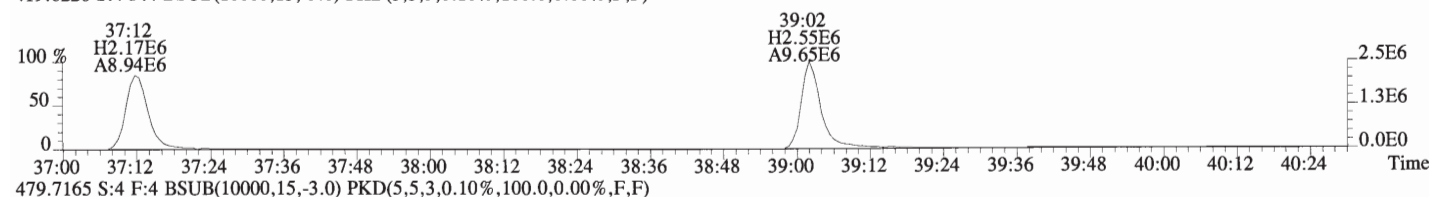
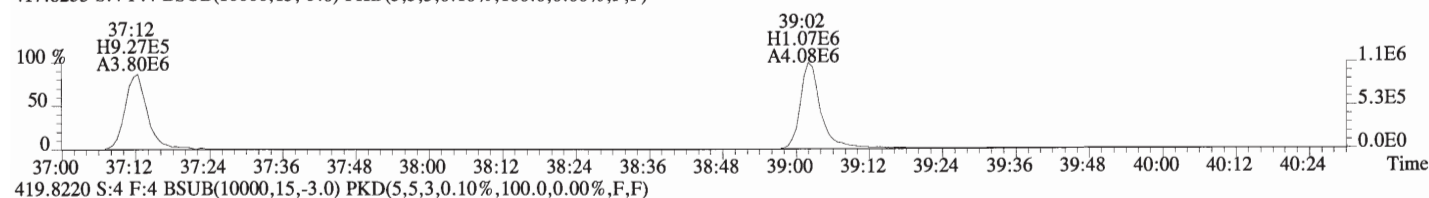
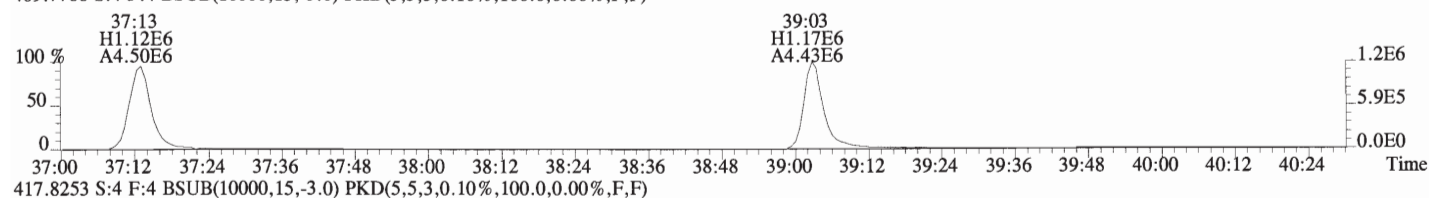
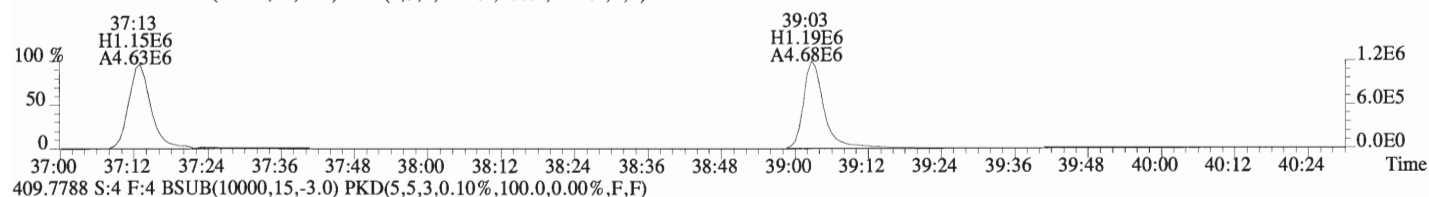
445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



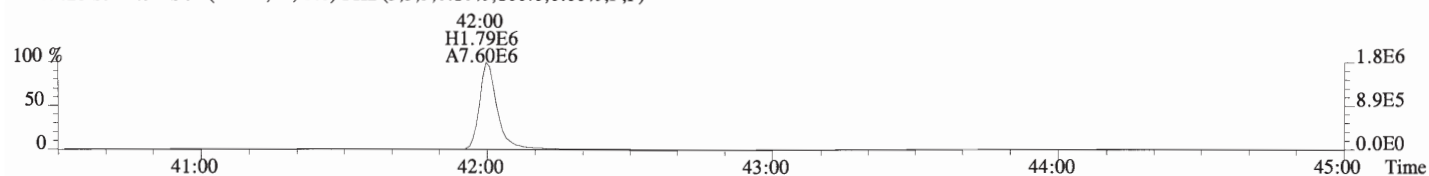
File:160407D1 #1-407 Acq: 7-APR-2016 16:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-4 1613 CS3 16C3101 Exp:OCDD_DB5
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



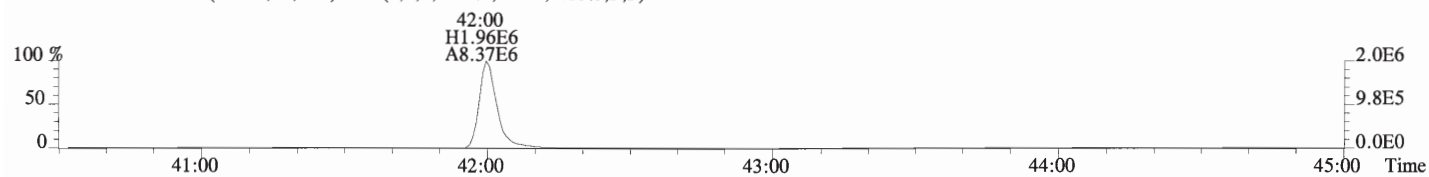
File:160407D1 #1-325 Acq: 7-APR-2016 16:35:58 GC EI+ Voltage SIR Autospec-UltimaE
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-4 1613 CS3 16C3101 Exp:OCDD_DB5
407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



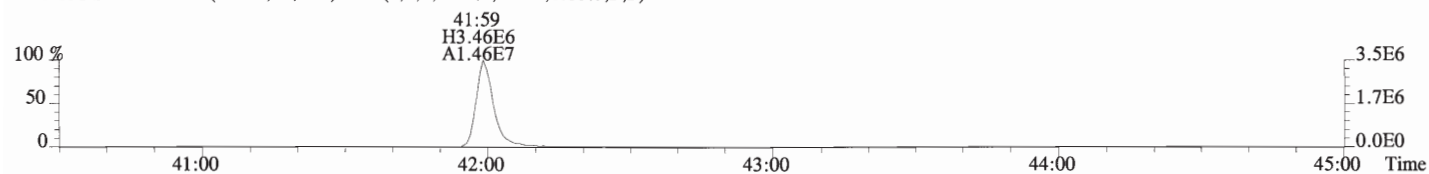
File:160407D1 #1-389 Acq: 7-APR-2016 16:35:58 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-4 1613 CS3 16C3101 Exp:OCDD_DB5
 441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



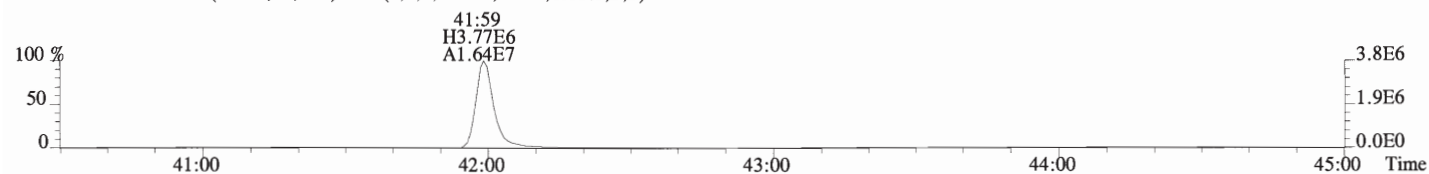
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



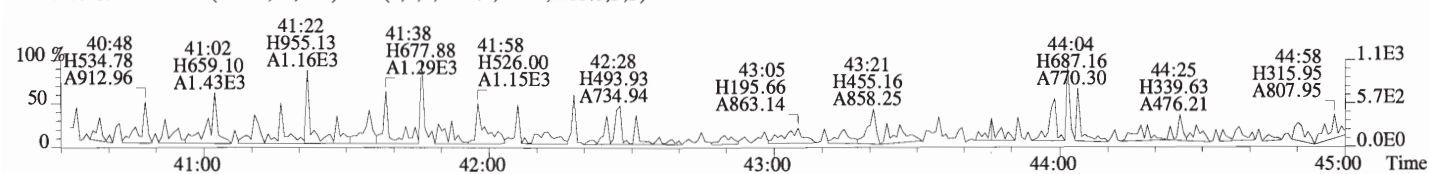
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



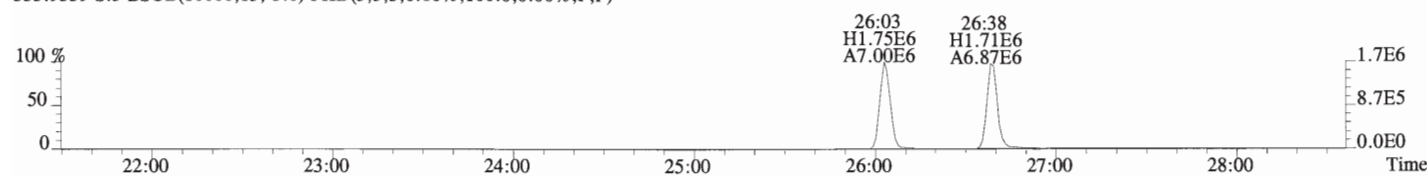
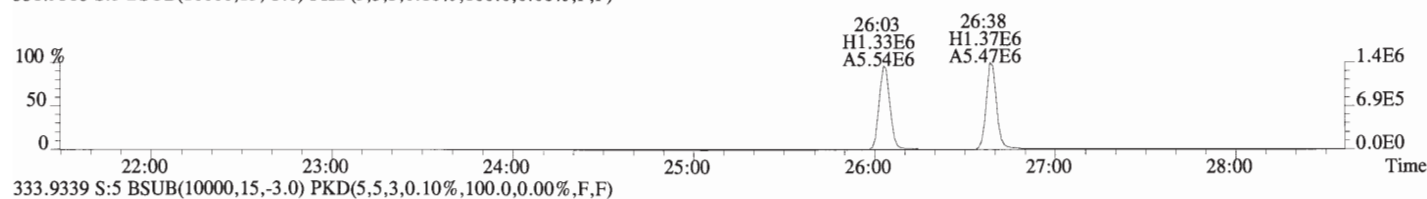
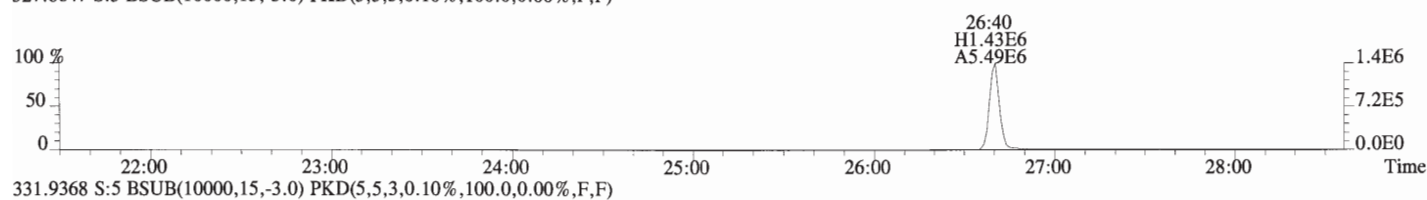
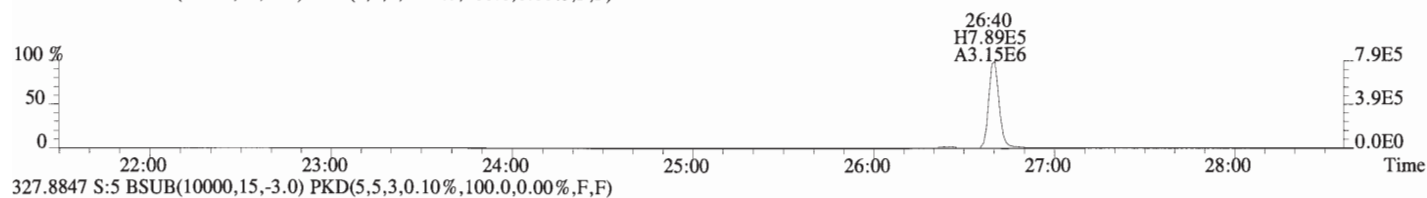
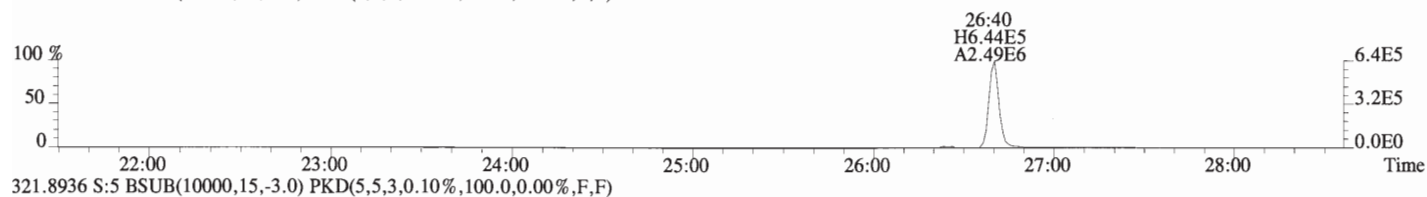
455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



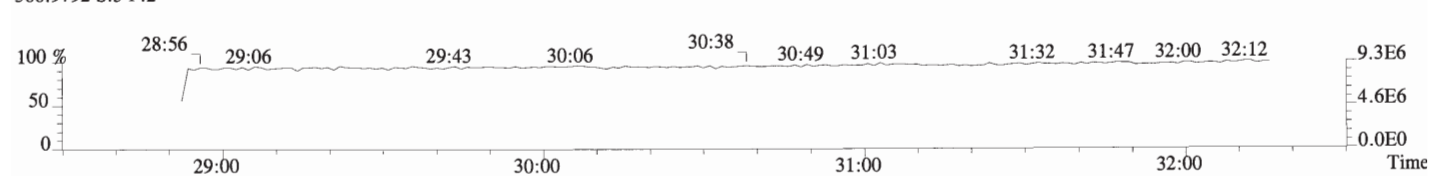
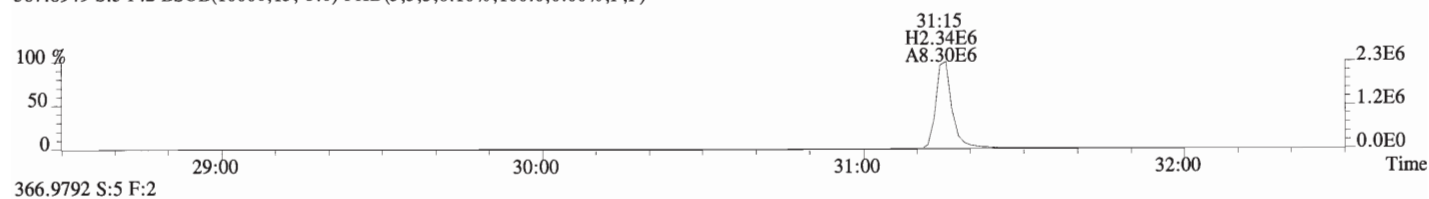
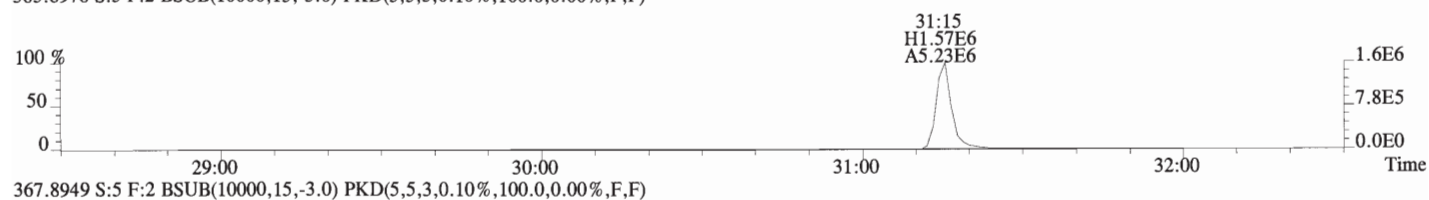
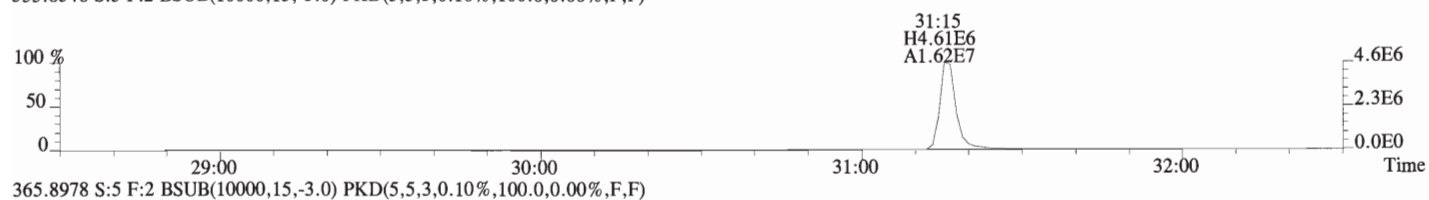
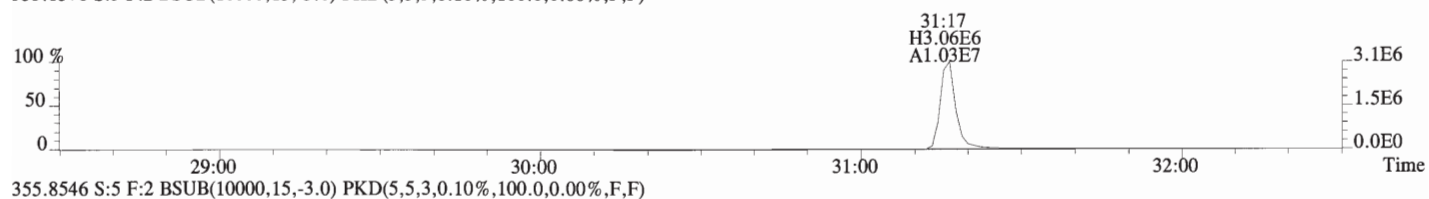
513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



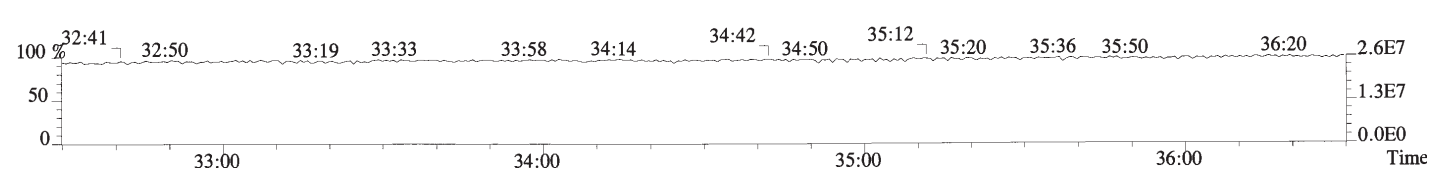
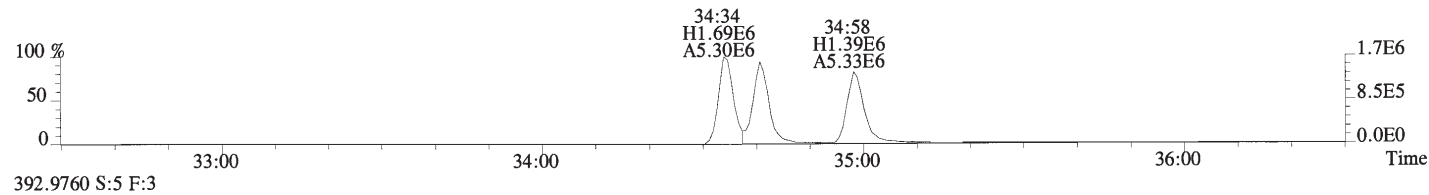
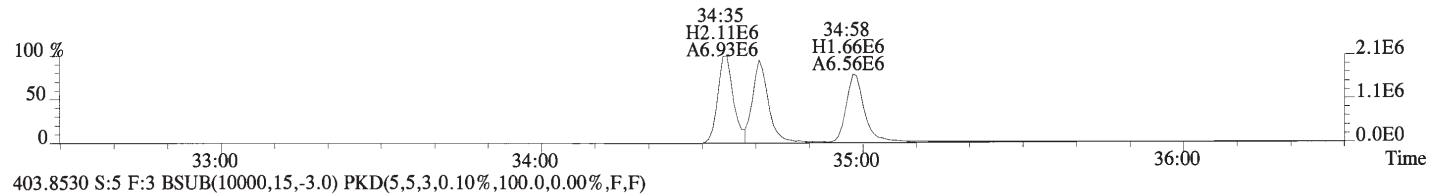
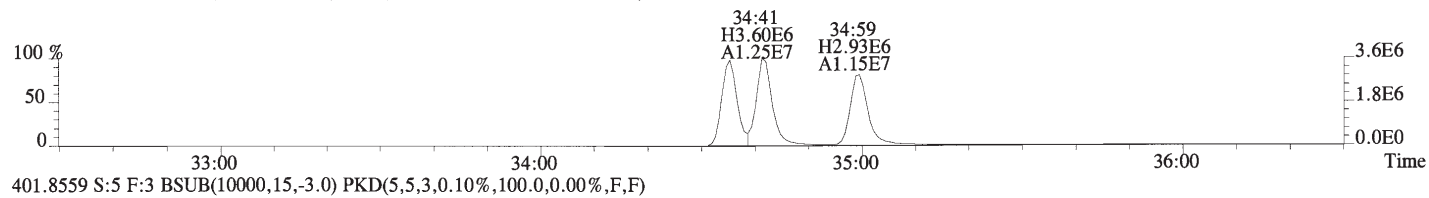
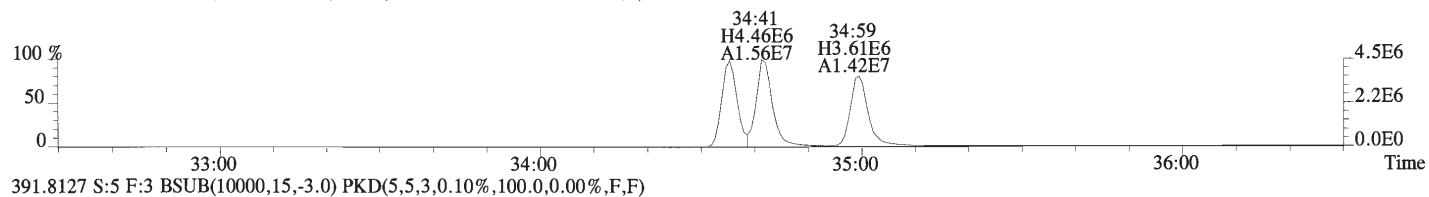
File:160407D1 #1-567 Acq: 7-APR-2016 17:24:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-5 1613 CS4 15J1908 Exp:OCDD_DB5
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



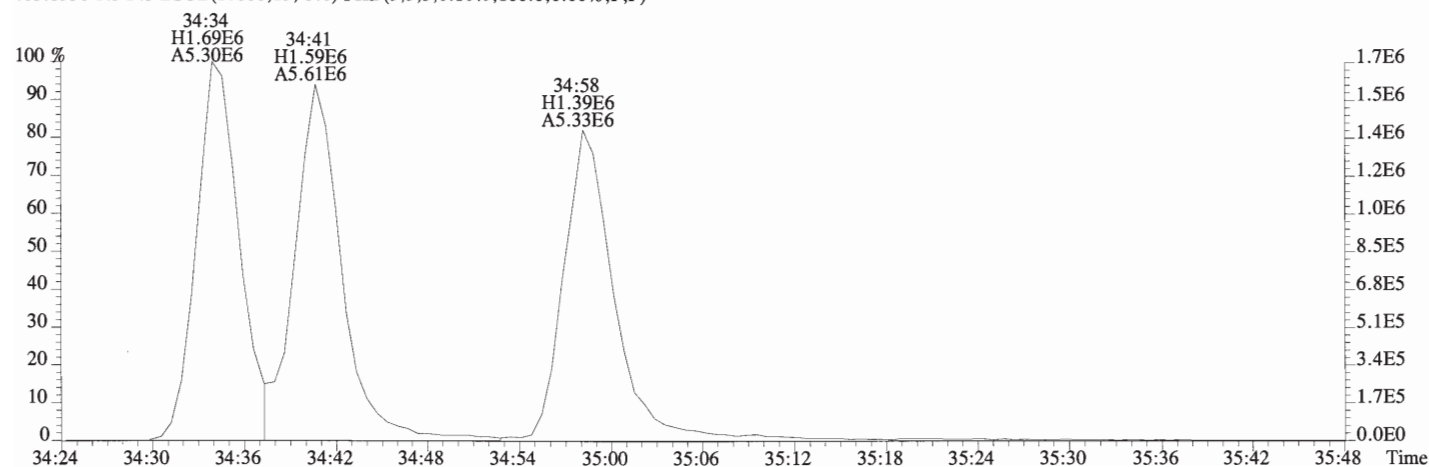
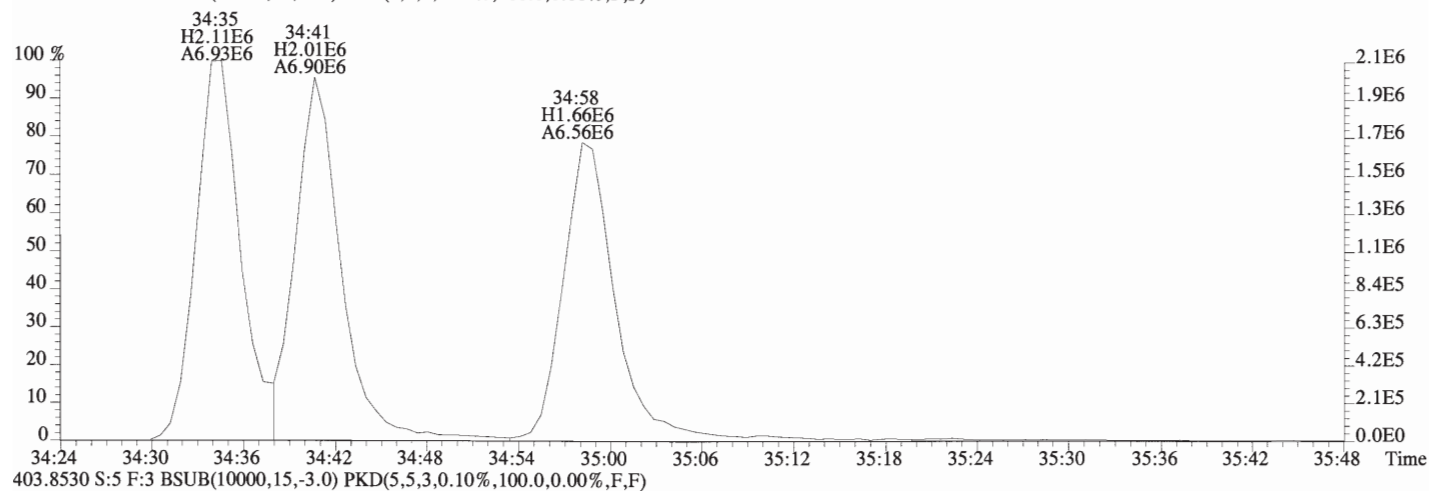
File:160407D1 #1-180 Acq: 7-APR-2016 17:24:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-5 1613 CS4 15J1908 Exp:OCDD_DB5
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



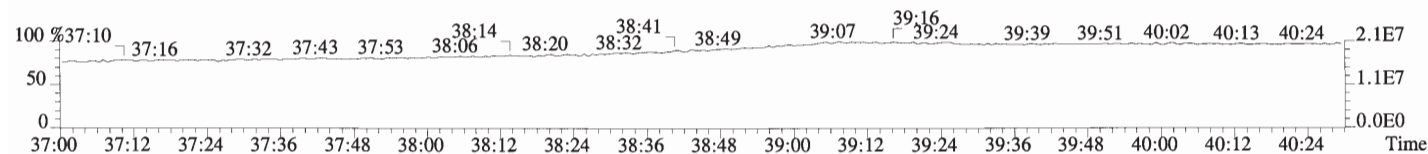
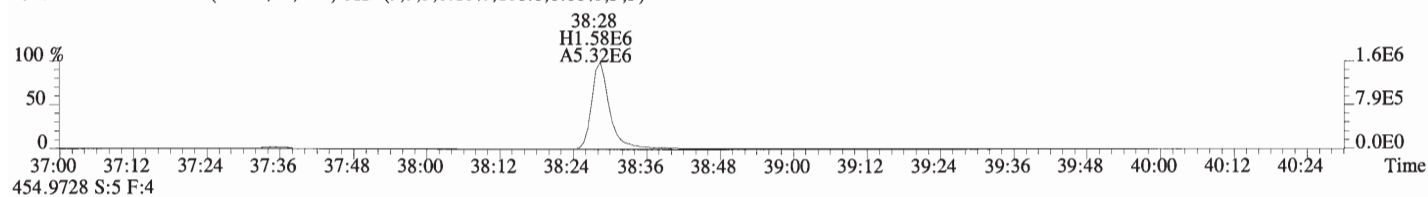
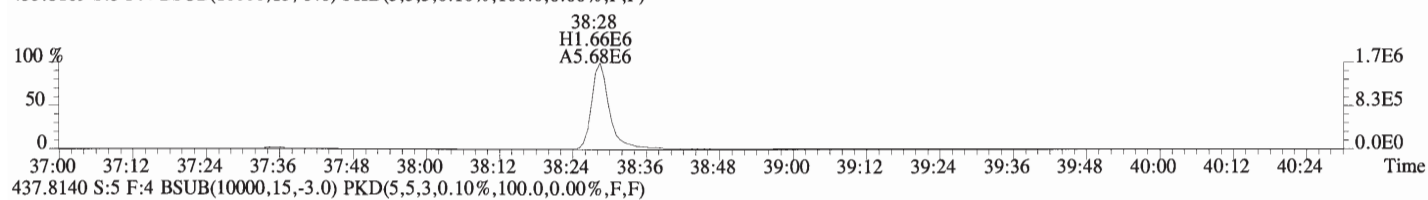
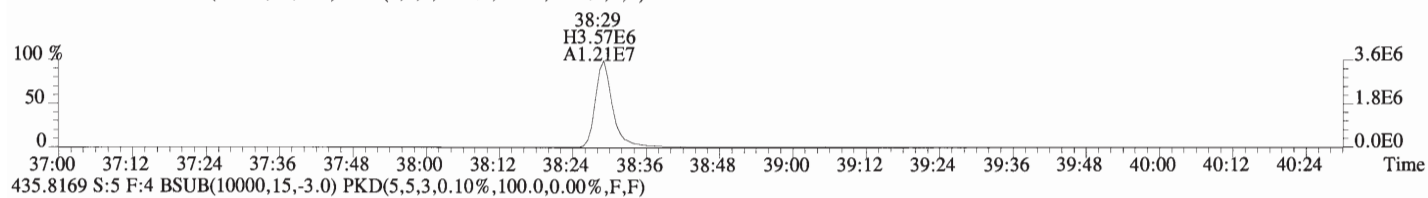
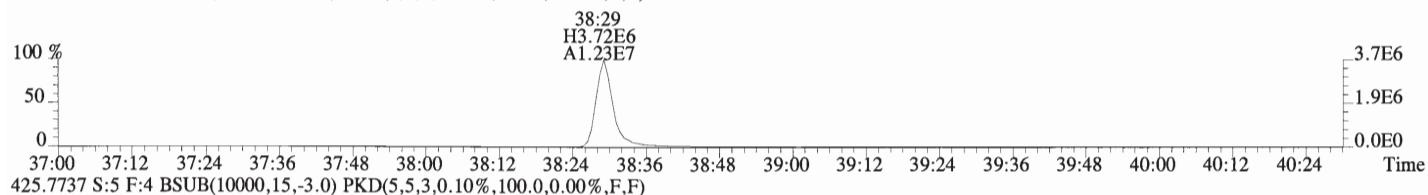
File:160407D1 #1-407 Acq: 7-APR-2016 17:24:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-5 1613 CS4 15J1908 Exp:OCDD_DB5
 389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



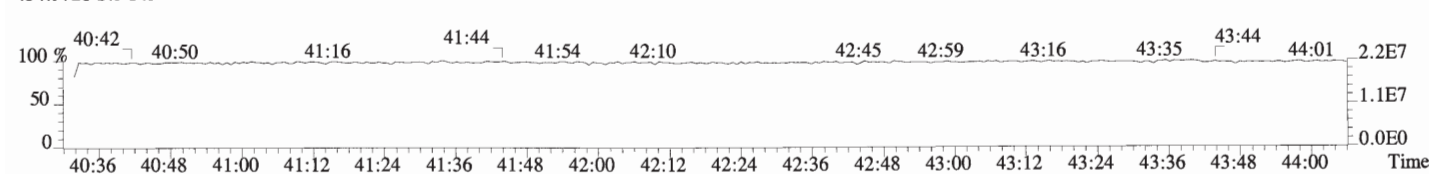
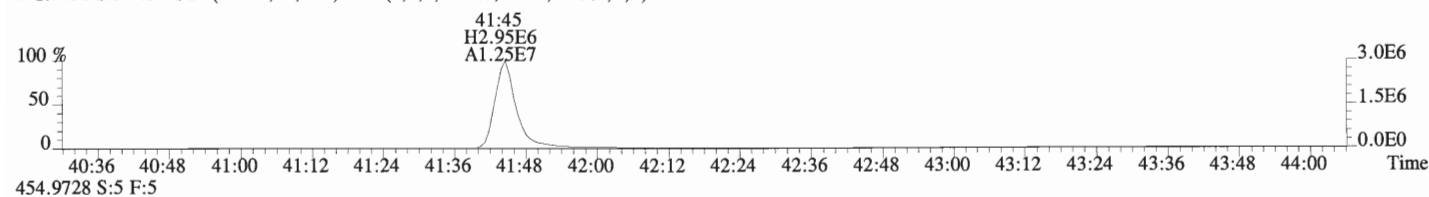
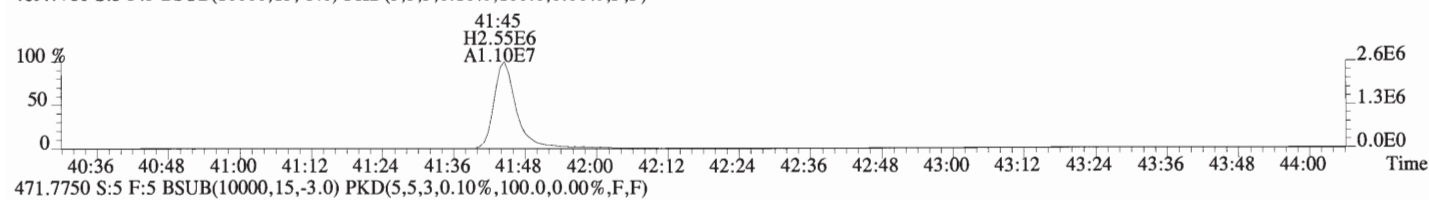
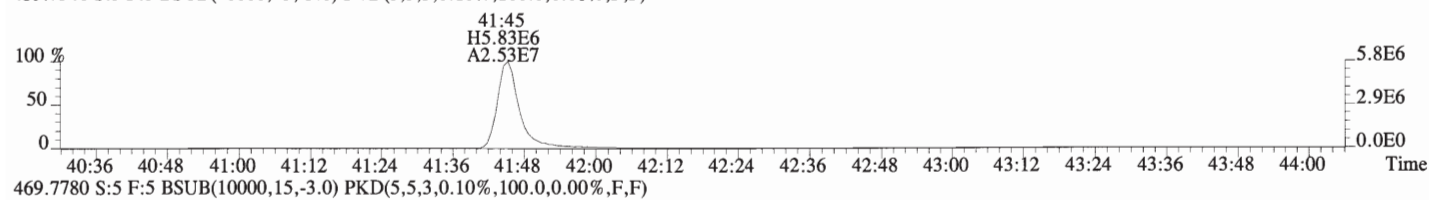
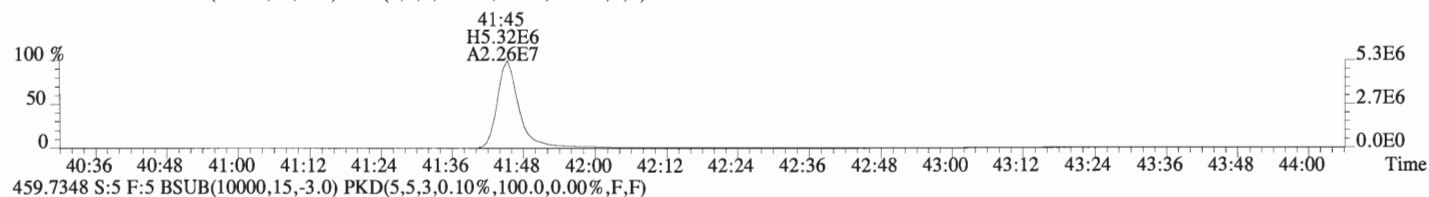
File:160407D1 #1-407 Acq: 7-APR-2016 17:24:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-5 1613 CS4 15J1908 Exp:OCDD_DB5
 401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



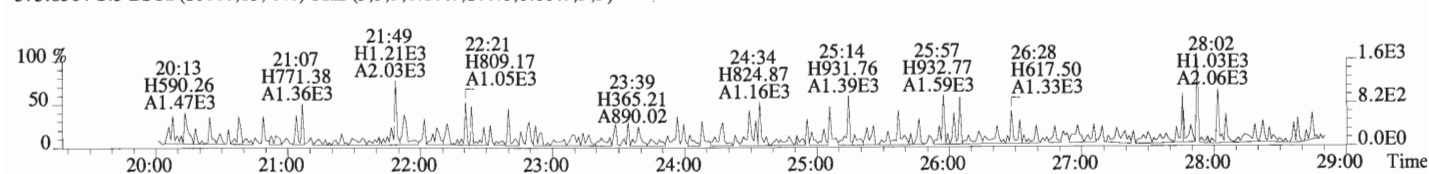
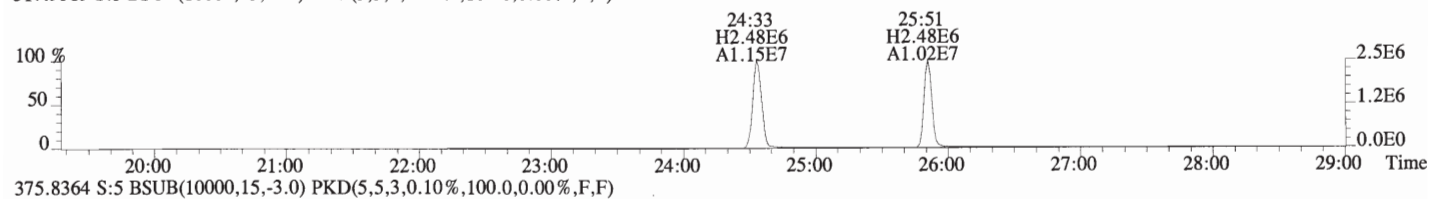
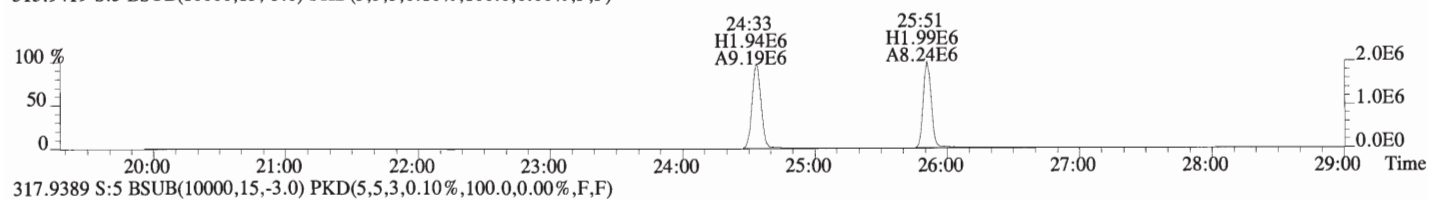
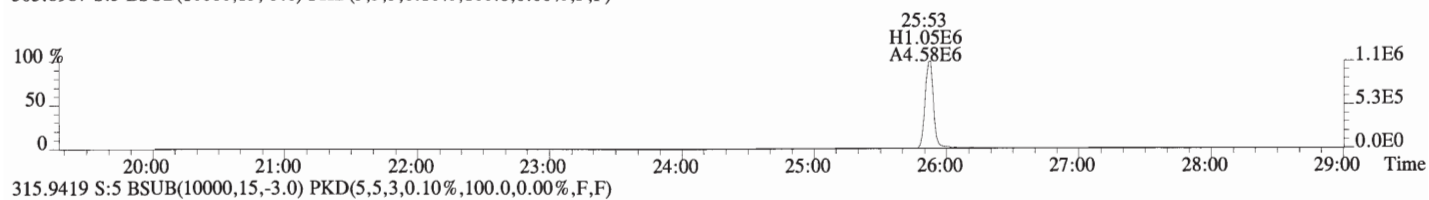
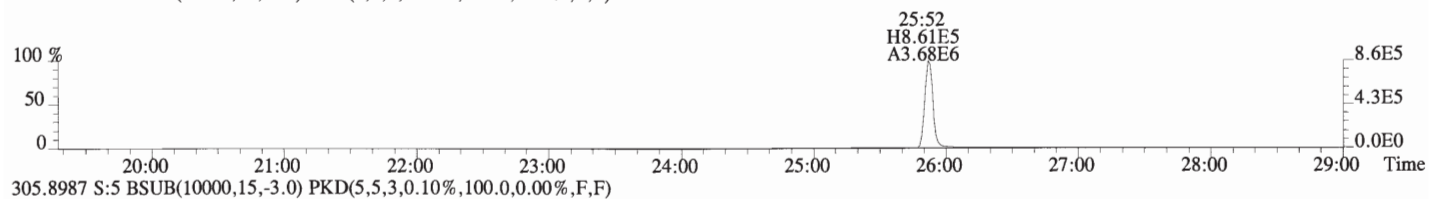
File:160407D1 #1-325 Acq: 7-APR-2016 17:24:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text: Vista Analytical Laboratory VG7 Text:ST160407D1-5 1613 CS4 15J1908 Exp:OCDD_DB5
 423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



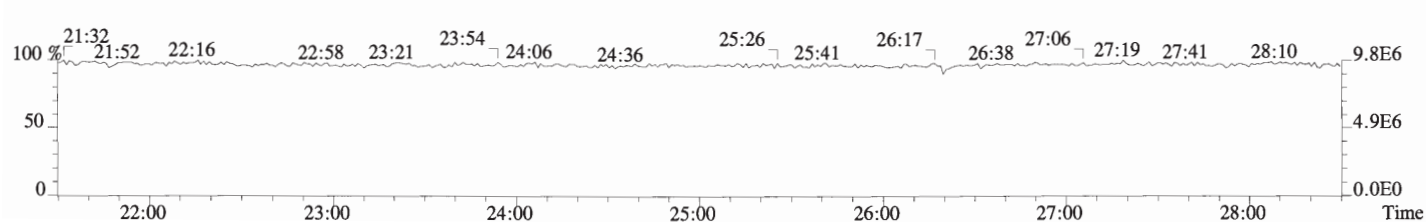
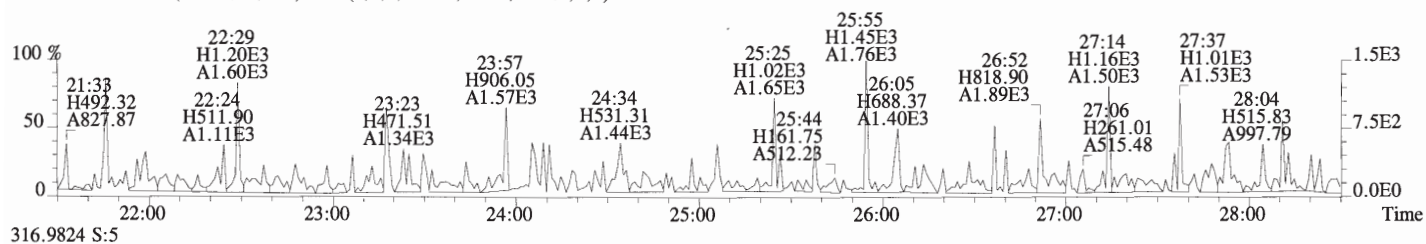
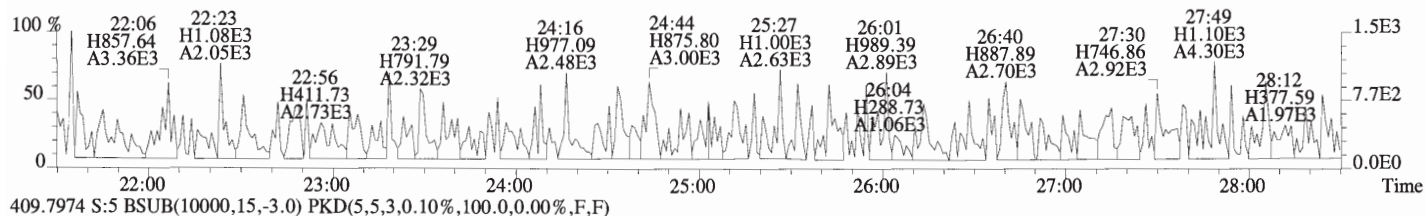
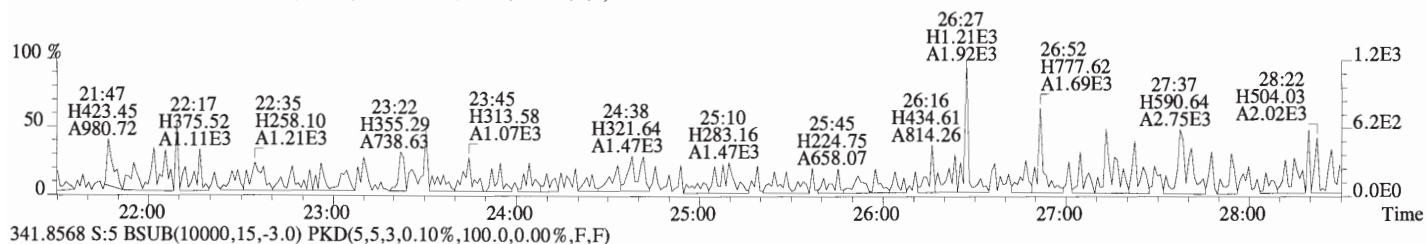
File:160407D1 #1-389 Acq: 7-APR-2016 17:24:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-5 1613 CS4 15J1908 Exp:OCDD_DB5
 457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



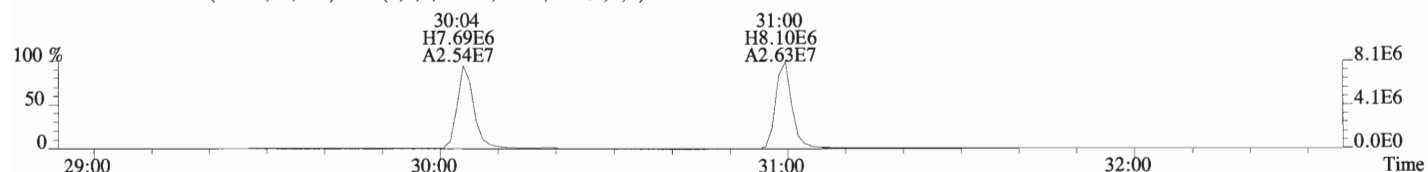
File:160407D1 #1-567 Acq: 7-APR-2016 17:24:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-5 1613 CS4 15J1908 Exp:OCDD_DB5
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



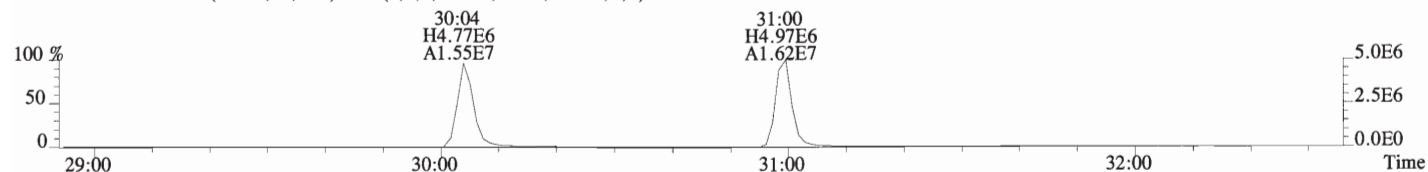
File:160407D1 #1-567 Acq: 7-APR-2016 17:24:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text: Vista Analytical Laboratory VG7 Text: ST160407D1-5 1613 CS4 1511908 Exp: OCDD_DB5
 339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



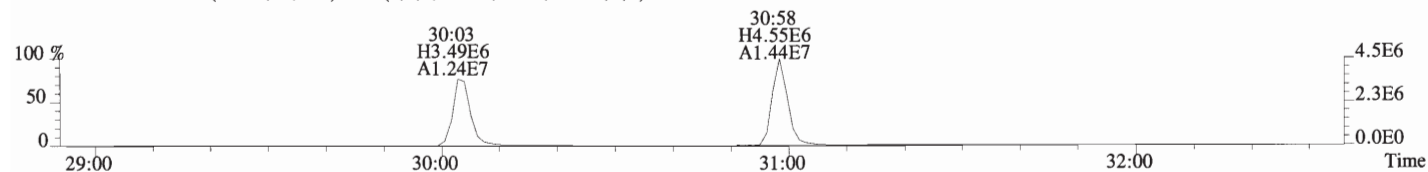
File:160407D1 #1-180 Acq: 7-APR-2016 17:24:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-5 1613 CS4 15J1908 Exp:OCDD_DB5
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



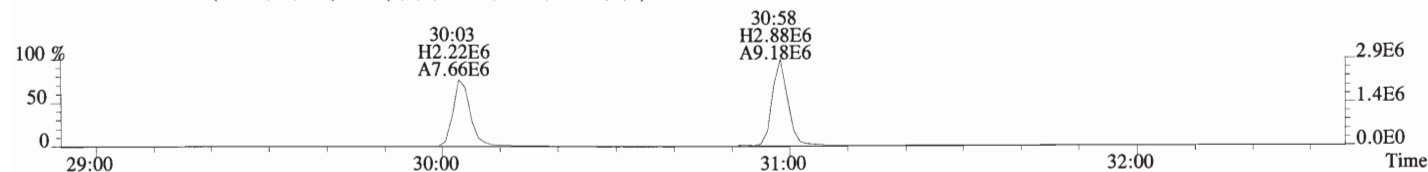
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



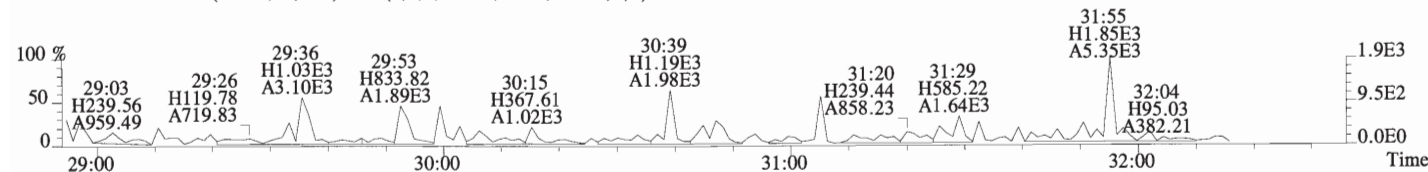
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



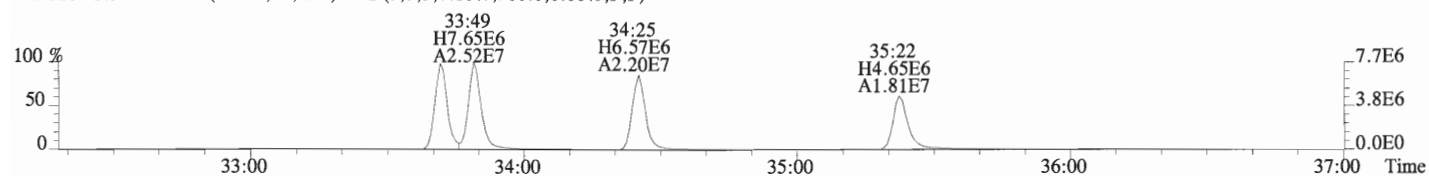
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



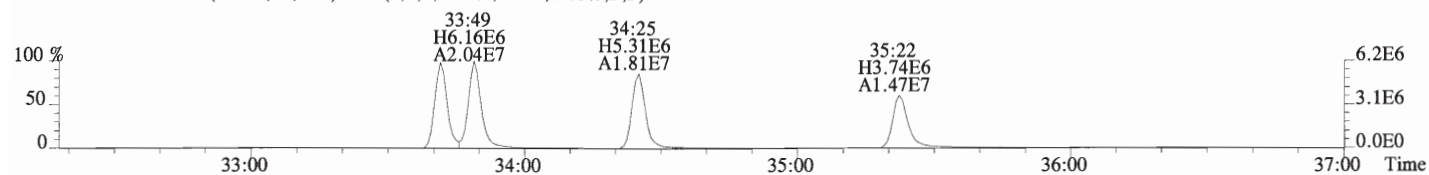
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



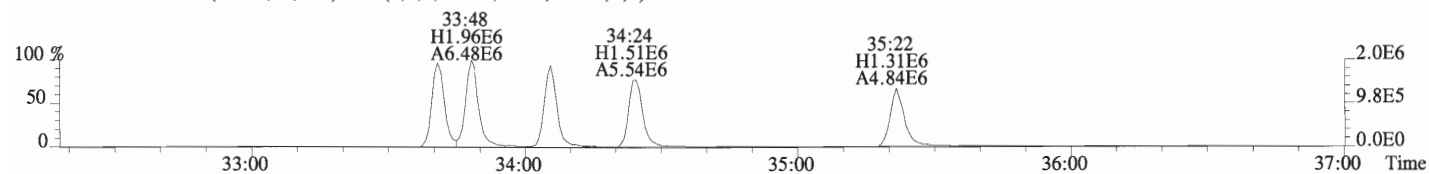
File:160407D1 #1-407 Acq: 7-APR-2016 17:24:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text: Vista Analytical Laboratory VG7 Text:ST160407D1-5 1613 CS4 15J1908 Exp:OCDD_DB5
 373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



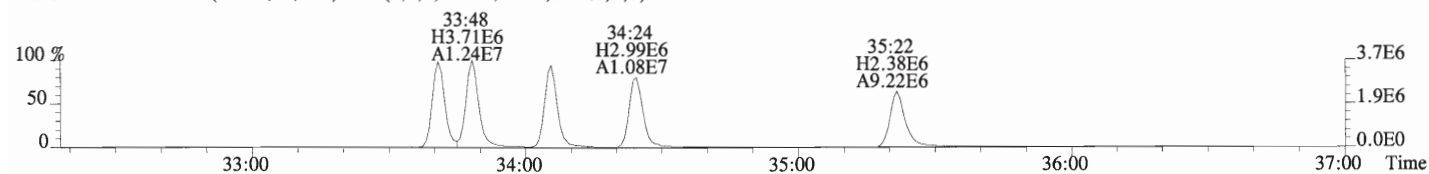
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



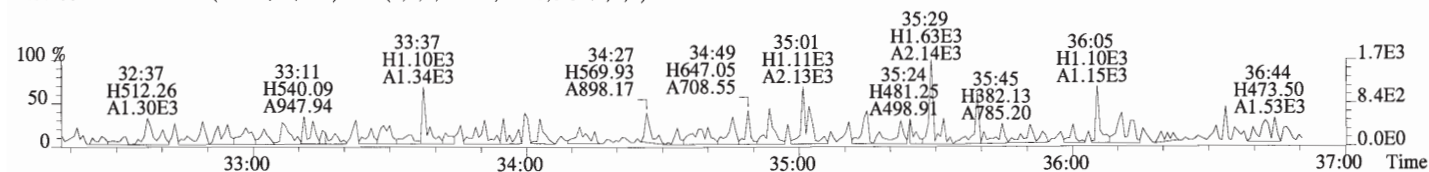
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



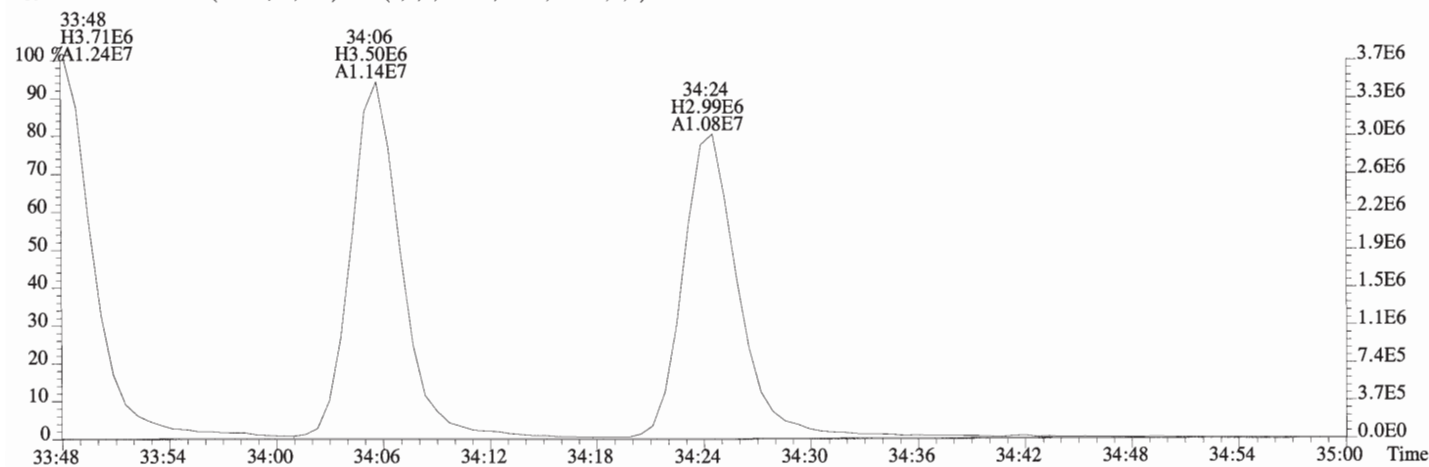
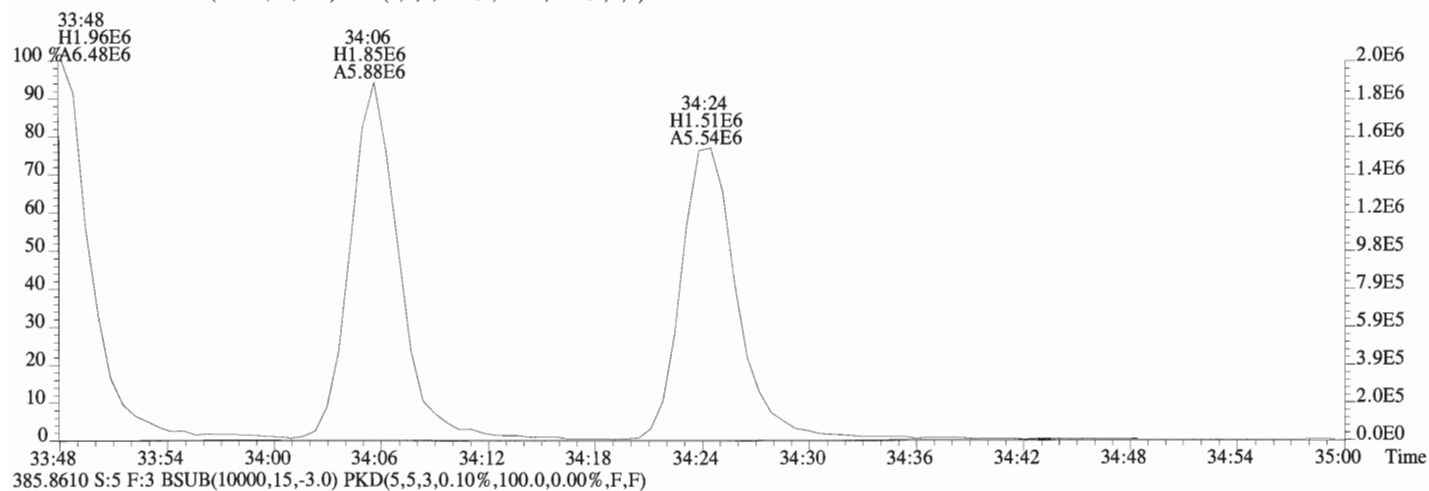
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



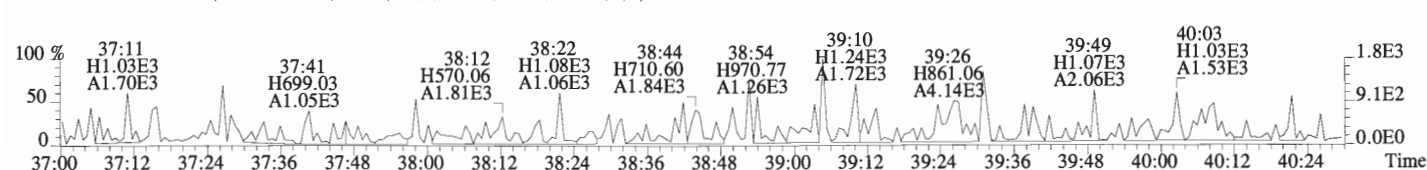
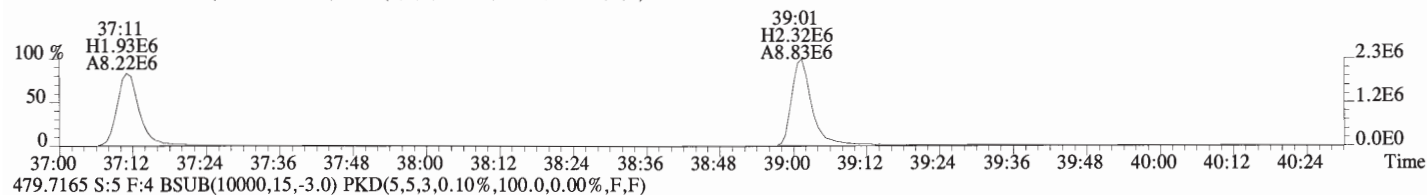
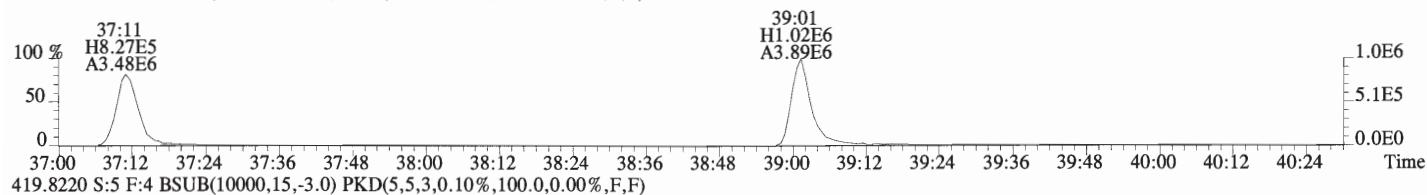
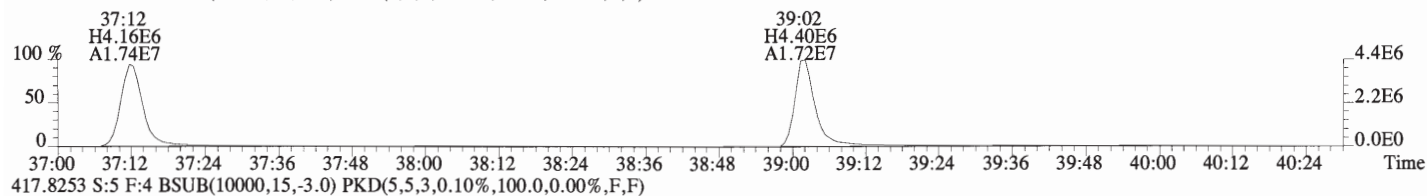
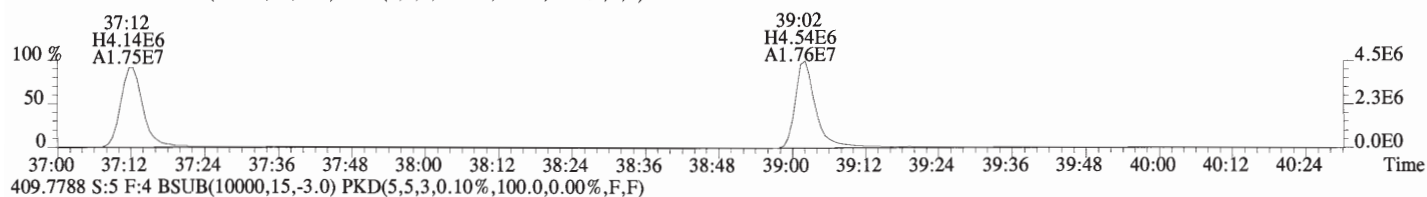
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



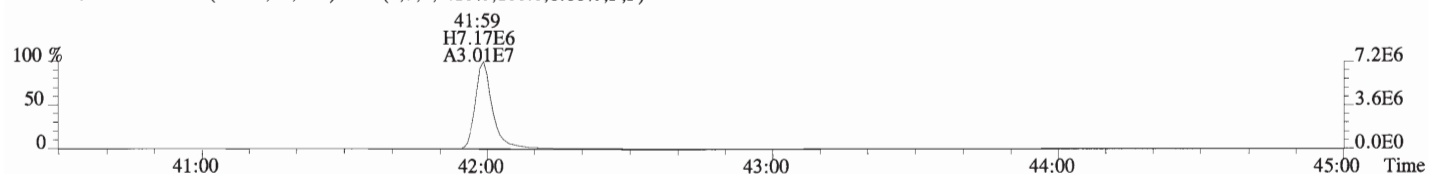
File:160407D1 #1-407 Acq: 7-APR-2016 17:24:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text: Vista Analytical Laboratory VG7 Text:ST160407D1-5 1613 CS4 15J1908 Exp:OCDD_DB5
 383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



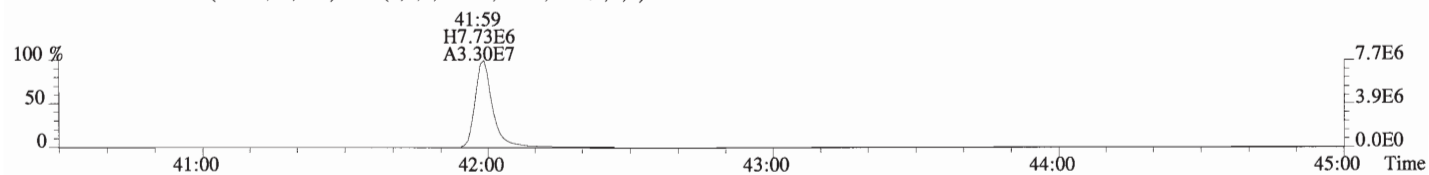
File:160407D1 #1-325 Acq: 7-APR-2016 17:24:18 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-5 1613 CS4 15J1908 Exp:OCDD_DB5
 407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



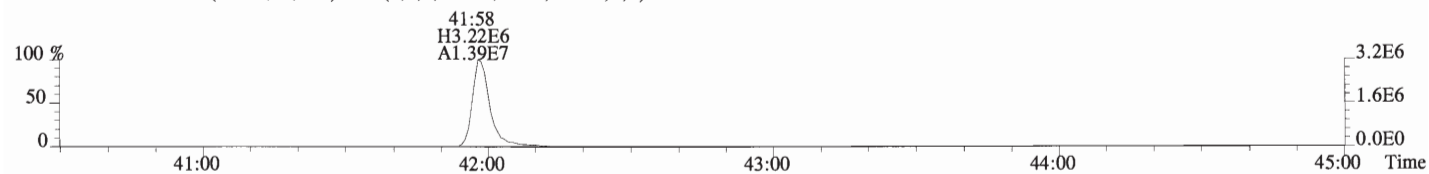
File:160407D1 #1-389 Acq: 7-APR-2016 17:24:18 GC EI+ Voltage SIR Autospec-UltimaE
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-5 1613 CS4 15J1908 Exp:OCDD_DB5
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



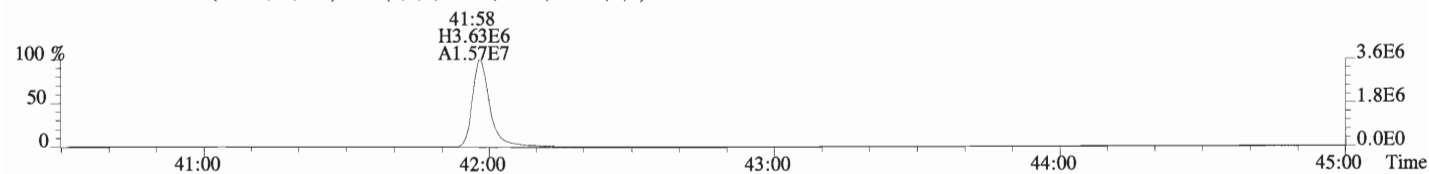
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



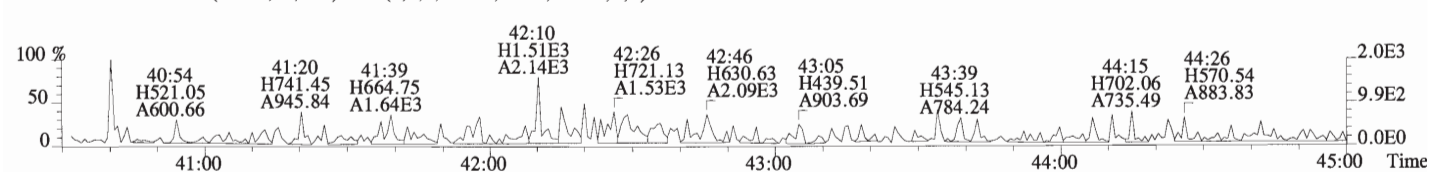
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



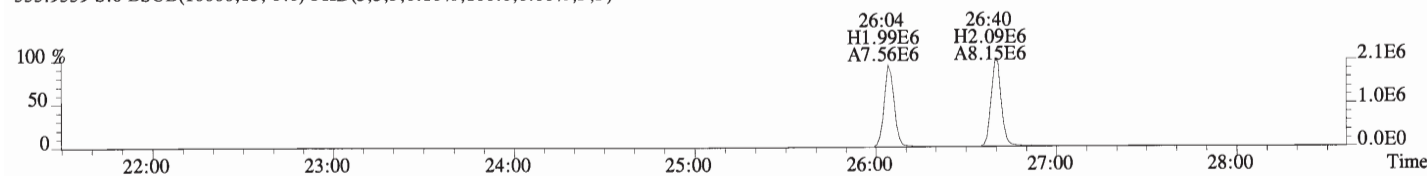
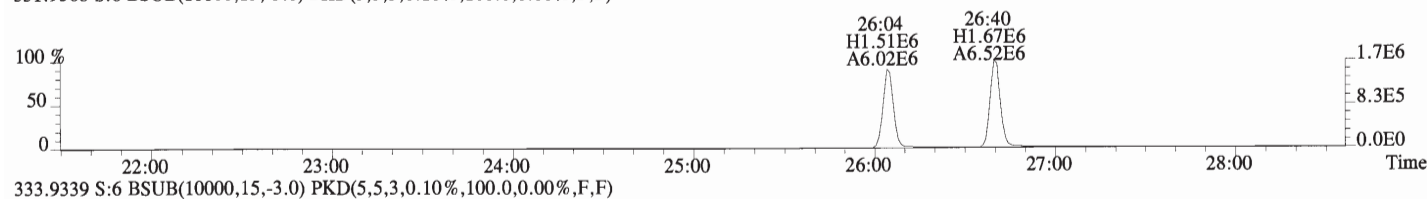
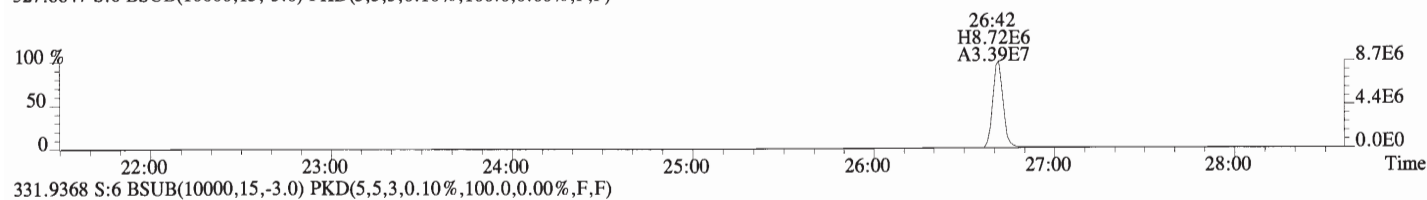
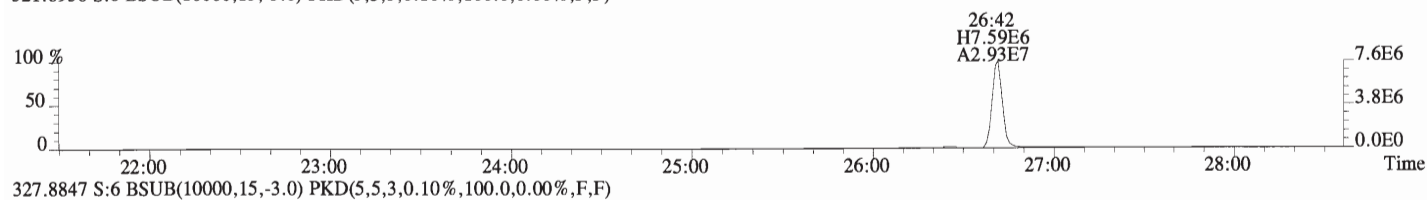
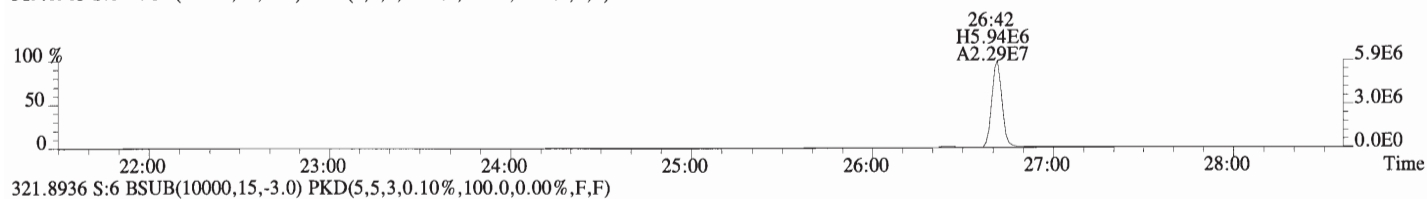
455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



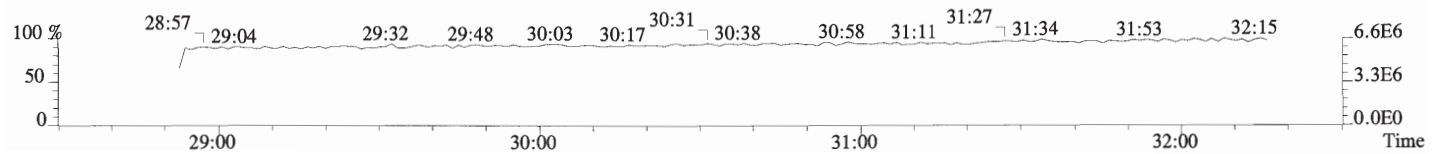
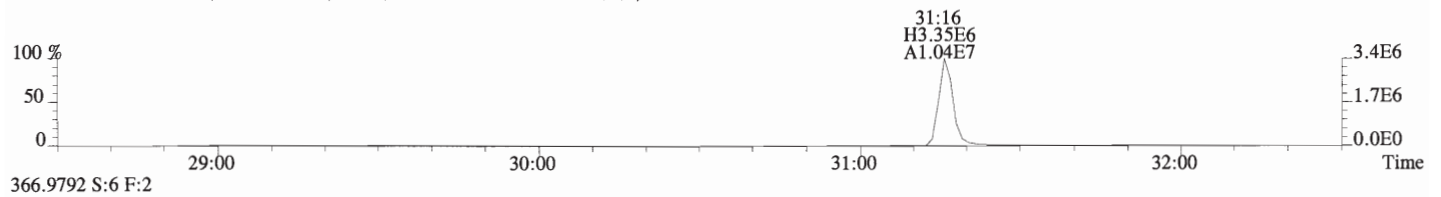
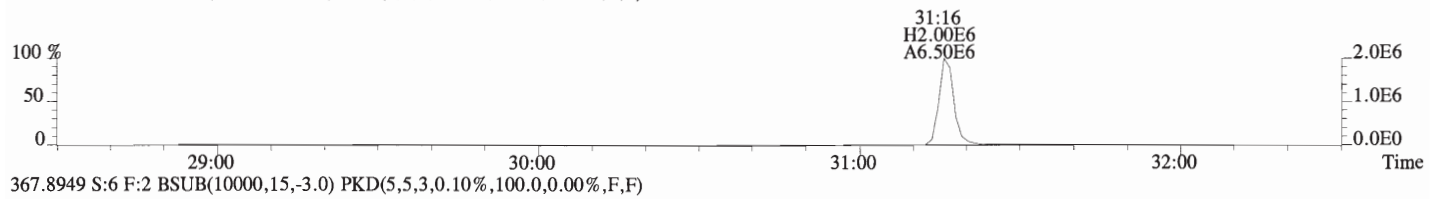
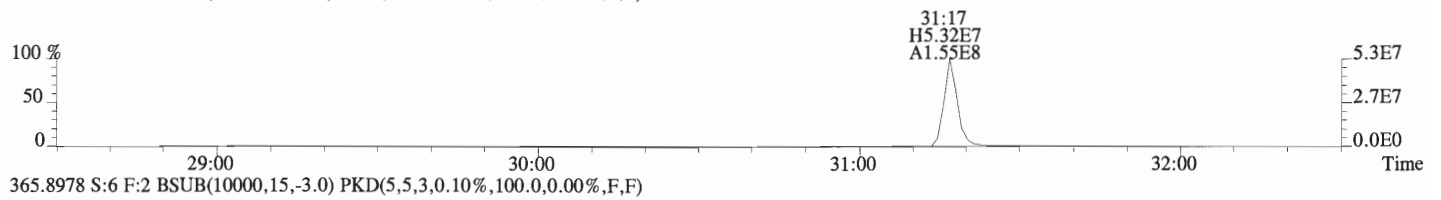
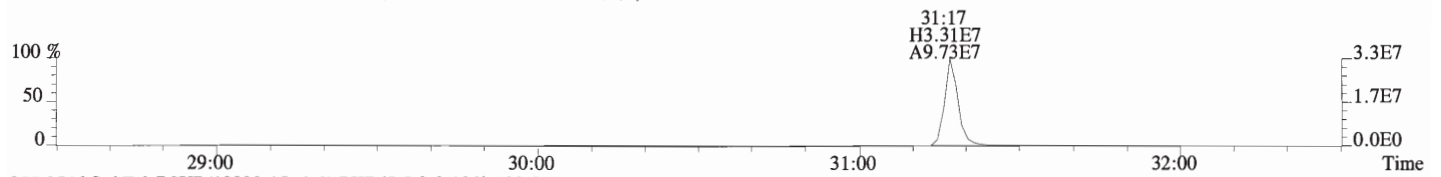
513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



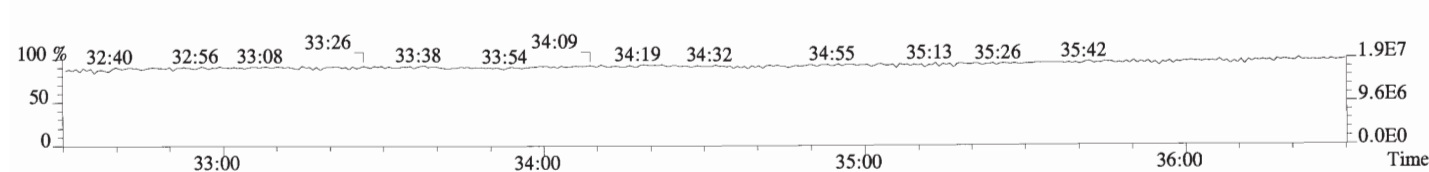
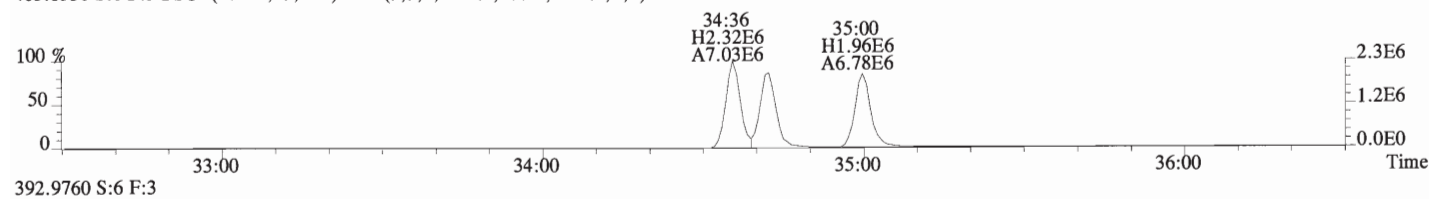
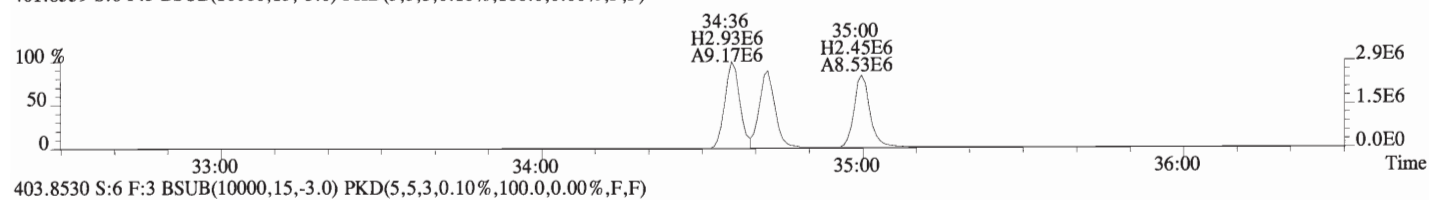
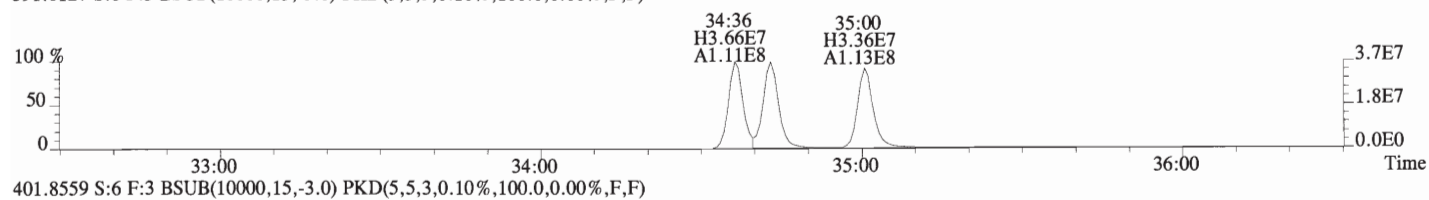
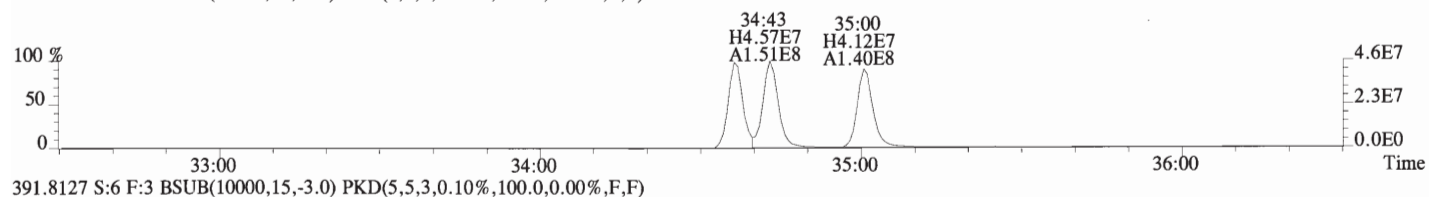
File:160407D1 #1-567 Acq: 7-APR-2016 18:12:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-6 1613 CS5 15J1909 Exp:OCDD_DB5
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



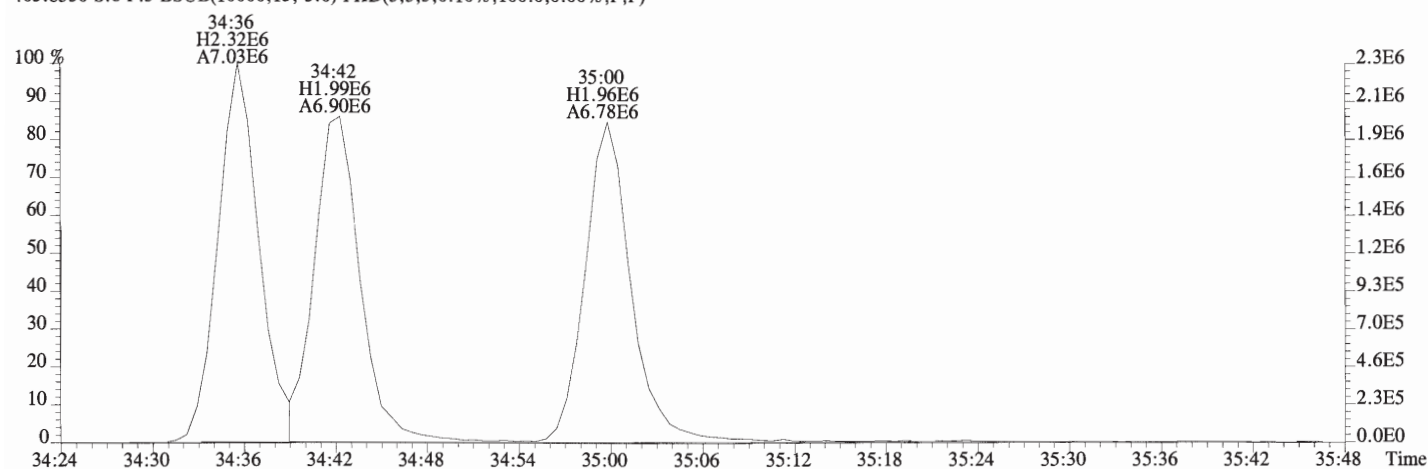
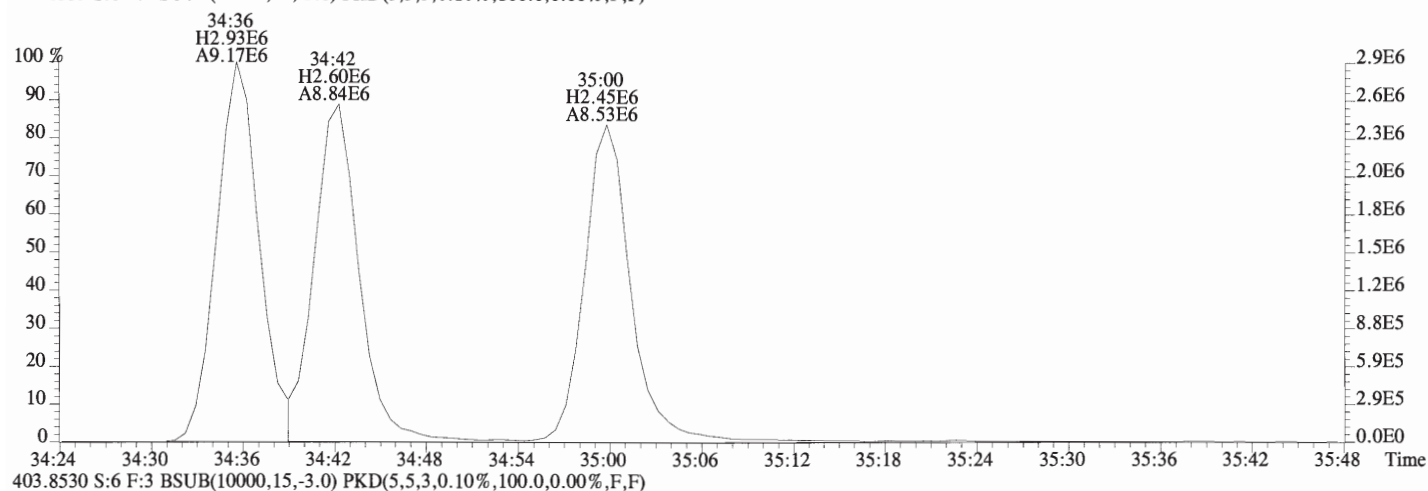
File:160407D1 #1-180 Acq: 7-APR-2016 18:12:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-6 1613 CS5 15J1909 Exp:OCDD_DB5
 353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



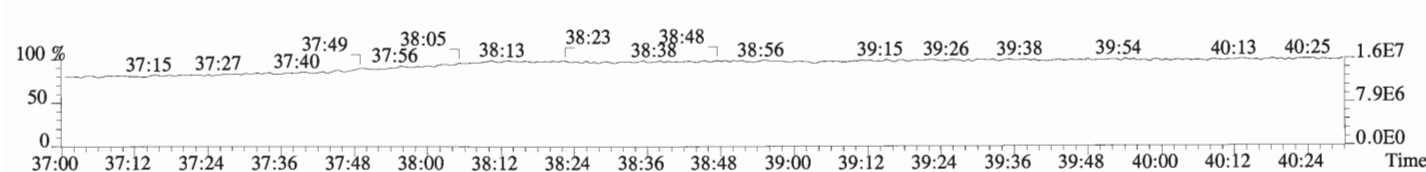
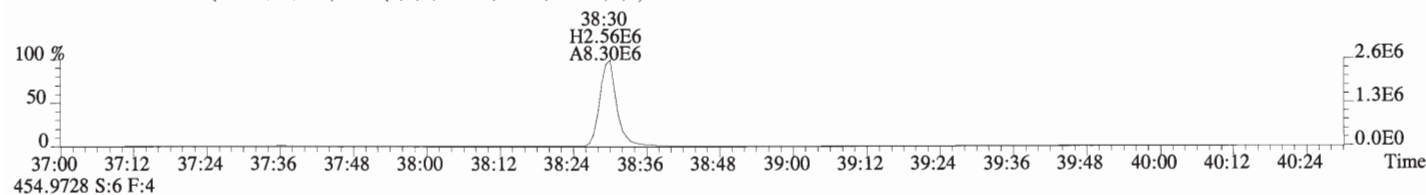
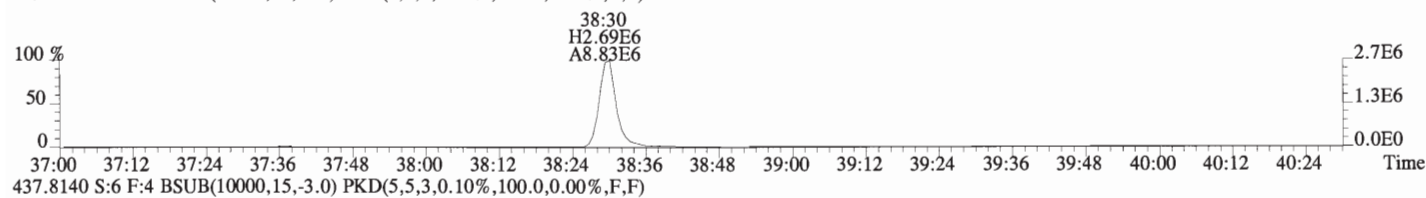
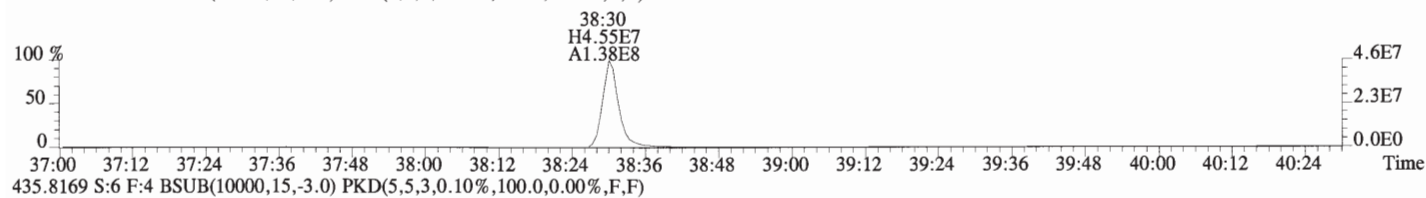
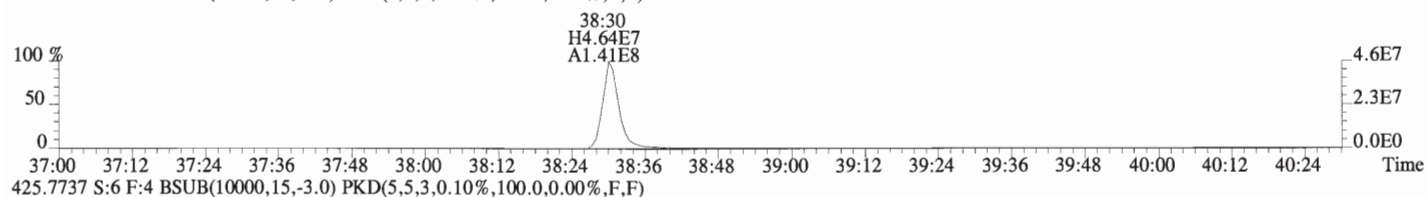
File:160407D1 #1-406 Acq: 7-APR-2016 18:12:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-6 1613 CS5 15J1909 Exp:OCDD_DB5
 389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



