



SFPP, L.P.
Operating Partnership

August 2, 2013

California Regional Water Quality Control Board
Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, California 90013

Re: Effluent Monitoring Report
April through June 2013
SFPP, L.P.
15306 Norwalk Boulevard, Norwalk, California
(NPDES No. CA0063509, CI No. 7497)

Attention: Information Technology Unit

In reference to the subject National Pollutant Discharge Elimination System (NPDES) permit, please find enclosed the second calendar quarter 2013 self-monitoring report for the subject discharge.

I certify under penalty of law that this document and all documents were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on the 2nd day of August 2013.
at 3:47 p.m.

A handwritten signature in blue ink, appearing to read 'Stephen Defibaugh', is written over a horizontal line.

_____ (signature)

Stephen T. Defibaugh (printed name)

Remediation Project Manager (title)



CH2M HILL
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Los Angeles, CA 90017
Tel 213.538.1388
Fax 213.538.1399

August 15, 2013

437810.A1.05

Mr. Stephen Defibaugh
Kinder Morgan Energy Partners, L.P.
1100 Town and Country Road
Orange, California 92868

Subject: Effluent Monitoring Report, April 1 to June 30, 2013 (Second Quarter 2013)
SFPP Norwalk Pump Station, 15306 Norwalk Boulevard, Norwalk, California
(NPDES No. CA0063509, CI No. 7497)

Dear Mr. Defibaugh:

This report has been prepared by CH2M HILL, on behalf of SFPP, L.P. (SFPP), an operating partnership of Kinder Morgan Energy Partners, L.P. (KMEP), to summarize National Pollutant Discharge Elimination System (NPDES) monitoring related to the discharge of treated groundwater from SFPP's product recovery and groundwater extraction (GWE) system. This system is installed at the SFPP Norwalk Pump Station located within the Defense Fuel Support Point Norwalk, at 15306 Norwalk Boulevard, Norwalk, California (the site).

SFPP performed certain operations, maintenance, and monitoring tasks on the product recovery and GWE systems. SFPP retained CH2M HILL to prepare this report based on the NPDES monitoring performed by SFPP. This report describes NPDES monitoring activities during the period of April 1 through June 30, 2013.

Remediation System

The remediation system at the site consists of soil vapor extraction (SVE) and extraction of free product and/or groundwater (total fluids extraction [TFE]) for product recovery, GWE for hydraulic control, and treatment of extracted soil vapors and groundwater. SVE is performed using a blower to remove soil vapors at a rate of up to 3,000 standard cubic feet per minute (scfm) from up to 33 SVE wells. The extracted vapors are conveyed to a knockout tank that separates entrained moisture from the soil vapors. Soil vapors are then treated in a catalytic oxidizer prior to emission to the atmosphere. Operation of the SVE and treatment system is conducted in accordance with Permit to Operate No. F13759 issued by the South Coast Air Quality Management District.

The free product and GWE portion of the system consists of 20 extraction wells that are located in the south-central part of the site and five extraction wells that are located in the southeastern part of the site. Five extraction wells in the south-central area (MW-SF-3, MW-SF-14, MW-SF-15, MW-SF-16, and GMW-O-21) and four wells in the southeastern area (GMW-36, GMW-O-15, GMW-O-18, and GMW-SF-9) are currently equipped with pneumatically operated top-loading pumps. The West Side Barrier (WSB) GWE system was shut down in August 2008 based on the reduced lateral extent and low concentrations of volatile organic compounds (VOCs) west of the site.

Free product and groundwater recovered by pneumatically operated top-loading total fluids pumps in the south-central and southeastern parts of the site along with the liquid condensate from the knockout tank are piped to an oil-water separator (OWS). Free product, if any, from the OWS is collected in a storage tank and recycled at an offsite location. Water from the OWS is treated using liquid-phase granular activated carbon (LGAC). Treated water is routed through an onsite 3,000-gallon equalization tank. Two fluidized bed bioreactors (FBBRs) installed downstream of the equalization tank treat fuel oxygenates such as tertiary butyl alcohol (TBA) and methyl tertiary butyl ether (MTBE). The treated groundwater then passes through polishing LGAC units prior to discharge in accordance with the NPDES permit (No. CA0063509, CI No. 7497).

Summary of Quarterly Operations

Approximately 1,672,547 gallons of groundwater was extracted during the second quarter 2013. This total includes groundwater extracted from the south-central and southeastern areas. No water was extracted from the WSB area. Table 1 summarizes the average daily flow rate during the reporting period. Remediation of the south-central and southeastern areas was performed throughout the quarter, with the following exceptions:

- The TFE/GWE system was turned off on April 26, 2013, to clean out the OWS and sump. The system was restarted the same day.
- The TFE/GWE system shut down on April 22, May 3, May 8, and June 25, 2013, due to clogged bag filters and a high water level in the transfer tank. The bag filters were changed out, the lead LGAC vessels were backwashed, and the system was restarted the same day. A backwash tank and a recirculation pump will be added to the upstream system to reduce the amount of fines that are plugging up the bag filters.
- The TFE/GWE systems were off on arrival on June 28, 2013, due to a sitewide power outage. The system was restarted on the same day.

Routine Effluent Monitoring

Effluent water samples were collected pursuant to the Waste Discharge Requirements (WDRs) under Order No. R4-2011-0095. Samples were collected at the Order-designated monitoring point EFF-001 (Remediation System Effluent).

Samples were transported to Advanced Technology Laboratories (ATL) in Las Vegas, Nevada, for analysis. ATL is certified by the National Environmental Laboratory Accreditation Program

Mr. Stephen Defibaugh, Kinder Morgan Energy Partners, L.P.

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and the California Department of Health Services Environmental Laboratory Accreditation Program. The samples were analyzed in accordance with current United States Environmental Protection Agency (EPA) guidelines or as specified in the WDRs for the site. Analytical results for the monthly and quarterly effluent monitoring are summarized in Table 2. Analytical results for the remaining priority pollutants are summarized in Table 3. Quarterly monitoring for remaining priority pollutants is required during the initial 2 years of the NPDES permit (July 2011 through June 2013); annual monitoring will commence thereafter. The next planned sampling event for remaining priority pollutants will occur during routine annual sampling, currently scheduled for December 2013. Laboratory analytical reports and chain-of-custody documents are included in Appendix A.

Summary of Compliance Results

As shown in Tables 1 and 2, the results of the monthly and quarterly effluent monitoring indicate that all discharge limitations were met during the reporting period.

Waste Hauling

Nine 55-gallon drums of nonhazardous bag filters were removed from the site on April 11, 2013, by Environmental Logistics, Inc. (140 Monte Avenue, Rialto, California 92316) and transported to Filter Recycling Services, Inc., at 180 Monte Avenue, Bloomington, California 92316.

Approximately 1,600 gallons of non-Resource Conservation and Recovery Act (RCRA) hazardous waste liquids were removed from the site on April 26, 2013, by West Coast Environmental Solutions (2650 Lime Avenue, Signal Hill, California 90755). The waste was transported to Demenno/Kerdoon at 2000 North Alameda Street, Compton, California 90222.

Copies of the waste manifests are included in Appendix B.

Should you require any further information, please contact me at (714) 435-6194.

Sincerely,

CH2M HILL, Inc.



Samantha Chen
Project Engineer

Attachments:

Table 1 - Effluent Flow Rate Measurements, Second Quarter 2013

Table 2 - NPDES Effluent Monitoring, Second Quarter 2013

Table 3 - NPDES Effluent Monitoring, Remaining Priority Pollutants, Second Quarter 2013

Appendix A - Laboratory Analytical Reports and Chain-of-Custody Documents

Appendix B - Waste Manifests

Tables

TABLE 1

Effluent Flow Rate Measurements¹, Second Quarter 2013
 SFPP Norwalk Pump Station, Norwalk, California

Date	Average Flow Rate (gpd) (Maximum Daily Discharge Limit = 150,000 gpd ²)
04/01/13	16,654
04/02/13	16,061
04/03/13	16,169
04/04/13	16,286
04/05/13	16,260
04/06/13	16,318
04/07/13	15,815
04/08/13	16,064
04/09/13	15,824
04/10/13	13,973
04/11/13	15,666
04/12/13	15,803
04/13/13	15,139
04/14/13	15,373
04/15/13	15,148
04/16/13	15,506
04/17/13	15,649
04/18/13	15,334
04/19/13	15,402
04/20/13	16,975
04/21/13	28,073
04/22/13	5,810
04/23/13	12,162
04/24/13	22,605
04/25/13	16,766
04/26/13	16,552
04/27/13	15,523
04/28/13	21,150
04/29/13	21,030
04/30/13	21,006
05/01/13	17,972
05/02/13	17,972
05/03/13	17,972
05/04/13	21,500
05/05/13	21,500
05/06/13	21,500
05/07/13	21,500
05/08/13	1,973
05/09/13	18,425
05/10/13	23,785
05/11/13	23,785
05/12/13	20,896
05/13/13	23,896
05/14/13	21,137
05/15/13	28,566
05/16/13	26,417
05/17/13	24,665
05/18/13	26,665
05/19/13	25,487
05/20/13	25,487
05/21/13	18,962

TABLE 1

Effluent Flow Rate Measurements¹, Second Quarter 2013
 SFPP Norwalk Pump Station, Norwalk, California

Date	Average Flow Rate (gpd) (Maximum Daily Discharge Limit = 150,000 gpd ²)
05/22/13	30,572
05/23/13	12,110
05/24/13	8,032
05/25/13	8,032
05/26/13	48,261
05/27/13	13,296
05/28/13	13,193
05/29/13	1,005
05/30/13	8,801
05/31/13	10,294
06/01/13	7,409
06/02/13	8,383
06/03/13	11,102
06/04/13	9,117
06/05/13	12,006
06/06/13	6,707
06/07/13	8,149
06/08/13	21,535
06/09/13	20,217
06/10/13	23,355
06/11/13	20,215
06/12/13	11,181
06/13/13	20,966
06/14/13	20,889
06/15/13	25,857
06/16/13	15,591
06/17/13	21,105
06/18/13	17,233
06/19/13	35,773
06/20/13	30,493
06/21/13	23,361
06/22/13	27,833
06/23/13	26,906
06/24/13	26,528
06/25/13	12,922
06/26/13	33,071
06/27/13	12,437
06/28/13	10,420
06/29/13	35,267
06/30/13	16,766

Notes

1. Data reported based on information provided by SFPP, L.P.
2. California Regional Water Quality Control Board Waste Discharge Requirements (WDRs).
 gpd = gallons per day

TABLE 2

NPDES Effluent Monitoring, Second Quarter 2013

SFPP Norwalk Pump Station, Norwalk, California

Analyte	Sampling Frequency	Analytical Method	Units	MDL ⁴	RL ⁴	ML ¹	4/3/2013	4/9/2013	5/7/2013	5/14/2013	6/7/2013	6/14/2013	Discharge Limits ²	
													Monthly Average	Daily Maximum
Temperature	Monthly	--	°F	--	--	NE	--	76.8	71	--	--	81.1	--	86
Oil and Grease	Monthly	EPA 1664A	mg/L	1.2	4.3	NE	<1.2	--	<1.2	--	<1.1	--	10	15
TPH as gas (C4-C12)	Monthly	EPA 8015B	µg/L	8.5	100	NE	<8.5	--	<8.5	--	<8.5	--	--	--
TPH as Diesel (C13-C22)	Monthly	EPA 8015B	µg/L	13	51	NE	<13	--	<13	--	15 J	--	--	--
TPH as Oil (C23+)	Monthly	EPA 8015B	µg/L	9.7	51	NE	<9.7	--	<9.6	--	<9.6	--	--	--
Total TPH	Monthly	EPA 8015B	µg/L	13	100	NE	<13	--	<13	--	15 J	--	NE	100
Settleable Solids	Monthly	SM 2540F	mL/L/hr	1.1	1.1	NE	<0.1	--	<0.1	--	<1.1	--	0.1	0.3
Total Suspended Solids	Monthly	SM 2540D	mg/L	5	5	NE	<5.0	--	<5.0	--	<5.0	--	50	75
Phenolics	Monthly	EPA 420.1	µg/L	150	300	50	<150	--	<150	--	<150	--	300	NE
Benzene	Monthly	EPA 8260B	µg/L	0.048	1	2.0	<0.048	--	<0.048	--	<0.048	--	1	NE
1,1-Dichloroethane	Monthly	EPA 8260B	µg/L	0.062	0.5	1.0	<0.062	--	<0.062	--	<0.062	--	5	NE
1,2-Dichloroethane	Monthly	EPA 8260B	µg/L	0.04	0.5	2.0	<0.044	--	<0.044	--	<0.044	--	0.5	NE
Ethylbenzene	Monthly	EPA 8260B	µg/L	0.036	1	2.0	<0.036	--	<0.036	--	<0.036	--	10	NE
Toluene	Monthly	EPA 8260B	µg/L	0.034	2	2.0	<0.034	--	<0.034	--	<0.034	--	10	NE
Methyl tertiary-butyl ether	Monthly	EPA 8260B	µg/L	0.098	1	NE	0.43 J	--	<0.098	--	0.35 J	--	NE	5.0
Tertiary butyl alcohol	Monthly	EPA 8260B	µg/L	1	5	NE	<1.0	--	<1.0	--	<1.0	--	NE	150 ³
Total Xylenes	Monthly	EPA 8260B	µg/L	1.5	2	NE	<1.5	--	<1.5	--	<1.5	--	10	NE
Copper (total recoverable) (dry weather)	Monthly	EPA 200.8	µg/L	0.14	0.5	0.5	<0.14	--	<0.14	--	<0.14	--	16	33
Copper (total recoverable) (wet weather)	Monthly	EPA 200.8	µg/L	0.14	0.5	0.5	<0.14	--	<0.14	--	<0.14	--	16	33
Lead (total recoverable) (dry weather)	Monthly	EPA 200.8	µg/L	0.15	0.5	0.5	<0.15	--	<0.15	--	<0.15	--	8.2	15
Lead (total recoverable) (wet weather)	Monthly	EPA 200.8	µg/L	0.15	0.5	0.5	<0.15	--	<0.15	--	<0.15	--	8.2	15
Mercury (total recoverable)	Monthly	EPA 245.1	µg/L	0.026	0.05	0.2	0.03 J	--	0.027 J	--	0.031 J	--	0.051	0.14
Selenium (total recoverable)	Monthly	EPA 200.8	µg/L	0.084	0.5	2.0	0.14 J	--	0.17 J	--	0.086 J	--	3.4	9.2
Thallium (total recoverable)	Monthly	EPA 200.8	µg/L	0.075	0.5	1.0	<0.075	--	<0.075	--	<0.075	--	6.3	13
Zinc (total recoverable) (wet weather) ⁵	Monthly	EPA 200.8	µg/L	1.3	10	1.0	1.3 J	--	<1.3	--	<1.3	--	79	158
Chromium VI	Monthly	EPA 7199	µg/L	0.014	0.2	0.5	<0.014	--	--	<0.014	0.089J	--	8.1	16
pH	Quarterly	--	s.u.	--	--	NE	--	7	--	--	--	--	--	6.5/8.5
Ammonia Nitrogen (as N)	Quarterly	SM 4500 NH3C	mg/L	0.15	0.15	NE	--	<0.15	--	--	--	--	NE	NE
Di-isopropyl Ether	Quarterly	EPA 8260B	µg/L	0.038	1	NE	<0.038	--	--	--	--	--	NE	NE
Methylene Blue Active Substances	Quarterly	SM 5540C	mg/L	0.05	0.05	NE	--	<0.05	--	--	--	--	NE	NE
Tert-amyl-methyl Ether	Quarterly	EPA 8260B	µg/L	0.054	1	NE	<0.054	--	--	--	--	--	NE	NE
Turbidity	Quarterly	SM 2130B	NTU	0.1	0.1	NE	<0.1	--	--	--	--	--	50	75
Methyl ethyl ketone	Quarterly	EPA 8260B	µg/L	0.7	10	NE	<0.7	--	--	--	--	--	50	NE
Other Priority Pollutants	Quarterly	--	See Table 3	--	--	--	--	--	--	--	--	--	NE	NE
BOD	Annually	SM 5210B	mg/L	--	--	NE	--	--	--	--	--	--	20	30
Nitrate + Nitrite as N	Annually	EPA 300.0	mg/L	--	--	NE	--	--	--	--	--	--	NE	NE
Sulfides	Annually	SM 4500 S2-D	mg/L	--	--	NE	--	--	--	--	--	--	NE	NE
TCDD Equivalents	Annually	EPA 8290	pg/L	--	--	NE	--	--	--	--	--	--	NE	NE

Notes

- State Water Resources Control Board Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California.
 - California Regional Water Quality Control Board Waste Discharge Requirements (WDRs).
 - 150 µg/L discharge limit for tertiary butyl alcohol (TBA) is per Time Schedule Order.
 - The highest MDL and RL during this reporting period is shown.
 - There are no dry weather limitations for zinc.
- = not measured or not analyzed.

Abbreviations

BOD = biological oxygen demand (5 days at 20 degrees Celsius)
 ° F = degrees Fahrenheit
 DNQ = detected, but not quantified. Result is greater than or equal to the laboratory MDL but less than the ML (or RL if no ML is listed).
 J = detected at a concentration below the RL and above the MDL. Reported value is estimated.
 mg/L = milligrams per liter
 µg/L = micrograms per liter
 pg/L = picograms per liter
 < = not detected above the MDL
 MDL = laboratory method detection limit
 ML = minimum level. See note 1.
 NE = not established

TABLE 3

NPDES Effluent Monitoring, Remaining Priority Pollutants, Second Quarter 2013
SFPP Norwalk Pump Station, Norwalk, California

Analyte	Analytical Method	Units	MDL	RL	4/3/2013	4/9/2013	ML ¹
Analyte	EPA Method	Report Units	MDL	RL	4/3/2013	4/9/2013	ML
Antimony	EPA 200.8	µg/L	0.084	0.50	0.55	--	0.50
Arsenic	EPA 200.8	µg/L	0.035	0.10	23	--	2
Beryllium	EPA 200.8	µg/L	0.076	0.5	<0.076	--	0.50
Cadmium	EPA 200.8	µg/L	0.084	0.25	<0.084	--	0.25
Nickel	EPA 200.8	µg/L	0.17	1.0	0.27 J	--	1
Silver	EPA 200.8	µg/L	0.15	0.25	<0.15	--	0.25
Total Chromium	EPA 200.8	µg/L	0.17	0.50	<0.17	--	0.50
Chromium (III) (Total Cr - Cr VI)	Calculated	µg/L	0.17	0.50	<0.17	--	NE
Aroclor-1016	EPA 8082	µg/L	0.19	0.50	--	<0.19	0.5
Aroclor-1221	EPA 8082	µg/L	0.49	1.0	--	<0.49	0.5
Aroclor-1232	EPA 8082	µg/L	0.25	0.50	--	<0.25	0.5
Aroclor-1242	EPA 8082	µg/L	0.23	0.50	--	<0.23	0.5
Aroclor-1248	EPA 8082	µg/L	0.14	0.50	--	<0.14	0.5
Aroclor-1254	EPA 8082	µg/L	0.24	0.50	--	<0.24	0.5
Aroclor-1260	EPA 8082	µg/L	0.070	0.50	--	<0.07	0.5
4,4'-DDD	EPA 8081A	µg/L	0.0130	0.050	--	<0.013	0.05
4,4'-DDE	EPA 8081A	µg/L	0.0230	0.050	--	<0.023	0.05
4,4'-DDT	EPA 8081A	µg/L	0.0360	0.050	--	<0.036	0.01
Aldrin	EPA 8081A	µg/L	0.0082	0.025	--	<0.0082	0.005
Alpha Endosulfan	EPA 8081A	µg/L	0.0087	0.025	--	<0.0087	0.02
Alpha-BHC	EPA 8081A	µg/L	0.0087	0.025	--	<0.0087	0.01
Beta Endosulfan	EPA 8081A	µg/L	0.02	0.050	--	<0.02	0.01
Beta-BHC	EPA 8081A	µg/L	0.011	0.025	--	<0.011	0.005
Chlordane	EPA 8081A	µg/L	0.026	0.25	--	<0.026	0.1
Delta-BHC	EPA 8081A	µg/L	0.015	0.025	--	<0.015	0.005
Dieldrin	EPA 8081A	µg/L	0.018	0.050	--	<0.018	0.01
Endosulfan Sulfate	EPA 8081A	µg/L	0.027	0.050	--	<0.027	0.05
Endrin	EPA 8081A	µg/L	0.013	0.050	--	<0.013	0.01
Endrin Aldehyde	EPA 8081A	µg/L	0.027	0.050	--	<0.027	0.01
Gamma-BHC	EPA 8081A	µg/L	0.012	0.025	--	<0.012	0.02
Heptachlor	EPA 8081A	µg/L	0.012	0.025	--	<0.012	0.01
Heptachlor Epoxide	EPA 8081A	µg/L	0.0081	0.025	--	<0.0081	0.01
Toxaphene	EPA 8081A	µg/L	0.15	2.5	--	<0.15	0.5
1,1,1-Trichloroethane	EPA 8260B	µg/L	0.072	1.0	<0.072	--	2
1,1,2,2-Tetrachloroethane	EPA 8260B	µg/L	0.10	1.0	<0.1	--	1
1,1,2-Trichloroethane	EPA 8260B	µg/L	0.13	1.0	<0.13	--	2
1,1-Dichloroethene	EPA 8260B	µg/L	0.16	1.0	<0.16	--	2
1,2,4-Trichlorobenzene	EPA 8260B	µg/L	0.1	1.0	<0.1	--	5
1,2-Dichlorobenzene	EPA 8260B	µg/L	0.048	1.0	<0.048	--	2
1,2-Dichloropropane	EPA 8260B	µg/L	0.094	1.0	<0.094	--	1
1,3-Dichlorobenzene	EPA 8260B	µg/L	0.061	1.0	<0.061	--	1
1,4-Dichlorobenzene	EPA 8260B	µg/L	0.078	1.0	<0.078	--	1
2-Chloroethyl Vinyl Ether	EPA 8260B	µg/L	0.14	0.5	--	<0.14	1
Acrolein	EPA 8260B	µg/L	0.89	20	<0.89	--	5
Acrylonitrile	EPA 8260B	µg/L	0.68	20	<0.68	--	2
Bromodichloromethane	EPA 8260B	µg/L	0.048	1.0	<0.048	--	2
Bromoform	EPA 8260B	µg/L	0.18	1.0	<0.18	--	2
Bromomethane	EPA 8260B	µg/L	0.13	1.0	<0.13	--	2
cis-1,3-Dichloropropene	EPA 8260B	µg/L	0.051	1.0	<0.051	--	2
Carbon Tetrachloride	EPA 8260B	µg/L	0.057	1.0	<0.057	--	2
Chlorobenzene	EPA 8260B	µg/L	0.044	1.0	<0.044	--	2
Chloroethane	EPA 8260B	µg/L	0.17	1.0	<0.17	--	2
Chloroform	EPA 8260B	µg/L	0.048	1.0	<0.048	--	2
Chloromethane	EPA 8260B	µg/L	0.043	1.0	<0.043	--	2
Dibromochloromethane	EPA 8260B	µg/L	0.07	1.0	<0.07	--	2
Hexachlorobutadiene	EPA 8260B	µg/L	0.07	1.0	<0.07	--	1
Methylene Chloride	EPA 8260B	µg/L	0.28	2.0	<0.28	--	2
Naphthalene	EPA 8260B	µg/L	0.10	1.0	<0.1	--	1
trans-1,2-Dichloroethene	EPA 8260B	µg/L	0.11	1.0	<0.11	--	1
trans-1,3-Dichloropropene	EPA 8260B	µg/L	0.06	1.0	<0.06	--	2
Tetrachloroethene	EPA 8260B	µg/L	0.12	1.0	<0.12	--	2
Trichloroethene	EPA 8260B	µg/L	0.075	1.0	<0.075	--	2
Vinyl Chloride	EPA 8260B	µg/L	0.082	1.0	<0.082	--	2

TABLE 3

NPDES Effluent Monitoring, Remaining Priority Pollutants, Second Quarter 2013
SFPP Norwalk Pump Station, Norwalk, California

Analyte	Analytical Method	Units	MDL	RL	4/3/2013	4/9/2013	ML ¹
1,2-Diphenylhydrazine	EPA 8270C	µg/L	2.7	10	--	<2.7	1
2,4,6-Trichlorophenol	EPA 8270C	µg/L	2.7	10	--	<2.7	10
2,4-Dichlorophenol	EPA 8270C	µg/L	2.8	10	--	<2.8	5
2,4-Dimethylphenol	EPA 8270C	µg/L	2.6	10	--	<2.6	2
2,4-Dinitrophenol	EPA 8270C	µg/L	2.4	50	--	<2.4	5
2,4-Dinitrotoluene	EPA 8270C	µg/L	2.3	10	--	<2.3	5
2,6-Dinitrotoluene	EPA 8270C	µg/L	2.4	10	--	<2.4	5
2-Chloronaphthalene	EPA 8270C	µg/L	2.5	10	--	<2.5	10
2-Chlorophenol	EPA 8270C	µg/L	2.7	10	--	<2.7	5
2-Nitrophenol	EPA 8270C	µg/L	3.0	10	--	<3	10
3,3'-Dichlorobenzidine	EPA 8270C	µg/L	5.7	20	--	<5.7	5
4,6-Dinitro-2-Methylphenol	EPA 8270C	µg/L	2.0	50	--	<2	5
4-Bromophenyl-Phenyl Ether	EPA 8270C	µg/L	2.7	10	--	<2.7	5
4-Chloro-3-Methylphenol	EPA 8270C	µg/L	2.6	50	--	<2.6	1
4-Chlorophenyl-Phenyl Ether	EPA 8270C	µg/L	2.5	10	--	<2.5	5
4-Nitrophenol	EPA 8270C	µg/L	2.2	50	--	<2.2	10
Acenaphthene	EPA 8270C	µg/L	2.9	10	--	<2.9	1
Acenaphthylene	EPA 8270C	µg/L	3.0	10	--	<3	10
Anthracene	EPA 8270C	µg/L	2.6	10	--	<2.6	10
Benzidine	EPA 8270C	µg/L	7.9	50	--	<7.9	5
Benzo (a) Anthracene	EPA 8270C	µg/L	2.8	10	--	<2.8	5
Benzo (a) Pyrene	EPA 8270C	µg/L	2.6	10	--	<2.6	10
Benzo (b) Fluoranthene	EPA 8270C	µg/L	4.9	10	--	<4.9	10
Benzo (g,h,i) Perylene	EPA 8270C	µg/L	2.5	10	--	<2.5	5
Benzo (k) Fluoranthene	EPA 8270C	µg/L	2.9	10	--	<2.9	10
Bis(2-Chloroethoxy) Methane	EPA 8270C	µg/L	3.1	10	--	<3.1	5
Bis(2-Chloroethyl) Ether	EPA 8270C	µg/L	3.2	10	--	<3.2	1
Bis(2-Chloroisopropyl) Ether	EPA 8270C	µg/L	3.1	10	--	<3.1	2
Bis(2-Ethylhexyl) Phthalate	EPA 8270C	µg/L	2.6	10	--	<2.6	5
Butyl Benzyl Phthalate	EPA 8270C	µg/L	2.6	10	--	<2.6	10
Chrysene	EPA 8270C	µg/L	2.7	10	--	<2.7	10
Dibenz (a,h) Anthracene	EPA 8270C	µg/L	2.4	10	--	<2.4	10
Diethyl Phthalate	EPA 8270C	µg/L	2.7	10	--	<2.7	2
Dimethyl Phthalate	EPA 8270C	µg/L	2.6	10	--	<2.6	2
Di-n-Butyl Phthalate	EPA 8270C	µg/L	3.0	10	--	<3	10
Di-n-Octyl Phthalate	EPA 8270C	µg/L	2.4	10	--	<2.4	10
Fluoranthene	EPA 8270C	µg/L	3.2	10	--	<3.2	1
Fluorene	EPA 8270C	µg/L	2.7	10	--	<2.7	10
Hexachlorobenzene	EPA 8270C	µg/L	2.3	10	--	<2.3	1
Hexachlorocyclopentadiene	EPA 8270C	µg/L	2.3	10	--	<2.3	5
Hexachloroethane	EPA 8270C	µg/L	2.6	10	--	<2.6	1
Indeno (1,2,3-c,d) Pyrene	EPA 8270C	µg/L	2.5	10	--	<2.5	10
Isophorone	EPA 8270C	µg/L	3.0	10	--	<3	1
Nitrobenzene	EPA 8270C	µg/L	2.7	10	--	<2.7	1
N-Nitrosodimethylamine	EPA 8270C	µg/L	2.7	50	--	<2.7	5
N-Nitroso-di-n-propylamine	EPA 8270C	µg/L	2.9	10	--	<2.9	5
N-Nitrosodiphenylamine	EPA 8270C	µg/L	2.5	10	--	<2.5	1
Pentachlorophenol	EPA 8270C	µg/L	1.8	50	--	<1.8	5
Phenanthrene	EPA 8270C	µg/L	2.7	10	--	<2.7	5
Phenol	EPA 8270C	µg/L	1.9	10	--	<1.9	1
Pyrene	EPA 8270C	µg/L	3.1	10	--	<3.1	10
2,3,7,8-TCDD	EPA 8290	pg/L	0.2	0.2	--	0.31U	NE
Asbestos	EPA 600 94 134, 100.1	MFL	0.2	0.2	--	<0.2	NE
Cyanide (Total)	SM 4500 CN-E	mg/L	0.01	0.01	--	<0.005	NE

Note

1. State Water Resources Control Board Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California.

Abbreviations

DNQ = detected, but not quantified. Result is greater than or equal to the laboratory MDL but less than the ML (or RL if no ML is listed).

J = detected at a concentration below the RL and above the MDL. Reported value is estimated.

MDL = laboratory method detection limit

ML = minimum level

mg/L = milligrams per liter

µg/L = micrograms per liter

< = not detected above the MDL

NE = not established

MFL = millions of fibers per liter

pg/L = picograms per liter

RL = laboratory reporting limit

U= Under detection limit

Appendix A
Laboratory Analytical Reports and
Chain-of-Custody Documents

April 12, 2013

Daniel Jablonski
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612
TEL: (213)228-8271
FAX: (510) 622-9129

CA-ELAP No.:2676
NV Cert. No.:NV-009222007A

Workorder No.: N009937

RE: SFPP - Norwalk Site


Attention: Daniel Jablonski

Enclosed are the results for sample(s) received on April 04, 2013 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,


Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



**Advanced Technology
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Project: SFPP - Norwalk Site
Lab Order: N009937

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Subcontracted Analyses:

Phenols by EPA 420.1 and Settleable Solids by SM 2540F were subcontracted to Advanced Technology Laboratories-Signal Hill,CA.

Analytical Comments for EPA 200.8:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Silver possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 8260B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Acrolein possibly due to matrix interference.

Laboratory Control Sample (LCS) recovery biased low for Acrolein. NELAC standard allows for three analytes in marginal exceedence based on 51-70 analytes on Laboratory Control Sample (LCS).

CLIENT: CH2M HILL
Project: SFPP - Norwalk Site
Lab Order: N009937
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N009937-001A	EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	4/4/2013	4/12/2013
N009937-001B	EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	4/4/2013	4/12/2013
N009937-001C	EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	4/4/2013	4/12/2013
N009937-001D	EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	4/4/2013	4/12/2013
N009937-001E	EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	4/4/2013	4/12/2013
N009937-001F	EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	4/4/2013	4/12/2013
N009937-001G	EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	4/4/2013	4/12/2013
N009937-001H	EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	4/4/2013	4/12/2013
N009937-001I	EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	4/4/2013	4/12/2013



CLIENT: CH2M HILL
Lab Order: N009937
Project: SFPP - Norwalk Site
Lab ID: N009937-001

Client Sample ID: EFF-04-03
Collection Date: 4/3/2013 12:30:00 PM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL NON-FILTERABLE RESIDUE

SM2540D

RunID: WETCHEM_130405F	QC Batch: 42617				PrepDate: 4/5/2013		Analyst: LCC
Suspended Solids (Residue, Non-Filterable)	ND	5.0	5.0		mg/L	1	4/5/2013

TURBIDITY

SM 2130B

RunID: WETCHEM_130405G	QC Batch: R88337				PrepDate:		Analyst: QBM
Turbidity	ND	0.10	0.10		NTU	1	4/5/2013

HEXANE EXTRACTABLE MATERIAL (HEM)

EPA 1664 _HEM

RunID: WETCHEM_130408C	QC Batch: 42624				PrepDate: 4/8/2013		Analyst: QBM
Oil & Grease	ND	1.2	4.3		mg/L	1	4/8/2013

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_130404A	QC Batch: P13VW056				PrepDate:		Analyst: QBM
1,1,1,2-Tetrachloroethane	ND	0.068	1.0		µg/L	1	4/4/2013 12:02 PM
1,1,1-Trichloroethane	ND	0.072	1.0		µg/L	1	4/4/2013 12:02 PM
1,1,1,2,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	4/4/2013 12:02 PM
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	4/4/2013 12:02 PM
1,1-Dichloroethane	ND	0.062	0.50		µg/L	1	4/4/2013 12:02 PM
1,1-Dichloroethene	ND	0.16	1.0		µg/L	1	4/4/2013 12:02 PM
1,1-Dichloropropene	ND	0.073	1.0		µg/L	1	4/4/2013 12:02 PM
1,2,3-Trichlorobenzene	ND	0.084	1.0		µg/L	1	4/4/2013 12:02 PM
1,2,3-Trichloropropane	ND	0.11	1.0		µg/L	1	4/4/2013 12:02 PM
1,2,4-Trichlorobenzene	ND	0.10	1.0		µg/L	1	4/4/2013 12:02 PM
1,2,4-Trimethylbenzene	ND	0.036	1.0		µg/L	1	4/4/2013 12:02 PM
1,2-Dibromo-3-chloropropane	ND	0.34	2.0		µg/L	1	4/4/2013 12:02 PM
1,2-Dibromoethane	ND	0.090	1.0		µg/L	1	4/4/2013 12:02 PM
1,2-Dichlorobenzene	ND	0.048	1.0		µg/L	1	4/4/2013 12:02 PM
1,2-Dichloroethane	ND	0.044	0.50		µg/L	1	4/4/2013 12:02 PM
1,2-Dichloropropane	ND	0.094	1.0		µg/L	1	4/4/2013 12:02 PM
1,3,5-Trimethylbenzene	ND	0.054	1.0		µg/L	1	4/4/2013 12:02 PM
1,3-Dichlorobenzene	ND	0.061	1.0		µg/L	1	4/4/2013 12:02 PM
1,3-Dichloropropane	ND	0.081	1.0		µg/L	1	4/4/2013 12:02 PM
1,4-Dichlorobenzene	ND	0.078	1.0		µg/L	1	4/4/2013 12:02 PM
2,2-Dichloropropane	ND	0.061	1.0		µg/L	1	4/4/2013 12:02 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit S Spike/Surrogate outside of limits due to matrix interference
 Results are wet unless otherwise specified DO Surrogate Diluted Out



CLIENT: CH2M HILL
Lab Order: N009937
Project: SFPP - Norwalk Site
Lab ID: N009937-001

Client Sample ID: EFF-04-03
Collection Date: 4/3/2013 12:30:00 PM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_130404A	QC Batch: P13VW056	PrepDate:	Analyst: QBM
2-Butanone	ND 0.70	10	µg/L 1 4/4/2013 12:02 PM
2-Chlorotoluene	ND 0.054	1.0	µg/L 1 4/4/2013 12:02 PM
4-Chlorotoluene	ND 0.039	1.0	µg/L 1 4/4/2013 12:02 PM
4-Isopropyltoluene	ND 0.044	1.0	µg/L 1 4/4/2013 12:02 PM
4-Methyl-2-pentanone	ND 0.59	10	µg/L 1 4/4/2013 12:02 PM
Acetone	ND 1.2	10	µg/L 1 4/4/2013 12:02 PM
Acrolein	ND 0.89	20	µg/L 1 4/4/2013 12:02 PM
Acrylonitrile	ND 0.68	20	µg/L 1 4/4/2013 12:02 PM
Benzene	ND 0.048	1.0	µg/L 1 4/4/2013 12:02 PM
Bromobenzene	ND 0.054	1.0	µg/L 1 4/4/2013 12:02 PM
Bromochloromethane	ND 0.15	1.0	µg/L 1 4/4/2013 12:02 PM
Bromodichloromethane	ND 0.048	1.0	µg/L 1 4/4/2013 12:02 PM
Bromoform	ND 0.18	1.0	µg/L 1 4/4/2013 12:02 PM
Bromomethane	ND 0.13	1.0	µg/L 1 4/4/2013 12:02 PM
Carbon disulfide	ND 0.040	1.0	µg/L 1 4/4/2013 12:02 PM
Carbon tetrachloride	ND 0.057	1.0	µg/L 1 4/4/2013 12:02 PM
Chlorobenzene	ND 0.044	1.0	µg/L 1 4/4/2013 12:02 PM
Chloroethane	ND 0.17	1.0	µg/L 1 4/4/2013 12:02 PM
Chloroform	ND 0.048	1.0	µg/L 1 4/4/2013 12:02 PM
Chloromethane	ND 0.043	1.0	µg/L 1 4/4/2013 12:02 PM
cis-1,2-Dichloroethene	ND 0.057	1.0	µg/L 1 4/4/2013 12:02 PM
cis-1,3-Dichloropropene	ND 0.051	1.0	µg/L 1 4/4/2013 12:02 PM
Di-isopropyl ether	ND 0.038	1.0	µg/L 1 4/4/2013 12:02 PM
Dibromochloromethane	ND 0.070	1.0	µg/L 1 4/4/2013 12:02 PM
Dibromomethane	ND 0.11	1.0	µg/L 1 4/4/2013 12:02 PM
Dichlorodifluoromethane	ND 0.054	1.0	µg/L 1 4/4/2013 12:02 PM
Ethyl tert-butyl ether	ND 0.061	1.0	µg/L 1 4/4/2013 12:02 PM
Ethylbenzene	ND 0.036	1.0	µg/L 1 4/4/2013 12:02 PM
Freon-113	ND 0.15	1.0	µg/L 1 4/4/2013 12:02 PM
Hexachlorobutadiene	ND 0.070	1.0	µg/L 1 4/4/2013 12:02 PM
Isopropylbenzene	ND 0.073	1.0	µg/L 1 4/4/2013 12:02 PM
m,p-Xylene	ND 0.14	1.0	µg/L 1 4/4/2013 12:02 PM
Methylene chloride	ND 0.28	2.0	µg/L 1 4/4/2013 12:02 PM
MTBE	0.43 0.098	1.0	J µg/L 1 4/4/2013 12:02 PM
n-Butylbenzene	ND 0.076	1.0	µg/L 1 4/4/2013 12:02 PM
n-Propylbenzene	ND 0.049	1.0	µg/L 1 4/4/2013 12:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified

E Value above quantitation range
 J Analyte detected below quantitation limits
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out



CLIENT: CH2M HILL
Lab Order: N009937
Project: SFPP - Norwalk Site
Lab ID: N009937-001

Client Sample ID: EFF-04-03
Collection Date: 4/3/2013 12:30:00 PM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_130404A	QC Batch: P13VW056	PrepDate:	Analyst: QBM
Naphthalene	ND 0.10	1.0	µg/L 1 4/4/2013 12:02 PM
o-Xylene	ND 0.042	1.0	µg/L 1 4/4/2013 12:02 PM
sec-Butylbenzene	ND 0.036	1.0	µg/L 1 4/4/2013 12:02 PM
Styrene	ND 0.040	1.0	µg/L 1 4/4/2013 12:02 PM
Tert-amyl methyl ether	ND 0.054	1.0	µg/L 1 4/4/2013 12:02 PM
Tert-Butanol	ND 1.0	5.0	µg/L 1 4/4/2013 12:02 PM
tert-Butylbenzene	ND 0.040	1.0	µg/L 1 4/4/2013 12:02 PM
Tetrachloroethene	ND 0.12	1.0	µg/L 1 4/4/2013 12:02 PM
Toluene	ND 0.034	2.0	µg/L 1 4/4/2013 12:02 PM
trans-1,2-Dichloroethene	ND 0.11	1.0	µg/L 1 4/4/2013 12:02 PM
trans-1,3-Dichloropropene	ND 0.060	1.0	µg/L 1 4/4/2013 12:02 PM
Trichloroethene	ND 0.075	1.0	µg/L 1 4/4/2013 12:02 PM
Trichlorofluoromethane	ND 0.057	1.0	µg/L 1 4/4/2013 12:02 PM
Vinyl chloride	ND 0.082	1.0	µg/L 1 4/4/2013 12:02 PM
Xylenes, Total	ND 1.5	2.0	µg/L 1 4/4/2013 12:02 PM
Surr: 1,2-Dichloroethane-d4	98.2 0	72-119	%REC 1 4/4/2013 12:02 PM
Surr: 4-Bromofluorobenzene	94.6 0	76-119	%REC 1 4/4/2013 12:02 PM
Surr: Dibromofluoromethane	104 0	85-115	%REC 1 4/4/2013 12:02 PM
Surr: Toluene-d8	99.9 0	81-120	%REC 1 4/4/2013 12:02 PM

TPH EXTRACTABLE BY GC/FID

EPA 3510C

EPA 8015B

RunID: GC3_130408A	QC Batch: 42623	PrepDate: 4/8/2013	Analyst: MDM
TPH-Diesel (C13-C22)	ND 13	51	ug/L 1 4/8/2013 01:42 PM
TPH-Oil (C23-C36)	ND 9.7	51	ug/L 1 4/8/2013 01:42 PM
Surr: Octacosane	90.5 0	26-152	%REC 1 4/8/2013 01:42 PM
Surr: p-Terphenyl	91.9 0	57-132	%REC 1 4/8/2013 01:42 PM

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B

RunID: GC4_130405A	QC Batch: E13VW018	PrepDate:	Analyst: QBM
TPH-Gasoline (C4-C12)	ND 8.5	100	µg/L 1 4/5/2013 10:36 AM
Surr: Chlorobenzene - d5	84.8 0	74-138	%REC 1 4/5/2013 10:36 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified
 E Value above quantitation range
 J Analyte detected below quantitation limits
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out



Advanced Technology
 Laboratories, Inc.

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Lab Order: N009937
Project: SFPP - Norwalk Site
Lab ID: N009937-001

Client Sample ID: EFF-04-03
Collection Date: 4/3/2013 12:30:00 PM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 7199

RunID: IC6_130404A	QC Batch: R88316				PrepDate:		Analyst: QBM
Hexavalent Chromium	ND	0.014	0.20		µg/L	1	4/4/2013 10:48 AM

MERCURY BY COLD VAPOR TECHNIQUE

EPA 245.1

RunID: AA1_130404C	QC Batch: 42611				PrepDate:	4/4/2013	Analyst: WLS
Mercury	0.030	0.026	0.050	J	µg/L	1	4/4/2013

ICP-MS METALS BY COLLISION/REACTION CELL

EPA 200.8

RunID: ICP7_130404A	QC Batch: 42598				PrepDate:	4/4/2013	Analyst: CEI
Selenium	0.14	0.084	0.50	J	µg/L	1	4/4/2013 05:03 PM

ICPMS METALS

EPA 200.8

RunID: ICP7_130404A	QC Batch: 42598				PrepDate:	4/4/2013	Analyst: CEI
Antimony	0.55	0.084	0.50		µg/L	1	4/4/2013 05:03 PM
Arsenic	23	0.035	0.10		µg/L	1	4/4/2013 05:03 PM
Beryllium	ND	0.076	0.50		µg/L	1	4/4/2013 08:54 PM
Cadmium	ND	0.084	0.25		µg/L	1	4/4/2013 05:03 PM
Chromium	ND	0.17	0.50		µg/L	1	4/4/2013 05:03 PM
Copper	ND	0.14	0.50		µg/L	1	4/4/2013 05:03 PM
Lead	ND	0.15	0.50		µg/L	1	4/4/2013 05:03 PM
Nickel	0.27	0.17	1.0	J	µg/L	1	4/4/2013 05:03 PM
Silver	ND	0.15	0.25		µg/L	1	4/4/2013 05:03 PM
Thallium	ND	0.075	0.50		µg/L	1	4/4/2013 05:03 PM
Zinc	1.3	1.3	10	J	µg/L	1	4/4/2013 05:03 PM

TOTAL TPH

EPA 3510C

EPA 8015B

RunID: GC3_130408A	QC Batch: 42623				PrepDate:	4/8/2013	Analyst: MDM
Total TPH	ND	13	100		ug/L	1	4/8/2013 01:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified
 E Value above quantitation range
 J Analyte detected below quantitation limits
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out



CLIENT: CH2M HILL
Work Order: N009937
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.2_2540D_W

Sample ID: MB-42617	SampType: MBLK	TestCode: 160.2_2540D_ Units: mg/L	Prep Date: 4/5/2013	RunNo: 88322							
Client ID: PBW	Batch ID: 42617	TestNo: SM2540D	Analysis Date: 4/5/2013	SeqNo: 1550851							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter)	ND	10									

Sample ID: LCS-42617	SampType: LCS	TestCode: 160.2_2540D_ Units: mg/L	Prep Date: 4/5/2013	RunNo: 88322							
Client ID: LCSW	Batch ID: 42617	TestNo: SM2540D	Analysis Date: 4/5/2013	SeqNo: 1550852							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter)	978.000	10	1000	0	97.8	80	120				

Sample ID: N009937-001E-DUP	SampType: DUP	TestCode: 160.2_2540D_ Units: mg/L	Prep Date: 4/5/2013	RunNo: 88322							
Client ID: ZZZZZ	Batch ID: 42617	TestNo: SM2540D	Analysis Date: 4/5/2013	SeqNo: 1550854							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter)	ND	5.0						0	0	5	

Qualifiers:

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|---|--|----|-------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out | | Calculations are based on raw values |



CLIENT: CH2M HILL
Work Order: N009937
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 1664_HEM_W

Sample ID: MB-42624	SampType: MBLK	TestCode: 1664_HEM_W	Units: mg/L	Prep Date: 4/8/2013	RunNo: 88386						
Client ID: PBW	Batch ID: 42624	TestNo: EPA 1664_H		Analysis Date: 4/8/2013	SeqNo: 1554456						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Oil & Grease ND 4.0

Sample ID: LCS-42624	SampType: LCS	TestCode: 1664_HEM_W	Units: mg/L	Prep Date: 4/8/2013	RunNo: 88386						
Client ID: LCSW	Batch ID: 42624	TestNo: EPA 1664_H		Analysis Date: 4/8/2013	SeqNo: 1554457						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Oil & Grease 35.700 4.0 40.00 0 89.2 78 114

Sample ID: N009937-001A-MS	SampType: MS	TestCode: 1664_HEM_W	Units: mg/L	Prep Date: 4/8/2013	RunNo: 88386						
Client ID: ZZZZZ	Batch ID: 42624	TestNo: EPA 1664_H		Analysis Date: 4/8/2013	SeqNo: 1554459						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Oil & Grease 42.500 4.3 43.48 0 97.8 78 114

Sample ID: N009937-001A-MSD	SampType: MSD	TestCode: 1664_HEM_W	Units: mg/L	Prep Date: 4/8/2013	RunNo: 88386						
Client ID: ZZZZZ	Batch ID: 42624	TestNo: EPA 1664_H		Analysis Date: 4/8/2013	SeqNo: 1554460						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Oil & Grease 39.355 4.3 43.01 0 91.5 78 114 42.50 7.68 18

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



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CLIENT: CH2M HILL
Work Order: N009937
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_DRC

Sample ID: MB-42598	SampType: MBLK	TestCode: 200.8_W_DR	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88305						
Client ID: PBW	Batch ID: 42598	TestNo: EPA 200.8		Analysis Date: 4/4/2013	SeqNo: 1550347						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Selenium ND 0.50

Sample ID: LCS-42598	SampType: LCS	TestCode: 200.8_W_DR	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88305						
Client ID: LCSW	Batch ID: 42598	TestNo: EPA 200.8		Analysis Date: 4/4/2013	SeqNo: 1550348						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Selenium 10.343 0.50 10.00 0 103 85 115

Sample ID: N009937-001H-MS	SampType: MS	TestCode: 200.8_W_DR	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88305						
Client ID: ZZZZZ	Batch ID: 42598	TestNo: EPA 200.8		Analysis Date: 4/4/2013	SeqNo: 1550352						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Selenium 9.430 0.50 10.00 0.1399 92.9 75 125

Sample ID: N009937-001H-MSD	SampType: MSD	TestCode: 200.8_W_DR	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88305						
Client ID: ZZZZZ	Batch ID: 42598	TestNo: EPA 200.8		Analysis Date: 4/4/2013	SeqNo: 1550353						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Selenium 9.493 0.50 10.00 0.1399 93.5 75 125 9.430 0.667 20

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



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CLIENT: CH2M HILL
Work Order: N009937
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: MB-42598	SampType: MBLK	TestCode: 200.8_W_SFPP Units: µg/L	Prep Date: 4/4/2013	RunNo: 88305							
Client ID: PBW	Batch ID: 42598	TestNo: EPA 200.8	Analysis Date: 4/4/2013	SeqNo: 1550314							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Antimony	ND	0.50									
Arsenic	ND	0.10									
Cadmium	ND	0.25									
Chromium	ND	0.50									
Copper	ND	0.50									
Lead	ND	0.50									
Nickel	ND	1.0									
Silver	ND	0.25									
Thallium	ND	0.50									
Zinc	ND	10									

Sample ID: LCS-42598	SampType: LCS	TestCode: 200.8_W_SFPP Units: µg/L	Prep Date: 4/4/2013	RunNo: 88305							
Client ID: LCSW	Batch ID: 42598	TestNo: EPA 200.8	Analysis Date: 4/4/2013	SeqNo: 1550315							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Antimony	10.337	0.50	10.00	0	103	85	115				
Arsenic	11.219	0.10	10.00	0	112	85	115				
Cadmium	10.793	0.25	10.00	0	108	85	115				
Chromium	10.146	0.50	10.00	0	101	85	115				
Copper	10.013	0.50	10.00	0	100	85	115				
Lead	10.672	0.50	10.00	0	107	85	115				
Nickel	9.632	1.0	10.00	0	96.3	85	115				
Silver	10.057	0.25	10.00	0	101	85	115				
Thallium	10.652	0.50	10.00	0	107	85	115				
Zinc	102.861	10	100.0	0	103	85	115				

Sample ID: N009937-001H-MS	SampType: MS	TestCode: 200.8_W_SFPP Units: µg/L	Prep Date: 4/4/2013	RunNo: 88305							
Client ID: ZZZZZ	Batch ID: 42598	TestNo: EPA 200.8	Analysis Date: 4/4/2013	SeqNo: 1550319							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



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CLIENT: CH2M HILL
 Work Order: N009937
 Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: N009937-001H-MS	SampType: MS	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88305
Client ID: ZZZZZZ	Batch ID: 42598	TestNo: EPA 200.8		Analysis Date: 4/4/2013	SeqNo: 1550319

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.644	0.50	10.00	0.5500	101	75	125				
Arsenic	32.186	0.10	10.00	22.55	96.3	75	125				
Cadmium	9.021	0.25	10.00	0	90.2	75	125				
Chromium	8.659	0.50	10.00	0	86.6	75	125				
Copper	7.686	0.50	10.00	0	76.9	75	125				
Lead	8.692	0.50	10.00	0	86.9	75	125				
Nickel	7.953	1.0	10.00	0.2653	76.9	75	125				
Silver	ND	0.25	10.00	0	0	75	125				S
Thallium	8.908	0.50	10.00	0	89.1	75	125				
Zinc	89.566	10	100.0	1.330	88.2	75	125				

Sample ID: N009937-001H-MSD	SampType: MSD	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88305
Client ID: ZZZZZZ	Batch ID: 42598	TestNo: EPA 200.8		Analysis Date: 4/4/2013	SeqNo: 1550320

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.597	0.50	10.00	0.5500	100	75	125	10.64	0.444	20	
Arsenic	32.058	0.10	10.00	22.55	95.0	75	125	32.19	0.398	20	
Cadmium	9.026	0.25	10.00	0	90.3	75	125	9.021	0.0497	20	
Chromium	8.619	0.50	10.00	0	86.2	75	125	8.659	0.460	20	
Copper	7.557	0.50	10.00	0	75.6	75	125	7.686	1.69	20	
Lead	8.733	0.50	10.00	0	87.3	75	125	8.692	0.464	20	
Nickel	7.792	1.0	10.00	0.2653	75.3	75	125	7.953	2.05	20	
Silver	ND	0.25	10.00	0	0	75	125	0	0	20	S
Thallium	8.955	0.50	10.00	0	89.5	75	125	8.908	0.528	20	
Zinc	92.517	10	100.0	1.330	91.2	75	125	89.57	3.24	20	

Sample ID: MB-42598	SampType: MBLK	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88309
Client ID: PBW	Batch ID: 42598	TestNo: EPA 200.8		Analysis Date: 4/4/2013	SeqNo: 1550365

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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Qualifiers:

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|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



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CLIENT: CH2M HILL
Work Order: N009937
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: MB-42598	SampType: MBLK	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88309						
Client ID: PBW	Batch ID: 42598	TestNo: EPA 200.8		Analysis Date: 4/4/2013	SeqNo: 1550365						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Beryllium ND 0.50

Sample ID: LCS-42598	SampType: LCS	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88309						
Client ID: LCSW	Batch ID: 42598	TestNo: EPA 200.8		Analysis Date: 4/4/2013	SeqNo: 1550366						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Beryllium 10.112 0.50 10.00 0 101 85 115

Sample ID: N009937-001H-MS	SampType: MS	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88309						
Client ID: ZZZZZ	Batch ID: 42598	TestNo: EPA 200.8		Analysis Date: 4/4/2013	SeqNo: 1550370						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Beryllium 8.351 0.50 10.00 0 83.5 75 125

Sample ID: N009937-001H-MSD	SampType: MSD	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88309						
Client ID: ZZZZZ	Batch ID: 42598	TestNo: EPA 200.8		Analysis Date: 4/4/2013	SeqNo: 1550371						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Beryllium 8.348 0.50 10.00 0 83.5 75 125 8.351 0.0288 20

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 2130_W

Sample ID: MB-R88337	SampType: MBLK	TestCode: 2130_W	Units: NTU	Prep Date:	RunNo: 88337						
Client ID: PBW	Batch ID: R88337	TestNo: SM 2130B		Analysis Date: 4/5/5013	SeqNo: 1552248						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Turbidity	ND	0.10									
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Sample ID: N009937-001E-DUP	SampType: DUP	TestCode: 2130_W	Units: NTU	Prep Date:	RunNo: 88337						
Client ID: ZZZZZ	Batch ID: R88337	TestNo: SM 2130B		Analysis Date: 4/5/5013	SeqNo: 1552250						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Turbidity	ND	0.10				0	0	30			
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Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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CLIENT: CH2M HILL
Work Order: N009937
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_W_LL

Sample ID: LCS-42611	SampType: LCS	TestCode: 245.1_W_LL	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88302						
Client ID: LCSW	Batch ID: 42611	TestNo: EPA 245.1		Analysis Date: 4/4/2013	SeqNo: 1549893						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	2.490	0.050	2.500	0	99.6	85	115				
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Sample ID: MB-42611	SampType: MBLK	TestCode: 245.1_W_LL	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88302						
Client ID: PBW	Batch ID: 42611	TestNo: EPA 245.1		Analysis Date: 4/4/2013	SeqNo: 1549894						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	ND	0.050									
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Sample ID: N009937-001H-MS	SampType: MS	TestCode: 245.1_W_LL	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88302						
Client ID: ZZZZZ	Batch ID: 42611	TestNo: EPA 245.1		Analysis Date: 4/4/2013	SeqNo: 1549896						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	2.540	0.050	2.500	0.02980	100	75	125				
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Sample ID: N009937-001H-MSD	SampType: MSD	TestCode: 245.1_W_LL	Units: µg/L	Prep Date: 4/4/2013	RunNo: 88302						
Client ID: ZZZZZ	Batch ID: 42611	TestNo: EPA 245.1		Analysis Date: 4/4/2013	SeqNo: 1549897						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	2.650	0.050	2.500	0.02980	105	75	125	2.540	4.24	20	
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Qualifiers:

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|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



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CLIENT: CH2M HILL
Work Order: N009937
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 7199_WPGE

Sample ID: MB-R88316	SampType: MBLK	TestCode: 7199_WPGE	Units: µg/L	Prep Date:	RunNo: 88316						
Client ID: PBW	Batch ID: R88316	TestNo: EPA 7199		Analysis Date: 4/4/2013	SeqNo: 1550690						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.026	0.20									J

Sample ID: LCS-R88316	SampType: LCS	TestCode: 7199_WPGE	Units: µg/L	Prep Date:	RunNo: 88316						
Client ID: LCSW	Batch ID: R88316	TestNo: EPA 7199		Analysis Date: 4/4/2013	SeqNo: 1550691						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.996	0.20	5.000	0	99.9	90	110				

Sample ID: N009937-001DUP	SampType: DUP	TestCode: 7199_WPGE	Units: µg/L	Prep Date:	RunNo: 88316						
Client ID: ZZZZZZ	Batch ID: R88316	TestNo: EPA 7199		Analysis Date: 4/4/2013	SeqNo: 1550693						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.103	0.20						0	0	20	J

Sample ID: N009937-001IMS	SampType: MS	TestCode: 7199_WPGE	Units: µg/L	Prep Date:	RunNo: 88316						
Client ID: ZZZZZZ	Batch ID: R88316	TestNo: EPA 7199		Analysis Date: 4/4/2013	SeqNo: 1550694						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.082	0.20	1.000	0	108	85	115				

Sample ID: N009931-011AMS	SampType: MS	TestCode: 7199_WPGE	Units: µg/L	Prep Date:	RunNo: 88316						
Client ID: ZZZZZZ	Batch ID: R88316	TestNo: EPA 7199		Analysis Date: 4/4/2013	SeqNo: 1550696						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.301	0.20	1.000	1.304	99.7	85	115				

Qualifiers:

- | | | |
|--|--|--|
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CLIENT: CH2M HILL
Work Order: N009937
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 7199_WPGE

Sample ID: N009931-011AMSD	SampType: MSD	TestCode: 7199_WPGE	Units: µg/L	Prep Date:	RunNo: 88316						
Client ID: ZZZZZZ	Batch ID: R88316	TestNo: EPA 7199		Analysis Date: 4/4/2013	SeqNo: 1550697						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.241	0.20	1.000	1.304	93.8	85	115	2.301	2.63	20	

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



**Advanced Technology
Laboratories, Inc.**

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CLIENT: CH2M HILL
Work Order: N009937
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_FP_SFPP

Sample ID: MB-42623	SampType: MBLK	TestCode: 8015_W_FP_	Units: ug/L	Prep Date: 4/8/2013	RunNo: 88340						
Client ID: PBW	Batch ID: 42623	TestNo: EPA 8015B EPA 3510C		Analysis Date: 4/8/2013	SeqNo: 1552507						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel (C13-C22)	ND	50									
TPH-Oil (C23-C36)	ND	50									
Surr: Octacosane	66.285		80.00		82.9	26	152				
Surr: p-Terphenyl	67.589		80.00		84.5	57	132				

Qualifiers:

- | | | |
|--|--|--|
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CLIENT: CH2M HILL
Work Order: N009937
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_GSFPP

Sample ID: E130405LCS	SampType: LCS	TestCode: 8015_W_GSF	Units: µg/L	Prep Date:	RunNo: 88321						
Client ID: LCSW	Batch ID: E13VW018	TestNo: EPA 8015B		Analysis Date: 4/5/2013	SeqNo: 1550855						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Gasoline (C4-C12)	1173.000	100	1000	0	117	67	136				
Surr: Chlorobenzene - d5	47259.000		50000		94.5	74	138				

Sample ID: E130405MB1	SampType: MBLK	TestCode: 8015_W_GSF	Units: µg/L	Prep Date:	RunNo: 88321						
Client ID: PBW	Batch ID: E13VW018	TestNo: EPA 8015B		Analysis Date: 4/5/2013	SeqNo: 1550856						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Gasoline (C4-C12)	ND	100									
Surr: Chlorobenzene - d5	44078.000		50000		88.2	74	138				

Sample ID: N009937-001CMS	SampType: MS	TestCode: 8015_W_GSF	Units: µg/L	Prep Date:	RunNo: 88321						
Client ID: ZZZZZ	Batch ID: E13VW018	TestNo: EPA 8015B		Analysis Date: 4/5/2013	SeqNo: 1550858						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Gasoline (C4-C12)	840.000	100	1000	0	84.0	67	136				
Surr: Chlorobenzene - d5	44184.000		50000		88.4	74	138				

Sample ID: N009937-001CMSD	SampType: MSD	TestCode: 8015_W_GSF	Units: µg/L	Prep Date:	RunNo: 88321						
Client ID: ZZZZZ	Batch ID: E13VW018	TestNo: EPA 8015B		Analysis Date: 4/5/2013	SeqNo: 1550859						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Gasoline (C4-C12)	1040.000	100	1000	0	104	67	136	840.0	21.3	30	
Surr: Chlorobenzene - d5	48250.000		50000		96.5	74	138		0	0	

Qualifiers:

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|--|--|--|
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CLIENT: CH2M HILL
Work Order: N009937
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPTOT

Sample ID: MB-42623	SampType: MBLK	TestCode: 8015_W_SFPP	Units: ug/L	Prep Date: 4/8/2013	RunNo: 88340						
Client ID: PBW	Batch ID: 42623	TestNo: EPA 8015B	EPA 3510C	Analysis Date: 4/8/2013	SeqNo: 1552509						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total TPH	ND	100									

Qualifiers:

- | | | |
|--|--|--|
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CLIENT: CH2M HILL
 Work Order: N009937
 Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P130404LCS	SampType: LCS	TestCode: 8260_WP_SF	Units: µg/L	Prep Date:	RunNo: 88303
Client ID: LCSW	Batch ID: P13VW056	TestNo: EPA 8260B		Analysis Date: 4/4/2013	SeqNo: 1550291

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	19.850	1.0	20.00	0	99.2	81	129				
1,1,1-Trichloroethane	18.730	1.0	20.00	0	93.6	67	132				
1,1,2,2-Tetrachloroethane	19.880	1.0	20.00	0	99.4	63	128				
1,1,2-Trichloroethane	18.420	1.0	20.00	0	92.1	75	125				
1,1-Dichloroethane	18.440	0.50	20.00	0	92.2	69	133				
1,1-Dichloroethene	19.830	1.0	20.00	0	99.2	68	130				
1,1-Dichloropropene	18.870	1.0	20.00	0	94.4	73	132				
1,2,3-Trichlorobenzene	21.890	1.0	20.00	0	109	67	137				
1,2,3-Trichloropropane	18.740	1.0	20.00	0	93.7	73	124				
1,2,4-Trichlorobenzene	21.110	1.0	20.00	0	106	66	134				
1,2,4-Trimethylbenzene	19.630	1.0	20.00	0	98.2	74	132				
1,2-Dibromo-3-chloropropane	20.800	2.0	20.00	0	104	50	132				
1,2-Dibromoethane	19.730	1.0	20.00	0	98.6	80	121				
1,2-Dichlorobenzene	20.690	1.0	20.00	0	103	71	122				
1,2-Dichloroethane	17.980	0.50	20.00	0	89.9	69	132				
1,2-Dichloropropane	17.810	1.0	20.00	0	89.0	75	125				
1,3,5-Trimethylbenzene	19.600	1.0	20.00	0	98.0	74	131				
1,3-Dichlorobenzene	20.120	1.0	20.00	0	101	75	124				
1,3-Dichloropropane	19.040	1.0	20.00	0	95.2	73	126				
1,4-Dichlorobenzene	19.730	1.0	20.00	0	98.6	74	123				
2,2-Dichloropropane	19.810	1.0	20.00	0	99.0	69	137				
2-Butanone	179.350	10	200.0	0	89.7	49	136				
2-Chlorotoluene	19.250	1.0	20.00	0	96.2	73	126				
4-Chlorotoluene	19.290	1.0	20.00	0	96.5	74	128				
4-Isopropyltoluene	19.720	1.0	20.00	0	98.6	73	130				
4-Methyl-2-pentanone	180.350	10	200.0	0	90.2	58	134				
Acetone	182.350	10	200.0	0	91.2	40	135				
Acrolein	149.140	20	200.0	0	74.6	75	125				S
Acrylonitrile	198.650	20	200.0	0	99.3	75	125				
Benzene	18.940	1.0	20.00	0	94.7	81	122				

Qualifiers:

- | | | |
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CLIENT: CH2M HILL
 Work Order: N009937
 Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P130404LCS	SampType: LCS	TestCode: 8260_WP_SF	Units: µg/L	Prep Date:	RunNo: 88303
Client ID: LCSW	Batch ID: P13VW056	TestNo: EPA 8260B		Analysis Date: 4/4/2013	SeqNo: 1550291

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromobenzene	19.930	1.0	20.00	0	99.7	76	124				
Bromochloromethane	20.520	1.0	20.00	0	103	65	129				
Bromodichloromethane	19.570	1.0	20.00	0	97.9	76	121				
Bromoform	22.640	1.0	20.00	0	113	69	128				
Bromomethane	22.410	1.0	20.00	0	112	53	141				
Carbon disulfide	19.730	1.0	20.00	0	98.6	75	125				
Carbon tetrachloride	20.250	1.0	20.00	0	101	66	138				
Chlorobenzene	19.910	1.0	20.00	0	99.6	81	122				
Chloroethane	21.250	1.0	20.00	0	106	58	133				
Chloroform	18.920	1.0	20.00	0	94.6	69	128				
Chloromethane	15.530	1.0	20.00	0	77.7	56	131				
cis-1,2-Dichloroethene	19.520	1.0	20.00	0	97.6	72	126				
cis-1,3-Dichloropropene	18.670	1.0	20.00	0	93.4	69	131				
Di-isopropyl ether	17.260	1.0	20.00	0	86.3	70	130				
Dibromochloromethane	20.800	1.0	20.00	0	104	66	133				
Dibromomethane	18.970	1.0	20.00	0	94.8	76	125				
Dichlorodifluoromethane	12.970	1.0	20.00	0	64.9	53	153				
Ethyl tert-butyl ether	17.840	1.0	20.00	0	89.2	70	130				
Ethylbenzene	19.240	1.0	20.00	0	96.2	73	127				
Freon-113	20.280	1.0	20.00	0	101	75	125				
Hexachlorobutadiene	21.770	1.0	20.00	0	109	67	131				
Isopropylbenzene	19.570	1.0	20.00	0	97.9	75	127				
m,p-Xylene	38.240	1.0	40.00	0	95.6	76	128				
Methylene chloride	18.680	2.0	20.00	0	93.4	63	137				
MTBE	17.970	1.0	20.00	0	89.8	65	123				
n-Butylbenzene	20.100	1.0	20.00	0	101	69	137				
n-Propylbenzene	19.480	1.0	20.00	0	97.4	72	129				
Naphthalene	21.960	1.0	20.00	0	110	54	138				
o-Xylene	19.090	1.0	20.00	0	95.4	80	121				
sec-Butylbenzene	19.530	1.0	20.00	0	97.6	72	127				

Qualifiers:

- | | | |
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CLIENT: CH2M HILL
Work Order: N009937
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P130404LCS		SampType: LCS		TestCode: 8260_WP_SF Units: µg/L		Prep Date:		RunNo: 88303			
Client ID: LCSW		Batch ID: P13VW056		TestNo: EPA 8260B		Analysis Date: 4/4/2013		SeqNo: 1550291			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Styrene	19.830	1.0	20.00	0	99.2	65	134				
Tert-amyl methyl ether	17.970	1.0	20.00	0	89.8	70	130				
Tert-Butanol	81.600	5.0	100.0	0	81.6	70	130				
tert-Butylbenzene	20.000	1.0	20.00	0	100	70	129				
Tetrachloroethene	19.060	1.0	20.00	0	95.3	66	128				
Toluene	18.940	2.0	20.00	0	94.7	77	122				
trans-1,2-Dichloroethene	19.610	1.0	20.00	0	98.0	63	137				
trans-1,3-Dichloropropene	18.990	1.0	20.00	0	95.0	59	135				
Trichloroethene	19.670	1.0	20.00	0	98.4	70	127				
Trichlorofluoromethane	19.840	1.0	20.00	0	99.2	57	129				
Vinyl chloride	17.070	1.0	20.00	0	85.4	50	134				
Xylenes, Total	57.330	2.0	60.00	0	95.6	75	125				
Surr: 1,2-Dichloroethane-d4	23.840		25.00		95.4	72	119				
Surr: 4-Bromofluorobenzene	24.410		25.00		97.6	76	119				
Surr: Dibromofluoromethane	25.000		25.00		100	85	115				
Surr: Toluene-d8	24.850		25.00		99.4	81	120				

Sample ID: P130404MB2		SampType: MBLK		TestCode: 8260_WP_SF Units: µg/L		Prep Date:		RunNo: 88303			
Client ID: PBW		Batch ID: P13VW056		TestNo: EPA 8260B		Analysis Date: 4/4/2013		SeqNo: 1550292			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	1.0									
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	1.0									
1,1-Dichloropropene	ND	1.0									
1,2,3-Trichlorobenzene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									

Qualifiers:

- | | | |
|--|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P130404MB2	SampType: MBLK	TestCode: 8260_WP_SF	Units: µg/L	Prep Date:	RunNo: 88303						
Client ID: PBW	Batch ID: P13VW056	TestNo: EPA 8260B		Analysis Date: 4/4/2013	SeqNo: 1550292						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	1.0									
1,2,4-Trimethylbenzene	ND	1.0									
1,2-Dibromo-3-chloropropane	ND	2.0									
1,2-Dibromoethane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	1.0									
1,3,5-Trimethylbenzene	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2,2-Dichloropropane	ND	1.0									
2-Butanone	ND	10									
2-Chlorotoluene	ND	1.0									
4-Chlorotoluene	ND	1.0									
4-Isopropyltoluene	ND	1.0									
4-Methyl-2-pentanone	ND	10									
Acetone	ND	10									
Acrolein	ND	20									
Acrylonitrile	ND	20									
Benzene	ND	1.0									
Bromobenzene	ND	1.0									
Bromochloromethane	ND	1.0									
Bromodichloromethane	ND	1.0									
Bromoform	ND	1.0									
Bromomethane	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									

Qualifiers:

- | | | |
|--|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P130404MB2	SampType: MBLK	TestCode: 8260_WP_SF	Units: µg/L	Prep Date:	RunNo: 88303
Client ID: PBW	Batch ID: P13VW056	TestNo: EPA 8260B		Analysis Date: 4/4/2013	SeqNo: 1550292

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	ND	1.0									
Chloromethane	ND	1.0									
cis-1,2-Dichloroethene	ND	1.0									
cis-1,3-Dichloropropene	ND	1.0									
Di-isopropyl ether	ND	1.0									
Dibromochloromethane	ND	1.0									
Dibromomethane	ND	1.0									
Dichlorodifluoromethane	ND	1.0									
Ethyl tert-butyl ether	ND	1.0									
Ethylbenzene	ND	1.0									
Freon-113	ND	1.0									
Hexachlorobutadiene	ND	1.0									
Isopropylbenzene	ND	1.0									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	2.0									
MTBE	ND	1.0									
n-Butylbenzene	ND	1.0									
n-Propylbenzene	ND	1.0									
Naphthalene	ND	1.0									
o-Xylene	ND	1.0									
sec-Butylbenzene	ND	1.0									
Styrene	ND	1.0									
Tert-amyl methyl ether	ND	1.0									
Tert-Butanol	ND	5.0									
tert-Butylbenzene	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	2.0									
trans-1,2-Dichloroethene	ND	1.0									
trans-1,3-Dichloropropene	ND	1.0									
Trichloroethene	ND	1.0									

Qualifiers:

- | | | |
|--|--|--|
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CLIENT: CH2M HILL
 Work Order: N009937
 Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P130404MB2	SampType: MBLK	TestCode: 8260_WP_SF	Units: µg/L	Prep Date:	RunNo: 88303						
Client ID: PBW	Batch ID: P13VW056	TestNo: EPA 8260B	Analysis Date: 4/4/2013	SeqNo: 1550292							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-d4	23.630		25.00		94.5	72	119				
Surr: 4-Bromofluorobenzene	23.540		25.00		94.2	76	119				
Surr: Dibromofluoromethane	25.790		25.00		103	85	115				
Surr: Toluene-d8	24.700		25.00		98.8	81	120				

Sample ID: N009937-001GMS	SampType: MS	TestCode: 8260_WP_SF	Units: µg/L	Prep Date:	RunNo: 88303						
Client ID: ZZZZZ	Batch ID: P13VW056	TestNo: EPA 8260B	Analysis Date: 4/4/2013	SeqNo: 1550294							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.370	1.0	20.00	0	102	81	129				
1,1,1-Trichloroethane	19.700	1.0	20.00	0	98.5	67	132				
1,1,2,2-Tetrachloroethane	19.420	1.0	20.00	0	97.1	63	128				
1,1,2-Trichloroethane	19.300	1.0	20.00	0	96.5	75	125				
1,1-Dichloroethane	18.260	0.50	20.00	0	91.3	69	133				
1,1-Dichloroethene	21.730	1.0	20.00	0	109	68	130				
1,1-Dichloropropene	19.390	1.0	20.00	0	97.0	73	132				
1,2,3-Trichlorobenzene	21.630	1.0	20.00	0	108	67	137				
1,2,3-Trichloropropane	18.740	1.0	20.00	0	93.7	73	124				
1,2,4-Trichlorobenzene	21.310	1.0	20.00	0	107	66	134				
1,2,4-Trimethylbenzene	19.660	1.0	20.00	0	98.3	74	132				
1,2-Dibromo-3-chloropropane	20.850	2.0	20.00	0	104	50	132				
1,2-Dibromoethane	20.070	1.0	20.00	0	100	80	121				
1,2-Dichlorobenzene	20.830	1.0	20.00	0	104	71	122				
1,2-Dichloroethane	19.690	0.50	20.00	0	98.4	69	132				
1,2-Dichloropropane	17.820	1.0	20.00	0	89.1	75	125				
1,3,5-Trimethylbenzene	19.530	1.0	20.00	0	97.6	74	131				
1,3-Dichlorobenzene	20.410	1.0	20.00	0	102	75	124				

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



**Advanced Technology
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
 Work Order: N009937
 Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N009937-001GMS	SampType: MS	TestCode: 8260_WP_SF	Units: µg/L	Prep Date:	RunNo: 88303
Client ID: ZZZZZZ	Batch ID: P13VW056	TestNo: EPA 8260B		Analysis Date: 4/4/2013	SeqNo: 1550294

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichloropropane	18.930	1.0	20.00	0	94.6	73	126				
1,4-Dichlorobenzene	19.840	1.0	20.00	0	99.2	74	123				
2,2-Dichloropropane	19.220	1.0	20.00	0	96.1	69	137				
2-Butanone	122.110	10	200.0	0	61.1	49	136				
2-Chlorotoluene	19.210	1.0	20.00	0	96.0	73	126				
4-Chlorotoluene	19.130	1.0	20.00	0	95.7	74	128				
4-Isopropyltoluene	20.020	1.0	20.00	0	100	73	130				
4-Methyl-2-pentanone	179.940	10	200.0	0	90.0	58	134				
Acetone	90.520	10	200.0	0	45.3	40	135				
Acrolein	139.470	20	200.0	0	69.7	75	125				S
Acrylonitrile	196.380	20	200.0	0	98.2	75	125				
Benzene	19.290	1.0	20.00	0	96.5	81	122				
Bromobenzene	20.200	1.0	20.00	0	101	76	124				
Bromochloromethane	20.840	1.0	20.00	0	104	65	129				
Bromodichloromethane	20.850	1.0	20.00	0	104	76	121				
Bromoform	23.340	1.0	20.00	0	117	69	128				
Bromomethane	23.210	1.0	20.00	0	116	53	141				
Carbon disulfide	20.940	1.0	20.00	0	105	75	125				
Carbon tetrachloride	21.180	1.0	20.00	0	106	66	138				
Chlorobenzene	20.010	1.0	20.00	0	100	81	122				
Chloroethane	20.280	1.0	20.00	0	101	58	133				
Chloroform	20.050	1.0	20.00	0	100	69	128				
Chloromethane	14.070	1.0	20.00	0	70.4	56	131				
cis-1,2-Dichloroethene	19.350	1.0	20.00	0	96.8	72	126				
cis-1,3-Dichloropropene	18.690	1.0	20.00	0	93.5	69	131				
Di-isopropyl ether	17.210	1.0	20.00	0	86.1	70	130				
Dibromochloromethane	21.300	1.0	20.00	0	106	66	133				
Dibromomethane	19.930	1.0	20.00	0	99.7	76	125				
Dichlorodifluoromethane	13.570	1.0	20.00	0	67.8	53	153				
Ethyl tert-butyl ether	18.370	1.0	20.00	0	91.9	70	130				

Qualifiers:

- | | | |
|--|--|--|
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**Advanced Technology
Laboratories, Inc.**

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CLIENT: CH2M HILL
 Work Order: N009937
 Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N009937-001GMS	SampType: MS	TestCode: 8260_WP_SF	Units: µg/L	Prep Date:	RunNo: 88303						
Client ID: ZZZZZ	Batch ID: P13VW056	TestNo: EPA 8260B		Analysis Date: 4/4/2013	SeqNo: 1550294						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	19.480	1.0	20.00	0	97.4	73	127				
Freon-113	20.940	1.0	20.00	0	105	75	125				
Hexachlorobutadiene	21.410	1.0	20.00	0	107	67	131				
Isopropylbenzene	19.470	1.0	20.00	0	97.4	75	127				
m,p-Xylene	38.870	1.0	40.00	0	97.2	76	128				
Methylene chloride	18.570	2.0	20.00	0	92.8	63	137				
MTBE	18.510	1.0	20.00	0.4300	90.4	65	123				
n-Butylbenzene	19.840	1.0	20.00	0	99.2	69	137				
n-Propylbenzene	19.340	1.0	20.00	0	96.7	72	129				
Naphthalene	22.130	1.0	20.00	0	111	54	138				
o-Xylene	19.510	1.0	20.00	0	97.6	80	121				
sec-Butylbenzene	19.500	1.0	20.00	0	97.5	72	127				
Styrene	19.660	1.0	20.00	0	98.3	65	134				
Tert-amyl methyl ether	18.040	1.0	20.00	0	90.2	70	130				
Tert-Butanol	77.890	5.0	100.0	0	77.9	70	130				
tert-Butylbenzene	19.950	1.0	20.00	0	99.8	70	129				
Tetrachloroethene	19.170	1.0	20.00	0	95.9	66	128				
Toluene	19.660	2.0	20.00	0	98.3	77	122				
trans-1,2-Dichloroethene	19.430	1.0	20.00	0	97.2	63	137				
trans-1,3-Dichloropropene	19.690	1.0	20.00	0	98.4	59	135				
Trichloroethene	19.850	1.0	20.00	0	99.2	70	127				
Trichlorofluoromethane	21.570	1.0	20.00	0	108	57	129				
Vinyl chloride	16.420	1.0	20.00	0	82.1	50	134				
Xylenes, Total	58.380	2.0	60.00	0	97.3	75	125				
Surr: 1,2-Dichloroethane-d4	24.800		25.00		99.2	72	119				
Surr: 4-Bromofluorobenzene	24.230		25.00		96.9	76	119				
Surr: Dibromofluoromethane	25.860		25.00		103	85	115				
Surr: Toluene-d8	25.320		25.00		101	81	120				

Qualifiers:

- | | | |
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| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



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Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
 Work Order: N009937
 Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N009937-001GMSD	SampType: MSD	TestCode: 8260_WP_SF	Units: µg/L	Prep Date:	RunNo: 88303						
Client ID: ZZZZZ	Batch ID: P13VW056	TestNo: EPA 8260B		Analysis Date: 4/4/2013	SeqNo: 1550295						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.480	1.0	20.00	0	102	81	129	20.37	0.539	20	
1,1,1-Trichloroethane	19.340	1.0	20.00	0	96.7	67	132	19.70	1.84	20	
1,1,2,2-Tetrachloroethane	19.700	1.0	20.00	0	98.5	63	128	19.42	1.43	20	
1,1,2-Trichloroethane	19.040	1.0	20.00	0	95.2	75	125	19.30	1.36	20	
1,1-Dichloroethane	18.020	0.50	20.00	0	90.1	69	133	18.26	1.32	20	
1,1-Dichloroethene	20.670	1.0	20.00	0	103	68	130	21.73	5.00	20	
1,1-Dichloropropene	19.020	1.0	20.00	0	95.1	73	132	19.39	1.93	20	
1,2,3-Trichlorobenzene	22.490	1.0	20.00	0	112	67	137	21.63	3.90	20	
1,2,3-Trichloropropane	18.990	1.0	20.00	0	95.0	73	124	18.74	1.33	20	
1,2,4-Trichlorobenzene	22.160	1.0	20.00	0	111	66	134	21.31	3.91	20	
1,2,4-Trimethylbenzene	20.080	1.0	20.00	0	100	74	132	19.66	2.11	20	
1,2-Dibromo-3-chloropropane	21.360	2.0	20.00	0	107	50	132	20.85	2.42	20	
1,2-Dibromoethane	19.760	1.0	20.00	0	98.8	80	121	20.07	1.56	20	
1,2-Dichlorobenzene	21.680	1.0	20.00	0	108	71	122	20.83	4.00	20	
1,2-Dichloroethane	19.180	0.50	20.00	0	95.9	69	132	19.69	2.62	20	
1,2-Dichloropropane	17.290	1.0	20.00	0	86.5	75	125	17.82	3.02	20	
1,3,5-Trimethylbenzene	20.100	1.0	20.00	0	101	74	131	19.53	2.88	20	
1,3-Dichlorobenzene	20.710	1.0	20.00	0	104	75	124	20.41	1.46	20	
1,3-Dichloropropane	18.410	1.0	20.00	0	92.0	73	126	18.93	2.79	20	
1,4-Dichlorobenzene	20.580	1.0	20.00	0	103	74	123	19.84	3.66	20	
2,2-Dichloropropane	18.420	1.0	20.00	0	92.1	69	137	19.22	4.25	20	
2-Butanone	116.400	10	200.0	0	58.2	49	136	122.1	4.79	20	
2-Chlorotoluene	19.400	1.0	20.00	0	97.0	73	126	19.21	0.984	20	
4-Chlorotoluene	19.540	1.0	20.00	0	97.7	74	128	19.13	2.12	20	
4-Isopropyltoluene	20.440	1.0	20.00	0	102	73	130	20.02	2.08	20	
4-Methyl-2-pentanone	175.700	10	200.0	0	87.8	58	134	179.9	2.38	20	
Acetone	84.320	10	200.0	0	42.2	40	135	90.52	7.09	20	
Acrolein	132.270	20	200.0	0	66.1	75	125	139.5	5.30	20	S
Acrylonitrile	185.890	20	200.0	0	92.9	75	125	196.4	5.49	20	
Benzene	19.070	1.0	20.00	0	95.4	81	122	19.29	1.15	20	

Qualifiers:

- | | | |
|--|--|--|
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Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
 Work Order: N009937
 Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N009937-001GMSD	SampType: MSD	TestCode: 8260_WP_SF	Units: µg/L	Prep Date:	RunNo: 88303
Client ID: ZZZZZ	Batch ID: P13VW056	TestNo: EPA 8260B		Analysis Date: 4/4/2013	SeqNo: 1550295

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromobenzene	21.070	1.0	20.00	0	105	76	124	20.20	4.22	20	
Bromochloromethane	20.140	1.0	20.00	0	101	65	129	20.84	3.42	20	
Bromodichloromethane	20.050	1.0	20.00	0	100	76	121	20.85	3.91	20	
Bromoform	23.430	1.0	20.00	0	117	69	128	23.34	0.385	20	
Bromomethane	24.870	1.0	20.00	0	124	53	141	23.21	6.91	20	
Carbon disulfide	20.320	1.0	20.00	0	102	75	125	20.94	3.01	20	
Carbon tetrachloride	21.820	1.0	20.00	0	109	66	138	21.18	2.98	20	
Chlorobenzene	19.830	1.0	20.00	0	99.2	81	122	20.01	0.904	20	
Chloroethane	20.080	1.0	20.00	0	100	58	133	20.28	0.991	20	
Chloroform	19.500	1.0	20.00	0	97.5	69	128	20.05	2.78	20	
Chloromethane	13.560	1.0	20.00	0	67.8	56	131	14.07	3.69	20	
cis-1,2-Dichloroethene	19.210	1.0	20.00	0	96.0	72	126	19.35	0.726	20	
cis-1,3-Dichloropropene	18.690	1.0	20.00	0	93.5	69	131	18.69	0	20	
Di-isopropyl ether	16.700	1.0	20.00	0	83.5	70	130	17.21	3.01	20	
Dibromochloromethane	21.540	1.0	20.00	0	108	66	133	21.30	1.12	20	
Dibromomethane	20.340	1.0	20.00	0	102	76	125	19.93	2.04	20	
Dichlorodifluoromethane	12.560	1.0	20.00	0	62.8	53	153	13.57	7.73	20	
Ethyl tert-butyl ether	17.420	1.0	20.00	0	87.1	70	130	18.37	5.31	20	
Ethylbenzene	19.220	1.0	20.00	0	96.1	73	127	19.48	1.34	20	
Freon-113	20.450	1.0	20.00	0	102	75	125	20.94	2.37	20	
Hexachlorobutadiene	21.880	1.0	20.00	0	109	67	131	21.41	2.17	20	
Isopropylbenzene	20.090	1.0	20.00	0	100	75	127	19.47	3.13	20	
m,p-Xylene	38.530	1.0	40.00	0	96.3	76	128	38.87	0.879	20	
Methylene chloride	17.840	2.0	20.00	0	89.2	63	137	18.57	4.01	20	
MTBE	18.110	1.0	20.00	0.4300	88.4	65	123	18.51	2.18	20	
n-Butylbenzene	20.490	1.0	20.00	0	102	69	137	19.84	3.22	20	
n-Propylbenzene	19.650	1.0	20.00	0	98.2	72	129	19.34	1.59	20	
Naphthalene	22.830	1.0	20.00	0	114	54	138	22.13	3.11	20	
o-Xylene	19.300	1.0	20.00	0	96.5	80	121	19.51	1.08	20	
sec-Butylbenzene	20.120	1.0	20.00	0	101	72	127	19.50	3.13	20	

Qualifiers:

- | | | |
|--|--|--|
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Laboratories, Inc.**

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CLIENT: CH2M HILL
Work Order: N009937
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: N009937-001GMSD	SampType: MSD	TestCode: 8260_WP_SF	Units: µg/L	Prep Date:	RunNo: 88303						
Client ID: ZZZZZ	Batch ID: P13VW056	TestNo: EPA 8260B		Analysis Date: 4/4/2013	SeqNo: 1550295						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Styrene	19.750	1.0	20.00	0	98.8	65	134	19.66	0.457	20	
Tert-amyl methyl ether	17.660	1.0	20.00	0	88.3	70	130	18.04	2.13	20	
Tert-Butanol	78.680	5.0	100.0	0	78.7	70	130	77.89	1.01	20	
tert-Butylbenzene	20.310	1.0	20.00	0	102	70	129	19.95	1.79	20	
Tetrachloroethene	19.200	1.0	20.00	0	96.0	66	128	19.17	0.156	20	
Toluene	19.270	2.0	20.00	0	96.4	77	122	19.66	2.00	20	
trans-1,2-Dichloroethene	19.210	1.0	20.00	0	96.0	63	137	19.43	1.14	20	
trans-1,3-Dichloropropene	19.400	1.0	20.00	0	97.0	59	135	19.69	1.48	20	
Trichloroethene	19.700	1.0	20.00	0	98.5	70	127	19.85	0.759	20	
Trichlorofluoromethane	20.920	1.0	20.00	0	105	57	129	21.57	3.06	20	
Vinyl chloride	16.430	1.0	20.00	0	82.2	50	134	16.42	0.0609	20	
Xylenes, Total	57.830	2.0	60.00	0	96.4	75	125	58.38	0.947	20	
Surr: 1,2-Dichloroethane-d4	24.190		25.00		96.8	72	119		0		
Surr: 4-Bromofluorobenzene	24.420		25.00		97.7	76	119		0		
Surr: Dibromofluoromethane	25.220		25.00		101	85	115		0		
Surr: Toluene-d8	25.030		25.00		100	81	120		0		

Qualifiers:

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|--|--|--|
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**Advanced Technology
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CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
 3151 W. Post Road
 Las Vegas, NV 89118
 Tel: 702-307-2659 Fax: 702-307-2691
 Marlon Cartin (marlon@atl-labs.com)

DATE: **4/3/13**
 PAGE: 1 OF 1

LABORATORY CLIENT: Kinder Morgan Energy Partners, Attn: Steve Defibaugh 1100 Town & Country Road Orange, CA 92868 TEL: 714-560-4802 FAX: 714-560-4601 E-MAIL: james.dye@kindermorgan.com		CLIENT PROJECT NAME / NUMBER: SFPF - Norwalk Site																	
PROJECT CONTACT: James Dye SAMPLER(S) (SIGNATURE):		P.O. NO.: QUOTE NO.:																	
TURNAROUND TIME: <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input checked="" type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY): <input type="checkbox"/> RWOCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL / /		LAB USE ONLY:																	
SPECIAL INSTRUCTIONS: Report to D. Jablonski/CH2M HILL, cc: KMEP Direct Bill KMEP/SFPF - Steve Defibaugh-ref. AFE# 81195 "J" flags required/Use lowest possible detection limit - all methods.		REQUESTED ANALYSIS:																	
<table border="1"> <thead> <tr> <th rowspan="2">LAB USE ONLY</th> <th rowspan="2">SAMPLE ID</th> <th rowspan="2">LOCATION/DESCRIPTION</th> <th colspan="2">SAMPLING</th> <th rowspan="2">MAT-RIX</th> <th rowspan="2">COMMENTS</th> </tr> <tr> <th>DATE</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td></td> <td>EFF-04-03</td> <td>Effluent</td> <td>4/3/13</td> <td>12:30</td> <td>WW</td> <td>Ammonia Nitrogen (as N) (SM-4500 NH3C) X DIFE, TAME, and MEK (826B) X MBAs (SM 5540C) X Turbidity (SM2130B) X Cu, Pb, Tl, Zn, & Priority Pollutants (200.8) X Se (200.8), Hg (245.1) X Cr VI (7199) X Priority Pollutants (8082) X Priority Pollutants (8081A) X BTX, 1,1-DCA, 1,2-DCA, & Priority Pollutants (826B) X MTBE and TBA, (8260B) 48HR TAT X Oil & Grease (1664) X TPH-g, TPH-d, and TPH-oil (8015B) X TPH-g, TPH-d, and TPH-oil (8015B) X Settleable Solids (SM2540F) X Total Suspended Solids (SM2540D) X Phenol (420.1) X Priority Pollutants (8270C) X Cyanide (SM 4500 CN-E, EPA 9014) X Asbestos (EPA/600/R-93/116(PCM)) X 2,3,7,8-TCDD (8290) X</td> </tr> </tbody> </table>				LAB USE ONLY	SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING		MAT-RIX	COMMENTS	DATE	TIME		EFF-04-03	Effluent	4/3/13	12:30	WW	Ammonia Nitrogen (as N) (SM-4500 NH3C) X DIFE, TAME, and MEK (826B) X MBAs (SM 5540C) X Turbidity (SM2130B) X Cu, Pb, Tl, Zn, & Priority Pollutants (200.8) X Se (200.8), Hg (245.1) X Cr VI (7199) X Priority Pollutants (8082) X Priority Pollutants (8081A) X BTX, 1,1-DCA, 1,2-DCA, & Priority Pollutants (826B) X MTBE and TBA, (8260B) 48HR TAT X Oil & Grease (1664) X TPH-g, TPH-d, and TPH-oil (8015B) X TPH-g, TPH-d, and TPH-oil (8015B) X Settleable Solids (SM2540F) X Total Suspended Solids (SM2540D) X Phenol (420.1) X Priority Pollutants (8270C) X Cyanide (SM 4500 CN-E, EPA 9014) X Asbestos (EPA/600/R-93/116(PCM)) X 2,3,7,8-TCDD (8290) X
LAB USE ONLY	SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING				MAT-RIX	COMMENTS											
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Received by (Signature): Received by (Signature): Received by (Signature):		DATE: 4/3/13 TIME: 14:05 DATE: 4/3/13 TIME: 14:17 DATE: 4/4/13 TIME: 10:00																	

4.7°C ICE 1R#1

Revised: 08/23/12

Marlon Cartin

From: Daniel.Jablonski@CH2M.com
Sent: Wednesday, April 03, 2013 4:42 PM
To: marlon@atl-labs.com; Samantha.Chen@CH2M.com
Subject: RE: Norwalk COC and Samples Received

Flow	Daily
Temperature	Monthly
Oil and Grease	Monthly
TPH as gas (C4-C12)	Monthly
TPH as Diesel (C13-C22)	Monthly
TPH as Oil (C23+)	Monthly
Total TPH	Monthly
Settleable Solids	Monthly
Total Suspended Solids	Monthly
Phenol	Monthly
Benzene	Monthly
1,1-Dichloroethane	Monthly
1,2-Dichloroethane	Monthly
Ethylbenzene	Monthly
Toluene	Monthly
Methyl tertiary-butyl ether	Monthly
Tertiary butyl alcohol	Monthly
Total Xylenes	Monthly
Copper (total recoverable) (dry weather)	Monthly
Copper (total recoverable) (wet weather)	Monthly
Lead (total recoverable) (dry weather)	Monthly
Lead (total recoverable) (wet weather)	Monthly
Mercury (total recoverable)	Monthly
Selenium (total recoverable)	Monthly
Thallium (total recoverable)	Monthly
Zinc (total recoverable) (wet weather)	Monthly
Chromium VI	Monthly

Monthly parameters above. Looks like you have everything except TSS. Can you use the Gen Chem bottle for TSS?
Run metals and VOCs 24 hour TAT. Whatever quarterly parameters we need, we can get next week. Sam can coordinate.

Dan

From: Marlon B. Cartin [<mailto:marlon@atl-labs.com>]
Sent: Wednesday, April 03, 2013 4:19 PM
To: Jablonski, Daniel/LAC
Cc: Chen, Samantha/SCO
Subject: Norwalk COC and Samples Received

Hi Dan!

Please see attached COC. The COC is for Quarterly testing I think but the bottles we got are for monthly testing, please see list below. The coolers I sent are labeled either for monthly or quarterly sampling. Please let me know if you want me to proceed with the monthly or just cancel this and re-sample the quarterly.

1-Metals

1-CrVI

1-Gen Min

1-SS

1-Phenols

6-voa's

3-O&G

3-TPH dro/oro

Thanks,

Marlon B. Cartin

Advanced Technology Laboratories, Inc.

3151 W. Post Road

Las Vegas, NV 89118

Phone: 702-307-2659 ext 410

Mobile: 702-439-0421

www.atl-labs.com

Advanced Technology Laboratories, Inc. is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is accredited by the State of California, NELAP and State of Nevada and holds various SBE, DBE and MBE certificates and a USDA soil permit. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates. Advanced Technology Labs, Inc. - Your Partner for Quality Environmental Testing

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<<DOC_20130403131412.pdf>>

Advanced Technology Laboratories, Inc.

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 4/4/2013 Workorder: N009937
 Rep sample Temp (Deg C): 4.7 IR Gun ID: 1
 Temp Blank: Yes No
 Carrier name: FedEx
 Last 4 digits of Tracking No.: 2179 Packing Material Used: Bubble Wrap
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|--|--|--|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input type="checkbox"/>
Yes <input type="checkbox"/> | No <input type="checkbox"/>
No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>
NA <input checked="" type="checkbox"/> |

Comments: Shipping label is unrecoverable.

Checklist Completed B MBC MBC 4/4/13

Reviewed By: 

Advanced Technology Laboratories, Inc.

WORK ORDER Summary

04-Apr-13

WorkOrder: N009937

Client ID: CH2HI01

Project: SFPP - Norwalk Site

QC Level: RTNE

Date Received: 4/4/2013

Comments: Report to D. Jablonski/CH2M HILL, cc:KMPEP.

Direct Bill KMPEP/SFPP-Steve Defibaugh-ref.AFE# 81195. "J" Flags rec

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hid	MS	Sub	Storage
N009937-001A	EFF-04-03	4/3/2013 12:30:00 PM	4/10/2013	Wastewater		Oil and Grease Sample Prep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N009937-001B			4/10/2013		EPA 1664_HEM	Hexane Extractable Material (HEM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			4/10/2013		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			4/10/2013		EPA 8015B	TPH EXTRACTABLE BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			4/10/2013		EPA 8015B	Total TPH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N009937-001C			4/10/2013		EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N009937-001D			4/10/2013		SM2540F	SETTLEABLE MATTER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SUB
			4/10/2013			Settleable Matter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SUB
N009937-001E			4/10/2013		SM2540D	TOTAL NON-FILTERABLE RESIDUE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			4/10/2013			Total Suspended Solids Prep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N009937-001F			4/10/2013		EPA 420.1	PHENOLICS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SUB
			4/10/2013			Phenols Prep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SUB
N009937-001G			4/10/2013		EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N009937-001H			4/5/2013			AQPREP TOTAL METALS: ICP, FLAA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			4/5/2013		EPA 200.8	ICP-MS METALS BY COLLISION/REACTION CELL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			4/5/2013		EPA 200.8	ICPMS METALS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			4/5/2013		EPA 245.1	MERCURY BY COLD VAPOR TECHNIQUE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			4/5/2013			MERCURY PREP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N009937-001I			4/10/2013		EPA 7199	Hexavalent Chromium by IC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N009937-002A	FOLDER		4/10/2013		Folder	Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB

Marlon Cartin

From: Daniel.Jablonski@CH2M.com
Sent: Thursday, April 04, 2013 3:15 PM
To: marlon@atl-labs.com
Cc: Samantha.Chen@CH2M.com
Subject: RE: Norwalk COC and Samples Received

Run metals and VOCs for the quarterly list. We only need 24 hr TAT for the monthly metals/VOCs parameters called out below however. Everything else can be normal TAT

Thanks - Dan

From: Marlon B. Cartin [<mailto:marlon@atl-labs.com>]
Sent: Thursday, April 04, 2013 3:16 PM
To: Jablonski, Daniel/LAC
Cc: Chen, Samantha/SCO
Subject: RE: Norwalk COC and Samples Received

Hi Dan!

The analyst has loaded and digested the samples considering the analytes shown below which is the Monthly list. We have a more comprehensive list of analytes for Metals and VOC during the quarterly testing. If we are to re-run the sample using the quarterly list, we might not be able to report the VOC and Metals tomorrow morning. There's a chance that we can report it in the afternoon. Please advice.

Thanks,

Marlon

From: Daniel.Jablonski@CH2M.com [<mailto:Daniel.Jablonski@CH2M.com>]
Sent: Wednesday, April 03, 2013 4:42 PM
To: marlon@atl-labs.com; Samantha.Chen@CH2M.com
Subject: RE: Norwalk COC and Samples Received

Flow	Daily
Temperature	Monthly
Oil and Grease	Monthly
TPH as gas (C4-C12)	Monthly
TPH as Diesel (C13-C22)	Monthly
TPH as Oil (C23+)	Monthly
Total TPH	Monthly
Settleable Solids	Monthly
Total Suspended Solids	Monthly
Phenol	Monthly
Benzene	Monthly
1,1-Dichloroethane	Monthly
1,2-Dichloroethane	Monthly
Ethylbenzene	Monthly
Toluene	Monthly
Methyl tertiary-butyl ether	Monthly

Tertiary butyl alcohol	Monthly
Total Xylenes	Monthly
Copper (total recoverable) (dry weather)	Monthly
Copper (total recoverable) (wet weather)	Monthly
Lead (total recoverable) (dry weather)	Monthly
Lead (total recoverable) (wet weather)	Monthly
Mercury (total recoverable)	Monthly
Selenium (total recoverable)	Monthly
Thallium (total recoverable)	Monthly
Zinc (total recoverable) (wet weather)	Monthly
Chromium VI	Monthly

Monthly parameters above. Looks like you have everything except TSS. Can you use the Gen Chem bottle for TSS?
Run metals and VOCs 24 hour TAT. Whatever quarterly parameters we need, we can get next week. Sam can coordinate.

Dan

From: Marlon B. Cartin [<mailto:marlon@atl-labs.com>]
Sent: Wednesday, April 03, 2013 4:19 PM
To: Jablonski, Daniel/LAC
Cc: Chen, Samantha/SCO
Subject: Norwalk COC and Samples Received

Hi Dan!

Please see attached COC. The COC is for Quarterly testing I think but the bottles we got are for monthly testing, please see list below. The coolers I sent are labeled either for monthly or quarterly sampling. Please let me know if you want me to proceed with the monthly or just cancel this and re-sample the quarterly.

1-Metals

1-CrVI

1-Gen Min

1-SS

1-Phenols

6-voa's

3-O&G

3-TPH dro/oro

Thanks,

Marlon B. Cartin

Advanced Technology Laboratories, Inc.

3151 W. Post Road

Las Vegas, NV 89118

Phone: 702-307-2659 ext 410

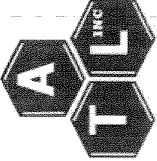
Mobile: 702-439-0421

www.atl-labs.com

Advanced Technology Laboratories, Inc. is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is accredited by the State of California, NELAP and State of Nevada and holds various SBE, DBE and MBE certificates and a USDA soil permit. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates. Advanced Technology Labs, Inc. - Your Partner for Quality Environmental Testing

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Advanced Technology Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atslab.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: RTNE

Subcontractor:

Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California

TEL: (562) 989-4045
FAX: (562) 989-4045
Acct #:

Field Sampler: *P.L.*

03-Apr-13

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				SM 5540 C	SM2540F
N009937-001A TEFF-04-03	Wastewater	4/3/2013 12:30:00 PM	8OZP	<i>SM 4502NH3C</i>	
N009937-001D / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	32OZP		1
N009937-001D TEFF-04-03	Wastewater	4/3/2013 12:30:00 PM	16OZP		
N009937-001F / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	32OZA		
N009937-001Q TEFF-04-03	Wastewater	4/3/2013 12:30:00 PM	8OZP		1

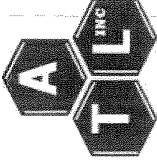
MSC 4/4/13

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N009937

Please fax results by: 5 Day TAT

Relinquished by:	<i>Mrs. Carlin</i>	Date/Time	
Relinquished by:	<i>Mrs. Carlin</i>	Date/Time	
Received by:	<i>4/3/13 C/KOD</i>	Date/Time	
Received by:		Date/Time	



Advanced Technology Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atlglobal.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: RTNE

Subcontractor:

Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California

TEL: (562) 989-4045
FAX: (562) 989-4045
Acct #:

Field Sampler: *P.L.*

03-Apr-13

Sample ID	Matrix	Date Collected	Bottle Type	SM4500-CNE	Requested Tests
N009937-001A / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	8OZP		<i>#20.1</i>
N009937-001D / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	32OZP		
N009937-001D / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	16OZP	1	
N009937-001F / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	32OZA		
N009937-001G / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	8OZP		

MBC 4/4/13

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N009937

Please fax results by: 5 Day TAT

Relinquished by: <i>M. B. SATTIN</i>	Date/Time: <i>4/3/2013</i>
Relinquished by: _____	Date/Time: _____
Received by: _____	Date/Time: _____
Received by: _____	Date/Time: _____

April 12, 2013

Marlon Cartin
Advanced Technology Laboratory-Las Vegas
3151 W Post Rd.
Las Vegas, NV 89118
Tel: (702) 307-2659
Fax:(702) 307-2691



Re: ATL Work Order Number : 1300988
Client Reference : [none]

Enclosed are the results for sample(s) received on April 03, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Advanced Technology Laboratory-Las Vegas

Project Number : -

3151 W Post Rd.

Report To : Marlon Cartin

Las Vegas , NV 89118

Reported : 04/12/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N009937-001D / EFF-04-03	1300988-01	Waste Water	4/03/13 12:30	4/03/13 16:50
N009937-001F / EFF-04-03	1300988-02	Waste Water	4/03/13 12:30	4/03/13 16:50

CASE NARRATIVE

The sample for EPA 420.1 (Phenolics) analysis was subcontracted to AETL with ELAP Cert.# 1541.



Certificate of Analysis

Advanced Technology Laboratory-Las Vegas
 3151 W Post Rd.
 Las Vegas , NV 89118

Project Number : -
 Report To : Marlon Cartin
 Reported : 04/12/2013

Client Sample ID N009937-001D / EFF-04-03

Lab ID: 1300988-01

Residue, Settleable by SM 2540F

Analyst: AG

Analyte	Result (mL/L)	PQL (mL/L)	MDL (mL/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Settleable	ND	0.10	0.10	1	B3D0125	04/05/2013	04/05/13 09:21	

QUALITY CONTROL SECTION

Residue, Settleable by SM 2540F - Quality Control

Analyte	Result (mL/L)	PQL (mL/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Residue, Settleable	ND	0.10					NR		

Batch B3D0125 - No_Prep_WC_1

Blank (B3D0125-BLK1)

Prepared: 4/5/2013 Analyzed: 4/5/2013

Residue, Settleable ND 0.10 NR



Certificate of Analysis

Advanced Technology Laboratory-Las Vegas

Project Number : -

3151 W Post Rd.

Report To : Marlon Cartin

Las Vegas , NV 89118

Reported : 04/12/2013

Notes and Definitions

ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225

Number of Pages 2
Date Received 04/04/2013
Date Reported 04/12/2013

Telephone: (562)989-4045
Attention: Rachelle Arada

Job Number	Order Date	Client
69108	04/04/2013	ATL

Project ID: 1300988
Project Name: PO# SC07920

Enclosed please find results of analyses of 1 water sample which was analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181

Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Page: 1 A

Ordered By

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225

Project ID: 1300988
Date Received 04/04/2013
Date Reported 04/12/2013

Telephone: (562)989-4045
Attention: Rachele Arada

Job Number	Order Date	Client
69108	04/04/2013	ATL

CERTIFICATE OF ANALYSIS CASE NARRATIVE

AETL received 1 samples with the following specification on 04/04/2013.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers
69108.01	1300988-02	04/03/2013	Aqueous	1
Method ^ Submethod	Req Date	Priority	TAT	Units
420.1	04/11/2013	2	Normal	mg/L

The samples were analyzed as specified on the enclosed chain of custody.
No analytical non-conformances were encountered.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

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 Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Ordered By

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755-5225

Telephone: (562)989-4045

Attn: Rachelle Arada

Page: 2

Project ID: 1300988

Project Name: PO# SC07920

AETL Job Number	Submitted	Client
69108	04/04/2013	ATL

Method: 420.1, Phenolics, Total Recoverable, Spectrophotometric, Manual

QC Batch No: 041013-1

Our Lab I.D.		Method Blank	69108.01			
Client Sample I.D.			1300988-02			
Date Sampled			04/03/2013			
Date Prepared		04/10/2013	04/10/2013			
Preparation Method		420.1	420.1			
Date Analyzed		04/10/2013	04/10/2013			
Matrix		Aqueous	Aqueous			
Units		mg/L	mg/L			
Dilution Factor		1	1			
Analytes	MDL	PQL	Results	Results		
Phenolic compounds as phenol	0.15	0.30	ND	ND		

QUALITY CONTROL REPORT

QC Batch No: 041013-1; Dup or Spiked Sample: 69108.01; LCS: Clean Water; QC Prepared: 04/10/2013; QC Analyzed: 04/10/2013;

Units: mg/L

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Phenol	0.00	0.500	0.476	95.2	0.500	0.480	96.0	<1	80-120	<15

QC Batch No: 041013-1; Dup or Spiked Sample: 69108.01; LCS: Clean Water; QC Prepared: 04/10/2013; QC Analyzed: 04/10/2013;

Units: mg/L

Analytes	SM Result	SM DUP Result	RPD %	SM RPD % Limit	LCS Concen	LCS Recov	LCS % REC	LCS/LCSD % Limit		
Phenol	ND	ND	<1	<15	0.500	0.488	97.6	80-120		



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Data Qualifiers and Descriptors

Data Qualifier:

- #: Recovery is not within acceptable control limits.
- *: In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
- B: Analyte was present in the Method Blank.
- D: Result is from a diluted analysis.
- E: Result is beyond calibration limits and is estimated.
- H: Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
- J: Analyte was detected. However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
- M: Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
- MCL: Maximum Contaminant Level
- NS: No Standard Available
- S6: Surrogate recovery is outside control limits due to matrix interference.
- S8: The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
- X: Results represent LCS and LCSD data.

Definition:

- %Limi: Percent acceptable limits.
- %REC: Percent recovery.
- Con.L: Acceptable Control Limits
- Conce: Added concentration to the sample.
- LCS: Laboratory Control Sample
- MDL: Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.



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Data Qualifiers and Descriptors

MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate
ND:	Analyte was not detected in the sample at or above MDL.
PQL:	Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
Recov:	Recovered concentration in the sample.
RPD:	Relative Percent Difference


ADVANCED TECHNOLOGY
 LABORATORIES

Job # 69108

SUBCONTRACT ORDER

Work Order: 1300988

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachele Arada


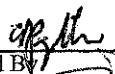
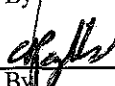
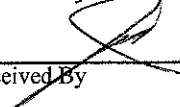
RECEIVING LABORATORY:

AETL
 2834 North Naomi Street
 Burbank, CA 91504
 Phone : (818) 845-8200
 Fax: (818) 845-8840
 PO#: SC07920 - 5 DAY TAT RA

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled
ATL Lab#: 1300988-02 / N009937-001 / <i>For 41413</i> EFF-04-03			Waste Water
420.1_5530BD_SUB	04/11/13 17:00	05/01/13 12:30	04/03/13 12:30
1-Amber H2SO4 - 1000mL			<i>69108-01</i>

Comments:

 Released By	<i>4/4/13 1348</i> Date	 Received By	<i>4/4/13 1348</i> Date
 Released By	<i>4/4/13 1833</i> Date	 Received By	<i>04/04/13 18-33</i> Date

V.L.L.



Advanced Technology Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atlglobal.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: RTNE

Subcontractor:

Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California

TEL: (562) 989-4045
FAX: (562) 989-4045
Acct #:

Field Sampler: *P.L.*

03-Apr-13

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				SM 5540 C	SM2540F
N009937-001A / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	8OZP	<i>SM 5540 C</i>	
N009937-001C / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	32OZP		
N009937-001D / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	16OZP		1
N009937-001J / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	32OZA		
N009937-001Q / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	8OZP		1

1300988-1

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N009937

Please fax results by: 5 Day TAT

Relinquished by: <i>Mrs. Capetina</i>	Date/Time: <i>4/13/13</i>
Relinquished by: _____	Date/Time: _____
Received by: _____	Date/Time: _____
Received by: _____	Date/Time: _____



Advanced Technology Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atglobal.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: RTNE

Subcontractor:

Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California

Field Sampler: P.L.

03-Apr-13

Sample ID	Matrix	Date Collected	Bottle Type	SM4500-CN E	Requested Tests
N009937-001A / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	8OZP		420.1
N009937-001C / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	32OZP		
N009937-001D / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	16OZP	1	
N009937-001J / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	32OZA		1
N009937-001G / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	8OZP		

1300984 - 1
↓

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N009937

Please fax results by: 5 Day TAT

Relinquished by: <u>Justin Smith</u>	Date/Time: <u>4/3/13 1600</u>
Received by: <u>FPO</u>	Date/Time: <u>4/3/13 1650</u>
Relinquished by: _____	Date/Time: _____
Received by: _____	Date/Time: _____

CHAIN OF CUSTODY RECORD - PLEASE COMPLETE ALL SHADED AREAS

Page 1 of 1
FOR LABORATORY USE ONLY

ADVANCED TECHNOLOGY LABORATORIES
 3275 Walnut Ave., Signal Hill, CA 90755
 Tel: (562) 989-4045 • Fax: (562) 989-4040

Submitter - Please complete all SHADED areas and include QUOTE # above to ensure proper invoicing.

P.O. #: _____ Quote #: _____
 As the authorized agent of the below named company, I hereby purchase testing services from ATL as dictated below and guarantee payment in full.

Submitter (Print): _____
Signature: _____

Method of Transport
 Client ATL OnTrac
 FedEx GSO Other: _____

Sample Condition Upon Receipt
 1. CHILLED Y N 4. SEALED Y N
 2. HEADSPACE (VOA) Y N 5. # OF SPLS MATCH COC Y N
 3. CONTAINER INTACT Y N 6. PRESERVED Y N

Client: Advanced Technology Laboratory-Las Vegas
 Address: 3151 W Post Rd. City: Las Vegas State: NV Zip Code: 89118
 Tel: (702) 307-2659 Fax: (702) 307-2691

Project Name: CH2M HILL- Norwalk
 Sampler: _____

Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____
 Received by: (Signature and Printed Name) _____ Date: 4/13/13 Time: 1650

Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____
 Received by: (Signature and Printed Name) _____ Date: _____ Time: _____

Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____
 Received by: (Signature and Printed Name) _____ Date: _____ Time: _____

Special Instructions/Comments:
 1 Tech (15 min x 2DT) + (15 min shipping time)-
 Shipped via FEDEX.

Send Report to: _____
 Attn: _____ Email: _____
 Company: _____
 Address: _____
 City: _____ State: _____ ZIP: _____

Circle or Write In Analyses

8260 - 824 Volatiles					
8015B (GRO) / 8021 (BTEX)					
8270B - 825 (GNA) / 8310 (PAHS)					
8015B (DRO) / 8015B (HCID)					
8091 Org/Cl / 8141 Org/PA Pest					
8010B - 200.7 CAM Metals					
8010B - 200.7 Metals					
7199 - 218.6 (Hex Chromium)					
300 (Antions) / 314 (Perchlorate)					
Field Services					

Business Hours: 8:30 AM TO 5:30 PM

Lab No.	Sample ID / Location	Date	Time
1		4/3/2013	
2			
3			
4			
5			
6			
7			
8			
9			
10			

Preservatives: 1=HCl; 2=HNO3;
 3=H2SO4; 4 = 4C; 5=Zn ((Ac)2; 6=NaOH;
 7=NA2S2O3

FOR RUSH TCLP / STLC, ADD 2 DAYS TO RESPECTIVE TAT.
Subcon. TAT is 10 - 15 business days;
 Dioxin and Furans 21 business days.

CHAIN OF CUSTODY RECORD

DATE: 4/3/13 PAGE: 1 OF 1

Advanced Technology Laboratories
 3151 W. Post Road
 Las Vegas, NV 89118
 Tel: 702-307-2659 Fax: 702-307-2691
 Marlon Cartin (marlon@atl-labs.com)

LABORATORY CLIENT Kinder Morgan Energy Partners, Attn: Steve Defibaugh Address: 1100 Town & Country Road City: Orange, CA 92868 Tel: 714-560-4802 Fax: 714-560-4601 E-MAIL: James_Dave@kempmorg.com		CLIENT PROJECT NAME/NUMBER: SFPP - Norwalk Site	
TURNAROUND TIME <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)		P.O. NO.: QUOTE NO.:	
PROJECT CONTACT: James Dye SAMPLER(S) SIGNATURE:		LAB USE ONLY	
SPECIAL INSTRUCTIONS <input type="checkbox"/> RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL / / Report to D. Jablonski/CH2M HILL, cc: KMEP Direct Bill KMEP/SFPP - Steve Defibaugh-ref. AFE# 81195 "J" flags required/Use lowest possible detection limit - all methods.		REQUESTED ANALYSIS	
AMMONIA NITROGEN (AS N) (SM 4500 NH3C)		X	
DIPE, TAME, and MEK (8260B)		X	
MBAS (SM 5540C)		X	
TURBIDITY (SM 2130B)		X	
Cu, Pb, Tl, Zn, & Priority Pollutants (200.8)		X	
Se (200.8); Hg (245.1)		X	
Cr VI (7199)		X	
Priority Pollutants (8082)		X	
Priority Pollutants (8081A)		X	
BTEX, 1,1-DCA, 1,2-DCA, & Priority Pollutants (8260B)		X	
MTBE and TBA, (8260B) 48HR TAT		X	
Oil & Grease (1664)		X	
TPH-g, TPH-d, and TPH-oll (8015B)		X	
Total TPH (as TPH-g, TPH-d, and TPH-oll) (8015B)		X	
Settleable Solids (SM 2540F)		X	
Total Suspended Solids (SM 2540D)		X	
Phenol (420.1)		X	
Priority Pollutants (8270C)		X	
Cyanide (SM 4500 CN-E, EPA 9014)		X	
Asbestos (EPA/600/R-93/116(PCM))		X	
2,3,7,8-TCDD (8290)		X	
LAB USE ONLY			
RECEIVED BY: (Signature)		Date: <u>4/3/13</u>	Time: <u>14:05</u>
RECEIVED BY: (Signature)		Date: <u>4/1/13</u>	Time: <u>14:17</u>
RECEIVED BY: (Signature)		Date:	Time:
Comments: provided to Marlon Cartin.			

Revised: 08/23/12

Carmen Aguila

From: Marlon B. Cartin [marlon@atl-labs.com]
Sent: Thursday, April 04, 2013 10:00 AM
To: Carmen Aguila
Subject: FW: Scanned document.
Attachments: SKMBT_60113040408450.pdf

Carmen!

Please see attached new version of the Sub-COC of Norwalk sample from yesterday. The only changes are the fraction of the sample ID's.

Thanks,

Marlon

-----Original Message-----

From: bizhub_601@atl-labs.com [mailto:bizhub_601@atl-labs.com]
Sent: Thursday, April 04, 2013 9:46 AM
To: marlon@atl-labs.com
Subject: Scanned document.

Scanned document.



Advanced Technology Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atglobal.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: RTNE

Subcontractor:

Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California

TEL: (562) 989-4045
FAX: (562) 989-4045
Acct #:

Field Sampler: *P.L.*

03-Apr-13

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				SM 4507H3C	SM 5540 C
N009937-001A / EFF-04-08	Wastewater	4/3/2013 12:30:00 PM	8OZP	1	SM2540F
N009937-001D / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	32OZP		
N009937-001B / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	16OZP		1
N009937-001F / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	32OZA		
N009937-001Q / EFF-04-08	Wastewater	4/3/2013 12:30:00 PM	8OZP	1	

1970 116-1
↓

MHC 4/4/13

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N009937 Please fax results by: 5 Day TAT

Relinquished by: <i>MSCAVETT</i>	Date/Time: <i>4/3/13</i>
Relinquished by: _____	Date/Time: _____
Received by: <i>C. Ajik</i>	Date/Time: <i>4/3/13</i>
Received by: _____	Date/Time: _____



Advanced Technology Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atlglobal.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: RTNE

Subcontractor:

Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California

TEL: (562) 989-4045
FAX: (562) 989-4045
Acct #:

Field Sampler: *P.L.*

03-Apr-13

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				SM4500-CN E	
N009937-001A / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	8OZP		<i>420.1</i>
N009937-001C / D / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	32OZP		
N009937-001D / EEE-04-03	Wastewater	4/3/2013 12:30:00 PM	16OZP	1	
N009937-001F / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	32OZA		1
N009937-001G / EFF-04-03	Wastewater	4/3/2013 12:30:00 PM	8OZP		

MBC 4/4/13

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N009937

Please fax results by: 5 Day TAT

Relinquished by: <i>MBC</i>	Date/Time: <i>4/3/13</i>
Relinquished by: <i>[Signature]</i>	Date/Time: <i>4/3/13</i>
Received by: <i>[Signature]</i>	Date/Time: <i>4/3/13</i>
Received by: <i>[Signature]</i>	Date/Time: <i>4/3/13</i>

April 18, 2013

Daniel Jablonski
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612
TEL: (213)228-8271
FAX: (510) 622-9129

CA-ELAP No.:2676
NV Cert. No.:NV-009222007A

Workorder No.: N009966

RE: SFPP - Norwalk Site

Attention: Daniel Jablonski

Enclosed are the results for sample(s) received on April 10, 2013 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



**Advanced Technology
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Project: SFPP - Norwalk Site
Lab Order: N009966

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Subcontracted Analyses:

Dioxins by EPA 8290 was subcontracted to APPL,Inc.-Clovis,CA.

Cyanide and MBAS were subcontracted to Advanced Technology Laboratories-Signal Hill, CA .

Asbestos was subcontracted to EMS Laboratories- Pasadena, CA.



CLIENT: CH2M HILL
Project: SFPP - Norwalk Site
Lab Order: N009966
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N009966-001A	EFF-04-09	Wastewater	4/9/2013 10:50:00 AM	4/10/2013	
N009966-001B	EFF-04-09	Wastewater	4/9/2013 10:50:00 AM	4/10/2013	
N009966-001C	EFF-04-09	Wastewater	4/9/2013 10:50:00 AM	4/10/2013	
N009966-001D	EFF-04-09	Wastewater	4/9/2013 10:50:00 AM	4/10/2013	
N009966-001E	EFF-04-09	Wastewater	4/9/2013 10:50:00 AM	4/10/2013	
N009966-001F	EFF-04-09	Wastewater	4/9/2013 10:50:00 AM	4/10/2013	
N009966-001G	EFF-04-09	Wastewater	4/9/2013 10:50:00 AM	4/10/2013	
N009966-001H	EFF-04-09	Wastewater	4/9/2013 10:50:00 AM	4/10/2013	



Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: 18-Apr-13

CLIENT: CH2M HILL
Lab Order: N009966
Project: SFPP - Norwalk Site
Lab ID: N009966-001

Client Sample ID: EFF-04-09
Collection Date: 4/9/2013 10:50:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3510C

EPA 8270C

RunID: MS3_130415A	QC Batch: 42664	PrepDate: 4/11/2013	Analyst: MDM			
1,2-Diphenylhydrazine	ND	2.7	10	µg/L	1	4/15/2013 11:23 PM
2,4,6-Trichlorophenol	ND	2.7	10	µg/L	1	4/15/2013 11:23 PM
2,4-Dichlorophenol	ND	2.8	10	µg/L	1	4/15/2013 11:23 PM
2,4-Dimethylphenol	ND	2.6	10	µg/L	1	4/15/2013 11:23 PM
2,4-Dinitrophenol	ND	2.4	50	µg/L	1	4/15/2013 11:23 PM
2,4-Dinitrotoluene	ND	2.3	10	µg/L	1	4/15/2013 11:23 PM
2,6-Dinitrotoluene	ND	2.4	10	µg/L	1	4/15/2013 11:23 PM
2-Chloronaphthalene	ND	2.5	10	µg/L	1	4/15/2013 11:23 PM
2-Chlorophenol	ND	2.7	10	µg/L	1	4/15/2013 11:23 PM
2-Nitrophenol	ND	3.0	10	µg/L	1	4/15/2013 11:23 PM
3,3'-Dichlorobenzidine	ND	5.7	20	µg/L	1	4/15/2013 11:23 PM
4,6-Dinitro-2-methylphenol	ND	2.0	50	µg/L	1	4/15/2013 11:23 PM
4-Bromophenyl-phenylether	ND	2.7	10	µg/L	1	4/15/2013 11:23 PM
4-Chloro-3-methylphenol	ND	2.6	50	µg/L	1	4/15/2013 11:23 PM
4-Chloroaniline	ND	2.5	20	µg/L	1	4/15/2013 11:23 PM
4-Chlorophenyl-phenylether	ND	2.5	10	µg/L	1	4/15/2013 11:23 PM
4-Nitrophenol	ND	2.2	50	µg/L	1	4/15/2013 11:23 PM
Acenaphthene	ND	2.9	10	µg/L	1	4/15/2013 11:23 PM
Acenaphthylene	ND	3.0	10	µg/L	1	4/15/2013 11:23 PM
Anthracene	ND	2.6	10	µg/L	1	4/15/2013 11:23 PM
Benzidine (M)	ND	7.9	50	µg/L	1	4/15/2013 11:23 PM
Benzo(a)anthracene	ND	2.8	10	µg/L	1	4/15/2013 11:23 PM
Benzo(a)pyrene	ND	2.6	10	µg/L	1	4/15/2013 11:23 PM
Benzo(b)fluoranthene	ND	4.9	10	µg/L	1	4/15/2013 11:23 PM
Benzo(g,h,i)perylene	ND	2.5	10	µg/L	1	4/15/2013 11:23 PM
Benzo(k)fluoranthene	ND	2.9	10	µg/L	1	4/15/2013 11:23 PM
Bis(2-chloroethoxy)methane	ND	3.1	10	µg/L	1	4/15/2013 11:23 PM
Bis(2-chloroethyl)ether	ND	3.2	10	µg/L	1	4/15/2013 11:23 PM
Bis(2-chloroisopropyl)ether	ND	3.1	10	µg/L	1	4/15/2013 11:23 PM
Bis(2-ethylhexyl)phthalate	ND	2.6	10	µg/L	1	4/15/2013 11:23 PM
Butylbenzylphthalate	ND	2.6	10	µg/L	1	4/15/2013 11:23 PM
Chrysene	ND	2.7	10	µg/L	1	4/15/2013 11:23 PM
Di-n-butylphthalate	ND	3.0	10	µg/L	1	4/15/2013 11:23 PM
Di-n-octylphthalate	ND	2.4	10	µg/L	1	4/15/2013 11:23 PM
Dibenz(a,h)anthracene	ND	2.4	10	µg/L	1	4/15/2013 11:23 PM
Diethylphthalate	ND	2.7	10	µg/L	1	4/15/2013 11:23 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit S Spike/Surrogate outside of limits due to matrix interference
Results are wet unless otherwise specified DO Surrogate Diluted Out



Advanced Technology Laboratories, Inc.

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: 18-Apr-13

CLIENT: CH2M HILL
Lab Order: N009966
Project: SFPP - Norwalk Site
Lab ID: N009966-001

Client Sample ID: EFF-04-09
Collection Date: 4/9/2013 10:50:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3510C

EPA 8270C

RunID:	MS3_130415A	QC Batch:	42664	PrepDate:	4/11/2013	Analyst:	MDM
Dimethylphthalate	ND	2.6	10	µg/L	1	4/15/2013 11:23 PM	
Fluoranthene	ND	3.2	10	µg/L	1	4/15/2013 11:23 PM	
Fluorene	ND	2.7	10	µg/L	1	4/15/2013 11:23 PM	
Hexachlorocyclopentadiene	ND	2.3	10	µg/L	1	4/15/2013 11:23 PM	
Indeno(1,2,3-cd)pyrene	ND	2.5	10	µg/L	1	4/15/2013 11:23 PM	
Isophorone	ND	3.0	10	µg/L	1	4/15/2013 11:23 PM	
N-Nitrosodi-n-propylamine	ND	2.9	10	µg/L	1	4/15/2013 11:23 PM	
N-Nitrosodimethylamine	ND	2.7	50	µg/L	1	4/15/2013 11:23 PM	
N-Nitrosodiphenylamine	ND	2.5	10	µg/L	1	4/15/2013 11:23 PM	
Nitrobenzene	ND	2.7	10	µg/L	1	4/15/2013 11:23 PM	
Pentachlorophenol	ND	1.8	50	µg/L	1	4/15/2013 11:23 PM	
Phenanthrene	ND	2.7	10	µg/L	1	4/15/2013 11:23 PM	
Phenol	ND	1.9	10	µg/L	1	4/15/2013 11:23 PM	
Pyrene	ND	3.1	10	µg/L	1	4/15/2013 11:23 PM	
Surr: 1,2-Dichlorobenzene-d4	66.8	0	27-100	%REC	1	4/15/2013 11:23 PM	
Surr: 2,4,6-Tribromophenol	82.6	0	42-124	%REC	1	4/15/2013 11:23 PM	
Surr: 2-Chlorophenol-d4	68.5	0	34-98	%REC	1	4/15/2013 11:23 PM	
Surr: 2-Fluorobiphenyl	71.6	0	48-120	%REC	1	4/15/2013 11:23 PM	
Surr: 2-Fluorophenol	55.4	0	20-120	%REC	1	4/15/2013 11:23 PM	
Surr: 4-Terphenyl-d14	95.9	0	51-135	%REC	1	4/15/2013 11:23 PM	
Surr: Nitrobenzene-d5	73.3	0	41-120	%REC	1	4/15/2013 11:23 PM	
Surr: Phenol-d5	42.3	0	20-120	%REC	1	4/15/2013 11:23 PM	

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS1_130410A	QC Batch:	D13VW010A	PrepDate:	Analyst:	QBM
2-Chloroethyl vinyl ether	ND	0.14	0.50	µg/L	1	4/10/2013 07:31 PM
Surr: 1,2-Dichloroethane-d4	109	0	56-120	%REC	1	4/10/2013 07:31 PM
Surr: 4-Bromofluorobenzene	101	0	80-120	%REC	1	4/10/2013 07:31 PM
Surr: Dibromofluoromethane	105	0	72-120	%REC	1	4/10/2013 07:31 PM
Surr: Toluene-d8	101	0	80-123	%REC	1	4/10/2013 07:31 PM

ORGANOCHLORINE PESTICIDES BY GC/ECD

EPA 3510C

EPA 8081A

RunID:	GC7_130411A	QC Batch:	42647	PrepDate:	4/10/2013	Analyst:	MDM
4,4'-DDD	ND	0.013	0.050	µg/L	1	4/11/2013 08:07 AM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit S Spike/Surrogate outside of limits due to matrix interference
Results are wet unless otherwise specified DO Surrogate Diluted Out



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Laboratories, Inc.**

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: 18-Apr-13

CLIENT: CH2M HILL
Lab Order: N009966
Project: SFPP - Norwalk Site
Lab ID: N009966-001

Client Sample ID: EFF-04-09
Collection Date: 4/9/2013 10:50:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ORGANOCHLORINE PESTICIDES BY GC/ECD

EPA 3510C

EPA 8081A

RunID: GC7_130411A	QC Batch: 42647	PrepDate: 4/10/2013	Analyst: MDM
4,4'-DDE	ND 0.023	0.050	µg/L 1 4/11/2013 08:07 AM
4,4'-DDT	ND 0.036	0.050	µg/L 1 4/11/2013 08:07 AM
Aldrin	ND 0.0082	0.025	µg/L 1 4/11/2013 08:07 AM
alpha-BHC	ND 0.0087	0.025	µg/L 1 4/11/2013 08:07 AM
alpha-Chlordane	ND 0.0087	0.025	µg/L 1 4/11/2013 08:07 AM
beta-BHC	ND 0.011	0.025	µg/L 1 4/11/2013 08:07 AM
delta-BHC	ND 0.015	0.025	µg/L 1 4/11/2013 08:07 AM
Dieldrin	ND 0.018	0.050	µg/L 1 4/11/2013 08:07 AM
Endosulfan I	ND 0.0087	0.025	µg/L 1 4/11/2013 08:07 AM
Endosulfan II	ND 0.020	0.050	µg/L 1 4/11/2013 08:07 AM
Endosulfan sulfate	ND 0.027	0.050	µg/L 1 4/11/2013 08:07 AM
Endrin	ND 0.013	0.050	µg/L 1 4/11/2013 08:07 AM
Endrin aldehyde	ND 0.027	0.050	µg/L 1 4/11/2013 08:07 AM
gamma-BHC	ND 0.012	0.025	µg/L 1 4/11/2013 08:07 AM
gamma-Chlordane	ND 0.0071	0.025	µg/L 1 4/11/2013 08:07 AM
Heptachlor	ND 0.012	0.025	µg/L 1 4/11/2013 08:07 AM
Heptachlor epoxide	ND 0.0081	0.025	µg/L 1 4/11/2013 08:07 AM
Methoxychlor	ND 0.046	0.25	µg/L 1 4/11/2013 08:07 AM
Toxaphene	ND 0.15	2.5	µg/L 1 4/11/2013 08:07 AM
Surr: Tetrachloro-m-xylene	75.6 0	33-138	%REC 1 4/11/2013 08:07 AM
Surr: Decachlorobiphenyl	84.7 0	29-135	%REC 1 4/11/2013 08:07 AM

PCBS BY GC/ECD

EPA 3510C

EPA 8082

RunID: GC7_130411B	QC Batch: 42647	PrepDate: 4/10/2013	Analyst: MDM
Aroclor 1016	ND 0.19	0.50	µg/L 1 4/12/2013 01:21 AM
Aroclor 1221	ND 0.49	1.0	µg/L 1 4/12/2013 01:21 AM
Aroclor 1232	ND 0.25	0.50	µg/L 1 4/12/2013 01:21 AM
Aroclor 1242	ND 0.23	0.50	µg/L 1 4/12/2013 01:21 AM
Aroclor 1248	ND 0.14	0.50	µg/L 1 4/12/2013 01:21 AM
Aroclor 1254	ND 0.24	0.50	µg/L 1 4/12/2013 01:21 AM
Aroclor 1260	ND 0.070	0.50	µg/L 1 4/12/2013 01:21 AM
Surr: Decachlorobiphenyl	94.0 0	29-133	%REC 1 4/12/2013 01:21 AM
Surr: Tetrachloro-m-xylene	78.1 0	50-120	%REC 1 4/12/2013 01:21 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit S Spike/Surrogate outside of limits due to matrix interference
Results are wet unless otherwise specified DO Surrogate Diluted Out



**Advanced Technology
Laboratories, Inc.**

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL

Work Order: N009966

Project: SFPP - Norwalk Site

TestCode: 8081_W_PGE

Sample ID: LCS-42647	SampType: LCS	TestCode: 8081_W_PGE	Units: µg/L	Prep Date: 4/10/2013	RunNo: 88403
Client ID: LCSW	Batch ID: 42647	TestNo: EPA 8081A	EPA 3510C	Analysis Date: 4/11/2013	SeqNo: 155578

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	0.542	0.050	0.5000	0	108	50	139				
4,4'-DDE	0.507	0.050	0.5000	0	101	48	137				
4,4'-DDT	0.519	0.050	0.5000	0	104	47	138				
Aldrin	0.476	0.025	0.5000	0	95.3	42	138				
alpha-BHC	0.473	0.025	0.5000	0	94.7	60	128				
alpha-Chlordane	0.472	0.025	0.5000	0	94.3	63	123				
beta-BHC	0.467	0.025	0.5000	0	93.3	66	126				
delta-BHC	0.344	0.025	0.5000	0	68.7	46	136				
Dieldrin	0.500	0.050	0.5000	0	100	62	129				
Endosulfan I	0.491	0.025	0.5000	0	98.1	49	120				
Endosulfan II	0.473	0.050	0.5000	0	94.7	42	130				
Endosulfan sulfate	0.490	0.050	0.5000	0	98.0	54	137				
Endrin	0.667	0.050	0.5000	0	133	56	134				
Endrin aldehyde	0.425	0.050	0.5000	0	85.1	56	137				
gamma-BHC	0.476	0.025	0.5000	0	95.1	30	146				
gamma-Chlordane	0.493	0.025	0.5000	0	98.5	67	120				
Heptachlor	0.502	0.025	0.5000	0	100	51	128				
Heptachlor epoxide	0.496	0.025	0.5000	0	99.2	62	131				
Methoxychlor	0.535	0.25	0.5000	0	107	56	150				
Surr: Tetrachloro-m-xylene	0.448		0.5000		89.6	33	138				
Surr: Decachlorobiphenyl	0.433		0.5000		86.7	29	135				

Sample ID: MB-42647	SampType: MBLK	TestCode: 8081_W_PGE	Units: µg/L	Prep Date: 4/10/2013	RunNo: 88403
Client ID: PBW	Batch ID: 42647	TestNo: EPA 8081A	EPA 3510C	Analysis Date: 4/11/2013	SeqNo: 155579

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	ND	0.050									
4,4'-DDE	ND	0.050									

Qualifiers:

- B Analyte detected in the associated Method Blank
 - J Analyte detected below quantitation limits
 - S Spike/Surrogate outside of limits due to matrix interference
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

TestCode: 8081_W_PGE

Sample ID: MB-42647	SampType: MBLK	TestCode: 8081_W_PGE	Units: µg/L	Prep Date: 4/10/2013	RunNo: 88403						
Client ID: PBW	Batch ID: 42647	TestNo: EPA 8081A	EPA 3510C	Analysis Date: 4/11/2013	SeqNo: 1555579						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

4,4'-DDT	ND	0.050									
Aldrin	ND	0.025									
alpha-BHC	ND	0.025									
alpha-Chlordane	ND	0.025									
beta-BHC	ND	0.025									
delta-BHC	ND	0.025									
Dieldrin	ND	0.050									
Endosulfan I	ND	0.025									
Endosulfan II	ND	0.050									
Endosulfan sulfate	ND	0.050									
Endrin	ND	0.050									
Endrin aldehyde	ND	0.050									
gamma-BHC	ND	0.025									
gamma-Chlordane	ND	0.025									
Heptachlor	ND	0.025									
Heptachlor epoxide	ND	0.025									
Methoxychlor	ND	0.25									
Toxaphene	ND	2.5									
Surr: Tetrachloro-m-xylene	0.392		0.5000		78.3	33		138			
Surr: Decachlorobiphenyl	0.431		0.5000		86.1	29		135			

Sample ID: N009966-001C-MS	SampType: MS	TestCode: 8081_W_PGE	Units: µg/L	Prep Date: 4/10/2013	RunNo: 88403						
Client ID: ZZZZZZ	Batch ID: 42647	TestNo: EPA 8081A	EPA 3510C	Analysis Date: 4/11/2013	SeqNo: 1555581						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

4,4'-DDD	0.524	0.050	0.5000	0	105	50		139			
4,4'-DDE	0.513	0.050	0.5000	0	103	48		137			
4,4'-DDT	0.524	0.050	0.5000	0	105	47		138			
Aldrin	0.459	0.025	0.5000	0	91.7	42		138			
alpha-BHC	0.468	0.025	0.5000	0	93.6	60		128			

Qualifiers:

- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - ND Not Detected at the Reporting Limit
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

TestCode: 8081_W_PGE

Sample ID: N009966-001C-MS	SampType: MS	TestCode: 8081_W_PGE	Units: µg/L	Prep Date: 4/10/2013	RunNo: 88403
Client ID: ZZZZZZ	Batch ID: 42647	TestNo: EPA 8081A	EPA 3510C	Analysis Date: 4/11/2013	SeqNo: 1555581

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
alpha-Chlordane	0.477	0.025	0.5000	0	95.5	63	123				
beta-BHC	0.466	0.025	0.5000	0	93.3	66	126				
delta-BHC	0.355	0.025	0.5000	0	71.1	46	136				
Dieldrin	0.512	0.050	0.5000	0	102	62	129				
Endosulfan I	0.499	0.025	0.5000	0	99.8	49	120				
Endosulfan II	0.479	0.050	0.5000	0	95.7	42	130				
Endosulfan sulfate	0.492	0.050	0.5000	0	98.4	54	137				
Endrin	0.691	0.050	0.5000	0	138	56	134				
Endrin aldehyde	0.430	0.050	0.5000	0	86.0	56	137				
gamma-BHC	0.476	0.025	0.5000	0	95.2	30	146				S
gamma-Chlordane	0.499	0.025	0.5000	0	99.8	67	120				
Heptachlor	0.482	0.025	0.5000	0	96.3	51	128				
Heptachlor epoxide	0.502	0.025	0.5000	0	100	62	131				
Methoxychlor	0.545	0.25	0.5000	0	109	56	150				
Surr: Tetrachloro-m-xylene	0.409		0.5000		81.7	33	138				
Surr: Decachlorobiphenyl	0.459		0.5000		91.7	29	135				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	0.539	0.050	0.5000	0	108	50	139	0.5236	3.00	30	
4,4'-DDE	0.497	0.050	0.5000	0	99.4	48	137	0.5129	3.11	30	
4,4'-DDT	0.524	0.050	0.5000	0	105	47	138	0.5235	0.0392	30	
Aldrin	0.448	0.025	0.5000	0	89.6	42	138	0.4587	2.31	30	
alpha-BHC	0.459	0.025	0.5000	0	91.8	60	128	0.4681	1.96	30	
alpha-Chlordane	0.461	0.025	0.5000	0	92.1	63	123	0.4773	3.55	30	
beta-BHC	0.451	0.025	0.5000	0	90.2	66	126	0.4664	3.31	30	
delta-BHC	0.344	0.025	0.5000	0	68.9	46	136	0.3554	3.16	30	
Dieldrin	0.495	0.050	0.5000	0	99.0	62	129	0.5124	3.45	30	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected below quantitation limits
- S Spike/Surrogate outside of limits due to matrix interference
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

Calculations are based on raw values

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8081_W_PGE

Sample ID:	N009966-001C-MSD	SampType:	MSD	TestCode:	8081_W_PGE	Units:	µg/L	Prep Date:	4/10/2013	RunNo:	88403
Client ID:	ZZZZZZ	Batch ID:	42647	TestNo:	EPA 8081A	EPA	3510C	Analysis Date:	4/11/2013	SeqNo:	1555582
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Endosulfan I	0.481	0.025	0.5000	0	96.3	49	120	0.4990	3.58	30	
Endosulfan II	0.470	0.050	0.5000	0	94.1	42	130	0.4787	1.73	30	
Endosulfan sulfate	0.475	0.050	0.5000	0	95.1	54	137	0.4921	3.49	30	
Endrin	0.681	0.050	0.5000	0	136	56	134	0.6906	1.34	30	S
Endrin aldehyde	0.422	0.050	0.5000	0	84.3	56	137	0.4299	1.96	30	
gamma-BHC	0.462	0.025	0.5000	0	92.5	30	146	0.4761	2.91	30	
gamma-Chlordane	0.484	0.025	0.5000	0	96.7	67	120	0.4992	3.17	30	
Heptachlor	0.473	0.025	0.5000	0	94.7	51	128	0.4816	1.72	30	
Heptachlor epoxide	0.488	0.025	0.5000	0	97.6	62	131	0.5021	2.85	30	
Methoxychlor	0.528	0.25	0.5000	0	106	56	150	0.5452	3.30	30	
Toxaphene	ND	2.5	5.000	0	0	41	126	0	0	30	S
Surr: Tetrachloro-m-xylene	0.424		0.5000		84.8	33	138		0	30	
Surr: Decachlorobiphenyl	0.446		0.5000		89.3	29	135		0	30	

Qualifiers:

- B Analyte detected in the associated Method Blank
 - J Analyte detected below quantitation limits
 - S Spike/Surrogate outside of limits due to matrix interference
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

TestCode: 8082_W_PGE

Sample ID: LCS-42647	SampType: LCS	TestCode: 8082_W_PGE	Units: µg/L	Prep Date: 4/10/2013	RunNo: 88409
Client ID: LCSW	Batch ID: 42647	TestNo: EPA 8082	Units: EPA 3510C	Analysis Date: 4/12/2013	SeqNo: 1555806

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	4.700	0.50	5.000	0	94.0	40	144				
Aroclor 1260	4.653	0.50	5.000	0	93.1	45	145				
Surr: Decachlorobiphenyl	0.492		0.5000		98.5	29	133				
Surr: Tetrachloro-m-xylene	0.436		0.5000		87.2	50	120				

Sample ID: MB-42647	SampType: MBLK	TestCode: 8082_W_PGE	Units: µg/L	Prep Date: 4/10/2013	RunNo: 88409
Client ID: PBW	Batch ID: 42647	TestNo: EPA 8082	Units: EPA 3510C	Analysis Date: 4/12/2013	SeqNo: 1555807

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.50									
Aroclor 1221	ND	1.0									
Aroclor 1232	ND	0.50									
Aroclor 1242	ND	0.50									
Aroclor 1248	ND	0.50									
Aroclor 1254	ND	0.50									
Aroclor 1260	ND	0.50									
Surr: Decachlorobiphenyl	0.488		0.5000		97.5	29	133				
Surr: Tetrachloro-m-xylene	0.424		0.5000		84.8	50	120				

Sample ID: N009966-001C-MS	SampType: MS	TestCode: 8082_W_PGE	Units: µg/L	Prep Date: 4/10/2013	RunNo: 88409
Client ID: ZZZZZZ	Batch ID: 42647	TestNo: EPA 8082	Units: EPA 3510C	Analysis Date: 4/12/2013	SeqNo: 1555809

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	4.506	0.50	5.000	0	90.1	40	144				
Aroclor 1260	4.617	0.50	5.000	0	92.3	45	145				
Surr: Decachlorobiphenyl	0.467		0.5000		93.5	29	133				
Surr: Tetrachloro-m-xylene	0.415		0.5000		83.0	50	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - H Holding times for preparation or analysis exceeded
 - J Analyte detected below quantitation limits
 - R RPD outside accepted recovery limits
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - ND Not Detected at the Reporting Limit
- Calculations are based on raw values

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8082_W_PGE

Sample ID: N009966-001C-MSD	SampType: MSD	TestCode: 8082_W_PGE	Units: µg/L	Prep Date: 4/10/2013	RunNo: 88409						
Client ID: ZZZZZZ	Batch ID: 42647	TestNo: EPA 8082	EPA 3510C	Analysis Date: 4/12/2013	SeqNo: 1555810						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aroclor 1016	4.691	0.50	5.000	0	93.8	40	144	4.506	4.01	30	
Aroclor 1260	4.847	0.50	5.000	0	96.9	45	145	4.617	4.86	30	
Surr: Decachlorobiphenyl	0.492		0.5000		98.3	29	133		0		
Surr: Tetrachloro-m-xylene	0.435		0.5000		86.9	50	120		0		

Qualifiers:

- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - ND Not Detected at the Reporting Limit
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WU_LL

Sample ID: D121215LCS	SampType: LCS	TestCode: 8260_WU_LL	Units: µg/L	Prep Date:	RunNo: 88468						
Client ID: LCSW	Batch ID: D13VW010A	TestNo: EPA 8260B		Analysis Date: 4/10/2013	SeqNo: 1557817						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 1,2-Dichloroethane-d4	26.300		25.00		105	56	120				
Surr: 4-Bromofluorobenzene	25.800		25.00		103	80	120				
Surr: Dibromofluoromethane	26.020		25.00		104	72	120				
Surr: Toluene-d8	26.010		25.00		104	80	123				

Sample ID: N009966-001GMS	SampType: MS	TestCode: 8260_WU_LL	Units: µg/L	Prep Date:	RunNo: 88468						
Client ID: ZZZZZ	Batch ID: D13VW010A	TestNo: EPA 8260B		Analysis Date: 4/10/2013	SeqNo: 1557818						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

2-Chloroethyl vinyl ether	18.190	0.50	20.00	0	91.0	70	130				
Surr: 1,2-Dichloroethane-d4	24.750		25.00		99.0	56	120				
Surr: 4-Bromofluorobenzene	24.860		25.00		99.4	80	120				
Surr: Dibromofluoromethane	24.390		25.00		97.6	72	120				
Surr: Toluene-d8	25.170		25.00		101	80	123				

Sample ID: N009966-001GMSD	SampType: MSD	TestCode: 8260_WU_LL	Units: µg/L	Prep Date:	RunNo: 88468						
Client ID: ZZZZZ	Batch ID: D13VW010A	TestNo: EPA 8260B		Analysis Date: 4/10/2013	SeqNo: 1557819						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

2-Chloroethyl vinyl ether	21.540	0.50	20.00	0	108	70	130	18.19	16.9	20	
Surr: 1,2-Dichloroethane-d4	28.130		25.00		113	56	120		0		
Surr: 4-Bromofluorobenzene	26.700		25.00		107	80	120		0		
Surr: Dibromofluoromethane	27.770		25.00		111	72	120		0		
Surr: Toluene-d8	27.250		25.00		109	80	123		0		

Sample ID: D130410MB2	SampType: MBLK	TestCode: 8260_WU_LL	Units: µg/L	Prep Date:	RunNo: 88468						
Client ID: PBW	Batch ID: D13VW010A	TestNo: EPA 8260B		Analysis Date: 4/10/2013	SeqNo: 1557820						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WU_LL

Sample ID: D130410MB2	SampType: MBLK	TestCode: 8260_WU_LL	Units: µg/L	Prep Date:	RunNo: 88468						
Client ID: PBW	Batch ID: D13YW010A	TestNo: EPA 8260B		Analysis Date: 4/10/2013	SeqNo: 1557820						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

2-Chloroethyl vinyl ether	ND	0.50									
Surr: 1,2-Dichloroethane-d4	25.130		25.00		101	56	120				
Surr: 4-Bromofluorobenzene	25.000		25.00		100	80	120				
Surr: Dibromofluoromethane	24.600		25.00		98.4	72	120				
Surr: Toluene-d8	25.090		25.00		100	80	123				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

Advanced Technology Laboratories, Inc.
 3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: LCS-42664	SampType: LCS	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441						
Client ID: LCSW	Batch ID: 42664	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 4/15/2013	SeqNo: 1556930						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2-Diphenylhydrazine	69.440	10	100.0	0	69.4	60	117				
2,4,6-Trichlorophenol	74.110	10	100.0	0	74.1	49	126				
2,4-Dichlorophenol	71.100	10	100.0	0	71.1	48	120				
2,4-Dimethylphenol	66.340	10	100.0	0	66.3	28	120				
2,4-Dinitrophenol	83.580	50	100.0	0	83.6	25	130				
2,4-Dinitrotoluene	75.070	10	100.0	0	75.1	51	120				
2,6-Dinitrotoluene	73.050	10	100.0	0	73.0	49	120				
2-Chloronaphthalene	64.170	10	100.0	0	64.2	49	120				
2-Chlorophenol	63.910	10	100.0	0	63.9	37	120				
2-Nitrophenol	69.600	10	100.0	0	69.6	39	123				
3,3'-Dichlorobenzidine	127.900	20	200.0	0	64.0	20	120				
4,6-Dinitro-2-methylphenol	80.780	50	100.0	0	80.8	40	130				
4-Bromophenyl-phenylether	71.220	10	100.0	0	71.2	52	120				
4-Chloro-3-methylphenol	76.730	50	100.0	0	76.7	47	120				
4-Chloroaniline	58.200	20	100.0	0	58.2	20	120				
4-Chlorophenyl-phenylether	66.290	10	100.0	0	66.3	50	120				
4-Nitrophenol	61.450	50	100.0	0	61.4	20	120				
Acenaphthene	66.980	10	100.0	0	67.0	47	120				
Acenaphthylene	68.410	10	100.0	0	68.4	50	120				
Anthracene	71.170	10	100.0	0	71.2	54	120				J
Benzidine (M)	46.970	50	200.0	0	23.5	10	162				
Benzo(a)anthracene	72.520	10	100.0	0	72.5	56	100				
Benzo(a)pyrene	65.850	10	100.0	0	65.8	53	120				
Benzo(b)fluoranthene	67.870	10	100.0	0	67.9	45	124				
Benzo(g,h,i)perylene	74.100	10	100.0	0	74.1	38	123				
Benzo(k)fluoranthene	68.920	10	100.0	0	68.9	45	124				
Bis(2-chloroethoxy)methane	68.620	10	100.0	0	68.6	46	120				
Bis(2-chloroethyl)ether	63.710	10	100.0	0	63.7	37	120				
Bis(2-chloroisopropyl)ether	62.800	10	100.0	0	62.8	26	131				
Bis(2-ethylhexyl)phthalate	81.910	10	100.0	0	81.9	42	126				

Qualifiers:

- B Analyte detected in the associated Method Blank
 - J Analyte detected below quantitation limits
 - S Spike/Surrogate outside of limits due to matrix interference
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: LCS-42664	SampType: LCS	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441						
Client ID: LCSW	Batch ID: 42664	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 4/15/2013	SeqNo: 1556930						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Butylbenzylphthalate	84.600	10	100.0	0	84.6	46	120				
Chrysene	62.660	10	100.0	0	62.7	55	120				
Di-n-butylphthalate	80.710	10	100.0	0	80.7	54	120				
Di-n-octylphthalate	79.630	10	100.0	0	79.6	37	137				
Dibenz(a,h)anthracene	74.150	10	100.0	0	74.2	42	127				
Diethylphthalate	74.930	10	100.0	0	74.9	41	120				
Dimethylphthalate	73.900	10	100.0	0	73.9	25	127				
Fluoranthene	72.050	10	100.0	0	72.0	54	120				
Fluorene	67.590	10	100.0	0	67.6	50	120				
Hexachlorocyclopentadiene	61.170	10	100.0	0	61.2	51	108				
Indeno(1,2,3-cd)pyrene	71.790	10	100.0	0	71.8	43	125				
Isophorone	76.450	10	100.0	0	76.4	50	120				
N-Nitrosodi-n-propylamine	68.240	10	100.0	0	68.2	34	128				
N-Nitrosodimethylamine	48.250	50	100.0	0	48.2	35	98				J
N-Nitrosodiphenylamine	72.730	10	100.0	0	72.7	48	120				
Nitrobenzene	62.250	10	100.0	0	62.3	44	120				
Pentachlorophenol	74.450	50	100.0	0	74.4	38	120				
Phenanthrene	70.480	10	100.0	0	70.5	51	120				
Phenol	50.780	10	100.0	0	50.8	20	120				
Pyrene	70.650	10	100.0	0	70.6	49	128				
Surr: 1,2-Dichlorobenzene-d4	55.500		100.0		55.5	27	100				
Surr: 2,4,6-Tribromophenol	77.320		100.0		77.3	42	124				
Surr: 2-Chlorophenol-d4	62.810		100.0		62.8	34	98				
Surr: 2-Fluorobiphenyl	67.550		100.0		67.6	48	120				
Surr: 2-Fluorophenol	54.380		100.0		54.4	20	120				
Surr: 4-Terphenyl-d14	76.870		100.0		76.9	51	135				
Surr: Nitrobenzene-d5	66.170		100.0		66.2	41	120				
Surr: Phenol-d5	48.780		100.0		48.8	20	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - H Holding times for preparation or analysis exceeded
 - J Analyte detected below quantitation limits
 - R RPD outside accepted recovery limits
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - ND Not Detected at the Reporting Limit
 - RPD outside accepted recovery limits
- Calculations are based on raw values

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: MB-42664	SampType: MBLK	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441						
Client ID: PBW	Batch ID: 42664	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 4/15/2013	SeqNo: 1556931						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2-Diphenylhydrazine	ND	10									
2,4,6-Trichlorophenol	ND	10									
2,4-Dichlorophenol	ND	10									
2,4-Dimethylphenol	ND	10									
2,4-Dinitrophenol	ND	50									
2,4-Dinitrotoluene	ND	10									
2,6-Dinitrotoluene	ND	10									
2-Chloronaphthalene	ND	10									
2-Chlorophenol	ND	10									
2-Nitrophenol	ND	10									
3,3'-Dichlorobenzidine	ND	20									
4,6-Dinitro-2-methylphenol	ND	50									
4-Bromophenyl-phenylether	ND	10									
4-Chloro-3-methylphenol	ND	50									
4-Chloroaniline	ND	20									
4-Chlorophenyl-phenylether	ND	10									
4-Nitrophenol	ND	50									
Acenaphthene	ND	10									
Acenaphthylene	ND	10									
Anthracene	ND	10									
Benzidine (M)	ND	50									
Benzo(a)anthracene	ND	10									
Benzo(a)pyrene	ND	10									
Benzo(b)fluoranthene	ND	10									
Benzo(g,h,i)perylene	ND	10									
Benzo(k)fluoranthene	ND	10									
Bis(2-chloroethoxy)methane	ND	10									
Bis(2-chloroethyl)ether	ND	10									
Bis(2-chloroisopropyl)ether	ND	10									
Bis(2-ethylhexyl)phthalate	ND	10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: MB-42664	SampType: MBLK	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441						
Client ID: PBW	Batch ID: 42664	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 4/15/2013	SeqNo: 1556931						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Butylbenzylphthalate	ND	10									
Chrysene	ND	10									
Di-n-butylphthalate	ND	10									
Di-n-octylphthalate	ND	10									
Dibenz(a,h)anthracene	ND	10									
Diethylphthalate	ND	10									
Dimethylphthalate	ND	10									
Fluoranthene	ND	10									
Fluorene	ND	10									
Hexachlorocyclopentadiene	ND	10									
Indeno(1,2,3-cd)pyrene	ND	10									
Isophorone	ND	10									
N-Nitrosodi-n-propylamine	ND	10									
N-Nitrosodimethylamine	ND	50									
N-Nitrosodiphenylamine	ND	10									
Nitrobenzene	ND	10									
Pentachlorophenol	ND	50									
Phenanthrene	ND	10									
Phenol	ND	10									
Pyrene	ND	10									
Surr: 1,2-Dichlorobenzene-d4	51.500		100.0		51.5	27	100				
Surr: 2,4,6-Tribromophenol	65.820		100.0		65.8	42	124				
Surr: 2-Chlorophenol-d4	56.040		100.0		56.0	34	98				
Surr: 2-Fluorobiphenyl	58.860		100.0		58.9	48	120				
Surr: 2-Fluorophenol	50.320		100.0		50.3	20	120				
Surr: 4-Terphenyl-d14	86.140		100.0		86.1	51	135				
Surr: Nitrobenzene-d5	59.820		100.0		59.8	41	120				
Surr: Phenol-d5	42.440		100.0		42.4	20	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - ND Not Detected at the Reporting Limit
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: N009966-001H-MS	SampType: MS	Prep Date: 4/11/2013	RunNo: 88441
Client ID: ZZZZZZ	Batch ID: 42664	Analysis Date: 4/15/2013	SeqNo: 1556933
TestCode: 8270_W_PGE Units: µg/L			
TestNo: EPA 8270C EPA 3510C			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Diphenylhydrazine	71.520	10	100.0	0	71.5	60	117				
2,4,6-Trichlorophenol	75.670	10	100.0	0	75.7	49	126				
2,4-Dichlorophenol	69.780	10	100.0	0	69.8	48	120				
2,4-Dimethylphenol	67.250	10	100.0	0	67.2	28	120				
2,4-Dinitrophenol	85.760	50	100.0	0	85.8	25	130				
2,4-Dinitrotoluene	79.410	10	100.0	0	79.4	51	120				
2,6-Dinitrotoluene	75.690	10	100.0	0	75.7	49	120				
2-Chloronaphthalene	65.140	10	100.0	0	65.1	49	120				
2-Chlorophenol	65.160	10	100.0	0	65.2	37	120				
2-Nitrophenol	69.650	10	100.0	0	69.6	39	123				
3,3'-Dichlorobenzidine	119.060	20	200.0	0	59.5	20	120				
4,6-Dinitro-2-methylphenol	82.260	50	100.0	0	82.3	40	130				
4-Bromophenyl-phenylether	75.210	10	100.0	0	75.2	52	120				
4-Chloro-3-methylphenol	76.080	50	100.0	0	76.1	47	120				
4-Chloroaniline	58.830	20	100.0	0	58.8	20	120				
4-Chlorophenyl-phenylether	69.090	10	100.0	0	69.1	50	120				J
4-Nitrophenol	48.000	50	100.0	0	48.0	20	120				
Acenaphthene	67.900	10	100.0	0	67.9	47	120				
Acenaphthylene	68.370	10	100.0	0	68.4	50	120				
Anthracene	74.960	10	100.0	0	75.0	54	120				
Ben-zidine (M)	43.450	50	200.0	0	21.7	10	162				J
Benzo(a)anthracene	79.800	10	100.0	0	79.8	56	100				
Benzo(a)pyrene	72.670	10	100.0	0	72.7	53	120				
Benzo(b)fluoranthene	73.880	10	100.0	0	73.9	45	124				
Benzo(g,h,i)perylene	81.250	10	100.0	0	81.2	38	123				
Benzo(k)fluoranthene	75.110	10	100.0	0	75.1	45	124				
Bis(2-chloroethoxy)methane	67.170	10	100.0	0	67.2	46	120				
Bis(2-chloroethyl)ether	64.490	10	100.0	0	64.5	37	120				
Bis(2-chloroisopropyl)ether	64.080	10	100.0	0	64.1	26	131				
Bis(2-ethylhexyl)phthalate	92.490	10	100.0	0	92.5	42	126				

Qualifiers:

- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - ND Not Detected at the Reporting Limit
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: N009966-001H-MS	SampType: MS	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441						
Client ID: ZZZZZZ	Batch ID: 42664	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 4/15/2013	SeqNo: 1556933						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Butylbenzylphthalate	92.880	10	100.0	0	92.9	46	120				
Chrysene	69.010	10	100.0	0	69.0	55	120				
Di-n-butylphthalate	88.830	10	100.0	0	88.8	54	120				
Di-n-octylphthalate	87.180	10	100.0	0	87.2	37	137				
Dibenz(a,h)anthracene	83.940	10	100.0	0	83.9	42	127				
Diethylphthalate	80.200	10	100.0	0	80.2	41	120				
Dimethylphthalate	77.240	10	100.0	0	77.2	25	127				
Fluoranthene	76.950	10	100.0	0	77.0	54	120				
Fluorene	69.710	10	100.0	0	69.7	50	120				
Hexachlorocyclopentadiene	64.170	10	100.0	0	64.2	51	108				
Indeno(1,2,3-cd)pyrene	80.820	10	100.0	0	80.8	43	125				
Isophorone	74.460	10	100.0	0	74.5	50	120				
N-Nitrosodi-n-propylamine	66.730	10	100.0	0	66.7	34	128				
N-Nitrosodimethylamine	47.960	50	100.0	0	48.0	35	98				J
N-Nitrosodiphenylamine	79.330	10	100.0	0	79.3	48	120				
Nitrobenzene	61.710	10	100.0	0	61.7	44	120				
Pentachlorophenol	85.480	50	100.0	0	85.5	38	120				
Phenanthrene	74.740	10	100.0	0	74.7	51	120				
Phenol	44.460	10	100.0	0	44.5	20	120				
Pyrene	76.370	10	100.0	0	76.4	49	128				
Surr: 1,2-Dichlorobenzene-d4	58.590		100.0		58.6	27	100				
Surr: 2,4,6-Tribromophenol	82.210		100.0		82.2	42	124				
Surr: 2-Chlorophenol-d4	63.120		100.0		63.1	34	98				
Surr: 2-Fluorobiphenyl	67.450		100.0		67.5	48	120				
Surr: 2-Fluorophenol	53.250		100.0		53.2	20	120				
Surr: 4-Terphenyl-d14	83.360		100.0		83.4	51	135				
Surr: Nitrobenzene-d5	65.150		100.0		65.2	41	120				
Surr: Phenol-d5	41.210		100.0		41.2	20	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - ND Not Detected at the Reporting Limit
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	Sample ID: N009966-001H-MSD		Client ID: ZZZZZZ	
												SampType: MSD	Batch ID: 42664	TestCode: 8270_W_PGE	Units: µg/L
1,2-Diphenylhydrazine	82.540	10	100.0	0	82.5	60	117	71.52	14.3	20					
2,4,6-Trichlorophenol	86.540	10	100.0	0	86.5	49	126	75.67	13.4	20					
2,4-Dichlorophenol	79.600	10	100.0	0	79.6	48	120	69.78	13.1	20					
2,4-Dimethylphenol	77.040	10	100.0	0	77.0	28	120	67.25	13.6	20					
2,4-Dinitrophenol	95.920	50	100.0	0	95.9	25	130	85.76	11.2	20					
2,4-Dinitrotoluene	91.000	10	100.0	0	91.0	51	120	79.41	13.6	20					
2,6-Dinitrotoluene	88.480	10	100.0	0	88.5	49	120	75.69	15.6	20					
2-Chloronaphthalene	73.920	10	100.0	0	73.9	49	120	65.14	12.6	20					
2-Chlorophenol	71.790	10	100.0	0	71.8	37	120	65.16	9.68	20					
2-Nitrophenol	80.090	10	100.0	0	80.1	39	123	69.65	13.9	20					
3,3'-Dichlorobenzidine	138.960	20	200.0	0	69.5	20	120	119.1	15.4	20					
4,6-Dinitro-2-methylphenol	94.010	50	100.0	0	94.0	40	130	82.26	13.3	20					
4-Bromophenyl-phenylether	87.200	10	100.0	0	87.2	52	120	75.21	14.8	20					
4-Chloro-3-methylphenol	87.920	50	100.0	0	87.9	47	120	76.08	14.4	20					
4-Chloroaniline	70.700	20	100.0	0	70.7	20	120	58.83	18.3	20					
4-Chlorophenyl-phenylether	79.450	10	100.0	0	79.4	50	120	69.09	13.9	20					
4-Nitrophenol	51.250	50	100.0	0	51.3	20	120	48.00	6.55	20					
Acenaphthene	79.860	10	100.0	0	79.9	47	120	67.90	16.2	20					
Acenaphthylene	79.420	10	100.0	0	79.4	50	120	68.37	15.0	20					
Anthracene	87.230	10	100.0	0	87.2	54	120	74.96	15.1	20					
Benzdine (M)	61.620	50	200.0	0	30.8	10	162	43.45	34.6	20					R
Benzo(a)anthracene	90.130	10	100.0	0	90.1	56	100	79.80	12.2	20					
Benzo(a)pyrene	82.530	10	100.0	0	82.5	53	120	72.67	12.7	20					
Benzo(b)fluoranthene	85.100	10	100.0	0	85.1	45	124	73.88	14.1	20					
Benzo(g,h,i)perylene	93.390	10	100.0	0	93.4	38	123	81.25	13.9	20					
Benzo(k)fluoranthene	87.010	10	100.0	0	87.0	45	124	75.11	14.7	20					
Bis(2-chloroethoxy)methane	77.900	10	100.0	0	77.9	46	120	67.17	14.8	20					
Bis(2-chloroethyl)ether	72.470	10	100.0	0	72.5	37	120	64.49	11.7	20					
Bis(2-chloroisopropyl)ether	70.480	10	100.0	0	70.5	26	131	64.08	9.51	20					
Bis(2-ethylhexyl)phthalate	103.660	10	100.0	0	104	42	126	92.49	11.4	20					

Qualifiers:

- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - ND Not Detected at the Reporting Limit
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

TestCode: 8270_W_PGE

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	Sample ID: N009966-001H-MSD		Client ID: ZZZZZZ		
												SampType: MSD	Batch ID: 42664	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013
Butylbenzylphthalate	104.610	10	100.0	0	105	46	120	92.88	11.9	20						
Chrysene	79.000	10	100.0	0	79.0	55	120	69.01	13.5	20						
Di-n-butylphthalate	101.080	10	100.0	0	101	54	120	88.83	12.9	20						
Di-n-octylphthalate	103.020	10	100.0	0	103	37	137	87.18	16.7	20						
Dibenz(a,h)anthracene	97.180	10	100.0	0	97.2	42	127	83.94	14.6	20						
Diethylphthalate	92.280	10	100.0	0	92.3	41	120	80.20	14.0	20						
Dimethylphthalate	88.160	10	100.0	0	88.2	25	127	77.24	13.2	20						
Fluoranthene	89.620	10	100.0	0	89.6	54	120	76.95	15.2	20						
Fluorene	80.550	10	100.0	0	80.6	50	120	69.71	14.4	20						
Hexachlorocyclopentadiene	71.590	10	100.0	0	71.6	51	108	64.17	10.9	20						J
Indeno(1,2,3-cd)pyrene	93.340	10	100.0	0	93.3	43	125	80.82	14.4	20						
Isophorone	85.910	10	100.0	0	85.9	50	120	74.46	14.3	20						
N-Nitrosodi-n-propylamine	77.490	10	100.0	0	77.5	34	128	66.73	14.9	20						
N-Nitrosodimethylamine	48.970	50	100.0	0	49.0	35	98	47.96	0	20						
N-Nitrosodiphenylamine	91.180	10	100.0	0	91.2	48	120	79.33	13.9	20						
Nitrobenzene	70.840	10	100.0	0	70.8	44	120	61.71	13.8	20						
Pentachlorophenol	95.960	50	100.0	0	96.0	38	120	85.48	11.6	20						
Phenanthrene	86.760	10	100.0	0	86.8	51	120	74.74	14.9	20						
Phenol	47.370	10	100.0	0	47.4	20	120	44.46	6.34	20						
Pyrene	89.520	10	100.0	0	89.5	49	128	76.37	15.9	20						
Surr: 1,2-Dichlorobenzene-d4	60.280		100.0		60.3	27	100		0							
Surr: 2,4,6-Tribromophenol	94.080		100.0		94.1	42	124		0							
Surr: 2-Chlorophenol-d4	69.440		100.0		69.4	34	98		0							
Surr: 2-Fluorobiphenyl	75.470		100.0		75.5	48	120		0							
Surr: 2-Fluorophenol	55.360		100.0		55.4	20	120		0							
Surr: 4-Terphenyl-d14	95.490		100.0		95.5	51	135		0							
Surr: Nitrobenzene-d5	74.250		100.0		74.2	41	120		0							
Surr: Phenol-d5	44.820		100.0		44.8	20	120		0							

Qualifiers:

- B Analyte detected in the associated Method Blank
 - J Analyte detected below quantitation limits
 - S Spike/Surrogate outside of limits due to matrix interference
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values



6245 Harrison Drive, Suite 4
Las Vegas, NV 89120
E-mail: veritaslabs@msn.com

Phone: (702) 321-8315 Fax: (702) 597-2098

Company Name: Veritas Laboratories Telephone: (702) 321-8315
 Address: 6245 Harrison Drive, Suite 4 Fax: (702) 597-2098
 Las Vegas, NV 89120 veritaslabs@msn.com
 Attention: Bruce Cunningham Email: RYAN
 Invoice To: Same as Above Project Name: V13DOY1
 Project Number

Client Sample Identification	Lab ID #	Sampled Date	Sampled Time	Com- posite	Grab	Matrix Code ¹
V13DOY1-01		4/1/13	1210		5	5
-02			1215		5	5
-03			1220		5	5
-04			1225		5	5

Relinquished by: (Signature)	Date/Time:	Turnaround Time:	Matrix Code	Preservation Codes	Received Temperature:
<i>[Signature]</i>	4/1/13 1610	24 Hours	GW=Groundwater	I=Iced	34 182
Received by: (Signature)	4/1/13 1610	48 Hours	WW=Wastewater	H=HCL	Received in Good
Relinquished by: (Signature)	4/1/13 1631	72 Hours	DW=Drinking Water	N=HNO ₃	Condition?
Received by: (Signature)	4/1/13 1631	Normal	A=Air	S=H ₂ SO ₄	Yes/No
		Other	S=Soil/Solid	X=NaOH	Custody Seals?
		Date Needed	SL=Sludge	T=Na ₂ S ₂ O ₃	Yes/No
			OL=Organic Liquid	O=Other	
			W=Wipe	NO=None	
			O=Other		

Sent to AL via carrier CHAIN OF CUSTODY

Advanced Technology Laboratories, Inc.

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 4/11/2013 Workorder: N009996
 Rep sample Temp (Deg C): 3.4 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|--|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments:

Checklist Completed B

MBC

MBC 4/12/13

Reviewed By:



April 18, 2013

Marlon Cartin
Advanced Technology Laboratory-Las Vegas
3151 W Post Rd.
Las Vegas, NV 89118
Tel: (702) 307-2659
Fax:(702) 307-2691



Re: ATL Work Order Number : 1301035
Client Reference : [none]

Enclosed are the results for sample(s) received on April 09, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Advanced Technology Laboratory-Las Vegas

Project Number : -

3151 W Post Rd.

Report To : Marlon Cartin

Las Vegas , NV 89118

Reported : 04/18/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N009966-001A / EFF-04-09	1301035-01	Waste Water	4/09/13 10:50	4/09/13 16:00
N009966-001B / EFF-04-09	1301035-02	Waste Water	4/09/13 10:50	4/09/13 16:00
N009966-001D / EFF-04-09	1301035-03	Waste Water	4/09/13 10:50	4/09/13 16:00

CASE NARRATIVE

The sample for SM 5540C (MBAS) was subcontracted to AETL with ELAP Cert.# 1541.



Certificate of Analysis

Advanced Technology Laboratory-Las Vegas
3151 W Post Rd.
Las Vegas , NV 89118

Project Number : -
Report To : Marlon Cartin
Reported : 04/18/2013

Client Sample ID N009966-001A / EFF-04-09

Lab ID: 1301035-01

Ammonia, as Nitrogen N by SM 4500NH3C

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Nitrogen, Ammonia (As N)	ND	0.15	NA	1	B3D0256	04/16/2013	04/16/13 11:34	



Certificate of Analysis

Advanced Technology Laboratory-Las Vegas
3151 W Post Rd.
Las Vegas , NV 89118

Project Number : -
Report To : Marlon Cartin
Reported : 04/18/2013

Client Sample ID N009966-001D / EFF-04-09

Lab ID: 1301035-03

Cyanide, Total by SM4500-CN E

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cyanide, Total	ND	0.010	0.005	1	B3D0242	04/15/2013	04/15/13 14:13	



Certificate of Analysis

Advanced Technology Laboratory-Las Vegas
 3151 W Post Rd.
 Las Vegas , NV 89118

Project Number : -
 Report To : Marlon Cartin
 Reported : 04/18/2013

QUALITY CONTROL SECTION

Cyanide, Total by SM4500-CN E - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3D0242 - Prep_WC_3_W									
Blank (B3D0242-BLK1)				Prepared: 4/15/2013 Analyzed: 4/15/2013					
Cyanide, Total	ND	0.010			NR				
LCS (B3D0242-BS1)				Prepared: 4/15/2013 Analyzed: 4/15/2013					
Cyanide, Total	0.373000	0.010	0.400000		93.2	80 - 120			
Matrix Spike (B3D0242-MS1)		Source: 1301035-03		Prepared: 4/15/2013 Analyzed: 4/15/2013					
Cyanide, Total	0.390000	0.010	0.400000	ND	97.5	80 - 120			
Matrix Spike Dup (B3D0242-MSD1)		Source: 1301035-03		Prepared: 4/15/2013 Analyzed: 4/15/2013					
Cyanide, Total	0.397000	0.010	0.400000	ND	99.2	80 - 120	1.78	20	



Certificate of Analysis

Advanced Technology Laboratory-Las Vegas
 3151 W Post Rd.
 Las Vegas , NV 89118

Project Number : -
 Report To : Marlon Cartin
 Reported : 04/18/2013

Ammonia, as Nitrogen N by SM 4500NH3C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
---------	------------------	---------------	----------------	------------------	-------	-----------------	-----	--------------	-------

Batch B3D0256 - Prep_WC_3_W

Blank (B3D0256-BLK1)

Prepared: 4/16/2013 Analyzed: 4/16/2013

Nitrogen, Ammonia (As N)

ND 0.03

NR

LCS (B3D0256-BS1)

Prepared: 4/16/2013 Analyzed: 4/16/2013

Nitrogen, Ammonia (As N)

0.856000 0.03 1.00000

85.6 80 - 120

Matrix Spike (B3D0256-MS1)

Source: 1301035-01

Prepared: 4/16/2013 Analyzed: 4/16/2013

Nitrogen, Ammonia (As N)

4.74000 0.15 5.00000

ND 94.8 80 - 120

Matrix Spike Dup (B3D0256-MSD1)

Source: 1301035-01

Prepared: 4/16/2013 Analyzed: 4/16/2013

Nitrogen, Ammonia (As N)

4.75500 0.15 5.00000

ND 95.1 80 - 120 0.316 20



Certificate of Analysis

Advanced Technology Laboratory-Las Vegas

Project Number : -

3151 W Post Rd.

Report To : Marlon Cartin

Las Vegas , NV 89118

Reported : 04/18/2013

Notes and Definitions

ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225

Number of Pages 2
Date Received 04/10/2013
Date Reported 04/17/2013

Telephone: (562)989-4045
Attention: Rachelle Arada

Job Number	Order Date	Client
69163	04/10/2013	ATL

Project ID: 1301035
Project Name: PO# SC07932

Enclosed please find results of analyses of 1 water sample which was analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181

Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Page: 1 A

Ordered By

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225

Project ID: 1301035
Date Received 04/10/2013
Date Reported 04/17/2013

Telephone: (562)989-4045
Attention: Rachele Arada

Job Number	Order Date	Client
69163	04/10/2013	ATL

CERTIFICATE OF ANALYSIS CASE NARRATIVE

AETL received 1 samples with the following specification on 04/10/2013.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers	
69163.01	1301035-02	04/09/2013	Aqueous	1	
Method ^ Submethod		Req Date	Priority	TAT	Units
SM-5540C		04/17/2013	2	Normal	mg/L

The samples were analyzed as specified on the enclosed chain of custody. Analytical non-conformances have been noted on the report.

Checked By: 

Approved By: 

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
 Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Ordered By

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755-5225

Telephone: (562)989-4045

Attn: Rachelle Arada

Page: 2

Project ID: 1301035
 Project Name: PO# SC07932

AETL Job Number	Submitted	Client
69163	04/10/2013	ATL

Method: SM-5540C, Methylene Blue Active Substances (MBAS)

QC Batch No: 041013-1

Our Lab I.D.		Method Blank	69163.01		
Client Sample I.D.			1301035-02		
Date Sampled			04/09/2013		
Date Prepared		04/10/2013	04/10/2013		
Preparation Method		SM5540C	SM5540C		
Date Analyzed		04/10/2013	04/10/2013		
Matrix		Aqueous	Aqueous		
Units		mg/L	mg/L		
Dilution Factor		1	1		
Analytes	MDL	PQL	Results	Results	
Surfactants (MBAS)	0.05	0.05	ND	ND	

QUALITY CONTROL REPORT

QC Batch No: 041013-1; Dup or Spiked Sample: 69163.01; LCS: Clean Water; QC Prepared: 04/10/2013; QC Analyzed: 04/10/2013;

Units: mg/L

Analytes	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Surfactants (MBAS)	0.500	0.431X	86.2	0.500	0.426X	85.2	1.2	80-120	<15

QC Batch No: 041013-1; Dup or Spiked Sample: 69163.01; LCS: Clean Water; QC Prepared: 04/10/2013; QC Analyzed: 04/10/2013;

Units: mg/L

Analytes	SM Result	SM DUP Result	RPD %	SM RPD % Limit
Surfactants (MBAS)	ND	ND	<1	<15



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street, Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

Data Qualifier:

- #: Recovery is not within acceptable control limits.
- *: In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
- B: Analyte was present in the Method Blank.
- D: Result is from a diluted analysis.
- E: Result is beyond calibration limits and is estimated.
- H: Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
- J: Analyte was detected. However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
- M: Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
- MCL: Maximum Contaminant Level
- NS: No Standard Available
- S6: Surrogate recovery is outside control limits due to matrix interference.
- S8: The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
- X: Results represent LCS and LCSD data.

Definition:

- %Limi: Percent acceptable limits.
- %REC: Percent recovery.
- Con.L: Acceptable Control Limits
- Conce: Added concentration to the sample.
- LCS: Laboratory Control Sample
- MDL: Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.



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Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate
ND:	Analyte was not detected in the sample at or above MDL.
PQL:	Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
Recov:	Recovered concentration in the sample.
RPD:	Relative Percent Difference


ADVANCED TECHNOLOGY
 LABORATORIES

SUBCONTRACT ORDER

Work Order: 1301035

Job # 69163

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachelle Arada

RECEIVING LABORATORY:

AETL
 2834 North Naomi Street
 Burbank, CA 91504
 Phone : (818) 845-8200
 Fax: (818) 845-8840
 PO#: SC07932 - 5 DAY TAT (RA)

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled
ATL Lab#: 1301035-02 / N009966-001B / EFF-04-09			04/09/13 10:50
425.1_5540C	04/16/13 15:00	04/11/13 10:50	<i>69163.01</i>
1-Poly Unpres - 1000mL	<i>17</i>		

Comments:

<i>[Signature]</i>	<i>4/12/13 1149</i>	<i>Thomas Helmer</i>	<i>4-10-13</i>
Released By	Date	Received By	Date
<i>Thomas Helmer</i>	<i>4-10-13</i>	<i>[Signature]</i>	<i>04/10/13 13.25</i>
Released By	Date	Received By	Date

lala

CHAIN-OF-CUSTODY RECORD

Advanced Technology Laboratories
 3151-3153 W Post Rd., Las Vegas, NV 89118
 www.atlglobal.com
 TEL: 7023072659 FAX: 7023072691



QC Level: RTNE

Subcontractor:

Advanced Technology Laboratories - Signal Hill
 3283 Walnut Ave.
 Signal Hill, California

Field Sampler: *J. DYE*

09-Apr-13

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				SM 5540 C	SM4500-CN E
N009966-001A / EFF-04-09 / 30/33 /	Wastewater	4/9/2013 10:50:00 AM	8OZP		1
N009966-001B / EFF-04-09 / -2	Wastewater	4/9/2013 10:50:00 AM	8OZP	1	
N009966-001D / EFF-04-09 / -3	Wastewater	4/9/2013 10:50:00 AM	16OZP		1

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N009966 For questions, call Marlon at (702)-307-2659. Please e-mail results to marlon@atl-labs.com by: 5 Day TAT.

Relinquished by: <i>MARLON</i>	Date/Time: <i>4/13/13</i>
Relinquished by: <i>Marlon</i>	Date/Time: <i>4/9/13</i>

CHAIN OF CUSTODY RECORD - PLEASE COMPLETE ALL SHADED AREAS

Page of
FOR LABORATORY USE ONLY

ADVANCED TECHNOLOGY LABORATORIES
 3275 Walnut Ave., Signal Hill, CA 90755
 Tel. (562) 989-4045 • Fax: (562) 989-4040

Method of Transport
 Client ATL
 FedEx OnTrac
 GSO Other.

Sample Condition Upon Receipt
 1. CHILLED Y N 4. SEALED Y N
 2. HEADSPACE (VOA) Y N 5. # OF SPLS MATCH COC Y N
 3. CONTAINER INTACT Y N 6. PRESERVED Y N

Submitter - Please complete all SHADED areas and include QUOTE # above to ensure proper invoicing.

Client: Advanced Technology Laboratory-Las Vegas Address: 3151 W Post Rd. City: Las Vegas State: NV Zip Code: 89118 Tel: (702) 307-2659 Fax: (702) 307-2691

Project Name: CH2M HILL- Nonwalk Sampler: (Signature)

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

Bill To: **Send Report to:** **Special Instructions/Comments:**
 15 mins shipping time

Attn: **Attn:** **Company:** **Company:** **Email:** **Email:**

Address: **Address:** **City:** **City:** **State:** **State:** **ZIP:** **ZIP:**

City: **State:** **ZIP:** **City:** **State:** **ZIP:**

8260 - 624 (Volatiles)
 8015B (GRO) / 8021 (BTEX)
 8270B - 625 (BNA) / 8310 (PAHs)
 8015B (DRO) / 8015B (HClD)
 8022 PCBs
 6010B - 2007 CAM Metals
 6010B - 2007.8 - 1640 Metals
 7199 - 218.6 (Hex. Chromium)
 300 (Antions) / 314 (Perchlorate)
 Field Services

CIRCLE or Write IN Analyses

CIRCLE APPROPRIATE MATRIX

I T E M	Lab No.	Sample ID / Location	Sample Description	Date	Time	RESERVATION		REMARKS
						Container(s)	Type	
1				4/9/2013				
2								
3								
4								
5								
6								
7								
8								
9								
10								

QA/QC
 RTNE Legal
 CT Logcode
 SWRCB OTHER

Material: 1=Glass; 2=Plastic; 3=Metal
 TAT 0: 300% SURCHARGE SAME BUSINESS DAY IF RECEIVED BY 8:30 AM
 TAT 1: 100% SURCHARGE NEXT BUSINESS DAY
 TAT 2: 50% SURCHARGE 2ND BUSINESS DAY
 TAT 3: 30% SURCHARGE 3RD BUSINESS DAY
 TAT 4: 20% SURCHARGE 4TH BUSINESS DAY
 TAT 5: NO SURCHARGE 5-7 BUSINESS DAYS
 TAT 10: 10% DISCOUNT 10th BUSINESS DAY

Container Types: 1=Tube; 2=VOA; 3=Liter; 4=Pin; 5=Jar; 6=Tealjar; 7=Canister

Preservatives: 1=HCl, 2=FINO3, 3=H2SO4; 4 = 4C; 5=Zn ((Ac)2; 6=NaOH; 7=NA2S2O3

FOR KUSH TULPT/STLC; ADD 2 DAYS TO RESPECTIVE TAT.
 Subcon: TAT IS 10 - 15 business days, Dioxin and Furans 21 business days.

150003

CHAIN-OF-CUSTODY RECORD

Advanced Technology Laboratories
 3151-3153 W Post Rd., Las Vegas, NV 89118
 www.atilglobal.com
 TEL: 7023072659 FAX: 7023072691

QC Level: RTNE

Subcontractor:

EMS Laboratories
 117 W. Bellevue Dr.
 Pasadena, CA 91105

TEL: (626) 568-4065
 FAX:
 Acct #:

Field Sampler: James Dye

10-Apr-13

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				Asb_TEM	
N009966-001E / EFF-04-09	Wastewater	4/9/2013 10:50:00 AM	16OZP	1	

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N009966 For questions, call Marlon at (702)-307-2659. Please e-mail results to marlon@ati-labs.com by: Normal TAT

Please analyze for Asbestos by EPA/600/R-93/116(PCM).

Relinquished by: <u>MBCARLAN</u>	Date/Time: <u>4/10/13 @ 17:00</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>4/11/13 @ 17</u>
Received by: <u>Ann Marie M</u>	Date/Time: <u>4/11/13 @ 17</u>
Received by: _____	Date/Time: _____

DATE: April 24, 2013 Page 1 of 6
CUSTOMER: Advanced Technology Laboratories
3151-3153 W. Post Rd.
Las Vegas, NV 89118
ATTENTION: Marlon Cartin
REPORT NO: 156063
REFERENCE: P.O. # N009966
SUBJECT: Analysis of Water Samples for Asbestos by TEM
ACCREDITED: State of Nevada Environmental Laboratory Certification CA-245

One sample was submitted for analysis according to EPA 600/4-83-043, EPA 100.1.

SAMPLE NO: N009966-001E /EFF-04-09
COLLECTED: 04/09/2013 1050 by James Dye
DATE RECEIVED: 04/11/2013 0917
FILTERED: 04/10/2013 0946
DATE ANALYZED: 04/18/2013

The test results along with the laboratory blank are enclosed.

Respectfully submitted,

EMS LABORATORIES, INC.



B. M. Kolk
Laboratory Director
bk

Note: The results of the analysis are based upon the samples submitted to the laboratory. No representation is made regarding the sampling area other than that implied by the analytical results for the immediate vicinity of the samples analyzed as calculated from the data presented with those samples.

This report shall not be reproduced, except in full, without the written approval of EMS Laboratories, Inc. Unless otherwise noted in this cover letter, the samples were received properly packaged, clearly identified and intact.

Any deviation or exclusion from the test method is noted in this cover letter.

ANALYSIS OF WATER BY TEM (EPA-600/4-83-043) EPA 100.1

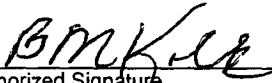
LAB.NO. 156063
 CLIENT: Advanced Technology Laboratories
 DATE: 4/18/2013

Laboratory I.D.	Client I.D.	FILTER MEDIA DATA			No. of G.O.	Analyzed Area, mm ²	Sample Volume (ml)
		Type	Diameter mm	Effective Area mm ²			
156063-EFF	N009966-001E EFF-04-09	PC	47	1017	20	0.196	25
4-11-13-BL	EMS Blank	PC	47	1017	20	0.196	500

INDIVIDUAL ANALYTICAL RESULTS

Laboratory I.D.	Client I.D.	No of Asbestos Fib			Detection Limit (MFL)	CONCENTRATION (MFL)		
		All sizes	Fib >5µm	Fib >10µm		Fib	Fib >5µm	Fib >10µm
156063-EFF	N009966-001E	ND	ND	ND	0.2	< 0.2	< 0.2	< 0.2
4-11-13-BL	EMS Blank	ND	ND	ND	0.01	< 0.01	< 0.01	< 0.01

The analysis was carried out to the approved TEM method. This laboratory is in compliance with the quality specified by the method.



 Authorized Signature

NA Not Applicable
 ND None Detected
 PC Polycarbonate Filter
 GO Grid Openings
 MFL Million Fibers per Liter
 Fib Fibers

TEM-6A (2011 Rev)

TEM ASBESTOS ANALYSIS

Client ATL
 Sample No. 09

EMS Lab No. 156063
 Page 2 of 2

Grid	Grid Opening	Structure Number	Structure	Dimensions (mm)		Fiber Classification											EDS Analysis				Comments						
				Width	Length	NAM	TM	CM	CD	CQ	CMQ	CDQ	UF	AD	AX	ADX	AQ	ADQ	AZQ	AZZ		Na	Mg	Si	Ca	Fe	
B	R36	N5D																									
	C36	N5D																									
	E33	N5D																									
	G41	N5D																									
	E51	N5D																									
	G41	N5D																									
	H44	N5D																									
C	E36	N5D																									
	G46	N5D																									
	E36	N5D																									
	E34	N5D																									
	B38	N5D																									
	A44	N5D																									

TEM ASBESTOS ANALYSIS

Client EMS-BLK
 Sample No. 100.1/100.2

EMS Lab No. 4-11-13
 Page 1 of 2

TYPE OF SAMPLE
 Air Water
 Soil Bulk
 Other _____

METHOD OF ANALYSIS
 EPA 600/4-83-043 ISO

LEVEL OF ANALYSIS
 Chrysotile CD-CDO
 Amphibole AD-ADO

ASPECT RATIO
 3:1 5:1

EPA/600/R-94/134 100.1 100.2

LENGTHS
 All Sizes (EPA)
 (µm) ≥ 0.5
 ≥ 1.0
 ≥ 5.0
 ≥ 10.0
 PCM Range*
 * ≥ 0.25 µm width
 ≥ 5.0 µm length)

PORE SIZE
 0.45 µm 0.8 µm
 0.1 µm 0.22 µm
 Other _____

G.O. Area (mm²) 0.0
 No. of G.O. to Analyze 20

FILTER TYPE / AREA (mm±)
 MCE 365
 PC 34
 MCN 107
 Other _____

DIRECT PREP
INDIRECT PREP

H2O
100.2/100.1 liters
 Volume _____ ml
 Working Volume 500 grams
 Weight _____ %
 Ashed Area _____ %

Prepared By JAP
 Date 4-11-13

MICROSCOPE
 H600A - Serial No. 542-36-01
 H600B - Serial No. 542-05-06

ENERGY DISPERSIVE X-RAY SYSTEM
 Thermo 4405C-3NUT

Grid Address: A
 Screen Magnification: 1880x
 Camera Constant: 27.2
 Accelerating Voltage: 100KV
 Beam Current: 10 µA
 K-Factor: 1.1
 Analyst Mona Date 4-11-13

RECEIVING

Grid	Grid Opening	Structure Number	Structure	Dimensions (mm)		Fiber Classification										EDS Analysis					Comments							
				Width	Length	NAM	TM	CM	CD	CQ	CMQ	CDQ	UF	AD	AX	ADX	AQ	ADQ	AZQ	AZZ		Na	Mg	Si	Ca	Fe		
A	133	NS9																										
	134	NS9																										
	135	NS9																										
	136	NS9																										
	137	NS9																										
	138	NS9																										
	139	NS9																										
	140	NS9																										
	141	NS9																										
	142	NS9																										
	143	NS9																										
	144	NS9																										
	145	NS9																										
	146	NS9																										
	147	NS9																										
	148	NS9																										
	149	NS9																										
	150	NS9																										

OBSERVATIONS:

Clean Debris Gypsum Condition of the Grid:

Very Light Moderate Heavy Very Heavy

Light Moderate Heavy Very Heavy

Scrappy Undissolved Filter

April 25, 2013

Daniel Jablonski
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612
TEL: (213)228-8271
FAX: (510) 622-9129

CA-ELAP No.:2676
NV Cert. No.:NV-009222007A

Workorder No.: N009966

RE: SFPP - Norwalk Site

Attention: Daniel Jablonski

Enclosed are the results for sample(s) received on April 10, 2013 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an amended report. Please disregard all previous documentation that corresponds to the page(s) enclosed.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



**Advanced Technology
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: 25-Apr-13

CLIENT: CH2M HILL
Lab Order: N009966
Project: SFPP - Norwalk Site
Lab ID: N009966-001

Client Sample ID: EFF-04-09
Collection Date: 4/9/2013 10:50:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3510C

EPA 8270C

RunID: MS3_130415A	QC Batch: 42664	PrepDate: 4/11/2013	Analyst: MDM
1,2-Diphenylhydrazine	ND 2.7	10	µg/L 1 4/15/2013 11:23 PM
2,4,6-Trichlorophenol	ND 2.7	10	µg/L 1 4/15/2013 11:23 PM
2,4-Dichlorophenol	ND 2.8	10	µg/L 1 4/15/2013 11:23 PM
2,4-Dimethylphenol	ND 2.6	10	µg/L 1 4/15/2013 11:23 PM
2,4-Dinitrophenol	ND 2.4	50	µg/L 1 4/15/2013 11:23 PM
2,4-Dinitrotoluene	ND 2.3	10	µg/L 1 4/15/2013 11:23 PM
2,6-Dinitrotoluene	ND 2.4	10	µg/L 1 4/15/2013 11:23 PM
2-Chloronaphthalene	ND 2.5	10	µg/L 1 4/15/2013 11:23 PM
2-Chlorophenol	ND 2.7	10	µg/L 1 4/15/2013 11:23 PM
2-Nitrophenol	ND 3.0	10	µg/L 1 4/15/2013 11:23 PM
3,3'-Dichlorobenzidine	ND 5.7	20	µg/L 1 4/15/2013 11:23 PM
4,6-Dinitro-2-methylphenol	ND 2.0	50	µg/L 1 4/15/2013 11:23 PM
4-Bromophenyl-phenylether	ND 2.7	10	µg/L 1 4/15/2013 11:23 PM
4-Chloro-3-methylphenol	ND 2.6	50	µg/L 1 4/15/2013 11:23 PM
4-Chloroaniline	ND 2.5	20	µg/L 1 4/15/2013 11:23 PM
4-Chlorophenyl-phenylether	ND 2.5	10	µg/L 1 4/15/2013 11:23 PM
4-Nitrophenol	ND 2.2	50	µg/L 1 4/15/2013 11:23 PM
Acenaphthene	ND 2.9	10	µg/L 1 4/15/2013 11:23 PM
Acenaphthylene	ND 3.0	10	µg/L 1 4/15/2013 11:23 PM
Anthracene	ND 2.6	10	µg/L 1 4/15/2013 11:23 PM
Benzidine (M)	ND 7.9	50	µg/L 1 4/15/2013 11:23 PM
Benzo(a)anthracene	ND 2.8	10	µg/L 1 4/15/2013 11:23 PM
Benzo(a)pyrene	ND 2.6	10	µg/L 1 4/15/2013 11:23 PM
Benzo(b)fluoranthene	ND 4.9	10	µg/L 1 4/15/2013 11:23 PM
Benzo(g,h,i)perylene	ND 2.5	10	µg/L 1 4/15/2013 11:23 PM
Benzo(k)fluoranthene	ND 2.9	10	µg/L 1 4/15/2013 11:23 PM
Bis(2-chloroethoxy)methane	ND 3.1	10	µg/L 1 4/15/2013 11:23 PM
Bis(2-chloroethyl)ether	ND 3.2	10	µg/L 1 4/15/2013 11:23 PM
Bis(2-chloroisopropyl)ether	ND 3.1	10	µg/L 1 4/15/2013 11:23 PM
Bis(2-ethylhexyl)phthalate	ND 2.6	10	µg/L 1 4/15/2013 11:23 PM
Butylbenzylphthalate	ND 2.6	10	µg/L 1 4/15/2013 11:23 PM
Chrysene	ND 2.7	10	µg/L 1 4/15/2013 11:23 PM
Di-n-butylphthalate	ND 3.0	10	µg/L 1 4/15/2013 11:23 PM
Di-n-octylphthalate	ND 2.4	10	µg/L 1 4/15/2013 11:23 PM
Dibenz(a,h)anthracene	ND 2.4	10	µg/L 1 4/15/2013 11:23 PM
Diethylphthalate	ND 2.7	10	µg/L 1 4/15/2013 11:23 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



Advanced Technology Laboratories, Inc.

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: 25-Apr-13

CLIENT: CH2M HILL
Lab Order: N009966
Project: SFPP - Norwalk Site
Lab ID: N009966-001

Client Sample ID: EFF-04-09
Collection Date: 4/9/2013 10:50:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3510C

EPA 8270C

RunID:	MS3_130415A	QC Batch:	42664	PrepDate:	4/11/2013	Analyst:	MDM
Dimethylphthalate	ND	2.6	10	µg/L	1	4/15/2013 11:23 PM	
Fluoranthene	ND	3.2	10	µg/L	1	4/15/2013 11:23 PM	
Fluorene	ND	2.7	10	µg/L	1	4/15/2013 11:23 PM	
Hexachlorobenzene	ND	2.3	10	µg/L	1	4/15/2013 11:23 PM	
Hexachlorocyclopentadiene	ND	2.3	10	µg/L	1	4/15/2013 11:23 PM	
Hexachloroethane	ND	2.6	10	µg/L	1	4/15/2013 11:23 PM	
Indeno(1,2,3-cd)pyrene	ND	2.5	10	µg/L	1	4/15/2013 11:23 PM	
Isophorone	ND	3.0	10	µg/L	1	4/15/2013 11:23 PM	
N-Nitrosodi-n-propylamine	ND	2.9	10	µg/L	1	4/15/2013 11:23 PM	
N-Nitrosodimethylamine	ND	2.7	50	µg/L	1	4/15/2013 11:23 PM	
N-Nitrosodiphenylamine	ND	2.5	10	µg/L	1	4/15/2013 11:23 PM	
Nitrobenzene	ND	2.7	10	µg/L	1	4/15/2013 11:23 PM	
Pentachlorophenol	ND	1.8	50	µg/L	1	4/15/2013 11:23 PM	
Phenanthrene	ND	2.7	10	µg/L	1	4/15/2013 11:23 PM	
Phenol	ND	1.9	10	µg/L	1	4/15/2013 11:23 PM	
Pyrene	ND	3.1	10	µg/L	1	4/15/2013 11:23 PM	
Surr: 1,2-Dichlorobenzene-d4	66.8	0	27-100	%REC	1	4/15/2013 11:23 PM	
Surr: 2,4,6-Tribromophenol	82.6	0	42-124	%REC	1	4/15/2013 11:23 PM	
Surr: 2-Chlorophenol-d4	68.5	0	34-98	%REC	1	4/15/2013 11:23 PM	
Surr: 2-Fluorobiphenyl	71.6	0	48-120	%REC	1	4/15/2013 11:23 PM	
Surr: 2-Fluorophenol	55.4	0	20-120	%REC	1	4/15/2013 11:23 PM	
Surr: 4-Terphenyl-d14	95.9	0	51-135	%REC	1	4/15/2013 11:23 PM	
Surr: Nitrobenzene-d5	73.3	0	41-120	%REC	1	4/15/2013 11:23 PM	
Surr: Phenol-d5	42.3	0	20-120	%REC	1	4/15/2013 11:23 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



**Advanced Technology
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID:	LCS-42664	SampType:	LCS	TestCode:	8270_W_PGE	Units:	µg/L	Prep Date:	4/11/2013	RunNo:	88441
Client ID:	LCSW	Batch ID:	42664	TestNo:	EPA 8270C	EPA	3510C	Analysis Date:	4/15/2013	SeqNo:	1556930
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Diphenylhydrazine	69.440	10	100.0	0	69.4	60	117				
2,4,6-Trichlorophenol	74.110	10	100.0	0	74.1	49	126				
2,4-Dichlorophenol	71.100	10	100.0	0	71.1	48	120				
2,4-Dimethylphenol	66.340	10	100.0	0	66.3	28	120				
2,4-Dinitrophenol	83.580	50	100.0	0	83.6	25	130				
2,4-Dinitrotoluene	75.070	10	100.0	0	75.1	51	120				
2,6-Dinitrotoluene	73.050	10	100.0	0	73.0	49	120				
2-Chloronaphthalene	64.170	10	100.0	0	64.2	49	120				
2-Chlorophenol	63.910	10	100.0	0	63.9	37	120				
2-Nitrophenol	69.600	10	100.0	0	69.6	39	123				
3,3'-Dichlorobenzidine	127.900	20	200.0	0	64.0	20	120				
4,6-Dinitro-2-methylphenol	80.780	50	100.0	0	80.8	40	130				
4-Bromophenyl-phenylether	71.220	10	100.0	0	71.2	52	120				
4-Chloro-3-methylphenol	76.730	50	100.0	0	76.7	47	120				
4-Chloroaniline	58.200	20	100.0	0	58.2	20	120				
4-Chlorophenyl-phenylether	66.290	10	100.0	0	66.3	50	120				
4-Nitrophenol	61.450	50	100.0	0	61.4	20	120				
Acenaphthene	66.980	10	100.0	0	67.0	47	120				
Acenaphthylene	68.410	10	100.0	0	68.4	50	120				
Anthracene	71.170	10	100.0	0	71.2	54	120				
Ben-zidine (M)	46.970	50	200.0	0	23.5	10	162				
Benzo(a)anthracene	72.520	10	100.0	0	72.5	56	100				
Benzo(a)pyrene	65.850	10	100.0	0	65.8	53	120				
Benzo(b)fluoranthene	67.870	10	100.0	0	67.9	45	124				
Benzo(g,h,i)perylene	74.100	10	100.0	0	74.1	38	123				
Benzo(k)fluoranthene	68.920	10	100.0	0	68.9	45	124				
Bis(2-chloroethoxy)methane	68.620	10	100.0	0	68.6	46	120				
Bis(2-chloroethyl)ether	63.710	10	100.0	0	63.7	37	120				
Bis(2-chloroisopropyl)ether	62.800	10	100.0	0	62.8	26	131				

Qualifiers:

B Analyte detected in the associated Method Blank
 ND Not Detected at the Reporting Limit
 DO Surrogate Diluted Out
 E Value above quantitation range
 R RPD outside accepted recovery limits
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: LCS-42664	SampType: LCS	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441						
Client ID: LCSW	Batch ID: 42664	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 4/15/2013	SeqNo: 1556930						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Bis(2-ethylhexyl)phthalate	81.910	10	100.0	0	81.9	42	126				
Butylbenzylphthalate	84.600	10	100.0	0	84.6	46	120				
Chrysene	62.660	10	100.0	0	62.7	55	120				
Di-n-butylphthalate	80.710	10	100.0	0	80.7	54	120				
Di-n-octylphthalate	79.630	10	100.0	0	79.6	37	137				
Dibenz(a,h)anthracene	74.150	10	100.0	0	74.2	42	127				
Diethylphthalate	74.930	10	100.0	0	74.9	41	120				
Dimethylphthalate	73.900	10	100.0	0	73.9	25	127				
Fluoranthene	72.050	10	100.0	0	72.0	54	120				
Fluorene	67.590	10	100.0	0	67.6	50	120				
Hexachlorobenzene	68.810	10	100.0	0	68.8	52	120				
Hexachlorocyclopentadiene	61.170	10	100.0	0	61.2	51	108				
Hexachloroethane	54.630	10	100.0	0	54.6	28	120				
Indeno(1,2,3-cd)pyrene	71.790	10	100.0	0	71.8	43	125				
Isophorone	76.450	10	100.0	0	76.4	50	120				
N-Nitrosodi-n-propylamine	68.240	10	100.0	0	68.2	34	128				
N-Nitrosodimethylamine	48.250	50	100.0	0	48.2	35	98				
N-Nitrosodiphenylamine	72.730	10	100.0	0	72.7	48	120				
Nitrobenzene	62.250	10	100.0	0	62.3	44	120				
Pentachlorophenol	74.450	50	100.0	0	74.4	38	120				
Phenanthrene	70.480	10	100.0	0	70.5	51	120				
Phenol	50.780	10	100.0	0	50.8	20	120				
Pyrene	70.650	10	100.0	0	70.6	49	128				
Surr: 1,2-Dichlorobenzene-d4	55.500		100.0		55.5	27	100				
Surr: 2,4,6-Tribromophenol	77.320		100.0		77.3	42	124				
Surr: 2-Chlorophenol-d4	62.810		100.0		62.8	34	98				
Surr: 2-Fluorobiphenyl	67.550		100.0		67.6	48	120				
Surr: 2-Fluorophenol	54.380		100.0		54.4	20	120				
Surr: 4-Terphenyl-d14	76.870		100.0		76.9	51	135				
Surr: Nitrobenzene-d5	66.170		100.0		66.2	41	120				

Qualifiers:

B Analyte detected in the associated Method Blank
 ND Not Detected at the Reporting Limit
 DO Surrogate Diluted Out
 E Value above quantitation range
 R RPD outside accepted recovery limits
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

TestCode: 8270_W_PGE

Sample ID: LCS-42664	SampType: LCS	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441		
Client ID: LCSW	Batch ID: 42664	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 4/15/2013	SeqNo: 1556930		
Analyte	Result	PQL	SPK value	SPK Ref Val	%RPD	RPDLimit	Qual
Surr: Phenol-d5	48.780	100.0	20	48.8	20	120	

Sample ID: MB-42664	SampType: MBLK	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441						
Client ID: PBW	Batch ID: 42664	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 4/15/2013	SeqNo: 1556931						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2-Diphenylhydrazine	ND	10	20	48.8	20	120	
2,4,6-Trichlorophenol	ND	10	20				
2,4-Dichlorophenol	ND	10	20				
2,4-Dimethylphenol	ND	10	20				
2,4-Dinitrophenol	ND	50	20				
2,4-Dinitrotoluene	ND	10	20				
2,6-Dinitrotoluene	ND	10	20				
2-Chloronaphthalene	ND	10	20				
2-Chlorophenol	ND	10	20				
2-Nitrophenol	ND	10	20				
3,3'-Dichlorobenzidine	ND	20	20				
4,6-Dinitro-2-methylphenol	ND	50	20				
4-Bromophenyl-phenylether	ND	10	20				
4-Chloro-3-methylphenol	ND	50	20				
4-Chloroaniline	ND	20	20				
4-Chlorophenyl-phenylether	ND	10	20				
4-Nitrophenol	ND	50	20				
Acenaphthene	ND	10	20				
Acenaphthylene	ND	10	20				
Anthracene	ND	10	20				
Benzidine (M)	ND	50	20				
Benzo(a)anthracene	ND	10	20				
Benzo(a)pyrene	ND	10	20				
Benzo(b)fluoranthene	ND	10	20				

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	



3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: MB-42664	SampType: MBLK	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441							
Client ID: PBW	Batch ID: 42664	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 4/15/2013	SeqNo: 1556931							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD	Ref Val	%RPD	RPDLimit	Qual

Benzo(g,h,i)perylene	ND	10										
Benzo(k)fluoranthene	ND	10										
Bis(2-chloroethoxy)methane	ND	10										
Bis(2-chloroethyl)ether	ND	10										
Bis(2-chloroisopropyl)ether	ND	10										
Bis(2-ethylhexyl)phthalate	ND	10										
Butylbenzylphthalate	ND	10										
Chrysene	ND	10										
Di-n-butylphthalate	ND	10										
Di-n-octylphthalate	ND	10										
Dibenz(a,h)anthracene	ND	10										
Diethylphthalate	ND	10										
Dimethylphthalate	ND	10										
Fluoranthene	ND	10										
Fluorene	ND	10										
Hexachlorobenzene	ND	10										
Hexachlorocyclopentadiene	ND	10										
Hexachloroethane	ND	10										
Indeno(1,2,3-cd)pyrene	ND	10										
Isophorone	ND	10										
N-Nitrosodi-n-propylamine	ND	10										
N-Nitrosodimethylamine	ND	50										
N-Nitrosodiphenylamine	ND	10										
Nitrobenzene	ND	10										
Pentachlorophenol	ND	50										
Phenanthrene	ND	10										
Phenol	ND	10										
Pyrene	ND	10										
Surr: 1,2-Dichlorobenzene-d4	51.500		100.0			51.5		27		100		
Surr: 2,4,6-Tribromophenol	65.820		100.0			65.8		42		124		

Qualifiers:

B Analyte detected in the associated Method Blank
 ND Not Detected at the Reporting Limit
 DO Surrogate Diluted Out
 E Value above quantitation range
 R RPD outside accepted recovery limits
 Calculations are based on raw values
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference



3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: MB-42664	Surr: 2-Chlorophenol-d4	SampType: MBLK	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441					
Client ID: PBW	Surr: 2-Fluorobiphenyl	Batch ID: 42664	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 4/15/2013	SeqNo: 1556931					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 2-Fluorobiphenyl	56.040	100.0	100.0	56.0	34	98					
Surr: 2-Fluorophenol	58.860	100.0	100.0	58.9	48	120					
Surr: 4-Terphenyl-d14	50.320	100.0	100.0	50.3	20	120					
Surr: Nitrobenzene-d5	86.140	100.0	100.0	86.1	51	135					
Surr: Phenol-d5	59.820	100.0	100.0	59.8	41	120					
	42.440	100.0	100.0	42.4	20	120					

Sample ID: N009966-001H-MS	Surr: 2-Chlorophenol-d4	SampType: MS	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441					
Client ID: ZZZZZ	Surr: 2-Fluorobiphenyl	Batch ID: 42664	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 4/15/2013	SeqNo: 1556933					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2-Diphenylhydrazine	71.520	10	100.0	0	71.5	60	117				
2,4,6-Trichlorophenol	75.670	10	100.0	0	75.7	49	126				
2,4-Dichlorophenol	69.780	10	100.0	0	69.8	48	120				
2,4-Dimethylphenol	67.250	10	100.0	0	67.2	28	120				
2,4-Dinitrophenol	85.760	50	100.0	0	85.8	25	130				
2,4-Dinitrotoluene	79.410	10	100.0	0	79.4	51	120				
2,6-Dinitrotoluene	75.690	10	100.0	0	75.7	49	120				
2-Chloronaphthalene	65.140	10	100.0	0	65.1	49	120				
2-Chlorophenol	65.160	10	100.0	0	65.2	37	120				
2-Nitrophenol	69.650	10	100.0	0	69.6	39	123				
3,3'-Dichlorobenzidine	119.060	20	200.0	0	59.5	20	120				
4,6-Dinitro-2-methylphenol	82.260	50	100.0	0	82.3	40	130				
4-Bromophenyl-phenylether	75.210	10	100.0	0	75.2	52	120				
4-Chloro-3-methylphenol	76.080	50	100.0	0	76.1	47	120				
4-Chloroaniline	58.830	20	100.0	0	58.8	20	120				
4-Chlorophenyl-phenylether	69.090	10	100.0	0	69.1	50	120				
4-Nitrophenol	48.000	50	100.0	0	48.0	20	120				
Acenaphthene	67.900	10	100.0	0	67.9	47	120				
Acenaphthylene	68.370	10	100.0	0	68.4	50	120				

Qualifiers:

B Analyte detected in the associated Method Blank
 ND Not Detected at the Reporting Limit
 DO Surrogate Diluted Out
 A Advanced Technology Laboratories, Inc.

