

Miscellaneous

No non conformance reports were generated for this work order

November 30, 2010

Ms. Tammy McCloskey
Accutest Laboratories
Fresh Ponds Corporate Village, Bldg B
2235 Route 130
Dayton, New Jersey 08810

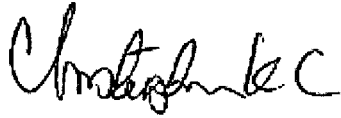
Re: HRMS Subcontract
Work Order: 1742
SDG: JA58900

Dear Ms. McCloskey:

Cape Fear Analytical, LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 16, 2010. This revised data report has been prepared and reviewed in accordance with CFA's standard operating procedures. Refer to the fractional case narrative for revision details.

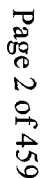
Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (910) 795-0421.

Sincerely,



Chris Cornwell
Project Manager

Enclosures



Fresh Ponds Corporate Village, Building B
2215 Route 130, Dayton, NJ 08810
908-129-0200 FAX: 908-329-3499/3480

JA58900

Analytical Information

reserved where applicable

On Ten

W0# 1742

Fresh Ponds Corporate Village, Building B
2235 Route 130, Dayton, NJ 08810
908-329-0200 FAX: 908-329-3499/3480

Accutest Job #:

JA58900

Accutest Quote #:

Client Information				Facility Information								Analytical Information						
Accutest																		
Name 2235 Route 130				Project Name BBNPP, PA														
Address Dayton NJ 08810				Location														
City State Zip Tammy McCloskey				Project No. JA58900														
Send Report to: Phone #: (732) 329-0200				FAX #: (732) 329-3499														
Field ID / Point of Collection		Collection			Matrix	# of bottles	Preservation					2,2,7,8 TCDD Dioxin via 8290						
		Date	Time	Sampled By			HCL	NaOH	HNO3	H2Se4	NONE							
11		10/13/10		MH	Soil						X							
12		10/13/10		MH	Soil						X							
14		10/14/10		MH	Soil						X							
Turnaround Information				Data Deliverable Information								Comments / Remarks						
<input type="checkbox"/> 21 Day Standard <input type="checkbox"/> 14 Day <input type="checkbox"/> 7 Days EMERGENCY <input checked="" type="checkbox"/> Other 21 (Days) 21 Day Turnaround Hardcopy, Emergency or RUSH is FAX Data unless previously approved.				Approved By: _____ _____				<input type="checkbox"/> NJ Reduced <input checked="" type="checkbox"/> NJ Full <input type="checkbox"/> FULL CLP <input type="checkbox"/> Disk Deliverable <input type="checkbox"/> Other (Specify)				<input type="checkbox"/> Commercial "A" <input type="checkbox"/> Commercial "B" <input type="checkbox"/> State Forms						
Sample Custody must be documented below each time samples change possession, including courier delivery.																		
Relinquished by Sampler:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:								
1		10-11-10 1700		1		2		10/16/10 0900		2								
Relinquished by Sampler:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:								
3				3		4				4								
Relinquished by Sampler:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:								
5				5		549				On Ice								

WO# 1742

SAMPLE RECEIPT CHECKLIST
Cape Fear Analytical

Client: <u>Accutest</u>	Work Order: <u>1742</u>
Received By: <u>CKC</u> <u>CFA</u>	Date/Time Received: <u>10/16/10</u> <u>09:40</u>

Suspected Hazard Information	Yes	NA	No
Shipped as DOT Hazardous?			<input checked="" type="checkbox"/>
Samples identified as Foreign Soil?			<input checked="" type="checkbox"/>

#	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken damaged container leaking container other(describe)
2	Chain of Custody documents included with shipment?	<input checked="" type="checkbox"/>			
3	Samples requiring cold preservation within 0-6°C?	<input checked="" type="checkbox"/>			Preservation Method: ice bags blue ice dry ice none other (describe) <u>3.6</u>
4	Samples requiring chemical preservation at proper pH?		<input checked="" type="checkbox"/>		Sample IDs, containers affected and pH observed: <u>All containers pH = 7</u> If preservative added, Lot#:
5	Samples requiring preservation have no residual chlorine?	<input checked="" type="checkbox"/>			Sample IDs, containers affected: If preservative added, Lot#:
6	Samples received within holding time?	<input checked="" type="checkbox"/>			Sample IDs, tests affected:
7	Sample IDs on COC match IDs on containers?	<input checked="" type="checkbox"/>			Sample IDs, containers affected:
8	Date & time of COC match date & time on containers?			<input checked="" type="checkbox"/>	Sample IDs, containers affected: <u>No collection times noted on samples</u>
9	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Sample IDs, containers affected: <u>Not noted on COC</u>
10	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			

Comments:

Checklist performed by: Initials: CL Date: 10/16/10

High Resolution Dioxin and Furan Analysis

Case Narrative

**HDOX Case Narrative
Accutest Laboratories (ACCU)
SDG JA58900**

Revision 1

This data package has been revised to correct a reporting error. The soil samples were not reported with EMPCs in the original data package.

Method/Analysis Information

Product: TCDD only by SW846 Method 8290A

Analytical Method: SW846 8290A

Extraction Method: SW846 3540C, 3520C

Analytical Batch Number: 17194, 17315

Clean Up Batch Number: 17095, 17173

Extraction Batch Number: 16733, 17115

Sample Analysis

The following samples were analyzed using the analytical protocol as established in Method 8290A:

Sample ID	Client ID
1742001	JA58900-1
1742002	JA58900-2
1742003	JA58900-3 MS/MSD
1742004	JA58900-4
1742005	JA58900-7
1742006	JA58900-8
1742007	JA58900-9
1742008	JA58900-10
1742009	JA58900-11
1742010	JA58900-12
1742011	JA58900-14
1742012	JA58900-5
1742013	JA58900-6
12002009	1742001(JA58900-1) Sample Duplicate (DUP)
12002022	Laboratory Control Sample (LCS)
12002023	Laboratory Control Sample Duplicate (LCSD)
12002024	Method Blank (MB)
12002027	1742003(JA58900-3 MS/MSD) Matrix Spike (MS)
12002028	1742003(JA58900-3 MS/MSD) Matrix Spike Duplicate (MSD)

12002074	Laboratory Control Sample (LCS)
12002075	Laboratory Control Sample Duplicate (LCSD)
12002076	Method Blank (MB)

Samples 1742 001, 002, 003, 004, 005, 006, 007, 008, 009, 010 and 011 in this SDG were analyzed on an "dry weight" basis. Samples 1742 012 and 013 in this SDG were analyzed on a "as received" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by Cape Fear Analytical LLC (CFA) as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with CF-OA-E-002 REV# 7.

Raw data reports are processed and reviewed by the analyst using the TargetLynx software package.

Calibration Information

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement

The MB(s) analyzed with this SDG met the acceptance criteria.

Certification Statement

The test results presented in this document are certified to meet all requirements of the 2003 NELAC Standard.

Surrogate Recoveries

All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery

The LCSD spike recoveries met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement

The RPD(s) between the LCS and LCSD met the acceptance limits.

QC Sample Designation

Sample 1742003 (JA58900-3 MS/MSD)- Batch 17194 was selected for analysis as the matrix spike and matrix spike duplicate.

Matrix Spike (MS) Recovery Statement

The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

The RPD(s) between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement

The RPD between the sample and its duplicate met the acceptance limits.

Technical Information**Holding Time Specifications**

CFA assigns holding times based on the associated methodology, which assigns the date and time from sample collection. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information**Nonconformance (NCR) Documentation**

A NCR was not required for this SDG.

Manual Integrations

Certain standards and QC samples required manual integrations to correctly position the baseline as set in the calibration standard injections. Where manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction.

Sample preparation

No difficulties were encountered during sample preparation.

System Configuration

This analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
HRP763_1	Waters Autospec Premier high-resolution GC/MS system	Waters Autospec Prem	DB-5MS	60m x 0.25mm, 0.25um

Sample Data Summary

Cape Fear Analytical, LLC

3306 Kitty Hawk Road Suite 120, Wilmington, NC 28405 - (910) 795-0421 - www.capefearanalytical.com

Certificate of Analysis Report for

ACCU001 Accutest Laboratories

Client SDG: JA58900 CFA Work Order: 1742

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria.
- ** Analyte is a surrogate compound
- J Value is estimated
- K Estimated Maximum Possible Concentration
- U Analyte was analyzed for , but not detected above the specified detection limit.

Review/Validation

Cape Fear Analytical requires all analytical data to be verified by a qualified data reviewer.

The following data validator verified the information presented in this case narrative:

Signature: 

Name: Heather Patterson

Date: 30 NOV 2010

Title: Analyst III

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742001
Client Sample: 8290 TCDD Soil
Client ID: JA58900-1
Batch ID: 17194
Run Date: 11/04/2010 18:01
Data File: b03nov10a_4-5
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/14/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.35 g

Project: ACCU00309
Matrix: Soil
%Moisture: 23.9
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.0547		pg/g	0.0547	0.984

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		155	197	pg/g	78.5	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

U Analyte was analyzed for , but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742002
Client Sample: 8290 TCDD Soil
Client ID: JA58900-2
Batch ID: 17194
Run Date: 11/04/2010 18:49
Data File: b03nov10a_4-6
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/14/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.46 g

Project: ACCU00309
Matrix: Soil
%Moisture: 24.9
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	JK		0.0554	pg/g	0.0461	0.990

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		169	198	pg/g	85.6	(40%-135%)

Comments:

J Value is estimated

K Estimated Maximum Possible Concentration

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number:	JA58900	Client:	ACCU001	Project:	ACCU00309
Lab Sample ID:	1742003	Date Collected:	10/14/2010 00:00	Matrix:	Soil
Client Sample:	8290 TCDD Soil	Date Received:	10/16/2010 09:40	%Moisture:	22.9
Client ID:	JA58900-3 MS/MSD			Prep Basis:	Dry Weight
Batch ID:	17194	Method:	SW846 8290A		
Run Date:	11/04/2010 19:38	Analyst:	MJC	Instrument:	HRP763
Data File:	b03nov10a_4-7			Dilution:	1
Prep Batch:	16733	Prep Method:	SW846 3540C		
Prep Date:	19-OCT-10	Aliquot:	13.77 g		

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.11		pg/g	0.110	0.942

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		150	188	pg/g	79.7	(40%-135%)

Comments:**K** Estimated Maximum Possible Concentration**U** Analyte was analyzed for , but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742004
Client Sample: 8290 TCDD Soil
Client ID: JA58900-4
Batch ID: 17194
Run Date: 11/04/2010 22:03
Data File: b03nov10a_4-10
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/14/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.88 g

Project: ACCU00309
Matrix: Soil
%Moisture: 23.8
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	JK		0.0643	pg/g	0.051	0.945

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		165	189	pg/g	87.1	(40%-135%)

Comments:**J** Value is estimated**K** Estimated Maximum Possible Concentration

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742005
Client Sample: 8290 TCDD Soil
Client ID: JA58900-7
Batch ID: 17194
Run Date: 11/04/2010 22:51
Data File: b03nov10a_4-11
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/13/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.44 g

Project: ACCU00309
Matrix: Soil
%Moisture: 21.9
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.0688		pg/g	0.0688	0.952

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		124	190	pg/g	65.3	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

U Analyte was analyzed for , but not detected above the specified detection limit.

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742006
Client Sample: 8290 TCDD Soil
Client ID: JA58900-8
Batch ID: 17194
Run Date: 11/04/2010 23:40
Data File: b03nov10a_4-12
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/13/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.46 g

Project: ACCU00309
Matrix: Soil
%Moisture: 21.8
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.057		pg/g	0.057	0.950

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		163	190	pg/g	85.8	(40%-135%)

Comments:

- K Estimated Maximum Possible Concentration
U Analyte was analyzed for , but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742007
Client Sample: 8290 TCDD Soil
Client ID: JA58900-9
Batch ID: 17194
Run Date: 11/05/2010 00:28
Data File: b03nov10a_4-13
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/13/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.47 g

Project: ACCU00309
Matrix: Soil
%Moisture: 20.8
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	JK		0.0506	pg/g	0.0467	0.938

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		160	188	pg/g	85.2	(40%-135%)

Comments:

J Value is estimated
K Estimated Maximum Possible Concentration

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742008
Client Sample: 8290 TCDD Soil
Client ID: JA58900-10
Batch ID: 17194
Run Date: 11/05/2010 04:38
Data File: b03nov10a_5-4
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/13/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.99 g

Project: ACCU00309
Matrix: Soil
%Moisture: 25.3
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	J	0.0785		pg/g	0.0456	0.957

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		170	191	pg/g	88.6	(40%-135%)

Comments:

J Value is estimated

K Estimated Maximum Possible Concentration

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742009
Client Sample: 8290 TCDD Soil
Client ID: JA58900-11
Batch ID: 17194
Run Date: 11/05/2010 05:26
Data File: b03nov10a_5-5
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/13/2010 00:00
Date Received: 10/16/2010 09:40

Method: SW846 8290A
Analyst: MJC

Prep Method: SW846 3540C
Aliquot: 13.06 g

Project: ACCU00309
Matrix: Soil
%Moisture: 22.2
Prep Basis: Dry Weight

Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.0506		pg/g	0.0506	0.984

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		169	197	pg/g	86.0	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

U Analyte was analyzed for , but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742010
Client Sample: 8290 TCDD Soil
Client ID: JA58900-12
Batch ID: 17194
Run Date: 11/05/2010 06:15
Data File: b03nov10a_5-6
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/13/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.56 g

Project: ACCU00309
Matrix: Soil
%Moisture: 20.2
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.0504		pg/g	0.0504	0.924

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		136	185	pg/g	73.6	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

U Analyte was analyzed for , but not detected above the specified detection limit.

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742011
Client Sample: 8290 TCDD Soil
Client ID: JA58900-14
Batch ID: 17194
Run Date: 11/05/2010 07:03
Data File: b03nov10a_5-7
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/14/2010 00:00
Date Received: 10/16/2010 09:40

Method: SW846 8290A
Analyst: MJC

Prep Method: SW846 3540C
Aliquot: 13.93 g

Project: ACCU00309
Matrix: Soil
%Moisture: 23.5
Prep Basis: Dry Weight

Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.052		pg/g	0.052	0.938

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		174	188	pg/g	92.5	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

U Analyte was analyzed for , but not detected above the specified detection limit.

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742012
Client Sample: 8290 TCDD Water
Client ID: JA58900-5
Batch ID: 17315
Run Date: 11/05/2010 07:52
Data File: b03nov10a_5-8
Prep Batch: 17115
Prep Date: 27-OCT-10

Client: ACCU001
Date Collected: 10/14/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3520C
Aliquot: 899.9 mL

Project: ACCU00309
Matrix: FB
Prep Basis: As Received
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.547		pg/L	0.547	11.1

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1880	2220	pg/L	84.6	(40%-135%)

Comments:

U Analyte was analyzed for , but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742013
Client Sample: 8290 TCDD Water
Client ID: JA58900-6
Batch ID: 17315
Run Date: 11/05/2010 08:40
Data File: b03nov10a_5-9
Prep Batch: 17115
Prep Date: 27-OCT-10

Client: ACCU001
Date Collected: 10/14/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3520C
Aliquot: 864.1 mL

Project: ACCU00309
Matrix: FB
Prep Basis: As Received
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.539		pg/L	0.539	11.6

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		2010	2310	pg/L	86.8	(40%-135%)

Comments:

U Analyte was analyzed for , but not detected above the specified detection limit.

Quality Control Summary

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

Page 1 of 2

SDG Number: JA58900

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 16733

Matrix: SOIL

Lab Sample ID: 12002022

Instrument: HRP763

Analysis Date: 11/04/2010 14:48

Dilution: 1

Analyst: MJC

Prep Batch ID:16733

Batch ID: 17194

CAS No.	Parmname	Amount Added pg/g	Spike Conc. pg/g	Recovery %	Acceptance Limits
1746-01-6	LCS 2,3,7,8-TCDD	20.0	21.6	108	70-130

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

Page 2 of 2

SDG Number: JA58900

Sample Type: Laboratory Control Sample Duplicate

Client ID: LCSD for batch 16733

Matrix: SOIL

Lab Sample ID: 12002023

Instrument: HRP763

Analysis Date: 11/04/2010 15:35

Dilution: 1

Analyst: MJC

Prep Batch ID: 16733

Batch ID: 17194

CAS No.	Parmname	Amount Added pg/g	Spike Conc. pg/g	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1746-01-6	LCSD 2,3,7,8-TCDD	20.0	21.1	105	70-130	2.42	0-20

**Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report**

Page 1 of 2

SDG Number:	JA58900	Sample Type:	Matrix Spike
Client ID:	JA58900-3 MS/MSD(1742003MS)	Matrix:	Soil
Lab Sample ID:	12002027	%Moisture:	22.9
Instrument:	HRP763	Analysis Date:	11/04/2010 20:26
Analyst:	MJC	Dilution:	1
		Prep Batch ID:	16733
		Batch ID:	17194

CAS No.		Parmname		Amount Added pg/g		Spike Conc. pg/g	Recovery %	Acceptance Limits
1746-01-6	MS	2,3,7,8-TCDD		19.3	U	20.4	105	70-130

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

Page 2 of 2

SDG Number: JA58900 Sample Type: Matrix Spike Duplicate
Client ID: JA58900-3 MS/MSD(1742003MSD) Matrix: Soil
Lab Sample ID: 12002028 %Moisture: 22.9
Instrument: HRP763 Analysis Date: 11/04/2010 21:15 Dilution: 1
Analyst: MJC Prep Batch ID:16733
Batch ID: 17194

CAS No.	Parmname	Amount Added pg/g		Spike Conc. pg/g	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1746-01-6	MSD 2,3,7,8-TCDD	18.8	U	19.8	105	70-130	2.93	0-20

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

Page 1 of 2

SDG Number: JA58900

Client ID: LCS for batch 17115

Lab Sample ID: 12002074

Instrument: HRP763

Analyst: MJC

Sample Type: Laboratory Control Sample

Matrix: WATER

Analysis Date: 11/05/2010 02:13

Dilution: 1

Prep Batch ID: 17115

Batch ID: 17315

CAS No.		Parmname	Amount Added pg/L	Spike Conc. pg/L	Recovery %	Acceptance Limits
1746-01-6	LCS	2,3,7,8-TCDD	200	211	106	70-130

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

Page 2 of 2

SDG Number: JA58900

Client ID: LCSD for batch 17115

Lab Sample ID: 12002075

Instrument: HRP763

Analyst: MJC

Sample Type: Laboratory Control Sample Duplicate

Matrix: WATER

Analysis Date: 11/05/2010 03:01

Dilution: 1

Prep Batch ID: 17115

Batch ID: 17315

CAS No.	Parmname	Amount Added pg/L	Spike Conc. pg/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1746-01-6	LCSD 2,3,7,8-TCDD	200	211	105	70-130	0.332	0-20

**Hi-Res Dioxins/Furans
Surrogate Recovery Report**

SDG Number: JA58900

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12002074	LCS for batch 17115	13C-2,3,7,8-TCDD		89.7	(40%-135%)
12002075	LCSD for batch 17115	13C-2,3,7,8-TCDD		83.9	(40%-135%)
12002076	MB for batch 17115	13C-2,3,7,8-TCDD		89.7	(40%-135%)
1742012	JA58900-5	13C-2,3,7,8-TCDD		84.6	(40%-135%)
1742013	JA58900-6	13C-2,3,7,8-TCDD		86.8	(40%-135%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

Hi-Res Dioxins/Furans
Surrogate Recovery Report

Page 2 of 2

SDG Number: JA58900

Matrix Type: SOLID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12002022	LCS for batch 16733	13C-2,3,7,8-TCDD		78.3	(40%-135%)
12002023	LCSD for batch 16733	13C-2,3,7,8-TCDD		78.7	(40%-135%)
12002024	MB for batch 16733	13C-2,3,7,8-TCDD		78.6	(40%-135%)
1742001	JA58900-1	13C-2,3,7,8-TCDD		78.5	(40%-135%)
1742002	JA58900-2	13C-2,3,7,8-TCDD		85.6	(40%-135%)
1742003	JA58900-3 MS/MSD	13C-2,3,7,8-TCDD		79.7	(40%-135%)
12002027	JA58900-3 MS/MSD(1742003MS)	13C-2,3,7,8-TCDD		79.0	(40%-135%)
12002028	JA58900-3 MS/MSD(1742003MSD)	13C-2,3,7,8-TCDD		79.5	(40%-135%)
1742004	JA58900-4	13C-2,3,7,8-TCDD		87.1	(40%-135%)
1742005	JA58900-7	13C-2,3,7,8-TCDD		65.3	(40%-135%)
1742006	JA58900-8	13C-2,3,7,8-TCDD		85.8	(40%-135%)
1742007	JA58900-9	13C-2,3,7,8-TCDD		85.2	(40%-135%)
1742008	JA58900-10	13C-2,3,7,8-TCDD		88.6	(40%-135%)
1742009	JA58900-11	13C-2,3,7,8-TCDD		86.0	(40%-135%)
1742010	JA58900-12	13C-2,3,7,8-TCDD		73.6	(40%-135%)
1742011	JA58900-14	13C-2,3,7,8-TCDD		92.5	(40%-135%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

Method Blank Summary

Page 1 of 1

SDG Number: JA58900
 Client ID: MB for batch 16733
 Lab Sample ID: 12002024
 Column:

Client: ACCU001
 Instrument ID: HRP763
 Prep Date: 19-OCT-10

Matrix: SOIL
 Data File: b03nov10a_4-3
 Analyzed: 11/04/10 16:24

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 16733	12002022	b03nov10a_4-1	11/04/10	1448
02 LCSD for batch 16733	12002023	b03nov10a_4-2	11/04/10	1535
03 JA58900-1	1742001	b03nov10a_4-5	11/04/10	1801
04 JA58900-2	1742002	b03nov10a_4-6	11/04/10	1849
05 JA58900-3 MS/MSD	1742003	b03nov10a_4-7	11/04/10	1938
06 JA58900-3 MS/MSD(1742003MS)	12002027	b03nov10a_4-8	11/04/10	2026
07 JA58900-3 MS/MSD(1742003MSD)	12002028	b03nov10a_4-9	11/04/10	2115
08 JA58900-4	1742004	b03nov10a_4-10	11/04/10	2203
09 JA58900-7	1742005	b03nov10a_4-11	11/04/10	2251
10 JA58900-8	1742006	b03nov10a_4-12	11/04/10	2340
11 JA58900-9	1742007	b03nov10a_4-13	11/05/10	0028
12 JA58900-10	1742008	b03nov10a_5-4	11/05/10	0438
13 JA58900-11	1742009	b03nov10a_5-5	11/05/10	0526
14 JA58900-12	1742010	b03nov10a_5-6	11/05/10	0615
15 JA58900-14	1742011	b03nov10a_5-7	11/05/10	0703

Method Blank Summary

Page 1 of 1

SDG Number: JA58900
Client ID: MB for batch 17115
Lab Sample ID: 12002076
Column:

Client: ACCU001
Instrument ID: HRP763
Prep Date: 27-OCT-10

Matrix: WATER
Data File: b03nov10a_5-3
Analyzed: 11/05/10 03:49

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 17115	12002074	b03nov10a_5-1	11/05/10	0213
02 LCSD for batch 17115	12002075	b03nov10a_5-2	11/05/10	0301
03 JA58900-5	1742012	b03nov10a_5-8	11/05/10	0752
04 JA58900-6	1742013	b03nov10a_5-9	11/05/10	0840

Sample Raw Data

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number:	JA58900	Client:	ACCU001	Project:	ACCU00309
Lab Sample ID:	1742001	Date Collected:	10/14/2010 00:00	Matrix:	Soil
Client Sample:	8290 TCDD Soil	Date Received:	10/16/2010 09:40	%Moisture:	23.9
Client ID:	JA58900-1			Prep Basis:	Dry Weight
Batch ID:	17194	Method:	SW846 8290A	Instrument:	HRP763
Run Date:	11/04/2010 18:01	Analyst:	MJC	Dilution:	1
Data File:	b03nov10a_4-5				
Prep Batch:	16733	Prep Method:	SW846 3540C		
Prep Date:	19-OCT-10	Aliquot:	13.35 g		

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.0547		pg/g	0.0547	0.984

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		155	197	pg/g	78.5	(40%-135%)

Comments:**K** Estimated Maximum Possible Concentration**U** Analyte was analyzed for , but not detected above the specified detection limit.