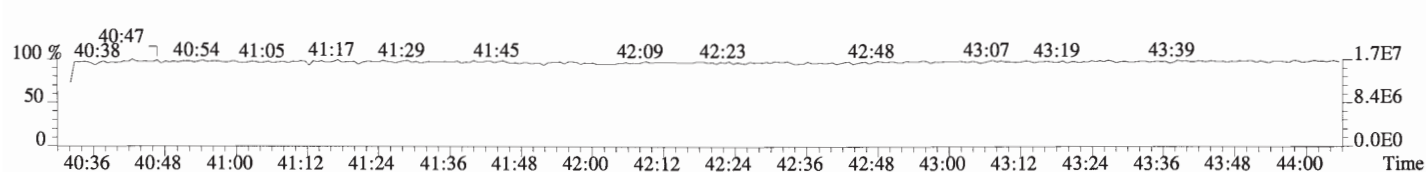
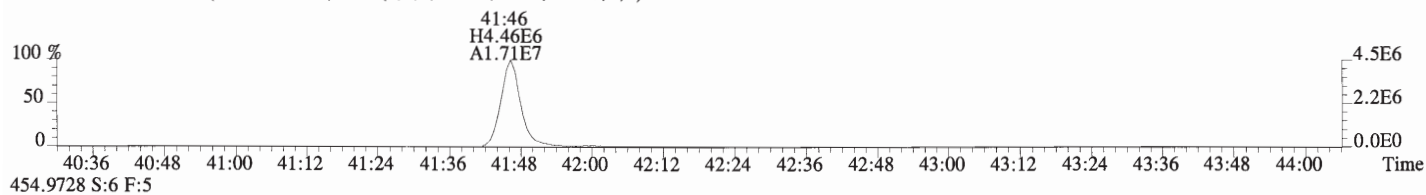
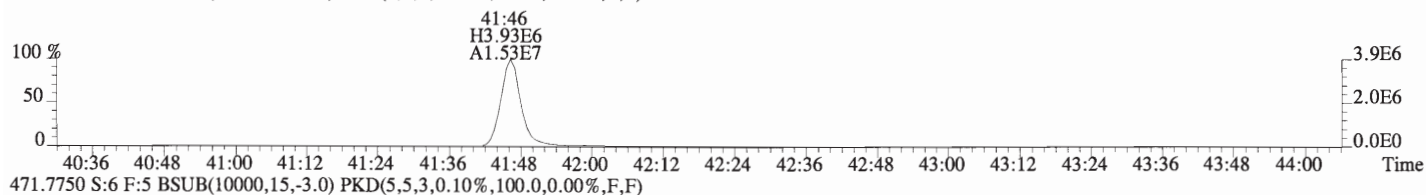
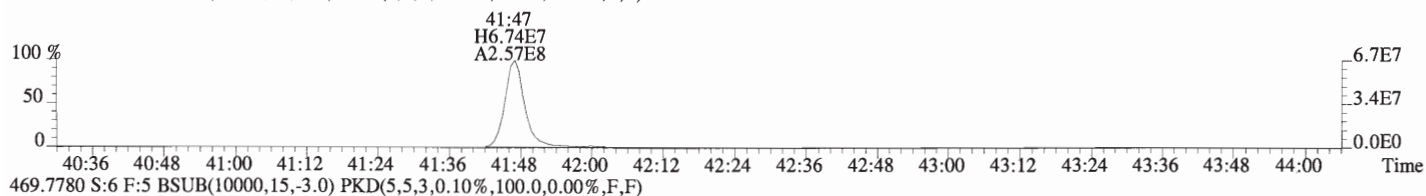
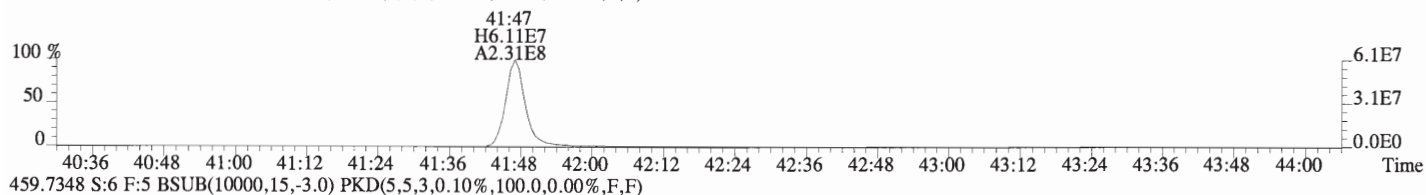
File:160407D1 #1-406 Acq: 7-APR-2016 18:12:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-6 1613 CS5 15J1909 Exp:OCDD_DB5
 401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



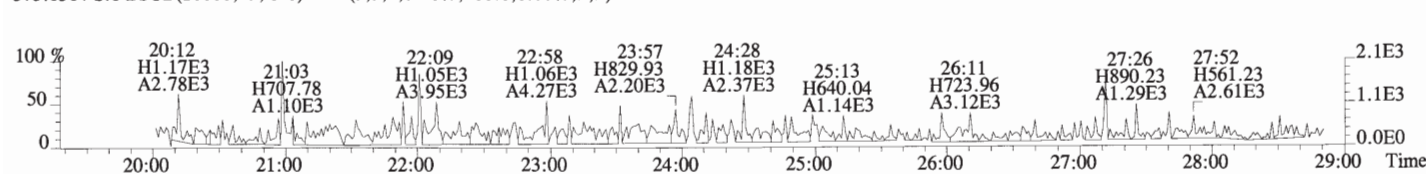
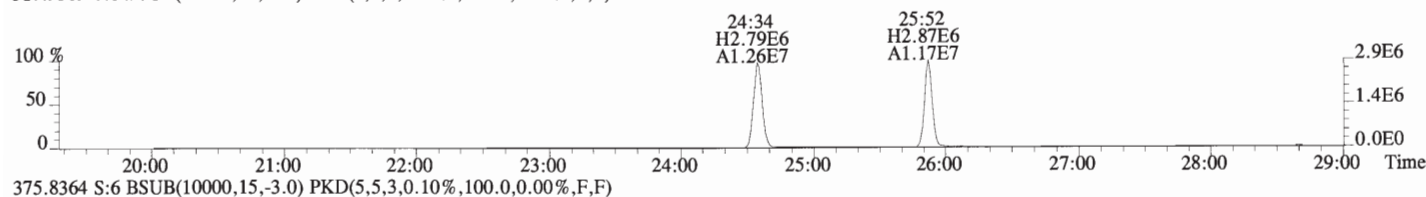
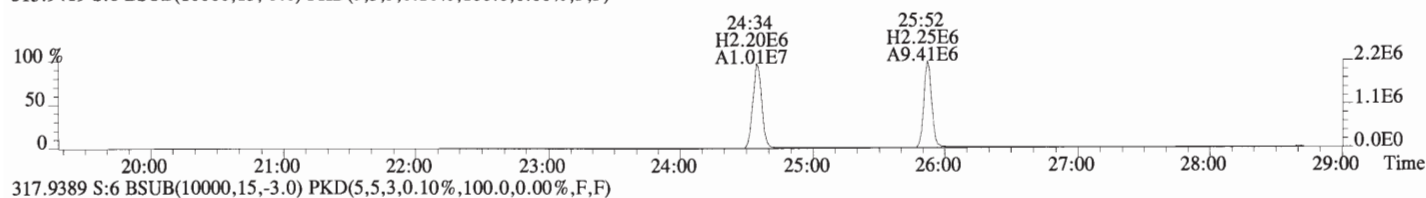
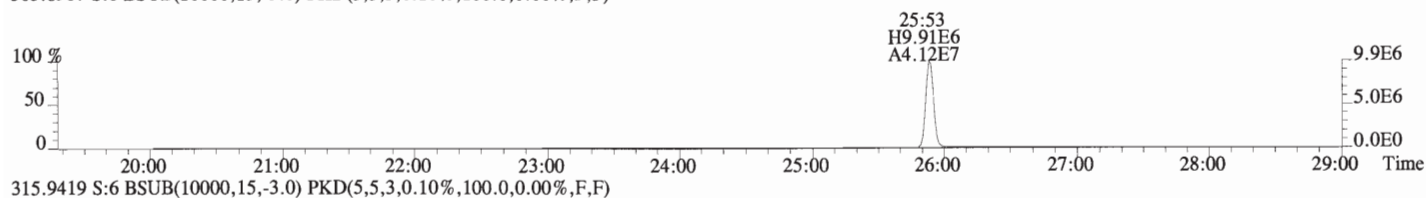
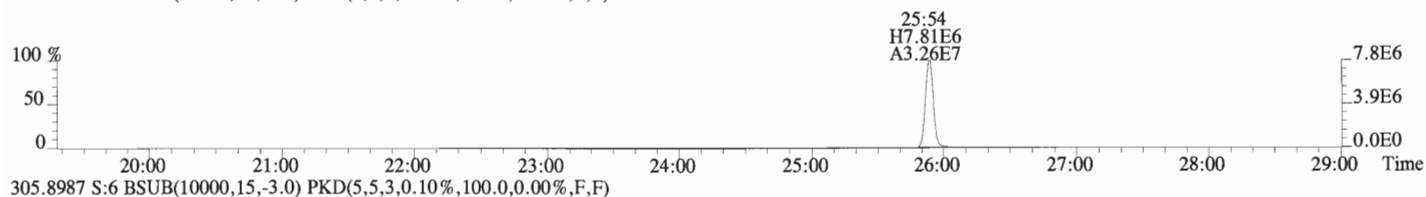
File:160407D1 #1-326 Acq: 7-APR-2016 18:12:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text: Vista Analytical Laboratory VG7 Text:ST160407D1-6 1613 CS5 15J1909 Exp:OCDD_DB5
 423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



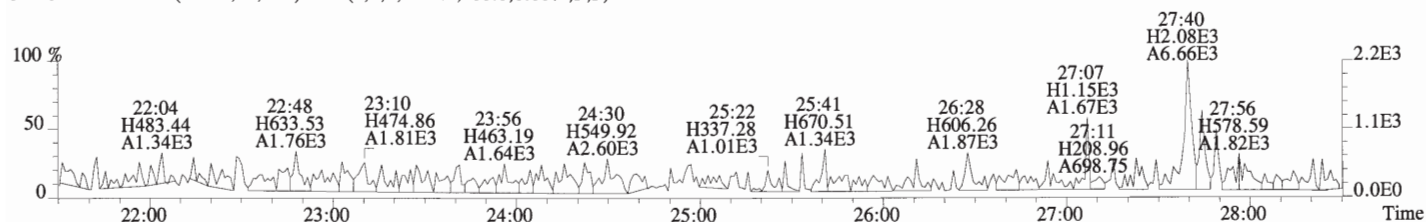
File:160407D1 #1-388 Acq: 7-APR-2016 18:12:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-6 1613 CS5 15J1909 Exp:OCDD_DB5
 457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



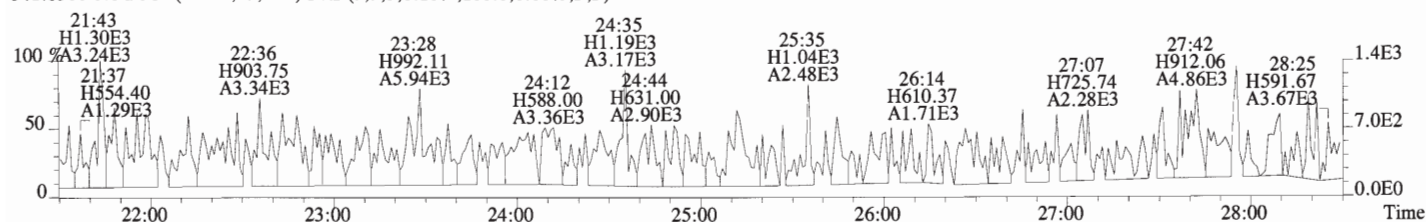
File:160407D1 #1-567 Acq: 7-APR-2016 18:12:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-6 1613 CS5 15J1909 Exp:OCDD_DB5
 303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



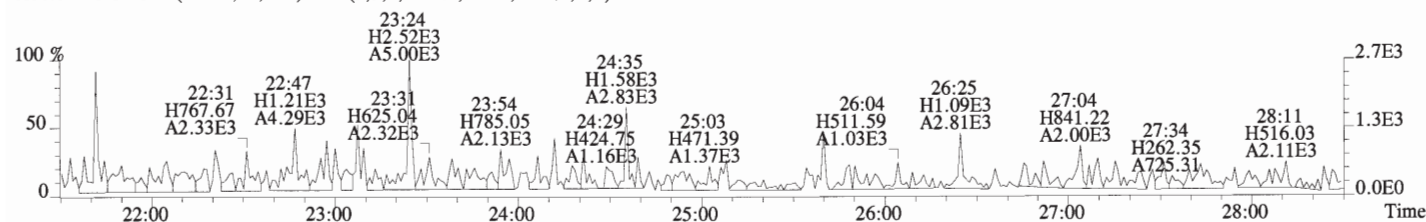
File:160407D1 #1-567 Acq: 7-APR-2016 18:12:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-6 1613 CS5 15J1909 Exp:OCDD_DB5
339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



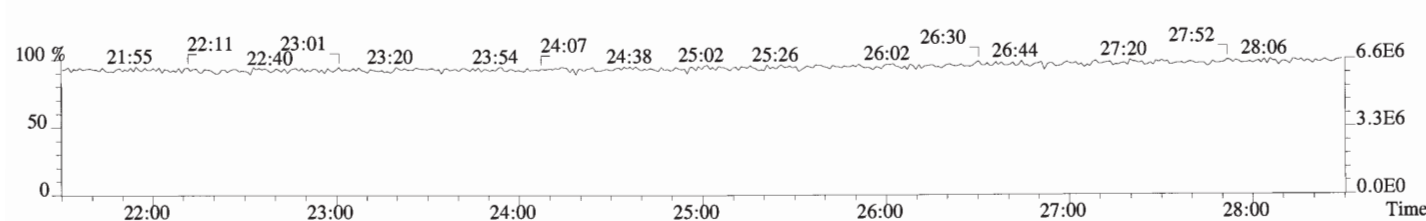
341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



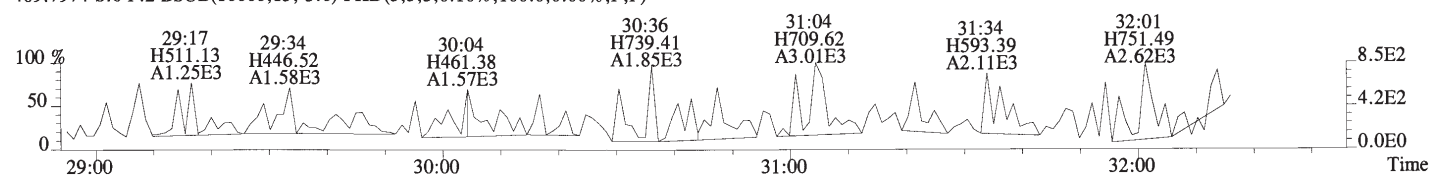
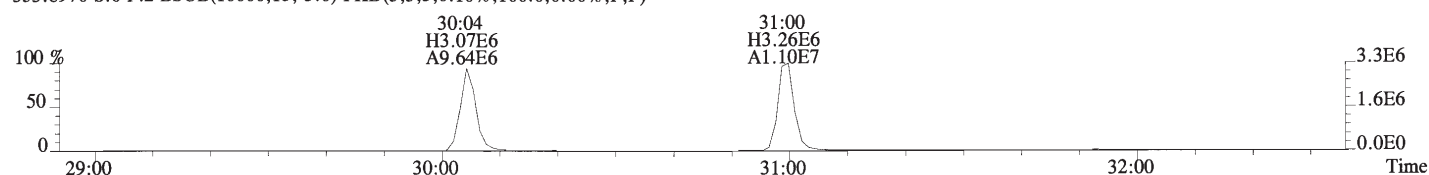
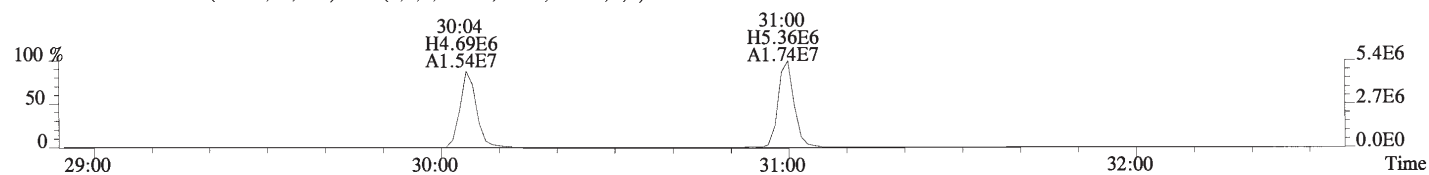
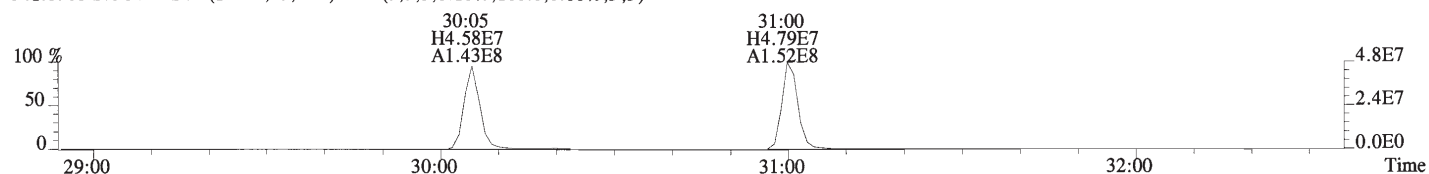
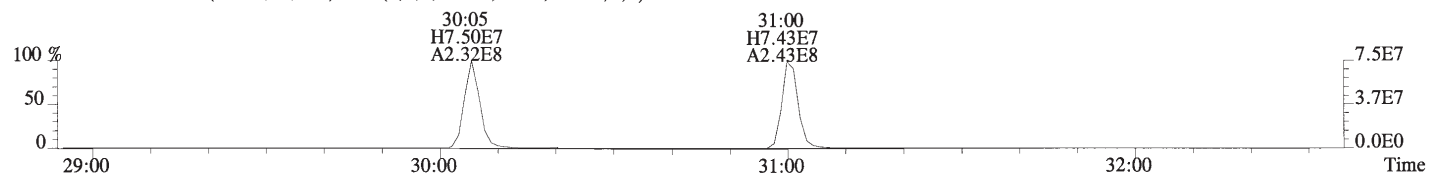
409.7974 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



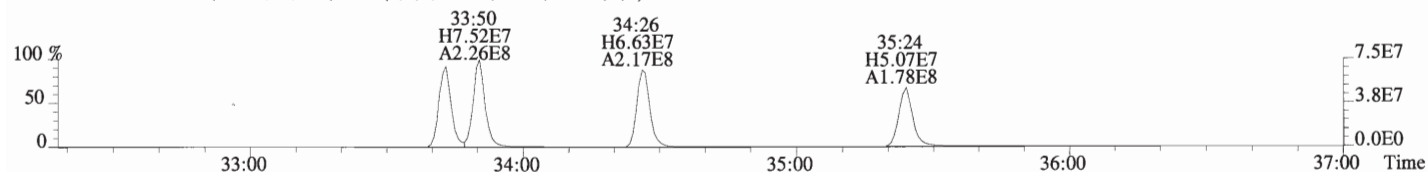
316.9824 S:6



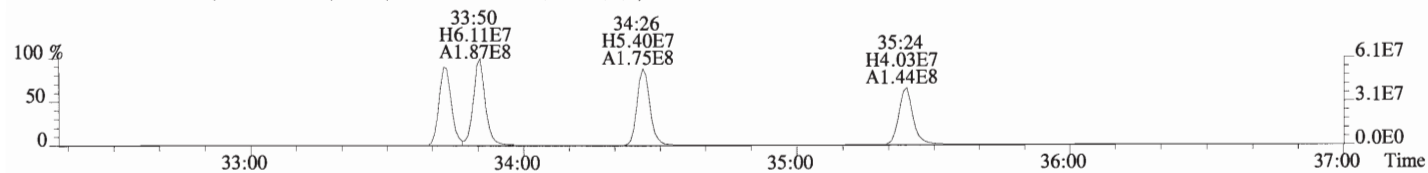
File:160407D1 #1-180 Acq: 7-APR-2016 18:12:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-6 1613 CS5 15J1909 Exp:OCDD_DB5
 339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



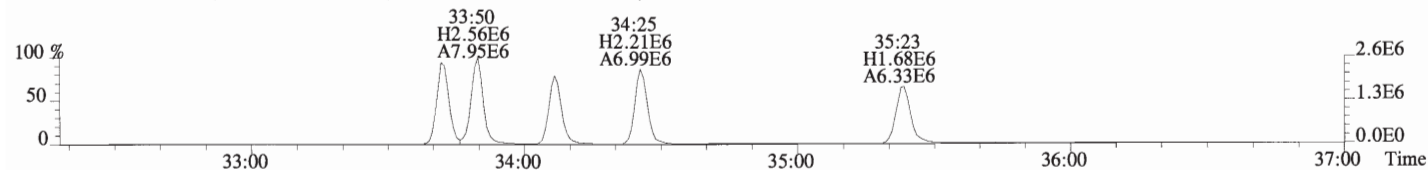
File:160407D1 #1-406 Acq: 7-APR-2016 18:12:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-6 1613 CS5 15J1909 Exp:OCDD_DB5
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



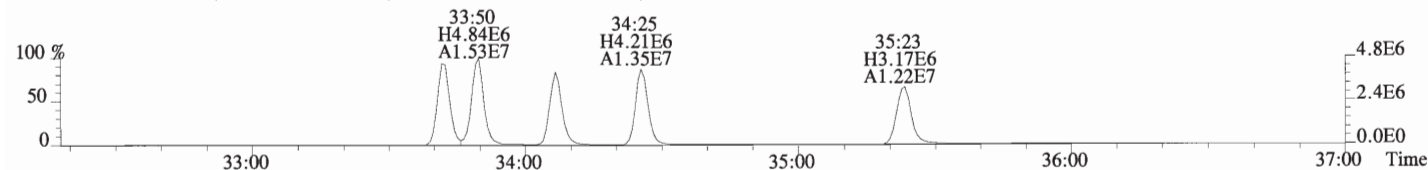
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



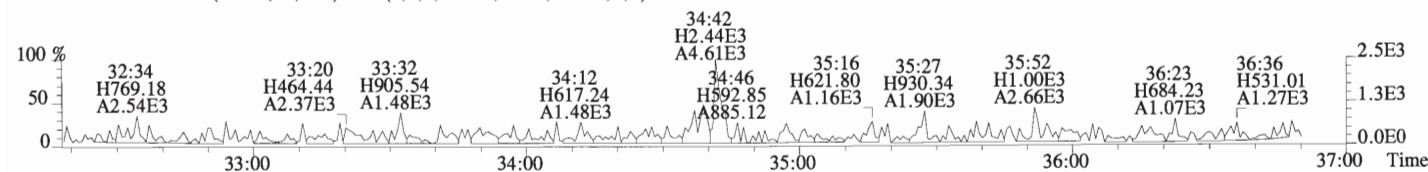
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



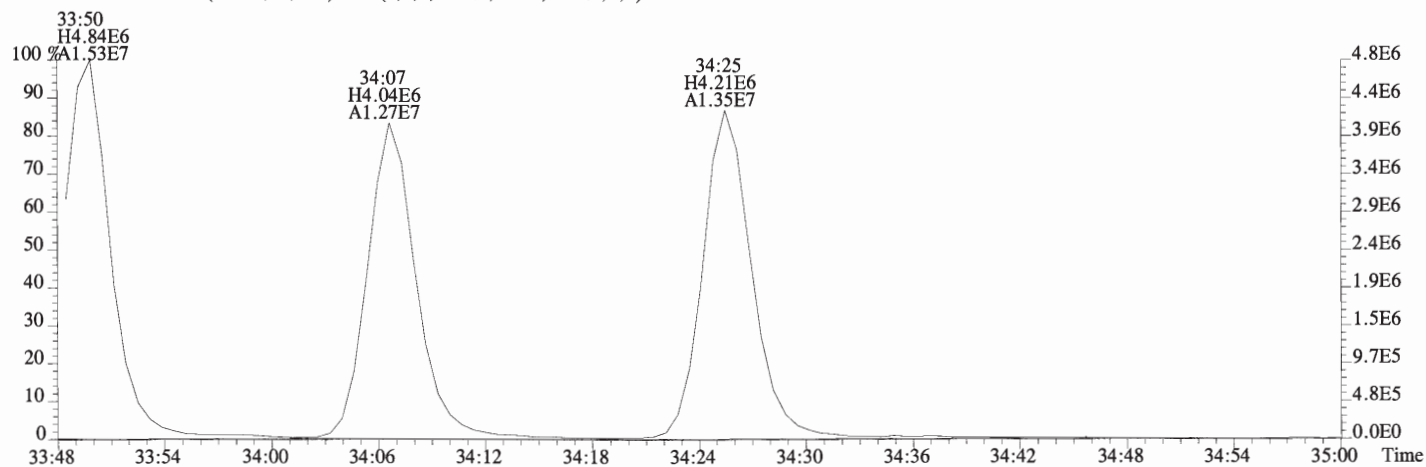
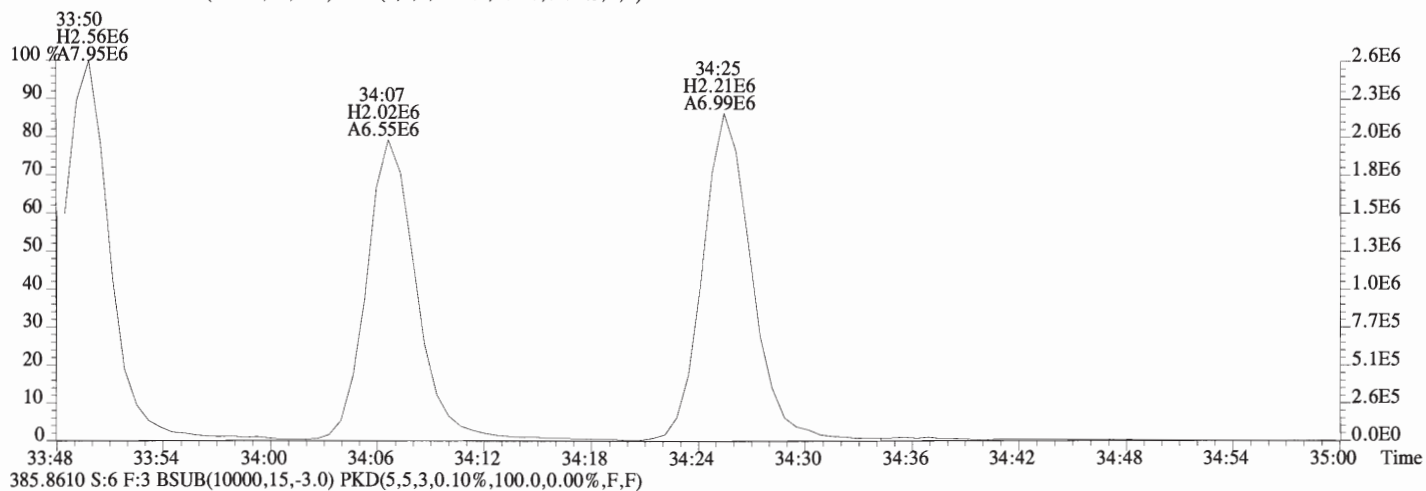
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



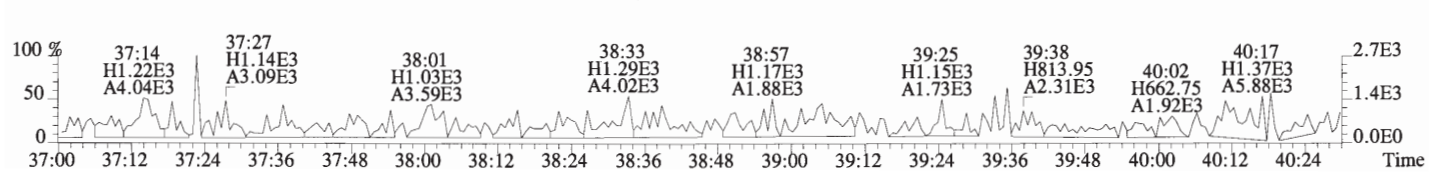
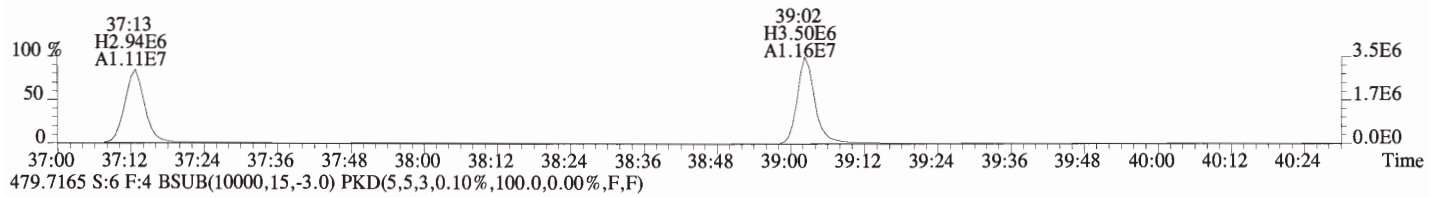
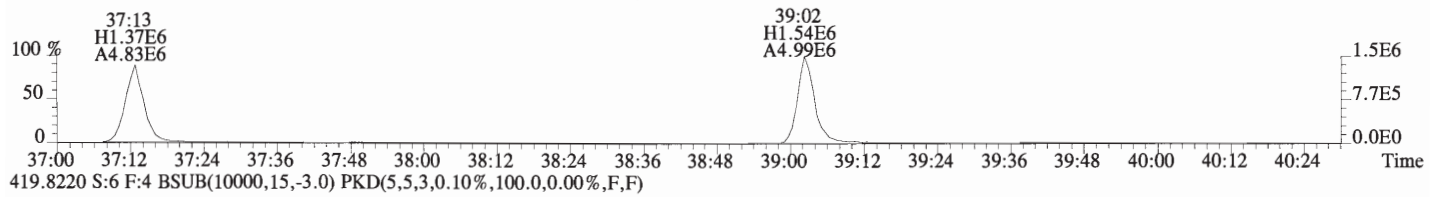
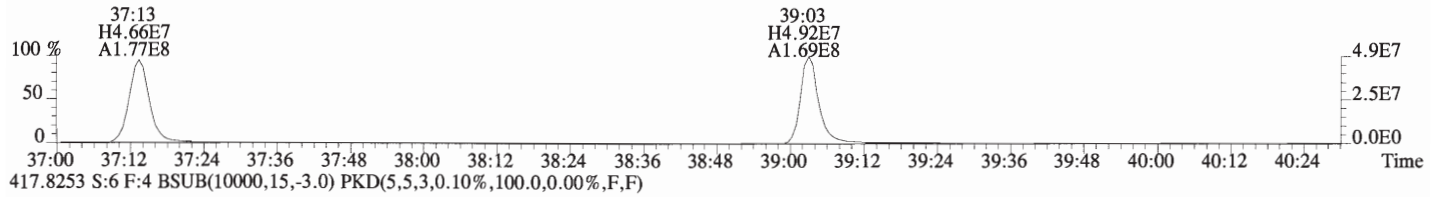
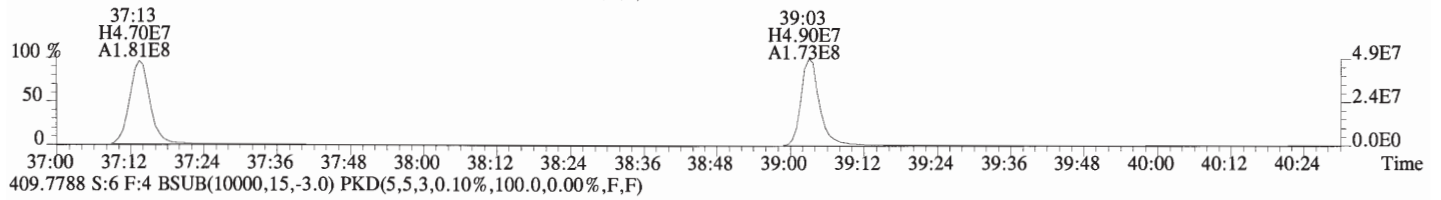
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



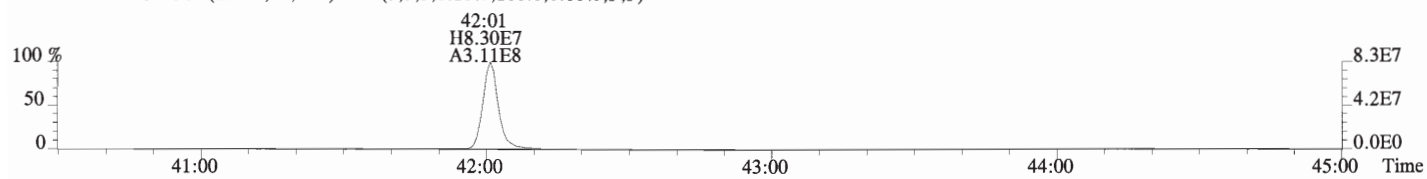
File:160407D1 #1-406 Acq: 7-APR-2016 18:12:36 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-6 1613 CS5 15J1909 Exp:OCDD_DB5
 383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



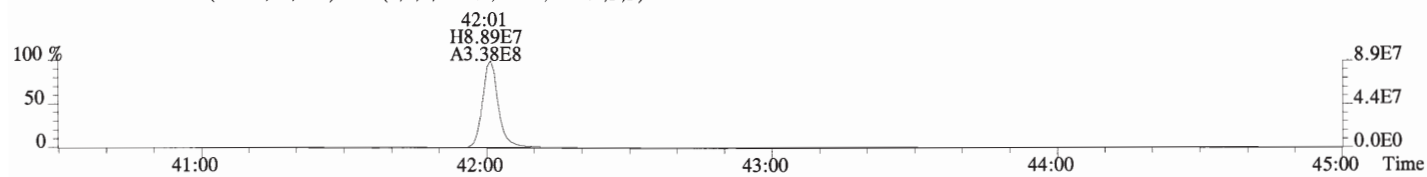
File:160407D1 #1-326 Acq: 7-APR-2016 18:12:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-6 1613 CS5 15J1909 Exp:OCDD_DB5
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



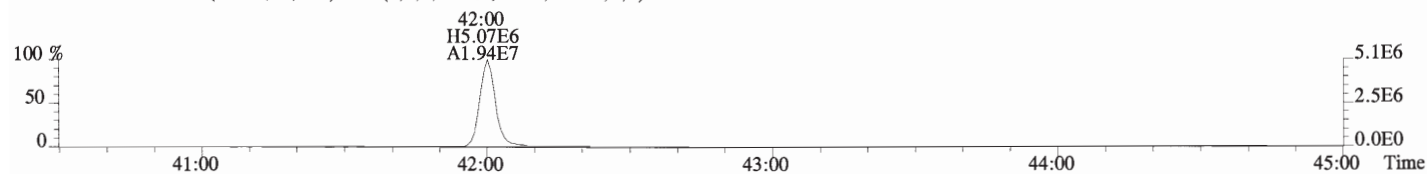
File:160407D1 #1-388 Acq: 7-APR-2016 18:12:36 GC EI+ Voltage SIR Autospec-UltimaE
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST160407D1-6 1613 CS5 15J1909 Exp:OCDD_DB5
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



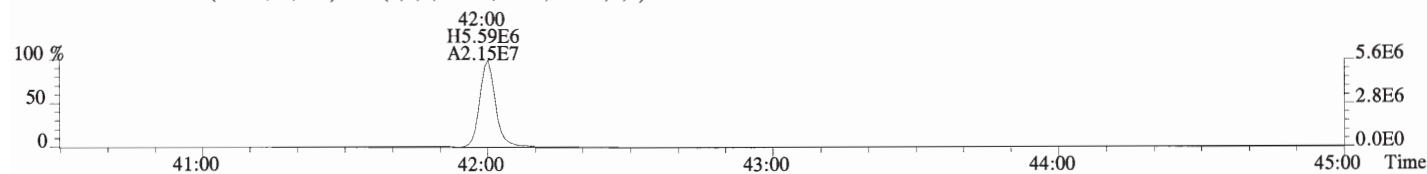
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



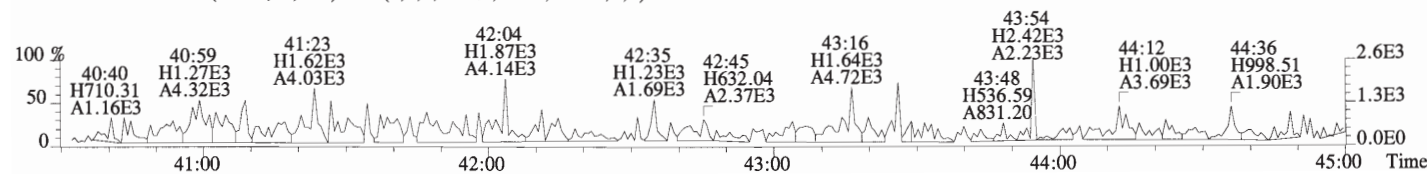
453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

CCAL ID: SS160408D1-1

Contract No.: SAS No.:

Initial Calibration Date: 4-7-16

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 160408D1 S#2 Analysis Date: 8-APR-16 Time: 15:28:50

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	9.27	7.8 - 12.9
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	y	50.5	8.2 - 12.3 (4) 39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	52.0	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	50.4	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	y	48.9	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	49.6	43.0 - 58.0
OCDD	M+2/M+4	0.88	0.76-1.02	y	106	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	y	9.52	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	53.5	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	55.0	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	50.1	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	y	51.6	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	50.0	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.26	1.05-1.43	y	52.6	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.01	0.88-1.20	y	51.8	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	y	51.2	43.0 - 58.0
OCDF	M+2/M+4	0.91	0.76-1.02	y	104	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: DB

Date: 4/8/16

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 4-7-16

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 160408D1 S#2 Analysis Date: 8-APR-16 Time: 15:28:50

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	y	98.4	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	y	83.7	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.30	1.05-1.43	y	91.8	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.31	1.05-1.43	y	99.0	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	97.4	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	96.2	72.0 - 138.0
13C-OCDD	M/M+2	0.90	0.76-1.02	y	184	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.80	0.65-0.89	y	97.8	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	80.4	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	80.4	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	94.9	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	123	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	100	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	125	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.44	0.37-0.51	y	99.3	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.43	0.37-0.51	y	113	77.0 - 129.0
13C-OCDF	M+2/M+4	0.90	0.76-1.02	y	189	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					8.77	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: DB

Date: 4/8/16

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 4-7-16

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 160408D1 S#2 Analysis Date: 8-APR-16 Time: 15:28:50

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002

(1) Contract-required limits for
Relative Retention Times (RRT)
as specified in Table 2, Method 1613. 10/94

LABELED COMPOUNDS

13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.200	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.154	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.189	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.024	0.989-1.052

Analyst: DBDate: 4/8/16

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 4-7-16

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 160408D1 S#2 Analysis Date: 8-APR-16 Time: 15:28:50

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.000	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001

(1) Contract-required limits for
Relative Retention Times (RRT)
as specified in Table 2, Method 1613. 10/94

LABELED COMPOUNDS

13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.010	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.037	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.026	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.091	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.145	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.129	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.225	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.231	1.091-1.371

Analyst: DB

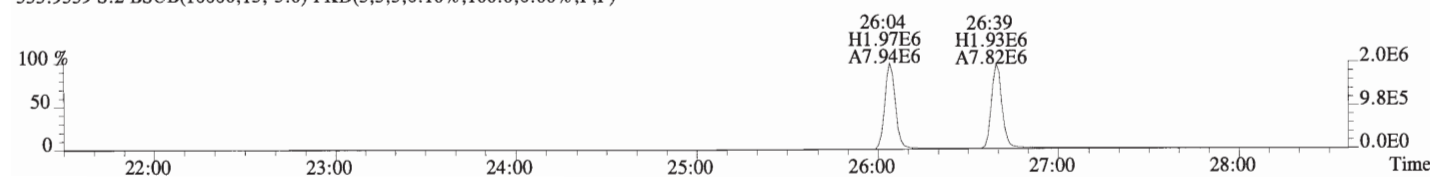
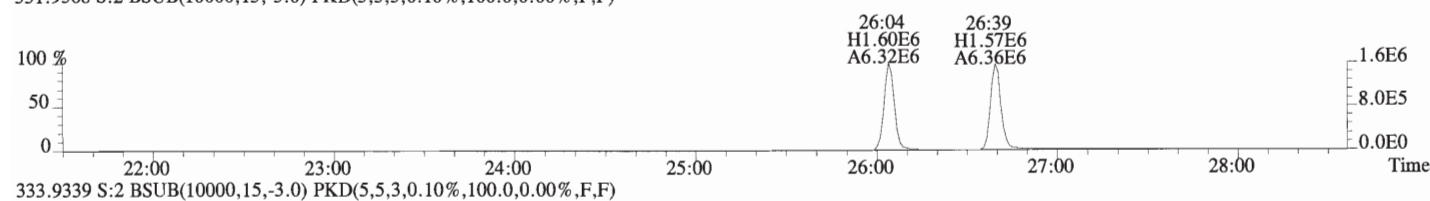
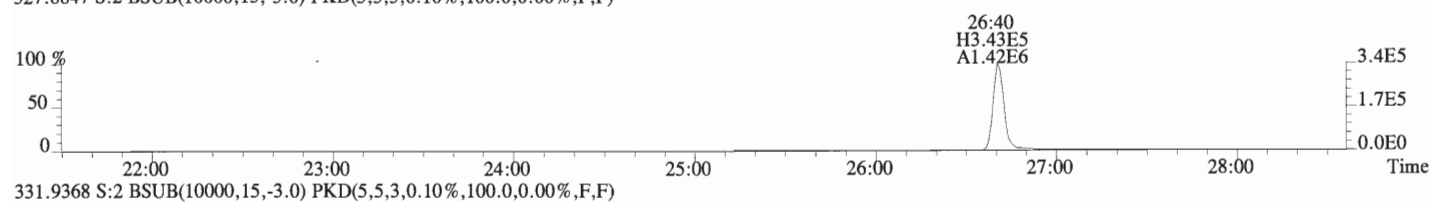
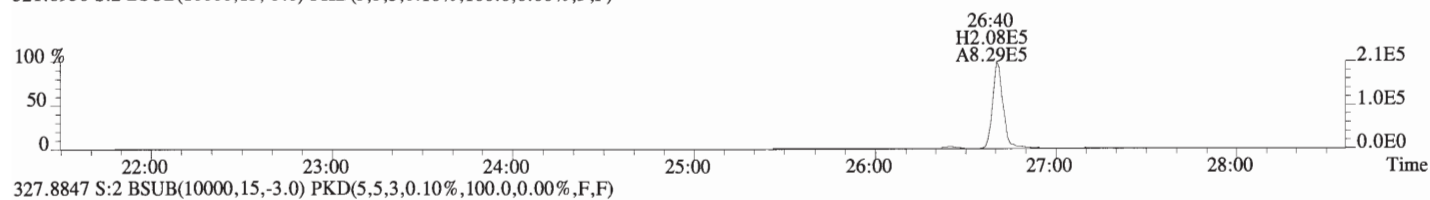
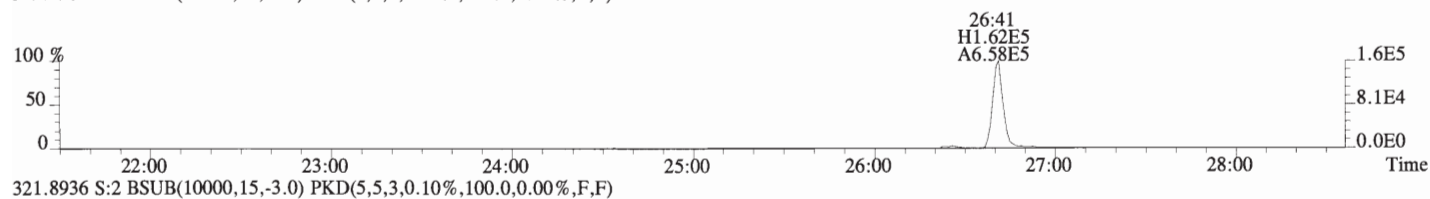
Date: 4/8/16

Client ID: 1613 CS3 15J1912 Filename: 160408D1 S:2 Acq: 8-APR-16 15:28:50 ConCal: ST160408D1-1 Page 2 of 2
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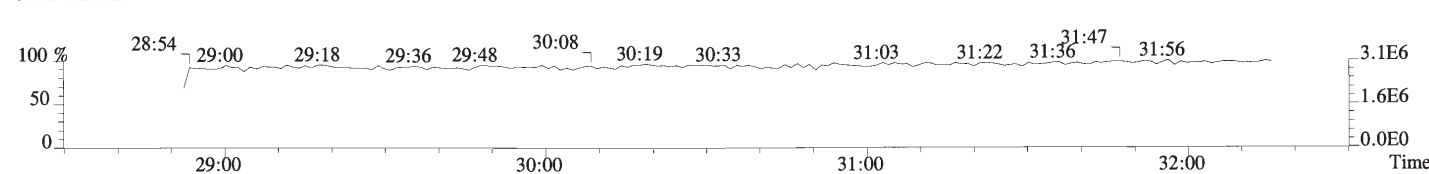
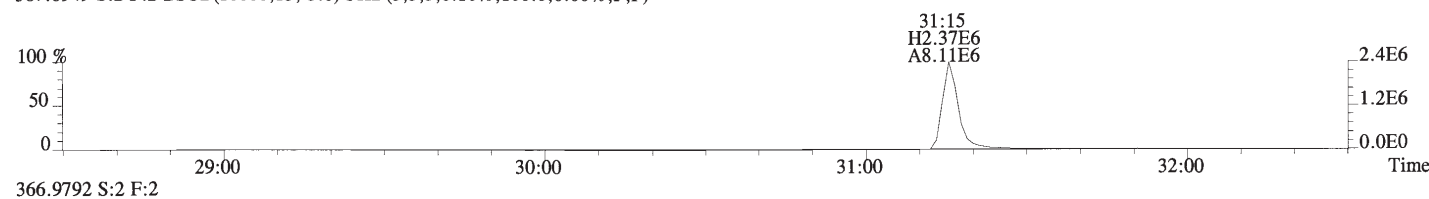
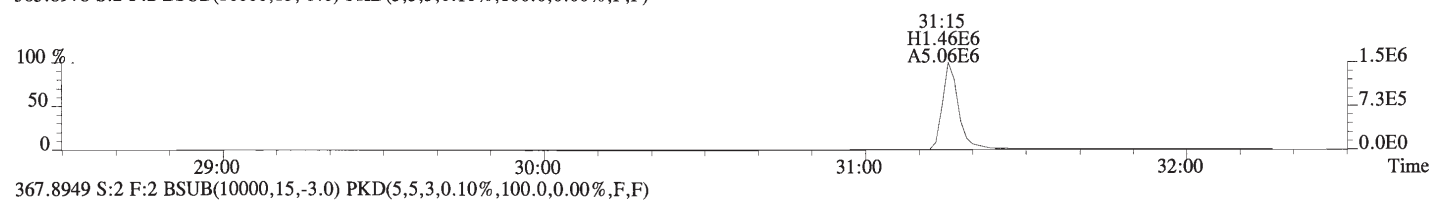
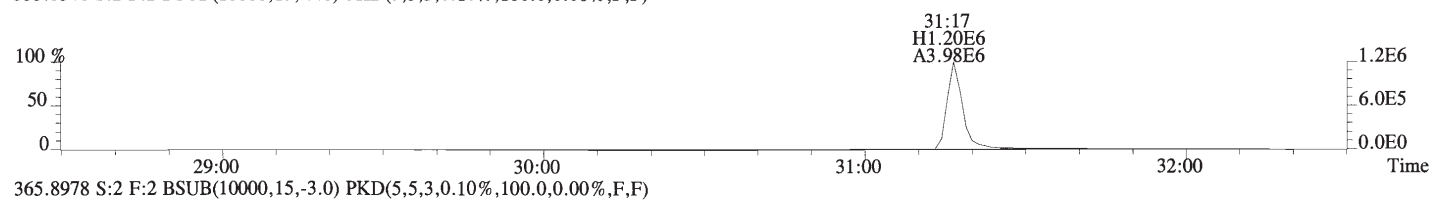
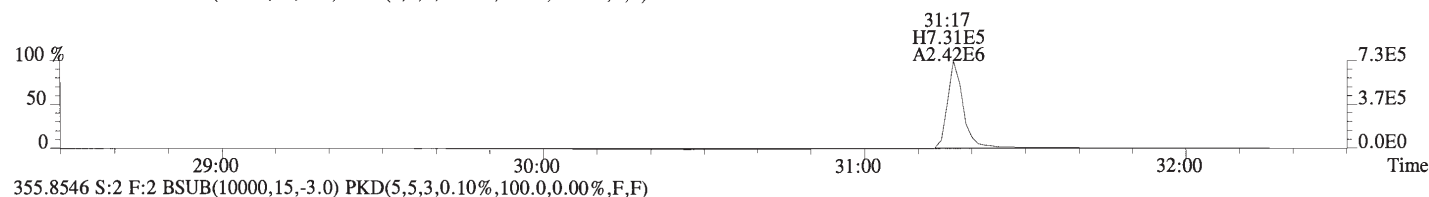
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		Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL				
		2,3,7,8-TCDD	1.49e+06	0.79	y	1.13	26:41	1.001	9.2673	*	2.5	*	Total Tetra-Dioxins	9.32	10.1	*
		1,2,3,7,8-PeCDD	6.40e+06	0.61	y	0.96	31:17	1.000	50.479	*	2.5	*	Total Penta-Dioxins	50.5	50.9	*
		1,2,3,4,7,8-HxCDD	6.17e+06	1.25	y	0.99	34:36	1.001	52.014	*	2.5	*	Total Hexa-Dioxins	152	152	*
		1,2,3,6,7,8-HxCDD	6.97e+06	1.25	y	1.05	34:43	1.000	50.374	*	2.5	*	Total Hepta-Dioxins	50.7	51.7	*
		1,2,3,7,8,9-HxCDD	6.42e+06	1.25	y	1.07	35:01	1.000	48.948	*	2.5	*	Total Tetra-Furans	9.81	10.3	*
		1,2,3,4,6,7,8-HpCDD	5.82e+06	1.03	y	1.05	38:30	1.000	49.601	*	2.5	*	Total Penta-Furans	111.16	111.80	*
		OCDD	1.09e+07	0.88	y	0.96	41:47	1.000	106.21	*	2.5	*	Total Hexa-Furans	205	206	*
													Total Hepta-Furans	103	103	*
		2,3,7,8-TCDF	2.30e+06	0.77	y	1.12	25:53	1.001	9.5218	*	2.5	*				
		1,2,3,7,8-PeCDF	1.04e+07	1.57	y	1.01	30:05	1.000	53.476	*	2.5	*				
		2,3,4,7,8-PeCDF	1.12e+07	1.54	y	0.90	31:01	1.001	55.048	*	2.5	*				
		1,2,3,4,7,8-HxCDF	1.02e+07	1.24	y	1.16	33:42	1.000	50.088	*	2.5	*				
		1,2,3,6,7,8-HxCDF	1.18e+07	1.28	y	1.16	33:50	1.000	51.573	*	2.5	*				
		2,3,4,6,7,8-HxCDF	1.04e+07	1.26	y	1.21	34:26	1.000	49.996	*	2.5	*				
		1,2,3,7,8,9-HxCDF	8.78e+06	1.26	y	1.12	35:24	1.001	52.570	*	2.5	*				
		1,2,3,4,6,7,8-HpCDF	9.25e+06	1.01	y	1.43	37:13	1.001	51.759	*	2.5	*				
		1,2,3,4,7,8,9-HpCDF	7.90e+06	1.05	y	1.32	39:03	1.000	51.195	*	2.5	*				
		OCDF	1.47e+07	0.91	y	1.03	42:01	1.000	104.15	*	2.5	*				
													Rec	Qual		
IS		13C-2,3,7,8-TCDD	1.42e+07	0.81	y	1.01	26:40	1.023	98.423				98.4			
IS		13C-1,2,3,7,8-PeCDD	1.32e+07	0.62	y	1.10	31:17	1.200	83.719				83.7			
IS		13C-1,2,3,4,7,8-HxCDD	1.20e+07	1.30	y	0.70	34:35	1.014	91.843				91.8			
IS		13C-1,2,3,6,7,8-HxCDD	1.32e+07	1.31	y	0.72	34:42	1.017	99.037				99.0			
IS		13C-1,2,3,7,8,9-HxCDD	1.22e+07	1.26	y	0.68	35:00	1.026	97.429				97.4			
IS		13C-1,2,3,4,6,7,8-HpCDD	1.12e+07	1.06	y	0.62	38:30	1.129	96.185				96.2			
IS		13C-OCDD	2.15e+07	0.90	y	0.63	41:47	1.225	183.78				91.9			
IS		13C-2,3,7,8-TCDF	2.16e+07	0.80	y	0.90	25:52	0.992	97.816				97.8			
IS		13C-1,2,3,7,8-PeCDF	1.93e+07	1.57	y	0.98	30:05	1.154	80.384				80.4			
IS		13C-2,3,4,7,8-PeCDF	2.25e+07	1.56	y	1.15	30:60	1.189	80.442				80.4			
IS		13C-1,2,3,4,7,8-HxCDF	1.76e+07	0.53	y	1.00	33:41	0.988	94.931				94.9			
IS		13C-1,2,3,6,7,8-HxCDF	1.97e+07	0.53	y	0.86	33:49	0.992	122.61				123			
IS		13C-2,3,4,6,7,8-HxCDF	1.72e+07	0.52	y	0.92	34:26	1.010	100.43				100			
IS		13C-1,2,3,7,8,9-HxCDF	1.49e+07	0.52	y	0.64	35:23	1.037	124.53				125			
IS		13C-1,2,3,4,6,7,8-HpCDF	1.25e+07	0.44	y	0.68	37:12	1.091	99.310				99.3			
IS		13C-1,2,3,4,7,8,9-HpCDF	1.17e+07	0.43	y	0.55	39:02	1.145	113.47				113			
IS		13C-OCDF	2.75e+07	0.90	y	0.78	41:60	1.231	189.20				94.6			
C/Up		37Cl-2,3,7,8-TCDD	1.42e+06			1.14	26:41	1.024	8.7728				21.9			
RS/RT		13C-1,2,3,4-TCDD	1.43e+07	0.80	y	1.00	26:04	*	100.00							
RS		13C-1,2,3,4-TCDF	2.45e+07	0.80	y	1.00	24:34	*	100.00							
RS/RT		13C-1,2,3,4,6,9-HxCDF	1.86e+07	0.52	y	1.00	34:06	*	100.00							

Integrations
by DB
Analyst:
Date: 4/8/16
Reviewed
by a/c
Analyst:
Date: 4/11/16

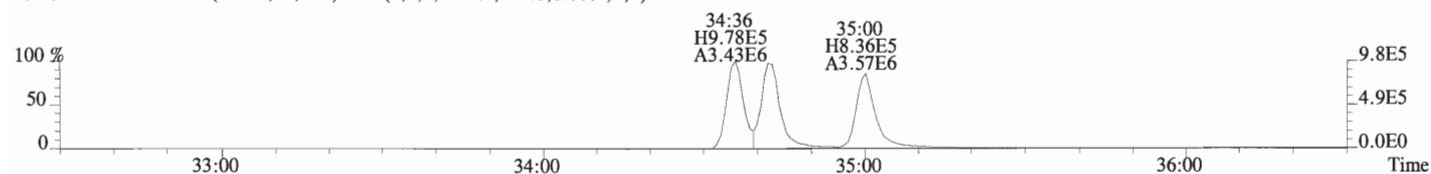
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319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



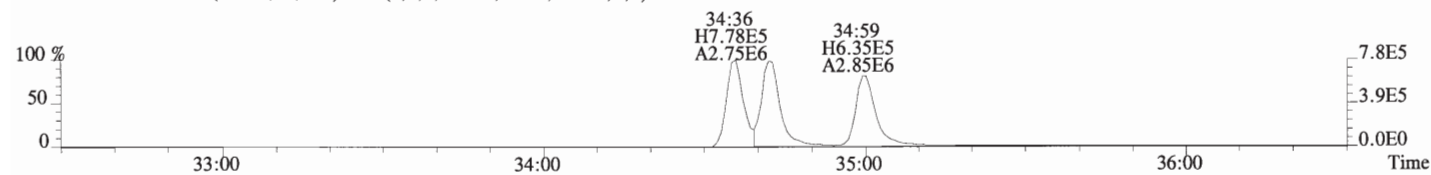
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 353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



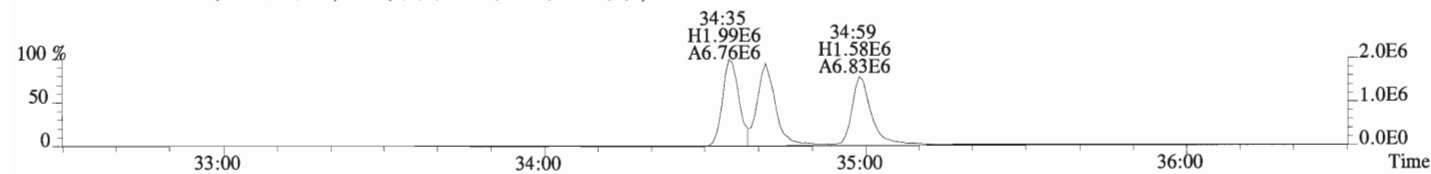
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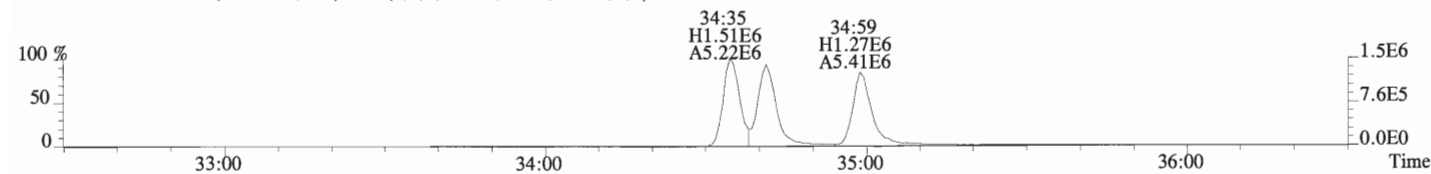
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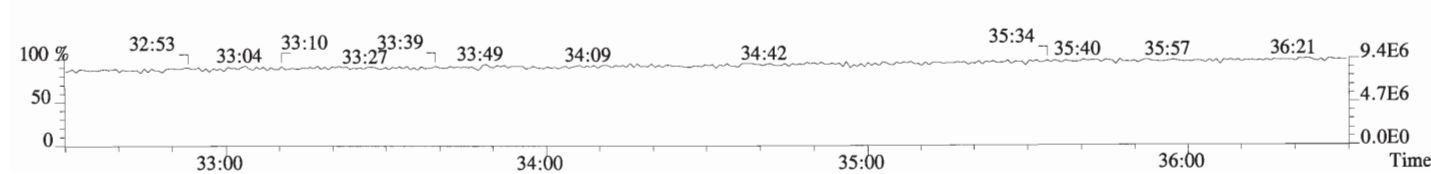
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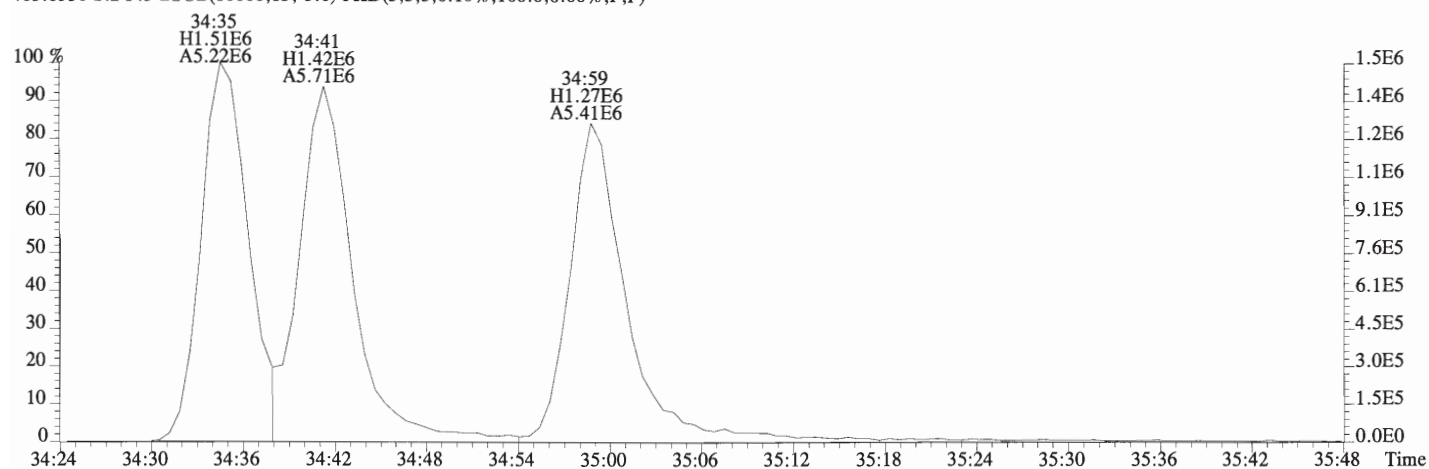
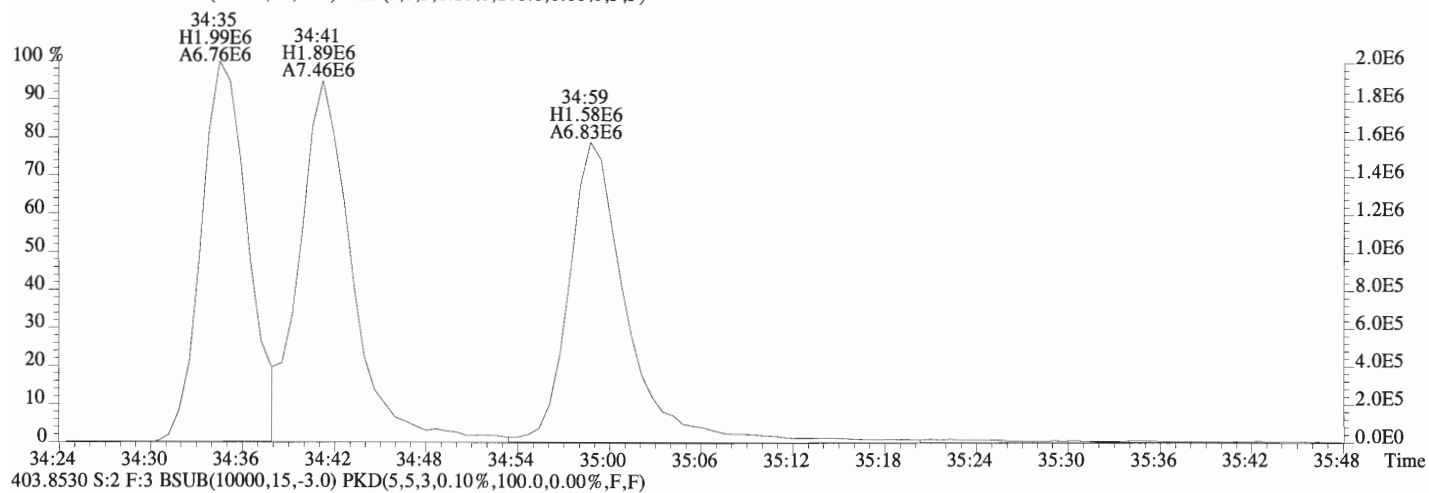
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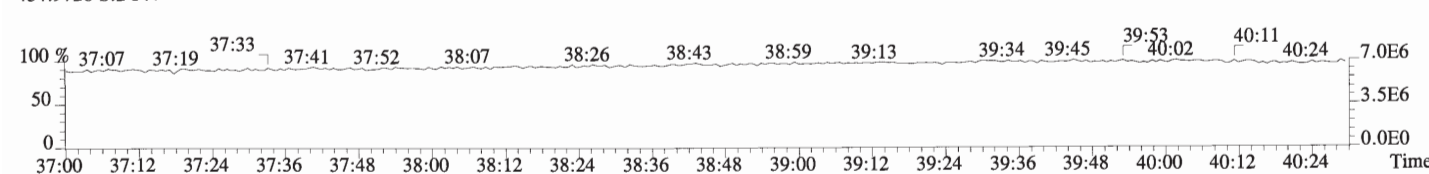
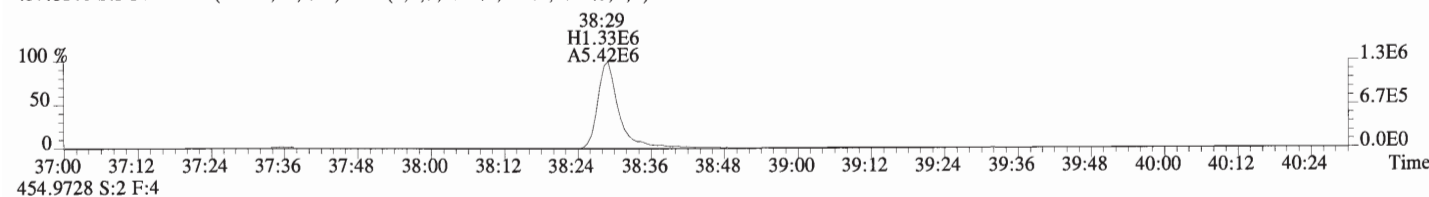
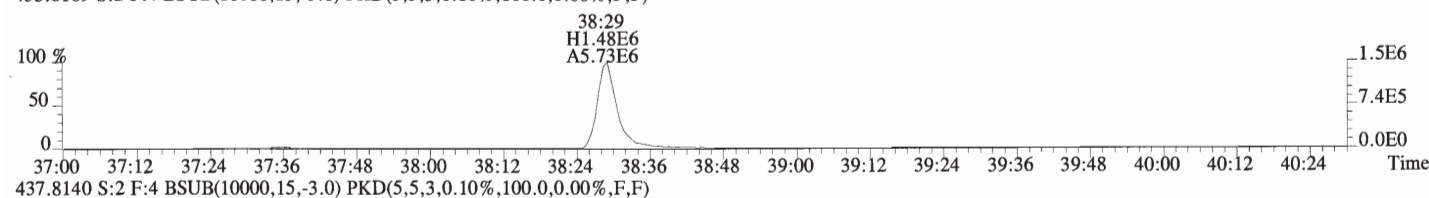
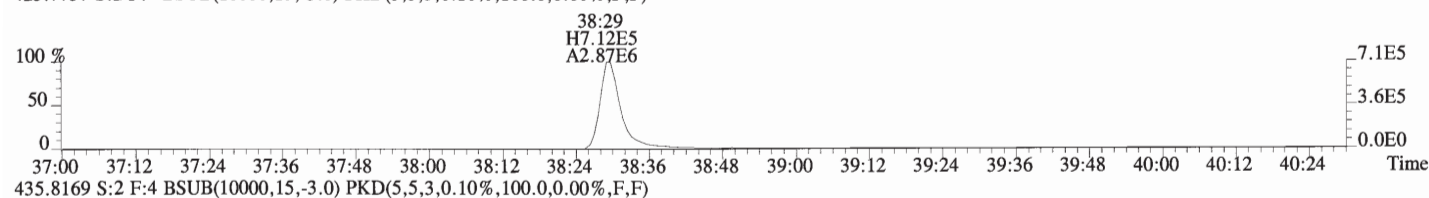
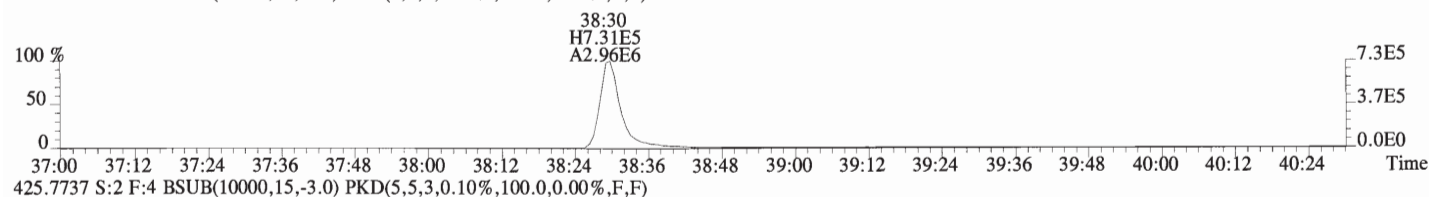
392.9760 S:2 F:3



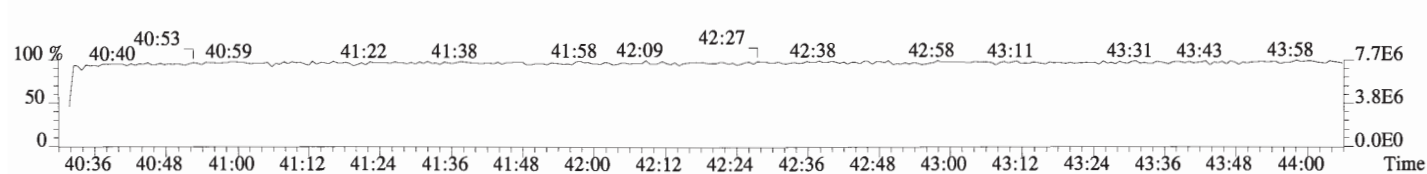
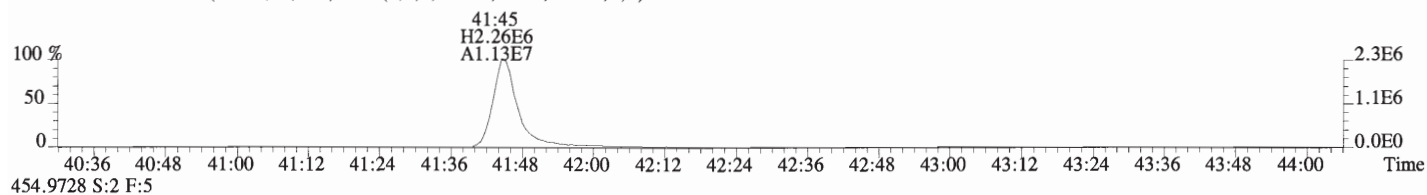
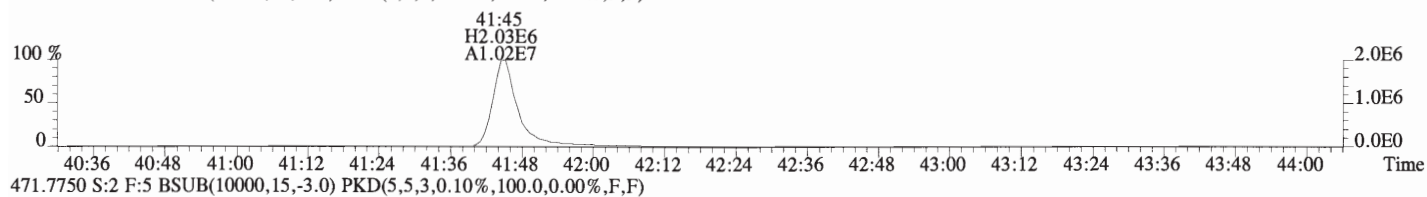
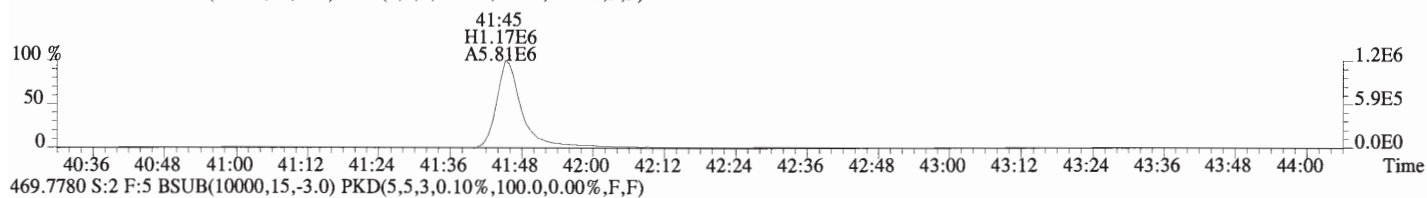
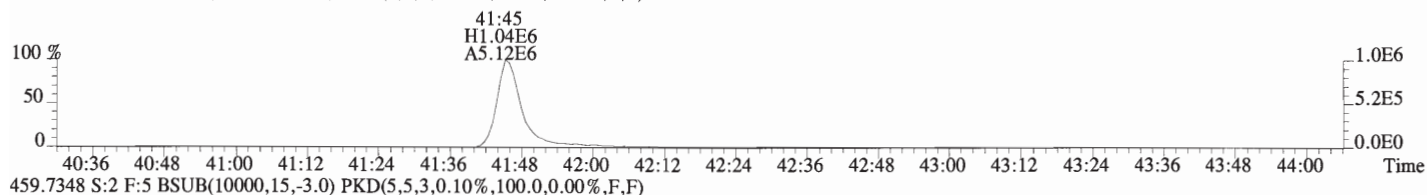
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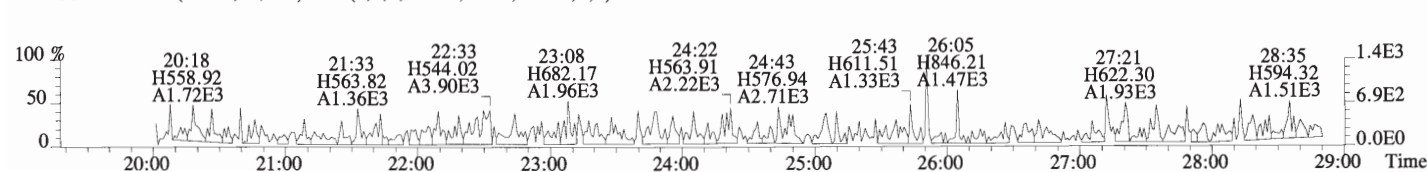
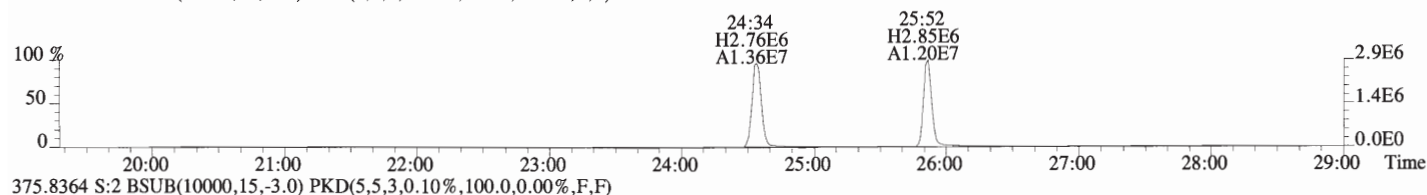
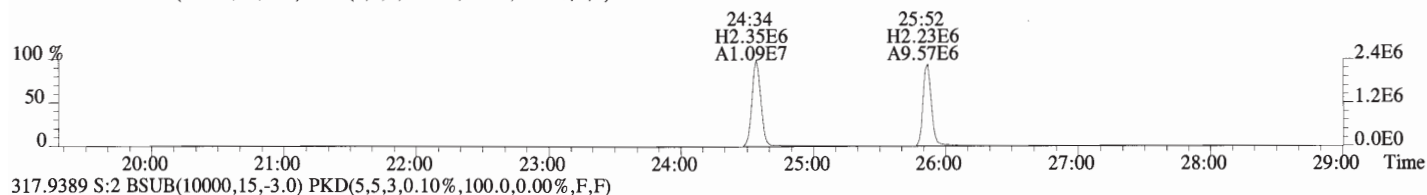
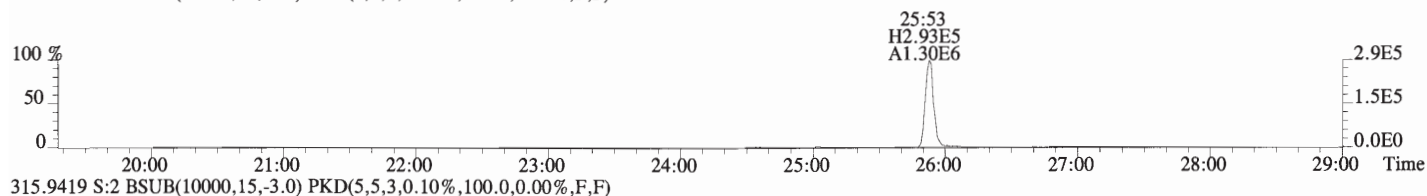
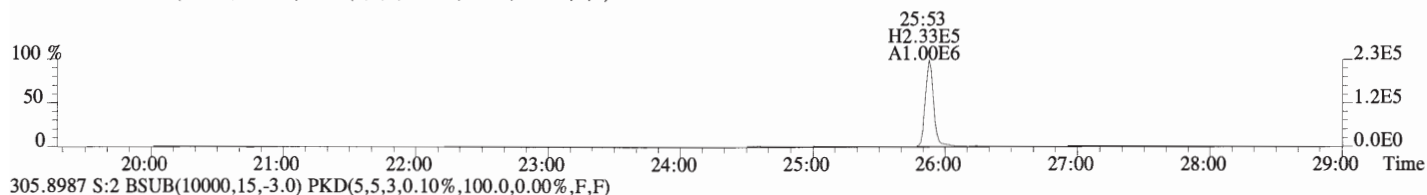
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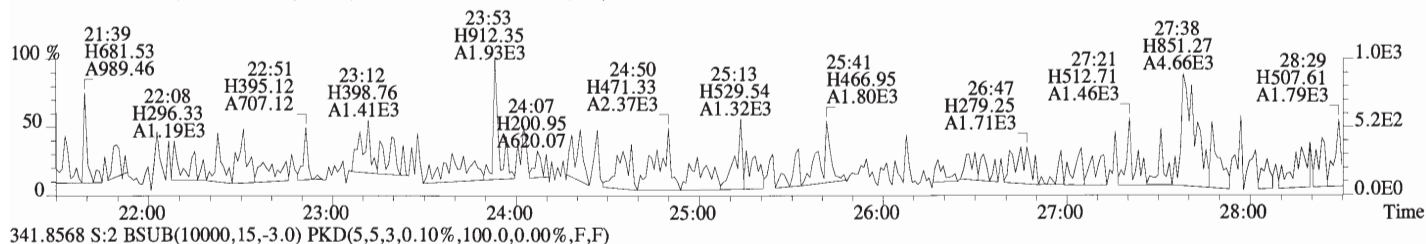
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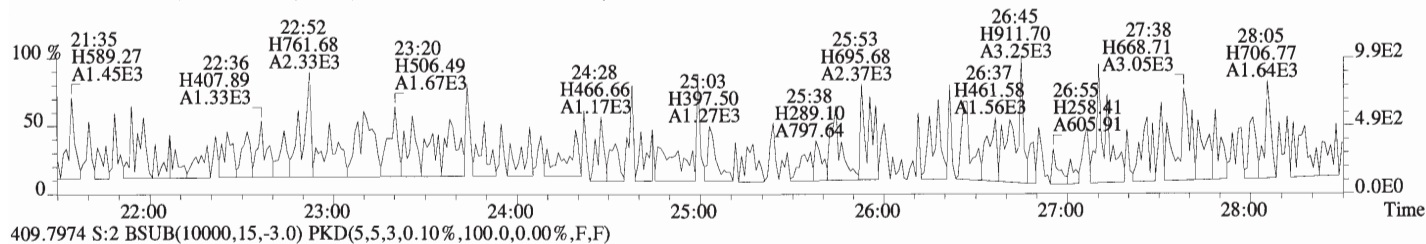
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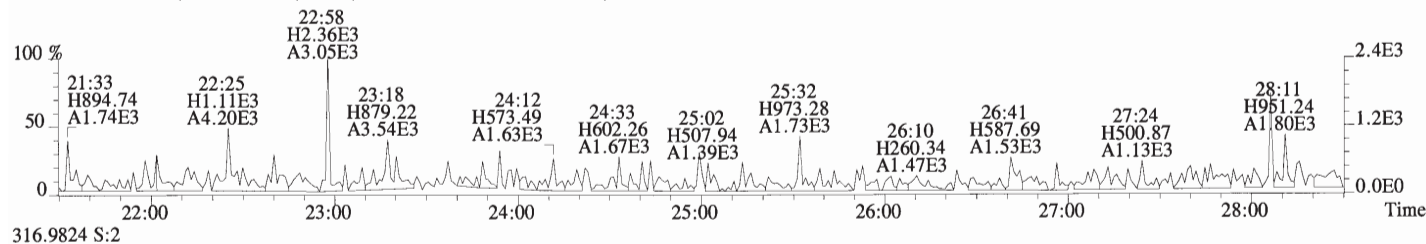
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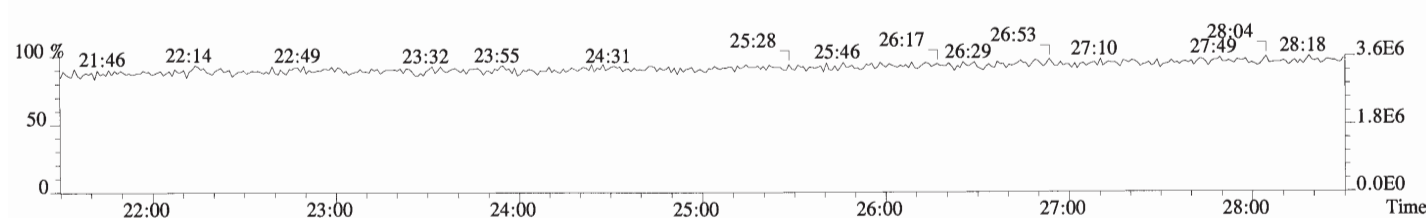
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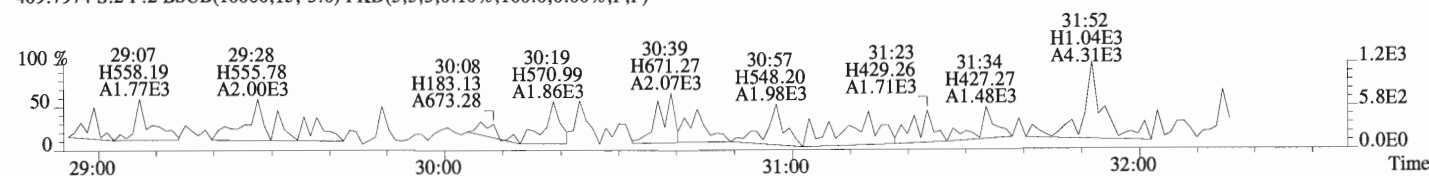
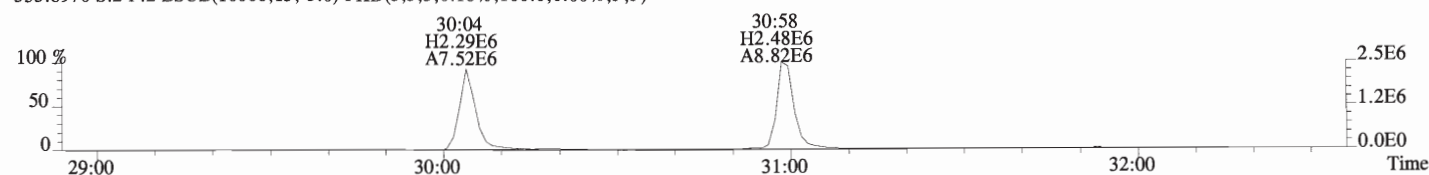
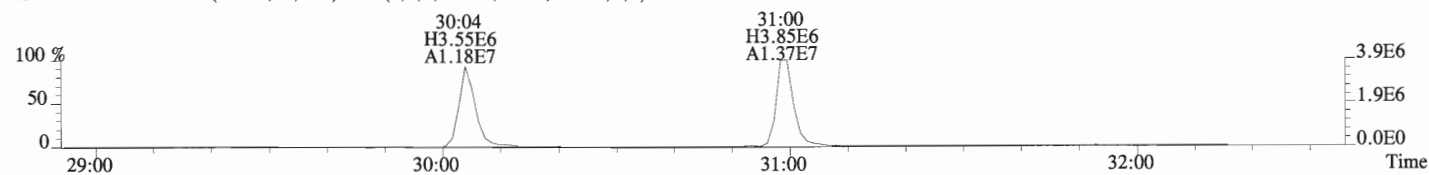
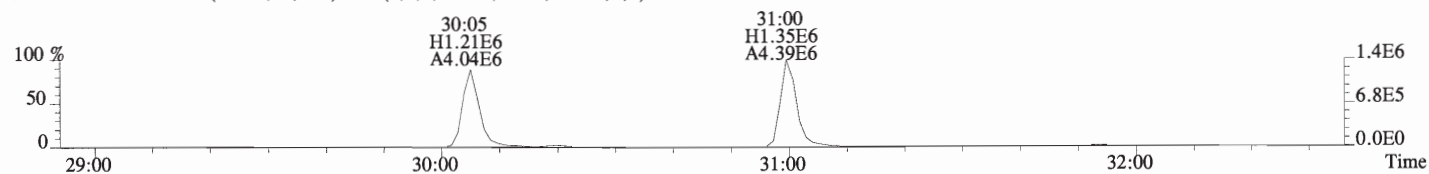
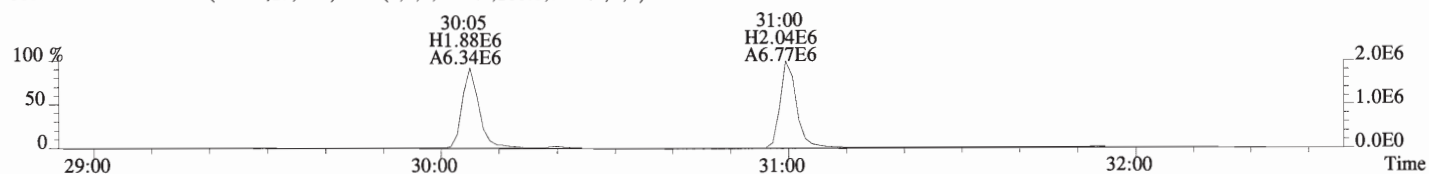
409.7974 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



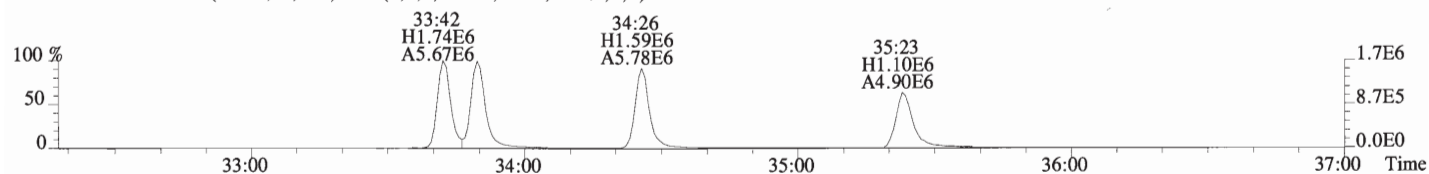
316.9824 S:2



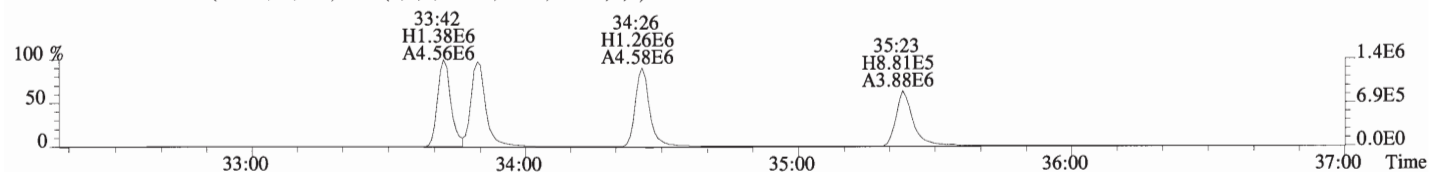
File:160408D1 #1-180 Acq: 8-APR-2016 15:28:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG7 Text:SS160408D1-1 1613 CS3 15J1912 Exp:OCDD_DB5
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



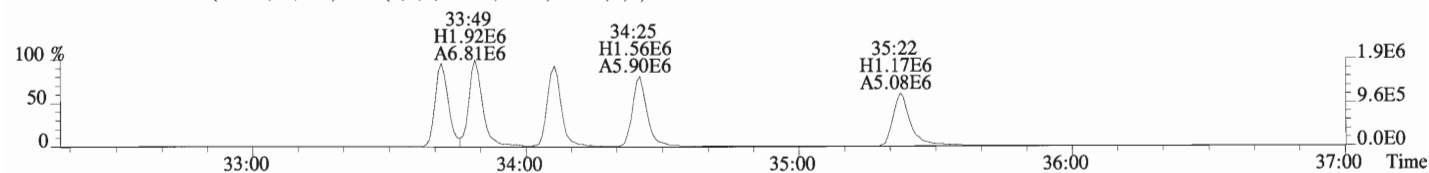
File:160408D1 #1-407 Acq: 8-APR-2016 15:28:50 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:SS160408D1-1 1613 CS3 15J1912 Exp:OCDD_DB5
 373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



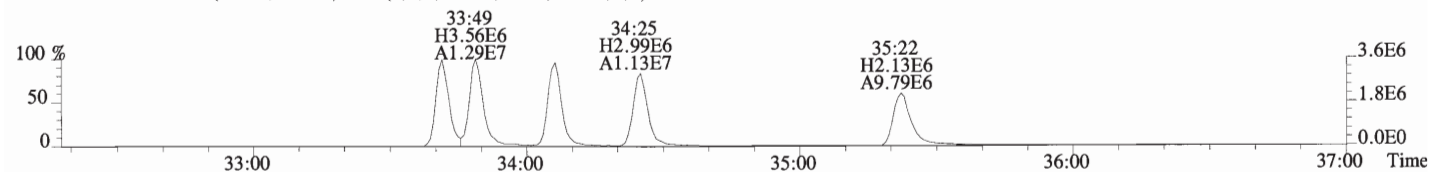
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



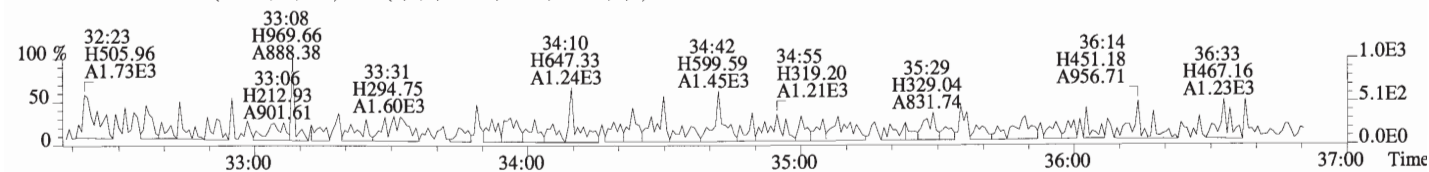
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



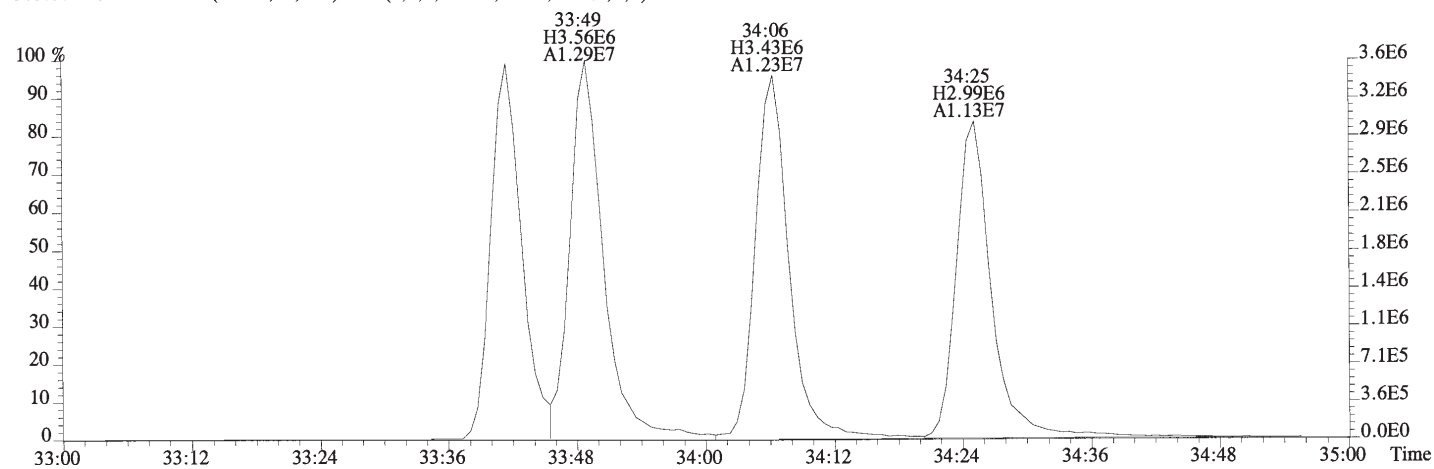
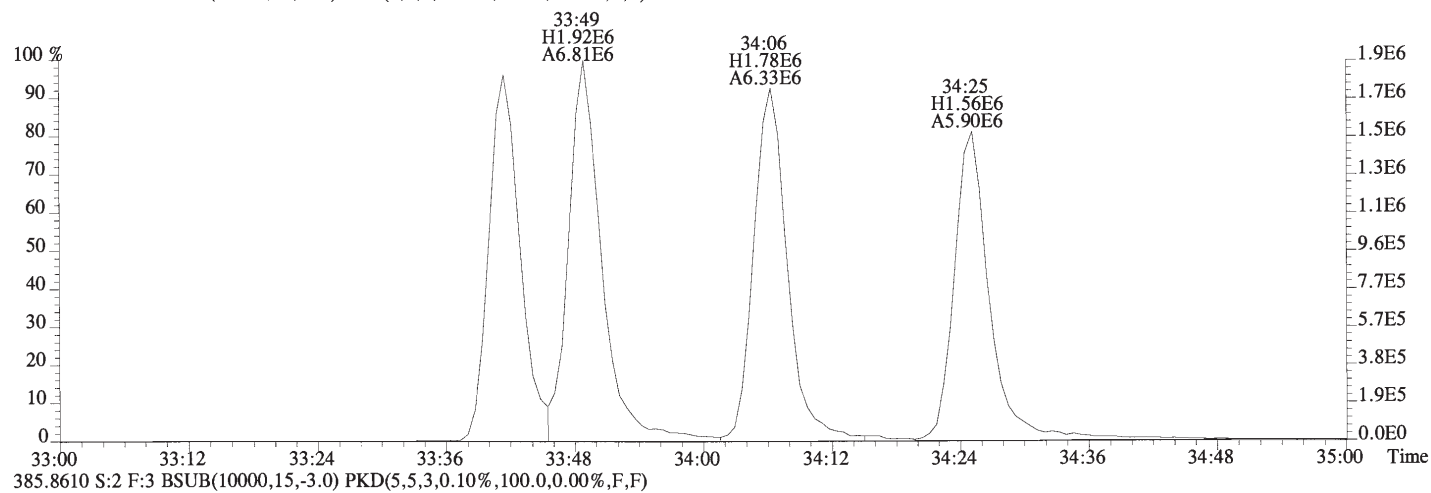
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