E Value above quantitation range
 R RPD outside accepted recovery limits
 Calculations are based on raw values

H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Sample ID: N009966-001H-MS	SampType: MS	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441						
Client ID: ZZZZZZ	Batch ID: 42664	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 4/15/2013	SeqNo: 1556933						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Anthracene	74.960	10	100.0	0	75.0	54	120				
Benzidine (M)	43.450	50	200.0	0	21.7	10	162				
Benzo(a)anthracene	79.800	10	100.0	0	79.8	56	100				
Benzo(a)pyrene	72.670	10	100.0	0	72.7	53	120				
Benzo(b)fluoranthene	73.880	10	100.0	0	73.9	45	124				
Benzo(g,h,i)perylene	81.250	10	100.0	0	81.2	38	123				
Benzo(k)fluoranthene	75.110	10	100.0	0	75.1	45	124				
Bis(2-chloroethoxy)methane	67.170	10	100.0	0	67.2	46	120				
Bis(2-chloroethyl)ether	64.490	10	100.0	0	64.5	37	120				
Bis(2-chloroisopropyl)ether	64.080	10	100.0	0	64.1	26	131				
Bis(2-ethylhexyl)phthalate	92.490	10	100.0	0	92.5	42	126				
Butylbenzylphthalate	92.880	10	100.0	0	92.9	46	120				
Chrysene	69.010	10	100.0	0	69.0	55	120				
Di-n-butylphthalate	88.830	10	100.0	0	88.8	54	120				
Di-n-octylphthalate	87.180	10	100.0	0	87.2	37	137				
Dibenz(a,h)anthracene	83.940	10	100.0	0	83.9	42	127				
Diethylphthalate	80.200	10	100.0	0	80.2	41	120				
Dimethylphthalate	77.240	10	100.0	0	77.2	25	127				
Fluoranthene	76.950	10	100.0	0	77.0	54	120				
Fluorene	69.710	10	100.0	0	69.7	50	120				
Hexachlorobenzene	73.620	10	100.0	0	73.6	52	120				
Hexachlorocyclopentadiene	64.170	10	100.0	0	64.2	51	108				
Hexachloroethane	59.270	10	100.0	0	59.3	28	120				
Indeno(1,2,3-cd)pyrene	80.820	10	100.0	0	80.8	43	125				
Isophorone	74.460	10	100.0	0	74.5	50	120				
N-Nitrosodi-n-propylamine	66.730	10	100.0	0	66.7	34	128				
N-Nitrosodimethylamine	47.960	50	100.0	0	48.0	35	98				
N-Nitrosodiphenylamine	79.330	10	100.0	0	79.3	48	120				
Nitrobenzene	61.710	10	100.0	0	61.7	44	120				
Pentachlorophenol	85.480	50	100.0	0	85.5	38	120				

Qualifiers:

B Analyte detected in the associated Method Blank
 ND Not Detected at the Reporting Limit
 DO Surrogate Diluted Out
 E Value above quantitation range
 R RPD outside accepted recovery limits
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

TestCode: 8270_W_PGE

Sample ID: N009966-001H-MS	SampType: MS	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441						
Client ID: ZZZZZZ	Batch ID: 42664	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 4/15/2013	SeqNo: 1556933						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenanthrene	74.740	10	100.0	0	74.7	51	120				
Phenol	44.460	10	100.0	0	44.5	20	120				
Pyrene	76.370	10	100.0	0	76.4	49	128				
Surr: 1,2-Dichlorobenzene-d4	58.590		100.0		58.6	27	100				
Surr: 2,4,6-Tribromophenol	82.210		100.0		82.2	42	124				
Surr: 2-Chlorophenol-d4	63.120		100.0		63.1	34	98				
Surr: 2-Fluorobiphenyl	67.450		100.0		67.5	48	120				
Surr: 2-Fluorophenol	53.250		100.0		53.2	20	120				
Surr: 4-Terphenyl-d14	83.360		100.0		83.4	51	135				
Surr: Nitrobenzene-d5	65.150		100.0		65.2	41	120				
Surr: Phenol-d5	41.210		100.0		41.2	20	120				

Sample ID: N009966-001H-MSD	SampType: MSD	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441						
Client ID: ZZZZZZ	Batch ID: 42664	TestNo: EPA 8270C	EPA 3510C	Analysis Date: 4/16/2013	SeqNo: 1556934						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Diphenylhydrazine	82.540	10	100.0	0	82.5	60	117	71.52	14.3	20	
2,4,6-Trichlorophenol	86.540	10	100.0	0	86.5	49	126	75.67	13.4	20	
2,4-Dichlorophenol	79.600	10	100.0	0	79.6	48	120	69.78	13.1	20	
2,4-Dimethylphenol	77.040	10	100.0	0	77.0	28	120	67.25	13.6	20	
2,4-Dinitrophenol	95.920	50	100.0	0	95.9	25	130	85.76	11.2	20	
2,4-Dinitrotoluene	91.000	10	100.0	0	91.0	51	120	79.41	13.6	20	
2,6-Dinitrotoluene	88.480	10	100.0	0	88.5	49	120	75.69	15.6	20	
2-Chloronaphthalene	73.920	10	100.0	0	73.9	49	120	65.14	12.6	20	
2-Chlorophenol	71.790	10	100.0	0	71.8	37	120	65.16	9.68	20	
2-Nitrophenol	80.090	10	100.0	0	80.1	39	123	69.65	13.9	20	
3,3'-Dichlorobenzidine	138.960	20	200.0	0	69.5	20	120	119.1	15.4	20	
4,6-Dinitro-2-methylphenol	94.010	50	100.0	0	94.0	40	130	82.26	13.3	20	
4-Bromophenyl-phenylether	87.200	10	100.0	0	87.2	52	120	75.21	14.8	20	
4-Chloro-3-methylphenol	87.920	50	100.0	0	87.9	47	120	76.08	14.4	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	Sample ID: N009966-001H-MSD		Client ID: ZZZZZZ	
												SampType: MSD	Batch ID: 42664	TestCode: 8270_W_PGE	Units: µg/L
4-Chloroaniline	70.700	20	100.0	0	70.7	20	120	58.83	18.3	20					
4-Chlorophenyl-phenylether	79.450	10	100.0	0	79.4	50	120	69.09	13.9	20					
4-Nitrophenol	51.250	50	100.0	0	51.3	20	120	48.00	6.55	20					
Acenaphthene	79.860	10	100.0	0	79.9	47	120	67.90	16.2	20					
Acenaphthylene	79.420	10	100.0	0	79.4	50	120	68.37	15.0	20					
Anthracene	87.230	10	100.0	0	87.2	54	120	74.96	15.1	20					
Benzidine (M)	61.620	50	200.0	0	30.8	10	162	43.45	34.6	20					
Benzo(a)anthracene	90.130	10	100.0	0	90.1	56	100	79.80	12.2	20					
Benzo(a)pyrene	82.530	10	100.0	0	82.5	53	120	72.67	12.7	20					
Benzo(b)fluoranthene	85.100	10	100.0	0	85.1	45	124	73.88	14.1	20					
Benzo(g,h,i)perylene	93.390	10	100.0	0	93.4	38	123	81.25	13.9	20					
Benzo(k)fluoranthene	87.010	10	100.0	0	87.0	45	124	75.11	14.7	20					
Bis(2-chloroethoxy)methane	77.900	10	100.0	0	77.9	46	120	67.17	14.8	20					
Bis(2-chloroethyl)ether	72.470	10	100.0	0	72.5	37	120	64.49	11.7	20					
Bis(2-chloroisopropyl)ether	70.480	10	100.0	0	70.5	26	131	64.08	9.51	20					
Bis(2-ethylhexyl)phthalate	103.660	10	100.0	0	104	42	126	92.49	11.4	20					
Butylbenzylphthalate	104.610	10	100.0	0	105	46	120	92.88	11.9	20					
Chrysene	79.000	10	100.0	0	79.0	55	120	69.01	13.5	20					
Di-n-butylphthalate	101.080	10	100.0	0	101	54	120	88.83	12.9	20					
Di-n-octylphthalate	103.020	10	100.0	0	103	37	137	87.18	16.7	20					
Dibenz(a,h)anthracene	97.180	10	100.0	0	97.2	42	127	83.94	14.6	20					
Diethylphthalate	92.280	10	100.0	0	92.3	41	120	80.20	14.0	20					
Dimethylphthalate	88.160	10	100.0	0	88.2	25	127	77.24	13.2	20					
Fluoranthene	89.620	10	100.0	0	89.6	54	120	76.95	15.2	20					
Fluorene	80.550	10	100.0	0	80.6	50	120	69.71	14.4	20					
Hexachlorobenzene	85.420	10	100.0	0	85.4	52	120	73.62	14.8	20					
Hexachlorocyclopentadiene	71.590	10	100.0	0	71.6	51	108	64.17	10.9	20					
Hexachloroethane	62.540	10	100.0	0	62.5	28	120	59.27	5.37	20					
Indeno(1,2,3-cd)pyrene	93.340	10	100.0	0	93.3	43	125	80.82	14.4	20					
Isophorone	85.910	10	100.0	0	85.9	50	120	74.46	14.3	20					

Qualifiers:

B Analyte detected in the associated Method Blank
 ND Not Detected at the Reporting Limit
 DO Surrogate Diluted Out
 E Value above quantitation range
 R RPD outside accepted recovery limits
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N009966
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_PGE

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	TestCode: 8270_W_PGE	Units: µg/L	Prep Date: 4/11/2013	RunNo: 88441
												MSD	SampType: MSD	Batch ID: 42664	TestNo: EPA 8270C
N-Nitrosodi-n-propylamine	77.490	10	100.0	0	77.5	34	128	66.73	14.9	20					
N-Nitrosodimethylamine	48.970	50	100.0	0	49.0	35	98	47.96	0	20					
N-Nitrosodiphenylamine	91.180	10	100.0	0	91.2	48	120	79.33	13.9	20					
Nitrobenzene	70.840	10	100.0	0	70.8	44	120	61.71	13.8	20					
Pentachlorophenol	95.960	50	100.0	0	96.0	38	120	85.48	11.6	20					
Phenanthrene	86.760	10	100.0	0	86.8	51	120	74.74	14.9	20					
Phenol	47.370	10	100.0	0	47.4	20	120	44.46	6.34	20					
Pyrene	89.520	10	100.0	0	89.5	49	128	76.37	15.9	20					
Surr: 1,2-Dichlorobenzene-d4	60.280		100.0		60.3	27	100		0						
Surr: 2,4,6-Tribromophenol	94.080		100.0		94.1	42	124		0						
Surr: 2-Chlorophenol-d4	69.440		100.0		69.4	34	98		0						
Surr: 2-Fluorobiphenyl	75.470		100.0		75.5	48	120		0						
Surr: 2-Fluorophenol	55.360		100.0		55.4	20	120		0						
Surr: 4-Terphenyl-d14	95.490		100.0		95.5	51	135		0						
Surr: Nitrobenzene-d5	74.250		100.0		74.2	41	120		0						
Surr: Phenol-d5	44.820		100.0		44.8	20	120		0						

Qualifiers:

B Analyte detected in the associated Method Blank
 ND Not Detected at the Reporting Limit
 DO Surrogate Diluted Out
 E Value above quantitation range
 R RPD outside accepted recovery limits
 Calculations are based on raw values
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference

EPA METHOD 8290
Dioxins/Furans

APPL, INC.

Data Validation Package
for

EPA METHOD 8290
Dioxins/Furans by HR-MS

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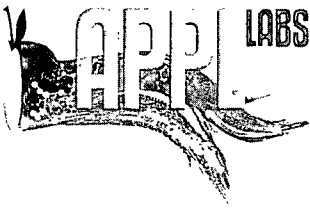
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**EPA METHOD 8290
Dioxins/Furans**

Case Narrative





EPA Method 8290

2,3,7,8-TCDD

Case Narrative

ARF: 70447

Project: N009137

State Certification Number: CA1312 (DW & WW)

NELAP Certification number: 05233CA (HW)

Results in this report apply to the sample analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sample Receipt Information:

The sample was received on April 11, 2013, at 2.5°C. The sample was assigned Analytical Request Form (ARF) number 70447. The sample number and requested analysis were compared to the chain of custody. No exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
N009966-001F / EFF-04-09	AY78757	WATER	4/9/2013	4/11/2013

The sample was screened for responses down to the EMPC or EDL, in accordance with the EPA 8290 method.

Sample Preparation:

The sample was extracted and cleaned up according to the EPA 8290 method. All holding times were met.

Analysis Information:

The sample was analyzed according to the EPA 8290, using a Waters Inc. Autospec Premier High Resolution Mass Spectrometer. The results were reported in accordance with EPA 8290 guidelines, as follows:

1. For analytes that had no chromatographic response in the sample, the EDL (Estimated Detection Limit) was reported in the EDL / EMPC column on the Form 1.

2. For analytes that exhibited chromatographic peaks in the sample (but did not meet the method requirements for positive identification), the EMPC (Estimated Maximum Potential Concentration) was reported in the EDL / EMPC column.
3. For the positively identified analytes the concentration was reported in the "Results" column, and EMPC was reported in the EDL / EMPC column. The EMPC is equal to the detected concentration.

Quality Control/Assurance

Calibrations:

Calibrations and Resolution Checks were performed according to the method. The % recovery for OCDF exceeded the control limit of 80% at 79.3%. All other calibration acceptance criteria were met.

Blanks:

The method blank contained no target analyte at or above one-half the PQL.

Spikes:

A Laboratory Control Spike (LCS) was used for quality control. All LCS recoveries met acceptance criteria.

No sample was designated by the client for MS/MSD analysis.

Surrogate Recoveries (C13 Internal Standards):

C13 Internal Standards were added to the extracts in accordance with the method and reported on the Form 1s as surrogate recoveries. All recoveries met acceptance criteria.

Summary:

All data were acceptable. No analytical exception is noted.

CERTIFICATION

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.



5-7-13

Sharon Dehmlow, Laboratory Director / Date

**EPA METHOD 8290
Dioxins/Furans**


Chain of Custody and ARF



APPL - Analysis Request Form


70447

Client: Advanced Technology Labs
 Address: 3151-3153 W. Post Rd.
Las Vegas, NV 89118
 Attn: Marlon Cartin
 Phone: 702-307-2659 Fax: 702-307-2691
 Job: N009966
 PO #: N009966
 Chain of Custody (Y/N): N # _____
 RAD Screen (Y/N): Y pH (Y/N): N
 Turn Around Type: STD

Received by: WLA 
 Date Received: 04/11/13 Time: 11:20
 Delivered by: ONTRAC
 Shuttle Custody Seals (Y/N): N Time Zone: -7
 Chest Temp(s): 2.5°C
 Color: A-GREEN
 Samples Chilled until Placed in Refrig/Freezer: Y
 Project Manager: Cynthia Clark
 QC Report Type: DVP4/NV
 Due Date: 05/02/13

Comments:
*H8290 Report 'PC' or 'DL' on Form 1; report 2,3,7,8-TCDD only
 email report to marlon@atl-labs.com*

<u>Sample Distribution:</u>	<u>Charges:</u>	<u>Invoice To:</u>
Extractions: 1- SEP8290		
Other: 1-\$8290W		

Client ID	APPL ID	Sampled	Analyses Requested
1. N009966-001F / EFF-04-09 <i>attracted 4/15</i>	(AY78757W )	04/09/13 10:50	(\$8290W)-- 2,3,7,8-TCDD only

APPL Sample Receipt Form

ARF# 70447

<u>Sample</u>	<u>Container Type</u>	<u>Count</u>	<u>pH</u>
AY78757	17 Amber Liter	1	NA

<u>Sample</u>	<u>Container Type</u>	<u>Count</u>	<u>pH</u>
---------------	-----------------------	--------------	-----------



Advanced Technology Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118

www.atglobal.com

TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

2.5^{oc}
70447
Page 1 of 1

QC Level: RTNE

Subcontractor:

APPL, Inc.
908 N. Temperance Ave.
Clovis, CA 93611

TEL:
FAX: (209) 275-4422
Acct #:

Field Sampler: James Dye

10-Apr-13

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 8290		
N009966-001F / EFF-04-09	Wastewater	4/9/2013 10:50:00 AM	32OZA	1		

General Comments: Please email sample receipt acknowledgement to the PM.
 Please use PO#: N009966 For questions, call Marlon at (702)-307-2659. Please e-mail results to marlon@atl-labs.com by: Normal TAT.
 Please analyze for 2,3,7,8-TCDD by EPA 8290.

Relinquished by: <i>Marlon</i>	Date/Time: 4/10/13 @ 17:00	Received by: <i>Will John</i>	Date/Time: 4/11/13 @ 11:20
Relinquished by: _____	_____	Received by: _____	_____

COOLER RECEIPT FORM

1) Project: N009966 Date Received: 4/11/13

2) Coolers: Number of Coolers: 1

3) YES NO Were coolers and samples screened for radioactivity?

4) YES NO Were custody seals on outside of cooler? How many? _____ Date on seal? _____

5) Name on seal? _____

6) YES NO NA Were custody seals unbroken and intact at the time of arrival?

7) YES NO Did the cooler come with a shipping slip (air bill, etc.)? Carrier name: On Trac (Gold State Overnight)

8) Shipping slip numbers: 1) 521526814 2) _____ 3) _____

9) YES NO NA Was the shipping slip scanned into the database?

10) YES NO NA If cooler belongs to APPL, has it been logged into the ice chest database?

11) Describe type of packing in cooler (bubble wrap, popcorn, type of ice, etc.): bubble bag in

12) YES NO NA For hand delivered samples was sufficient ice present to start the cooling process?

13) YES NO Was a temperature blank included in the cooler?

14) Serial number of certified NIST thermometer used: J5297 Correction factor: 0

15) Cooler temp(s): 1) 2.5°C 3) _____ 4) _____ 5) _____ 6) _____ 7) _____ 8) _____

Chain of custody:

16) YES NO Was a chain of custody received?

17) YES NO Were the custody papers signed in the appropriate places?

18) YES NO Was the project identifiable from custody papers?

19) YES NO Did the chain of custody include date and time of sampling?

20) YES NO Is location where sample was taken listed on the chain of custody?

Sample Labels:

21) YES NO Were container labels in good condition?

22) YES NO Was the client ID on the label?

23) YES NO Was the date of sampling on the label?

24) YES NO Was the time of sampling on the label?

25) YES NO Did all container labels agree with custody papers?

Sample Containers:

26) YES NO Were all containers sealed in separate bags?

27) YES NO Did all containers arrive unbroken?

28) YES NO Was there any leakage from samples?

29) YES NO Were any of the lids cracked or broken?

30) YES NO Were correct containers used for the tests indicated?

31) YES NO Was a sufficient amount of sample sent for tests indicated?

32) YES NO NA Were bubbles present in volatile samples? If yes, the following were received with air bubbles:

Larger than a pea: _____

Smaller than a pea: _____

Preservation & Hold time:

33) YES NO NA Was a sufficient amount of holding time remaining to analyze the samples?

34) YES NO NA Do the sample containers contain the same preservative as what is stated on the COC?

35) YES NO NA Was the pH taken of all non-VOA preserved samples and written on the sample container?

36) YES NO NA Was the pH of acid preserved non-VOA samples < 2 & sodium hydroxide preserved samples > 12?

37) YES NO NA Unpreserved VOA Vials received? _____

38) YES NO NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF? _____

Lab notified if pH was not adequate: _____

Deficiencies: _____

Signature of personnel receiving samples: Yang Lu Second reviewer: Will [Signature]

Signature of project manager notified: _____ Date and Time of notification: _____

Name of client notified: _____ Date and Time of notification: _____

Information given to client: _____

_____ by whom (Initials): _____

**EPA METHOD 8290
Dioxins/Furans**

QC Summary



Method Blank
EPA 8290 - Dioxins and Furans

Blank Name/QCG: 130415W-78757 - 177086

Batch ID: \$8290W-130415A

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Sample Type	Analyte	Result	PQL	EDL/EMPC	Units	Ext Date	Analysis Date
BLANK	2,3,7,8-TCDD	0.32 U	50.0	0.32DL	pg/L	04/15/13	05/02/13
BLANK	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S)	90.0	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S)	87.5	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	88.4	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)	82.1	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-1,2,3,7,8-PECDD (S)	83.9	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-1,2,3,7,8-PECDF (S)	80.1	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-2,3,7,8-TCDD (S)	84.7	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-2,3,7,8-TCDF (S)	84.6	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-OCDD (S)	82.8	40-135		%	04/15/13	05/02/13

Quant Method: 130501_8290
Run #: 130501_HR_15
Instrument: Magneto
Sequence: 130501
Initials: RP

Laboratory Control Spike Recovery

EPA 8290 - Dioxins and Furans

APPL ID: 130415W-78757 LCS - 177086
 Batch ID: #8290W-130415A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level pg/L	SPK Result pg/L	SPK % Recovery	Recovery Limits
2,3,7,8-TCDD	500	547	109	70-130
SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD	5000	3460	69.2	40-135
SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF	5000	3350	67.0	40-135
SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	5000	3310	66.2	40-135
SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)	5000	3100	62.0	40-135
SURROGATE: 13C-1,2,3,7,8-PECDD (S)	2000	1330	66.5	40-135
SURROGATE: 13C-1,2,3,7,8-PECDF (S)	2000	1350	67.5	40-135
SURROGATE: 13C-2,3,7,8-TCDD (S)	2000	1340	67.0	40-135
SURROGATE: 13C-2,3,7,8-TCDF (S)	2000	1350	67.5	40-135
SURROGATE: 13C-OCDD (S)	10000	6770	67.7	40-135

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	130501_8290
Extraction Date :	04/15/13
Analysis Date :	05/02/13
Instrument :	Magneto
Run :	130501_HR_13
Initials :	RP

Printed: 05/03/13 12:53:47 PM
 APPL Standard LCS

Surrogate Recovery

Lab Name: APPL, Inc.

SDG No: 70447

Case No: 70447

Date Analyzed: 05/02/13

Matrix: WATER

Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S)			SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
130415A-LCS	Lab Control Spike	40-135	69.2		40-135	67.0	
130415A-BLK	Blank	40-135	90.0		40-135	87.5	
AY78757	N009966-001F / EFF-04-09	40-135	83.4		40-135	81.1	

Comments: Batch: #8290W-130415A

Surrogate Recovery

Lab Name: APPL, Inc.
 Case No: 70447
 Matrix: WATER

SDG No: 70447
 Date Analyzed: 05/02/13
 Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)			SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
130415A-LCS	Lab Control Spike	40-135	66.2		40-135	62.0	
130415A-BLK	Blank	40-135	88.4		40-135	82.1	
AY78757	N009966-001F / EFF-04-09	40-135	84.8		40-135	78.4	

Comments: Batch: #8290W-130415A

Surrogate Recovery

Lab Name: APPL, Inc.
 Case No: 70447
 Matrix: WATER

SDG No: 70447
 Date Analyzed: 05/02/13
 Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-1,2,3,7,8-PECDD (S)			SURROGATE: 13C-1,2,3,7,8-PECDF (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
130415A-LCS	Lab Control Spike	40-135	66.5		40-135	67.5	
130415A-BLK	Blank	40-135	83.9		40-135	80.1	
AY78757	N009966-001F / EFF-04-09	40-135	80.9		40-135	78.7	

Comments: Batch: #8290W-130415A

Surrogate Recovery

Lab Name: APPL, Inc.
 Case No: 70447
 Matrix: WATER

SDG No: 70447
 Date Analyzed: 05/02/13
 Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-2,3,7,8-TCDD (S)			SURROGATE: 13C-2,3,7,8-TCDF (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
130415A-LCS	Lab Control Spike	40-135	67.0		40-135	67.5	
130415A-BLK	Blank	40-135	84.7		40-135	84.6	
AY78757	N009966-001F / EFF-04-09	40-135	82.0		40-135	82.5	

Comments: Batch: #8290W-130415A

Surrogate Recovery

Lab Name: APPL, Inc.
 Case No: 70447
 Matrix: WATER

SDG No: 70447
 Date Analyzed: 05/02/13
 Instrument: Magneto

APPL ID.	Client Sample No.	SURROGATE: 13C-OCDD (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
130415A-LCS	Lab Control Spike	40-135	67.7				
130415A-BLK	Blank	40-135	82.8				
AY78757	N009966-001F / EFF-04-09	40-135	74.9				

Comments: Batch: #8290W-130415A

EPA 8290

Form 4

Blank Summary

Lab Name: APPL, Inc.
Case No: 70447
Matrix: WATER
Blank ID: 130415A-BLK

SDG No: 70447
Date Analyzed: 05/02/13
Instrument: Magneto
Time Analyzed: 0849

APPL ID.	Client Sample No.	File ID.	Date Analyzed
130415A-LCS	Lab Control Spike	130501_HR_13	05/02/13 0631
130415A-BLK	Blank	130501_HR_15	05/02/13 0849
AY78757	N009966-001F / EFF-04-09	130501_HR_16	05/02/13 0958

Comments: Batch: #8290W-130415A

**EPA METHOD 8290
Dioxins/Furans**

Sample Data



EPA 8290 - Dioxins and Furans

Advanced Technology Labs
3151-3153 W. Post Rd.
Las Vegas, NV 89118

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Marlon Cartin

Project: N009966

Sample ID: N009966-001F / EFF-04-09

Sample Collection Date: 04/09/13

ARF: 70447

APPL ID: AY78757

QCG: \$8290W-130415A-177086

Method	Analyte	Result	PQL	EDL/EMPC	Units	Ext Date	Analysis Date
EPA 8290	2,3,7,8-TCDD	0.31 U	50.0	0.31DL	pg/L	04/15/13	05/02/13
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S)	83.4	40-135		%	04/15/13	05/02/13
EPA 8290	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S)	81.1	40-135		%	04/15/13	05/02/13
EPA 8290	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	84.8	40-135		%	04/15/13	05/02/13
EPA 8290	SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)	78.4	40-135		%	04/15/13	05/02/13
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDD (S)	80.9	40-135		%	04/15/13	05/02/13
EPA 8290	SURROGATE: 13C-1,2,3,7,8-PECDF (S)	78.7	40-135		%	04/15/13	05/02/13
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDD (S)	82.0	40-135		%	04/15/13	05/02/13
EPA 8290	SURROGATE: 13C-2,3,7,8-TCDF (S)	82.5	40-135		%	04/15/13	05/02/13
EPA 8290	SURROGATE: 13C-OCDD (S)	74.9	40-135		%	04/15/13	05/02/13

Quant Method: 130501_8290
Run #: 130501_HR_16
Instrument: Magneto
Sequence: 130501
Dilution Factor: 1
Initials: RP

Printed: 05/07/13 4:35:06 PM
Form 1 - APPL Standard GC - No MC

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

Name	Peak Area	1° Area	RT	Ion Ab	Ion Fail?	S/N1	S/N2	Conc.	%Rec	LOD	EMPC	Multiplier
2,3,7,8-TCDD										0.308		50.00
1,2,3,7,8-PeCDD	1.430640e2	1.775320e2	41.10	0.81	YES	NO	NO	2.718		0.304	1.994	50.00
1,2,3,4,7,8-HxCDD	4.482460e2	3.019740e2	48.47	1.48	YES	NO	NO	7.963		1.435	6.369	50.00
1,2,3,6,7,8-HxCDD	2.074960e2	3.254290e2	48.70	0.64	YES	NO	NO	4.827		1.580	3.395	50.00
1,2,3,7,8,9-HxCDD	3.487240e2	2.505240e2	49.23	1.39	NO	NO	NO	6.383		1.369	6.383	50.00
1,2,3,4,6,7,8-HpCDD	3.904240e2	2.606760e2	55.01	1.50	YES	NO	NO	6.139		0.936	5.014	50.00
OCDD	5.129210e2	3.739350e2	61.43	1.37	YES	NO	NO	9.797		0.659	7.807	50.00
2,3,7,8-TCDF	8.029300e1	5.594000e1	31.27	1.44	YES	NO	NO	0.666		0.256	0.484	50.00
1,2,3,7,8-PeCDF	1.526270e2	1.211760e2	38.38	1.26	YES	NO	NO	4.584		0.429	1.453	50.00
2,3,4,7,8-PeCDF	1.886420e2	5.072800e1	40.45	3.72	YES	NO	NO	1.474		0.456	0.796	50.00
1,2,3,4,7,8-HxCDF	3.247070e2	2.524000e2	46.63	1.29	NO	NO	NO	3.543		0.347	3.543	50.00
1,2,3,6,7,8-HxCDF	3.029720e2	2.799180e2	46.90	1.08	NO	NO	NO	3.298		0.314	3.298	50.00
2,3,4,6,7,8-HxCDF	4.410660e2	3.028430e2	48.09	1.46	YES	NO	NO	4.658		0.348	4.248	50.00
1,2,3,7,8,9-HxCDF	2.759550e2	2.042070e2	49.83	1.35	NO	NO	NO	3.476		0.402	3.476	50.00
1,2,3,4,6,7,8-HpCDF	4.571310e2	4.798650e2	52.85	0.95	NO	NO	NO	6.142		0.417	6.142	50.00
1,2,3,4,7,8,9-HpCDF	1.397160e2	2.612120e2	55.97	0.53	YES	NO	NO	3.371		0.534	2.304	50.00
OCDF	4.162240e2	2.552240e2	61.83	1.63	YES	NO	NO	6.446		0.722	4.631	50.00
13C-2,3,7,8-TCDD	1.454788e5	1.798194e5	32.23	0.81	NO	NO	NO	1639.781	81.99	2.122		50.00
13C-1,2,3,7,8-PeCDD	1.627728e5	9.916574e4	41.09	1.64	NO	NO	NO	1618.321	80.92	2.273		50.00
13C-1,2,3,6,7,8-HxCDD	3.018914e5	2.448759e5	48.65	1.23	NO	NO	NO	3919.312	78.39	2.877		50.00
13C-1,2,3,4,6,7,8-HpCDD	2.658478e5	2.447181e5	55.01	1.09	NO	NO	NO	4169.720	83.39	2.648		50.00
13C-OCDD	3.946468e5	4.378275e5	61.42	0.90	NO	NO	NO	7487.417	74.87	2.496		50.00
13C-2,3,7,8-TCDF	1.926793e5	2.448826e5	31.26	0.79	NO	NO	NO	1649.209	82.46	0.756		50.00
13C-1,2,3,7,8-PeCDF	2.070750e5	1.303101e5	38.37	1.59	NO	NO	NO	1573.014	78.65	14.637		50.00
13C-1,2,3,4,7,8-HxCDF	2.207575e5	4.324061e5	46.60	0.51	NO	NO	NO	4241.309	84.83	2.360		50.00
13C-1,2,3,4,6,7,8-HpCDF	1.638263e5	3.688575e5	52.83	0.44	NO	NO	NO	4052.661	81.05	1.735		50.00
13C-1,2,3,4-TCDD	1.975842e5	2.456121e5	31.49	0.80	NO	NO	NO	2000.000	100.00	1.899		50.00
13C-1,2,3,7,8,9-HxCDD	1.617248e5	1.217838e5	49.17	1.33	NO	NO	NO	2000.000	100.00	2.831		50.00
Total Tetra-Dioxins	9.310860e2							11.389		0.308	8.472	50.00
Total Penta-Dioxins	5.528150e2							16.716		0.304	6.671	50.00
Total Hexa-Dioxins	2.201866e3							35.341		1.394	24.548	50.00
Total Hepta-Dioxins	1.850975e3							29.791		0.936	18.953	50.00
Total Tetra-Furans	8.798640e2							10.905		0.256	7.998	50.00
Total Penta-Furans	8.230580e2							9.304		0.442	6.248	50.00
Total Hexa-Furans	1.986123e3							22.745		0.348	19.859	50.00
Total Hepa-Furans	1.300115e3							16.310		0.468	11.806	50.00
PFK1	0.000000e0											1.00
PFK2	0.000000e0											1.00
PFK3	0.000000e0											1.00
PFK4	0.000000e0											1.00
PFK5	0.000000e0											1.00
HxCDPE	0.000000e0											1.00
HpCDPE	0.000000e0											1.00
OCDPE	0.000000e0											1.00
NCDPE	0.000000e0											1.00
DCDPE	0.000000e0											1.00

9/3/13
RP

RETENTION TIME CHECK

AY78757 50.000 DF 04/15/13

EPA Method 8290

INSTRUMENT: Magneto
 COLUMN: Restek DB5 - 60m
 MATRIX:

ANALYSIS DATE/TIME:
 EXTRACTION DATE:
 SEQUENCE:
 RUN FILE: 130501_HR_16

Analyte	RT of congener in sample	RT of ¹³ C congener in sample	RRT of congener in sample	RRT of congener in CCV	LCL ^a	UCL ^b	Qualifiers
	130501_HR_16	130501_HR_16	130501_HR_16	130501_HR_10			
2,3,7,8-TCDD		32.2270	0.0000	1.0004	32.2103	32.2770	Fail
1,2,3,7,8-PeCDD	41.0993	41.0892	1.0002	1.0010	41.0725	41.1392	Pass
1,2,3,4,7,8-HxCDD	48.4725	48.6532	0.9963	0.9961	0.9911	1.0011	Pass
1,2,3,6,7,8-HxCDD	48.6957	48.6532	1.0009	1.0004	48.6365	48.7032	Pass
1,2,3,7,8,9-HxCDD	49.2268	49.1737	1.0011	1.0004	49.1570	49.2237	Fail
1,2,3,4,6,7,8-HpCDD	55.0125	55.0125	1.0000	1.0004	54.9958	55.0625	Pass
OCDD	61.4260	61.4158	1.0002	1.0003	61.3991	61.4658	Pass
2,3,7,8-TCDF	31.2745	31.2610	1.0004	1.0009	31.2443	31.3110	Pass
1,2,3,7,8-PeCDF	38.3828	38.3727	1.0003	1.0008	38.3560	38.4227	Pass
2,3,4,7,8-PeCDF	40.4505	38.3727	1.0541	1.0543	1.0490	1.0596	Pass
1,2,3,4,7,8-HxCDF	46.6347	46.6028	1.0007	1.0005	46.5861	46.6528	Pass
1,2,3,6,7,8-HxCDF	46.9003	46.6028	1.0064	1.0061	1.0011	1.0112	Pass
2,3,4,6,7,8-HxCDF	48.0902	46.6028	1.0319	1.0321	1.0269	1.0372	Pass
1,2,3,7,8,9-HxCDF	49.8323	46.6028	1.0693	1.0689	1.0636	1.0743	Pass
1,2,3,4,6,7,8-HpCDF	52.8537	52.8333	1.0004	1.0004	52.8166	52.8833	Pass
1,2,3,4,7,8,9-HpCDF	55.9653	52.8333	1.0593	1.0600	1.0547	1.0653	Pass
OCDF	61.8313	61.4158	1.0068	1.0066	1.0016	1.0116	Pass
¹³ C ₁₂ -2,3,7,8-TCDD	32.2270	31.4923	1.0233	1.0233	1.0182	1.0284	Pass
¹³ C ₁₂ -1,2,3,7,8-PeCDD	41.0892	31.4923	1.3047	1.3048	1.2983	1.3113	Pass
¹³ C ₁₂ -1,2,3,6,7,8-HxCDD	48.6532	49.1737	0.9894	0.9894	0.9845	0.9944	Pass
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDD	55.0125	49.1737	1.1187	1.1185	1.1129	1.1241	Pass
¹³ C ₁₂ -OCDD	61.4158	49.1737	1.2490	1.2491	1.2428	1.2553	Pass
¹³ C ₁₂ -2,3,7,8-TCDF	31.2610	31.4923	0.9927	0.9922	0.9873	0.9972	Pass
¹³ C ₁₂ -1,2,3,7,8-PeCDF	38.3727	31.4923	1.2185	1.2188	1.2127	1.2248	Pass
¹³ C ₁₂ -1,2,3,4,7,8-HxCDF	46.6028	49.1737	0.9477	0.9478	0.9431	0.9526	Pass
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDF	52.8333	49.1737	1.0744	1.0742	1.0689	1.0796	Pass
¹³ C ₁₂ -1,2,3,4-TCDD	31.4923	31.4923	1.0000	1.0000	0.9950	1.0050	Pass
¹³ C ₁₂ -1,2,3,7,8,9-HxCDD	49.1737	49.1737	1.0000	1.0000	0.9950	1.0050	Pass

a. Lower control limit
 b. Upper control limit

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

#	Name	RT	RRT
1	2,3,7,8-TCDD		
2	1,2,3,7,8-PeCDD	41.099300	1.000246
3	1,2,3,4,7,8-HxCDD	48.472500	0.996286
4	1,2,3,6,7,8-HxCDD	48.695702	1.000874
5	1,2,3,7,8,9-HxCDD	49.226799	1.001080
6	1,2,3,4,6,7,8-HpCDD	55.012501	1.000000
7	OCDD	61.425999	1.000166
8	2,3,7,8-TCDF	31.274500	1.000432
9	1,2,3,7,8-PeCDF	38.382801	1.000263
10	2,3,4,7,8-PeCDF	40.450500	1.054148
11	1,2,3,4,7,8-HxCDF	46.634701	1.000684
12	1,2,3,6,7,8-HxCDF	46.900299	1.006384
13	2,3,4,6,7,8-HxCDF	48.090199	1.031916
14	1,2,3,7,8,9-HxCDF	49.832298	1.069298
15	1,2,3,4,6,7,8-HpCDF	52.853699	1.000386
16	1,2,3,4,7,8,9-HpCDF	55.965302	1.059281
17	OCDF	61.831299	1.006765
18	13C-2,3,7,8-TCDD	32.227001	1.023329
19	13C-1,2,3,7,8-PeCDD	41.089199	1.304738
20	13C-1,2,3,6,7,8-HxCDD	48.653198	0.989415
21	13C-1,2,3,4,6,7,8-HpCDD	55.012501	1.118738
22	13C-OCDD	61.415798	1.248956
23	13C-2,3,7,8-TCDF	31.261000	0.992655
24	13C-1,2,3,7,8-PeCDF	38.372700	1.218479
25	13C-1,2,3,4,7,8-HxCDF	46.602798	0.947718
26	13C-1,2,3,4,6,7,8-HpCDF	52.833302	1.074422
27	13C-1,2,3,4-TCDD	31.492300	1.000000
28	13C-1,2,3,7,8,9-HxCDD	49.173698	1.000000

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

#	Name	Signal	Noise 1	S/N 1	Flag S/N..	Signal 2	Noise 2	S/N 2	Flag S/N..
1	2,3,7,8-TCDD		6.4522873e1				5.8747444e1		
2	1,2,3,7,8-PeCDD	8.1400000e2	5.4823997e1	41.57	NO	1.0160000e3	4.3513172e1	23.35	NO
3	1,2,3,4,7,8-HxCDD	3.3380000e3	1.8785265e2	17.08	NO	2.1650000e3	2.4379001e2	8.88	NO
4	1,2,3,6,7,8-HxCDD	1.5570000e3	1.8785265e2	7.78	NO	2.0730000e3	2.4379001e2	8.50	NO
5	1,2,3,7,8,9-HxCDD	1.9210000e3	1.8785265e2	10.14	NO	1.6650000e3	2.4379001e2	6.83	NO
6	1,2,3,4,6,7,8-HpCDD	3.0290000e3	1.3808949e2	22.57	NO	2.1360000e3	1.5434836e2	13.84	NO
7	OCDD	3.1970000e3	9.5171326e1	30.34	NO	2.6230000e3	6.3416603e1	41.36	NO
8	2,3,7,8-TCDF	3.9400000e2	5.7739487e1	13.12	NO	4.1900000e2	8.0149010e1	5.23	NO
9	1,2,3,7,8-PeCDF	1.0530000e3	1.3196927e2	4.40	NO	9.7200000e2	6.9989281e1	13.89	NO
10	2,3,4,7,8-PeCDF	1.2470000e3	1.3196927e2	5.83	NO	4.3500000e2	6.9989281e1	6.22	NO
11	1,2,3,4,7,8-HxCDF	2.2520000e3	7.7262749e1	25.64	NO	1.9210000e3	7.8200401e1	24.57	NO
12	1,2,3,6,7,8-HxCDF	2.3170000e3	7.7262749e1	27.25	NO	2.3380000e3	7.8200401e1	29.90	NO
13	2,3,4,6,7,8-HxCDF	2.3530000e3	7.7262749e1	65.00	NO	1.8990000e3	7.8200401e1	24.28	NO
14	1,2,3,7,8,9-HxCDF	1.6320000e3	7.7262749e1	25.15	NO	1.3190000e3	7.8200401e1	16.87	NO
15	1,2,3,4,6,7,8-HpCDF	3.1740000e3	9.9008987e1	36.28	NO	3.2260000e3	9.0724792e1	35.56	NO
16	1,2,3,4,7,8,9-HpCDF	8.5600000e2	9.9008987e1	3.96	NO	2.0390000e3	9.0724792e1	22.47	NO
17	OCDF	2.8210000e3	6.4910522e1	41.28	NO	1.8680000e3	1.3483206e2	13.85	NO
18	13C-2,3,7,8-TCDD	9.0961600e5	8.2531110e2	1103.17	NO	1.1196050e6	2.8909140e2	3872.84	NO
19	13C-1,2,3,7,8-PeCDD	1.1156890e6	7.5062616e2	1484.99	NO	6.6892200e5	2.2365683e2	2990.84	NO
20	13C-1,2,3,6,7,8-HxCDD	2.1378380e6	7.2055121e2	2967.77	NO	1.7508580e6	3.3955658e2	5156.31	NO
21	13C-1,2,3,4,6,7,8-HpCDD	1.9587990e6	5.0733856e2	3859.15	NO	1.8058350e6	3.4930981e2	5169.72	NO
22	13C-OCDD	2.6210490e6	4.7349380e2	5533.96	NO	2.9249620e6	2.5971802e2	11262.07	NO
23	13C-2,3,7,8-TCDF	1.2697090e6	2.2859369e2	5555.11	NO	1.6238190e6	3.0282245e2	5362.28	NO
24	13C-1,2,3,7,8-PeCDF	1.4105610e6	3.6164032e2	3897.87	NO	8.7148600e5	7.9511646e3	109.60	NO
25	13C-1,2,3,4,7,8-HxCDF	1.5455010e6	5.5096216e2	2804.07	NO	3.0063770e6	4.0920398e2	7346.89	NO
26	13C-1,2,3,4,6,7,8-HpCDF	1.2229110e6	1.7851991e2	6851.81	NO	2.7247370e6	4.2394373e2	6427.12	NO
27	13C-1,2,3,4-TCDD	1.3079600e6	8.2531110e2	1585.09	NO	1.6300290e6	2.8909140e2	5638.46	NO
28	13C-1,2,3,7,8,9-HxCDD	1.0680350e6	7.2055121e2	1483.55	NO	8.2668800e5	3.3955658e2	2434.61	NO

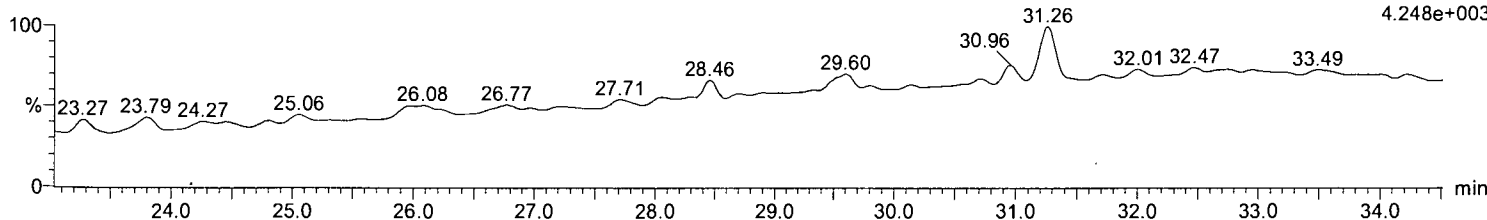
Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59
Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

2,3,7,8-TCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

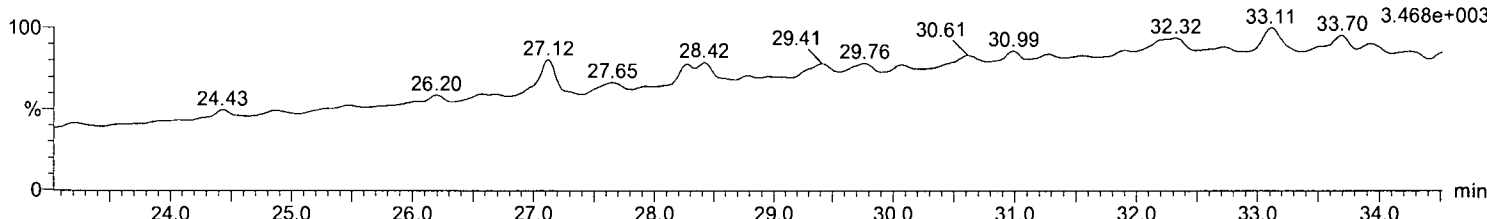
F1:Voltage SIR,EI+
319.8965
4.248e+003



2,3,7,8-TCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

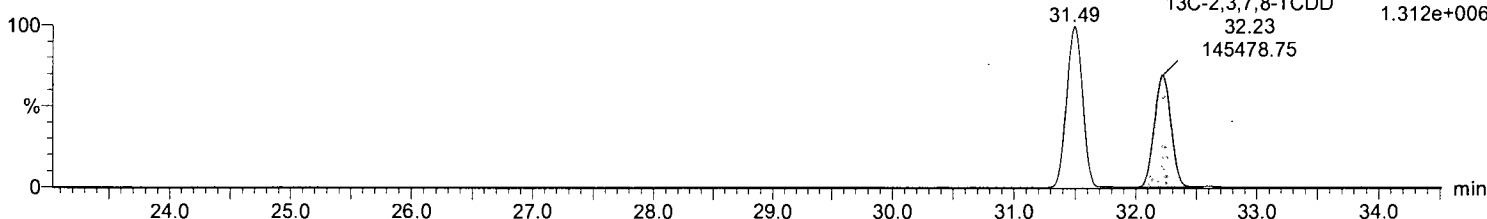
F1:Voltage SIR,EI+
321.8936
3.468e+003



13C-2,3,7,8-TCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

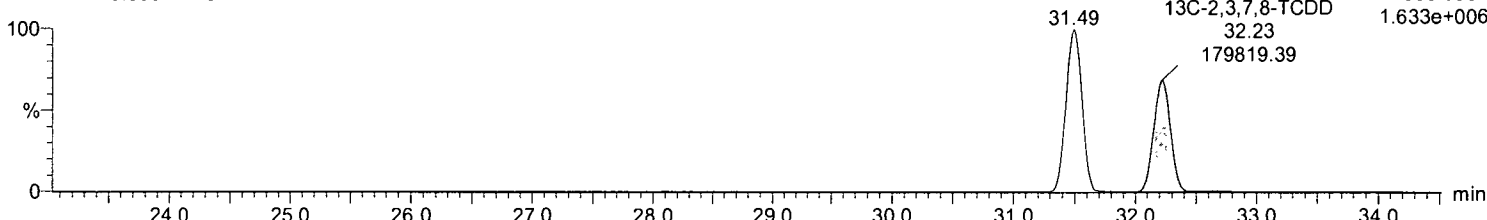
F1:Voltage SIR,EI+
331.9368
1.312e+006



13C-2,3,7,8-TCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

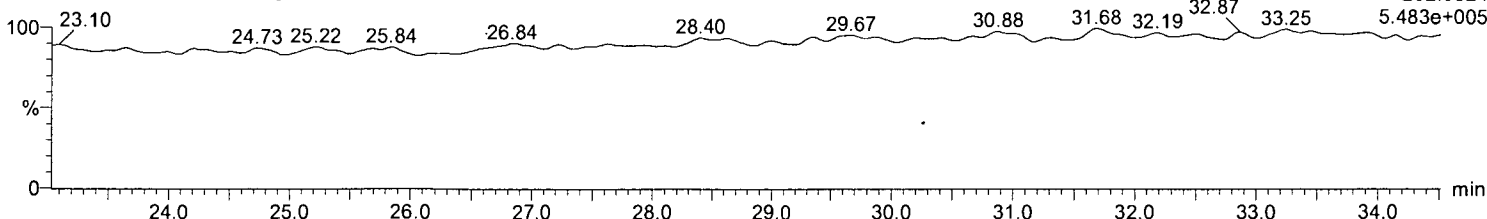
F1:Voltage SIR,EI+
333.9338
1.633e+006



PFK1

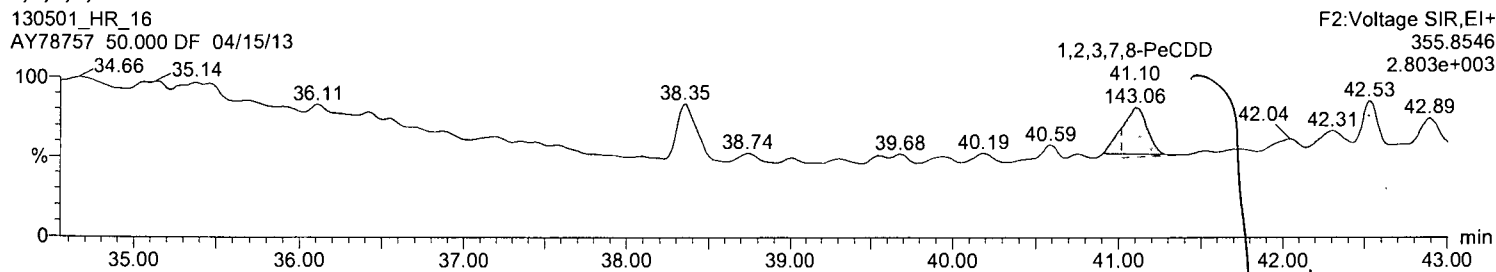
130501_HR_16
AY78757 50.000 DF 04/15/13

F1:Voltage SIR,EI+
292.9824
5.483e+005

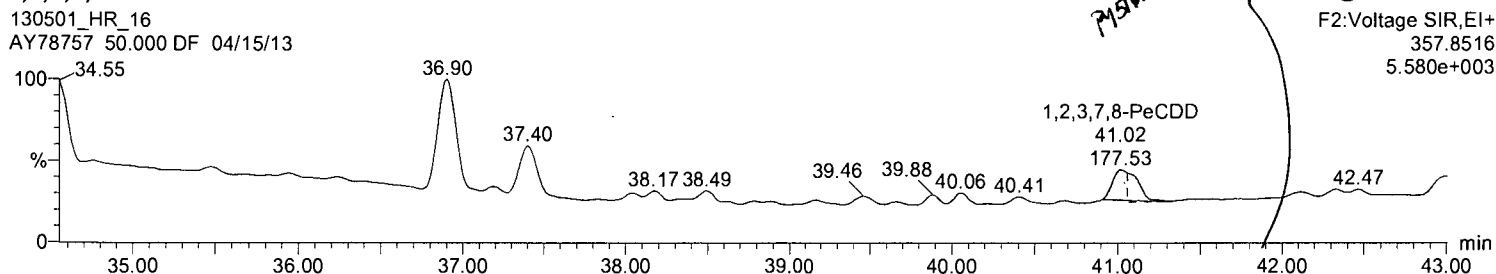


Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

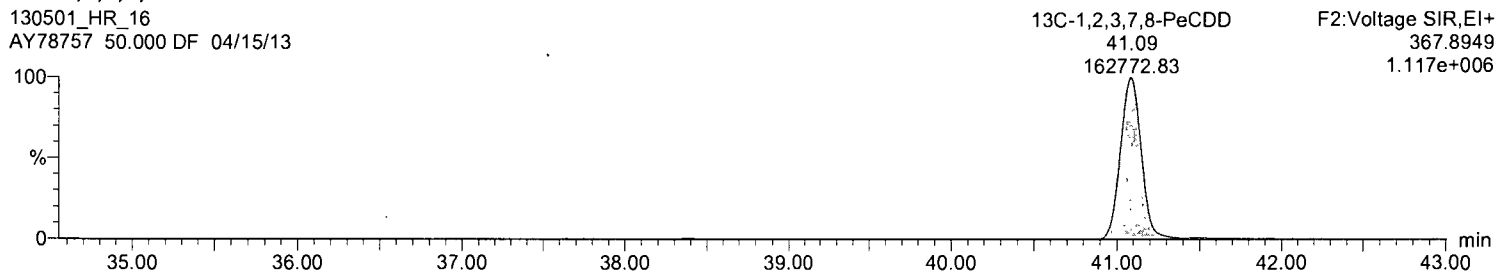
1,2,3,7,8-PeCDD



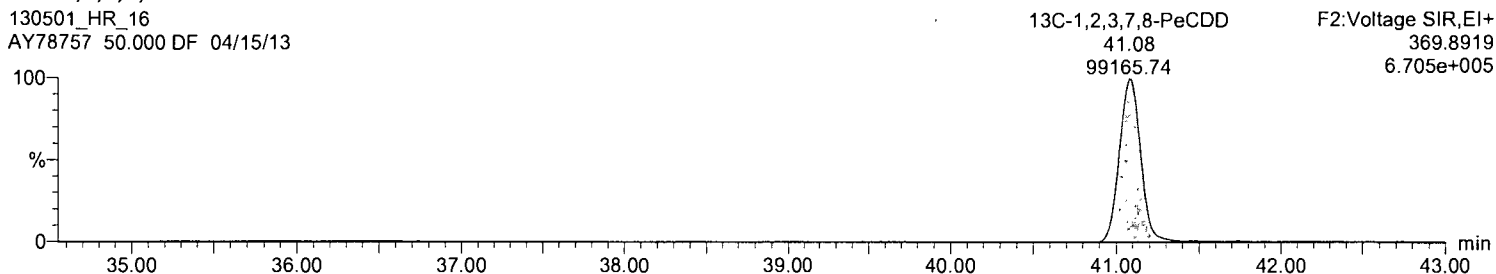
1,2,3,7,8-PeCDD



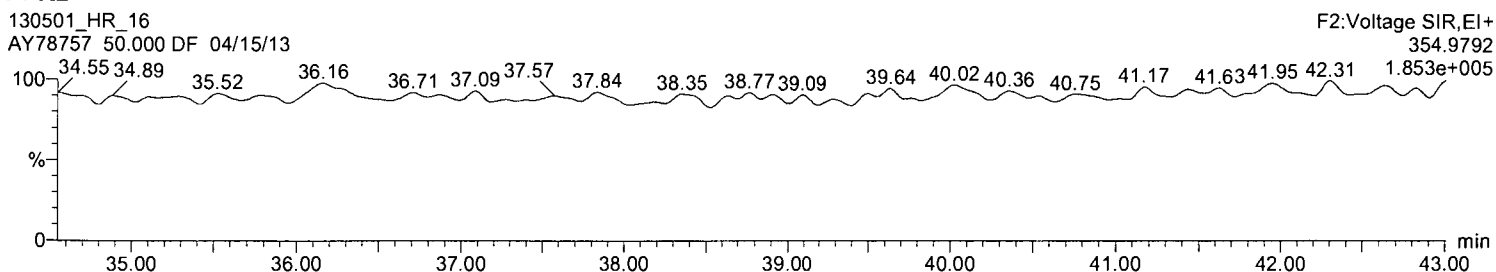
13C-1,2,3,7,8-PeCDD



13C-1,2,3,7,8-PeCDD



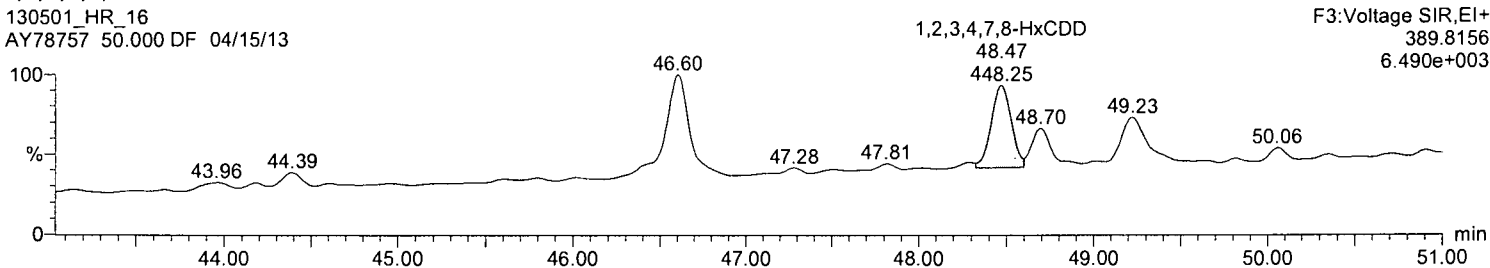
PFK2



Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

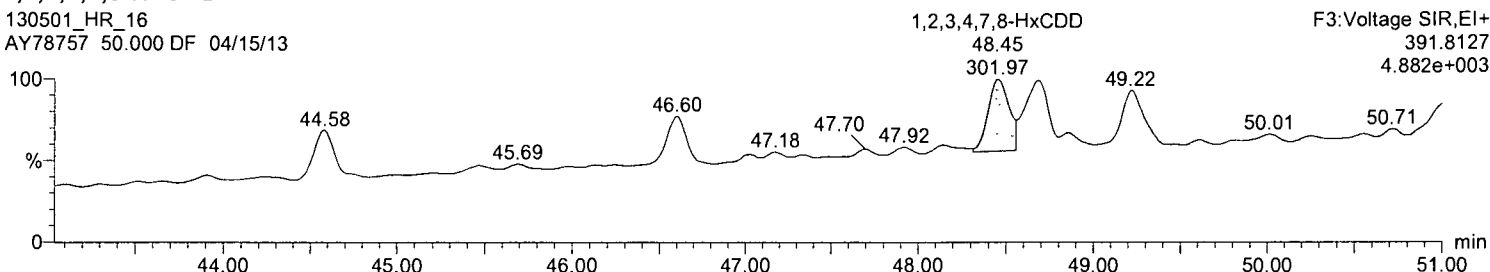
1,2,3,4,7,8-HxCDD

130501_HR_16
AY78757 50.000 DF 04/15/13



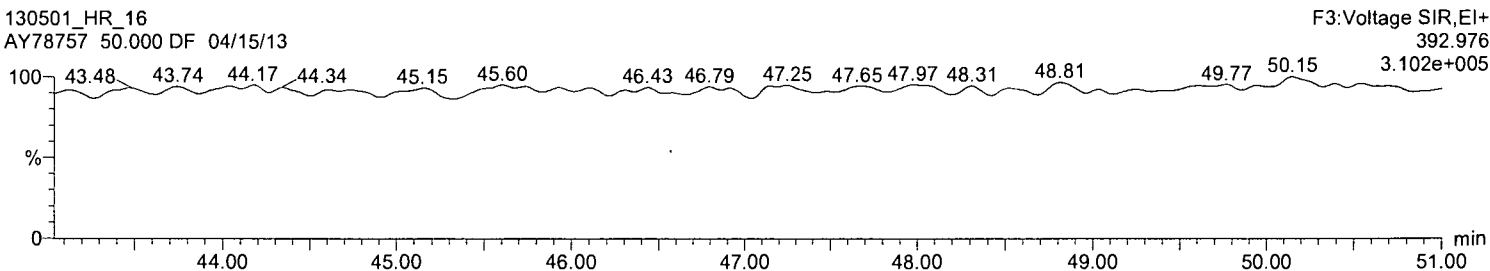
1,2,3,4,7,8-HxCDD

130501_HR_16
AY78757 50.000 DF 04/15/13



PFK3

130501_HR_16
AY78757 50.000 DF 04/15/13

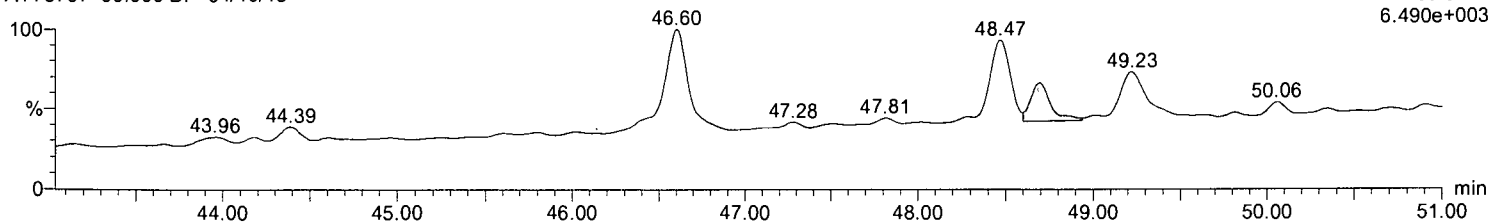


Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

1,2,3,6,7,8-HxCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

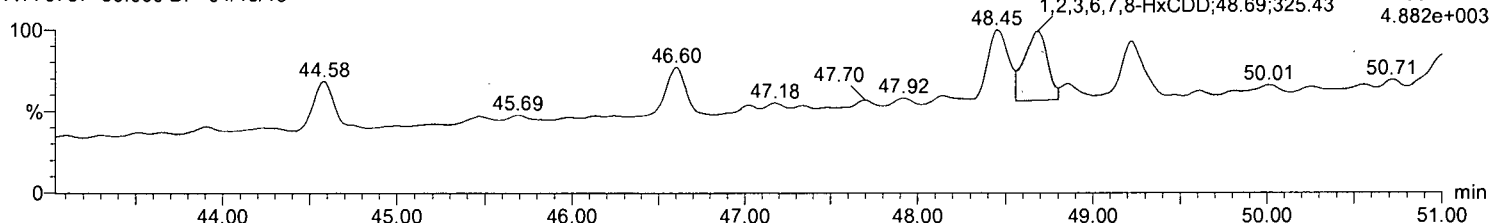
F3:Voltage SIR,EI+
389.8156
6.490e+003



1,2,3,6,7,8-HxCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

F3:Voltage SIR,EI+
391.8127
4.882e+003

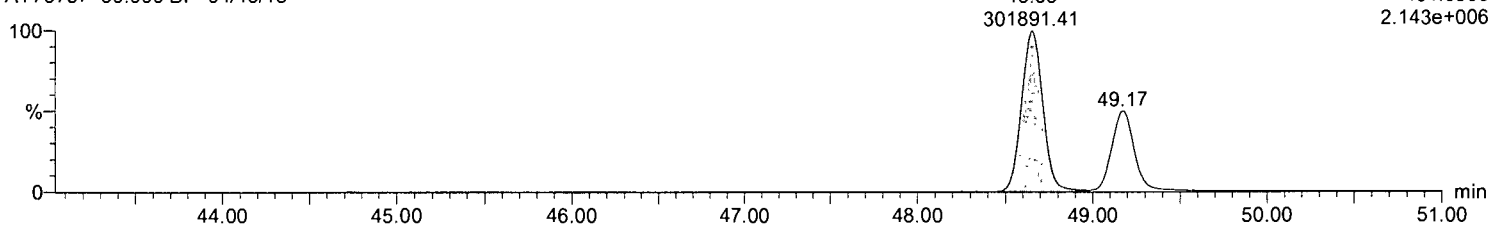


13C-1,2,3,6,7,8-HxCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

13C-1,2,3,6,7,8-HxCDD

F3:Voltage SIR,EI+
401.8559
2.143e+006

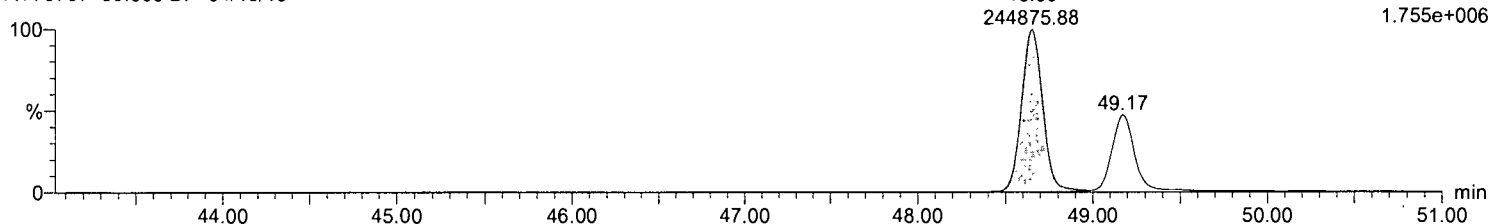


13C-1,2,3,6,7,8-HxCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

13C-1,2,3,6,7,8-HxCDD

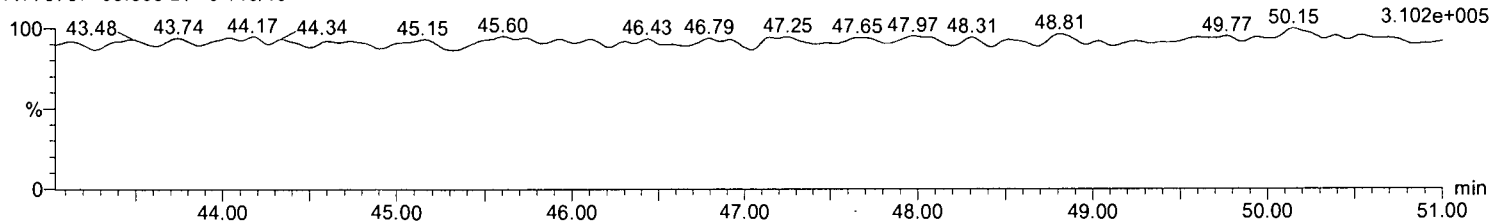
F3:Voltage SIR,EI+
403.8529
1.755e+006



PFK3

130501_HR_16
AY78757 50.000 DF 04/15/13

F3:Voltage SIR,EI+
392.976
3.102e+005

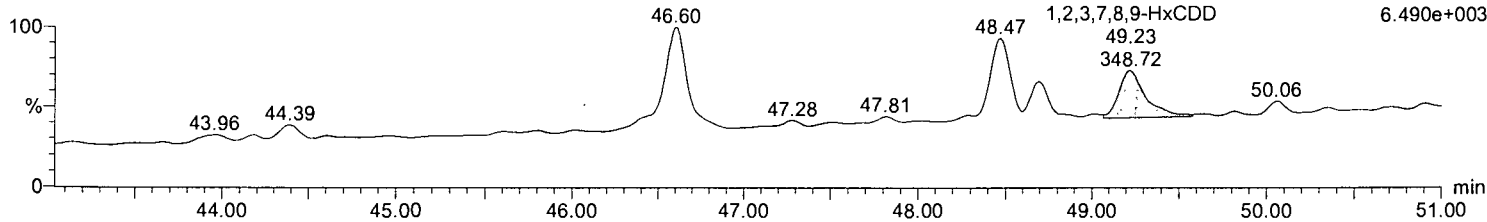


Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

1,2,3,7,8,9-HxCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

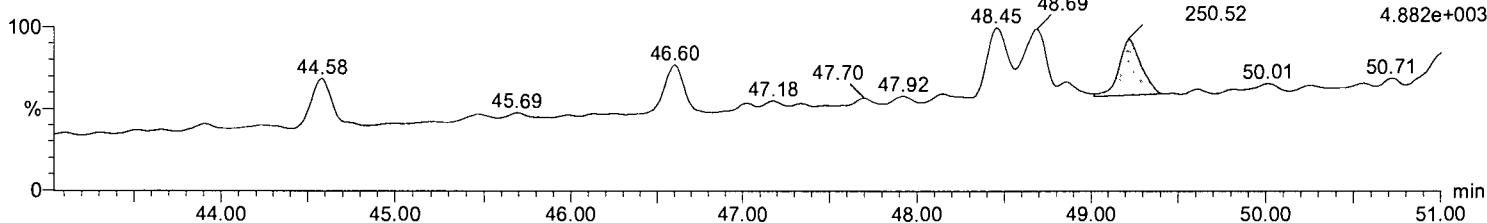
F3:Voltage SIR,EI+
389.8156
6.490e+003



1,2,3,7,8,9-HxCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

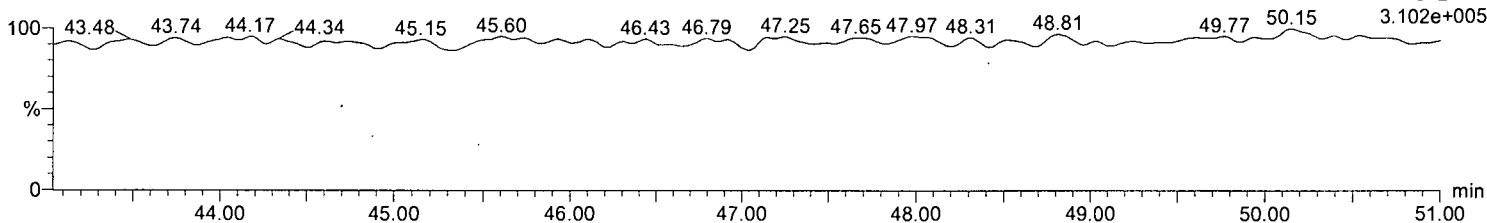
1,2,3,7,8,9-HxCDD F3:Voltage SIR,EI+
49.22 391.8127
250.52 4.882e+003



PFK3

130501_HR_16
AY78757 50.000 DF 04/15/13

F3:Voltage SIR,EI+
392.976
3.102e+005

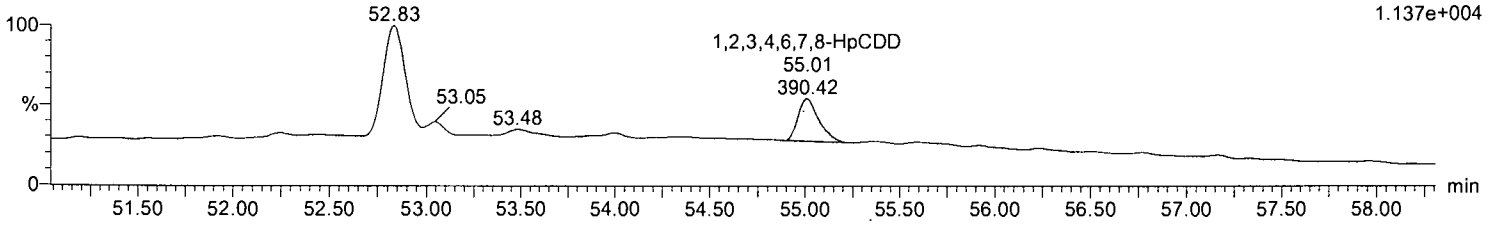


Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

1,2,3,4,6,7,8-HpCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

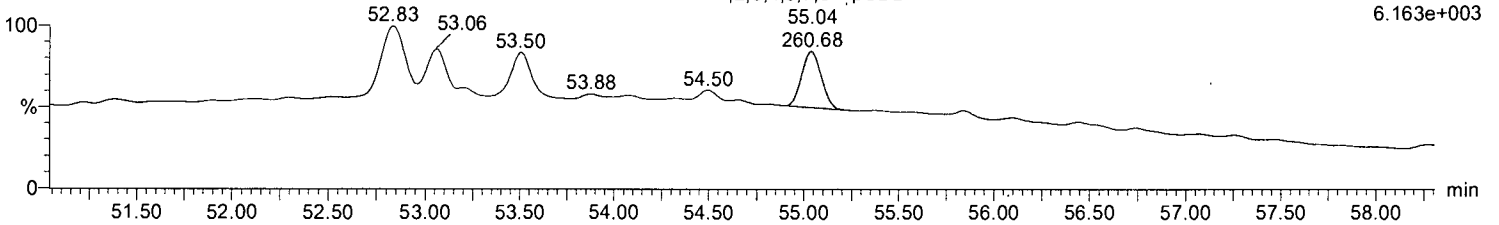
F4:Voltage SIR,EI+
423.7767
1.137e+004



1,2,3,4,6,7,8-HpCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

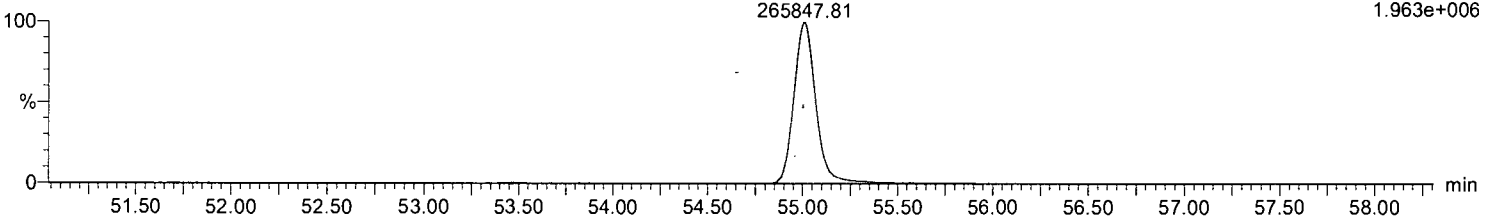
F4:Voltage SIR,EI+
425.7737
6.163e+003



13C-1,2,3,4,6,7,8-HpCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

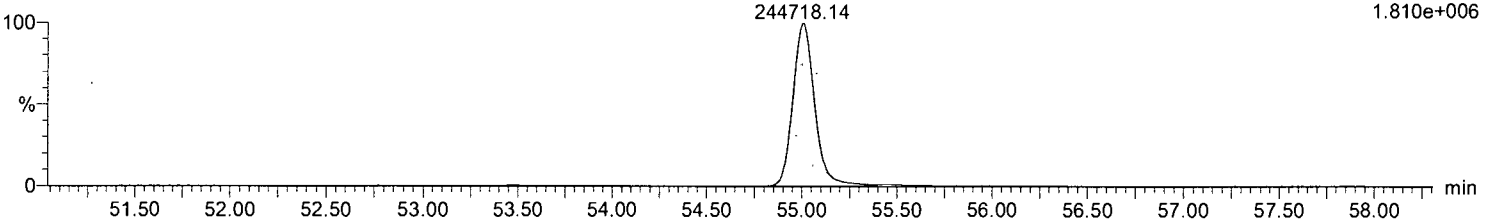
F4:Voltage SIR,EI+
435.8169
1.963e+006



13C-1,2,3,4,6,7,8-HpCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

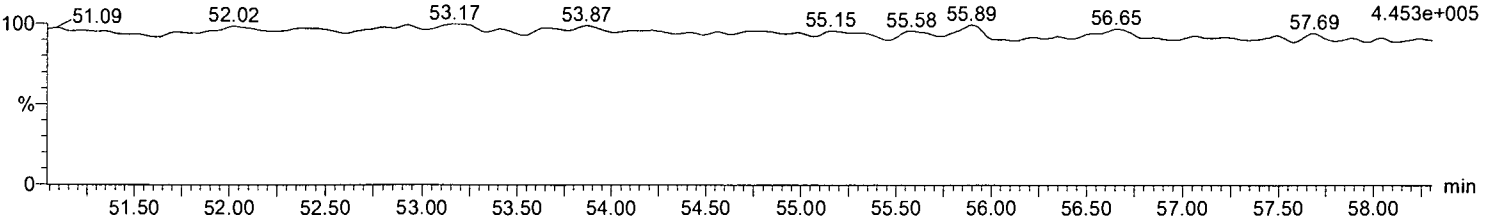
F4:Voltage SIR,EI+
437.814
1.810e+006



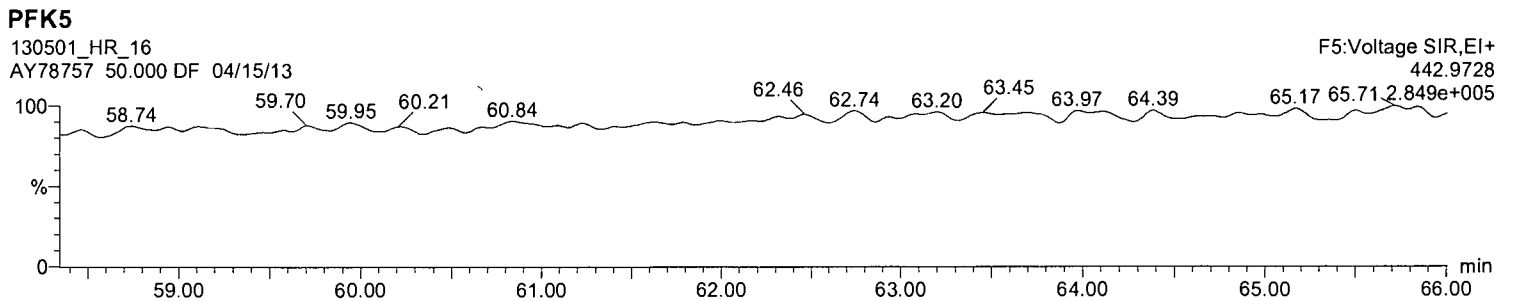
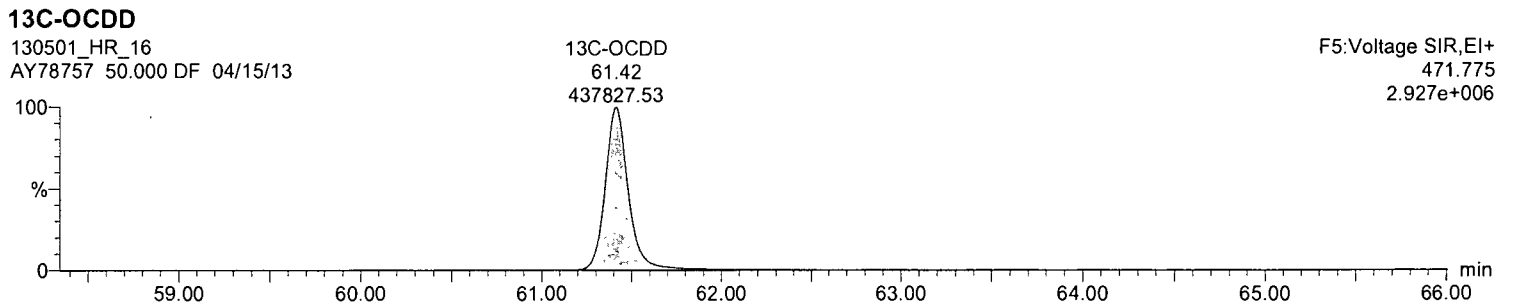
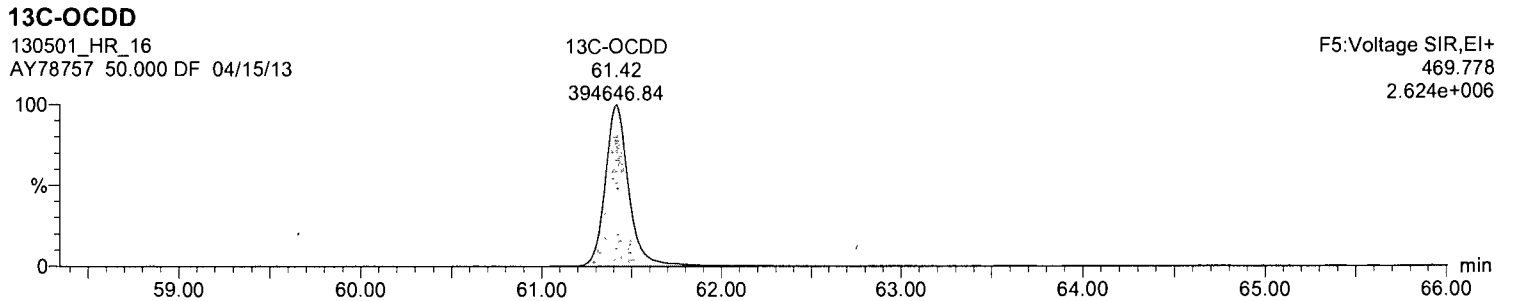
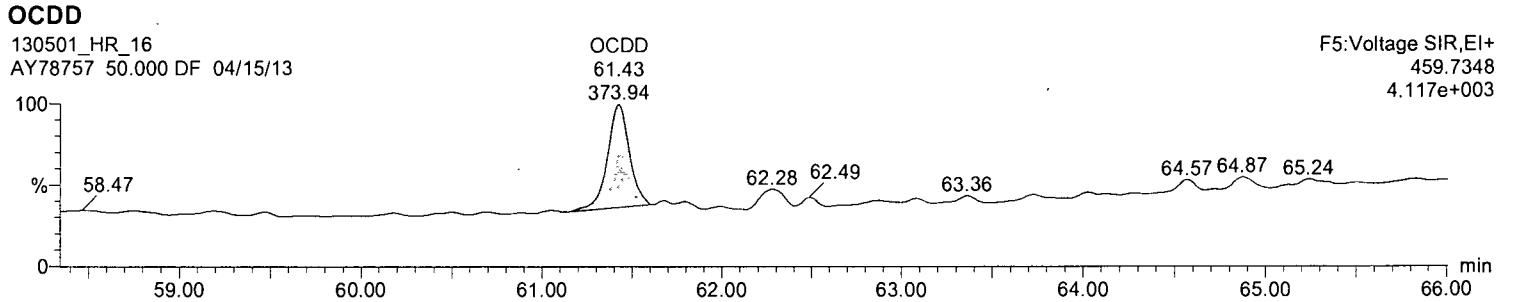
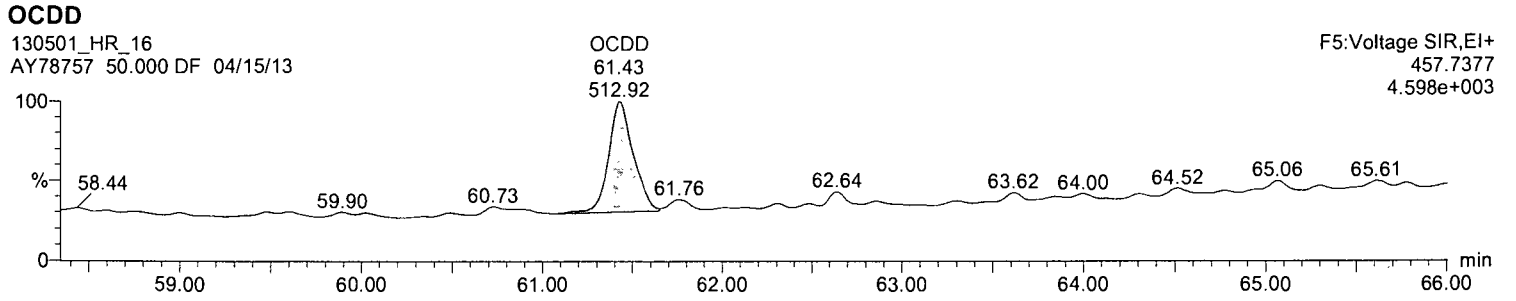
PFK4

130501_HR_16
AY78757 50.000 DF 04/15/13

F4:Voltage SIR,EI+
430.9728
4.453e+005



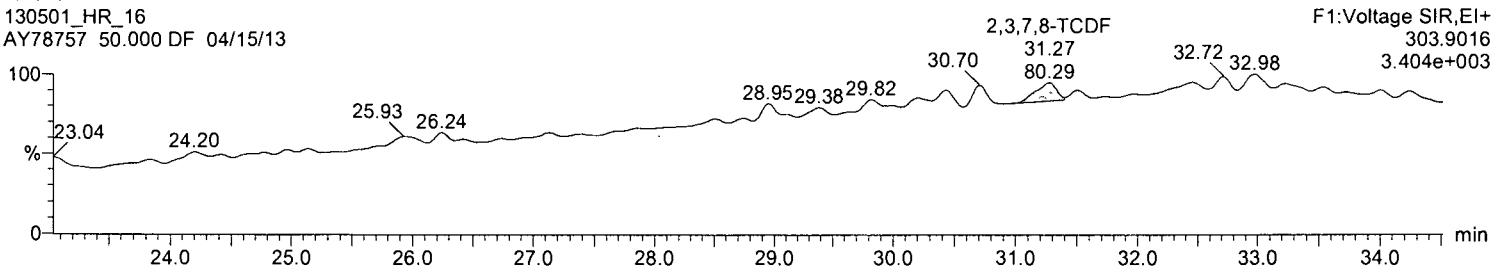
Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP



Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

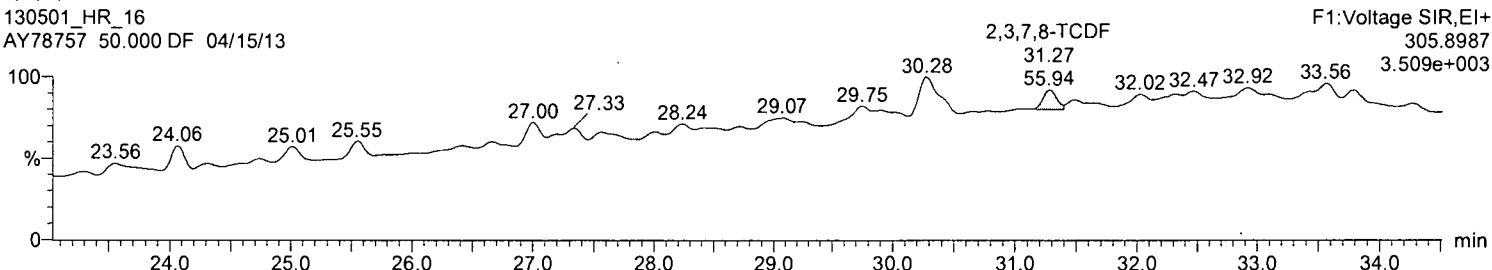
2,3,7,8-TCDF

130501_HR_16
AY78757 50.000 DF 04/15/13



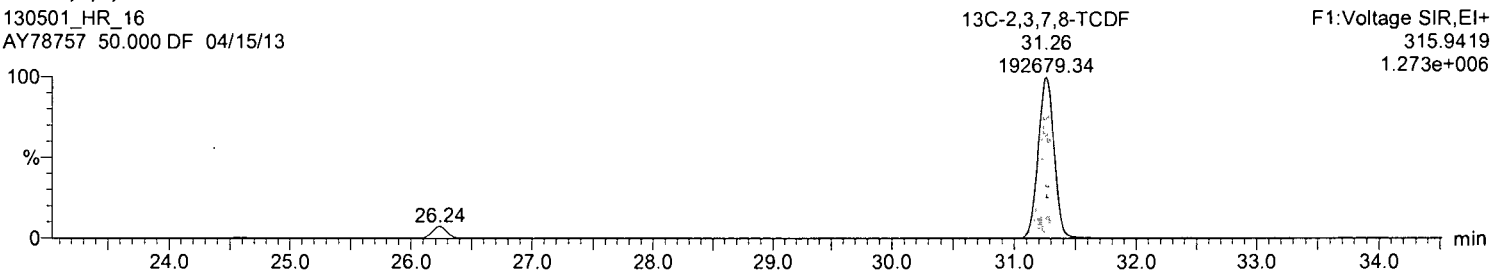
2,3,7,8-TCDF

130501_HR_16
AY78757 50.000 DF 04/15/13



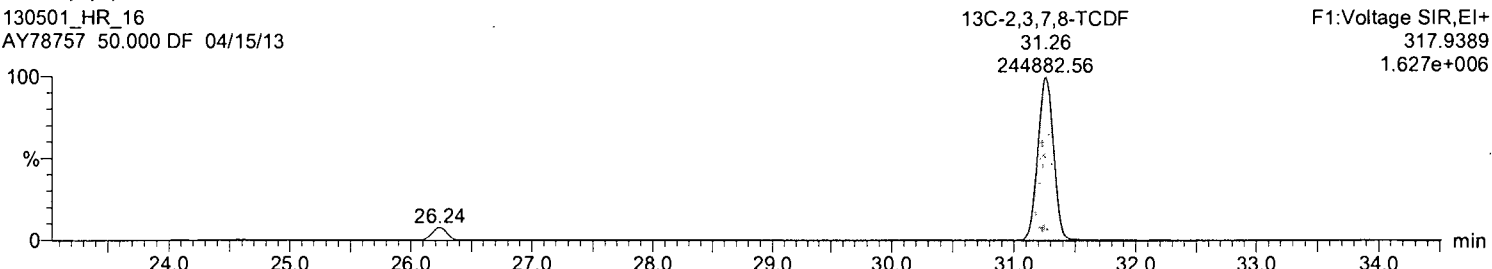
13C-2,3,7,8-TCDF

130501_HR_16
AY78757 50.000 DF 04/15/13



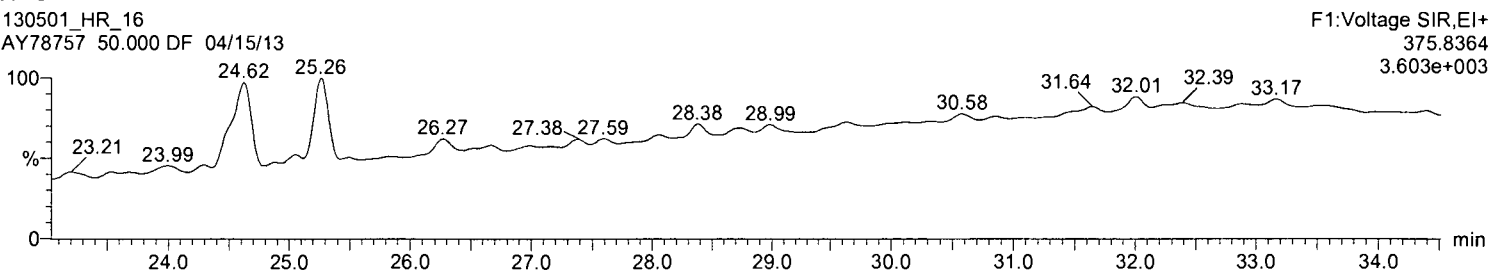
13C-2,3,7,8-TCDF

130501_HR_16
AY78757 50.000 DF 04/15/13



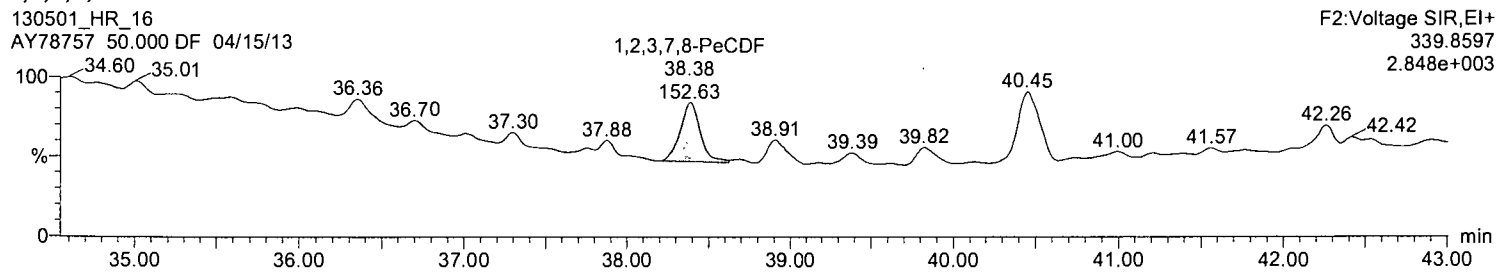
HxCDFE

130501_HR_16
AY78757 50.000 DF 04/15/13

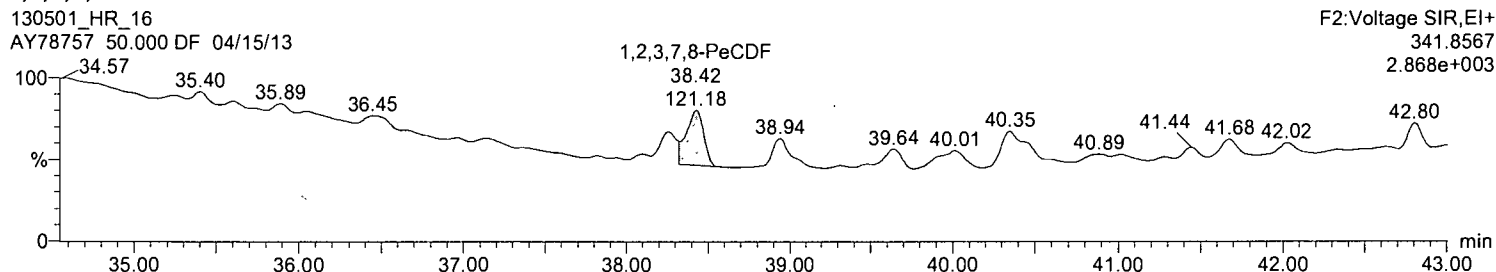


Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

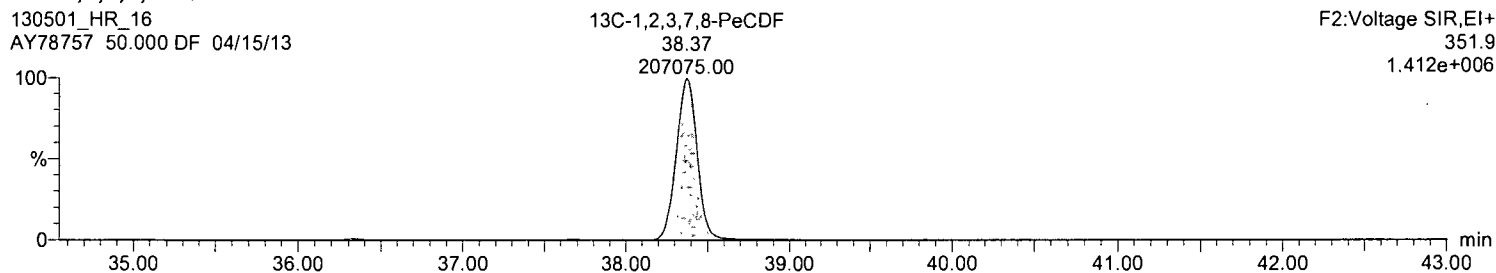
1,2,3,7,8-PeCDF



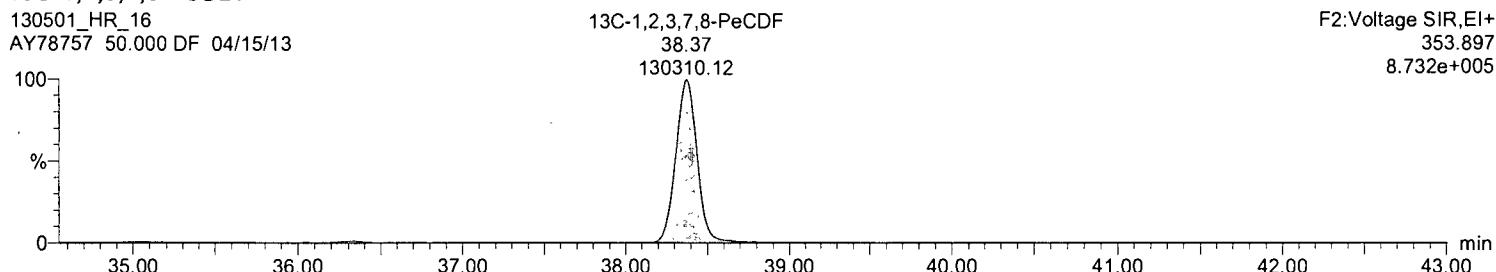
1,2,3,7,8-PeCDF



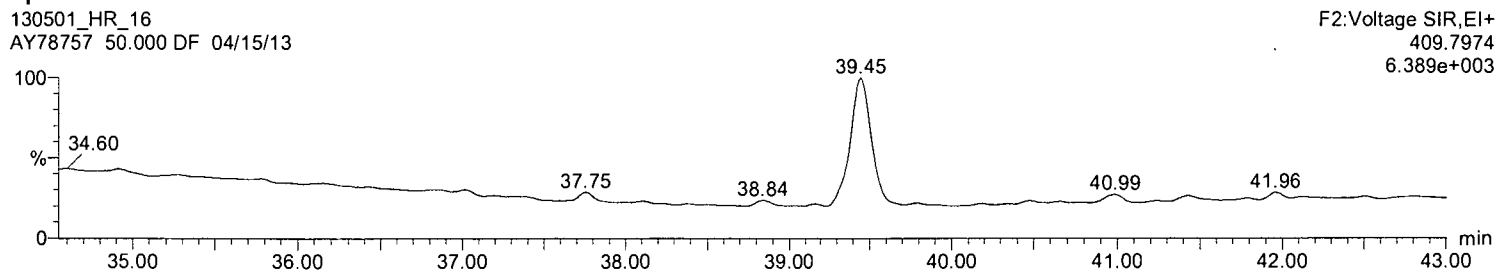
13C-1,2,3,7,8-PeCDF



13C-1,2,3,7,8-PeCDF



HpCDPE



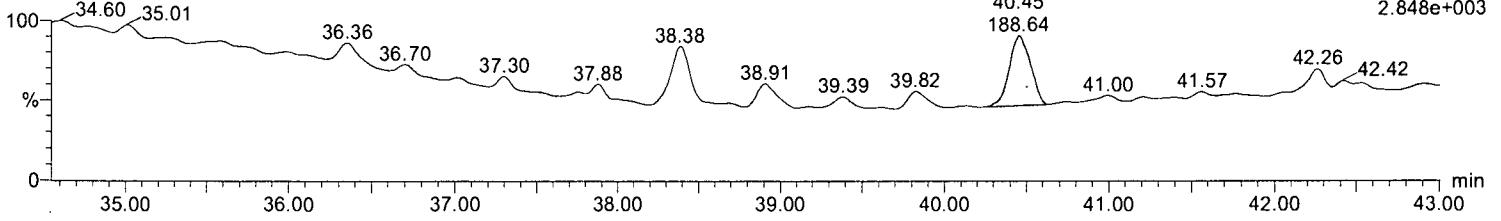
Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

2,3,4,7,8-PeCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

2,3,4,7,8-PeCDF

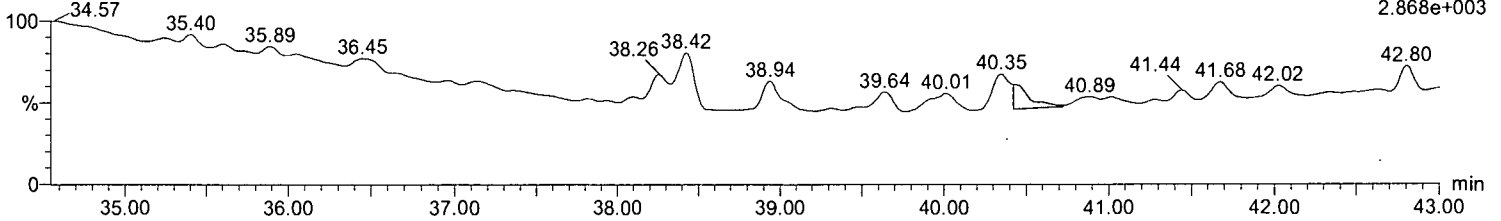
F2:Voltage SIR,EI+
339.8597
2.848e+003



2,3,4,7,8-PeCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

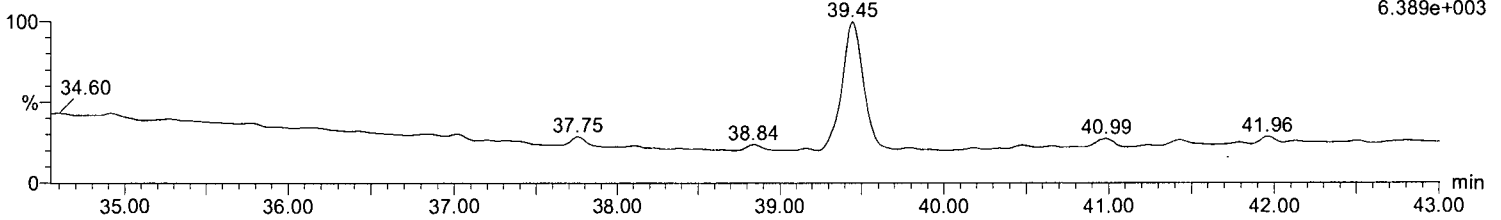
F2:Voltage SIR,EI+
341.8567
2.868e+003



HpCDPE

130501_HR_16
AY78757 50.000 DF 04/15/13

F2:Voltage SIR,EI+
409.7974
6.389e+003



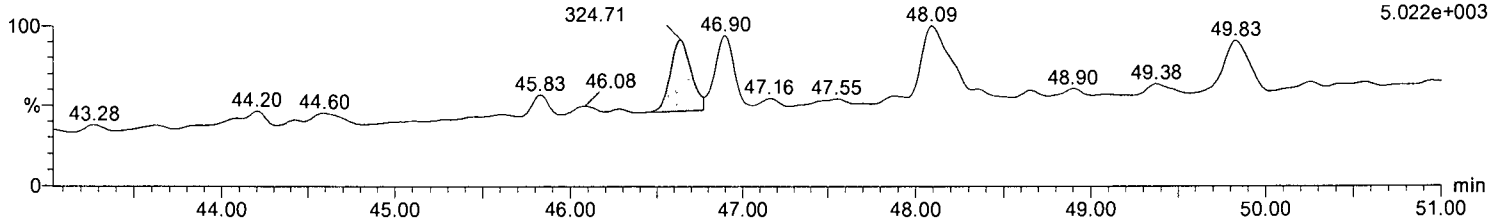
Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

1,2,3,4,7,8-HxCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

1,2,3,4,7,8-HxCDF
46.63
324.71

F3:Voltage SIR,EI+
373.8208
5.022e+003

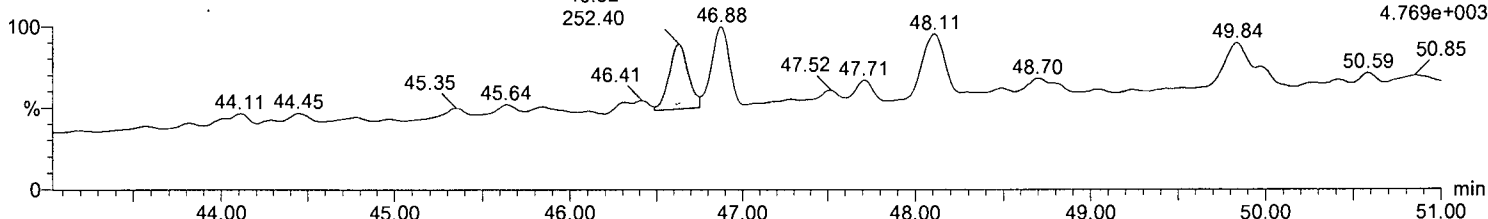


1,2,3,4,7,8-HxCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

1,2,3,4,7,8-HxCDF
46.62
252.40

F3:Voltage SIR,EI+
375.8178
4.769e+003

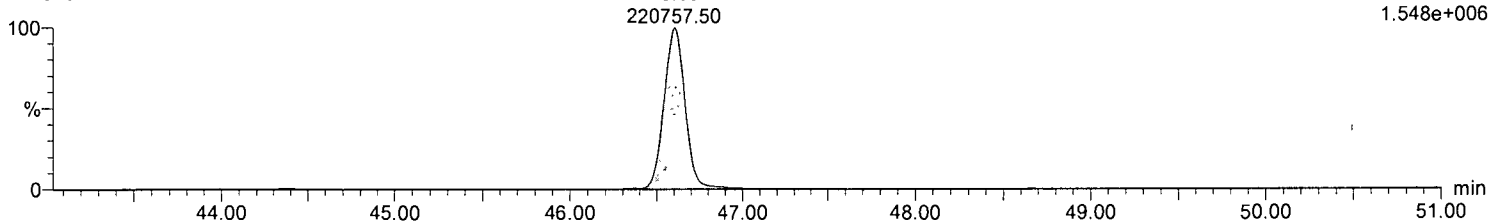


13C-1,2,3,4,7,8-HxCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

13C-1,2,3,4,7,8-HxCDF
46.60
220757.50

F3:Voltage SIR,EI+
383.8639
1.548e+006

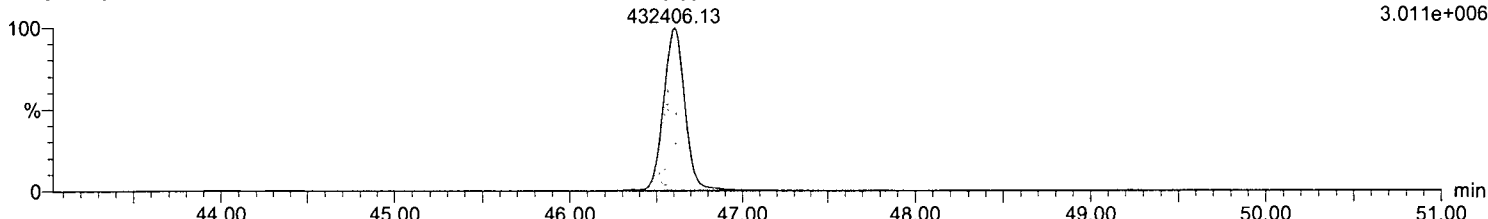


13C-1,2,3,4,7,8-HxCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

13C-1,2,3,4,7,8-HxCDF
46.60
432406.13

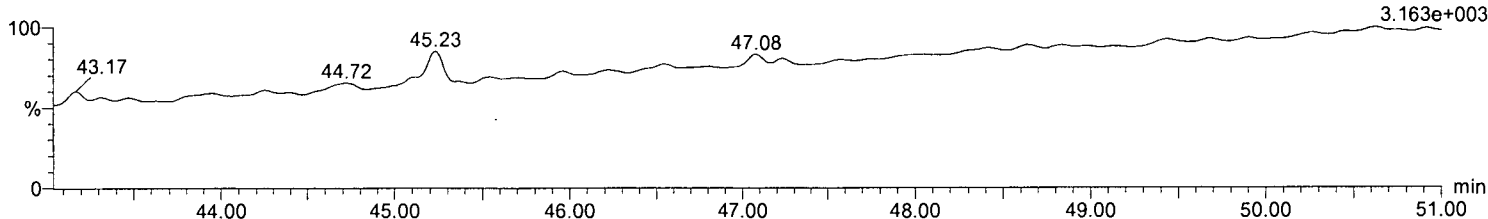
F3:Voltage SIR,EI+
385.861
3.011e+006



OCDPE

130501_HR_16
AY78757 50.000 DF 04/15/13

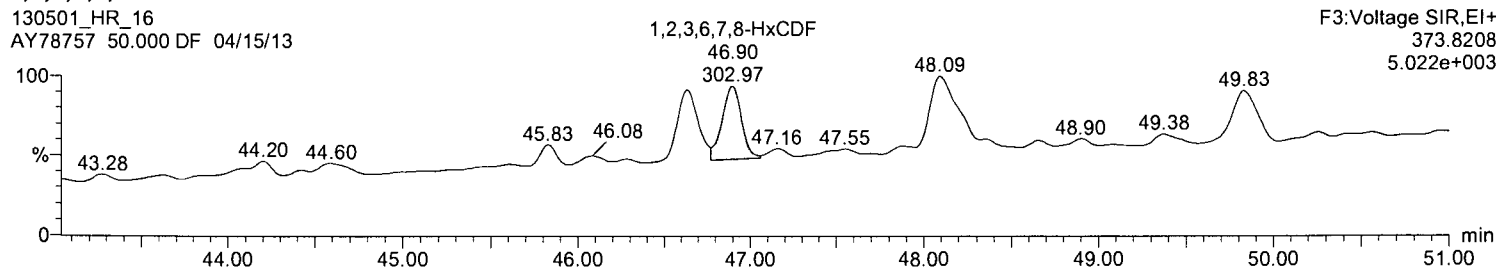
F3:Voltage SIR,EI+
445.7555
3.163e+003



Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

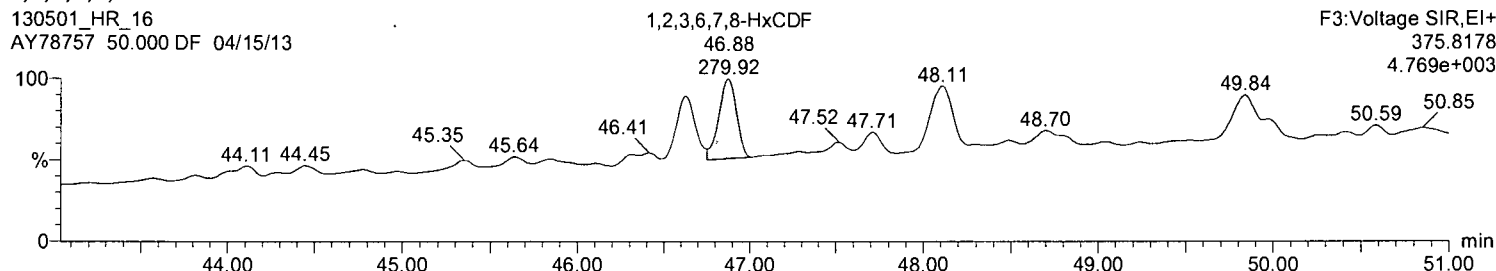
1,2,3,6,7,8-HxCDF

130501_HR_16
AY78757 50.000 DF 04/15/13



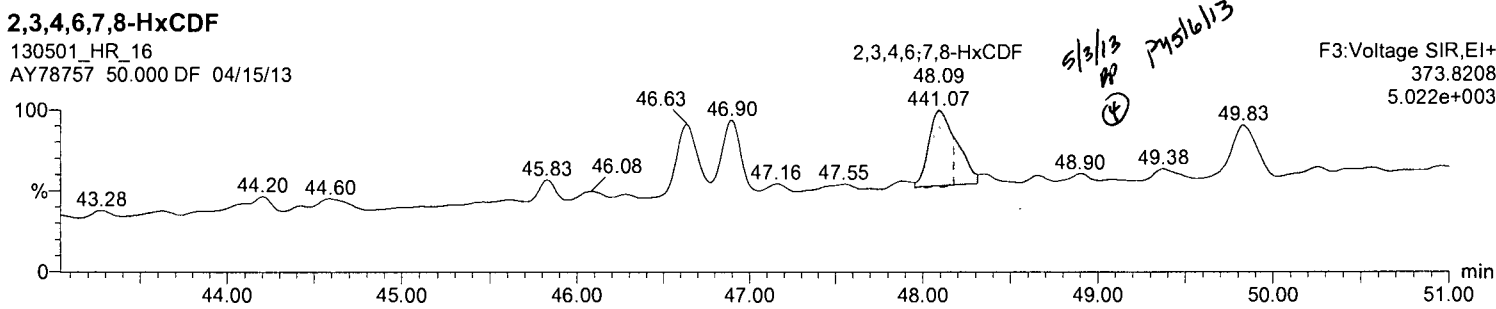
1,2,3,6,7,8-HxCDF

130501_HR_16
AY78757 50.000 DF 04/15/13



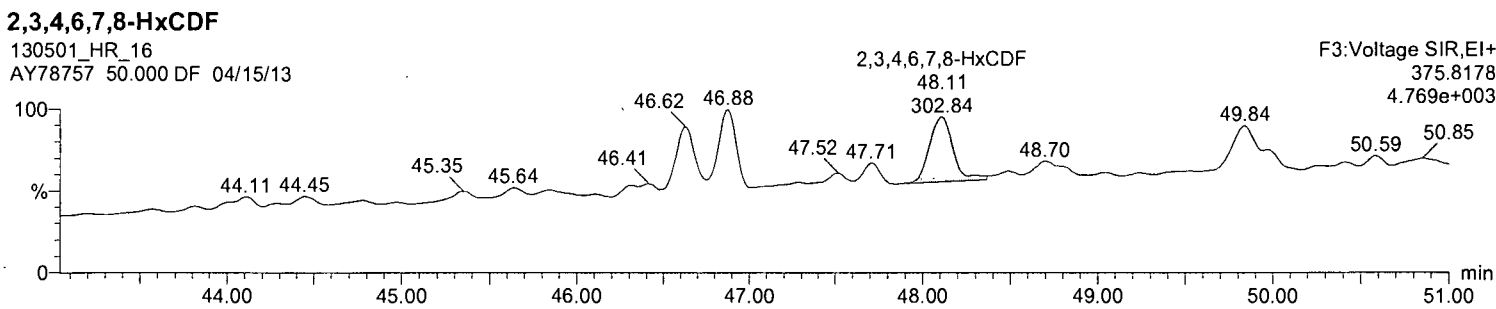
2,3,4,6,7,8-HxCDF

130501_HR_16
AY78757 50.000 DF 04/15/13



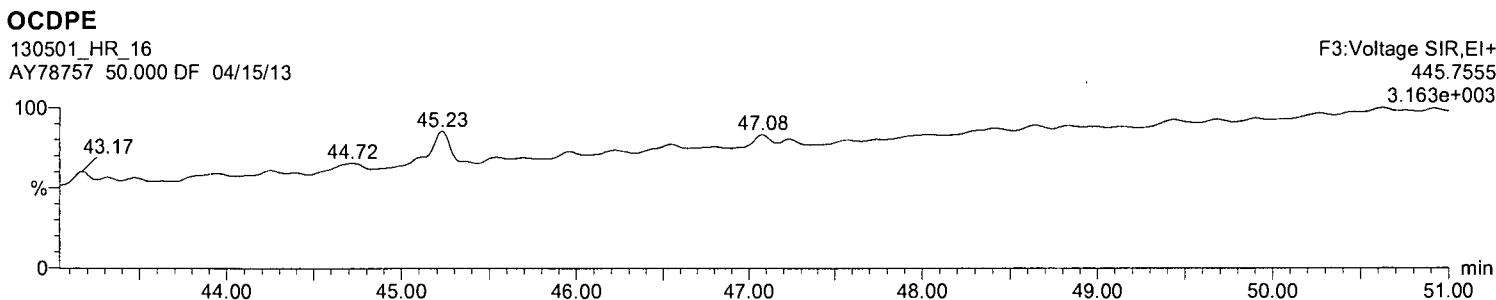
2,3,4,6,7,8-HxCDF

130501_HR_16
AY78757 50.000 DF 04/15/13



OCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

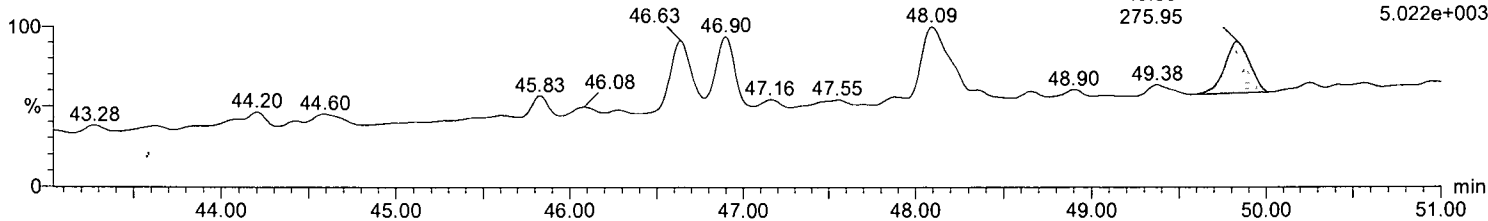


Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

1,2,3,7,8,9-HxCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

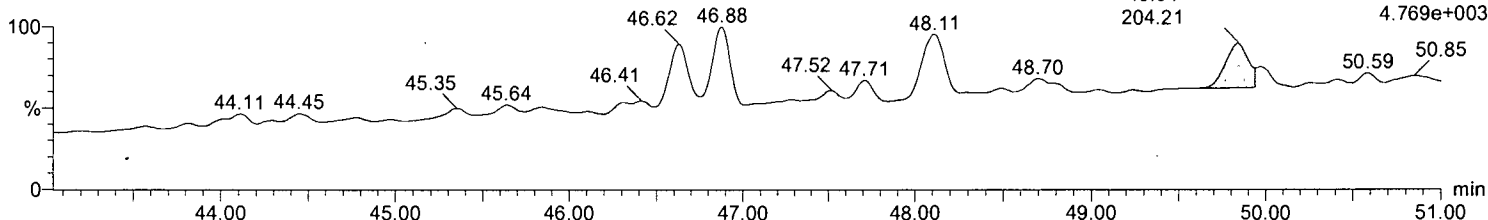
1,2,3,7,8,9-HxCDF F3:Voltage SIR,EI+
49.83 373.8208
275.95 5.022e+003



1,2,3,7,8,9-HxCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

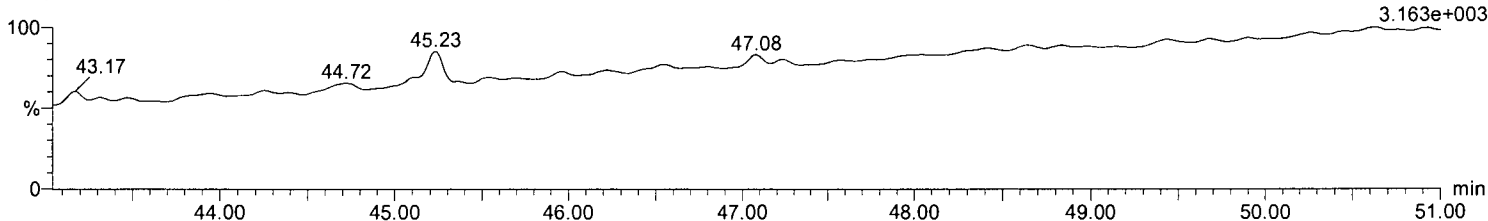
1,2,3,7,8,9-HxCDF F3:Voltage SIR,EI+
49.84 375.8178
204.21 4.769e+003



OCDPE

130501_HR_16
AY78757 50.000 DF 04/15/13

F3:Voltage SIR,EI+
445.7555
3.163e+003



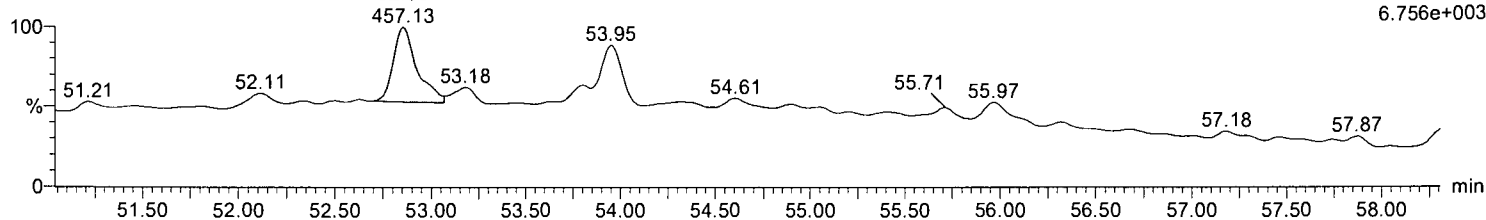
Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

1,2,3,4,6,7,8-HpCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

1,2,3,4,6,7,8-HpCDF
52.85
457.13

F4:Voltage SIR,EI+
407.7818
6.756e+003

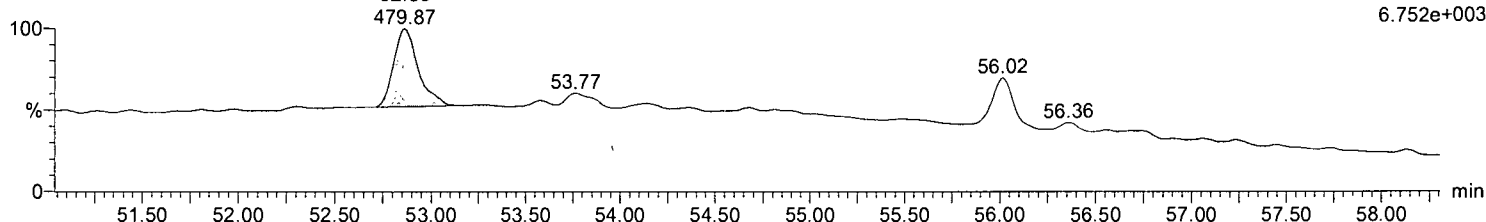


1,2,3,4,6,7,8-HpCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

1,2,3,4,6,7,8-HpCDF
52.86
479.87

F4:Voltage SIR,EI+
409.7788
6.752e+003

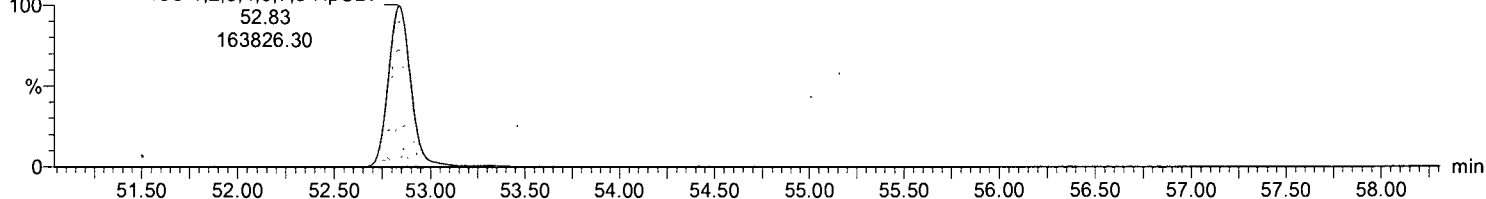


13C-1,2,3,4,6,7,8-HpCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

13C-1,2,3,4,6,7,8-HpCDF
52.83
163826.30

F4:Voltage SIR,EI+
417.825
1.227e+006

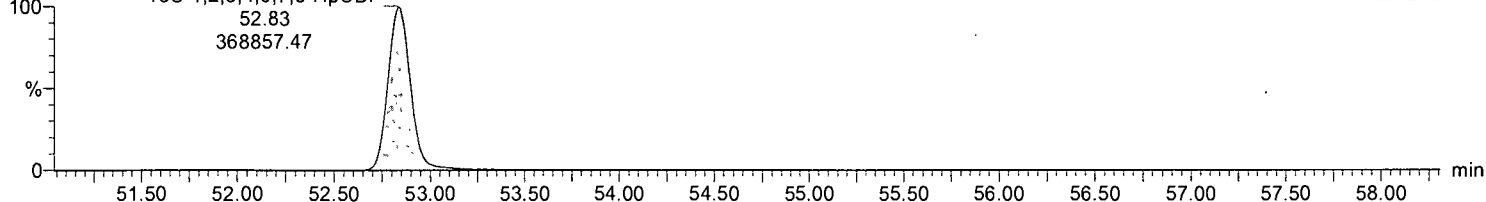


13C-1,2,3,4,6,7,8-HpCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

13C-1,2,3,4,6,7,8-HpCDF
52.83
368857.47

F4:Voltage SIR,EI+
419.822
2.729e+006

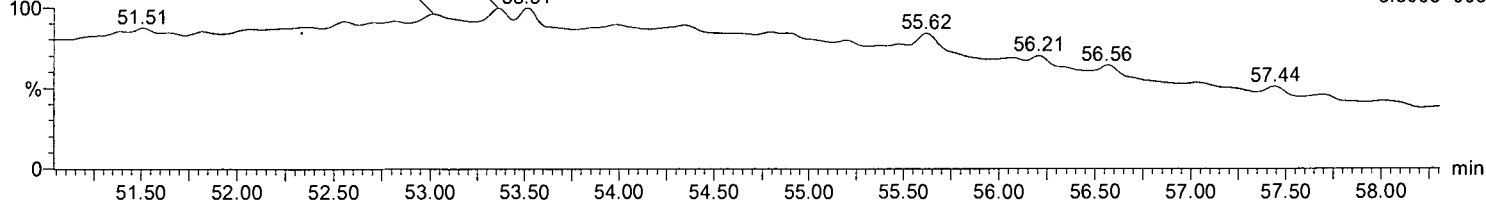


NCDPE

130501_HR_16
AY78757 50.000 DF 04/15/13

53.02 53.36 53.51

F4:Voltage SIR,EI+
479.7165
3.896e+003

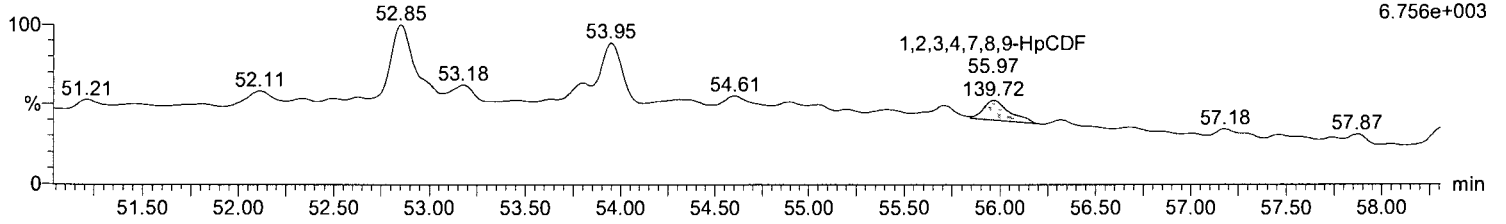


Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

1,2,3,4,7,8,9-HpCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

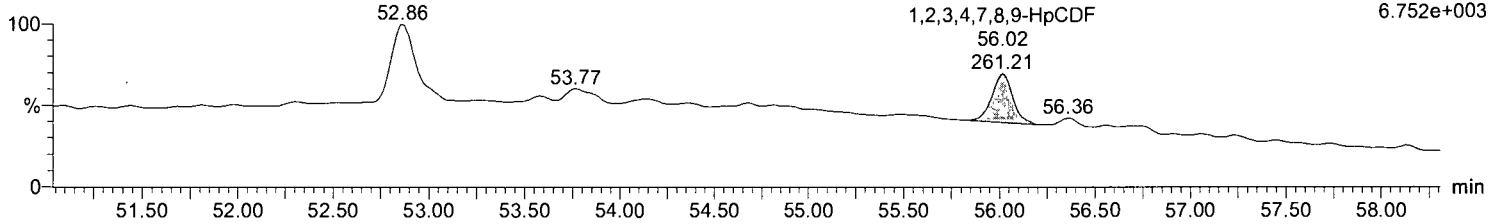
F4:Voltage SIR,EI+
407.7818
6.756e+003



1,2,3,4,7,8,9-HpCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

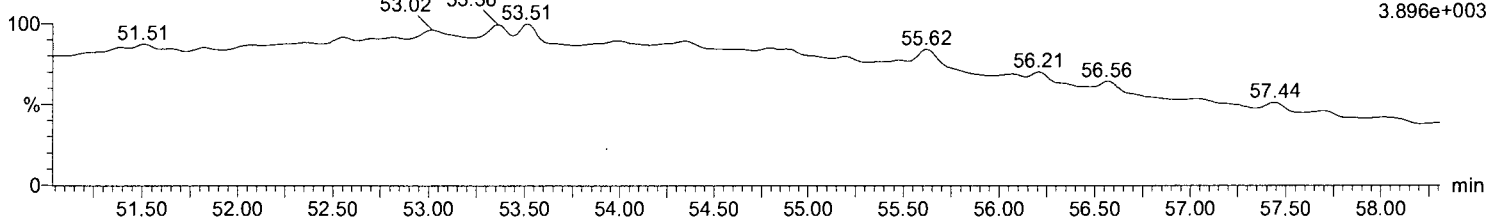
F4:Voltage SIR,EI+
409.7788
6.752e+003



NCDPE

130501_HR_16
AY78757 50.000 DF 04/15/13

F4:Voltage SIR,EI+
479.7165
3.896e+003



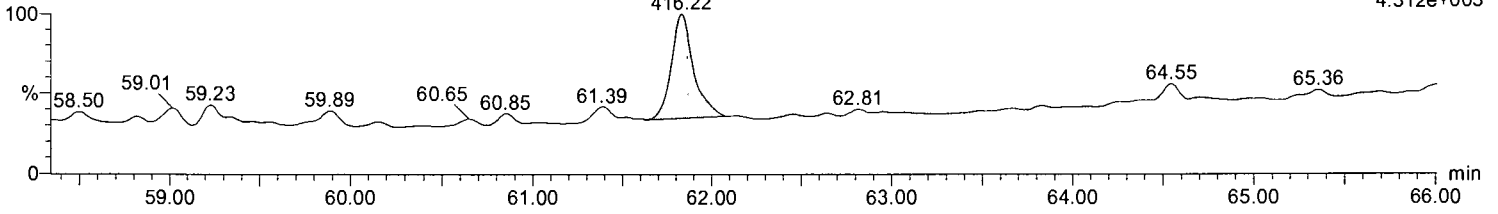
Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

OCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

OCDF
61.83
416.22

F5:Voltage SIR,EI+
441.7428
4.312e+003

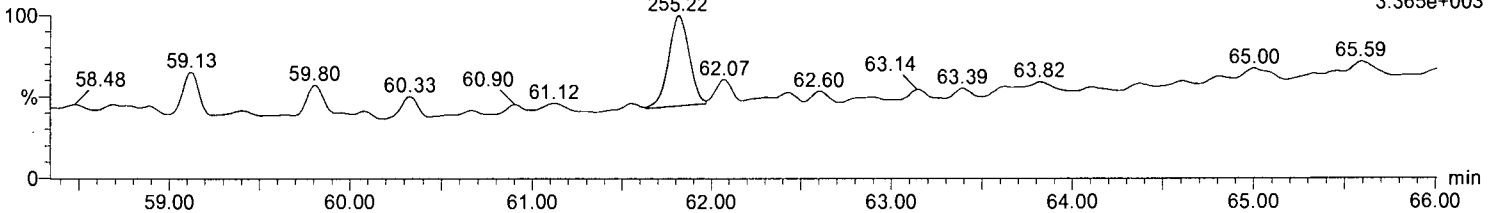


OCDF

130501_HR_16
AY78757 50.000 DF 04/15/13

OCDF
61.81
255.22

F5:Voltage SIR,EI+
443.7399
3.365e+003

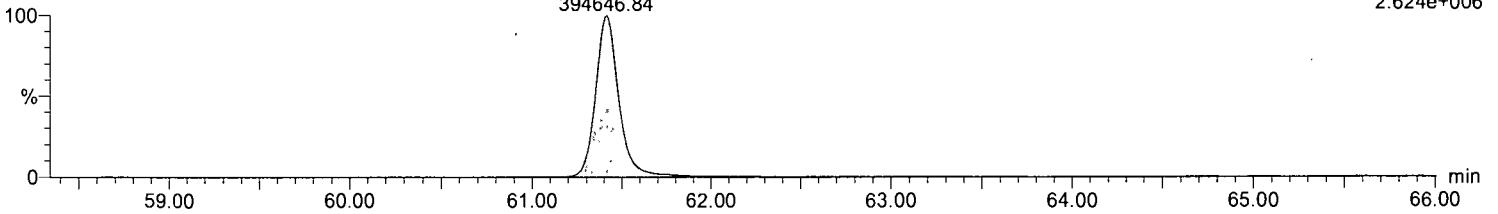


13C-OCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

13C-OCDD
61.42
394646.84

F5:Voltage SIR,EI+
469.778
2.624e+006

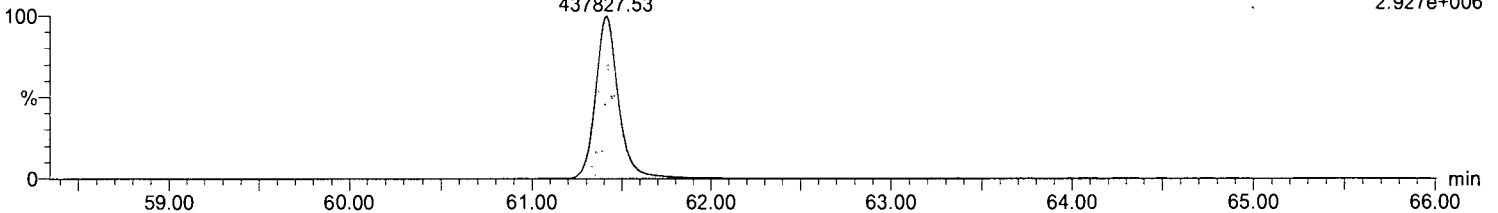


13C-OCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

13C-OCDD
61.42
437827.53

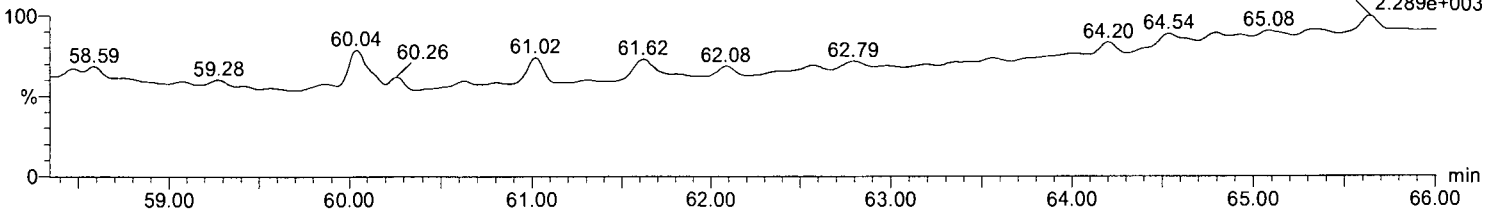
F5:Voltage SIR,EI+
471.775
2.927e+006



DCDPE

130501_HR_16
AY78757 50.000 DF 04/15/13

F5:Voltage SIR,EI+
513.6775
2.289e+003

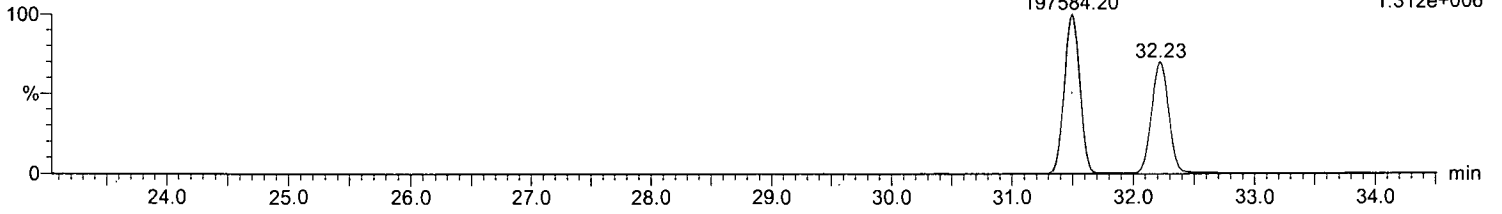


Name: 130501_HR_16, Date: 02-May-2013, Time: 09:58:16, ID: , Description: AY78757 50.000 DF 04/15/13, User: RP

13C-1,2,3,4-TCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

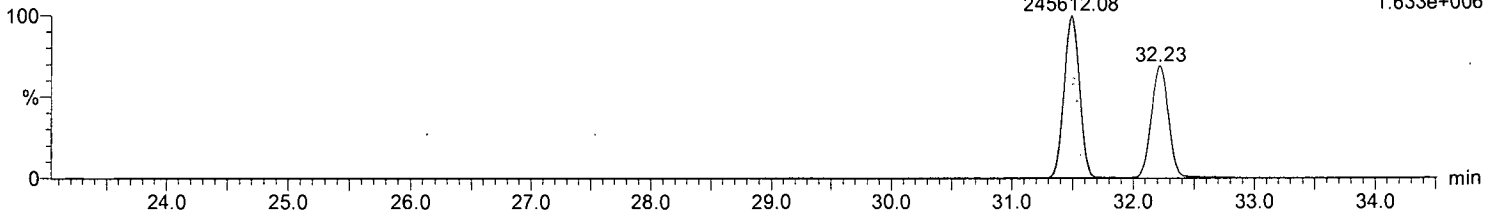
13C-1,2,3,4-TCDD
31.49
197584.20
F1:Voltage SIR,EI+
331.9368
1.312e+006



13C-1,2,3,4-TCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

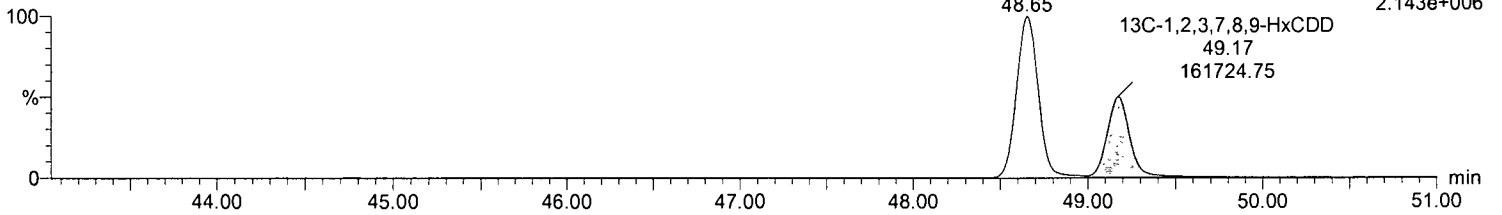
13C-1,2,3,4-TCDD
31.49
245612.08
F1:Voltage SIR,EI+
333.9338
1.633e+006



13C-1,2,3,7,8,9-HxCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

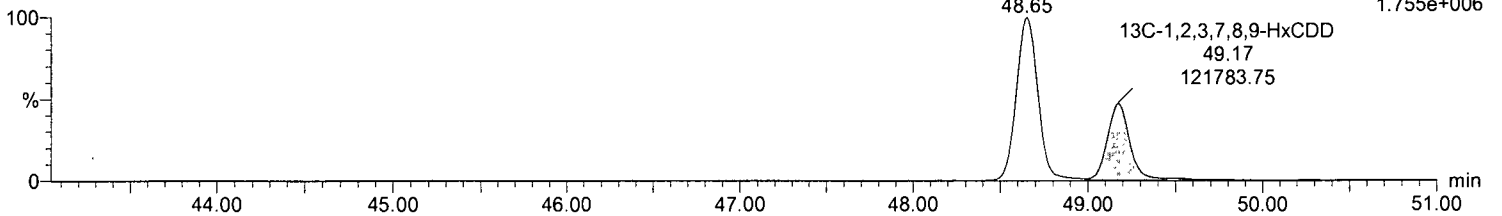
F3:Voltage SIR,EI+
401.8559
2.143e+006



13C-1,2,3,7,8,9-HxCDD

130501_HR_16
AY78757 50.000 DF 04/15/13

F3:Voltage SIR,EI+
403.8529
1.755e+006



**EPA METHOD 8290
Dioxins/Furans**

Calibration Data



Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: 02 May 2013 07:30:19

Compound name: 2,3,7,8-TCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1°Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	0.50	0.85	NO	32.34	1.984382e3	2.329114e3	0.979
2	130501_HR_04	EDF-9999 CS-2 02/12/13	2.00	0.85	NO	32.27	7.211824e3	8.514637e3	0.959
3	130501_HR_05	EDF-9999 CS-3 05/01/13	10.00	0.84	NO	32.31	1.807456e4	2.163341e4	0.935
4	130501_HR_06	EDF-9999 CS-4 02/12/13	40.00	0.77	NO	32.28	1.327627e5	1.720954e5	0.990
5	130501_HR_07	EDF-9999 CS-5 02/12/13	200.00	0.77	NO	32.28	8.010084e5	1.045665e6	1.049

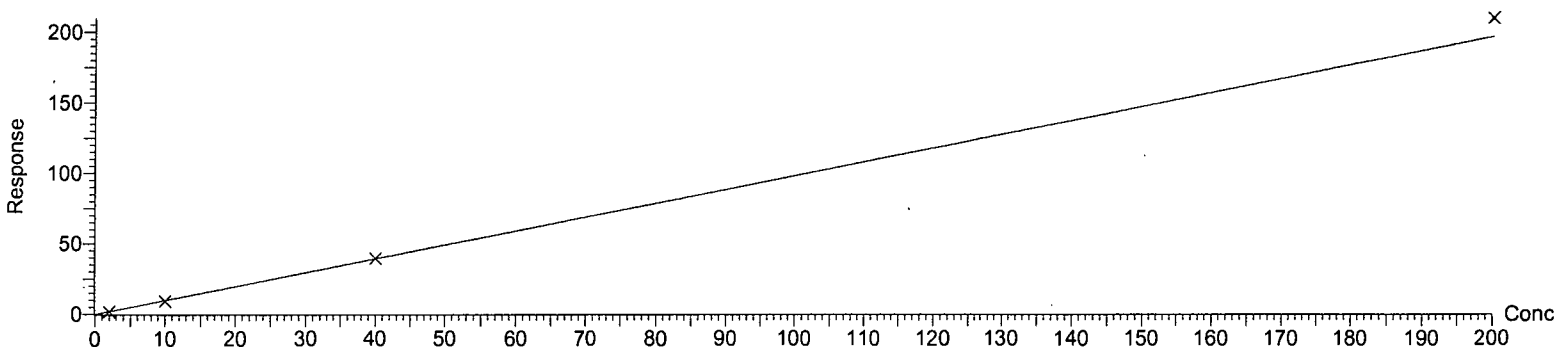
Compound name: 2,3,7,8-TCDD

Response Factor: 0.983467

RRF SD: 0.0493253, % Relative SD: 5.01545

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF



Compound name: 1,2,3,7,8-PeCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1°Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	2.50	1.51	NO	41.21	1.005876e4	6.676741e3	0.929
2	130501_HR_04	EDF-9999 CS-2 02/12/13	10.00	1.51	NO	41.16	3.405964e4	2.255248e4	0.892
3	130501_HR_05	EDF-9999 CS-3 05/01/13	50.00	1.58	NO	41.18	8.943470e4	5.668574e4	0.864
4	130501_HR_06	EDF-9999 CS-4 02/12/13	200.00	1.54	NO	41.16	6.876034e5	4.461077e5	0.903
5	130501_HR_07	EDF-9999 CS-5 02/12/13	1000.00	1.53	NO	41.16	4.400118e6	2.873122e6	0.946

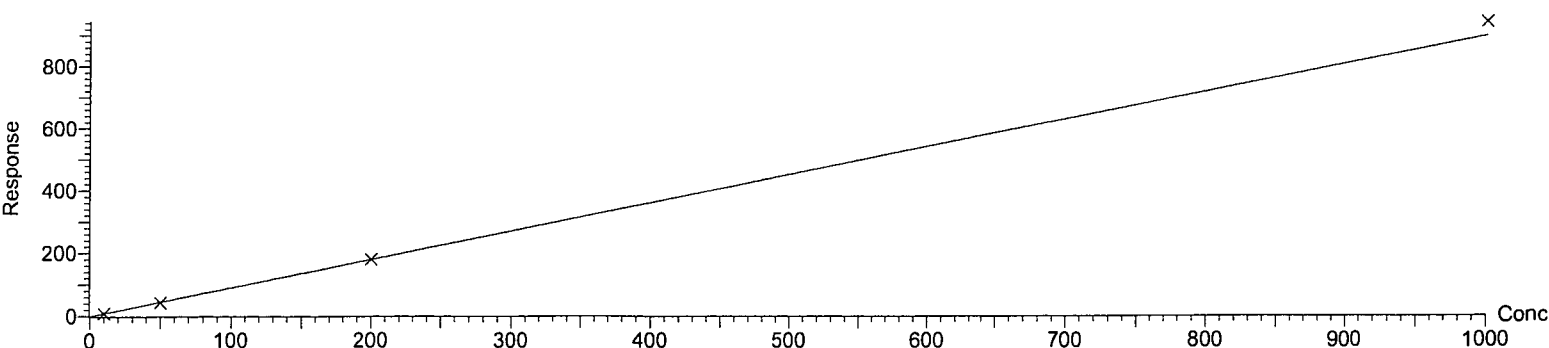
Compound name: 1,2,3,7,8-PeCDD

Response Factor: 0.901146

RRF SD: 0.0342315, % Relative SD: 3.79866

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

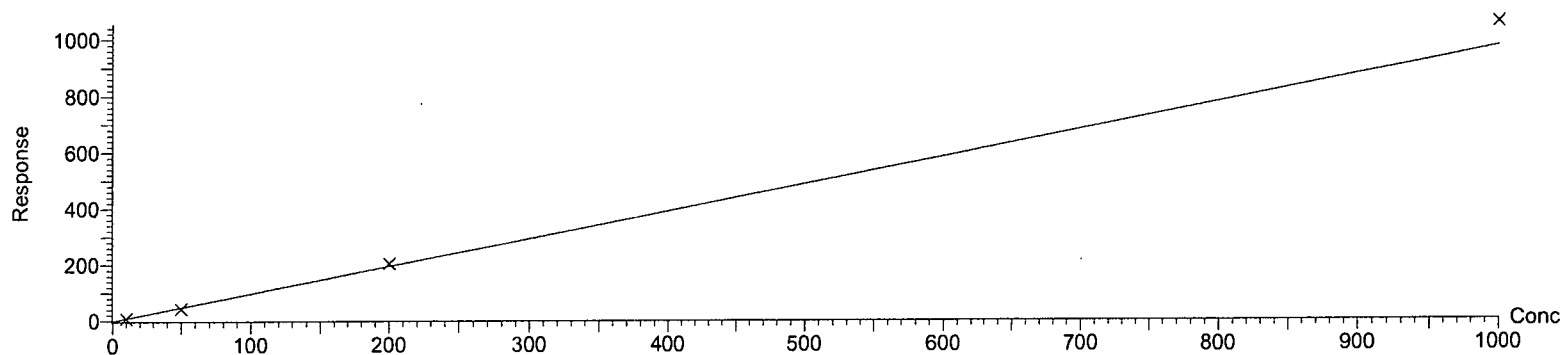
Curve type: RF



Compound name: 1,2,3,4,7,8-HxCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1 ^o Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	2.50	1.09	NO	48.55	8.472312e3	7.767963e3	0.946
2	130501_HR_04	EDF-9999 CS-2 02/12/13	10.00	1.21	NO	48.50	2.960897e4	2.445160e4	0.946
3	130501_HR_05	EDF-9999 CS-3 05/01/13	50.00	1.27	NO	48.54	7.613379e4	6.017904e4	0.866
4	130501_HR_06	EDF-9999 CS-4 02/12/13	200.00	1.26	NO	48.50	6.017976e5	4.769752e5	1.017
5	130501_HR_07	EDF-9999 CS-5 02/12/13	1000.00	1.25	NO	48.51	4.097588e6	3.288987e6	1.056

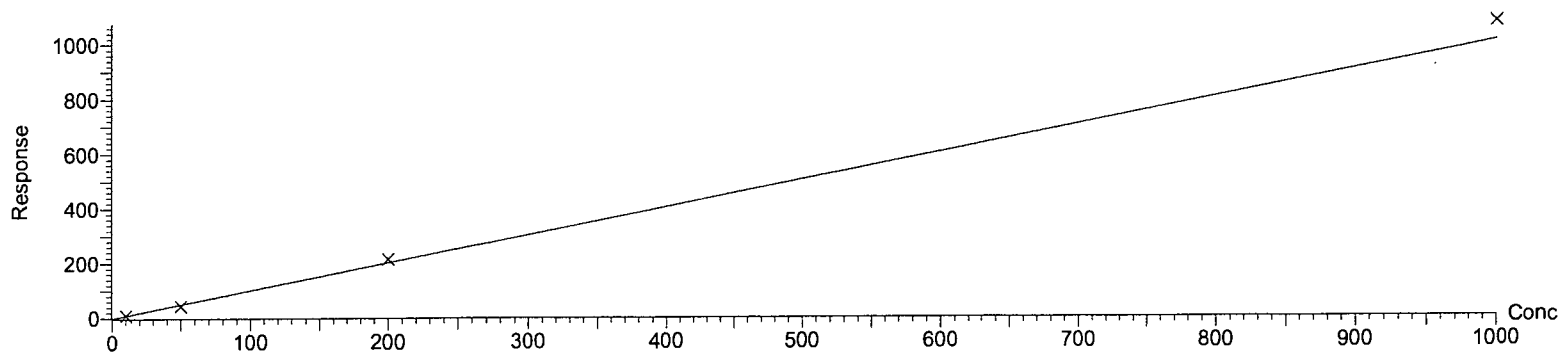
Compound name: 1,2,3,4,7,8-HxCDD
 Response Factor: 0.971284
 RRF SD: 0.0834476, % Relative SD: 8.59147
 Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: 1,2,3,6,7,8-HxCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1 ^o Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	2.50	1.20	NO	48.75	9.877960e3	8.210342e3	1.054
2	130501_HR_04	EDF-9999 CS-2 02/12/13	10.00	1.26	NO	48.70	3.191403e4	2.534628e4	1.002
3	130501_HR_05	EDF-9999 CS-3 05/01/13	50.00	1.17	NO	48.75	7.485499e4	6.385732e4	0.881
4	130501_HR_06	EDF-9999 CS-4 02/12/13	200.00	1.24	NO	48.73	6.327429e5	5.102527e5	1.077
5	130501_HR_07	EDF-9999 CS-5 02/12/13	1000.00	1.24	NO	48.72	4.174680e6	3.360750e6	1.077

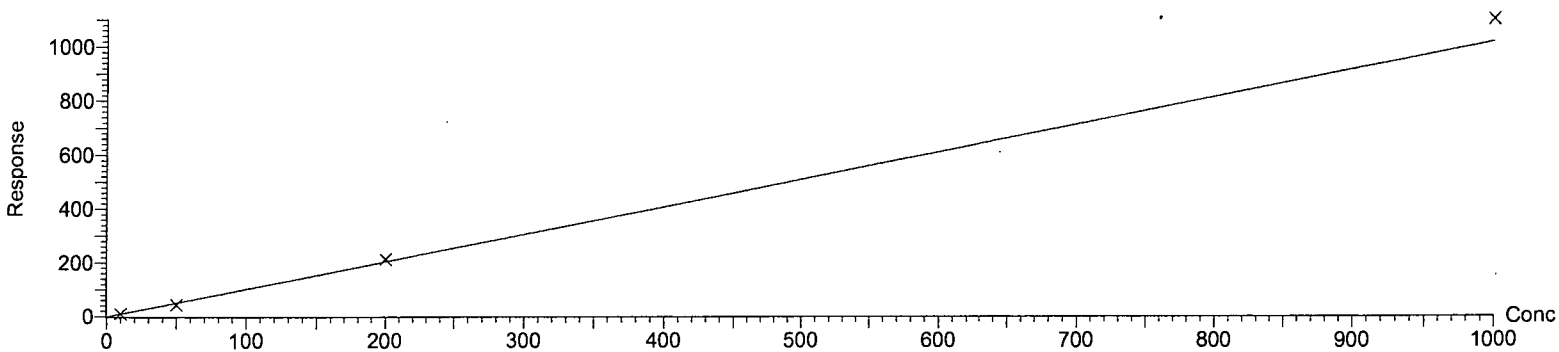
Compound name: 1,2,3,6,7,8-HxCDD
 Response Factor: 1.00955
 RRF SD: 0.0924106, % Relative SD: 9.15364
 Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: 1,2,3,7,8,9-HxCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1 st Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	2.50	1.25	NO	49.28	1.004384e4	8.032512e3	1.053
2	130501_HR_04	EDF-9999 CS-2 02/12/13	10.00	1.30	NO	49.23	3.292100e4	2.527615e4	1.019
3	130501_HR_05	EDF-9999 CS-3 05/01/13	50.00	1.23	NO	49.27	7.699410e4	6.268595e4	0.888
4	130501_HR_06	EDF-9999 CS-4 02/12/13	200.00	1.25	NO	49.24	6.264668e5	5.030411e5	1.065
5	130501_HR_07	EDF-9999 CS-5 02/12/13	1000.00	1.25	NO	49.25	4.270782e6	3.430001e6	1.101

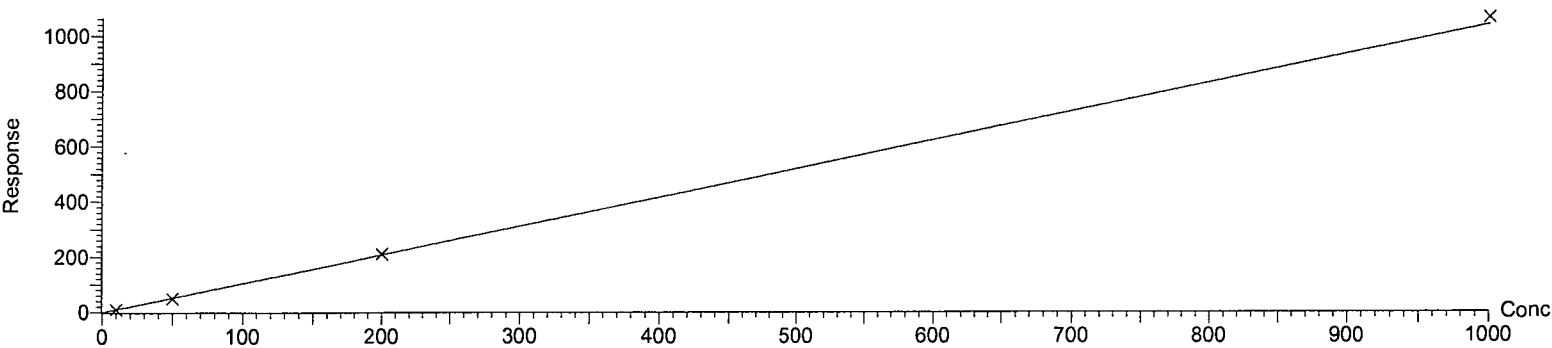
Compound name: 1,2,3,7,8,9-HxCDD
 Response Factor: 1.01792
 RRF SD: 0.0931336, % Relative SD: 9.14942
 Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: 1,2,3,4,6,7,8-HpCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1 st Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	2.50	1.09	NO	55.10	8.580728e3	7.839100e3	1.092
2	130501_HR_04	EDF-9999 CS-2 02/12/13	10.00	1.08	NO	55.06	2.828613e4	2.626602e4	1.052
3	130501_HR_05	EDF-9999 CS-3 05/01/13	50.00	1.09	NO	55.10	6.266825e4	5.736018e4	0.984
4	130501_HR_06	EDF-9999 CS-4 02/12/13	200.00	1.06	NO	55.07	5.413582e5	5.114557e5	1.055
5	130501_HR_07	EDF-9999 CS-5 02/12/13	1000.00	1.04	NO	55.08	3.433830e6	3.299638e6	1.064

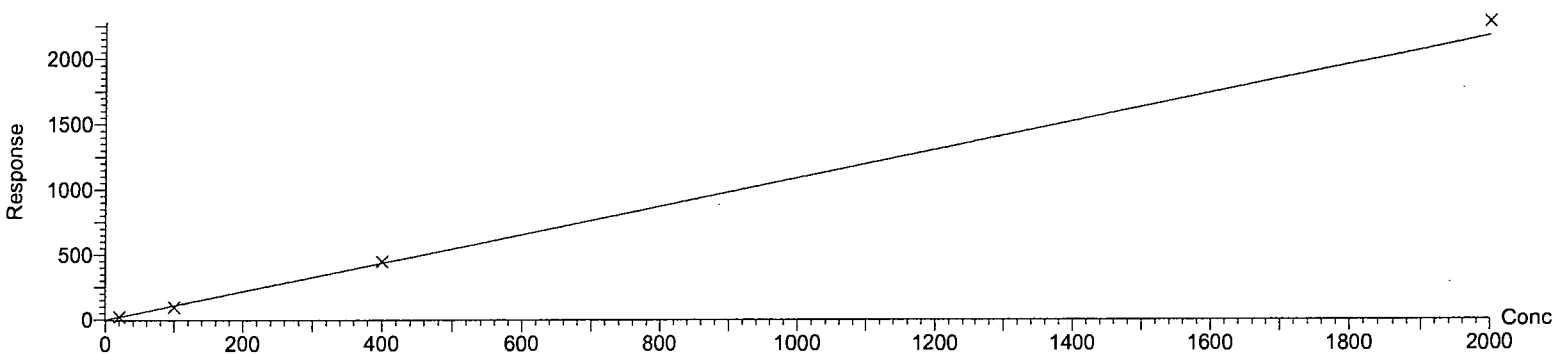
Compound name: 1,2,3,4,6,7,8-HpCDD
 Response Factor: 1.0387
 RRF SD: 0.0369983, % Relative SD: 3.56199
 Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: OCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	5.00	0.86	NO	61.52	1.397140e4	1.632834e4	1.100
2	130501_HR_04	EDF-9999 CS-2 02/12/13	20.00	0.92	NO	61.47	4.852381e4	5.280077e4	1.138
3	130501_HR_05	EDF-9999 CS-3 05/01/13	100.00	0.92	NO	61.52	1.013609e5	1.097814e5	0.954
4	130501_HR_06	EDF-9999 CS-4 02/12/13	400.00	0.87	NO	61.49	9.609964e5	1.099325e6	1.117
5	130501_HR_07	EDF-9999 CS-5 02/12/13	2000.00	0.89	NO	61.51	6.422059e6	7.210598e6	1.141

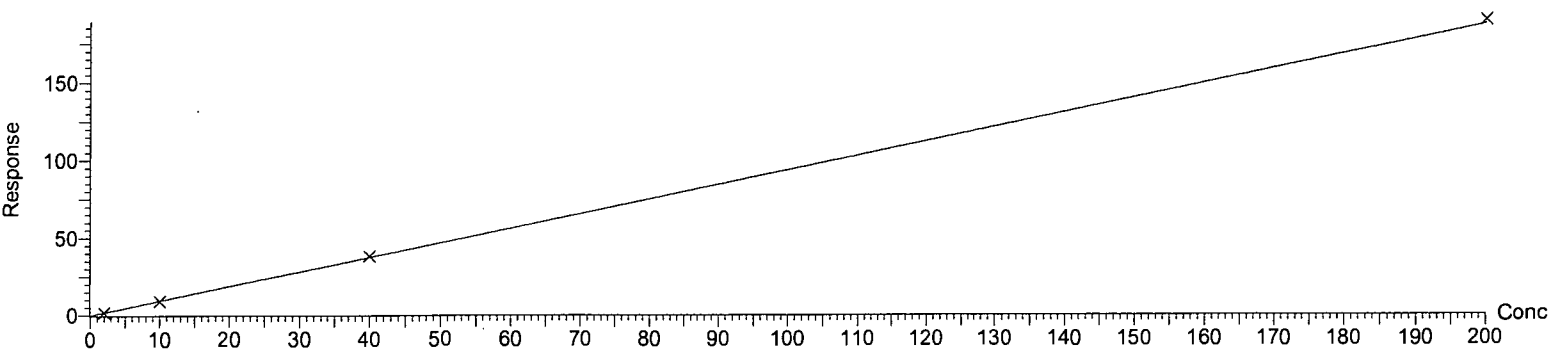
Compound name: OCDD
 Response Factor: 1.08741
 RRF SD: 0.0896977, % Relative SD: 8.24876
 Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: 2,3,7,8-TCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	0.50	0.79	NO	31.36	2.520844e3	3.202510e3	0.980
2	130501_HR_04	EDF-9999 CS-2 02/12/13	2.00	0.80	NO	31.30	9.220980e3	1.153243e4	0.945
3	130501_HR_05	EDF-9999 CS-3 05/01/13	10.00	0.80	NO	31.34	2.264252e4	2.834717e4	0.892
4	130501_HR_06	EDF-9999 CS-4 02/12/13	40.00	0.78	NO	31.32	1.676105e5	2.145877e5	0.956
5	130501_HR_07	EDF-9999 CS-5 02/12/13	200.00	0.77	NO	31.32	9.881519e5	1.290237e6	0.948

Compound name: 2,3,7,8-TCDF
 Response Factor: 0.935305
 RRF SD: 0.029304, % Relative SD: 3.13309
 Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: 1,2,3,7,8-PeCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1°Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	2.50	1.58	NO	38.50	1.514670e4	9.604771e3	1.016
2	130501_HR_04	EDF-9999 CS-2 02/12/13	10.00	1.60	NO	38.43	5.340986e4	3.337961e4	1.030
3	130501_HR_05	EDF-9999 CS-3 05/01/13	50.00	1.54	NO	38.48	1.296627e5	8.402519e4	0.936
4	130501_HR_06	EDF-9999 CS-4 02/12/13	200.00	1.56	NO	38.44	1.041351e6	6.687519e5	1.048
5	130501_HR_07	EDF-9999 CS-5 02/12/13	1000.00	1.57	NO	38.45	6.756454e6	4.297130e6	1.085

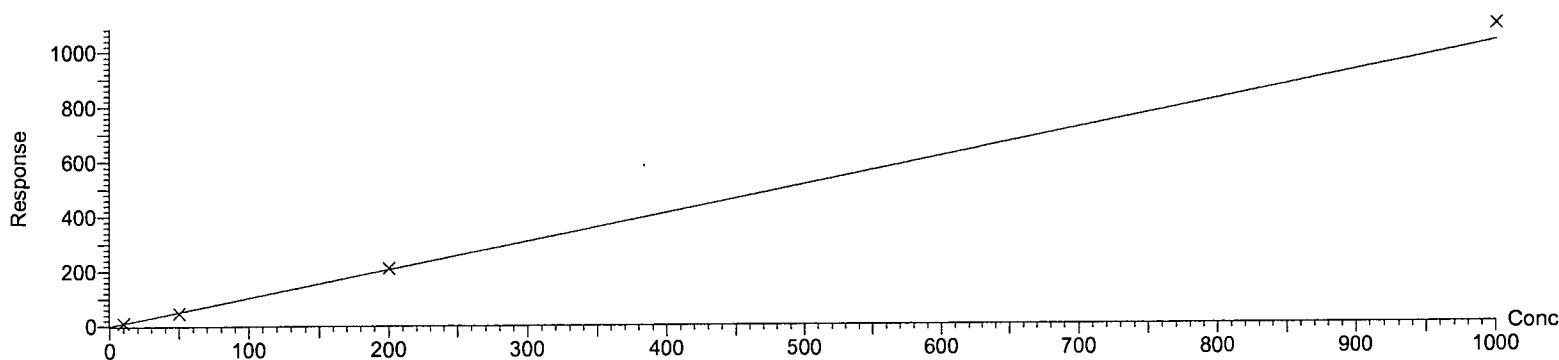
Compound name: 1,2,3,7,8-PeCDF

Response Factor: 1.02468

RRF SD: 0.0637268, % Relative SD: 6.2192

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF



Compound name: 2,3,4,7,8-PeCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1°Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	2.50	1.45	NO	40.55	1.377484e4	9.471828e3	0.955
2	130501_HR_04	EDF-9999 CS-2 02/12/13	10.00	1.50	NO	40.50	4.865336e4	3.237113e4	0.962
3	130501_HR_05	EDF-9999 CS-3 05/01/13	50.00	1.59	NO	40.54	1.280269e5	8.071242e4	0.914
4	130501_HR_06	EDF-9999 CS-4 02/12/13	200.00	1.54	NO	40.50	9.679564e5	6.266494e5	0.977
5	130501_HR_07	EDF-9999 CS-5 02/12/13	1000.00	1.57	NO	40.51	6.209005e6	3.962159e6	0.999

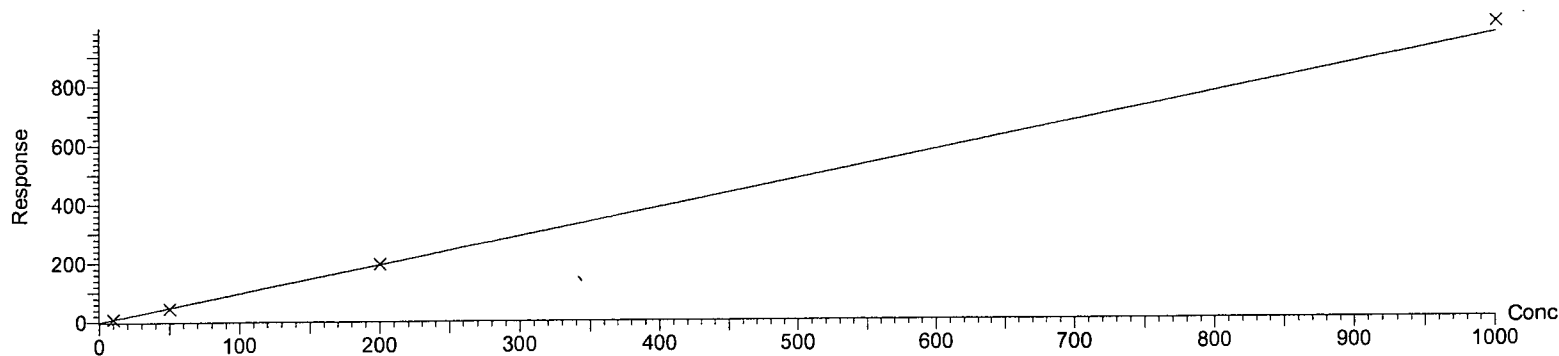
Compound name: 2,3,4,7,8-PeCDF

Response Factor: 0.962804

RRF SD: 0.0359823, % Relative SD: 3.73723

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF



Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

Compound name: 1,2,3,4,7,8-HxCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	2.50	1.25	NO	46.70	1.229468e4	9.864157e3	1.199
2	130501_HR_04	EDF-9999 CS-2 02/12/13	10.00	1.22	NO	46.65	4.172783e4	3.420703e4	1.226
3	130501_HR_05	EDF-9999 CS-3 05/01/13	50.00	1.25	NO	46.70	1.099368e5	8.795053e4	1.162
4	130501_HR_06	EDF-9999 CS-4 02/12/13	200.00	1.26	NO	46.66	8.712533e5	6.920068e5	1.309
5	130501_HR_07	EDF-9999 CS-5 02/12/13	1000.00	1.24	NO	46.67	5.636369e6	4.552482e6	1.290

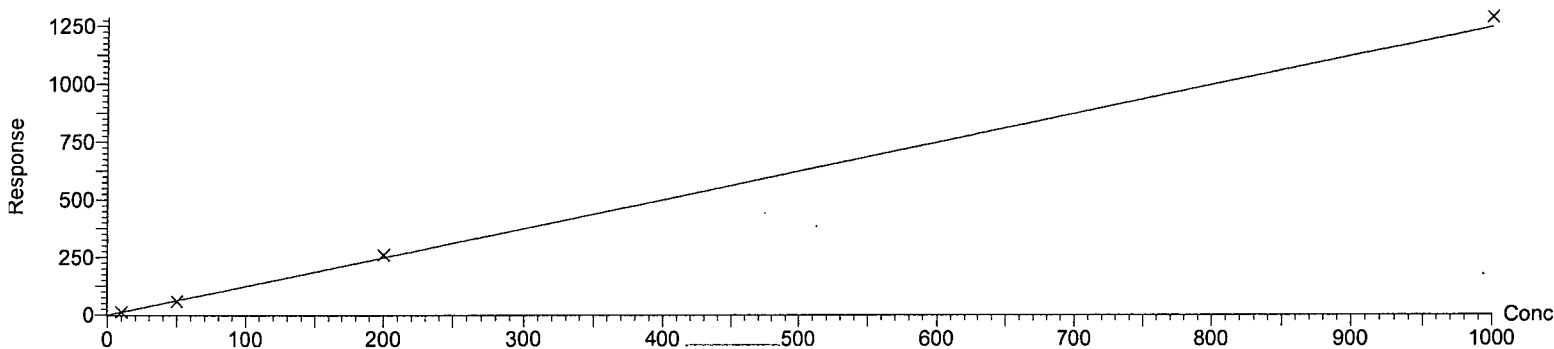
Compound name: 1,2,3,4,7,8-HxCDF

Response Factor: 1.24685

RRF SD: 0.0665296, % Relative SD: 5.33582

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF



Compound name: 1,2,3,6,7,8-HxCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	2.50	1.26	NO	46.96	1.350875e4	1.069319e4	1.309
2	130501_HR_04	EDF-9999 CS-2 02/12/13	10.00	1.28	NO	46.92	4.629474e4	3.616922e4	1.332
3	130501_HR_05	EDF-9999 CS-3 05/01/13	50.00	1.22	NO	46.95	1.164025e5	9.545666e4	1.244
4	130501_HR_06	EDF-9999 CS-4 02/12/13	200.00	1.24	NO	46.93	9.335799e5	7.557134e5	1.415
5	130501_HR_07	EDF-9999 CS-5 02/12/13	1000.00	1.26	NO	46.93	6.256283e6	4.969655e6	1.421

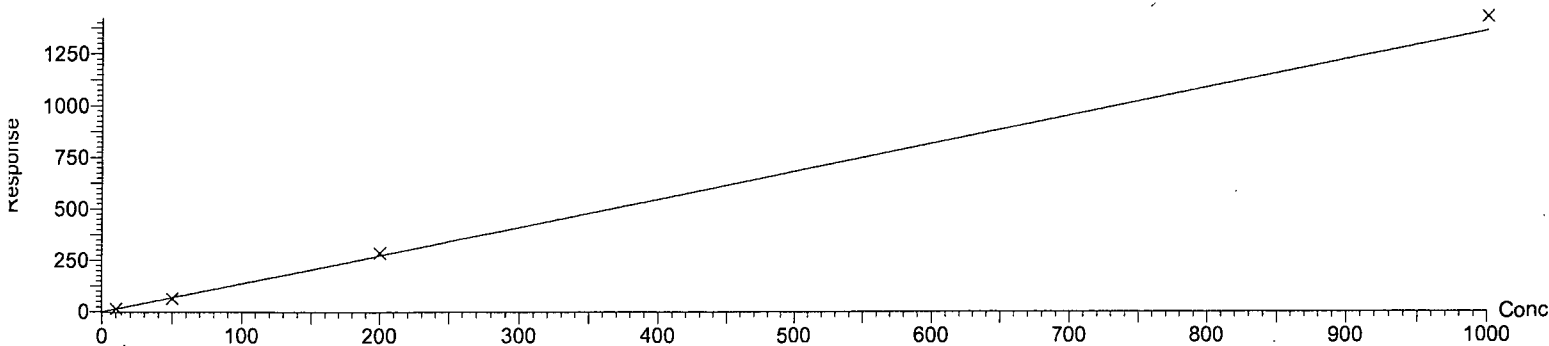
Compound name: 1,2,3,6,7,8-HxCDF

Response Factor: 1.35293

RRF SD: 0.0830021, % Relative SD: 6.13499

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF



Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

Compound name: 2,3,4,6,7,8-HxCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1 ^o Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	2.50	1.30	NO	48.19	1.270013e4	9.789543e3	1.217
2	130501_HR_04	EDF-9999 CS-2 02/12/13	10.00	1.19	NO	48.13	4.205698e4	3.525091e4	1.249
3	130501_HR_05	EDF-9999 CS-3 05/01/13	50.00	1.25	NO	48.18	1.055157e5	8.415521e4	1.114
4	130501_HR_06	EDF-9999 CS-4 02/12/13	200.00	1.24	NO	48.15	8.337504e5	6.697479e5	1.259
5	130501_HR_07	EDF-9999 CS-5 02/12/13	1000.00	1.24	NO	48.15	5.554826e6	4.467670e6	1.269

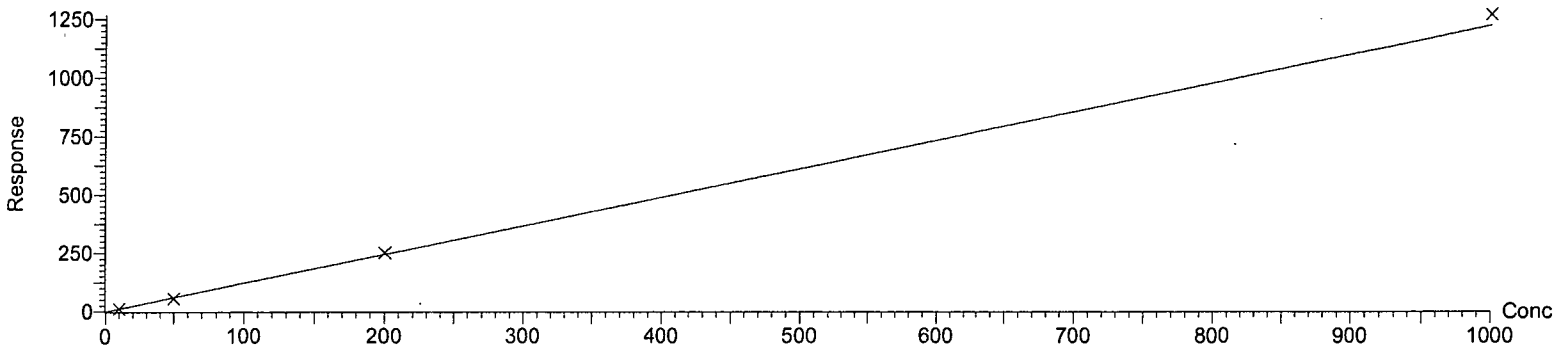
Compound name: 2,3,4,6,7,8-HxCDF

Response Factor: 1.22255

RRF SD: 0.0728295, % Relative SD: 5.95716

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF



Compound name: 1,2,3,7,8,9-HxCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1 ^o Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	2.50	1.27	NO	49.91	1.138219e4	8.949595e3	1.100
2	130501_HR_04	EDF-9999 CS-2 02/12/13	10.00	1.20	NO	49.86	3.644477e4	3.046746e4	1.081
3	130501_HR_05	EDF-9999 CS-3 05/01/13	50.00	1.23	NO	49.89	8.434842e4	6.882903e4	0.900
4	130501_HR_06	EDF-9999 CS-4 02/12/13	200.00	1.25	NO	49.87	7.420215e5	5.935878e5	1.118
5	130501_HR_07	EDF-9999 CS-5 02/12/13	1000.00	1.26	NO	49.88	4.976821e6	3.959896e6	1.131

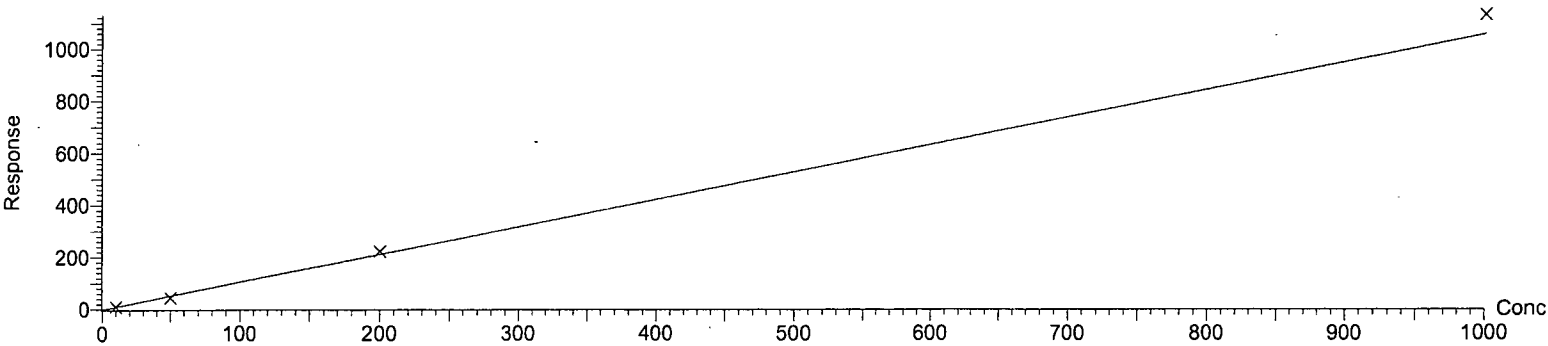
Compound name: 1,2,3,7,8,9-HxCDF

Response Factor: 1.05749

RRF SD: 0.107379, % Relative SD: 10.1542

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

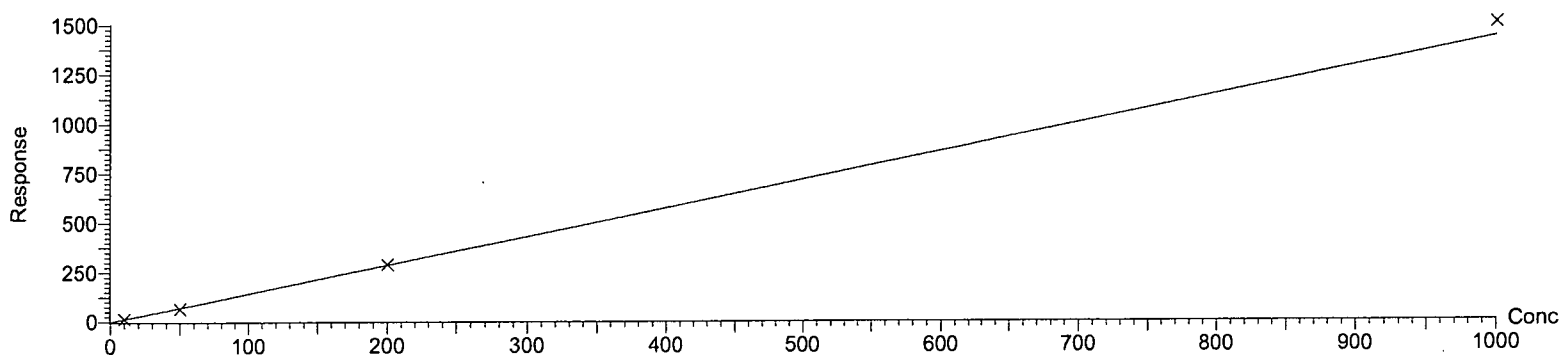
Curve type: RF



Compound name: 1,2,3,4,6,7,8-HpCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	2.50	1.09	NO	52.94	1.260330e4	1.160997e4	1.488
2	130501_HR_04	EDF-9999 CS-2 02/12/13	10.00	1.01	NO	52.89	4.032386e4	3.982496e4	1.447
3	130501_HR_05	EDF-9999 CS-3 05/01/13	50.00	1.03	NO	52.92	9.046288e4	8.790348e4	1.333
4	130501_HR_06	EDF-9999 CS-4 02/12/13	200.00	1.03	NO	52.89	7.878494e5	7.656119e5	1.447
5	130501_HR_07	EDF-9999 CS-5 02/12/13	1000.00	1.04	NO	52.90	5.088418e6	4.911293e6	1.501

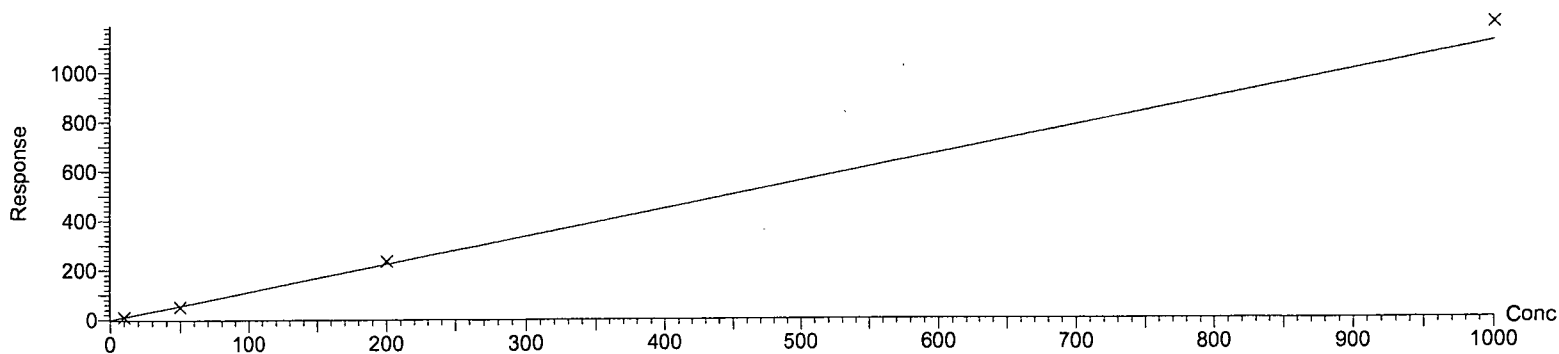
Compound name: 1,2,3,4,6,7,8-HpCDF
 Response Factor: 1.43193
 RRF SD: 0.071041, % Relative SD: 4.96123
 Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: 1,2,3,4,7,8,9-HpCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	2.50	1.09	NO	56.07	1.006723e4	9.243158e3	1.187
2	130501_HR_04	EDF-9999 CS-2 02/12/13	10.00	1.05	NO	56.03	3.065049e4	2.918269e4	1.080
3	130501_HR_05	EDF-9999 CS-3 05/01/13	50.00	1.05	NO	56.08	6.971157e4	6.634805e4	1.017
4	130501_HR_06	EDF-9999 CS-4 02/12/13	200.00	1.05	NO	56.03	6.467414e5	6.174442e5	1.177
5	130501_HR_07	EDF-9999 CS-5 02/12/13	1000.00	1.04	NO	56.04	4.038296e6	3.895750e6	1.191

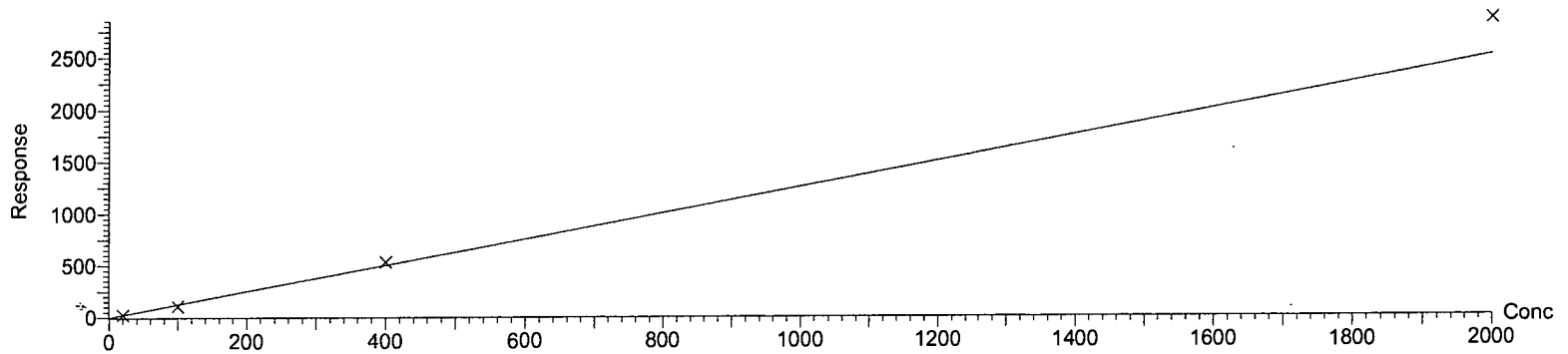
Compound name: 1,2,3,4,7,8,9-HpCDF
 Response Factor: 1.11633
 RRF SD: 0.0828862, % Relative SD: 7.42491
 Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: OCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	5.00	0.87	NO	61.91	1.410191e4	1.624351e4	1.101
2	130501_HR_04	EDF-9999 CS-2 02/12/13	20.00	0.86	NO	61.86	4.865906e4	5.649614e4	1.181
3	130501_HR_05	EDF-9999 CS-3 05/01/13	100.00	0.87	NO	61.90	1.098888e5	1.264504e5	1.068
4	130501_HR_06	EDF-9999 CS-4 02/12/13	400.00	0.90	NO	61.88	1.165226e6	1.289859e6	1.332
5	130501_HR_07	EDF-9999 CS-5 02/12/13	2000.00	0.91	NO	61.89	8.111981e6	8.921495e6	1.425

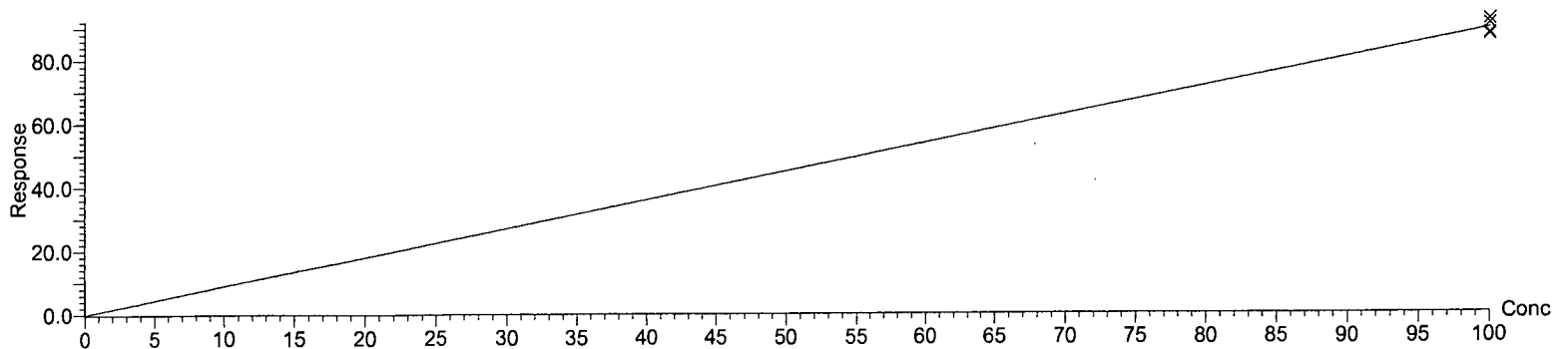
Compound name: OCDF
 Response Factor: 1.25128
 RRF SD: 0.158493, % Relative SD: 12.6665
 Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: 13C-2,3,7,8-TCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	100.00	0.79	NO	32.30	3.884723e5	4.925056e5	0.925
2	130501_HR_04	EDF-9999 CS-2 02/12/13	100.00	0.78	NO	32.25	3.589961e5	4.605832e5	0.873
3	130501_HR_05	EDF-9999 CS-3 05/01/13	100.00	0.80	NO	32.28	1.885785e5	2.360969e5	0.878
4	130501_HR_06	EDF-9999 CS-4 02/12/13	100.00	0.78	NO	32.25	3.363261e5	4.333906e5	0.908
5	130501_HR_07	EDF-9999 CS-5 02/12/13	100.00	0.79	NO	32.25	3.875209e5	4.924670e5	0.922

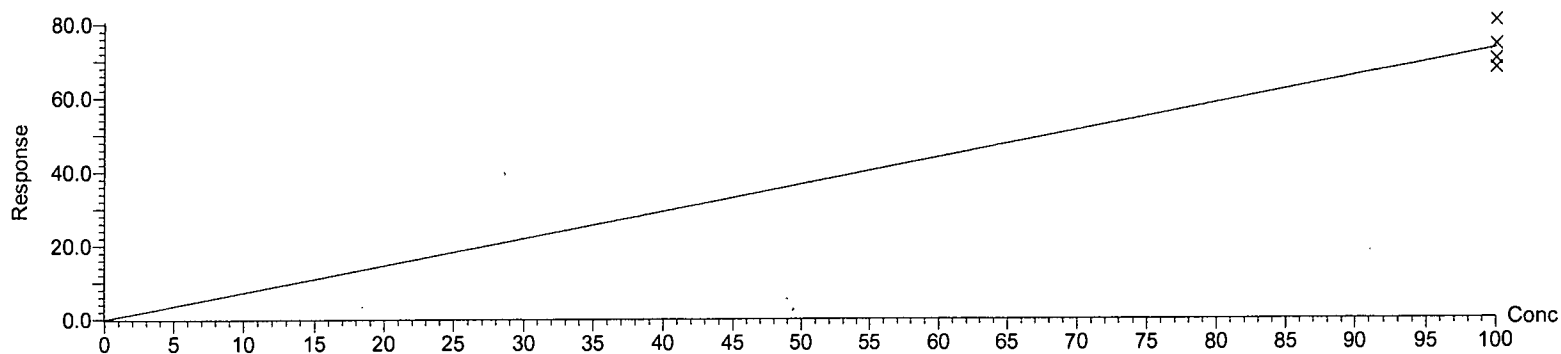
Compound name: 13C-2,3,7,8-TCDD
 Response Factor: 0.89522
 RRF SD: 0.0234165, % Relative SD: 2.61572
 Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: 13C-1,2,3,7,8-PeCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	100.00	1.59	NO	41.18	4.424526e5	2.781704e5	0.757
2	130501_HR_04	EDF-9999 CS-2 02/12/13	100.00	1.58	NO	41.13	3.888630e5	2.455164e5	0.676
3	130501_HR_05	EDF-9999 CS-3 05/01/13	100.00	1.54	NO	41.15	2.054110e5	1.330072e5	0.700
4	130501_HR_06	EDF-9999 CS-4 02/12/13	100.00	1.59	NO	41.13	3.854302e5	2.426632e5	0.741
5	130501_HR_07	EDF-9999 CS-5 02/12/13	100.00	1.55	NO	41.14	4.673823e5	3.013532e5	0.805

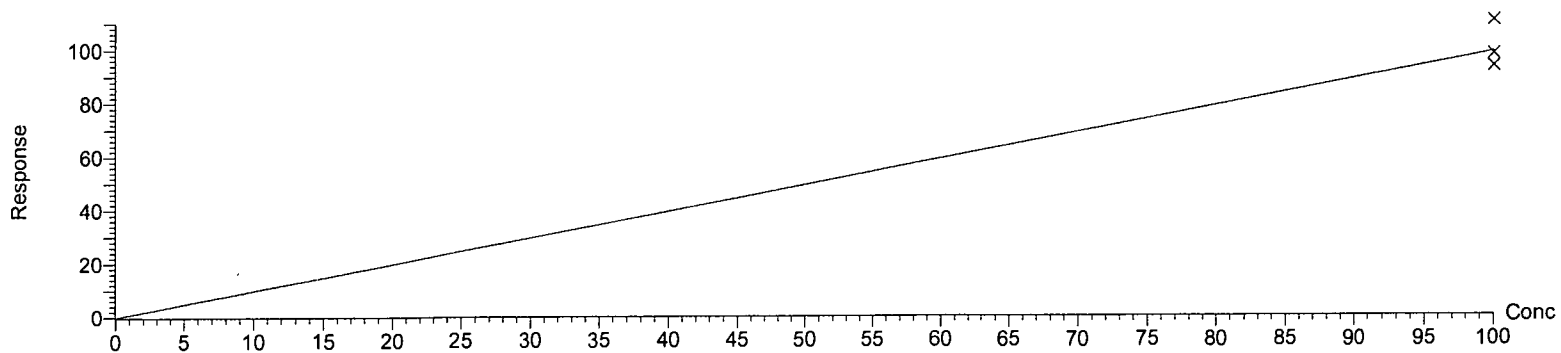
Compound name: 13C-1,2,3,7,8-PeCDD
 Response Factor: 0.730413
 RRF SD: 0.0566885, % Relative SD: 7.76115
 Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: 13C-1,2,3,6,7,8-HxCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	100.00	1.25	NO	48.73	3.810371e5	3.053747e5	0.971
2	130501_HR_04	EDF-9999 CS-2 02/12/13	100.00	1.27	NO	48.68	3.199041e5	2.514402e5	0.975
3	130501_HR_05	EDF-9999 CS-3 05/01/13	100.00	1.24	NO	48.73	1.741724e5	1.405484e5	1.101
4	130501_HR_06	EDF-9999 CS-4 02/12/13	100.00	1.27	NO	48.69	2.968027e5	2.336613e5	0.930
5	130501_HR_07	EDF-9999 CS-5 02/12/13	100.00	1.23	NO	48.69	3.853194e5	3.142530e5	0.931

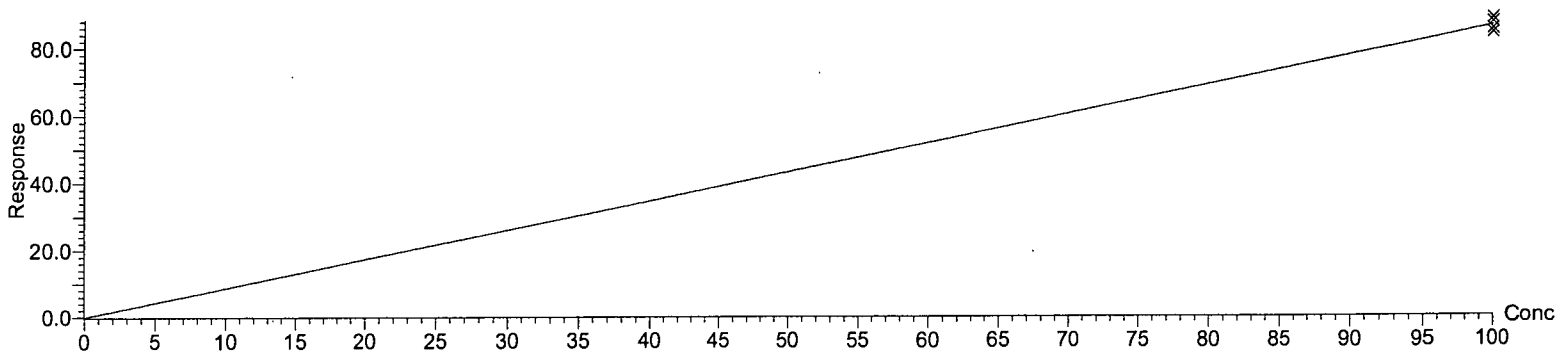
Compound name: 13C-1,2,3,6,7,8-HxCDD
 Response Factor: 0.984139
 RRF SD: 0.080538, % Relative SD: 8.1836
 Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: 13C-1,2,3,4,6,7,8-HpCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	100.00	1.04	NO	55.08	3.071345e5	2.944912e5	0.851
2	130501_HR_04	EDF-9999 CS-2 02/12/13	100.00	1.06	NO	55.04	2.664168e5	2.521654e5	0.885
3	130501_HR_05	EDF-9999 CS-3 05/01/13	100.00	1.02	NO	55.08	1.234353e5	1.205986e5	0.853
4	130501_HR_06	EDF-9999 CS-4 02/12/13	100.00	1.04	NO	55.05	2.545418e5	2.442536e5	0.874
5	130501_HR_07	EDF-9999 CS-5 02/12/13	100.00	1.07	NO	55.06	3.271204e5	3.058553e5	0.842

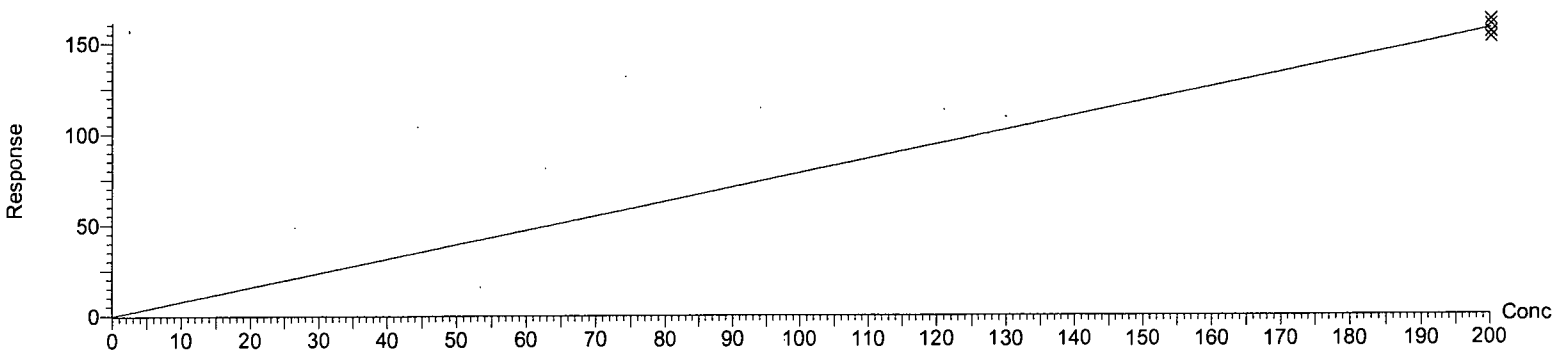
Compound name: 13C-1,2,3,4,6,7,8-HpCDD
 Response Factor: 0.863791
 RRF SD: 0.0196012, % Relative SD: 2.2692
 Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: 13C-OCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	200.00	0.88	NO	61.51	5.154058e5	5.867097e5	0.780
2	130501_HR_04	EDF-9999 CS-2 02/12/13	200.00	0.92	NO	61.45	4.263278e5	4.641552e5	0.760
3	130501_HR_05	EDF-9999 CS-3 05/01/13	200.00	0.88	NO	61.50	2.075312e5	2.352290e5	0.774
4	130501_HR_06	EDF-9999 CS-4 02/12/13	200.00	0.87	NO	61.46	4.292139e5	4.926636e5	0.808
5	130501_HR_07	EDF-9999 CS-5 02/12/13	200.00	0.90	NO	61.48	5.655877e5	6.296708e5	0.795

Compound name: 13C-OCDD
 Response Factor: 0.784337
 RRF SD: 0.0212686, % Relative SD: 2.71167
 Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: 13C-2,3,7,8-TCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	100.00	0.78	NO	31.33	5.128961e5	6.549013e5	1.226
2	130501_HR_04	EDF-9999 CS-2 02/12/13	100.00	0.77	NO	31.29	4.768149e5	6.214163e5	1.170
3	130501_HR_05	EDF-9999 CS-3 05/01/13	100.00	0.79	NO	31.32	2.514236e5	3.202298e5	1.182
4	130501_HR_06	EDF-9999 CS-4 02/12/13	100.00	0.78	NO	31.29	4.384563e5	5.605465e5	1.178
5	130501_HR_07	EDF-9999 CS-5 02/12/13	100.00	0.77	NO	31.29	5.240549e5	6.776939e5	1.259

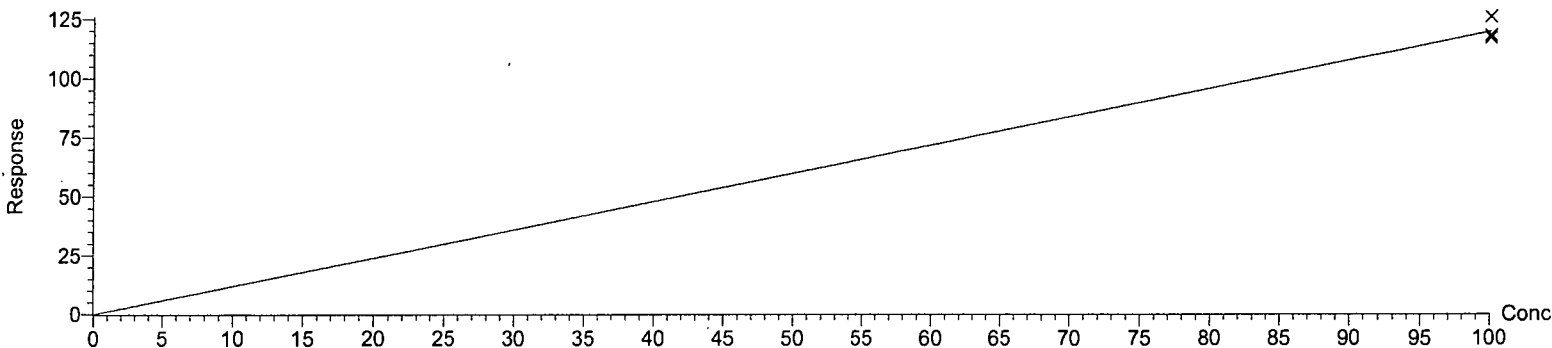
Compound name: 13C-2,3,7,8-TCDF

Response Factor: 1.19729

RRF SD: 0.0414843, % Relative SD: 3.46486

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF



Compound name: 13C-1,2,3,7,8-PeCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	100.00	1.57	NO	38.46	5.954650e5	3.786717e5	1.023
2	130501_HR_04	EDF-9999 CS-2 02/12/13	100.00	1.61	NO	38.41	5.193688e5	3.232712e5	0.898
3	130501_HR_05	EDF-9999 CS-3 05/01/13	100.00	1.59	NO	38.45	2.806990e5	1.761412e5	0.945
4	130501_HR_06	EDF-9999 CS-4 02/12/13	100.00	1.58	NO	38.41	4.995176e5	3.162872e5	0.962
5	130501_HR_07	EDF-9999 CS-5 02/12/13	100.00	1.61	NO	38.43	6.276389e5	3.910032e5	1.067

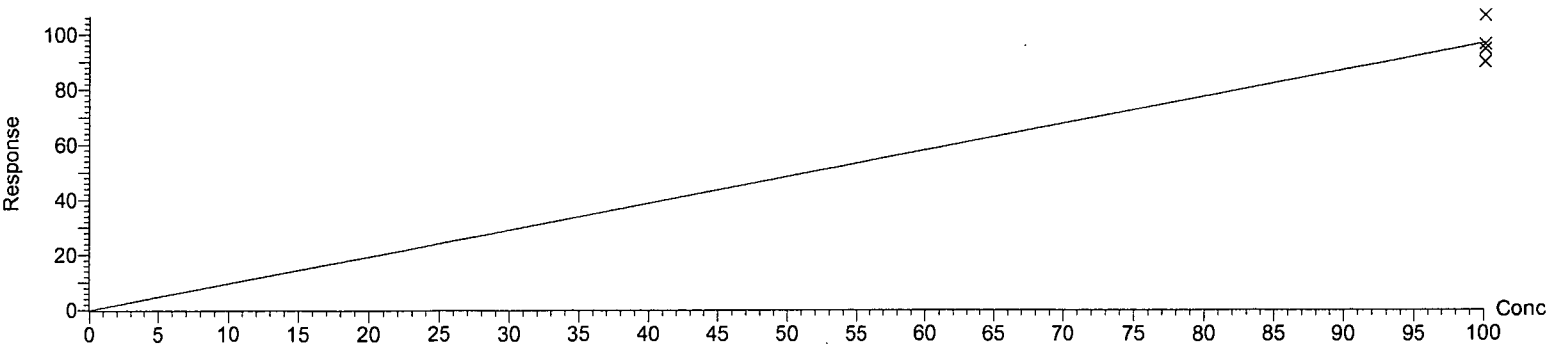
Compound name: 13C-1,2,3,7,8-PeCDF

Response Factor: 0.967893

RRF SD: 0.0715708, % Relative SD: 7.39449

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

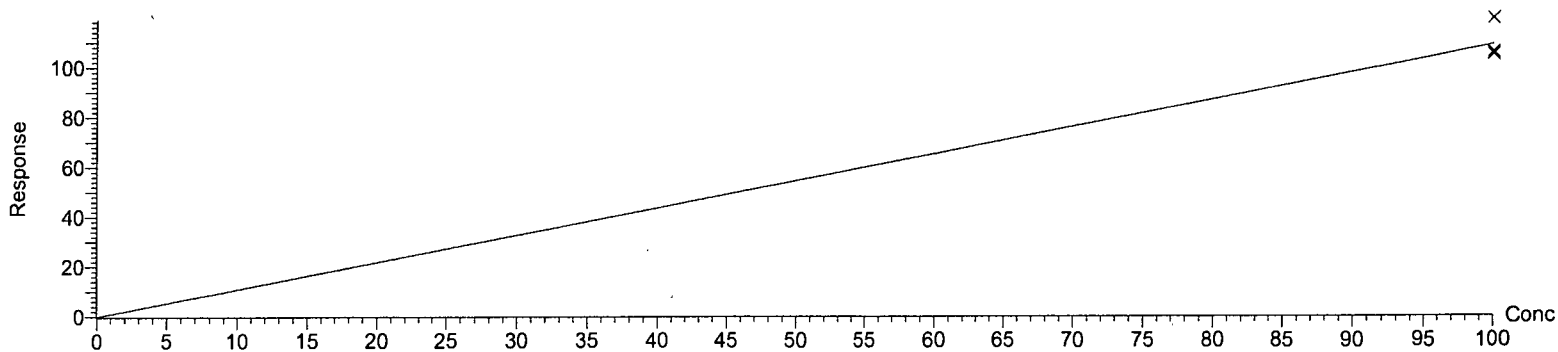
Curve type: RF



Compound name: 13C-1,2,3,4,7,8-HxCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	100.00	0.51	NO	46.68	2.507504e5	4.887296e5	1.046
2	130501_HR_04	EDF-9999 CS-2 02/12/13	100.00	0.52	NO	46.63	2.120348e5	4.071253e5	1.057
3	130501_HR_05	EDF-9999 CS-3 05/01/13	100.00	0.52	NO	46.67	1.161729e5	2.243499e5	1.191
4	130501_HR_06	EDF-9999 CS-4 02/12/13	100.00	0.52	NO	46.64	2.051765e5	3.918991e5	1.046
5	130501_HR_07	EDF-9999 CS-5 02/12/13	100.00	0.52	NO	46.65	2.704373e5	5.196220e5	1.051

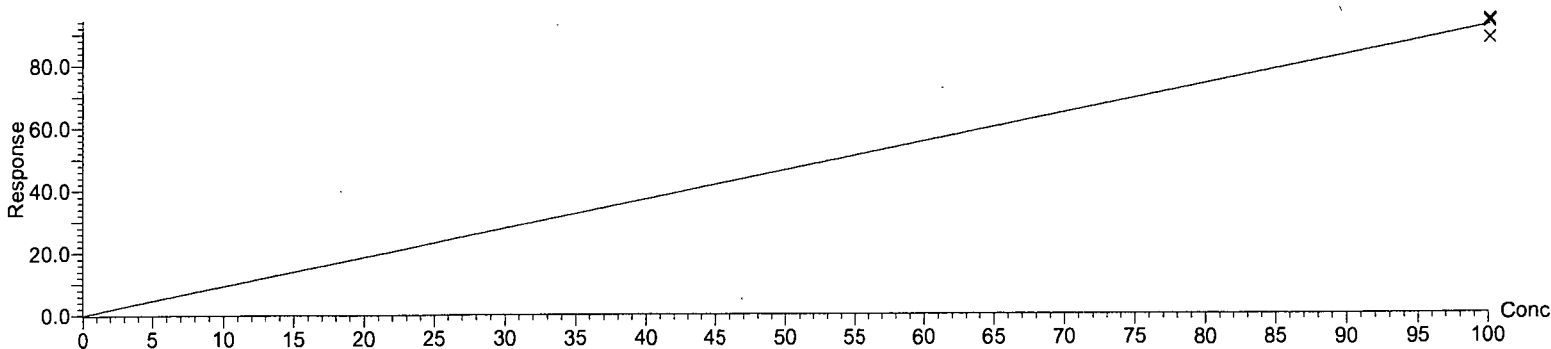
Compound name: 13C-1,2,3,4,7,8-HxCDF
 Response Factor: 1.08639
 RRF SD: 0.0697864, % Relative SD: 6.4237
 Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: 13C-1,2,3,4,6,7,8-HpCDF

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1° Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	100.00	0.46	NO	52.92	2.057060e5	4.452080e5	0.921
2	130501_HR_04	EDF-9999 CS-2 02/12/13	100.00	0.44	NO	52.87	1.705270e5	3.834197e5	0.946
3	130501_HR_05	EDF-9999 CS-3 05/01/13	100.00	0.44	NO	52.90	8.196613e4	1.857239e5	0.936
4	130501_HR_06	EDF-9999 CS-4 02/12/13	100.00	0.44	NO	52.87	1.651796e5	3.717179e5	0.941
5	130501_HR_07	EDF-9999 CS-5 02/12/13	100.00	0.45	NO	52.88	2.077816e5	4.582018e5	0.886

Compound name: 13C-1,2,3,4,6,7,8-HpCDF
 Response Factor: 0.927242
 RRF SD: 0.0277543, % Relative SD: 2.99321
 Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
 Curve type: RF



Compound name: 13C-1,2,3,4-TCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1 ^o Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	100.00	0.81	NO	31.57	4.247655e5	5.275926e5	1.000
2	130501_HR_04	EDF-9999 CS-2 02/12/13	100.00	0.82	NO	31.52	4.220331e5	5.166931e5	1.000
3	130501_HR_05	EDF-9999 CS-3 05/01/13	100.00	0.78	NO	31.56	2.126313e5	2.709081e5	1.000
4	130501_HR_06	EDF-9999 CS-4 02/12/13	100.00	0.78	NO	31.52	3.725564e5	4.755236e5	1.000
5	130501_HR_07	EDF-9999 CS-5 02/12/13	100.00	0.81	NO	31.52	4.285994e5	5.258977e5	1.000

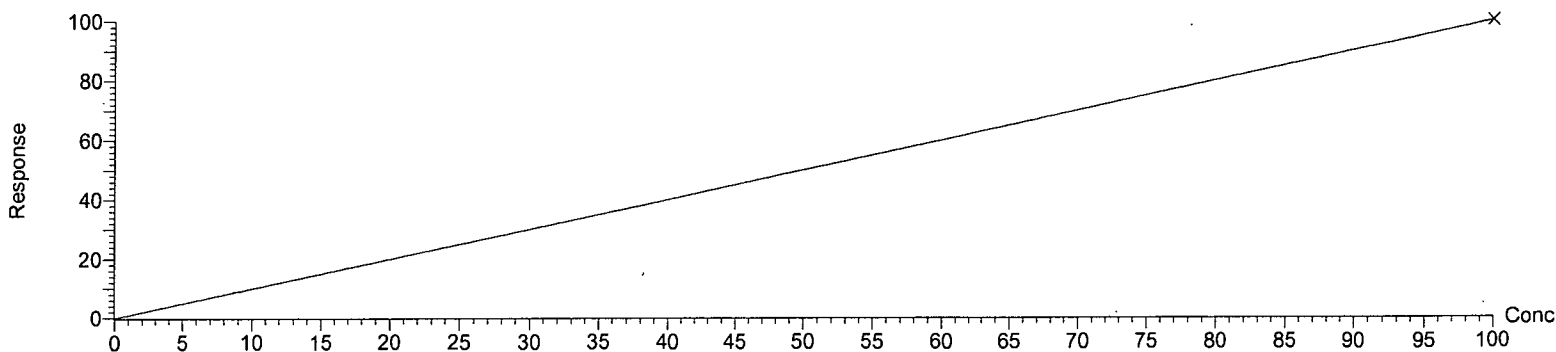
Compound name: 13C-1,2,3,4-TCDD

Response Factor: 1

RRF SD: 0, % Relative SD: 0

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF



Compound name: 13C-1,2,3,7,8,9-HxCDD

#	Name	Sample Text	Std. Conc	Ion Ratio	IR Fail?	RT	Area	1 ^o Area	RRF
1	130501_HR_03	EDF-9999 CS-1 02/12/13	100.00	1.26	NO	49.26	3.935855e5	3.130887e5	1.000
2	130501_HR_04	EDF-9999 CS-2 02/12/13	100.00	1.23	NO	49.20	3.235791e5	2.621359e5	1.000
3	130501_HR_05	EDF-9999 CS-3 05/01/13	100.00	1.25	NO	49.25	1.589292e5	1.270160e5	1.000
4	130501_HR_06	EDF-9999 CS-4 02/12/13	100.00	1.22	NO	49.21	3.132204e5	2.573279e5	1.000
5	130501_HR_07	EDF-9999 CS-5 02/12/13	100.00	1.26	NO	49.22	4.186132e5	3.330373e5	1.000

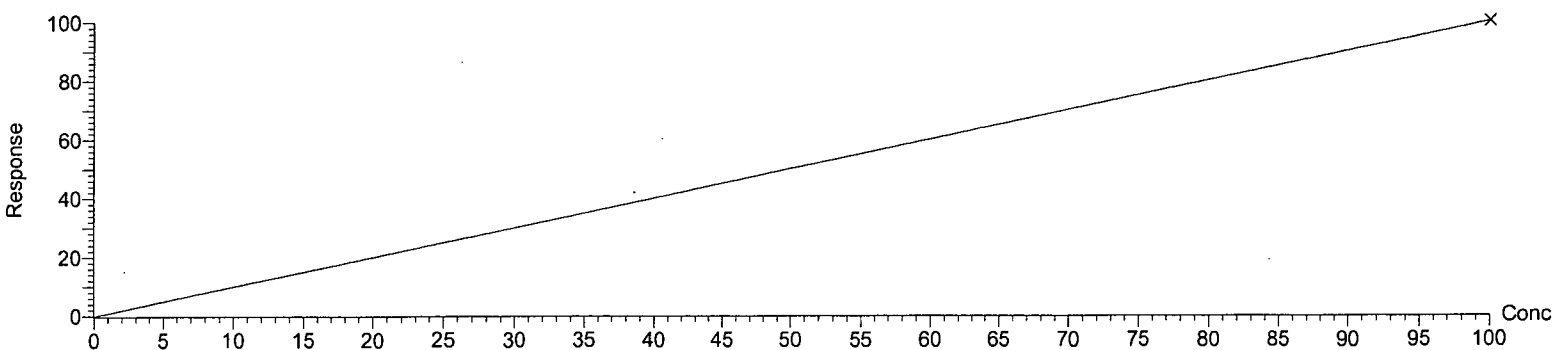
Compound name: 13C-1,2,3,7,8,9-HxCDD

Response Factor: 1

RRF SD: 0, % Relative SD: 0

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF



Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: 02 May 2013 07:30:19

Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, ID: , Description: EDF-9999 CS-1 02/12/13, User: RP

#	Name	Signal	Noise 1	S/N 1	Flag S/N	Signal 2	Noise 2	S/N 2	Flag S/N
1	2,3,7,8-TCDD	1.3368000e4	2.3547084e2	59.16	NO	1.5325000e4	4.6153572e1	332.04	NO
2	1,2,3,7,8-PeCDD	7.3684000e4	9.3543106e1	786.91	NO	4.8267000e4	8.4540024e1	570.94	NO
3	1,2,3,4,7,8-HxCDD	6.2881000e4	4.0779395e2	152.10	NO	5.9864000e4	2.2780325e2	262.79	NO
4	1,2,3,6,7,8-HxCDD	7.3285000e4	4.0779395e2	177.64	NO	6.0397000e4	2.2780325e2	265.13	NO
5	1,2,3,7,8,9-HxCDD	7.0742000e4	4.0779395e2	171.46	NO	5.5645000e4	2.2780325e2	244.27	NO
6	1,2,3,4,6,7,8-HpCDD	6.5872000e4	4.9380936e2	132.54	NO	5.8916000e4	9.9148239e1	594.22	NO
7	OCDD	1.0105700e5	5.2796551e1	1917.59	NO	1.1868500e5	1.0395786e2	1141.66	NO
8	2,3,7,8-TCDF	1.6461000e4	7.3811363e1	228.84	NO	1.9660000e4	5.4531166e1	360.53	NO
9	1,2,3,7,8-PeCDF	9.6528000e4	9.6833551e2	98.12	NO	6.3117000e4	3.1150519e2	202.62	NO
10	2,3,4,7,8-PeCDF	1.0171600e5	9.6833551e2	103.59	NO	6.9208000e4	3.1150519e2	222.17	NO
11	1,2,3,4,7,8-HxCDF	9.1516000e4	1.1431167e2	797.13	NO	7.3181000e4	2.0396681e2	358.79	NO
12	1,2,3,6,7,8-HxCDF	1.0009900e5	1.1431167e2	872.37	NO	7.6650000e4	2.0396681e2	375.80	NO
13	2,3,4,6,7,8-HxCDF	9.1200000e4	1.1431167e2	795.17	NO	6.9535000e4	2.0396681e2	340.91	NO
14	1,2,3,7,8,9-HxCDF	8.3928000e4	1.1431167e2	731.63	NO	6.5016000e4	2.0396681e2	318.76	NO
15	1,2,3,4,6,7,8-HpCDF	9.4728000e4	1.1516385e2	818.81	NO	8.6753000e4	1.9310327e2	449.26	NO
16	1,2,3,4,7,8,9-HpCDF	7.3205000e4	1.1516385e2	634.42	NO	6.7598000e4	1.9310327e2	350.06	NO
17	OCDF	8.8314000e4	2.4241400e2	362.65	NO	1.0117100e5	1.8704332e2	540.90	NO
18	13C-2,3,7,8-TCDD	2.4906520e6	6.2224817e2	4004.17	NO	3.1756190e6	1.9358647e2	16404.14	NO
19	13C-1,2,3,7,8-PeCDD	3.1344780e6	2.8539014e2	10981.89	NO	1.9891900e6	3.7030109e2	5371.82	NO
20	13C-1,2,3,6,7,8-HxCDD	2.7975250e6	4.4893533e2	6241.22	NO	2.2507260e6	2.7989349e2	8041.37	NO
21	13C-1,2,3,4,6,7,8-HpCDD	2.3223080e6	6.0965948e2	3807.88	NO	2.1975390e6	5.2615808e2	4176.58	NO
22	13C-OCDD	3.5974830e6	3.7048883e2	9706.39	NO	4.0159640e6	5.5818665e2	7194.66	NO
23	13C-2,3,7,8-TCDF	3.3548600e6	2.8603348e2	11729.66	NO	4.2642240e6	5.1957391e2	8207.16	NO
24	13C-1,2,3,7,8-PeCDF	3.8624450e6	9.7533527e2	3957.32	NO	2.4699180e6	5.8517004e2	4220.86	NO
25	13C-1,2,3,4,7,8-HxCDF	1.9370690e6	8.3655481e2	2310.54	NO	3.7651420e6	2.9064495e3	1295.44	NO
26	13C-1,2,3,4,6,7,8-HpCDF	1.4994940e6	6.1428888e2	2434.80	NO	3.2495660e6	7.7609216e2	4187.09	NO
27	13C-1,2,3,4-TCDD	2.7694860e6	6.2224817e2	4452.09	NO	3.4397630e6	1.9358647e2	17768.61	NO
28	13C-1,2,3,7,8,9-HxCDD	2.6894790e6	4.4893533e2	5992.77	NO	2.1141560e6	2.7989349e2	7553.43	NO

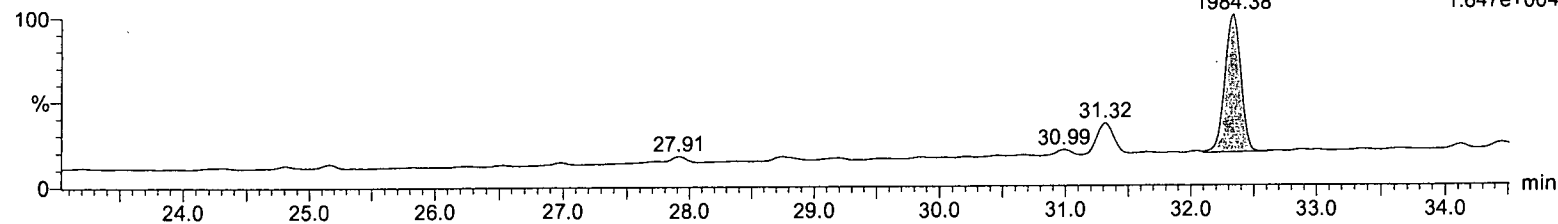
Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59
Calibration: 02 May 2013 07:30:19

Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

2,3,7,8-TCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

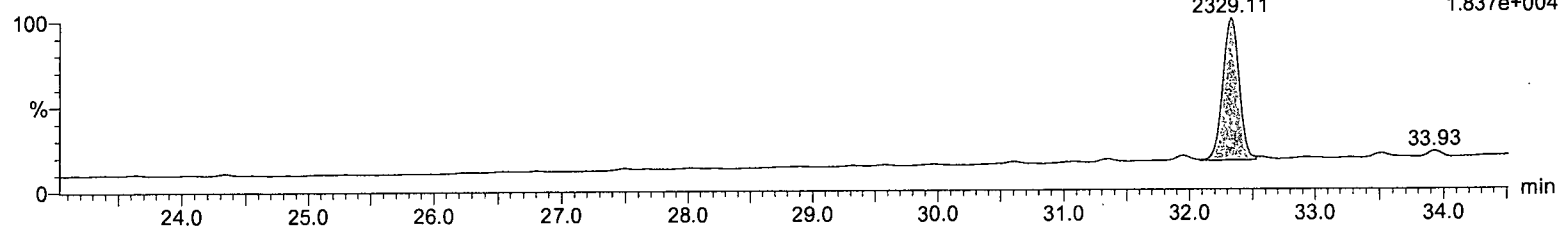
2,3,7,8-TCDD F1:Voltage SIR,EI+
32.34 319.8965
1984.38 1.647e+004



2,3,7,8-TCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

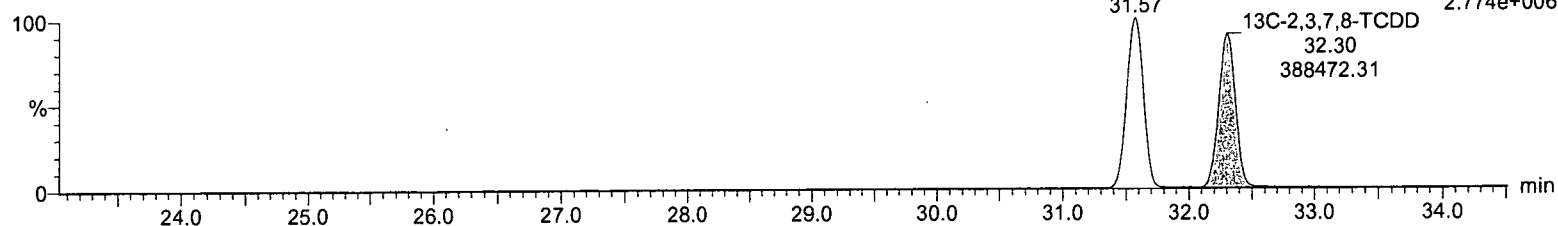
2,3,7,8-TCDD F1:Voltage SIR,EI+
32.32 321.8936
2329.11 1.837e+004