Quantify Sample Summary Report
Method 8290 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

Last Altered: Friday, November 05, 2010 4:49:10 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:54:07 PM Eastern Standard Time

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Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-5, Date: 04-Nov-2010, Time: 18:01:18, ID: 1742001-1, Description: 17194 HMS8290TCL, Task: HRP763_1, User: MJC

HMP
07 Nov 10

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	9.42e1	7.04e1	1.65e2	31.76	1.001	1.34	YES	0.017	0.0278	1.60e3	822	2.0	2.24e3	944	2.4	bb
2	12378-PeCDD							NO		0.0234		951			575		
3	123478-HxCDD							NO		0.0273		681			526		
4	123678-HxCDD							NO		0.0253		681			526		
5	123789-HxCDD							NO		0.0283		681			526		
6	1234678-HpCDD	1.51e2	6.01e1	2.11e2	40.76	1.000	2.52	YES	0.036	0.0402	3.34e3	403	8.3	1.43e3	665	2.2	db
7	OCDD	8.76e2	1.15e3	2.03e3	45.17	1.000	0.76	NO	0.542	0.190	9.60e3	868	11.1	1.40e4	1639	8.5	bb
8	2378-TCDF	1.69e3	2.16e3	3.85e3	31.22	1.001	0.78	NO	0.242	0.0206	2.59e4	1002	25.9	3.38e4	920	36.8	bb
9	12378-PeCDF							NO		0.0316		1197			1661		
10	23478-PeCDF	2.07e2	1.30e2	3.37e2	34.33	1.019	1.59	NO	0.029	0.0323	5.50e3	1197	4.6	3.27e3	1661	2.0	bd
11	123478-HxCDF							NO		0.0313		757			901		
12	123678-HxCDF	6.42e1	6.71e1	1.31e2	36.58	1.000	0.96	YES	0.014	0.0269	3.43e3	757	4.5	2.52e3	901	2.8	bb
13	234678-HxCDF							NO		0.0298		757			901		
14	123789-HxCDF							NO		0.0360		757			901		
15	1234678-HpCDF	1.12e2	8.31e1	1.95e2	39.43	1.000	1.35	YES	0.025	0.0217	2.42e3	421	5.8	1.94e3	483	4.0	bb
16	1234789-HpCDF							NO		0.0298		421			483		
17	OCDF	6.84e1	5.50e1	1.23e2	45.53	1.008	1.24	YES	0.027	0.0830	2.93e3	744	3.9	3.01e3	615	4.9	bb
18	13C-2378-TCDD	4.12e5	5.25e5	9.37e5	31.72	1.013	0.78	NO	78.532	0.0577	8.27e6	2969	2784.8	1.05e7	1342	7841.1	bb
19	13C-12378-PeCDD	4.95e5	3.13e5	8.08e5	34.53	1.102	1.58	NO	79.794	0.0731	1.16e7	2449	4737.5	7.27e6	2184	3328.1	bb
20	13C-123678-HxCDD	4.38e5	3.45e5	7.83e5	37.30	0.993	1.27	NO	92.477	0.139	8.28e6	3257	2540.8	6.37e6	3527	1804.6	bb
21	13C-1234678-HpCDD	2.97e5	2.80e5	5.78e5	40.73	1.085	1.06	NO	94.757	0.161	4.08e6	3017	1353.9	3.85e6	2652	1450.6	bb
22	13C-OCDD	3.50e5	4.01e5	7.51e5	45.15	1.202	0.87	NO	147.621	0.211	3.72e6	3181	1168.6	4.11e6	3003	1368.8	bb
23	13C-2378-TCDF	7.14e5	9.03e5	1.62e6	31.19	0.996	0.79	NO	83.302	0.0246	1.26e7	1548	8134.0	1.60e7	1445	11056.0	bb
24	13C-12378-PeCDF	7.72e5	4.80e5	1.25e6	33.70	1.076	1.61	NO	69.414	0.0455	1.79e7	2893	6196.4	1.12e7	2237	5015.6	bd
25	13C-123678-HxCDF	3.07e5	5.91e5	8.97e5	36.57	0.974	0.52	NO	72.301	0.0779	5.97e6	2535	2356.7	1.17e7	3043	3859.9	bb
26	13C-1234678-HpCDF	1.91e5	4.27e5	6.17e5	39.43	1.050	0.45	NO	75.041	0.0789	3.02e6	1787	1690.3	6.77e6	1956	3461.5	bb
27	13C-1234-TCDD	4.70e5	5.96e5	1.07e6	31.33	0.000	0.79	NO	100.000	0.0647	8.81e6	2969	2968.7	1.12e7	1342	8350.9	bb
28	13C-123789-HxCDD	4.29e5	3.33e5	7.61e5	37.55	0.000	1.29	NO	100.000	0.154	7.42e6	3257	2277.3	5.81e6	3527	1646.9	bd
29	37Cl-2378-TCDD (SS)									0.0104		688					
30	13C-23478-PeCDF (SS)	4.91e3	3.03e3	7.94e3	34.32	1.018	1.62	NO	0.680	0.0567	1.01e5	2893	34.8	6.84e4	2237	30.6	bb

Quantify Sample Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

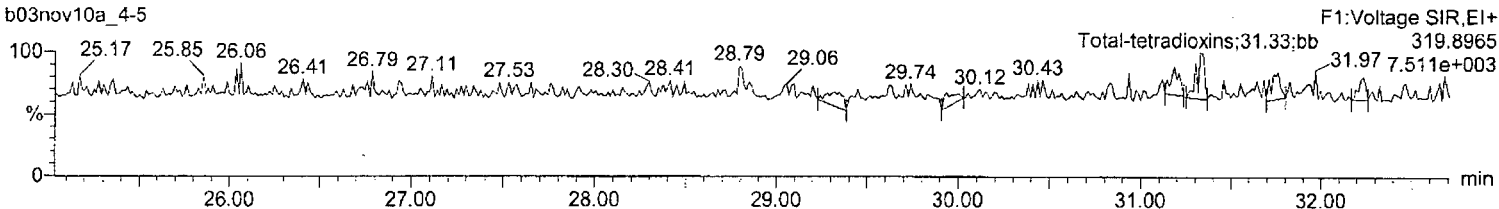
Last Altered: Friday, November 05, 2010 4:14:46 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:18:12 PM Eastern Standard Time

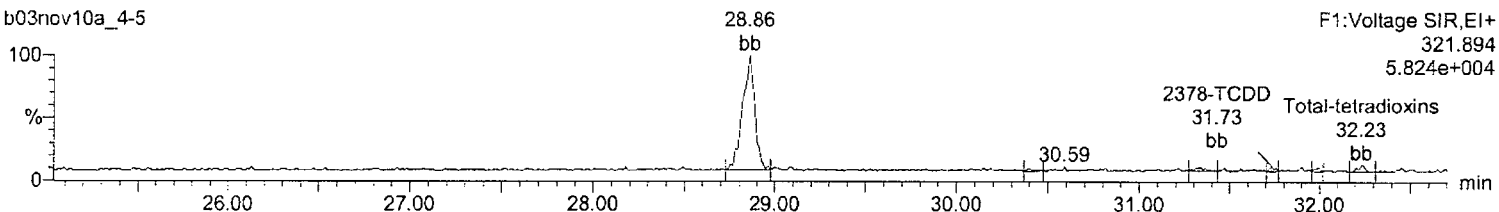
Name: b03nov10a_4-5, Date: 04-Nov-2010, Time: 18:01:18, ID: 1742001-1, Description: 17315, Job: HMS8290TCL,
Task: HRP763_1, User: MJC

Total-tetradoxins

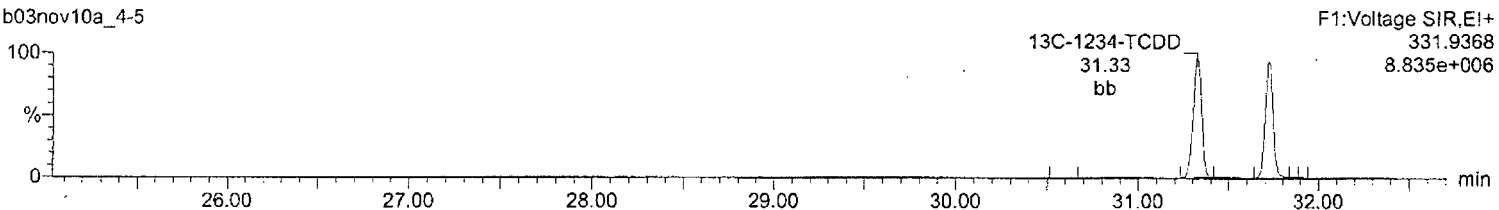
b03nov10a_4-5

**Total-tetradoxins**

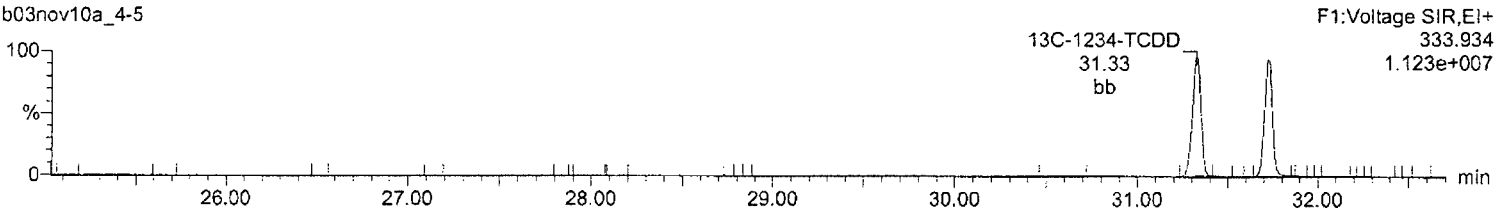
b03nov10a_4-5

**13C-2378-TCDD**

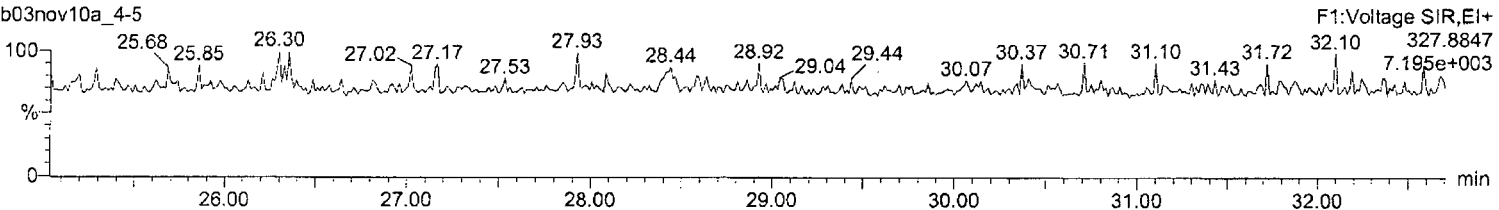
b03nov10a_4-5

**13C-2378-TCDD**

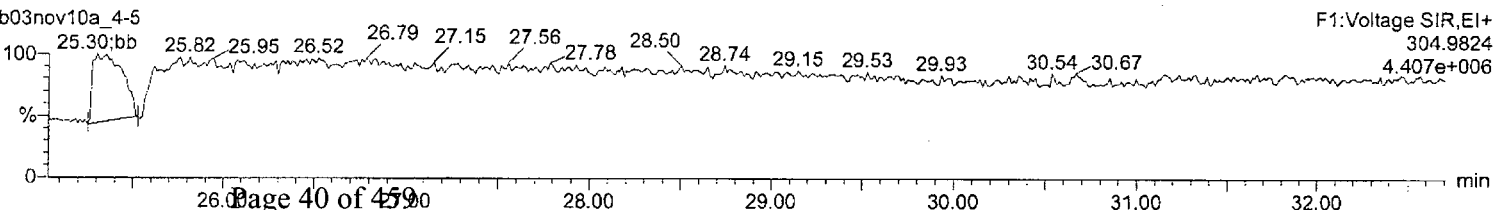
b03nov10a_4-5

**37Cl-2378-TCDD (SS)**

b03nov10a_4-5

**Lock Mass F1**

b03nov10a_4-5



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number:	JA58900	Client:	ACCU001	Project:	ACCU00309
Lab Sample ID:	1742002	Date Collected:	10/14/2010 00:00	Matrix:	Soil
Client Sample:	8290 TCDD Soil	Date Received:	10/16/2010 09:40	%Moisture:	24.9
Client ID:	JA58900-2			Prep Basis:	Dry Weight
Batch ID:	17194	Method:	SW846 8290A	Instrument:	HRP763
Run Date:	11/04/2010 18:49	Analyst:	MJC	Dilution:	1
Data File:	b03nov10a_4-6				
Prep Batch:	16733	Prep Method:	SW846 3540C		
Prep Date:	19-OCT-10	Aliquot:	13.46 g		

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	JK		0.0554	pg/g	0.0461	0.990

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		169	198	pg/g	85.6	(40%-135%)

Comments:**J** Value is estimated**K** Estimated Maximum Possible Concentration

Quantify Sample Summary Report
Method 8290 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

Last Altered: Friday, November 05, 2010 4:49:10 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:55:26 PM Eastern Standard Time

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Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-6, Date: 04-Nov-2010, Time: 18:49:43, ID: 1742002-1, Description: 17194 HMS8290TCS 8/11/10
47345, Job: HMS8290TCL, Task: HRP763_1, User: MJC

HMP
07 Nov 10

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	1.09e2	1.68e2	2.77e2	31.74	1.000	0.65	YES	0.028	0.0233	2.50e3	693	3.6	3.93e3	979	4.0	bb
2	12378-PeCDD	1.81e2	1.30e2	3.10e2	34.55	1.000	1.39	NO	0.035	0.0343	5.57e3	1192	4.7	4.28e3	1027	4.2	bb
3	123478-HxCDD	2.23e2	1.26e2	3.50e2	37.24	0.998	1.77	YES	0.045	0.0427	4.24e3	970	4.4	2.80e3	1026	2.7	bd
4	123678-HxCDD	3.90e2	2.85e2	6.75e2	37.32	1.000	1.37	NO	0.081	0.0395	7.14e3	970	7.4	6.49e3	1026	6.3	db
5	123789-HxCDD	5.18e2	3.51e2	8.69e2	37.57	1.007	1.48	YES	0.116	0.0442	1.23e4	970	12.6	7.67e3	1026	7.5	bb
6	1234678-HpCDD	6.03e3	6.08e3	1.21e4	40.75	1.000	0.99	NO	1.697	0.0568	8.41e4	804	104.6	8.87e4	1053	84.3	bb
7	OCDD	4.74e4	5.56e4	1.03e5	45.19	1.000	0.85	NO	18.084	0.181	5.19e5	1720	301.5	5.72e5	1692	338.0	bb
8	2378-TCDF	1.88e3	2.48e3	4.36e3	31.22	1.001	0.76	NO	0.258	0.0264	2.92e4	1127	25.9	3.72e4	1352	27.5	bd
9	12378-PeCDF	6.28e1	1.34e2	1.97e2	33.75	1.001	0.47	YES	0.015	0.0380	2.35e3	1592	1.5	3.55e3	2226	1.6	db
10	23478-PeCDF	4.72e2	1.48e2	6.20e2	34.34	1.019	3.19	YES	0.048	0.0389	1.06e4	1592	6.7	3.36e3	2226	1.5	db
11	123478-HxCDF	2.08e2	1.03e2	3.11e2	36.48	0.997	2.02	YES	0.032	0.0358	4.22e3	1008	4.2	3.33e3	1193	2.8	dd
12	123678-HxCDF	2.19e2	1.70e2	3.89e2	36.61	1.001	1.29	NO	0.034	0.0308	4.94e3	1008	4.9	2.09e3	1193	1.8	db
13	234678-HxCDF	1.76e2	2.08e2	3.84e2	37.09	1.014	0.85	YES	0.037	0.0341	5.62e3	1008	5.6	4.86e3	1193	4.1	bd
14	123789-HxCDF	6.98e1	5.53e1	1.25e2	37.93	1.037	1.26	NO	0.015	0.0411	3.06e3	1008	3.0	1.56e3	1193	1.3	bd
15	1234678-HpCDF	2.26e3	2.16e3	4.42e3	39.44	1.000	1.05	NO	0.409	0.0307	4.19e4	1016	41.2	3.86e4	699	55.2	bb
16	1234789-HpCDF							NO		0.0422		1016			699		
17	OCDF	3.69e3	4.37e3	8.07e3	45.52	1.008	0.84	NO	1.144	0.0646	4.02e4	595	67.6	4.54e4	911	49.8	bd
18	13C-2378-TCDD	4.34e5	5.55e5	9.88e5	31.73	1.013	0.78	NO	85.602	0.0498	9.35e6	2104	4442.1	1.19e7	1396	8530.6	bb
19	13C-12378-PeCDD	5.21e5	3.29e5	8.50e5	34.53	1.102	1.59	NO	86.714	0.0945	1.16e7	3496	3304.6	7.18e6	2139	3354.9	bb
20	13C-123678-HxCDD	4.83e5	3.83e5	8.66e5	37.31	0.993	1.26	NO	84.588	0.100	8.73e6	2449	3564.6	7.04e6	3302	2131.2	bb
21	13C-1234678-HpCDD	3.63e5	3.48e5	7.10e5	40.74	1.085	1.04	NO	96.368	0.153	4.98e6	4124	1208.4	4.67e6	2178	2143.2	bb
22	13C-OCDD	5.45e5	5.99e5	1.14e6	45.17	1.203	0.91	NO	185.937	0.150	5.41e6	2650	2040.6	5.99e6	2521	2374.7	bd
23	13C-2378-TCDF	7.57e5	9.57e5	1.71e6	31.19	0.995	0.79	NO	91.298	0.0291	1.26e7	1556	8118.9	1.61e7	1766	9105.7	bb
24	13C-12378-PeCDF	8.62e5	5.49e5	1.41e6	33.71	1.076	1.57	NO	80.855	0.0564	1.97e7	3130	6293.5	1.25e7	2866	4348.2	bd
25	13C-123678-HxCDF	3.75e5	7.13e5	1.09e6	36.58	0.974	0.53	NO	72.423	0.0584	6.99e6	2133	3277.3	1.34e7	2775	4831.1	bd
26	13C-1234678-HpCDF	2.66e5	5.81e5	8.47e5	39.44	1.050	0.46	NO	85.066	0.0973	4.12e6	2283	1803.6	9.13e6	3131	2915.9	bd
27	13C-1234-TCDD	4.56e5	5.75e5	1.03e6	31.34	0.000	0.79	NO	100.000	0.0558	8.33e6	2104	3957.2	1.08e7	1396	7708.6	bb
28	13C-123789-HxCDD	5.07e5	4.14e5	9.21e5	37.56	0.000	1.23	NO	100.000	0.112	8.51e6	2449	3473.8	6.86e6	3302	2076.9	bb
29	37Cl-2378-TCDD (SS)									0.0136		1017					
30	13C-23478-PeCDF (SS)	1.59e3	9.59e2	2.55e3	34.34	1.019	1.66	NO	0.194	0.0598	4.01e4	3130	12.8	2.15e4	2866	7.5	bb

Quantify Sample Report**MassLynx 4.1**

Method 8290 Quantification Report

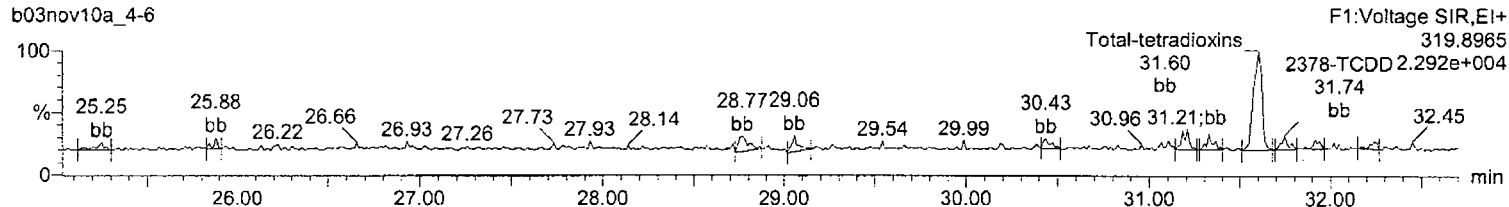
Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

Last Altered: Friday, November 05, 2010 4:14:46 PM Eastern Standard Time

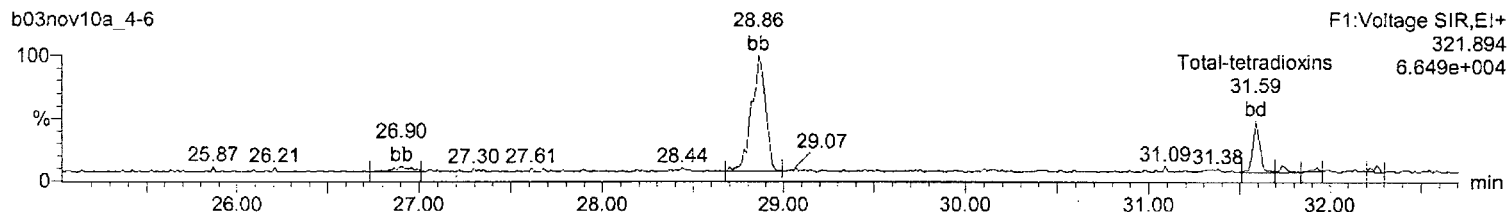
Printed: Friday, November 05, 2010 4:18:12 PM Eastern Standard Time

Name: b03nov10a_4-6, Date: 04-Nov-2010, Time: 18:49:43, ID: 1742002-1, Description: 17315, Job: HMS8290TCL, Task: HRP763_1, User: MJC**Total-tetradioxins**