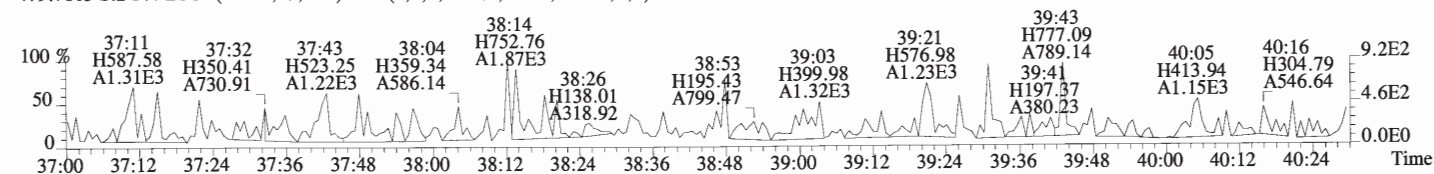
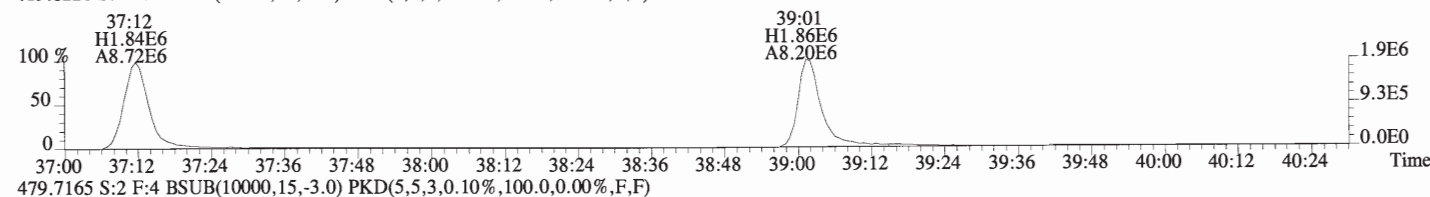
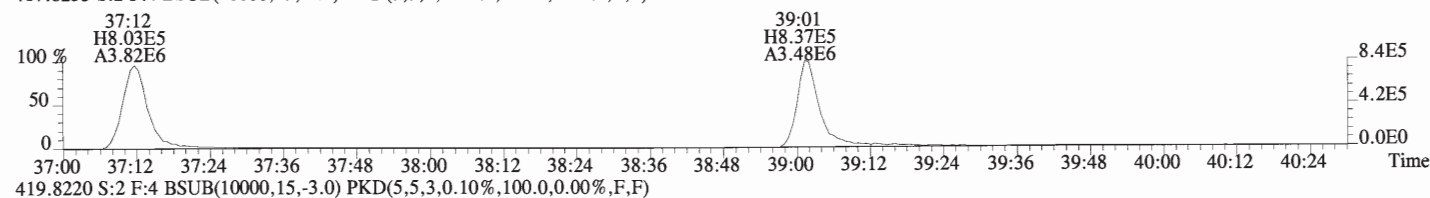
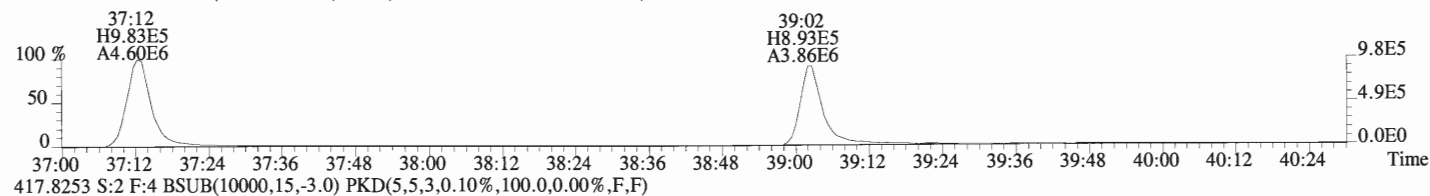
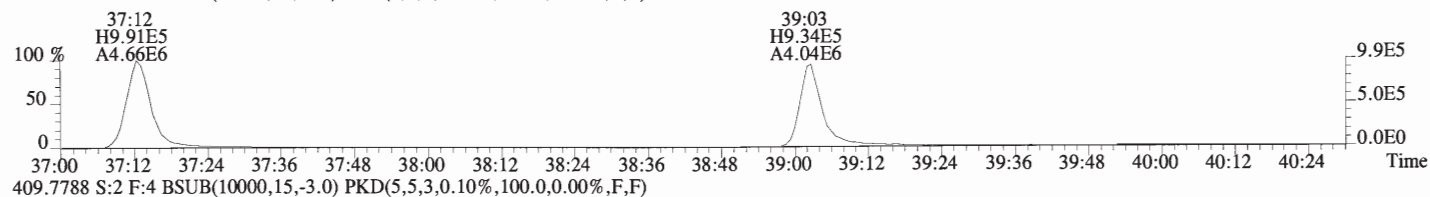
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



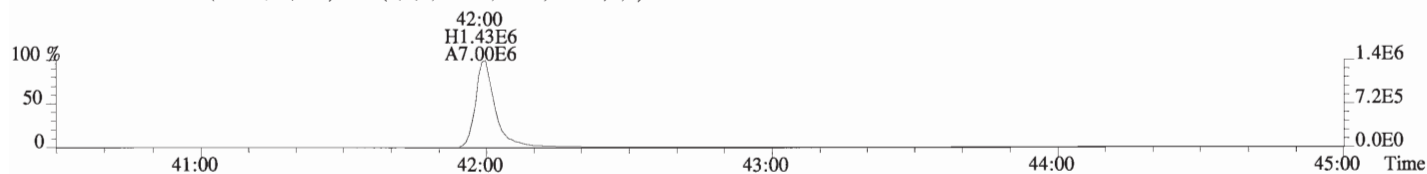
File:160408D1 #1-407 Acq: 8-APR-2016 15:28:50 GC EI+ Voltage SIR Autospec-UltimaE
Sample#2 File Text: Vista Analytical Laboratory VG7 Text:SS160408D1-1 1613 CS3 15J1912 Exp:OCDD_DB5
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



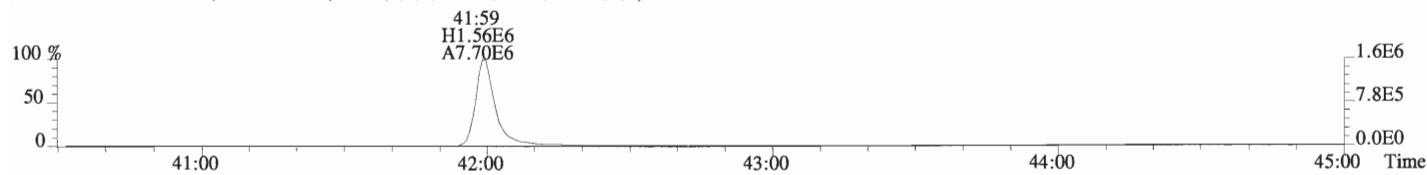
File:160408D1 #1-325 Acq: 8-APR-2016 15:28:50 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:SS160408D1-1 1613 CS3 15J1912 Exp:OCDD_DB5
 407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



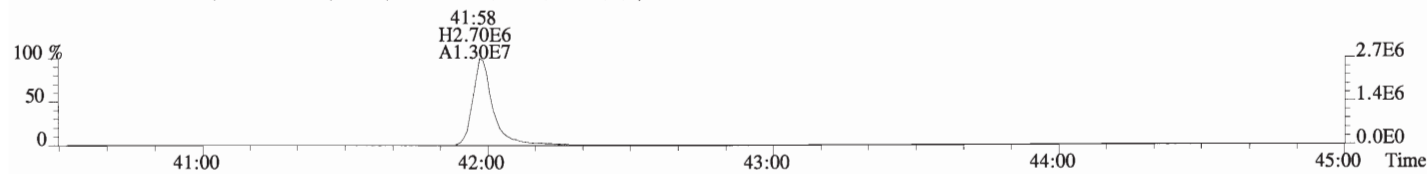
File:160408D1 #1-389 Acq: 8-APR-2016 15:28:50 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:SS160408D1-1 1613 CS3 15J1912 Exp:OCDD_DB5
 441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



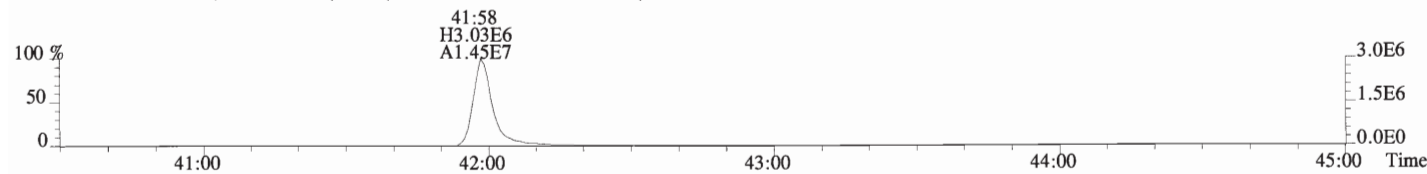
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



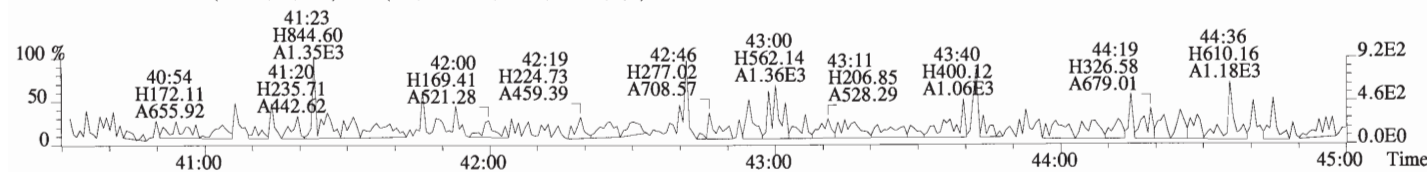
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

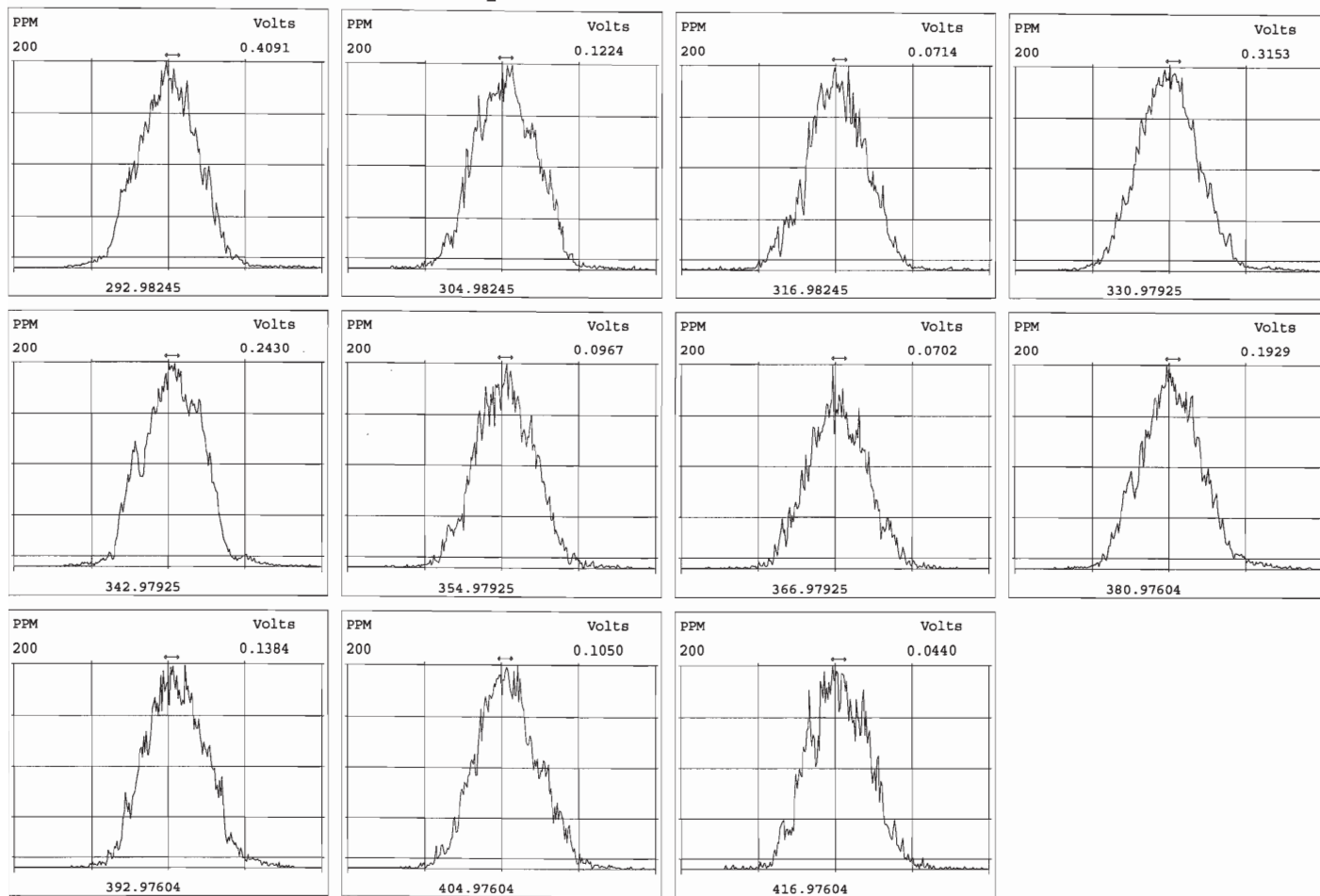


513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

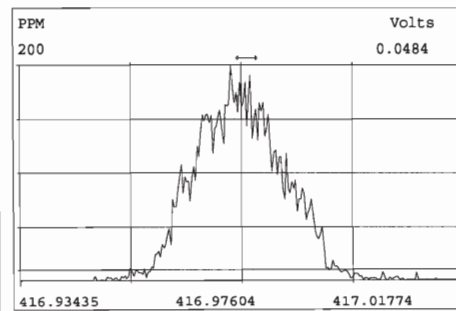
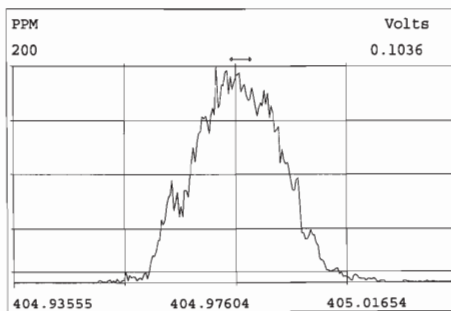
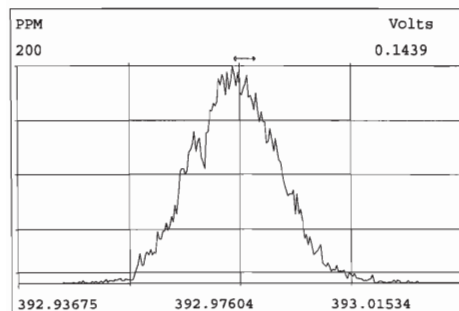
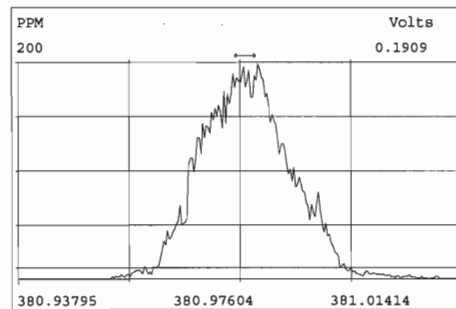
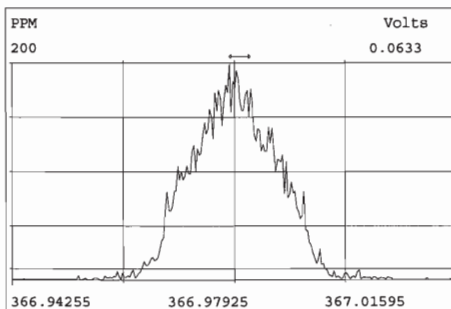
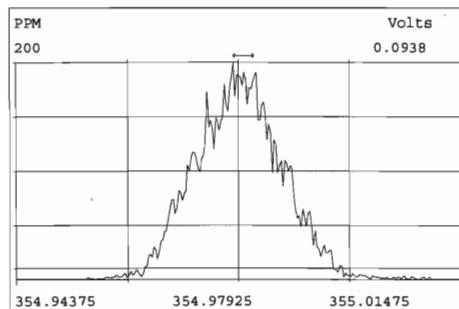
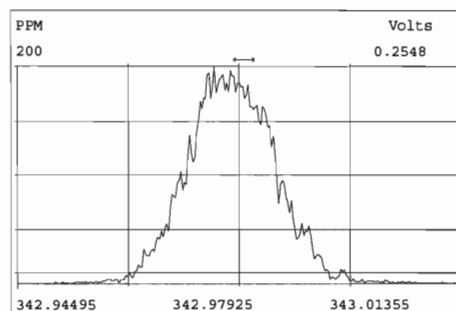
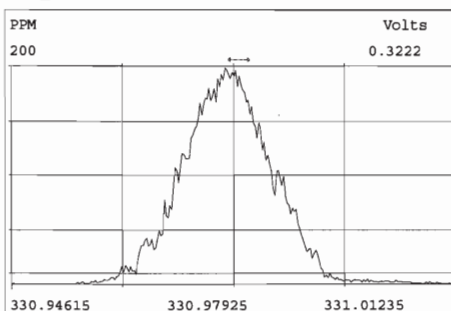
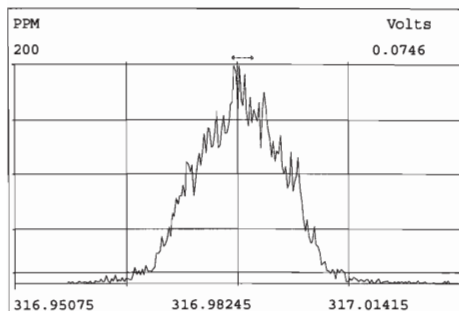


Peak Locate Examination: 7-APR-2016:19:59 File:RES_CHECK

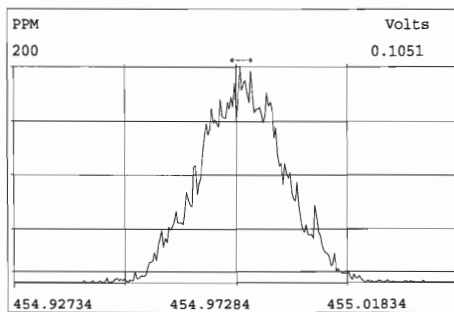
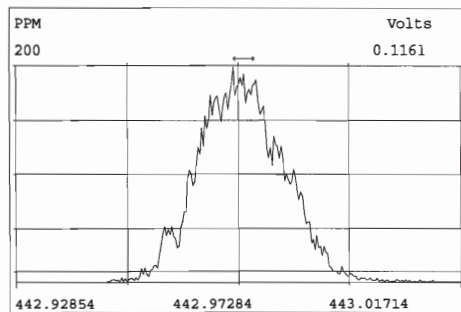
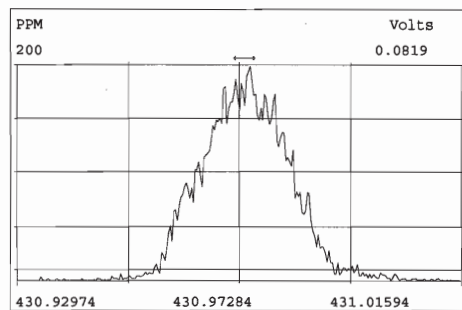
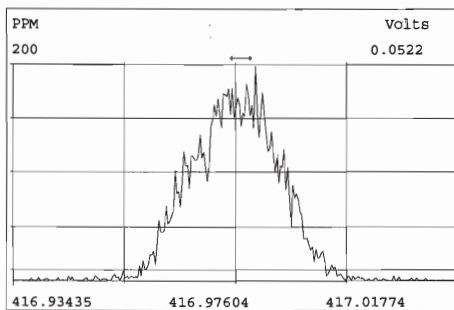
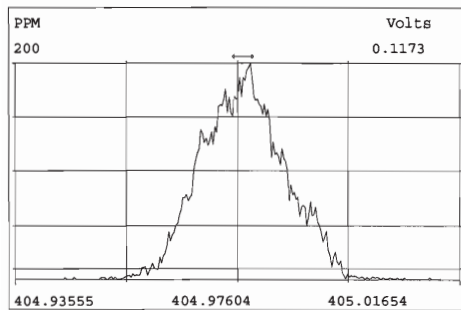
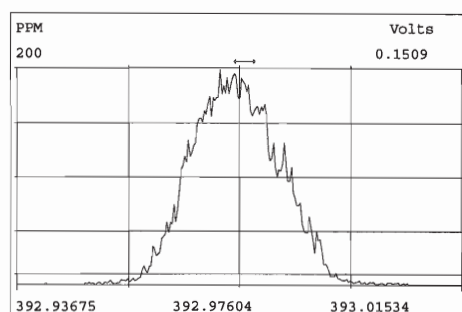
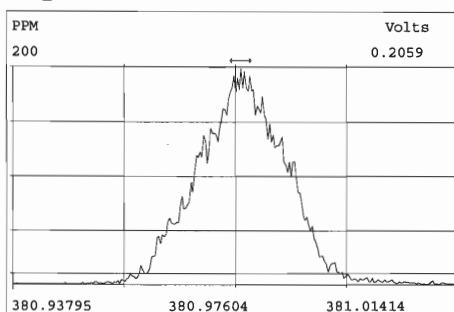
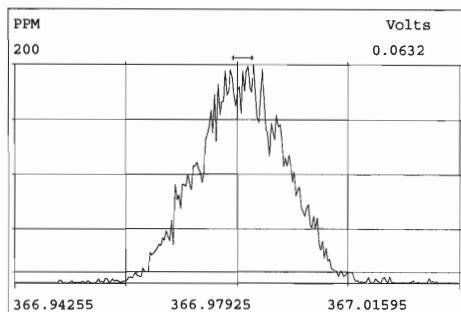
Experiment:OCDD_DB5 Function:1 Reference:PFK



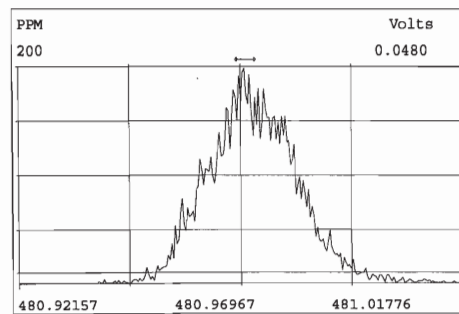
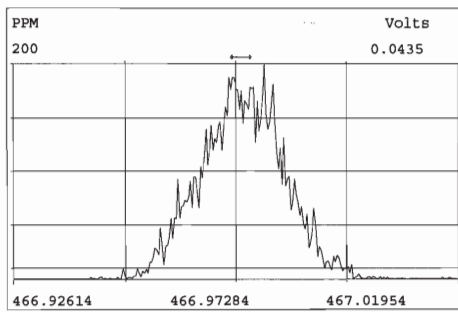
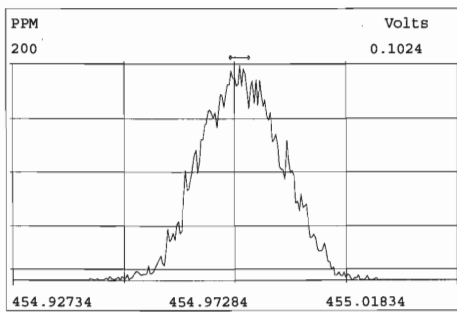
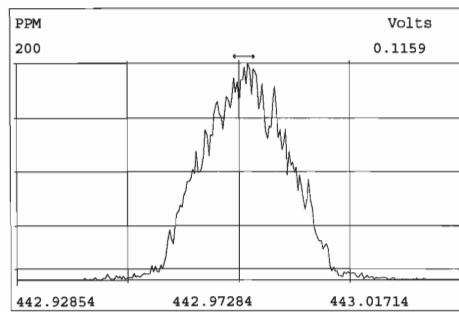
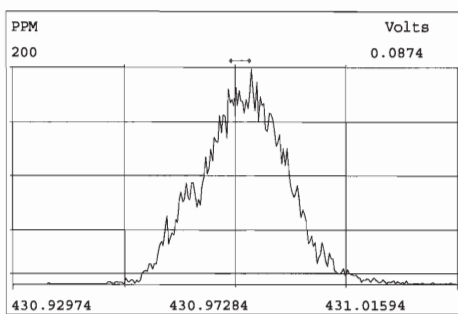
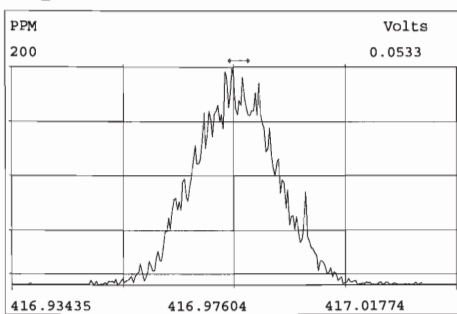
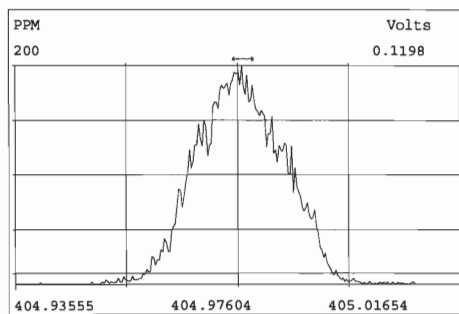
Peak Locate Examination: 7-APR-2016:20:00 File:RES_CHECK
Experiment:OCDD_DB5 Function:2 Reference:PFK



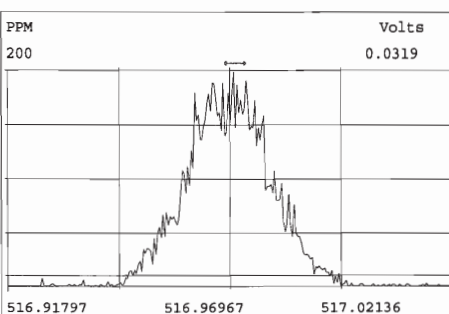
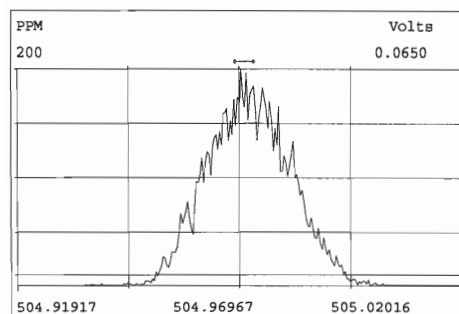
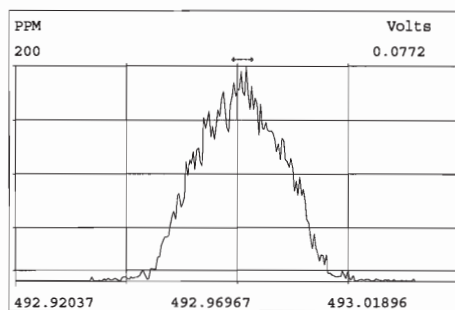
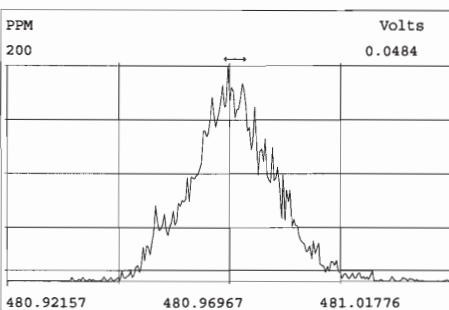
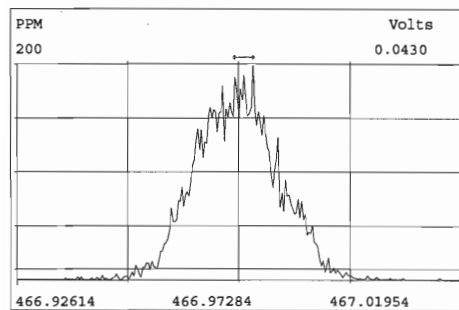
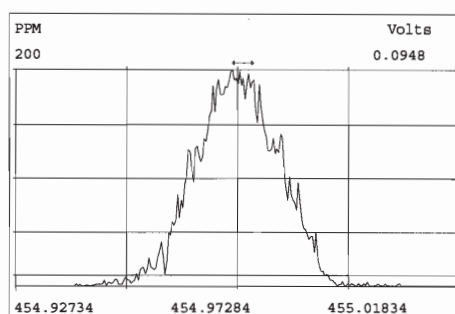
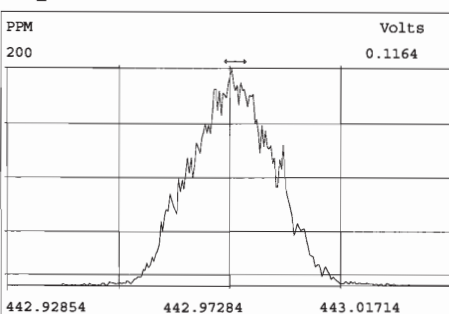
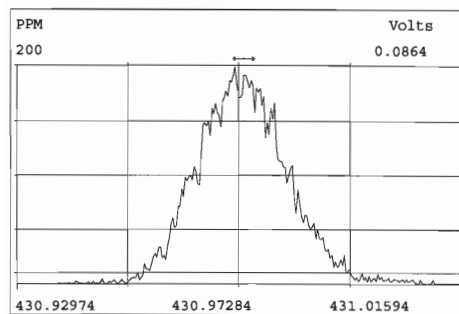
Peak Locate Examination: 7-APR-2016:20:00 File:RES_CHECK
Experiment:OCDD_DB5 Function:3 Reference:PFK



Peak Locate Examination: 7-APR-2016:20:01 File:RES_CHECK
Experiment:OCDD_DB5 Function:4 Reference:PFK



Peak Locate Examination: 7-APR-2016:20:02 File:RES_CHECK
Experiment:OCDD_DB5 Function:5 Reference:PFK



Quantify Compound Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory VG-11

Page 1 of 2

Dataset: L:\Masslynx Common\vg11\VG11_L.PRO\Results\160208K1\160208K1_crv.qld

Last Altered: Monday, February 08, 2016 14:29:43 Pacific Standard Time

Printed: Monday, February 08, 2016 14:30:10 Pacific Standard Time

Method: L:\Masslynx Common\vg11\VG11_L.PRO\MethDB\tcdf.mdb 28 Aug 2015 06:01:56

Calibration: L:\Masslynx Common\vg11\VG11_L.PRO\CurveDB\db225_1613TCDFvg11-2-8-16.cdb 08 Feb 2016 14:29:41

Compound name: 2,3,7,8-TCDF

Response Factor: 1.07096

RRF SD: 0.0596266, Relative SD: 5.56758

Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)

Curve type: RF

	#-Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc.	RRF
1	1 160208K1_2	0.250	0.74	NO	18.40	5.50e3	1.93e6	0.265	1.14
2	2 160208K1_3	0.500	0.75	NO	18.41	9.81e3	1.92e6	0.478	1.02
3	3 160208K1_4	2.00	0.77	NO	18.41	3.91e4	2.00e6	1.83	0.979
4	4 160208K1_5	10.0	0.78	NO	18.40	1.64e5	1.53e6	10.0	1.07
5	5 160208K1_6	40.0	0.78	NO	18.41	8.19e5	1.87e6	41.0	1.10
6	6 160208K1_7	300	0.79	NO	18.40	6.51e6	1.94e6	313	1.12

CP 2/8/16
WV 2/9/16

Compound name: 13C-2,3,7,8-TCDF

Response Factor: 0.928586

RRF SD: 0.0199774, Relative SD: 2.15138

Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)

Curve type: RF

	#-Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc.	RRF
1	1 160208K1_2	100	0.80	NO	18.39	1.93e6	2.09e6	99.7	0.926
2	2 160208K1_3	100	0.78	NO	18.39	1.92e6	2.00e6	103	0.957
3	3 160208K1_4	100	0.79	NO	18.39	2.00e6	2.13e6	101	0.938
4	4 160208K1_5	100	0.79	NO	18.39	1.53e6	1.71e6	96.7	0.898
5	5 160208K1_6	100	0.77	NO	18.39	1.87e6	2.03e6	98.8	0.917
6	6 160208K1_7	100	0.82	NO	18.38	1.94e6	2.07e6	101	0.936

Dataset: L:\Masslynx Common\vg11\VG11_L.PRO\Results\160208K1\160208K1_crv.qld

Last Altered: Monday, February 08, 2016 14:29:43 Pacific Standard Time

Printed: Monday, February 08, 2016 14:30:10 Pacific Standard Time

Compound name: 13C-1,2,3,4-TCDF

Response Factor: 1

RRF SD: 9.93014e-017, Relative SD: 9.93014e-015

Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc.	RRF
1	1 160208K1_2	100	0.78	NO	16.15	2.09e6	2.09e6	100	1.00
2	2 160208K1_3	100	0.80	NO	16.15	2.00e6	2.00e6	100	1.00
3	3 160208K1_4	100	0.78	NO	16.16	2.13e6	2.13e6	100	1.00
4	4 160208K1_5	100	0.79	NO	16.15	1.71e6	1.71e6	100	1.00
5	5 160208K1_6	100	0.81	NO	16.15	2.03e6	2.03e6	100	1.00
6	6 160208K1_7	100	0.79	NO	16.15	2.07e6	2.07e6	100	1.00

Compound name: 13C-1,2,3,4-TCDD

No Calibration

Response type: External Std, Area

Curve type: RF

	# Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc.	RRF
1	1 160208K1_2	0.000		NO					
2	2 160208K1_3	0.000	0.81	NO	16.94	1.43e6			0.000
3	3 160208K1_4	0.000		NO					
4	4 160208K1_5	0.000		NO					
5	5 160208K1_6	0.000	0.80	NO	16.94	1.46e6			0.000
6	6 160208K1_7	0.000		NO					

Dataset: L:\Masslynx Common\vg11\VG11_L.PRO\Results\160208K1\160208K1_crv.qld

Last Altered: Monday, February 08, 2016 14:29:43 Pacific Standard Time

Printed: Monday, February 08, 2016 14:31:25 Pacific Standard Time

Method: L:\Masslynx Common\vg11\VG11_L.PRO\MethDB\tcdf.mdb 28 Aug 2015 06:01:56

Calibration: L:\Masslynx Common\vg11\VG11_L.PRO\CurveDB\db225_1613TCDFvg11-2-8-16.cdb 08 Feb 2016 14:29:41



Name: 160208K1_5, Date: 08-Feb-2016, Time: 11:26:13, ID: ST160208K1-4 1613 CS3 16A1401, Description: 1613 CS3 16A1401

#	Name	Resp	RA	n/y	RRF	wt/vol	RT	RRT	Conc	%Rec	DL	EMPC
1	1 2,3,7,8-TCDF	1.64e5	0.78	NO	1.07	1.000	18.40	1.001	10.005	100	0.0938	10.0
2	2 13C-2,3,7,8-TCDF	1.53e6	0.79	NO	0.929	1.000	18.39	1.139	96.721	96.7	0.208	
3	3 13C-1,2,3,4-TCDF	1.71e6	0.79	NO	1.00	1.000	16.15	1.000	100.00	100	0.193	
4	4 13C-1,2,3,4-TCDD			NO		1.000						

Dataset: Untitled

Last Altered: Friday, February 12, 2016 09:27:23 Pacific Standard Time

Printed: Friday, February 12, 2016 09:27:42 Pacific Standard Time

Method: L:\Masslynx Common\vg11\VG11_L.PRO\MethDB\tcdf.mdb 28 Aug 2015 06:01:56

Calibration: L:\Masslynx Common\vg11\VG11_L.PRO\CurveDB\db225_1613TCDFvg11-2-8-16.cdb 08 Feb 2016 14:29:41

Compound name: 2,3,7,8-TCDF

	Name	ID	Acq.Date	Acq.Time
1	160208K1_1	CP160208K1-1 225 CPSM	08-Feb-16	09:15:53
2	160208K1_2	ST160208K1-1 1613 CS0 15J1904	08-Feb-16	09:46:49
3	160208K1_3	ST160208K1-2 1613 CS1 15J1905	08-Feb-16	10:19:56
4	160208K1_4	ST160208K1-3 1613 CS2 15J1906	08-Feb-16	10:53:05
5	160208K1_5	ST160208K1-4 1613 CS3 16A1401	08-Feb-16	11:26:13
6	160208K1_6	ST160208K1-5 1613 CS4 15J1908	08-Feb-16	11:59:21
7	160208K1_7	ST160208K1-6 1613 CS5 15J1909	08-Feb-16	12:32:29
8	160208K1_8	Solvent Blank	08-Feb-16	13:05:37
9	160208K1_9	SS160208K1-1 1613 SSS 15J1912	08-Feb-16	13:38:47
10	160208K1_10	Solvent Blank	08-Feb-16	14:11:51
11	160208K1_11	1600098-03RE1 WW-P1PM-03-US-20160204...	08-Feb-16	15:23:59
12	160208K1_12	1600098-06RE1 WW-P1PM-06-US-20160204...	08-Feb-16	15:54:52
13	160208K1_13	1600099-01RE1 WW-P1PM-01-RE-20160204...	08-Feb-16	16:28:00
14	160208K1_14	1600099-02RE1 WW-P1PM-02-RE-20160204...	08-Feb-16	17:01:06
15	160208K1_15	1600099-03RE1 WW-P1PM-03-RE-20160204...	08-Feb-16	17:34:14
16	160208K1_16	1600099-04RE1 WW-P1PM-04-RE-20160204...	08-Feb-16	18:07:20
17	160208K1_17	1600099-05RE1 WW-P1PM-05-RE-20160204...	08-Feb-16	18:40:26
18	160208K1_18	1600099-06RE1 WW-P1PM-06-RE-20160204...	08-Feb-16	19:13:36
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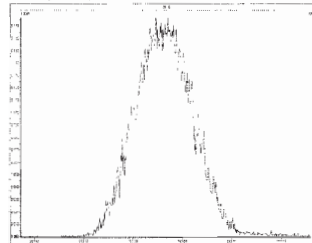
Experiment Calibration Report**MassLynx 4.1 SCN815**

Page 1 of 1

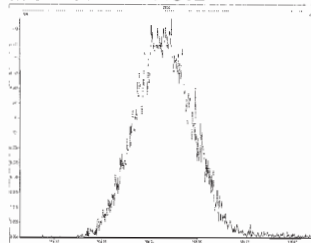
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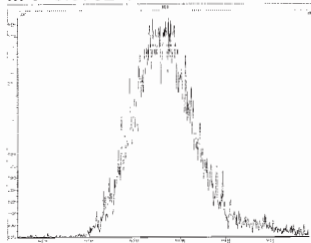
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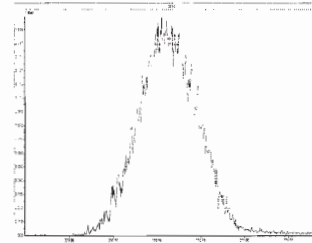
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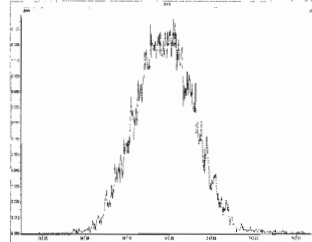
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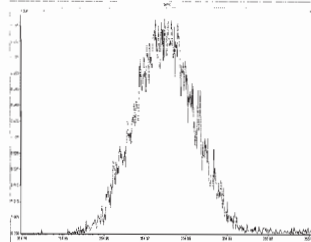
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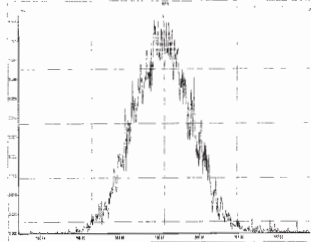
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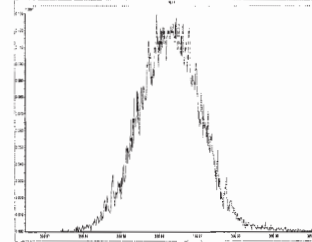
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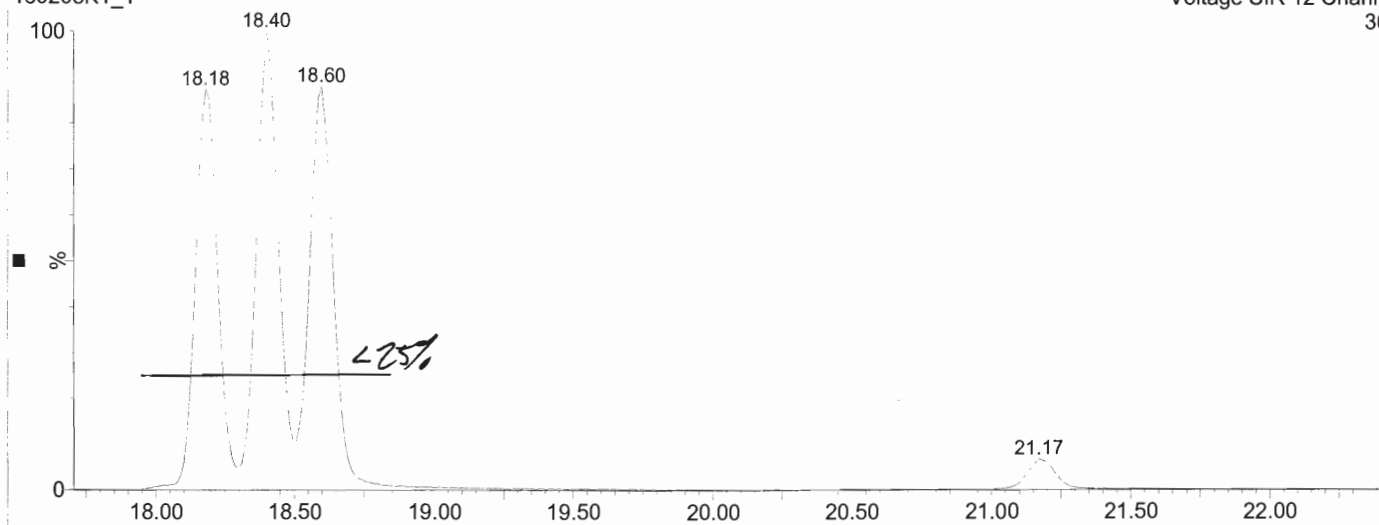
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225 CPSM
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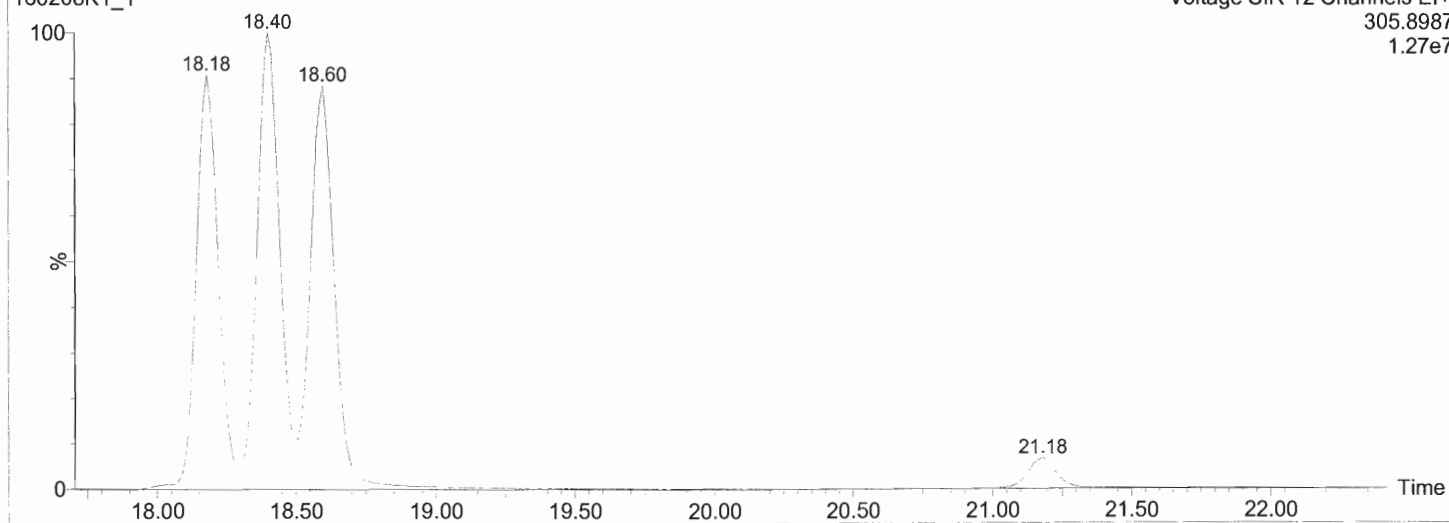
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160208K1_1

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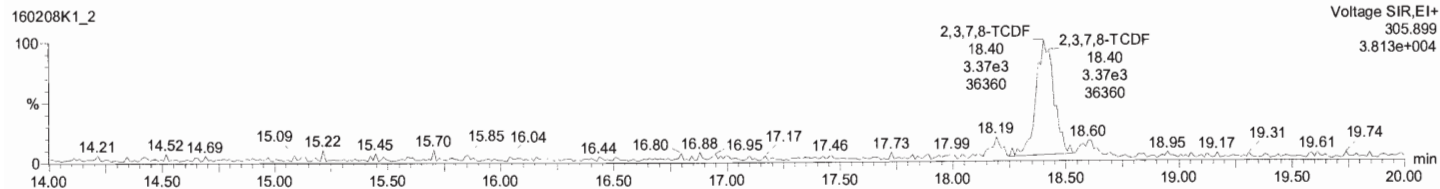
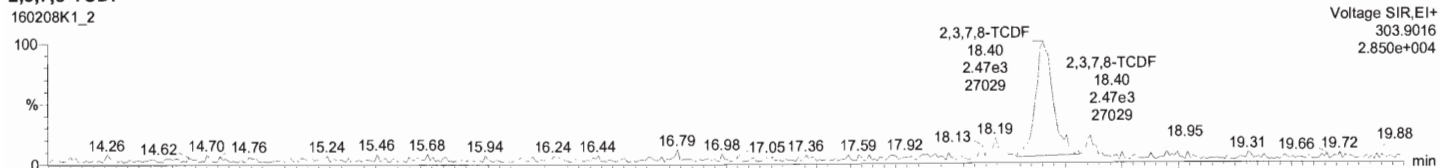
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Printed: Monday, February 08, 2016 13:39:54 Pacific Standard Time

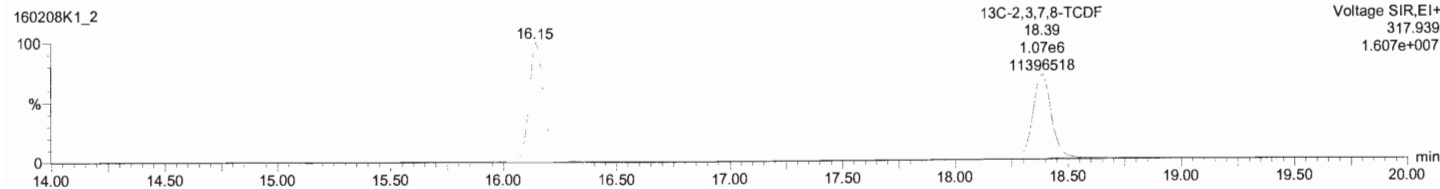
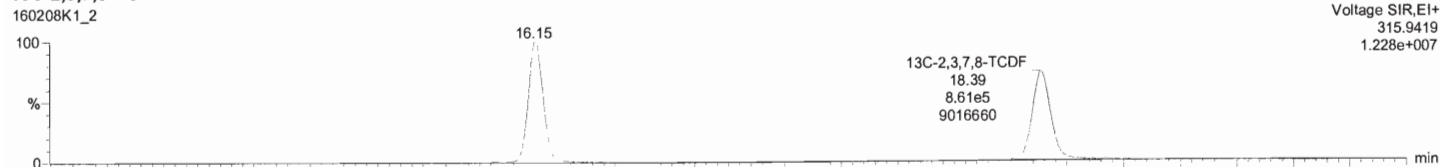
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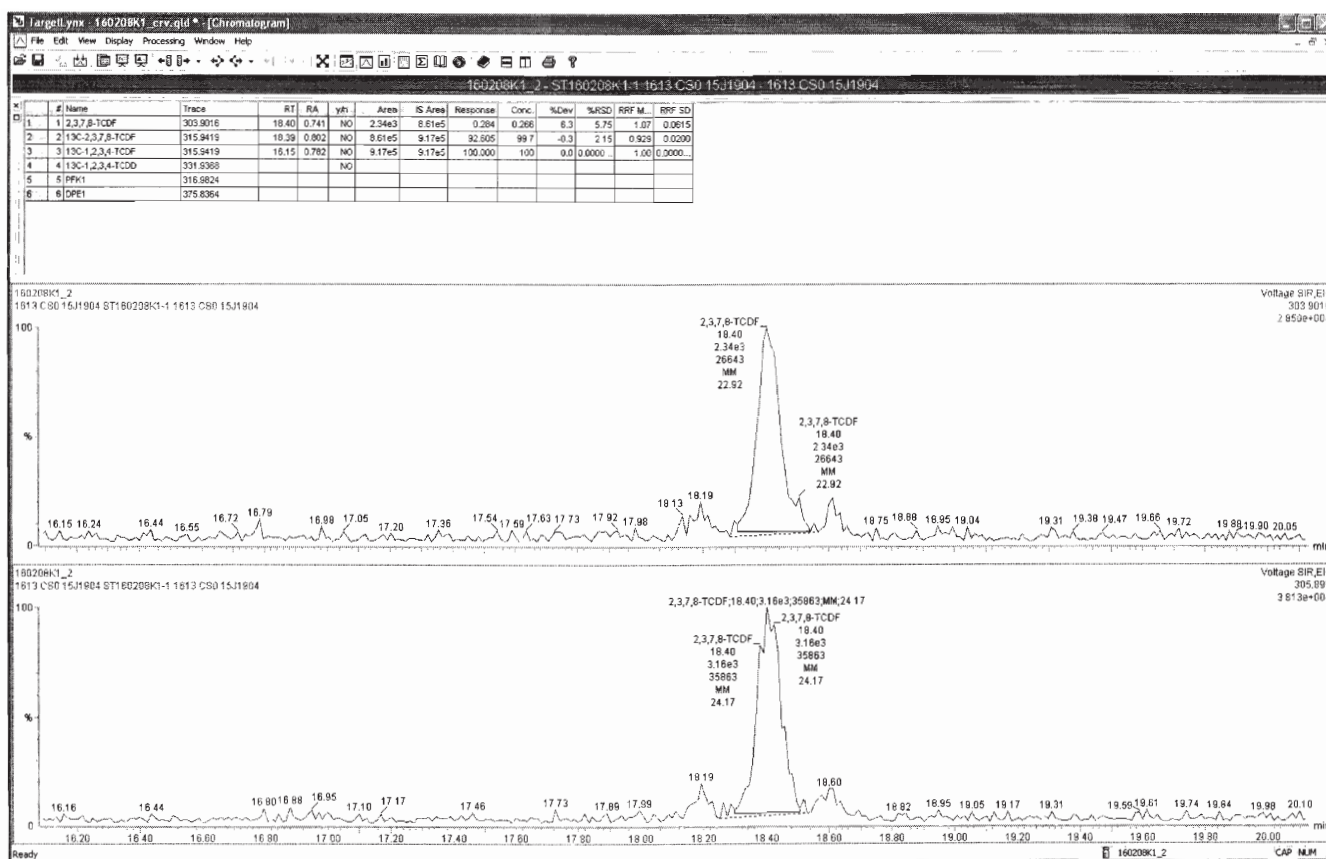
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2,3,7,8-TCDF



13C-2,3,7,8-TCDF





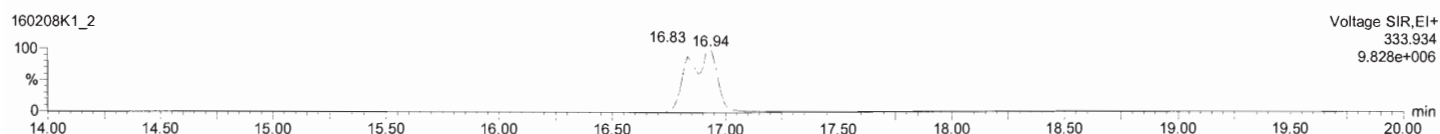
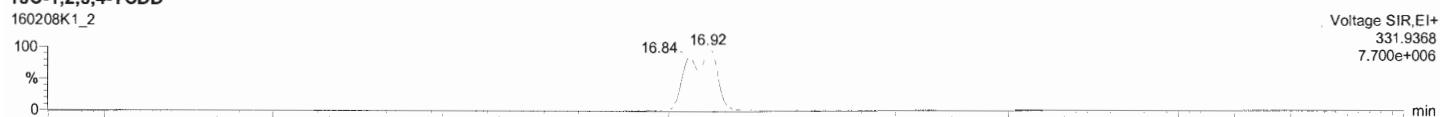
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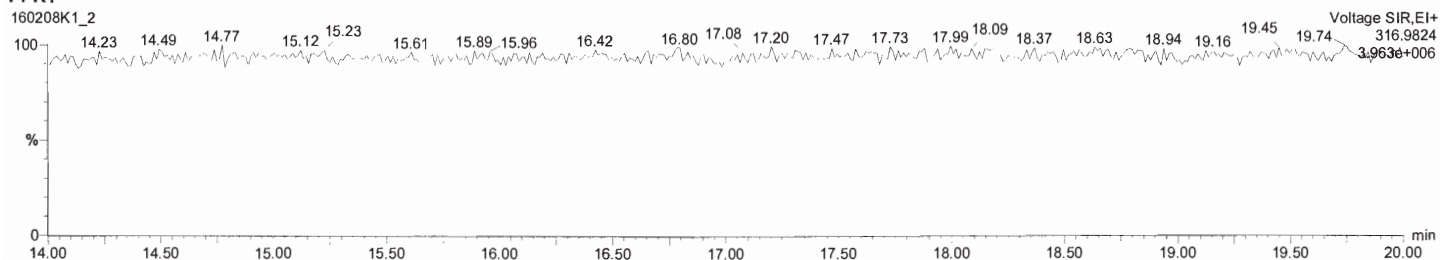
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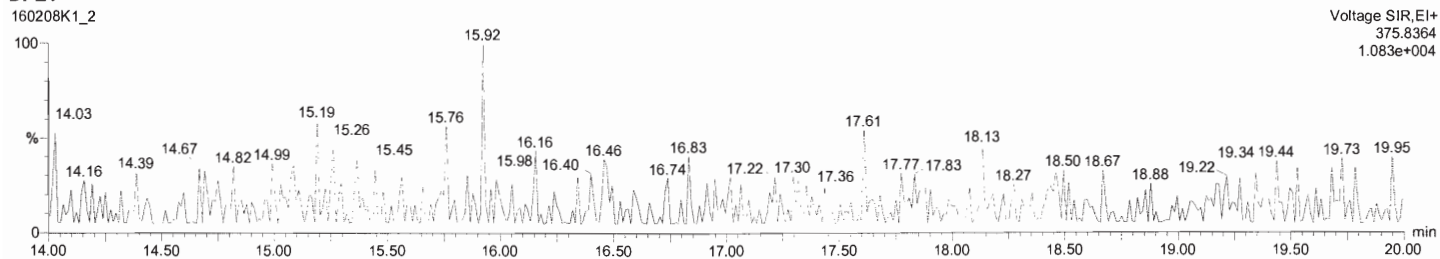
13C-1,2,3,4-TCDD



PFK1



DPE1

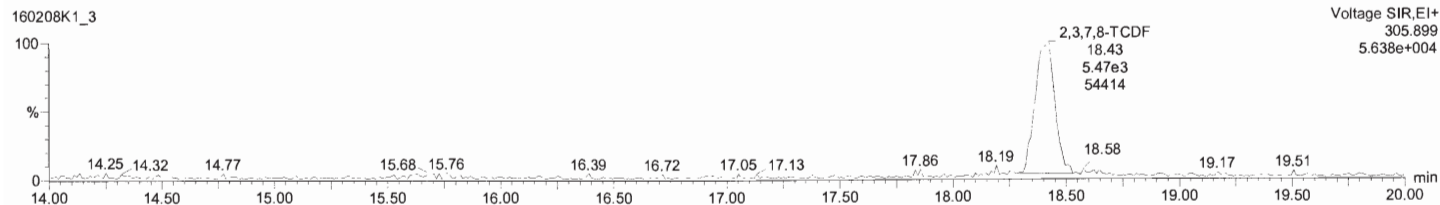
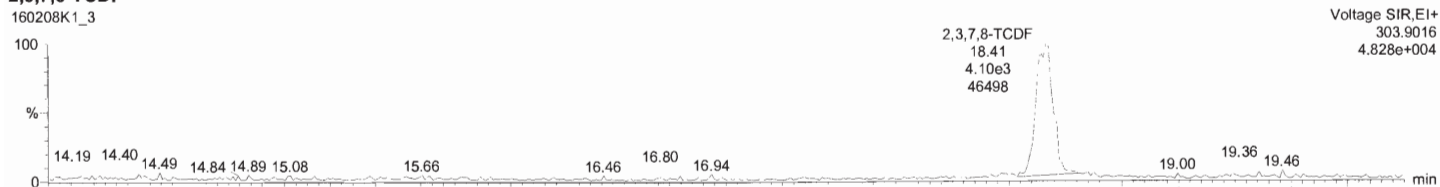


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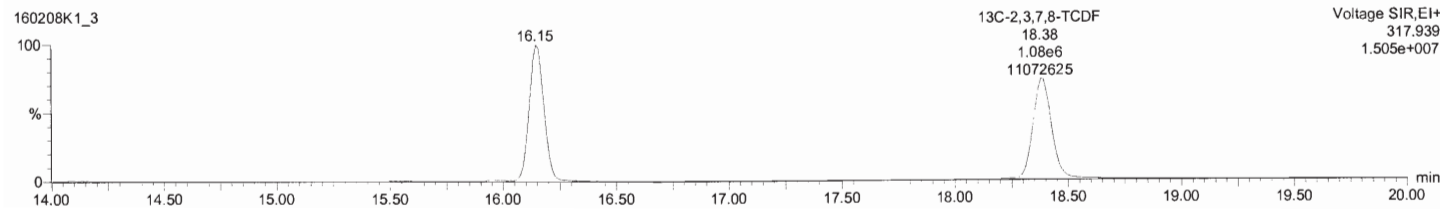
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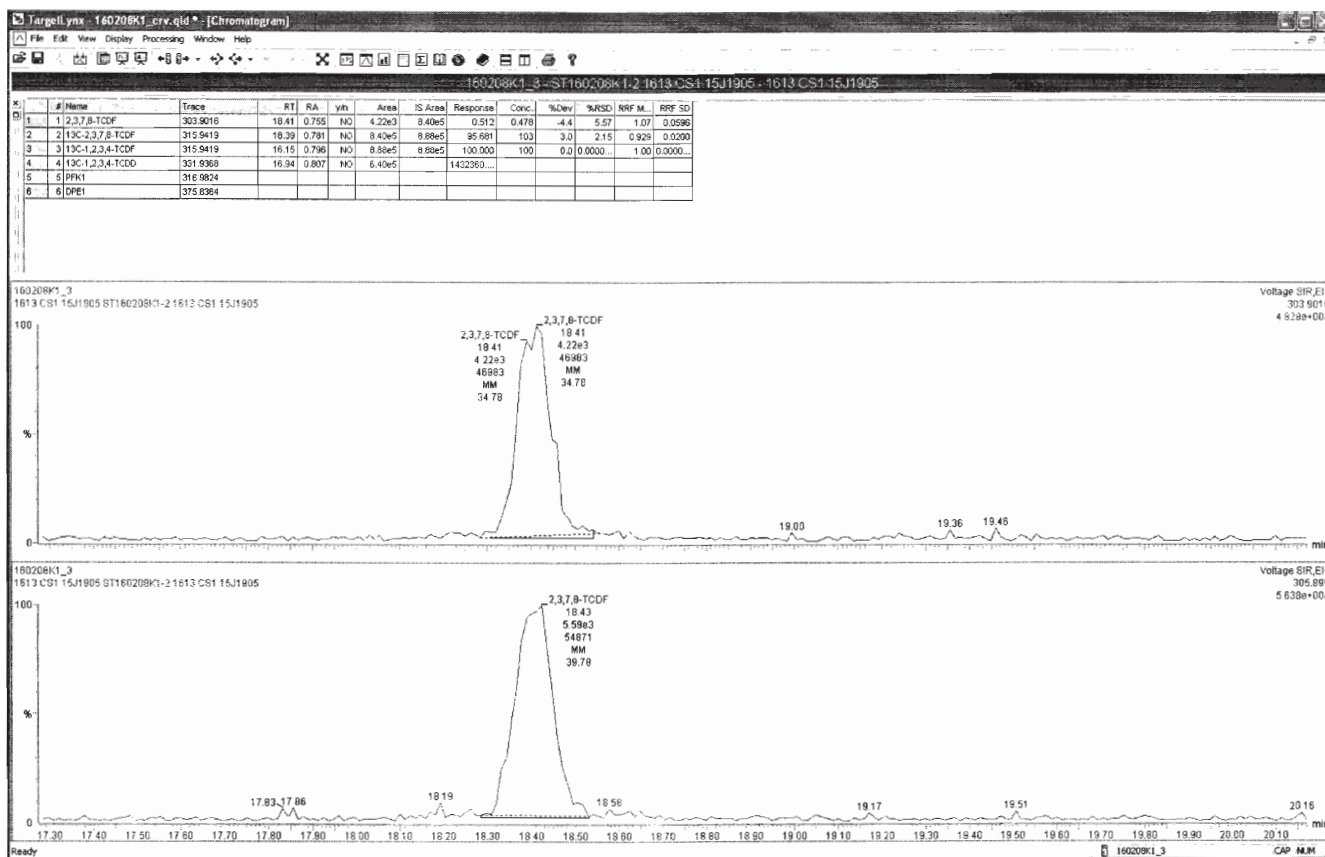
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2,3,7,8-TCDF



13C-2,3,7,8-TCDF



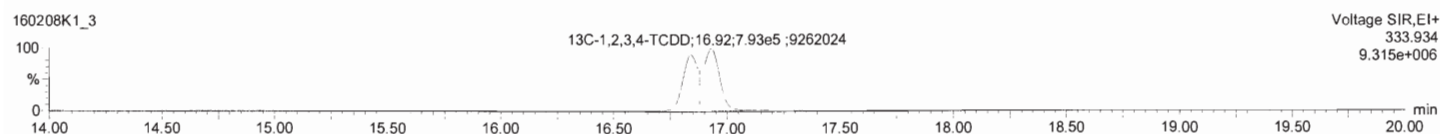
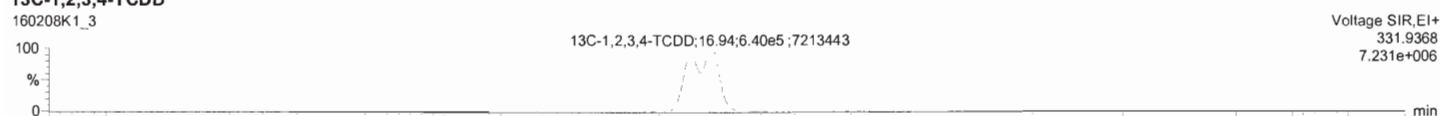


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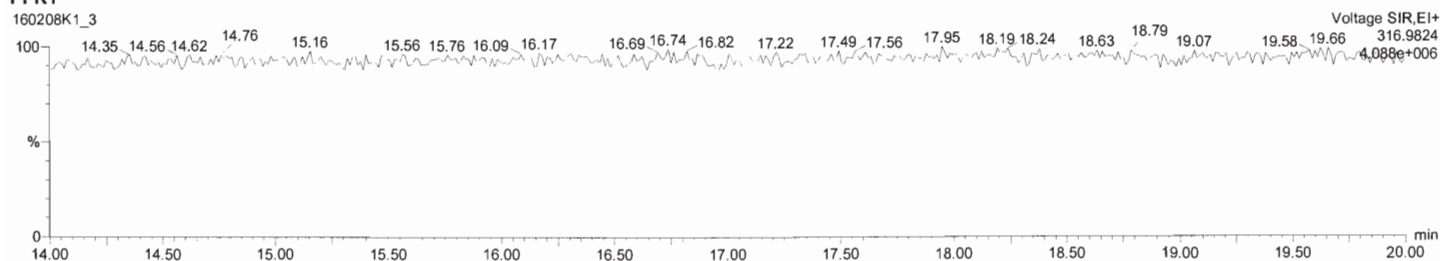
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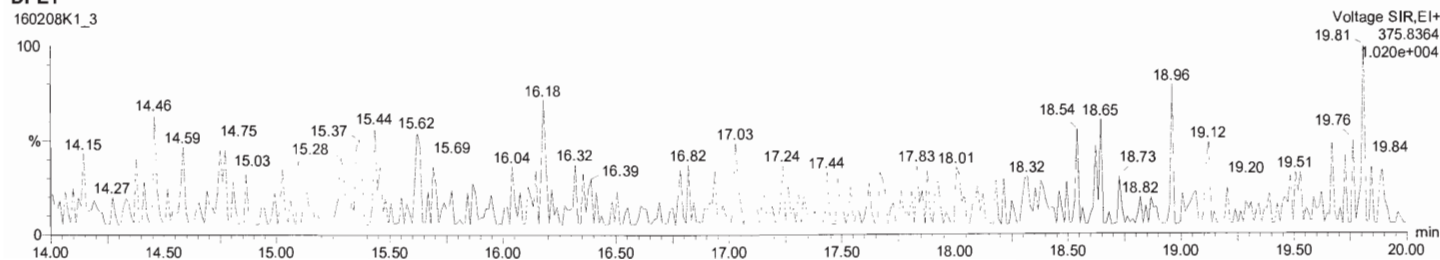
13C-1,2,3,4-TCDD



PFK1



DPE1



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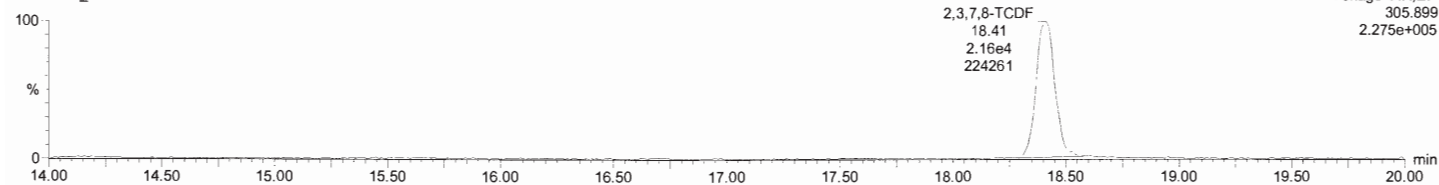
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2,3,7,8-TCDF

160208K1_4

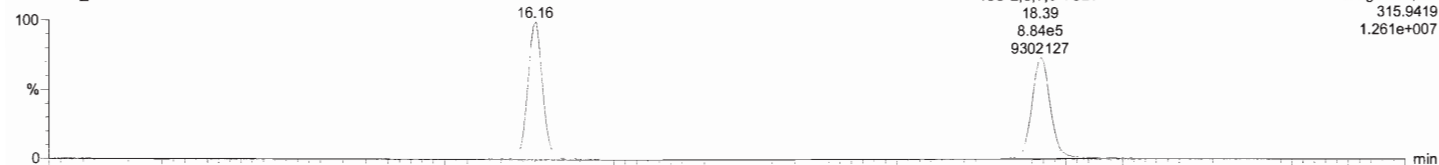


160208K1_4

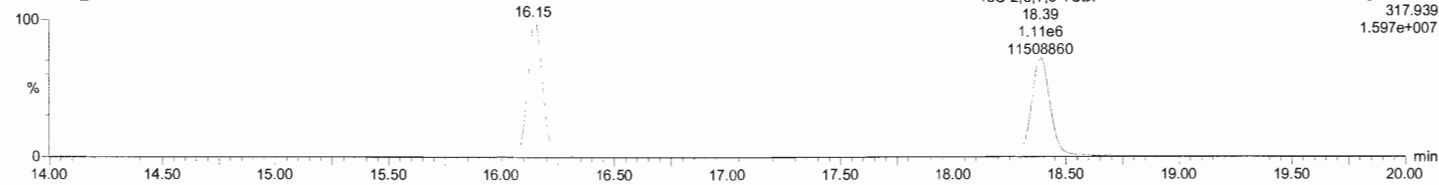


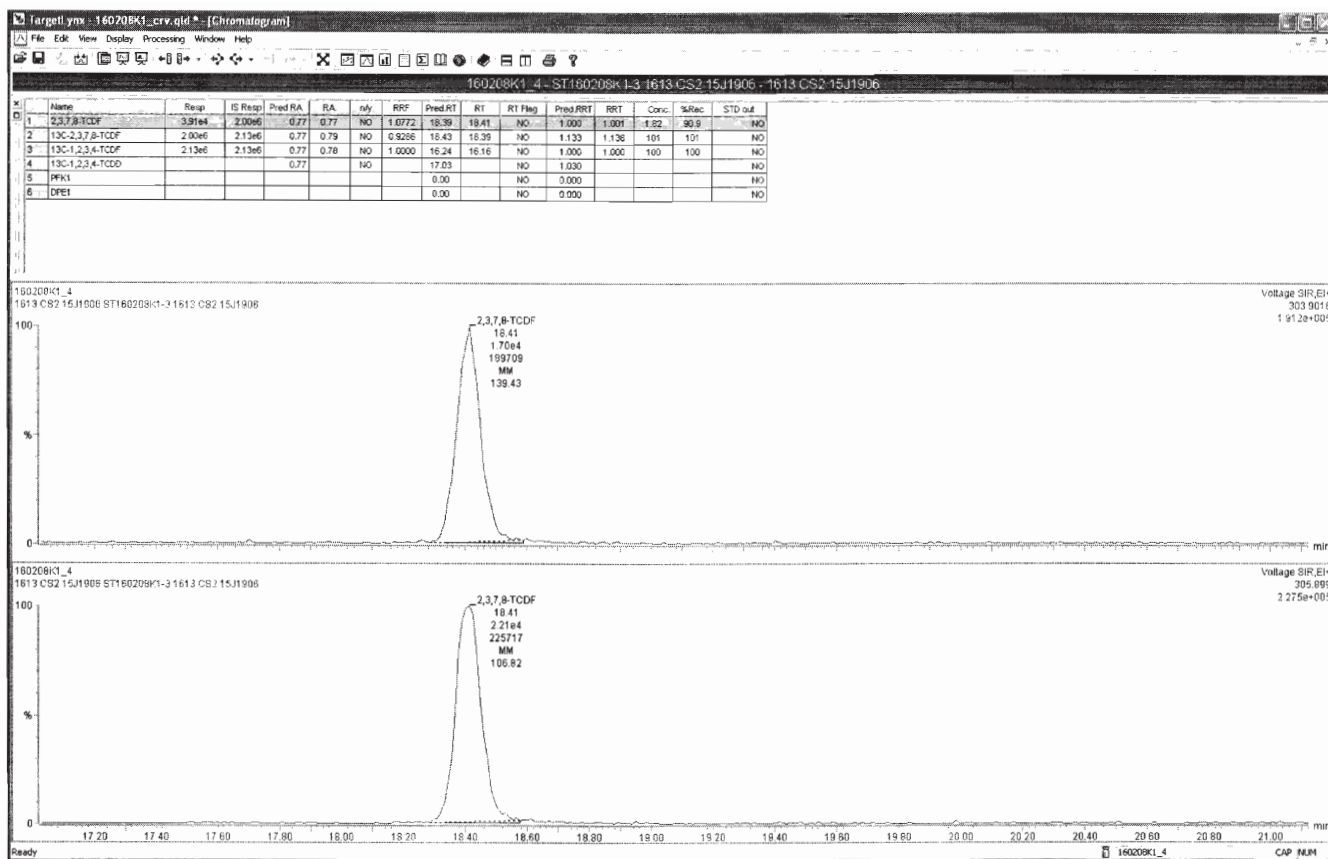
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160208K1_4



160208K1_4





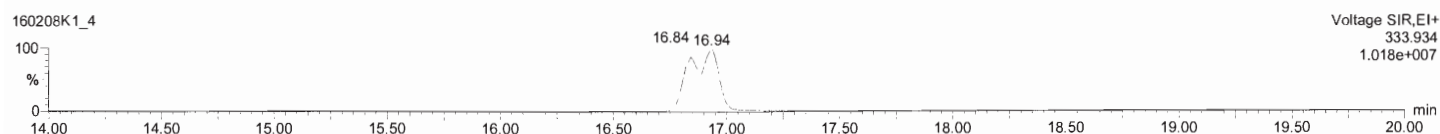
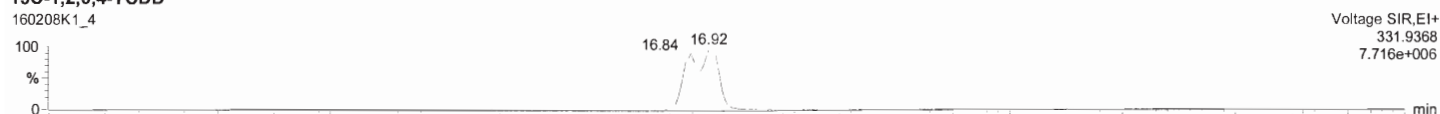
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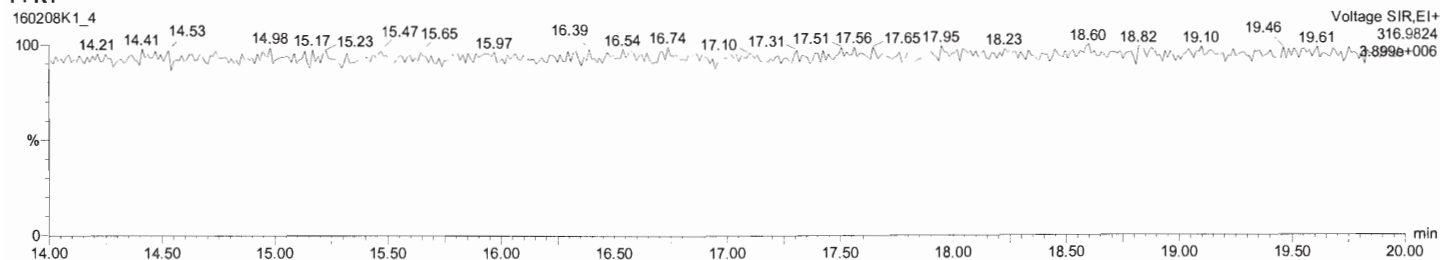
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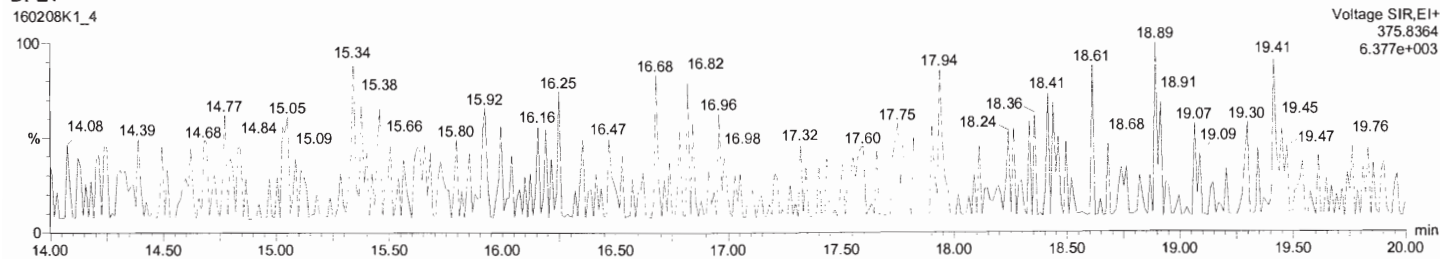
13C-1,2,3,4-TCDD



PFK1



DPE1

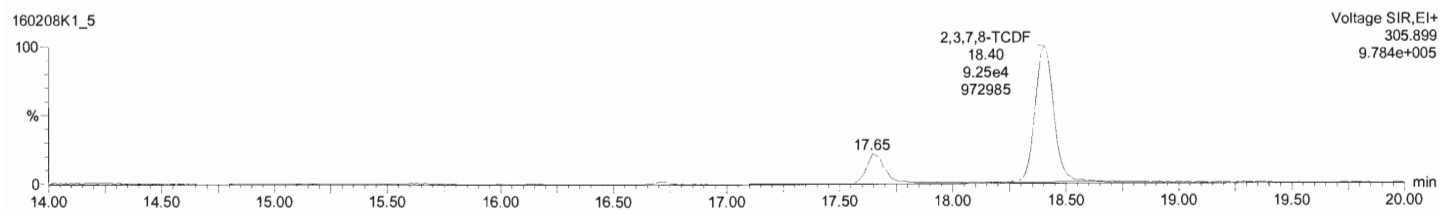
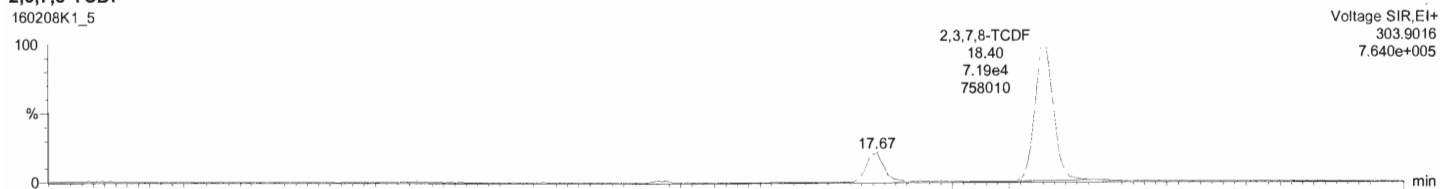


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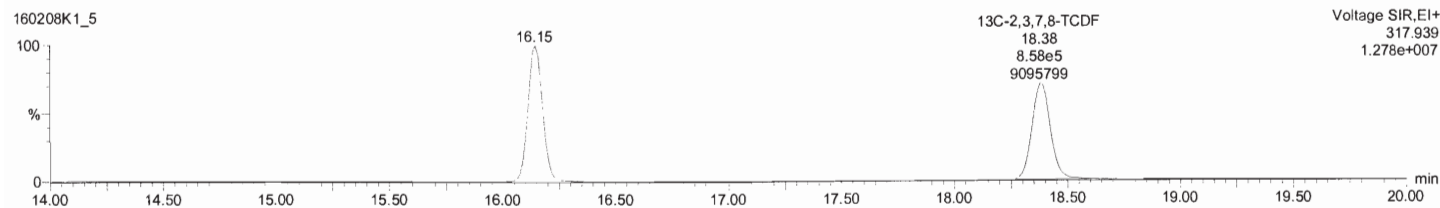
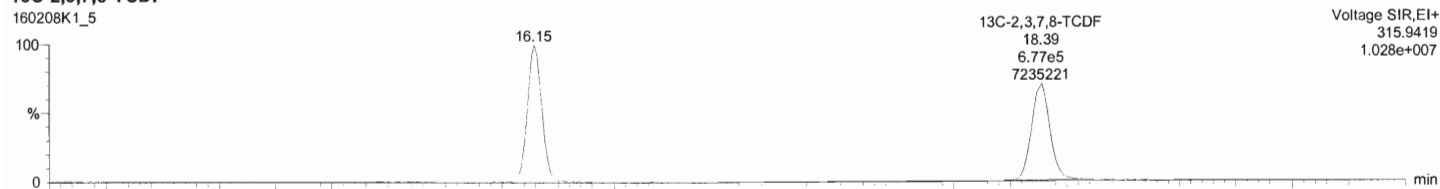
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2,3,7,8-TCDF



13C-2,3,7,8-TCDF



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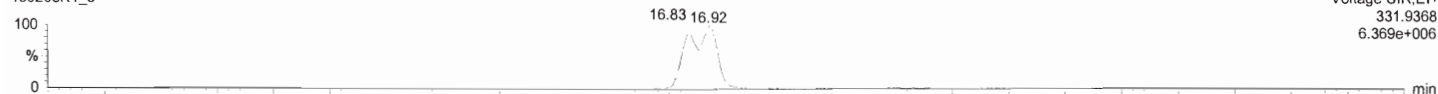
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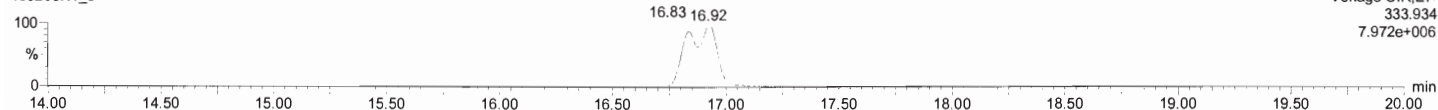
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13C-1,2,3,4-TCDD

160208K1_5

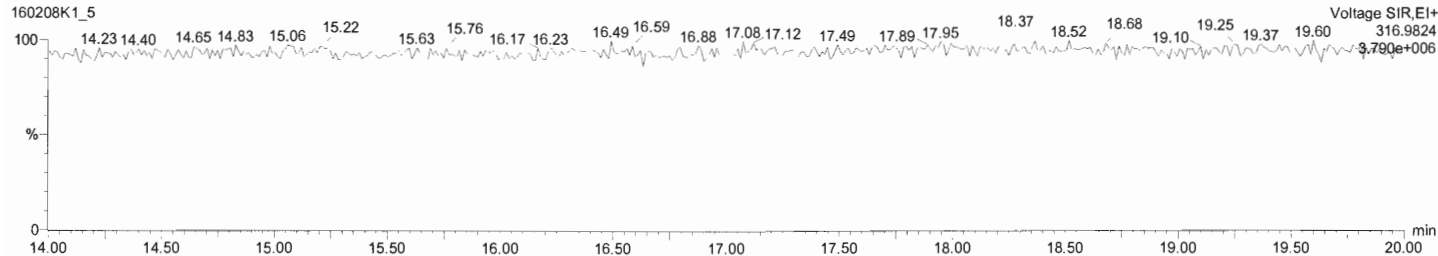


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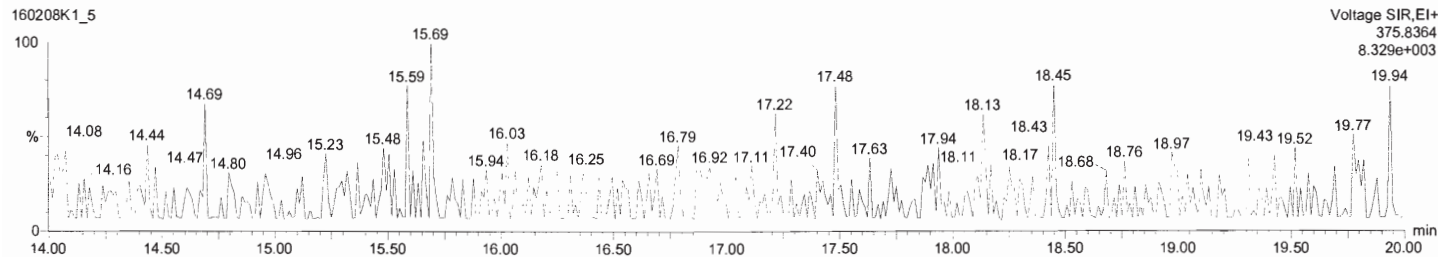
PFK1

160208K1_5



DPE1

160208K1_5



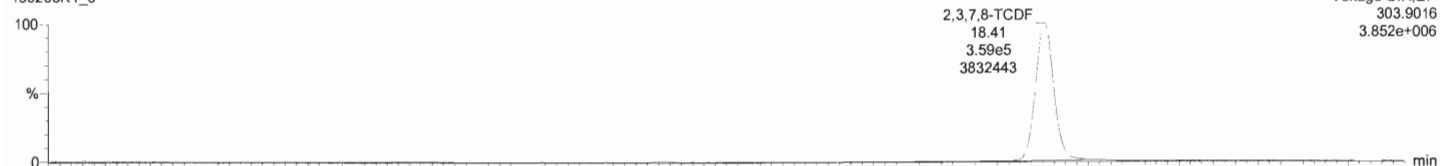
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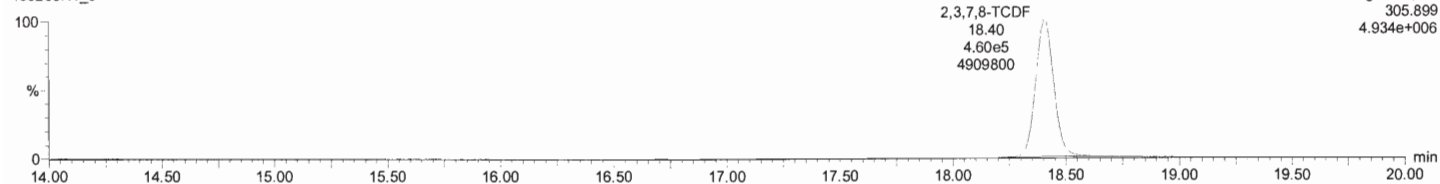
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2,3,7,8-TCDF

160208K1_6

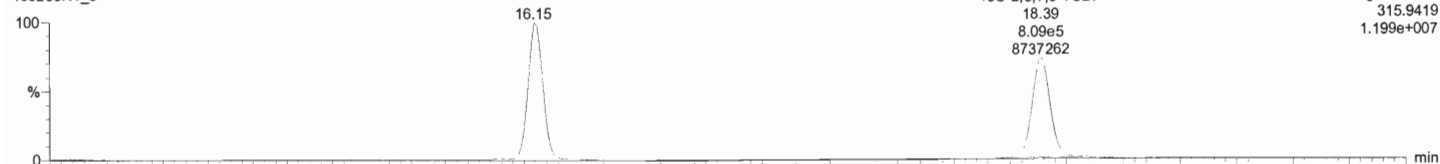


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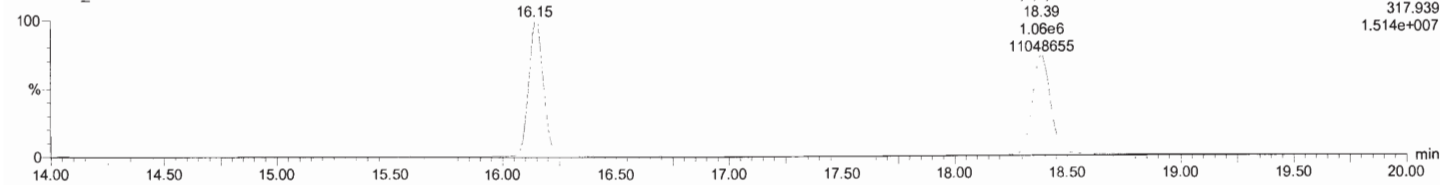


13C-2,3,7,8-TCDF

160208K1_6



160208K1_6

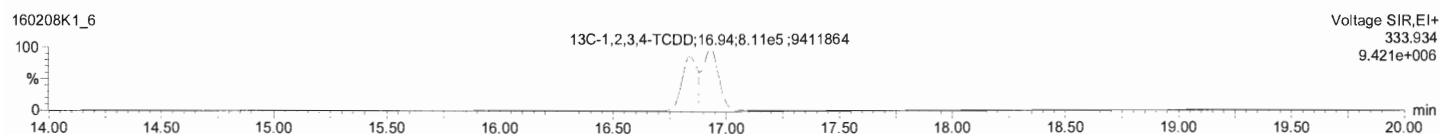
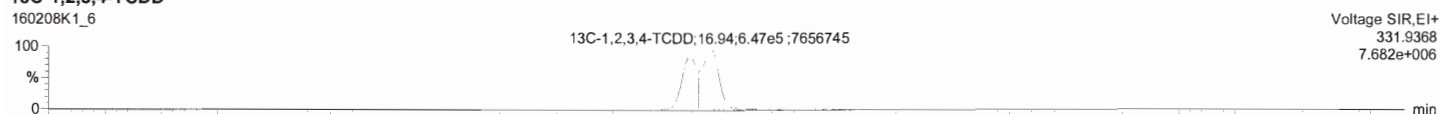


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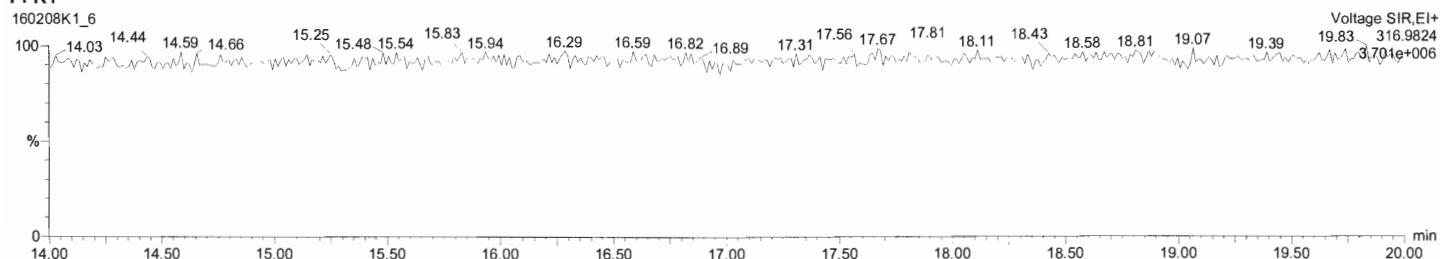
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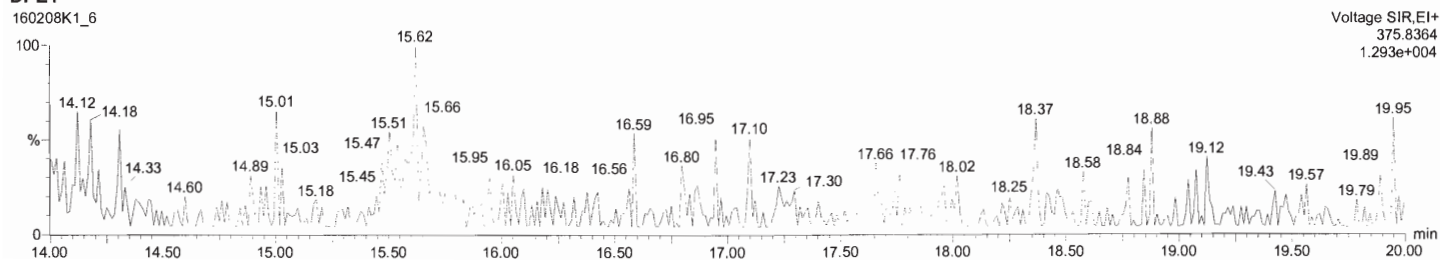
13C-1,2,3,4-TCDD



PFK1



DPE1



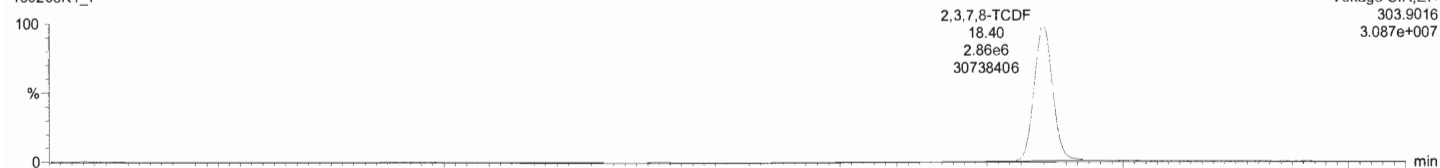
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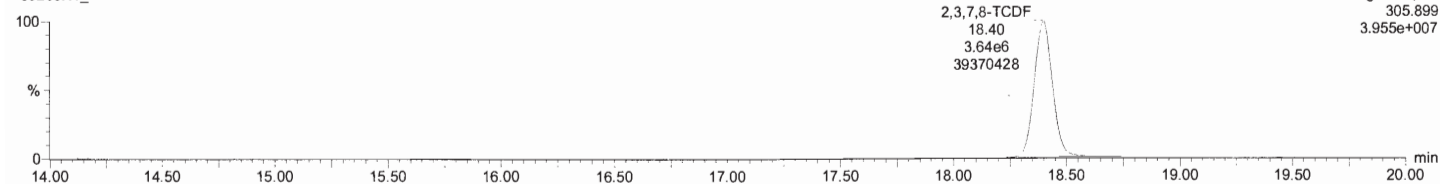
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2,3,7,8-TCDF

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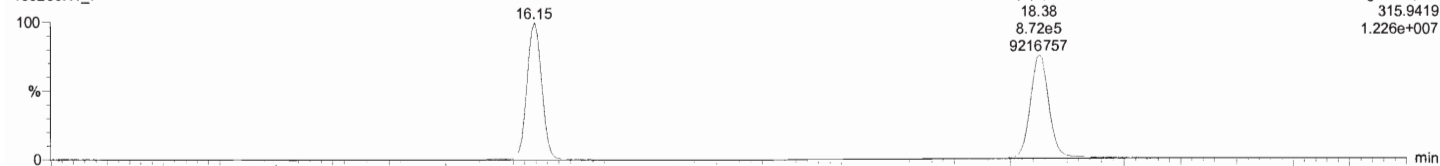


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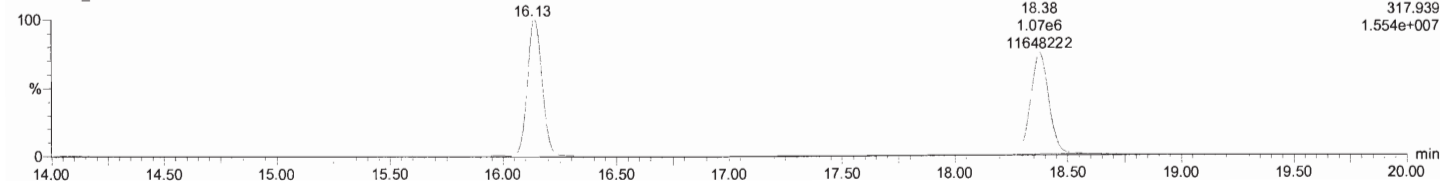


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160208K1_7



160208K1_7

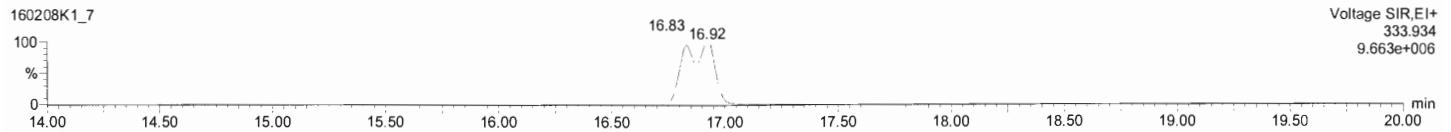
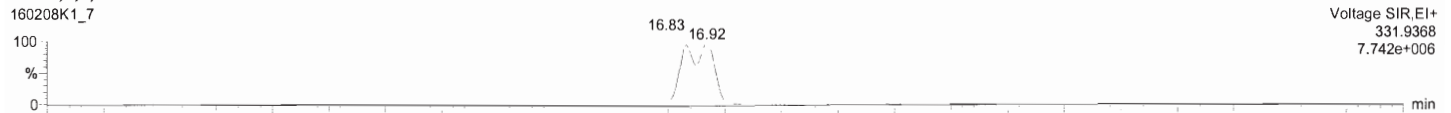