13C-2,3,7,8-TCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

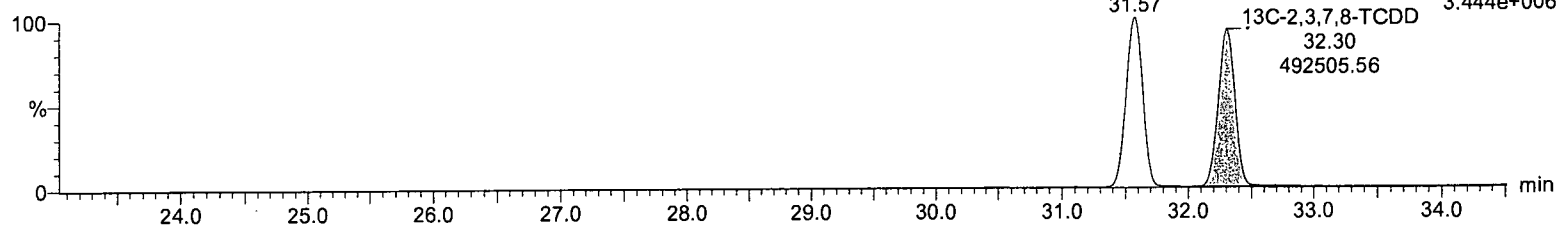
F1:Voltage SIR,EI+
331.9368
2.774e+006



13C-2,3,7,8-TCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

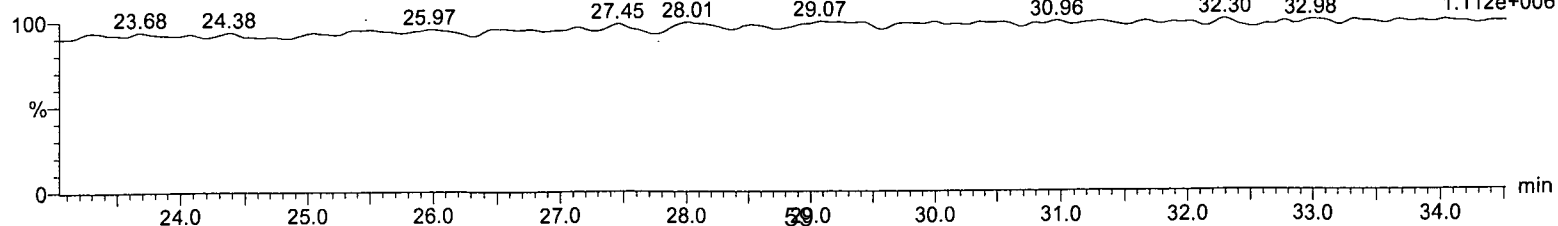
F1:Voltage SIR,EI+
333.9338
3.444e+006



PFK1

130501_HR_03
EDF-9999 CS-1 02/12/13

F1:Voltage SIR,EI+
292.9824
1.112e+006



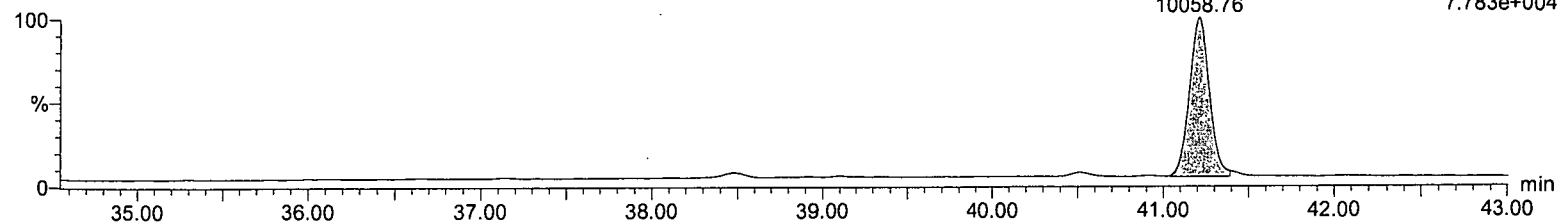
Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

1,2,3,7,8-PeCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

1,2,3,7,8-PeCDD
41.21
10058.76

F2:Voltage SIR,EI+
355.8546
7.783e+004

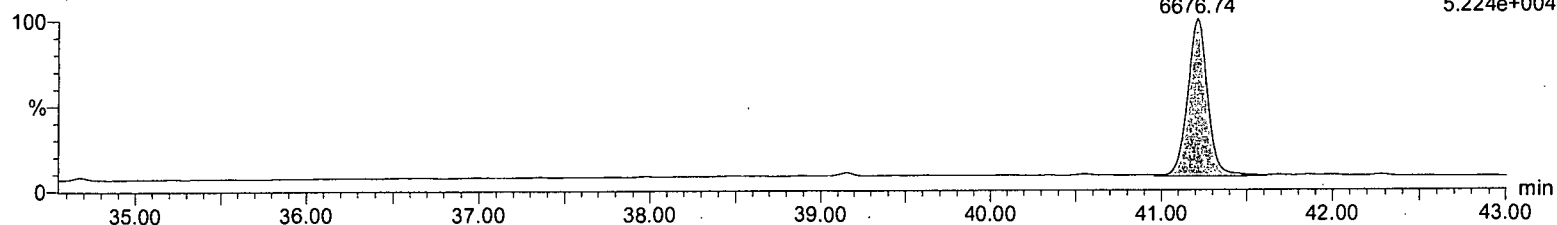


1,2,3,7,8-PeCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

1,2,3,7,8-PeCDD
41.21
6676.74

F2:Voltage SIR,EI+
357.8516
5.224e+004

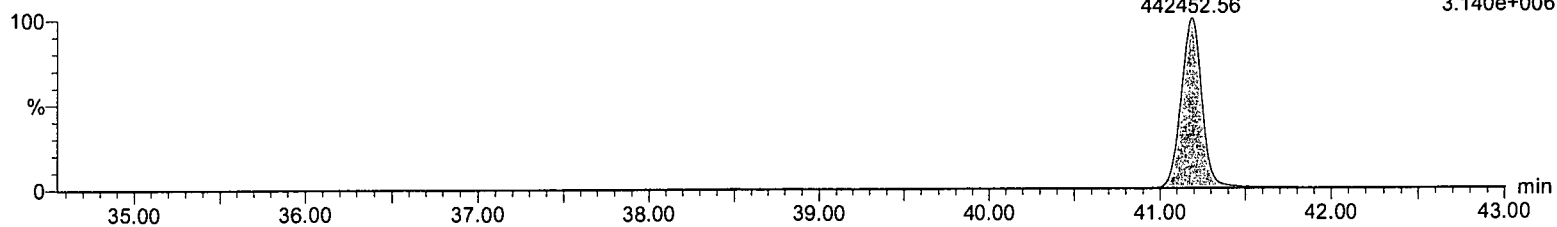


13C-1,2,3,7,8-PeCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

13C-1,2,3,7,8-PeCDD
41.18
442452.56

F2:Voltage SIR,EI+
367.8949
3.140e+006

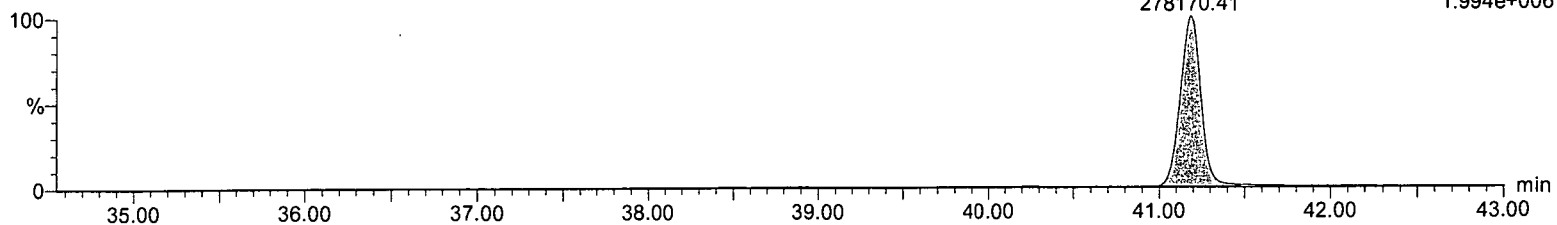


13C-1,2,3,7,8-PeCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

13C-1,2,3,7,8-PeCDD
41.18
278170.41

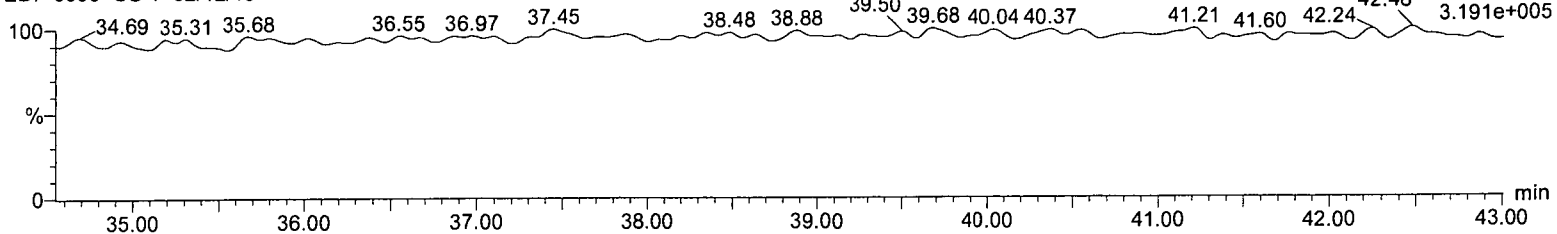
F2:Voltage SIR,EI+
369.8919
1.994e+006



PFK2

130501_HR_03
EDF-9999 CS-1 02/12/13

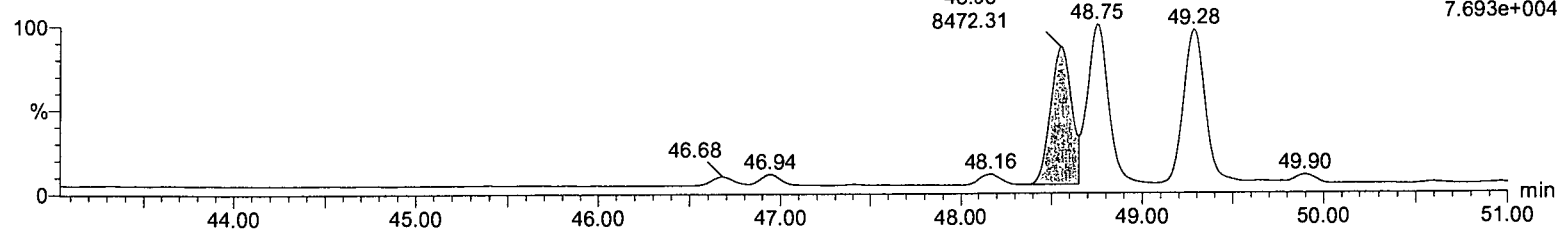
F2:Voltage SIR,EI+
354.9792
3.191e+005



Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

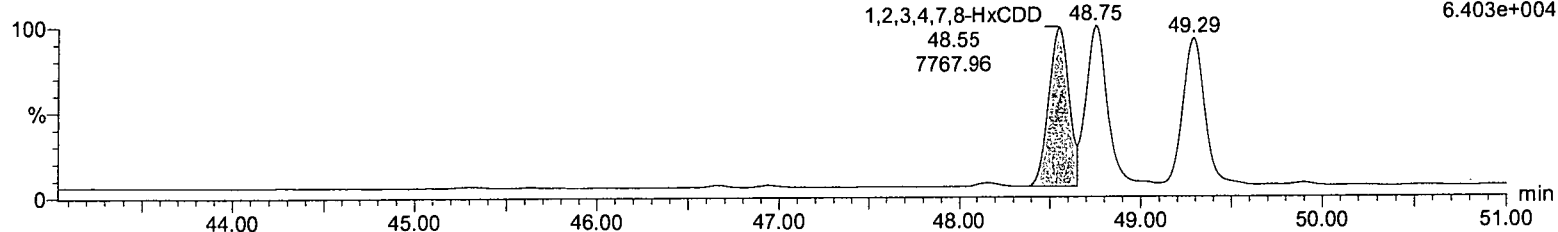
1,2,3,4,7,8-HxCDD

130501_HR_03
EDF-9999 CS-1 02/12/13



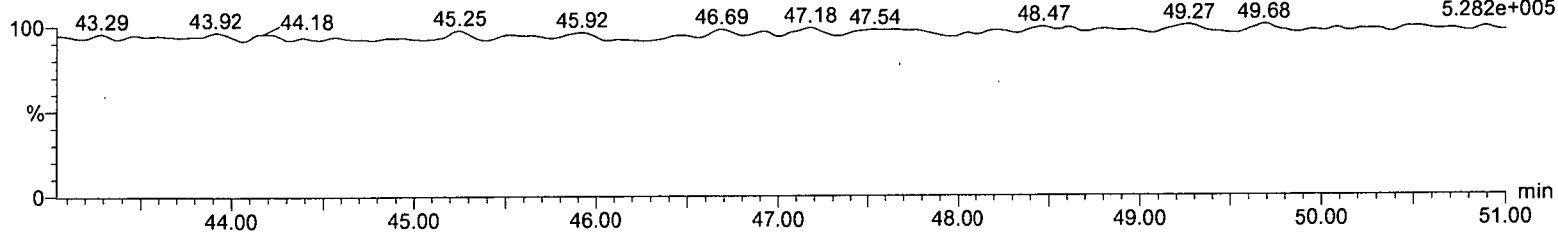
1,2,3,4,7,8-HxCDD

130501_HR_03
EDF-9999 CS-1 02/12/13



PFK3

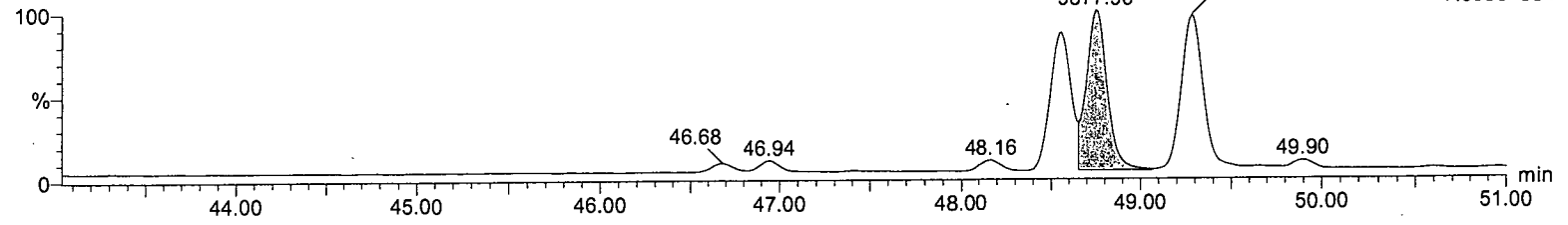
130501_HR_03
EDF-9999 CS-1 02/12/13



Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

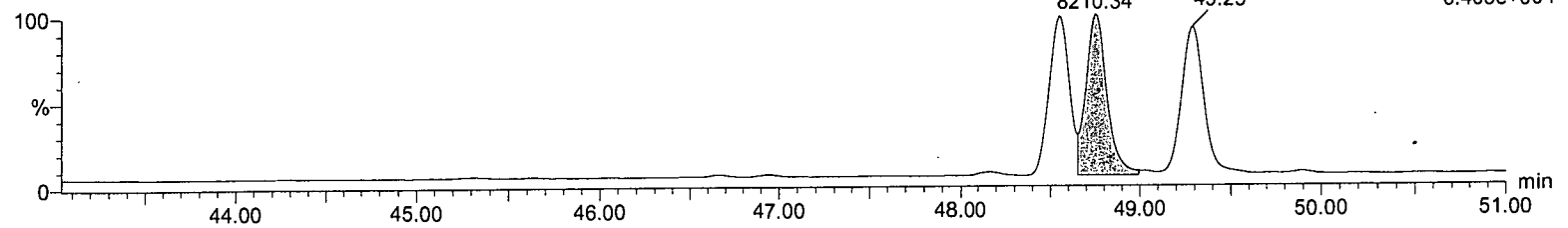
1,2,3,6,7,8-HxCDD

130501_HR_03
EDF-9999 CS-1 02/12/13



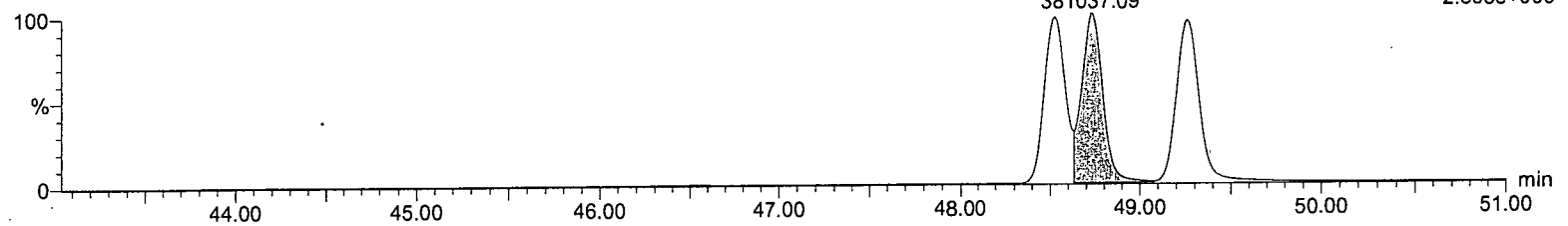
1,2,3,6,7,8-HxCDD

130501_HR_03
EDF-9999 CS-1 02/12/13



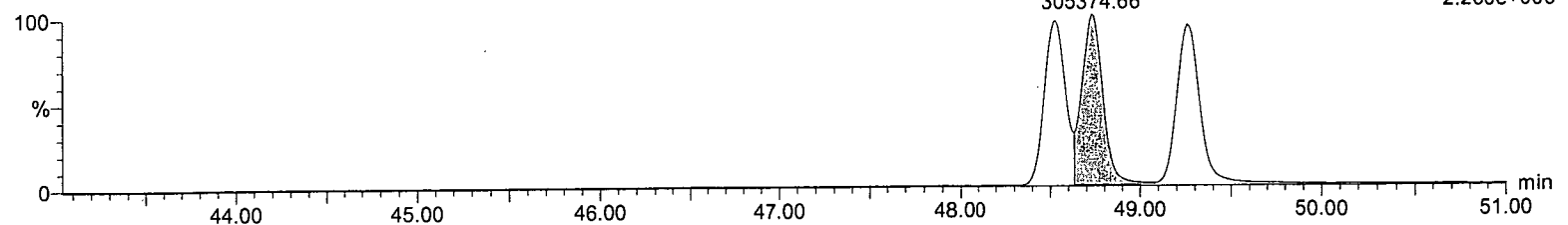
13C-1,2,3,6,7,8-HxCDD

130501_HR_03
EDF-9999 CS-1 02/12/13



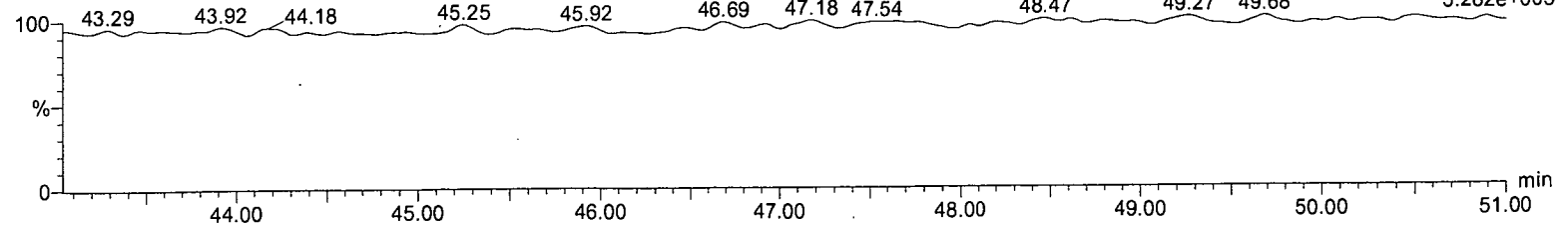
13C-1,2,3,6,7,8-HxCDD

130501_HR_03
EDF-9999 CS-1 02/12/13



PFK3

130501_HR_03
EDF-9999 CS-1 02/12/13

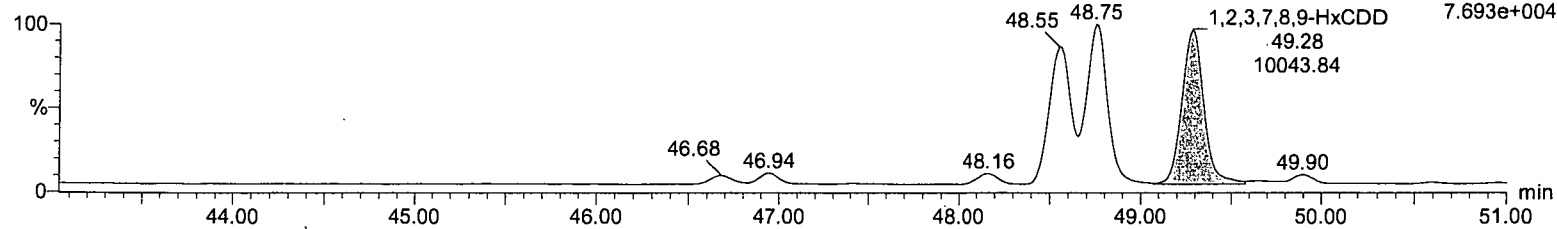


Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

1,2,3,7,8,9-HxCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

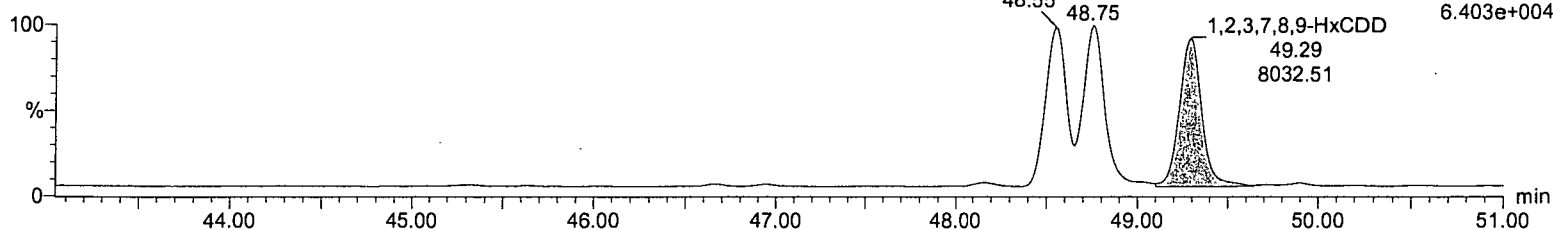
F3:Voltage SIR,EI+
389.8156
7.693e+004



1,2,3,7,8,9-HxCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

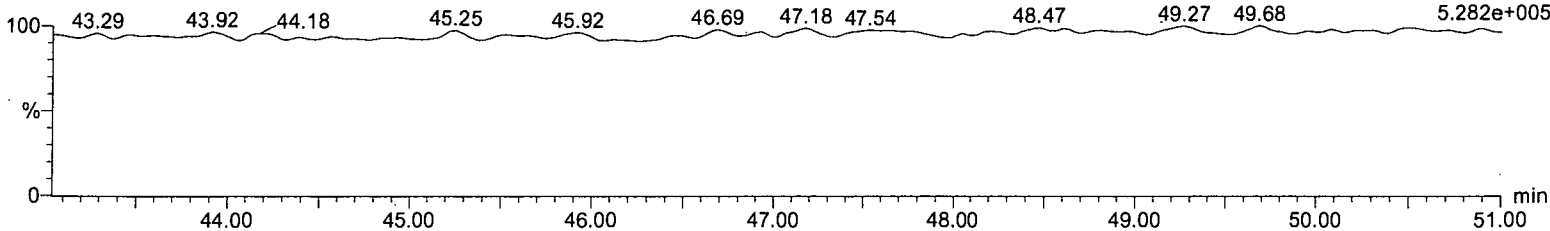
F3:Voltage SIR,EI+
391.8127
6.403e+004



PFK3

130501_HR_03
EDF-9999 CS-1 02/12/13

F3:Voltage SIR,EI+
392.976
5.282e+005



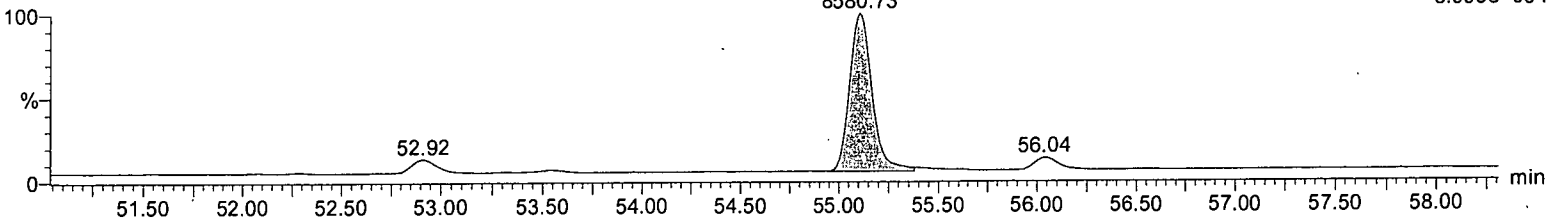
Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

1,2,3,4,6,7,8-HpCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

1,2,3,4,6,7,8-HpCDD
55.10
8580.73

F4:Voltage SIR,EI+
423.7767
6.995e+004

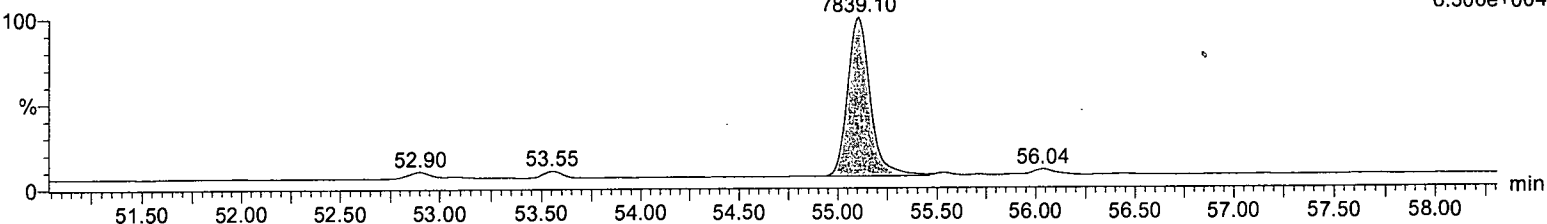


1,2,3,4,6,7,8-HpCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

1,2,3,4,6,7,8-HpCDD
55.10
7839.10

F4:Voltage SIR,EI+
425.7737
6.306e+004

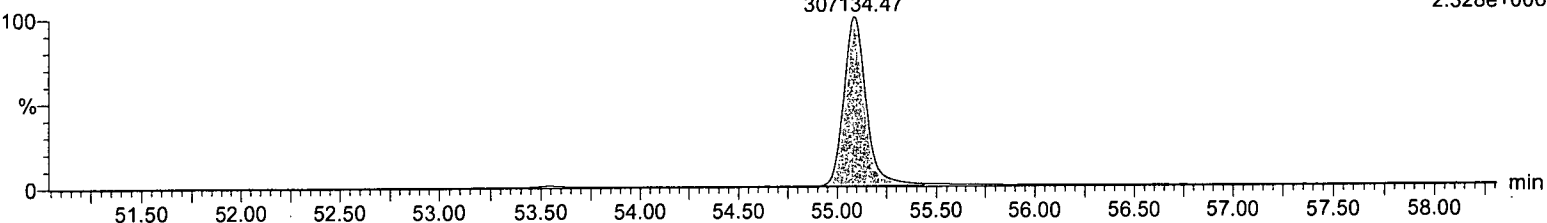


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

13C-1,2,3,4,6,7,8-HpCDD
55.08
307134.47

F4:Voltage SIR,EI+
435.8169
2.328e+006

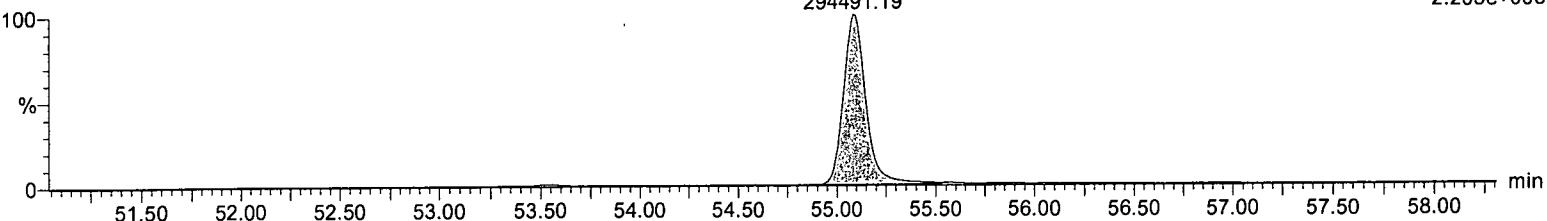


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

13C-1,2,3,4,6,7,8-HpCDD
55.08
294491.19

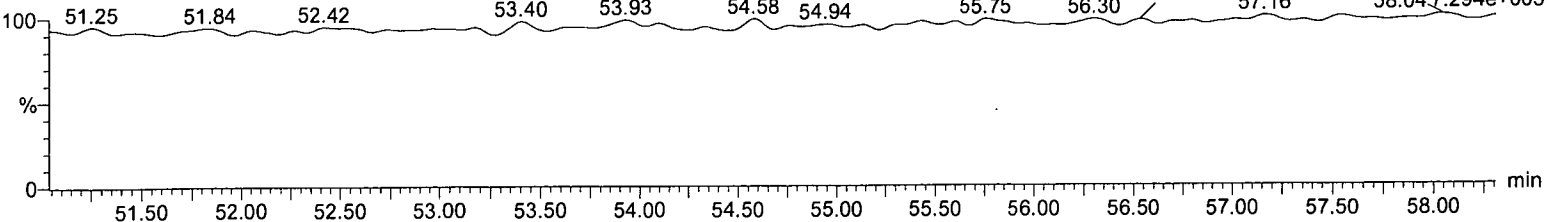
F4:Voltage SIR,EI+
437.814
2.203e+006



PFK4

130501_HR_03
EDF-9999 CS-1 02/12/13

F4:Voltage SIR,EI+
430.9728
7.294e+005



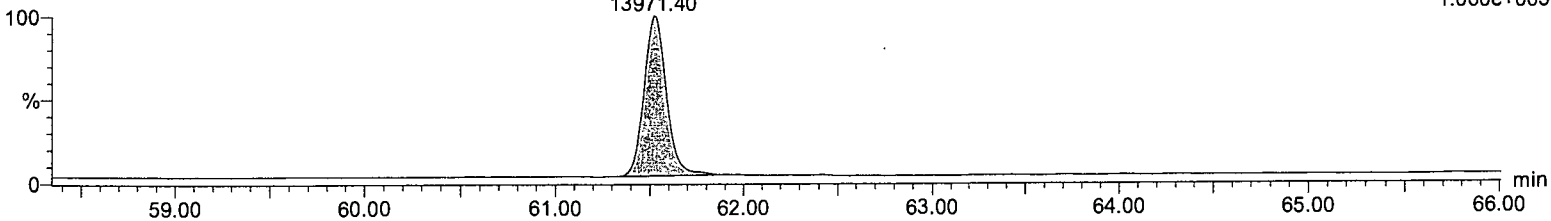
Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

OCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

OCDD
61.52
13971.40

F5:Voltage SIR,EI+
457.7377
1.060e+005

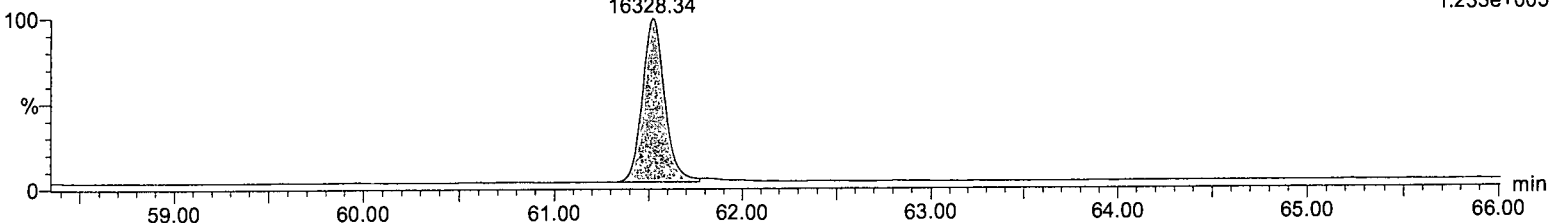


OCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

OCDD
61.52
16328.34

F5:Voltage SIR,EI+
459.7348
1.233e+005

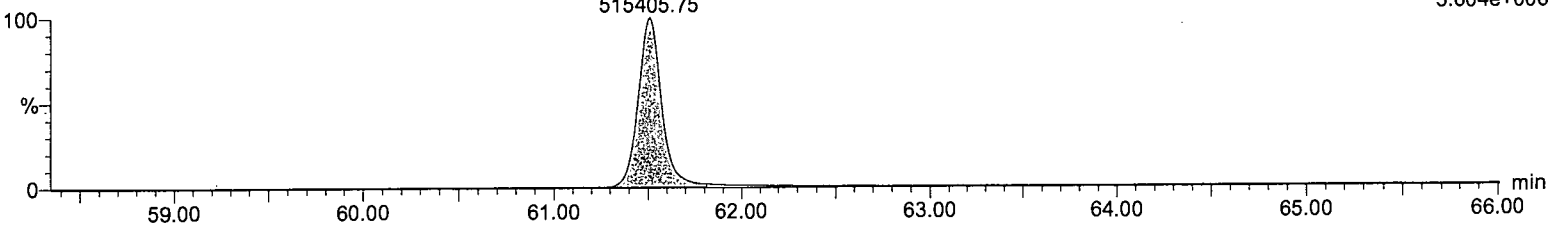


13C-OCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

13C-OCDD
61.51
515405.75

F5:Voltage SIR,EI+
469.778
3.604e+006

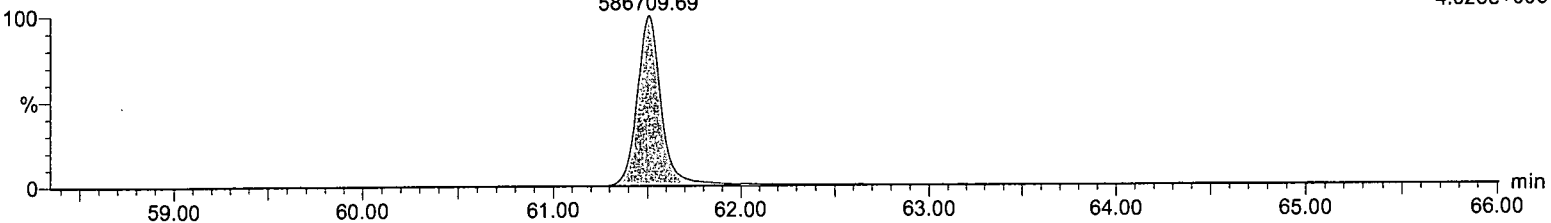


13C-OCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

13C-OCDD
61.51
586709.69

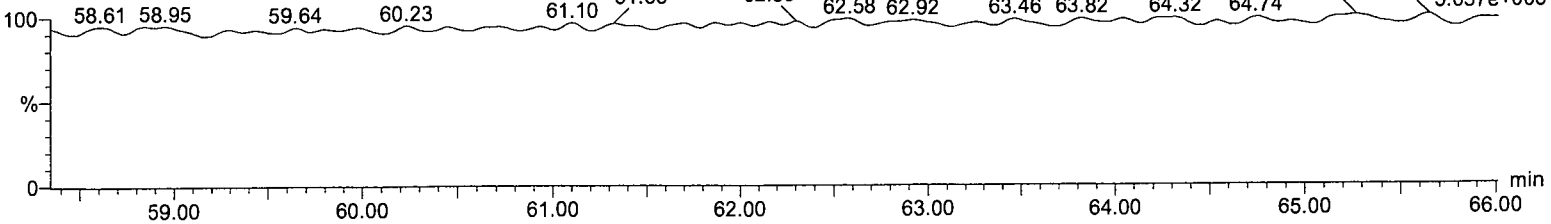
F5:Voltage SIR,EI+
471.775
4.023e+006



PFK5

130501_HR_03
EDF-9999 CS-1 02/12/13

F5:Voltage SIR,EI+
442.9728
5.037e+005



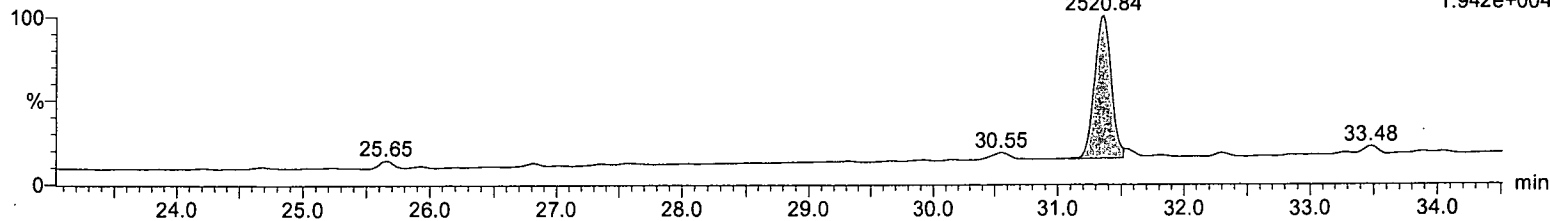
Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

2,3,7,8-TCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

2,3,7,8-TCDF
31.36
2520.84

F1:Voltage SIR,EI+
303.9016
1.942e+004

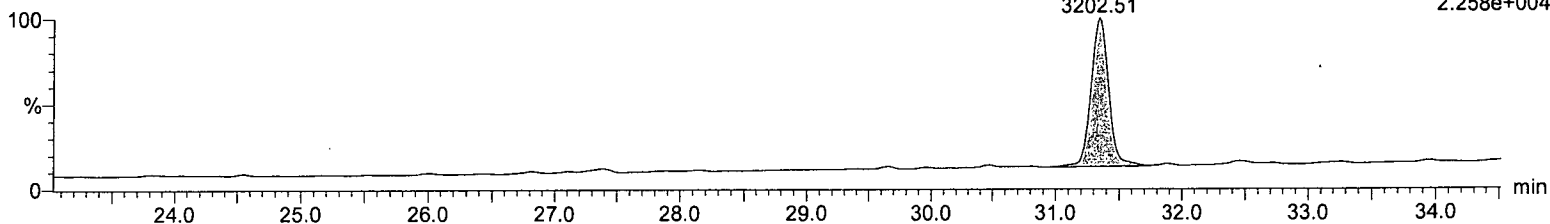


2,3,7,8-TCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

2,3,7,8-TCDF
31.34
3202.51

F1:Voltage SIR,EI+
305.8987
2.258e+004

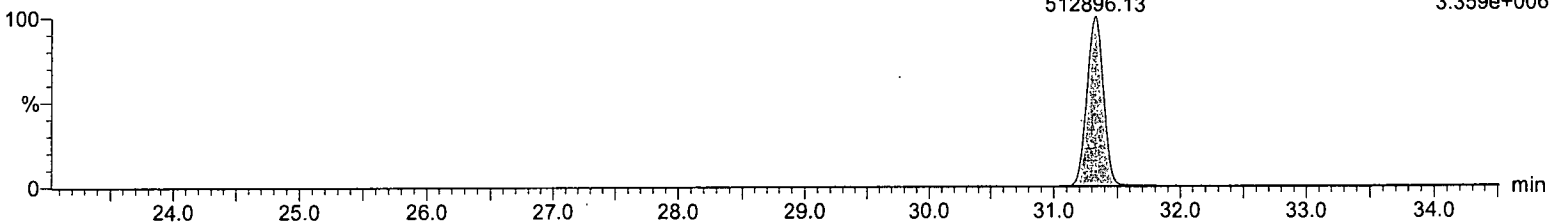


13C-2,3,7,8-TCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

13C-2,3,7,8-TCDF
31.33
512896.13

F1:Voltage SIR,EI+
315.9419
3.359e+006

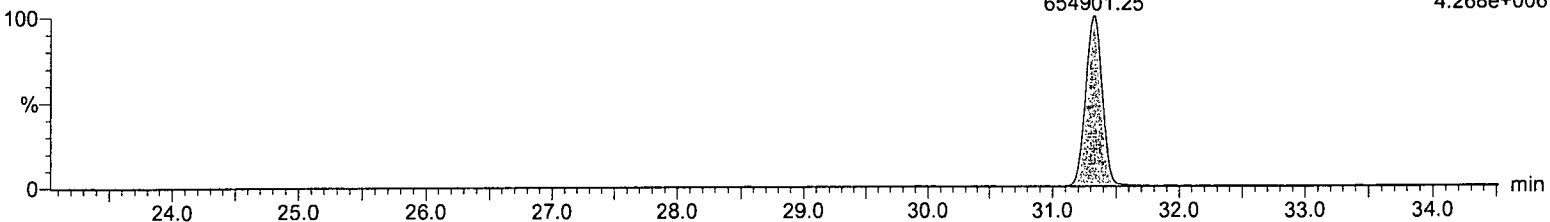


13C-2,3,7,8-TCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

13C-2,3,7,8-TCDF
31.33
654901.25

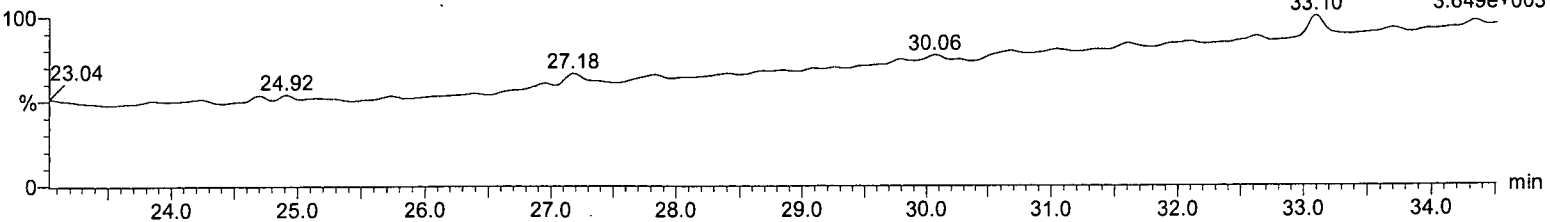
F1:Voltage SIR,EI+
317.9389
4.268e+006



HxCDPE

130501_HR_03
EDF-9999 CS-1 02/12/13

F1:Voltage SIR,EI+
375.8364
3.649e+003

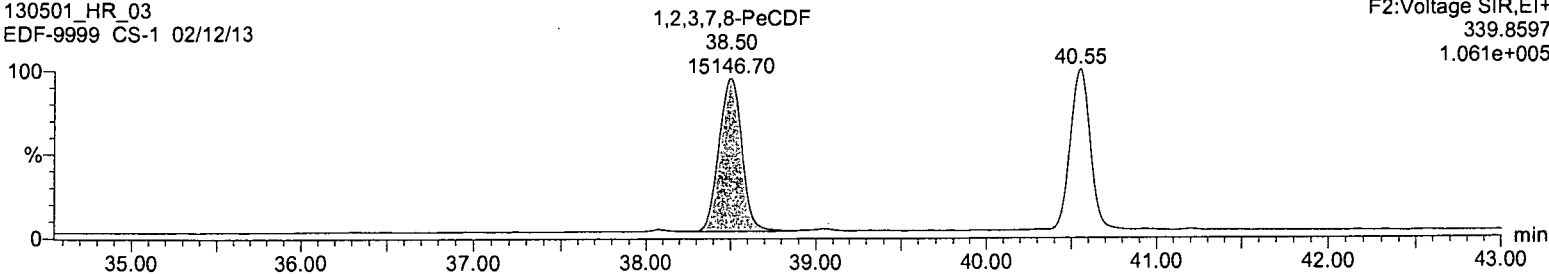


Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

1,2,3,7,8-PeCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

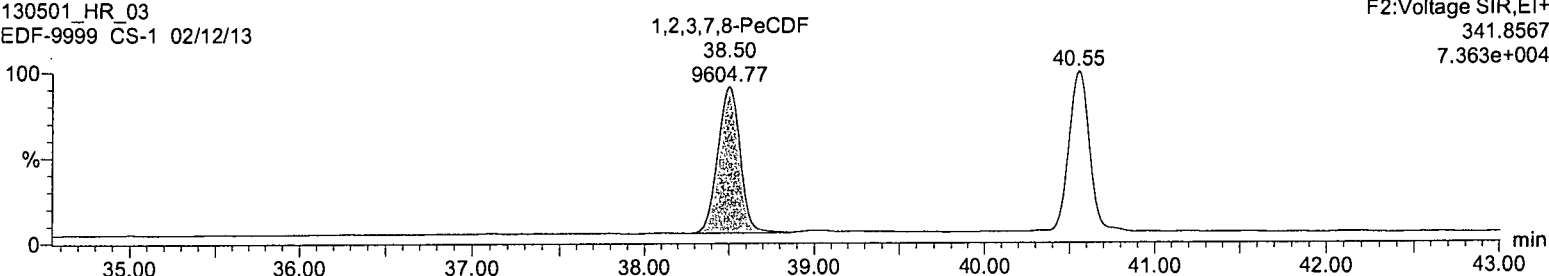
F2:Voltage SIR,EI+
339.8597
1.061e+005



1,2,3,7,8-PeCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

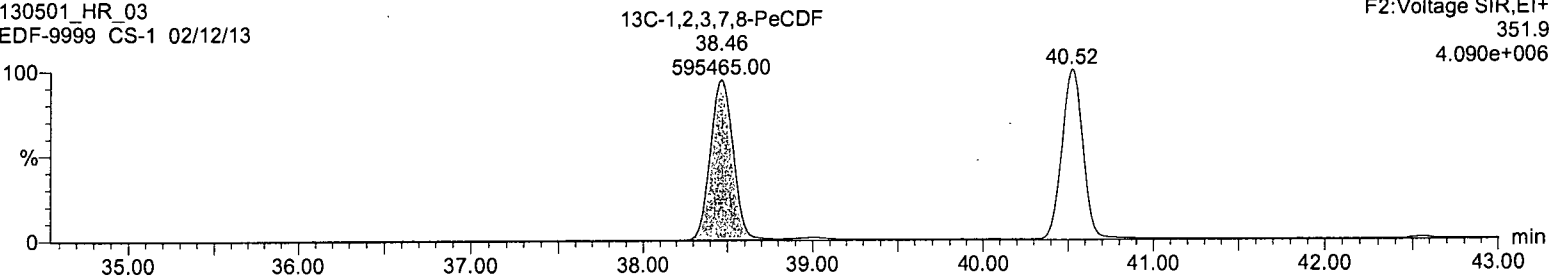
F2:Voltage SIR,EI+
341.8567
7.363e+004



13C-1,2,3,7,8-PeCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

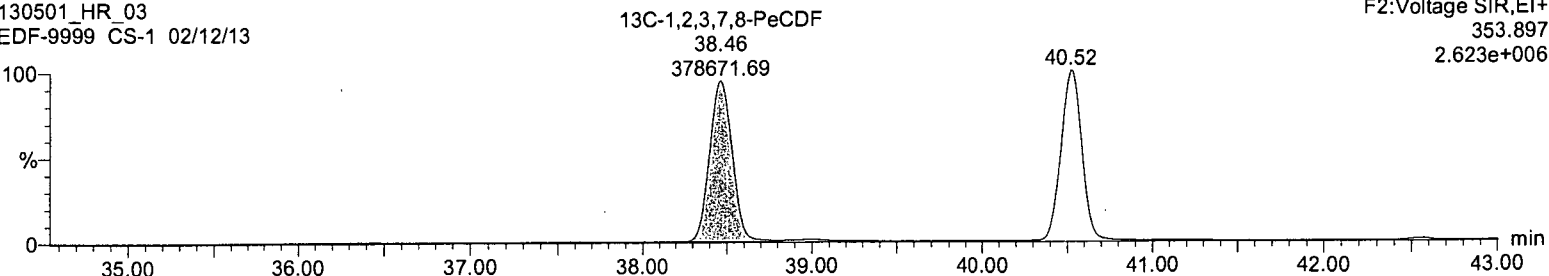
F2:Voltage SIR,EI+
351.9
4.090e+006



13C-1,2,3,7,8-PeCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

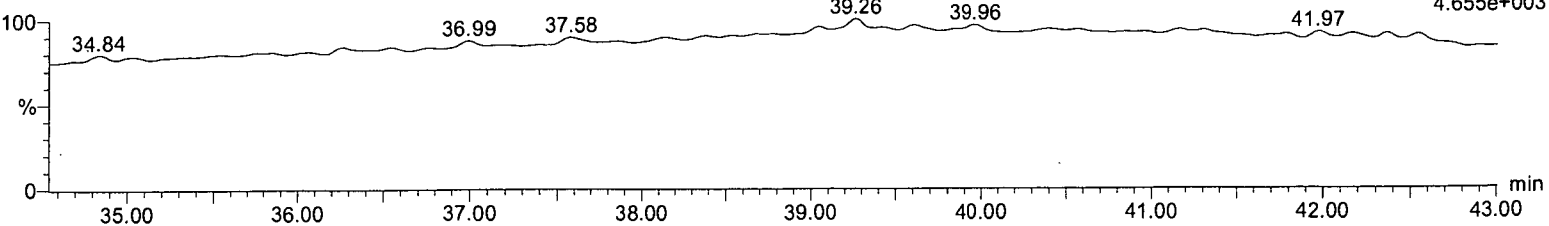
F2:Voltage SIR,EI+
353.897
2.623e+006



HpCDPE

130501_HR_03
EDF-9999 CS-1 02/12/13

F2:Voltage SIR,EI+
409.7974
4.655e+003



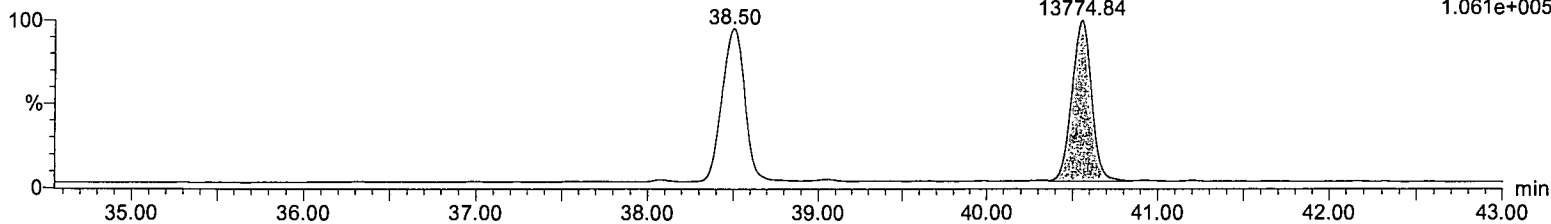
Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

2,3,4,7,8-PeCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

2,3,4,7,8-PeCDF
40.55
13774.84

F2:Voltage SIR,EI+
339.8597
1.061e+005

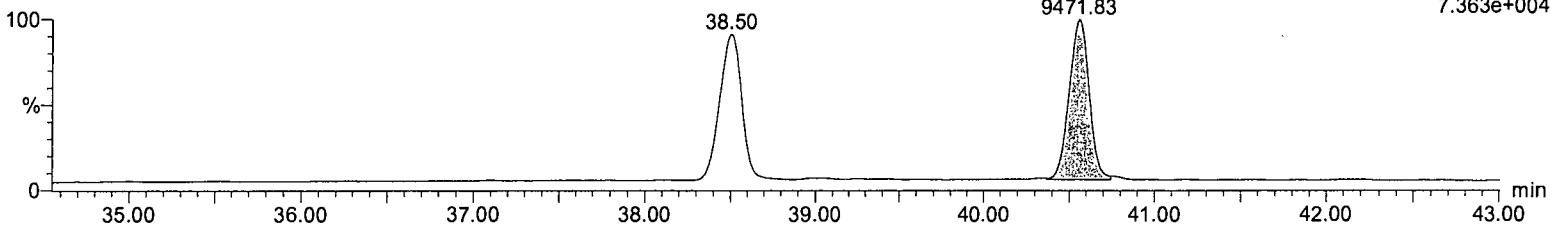


2,3,4,7,8-PeCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

2,3,4,7,8-PeCDF
40.55
9471.83

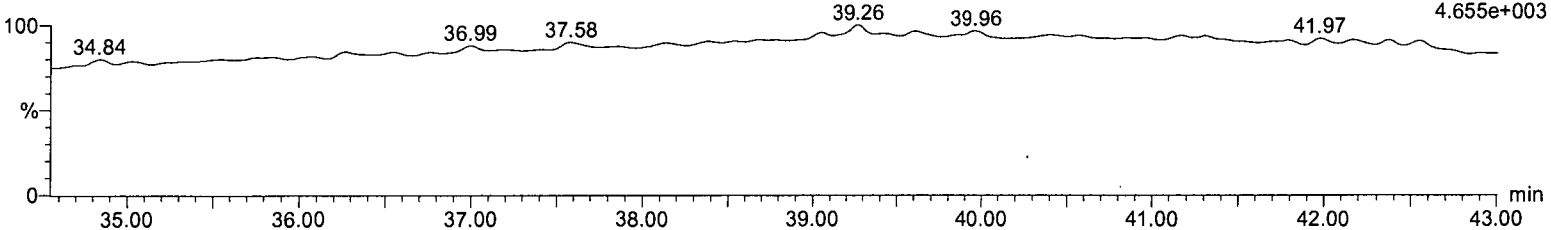
F2:Voltage SIR,EI+
341.8567
7.363e+004



HpCDPE

130501_HR_03
EDF-9999 CS-1 02/12/13

F2:Voltage SIR,EI+
409.7974
4.655e+003



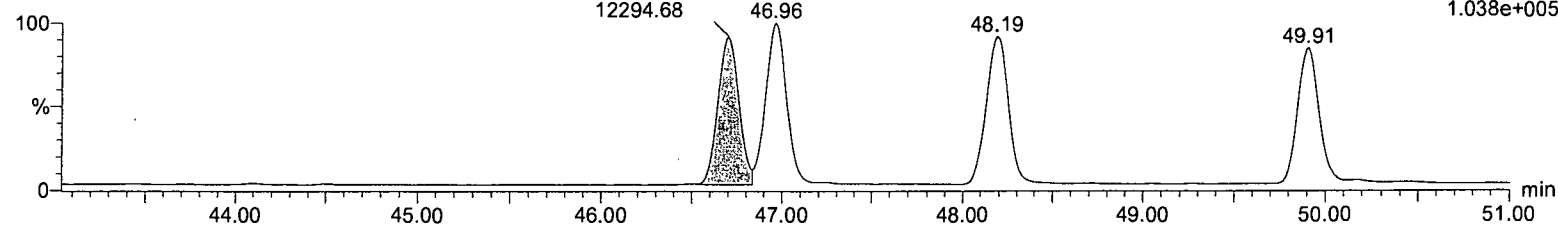
Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

1,2,3,4,7,8-HxCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

1,2,3,4,7,8-HxCDF
46.70
12294.68

F3:Voltage SIR,EI+
373.8208
1.038e+005

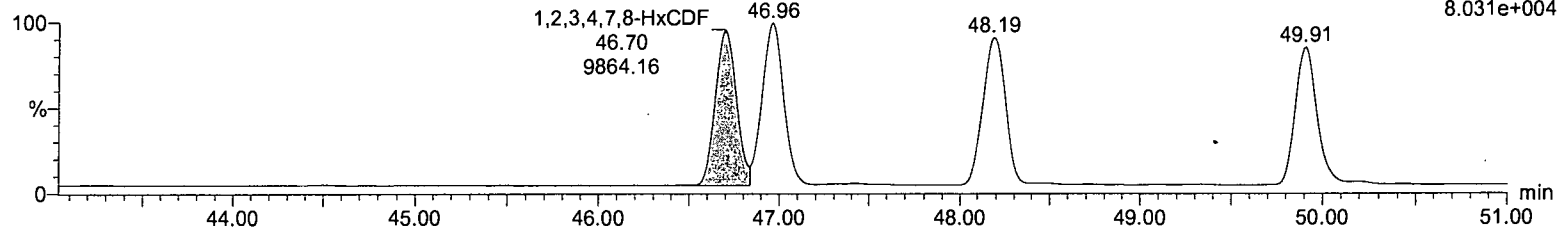


1,2,3,4,7,8-HxCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

1,2,3,4,7,8-HxCDF
46.70
9864.16

F3:Voltage SIR,EI+
375.8178
8.031e+004

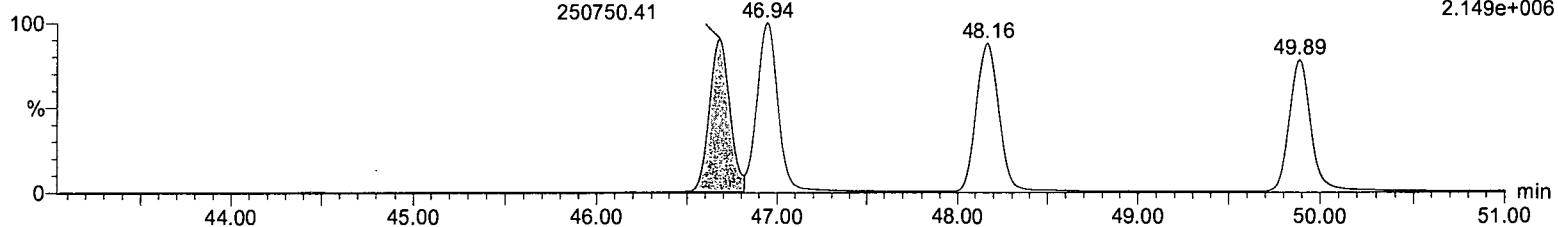


13C-1,2,3,4,7,8-HxCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

13C-1,2,3,4,7,8-HxCDF
46.68
250750.41

F3:Voltage SIR,EI+
383.8639
2.149e+006

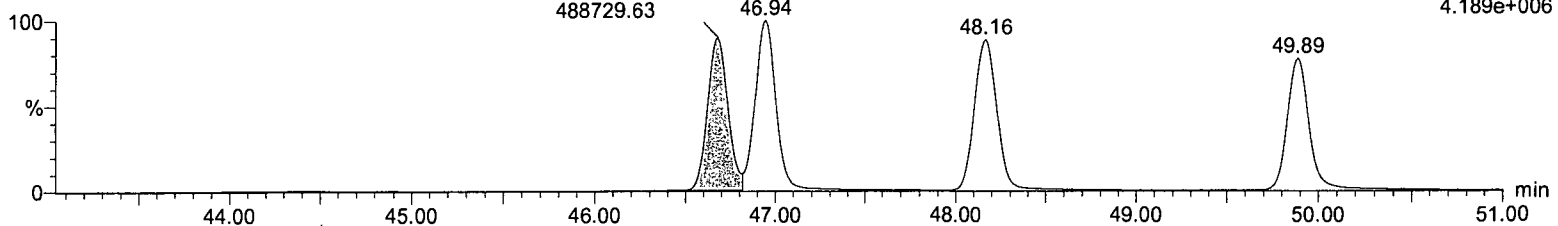


13C-1,2,3,4,7,8-HxCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

13C-1,2,3,4,7,8-HxCDF
46.68
488729.63

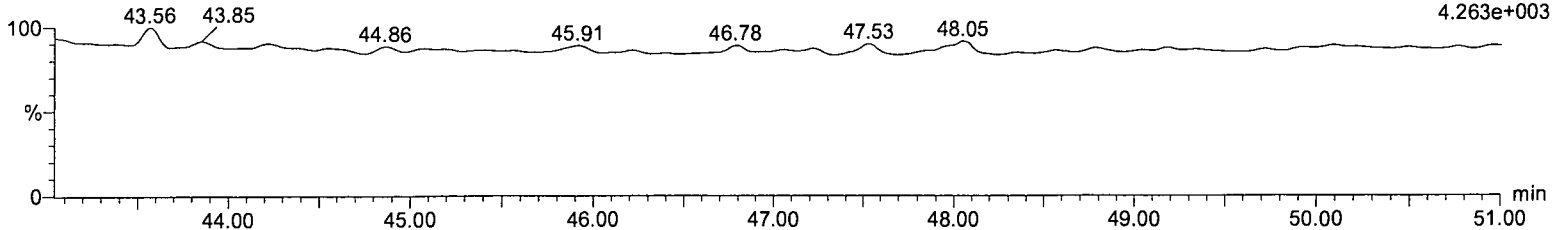
F3:Voltage SIR,EI+
385.861
4.189e+006



OCDPE

130501_HR_03
EDF-9999 CS-1 02/12/13

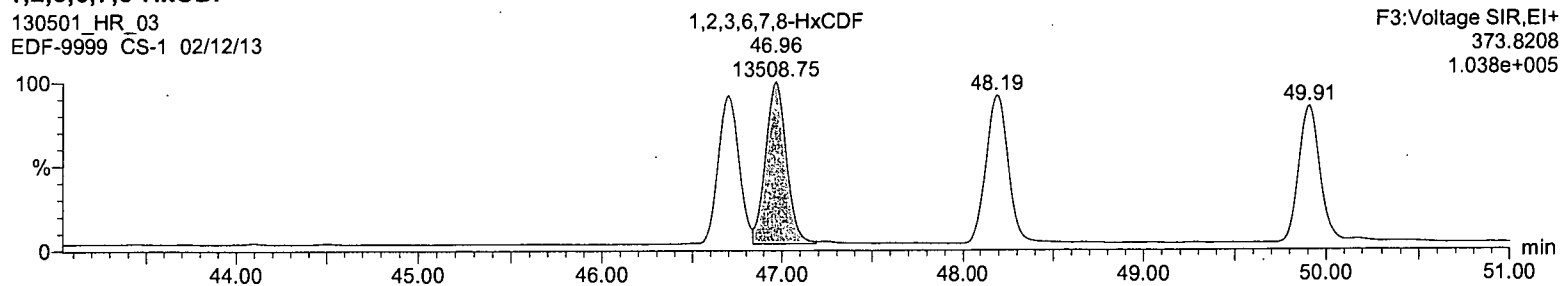
F3:Voltage SIR,EI+
445.7555
4.263e+003



Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

1,2,3,6,7,8-HxCDF

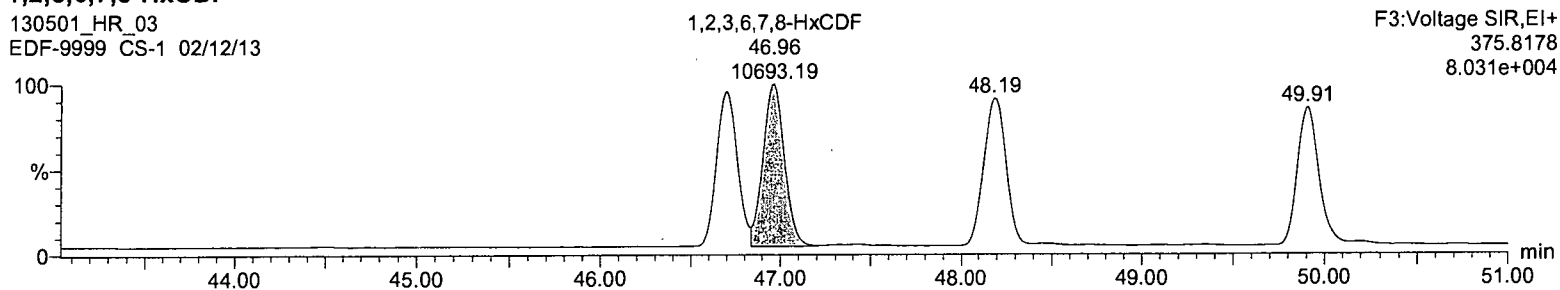
130501_HR_03
EDF-9999 CS-1 02/12/13



F3:Voltage SIR,EI+
373.8208
1.038e+005

1,2,3,6,7,8-HxCDF

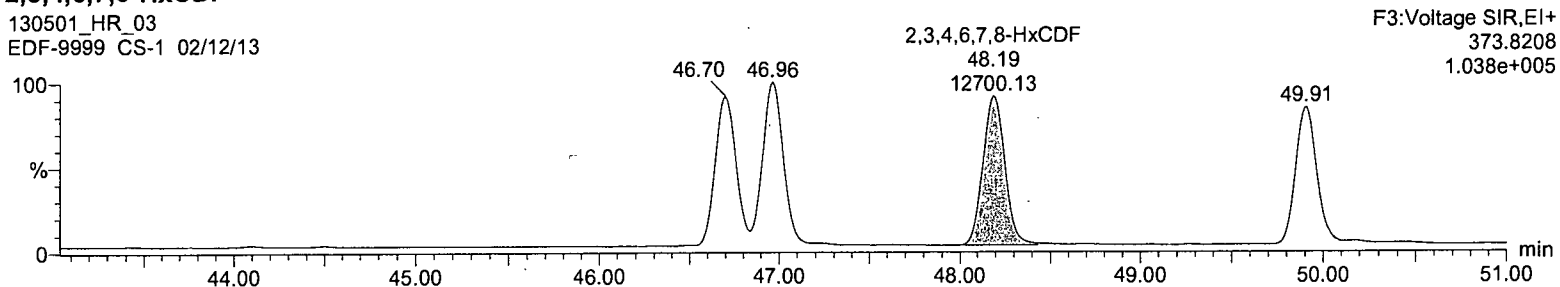
130501_HR_03
EDF-9999 CS-1 02/12/13



F3:Voltage SIR,EI+
375.8178
8.031e+004

2,3,4,6,7,8-HxCDF

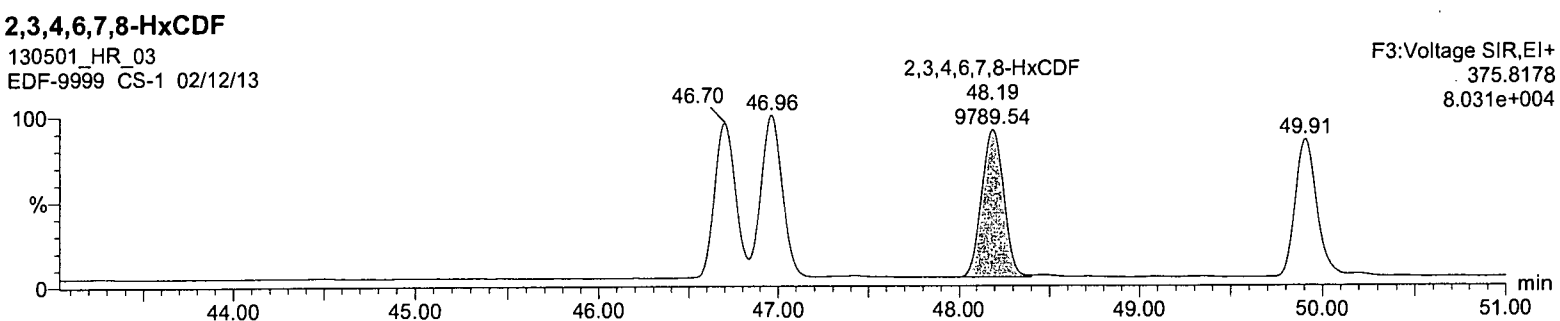
130501_HR_03
EDF-9999 CS-1 02/12/13



F3:Voltage SIR,EI+
373.8208
1.038e+005

2,3,4,6,7,8-HxCDF

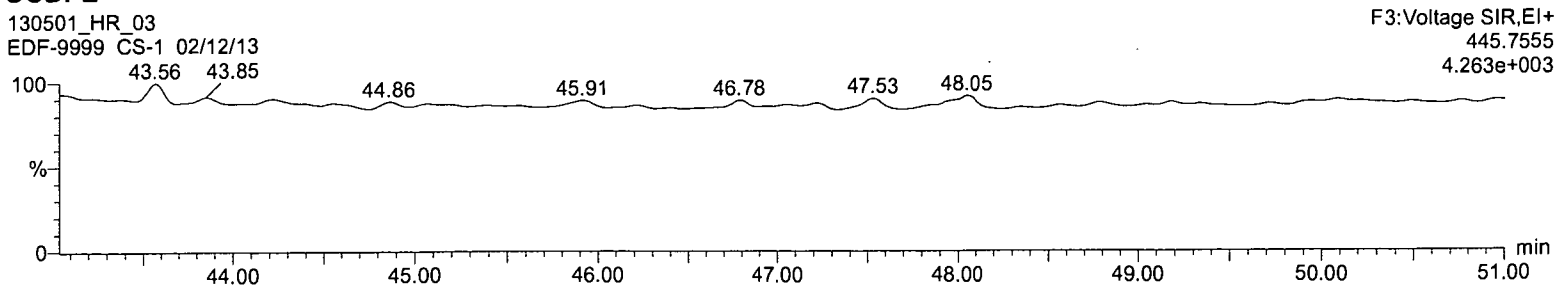
130501_HR_03
EDF-9999 CS-1 02/12/13



F3:Voltage SIR,EI+
375.8178
8.031e+004

OCDPE

130501_HR_03
EDF-9999 CS-1 02/12/13

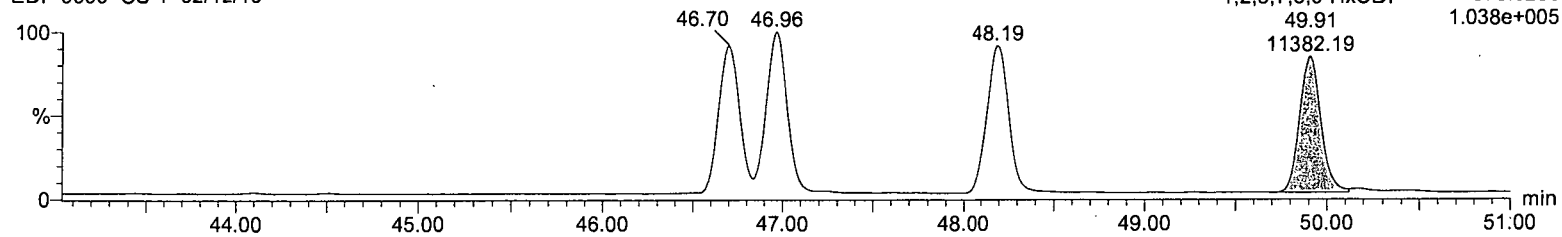


F3:Voltage SIR,EI+
445.7555
4.263e+003

Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

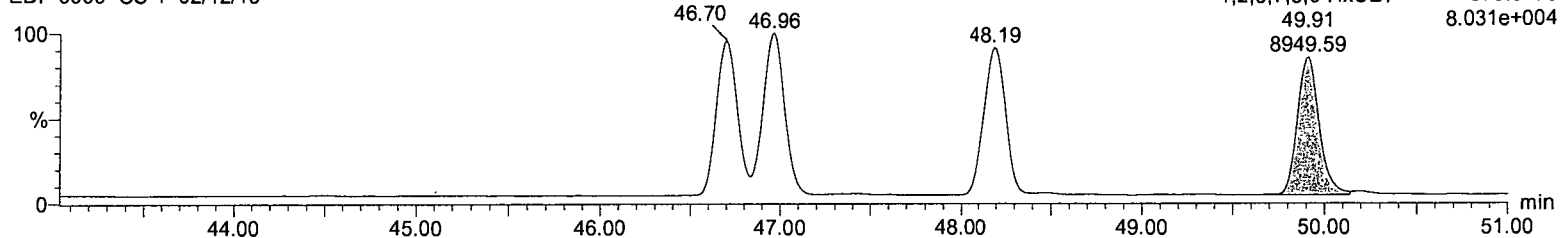
1,2,3,7,8,9-HxCDF

130501_HR_03
EDF-9999 CS-1 02/12/13



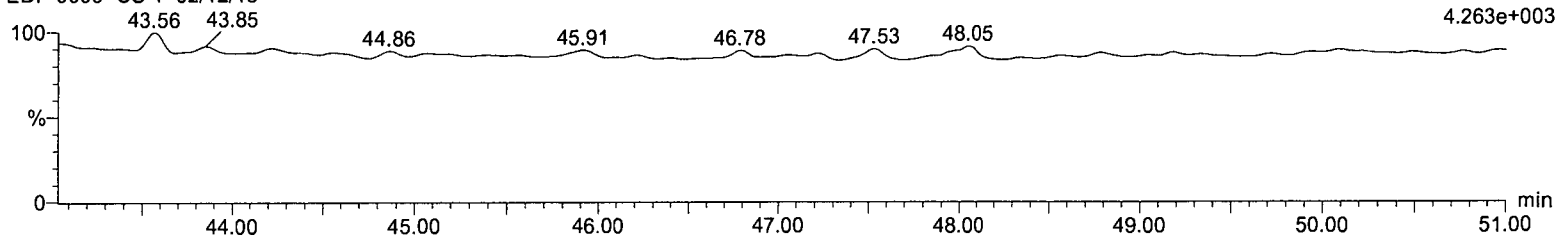
1,2,3,7,8,9-HxCDF

130501_HR_03
EDF-9999 CS-1 02/12/13



OCDPE

130501_HR_03
EDF-9999 CS-1 02/12/13



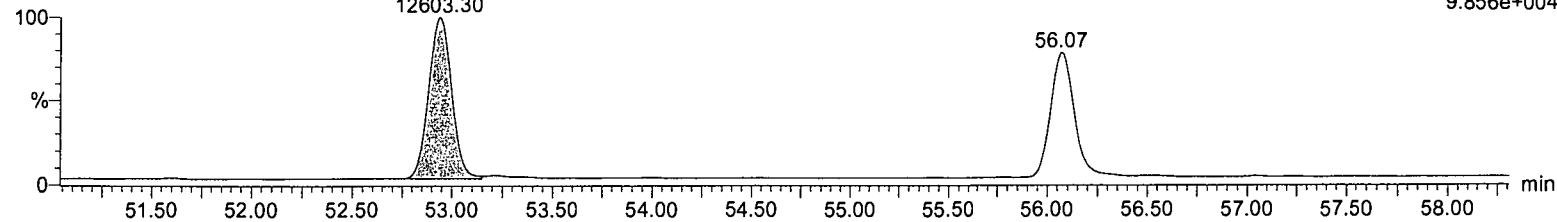
Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

1,2,3,4,6,7,8-HpCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

1,2,3,4,6,7,8-HpCDF
52.94
12603.30

F4:Voltage SIR,EI+
407.7818
9.856e+004

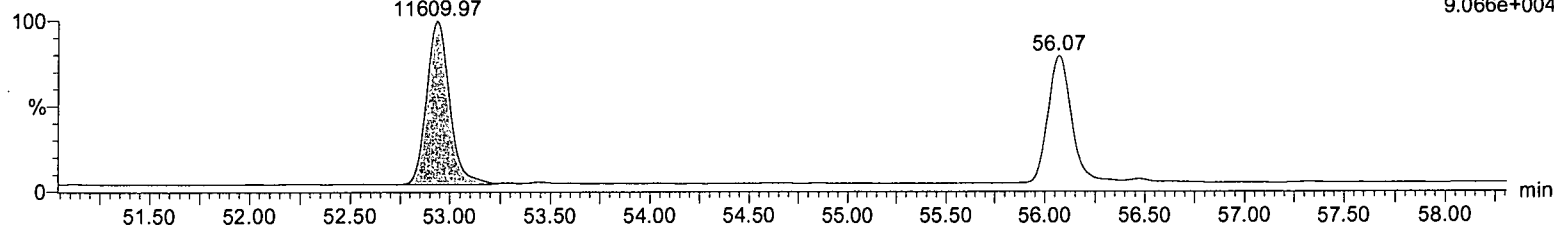


1,2,3,4,6,7,8-HpCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

1,2,3,4,6,7,8-HpCDF
52.94
11609.97

F4:Voltage SIR,EI+
409.7788
9.066e+004

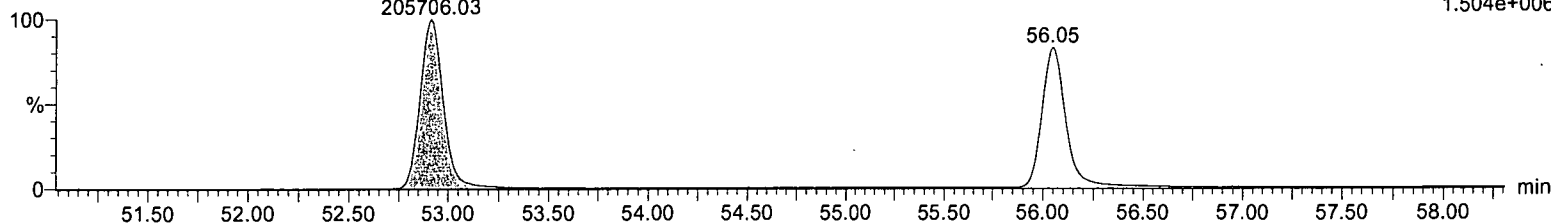


13C-1,2,3,4,6,7,8-HpCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

13C-1,2,3,4,6,7,8-HpCDF
52.92
205706.03

F4:Voltage SIR,EI+
417.825
1.504e+006

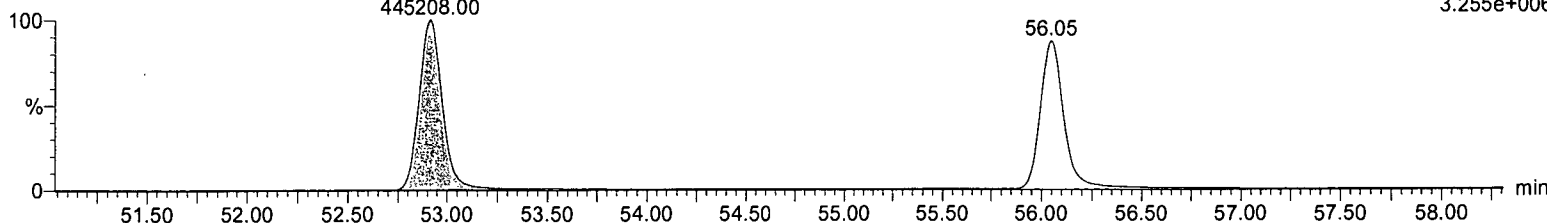


13C-1,2,3,4,6,7,8-HpCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

13C-1,2,3,4,6,7,8-HpCDF
52.92
445208.00

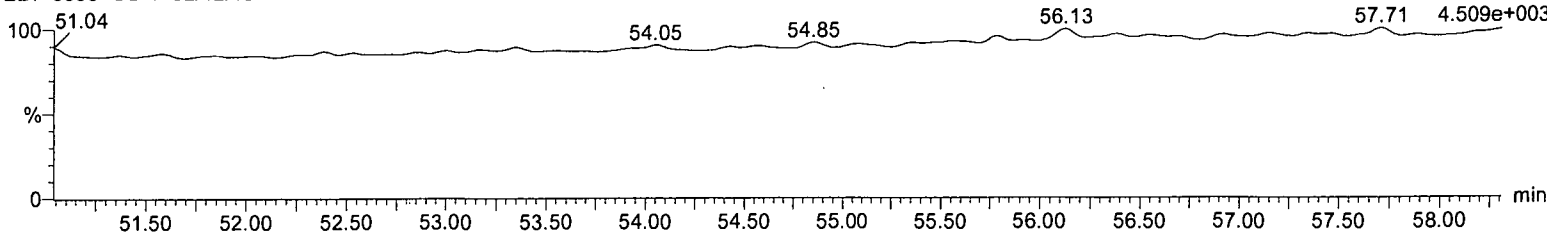
F4:Voltage SIR,EI+
419.822
3.255e+006



NCDPE

130501_HR_03
EDF-9999 CS-1 02/12/13

F4:Voltage SIR,EI+
479.7165
4.509e+003

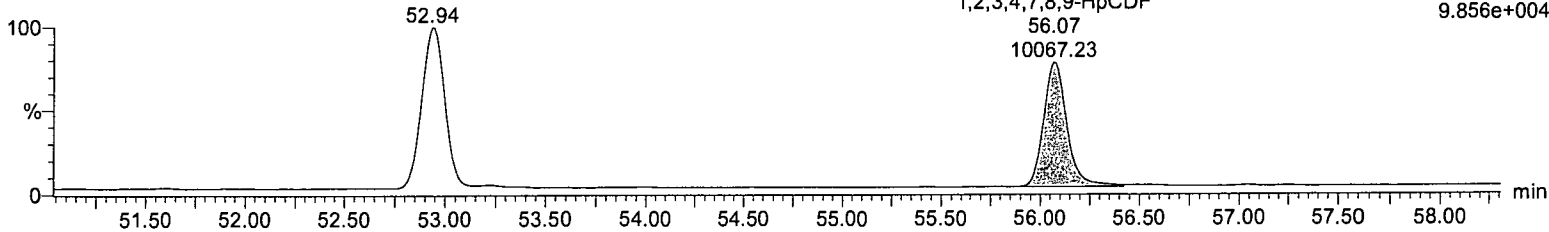


Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

1,2,3,4,7,8,9-HpCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

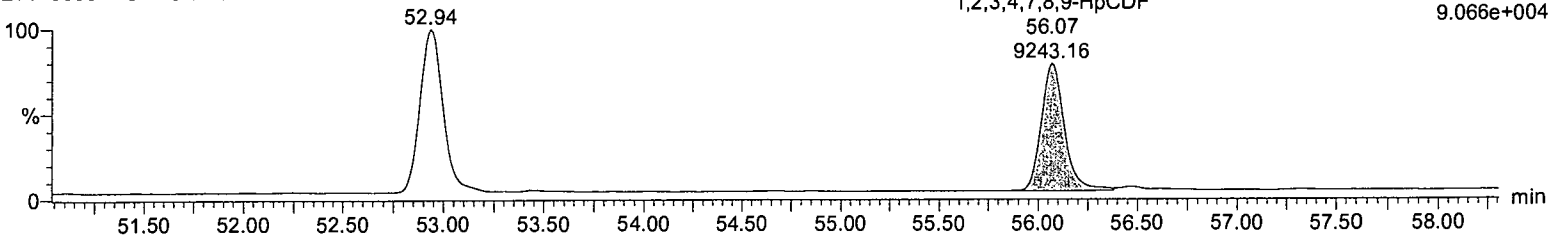
F4:Voltage SIR,EI+
407.7818
9.856e+004



1,2,3,4,7,8,9-HpCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

F4:Voltage SIR,EI+
409.7788
9.066e+004

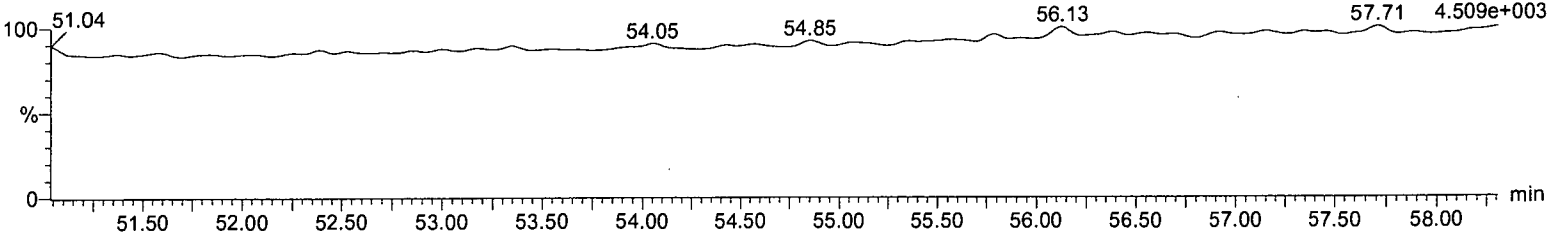


NCDPE

130501_HR_03
EDF-9999 CS-1 02/12/13

F4:Voltage SIR,EI+
479.7165

4.509e+003



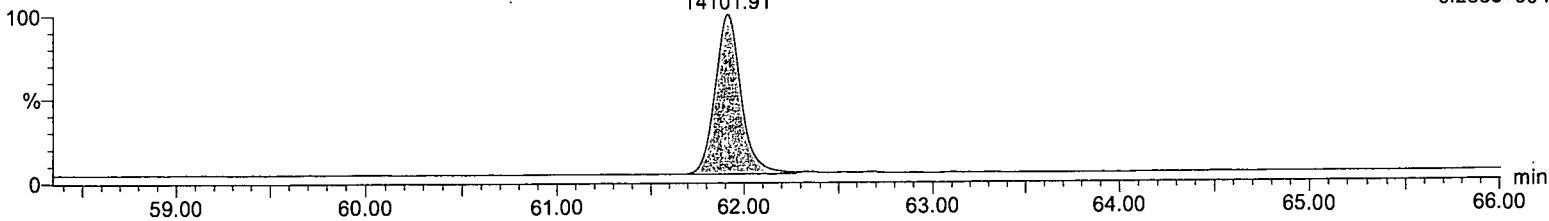
Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

OCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

OCDF
61.91
14101.91

F5:Voltage SIR,EI+
441.7428
9.288e+004

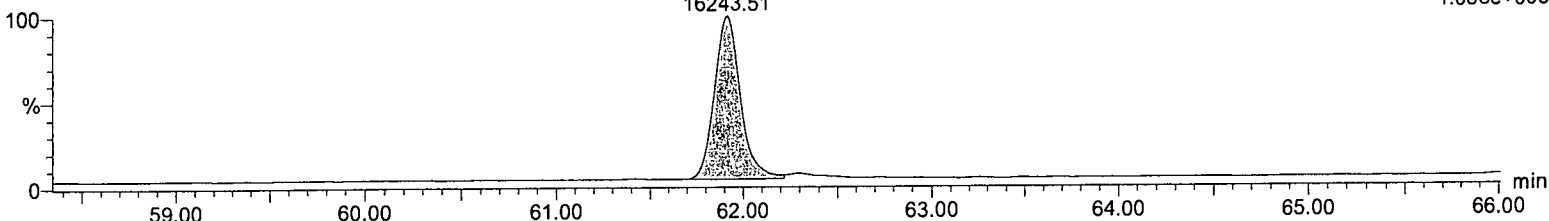


OCDF

130501_HR_03
EDF-9999 CS-1 02/12/13

OCDF
61.91
16243.51

F5:Voltage SIR,EI+
443.7399
1.058e+005

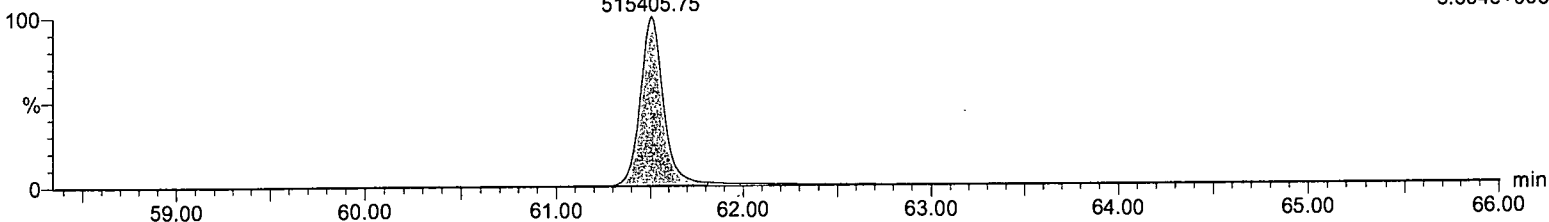


13C-OCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

13C-OCDD
61.51
515405.75

F5:Voltage SIR,EI+
469.778
3.604e+006

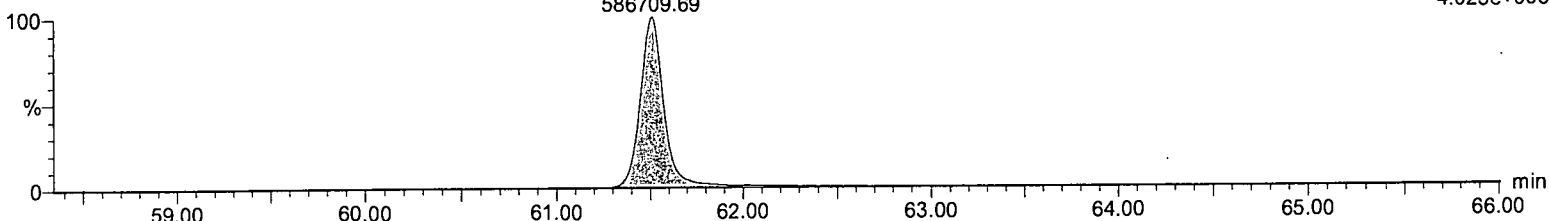


13C-OCDD

130501_HR_03
EDF-9999 CS-1 02/12/13

13C-OCDD
61.51
586709.69

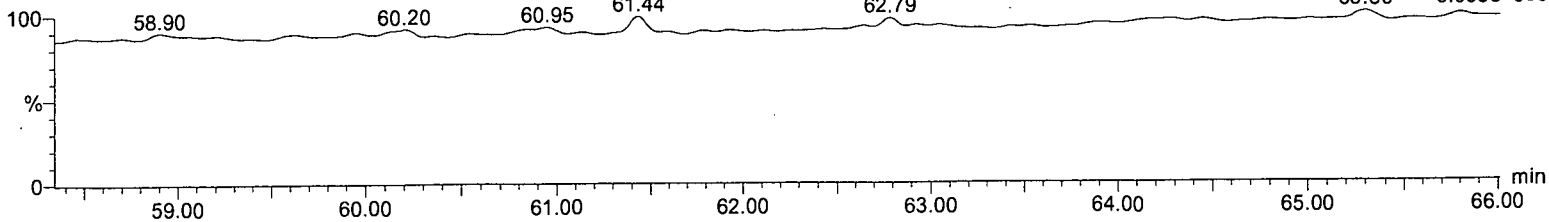
F5:Voltage SIR,EI+
471.775
4.023e+006



DCDPE

130501_HR_03
EDF-9999 CS-1 02/12/13

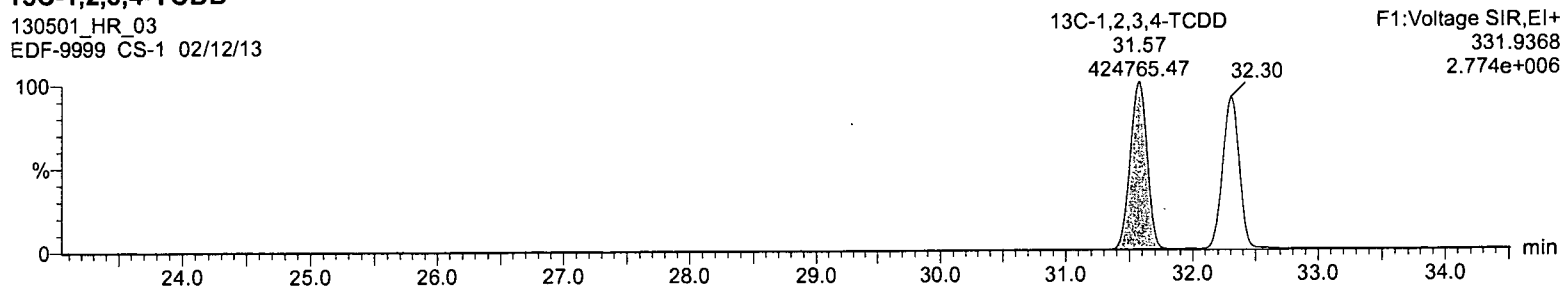
F5:Voltage SIR,EI+
513.6775
5.063e+003



Name: 130501_HR_03, Date: 01-May-2013, Time: 18:49:30, Description: EDF-9999 CS-1 02/12/13, User: RP

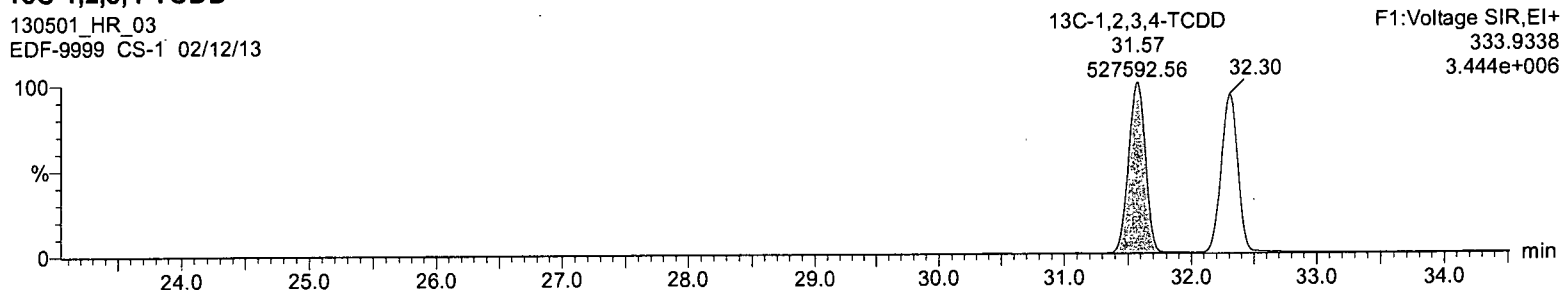
13C-1,2,3,4-TCDD

130501_HR_03
EDF-9999 CS-1 02/12/13



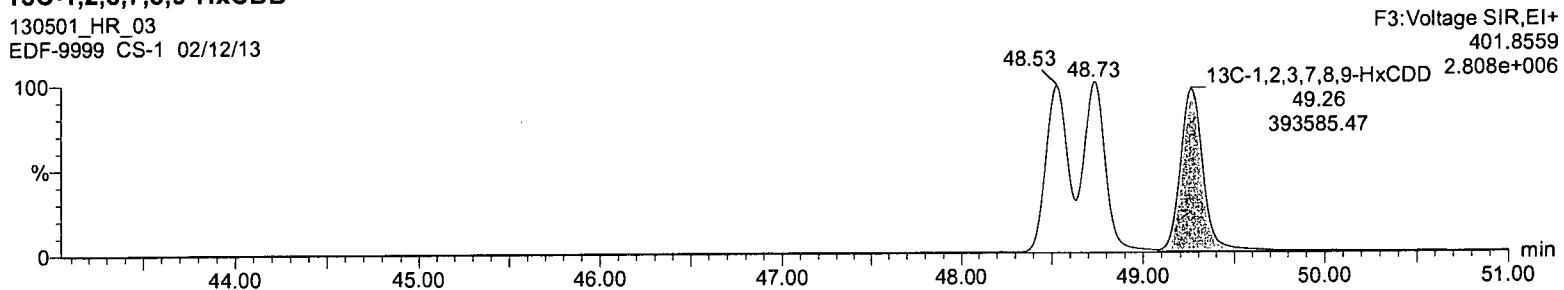
13C-1,2,3,4-TCDD

130501_HR_03
EDF-9999 CS-1 02/12/13



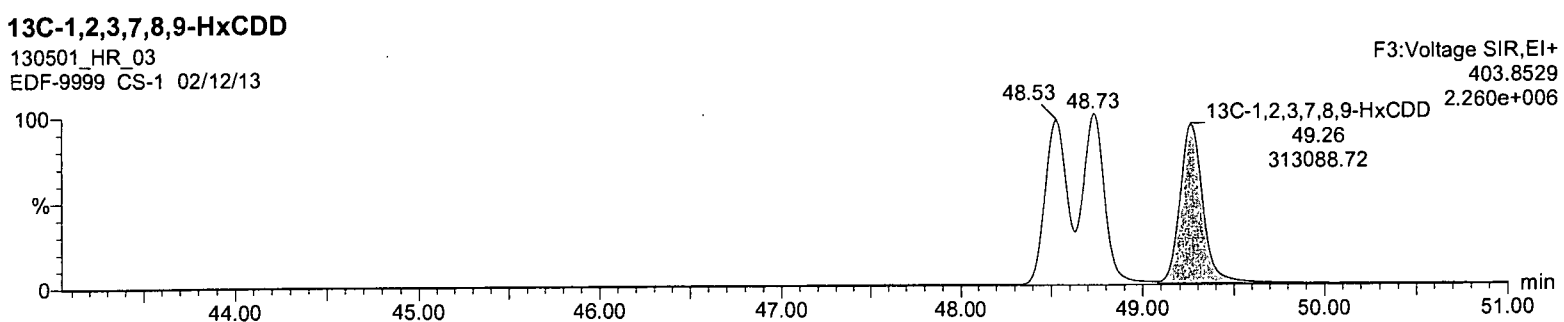
13C-1,2,3,7,8,9-HxCDD

130501_HR_03
EDF-9999 CS-1 02/12/13



13C-1,2,3,7,8,9-HxCDD

130501_HR_03
EDF-9999 CS-1 02/12/13



Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: 02 May 2013 07:30:19

Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, ID: , Description: EDF-9999 CS-2 02/12/13, User: RP

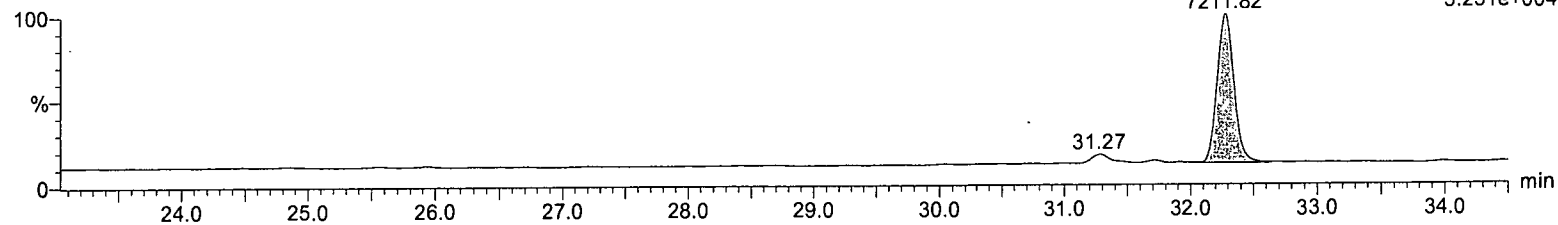
#	Name	Signal	Noise:1	S/N:1	Flag	S/N	Signal:2	Noise:2	S/N:2	Flag	S/N
1	2,3,7,8-TCDD	4.6223000e4	5.7153702e1	810.79	NO		5.4752000e4	6.7699455e1	808.75	NO	
2	1,2,3,7,8-PeCDD	2.3531500e5	3.1113794e2	755.51	NO		1.5779800e5	8.7374763e1	1805.99	NO	
3	1,2,3,4,7,8-HxCDD	2.2985100e5	4.5428513e2	504.76	NO		1.8738600e5	3.1313745e2	598.41	NO	
4	1,2,3,6,7,8-HxCDD	2.2436300e5	4.5428513e2	492.67	NO		1.7827900e5	3.1313745e2	569.33	NO	
5	1,2,3,7,8,9-HxCDD	2.1926600e5	4.5428513e2	481.44	NO		1.6984100e5	3.1313745e2	542.38	NO	
6	1,2,3,4,6,7,8-HpCDD	2.1281700e5	2.6184019e3	79.70	NO		1.9683400e5	1.4339789e2	1372.64	NO	
7	OCDD	3.0483500e5	1.5469846e2	1967.76	NO		3.3125600e5	2.7667380e2	1197.28	NO	
8	2,3,7,8-TCDF	5.9896000e4	5.1810265e1	1156.37	NO		7.5088000e4	5.7194145e1	1312.86	NO	
9	1,2,3,7,8-PeCDF	3.7496900e5	9.6214111e2	389.09	NO		2.3769400e5	3.2073062e2	741.10	NO	
10	2,3,4,7,8-PeCDF	3.5396700e5	9.6214111e2	367.46	NO		2.2617900e5	3.2073062e2	705.20	NO	
11	1,2,3,4,7,8-HxCDF	2.9330200e5	2.6924973e2	1085.84	NO		2.4351500e5	5.8655121e2	415.16	NO	
12	1,2,3,6,7,8-HxCDF	3.2211500e5	2.6924973e2	1192.94	NO		2.5273500e5	5.8655121e2	430.88	NO	
13	2,3,4,6,7,8-HxCDF	2.9070500e5	2.6924973e2	1076.66	NO		2.4955500e5	5.8655121e2	425.46	NO	
14	1,2,3,7,8,9-HxCDF	2.4264100e5	2.6924973e2	898.81	NO		1.9803200e5	5.8655121e2	337.62	NO	
15	1,2,3,4,6,7,8-HpCDF	2.8947600e5	1.4996864e2	1925.33	NO		2.9056200e5	1.3278718e3	218.82	NO	
16	1,2,3,4,7,8,9-HpCDF	2.1143300e5	1.4996864e2	1406.59	NO		2.0298900e5	1.3278718e3	152.87	NO	
17	OCDF	2.9341300e5	3.1989124e2	917.69	NO		3.3081800e5	2.5221710e2	1311.64	NO	
18	13C-2,3,7,8-TCDD	2.3403980e6	5.5836865e2	4192.23	NO		3.0150540e6	2.3602309e2	12774.40	NO	
19	13C-1,2,3,7,8-PeCDD	2.6321430e6	5.5898645e2	4707.75	NO		1.6743790e6	4.6032632e2	3637.37	NO	
20	13C-1,2,3,6,7,8-HxCDD	2.3047400e6	7.0620349e2	3267.15	NO		1.8142580e6	1.1878761e3	1527.31	NO	
21	13C-1,2,3,4,6,7,8-HpCDD	1.9431120e6	4.8676254e2	3990.15	NO		1.8086270e6	4.9883148e2	3625.73	NO	
22	13C-OCDD	2.6638450e6	2.5023210e3	1063.24	NO		2.9796610e6	6.0416302e2	4931.88	NO	
23	13C-2,3,7,8-TCDF	3.2178410e6	2.6013593e2	12369.27	NO		4.1956300e6	8.1996741e2	5116.83	NO	
24	13C-1,2,3,7,8-PeCDF	3.7500320e6	9.8371710e2	3810.05	NO		2.3365610e6	5.4197687e2	4311.18	NO	
25	13C-1,2,3,4,7,8-HxCDF	1.5189540e6	8.9722668e2	1690.03	NO		2.9392970e6	1.3238644e3	2220.24	NO	
26	13C-1,2,3,4,6,7,8-HpCDF	1.1835200e6	3.5804587e2	3299.19	NO		2.6693860e6	7.8871997e2	3384.45	NO	
27	13C-1,2,3,4-TCDD	2.8956440e6	5.5836865e2	5187.54	NO		3.5494150e6	2.3602309e2	15038.42	NO	
28	13C-1,2,3,7,8,9-HxCDD	2.1871390e6	7.0620349e2	3109.18	NO		1.7294470e6	1.1878761e3	1455.92	NO	

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59
Calibration: 02 May 2013 07:30:19

Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

2,3,7,8-TCDD

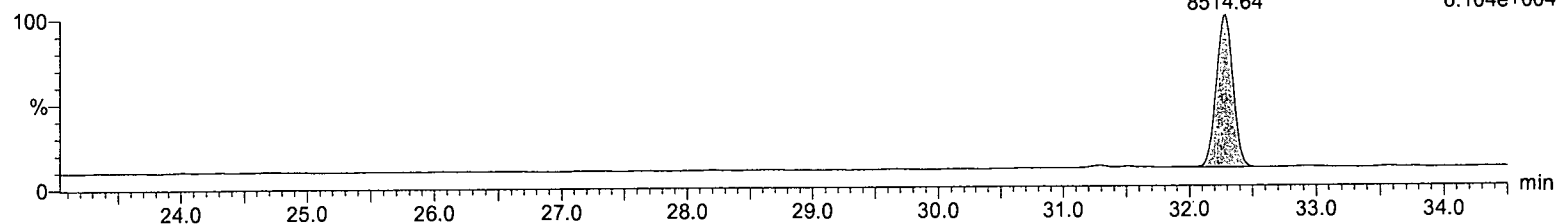
130501_HR_04
EDF-9999 CS-2 02/12/13



F1:Voltage SIR,EI+
319.8965
5.251e+004

2,3,7,8-TCDD

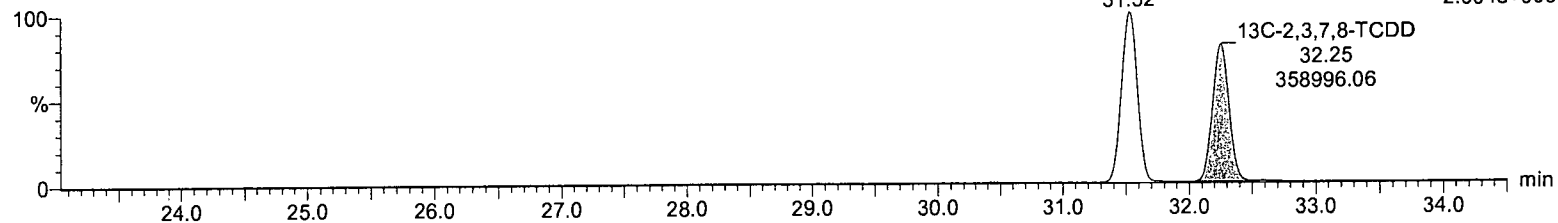
130501_HR_04
EDF-9999 CS-2 02/12/13



F1:Voltage SIR,EI+
321.8936
6.104e+004

13C-2,3,7,8-TCDD

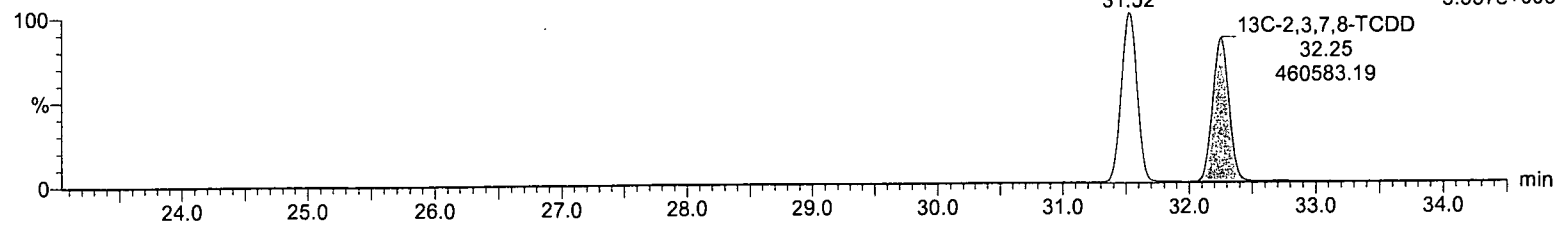
130501_HR_04
EDF-9999 CS-2 02/12/13



F1:Voltage SIR,EI+
331.9368
2.904e+006

13C-2,3,7,8-TCDD

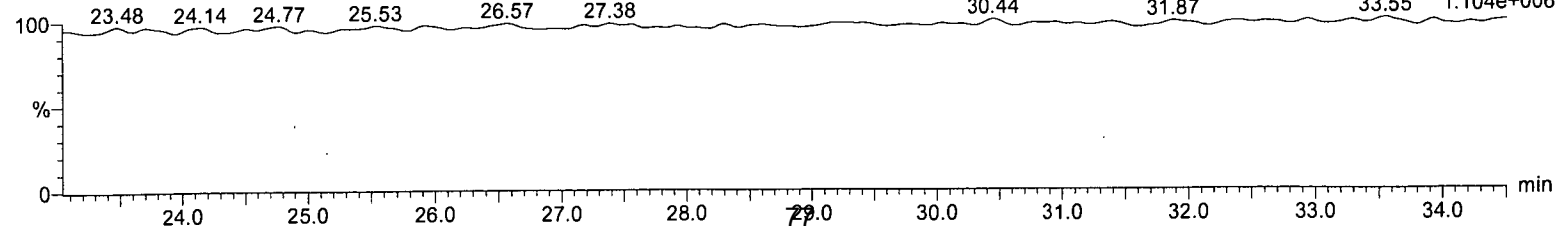
130501_HR_04
EDF-9999 CS-2 02/12/13



F1:Voltage SIR,EI+
333.9338
3.557e+006

PFK1

130501_HR_04
EDF-9999 CS-2 02/12/13



F1:Voltage SIR,EI+
292.9824
1.104e+006

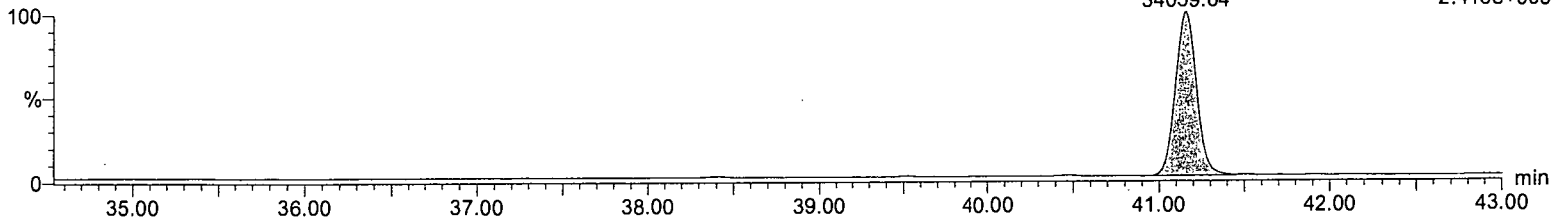
Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

1,2,3,7,8-PeCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

1,2,3,7,8-PeCDD
41.16
34059.64

F2:Voltage SIR,EI+
355.8546
2.415e+005

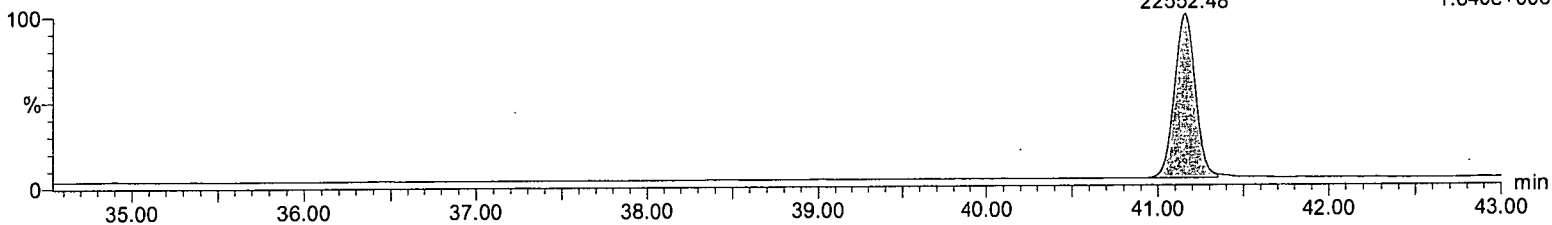


1,2,3,7,8-PeCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

1,2,3,7,8-PeCDD
41.16
22552.48

F2:Voltage SIR,EI+
357.8516
1.640e+005

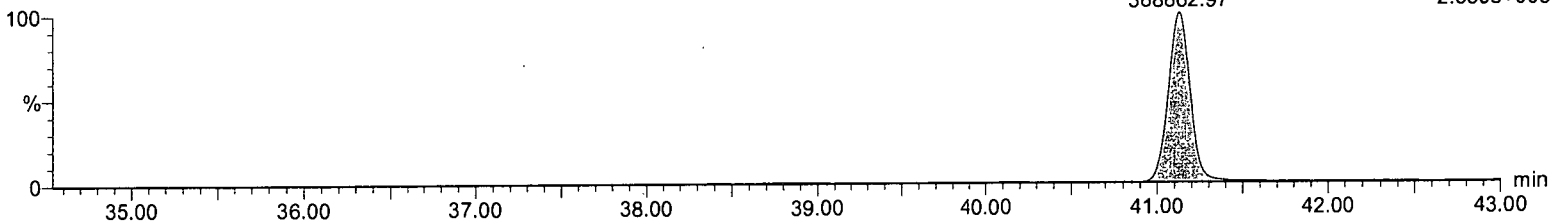


13C-1,2,3,7,8-PeCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-1,2,3,7,8-PeCDD
41.13
388862.97

F2:Voltage SIR,EI+
367.8949
2.639e+006

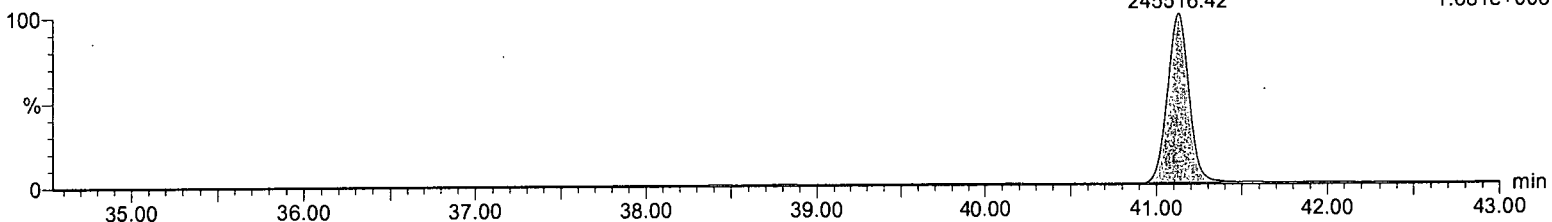


13C-1,2,3,7,8-PeCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-1,2,3,7,8-PeCDD
41.13
245516.42

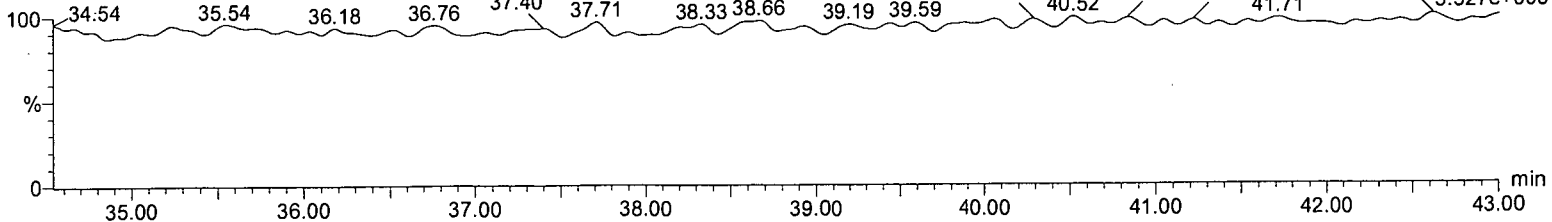
F2:Voltage SIR,EI+
369.8919
1.681e+006



PFK2

130501_HR_04
EDF-9999 CS-2 02/12/13

F2:Voltage SIR,EI+
354.9792
3.327e+005



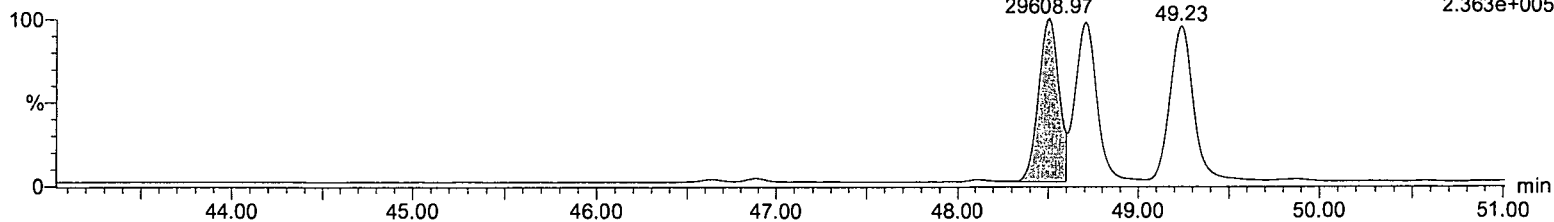
Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

1,2,3,4,7,8-HxCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

1,2,3,4,7,8-HxCDD
48.50

F3:Voltage SIR,EI+
389.8156
2.363e+005

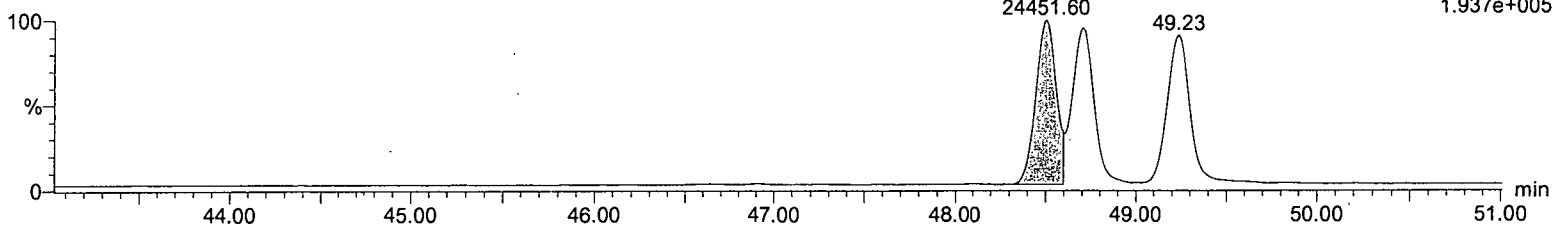


1,2,3,4,7,8-HxCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

1,2,3,4,7,8-HxCDD
48.50

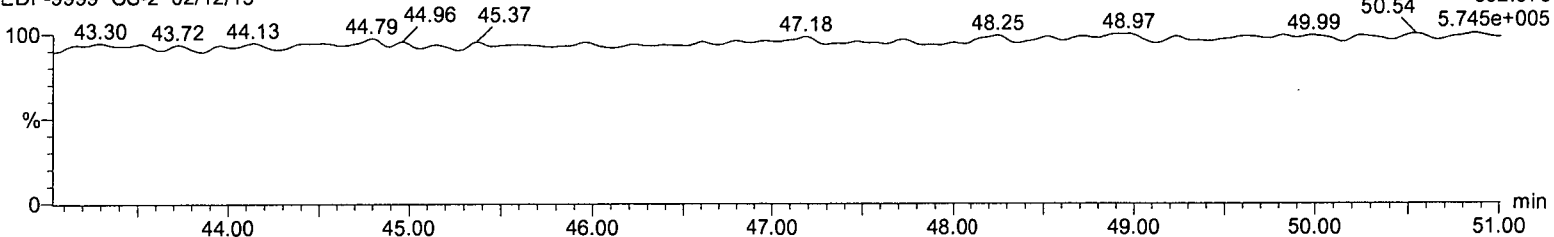
F3:Voltage SIR,EI+
391.8127
1.937e+005



PFK3

130501_HR_04
EDF-9999 CS-2 02/12/13

F3:Voltage SIR,EI+
392.976
5.745e+005

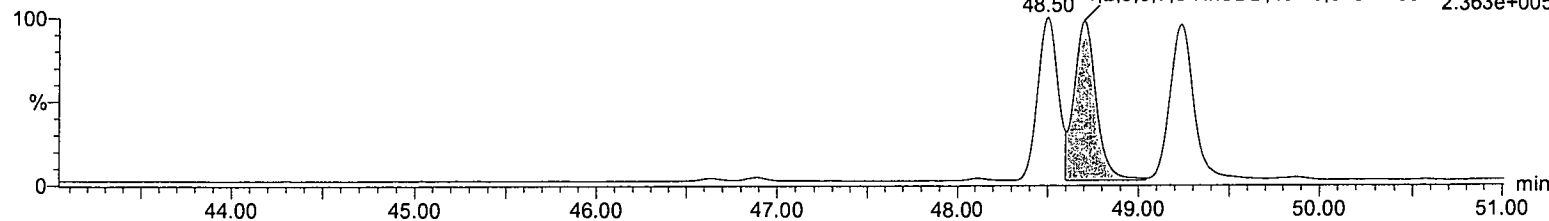


Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

1,2,3,6,7,8-HxCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

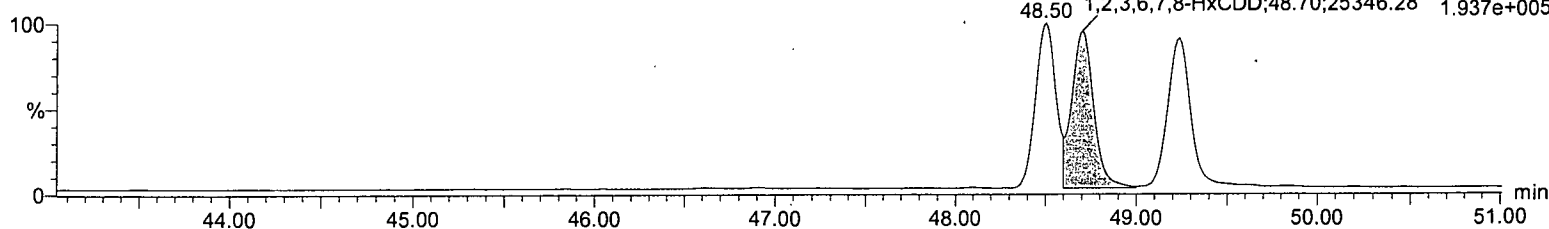
F3:Voltage SIR,EI+
389.8156
2.363e+005



1,2,3,6,7,8-HxCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

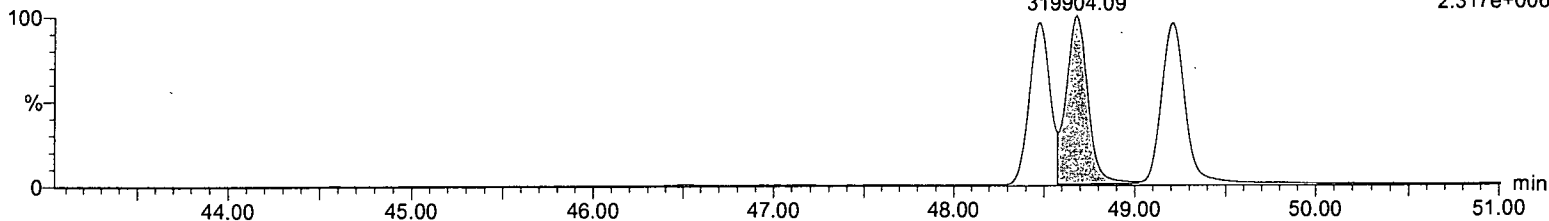
F3:Voltage SIR,EI+
391.8127
1.937e+005



13C-1,2,3,6,7,8-HxCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

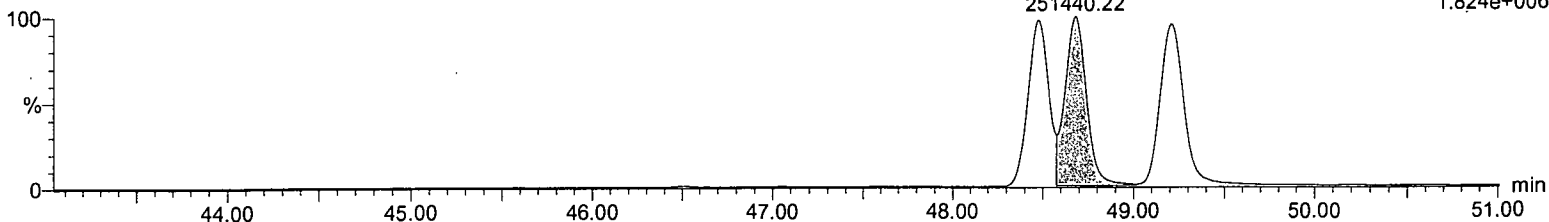
13C-1,2,3,6,7,8-HxCDD
48.68
319904.09
F3:Voltage SIR,EI+
401.8559
2.317e+006



13C-1,2,3,6,7,8-HxCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

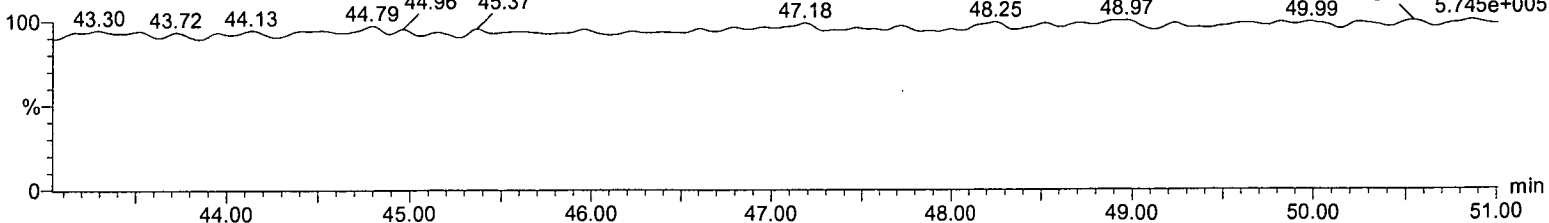
13C-1,2,3,6,7,8-HxCDD
48.68
251440.22
F3:Voltage SIR,EI+
403.8529
1.824e+006



PFK3

130501_HR_04
EDF-9999 CS-2 02/12/13

F3:Voltage SIR,EI+
392.976
5.745e+005

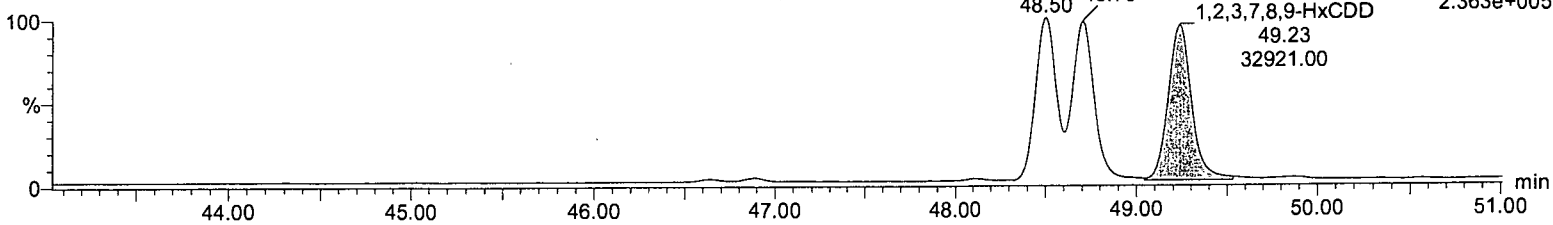


Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

1,2,3,7,8,9-HxCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

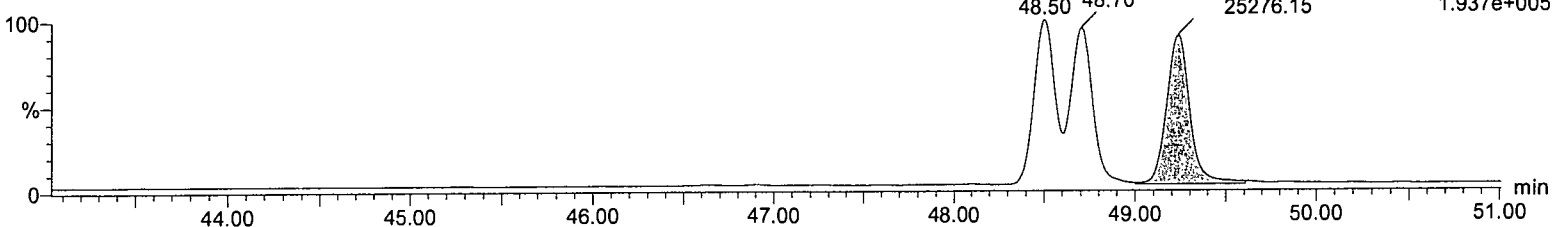
F3:Voltage SIR,EI+
389.8156
2.363e+005



1,2,3,7,8,9-HxCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

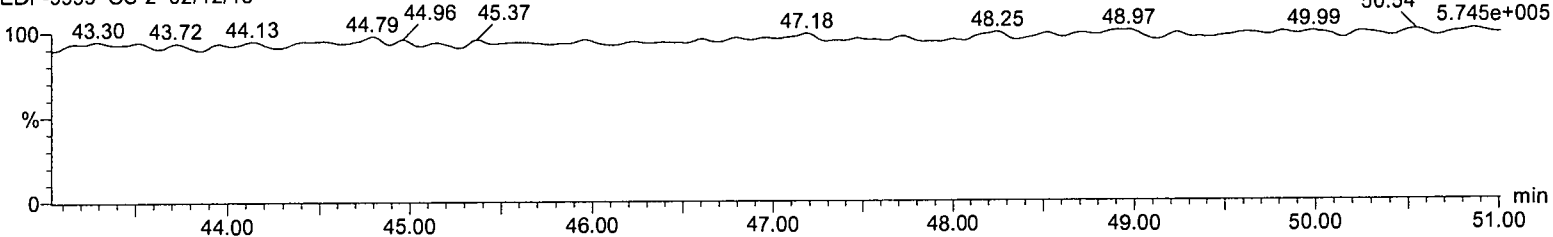
1,2,3,7,8,9-HxCDD F3:Voltage SIR,EI+
49.23
25276.15
391.8127
1.937e+005



PFK3

130501_HR_04
EDF-9999 CS-2 02/12/13

F3:Voltage SIR,EI+
392.976
5.745e+005



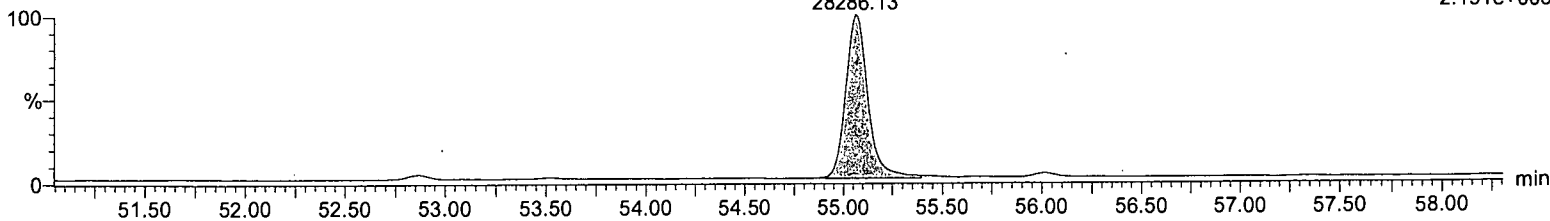
Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

1,2,3,4,6,7,8-HpCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

1,2,3,4,6,7,8-HpCDD
55.06
28286.13

F4:Voltage SIR,EI+
423.7767
2.191e+005

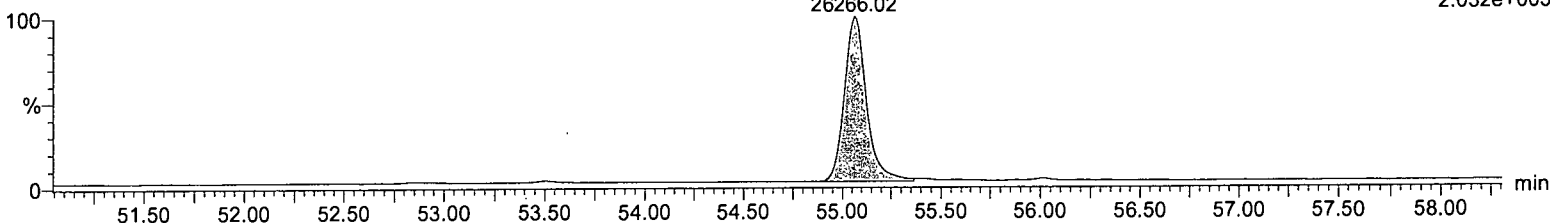


1,2,3,4,6,7,8-HpCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

1,2,3,4,6,7,8-HpCDD
55.06
26266.02

F4:Voltage SIR,EI+
425.7737
2.032e+005

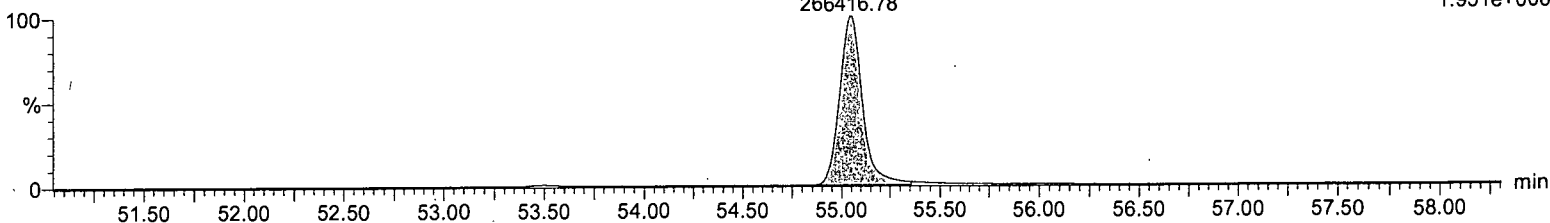


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-1,2,3,4,6,7,8-HpCDD
55.04
266416.78

F4:Voltage SIR,EI+
435.8169
1.951e+006

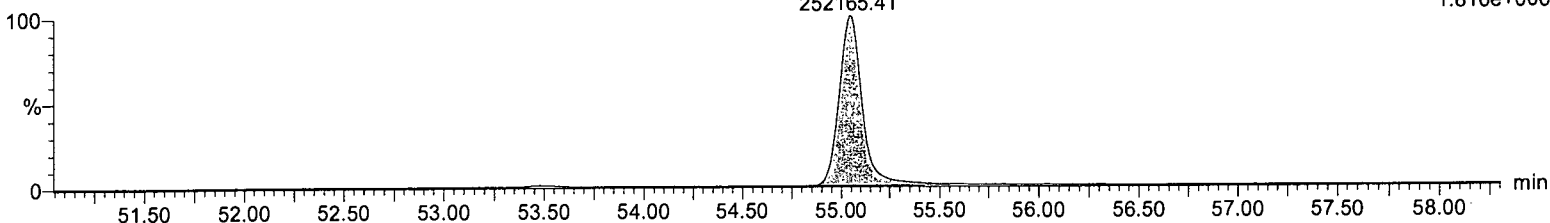


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-1,2,3,4,6,7,8-HpCDD
55.04
252165.41

F4:Voltage SIR,EI+
437.814
1.816e+006

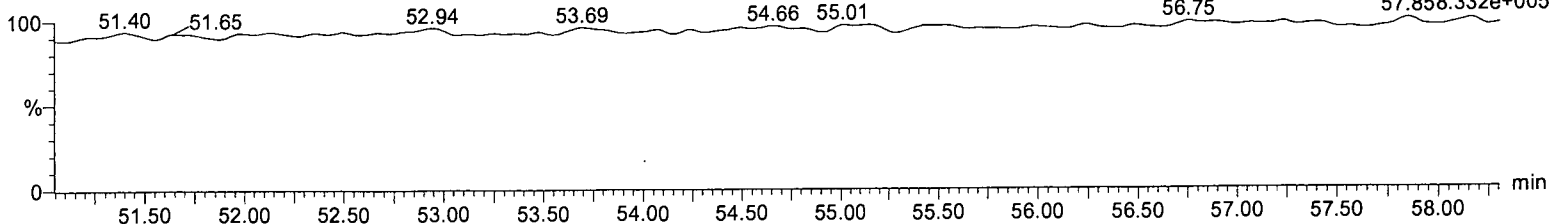


PFK4

130501_HR_04
EDF-9999 CS-2 02/12/13

51.40 51.65 52.94 53.69 54.66 55.01

F4:Voltage SIR,EI+
430.9728
57.858.332e+005



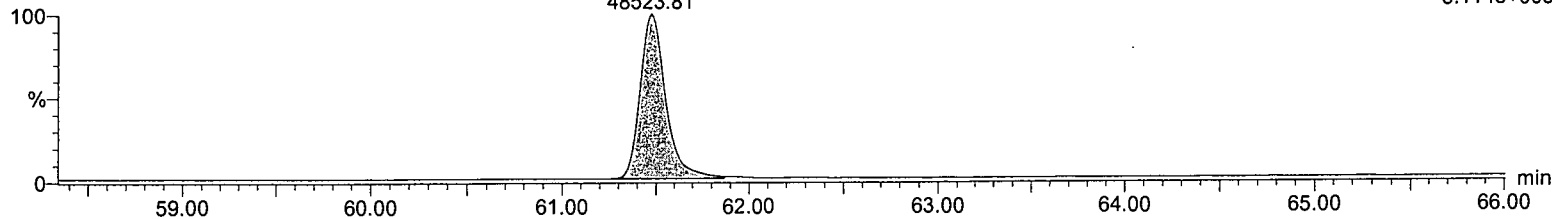
Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

OCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

OCDD
61.47
48523.81

F5:Voltage SIR,EI+
457.7377
3.114e+005

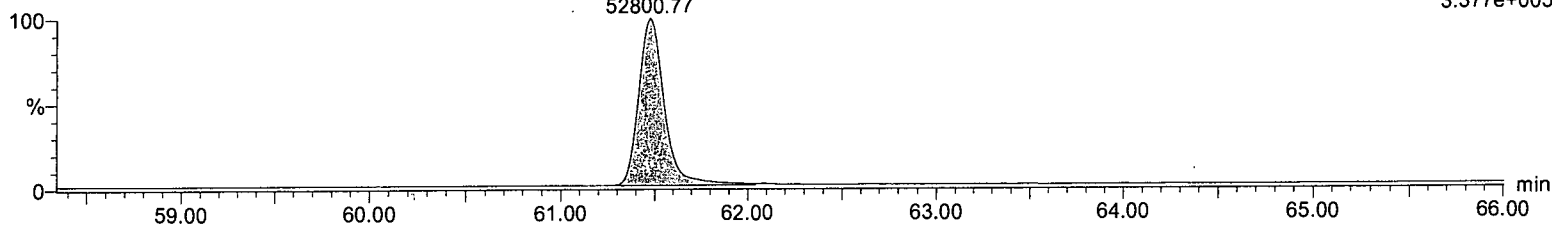


OCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

OCDD
61.47
52800.77

F5:Voltage SIR,EI+
459.7348
3.377e+005

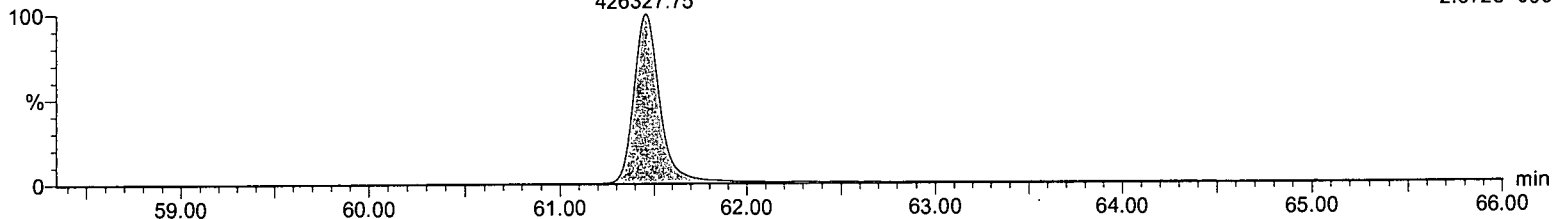


13C-OCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-OCDD
61.45
426327.75

F5:Voltage SIR,EI+
469.778
2.672e+006

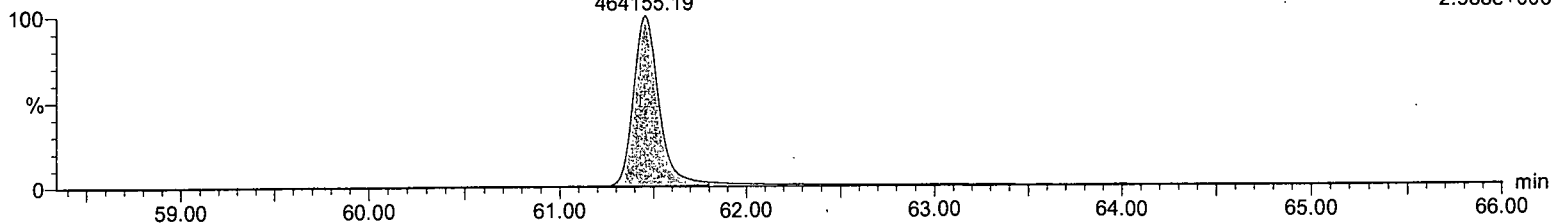


13C-OCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-OCDD
61.45
464155.19

F5:Voltage SIR,EI+
471.775
2.988e+006

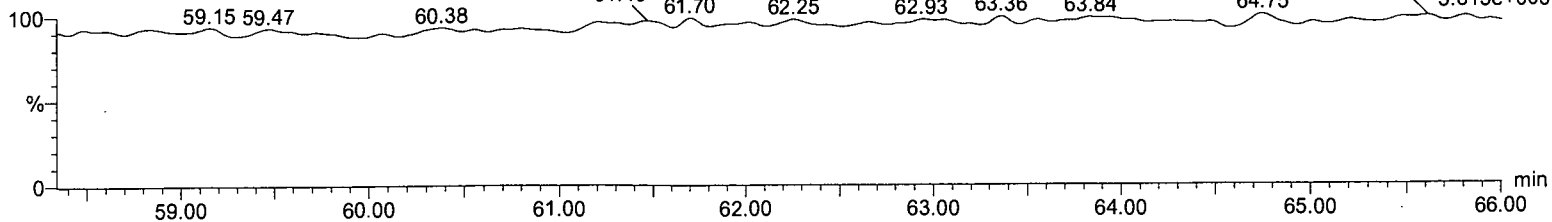


PFK5

130501_HR_04
EDF-9999 CS-2 02/12/13

61.46 61.70 62.25 62.93 63.36 63.84 64.75

F5:Voltage SIR,EI+
442.9728
5.613e+005



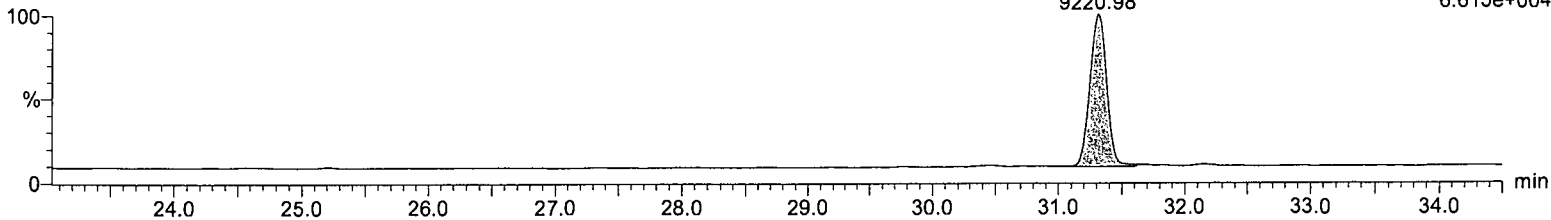
Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

2,3,7,8-TCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

2,3,7,8-TCDF
31.30
9220.98

F1:Voltage SIR,EI+
303.9016
6.615e+004

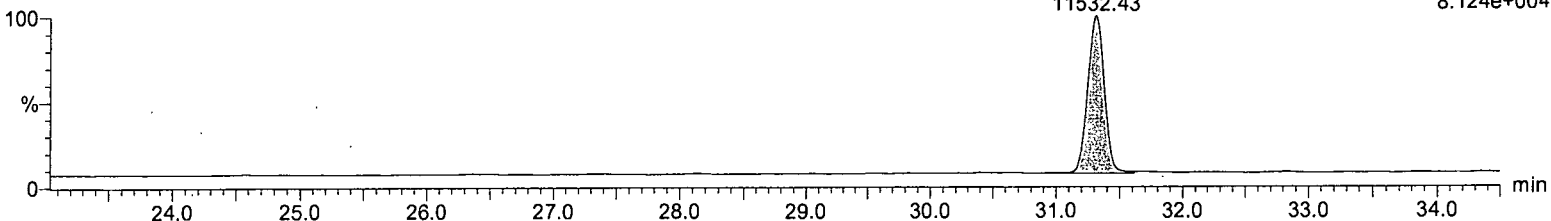


2,3,7,8-TCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

2,3,7,8-TCDF
31.32
11532.43

F1:Voltage SIR,EI+
305.8987
8.124e+004

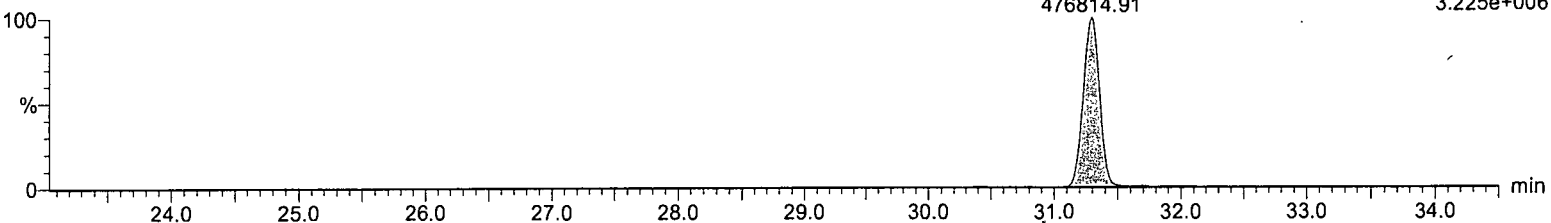


13C-2,3,7,8-TCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-2,3,7,8-TCDF
31.29
476814.91

F1:Voltage SIR,EI+
315.9419
3.225e+006

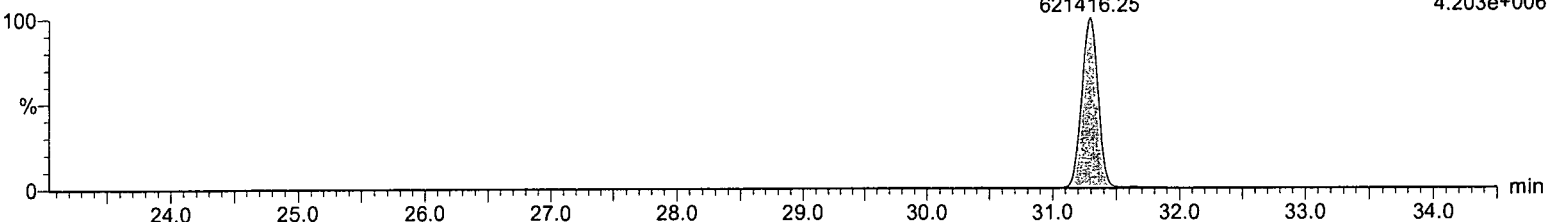


13C-2,3,7,8-TCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-2,3,7,8-TCDF
31.29
621416.25

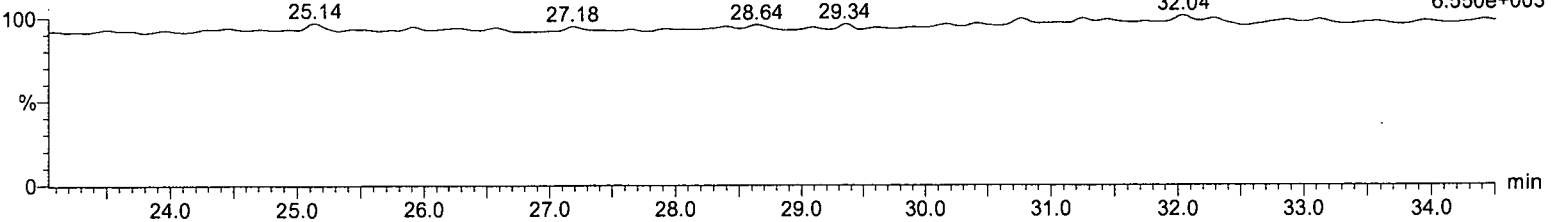
F1:Voltage SIR,EI+
317.9389
4.203e+006



HxCDFE

130501_HR_04
EDF-9999 CS-2 02/12/13

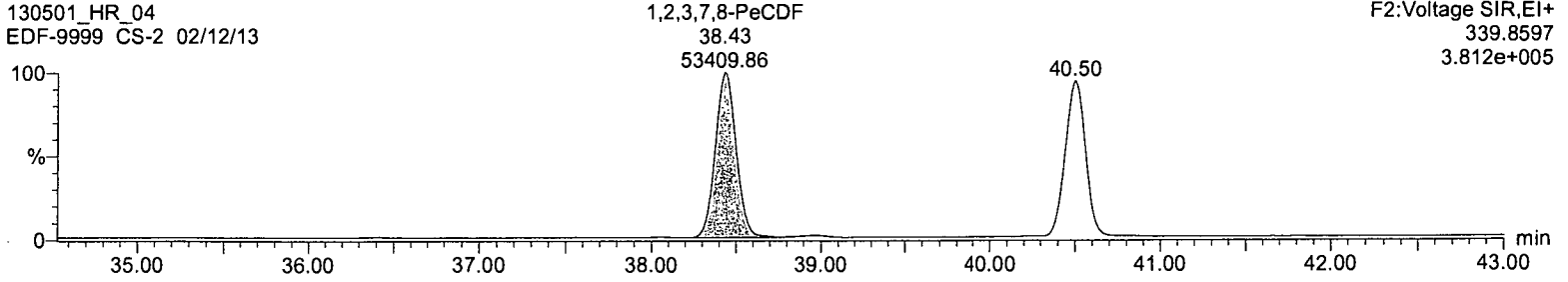
F1:Voltage SIR,EI+
375.8364
6.550e+003



Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

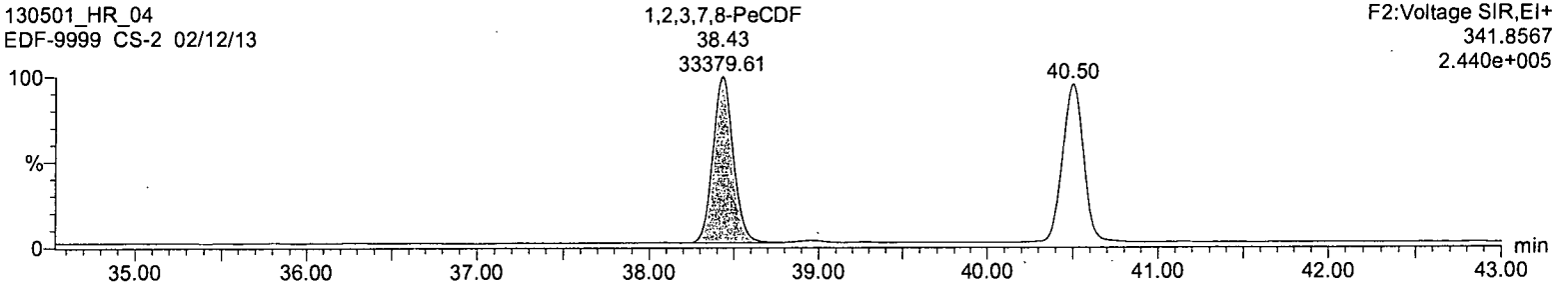
1,2,3,7,8-PeCDF

130501_HR_04
EDF-9999 CS-2 02/12/13



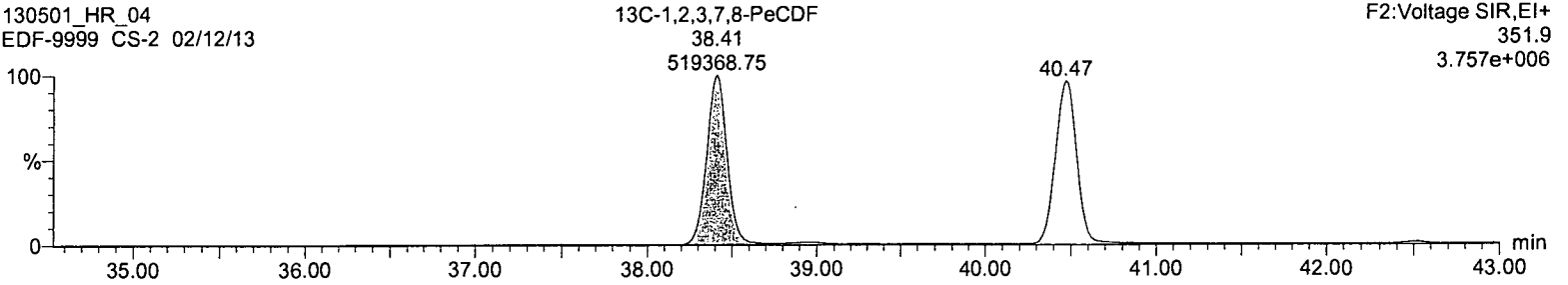
1,2,3,7,8-PeCDF

130501_HR_04
EDF-9999 CS-2 02/12/13



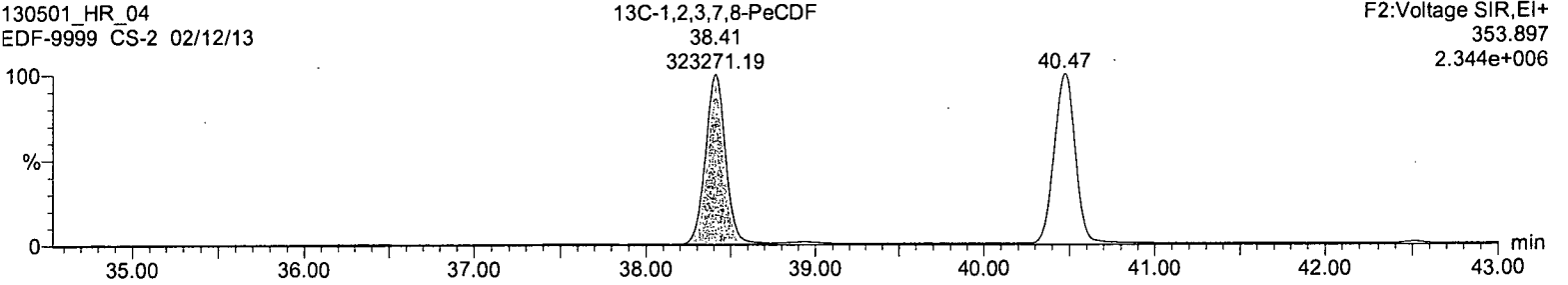
13C-1,2,3,7,8-PeCDF

130501_HR_04
EDF-9999 CS-2 02/12/13



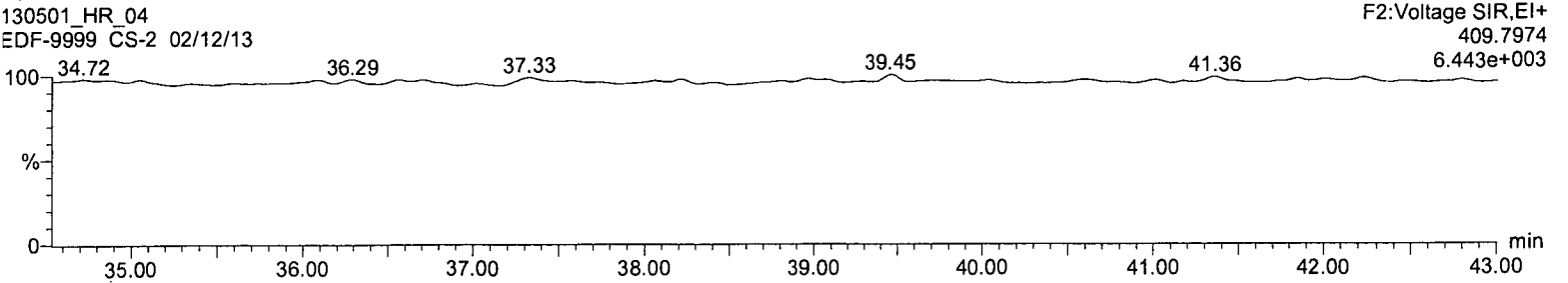
13C-1,2,3,7,8-PeCDF

130501_HR_04
EDF-9999 CS-2 02/12/13



-IpCDPE

130501_HR_04
EDF-9999 CS-2 02/12/13

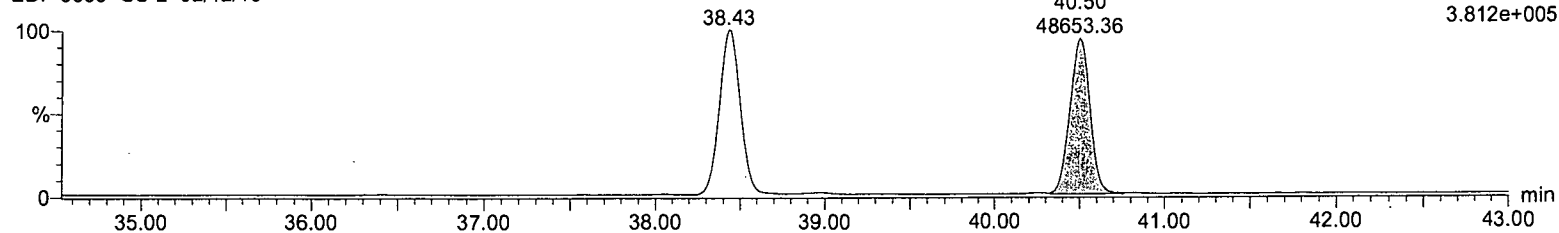


Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

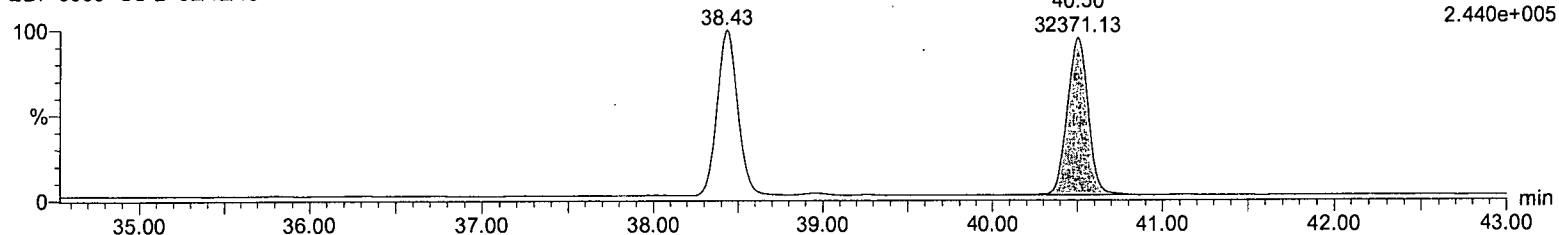
2,3,4,7,8-PeCDF

130501_HR_04
EDF-9999 CS-2 02/12/13



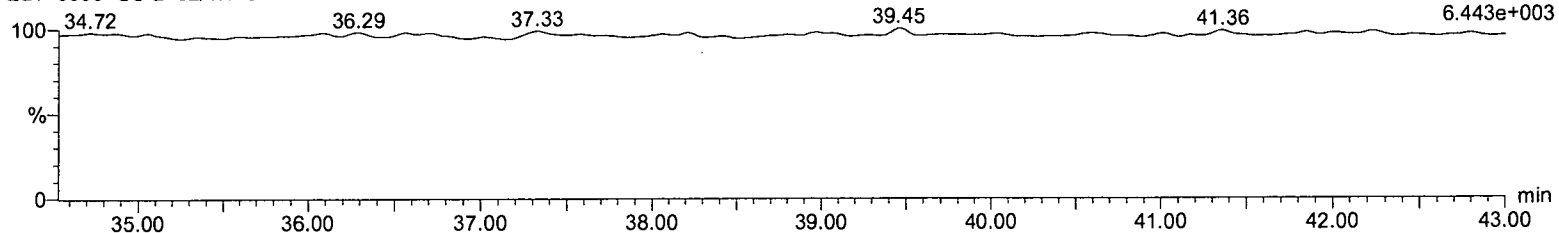
2,3,4,7,8-PeCDF

130501_HR_04
EDF-9999 CS-2 02/12/13



HpCDPE

130501_HR_04
EDF-9999 CS-2 02/12/13



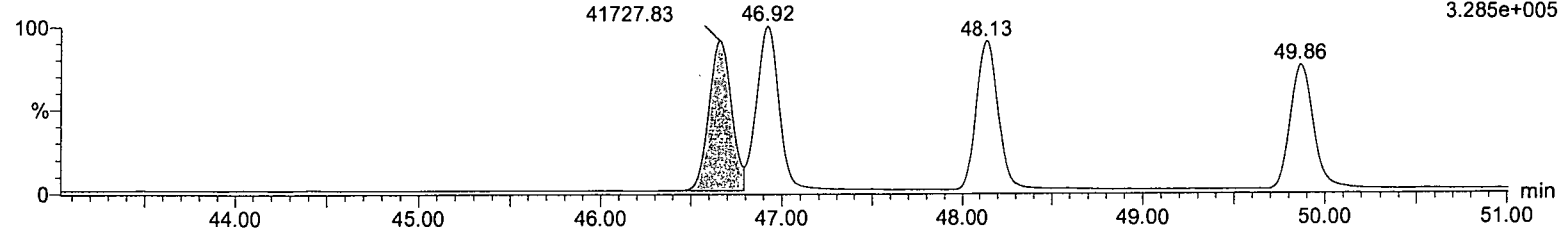
Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

1,2,3,4,7,8-HxCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

1,2,3,4,7,8-HxCDF
46.65

F3:Voltage SIR,EI+
373.8208
3.285e+005

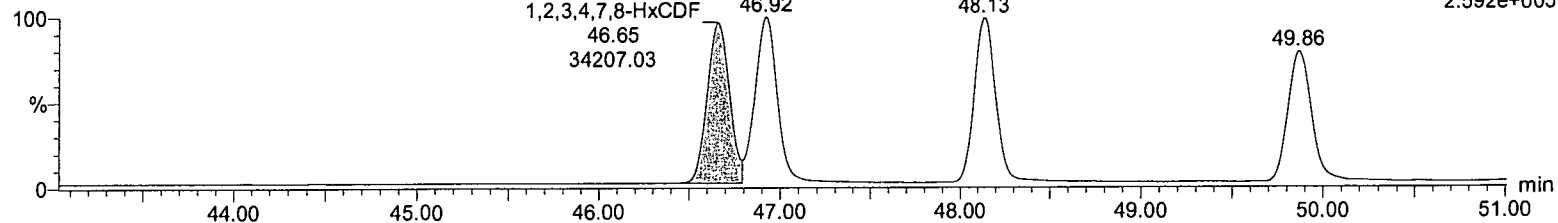


1,2,3,4,7,8-HxCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

1,2,3,4,7,8-HxCDF
46.65

F3:Voltage SIR,EI+
375.8178
2.592e+005

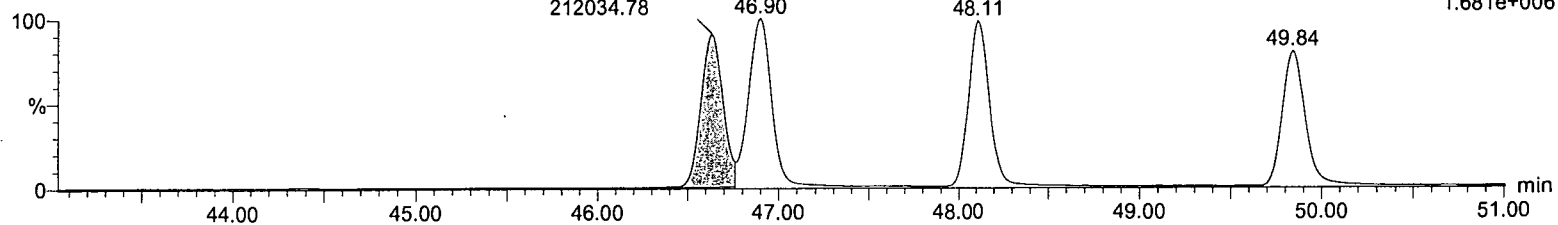


13C-1,2,3,4,7,8-HxCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-1,2,3,4,7,8-HxCDF
46.63

F3:Voltage SIR,EI+
383.8639
1.681e+006

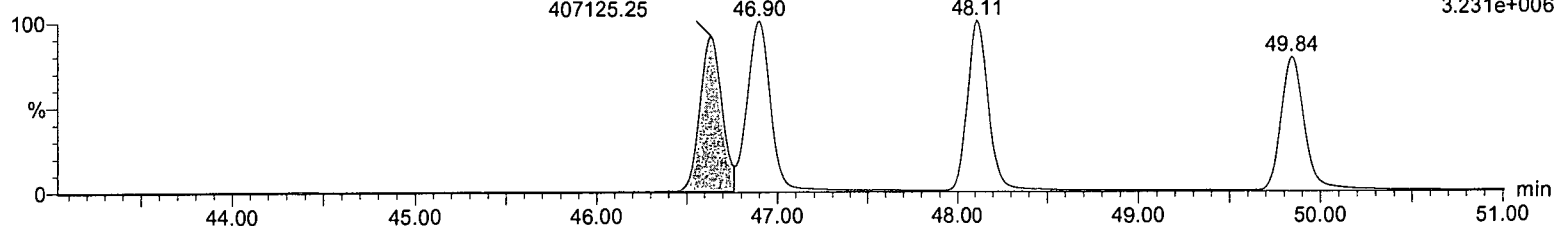


13C-1,2,3,4,7,8-HxCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-1,2,3,4,7,8-HxCDF
46.63

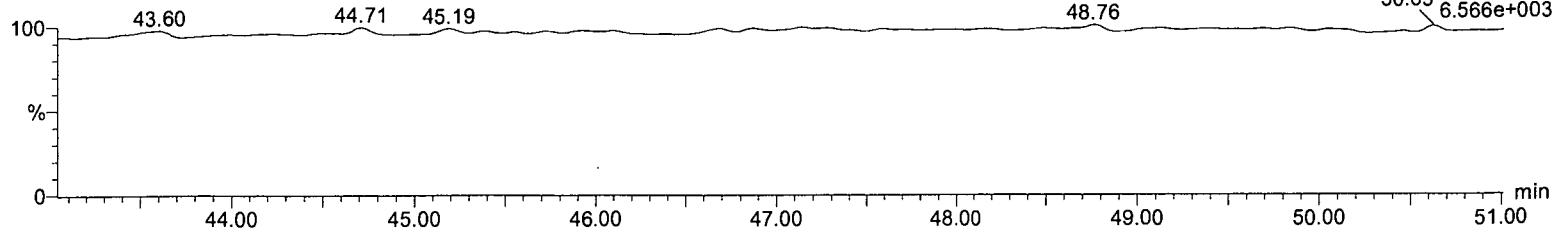
F3:Voltage SIR,EI+
385.861
3.231e+006



OCDPE

130501_HR_04
EDF-9999 CS-2 02/12/13

F3:Voltage SIR,EI+
445.7555
50.63 6.566e+003



Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

1,2,3,6,7,8-HxCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

1,2,3,6,7,8-HxCDF

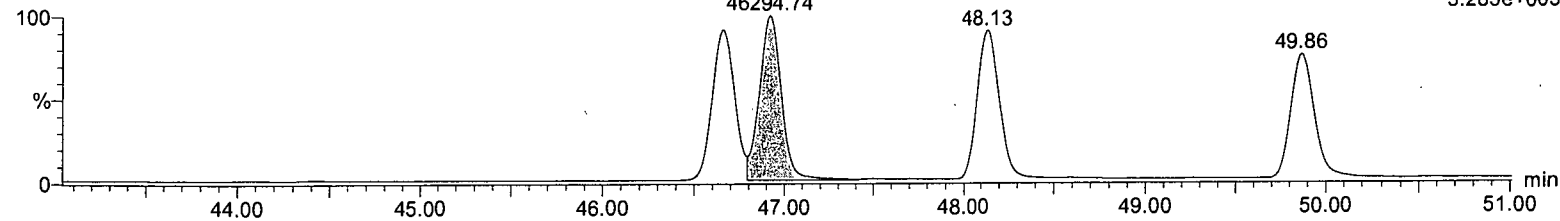
46.92

46294.74

48.13

49.86

F3:Voltage SIR,EI+
373.8208
3.285e+005



1,2,3,6,7,8-HxCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

1,2,3,6,7,8-HxCDF

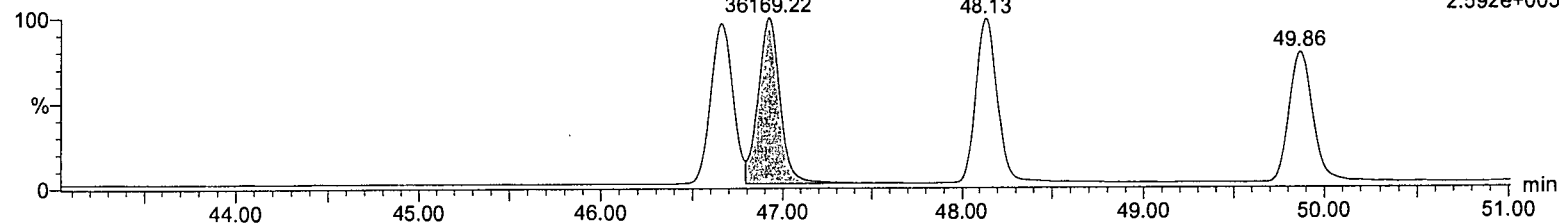
46.92

36169.22

48.13

49.86

F3:Voltage SIR,EI+
375.8178
2.592e+005



2,3,4,6,7,8-HxCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

2,3,4,6,7,8-HxCDF

46.65

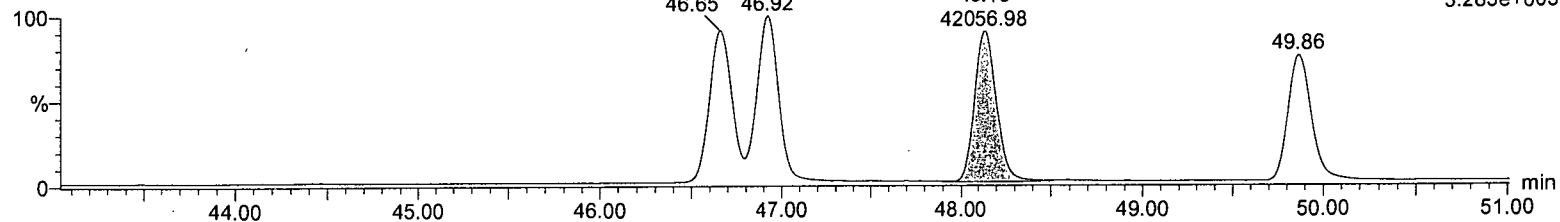
46.92

48.13

42056.98

49.86

F3:Voltage SIR,EI+
373.8208
3.285e+005



2,3,4,6,7,8-HxCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

2,3,4,6,7,8-HxCDF

46.65

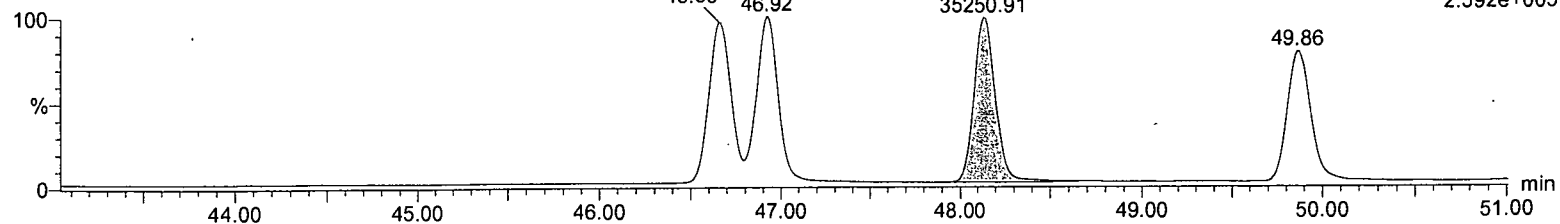
46.92

48.13

35250.91

49.86

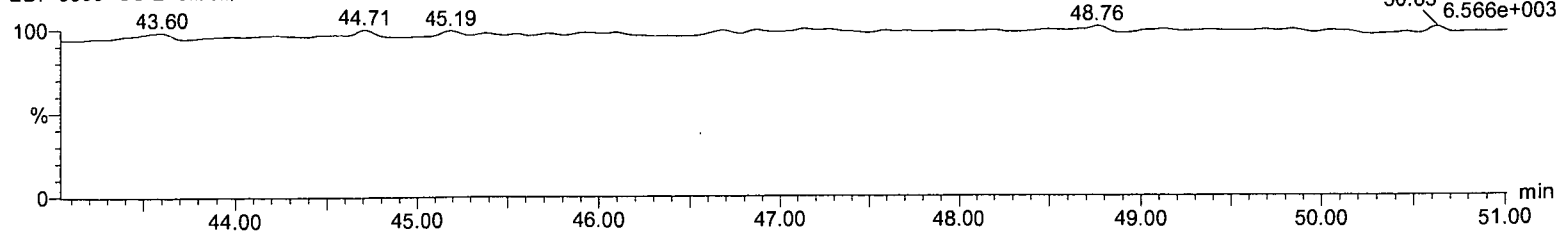
F3:Voltage SIR,EI+
375.8178
2.592e+005



OCDPE

130501_HR_04
EDF-9999 CS-2 02/12/13

F3:Voltage SIR,EI+
445.7555
50.63 6.566e+003

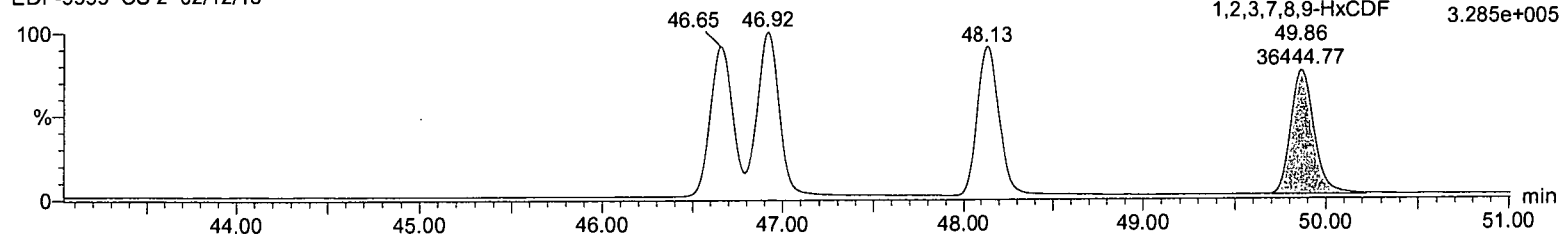


Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

1,2,3,7,8,9-HxCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

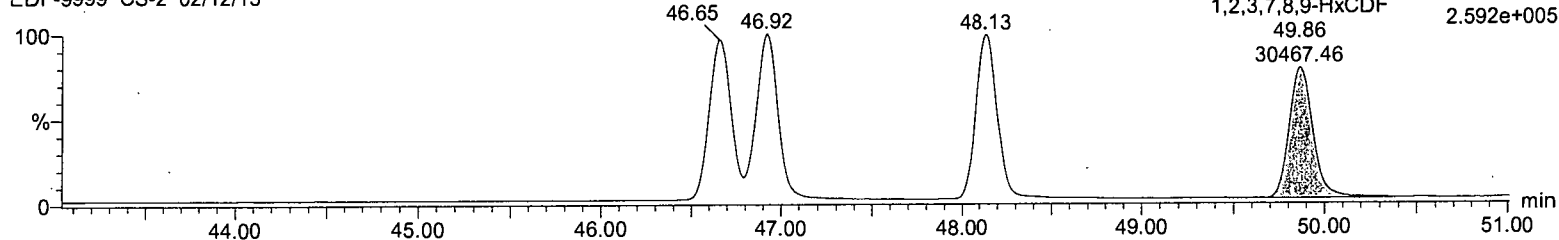
F3:Voltage SIR,EI+
373.8208
3.285e+005



1,2,3,7,8,9-HxCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

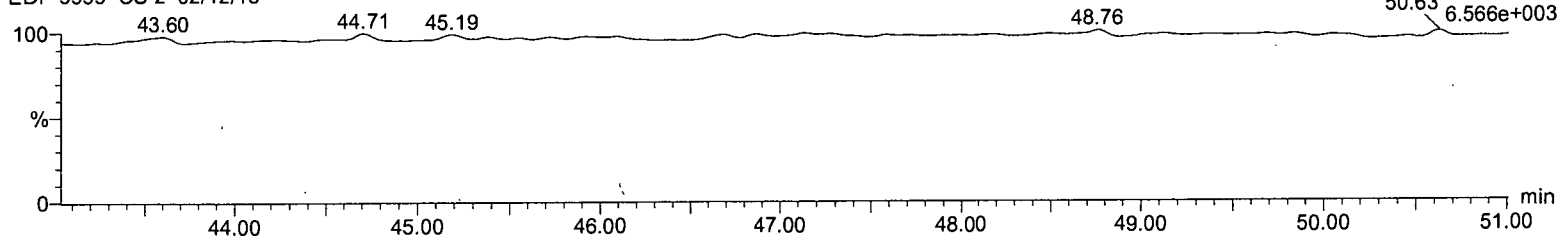
F3:Voltage SIR,EI+
375.8178
2.592e+005



OCDPE

130501_HR_04
EDF-9999 CS-2 02/12/13

F3:Voltage SIR,EI+
445.7555
6.566e+003



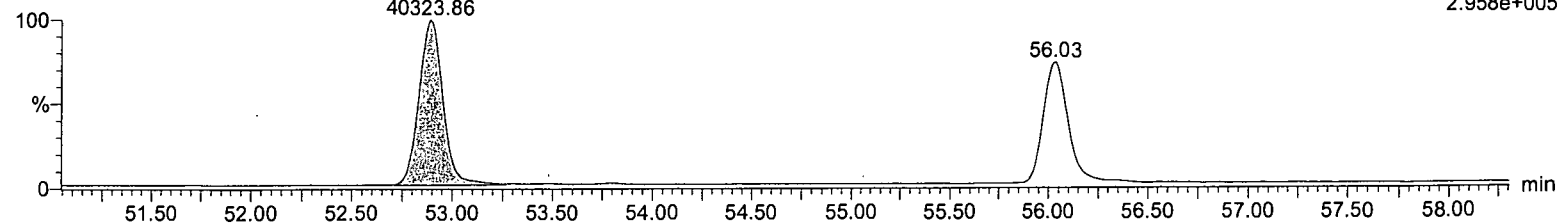
Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

1,2,3,4,6,7,8-HpCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

1,2,3,4,6,7,8-HpCDF
52.89
40323.86

F4:Voltage SIR,EI+
407.7818
2.958e+005

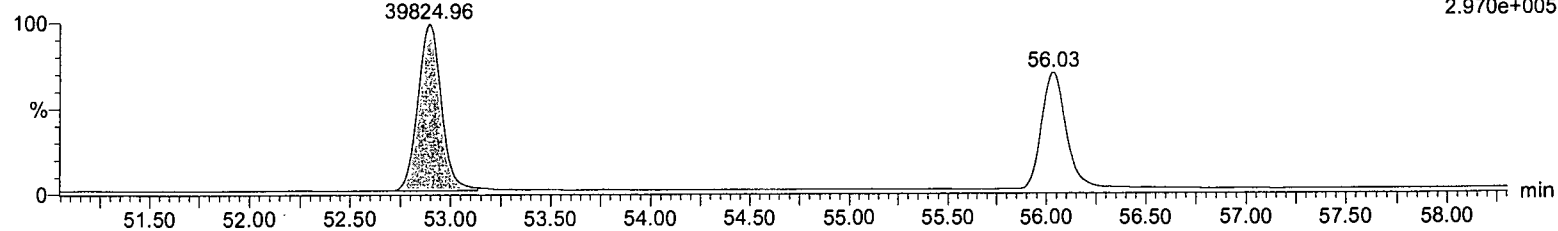


1,2,3,4,6,7,8-HpCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

1,2,3,4,6,7,8-HpCDF
52.89
39824.96

F4:Voltage SIR,EI+
409.7788
2.970e+005

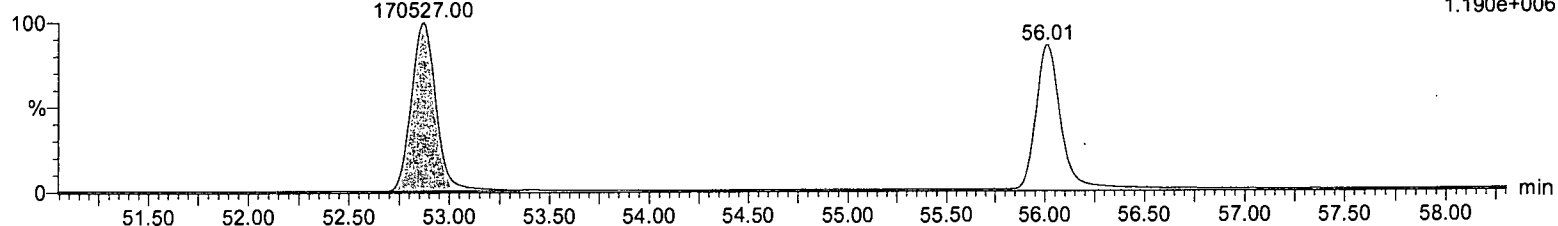


13C-1,2,3,4,6,7,8-HpCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-1,2,3,4,6,7,8-HpCDF
52.87
170527.00

F4:Voltage SIR,EI+
417.825
1.190e+006

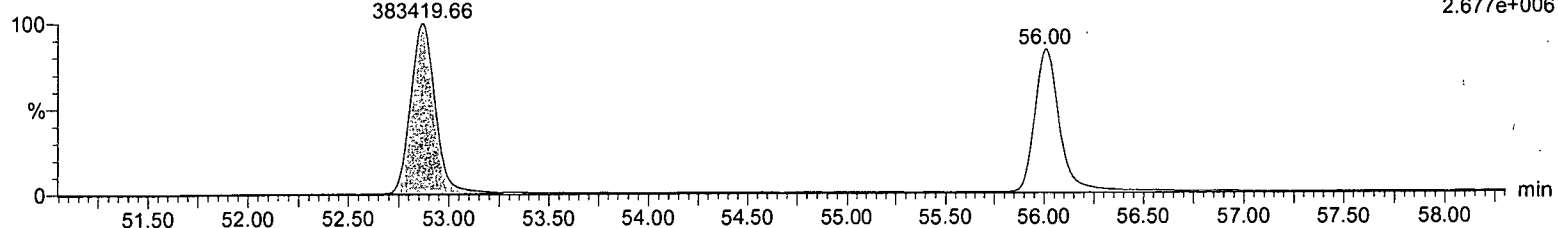


13C-1,2,3,4,6,7,8-HpCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-1,2,3,4,6,7,8-HpCDF
52.87
383419.66

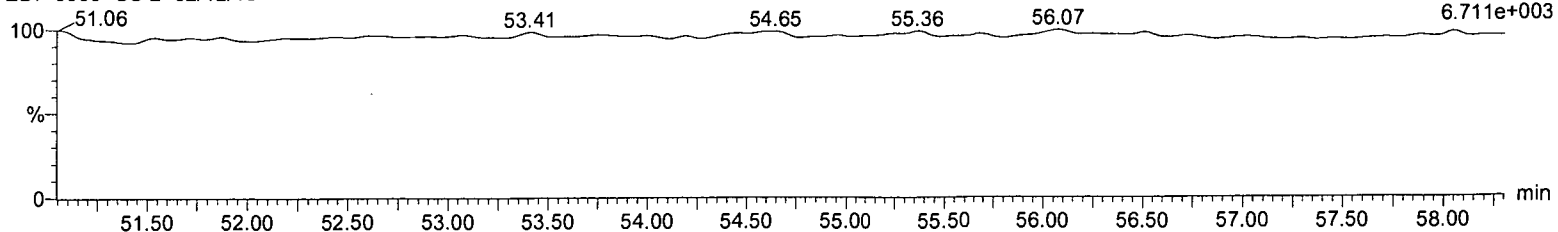
F4:Voltage SIR,EI+
419.822
2.677e+006



NCDPE

130501_HR_04
EDF-9999 CS-2 02/12/13

F4:Voltage SIR,EI+
479.7165
6.711e+003



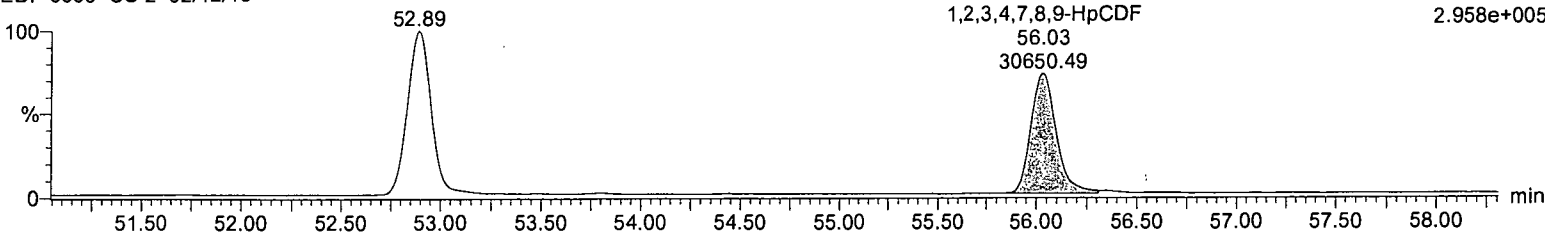
Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

1,2,3,4,7,8,9-HpCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

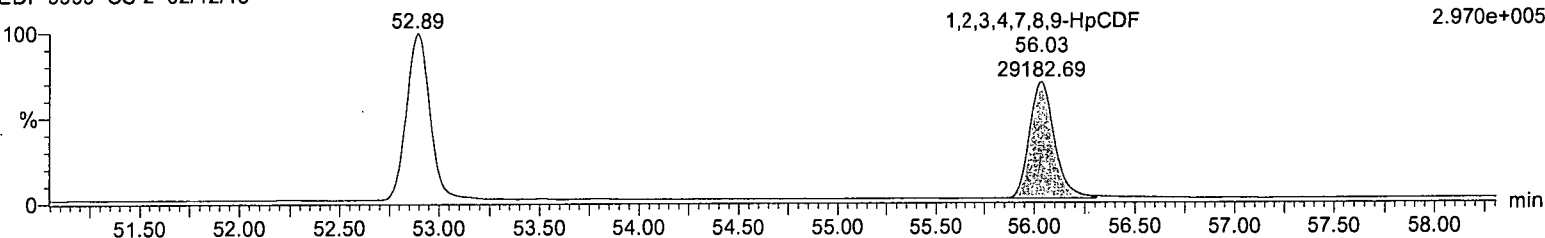
F4:Voltage SIR,EI+
407.7818
2.958e+005



1,2,3,4,7,8,9-HpCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

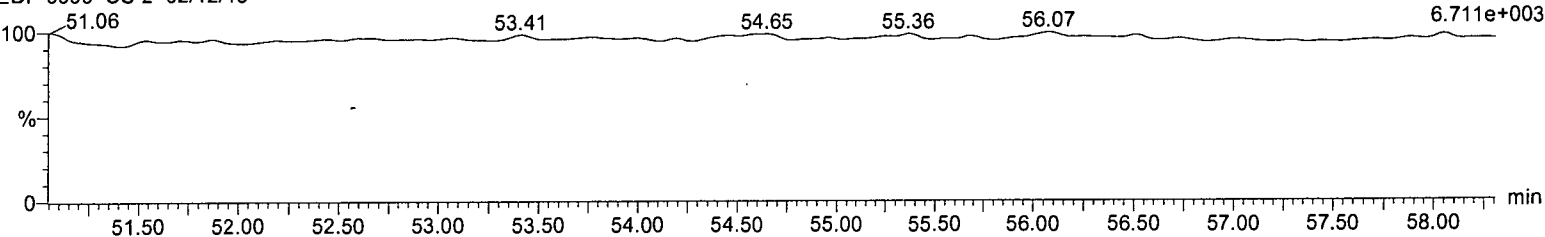
F4:Voltage SIR,EI+
409.7788
2.970e+005



NCDPE

130501_HR_04
EDF-9999 CS-2 02/12/13

F4:Voltage SIR,EI+
479.7165
6.711e+003



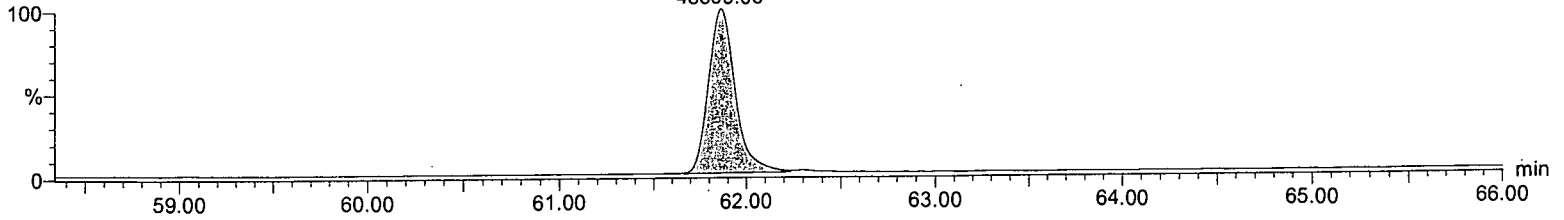
Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

OCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

OCDF
61.86
48659.06

F5:Voltage SIR,EI+
441.7428
3.007e+005

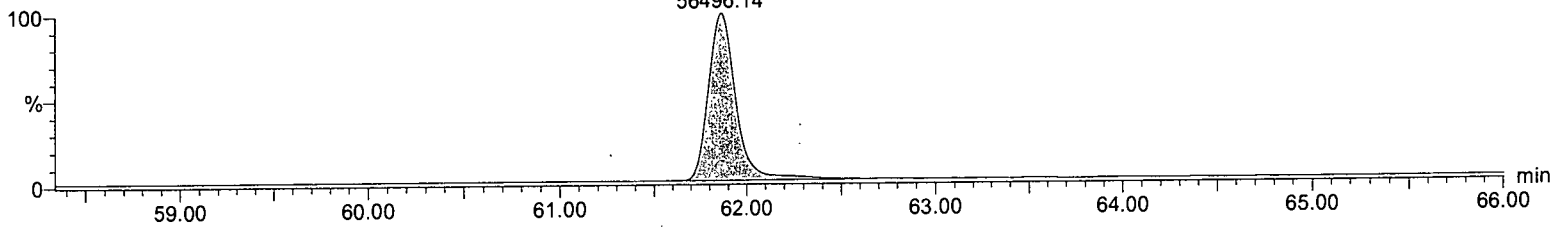


OCDF

130501_HR_04
EDF-9999 CS-2 02/12/13

OCDF
61.86
56496.14

F5:Voltage SIR,EI+
443.7399
3.376e+005

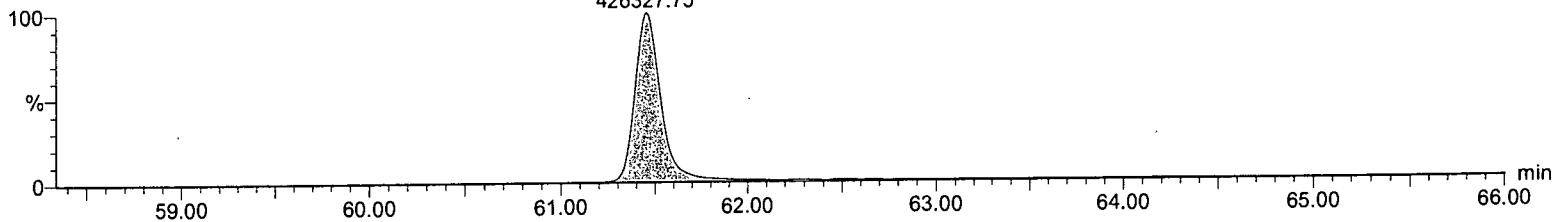


13C-OCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-OCDD
61.45
426327.75

F5:Voltage SIR,EI+
469.778
2.672e+006

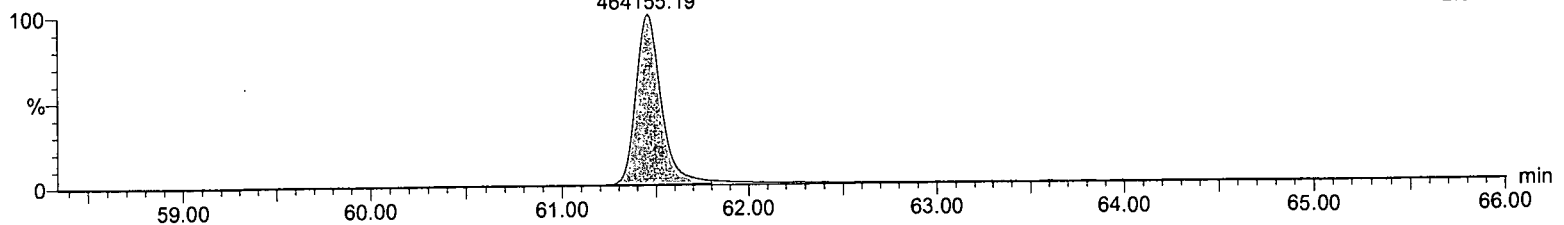


13C-OCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-OCDD
61.45
464155.19

F5:Voltage SIR,EI+
471.775
2.988e+006

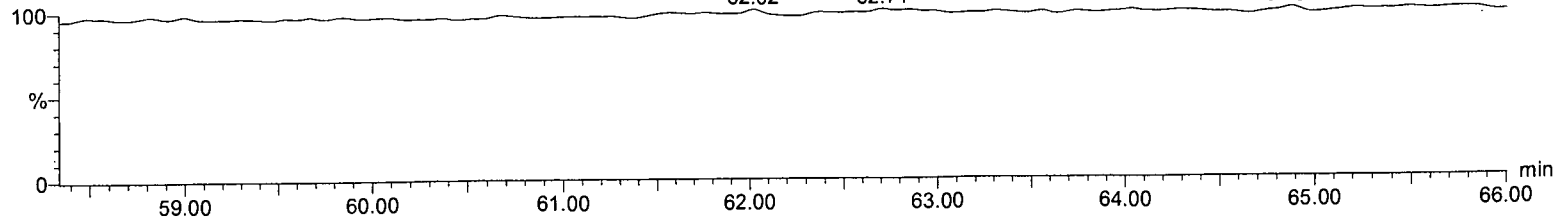


DCDPE

130501_HR_04
EDF-9999 CS-2 02/12/13

62.02 62.71 64.88

F5:Voltage SIR,EI+
513.6775
6.534e+003



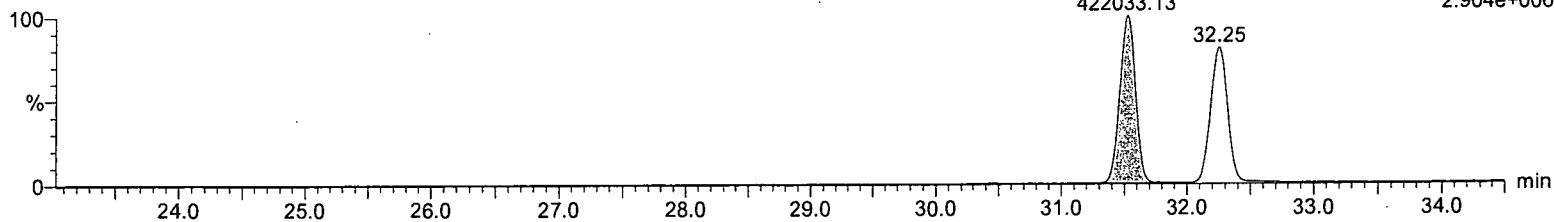
Name: 130501_HR_04, Date: 01-May-2013, Time: 19:58:17, Description: EDF-9999 CS-2 02/12/13, User: RP

13C-1,2,3,4-TCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-1,2,3,4-TCDD
31.52
422033.13

F1:Voltage SIR,EI+
331.9368
2.904e+006

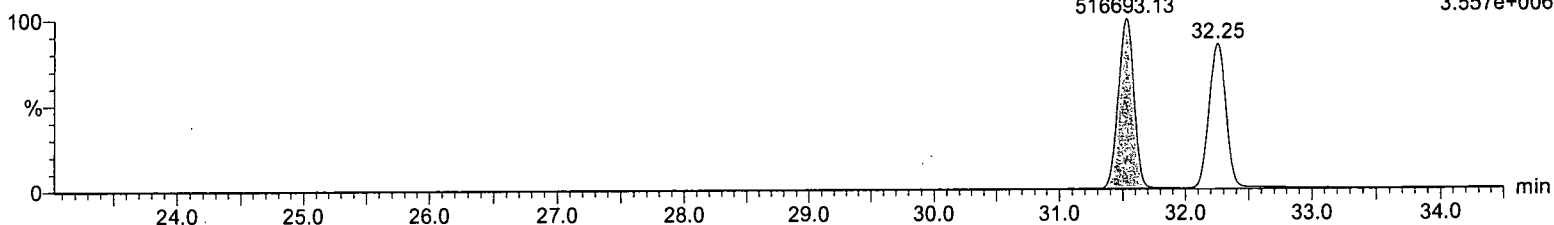


13C-1,2,3,4-TCDD

130501_HR_04
EDF-9999 CS-2 02/12/13

13C-1,2,3,4-TCDD
31.52
516693.13

F1:Voltage SIR,EI+
333.9338
3.557e+006



13C-1,2,3,7,8,9-HxCDD

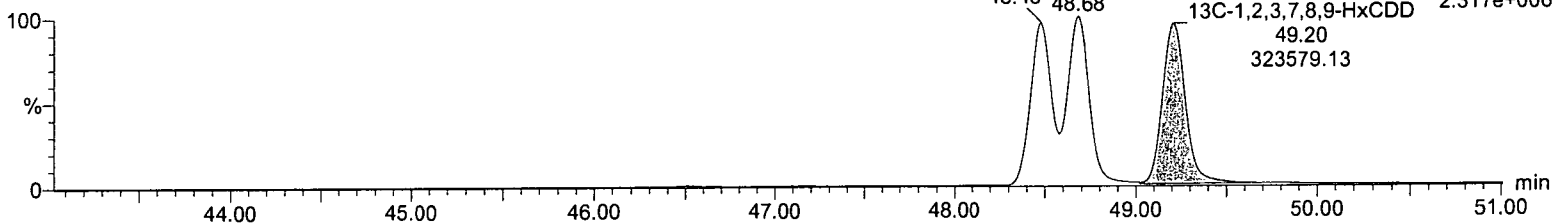
130501_HR_04
EDF-9999 CS-2 02/12/13

48.48

48.68

13C-1,2,3,7,8,9-HxCDD
49.20
323579.13

F3:Voltage SIR,EI+
401.8559
2.317e+006



13C-1,2,3,7,8,9-HxCDD

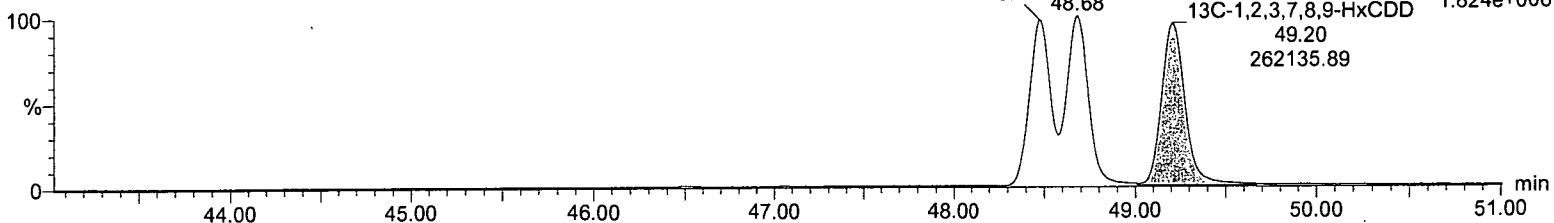
130501_HR_04
EDF-9999 CS-2 02/12/13

48.47

48.68

13C-1,2,3,7,8,9-HxCDD
49.20
262135.89

F3:Voltage SIR,EI+
403.8529
1.824e+006



Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: 02 May 2013 07:30:19

Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

#	Name	Signal	Noise:1	S/N:1	Flag	S/N:	Signal:2	Noise:2	S/N:2	Flag	S/N:
1	2,3,7,8-TCDD	1.1785000e5	2.3715558e2	494.53	NO		1.3950800e5	1.4103152e2	989.20	NO	
2	1,2,3,7,8-PeCDD	5.8978900e5	1.9464096e2	3028.25	NO		3.7000000e5	1.3214655e2	2799.92	NO	
3	1,2,3,4,7,8-HxCDD	5.7087200e5	2.4194650e2	2355.12	NO		4.6131200e5	5.5205444e2	835.63	NO	
4	1,2,3,6,7,8-HxCDD	5.3600800e5	2.4194650e2	2211.20	NO		4.4718300e5	5.5205444e2	810.03	NO	
5	1,2,3,7,8,9-HxCDD	5.4346900e5	2.4194650e2	2242.51	NO		4.3298100e5	5.5205444e2	784.31	NO	
6	1,2,3,4,6,7,8-HpCDD	4.5581600e5	5.9551440e2	763.62	NO		4.0788500e5	5.5399799e2	736.26	NO	
7	OCDD	6.1317500e5	1.7196983e2	3560.90	NO		6.9016700e5	5.2028040e2	1326.53	NO	
8	2,3,7,8-TCDF	1.5052000e5	1.1707070e2	1281.68	NO		1.8448700e5	1.5529407e2	1187.98	NO	
9	1,2,3,7,8-PeCDF	9.0090300e5	3.0124360e3	295.23	NO		5.8025200e5	4.5736459e2	1268.69	NO	
10	2,3,4,7,8-PeCDF	8.7089700e5	3.0124360e3	285.31	NO		5.5841000e5	4.5736459e2	1220.93	NO	
11	1,2,3,4,7,8-HxCDF	8.3367000e5	1.1732192e3	708.82	NO		6.6974500e5	4.0396326e2	1657.94	NO	
12	1,2,3,6,7,8-HxCDF	8.2291400e5	1.1732192e3	699.70	NO		6.7347800e5	4.0396326e2	1667.18	NO	
13	2,3,4,6,7,8-HxCDF	7.7373200e5	1.1732192e3	658.01	NO		6.1613800e5	4.0396326e2	1525.23	NO	
14	1,2,3,7,8,9-HxCDF	5.8350800e5	1.1732192e3	496.16	NO		4.7179500e5	4.0396326e2	1167.92	NO	
15	1,2,3,4,6,7,8-HpCDF	6.6125200e5	3.8971753e2	1693.13	NO		6.4955300e5	3.4222403e2	1898.03	NO	
16	1,2,3,4,7,8,9-HpCDF	4.8511900e5	3.8971753e2	1241.32	NO		4.5855400e5	3.4222403e2	1339.92	NO	
17	OCDF	7.4364600e5	2.8944952e2	2568.55	NO		8.5831900e5	2.5127788e2	3415.82	NO	
18	13C-2,3,7,8-TCDD	1.1880480e6	5.5823865e2	2129.65	NO		1.5057110e6	3.8105811e2	3951.39	NO	
19	13C-1,2,3,7,8-PeCDD	1.4381900e6	8.2613123e2	1740.01	NO		9.3039200e5	1.4905013e2	6242.14	NO	
20	13C-1,2,3,6,7,8-HxCDD	1.2728320e6	1.5836049e3	803.40	NO		1.0285780e6	2.4799626e3	414.76	NO	
21	13C-1,2,3,4,6,7,8-HpCDD	8.3837500e5	9.4822168e2	882.94	NO		8.1869300e5	4.2104901e2	1944.41	NO	
22	13C-OCDD	1.3320180e6	1.1376238e3	1169.87	NO		1.4910940e6	6.0942944e2	2446.70	NO	
23	13C-2,3,7,8-TCDF	1.6140050e6	2.0552020e2	7851.62	NO		2.0834420e6	3.7455191e2	5562.49	NO	
24	13C-1,2,3,7,8-PeCDF	1.9119110e6	9.4657654e2	2017.89	NO		1.2121790e6	5.3167468e2	2279.93	NO	
25	13C-1,2,3,4,7,8-HxCDF	8.6262600e5	5.0166202e2	1721.97	NO		1.6587340e6	8.1992596e2	2023.03	NO	
26	13C-1,2,3,4,6,7,8-HpCDF	5.9842100e5	3.9612091e2	1507.99	NO		1.3656480e6	4.4066583e2	3099.06	NO	
27	13C-1,2,3,4-TCDD	1.4242200e6	5.5823865e2	2551.23	NO		1.8066100e6	3.8105811e2	4741.04	NO	
28	13C-1,2,3,7,8,9-HxCDD	1.1015660e6	1.5836049e3	694.56	NO		8.9407700e5	2.4799626e3	360.52	NO	

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

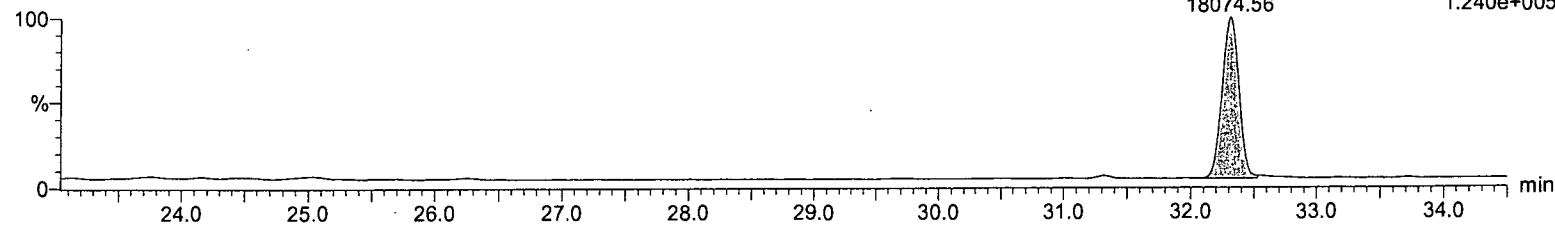
Calibration: 02 May 2013 07:30:19

Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

2,3,7,8-TCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

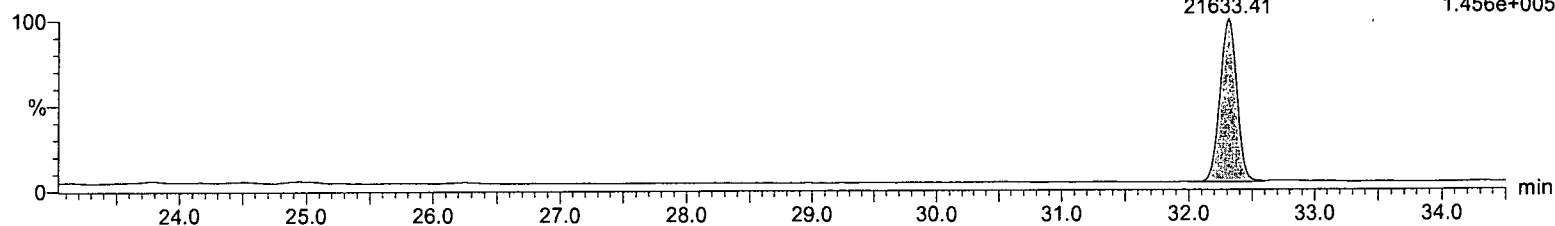
2,3,7,8-TCDD
32.31
18074.56
F1:Voltage SIR,EI+
319.8965
1.240e+005



2,3,7,8-TCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

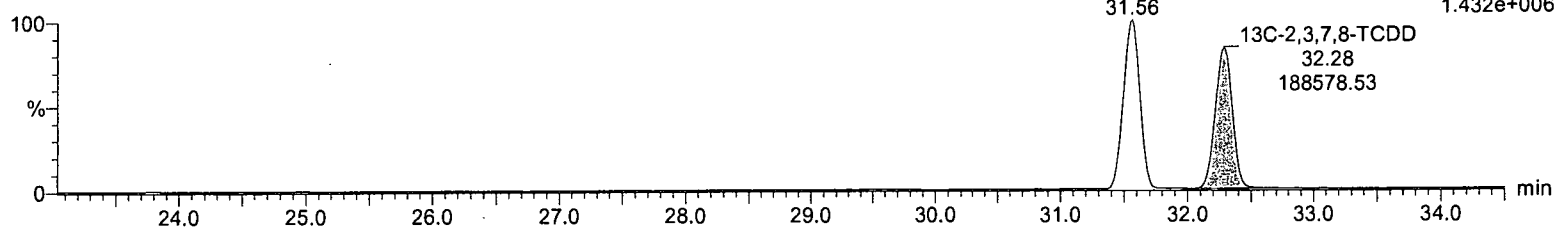
2,3,7,8-TCDD
32.31
21633.41
F1:Voltage SIR,EI+
321.8936
1.456e+005



13C-2,3,7,8-TCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

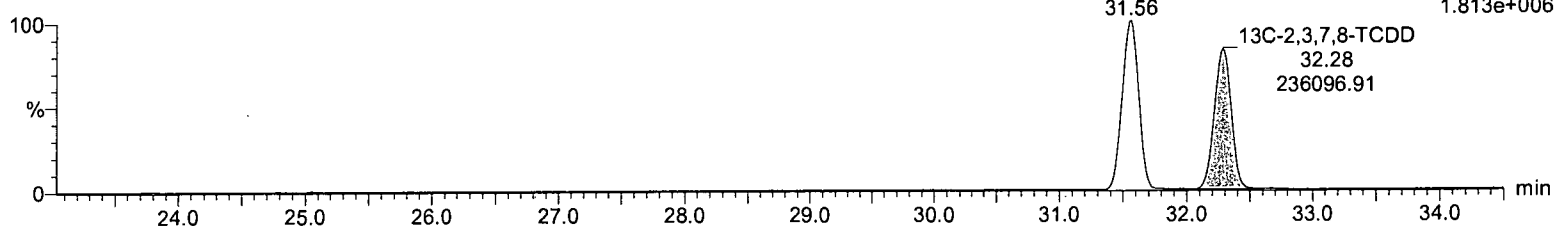
F1:Voltage SIR,EI+
331.9368
1.432e+006



13C-2,3,7,8-TCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

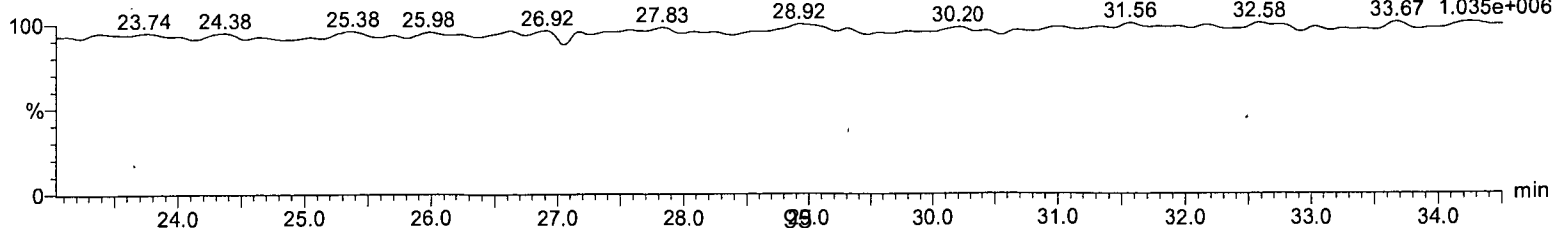
F1:Voltage SIR,EI+
333.9338
1.813e+006



PFK1

130501_HR_05
EDF-9999 CS-3 05/01/13

F1:Voltage SIR,EI+
292.9824
1.035e+006

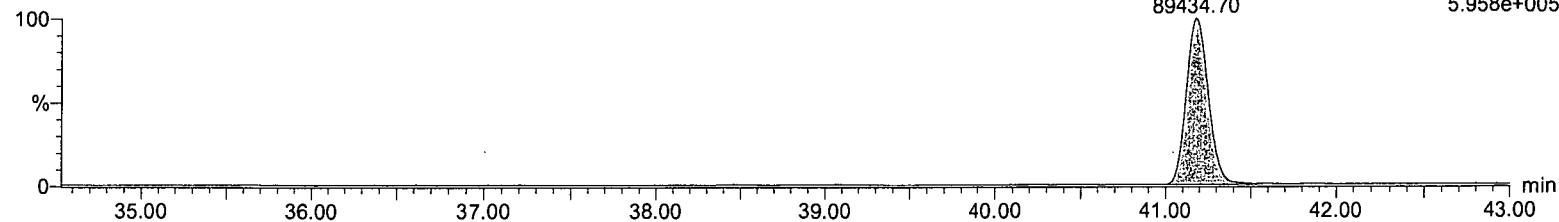


Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,7,8-PeCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

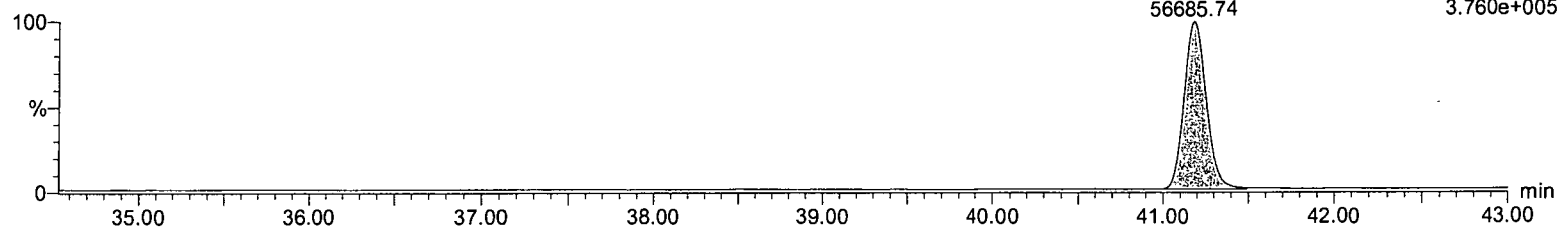
1,2,3,7,8-PeCDD
41.18
89434.70
F2:Voltage SIR,EI+
355.8546
5.958e+005



1,2,3,7,8-PeCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

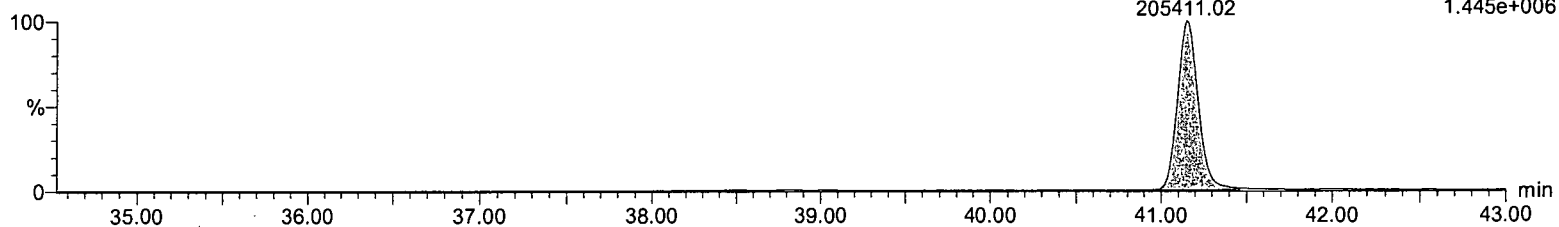
1,2,3,7,8-PeCDD
41.18
56685.74
F2:Voltage SIR,EI+
357.8516
3.760e+005



13C-1,2,3,7,8-PeCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

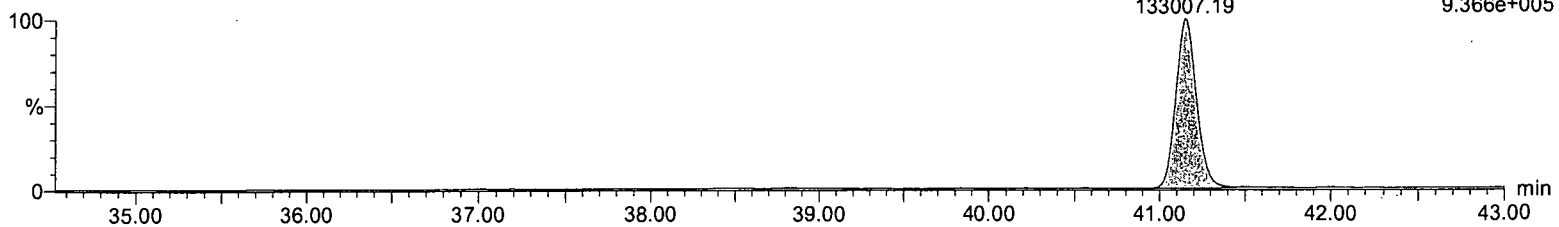
13C-1,2,3,7,8-PeCDD
41.15
205411.02
F2:Voltage SIR,EI+
367.8949
1.445e+006



13C-1,2,3,7,8-PeCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

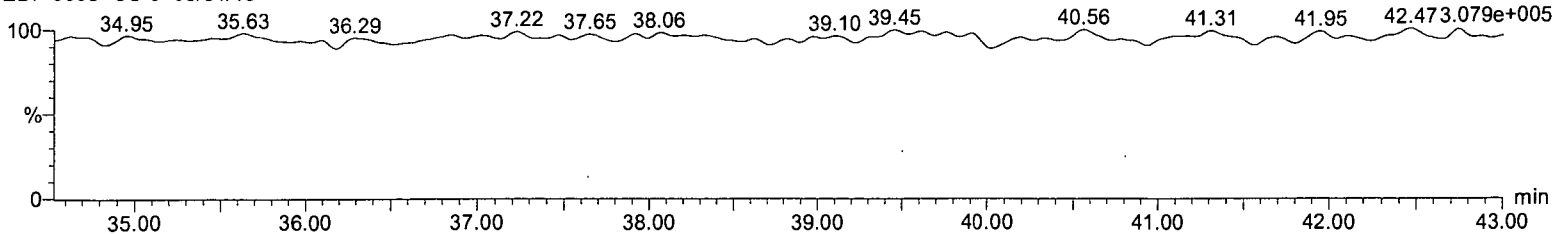
13C-1,2,3,7,8-PeCDD
41.15
133007.19
F2:Voltage SIR,EI+
369.8919
9.366e+005