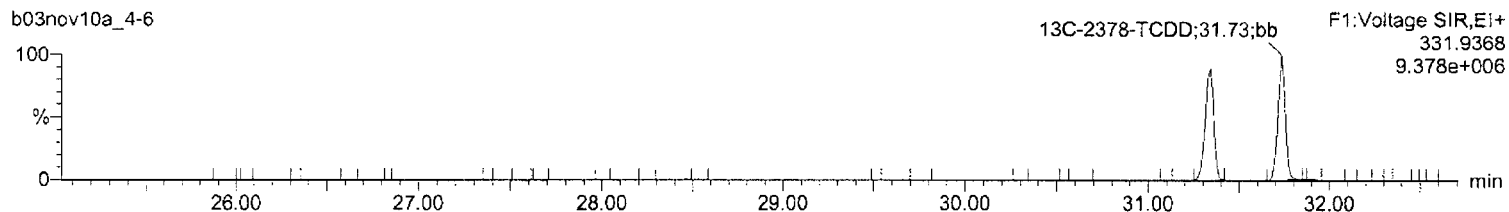
b03nov10a_4-6

**Total-tetradioxins**

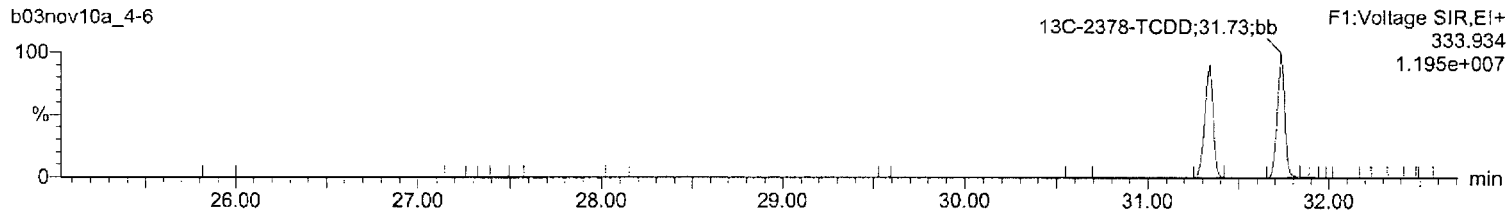
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**¹³C-2378-TCDD**

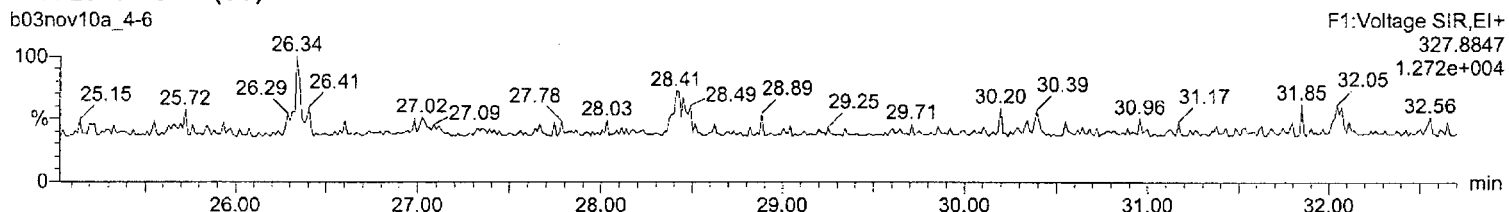
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**¹³C-2378-TCDD**

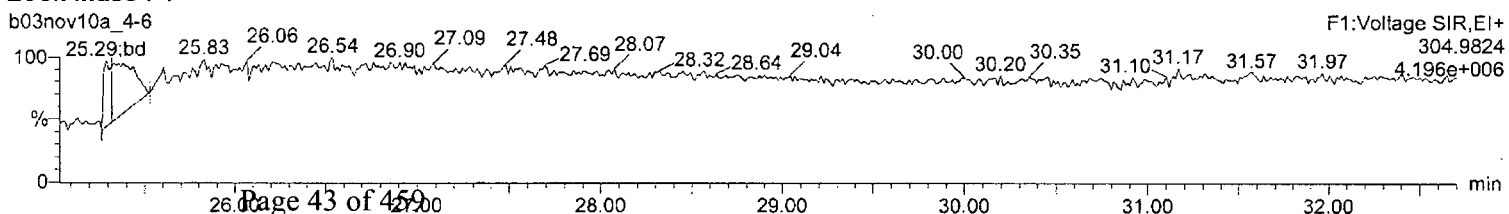
b03nov10a_4-6

**³⁷Cl-2378-TCDD (SS)**

b03nov10a_4-6

**Lock Mass F1**

b03nov10a_4-6



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

Page 1 of 1

SDG Number:	JA58900	Client:	ACCU001	Project:	ACCU00309
Lab Sample ID:	1742003	Date Collected:	10/14/2010 00:00	Matrix:	Soil
Client Sample:	8290 TCDD Soil	Date Received:	10/16/2010 09:40	%Moisture:	22.9
Client ID:	JA58900-3 MS/MSD			Prep Basis:	Dry Weight
Batch ID:	17194	Method:	SW846 8290A	Instrument:	HRP763
Run Date:	11/04/2010 19:38	Analyst:	MJC	Dilution:	1
Data File:	b03nov10a_4-7				
Prep Batch:	16733	Prep Method:	SW846 3540C		
Prep Date:	19-OCT-10	Aliquot:	13.77 g		

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.11		pg/g	0.110	0.942

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		150	188	pg/g	79.7	(40%-135%)

Comments:

- K Estimated Maximum Possible Concentration
U Analyte was analyzed for , but not detected above the specified detection limit.

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a 4.qld

Last Altered: Friday, November 05, 2010 4:49:10 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:56:40 PM Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methddb\CFA EPA8290 110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a 4-7, Date: 04-Nov-2010, Time: 19:38:09, ID: 1742003-1, Description: 1714, Job: HMS8290TCL, Task: HRP763 1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD							NO		0.0583		767			3266		
2	12378-PeCDD							NO		0.0283		900			834		
3	123478-HxCDD							NO		0.0328		735			653		
4	123678-HxCDD							NO		0.0304		735			653		
5	123789-HxCDD							NO		0.0340		735			653		
6	1234678-HpCDD	1.58e2	2.39e2	3.97e2	40.75	1.000	0.66	YES	0.059	0.0329	2.67e3	561	4.8	4.10e3	412	10.0	bb
7	OCDD	2.61e3	2.53e3	5.14e3	45.20	1.001	1.03	YES	0.968	0.119	2.64e4	1682	15.7	3.13e4	453	69.2	bd
8	2378-TCDF	1.27e3	1.88e3	3.15e3	31.22	1.001	0.67	NO	0.190	0.0220	2.45e4	892	27.4	3.04e4	1187	25.6	db
9	12378-PeCDF							NO		0.0303		1147			1677		
10	23478-PeCDF	2.26e2	1.49e2	3.75e2	34.35	1.019	1.52	NO	0.030	0.0310	5.96e3	1147	5.2	3.67e3	1677	2.2	bb
11	123478-HxCDF							NO		0.0198		613			543		
12	123678-HxCDF							NO		0.0170		613			543		
13	234678-HxCDF							NO		0.0189		613			543		
14	123789-HxCDF							NO		0.0228		613			543		
15	1234678-HpCDF							NO		0.0209		473			563		
16	1234789-HpCDF							NO		0.0287		473			563		
17	OCDF	6.53e1	6.95e1	1.35e2	45.50	1.007	0.94	NO	0.021	0.0576	2.56e3	563	4.6	2.41e3	712	3.4	bb
18	13C-2378-TCDD	4.23e5	5.36e5	9.58e5	31.73	1.013	0.79	NO	79.684	0.0550	9.05e6	2317	3904.0	1.16e7	1605	7219.3	bb
19	13C-12378-PeCDD	5.06e5	3.16e5	8.22e5	34.53	1.102	1.60	NO	80.566	0.100	1.10e7	4189	2615.0	6.91e6	1858	3716.6	bb
20	13C-123678-HxCDD	4.41e5	3.46e5	7.87e5	37.31	0.994	1.27	NO	85.545	0.113	7.92e6	3183	2489.8	6.20e6	2635	2352.4	bb
21	13C-1234678-HpCDD	3.44e5	3.29e5	6.72e5	40.74	1.085	1.05	NO	101.492	0.137	4.52e6	2781	1626.2	4.40e6	2333	1887.3	bd
22	13C-OCDD	5.03e5	5.63e5	1.07e6	45.16	1.203	0.89	NO	192.888	0.179	5.09e6	2917	1744.9	5.69e6	2654	2143.4	bd
23	13C-2378-TCDF	7.52e5	9.36e5	1.69e6	31.19	0.995	0.80	NO	86.290	0.0277	1.28e7	1629	7875.7	1.58e7	1581	10024.6	bb
24	13C-12378-PeCDF	8.27e5	5.27e5	1.35e6	33.70	1.075	1.57	NO	74.514	0.0832	1.83e7	5478	3334.9	1.18e7	3488	3383.6	bd
25	13C-123678-HxCDF	3.37e5	6.44e5	9.82e5	36.58	0.974	0.52	NO	72.767	0.0782	6.62e6	2010	3291.8	1.26e7	3915	3215.8	bb
26	13C-1234678-HpCDF	2.29e5	5.22e5	7.51e5	39.43	1.050	0.44	NO	83.988	0.109	3.56e6	2633	1352.7	8.03e6	2852	2816.0	bb
27	13C-1234-TCDD	4.79e5	5.95e5	1.07e6	31.34	0.000	0.81	NO	100.000	0.0616	8.52e6	2317	3677.5	1.05e7	1605	6541.8	bb
28	13C-123789-HxCDD	4.66e5	3.62e5	8.27e5	37.55	0.000	1.29	NO	100.000	0.125	7.85e6	3183	2465.6	6.15e6	2635	2334.8	bd
29	37Cl-2378-TCDD (SS)									0.0117		844					
30	13C-23478-PeCDF (SS)	4.01e3	2.20e3	6.20e3	34.33	1.019	1.82	YES	0.491	0.0963	8.87e4	5478	16.2	5.36e4	3488	15.4	bb

Quantify Sample Report MassLynx 4.1
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

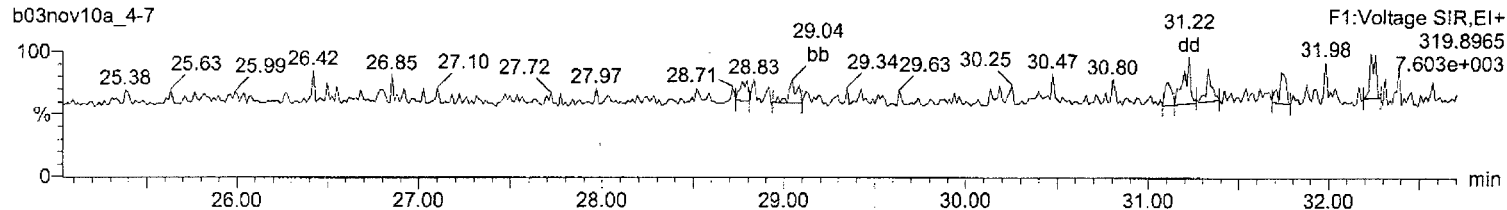
Last Altered: Friday, November 05, 2010 4:14:46 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:18:12 PM Eastern Standard Time

Name: b03nov10a_4-7, Date: 04-Nov-2010, Time: 19:38:09, ID: 1742003-1, Description: 17315, Job: HMS8290TCL,
Task: HRP763_1, User: MJC

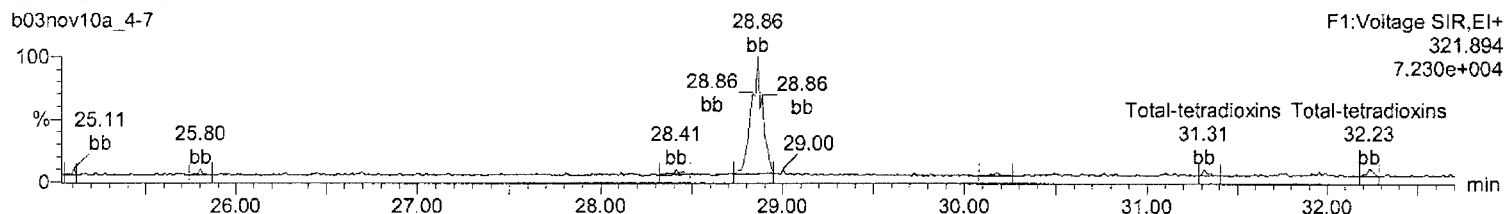
Total-tetradoxins

b03nov10a_4-7



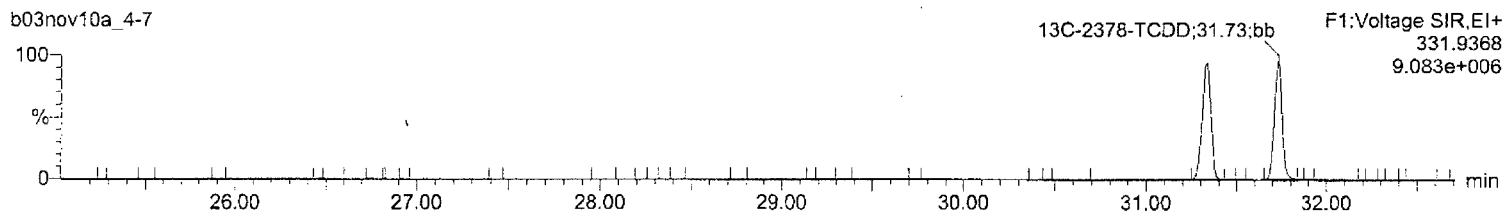
Total-tetradoxins

b03nov10a_4-7



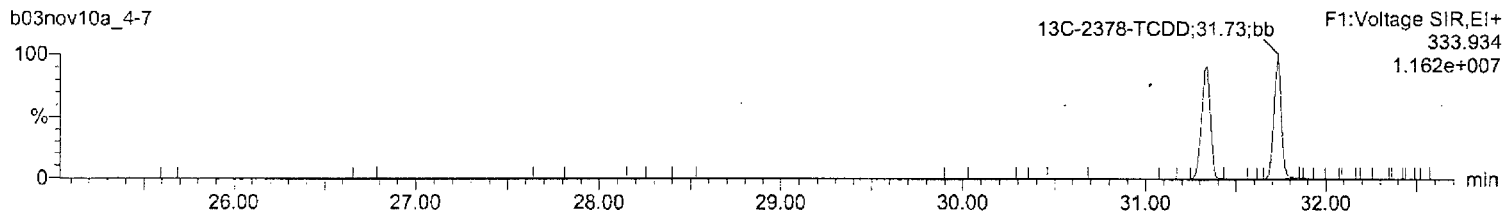
13C-2378-TCDD

b03nov10a_4-7



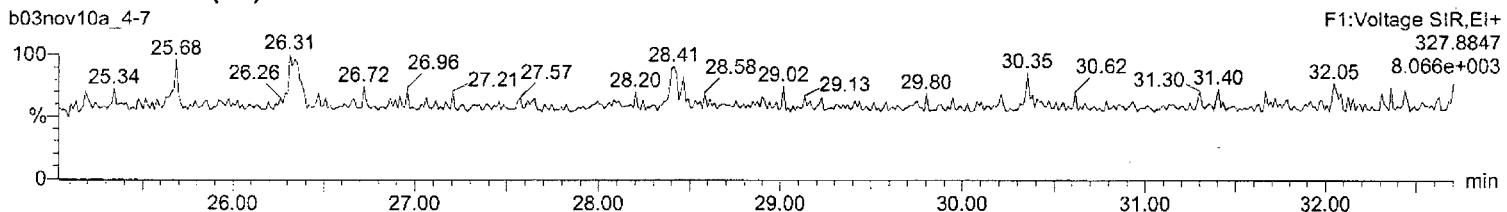
13C-2378-TCDD

b03nov10a_4-7



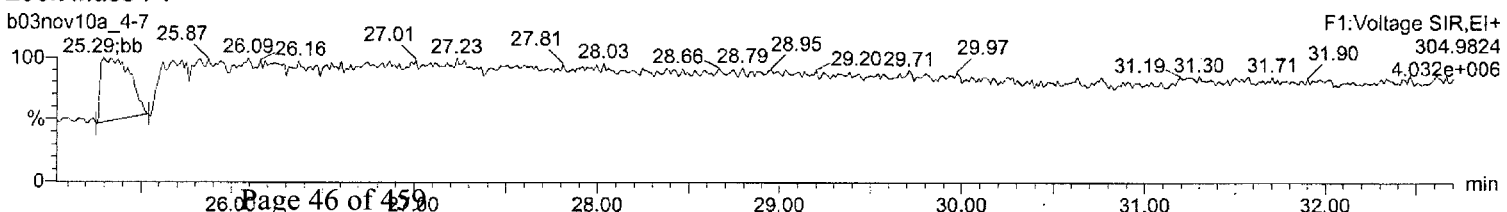
37Cl-2378-TCDD (SS)

b03nov10a_4-7



Lock Mass F1

b03nov10a_4-7



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742004
Client Sample: 8290 TCDD Soil
Client ID: JA58900-4
Batch ID: 17194
Run Date: 11/04/2010 22:03
Data File: b03nov10a_4-10
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/14/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.88 g

Project: ACCU00309
Matrix: Soil
%Moisture: 23.8
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	JK		0.0643	pg/g	0.051	0.945

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		165	189	pg/g	87.1	(40%-135%)

Comments:**J** Value is estimated**K** Estimated Maximum Possible Concentration

Quantify Sample Summary Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

Last Altered: Friday, November 05, 2010 5:05:42 PM Eastern Standard Time

Printed: Friday, November 05, 2010 5:06:18 PM Eastern Standard Time

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Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

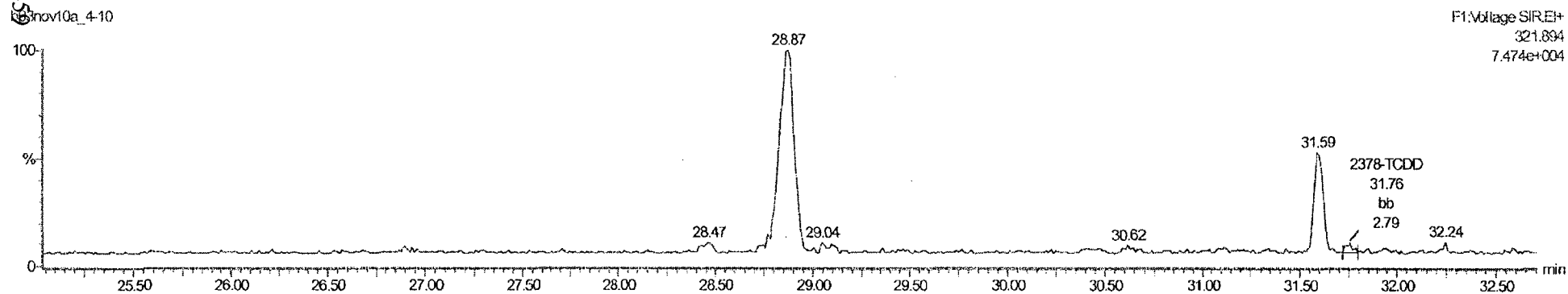
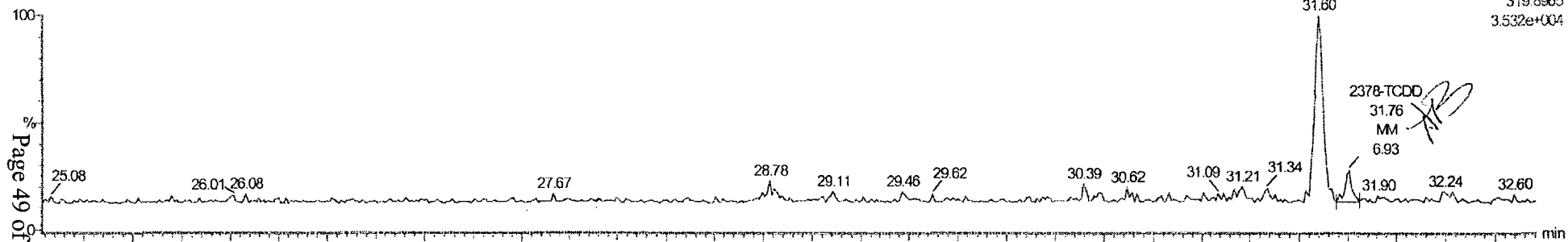
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Name: b03nov10a_4-10, Date: 04-Nov-2010, Time: 22:03:26, ID: 1742004-1, Description: 17315, Job: HMS8290TCL, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	2.26e2	1.17e2	3.44e2	31.76	1.000	1.93	YES	0.034	0.0270	5.29e3	764	6.9	2.91e3	1041	2.8	MM
2	12378-PeCDD	2.79e2	1.54e2	4.34e2	34.56	1.001	1.81	YES	0.050	0.0475	7.00e3	1657	4.2	3.67e3	1243	2.9	bb
3	123478-HxCDD	2.32e2	1.46e2	3.78e2	37.22	0.997	1.59	YES	0.048	0.0694	4.34e3	1743	2.5	3.11e3	1416	2.2	bd
4	123678-HxCDD	4.24e2	3.35e2	7.59e2	37.32	1.000	1.27	NO	0.089	0.0643	1.14e4	1743	6.5	6.95e3	1416	4.9	db
5	123789-HxCDD	3.12e2	2.38e2	5.49e2	37.60	1.008	1.31	NO	0.072	0.0719	6.60e3	1743	3.8	4.94e3	1416	3.5	db
6	1234678-HpCDD	4.52e3	4.07e3	8.59e3	40.76	1.000	1.11	NO	1.195	0.0809	6.54e4	1466	44.6	5.59e4	1038	53.8	bb
7	OCDD	3.94e4	4.45e4	8.38e4	45.17	1.000	0.88	NO	15.732	0.180	3.87e5	1439	268.7	4.61e5	1609	286.8	bd
8	2378-TCDF	2.29e3	2.99e3	5.28e3	31.22	1.000	0.76	NO	0.320	0.0376	3.72e4	1721	21.6	4.78e4	1804	26.5	db
9	12378-PeCDF	3.83e2	2.71e2	6.54e2	33.71	1.000	1.41	NO	0.048	0.0441	8.84e3	1944	4.5	5.84e3	2461	2.4	db
10	23478-PeCDF	8.68e2	5.04e2	1.37e3	34.37	1.020	1.72	NO	0.103	0.0450	1.47e4	1944	7.6	1.19e4	2461	4.8	db
11	123478-HxCDF	3.60e2	3.96e2	7.56e2	36.49	0.997	0.91	YES	0.076	0.0435	9.61e3	1462	6.6	9.67e3	1280	7.6	db
12	123678-HxCDF	3.61e2	3.62e2	7.24e2	36.60	1.000	1.00	YES	0.063	0.0373	9.02e3	1462	6.2	7.03e3	1280	5.5	bb
13	234678-HxCDF	5.98e2	2.43e2	8.40e2	37.10	1.014	2.46	YES	0.081	0.0413	1.06e4	1462	7.3	5.05e3	1280	3.9	bb
14	123789-HxCDF	2.33e2	1.20e2	3.53e2	37.92	1.036	1.95	YES	0.041	0.0499	5.76e3	1462	3.9	4.21e3	1280	3.3	db
15	1234678-HpCDF	2.31e3	2.34e3	4.64e3	39.45	1.000	0.99	NO	0.424	0.0272	4.10e4	746	54.9	3.97e4	771	51.5	bb
16	1234789-HpCDF	2.39e2	1.93e2	4.31e2	41.47	1.052	1.24	YES	0.054	0.0374	4.39e3	746	5.9	4.74e3	771	6.1	bb
17	OCDF	2.34e3	2.42e3	4.76e3	45.51	1.008	0.97	NO	0.722	0.0637	2.32e4	631	36.7	2.37e4	702	33.7	bb
18	13C-2378-TCDD	4.44e5	5.52e5	9.95e5	31.75	1.013	0.80	NO	87.110	0.0560	8.83e6	2086	4234.4	1.09e7	1835	5931.5	bb
19	13C-12378-PeCDD	5.07e5	3.27e5	8.34e5	34.53	1.102	1.55	NO	86.028	0.0515	1.08e7	1395	7728.6	6.90e6	1668	4137.1	bb
20	13C-123678-HxCDD	4.98e5	3.81e5	8.80e5	37.32	0.993	1.31	NO	83.001	0.180	8.62e6	4916	1753.4	6.71e6	4820	1392.4	bd
21	13C-1234678-HpCDD	3.68e5	3.47e5	7.15e5	40.74	1.084	1.06	NO	93.720	0.163	4.76e6	3020	1575.8	4.48e6	3311	1351.6	bd
22	13C-OCDD	5.06e5	5.64e5	1.07e6	45.16	1.202	0.90	NO	168.038	0.210	4.82e6	3061	1575.4	5.41e6	3763	1437.3	bd
23	13C-2378-TCDF	7.41e5	9.39e5	1.68e6	31.21	0.996	0.79	NO	90.388	0.0332	1.26e7	1689	7477.8	1.59e7	2098	7587.5	bb
24	13C-12378-PeCDF	8.89e5	5.63e5	1.45e6	33.71	1.076	1.58	NO	84.050	0.0630	1.96e7	3502	5610.6	1.25e7	3164	3938.4	bd
25	13C-123678-HxCDF	3.74e5	7.16e5	1.09e6	36.59	0.974	0.52	NO	70.125	0.0789	7.15e6	2600	2748.9	1.35e7	3651	3694.4	bb
26	13C-1234678-HpCDF	2.67e5	5.92e5	8.58e5	39.44	1.050	0.45	NO	83.333	0.0967	4.07e6	2153	1892.0	9.08e6	2927	3103.2	bd
27	13C-1234-TCDD	4.55e5	5.66e5	1.02e6	31.34	0.000	0.80	NO	100.000	0.0627	8.37e6	2086	4010.9	1.04e7	1835	5640.5	bb
28	13C-123789-HxCDD	5.51e5	4.02e5	9.53e5	37.57	0.000	1.37	NO	100.000	0.200	8.42e6	4916	1713.3	6.53e6	4820	1354.5	dd
29	37Cl-2378-TCDD (SS)									0.0142		989					
30	13C-23478-PeCDF (SS)	8.10e2	7.47e2	1.56e3	34.34	1.019	1.08	YES	0.115	0.0667	1.69e4	3502	4.8	1.65e4	3164	5.2	bb