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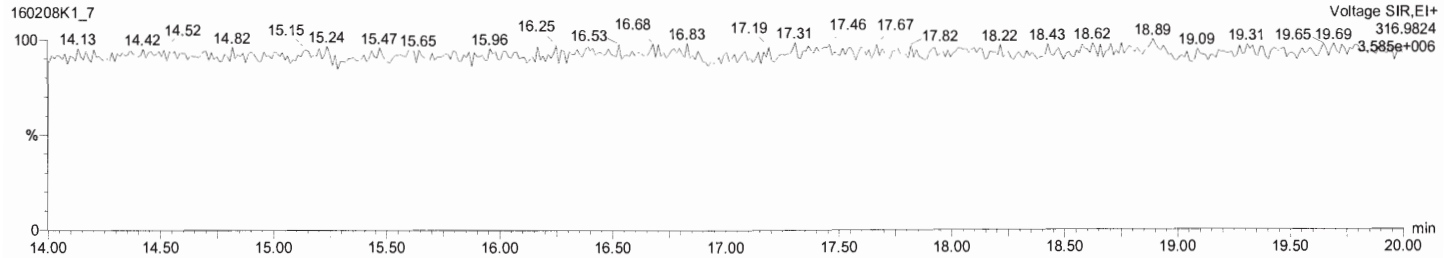
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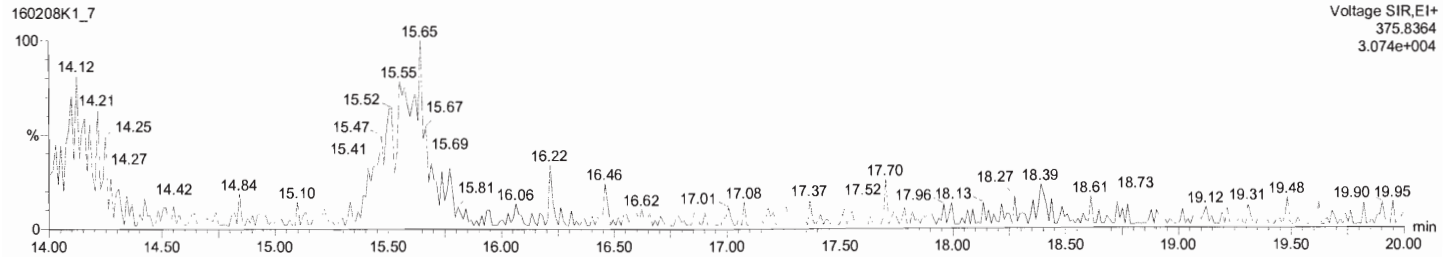
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PFK1



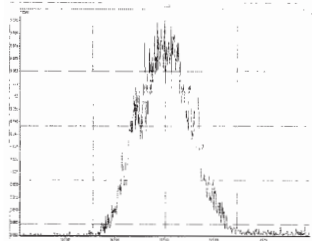
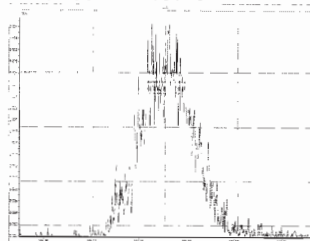
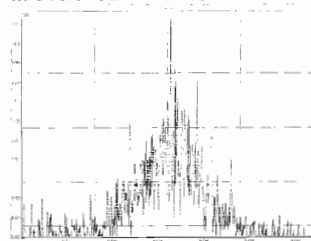
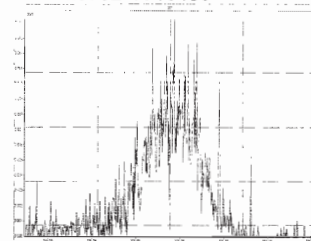
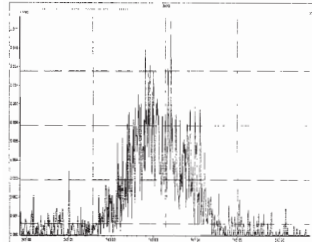
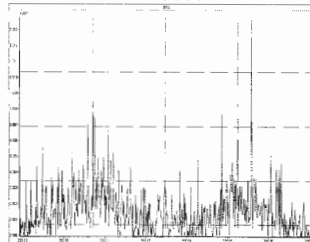
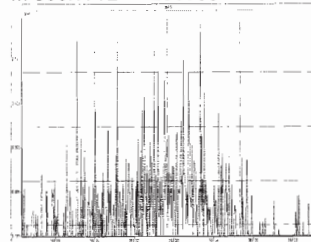
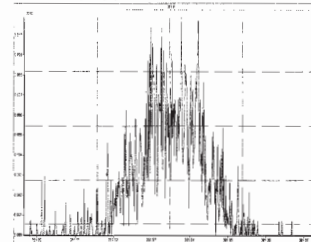
DPE1



Resolution Check Report**MassLynx 4.1 SCN815**

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Printed: Monday, February 08, 2016 20:21:42 Pacific Standard Time

M 292.9824 R 12626**M 304.9824 R 13023****M 318.9792 R 15245****M 330.9792 R 15460****M 342.9792 R 16078****M 354.9792 R 499995****M 366.9792 R 235388****M 380.9760 R 15467**

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Last Altered: Monday, February 08, 2016 14:32:01 Pacific Standard Time

Printed: Monday, February 08, 2016 14:32:20 Pacific Standard Time

Method: L:\Masslynx Common\vg11\VG11_L.PRO\MethDB\tcdf.mdb 28 Aug 2015 06:01:56

Calibration: L:\Masslynx Common\vg11\VG11_L.PRO\CurveDB\db225_1613TCDFvg11-2-8-16.cdb 08 Feb 2016 14:29:41

Name: 160208K1_9, Date: 08-Feb-2016, Time: 13:38:47, ID: SS160208K1-1 1613 SSS 15J1912, Description: 1613 CS3 15J1912

#	Name	Resp	RA	n/y	RRF	wt/vol	RT	RRT	Conc.	%Rec	DL	EMPC
1	2,3,7,8-TCDF	1.68e5	0.77	NO	1.07	1.000	18.39	1.001	9.0683	90.7	0.0661	9.07
2	2 13C-2,3,7,8-TCDF	1.73e6	0.77	NO	0.929	1.000	18.38	1.138	96.240	96.2	0.158	
3	3 13C-1,2,3,4-TCDF	1.94e6	0.79	NO	1.00	1.000	16.15	1.000	100.00	100	0.147	

Ref/LC
h/w
2/9/16

Dataset: Untitled

Last Altered: Tuesday, February 09, 2016 08:44:43 Pacific Standard Time
Printed: Tuesday, February 09, 2016 08:59:21 Pacific Standard Time

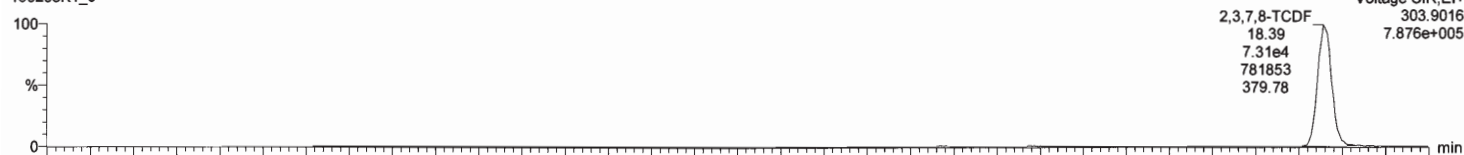
Method: L:\Masslynx Common\vg11\VG11_L.PRO\MethDB\tcdf.mdb 28 Aug 2015 06:01:56

Calibration: L:\Masslynx Common\vg11\VG11_L.PRO\CurveDB\db225_1613TCDFvg11-2-8-16.cdb 08 Feb 2016 14:29:41

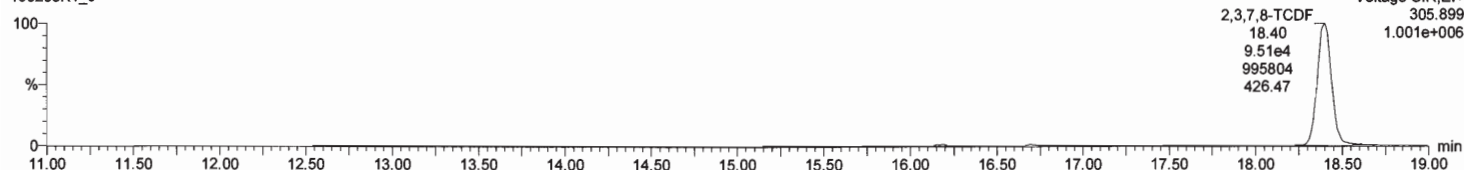
Name: 160208K1_9, Date: 08-Feb-2016, Time: 13:38:47, ID: SS160208K1-1 1613 SSS 15J1912, Description: 1613 CS3 15J1912

2,3,7,8-TCDF

160208K1_9

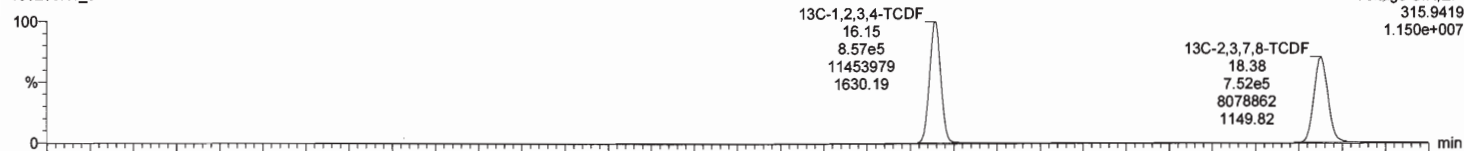


160208K1_9

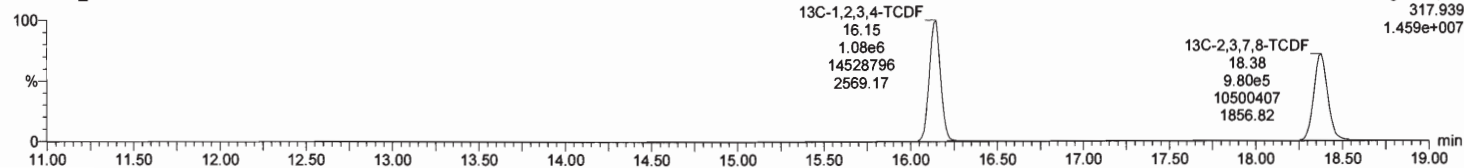


13C-2,3,7,8-TCDF

160208K1_9



160208K1_9

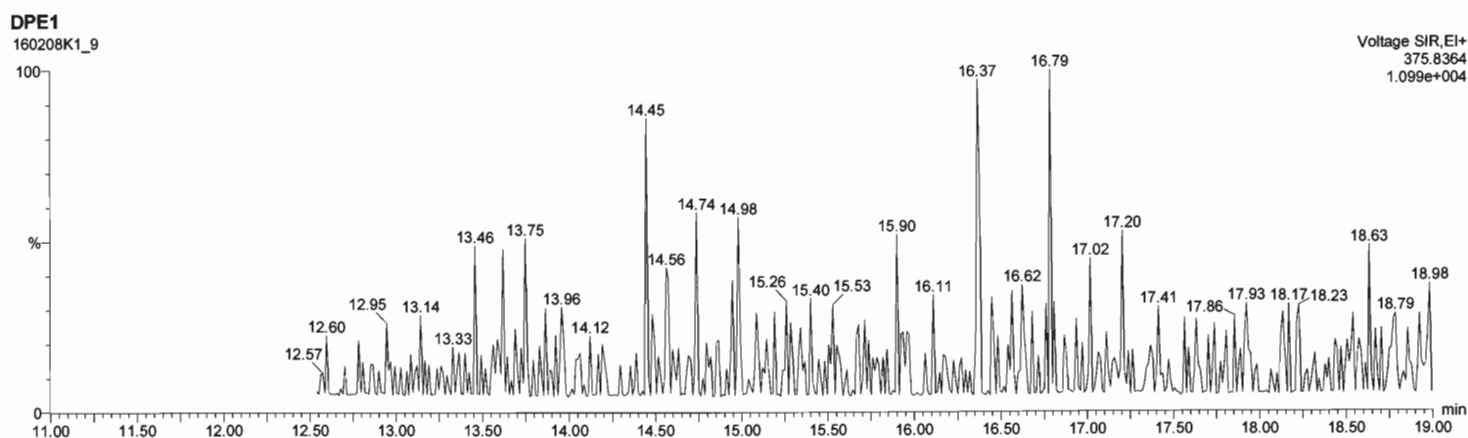
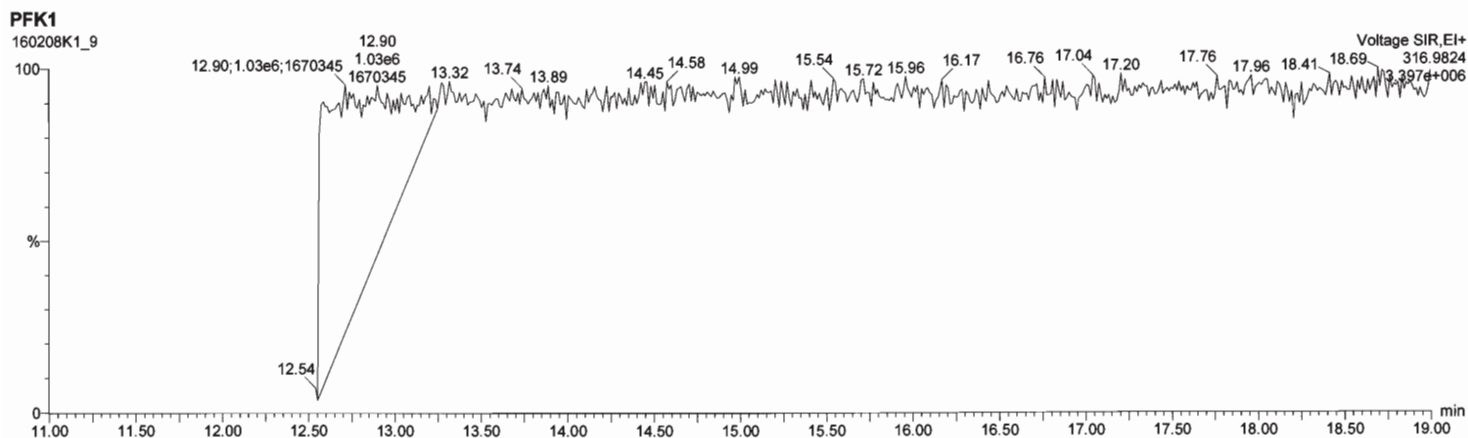


Dataset: Untitled

Last Altered: Tuesday, February 09, 2016 08:44:43 Pacific Standard Time

Printed: Tuesday, February 09, 2016 08:59:21 Pacific Standard Time

Name: 160208K1_9, Date: 08-Feb-2016, Time: 13:38:47, ID: SS160208K1-1 1613 SSS 15J1912, Description: 1613 CS3 15J1912



July 00, 0281

Vista Work Order No. 1600847

Mr. Mark Wherrill
DC0k Cill
H22 Embassy 4 oT j E, White 122
Atlanta, RA 7270G

Dear Mr. Wherrill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on July 28, 02816. This sample set was analyzed on a standard turnaround time, under your - roect j ame N oodbine Wpecial Event6

Vista Analytical Laboratory is committed to serving you effectively6 if you require additional information, please contact me at q81z197z8302 or by email at mmaier5 vistazanalyticalcom6

. Thank you for choosing Vista as part of your analytical support team6

Sincerely,



Mark Wherrill
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1600847

Case Narrative

Sample Condition on Receipt:

Wx soil samples Tere received in Good condition and Tithin the method temperature requirements6 . he samples Tere received in clear Glass containers . hey Tere stored in the dark to prevent potential UV degradation in accordance Tith Vista standard operating procedures and EPA method 8161

Analytical Notes:

EPA Method 8161

. hese samples Tere extracted and analyzed for tetrahydroxochlorinated dioxins and furans by EPA method 8161 using a BQX-1000 column6

Conditions

. hese samples Tere extracted and analyzed Tithin the method hold times6

Quality Control

. he initial Calibration and Continuous Calibration Verifications met the method acceptance criteria6

Method Blank and (nSoinS - precision and recovery) (- 4 / sample Tere extracted and analyzed Tith the preparation batch6 j o analytes Tere detected in the method Blank . he (- 4 recoveries Tere Tithin the method acceptance criteria6

Labeled standard recoveries for all OD and field samples Tere Tithin method acceptance criteria6

As requested, k Wk Wk Tere performed on sample UQRAZ7U6 . he acceptance criteria Tere met for all analytes6

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Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1600847-01	DU-2-5-A		23-Jun-16 08:45	01-Jul-16 08:57	Clear Glass Jar, 120mL
1600847-02	DU-2-5-B		23-Jun-16 09:30	01-Jul-16 08:57	Clear Glass Jar, 120mL
1600847-03	DU-2-5-C		23-Jun-16 10:15	01-Jul-16 08:57	Clear Glass Jar, 120mL
1600847-04	BGA-1		23-Jun-16 15:15	01-Jul-16 08:57	Clear Glass Jar, 120mL
1600847-05	BGA-2		23-Jun-16 16:00	01-Jul-16 08:57	Clear Glass Jar, 120mL
1600847-06	BGA-3	MS/MSD	23-Jun-16 16:45	01-Jul-16 08:57	Clear Glass Jar, 120mL
		MS/MSD			Clear Glass Jar, 120mL
		MS/MSD			Clear Glass Jar, 120mL

ANALYTICAL RESULTS

LCL-UCL-LLower control limit-Lupper control limit
The IrZtZre reported in IryZwei. hstThe Zample Zize IZreported in IwetZwei. hst
Min-The IIEQ IZcalculated IuZn. zero for the concentration of Ikon. enerZthat are not detected sllll

Sample ID: OPR					EPA Method 1613B		
Matrix: Solid		QC Batch: B6G0039			Lab Sample: B6G0039-BS1		
Sample Size: 10g I		Date Extracted: 11-7J1-u016 12:35			Date Analyzed: 19-7J1-16 16:35 ColJmn: ZB-sMS Analy. t: DB		
Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
u'2T'5-4CDD	19g	u0g	96g	6, - 1s5	8S 12C-u'2T'5-4CDD	5sg	u0 - 1, s
1'W'2T'5-PeCDD	90g	100	90g	, 0 - 13u	12C-1'W'2T'5-PeCDD	66g	u1 - uu,
1'W'2B'5-HxCDD	90g	100	90g	, 0 - 163	12C-1'W'2B'5-HxCDD	96g	u1 - 192
1'W'2B'5-HxCDD	92g	100	92g	, 6 - 123	12C-1'W'2B'5-HxCDD	9u	us - 162
1'W'2T'5-HxCDD	92g	100	92g	63 - 16u	12C-1'W'2T'5-HxCDD	99g	u1 - 192
1'W'2B'5-HpCDD	92g	100	92g	, 0 - 130	12C-1'W'2B'5-HpCDD	5s	u6 - 166
OCDD	159	u00	93g	, 5 - 133	12C-OCDD	63g	12 - 199
u'2T'5-4CDF	15g	u0g	93g	, s - 1s5	12C-u'2T'5-4CDF	59g	uu - 1su
1'W'2T'5-PeCDF	93g	100	93g	50 - 123	12C-1'W'2T'5-PeCDF	63g	u1 - 19u
u'2B'5-PeCDF	92g	100	92g	65 - 160	12C-u'2B'5-PeCDF	63g	12 - 2u5
1'W'2B'5-HxCDF	9u	100	9u	, u - 123	12C-1'W'2B'5-HxCDF	53g	19 - u0u
1'W'2B'5-HxCDF	92g	100	92g	53 - 120	12C-1'W'2B'5-HxCDF	5u	u1 - 1s9
u'2B'5-HxCDF	59g	100	59g	, 0 - 1s6	12C-u'2B'5-HxCDF	55g	uu - 1, 6
1'W'2T'5-HxCDF	91g	100	91g	, 5 - 120	12C-1'W'2T'5-HxCDF	9, g	1, - u0s
1'W'2B'5-HpCDF	91g	100	91g	5u - 1uu	12C-1'W'2B'5-HpCDF	, 5g	u1 - 1s5
1'W'2B'5-HpCDF	91g	100	91g	, 5 - 125	12C-1'W'2B'5-HpCDF	50g	u0 - 156
OCDF	15,	u00	92g	62 - 1, 0	12C-OCDF	63g	12 - 199
					CRS 2, Cl-u'2T'5-4CDD	50g	21 - 191

LCL-UCL - Lower control limit - Jpper control limit

[illegible]

CQ8S6ne v1P9tPift r6E nDPAWPPD BoErie iD Qd Q8Ud Q8QowPjnt oEjDorie iD8d v9v9nt oEjDorie iD8

5x r d r6E nE nDPAW nzie J e nvo8p1Pt oEjDoridnE x iEST A8dP1S h n8 n8t J nDPAW %E dPjorjot dP1t oEjDoridnEzot oE, PE3 %d8d8p1t oEjDPAW dP1vmm

[illegible]

[illegible]

[illegible]

[illegible]

Sample ID: Matrix Spike								EPA Method 1613B							
Source Client ID: BGA-3				QC Batch: B6G0049				Lab Sample: B6G0049-MS1/B6G0049-MSD1							
Source LabNumber: 1600847-06				Date Extracted: 11-Jul-2016 13:48				Date Analyzed: 20-Jul-16 11:58 Column: ZB-5MS Analyst: DB							
Matrix: Solid								20-Jul-16 12:46 Column: ZB-5MS Analyst: DB							
Sample Size: 10.6/10.7 g															
Analyte	Spike-MS (pg/g)	MS %R	MS Qualifiers	Spike-MSD (pg/g)	MSD %R	RPD	MSD Qualifiers	Labeled Standard		MS %R	MS Qualifiers	MSD %R	MSD Qualifiers		
2,3,7,8-TCDD	20.8	84.4		20.7	83.4	1.19		IS	13C-2,3,7,8-TCDD	85.3		96.5			
1,2,3,7,8-PeCDD	104	83.8		103	84.5	0.832			13C-1,2,3,7,8-PeCDD	72.2		78.2			
1,2,3,4,7,8-HxCDD	104	85.7		103	85.0	0.820			13C-1,2,3,4,7,8-HxCDD	88.8		96.9			
1,2,3,6,7,8-HxCDD	104	85.3		103	83.8	1.77			13C-1,2,3,6,7,8-HxCDD	84.2		93.9			
1,2,3,7,8,9-HxCDD	104	85.3		103	85.6	0.351			13C-1,2,3,7,8,9-HxCDD	87.8		101			
1,2,3,4,6,7,8-HpCDD	104	87.5		103	88.5	1.14			13C-1,2,3,4,6,7,8-HpCDD	71.1		74.2			
OCDD	208	84.9		207	84.9	0			13C-OCDD	51.5		58.5			
2,3,7,8-TCDF	20.8	83.5		20.7	81.7	2.18			13C-2,3,7,8-TCDF	83.4		96.3			
1,2,3,7,8-PeCDF	104	84.2		103	83.5	0.835			13C-1,2,3,7,8-PeCDF	71.8		77.1			
2,3,4,7,8-PeCDF	104	85.5		103	85.4	0.117			13C-2,3,4,7,8-PeCDF	71.4		74.3			
1,2,3,4,7,8-HxCDF	104	85.6		103	86.6	1.16			13C-1,2,3,4,7,8-HxCDF	82.6		91.3			
1,2,3,6,7,8-HxCDF	104	85.3		103	86.0	0.817			13C-1,2,3,6,7,8-HxCDF	79.9		88.5			
2,3,4,6,7,8-HxCDF	104	84.8		103	85.0	0.236			13C-2,3,4,6,7,8-HxCDF	84.9		92.3			
1,2,3,7,8,9-HxCDF	104	86.2		103	85.2	1.17			13C-1,2,3,7,8,9-HxCDF	88.7		103			
1,2,3,4,6,7,8-HpCDF	104	83.6		103	82.2	1.69			13C-1,2,3,4,6,7,8-HpCDF	74.7		83.0			
1,2,3,4,7,8,9-HpCDF	104	84.7		103	84.1	0.711			13C-1,2,3,4,7,8,9-HpCDF	68.4		77.8			
OCDF	208	85.2		207	84.4	0.943			13C-OCDF	52.4		58.9			
								CRS	37Cl-2,3,7,8-TCDD	78.7		86.4			

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The associated compound concentration exceeded the calibration range of the instrument.
H	Recovery and/or RPD was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Reporting Limit/LOQ.
*	See Cover Letter
Conc.	Concentration
NA	Not applicable
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-004
Pennsylvania Department of Environmental Protection	012
South Carolina Department of Health	87002001
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	7923
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope	EPA 1613B

Dilution GC/HRMS	
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 11372 Group # 1675877 Sample # 8444051-116

1600847
12°C

COC # 501333

Client Information				Matrix		Analysis Requested												For Lab Use Only															
Client: <u>CH2MHILL</u>				Acct. #:		Preservation Codes												FSC:															
Project Name/ID: <u>DOW WOODBINE</u>				PWSID #:														SCR#:															
Project Manager: <u>Mark Sheerell</u>				P.O. #:																													
Sampler: <u>J. Croshie A. Schwartz</u>				Quote #:																													
State where samples were collected: <u>Georgia</u>				For Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>																													
Sample Identification				Collected		Grab		Composite		Soil		Tissue		Potable		Ground		Surface		Water		NPDES		Other:		Total # of Containers		Analysis Requested		Preservation Codes		Remarks	
				Date		Time																											
DU-2-S-A				6-23-16		0845		X																		6		VOC					
DU-2-S-B						0930		X																		6		SVOC					
DU-2-S-C						1015		X																		6		Hex Chromium					
DU-2-2-A						1115		X																		6		Cyanide					
DU-2-2-B						1205		X																		6		Mercury Metals					
DU-2-2-C						1300		X																		6		Perchlorate					
BGA-1						1515		X																		6		Explosives					
BGA-2						1600		X																		6		Moisture					
BGA-3						1645		X																		6		pH/ORP					
* Samples not rec'd in o7/16 shipment																										18		Dioxins/Furans				Dioxins to be repackaged to Vista LAB	
Turnaround Time (TAT) Requested (please circle)																																	
Standard																																	
Rush																																	
(Rush TAT is subject to laboratory approval and surcharge.)																																	
Date results are needed:																																	
E-mail address:																																	
Data Package Options (circle if required)																																	
Type I (EPA Level 3)																																	
Equivalent/non-CLP																																	
Type III (Reduced non-CLP)																																	
NJ DKQP																																	
TX TRRP-13																																	
NYSDEC Category A or B																																	
MA MCP																																	
CT RCP																																	
EDD Required? Yes No																																	
If yes, format:																																	
Site-Specific QC (MS/MSD/Dup)? Yes No																																	
(If yes, indicate QC sample and submit triplicate sample volume.)																																	
Relinquished by Commercial Carrier:																																	
UPS FedEx Other																																	
Temperature upon receipt																																	
0.6 - 17 °C																																	

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

7044 0216

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

SAMPLE LOG-IN CHECKLIST



Vista Project #:

1600847

TAT

Std

Samples Arrival:	Date/Time 7/1/16 0857	Initials: gkr	Location: WR-2 Shelf/Rack: N/A
Logged In:	Date/Time 07/01/16 1208	Initials: BAB	Location: WR-2 Shelf/Rack: F5
Delivered By:	FedEx	UPS	On Trac
		DHL	Hand Delivered
Other			
Preservation:	Ice	Blue Ice	Dry Ice
			None
Temp °C: 2.0 (uncorrected)	Time: 0908		Thermometer ID: DT-2
Temp °C: 1.2 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill 2 of 2 Trk # 5035 4242 1610	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented?			None
Shipping Container	Vista	Client	Retain
			Return
			Dispose

Comments: Samples rec'd in clear glass jars. BAB 07/01/16

Chain of Custody Anomaly/Sample Acceptance Form



Client: CH2M Hill
 Contact: Mark Sherrill
 Email:
 Phone: (678) 938-0923

Workorder Number: 1600847
 Date Received: 01-Jul-16 08:57
 Documented by/date: B.Benedict 07/01/2016

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

<input type="checkbox"/> Complete Chain-of-Custody	<input type="checkbox"/> Preservative	<input type="checkbox"/> Collector's Name
<input type="checkbox"/> Test Method Requested	<input type="checkbox"/> Sample Identification	<input type="checkbox"/> Sample Type
<input type="checkbox"/> Analyte List Requested	<input type="checkbox"/> Sample Collection Date and/or Time	<input type="checkbox"/> Sample Location
<input type="checkbox"/> Other:		

The following anomalies were noted. Authorization is needed to proceed with analysis.

<input type="checkbox"/> Temperature outside < 6°C Range	Samples Affected: _____		
Temperature _____ °C	Ice Present?	Yes	No Melted
<input type="checkbox"/> Sample ID Discrepancy	<input type="checkbox"/> Insufficient Sample Size		
<input type="checkbox"/> Sample Holding Time Missed	<input type="checkbox"/> Sample Container(s) Broken		
<input type="checkbox"/> Custody Seals Broken	<input checked="" type="checkbox"/> Incorrect Container Type: Samples received in clear glass jars		

Comments:

Client Authorization

Proceed with Analysis: YES NO

Signature and Date

Client Comments/Instructions

per 7/7/16 email

EXTRACTION INFORMATION

Process Sheet
Workorder: **1600847**

Prep Expiration: 06/23/2017
Client: CH2M Hill

Workorder Due: **22-Jul-16 00:00**

TAT: 21

Method: **1613 Full List**
Matrix: **Solid**
Client Matrix: Soil
Also run: **Percent Solids**

Prep Batch: BGG0049

Prep Data Entered: DBF 7/15/16
Date and Initials

Initial Sequence: S6G0031

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1600847-01 "A"	<input checked="" type="checkbox"/>	DU-2-5-A	01-Jul-16 08:57	WR-2 F-5	
1600847-02 "A"	<input checked="" type="checkbox"/>	DU-2-5-B	01-Jul-16 08:57	WR-2 F-5	
1600847-03 "A"	<input checked="" type="checkbox"/>	DU-2-5-C	01-Jul-16 08:57	WR-2 F-5	
1600847-04 "A"	<input checked="" type="checkbox"/>	BGA-1	01-Jul-16 08:57	WR-2 F-5	
1600847-05 "A"	<input checked="" type="checkbox"/>	BGA-2	01-Jul-16 08:57	WR-2 F-5	
1600847-06 "A"	<input checked="" type="checkbox"/>	BGA-3 A	01-Jul-16 08:57	WR-2 F-5	MS/MSD

~~A~~ Sample N/A SR 7/14/16

Vista PM: Martha Maier

Vial Box ID: SDCL

Sample Reconciled By: S. Roughton 7, 7, 2016
Page 1 of 1

Batch: B6G0049

Matrix: Solid

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1600847-01	11.22	89.79592	10.0751	20	11-Jul-16 13:48	SPR			Soil	1613 Full List
1600847-02	11.3	91.42857	10.3314	20	11-Jul-16 13:48	SPR			Soil	1613 Full List
1600847-03	10.84	93.23529	10.1067	20	11-Jul-16 13:48	SPR			Soil	1613 Full List
1600847-04	14.62	69.45338	10.1541	20	11-Jul-16 13:48	SPR			Soil	1613 Full List
1600847-05	11.2	92.10526	10.3158	20	11-Jul-16 13:48	SPR			Soil	1613 Full List
1600847-06	10.89	90.69767	9.8770	20	11-Jul-16 13:48	SPR			Soil	1613 Full List
1600867-01	10.2	97.34848	9.9295	20	11-Jul-16 13:48	SPR			Solid	1613 Full List
1600867-02	10.21	91.26984	9.3187	20	11-Jul-16 13:48	SPR			Solid	1613 Full List
B6G0049-BLK1	10			20	11-Jul-16 13:48	SPR				QC
B6G0049-BS1	10			20	11-Jul-16 13:48	SPR	15J1327	10		QC
B6G0049-MS1	10.61			20	11-Jul-16 13:48	SPR				QC
B6G0049-MSD1	10.66			20	11-Jul-16 13:48	SPR				QC

Solids estimate

Batch: B6G0043

Lab ID	Analysis	% Solids	Entered	Target weight	Weigh this much
1600867-01	Percent Solids	97.35		10.00	10.27
1600867-02	Percent Solids	91.27		10.00	10.96

Solids estimate

Batch: B6G0025

Lab ID	Analysis	% Solids	Entered	Target weight	Weigh this much
1600835-07	Percent Solids	86.70		10.00	11.53
1600835-08	Percent Solids	84.77		10.00	11.80
1600835-09	Percent Solids	88.48		10.00	11.30
1600847-01	Percent Solids	89.80		10.00	11.14
1600847-02	Percent Solids	91.43		10.00	10.94
1600847-03	Percent Solids	93.24		10.00	10.73
1600847-04	Percent Solids	69.45		10.00	14.40
1600847-05	Percent Solids	92.11		10.00	10.86
1600847-06	Percent Solids	90.70		10.00	11.03
1600848-01	Percent Solids	97.24		10.00	10.28
1600848-02	Percent Solids	98.15		10.00	10.19
1600848-03	Percent Solids	100.00		10.00	10.00
1600848-04	Percent Solids	98.56		10.00	10.15

B6G0043

Analyst: S. Roughton	Test Code: %Moist/%Solids
Analyte: Dried at 110°C+/-5°C	Units: %

HRMS-8

<u>Date/Time IN:</u>	<u>Date/Time OUT</u>
7/11/16 14:10	7/13/16 16:10

[illegible]

Percent Moisture/ Percent Solids

D2216-90

BATCH ID

B6G0043

Analyst: ~~BSS~~ S. Roughton
SR 7/11/16
Analyte: Dried at 110°C +/- 5°C
Test Code: %Moist/%Solids
Units: %

HRMS-8

Date/Time IN: 7/11/16 1410
Date/Time OUT: 7/13/16 1610

B		C	D	E	F	G	H	K	M	N	O	P	Q	
Particle Size		SampleID		SampType	Initial and Date:	7/11/16 SR	7/13/16		SR 7/11/16					
					Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-	Visual Inspection
N/A		1600867-01		Sample	1.28	3.92	3.85							dry, fine, dirt
N/A		1600867-02 (A)		Sample	1.26	3.70	3.56		SR 7/11/16					dry, clumpy
				(A) Sample homogenized in a mortar with pestle. SR 7/11/16										

D2216-90 BATCH ID B6G0025

Analyst: S.Roughton	Test Code: %Moist/%Solids
Analyte:	Units: %
Dried at 110°C+/-5°C	

HRMS-8

<u>Date/Time IN:</u>	<u>Date/Time OUT</u>
7/7/16 0932	7/8/16 13:15

[illegible]

Percent Moisture/ Percent Solids

D2216-90

BATCH ID

B6G0025

Analyst: S. Roughton

Test Code: %Moist/%Solids

Analyte:
Dried at 110°C +/- 5°C

Units: %

INST H2MS-8

Date/Time IN: 7/7/16 0932 Date/Time OUT: 7/8/16 13:15

B		C		D	E		F	G	H	K	M	N	O	P	Q
Particle Size		SampleID		SampType	Initial and Date:		SR 7/7/16	BSS 7/8/16			SR 7/7/16				
					Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	pH Before	pH After	Acid Added	Cl-	Visual Inspection	
N/A ↓	1600835-07	(A)	Sample	1.26	3.44	3.15								Fine, sandy, twigs	
	1600835-08	(A)	Sample	1.26	3.82	3.43								fine, sandy, twigs	
	1600835-09	(A)	Sample	1.26	3.43	3.18								Fine, sandy, twigs	
	1600847-01	(A)	Sample	1.27	3.72	3.47								Soil, dark, twigs	
	1600847-02	(A)	Sample	1.27	4.42	4.15								soil, dark, twigs	
	1600847-03	(A)	Sample	1.28	4.68	4.45								soil, dark, twigs	
	1600847-04	(A)	Sample	1.28	4.39	3.44								dark, moist, twigs	
	1600847-05	(A)	Sample	1.27	3.55	3.37								sandy, twigs	
	1600847-06		Sample	1.27	3.42	3.22								fine, sandy, twigs	
	1600848-01		Sample	1.28	3.45	3.39								fine, brown	
	1600848-02		Sample	1.28	3.44	3.40								sandy	
	1600848-03		Sample	1.28	3.36	3.36								sand, twigs, rocks	
1600848-04	(A)	Sample	1.27	3.36	3.33								sandy, twigs		
				(A) Homogenized in a secondary container											

Matrix: Solid

PREPARATION BENCH SHEET

Method: 1613 Full List

B6G0049

Chemist: S. Roughton

Prepared using: HRMS - Soxhlet

Prep Date/Time: 11-Jul-16 13:48

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	C6G0059 AP CHEM/ DATE	C6G0060 ABSG CHEM/ DATE	C6G0060 AA CHEM/ DATE	C6G0066 Florisil CHEM/ DATE	RS CHEM/WIT DATE
<input type="checkbox"/>	B6G0049-BLK1	[10.00]	(10.00)	SL 5 ^g 7/11/16	INS OK 7/13/16	OK 7/13/16	OK 7/14/16	OK 7/14/16	OK 7/15/16	OK OK 7/15/16
<input type="checkbox"/>	B6G0049-BS1	↓	↓	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	B6G0049-MS1 1600847-06	11.03	10.61	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	B6G0049-MSD1 1600847-06	11.03	10.66	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1600847-01	11.14	11.22	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1600847-02	10.94	11.30	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1600847-03	10.73	10.84	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1600847-04	14.40	14.62	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1600847-05	10.86	11.20	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1600847-06	11.03	10.89	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1600867-01 OK 7/14/16	10.27	10.20	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1600867-02	10.96	10.21	↓	↓	↓	↓	↓	↓	↓

IS Name <u>V5</u>	NS Name <u>V11</u>	CRS Name <u>V5</u>	RS Name <u>V5</u>	Cycle Time	APP: SEFUN SOX <u>SDS</u>	Check Out: <u>SL 7/11/16</u>
PCDD/F <u>15J1324, 10.21</u>	PCDD/F <u>15J1327, 10.21</u>	PCDD/F <u>15J1325, 10.21</u>	PCDD/F <u>15J1326, 10.21</u>	Start Date/Time <u>7/11/16 1610</u>	SOLV: <u>Tol</u>	Check In: <u>↓</u>
PCB	PCB	PCB	PCB	Stop Date/Time <u>7/12/16 0825</u>	Other <u>N/A</u>	Chemist/Date: <u>↓</u>
PAH	PAH	PAH	PAH	Final Volume(s) <u>20ml</u>	<u>C14</u>	Balance ID: <u>HRMS-8</u>

Comments:

Work Order 1600847

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SAMPLE DATA – EPA METHOD 1613

Client ID: Method Blank
Lab ID: B6G0049-BLK1

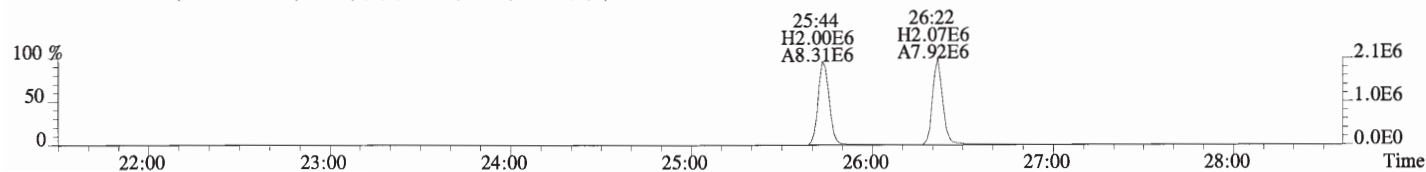
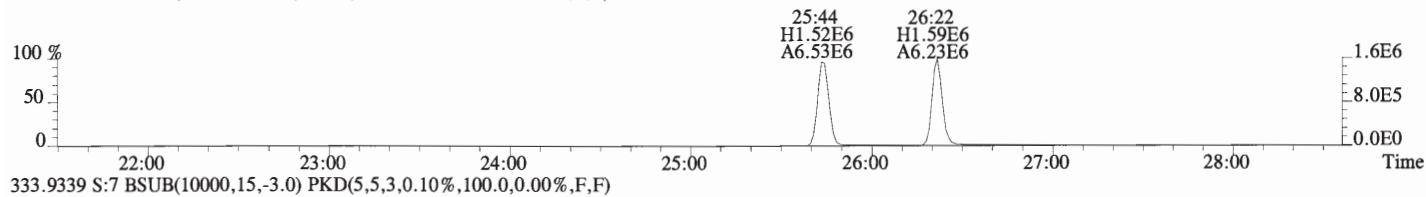
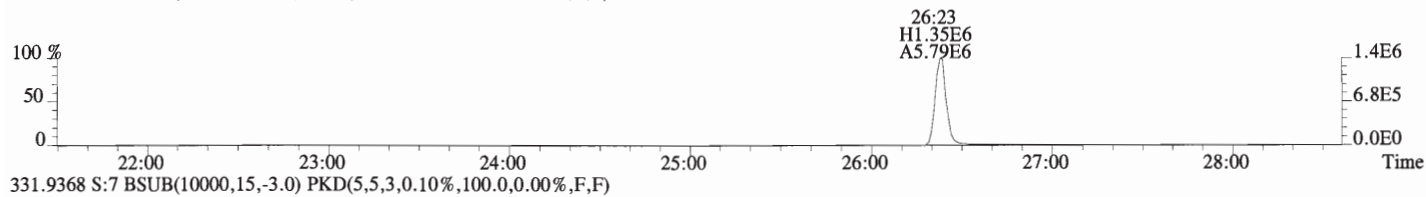
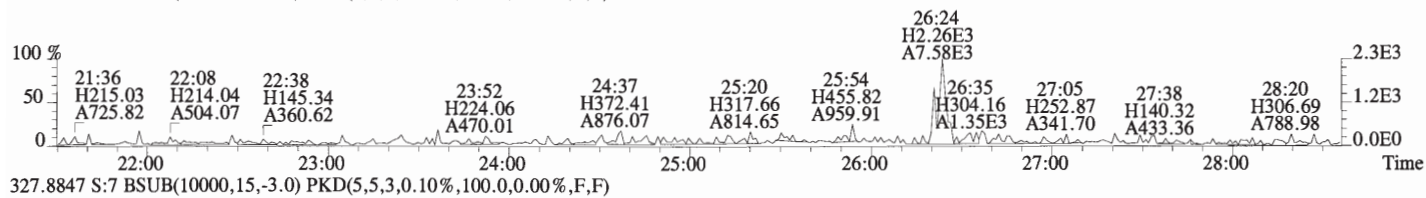
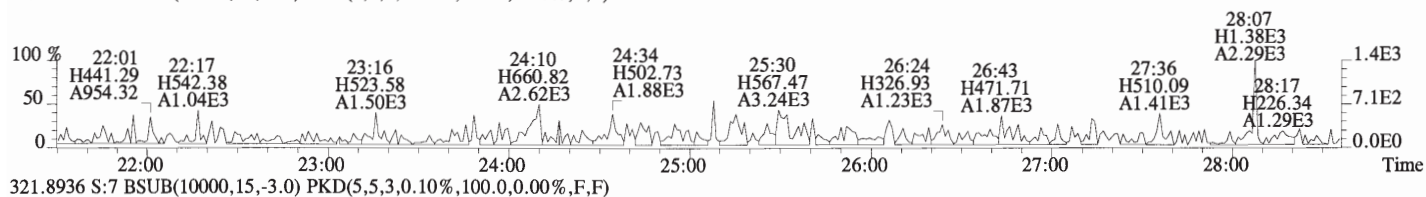
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GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16 wt/vol:10.000

ConCal: ST160719D1-1
EndCAL: NA

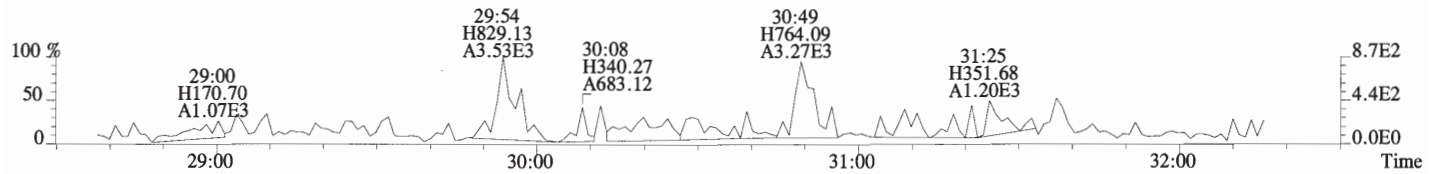
Page 4 of 4

Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	1.13	NotF _q	*	*	*	224	2.5	0.0483	Total Tetra-Dioxins	*	*	*	224	0.0483
1,2,3,7,8-PeCDD	*	* n	0.96	NotF _q	*	*	*	344	2.5	0.0867	Total Penta-Dioxins	*	*	*	344	0.0867
1,2,3,4,7,8-HxCDD	*	* n	1.00	NotF _q	*	*	*	258	2.5	0.102	Total Hexa-Dioxins	*	*	*	258	0.102
1,2,3,6,7,8-HxCDD	*	* n	1.10	NotF _q	*	*	*	258	2.5	0.106	Total Hepta-Dioxins	*	*	*	132	0.0698
1,2,3,7,8,9-HxCDD	*	* n	1.05	NotF _q	*	*	*	258	2.5	0.114	Total Tetra-Furans	*	*	*	292	0.0514
1,2,3,4,6,7,8-HpCDD	*	* n	1.05	NotF _q	*	*	*	132	2.5	0.0698	Total Penta-Furans	0.0000	0.0000	*	216	0.0566
OCDD	*	* n	0.96	NotF _q	*	*	*	115	2.5	0.0913	Total Hexa-Furans	*	*	*	274	0.0535
											Total Hepta-Furans	*	*	*	164	0.0492
2,3,7,8-TCDF	*	* n	1.12	NotF _q	*	*	*	292	2.5	0.0514						
1,2,3,7,8-PeCDF	*	* n	1.01	NotF _q	*	*	*	216	2.5	0.0577						
2,3,4,7,8-PeCDF	*	* n	0.90	NotF _q	*	*	*	216	2.5	0.0556						
1,2,3,4,7,8-HxCDF	*	* n	1.16	NotF _q	*	*	*	274	2.5	0.0477						
1,2,3,6,7,8-HxCDF	*	* n	1.16	NotF _q	*	*	*	274	2.5	0.0472						
2,3,4,6,7,8-HxCDF	*	* n	1.23	NotF _q	*	*	*	274	2.5	0.0484						
1,2,3,7,8,9-HxCDF	*	* n	1.13	NotF _q	*	*	*	274	2.5	0.0736						
1,2,3,4,6,7,8-HpCDF	*	* n	1.44	NotF _q	*	*	*	164	2.5	0.0476						
1,2,3,4,7,8,9-HpCDF	*	* n	1.31	NotF _q	*	*	*	164	2.5	0.0508						
OCDF	*	* n	1.03	NotF _q	*	*	*	278	2.5	0.164						
IS 13C-2,3,7,8-TCDD	1.42e+07	0.79 y	1.01	26:22	1.024	188.74					Rec 94.4	Qual				
IS 13C-1,2,3,7,8-PeCDD	1.19e+07	0.62 y	1.10	31:08	1.209	145.17					72.6					
IS 13C-1,2,3,4,7,8-HxCDD	9.48e+06	1.29 y	0.72	34:25	1.014	195.09					97.5					
IS 13C-1,2,3,6,7,8-HxCDD	9.52e+06	1.28 y	0.73	34:31	1.017	194.16					97.1					
IS 13C-1,2,3,7,8,9-HxCDD	9.58e+06	1.24 y	0.70	34:49	1.026	202.39					101					
IS 13C-1,2,3,4,6,7,8-HpCDD	7.10e+06	1.06 y	0.66	38:20	1.129	158.41					79.2					
IS 13C-OCDD	1.08e+07	0.91 y	0.66	41:33	1.224	242.72					60.7					
IS 13C-2,3,7,8-TCDF	2.02e+07	0.78 y	0.90	25:32	0.992	191.20					95.6					
IS 13C-1,2,3,7,8-PeCDF	1.60e+07	1.58 y	0.98	29:54	1.162	138.36					69.2					
IS 13C-2,3,4,7,8-PeCDF	1.86e+07	1.62 y	1.15	30:50	1.198	138.17					69.1					
IS 13C-1,2,3,4,7,8-HxCDF	1.19e+07	0.51 y	1.01	33:33	0.988	174.03					87.0					
IS 13C-1,2,3,6,7,8-HxCDF	1.27e+07	0.52 y	1.10	33:40	0.992	171.29					85.6					
IS 13C-2,3,4,6,7,8-HxCDF	1.18e+07	0.51 y	0.95	34:16	1.009	183.54					91.8					
IS 13C-1,2,3,7,8,9-HxCDF	1.09e+07	0.52 y	0.83	35:12	1.037	195.49					97.7					
IS 13C-1,2,3,4,6,7,8-HpCDF	7.46e+06	0.45 y	0.70	36:57	1.089	158.18					79.1					
IS 13C-1,2,3,4,7,8,9-HpCDF	7.33e+06	0.44 y	0.72	38:53	1.145	151.04					75.5					
IS 13C-OCDF	1.32e+07	0.87 y	0.82	41:46	1.230	237.89					59.5					
C/Up 37Cl-2,3,7,8-TCDD	5.79e+06		1.14	26:23	1.025	68.608					85.8					
RS/RT 13C-1,2,3,4-TCDD	1.48e+07	0.79 y	1.00	25:44	*	200.00					Integrations	Reviewed				
RS 13C-1,2,3,4-TCDF	2.35e+07	0.81 y	1.00	24:09	*	200.00					by 1/8	by				
RS/RT 13C-1,2,3,4,6,9-HxCDF	1.35e+07	0.51 y	1.00	33:57	*	200.00					Analyst: 1/8	Analyst: 1/2				
											Date: 7/20/16	Date: 7/22/15				

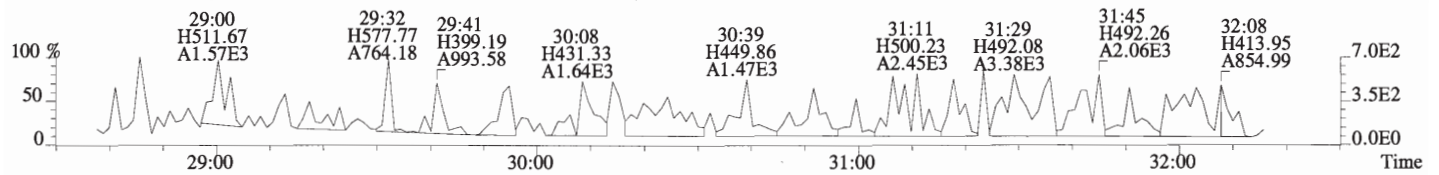
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319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



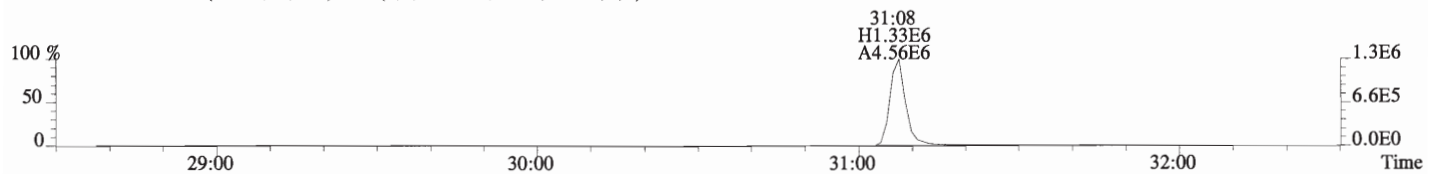
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353.8576 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



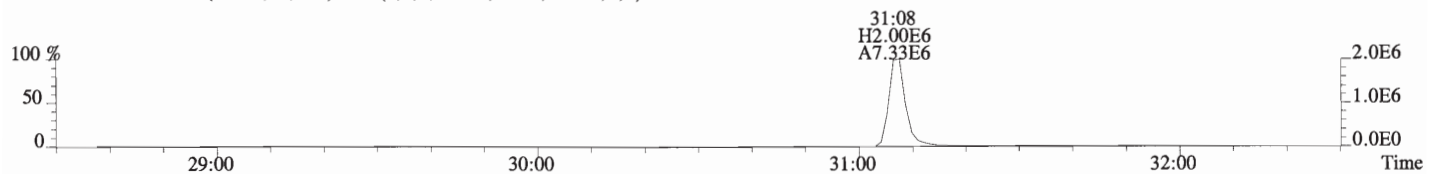
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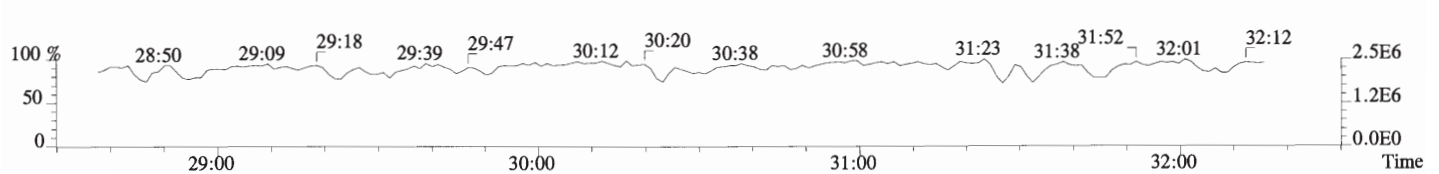
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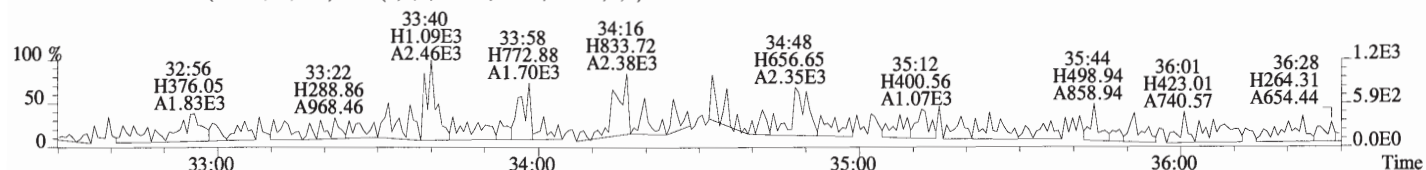
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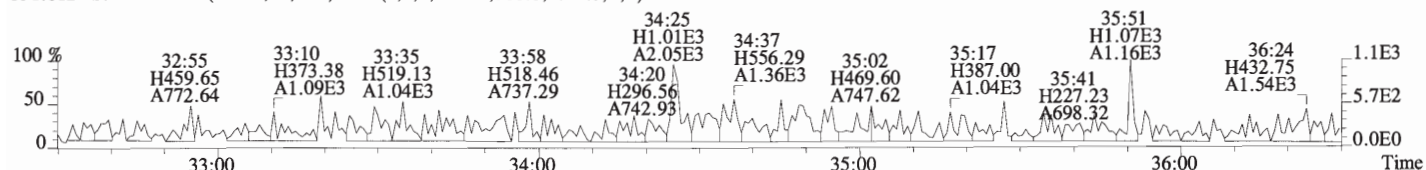
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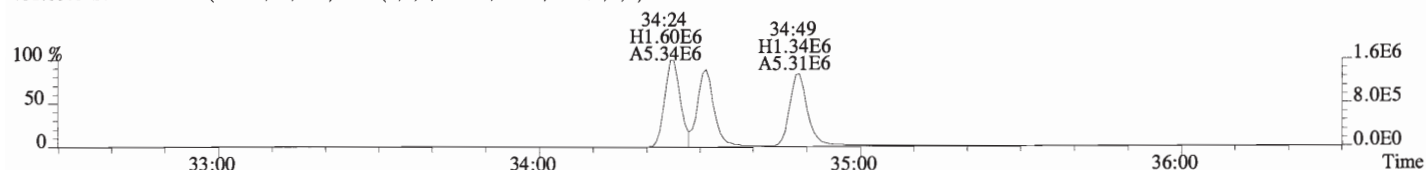
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389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



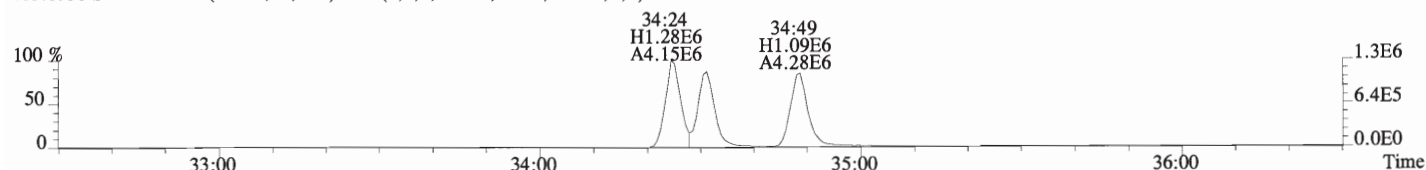
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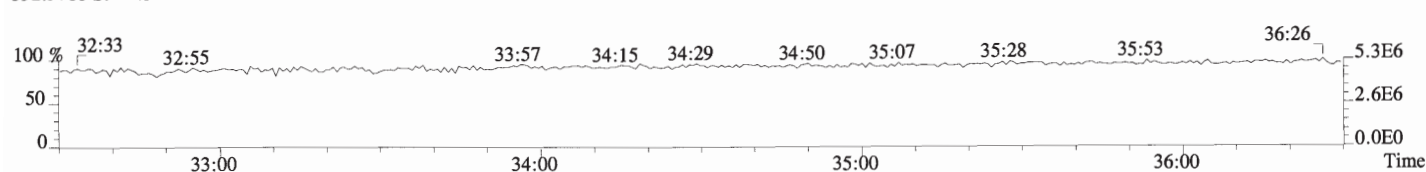
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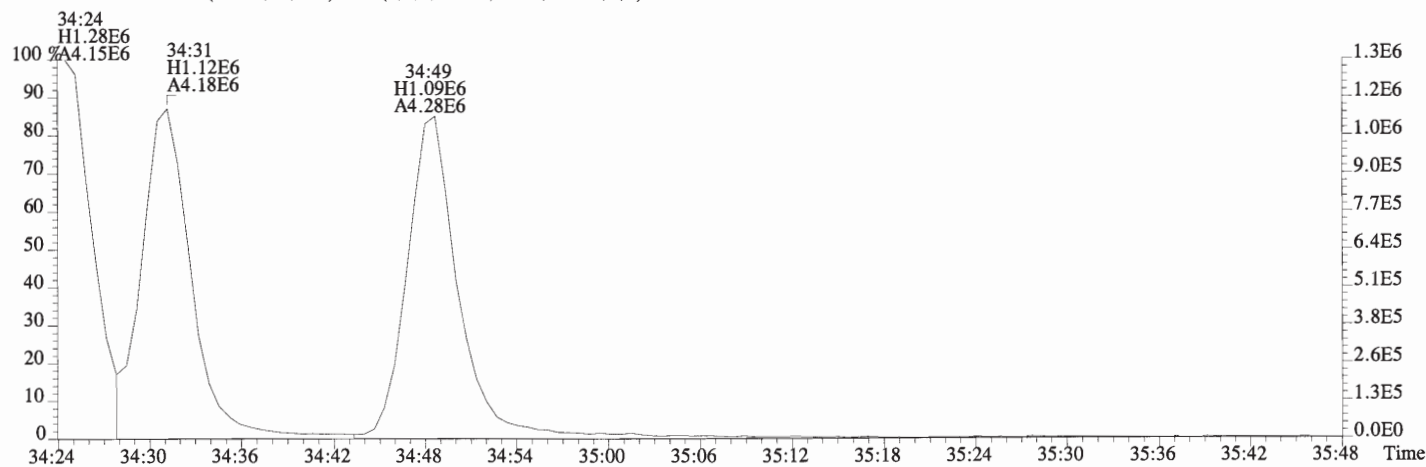
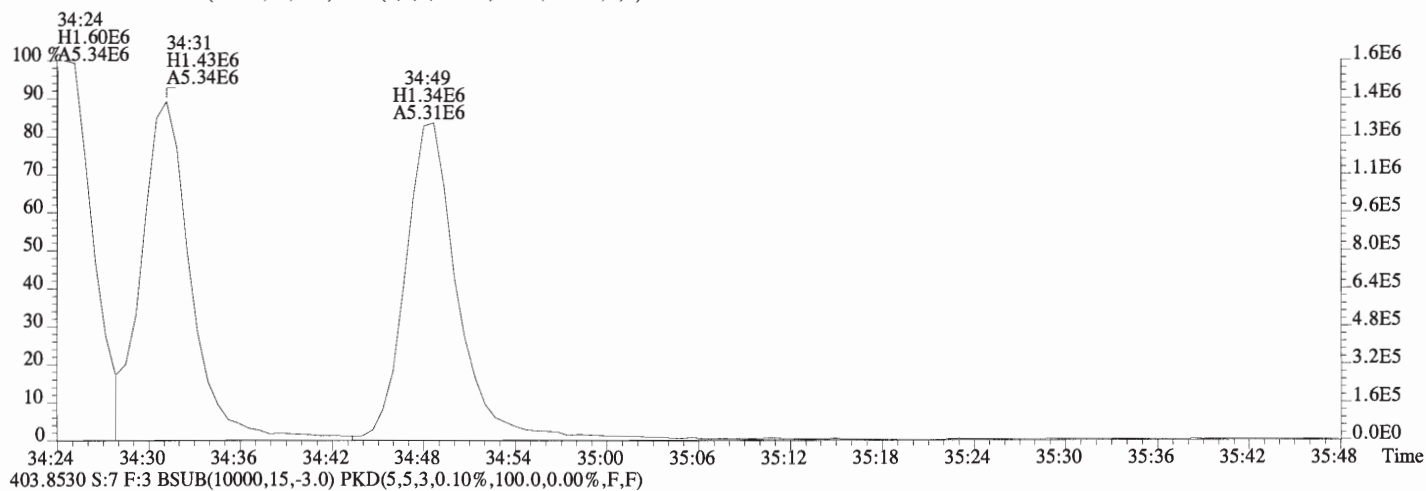
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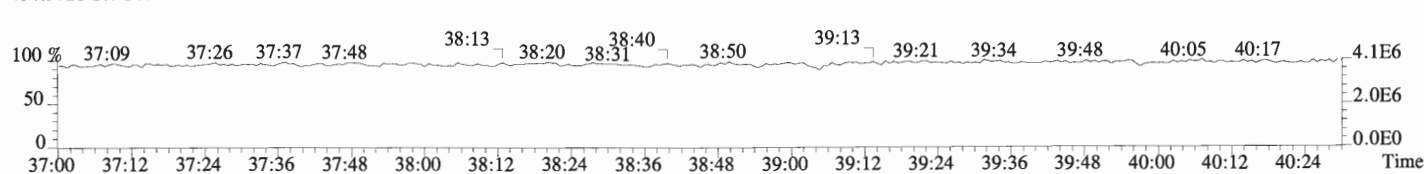
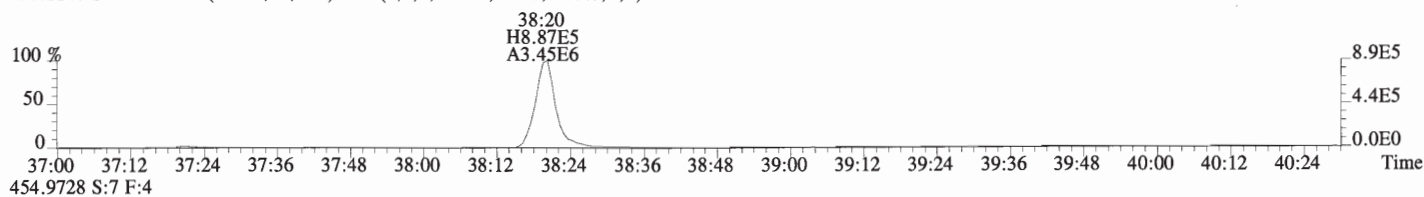
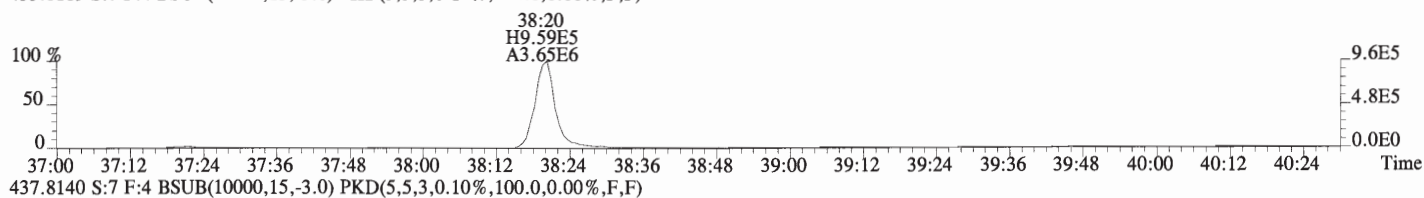
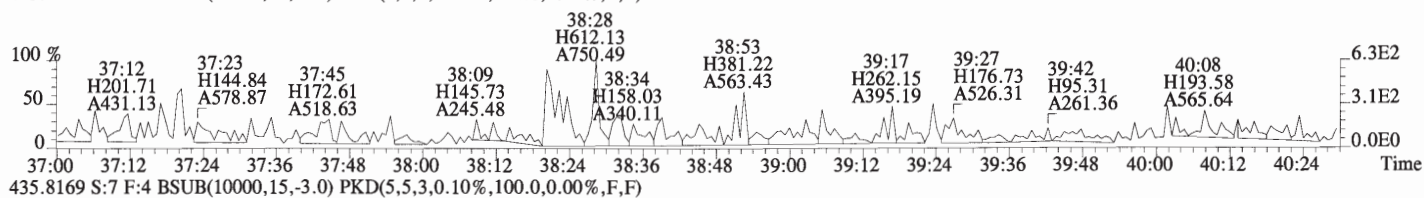
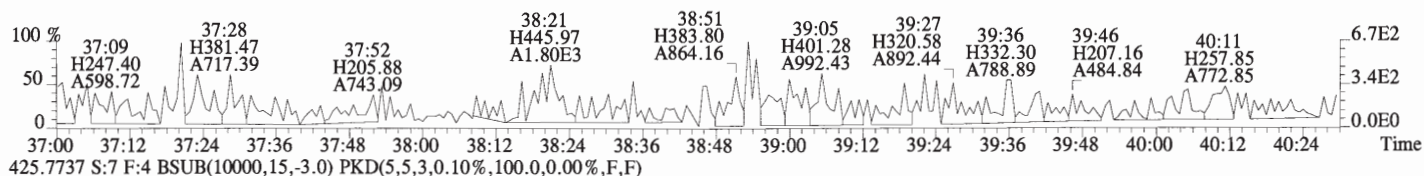
392.9760 S:7 F:3



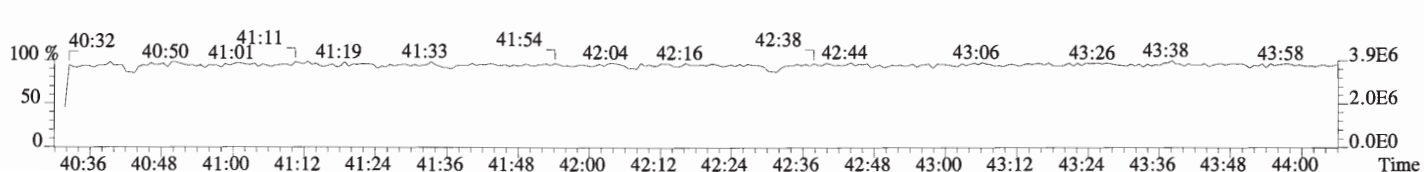
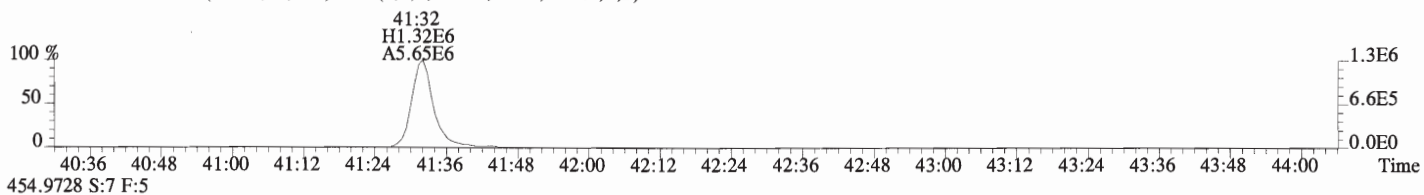
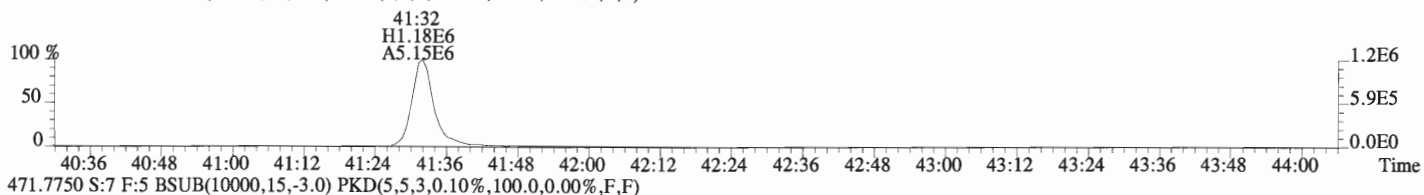
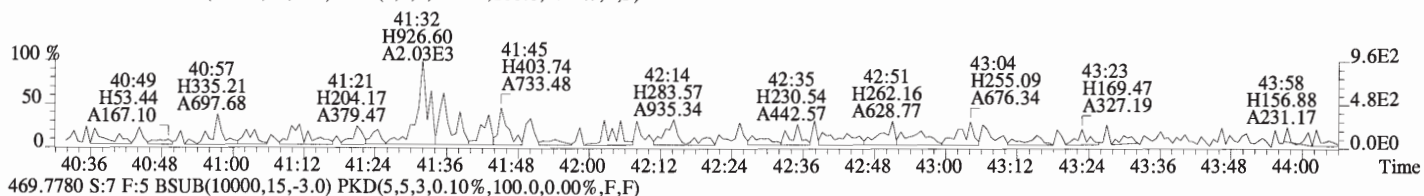
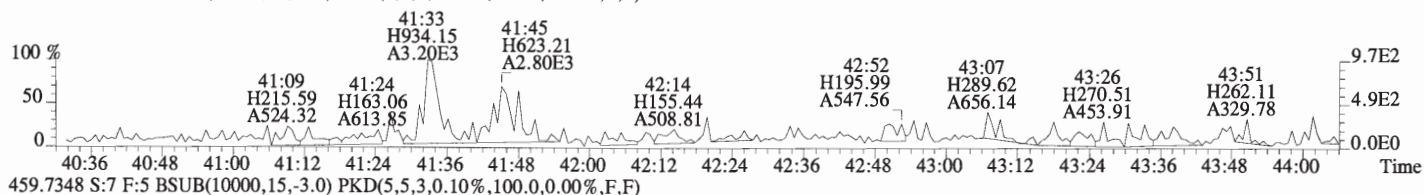
File:160719D1 #1-392 Acq:19-JUL-2016 20:03:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BLK1 Method Blank 10 Exp:OCDD_DB5
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



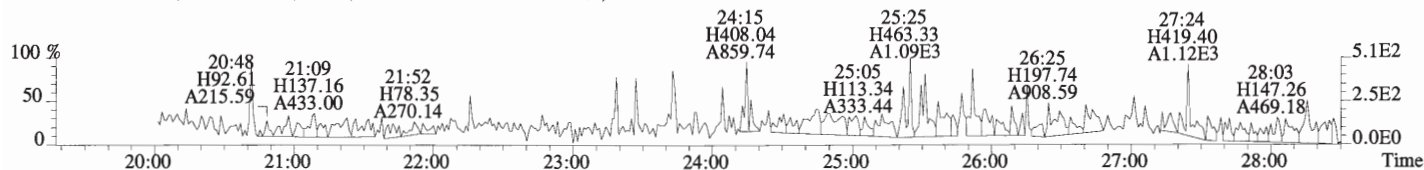
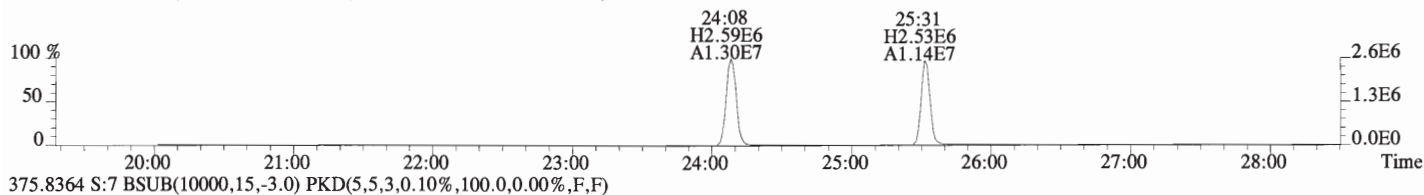
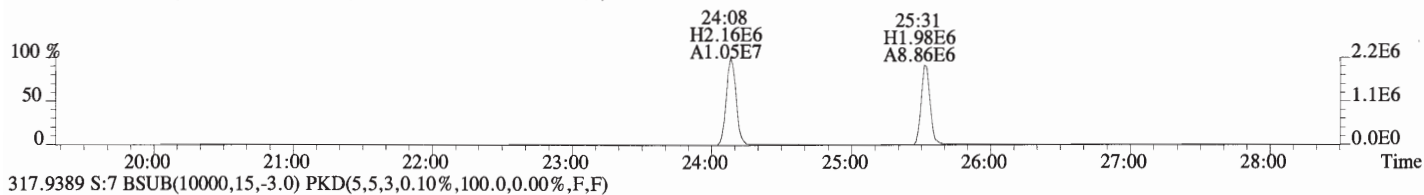
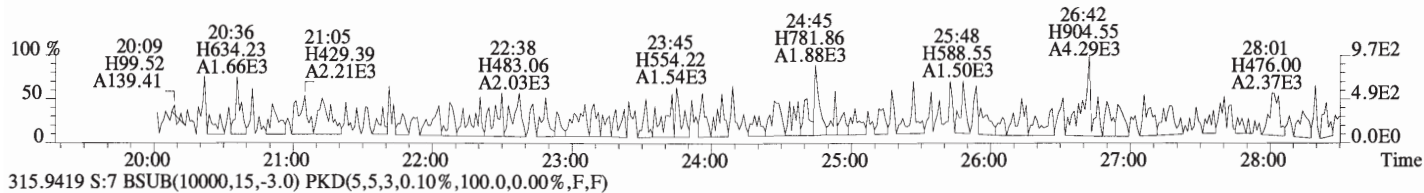
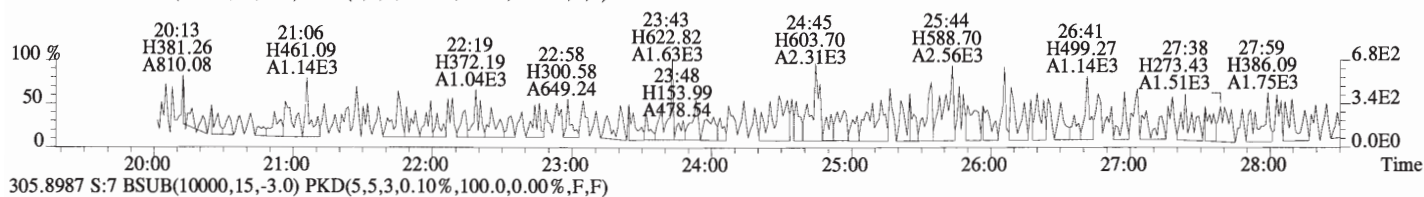
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Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BLK1 Method Blank 10 Exp:OCDD_DB5
423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



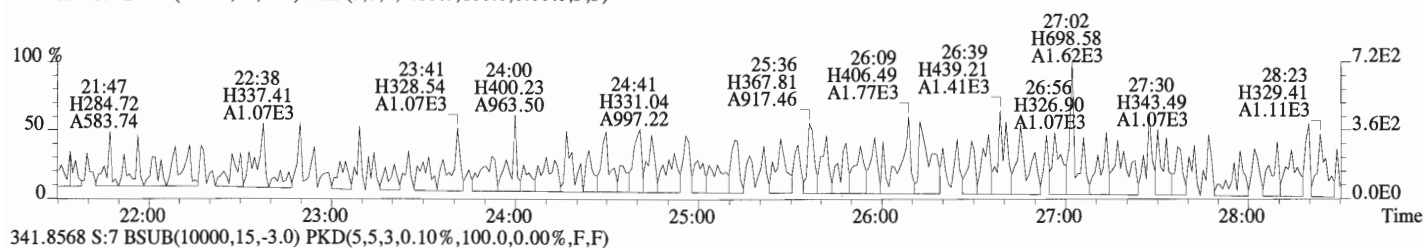
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 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BLK1 Method Blank 10 Exp:OCDD_DB5
 457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



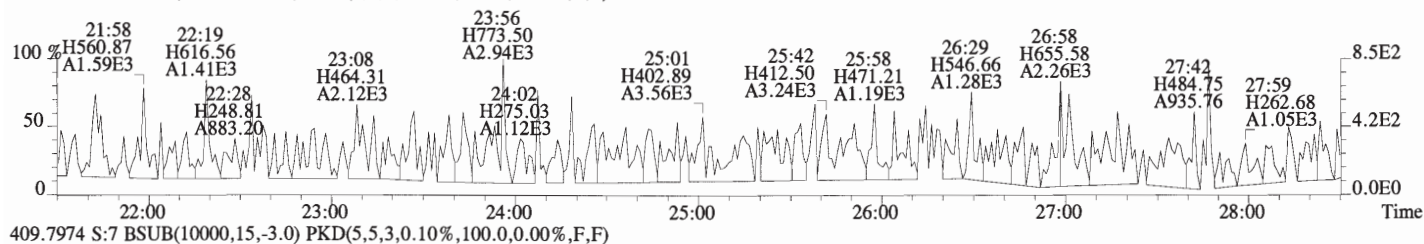
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Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BLK1 Method Blank 10 Exp:OCDD_DB5
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



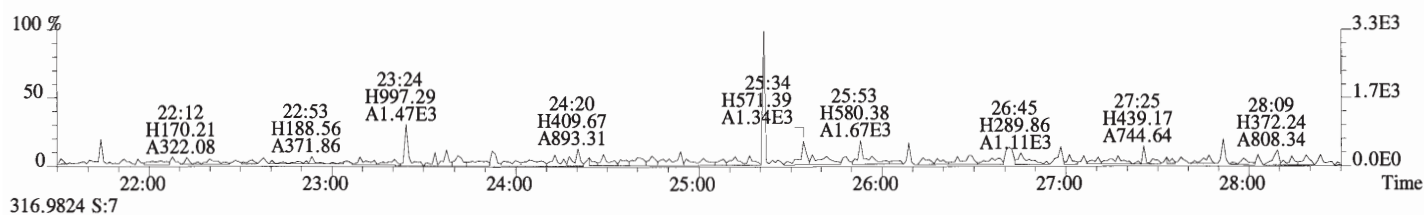
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Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



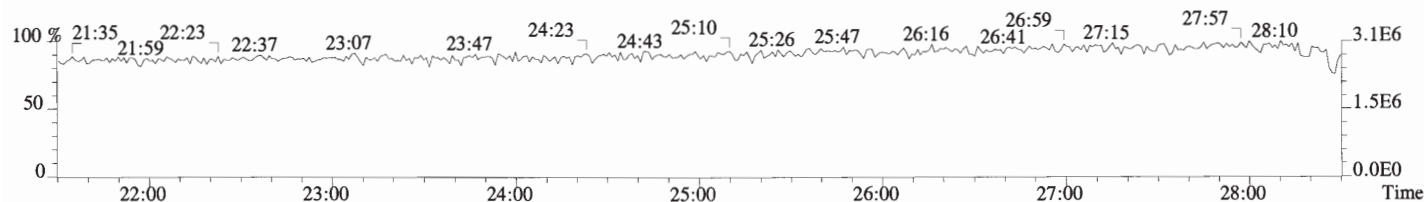
341.8568 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



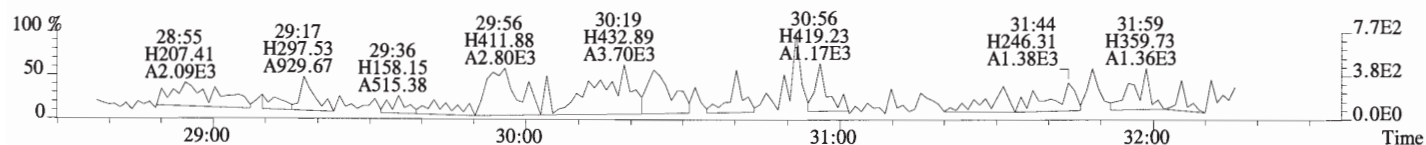
409.7974 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



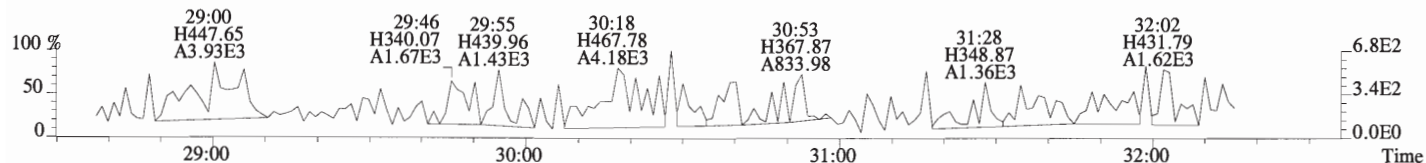
316.9824 S:7



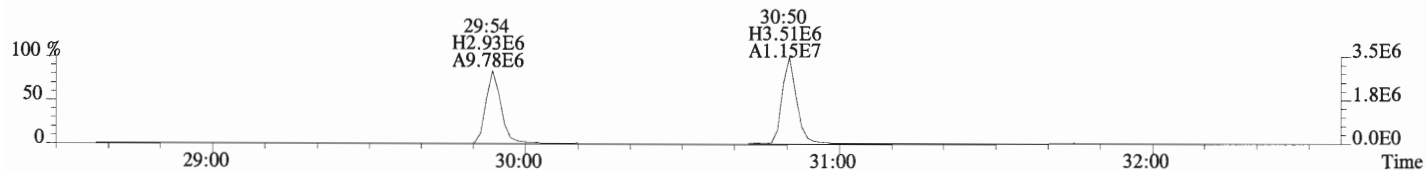
File:160719D1 #1-193 Acq:19-JUL-2016 20:03:10 GC EI+ Voltage SIR Autospec-UltimaE
Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BLK1 Method Blank 10 Exp:OCDD_DB5
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



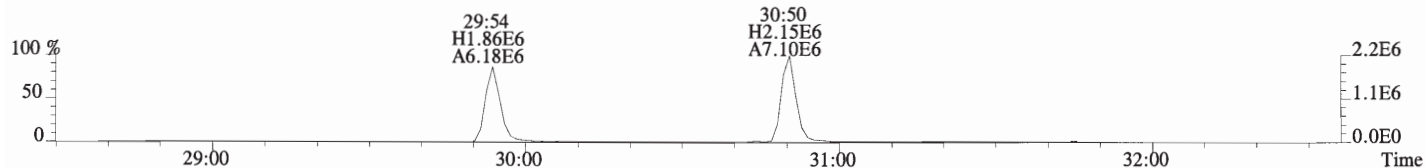
341.8568 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



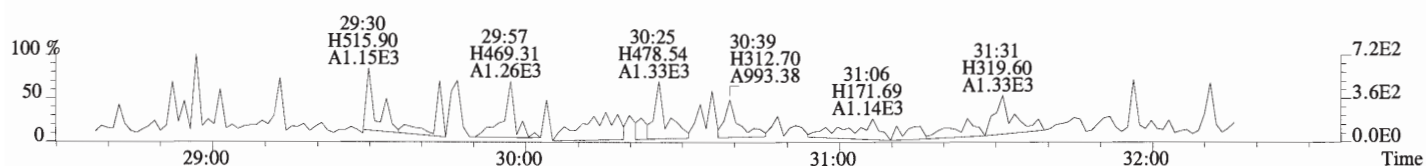
351.9000 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



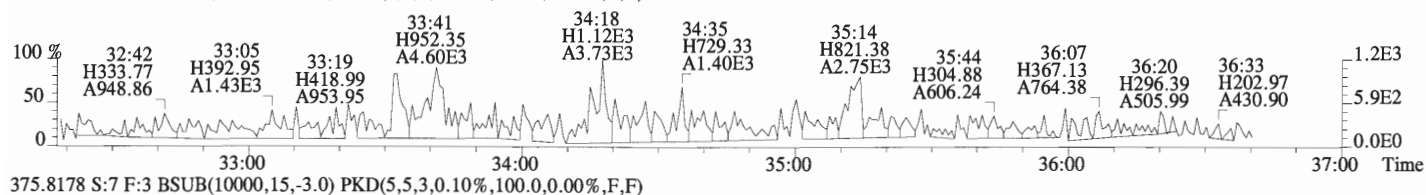
353.8970 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



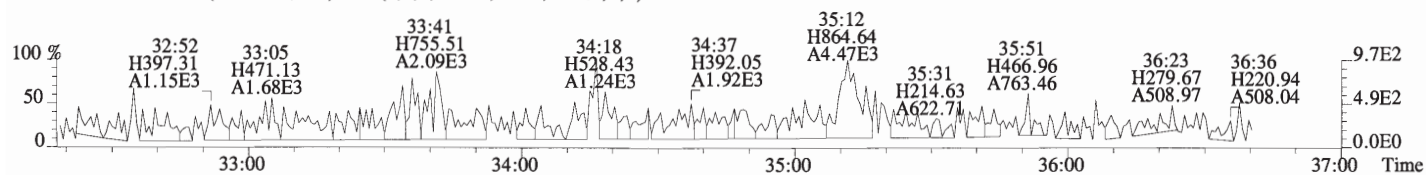
409.7974 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



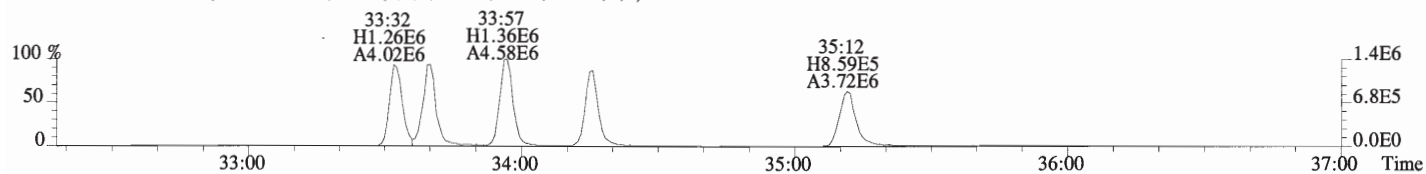
File:160719D1 #1-392 Acq:19-JUL-2016 20:03:10 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BLK1 Method Blank 10 Exp:OCDD_DB5
 373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



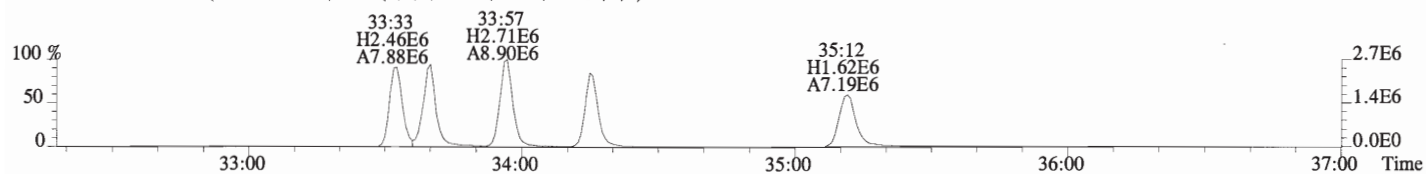
375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



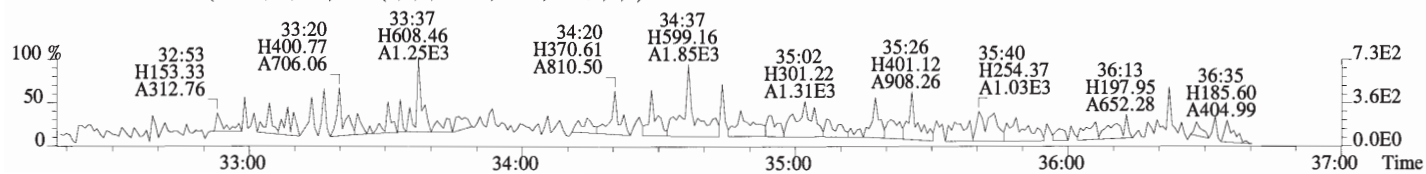
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



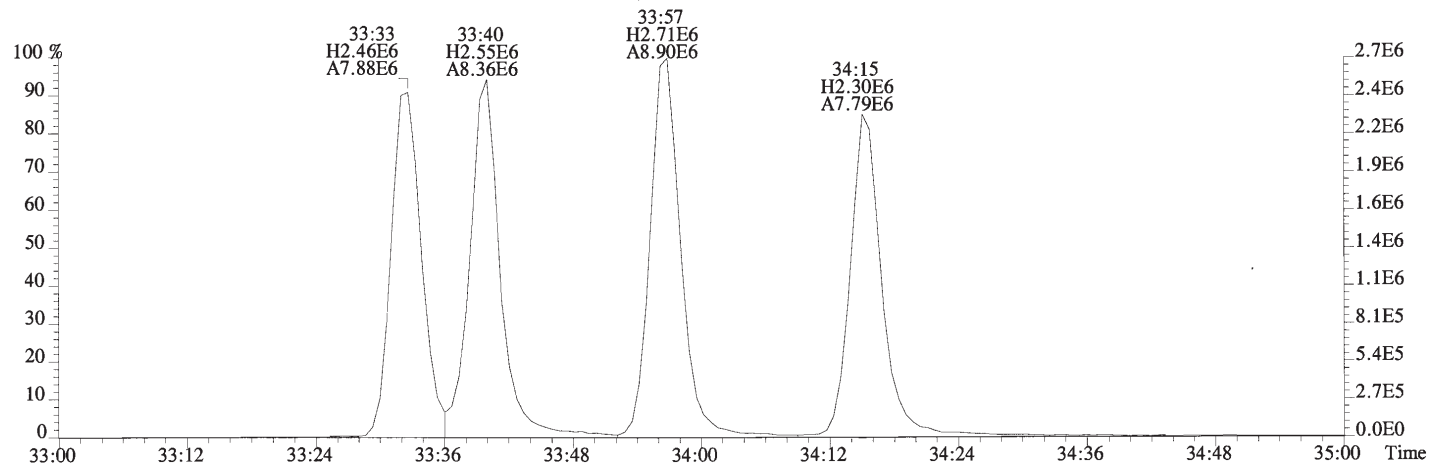
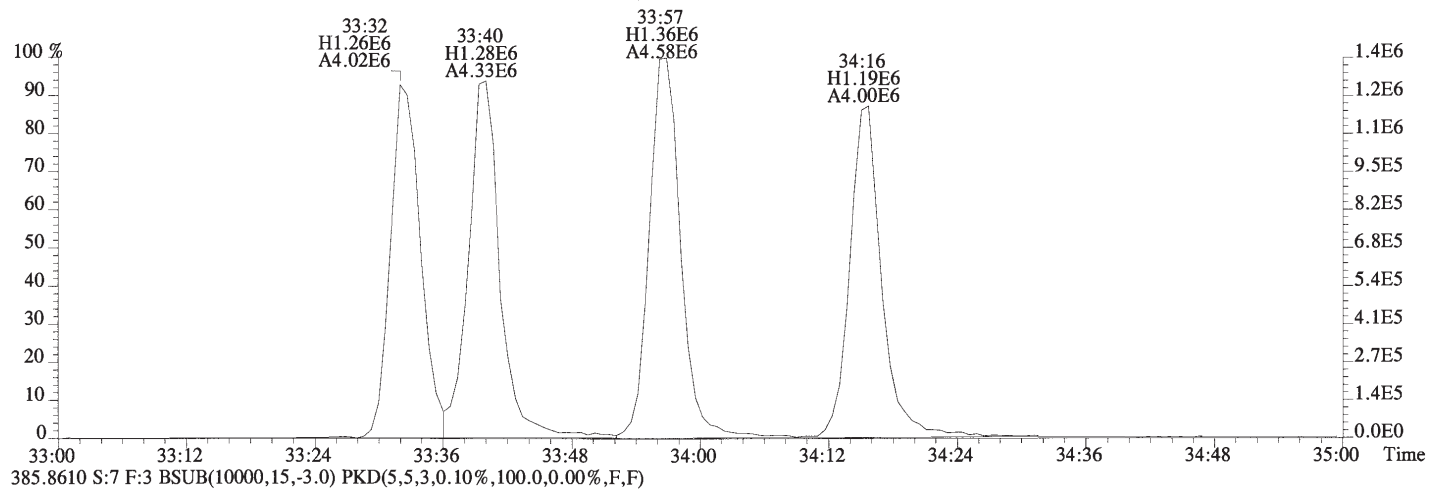
385.8610 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



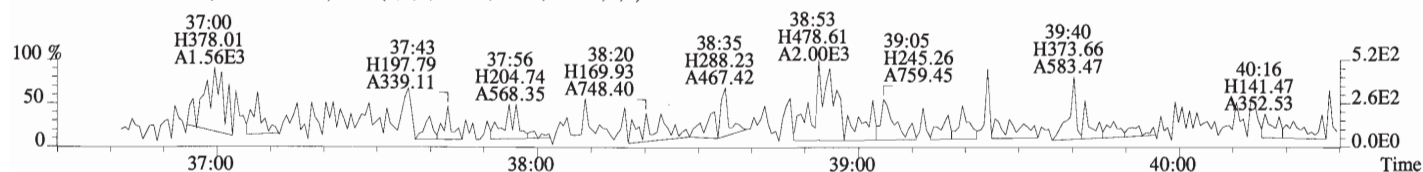
445.7555 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



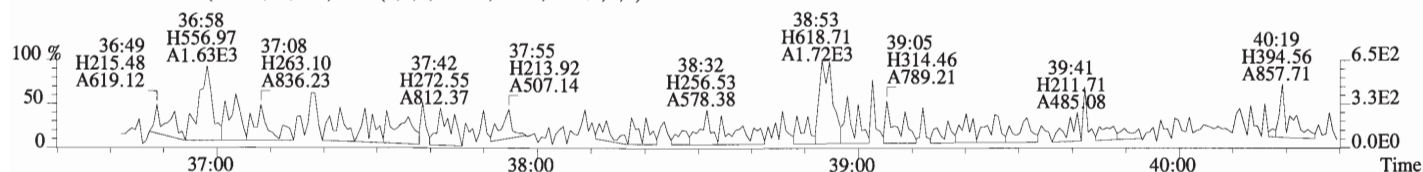
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 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BLK1 Method Blank 10 Exp:OCDD_DB5
 383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