PFK2

130501_HR_05
EDF-9999 CS-3 05/01/13

F2:Voltage SIR,EI+
354.9792



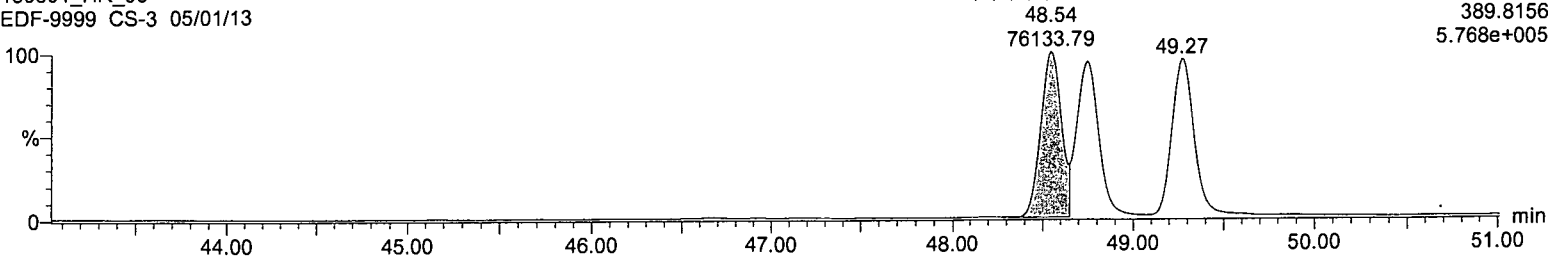
Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,7,8-HxCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

1,2,3,4,7,8-HxCDD

F3:Voltage SIR,EI+
389.8156
5.768e+005

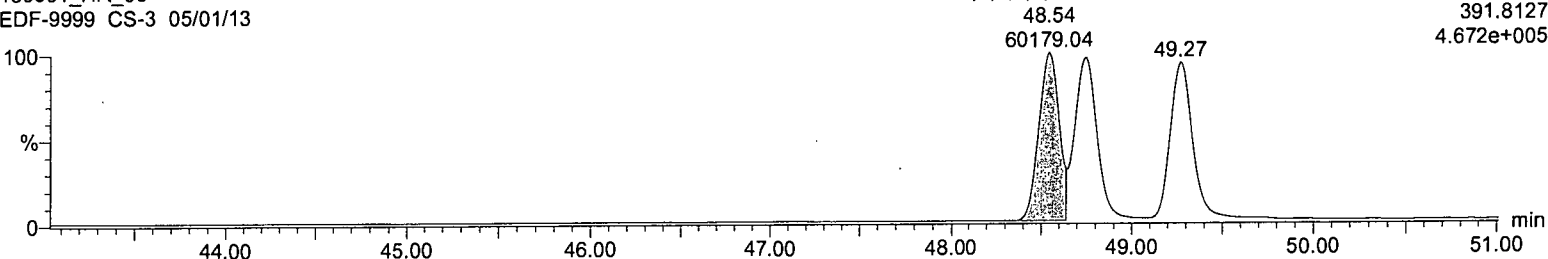


1,2,3,4,7,8-HxCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

1,2,3,4,7,8-HxCDD

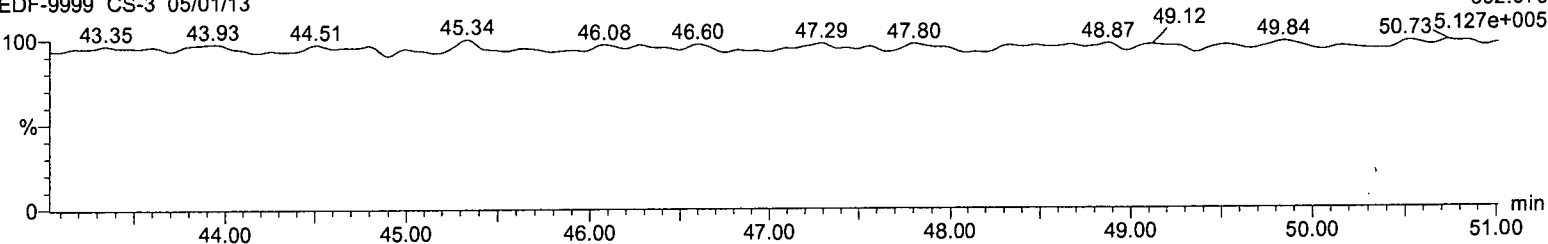
F3:Voltage SIR,EI+
391.8127
4.672e+005



PFK3

130501_HR_05
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
392.976
5.127e+005

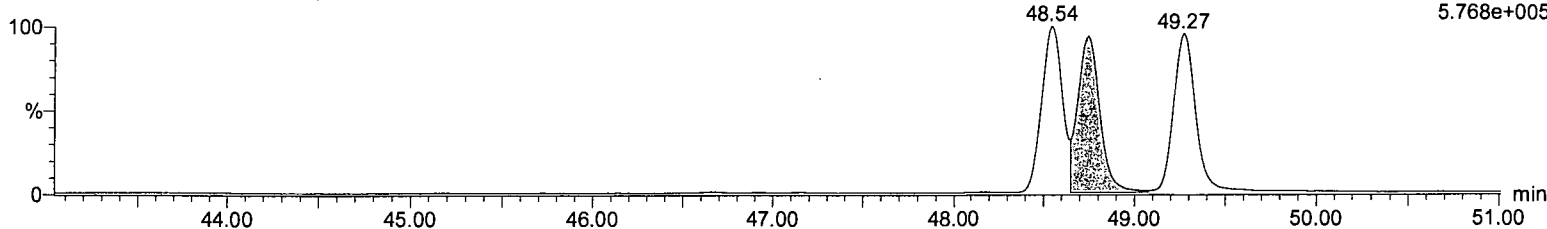


Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,6,7,8-HxCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

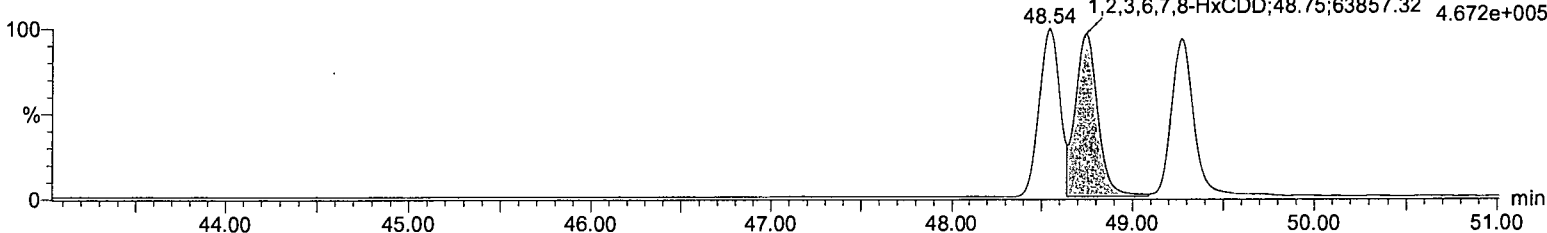
F3:Voltage SIR,EI+
389.8156
5.768e+005



1,2,3,6,7,8-HxCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
391.8127
4.672e+005

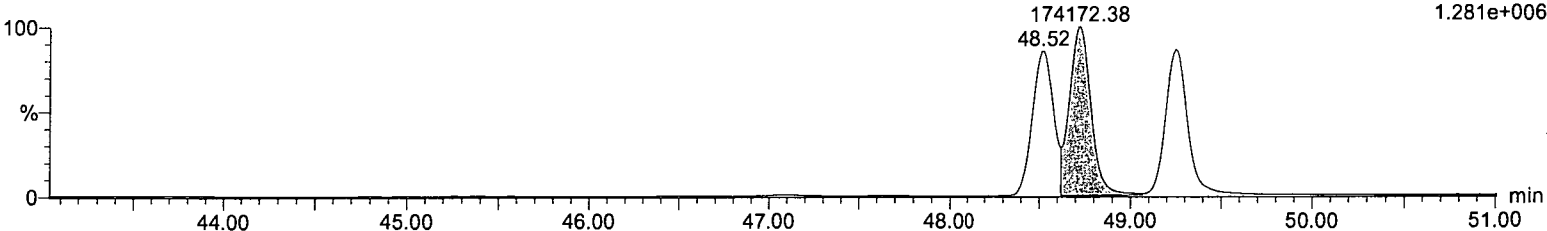


13C-1,2,3,6,7,8-HxCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

13C-1,2,3,6,7,8-HxCDD

F3:Voltage SIR,EI+
401.8559
1.281e+006

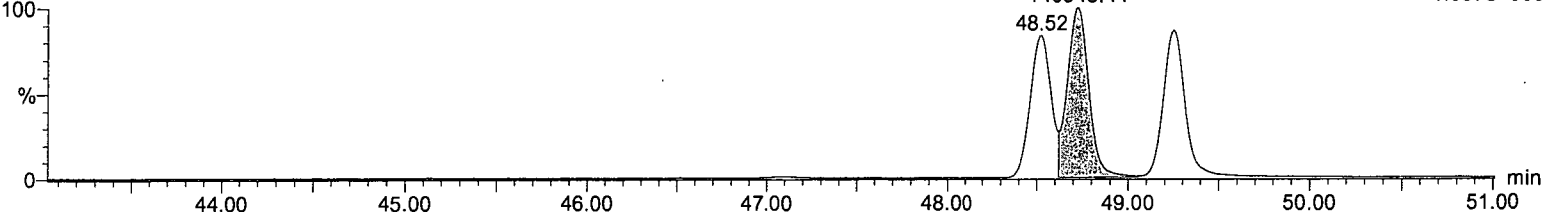


13C-1,2,3,6,7,8-HxCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

13C-1,2,3,6,7,8-HxCDD

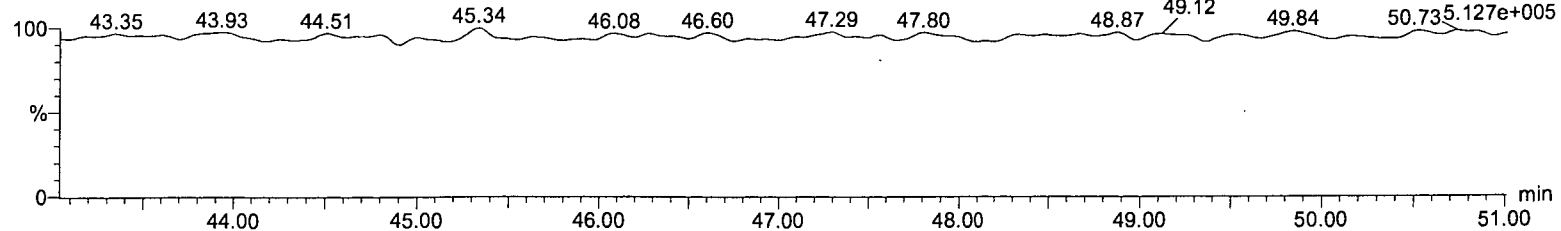
F3:Voltage SIR,EI+
403.8529
1.037e+006



PFK3

130501_HR_05
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
392.976

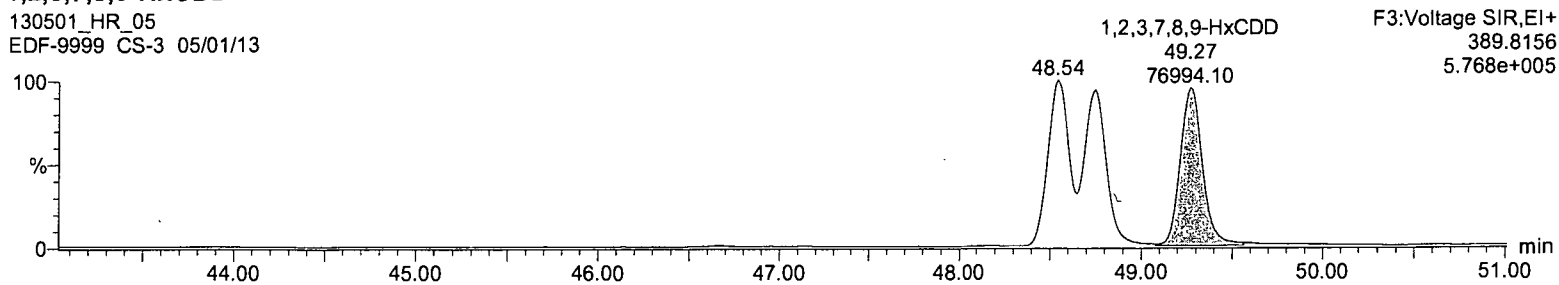


Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

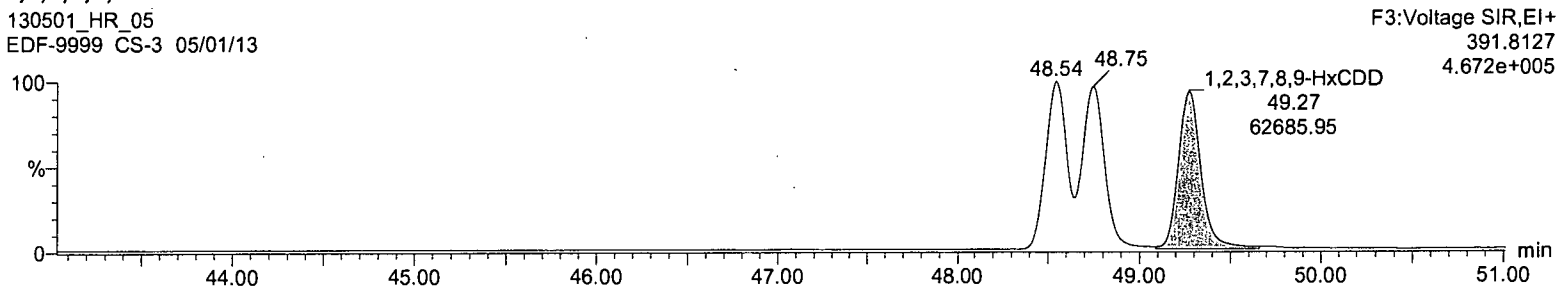
1,2,3,7,8,9-HxCDD

130501_HR_05
EDF-9999 CS-3 05/01/13



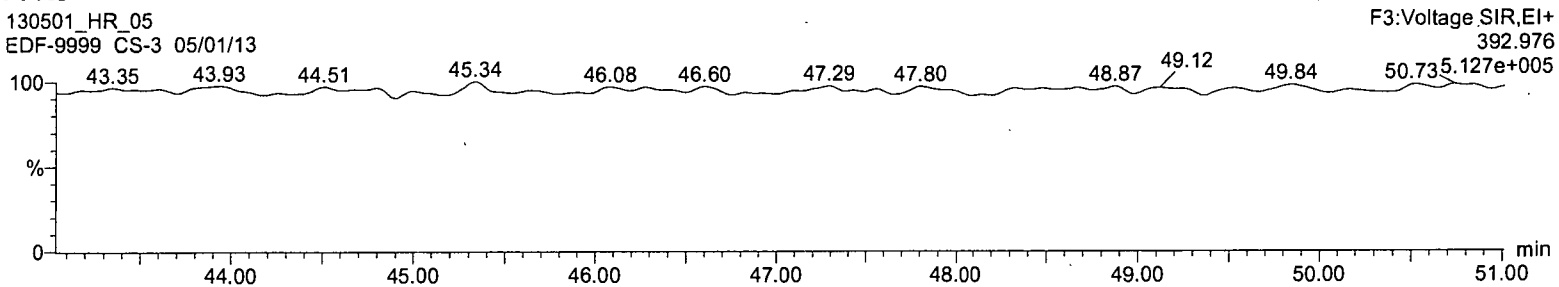
1,2,3,7,8,9-HxCDD

130501_HR_05
EDF-9999 CS-3 05/01/13



PFK3

130501_HR_05
EDF-9999 CS-3 05/01/13



Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

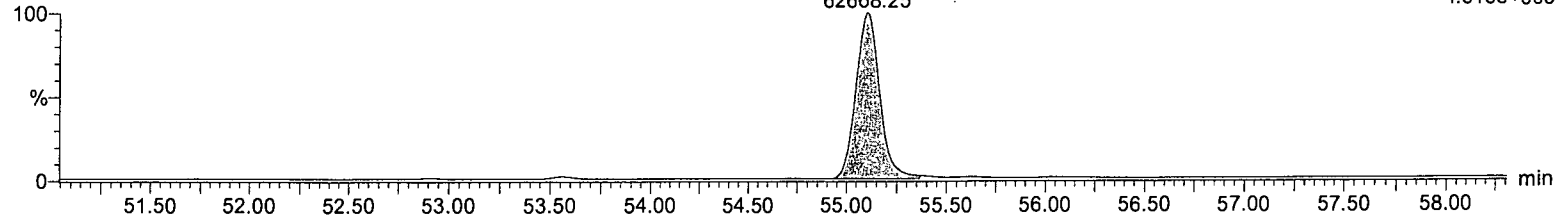
Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,6,7,8-HpCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

1,2,3,4,6,7,8-HpCDD
55.10
62668.25

F4:Voltage SIR,EI+
423.7767
4.616e+005

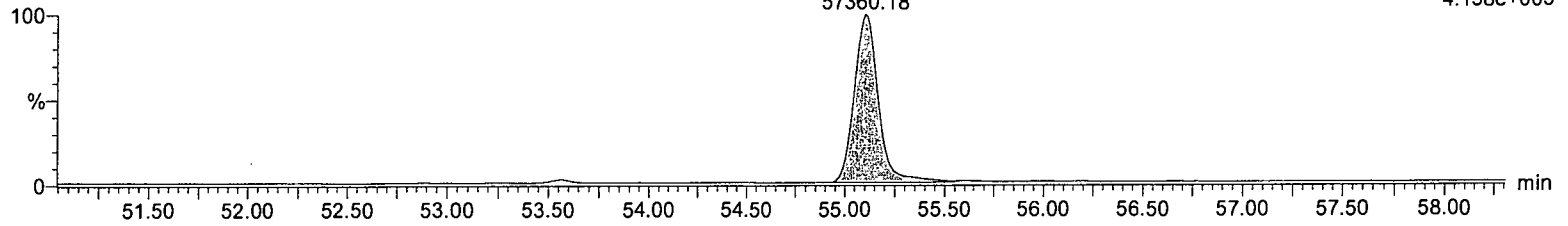


1,2,3,4,6,7,8-HpCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

1,2,3,4,6,7,8-HpCDD
55.10
57360.18

F4:Voltage SIR,EI+
425.7737
4.138e+005

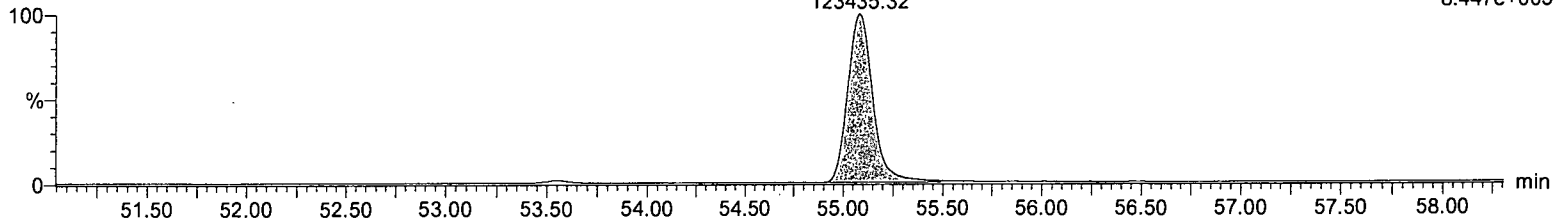


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

13C-1,2,3,4,6,7,8-HpCDD
55.08
123435.32

F4:Voltage SIR,EI+
435.8169
8.447e+005

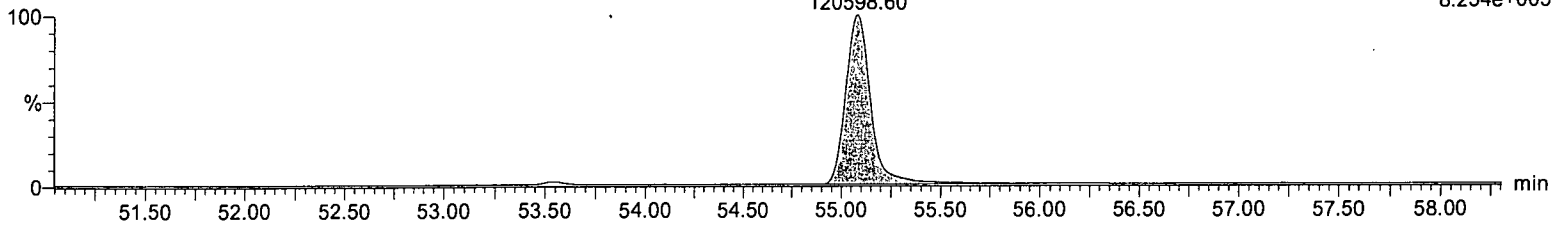


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

13C-1,2,3,4,6,7,8-HpCDD
55.08
120598.60

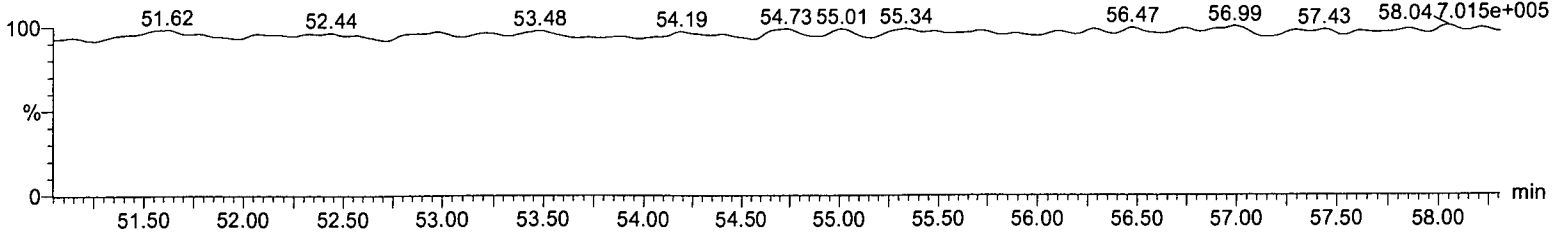
F4:Voltage SIR,EI+
437.814
8.254e+005



PFK4

130501_HR_05
EDF-9999 CS-3 05/01/13

F4:Voltage SIR,EI+
430.9728
4.7015e+005

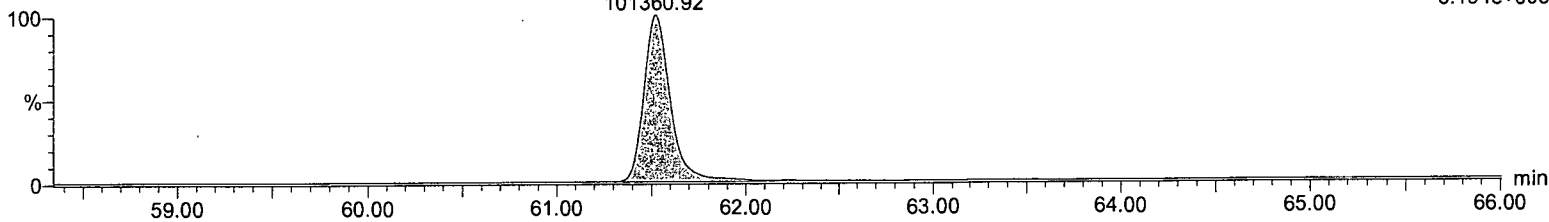


Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

OCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

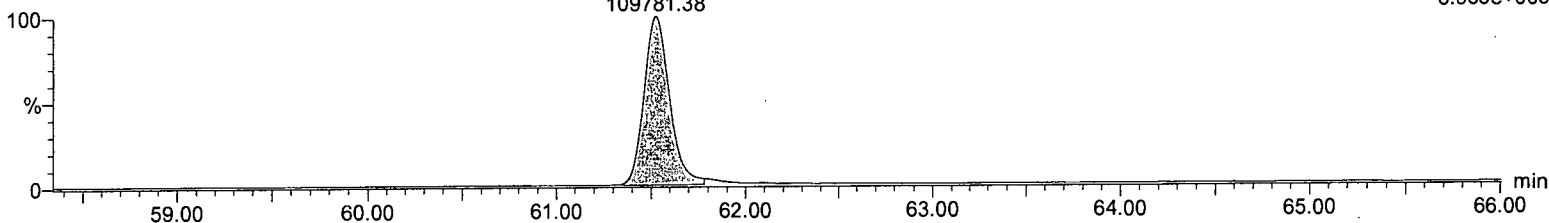
F5:Voltage SIR,EI+
457.7377
6.194e+005



OCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

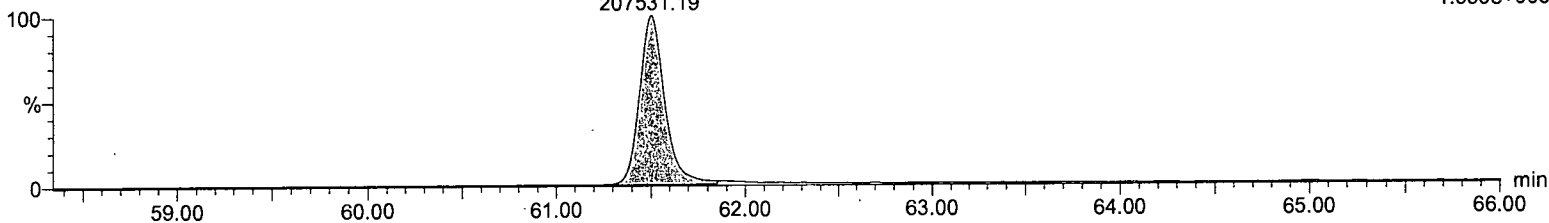
F5:Voltage SIR,EI+
459.7348
6.965e+005



13C-OCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

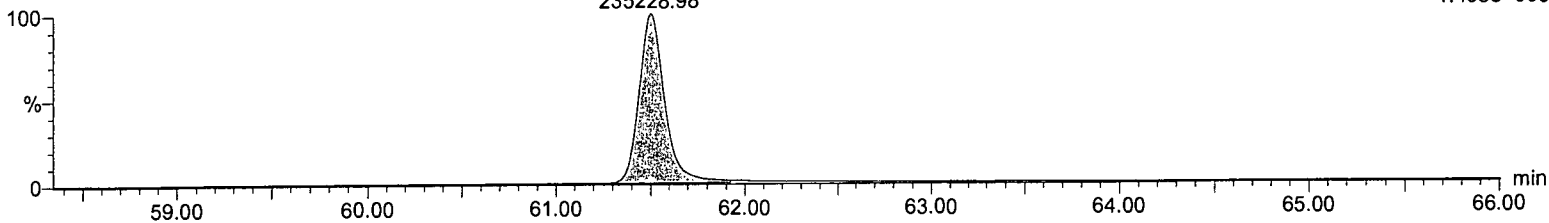
F5:Voltage SIR,EI+
469.778
1.339e+006



13C-OCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

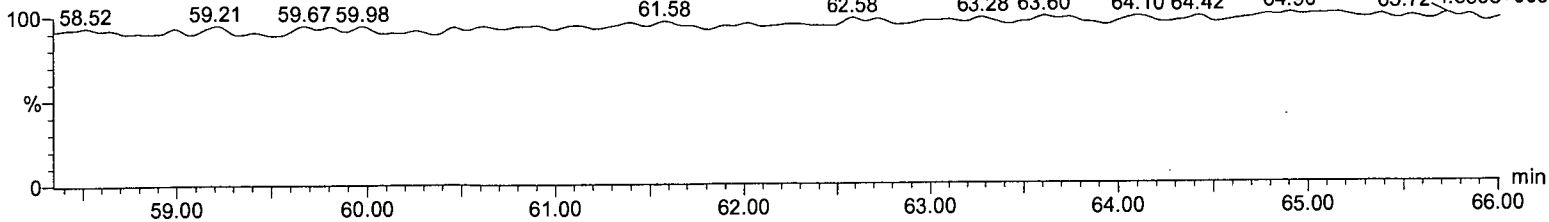
F5:Voltage SIR,EI+
471.775
1.498e+006



PFK5

130501_HR_05
EDF-9999 CS-3 05/01/13

F5:Voltage SIR,EI+
442.9728
4.635e+005



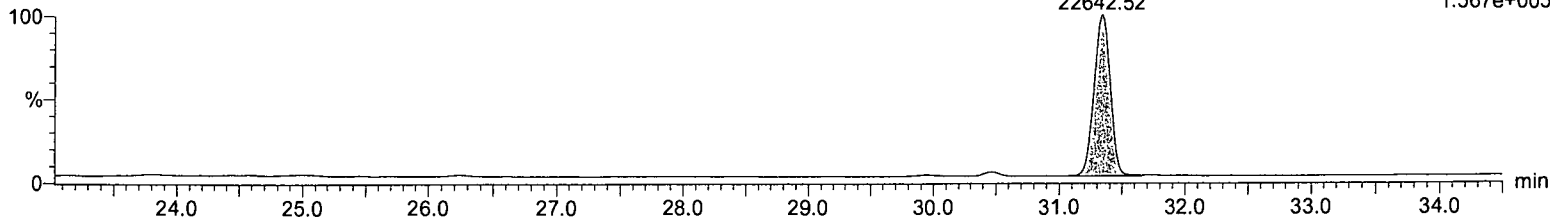
Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

2,3,7,8-TCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

2,3,7,8-TCDF
31.34
22642.52

F1:Voltage SIR,EI+
303.9016
1.567e+005

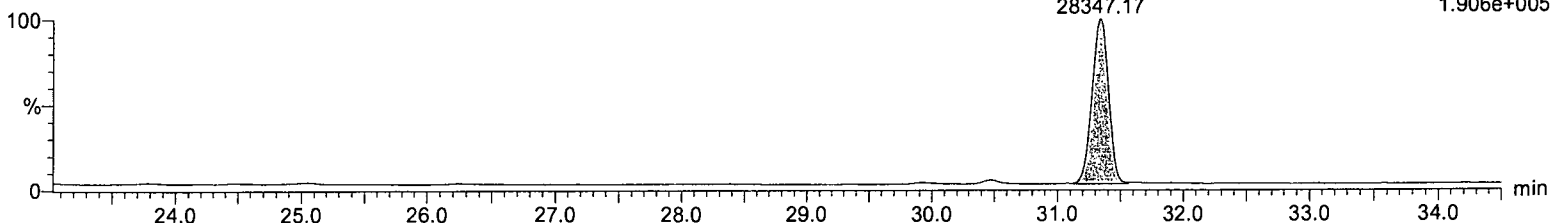


2,3,7,8-TCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

2,3,7,8-TCDF
31.34
28347.17

F1:Voltage SIR,EI+
305.8987
1.906e+005

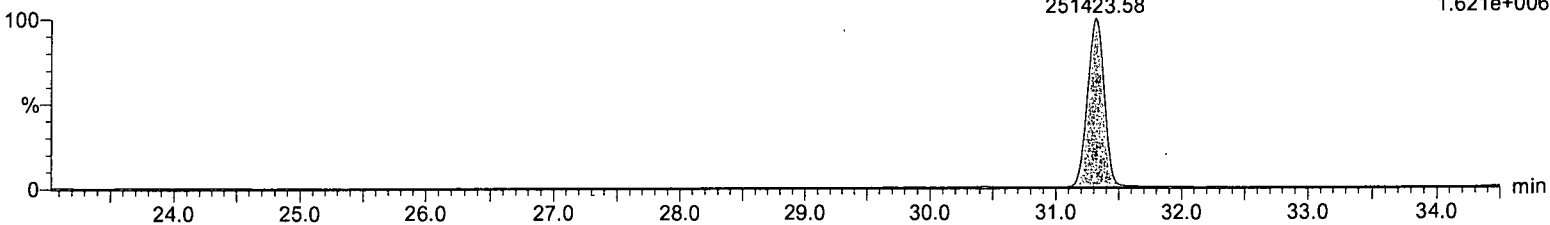


13C-2,3,7,8-TCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

13C-2,3,7,8-TCDF
31.32
251423.58

F1:Voltage SIR,EI+
315.9419
1.621e+006

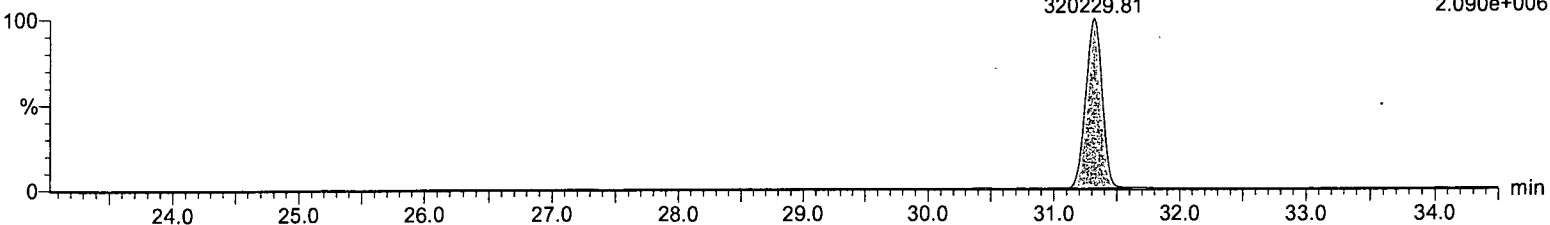


13C-2,3,7,8-TCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

13C-2,3,7,8-TCDF
31.32
320229.81

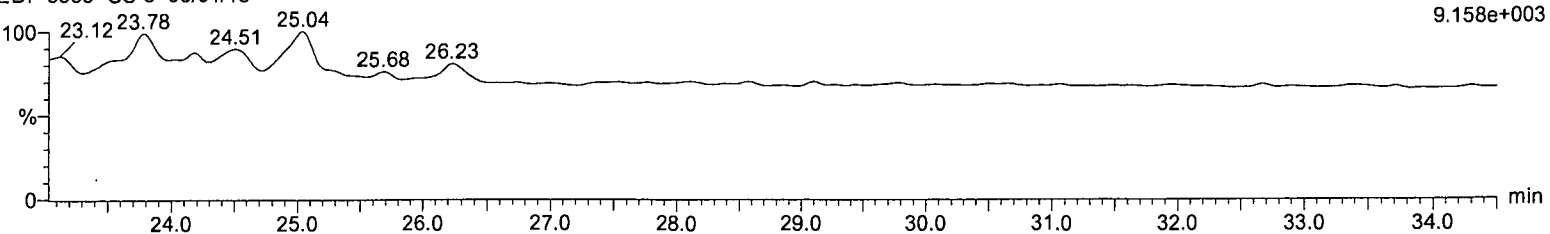
F1:Voltage SIR,EI+
317.9389
2.090e+006



HxCDPE

130501_HR_05
EDF-9999 CS-3 05/01/13

F1:Voltage SIR,EI+
375.8364
9.158e+003



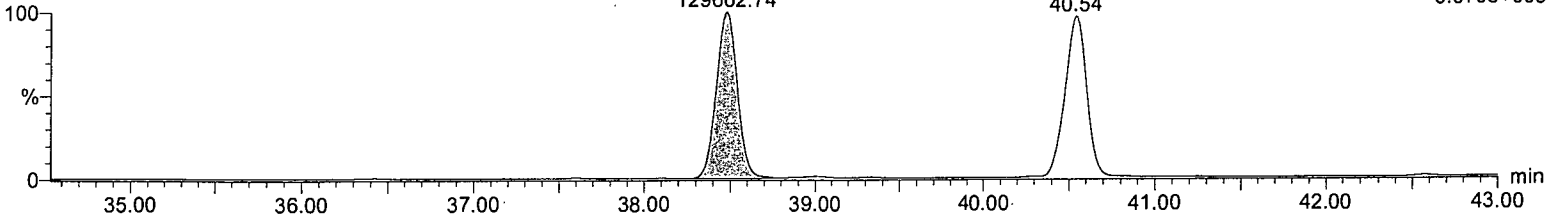
Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,7,8-PeCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

1,2,3,7,8-PeCDF
38.48
129662.74

F2:Voltage SIR,EI+
339.8597
9.070e+005

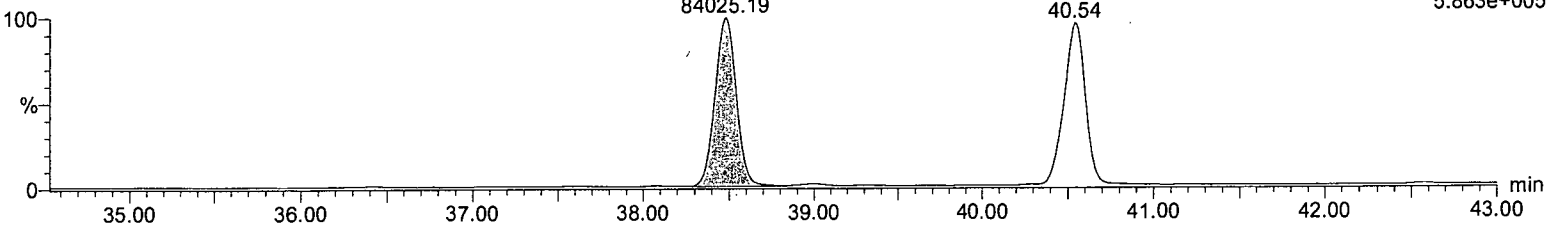


1,2,3,7,8-PeCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

1,2,3,7,8-PeCDF
38.48
84025.19

F2:Voltage SIR,EI+
341.8567
5.863e+005

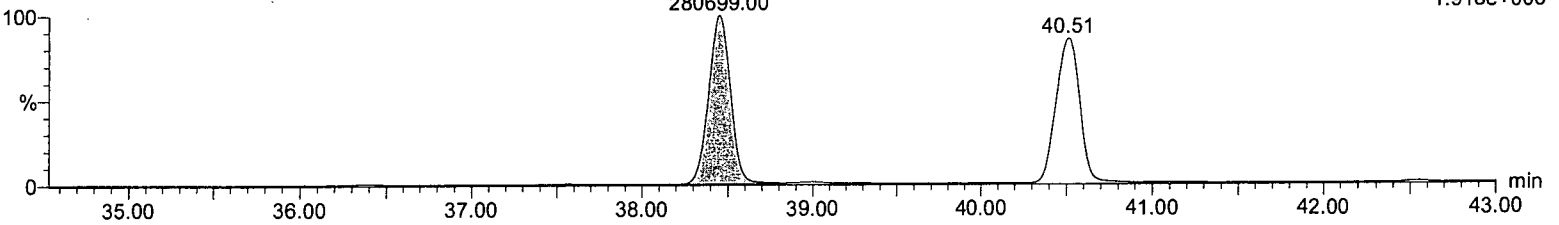


13C-1,2,3,7,8-PeCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

13C-1,2,3,7,8-PeCDF
38.45
280699.00

F2:Voltage SIR,EI+
351.9
1.918e+006

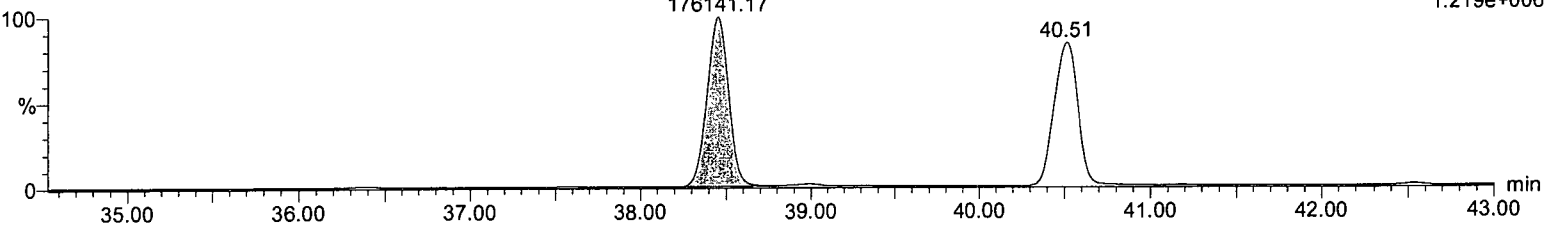


13C-1,2,3,7,8-PeCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

13C-1,2,3,7,8-PeCDF
38.45
176141.17

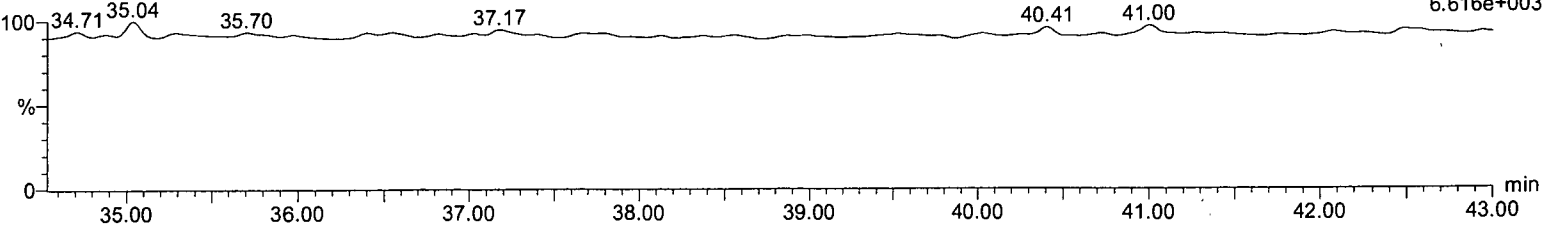
F2:Voltage SIR,EI+
353.897
1.219e+006



HpCDPE

130501_HR_05
EDF-9999 CS-3 05/01/13

F2:Voltage SIR,EI+
409.7974
6.616e+003



Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

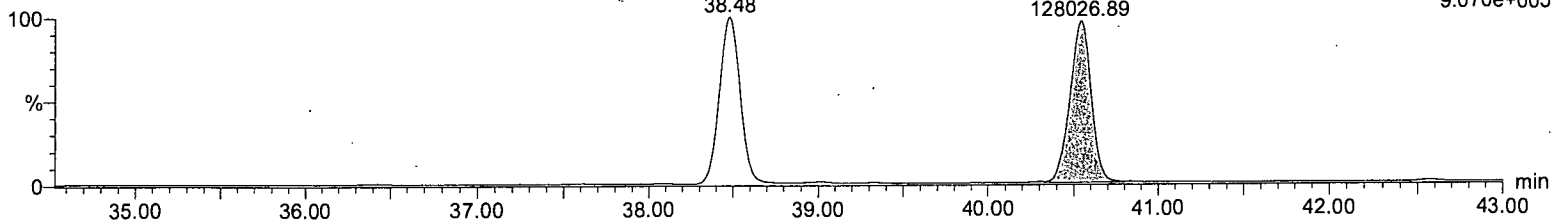
Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

2,3,4,7,8-PeCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

2,3,4,7,8-PeCDF
40.54
128026.89

F2:Voltage SIR,EI+
339.8597
9.070e+005

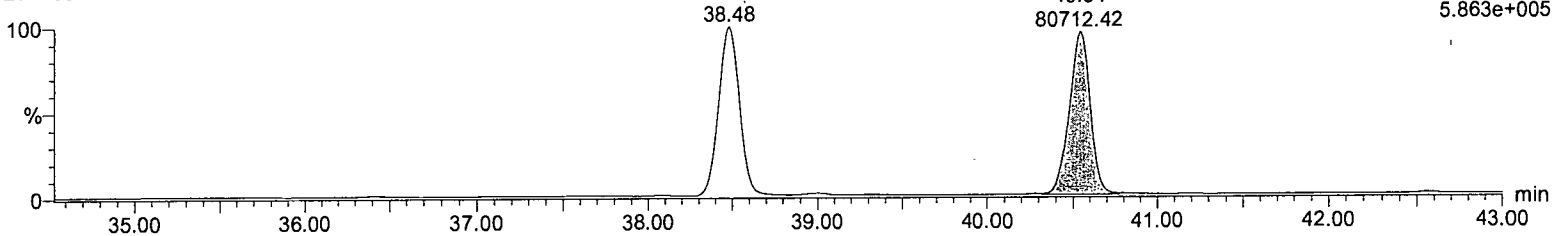


2,3,4,7,8-PeCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

2,3,4,7,8-PeCDF
40.54
80712.42

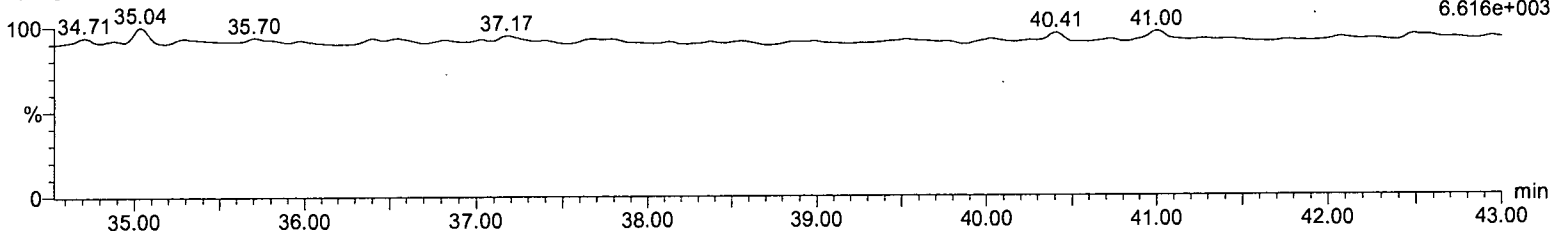
F2:Voltage SIR,EI+
341.8567
5.863e+005



HpCDPE

130501_HR_05
EDF-9999 CS-3 05/01/13

F2:Voltage SIR,EI+
409.7974
6.616e+003

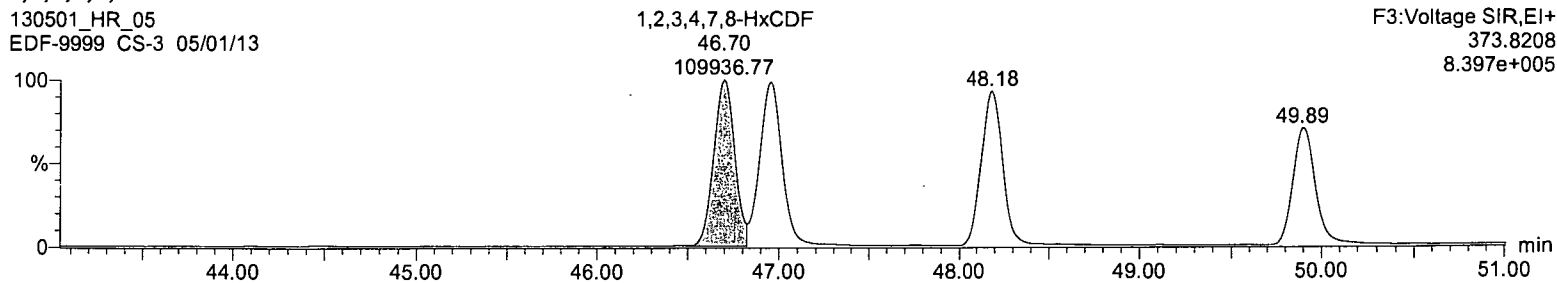


Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,7,8-HxCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

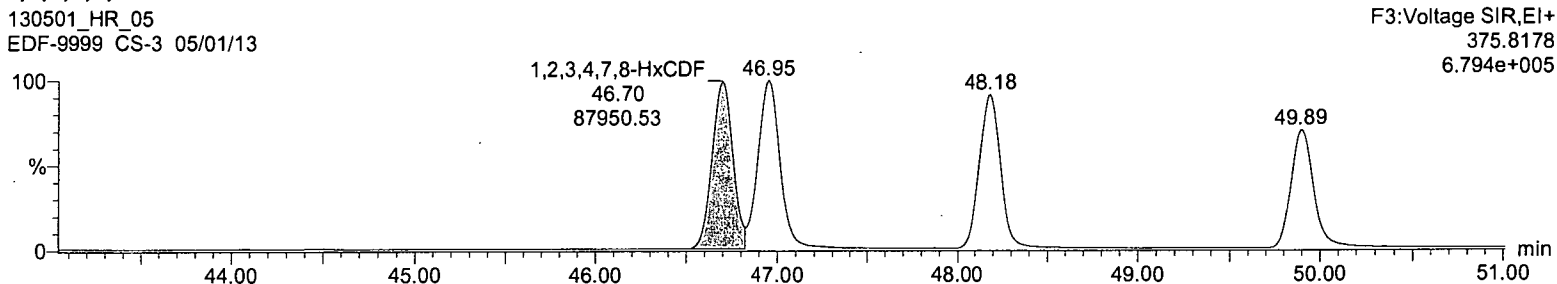
F3:Voltage SIR,EI+
373.8208
8.397e+005



1,2,3,4,7,8-HxCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

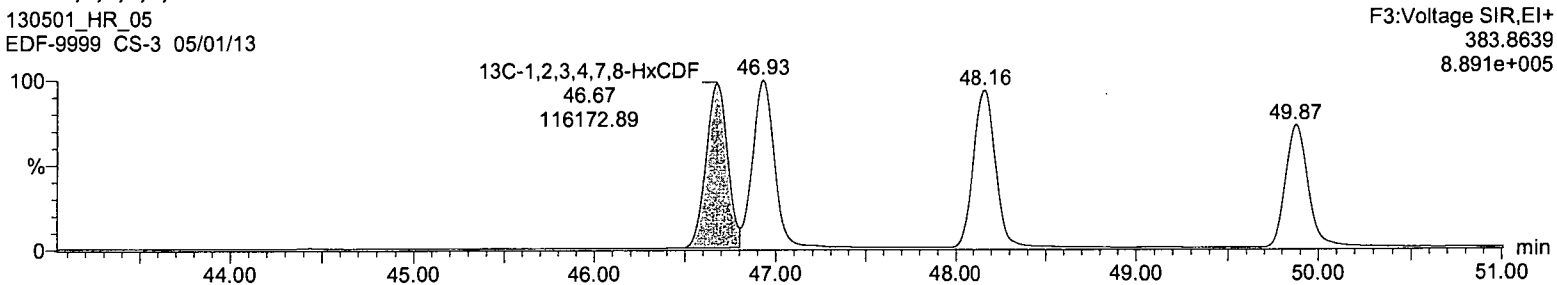
F3:Voltage SIR,EI+
375.8178
6.794e+005



13C-1,2,3,4,7,8-HxCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

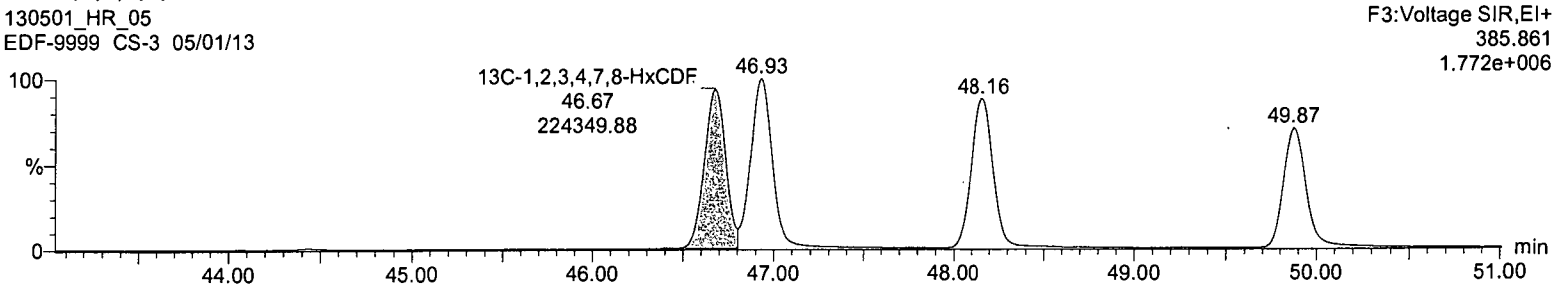
F3:Voltage SIR,EI+
383.8639
8.891e+005



13C-1,2,3,4,7,8-HxCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

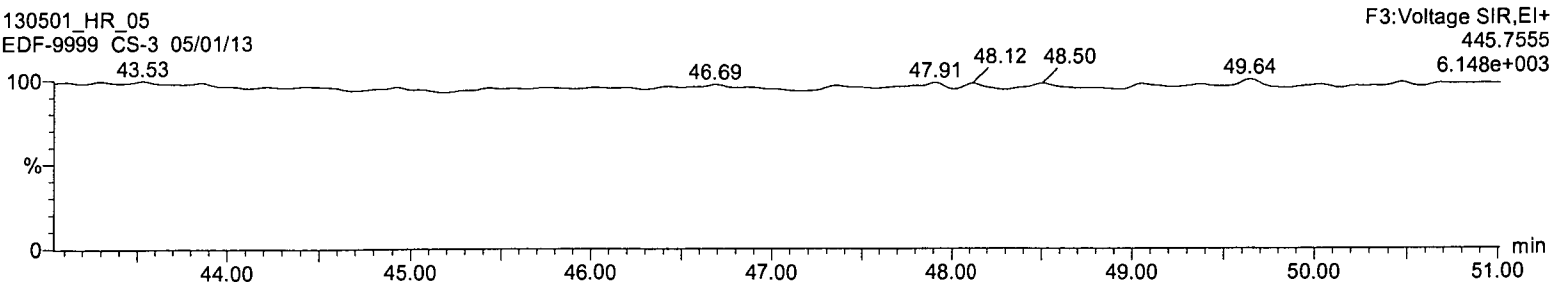
F3:Voltage SIR,EI+
385.861
1.772e+006



OCDPE

130501_HR_05
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
445.7555
6.148e+003

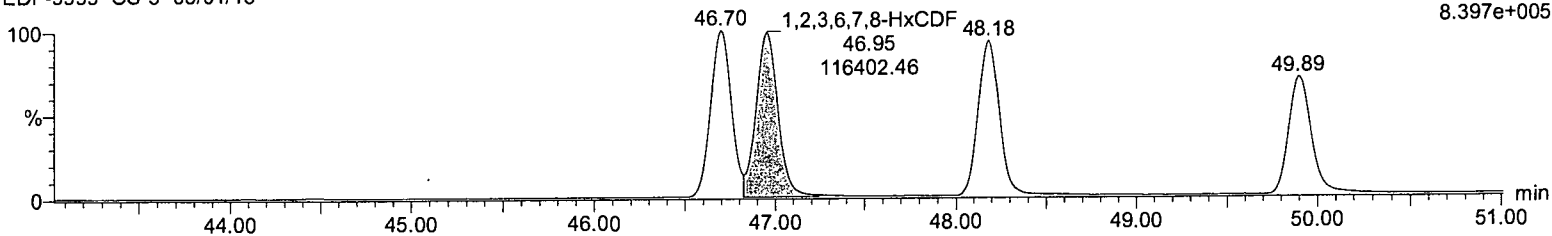


Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,6,7,8-HxCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

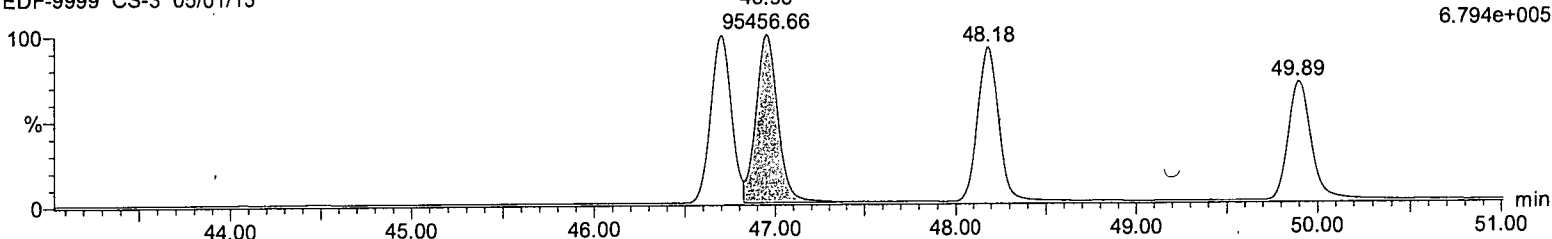
F3:Voltage SIR,EI+
373.8208
8.397e+005



1,2,3,6,7,8-HxCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

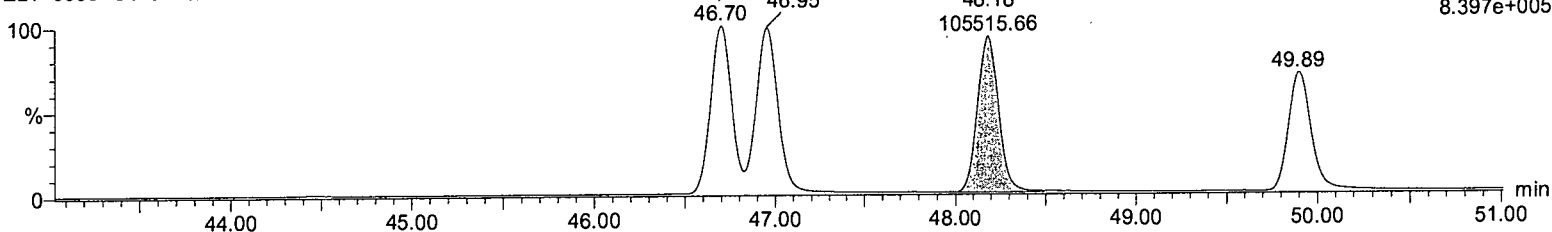
F3:Voltage SIR,EI+
375.8178
6.794e+005



2,3,4,6,7,8-HxCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

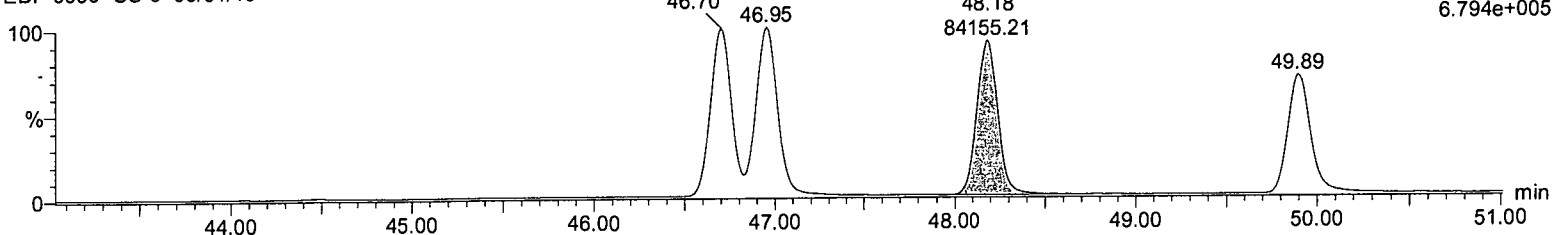
F3:Voltage SIR,EI+
373.8208
8.397e+005



2,3,4,6,7,8-HxCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

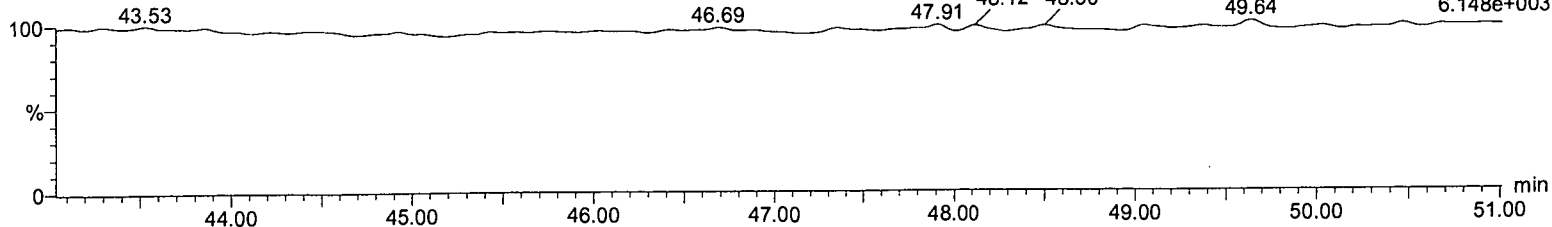
F3:Voltage SIR,EI+
375.8178
6.794e+005



OCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
445.7555
6.148e+003

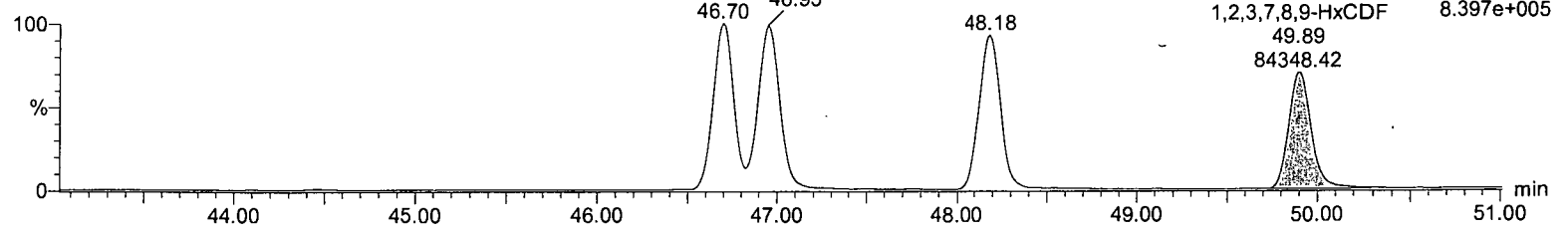


Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,7,8,9-HxCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

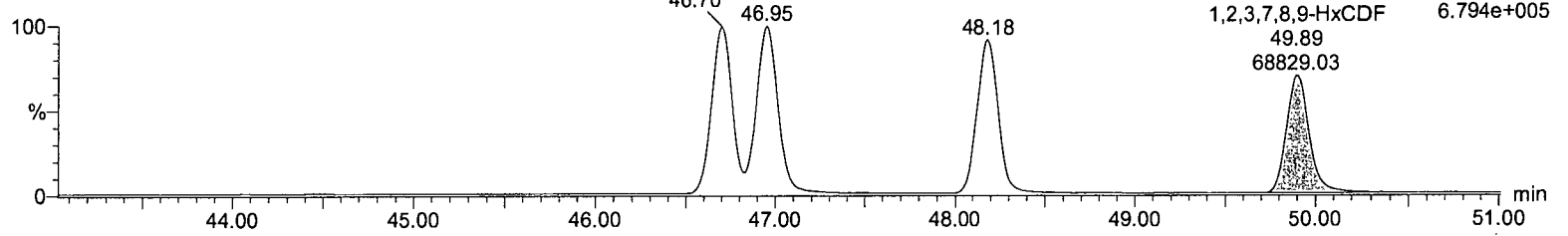
F3:Voltage SIR,EI+
373.8208
8.397e+005



1,2,3,7,8,9-HxCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

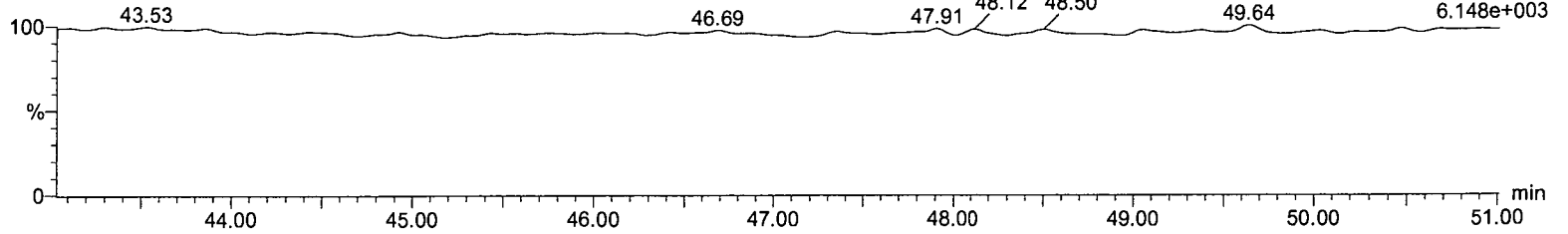
F3:Voltage SIR,EI+
375.8178
6.794e+005



OCDPE

130501_HR_05
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
445.7555
6.148e+003



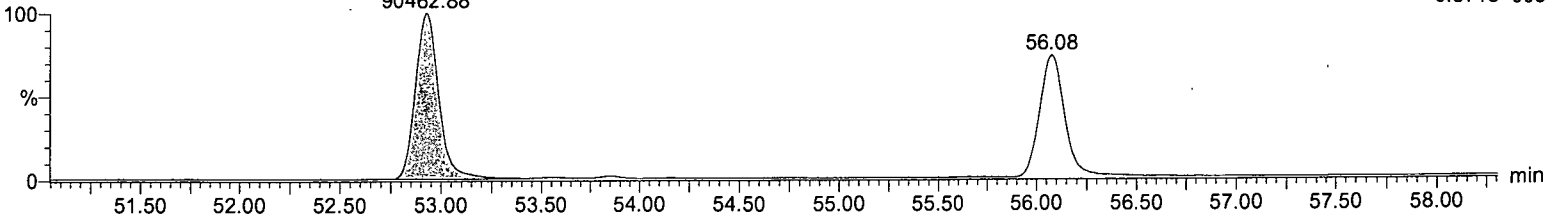
Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,6,7,8-HpCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

1,2,3,4,6,7,8-HpCDF
52.92
90462.88

F4:Voltage SIR,EI+
407.7818
6.671e+005

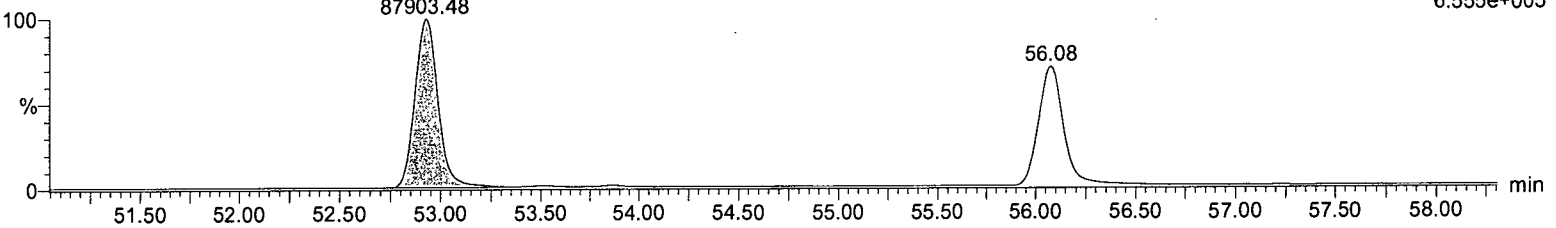


1,2,3,4,6,7,8-HpCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

1,2,3,4,6,7,8-HpCDF
52.92
87903.48

F4:Voltage SIR,EI+
409.7788
6.555e+005

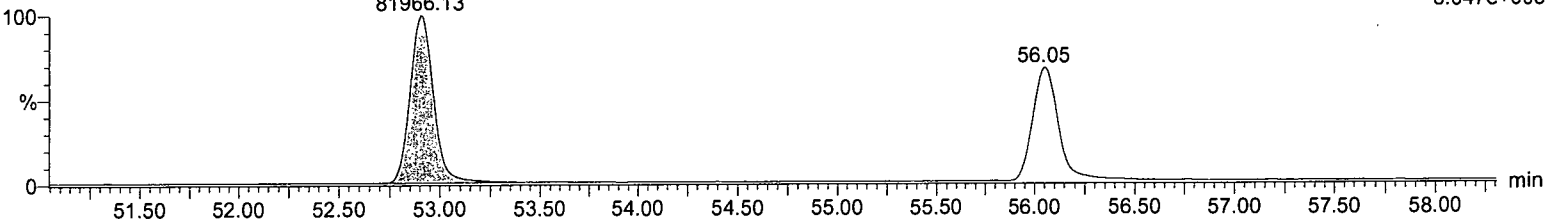


13C-1,2,3,4,6,7,8-HpCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

13C-1,2,3,4,6,7,8-HpCDF
52.90
81966.13

F4:Voltage SIR,EI+
417.825
6.047e+005

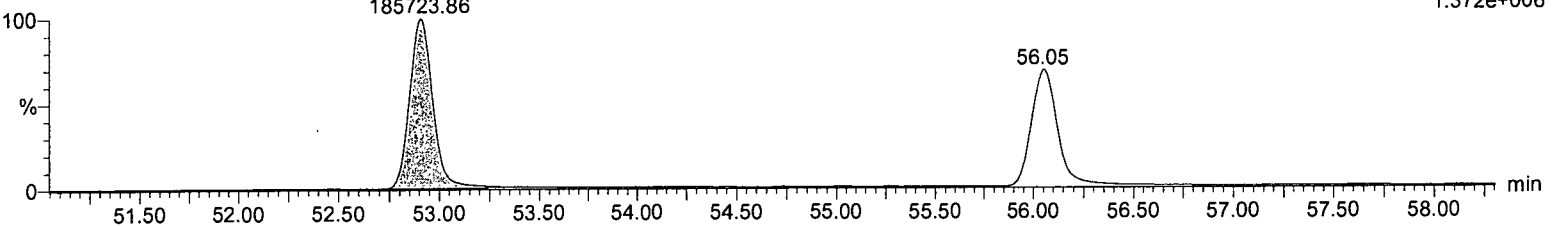


13C-1,2,3,4,6,7,8-HpCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

13C-1,2,3,4,6,7,8-HpCDF
52.90
185723.86

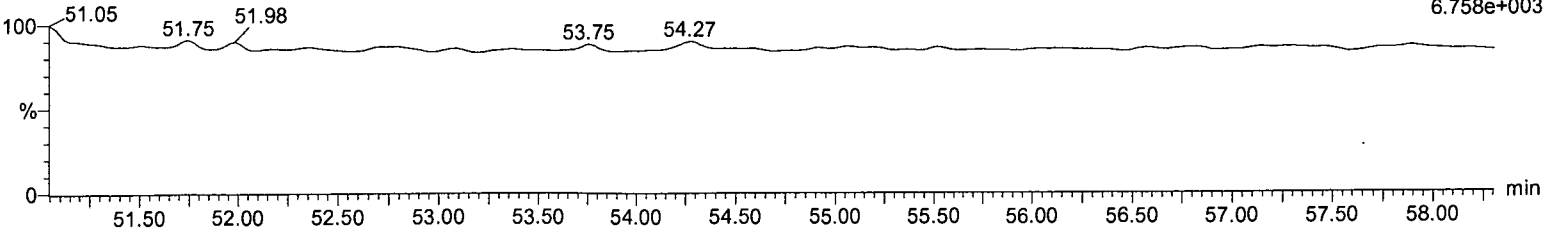
F4:Voltage SIR,EI+
419.822
1.372e+006



NCDPE

130501_HR_05
EDF-9999 CS-3 05/01/13

F4:Voltage SIR,EI+
479.7165
6.758e+003

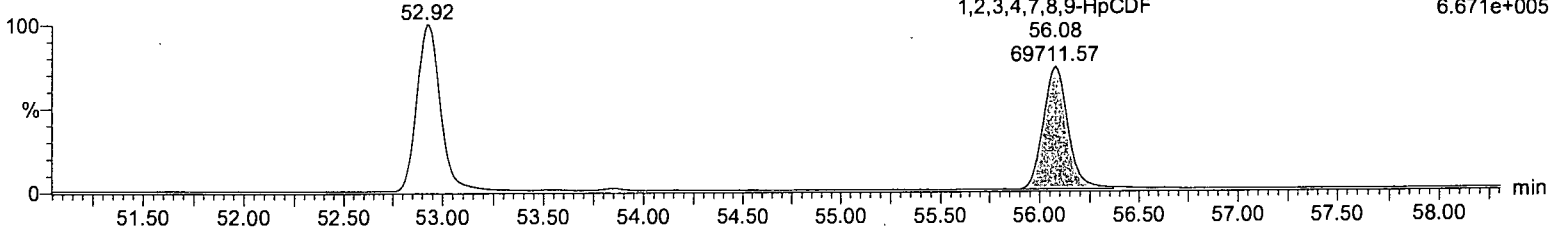


Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,7,8,9-HpCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

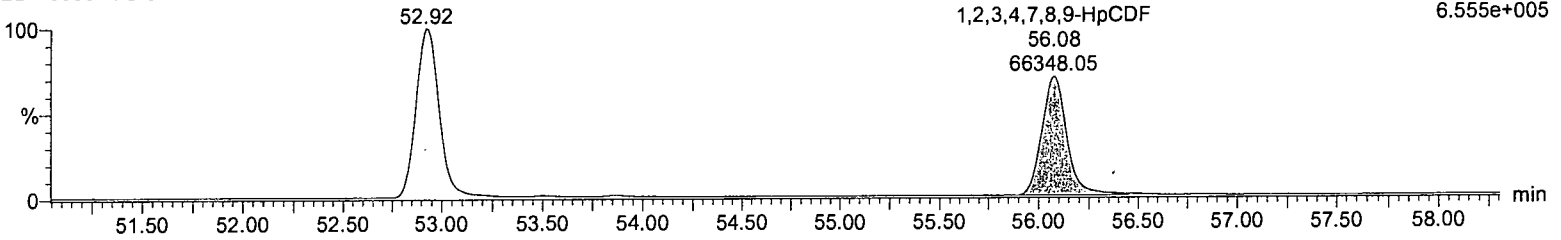
F4:Voltage SIR,EI+
407.7818
6.671e+005



1,2,3,4,7,8,9-HpCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

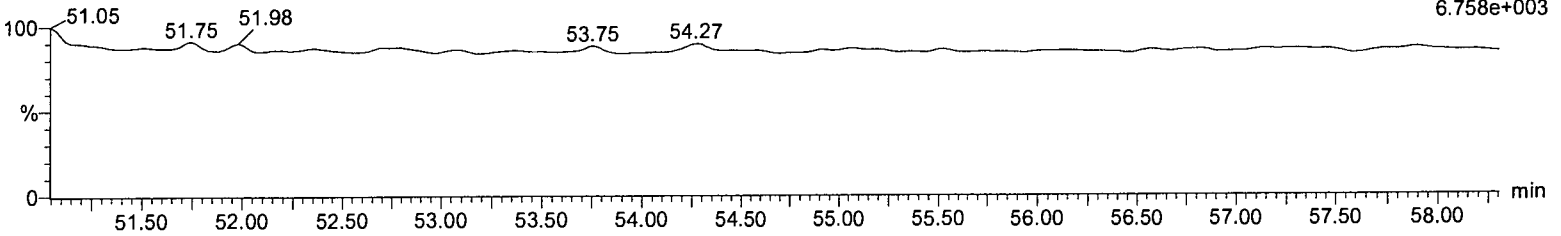
F4:Voltage SIR,EI+
409.7788
6.555e+005



NCDPE

130501_HR_05
EDF-9999 CS-3 05/01/13

F4:Voltage SIR,EI+
479.7165
6.758e+003

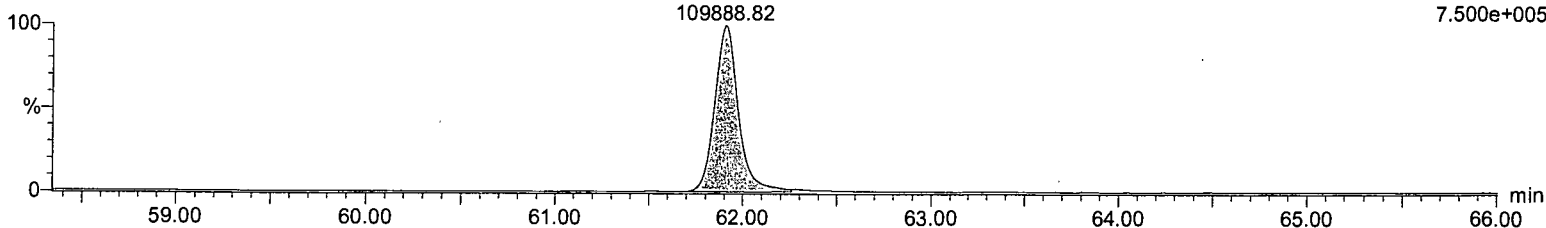


Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

OCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

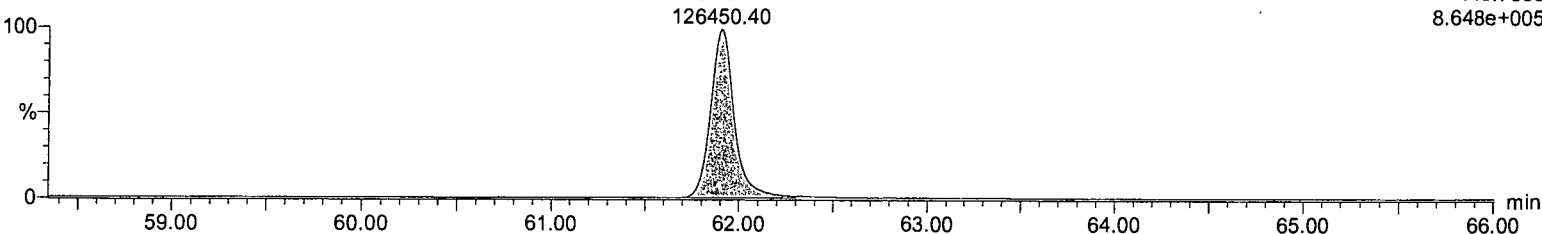
F5:Voltage SIR,EI+
441.7428
7.500e+005



OCDF

130501_HR_05
EDF-9999 CS-3 05/01/13

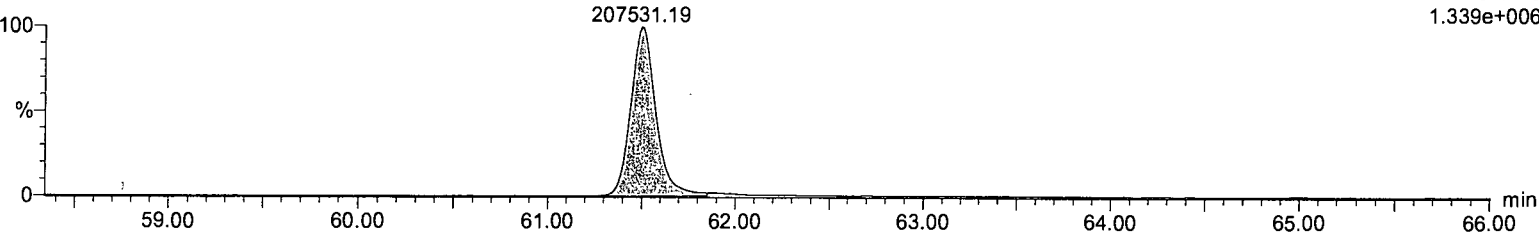
F5:Voltage SIR,EI+
443.7399
8.648e+005



13C-OCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

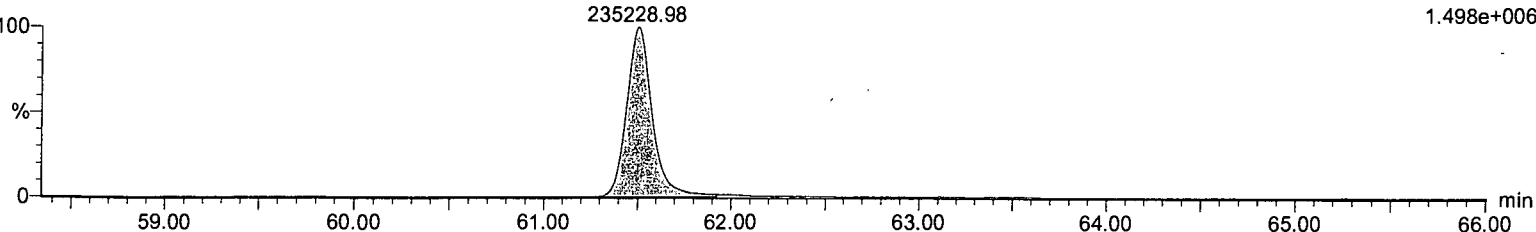
F5:Voltage SIR,EI+
469.778
1.339e+006



13C-OCDD

130501_HR_05
EDF-9999 CS-3 05/01/13

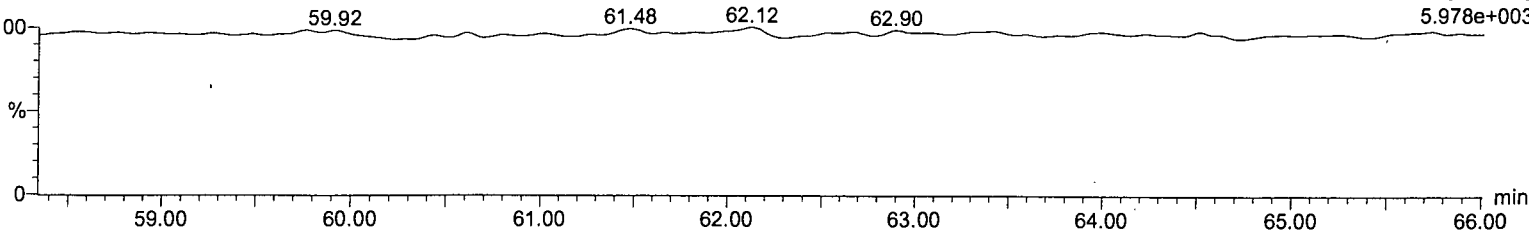
F5:Voltage SIR,EI+
471.775
1.498e+006



DCDPE

130501_HR_05
EDF-9999 CS-3 05/01/13

F5:Voltage SIR,EI+
513.6775
5.978e+003

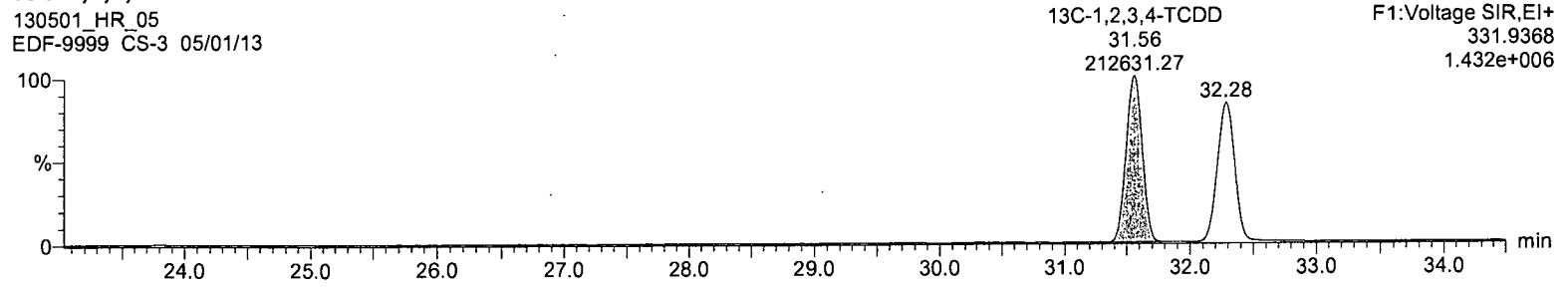


Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

Name: 130501_HR_05, Date: 01-May-2013, Time: 21:07:09, Description: EDF-9999 CS-3 05/01/13, User: RP

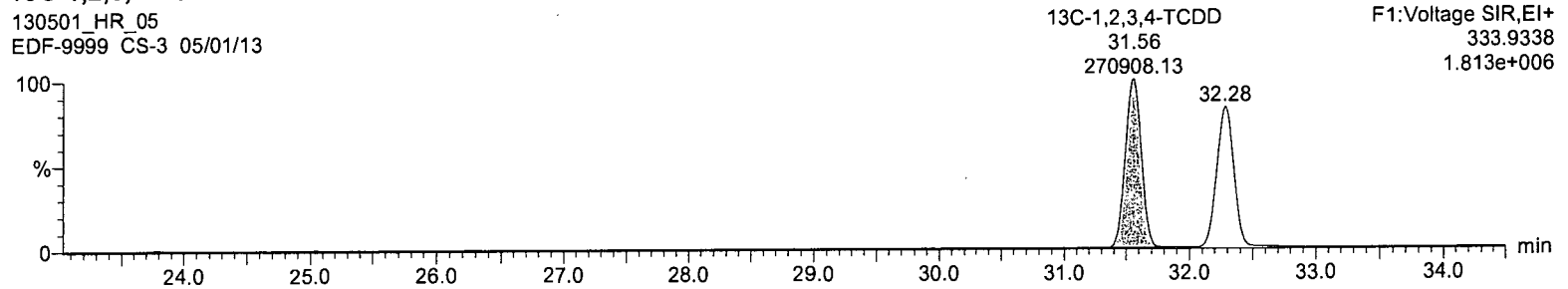
13C-1,2,3,4-TCDD

130501_HR_05
EDF-9999 CS-3 05/01/13



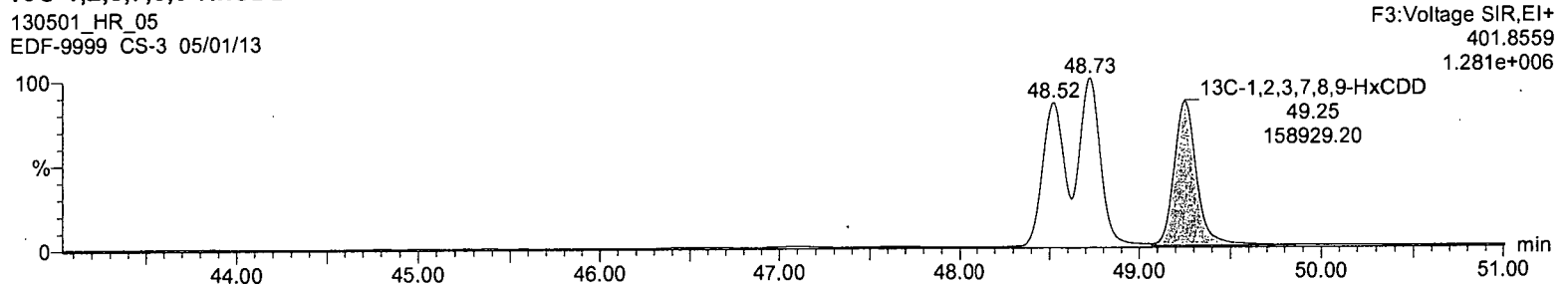
13C-1,2,3,4-TCDD

130501_HR_05
EDF-9999 CS-3 05/01/13



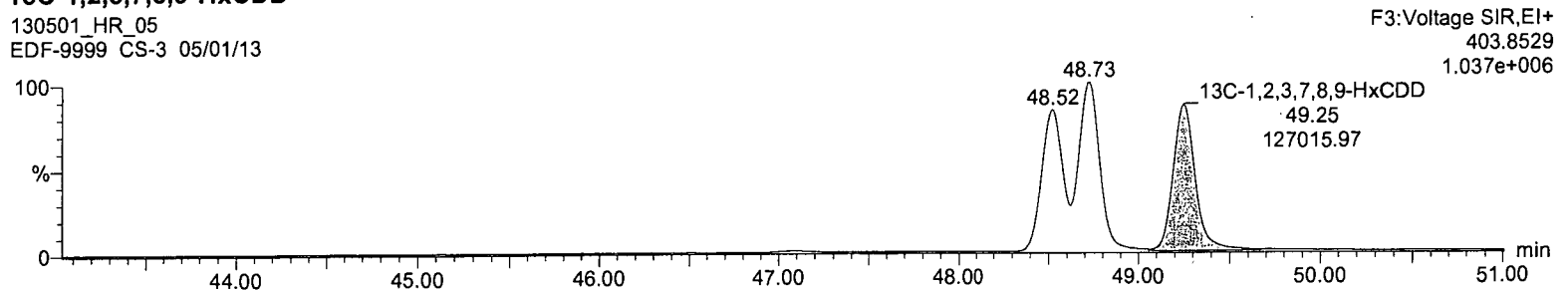
13C-1,2,3,7,8,9-HxCDD

130501_HR_05
EDF-9999 CS-3 05/01/13



13C-1,2,3,7,8,9-HxCDD

130501_HR_05
EDF-9999 CS-3 05/01/13



Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59
 Calibration: 02 May 2013 07:30:19

Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, ID: , Description: EDF-9999 CS-4 02/12/13, User: RP

#	Name	Signal	Noise:1	S/N:1	Flag: S/N	Signal:2	Noise:2	S/N:2	Flag: S/N
1	2,3,7,8-TCDD	8.4765400e5	2.9748187e2	2848.55	NO	1.0968100e6	2.3299883e2	4707.36	NO
2	1,2,3,7,8-PeCDD	4.7973500e6	7.8364508e2	6119.73	NO	3.1070530e6	2.0682288e2	15022.77	NO
3	1,2,3,4,7,8-HxCDD	4.5319270e6	5.6145203e2	8064.51	NO	3.5643930e6	9.9715625e2	3574.56	NO
4	1,2,3,6,7,8-HxCDD	4.2057630e6	5.6145203e2	7483.93	NO	3.3854080e6	9.9715625e2	3395.06	NO
5	1,2,3,7,8,9-HxCDD	4.4031020e6	5.6145203e2	7836.21	NO	3.5518980e6	9.9715625e2	3562.03	NO
6	1,2,3,4,6,7,8-HpCDD	4.0016850e6	9.2710791e2	4311.92	NO	3.7879730e6	4.6043872e2	8226.88	NO
7	OCDD	5.9575330e6	1.0868088e3	5478.54	NO	6.8023740e6	6.1128278e2	11128.03	NO
8	2,3,7,8-TCDF	1.0998660e6	2.5645728e2	4288.00	NO	1.3968510e6	2.1925748e2	6370.82	NO
9	1,2,3,7,8-PeCDF	6.9947750e6	2.5354417e3	2756.58	NO	4.4769410e6	1.6474121e3	2717.56	NO
10	2,3,4,7,8-PeCDF	6.5819400e6	2.5354417e3	2594.01	NO	4.2911550e6	1.6474121e3	2604.79	NO
11	1,2,3,4,7,8-HxCDF	6.6641460e6	1.3107239e3	5077.59	NO	5.2824120e6	9.9078186e2	5331.56	NO
12	1,2,3,6,7,8-HxCDF	6.4357930e6	1.3107239e3	4903.62	NO	5.2231800e6	9.9078186e2	5271.78	NO
13	2,3,4,6,7,8-HxCDF	6.2403890e6	1.3107239e3	4755.68	NO	5.0006840e6	9.9078186e2	5047.21	NO
14	1,2,3,7,8,9-HxCDF	5.4510660e6	1.3107239e3	4155.43	NO	4.3522750e6	9.9078186e2	4392.77	NO
15	1,2,3,4,6,7,8-HpCDF	5.7824180e6	9.6533813e2	5984.79	NO	5.6124950e6	8.6916113e2	6457.37	NO
16	1,2,3,4,7,8,9-HpCDF	4.7141040e6	9.6533813e2	4879.27	NO	4.5124520e6	8.6916113e2	5191.73	NO
17	OCDF	7.0775110e6	1.2246370e3	5776.77	NO	7.9299970e6	1.5015609e3	5281.17	NO
18	13C-2,3,7,8-TCDD	2.1600690e6	6.5460156e2	3301.45	NO	2.7979990e6	1.3424423e2	20842.60	NO
19	13C-1,2,3,7,8-PeCDD	2.7580190e6	5.5316022e2	4985.37	NO	1.7387950e6	3.4629449e2	5021.15	NO
20	13C-1,2,3,6,7,8-HxCDD	1.9728830e6	1.0478507e3	1884.72	NO	1.5602660e6	5.5702173e2	2801.09	NO
21	13C-1,2,3,4,6,7,8-HpCDD	1.8315380e6	7.5521613e2	2422.43	NO	1.7403430e6	3.4720740e2	5012.40	NO
22	13C-OCDD	2.6341080e6	8.5626685e2	3073.26	NO	3.0074120e6	6.9272418e2	4341.43	NO
23	13C-2,3,7,8-TCDF	2.8984010e6	3.2417484e2	8940.58	NO	3.6790760e6	5.5016650e2	6687.20	NO
24	13C-1,2,3,7,8-PeCDF	3.4199320e6	5.4500452e2	6272.08	NO	2.1431940e6	7.5955640e2	2821.64	NO
25	13C-1,2,3,4,7,8-HxCDF	1.5331700e6	1.0613242e3	1442.34	NO	2.8964510e6	6.3589795e2	4554.90	NO
26	13C-1,2,3,4,6,7,8-HpCDF	1.2347930e6	1.1637502e3	1058.60	NO	2.7382740e6	8.7685303e2	3122.84	NO
27	13C-1,2,3,4-TCDD	2.3909360e6	6.5460156e2	3653.30	NO	3.0529390e6	1.3424423e2	22741.68	NO
28	13C-1,2,3,7,8,9-HxCDD	2.1811290e6	1.0478507e3	2081.18	NO	1.7805390e6	5.5702173e2	3196.53	NO

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

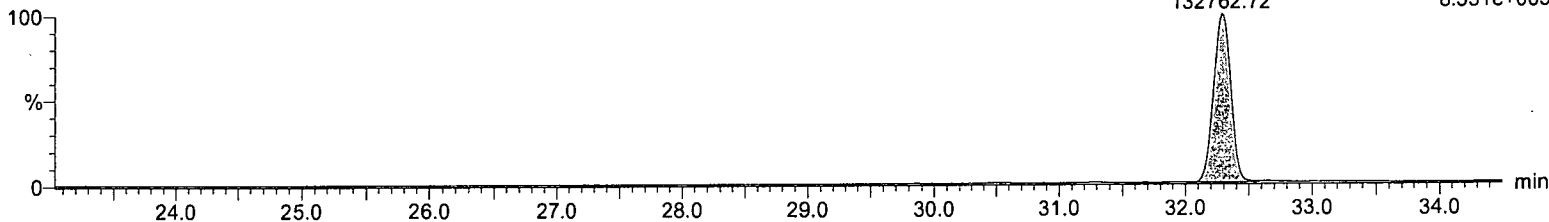
Calibration: 02 May 2013 07:30:19

Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

2,3,7,8-TCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

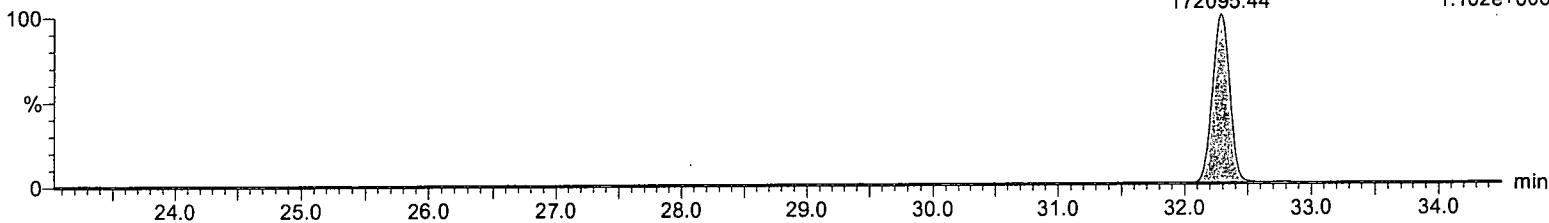
2,3,7,8-TCDD F1:Voltage SIR,EI+
32.28 319.8965
132762.72 8.531e+005



2,3,7,8-TCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

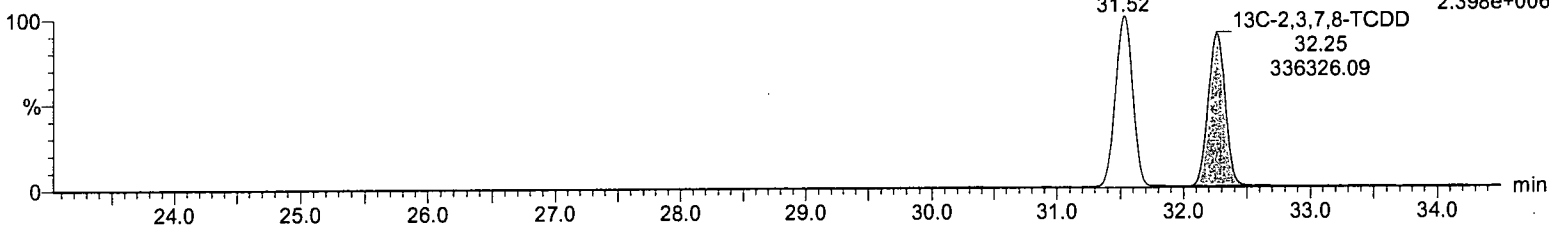
2,3,7,8-TCDD F1:Voltage SIR,EI+
32.28 321.8936
172095.44 1.102e+006



13C-2,3,7,8-TCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

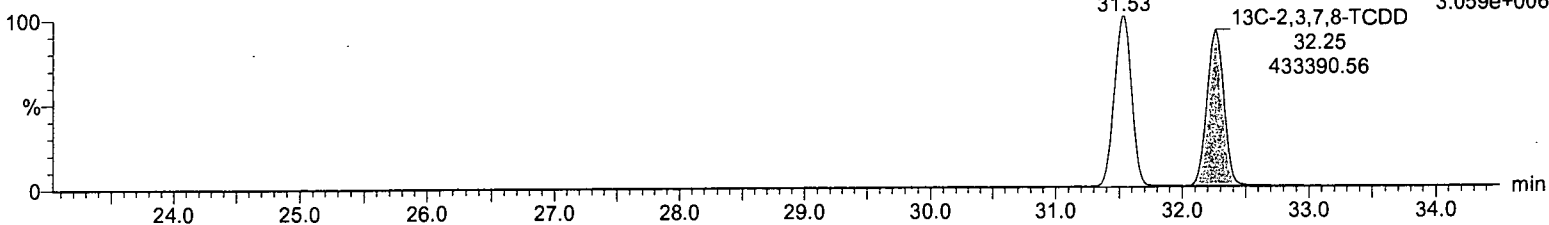
F1:Voltage SIR,EI+
331.9368
2.398e+006



13C-2,3,7,8-TCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

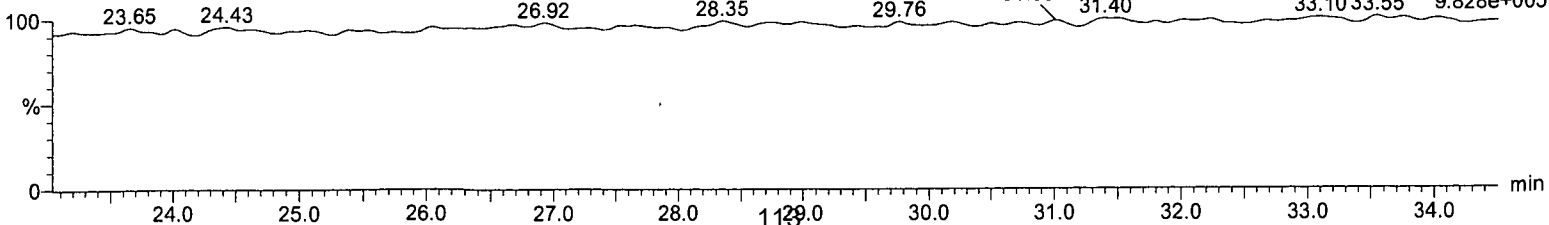
F1:Voltage SIR,EI+
333.9338
3.059e+006



PFK1

130501_HR_06
EDF-9999 CS-4 02/12/13

F1:Voltage SIR,EI+
292.9824
9.828e+005

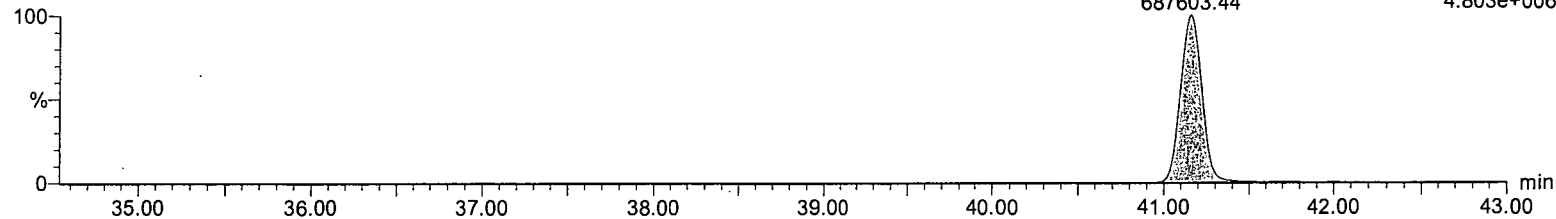


Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

1,2,3,7,8-PeCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

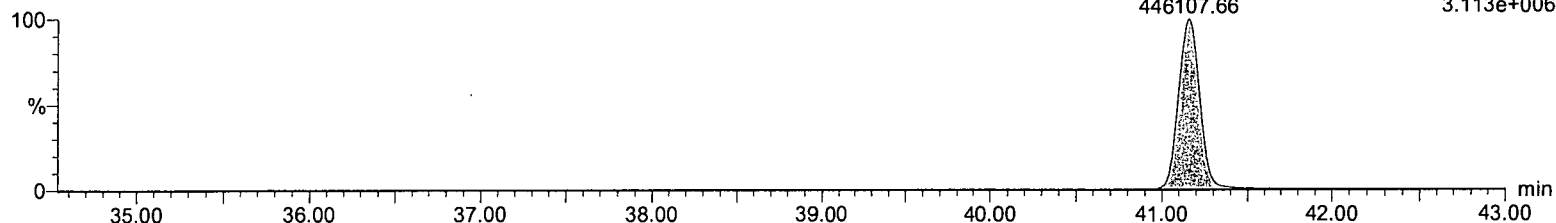
1,2,3,7,8-PeCDD
41.16
687603.44
F2:Voltage SIR,EI+
355.8546
4.803e+006



1,2,3,7,8-PeCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

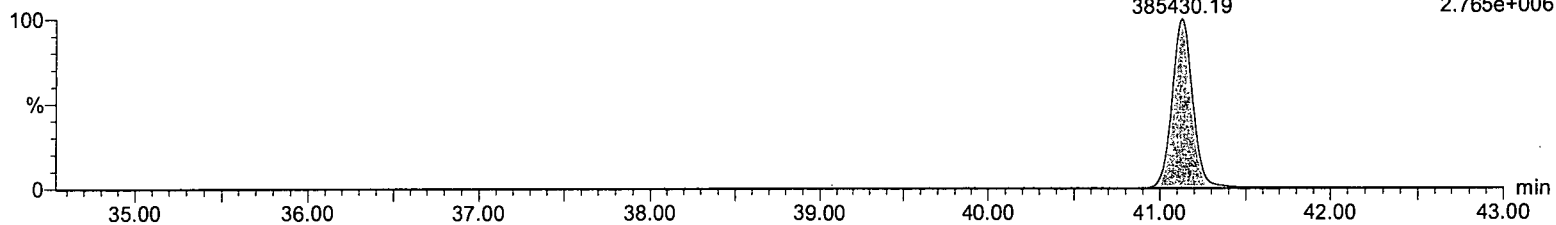
1,2,3,7,8-PeCDD
41.16
446107.66
F2:Voltage SIR,EI+
357.8516
3.113e+006



13C-1,2,3,7,8-PeCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

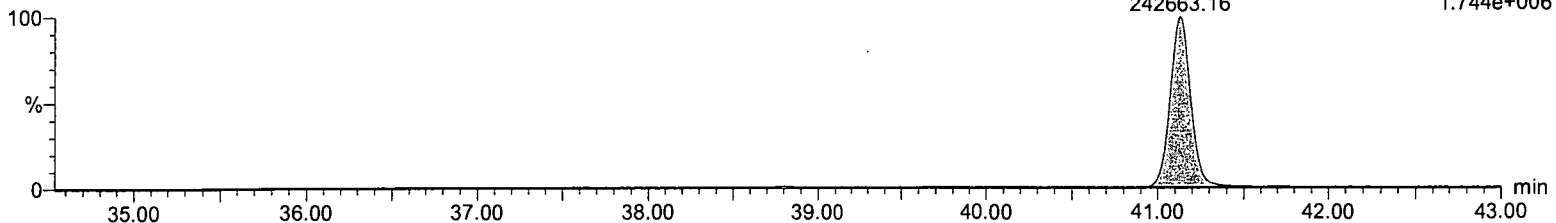
13C-1,2,3,7,8-PeCDD
41.13
385430.19
F2:Voltage SIR,EI+
367.8949
2.765e+006



13C-1,2,3,7,8-PeCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

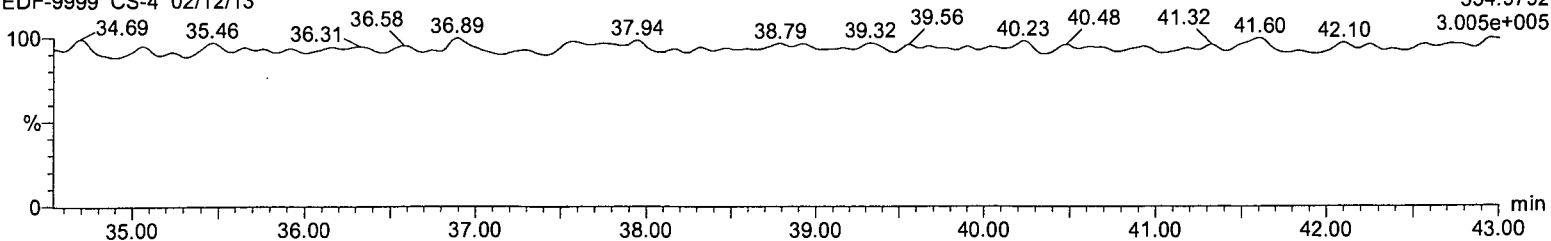
13C-1,2,3,7,8-PeCDD
41.13
242663.16
F2:Voltage SIR,EI+
369.8919
1.744e+006



PFK2

130501_HR_06
EDF-9999 CS-4 02/12/13

F2:Voltage SIR,EI+
354.9792
3.005e+005

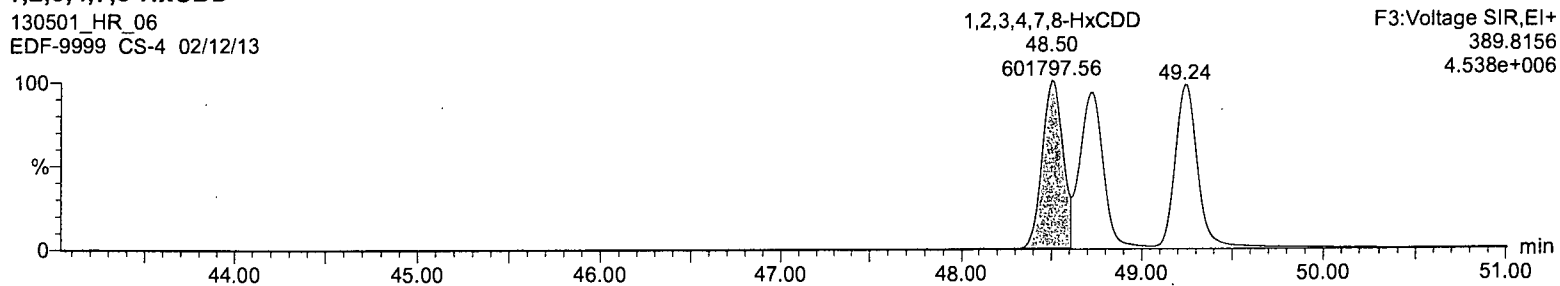


Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

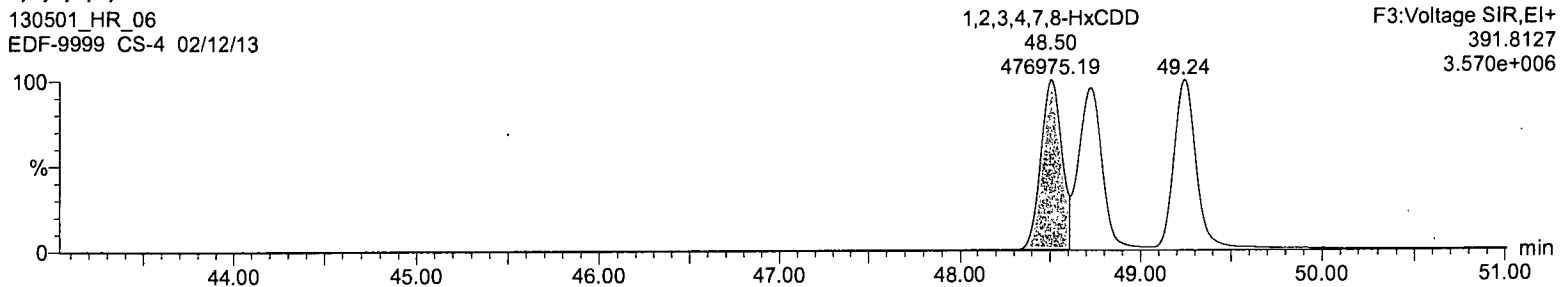
1,2,3,4,7,8-HxCDD

130501_HR_06
EDF-9999 CS-4 02/12/13



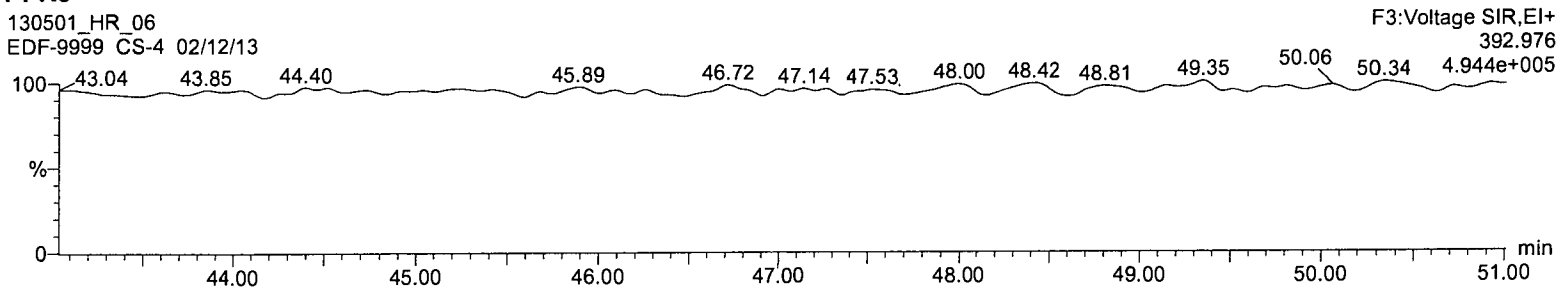
1,2,3,4,7,8-HxCDD

130501_HR_06
EDF-9999 CS-4 02/12/13



PFK3

130501_HR_06
EDF-9999 CS-4 02/12/13

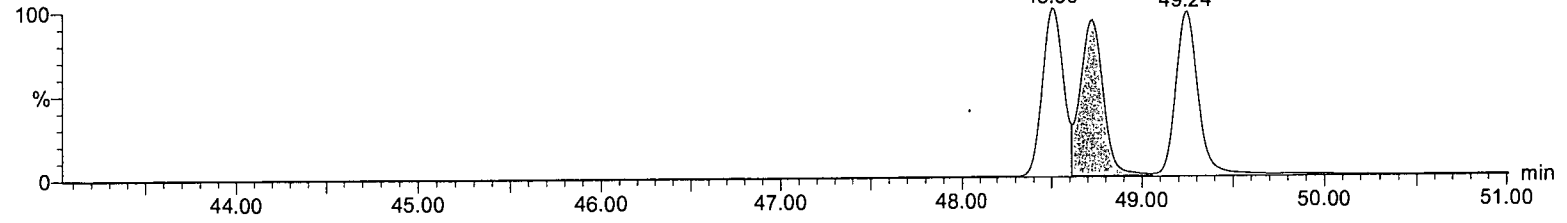


Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

1,2,3,6,7,8-HxCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

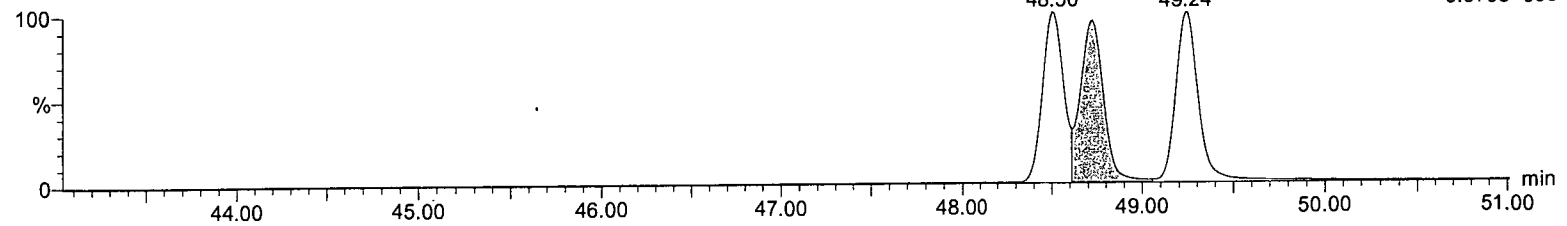
F3:Voltage SIR,EI+
389.8156
4.538e+006



1,2,3,6,7,8-HxCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

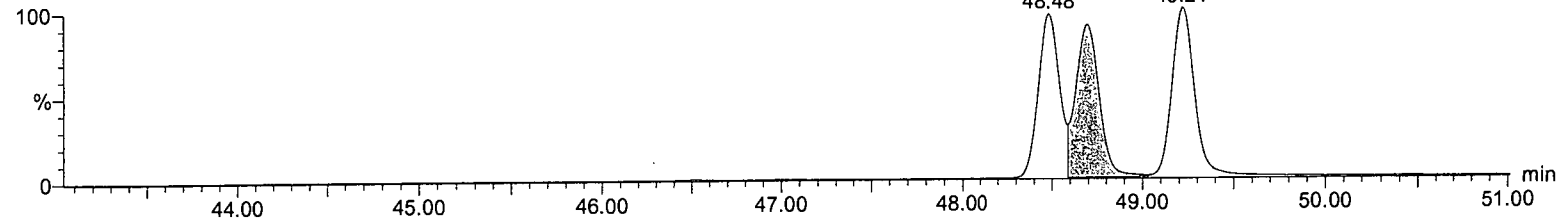
F3:Voltage SIR,EI+
391.8127
3.570e+006



13C-1,2,3,6,7,8-HxCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

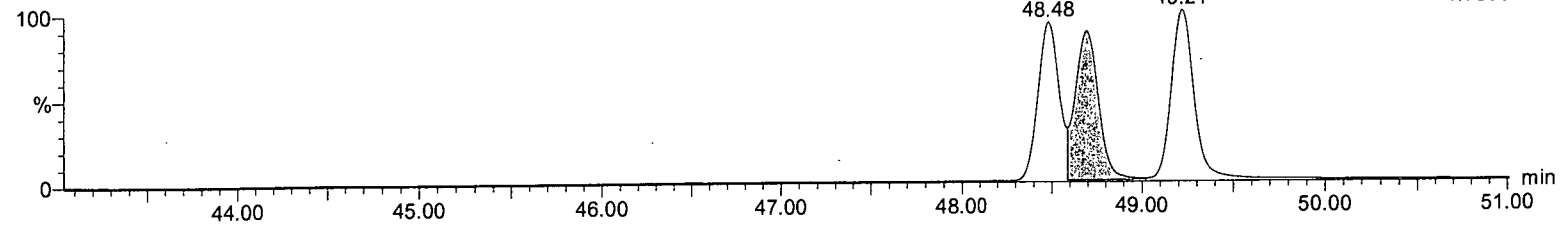
F3:Voltage SIR,EI+
401.8559
2.189e+006



13C-1,2,3,6,7,8-HxCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

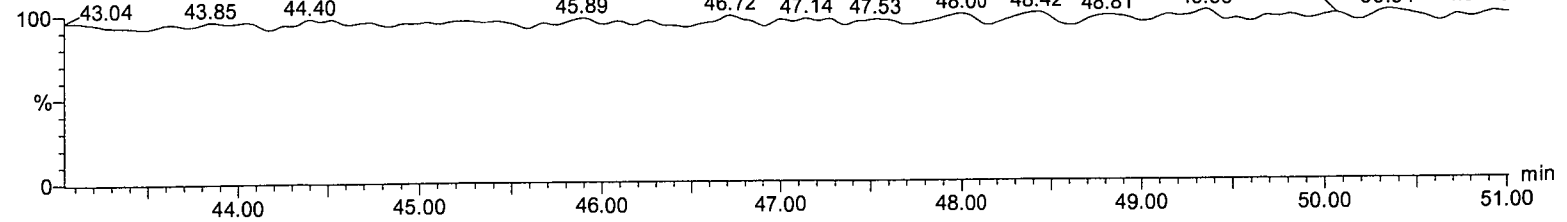
F3:Voltage SIR,EI+
403.8529
1.789e+006



PFK3

130501_HR_06
EDF-9999 CS-4 02/12/13

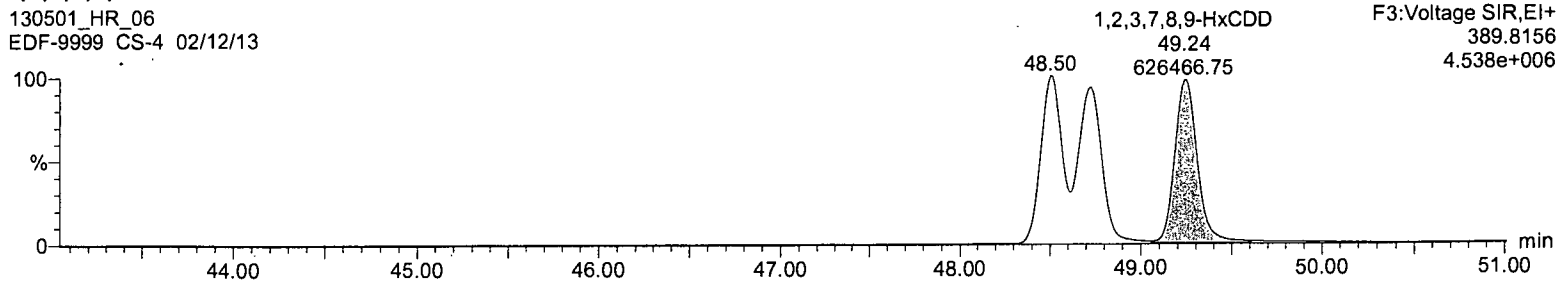
F3:Voltage SIR,EI+
392.976
4.944e+005



Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

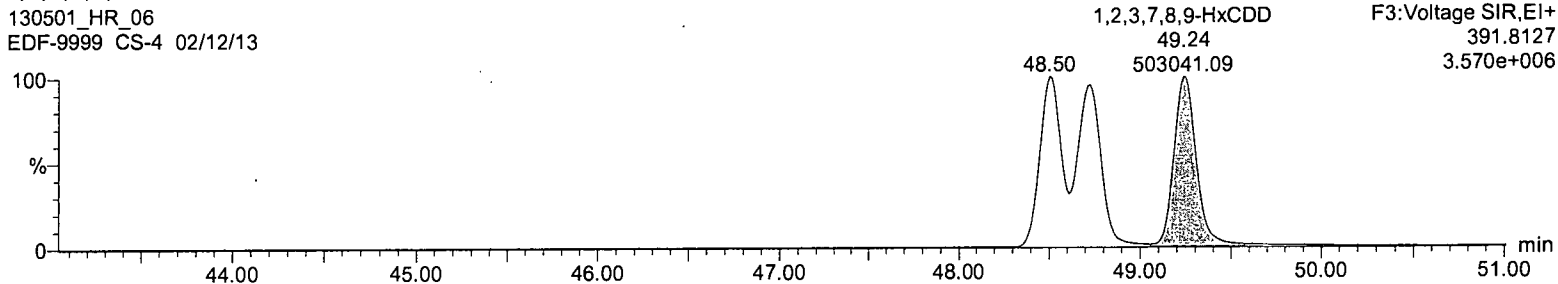
1,2,3,7,8,9-HxCDD

130501_HR_06
EDF-9999 CS-4 02/12/13



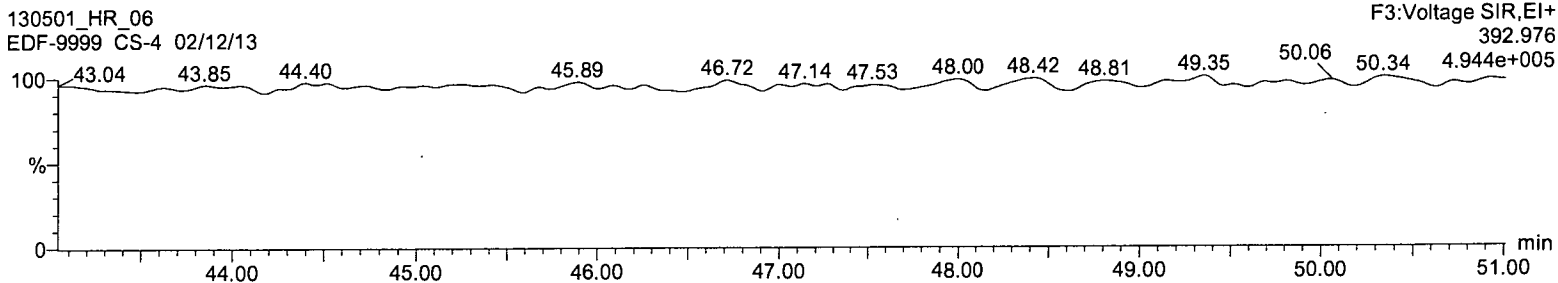
1,2,3,7,8,9-HxCDD

130501_HR_06
EDF-9999 CS-4 02/12/13



PFK3

130501_HR_06
EDF-9999 CS-4 02/12/13



Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

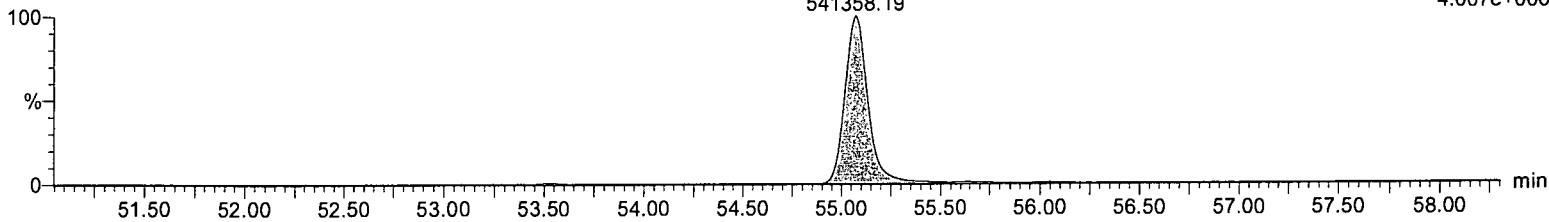
Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

1,2,3,4,6,7,8-HpCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

1,2,3,4,6,7,8-HpCDD
55.07
541358.19

F4:Voltage SIR,EI+
423.7767
4.007e+006

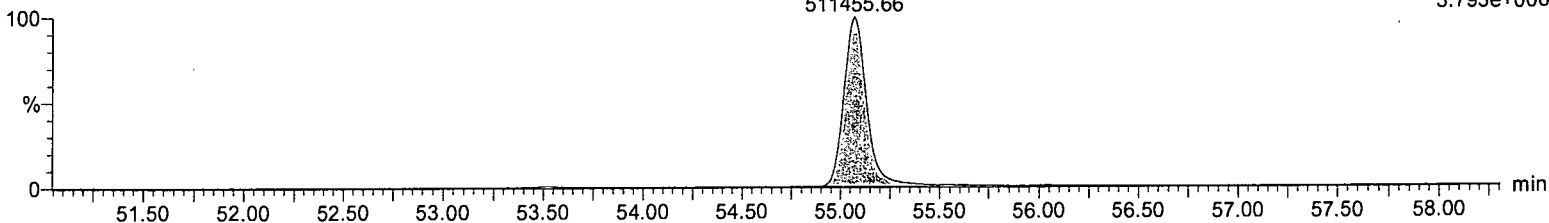


1,2,3,4,6,7,8-HpCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

1,2,3,4,6,7,8-HpCDD
55.07
511455.66

F4:Voltage SIR,EI+
425.7737
3.793e+006

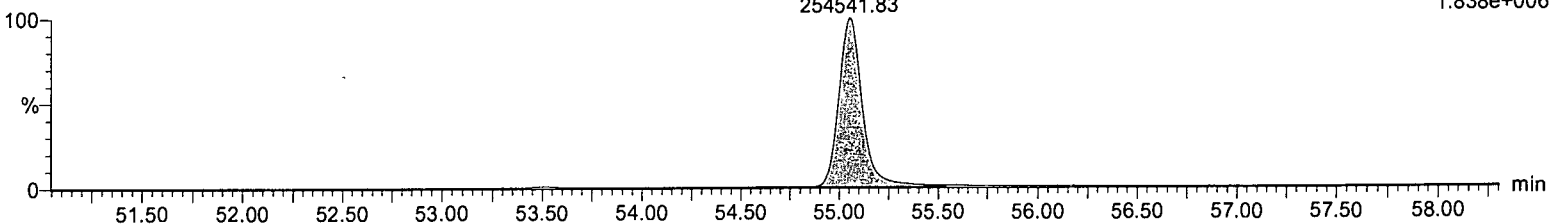


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

13C-1,2,3,4,6,7,8-HpCDD
55.05
254541.83

F4:Voltage SIR,EI+
435.8169
1.838e+006

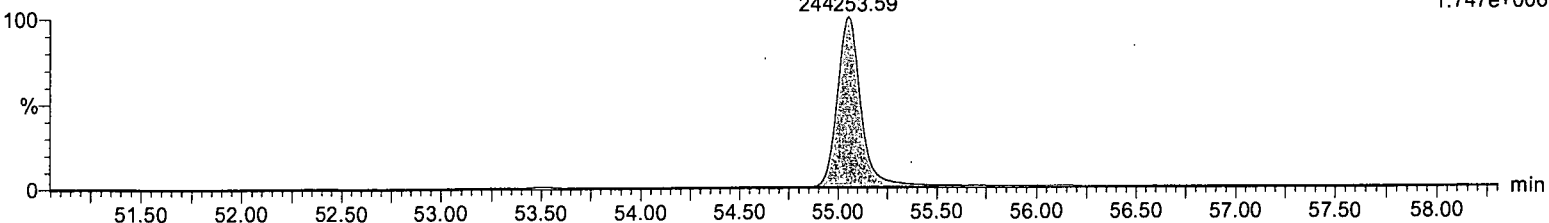


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

13C-1,2,3,4,6,7,8-HpCDD
55.05
244253.59

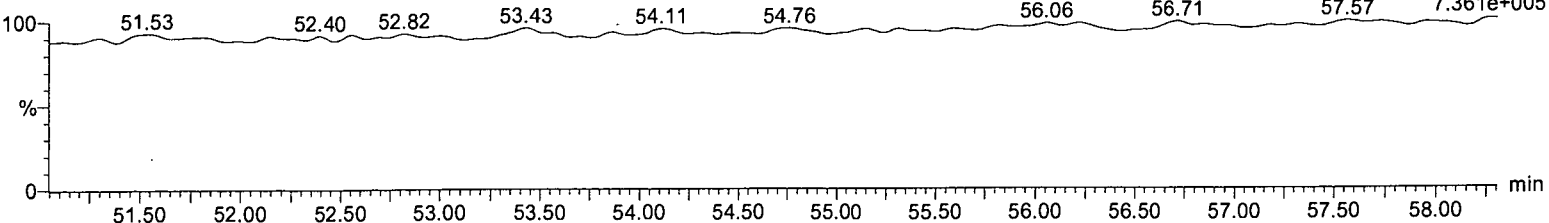
F4:Voltage SIR,EI+
437.814
1.747e+006



PFK4

130501_HR_06
EDF-9999 CS-4 02/12/13

F4:Voltage SIR,EI+
430.9728
7.361e+005

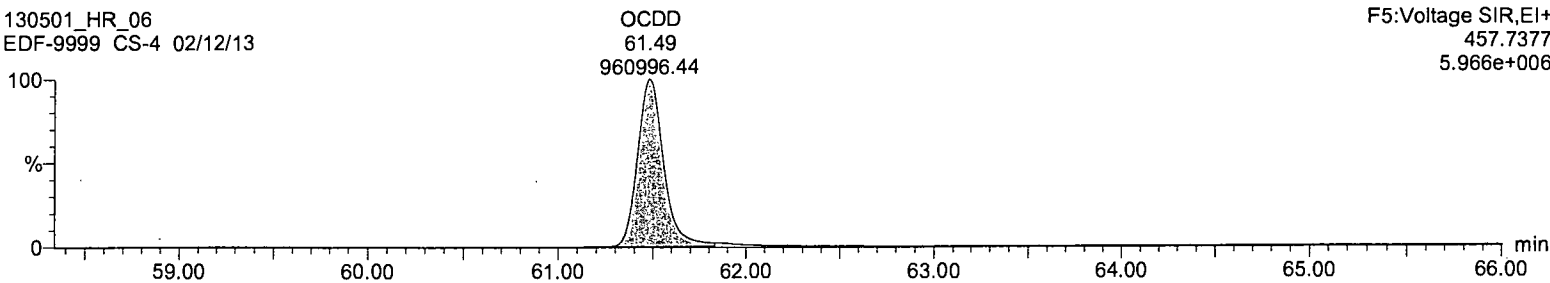


Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

OCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

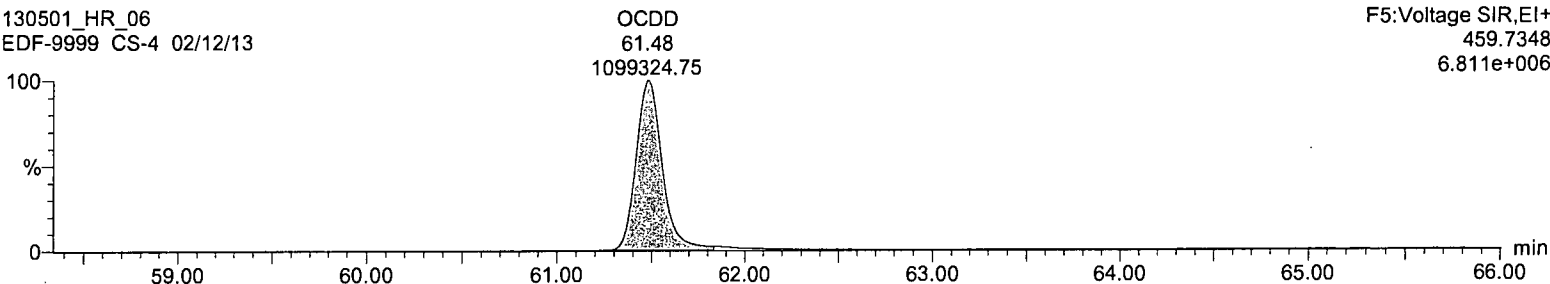
F5:Voltage SIR,EI+
457.7377
5.966e+006



OCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

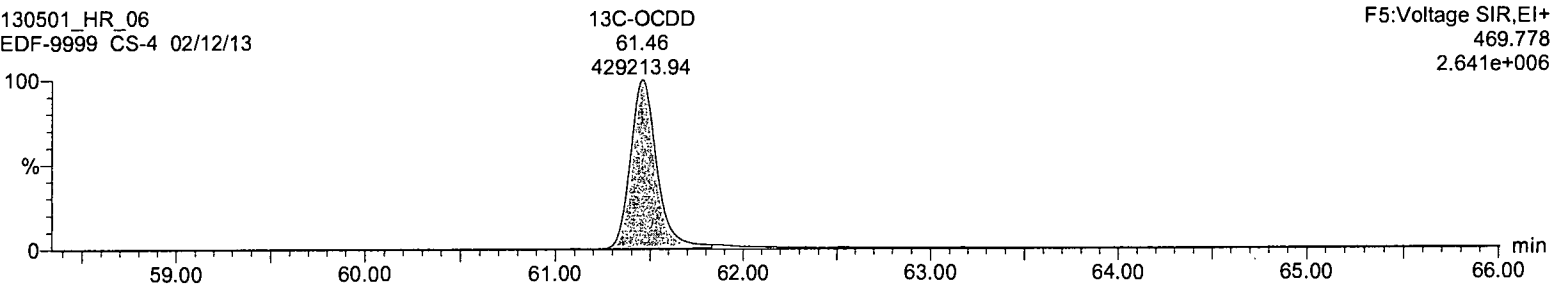
F5:Voltage SIR,EI+
459.7348
6.811e+006



13C-OCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

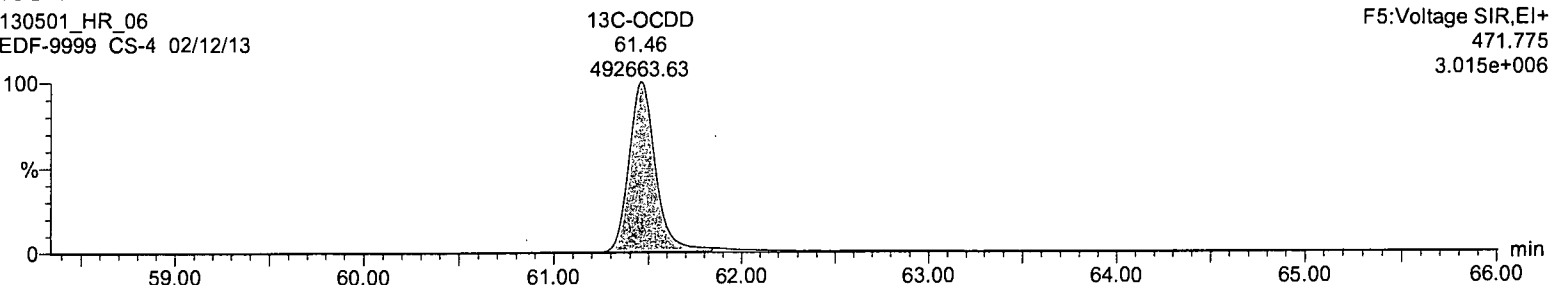
F5:Voltage SIR,EI+
469.778
2.641e+006



13C-OCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

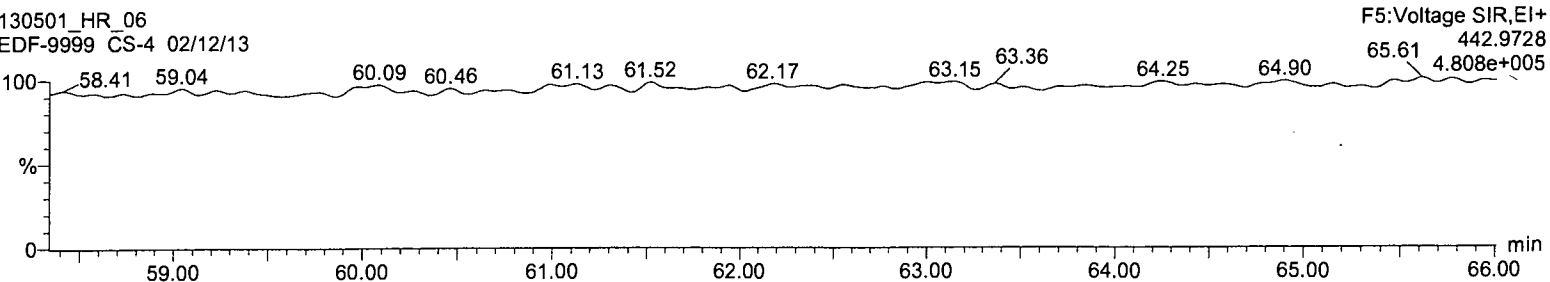
F5:Voltage SIR,EI+
471.775
3.015e+006



PFK5

130501_HR_06
EDF-9999 CS-4 02/12/13

F5:Voltage SIR,EI+
442.9728
4.808e+005



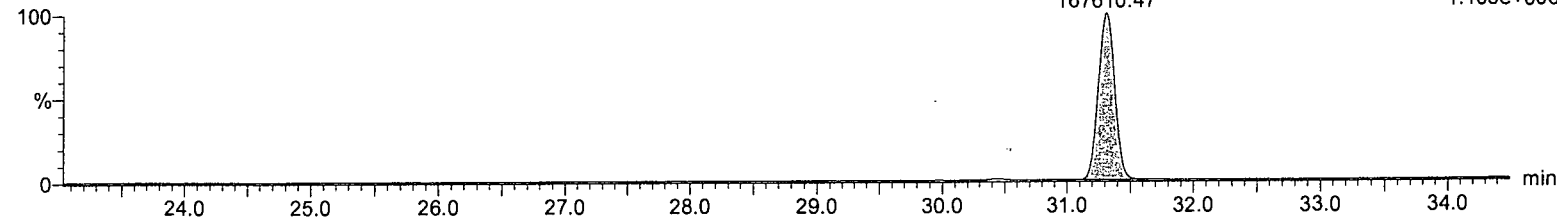
Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

2,3,7,8-TCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

2,3,7,8-TCDF
31.32
167610.47

F1:Voltage SIR,EI+
303.9016
1.105e+006

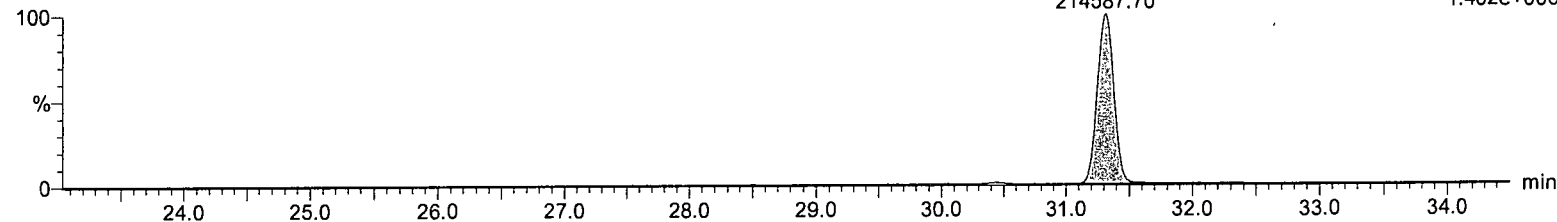


2,3,7,8-TCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

2,3,7,8-TCDF
31.32
214587.70

F1:Voltage SIR,EI+
305.8987
1.402e+006

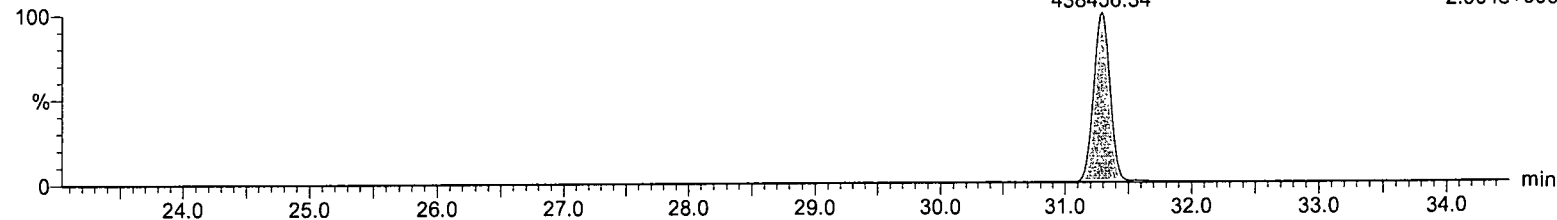


13C-2,3,7,8-TCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

13C-2,3,7,8-TCDF
31.29
438456.34

F1:Voltage SIR,EI+
315.9419
2.904e+006

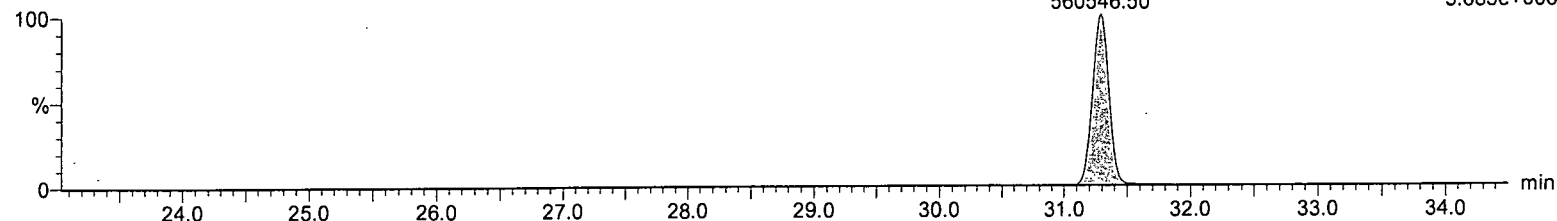


13C-2,3,7,8-TCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

13C-2,3,7,8-TCDF
31.29
560546.50

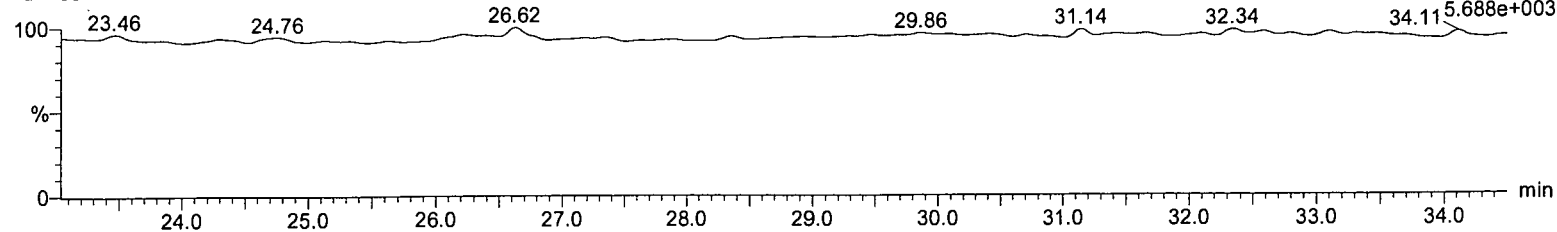
F1:Voltage SIR,EI+
317.9389
3.685e+006



HxCDFE

130501_HR_06
EDF-9999 CS-4 02/12/13

F1:Voltage SIR,EI+
375.8364
5.688e+003



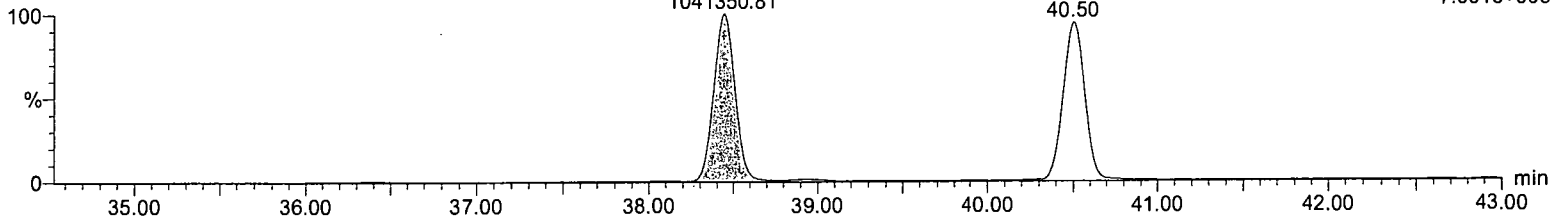
Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

1,2,3,7,8-PeCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

1,2,3,7,8-PeCDF
38.44
1041350.81

F2:Voltage SIR,EI+
339.8597
7.001e+006

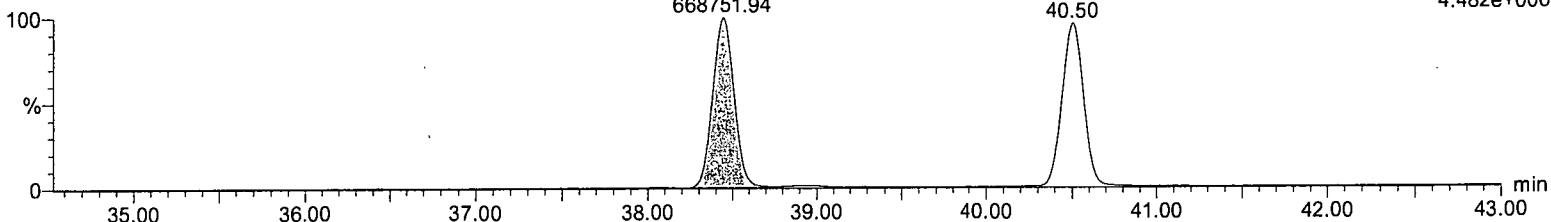


1,2,3,7,8-PeCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

1,2,3,7,8-PeCDF
38.44
668751.94

F2:Voltage SIR,EI+
341.8567
4.482e+006

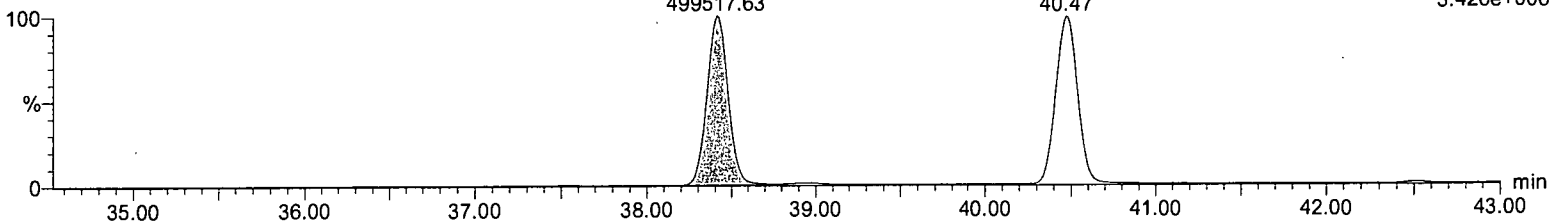


13C-1,2,3,7,8-PeCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

13C-1,2,3,7,8-PeCDF
38.41
499517.63

F2:Voltage SIR,EI+
351.9
3.426e+006

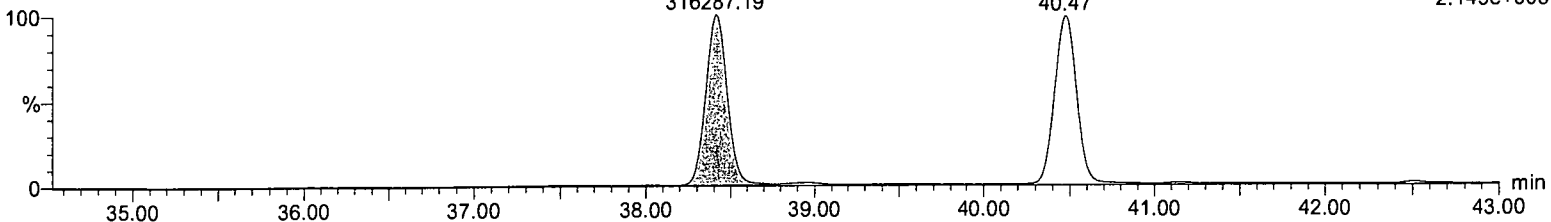


13C-1,2,3,7,8-PeCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

13C-1,2,3,7,8-PeCDF
38.41
316287.19

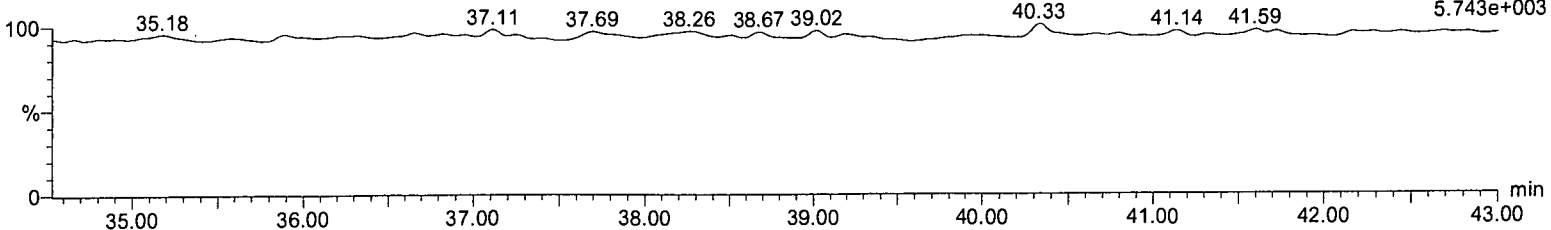
F2:Voltage SIR,EI+
353.897
2.149e+006



HpCDPE

130501_HR_06
EDF-9999 CS-4 02/12/13

F2:Voltage SIR,EI+
409.7974
5.743e+003



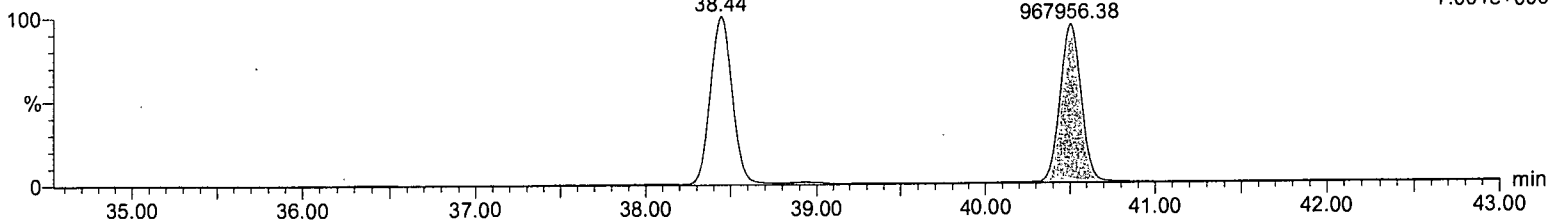
Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

2,3,4,7,8-PeCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

2,3,4,7,8-PeCDF
40.50
967956.38

F2:Voltage SIR,EI+
339.8597
7.001e+006

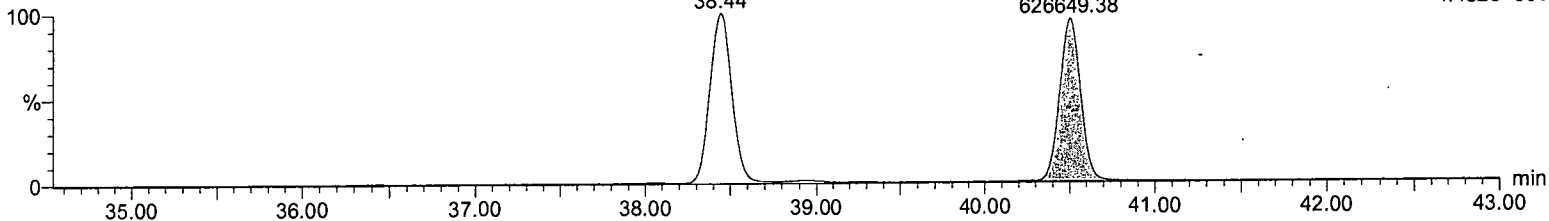


2,3,4,7,8-PeCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

2,3,4,7,8-PeCDF
40.50
626649.38

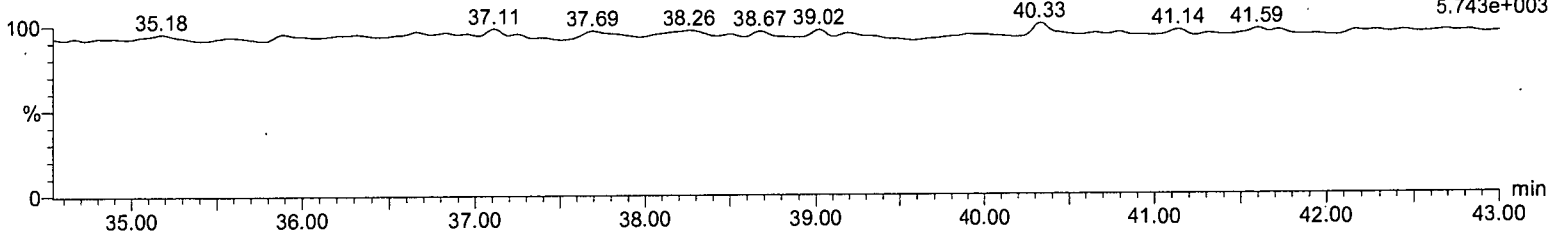
F2:Voltage SIR,EI+
341.8567
4.482e+006



HpCDPE

130501_HR_06
EDF-9999 CS-4 02/12/13

F2:Voltage SIR,EI+
409.7974
5.743e+003

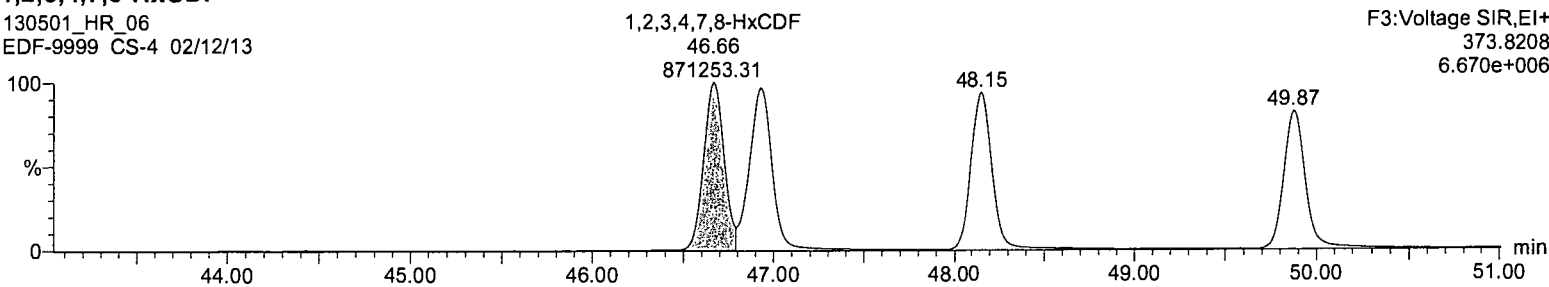


Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

1,2,3,4,7,8-HxCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

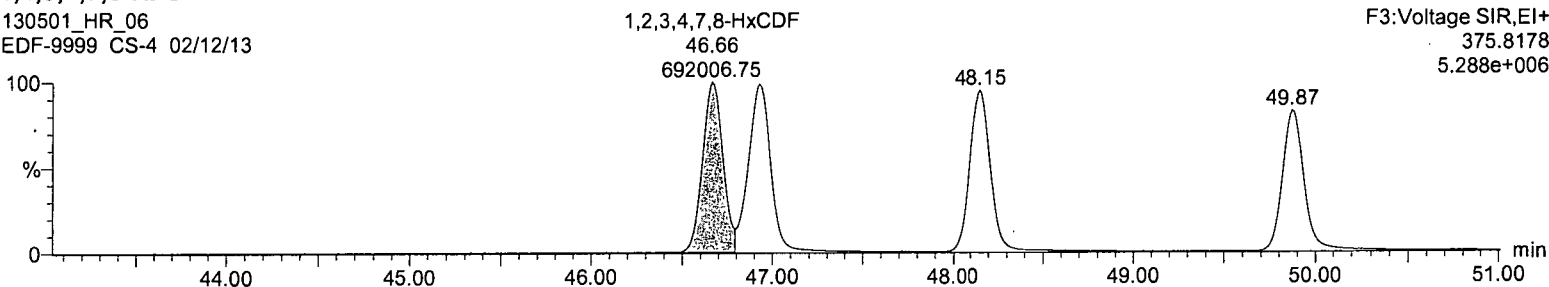
F3:Voltage SIR,EI+
373.8208
6.670e+006



1,2,3,4,7,8-HxCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

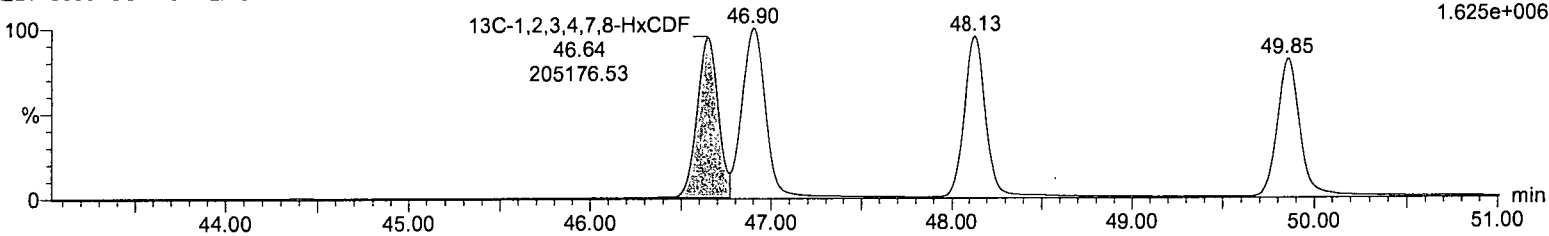
F3:Voltage SIR,EI+
375.8178
5.288e+006



13C-1,2,3,4,7,8-HxCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

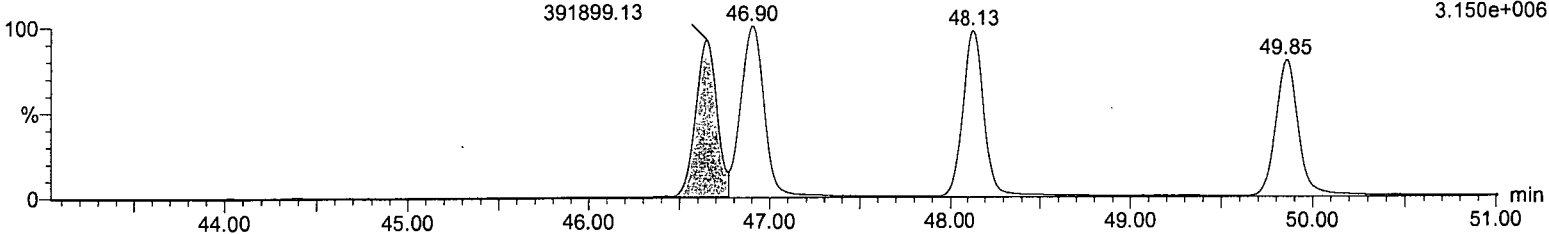
F3:Voltage SIR,EI+
383.8639
1.625e+006



13C-1,2,3,4,7,8-HxCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

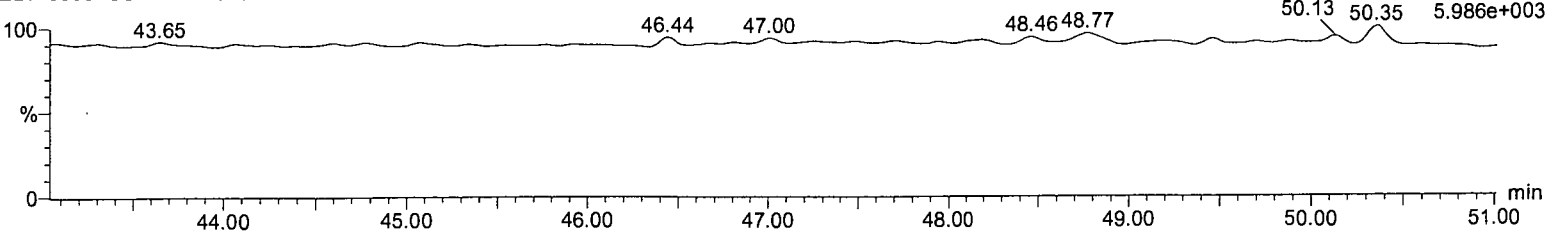
F3:Voltage SIR,EI+
385.861
3.150e+006



OCDFE

130501_HR_06
EDF-9999 CS-4 02/12/13

F3:Voltage SIR,EI+
445.7555
5.986e+003

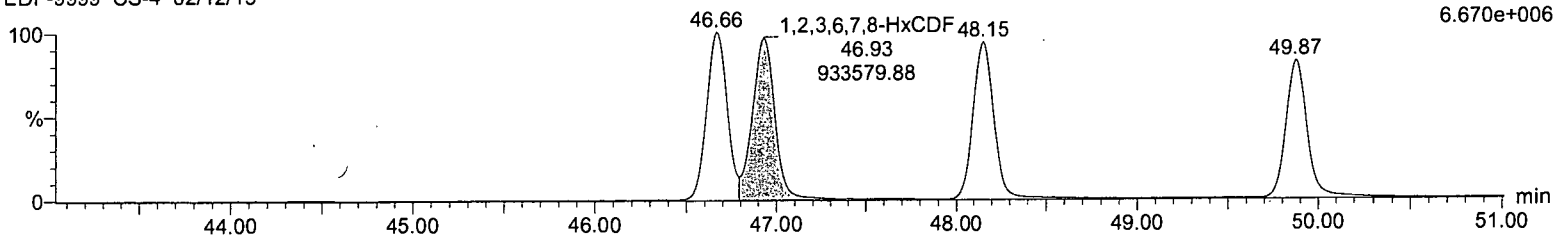


Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

1,2,3,6,7,8-HxCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

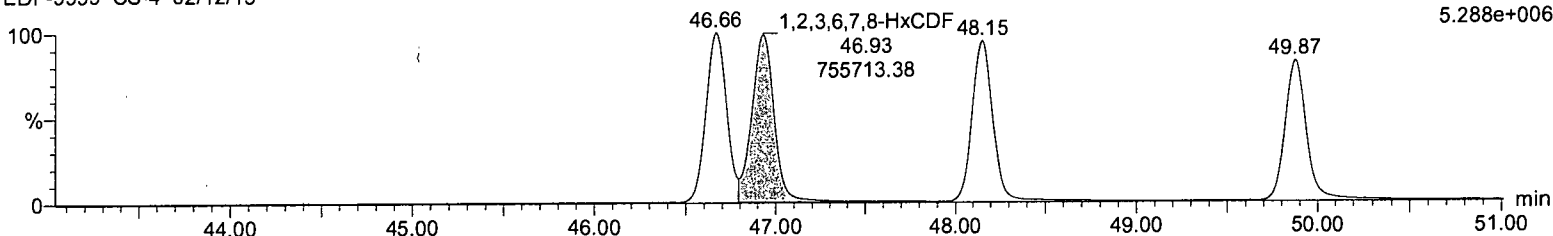
F3:Voltage SIR,EI+
373.8208
6.670e+006



1,2,3,6,7,8-HxCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

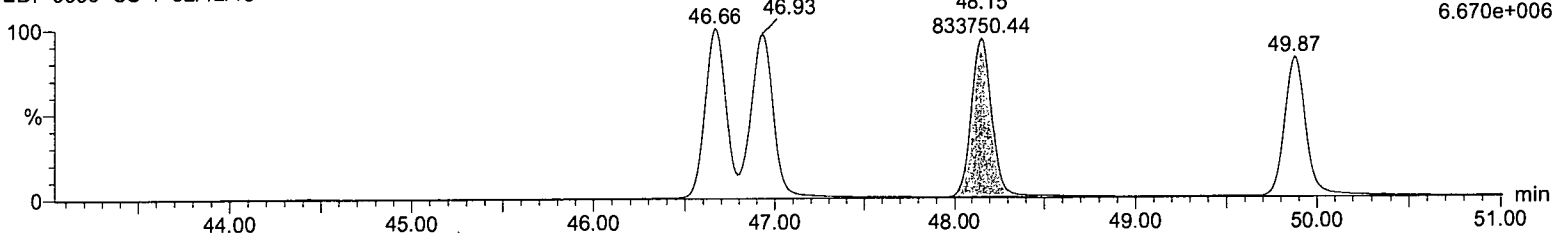
F3:Voltage SIR,EI+
375.8178
5.288e+006



2,3,4,6,7,8-HxCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

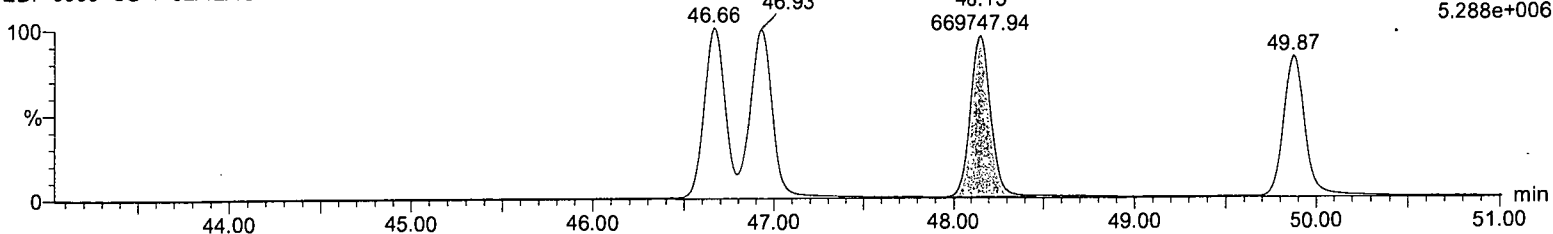
F3:Voltage SIR,EI+
373.8208
6.670e+006



2,3,4,6,7,8-HxCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

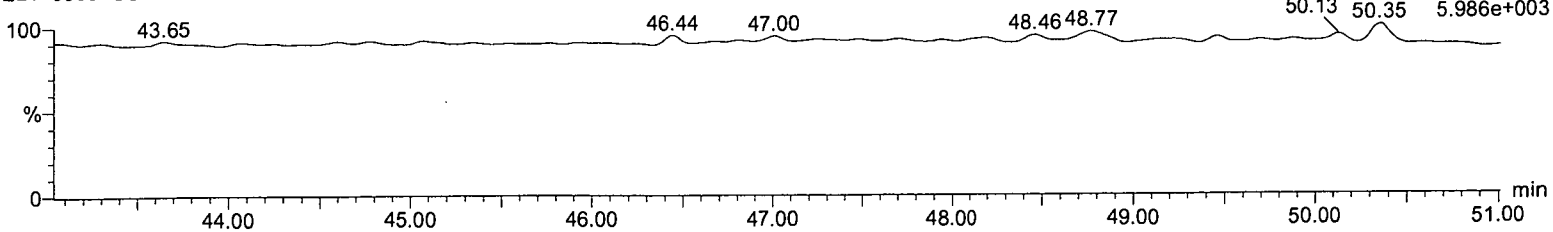
F3:Voltage SIR,EI+
375.8178
5.288e+006



OCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

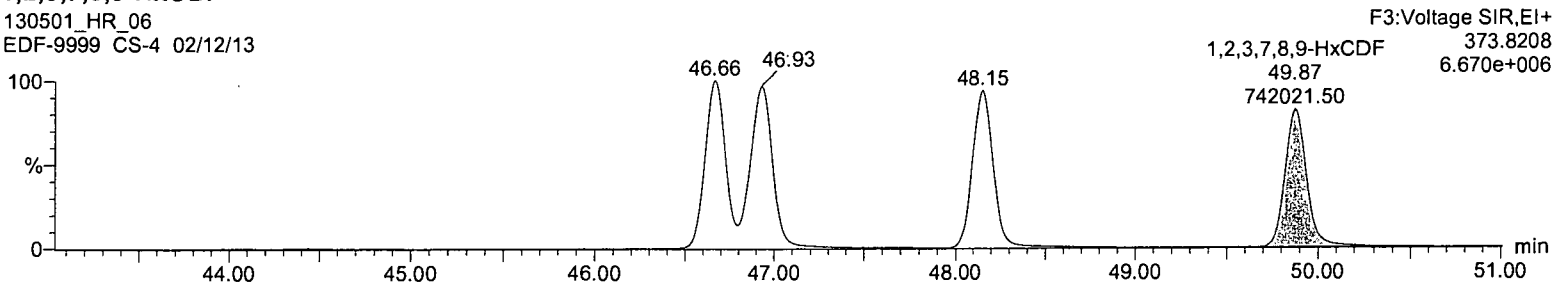
F3:Voltage SIR,EI+
445.7555
5.986e+003



Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

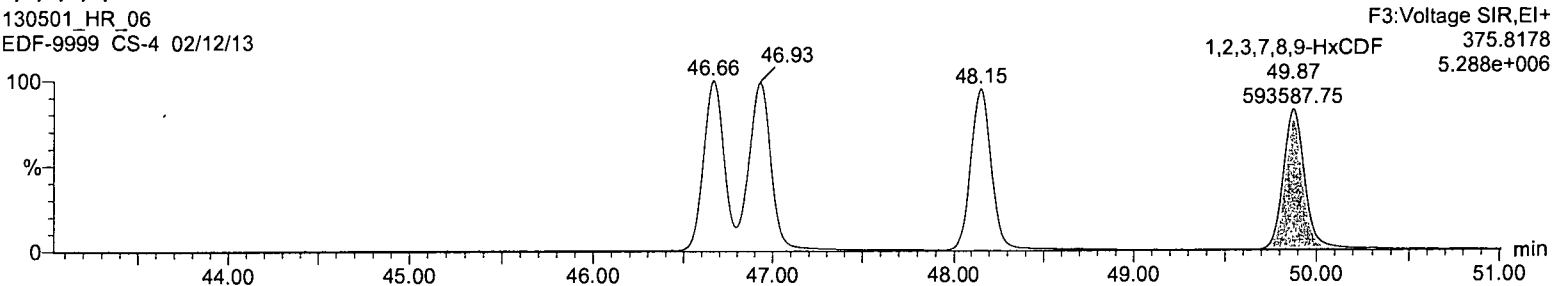
1,2,3,7,8,9-HxCDF

130501_HR_06
EDF-9999 CS-4 02/12/13



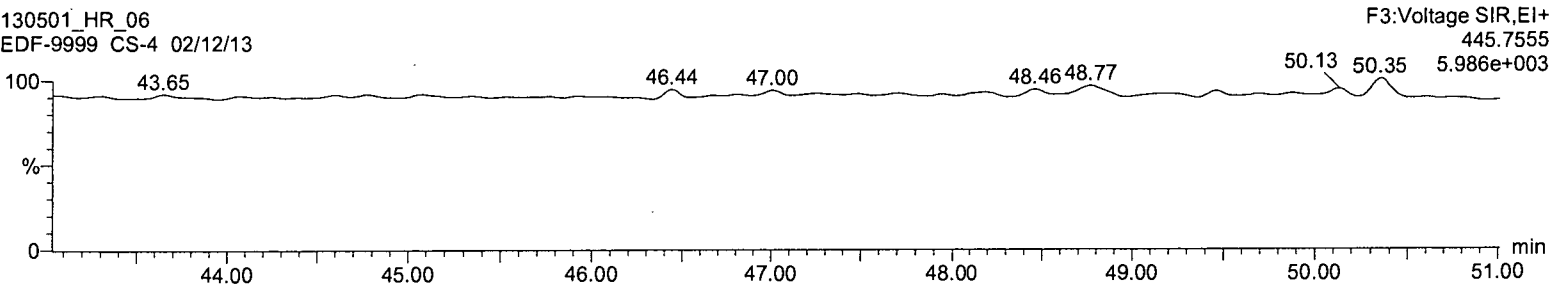
1,2,3,7,8,9-HxCDF

130501_HR_06
EDF-9999 CS-4 02/12/13



OCDPE

130501_HR_06
EDF-9999 CS-4 02/12/13



Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

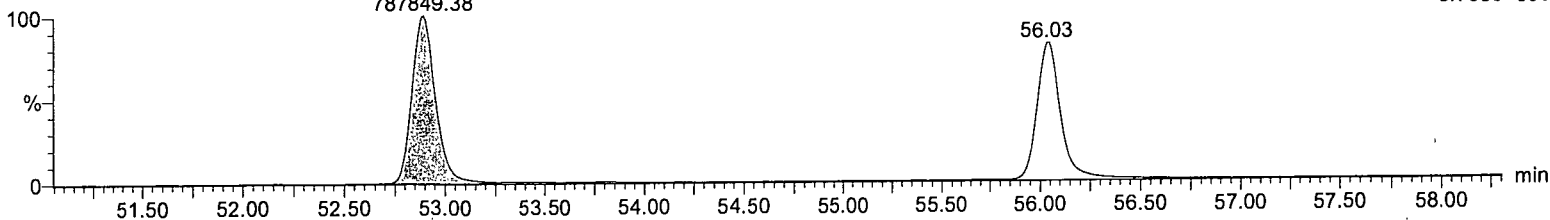
Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

1,2,3,4,6,7,8-HpCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

1,2,3,4,6,7,8-HpCDF
52.89
787849.38

F4:Voltage SIR,EI+
407.7818
5.788e+006

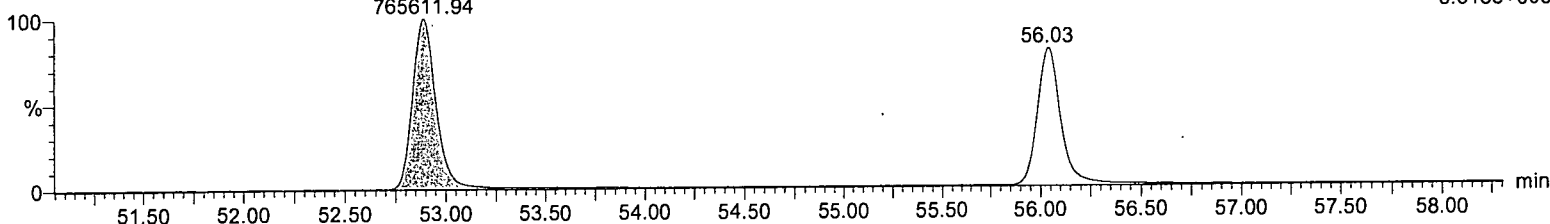


1,2,3,4,6,7,8-HpCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

1,2,3,4,6,7,8-HpCDF
52.89
765611.94

F4:Voltage SIR,EI+
409.7788
5.618e+006

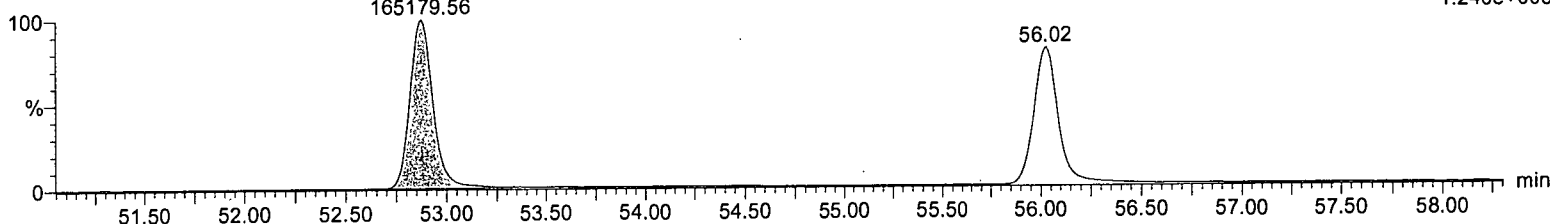


13C-1,2,3,4,6,7,8-HpCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

13C-1,2,3,4,6,7,8-HpCDF
52.87
165179.56

F4:Voltage SIR,EI+
417.825
1.240e+006

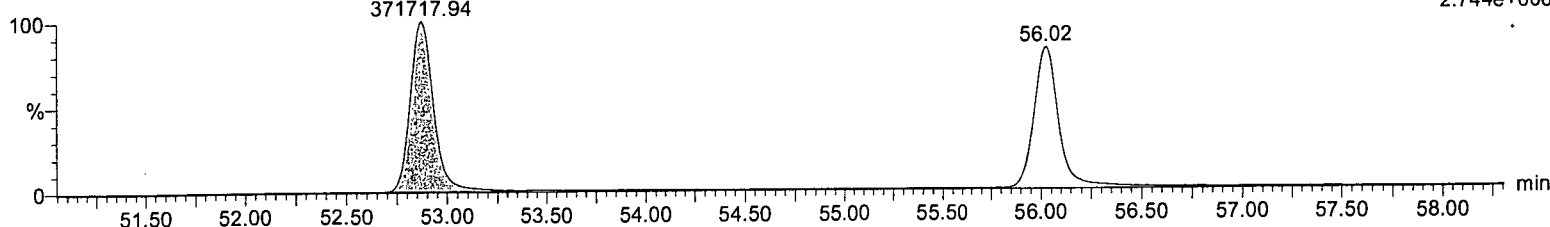


13C-1,2,3,4,6,7,8-HpCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

13C-1,2,3,4,6,7,8-HpCDF
52.87
371717.94

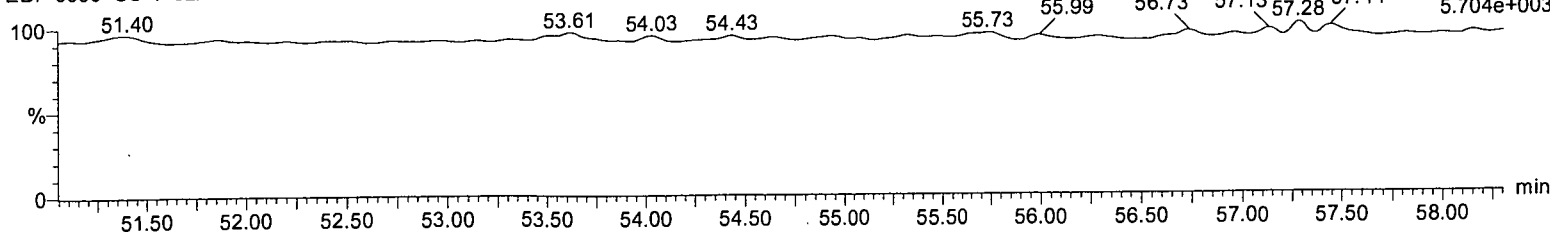
F4:Voltage SIR,EI+
419.822
2.744e+006



NCDPE

130501_HR_06
EDF-9999 CS-4 02/12/13

F4:Voltage SIR,EI+
479.7165
5.704e+003



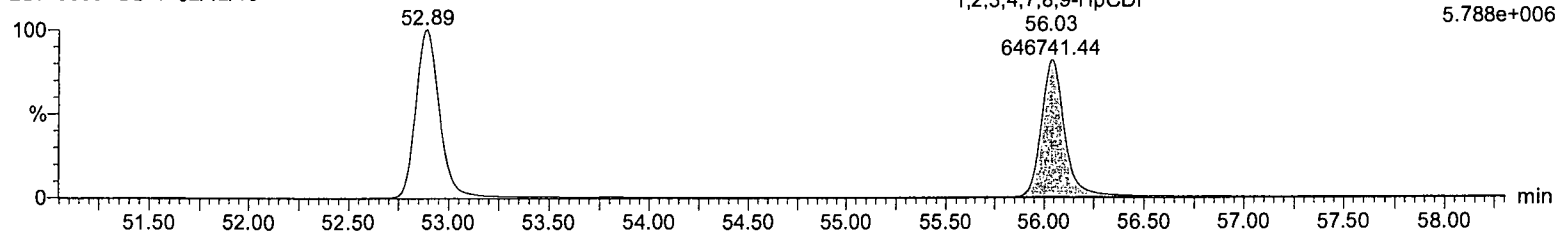
Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

1,2,3,4,7,8,9-HpCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

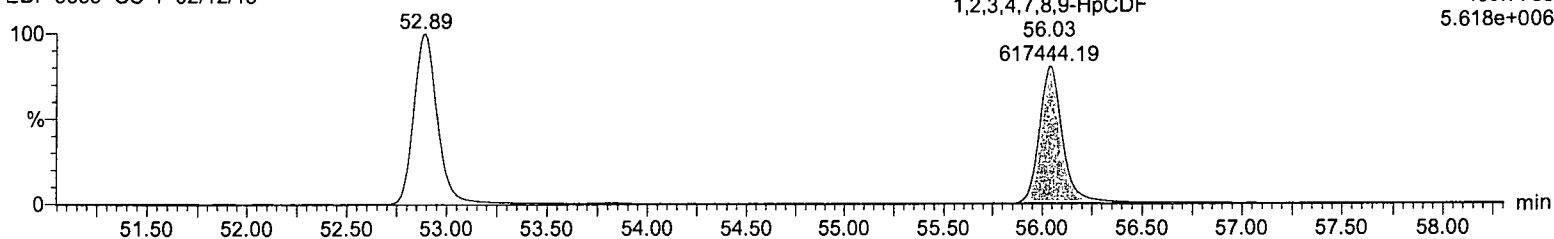
F4:Voltage SIR,EI+
407.7818
5.788e+006



1,2,3,4,7,8,9-HpCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

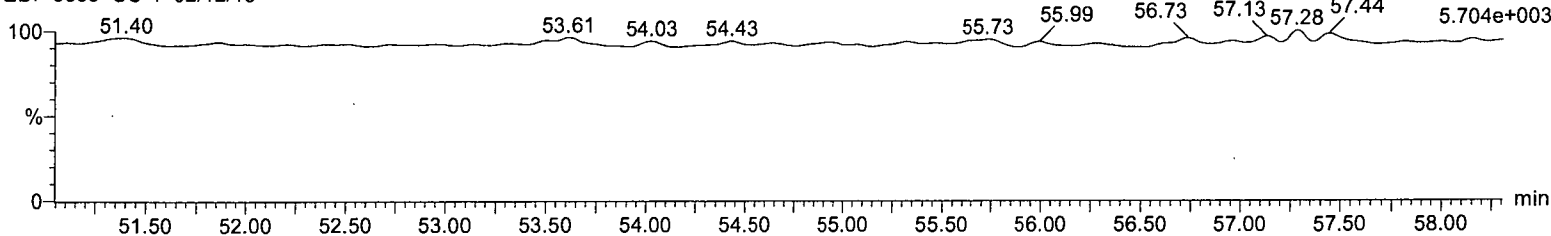
F4:Voltage SIR,EI+
409.7788
5.618e+006



NCDPE

130501_HR_06
EDF-9999 CS-4 02/12/13

F4:Voltage SIR,EI+
479.7165
5.704e+003



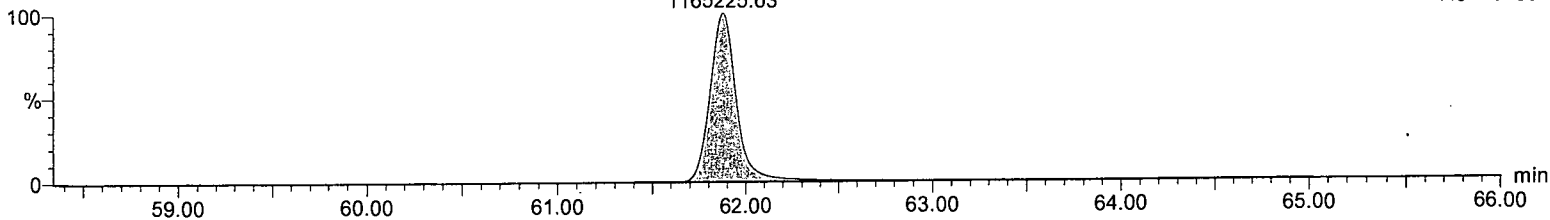
Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

OCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

OCDF
61.88
1165225.63

F5:Voltage SIR,EI+
441.7428
7.087e+006

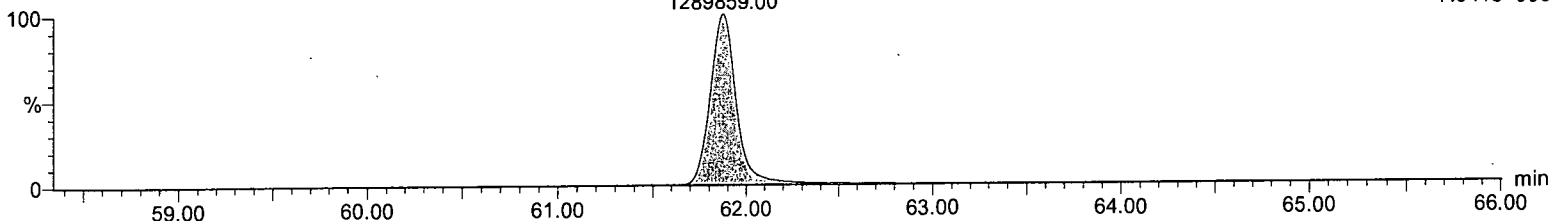


OCDF

130501_HR_06
EDF-9999 CS-4 02/12/13

OCDF
61.88
1289859.00

F5:Voltage SIR,EI+
443.7399
7.941e+006

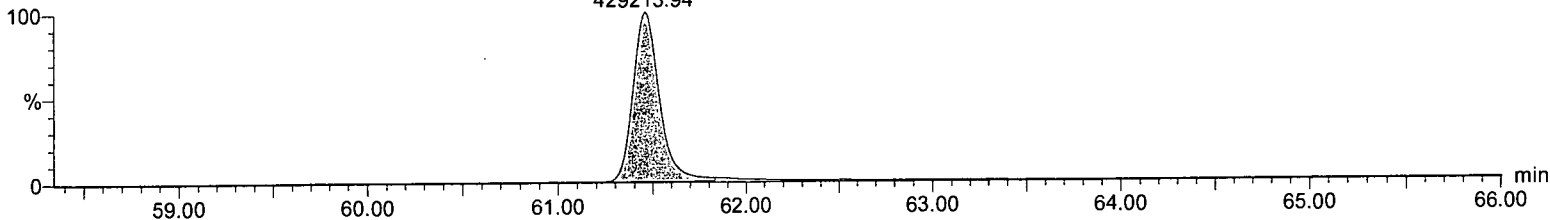


13C-OCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

13C-OCDD
61.46
429213.94

F5:Voltage SIR,EI+
469.778
2.641e+006

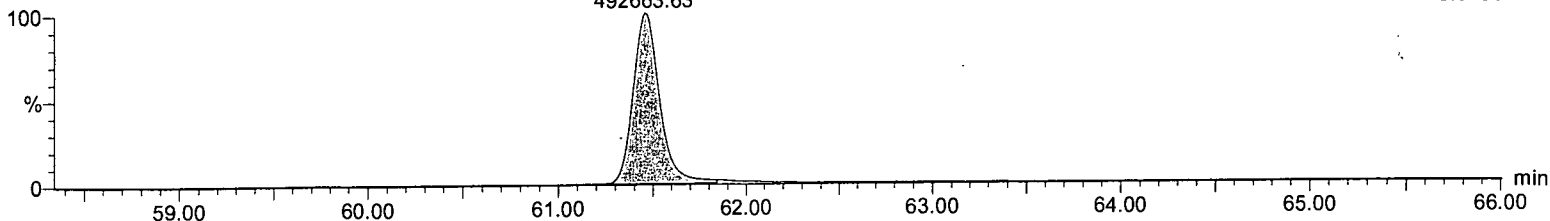


13C-OCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

13C-OCDD
61.46
492663.63

F5:Voltage SIR,EI+
471.775
3.015e+006

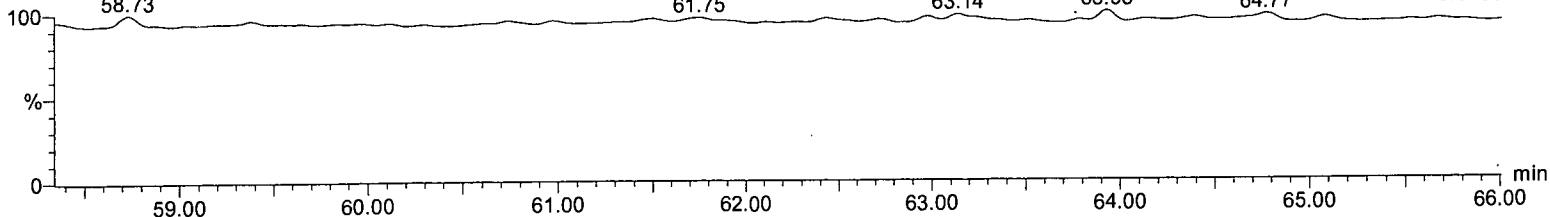


DCDPE

130501_HR_06
EDF-9999 CS-4 02/12/13

58.73 61.75 63.14 63.93 64.77

F5:Voltage SIR,EI+
513.6775
5.615e+003



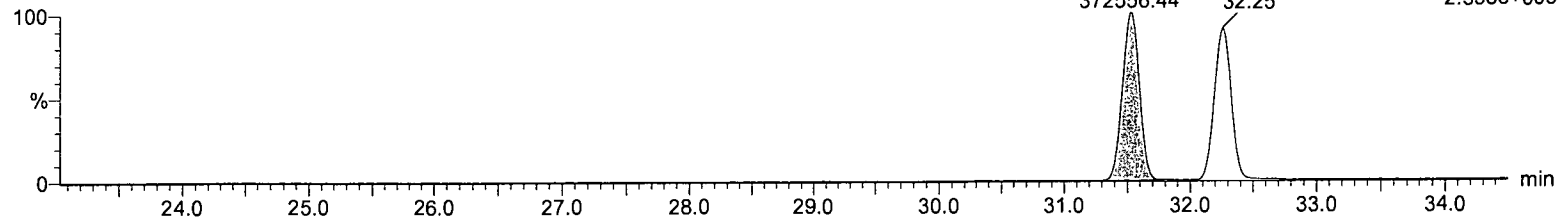
Name: 130501_HR_06, Date: 01-May-2013, Time: 22:24:04, Description: EDF-9999 CS-4 02/12/13, User: RP

13C-1,2,3,4-TCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

13C-1,2,3,4-TCDD

F1:Voltage SIR,EI+
331.9368
2.398e+006

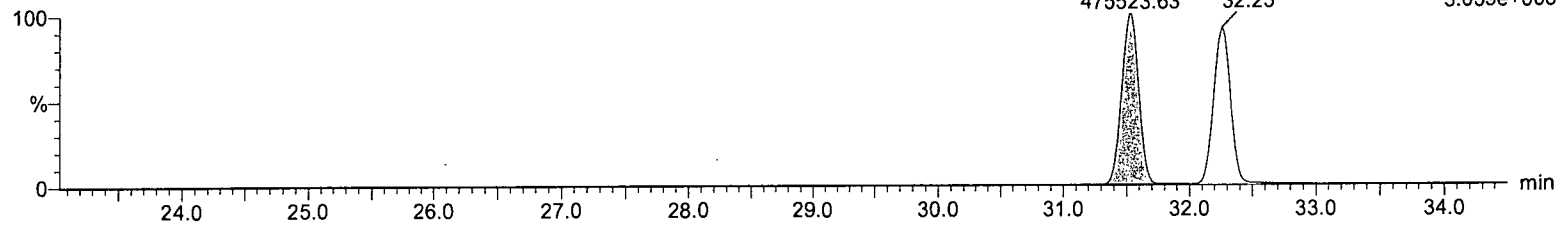


13C-1,2,3,4-TCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

13C-1,2,3,4-TCDD

F1:Voltage SIR,EI+
333.9338
3.059e+006

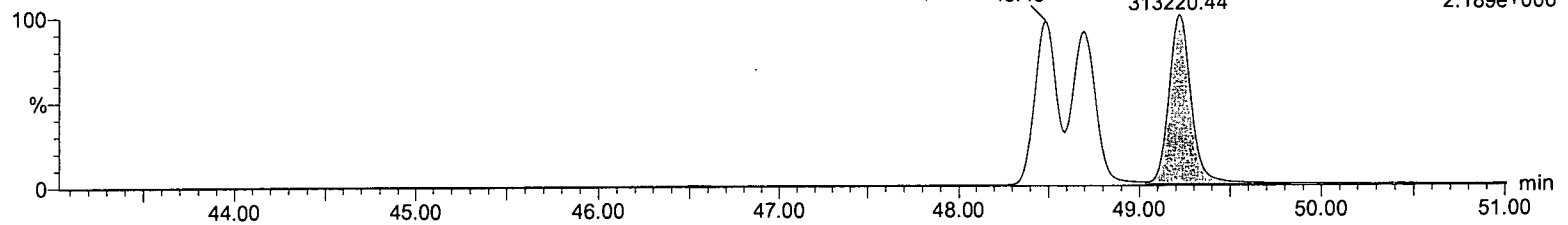


13C-1,2,3,7,8,9-HxCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

13C-1,2,3,7,8,9-HxCDD

F3:Voltage SIR,EI+
401.8559
2.189e+006

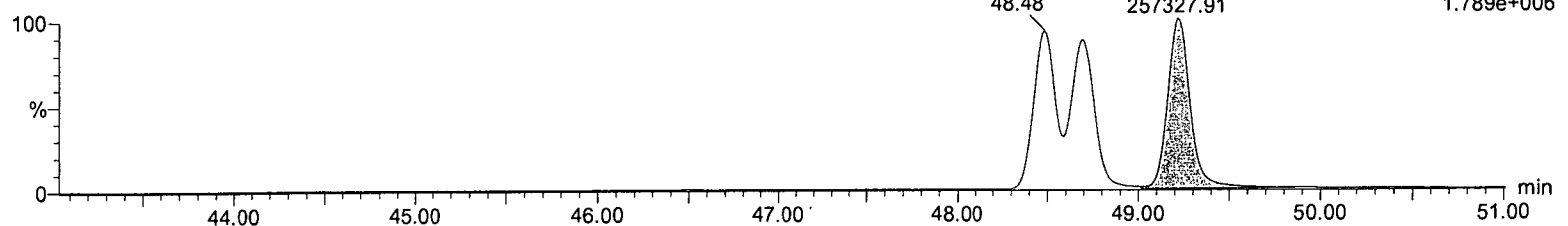


13C-1,2,3,7,8,9-HxCDD

130501_HR_06
EDF-9999 CS-4 02/12/13

13C-1,2,3,7,8,9-HxCDD

F3:Voltage SIR,EI+
403.8529
1.789e+006



Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: 02 May 2013 07:30:19

Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, ID: , Description: EDF-9999 CS-5 02/12/13, User: RP

#	Name	Signal	Noise	S/N:1	Flag	S/N:2	Noise	S/N:2	Flag
1	2,3,7,8-TCDD	5.1082390e6	4.3015878e2	11872.96	NO	6.6859130e6	2.5751080e2	25963.62	NO
2	1,2,3,7,8-PeCDD	3.2672866e7	1.0199679e3	32026.11	NO	2.1428340e7	1.6799082e3	12755.66	NO
3	1,2,3,4,7,8-HxCDD	2.9577860e7	1.1543817e3	25617.30	NO	2.3695278e7	3.6970234e3	6409.29	NO
4	1,2,3,6,7,8-HxCDD	2.8551772e7	1.1543817e3	24729.50	NO	2.3018504e7	3.6970234e3	6226.23	NO
5	1,2,3,7,8,9-HxCDD	3.1136516e7	1.1543817e3	26971.16	NO	2.5043454e7	3.6970234e3	6773.95	NO
6	1,2,3,4,6,7,8-HpCDD	2.5897018e7	1.2179067e3	21256.54	NO	2.4991068e7	2.0252932e3	12339.48	NO
7	OCDD	4.0098104e7	1.8248684e3	21974.89	NO	4.5063632e7	1.5748572e3	28614.42	NO
8	2,3,7,8-TCDF	6.5846360e6	2.6420657e2	24917.76	NO	8.5519600e6	4.6622223e2	18343.10	NO
9	1,2,3,7,8-PeCDF	4.8799268e7	2.3286758e3	20949.86	NO	3.1037248e7	1.3910166e3	22312.64	NO
10	2,3,4,7,8-PeCDF	4.4185764e7	2.3286758e3	18969.66	NO	2.8080790e7	1.3910166e3	20187.24	NO
11	1,2,3,4,7,8-HxCDF	4.1376044e7	1.0253813e3	40333.85	NO	3.3439316e7	4.4418096e3	7528.31	NO
12	1,2,3,6,7,8-HxCDF	4.3688348e7	1.0253813e3	42590.43	NO	3.4854160e7	4.4418096e3	7846.84	NO
13	2,3,4,6,7,8-HxCDF	4.0744992e7	1.0253813e3	39727.21	NO	3.2793532e7	4.4418096e3	7382.92	NO
14	1,2,3,7,8,9-HxCDF	3.6679152e7	1.0253813e3	35773.53	NO	2.9209102e7	4.4418096e3	6575.95	NO
15	1,2,3,4,6,7,8-HpCDF	3.8481220e7	4.0738979e3	9440.32	NO	3.7187420e7	4.4654375e3	8327.83	NO
16	1,2,3,4,7,8,9-HpCDF	2.8200774e7	4.0738979e3	6918.51	NO	2.7133498e7	4.4654375e3	6076.34	NO
17	OCDF	5.3766768e7	1.2819917e3	41937.82	NO	5.9165080e7	8.3607550e2	70765.24	NO
18	13C-2,3,7,8-TCDD	2.4813520e6	3.3772363e2	7347.35	NO	3.1353950e6	4.5774033e2	6849.72	NO
19	13C-1,2,3,7,8-PeCDD	3.3799130e6	4.3692029e2	7733.57	NO	2.1936680e6	3.7820825e2	5800.16	NO
20	13C-1,2,3,6,7,8-HxCDD	2.7060530e6	3.7004327e2	7316.49	NO	2.1292500e6	5.2766321e2	4035.24	NO
21	13C-1,2,3,4,6,7,8-HpCDD	2.4266080e6	9.8506543e2	2463.63	NO	2.2928750e6	2.1888844e2	10475.08	NO
22	13C-OCDD	3.4536250e6	1.4657310e3	2354.88	NO	3.8706750e6	3.9698132e2	9750.27	NO
23	13C-2,3,7,8-TCDF	3.4561690e6	5.2333856e2	6604.01	NO	4.4656320e6	2.8005511e2	15945.55	NO
24	13C-1,2,3,7,8-PeCDF	4.3314950e6	1.1259795e3	3843.74	NO	2.7043240e6	8.8012592e2	3072.66	NO
25	13C-1,2,3,4,7,8-HxCDF	1.9450990e6	4.0233264e2	4827.99	NO	3.7347700e6	1.0212871e3	3656.92	NO
26	13C-1,2,3,4,6,7,8-HpCDF	1.5570990e6	3.2842191e2	4738.14	NO	3.4478810e6	3.4560172e2	9976.46	NO
27	13C-1,2,3,4-TCDD	2.9168440e6	3.3772363e2	8638.93	NO	3.5969100e6	4.5774033e2	7857.97	NO
28	13C-1,2,3,7,8,9-HxCDD	2.9720260e6	3.7004327e2	8029.99	NO	2.3741910e6	5.2766321e2	4499.44	NO

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

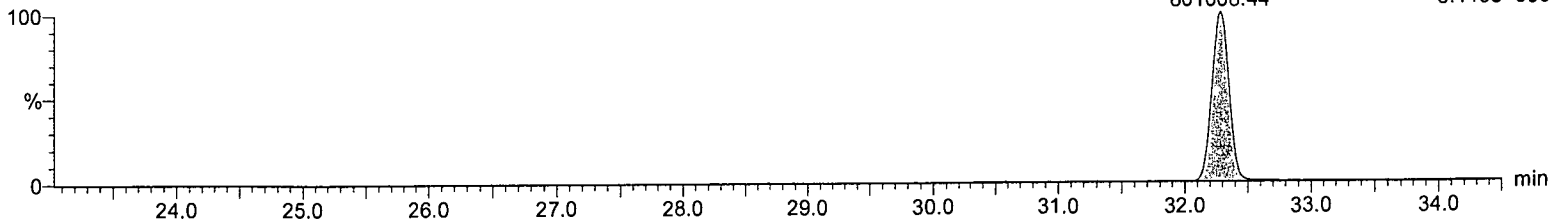
Calibration: 02 May 2013 07:30:19

Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

2,3,7,8-TCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

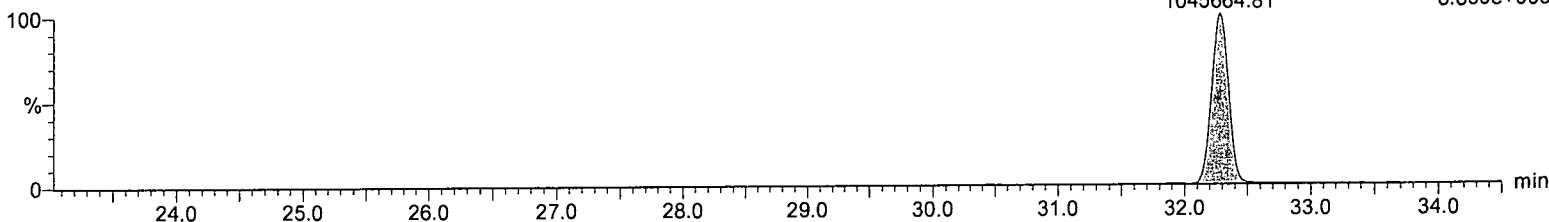
2,3,7,8-TCDD
32.28
801008.44
F1:Voltage SIR,EI+
319.8965
5.113e+006



2,3,7,8-TCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

2,3,7,8-TCDD
32.28
1045664.81
F1:Voltage SIR,EI+
321.8936
6.690e+006

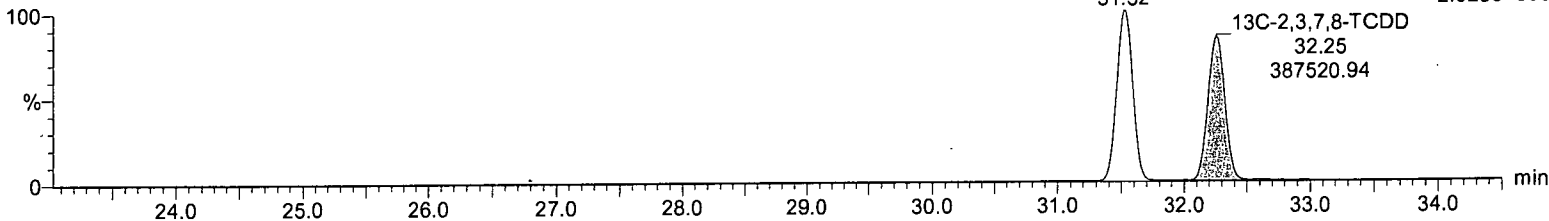


13C-2,3,7,8-TCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

F1:Voltage SIR,EI+
331.9368
2.923e+006

31.52
13C-2,3,7,8-TCDD
32.25
387520.94

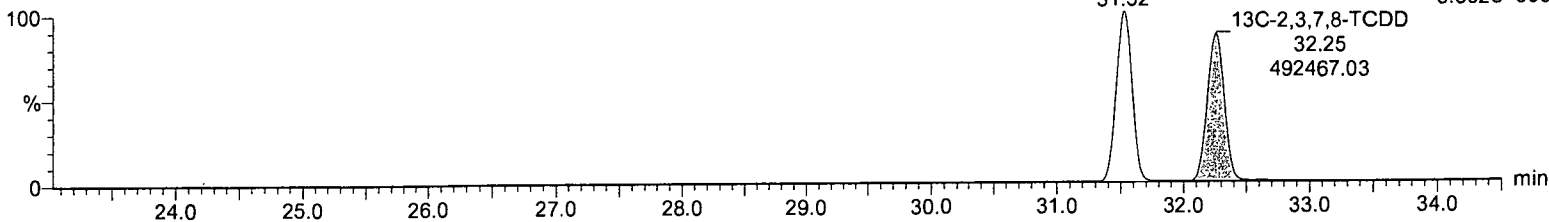


13C-2,3,7,8-TCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

F1:Voltage SIR,EI+
333.9338
3.602e+006

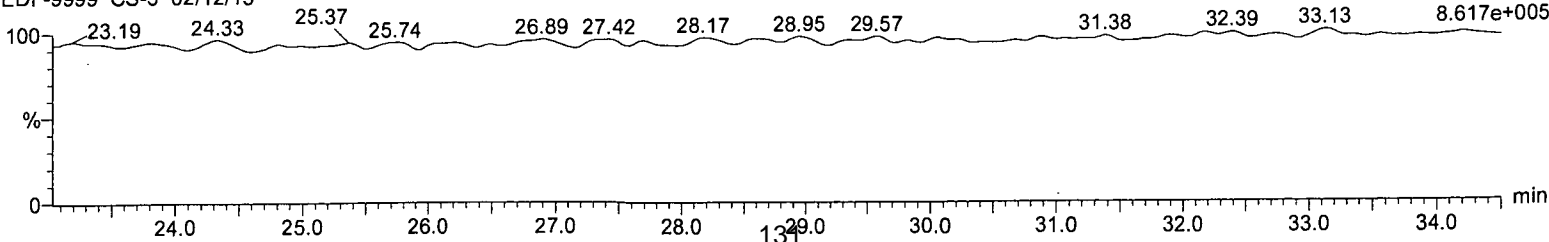
31.52
13C-2,3,7,8-TCDD
32.25
492467.03



PFK1

130501_HR_07
EDF-9999 CS-5 02/12/13

F1:Voltage SIR,EI+
292.9824
8.617e+005

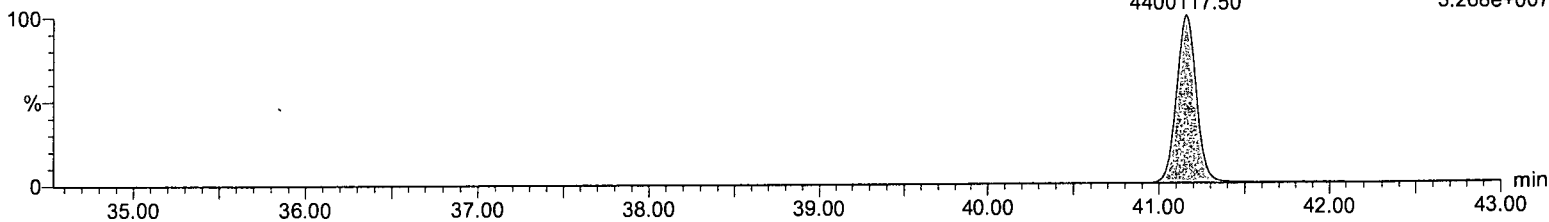


Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

1,2,3,7,8-PeCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

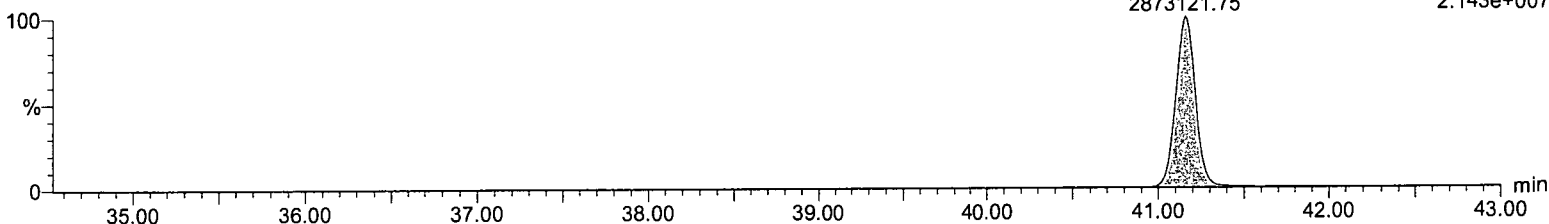
1,2,3,7,8-PeCDD
41.16
4400117.50
F2:Voltage SIR,EI+
355.8546
3.268e+007



1,2,3,7,8-PeCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

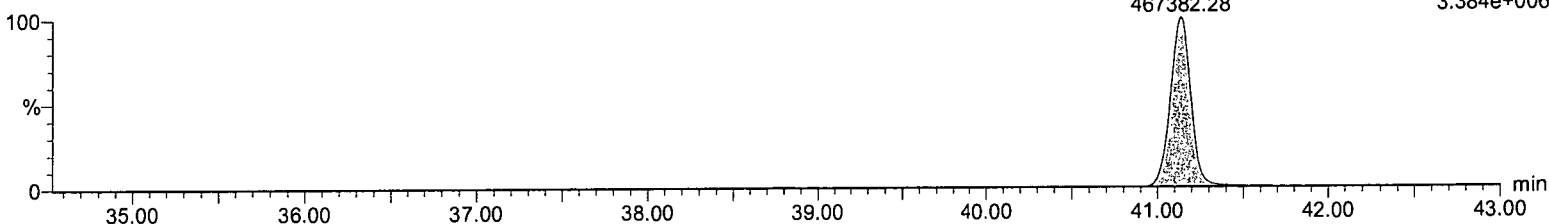
1,2,3,7,8-PeCDD
41.16
2873121.75
F2:Voltage SIR,EI+
357.8516
2.143e+007



13C-1,2,3,7,8-PeCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

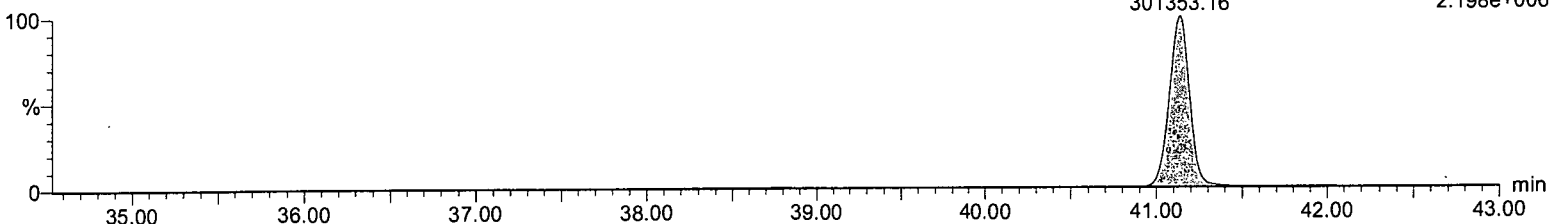
13C-1,2,3,7,8-PeCDD
41.14
467382.28
F2:Voltage SIR,EI+
367.8949
3.384e+006



13C-1,2,3,7,8-PeCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

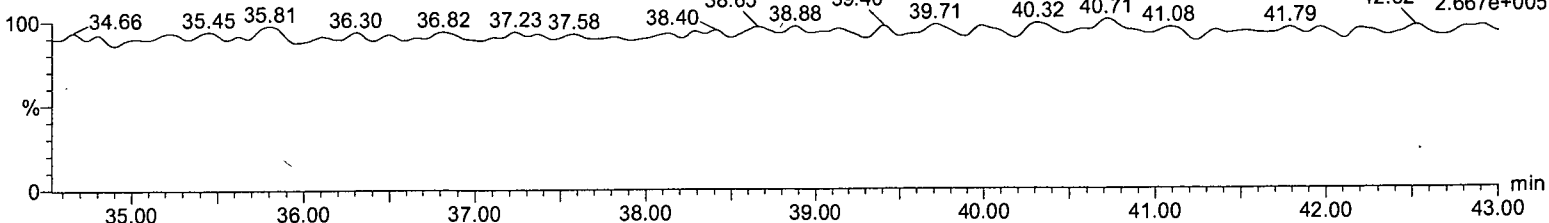
13C-1,2,3,7,8-PeCDD
41.14
301353.16
F2:Voltage SIR,EI+
369.8919
2.198e+006