MANUAL INTEGRATION

b03nov10a_4-10



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WMP 01 Nov 10

Quantify Sample Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

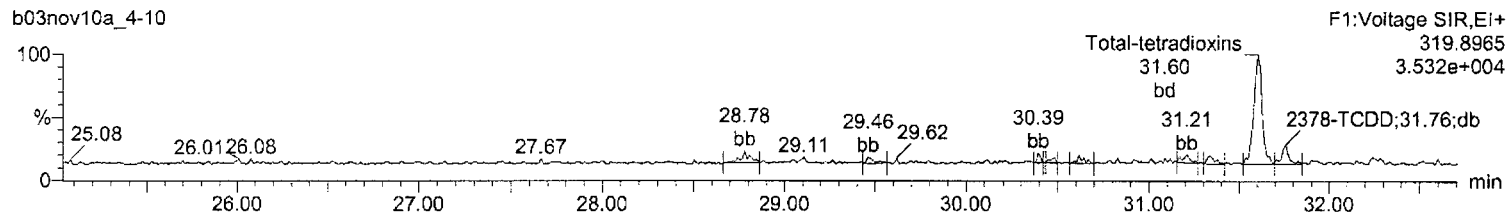
Last Altered: Friday, November 05, 2010 4:14:46 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:18:12 PM Eastern Standard Time

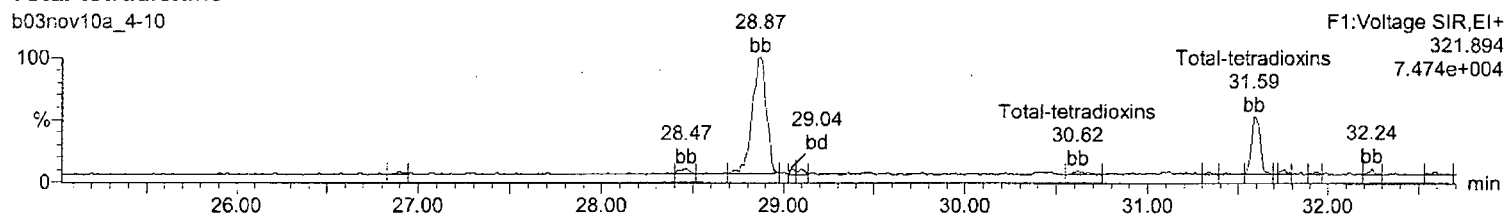
Name: b03nov10a_4-10, Date: 04-Nov-2010, Time: 22:03:26, ID: 1742004-1, Description: 17315, Job: HMS8290TCL,
Task: HRP763_1, User: MJC

Total-tetradoxins

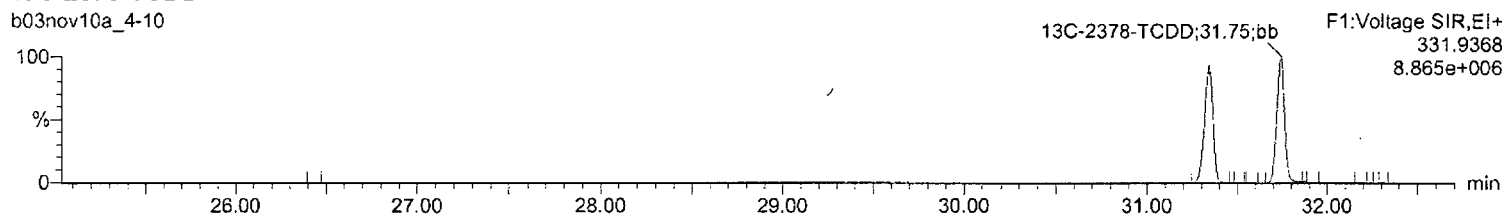
b03nov10a_4-10

**Total-tetradoxins**

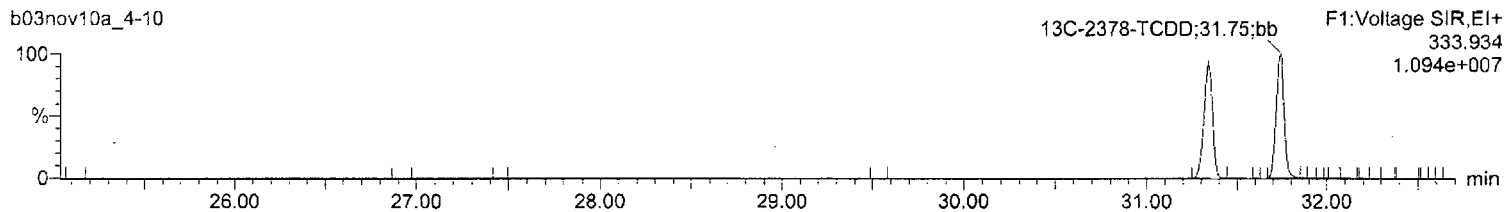
b03nov10a_4-10

**13C-2378-TCDD**

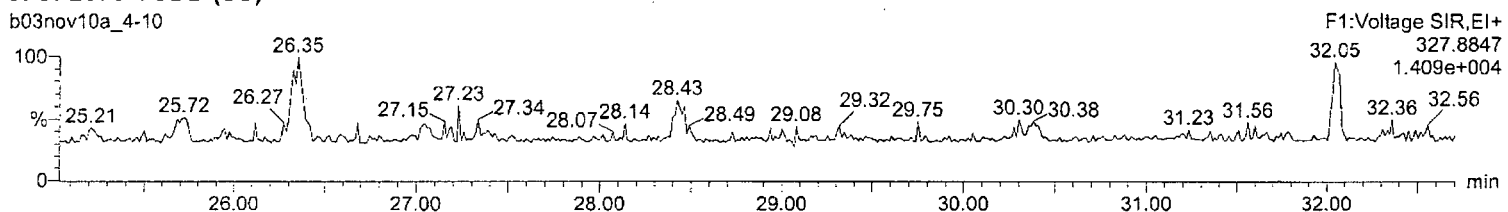
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**13C-2378-TCDD**

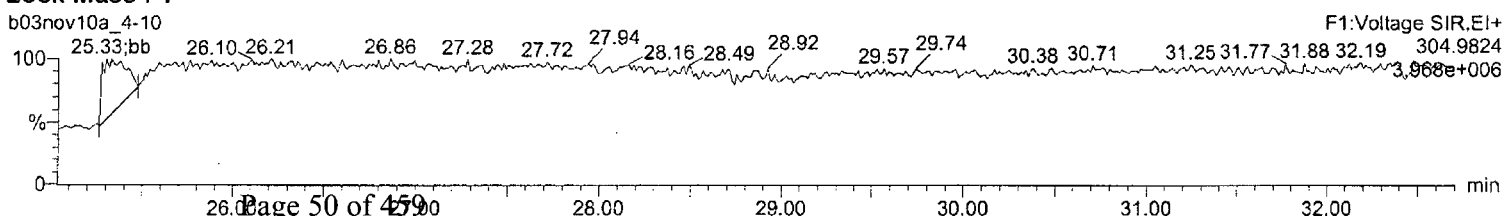
b03nov10a_4-10

**37Cl-2378-TCDD (SS)**

b03nov10a_4-10

**Lock Mass F1**

b03nov10a_4-10



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742005
Client Sample: 8290 TCDD Soil
Client ID: JA58900-7
Batch ID: 17194
Run Date: 11/04/2010 22:51
Data File: b03nov10a_4-11
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/13/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.44 g

Project: ACCU00309
Matrix: Soil
%Moisture: 21.9
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.0688		pg/g	0.0688	0.952

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		124	190	pg/g	65.3	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

U Analyte was analyzed for , but not detected above the specified detection limit.

Quantify Sample Summary Report
Method 8290 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

Last Altered: Friday, November 05, 2010 5:05:42 PM Eastern Standard Time

Printed: Friday, November 05, 2010 5:07:52 PM Eastern Standard Time

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Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-11, Date: 04-Nov-2010, Time: 22:51:51, ID: 1742005-1, Description: 17194 HMS8290TCL, Task: HRP763_1, User: MJC

HMP

07 Nov 10

17194

HMS8290TCL

7/10/10

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD							NO		0.0361		588			815		
2	12378-PeCDD							NO		0.0619		924			739		
3	123478-HxCDD							NO		0.0893		701			754		
4	123678-HxCDD							NO		0.0827		701			754		
5	123789-HxCDD							NO		0.0925		701			754		
6	1234678-HpCDD							NO		0.172		433			463		
7	OCDD	1.33e2	2.66e2	4.00e2	45.20	1.001	0.50	YES	1.135	0.934	4.09e3	540	7.6	4.06e3	598	6.8	dd
8	2378-TCDF	1.18e3	1.47e3	2.65e3	31.22	1.001	0.80	NO	0.256	0.0400	2.22e4	1273	17.4	2.61e4	1029	25.4	bb
9	12378-PeCDF	6.02e1	6.07e1	1.21e2	33.72	1.001	0.99	YES	0.021	0.0549	1.73e3	1144	1.5	3.22e3	1293	2.5	bb
10	23478-PeCDF	1.03e2	6.82e1	1.71e2	34.34	1.019	1.51	NO	0.030	0.0561	2.17e3	1144	1.9	2.08e3	1293	1.6	bb
11	123478-HxCDF							NO		0.0615		702			534		
12	123678-HxCDF							NO		0.0529		702			534		
13	234678-HxCDF							NO		0.0585		702			534		
14	123789-HxCDF							NO		0.0707		702			534		
15	1234678-HpCDF							NO		0.117		394			560		
16	1234789-HpCDF							NO		0.161		394			560		
17	OCDF							NO		0.716		493			586		
18	13C-2378-TCDD	2.33e5	2.95e5	5.28e5	31.73	1.013	0.79	NO	65.265	0.0807	5.09e6	2077	2452.6	6.37e6	1690	3769.8	bb
19	13C-12378-PeCDD	2.14e5	1.37e5	3.51e5	34.52	1.102	1.56	NO	51.069	0.0863	4.76e6	2170	2191.6	2.97e6	1247	2382.5	bb
20	13C-123678-HxCDD	1.54e5	1.24e5	2.78e5	37.30	0.993	1.24	NO	169.522	0.431	3.02e6	2281	1323.2	2.39e6	1852	1291.0	bb
21	13C-1234678-HpCDD	5.80e4	5.53e4	1.13e5	40.73	1.085	1.05	NO	96.103	0.389	7.96e5	1463	544.5	7.24e5	1223	591.6	bd
22	13C-OCDD	3.37e4	3.71e4	7.07e4	45.15	1.202	0.91	NO	71.886	0.523	3.49e5	1650	211.7	3.72e5	1367	272.3	bb
23	13C-2378-TCDF	4.60e5	5.93e5	1.05e6	31.19	0.995	0.78	NO	79.968	0.0416	7.68e6	1234	6221.6	9.90e6	1926	5142.0	bb
24	13C-12378-PeCDF	3.83e5	2.46e5	6.29e5	33.70	1.075	1.56	NO	51.457	0.0595	8.68e6	2192	3961.8	5.52e6	2008	2750.4	bd
25	13C-123678-HxCDF	1.17e5	2.27e5	3.43e5	36.58	0.974	0.52	NO	143.002	0.297	2.26e6	1824	1237.0	4.41e6	2360	1869.0	bd
26	13C-1234678-HpCDF	3.73e4	8.32e4	1.20e5	39.43	1.050	0.45	NO	75.672	0.280	5.93e5	1091	543.2	1.30e6	1519	857.7	bd
27	13C-1234-TCDD	3.21e5	4.02e5	7.23e5	31.34	0.000	0.80	NO	100.000	0.0904	5.55e6	2077	2670.8	7.18e6	1690	4251.1	bb
28	13C-123789-HxCDD	8.26e4	6.46e4	1.47e5	37.55	0.000	1.28	NO	100.000	0.479	1.45e6	2281	637.1	1.11e6	1852	599.8	bb
29	37Cl-2378-TCDD (SS)									0.0169		685					
30	13C-23478-PeCDF (SS)	1.24e3	7.75e2	2.01e3	34.33	1.019	1.60	NO	0.342	0.0947	2.92e4	2192	13.3	1.73e4	2008	8.6	bd

Quantify Sample Report**MassLynx 4.1****Method 8290 Quantification Report**

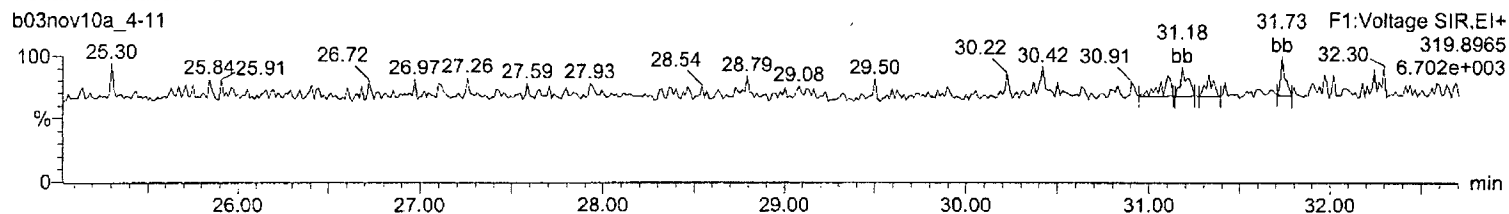
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Last Altered: Friday, November 05, 2010 4:14:46 PM Eastern Standard Time

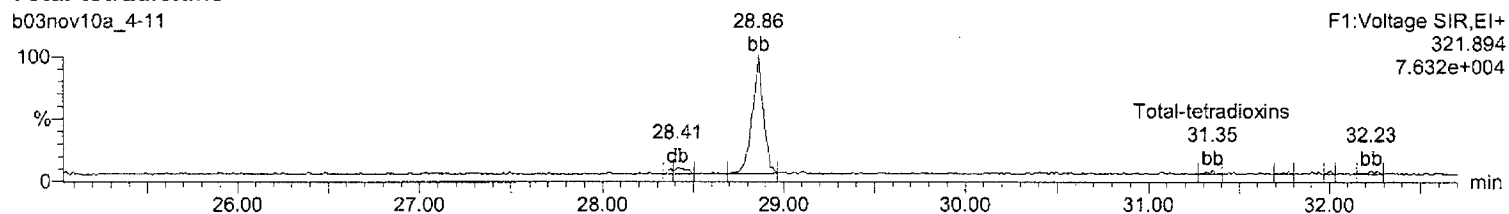
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Name: b03nov10a_4-11, Date: 04-Nov-2010, Time: 22:51:51, ID: 1742005-1, Description: 17315, Job: HMS8290TCL, Task: HRP763_1, User: MJC**Total-tetradoxins**

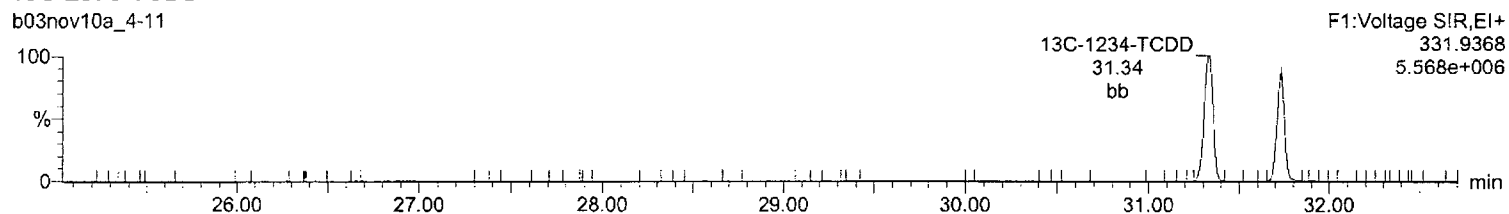
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**Total-tetradoxins**

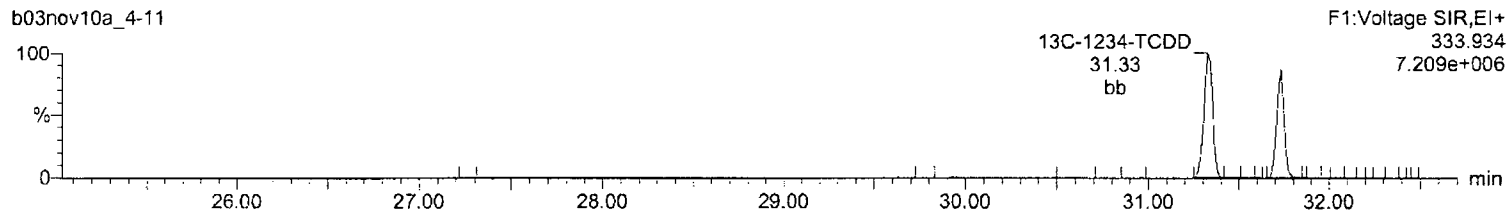
b03nov10a_4-11

**13C-2378-TCDD**

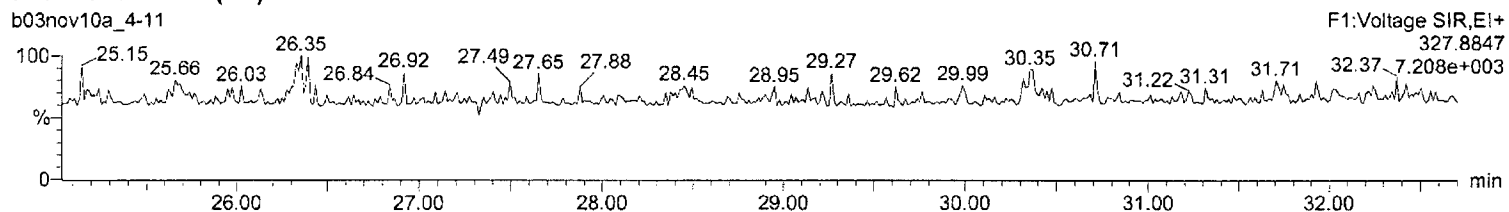
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**13C-2378-TCDD**

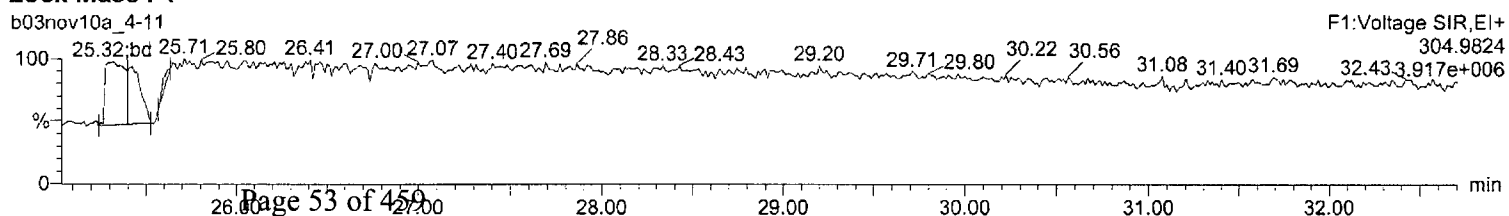
b03nov10a_4-11

**37Cl-2378-TCDD (SS)**

b03nov10a_4-11

**Lock Mass F1**

b03nov10a_4-11



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742006
Client Sample: 8290 TCDD Soil
Client ID: JA58900-8
Batch ID: 17194
Run Date: 11/04/2010 23:40
Data File: b03nov10a_4-12
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/13/2010 00:00
Date Received: 10/16/2010 09:40

Method: SW846 8290A
Analyst: MJC

Prep Method: SW846 3540C
Aliquot: 13.46 g

Project: ACCU00309
Matrix: Soil
%Moisture: 21.8
Prep Basis: Dry Weight

Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.057		pg/g	0.057	0.950

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		163	190	pg/g	85.8	(40%-135%)

Comments:

- K** Estimated Maximum Possible Concentration
U Analyte was analyzed for , but not detected above the specified detection limit.