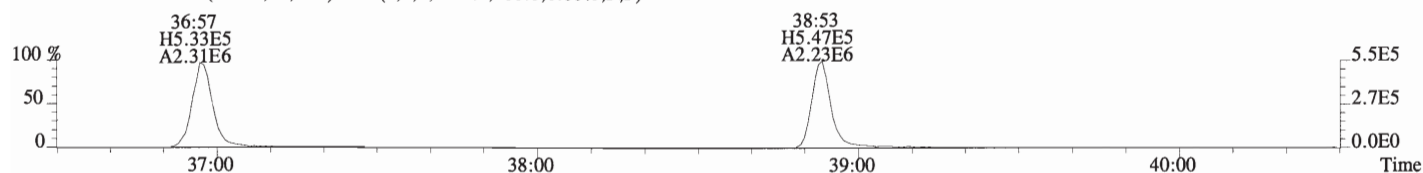
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 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BLK1 Method Blank 10 Exp:OCDD_DB5
 407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



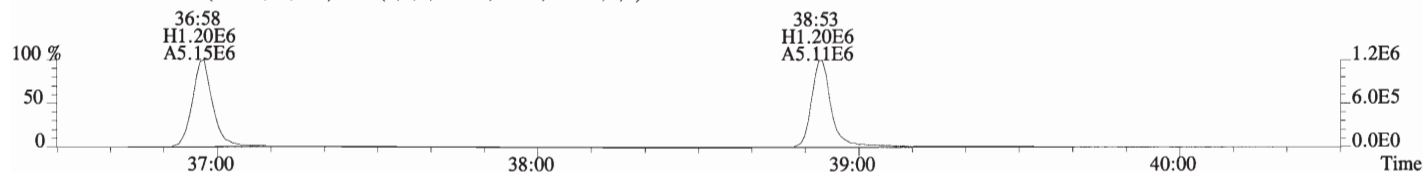
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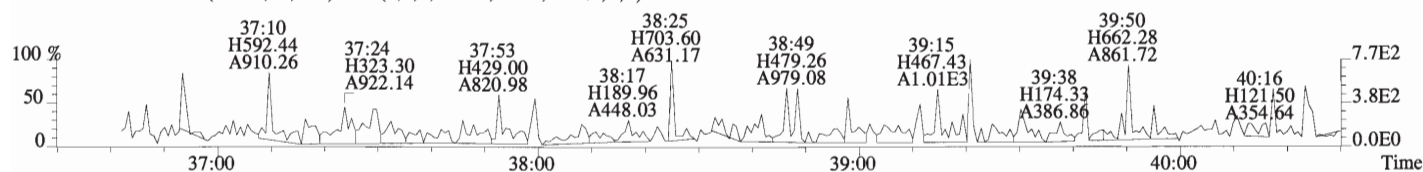
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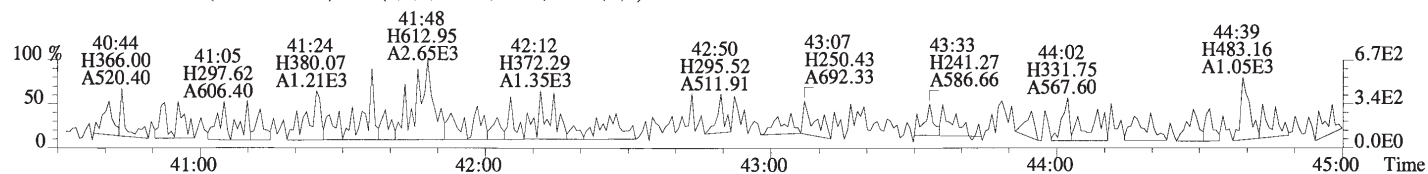
419.8220 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



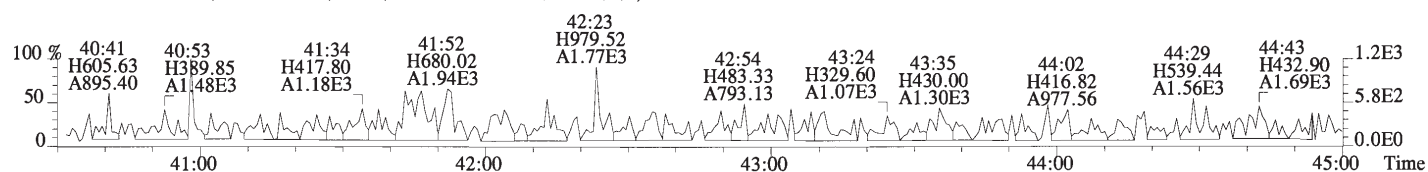
479.7165 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



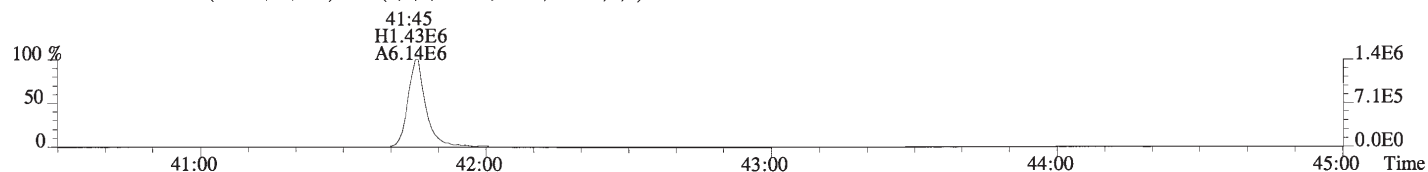
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 Sample#7 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BLK1 Method Blank 10 Exp:OCDD_DB5
 441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



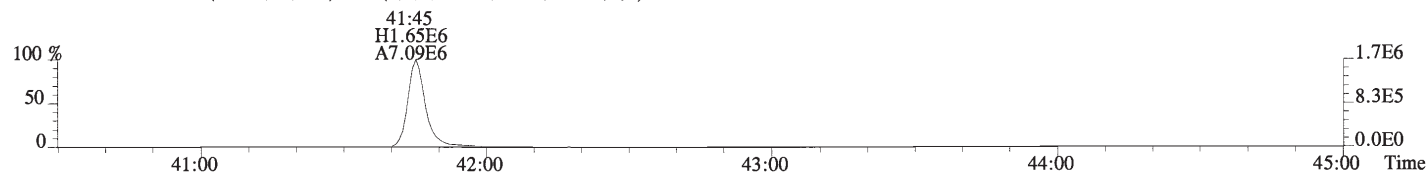
443.7398 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



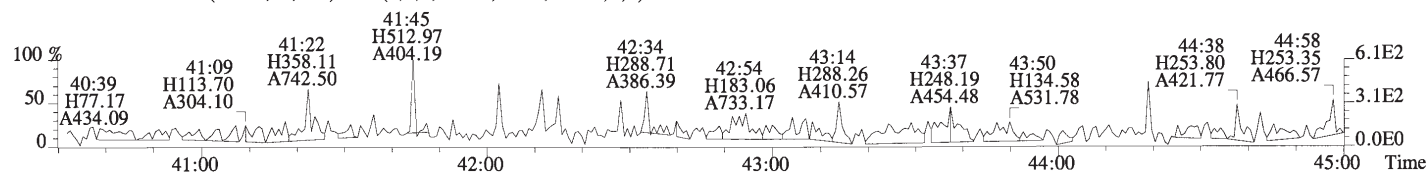
453.7831 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



FORM 8A
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B6G0049-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 160719D1-3

Ext. Date: Shift: Day Analysis Date: 19-JUL-16 Time: 16:48:59

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
2,3,7,8-TCDD	10	9.69	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	45.3	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	45.3	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	46.8	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	46.6	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	46.7	35.0 - 70.0
OCDD	100	94.4	78.0 - 144.0
2,3,7,8-TCDF	10	9.46	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	47.0	40.0 - 67.0
2,3,4,7,8-PeCDF	50	46.7	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	46.3	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	46.8	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	44.9	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	45.6	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	45.8	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	45.5	39.0 - 69.0
OCDF	100	93.6	63.0 - 170.0

(1) Contract-required concentration limits for OPR
as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR
as specified in Table 6a, Method 1613. 10/94

Analyst: DB

Date: 7/20/16

FORM 8B
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory Extraction Batch: B6G0049-BS1

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): SOLID OPR Data Filename: 160719D1-3

Ext. Date: Shift: Day Analysis Date: 19-JUL-16 Time: 16:48:59

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

LABELLED COMPOUNDS	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
13C-2,3,7,8-TCDD	100	85.7	20.0 - 175.0
13C-1,2,3,7,8-PeCDD	100	66.1	25.0 - 141.0 (2) 21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	96.2	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	92.2	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	99.3	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	85.3	26.0 - 166.0
13C-OCDD	200	130	26.0 - 397.0
13C-2,3,7,8-TCDF	100	89.2	22.0 - 152.0 26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	64.4	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	64.0	13.0 - 328.0
13C-1,2,3,4,7,8-HxCDF	100	84.2	19.0 - 202.0
13C-1,2,3,6,7,8-HxCDF	100	82.9	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	88.7	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	97.9	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	78.2	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	80.6	20.0 - 186.0
13C-OCDF	200	129	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	32.0	12.4 - 76.4

(1) Contract-required concentration limits for OPR
as specified in Table 6, Method 1613. 10/94

(2) Contract-required concentration limits for OPR
as specified in Table 6a, Method 1613. 10/94

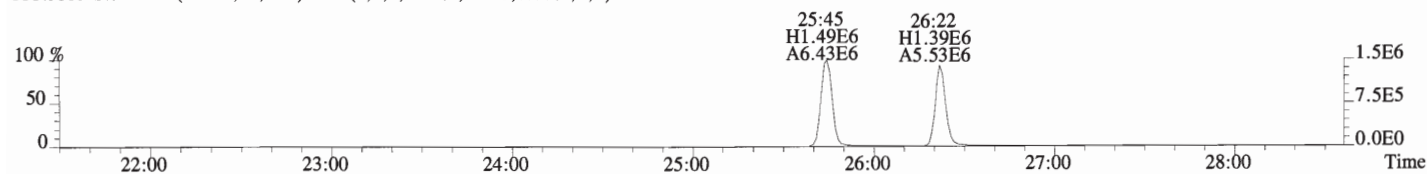
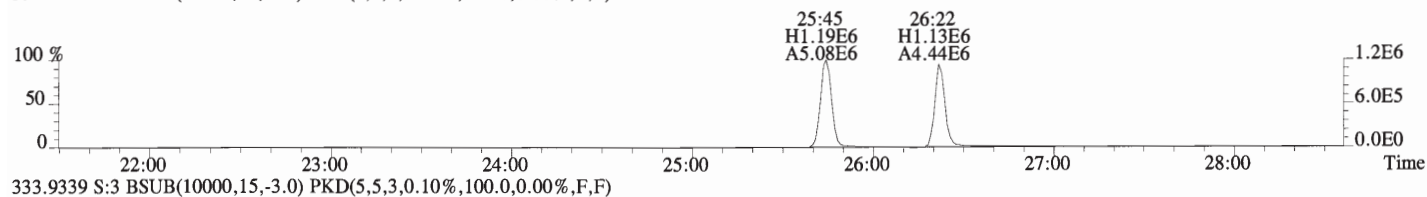
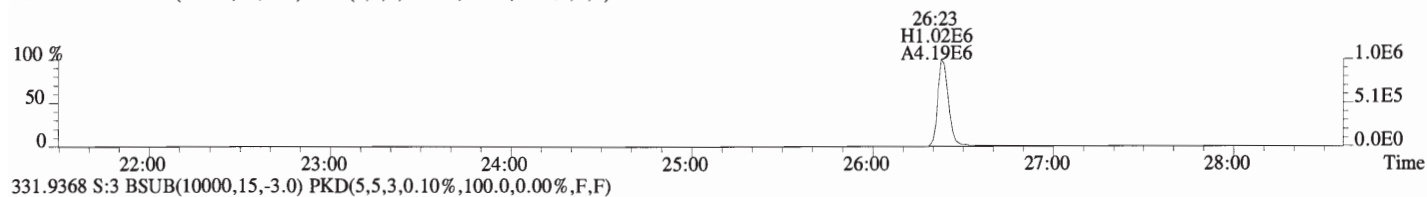
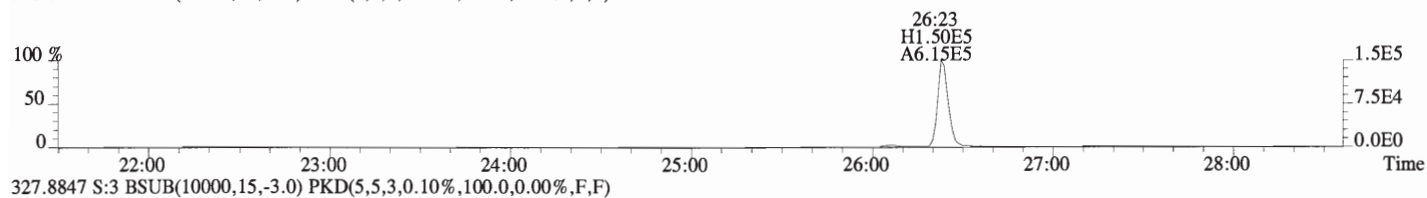
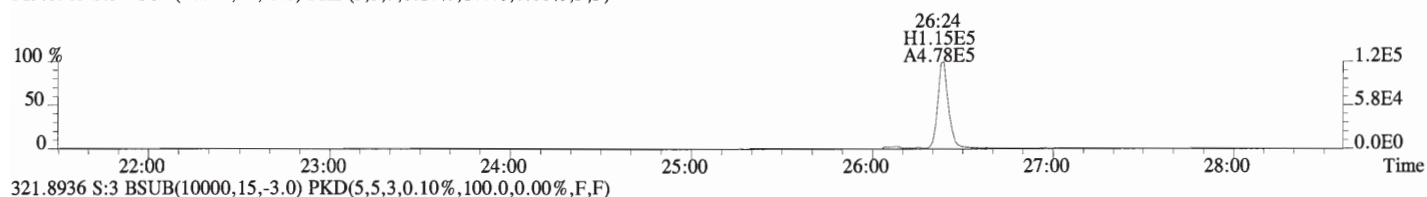
Analyst: DB

Date: 7/20/16

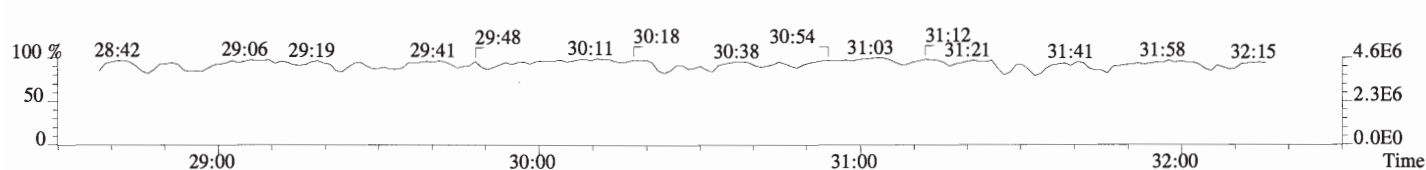
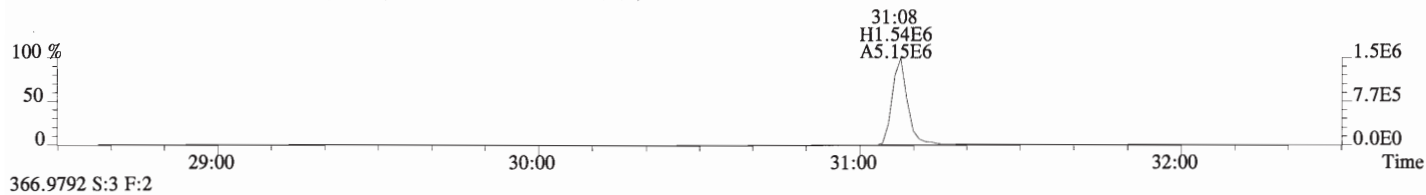
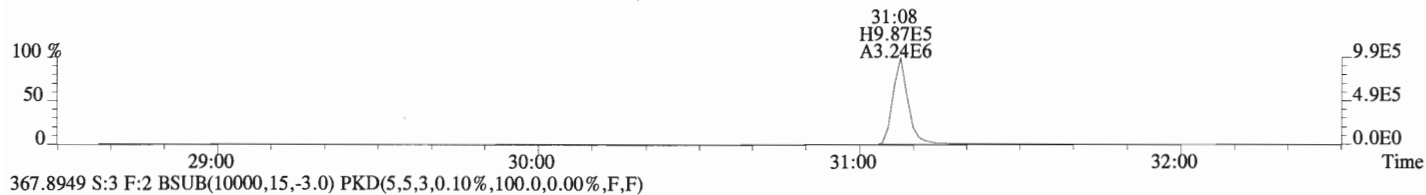
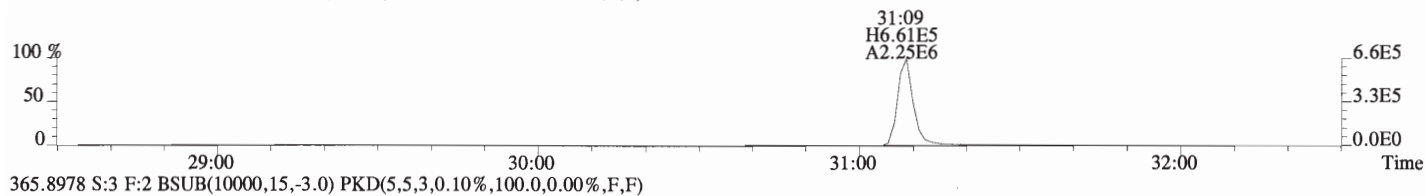
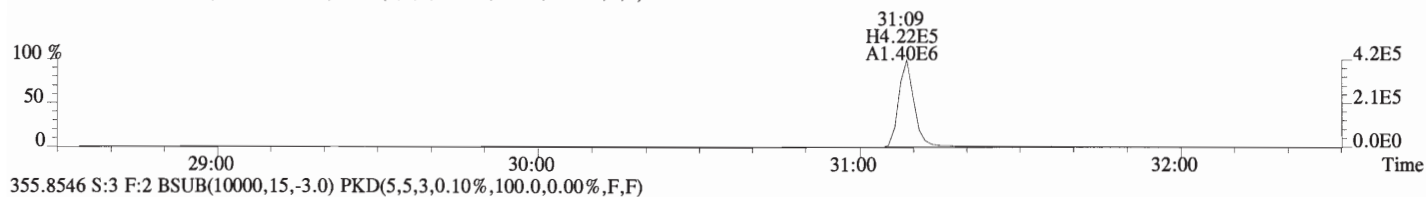
Client ID: OPR Filename: 160719D1 S:3 Acq:19-JUL-16 16:48:59 ConCal: ST160719D1-1 Page 2 of 2
Lab ID: B6G0049-BS1 GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16 wt/vol: 1.000 EndCAL: NA

											Name	Conc	EMPC	Qual	noise	DL											
											2,3,7,8-TCDD	1.09e+06	0.78	y	1.13	26:24	1.001	9.6883	*	2.5	*	Total Tetra-Dioxins	9.93	11.0	*	*	
											1,2,3,7,8-PeCDD	3.65e+06	0.62	y	0.96	31:09	1.001	45.256	*	2.5	*	Total Penta-Dioxins	45.4	46.1	*	*	
											1,2,3,4,7,8-HxCDD	3.47e+06	1.22	y	1.00	34:26	1.000	45.283	*	2.5	*	Total Hexa-Dioxins	139	140	*	*	
											1,2,3,6,7,8-HxCDD	3.79e+06	1.22	y	1.10	34:33	1.000	46.811	*	2.5	*	Total Hepta-Dioxins	47.5	49.1	*	*	
											1,2,3,7,8,9-HxCDD	3.75e+06	1.23	y	1.05	34:50	1.000	46.621	*	2.5	*	Total Tetra-Furans	10.1	10.7	*	*	
											1,2,3,4,6,7,8-HpCDD	3.07e+06	1.05	y	1.05	38:22	1.000	46.709	*	2.5	*	Total Penta-Furans	95.712	96.765	*	*	
											OCDD	4.28e+06	0.88	y	0.96	41:34	1.000	94.404	*	2.5	*	Total Hexa-Furans	184	186	*	*	
																						Total Hepta-Furans	91.8	93.3	*	*	
											2,3,7,8-TCDF	1.57e+06	0.80	y	1.12	25:33	1.001	9.4599	*	2.5	*						
											1,2,3,7,8-PeCDF	5.52e+06	1.57	y	1.01	29:55	1.000	47.021	*	2.5	*						
											2,3,4,7,8-PeCDF	5.69e+06	1.58	y	0.90	30:52	1.000	46.745	*	2.5	*						
											1,2,3,4,7,8-HxCDF	5.06e+06	1.23	y	1.16	33:33	1.000	46.321	*	2.5	*						
											1,2,3,6,7,8-HxCDF	5.42e+06	1.23	y	1.16	33:41	1.000	46.759	*	2.5	*						
											2,3,4,6,7,8-HxCDF	5.12e+06	1.23	y	1.23	34:17	1.000	44.912	*	2.5	*						
											1,2,3,7,8,9-HxCDF	4.62e+06	1.22	y	1.13	35:13	1.000	45.634	*	2.5	*						
											1,2,3,4,6,7,8-HpCDF	3.97e+06	1.01	y	1.44	36:59	1.001	45.820	*	2.5	*						
											1,2,3,4,7,8,9-HpCDF	3.82e+06	1.06	y	1.31	38:56	1.000	45.507	*	2.5	*						
											OCDF	5.64e+06	0.90	y	1.03	41:47	1.000	93.621	*	2.5	*						
																						Rec	Qual				
IS	13C-2,3,7,8-TCDD	9.97e+06	0.80	y	1.01	26:22	1.025	85.718														85.7					
IS	13C-1,2,3,7,8-PeCDD	8.39e+06	0.63	y	1.10	31:08	1.209	66.053														66.1					
IS	13C-1,2,3,4,7,8-HxCDD	7.65e+06	1.28	y	0.72	34:25	1.014	96.206														96.2					
IS	13C-1,2,3,6,7,8-HxCDD	7.39e+06	1.27	y	0.73	34:32	1.017	92.178														92.2					
IS	13C-1,2,3,7,8,9-HxCDD	7.68e+06	1.26	y	0.70	34:49	1.026	99.266														99.3					
IS	13C-1,2,3,4,6,7,8-HpCDD	6.25e+06	1.03	y	0.66	38:20	1.129	85.287														85.3					
IS	13C-OCDD	9.44e+06	0.93	y	0.66	41:33	1.224	129.65														64.8					
IS	13C-2,3,7,8-TCDF	1.48e+07	0.79	y	0.90	25:32	0.992	89.210														89.2					
IS	13C-1,2,3,7,8-PeCDF	1.17e+07	1.60	y	0.98	29:55	1.162	64.369														64.4					
IS	13C-2,3,4,7,8-PeCDF	1.35e+07	1.58	y	1.15	30:51	1.199	63.980														64.0					
IS	13C-1,2,3,4,7,8-HxCDF	9.41e+06	0.51	y	1.01	33:33	0.988	84.166														84.2					
IS	13C-1,2,3,6,7,8-HxCDF	1.00e+07	0.52	y	1.10	33:41	0.992	82.872														82.9					
IS	13C-2,3,4,6,7,8-HxCDF	9.31e+06	0.50	y	0.95	34:16	1.009	88.661														88.7					
IS	13C-1,2,3,7,8,9-HxCDF	8.93e+06	0.52	y	0.83	35:12	1.037	97.871														97.9					
IS	13C-1,2,3,4,6,7,8-HpCDF	6.03e+06	0.45	y	0.70	36:58	1.088	78.153														78.2					
IS	13C-1,2,3,4,7,8,9-HpCDF	6.40e+06	0.44	y	0.72	38:54	1.145	80.621														80.6					
IS	13C-OCDF	1.17e+07	0.88	y	0.82	41:46	1.230	128.55														64.3					
C/Up	37Cl-2,3,7,8-TCDD	4.19e+06			1.14	26:24	1.025	32.016														80.0					
RS/RT	13C-1,2,3,4-TCDD	1.15e+07	0.79	y	1.00	25:45	*	100.00																			
RS	13C-1,2,3,4-TCDF	1.85e+07	0.81	y	1.00	24:09	*	100.00																			
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.10e+07	0.52	y	1.00	33:57	*	100.00																			

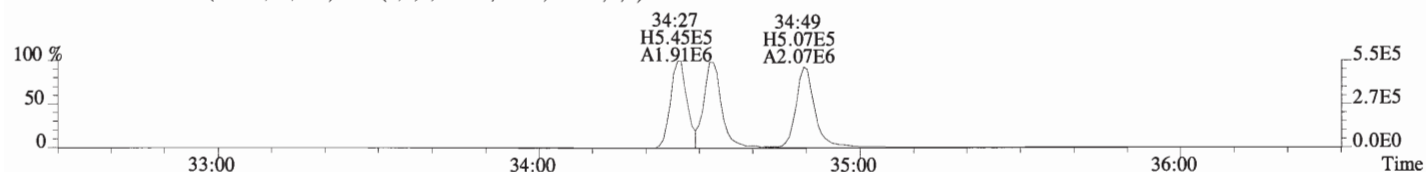
File:160719D1 #1-551 Acq:19-JUL-2016 16:48:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BS1 OPR 10 Exp:OCDD_DB5
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



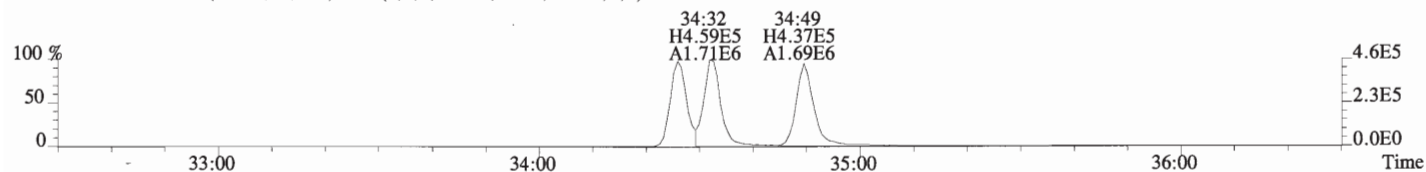
File:160719D1 #1-193 Acq:19-JUL-2016 16:48:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BS1 OPR 10 Exp:OCDD_DB5
 353.8576 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



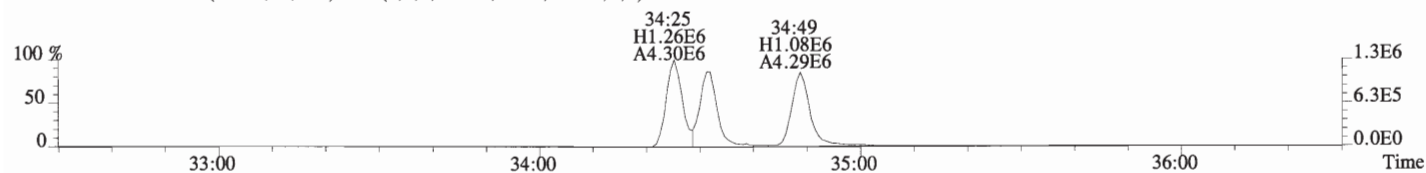
File:160719D1 #1-392 Acq:19-JUL-2016 16:48:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text: Vista Analytical Laboratory VG7 Text:B6G0049-BS1 OPR 10 Exp:OCDD_DB5
 389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



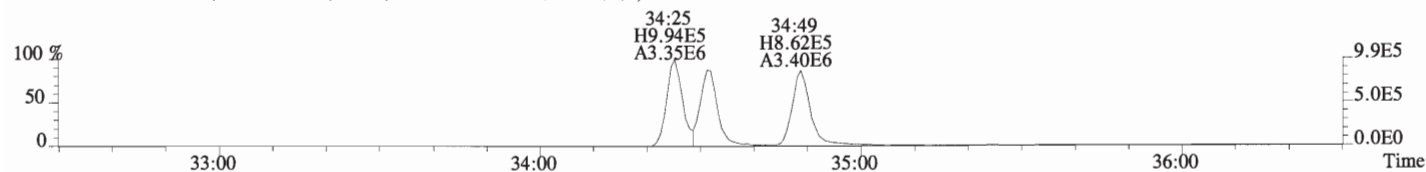
391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



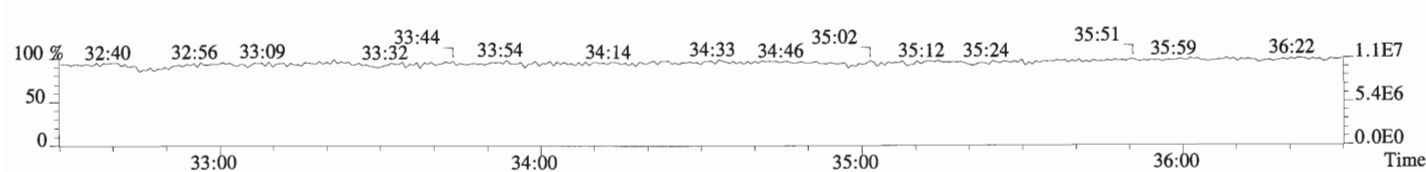
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



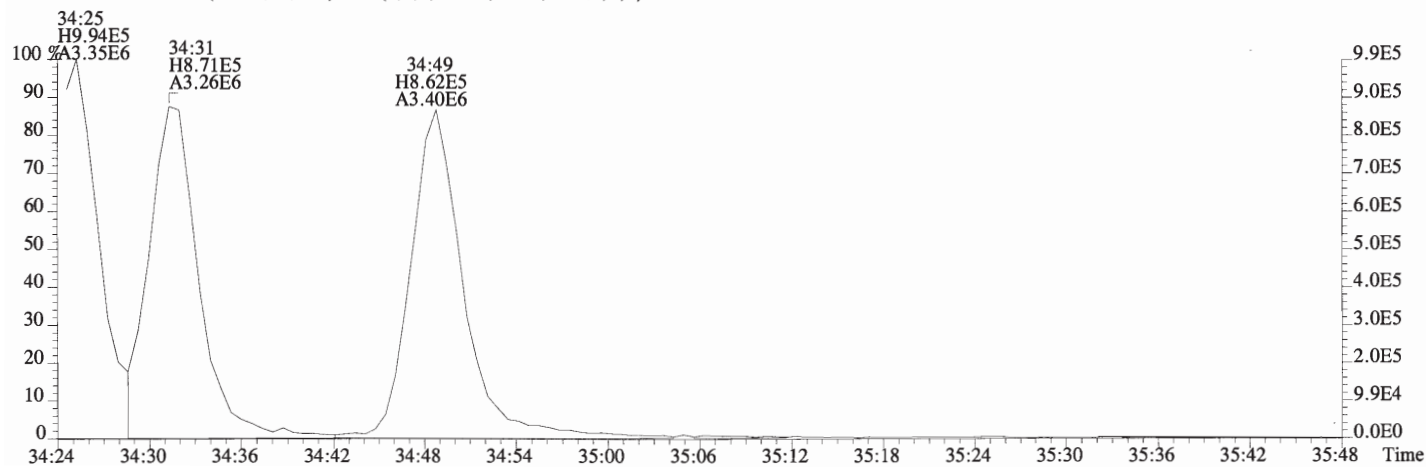
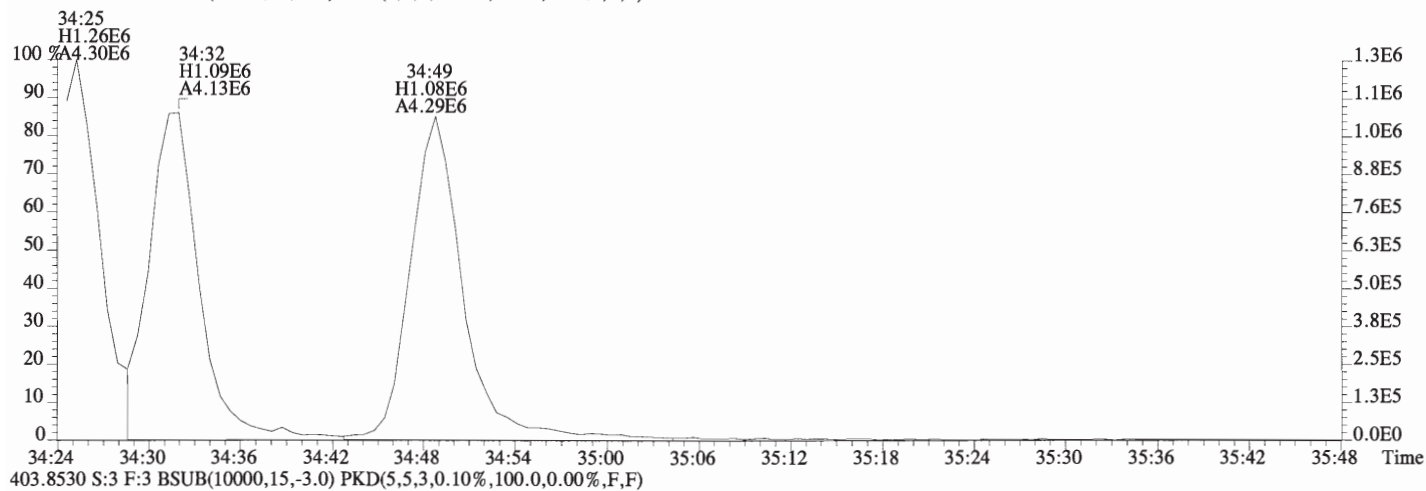
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



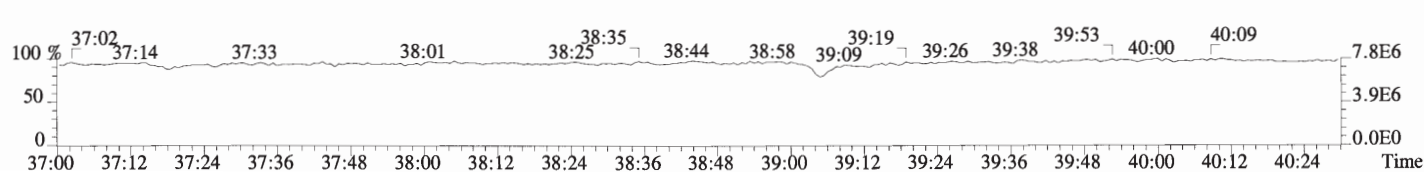
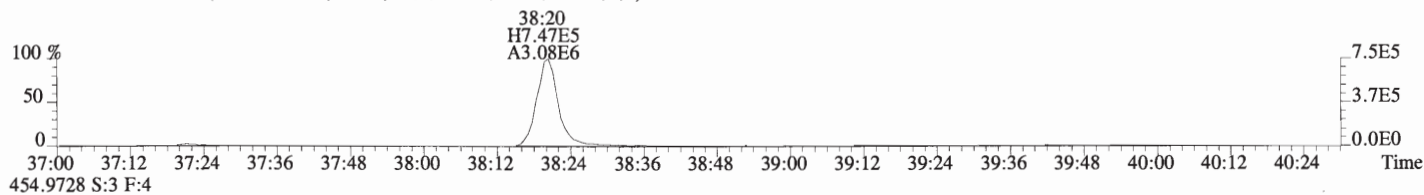
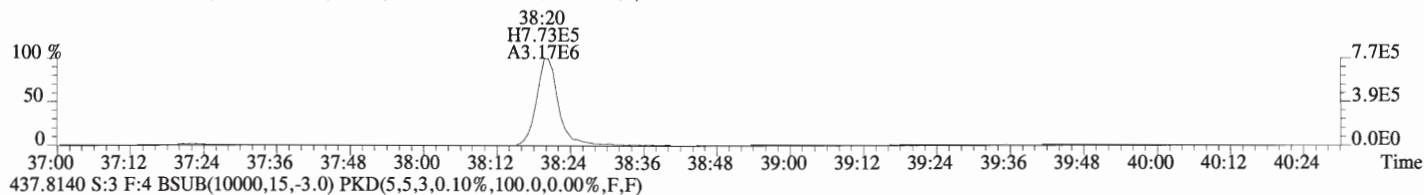
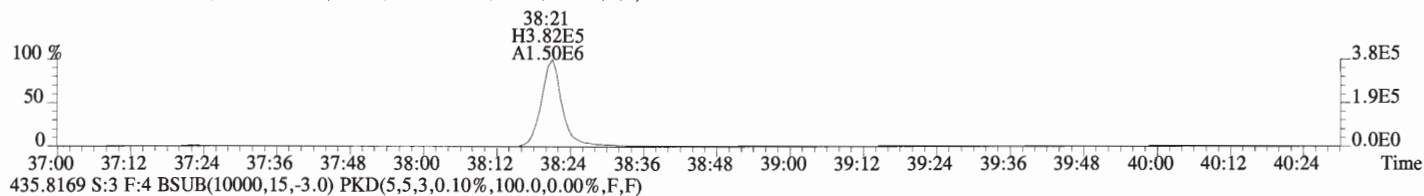
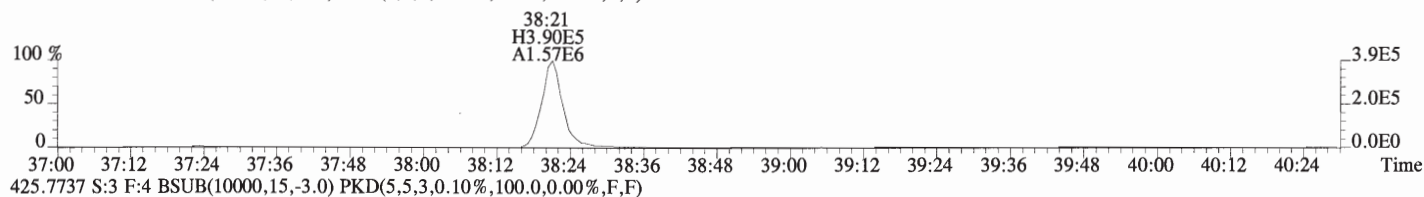
392.9760 S:3 F:3



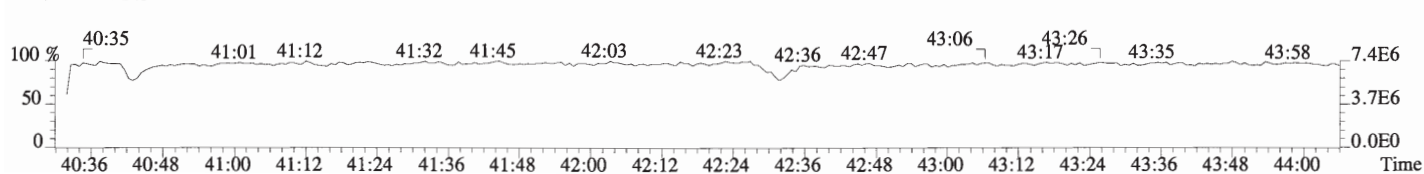
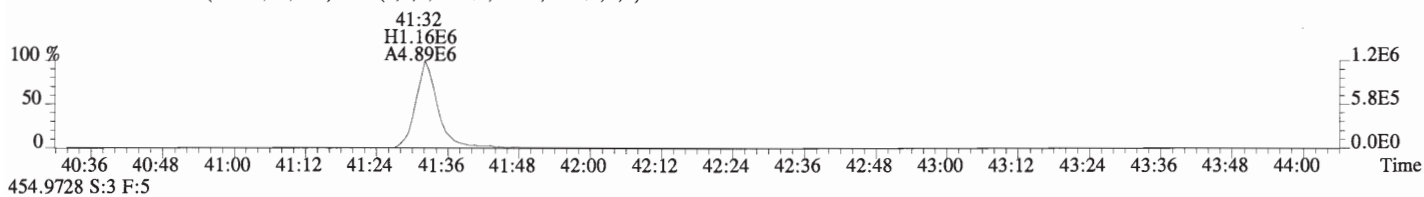
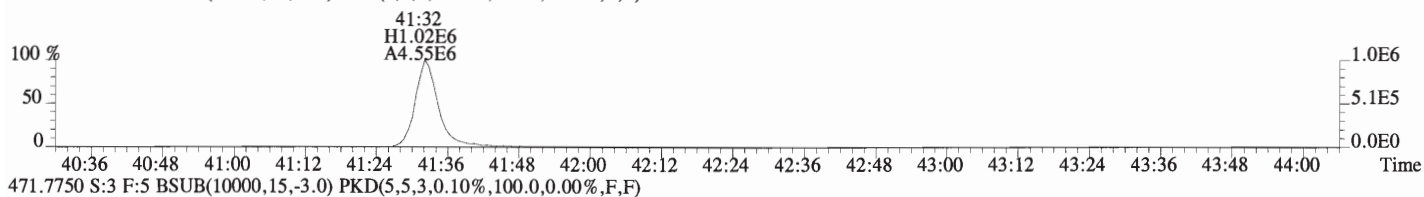
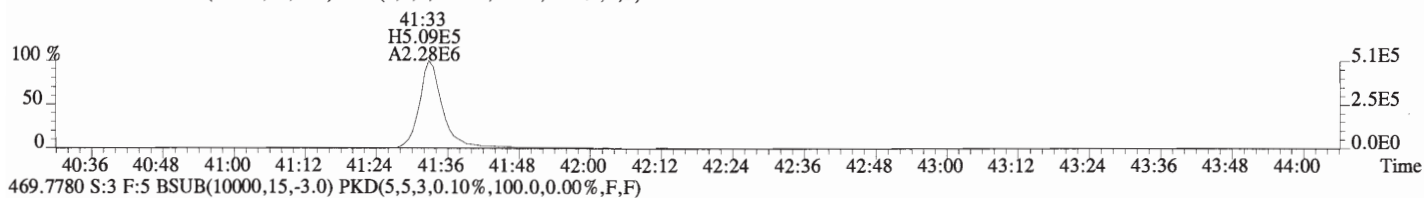
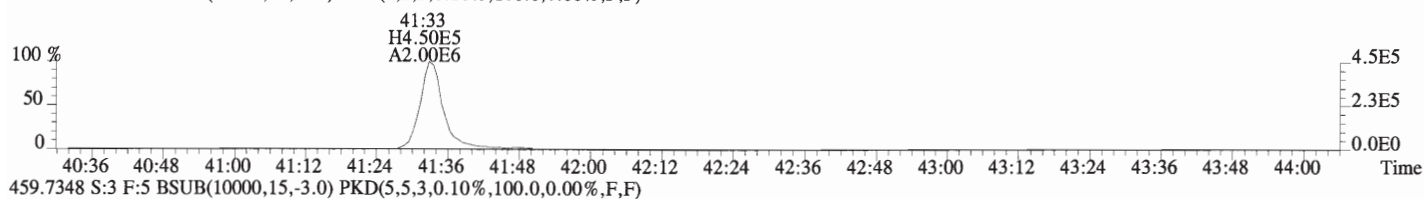
File:160719D1 #1-392 Acq:19-JUL-2016 16:48:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BS1 OPR 10 Exp:OCDD_DB5
 401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



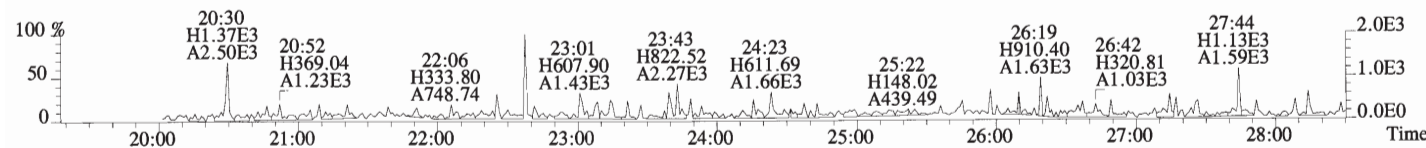
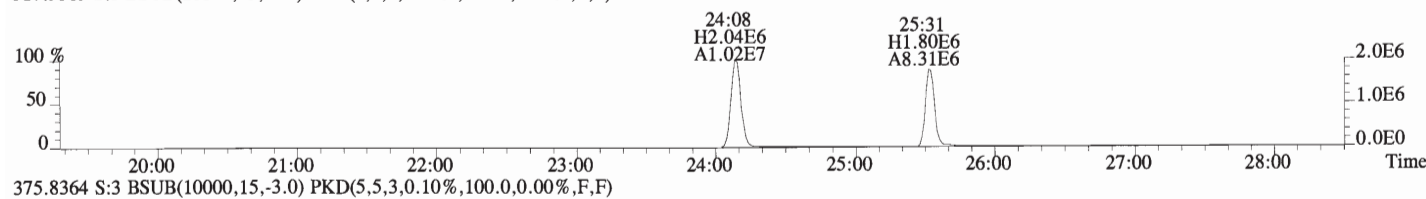
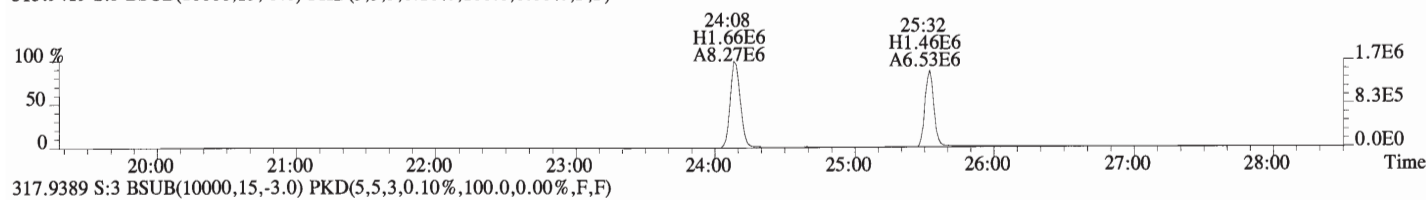
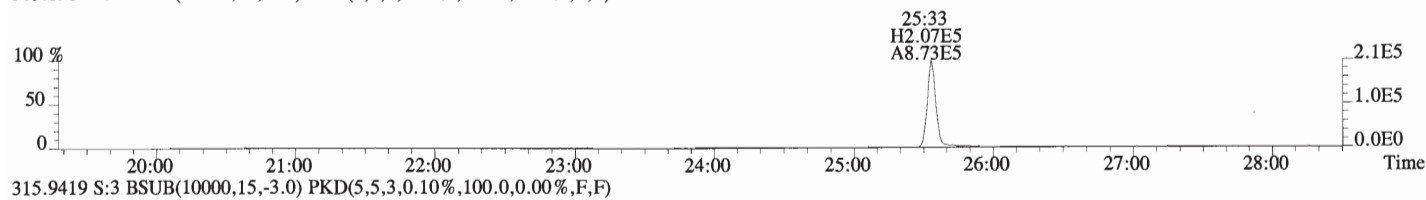
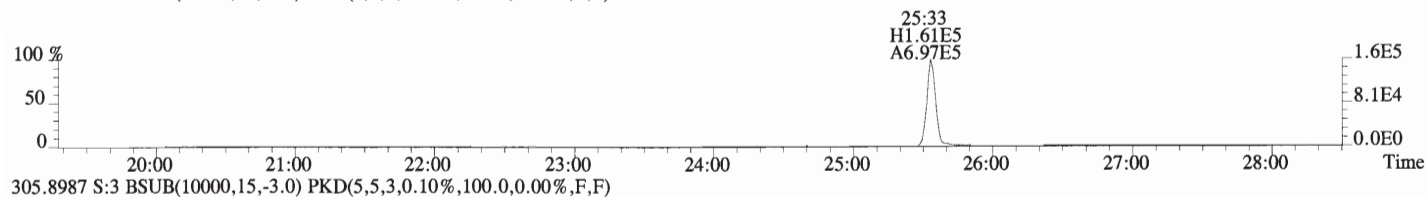
File:160719D1 #1-340 Acq:19-JUL-2016 16:48:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BS1 OPR 10 Exp:OCDD_DB5
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



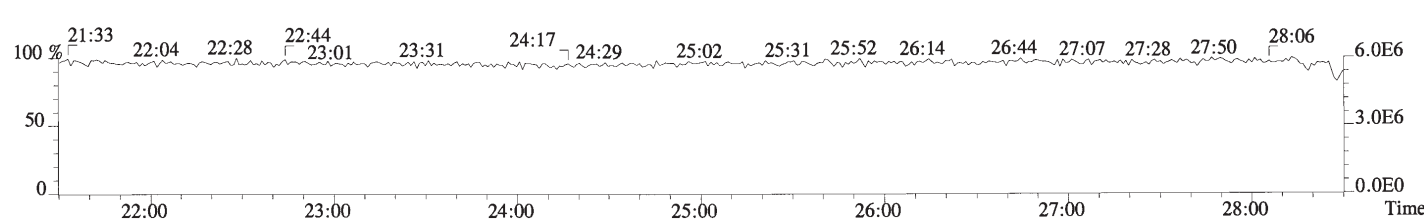
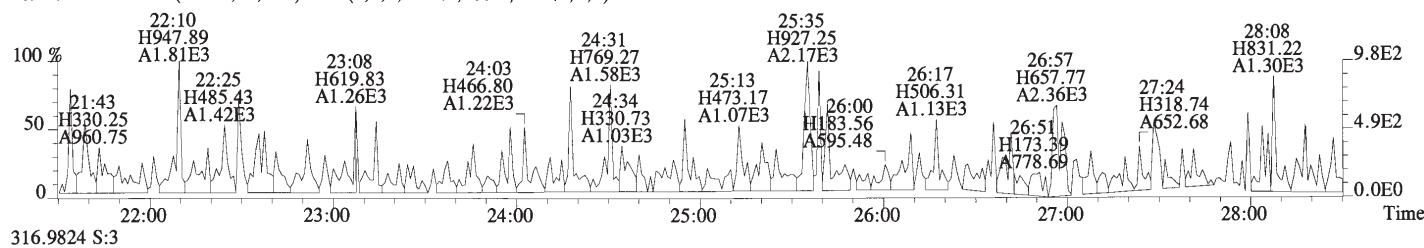
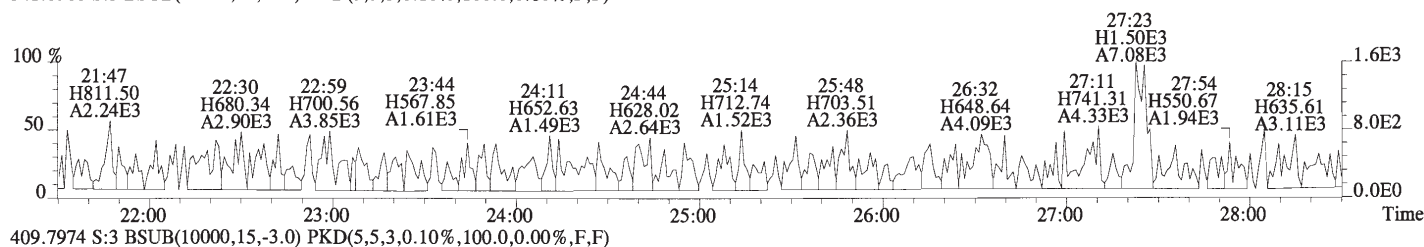
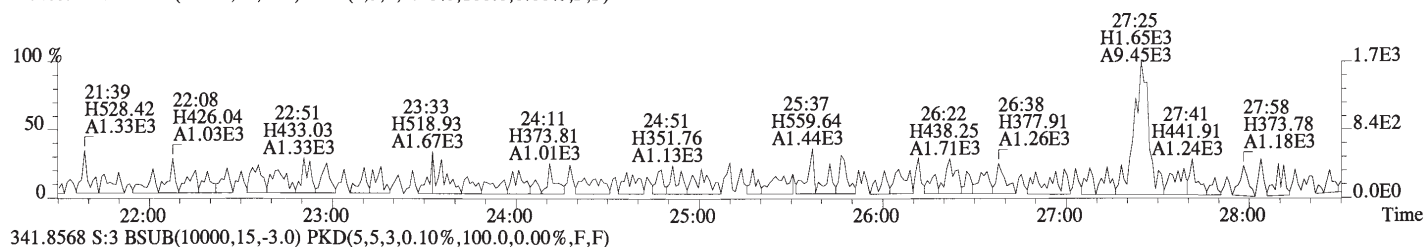
File:160719D1 #1-388 Acq:19-JUL-2016 16:48:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BS1 OPR 10 Exp:OCDD_DB5
 457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



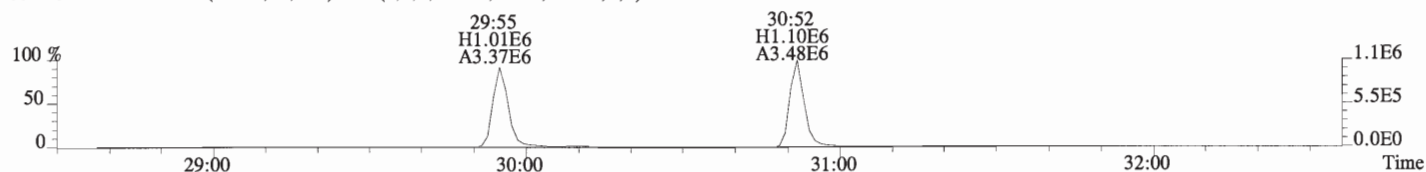
File:160719D1 #1-551 Acq:19-JUL-2016 16:48:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BS1 OPR 10 Exp:OCDD_DB5
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



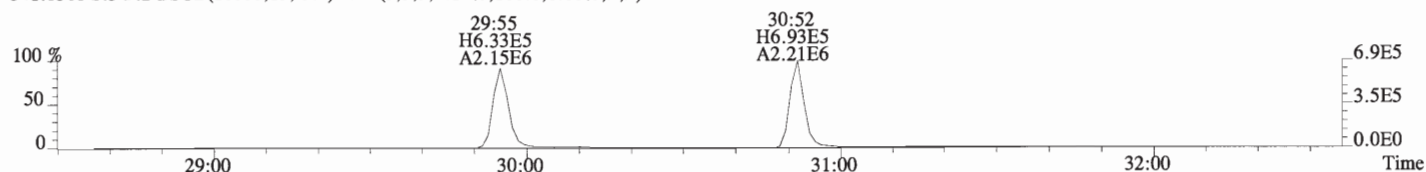
File:160719D1 #1-551 Acq:19-JUL-2016 16:48:59 GC EI+ Voltage SIR Autospec-UltimaE
Sample#3 File Text: Vista Analytical Laboratory VG7 Text:B6G0049-BS1 OPR 10 Exp:OCDD_DB5
339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



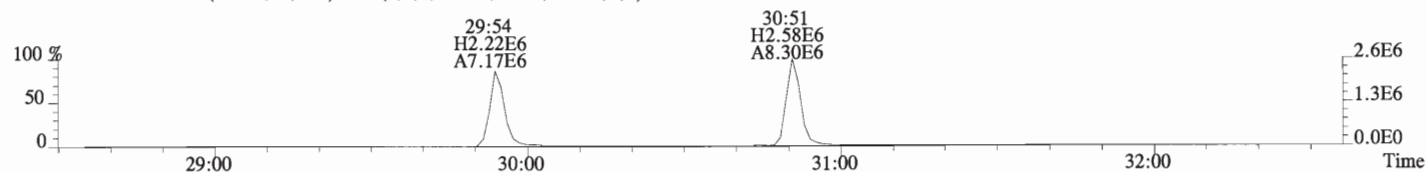
File:160719D1 #1-193 Acq:19-JUL-2016 16:48:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BS1 OPR 10 Exp:OCDD_DB5
 339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



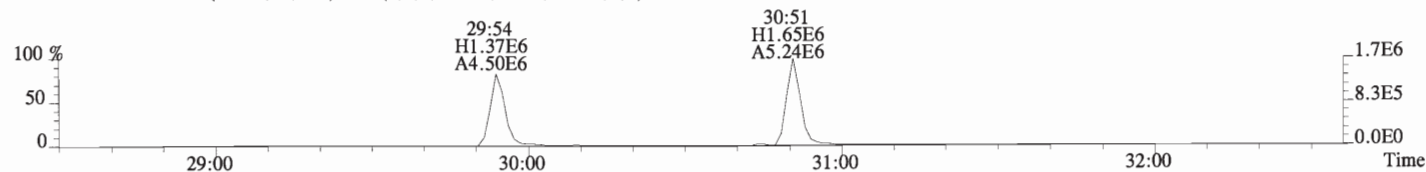
341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



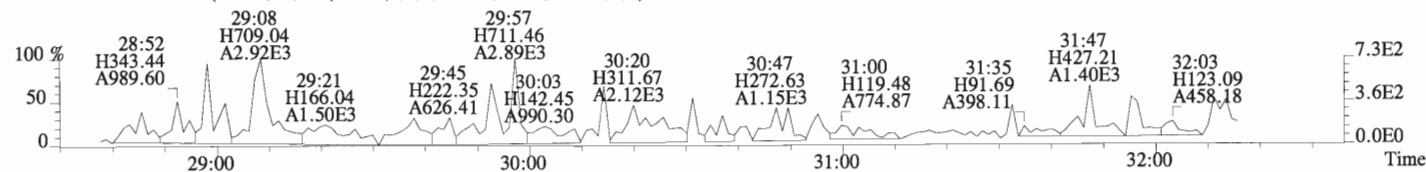
351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



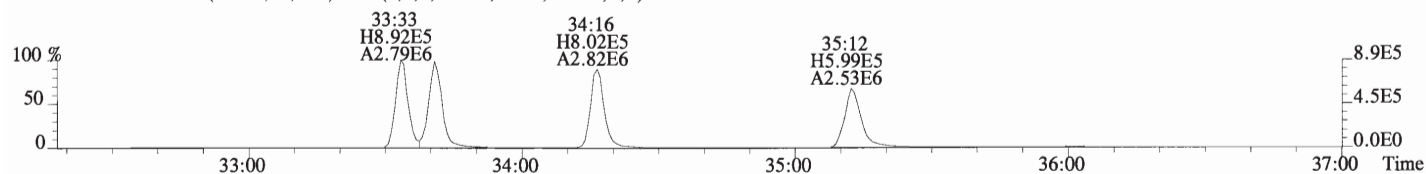
353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



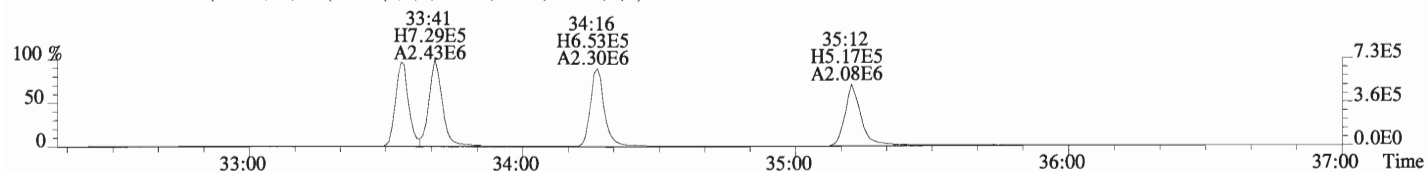
409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



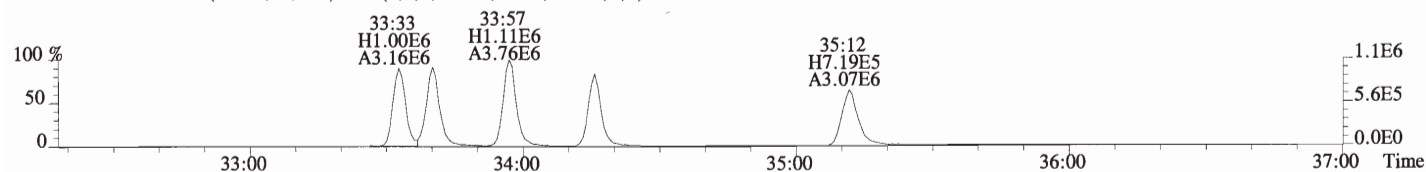
File:160719D1 #1-392 Acq:19-JUL-2016 16:48:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BS1 OPR 10 Exp:OCDD_DB5
 373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



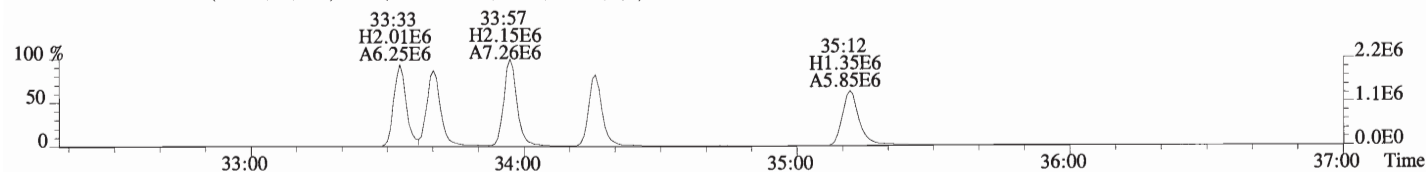
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



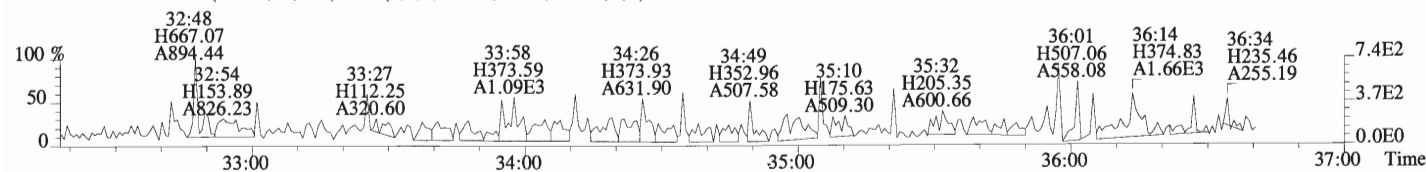
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



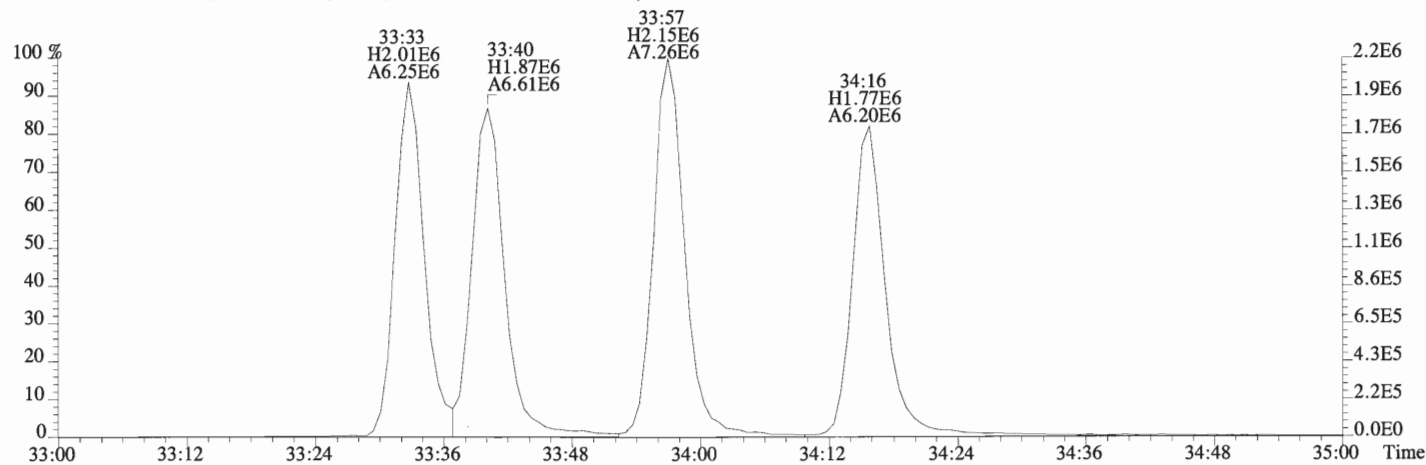
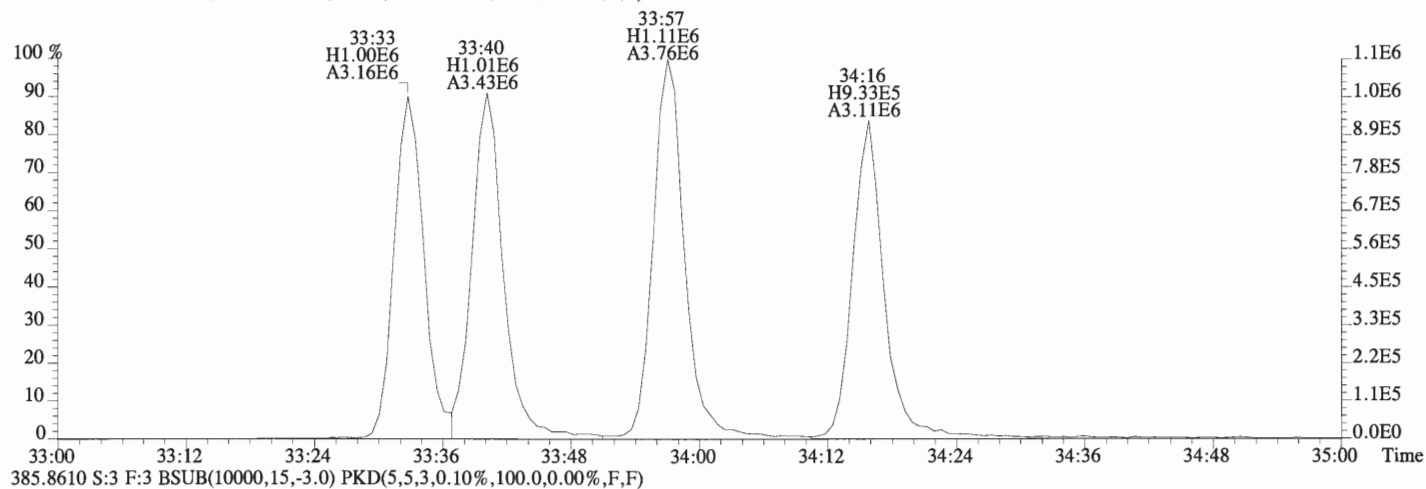
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



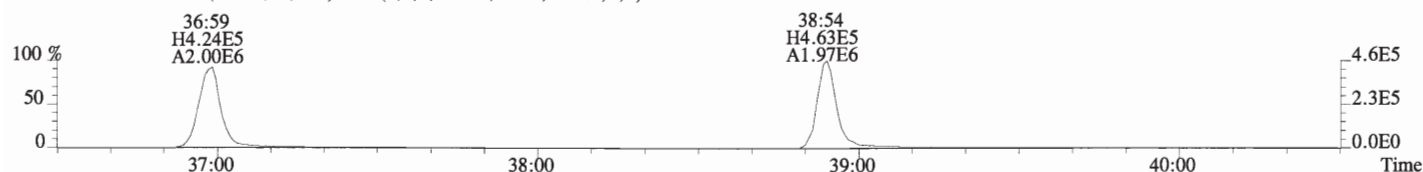
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



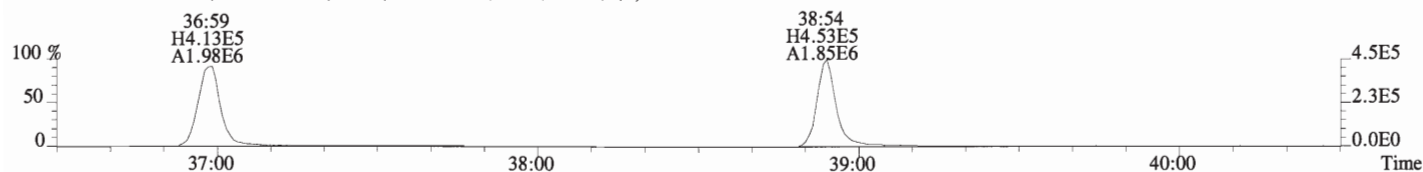
File:160719D1 #1-392 Acq:19-JUL-2016 16:48:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BS1 OPR 10 Exp:OCDD_DB5
 383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



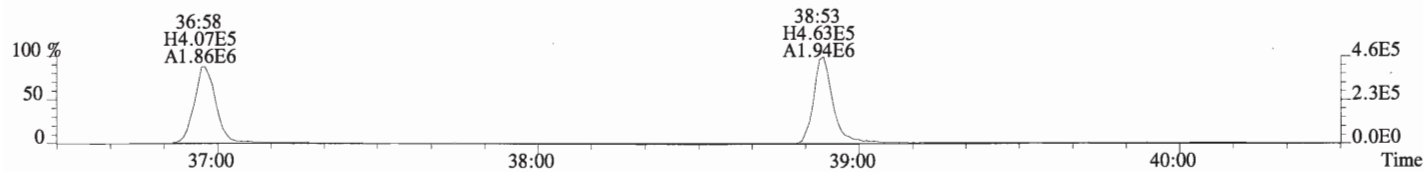
File:160719D1 #1-340 Acq:19-JUL-2016 16:48:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BS1 OPR 10 Exp:OCDD_DB5
 407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



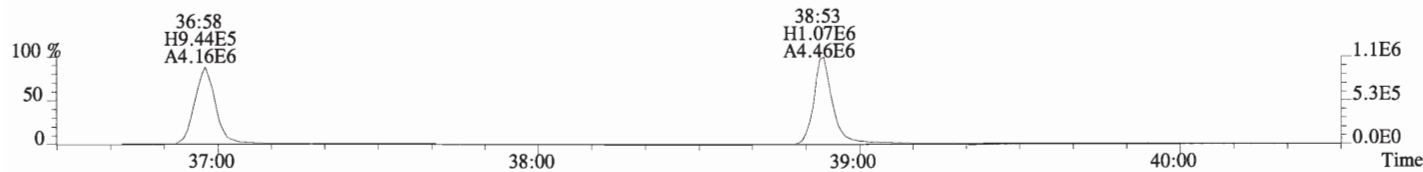
409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



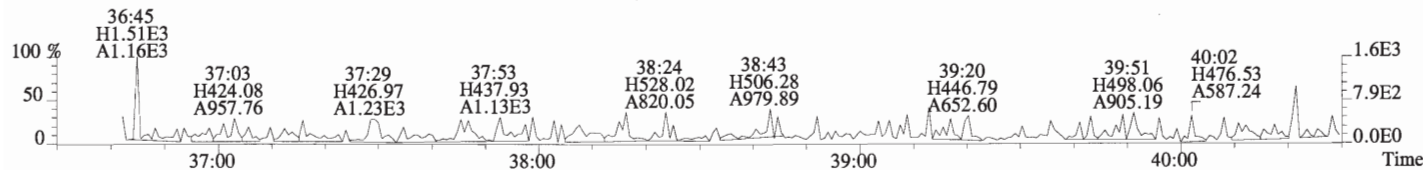
417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



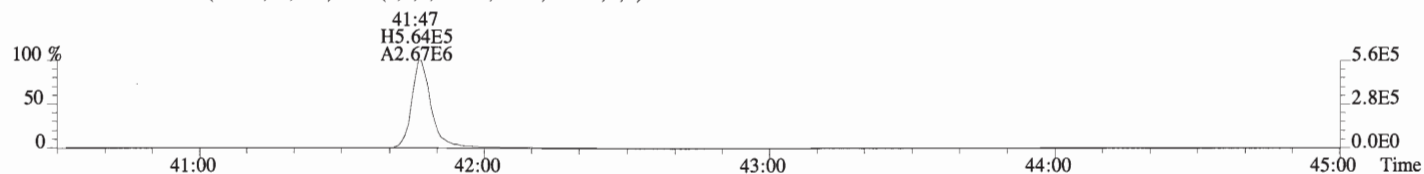
419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



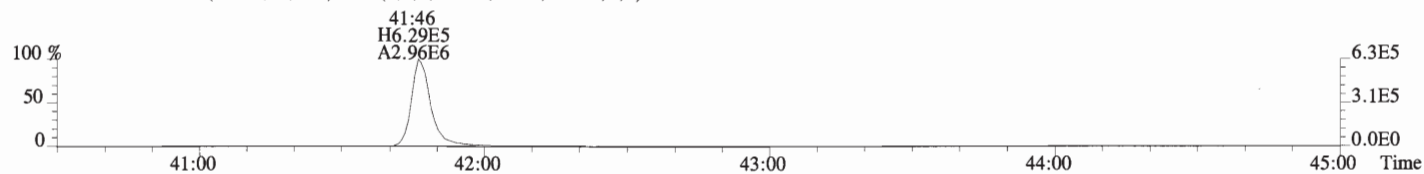
479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



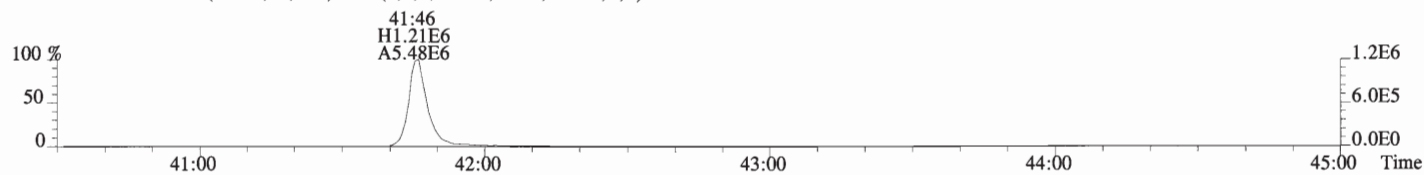
File:160719D1 #1-388 Acq:19-JUL-2016 16:48:59 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:B6G0049-BS1 OPR 10 Exp:OCDD_DB5
 441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



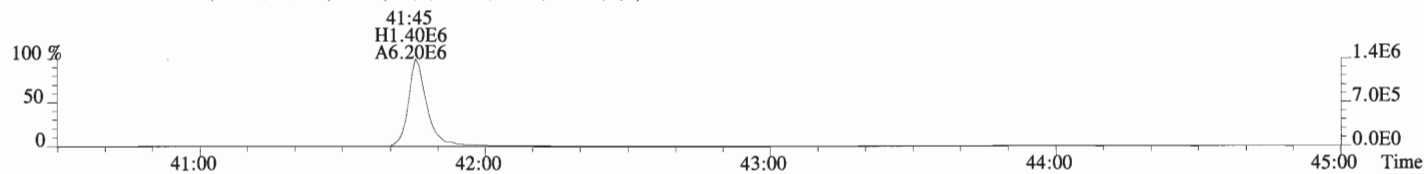
443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



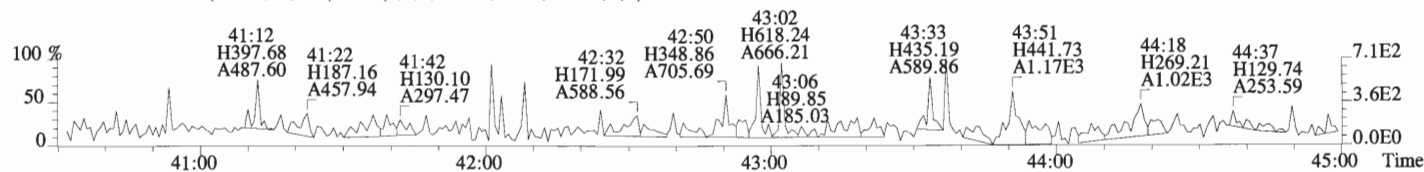
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



455.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: DU-2-5-A
Lab ID: 1600847-01

Filename: 160719D1 S:11 Acq:19-JUL-16 23:17:13
GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16 wt/vol:10.075

ConCal: ST160719D1-1
EndCAL: NA

Page 7 of 7

											Name	Conc	EMPC	Qual	noise	DL											
											2,3,7,8-TCDD	1.36e+04	0.46	n	1.13	26:23	1.001	0.17154	*	2.5	*	Total Tetra-Dioxins	3.09	3.26	*	*	
											1,2,3,7,8-PeCDD	3.68e+04	0.58	y	0.96	31:08	1.000	0.63856	*	2.5	*	Total Penta-Dioxins	4.11	5.78	*	*	
											1,2,3,4,7,8-HxCDD	6.67e+04	1.09	y	1.00	34:26	1.000	1.2468	*	2.5	*	Total Hexa-Dioxins	29.0	29.0	*	*	
											1,2,3,6,7,8-HxCDD	1.80e+05	1.22	y	1.10	34:33	1.000	3.3382	*	2.5	*	Total Hepta-Dioxins	182	182	*	*	
											1,2,3,7,8,9-HxCDD	1.40e+05	1.19	y	1.05	34:50	1.000	2.5285	*	2.5	*	Total Tetra-Furans	*	8.61	*	1.57	
											1,2,3,4,6,7,8-HpCDD	5.57e+06	1.03	y	1.05	38:21	1.000	113.72	*	2.5	*	Total Penta-Furans	8.5582	9.6743	*	*	
											OCDD	3.49e+07	0.90	y	0.96	41:34	1.000	1059.9	*	2.5	*	Total Hexa-Furans	26.3	26.3	*	*	
																			*		*	Total Hepta-Furans	76.5	76.5	*	*	
											2,3,7,8-TCDF	5.17e+04	0.71	y	1.12	25:33	1.000	0.44830	*	2.5	*						
											1,2,3,7,8-PeCDF	4.35e+04	1.46	y	1.01	29:55	1.001	0.52350	*	2.5	*						
											2,3,4,7,8-PeCDF	6.14e+04	1.48	y	0.90	30:52	1.001	0.73718	*	2.5	*						
											1,2,3,4,7,8-HxCDF	8.34e+04	1.37	y	1.16	33:34	1.001	1.2168	*	2.5	*						
											1,2,3,6,7,8-HxCDF	9.83e+04	1.17	y	1.16	33:41	1.000	1.3278	*	2.5	*						
											2,3,4,6,7,8-HxCDF	1.54e+05	1.17	y	1.23	34:17	1.000	2.0108	*	2.5	*						
											1,2,3,7,8,9-HxCDF	4.14e+04	1.35	y	1.13	35:14	1.001	0.78526	*	2.5	*						
											1,2,3,4,6,7,8-HpCDF	2.15e+06	1.03	y	1.44	36:58	1.000	32.725	*	2.5	*						
											1,2,3,4,7,8,9-HpCDF	1.36e+05	0.96	y	1.31	38:54	1.000	2.3181	*	2.5	*						
											OCDF	4.50e+06	0.89	y	1.03	41:48	1.000	107.29	*	2.5	*						
																						Rec	Qual				
IS											13C-2,3,7,8-TCDD	1.39e+07	0.81	y	1.01	26:22	1.024	181.68				91.5					
IS											13C-1,2,3,7,8-PeCDD	1.19e+07	0.62	y	1.10	31:08	1.209	142.25				71.7					
IS											13C-1,2,3,4,7,8-HxCDD	1.06e+07	1.26	y	0.72	34:25	1.014	207.27				104					
IS											13C-1,2,3,6,7,8-HxCDD	9.79e+06	1.26	y	0.73	34:32	1.017	190.04				95.7					
IS											13C-1,2,3,7,8,9-HxCDD	1.05e+07	1.24	y	0.70	34:49	1.025	211.36				106					
IS											13C-1,2,3,4,6,7,8-HpCDD	9.26e+06	1.04	y	0.66	38:21	1.129	196.60				99.0					
IS											13C-OCDD	1.36e+07	0.92	y	0.66	41:34	1.224	290.79				73.2					
IS											13C-2,3,7,8-TCDF	2.05e+07	0.80	y	0.90	25:32	0.992	192.47				97.0					
IS											13C-1,2,3,7,8-PeCDF	1.64e+07	1.62	y	0.98	29:54	1.161	141.45				71.3					
IS											13C-2,3,4,7,8-PeCDF	1.84e+07	1.59	y	1.15	30:51	1.198	135.81				68.4					
IS											13C-1,2,3,4,7,8-HxCDF	1.17e+07	0.51	y	1.01	33:33	0.988	163.06				82.1					
IS											13C-1,2,3,6,7,8-HxCDF	1.27e+07	0.52	y	1.10	33:41	0.992	163.39				82.3					
IS											13C-2,3,4,6,7,8-HxCDF	1.24e+07	0.52	y	0.95	34:16	1.009	184.36				92.9					
IS											13C-1,2,3,7,8,9-HxCDF	9.23e+06	0.51	y	0.83	35:12	1.037	157.54				79.4					
IS											13C-1,2,3,4,6,7,8-HpCDF	9.07e+06	0.45	y	0.70	36:58	1.088	183.14				92.3					
IS											13C-1,2,3,4,7,8,9-HpCDF	8.88e+06	0.44	y	0.72	38:54	1.145	173.96				87.6					
IS											13C-OCDF	1.62e+07	0.89	y	0.82	41:47	1.230	276.53				69.7					
C/Up											37Cl-2,3,7,8-TCDD	5.63e+06			1.14	26:24	1.025	65.240				82.2					
RS/RT											13C-1,2,3,4-TCDD	1.51e+07	0.80	y	1.00	25:45	*	198.51									
RS											13C-1,2,3,4-TCDF	2.34e+07	0.80	y	1.00	24:09	*	198.51									
RS/RT											13C-1,2,3,4,6,9-HxCDF	1.41e+07	0.51	y	1.00	33:58	*	198.51									
																						Integrations	Reviewed				
																						by	by				
																						Analyst: <i>DB</i>	Analyst: <i>[Signature]</i>				
																						Date: <i>7/20/16</i>	Date: <i>7/22/16</i>				

Totals class: TCDD EMPC

Entry #: 19

Run: 13 File: 160719D1 S: 11 I: 1 F: 1
Acquired: 19-JUL-16 23:17:13 Processed: 20-JUL-16 09:26:15

Total Concentration: 3.2582 Unnamed Concentration: 3.087

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
22:33	2.655e+04	3.747e+04	0.71 y	6.401e+04	0.80655
22:58	2.039e+04	2.525e+04	0.81 y	4.564e+04	0.57508
23:27	4.058e+03	4.649e+03	0.87 y	8.706e+03	0.10970
24:19	3.142e+03	3.644e+03	0.86 y	6.786e+03	0.085498
24:33	2.450e+04	2.978e+04	0.82 y	5.428e+04	0.68391
24:46	9.673e+03	1.204e+04	0.80 y	2.171e+04	0.27357
25:23	5.250e+03	6.206e+03	0.85 y	1.146e+04	0.14434
25:44	4.602e+03	6.879e+03	0.67 y	1.148e+04	0.14465
26:07	8.518e+03	1.239e+04	0.69 y	2.091e+04	0.26340
26:23	5.923e+03	1.282e+04	0.46 n	1.361e+04	0.17154 2,3,7,8-TCDD

Totals class: PeCDD EMPC

Entry #: 21

Run: 13 File: 160719D1 S: 11 I: 1 F: 2
Acquired: 19-JUL-16 23:17:13 Processed: 20-JUL-16 09:26:15

Total Concentration: 5.7793 Unnamed Concentration: 5.141

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name
29:01	3.382e+04	7.409e+04	0.46	n	8.751e+04	1.5167
29:28	9.108e+03	1.634e+04	0.56	y	2.545e+04	0.44111
29:56	1.030e+04	1.612e+04	0.64	y	2.642e+04	0.45795
30:00	3.429e+03	4.795e+03	0.72	y	8.223e+03	0.14252
30:07	1.267e+04	2.136e+04	0.59	y	3.403e+04	0.58984
30:11	1.516e+04	2.260e+04	0.67	y	3.776e+04	0.65448
30:25	1.293e+04	2.392e+04	0.54	y	3.684e+04	0.63857
30:44	7.714e+03	1.257e+04	0.61	y	2.029e+04	0.35158
31:08	1.358e+04	2.326e+04	0.58	y	3.684e+04	0.63856 1,2,3,7,8-PeCDD
31:13	4.931e+03	5.241e+03	0.94	n	8.543e+03	0.14806
31:32	4.331e+03	7.205e+03	0.60	y	1.154e+04	0.19993

Totals class: HxCDD EMPC

Entry #: 23

Run: 13 File: 160719D1 S: 11 I: 1 F: 3
Acquired: 19-JUL-16 23:17:13 Processed: 20-JUL-16 09:26:15

Total Concentration: 28.994 Unnamed Concentration: 21.881

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:56	2.805e+05	2.343e+05	1.20 y	5.148e+05	9.4645
33:29	5.163e+04	4.459e+04	1.16 y	9.622e+04	1.7690
33:44	2.877e+05	2.397e+05	1.20 y	5.274e+05	9.6965
33:51	1.400e+04	1.071e+04	1.31 y	2.471e+04	0.45430
34:26	3.471e+04	3.194e+04	1.09 y	6.665e+04	1.2468 1,2,3,4,7,8-HxCDD
34:33	9.914e+04	8.124e+04	1.22 y	1.804e+05	3.3382 1,2,3,6,7,8-HxCDD
34:44	1.571e+04	1.130e+04	1.39 y	2.701e+04	0.49649
34:50	7.625e+04	6.410e+04	1.19 y	1.403e+05	2.5285 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 13 File: 160719D1 S: 11 I: 1 F: 4
Acquired: 19-JUL-16 23:17:13 Processed: 20-JUL-16 09:26:15

Total Concentration: 181.81 Unnamed Concentration: 68.088

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:23	1.715e+06	1.621e+06	1.06 y	3.336e+06	68.088
38:21	2.823e+06	2.749e+06	1.03 y	5.571e+06	113.72

1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 13 File: 160719D1 S: 11 I: 1 F: 1
 Acquired: 19-JUL-16 23:17:13 Processed: 20-JUL-16 09:26:15

Total Concentration: 8.6064 Unnamed Concentration: 8.158

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
20:23	1.557e+04	1.915e+04	0.81 y	3.472e+04	0.30089
20:56	7.063e+03	9.880e+03	0.71 y	1.694e+04	0.14685
21:33	3.927e+04	4.482e+04	0.88 y	8.408e+04	0.72878
22:05	5.087e+04	6.495e+04	0.78 y	1.158e+05	1.0038
22:32	3.292e+04	4.236e+04	0.78 y	7.528e+04	0.65243
23:01	1.379e+04	1.901e+04	0.73 y	3.279e+04	0.28422
23:10	1.123e+04	1.348e+04	0.83 y	2.471e+04	0.21414
23:22	1.024e+04	1.543e+04	0.66 y	2.567e+04	0.22247
23:46	1.444e+04	1.816e+04	0.79 y	3.260e+04	0.28254
23:55	2.089e+04	2.474e+04	0.84 y	4.564e+04	0.39554
24:09	5.993e+04	7.887e+04	0.76 y	1.388e+05	1.2030
24:39	2.347e+04	2.733e+04	0.86 y	5.080e+04	0.44027
24:56	1.677e+04	1.907e+04	0.88 y	3.584e+04	0.31061
25:07	1.303e+04	1.976e+04	0.66 y	3.279e+04	0.28421
25:20	1.824e+04	2.081e+04	0.88 y	3.905e+04	0.33844
25:26	1.120e+04	1.457e+04	0.77 y	2.577e+04	0.22334
25:33	2.156e+04	3.016e+04	0.71 y	5.172e+04	0.44830
25:54	4.851e+04	6.071e+04	0.80 y	1.092e+05	0.94662
27:27	1.512e+04	1.173e+04	1.29 n	2.076e+04	0.17993

2,3,7,8-TCDF

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 13 File: 160719D1 S: 11 I: 1 F: 1
Acquired: 19-JUL-16 23:17:13 Processed: 20-JUL-16 09:26:15

Total Concentration: 2.4612 Unnamed Concentration: 2.461

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:26	1.233e+05	8.113e+04	1.52 y	2.045e+05	2.4612

Totals class: PeCDF EMPC

Entry #: 31

Run: 13 File: 160719D1 S: 11 I: 1 F: 2
 Acquired: 19-JUL-16 23:17:13 Processed: 20-JUL-16 09:26:15

Total Concentration: 7.2131 Unnamed Concentration: 5.952

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28:49	4.755e+04	2.348e+04	2.02 n	5.988e+04	0.72084
28:57	7.106e+04	5.386e+04	1.32 y	1.249e+05	1.5038
29:27	1.424e+04	9.453e+03	1.51 y	2.369e+04	0.28522
29:31	4.156e+04	2.658e+04	1.56 y	6.814e+04	0.82027
29:36	1.432e+04	1.086e+04	1.32 y	2.518e+04	0.30307
29:44	1.405e+04	7.347e+03	1.91 n	1.873e+04	0.22552
29:55	2.580e+04	1.771e+04	1.46 y	4.351e+04	0.52350
30:09	4.511e+04	2.727e+04	1.65 y	7.239e+04	0.87138
30:18	9.364e+03	5.289e+03	1.77 y	1.465e+04	0.17639
30:45	4.300e+04	2.980e+04	1.44 y	7.280e+04	0.87630
30:52	3.664e+04	2.472e+04	1.48 y	6.136e+04	0.73718
31:44	8.569e+03	1.239e+04	0.69 n	1.410e+04	0.16971

1,2,3,7,8-PeCDF

2,3,4,7,8-PeCDF

Totals class: HxCDF EMPC

Entry #: 33

Run: 13

File: 160719D1

S: 11 I: 1 F: 3

Acquired: 19-JUL-16 23:17:13

Processed: 20-JUL-16 09:26:15

Total Concentration: 26.321

Unnamed Concentration: 20.980

RT	m1 Resp	m2 Resp	RA	Resp Concentration		Name
32:24	9.652e+04	8.615e+04	1.12 y	1.827e+05	2.6905	
32:34	3.424e+05	2.691e+05	1.27 y	6.115e+05	9.0057	
32:55	9.938e+03	9.130e+03	1.09 y	1.907e+04	0.28084	
33:06	2.284e+05	1.797e+05	1.27 y	4.082e+05	6.0115	
33:28	7.577e+04	6.614e+04	1.15 y	1.419e+05	2.0901	
33:34	4.817e+04	3.526e+04	1.37 y	8.343e+04	1.2168	1,2,3,4,7,8-HxCDF
33:41	5.298e+04	4.528e+04	1.17 y	9.827e+04	1.3278	1,2,3,6,7,8-HxCDF
33:58	1.264e+04	1.189e+04	1.06 y	2.453e+04	0.36123	
34:07	1.969e+04	1.700e+04	1.16 y	3.669e+04	0.54030	
34:17	8.320e+04	7.123e+04	1.17 y	1.544e+05	2.0108	2,3,4,6,7,8-HxCDF
35:14	2.375e+04	1.764e+04	1.35 y	4.139e+04	0.78526	1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC

Entry #: 35

Run: 13 File: 160719D1 S: 11 I: 1 F: 4

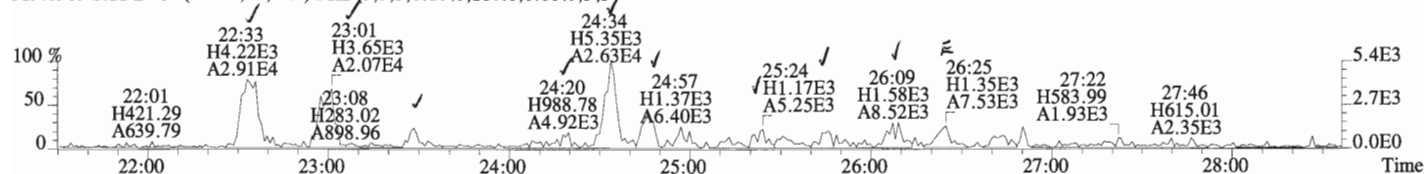
Acquired: 19-JUL-16 23:17:13 Processed: 20-JUL-16 09:26:15

Total Concentration: 76.541

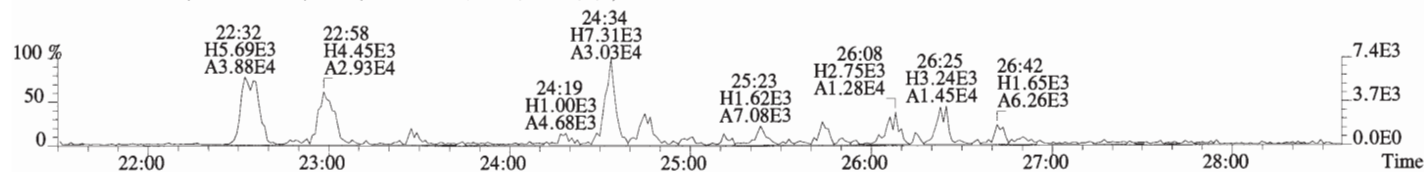
Unnamed Concentration: 41.498

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Concentration	Name
36:58	1.094e+06	1.059e+06	1.03 y	2.153e+06	32.725	1,2,3,4,6,7,8-HpCDF
37:23	6.045e+04	6.064e+04	1.00 y	1.211e+05	1.9481	
37:37	1.253e+06	1.205e+06	1.04 y	2.458e+06	39.550	
38:54	6.661e+04	6.946e+04	0.96 y	1.361e+05	2.3181	1,2,3,4,7,8,9-HpCDF

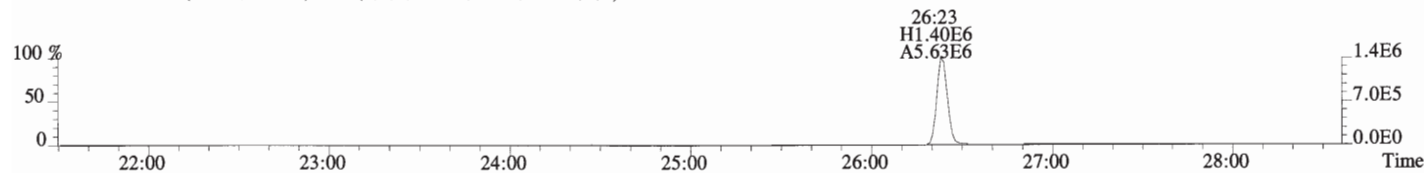
File:160719D1 #1-551 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 319.8965 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



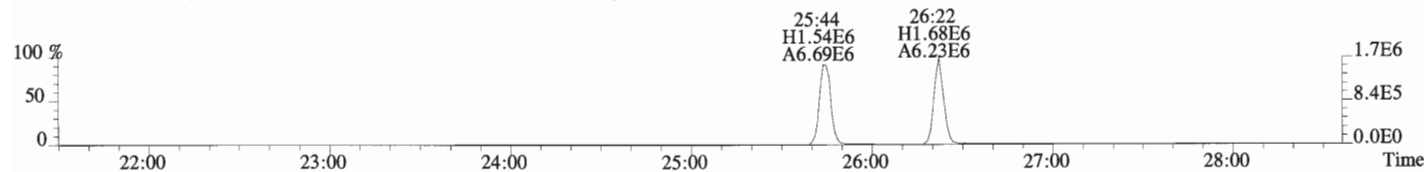
321.8936 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



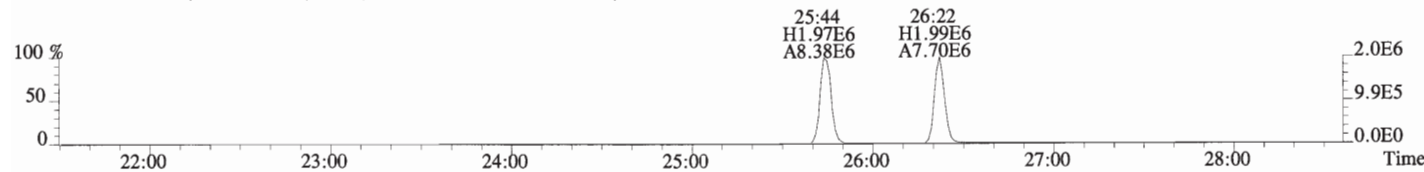
327.8847 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