PFK2

130501_HR_07
EDF-9999 CS-5 02/12/13

F2:Voltage SIR,EI+
354.9792
2.667e+005

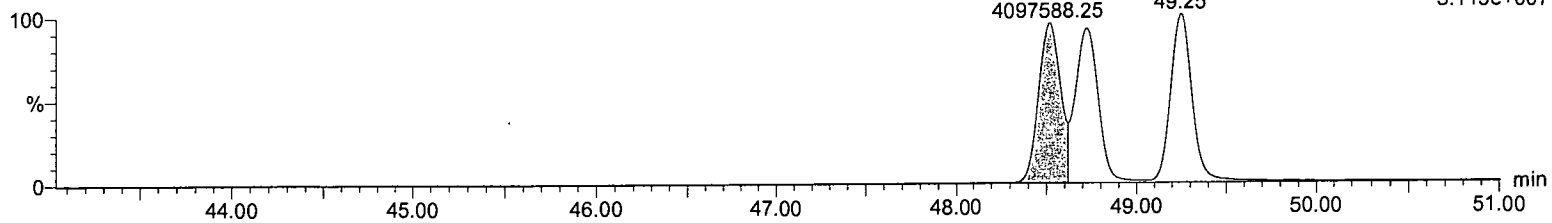


Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Curve_8290.qld

Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

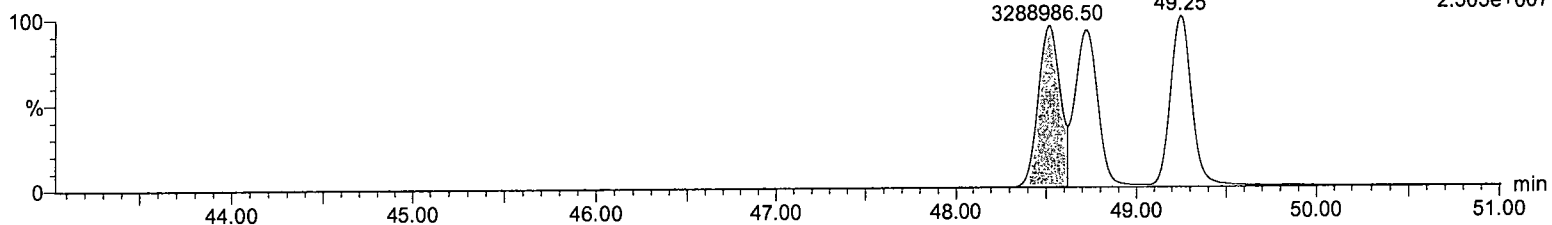
1,2,3,4,7,8-HxCDD

130501_HR_07
EDF-9999 CS-5 02/12/13



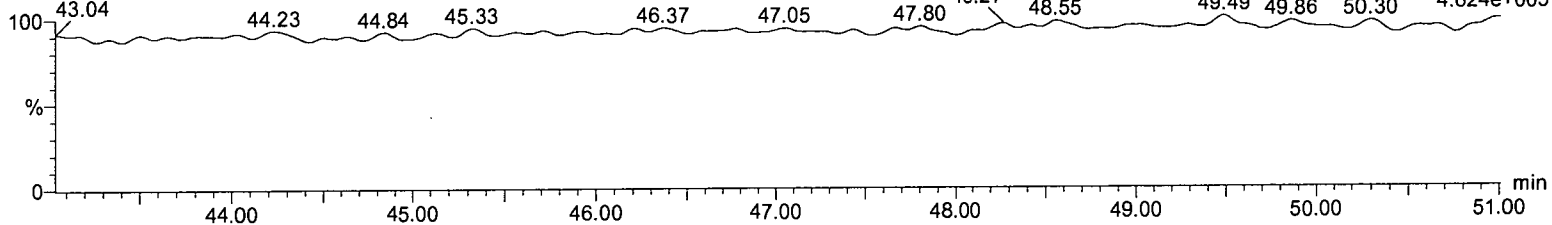
1,2,3,4,7,8-HxCDD

130501_HR_07
EDF-9999 CS-5 02/12/13



PFK3

130501_HR_07
EDF-9999 CS-5 02/12/13

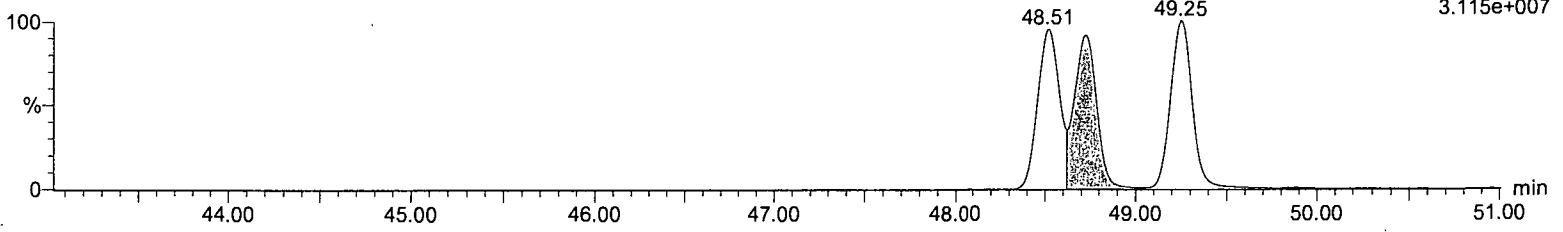


Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

1,2,3,6,7,8-HxCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

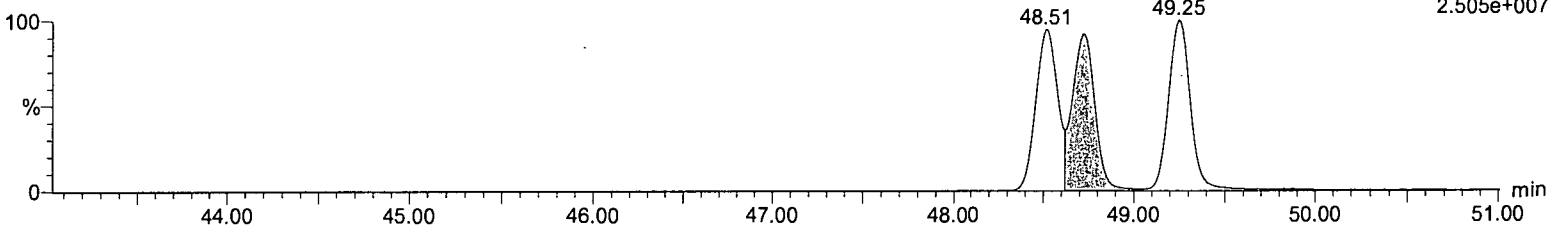
F3:Voltage SIR,EI+
389.8156
3.115e+007



1,2,3,6,7,8-HxCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

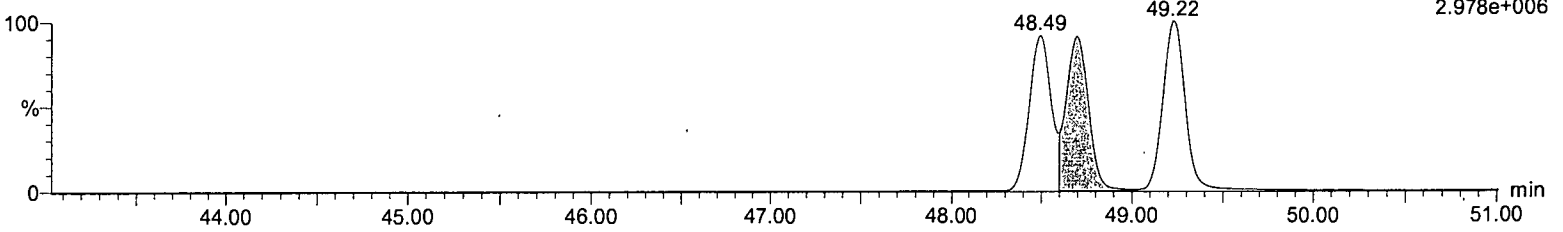
F3:Voltage SIR,EI+
391.8127
2.505e+007



13C-1,2,3,6,7,8-HxCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

F3:Voltage SIR,EI+
401.8559
2.978e+006

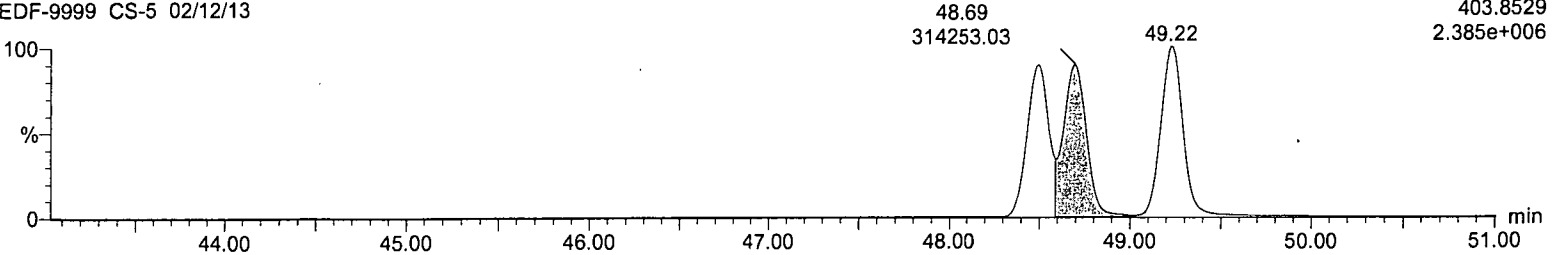


13C-1,2,3,6,7,8-HxCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

13C-1,2,3,6,7,8-HxCDD

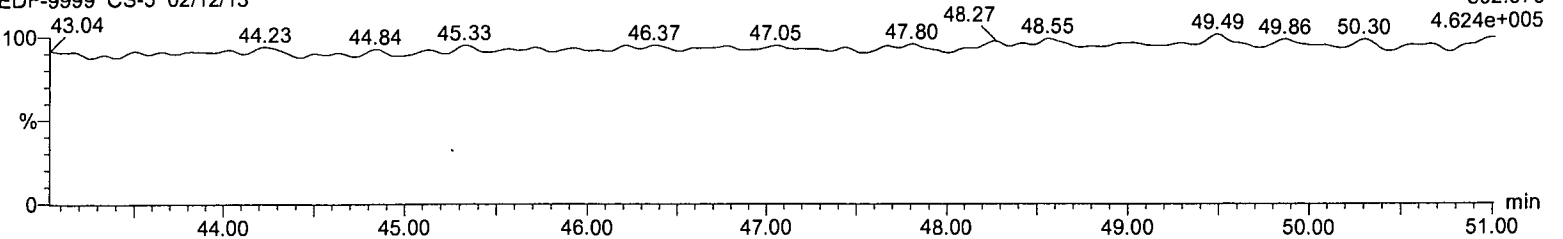
F3:Voltage SIR,EI+
403.8529
2.385e+006



PFK3

130501_HR_07
EDF-9999 CS-5 02/12/13

F3:Voltage SIR,EI+
392.976



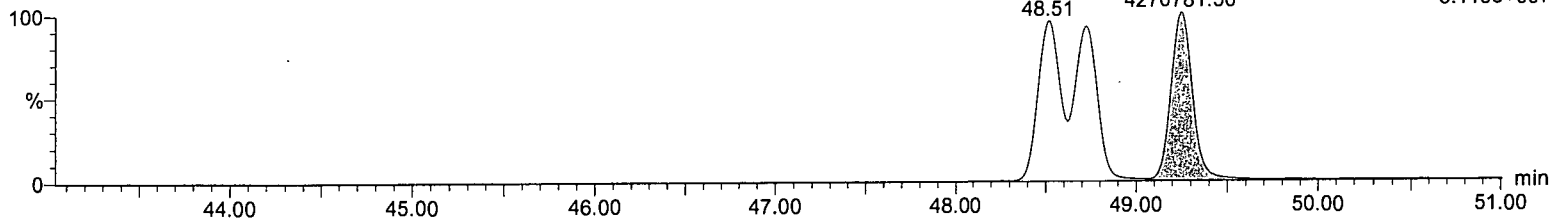
Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

1,2,3,7,8,9-HxCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

1,2,3,7,8,9-HxCDD

F3:Voltage SIR,EI+
389.8156
3.115e+007

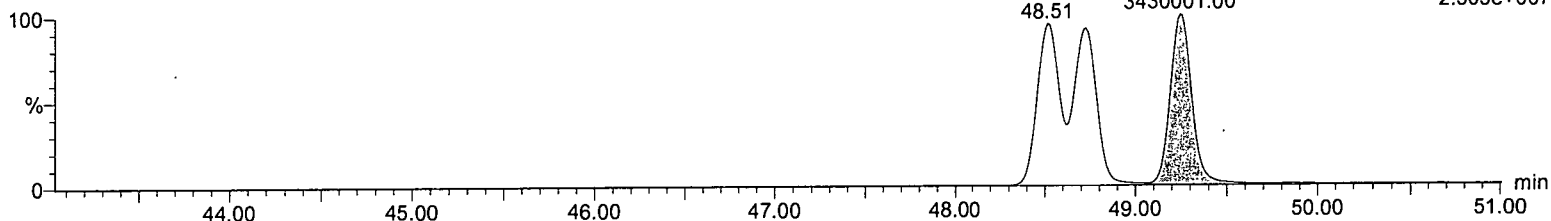


1,2,3,7,8,9-HxCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

1,2,3,7,8,9-HxCDD

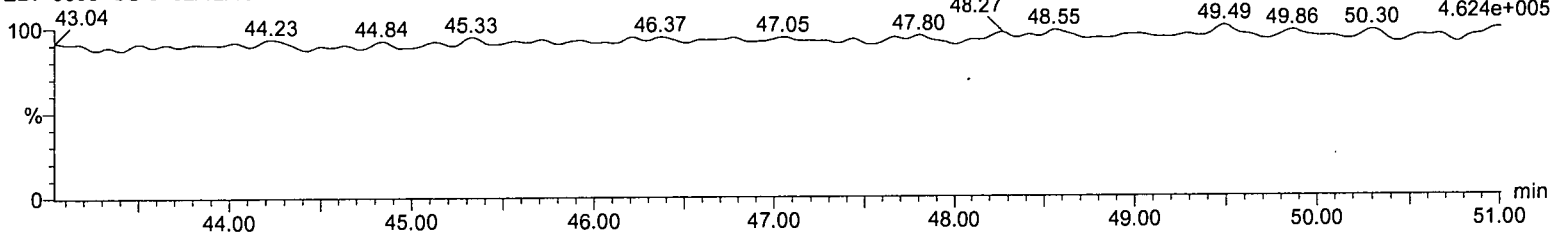
F3:Voltage SIR,EI+
391.8127
2.505e+007



PFK3

130501_HR_07
EDF-9999 CS-5 02/12/13

F3:Voltage SIR,EI+
392.976
4.624e+005



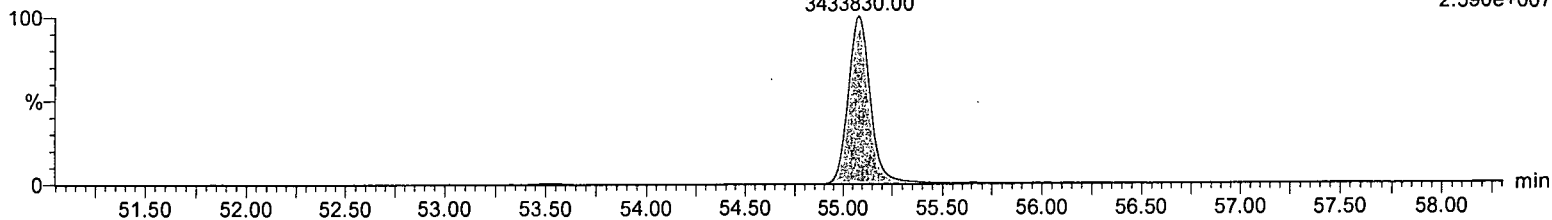
Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

1,2,3,4,6,7,8-HpCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

1,2,3,4,6,7,8-HpCDD
55.08
3433830.00

F4:Voltage SIR,EI+
423.7767
2.590e+007

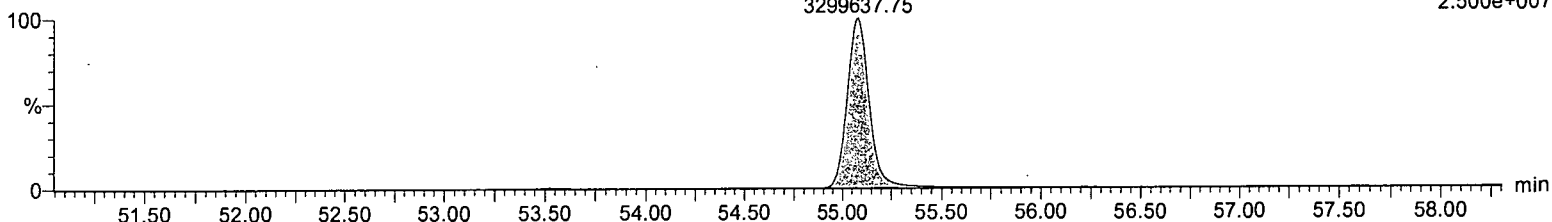


1,2,3,4,6,7,8-HpCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

1,2,3,4,6,7,8-HpCDD
55.08
3299637.75

F4:Voltage SIR,EI+
425.7737
2.500e+007

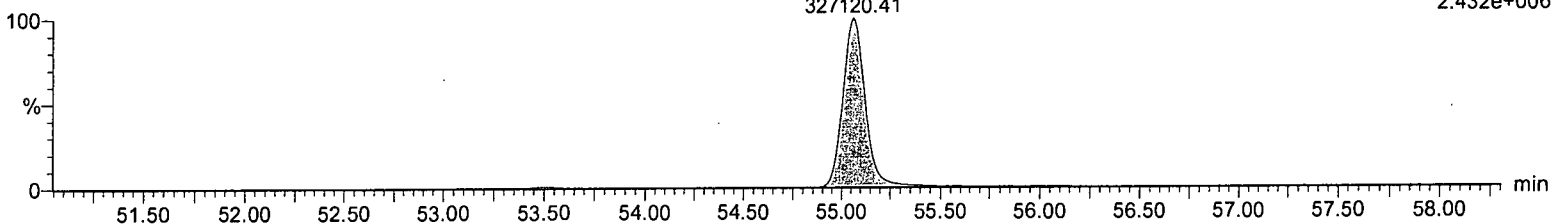


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

13C-1,2,3,4,6,7,8-HpCDD
55.06
327120.41

F4:Voltage SIR,EI+
435.8169
2.432e+006

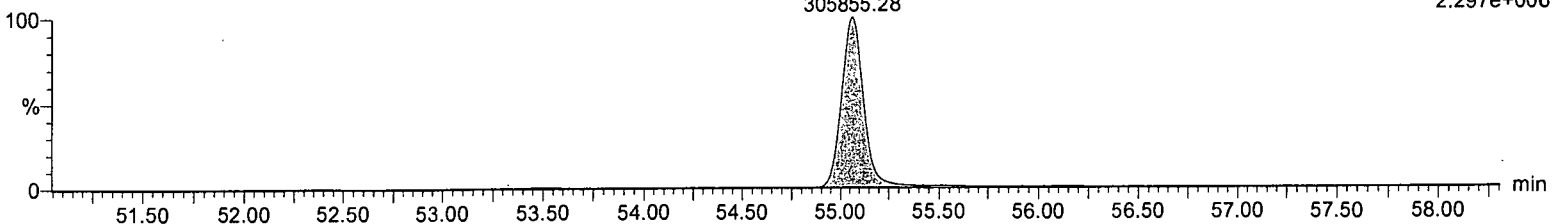


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

13C-1,2,3,4,6,7,8-HpCDD
55.06
305855.28

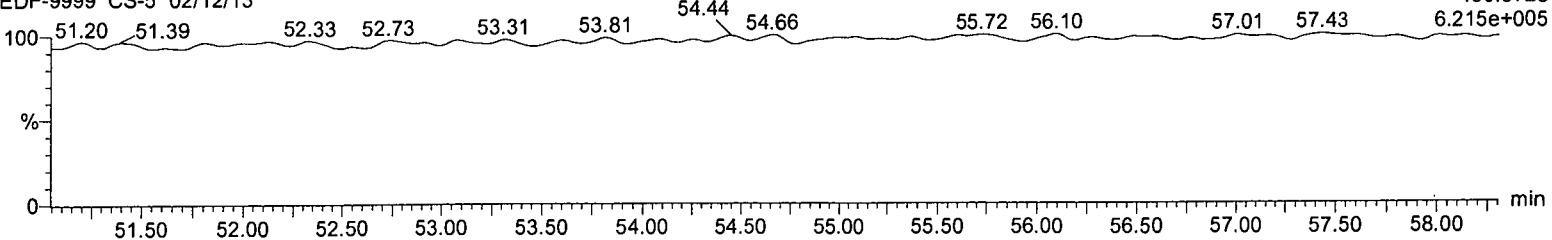
F4:Voltage SIR,EI+
437.814
2.297e+006



PFK4

130501_HR_07
EDF-9999 CS-5 02/12/13

F4:Voltage SIR,EI+
430.9728
6.215e+005



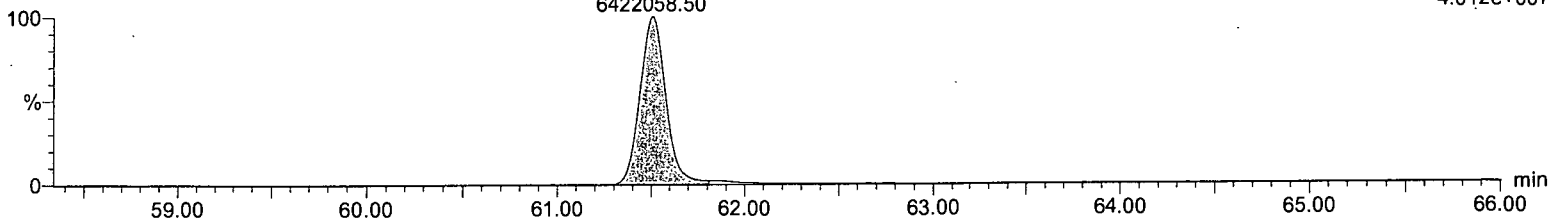
Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

OCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

OCDD
61.51
6422058.50

F5:Voltage SIR,EI+
457.7377
4.012e+007

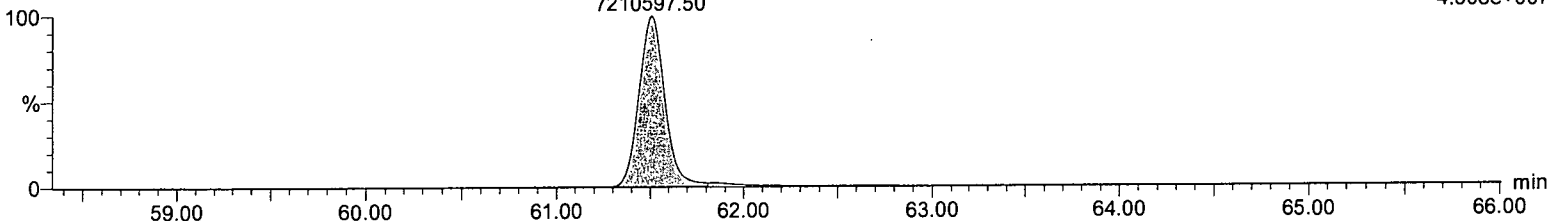


OCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

OCDD
61.51
7210597.50

F5:Voltage SIR,EI+
459.7348
4.508e+007

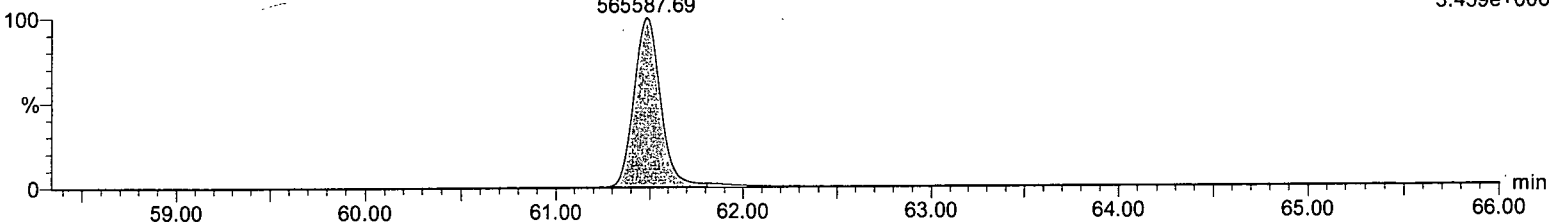


13C-OCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

13C-OCDD
61.48
565587.69

F5:Voltage SIR,EI+
469.778
3.459e+006

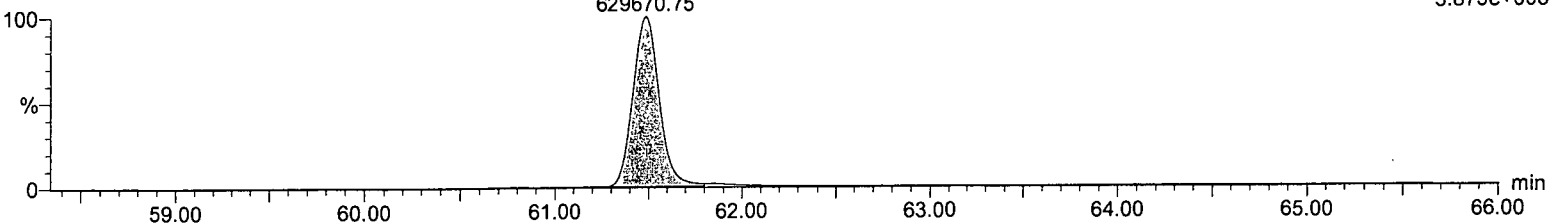


13C-OCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

13C-OCDD
61.48
629670.75

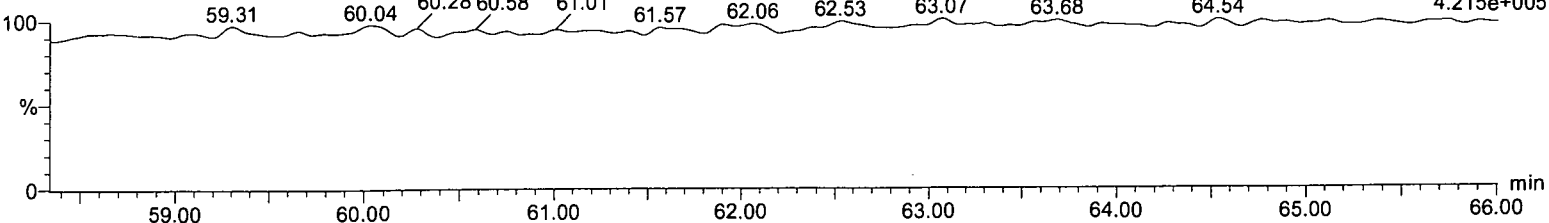
F5:Voltage SIR,EI+
471.775
3.875e+006



PFK5

130501_HR_07
EDF-9999 CS-5 02/12/13

F5:Voltage SIR,EI+
442.9728
4.215e+005



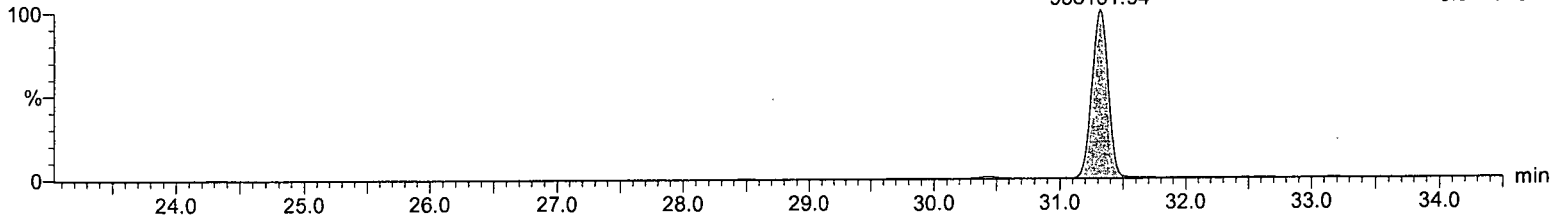
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2,3,7,8-TCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

2,3,7,8-TCDF
31.32
988151.94

F1:Voltage SIR,EI+
303.9016
6.589e+006

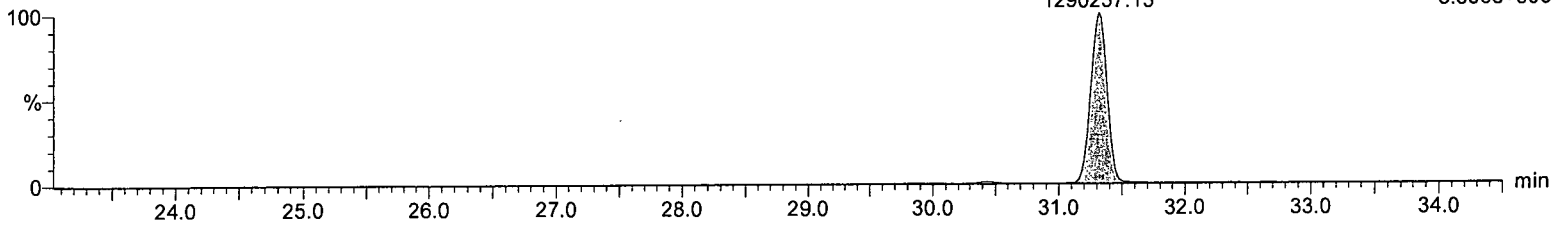


2,3,7,8-TCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

2,3,7,8-TCDF
31.32
1290237.13

F1:Voltage SIR,EI+
305.8987
8.556e+006

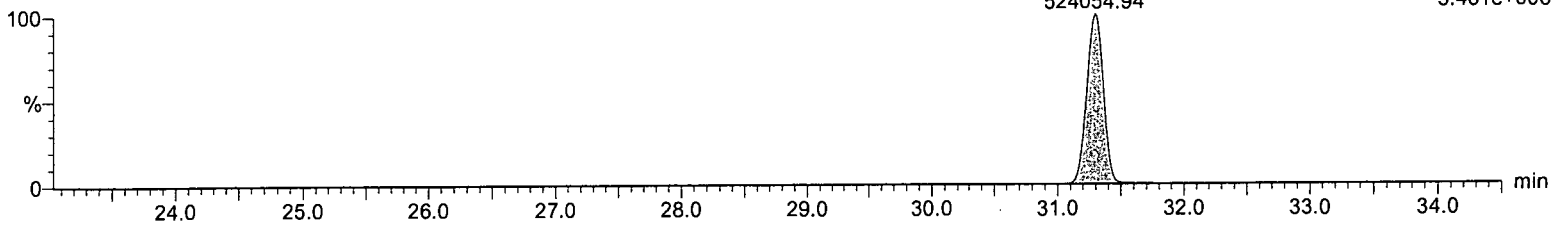


13C-2,3,7,8-TCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

13C-2,3,7,8-TCDF
31.29
524054.94

F1:Voltage SIR,EI+
315.9419
3.461e+006

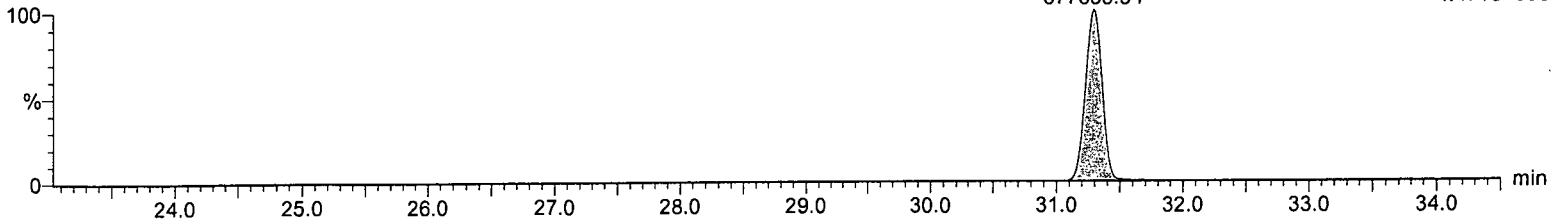


13C-2,3,7,8-TCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

13C-2,3,7,8-TCDF
31.29
677693.94

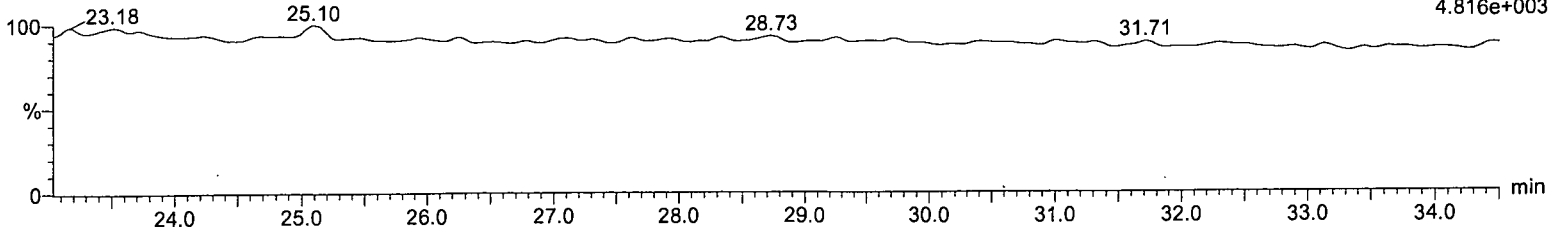
F1:Voltage SIR,EI+
317.9389
4.471e+006



HxCDPE

130501_HR_07
EDF-9999 CS-5 02/12/13

F1:Voltage SIR,EI+
375.8364
4.816e+003

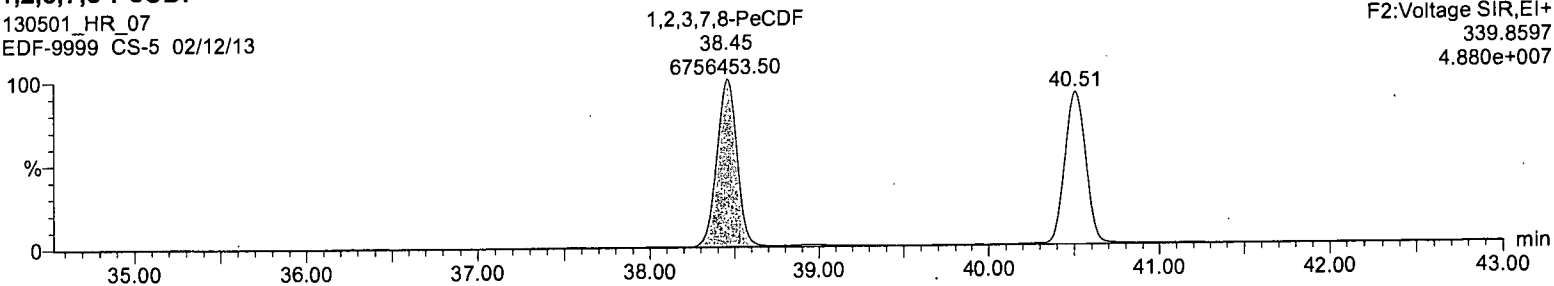


Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

1,2,3,7,8-PeCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

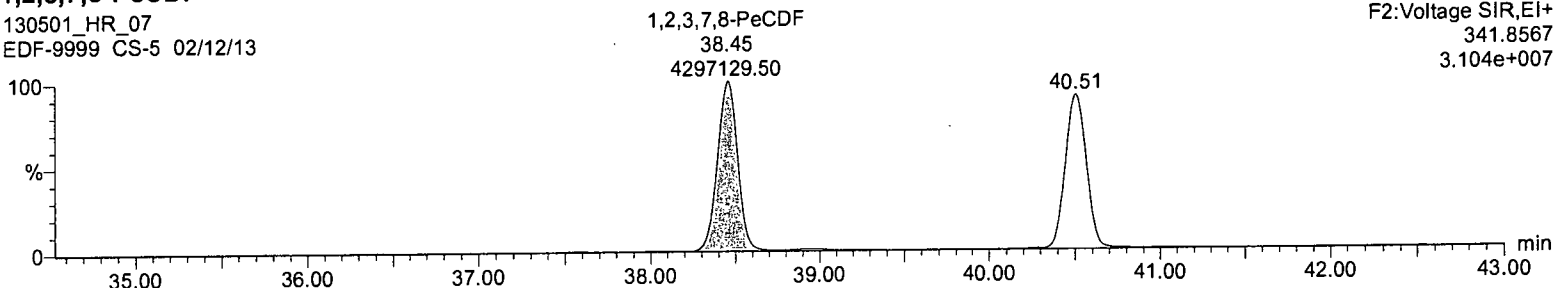
F2:Voltage SIR,EI+
339.8597
4.880e+007



1,2,3,7,8-PeCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

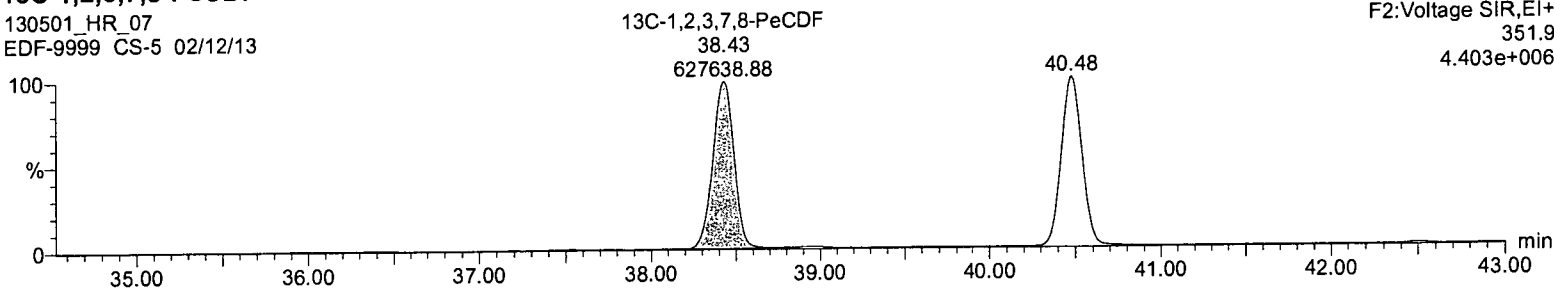
F2:Voltage SIR,EI+
341.8567
3.104e+007



13C-1,2,3,7,8-PeCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

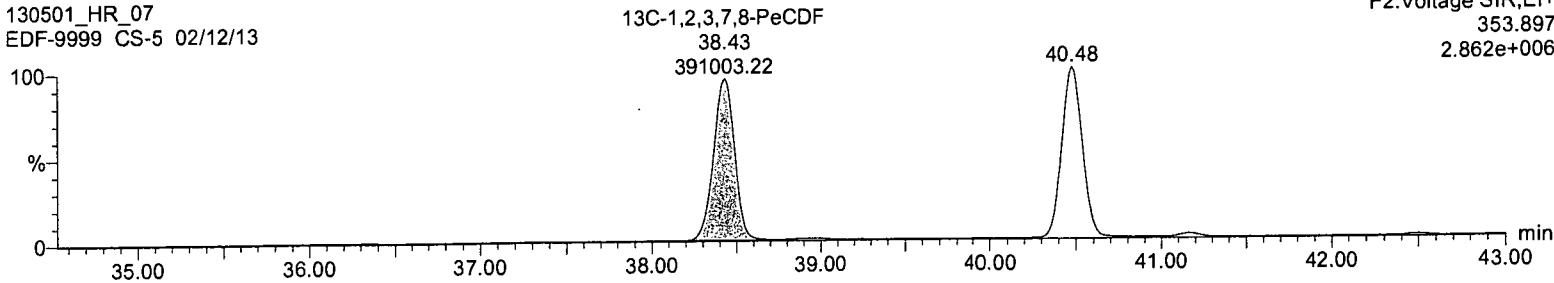
F2:Voltage SIR,EI+
351.9
4.403e+006



13C-1,2,3,7,8-PeCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

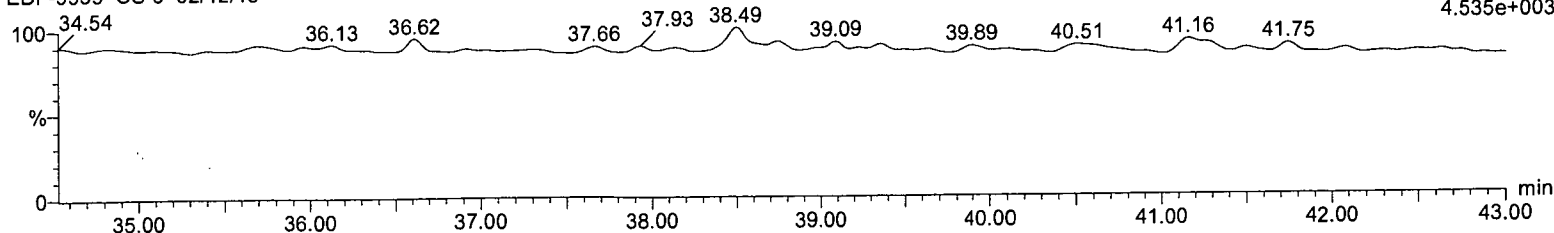
F2:Voltage SIR,EI+
353.897
2.862e+006



HpCDPE

130501_HR_07
EDF-9999 CS-5 02/12/13

F2:Voltage SIR,EI+
409.7974
4.535e+003

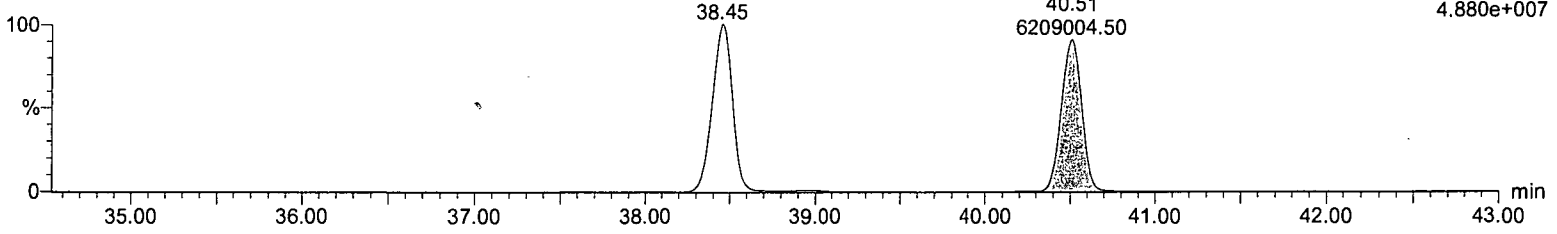


Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

2,3,4,7,8-PeCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

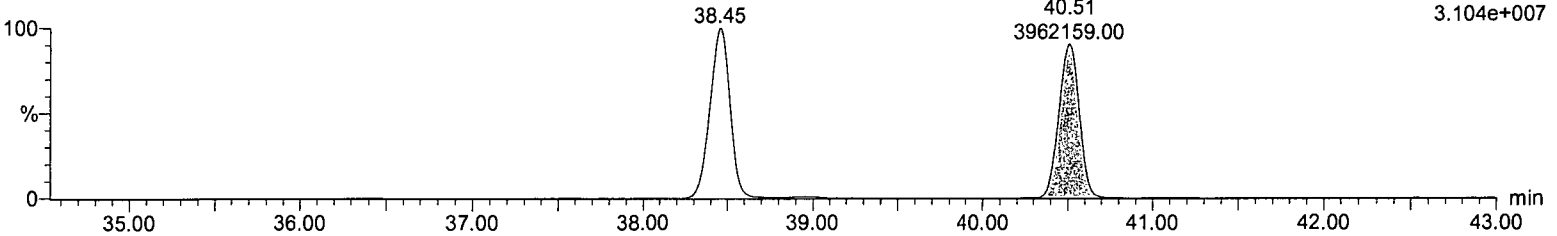
F2:Voltage SIR,EI+
339.8597
4.880e+007



2,3,4,7,8-PeCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

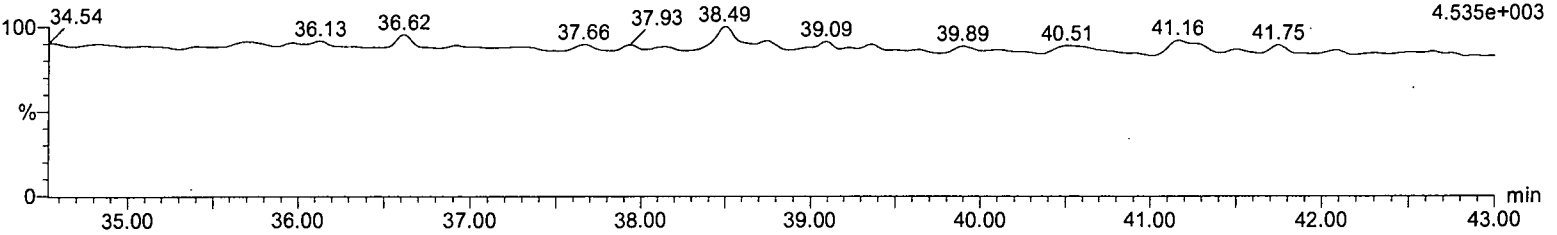
F2:Voltage SIR,EI+
341.8567
3.104e+007



HpCDPE

130501_HR_07
EDF-9999 CS-5 02/12/13

F2:Voltage SIR,EI+
409.7974
4.535e+003

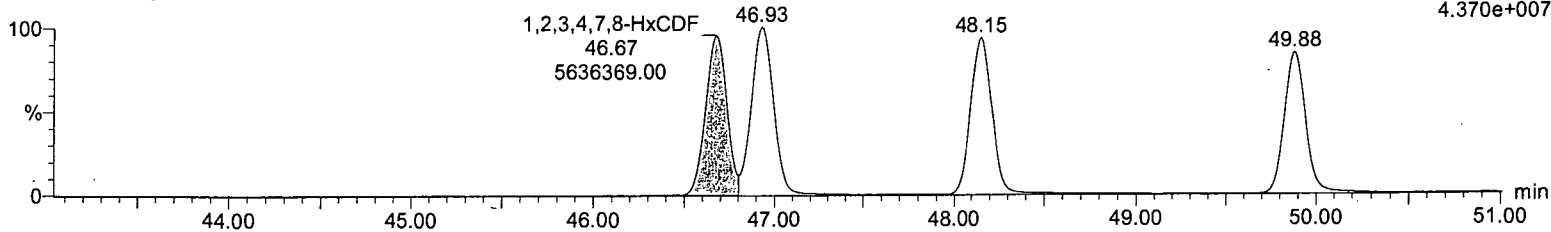


Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

1,2,3,4,7,8-HxCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

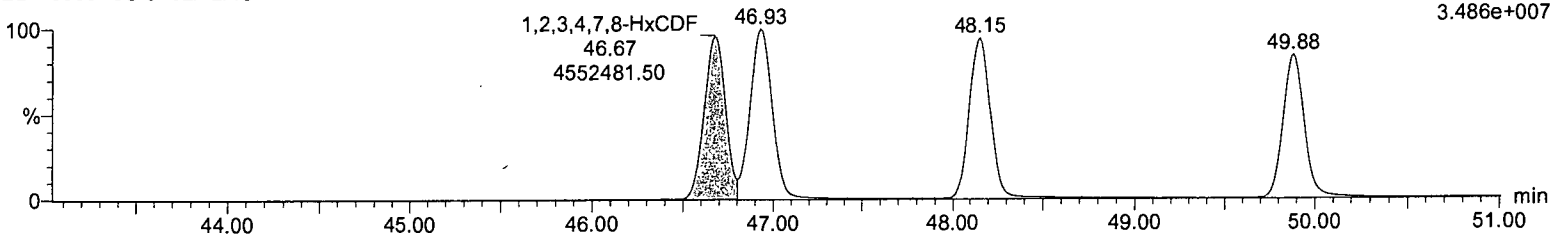
F3:Voltage SIR,EI+
373.8208
4.370e+007



1,2,3,4,7,8-HxCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

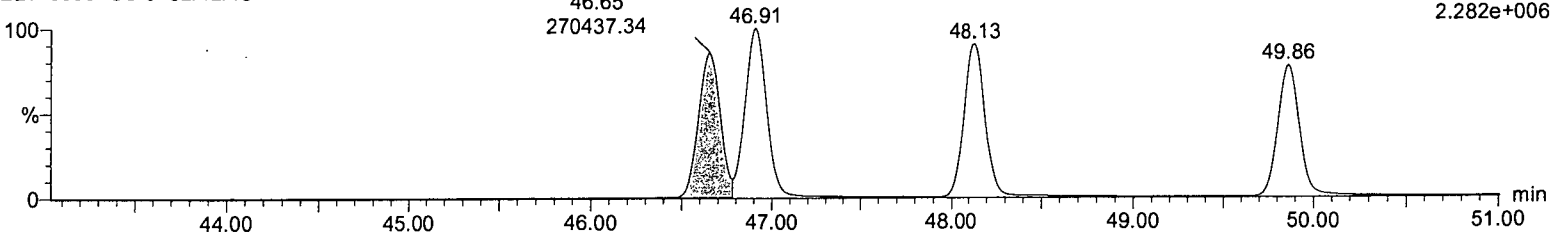
F3:Voltage SIR,EI+
375.8178
3.486e+007



13C-1,2,3,4,7,8-HxCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

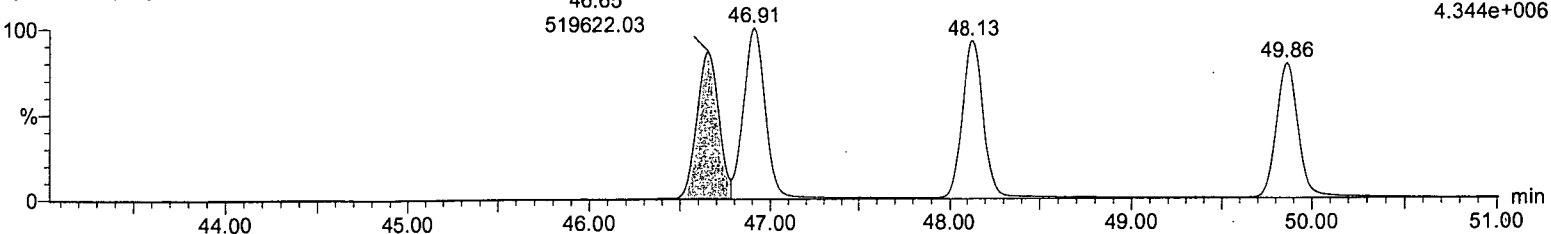
F3:Voltage SIR,EI+
383.8639
2.282e+006



13C-1,2,3,4,7,8-HxCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

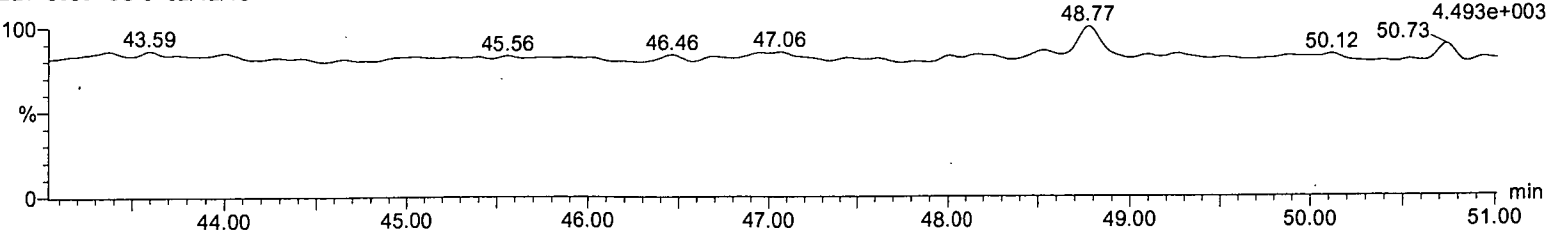
F3:Voltage SIR,EI+
385.861
4.344e+006



OCDPE

130501_HR_07
EDF-9999 CS-5 02/12/13

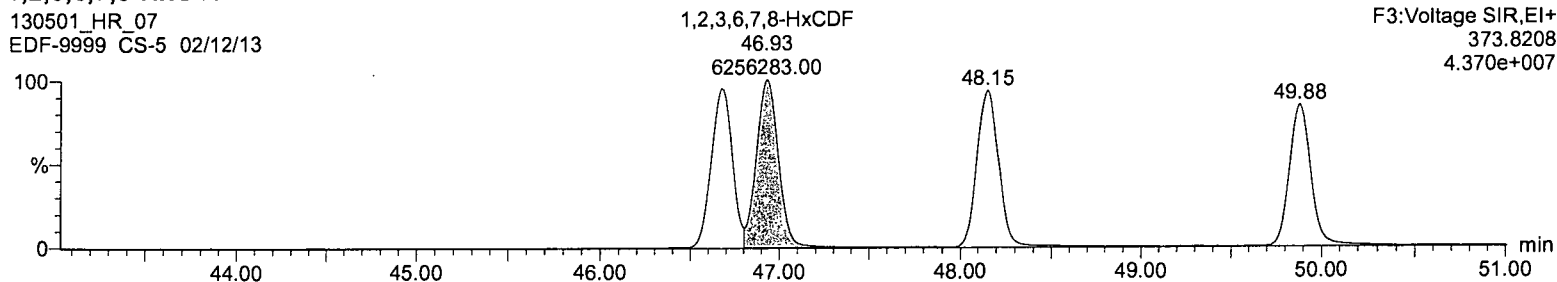
F3:Voltage SIR,EI+
445.7555
4.493e+003



Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

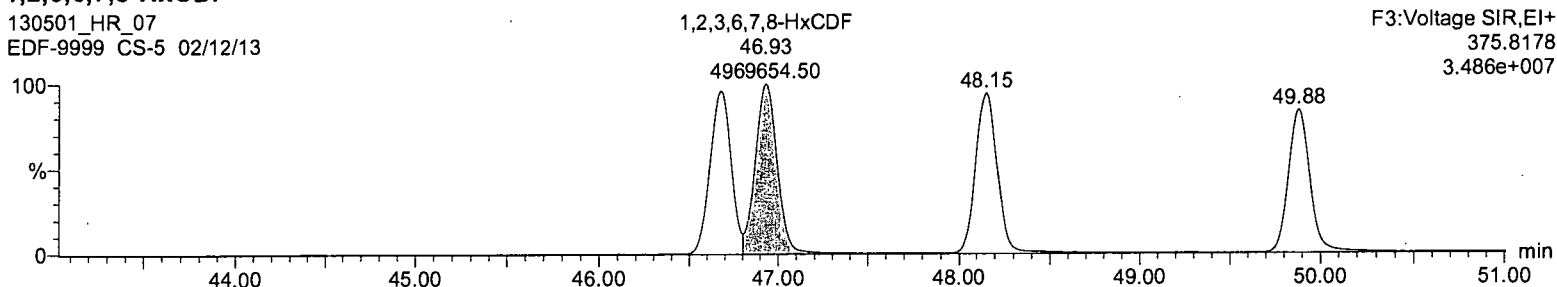
1,2,3,6,7,8-HxCDF

130501_HR_07
EDF-9999 CS-5 02/12/13



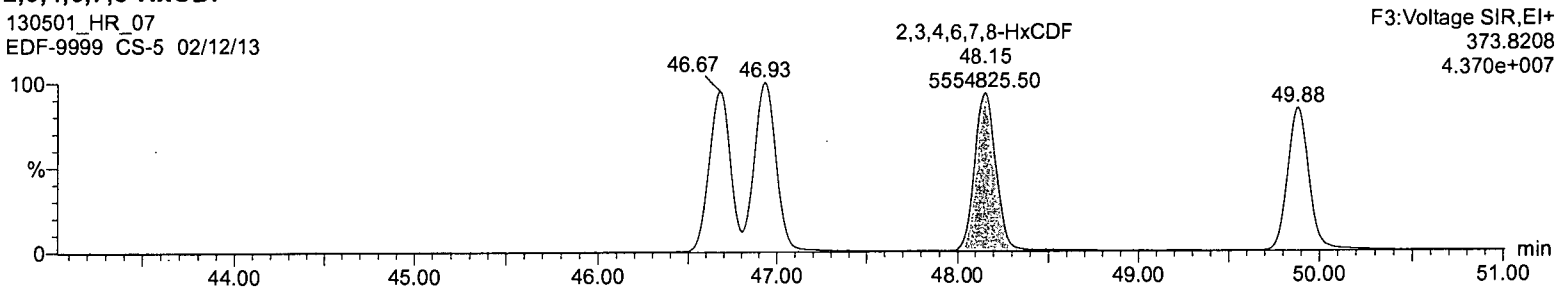
1,2,3,6,7,8-HxCDF

130501_HR_07
EDF-9999 CS-5 02/12/13



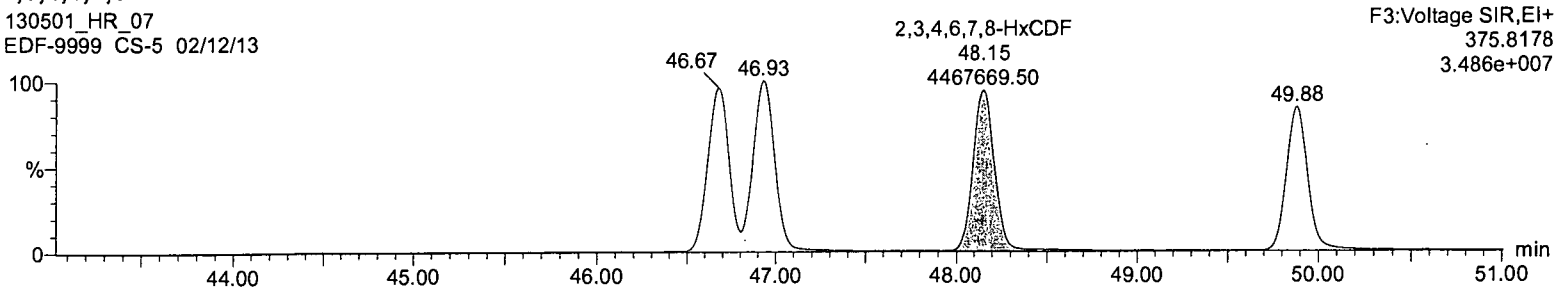
2,3,4,6,7,8-HxCDF

130501_HR_07
EDF-9999 CS-5 02/12/13



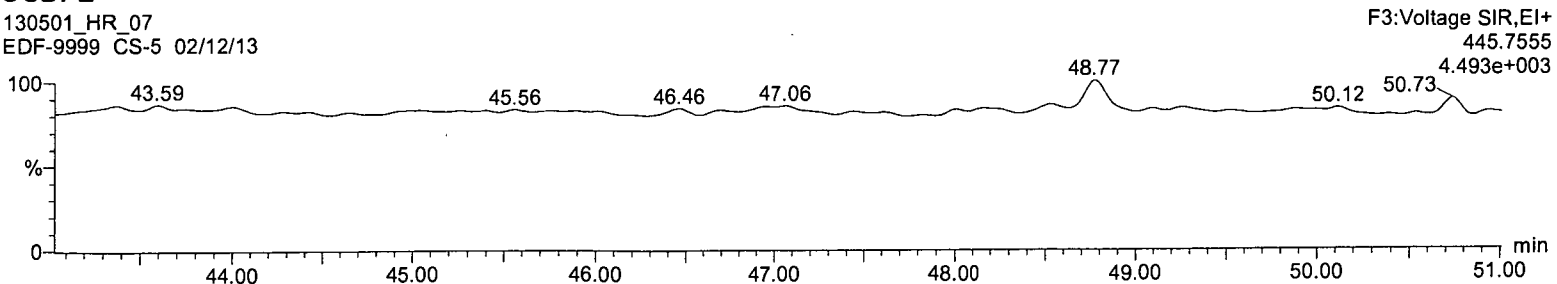
2,3,4,6,7,8-HxCDF

130501_HR_07
EDF-9999 CS-5 02/12/13



OCDF

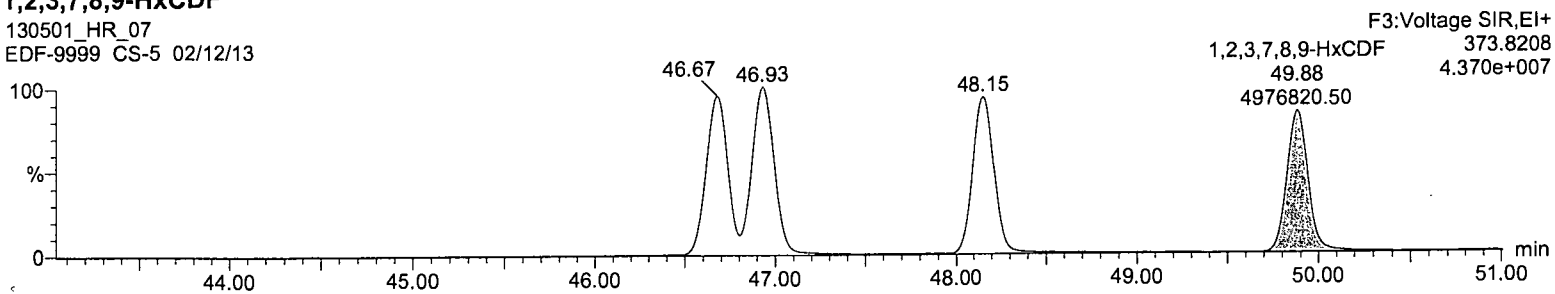
130501_HR_07
EDF-9999 CS-5 02/12/13



Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

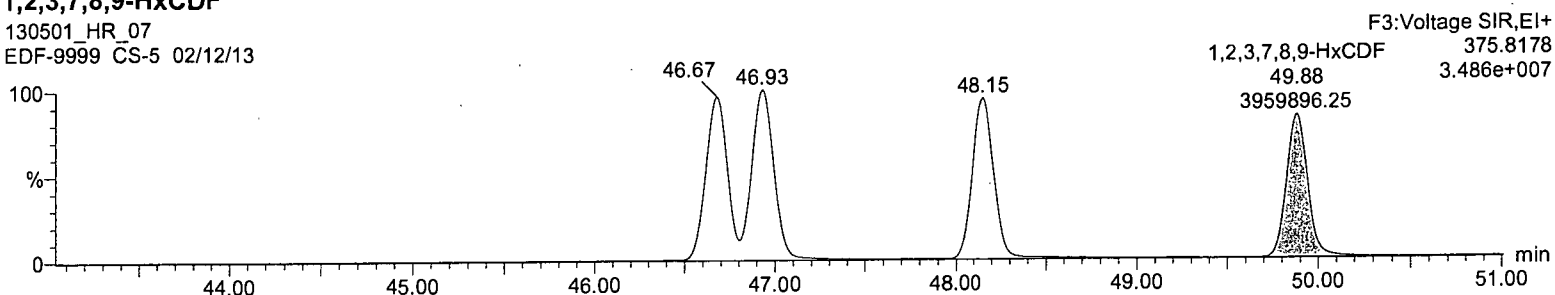
1,2,3,7,8,9-HxCDF

130501_HR_07
EDF-9999 CS-5 02/12/13



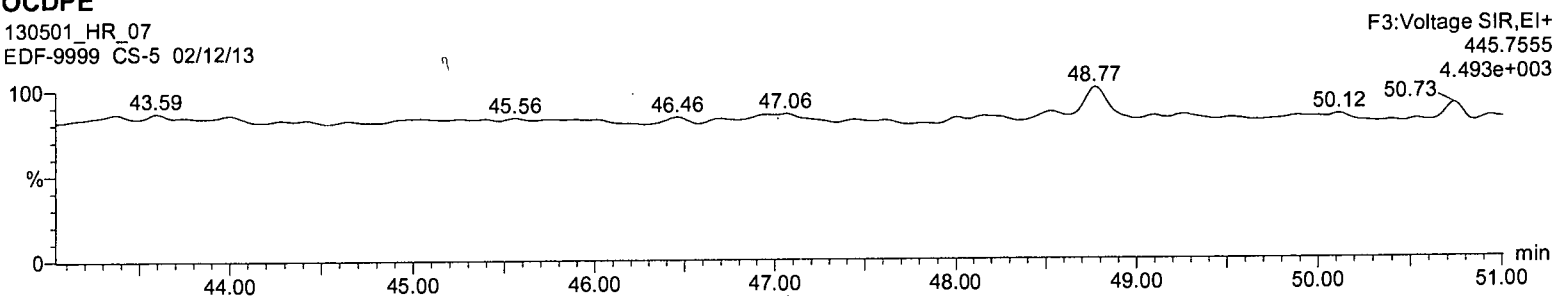
1,2,3,7,8,9-HxCDF

130501_HR_07
EDF-9999 CS-5 02/12/13



OCDPE

130501_HR_07
EDF-9999 CS-5 02/12/13



Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

1,2,3,4,6,7,8-HpCDF

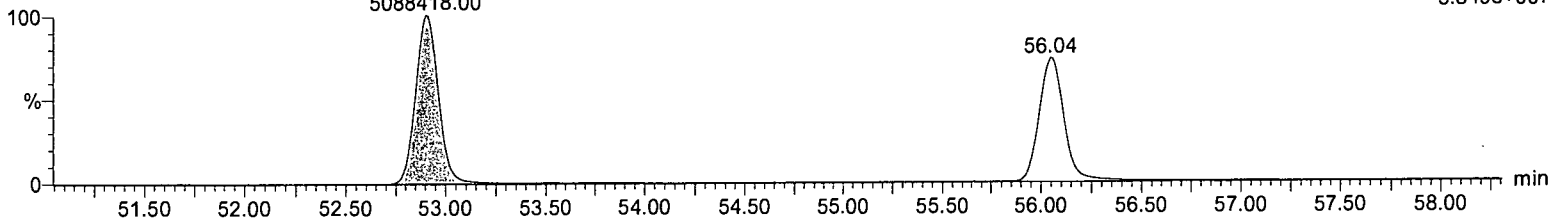
130501_HR_07
EDF-9999 CS-5 02/12/13

1,2,3,4,6,7,8-HpCDF

52.90

5088418.00

F4:Voltage SIR,EI+
407.7818
3.849e+007



1,2,3,4,6,7,8-HpCDF

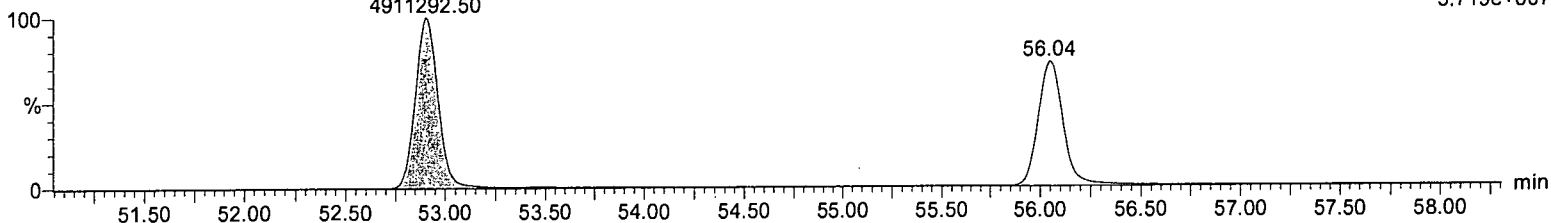
130501_HR_07
EDF-9999 CS-5 02/12/13

1,2,3,4,6,7,8-HpCDF

52.90

4911292.50

F4:Voltage SIR,EI+
409.7788
3.719e+007



13C-1,2,3,4,6,7,8-HpCDF

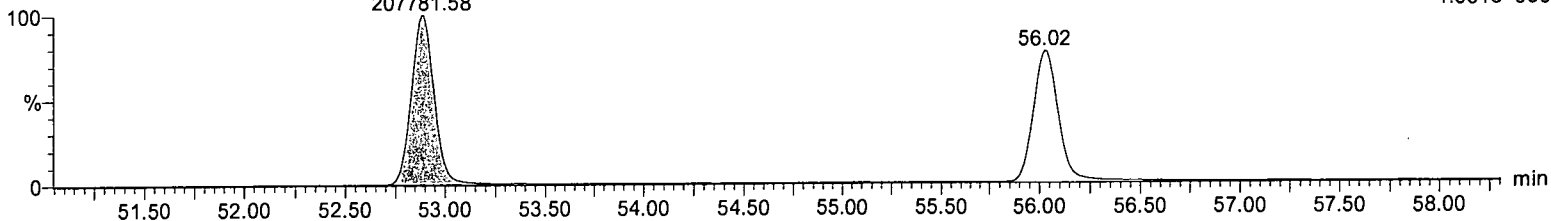
130501_HR_07
EDF-9999 CS-5 02/12/13

13C-1,2,3,4,6,7,8-HpCDF

52.88

207781.58

F4:Voltage SIR,EI+
417.825
1.561e+006



13C-1,2,3,4,6,7,8-HpCDF

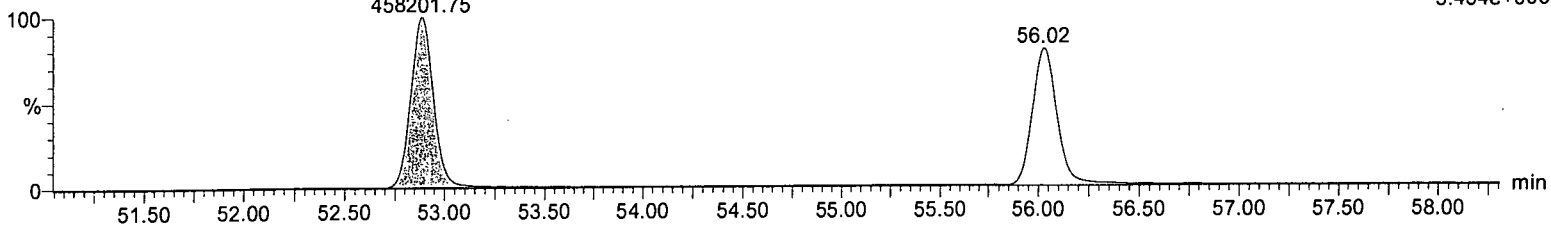
130501_HR_07
EDF-9999 CS-5 02/12/13

13C-1,2,3,4,6,7,8-HpCDF

52.88

458201.75

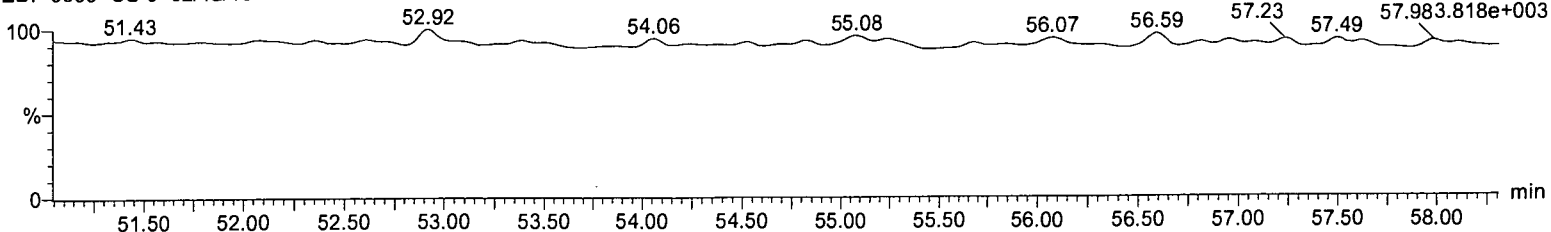
F4:Voltage SIR,EI+
419.822
3.454e+006



NCDPE

130501_HR_07
EDF-9999 CS-5 02/12/13

F4:Voltage SIR,EI+
479.7165
57.983.818e+003

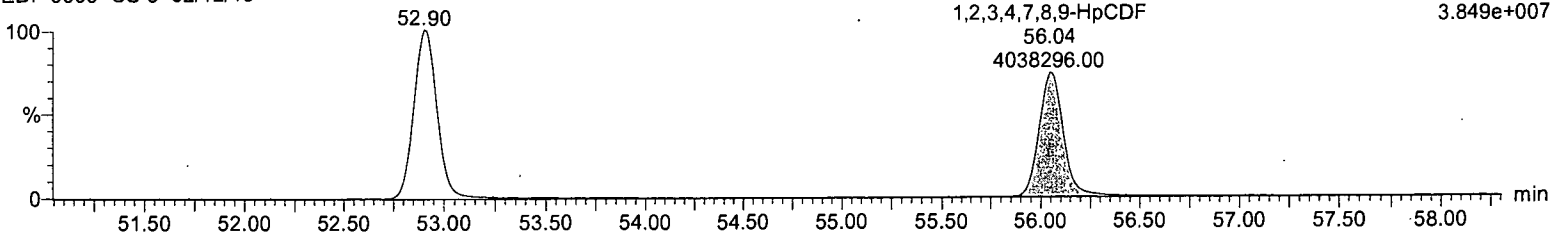


Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

1,2,3,4,7,8,9-HpCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

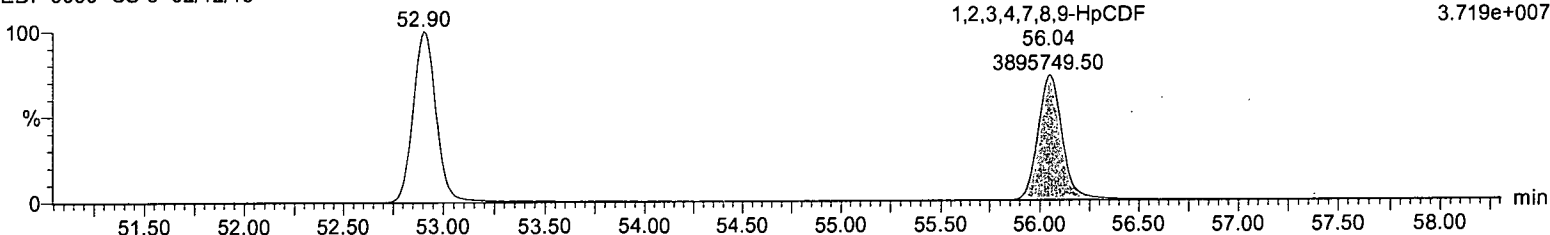
F4:Voltage SIR,EI+
407.7818
3.849e+007



1,2,3,4,7,8,9-HpCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

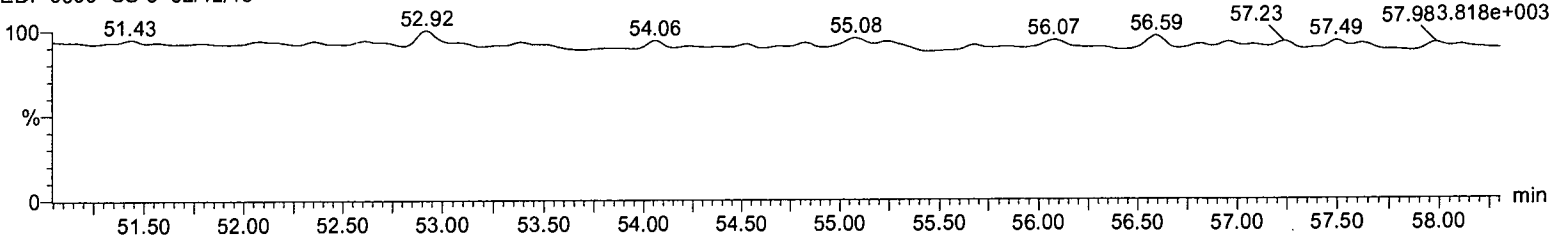
F4:Voltage SIR,EI+
409.7788
3.719e+007



NCDPE

130501_HR_07
EDF-9999 CS-5 02/12/13

F4:Voltage SIR,EI+
479.7165
57.983.818e+003

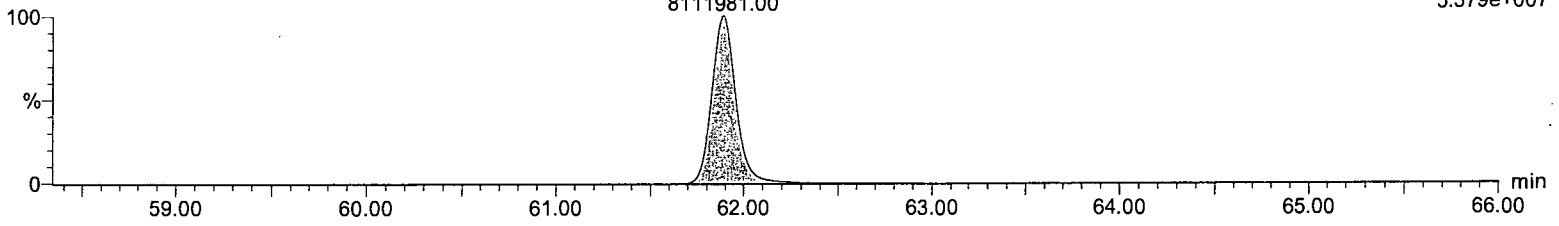


Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45, Description: EDF-9999 CS-5 02/12/13, User: RP

OCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

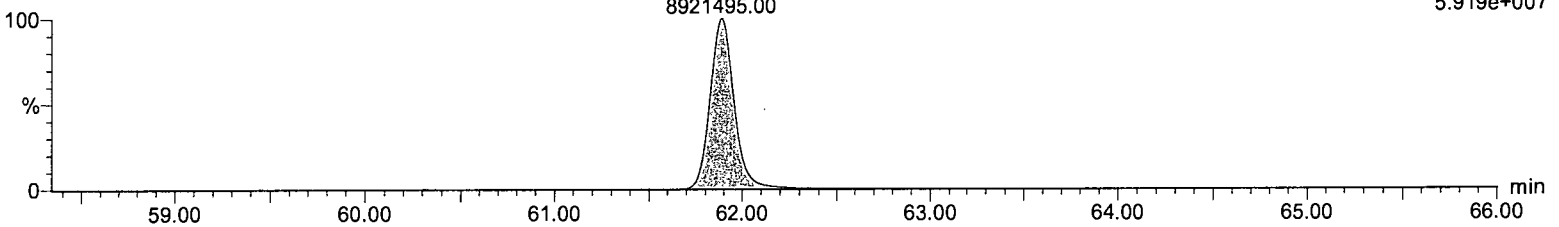
F5:Voltage SIR,EI+
441.7428
5.379e+007



OCDF

130501_HR_07
EDF-9999 CS-5 02/12/13

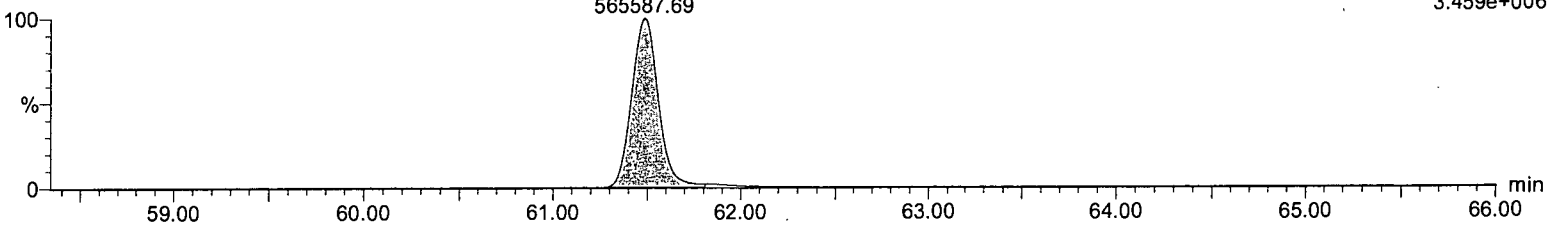
F5:Voltage SIR,EI+
443.7399
5.919e+007



13C-OCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

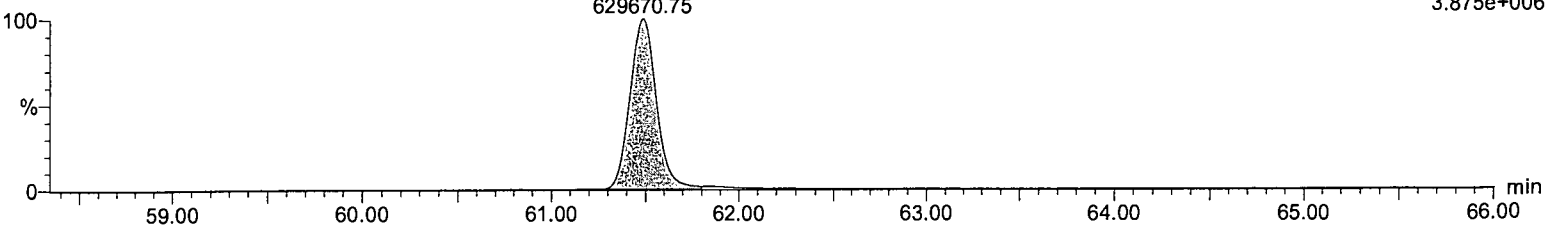
F5:Voltage SIR,EI+
469.778
3.459e+006



13C-OCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

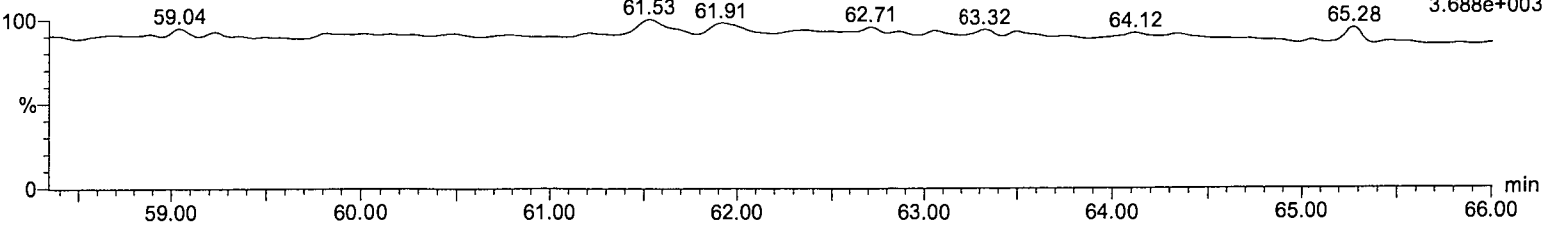
F5:Voltage SIR,EI+
471.775
3.875e+006



DCDPE

130501_HR_07
EDF-9999 CS-5 02/12/13

F5:Voltage SIR,EI+
513.6775
3.688e+003



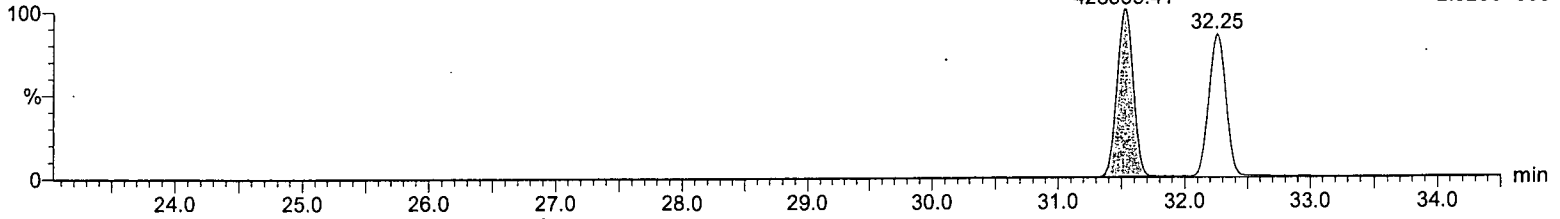
Name: 130501_HR_07, Date: 01-May-2013, Time: 23:31:45; Description: EDF-9999 CS-5 02/12/13, User: RP

13C-1,2,3,4-TCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

13C-1,2,3,4-TCDD

F1:Voltage SIR,EI+
331.9368
2.923e+006

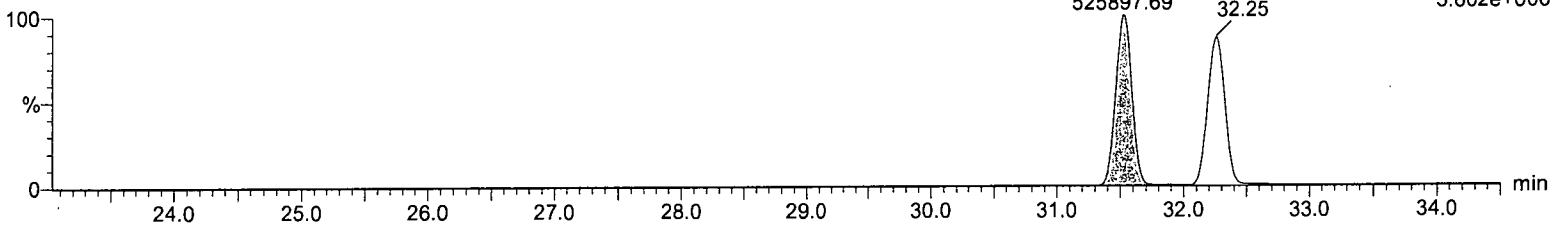


13C-1,2,3,4-TCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

13C-1,2,3,4-TCDD

F1:Voltage SIR,EI+
333.9338
3.602e+006

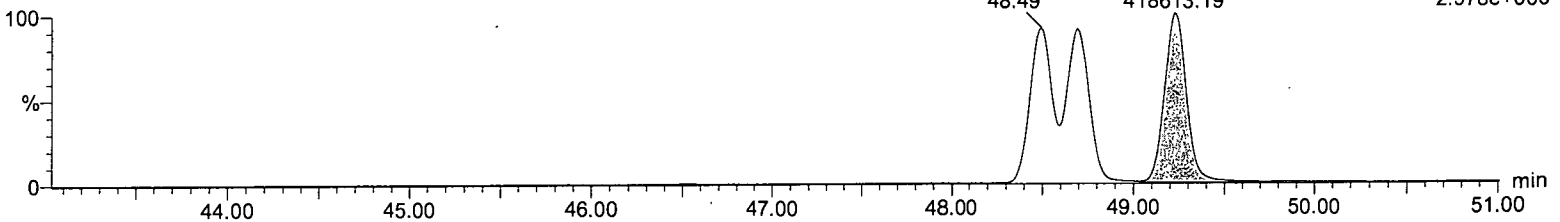


13C-1,2,3,7,8,9-HxCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

13C-1,2,3,7,8,9-HxCDD

F3:Voltage SIR,EI+
401.8559
2.978e+006

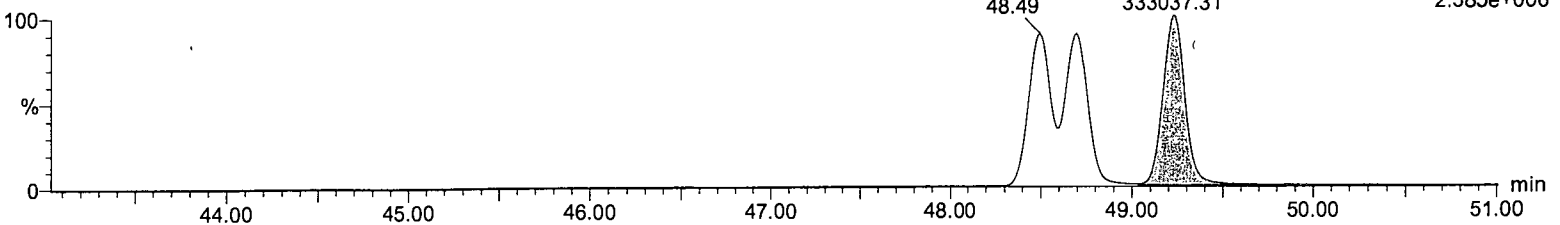


13C-1,2,3,7,8,9-HxCDD

130501_HR_07
EDF-9999 CS-5 02/12/13

13C-1,2,3,7,8,9-HxCDD

F3:Voltage SIR,EI+
403.8529
2.385e+006



Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13

#	Name	Peak Area	1 st Area	RT	Ion/Ab	Ion/Fail?	S/N1	S/N2	Conc	%Rec	RRF	%Dev
1	2,3,7,8-TCDD	2.110208e4	2.576157e4	32.31	0.8191	NO	NO	NO	9.561	95.61	0.940	-4.4
2	1,2,3,7,8-PeCDD	1.023722e5	6.526950e4	41.22	1.5685	NO	NO	NO	51.731	103.46	0.932	3.5
3	1,2,3,4,7,8-HxCDD	8.472774e4	6.554723e4	48.55	1.2926	NO	NO	NO	43.110	86.22	0.837	-13.8
4	1,2,3,6,7,8-HxCDD	8.918773e4	7.185602e4	48.76	1.2412	NO	NO	NO	44.448	88.90	0.897	-11.1
5	1,2,3,7,8,9-HxCDD	9.106640e4	7.207981e4	49.28	1.2634	NO	NO	NO	44.658	89.32	0.909	-10.7
6	1,2,3,4,6,7,8-HpCDD	7.145929e4	6.985902e4	55.11	1.0229	NO	NO	NO	47.650	95.30	0.990	-4.7
7	OCDD	1.237511e5	1.380855e5	61.55	0.8962	NO	NO	NO	88.037	88.04	0.957	-12.0
8	2,3,7,8-TCDF	2.607353e4	3.006839e4	31.34	0.8671	NO	NO	NO	9.610	96.10	0.899	-3.9
9	1,2,3,7,8-PeCDF	1.447034e5	9.003043e4	38.49	1.6073	NO	NO	NO	46.011	92.02	0.943	-8.0
10	2,3,4,7,8-PeCDF	1.474100e5	9.177627e4	40.55	1.6062	NO	NO	NO	49.896	99.79	0.961	-0.2
11	1,2,3,4,7,8-HxCDF	1.202094e5	9.579226e4	46.71	1.2549	NO	NO	NO	47.609	95.22	1.187	-4.8
12	1,2,3,6,7,8-HxCDF	1.365999e5	1.099173e5	46.97	1.2428	NO	NO	NO	50.075	100.15	1.355	0.1
13	2,3,4,6,7,8-HxCDF	1.199375e5	9.303243e4	48.18	1.2892	NO	NO	NO	47.874	95.75	1.171	-4.3
14	1,2,3,7,8,9-HxCDF	9.912877e4	8.006188e4	49.91	1.2382	NO	NO	NO	46.568	93.14	0.985	-6.9
15	1,2,3,4,6,7,8-HpCDF	1.116213e5	1.056827e5	52.93	1.0562	NO	NO	NO	48.837	97.67	1.399	-2.3
16	1,2,3,4,7,8,9-HpCDF	8.593482e4	8.275963e4	56.09	1.0384	NO	NO	NO	48.630	97.26	1.086	-2.7
17	OCDF	1.403726e5	1.545425e5	61.93	0.9083	NO	NO	NO	86.173	86.17	1.078	-13.8
18	13C-2,3,7,8-TCDD	2.208560e5	2.775485e5	32.29	0.7957	NO	NO	NO	110.016	110.02	0.985	10.0
19	13C-1,2,3,7,8-PeCDD	2.190938e5	1.405206e5	41.18	1.5592	NO	NO	NO	97.291	97.29	0.711	-2.7
20	13C-1,2,3,6,7,8-HxCDD	2.000150e5	1.588786e5	48.74	1.2589	NO	NO	NO	113.588	113.59	1.118	13.6
21	13C-1,2,3,4,6,7,8-HpCDD	1.445712e5	1.409573e5	55.09	1.0256	NO	NO	NO	102.959	102.96	0.889	3.0
22	13C-OCDD	2.634781e5	2.835396e5	61.53	0.9292	NO	NO	NO	217.232	108.62	0.852	8.6
23	13C-2,3,7,8-TCDF	2.692583e5	3.553816e5	31.32	0.7577	NO	NO	NO	103.095	103.09	1.234	3.1
24	13C-1,2,3,7,8-PeCDF	3.035055e5	1.943801e5	38.46	1.5614	NO	NO	NO	101.650	101.65	0.984	1.7
25	13C-1,2,3,4,7,8-HxCDF	1.253016e5	2.385740e5	46.69	0.5252	NO	NO	NO	104.326	104.33	1.133	4.3
26	13C-1,2,3,4,6,7,8-HpCDF	9.338315e4	2.173610e5	52.91	0.4296	NO	NO	NO	104.384	104.38	0.968	4.4
27	13C-1,2,3,4-TCDD	2.274117e5	2.786398e5	31.56	0.8161	NO	NO	NO	100.000	100.00	1.000	0.0
28	13C-1,2,3,7,8,9-HxCDD	1.785303e5	1.425214e5	49.26	1.2527	NO	NO	NO	100.000	100.00	1.000	0.0

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

#	Name	RT	RRT
1	2,3,7,8-TCDD	32.308701	1.000424
2	1,2,3,7,8-PeCDD	41.220699	1.000983
3	1,2,3,4,7,8-HxCDD	48.546001	0.996077
4	1,2,3,6,7,8-HxCDD	48.758301	1.000433
5	1,2,3,7,8,9-HxCDD	49.278702	1.000430
6	1,2,3,4,6,7,8-HpCDD	55.112801	1.000368
7	OCDD	61.546501	1.000330
8	2,3,7,8-TCDF	31.342501	1.000869
9	1,2,3,7,8-PeCDF	38.494301	1.000788
10	2,3,4,7,8-PeCDF	40.551800	1.054279
11	1,2,3,4,7,8-HxCDF	46.708199	1.000454
12	1,2,3,6,7,8-HxCDF	46.973801	1.006143
13	2,3,4,6,7,8-HxCDF	48.184799	1.032082
14	1,2,3,7,8,9-HxCDF	49.905300	1.068933
15	1,2,3,4,6,7,8-HpCDF	52.933800	1.000384
16	1,2,3,4,7,8,9-HpCDF	56.085800	1.059952
17	OCDF	61.931499	1.006587
18	13C-2,3,7,8-TCDD	32.294998	1.023282
19	13C-1,2,3,7,8-PeCDD	41.180199	1.304814
20	13C-1,2,3,6,7,8-HxCDD	48.737202	0.989437
21	13C-1,2,3,4,6,7,8-HpCDD	55.092499	1.118459
22	13C-OCDD	61.526199	1.249073
23	13C-2,3,7,8-TCDF	31.315300	0.992240
24	13C-1,2,3,7,8-PeCDF	38.464001	1.218750
25	13C-1,2,3,4,7,8-HxCDF	46.687000	0.947815
26	13C-1,2,3,4,6,7,8-HpCDF	52.913502	1.074222
27	13C-1,2,3,4-TCDD	31.560200	1.000000
28	13C-1,2,3,7,8,9-HxCDD	49.257500	1.000000

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

#	Name	Signal	Noise 1	S/N 1	Flag S/N	Signal 2	Noise 2	S/N 2	Flag S/N
1	2,3,7,8-TCDD	1.3362600e5	1.2570351e2	1060.77	NO	1.6743400e5	1.4755318e2	1134.74	NO
2	1,2,3,7,8-PeCDD	7.0377800e5	2.0625238e2	3409.69	NO	4.4864000e5	1.0022774e2	4476.21	NO
3	1,2,3,4,7,8-HxCDD	6.0235100e5	6.1262170e2	980.70	NO	4.6012300e5	1.5201082e3	302.69	NO
4	1,2,3,6,7,8-HxCDD	5.8497700e5	6.1262170e2	952.37	NO	4.6617600e5	1.5201082e3	306.67	NO
5	1,2,3,7,8,9-HxCDD	6.2794400e5	6.1262170e2	1022.56	NO	4.9069800e5	1.5201082e3	322.80	NO
6	1,2,3,4,6,7,8-HpCDD	5.1460100e5	2.4884889e2	2064.02	NO	5.0596900e5	1.4272290e3	354.51	NO
7	OCDD	7.1678800e5	2.5317334e2	2826.45	NO	8.2579500e5	4.0391364e2	2044.48	NO
8	2,3,7,8-TCDF	1.7039100e5	1.4025003e2	1212.70	NO	1.9824300e5	1.2730437e2	1557.24	NO
9	1,2,3,7,8-PeCDF	1.0139460e6	1.5719812e3	643.75	NO	6.3739500e5	5.5819537e2	1141.89	NO
10	2,3,4,7,8-PeCDF	1.0075030e6	1.5719812e3	639.67	NO	6.2154100e5	5.5819537e2	1113.48	NO
11	1,2,3,4,7,8-HxCDF	8.3169800e5	7.7088257e2	1075.56	NO	6.5532800e5	3.3940286e2	1930.83	NO
12	1,2,3,6,7,8-HxCDF	9.5190500e5	7.7088257e2	1231.49	NO	7.6904800e5	3.3940286e2	2265.89	NO
13	2,3,4,6,7,8-HxCDF	8.3189100e5	7.7088257e2	1075.82	NO	6.4990900e5	3.3940286e2	1914.86	NO
14	1,2,3,7,8,9-HxCDF	6.9921000e5	7.7088257e2	904.14	NO	5.5497300e5	3.3940286e2	1635.15	NO
15	1,2,3,4,6,7,8-HpCDF	7.9043900e5	5.7845270e2	1362.30	NO	7.4888200e5	7.5851849e2	987.30	NO
16	1,2,3,4,7,8,9-HpCDF	5.8938400e5	5.7845270e2	1014.74	NO	5.6328400e5	7.5851849e2	742.61	NO
17	OCDF	8.1892300e5	1.6497481e2	4982.08	NO	8.9625600e5	3.0279965e2	2959.90	NO
18	13C-2,3,7,8-TCDD	1.4201040e6	3.4306635e2	4139.78	NO	1.7875790e6	7.1567517e2	2497.75	NO
19	13C-1,2,3,7,8-PeCDD	1.4359460e6	2.9025024e2	4944.44	NO	9.3272600e5	2.4400818e2	3822.52	NO
20	13C-1,2,3,6,7,8-HxCDD	1.3053690e6	8.7228613e3	147.79	NO	1.0322220e6	7.2613730e3	142.15	NO
21	13C-1,2,3,4,6,7,8-HpCDD	1.0327570e6	6.2369080e2	1653.17	NO	9.9358000e5	8.1972852e2	1212.08	NO
22	13C-OCDD	1.4894090e6	4.6629044e2	3192.10	NO	1.6415820e6	4.8586914e2	3378.65	NO
23	13C-2,3,7,8-TCDF	1.8087310e6	1.8396776e2	9832.37	NO	2.3809350e6	2.5299426e2	9411.02	NO
24	13C-1,2,3,7,8-PeCDF	2.0432560e6	1.0992303e4	183.17	NO	1.3063890e6	3.7099541e3	352.13	NO
25	13C-1,2,3,4,7,8-HxCDF	8.8501800e5	3.9144756e3	222.41	NO	1.6829550e6	1.8504847e3	909.47	NO
26	13C-1,2,3,4,6,7,8-HpCDF	6.6614500e5	6.5242438e2	1017.82	NO	1.5516700e6	2.0404812e3	760.44	NO
27	13C-1,2,3,4-TCDD	1.5180450e6	3.4306635e2	4425.43	NO	1.8575700e6	7.1567517e2	2595.55	NO
28	13C-1,2,3,7,8,9-HxCDD	1.1937310e6	8.7228613e3	134.64	NO	9.6293100e5	7.2613730e3	132.61	NO

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

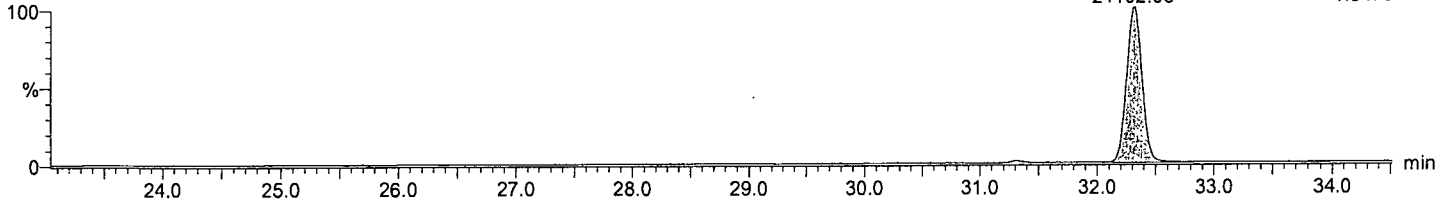
Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

2,3,7,8-TCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

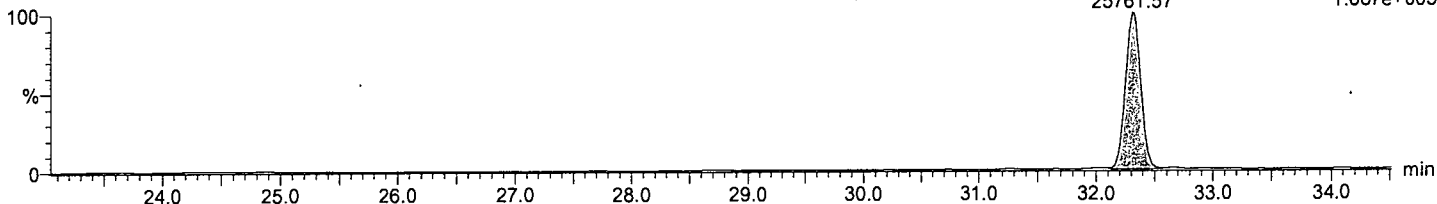
2,3,7,8-TCDD F1:Voltage SIR,EI+
32.31 319.8965
21102.08 1.347e+005



2,3,7,8-TCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

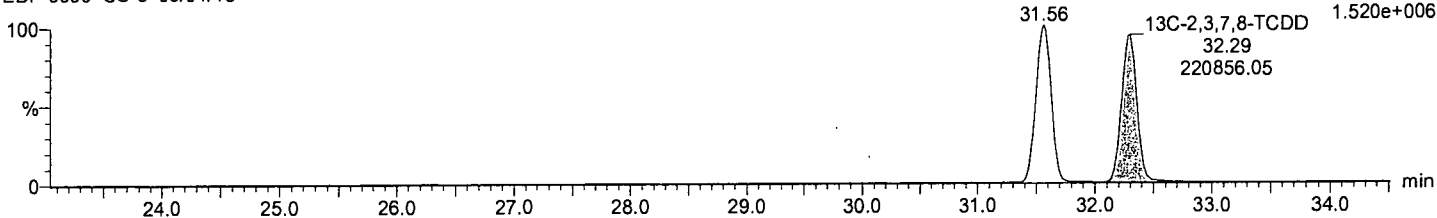
2,3,7,8-TCDD F1:Voltage SIR,EI+
32.31 321.8936
25761.57 1.687e+005



13C-2,3,7,8-TCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

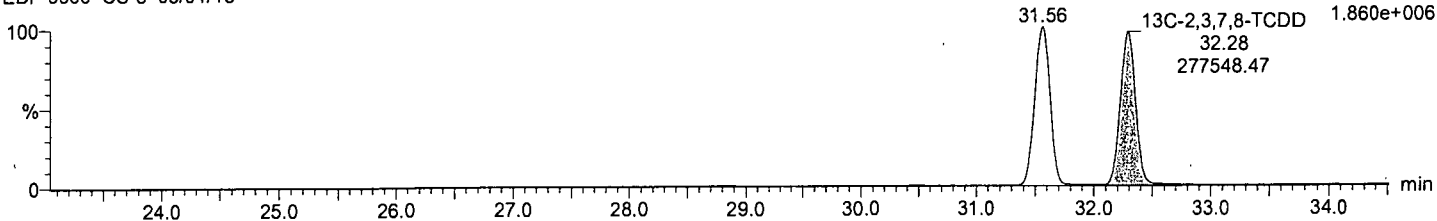
F1:Voltage SIR,EI+
321.9368
1.520e+006



13C-2,3,7,8-TCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

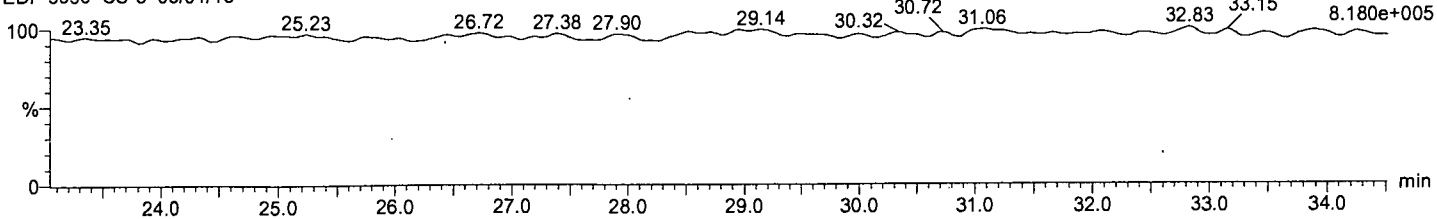
F1:Voltage SIR,EI+
333.9338
1.860e+006



PFK1

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F1:Voltage SIR,EI+
292.9824
8.180e+005



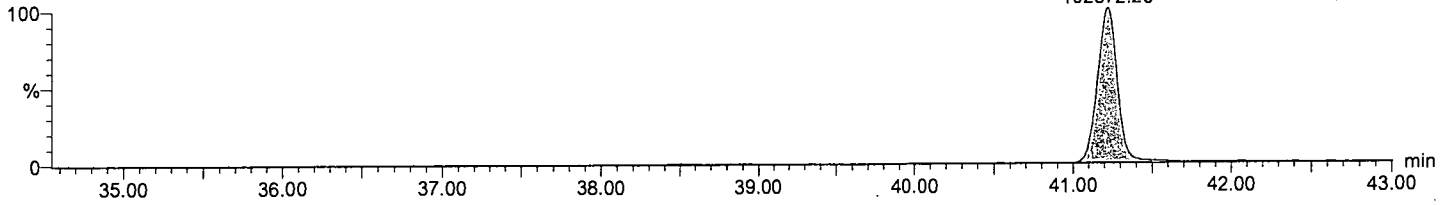
Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,7,8-PeCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,7,8-PeCDD
41.22
102372.20

F2:Voltage SIR,EI+
355.8546
7.049e+005

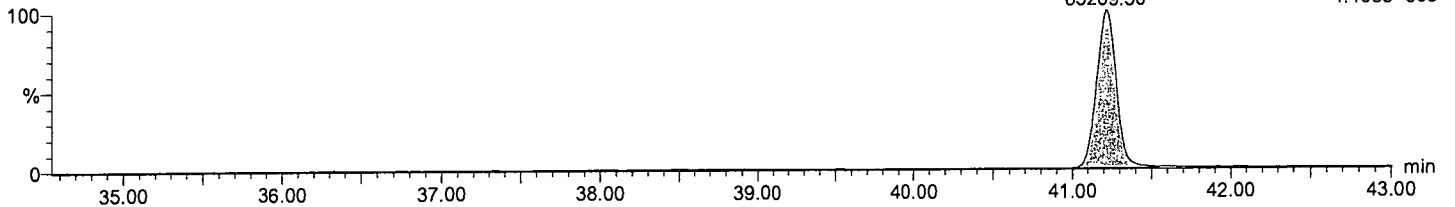


1,2,3,7,8-PeCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,7,8-PeCDD
41.21
65269.50

F2:Voltage SIR,EI+
357.8516
4.498e+005

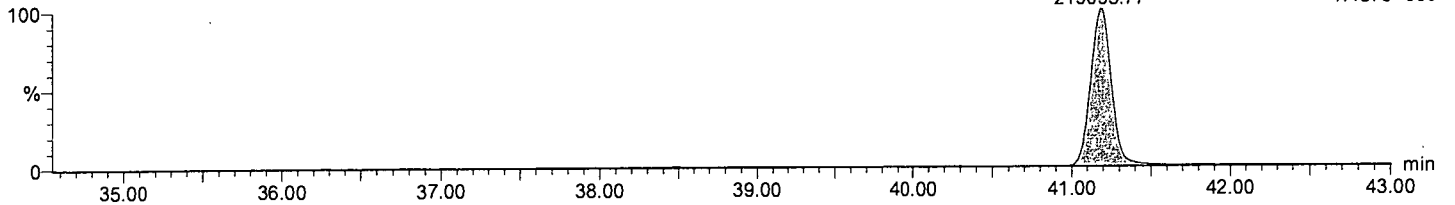


13C-1,2,3,7,8-PeCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,7,8-PeCDD
41.18
219093.77

F2:Voltage SIR,EI+
367.8949
1.437e+006

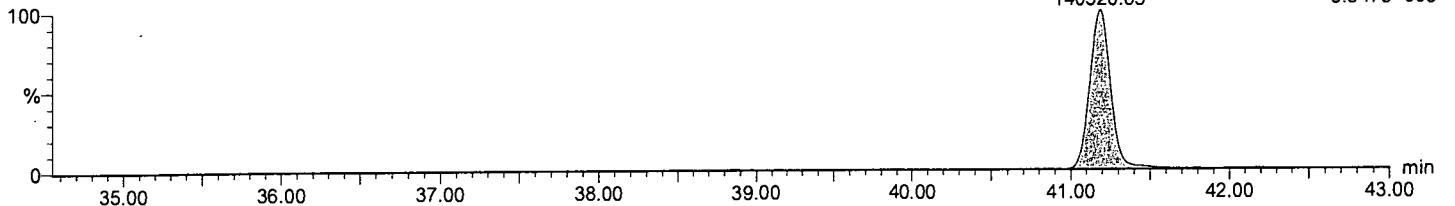


13C-1,2,3,7,8-PeCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,7,8-PeCDD
41.18
140520.63

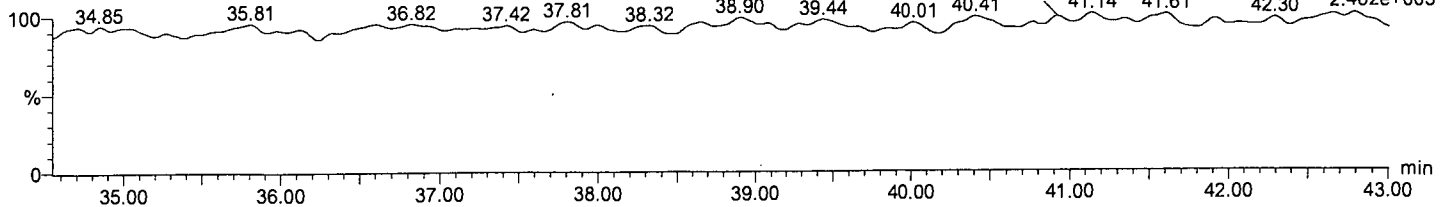
F2:Voltage SIR,EI+
369.8919
9.347e+005



PFK2

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F2:Voltage SIR,EI+
354.9792
2.462e+005



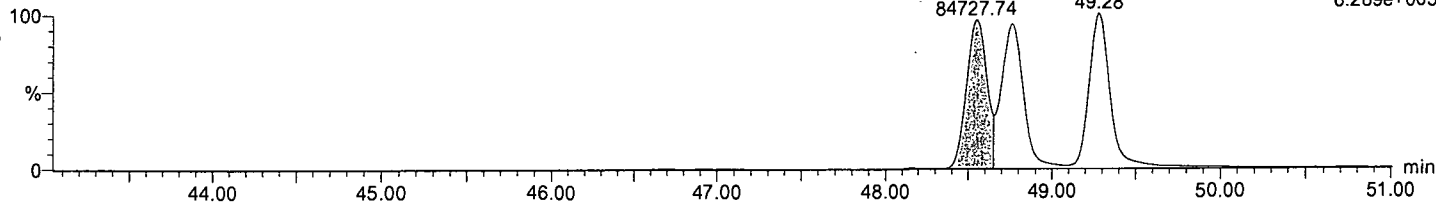
Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,7,8-HxCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,4,7,8-HxCDD

F3:Voltage SIR,EI+
389.8156
6.289e+005

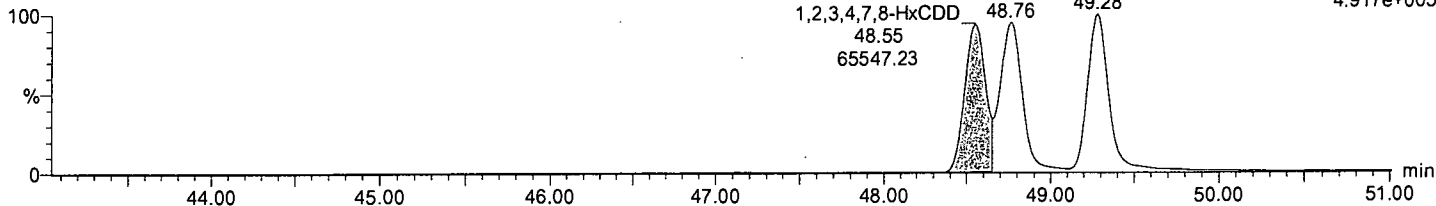


1,2,3,4,7,8-HxCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,4,7,8-HxCDD

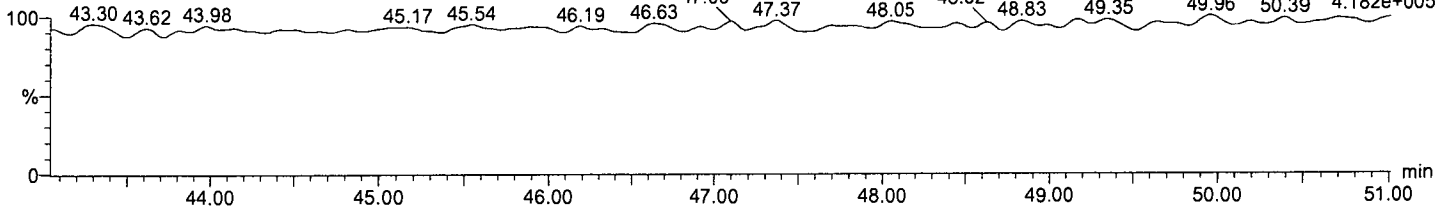
F3:Voltage SIR,EI+
391.8127
4.917e+005



PFK3

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
392.976
4.182e+005

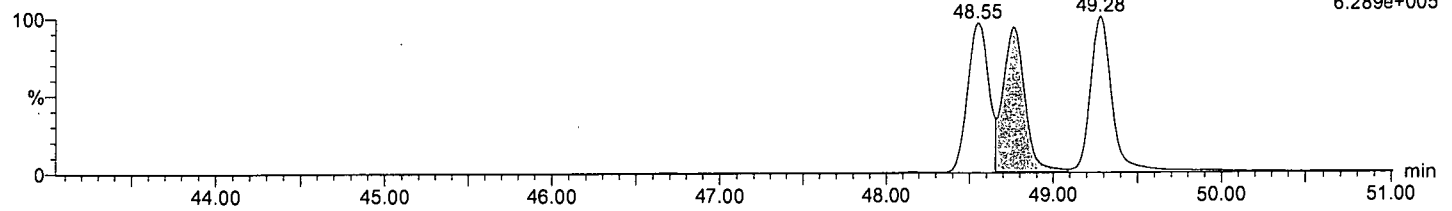


Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,6,7,8-HxCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

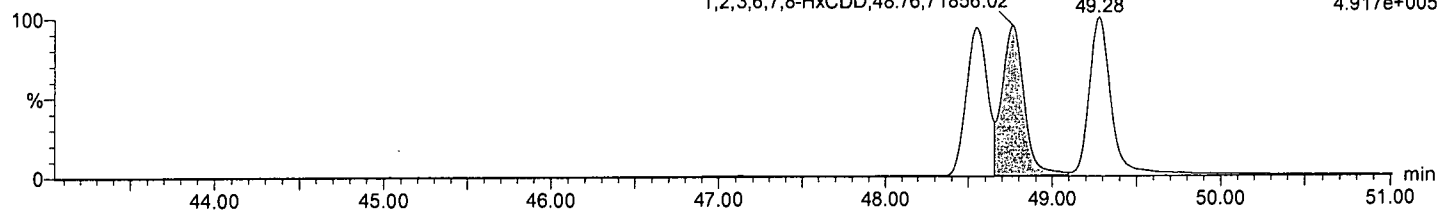
F3:Voltage SIR,EI+
389.8156
6.289e+005



1,2,3,6,7,8-HxCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

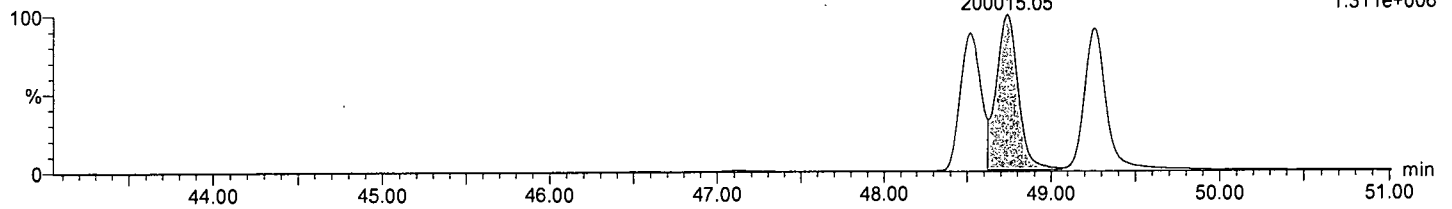
F3:Voltage SIR,EI+
391.8127
4.917e+005



13C-1,2,3,6,7,8-HxCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

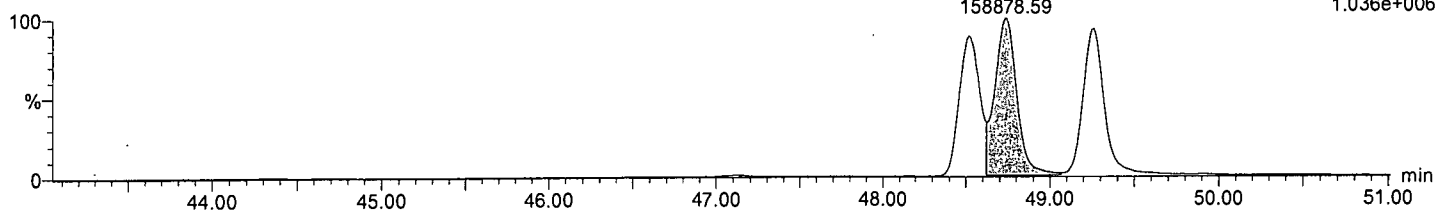
F3:Voltage SIR,EI+
401.8559
1.311e+006



13C-1,2,3,6,7,8-HxCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

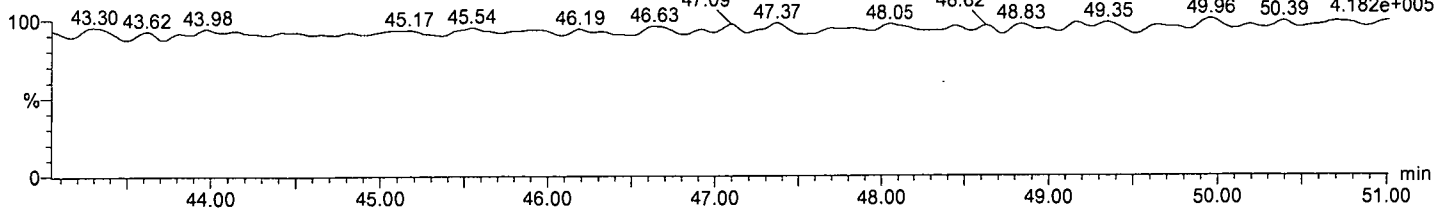
F3:Voltage SIR,EI+
403.8529
1.036e+006



PFK3

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
392.976
4.182e+005



Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,7,8,9-HxCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

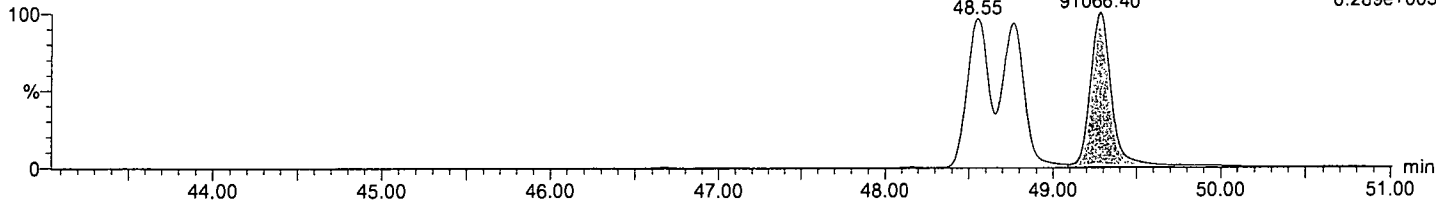
1,2,3,7,8,9-HxCDD

F3:Voltage SIR,EI+

48.55 49.28 91066.40

389.8156

6.289e+005



1,2,3,7,8,9-HxCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

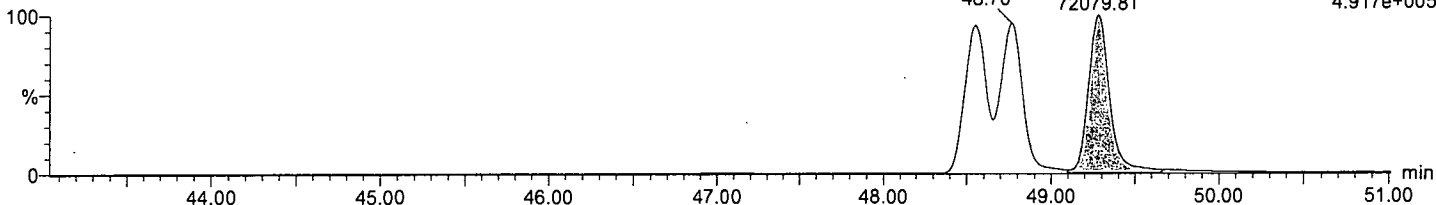
1,2,3,7,8,9-HxCDD

F3:Voltage SIR,EI+

48.76 49.28 72079.81

391.8127

4.917e+005

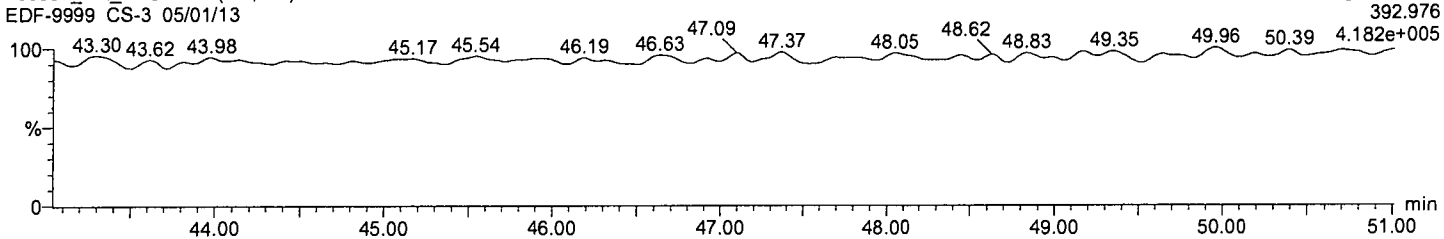


PFK3

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+

392.976



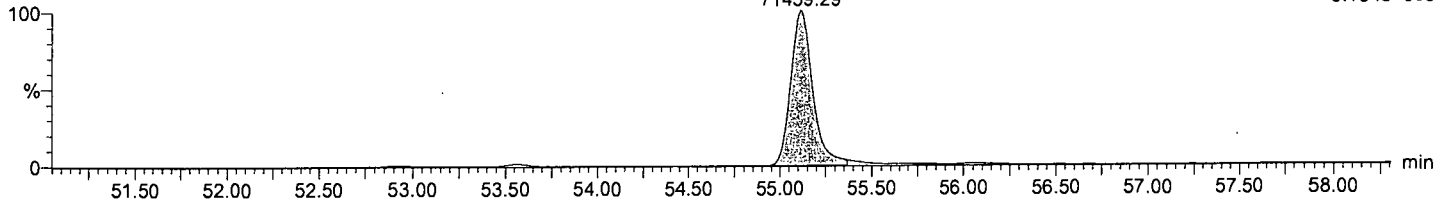
Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,6,7,8-HpCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,4,6,7,8-HpCDD
55.11
71459.29

F4:Voltage SIR,EI+
423.7767
5.154e+005

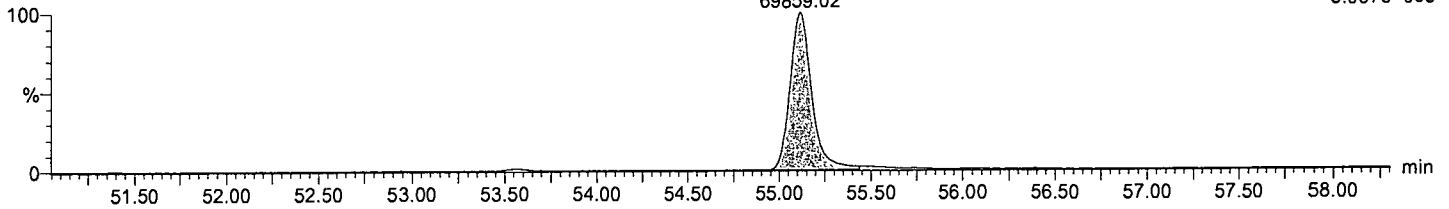


1,2,3,4,6,7,8-HpCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,4,6,7,8-HpCDD
55.11
69859.02

F4:Voltage SIR,EI+
425.7737
5.067e+005

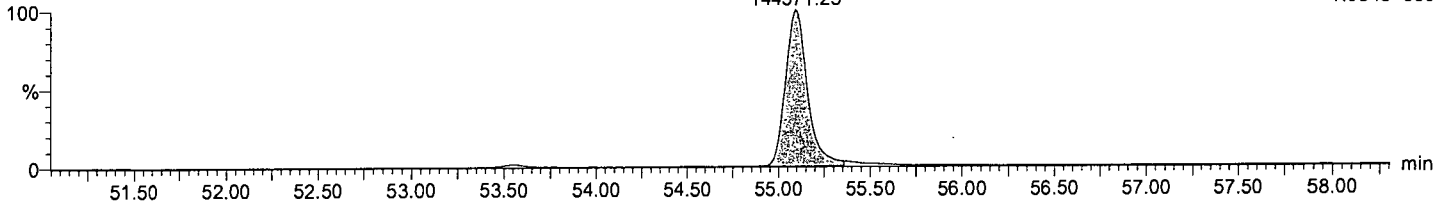


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,4,6,7,8-HpCDD
55.09
144571.23

F4:Voltage SIR,EI+
435.8169
1.034e+006

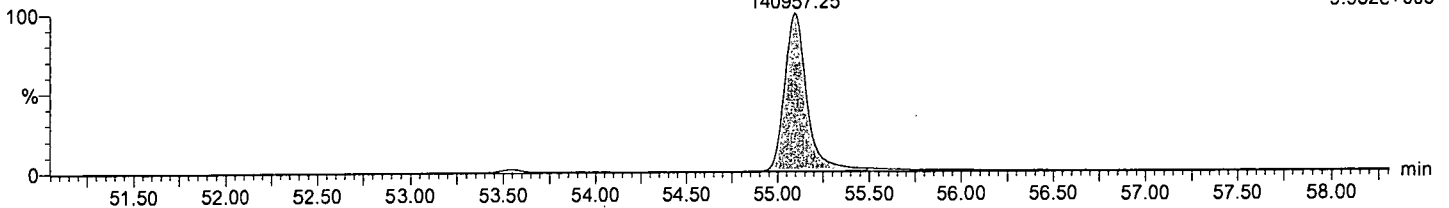


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,4,6,7,8-HpCDD
55.09
140957.25

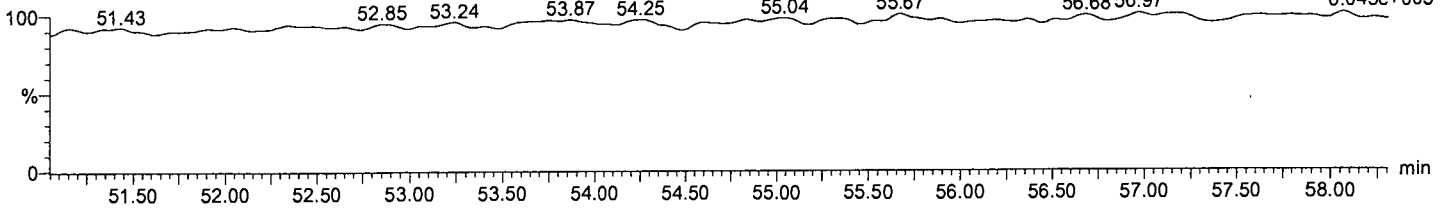
F4:Voltage SIR,EI+
437.814
9.952e+005



PFK4

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F4:Voltage SIR,EI+
430.9728
6.043e+005



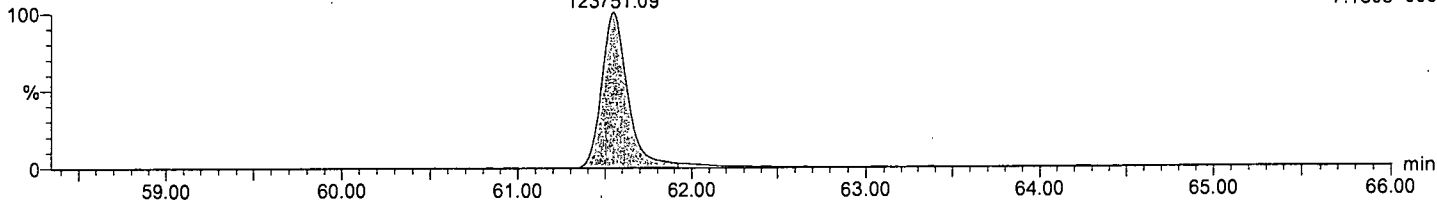
Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

OCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

OCDD
61.55
123751.09

F5:Voltage SIR,EI+
457.7377
7.180e+005

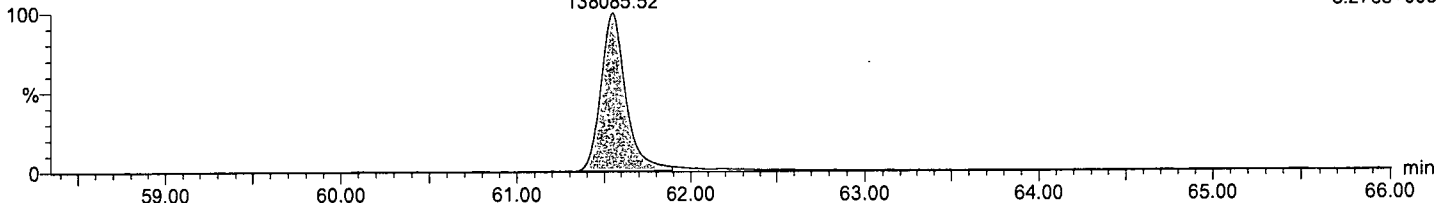


OCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

OCDD
61.55
138085.52

F5:Voltage SIR,EI+
459.7348
8.276e+005

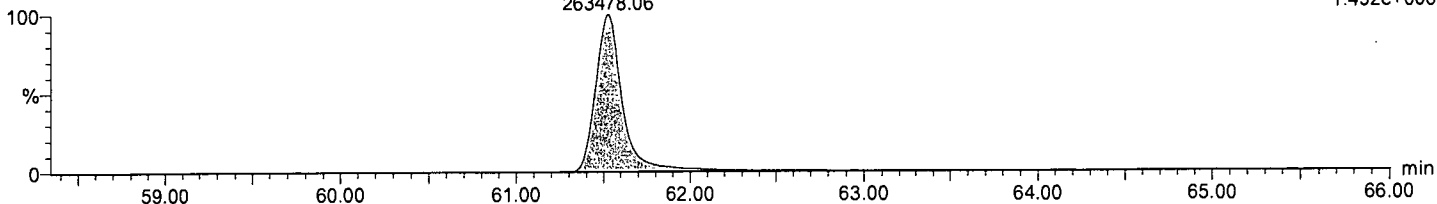


13C-OCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-OCDD
61.53
263478.06

F5:Voltage SIR,EI+
469.778
1.492e+006

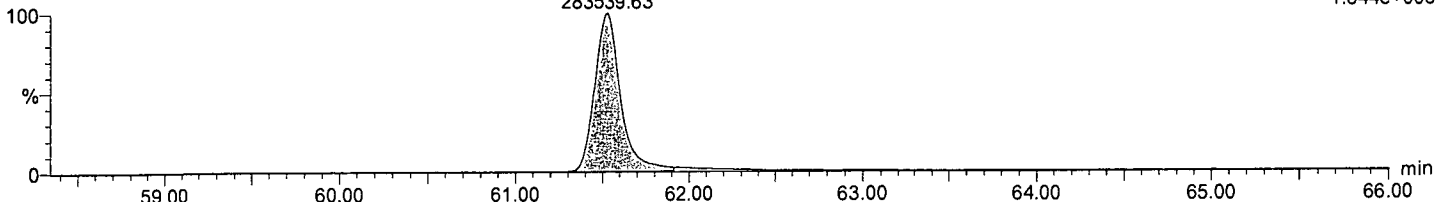


13C-OCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-OCDD
61.53
283539.63

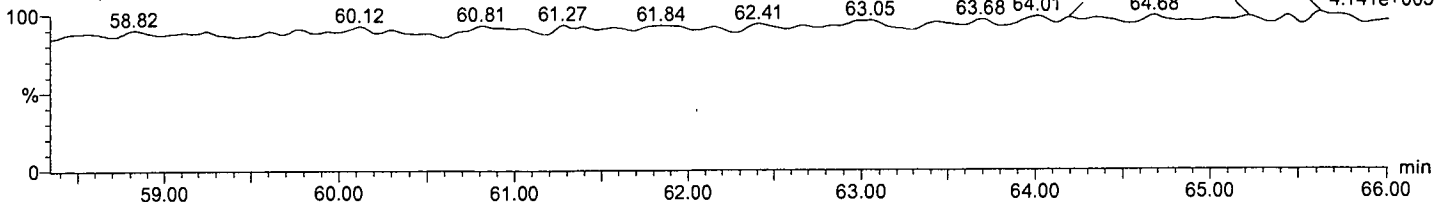
F5:Voltage SIR,EI+
471.775
1.644e+006



PFK5

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F5:Voltage SIR,EI+
442.9728
4.141e+005



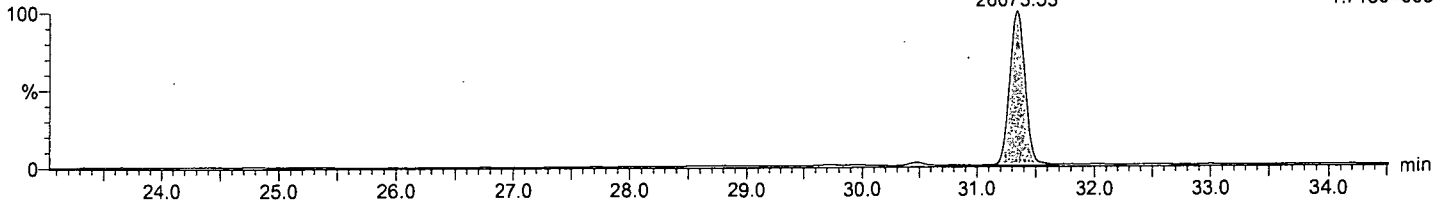
Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

2,3,7,8-TCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

2,3,7,8-TCDF
31.34
26073.53

F1:Voltage SIR,EI+
303.9016
1.715e+005

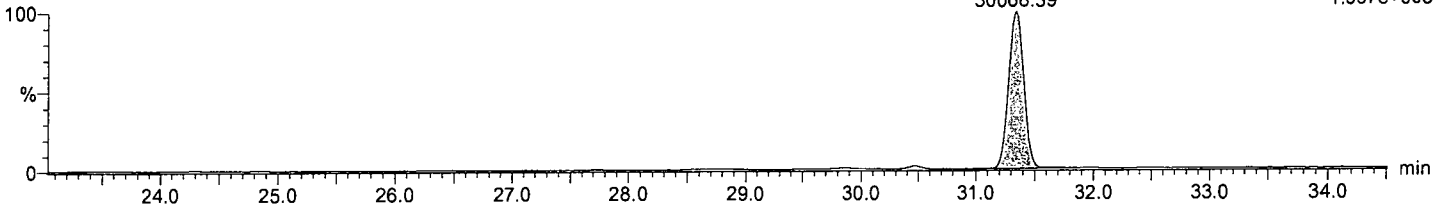


2,3,7,8-TCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

2,3,7,8-TCDF
31.34
30068.39

F1:Voltage SIR,EI+
305.8987
1.997e+005

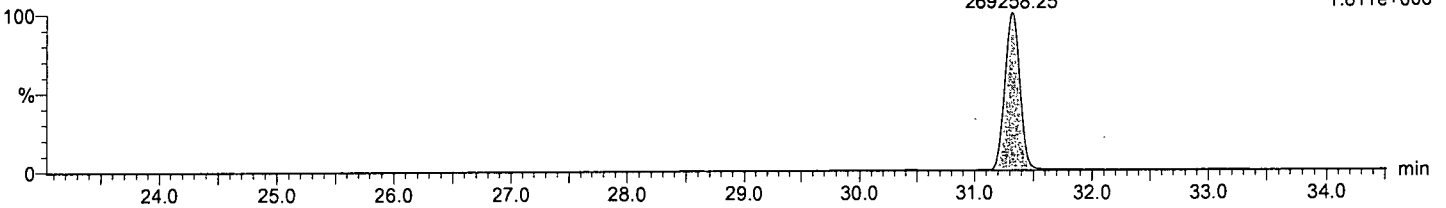


13C-2,3,7,8-TCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-2,3,7,8-TCDF
31.32
269258.25

F1:Voltage SIR,EI+
315.9419
1.811e+006

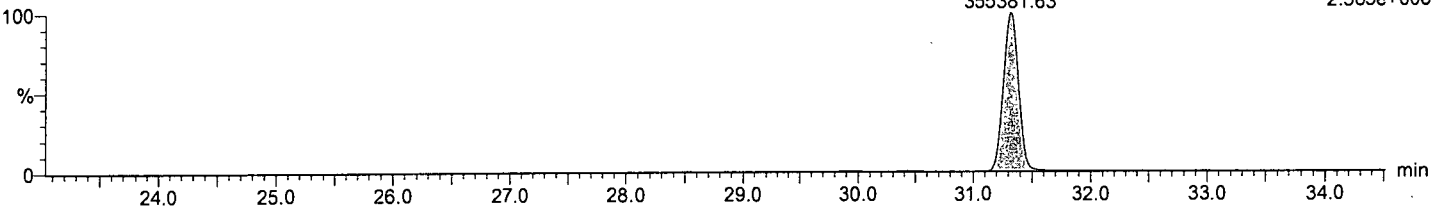


13C-2,3,7,8-TCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-2,3,7,8-TCDF
31.32
355381.63

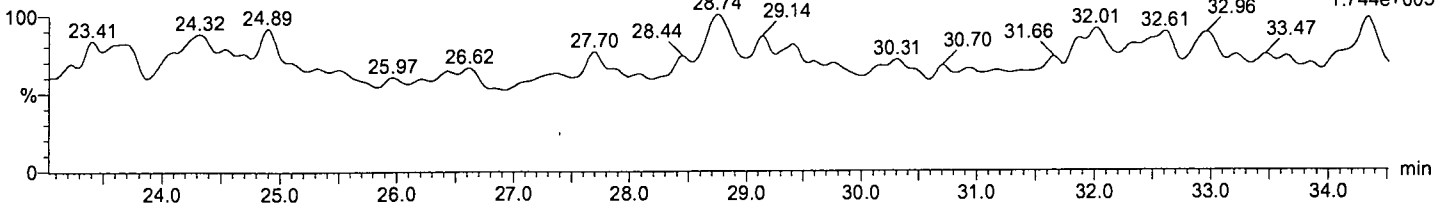
F1:Voltage SIR,EI+
317.9389
2.383e+006



HxCDFE

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F1:Voltage SIR,EI+
375.8364
1.744e+003



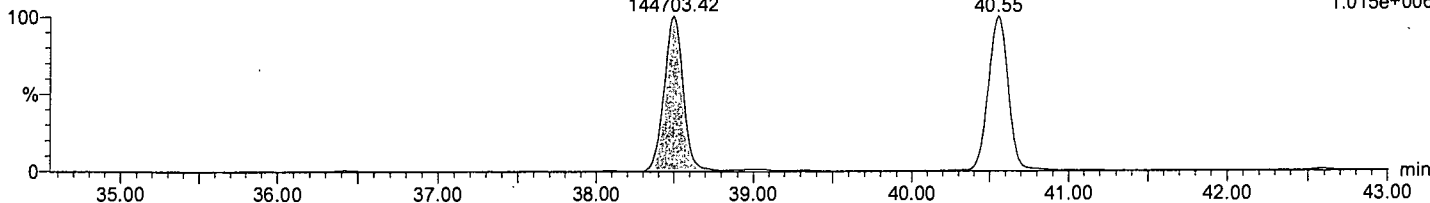
Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,7,8-PeCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,7,8-PeCDF
38.49
144703.42

F2:Voltage SIR,EI+
339.8597
1.015e+006

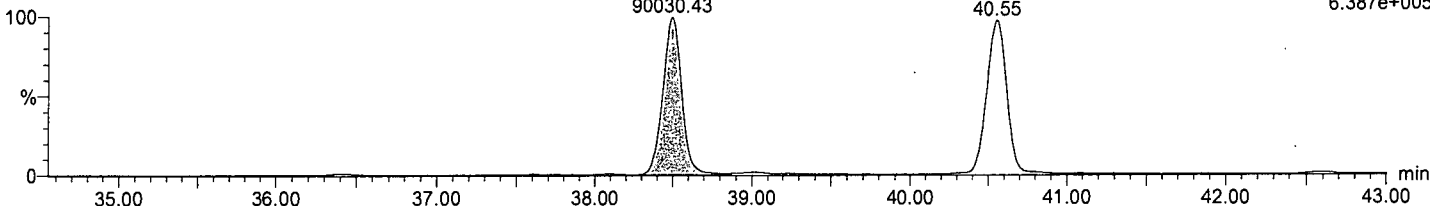


1,2,3,7,8-PeCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,7,8-PeCDF
38.49
90030.43

F2:Voltage SIR,EI+
341.8567
6.387e+005

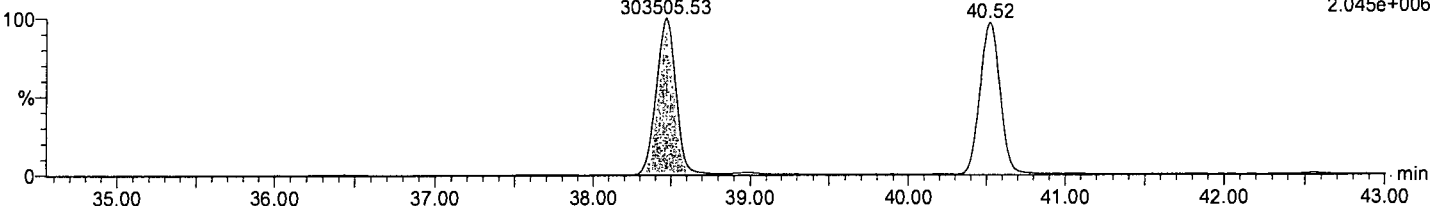


13C-1,2,3,7,8-PeCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,7,8-PeCDF
38.46
303505.53

F2:Voltage SIR,EI+
351.9
2.045e+006

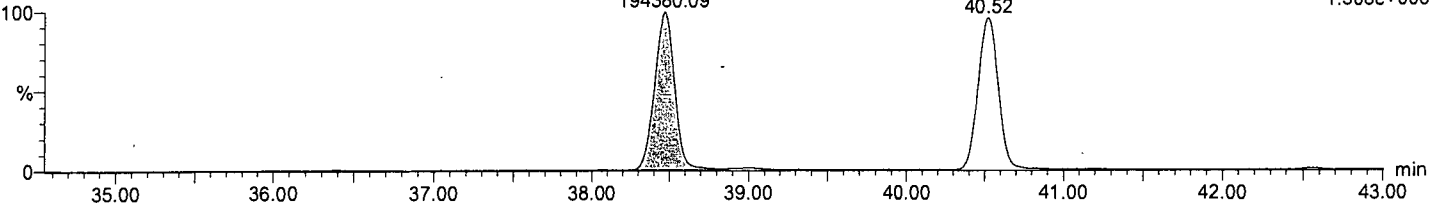


13C-1,2,3,7,8-PeCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,7,8-PeCDF
38.46
194380.09

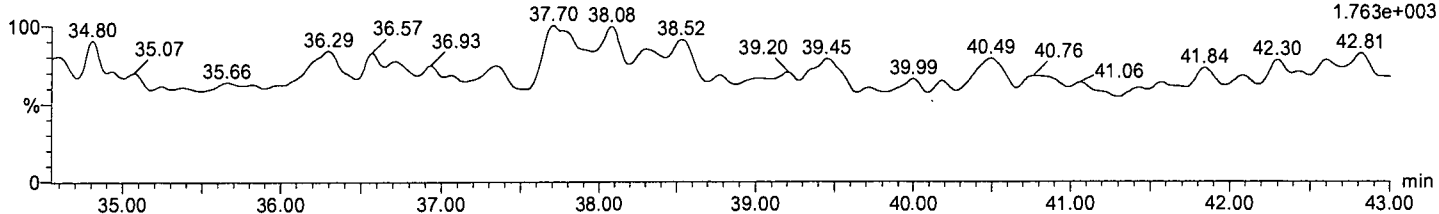
F2:Voltage SIR,EI+
353.897
1.308e+006



HpCDPE

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F2:Voltage SIR,EI+
409.7974
1.763e+003



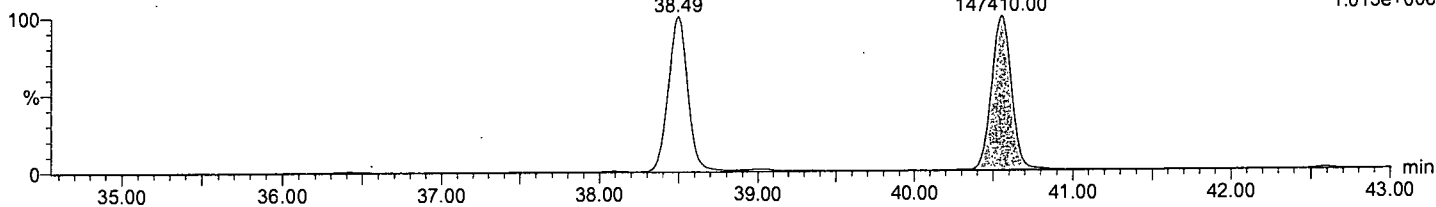
Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

2,3,4,7,8-PeCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

2,3,4,7,8-PeCDF
40.55
147410.00

F2:Voltage SIR,EI+
339.8597
1.015e+006

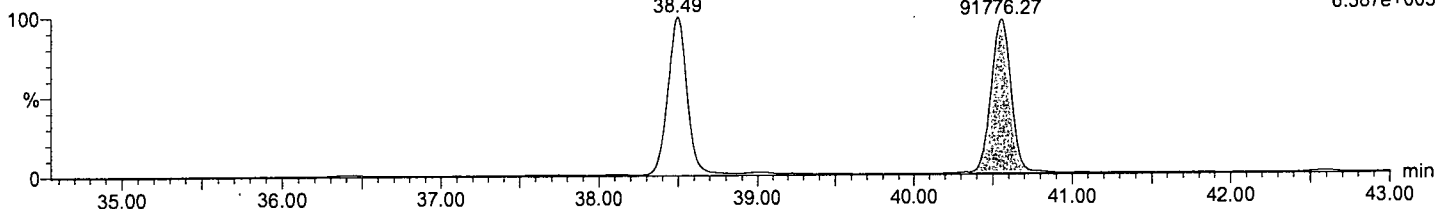


2,3,4,7,8-PeCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

2,3,4,7,8-PeCDF
40.55
91776.27

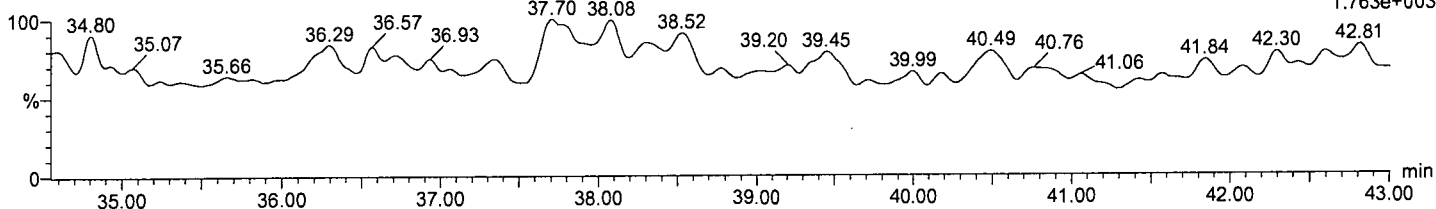
F2:Voltage SIR,EI+
341.8567
6.387e+005



HpCDPE

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F2:Voltage SIR,EI+
409.7974
1.763e+003



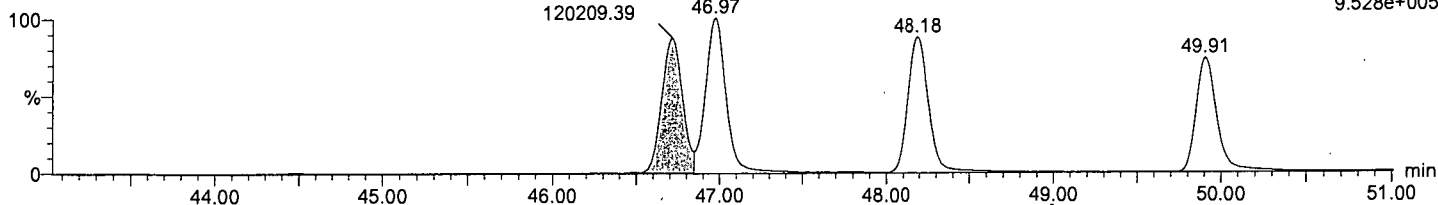
Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,7,8-HxCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,4,7,8-HxCDF
46.71

F3:Voltage SIR,EI+
373.8208
9.528e+005

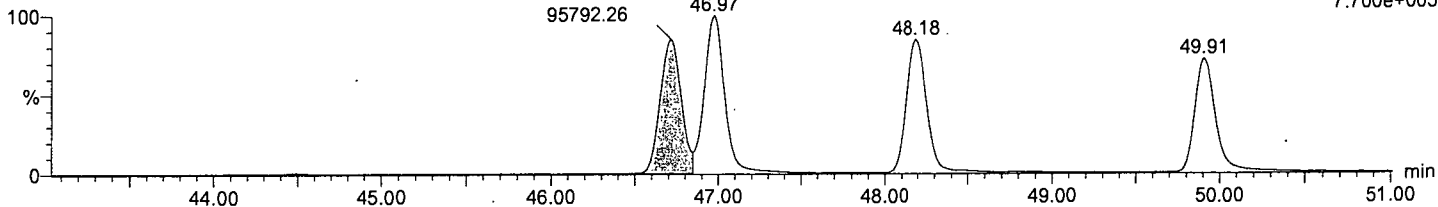


1,2,3,4,7,8-HxCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,4,7,8-HxCDF
46.71

F3:Voltage SIR,EI+
375.8178
7.700e+005

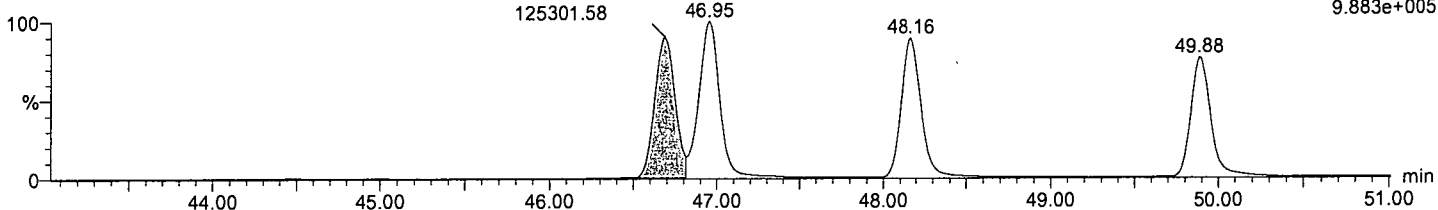


13C-1,2,3,4,7,8-HxCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,4,7,8-HxCDF
46.69

F3:Voltage SIR,EI+
383.8639
9.883e+005

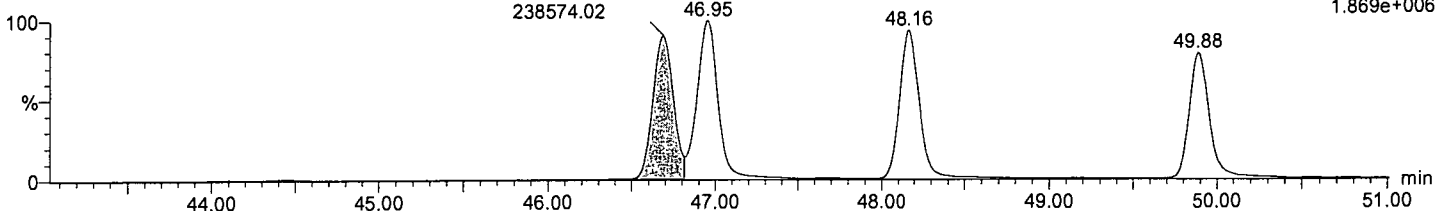


13C-1,2,3,4,7,8-HxCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,4,7,8-HxCDF
46.69

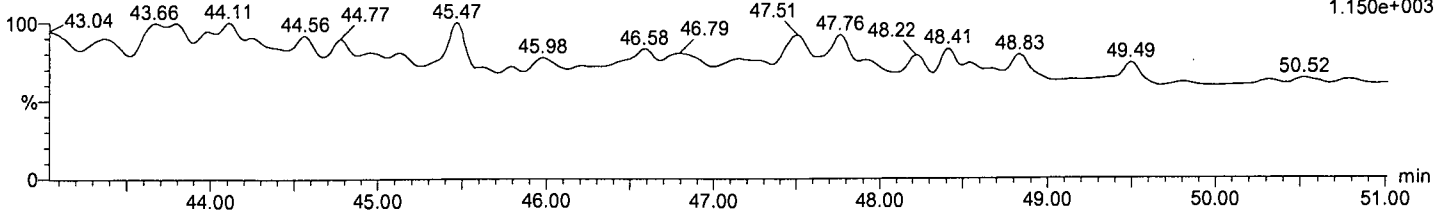
F3:Voltage SIR,EI+
385.861
1.869e+006



OCDPE

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
445.7555
1.150e+003



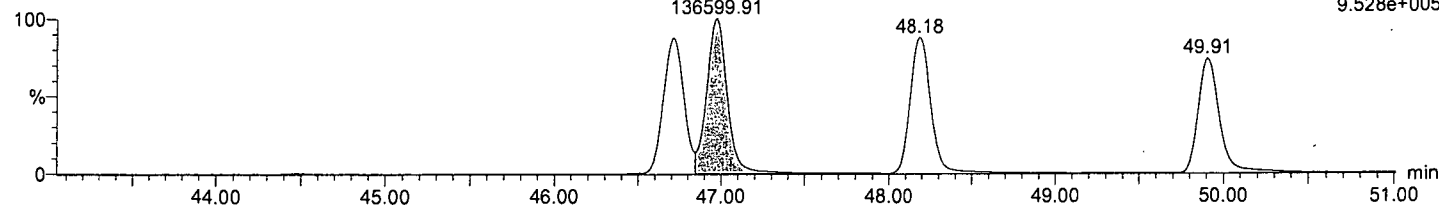
Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,6,7,8-HxCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,6,7,8-HxCDF

F3:Voltage SIR,EI+
373.8208
9.528e+005

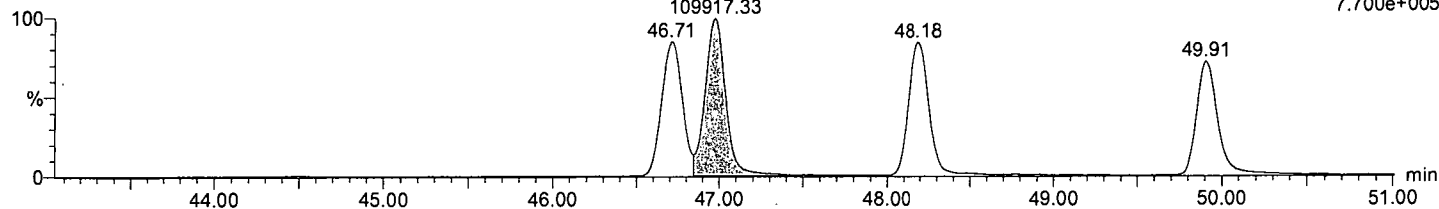


1,2,3,6,7,8-HxCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,6,7,8-HxCDF

F3:Voltage SIR,EI+
375.8178
7.700e+005

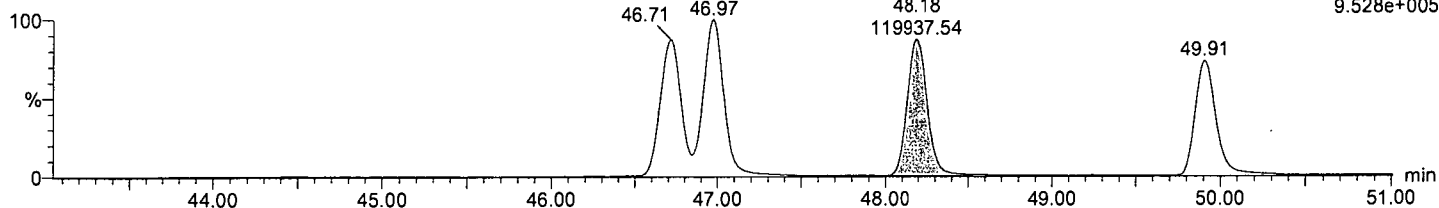


2,3,4,6,7,8-HxCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

2,3,4,6,7,8-HxCDF

F3:Voltage SIR,EI+
373.8208
9.528e+005

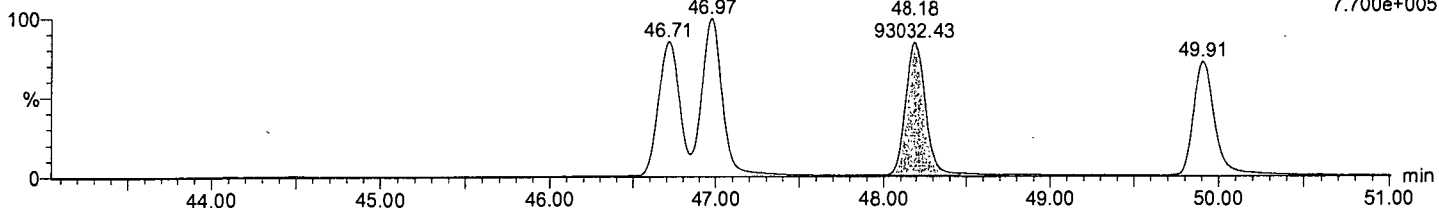


2,3,4,6,7,8-HxCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

2,3,4,6,7,8-HxCDF

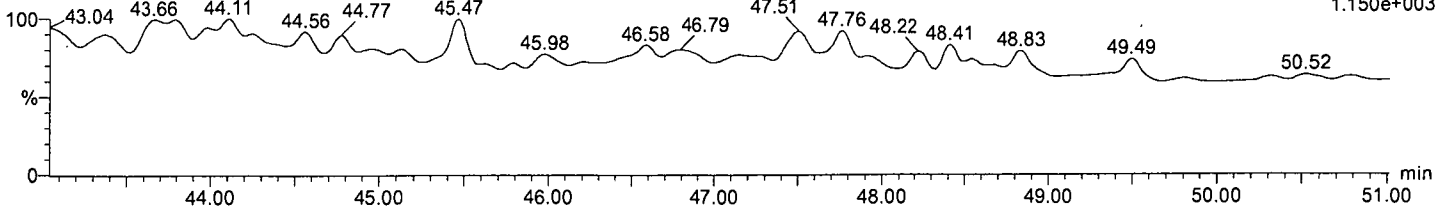
F3:Voltage SIR,EI+
375.8178
7.700e+005



OCDPE

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
445.7555
1.150e+003

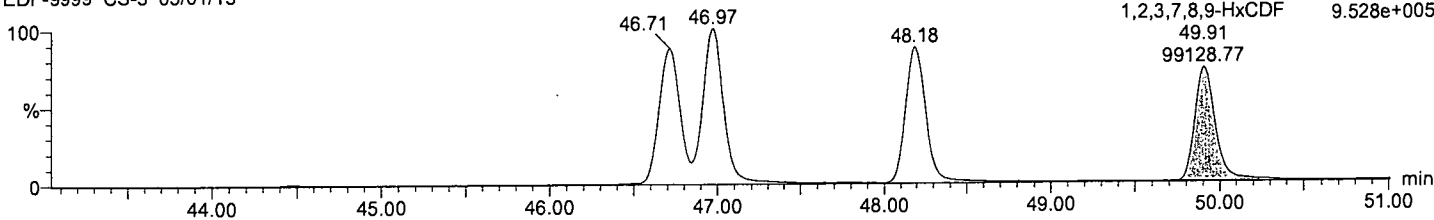


Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,7,8,9-HxCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

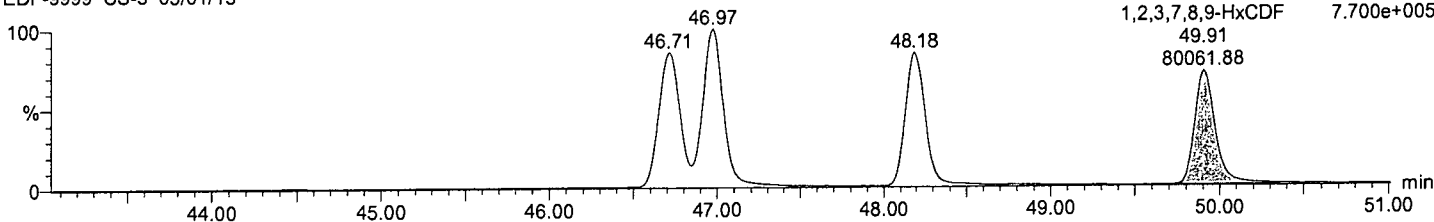
F3:Voltage SIR,EI+
373.8208
9.528e+005



1,2,3,7,8,9-HxCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

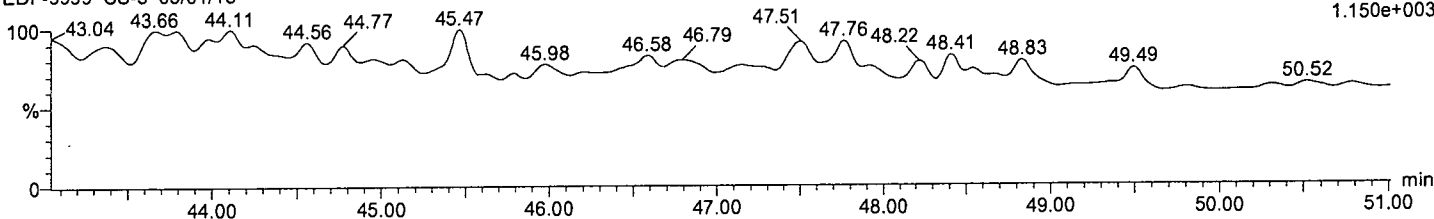
F3:Voltage SIR,EI+
375.8178
7.700e+005



OCDPE

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
445.7555
1.150e+003

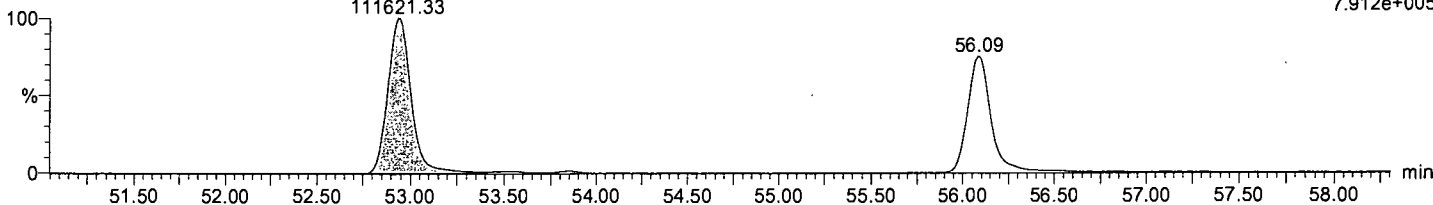


Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,6,7,8-HpCDF

130501_HR_10 Smooth(Mn,3x3) 1,2,3,4,6,7,8-HpCDF
EDF-9999 CS-3 05/01/13

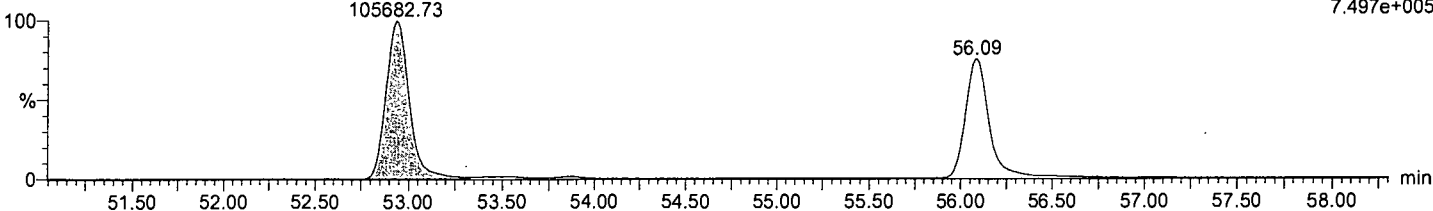
F4:Voltage SIR,EI+
407.7818
7.912e+005



1,2,3,4,6,7,8-HpCDF

130501_HR_10 Smooth(Mn,3x3) 1,2,3,4,6,7,8-HpCDF
EDF-9999 CS-3 05/01/13

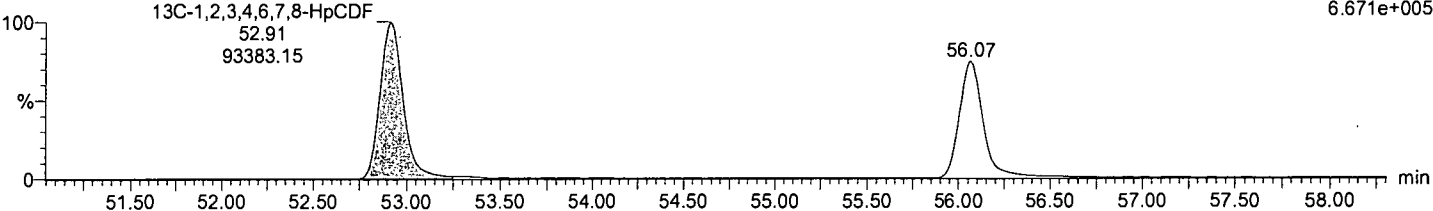
F4:Voltage SIR,EI+
409.7788
7.497e+005



13C-1,2,3,4,6,7,8-HpCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

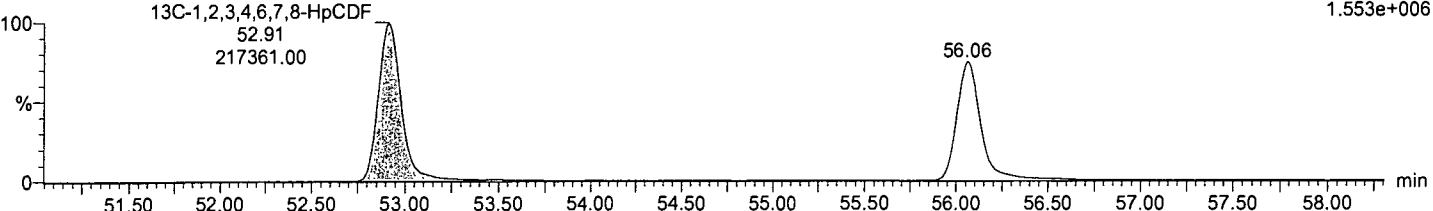
F4:Voltage SIR,EI+
417.825
6.671e+005



13C-1,2,3,4,6,7,8-HpCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

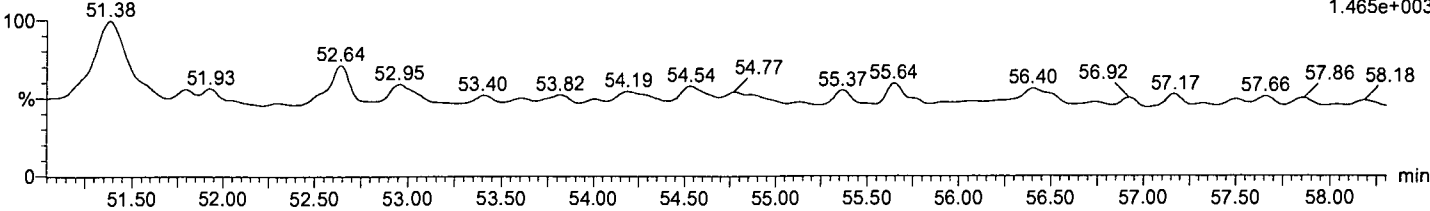
F4:Voltage SIR,EI+
419.822
1.553e+006



NCDPE

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F4:Voltage SIR,EI+
479.7165
1.465e+003

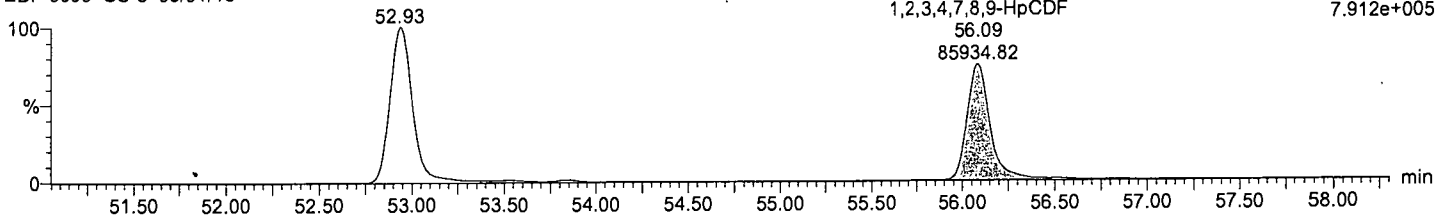


Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,7,8,9-HpCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

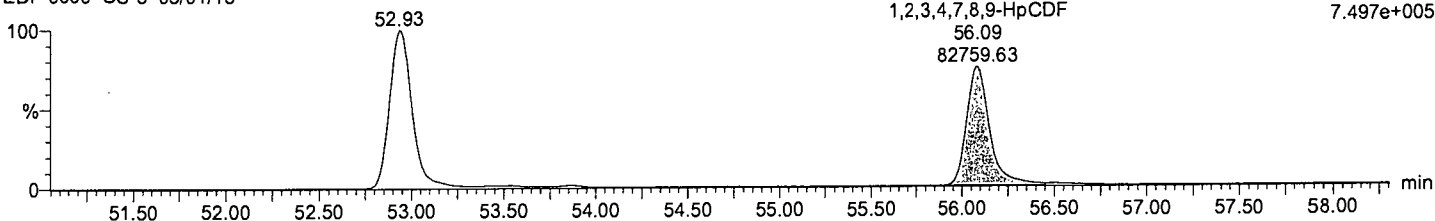
F4:Voltage SIR,EI+
407.7818
7.912e+005



1,2,3,4,7,8,9-HpCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

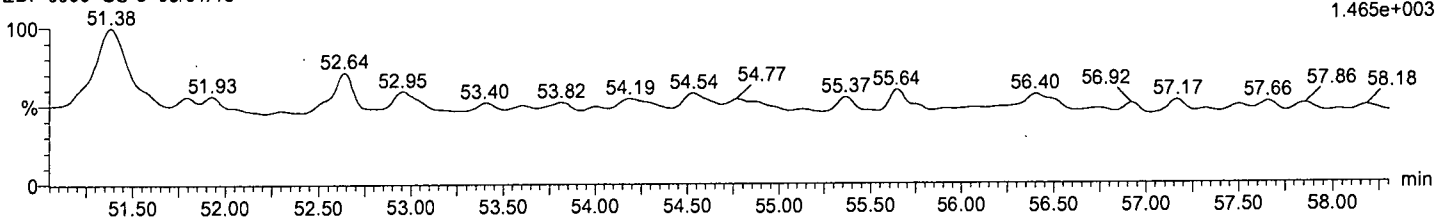
F4:Voltage SIR,EI+
409.7788
7.497e+005



NCDPE

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F4:Voltage SIR,EI+
479.7165
1.465e+003



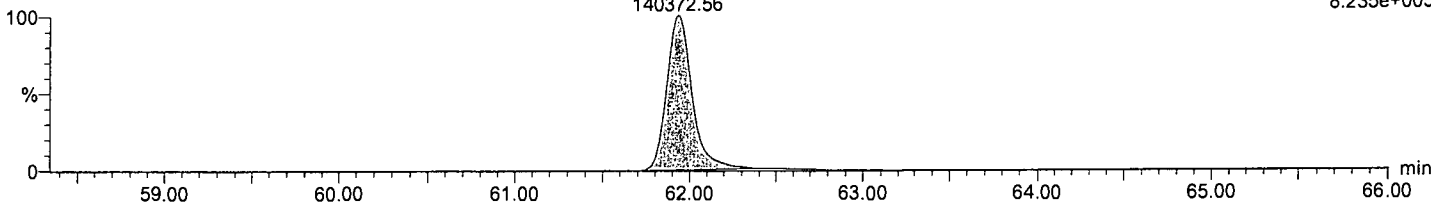
Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

OCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

OCDF
61.93
140372.56

F5:Voltage SIR,EI+
441.7428
8.235e+005

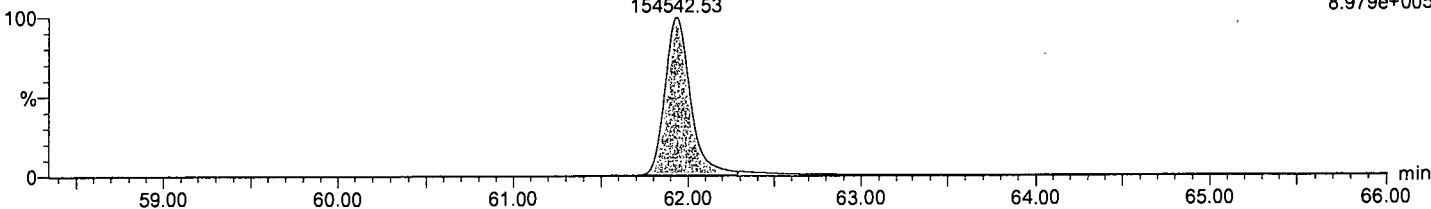


OCDF

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

OCDF
61.93
154542.53

F5:Voltage SIR,EI+
443.7399
8.979e+005

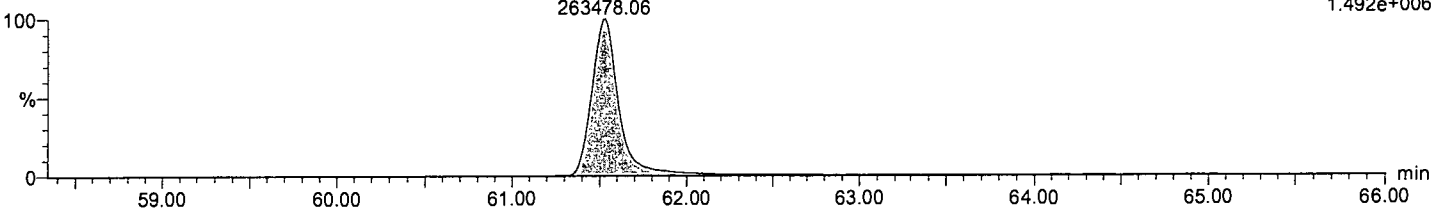


13C-OCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-OCDD
61.53
263478.06

F5:Voltage SIR,EI+
469.778
1.492e+006

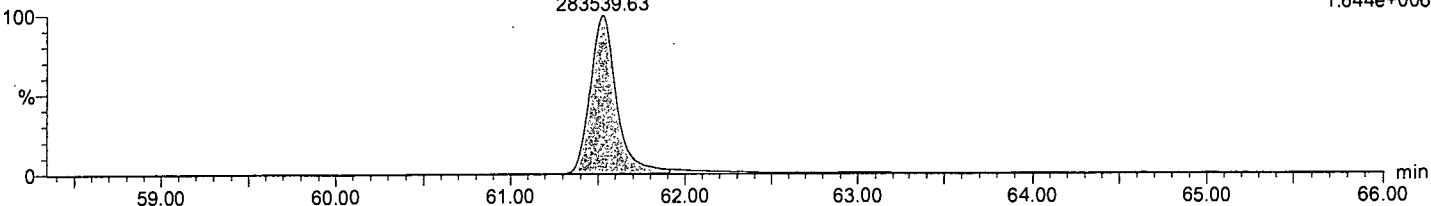


13C-OCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-OCDD
61.53
283539.63

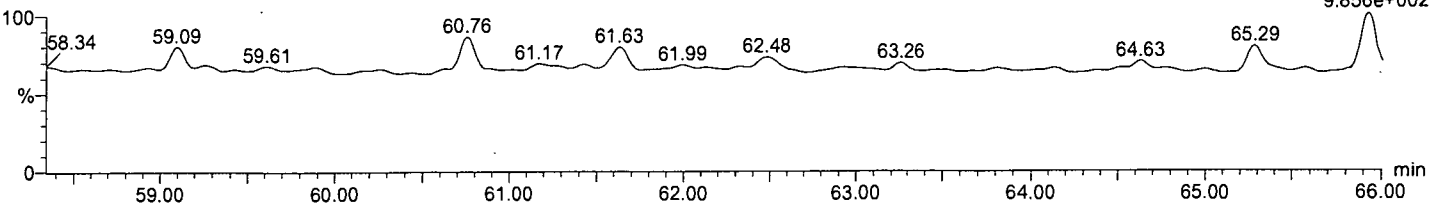
F5:Voltage SIR,EI+
471.775
1.644e+006



DCDPE

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

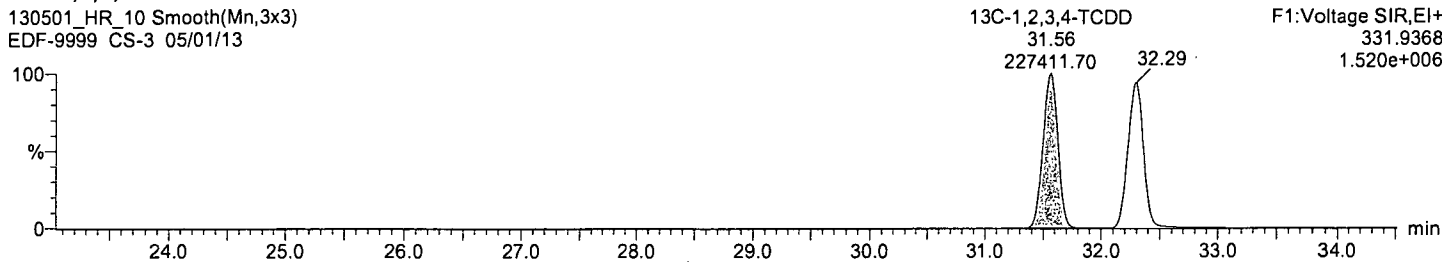
F5:Voltage SIR,EI+
513.6775
9.856e+002



Name: 130501_HR_10, Date: 02-May-2013, Time: 02:58:13, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

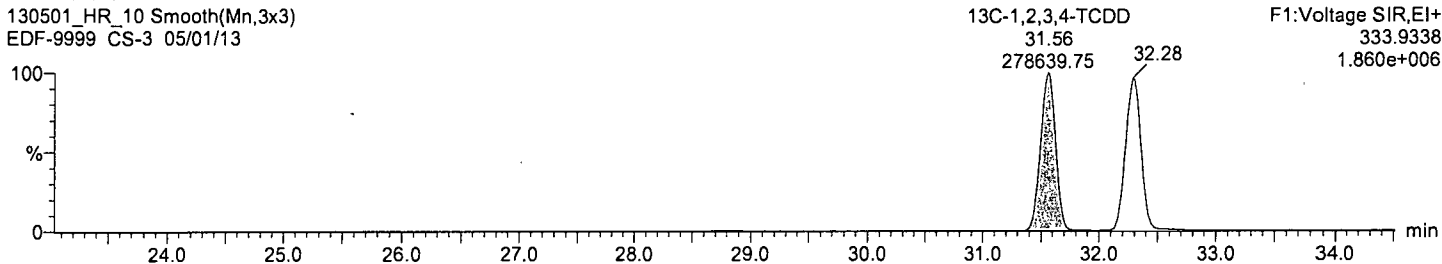
13C-1,2,3,4-TCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13



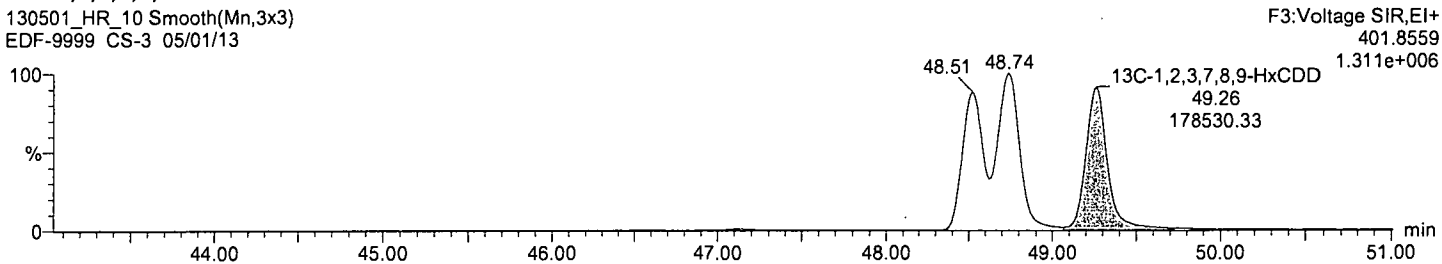
13C-1,2,3,4-TCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13



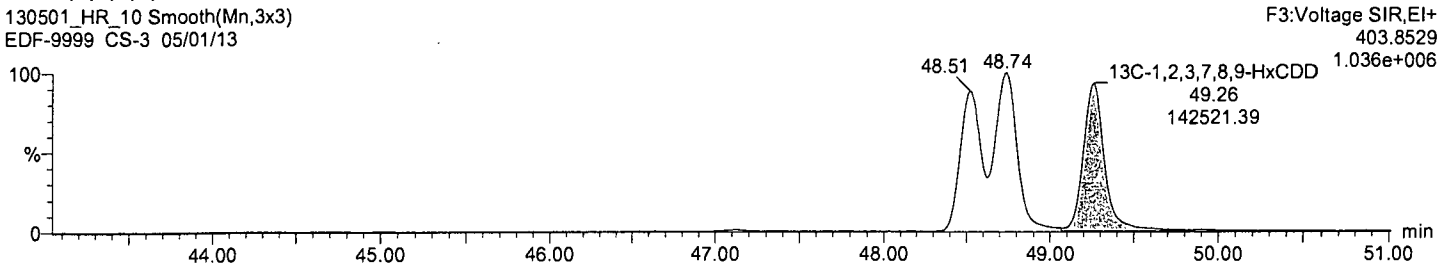
13C-1,2,3,7,8,9-HxCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13



13C-1,2,3,7,8,9-HxCDD

130501_HR_10 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13



Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13

#	Name	Peak Area	1 ^o Area	RT	Ion Ab	Ion.Fail?	S/N1	S/N2	Conc	%Rec	RRF	%Dev
1	2,3,7,8-TCDD	1.871299e4	2.548576e4	32.28	0.7343	NO	NO	NO	9.944	99.44	0.978	-0.6
2	1,2,3,7,8-PeCDD	1.010468e5	6.294756e4	41.16	1.6053	NO	NO	NO	51.376	102.75	0.926	2.8
3	1,2,3,4,7,8-HxCDD	9.508218e4	7.948195e4	48.52	1.1963	NO	NO	NO	46.861	93.72	0.910	-6.3
4	1,2,3,6,7,8-HxCDD	9.133110e4	7.133620e4	48.72	1.2803	NO	NO	NO	42.012	84.02	0.848	-16.0
5	1,2,3,7,8,9-HxCDD	9.904995e4	7.818345e4	49.25	1.2669	NO	NO	NO	45.398	90.80	0.924	-9.2
6	1,2,3,4,6,7,8-HpCDD	8.430715e4	8.039403e4	55.08	1.0487	NO	NO	NO	45.768	91.54	0.951	-8.5
7	OCDD	1.491071e5	1.688322e5	61.51	0.8832	NO	NO	NO	87.923	87.92	0.956	-12.1
8	2,3,7,8-TCDF	2.421639e4	3.069333e4	31.32	0.7890	NO	NO	NO	10.000	100.00	0.935	-0.0
9	1,2,3,7,8-PeCDF	1.417251e5	8.976851e4	38.46	1.5788	NO	NO	NO	46.276	92.55	0.948	-7.4
10	2,3,4,7,8-PeCDF	1.437539e5	9.185896e4	40.50	1.5649	NO	NO	NO	50.126	100.25	0.965	0.3
11	1,2,3,4,7,8-HxCDF	1.267506e5	1.037400e5	46.67	1.2218	NO	NO	NO	47.039	94.08	1.173	-5.9
12	1,2,3,6,7,8-HxCDF	1.431319e5	1.164781e5	46.93	1.2288	NO	NO	NO	48.827	97.65	1.321	-2.3
13	2,3,4,6,7,8-HxCDF	1.297876e5	1.045827e5	48.15	1.2410	NO	NO	NO	48.781	97.56	1.193	-2.4
14	1,2,3,7,8,9-HxCDF	1.107394e5	9.009837e4	49.89	1.2291	NO	NO	NO	48.327	96.65	1.022	-3.3
15	1,2,3,4,6,7,8-HpCDF	1.190070e5	1.154082e5	52.90	1.0312	NO	NO	NO	46.779	93.56	1.340	-6.4
16	1,2,3,4,7,8,9-HpCDF	1.024645e5	1.025327e5	56.04	0.9993	NO	NO	NO	52.473	104.95	1.172	4.9
17	OCDF	1.720342e5	1.871554e5	61.89	0.9192	NO	NO	NO	86.322	86.32	1.080	-13.7
18	13C-2,3,7,8-TCDD	2.020811e5	2.498776e5	32.24	0.8087	NO	NO	NO	98.198	98.20	0.879	-1.8
19	13C-1,2,3,7,8-PeCDD	2.168641e5	1.373556e5	41.13	1.5789	NO	NO	NO	94.327	94.33	0.689	-5.7
20	13C-1,2,3,6,7,8-HxCDD	2.101533e5	1.733776e5	48.70	1.2121	NO	NO	NO	108.550	108.55	1.068	8.5
21	13C-1,2,3,4,6,7,8-HpCDD	1.773962e5	1.690551e5	55.06	1.0493	NO	NO	NO	111.717	111.72	0.965	11.7
22	13C-OCDD	3.154143e5	3.496697e5	61.48	0.9020	NO	NO	NO	236.189	118.09	0.926	18.1
23	13C-2,3,7,8-TCDF	2.523540e5	3.347341e5	31.29	0.7539	NO	NO	NO	95.376	95.38	1.142	-4.6
24	13C-1,2,3,7,8-PeCDF	3.006205e5	1.875762e5	38.42	1.6027	NO	NO	NO	98.107	98.11	0.950	-1.9
25	13C-1,2,3,4,7,8-HxCDF	1.335726e5	2.594189e5	46.64	0.5149	NO	NO	NO	100.759	100.76	1.095	0.8
26	13C-1,2,3,4,6,7,8-HpCDF	1.083080e5	2.416523e5	52.88	0.4482	NO	NO	NO	105.126	105.13	0.975	5.1
27	13C-1,2,3,4-TCDD	2.266445e5	2.874775e5	31.52	0.7884	NO	NO	NO	100.000	100.00	1.000	0.0
28	13C-1,2,3,7,8,9-HxCDD	1.998057e5	1.592113e5	49.22	1.2550	NO	NO	NO	100.000	100.00	1.000	0.0

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

#	Name	RT	RRT
1	2,3,7,8-TCDD	32.281799	1.001265
2	1,2,3,7,8-PeCDD	41.157200	1.000742
3	1,2,3,4,7,8-HxCDD	48.522701	0.996292
4	1,2,3,6,7,8-HxCDD	48.724701	1.000439
5	1,2,3,7,8,9-HxCDD	49.245201	1.000431
6	1,2,3,4,6,7,8-HpCDD	55.081200	1.000371
7	OCDD	61.514801	1.000493
8	2,3,7,8-TCDF	31.315701	1.000876
9	1,2,3,7,8-PeCDF	38.460999	1.001054
10	2,3,4,7,8-PeCDF	40.498299	1.054080
11	1,2,3,4,7,8-HxCDF	46.674198	1.000684
12	1,2,3,6,7,8-HxCDF	46.929199	1.006151
13	2,3,4,6,7,8-HxCDF	48.150799	1.032342
14	1,2,3,7,8,9-HxCDF	49.893299	1.069701
15	1,2,3,4,6,7,8-HpCDF	52.902000	1.000382
16	1,2,3,4,7,8,9-HpCDF	56.043999	1.059797
17	OCDF	61.889999	1.006595
18	13C-2,3,7,8-TCDD	32.241001	1.022884
19	13C-1,2,3,7,8-PeCDD	41.126701	1.304794
20	13C-1,2,3,6,7,8-HxCDD	48.703300	0.989422
21	13C-1,2,3,4,6,7,8-HpCDD	55.060799	1.118576
22	13C-OCDD	61.484501	1.249076
23	13C-2,3,7,8-TCDF	31.288300	0.992659
24	13C-1,2,3,7,8-PeCDF	38.420502	1.218936
25	13C-1,2,3,4,7,8-HxCDF	46.642300	0.947552
26	13C-1,2,3,4,6,7,8-HpCDF	52.881802	1.074309
27	13C-1,2,3,4-TCDD	31.519699	1.000000
28	13C-1,2,3,7,8,9-HxCDD	49.223999	1.000000

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

#	Name	Signal 1	Noise 1	S/N 1	Flag S/N	Signal 2	Noise 2	S/N 2	Flag S/N
1	2,3,7,8-TCDD	1.1546600e5	1.1786885e2	983.68	NO	1.5509800e5	5.2038311e1	2980.46	NO
2	1,2,3,7,8-PeCDD	7.1400000e5	3.8080969e2	1873.86	NO	4.4313300e5	1.4156938e2	3130.15	NO
3	1,2,3,4,7,8-HxCDD	6.7022700e5	7.8244684e2	855.06	NO	5.6253900e5	4.1924692e3	134.18	NO
4	1,2,3,6,7,8-HxCDD	6.4807100e5	7.8244684e2	826.63	NO	5.0834700e5	4.1924692e3	121.25	NO
5	1,2,3,7,8,9-HxCDD	6.7567600e5	7.8244684e2	861.62	NO	5.3815200e5	4.1924692e3	128.36	NO
6	1,2,3,4,6,7,8-HpCDD	6.4903300e5	2.0229404e2	3202.43	NO	6.1745500e5	2.9547958e2	2089.67	NO
7	OCDD	9.6404500e5	6.4354791e2	1497.36	NO	1.0691940e6	3.3571130e2	3184.86	NO
8	2,3,7,8-TCDF	1.5053200e5	1.7496790e2	857.72	NO	1.9673300e5	8.5855789e1	2291.44	NO
9	1,2,3,7,8-PeCDF	9.4220400e5	8.1929974e2	1147.33	NO	5.9191700e5	1.7390032e3	340.38	NO
10	2,3,4,7,8-PeCDF	9.2951800e5	8.1929974e2	1132.56	NO	6.0244200e5	1.7390032e3	346.43	NO
11	1,2,3,4,7,8-HxCDF	9.0334500e5	7.9565566e3	111.47	NO	7.2680400e5	5.5755432e2	1303.56	NO
12	1,2,3,6,7,8-HxCDF	1.0108870e6	7.9565566e3	124.98	NO	8.3783600e5	5.5755432e2	1502.70	NO
13	2,3,4,6,7,8-HxCDF	9.4890300e5	7.9565566e3	117.17	NO	7.6377600e5	5.5755432e2	1369.87	NO
14	1,2,3,7,8,9-HxCDF	7.8115900e5	7.9565566e3	96.07	NO	6.3262700e5	5.5755432e2	1134.65	NO
15	1,2,3,4,6,7,8-HpCDF	9.0030500e5	1.2327834e3	728.56	NO	8.5950500e5	9.1031338e3	94.42	NO
16	1,2,3,4,7,8,9-HpCDF	7.5192100e5	1.2327834e3	608.83	NO	7.3351600e5	9.1031338e3	80.58	NO
17	OCDF	1.0118070e6	1.5517194e2	6521.99	NO	1.0898010e6	3.9381182e3	276.73	NO
18	13C-2,3,7,8-TCDD	1.2826370e6	4.5694244e2	2808.18	NO	1.5852770e6	2.9408337e2	5390.57	NO
19	13C-1,2,3,7,8-PeCDD	1.4638570e6	6.0108704e2	2434.13	NO	9.1672500e5	9.9103174e2	925.02	NO
20	13C-1,2,3,6,7,8-HxCDD	1.4824740e6	5.2060052e2	2849.30	NO	1.2253150e6	6.2333687e3	196.57	NO
21	13C-1,2,3,4,6,7,8-HpCDD	1.3683490e6	3.2898114e2	4156.02	NO	1.2836620e6	4.7054584e2	2728.03	NO
22	13C-OCDD	1.9666270e6	4.7403900e2	4147.21	NO	2.1867710e6	2.9510419e2	7410.17	NO
23	13C-2,3,7,8-TCDF	1.6340530e6	2.5688989e2	6363.07	NO	2.1710000e6	5.8380469e2	3718.71	NO
24	13C-1,2,3,7,8-PeCDF	1.9533610e6	5.4387500e2	3588.49	NO	1.2192120e6	2.1724800e3	561.21	NO
25	13C-1,2,3,4,7,8-HxCDF	9.4913100e5	6.0287720e2	1572.34	NO	1.8445260e6	8.1298737e2	2268.82	NO
26	13C-1,2,3,4,6,7,8-HpCDF	8.1915800e5	5.2488513e2	1557.29	NO	1.8289840e6	5.5853528e2	3274.61	NO
27	13C-1,2,3,4-TCDD	1.4965540e6	4.5694244e2	3277.37	NO	1.8940540e6	2.9408337e2	6440.53	NO
28	13C-1,2,3,7,8,9-HxCDD	1.3969090e6	5.2060052e2	2681.00	NO	1.1257730e6	6.2333687e3	180.60	NO

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

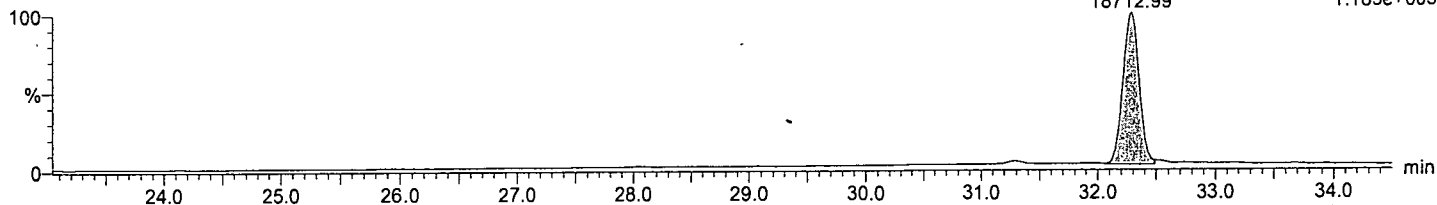
Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

2,3,7,8-TCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

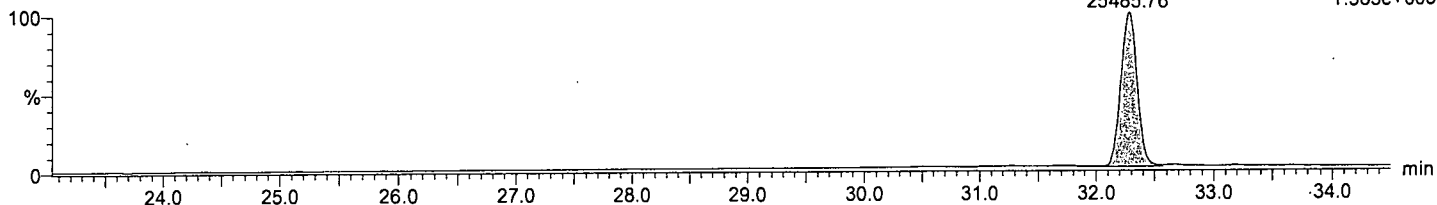
2,3,7,8-TCDD
32.28
18712.99
F1:Voltage SIR,EI+
319.8965
1.189e+005



2,3,7,8-TCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

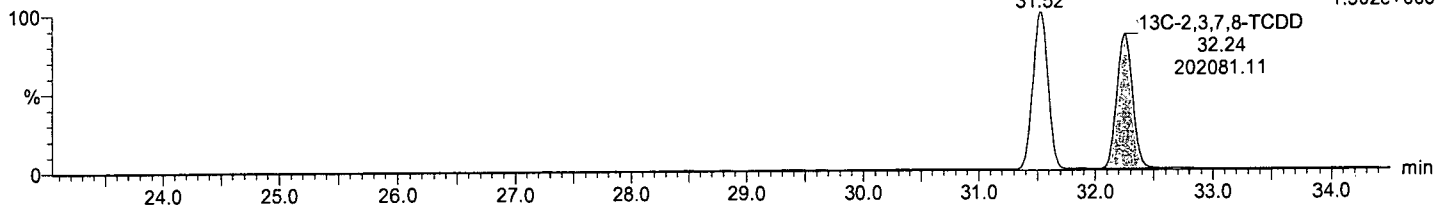
2,3,7,8-TCDD
32.27
25485.76
F1:Voltage SIR,EI+
321.8936
1.583e+005



13C-2,3,7,8-TCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

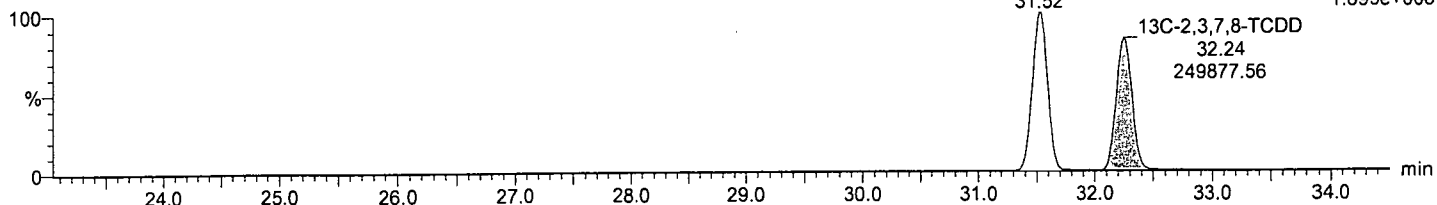
13C-2,3,7,8-TCDD
32.24
202081.11
F1:Voltage SIR,EI+
331.9368
1.502e+006



13C-2,3,7,8-TCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

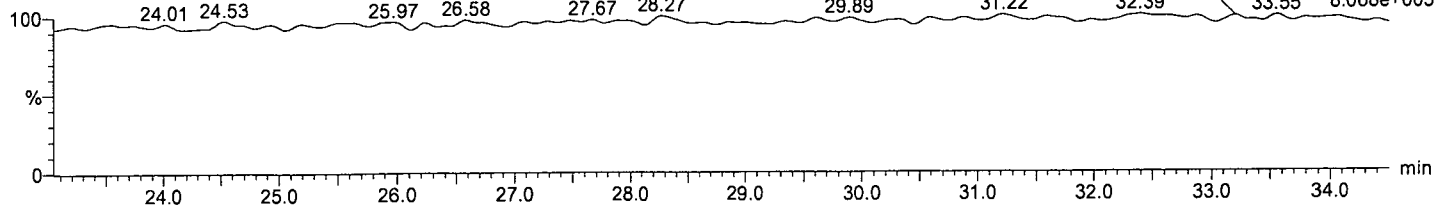
13C-2,3,7,8-TCDD
32.24
249877.56
F1:Voltage SIR,EI+
333.9338
1.899e+006



PFK1

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F1:Voltage SIR,EI+
292.9824
8.068e+005



Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,7,8-PeCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,7,8-PeCDD

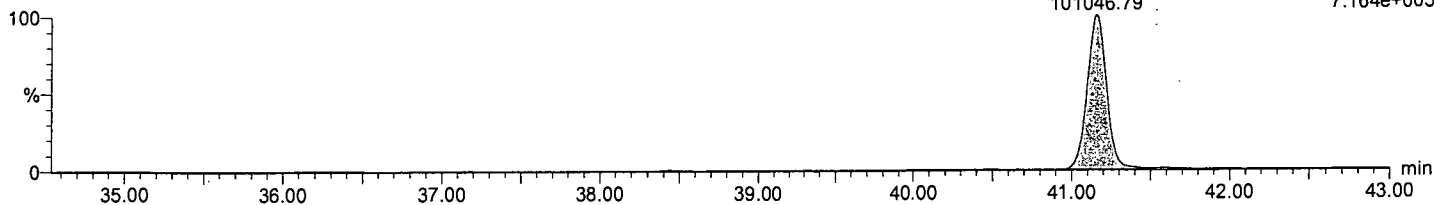
F2:Voltage SIR,EI+

41.16

355.8546

101046.79

7.164e+005



1,2,3,7,8-PeCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,7,8-PeCDD

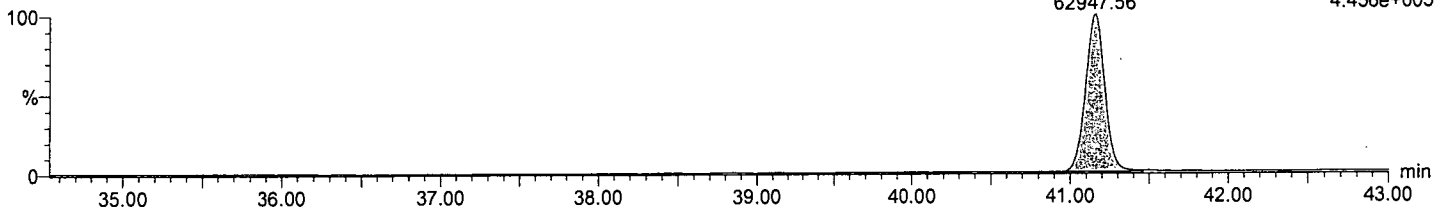
F2:Voltage SIR,EI+

41.16

357.8516

62947.56

4.456e+005



13C-1,2,3,7,8-PeCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,7,8-PeCDD

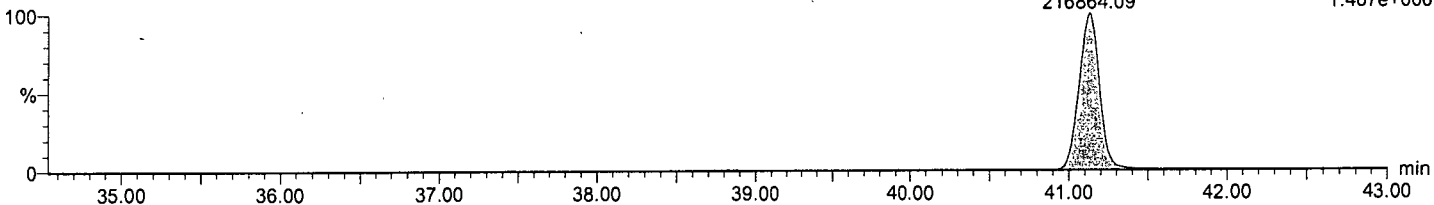
F2:Voltage SIR,EI+

41.13

367.8949

216864.09

1.467e+006



13C-1,2,3,7,8-PeCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,7,8-PeCDD

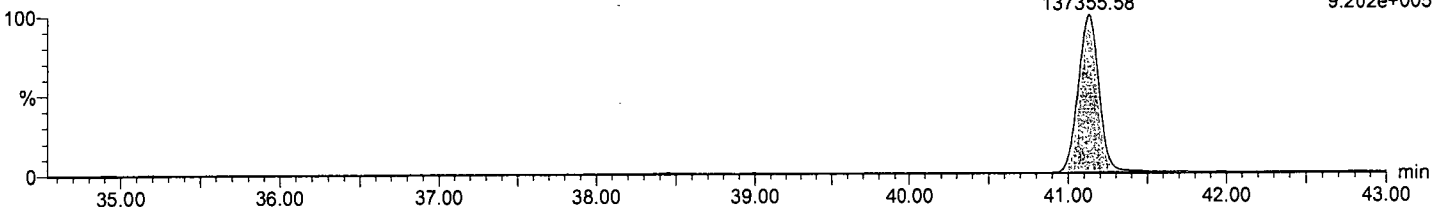
F2:Voltage SIR,EI+

41.13

369.8919

137355.58

9.202e+005

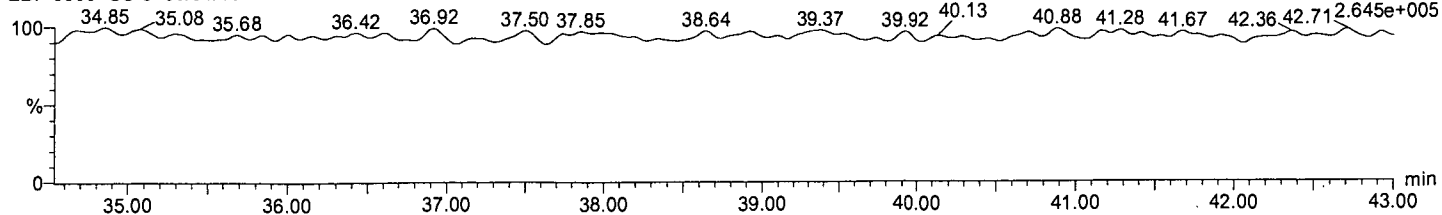


PFK2

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F2:Voltage SIR,EI+

354.9792



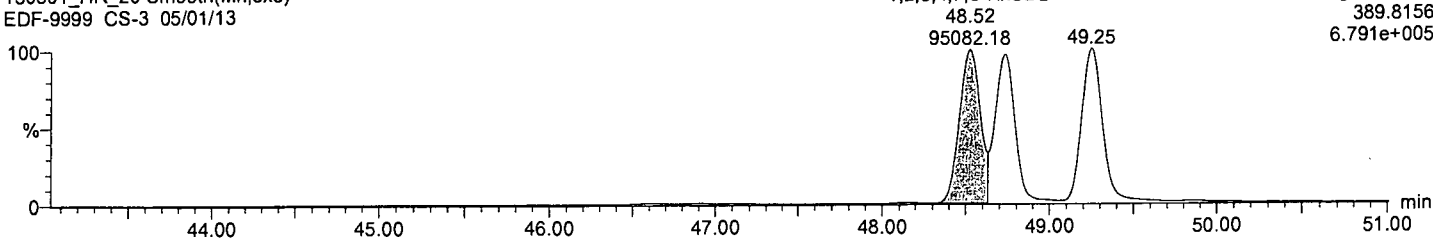
Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,7,8-HxCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,4,7,8-HxCDD

F3:Voltage SIR,EI+
389.8156
6.791e+005

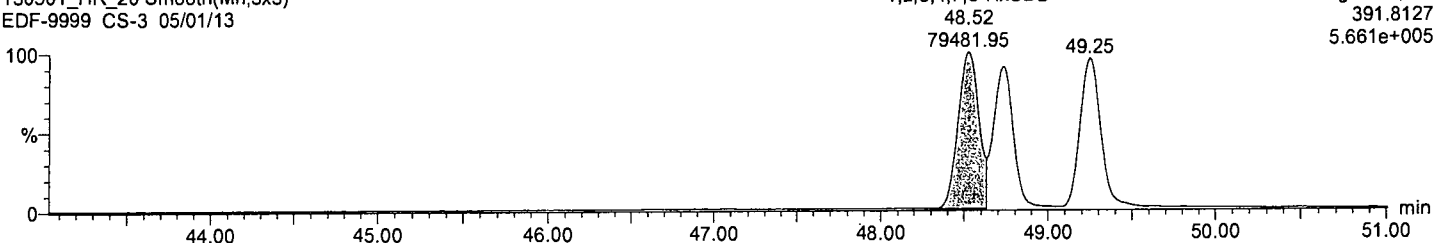


1,2,3,4,7,8-HxCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,4,7,8-HxCDD

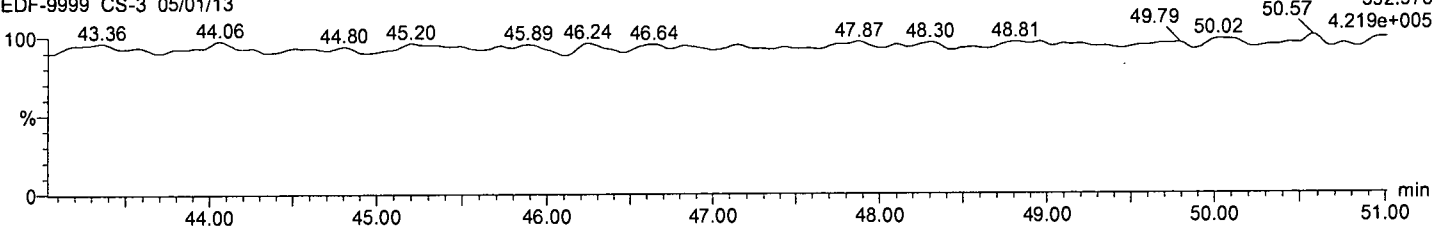
F3:Voltage SIR,EI+
391.8127
5.661e+005



PFK3

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
392.976
4.219e+005

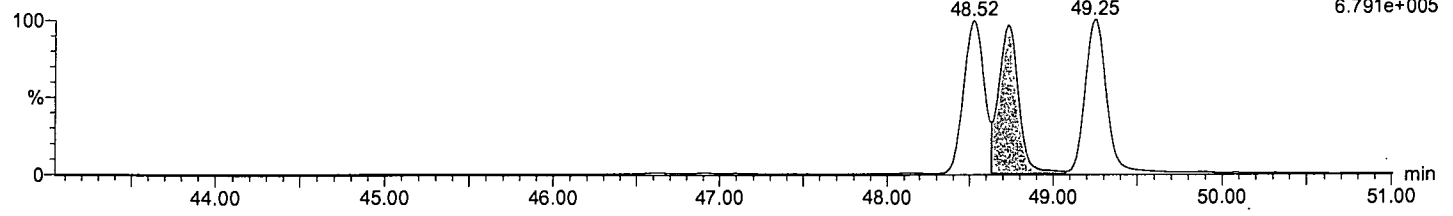


Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,6,7,8-HxCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

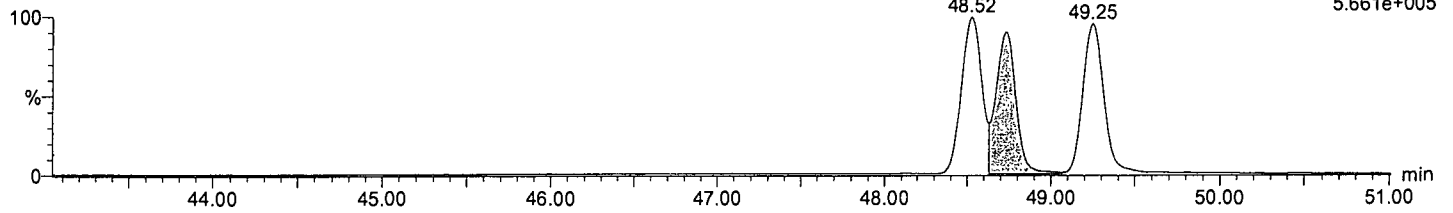
F3:Voltage SIR,EI+
389.8156
6.791e+005



1,2,3,6,7,8-HxCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
391.8127
5.661e+005

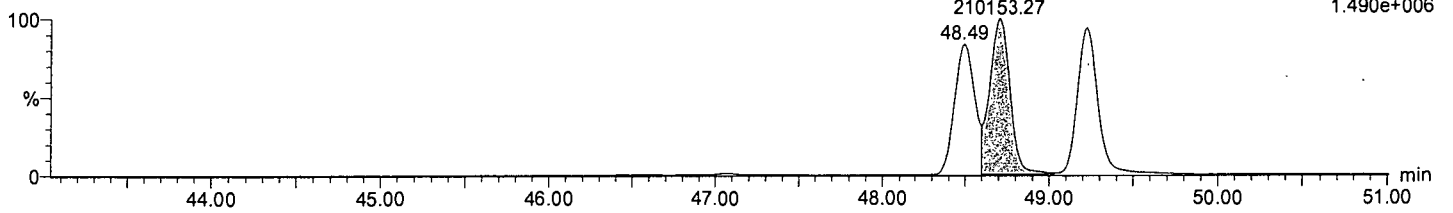


13C-1,2,3,6,7,8-HxCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,6,7,8-HxCDD

F3:Voltage SIR,EI+
401.8559
1.490e+006

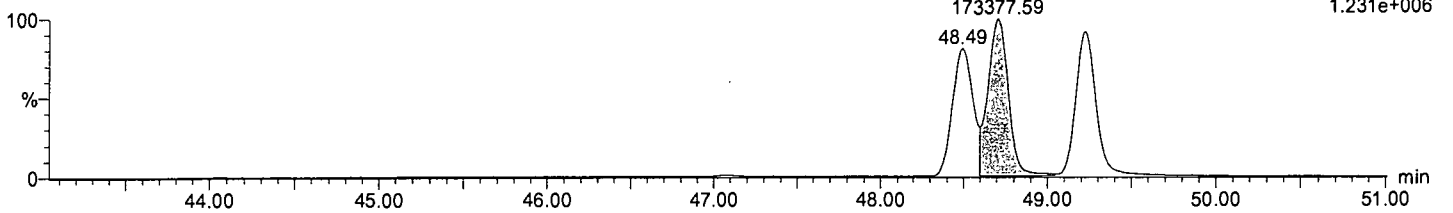


13C-1,2,3,6,7,8-HxCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,6,7,8-HxCDD

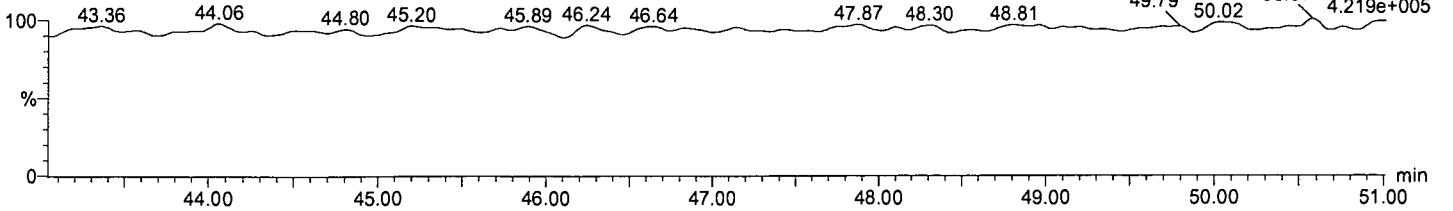
F3:Voltage SIR,EI+
403.8529
1.231e+006



PFK3

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
392.976
4.219e+005



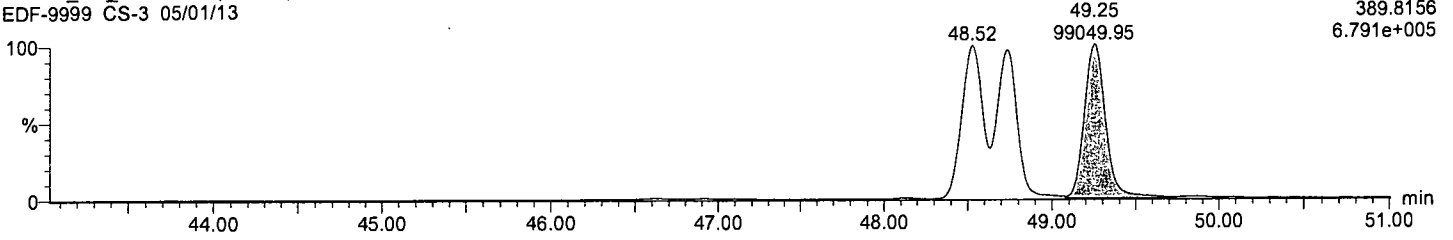
Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,7,8,9-HxCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,7,8,9-HxCDD

F3:Voltage SIR,EI+
389.8156
6.791e+005

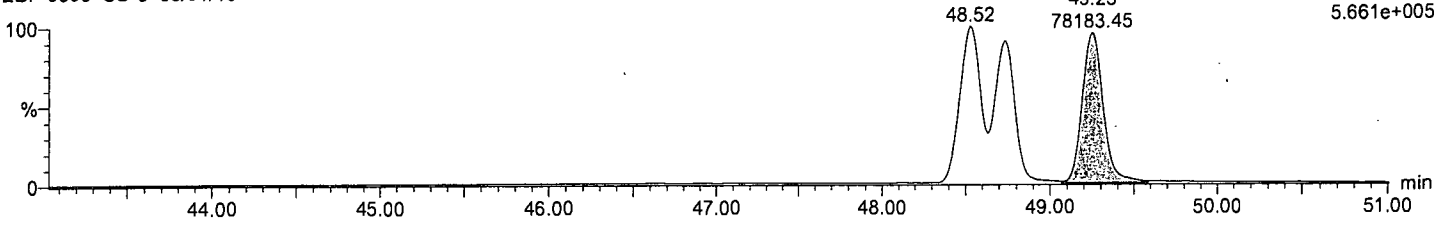


1,2,3,7,8,9-HxCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,7,8,9-HxCDD

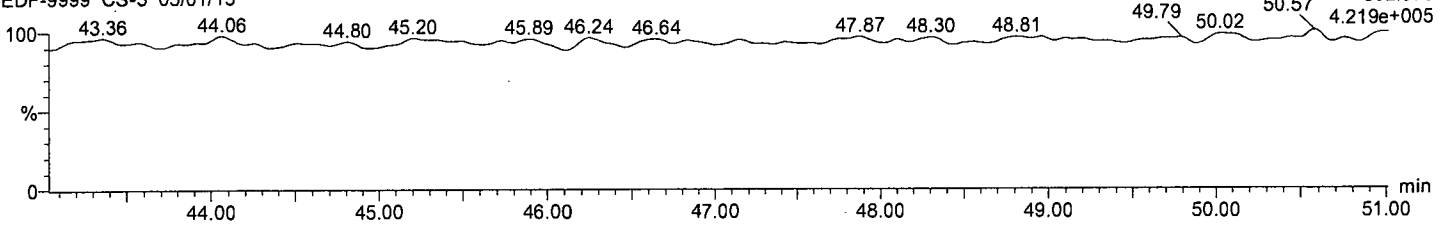
F3:Voltage SIR,EI+
391.8127
5.661e+005



PFK3

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
392.976
4.219e+005



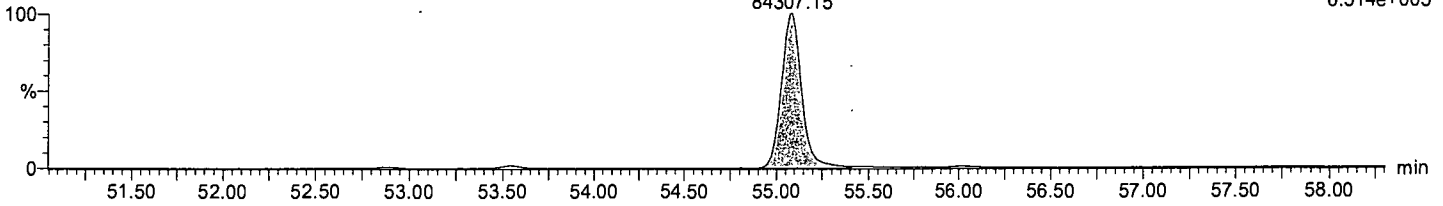
Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,6,7,8-HpCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,4,6,7,8-HpCDD
55.08
84307.15

F4:Voltage SIR,EI+
423.7767
6.514e+005

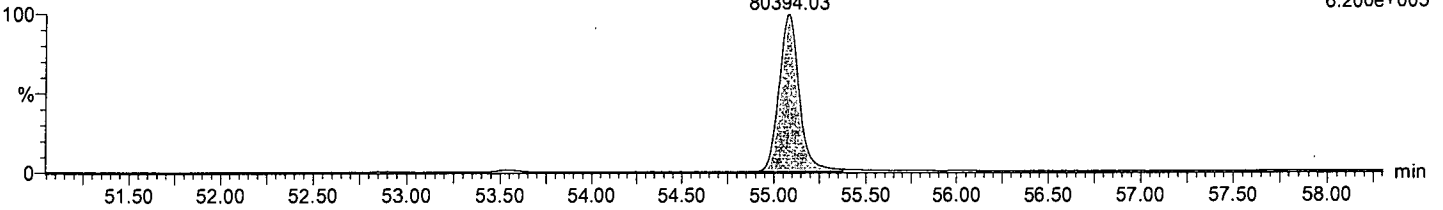


1,2,3,4,6,7,8-HpCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,4,6,7,8-HpCDD
55.08
80394.03