Quantify Sample Summary Report
Method 8290 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

Last Altered: Friday, November 05, 2010 5:05:42 PM Eastern Standard Time

Printed: Friday, November 05, 2010 5:09:04 PM Eastern Standard Time

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Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-12, Date: 04-Nov-2010, Time: 23:40:17, ID: 1742006-1, Description: 17194 HMS8290TCS 7/10/10
47315, Job: HMS8290TCL, Task: HRP763_1, User: MJC

HMP
07 Nov 10

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD							NO		0.0300		864			954		
2	12378-PeCDD							NO		0.0320		849			866		
3	123478-HxCDD							NO		0.0461		728			885		
4	123678-HxCDD							NO		0.0427		728			885		
5	123789-HxCDD							NO		0.0478		728			885		
6	1234678-HpCDD	1.69e2	1.97e2	3.66e2	40.73	1.000	0.86	YES	0.068	0.0540	5.27e3	589	9.0	3.30e3	692	4.8	bd
7	OCDD	1.74e3	1.82e3	3.56e3	45.17	1.000	0.96	NO	0.895	0.114	2.05e4	1045	19.6	1.74e4	470	37.0	bb
8	2378-TCDF	1.25e3	1.65e3	2.90e3	31.23	1.001	0.76	NO	0.199	0.0287	2.13e4	989	21.6	2.62e4	1392	18.8	bb
9	12378-PeCDF							NO		0.0300		999			1376		
10	23478-PeCDF							NO		0.0307		999			1376		
11	123478-HxCDF	6.41e1	8.76e1	1.52e2	36.58	1.000	0.73	YES	0.020	0.0286	3.31e3	742	4.5	3.44e3	627	5.5	bb
12	123678-HxCDF							NO		0.0245		742			627		
13	234678-HxCDF							NO		0.0272		742			627		
14	123789-HxCDF							NO		0.0328		742			627		
15	1234678-HpCDF	7.06e1	7.52e1	1.46e2	39.44	1.000	0.94	NO	0.019	0.0241	1.54e3	548	2.8	2.52e3	458	5.5	bb
16	1234789-HpCDF							NO		0.0331		548			458		
17	OCDF	5.15e1	8.82e1	1.40e2	45.48	1.007	0.58	YES	0.028	0.0776	2.97e3	621	4.8	3.04e3	652	4.7	bd
18	13C-2378-TCDD	3.72e5	4.64e5	8.36e5	31.73	1.013	0.80	NO	85.805	0.0615	7.99e6	2099	3805.6	9.93e6	1544	6429.8	bb
19	13C-12378-PeCDD	4.30e5	2.75e5	7.05e5	34.54	1.102	1.56	NO	85.183	0.0831	9.49e6	2164	4385.5	6.12e6	2013	3038.1	bb
20	13C-123678-HxCDD	3.60e5	2.82e5	6.41e5	37.31	0.994	1.28	NO	90.951	0.155	6.57e6	3082	2131.0	5.23e6	2987	1751.2	bb
21	13C-1234678-HpCDD	2.75e5	2.60e5	5.35e5	40.73	1.085	1.06	NO	105.411	0.162	3.64e6	2299	1582.3	3.47e6	2283	1520.1	bd
22	13C-OCDD	3.77e5	4.22e5	7.98e5	45.15	1.202	0.89	NO	188.444	0.249	3.77e6	2855	1320.6	4.16e6	3022	1378.1	bd
23	13C-2378-TCDF	6.60e5	8.27e5	1.49e6	31.19	0.995	0.80	NO	93.812	0.0412	1.13e7	2453	4586.7	1.39e7	1518	9186.1	bb
24	13C-12378-PeCDF	7.10e5	4.52e5	1.16e6	33.71	1.076	1.57	NO	78.864	0.0681	1.55e7	3545	4382.2	9.91e6	2553	3880.6	bd
25	13C-123678-HxCDF	2.90e5	5.51e5	8.41e5	36.58	0.974	0.53	NO	81.364	0.0925	5.45e6	2331	2340.0	1.07e7	2985	3579.4	bb
26	13C-1234678-HpCDF	1.92e5	4.20e5	6.13e5	39.43	1.050	0.46	NO	89.390	0.123	3.08e6	2430	1267.6	6.73e6	2264	2972.6	bd
27	13C-1234-TCDD	3.87e5	4.83e5	8.71e5	31.34	0.000	0.80	NO	100.000	0.0688	7.06e6	2099	3365.0	8.86e6	1544	5742.7	bb
28	13C-123789-HxCDD	3.54e5	2.80e5	6.34e5	37.55	0.000	1.27	NO	100.000	0.172	5.91e6	3082	1917.9	4.84e6	2987	1620.8	bd
29	37Cl-2378-TCDD (SS)									0.0135		853					
30	13C-23478-PeCDF (SS)	2.14e3	9.78e2	3.12e3	34.33	1.018	2.19	YES	0.287	0.0771	4.83e4	3545	13.6	2.14e4	2553	8.4	bd

Quantify Sample Report **MassLynx 4.1**

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

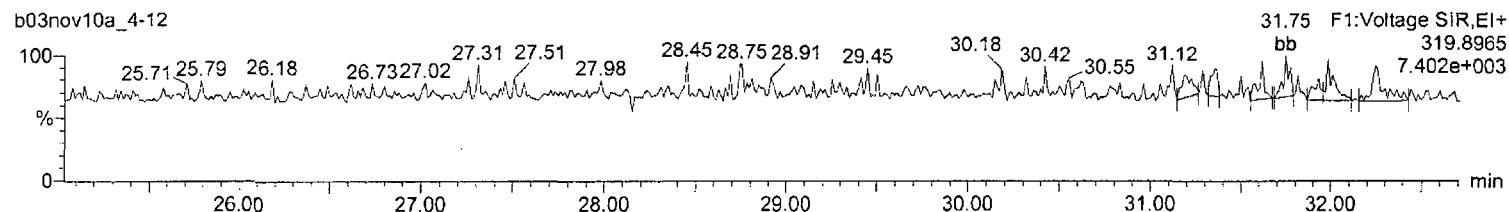
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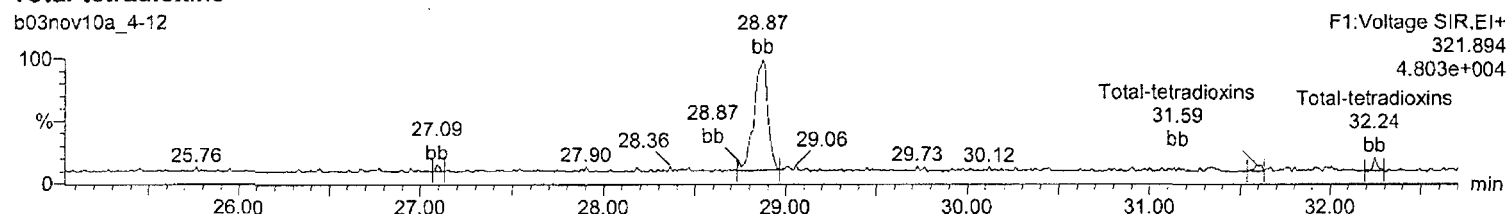
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Task: HRP763_1, User: MJC

Total-tetradoxins

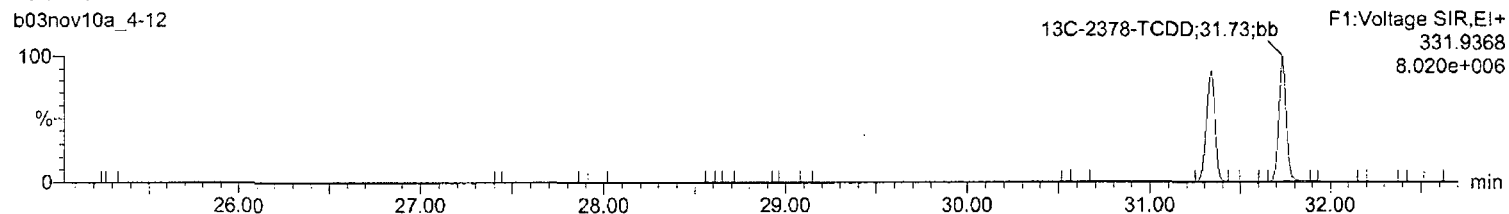
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**Total-tetradoxins**

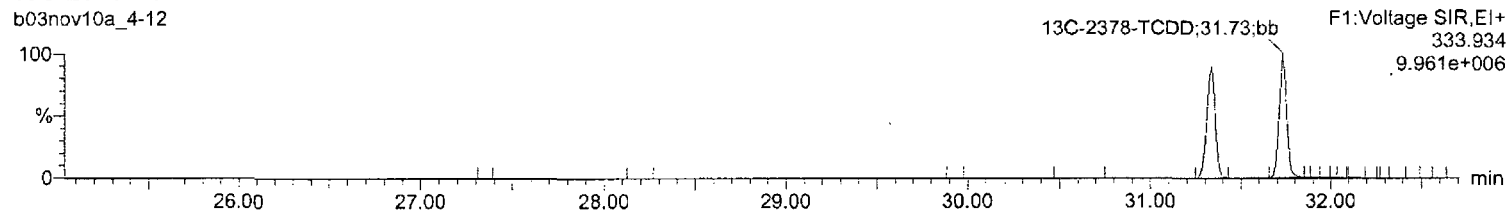
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**13C-2378-TCDD**

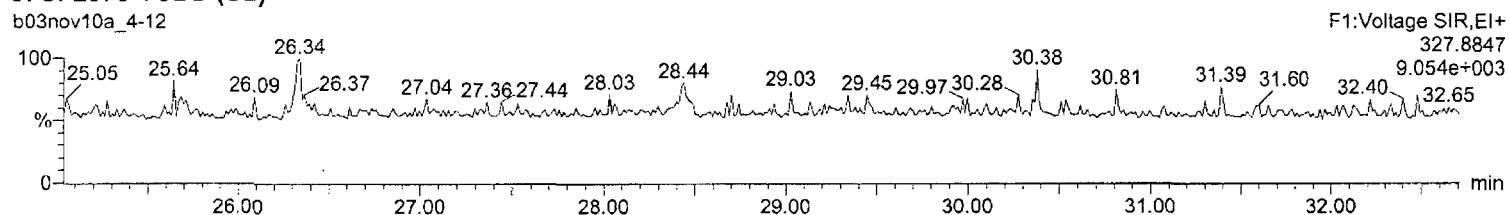
b03nov10a_4-12

**13C-2378-TCDD**

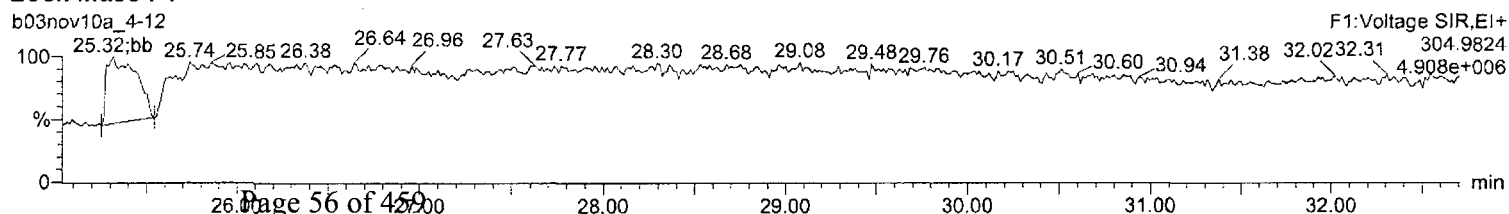
b03nov10a_4-12

**37Cl-2378-TCDD (SS)**

b03nov10a_4-12

**Lock Mass F1**

b03nov10a_4-12



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742007
Client Sample: 8290 TCDD Soil
Client ID: JA58900-9
Batch ID: 17194
Run Date: 11/05/2010 00:28
Data File: b03nov10a_4-13
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/13/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.47 g

Project: ACCU00309
Matrix: Soil
%Moisture: 20.8
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	JK		0.0506	pg/g	0.0467	0.938

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		160	188	pg/g	85.2	(40%-135%)

Comments:

- J** Value is estimated
K Estimated Maximum Possible Concentration

Quantify Sample Summary Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

Last Altered: Friday, November 05, 2010 5:05:42 PM Eastern Standard Time

Printed: Friday, November 05, 2010 5:10:17 PM Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-13, Date: 05-Nov-2010, Time: 00:28:42, ID: 1742007-1, Description: 47345, Job: HMS8290TGL, Task: HRP763_1, User: MJC

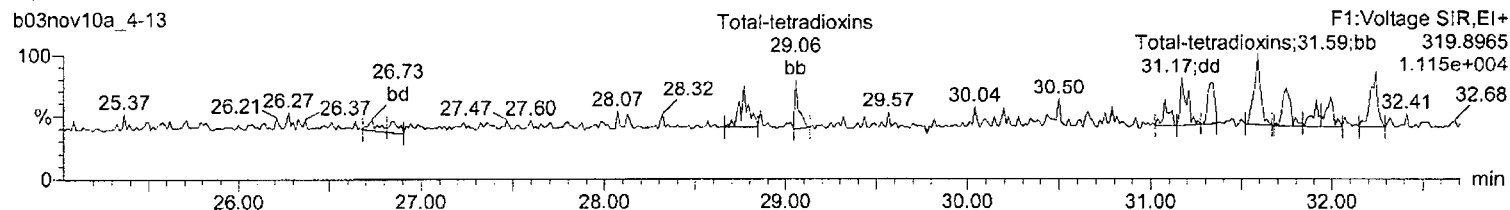
	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	1.81e2	1.34e2	3.15e2	31.75	1.000	1.35	YES	0.027	0.0249	3.39e3	961	3.5	3.23e3	933	3.5	bd
2	12378-PeCDD	1.25e2	5.08e1	1.75e2	34.59	1.002	2.45	YES	0.017	0.0290	2.16e3	1410	1.5	1.59e3	758	2.1	bb
3	123478-HxCDD							NO		0.0432		1012			1200		
4	123678-HxCDD							NO		0.0400		1012			1200		
5	123789-HxCDD							NO		0.0447		1012			1200		
6	1234678-HpCDD	8.67e2	8.45e2	1.71e3	40.73	1.000	1.03	NO	0.218	0.0388	1.38e4	708	19.5	1.53e4	652	23.5	bd
7	OCDD	1.13e4	1.19e4	2.33e4	45.18	1.000	0.95	NO	3.881	0.0901	1.27e5	813	156.7	1.45e5	1011	143.2	bd
8	2378-TCDF	2.41e3	2.98e3	5.39e3	31.21	1.000	0.81	NO	0.274	0.0277	4.44e4	1361	32.6	4.66e4	1717	27.2	bb
9	12378-PeCDF	1.81e2	7.87e1	2.59e2	33.70	1.000	2.30	YES	0.016	0.0308	3.95e3	1967	2.0	3.69e3	1882	2.0	bb
10	23478-PeCDF	2.71e2	1.70e2	4.41e2	34.34	1.019	1.59	NO	0.028	0.0315	9.83e3	1967	5.0	4.45e3	1882	2.4	bb
11	123478-HxCDF	9.27e1	9.17e1	1.84e2	36.48	0.998	1.01	YES	0.017	0.0239	2.04e3	1223	1.7	2.99e3	489	6.1	dd
12	123678-HxCDF	1.00e2	5.84e1	1.58e2	36.59	1.001	1.71	YES	0.012	0.0205	2.08e3	1223	1.7	3.29e3	489	6.7	db
13	234678-HxCDF	9.04e1	7.44e1	1.65e2	37.10	1.014	1.21	NO	0.014	0.0227	2.04e3	1223	1.7	3.69e3	489	7.6	bb
14	123789-HxCDF							NO		0.0274		1223			489		
15	1234678-HpCDF	3.90e2	4.83e2	8.73e2	39.44	1.001	0.81	YES	0.073	0.0266	6.95e3	946	7.3	7.84e3	728	10.8	bb
16	1234789-HpCDF							NO		0.0365		946			728		
17	OCDF	2.23e2	2.76e2	4.99e2	45.48	1.007	0.81	NO	0.067	0.0522	6.38e3	515	12.4	5.08e3	793	6.4	dd
18	13C-2378-TCDD	5.06e5	6.35e5	1.14e6	31.73	1.013	0.80	NO	85.226	0.0520	9.99e6	2252	4436.8	1.24e7	1946	6372.3	bb
19	13C-12378-PeCDD	5.95e5	3.78e5	9.73e5	34.53	1.102	1.57	NO	85.739	0.0603	1.33e7	2466	5392.6	8.40e6	1664	5049.2	bb
20	13C-123678-HxCDD	5.07e5	4.02e5	9.09e5	37.30	0.993	1.26	NO	85.836	0.162	9.55e6	4956	1927.7	7.61e6	4549	1673.2	bb
21	13C-1234678-HpCDD	4.06e5	3.75e5	7.81e5	40.73	1.085	1.08	NO	102.449	0.155	5.44e6	3361	1618.4	5.09e6	3205	1587.6	bb
22	13C-OCDD	5.72e5	6.33e5	1.21e6	45.16	1.203	0.90	NO	189.297	0.325	5.79e6	4539	1276.2	6.48e6	6932	934.7	bb
23	13C-2378-TCDF	8.89e5	1.11e6	2.00e6	31.19	0.996	0.80	NO	92.001	0.0316	1.51e7	2109	7138.0	1.88e7	2039	9204.9	bb
24	13C-12378-PeCDF	1.05e6	6.69e5	1.72e6	33.70	1.076	1.57	NO	85.037	0.0566	2.45e7	3867	6340.5	1.55e7	3041	5109.6	bd
25	13C-123678-HxCDF	4.16e5	7.92e5	1.21e6	36.57	0.974	0.53	NO	77.778	0.0671	8.15e6	2539	3209.3	1.54e7	3242	4739.2	bb
26	13C-1234678-HpCDF	2.92e5	6.43e5	9.35e5	39.42	1.050	0.45	NO	90.821	0.0984	4.62e6	2851	1619.8	1.01e7	2772	3640.8	bb
27	13C-1234-TCDD	5.28e5	6.67e5	1.19e6	31.33	0.000	0.79	NO	100.000	0.0582	9.55e6	2252	4241.2	1.23e7	1946	6309.2	bb
28	13C-123789-HxCDD	5.33e5	4.19e5	9.53e5	37.55	0.000	1.27	NO	100.000	0.180	8.88e6	4956	1791.9	7.00e6	4549	1539.7	bb
29	37Cl-2378-TCDD (SS)									0.0115		913					
30	13C-23478-PeCDF (SS)	1.55e3	1.11e3	2.66e3	34.32	1.018	1.39	NO	0.165	0.0553	3.88e4	3867	10.0	2.63e4	3041	8.6	bb

Method 8290 Quantification Report

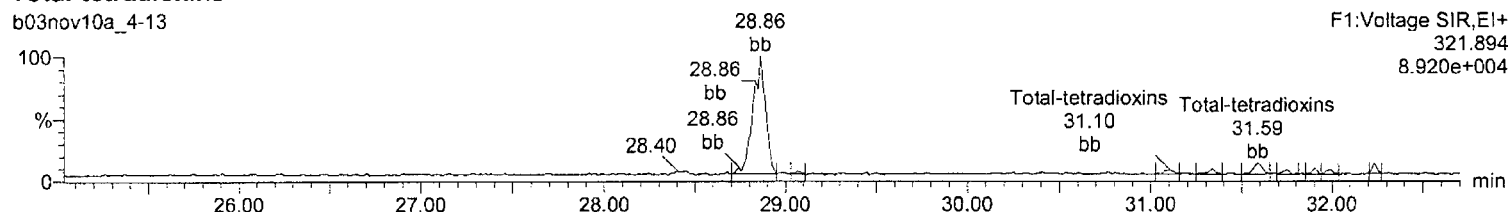
Printed: Friday, November 05, 2010 4:18:12 PM Eastern Standard Time

Task: HRP763_1, User: MJC

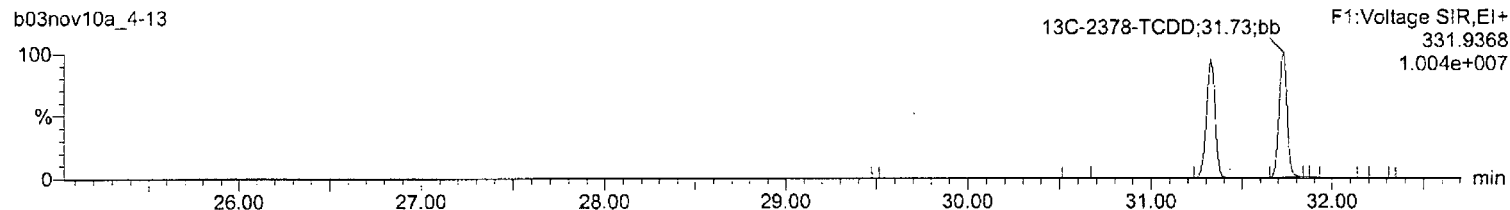
b03nov10a 4-13



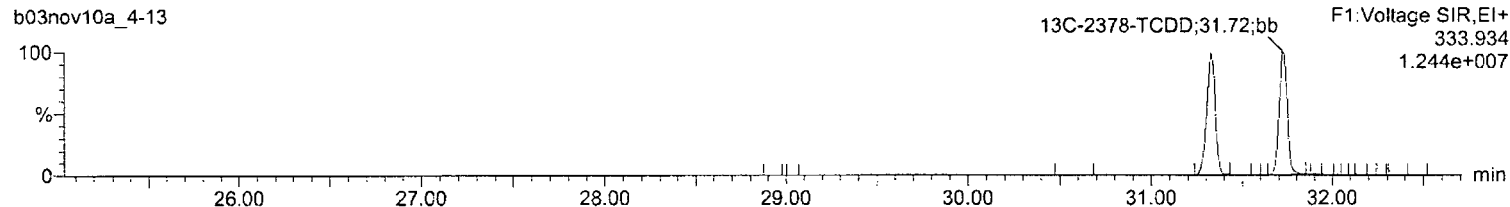
b03nov10a 4-13



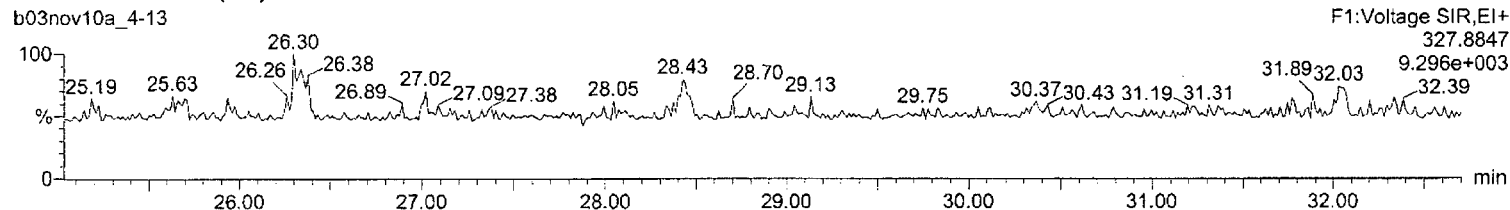
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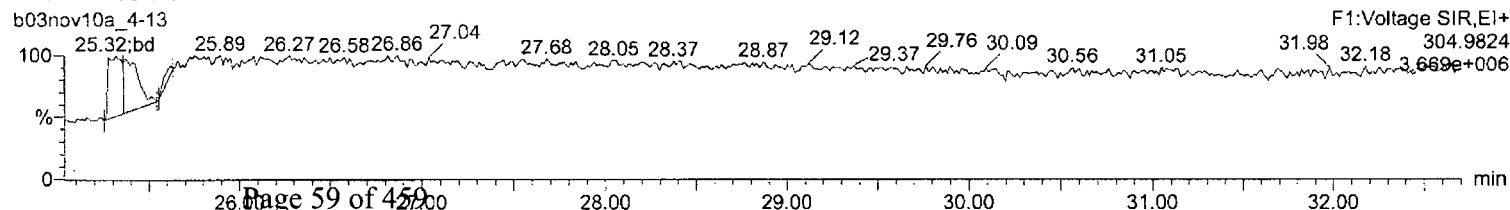
b03nov10a_4-13



b03nov10a_4-13



b03nov10a 4-13



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742008
Client Sample: 8290 TCDD Soil
Client ID: JA58900-10
Batch ID: 17194
Run Date: 11/05/2010 04:38
Data File: b03nov10a_5-4
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/13/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.99 g