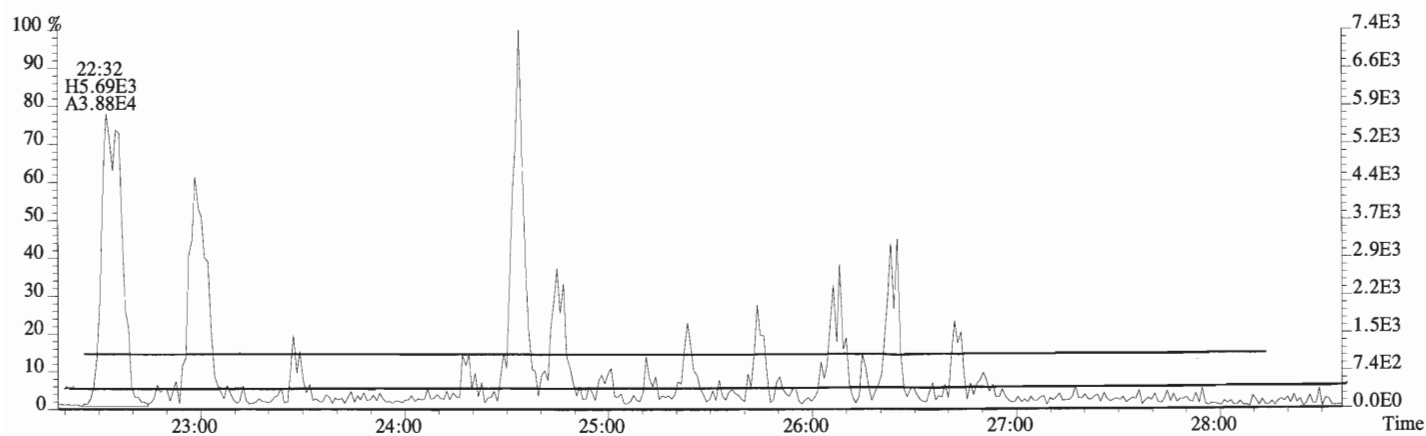
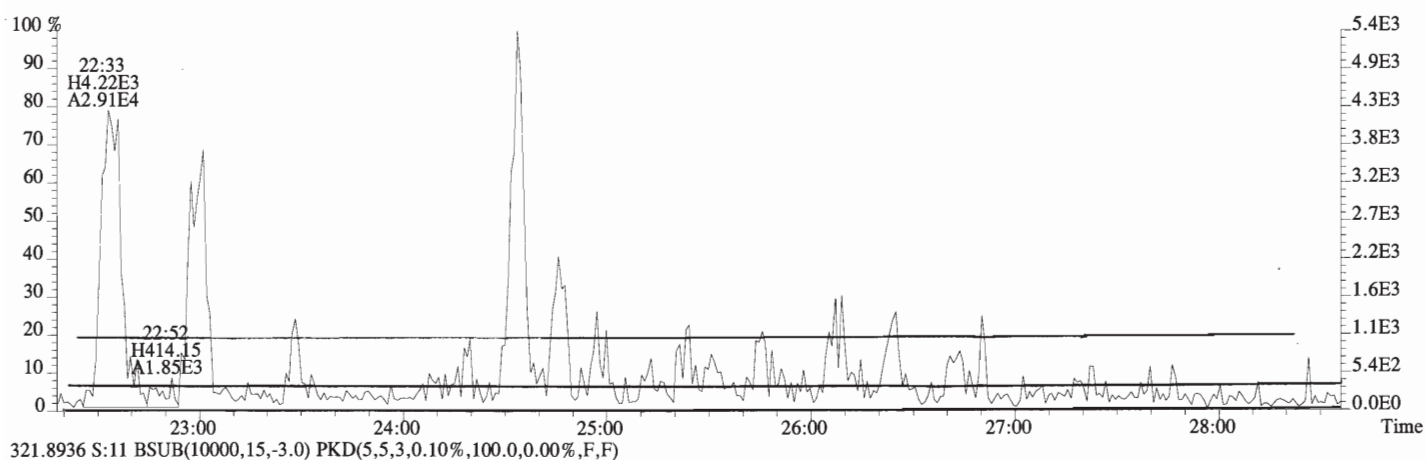
331.9368 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



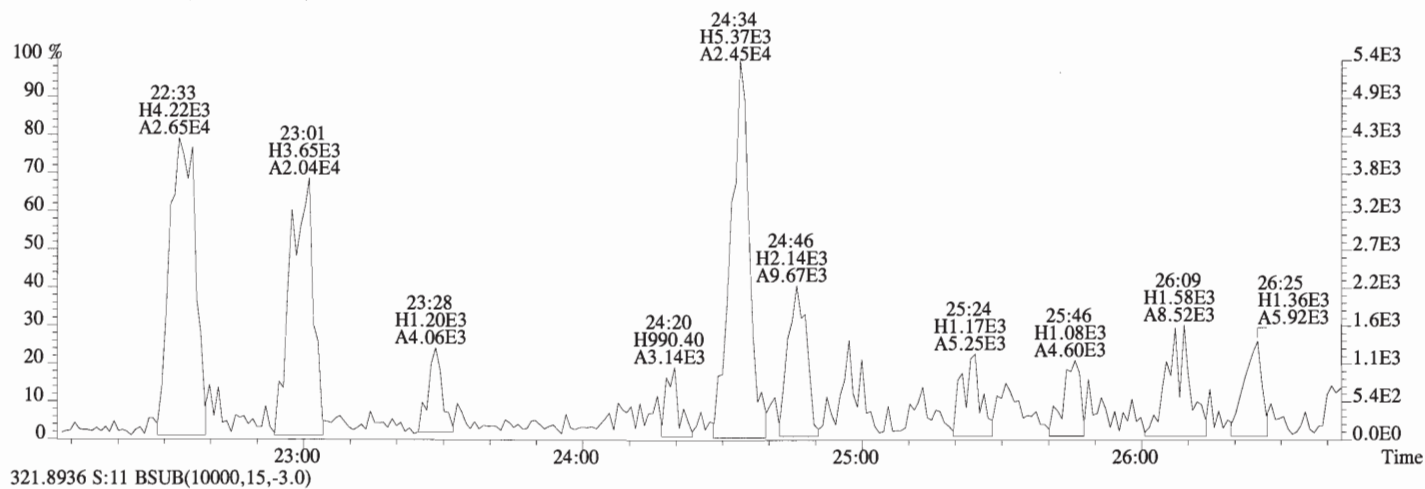
333.9339 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



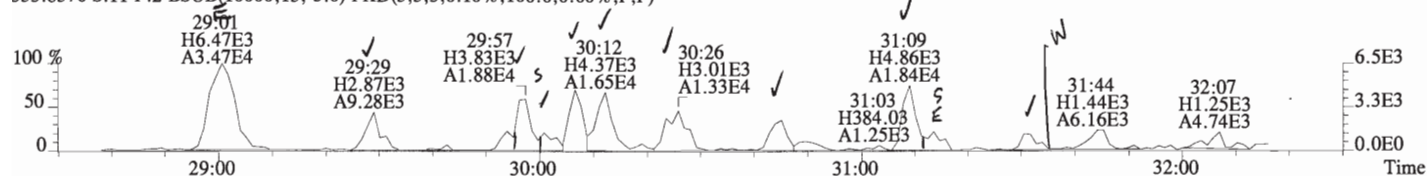
File:160719D1 #1-551 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 319.8965 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



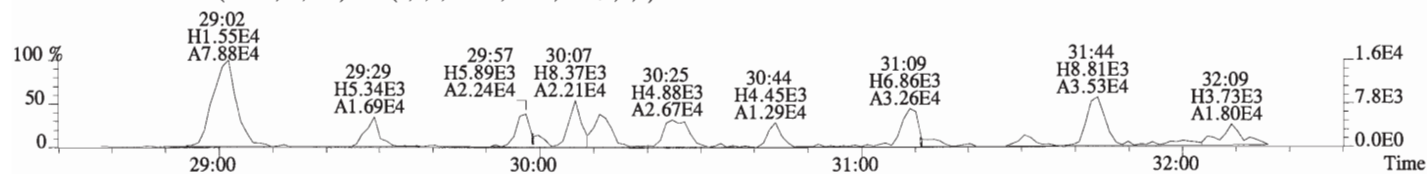
File:160719D1 #1-551 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 319.8965 S:11 BSUB(10000,15,-3.0)



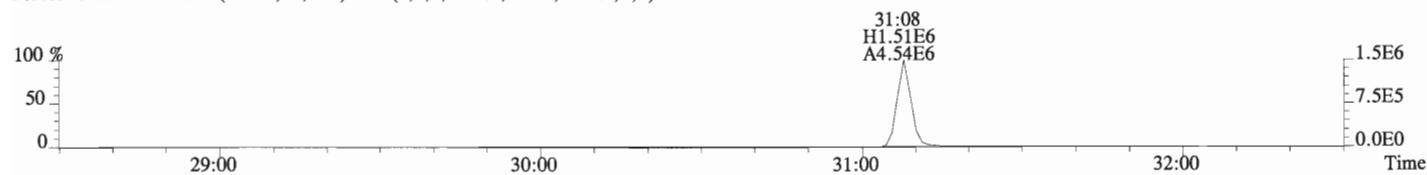
File:160719D1 #1-193 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 353.8576 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



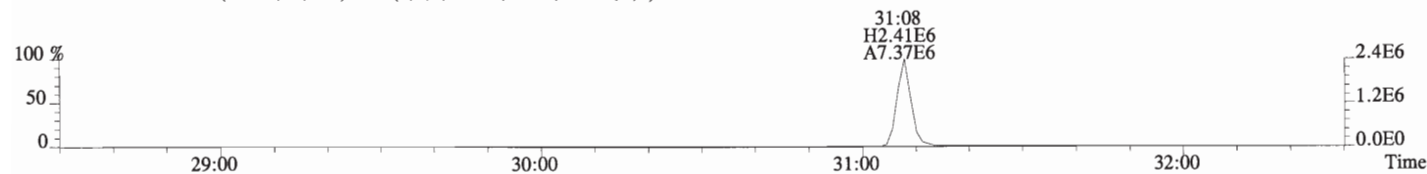
355.8546 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



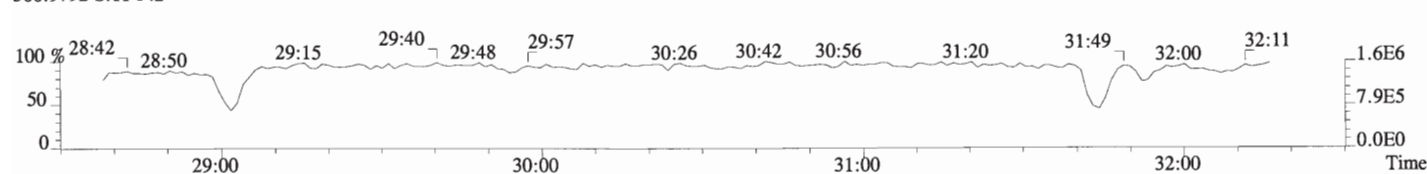
365.8978 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



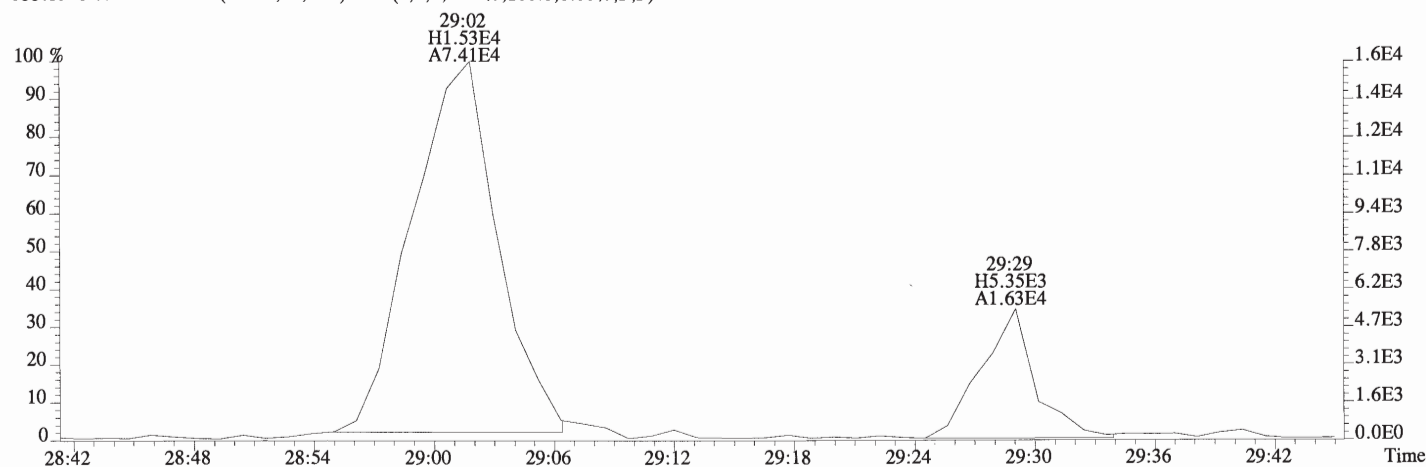
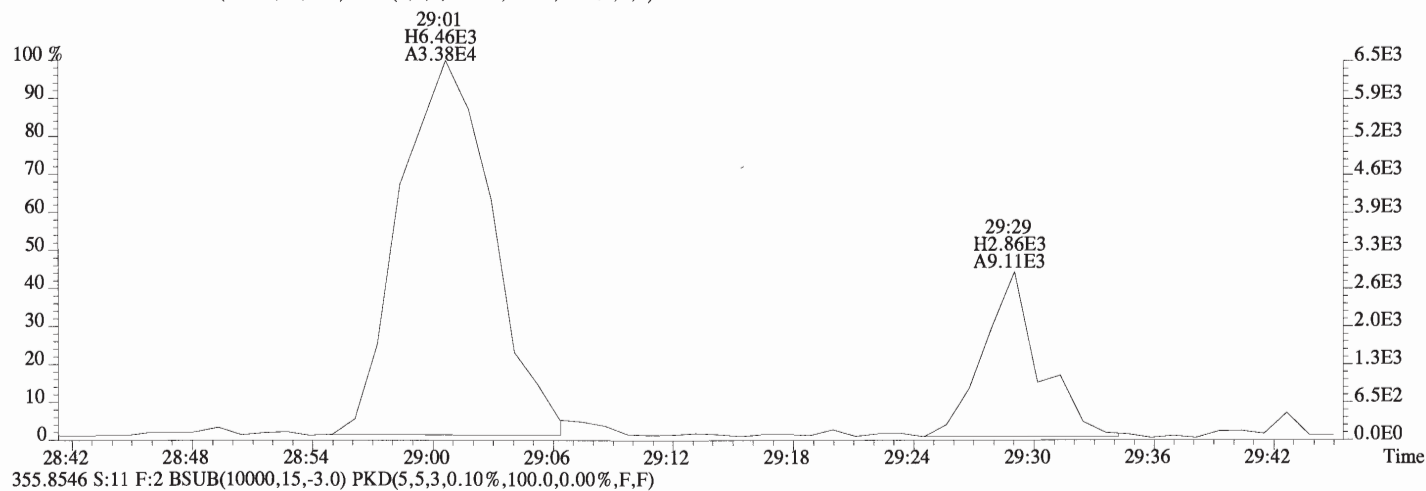
367.8949 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



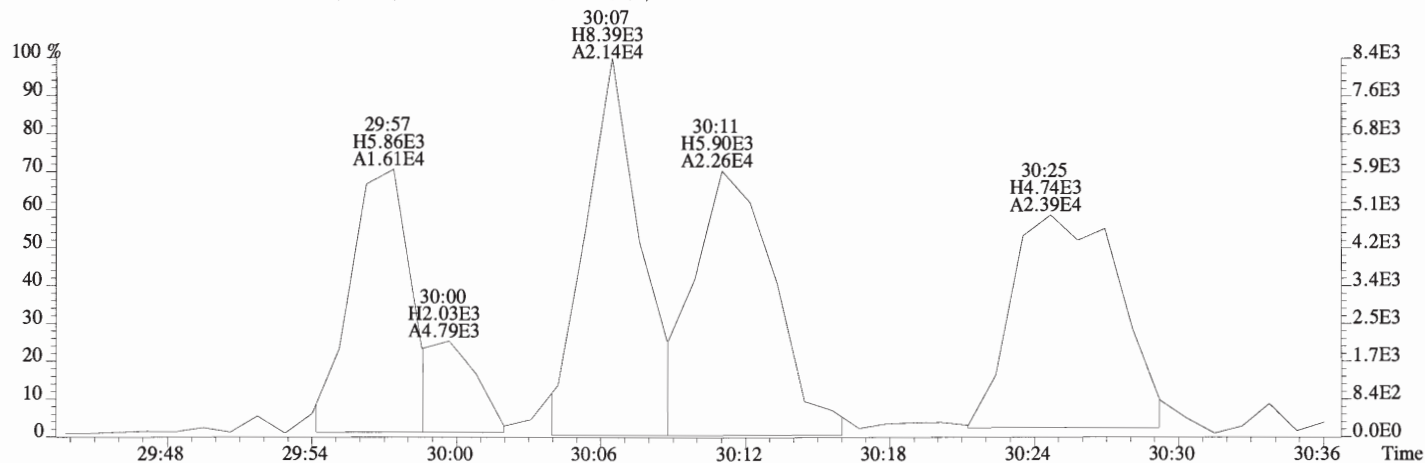
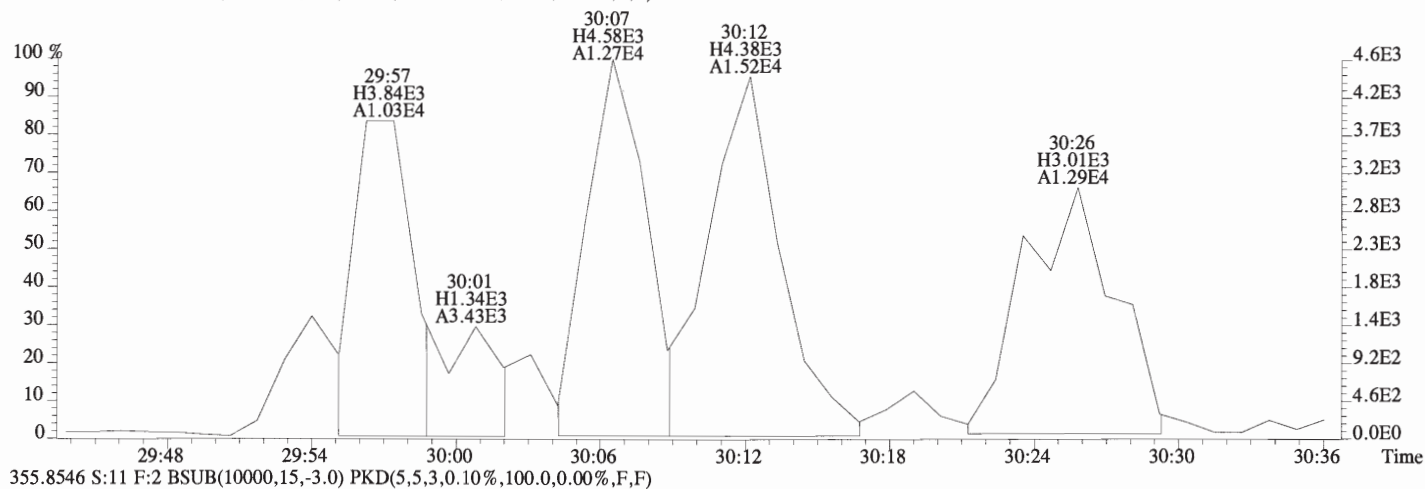
366.9792 S:11 F:2



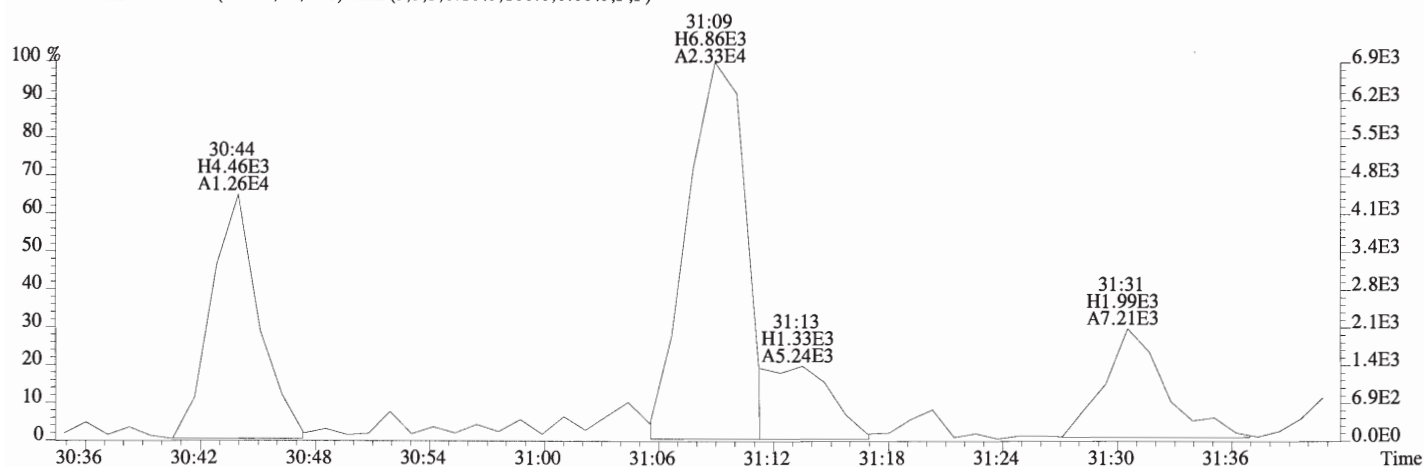
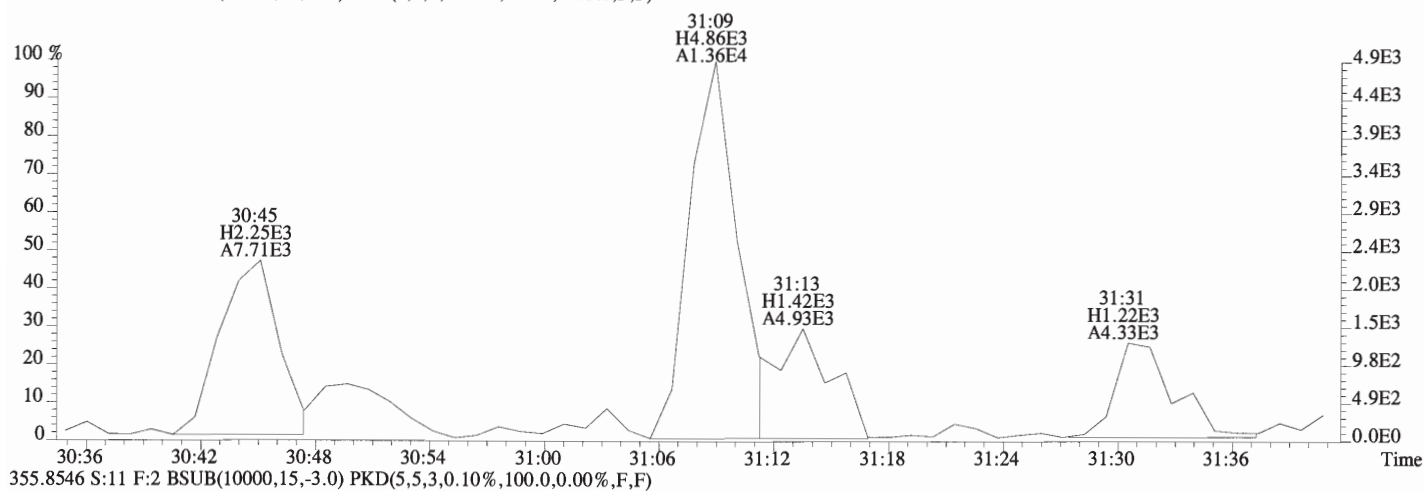
File:160719D1 #1-193 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 353.8576 S:11 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



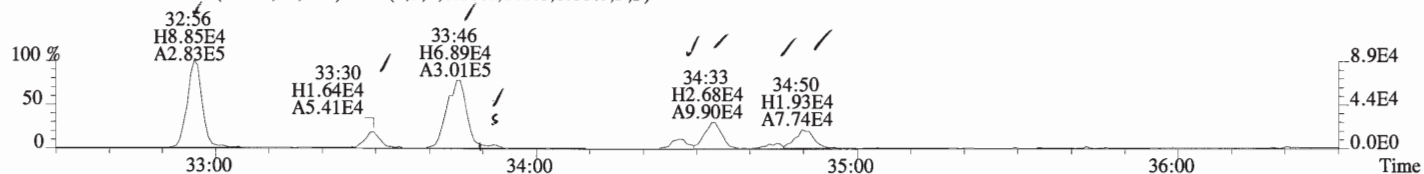
File:160719D1 #1-193 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 353.8576 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



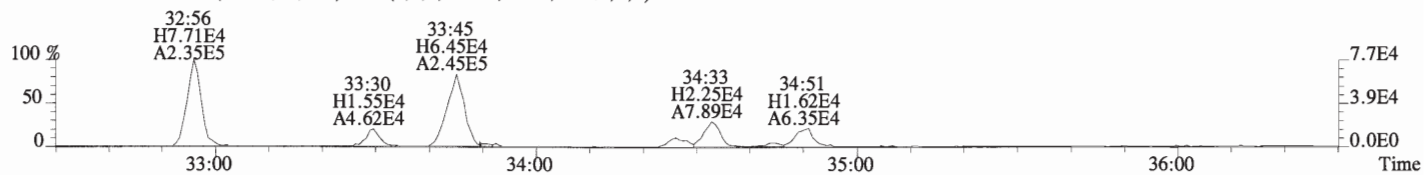
File:160719D1 #1-193 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 353.8576 S:11 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



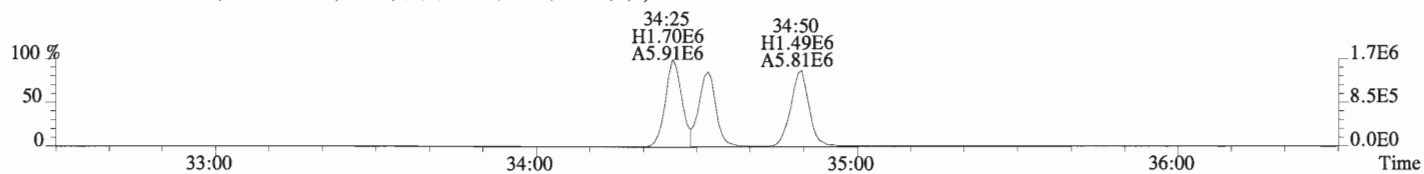
File:160719D1 #1-392 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



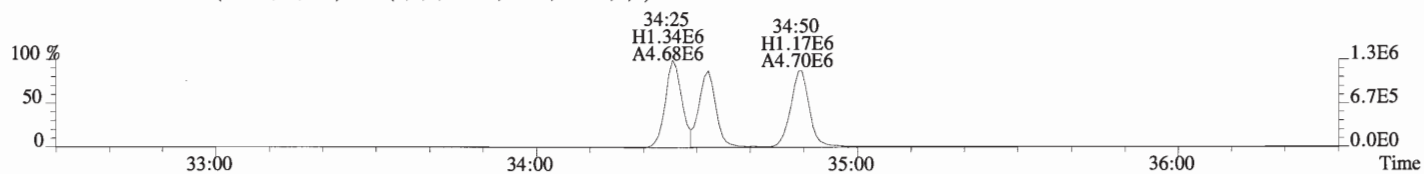
391.8127 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



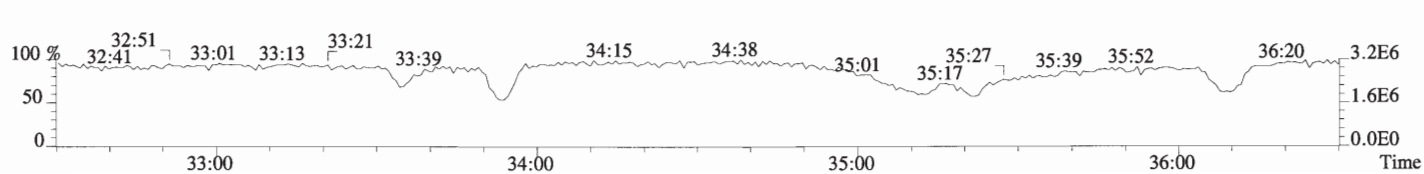
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



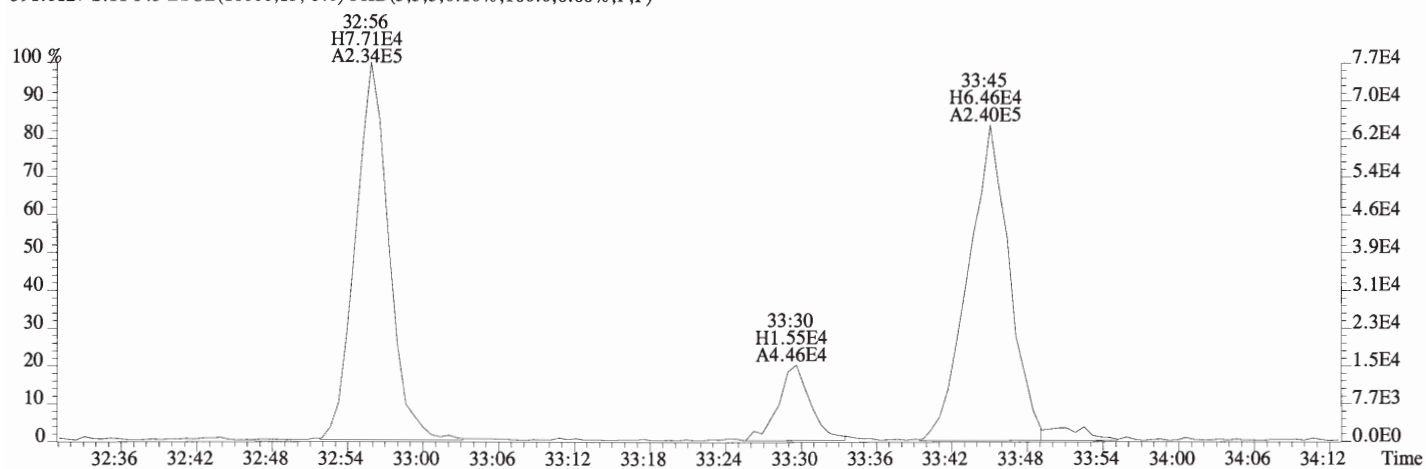
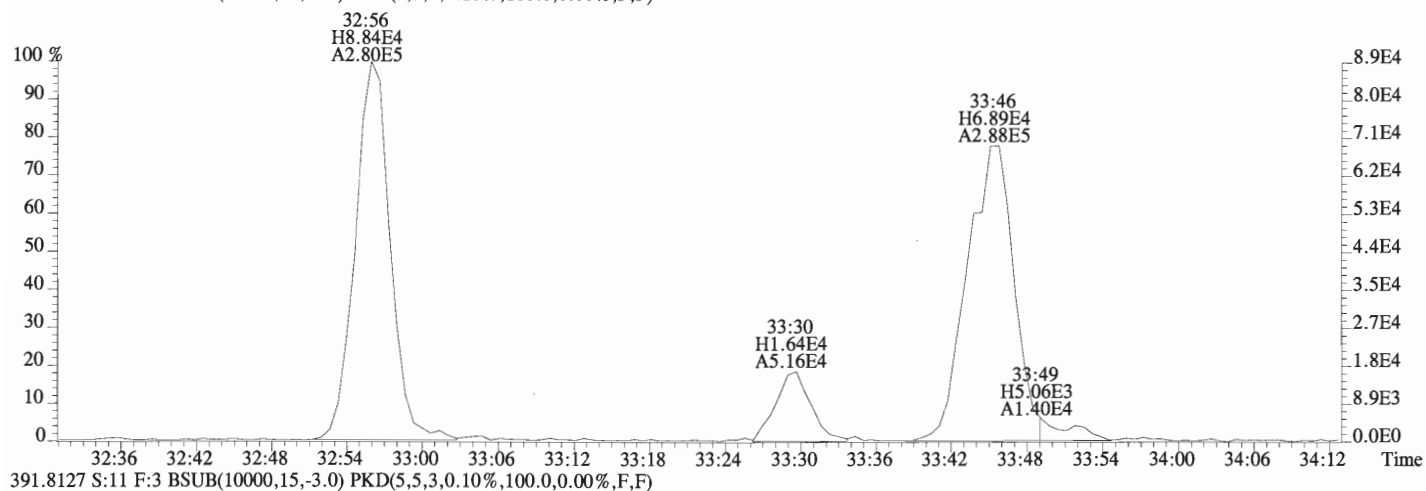
403.8530 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



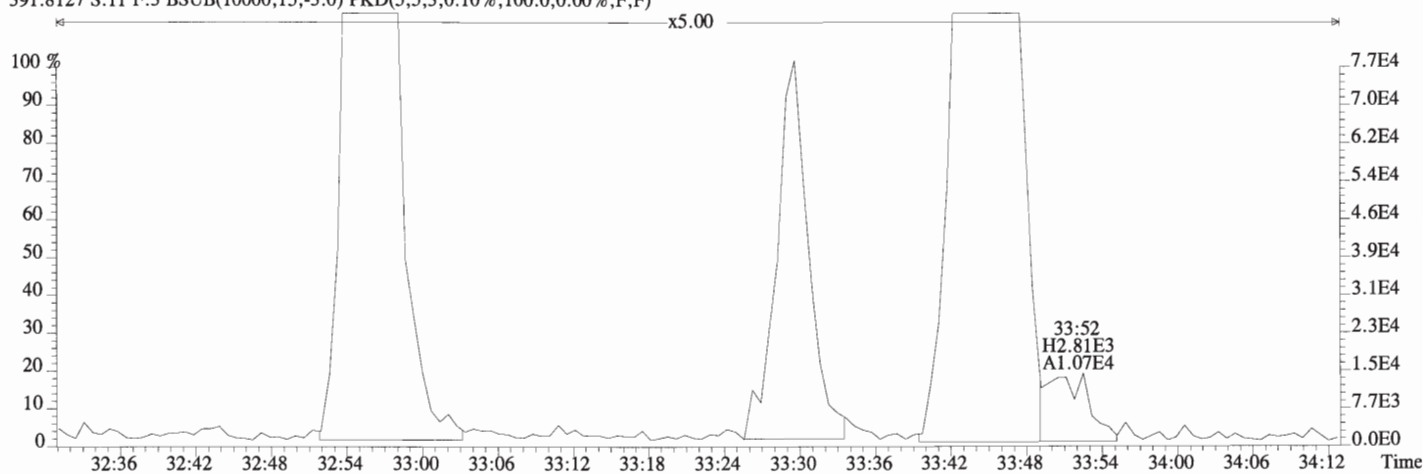
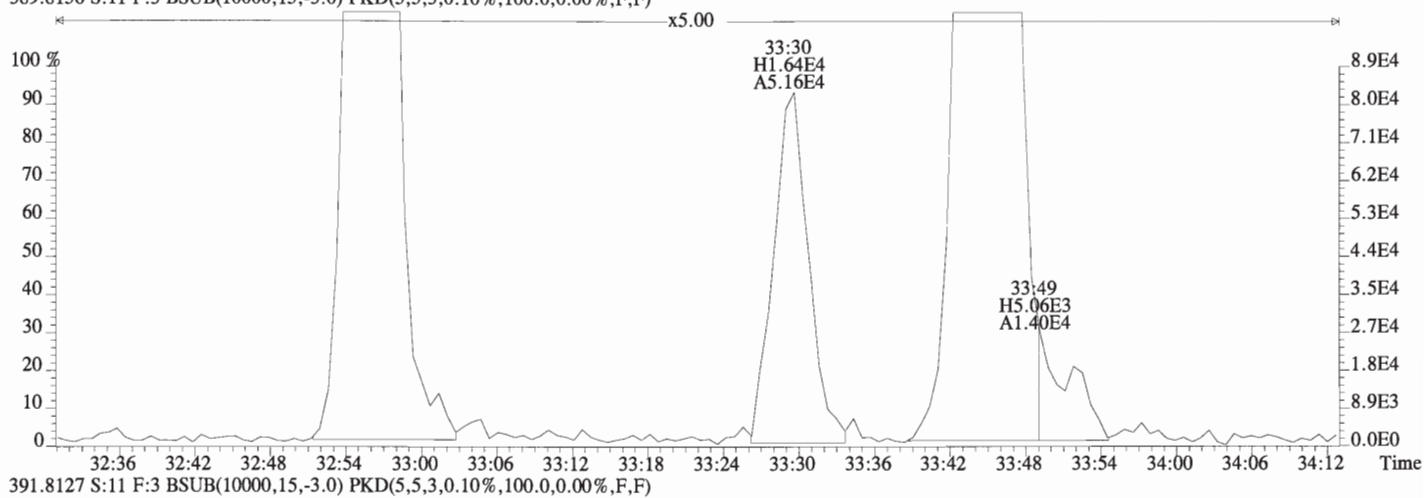
392.9760 S:11 F:3



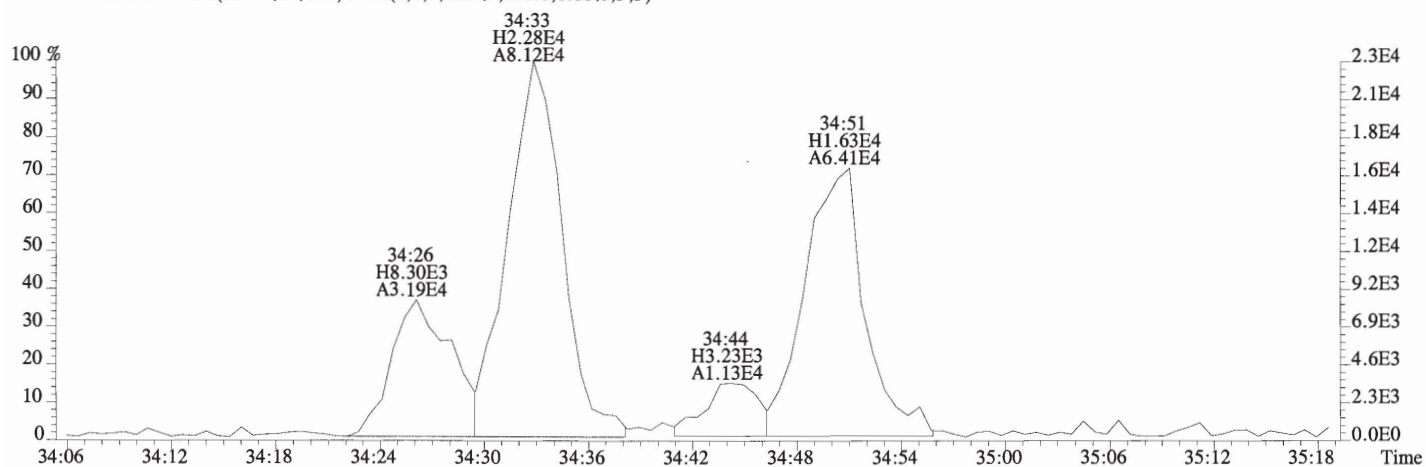
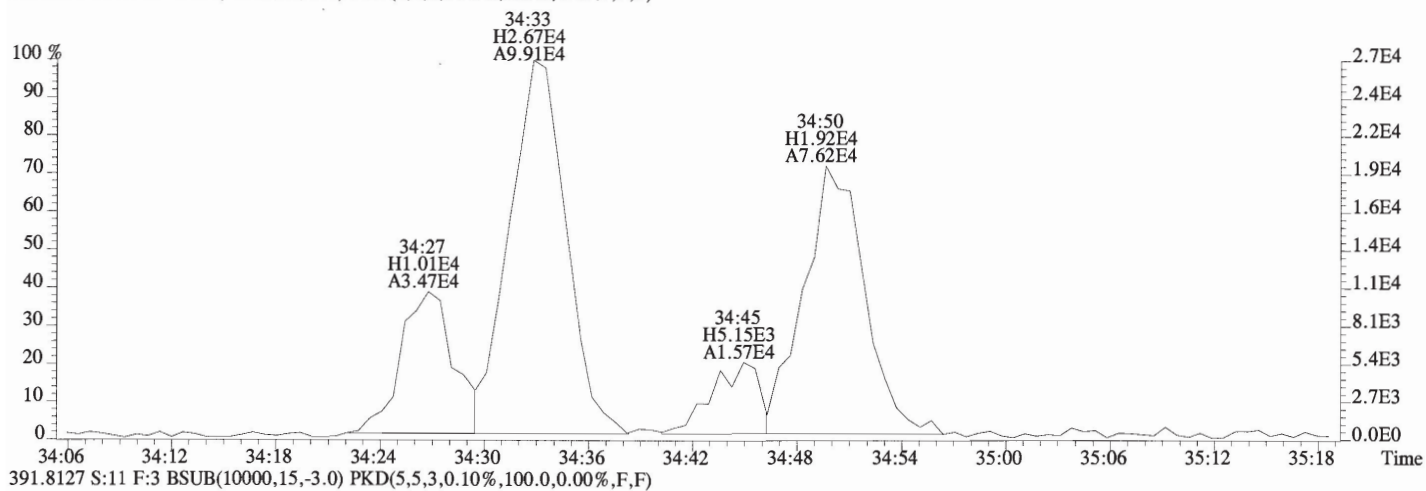
File:160719D1 #1-392 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



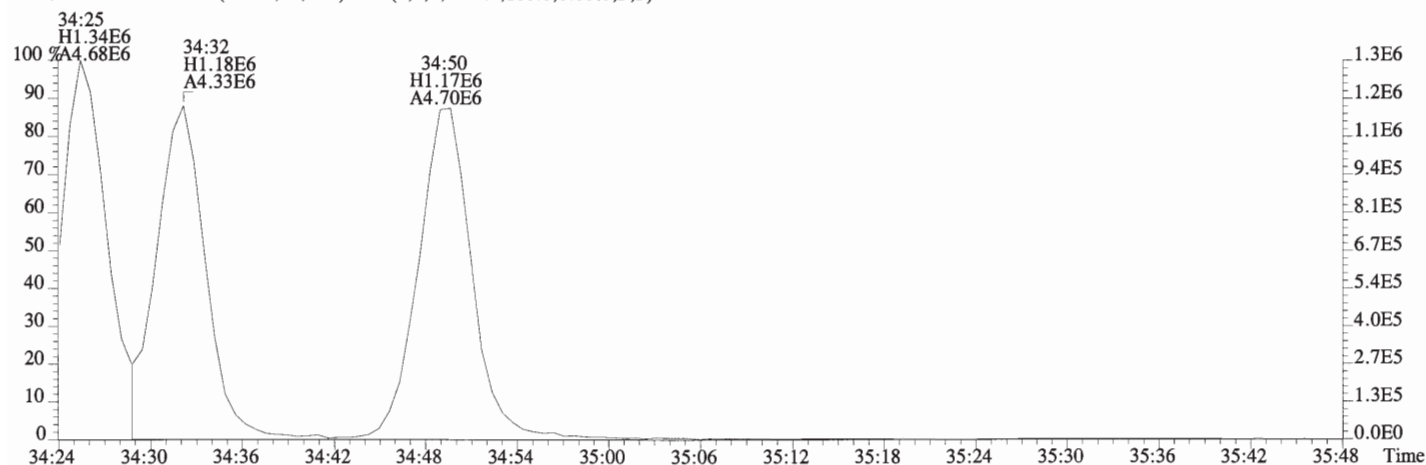
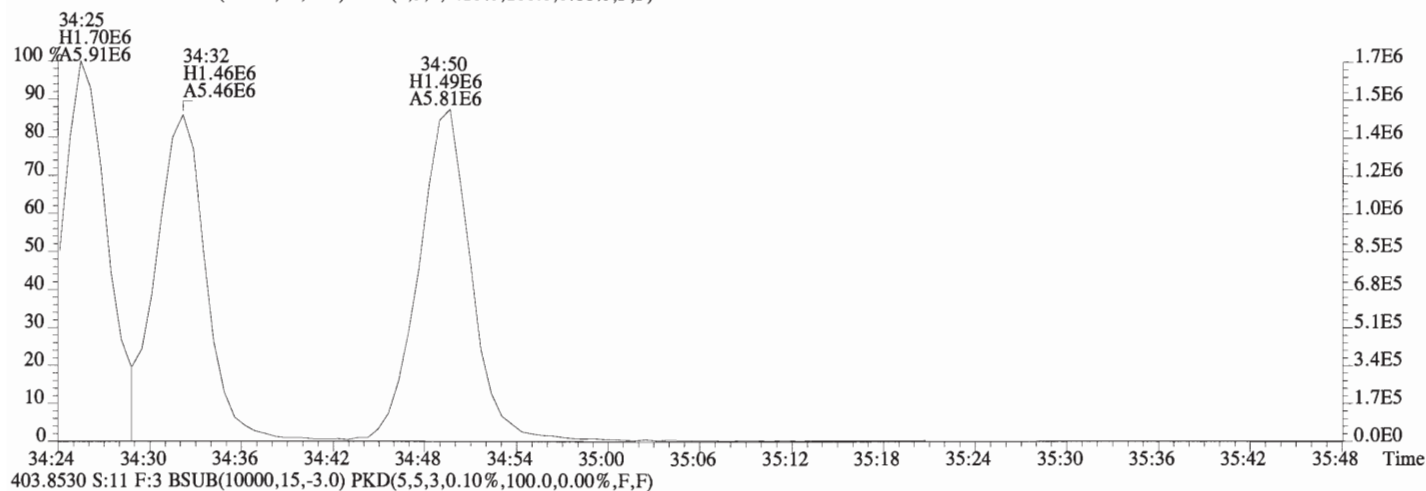
File:160719D1 #1-392 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



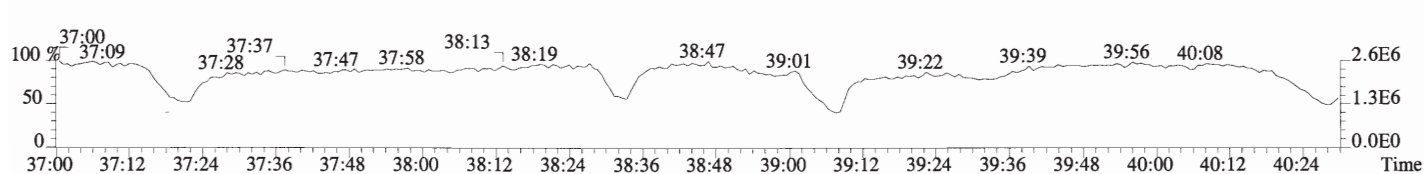
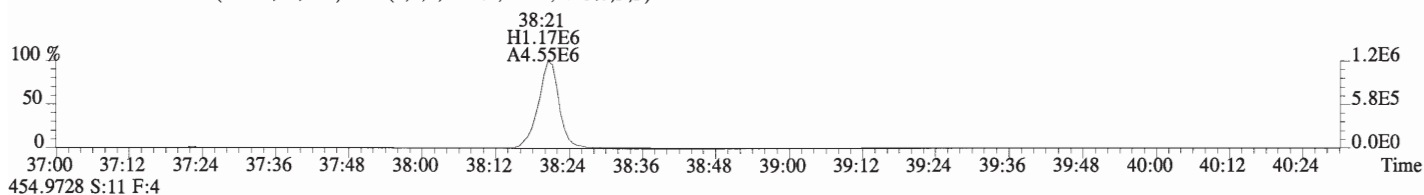
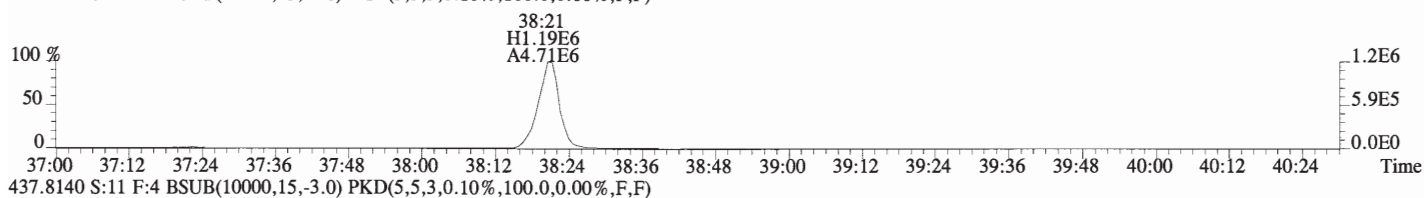
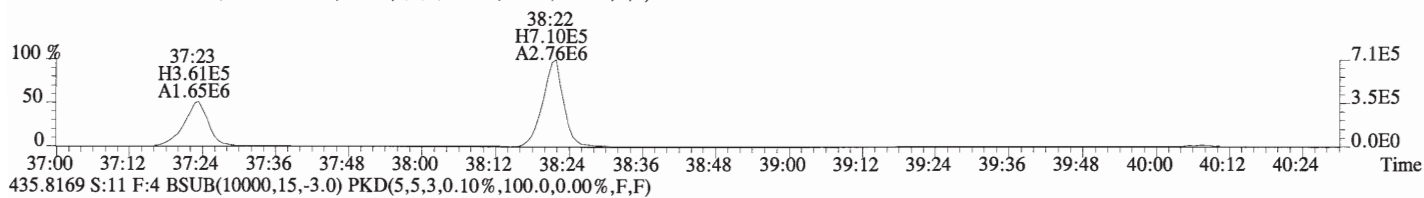
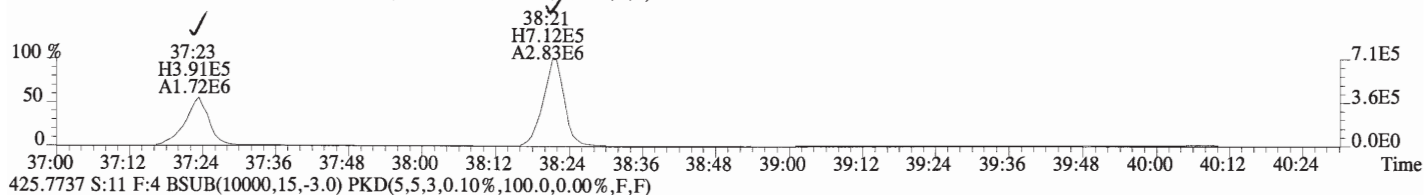
File:160719D1 #1-392 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



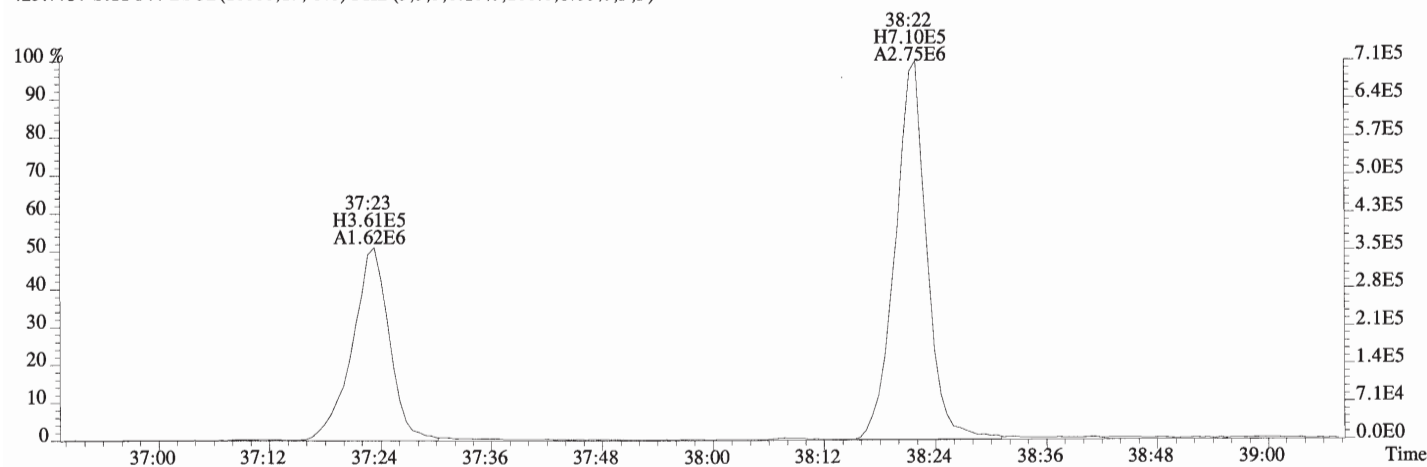
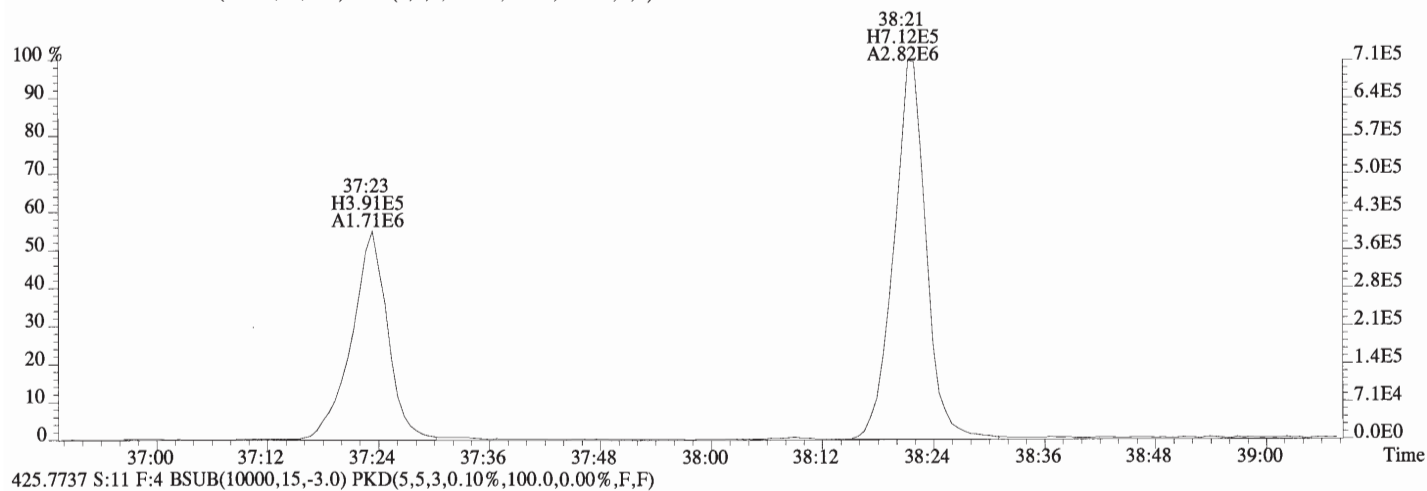
File:160719D1 #1-392 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



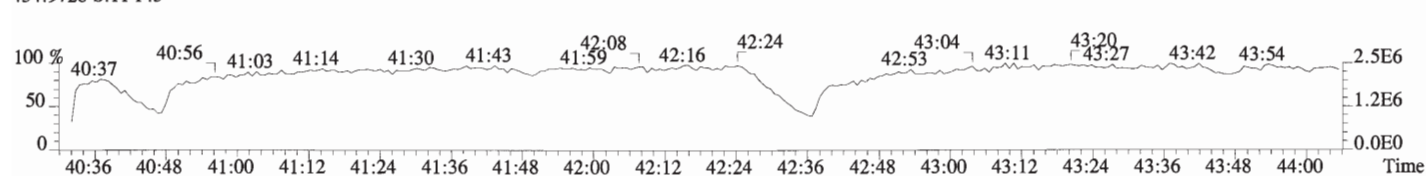
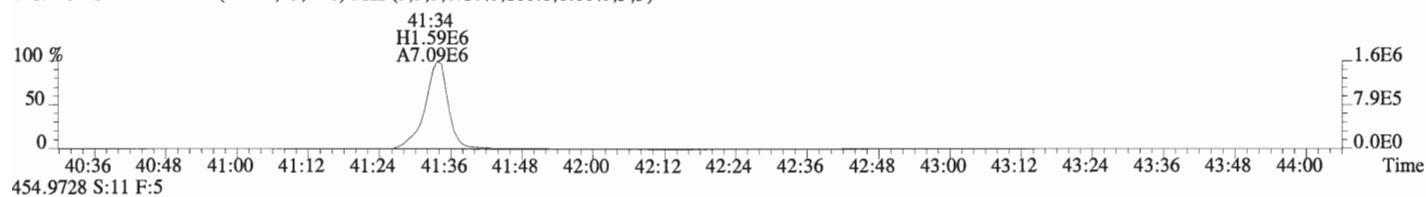
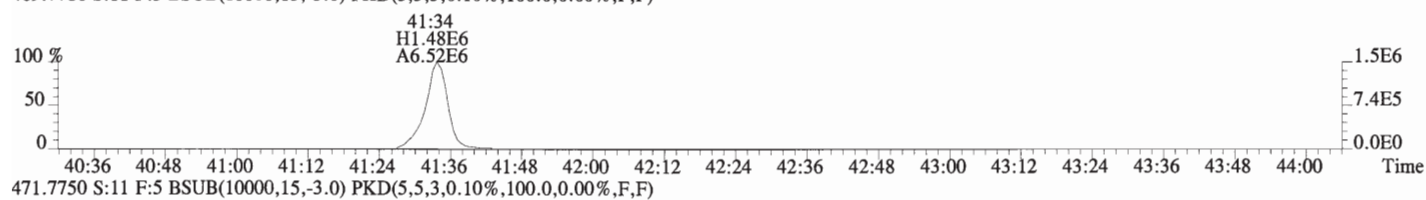
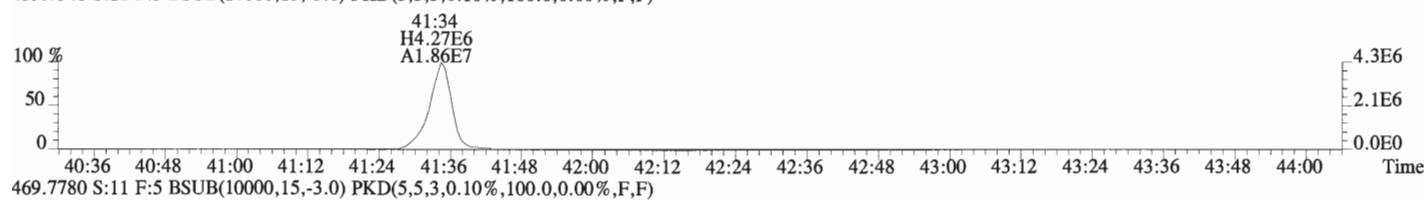
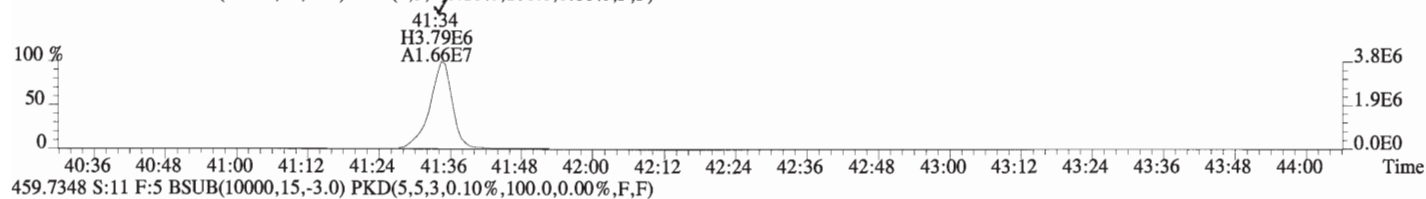
File:160719D1 #1-340 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



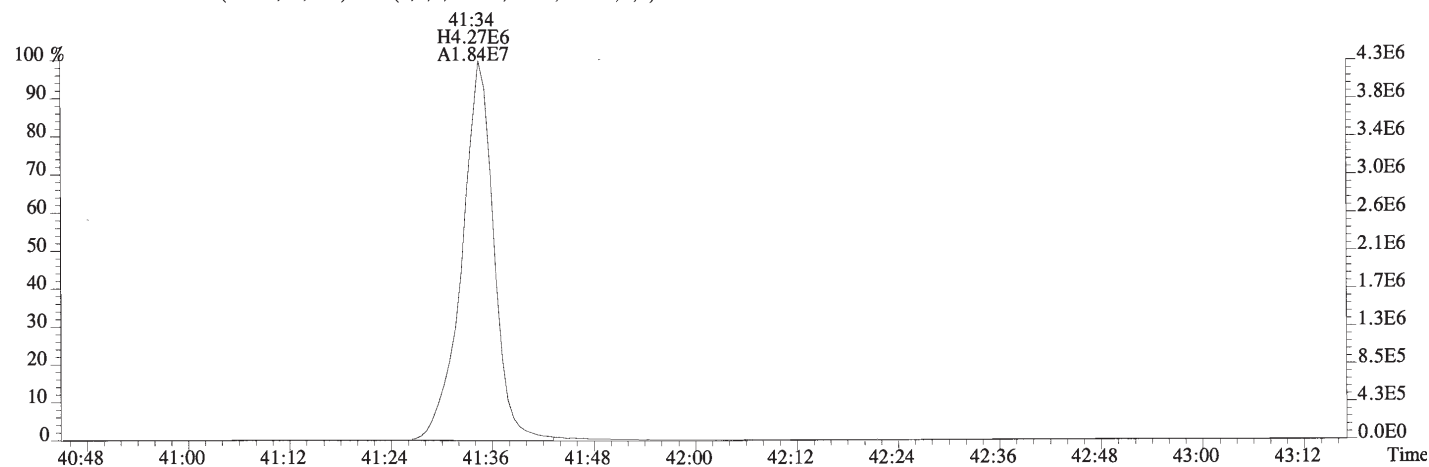
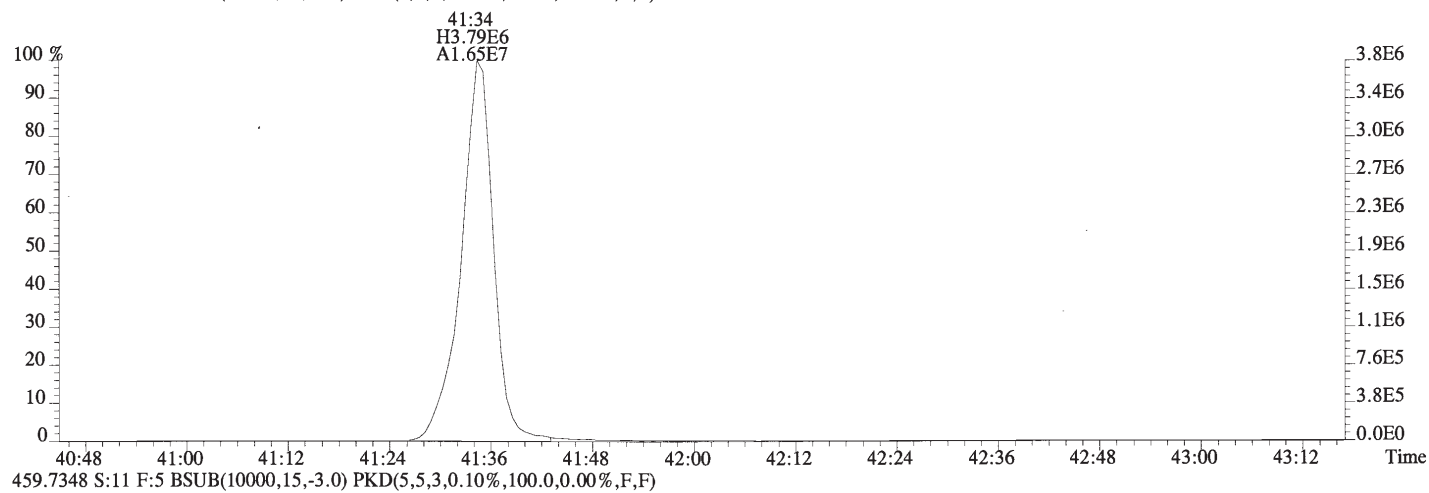
File:160719D1 #1-340 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



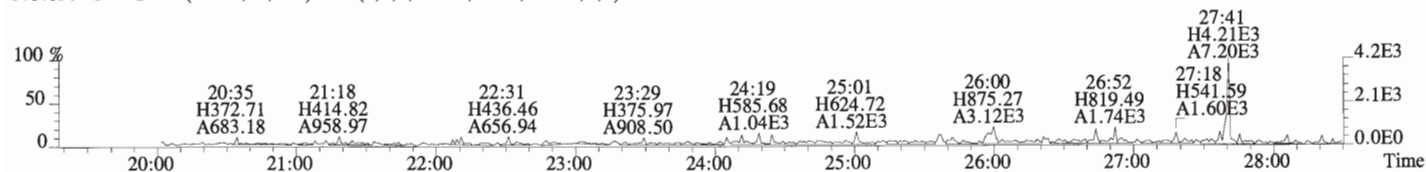
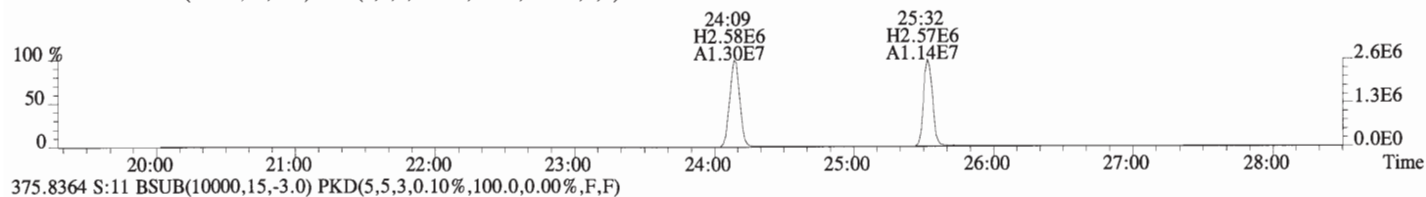
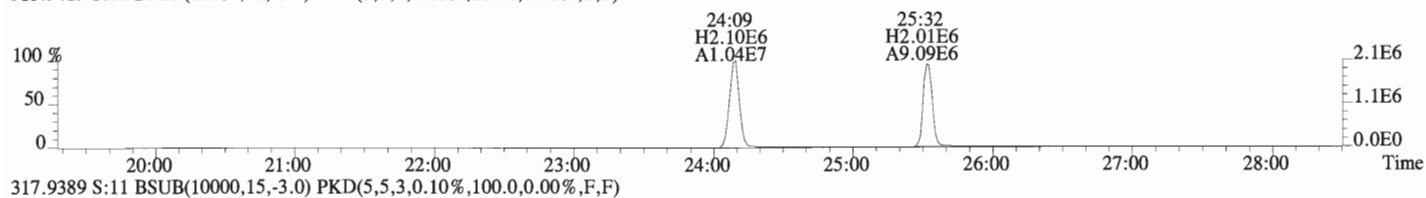
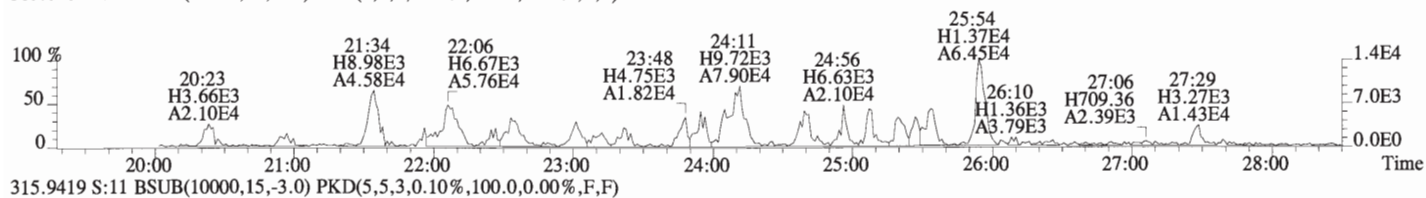
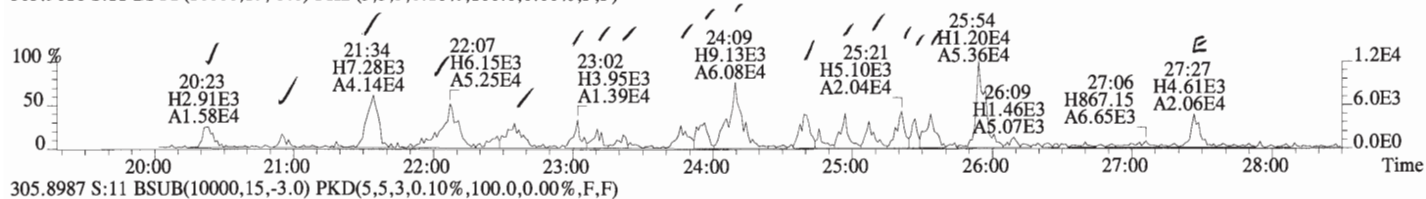
File:160719D1 #1-388 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 457.7377 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



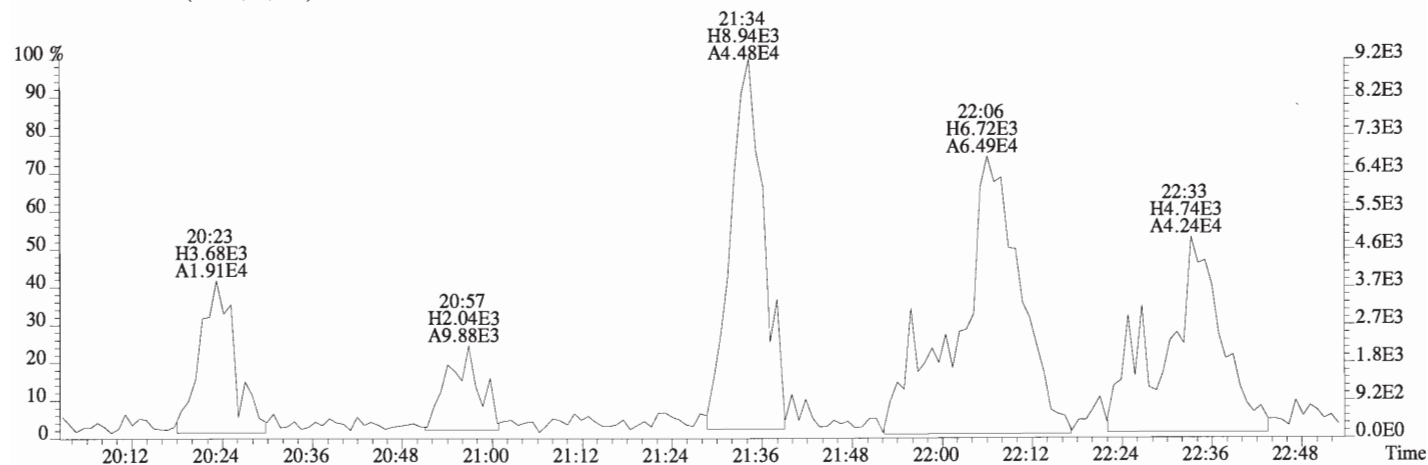
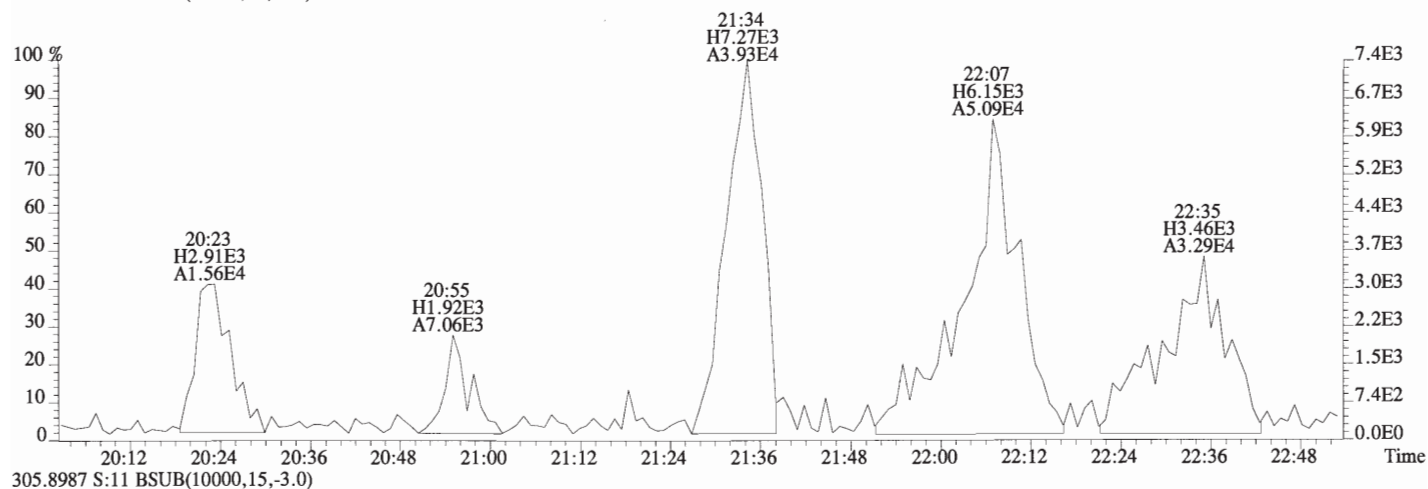
File:160719D1 #1-388 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
457.7377 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



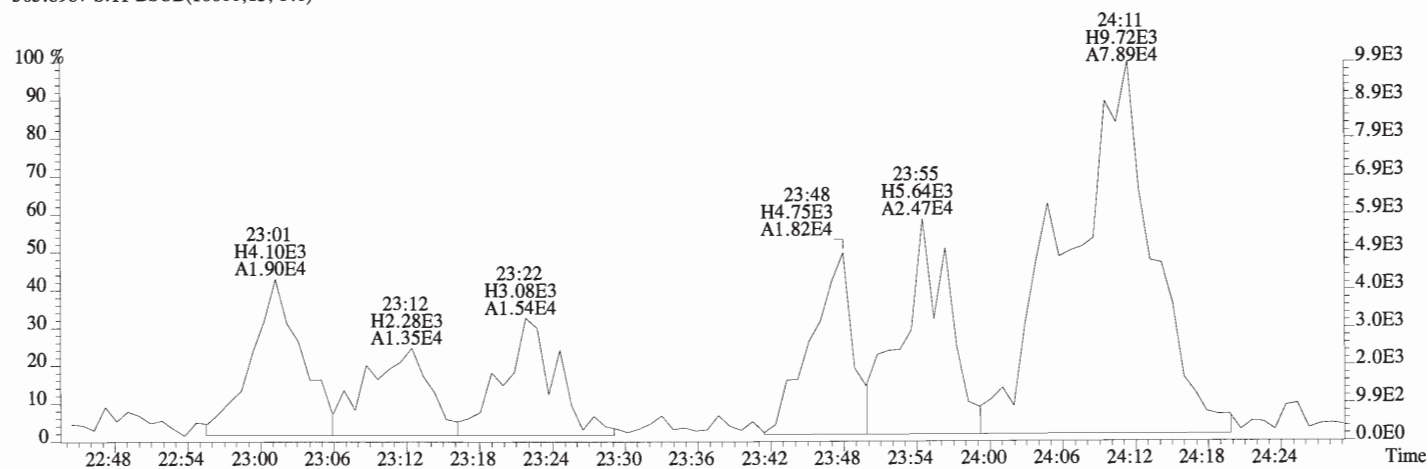
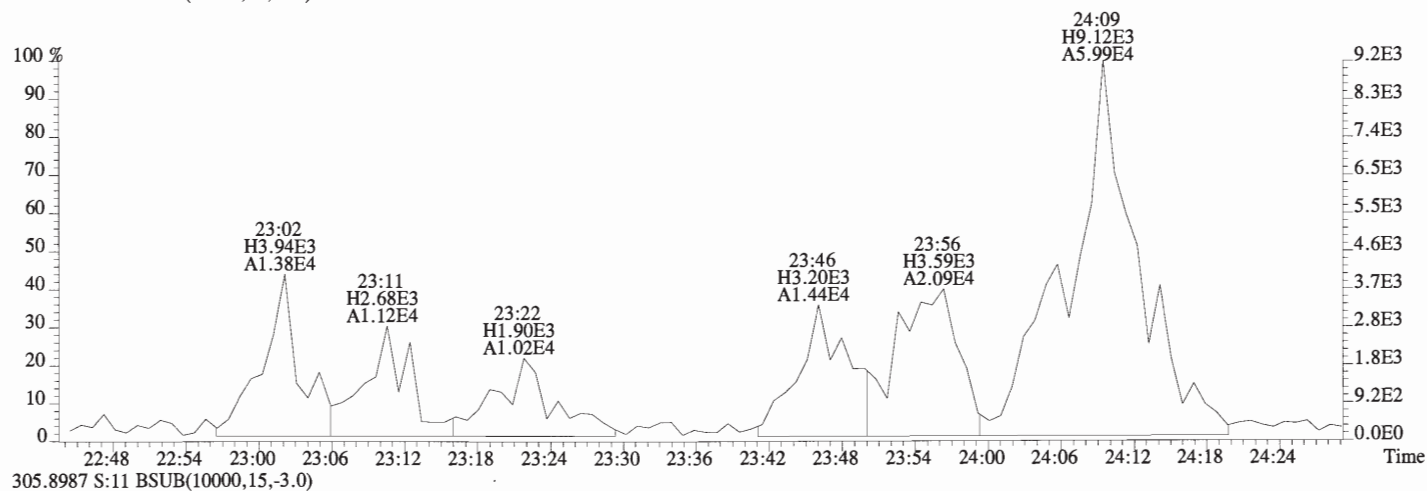
File:160719D1 #1-551 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



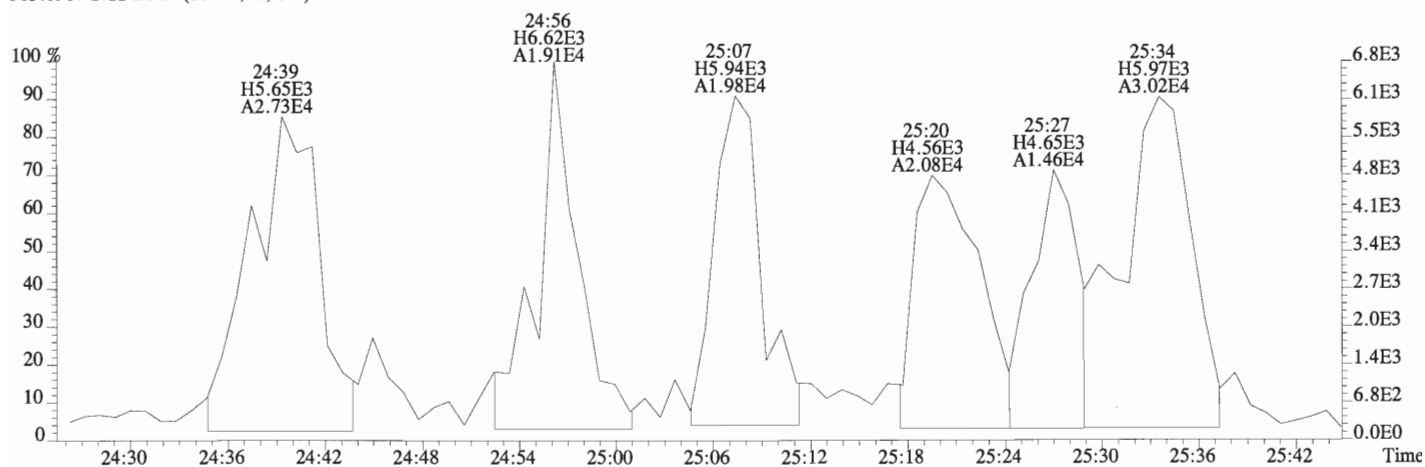
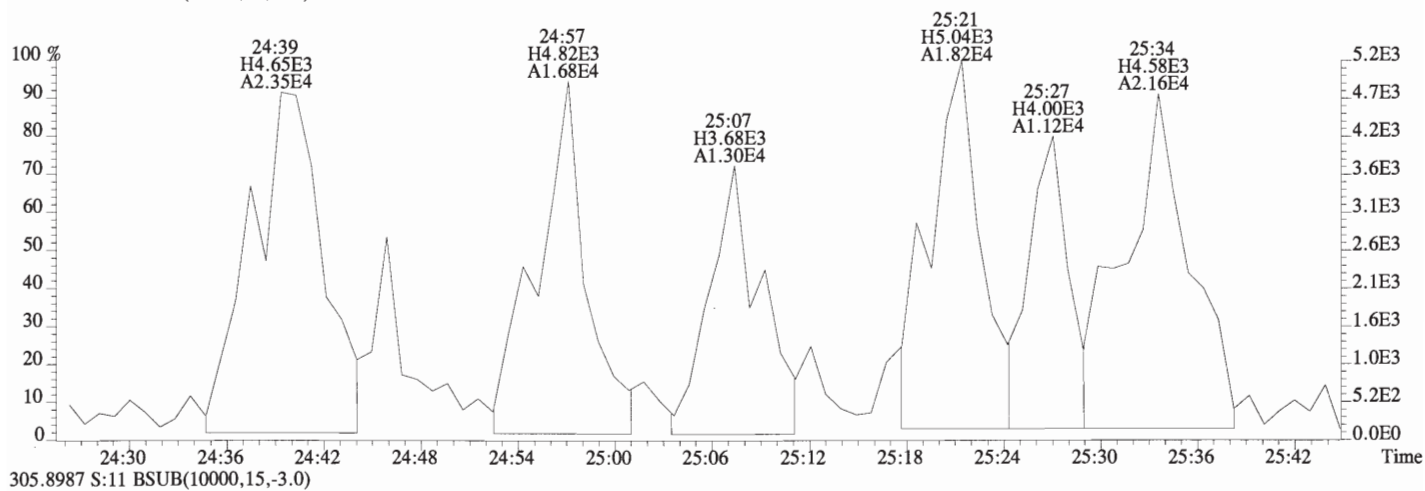
File:160719D1 #1-551 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 303.9016 S:11 BSUB(10000,15,-3.0)



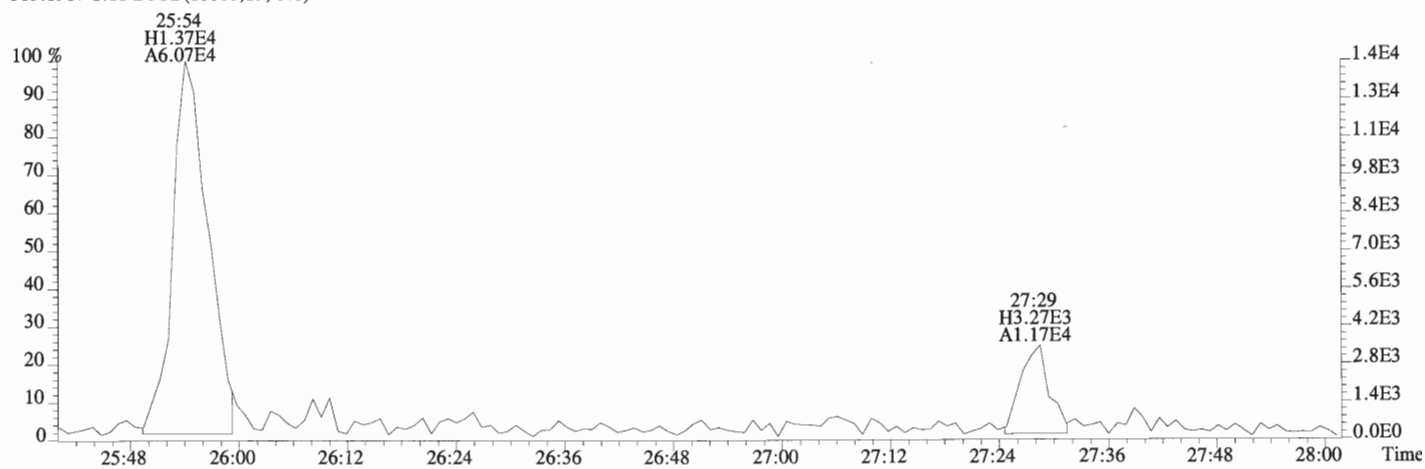
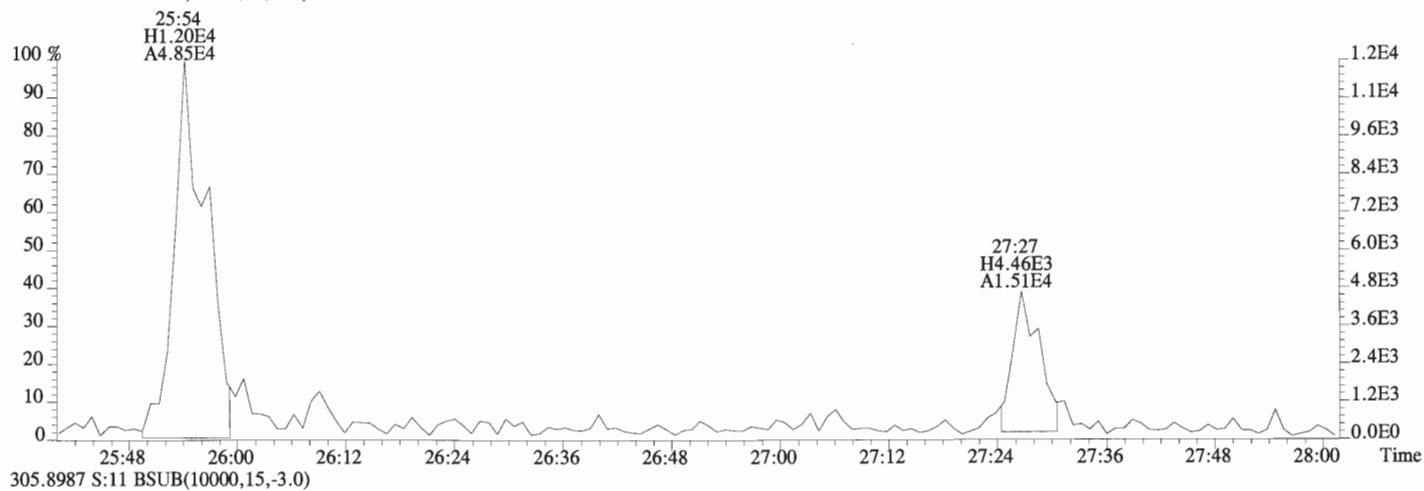
File:160719D1 #1-551 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
303.9016 S:11 BSUB(10000,15,-3.0)



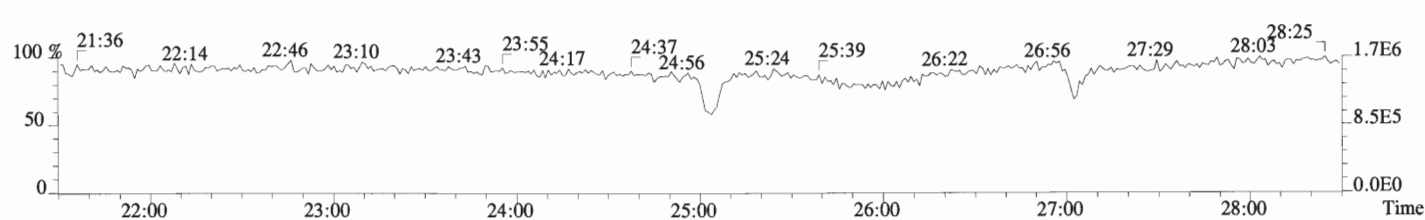
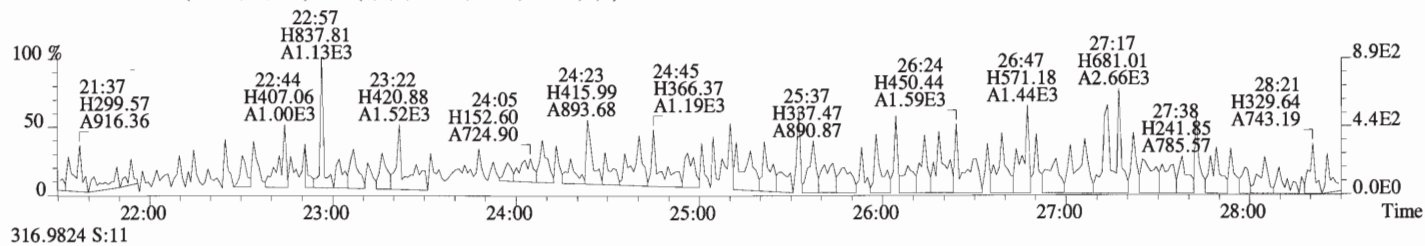
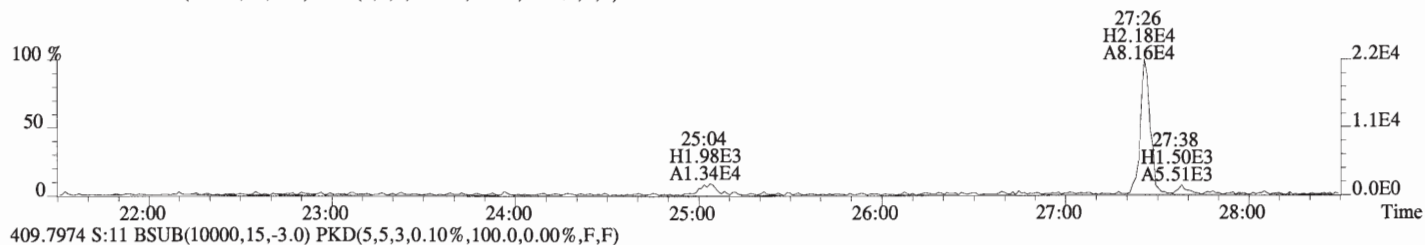
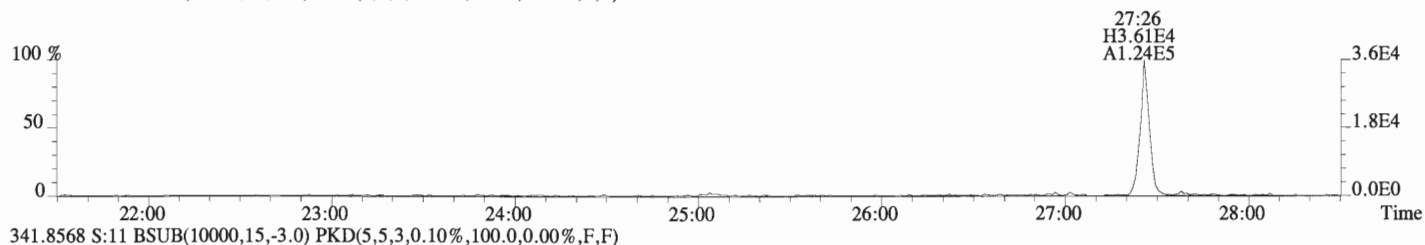
File:160719D1 #1-551 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 303.9016 S:11 BSub(10000,15,-3.0)



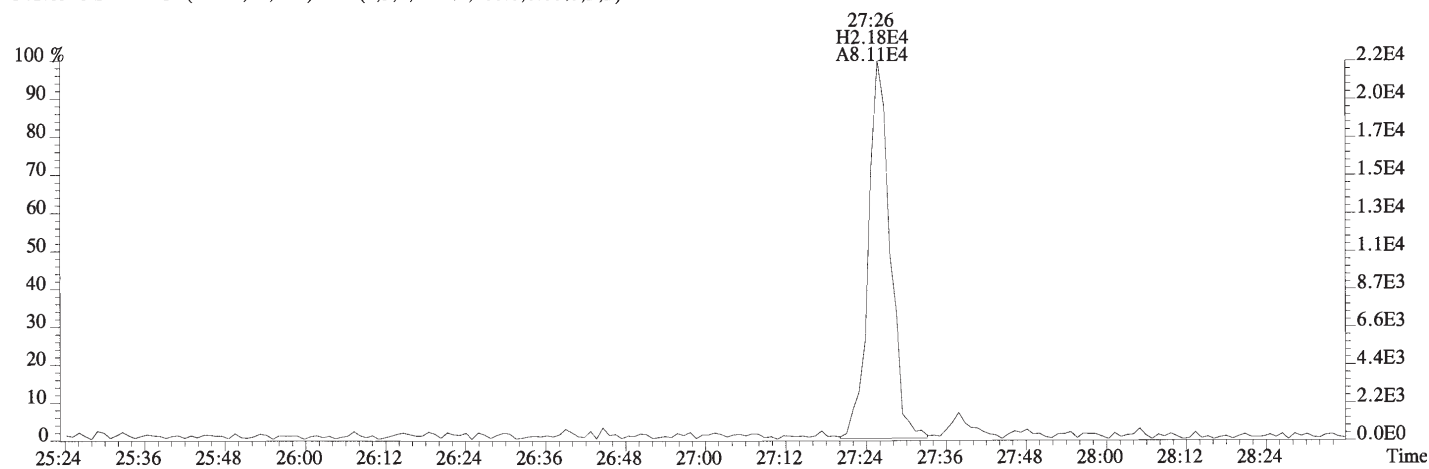
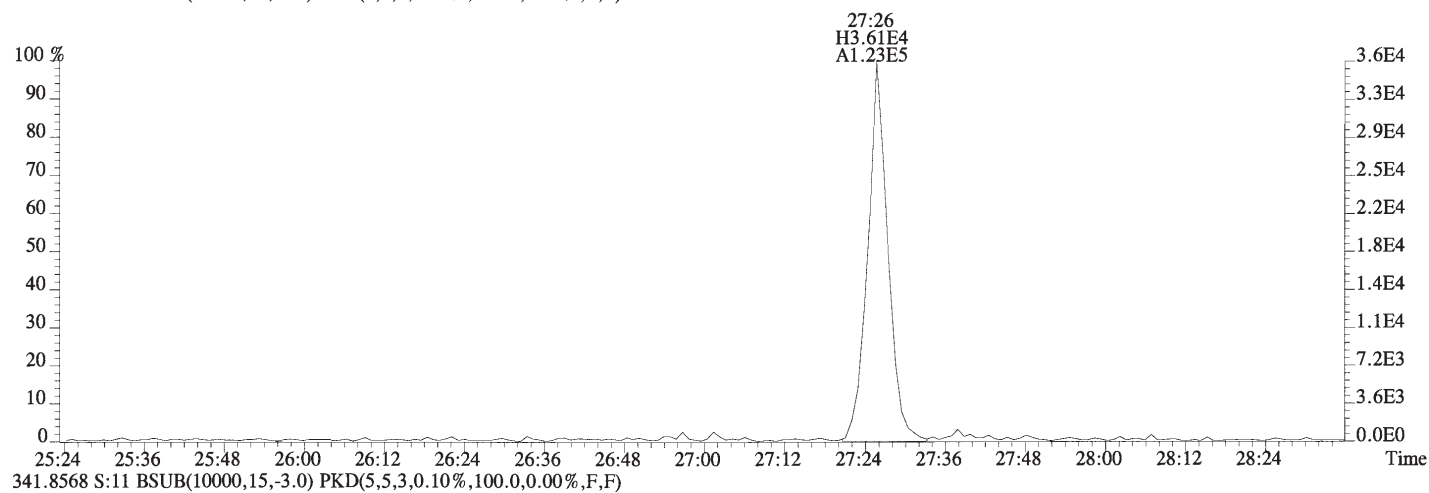
File:160719D1 #1-551 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
303.9016 S:11 BSUB(10000,15,-3.0)



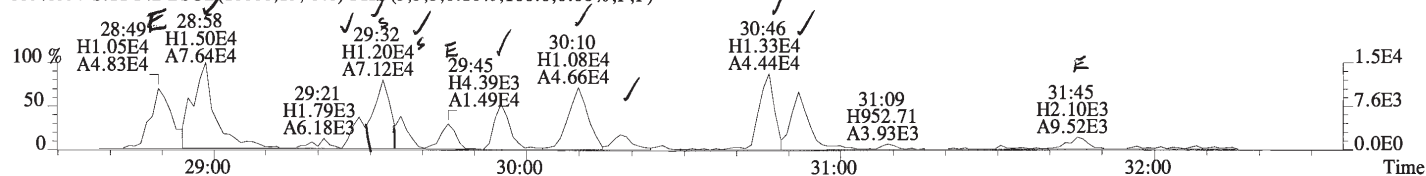
File:160719D1 #1-551 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 339.8597 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