F4:Voltage SIR,EI+
425.7737
6.200e+005

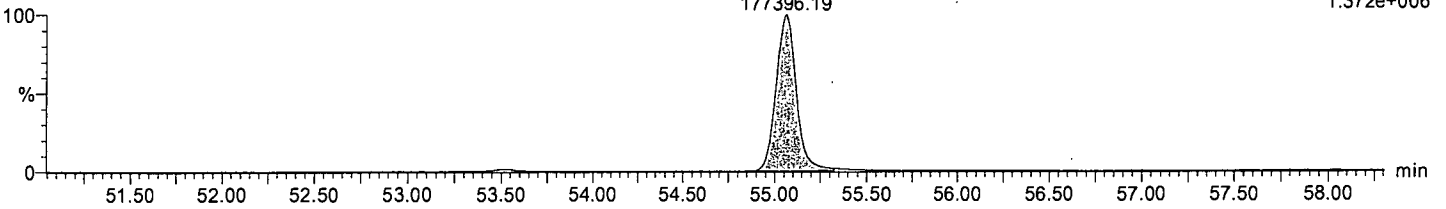


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,4,6,7,8-HpCDD
55.06
177396.19

F4:Voltage SIR,EI+
435.8169
1.372e+006

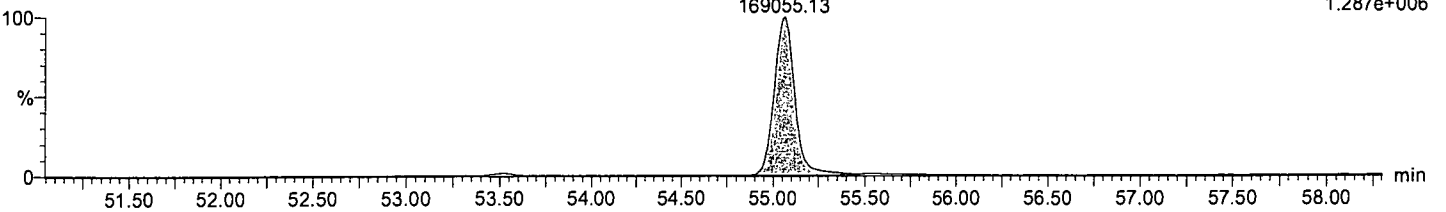


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,4,6,7,8-HpCDD
55.06
169055.13

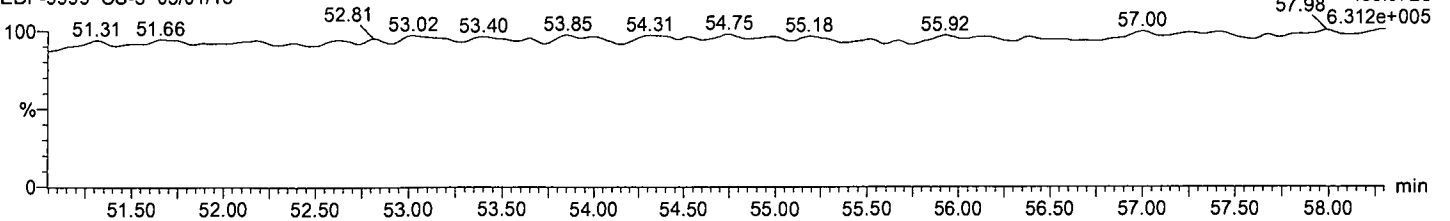
F4:Voltage SIR,EI+
437.814
1.287e+006



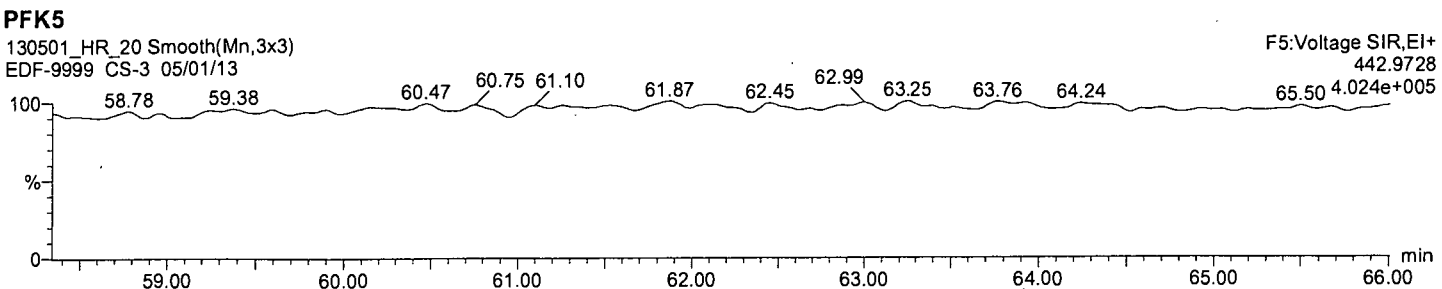
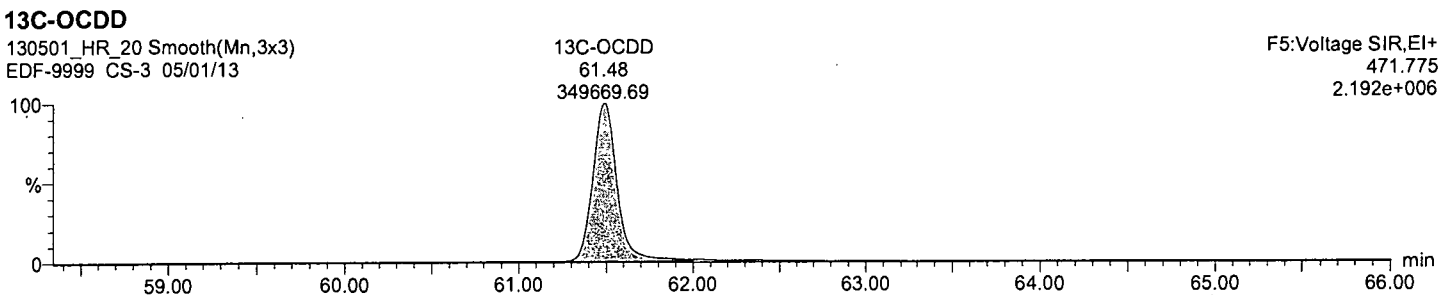
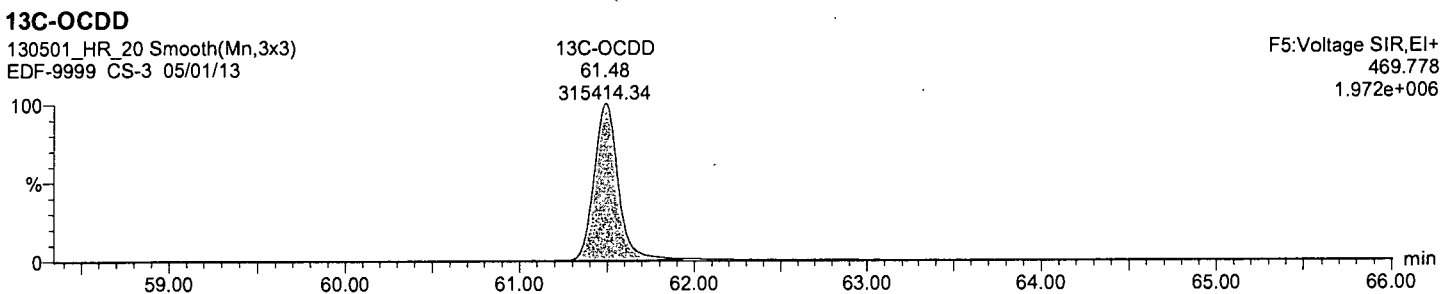
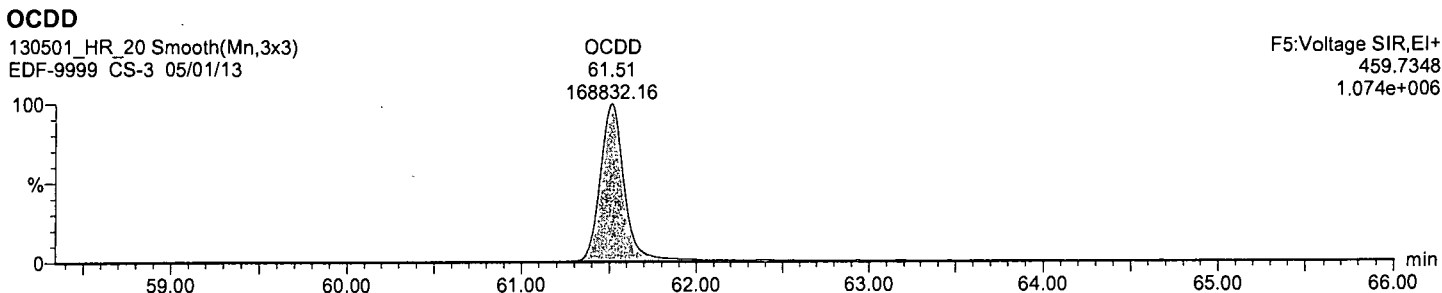
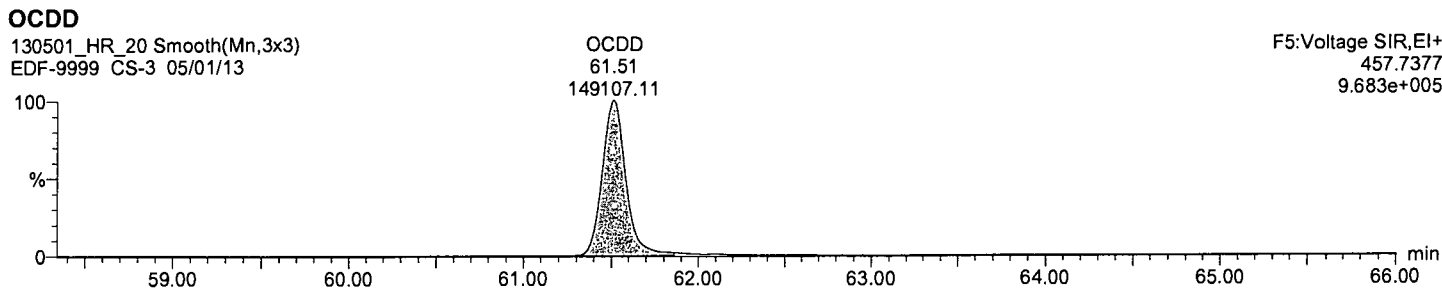
PFK4

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F4:Voltage SIR,EI+
430.9728
6.312e+005



Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP



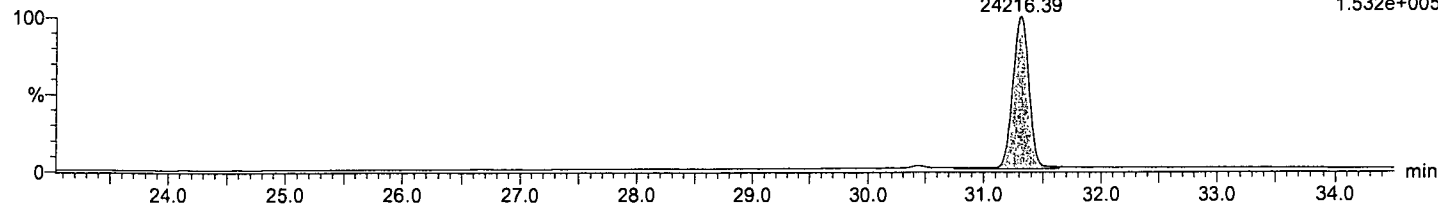
Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

2,3,7,8-TCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

2,3,7,8-TCDF
31.32
24216.39

F1:Voltage SIR,EI+
303.9016
1.532e+005

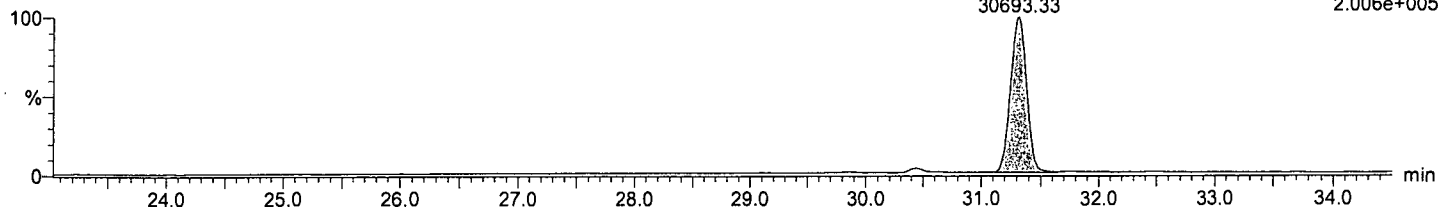


2,3,7,8-TCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

2,3,7,8-TCDF
31.32
30693.33

F1:Voltage SIR,EI+
305.8987
2.006e+005

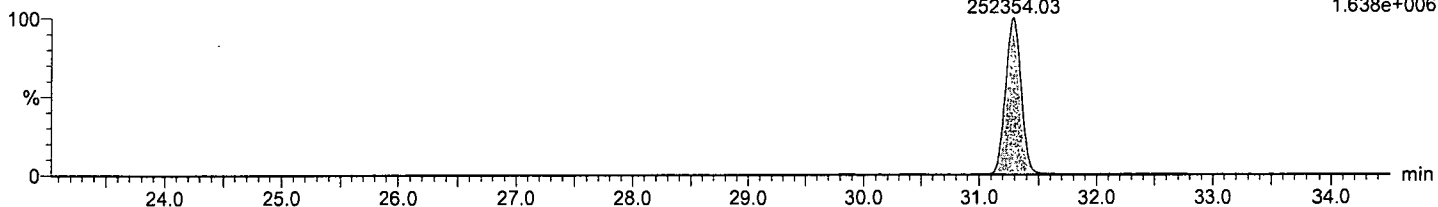


13C-2,3,7,8-TCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-2,3,7,8-TCDF
31.29
252354.03

F1:Voltage SIR,EI+
315.9419
1.638e+006

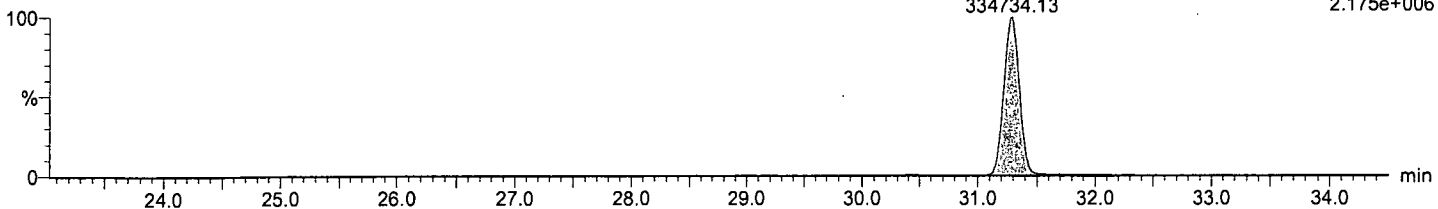


13C-2,3,7,8-TCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-2,3,7,8-TCDF
31.29
334734.13

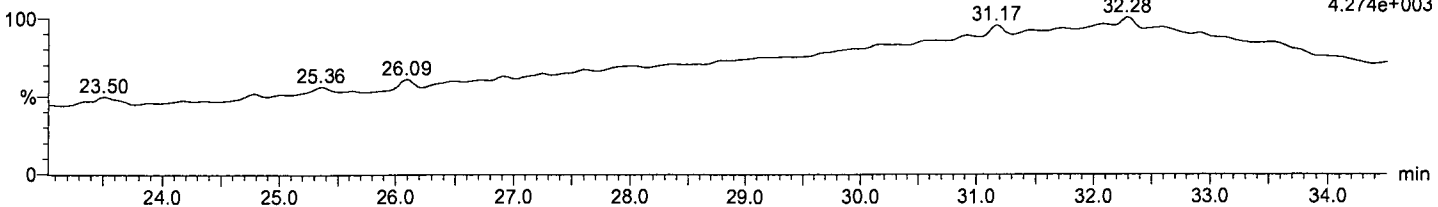
F1:Voltage SIR,EI+
317.9389
2.175e+006



HxCDPE

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F1:Voltage SIR,EI+
375.8364
4.274e+003



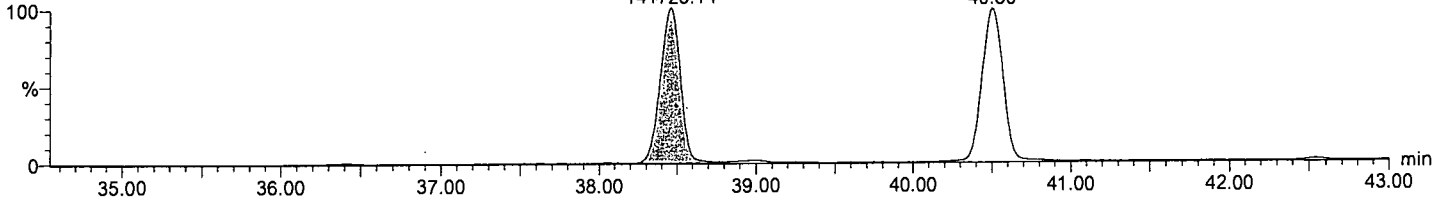
Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,7,8-PeCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,7,8-PeCDF
38.46
141725.14

F2:Voltage SIR,EI+
339.8597
9.442e+005

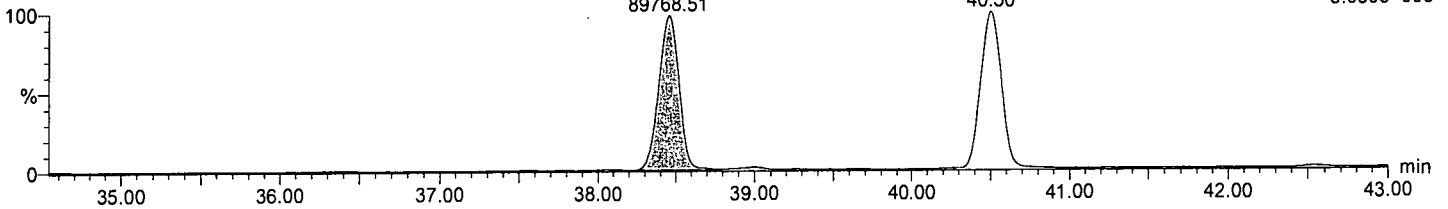


1,2,3,7,8-PeCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,7,8-PeCDF
38.45
89768.51

F2:Voltage SIR,EI+
341.8567
6.050e+005

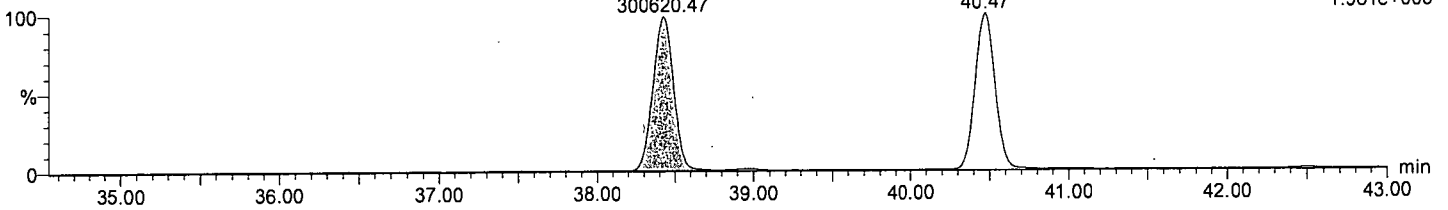


13C-1,2,3,7,8-PeCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,7,8-PeCDF
38.42
300620.47

F2:Voltage SIR,EI+
351.9
1.981e+006

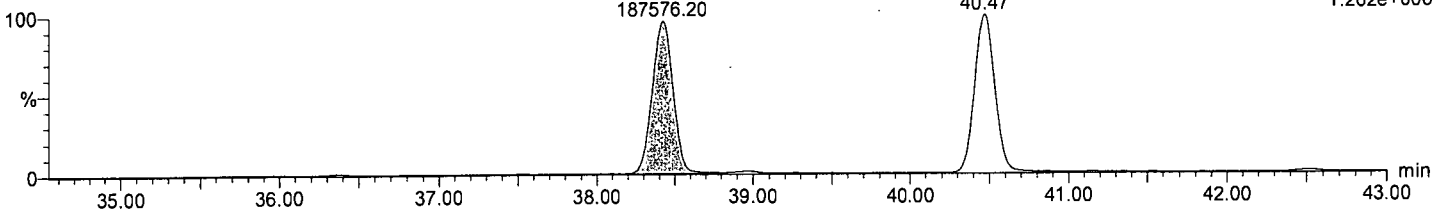


13C-1,2,3,7,8-PeCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,7,8-PeCDF
38.42
187576.20

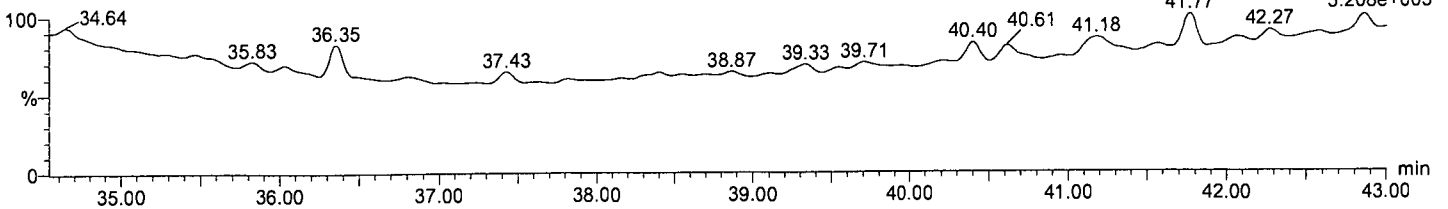
F2:Voltage SIR,EI+
353.897
1.262e+006



HpCDPE

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F2:Voltage SIR,EI+
409.7974
3.208e+003



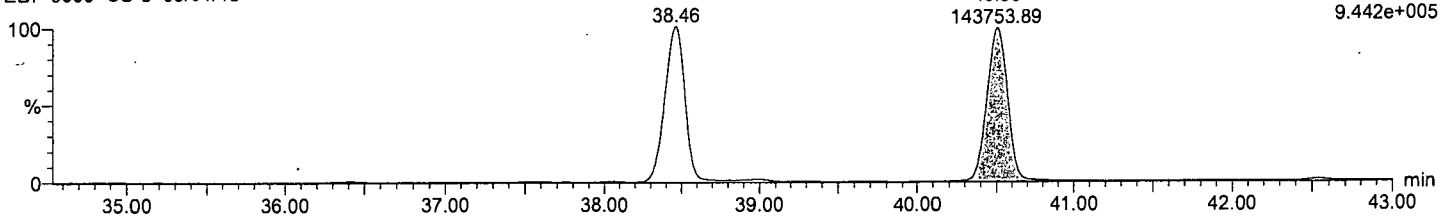
Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

2,3,4,7,8-PeCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

2,3,4,7,8-PeCDF
40.50

F2:Voltage SIR,EI+
339.8597
9.442e+005

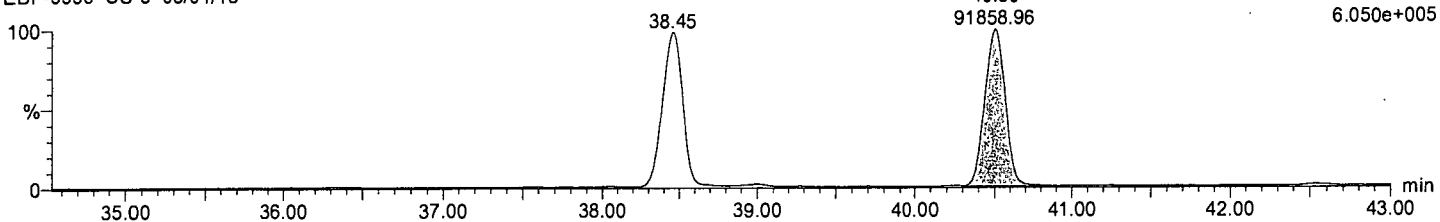


2,3,4,7,8-PeCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

2,3,4,7,8-PeCDF
40.50

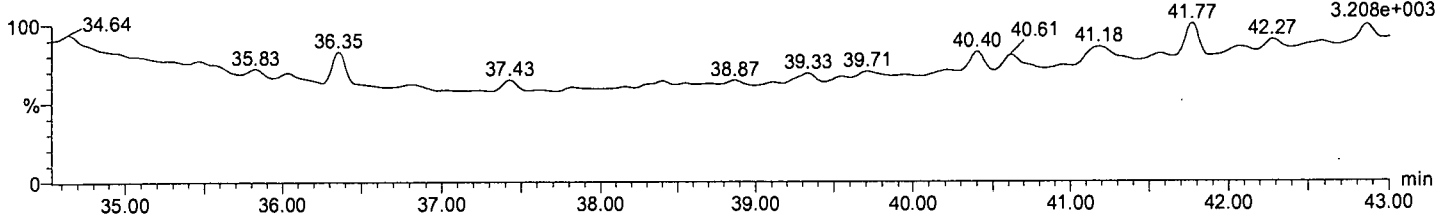
F2:Voltage SIR,EI+
341.8567
6.050e+005



HpCDPE

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F2:Voltage SIR,EI+
409.7974
3.208e+003



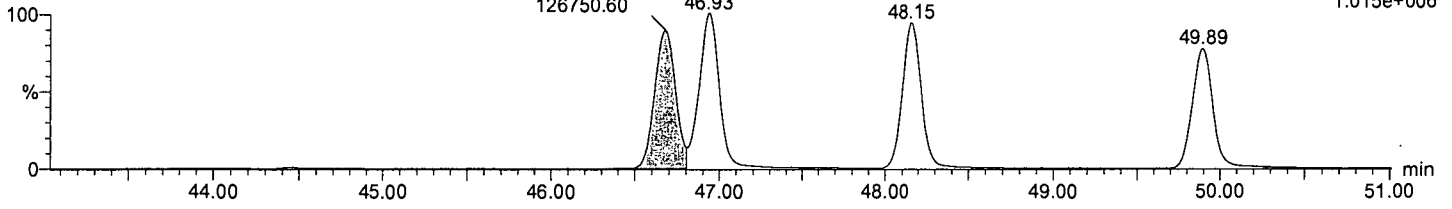
Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,7,8-HxCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,4,7,8-HxCDF
46.67
126750.60

F3:Voltage SIR,EI+
373.8208
1.015e+006

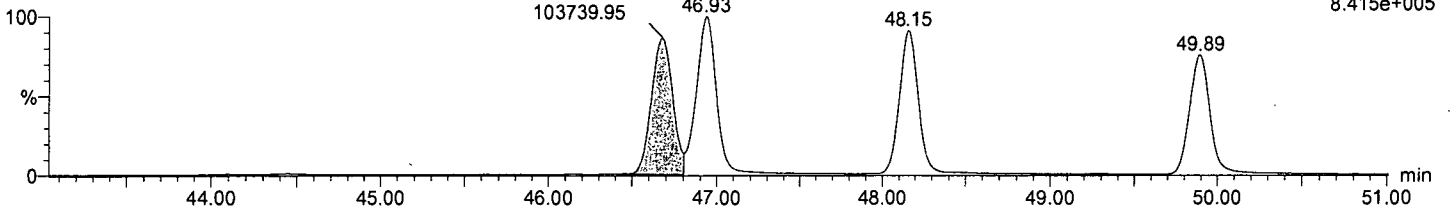


1,2,3,4,7,8-HxCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,4,7,8-HxCDF
46.67
103739.95

F3:Voltage SIR,EI+
375.8178
8.415e+005

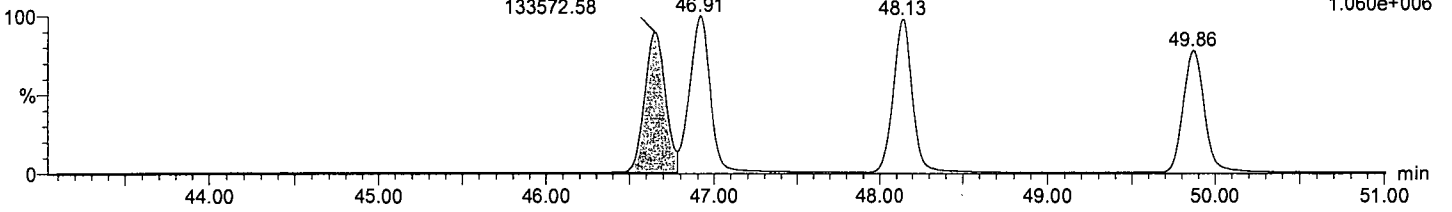


13C-1,2,3,4,7,8-HxCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,4,7,8-HxCDF
46.64
133572.58

F3:Voltage SIR,EI+
383.8639
1.060e+006

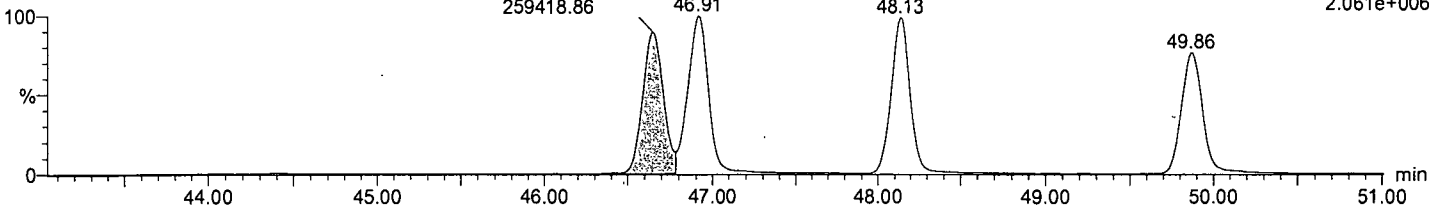


13C-1,2,3,4,7,8-HxCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

13C-1,2,3,4,7,8-HxCDF
46.64
259418.86

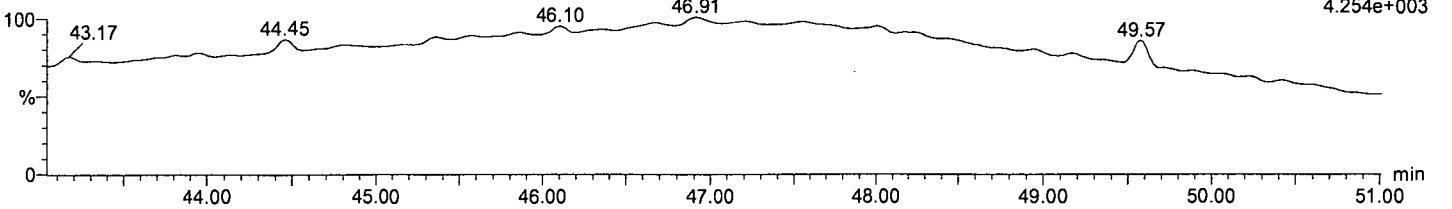
F3:Voltage SIR,EI+
385.861
2.061e+006



OCDFPE

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
445.7555
4.254e+003



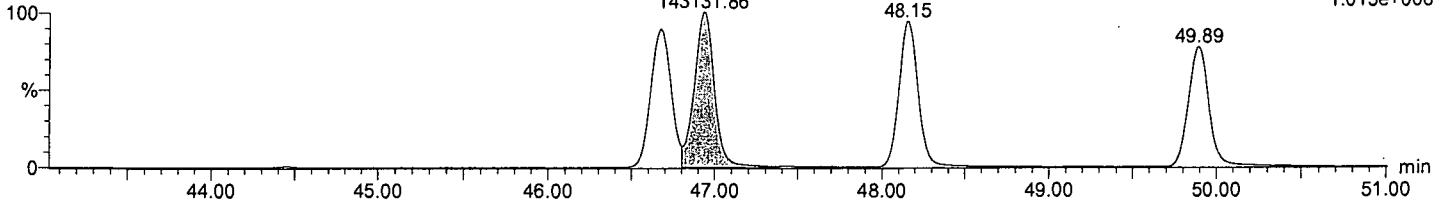
Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,6,7,8-HxCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,6,7,8-HxCDF
46.93
143131.86

F3:Voltage SIR,EI+
373.8208
1.015e+006

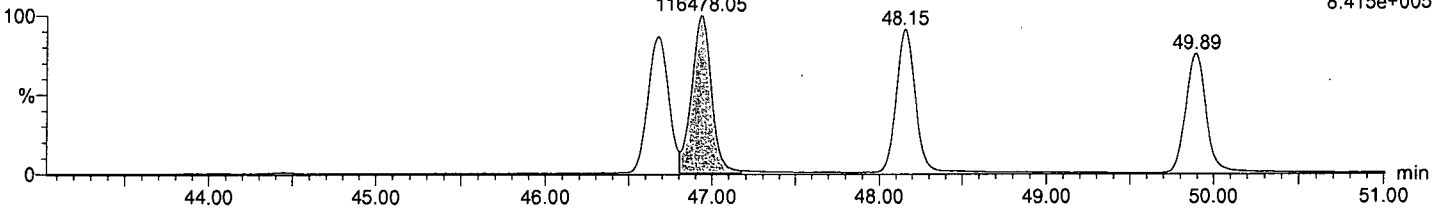


1,2,3,6,7,8-HxCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

1,2,3,6,7,8-HxCDF
46.93
116478.05

F3:Voltage SIR,EI+
375.8178
8.415e+005

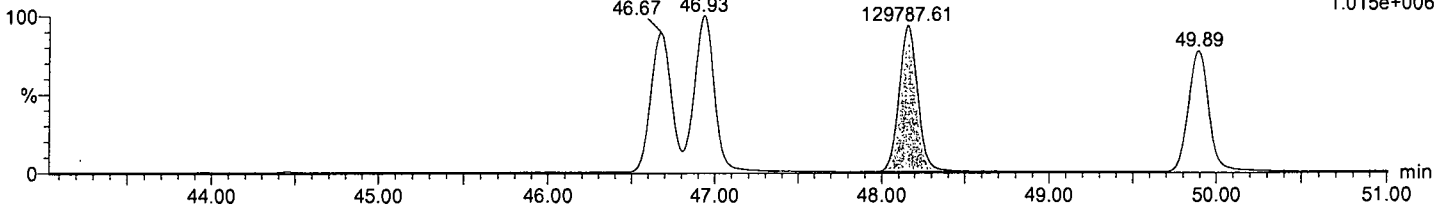


2,3,4,6,7,8-HxCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

2,3,4,6,7,8-HxCDF
48.15
129787.61

F3:Voltage SIR,EI+
373.8208
1.015e+006

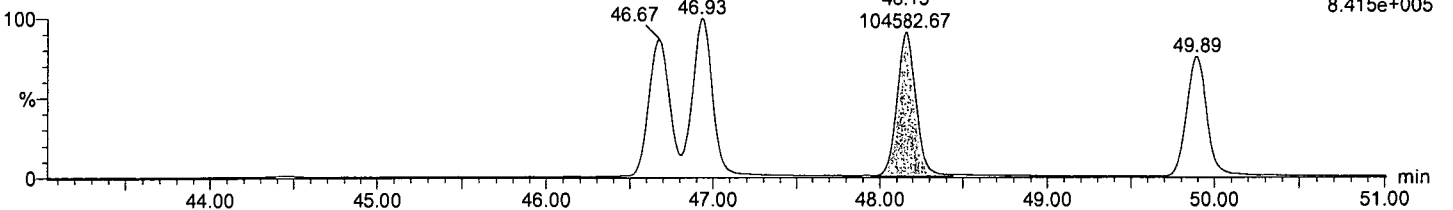


2,3,4,6,7,8-HxCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

2,3,4,6,7,8-HxCDF
48.15
104582.67

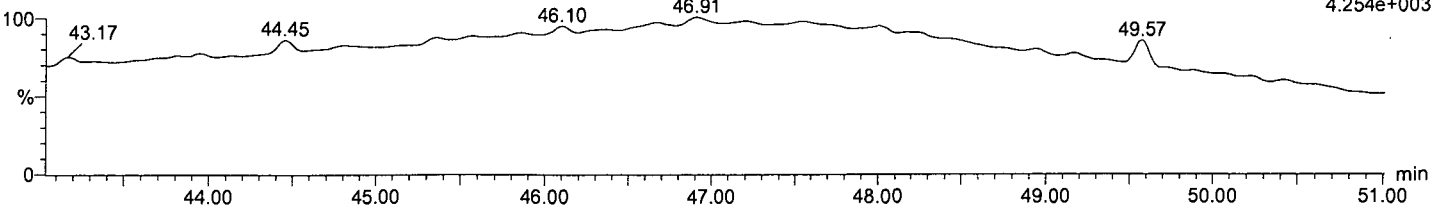
F3:Voltage SIR,EI+
375.8178
8.415e+005



OCDFPE

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
445.7555
4.254e+003

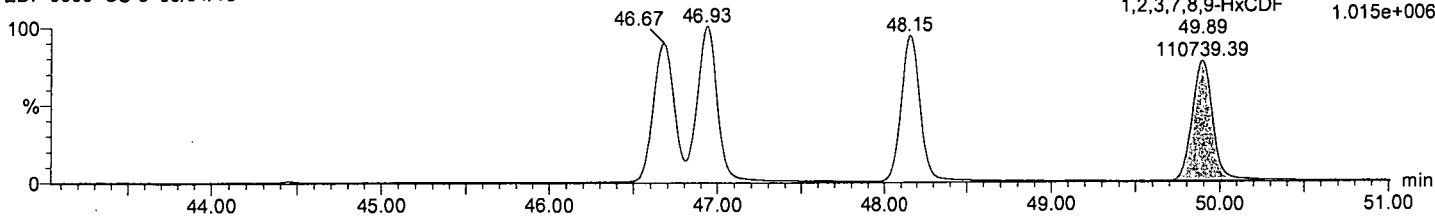


Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,7,8,9-HxCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

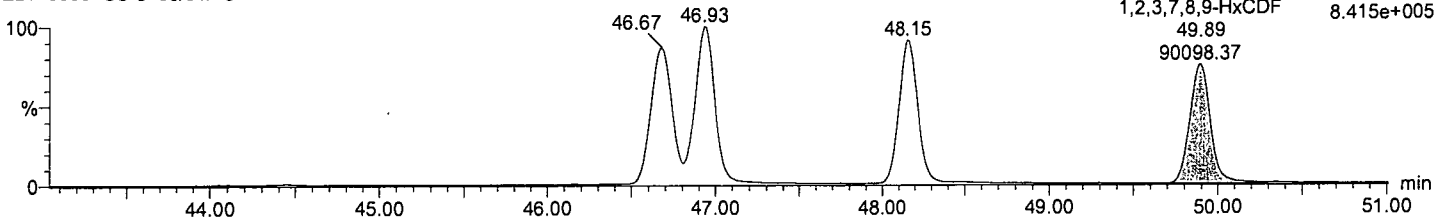
F3:Voltage SIR,EI+
373.8208
1.015e+006



1,2,3,7,8,9-HxCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

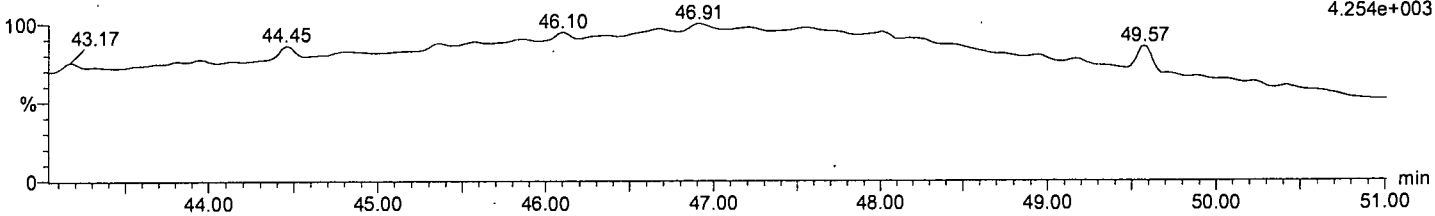
F3:Voltage SIR,EI+
375.8178
8.415e+005



OCDPE

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F3:Voltage SIR,EI+
445.7555
4.254e+003

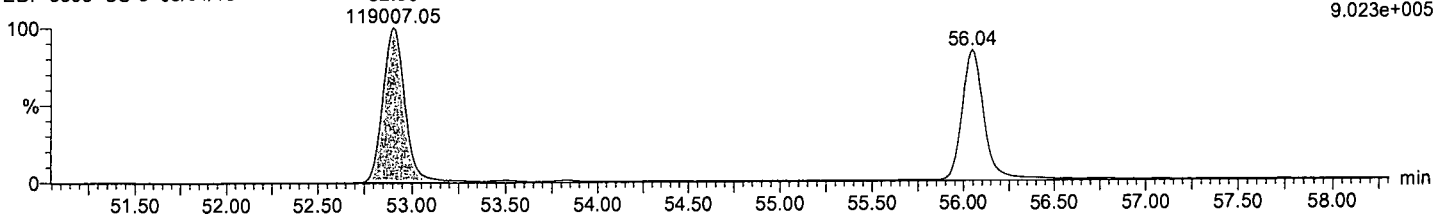


Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,6,7,8-HpCDF

130501_HR_20 Smooth(Mn,3x3) 1,2,3,4,6,7,8-HpCDF
EDF-9999 CS-3 05/01/13

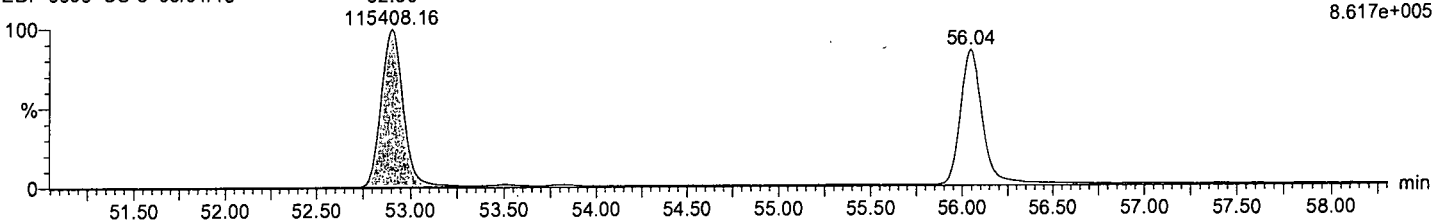
F4:Voltage SIR,EI+
407.7818
9.023e+005



1,2,3,4,6,7,8-HpCDF

130501_HR_20 Smooth(Mn,3x3) 1,2,3,4,6,7,8-HpCDF
EDF-9999 CS-3 05/01/13

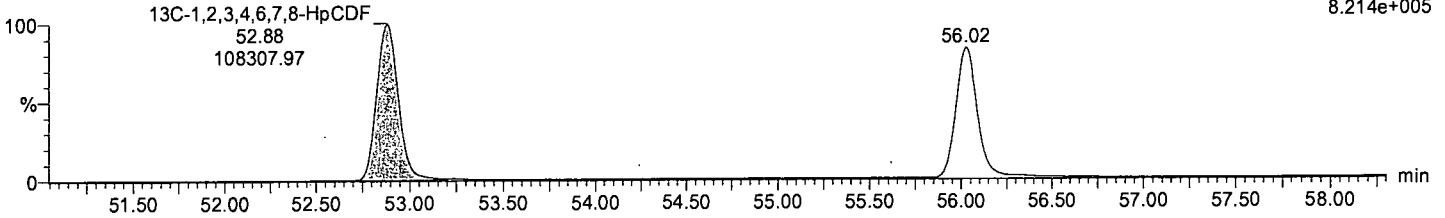
F4:Voltage SIR,EI+
409.7788
8.617e+005



¹³C-1,2,3,4,6,7,8-HpCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

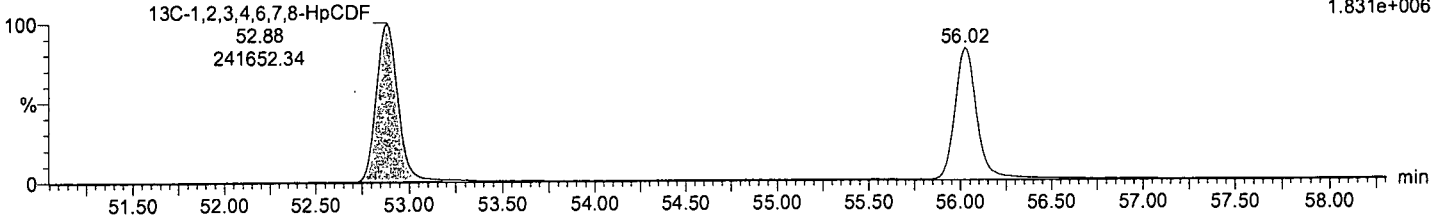
F4:Voltage SIR,EI+
417.825
8.214e+005



¹³C-1,2,3,4,6,7,8-HpCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

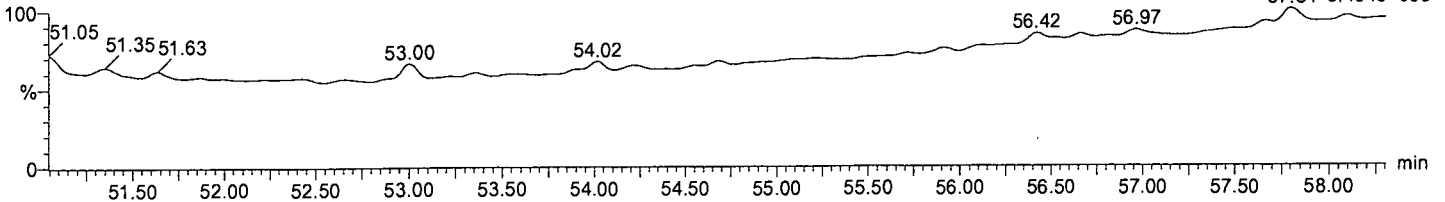
F4:Voltage SIR,EI+
419.822
1.831e+006



NCDE

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F4:Voltage SIR,EI+
479.7165
57.81 3.454e+003

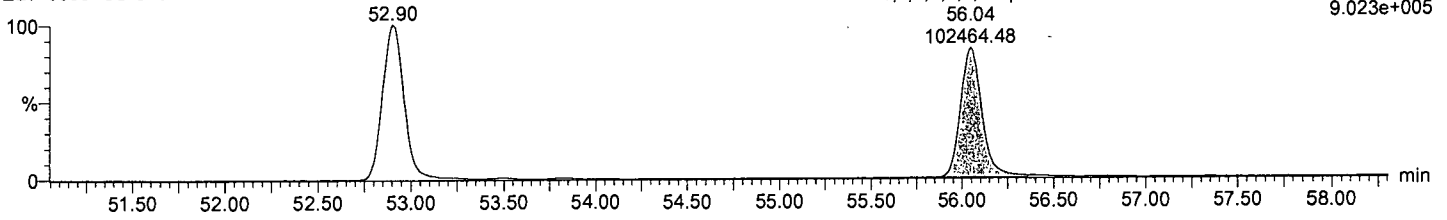


Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

1,2,3,4,7,8,9-HpCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

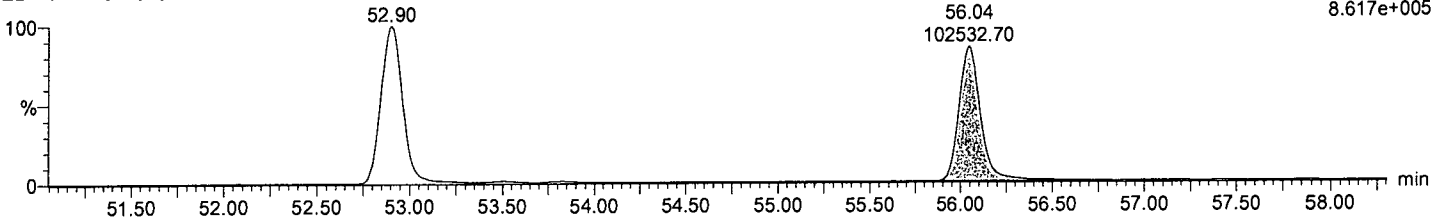
F4:Voltage SIR,EI+
407.7818
9.023e+005



1,2,3,4,7,8,9-HpCDF

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

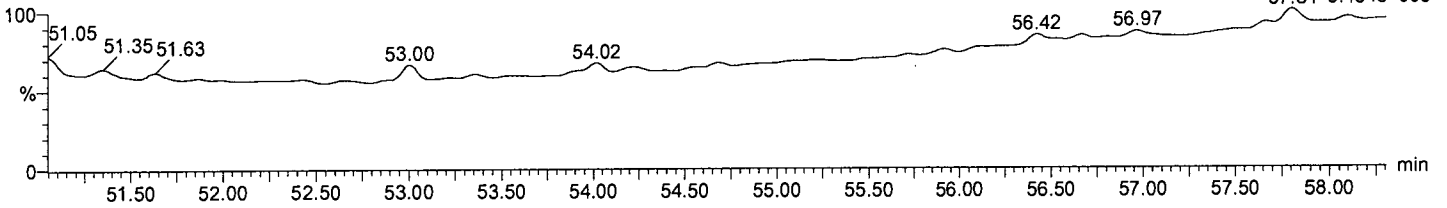
F4:Voltage SIR,EI+
409.7788
8.617e+005



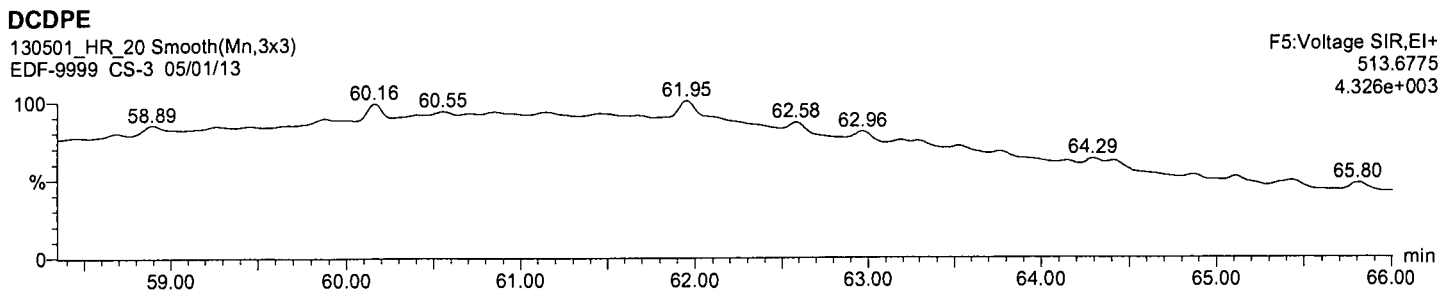
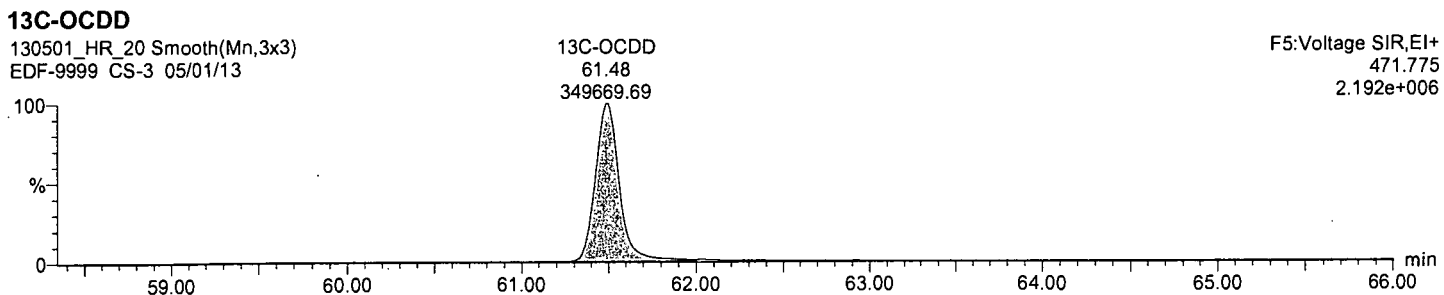
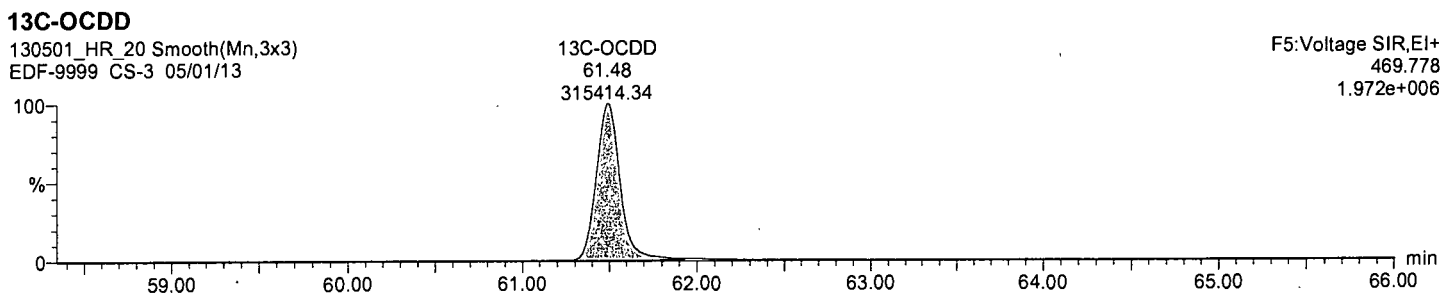
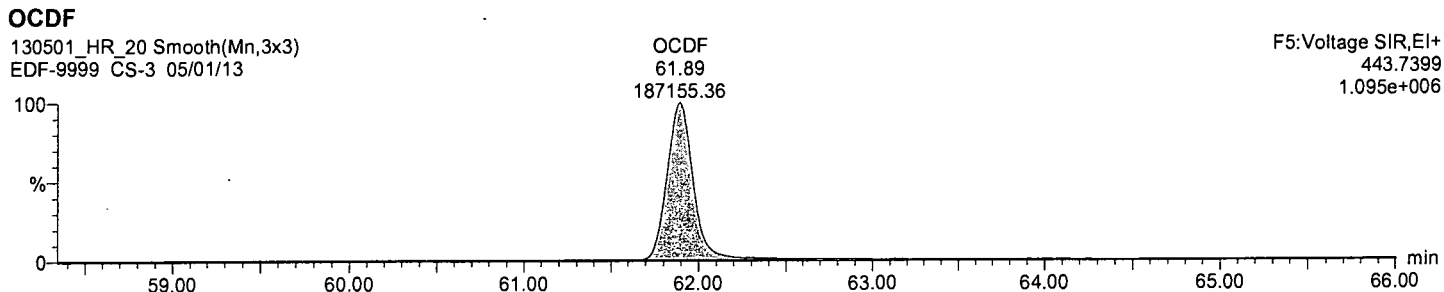
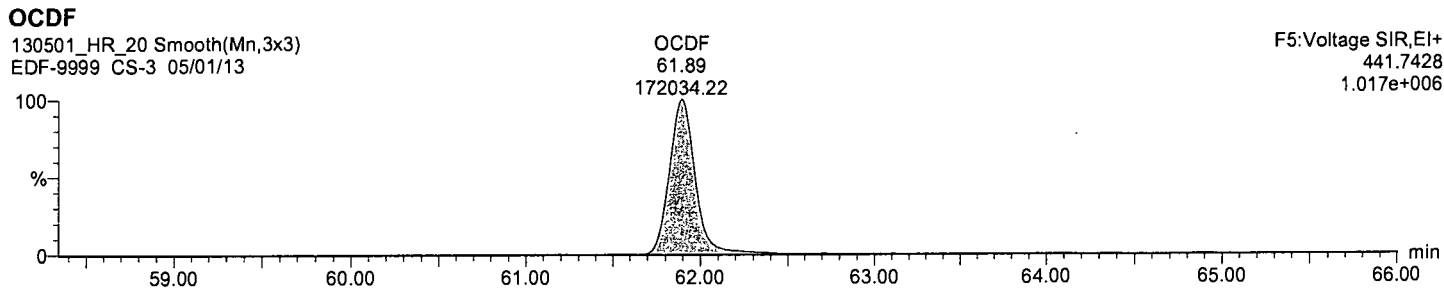
NCDPE

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13

F4:Voltage SIR,EI+
479.7165
57.81 3.454e+003



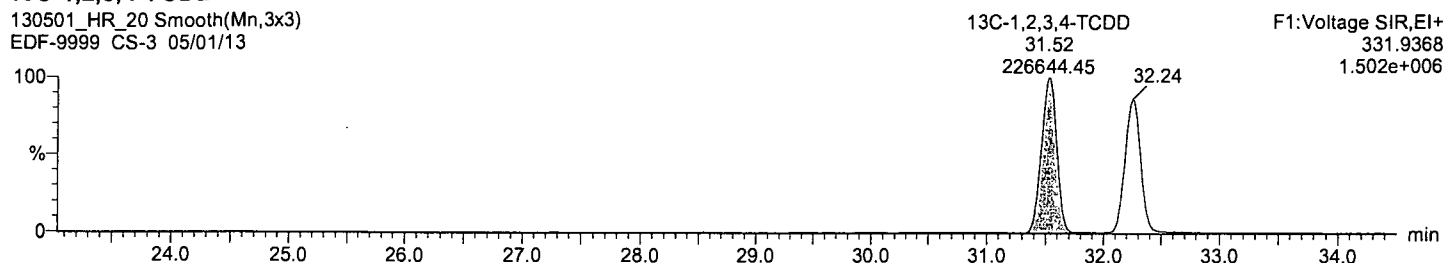
Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP



Name: 130501_HR_20, Date: 02-May-2013, Time: 14:40:23, ID: , Description: EDF-9999 CS-3 05/01/13, User: RP

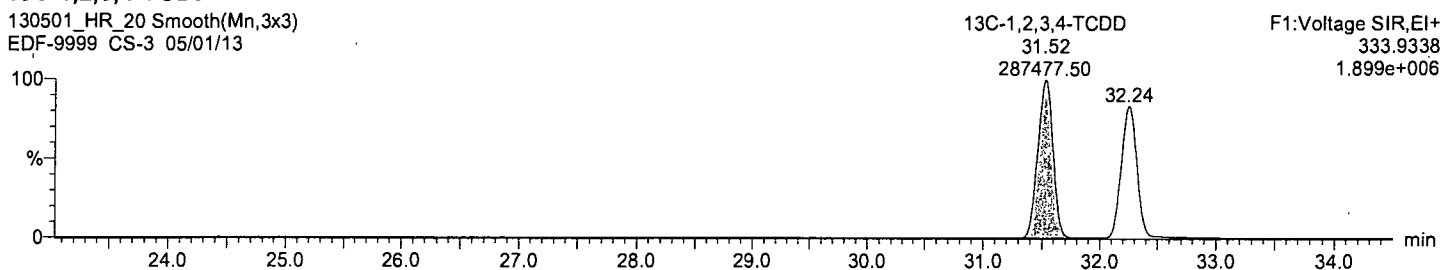
13C-1,2,3,4-TCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13



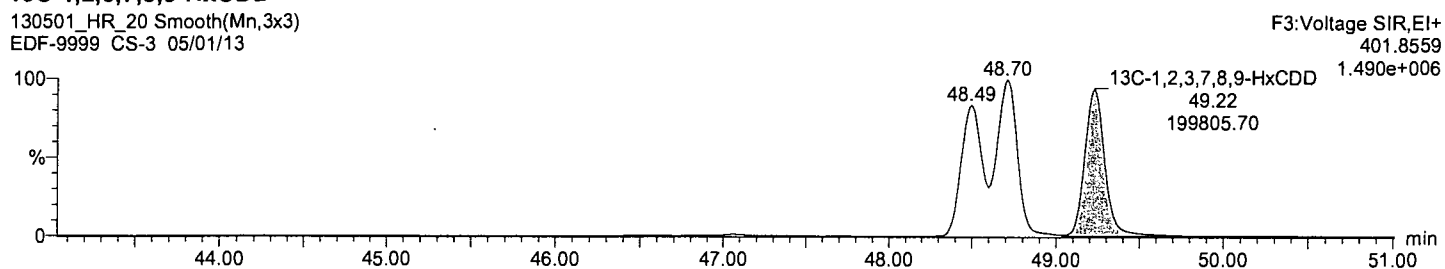
13C-1,2,3,4-TCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13



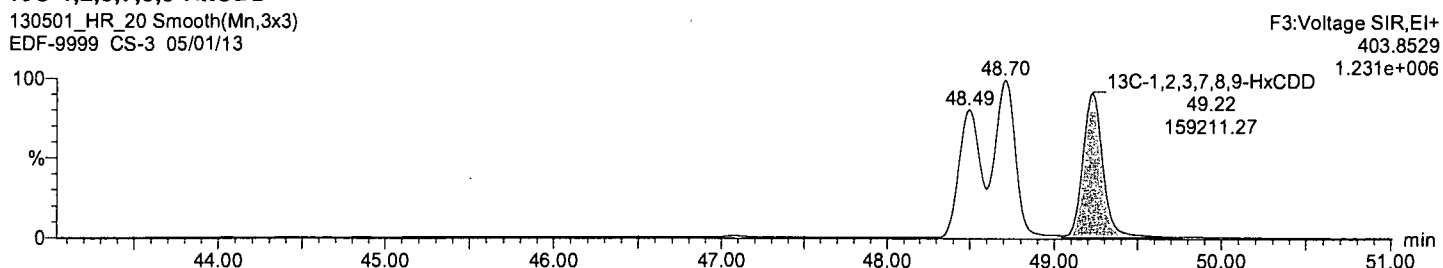
13C-1,2,3,7,8,9-HxCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13



13C-1,2,3,7,8,9-HxCDD

130501_HR_20 Smooth(Mn,3x3)
EDF-9999 CS-3 05/01/13



**EPA METHOD 8290
Dioxins/Furans**

Raw Data



Method Blank
EPA 8290 - Dioxins and Furans

Blank Name/QCG: **130415W-78757 - 177086**
 Batch ID: \$8290W-130415A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Sample Type	Analyte	Result	PQL	EDL/EMPC	Units	Ext Date	Analysis Date
BLANK	2,3,7,8-TCDD	0.32 U	50.0	0.32DL	pg/L	04/15/13	05/02/13
BLANK	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD (S)	90.0	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF (S)	87.5	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	88.4	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)	82.1	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-1,2,3,7,8-PECDD (S)	83.9	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-1,2,3,7,8-PECDF (S)	80.1	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-2,3,7,8-TCDD (S)	84.7	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-2,3,7,8-TCDF (S)	84.6	40-135		%	04/15/13	05/02/13
BLANK	SURROGATE: 13C-OCDD (S)	82.8	40-135		%	04/15/13	05/02/13

Quant Method: 130501_8290
 Run #: 130501_HR_15
 Instrument: Magneto
 Sequence: 130501
 Initials: RP

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

Name	Peak Area	1° Area	RT	Ion Ab	Ion Fail?	S/N1	S/N2	Conc.	%Rec	LOD	EMPC	Multiplier
2,3,7,8-TCDD	5.907900e1	6.069200e1	32.28	0.97	YES	YES	NO	0.704 <i>PT</i>		0.325	0.629	50.00
1,2,3,7,8-PeCDD	2.001400e2	8.401500e1	41.14	2.38	YES	NO	NO	2.247		0.458	1.694	50.00
1,2,3,4,7,8-HxCDD	1.985140e2	1.775400e2	48.49	1.12	NO	NO	NO	2.977		0.917	2.977	50.00
1,2,3,6,7,8-HxCDD	3.423720e2	2.389800e2	48.70	1.43	YES	NO	NO	4.427		0.882	4.076	50.00
1,2,3,7,8,9-HxCDD	4.026670e2	2.145330e2	49.21	1.88	YES	NO	NO	4.661		0.875	3.629	50.00
1,2,3,4,6,7,8-HpCDD	3.116960e2	3.789670e2	55.04	0.82	YES	NO	NO	5.312		0.362	4.702	50.00
OCDD	4.308580e2	3.187540e2	61.43	1.35	YES	NO	NO	6.587		0.300	5.294	50.00
2,3,7,8-TCDF	1.162330e2	4.424900e1	31.33	2.63	YES	YES	NO	0.739 <i>PT</i>		0.278	0.367	50.00
1,2,3,7,8-PeCDF	2.226870e2	8.138300e1	38.41	2.74	YES	NO	NO	1.671		0.211	1.141	50.00
2,3,4,7,8-PeCDF	1.145760e2	9.383500e1	40.47	1.22	YES	NO	NO	1.219		0.224	1.103	50.00
1,2,3,4,7,8-HxCDF	3.719040e2	2.877650e2	46.62	1.29	NO	NO	NO	3.420		0.973	3.420	50.00
1,2,3,6,7,8-HxCDF	6.022750e2	3.849570e2	46.89	1.56	YES	NO	NO	4.717		0.897	4.120	50.00
2,3,4,6,7,8-HxCDF	4.533000e2	3.937900e2	48.12	1.15	NO	NO	NO	4.479		0.993	4.479	50.00
1,2,3,7,8,9-HxCDF	2.326370e2	1.618100e2	49.83	1.44	YES	NO	NO	2.411		1.148	2.216	50.00
1,2,3,4,6,7,8-HpCDF	3.935320e2	3.141320e2	52.87	1.25	YES	NO	NO	3.780		0.290	3.423	50.00
1,2,3,4,7,8,9-HpCDF	2.681630e2	2.130630e2	56.01	1.26	YES	NO	NO	3.297		0.373	2.978	50.00
OCDF	2.198320e2	2.005340e2	61.82	1.10	YES	NO	NO	3.210		0.388	2.894	50.00
13C-2,3,7,8-TCDD	1.522930e5	1.952383e5	32.23	0.78	NO	NO	NO	1694.723	84.74	1.130		50.00
13C-1,2,3,7,8-PeCDD	1.716423e5	1.089914e5	41.10	1.57	NO	NO	NO	1677.279	83.86	0.908		50.00
13C-1,2,3,6,7,8-HxCDD	3.603413e5	2.900351e5	48.65	1.24	NO	NO	NO	4102.770	82.06	3.232		50.00
13C-1,2,3,4,6,7,8-HpCDD	3.201970e5	3.057163e5	55.02	1.05	NO	NO	NO	4498.568	89.97	2.618		50.00
13C-OCDD	4.945284e5	5.519895e5	61.42	0.90	NO	NO	NO	8283.480	82.83	5.484		50.00
13C-2,3,7,8-TCDF	2.033580e5	2.609435e5	31.27	0.78	NO	NO	NO	1692.922	84.65	0.587		50.00
13C-1,2,3,7,8-PeCDF	2.176660e5	1.374031e5	38.37	1.58	NO	NO	NO	1601.474	80.07	0.805		50.00
13C-1,2,3,4,7,8-HxCDF	2.650057e5	5.084832e5	46.61	0.52	NO	NO	NO	4420.151	88.40	3.626		50.00
13C-1,2,3,4,6,7,8-HpCDF	1.988514e5	4.548065e5	52.84	0.44	NO	NO	NO	4376.495	87.53	2.198		50.00
13C-1,2,3,4-TCDD	2.012978e5	2.568396e5	31.51	0.78	NO	NO	NO	2000.000	100.00	1.012		50.00
13C-1,2,3,7,8,9-HxCDD	1.787825e5	1.433696e5	49.18	1.25	NO	NO	NO	2000.000	100.00	3.180		50.00
Total Tetra-Dioxins	9.827450e2							11.348		0.325	7.099	50.00
Total Penta-Dioxins	2.928050e2							8.507		0.458	2.900	50.00
Total Hexa-Dioxins	2.108581e3							26.633		0.891	19.960	50.00
Total Hepta-Dioxins	1.985207e3							39.028		0.362	21.142	50.00
Total Tetra-Furans	9.084050e2							9.072		0.278	5.083	50.00
Total Penta-Furans	1.020906e3							10.649		0.217	6.566	50.00
Total Hexa-Furans	2.482740e3							22.539		0.995	18.619	50.00
Total Hepa-Furans	1.302663e3							12.954		0.326	10.410	50.00
PFK1	0.000000e0											1.00
PFK2	0.000000e0											1.00
PFK3	0.000000e0											1.00
PFK4	0.000000e0											1.00
PFK5	0.000000e0											1.00
HxCDFE	0.000000e0											1.00
HpCDFE	0.000000e0											1.00
OCDPE	0.000000e0											1.00
NCDPE	0.000000e0											1.00
DCDPE	0.000000e0											1.00

$$EDL_{TCDD} = \frac{(93.527405 + 48.0117)(2000)(2.5)}{(970969 + 123014)(0.983467)(12)} = 0.32$$

$$EMPC_{PeCDD} = \frac{(130.223 + 84.015)(2000)}{(171642.3 + 108991.4)(0.901146)(12)} = 1.694$$

5/3/13
RP

RETENTION TIME CHECK

130415WBLKA 50.000 DF 04/15/13

EPA Method 8290

INSTRUMENT: Magneto
 COLUMN: Restek DB5 - 60m
 MATRIX:

ANALYSIS DATE/TIME:
 EXTRACTION DATE:
 SEQUENCE:
 RUN FILE: 130501_HR_15

Analyte	RT of congener in sample	RT of ¹³ C congener in sample	RRT of congener in sample	RRT of congener in CCV	LCL ^a	UCL ^b	Qualifiers
	130501_HR_15	130501_HR_15	130501_HR_15	130501_HR_10			
2,3,7,8-TCDD	32.2813	32.2270	1.0017	1.0004	32.2103	32.2770	Fail
1,2,3,7,8-PeCDD	41.1402	41.0997	1.0010	1.0010	41.0830	41.1497	Pass
1,2,3,4,7,8-HxCDD	48.4942	48.6535	0.9967	0.9961	0.9911	1.0011	Pass
1,2,3,6,7,8-HxCDD	48.6960	48.6535	1.0009	1.0004	48.6368	48.7035	Pass
1,2,3,7,8,9-HxCDD	49.2060	49.1847	1.0004	1.0004	49.1680	49.2347	Pass
1,2,3,4,6,7,8-HpCDD	55.0435	55.0233	1.0004	1.0004	55.0066	55.0733	Pass
OCDD	61.4267	61.4165	1.0002	1.0003	61.3998	61.4665	Pass
2,3,7,8-TCDF	31.3288	31.2745	1.0017	1.0009	31.2578	31.3245	Fail
1,2,3,7,8-PeCDF	38.4137	38.3732	1.0011	1.0008	38.3565	38.4232	Pass
2,3,4,7,8-PeCDF	40.4712	38.3732	1.0547	1.0543	1.0490	1.0596	Pass
1,2,3,4,7,8-HxCDF	46.6243	46.6137	1.0002	1.0005	46.5970	46.6637	Pass
1,2,3,6,7,8-HxCDF	46.8900	46.6137	1.0059	1.0061	1.0011	1.0112	Pass
2,3,4,6,7,8-HxCDF	48.1223	46.6137	1.0324	1.0321	1.0269	1.0372	Pass
1,2,3,7,8,9-HxCDF	49.8328	46.6137	1.0691	1.0689	1.0636	1.0743	Pass
1,2,3,4,6,7,8-HpCDF	52.8743	52.8440	1.0006	1.0004	52.8273	52.8940	Pass
1,2,3,4,7,8,9-HpCDF	56.0063	52.8440	1.0598	1.0600	1.0547	1.0653	Pass
OCDF	61.8218	61.4165	1.0066	1.0066	1.0016	1.0116	Pass
¹³ C ₁₂ -2,3,7,8-TCDD	32.2270	31.5058	1.0229	1.0233	1.0182	1.0284	Pass
¹³ C ₁₂ -1,2,3,7,8-PeCDD	41.0997	31.5058	1.3045	1.3048	1.2983	1.3113	Pass
¹³ C ₁₂ -1,2,3,6,7,8-HxCDD	48.6535	49.1847	0.9892	0.9894	0.9845	0.9944	Pass
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDD	55.0233	49.1847	1.1187	1.1185	1.1129	1.1241	Pass
¹³ C ₁₂ -OCDD	61.4165	49.1847	1.2487	1.2491	1.2428	1.2553	Pass
¹³ C ₁₂ -2,3,7,8-TCDF	31.2745	31.5058	0.9927	0.9922	0.9873	0.9972	Pass
¹³ C ₁₂ -1,2,3,7,8-PeCDF	38.3732	31.5058	1.2180	1.2188	1.2127	1.2248	Pass
¹³ C ₁₂ -1,2,3,4,7,8-HxCDF	46.6137	49.1847	0.9477	0.9478	0.9431	0.9526	Pass
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDF	52.8440	49.1847	1.0744	1.0742	1.0689	1.0796	Pass
¹³ C ₁₂ -1,2,3,4-TCDD	31.5058	31.5058	1.0000	1.0000	0.9950	1.0050	Pass
¹³ C ₁₂ -1,2,3,7,8,9-HxCDD	49.1847	49.1847	1.0000	1.0000	0.9950	1.0050	Pass

a. Lower control limit
 b. Upper control limit

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

#	Name	RT	RRT
1	2,3,7,8-TCDD	32.281300	1.001685
2	1,2,3,7,8-PeCDD	41.140202	1.000985
3	1,2,3,4,7,8-HxCDD	48.494202	0.996726
4	1,2,3,6,7,8-HxCDD	48.695999	1.000874
5	1,2,3,7,8,9-HxCDD	49.206001	1.000433
6	1,2,3,4,6,7,8-HpCDD	55.043499	1.000367
7	OCDD	61.426701	1.000166
8	2,3,7,8-TCDF	31.328800	1.001736
9	1,2,3,7,8-PeCDF	38.413700	1.001055
10	2,3,4,7,8-PeCDF	40.471199	1.054674
11	1,2,3,4,7,8-HxCDF	46.624298	1.000227
12	1,2,3,6,7,8-HxCDF	46.889999	1.005927
13	2,3,4,6,7,8-HxCDF	48.122299	1.032364
14	1,2,3,7,8,9-HxCDF	49.832802	1.069059
15	1,2,3,4,6,7,8-HpCDF	52.874298	1.000573
16	1,2,3,4,7,8,9-HpCDF	56.006302	1.059842
17	OCDF	61.821800	1.006599
18	13C-2,3,7,8-TCDD	32.227001	1.022891
19	13C-1,2,3,7,8-PeCDD	41.099701	1.304512
20	13C-1,2,3,6,7,8-HxCDD	48.653500	0.989200
21	13C-1,2,3,4,6,7,8-HpCDD	55.023300	1.118708
22	13C-OCDD	61.416500	1.248691
23	13C-2,3,7,8-TCDF	31.274500	0.992658
24	13C-1,2,3,7,8-PeCDF	38.373199	1.217973
25	13C-1,2,3,4,7,8-HxCDF	46.613701	0.947728
26	13C-1,2,3,4,6,7,8-HpCDF	52.844002	1.074399
27	13C-1,2,3,4-TCDD	31.505800	1.000000
28	13C-1,2,3,7,8,9-HxCDD	49.184700	1.000000

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

#	Name	Signal	Noise:1	S/N:1	Flag/S/N:	Signal:2	Noise:2	S/N:2	Flag/S/N:
1	2,3,7,8-TCDD	3.700000e2	9.3527405e1	-9.12	YES	3.950000e2	4.8011681e1	8.23	NO
2	1,2,3,7,8-PeCDD	1.165000e3	6.4168007e1	20.28	NO	6.730000e2	9.4034233e1	7.16	NO
3	1,2,3,4,7,8-HxCDD	1.597000e3	1.5668842e2	10.26	NO	1.233000e3	1.7678873e2	6.97	NO
4	1,2,3,6,7,8-HxCDD	2.397000e3	1.5668842e2	15.41	NO	1.500000e3	1.7678873e2	8.48	NO
5	1,2,3,7,8,9-HxCDD	2.173000e3	1.5668842e2	32.38	NO	1.374000e3	1.7678873e2	7.77	NO
6	1,2,3,4,6,7,8-HpCDD	2.496000e3	5.1565041e1	51.70	NO	2.683000e3	9.0710464e1	29.58	NO
7	OCDD	2.667000e3	5.1650665e1	78.35	NO	2.010000e3	3.5257813e1	57.01	NO
8	2,3,7,8-TCDF	5.410000e2	8.3868843e1	-3.93	YES	3.150000e2	7.2768227e1	4.33	NO
9	1,2,3,7,8-PeCDF	1.480000e3	4.5451077e1	28.61	NO	4.320000e2	5.6098103e1	7.70	NO
10	2,3,4,7,8-PeCDF	9.300000e2	4.5451077e1	22.07	NO	6.610000e2	5.6098103e1	11.78	NO
11	1,2,3,4,7,8-HxCDF	3.161000e3	3.1428677e2	8.70	NO	2.412000e3	2.4020535e2	10.04	NO
12	1,2,3,6,7,8-HxCDF	4.177000e3	3.1428677e2	12.05	NO	2.731000e3	2.4020535e2	11.37	NO
13	2,3,4,6,7,8-HxCDF	2.386000e3	3.1428677e2	6.96	NO	2.151000e3	2.4020535e2	8.95	NO
14	1,2,3,7,8,9-HxCDF	1.325000e3	3.1428677e2	13.93	NO	9.500000e2	2.4020535e2	3.95	NO
15	1,2,3,4,6,7,8-HpCDF	2.898000e3	1.0695840e2	28.22	NO	2.152000e3	6.5161911e1	33.03	NO
16	1,2,3,4,7,8,9-HpCDF	1.807000e3	1.0695840e2	14.22	NO	1.503000e3	6.5161911e1	23.07	NO
17	OCDF	1.428000e3	6.0224434e1	19.86	NO	1.338000e3	6.9074135e1	19.37	NO
18	13C-2,3,7,8-TCDD	9.7096900e5	4.4792551e2	2166.17	NO	1.2301400e6	1.7167911e2	7165.34	NO
19	13C-1,2,3,7,8-PeCDD	1.1724380e6	2.4923270e2	4703.34	NO	7.4936500e5	1.5687347e2	4776.88	NO
20	13C-1,2,3,6,7,8-HxCDD	2.5924210e6	4.5818823e2	5661.56	NO	2.1070140e6	9.1434167e2	2304.41	NO
21	13C-1,2,3,4,6,7,8-HpCDD	2.4197570e6	6.6350079e2	3644.74	NO	2.3194680e6	3.1250507e2	7422.18	NO
22	13C-OCDD	3.1429110e6	1.3864915e3	2265.12	NO	3.5407000e6	4.6975903e2	7537.27	NO
23	13C-2,3,7,8-TCDF	1.3192220e6	2.4620879e2	5354.80	NO	1.6946480e6	1.8393541e2	9213.28	NO
24	13C-1,2,3,7,8-PeCDF	1.4425810e6	2.5161487e2	5731.73	NO	9.1907300e5	2.2589845e2	4068.52	NO
25	13C-1,2,3,4,7,8-HxCDF	1.9564860e6	9.6241455e2	2031.52	NO	3.7590580e6	7.3774786e2	5095.32	NO
26	13C-1,2,3,4,6,7,8-HpCDF	1.5739870e6	4.2396381e2	3710.93	NO	3.5720040e6	4.5577707e2	7837.17	NO
27	13C-1,2,3,4-TCDD	1.3456970e6	4.4792551e2	3002.40	NO	1.7213530e6	1.7167911e2	10026.57	NO
28	13C-1,2,3,7,8,9-HxCDD	1.1974880e6	4.5818823e2	2615.55	NO	9.6522400e5	9.1434167e2	1055.65	NO

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

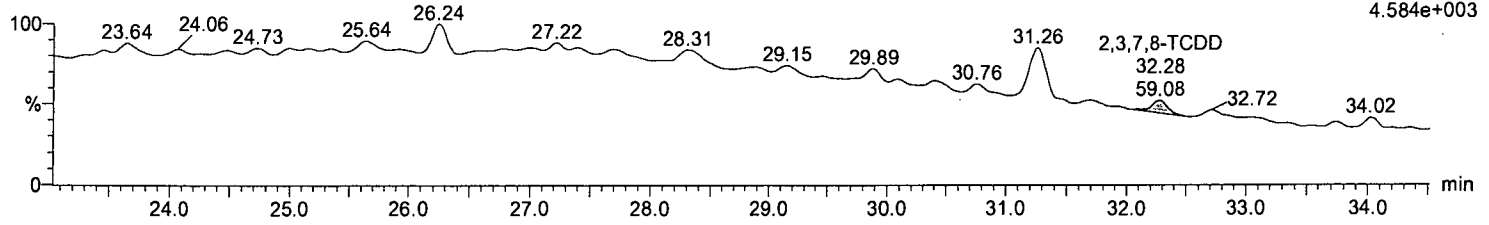
Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

2,3,7,8-TCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

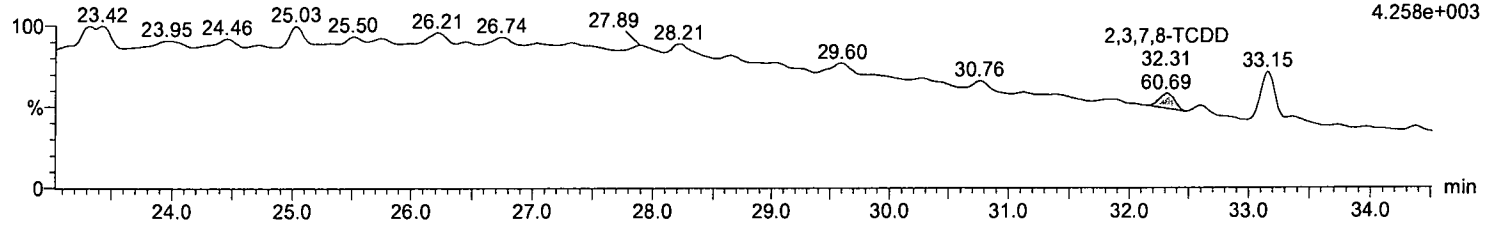
F1:Voltage SIR,EI+
319.8965
4.584e+003



2,3,7,8-TCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

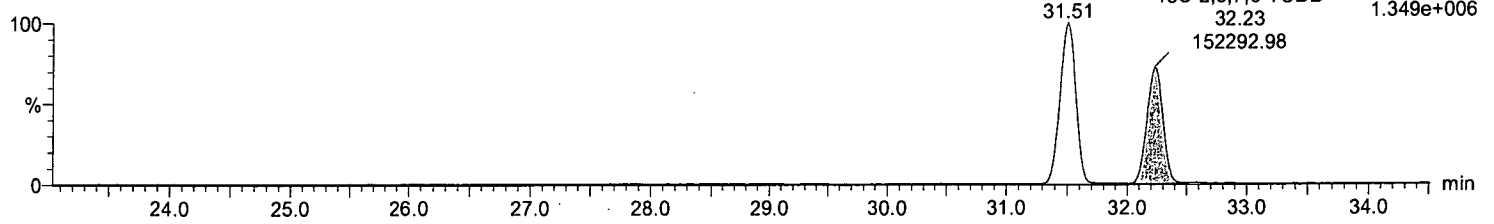
F1:Voltage SIR,EI+
321.8936
4.258e+003



13C-2,3,7,8-TCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

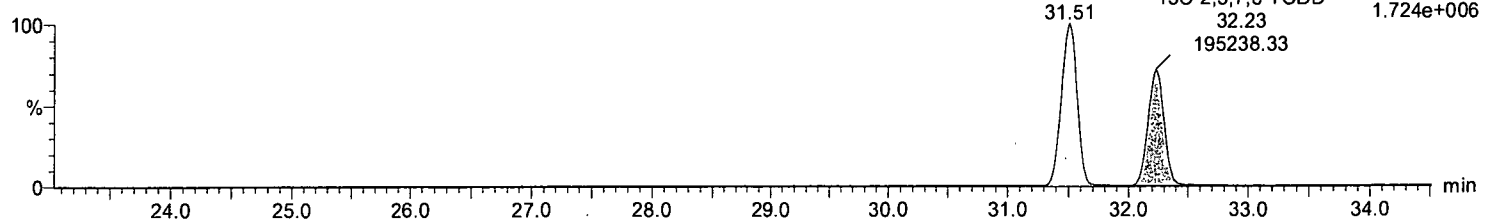
F1:Voltage SIR,EI+
331.9368
1.349e+006



13C-2,3,7,8-TCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

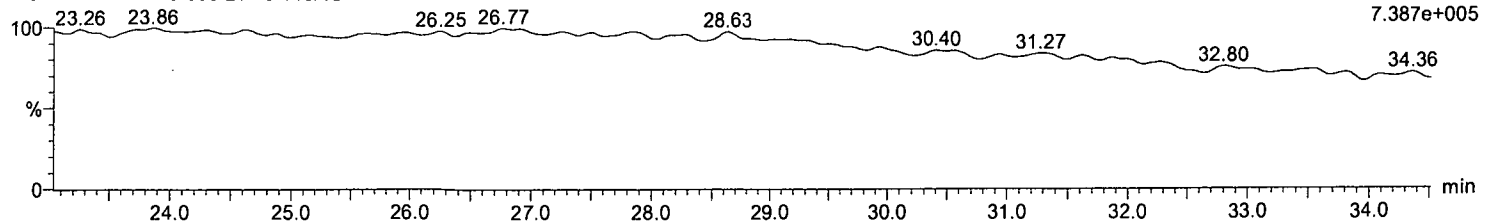
F1:Voltage SIR,EI+
333.9338
1.724e+006



PFK1

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

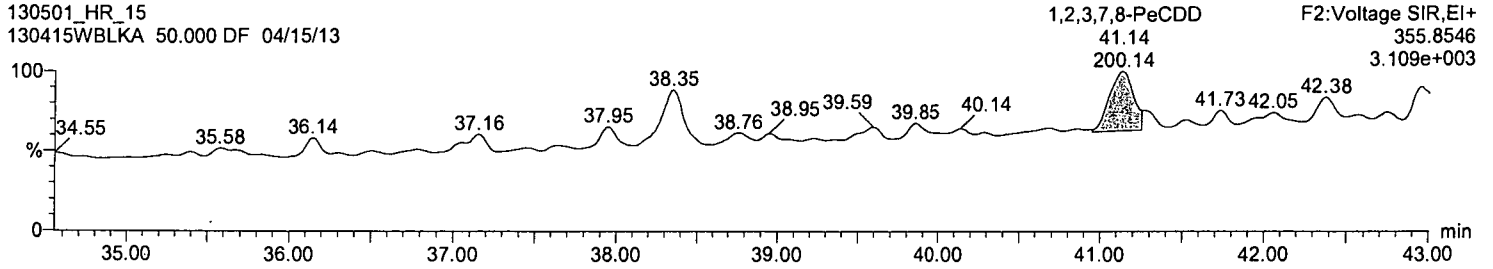
F1:Voltage SIR,EI+
292.9824
7.387e+005



Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

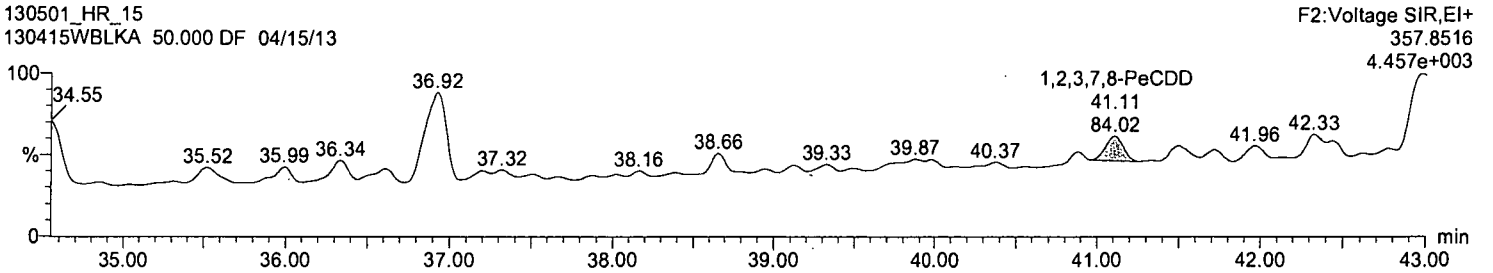
1,2,3,7,8-PeCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13



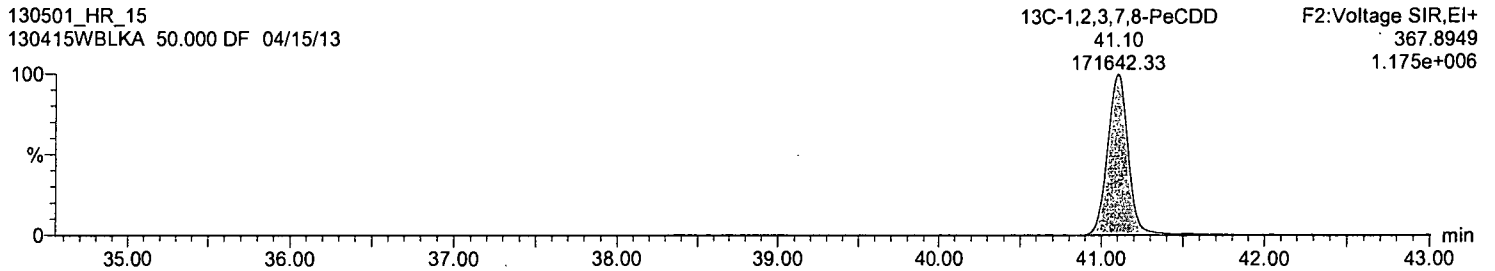
1,2,3,7,8-PeCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13



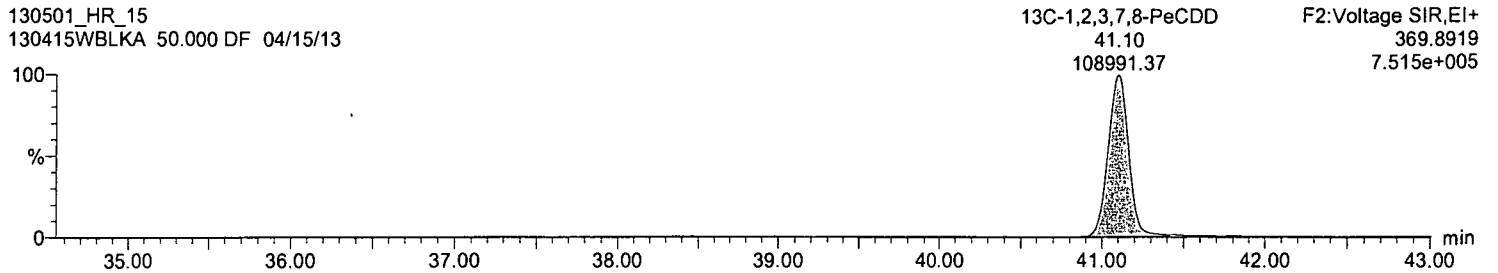
13C-1,2,3,7,8-PeCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13



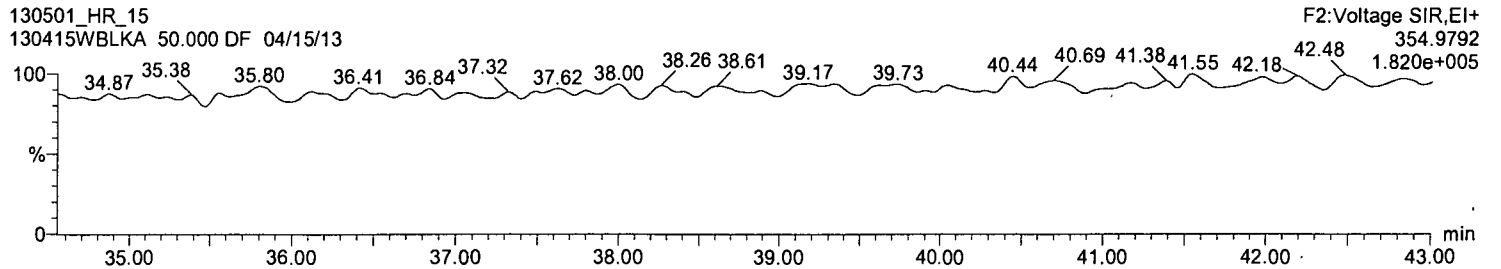
13C-1,2,3,7,8-PeCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13



PFK2

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

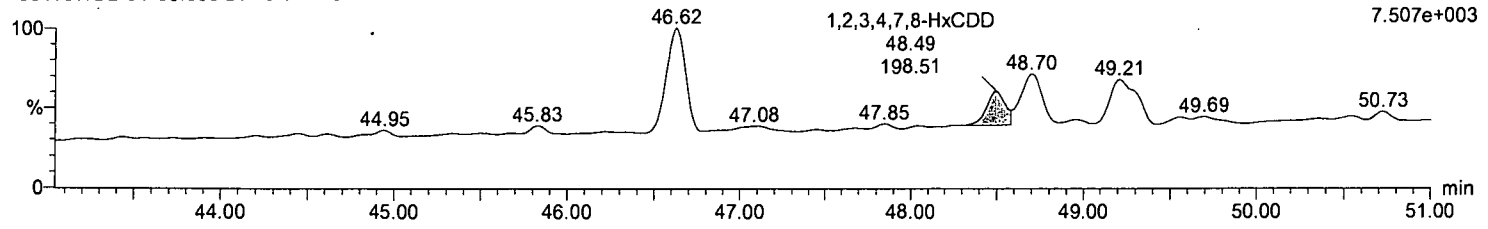


Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

1,2,3,4,7,8-HxCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

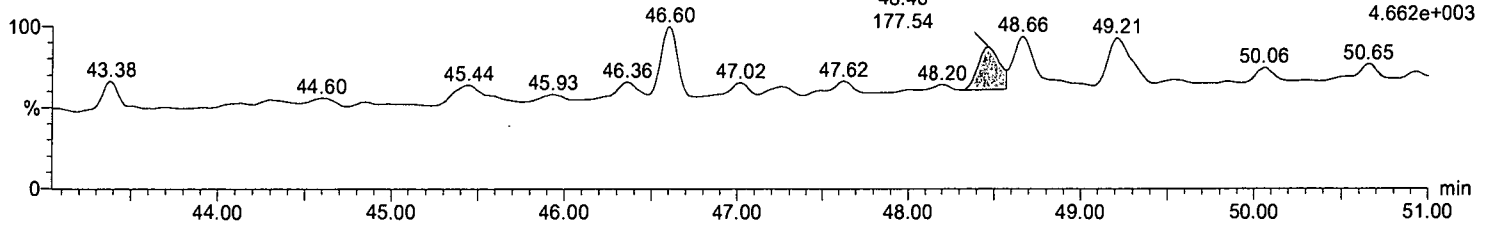
F3:Voltage SIR,EI+
389.8156
7.507e+003



1,2,3,4,7,8-HxCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

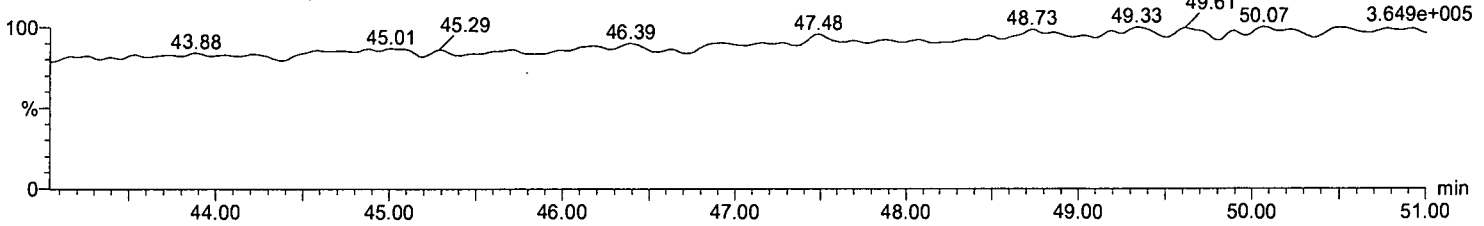
F3:Voltage SIR,EI+
391.8127
4.662e+003



PFK3

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

F3:Voltage SIR,EI+
392.976
3.649e+005

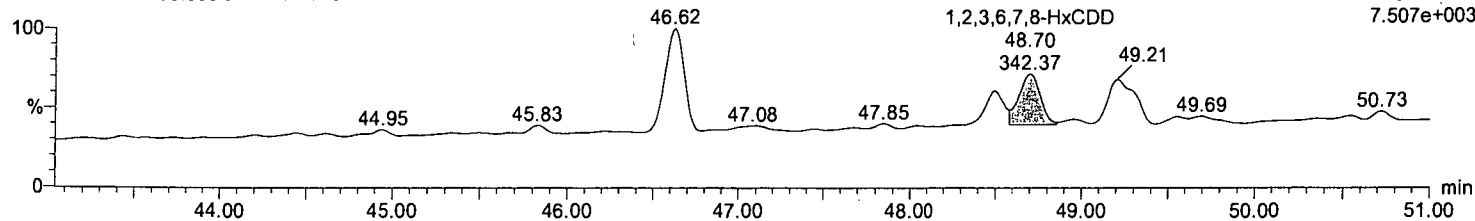


Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

1,2,3,6,7,8-HxCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

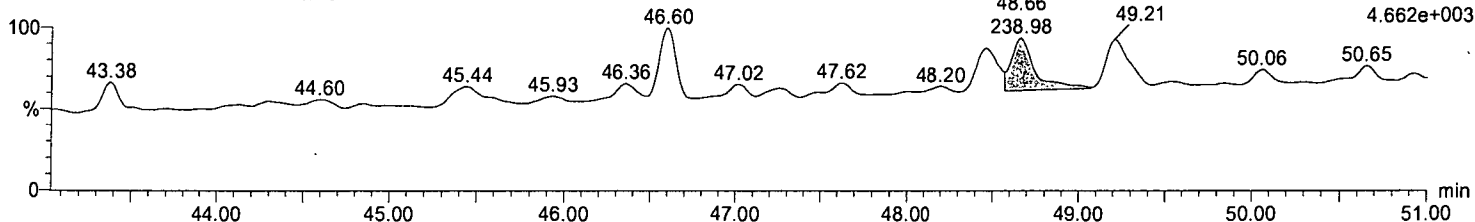
F3:Voltage SIR,EI+
389.8156
7.507e+003



1,2,3,6,7,8-HxCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

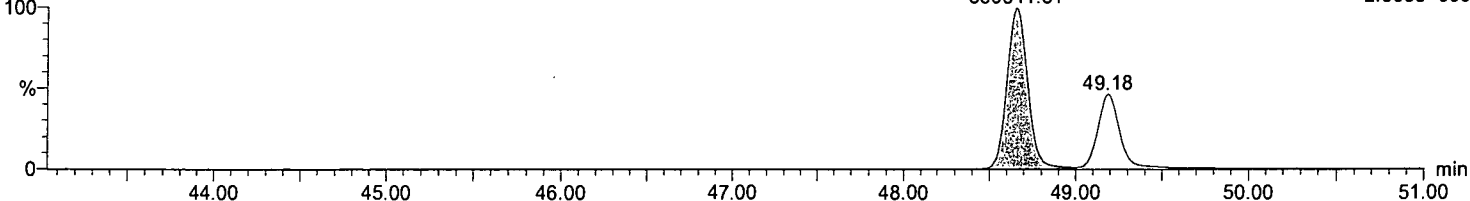
F3:Voltage SIR,EI+
391.8127
4.662e+003



13C-1,2,3,6,7,8-HxCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

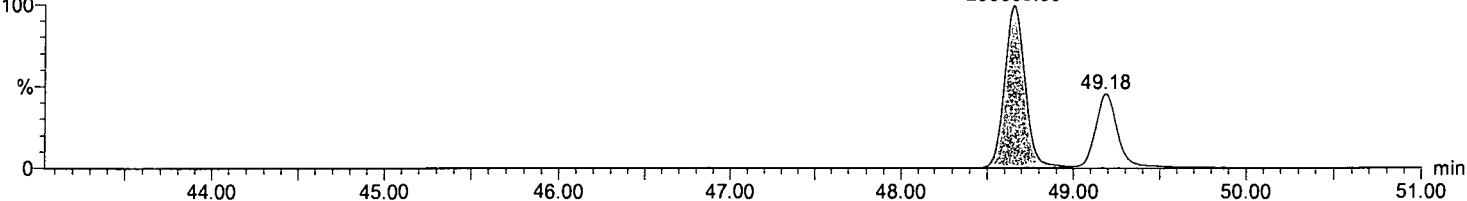
F3:Voltage SIR,EI+
401.8559
2.598e+006



13C-1,2,3,6,7,8-HxCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

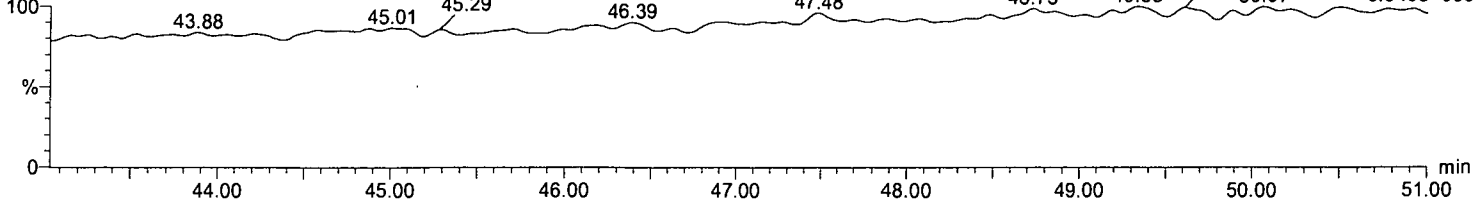
F3:Voltage SIR,EI+
403.8529
2.112e+006



PFK3

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

F3:Voltage SIR,EI+
392.976
3.649e+005



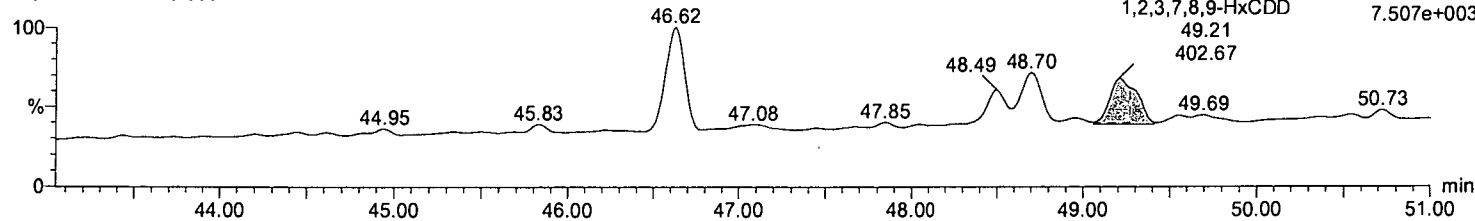
Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

1,2,3,7,8,9-HxCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

5/3/13 (4) 7/5/13

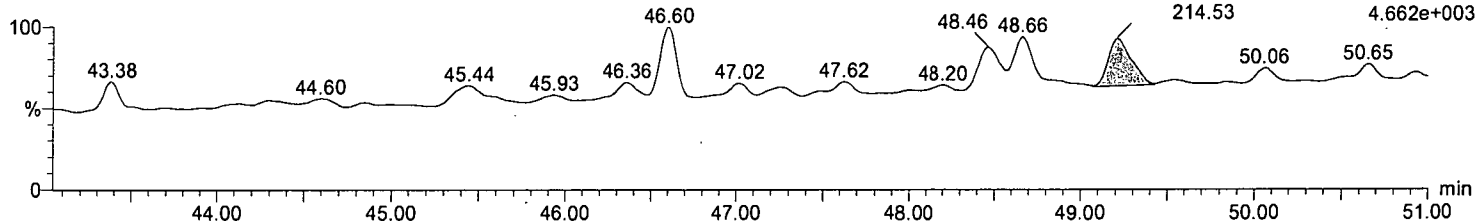
F3:Voltage SIR,EI+
389.8156
7.507e+003



1,2,3,7,8,9-HxCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

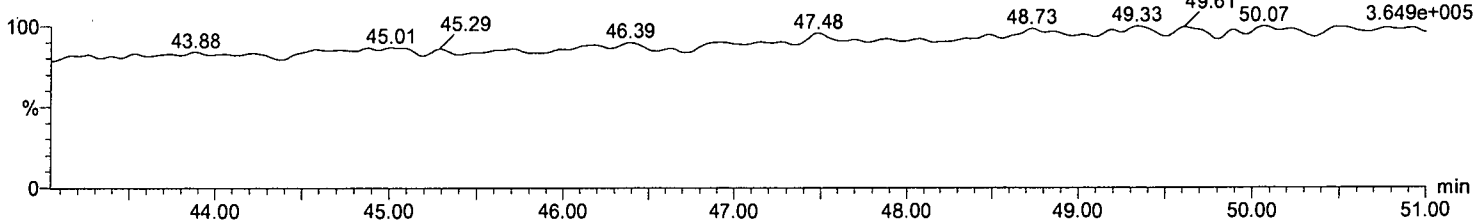
1,2,3,7,8,9-HxCDD F3:Voltage SIR,EI+
49.21 391.8127
214.53 4.662e+003



PFK3

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

F3:Voltage SIR,EI+
392.976
3.649e+005

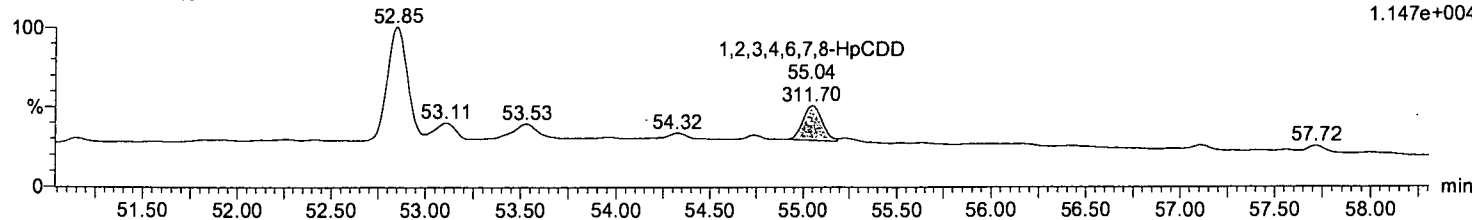


Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

1,2,3,4,6,7,8-HpCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

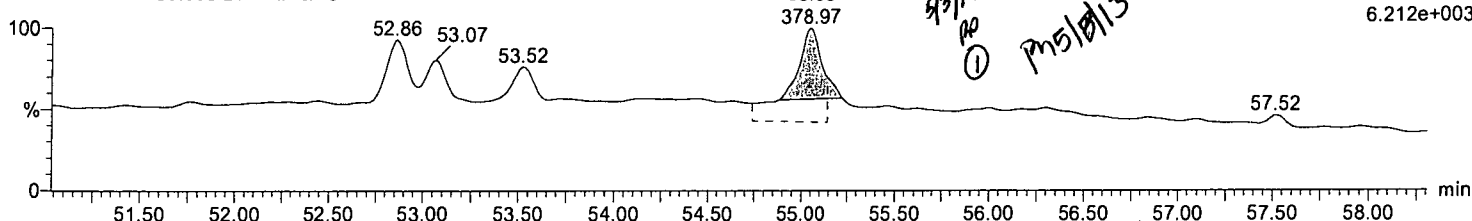
F4:Voltage SIR,EI+
423.7767
1.147e+004



1,2,3,4,6,7,8-HpCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

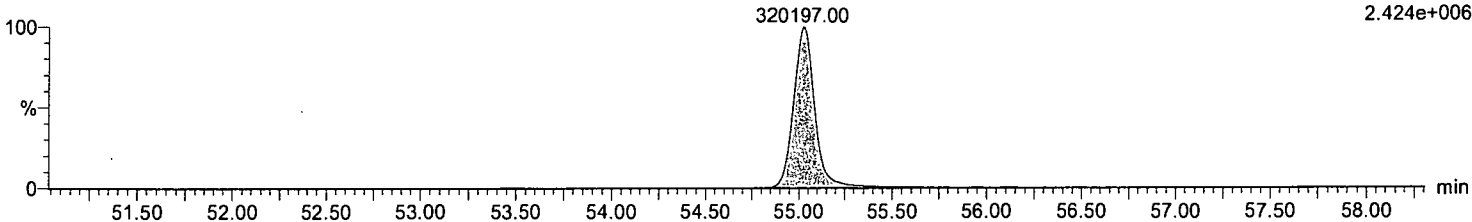
F4:Voltage SIR,EI+
425.7737
6.212e+003



13C-1,2,3,4,6,7,8-HpCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

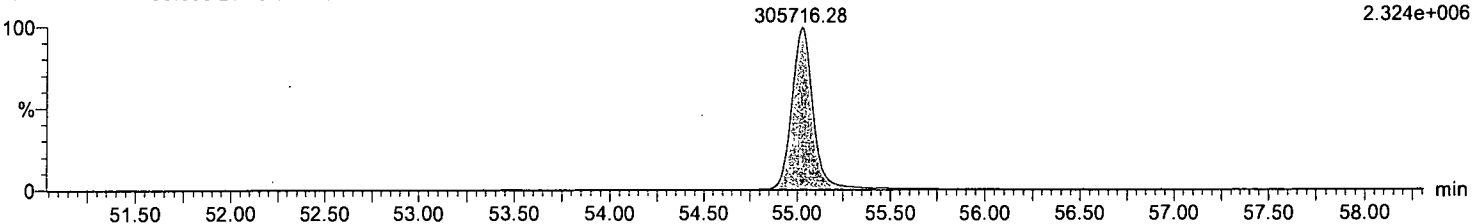
F4:Voltage SIR,EI+
435.8169
2.424e+006



13C-1,2,3,4,6,7,8-HpCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

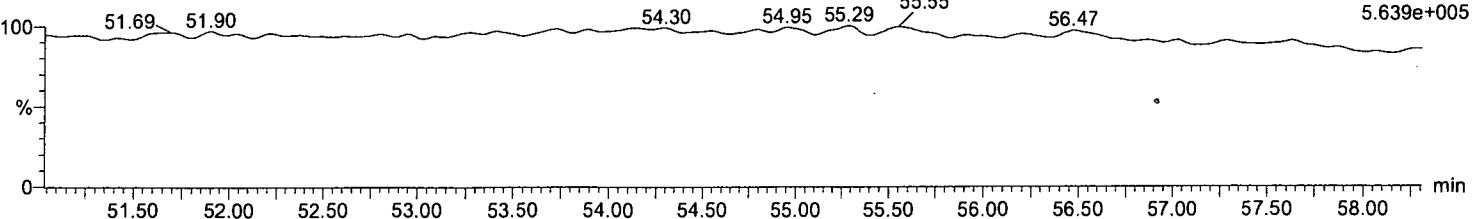
F4:Voltage SIR,EI+
437.814
2.324e+006



PFK4

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

F4:Voltage SIR,EI+
430.9728
5.639e+005



Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

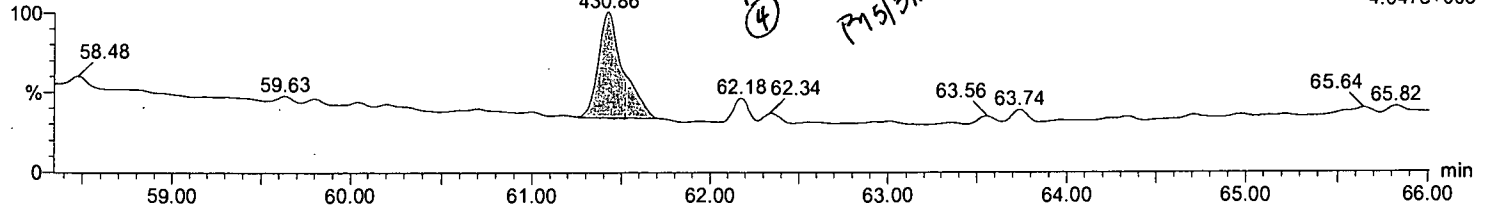
OCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

OCDD
61.43
430.86

F5:Voltage SIR,EI+
457.7377
4.047e+003

5/3/13
RP
(4)
7/5/3/13

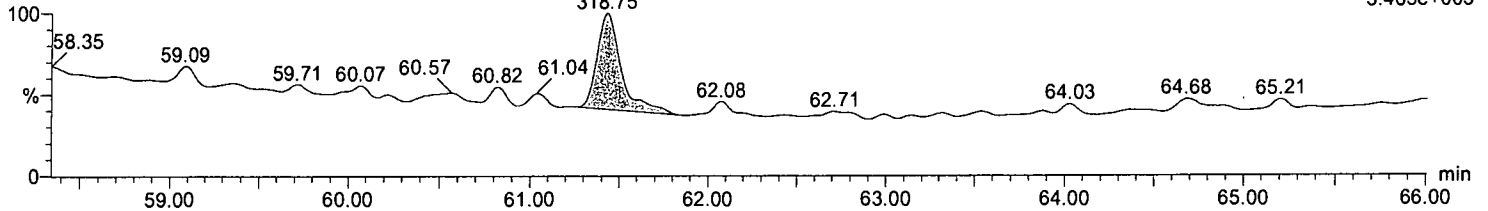


OCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

OCDD
61.43
318.75

F5:Voltage SIR,EI+
459.7348
3.405e+003

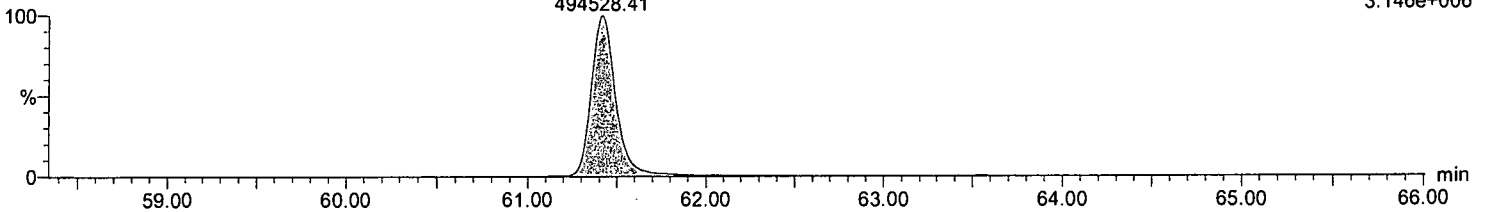


13C-OCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

13C-OCDD
61.42
494528.41

F5:Voltage SIR,EI+
469.778
3.146e+006

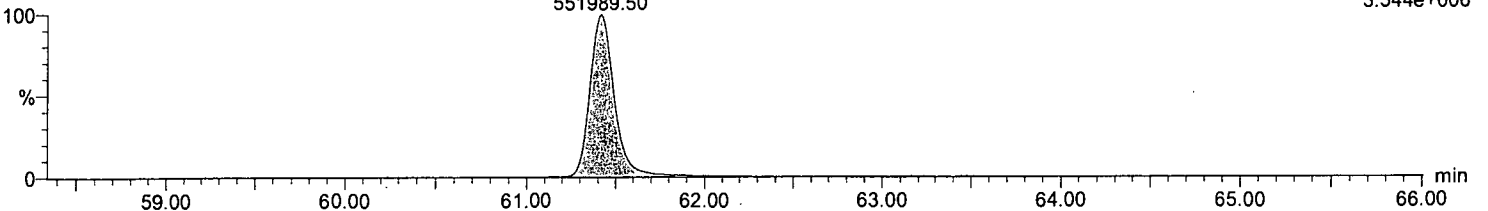


13C-OCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

13C-OCDD
61.42
551989.50

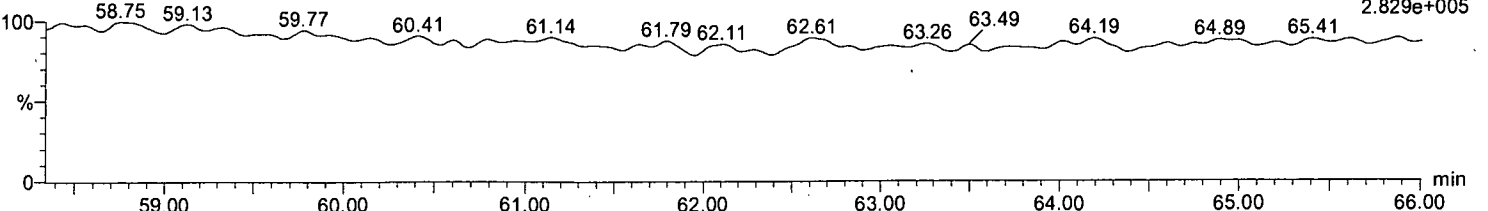
F5:Voltage SIR,EI+
471.775
3.544e+006



PFK5

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

F5:Voltage SIR,EI+
442.9728
2.829e+005



Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

2,3,7,8-TCDF

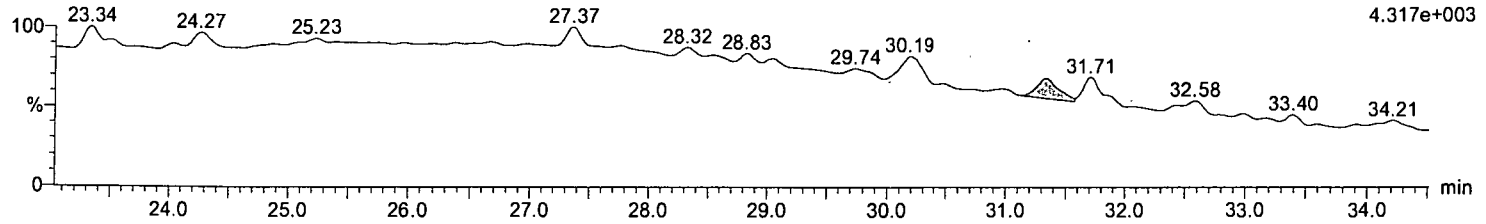
130501_HR_15

130415WBLKA 50.000 DF 04/15/13

F1:Voltage SIR,EI+

303.9016

4.317e+003



2,3,7,8-TCDF

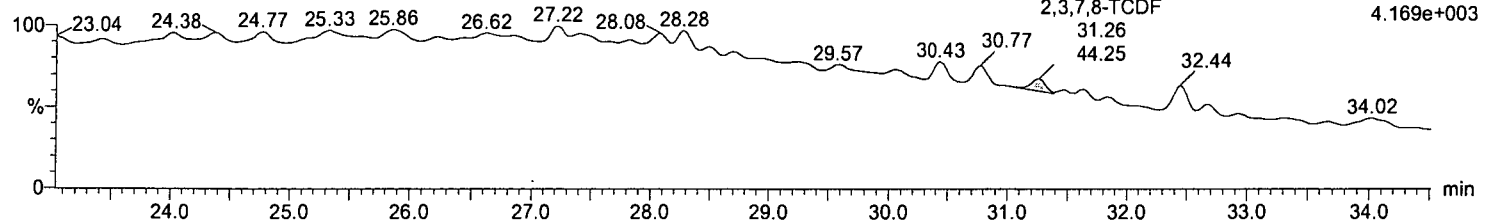
130501_HR_15

130415WBLKA 50.000 DF 04/15/13

F1:Voltage SIR,EI+

305.8987

4.169e+003



13C-2,3,7,8-TCDF

130501_HR_15

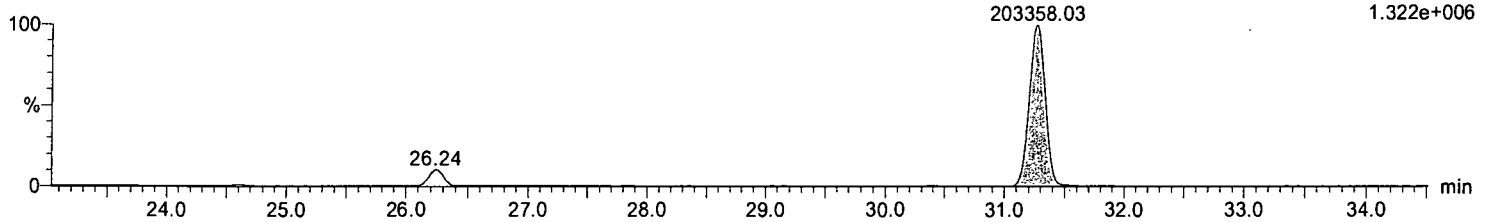
130415WBLKA 50.000 DF 04/15/13

13C-2,3,7,8-TCDF

F1:Voltage SIR,EI+

315.9419

1.322e+006



13C-2,3,7,8-TCDF

130501_HR_15

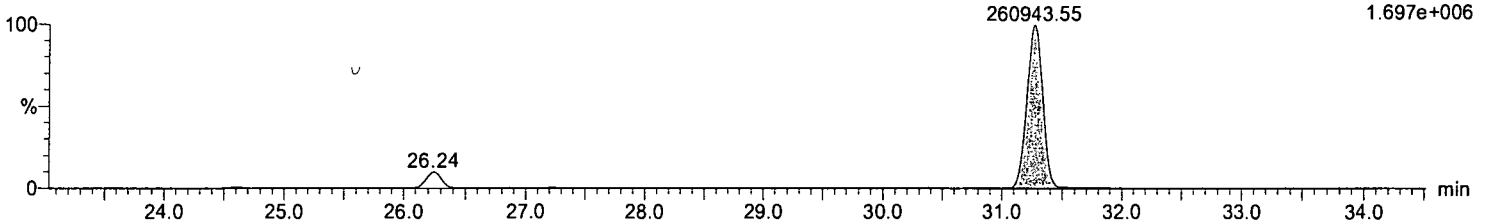
130415WBLKA 50.000 DF 04/15/13

13C-2,3,7,8-TCDF

F1:Voltage SIR,EI+

317.9389

1.697e+006



HxCDFE

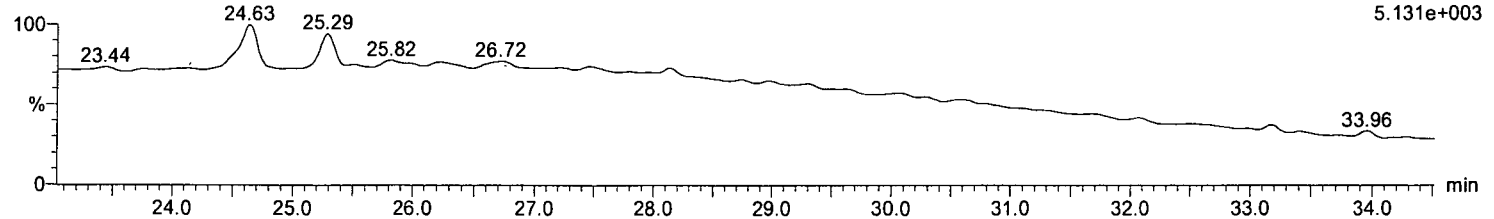
130501_HR_15

130415WBLKA 50.000 DF 04/15/13

F1:Voltage SIR,EI+

375.8364

5.131e+003

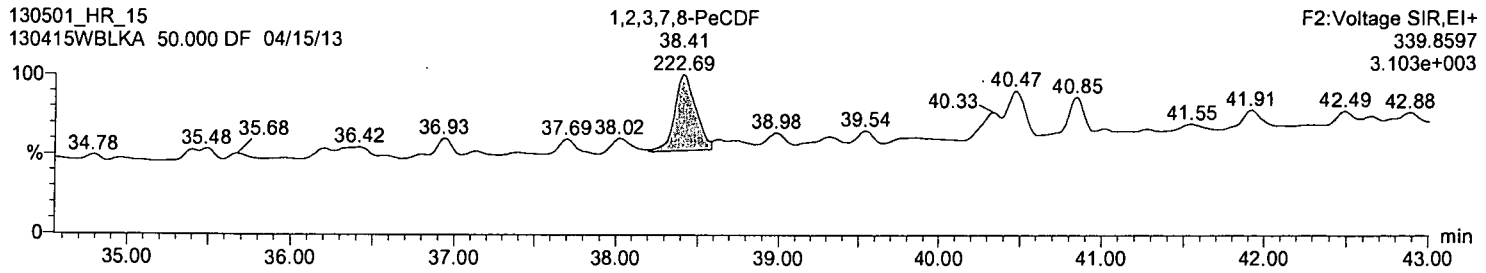


Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

1,2,3,7,8-PeCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

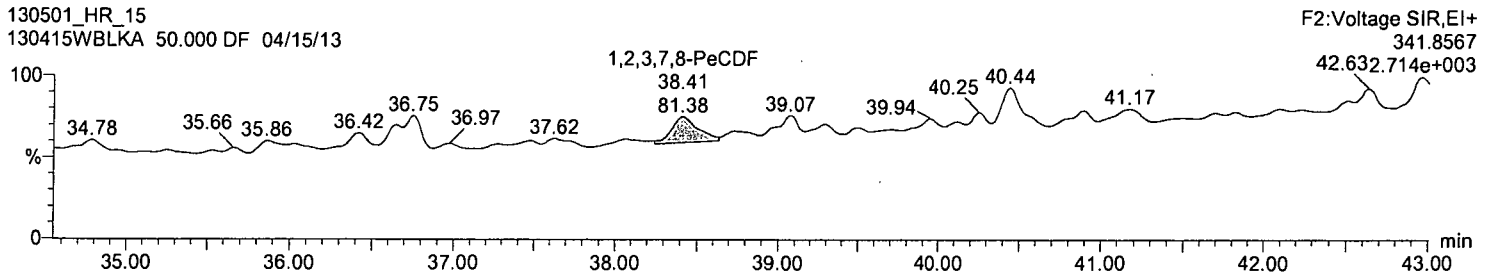
F2:Voltage SIR,EI+
339.8597
3.103e+003



1,2,3,7,8-PeCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

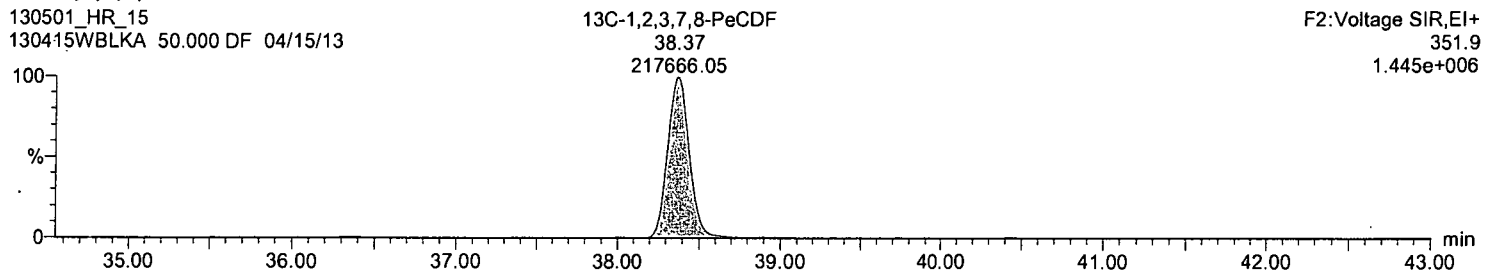
F2:Voltage SIR,EI+
341.8567
42.632.714e+003



13C-1,2,3,7,8-PeCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

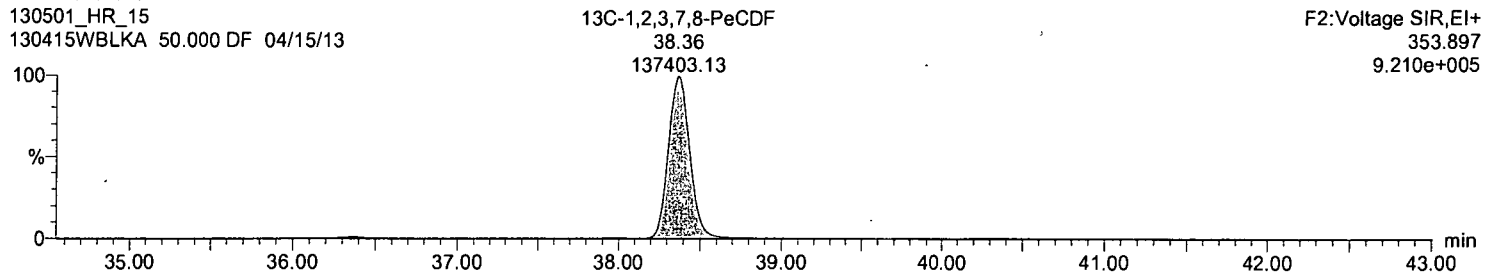
F2:Voltage SIR,EI+
351.9
1.445e+006



13C-1,2,3,7,8-PeCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

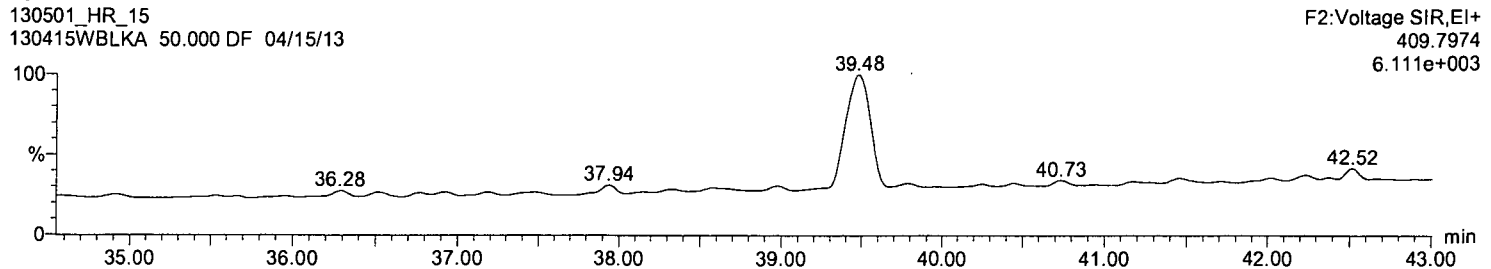
F2:Voltage SIR,EI+
353.897
9.210e+005



HpCDPE

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

F2:Voltage SIR,EI+
409.7974
6.111e+003



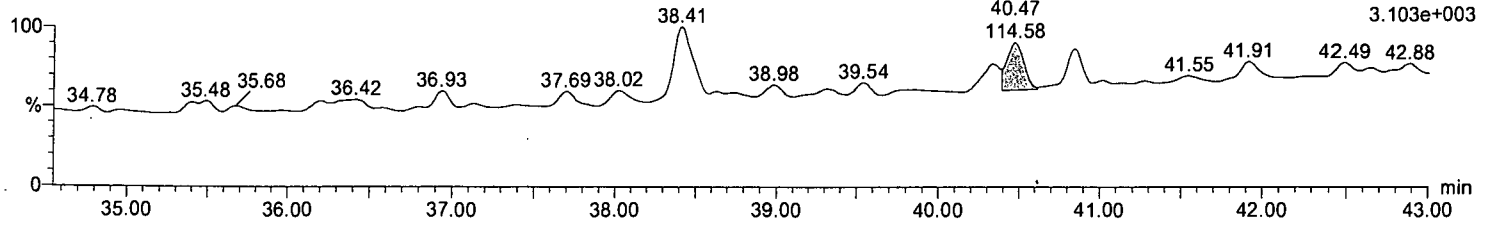
Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

2,3,4,7,8-PeCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

2,3,4,7,8-PeCDF

F2:Voltage SIR,EI+
339.8597
3.103e+003

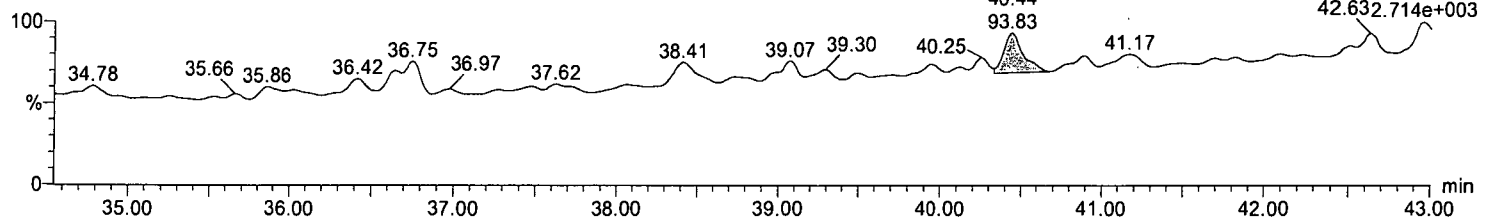


2,3,4,7,8-PeCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

2,3,4,7,8-PeCDF

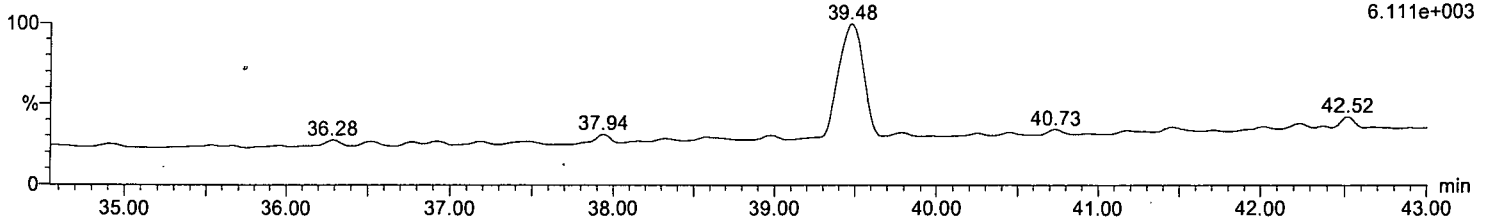
F2:Voltage SIR,EI+
341.8567
42.632.714e+003



HpCDPE

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

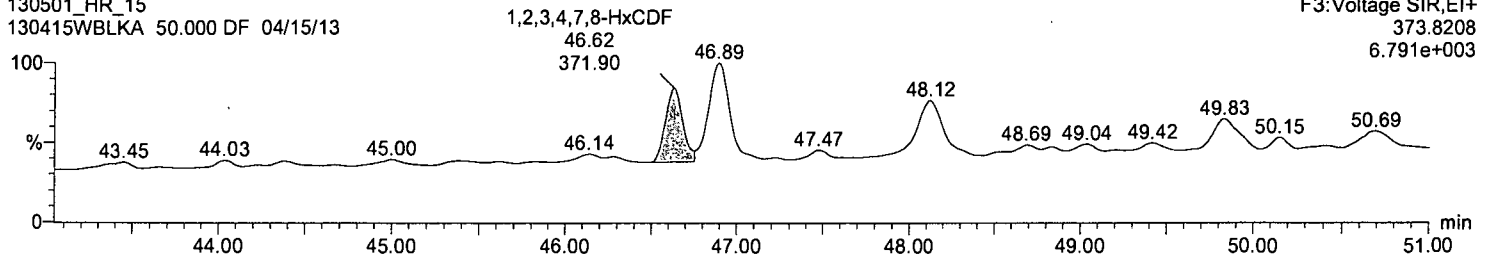
F2:Voltage SIR,EI+
409.7974
6.111e+003



Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

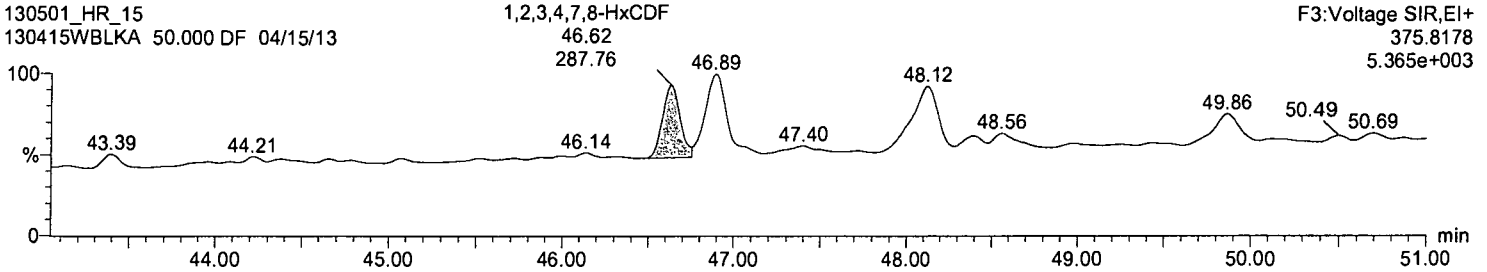
1,2,3,4,7,8-HxCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13



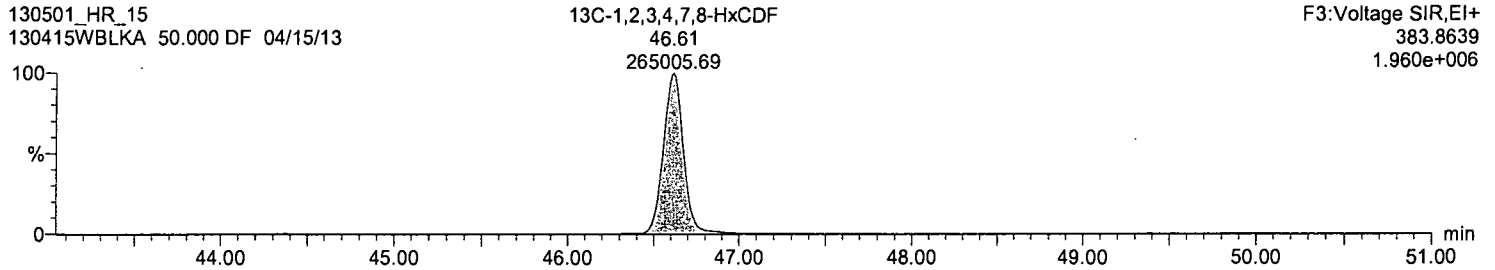
1,2,3,4,7,8-HxCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13



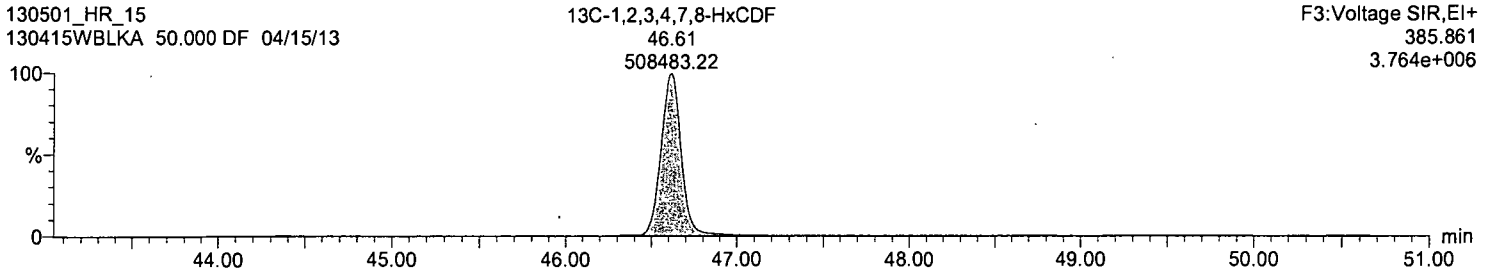
13C-1,2,3,4,7,8-HxCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13



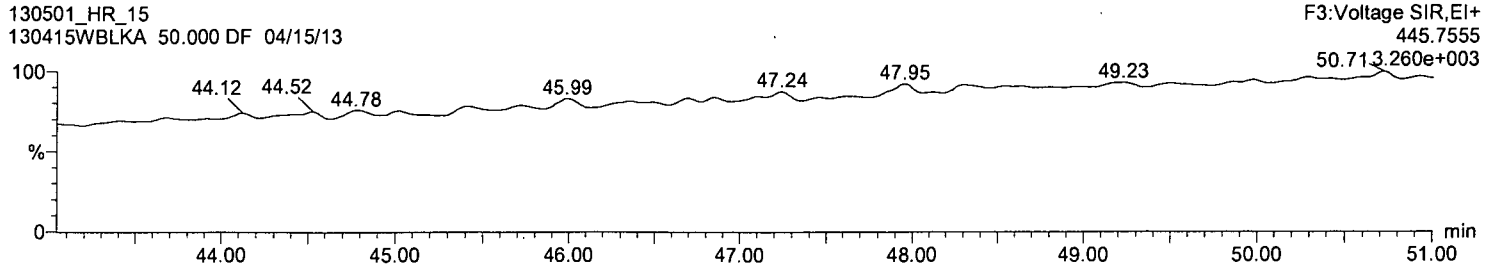
13C-1,2,3,4,7,8-HxCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13



OCDPE

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

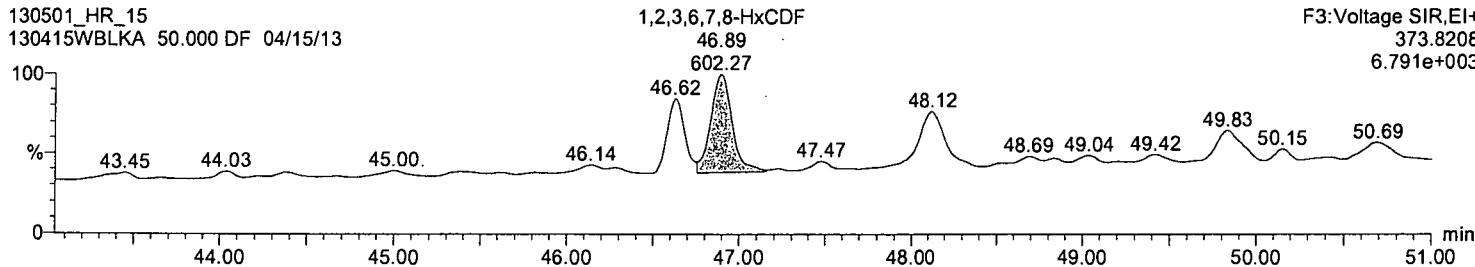


Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

1,2,3,6,7,8-HxCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

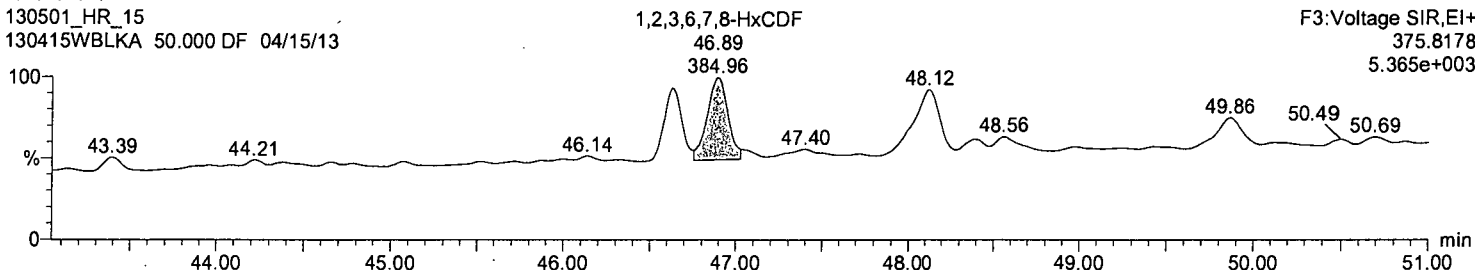
F3:Voltage SIR,EI+
373.8208
6.791e+003



1,2,3,6,7,8-HxCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

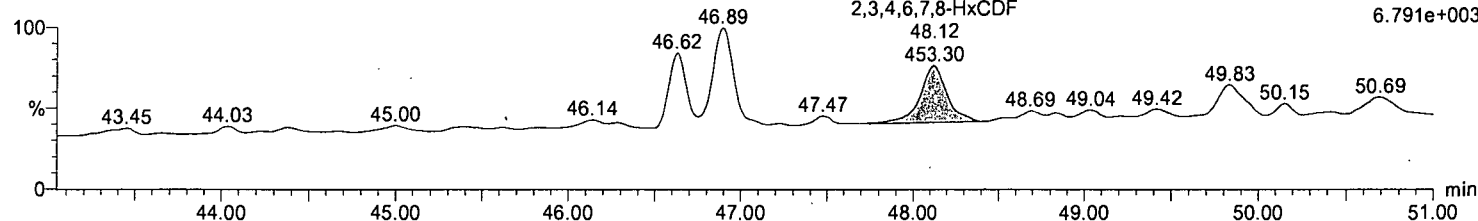
F3:Voltage SIR,EI+
375.8178
5.365e+003



2,3,4,6,7,8-HxCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

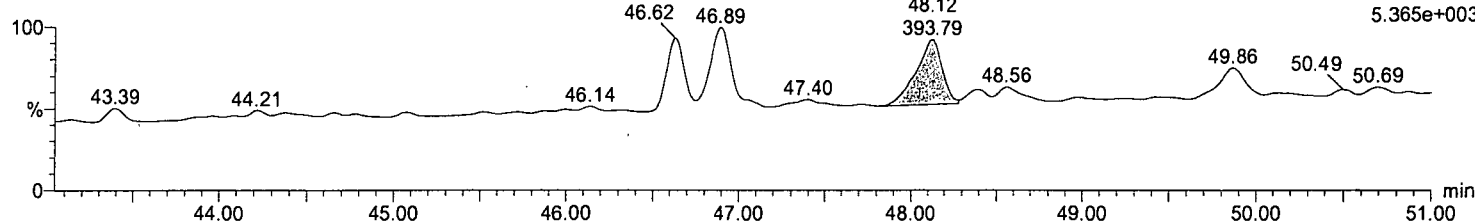
F3:Voltage SIR,EI+
373.8208
6.791e+003



2,3,4,6,7,8-HxCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

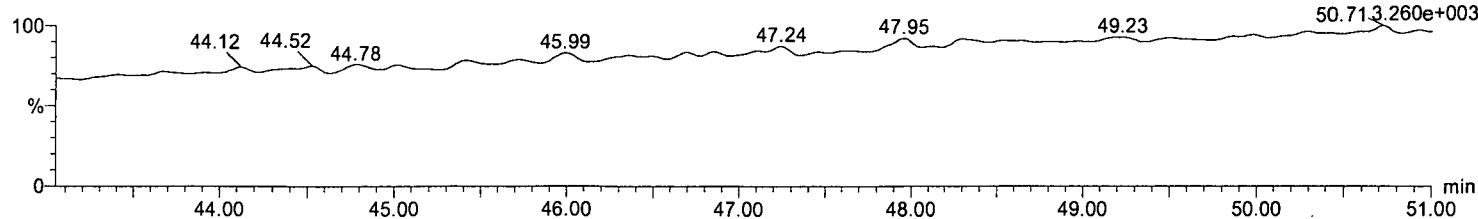
F3:Voltage SIR,EI+
375.8178
5.365e+003



OCDPE

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

F3:Voltage SIR,EI+
445.7555
50.713.260e+003

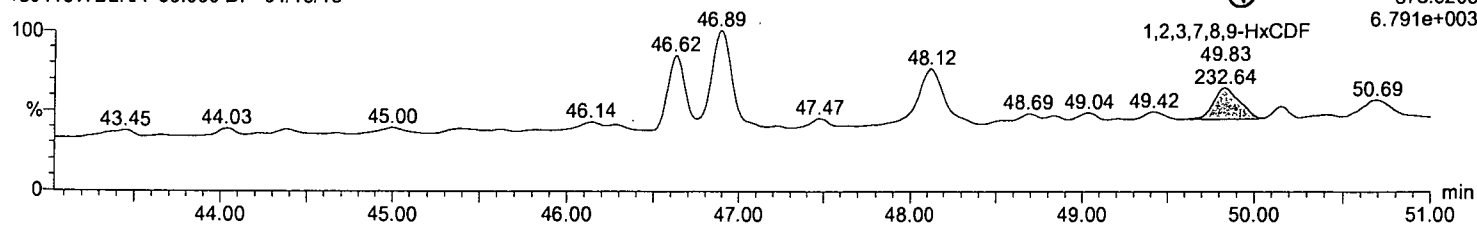


Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

1,2,3,7,8,9-HxCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

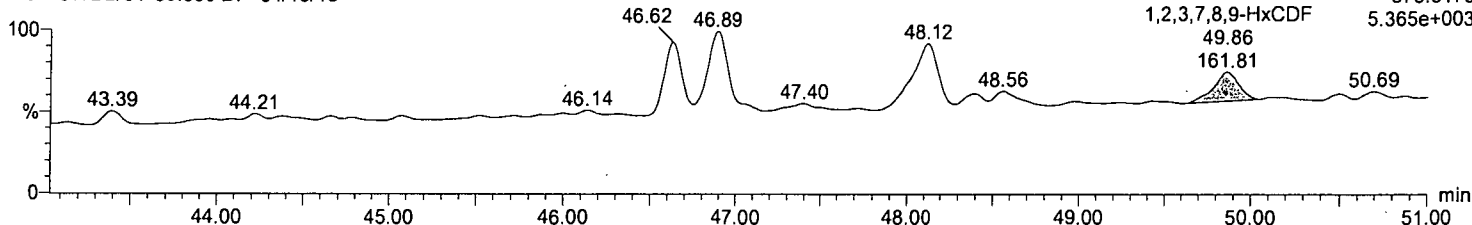
5/2/13
RP
4
F3:Voltage SIR,EI+
373.8208
6.791e+003



1,2,3,7,8,9-HxCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

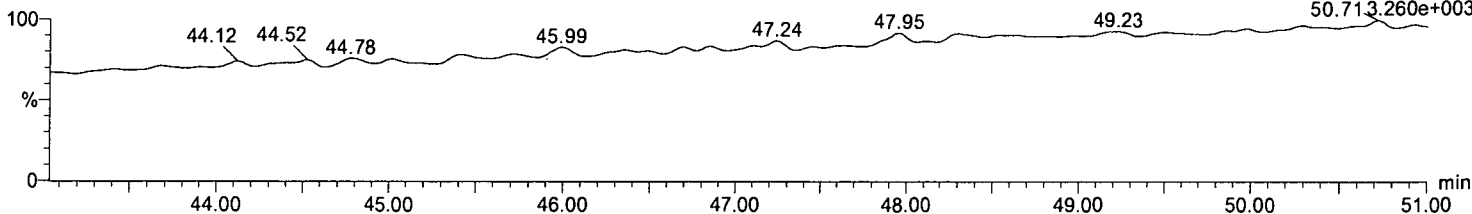
F3:Voltage SIR,EI+
375.8178
5.365e+003



OCDPE

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

F3:Voltage SIR,EI+
445.7555
50.713.260e+003



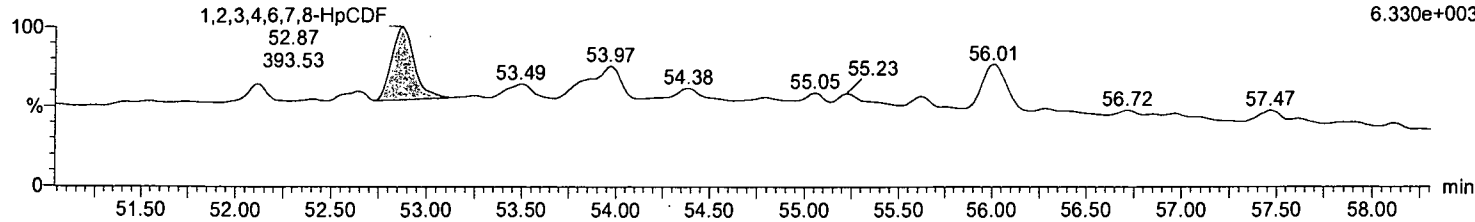
Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

1,2,3,4,6,7,8-HpCDF

130501_HR_15

130415WBLKA 50.000 DF 04/15/13

F4:Voltage SIR,EI+
407.7818
6.330e+003

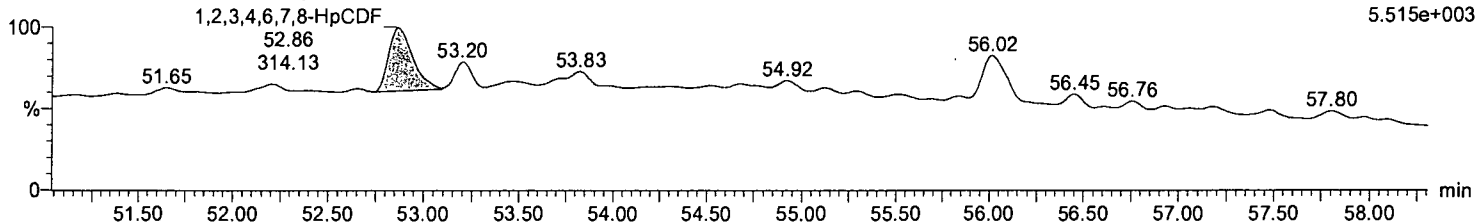


1,2,3,4,6,7,8-HpCDF

130501_HR_15

130415WBLKA 50.000 DF 04/15/13

F4:Voltage SIR,EI+
409.7788
5.515e+003

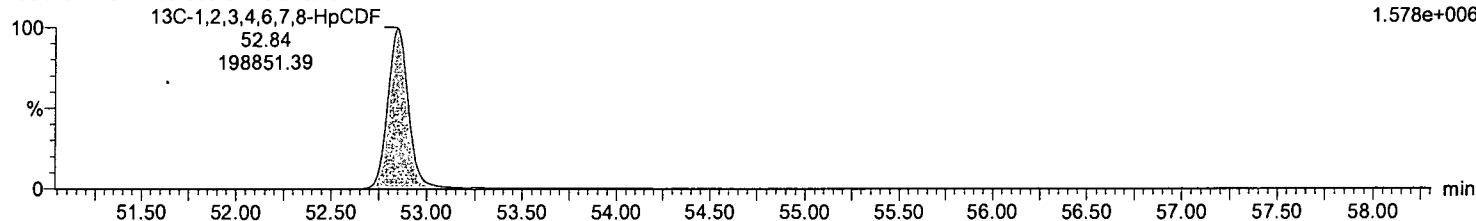


13C-1,2,3,4,6,7,8-HpCDF

130501_HR_15

130415WBLKA 50.000 DF 04/15/13

F4:Voltage SIR,EI+
417.825
1.578e+006

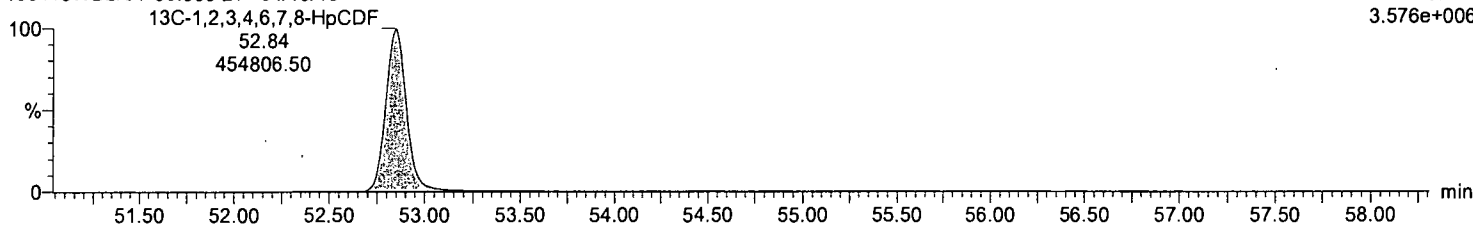


13C-1,2,3,4,6,7,8-HpCDF

130501_HR_15

130415WBLKA 50.000 DF 04/15/13

F4:Voltage SIR,EI+
419.822
3.576e+006

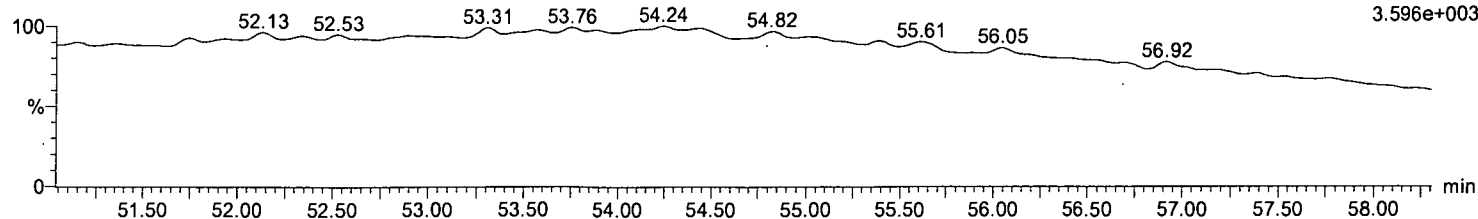


NCDPE

130501_HR_15

130415WBLKA 50.000 DF 04/15/13

F4:Voltage SIR,EI+
479.7165
3.596e+003

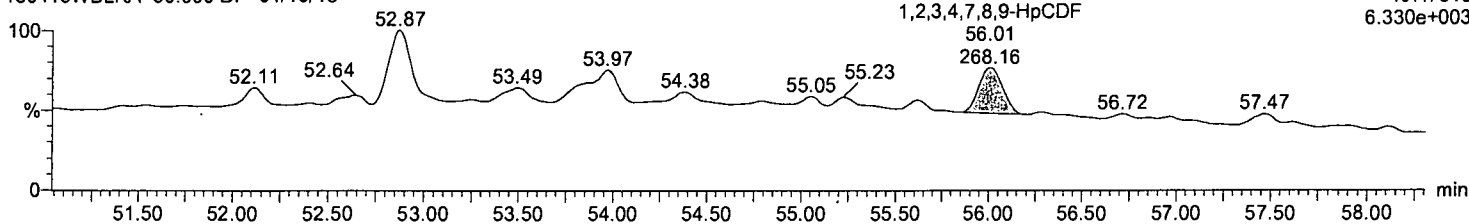


Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

1,2,3,4,7,8,9-HpCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

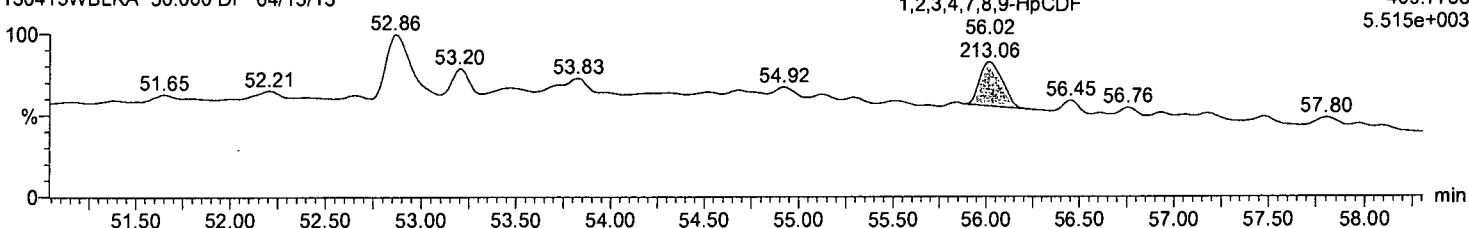
F4:Voltage SIR,EI+
407.7818
6.330e+003



1,2,3,4,7,8,9-HpCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

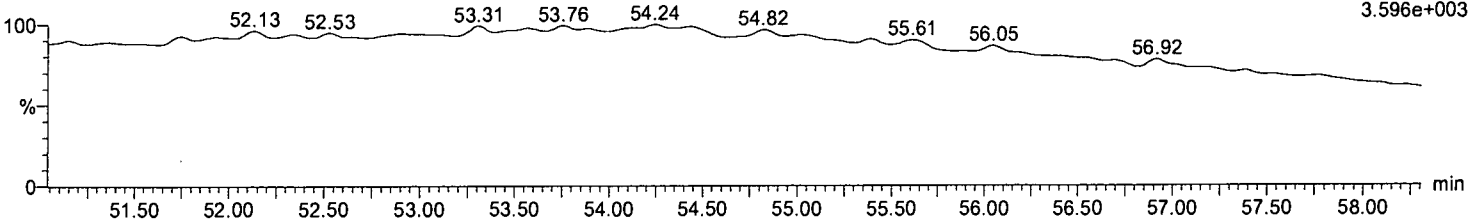
F4:Voltage SIR,EI+
409.7788
5.515e+003



NCDPE

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

F4:Voltage SIR,EI+
479.7165
3.596e+003

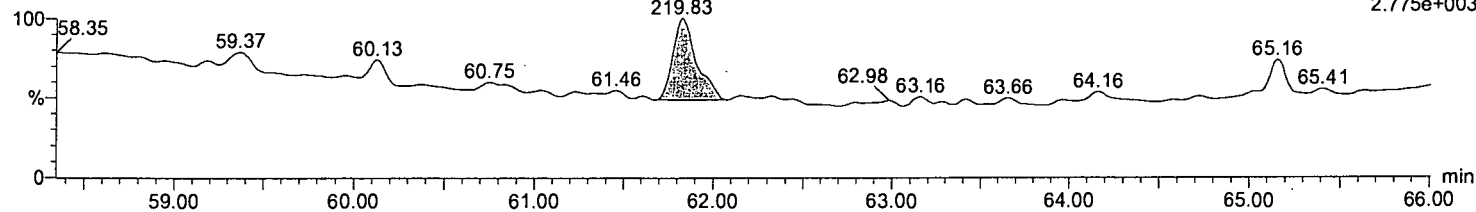


Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

OCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

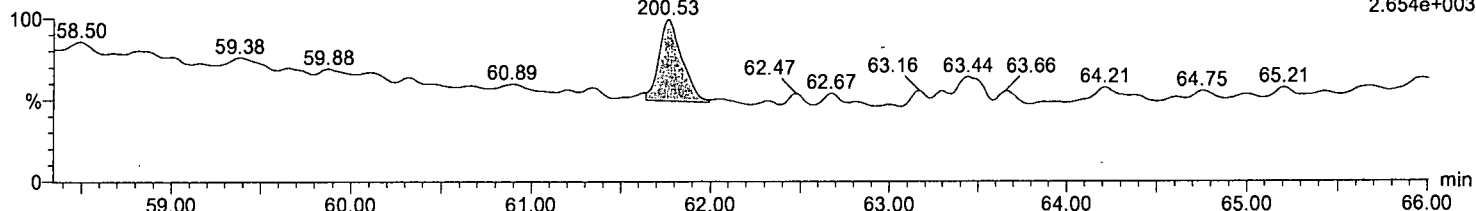
F5:Voltage SIR,EI+
441.7428
2.775e+003



OCDF

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

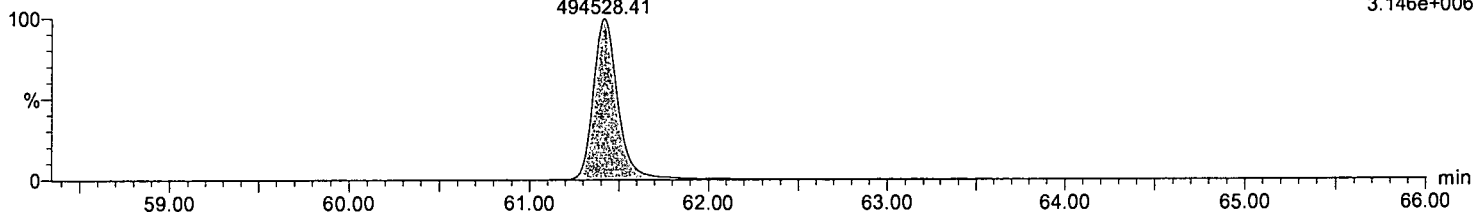
F5:Voltage SIR,EI+
443.7399
2.654e+003



13C-OCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

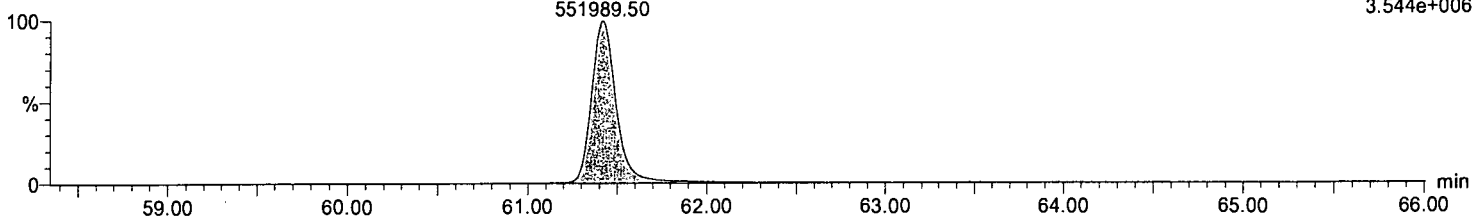
F5:Voltage SIR,EI+
469.778
3.146e+006



13C-OCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

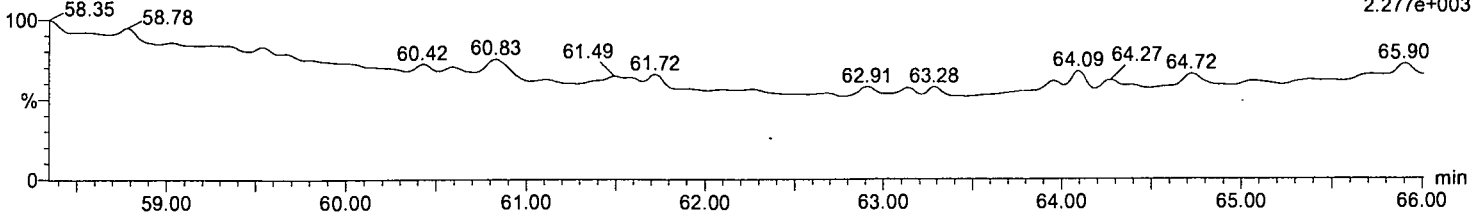
F5:Voltage SIR,EI+
471.775
3.544e+006



DCDPE

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

F5:Voltage SIR,EI+
513.6775
2.277e+003



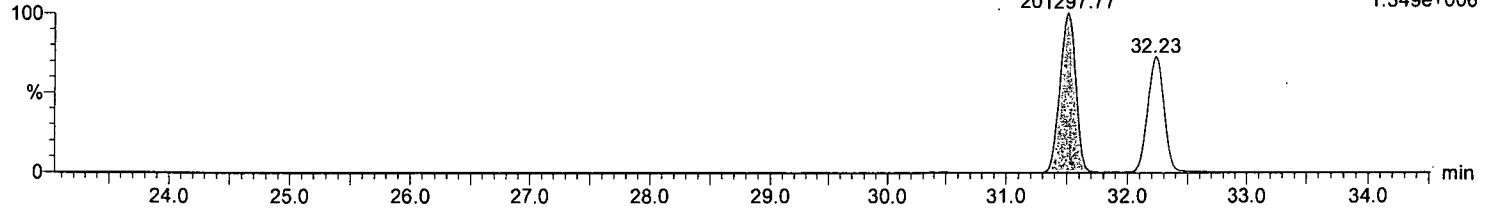
Name: 130501_HR_15, Date: 02-May-2013, Time: 08:49:24, ID: , Description: 130415WBLKA 50.000 DF 04/15/13, User: RP

13C-1,2,3,4-TCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

13C-1,2,3,4-TCDD
31.51
201297.77

F1:Voltage SIR,EI+
331.9368
1.349e+006

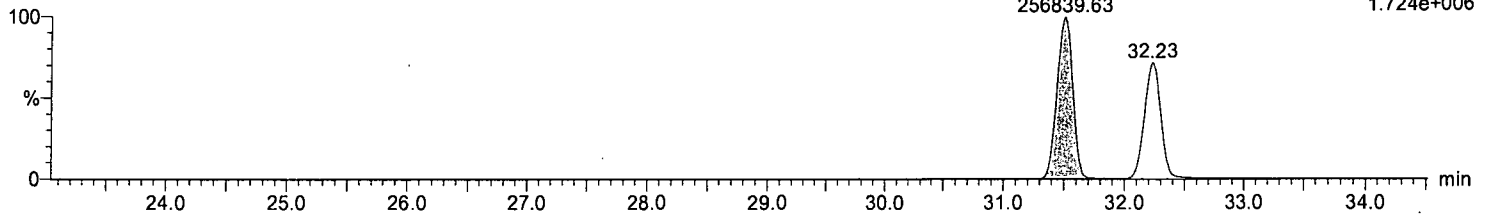


13C-1,2,3,4-TCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

13C-1,2,3,4-TCDD
31.51
256839.63

F1:Voltage SIR,EI+
333.9338
1.724e+006



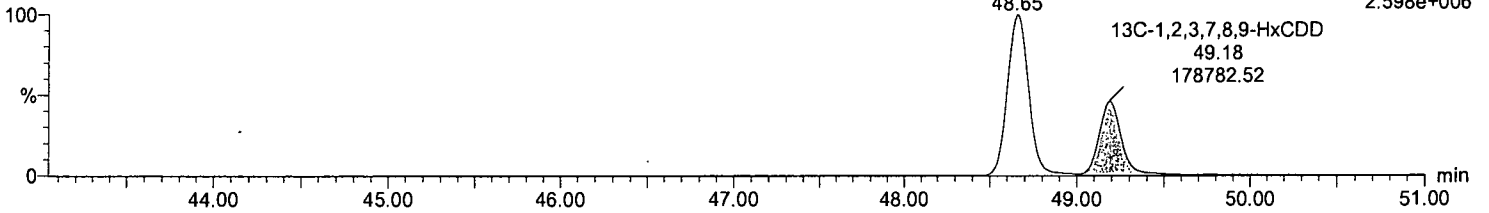
13C-1,2,3,7,8,9-HxCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

48.65

13C-1,2,3,7,8,9-HxCDD
49.18
178782.52

F3:Voltage SIR,EI+
401.8559
2.598e+006



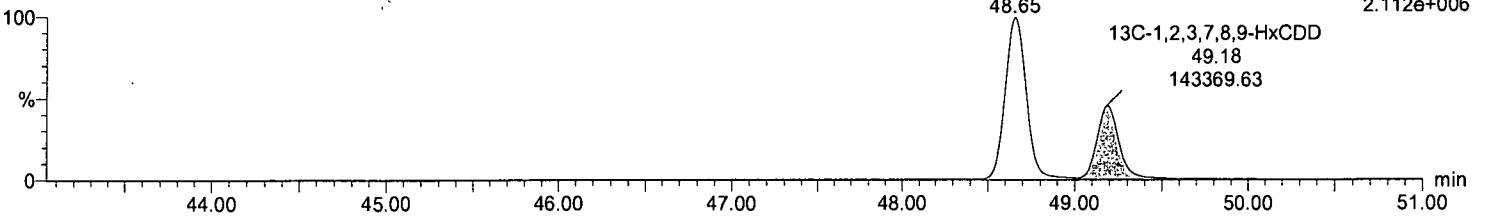
13C-1,2,3,7,8,9-HxCDD

130501_HR_15
130415WBLKA 50.000 DF 04/15/13

48.65

13C-1,2,3,7,8,9-HxCDD
49.18
143369.63

F3:Voltage SIR,EI+
403.8529
2.112e+006



Laboratory Control Spike Recovery

EPA 8290 - Dioxins and Furans

APPL ID: **130415W-78757 LCS - 177086**
 Batch ID: #8290W-130415A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level pg/L	SPK Result pg/L	SPK % Recovery	Recovery Limits
2,3,7,8-TCDD	500	547	109	70-130
SURROGATE: 13C-1,2,3,4,6,7,8-HPCDD	5000	3460	69.2	40-135
SURROGATE: 13C-1,2,3,4,6,7,8-HPCDF	5000	3350	67.0	40-135
SURROGATE: 13C-1,2,3,4,7,8-HXCDF (S)	5000	3310	66.2	40-135
SURROGATE: 13C-1,2,3,6,7,8-HXCDD (S)	5000	3100	62.0	40-135
SURROGATE: 13C-1,2,3,7,8-PECDD (S)	2000	1330	66.5	40-135
SURROGATE: 13C-1,2,3,7,8-PECDF (S)	2000	1350	67.5	40-135
SURROGATE: 13C-2,3,7,8-TCDD (S)	2000	1340	67.0	40-135
SURROGATE: 13C-2,3,7,8-TCDF (S)	2000	1350	67.5	40-135
SURROGATE: 13C-OCDD (S)	10000	6770	67.7	40-135

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	130501_8290
Extraction Date :	04/15/13
Analysis Date :	05/02/13
Instrument :	Magneto
Run :	130501_HR_13
Initials :	RP

Printed: 05/03/13 12:53:48 PM
 APPL Standard LCS

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

Name	Peak Area	1%Area	RT	Ion Ab	Ion Fail?	S/N1	S/N2	Conc	%Rec	LOD	EMPC	Multiplie
2,3,7,8-TCDD	6.291268e4	8.285835e4	32.32	0.76	NO	NO	NO	546.549	109.31	0.219	546.549	50.00
1,2,3,7,8-PeCDD	1.601426e5	1.038180e5	41.20	1.54	NO	NO	NO	1339.934	107.19	1.221	1339.934	50.00
1,2,3,4,7,8-HxCDD	1.395445e5	1.094677e5	48.54	1.27	NO	NO	NO	1276.252	102.10	2.700	1276.252	50.00
1,2,3,6,7,8-HxCDD	1.517556e5	1.230706e5	48.75	1.23	NO	NO	NO	1355.165	108.41	2.598	1355.165	50.00
1,2,3,7,8,9-HxCDD	1.599098e5	1.292671e5	49.27	1.24	NO	NO	NO	1414.207	113.14	2.577	1414.207	50.00
1,2,3,4,6,7,8-HpCDD	1.344067e5	1.298583e5	55.09	1.03	NO	NO	NO	1289.804	103.18	1.537	1289.804	50.00
OCDD	2.232905e5	2.586436e5	61.50	0.86	NO	NO	NO	2529.721	101.19	1.198	2529.721	50.00
2,3,7,8-TCDF	7.927459e4	1.041113e5	31.36	0.76	NO	NO	NO	536.283	107.26	0.776	536.283	50.00
1,2,3,7,8-PeCDF	2.369168e5	1.523783e5	38.47	1.55	NO	NO	NO	1286.708	102.94	1.188	1286.708	50.00
2,3,4,7,8-PeCDF	2.216405e5	1.422359e5	40.54	1.56	NO	NO	NO	1279.984	102.40	1.265	1279.984	50.00
1,2,3,4,7,8-HxCDF	2.102794e5	1.634103e5	46.70	1.29	NO	NO	NO	1262.936	101.03	1.974	1262.936	50.00
1,2,3,6,7,8-HxCDF	2.216786e5	1.747983e5	46.96	1.27	NO	NO	NO	1234.886	98.79	1.819	1234.886	50.00
2,3,4,6,7,8-HxCDF	2.030285e5	1.591535e5	48.17	1.28	NO	NO	NO	1248.369	99.87	2.013	1248.369	50.00
1,2,3,7,8,9-HxCDF	1.636433e5	1.258424e5	49.89	1.30	NO	NO	NO	1153.547	92.28	2.327	1153.547	50.00
1,2,3,4,6,7,8-HpCDF	1.984349e5	1.898425e5	52.91	1.05	NO	NO	NO	1324.708	105.98	2.190	1324.708	50.00
1,2,3,4,7,8,9-HpCDF	1.474598e5	1.420276e5	56.05	1.04	NO	NO	NO	1266.884	101.35	2.809	1266.884	50.00
OCDF	2.442957e5	2.758352e5	61.89	0.89	NO	NO	NO	2372.669	94.91	1.117	2372.669	50.00
13C-2,3,7,8-TCDD	2.411902e5	3.012006e5	32.30	0.80	NO	NO	NO	1342.076	67.10	1.244		50.00
13C-1,2,3,7,8-PeCDD	2.670490e5	1.701615e5	41.17	1.57	NO	NO	NO	1325.917	66.30	0.948		50.00
13C-1,2,3,6,7,8-HxCDD	5.626534e5	4.417498e5	48.71	1.27	NO	NO	NO	3095.397	61.91	1.574		50.00
13C-1,2,3,4,6,7,8-HpCDD	5.094744e5	4.767984e5	55.07	1.07	NO	NO	NO	3463.004	69.26	2.595		50.00
13C-OCDD	8.282650e5	9.236869e5	61.49	0.90	NO	NO	NO	6774.608	67.75	1.413		50.00
13C-2,3,7,8-TCDF	3.204960e5	4.107248e5	31.32	0.78	NO	NO	NO	1352.837	67.64	0.382		50.00
13C-1,2,3,7,8-PeCDF	3.600966e5	2.304328e5	38.44	1.56	NO	NO	NO	1351.477	67.57	0.738		50.00
13C-1,2,3,4,7,8-HxCDF	4.013735e5	7.851751e5	46.67	0.51	NO	NO	NO	3312.564	66.25	1.609		50.00
13C-1,2,3,4,6,7,8-HpCDF	3.159690e5	7.074929e5	52.90	0.45	NO	NO	NO	3347.676	66.95	1.199		50.00
13C-1,2,3,4-TCDD	3.990465e5	5.038450e5	31.56	0.79	NO	NO	NO	2000.000	100.00	1.113		50.00
13C-1,2,3,7,8,9-HxCDD	3.666229e5	2.928018e5	49.25	1.25	NO	NO	NO	2000.000	100.00	1.549		50.00

$$TCDD = \frac{(62912.68 + 82858.35)(2000)}{(241190.2 + 301200.6)(0.983467)(14)} = 546.549$$

5/3/13
RP

RETENTION TIME CHECK

130415WA_LCS-1 50.000 DF 04/15/13					EPA Method 8290		
INSTRUMENT:	Magneto			ANALYSIS DATE/TIME:			
COLUMN:	Restek DB5 - 60m			EXTRACTION DATE:			
MATRIX:				SEQUENCE:			
				RUN FILE: 130501_HR_13			
Analyte	RT of congener in sample	RT of ¹³ C congener in sample	RRT of congener in sample	RRT of congener in CCV	LCL ^a	UCL ^b	Qualifiers
	130501_HR_13	130501_HR_13	130501_HR_13	130501_HR_10			
2,3,7,8-TCDD	32.3228	32.2957	1.0008	1.0004	32.2790	32.3457	Pass
1,2,3,7,8-PeCDD	41.1978	41.1675	1.0007	1.0010	41.1508	41.2175	Pass
1,2,3,4,7,8-HxCDD	48.5442	48.7142	0.9965	0.9961	0.9911	1.0011	Pass
1,2,3,6,7,8-HxCDD	48.7460	48.7142	1.0007	1.0004	48.6975	48.7642	Pass
1,2,3,7,8,9-HxCDD	49.2665	49.2453	1.0004	1.0004	49.2286	49.2953	Pass
1,2,3,4,6,7,8-HpCDD	55.0910	55.0707	1.0004	1.0004	55.0540	55.1207	Pass
OCDD	61.5047	61.4945	1.0002	1.0003	61.4778	61.5445	Pass
2,3,7,8-TCDF	31.3567	31.3158	1.0013	1.0009	31.2991	31.3658	Pass
1,2,3,7,8-PeCDF	38.4713	38.4410	1.0008	1.0008	38.4243	38.4910	Pass
2,3,4,7,8-PeCDF	40.5390	38.4410	1.0546	1.0543	1.0490	1.0596	Pass
1,2,3,4,7,8-HxCDF	46.6955	46.6743	1.0005	1.0005	46.6576	46.7243	Pass
1,2,3,6,7,8-HxCDF	46.9612	46.6743	1.0061	1.0061	1.0011	1.0112	Pass
2,3,4,6,7,8-HxCDF	48.1723	46.6743	1.0321	1.0321	1.0269	1.0372	Pass
1,2,3,7,8,9-HxCDF	49.8933	46.6743	1.0690	1.0689	1.0636	1.0743	Pass
1,2,3,4,6,7,8-HpCDF	52.9120	52.9018	1.0002	1.0004	52.8851	52.9518	Pass
1,2,3,4,7,8,9-HpCDF	56.0538	52.9018	1.0596	1.0600	1.0547	1.0653	Pass
OCDF	61.8898	61.4945	1.0064	1.0066	1.0016	1.0116	Pass
¹³ C ₁₂ -2,3,7,8-TCDD	32.2957	31.5608	1.0233	1.0233	1.0182	1.0284	Pass
¹³ C ₁₂ -1,2,3,7,8-PeCDD	41.1675	31.5608	1.3044	1.3048	1.2983	1.3113	Pass
¹³ C ₁₂ -1,2,3,6,7,8-HxCDD	48.7142	49.2453	0.9892	0.9894	0.9845	0.9944	Pass
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDD	55.0707	49.2453	1.1183	1.1185	1.1129	1.1241	Pass
¹³ C ₁₂ -OCDD	61.4945	49.2453	1.2487	1.2491	1.2428	1.2553	Pass
¹³ C ₁₂ -2,3,7,8-TCDF	31.3158	31.5608	0.9922	0.9922	0.9873	0.9972	Pass
¹³ C ₁₂ -1,2,3,7,8-PeCDF	38.4410	31.5608	1.2180	1.2188	1.2127	1.2248	Pass
¹³ C ₁₂ -1,2,3,4,7,8-HxCDF	46.6743	49.2453	0.9478	0.9478	0.9431	0.9526	Pass
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDF	52.9018	49.2453	1.0743	1.0742	1.0689	1.0796	Pass
¹³ C ₁₂ -1,2,3,4-TCDD	31.5608	31.5608	1.0000	1.0000	0.9950	1.0050	Pass
¹³ C ₁₂ -1,2,3,7,8,9-HxCDD	49.2453	49.2453	1.0000	1.0000	0.9950	1.0050	Pass

a. Lower control limit
b. Upper control limit

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

#	Name	RT	RRT
1	2,3,7,8-TCDD	32.322800	1.000839
2	1,2,3,7,8-PeCDD	41.197800	1.000736
3	1,2,3,4,7,8-HxCDD	48.544201	0.996510
4	1,2,3,6,7,8-HxCDD	48.745998	1.000653
5	1,2,3,7,8,9-HxCDD	49.266499	1.000430
6	1,2,3,4,6,7,8-HpCDD	55.091000	1.000369
7	OCDD	61.504700	1.000166
8	2,3,7,8-TCDF	31.356701	1.001306
9	1,2,3,7,8-PeCDF	38.471298	1.000788
10	2,3,4,7,8-PeCDF	40.539001	1.054577
11	1,2,3,4,7,8-HxCDF	46.695499	1.000454
12	1,2,3,6,7,8-HxCDF	46.961201	1.006147
13	2,3,4,6,7,8-HxCDF	48.172298	1.032095
14	1,2,3,7,8,9-HxCDF	49.893299	1.068967
15	1,2,3,4,6,7,8-HpCDF	52.911999	1.000193
16	1,2,3,4,7,8,9-HpCDF	56.053799	1.059582
17	OCDF	61.889801	1.006428
18	13C-2,3,7,8-TCDD	32.295700	1.023285
19	13C-1,2,3,7,8-PeCDD	41.167500	1.304387
20	13C-1,2,3,6,7,8-HxCDD	48.714199	0.989215
21	13C-1,2,3,4,6,7,8-HpCDD	55.070702	1.118294
22	13C-OCDD	61.494499	1.248738
23	13C-2,3,7,8-TCDF	31.315800	0.992237
24	13C-1,2,3,7,8-PeCDF	38.441002	1.217998
25	13C-1,2,3,4,7,8-HxCDF	46.674301	0.947792
26	13C-1,2,3,4,6,7,8-HpCDF	52.901798	1.074251
27	13C-1,2,3,4-TCDD	31.560801	1.000000
28	13C-1,2,3,7,8,9-HxCDD	49.245300	1.000000

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

#	Name	Signal	Noise 1	S/N 1	Flag S/N	Signal 2	Noise 2	S/N 2	Flag S/N
1	2,3,7,8-TCDD	3.9327100e5	7.6936996e1	5109.81	NO	5.1810300e5	7.1264282e1	7270.16	NO
2	1,2,3,7,8-PeCDD	1.1116890e6	1.1045261e2	10063.87	NO	7.1922700e5	5.4903259e2	1309.99	NO
3	1,2,3,4,7,8-HxCDD	1.0982910e6	1.0330175e3	1060.53	NO	8.5189100e5	5.0751233e2	1678.56	NO
4	1,2,3,6,7,8-HxCDD	1.0698480e6	1.0330175e3	1033.07	NO	8.7015700e5	5.0751233e2	1714.55	NO
5	1,2,3,7,8,9-HxCDD	1.1140320e6	1.0330175e3	1076.02	NO	8.8894000e5	5.0751233e2	1751.56	NO
6	1,2,3,4,6,7,8-HpCDD	1.0065030e6	6.0042676e2	1674.94	NO	9.7612000e5	3.1656509e2	3083.47	NO
7	OCDD	1.5492630e6	3.2370770e2	4784.31	NO	1.7534580e6	3.0171689e2	5811.60	NO
8	2,3,7,8-TCDF	4.8944100e5	4.9891968e2	980.12	NO	6.5051600e5	1.6622838e2	3913.39	NO
9	1,2,3,7,8-PeCDF	1.5437460e6	4.9312143e2	3125.65	NO	9.9722600e5	5.1207385e2	1947.43	NO
10	2,3,4,7,8-PeCDF	1.4479750e6	4.9312143e2	2931.61	NO	9.2142000e5	5.1207385e2	1799.39	NO
11	1,2,3,4,7,8-HxCDF	1.4727630e6	6.1190430e2	2401.45	NO	1.1506730e6	1.0137231e3	1135.10	NO
12	1,2,3,6,7,8-HxCDF	1.5319030e6	6.1190430e2	2498.23	NO	1.1983620e6	1.0137231e3	1182.14	NO
13	2,3,4,6,7,8-HxCDF	1.4175890e6	6.1190430e2	2311.97	NO	1.1089010e6	1.0137231e3	1093.89	NO
14	1,2,3,7,8,9-HxCDF	1.0628700e6	6.1190430e2	1733.36	NO	8.1883100e5	1.0137231e3	807.75	NO
15	1,2,3,4,6,7,8-HpCDF	1.5167950e6	6.1666309e2	2455.73	NO	1.4385350e6	1.3247141e3	1085.92	NO
16	1,2,3,4,7,8,9-HpCDF	1.0482420e6	6.1666309e2	1696.63	NO	1.0129020e6	1.3247141e3	764.62	NO
17	OCDF	1.5960250e6	3.3555695e2	4754.70	NO	1.7891220e6	3.3563318e2	5330.59	NO
18	13C-2,3,7,8-TCDD	1.5309490e6	1.1112888e3	1378.08	NO	1.9003560e6	2.1871768e2	8688.63	NO
19	13C-1,2,3,7,8-PeCDD	1.8311670e6	3.9303259e2	4657.71	NO	1.1703170e6	4.3397723e2	2696.72	NO
20	13C-1,2,3,6,7,8-HxCDD	4.1127570e6	4.5070886e2	9130.55	NO	3.2360410e6	9.1742377e2	3527.31	NO
21	13C-1,2,3,4,6,7,8-HpCDD	3.7077750e6	1.5151913e3	2444.93	NO	3.4995700e6	4.6531873e2	7520.80	NO
22	13C-OCDD	5.6734930e6	4.0309473e2	14074.69	NO	6.3431270e6	5.7601984e2	11011.99	NO
23	13C-2,3,7,8-TCDF	2.0090600e6	3.3585492e2	5980.72	NO	2.5790370e6	2.1013617e2	12273.17	NO
24	13C-1,2,3,7,8-PeCDF	2.5171540e6	4.7914758e2	5251.71	NO	1.6279820e6	3.7392276e2	4353.79	NO
25	13C-1,2,3,4,7,8-HxCDF	2.7933980e6	9.9386438e2	2809.46	NO	5.3754970e6	5.5061517e2	9762.71	NO
26	13C-1,2,3,4,6,7,8-HpCDF	2.3889280e6	5.2129614e2	4580.85	NO	5.3145850e6	4.6056363e2	11539.31	NO
27	13C-1,2,3,4-TCDD	2.6397840e6	1.1112888e3	2375.77	NO	3.3122340e6	2.1871768e2	15143.88	NO
28	13C-1,2,3,7,8,9-HxCDD	2.4560050e6	4.5070886e2	5446.93	NO	1.9514590e6	9.1742377e2	2127.11	NO

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_Samples_10-20_8290.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290.mdb 02 May 2013 07:29:59

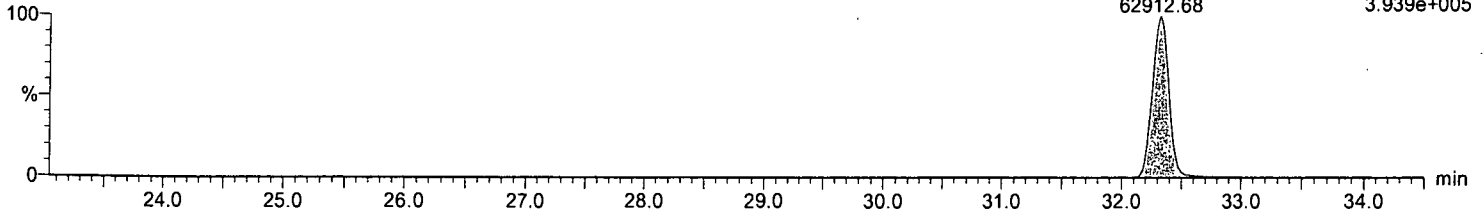
Calibration: C:\MassLynx\Default.pro\Curvedb\130501_8290.cdb 02 May 2013 07:30:19

Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

2,3,7,8-TCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

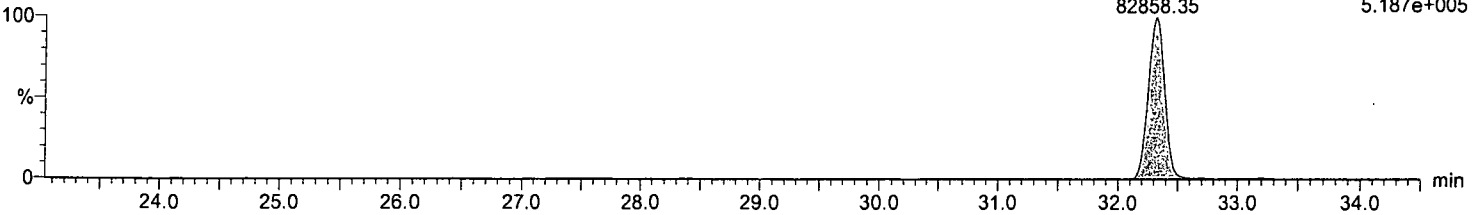
2,3,7,8-TCDD
32.32
62912.68
F1:Voltage SIR,EI+
319.8965
3.939e+005



2,3,7,8-TCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

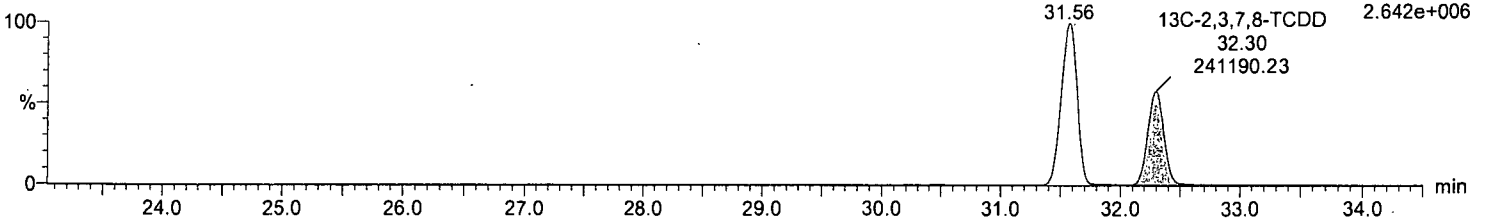
2,3,7,8-TCDD
32.32
82858.35
F1:Voltage SIR,EI+
321.8936
5.187e+005



13C-2,3,7,8-TCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

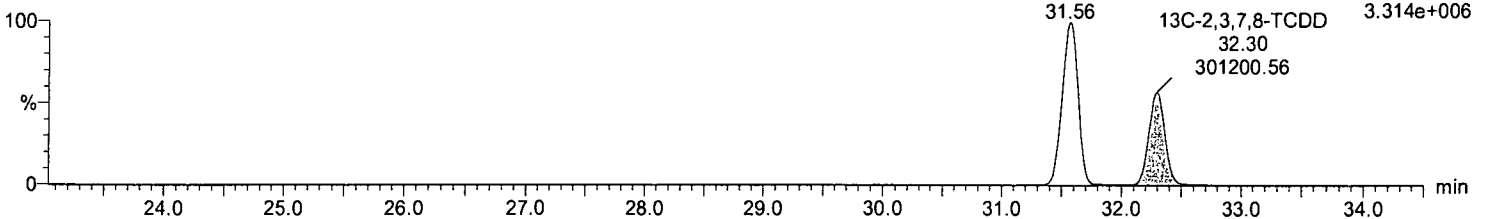
F1:Voltage SIR,EI+
331.9368
2.642e+006



13C-2,3,7,8-TCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

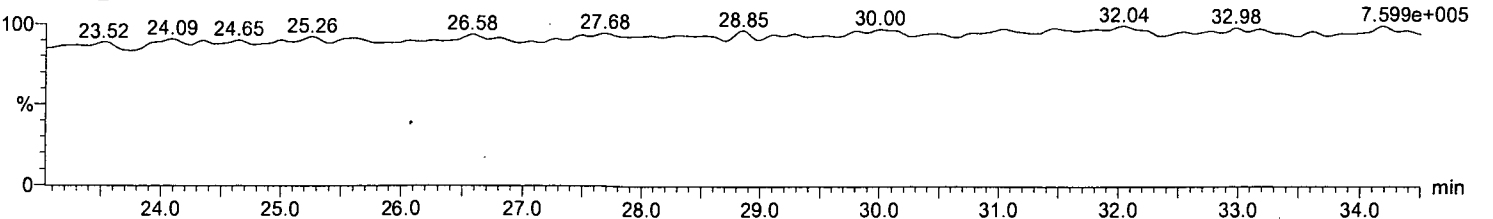
F1:Voltage SIR,EI+
333.9338
3.314e+006



PFK1

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F1:Voltage SIR,EI+
292.9824
7.599e+005

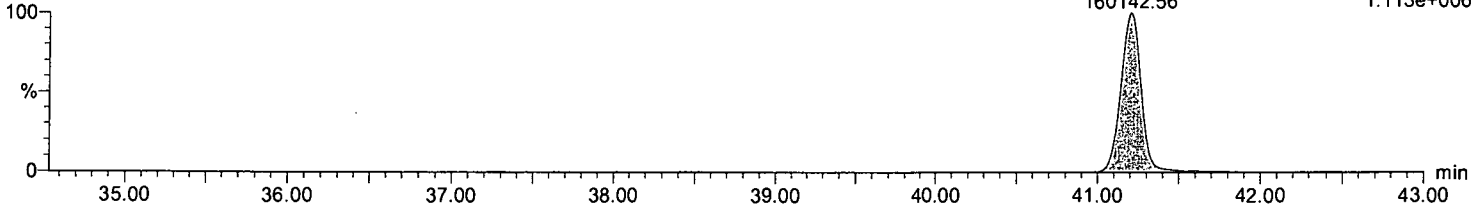


Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

1,2,3,7,8-PeCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

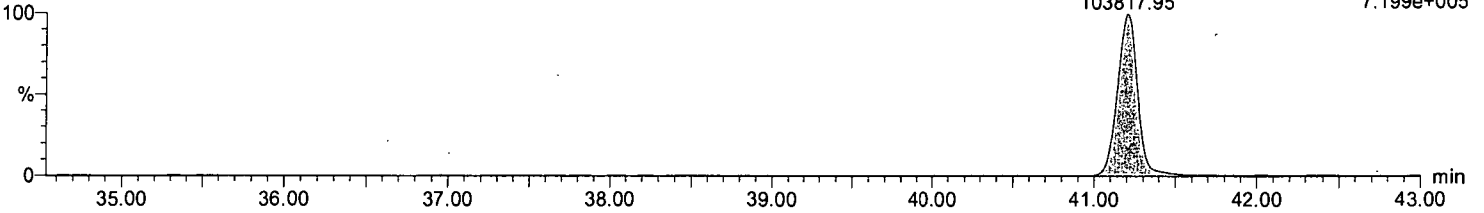
1,2,3,7,8-PeCDD
41.20
160142.56
F2:Voltage SIR,EI+
355.8546
1.113e+006



1,2,3,7,8-PeCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

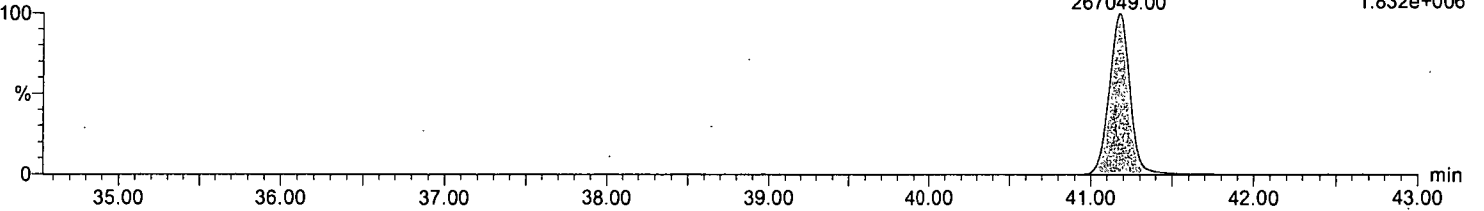
1,2,3,7,8-PeCDD
41.20
103817.95
F2:Voltage SIR,EI+
357.8516
7.199e+005



13C-1,2,3,7,8-PeCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

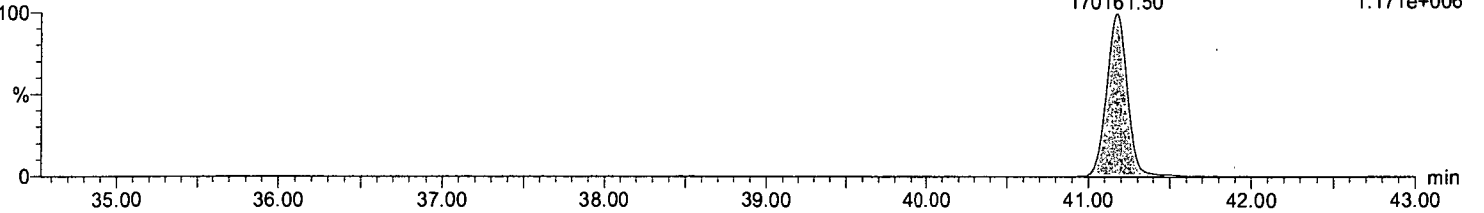
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41.17
267049.00
F2:Voltage SIR,EI+
367.8949
1.832e+006



13C-1,2,3,7,8-PeCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

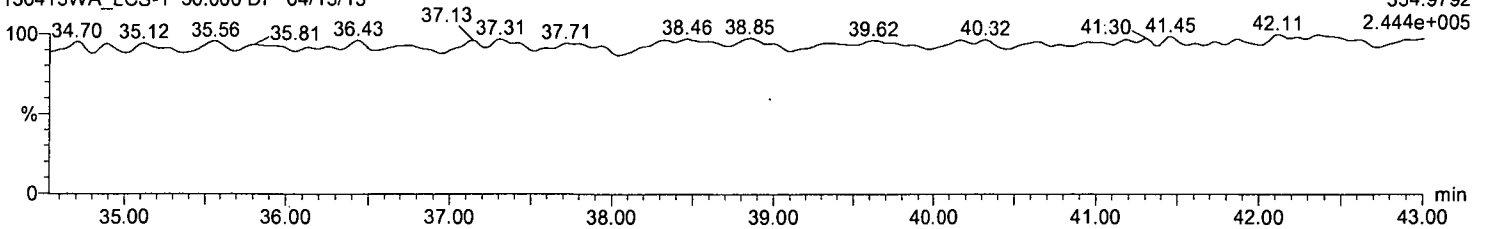
13C-1,2,3,7,8-PeCDD
41.17
170161.50
F2:Voltage SIR,EI+
369.8919
1.171e+006



PFK2

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F2:Voltage SIR,EI+
354.9792
2.444e+005



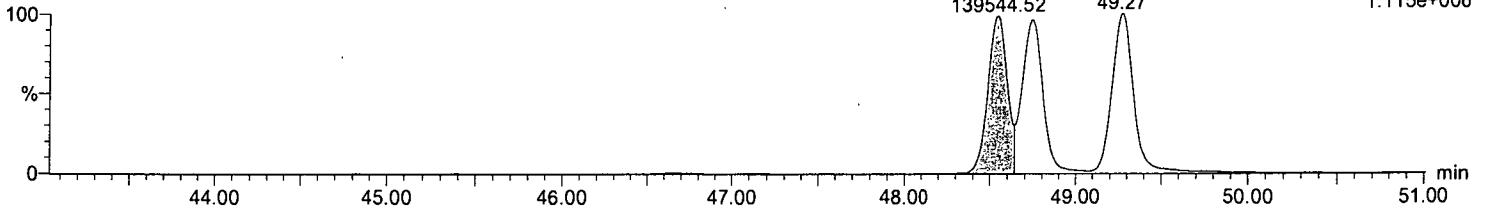
Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

1,2,3,4,7,8-HxCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

1,2,3,4,7,8-HxCDD

F3:Voltage SIR,EI+
389.8156
1.115e+006

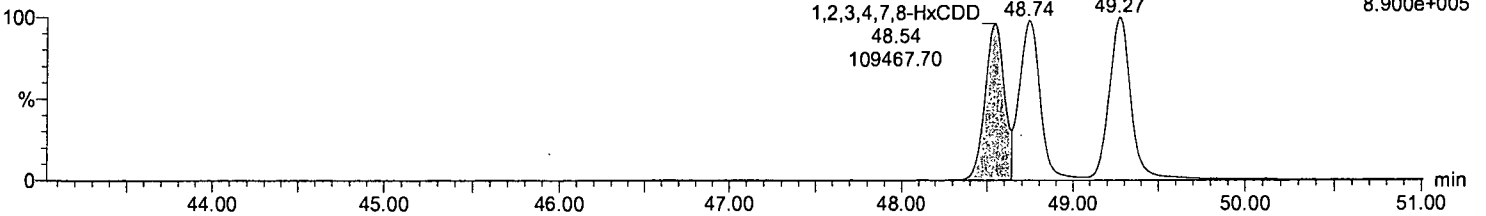


1,2,3,4,7,8-HxCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

1,2,3,4,7,8-HxCDD
48.54
109467.70
48.74
49.27

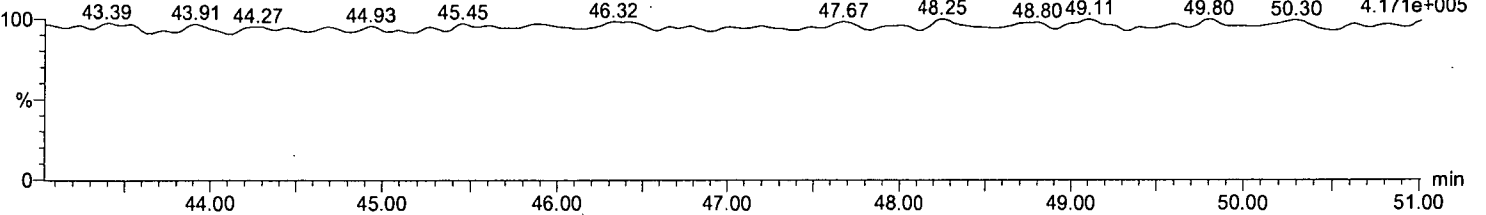
F3:Voltage SIR,EI+
391.8127
8.900e+005



PFK3

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F3:Voltage SIR,EI+
392.976
4.171e+005

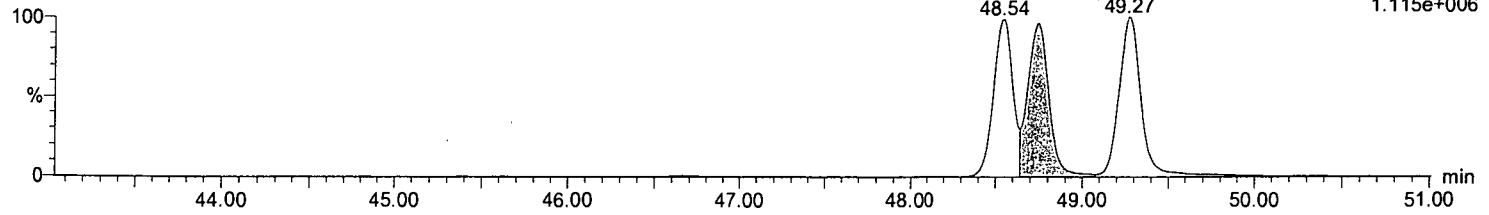


Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

1,2,3,6,7,8-HxCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

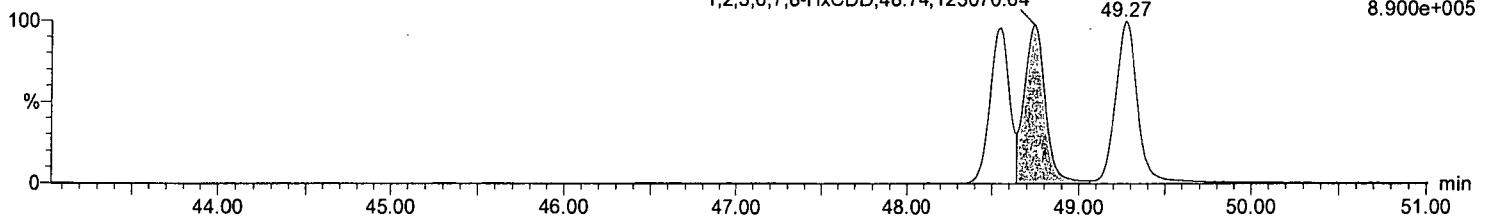
F3:Voltage SIR,EI+
389.8156
1.115e+006



1,2,3,6,7,8-HxCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

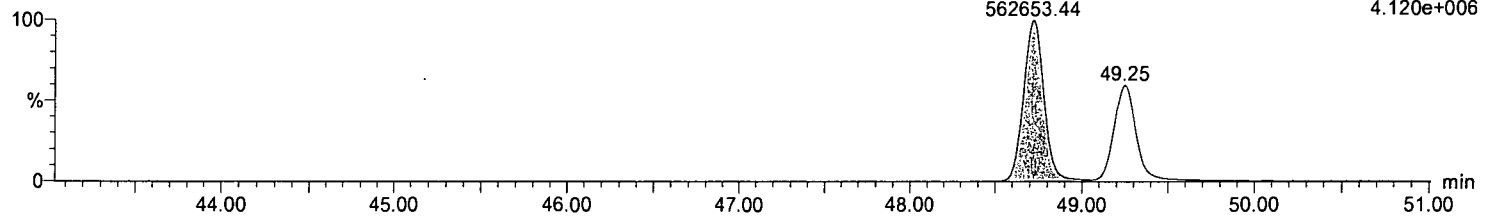
F3:Voltage SIR,EI+
391.8127
8.900e+005



13C-1,2,3,6,7,8-HxCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

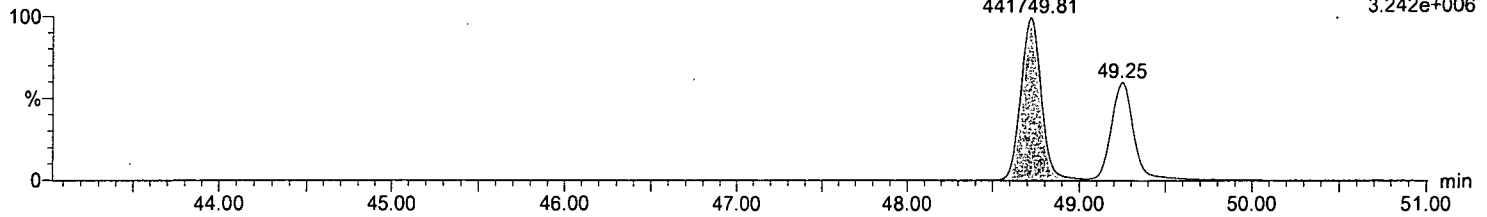
13C-1,2,3,6,7,8-HxCDD
48.71
562653.44
F3:Voltage SIR,EI+
401.8559
4.120e+006



13C-1,2,3,6,7,8-HxCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

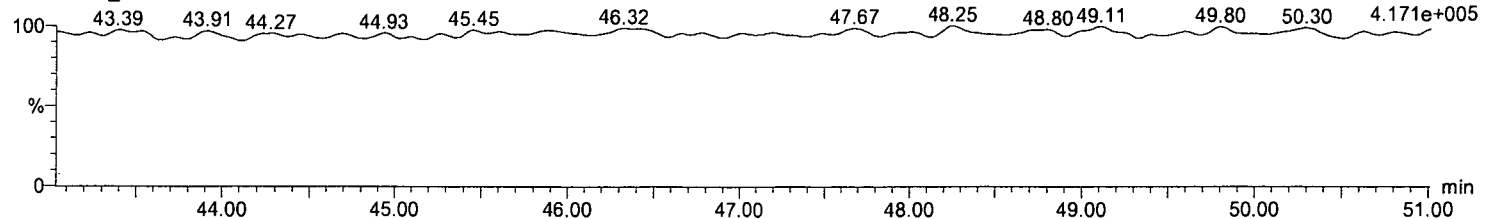
13C-1,2,3,6,7,8-HxCDD
48.71
441749.81
F3:Voltage SIR,EI+
403.8529
3.242e+006



PFK3

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F3:Voltage SIR,EI+
392.976
4.171e+005

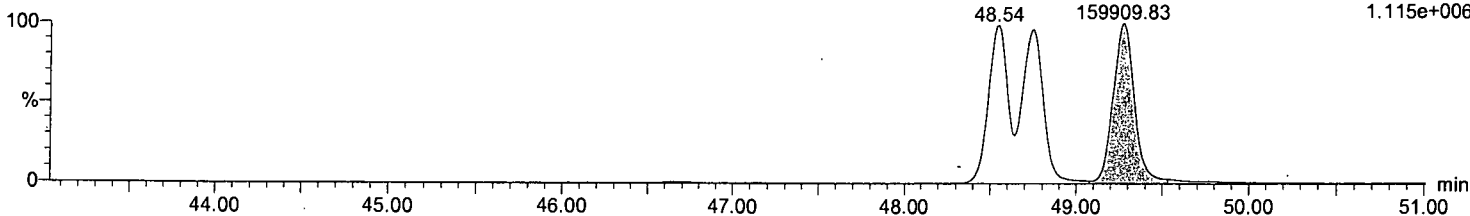


Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

1,2,3,7,8,9-HxCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

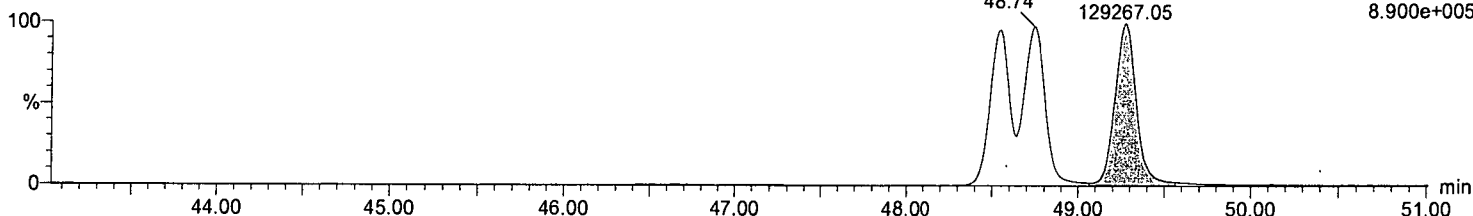
1,2,3,7,8,9-HxCDD
49.27
F3:Voltage SIR,EI+
389.8156
1.115e+006



1,2,3,7,8,9-HxCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

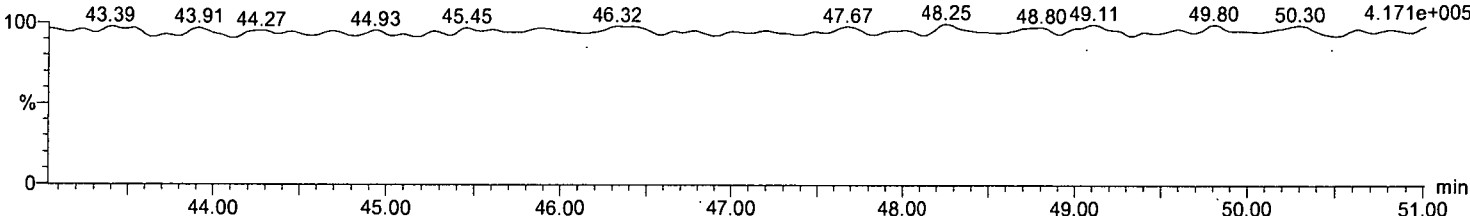
1,2,3,7,8,9-HxCDD
49.27
F3:Voltage SIR,EI+
391.8127
8.900e+005



PFK3

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F3:Voltage SIR,EI+
392.976
4.171e+005



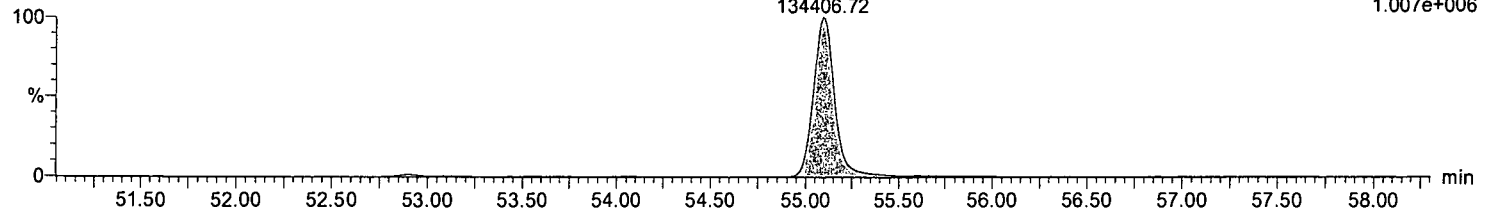
Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

1,2,3,4,6,7,8-HpCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

1,2,3,4,6,7,8-HpCDD
55.09
134406.72

F4:Voltage SIR,EI+
423.7767
1.007e+006

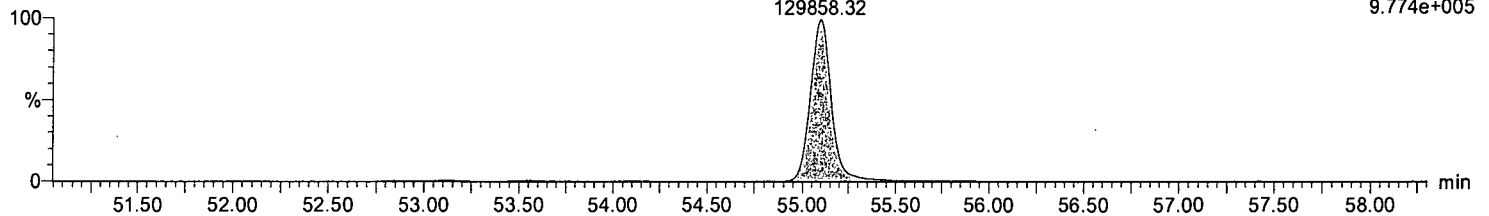


1,2,3,4,6,7,8-HpCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

1,2,3,4,6,7,8-HpCDD
55.09
129858.32

F4:Voltage SIR,EI+
425.7737
9.774e+005

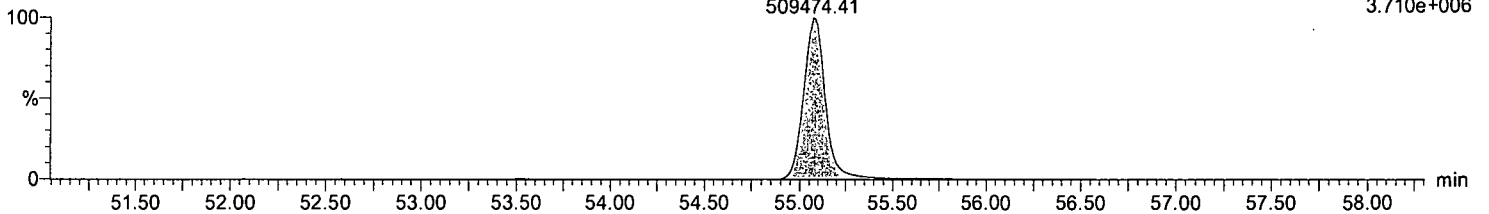


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

13C-1,2,3,4,6,7,8-HpCDD
55.07
509474.41

F4:Voltage SIR,EI+
435.8169
3.710e+006

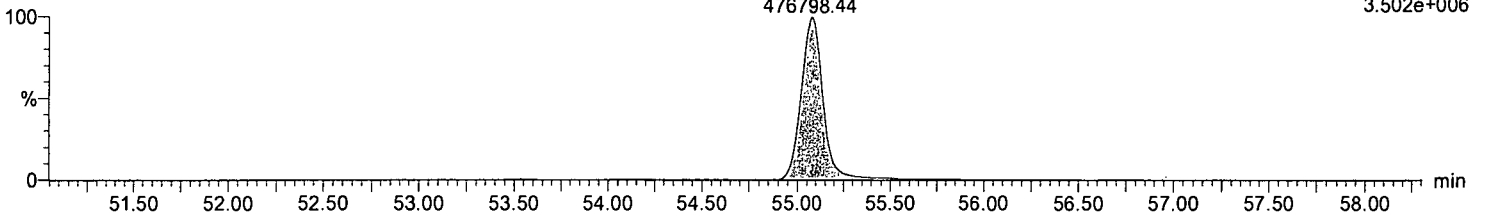


13C-1,2,3,4,6,7,8-HpCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

13C-1,2,3,4,6,7,8-HpCDD
55.07
476798.44

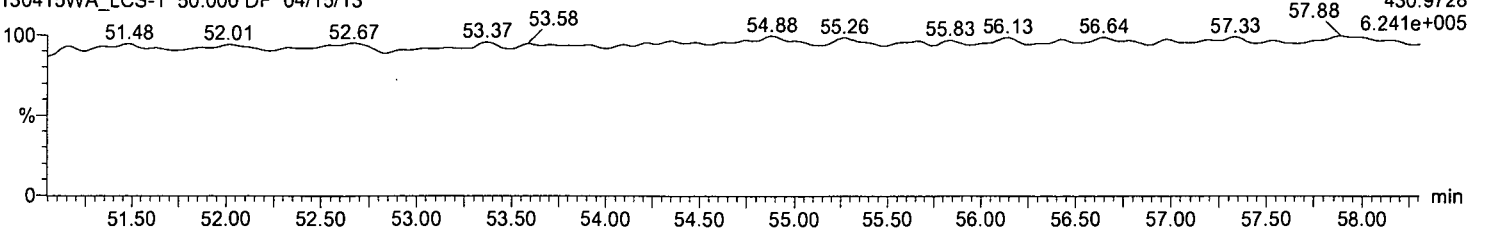
F4:Voltage SIR,EI+
437.814
3.502e+006



PFK4

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F4:Voltage SIR,EI+
430.9728
6.241e+005