Project: ACCU00309
Matrix: Soil
%Moisture: 25.3
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	J	0.0785		pg/g	0.0456	0.957

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		170	191	pg/g	88.6	(40%-135%)

Comments:

J Value is estimated /

K Estimated Maximum Possible Concentration

Quantify Sample Summary Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 3:26:48 PM Eastern Standard Time

Printed: Friday, November 05, 2010 3:34:43 PM Eastern Standard Time

Page
4

Method: Untitled 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-4, Date: 05-Nov-2010, Time: 04:38:17, ID: 1742008-1, Description: 17194 HMS8290TCS 7/11/10
17315 HMS8290TCL, Task: HRP763_1, User: MJC 9 Nov 10

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/UL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	1.78e2	2.60e2	4.38e2	31.77	1.001	0.68	NO	0.041	0.0238	3.33e3	901	3.7	1.03e4	858	12.0	bb
2	12378-PeCDD	2.02e2	2.34e2	4.36e2	34.55	1.000	0.86	YES	0.049	0.0428	5.01e3	1393	3.6	3.83e3	1220	3.1	bb
3	123478-HxCDD	6.51e2	3.62e2	1.01e3	37.32	1.000	1.80	YES	0.122	0.0601	1.38e4	1474	9.4	8.89e3	1300	6.8	db
4	123678-HxCDD							NO		0.0556		1474			1300		
5	123789-HxCDD	2.57e2	1.98e2	4.55e2	37.57	1.007	1.30	NO	0.057	0.0622	4.87e3	1474	3.3	4.63e3	1300	3.6	bb
6	1234678-HpCDD	5.39e3	5.28e3	1.07e4	40.75	1.000	1.02	NO	1.573	0.0661	7.97e4	972	82.0	7.11e4	971	73.3	bd
7	OCDD	4.04e4	4.31e4	8.35e4	45.17	1.000	0.94	NO	16.862	0.217	4.08e5	1687	241.9	4.27e5	1730	246.7	bd
8	2378-TCDF	2.55e3	3.16e3	5.71e3	31.22	1.000	0.81	NO	0.335	0.0356	4.31e4	2032	21.2	4.97e4	1313	37.8	db
9	12378-PeCDF	2.98e2	2.49e2	5.47e2	33.72	1.000	1.19	YES	0.040	0.0502	8.50e3	2733	3.1	7.08e3	2409	2.9	bb
10	23478-PeCDF	7.24e2	3.93e2	1.12e3	34.34	1.019	1.84	YES	0.083	0.0513	1.50e4	2733	5.5	9.28e3	2409	3.9	db
11	123478-HxCDF	5.32e2	5.29e2	1.06e3	36.50	0.998	1.01	YES	0.101	0.0424	1.08e4	1292	8.4	8.84e3	1305	6.8	dd
12	123678-HxCDF	3.32e2	3.20e2	6.53e2	36.60	1.001	1.04	YES	0.054	0.0364	6.07e3	1292	4.7	7.35e3	1305	5.6	db
13	234678-HxCDF	3.93e2	3.97e2	7.90e2	37.11	1.014	0.99	YES	0.072	0.0403	8.51e3	1292	6.6	1.03e4	1305	7.9	bb
14	123789-HxCDF							NO		0.0487		1292			1305		
15	1234678-HpCDF	2.56e3	2.59e3	5.15e3	39.45	1.000	0.99	NO	0.485	0.0391	3.84e4	1116	34.5	3.83e4	911	42.1	bb
16	1234789-HpCDF							NO		0.0537		1116			911		
17	OCDF	2.28e3	1.90e3	4.18e3	45.50	1.007	1.20	YES	0.683	0.112	2.79e4	821	34.0	2.65e4	1357	19.5	bd
18	13C-2378-TCDD	4.67e5	5.91e5	1.06e6	31.73	1.013	0.79	NO	88.558	0.0517	9.66e6	2056	4699.5	1.22e7	1616	7539.8	bb
19	13C-12378-PeCDD	5.29e5	3.33e5	8.62e5	34.54	1.102	1.59	NO	85.012	0.0812	1.09e7	2609	4176.6	6.81e6	2285	2979.0	bd
20	13C-123678-HxCDD	5.25e5	4.02e5	9.27e5	37.32	0.993	1.31	NO	84.768	0.159	8.75e6	4944	1769.9	6.84e6	3293	2075.7	bd
21	13C-1234678-HpCDD	3.50e5	3.25e5	6.75e5	40.74	1.084	1.08	NO	85.758	0.168	4.55e6	2842	1601.7	4.29e6	3422	1254.2	bd
22	13C-OCDD	4.70e5	5.24e5	9.94e5	45.17	1.202	0.90	NO	151.263	0.276	4.48e6	3146	1423.9	4.93e6	5438	907.2	bd
23	13C-2378-TCDF	7.71e5	9.64e5	1.73e6	31.21	0.996	0.80	NO	89.264	0.0377	1.27e7	1460	8716.1	1.59e7	2894	5479.5	bb
24	13C-12378-PeCDF	9.03e5	5.73e5	1.48e6	33.71	1.076	1.57	NO	81.718	0.0770	2.01e7	3985	5047.1	1.28e7	4276	2991.6	bd
25	13C-123678-HxCDF	4.07e5	7.44e5	1.15e6	36.58	0.974	0.55	NO	71.789	0.0955	7.15e6	3254	2195.8	1.37e7	4003	3420.1	dd
26	13C-1234678-HpCDF	2.61e5	5.71e5	8.32e5	39.44	1.050	0.46	NO	78.276	0.120	3.83e6	2993	1278.2	8.41e6	3025	2780.6	bd
27	13C-1234-TCDD	4.75e5	5.93e5	1.07e6	31.34	0.000	0.80	NO	100.000	0.0579	8.46e6	2056	4115.9	1.08e7	1616	6666.2	bb
28	13C-123789-HxCDD	5.69e5	4.15e5	9.83e5	37.57	0.000	1.37	NO	100.000	0.177	8.08e6	4944	1634.4	6.43e6	3293	1951.8	dd
29	37Cl-2378-TCDD (SS)									0.0123		944					
30	13C-23478-PeCDF (SS)	1.24e3	9.30e2	2.17e3	34.34	1.019	1.33	NO	0.157	0.0807	3.28e4	3985	8.2	2.40e4	4276	5.6	bb

Quantify Sample Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

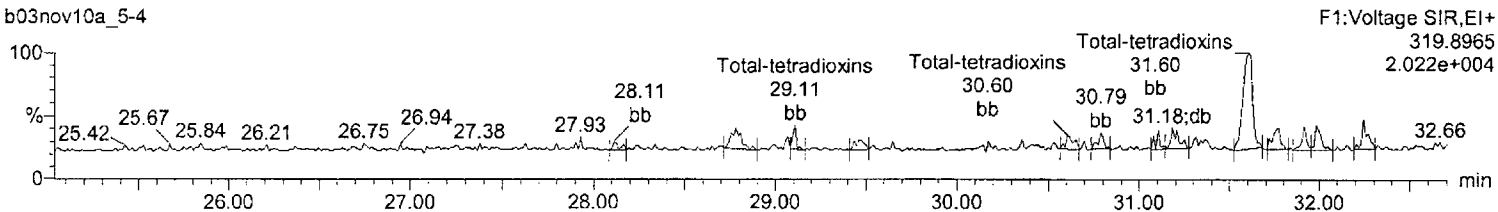
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Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

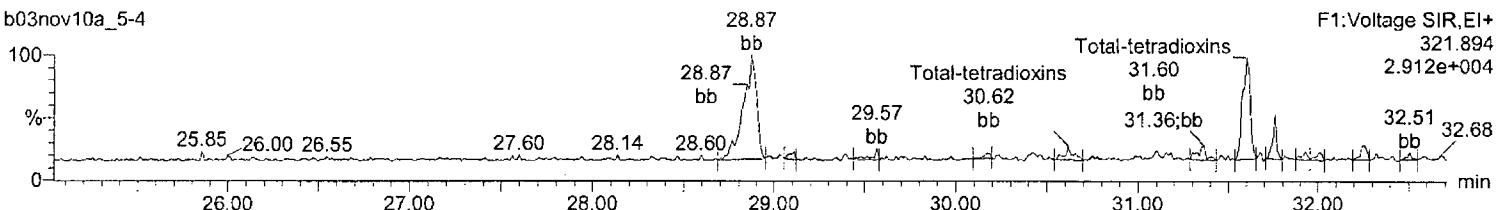
Name: b03nov10a_5-4, Date: 05-Nov-2010, Time: 04:38:17, ID: 1742008-1, Description: 17315, Job: HMS8290TCL,
Task: HRP763_1, User: MJC

Total-tetradoxins

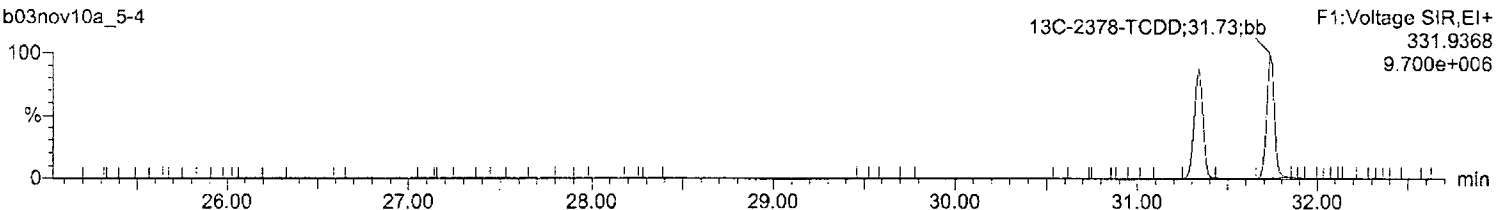
b03nov10a_5-4

**Total-tetradoxins**

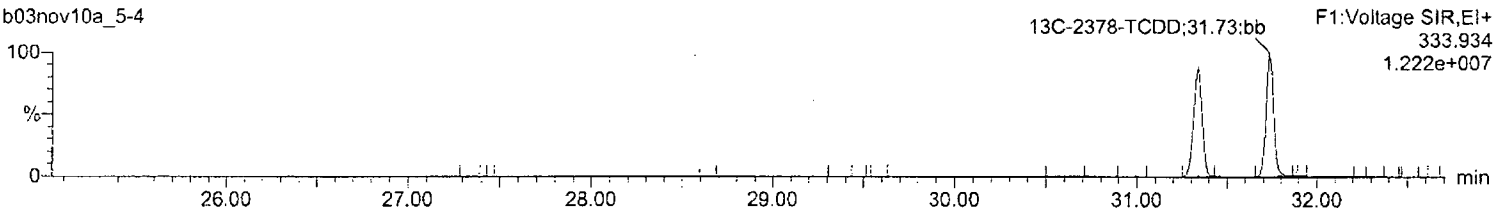
b03nov10a_5-4

**13C-2378-TCDD**

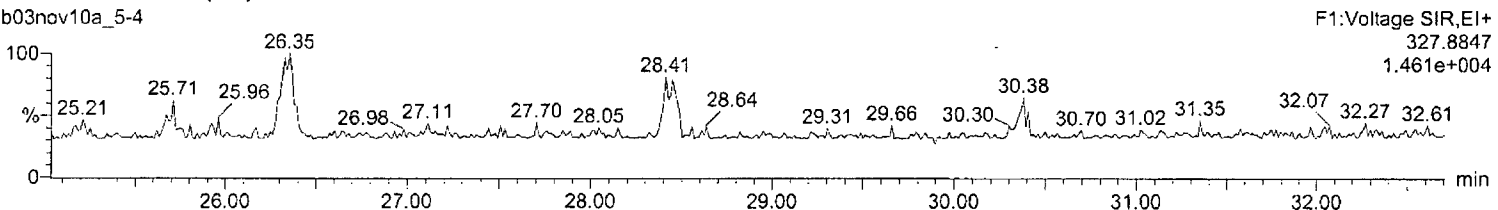
b03nov10a_5-4

**13C-2378-TCDD**

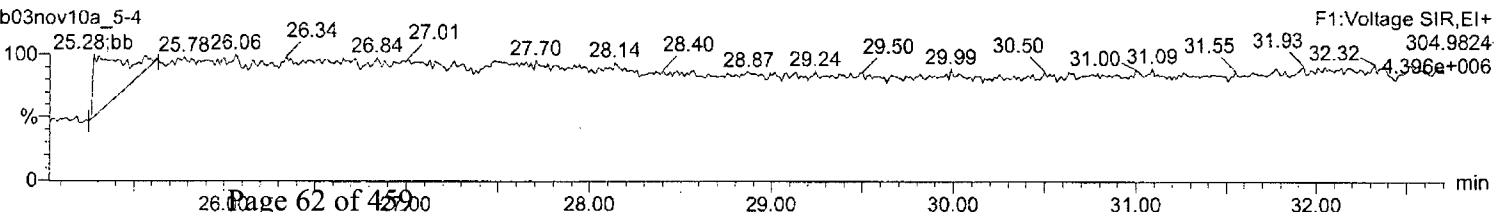
b03nov10a_5-4

**37Cl-2378-TCDD (SS)**

b03nov10a_5-4

**Lock Mass F1**

b03nov10a_5-4



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742009
Client Sample: 8290 TCDD Soil
Client ID: JA58900-11
Batch ID: 17194
Run Date: 11/05/2010 05:26
Data File: b03nov10a_5-5
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/13/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.06 g

Project: ACCU00309
Matrix: Soil
%Moisture: 22.2
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.0506		pg/g	0.0506	0.984

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		169	197	pg/g	86.0	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

U Analyte was analyzed for , but not detected above the specified detection limit.

Quantify Sample Summary Report
Method 8290 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 3:26:48 PM Eastern Standard Time

Printed: Friday, November 05, 2010 3:34:52 PM Eastern Standard Time

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Method: Untitled 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-5, Date: 05-Nov-2010, Time: 05:26:43, ID: 1742009-1, Description: 17194 HMS8290TCS 7/16/10
Job: HMS8290TCL, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD							NO		0.0257		659			787		
2	12378-PeCDD	8.21e1	5.24e1	1.35e2	34.54	1.000	1.57	NO	0.019	0.0361	1.73e3	1083	1.6	1.58e3	699	2.3	bb
3	123478-HxCDD							NO		0.0666		950			1305		
4	123678-HxCDD							NO		0.0617		950			1305		
5	123789-HxCDD							NO		0.0690		950			1305		
6	1234678-HpCDD	4.77e2	6.14e2	1.09e3	40.75	1.000	0.78	YES	0.216	0.0559	8.73e3	670	13.0	8.86e3	547	16.2	bb
7	OCDD	6.07e3	6.54e3	1.26e4	45.17	1.000	0.93	NO	3.393	0.114	6.00e4	637	94.1	7.21e4	732	98.4	bb
8	2378-TCDF	1.64e3	1.85e3	3.49e3	31.22	1.001	0.88	NO	0.268	0.0283	2.63e4	894	29.4	3.19e4	1207	26.4	bb
9	12378-PeCDF							NO		0.0449		1689			1421		
10	23478-PeCDF	1.74e2	5.22e1	2.26e2	34.35	1.019	3.34	YES	0.024	0.0458	4.93e3	1689	2.9	3.02e3	1421	2.1	bb
11	123478-HxCDF	1.24e2	5.66e1	1.81e2	36.47	0.997	2.19	YES	0.027	0.0330	2.70e3	749	3.6	2.48e3	691	3.6	bb
12	123678-HxCDF	8.28e1	5.52e1	1.38e2	36.60	1.001	1.50	YES	0.018	0.0283	2.30e3	749	3.1	1.60e3	691	2.3	bb
13	234678-HxCDF	1.08e2	8.67e1	1.94e2	37.09	1.014	1.24	NO	0.027	0.0314	2.92e3	749	3.9	3.22e3	691	4.7	bb
14	123789-HxCDF							NO		0.0379		749			691		
15	1234678-HpCDF	4.05e2	5.22e2	9.28e2	39.45	1.001	0.78	YES	0.128	0.0349	8.36e3	642	13.0	1.05e4	604	17.4	bb
16	1234789-HpCDF							NO		0.0480		642			604		
17	OCDF	1.45e2	2.15e2	3.60e2	45.50	1.007	0.67	YES	0.078	0.0719	2.97e3	389	7.6	4.60e3	679	6.8	bd
18	13C-2378-TCDD	3.60e5	4.57e5	8.17e5	31.73	1.013	0.79	NO	86.006	0.0631	7.35e6	2061	3564.2	9.43e6	1386	6806.1	bb
19	13C-12378-PeCDD	4.15e5	2.60e5	6.75e5	34.54	1.102	1.60	NO	83.778	0.0888	8.83e6	2027	4353.9	5.42e6	2087	2597.6	bb
20	13C-123678-HxCDD	3.61e5	2.92e5	6.53e5	37.31	0.993	1.23	NO	85.604	0.223	6.25e6	4124	1516.2	4.91e6	4784	1026.9	bb
21	13C-1234678-HpCDD	2.60e5	2.44e5	5.04e5	40.73	1.084	1.07	NO	91.711	0.176	3.35e6	2124	1578.8	3.17e6	2956	1073.1	bb
22	13C-OCDD	3.52e5	3.94e5	7.46e5	45.16	1.202	0.89	NO	162.807	0.233	3.41e6	3074	1110.3	3.77e6	2526	1493.1	bd
23	13C-2378-TCDF	5.88e5	7.38e5	1.33e6	31.19	0.995	0.80	NO	85.801	0.0443	1.00e7	1706	5888.3	1.26e7	2229	5675.0	bb
24	13C-12378-PeCDF	6.40e5	4.02e5	1.04e6	33.71	1.076	1.59	NO	72.586	0.0846	1.37e7	4660	2933.7	8.68e6	2325	3733.1	bd
25	13C-123678-HxCDF	2.52e5	4.89e5	7.41e5	36.58	0.974	0.52	NO	66.279	0.0981	4.90e6	2358	2079.6	9.36e6	3396	2756.5	bb
26	13C-1234678-HpCDF	1.76e5	3.91e5	5.67e5	39.43	1.050	0.45	NO	76.473	0.0984	2.61e6	2050	1271.1	5.72e6	1772	3226.4	bd
27	13C-1234-TCDD	3.75e5	4.73e5	8.48e5	31.34	0.000	0.79	NO	100.000	0.0706	6.48e6	2061	3143.4	8.31e6	1386	5996.7	bb
28	13C-123789-HxCDD	3.74e5	3.12e5	6.86e5	37.56	0.000	1.20	NO	100.000	0.248	5.88e6	4124	1425.9	4.68e6	4784	978.9	bb
29	37Cl-2378-TCDD (SS)	6.60e1		6.60e1	31.67	0.998			0.008	0.0127	1.13e3	744	1.5				bb
30	13C-23478-PeCDF (SS)	2.83e3	1.68e3	4.51e3	34.33	1.018	1.69	NO	0.464	0.101	5.97e4	4660	12.8	4.15e4	2325	17.9	bb

Quantify Sample Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

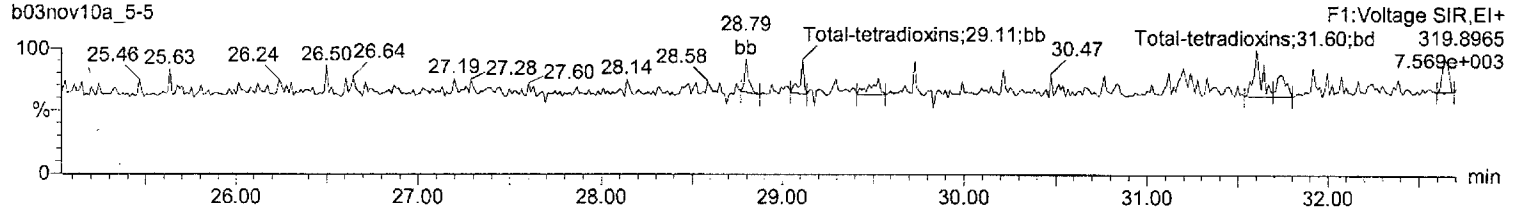
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

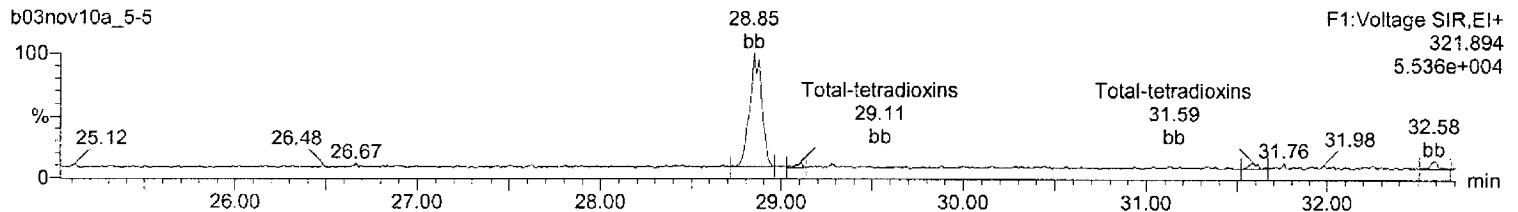
Name: b03nov10a_5-5, Date: 05-Nov-2010, Time: 05:26:43, ID: 1742009-1, Description: 17315, Job: HMS8290TCL,
Task: HRP763_1, User: MJC