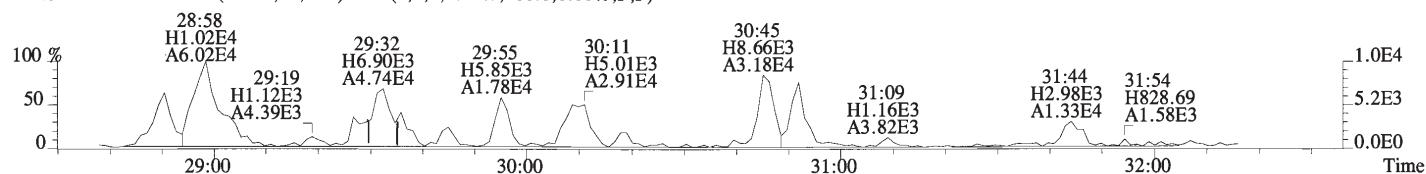
File:160719D1 #1-551 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
339.8597 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



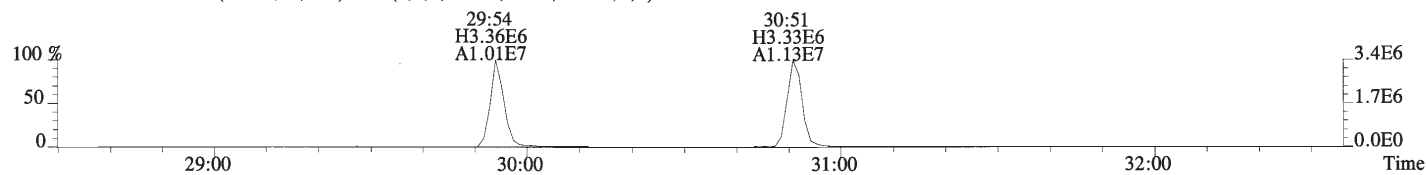
File:160719D1 #1-193 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



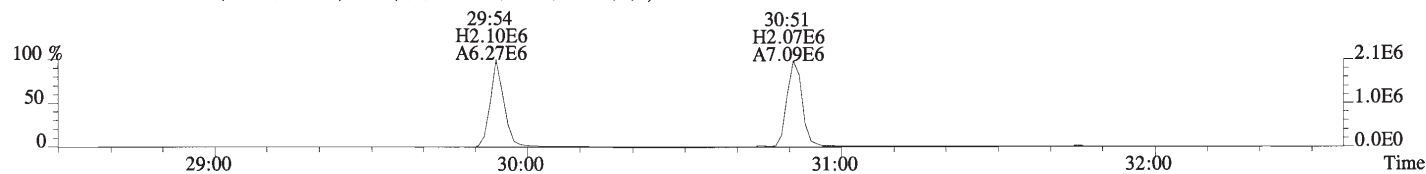
341.8568 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



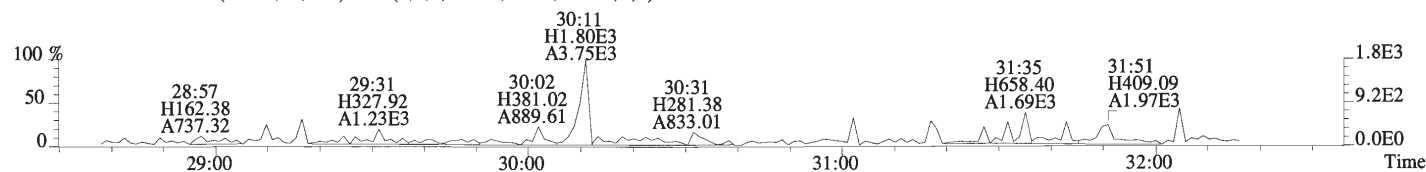
351.9000 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



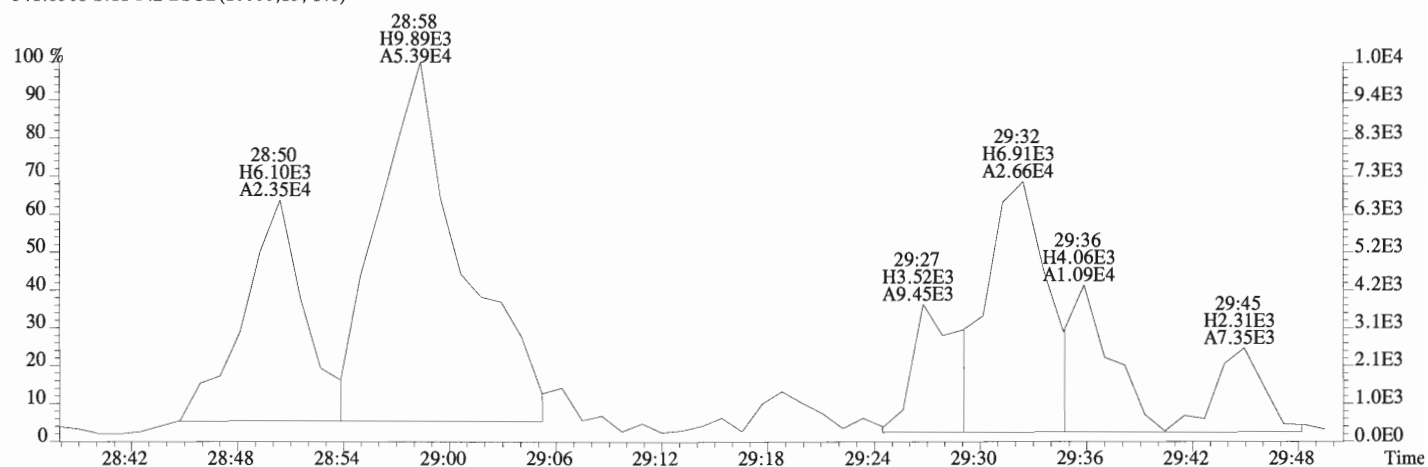
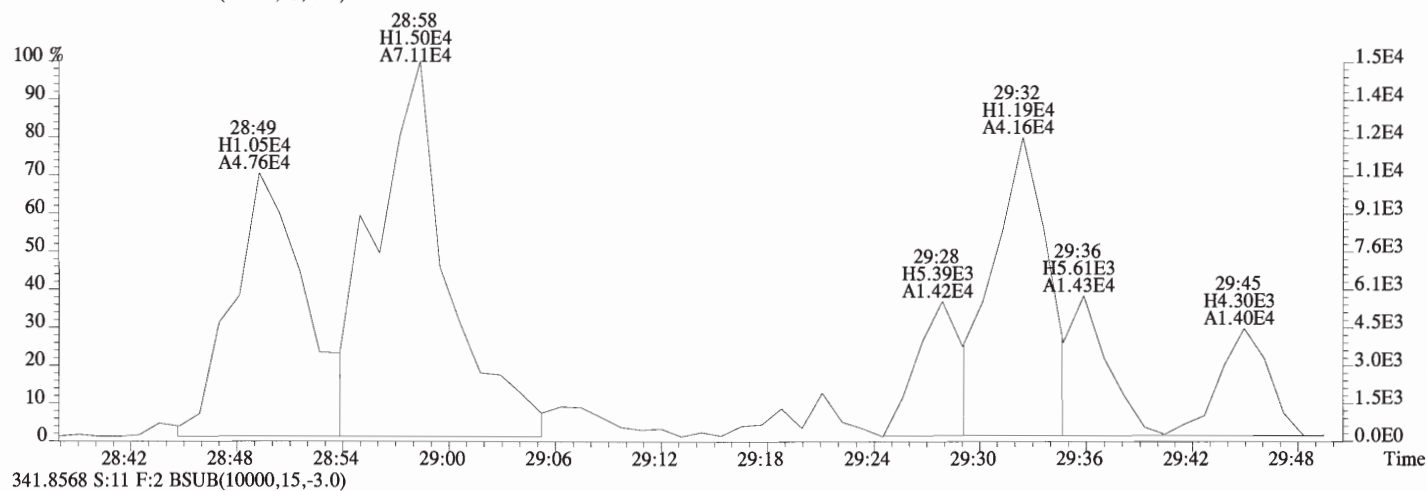
353.8970 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



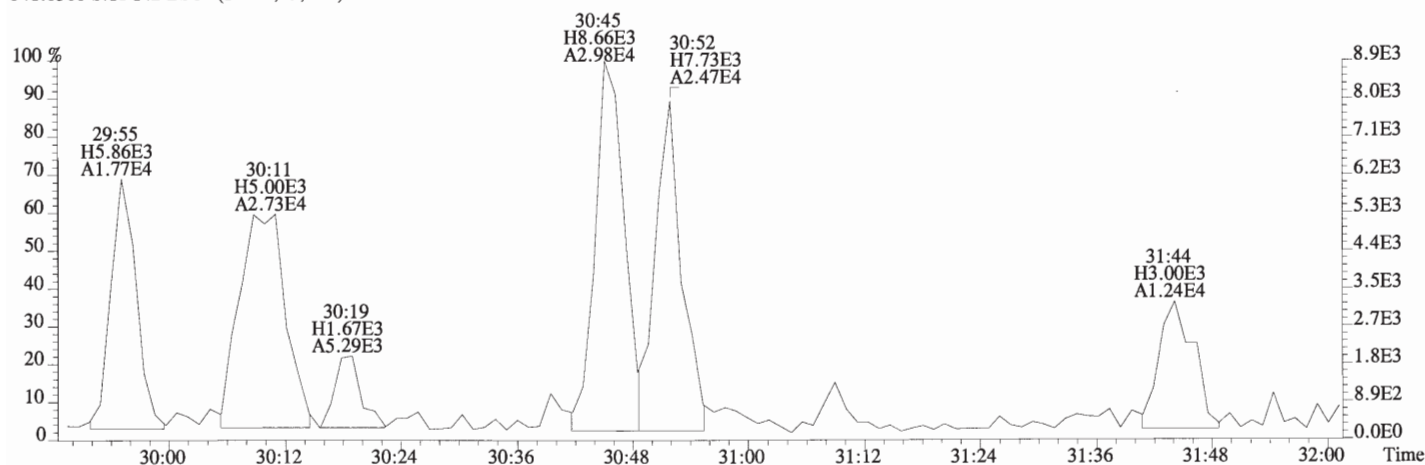
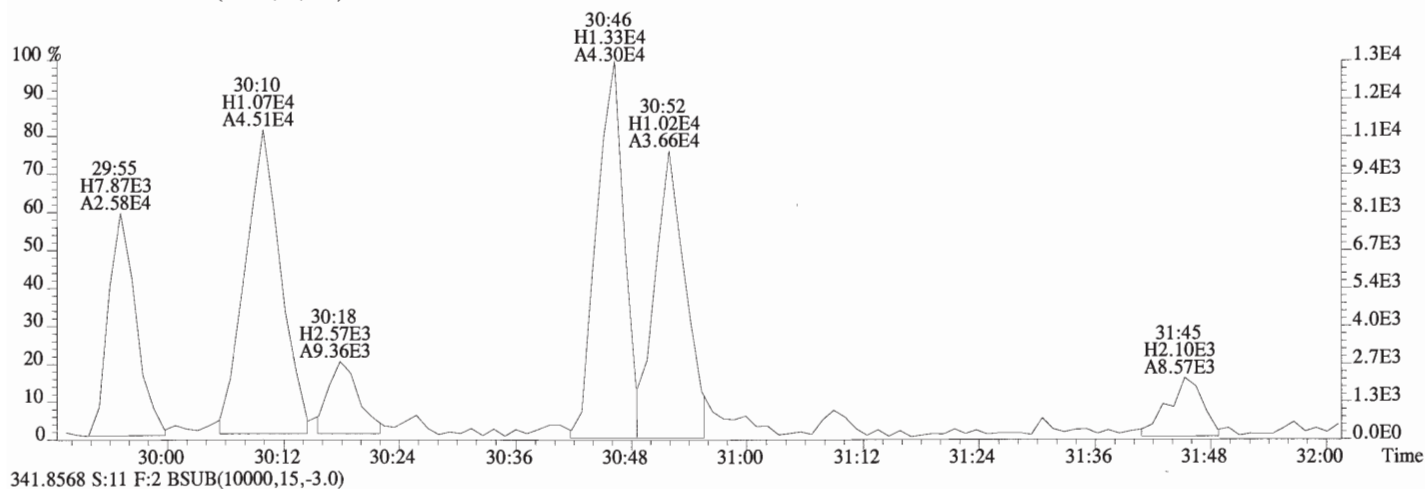
409.7974 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



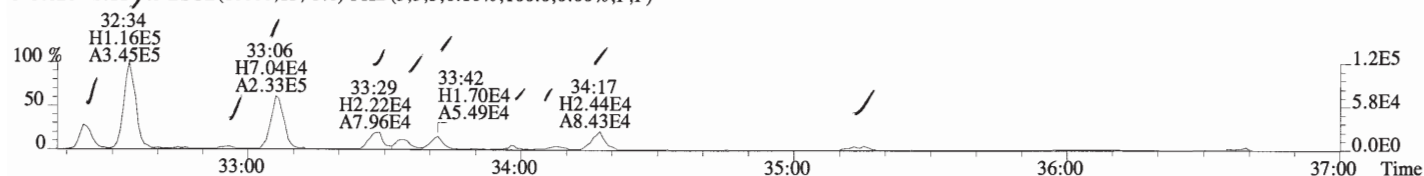
File:160719D1 #1-193 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
339.8597 S:11 F:2 BSub(10000,15,-3.0)



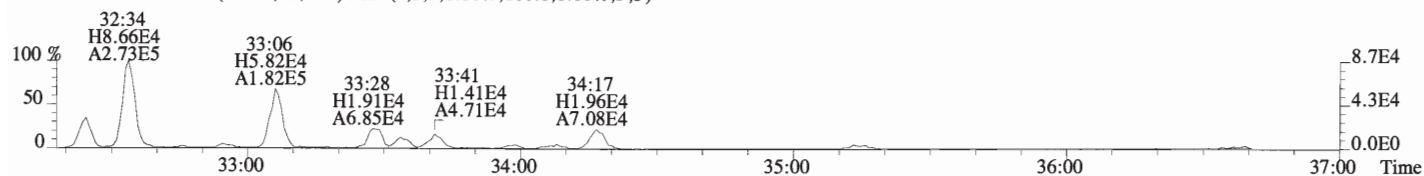
File:160719D1 #1-193 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 339.8597 S:11 F:2 BSUB(10000,15,-3.0)



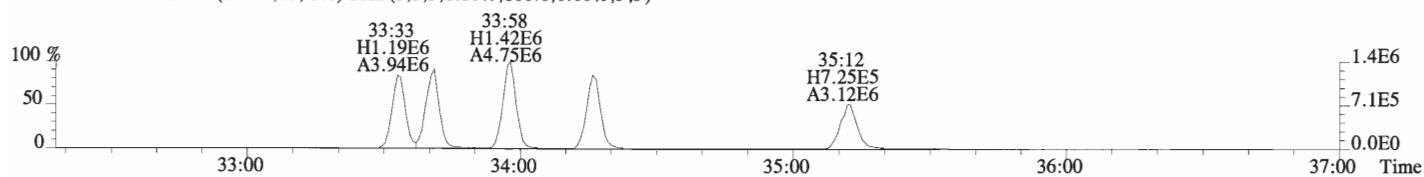
File:160719D1 #1-392 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text: Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



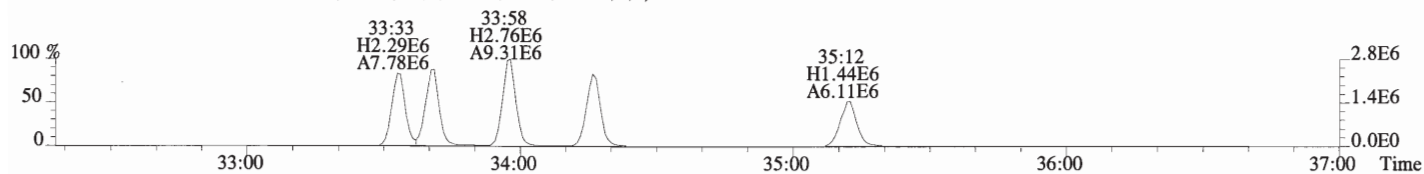
375.8178 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



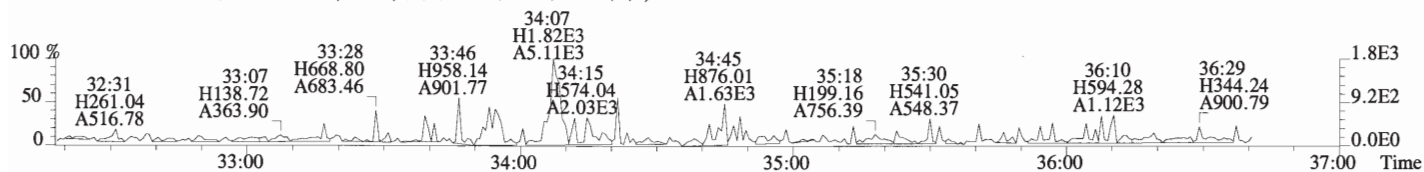
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



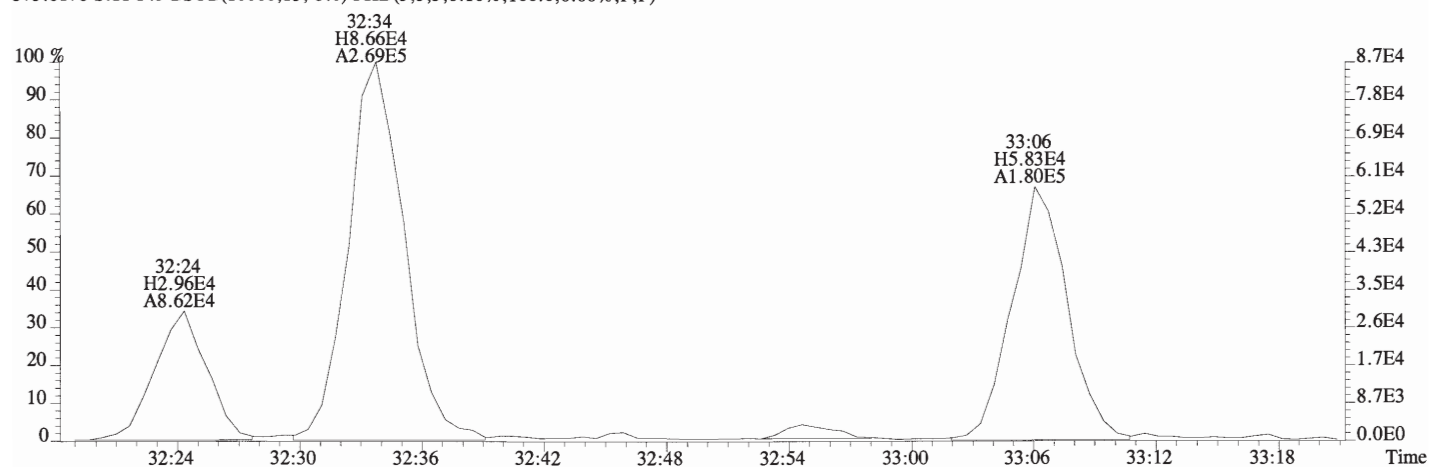
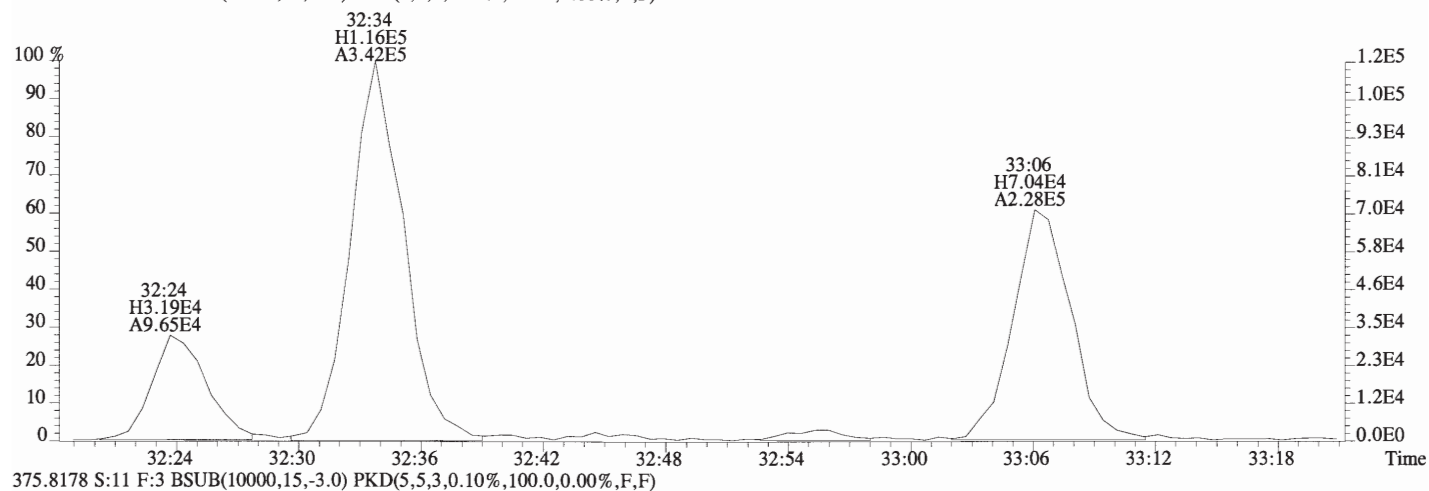
385.8610 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



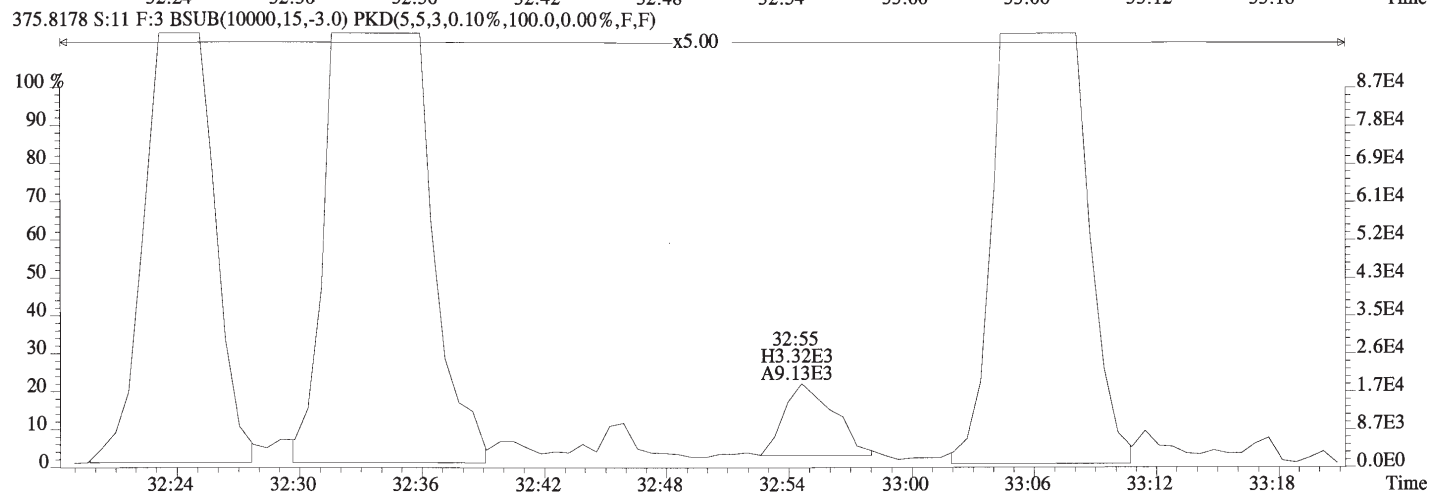
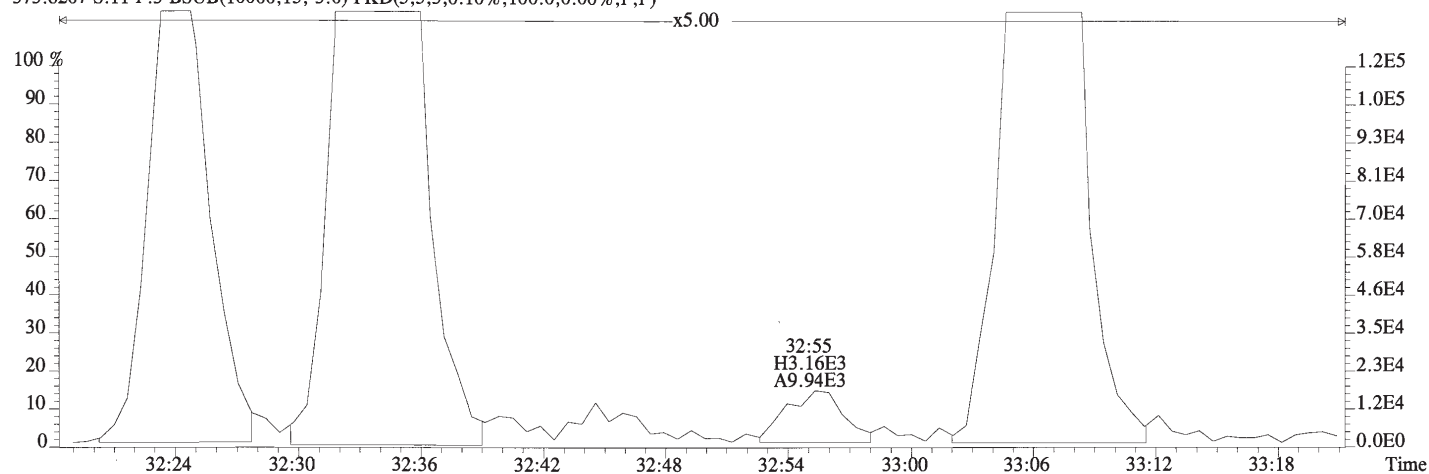
445.7555 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



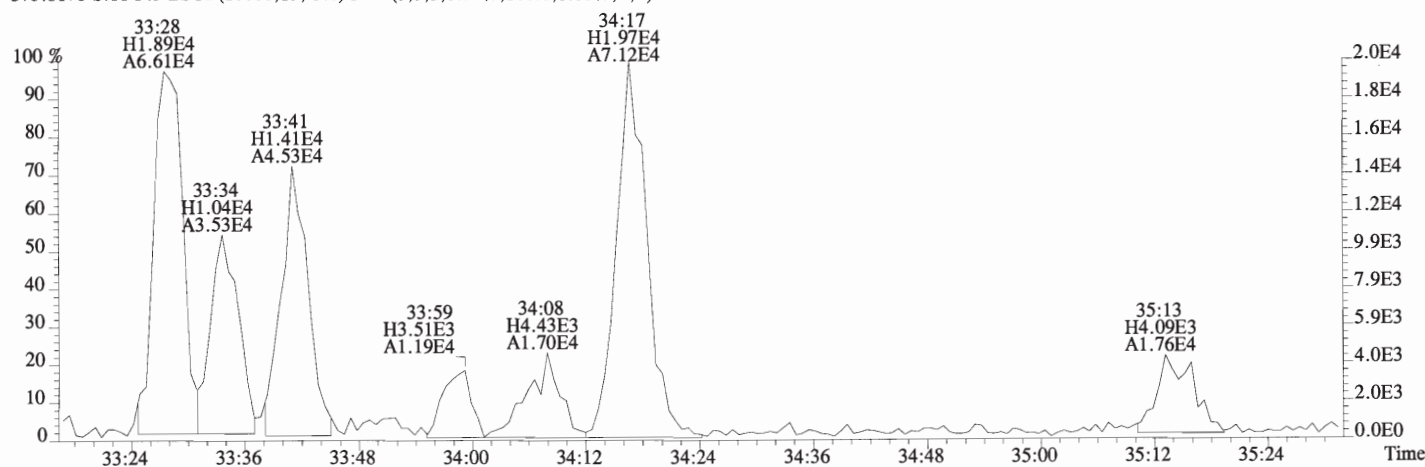
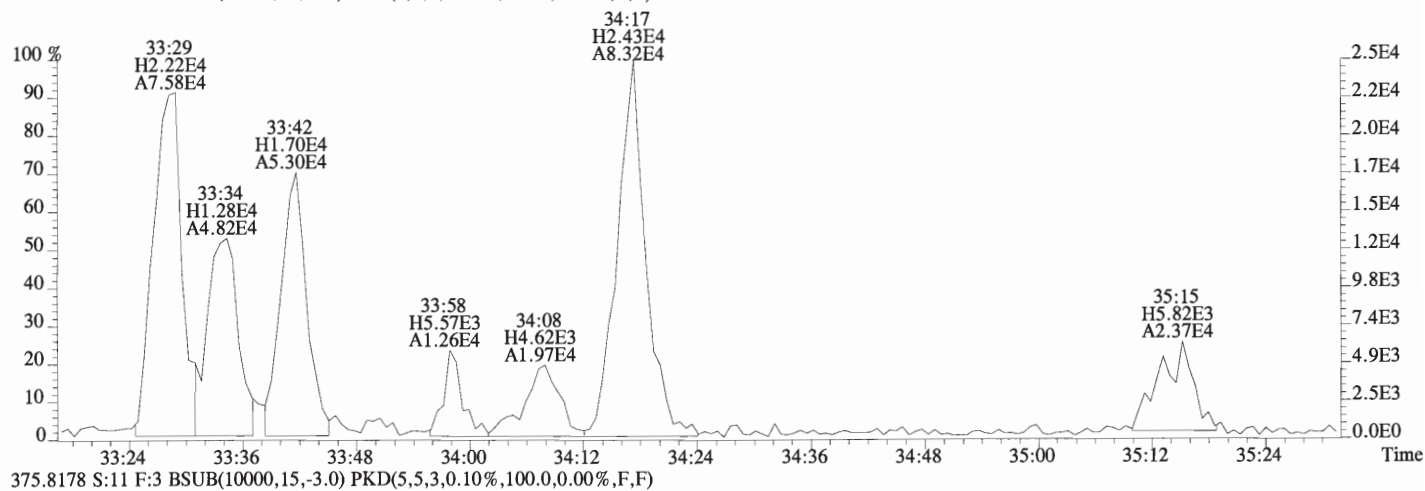
File:160719D1 #1-392 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



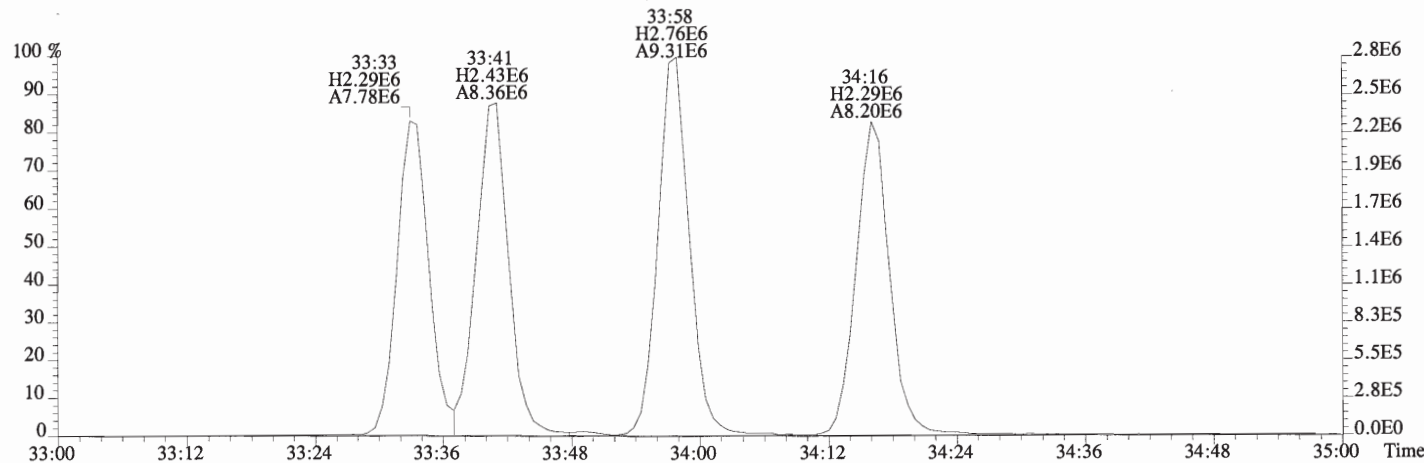
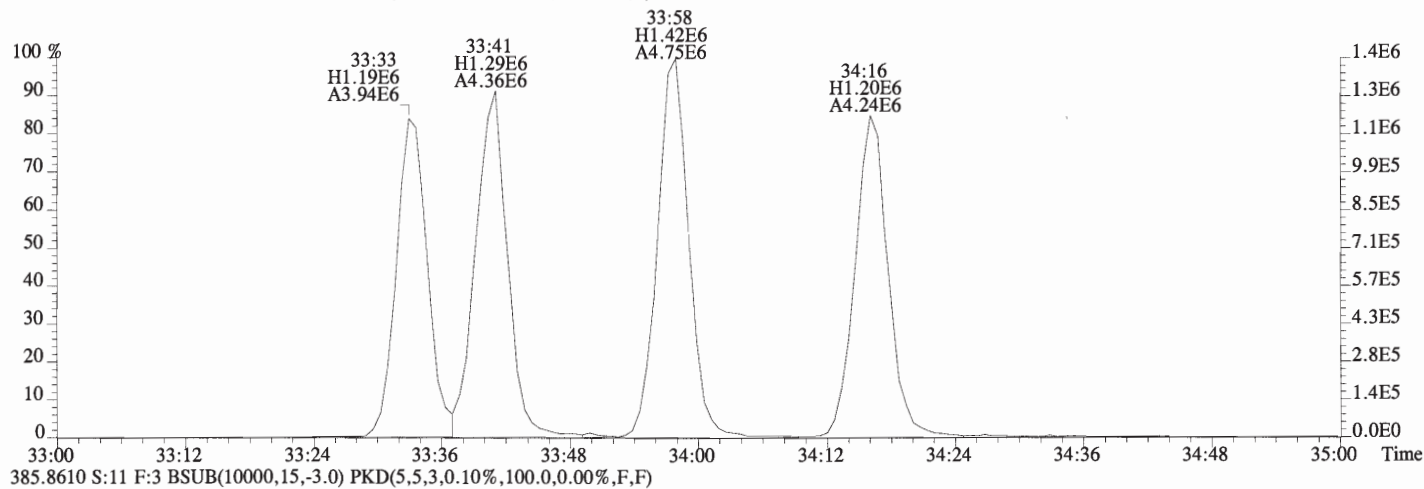
File:160719D1 #1-392 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



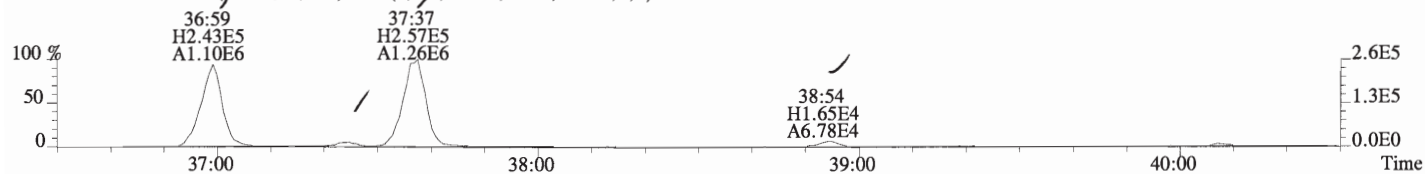
File:160719D1 #1-392 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 373.8207 S:11 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



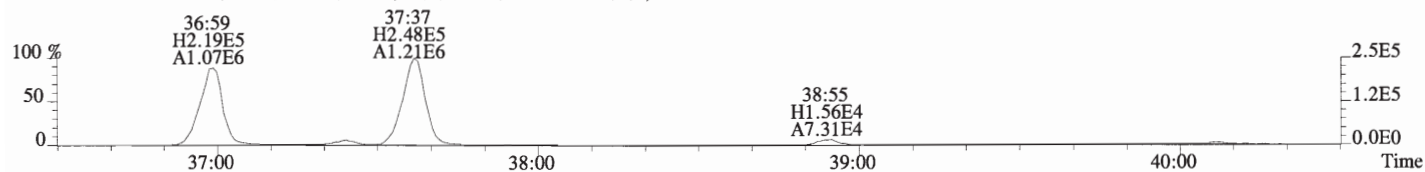
File:160719D1 #1-392 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



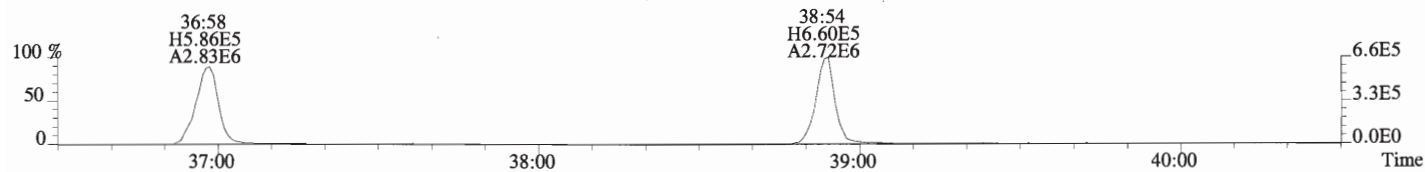
File:160719D1 #1-340 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



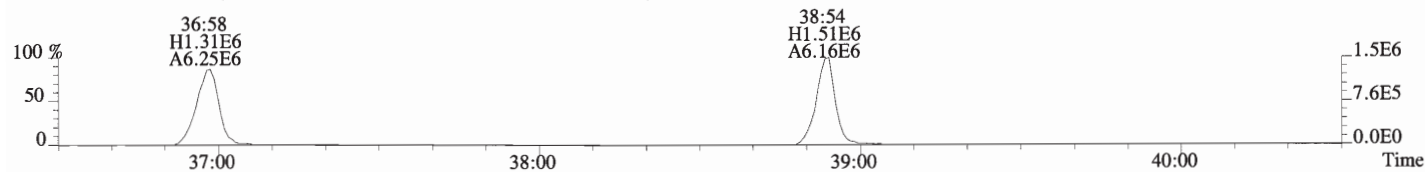
409.7788 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



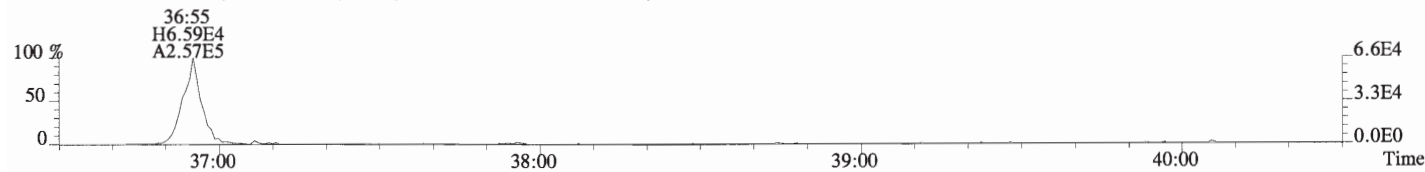
417.8253 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



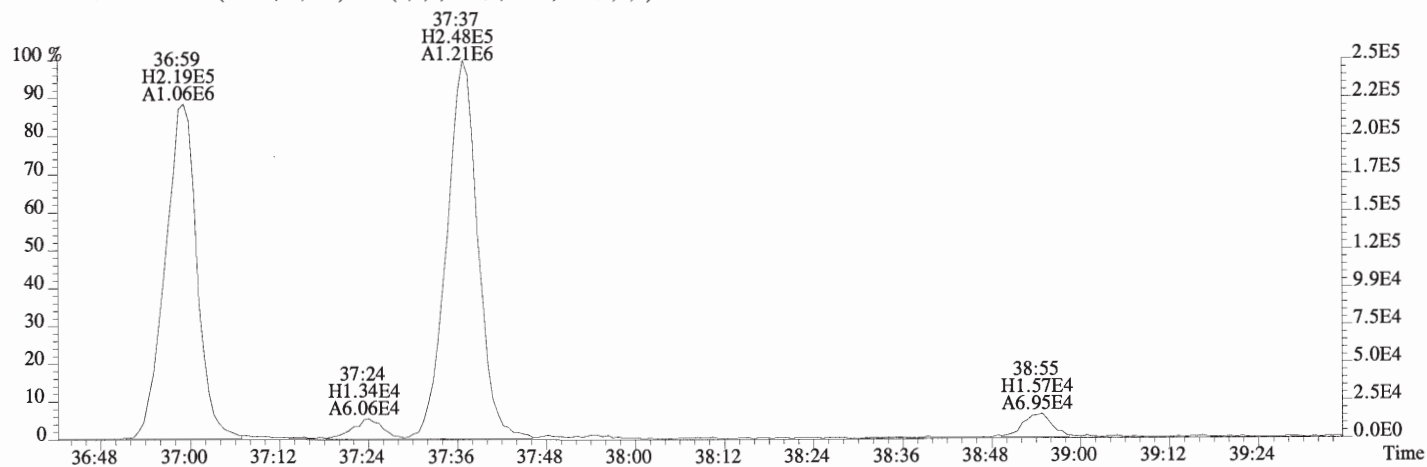
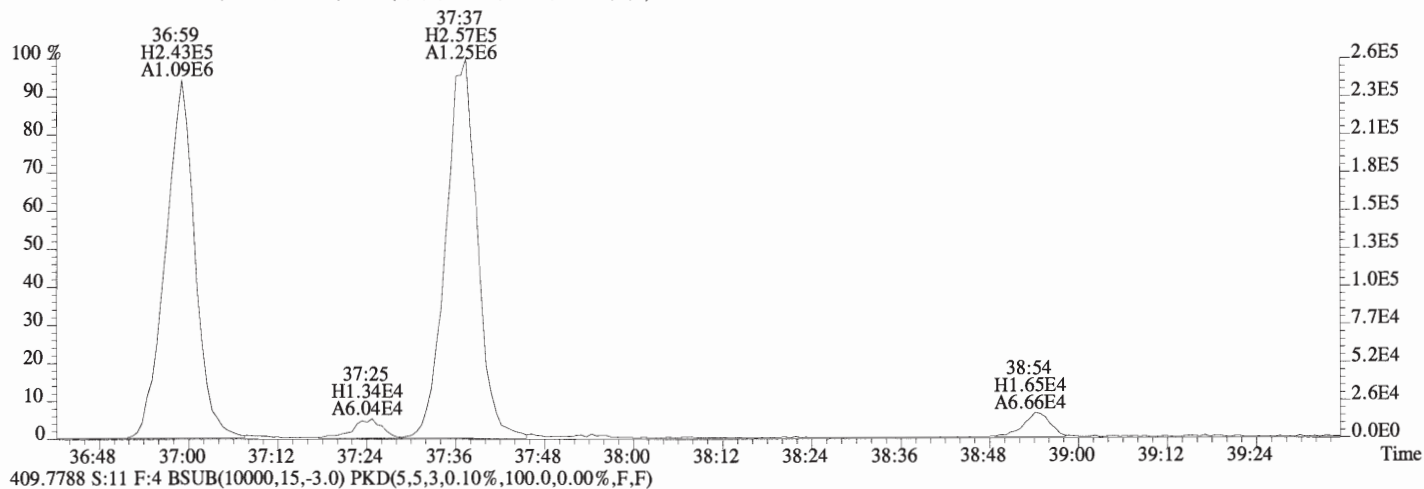
419.8220 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



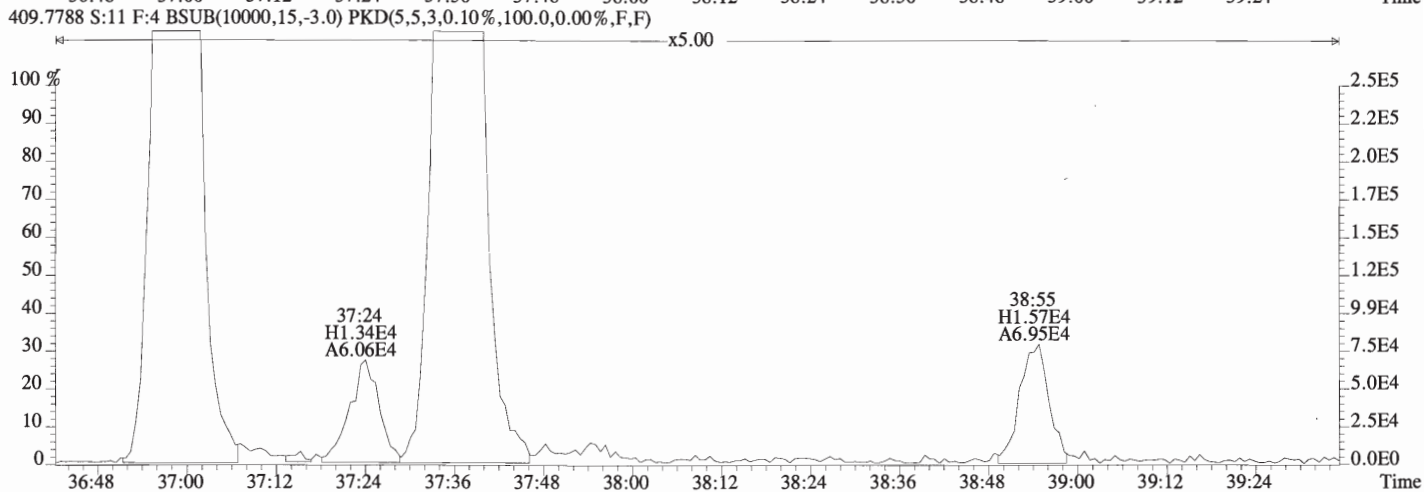
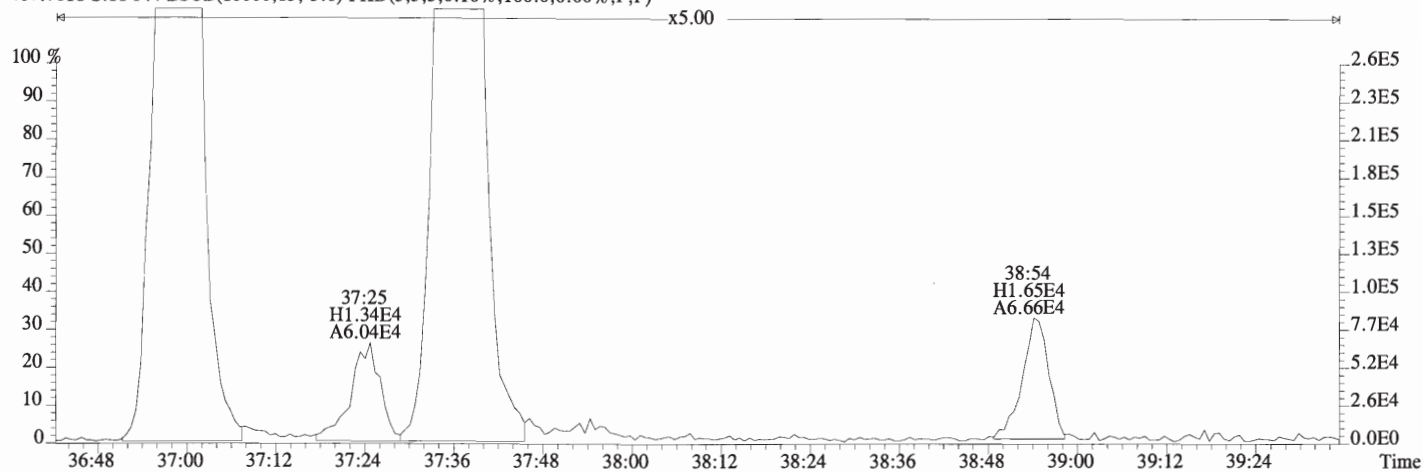
479.7165 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



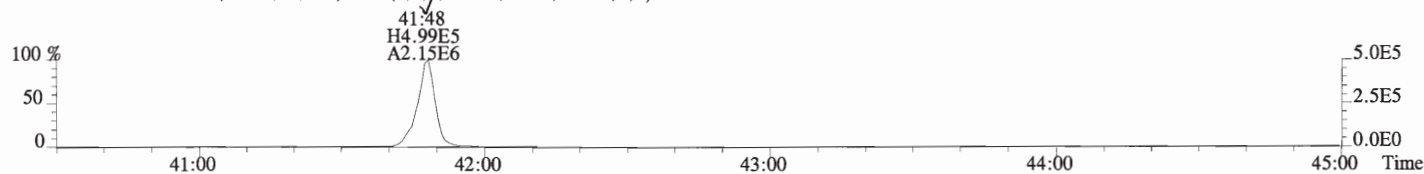
File:160719D1 #1-340 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



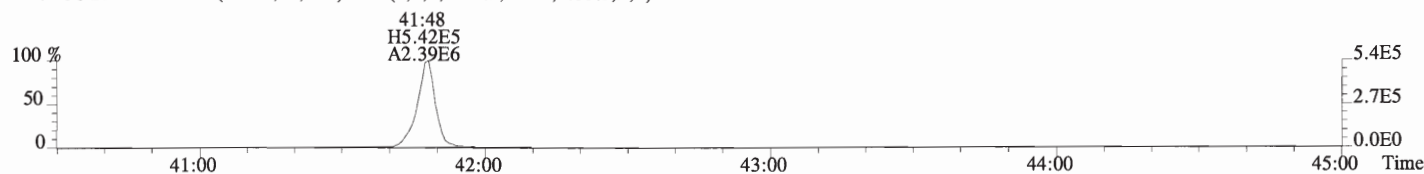
File:160719D1 #1-340 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



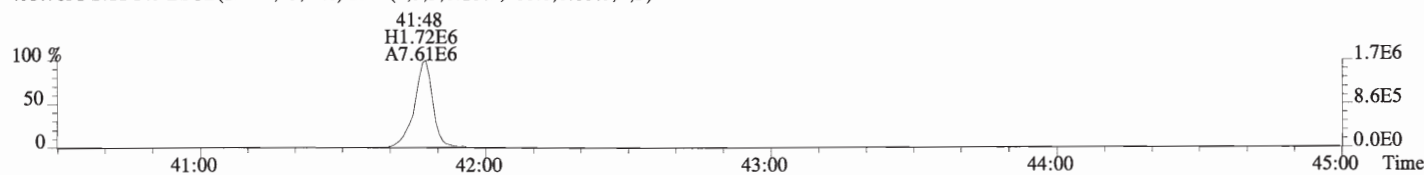
File:160719D1 #1-388 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
 441.7428 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



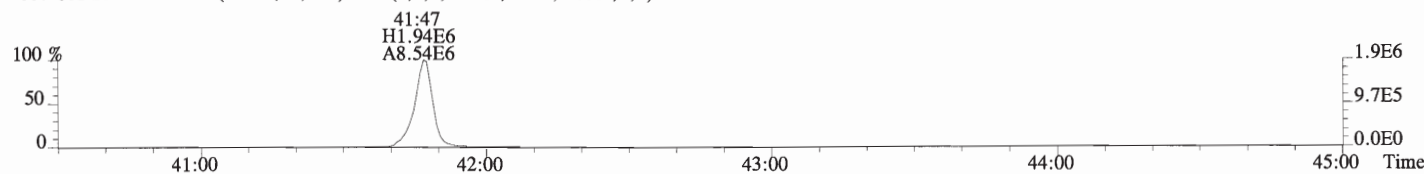
443.7398 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



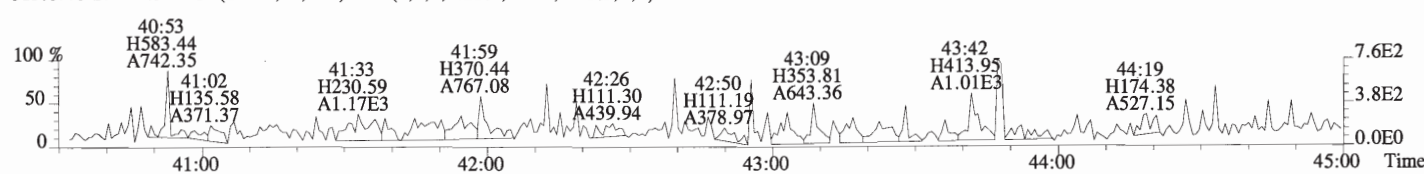
453.7831 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



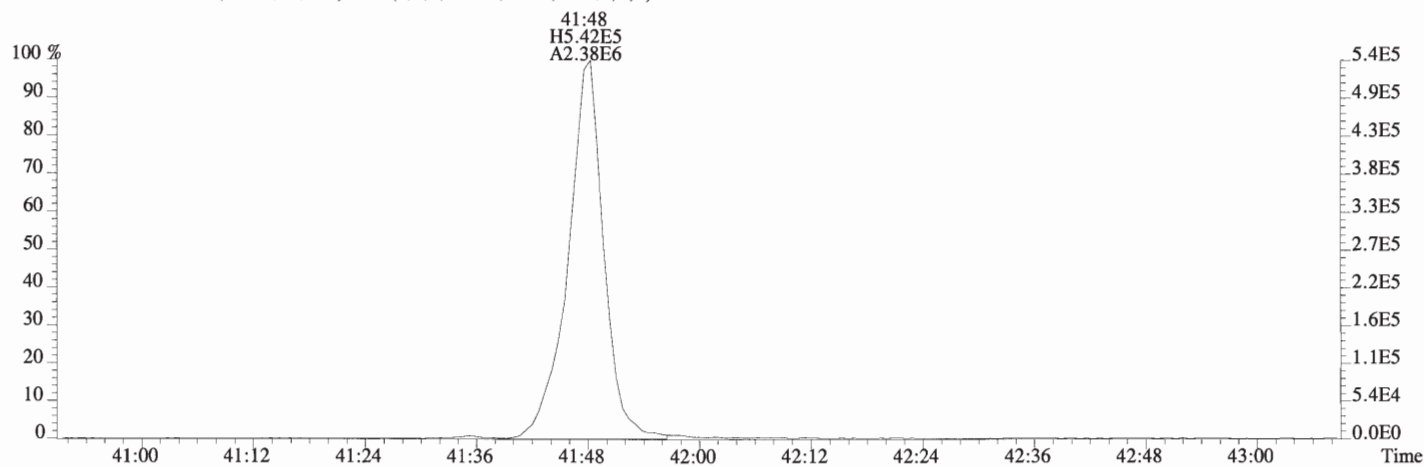
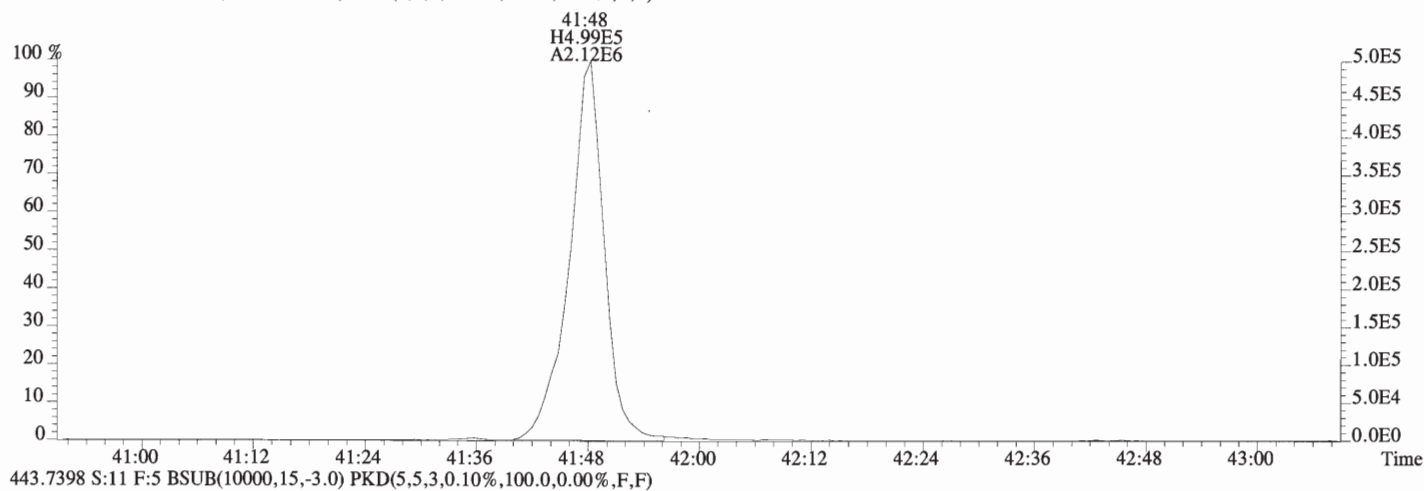
455.7801 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



513.6775 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160719D1 #1-388 Acq:19-JUL-2016 23:17:13 GC EI+ Voltage SIR Autospec-UltimaE
Sample#11 File Text:Vista Analytical Laboratory VG7 Text:1600847-01 DU-2-5-A 11.22 Exp:OCDD_DB5
441.7428 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Client ID: DU-2-5-B
Lab ID: 1600847-02

Filename: 160719D1 S:12 Acq:20-JUL-16 00:05:49
GC Column ID: ZB-5MS ICal: 1613VG7-4-7-16

wt/vol:10.331

ConCal: ST160719D1-1
EndCAL: NA

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										Name	Resp	RA	RRF	RT	RRT	Conc	Q	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
										2,3,7,8-TCDD	1.64e+04	0.51	n	1.13	26:23	1.000	0.18196	*	2.5	*	Total Tetra-Dioxins	1.79	2.67	*	*	
										1,2,3,7,8-PeCDD	3.59e+04	0.70	y	0.96	31:08	1.000	0.54761	*	2.5	*	Total Penta-Dioxins	3.59	5.01	*	*	
										1,2,3,4,7,8-HxCDD	4.02e+04	1.25	y	1.00	34:26	1.000	0.67288	*	2.5	*	Total Hexa-Dioxins	16.0	16.0	*	*	
										1,2,3,6,7,8-HxCDD	1.16e+05	1.17	y	1.10	34:32	1.000	1.8668	*	2.5	*	Total Hepta-Dioxins	92.6	92.6	*	*	
										1,2,3,7,8,9-HxCDD	8.25e+04	1.17	y	1.05	34:50	1.000	1.3228	*	2.5	*	Total Tetra-Furans	1.39	1.75	*	*	
										1,2,3,4,6,7,8-HpCDD	3.11e+06	1.03	y	1.05	38:21	1.000	55.314	*	2.5	*	Total Penta-Furans	2.3133	2.5575	*	*	
										OCDD	2.14e+07	0.89	y	0.96	41:33	1.000	573.26	*	2.5	*	Total Hexa-Furans	7.70	7.70	*	*	
																					Total Hepta-Furans	20.6	20.6	*	*	
										2,3,7,8-TCDF	*	* n	1.12	NotEq	*	*	*	687	2.5	0.0990						
										1,2,3,7,8-PeCDF	1.34e+04	1.50	y	1.01	29:55	1.000	0.14226	*	2.5	*						
										2,3,4,7,8-PeCDF	1.33e+04	1.59	y	0.90	30:51	1.000	0.13991	*	2.5	*						
										1,2,3,4,7,8-HxCDF	2.66e+04	1.37	y	1.16	33:33	1.000	0.33066	*	2.5	*						
										1,2,3,6,7,8-HxCDF	2.27e+04	1.28	y	1.16	33:41	1.000	0.26241	*	2.5	*						
										2,3,4,6,7,8-HxCDF	3.09e+04	1.41	y	1.23	34:17	1.000	0.35360	*	2.5	*						
										1,2,3,7,8,9-HxCDF	1.73e+04	1.22	y	1.13	35:13	1.000	0.26760	*	2.5	*						
										1,2,3,4,6,7,8-HpCDF	5.34e+05	1.08	y	1.44	36:58	1.000	7.1630	*	2.5	*						
										1,2,3,4,7,8,9-HpCDF	2.85e+04	1.17	y	1.31	38:54	1.000	0.43707	*	2.5	*						
										OCDF	1.17e+06	0.91	y	1.03	41:47	1.000	24.206	*	2.5	*						
																					Rec	Qual				
IS	13C-2,3,7,8-TCDD	1.54e+07	0.77	y	1.01	26:23	1.024	188.81													97.5					
IS	13C-1,2,3,7,8-PeCDD	1.32e+07	0.62	y	1.10	31:08	1.209	147.87													76.4					
IS	13C-1,2,3,4,7,8-HxCDD	1.15e+07	1.26	y	0.72	34:25	1.014	219.24													113					
IS	13C-1,2,3,6,7,8-HxCDD	1.09e+07	1.27	y	0.73	34:32	1.017	206.09													106					
IS	13C-1,2,3,7,8,9-HxCDD	1.15e+07	1.25	y	0.70	34:49	1.025	224.63													116					
IS	13C-1,2,3,4,6,7,8-HpCDD	1.04e+07	1.04	y	0.66	38:20	1.129	213.68													110					
IS	13C-OCDD	1.50e+07	0.92	y	0.66	41:33	1.224	311.21													80.4					
IS	13C-2,3,7,8-TCDF	2.27e+07	0.79	y	0.90	25:32	0.992	204.15													105					
IS	13C-1,2,3,7,8-PeCDF	1.81e+07	1.59	y	0.98	29:54	1.162	149.27													77.1					
IS	13C-2,3,4,7,8-PeCDF	2.04e+07	1.61	y	1.15	30:51	1.198	144.18													74.5					
IS	13C-1,2,3,4,7,8-HxCDF	1.34e+07	0.51	y	1.01	33:33	0.988	180.80													93.4					
IS	13C-1,2,3,6,7,8-HxCDF	1.45e+07	0.52	y	1.10	33:40	0.992	180.94													93.5					
IS	13C-2,3,4,6,7,8-HxCDF	1.38e+07	0.53	y	0.95	34:16	1.009	198.69													103					
IS	13C-1,2,3,7,8,9-HxCDF	1.11e+07	0.52	y	0.83	35:12	1.037	183.20													94.6					
IS	13C-1,2,3,4,6,7,8-HpCDF	1.00e+07	0.44	y	0.70	36:58	1.088	196.54													102					
IS	13C-1,2,3,4,7,8,9-HpCDF	9.63e+06	0.45	y	0.72	38:53	1.145	183.08													94.6					
IS	13C-OCDF	1.81e+07	0.90	y	0.82	41:46	1.230	301.30													77.8					
C/Up	37Cl-2,3,7,8-TCDD	6.58e+06			1.14	26:23	1.025	71.447													92.3					
RS/RT	13C-1,2,3,4-TCDD	1.57e+07	0.81	y	1.00	25:45	*	193.58																		
RS	13C-1,2,3,4-TCDF	2.39e+07	0.81	y	1.00	24:09	*	193.58																		
RS/RT	13C-1,2,3,4,6,9-HxCDF	1.41e+07	0.52	y	1.00	33:57	*	193.58																		
																						Integrations				
																						by				
																						Analyst:	DB			

Totals class: TCDD EMPC

Entry #: 19

Run: 14

File: 160719D1

S: 12 I: 1 F: 1

Acquired: 20-JUL-16 00:05:49

Processed: 20-JUL-16 09:26:17

Total Concentration: 2.6689

Unnamed Concentration: 2.487

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
22:34	1.644e+04	1.587e+04	1.04 n	2.809e+04	0.31131
22:59	1.056e+04	1.333e+04	0.79 y	2.389e+04	0.26475
23:28	6.561e+03	1.098e+04	0.60 n	1.508e+04	0.16714
24:19	8.364e+03	1.218e+04	0.69 y	2.055e+04	0.22771
24:33	2.603e+04	2.945e+04	0.88 y	5.549e+04	0.61491
24:45	8.424e+03	1.162e+04	0.72 y	2.005e+04	0.22219
24:58	2.857e+03	2.990e+03	0.96 n	5.293e+03	0.058659
25:12	3.361e+03	3.049e+03	1.10 n	5.396e+03	0.059802
25:23	4.671e+03	5.503e+03	0.85 y	1.017e+04	0.11275
25:44	7.270e+03	9.450e+03	0.77 y	1.672e+04	0.18530
26:07	6.056e+03	9.015e+03	0.67 y	1.507e+04	0.16703
26:23	7.143e+03	1.400e+04	0.51 n	1.642e+04	0.18196
26:43	5.344e+03	4.863e+03	1.10 n	8.608e+03	0.095397

2,3,7,8-TCDD

Totals class: PeCDD EMPC

Entry #: 21

Run: 14 File: 160719D1 S: 12 I: 1 F: 2
Acquired: 20-JUL-16 00:05:49 Processed: 20-JUL-16 09:26:17

Total Concentration: 5.0124

Unnamed Concentration: 4.465

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
29:00	3.155e+04	6.826e+04	0.46 n	8.162e+04	1.2440
29:27	2.122e+04	2.984e+04	0.71 y	5.107e+04	0.77829
29:57	6.931e+03	1.238e+04	0.56 y	1.931e+04	0.29435
30:06	1.535e+04	2.184e+04	0.70 y	3.719e+04	0.56684
30:12	8.969e+03	1.531e+04	0.59 y	2.428e+04	0.37006
30:24	1.875e+04	2.594e+04	0.72 y	4.469e+04	0.68109
30:43	6.686e+03	7.345e+03	0.91 n	1.197e+04	0.18248
31:08	1.481e+04	2.112e+04	0.70 y	3.593e+04	0.54761
31:13	4.115e+03	6.777e+03	0.61 y	1.089e+04	0.16601
31:31	4.746e+03	7.175e+03	0.66 y	1.192e+04	0.18170

1,2,3,7,8-PeCDD

Totals class: HxCDD EMPC

Entry #: 23

Run: 14 File: 160719D1 S: 12 I: 1 F: 3

Acquired: 20-JUL-16 00:05:49 Processed: 20-JUL-16 09:26:17

Total Concentration: 16.013

Unnamed Concentration: 12.151

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:55	1.831e+05	1.471e+05	1.25 y	3.301e+05	5.3779
33:29	2.786e+04	2.298e+04	1.21 y	5.084e+04	0.82817
33:45	1.902e+05	1.534e+05	1.24 y	3.436e+05	5.5971
34:26	2.232e+04	1.789e+04	1.25 y	4.021e+04	0.67288 1,2,3,4,7,8-HxCDD
34:32	6.245e+04	5.315e+04	1.17 y	1.156e+05	1.8668 1,2,3,6,7,8-HxCDD
34:44	1.206e+04	9.267e+03	1.30 y	2.133e+04	0.34746
34:50	4.441e+04	3.806e+04	1.17 y	8.247e+04	1.3228 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC

Entry #: 25

Run: 14

File: 160719D1

S: 12 I: 1 F: 4

Acquired: 20-JUL-16 00:05:49

Processed: 20-JUL-16 09:26:17

Total Concentration: 92.644

Unnamed Concentration: 37.329

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
37:22	1.073e+06	1.027e+06	1.04 y	2.101e+06	37.329
38:21	1.582e+06	1.531e+06	1.03 y	3.113e+06	55.314 1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC

Entry #: 27

Run: 14 File: 160719D1 S: 12 I: 1 F: 1
Acquired: 20-JUL-16 00:05:49 Processed: 20-JUL-16 09:26:17

Total Concentration: 1.7490 Unnamed Concentration: 1.749

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
20:23	9.637e+03	1.252e+04	0.77 y	2.215e+04	0.16867
21:34	3.467e+04	4.483e+04	0.77 y	7.950e+04	0.60535
22:07	1.100e+04	1.553e+04	0.71 y	2.653e+04	0.20201
24:06	1.573e+04	1.846e+04	0.85 y	3.419e+04	0.26033
25:55	8.731e+03	1.123e+04	0.78 y	1.996e+04	0.15196
27:27	4.275e+04	2.676e+04	1.60 n	4.736e+04	0.36064

Totals class: 1st Func. PeCDF EMPC Entry #: 29

Run: 14 File: 160719D1 S: 12 I: 1 F: 1
Acquired: 20-JUL-16 00:05:49 Processed: 20-JUL-16 09:26:17

Total Concentration: 0.83755 Unnamed Concentration: 0.838

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
27:25	4.863e+04	3.042e+04	1.60 y	7.905e+04	0.83755

Totals class: PeCDF EMPC

Entry #: 31

Run: 14 File: 160719D1 S: 12 I: 1 F: 2
 Acquired: 20-JUL-16 00:05:49 Processed: 20-JUL-16 09:26:17

Total Concentration: 1.7200 Unnamed Concentration: 1.438

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
28:49	1.142e+04	7.643e+03	1.49 y	1.907e+04	0.20202
28:57	1.824e+04	1.333e+04	1.37 y	3.157e+04	0.33445
29:02	8.546e+03	1.114e+04	0.77 n	1.406e+04	0.14897
29:33	1.435e+04	1.002e+04	1.43 y	2.437e+04	0.25822
29:44	3.070e+03	1.952e+03	1.57 y	5.023e+03	0.053218
29:55	8.024e+03	5.367e+03	1.50 y	1.339e+04	0.14226 1,2,3,7,8-PeCDF
30:09	8.773e+03	6.626e+03	1.32 y	1.540e+04	0.16315
30:17	3.626e+03	2.419e+03	1.50 y	6.045e+03	0.064051
30:45	6.562e+03	4.615e+03	1.42 y	1.118e+04	0.11843
30:51	8.137e+03	5.132e+03	1.59 y	1.327e+04	0.13991 2,3,4,7,8-PeCDF
31:44	5.468e+03	1.050e+04	0.52 n	8.995e+03	0.095306

Totals class: HxCDF EMPC

Entry #: 33

Run: 14 File: 160719D1 S: 12 I: 1 F: 3

Acquired: 20-JUL-16 00:05:49 Processed: 20-JUL-16 09:26:17

Total Concentration: 7.7047

Unnamed Concentration: 6.490

RT	m1 Resp	m2 Resp	RA	Resp Concentration	Name
32:24	2.900e+04	2.283e+04	1.27 y	5.183e+04	0.65016
32:33	1.126e+05	9.531e+04	1.18 y	2.079e+05	2.6080
32:54	5.911e+03	4.872e+03	1.21 y	1.078e+04	0.13527
33:06	1.325e+05	1.011e+05	1.31 y	2.336e+05	2.9307
33:28	6.992e+03	6.266e+03	1.12 y	1.326e+04	0.16632
33:33	1.534e+04	1.123e+04	1.37 y	2.657e+04	0.33066
33:41	1.275e+04	9.982e+03	1.28 y	2.273e+04	0.26241
34:17	1.812e+04	1.282e+04	1.41 y	3.093e+04	0.35360
35:13	9.533e+03	7.799e+03	1.22 y	1.733e+04	0.26760

Totals class: HpCDF EMPC

Entry #: 35

Run: 14

File: 160719D1

S: 12 I: 1 F: 4

Acquired: 20-JUL-16 00:05:49

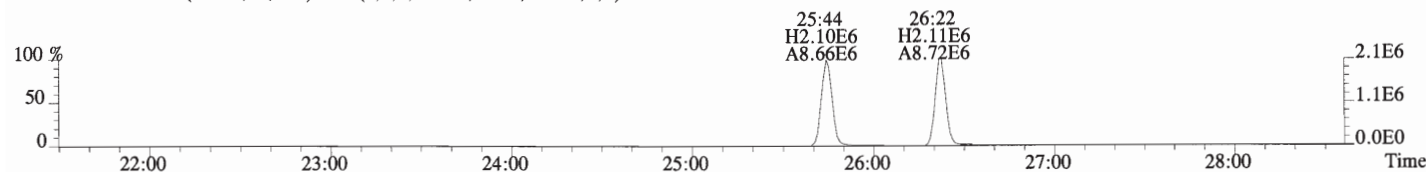
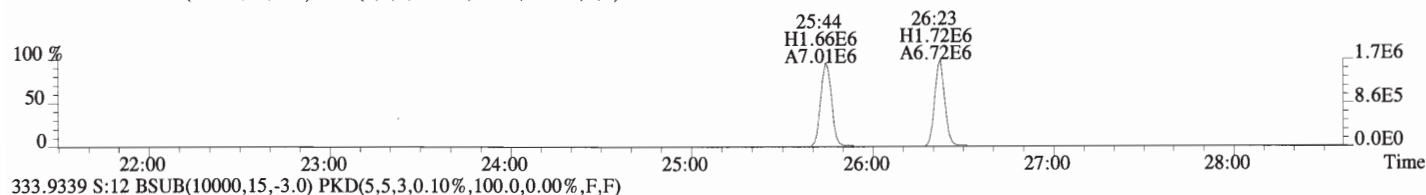
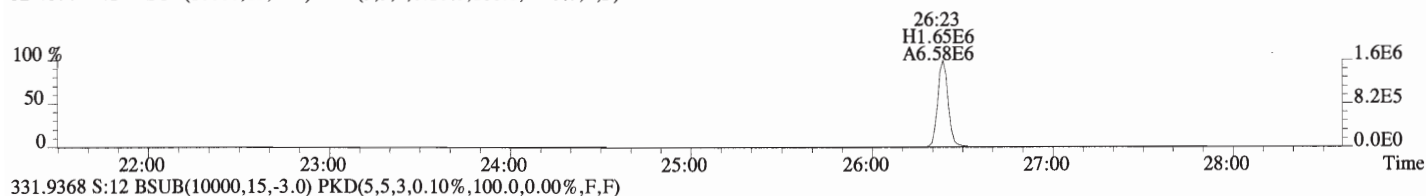
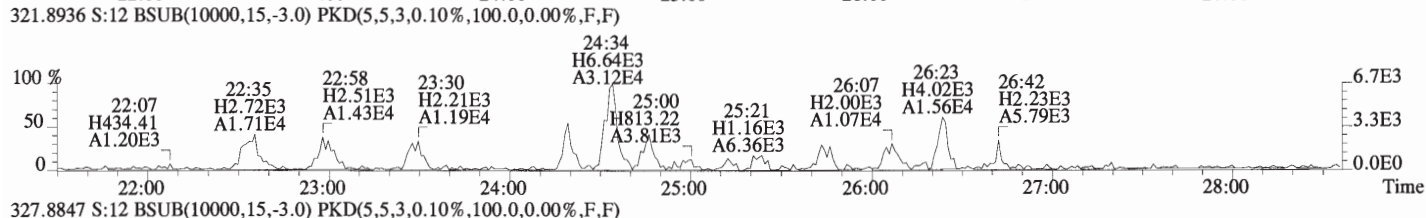
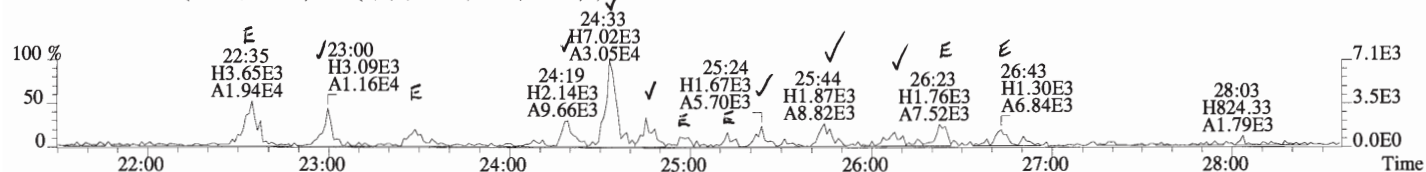
Processed: 20-JUL-16 09:26:17

Total Concentration: 20.582

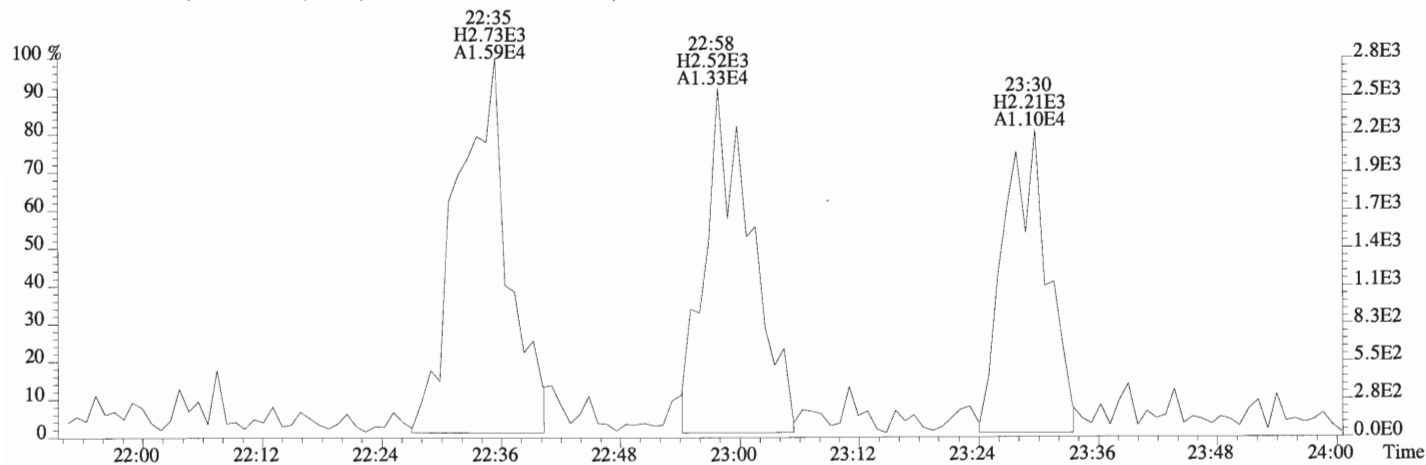
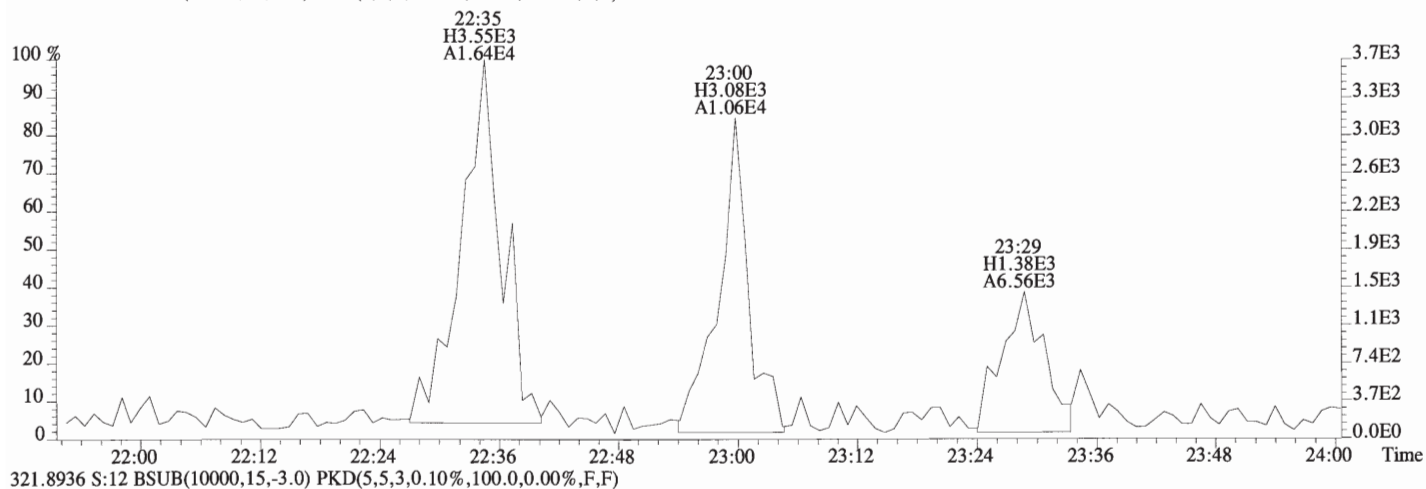
Unnamed Concentration: 12.982

RT	m1 Resp	m2 Resp	RA		Resp Concentration	Name	
36:58	2.778e+05	2.567e+05	1.08	y	5.345e+05	7.1630	1,2,3,4,6,7,8-HpCDF
37:36	4.591e+05	4.473e+05	1.03	y	9.064e+05	12.982	
38:54	1.541e+04	1.313e+04	1.17	y	2.854e+04	0.43707	1,2,3,4,7,8,9-HpCDF

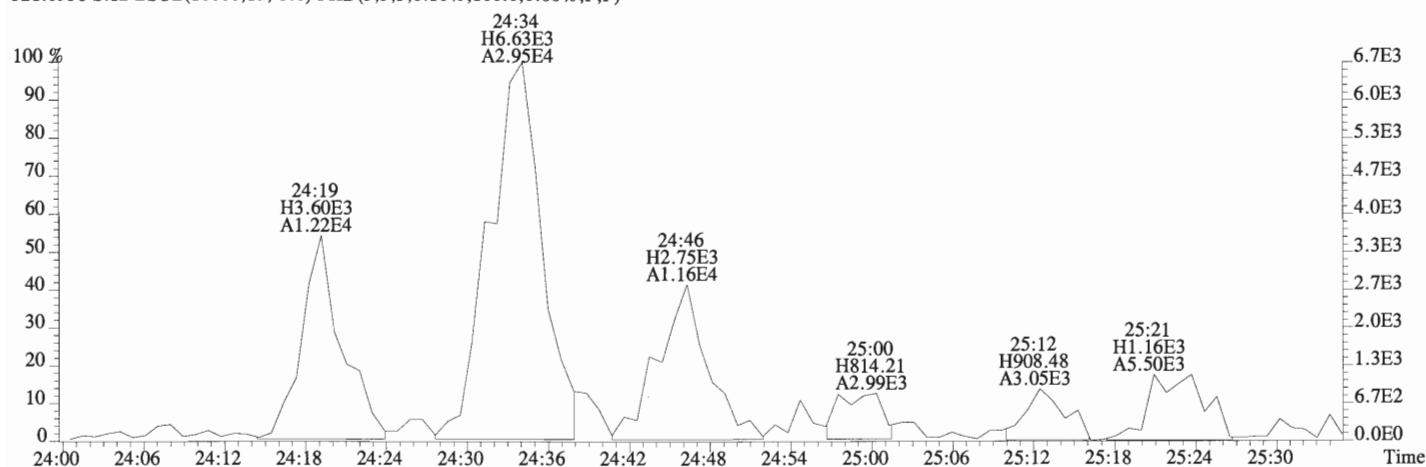
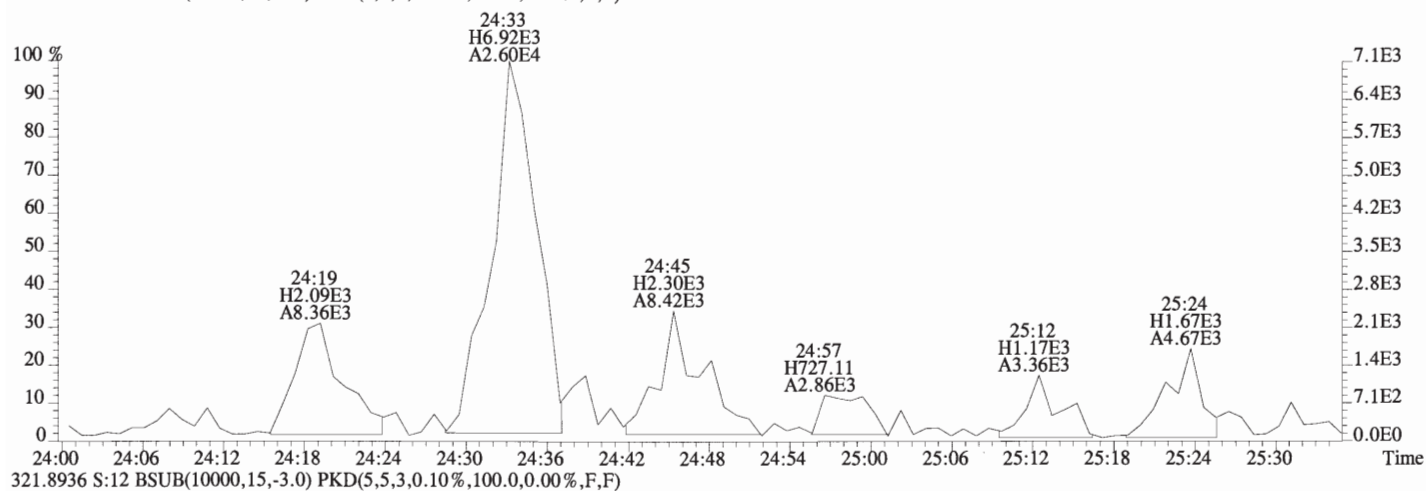
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 Sample#12 File Text: Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 319.8965 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



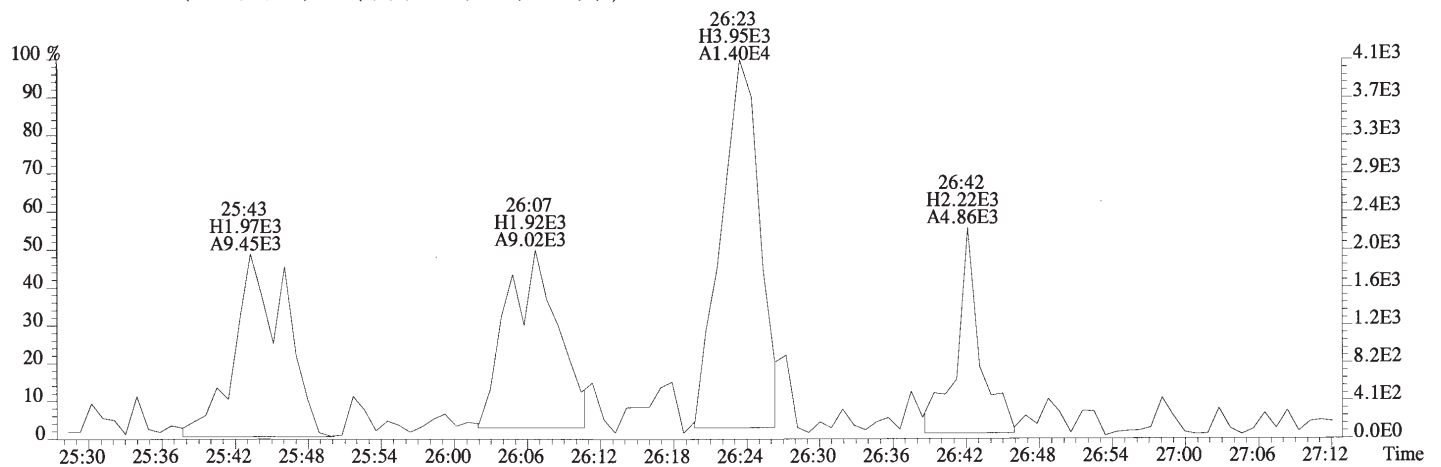
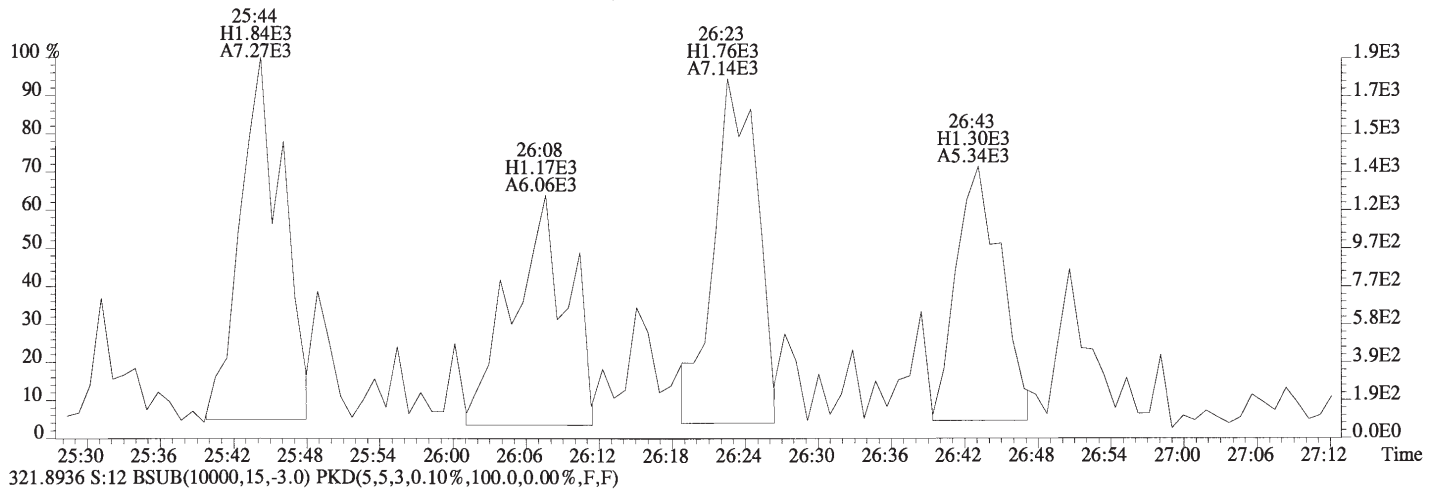
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Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
319.8965 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



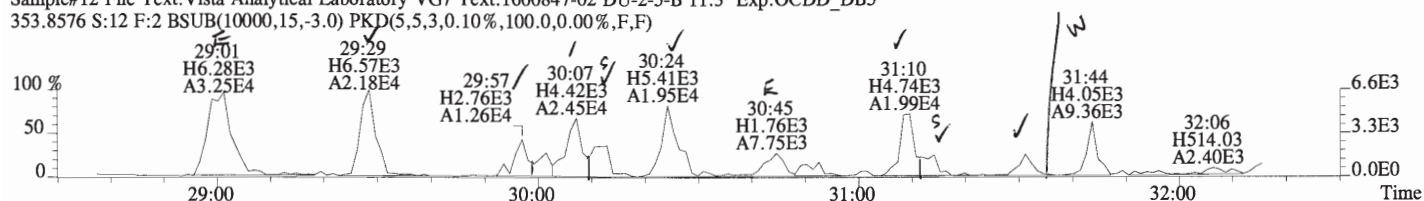
File:160719D1 #1-551 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 319.8965 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



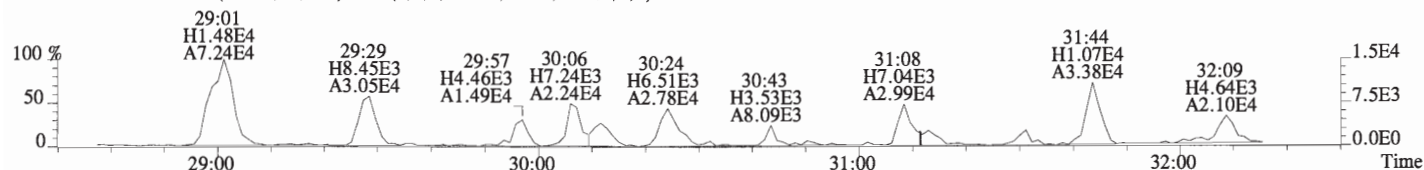
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 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 319.8965 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



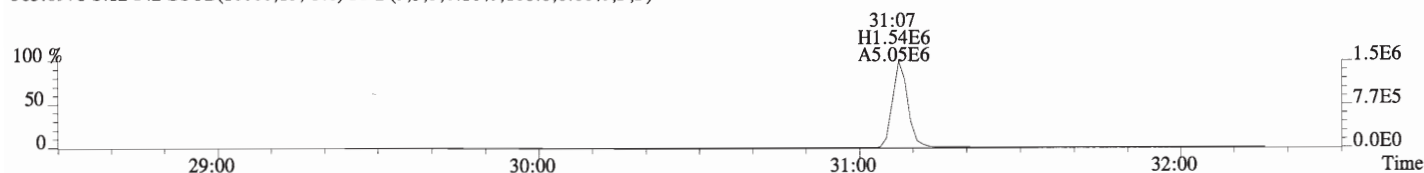
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 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 353.8576 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



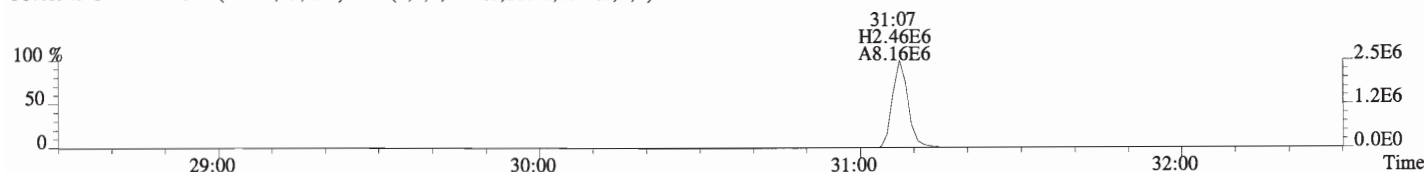
355.8546 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



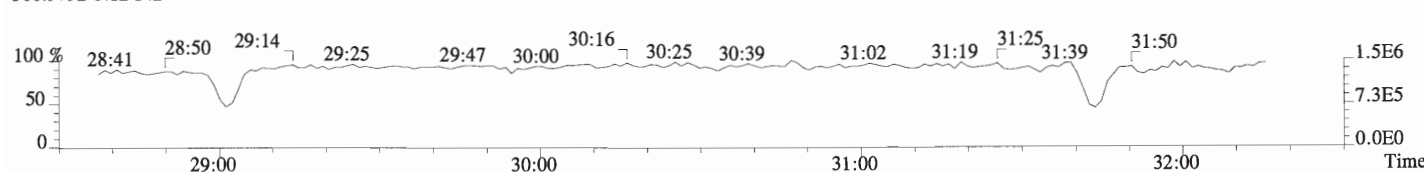
365.8978 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