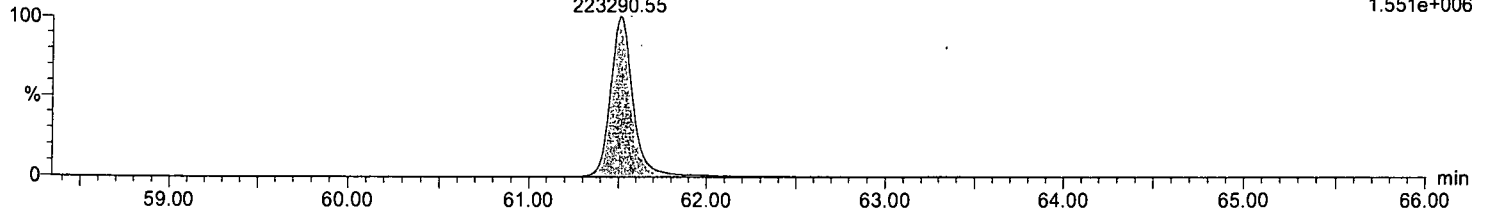


Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

OCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

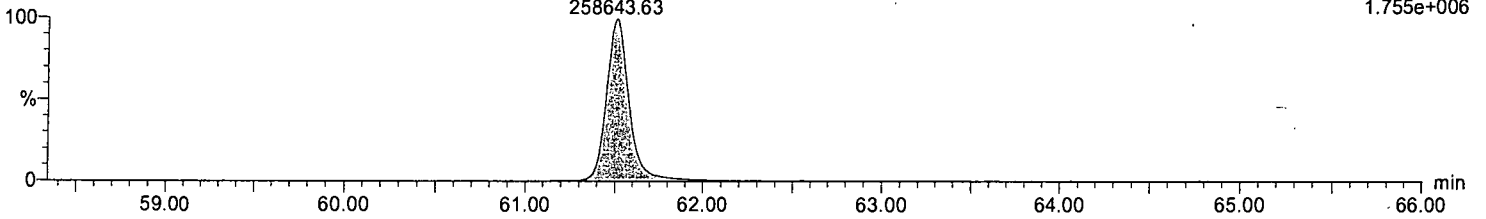
F5:Voltage SIR,EI+
457.7377
1.551e+006



OCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

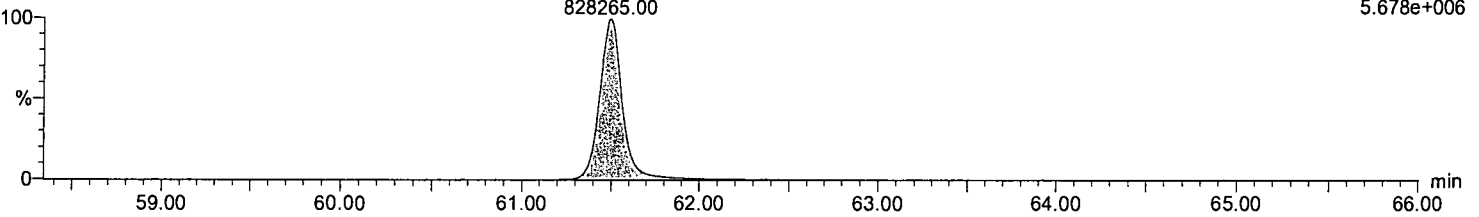
F5:Voltage SIR,EI+
459.7348
1.755e+006



13C-OCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

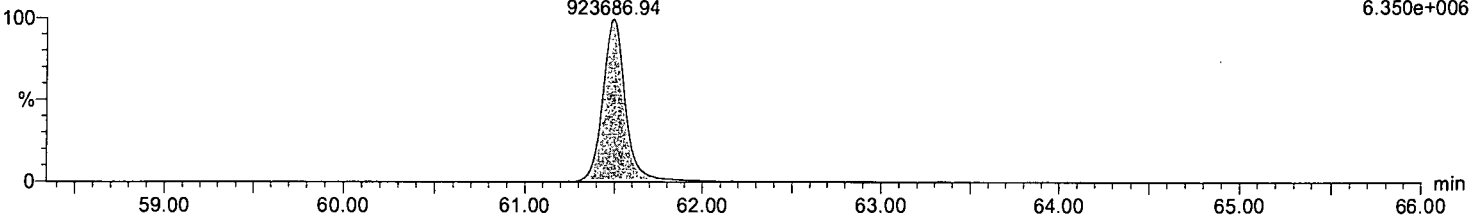
F5:Voltage SIR,EI+
469.778
5.678e+006



13C-OCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

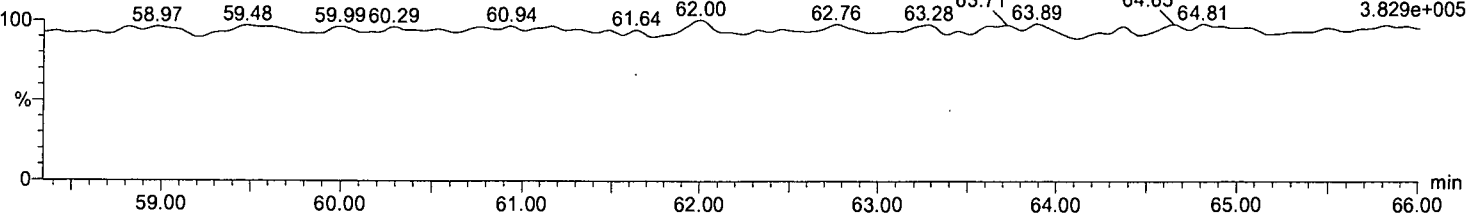
F5:Voltage SIR,EI+
471.775
6.350e+006



PFK5

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F5:Voltage SIR,EI+
442.9728
3.829e+005



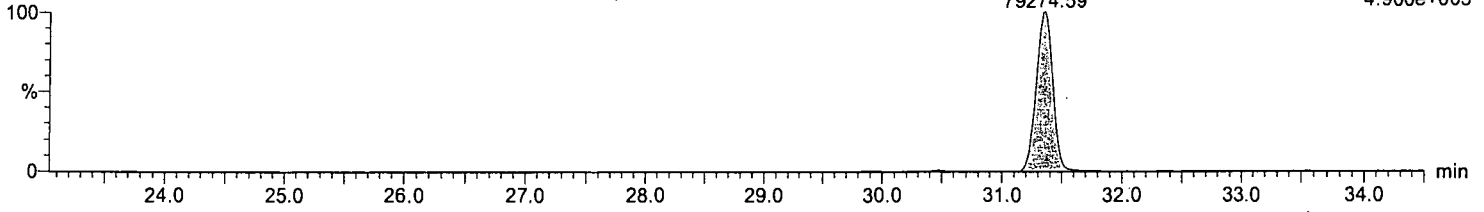
Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

2,3,7,8-TCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

2,3,7,8-TCDF
31.36
79274.59

F1:Voltage SIR,EI+
303.9016
4.900e+005

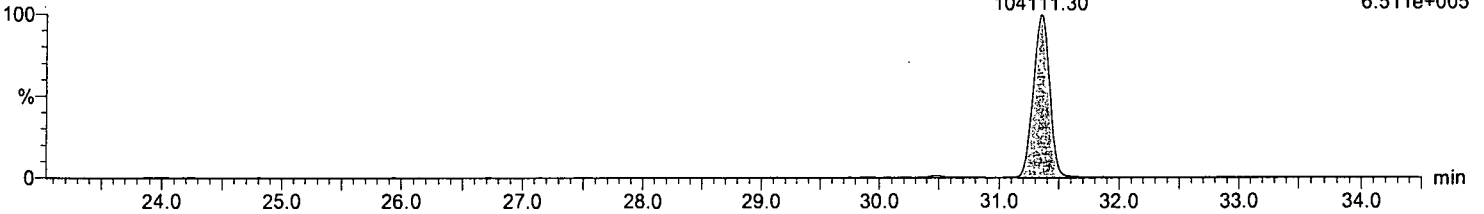


2,3,7,8-TCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

2,3,7,8-TCDF
31.34
104111.30

F1:Voltage SIR,EI+
305.8987
6.511e+005

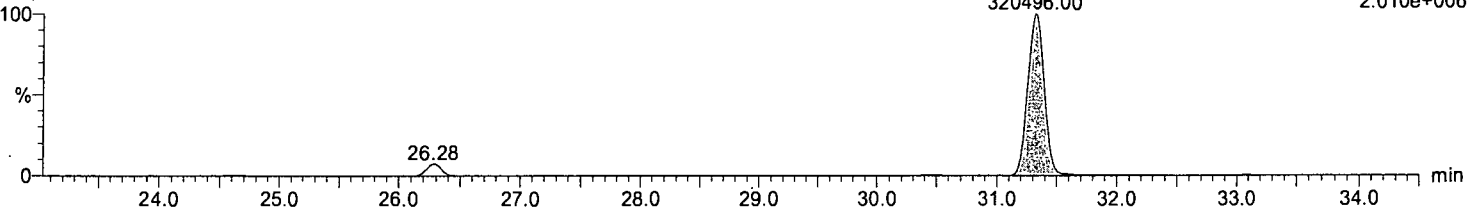


13C-2,3,7,8-TCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

13C-2,3,7,8-TCDF
31.32
320496.00

F1:Voltage SIR,EI+
315.9419
2.010e+006

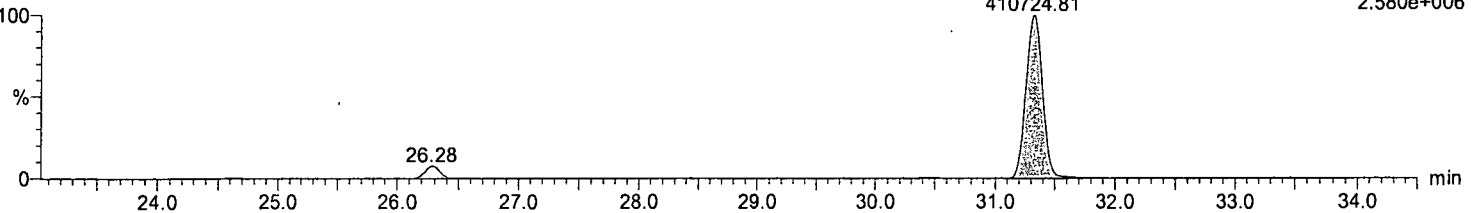


13C-2,3,7,8-TCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

13C-2,3,7,8-TCDF
31.32
410724.81

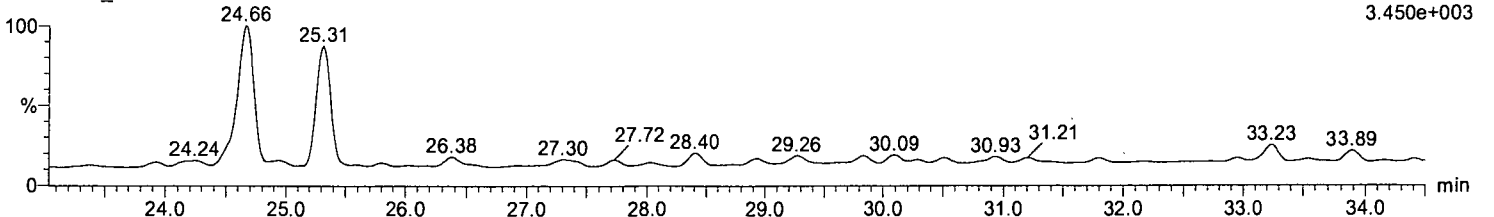
F1:Voltage SIR,EI+
317.9389
2.580e+006



HxCDFPE

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F1:Voltage SIR,EI+
375.8364
3.450e+003



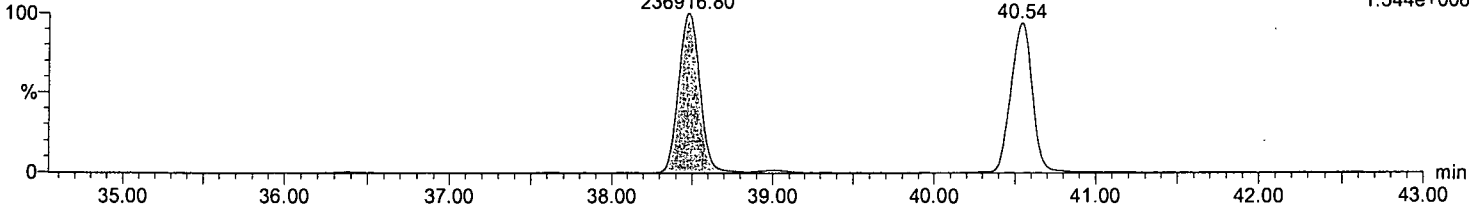
Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

1,2,3,7,8-PeCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

1,2,3,7,8-PeCDF
38.47
236916.80

F2: Voltage SIR, EI+
339.8597
1.544e+006

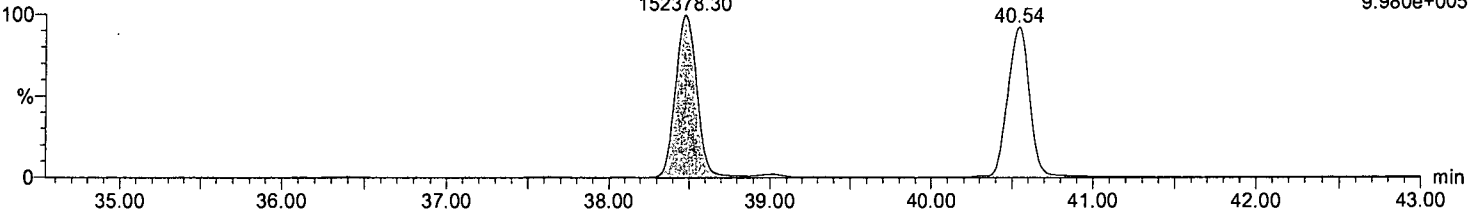


1,2,3,7,8-PeCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

1,2,3,7,8-PeCDF
38.47
152378.30

F2: Voltage SIR, EI+
341.8567
9.980e+005

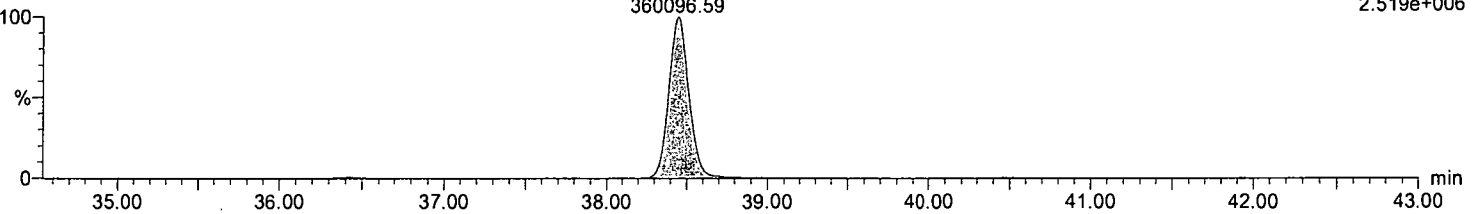


13C-1,2,3,7,8-PeCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

13C-1,2,3,7,8-PeCDF
38.44
360096.59

F2: Voltage SIR, EI+
351.9
2.519e+006

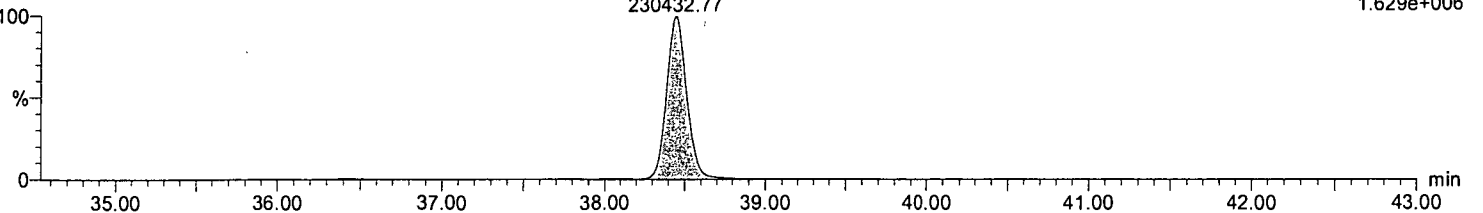


13C-1,2,3,7,8-PeCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

13C-1,2,3,7,8-PeCDF
38.44
230432.77

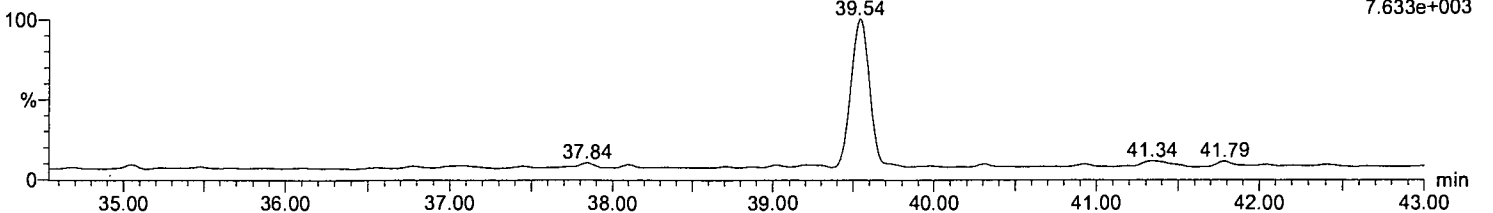
F2: Voltage SIR, EI+
353.897
1.629e+006



HpCDPE

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F2: Voltage SIR, EI+
409.7974
7.633e+003



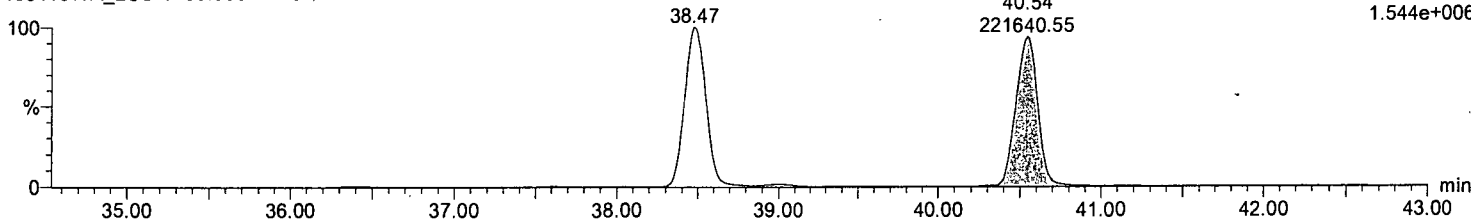
Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

2,3,4,7,8-PeCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

2,3,4,7,8-PeCDF
40.54
221640.55

F2:Voltage SIR,EI+
339.8597
1.544e+006

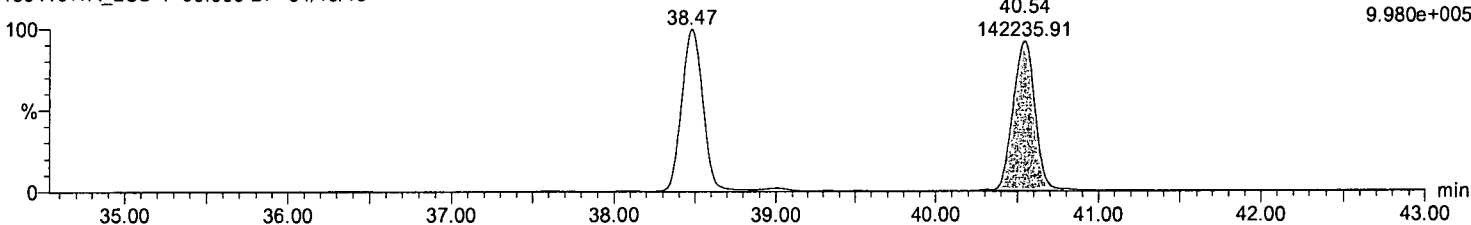


2,3,4,7,8-PeCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

2,3,4,7,8-PeCDF
40.54
142235.91

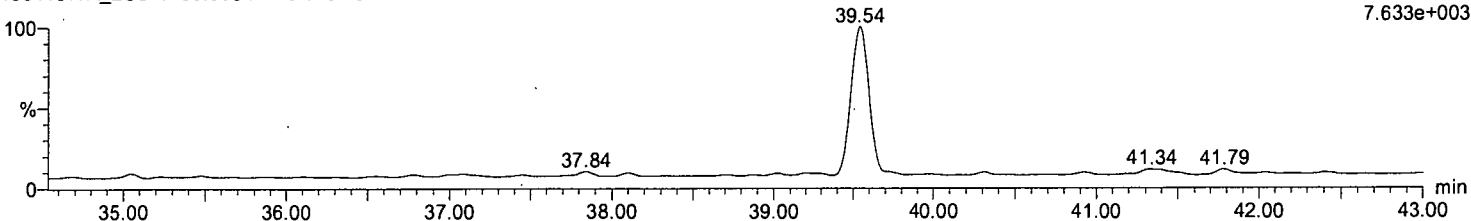
F2:Voltage SIR,EI+
341.8567
9.980e+005



HpCDPE

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F2:Voltage SIR,EI+
409.7974
7.633e+003

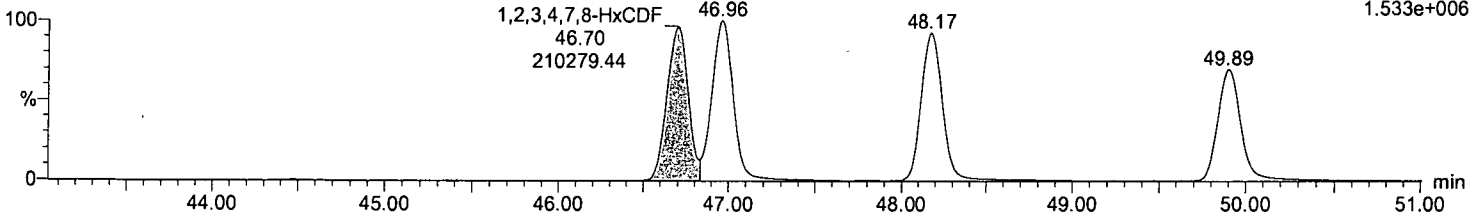


Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

1,2,3,4,7,8-HxCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

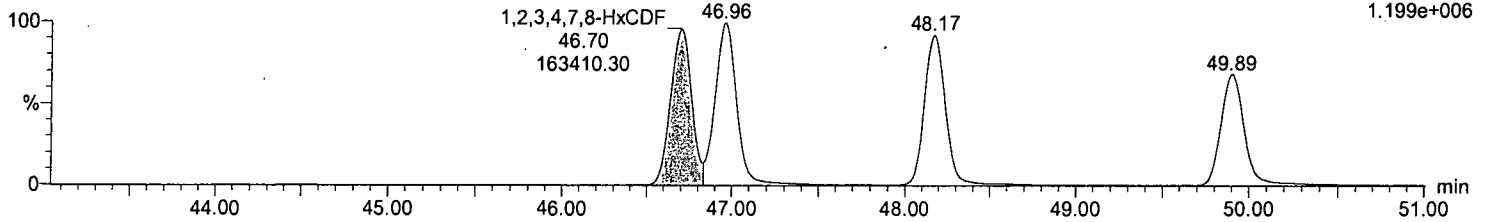
F3:Voltage SIR,EI+
373.8208
1.533e+006



1,2,3,4,7,8-HxCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

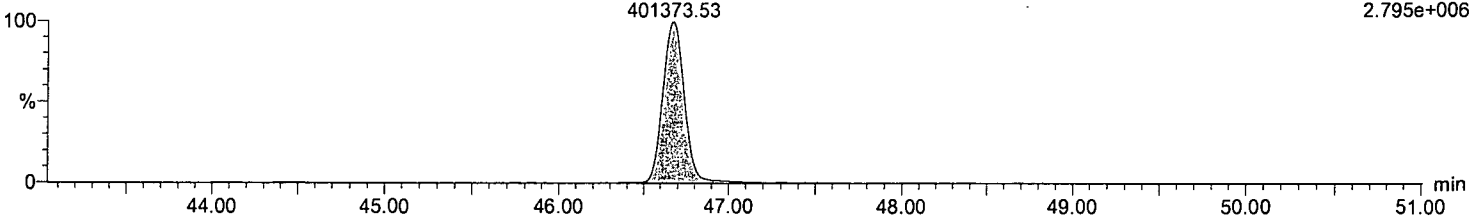
F3:Voltage SIR,EI+
375.8178
1.199e+006



13C-1,2,3,4,7,8-HxCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

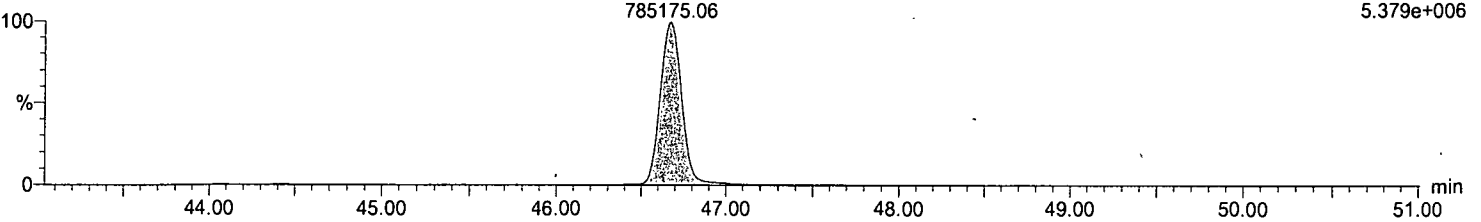
F3:Voltage SIR,EI+
383.8639
2.795e+006



13C-1,2,3,4,7,8-HxCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

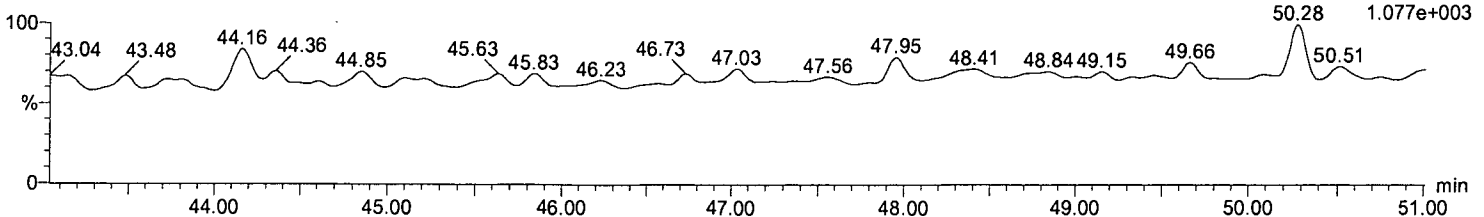
F3:Voltage SIR,EI+
385.861
5.379e+006



OCDPE

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F3:Voltage SIR,EI+
445.7555
1.077e+003



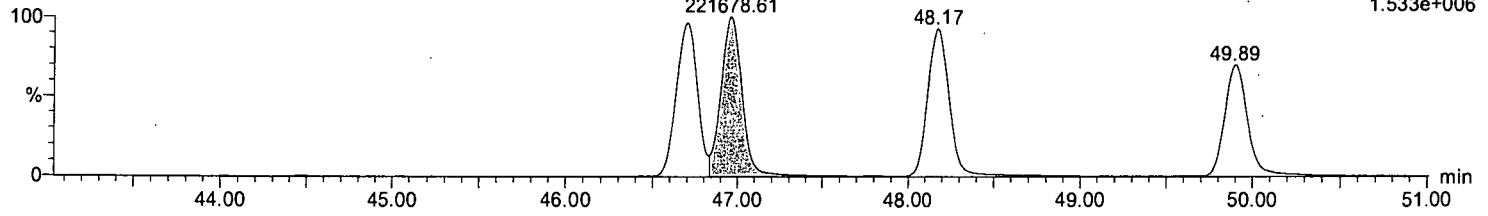
Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

1,2,3,6,7,8-HxCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

1,2,3,6,7,8-HxCDF
46.96
221678.61

F3:Voltage SIR,EI+
373.8208
1.533e+006

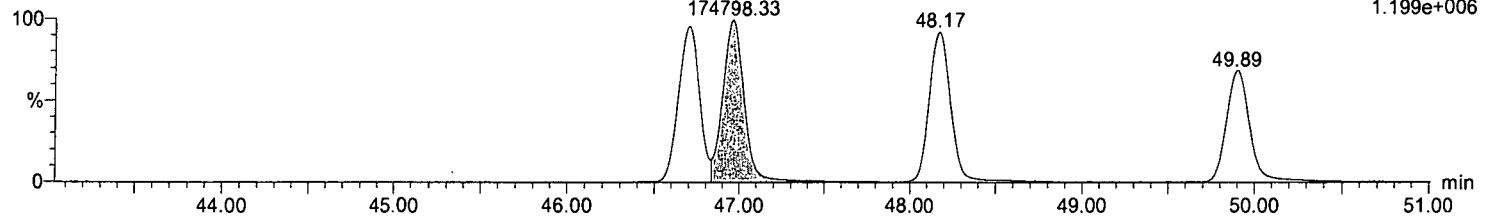


1,2,3,6,7,8-HxCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

1,2,3,6,7,8-HxCDF
46.96
174798.33

F3:Voltage SIR,EI+
375.8178
1.199e+006

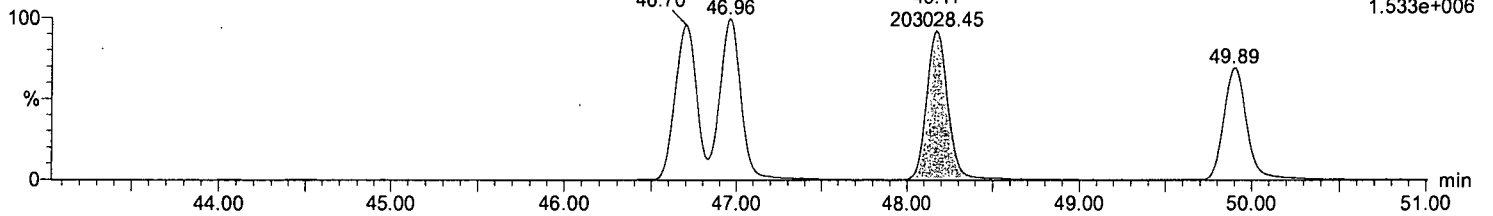


2,3,4,6,7,8-HxCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

2,3,4,6,7,8-HxCDF
46.70 46.96
48.17
203028.45

F3:Voltage SIR,EI+
373.8208
1.533e+006

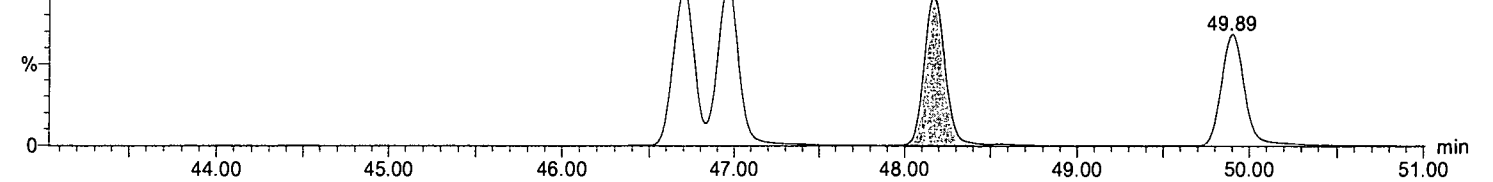


2,3,4,6,7,8-HxCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

2,3,4,6,7,8-HxCDF
46.70 46.96
48.17
159153.50

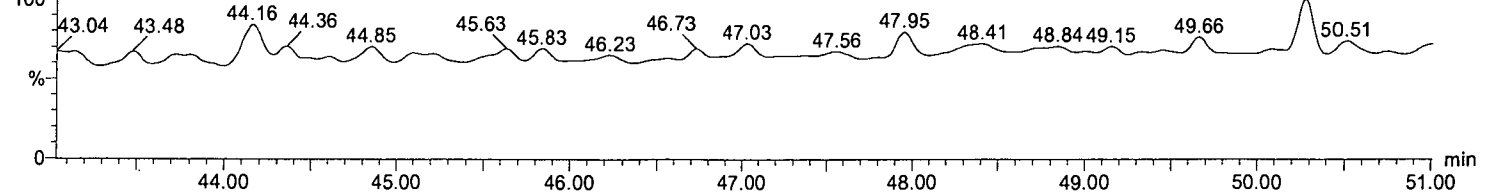
F3:Voltage SIR,EI+
375.8178
1.199e+006



OCDPE

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F3:Voltage SIR,EI+
445.7555
1.077e+003

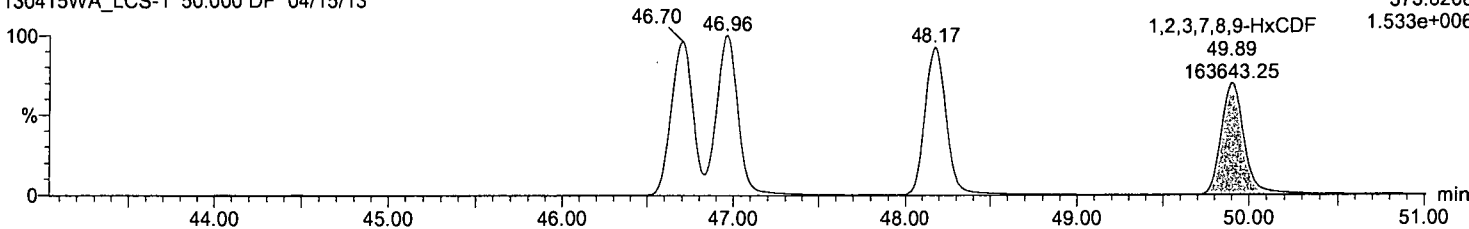


Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

1,2,3,7,8,9-HxCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

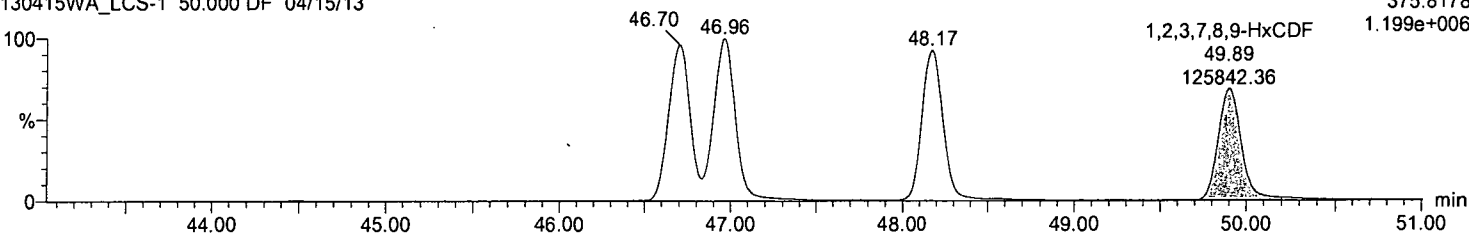
F3:Voltage SIR,EI+
373.8208
1,2,3,7,8,9-HxCDF 1.533e+006



1,2,3,7,8,9-HxCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

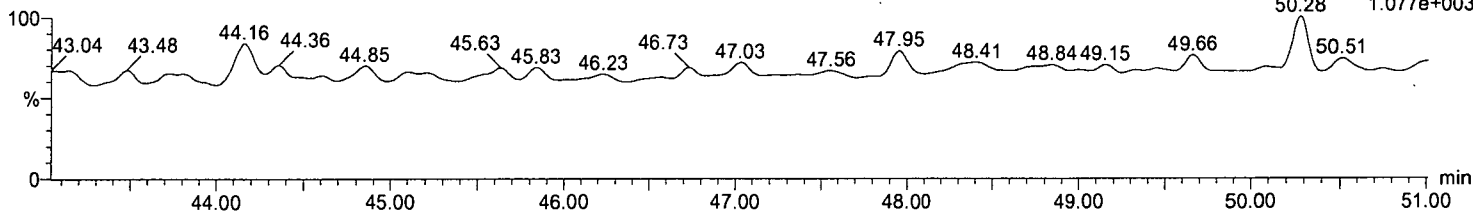
F3:Voltage SIR,EI+
375.8178
1,2,3,7,8,9-HxCDF 1.199e+006



OCDPE

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F3:Voltage SIR,EI+
445.7555
OCDPE 1.077e+003



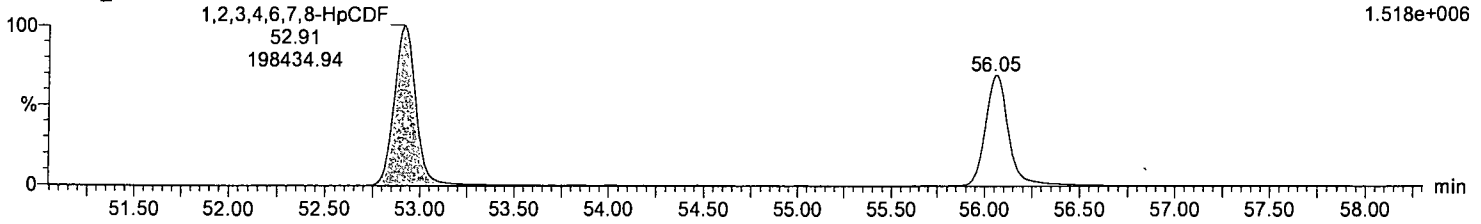
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1,2,3,4,6,7,8-HpCDF

130501_HR_13

130415WA_LCS-1 50.000 DF 04/15/13

F4:Voltage SIR,EI+
407.7818
1.518e+006

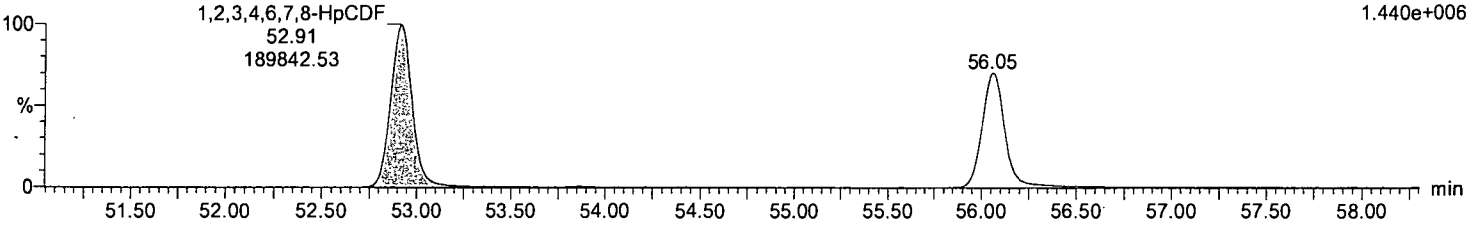


1,2,3,4,6,7,8-HpCDF

130501_HR_13

130415WA_LCS-1 50.000 DF 04/15/13

F4:Voltage SIR,EI+
409.7788
1.440e+006

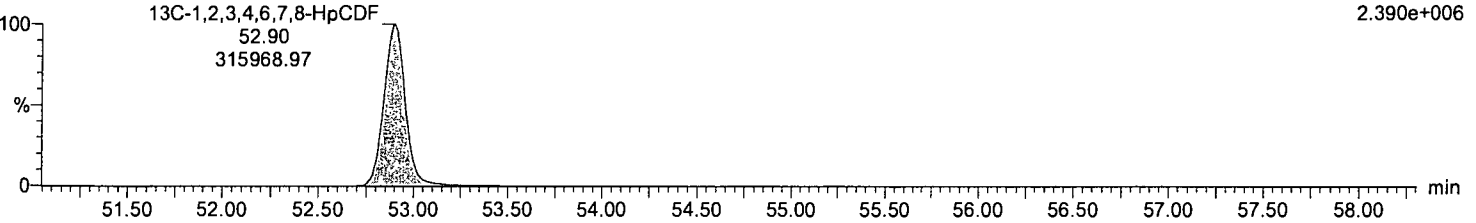


13C-1,2,3,4,6,7,8-HpCDF

130501_HR_13

130415WA_LCS-1 50.000 DF 04/15/13

F4:Voltage SIR,EI+
417.825
2.390e+006

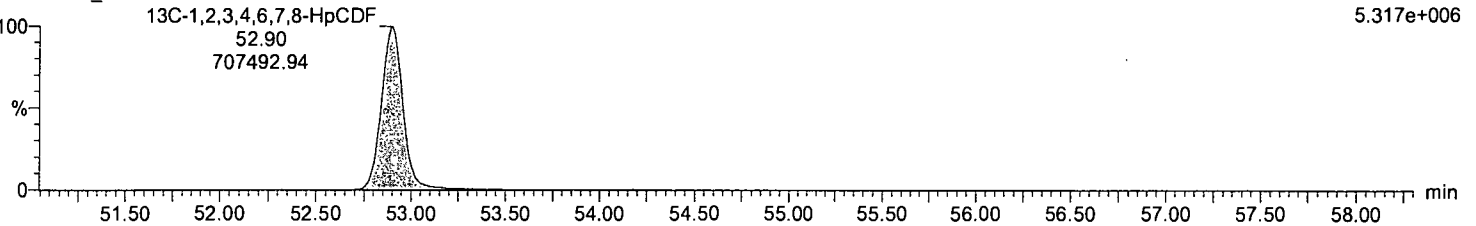


13C-1,2,3,4,6,7,8-HpCDF

130501_HR_13

130415WA_LCS-1 50.000 DF 04/15/13

F4:Voltage SIR,EI+
419.822
5.317e+006

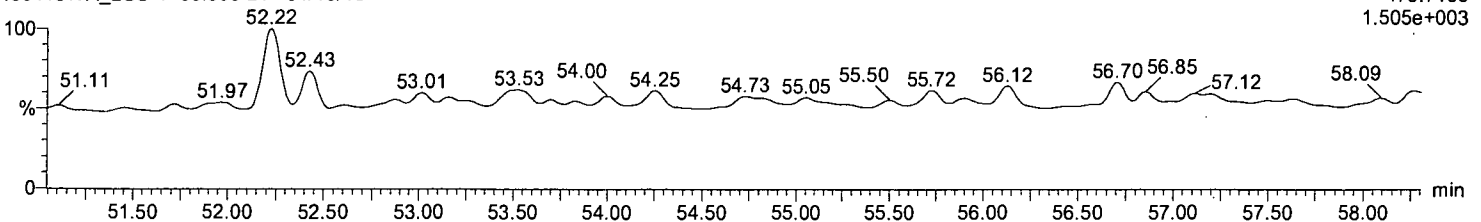


NCDPE

130501_HR_13

130415WA_LCS-1 50.000 DF 04/15/13

F4:Voltage SIR,EI+
479.7165
1.505e+003

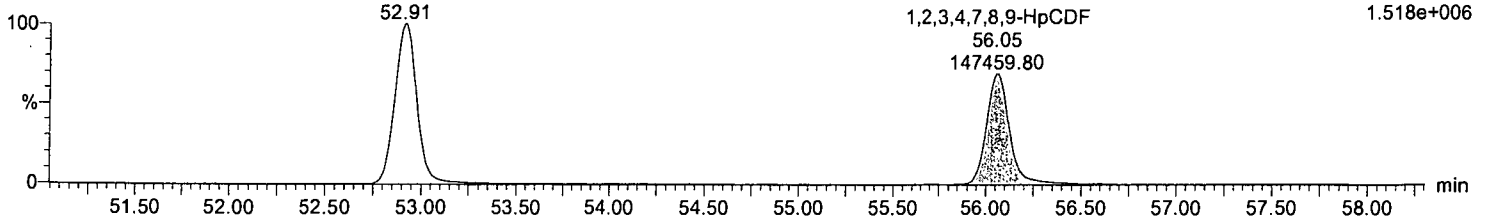


Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

1,2,3,4,7,8,9-HpCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

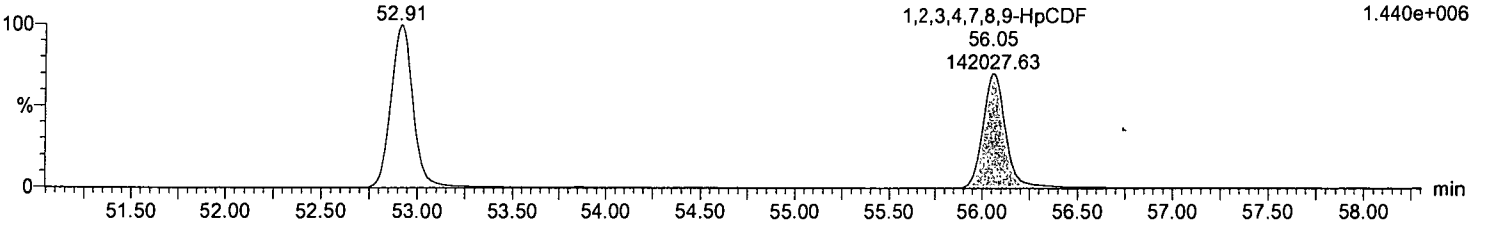
F4:Voltage SIR,EI+
407.7818
1.518e+006



1,2,3,4,7,8,9-HpCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

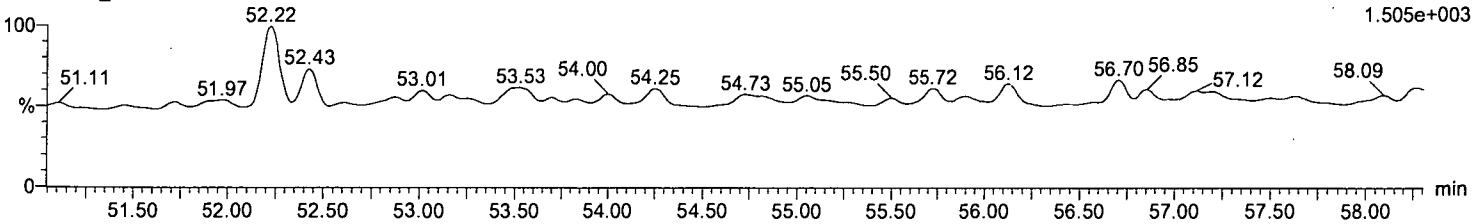
F4:Voltage SIR,EI+
409.7788
1.440e+006



NCDPE

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F4:Voltage SIR,EI+
479.7165
1.505e+003



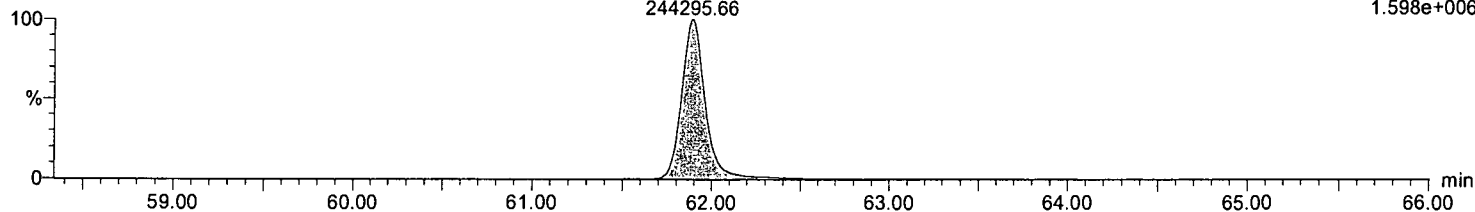
Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

OCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

OCDF
61.89
244295.66

F5:Voltage SIR,EI+
441.7428
1.598e+006

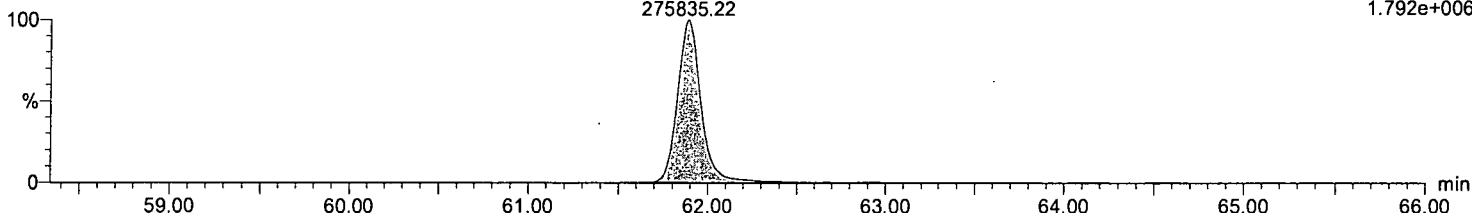


OCDF

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

OCDF
61.89
275835.22

F5:Voltage SIR,EI+
443.7399
1.792e+006

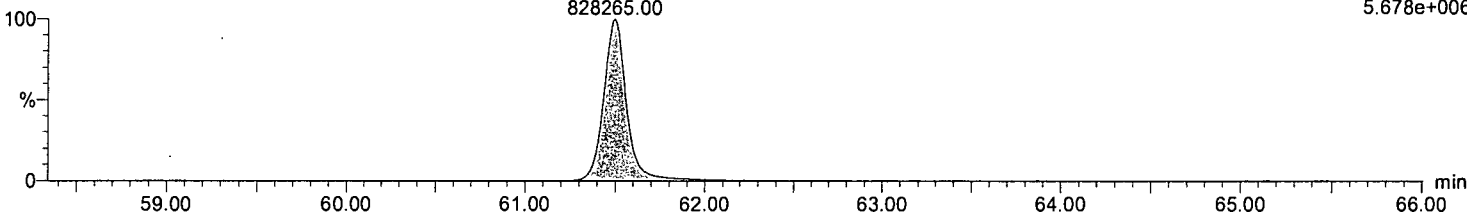


13C-OCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

13C-OCDD
61.49
828265.00

F5:Voltage SIR,EI+
469.778
5.678e+006

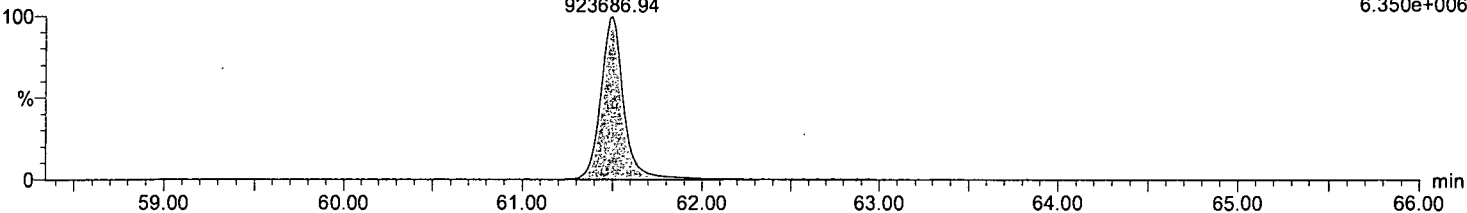


13C-OCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

13C-OCDD
61.49
923686.94

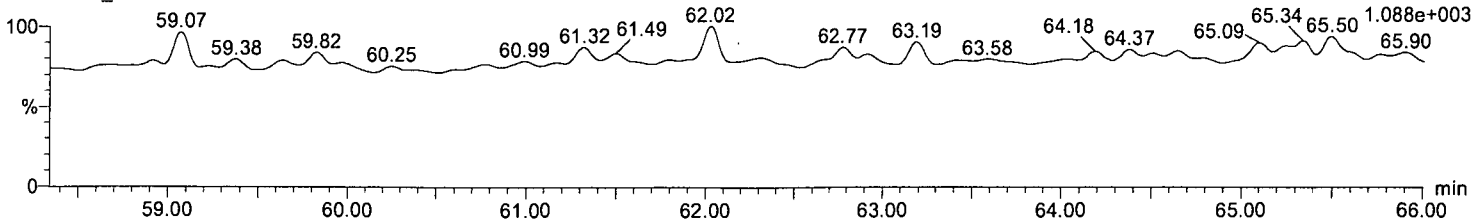
F5:Voltage SIR,EI+
471.775
6.350e+006



DCDPE

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F5:Voltage SIR,EI+
513.6775
1.088e+003



Name: 130501_HR_13, Date: 02-May-2013, Time: 06:31:51, ID: , Description: 130415WA_LCS-1 50.000 DF 04/15/13, User: RP

13C-1,2,3,4-TCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

13C-1,2,3,4-TCDD

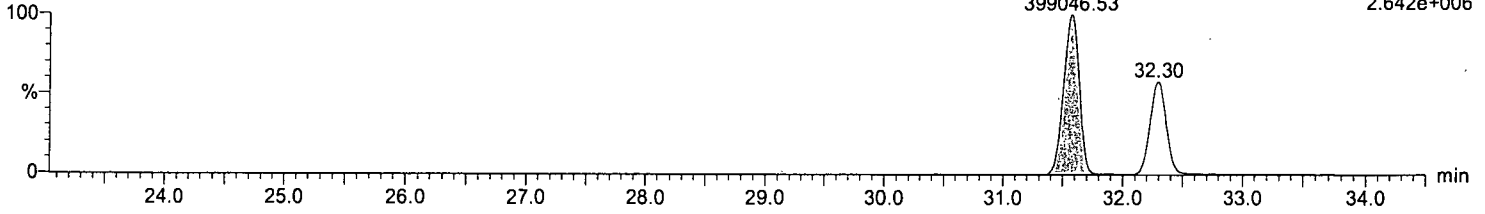
F1:Voltage SIR,EI+

31.56

331.9368

399046.53

2.642e+006



13C-1,2,3,4-TCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

13C-1,2,3,4-TCDD

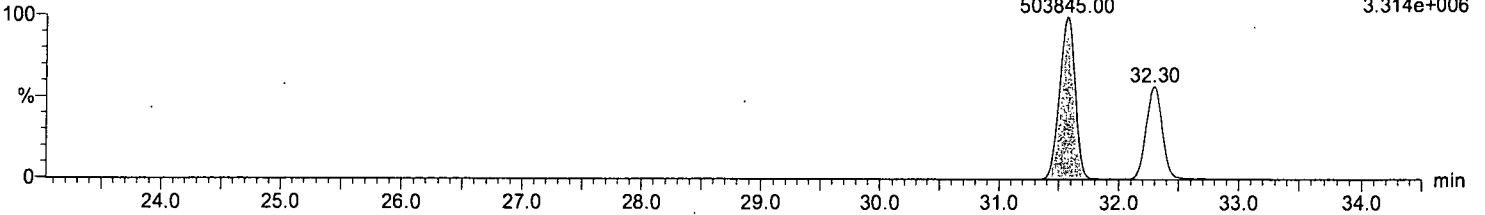
F1:Voltage SIR,EI+

31.56

333.9338

503845.00

3.314e+006



13C-1,2,3,7,8,9-HxCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F3:Voltage SIR,EI+

48.71

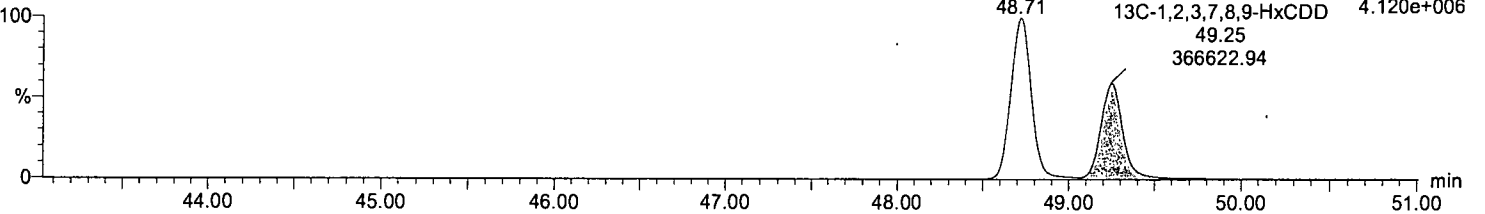
401.8559

13C-1,2,3,7,8,9-HxCDD

4.120e+006

49.25

366622.94



13C-1,2,3,7,8,9-HxCDD

130501_HR_13
130415WA_LCS-1 50.000 DF 04/15/13

F3:Voltage SIR,EI+

48.71

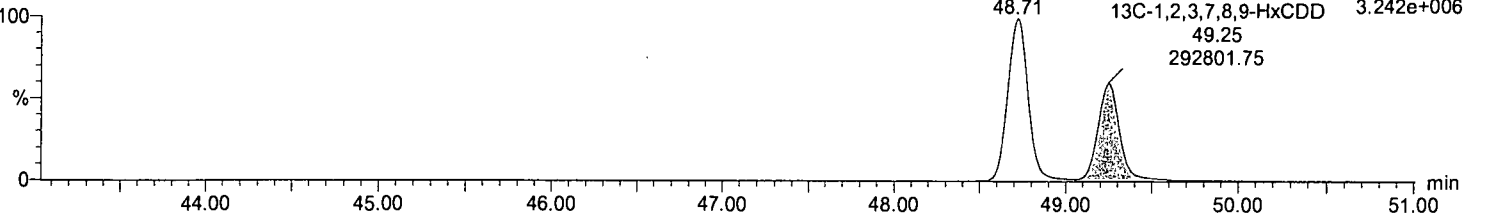
403.8529

13C-1,2,3,7,8,9-HxCDD

3.242e+006

49.25

292801.75

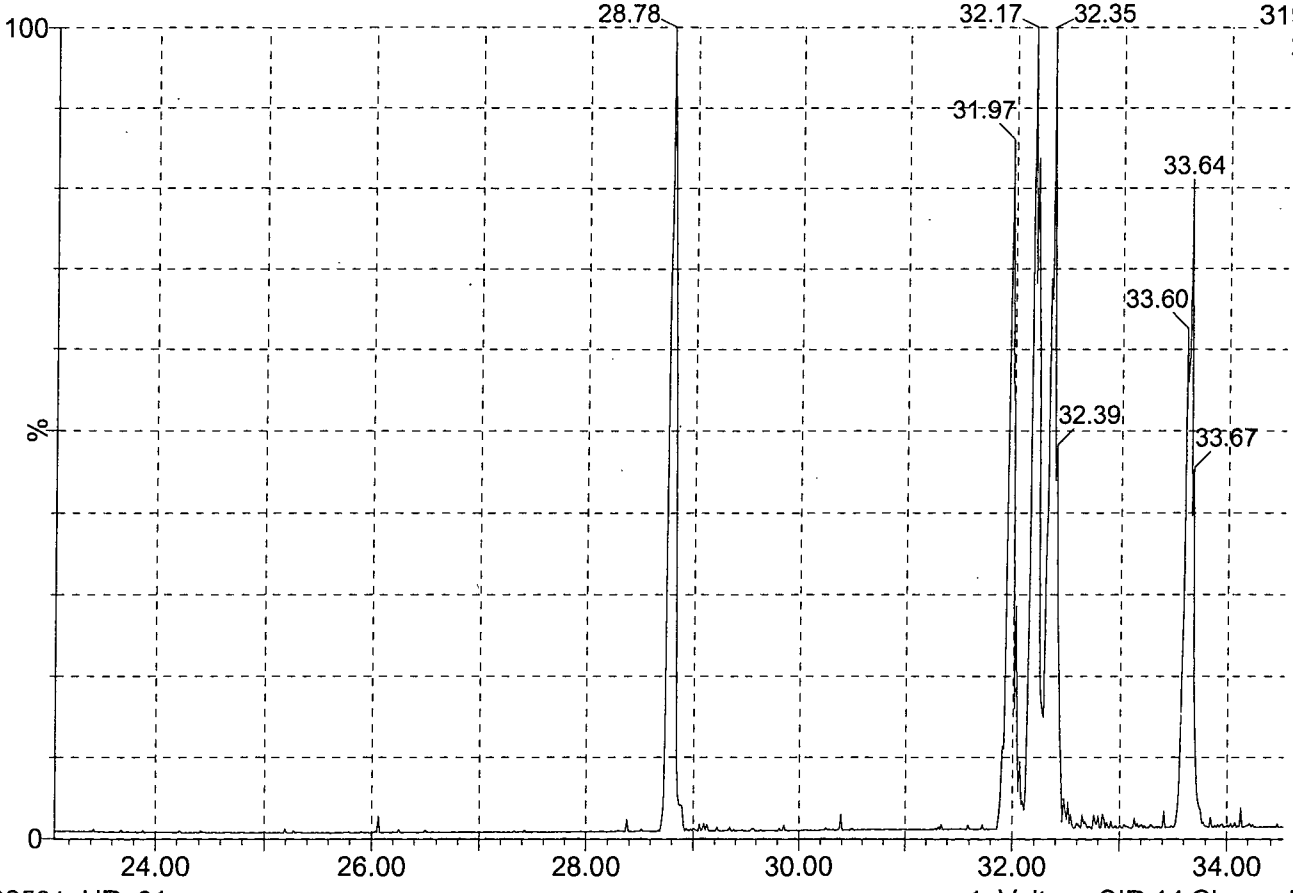


EDF-4147 8 ng/ml 04/24/13

130501_HR_01

1: Voltage SIR 14 Channels EI+

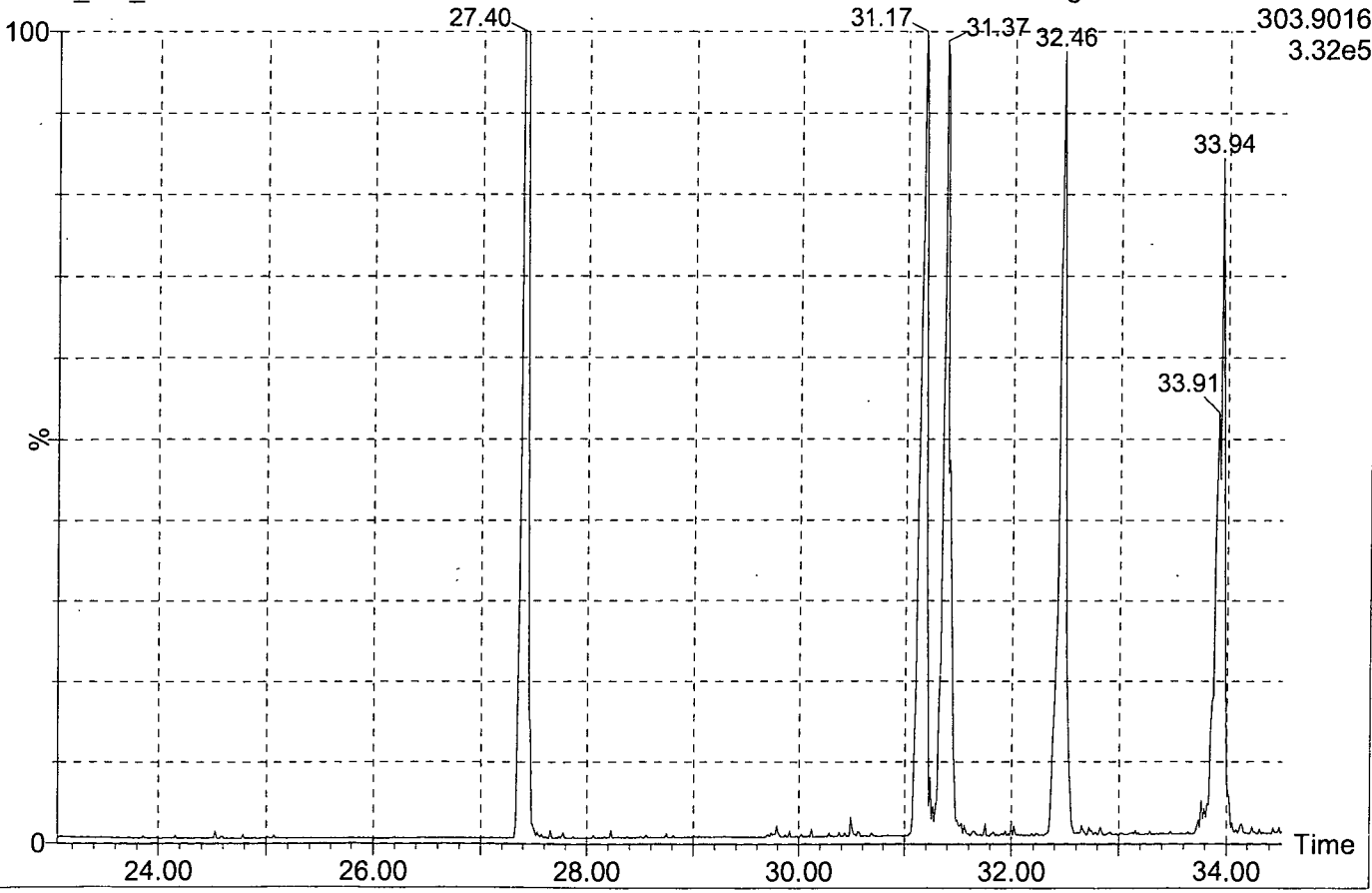
319.8965
2.72e5



130501_HR_01

1: Voltage SIR 14 Channels EI+

303.9016
3.32e5



Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_CP_01.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290_CP.mdb 02 May 2013 07:34:22

Calibration: 02 May 2013 07:34:32

Name: 130501_HR_01, Date: 01-May-2013, Time: 16:25:51, ID: , Description: EDF-4147 8 ng/ml 04/24/13, User: RP

#	Name	RT
1	1,3,6,8-TCDD (First)	28.78
2	1,2,3,7/1,2,3,8-TCDD	31.97
3	1,2,3,9-TCDD	32.19
4	2,3,7,8-TCDD	32.35
5	1,2,8,9-TCDD (Last)	33.63
6	13C-2,3,7,8-TCDD	32.32
7	1,2,4,6,8/1,2,4,7,9-PeCDD (First)	36.54
8	1,2,3,8,9-PeCDD (Last)	42.06
9	1,2,4,6,7,9/1,2,4,6,8,9-HxCDD (First)	45.38
10	1,2,3,4,6,7-HxCDD (Last)	49.14
11	1,2,3,4,6,7,9-HpCDD (First)	53.60
12	1,2,3,4,6,7,8-HpCDD (Last)	55.15
13	1,3,6,8-TCDF (First)	27.40
14	2,3,4,7-TCDF	31.17
15	2,3,7,8-TCDF	31.37
16	1,2,3,9-TCDF	32.46
17	1,2,8,9-TCDF (Last)	33.94
18	13C-2,3,7,8-TCDF	31.36
19	1,3,4,6,8-PeCDF (First)	33.76
20	1,2,3,8,9-PeCDF (Last)	42.63
21	1,2,3,4,6,8-HxCDF (First)	44.15
22	1,2,3,4,8,9-HxCDF (Last)	50.03
23	1,2,3,4,6,7,8-HpCDF (First)	52.98
24	1,2,3,4,7,8,9-HpCDF (Last)	56.12

Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_CP_01.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290_CP.mdb 02 May 2013 07:34:22

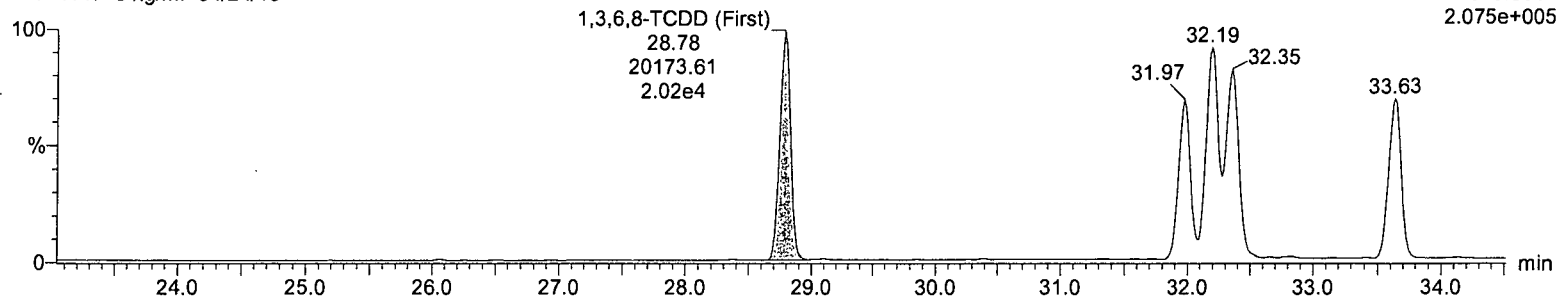
Calibration: 02 May 2013 07:34:32

Name: 130501_HR_01, Date: 01-May-2013, Time: 16:25:51, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,3,6,8-TCDD (First)

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

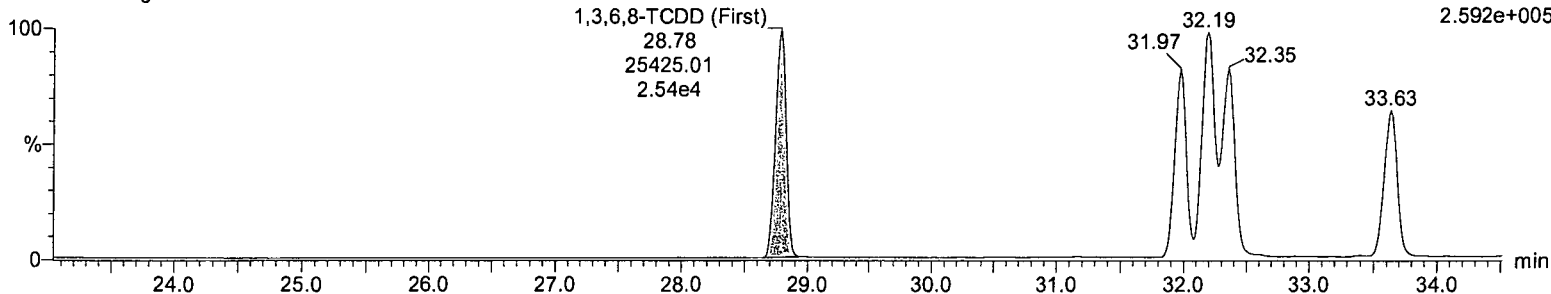
F1:Voltage SIR,EI+
319.8965
2.075e+005



1,3,6,8-TCDD (First)

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

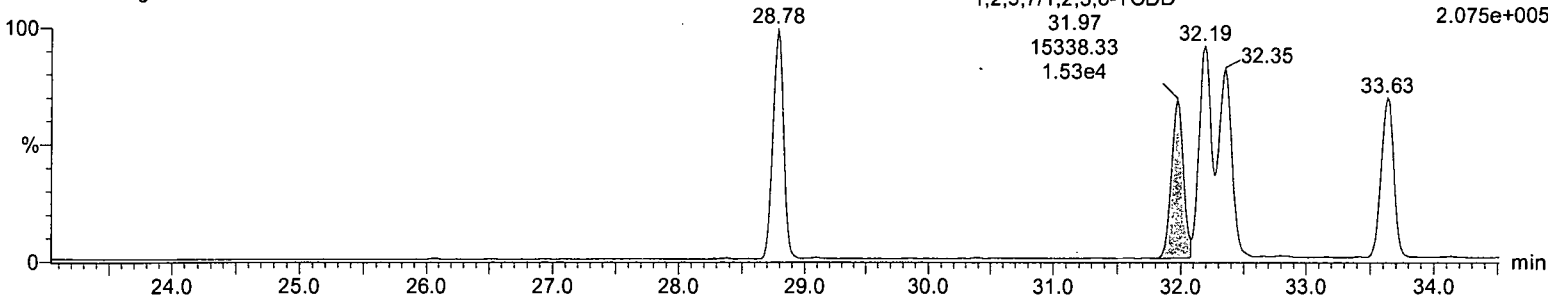
F1:Voltage SIR,EI+
321.8936
2.592e+005



1,2,3,7/1,2,3,8-TCDD

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

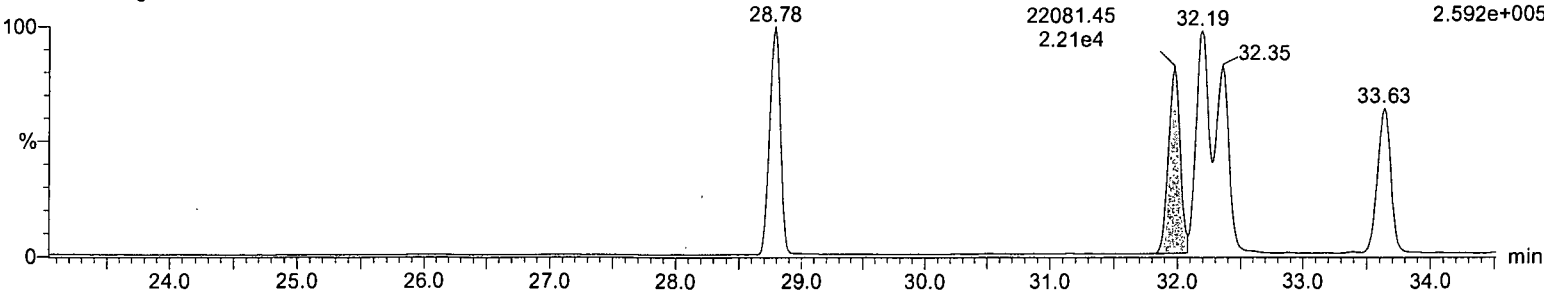
F1:Voltage SIR,EI+
319.8965
2.075e+005



1,2,3,7/1,2,3,8-TCDD

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

F1:Voltage SIR,EI+
321.8936
2.592e+005

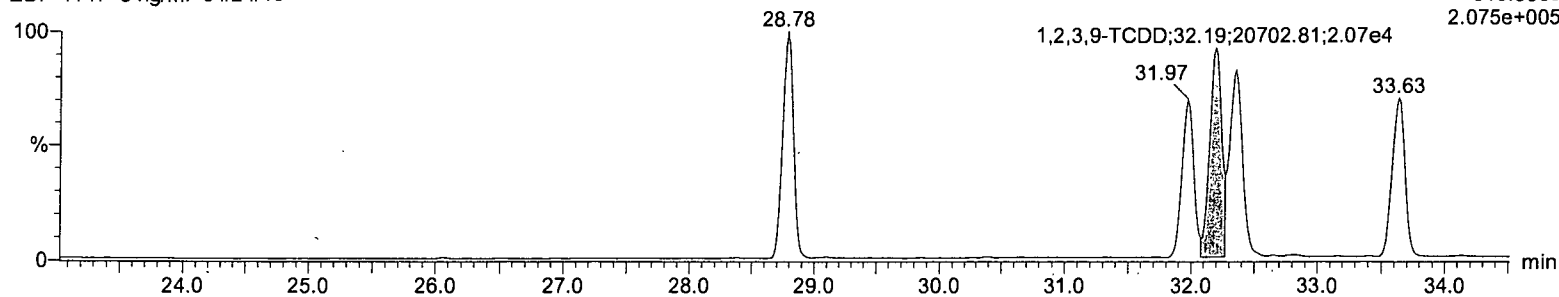


Name: 130501_HR_01, Date: 01-May-2013, Time: 16:25:51, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,3,9-TCDD

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

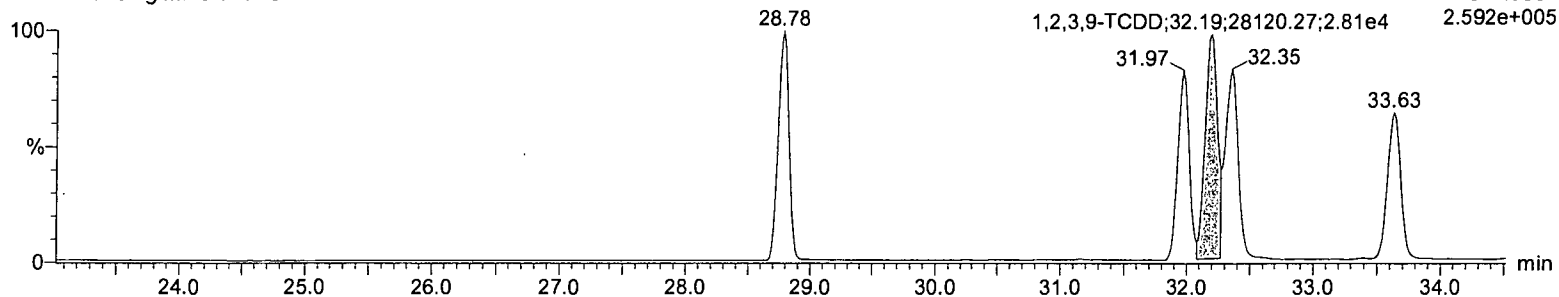
F1:Voltage SIR,EI+
319.8965
2.075e+005



1,2,3,9-TCDD

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

F1:Voltage SIR,EI+
321.8936
2.592e+005

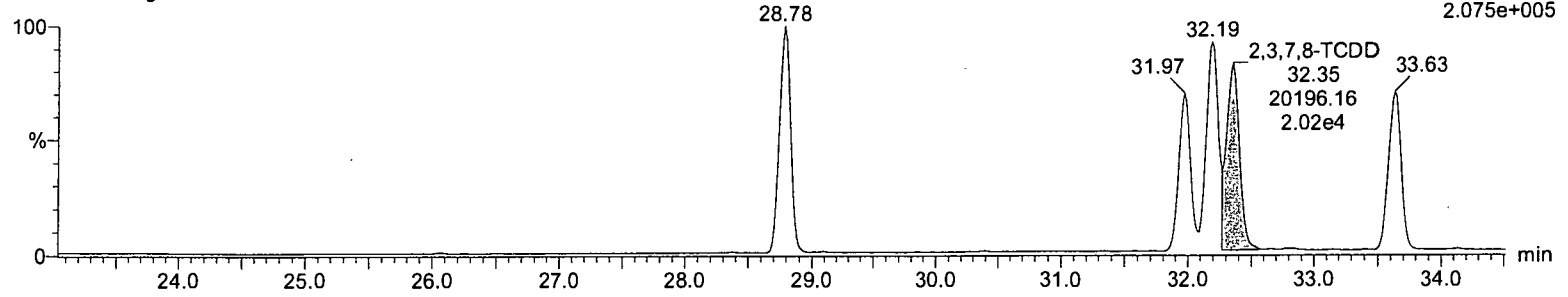


Name: 130501_HR_01, Date: 01-May-2013, Time: 16:25:51, ID: , Description: EDF-4147 8 ng/ml 04/24/13

2,3,7,8-TCDD

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

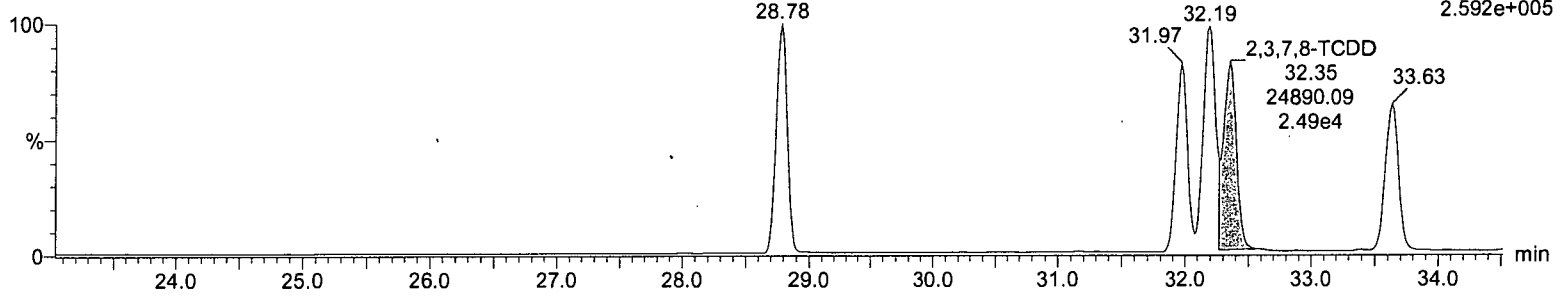
F1:Voltage SIR,EI+
319.8965
2.075e+005



2,3,7,8-TCDD

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

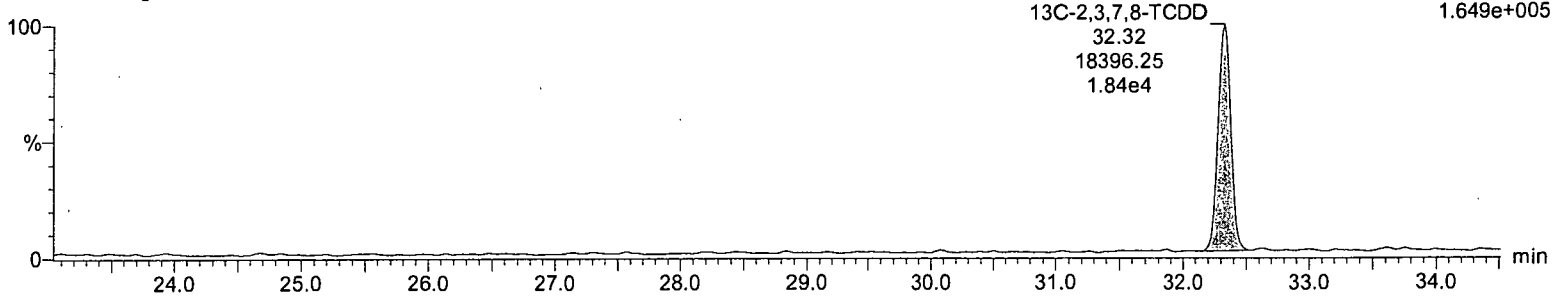
F1:Voltage SIR,EI+
321.8936
2.592e+005



13C-2,3,7,8-TCDD

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

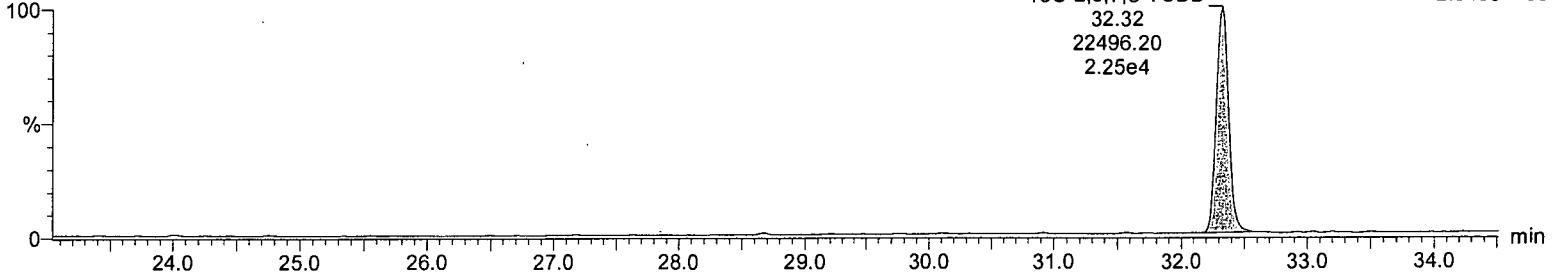
F1:Voltage SIR,EI+
331.9368
1.649e+005



13C-2,3,7,8-TCDD

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

F1:Voltage SIR,EI+
333.9338
2.046e+005

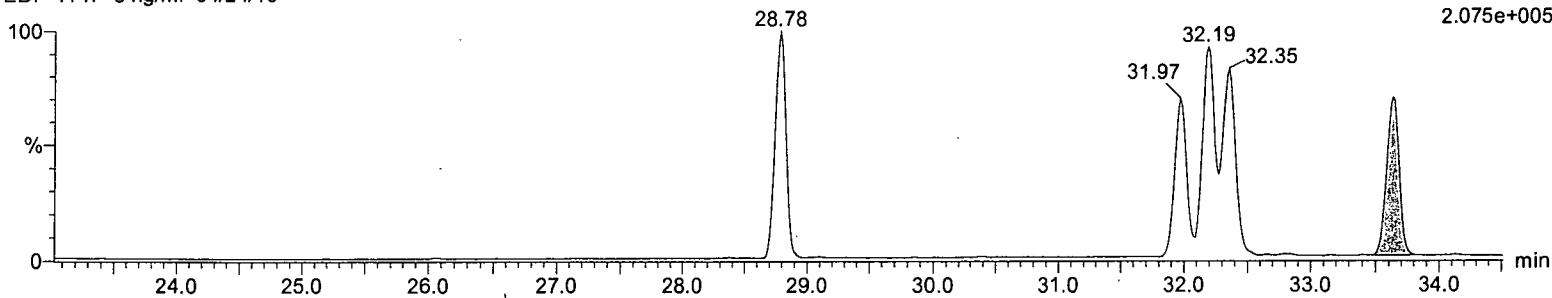


Name: 130501_HR_01, Date: 01-May-2013, Time: 16:25:51, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,8,9-TCDD (Last)

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

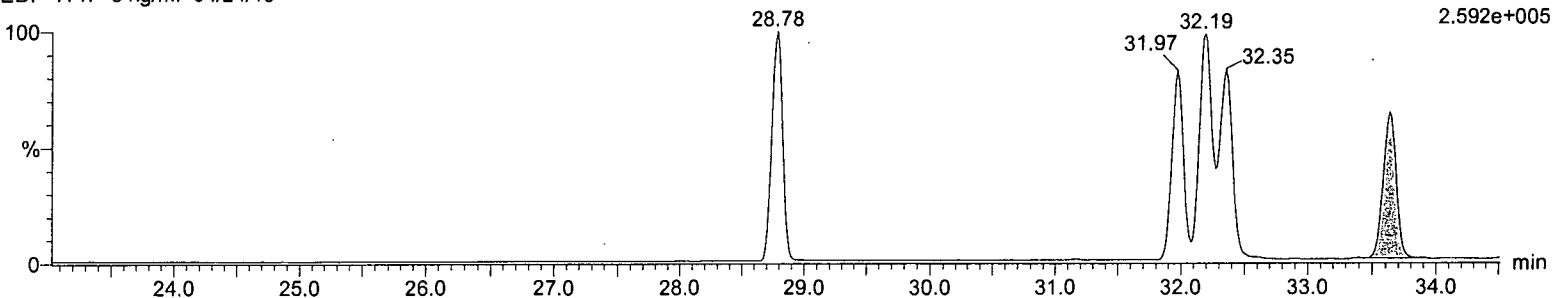
F1:Voltage SIR,EI+
319.8965
2.075e+005



1,2,8,9-TCDD (Last)

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

F1:Voltage SIR,EI+
321.8936
2.592e+005

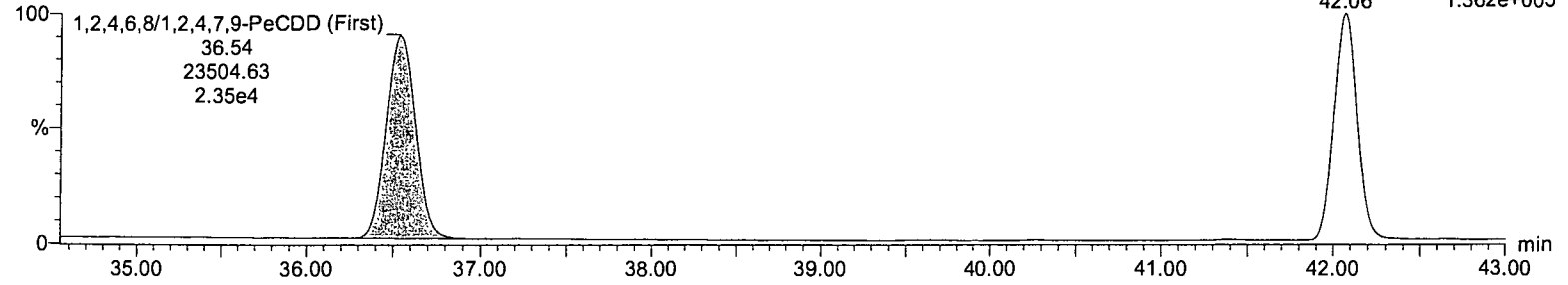


Name: 130501_HR_01, Date: 01-May-2013, Time: 16:25:51, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,4,6,8/1,2,4,7,9-PeCDD (First)

130501_HR_01 Smooth(Mn,3x4)
EDF-4147 8 ng/ml 04/24/13

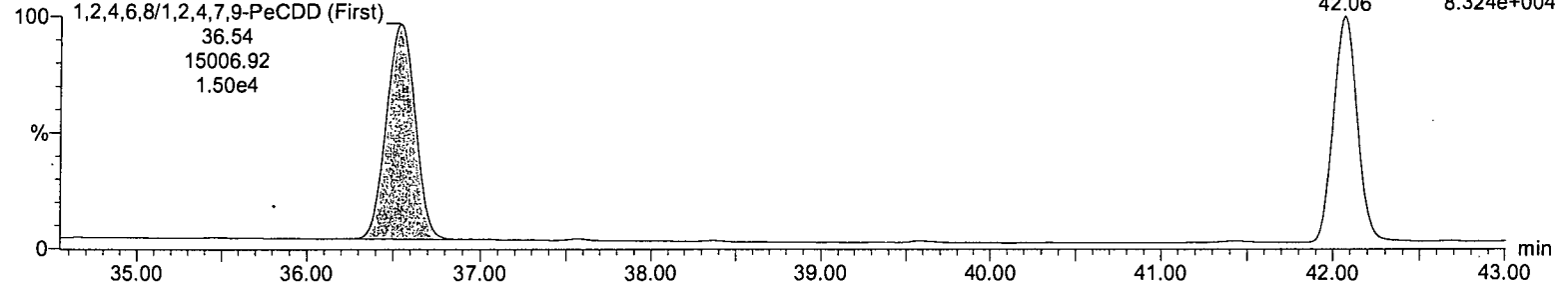
F2:Voltage SIR,EI+
355.8546
1.362e+005



1,2,4,6,8/1,2,4,7,9-PeCDD (First)

130501_HR_01 Smooth(Mn,3x4)
EDF-4147 8 ng/ml 04/24/13

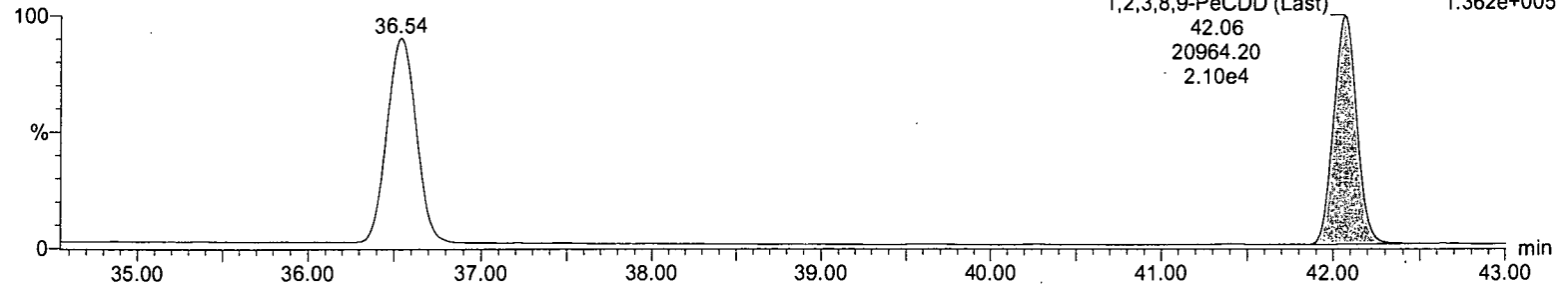
F2:Voltage SIR,EI+
357.8516
8.324e+004



1,2,3,8,9-PeCDD (Last)

130501_HR_01 Smooth(Mn,3x4)
EDF-4147 8 ng/ml 04/24/13

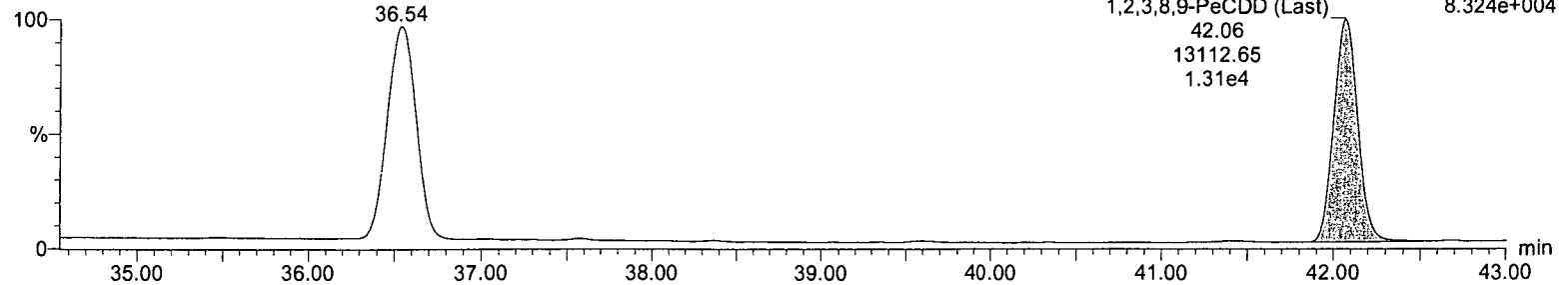
F2:Voltage SIR,EI+
355.8546
1.362e+005



1,2,3,8,9-PeCDD (Last)

130501_HR_01 Smooth(Mn,3x4)
EDF-4147 8 ng/ml 04/24/13

F2:Voltage SIR,EI+
357.8516
8.324e+004

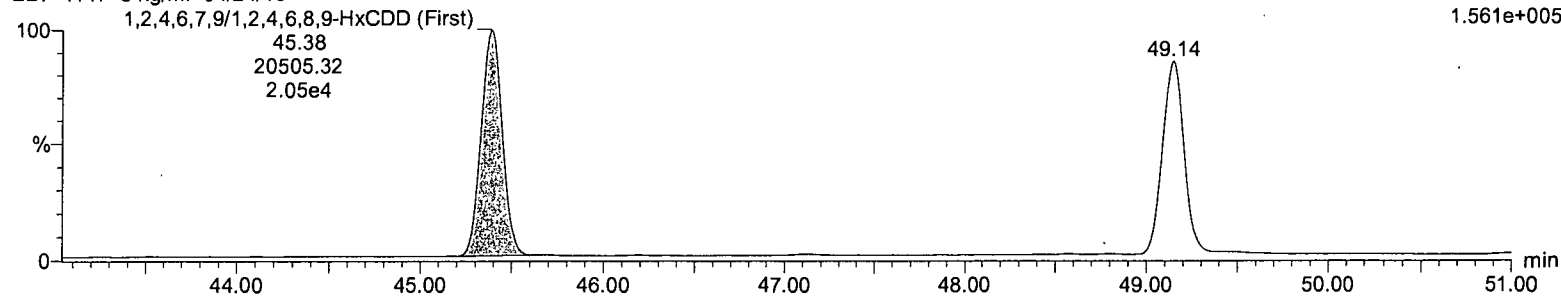


Name: 130501_HR_01, Date: 01-May-2013, Time: 16:25:51, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,4,6,7,9/1,2,4,6,8,9-HxCDD (First)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

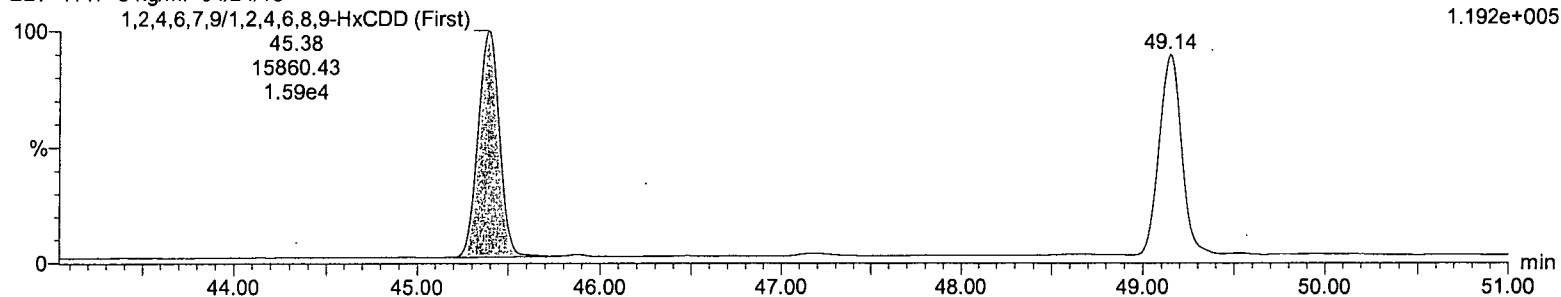
F3:Voltage SIR,EI+
389.8157
1.561e+005



1,2,4,6,7,9/1,2,4,6,8,9-HxCDD (First)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

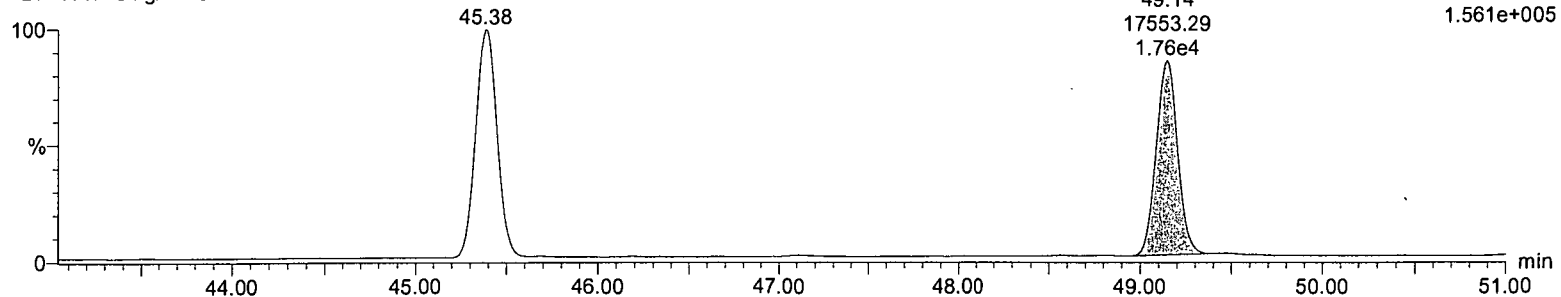
F3:Voltage SIR,EI+
391.8127
1.192e+005



1,2,3,4,6,7-HxCDD (Last)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

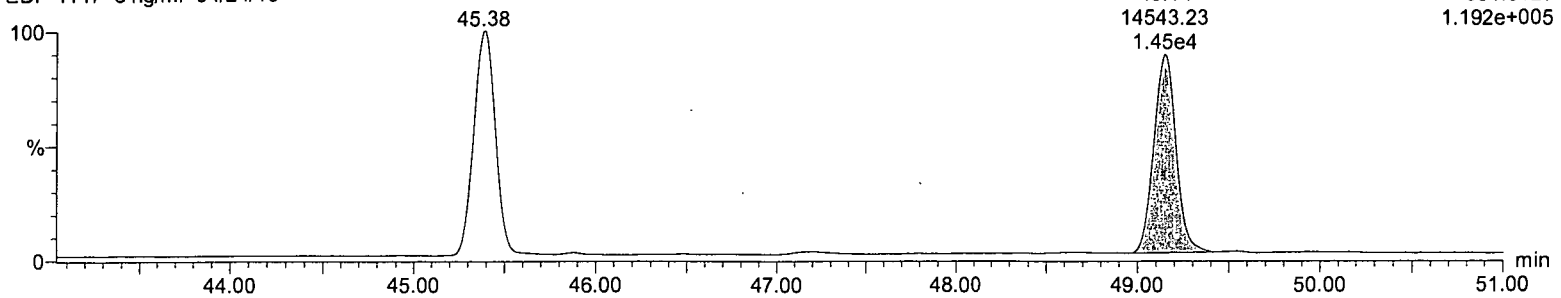
F3:Voltage SIR,EI+
389.8157
1.561e+005



1,2,3,4,6,7-HxCDD (Last)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

F3:Voltage SIR,EI+
391.8127
1.192e+005

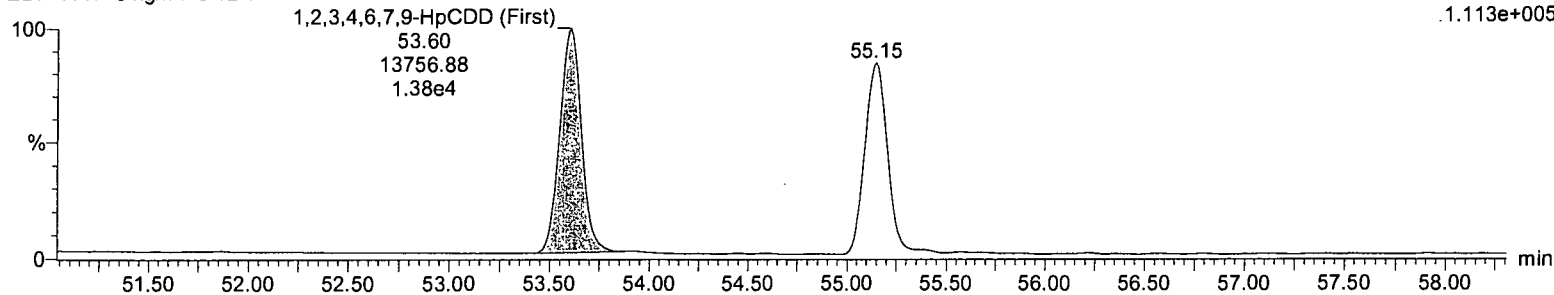


Name: 130501_HR_01, Date: 01-May-2013, Time: 16:25:51, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,3,4,6,7,9-HpCDD (First)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

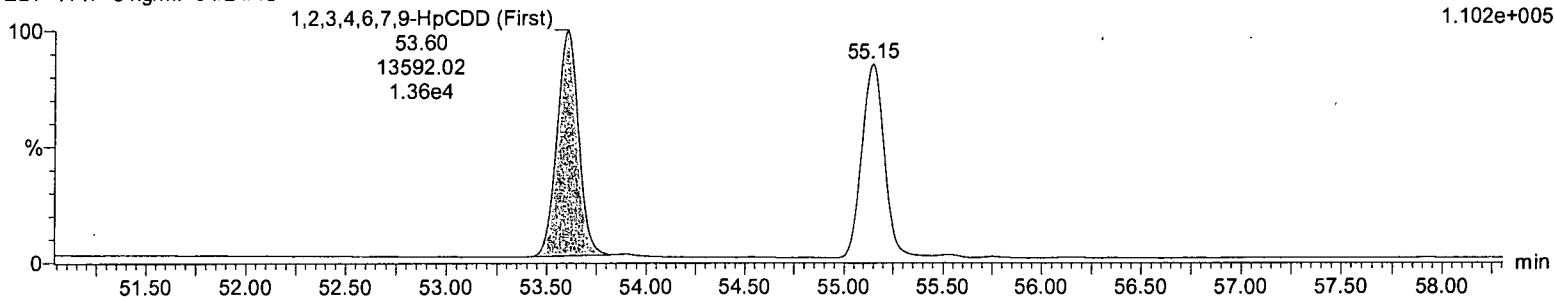
F4:Voltage SIR,EI+
423.7767
.1.113e+005



1,2,3,4,6,7,9-HpCDD (First)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

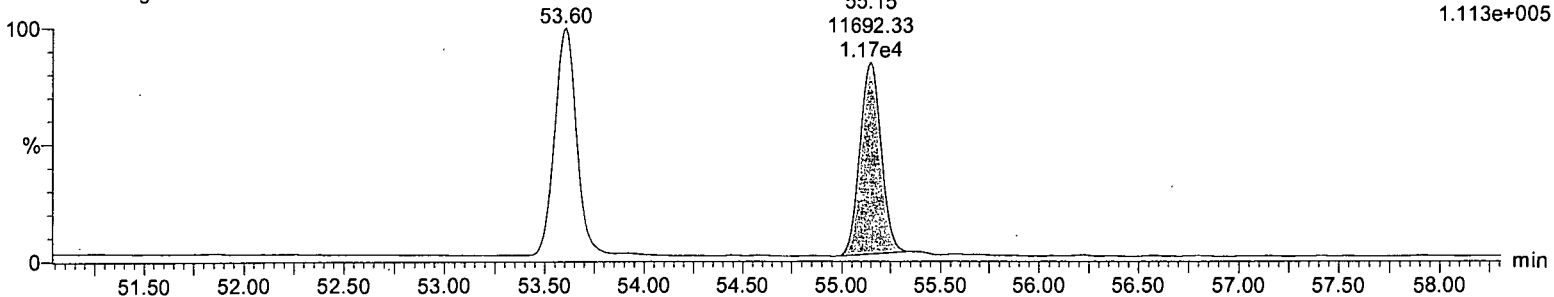
F4:Voltage SIR,EI+
425.7737
1.102e+005



1,2,3,4,6,7,8-HpCDD (Last)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

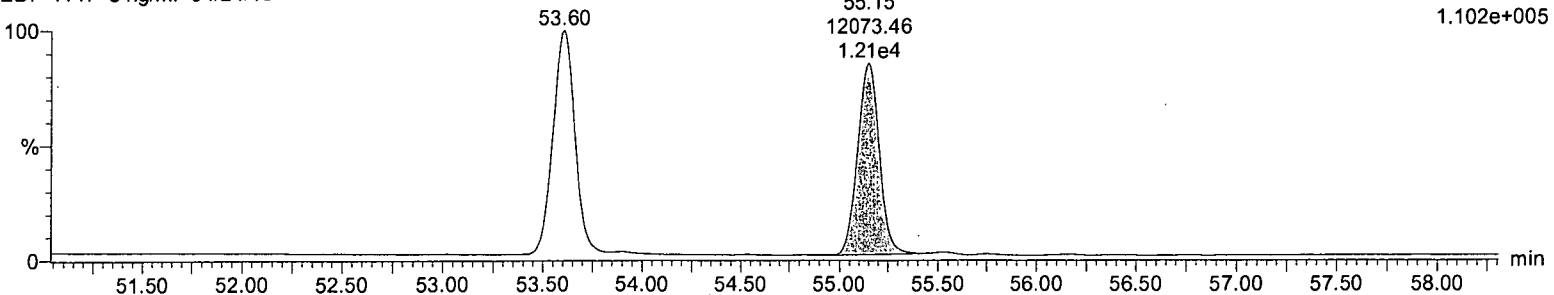
F4:Voltage SIR,EI+
423.7767
1.113e+005



1,2,3,4,6,7,8-HpCDD (Last)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

F4:Voltage SIR,EI+
425.7737
1.102e+005

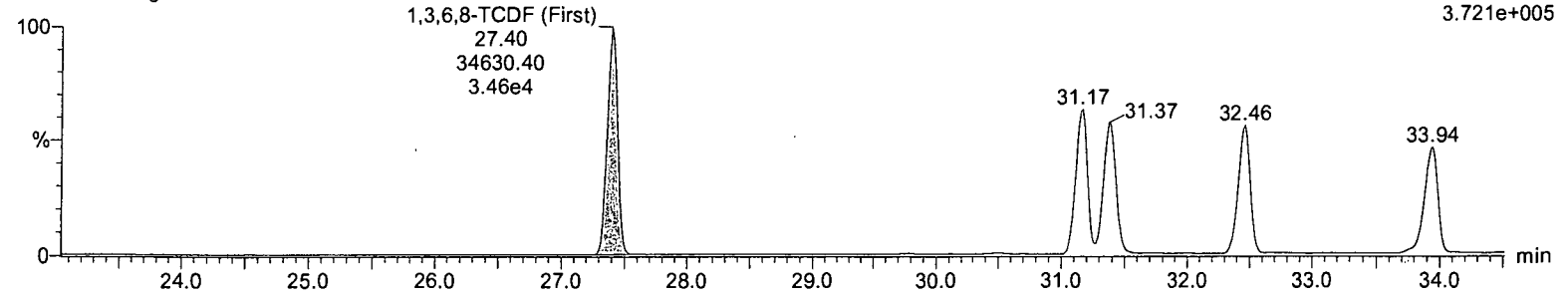


Name: 130501_HR_01, Date: 01-May-2013, Time: 16:25:51, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,3,6,8-TCDF (First)

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

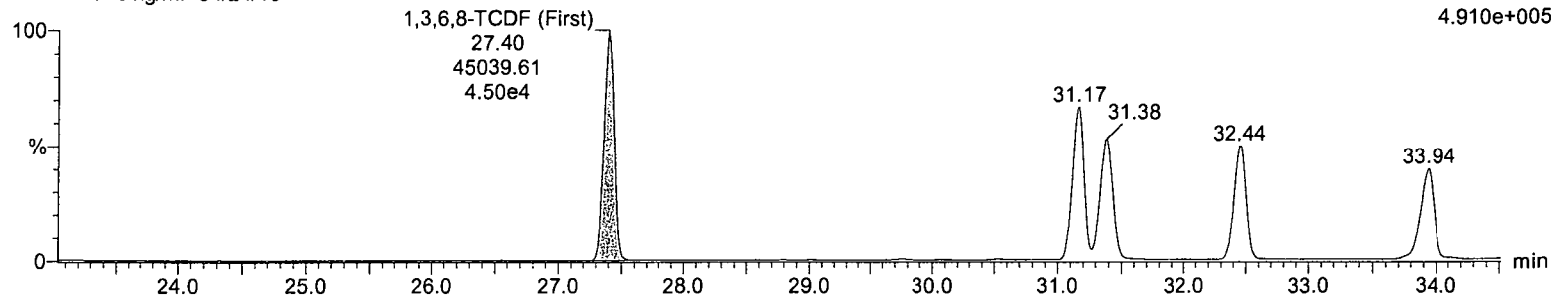
F1:Voltage SIR,EI+
303.9016
3.721e+005



1,3,6,8-TCDF (First)

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

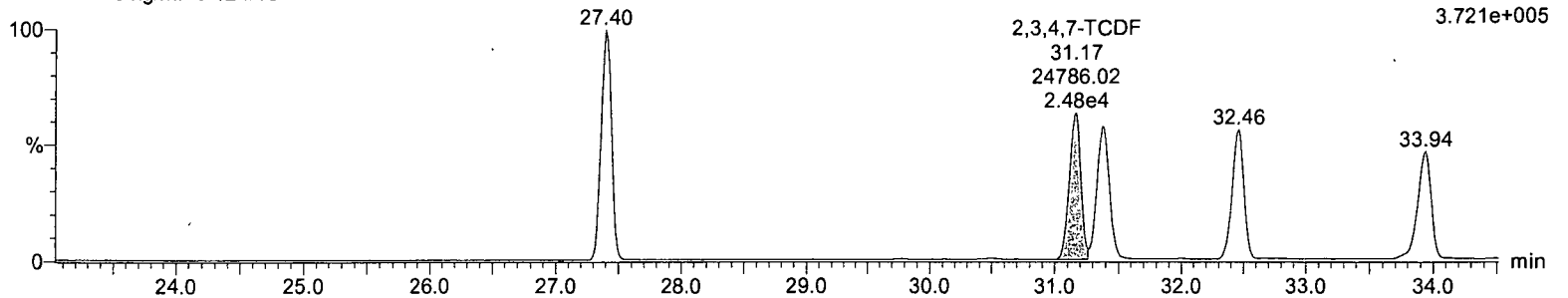
F1:Voltage SIR,EI+
305.8987
4.910e+005



2,3,4,7-TCDF

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

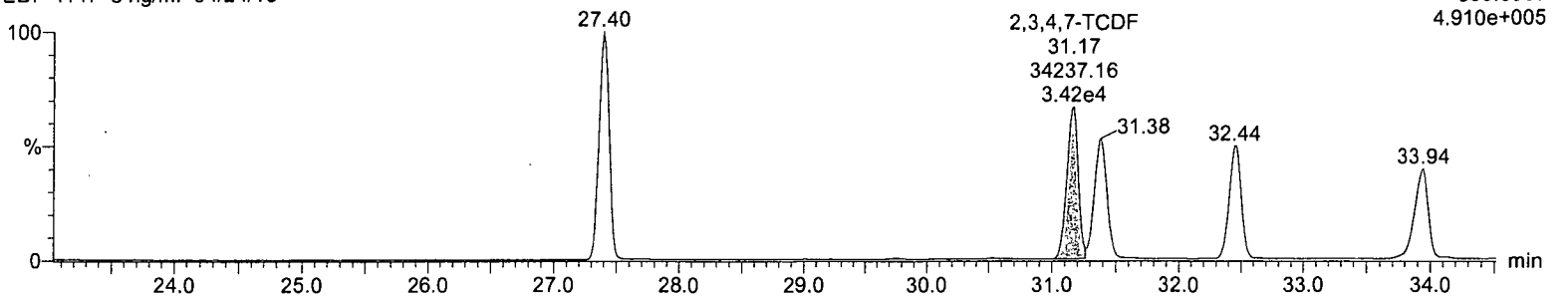
F1:Voltage SIR,EI+
303.9016
3.721e+005



2,3,4,7-TCDF

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

F1:Voltage SIR,EI+
305.8987
4.910e+005

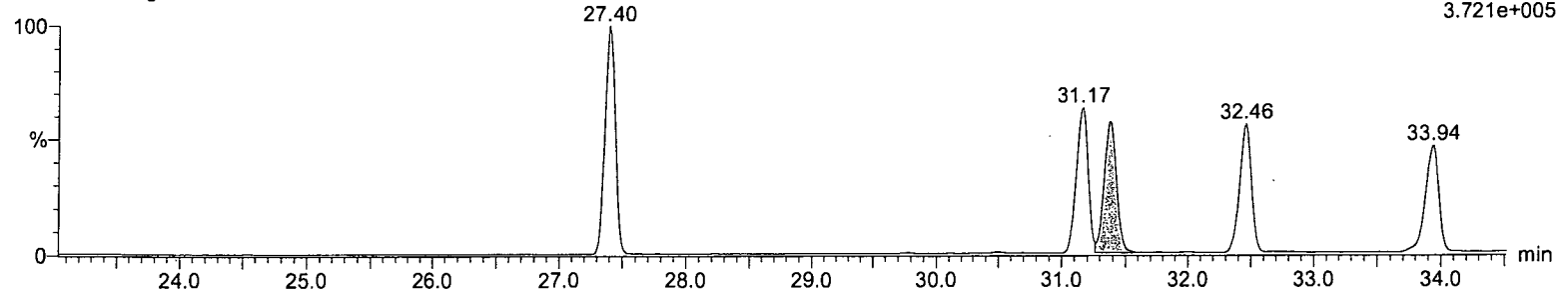


Name: 130501_HR_01, Date: 01-May-2013, Time: 16:25:51, ID: , Description: EDF-4147 8 ng/ml 04/24/13

2,3,7,8-TCDF

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

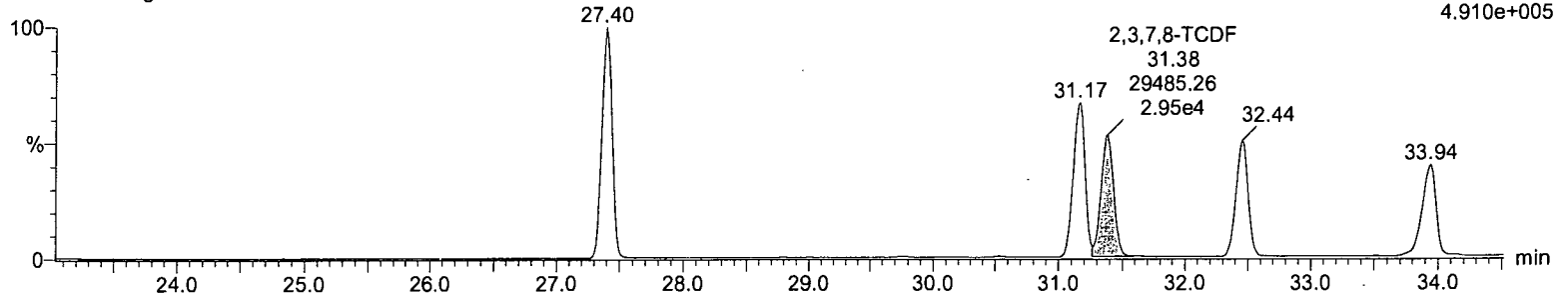
F1:Voltage SIR,EI+
303.9016
3.721e+005



2,3,7,8-TCDF

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

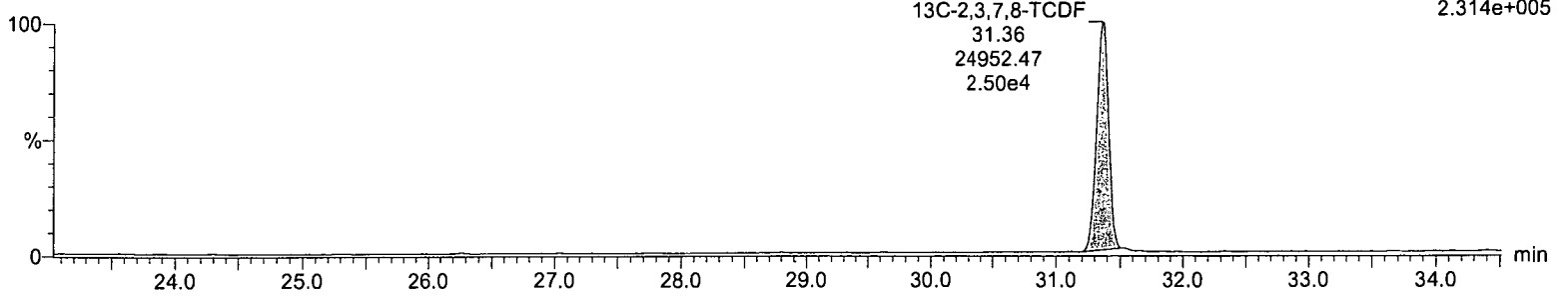
F1:Voltage SIR,EI+
305.8987
4.910e+005



13C-2,3,7,8-TCDF

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

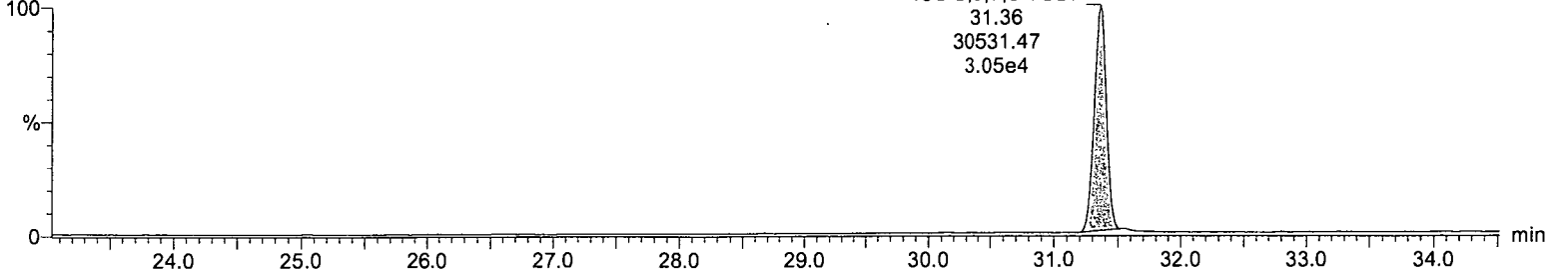
F1:Voltage SIR,EI+
315.9419
2.314e+005



13C-2,3,7,8-TCDF

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

F1:Voltage SIR,EI+
317.9389
2.797e+005

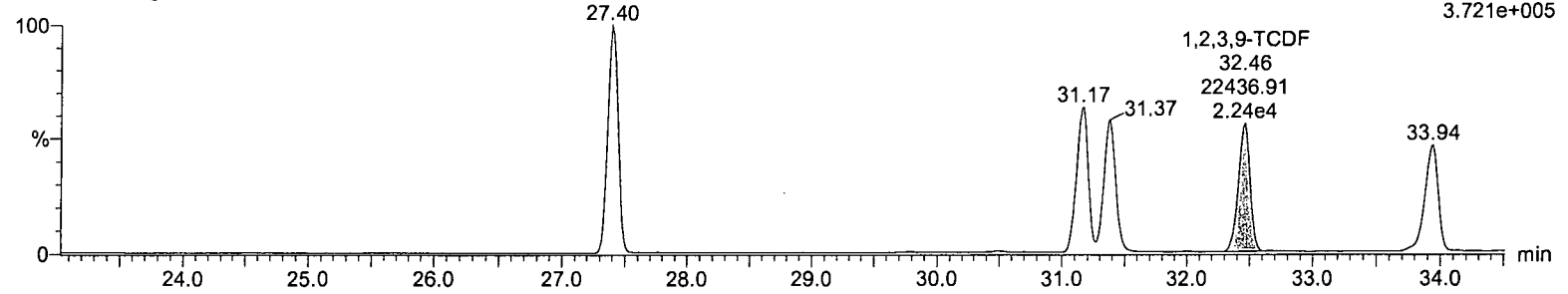


Name: 130501_HR_01, Date: 01-May-2013, Time: 16:25:51, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,3,9-TCDF

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

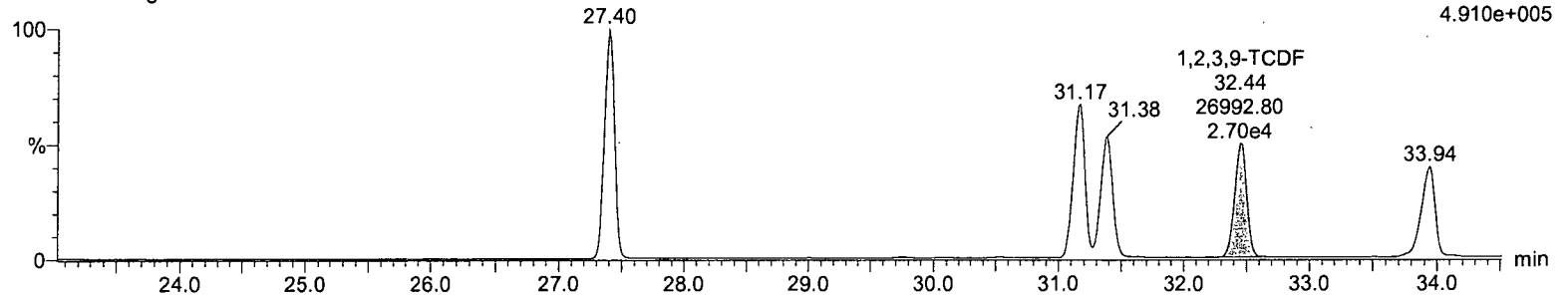
F1:Voltage SIR,EI+
303.9016
3.721e+005



1,2,3,9-TCDF

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

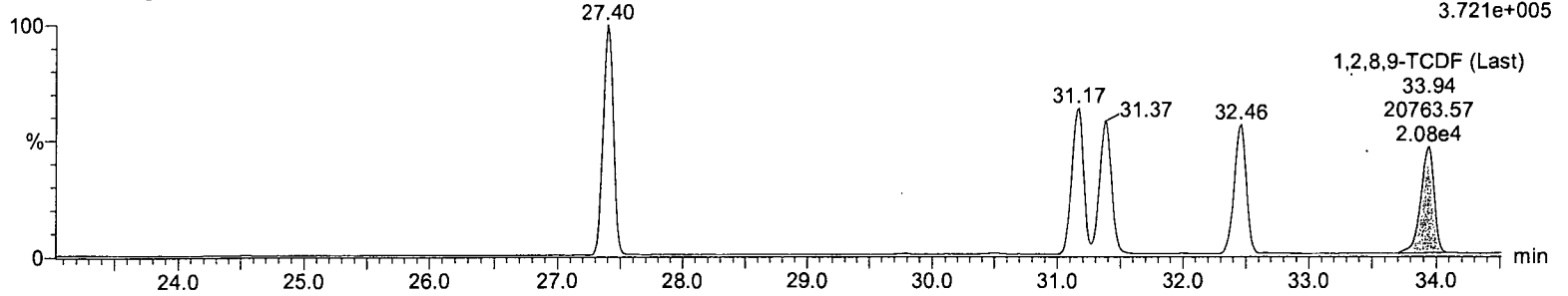
F1:Voltage SIR,EI+
305.8987
4.910e+005



1,2,8,9-TCDF (Last)

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

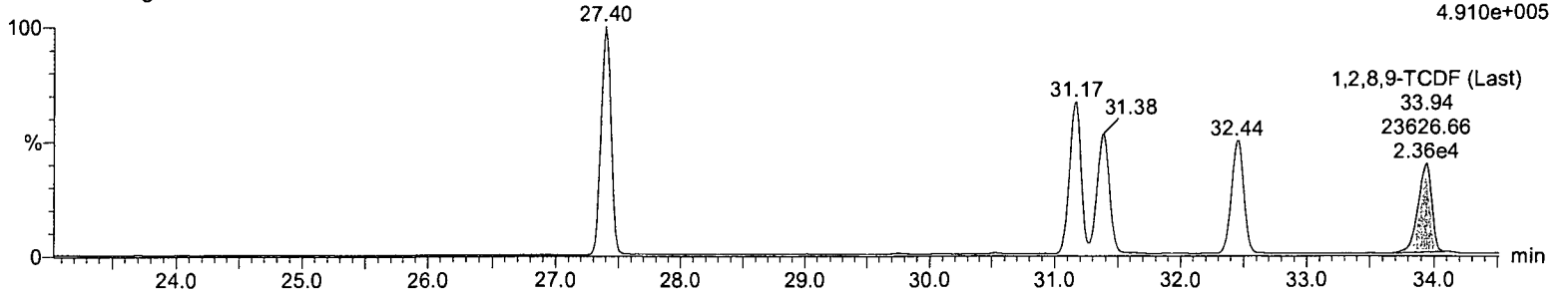
F1:Voltage SIR,EI+
303.9016
3.721e+005



1,2,8,9-TCDF (Last)

130501_HR_01 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

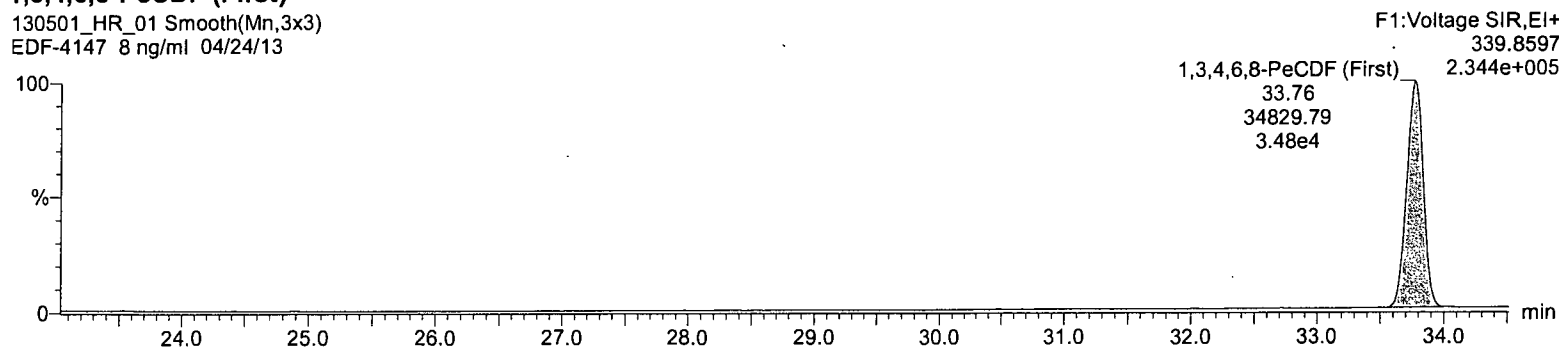
F1:Voltage SIR,EI+
305.8987
4.910e+005



Name: 130501_HR_01, Date: 01-May-2013, Time: 16:25:51, ID: , Description: EDF-4147 8 ng/ml 04/24/13

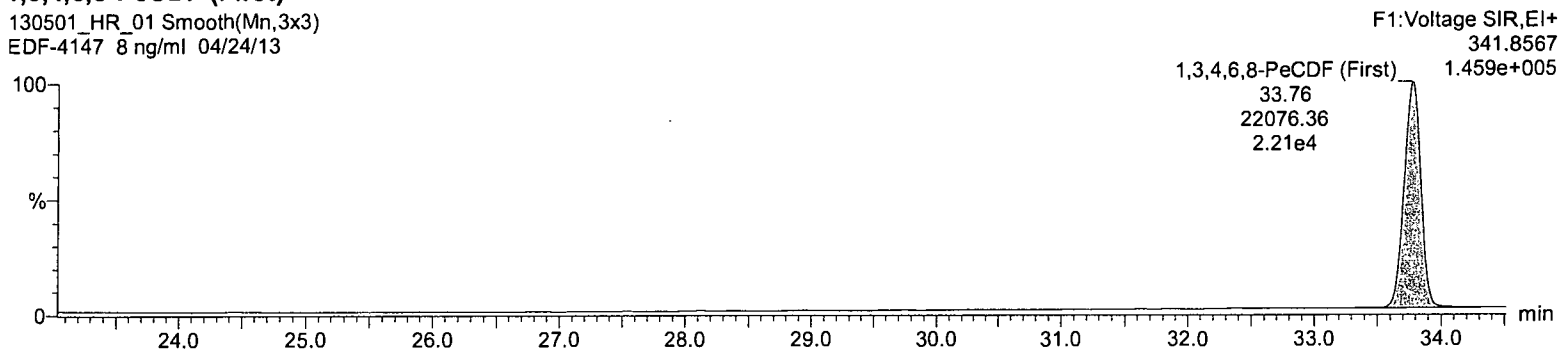
1,3,4,6,8-PeCDF (First)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13



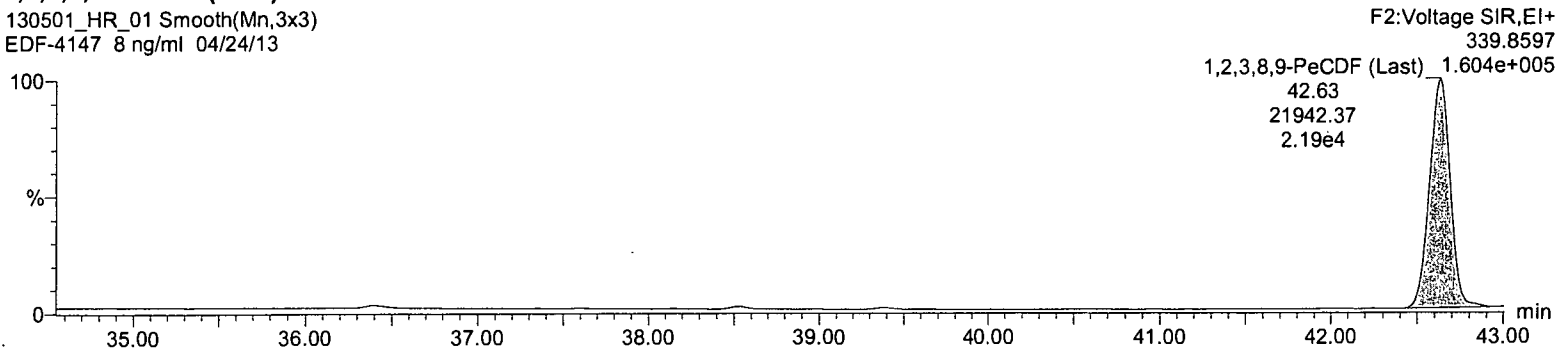
1,3,4,6,8-PeCDF (First)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13



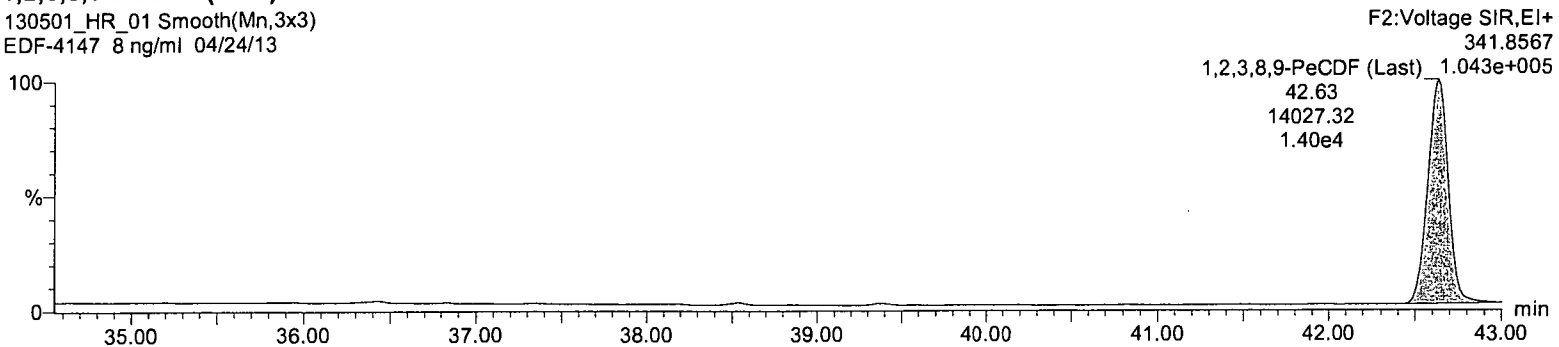
1,2,3,8,9-PeCDF (Last)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13



1,2,3,8,9-PeCDF (Last)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

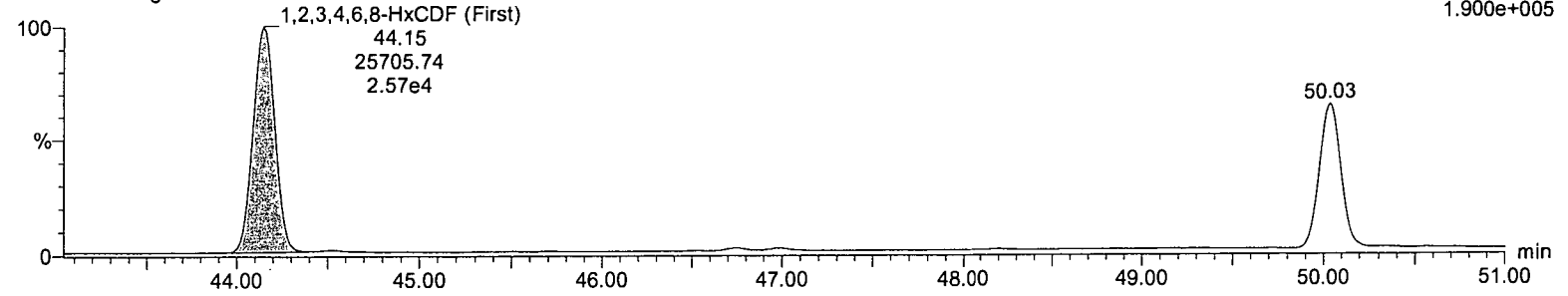


Name: 130501_HR_01, Date: 01-May-2013, Time: 16:25:51, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,3,4,6,8-HxCDF (First)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

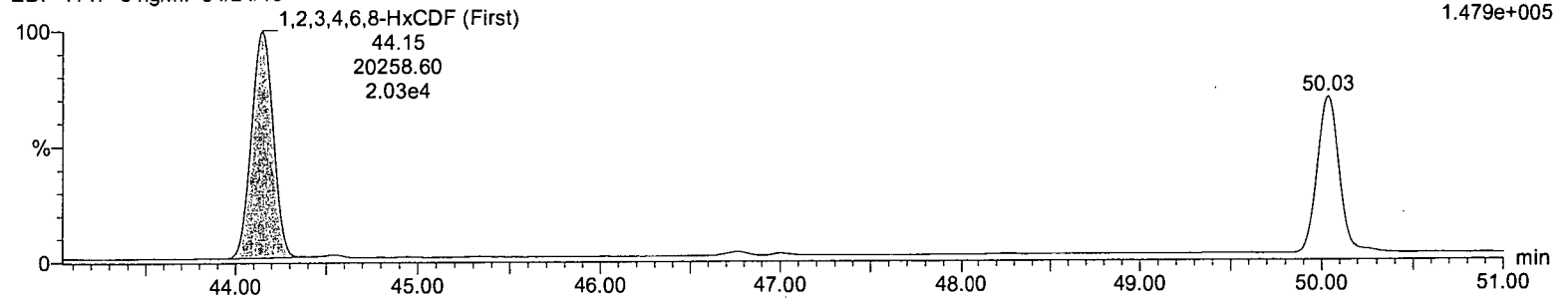
F3:Voltage SIR,EI+
373.8208
1.900e+005



1,2,3,4,6,8-HxCDF (First)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

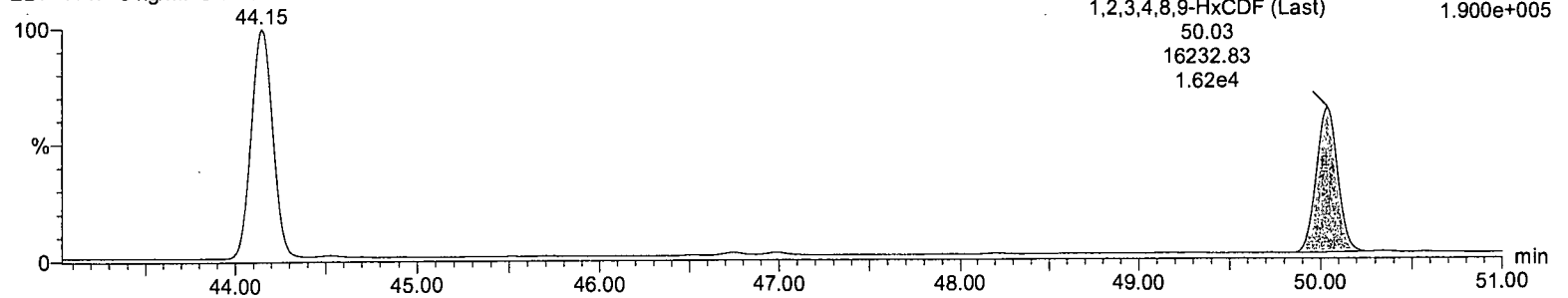
F3:Voltage SIR,EI+
375.8178
1.479e+005



1,2,3,4,8,9-HxCDF (Last)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

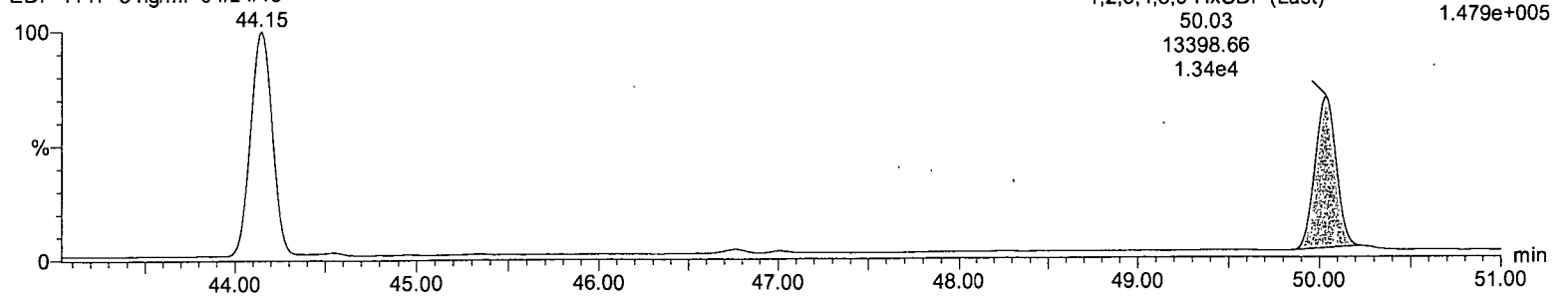
F3:Voltage SIR,EI+
373.8208
1.900e+005



1,2,3,4,8,9-HxCDF (Last)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

F3:Voltage SIR,EI+
375.8178
1.479e+005

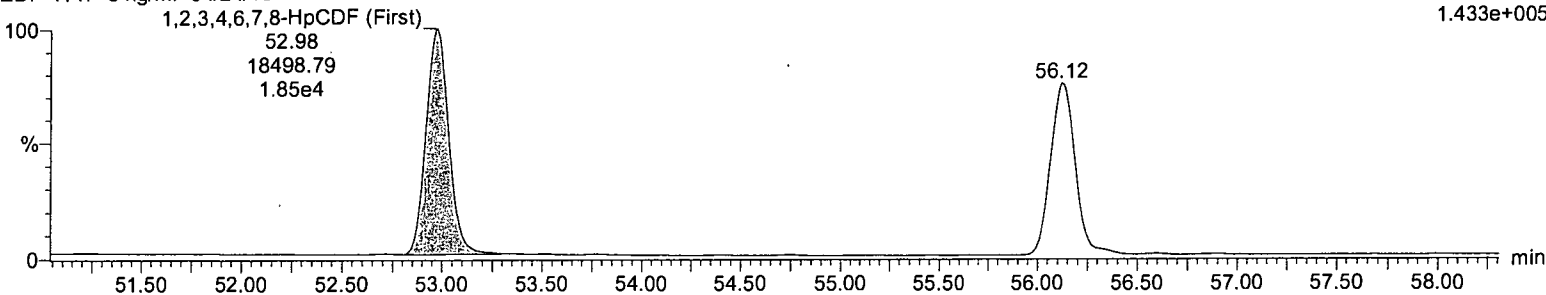


Name: 130501_HR_01, Date: 01-May-2013, Time: 16:25:51, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,3,4,6,7,8-HpCDF (First)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

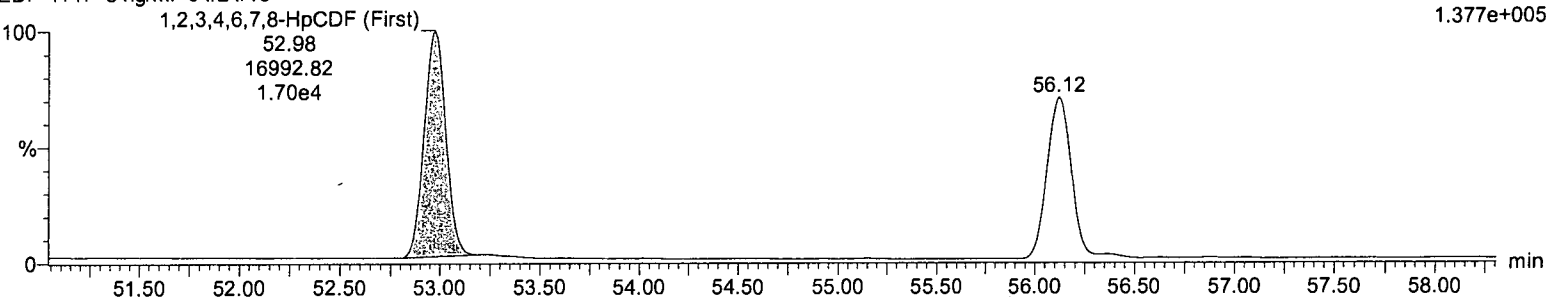
F4:Voltage SIR,EI+
407.7818
1.433e+005



1,2,3,4,6,7,8-HpCDF (First)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

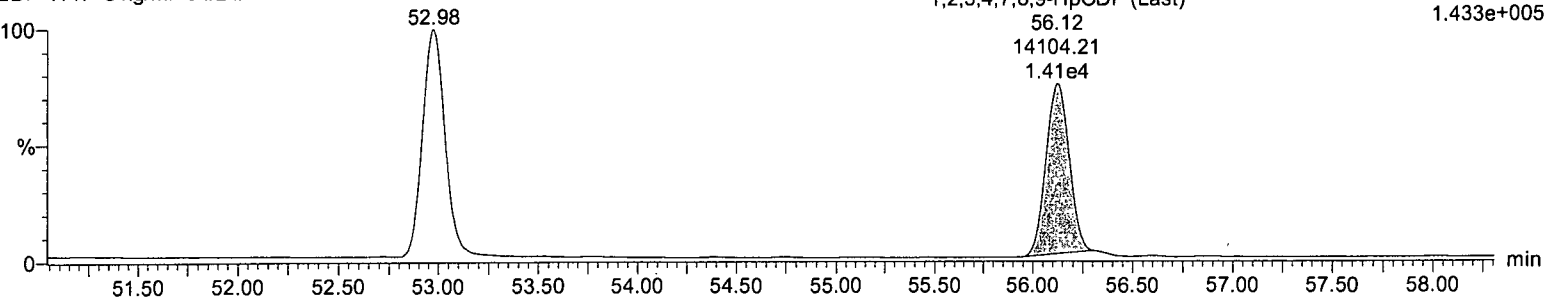
F4:Voltage SIR,EI+
409.7788
1.377e+005



1,2,3,4,7,8,9-HpCDF (Last)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

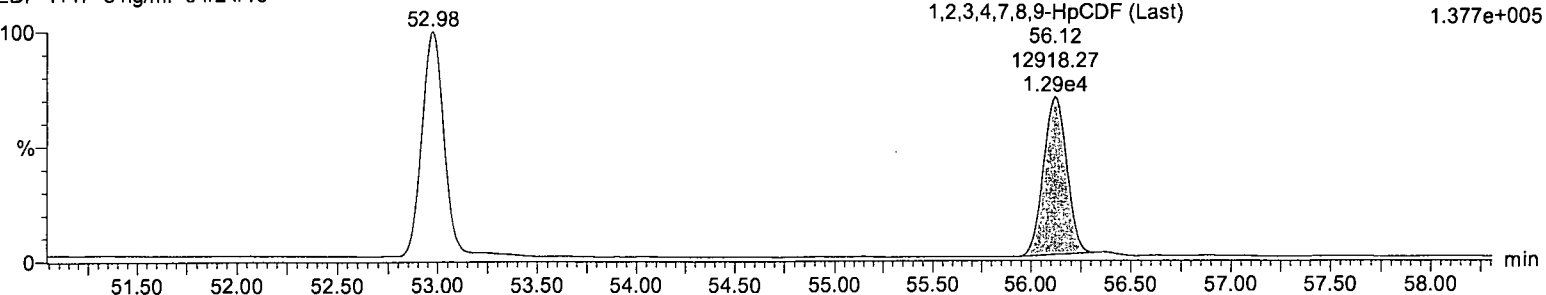
F4:Voltage SIR,EI+
407.7818
1.433e+005



1,2,3,4,7,8,9-HpCDF (Last)

130501_HR_01 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

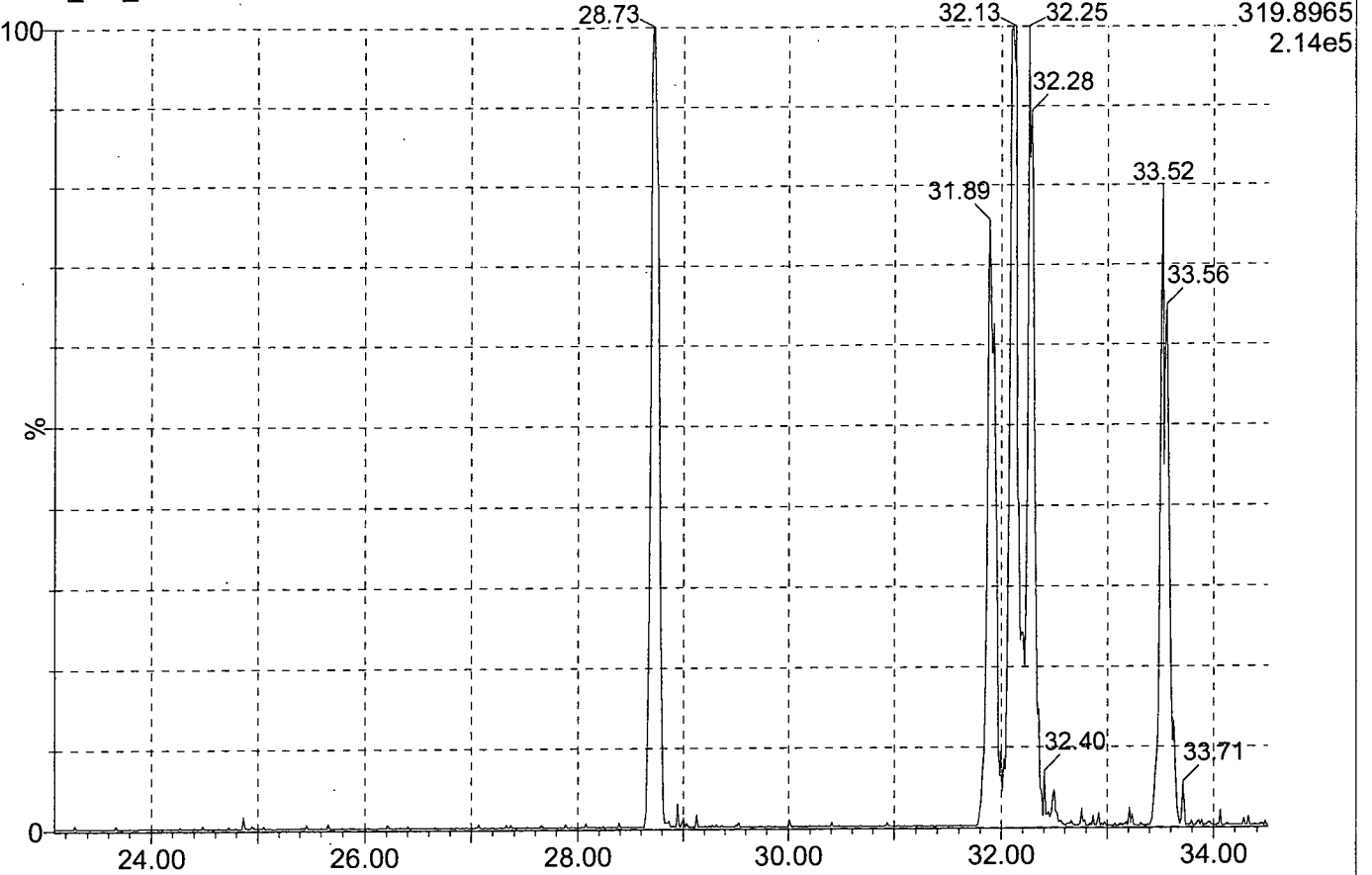
F4:Voltage SIR,EI+
409.7788
1.377e+005



EDF-4147 8 ng/ml 04/24/13

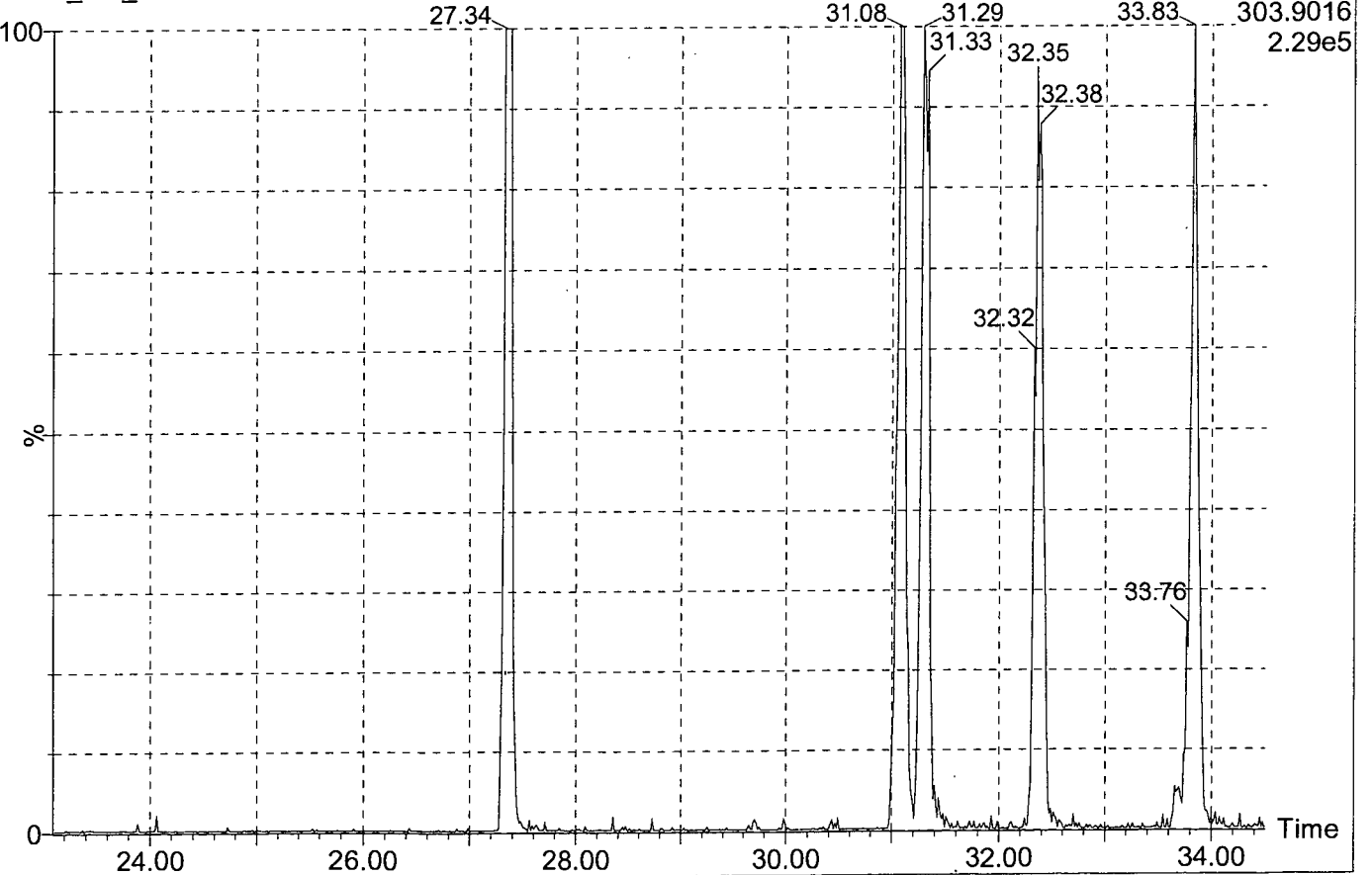
130501_HR_11

1: Voltage SIR 14 Channels EI+



130501_HR_11

1: Voltage SIR 14 Channels EI+



Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_CP_11.qld

Method: C:\MassLynx\Default.pro\Methdb\130501_8290_CP.mdb 02 May 2013 07:34:22

Calibration: 02 May 2013 07:35:50

Name: 130501_HR_11, Date: 02-May-2013, Time: 04:15:16, ID: , Description: EDF-4147 8 ng/ml 04/24/13, User: RP

#	Name	RT
1	1,3,6,8-TCDD (First)	28.73
2	1,2,3,7/1,2,3,8-TCDD	31.90
3	1,2,3,9-TCDD	32.10
4	2,3,7,8-TCDD	32.27
5	1,2,8,9-TCDD (Last)	33.53
6	13C-2,3,7,8-TCDD	32.24
7	1,2,4,6,8/1,2,4,7,9-PeCDD (First)	36.43
8	1,2,3,8,9-PeCDD (Last)	41.98
9	1,2,4,6,7,9/1,2,4,6,8,9-HxCDD (First)	45.30
10	1,2,3,4,6,7-HxCDD (Last)	49.05
11	1,2,3,4,6,7,9-HpCDD (First)	53.53
12	1,2,3,4,6,7,8-HpCDD (Last)	55.07
13	1,3,6,8-TCDF (First)	27.36
14	2,3,4,7-TCDF	31.08
15	2,3,7,8-TCDF	31.30
16	1,2,3,9-TCDF	32.36
17	1,2,8,9-TCDF (Last)	33.83
18	13C-2,3,7,8-TCDF	31.29
19	1,3,4,6,8-PeCDF (First)	33.67
20	1,2,3,8,9-PeCDF (Last)	42.53
21	1,2,3,4,6,8-HxCDF (First)	44.05
22	1,2,3,4,8,9-HxCDF (Last)	49.95
23	1,2,3,4,6,7,8-HpCDF (First)	52.89
24	1,2,3,4,7,8,9-HpCDF (Last)	56.03

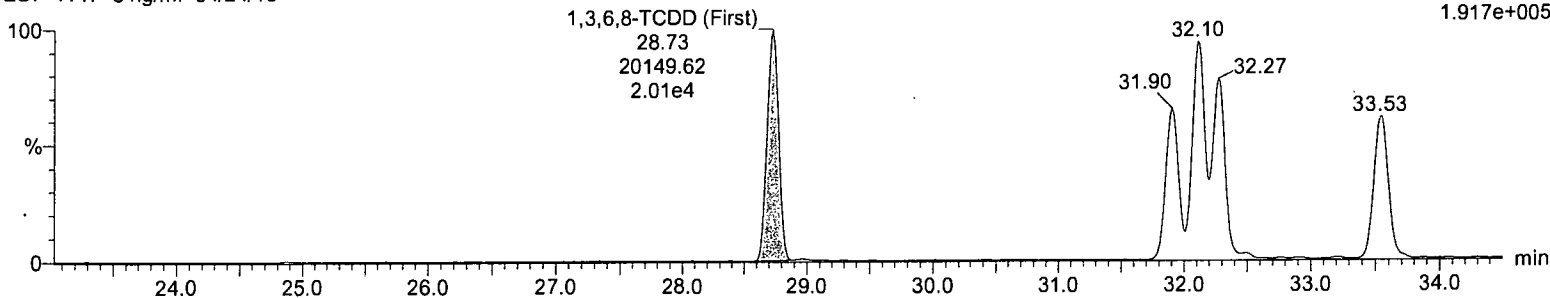
Method: C:\MassLynx\Default.pro\Methdb\130501_8290_CP.mdb 02 May 2013 07:34:22
Calibration: 02 May 2013 07:35:50

Name: 130501_HR_11, Date: 02-May-2013, Time: 04:15:16, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,3,6,8-TCDD (First)

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

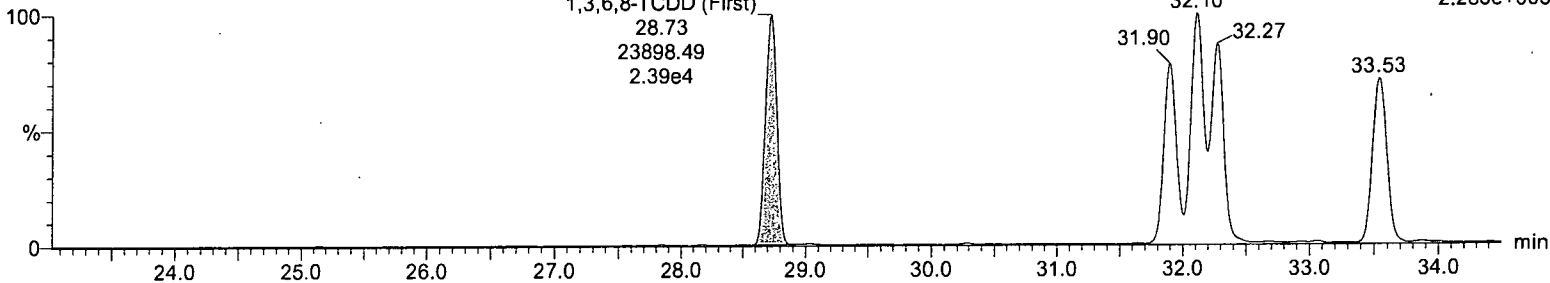
F1:Voltage SIR,EI+
319.8965
1.917e+005



1,3,6,8-TCDD (First)

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

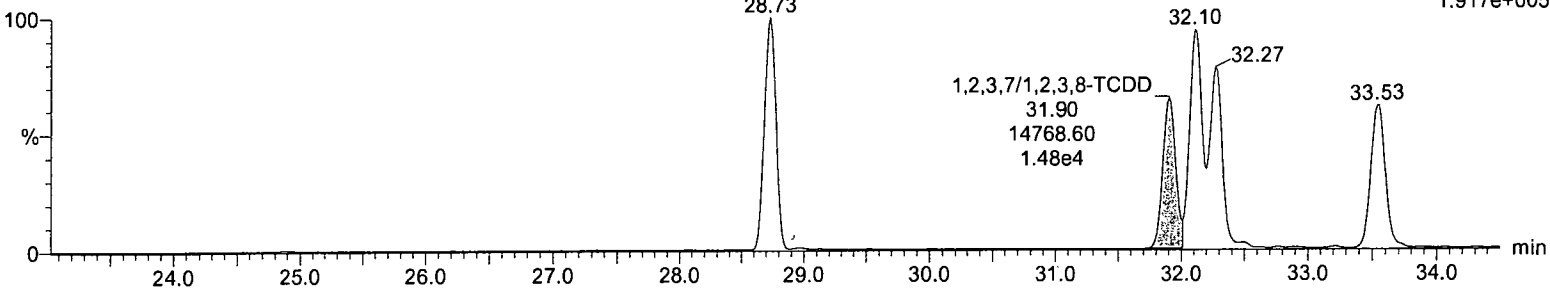
F1:Voltage SIR,EI+
321.8936
2.285e+005



1,2,3,7/1,2,3,8-TCDD

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

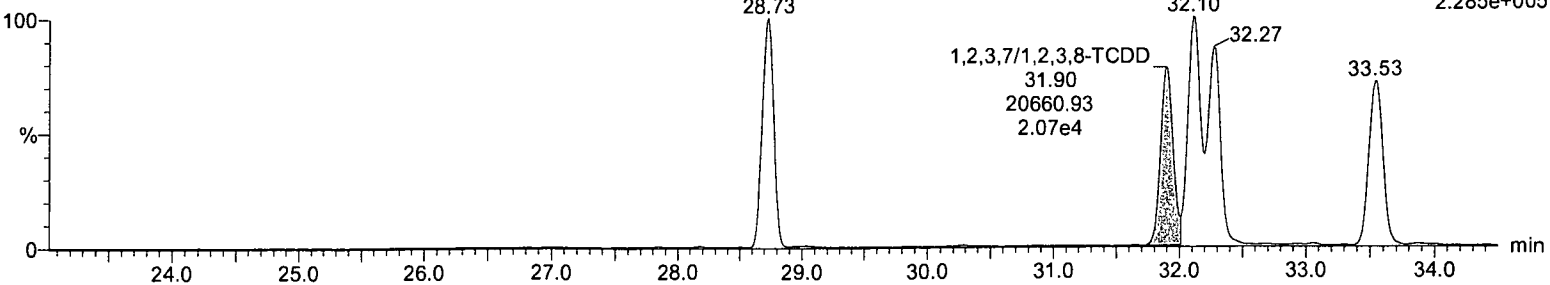
F1:Voltage SIR,EI+
319.8965
1.917e+005



1,2,3,7/1,2,3,8-TCDD

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

F1:Voltage SIR,EI+
321.8936
2.285e+005

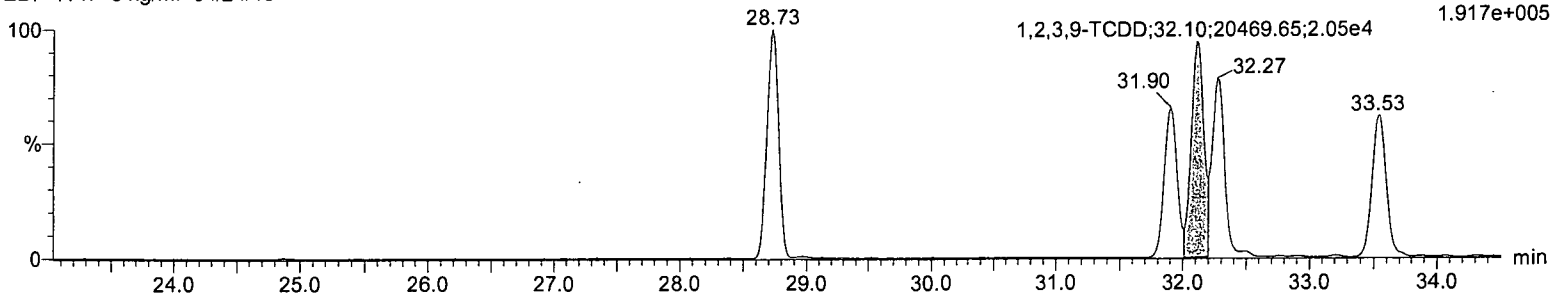


Name: 130501_HR_11, Date: 02-May-2013, Time: 04:15:16, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,3,9-TCDD

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

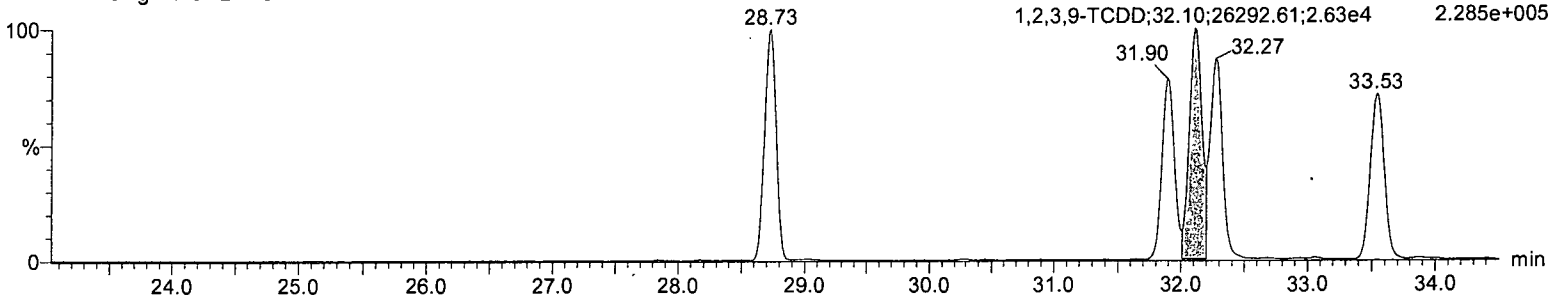
F1:Voltage SIR,EI+
319.8965
1.917e+005



1,2,3,9-TCDD

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

F1:Voltage SIR,EI+
321.8936
2.285e+005



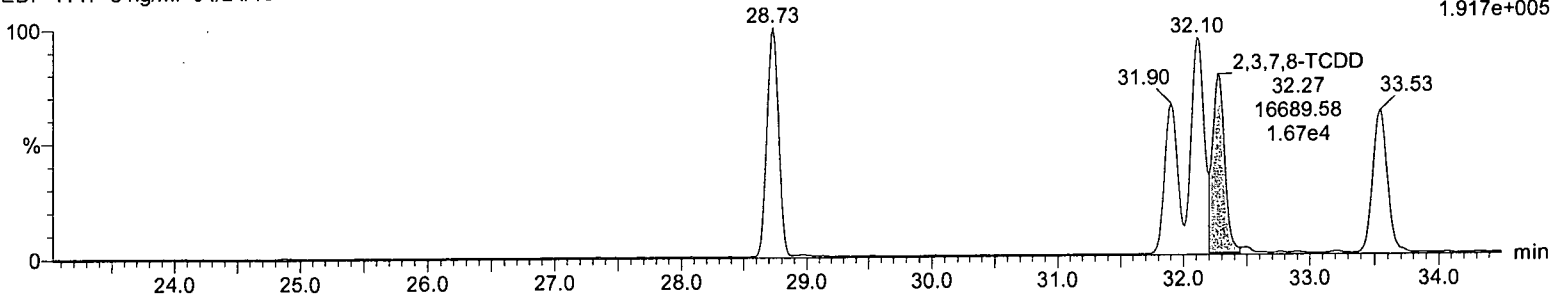
Dataset: C:\MassLynx\Default.pro\Quanted Data\130501_CP_11.qld

Name: 130501_HR_11, Date: 02-May-2013, Time: 04:15:16, ID: , Description: EDF-4147 8 ng/ml 04/24/13

2,3,7,8-TCDD

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

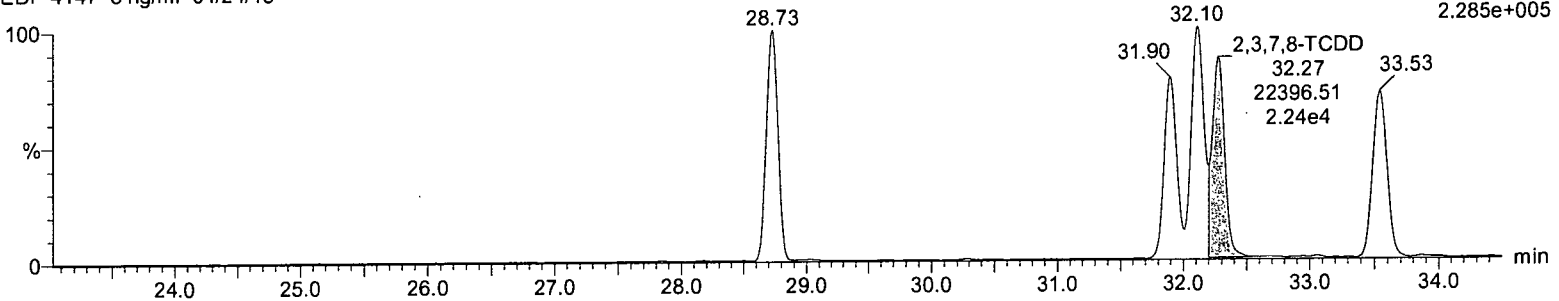
F1:Voltage SIR,EI+
319.8965
1.917e+005



2,3,7,8-TCDD

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

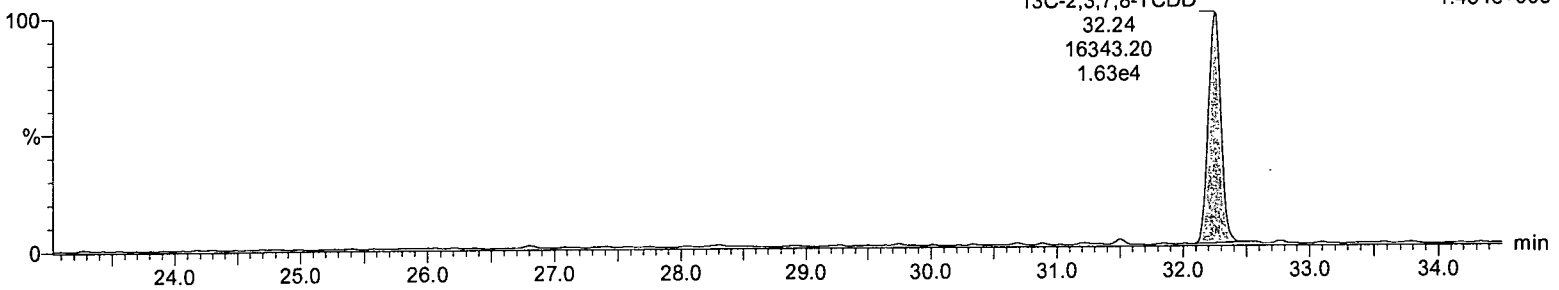
F1:Voltage SIR,EI+
321.8936
2.285e+005



13C-2,3,7,8-TCDD

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

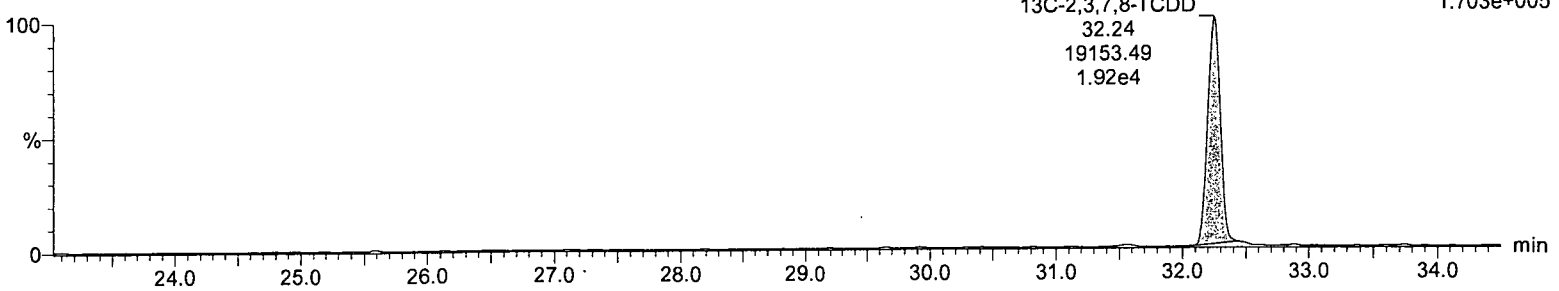
F1:Voltage SIR,EI+
331.9368
1.454e+005



13C-2,3,7,8-TCDD

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

F1:Voltage SIR,EI+
333.9338
1.703e+005

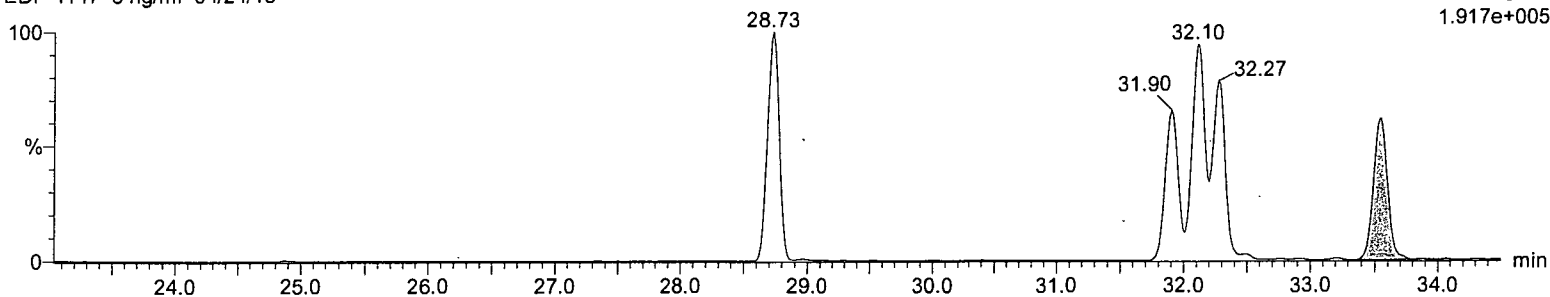


Name: 130501_HR_11, Date: 02-May-2013, Time: 04:15:16, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,8,9-TCDD (Last)

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

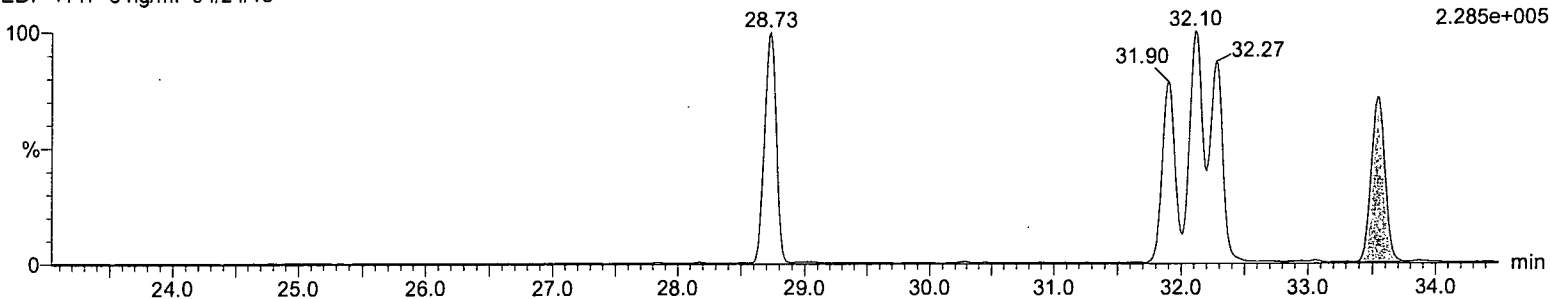
F1:Voltage SIR,EI+
319.8965
1.917e+005



1,2,8,9-TCDD (Last)

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

F1:Voltage SIR,EI+
321.8936
2.285e+005

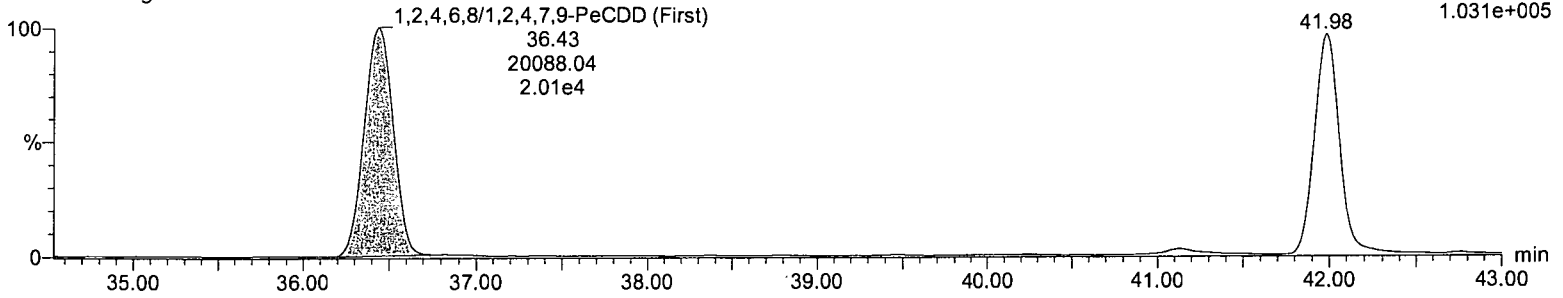


Name: 130501_HR_11, Date: 02-May-2013, Time: 04:15:16, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,4,6,8/1,2,4,7,9-PeCDD (First)

130501_HR_11 Smooth(Mn,3x4)
EDF-4147 8 ng/ml 04/24/13

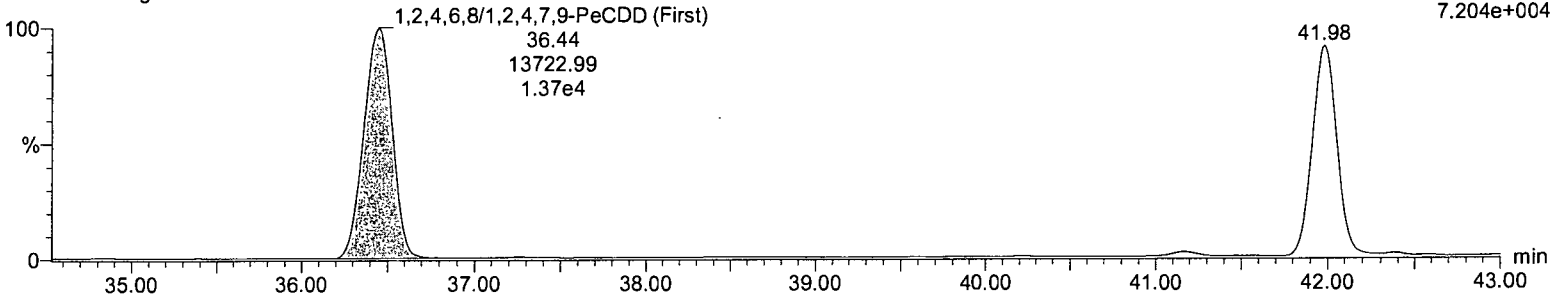
F2:Voltage SIR,EI+
355.8546
1.031e+05



1,2,4,6,8/1,2,4,7,9-PeCDD (First)

130501_HR_11 Smooth(Mn,3x4)
EDF-4147 8 ng/ml 04/24/13

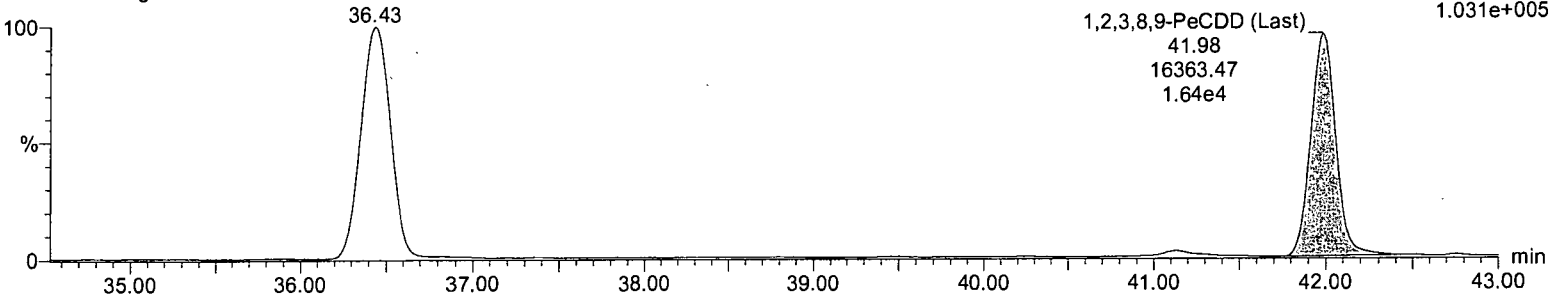
F2:Voltage SIR,EI+
357.8516
7.204e+004



1,2,3,8,9-PeCDD (Last)

130501_HR_11 Smooth(Mn,3x4)
EDF-4147 8 ng/ml 04/24/13

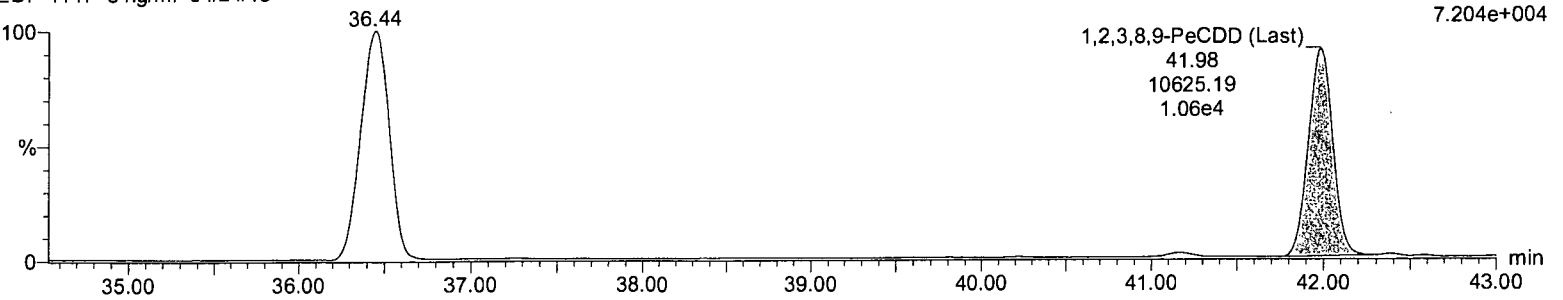
F2:Voltage SIR,EI+
355.8546
1.031e+05



1,2,3,8,9-PeCDD (Last)

130501_HR_11 Smooth(Mn,3x4)
EDF-4147 8 ng/ml 04/24/13

F2:Voltage SIR,EI+
357.8516
7.204e+004

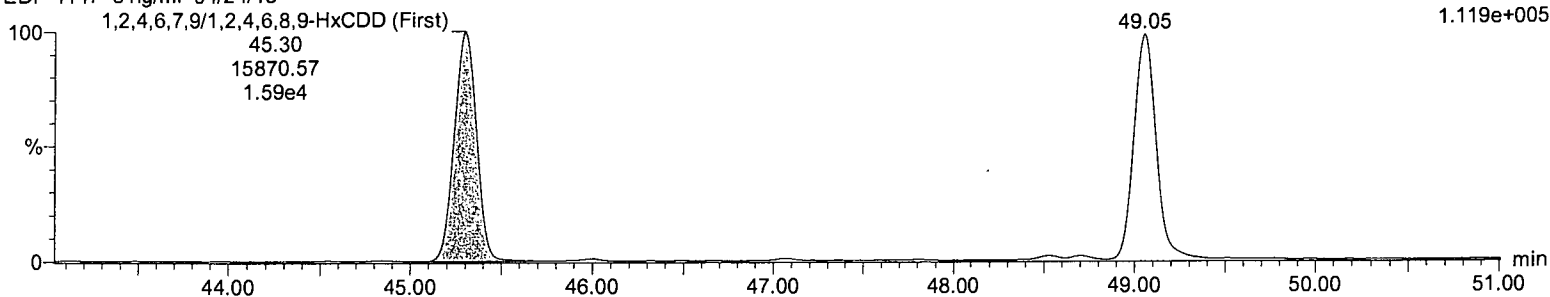


Name: 130501_HR_11, Date: 02-May-2013, Time: 04:15:16, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,4,6,7,9/1,2,4,6,8,9-HxCDD (First)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

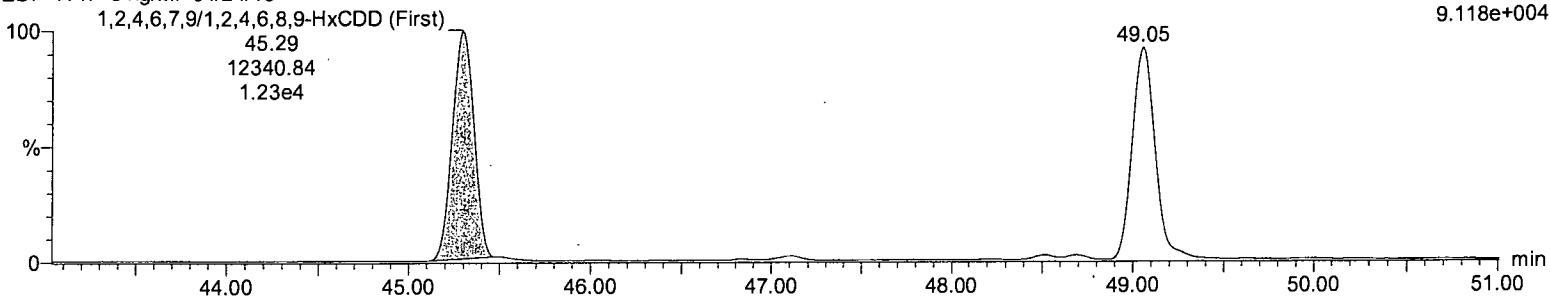
F3:Voltage SIR,EI+
389.8157
1.119e+005



1,2,4,6,7,9/1,2,4,6,8,9-HxCDD (First)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

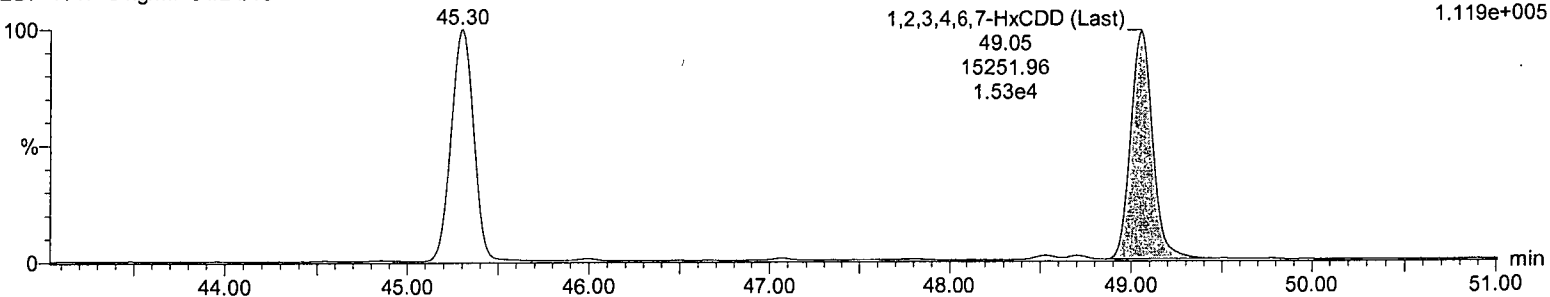
F3:Voltage SIR,EI+
391.8127
9.118e+004



1,2,3,4,6,7-HxCDD (Last)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

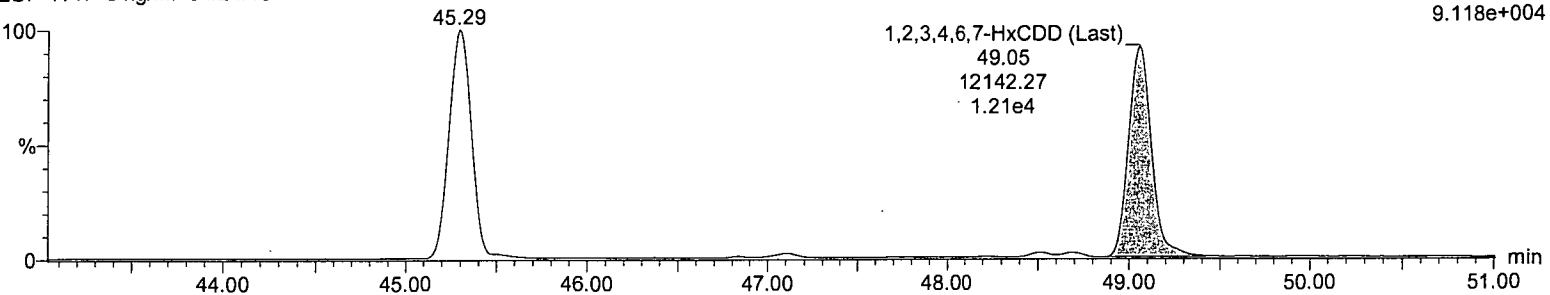
F3:Voltage SIR,EI+
389.8157
1.119e+005



1,2,3,4,6,7-HxCDD (Last)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

F3:Voltage SIR,EI+
391.8127
9.118e+004

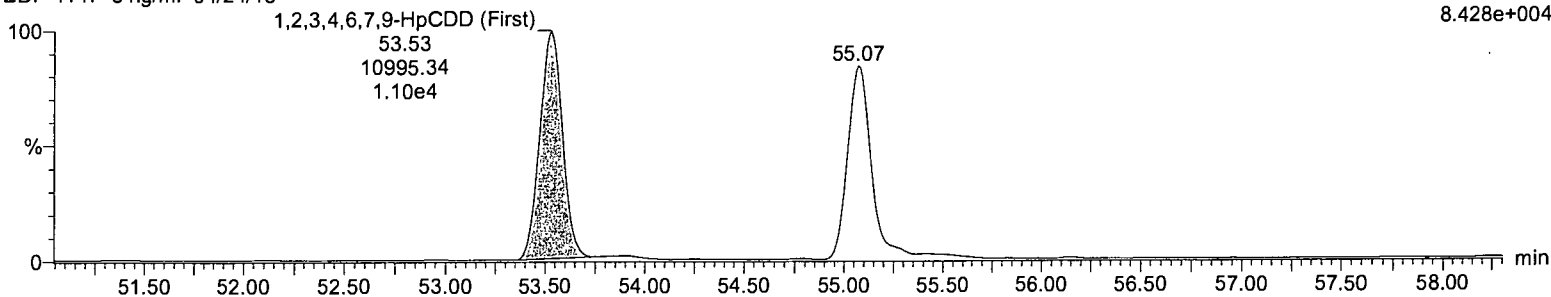


Name: 130501_HR_11, Date: 02-May-2013, Time: 04:15:16, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,3,4,6,7,9-HpCDD (First)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

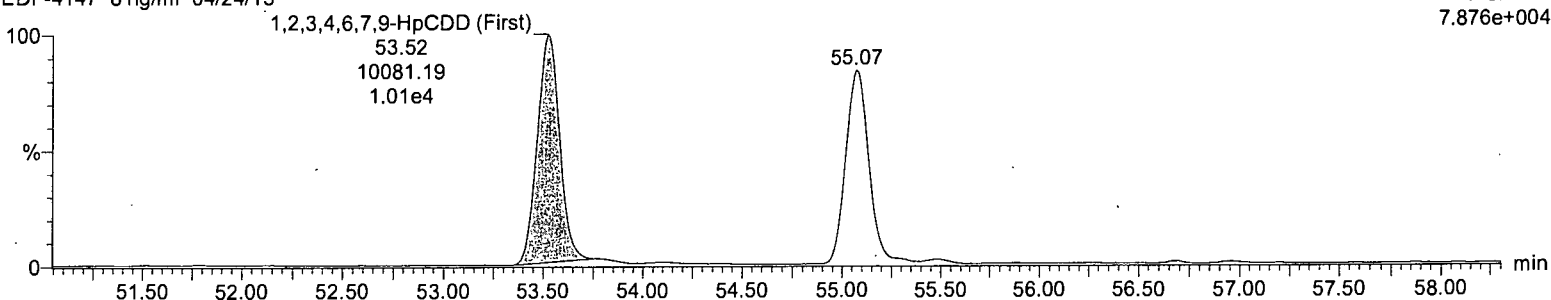
F4:Voltage SIR,EI+
423.7767
8.428e+004



1,2,3,4,6,7,9-HpCDD (First)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

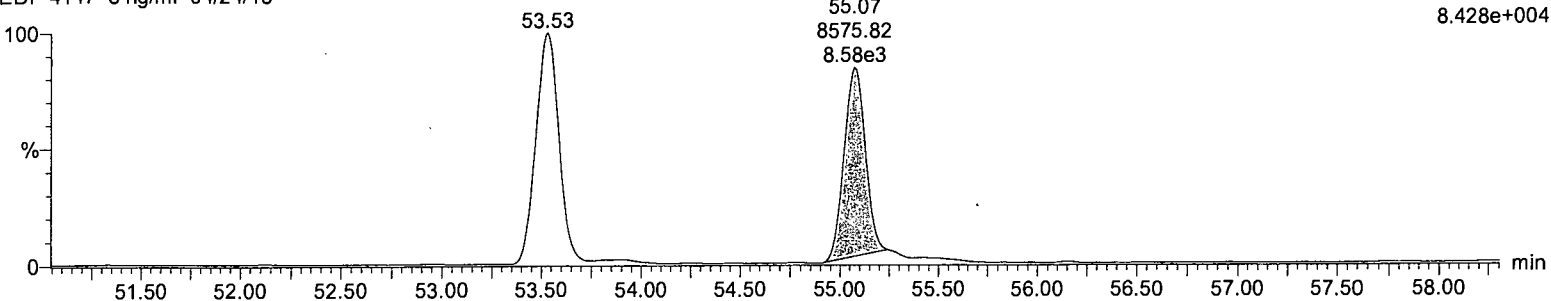
F4:Voltage SIR,EI+
425.7737
7.876e+004



1,2,3,4,6,7,8-HpCDD (Last)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

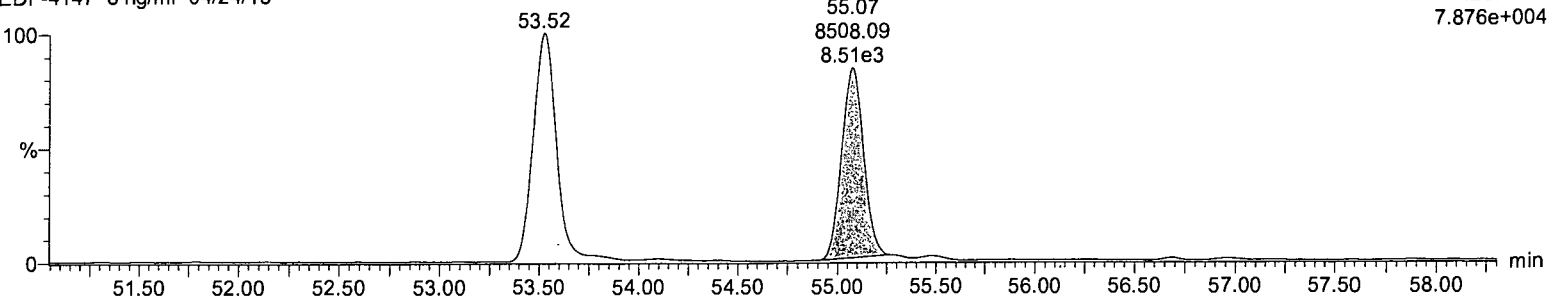
F4:Voltage SIR,EI+
423.7767
8.428e+004



1,2,3,4,6,7,8-HpCDD (Last)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

F4:Voltage SIR,EI+
425.7737
7.876e+004

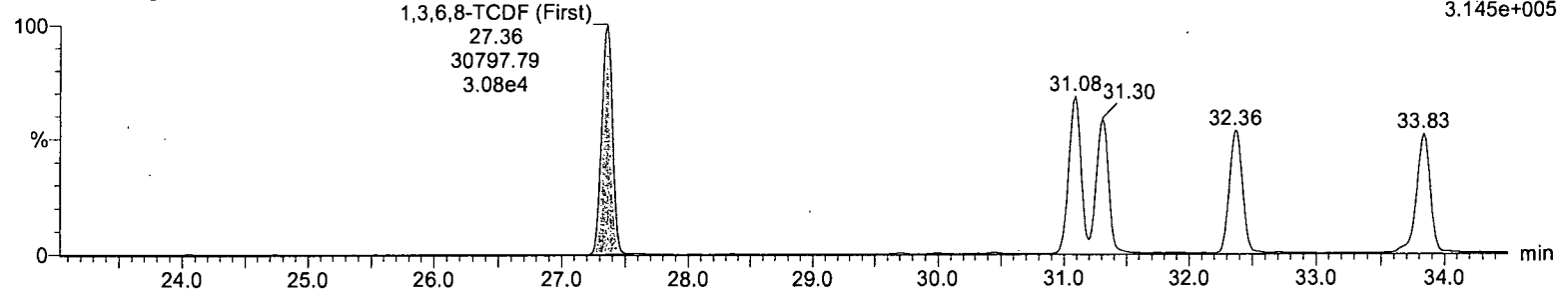


Name: 130501_HR_11, Date: 02-May-2013, Time: 04:15:16, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,3,6,8-TCDF (First)

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

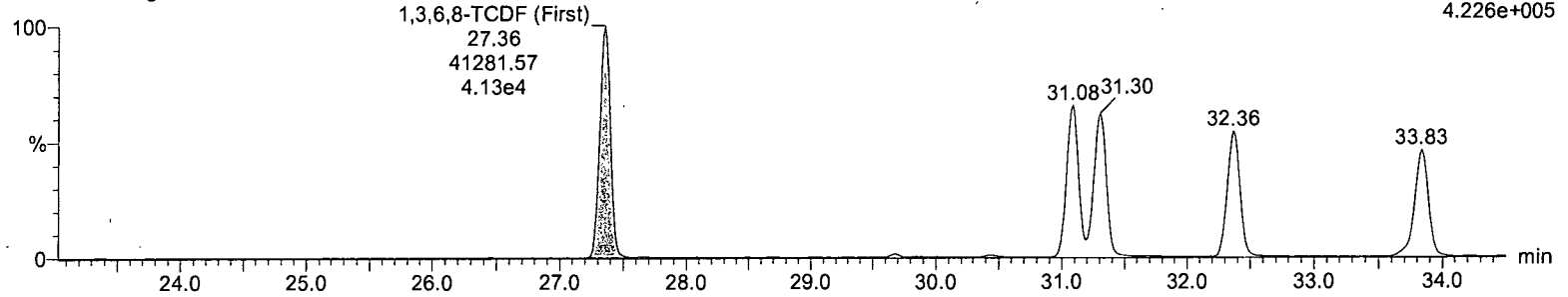
F1:Voltage SIR,EI+
303.9016
3.145e+005



1,3,6,8-TCDF (First)

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

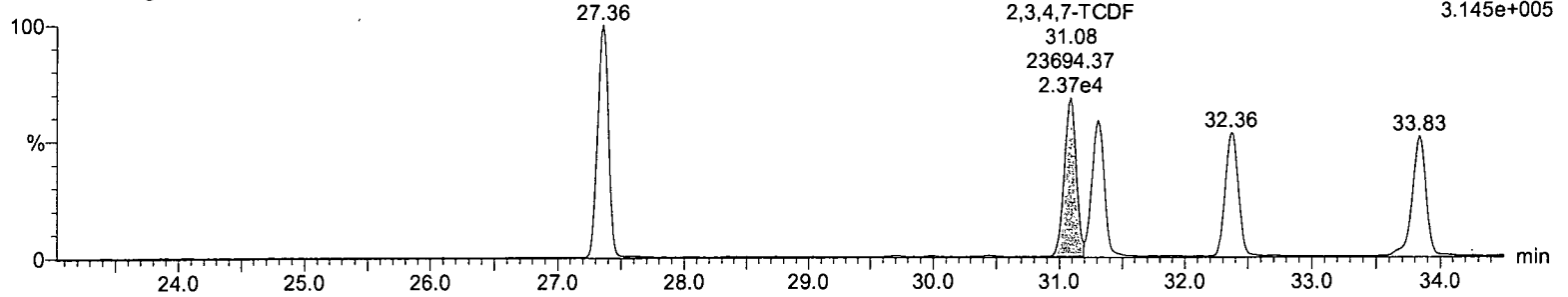
F1:Voltage SIR,EI+
305.8987
4.226e+005



2,3,4,7-TCDF

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

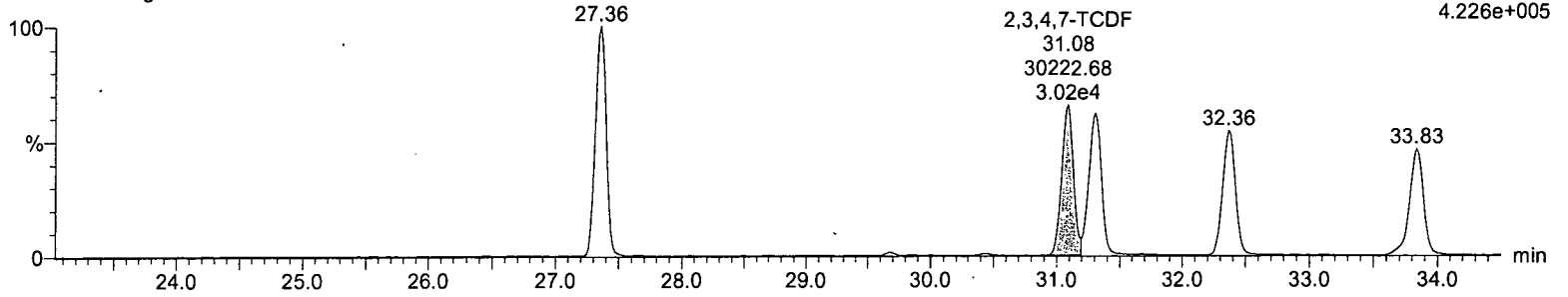
F1:Voltage SIR,EI+
303.9016
3.145e+005



2,3,4,7-TCDF

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

F1:Voltage SIR,EI+
305.8987
4.226e+005

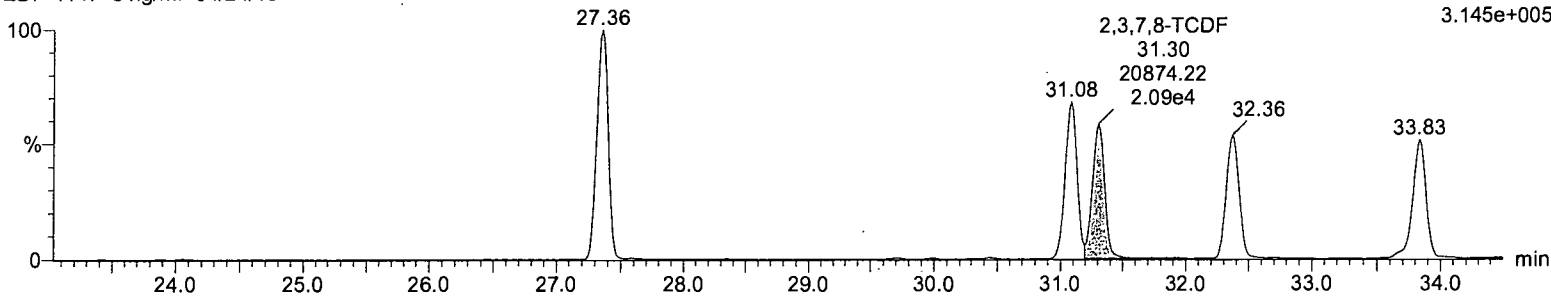


Name: 130501_HR_11, Date: 02-May-2013, Time: 04:15:16, ID: , Description: EDF-4147 8 ng/ml 04/24/13

2,3,7,8-TCDF

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

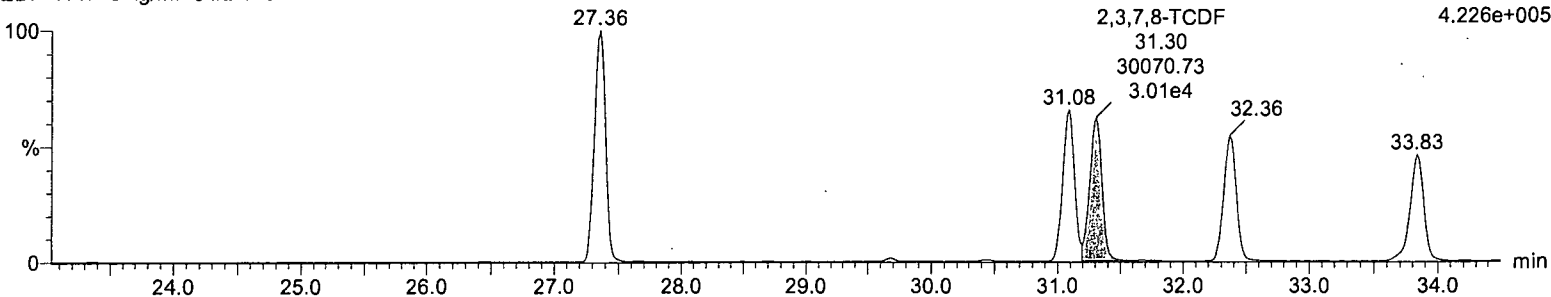
F1:Voltage SIR,EI+
303.9016
3.145e+005



2,3,7,8-TCDF

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

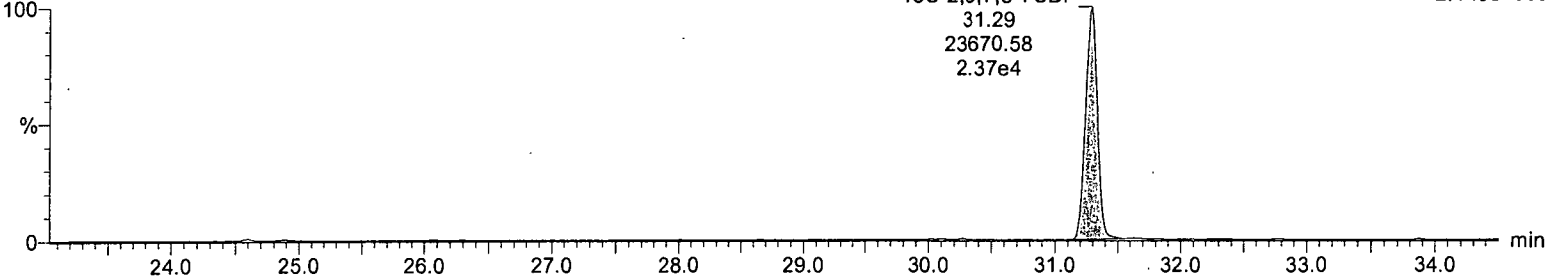
F1:Voltage SIR,EI+
305.8987
4.226e+005



13C-2,3,7,8-TCDF

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

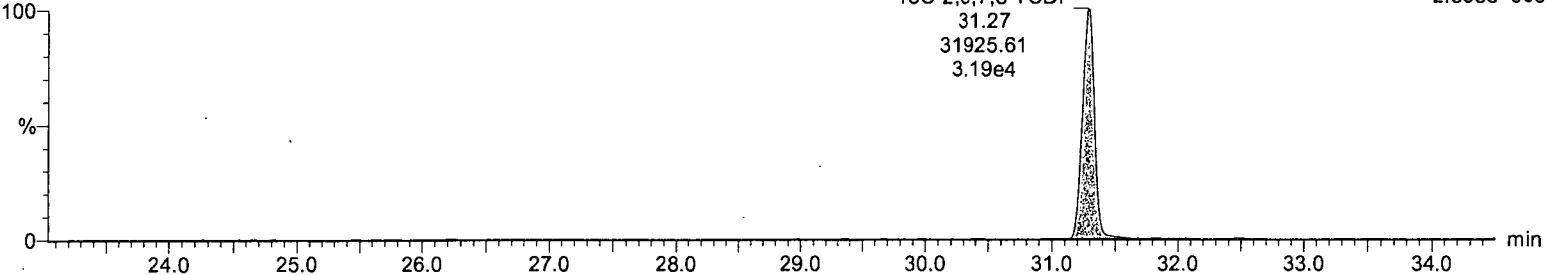
F1:Voltage SIR,EI+
315.9419
2.149e+005



13C-2,3,7,8-TCDF

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

F1:Voltage SIR,EI+
317.9389
2.858e+005

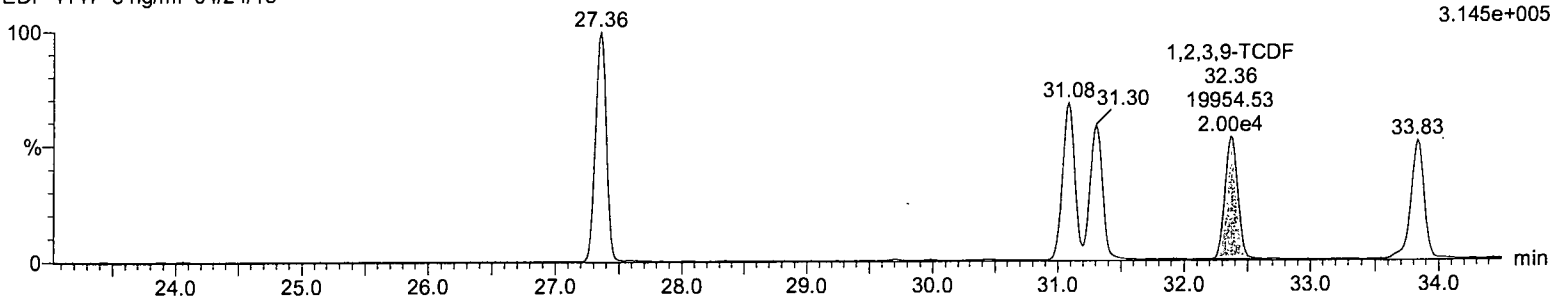


Name: 130501_HR_11, Date: 02-May-2013, Time: 04:15:16, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,3,9-TCDF

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

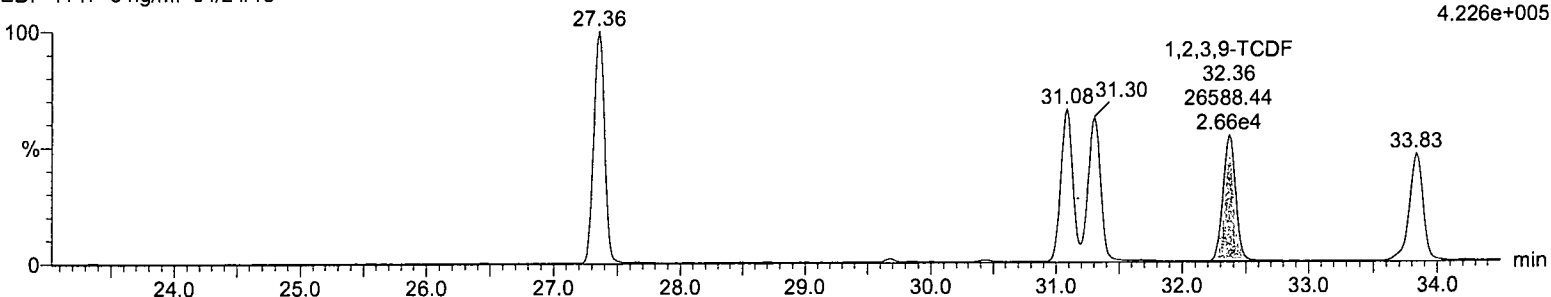
F1:Voltage SIR,EI+
303.9016
3.145e+005



1,2,3,9-TCDF

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

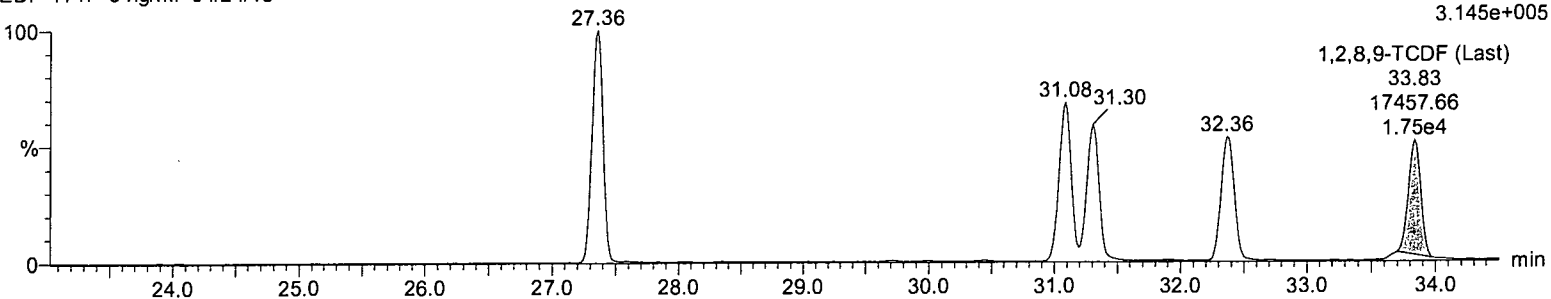
F1:Voltage SIR,EI+
305.8987
4.226e+005



1,2,8,9-TCDF (Last)

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

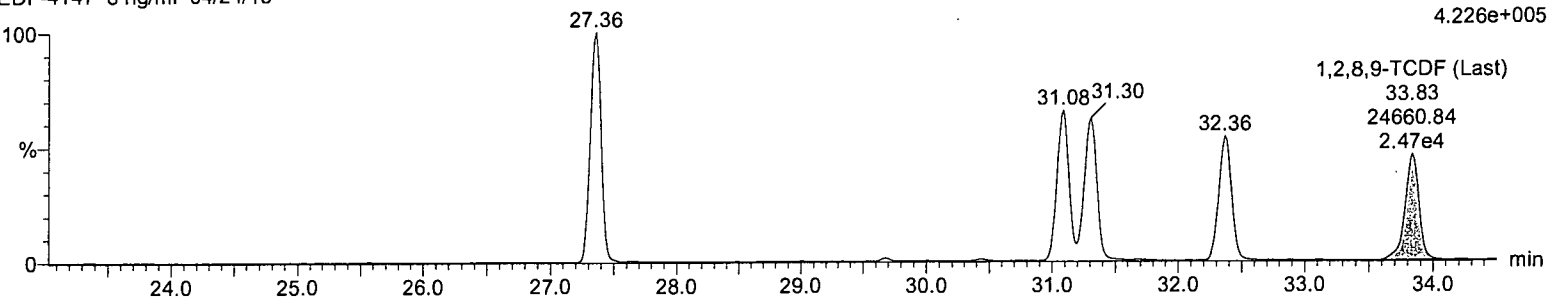
F1:Voltage SIR,EI+
303.9016
3.145e+005



1,2,8,9-TCDF (Last)