Total-tetradoxins

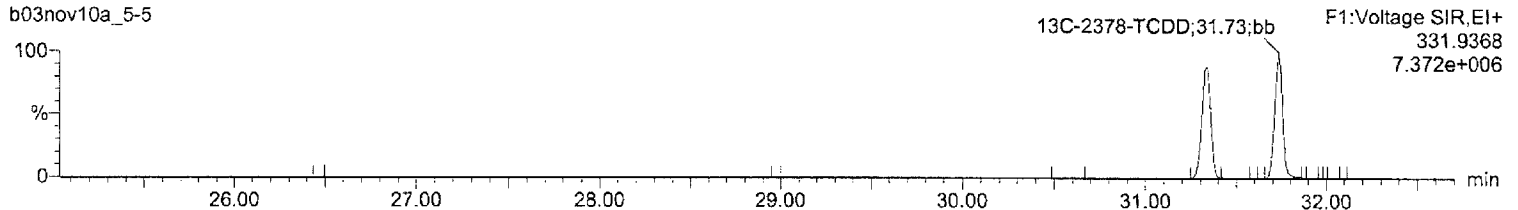
b03nov10a_5-5

**Total-tetradoxins**

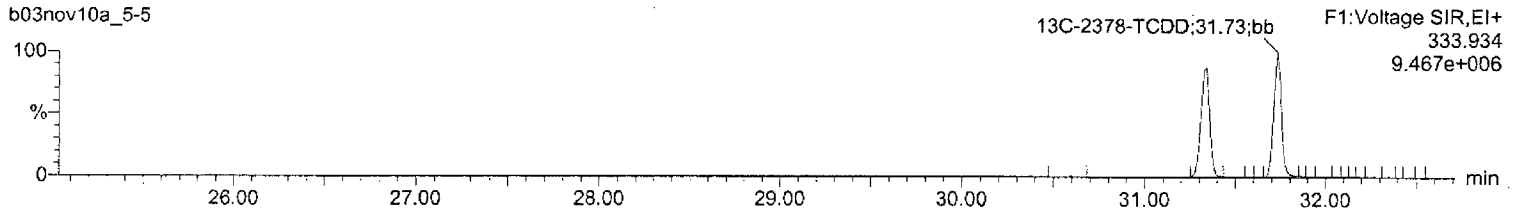
b03nov10a_5-5

**13C-2378-TCDD**

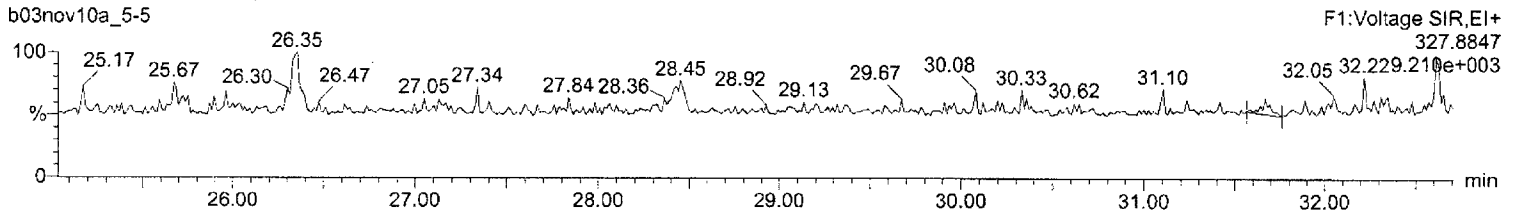
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**13C-2378-TCDD**

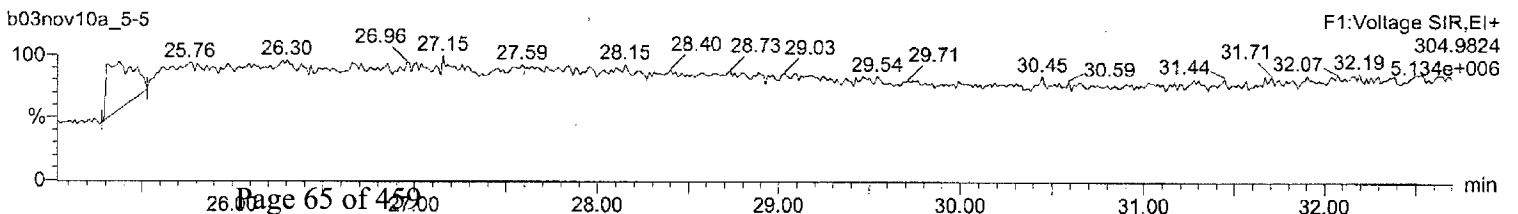
b03nov10a_5-5

**37Cl-2378-TCDD (SS)**

b03nov10a_5-5

**Lock Mass F1**

b03nov10a_5-5



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number:	JA58900	Client:	ACCU001	Project:	ACCU00309
Lab Sample ID:	1742010	Date Collected:	10/13/2010 00:00	Matrix:	Soil
Client Sample:	8290 TCDD Soil	Date Received:	10/16/2010 09:40	%Moisture:	20.2
Client ID:	JA58900-12			Prep Basis:	Dry Weight
Batch ID:	17194	Method:	SW846 8290A		
Run Date:	11/05/2010 06:15	Analyst:	MJC	Instrument:	HRP763
Data File:	b03nov10a_5-6			Dilution:	1
Prep Batch:	16733	Prep Method:	SW846 3540C		
Prep Date:	19-OCT-10	Aliquot:	13.56 g		

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.0504		pg/g	0.0504	0.924

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		136	185	pg/g	73.6	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration
U Analyte was analyzed for , but not detected above the specified detection limit.

Quantify Sample Summary Report
Method 8290 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 3:26:48 PM Eastern Standard Time

Printed: Friday, November 05, 2010 3:36:05 PM Eastern Standard Time

Page

Method: Untitled 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-6, Date: 05-Nov-2010, Time: 06:15:09, ID: 1742010-1, Description: 17194, Job: HMS8290TCS, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/UL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD							NO		0.0273		669			824		
2	12378-PeCDD							NO		0.0308		802			752		
3	123478-HxCDD							NO		0.0440		574			777		
4	123678-HxCDD							NO		0.0408		574			777		
5	123789-HxCDD							NO		0.0456		574			777		
6	1234678-HpCDD	8.67e1	1.06e2	1.92e2	40.74	1.000	0.82	YES	0.043	0.0647	4.31e3	531	8.1	3.00e3	709	4.2	bd
7	OCDD	2.51e3	2.69e3	5.20e3	45.18	1.000	0.93	NO	1.926	0.182	2.76e4	1121	24.6	2.96e4	462	64.0	bd
8	2378-TCDF	1.19e3	1.62e3	2.81e3	31.22	1.000	0.73	NO	0.201	0.0227	1.81e4	718	25.2	2.79e4	1035	27.0	bb
9	12378-PeCDF	1.17e2	6.61e1	1.83e2	33.71	1.000	1.77	NO	0.018	0.0305	3.31e3	1021	3.2	1.76e3	1378	1.3	bb
10	23478-PeCDF	1.82e2	1.49e2	3.31e2	34.35	1.019	1.22	YES	0.033	0.0312	4.75e3	1021	4.7	3.94e3	1378	2.9	bb
11	123478-HxCDF							NO		0.0280		679			502		
12	123678-HxCDF							NO		0.0240		679			502		
13	234678-HxCDF							NO		0.0266		679			502		
14	123789-HxCDF							NO		0.0321		679			502		
15	1234678-HpCDF							NO		0.0323		573			452		
16	1234789-HpCDF							NO		0.0443		573			452		
17	OCDF							NO		0.0845		411			496		
18	13C-2378-TCDD	3.55e5	4.49e5	8.04e5	31.73	1.013	0.79	NO	73.628	0.0455	7.15e6	1920	3724.8	9.32e6	1118	8334.2	bb
19	13C-12378-PeCDD	4.03e5	2.60e5	6.63e5	34.54	1.102	1.55	NO	71.618	0.0957	8.93e6	3716	2402.3	5.64e6	1711	3298.8	bb
20	13C-123678-HxCDD	3.30e5	2.61e5	5.91e5	37.31	0.993	1.26	NO	93.637	0.206	5.73e6	4328	1324.8	4.62e6	2868	1612.8	bb
21	13C-1234678-HpCDD	2.27e5	2.17e5	4.45e5	40.73	1.084	1.04	NO	97.844	0.172	2.93e6	2310	1266.1	2.76e6	2006	1377.6	bd
22	13C-OCDD	2.57e5	2.85e5	5.42e5	45.16	1.202	0.90	NO	143.021	0.251	2.48e6	2186	1135.5	2.86e6	3074	930.5	bd
23	13C-2378-TCDF	6.31e5	7.92e5	1.42e6	31.21	0.996	0.80	NO	80.097	0.0297	1.05e7	1690	6186.1	1.30e7	1539	8458.2	bb
24	13C-12378-PeCDF	6.68e5	4.18e5	1.09e6	33.71	1.076	1.60	NO	65.845	0.0604	1.55e7	4100	3789.2	9.76e6	1994	4893.5	bd
25	13C-123678-HxCDF	2.61e5	4.92e5	7.54e5	36.58	0.974	0.53	NO	81.449	0.118	4.84e6	1961	2466.2	9.03e6	4089	2208.9	bd
26	13C-1234678-HpCDF	1.54e5	3.45e5	4.99e5	39.44	1.050	0.44	NO	81.339	0.144	2.30e6	2163	1062.6	5.08e6	2722	1867.3	bd
27	13C-1234-TCDD	4.33e5	5.42e5	9.75e5	31.34	0.000	0.80	NO	100.000	0.0509	7.94e6	1920	4137.0	1.00e7	1118	8949.3	bb
28	13C-123789-HxCDD	3.18e5	2.49e5	5.68e5	37.56	0.000	1.28	NO	100.000	0.229	5.28e6	4328	1218.9	4.29e6	2868	1495.1	bb
29	37Cl-2378-TCDD (SS)									0.0111		632					
30	13C-23478-PeCDF (SS)	2.37e3	1.37e3	3.74e3	34.34	1.019	1.73	NO	0.368	0.0775	5.94e4	4100	14.5	2.96e4	1994	14.8	bb

17194

HMS8290TCS

3/16/10

Due 9/16/10

Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

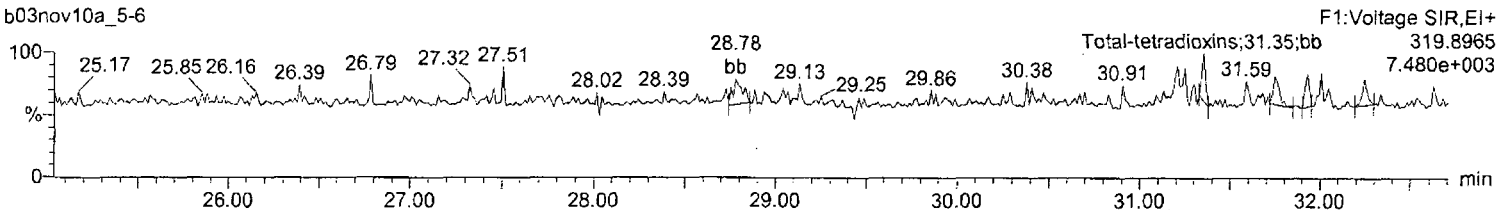
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-6, Date: 05-Nov-2010, Time: 06:15:09, ID: 1742010-1, Description: 17315, Job: HMS8290TCL,
Task: HRP763_1, User: MJC

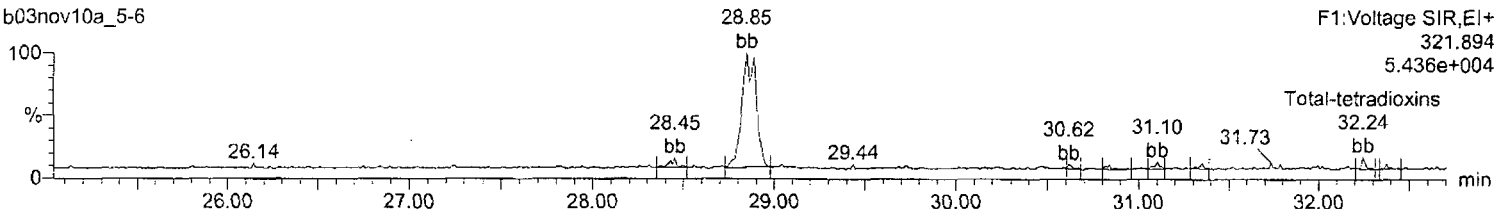
Total-tetradoxins

b03nov10a_5-6



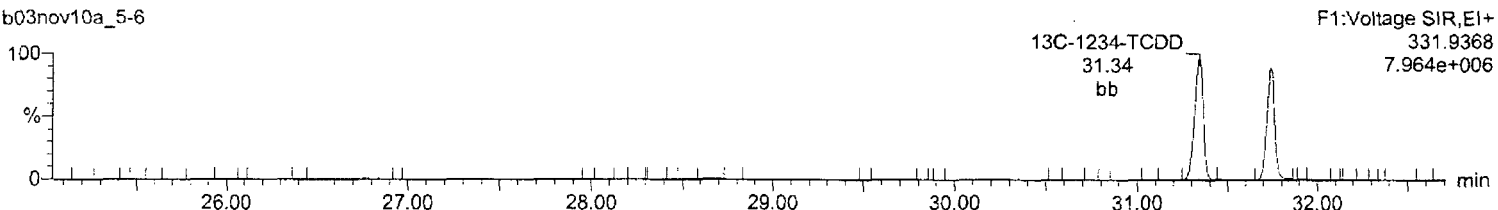
Total-tetradoxins

b03nov10a_5-6



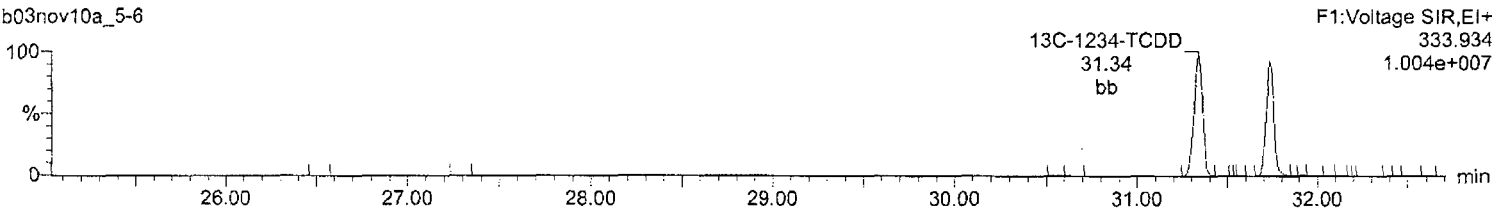
13C-2378-TCDD

b03nov10a_5-6



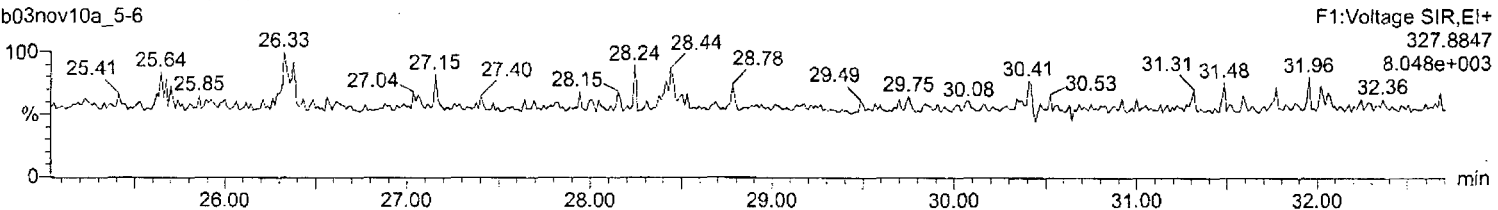
13C-2378-TCDD

b03nov10a_5-6



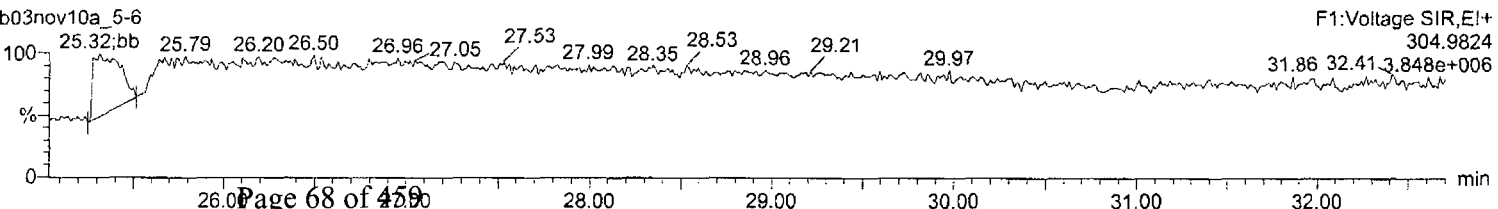
37Cl-2378-TCDD (SS)

b03nov10a_5-6



Lock Mass F1

b03nov10a_5-6



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742011
Client Sample: 8290 TCDD Soil
Client ID: JA58900-14
Batch ID: 17194
Run Date: 11/05/2010 07:03
Data File: b03nov10a_5-7
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/14/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.93 g

Project: ACCU00309
Matrix: Soil
%Moisture: 23.5
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.052		pg/g	0.052	0.938

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		174	188	pg/g	92.5	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

U Analyte was analyzed for, but not detected above the specified detection limit.

Quantify Sample Summary Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 3:26:48 PM Eastern Standard Time

Printed: Friday, November 05, 2010 3:36:15 PM Eastern Standard Time

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Method: Untitled 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-7, Date: 05-Nov-2010, Time: 07:03:34, ID: 1742011-1, Description: 17315, Job: HMS8290TGL, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	1.23e2	8.41e1	2.07e2	31.75	1.001	1.47	YES	0.022	0.0277	2.93e3	826	3.5	5.27e3	949	5.6	db
2	12378-PeCDD							NO		0.0407		1267			983		
3	123478-HxCDD	1.35e2	7.68e1	2.12e2	37.22	0.998	1.76	YES	0.033	0.0437	3.08e3	820	3.8	2.42e3	816	3.0	bd
4	123678-HxCDD	2.12e2	1.69e2	3.80e2	37.31	1.000	1.25	NO	0.056	0.0405	4.98e3	820	6.1	4.23e3	816	5.2	db
5	123789-HxCDD	9.55e1	8.44e1	1.80e2	37.54	1.007	1.13	NO	0.029	0.0453	2.86e3	820	3.5	2.56e3	816	3.1	dd
6	1234678-HpCDD	2.63e3	2.40e3	5.03e3	40.75	1.001	1.10	NO	0.836	0.0763	3.67e4	1035	35.5	3.48e4	913	38.1	bb
7	OCDD	2.56e4	2.86e4	5.42e4	45.16	1.000	0.89	NO	11.468	0.153	2.68e5	1249	214.3	2.83e5	1091	259.0	bd
8	2378-TCDF	1.62e3	2.12e3	3.74e3	31.19	1.000	0.77	NO	0.247	0.0404	2.50e4	1267	19.7	3.54e4	2072	17.1	bb
9	12378-PeCDF	2.46e2	1.35e2	3.81e2	33.66	0.999	1.83	YES	0.033	0.0401	9.39e3	1460	6.4	6.44e3	1831	3.5	bb
10	23478-PeCDF	3.01e2	1.17e2	4.17e2	34.33	1.019	2.58	YES	0.037	0.0410	6.82e3	1460	4.7	4.28e3	1831	2.3	db
11	123478-HxCDF	2.12e2	1.41e2	3.52e2	36.48	0.998	1.50	YES	0.043	0.0485	5.36e3	1081	5.0	3.86e3	1306	3.0	dd
12	123678-HxCDF							NO		0.0417		1081			1306		
13	234678-HxCDF	2.11e2	1.89e2	4.00e2	37.08	1.014	1.11	NO	0.047	0.0462	5.55e3	1081	5.1	4.87e3	1306	3.7	dd
14	123789-HxCDF							NO		0.0557		1081			1306		
15	1234678-HpCDF	1.37e3	1.43e3	2.80e3	39.43	1.000	0.95	NO	0.312	0.0443	2.29e4	1393	16.4	2.27e4	623	36.4	bb
16	1234789-HpCDF	7.90e1	8.01e1	1.59e2	41.45	1.052	0.99	NO	0.024	0.0608	1.93e3	1393	1.4	1.98e3	623	3.2	bb
17	OCDF	1.40e3	1.61e3	3.01e3	45.48	1.007	0.87	NO	0.514	0.0852	1.60e4	648	24.7	1.98e4	966	20.5	bb
18	13C-2378-TCDD	4.09e5	5.24e5	9.33e5	31.72	1.013	0.78	NO	92.497	0.0529	8.32e6	1821	4569.7	1.06e7	1389	7646.1	bb
19	13C-12378-PeCDD	4.54e5	2.89e5	7.43e5	34.53	1.102	1.57	NO	86.821	0.0831	9.82e6	1869	5256.0	6.13e6	2408	2548.1	bb
20	13C-123678-HxCDD	3.92e5	3.16e5	7.08e5	37.30	0.993	1.24	NO	89.153	0.170	6.93e6	3461	2003.2	5.43e6	3597	1509.2	bb
21	13C-1234678-HpCDD	3.09e5	2.90e5	5.99e5	40.72	1.084	1.06	NO	104.775	0.198	3.93e6	2574	1526.3	3.75e6	3348	1119.1	bd
22	13C-OCDD	4.45e5	5.04e5	9.49e5	45.15	1.202	0.88	NO	198.844	0.215	4.32e6	2044	2115.4	4.93e6	3312	1488.5	bd
23	13C-2378-TCDF	6.81e5	8.59e5	1.54e6	31.19	0.996	0.79	NO	93.805	0.0351	1.12e7	1571	7103.1	1.43e7	1896	7542.3	bb
24	13C-12378-PeCDF	7.57e5	4.78e5	1.24e6	33.70	1.076	1.58	NO	81.028	0.0708	1.61e7	3246	4974.0	1.02e7	3246	3149.8	bd
25	13C-123678-HxCDF	3.08e5	5.85e5	8.93e5	36.57	0.974	0.53	NO	76.703	0.0919	5.60e6	2544	2200.0	1.09e7	3037	3573.1	bd
26	13C-1234678-HpCDF	2.22e5	4.82e5	7.03e5	39.42	1.050	0.46	NO	91.119	0.103	3.37e6	1904	1771.4	7.34e6	2248	3264.4	bd
27	13C-1234-TCDD	4.01e5	5.00e5	9.01e5	31.33	0.000	0.80	NO	100.000	0.0593	7.22e6	1821	3966.8	9.14e6	1389	6579.7	bb
28	13C-123789-HxCDD	3.88e5	3.26e5	7.14e5	37.55	0.000	1.19	NO	100.000	0.189	6.08e6	3461	1757.2	4.84e6	3597	1344.4	bd
29	37Cl-2378-TCDD (SS)									0.0136		908					
30	13C-23478-PeCDF (SS)	2.02e3	1.34e3	3.36e3	34.33	1.019	1.51	NO	0.291	0.0792	4.06e4	3246	12.5	3.04e4	3246	9.4	bb

Quantify Sample Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

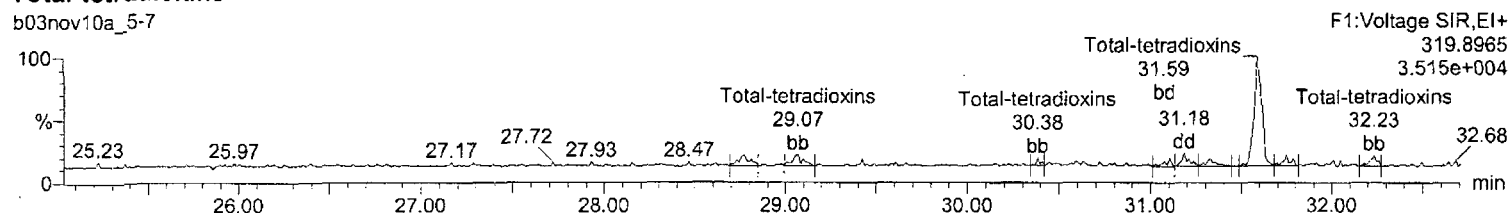
Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-7, Date: 05-Nov-2010, Time: 07:03:34, ID: 1742011-1, Description: 17315, Job: HMS8290TCL,