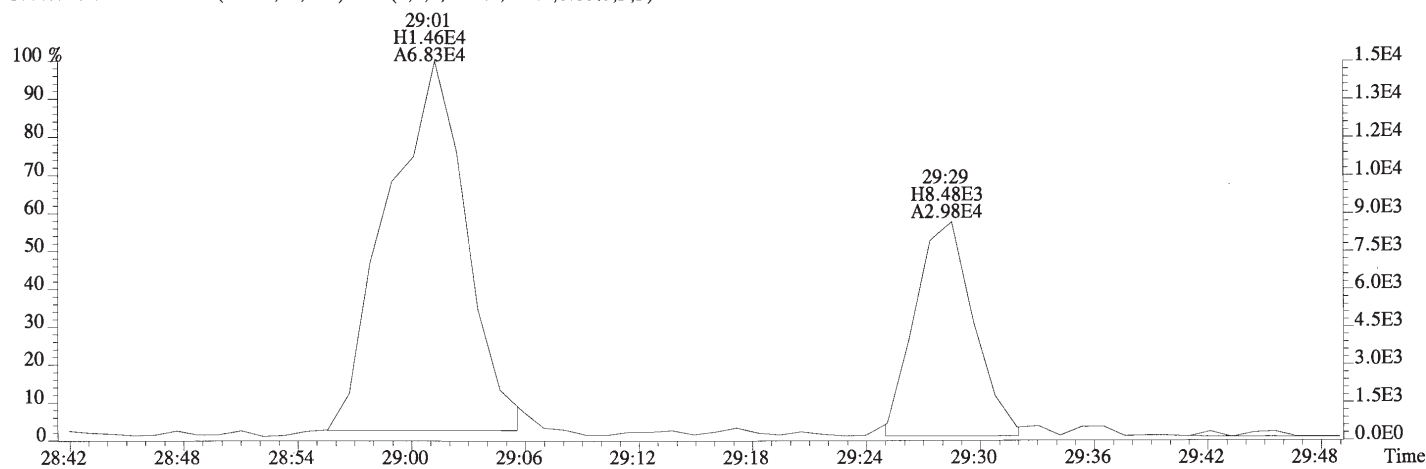
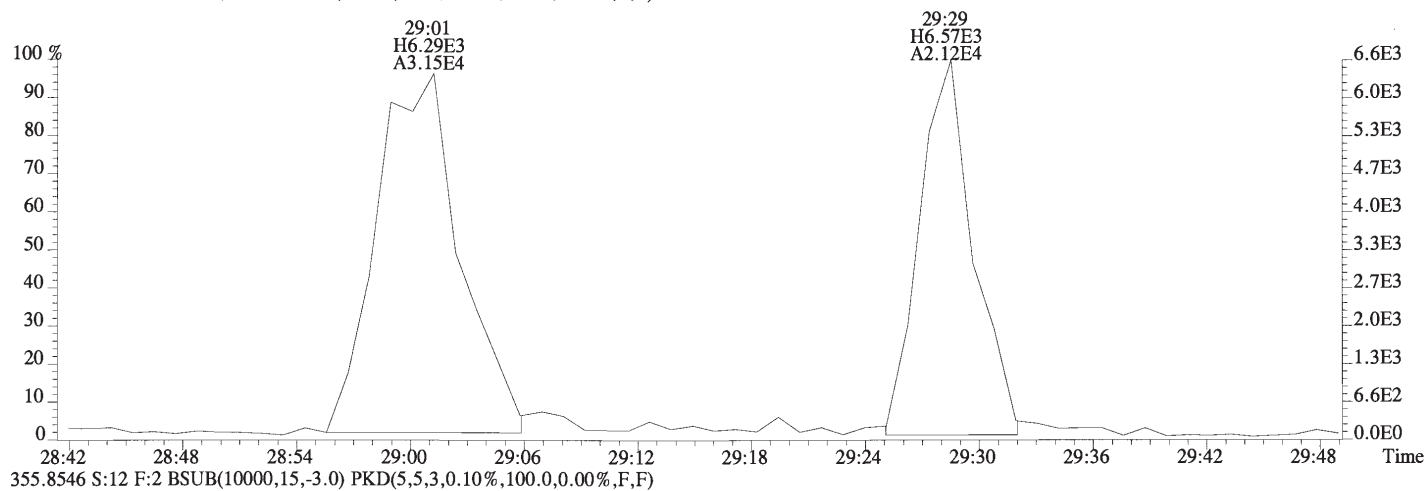
367.8949 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



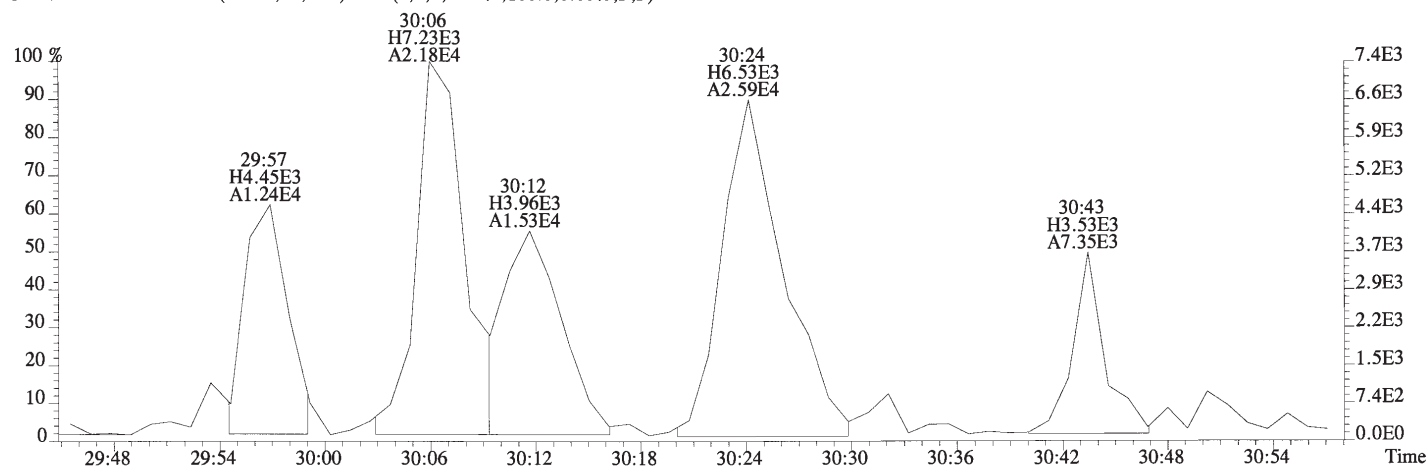
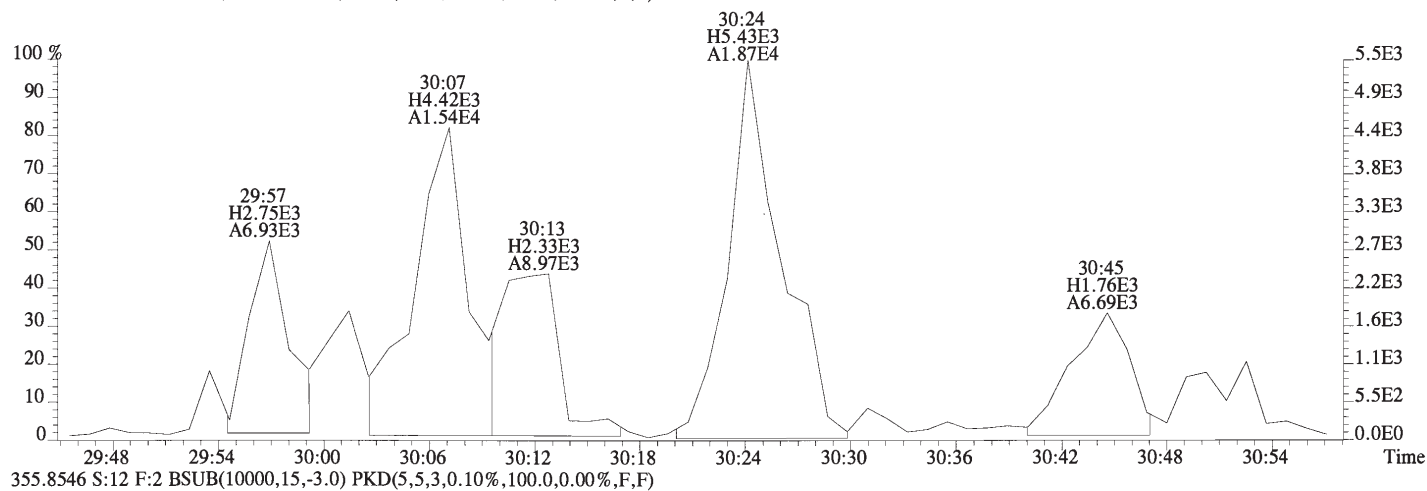
366.9792 S:12 F:2



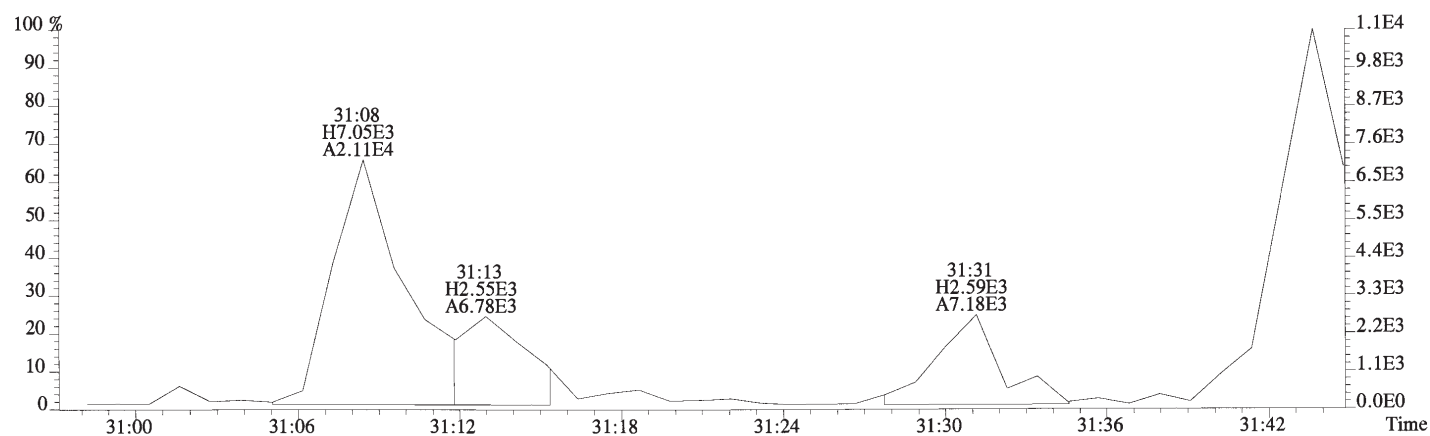
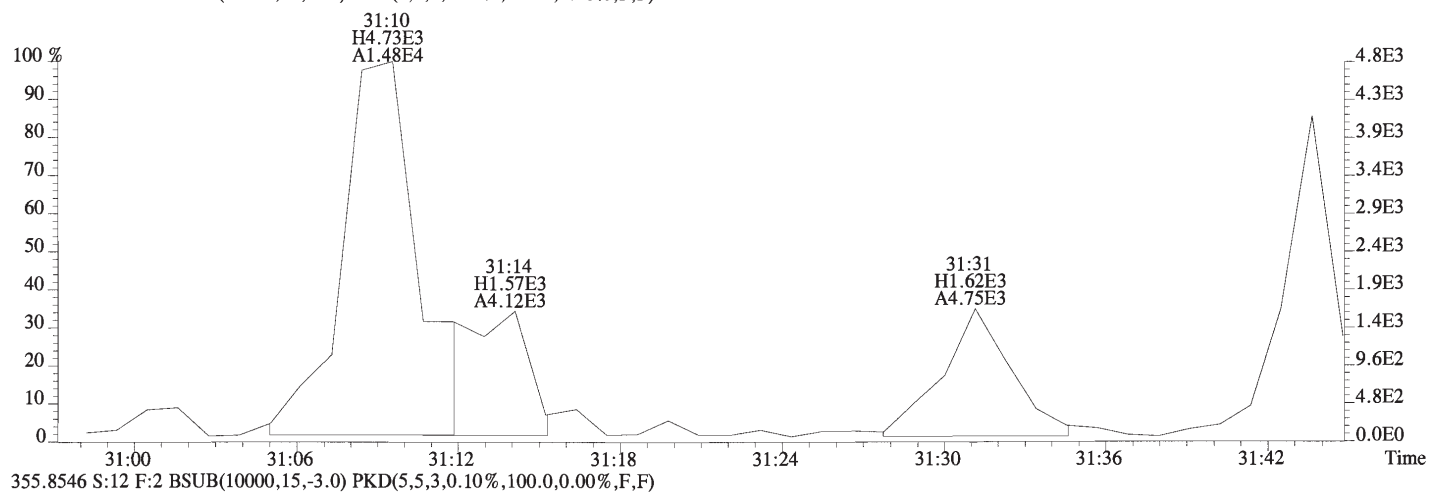
File:160719D1 #1-193 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 353.8576 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



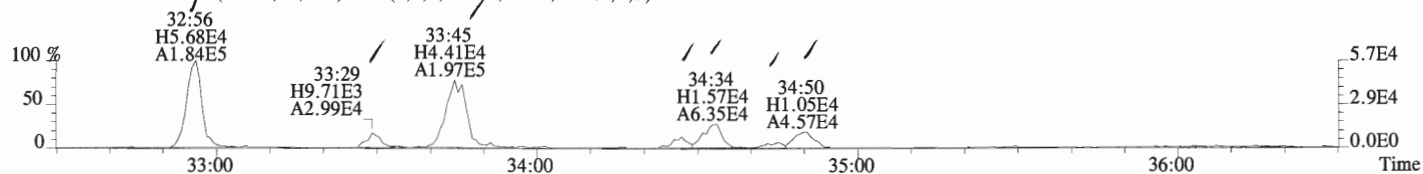
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Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
353.8576 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



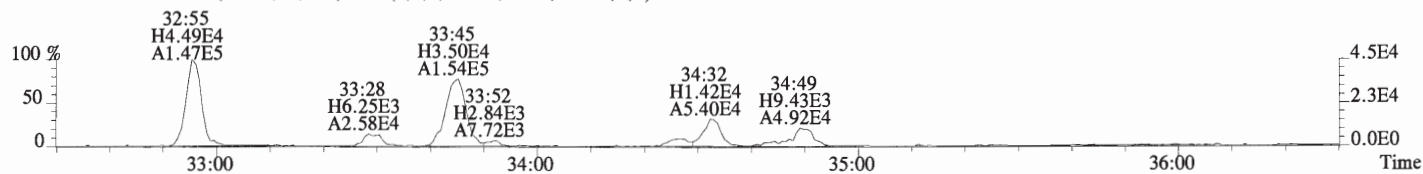
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 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 353.8576 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



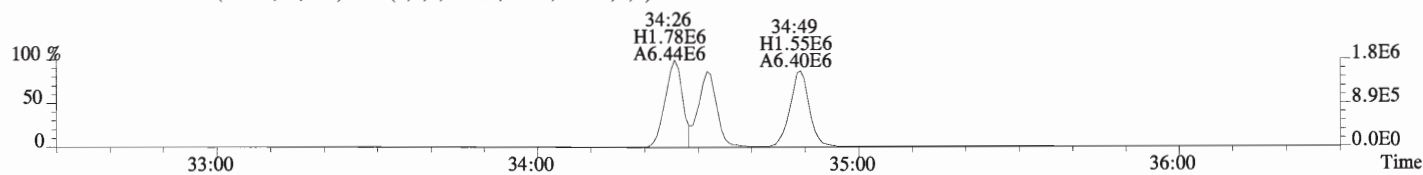
File:160719D1 #1-392 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text: Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



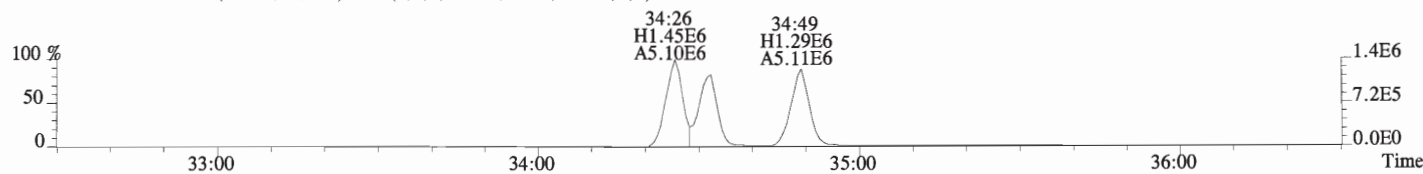
391.8127 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



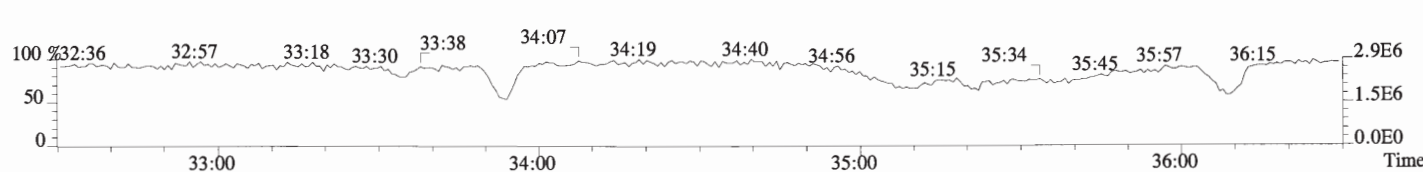
401.8559 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



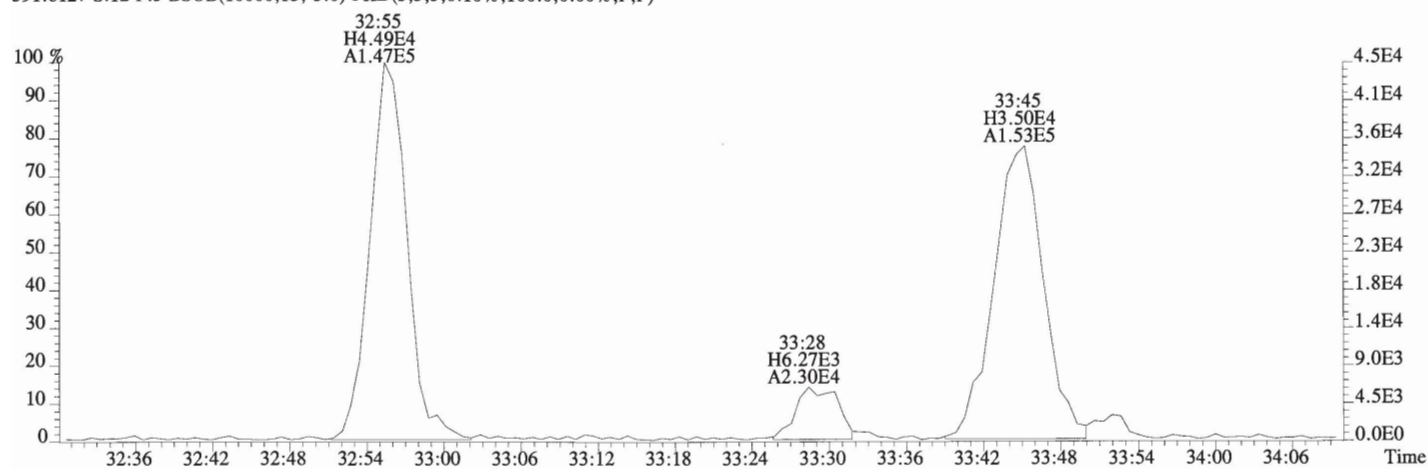
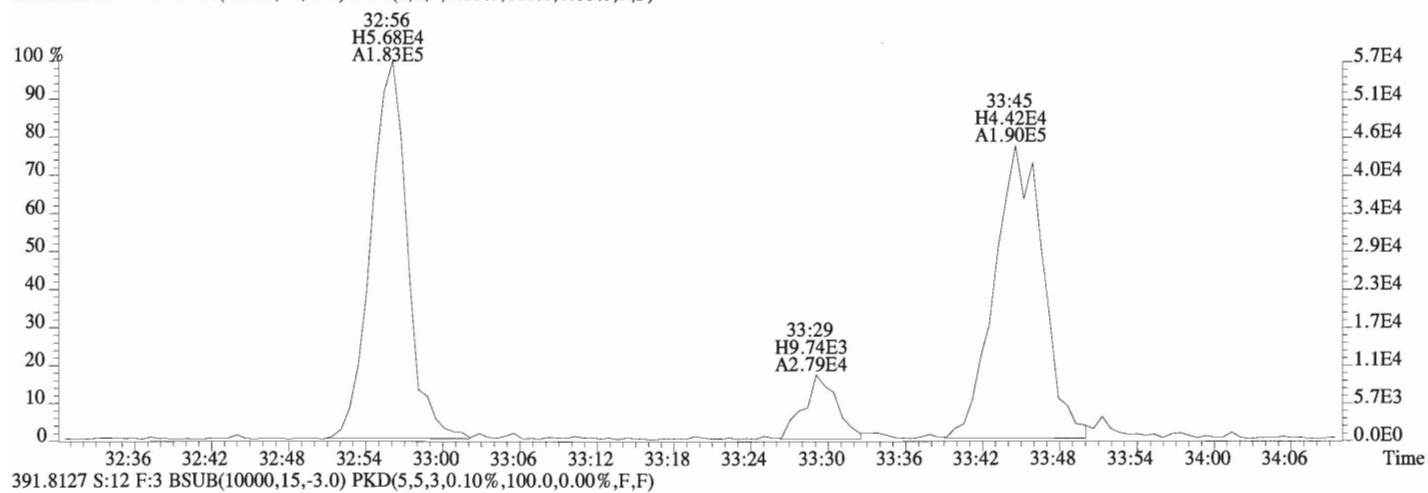
403.8530 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



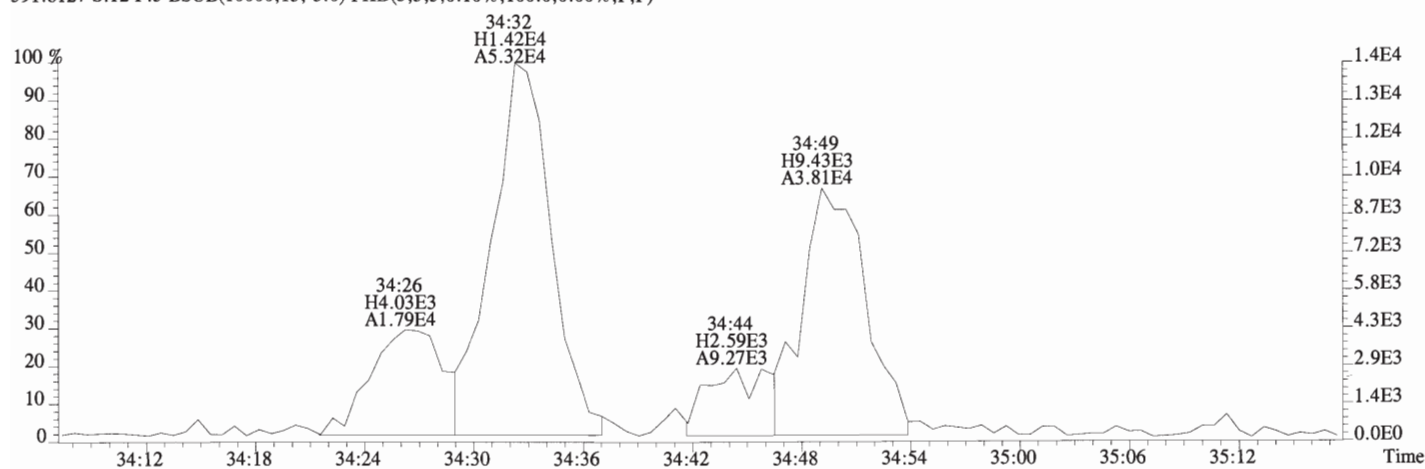
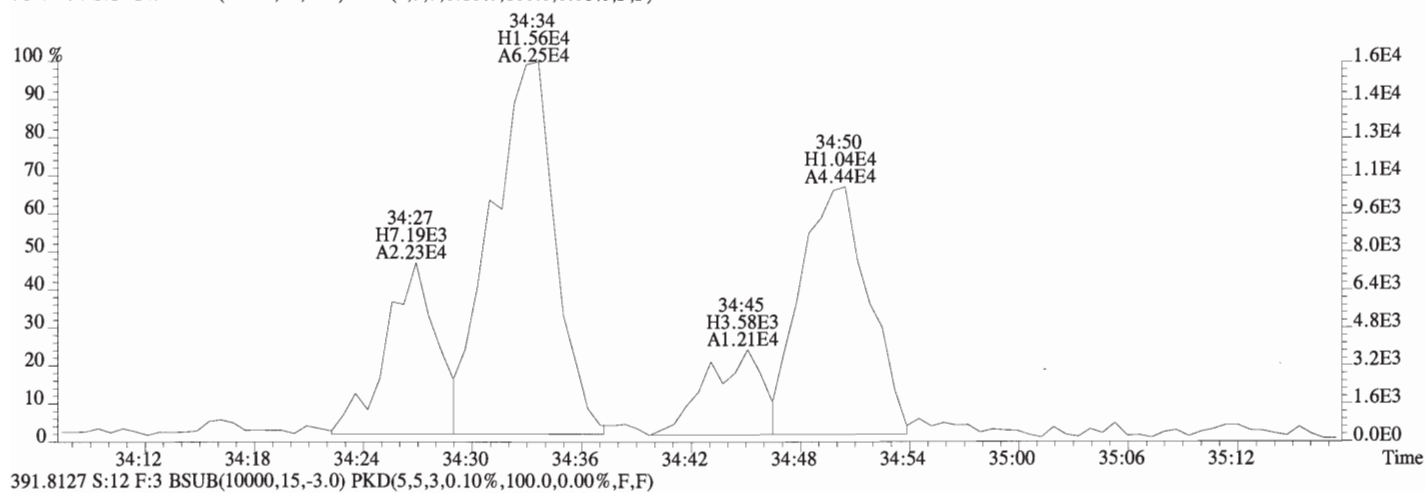
392.9760 S:12 F:3



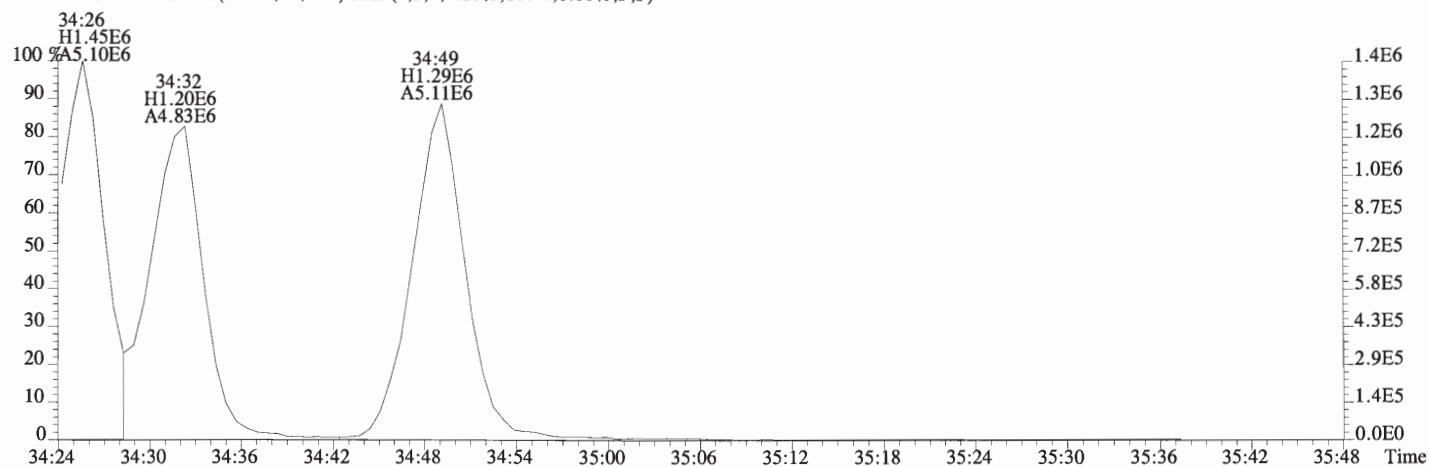
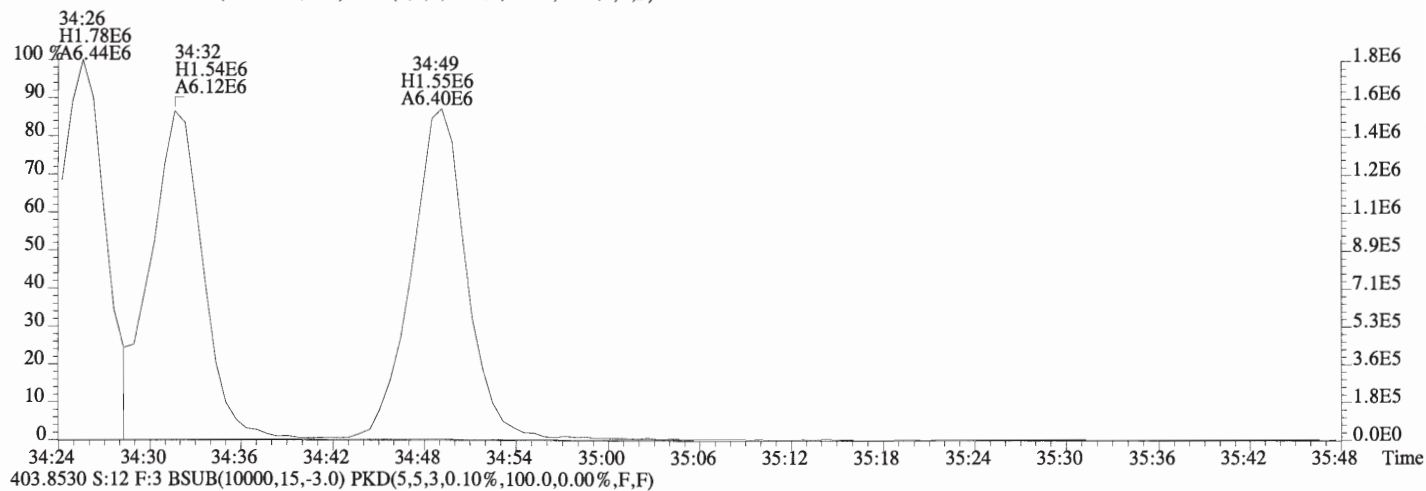
File:160719D1 #1-392 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



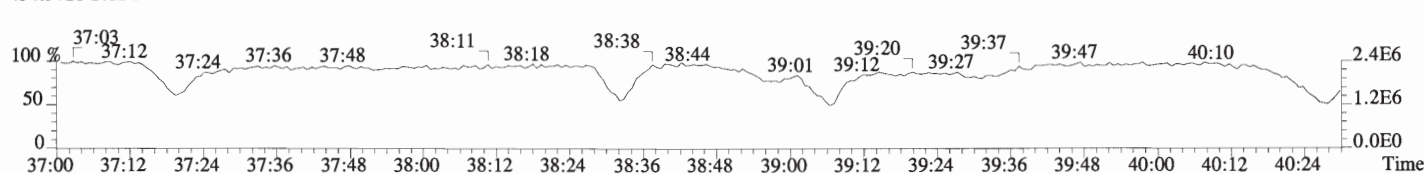
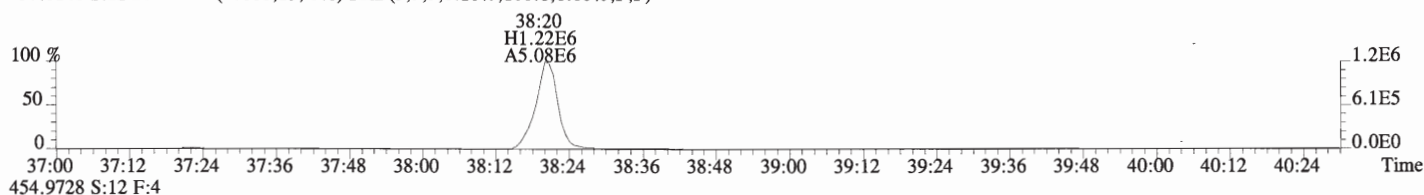
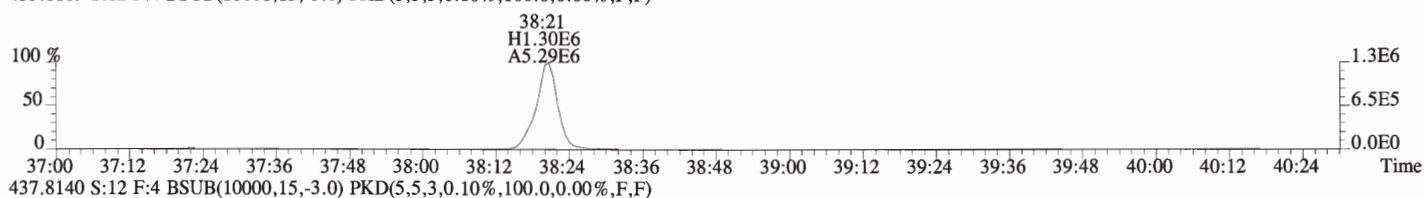
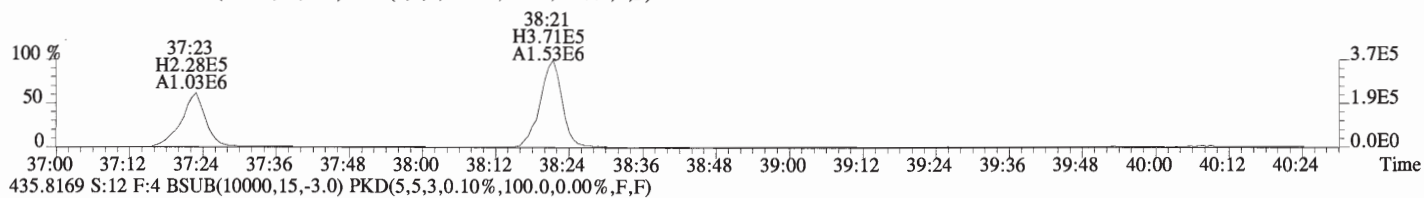
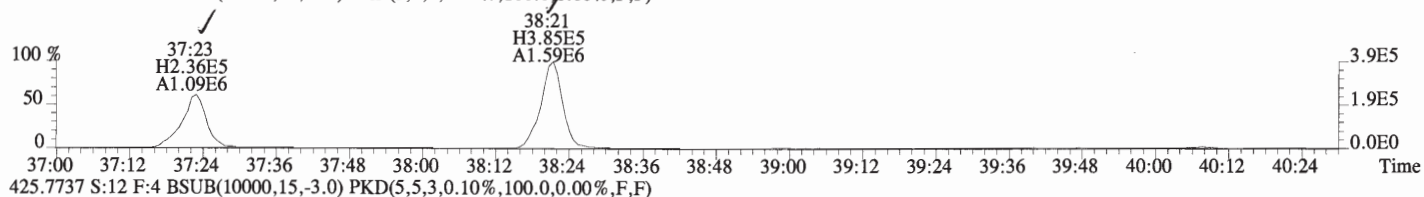
File:160719D1 #1-392 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



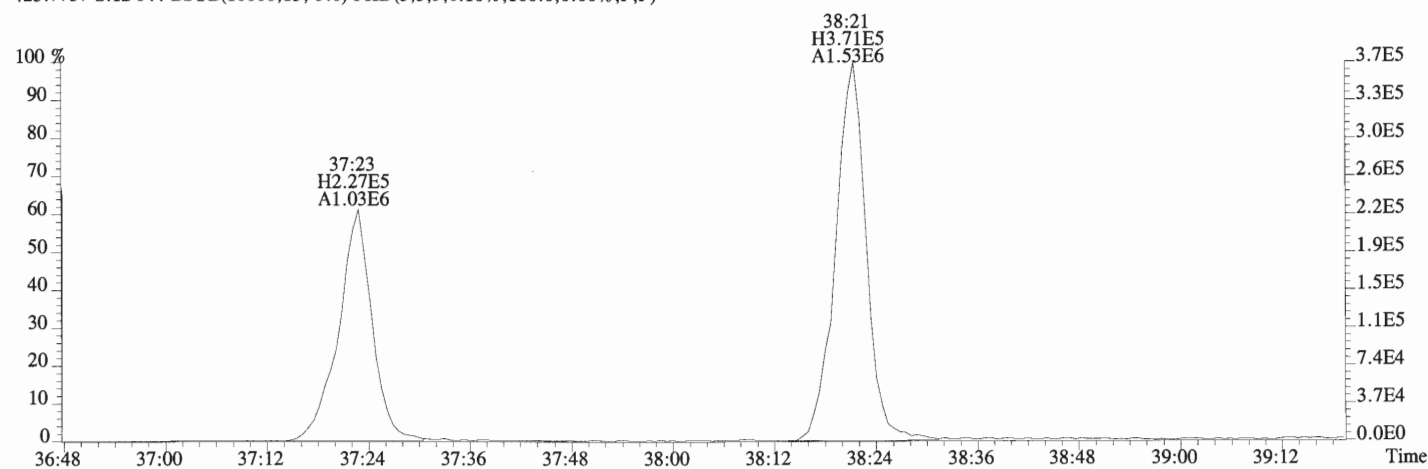
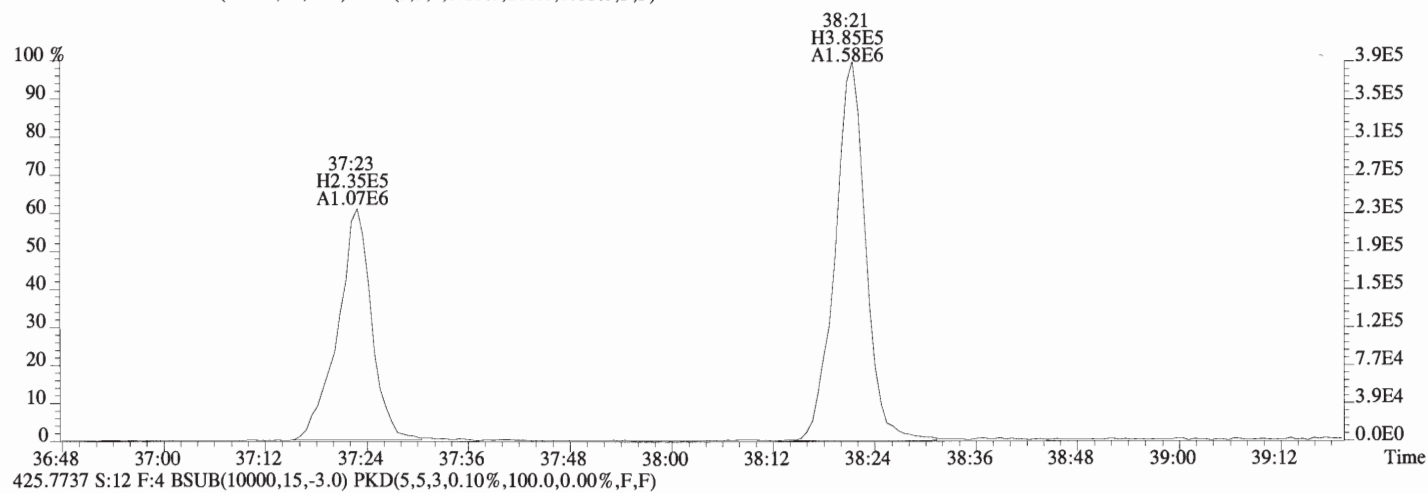
File:160719D1 #1-392 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 401.8559 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



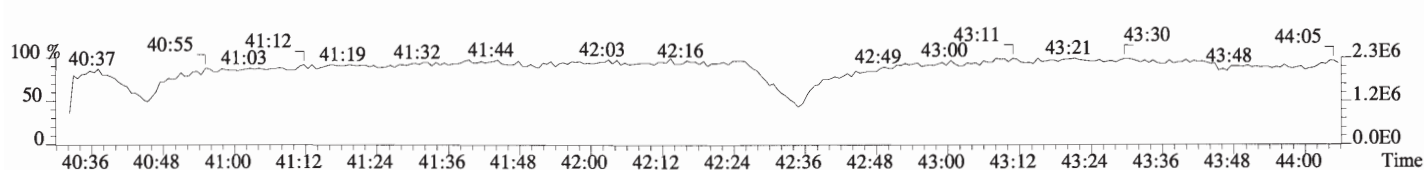
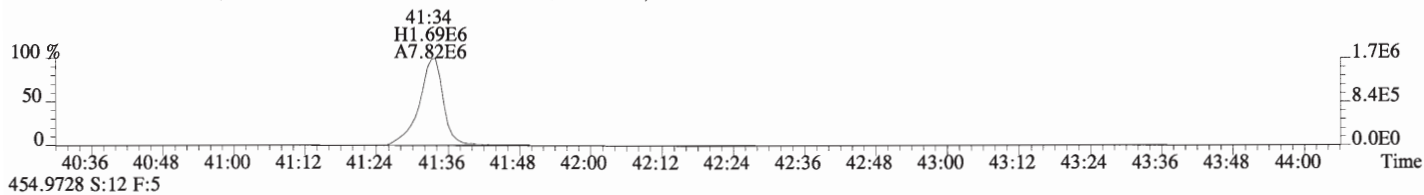
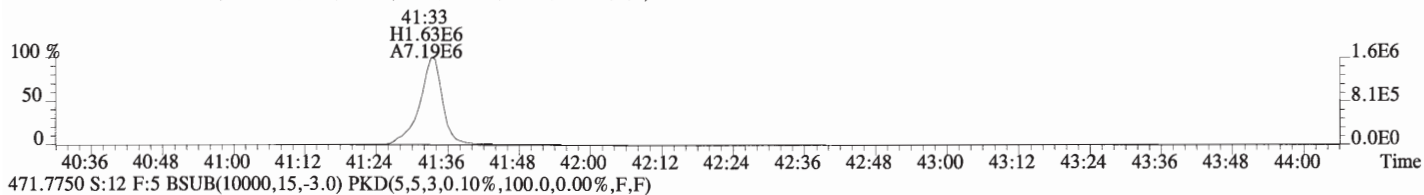
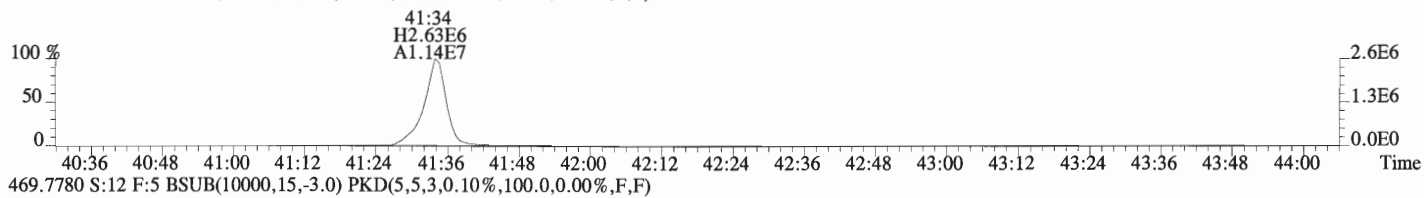
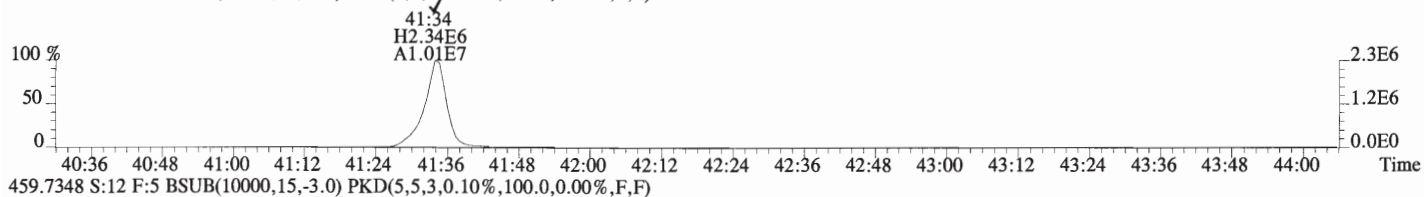
File:160719D1 #1-341 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 423.7767 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



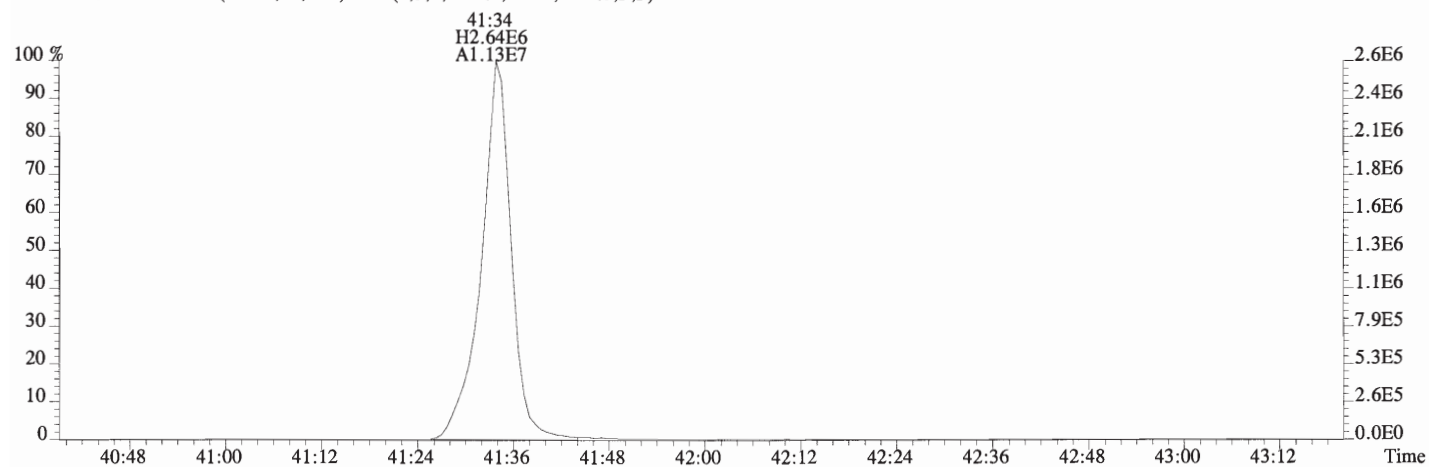
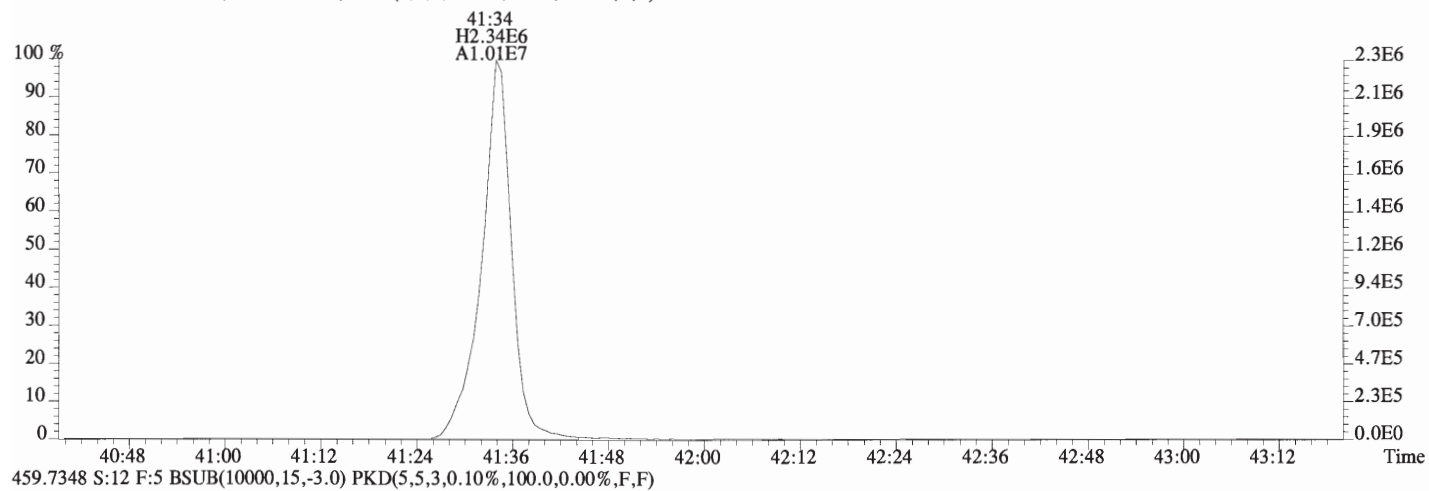
File:160719D1 #1-341 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
423.7767 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



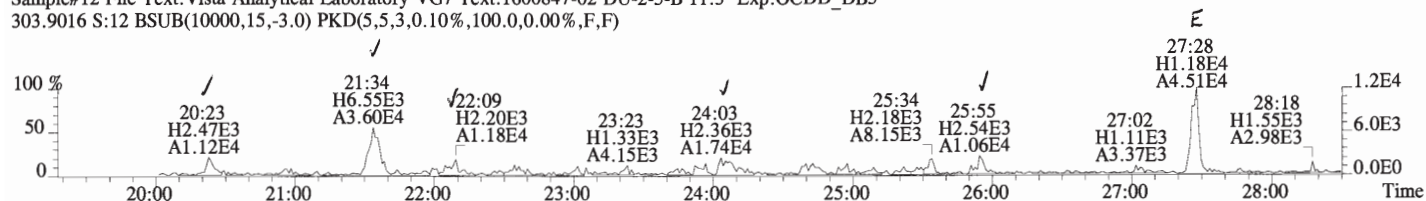
File:160719D1 #1-388 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 457.7377 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



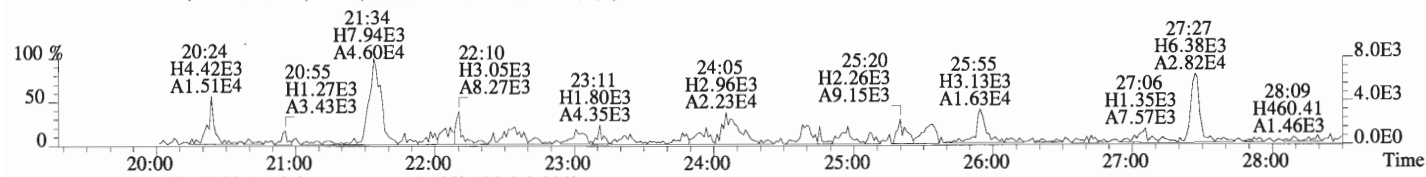
File:160719D1 #1-388 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
457.7377 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



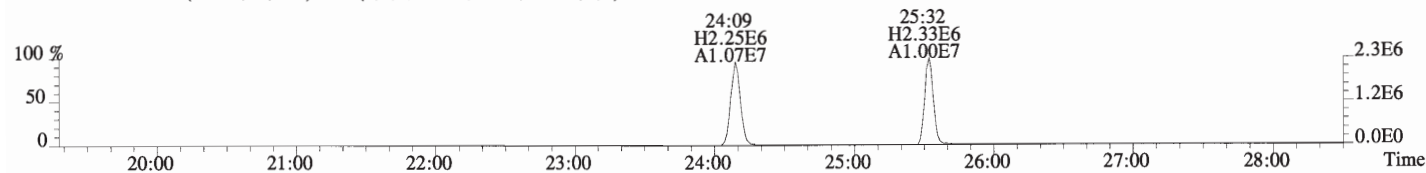
File:160719D1 #1-551 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



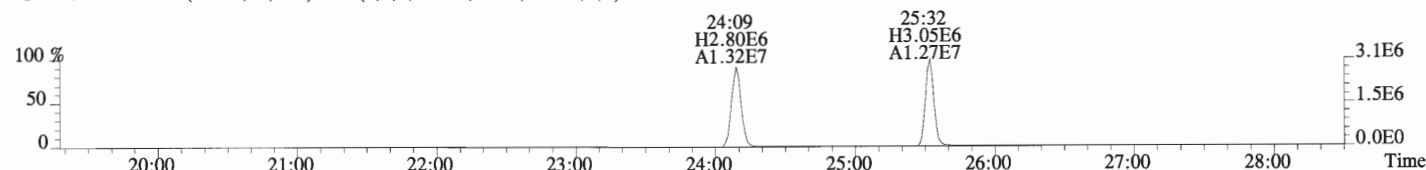
305.8987 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



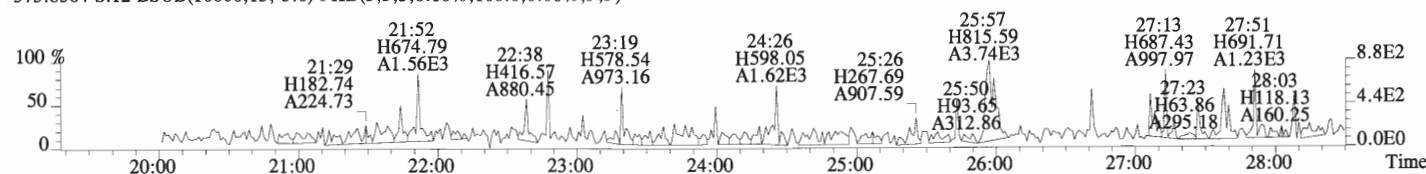
315.9419 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



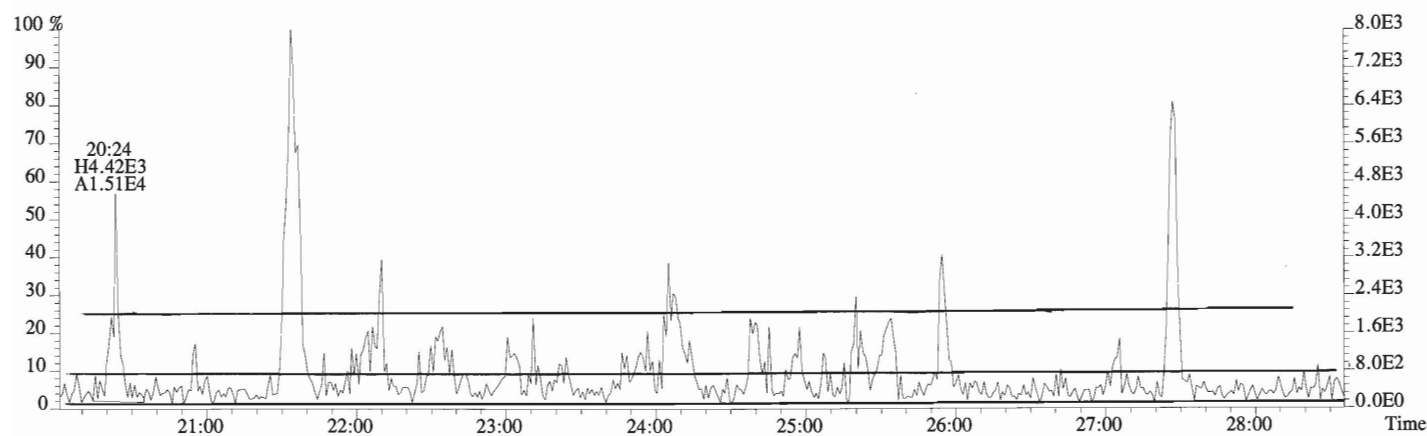
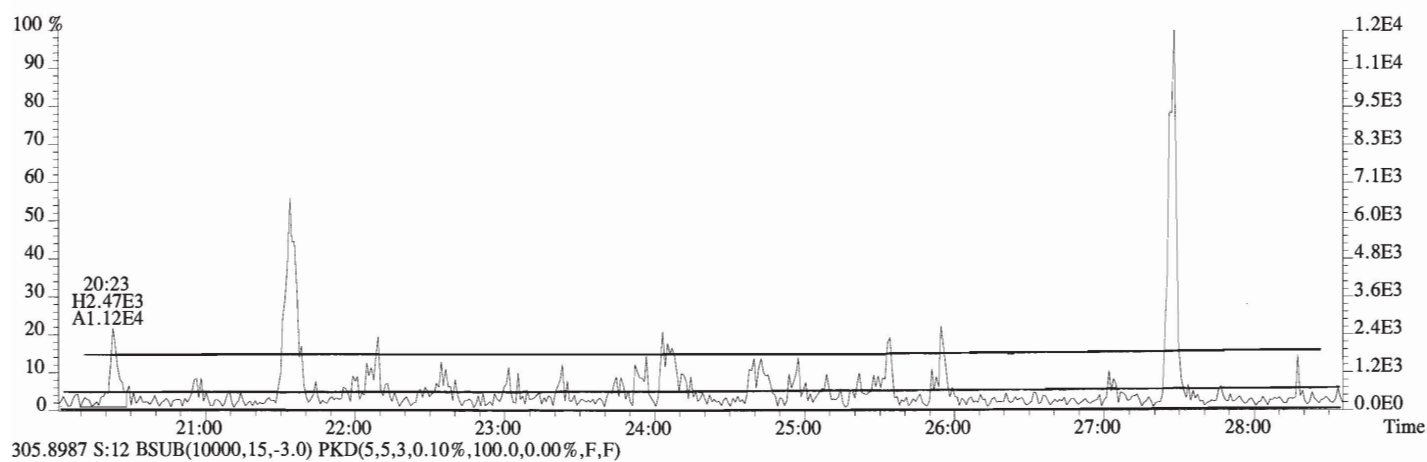
317.9389 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



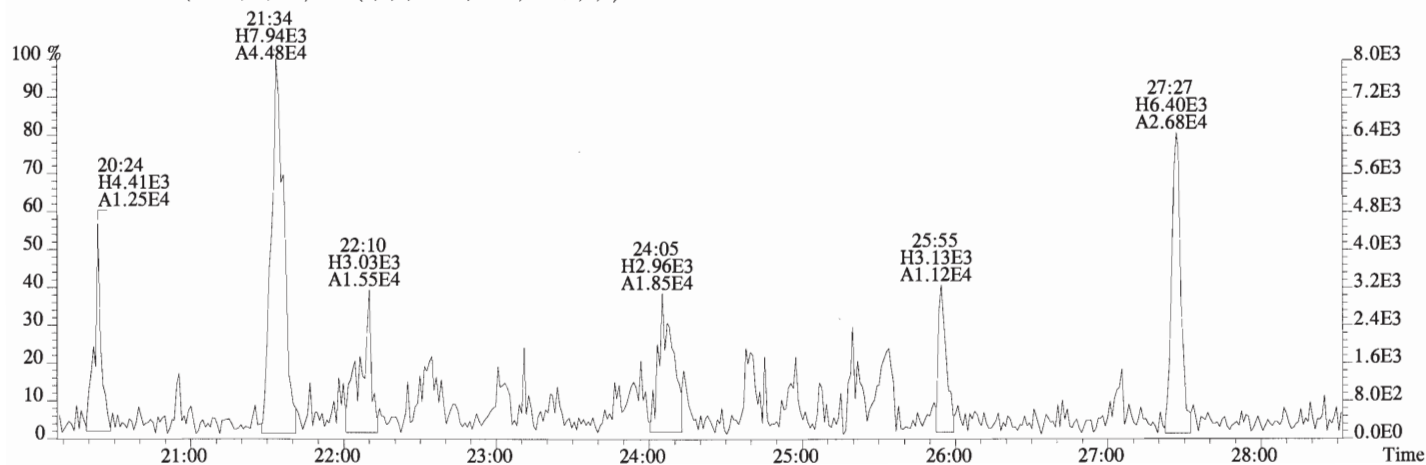
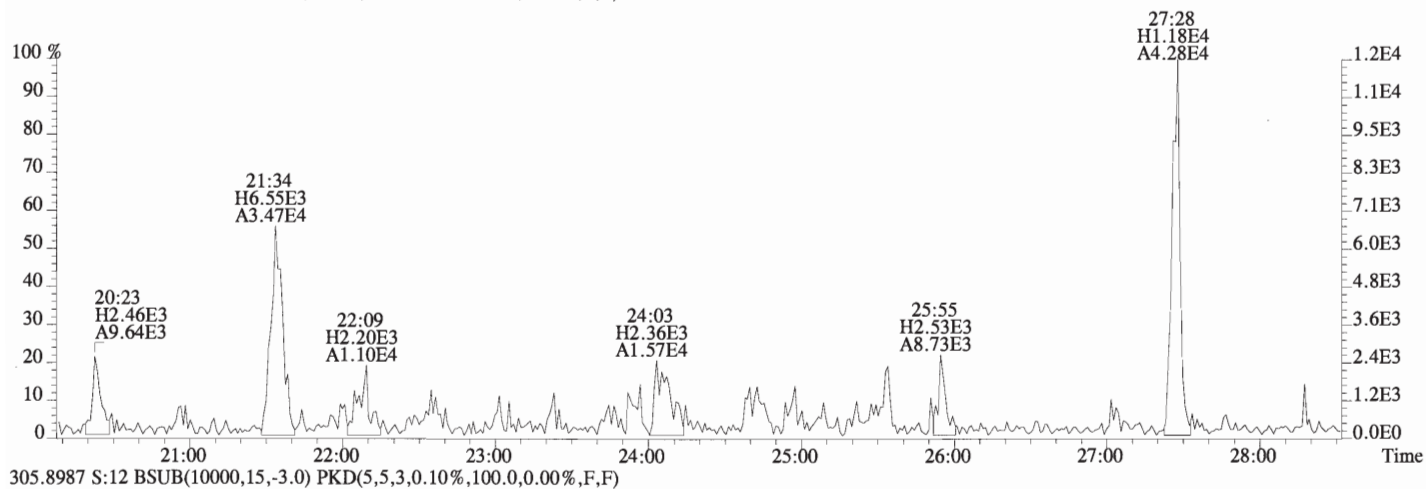
375.8364 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



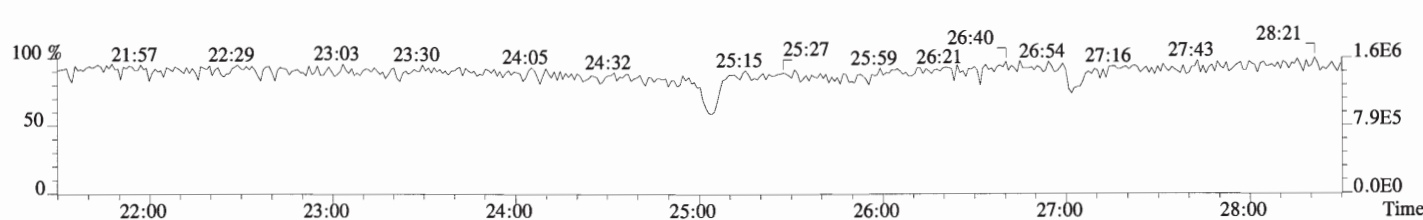
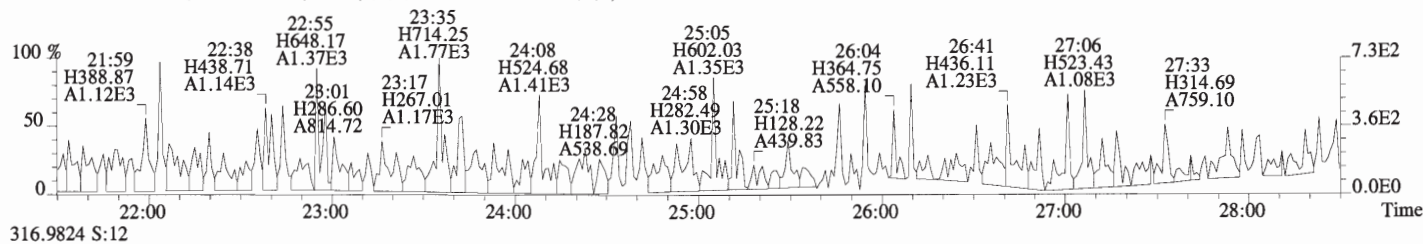
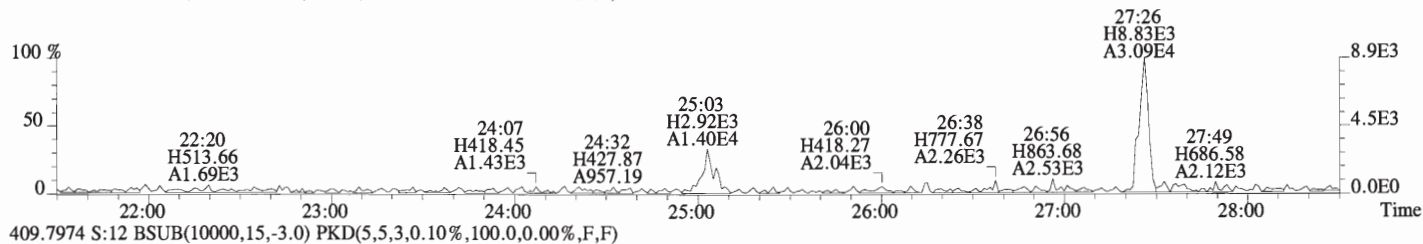
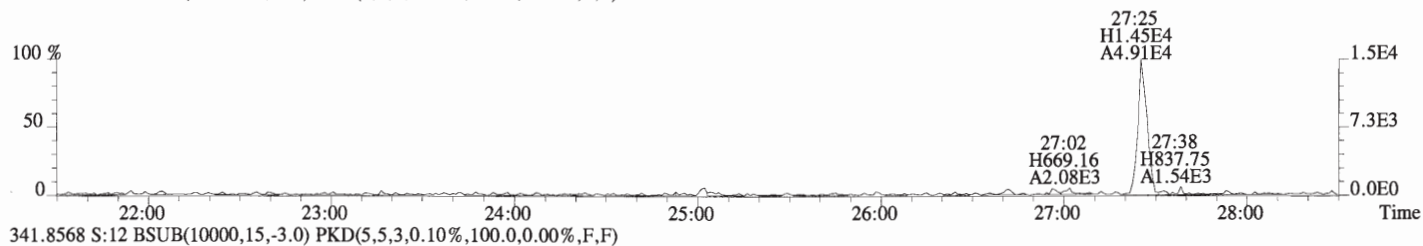
File:160719D1 #1-551 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



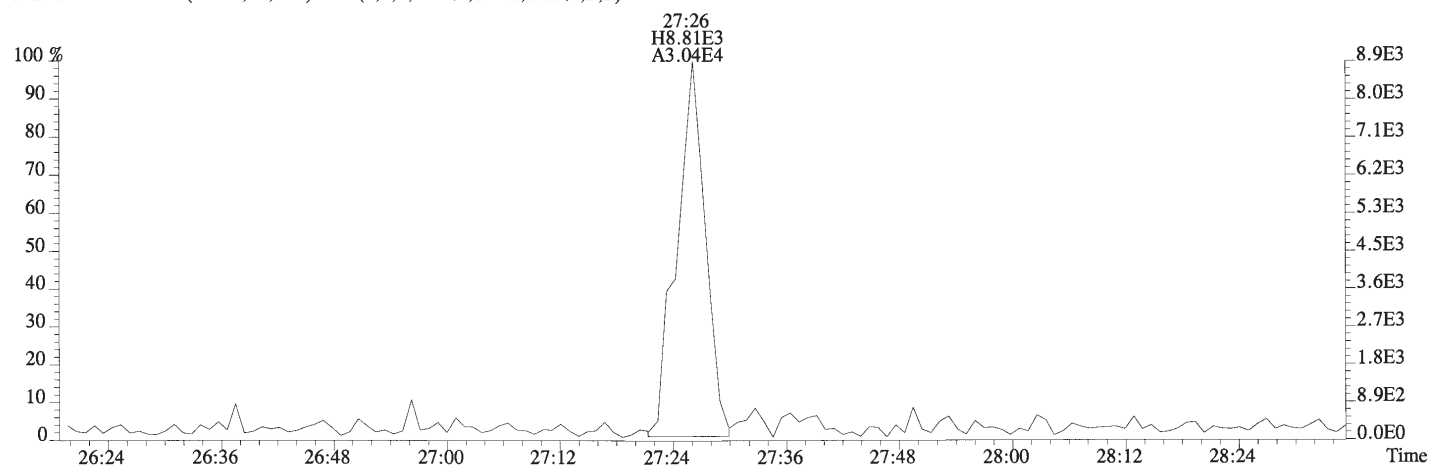
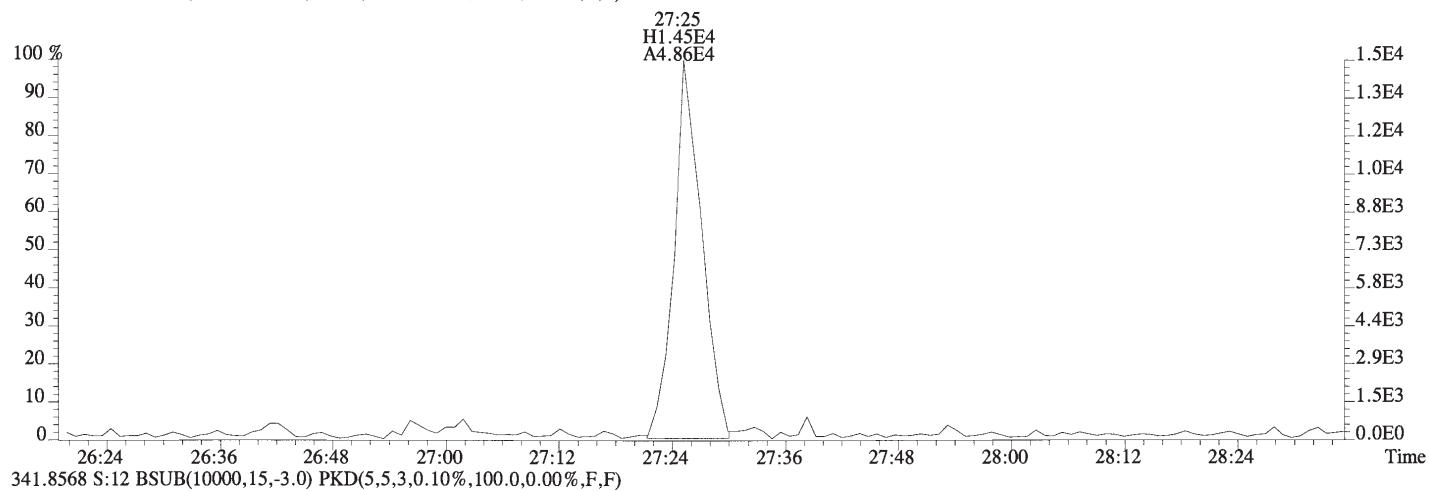
File:160719D1 #1-551 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



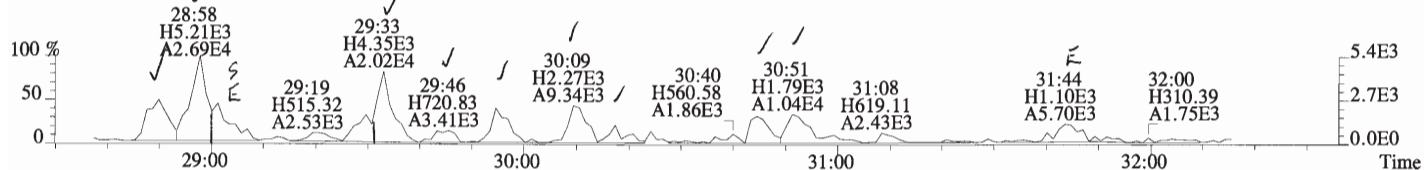
File:160719D1 #1-551 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 339.8597 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



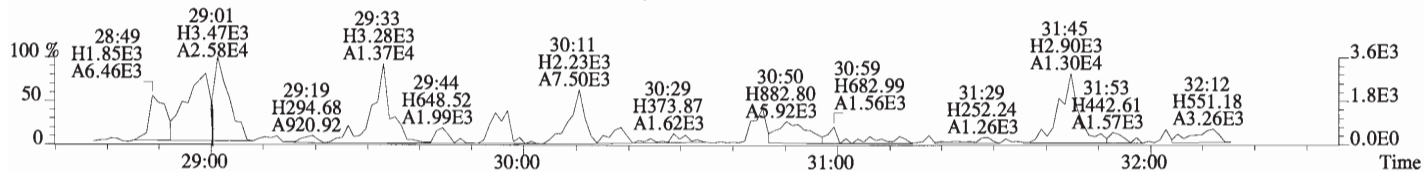
File:160719D1 #1-551 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
339.8597 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



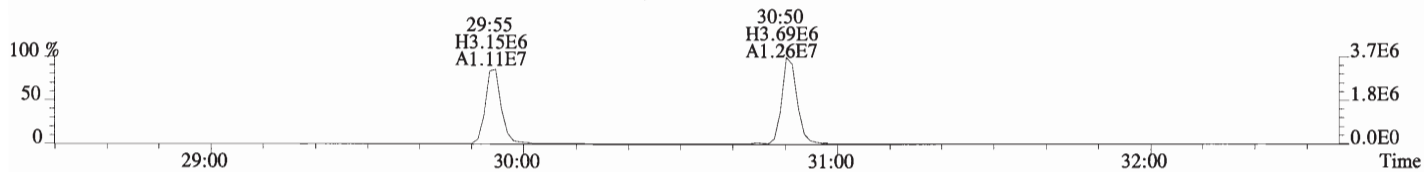
File:160719D1 #1-193 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



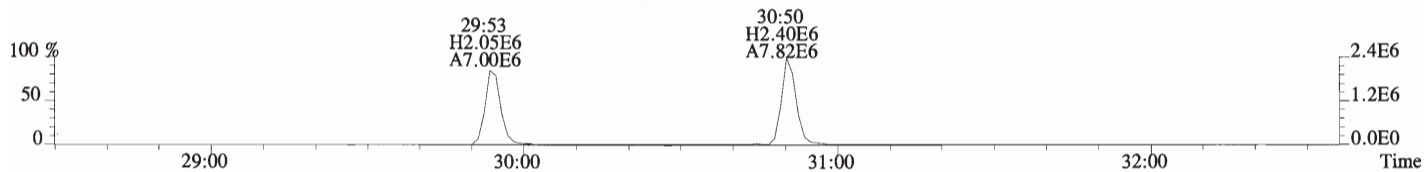
341.8568 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



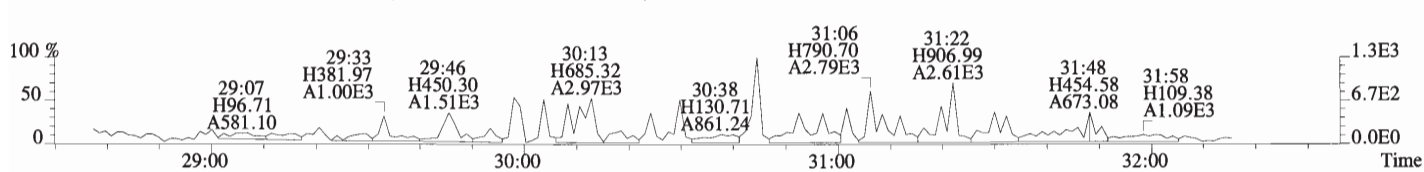
351.9000 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



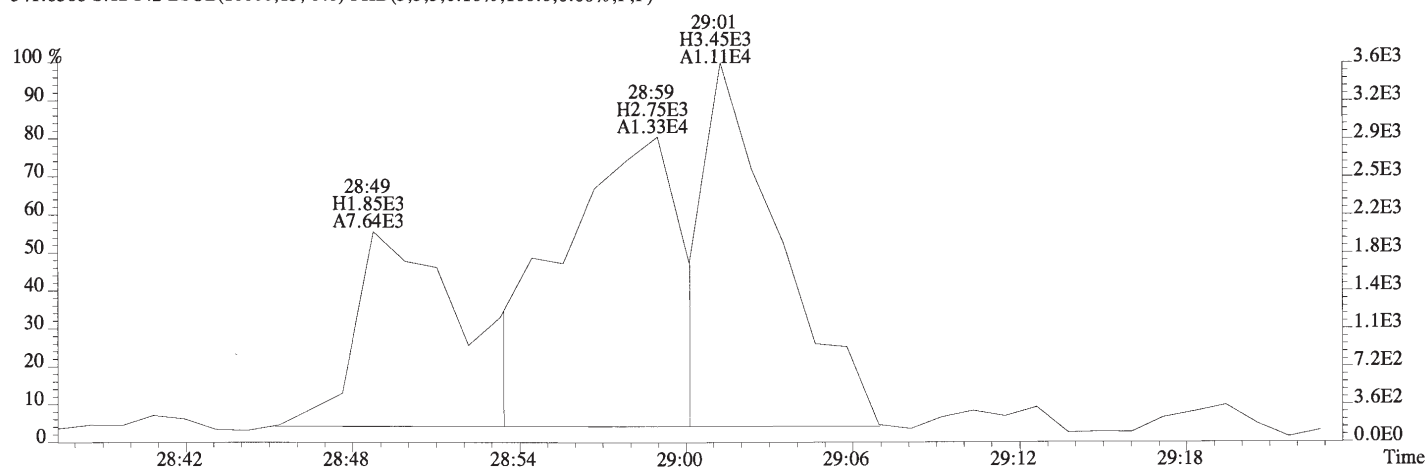
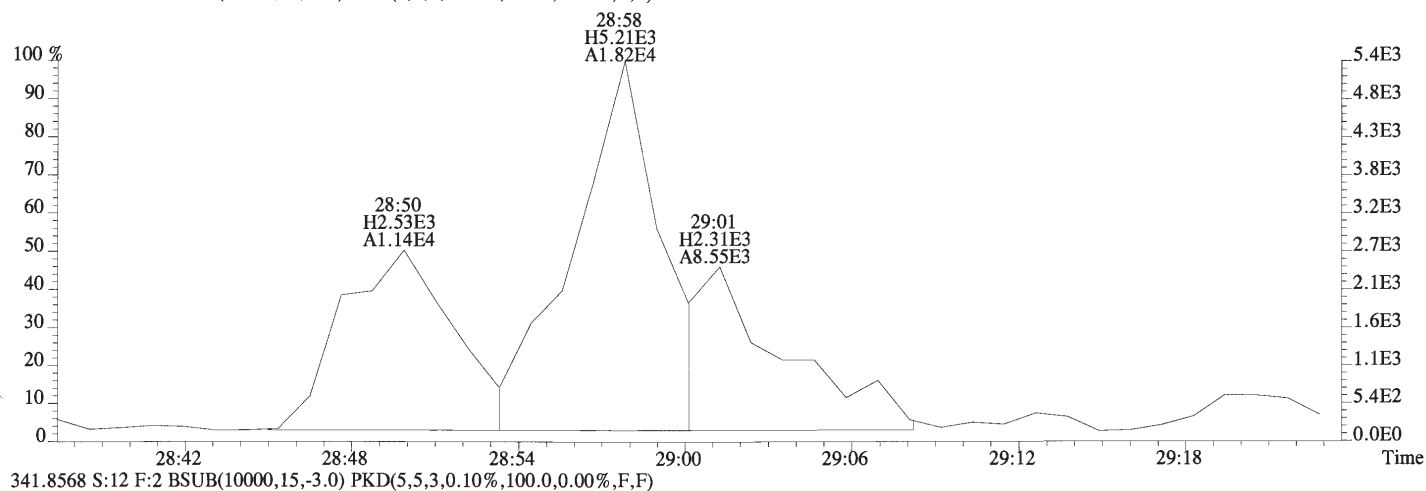
353.8970 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



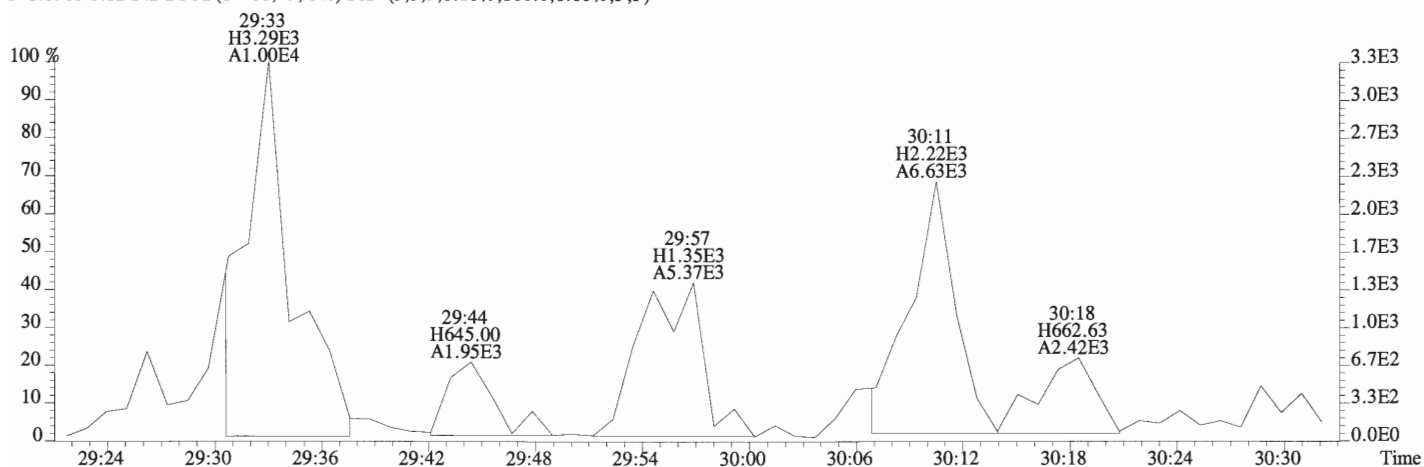
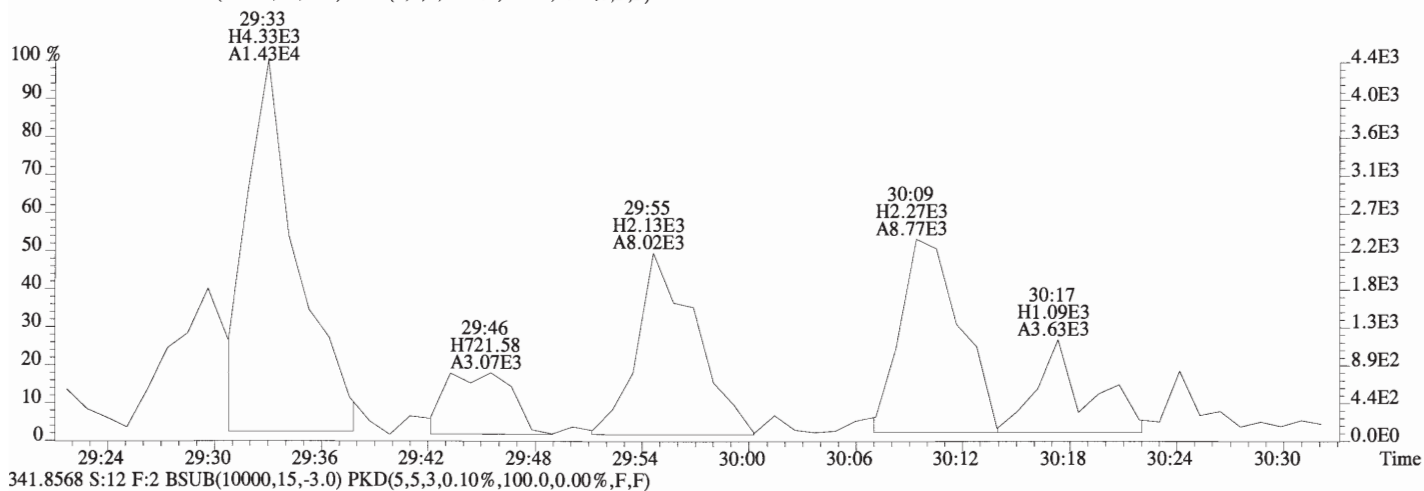
409.7974 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



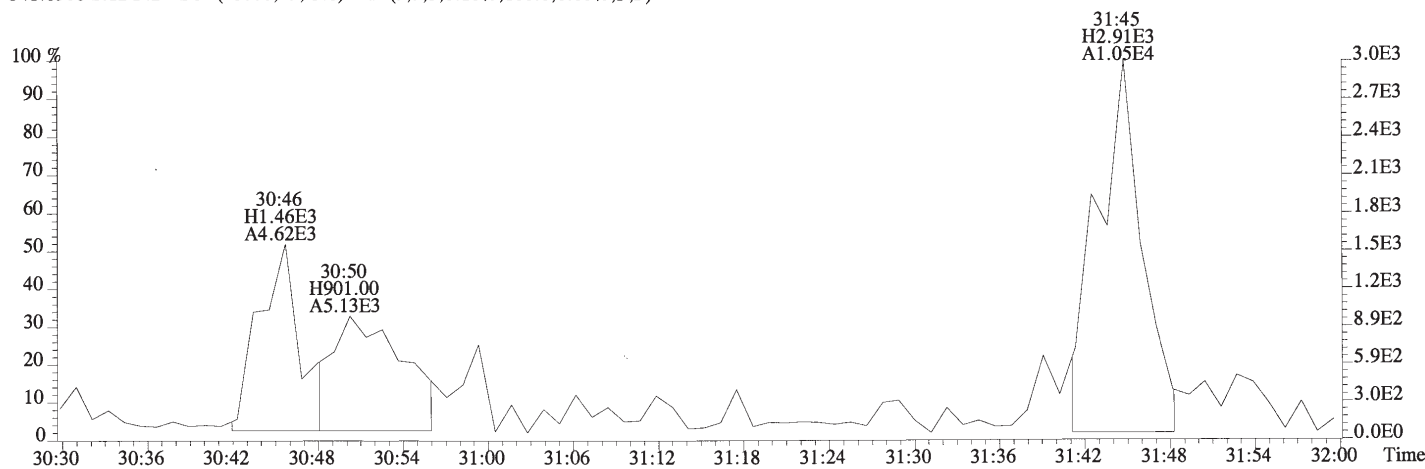
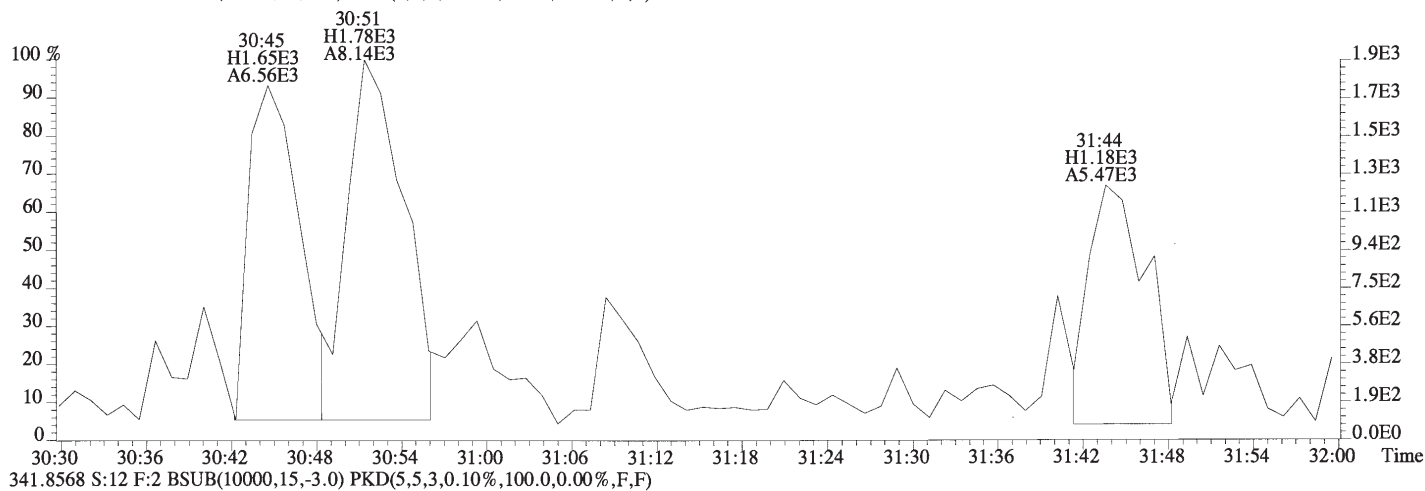
File:160719D1 #1-193 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



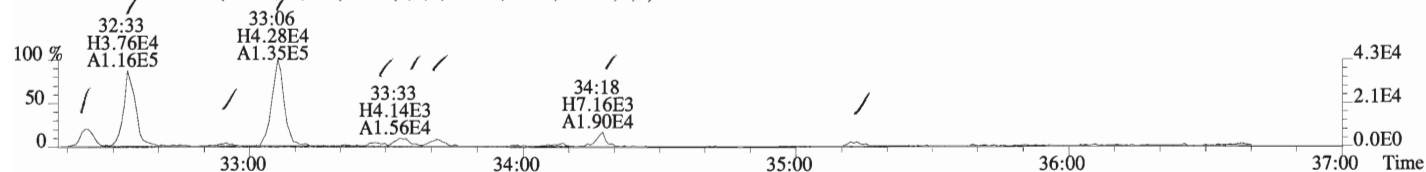
File:160719D1 #1-193 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 339.8597 S:12 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



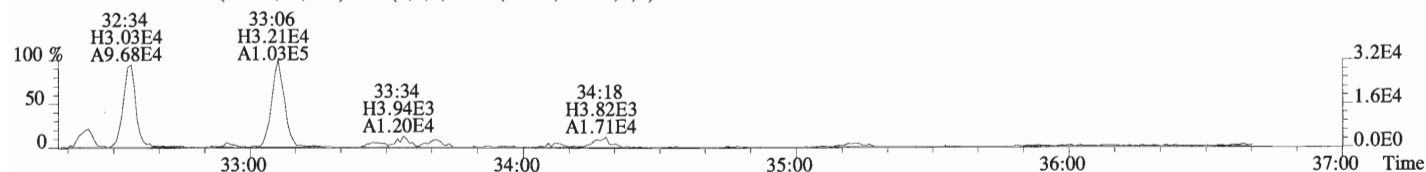
File:160719D1 #1-193 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



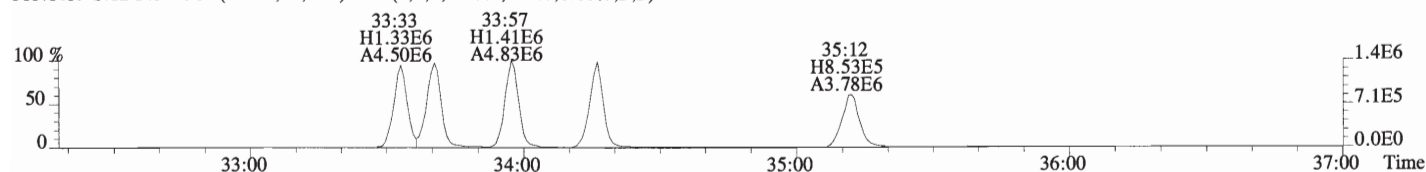
File:160719D1 #1-392 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
 Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
 373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



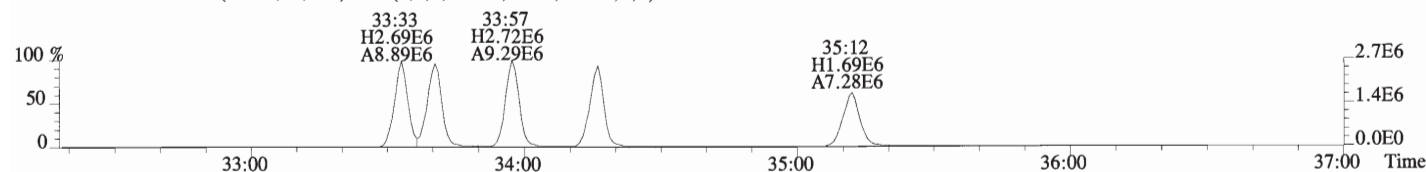
375.8178 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



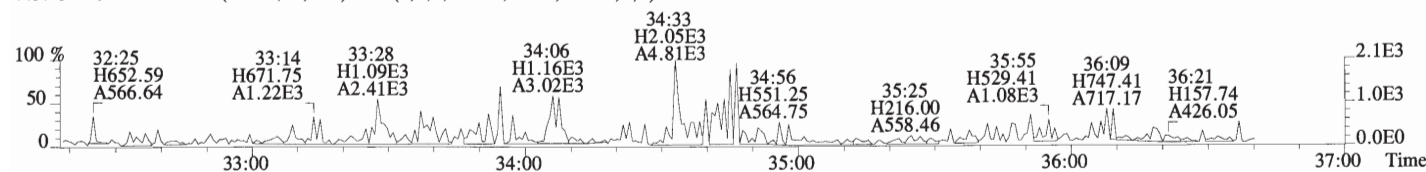
383.8639 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



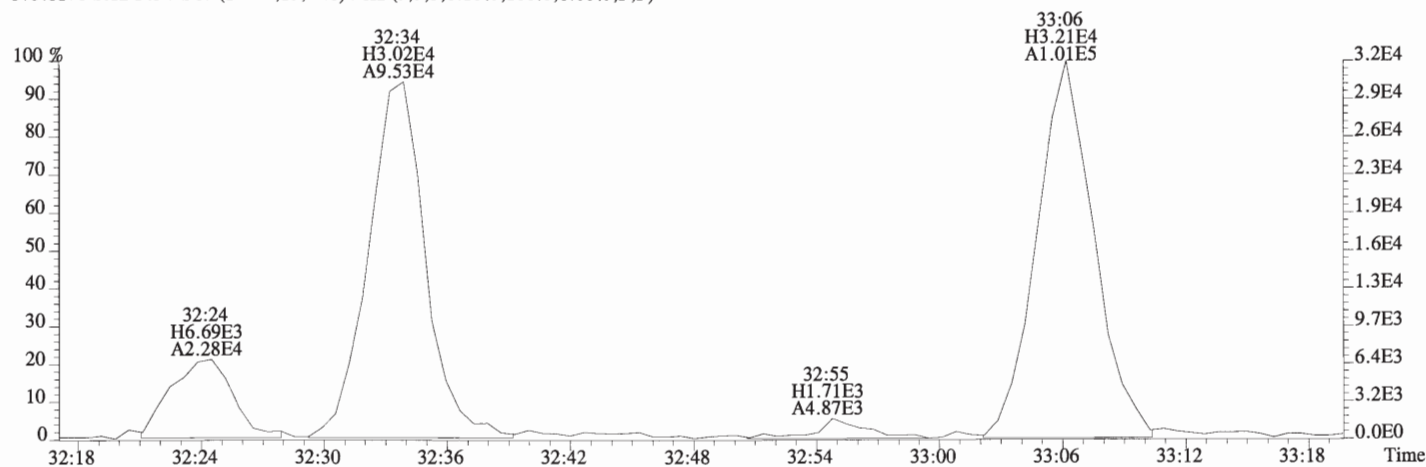
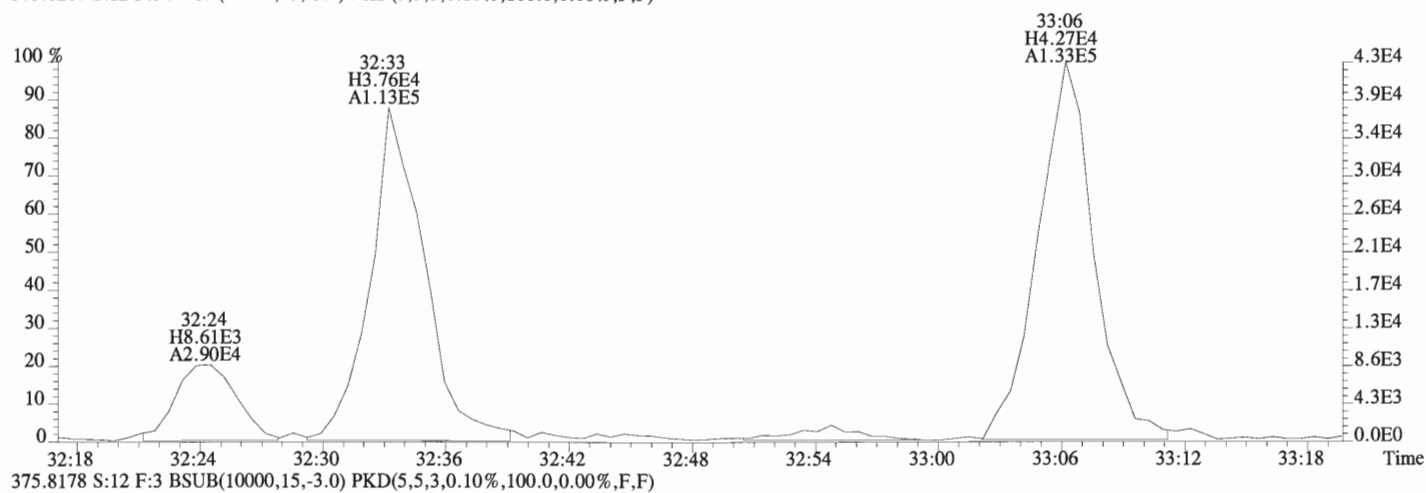
385.8610 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



445.7555 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160719D1 #1-392 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:160719D1 #1-392 Acq:20-JUL-2016 00:05:49 GC EI+ Voltage SIR Autospec-UltimaE
Sample#12 File Text:Vista Analytical Laboratory VG7 Text:1600847-02 DU-2-5-B 11.3 Exp:OCDD_DB5
373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