130501_HR_11 Smooth(Mn,2x2)
EDF-4147 8 ng/ml 04/24/13

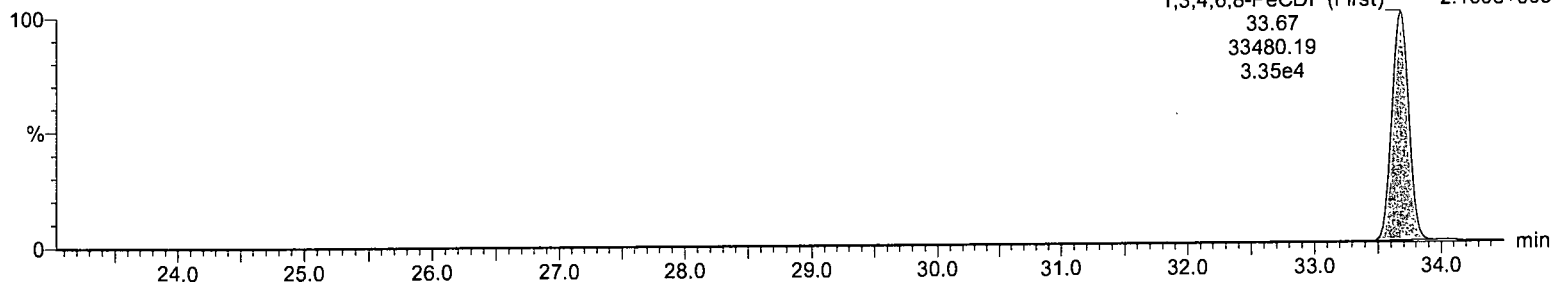
F1:Voltage SIR,EI+
305.8987
4.226e+005



Name: 130501_HR_11, Date: 02-May-2013, Time: 04:15:16, ID: , Description: EDF-4147 8 ng/ml 04/24/13

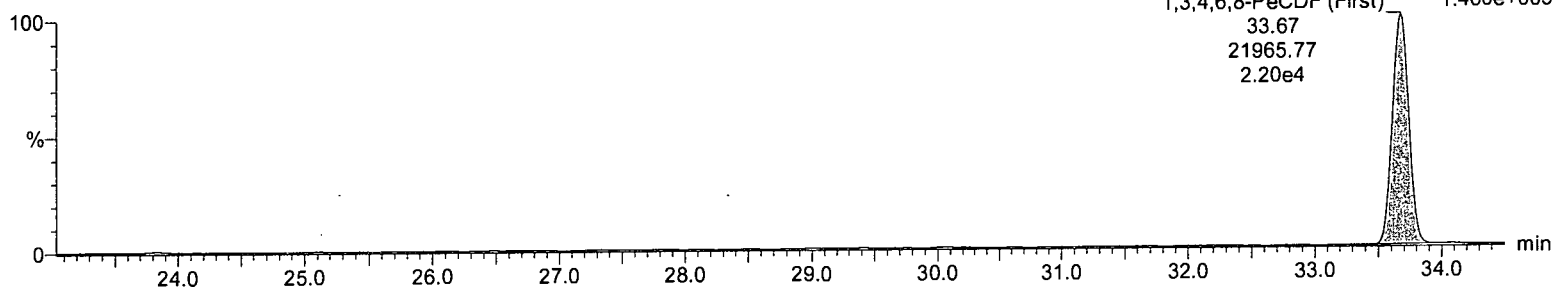
1,3,4,6,8-PeCDF (First)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13



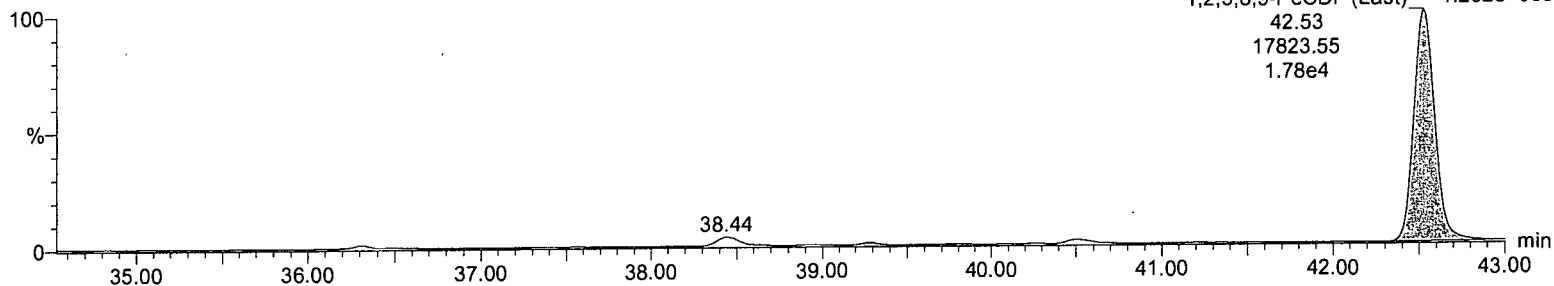
1,3,4,6,8-PeCDF (First)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13



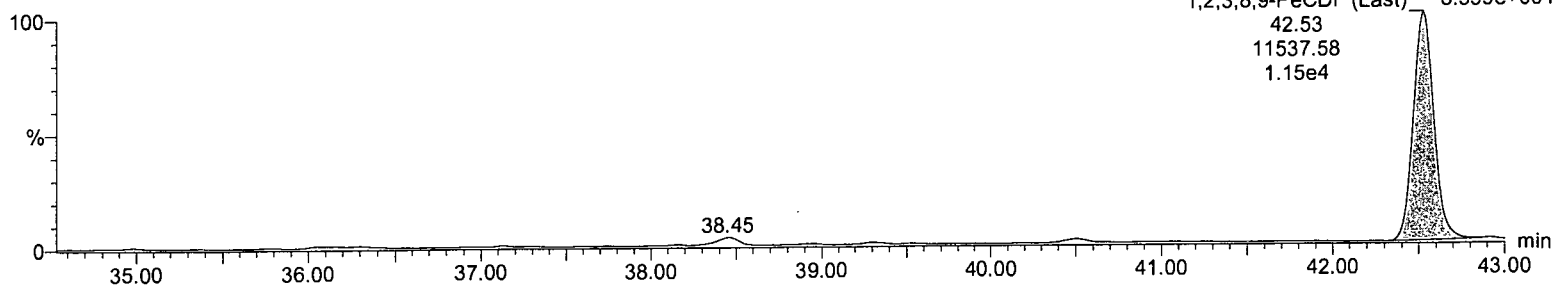
1,2,3,8,9-PeCDF (Last)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13



1,2,3,8,9-PeCDF (Last)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

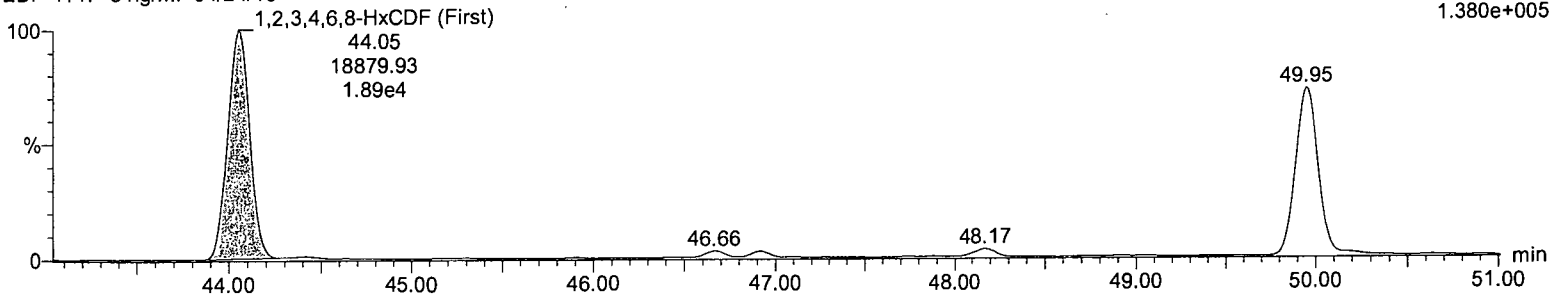


Name: 130501_HR_11, Date: 02-May-2013, Time: 04:15:16, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,3,4,6,8-HxCDF (First)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

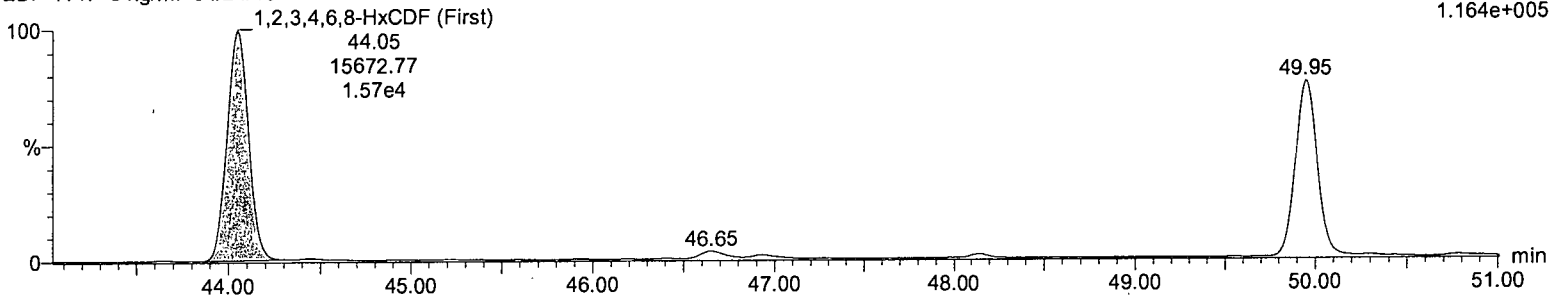
F3:Voltage SIR,EI+
373.8208
1.380e+005



1,2,3,4,6,8-HxCDF (First)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

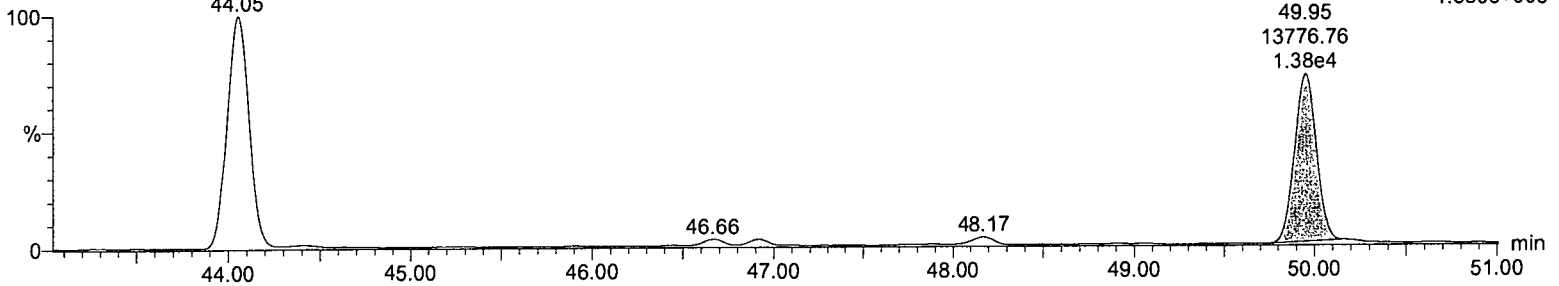
F3:Voltage SIR,EI+
375.8178
1.164e+005



1,2,3,4,8,9-HxCDF (Last)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

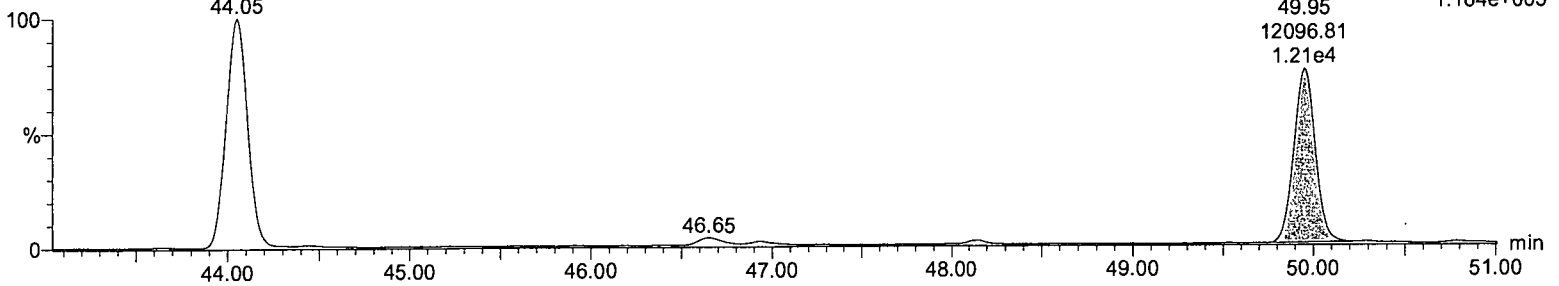
F3:Voltage SIR,EI+
373.8208
1,2,3,4,8,9-HxCDF (Last) 1.380e+005



1,2,3,4,8,9-HxCDF (Last)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

F3:Voltage SIR,EI+
375.8178
1,2,3,4,8,9-HxCDF (Last) 1.164e+005

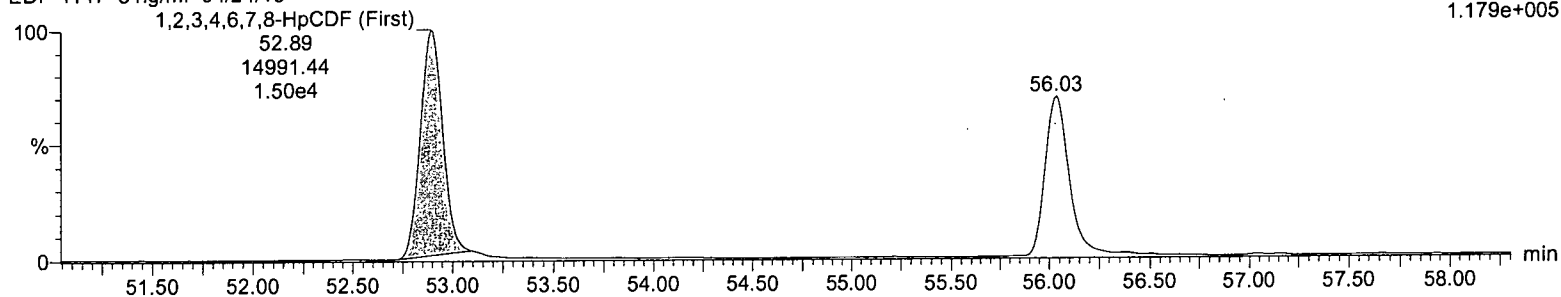


Name: 130501_HR_11, Date: 02-May-2013, Time: 04:15:16, ID: , Description: EDF-4147 8 ng/ml 04/24/13

1,2,3,4,6,7,8-HpCDF (First)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

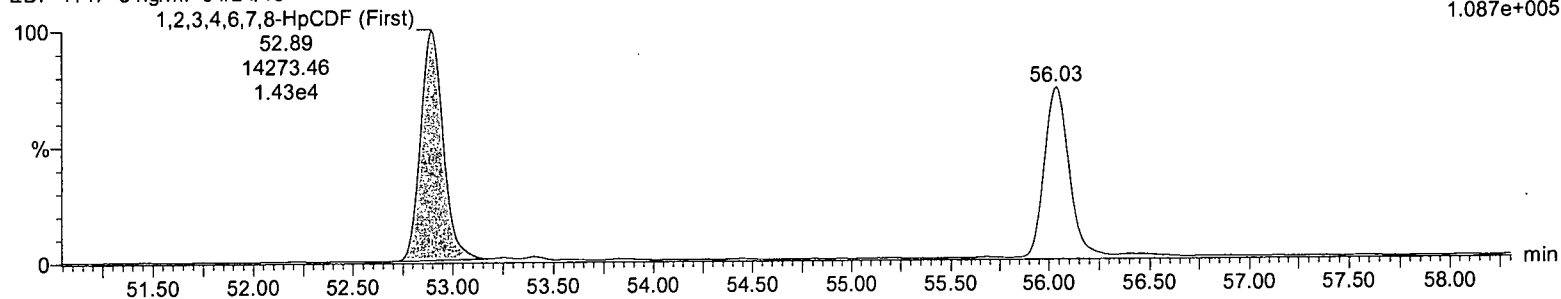
F4:Voltage SIR,EI+
407.7818
1.179e+005



1,2,3,4,6,7,8-HpCDF (First)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

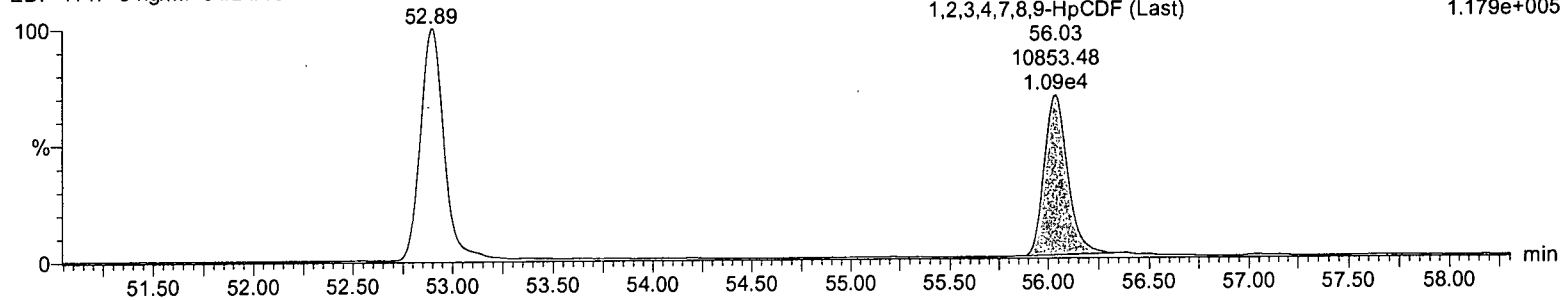
F4:Voltage SIR,EI+
409.7788
1.087e+005



1,2,3,4,7,8,9-HpCDF (Last)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

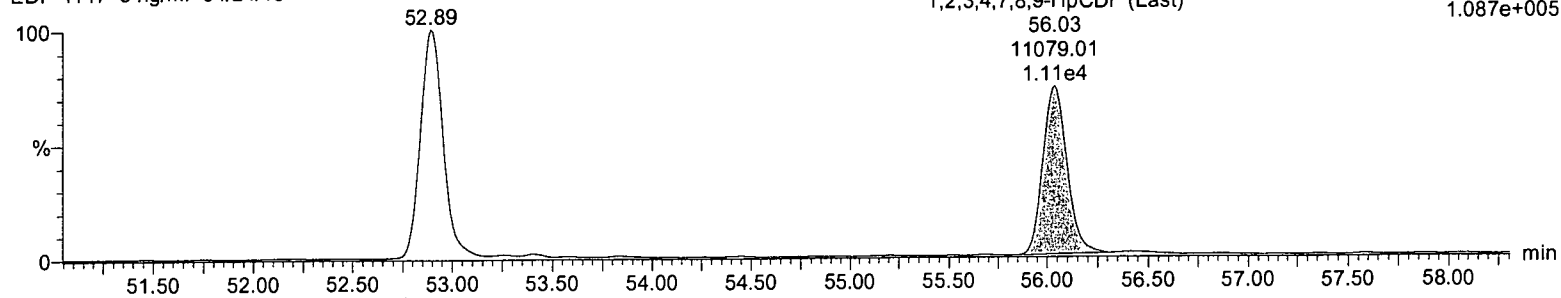
F4:Voltage SIR,EI+
407.7818
1.179e+005



1,2,3,4,7,8,9-HpCDF (Last)

130501_HR_11 Smooth(Mn,3x3)
EDF-4147 8 ng/ml 04/24/13

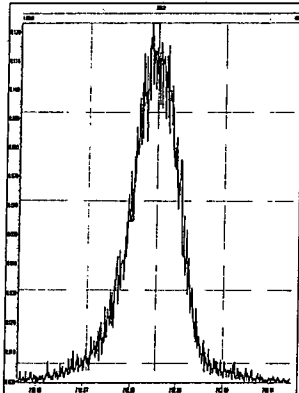
F4:Voltage SIR,EI+
409.7788
1.087e+005



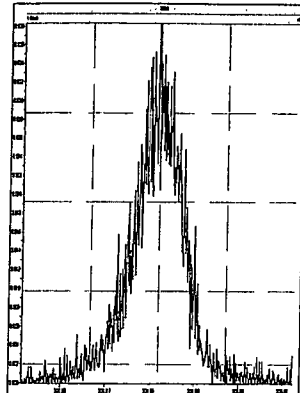
File: Experiment: 1613_120115_e.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Wednesday, May 01, 2013 16:19:51 Pacific Daylight Time

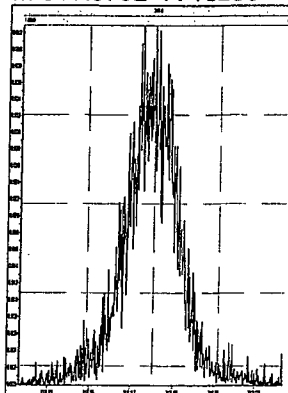
M 292.9824 R 11905



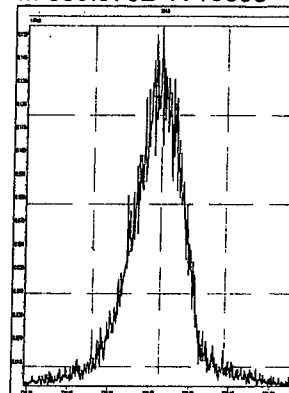
M 304.9824 R 13156



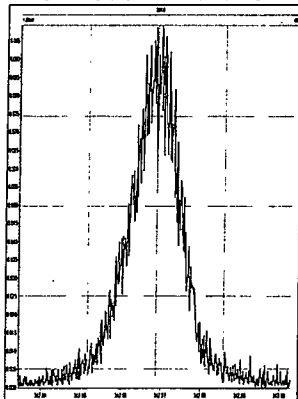
M 318.9792 R 13230



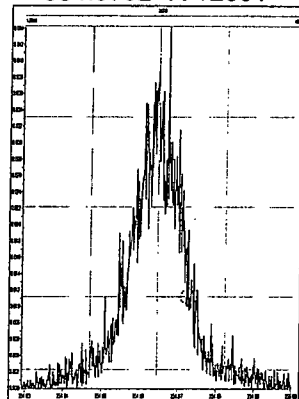
M 330.9792 R 10593



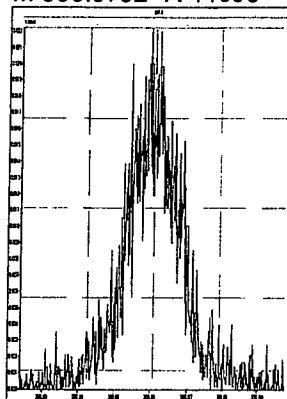
M 342.9792 R 11740



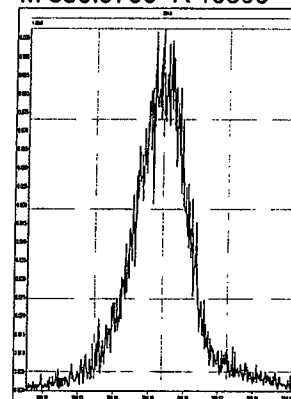
M 354.9792 R 12501



M 366.9792 R 11686



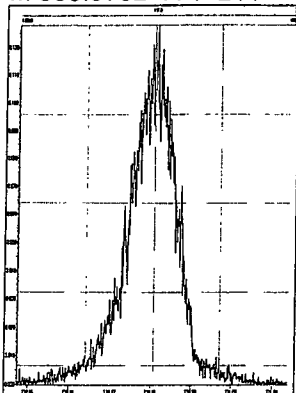
M 380.9760 R 10506



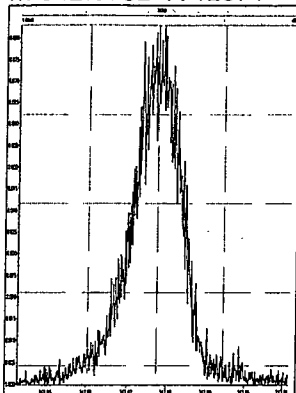
File: Experiment: 1613_120115_e.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Wednesday, May 01, 2013 16:20:18 Pacific Daylight Time

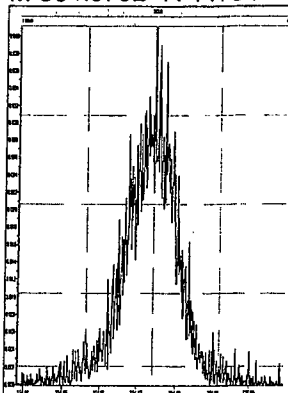
M 330.9792 R 11211



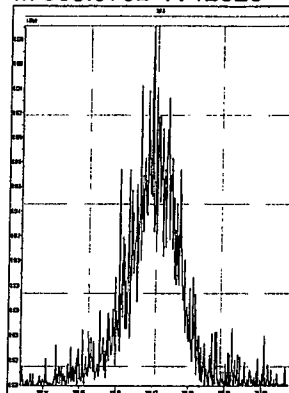
M 342.9792 R 12374



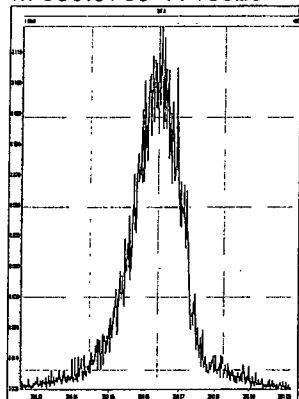
M 354.9792 R 11794



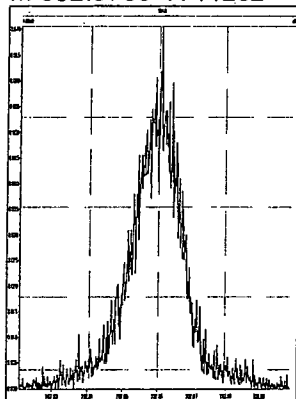
M 366.9792 R 12626



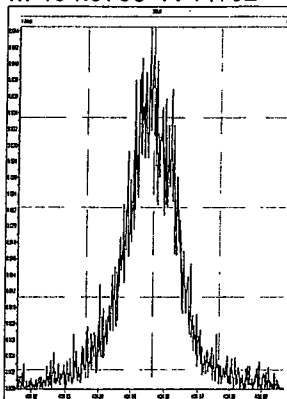
M 380.9760 R 10329



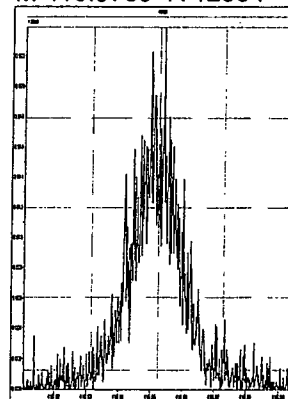
M 392.9760 R 11262



M 404.9760 R 11792



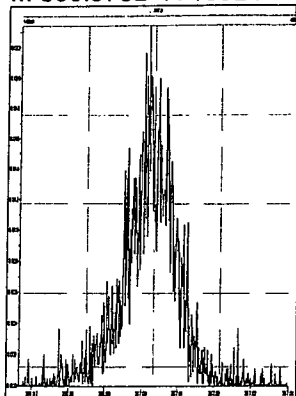
M 416.9760 R 12884



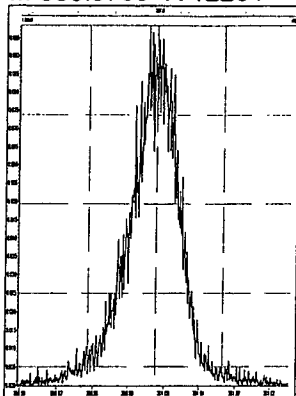
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Printed: Wednesday, May 01, 2013 16:20:40 Pacific Daylight Time

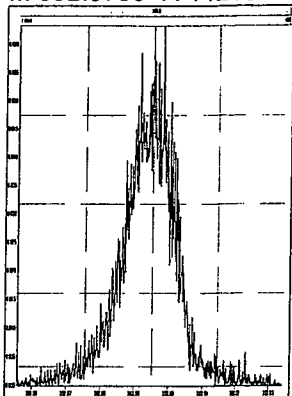
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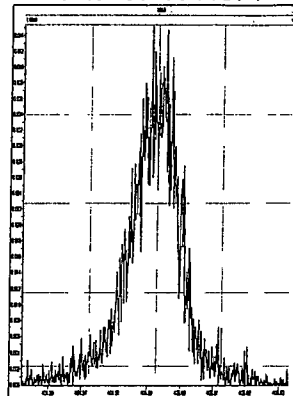
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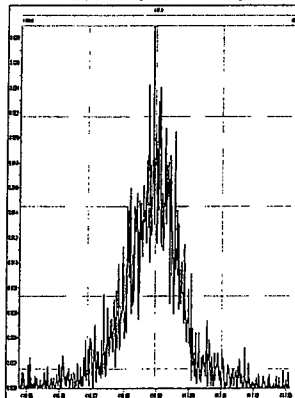
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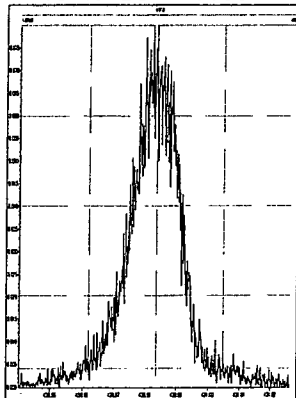
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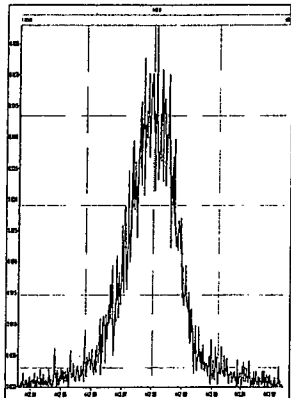
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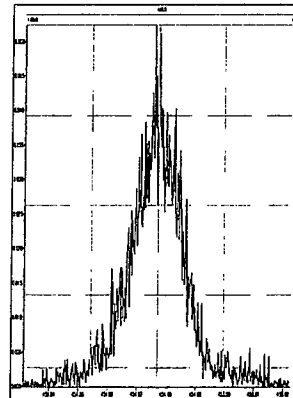
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M 442.9728 R 12500



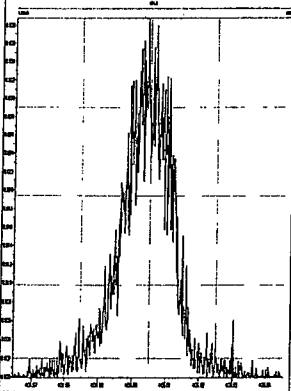
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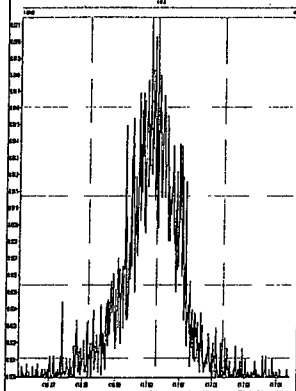
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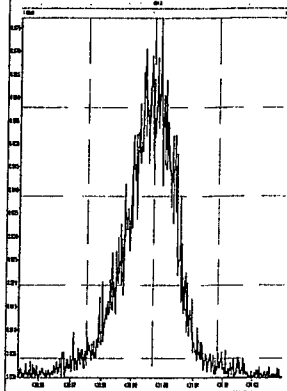
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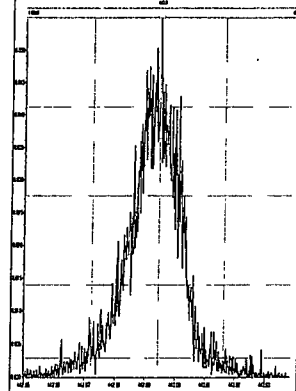
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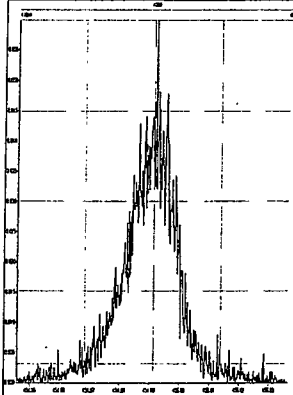
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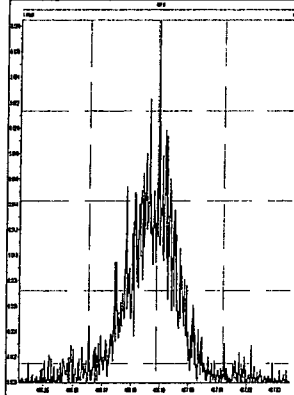
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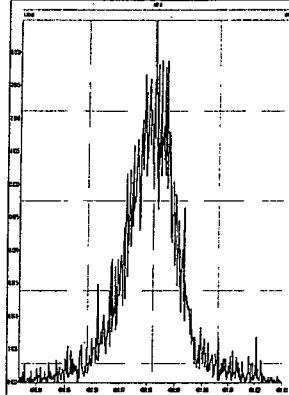
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M 466.9728 R 15057



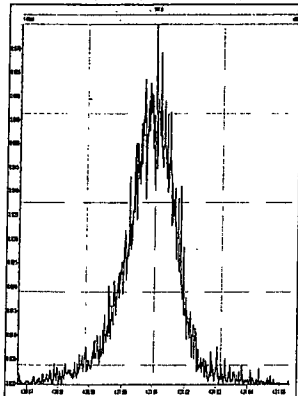
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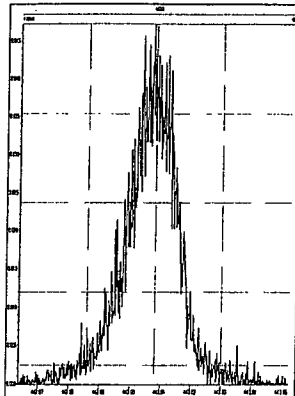
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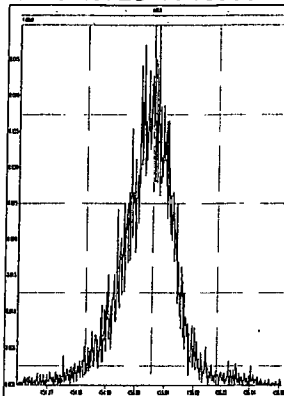
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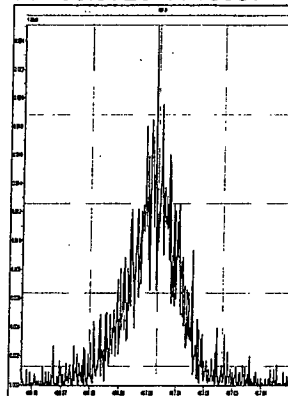
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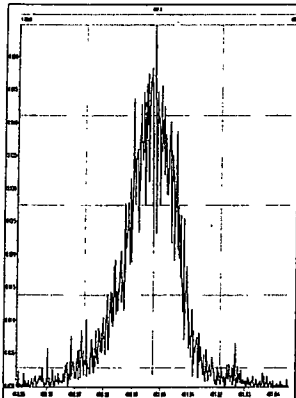
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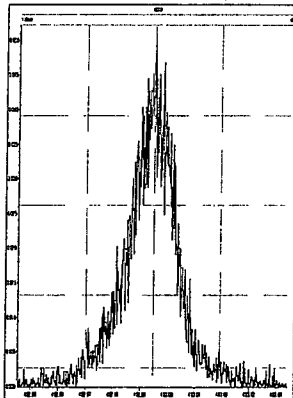
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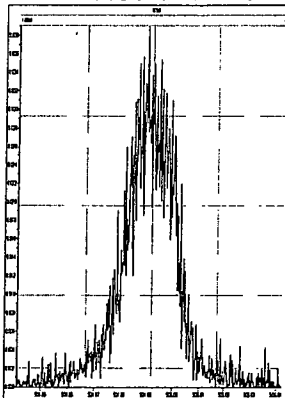
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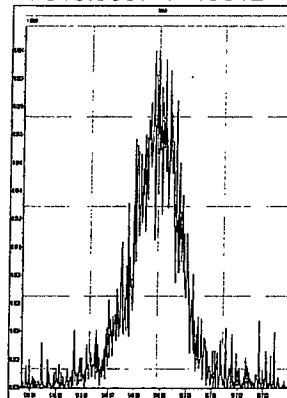
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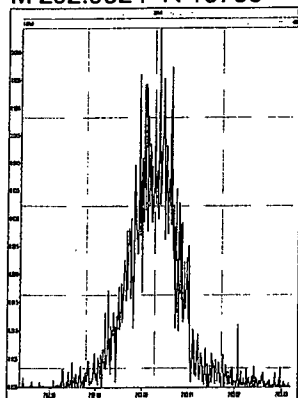
M 504.9696 R 14283



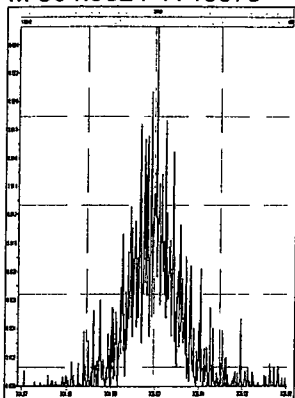
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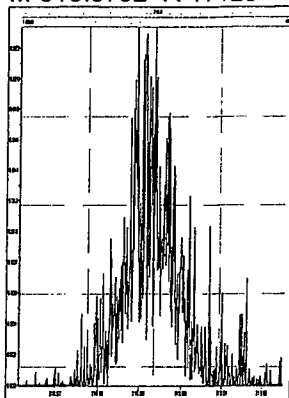
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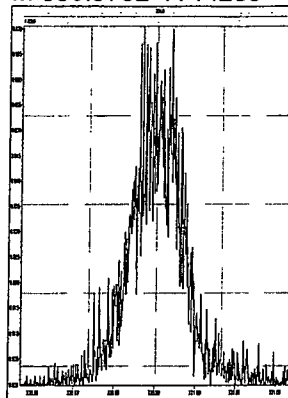
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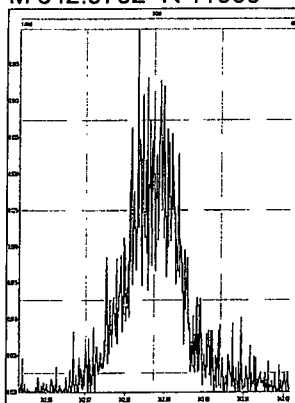
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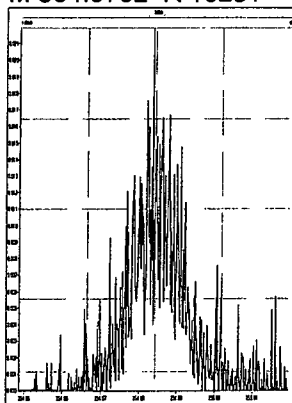
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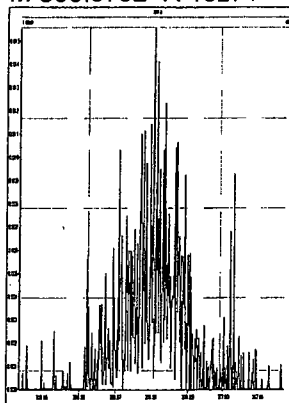
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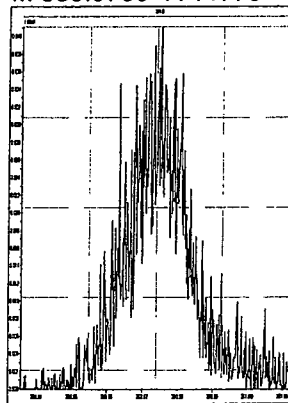
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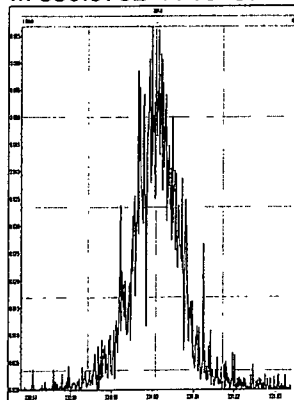
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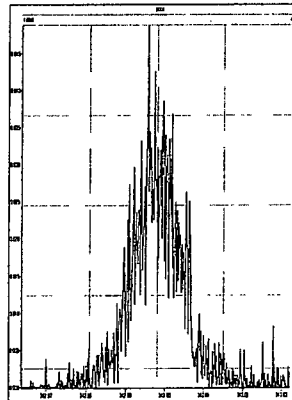
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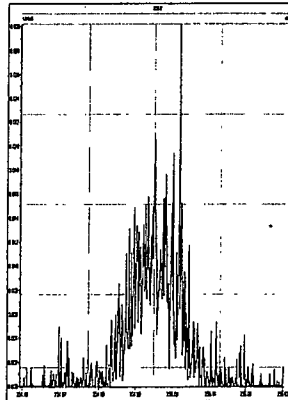
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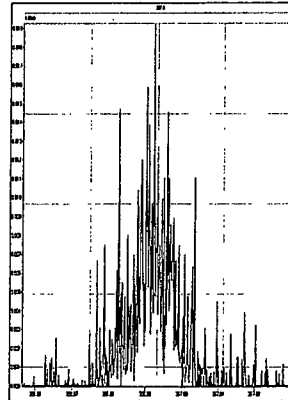
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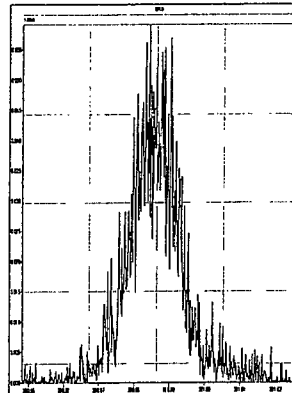
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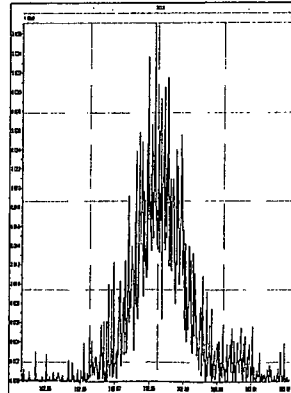
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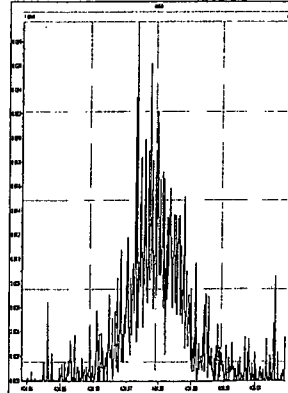
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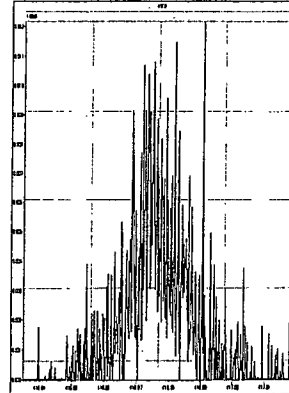
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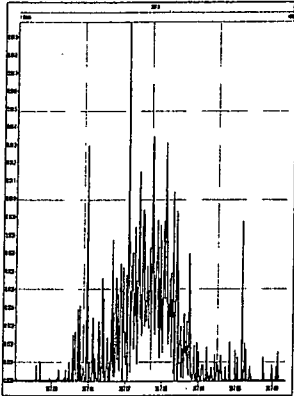
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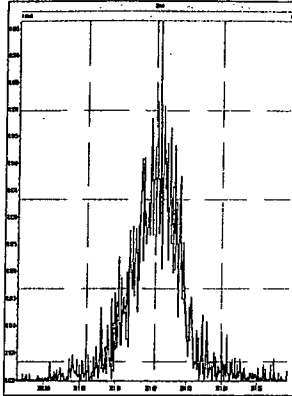
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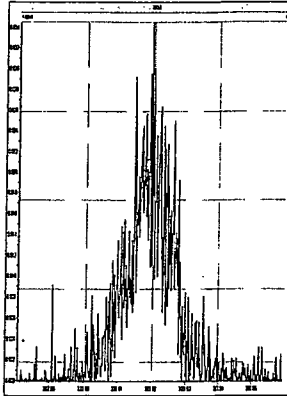
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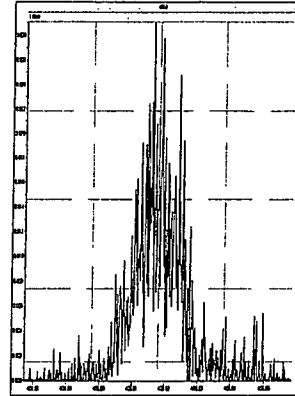
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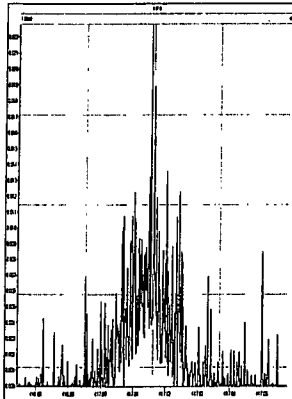
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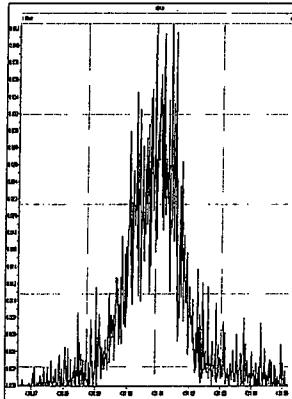
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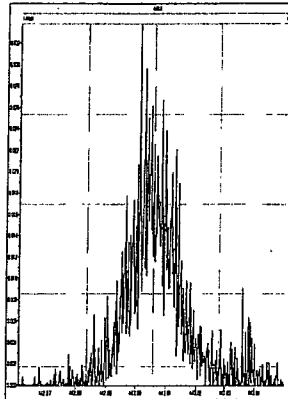
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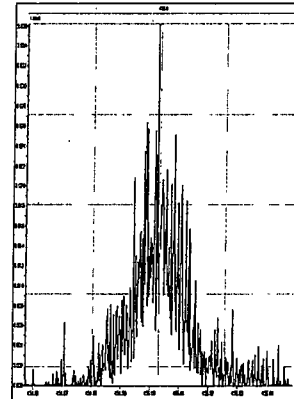
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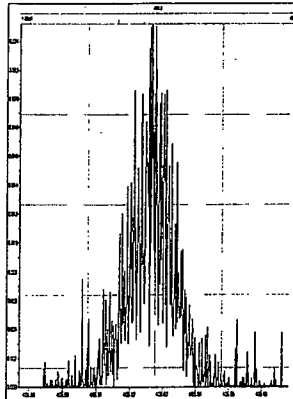
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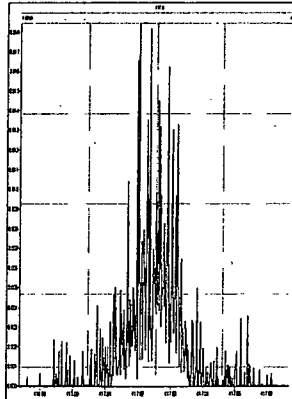
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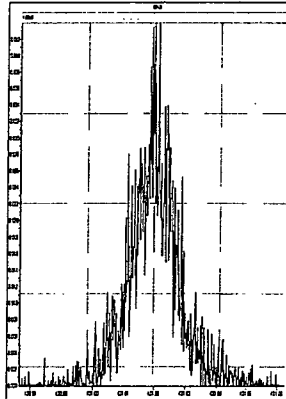
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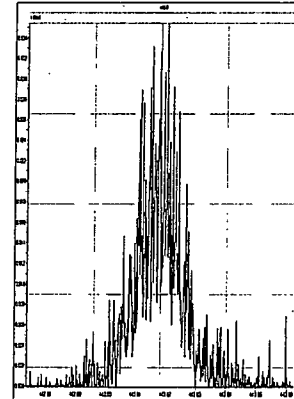
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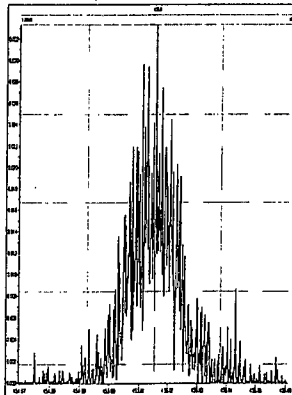
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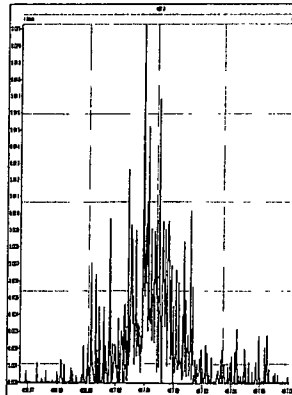
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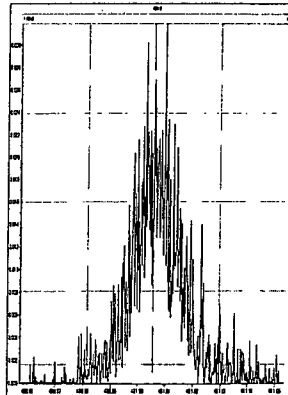
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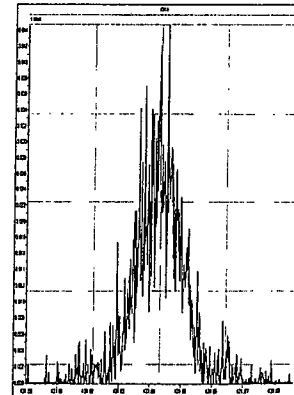
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M 480.9696 R 15923

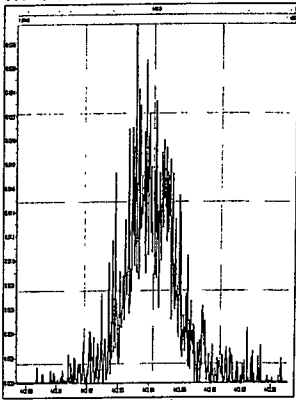


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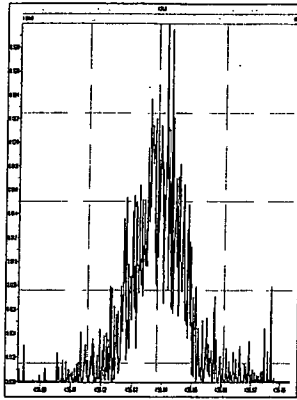


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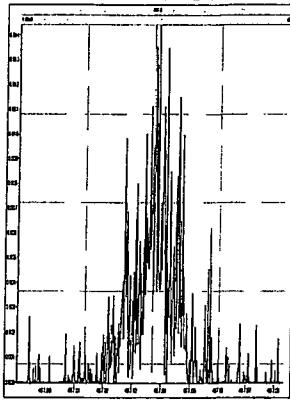
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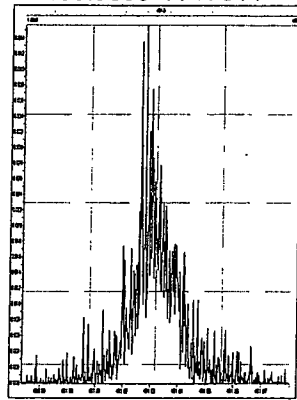
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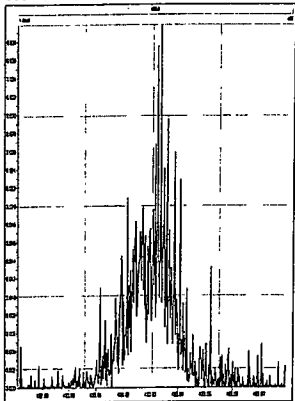
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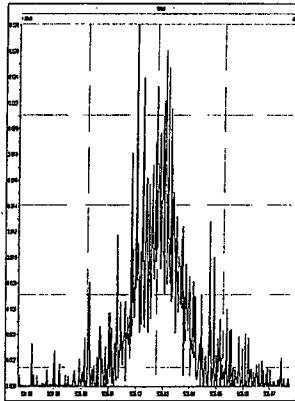
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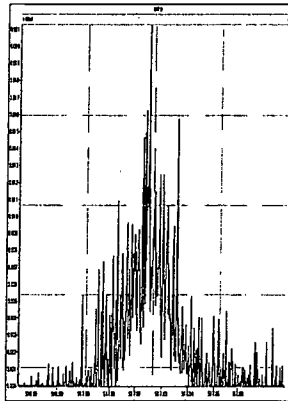
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M 504.9696 R 18940

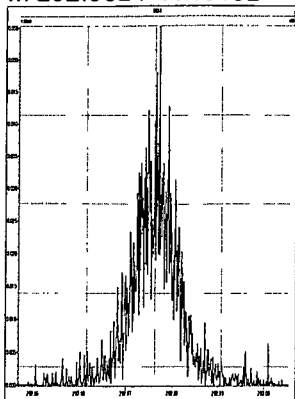


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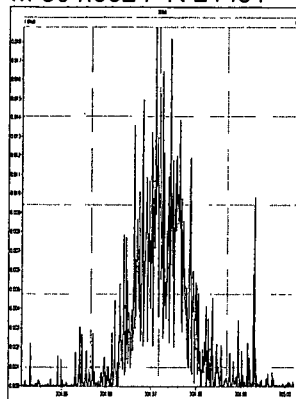


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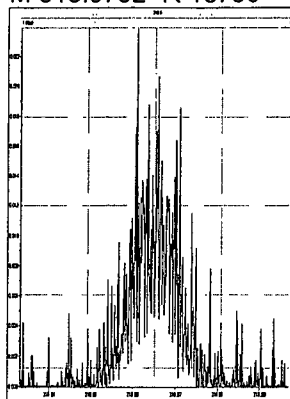
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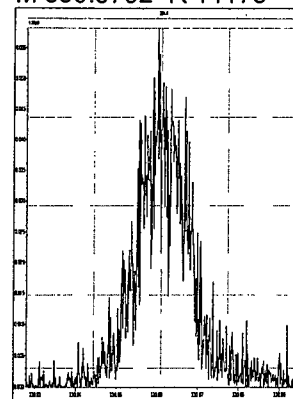
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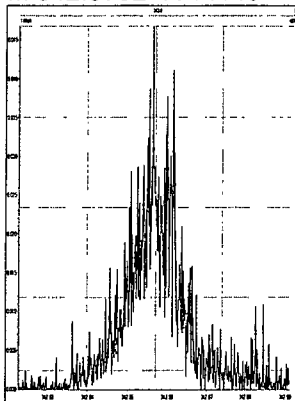
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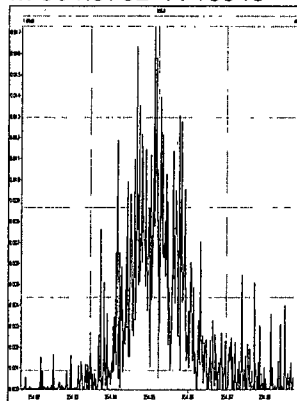
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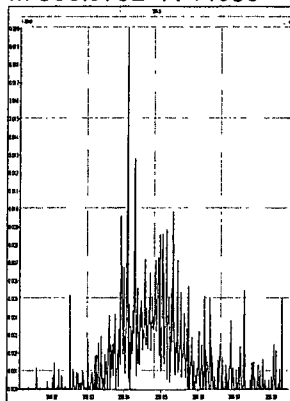
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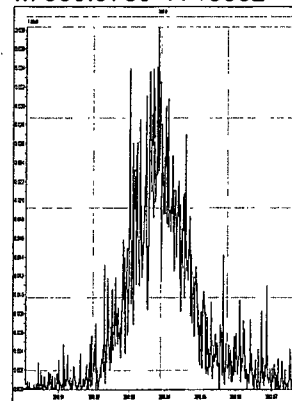
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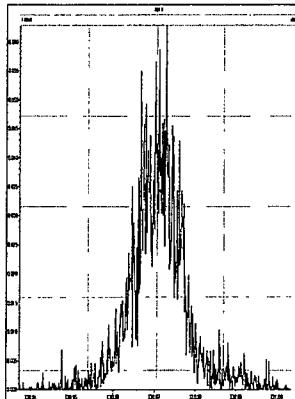
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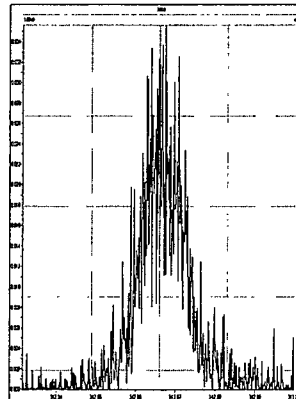
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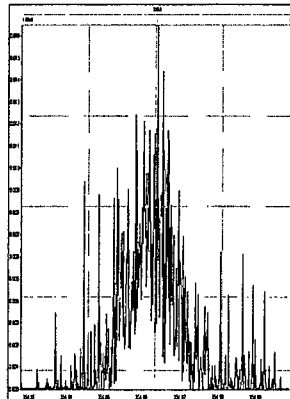
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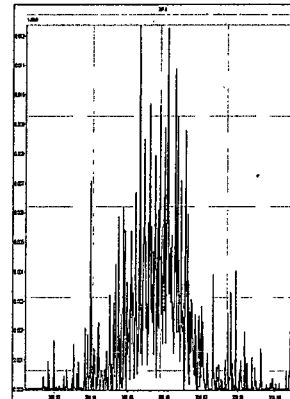
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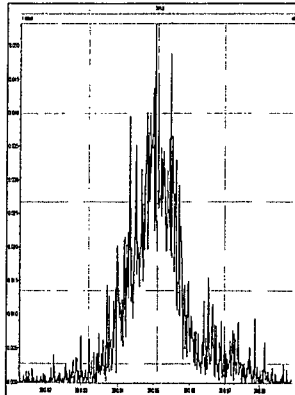
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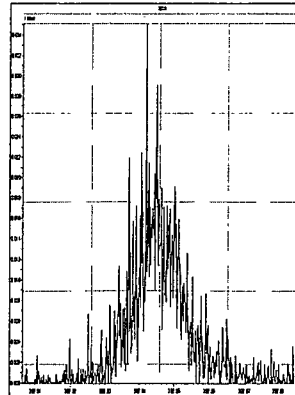
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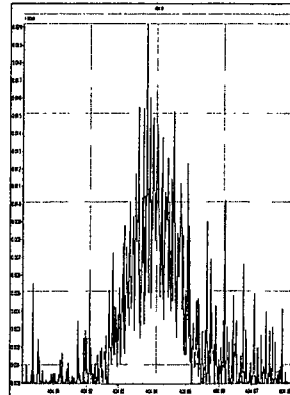
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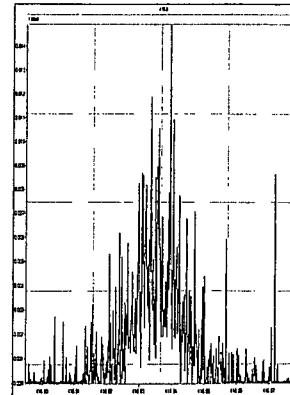
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M 404.9760 R 16181

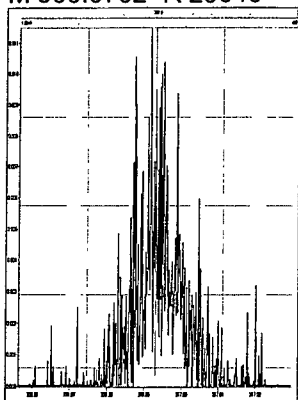


M 416.9760 R 25412

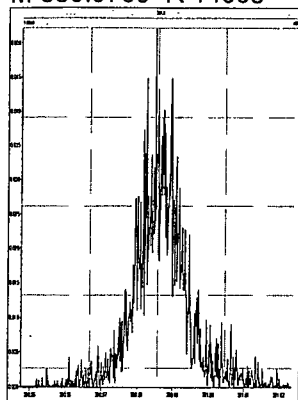


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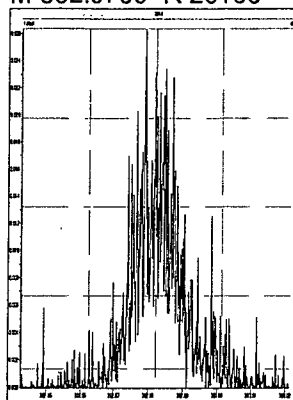
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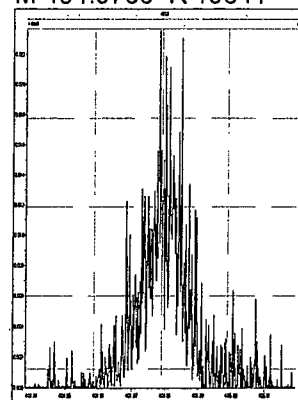
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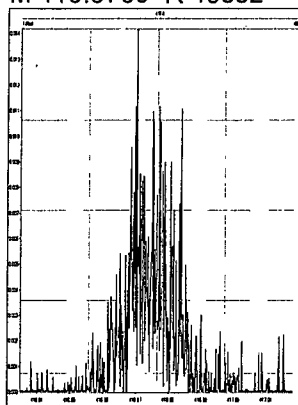
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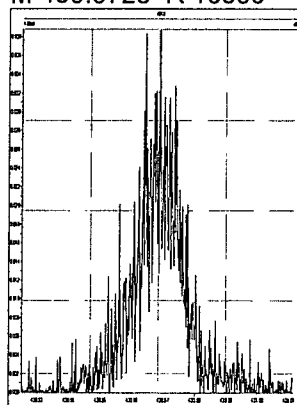
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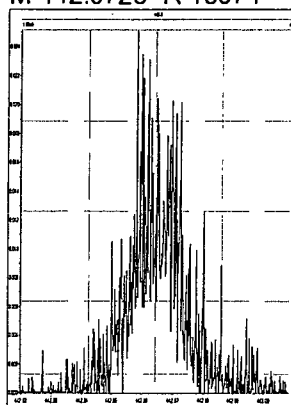
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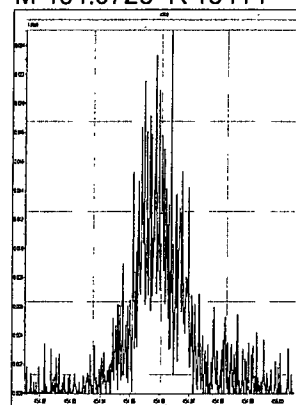
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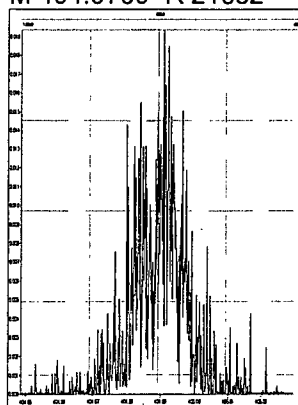
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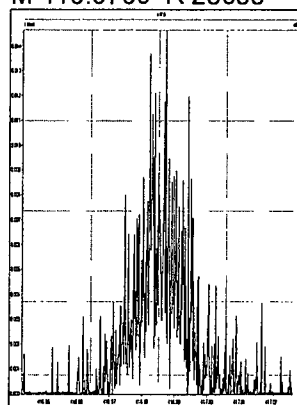
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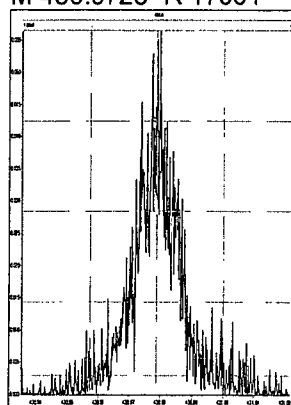
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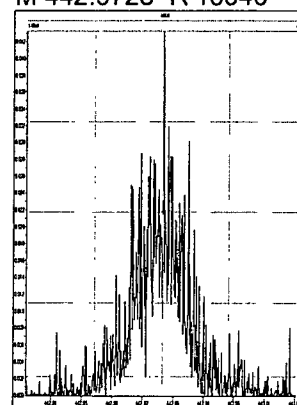
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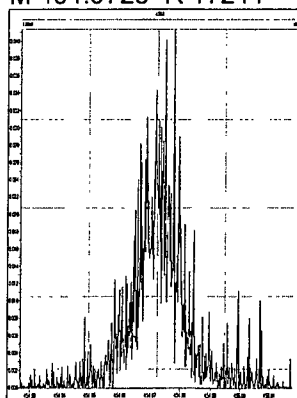
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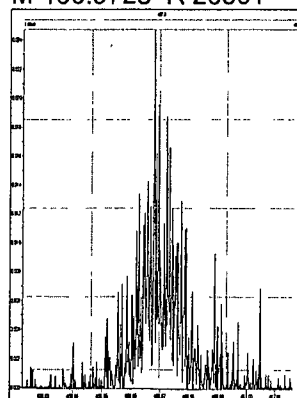
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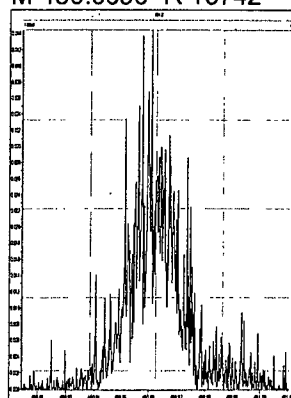
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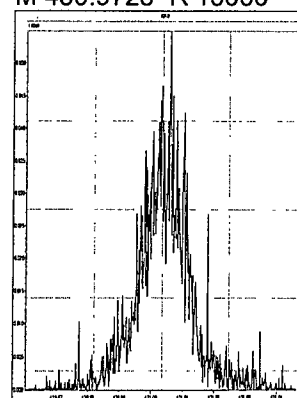
M 466.9728 R 26301



M 480.9696 R 15742

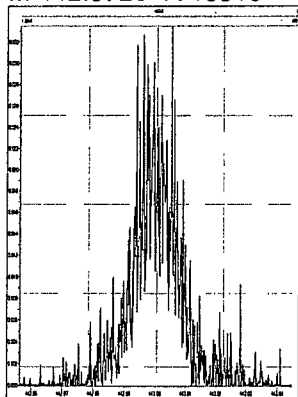


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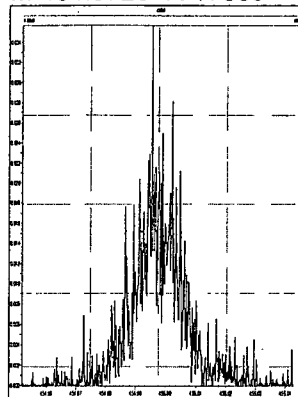


Printed: Thursday, May 02, 2013 13:32:35 Pacific Daylight Time

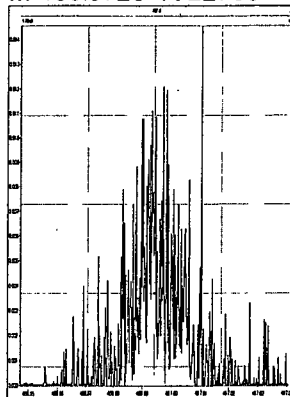
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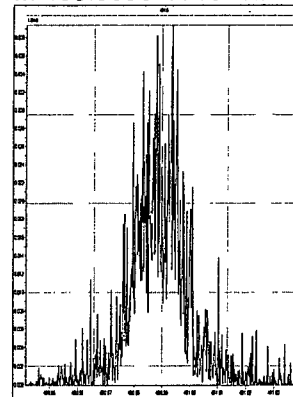
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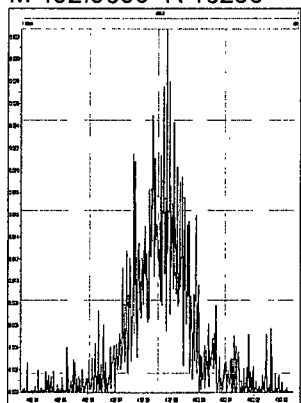
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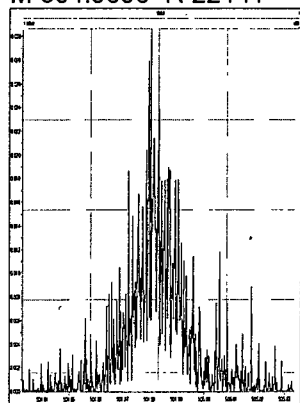
M 480.9696 R 16112



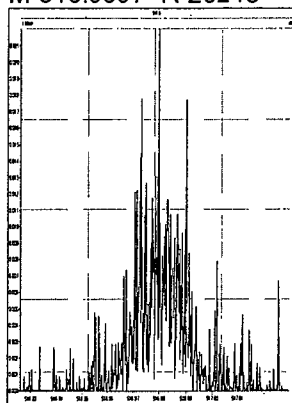
M 492.9696 R 16286



M 504.9696 R 22141



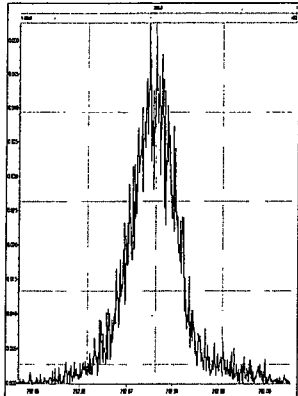
M 516.9697 R 20245



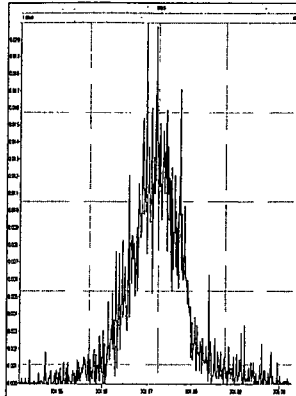
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Printed: Thursday, May 02, 2013 16:59:49 Pacific Daylight Time

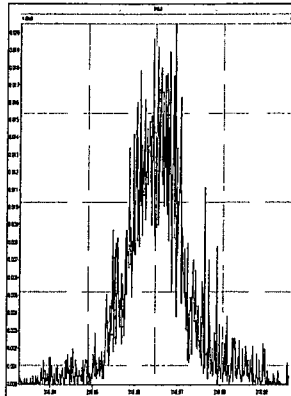
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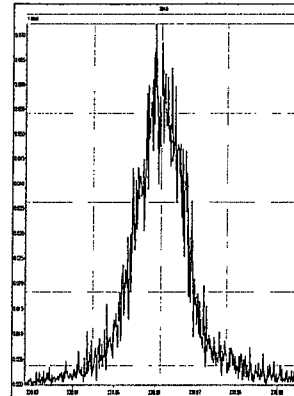
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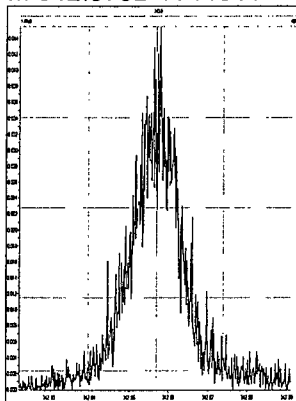
M 318.9792 R 13153



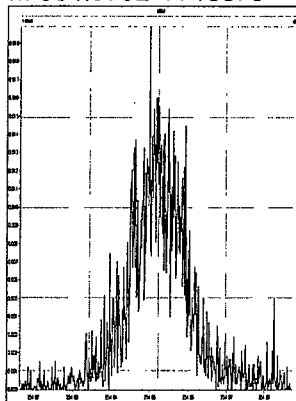
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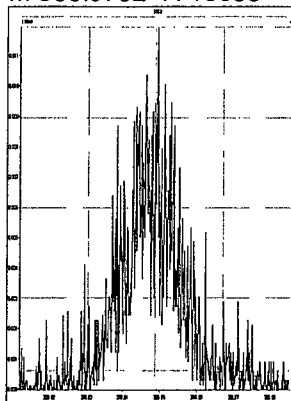
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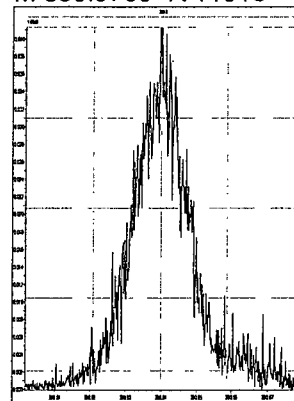
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M 366.9792 R 13088



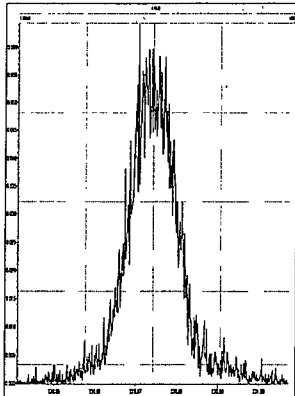
M 380.9760 R 11015



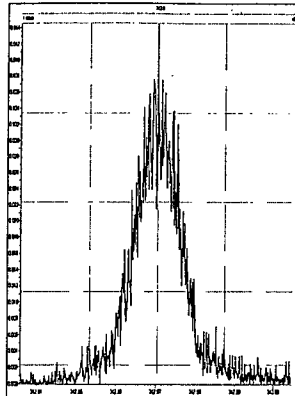
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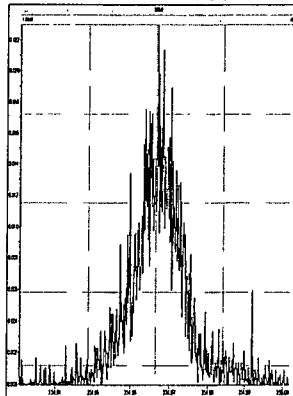
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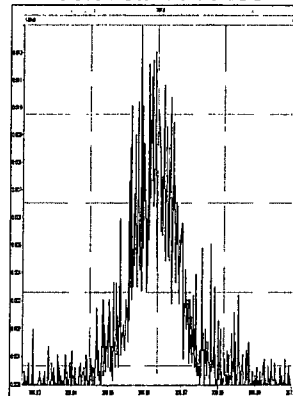
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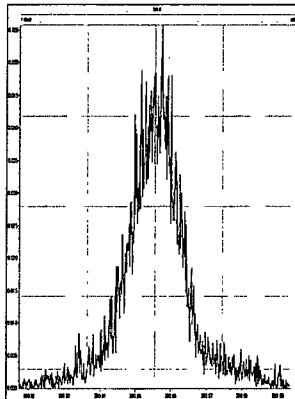
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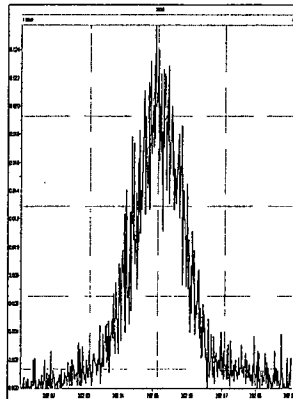
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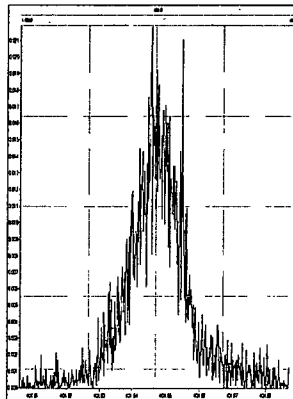
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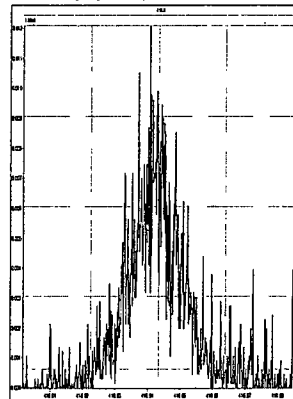
M 392.9760 R 13884



M 404.9760 R 11961



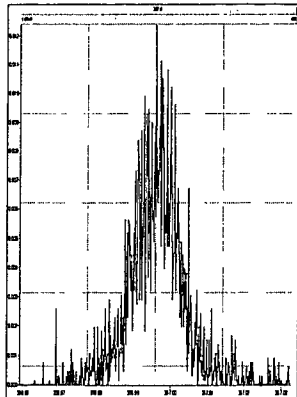
M 416.9760 R 14532



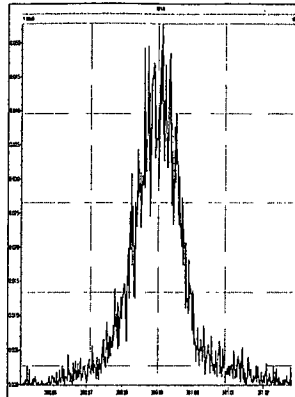
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Printed: Thursday, May 02, 2013 17:02:41 Pacific Daylight Time

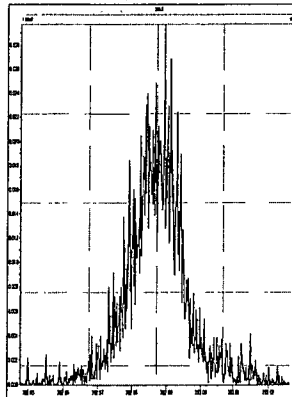
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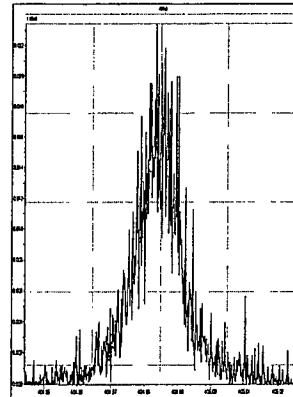
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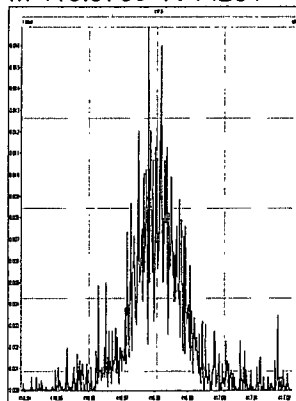
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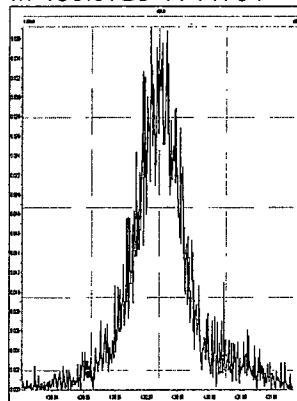
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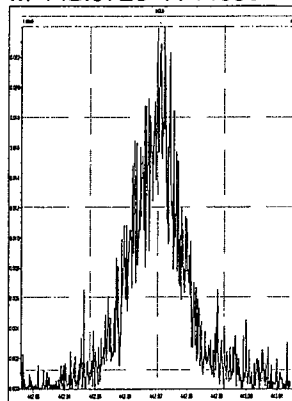
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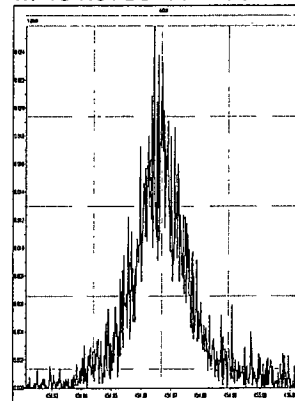
M 430.9728 R 11794



M 442.9728 R 11900



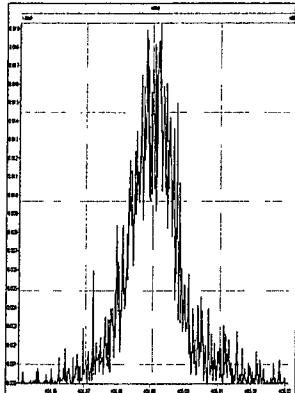
M 454.9728 R 13964



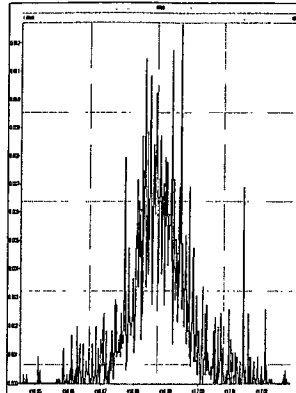
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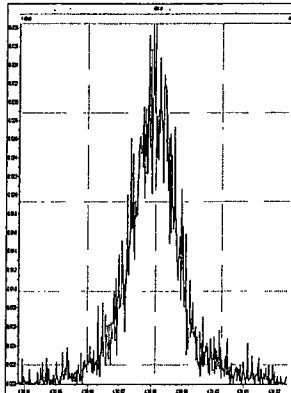
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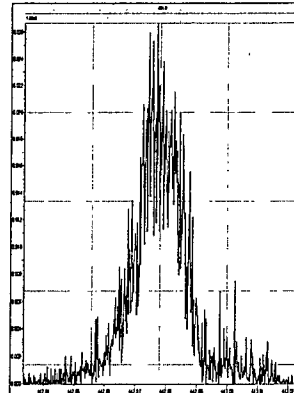
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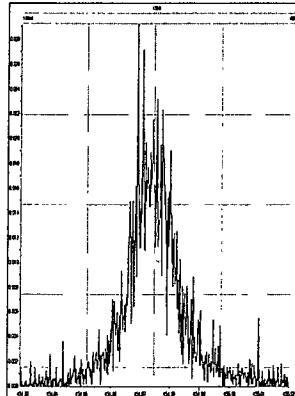
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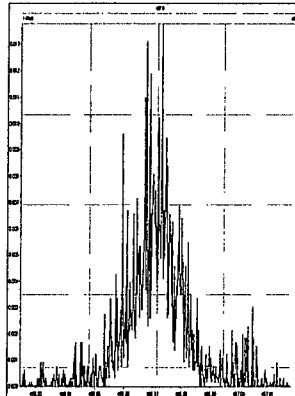
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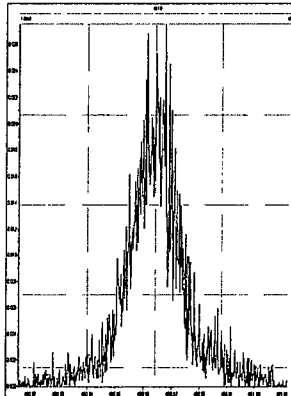
M 454.9728 R 14704



M 466.9728 R 14282



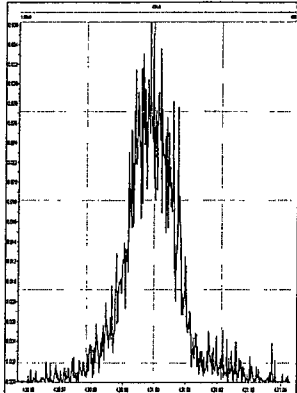
M 480.9696 R 13089



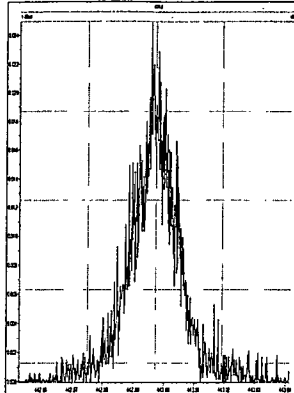
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Printed: Thursday, May 02, 2013 17:03:55 Pacific Daylight Time

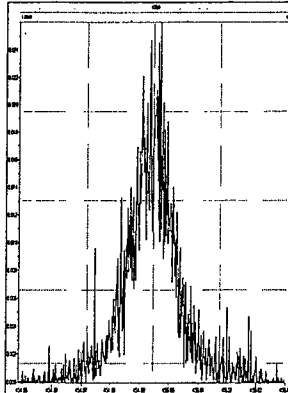
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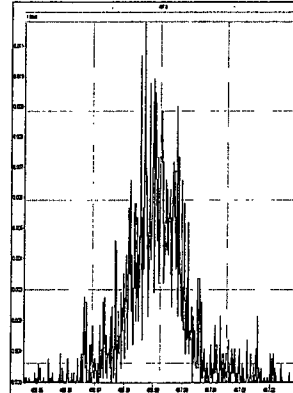
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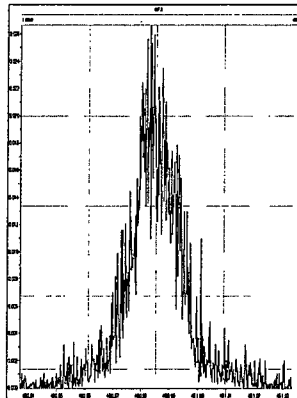
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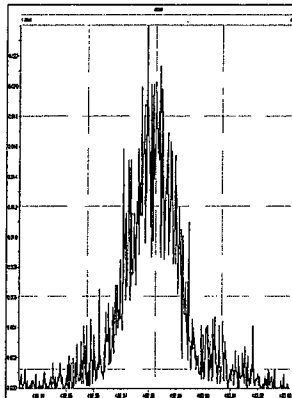
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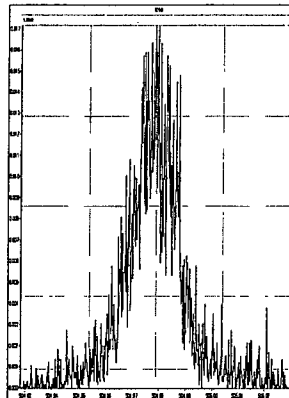
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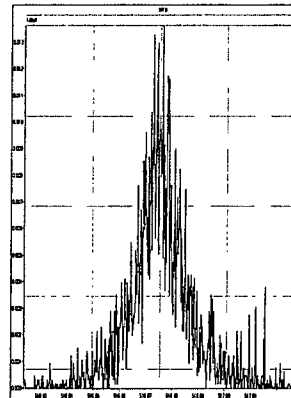
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M 504.9696 R 14126



M 516.9697 R 15244



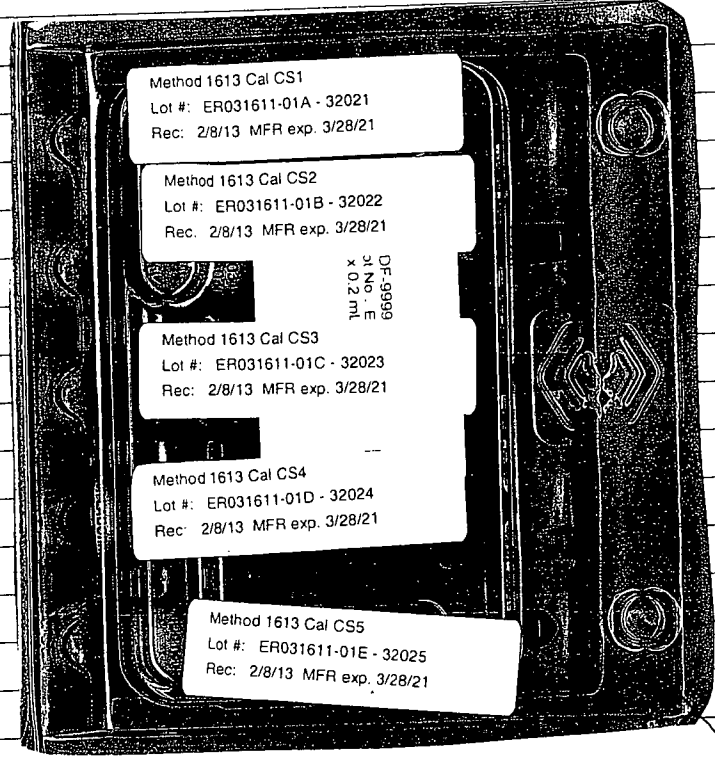
108
STANDARD

INITIAL	SOURCE	FINAL	FINAL	SOL. TN. #	DATE /
CONC	DATE	ALLOT	VOLUME	CONC	LOT #

NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED: 02-18-13

8290 CURVE 02-12-13:

38
02-12-13



EDF-9999	CS-1	02-12-13
EDF-9999	CS-2	02-12-13
EDF-9999	CS-3	02-12-13
EDF-9999	CS-4	02-12-13
EDF-9999	CS-5	02-12-13

EACH RESPECTIVE VIAL IN THE ABOVE PHOTOCOPY WAS CRACKED OPEN AND THE CONTENTS WERE DELIVERED INTO A MICRO-INSERT WITHIN AN AMBER VIAL

034

Dioxin/Furan Standard Prep Log #2

8/17/12 A

Filter Spike
 Spiked 5.0 uL of 1000 ng/mL EC-4977 1668 surrogate 07-06-12A to Soxhlet apparatus consisting of glass thimble, sodium bisulfate, and one-third each of 0.1 uL and 0.45 uL filter. The sample was extracted for a total of 18 hours with methylene chloride.

Sample was then rotovaped and solvent exchanged to hexane. A white precipitate formed in the sample. This was the time when Leonard instructed to spike with 5.0 uL of 1000 ng/mL EC-4978 1668 cleanup standard 02-24-12C and with 5.0 uL of 500 ng/mL 1668 spike 07-03-12A

The sample was then clean through an acid/base silica gel column. Nitrogen blowdown and exchanged to nonane.
 Spiked with 25uL of 200ng/mL EC-4979 08-09-12E to a total volume of 50uL.

08-19-12-A

Bl

CIL Cambridge Isotope Laboratories, Inc.
 METHOD 1668A CLEAN-UP STANDARD SOLN
 (13C12, 99%) 1 UG/ML IN NONANE
 EC-4978 1.2 MILLILITERS
 Lot PR-22186 PSO 10J-432

Method 1668A Clean-up Std. Soln.
 Lot #: PR-22186 - 30883
 Rec: 5/29/12 MFR exp. 10/27/20

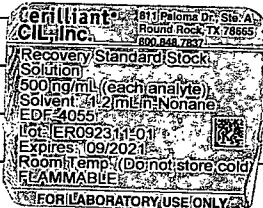
8/20/12

H

08-20-12A		0.50 ng/ml Dioxin/Furan Spikes							
Exp:	08/20/12	Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume
CIL	EDF-5008	Matrix Spiking Solution			100-500 ng/ml	ER113006-01 - 29355	08-0812C	11-30-16	100 ul
BDH Acetone		BDH1101-4LG				Lot: 081111B			9900 ul

8/20/12 B

H



Recovery Standard Stock
 Lot #: ER092311-01 - 30775
 Rec: 5/22/12 MFR exp. 09/30/21

8/20/12 C

H

08-20-12C		100 ng/ml EDF-4055							
Exp:	09/20/12	Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume
CIL	EDF-4055	Recovery Standard Stock Solution			500ng/ml	ER092311-01 - 30775	08-20-12B	09-30-21	100 ul
				Nonane					400 ul

8/29/12

H

08-29-12A		0.50 ng/ml Dioxin/Furan Spikes							
Exp:	08/29/12	Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume
CIL	EDF-5008	Matrix Spiking Solution			100-500 ng/ml	ER113006-01 - 29355	08-08-12C	11-30-16	50 ul
BDH Acetone		BDH1101-4LG				Lot: 081111B			9950 ul

Dioxin/Furan Standard Prep Log #2

045

11/25/12
H

11-25-12A				
Washed and Baked Silica Gel				
Supplier	ID #	ID	Lot #	
Sorbent Technologies	52700-5	Silica Gel 60A	020429L	
Soxhlet extract with methylene chloride for 24 hours				
Baked at 180C for 24 hours				
11-25-12B				
Washed and Baked Sodium Sulfate				
Supplier	ID #	ID	Lot #	
EMD	SX0760E-20	Sodium Sulfate	2351C512	
Soxhlet extract with methylene chloride for 24 hours				
Baked at 400C for 4 hours.				
11-25-12C				
5% (w:v) Sodium Chloride				
Supplier	ID #	ID	Amount	Lot #
EMD	SX0420-5	Sodium Chloride	50 g	TL20BZEMS
		Filtered DI water	1000 mL	
11-25-12D				
20% (w:v) Potassium Hydroxide				
Supplier	ID #	ID	Amount	Lot #
JT Baker	3150-05	Potassium Hydroxide, Flake	200 g	G41599
		Filtered DI water	1000 mL	
11-25-12E				
75:20:5 (v:v) Methylene chloride : Methanol : Toluene				
Supplier	ID #	ID	Amount	Lot #
EMD	DX0835-3	Methylene Chloride	750 mL	51257
EMD	MX0488P-1	Methanol	200 mL	51279
BDH	BDH1151-4LG	Toluene	50 mL	011811E
11-25-12F				
50:50 (v:v) Methylene chloride : Cyclohexane				
Supplier	ID #	ID	Amount	Lot #
EMD	DX0835-3	Methylene Chloride	500 mL	51257
B&J Brand	053-4	Cyclohexane	500 mL	BL409
11-25-12G				
Washed and Baked Celite 545				
Supplier	ID #	ID	Lot #	
JT Baker	3371-05	Celite 545	G40632	
Soxhlet extract with methylene chloride for 24 hours				
Bake for at 130C for 6 hours				
11-25-12H				
Washed and Baked Carbon/Celite 545 Mix				
Supplier	ID #	ID	Amount	Lot #
JT Baker	E346-07	Activated Carbon	5.40g	B10627
JT Baker	3371-05	Celite 545	62.0g	G40632
Soxhlet extract with methylene chloride for 24 hours				
Bake for at 130C for 6 hours				
11-25-12I				
Washed Glass Wool				
Supplier	ID #	ID	Lot #	
Supelco	2-0410	Glass Wool	11786	
Soxhlet extract with methylene chloride for 24 hours				
Rinse with Acetone and let air dry				

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046

Dioxin/Furan Standard Prep Log #2

11/21/12
PP

11-27-12A										
40% H2SO4 coated Silica Gel										
Added 480g of concentrated sulfuric acid to 720g of baked silica gel 11-25-12A										
Mixed with a glass rod until free of lumps.										
Stored in a glass bottle seal with a Teflon lined screw cap										
11-27-12B										
Basic Silica Gel										
Added 200g of 1M NaOH to 400g of baked silica gel 11-25-12A										
Mixed with a glass rod until free of lumps.										
Stored in a glass bottle seal with a Teflon lined screw cap										
11-27-12C										
Potassium Silicate										
Dissolve 56g of potassium hydroxide flakes in 300mL of methanol and add 100g of baked silica gel 11-25-12A										
Mixed at 60 C for 2 hours and then spread out to dry										
Activate overnight at 250C										

12/3/12
PP

12-03-12A										
1000 ng/ml PCB_1310116-01										
Exp:	12/03/13									
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume			
O2SI	1310116-01	PCB Congener Solution	100mg/L	16770-30506	04-16-12B	01-11-14	20 uL			
Nonane							1980 uL			
12-03-12B										
2.5 ng/ml PCB_1310116-01 (Spike)										
Exp:	12/03/12									
Supplier	ID #	ID	Conc	Date Code	Exp. Date	Volume				
O2SI	1310116-01	PCB Congener Solution	1000ng/mL	12-03-12A	12/03/13	25 uL				
BDH Acetone		BDH1101-4LG		062512A		9975 uL				
12-03-12C										
5.0 ng/ml EC-4977 (Surrogate)										
Exp:	12/03/12									
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume			
CIL	EC-4977	Method 1668A Toxics/LOC/Window	1000ng/mL	PR-22534-30882	07-06-12A	3-2-21	50 uL			
		Surrogate Spike Mix								
BDH Acetone		BDH1101-4LG		062512A			9950 uL			

12/4/12
PP

12-04-12A										
5.0 ng/ml EC-4978 (CleanUp)										
Exp:	12/04/12									
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume			
CIL	ED-4978	Method 1668A Cleanup Standard	1000ng/mL	PR-22186-31512	10-25-12B	10-27-20	50 uL			
BDH Acetone		BDH1101-4LG		062512A			9950 uL			
12-04-12B										
200 ng/ml EC-4979 (IS)										
Exp:	01/04/13									
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume			
CIL	EC-4979	Method 1668A Labeled Injection	5000ng/ml	PR-21420-30884	07-05-12A	11-18-20	30 uL			
		Internal Standard Solution					720 uL			

048

Dioxin/Furan Standard Prep Log #2

1/8/13 A
R

Gerilliant CIL Inc. 811 Paloma Dr., Ste. A Round Rock, TX 78664 800.848.7837

Method: B290 Matrix Spiking Solution
Catalog #: EDF-5008
Strength: 100-500 ng/mL
Solvent: 1:2 mL n-Nonane
Lot #: ER113006-01
Storage: Room Temperature
Date: 11/16/12
AM BILE

FOR LABORATORY USE ONLY

Method: B290 Matrix Spiking Solution
Lot #: ER113006-01 - 31510
Rec: 10/8/12 MFR exp: 11/30/16
R

1/8/13 B
R

Gerilliant CIL Inc. 811 Paloma Dr., Ste. A Round Rock, TX 78664 800.848.7837

Sample Fortification Solution
Strength: 100-500 ng/mL
Solvent: 1:2 mL n-Nonane
EDF: 5005
Lot #: ER011911-02
Expires: 01/20/21
Room Temp (Do not store cold)
FLAMMABLE

FOR LABORATORY USE ONLY

Sample Fortification Solution
Lot #: ER011911-02 - 31675
Rec: 12/13/12 MFR exp. 1/31/21
R

1/8/13 C
R



69672
AY73762 W01
A_Frig

26

DIOXINS AND FURANS IN WATER

PC

RTC

Dioxin and Furans in Water - WVF
Lot: 019929
Cat #: PE1295-2ML Exp: 12/31/2014
Storage: Store at 4°C
Danger: Highly Flammable liquid and vapour Causes skin irritation Keep away from heat/sparks/open flames/hot surfaces - No smoking

Product of USA
Safety data sheet available For R&D only Not for drug, household or other uses

Fluorochem WILSON-SOLMA-ALDRICH-FLUOR

WP13-1-4
WPCHEM



RT1561
RTC Labcode

Sample Instructions

Dioxin and Furans in Water - WP
Sample Item Number 1295-2ML



Sample Handling Store at Room Temperature
Sample Hazard Irritant, Flammable

Description

This concentrate contains up to 16 dioxins and furans in toluene.

Sample Preparation

Pour 1000-mL of reagent grade DI water into an extraction vessel.

Open ampule and transfer 1 mL of concentrate to the extraction vessel using Class A glassware.

Analyze as required by your normal procedures.

Assume a 1-Liter sample volume for calculation purposes.

056

Dioxin/Furan Standard Prep Log #2

2/22/13
RP

02-22-13A											
5.0 ng/ml EC-4978 (Cleanup)											
Exp:	02/22/13										
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume				
CIL	ED-4978	Method 1668A Cleanup Standard	1000ng/mL	PR-22186-31512	10-25-12B	10-27-20	100 uL				
BDH Acetone	BDH1101-4LG		062512A					19900 uL			
02-22-13B											
200 ng/ml EC-4979 (IS)											
Exp:	02/23/13										
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume				
CIL	EC-4979	Method 1668A Labeled Injection	5000ng/ml	PR-21420-30884	07-05-12A	11-18-20	50 uL				
	Internal Standard Solution							Nonane	1200 uL		

4/22/13
RP

02-22-13C										
2.5 ng/ml PCB_1310116-01 (Spike)										
Exp:	02/22/13									
Supplier	ID #	ID	Conc	Date Code	Exp. Date	Volume				
O2SI	1310116-01	PCB Congener Solution	1000ng/mL	01-23-13E	01/23/14	25 uL				
BDH Acetone	BDH1101-4LG		062512A					9975 uL		
02-22-13D										
5.0 ng/ml EC-4977 (Surrogate)										
Exp:	02/22/13									
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume			
CIL	EC-4977	Method 1668A Toxics/LOC/Window	1000ng/mL	PR-22534-31511	01-23-13B	3-2-21	50 uL			
	Surrogate Spike Mix									
BDH Acetone	BDH1101-4LG		062512A					9950 uL		

2/28/13
RP

02-28-13A										
0.50 ng/ml Dioxin/Furan Spikes										
Exp:	02/28/13									
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume			
CIL	EDF-5008	Matrix Spiking Solution	100-500 ng/ml	ER113006-01 - 31510	01-08-13A	11-30-16	50 uL			
BDH Acetone	BDH1101-4LG		062512A					9950 uL		

4/4/13
RP

04-01-13A										
0.50 ng/ml Dioxin/Furan Spikes										
Exp:	04/01/13									
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume			
CIL	EDF-5008	Matrix Spiking Solution	100-500 ng/mL	ER113006-01 - 31510	01-08-13A	11-30-16	50 uL			
BDH Acetone	BDH1101-4LG		110112D					9950 uL		
04-01-13B										
100 ng/ml EDF-4055										
Exp:	04/01/13									
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date	Volume			
CIL	EDF-4055	Recovery Standard Stock Solution	500ng/mL	ER092311-01 - 30775	08-20-13B	09-30-21	100 uL			
	Nonane							400 uL		

3/20/12B
5/3/13
RP

Dioxin/Furan Standard Prep Log #2

057

4/15/13 A
PP

04-15-13A						
0.50 ng/ml Dioxin/Furan Spikes						
Exp:	04/15/13					
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date
CIL	EDF-5008	Matrix Spiking Solution	100-500 ng/mL	ER113006-01 - 31510	01-08-13A	11-30-16
BDH Acetone		BDH1101-4LG		110112D		9950 uL

4/15/13 B
PP

Cerilliant® CIL, Inc. 811 Paloma Dr., Ste. A Round Rock, TX 78665 800.848.7837

Sample Fortification Solution
100 - 500 ng/mL
Solvent: 1.2 mL n-Nonane
EDF-5005
Lot: ER011911-02
Expires: 01/2021
Room Temp. (Do not store cold)
FLAMMABLE

FOR LABORATORY USE ONLY

Sample Fortification Solution
Lot #: ER011911-02 - 32034
Rec: 2/14/13 MFR exp. 1/31/21

4/15/13 A
PP

Cerilliant® CIL, Inc. 811 Paloma Dr., Ste. A Round Rock, TX 78665 800.848.7837

Recovery Standard Stock Solution
500 ng/mL (each analyte)
Solvent: 1.2 mL n-Nonane
EDF-4055
Lot: ER092311-01
Expires: 09/2021
Room Temp. (Do not store cold)
FLAMMABLE

FOR LABORATORY USE ONLY

Recovery Standard Stock
Lot #: ER092311-01 - 31509
Rec: 10/8/12 MFR exp. 9/30/21

4/15/13 B
PP

04-18-13B						
100 ng/ml EDF-4055						
Exp:	05/18/13					
Supplier	ID #	ID	Conc	Lot #	Date Code	Exp. Date
CIL	EDF-4055	Recovery Standard Stock Solution	500ng/mL	ER092311-01 - 31509	04-18-13A	09-30-21
		Nonane				200 uL
						800 uL

4/22/13 A
PP

Cerilliant® CIL, Inc. 811 Paloma Dr., Ste. A Round Rock, TX 78665 800.848.7837

Sample Fortification Solution
100 - 500 ng/mL
Solvent: 1.2 mL n-Nonane
EDF-5005
Lot: ER011911-02
Expires: 01/2021
Room Temp. (Do not store cold)
FLAMMABLE

FOR LABORATORY USE ONLY

Sample Fortification Solution
Lot #: ER011911-02 - 32035
Rec: 2/14/13 MFR exp. 1/31/21

Organic Extraction Worksheet

Method	8290 Separatory Funnel Extraction	Extraction Set	130415A	Extraction Method	SEP8290	Units	mL	
Spiked ID 1	EDF-5008 0.50ng/mL 04-15-13A	Surrogate ID 1	EDF-5005 100-500ng/mL 04-15-13B					
Spiked ID 2	EDF-4055 100ng/mL 04-01-13B - spiked after cleanup	Surrogate ID 2						
Spiked ID 3		Surrogate ID 3						
Spiked ID 4		Surrogate ID 4						
Spiked ID 5		Surrogate ID 5						
Spiked ID 6		Sufficient Vol for Matrix QC:		NO				
Spiked ID 7		Ext. Start Time:		04/15/13 11:30				
Spiked ID 8		Ext. End Time:		04/15/13 12:30				
		GC Requires Extract By:		04/22/13 17:00				
		pH1	NA			Water Bath Temp Criteria		35/60 °C
		pH2	NA					
		pH3	NA					

Spiked By: RP

Date 04/15/13 11:25:00 AM

Witnessed By: KY

Date 04/15/13 11:25:00 AM

Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	130415A Bk	0.020mL	2	0.020mL	1	1000mL	0.050mL	NA	04/15/13 11:30	Method Blank
					equip	E-WB1 Rotovap-01				
2	130415A LCS-1	1.0, 0.020mL	1,2	0.020mL	1	1000mL	0.050mL	NA	04/15/13 11:30	Lab Control Spike
					equip	E-WB2 Rotovap-02				
3	AY78119	0.10, 0.020mL	1,2	0.020mL	1	1000mL	0.050mL	NA	04/15/13 11:30	8290w LOQ (2nd Q)
					equip	E-WB2 Rotovap-02				
4	AY78757 <i>A4 78757 w01</i>	0.020mL	2	0.020mL	1	1000mL	0.050mL	NA	04/15/13 11:30	
					equip	E-WB1 Rotovap-01				
5	LOD (2nd Q)	0.050, 0.020mL	1,2	0.020mL	1	1000mL	0.050mL	NA	04/15/13 11:30	8290w LOD (2nd Q)
					equip	E-WB2 Rotovap-02				
6	MDL#1 (Water)	0.050, 0.020mL	1,2	0.020mL	1	1000mL	0.050mL	NA	04/15/13 11:30	8290w MDL
					equip	E-WB2 Rotovap-02				
7	MDL#2 (Water)	0.050, 0.020mL	1,2	0.020mL	1	1000mL	0.050mL	NA	04/15/13 11:30	8290w MDL
					equip	E-WB2 Rotovap-02				
8	MDL#3 (Water)	0.050, 0.020mL	1,2	0.020mL	1	1000mL	0.050mL	NA	04/15/13 11:30	8290w MDL
					equip	E-WB2 Rotovap-02				
9	MDL#4 (Water)	0.050, 0.020mL	1,2	0.020mL	1	1000mL	0.050mL	NA	04/15/13 11:30	8290w MDL
					equip	E-WB2 Rotovap-02				
10	MDL#5 (Water)	0.050, 0.020mL	1,2	0.020mL	1	1000mL	0.050mL	NA	04/15/13 11:30	8290w MDL
					equip	E-WB2 Rotovap-02				
11	MDL#6 (Water)	0.050, 0.020mL	1,2	0.020mL	1	1000mL	0.050mL	NA	04/15/13 11:30	8290w MDL
					equip	E-WB2 Rotovap-02				
12	MDL#7 (Water)	0.050, 0.020mL	1,2	0.020mL	1	1000mL	0.050mL	NA	04/15/13 11:30	8290w MDL
					equip	E-WB2 Rotovap-02				

4/25/13
RP

Solvent and Lot#	
Washed/Baked Silica Gel	11-25-13A
Washed/Baked Sodium Sulf	11-25-13B
5% Sodium Chloride	11-25-13C
20% Potassium Hydroxide	11-25-13D
Washed Glass Wool	11-25-131
Acidic Silica Gel	11-27-13A
Basic Silica Gel	11-25-13B

Extraction COC Transfer	
Extraction lab employee Initials	RP
GC analyst's initials	BA
Date	4/19/13
Time	1500
Refrigerator	PYRO

Technician's Initials	
Scanned By	RP
Sample Preparation	RP
Extraction	RP
Concentration	RP
Modified	04/15/13 10:56:53 AM

Reviewed By: RP

Date 04/15/13

286

Injection Log

APPL, Inc.
Instrument: Magneto
EPA Method: 8290

130501.seq

	File Name	File Text	DF	Acq Date	Acq Time
1	130501_HR_01	EDF-4147 8 ng/ml 04/24/13	1.000	05/01/13	16:25
2	130501_HR_03	EDF-9999 CS-1 02/12/13	1.000	05/01/13	18:49
3	130501_HR_04	EDF-9999 CS-2 02/12/13	1.000	05/01/13	19:58
4	130501_HR_05	EDF-9999 CS-3 05/01/13	1.000	05/01/13	21:07
5	130501_HR_06	EDF-9999 CS-4 02/12/13	1.000	05/01/13	22:24
6	130501_HR_07	EDF-9999 CS-5 02/12/13	1.000	05/01/13	23:31
7	130501_HR_10	EDF-9999 CS-3 05/01/13	1.000	05/02/13	2:58
8	130501_HR_11	EDF-4147 8 ng/ml 04/24/13	1.000	05/02/13	4:15
9	130501_HR_13	130415WA_LCS-1 50.000 DF 04/15/13	50.000	05/02/13	6:31
10	130501_HR_15	130415WBLKA 50.000 DF 04/15/13	50.000	05/02/13	8:49
11	130501_HR_16	AY78757 50.000 DF 04/15/13	50.000	05/02/13	9:58
13	130501_HR_20	EDF-9999 CS-3 05/01/13	1.000	05/02/13	14:40

May 17, 2013

Daniel Jablonski
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612
TEL: (213)228-8271
FAX: (510) 622-9129

CA-ELAP No.:2676
NV Cert. No.:NV-009222007A

Workorder No.: N010189

RE: SFPP - Norwalk Site

Attention: Daniel Jablonski

Enclosed are the results for sample(s) received on May 08, 2013 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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Advanced Technology
Laboratories, Inc.

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Project: SFPP - Norwalk Site
Lab Order: N010189

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Hexavalent Chromium by EPA 7199 was cancelled by the client.

Subcontracted Analyses:

Phenols by EPA 420.1 and Settleable Solids by SM 2540F were subcontracted to Advanced Technology Laboratories-Signal Hill,CA.

Analytical Comments for EPA 200.8:

Matrix Spike Duplicate (MSD) is outside recovery criteria for Copper possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



CLIENT: CH2M HILL
Project: SFPP - Norwalk Site
Lab Order: N010189
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N010189-001A	EFF-05-07	Wastewater	5/7/2013 8:00:00 AM	5/8/2013	5/17/2013
N010189-001B	EFF-05-07	Wastewater	5/7/2013 8:00:00 AM	5/8/2013	5/17/2013
N010189-001C	EFF-05-07	Wastewater	5/7/2013 8:00:00 AM	5/8/2013	5/17/2013
N010189-001D	EFF-05-07	Wastewater	5/7/2013 8:00:00 AM	5/8/2013	5/17/2013
N010189-001E	EFF-05-07	Wastewater	5/7/2013 8:00:00 AM	5/8/2013	5/17/2013
N010189-001F	EFF-05-07	Wastewater	5/7/2013 8:00:00 AM	5/8/2013	5/17/2013
N010189-001G	EFF-05-07	Wastewater	5/7/2013 8:00:00 AM	5/8/2013	5/17/2013
N010189-001H	EFF-05-07	Wastewater	5/7/2013 8:00:00 AM	5/8/2013	5/17/2013
N010189-001I	EFF-05-07	Wastewater	5/7/2013 8:00:00 AM	5/8/2013	5/17/2013



CLIENT: CH2M HILL
Lab Order: N010189
Project: SFPP - Norwalk Site
Lab ID: N010189-001

Client Sample ID: EFF-05-07
Collection Date: 5/7/2013 8:00:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL NON-FILTERABLE RESIDUE

SM2540D

RunID: WETCHEM_130509G	QC Batch: 42949				PrepDate: 5/9/2013		Analyst: LCC
Suspended Solids (Residue, Non-Filterable)	ND	5.0	5.0		mg/L	1	5/9/2013

HEXANE EXTRACTABLE MATERIAL (HEM)

EPA 1664 _HEM

RunID: WETCHEM_130510E	QC Batch: 42951				PrepDate: 5/10/2013		Analyst: QBM
Oil & Grease	ND	1.2	4.3		mg/L	1	5/10/2013

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS1_130508A	QC Batch: D13VW018				PrepDate:		Analyst: QBM
1,1-Dichloroethane	ND	0.062	0.50		ug/L	1	5/8/2013 12:49 PM
1,2-Dichloroethane	ND	0.044	0.50		ug/L	1	5/8/2013 12:49 PM
Benzene	ND	0.048	1.0		ug/L	1	5/8/2013 12:49 PM
Ethylbenzene	ND	0.036	1.0		ug/L	1	5/8/2013 12:49 PM
m,p-Xylene	ND	0.14	1.0		ug/L	1	5/8/2013 12:49 PM
MTBE	ND	0.098	1.0		ug/L	1	5/8/2013 12:49 PM
o-Xylene	ND	0.042	1.0		ug/L	1	5/8/2013 12:49 PM
Tert-Butanol	ND	1.0	5.0		ug/L	1	5/8/2013 12:49 PM
Toluene	ND	0.034	2.0		ug/L	1	5/8/2013 12:49 PM
Xylenes, Total	ND	1.5	2.0		ug/L	1	5/8/2013 12:49 PM
Surr: 1,2-Dichloroethane-d4	106	0	72-119		%REC	1	5/8/2013 12:49 PM
Surr: 4-Bromofluorobenzene	91.8	0	76-119		%REC	1	5/8/2013 12:49 PM
Surr: Dibromofluoromethane	105	0	85-115		%REC	1	5/8/2013 12:49 PM
Surr: Toluene-d8	96.8	0	81-120		%REC	1	5/8/2013 12:49 PM

TPH EXTRACTABLE BY GC/FID

EPA 3510C

EPA 8015B

RunID: GC3_130510A	QC Batch: 42950				PrepDate: 5/10/2013		Analyst: MDM
TPH-Diesel (C13-C22)	ND	13	50		ug/L	1	5/10/2013 03:28 PM
TPH-Oil (C23-C36)	ND	9.6	50		ug/L	1	5/10/2013 03:28 PM
Surr: Octacosane	92.3	0	26-152		%REC	1	5/10/2013 03:28 PM
Surr: p-Terphenyl	94.4	0	57-132		%REC	1	5/10/2013 03:28 PM

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B

RunID: GC4_130510A	QC Batch: E13VW024				PrepDate:		Analyst: QBM
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Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit S Spike/Surrogate outside of limits due to matrix interference
Results are wet unless otherwise specified DO Surrogate Diluted Out



CLIENT: CH2M HILL
Lab Order: N010189
Project: SFPP - Norwalk Site
Lab ID: N010189-001

Client Sample ID: EFF-05-07
Collection Date: 5/7/2013 8:00:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B

RunID: GC4_130510A	QC Batch: E13VW024				PrepDate:		Analyst: QBM
TPH-Gasoline (C4-C12)	ND	8.5	100		ug/L	1	5/10/2013 09:50 AM
Surr: Chlorobenzene - d5	101	0	74-138		%REC	1	5/10/2013 09:50 AM

MERCURY BY COLD VAPOR TECHNIQUE

EPA 245.1

RunID: AA1_130508C	QC Batch: 42935				PrepDate:	5/8/2013	Analyst: LCC
Mercury	0.027	0.026	0.050	J	µg/L	1	5/8/2013

ICP-MS METALS BY COLLISION/REACTION CELL

EPA 200.8

RunID: ICP7_130508A	QC Batch: 42940				PrepDate:	5/8/2013	Analyst: CEI
Selenium	0.17	0.084	0.50	J	µg/L	1	5/8/2013 05:12 PM

ICPMS METALS

EPA 200.8

RunID: ICP7_130508A	QC Batch: 42940				PrepDate:	5/8/2013	Analyst: CEI
Copper	ND	0.14	0.50		µg/L	1	5/8/2013 05:12 PM
Lead	ND	0.15	0.50		µg/L	1	5/8/2013 05:12 PM
Thallium	ND	0.075	0.50		µg/L	1	5/8/2013 05:12 PM
Zinc	ND	1.3	10		µg/L	1	5/8/2013 05:12 PM

TOTAL TPH

EPA 3510C

EPA 8015B

RunID: GC3_130510A	QC Batch: 42950				PrepDate:	5/10/2013	Analyst: MDM
Total TPH	0	13	100		ug/L	1	5/10/2013 03:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified
 E Value above quantitation range
 J Analyte detected below quantitation limits
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out



**Advanced Technology
 Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL

Work Order: N010189

Project: SFPP - Norwalk Site

TestCode: 160.2_2540D_W

Sample ID: MB-42949	SampType: MBLK	TestCode: 160.2_2540D_	Units: mg/L	Prep Date: 5/9/2013	RunNo: 88810						
Client ID: PBW	Batch ID: 42949	TestNo: SM2540D		Analysis Date: 5/9/2013	SeqNo: 1572969						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) ND 10

Sample ID: LCS-42949	SampType: LCS	TestCode: 160.2_2540D_	Units: mg/L	Prep Date: 5/9/2013	RunNo: 88810						
Client ID: LCSW	Batch ID: 42949	TestNo: SM2540D		Analysis Date: 5/9/2013	SeqNo: 1572970						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) 884.000 10 1000 0 88.4 80 120

Sample ID: N010182-001E-DUP	SampType: DUP	TestCode: 160.2_2540D_	Units: mg/L	Prep Date: 5/9/2013	RunNo: 88810						
Client ID: ZZZZZZ	Batch ID: 42949	TestNo: SM2540D		Analysis Date: 5/9/2013	SeqNo: 1572972						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Suspended Solids (Residue, Non-Filter) ND 10 0 0 0 0 5

Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL

Work Order: N010189

Project: SFPP - Norwalk Site

TestCode: 1664_HEM_W

Sample ID: MB-42951	SampType: MBLK	TestCode: 1664_HEM_W	Units: mg/L	Prep Date: 5/10/2013	RunNo: 88867
Client ID: PBW	Batch ID: 42951	TestNo: EPA 1664_H		Analysis Date: 5/10/2013	SeqNo: 1575801
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
	ND	4.0			
				LowLimit	HighLimit
				RPD Ref Val	%RPD
				RPDLimit	Qual

Sample ID: LCS-42951	SampType: LCS	TestCode: 1664_HEM_W	Units: mg/L	Prep Date: 5/10/2013	RunNo: 88867
Client ID: LCSW	Batch ID: 42951	TestNo: EPA 1664_H		Analysis Date: 5/10/2013	SeqNo: 1575802
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
	33.400	4.0	40.00	0	83.5
				78	114
				RPD Ref Val	%RPD
				RPDLimit	Qual

Sample ID: N010189-001A-MS	SampType: MS	TestCode: 1664_HEM_W	Units: mg/L	Prep Date: 5/10/2013	RunNo: 88867
Client ID: ZZZZZZ	Batch ID: 42951	TestNo: EPA 1664_H		Analysis Date: 5/10/2013	SeqNo: 1575804
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
	37.419	4.3	43.01	0	87.0
				78	114
				RPD Ref Val	%RPD
				RPDLimit	Qual

Sample ID: N010189-001A-MSD	SampType: MSD	TestCode: 1664_HEM_W	Units: mg/L	Prep Date: 5/10/2013	RunNo: 88867
Client ID: ZZZZZZ	Batch ID: 42951	TestNo: EPA 1664_H		Analysis Date: 5/10/2013	SeqNo: 1575805
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
	34.421	4.2	42.11	0	81.8
				78	114
				RPD Ref Val	%RPD
				RPDLimit	Qual

Oil & Grease 37.419 4.3 43.01 0 87.0 78 114

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL
Work Order: N010189
Project: SFPP - Norwalk Site

TestCode: 200.8_W_DRC

Sample ID: MB-42940	SampType: MBLK	TestCode: 200.8_W_DR	Units: µg/L	Prep Date: 5/8/2013	RunNo: 88784
Client ID: PBW	Batch ID: 42940	TestNo: EPA 200.8		Analysis Date: 5/8/2013	SeqNo: 1571930
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
	ND	0.50			
				LowLimit	HighLimit
				RPD Ref Val	RPDLimit
				%RPD	RPDLimit
				Qual	

Sample ID: LCS-42940	SampType: LCS	TestCode: 200.8_W_DR	Units: µg/L	Prep Date: 5/8/2013	RunNo: 88784
Client ID: LCSW	Batch ID: 42940	TestNo: EPA 200.8		Analysis Date: 5/8/2013	SeqNo: 1571931
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
	9.248	0.50	10.00	0	92.5
				LowLimit	HighLimit
				RPD Ref Val	RPDLimit
				%RPD	RPDLimit
				Qual	

Sample ID: N010189-001H-MS	SampType: MS	TestCode: 200.8_W_DR	Units: µg/L	Prep Date: 5/8/2013	RunNo: 88784
Client ID: ZZZZZ	Batch ID: 42940	TestNo: EPA 200.8		Analysis Date: 5/8/2013	SeqNo: 1571935
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
	9.507	0.50	10.00	0.1743	93.3
				LowLimit	HighLimit
				RPD Ref Val	RPDLimit
				%RPD	RPDLimit
				Qual	

Sample ID: N010189-001H-MSD	SampType: MSD	TestCode: 200.8_W_DR	Units: µg/L	Prep Date: 5/8/2013	RunNo: 88784
Client ID: ZZZZZ	Batch ID: 42940	TestNo: EPA 200.8		Analysis Date: 5/8/2013	SeqNo: 1571936
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
	9.806	0.50	10.00	0.1743	96.3
				LowLimit	HighLimit
				RPD Ref Val	RPDLimit
				%RPD	RPDLimit
				Qual	

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL

Work Order: N010189

Project: SFPP - Norwalk Site

TestCode: 200.8_W_SFPP

Sample ID: MB-42940	SampType: MBLK	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 5/8/2013	RunNo: 88784						
Client ID: PBW	Batch ID: 42940	TestNo: EPA 200.8		Analysis Date: 5/8/2013	SeqNo: 1571947						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	0.340										J
Lead	ND										
Thallium	ND										
Zinc	ND	10									

Sample ID: LCS-42940	SampType: LCS	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 5/8/2013	RunNo: 88784						
Client ID: LCSW	Batch ID: 42940	TestNo: EPA 200.8		Analysis Date: 5/8/2013	SeqNo: 1571948						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	9.941	0.50	10.00	0	99.4	85	115				
Lead	10.264	0.50	10.00	0	103	85	115				
Thallium	10.506	0.50	10.00	0	105	85	115				
Zinc	100.664	10	100.0	0	101	85	115				

Sample ID: N010189-001H-MS	SampType: MS	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 5/8/2013	RunNo: 88784						
Client ID: ZZZZZ	Batch ID: 42940	TestNo: EPA 200.8		Analysis Date: 5/8/2013	SeqNo: 1571952						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	7.514	0.50	10.00	0	75.1	75	125				
Lead	10.886	0.50	10.00	0	109	75	125				
Thallium	11.529	0.50	10.00	0	115	75	125				
Zinc	91.537	10	100.0	0	91.5	75	125				

Sample ID: N010189-001H-MSD	SampType: MSD	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 5/8/2013	RunNo: 88784						
Client ID: ZZZZZ	Batch ID: 42940	TestNo: EPA 200.8		Analysis Date: 5/8/2013	SeqNo: 1571953						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	7.355	0.50	10.00	0	73.6	75	125	7.514	2.13	20	S
Lead	10.811	0.50	10.00	0	108	75	125	10.89	0.692	20	

Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL

Work Order: N010189

Project: SFPP - Norwalk Site

TestCode: 200.8_W_SFPP

Sample ID: N010189-001H-MSD	SampType: MSD	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 5/8/2013	RunNo: 88784
Client ID: ZZZZZZ	Batch ID: 42940	TestNo: EPA 200.8		Analysis Date: 5/8/2013	SeqNo: 1571953

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	11.434	0.50	10.00	0	114	75	125	11.53	0.823	20	
Zinc	91.752	10	100.0	0	91.8	75	125	91.54	0.236	20	

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL

Work Order: N010189

Project: SFPP - Norwalk Site

TestCode: 245.1_W_LL

Sample ID: LCS-42935	SampType: LCS	TestCode: 245.1_W_LL	Units: µg/L	Prep Date: 5/8/2013	RunNo: 88776						
Client ID: LCSW	Batch ID: 42935	TestNo: EPA 245.1		Analysis Date: 5/8/2013	SeqNo: 1571358						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.828	0.050	2.500	0	113	85	115				

Sample ID: MB-42935	SampType: MBLK	TestCode: 245.1_W_LL	Units: µg/L	Prep Date: 5/8/2013	RunNo: 88776						
Client ID: PBW	Batch ID: 42935	TestNo: EPA 245.1		Analysis Date: 5/8/2013	SeqNo: 1571360						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.050									

Sample ID: N010189-001H-MS	SampType: MS	TestCode: 245.1_W_LL	Units: µg/L	Prep Date: 5/8/2013	RunNo: 88776						
Client ID: ZZZZZZ	Batch ID: 42935	TestNo: EPA 245.1		Analysis Date: 5/8/2013	SeqNo: 1571363						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.792	0.050	2.500	0.02711	111	75	125				

Sample ID: N010189-001H-MSD	SampType: MSD	TestCode: 245.1_W_LL	Units: µg/L	Prep Date: 5/8/2013	RunNo: 88776						
Client ID: ZZZZZZ	Batch ID: 42935	TestNo: EPA 245.1		Analysis Date: 5/8/2013	SeqNo: 1571364						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.816	0.050	2.500	0.02711	112	75	125	2.792	0.839		20

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL

Work Order: N010189

Project: SFPP - Norwalk Site

TestCode: 8015_W_FP_SFPP

Sample ID: MB-42950	SampType: MBLK	TestCode: 8015_W_FP_	Units: ug/L	Prep Date: 5/10/2013	RunNo: 88836
Client ID: PBW	Batch ID: 42950	TestNo: EPA 8015B	EPA 3510C	Analysis Date: 5/10/2013	SeqNo: 1574438

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel (C13-C22)	ND	50									
TPH-Oil (C23-C36)	ND	50									
Surr: Octacosane	76.957		80.00		96.2	26	152				
Surr: p-Terphenyl	77.536		80.00		96.9	57	132				

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL

Work Order: N010189

Project: SFPP - Norwalk Site

TestCode: 8015_W_GSFPP

Sample ID: E130510LCS	SampType: LCS	TestCode: 8015_W_GSF	Units: ug/L	RunNo: 88835
Client ID: LCSW	Batch ID: E13VW024	TestNo: EPA 8015B		SeqNo: 1574426
Analyte	Result	PQL	SPK value	SPK Ref Val
TPH-Gasoline (C4-C12)	889.000	100	1000	0
Surr: Chlorobenzene - d5	46508.000		50000	
		%REC	LowLimit	HighLimit
		88.9	67	136
		93.0	74	138
		%RPD	RPDLimit	RPDLimit

Prep Date:
 Analysis Date: **5/10/2013**

Sample ID: E130510MB1	SampType: MBLK	TestCode: 8015_W_GSF	Units: ug/L	RunNo: 88835
Client ID: PBW	Batch ID: E13VW024	TestNo: EPA 8015B		SeqNo: 1574427
Analyte	Result	PQL	SPK value	SPK Ref Val
TPH-Gasoline (C4-C12)	ND	100		
Surr: Chlorobenzene - d5	48392.000		50000	
		%REC	LowLimit	HighLimit
		96.8	74	138
		%RPD	RPDLimit	RPDLimit

Prep Date:
 Analysis Date: **5/10/2013**

Sample ID: N010189-001CMS	SampType: MS	TestCode: 8015_W_GSF	Units: ug/L	RunNo: 88835
Client ID: ZZZZZ	Batch ID: E13VW024	TestNo: EPA 8015B		SeqNo: 1574429
Analyte	Result	PQL	SPK value	SPK Ref Val
TPH-Gasoline (C4-C12)	905.000	100	1000	0
Surr: Chlorobenzene - d5	46908.000		50000	
		%REC	LowLimit	HighLimit
		90.5	67	136
		93.8	74	138
		%RPD	RPDLimit	RPDLimit

Prep Date:
 Analysis Date: **5/10/2013**

Sample ID: N010189-001CMSD	SampType: MSD	TestCode: 8015_W_GSF	Units: ug/L	RunNo: 88835
Client ID: ZZZZZ	Batch ID: E13VW024	TestNo: EPA 8015B		SeqNo: 1574430
Analyte	Result	PQL	SPK value	SPK Ref Val
TPH-Gasoline (C4-C12)	897.000	100	1000	0
Surr: Chlorobenzene - d5	47438.000		50000	
		%REC	LowLimit	HighLimit
		89.7	67	136
		94.9	74	138
		%RPD	RPDLimit	RPDLimit
		0.888	0	30
			0	0

Prep Date:
 Analysis Date: **5/10/2013**

Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPPTOT

CLIENT: CH2M HILL
 Work Order: N010189
 Project: SFPP - Norwalk Site

Sample ID: MB-42950	SampType: MBLK	TestCode: 8015_W_SFP	Units: ug/L	Prep Date: 5/10/2013	RunNo: 88836						
Client ID: PBW	Batch ID: 42950	TestNo: EPA 8015B	EPA 3510C	Analysis Date: 5/10/2013	SeqNo: 1574440						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total TPH	ND					100					

Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL

Work Order: N010189

Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: D130508LCS	SampType: LCS	TestCode: 8260_WP_SF	Units: ug/L
Client ID: LCSW	Batch ID: D13VW018	TestNo: EPA 8260B	
Prep Date: 88780		SeqNo: 1571576	
Analysis Date: 5/8/2013			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	20.750	0.50	20.00	0	104	69	133				
1,2-Dichloroethane	19.760	0.50	20.00	0	98.8	69	132				
Benzene	19.510	1.0	20.00	0	97.6	81	122				
Ethylbenzene	19.780	1.0	20.00	0	98.9	73	127				
m,p-Xylene	41.390	1.0	40.00	0	103	76	128				
MTBE	19.200	1.0	20.00	0	96.0	65	123				
o-Xylene	20.270	1.0	20.00	0	101	80	121				
Tert-Butanol	89.570	5.0	100.0	0	89.6	70	130				
Toluene	18.980	2.0	20.00	0	94.9	77	122				
Xylenes, Total	61.660	2.0	60.00	0	103	75	125				
Surr: 1,2-Dichloroethane-d4	25.940		25.00		104	72	119				
Surr: 4-Bromofluorobenzene	24.330		25.00		97.3	76	119				
Surr: Dibromofluoromethane	25.640		25.00		103	85	115				
Surr: Toluene-d8	23.470		25.00		93.9	81	120				

Sample ID: N010189-001GMS	SampType: MS	TestCode: 8260_WP_SF	Units: ug/L
Client ID: ZZZZZZ	Batch ID: D13VW018	TestNo: EPA 8260B	
Prep Date: 88780		SeqNo: 1571577	
Analysis Date: 5/8/2013			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	22.010	0.50	20.00	0	110	69	133				
1,2-Dichloroethane	20.450	0.50	20.00	0	102	69	132				
Benzene	20.400	1.0	20.00	0	102	81	122				
Ethylbenzene	19.890	1.0	20.00	0	99.4	73	127				
m,p-Xylene	41.620	1.0	40.00	0	104	76	128				
MTBE	19.760	1.0	20.00	0	98.8	65	123				
o-Xylene	20.700	1.0	20.00	0	104	80	121				
Tert-Butanol	86.450	5.0	100.0	0	86.4	70	130				
Toluene	19.740	2.0	20.00	0	98.7	77	122				
Xylenes, Total	62.320	2.0	60.00	0	104	75	125				
Surr: 1,2-Dichloroethane-d4	26.780		25.00		107	72	119				

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ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL

Work Order: N010189

Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: **N010189-001GMS** SampType: **MS** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **88780**
 Client ID: **ZZZZZ** Batch ID: **D13VW018** TestNo: **EPA 8260B** Analysis Date: **5/8/2013** SeqNo: **1571577**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	24.920		25.00		99.7	76	119				
Surr: Dibromofluoromethane	26.750		25.00		107	85	115				
Surr: Toluene-d8	24.150		25.00		96.6	81	120				

Sample ID: **N010189-001GMSD** SampType: **MSD** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **88780**
 Client ID: **ZZZZZ** Batch ID: **D13VW018** TestNo: **EPA 8260B** Analysis Date: **5/8/2013** SeqNo: **1571578**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	21.680	0.50	20.00	0	108	69	133	22.01	1.51	20	
1,2-Dichloroethane	20.170	0.50	20.00	0	101	69	132	20.45	1.38	20	
Benzene	20.030	1.0	20.00	0	100	81	122	20.40	1.83	20	
Ethylbenzene	19.820	1.0	20.00	0	99.1	73	127	19.89	0.353	20	
m,p-Xylene	40.670	1.0	40.00	0	102	76	128	41.62	2.31	20	
MTBE	20.240	1.0	20.00	0	101	65	123	19.76	2.40	20	
o-Xylene	20.490	1.0	20.00	0	102	80	121	20.70	1.02	20	
Tert-Butanol	89.640	5.0	100.0	0	89.6	70	130	86.45	3.62	20	
Toluene	19.390	2.0	20.00	0	97.0	77	122	19.74	1.79	20	
Xylenes, Total	61.160	2.0	60.00	0	102	75	125	62.32	1.88	20	
Surr: 1,2-Dichloroethane-d4	26.660		25.00		107	72	119		0		
Surr: 4-Bromofluorobenzene	24.980		25.00		99.9	76	119		0		
Surr: Dibromofluoromethane	26.860		25.00		107	85	115		0		
Surr: Toluene-d8	23.800		25.00		95.2	81	120		0		

Sample ID: **D130508MB2** SampType: **MBLK** TestCode: **8260_WP_SF** Units: **ug/L** Prep Date: RunNo: **88780**
 Client ID: **PBW** Batch ID: **D13VW018** TestNo: **EPA 8260B** Analysis Date: **5/8/2013** SeqNo: **1571579**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	ND	0.50									
1,2-Dichloroethane	ND	0.50									
Benzene	ND	1.0									

Qualifiers:

- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - ND Not Detected at the Reporting Limit
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values



3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL

Work Order: N010189

Project: SFPP - Norwalk Site

TestCode: 8260_WP_SFPP

Sample ID: D130508MB2	SampType: MBLK	TestCode: 8260_WP_SF	Units: ug/L
Client ID: PBW	Batch ID: D13VW018	TestNo: EPA 8260B	
Analyte	Result	PQL	SPK value
		SPK Ref Val	%REC
		HighLimit	RPD Ref Val
		LowLimit	%RPD
		RPDLimit	Qual
			RunNo: 88780
			SeqNo: 1571579
			Prep Date:
			Analysis Date: 5/8/2013

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0									
m,p-Xylene	ND	1.0									
MTBE	ND	1.0									
o-Xylene	ND	1.0									
Tert-Butanol	ND	5.0									
Toluene	ND	2.0									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-d4	24.580		25.00		98.3	72	119				
Surr: 4-Bromofluorobenzene	21.850		25.00		87.4	76	119				
Surr: Dibromofluoromethane	24.130		25.00		96.5	85	115				
Surr: Toluene-d8	23.630		25.00		94.5	81	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - ND Not Detected at the Reporting Limit
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values



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Advanced Technology Laboratories, Inc.

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 5/8/2013 Workorder: N010189
 Rep sample Temp (Deg C): 4.8 IR Gun ID: 1
 Temp Blank: Yes No
 Carrier name: Ontrac
 Last 4 digits of Tracking No.: 0709 Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|--|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH < 2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input type="checkbox"/>
Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>
No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>
NA <input type="checkbox"/> |

Comments: Sample was past holding time for 7199 upon receipt.

Checklist Completed B MBC MBC 5/8/13

Reviewed By: 

Advanced Technology Laboratories, Inc.

WORK ORDER Summary

08-May-13

WorkOrder: N010189

Client ID: CH2HI01

Project: SFPP - Norwalk Site

QC Level: RTNE

Date Received: 5/8/2013

Comments: Report to D. Jablonski/CH2M HILL, cc:KMEP. Direct Bill KMEP/SFPP-Steve Defibaugh-ref.AFE# 81195. "J" Flag required / Use lowest possible detection l

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N010189-001A	EFF-05-07	5/7/2013 8:00:00 AM	5/15/2013	Wastewater	EPA 1664_HEM	Oil and Grease Sample Prep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010189-001B		5/15/2013	5/15/2013	Hexane Extractable Material (HEM)	EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010189-001C		5/15/2013	5/15/2013	TPH EXTRACTABLE BY GC/FID	EPA 8015B	TPH EXTRACTABLE BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010189-001D		5/15/2013	5/15/2013	Total TPH	EPA 8015B	Total TPH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010189-001E		5/15/2013	5/15/2013	GASOLINE RANGE ORGANICS BY GC/FID	EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WV
N010189-001F		5/15/2013	5/15/2013	SETTLEABLE MATTER	SM2540F	SETTLEABLE MATTER	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SUB
N010189-001G		5/15/2013	5/15/2013	Setteable Matter	SM2540D	TOTAL NON-FILTERABLE RESIDUE	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SUB
N010189-001H		5/15/2013	5/15/2013	Total Suspended Solids Prep	EPA 420.1	PHENOLICS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SUB
N010189-001I		5/15/2013	5/15/2013	Phenols Prep	EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SUB
N010189-001J		5/9/2013	5/9/2013	AQPREP TOTAL METALS: ICP, FLAA	EPA 200.8	ICP-MS METALS BY COLLISION/REACTION CELL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010189-001K		5/9/2013	5/9/2013	MERCURY BY COLD VAPOR TECHNIQUE	EPA 245.1	MERCURY BY COLD VAPOR TECHNIQUE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010189-001L		5/9/2013	5/9/2013	MERCURY PREP	EPA 7199	Hexavalent Chromium by IC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010189-002A	FOLDER	5/9/2013	5/9/2013	Folder		Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB

CLIENT CORRESPONDENCE LOG

DATE: 5/8/2013 4:11:21 PM

Client Name: -CH2HI01

ATL Workorder No.: N01018

DATE	CONTACT	CALL IN/OUT	ISSUE / PROBLEM	COMMENTS/CORRECTIVE ACTION	INITIAL
5/8/2013 4:10:24 P	D. Jablonski	OUT	Sample was past Holding time for 7199 upon receipt.	Per contact, they will just re-sample for Cr+6.	marlonc



Advanced Technology Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atglobal.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: RTNE

Subcontractor:

Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California

TEL: (562) 989-4045
FAX: (562) 989-4045
Acct #:

Field Sampler:


07-May-13

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				EPA 420.1	SM2540F
N010189-001D / EFF-05 -07	Wastewater	5/2/2013 6:00:00 AM	320ZP		1
N010189-001F / EFF-05 -07	Wastewater	5/2/2013 6:00:00 AM	320ZA	1	

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N010189
day TAT.

For questions, call Marlon at (702)-307-2659. Please e-mail results to marlon@at-labs.com by 5

		Date/Time			Date/Time
Relinquished by:		2013-05-07	Received by:	_____	_____
Relinquished by:	_____	_____	Received by:	_____	_____



Advanced Technology
Laboratories, Inc.

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691



800.334.5000
ontrac.com

Waybill

On Time Delivery For Less
2. FROM (Company)

ENVIRO TREATMENT & TECHNOLOGY*

Street Address: 3875 WALNUT AVE Suite
 City: SIGNAL HILL
 State: CA ZIP Code: 90755
 Phone Number: - -

PLEASE PRINT IN BLOCK LETTERS WITH BLUE OR BLACK INK ONLY

3. TO (Company) WE DO NOT DELIVER TO THE BOXES OR PO ZIP CODES

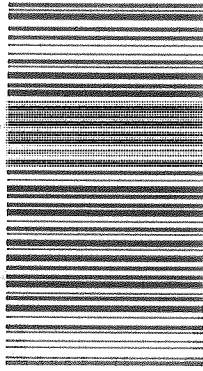
Street Address: ATLANTA
 City: WILMINGTON
 State: VA ZIP Code: 23072
 Phone Number: 702-907-2659

4. Shipper's Reference Number

Recipient's Name: SAMPLE RECEIVING
 Shipper's Reference Number: CHAZM HALL 050712

Recipient Copy

1a. OnTrac Account Number: Tracking Number: B10290520709
 1b. Date: 10/29/04 Pre-Print Number: 104044



5. WEIGHT SUBJECT TO VERIFICATION: 8 oz. Letter or L R S
 6. SERVICE LEVEL: Sunrise (NEXT BUSINESS MORNING) Sunrise Gold (EARLY NEXT BUSINESS MORNING) Palletized Freight (NEXT BUSINESS DAY)
 7. SERVICE OPTIONS: Signature Required Saturday Delivery Hold for Pickup

8. COLLECT ON DELIVERY: SECURED PAYMENT UNSECURED PAYMENT

9. DECLARED VALUE: \$.00
 10. PAYMENT: Shipper Other Account

11a. Shipper's Name: F L A S T
 11b. Shipper's Signature: BY USING THIS WAYBILL YOU AGREE TO THE TERMS AND CONDITIONS ON THE BACK OF THE "SHIPPED COPY"

May 16, 2013

Marlon Cartin
Advanced Technology Laboratory-Las Vegas
3151 W Post Rd.
Las Vegas, NV 89118
Tel: (702) 307-2659
Fax:(702) 307-2691



Re: ATL Work Order Number : 1301332
Client Reference : [none]

Enclosed are the results for sample(s) received on May 07, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Advanced Technology Laboratory-Las Vegas

Project Number : -

3151 W Post Rd.

Report To : Marlon Cartin

Las Vegas , NV 89118

Reported : 05/16/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N010189-001D / EFF-05-07	1301332-01	Waste Water	5/07/13 8:00	5/07/13 16:23
N010189-001F / EFF-05-07	1301332-02	Waste Water	5/07/13 8:00	5/07/13 16:23

CASE NARRATIVE

The sample for EPA 420.1 (Phenolics) analysis was subcontracted to AETL with ELAP Cert.# 1541.



Certificate of Analysis

Advanced Technology Laboratory-Las Vegas
3151 W Post Rd.
Las Vegas , NV 89118

Project Number : -
Report To : Marlon Cartin
Reported : 05/16/2013

Client Sample ID N010189-001D / EFF-05-07

Lab ID: 1301332-01

Residue, Settleable by SM 2540F

Analyst: AG

Analyte	Result (mL/L)	PQL (mL/L)	MDL (mL/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Settleable	ND	0.10	0.10	1	B3E0266	05/08/2013	05/08/13 10:11	

QUALITY CONTROL SECTION

Residue, Settleable by SM 2540F - Quality Control

Analyte	Result (mL/L)	PQL (mL/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Residue, Settleable	ND	0.10							

Batch B3E0266 - No_Prep_WC_1

Blank (B3E0266-BLK1)

Prepared: 5/8/2013 Analyzed: 5/8/2013

Residue, Settleable ND 0.10 NR



Certificate of Analysis

Advanced Technology Laboratory-Las Vegas

Project Number : -

3151 W Post Rd.

Report To : Marlon Cartin

Las Vegas , NV 89118

Reported : 05/16/2013

Notes and Definitions

ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225

Number of Pages 2
Date Received 05/08/2013
Date Reported 05/16/2013

Telephone: (562)989-4045
Attention: Rachelle Arada

Job Number	Order Date	Client
69450	05/08/2013	ATL

Project ID: 1301332
Project Name: PO# SC07976

Enclosed please find results of analyses of 1 water sample which was analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181

Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Page: 1 A

Ordered By

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225

Project ID: 1301332
Date Received 05/08/2013
Date Reported 05/16/2013

Telephone: (562)989-4045
Attention: Rachele Arada

Job Number	Order Date	Client
69450	05/08/2013	ATL

CERTIFICATE OF ANALYSIS CASE NARRATIVE

AETL received 1 samples with the following specification on 05/08/2013.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers	
69450.01	1301332-02	05/07/2013	Aqueous	1	
Method ^	Submethod	Req Date	Priority	TAT	Units
420.1		05/15/2013	2	Normal	mg/L

The samples were analyzed as specified on the enclosed chain of custody.
No analytical non-conformances were encountered.

Checked By: 

Approved By: 

Cyrus Razmara, Ph.D.
Laboratory Dire



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
 Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Ordered By

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755-5225

Telephone: (562)989-4045

Attn: Rachelle Arada

Page: 2

Project ID: 1301332

Project Name: PO# SC07976

AETL Job Number	Submitted	Client
69450	05/08/2013	ATL

Method: 420.1, Phenolics, Total Recoverable, Spectrophotometric, Manual

QC Batch No: 051413-1

Our Lab I.D.		Method Blank	69450.01			
Client Sample I.D.			1301332-02			
Date Sampled			05/07/2013			
Date Prepared		05/14/2013	05/14/2013			
Preparation Method		420.1	420.1			
Date Analyzed		05/14/2013	05/14/2013			
Matrix		Aqueous	Aqueous			
Units		mg/L	mg/L			
Dilution Factor		1	1			
Analytes	MDL	PQL	Results	Results		
Phenolic compounds as phenol	0.15	0.30	ND	ND		

QUALITY CONTROL REPORT

QC Batch No: 051413-1; Dup or Spiked Sample: 69448.01; LCS: Clean Water; QC Prepared: 05/14/2013; QC Analyzed: 05/14/2013;

Units: mg/L

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Phenol	0.00	0.500	0.483	96.6	0.500	0.479	95.8	<1	80-120	<15

QC Batch No: 051413-1; Dup or Spiked Sample: 69448.01; LCS: Clean Water; QC Prepared: 05/14/2013; QC Analyzed: 05/14/2013;

Units: mg/L

Analytes	SM Result	SM DUP Result	RPD %	SM RPD % Limit	LCS Concen	LCS Recov	LCS % REC	LCS/LCSD % Limit		
Phenol	ND	ND	<1	<15	0.500	0.472	94.4	80-120		



American Environmental Testing Laboratory Inc.

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Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

Data Qualifier:

- #: Recovery is not within acceptable control limits.
- *: In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
- B: Analyte was present in the Method Blank.
- D: Result is from a diluted analysis.
- E: Result is beyond calibration limits and is estimated.
- H: Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
- J: Analyte was detected. However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
- M: Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
- MCL: Maximum Contaminant Level
- NS: No Standard Available
- S6: Surrogate recovery is outside control limits due to matrix interference.
- S8: The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
- X: Results represent LCS and LCSD data.

Definition:

- %Limi: Percent acceptable limits.
- %REC: Percent recovery.
- Con.L: Acceptable Control Limits
- Conce: Added concentration to the sample.
- LCS: Laboratory Control Sample
- MDL: Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street, Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate
ND:	Analyte was not detected in the sample at or above MDL.
PQL:	Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
Recov:	Recovered concentration in the sample.
RPD:	Relative Percent Difference


ADVANCED TECHNOLOGY
 LABORATORIES

SUBCONTRACT ORDER

Work Order: 1301332

Job# 69450

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachelle Arada



RECEIVING LABORATORY:

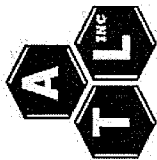
AETL
 2834 North Naomi Street
 Burbank, CA 91504
 Phone : (818) 845-8200
 Fax: (818) 845-8840
 PO#: SC07976 - 5 DAY TAT (PA)

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled
ATL Lab#: 1301332-02 / N010189-001F / EFF-05-07			
420.1_5530BD_SUB	05/14/13 17:00	06/04/13 08:00	05/07/13 08:00 69450.01
1-Amber H2SO4 - 1000mL			

Comments:

 Released By	5/8/13 1435 Date	Herman Received By	5-8-13 1435 Date
Herman Released By	5-8-13 1610 Date	 Received By	05/08/13 16.10 Date



Advanced Technology Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atlglobal.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: RTNE

Subcontractor:

Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California

TEL: (562) 989-4045
FAX: (562) 989-4045
Acct #:

Field Sampler: James Dye

07-May-13

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				EPA 420.1	SM2540F
N010189-001D / EFF-05 -07	Wastewater	5/7/2013 8:00:00 AM	320ZP		1
N010189-001F / EFF-05 -07	Wastewater	5/7/2013 8:00:00 AM	320ZA	1	

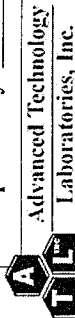
130/332 - 1
↓

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N010189
day TAT:

For questions, call Marlon at (702)-307-2659. Please e-mail results to marlon@atl-labs.com by 5

Relinquished by:	Date/Time	Received by:	Date/Time
	5/7/2013 4:22 PM	<i>W</i>	5/13/13 10:29
Relinquished by:		Received by:	



Advanced Technology Laboratories, Inc.
3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
 3151 W. Post Road
 Las Vegas, NV 89118
 Tel: 702-307-2659 Fax: 702-307-2691
 Marion Cartin (marlon@atl-labs.com)

DATE: 05/07/13
 PAGE: 1 OF 1

LABORATORY CLIENT: Kinder Morgan Energy Partners, Attn: Steve Defibaugh ADDRESS: 1100 Town & Country Road CITY: Orange, CA 92868 TEL: 714-560-4802 FAX: 714-560-4601 TURNAROUND TIME <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input checked="" type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) <input type="checkbox"/> RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL _____ / _____ / _____ SPECIAL INSTRUCTIONS Report to D. Jablonski/CH2M HILL, cc: KMEP Direct Bill KMEP/SFPP - Steve Defibaugh-ref. AFE# 81195 "J" flags required/Use lowest possible detection limit - all methods.		CLIENT PROJECT NAME / NUMBER: SFPP - Norwalk Site PROJECT CONTACT: James Dye SAMPLER(S): (SIGNATURE) _____ P.O. NO.: QUOTE NO.:	
OIL & GREASE (1664) <input checked="" type="checkbox"/>		TPH-g, TPH-d, and TPH-oi (8015B) <input checked="" type="checkbox"/>	
Total TPH (as TPH-g, TPH-d, and TPH-oi) (8015B) <input checked="" type="checkbox"/>		Total TPH (as TPH-g, TPH-d, and TPH-oi) (8015B) <input checked="" type="checkbox"/>	
Settleable Solids (SM2540F) <input checked="" type="checkbox"/>		Settleable Solids (SM2540F) <input checked="" type="checkbox"/>	
Total Suspended Solids (SM2540D) <input checked="" type="checkbox"/>		Total Suspended Solids (SM2540D) <input checked="" type="checkbox"/>	
Phenol (420.1) <input checked="" type="checkbox"/>		Phenol (420.1) <input checked="" type="checkbox"/>	
BTEX, Total Xylenes, 1,1-DCA, MTBE and TBA, (8260B) 48HR TAT <input checked="" type="checkbox"/>		BTEX, Total Xylenes, 1,1-DCA, MTBE and TBA, (8260B) 48HR TAT <input checked="" type="checkbox"/>	
Cu, Pb, Ti, and Zn (200.8) <input checked="" type="checkbox"/>		Cu, Pb, Ti, and Zn (200.8) <input checked="" type="checkbox"/>	
Se (200.8); Hg (245.1) <input checked="" type="checkbox"/>		Se (200.8); Hg (245.1) <input checked="" type="checkbox"/>	
Cr VI (7199) <input checked="" type="checkbox"/>		Cr VI (7199) <input checked="" type="checkbox"/>	
Comments 24 hr TAT for metals and VOCs		Comments 24 hr TAT for metals and VOCs	
SAMPLE ID: EFF-05-07 LOCATION/DESCRIPTION: Effluent SAMPLING DATE: 5/7/13 0600 MAT. RIX: WW NO. OF CONT.: 17		RECEIVED BY (SIGNATURE): <i>[Signature]</i> RECEIVED BY (SIGNATURE): <i>[Signature]</i> RECEIVED BY (SIGNATURE): <i>[Signature]</i>	

CHAIN OF CUSTODY RECORD - PLEASE COMPLETE ALL SHADED AREAS

ADVANCED TECHNOLOGY LABORATORIES
 3275 Walnut Ave., Signal Hill, CA 90755
 Tel: (562) 989-4045 • Fax: (562) 989-4040

Quote #: _____
 As the authorized agent of the below named company, I hereby purchase testing services from ATL as dictated below and guarantee payment in full.
 Submitter (Print): _____
 Signature: _____

FOR LABORATORY USE ONLY

Method of Transport: Client ATL OnTrac FedEx GSO Other: _____

Sample Condition Upon Receipt: 1. CHILLED Y N 2. HEADSPACE (VOA) Y N 3. CONTAINER INTACT Y N 4. SEALED Y N 5. # OF SPLS MATCH COC Y N 6. PRESERVED Y N

Client: Advanced Technology Laboratory-Las Vegas
 Address: 3151 W Post Rd. Las Vegas, NV
 City: Las Vegas State: NV Zip Code: 89118
 Project Name: CH2M HILL- Norwalk
 Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____
 Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____
 Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____
 Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____

Special Instructions/Comments:
 15 mins shipping time

Send Report to:
 Attn: _____ Email: _____
 Company: _____
 Address: _____
 City: _____ State: _____ ZIP: N008276

Samples and Records - Archival & Disposal
 Unless otherwise requested by client, all samples and Hard copy records will be disposed Forty-five (45) days after generation of report - electronic copies retained for five (5) years.
 Storage Fees (applies when storage is requested):
 ■ Samples: Forty-five (45) Days Complimentary - \$2.00 / sample / mo thereafter.
 ■ Hardcopy Reports \$17.50 per report.

ITEM	BUSINESS HOURS 8:30 AM TO 5:30 PM	Lab No.	Sample Description	Sample ID / Location	Date	Time	CIRCLE or Write IN Analyses		CIRCLE APPROPRIATE MATRIX	PRESERVATION	QA/QC	REMARKS
							RTNE	CT				
1					5/7/2013				SOIL / SEDIMENT / SLUDGE			
2									WATER - DRINKING / GROUND			
3									WATER - STORM / WASTE			
4									WATER - LAYERED - OIL			
5									SOIL / SEDIMENT / SLUDGE			
6									WATER - DRINKING / GROUND			
7									WATER - STORM / WASTE			
8									SOIL / SEDIMENT / SLUDGE			
9									WATER - DRINKING / GROUND			
10									WATER - LAYERED - OIL			

Container Types: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tecliar; 7 = Canister

Material: 1=Glass; 2=Plastic; 3=Metal

Preservatives: F=Flu, Z=Zinc, S=HNO3
 3=H2SO4; 4 = 4C; 5=Zn ((Ac)2; 6=NaOH; 7=NA2S2O3

FOR RUSH TULP7 STLC; ADD 7 DAYS TO RESPECTIVE TAT.
 Subcon: TAT IS 10 - 15 business days; Dioxin and Furans 21 business days.

May 20, 2013

Daniel Jablonski
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612
TEL: (213)228-8271
FAX: (510) 622-9129

CA-ELAP No.:2676
NV Cert. No.:NV-009222007A

Workorder No.: N010189

RE: SFPP - Norwalk Site

Attention: Daniel Jablonski

Enclosed are the results for sample(s) received on May 08, 2013 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an amended report. Please disregard all previous documentation that corresponds to the page(s) enclosed.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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**Advanced Technology
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL

Client Sample ID: EFF-05-07

Lab Order: N010189

Collection Date: 5/7/2013 8:00:00 AM

Project: SFPP - Norwalk Site

Matrix: WASTEWATER

Lab ID: N010189-001

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL TPH							
	EPA 3510C		EPA 8015B				
RunID: GC3_130510A	QC Batch: 42950			PrepDate: 5/10/2013		Analyst: MDM	
Total TPH	ND	13	100	ug/L	1	5/10/2013 03:28 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified

E Value above quantitation range
 J Analyte detected below quantitation limits
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out



May 23, 2013

Daniel Jablonski
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612
TEL: (213)228-8271
FAX: (510) 622-9129

CA-ELAP No.:2676
NV Cert. No.:NV-009222007A

Workorder No.: N010244

RE: SFPP - Norwalk Site

Attention: Daniel Jablonski

Enclosed are the results for sample(s) received on May 15, 2013 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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**Advanced Technology
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Project: SFPP - Norwalk Site
Lab Order: N010244

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Sample was received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Sample was analyzed within method holding time.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.



CLIENT: CH2M HILL
Project: SFPP - Norwalk Site
Lab Order: N010244
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N010244-001A	EFF-05-14	Wastewater	5/14/2013 12:50:00 PM	5/15/2013	5/23/2013



CLIENT: CH2M HILL
Lab Order: N010244
Project: SFPP - Norwalk Site
Lab ID: N010244-001

Client Sample ID: EFF-05-14
Collection Date: 5/14/2013 12:50:00 PM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

HEXAVALENT CHROMIUM BY IC

EPA 7199

RunID: IC6_130515A	QC Batch: R88947	PrepDate:	Analyst: QBM
Hexavalent Chromium	ND 0.014	0.20	µg/L 1 5/15/2013 09:37 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



ANALYTICAL QC SUMMARY REPORT

CLIENT: CH2M HILL
Work Order: N010244
Project: SFPP - Norwalk Site

TestCode: 7199_WPGE

Sample ID: MB-R88947	SampType: MBLK	TestCode: 7199_WPGE	Units: µg/L	Prep Date:	RunNo: 88947						
Client ID: PBW	Batch ID: R88947	TestNo: EPA 7199		Analysis Date: 5/15/2013	SeqNo: 1581401						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: LCS-R88947	SampType: LCS	TestCode: 7199_WPGE	Units: µg/L	Prep Date:	RunNo: 88947						
Client ID: LCSW	Batch ID: R88947	TestNo: EPA 7199		Analysis Date: 5/15/2013	SeqNo: 1581402						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.100	0.20	5.000	0	102	90	110				

Sample ID: N010244-001ADUP	SampType: DUP	TestCode: 7199_WPGE	Units: µg/L	Prep Date:	RunNo: 88947						
Client ID: ZZZZZZ	Batch ID: R88947	TestNo: EPA 7199		Analysis Date: 5/15/2013	SeqNo: 1581414						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20				0	0	20			

Sample ID: N010244-001AMS	SampType: MS	TestCode: 7199_WPGE	Units: µg/L	Prep Date:	RunNo: 88947						
Client ID: ZZZZZZ	Batch ID: R88947	TestNo: EPA 7199		Analysis Date: 5/15/2013	SeqNo: 1581415						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.980	0.20	1.000	0	98.0	85	115				

Sample ID: N010248-004AMS	SampType: MS	TestCode: 7199_WPGE	Units: µg/L	Prep Date:	RunNo: 88947						
Client ID: ZZZZZZ	Batch ID: R88947	TestNo: EPA 7199		Analysis Date: 5/15/2013	SeqNo: 1581417						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.058	0.20	5.000	3.933	103	85	115				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N010244
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 7199_WPGE

Sample ID: N010248-004AMSD	SampType: MSD	TestCode: 7199_WPGE	Units: µg/L	Prep Date:	RunNo: 88947					
Client ID: ZZZZZZ	Batch ID: R88947	TestNo: EPA 7199		Analysis Date: 5/15/2013	SeqNo: 1581418					
Analyte	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.20	5.000	3.933	104	85	115	9.058	0.626		20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- A **Advanced Technology Laboratories, Inc.**
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
 3151 W. Post Road
 Las Vegas, NV 89118
 Tel: 702-307-2659 Fax: 702-307-2691
 Marlon Cartin (marlon@atl-labs.com)

DATE: 5-14-13
 PAGE: 1 OF 1

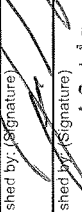

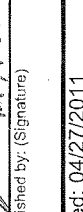
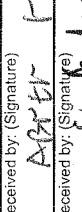
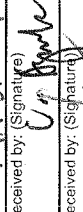

LABORATORY CLIENT: **Kinder Morgan Energy Partners, Attn: Steve Defibaugh**
 ADDRESS: **1100 Town & Country Road**
 CITY: **Orange, CA 92868**
 TEL: **714-560-4802** FAX: **714-560-4601** E-MAIL: **james.dye@kindermorgan.com**
 TURNAROUND TIME: SAME DAY 24 HR 48HR 72 HR 5 DAYS 10 DAYS
 SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY):
 RWQCB REPORTING ARCHIVE SAMPLES UNTIL / /

CLIENT PROJECT NAME / NUMBER: **SFPP - Norwalk Site**
 PROJECT CONTACT: **James Dye**
 SAMPLER(S) SIGNATURE: 

REQUESTED ANALYSIS

OIL & GREASE (1664) TPH-g (C5-C14 Only) (8015B (M)) BTEX; 1,1-DCA; 1,2-DCA; MEK(8260B) SETTABLE SOLIDS (2540F) TOTAL SUSPENDED SOLIDS (2540D) PHENOLICS (420.1) Cr(VI), Cu (7199, 6020) Se (6020) 24 HR TAT Hg (7470A) 24 HR TAT MTBE (8260B) 24 Hour TAT

LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	SAMPLING		NO. OF CONT.	COMMENTS
			DATE	TIME		
	EFF- EFF-05-14	Effluent	5/14/13	12:50 AM	14	Temperature* = Temperature* = (Temp. as sampled*)
						Monthly

Relinquished by: (Signature)  Date: 5/14/13 Time: 13:46
 Relinquished by: (Signature)  Date: 5/14/13 Time: 14:48
 Relinquished by: (Signature)  Date: 5/15/13 Time: 9:00
 Received by: (Signature)  Date: 5/14/13 Time: 13:46
 Received by: (Signature)  Date: 5/14/13 Time: 14:48
 Received by: (Signature)  Date: 5/15/13 Time: 9:00

Revised: 04/27/2011

NO1244-1

Advanced Technology Laboratories, Inc.

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 5/15/2013 Workorder: N010244
Rep sample Temp (Deg C): 3.8 IR Gun ID: 1
Temp Blank: Yes No
Carrier name: Ontrac
Last 4 digits of Tracking No.: 0692 Packing Material Used: None
Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|--|--|--|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input checked="" type="checkbox"/>
Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>
No <input type="checkbox"/> | NA <input type="checkbox"/>
NA <input type="checkbox"/> |

Comments: Please see attached correspondence.

Checklist Completed By MBC MBC 5/15/13

Reviewed By: 

Advanced Technology Laboratories, Inc.

WORK ORDER Summary

15-May-13

WorkOrder: N010244

Client ID: CH2HI01

Project: SFPP - Norwalk Site

QC Level: RTNE

Date Received: 5/15/2013

Comments: Report to D. Jablonski/CH2M HILL, cc:KMEP.

Direct Bill KMEP/SFPP-Steve Defibaugh-ref.AFE# 81195. "J" Flags requ

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N010244-001A	EFF-05-14	5/14/2013 12:50:00 PM	5/22/2013	Wastewater	EPA 7199	Hexavalent Chromium by IC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010244-002A	FOLDER		5/22/2013		Folder	Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB

Tracking Number
B10290520692

On-Time Account Number
059413

Pre-Print Number

Waybill

800.334.5000
 ontrac.com

On-Time Delivery For Less
 FROM (Company)

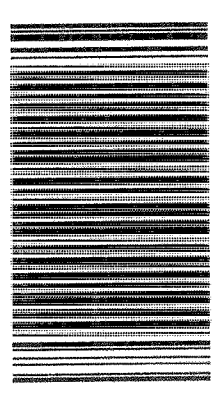
EWING INSTRUMENT & TECHNOLOGY*

Street Address
1275 WALNUT AVE SUITE
 City
STONHILL
 State
CA ZIP Code
94753
 Phone Number

PLEASE PRINT IN BLOCK LETTERS WITH BLUE OR BLACK INK ONLY

31. TO (Company) (Company) (City) (State) (ZIP Code)

32. TO (Company) (Company) (City) (State) (ZIP Code)
ATL
 Street Address
151 W POST RD
 Suite
 City
LAG VEBAS
 State
GA ZIP Code
30118
 Phone Number
707 307 2659
 Recipient's Name
AMPL FCB1 V16
 4. Shipper's Reference Number
W.M. HILL (51413)



5. WEIGHT WEIGHT 8 oz. Letter or <input checked="" type="checkbox"/>	6. SERVICE LEVEL SERVICE LEVEL Sunrise TEXT BUSINESS MORNING EARLY NEXT BUSINESS MORNING Palettized Freight NEXT BUSINESS DAY	7. SERVICE OPTIONS SERVICE OPTIONS Signature Required Saturday Delivery AVAILABLE IN SELECT ZIP CODES Hold for Pickup AT DESTINATION'S NEAREST FACILITY
8. COLLECT ON DELIVERY COLLECT ON DELIVERY SECURED PAYMENT UNSECURED PAYMENT	9. DECLARED VALUE DECLARED VALUE \$ 100.00	
10. PAYMENT PAYMENT Shipper <input checked="" type="checkbox"/> Other Account		11a. Shipper's Name Shipper's Name CAMPICK

11b. Shipper's Signature
 [Signature]

Recipient Copy

Marlon Cartin

From: Samantha.Chen@CH2M.com
Sent: Wednesday, May 15, 2013 8:44 AM
To: marlon@atl-labs.com
Cc: Daniel.Jablonski@CH2M.com; samplecontrol@atl-labs.com
Subject: RE: 7199

Hello Marlon,
Yes, you are correct, please only analyze for CrVI.

Thanks for catching this!

Sam

From: Marlon B. Cartin [<mailto:marlon@atl-labs.com>]
Sent: Wednesday, May 15, 2013 8:40 AM
To: Chen, Samantha/SCO
Cc: Jablonski, Daniel/LAC; Sample Control
Subject: 7199

Hi Sam!

For the attached COC, I am assuming that you only need Cr+6. I think they forgot to erase the Cu by 6020.

Please confirm.

Thanks,

Marlon B. Cartin

Advanced Technology Laboratories, Inc.

3151 W. Post Road

Las Vegas, NV 89118

Phone: 702-307-2659 ext 410

Mobile: 702-439-0421

www.atl-labs.com

Advanced Technology Laboratories, Inc. is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is accredited by the State of California, NELAP and State of Nevada and holds various SBE, DBE and MBE certificates and a USDA soil permit. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates. Advanced Technology Labs, Inc. - Your Partner for Quality Environmental Testing

This message is intended for the use of the individual or entity to which it is addressed. This may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are

June 14, 2013

Daniel Jablonski
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (213)228-8271
FAX: (510) 622-9129

CA-ELAP No.:2676
NV Cert. No.:NV-009222007A

Workorder No.: N010375

RE: SFPP - Norwalk Site

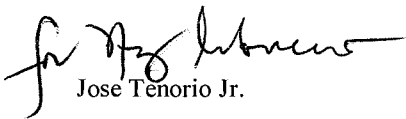
Attention: Daniel Jablonski

Enclosed are the results for sample(s) received on June 08, 2013 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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**Advanced Technology
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Project: SFPP - Norwalk Site
Lab Order: N010375

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Subcontracted Analyses:

Phenols by EPA 420.1 was subcontracted to AETL-Burbank,CA.



CLIENT: CH2M HILL
Project: SFPP - Norwalk Site
Lab Order: N010375
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N010375-001A	EFF-06-07	Wastewater	6/7/2013 11:20:00 AM	6/8/2013	6/14/2013
N010375-001B	EFF-06-07	Wastewater	6/7/2013 11:20:00 AM	6/8/2013	6/14/2013
N010375-001C	EFF-06-07	Wastewater	6/7/2013 11:20:00 AM	6/8/2013	6/14/2013
N010375-001D	EFF-06-07	Wastewater	6/7/2013 11:20:00 AM	6/8/2013	6/14/2013
N010375-001E	EFF-06-07	Wastewater	6/7/2013 11:20:00 AM	6/8/2013	6/14/2013
N010375-001F	EFF-06-07	Wastewater	6/7/2013 11:20:00 AM	6/8/2013	6/14/2013
N010375-001G	EFF-06-07	Wastewater	6/7/2013 11:20:00 AM	6/8/2013	6/14/2013
N010375-001H	EFF-06-07	Wastewater	6/7/2013 11:20:00 AM	6/8/2013	6/14/2013



CLIENT: CH2M HILL	Client Sample ID: EFF-06-07
Lab Order: N010375	Collection Date: 6/7/2013 11:20:00 AM
Project: SFPP - Norwalk Site	Matrix: WASTEWATER
Lab ID: N010375-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL NON-FILTERABLE RESIDUE

SM2540D

RunID: WETCHEM_130610B	QC Batch: 43188	PrepDate: 6/10/2013	Analyst: LCC
Suspended Solids (Residue, Non-Filterable)	ND 5.0	5.0	mg/L 1
			6/10/2013

SETTLABLE MATTER

SM2540F

RunID: WETCHEM_130608A	QC Batch: 43191	PrepDate: 6/8/2013	Analyst: JT
Settleable Matter	ND 1.1	1.1	ml/L 1
			6/8/2013

HEXANE EXTRACTABLE MATERIAL (HEM)

EPA 1664 _HEM

RunID: WETCHEM_130610C	QC Batch: 43193	PrepDate: 6/10/2013	Analyst: QBM
Oil & Grease	ND 1.1	4.0	mg/L 1
			6/10/2013

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_130610A	QC Batch: P13VW086	PrepDate:	Analyst: QBM
1,1-Dichloroethane	ND 0.062	0.50	ug/L 1
1,2-Dichloroethane	ND 0.044	0.50	ug/L 1
Benzene	ND 0.048	1.0	ug/L 1
Ethylbenzene	ND 0.036	1.0	ug/L 1
m,p-Xylene	ND 0.14	1.0	ug/L 1
MTBE	0.35 0.098	1.0	J ug/L 1
o-Xylene	ND 0.042	1.0	ug/L 1
Tert-Butanol	ND 1.0	5.0	ug/L 1
Toluene	ND 0.034	2.0	ug/L 1
Xylenes, Total	ND 1.5	2.0	ug/L 1
Surr: 1,2-Dichloroethane-d4	113 0	72-119	%REC 1
Surr: 4-Bromofluorobenzene	102 0	76-119	%REC 1
Surr: Dibromofluoromethane	111 0	85-115	%REC 1
Surr: Toluene-d8	99.0 0	81-120	%REC 1

TPH EXTRACTABLE BY GC/FID

EPA 3510C

EPA 8015B

RunID: GC3_130611A	QC Batch: 43198	PrepDate: 6/11/2013	Analyst: MDM
TPH-Diesel (C13-C22)	15 13	50	J ug/L 1
TPH-Oil (C23-C36)	ND 9.6	50	ug/L 1
Surr: Octacosane	80.1 0	26-152	%REC 1

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit S Spike/Surrogate outside of limits due to matrix interference
 Results are wet unless otherwise specified DO Surrogate Diluted Out



CLIENT: CH2M HILL	Client Sample ID: EFF-06-07
Lab Order: N010375	Collection Date: 6/7/2013 11:20:00 AM
Project: SFPP - Norwalk Site	Matrix: WASTEWATER
Lab ID: N010375-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC/FID							
EPA 3510C				EPA 8015B			
RunID: GC3_130611A	QC Batch: 43198			PrepDate:	6/11/2013		Analyst: MDM
Surr: p-Terphenyl	79.9	0	57-132		%REC	1	6/11/2013 02:32 PM
GASOLINE RANGE ORGANICS BY GC/FID							
EPA 8015B							
RunID: GC4_130610A	QC Batch: E13VW034			PrepDate:			Analyst: QBM
TPH-Gasoline (C4-C12)	ND	8.5	100		ug/L	1	6/10/2013 10:22 AM
Surr: Chlorobenzene - d5	112	0	74-138		%REC	1	6/10/2013 10:22 AM
MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: AA1_130610F	QC Batch: 43194			PrepDate:	6/10/2013		Analyst: LCC
Mercury	0.031	0.026	0.050	J	µg/L	1	6/10/2013
ICP-MS METALS BY COLLISION/REACTION CELL							
EPA 200.8							
RunID: ICP7_130611C	QC Batch: 43187			PrepDate:	6/10/2013		Analyst: CEI
Selenium	0.086	0.084	0.50	J	µg/L	1	6/11/2013 05:44 PM
ICPMS METALS							
EPA 200.8							
RunID: ICP7_130611C	QC Batch: 43187			PrepDate:	6/10/2013		Analyst: CEI
Copper	ND	0.14	0.50		µg/L	1	6/11/2013 05:44 PM
Lead	ND	0.15	0.50		µg/L	1	6/11/2013 05:44 PM
Thallium	ND	0.075	0.50		µg/L	1	6/11/2013 05:44 PM
Zinc	ND	1.3	10		µg/L	1	6/11/2013 05:44 PM
TOTAL TPH							
EPA 3510C				EPA 8015B			
RunID: GC3_130611A	QC Batch: 43198			PrepDate:	6/11/2013		Analyst: MDM
Total TPH	15.0	13	100		ug/L	1	6/11/2013

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified
 E Value above quantitation range
 J Analyte detected below quantitation limits
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out



CLIENT: CH2M HILL
Work Order: N010375
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.2_2540D_W

Sample ID: MB-43188	SampType: MBLK	TestCode: 160.2_2540D_ Units: mg/L	Prep Date: 6/10/2013	RunNo: 89195							
Client ID: PBW	Batch ID: 43188	TestNo: SM2540D	Analysis Date: 6/10/2013	SeqNo: 1591603							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter)	ND	10									

Sample ID: LCS-43188	SampType: LCS	TestCode: 160.2_2540D_ Units: mg/L	Prep Date: 6/10/2013	RunNo: 89195							
Client ID: LCSW	Batch ID: 43188	TestNo: SM2540D	Analysis Date: 6/10/2013	SeqNo: 1591604							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter)	879.000	10	1000	0	87.9	80	120				

Sample ID: N010375-001E-DUP	SampType: DUP	TestCode: 160.2_2540D_ Units: mg/L	Prep Date: 6/10/2013	RunNo: 89195							
Client ID: ZZZZZ	Batch ID: 43188	TestNo: SM2540D	Analysis Date: 6/10/2013	SeqNo: 1591606							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter)	ND	5.0						0	0	5	

Qualifiers:

- | | | | | | |
|---|--|----|-------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out | | Calculations are based on raw values |



CLIENT: CH2M HILL
Work Order: N010375
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.5_2540F_W

Sample ID: MB-43191	SampType: MBLK	TestCode: 160.5_2540F_ Units: m/L	Prep Date: 6/8/2013	RunNo: 89174							
Client ID: PBW	Batch ID: 43191	TestNo: SM2540F	Analysis Date: 6/8/2013	SeqNo: 1590624							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Settleable Matter	ND	1.0									

Sample ID: TAP H2O (DUP)	SampType: DUP	TestCode: 160.5_2540F_ Units: m/L	Prep Date: 6/8/2013	RunNo: 89174							
Client ID: ZZZZZ	Batch ID: 43191	TestNo: SM2540F	Analysis Date: 6/8/2013	SeqNo: 1590626							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Settleable Matter	ND	1.0						0	0	5	

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



**Advanced Technology
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N010375
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_DRC

Sample ID: MB-43187	SampType: MBLK	TestCode: 200.8_W_DR	Units: µg/L	Prep Date: 6/10/2013	RunNo: 89211						
Client ID: PBW	Batch ID: 43187	TestNo: EPA 200.8		Analysis Date: 6/11/2013	SeqNo: 1592205						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Selenium ND 0.50

Sample ID: LCS-43187	SampType: LCS	TestCode: 200.8_W_DR	Units: µg/L	Prep Date: 6/10/2013	RunNo: 89211						
Client ID: LCSW	Batch ID: 43187	TestNo: EPA 200.8		Analysis Date: 6/11/2013	SeqNo: 1592206						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Selenium 9.251 0.50 10.00 0 92.5 85 115

Sample ID: N010347-001B-MS	SampType: MS	TestCode: 200.8_W_DR	Units: µg/L	Prep Date: 6/10/2013	RunNo: 89211						
Client ID: ZZZZZ	Batch ID: 43187	TestNo: EPA 200.8		Analysis Date: 6/11/2013	SeqNo: 1592210						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Selenium 10.046 0.50 10.00 0.4087 96.4 75 125

Sample ID: N010347-001B-MSD	SampType: MSD	TestCode: 200.8_W_DR	Units: µg/L	Prep Date: 6/10/2013	RunNo: 89211						
Client ID: ZZZZZ	Batch ID: 43187	TestNo: EPA 200.8		Analysis Date: 6/11/2013	SeqNo: 1592211						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Selenium 10.279 0.50 10.00 0.4087 98.7 75 125 10.05 2.30 20

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



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CLIENT: CH2M HILL
Work Order: N010375
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: MB-43187	SampType: MBLK	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 6/10/2013	RunNo: 89211						
Client ID: PBW	Batch ID: 43187	TestNo: EPA 200.8		Analysis Date: 6/11/2013	SeqNo: 1592176						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.50									
Lead	ND	0.50									
Thallium	ND	0.50									
Zinc	ND	10									

Sample ID: LCS-43187	SampType: LCS	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 6/10/2013	RunNo: 89211						
Client ID: LCSW	Batch ID: 43187	TestNo: EPA 200.8		Analysis Date: 6/11/2013	SeqNo: 1592177						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	9.268	0.50	10.00	0	92.7	85	115				
Lead	9.534	0.50	10.00	0	95.3	85	115				
Thallium	9.609	0.50	10.00	0	96.1	85	115				
Zinc	95.489	10	100.0	0	95.5	85	115				

Sample ID: N010347-001B-MS	SampType: MS	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 6/10/2013	RunNo: 89211						
Client ID: ZZZZZ	Batch ID: 43187	TestNo: EPA 200.8		Analysis Date: 6/11/2013	SeqNo: 1592181						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	9.484	0.50	10.00	0.2841	92.0	75	125				
Lead	10.169	0.50	10.00	0	102	75	125				
Thallium	10.333	0.50	10.00	0	103	75	125				
Zinc	99.806	10	100.0	1.641	98.2	75	125				

Sample ID: N010347-001B-MSD	SampType: MSD	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 6/10/2013	RunNo: 89211						
Client ID: ZZZZZ	Batch ID: 43187	TestNo: EPA 200.8		Analysis Date: 6/11/2013	SeqNo: 1592182						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	9.512	0.50	10.00	0.2841	92.3	75	125	9.484	0.291	20	
Lead	10.359	0.50	10.00	0	104	75	125	10.17	1.85	20	

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



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CLIENT: CH2M HILL
Work Order: N010375
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W_SFPP

Sample ID: N010347-001B-MSD	SampType: MSD	TestCode: 200.8_W_SFPP	Units: µg/L	Prep Date: 6/10/2013	RunNo: 89211						
Client ID: ZZZZZZ	Batch ID: 43187	TestNo: EPA 200.8		Analysis Date: 6/11/2013	SeqNo: 1592182						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	10.580	0.50	10.00	0	106	75	125	10.33	2.36	20	
Zinc	99.190	10	100.0	1.641	97.5	75	125	99.81	0.620	20	

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



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CLIENT: CH2M HILL
Work Order: N010375
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_W_LL

Sample ID: LCS-43194	SampType: LCS	TestCode: 245.1_W_LL	Units: µg/L	Prep Date: 6/10/2013	RunNo: 89190						
Client ID: LCSW	Batch ID: 43194	TestNo: EPA 245.1		Analysis Date: 6/10/2013	SeqNo: 1591133						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	2.557	0.050	2.500	0	102	85	115				
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Sample ID: MB-43194	SampType: MBLK	TestCode: 245.1_W_LL	Units: µg/L	Prep Date: 6/10/2013	RunNo: 89190						
Client ID: PBW	Batch ID: 43194	TestNo: EPA 245.1		Analysis Date: 6/10/2013	SeqNo: 1591134						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	0.026	0.050									J
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Sample ID: N010375-001G-MS	SampType: MS	TestCode: 245.1_W_LL	Units: µg/L	Prep Date: 6/10/2013	RunNo: 89190						
Client ID: ZZZZZ	Batch ID: 43194	TestNo: EPA 245.1		Analysis Date: 6/10/2013	SeqNo: 1591136						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	2.572	0.050	2.500	0.03129	102	75	125				
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Sample ID: N010375-001G-MSD	SampType: MSD	TestCode: 245.1_W_LL	Units: µg/L	Prep Date: 6/10/2013	RunNo: 89190						
Client ID: ZZZZZ	Batch ID: 43194	TestNo: EPA 245.1		Analysis Date: 6/10/2013	SeqNo: 1591137						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	2.571	0.050	2.500	0.03129	102	75	125	2.572	0.0277	20	
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Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



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CLIENT: CH2M HILL
Work Order: N010375
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_FP_SFPP

Sample ID: MB-43198	SampType: MBLK	TestCode: 8015_W_FP_	Units: ug/L	Prep Date: 6/11/2013	RunNo: 89207						
Client ID: PBW	Batch ID: 43198	TestNo: EPA 8015B	EPA 3510C	Analysis Date: 6/11/2013	SeqNo: 1591991						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel (C13-C22)	13.026	50									J
TPH-Oil (C23-C36)	9.607	50									J
Surr: Octacosane	62.344		80.00		77.9	26	152				
Surr: p-Terphenyl	61.947		80.00		77.4	57	132				

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



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CLIENT: CH2M HILL
Work Order: N010375
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_GSFPP

Sample ID: E130610LCS	SampType: LCS	TestCode: 8015_W_GSF	Units: ug/L	Prep Date:	RunNo: 89191						
Client ID: LCSW	Batch ID: E13VW034	TestNo: EPA 8015B		Analysis Date: 6/10/2013	SeqNo: 1591939						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Gasoline (C4-C12)	1014.000	100	1000	0	101	67	136				
Surr: Chlorobenzene - d5	49916.000		50000		99.8	74	138				

Sample ID: E130610MB1	SampType: MBLK	TestCode: 8015_W_GSF	Units: ug/L	Prep Date:	RunNo: 89191						
Client ID: PBW	Batch ID: E13VW034	TestNo: EPA 8015B		Analysis Date: 6/10/2013	SeqNo: 1591940						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Gasoline (C4-C12)	ND	100									
Surr: Chlorobenzene - d5	49615.000		50000		99.2	74	138				

Sample ID: N010375-001BMS	SampType: MS	TestCode: 8015_W_GSF	Units: ug/L	Prep Date:	RunNo: 89191						
Client ID: ZZZZZ	Batch ID: E13VW034	TestNo: EPA 8015B		Analysis Date: 6/10/2013	SeqNo: 1591942						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Gasoline (C4-C12)	925.000	100	1000	0	92.5	67	136				
Surr: Chlorobenzene - d5	49376.000		50000		98.8	74	138				

Sample ID: N010375-001BMSD	SampType: MSD	TestCode: 8015_W_GSF	Units: ug/L	Prep Date:	RunNo: 89191						
Client ID: ZZZZZ	Batch ID: E13VW034	TestNo: EPA 8015B		Analysis Date: 6/10/2013	SeqNo: 1591943						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH-Gasoline (C4-C12)	959.000	100	1000	0	95.9	67	136	925.0	3.61	30	
Surr: Chlorobenzene - d5	51513.000		50000		103	74	138		0	0	

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



**Advanced Technology
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N010375
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPTOT

Sample ID: MB-43198	SampType: MBLK	TestCode: 8015_W_SFP	Units: ug/L	Prep Date: 6/11/2013	RunNo: 89207						
Client ID: PBW	Batch ID: 43198	TestNo: EPA 8015B	EPA 3510C	Analysis Date: 6/11/2013	SeqNo: 1592006						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total TPH	ND	100									

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



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Laboratories, Inc.**

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CLIENT: CH2M HILL
Work Order: N010375
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P130610LCS		SampType: LCS		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 89189	
Client ID: LCSW		Batch ID: P13VW086		TestNo: EPA 8260B		Analysis Date: 6/10/2013				SeqNo: 1591598	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	20.430	0.50	20.00	0	102	69	133				
1,2-Dichloroethane	20.350	0.50	20.00	0	102	69	132				
Benzene	20.310	1.0	20.00	0	102	81	122				
Ethylbenzene	19.850	1.0	20.00	0	99.2	73	127				
m,p-Xylene	40.200	1.0	40.00	0	101	76	128				
MTBE	19.720	1.0	20.00	0	98.6	65	123				
o-Xylene	19.930	1.0	20.00	0	99.7	80	121				
Tert-Butanol	95.390	5.0	100.0	0	95.4	70	130				
Toluene	19.250	2.0	20.00	0	96.2	77	122				
Xylenes, Total	60.130	2.0	60.00	0	100	75	125				
Surr: 1,2-Dichloroethane-d4	26.130		25.00		105	72	119				
Surr: 4-Bromofluorobenzene	25.870		25.00		103	76	119				
Surr: Dibromofluoromethane	25.440		25.00		102	85	115				
Surr: Toluene-d8	25.210		25.00		101	81	120				

Sample ID: P130610MB2		SampType: MBLK		TestCode: 8260_WP_SF		Units: ug/L		Prep Date:		RunNo: 89189	
Client ID: PBW		Batch ID: P13VW086		TestNo: EPA 8260B		Analysis Date: 6/10/2013				SeqNo: 1591599	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	ND	0.50									
1,2-Dichloroethane	ND	0.50									
Benzene	ND	1.0									
Ethylbenzene	ND	1.0									
m,p-Xylene	ND	1.0									
MTBE	ND	1.0									
o-Xylene	ND	1.0									
Tert-Butanol	ND	5.0									
Toluene	ND	2.0									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-d4	27.870		25.00		111	72	119				

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



**Advanced Technology
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
 Work Order: N010375
 Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Sample ID: P130610MB2	SampType: MBLK	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 89189						
Client ID: PBW	Batch ID: P13VW086	TestNo: EPA 8260B		Analysis Date: 6/10/2013	SeqNo: 1591599						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	25.360		25.00		101	76	119				
Surr: Dibromofluoromethane	27.930		25.00		112	85	115				
Surr: Toluene-d8	24.510		25.00		98.0	81	120				

Sample ID: N010375-001CMS	SampType: MS	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 89189						
Client ID: ZZZZZ	Batch ID: P13VW086	TestNo: EPA 8260B		Analysis Date: 6/10/2013	SeqNo: 1591601						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	22.230	0.50	20.00	0	111	69	133				
1,2-Dichloroethane	21.210	0.50	20.00	0	106	69	132				
Benzene	20.870	1.0	20.00	0	104	81	122				
Ethylbenzene	20.040	1.0	20.00	0	100	73	127				
m,p-Xylene	41.120	1.0	40.00	0	103	76	128				
MTBE	20.880	1.0	20.00	0.3500	103	65	123				
o-Xylene	20.530	1.0	20.00	0	103	80	121				
Tert-Butanol	105.640	5.0	100.0	0	106	70	130				
Toluene	19.410	2.0	20.00	0	97.0	77	122				
Xylenes, Total	61.650	2.0	60.00	0	103	75	125				
Surr: 1,2-Dichloroethane-d4	28.340		25.00		113	72	119				
Surr: 4-Bromofluorobenzene	26.920		25.00		108	76	119				
Surr: Dibromofluoromethane	26.670		25.00		107	85	115				
Surr: Toluene-d8	25.540		25.00		102	81	120				

Sample ID: N010375-001CMSD	SampType: MSD	TestCode: 8260_WP_SF	Units: ug/L	Prep Date:	RunNo: 89189						
Client ID: ZZZZZ	Batch ID: P13VW086	TestNo: EPA 8260B		Analysis Date: 6/10/2013	SeqNo: 1591602						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	22.040	0.50	20.00	0	110	69	133	22.23	0.858	20	
1,2-Dichloroethane	20.220	0.50	20.00	0	101	69	132	21.21	4.78	20	
Benzene	19.920	1.0	20.00	0	99.6	81	122	20.87	4.66	20	

Qualifiers:

- | | | |
|--|--|--|
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**Advanced Technology
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N010375
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	19.680	1.0	20.00	0	98.4	73	127	20.04	1.81	20	
m,p-Xylene	39.460	1.0	40.00	0	98.6	76	128	41.12	4.12	20	
MTBE	20.610	1.0	20.00	0.3500	101	65	123	20.88	1.30	20	
o-Xylene	19.820	1.0	20.00	0	99.1	80	121	20.53	3.52	20	
Tert-Butanol	102.930	5.0	100.0	0	103	70	130	105.6	2.60	20	
Toluene	18.660	2.0	20.00	0	93.3	77	122	19.41	3.94	20	
Xylenes, Total	59.280	2.0	60.00	0	98.8	75	125	61.65	3.92	20	
Surr: 1,2-Dichloroethane-d4	29.010		25.00		116	72	119		0		
Surr: 4-Bromofluorobenzene	26.310		25.00		105	76	119		0		
Surr: Dibromofluoromethane	27.490		25.00		110	85	115		0		
Surr: Toluene-d8	25.100		25.00		100	81	120		0		

Qualifiers:

- | | | |
|--|--|--|
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CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
 3151 W. Post Road
 Las Vegas, NV 89118
 Tel: 702-307-2659 Fax: 702-307-2691
 Marlon Cartin (marlon@atl-labs.com)

DATE: 6/7/13
 PAGE: 1 OF 1

LABORATORY CLIENT: Kinder Morgan Energy Partners, Attn: Steve Defibaugh ADDRESS: 1100 Town & Country Road CITY: Orange, CA 92868 TEL: 714-560-4802 FAX: 714-560-4601 E-MAIL: james_dye@kindermorgan.com		CLIENT PROJECT NAME / NUMBER: SFPP - Norwalk Site PROJECT CONTACT: James Dye SAMPLER(S): (SIGNATURE)						
TURNAROUND TIME <input type="checkbox"/> SAME DAY <input checked="" type="checkbox"/> 24 HR <input type="checkbox"/> 48HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) <input type="checkbox"/> RW/CB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL / / SPECIAL INSTRUCTIONS Report to D. Jablonski/CH2M HILL, cc: KMEP Direct Bill KMEP/SFPP - Steve Defibaugh-ref. AFE# 81195 "J" flags required/Use lowest possible detection limit - all methods.		P.O. NO.: QUOTE NO.: LAB USE ONLY: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>						
REQUESTED ANALYSIS								
LAB USE ONLY	SAMPLE ID	LOCATION/ DESCRIPTION	SAMPLING DATE	TIME	MAT- RIX	NO. OF CONT.	ANALYSIS	REMARKS
	EFF-06-07	Effluent	6/7/13	11:20	WW	14	<input checked="" type="checkbox"/> Oil & Grease (1664) <input checked="" type="checkbox"/> TPH-g (C5-C14 Only) (8015B (M)) <input checked="" type="checkbox"/> BTEX; 1,1-DCA; 1,2-DCA; MEK (8260B) <input checked="" type="checkbox"/> Settleable Solids (2540F) <input checked="" type="checkbox"/> Total Suspended Solids (2540D) <input checked="" type="checkbox"/> Phenolics (420.1) <input checked="" type="checkbox"/> Orthonitro (7199.6020F) <input checked="" type="checkbox"/> Se (6020) 24HR-TAT <input checked="" type="checkbox"/> Hg (7470A) 24HR-TAT <i>48 hr</i> <input checked="" type="checkbox"/> MTBE (8260B) 24HR-TAT	Comments: Temperature* = <u>21.5</u> Temperature* = <u>N/A</u> (Temp. as sampled*) Monthly
Relinquished by: (Signature)							Date: <u>6/7/13</u> Time: <u>13:35</u>	
Relinquished by: (Signature)							Date: <u>6/7/13</u> Time: <u>14:05</u>	
Relinquished by: (Signature)							Date: <u>6/8/13</u> Time: <u>11:30 AM</u>	

Revised: 04/27/2011
 Received by: (Signature) 4-10C

Advanced Technology Laboratories, Inc.

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 6/8/2013 Workorder: N010375
 Rep sample Temp (Deg C): 4.1 IR Gun ID: 1
 Temp Blank: Yes No
 Carrier name: FedEx
 Last 4 digits of Tracking No.: 5095 Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|--|--|--|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input type="checkbox"/>
Yes <input type="checkbox"/> | No <input type="checkbox"/>
No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>
NA <input checked="" type="checkbox"/> |

Comments:

Checklist Completed By JT ^{for} MRC ^{eliot}

Reviewed By: 

Advanced Technology Laboratories, Inc.

WORK ORDER Summary

11-Jun-13

WorkOrder: N010375

Client ID: CH2HI01

Project: SFPP - Norwalk Site

QC Level: RTNE

Date Received: 6/8/2013

Comments: Report to D. Jablonski/CH2M HILL, cc:KMEP.

Direct Bill KMEP/SFPP-Steve Defibaugh-ref.AFE# 81195. "J" Flags requ

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N010375-001A	EFF-06-07	6/7/2013 11:20:00 AM	6/14/2013	Wastewater		Oil and Grease Sample Prep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010375-001B		6/14/2013	6/14/2013		EPA 1664_HEM	Hexane Extractable Material (HEM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010375-001C		6/14/2013	6/14/2013		EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WV
N010375-001D		6/14/2013	6/14/2013		EPA 8260B	VOLATILE ORGANIC COMPOUNDS BY GC/MS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WV
N010375-001E		6/14/2013	6/14/2013		SM2540F	SETTLEABLE MATTER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010375-001F		6/14/2013	6/14/2013		SM2540D	Setteable Matter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010375-001G		6/14/2013	6/14/2013		EPA 420.1	TOTAL NON-FILTERABLE RESIDUE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010375-001H		6/12/2013	6/14/2013		EPA 245.1	Total Suspended Solids Prep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010375-001I		6/14/2013	6/14/2013		EPA 420.1	PHENOLICS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SUB
N010375-001J		6/14/2013	6/14/2013		EPA 245.1	Phenols Prep	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SUB
N010375-001K		6/14/2013	6/14/2013		EPA 200.8	MERCURY BY COLD VAPOR TECHNIQUE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010375-001L		6/14/2013	6/14/2013		EPA 200.8	MERCURY PREP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010375-001M		6/14/2013	6/14/2013		EPA 200.8	AQPREP TOTAL METALS: ICP, FLAA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010375-001N		6/14/2013	6/14/2013		EPA 3510C	ICP-MS METALS BY COLLISION/REACTION CELL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010375-001O		6/14/2013	6/14/2013		EPA 3510C	ICPMS METALS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010375-001P		6/14/2013	6/14/2013		EPA 8015B	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010375-001Q		6/14/2013	6/14/2013		EPA 8015B	TPH EXTRACTABLE BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010375-001R		6/14/2013	6/14/2013		EPA 8015B	Total TPH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010375-001S	FOLDER	6/14/2013	6/14/2013		Folder	Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB

From: (562) 989-4045
 Camen Aguila
 Advanced Tech Labs
 3275 walnut ave
 signal hill, CA 90755

Origin ID: LGBA



J13111302120326

Ship Date: 07JUN13
 ActWgt: 10.0 LB
 CAD: 4346475/INET3370

Dims: 15 X 15 X 18 IN

SHIP TO: (702) 307-2659

BILL RECEIPT

Marlon
ATL
3151 W POST RD

LAS VEGAS, NV 89118

Delivery Address Bar Code



Ref # CH2HILL
 Invoice #
 PO #
 Dept #

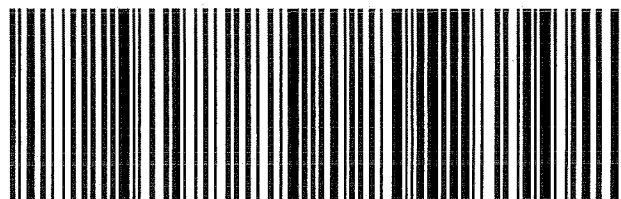
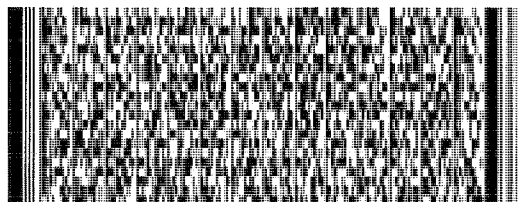
SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 7999 5366 5095

0201

89118

NV-US

LAS**WO LASA**

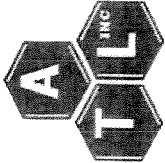
518G1/D777A3AB

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Advanced Technology Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atlinfo.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: RTNE

Subcontractor:

AETL
2834 North Naomi Street
Burbank, CA 91504

TEL: (818) 845-8200
FAX: (818) 845-8840
Acct #:

Field Sampler: James Dye

10-Jun-13

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests
N010375-001F / EFF-06-07	Wastewater	6/7/2013 11:20:00 AM	32OZA	EPA 420.1 1

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N010375 For questions, call Marlon at (702)-307-2659. Please e-mail results to marlon@atl-labs.com by: 5 Day TAT

Please analyze for Phenols by 420.1.

Date/Time

Date/Time

Relinquished by: *MARLON* Date/Time: *6/10/13 10:50*
 Received by: *[Signature]*

Relinquished by: *[Signature]* Date/Time: *6/10/13 10:50*
 Received by: *[Signature]*

Sample Control

From: Samantha.Chen@CH2M.com
Sent: Tuesday, June 11, 2013 11:29 AM
To: marlon@atl-labs.com
Cc: Daniel.Jablonski@CH2M.com; James_Dye@kindermorgan.com; Patrick_Loya@kindermorgan.com; samplecontrol@atl-labs.com
Subject: RE: KMEP Norwalk- Effluent Sample June 2013
Attachments: COC-KMEP Norwalk_Monthly.pdf; COC-KMEP Norwalk_Monthly.pdf

Marlon,

The May CoC is the correct one we should be using for June with the exception of CrVI, which James will sample today. Please make the appropriate revisions and let us know if you need anything from us.

Thanks for checking the CoCs, your attention to details is always appreciate it.

James and Pat, please you the attached monthly CoC for the effluent sampling in the future.

Sam

From: Marlon B. Cartin [<mailto:marlon@atl-labs.com>]
Sent: Tuesday, June 11, 2013 10:26 AM
To: Chen, Samantha/SCO
Cc: Jablonski, Daniel/LAC; James_Dye@kindermorgan.com; Patrick_Loya@kindermorgan.com; Sample Control
Subject: RE: KMEP Norwalk- Effluent Sample June 2013

Hi Sam!

I just want to make some clarification on the last sample we got. When reviewing the Work Order, we noticed that the COC for this month is different from the COC compare to the previous month in terms of analytes requested. I attached two versions of monthly monitoring COC. The one for this month is requesting a shorter list of parameters. Also, the Carbon Chain requested is the old one we are reporting which you already revised. Do you want me to follow the COC submitted this month or just copy the parameters from the previous month?

Please advice at your most convenient time.

Thanks,

Marlon

From: Samantha.Chen@CH2M.com [<mailto:Samantha.Chen@CH2M.com>]
Sent: Monday, June 10, 2013 8:27 AM
To: marlon@atl-labs.com
Cc: Daniel.Jablonski@CH2M.com; James_Dye@kindermorgan.com; Patrick_Loya@kindermorgan.com
Subject: KMEP Norwalk- Effluent Sample June 2013

Marlon,

Per your phone message, yes we can sample for settable solids again with hex chrom. Please schedule the pickup time after 2PM tomorrow as usual.

James,

When you sample for hex chrom tomorrow for the monthly effluent sample, please take another sample for settable solids, there was a mix up at the lab. Please advise if you do not have the appropriate sample bottles.

Thanks,

Samantha Chen

CH2M HILL
6 Hutton Centre Drive, Suite 700
Santa Ana, California 92707
OFFICE: (714) 435-6194
FAX: (714) 424-2001
CELL: (626)202-3557



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Advanced Technology Laboratory
3151-3153 W Post Road
Las Vegas, NV 89118-

Telephone: (702)307-2659
Attention: Nancy Sibucac

Number of Pages 2
Date Received 06/11/2013
Date Reported 06/13/2013

Job Number	Order Date	Client
69785	06/11/2013	ATL-LV

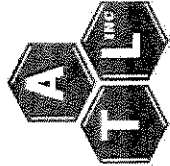
Project ID: N010375

Enclosed please find results of analyses of 1 water sample which was analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



Advanced Technology Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atlabs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

69785

QC Level: RTNE

Subcontractor:

AETL
2834 North Naomi Street
Burbank, CA 91504

TEL: (818) 845-8200
FAX: (818) 845-8840
Acct #:

Field Sampler: James Dye

10-Jun-13

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests
N010375-001F / EFF-06-07	Wastewater	6/7/2013 11:20:00 AM	32OZA 1	EPA 420.1 69785.01

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N010375 For questions, call Marlon at (702)-307-2659. Please e-mail results to marlon@atl-labs.com by: 5 Day TAT

Please analyze for Phenols by 420.1.

Relinquished by:	Date/Time	Received by:	Date/Time
<i>ANASTASIA P...</i>	6/19/13 2:15 PM	<i>Herman</i>	6/11/13 1400
Relinquished by:		Received by:	



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Page: 1 A

Ordered By

Advanced Technology Laboratory
3151-3153 W Post Road
Las Vegas, NV 89118-

Project ID: N010375
Date Received 06/11/2013
Date Reported 06/13/2013

Telephone: (702)307-2659
Attention: Nancy Sibucac

Job Number	Order Date	Client
69785	06/11/2013	ATL-LV

CERTIFICATE OF ANALYSIS CASE NARRATIVE

AETL received 1 samples with the following specification on 06/11/2013.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers	
69785.01	N010375-001F	06/07/2013	Aqueous	1	
Method ^ Submethod		Req Date	Priority	TAT	Units
420.1		06/18/2013	2	Normal	mg/L

The samples were analyzed as specified on the enclosed chain of custody.
No analytical non-conformances were encountered.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
 Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

ANALYTICAL RESULTS

Ordered By

Advanced Technology Laboratory
 3151-3153 W Post Road
 Las Vegas, NV 89118-

Telephone: (702)307-2659

Attn: Nancy Sibucan

Page: 2

Project ID: N010375

AETL Job Number	Submitted	Client
69785	06/11/2013	ATL-LV

Method: 420.1, Phenolics, Total Recoverable, Spectrophotometric, Manual

QC Batch No: 061313-1

Our Lab I.D.		Method Blank	69785.01			
Client Sample I.D.			N010375-001 F			
Date Sampled			06/07/2013			
Date Prepared		06/13/2013	06/13/2013			
Preparation Method		420.1	420.1			
Date Analyzed		06/13/2013	06/13/2013			
Matrix		Aqueous	Aqueous			
Units		mg/L	mg/L			
Dilution Factor		1	1			
Analytes	MDL	PQL	Results	Results		
Phenolic compounds as phenol	0.15	0.30	ND	ND		

QUALITY CONTROL REPORT

QC Batch No: 061313-1; Dup or Spiked Sample: 69785.01; LCS: Clean Water; QC Prepared: 06/13/2013; QC Analyzed: 06/13/2013;
 Units: mg/L

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Phenol	0.00	0.500	0.473	94.6	0.500	0.477	95.4	<1	80-120	<15

QC Batch No: 061313-1; Dup or Spiked Sample: 69785.01; LCS: Clean Water; QC Prepared: 06/13/2013; QC Analyzed: 06/13/2013;
 Units: mg/L

Analytes	SM Result	SM DUP Result	RPD %	SM RPD % Limit	LCS Concen	LCS Recov	LCS % REC	LCS/LCSD % Limit		
Phenol	ND	ND	<1	<15	0.500	0.482	96.4	80-120		



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Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

Data Qualifier:

- #: Recovery is not within acceptable control limits.
- *: In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
- B: Analyte was present in the Method Blank.
- D: Result is from a diluted analysis.
- E: Result is beyond calibration limits and is estimated.
- H: Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
- J: Analyte was detected. However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
- M: Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
- MCL: Maximum Contaminant Level
- NS: No Standard Available
- S6: Surrogate recovery is outside control limits due to matrix interference.
- S8: The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
- X: Results represent LCS and LCSD data.

Definition:

- %Limi: Percent acceptable limits.
- %REC: Percent recovery.
- Con.L: Acceptable Control Limits
- Conce: Added concentration to the sample.
- LCS: Laboratory Control Sample
- MDL: Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.



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Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Data Qualifiers and Descriptors

MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate
ND:	Analyte was not detected in the sample at or above MDL.
PQL:	Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
Recov:	Recovered concentration in the sample.
RPD:	Relative Percent Difference

June 17, 2013

Daniel Jablonski
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612
TEL: (213)228-8271
FAX: (510) 622-9129

CA-ELAP No.:2676
NV Cert. No.:NV-009222007A

Workorder No.: N010392

RE: SFPP - Norwalk Site

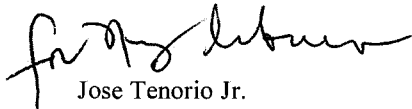
Attention: Daniel Jablonski

Enclosed are the results for sample(s) received on June 12, 2013 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



**Advanced Technology
Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Project: SFPP - Norwalk Site
Lab Order: N010392

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.



CLIENT: CH2M HILL
Project: SFPP - Norwalk Site
Lab Order: N010392
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N010392-001A	EFF-06-11	Wastewater	6/11/2013 11:37:00 AM	6/12/2013	6/17/2013



CLIENT: CH2M HILL
Lab Order: N010392
Project: SFPP - Norwalk Site
Lab ID: N010392-001

Client Sample ID: EFF-06-11
Collection Date: 6/11/2013 11:37:00 AM
Matrix: WASTEWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

HEXAVALENT CHROMIUM BY IC

EPA 7199

RunID: IC6_130612A	QC Batch: R89218	PrepDate:	Analyst: QBM
Hexavalent Chromium	ND 0.014 0.20	µg/L	1 6/12/2013 09:49 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



**Advanced Technology
 Laboratories, Inc.**

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N010392
Project: SFPP - Norwalk Site

ANALYTICAL QC SUMMARY REPORT

TestCode: 7199_WPGE

Sample ID:	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
MB-R89218	MBLK	7199_WPGE	µg/L		89218						
Client ID: PBW	Batch ID: R89218	TestNo: EPA 7199		Analysis Date: 6/12/2013	SeqNo: 1593104						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID:	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
LCS-R89218	LCS	7199_WPGE	µg/L		89218						
Client ID: LCSW	Batch ID: R89218	TestNo: EPA 7199		Analysis Date: 6/12/2013	SeqNo: 1593106						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.907	0.20	5.000	0	98.1	90	110				

Sample ID:	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
N010392-001ADUP	DUP	7199_WPGE	µg/L		89218						
Client ID: ZZZZZZ	Batch ID: R89218	TestNo: EPA 7199		Analysis Date: 6/12/2013	SeqNo: 1593108						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.076	0.20						0.08920	0	20	

Sample ID:	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
N010392-001AMS	MS	7199_WPGE	µg/L		89218						
Client ID: ZZZZZZ	Batch ID: R89218	TestNo: EPA 7199		Analysis Date: 6/12/2013	SeqNo: 1593109						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.070	0.20	1.000	0.08920	98.1	85	115				

Sample ID:	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
N010392-001AMSD	MSD	7199_WPGE	µg/L		89218						
Client ID: ZZZZZZ	Batch ID: R89218	TestNo: EPA 7199		Analysis Date: 6/12/2013	SeqNo: 1593110						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.092	0.20	1.000	0.08920	100	85	115	1.070	2.07	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Waybill

Trac 800.334.5000
ontrac.com

On Time Delivery For Less
2. FROM (Company)

1. FROM (Company) **ENVIRO INVESTMENT & TECHNOLOGY***

Street Address: 3475 WILLOW SUITE

City: SUNDAYVILLE

State: VA ZIP Code: 22755

Phone Number: _____

PLEASE PRINT IN BLOCK LETTERS WITH BLUE OR BLACK INK ONLY

3. TO (Company) WE CANNOT DELIVER TO PO BOXES OR P.O. BOXES

Street Address: ATLANTA

City: ATLANTA

State: GA ZIP Code: 30319

Phone Number: 702-907-2650

4. Shipper's Reference Number: 0101

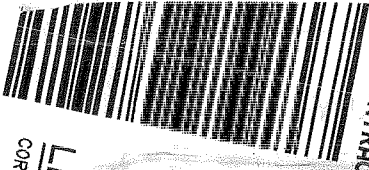
5. Recipient's Name: ENVIRO INVESTMENT & TECHNOLOGY

Recipient Copy

5 lbs

LAS VEGAS
COR 11 GU/3741

VEG
ontrac.com 800.334.5000



WWW.ONTRAC.COM

SUBJECT: 8 oz. Letter or

10 B S

AVAILABLE IN SPECIAL
Fold for Pickup
8. DESTINATION'S NEAREST FACILITY
8. DESTINATION'S NEAREST FACILITY

8. COLLECT ON DELIVERY
\$10.00 (MAX. PLEASE ATTACH C.O.D. TAG. ADDITIONAL CHARGE APPLIES.)

9. DECLARED VALUE
ADDITIONAL CHARGE APPLIES. LIABILITY LIMITED TO \$100 UNLESS DECLARED. \$50.00 LIABILITY LIMIT. SHIPMENTS WITH A DECLARED VALUE REQUIRE A DELIVERY SIGNATURE.

10. PAYMENT SHIPPER SELECTED IF NONE SELECTED

11a. Shipper's Name

11b. Shipper's Signature

OnTrac Use: Driver Number / PU Time / Initials

BY USING THIS WAYBILL YOU AGREE TO THE TERMS AND CONDITIONS ON THE BACK OF THE "SHIPPER COPY"

Advanced Technology Laboratories, Inc.

WORK ORDER Summary

12-Jun-13

WorkOrder: N010392

Client ID: CH2HI01

Project: SFPP - Norwalk Site

QC Level: RTNE

Date Received: 6/12/2013

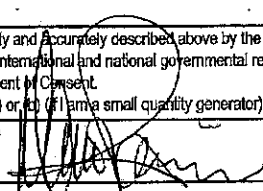
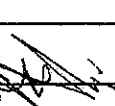
Comments: Report to D. Jablonski/CH2M HILL, cc:KMEP.

Direct Bill KMEP/SFPP-Steve Defibaugh-ref.AFE# 81195. "J" Flags r

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N010392-001A	EFF-06-11	6/11/2013 11:37:00 AM	6/19/2013	Wastewater	EPA 7199	Hexavalent Chromium by IC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N010392-002A	FOLDER		6/19/2013		Folder	Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB

Appendix B Waste Manifests

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CAT080033002	2. Page 1 of 1	3. Emergency Response Phone 800-424-9300	4. Manifest Tracking Number 011192478 JJK					
5. Generator's Name and Mailing Address SFPF, LP 1100 Town & Country Rd Orange CA 92868 Generator's Phone: 714 580-4873		At: Karina Hankins		Generator's Site Address (if different than mailing address) SFPF, L.P. Norwalk Station 15806 Norwalk Blvd Norwalk CA 90651						
6. Transporter 1 Company Name Environmental Logistics, Inc.				U.S. EPA ID Number CAR000172400						
7. Transporter 2 Company Name				U.S. EPA ID Number						
8. Designated Facility Name and Site Address Filter Recycling Services, Inc. 180 W. Monte Avenue Bloomington CA 92316 Facility's Phone: 909 423-2012				U.S. EPA ID Number CAD982444481						
GENERATOR	9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers No. Type		11. Total Quantity	12. Unit WL/Vol.	13. Waste Codes		
		Non-RCRA Hazardous Waste Solid (Fuel Filters)		3 DM		900	P	352		
	2.									
	3.									
	4.									
FILTER RECYCLING SERVICES' RIALTO FACILITY, EPA #CAD982444481 HAS THE APPROPRIATE PERMIT(S) FOR AND WILL ACCEPT THIS WASTE AS SHIPPED.										
14. Special Handling Instructions and Additional Information 1)(5) Fuel Filters - Non-RCRA - 12031523 Invoice #149268 One or more of the material listed on this manifest may be recycled as alternative daily cover (a method which uses the material in or on land)										
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (if I am a small quantity generator) is true.										
Generator's/Offeror's Printed/Typed Name MARIO RAMIREZ				Signature <i>[Signature]</i>				Month Day Year 14 11 13		
INFL	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:							
	17. Transporter Acknowledgment of Receipt of Materials									
TRANSPORTER	Transporter 1 Printed/Typed Name JUSTIN DE PINA				Signature <i>[Signature]</i>				Month Day Year 14 11 13	
	Transporter 2 Printed/Typed Name				Signature				Month Day Year	
DESIGNATED FACILITY	18. Discrepancy									
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
	18b. Alternate Facility (or Generator) Facility's Phone: U.S. EPA ID Number									
	18c. Signature of Alternate Facility (or Generator) Month Day Year									
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)										
1. HM1		2.		3.		4.				
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a:										
Printed/Typed Name Sarah Amick				Signature <i>[Signature]</i>				Month Day Year 14 11 13		

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number C A T 0 8 0 0 3 3 9 8 2		2. Page 1 of 1		3. Emergency Response Phone 800-424-8300		4. Manifest Tracking Number 011192478 JJK			
		5. Generator's Name and Mailing Address SFPP, LP 1100 Town & Country Rd Orange CA 92888					Generator's Site Address (if different than mailing address) SFPP, LP. Norwalk Station 15305 Norwalk Blvd Norwalk CA 90851				
6. Transporter 1 Company Name Environmental Logistics, Inc.		U.S. EPA ID Number C A R 0 0 0 1 7 2 4 8 0									
7. Transporter 2 Company Name		U.S. EPA ID Number									
8. Designated Facility Name and Site Address Filter Recycling Services, Inc. 180 W. Monte Avenue Bloomington CA 92318		U.S. EPA ID Number C A D 9 8 2 4 4 4 4 8 1									
Facility's Phone: 909 421-2012											
9a. HM		9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) Non-RCRA Hazardous Waste Solid (Fuel Filters)				10. Containers		11. Total Quantity	12. Unit WL/Vol.	13. Waste Codes	
						No.	Type				
						3	DM	900	P	352	
2.											
3.											
4.											
14. Special Handling Instructions and Additional Information 1(S) Fuel Filters - Non-RCRA - 12031523 Invoice #108286											
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.											
Generator's/Offoror's Printed/Typed Name MARIO RAMIREZ					Signature 			Month Day Year 14/11/13			
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____											
17. Transporter Acknowledgment of Receipt of Materials											
Transporter 1 Printed/Typed Name JUSTIN DEAN					Signature 			Month Day Year 14/11/13			
Transporter 2 Printed/Typed Name					Signature			Month Day Year			
18. Discrepancy											
18a. Discrepancy Indication Spec <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection											
Manifest Reference Number:											
18b. Alternate Facility (or Generator) U.S. EPA ID Number											
Facility's Phone:											
18c. Signature of Alternate Facility (or Generator) Month Day Year											
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)											
1.		2.		3.		4.					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a											
Printed/Typed Name					Signature			Month Day Year			

GENERATOR	UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number 047020330907	2. Page 1 of	3. Emergency Response Phone 909-444-6900	4. Manifest Tracking Number 011192478 JJK				
	5. Generator's Name and Mailing Address APPE LP 1105 Town & Country Rd Orange CA 92667 Generator's Phone: 714 470-4333			Generator's Site Address (if different than mailing address) APPE LP Newark Station 1000 Newark Blvd Newark CA 92841					
6. Transporter 1 Company Name Environmental Logistics, Inc				U.S. EPA ID Number C A R 0 6 0 - 7 2 4 2 7					
7. Transporter 2 Company Name				U.S. EPA ID Number					
8. Designated Facility Name and Site Address Fiber Recycling Services, Inc 10000 Monte Avonway Bakersfield CA 93311 Facility's Phone: 805 321-2015				U.S. EPA ID Number C A R 0 6 0 - 7 2 4 2 7					
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))			10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
	1. Non-PCPA Hazardous Waste Solid (Spent Fibers)			No. Type					
	2.			3 DW			P		
	3.								
	4.								
14. Special Handling Instructions and Additional Information 1) See Fiber Labels - HAZARDOUS - 12031512 Invoice #189166									
16. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.									
Generator's/Offeror's Printed/Typed Name					Signature			Month Day Year	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____									
17. Transporter Acknowledgment of Receipt of Materials									
Transporter 1 Printed/Typed Name					Signature			Month Day Year	
Transporter 2 Printed/Typed Name					Signature			Month Day Year	
18. Discrepancy									
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
18b. Alternate Facility (or Generator) Manifest Reference Number: _____ U.S. EPA ID Number _____									
18c. Signature of Alternate Facility (or Generator) _____ Month Day Year									
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)									
1.		2.		3.		4.			
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a									
Printed/Typed Name					Signature			Month Day Year	

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CAT080033962	2. Page 1 of 1	3. Emergency Response Phone 562-448-9510	4. Manifest Tracking Number 010540223 JJK		
5. Generator's Name and Mailing Address SFPPLP 1100 TOWN & COUNTRY ROAD ORANGE, CA. 92868 (714) 560-4887			Generator's Site Address (if different than mailing address) 15306 NORWALK BLVD. NORWALK CA. 90654				
6. Transporter 1 Company Name WEST COAST ENVIRONMENTAL SOLUTIONS			U.S. EPA ID Number CAR000215988				
7. Transporter 2 Company Name			U.S. EPA ID Number				
8. Designated Facility Name and Site Address DE MENDO KERDOAN 2000 N. ALAMEDA ST. EMERYVILLE CA. 94622 310-537-7100			U.S. EPA ID Number CAT080013352				
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
			No.	Type			
		1. NON RCRA HAZARDOUS WASTE LIQUID	001	TT	600	G	223
		2.					
		3.					
	4.						
14. Special Handling Instructions and Additional Information WEAR PROPER PPE WHEN HANDLING MATERIAL 24 HR. EMERGENCY PHONE # 562 244-1186 OILY WATER PROFILE # 335903							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offeror's Printed/Typed Name JAMES DYE			Signature 		Month Day Year 4 26 13		
TRANSPORTER INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
	17. Transporter Acknowledgment of Receipt of Materials						
	Transporter 1 Printed/Typed Name GEORGE BAIRD			Signature 		Month Day Year 4 26 13	
Transporter 2 Printed/Typed Name			Signature		Month Day Year		
DESIGNATED FACILITY	18. Discrepancy						
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
	18b. Alternate Facility (or Generator)			Manifest Reference Number: _____ U.S. EPA ID Number _____			
	Facility's Phone: _____			18c. Signature of Alternate Facility (or Generator)			
				Month Day Year			
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1.		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name			Signature		Month Day Year		
					Month Day Year		