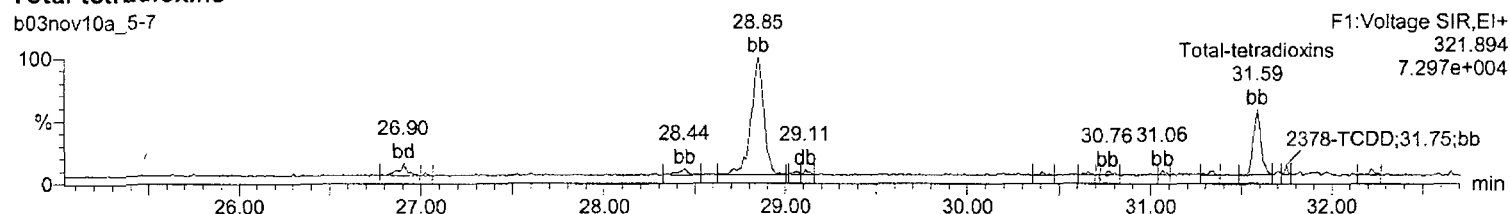
Task: HRP763_1, User: MJC

Total-tetradoxins

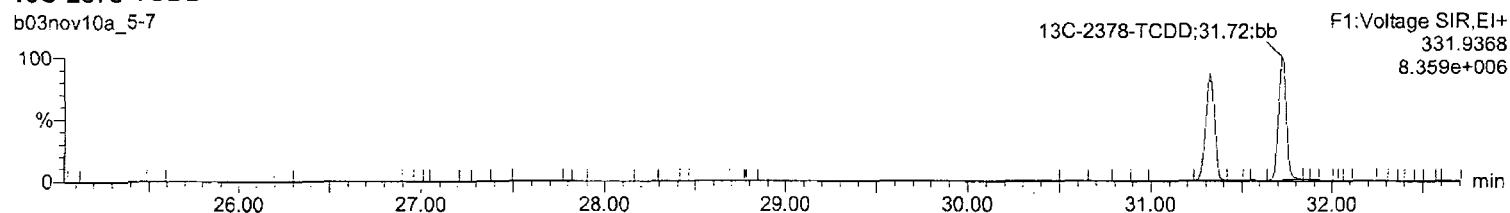
b03nov10a_5-7

**Total-tetradoxins**

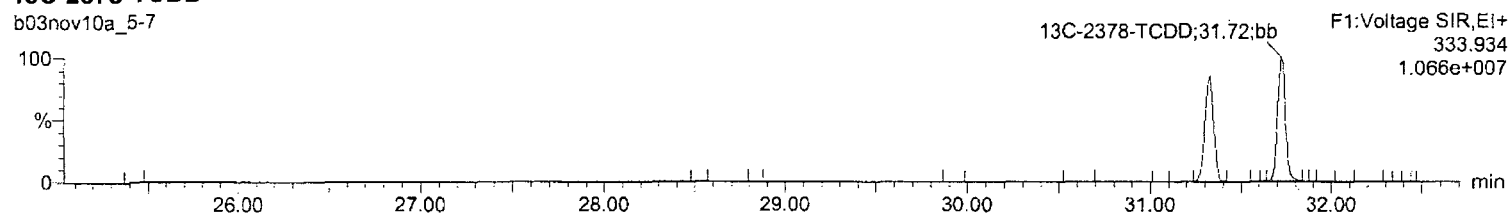
b03nov10a_5-7

**¹³C-2378-TCDD**

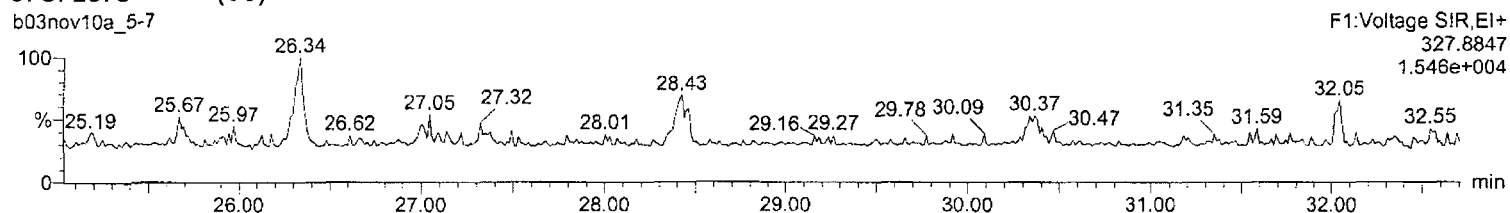
b03nov10a_5-7

**¹³C-2378-TCDD**

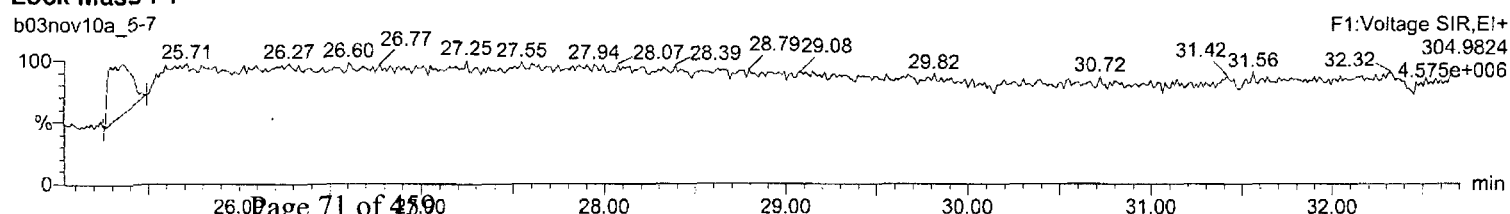
b03nov10a_5-7

**³⁷Cl-2378-TCDD (SS)**

b03nov10a_5-7

**Lock Mass F1**

b03nov10a_5-7



Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742012
Client Sample: 8290 TCDD Water
Client ID: JA58900-5
Batch ID: 17315
Run Date: 11/05/2010 07:52
Data File: b03nov10a_5-8
Prep Batch: 17115
Prep Date: 27-OCT-10

Client: ACCU001
Date Collected: 10/14/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3520C
Aliquot: 899.9 mL

Project: ACCU00309
Matrix: FB
Prep Basis: As Received
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.547		pg/L	0.547	11.1

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1880	2220	pg/L	84.6	(40%-135%)

Comments:

U Analyte was analyzed for , but not detected above the specified detection limit.

Quantify Sample Summary Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 3:26:48 PM Eastern Standard Time

Printed: Friday, November 05, 2010 3:37:29 PM Eastern Standard Time

Page

Method: Untitled 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-8, Date: 05-Nov-2010, Time: 07:52:00, ID: 1742012-1, Description: 17315, Job: HMS8290TCL, Task: HRP763_1, User: MJC

*One
9/11/10*

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD							NO		0.0246		559			588		
2	12378-PeCDD							NO		0.0346		772			609		
3	123478-HxCDD							NO		0.0405		642			617		
4	123678-HxCDD							NO		0.0375		642			617		
5	123789-HxCDD							NO		0.0420		642			617		
6	1234678-HpCDD							NO		0.0523		388			453		
7	OCDD							NO		0.111		312			432		
8	2378-TCDF							NO		0.0198		482			761		
9	12378-PeCDF							NO		0.0327		1020			1110		
10	23478-PeCDF							NO		0.0335		1020			1110		
11	123478-HxCDF							NO		0.0205		411			439		
12	123678-HxCDF							NO		0.0176		411			439		
13	234678-HxCDF							NO		0.0195		411			439		
14	123789-HxCDF							NO		0.0235		411			439		
15	1234678-HpCDF							NO		0.0311		466			401		
16	1234789-HpCDF							NO		0.0426		466			401		
17	OCDF							NO		0.123		412			609		
18	13C-2378-TCDD	3.05e5	3.88e5	6.92e5	31.73	1.013	0.79	NO	84.633	0.0668	6.08e6	1988	3057.0	7.99e6	1205	6631.7	bb
19	13C-12378-PeCDD	3.40e5	2.16e5	5.56e5	34.53	1.102	1.57	NO	80.155	0.0968	7.10e6	1498	4741.7	4.55e6	2426	1876.0	bb
20	13C-123678-HxCDD	3.24e5	2.56e5	5.80e5	37.31	0.994	1.27	NO	100.883	0.186	5.81e6	3686	1577.6	4.45e6	2105	2114.5	bb
21	13C-1234678-HpCDD	1.96e5	1.84e5	3.80e5	40.74	1.085	1.06	NO	91.919	0.197	2.48e6	2506	988.4	2.32e6	1917	1210.4	bd
22	13C-OCDD	1.93e5	2.19e5	4.12e5	45.15	1.202	0.88	NO	119.344	0.306	1.90e6	2772	684.4	2.10e6	2974	707.2	bd
23	13C-2378-TCDF	5.31e5	6.70e5	1.20e6	31.19	0.995	0.79	NO	90.217	0.0309	8.47e6	1150	7364.6	1.09e7	1254	8689.3	bb
24	13C-12378-PeCDF	5.95e5	3.79e5	9.74e5	33.71	1.076	1.57	NO	78.755	0.100	1.28e7	3277	3893.7	8.22e6	3949	2080.5	bd
25	13C-123678-HxCDF	2.52e5	4.85e5	7.38e5	36.58	0.974	0.52	NO	87.505	0.107	4.68e6	2501	1872.3	9.13e6	2413	3784.9	bb
26	13C-1234678-HpCDF	1.39e5	3.06e5	4.46e5	39.43	1.050	0.46	NO	79.794	0.145	2.05e6	1671	1228.4	4.54e6	2722	1668.8	bd
27	13C-1234-TCDD	3.25e5	4.06e5	7.31e5	31.34	0.000	0.80	NO	100.000	0.0748	5.70e6	1988	2864.9	7.05e6	1205	5852.2	bb
28	13C-123789-HxCDD	2.88e5	2.29e5	5.17e5	37.55	0.000	1.26	NO	100.000	0.206	4.69e6	3686	1273.3	3.78e6	2105	1797.8	bd
29	37Cl-2378-TCDD (SS)	6.59e1		6.59e1	31.75	1.000			0.009	0.0213	2.65e3	1033	2.6				bb
30	13C-23478-PeCDF (SS)	6.36e2	3.10e2	9.46e2	34.34	1.019	2.05	YES	0.104	0.111	1.50e4	3277	4.6	9.27e3	3949	2.3	dd

Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

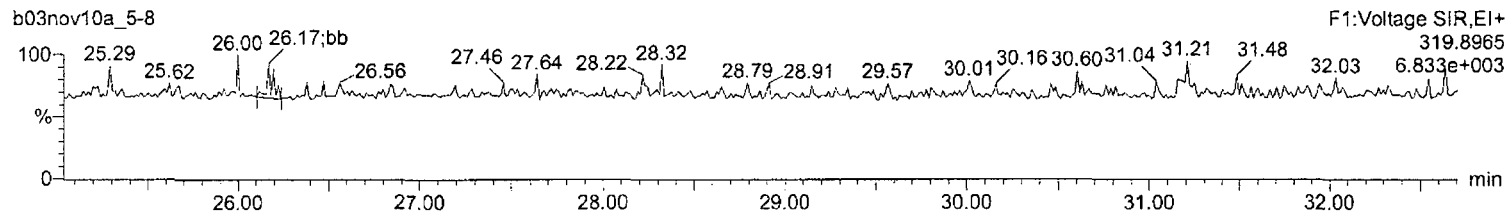
Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

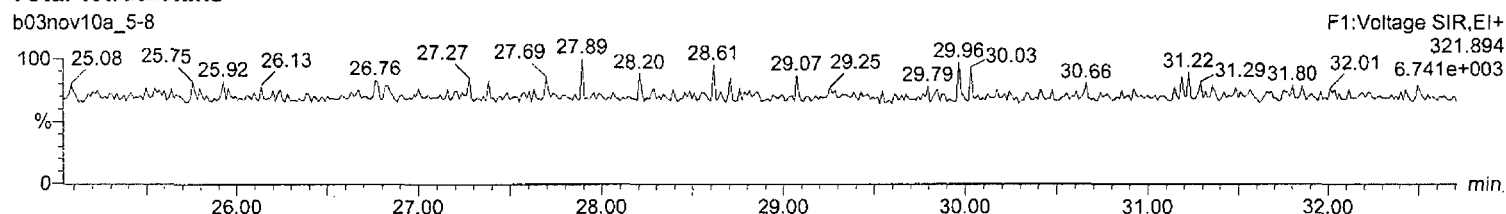
Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-8, Date: 05-Nov-2010, Time: 07:52:00, ID: 1742012-1, Description: 17315, Job: HMS8290TCL,
Task: HRP763_1, User: MJC

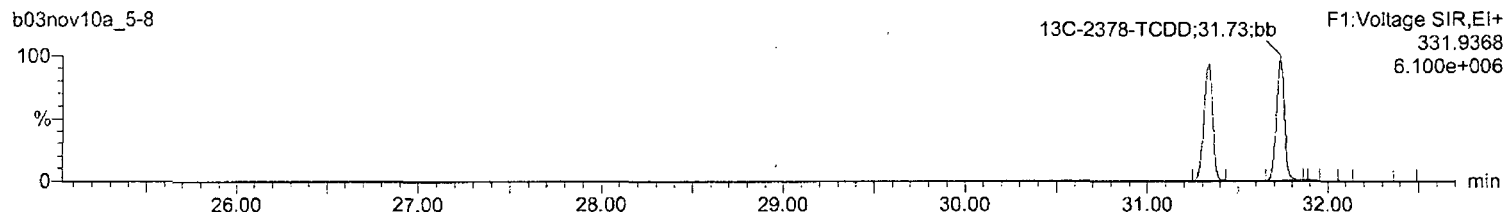
Total-tetradoxins



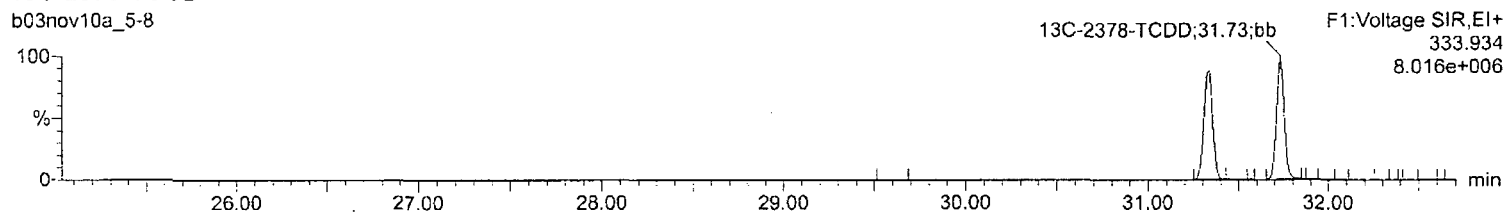
Total-tetradoxins



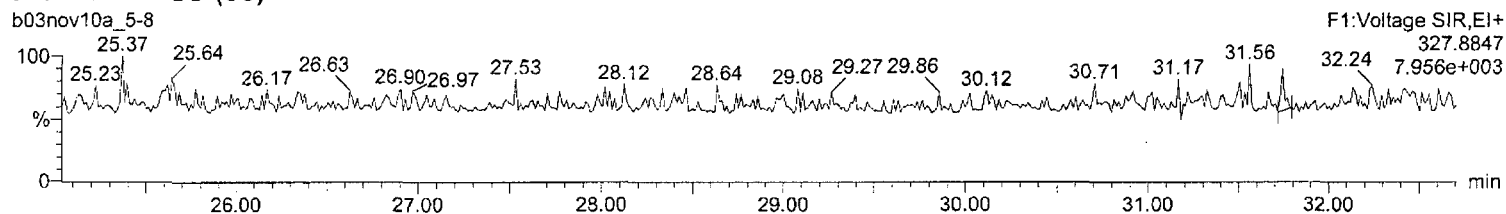
13C-2378-TCDD



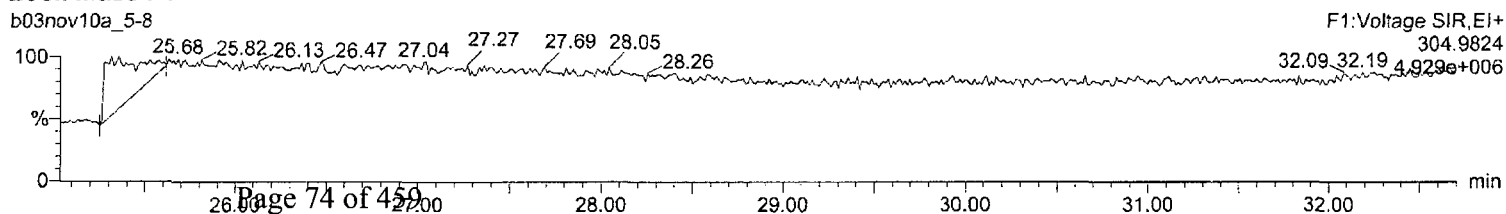
13C-2378-TCDD



37Cl-2378-TCDD (SS)



Lock Mass F1



**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 1742013
Client Sample: 8290 TCDD Water
Client ID: JA58900-6
Batch ID: 17315
Run Date: 11/05/2010 08:40
Data File: b03nov10a_5-9
Prep Batch: 17115
Prep Date: 27-OCT-10

Client: ACCU001
Date Collected: 10/14/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3520C
Aliquot: 864.1 mL

Project: ACCU00309
Matrix: FB
Prep Basis: As Received
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.539		pg/L	0.539	11.6

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		2010	2310	pg/L	86.8	(40%-135%)

Comments:

U Analyte was analyzed for , but not detected above the specified detection limit.

Quantify Sample Summary Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 3:26:48 PM Eastern Standard Time

Printed: Friday, November 05, 2010 3:37:38 PM Eastern Standard Time

Page 4

Method: Untitled 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-9, Date: 05-Nov-2010, Time: 08:40:26, ID: 1742013-1, Description: 17315, Job: HMS8290TCL, Task: HRP763_1, User: MJC

DUE
QUANT

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD							NO		0.0233		620			681		
2	12378-PeCDD							NO		0.0249		615			589		
3	123478-HxCDD							NO		0.0361		756			522		
4	123678-HxCDD							NO		0.0334		756			522		
5	123789-HxCDD							NO		0.0374		756			522		
6	1234678-HpCDD	5.36e1	5.85e1	1.12e2	40.73	1.000	0.92	NO	0.022	0.0377	1.07e3	319	3.4	1.80e3	529	3.4	bb
7	OCDD							NO		0.0506		311			301		
8	2378-TCDF							NO		0.0169		470			766		
9	12378-PeCDF							NO		0.0252		822			1131		
10	23478-PeCDF							NO		0.0257		822			1131		
11	123478-HxCDF							NO		0.0187		526			407		
12	123678-HxCDF							NO		0.0161		526			407		
13	234678-HxCDF							NO		0.0178		526			407		
14	123789-HxCDF							NO		0.0215		526			407		
15	1234678-HpCDF							NO		0.0228		476			380		
16	1234789-HpCDF							NO		0.0313		476			380		
17	OCDF							NO		0.0676		398			614		
18	13C-2378-TCDD	3.53e5	4.44e5	7.97e5	31.73	1.013	0.80	NO	86.805	0.0772	7.32e6	2060	3555.1	9.11e6	2035	4477.7	bb
19	13C-12378-PeCDD	4.19e5	2.61e5	6.80e5	34.53	1.102	1.61	NO	87.314	0.0699	8.67e6	1534	5652.2	5.59e6	1614	3463.9	bd
20	13C-123678-HxCDD	3.83e5	2.96e5	6.80e5	37.30	0.993	1.29	NO	85.134	0.153	6.69e6	2854	2343.8	5.29e6	3435	1538.9	bd
21	13C-1234678-HpCDD	2.64e5	2.51e5	5.15e5	40.72	1.084	1.05	NO	89.582	0.173	3.44e6	2489	1382.6	3.22e6	2641	1219.6	bb
22	13C-OCDD	3.58e5	4.03e5	7.61e5	45.15	1.202	0.89	NO	158.549	0.212	3.43e6	2130	1608.6	3.87e6	3132	1234.9	bd
23	13C-2378-TCDF	5.88e5	7.32e5	1.32e6	31.19	0.996	0.80	NO	88.415	0.0325	9.94e6	1680	5917.4	1.28e7	1125	11345.3	bb
24	13C-12378-PeCDF	6.87e5	4.19e5	1.11e6	33.70	1.076	1.64	NO	79.707	0.0773	1.55e7	2116	7311.4	9.81e6	4084	2402.1	bd
25	13C-123678-HxCDF	3.02e5	5.76e5	8.78e5	36.57	0.974	0.52	NO	74.943	0.0889	5.66e6	2743	2061.8	1.10e7	2632	4186.7	bb
26	13C-1234678-HpCDF	1.92e5	4.19e5	6.11e5	39.43	1.050	0.46	NO	78.652	0.134	2.77e6	2864	968.3	6.42e6	2501	2568.2	bd
27	13C-1234-TCDD	3.62e5	4.57e5	8.20e5	31.33	0.000	0.79	NO	100.000	0.0864	6.28e6	2060	3050.1	8.19e6	2035	4025.8	bb
28	13C-123789-HxCDD	4.13e5	3.05e5	7.18e5	37.55	0.000	1.35	NO	100.000	0.170	6.40e6	2854	2242.1	4.92e6	3435	1433.0	dd
29	37Cl-2378-TCDD (SS)									0.0182		1056					
30	13C-23478-PeCDF (SS)	1.52e3	6.66e2	2.19e3	34.32	1.018	2.29	YES	0.212	0.0800	1.96e4	2116	9.3	1.22e4	4084	3.0	dd

Quantify Sample Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

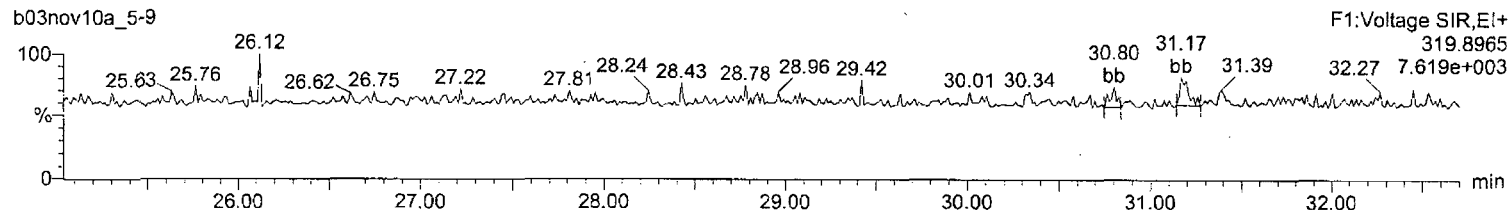
Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-9, Date: 05-Nov-2010, Time: 08:40:26, ID: 1742013-1, Description: 17315, Job: HMS8290TCL,

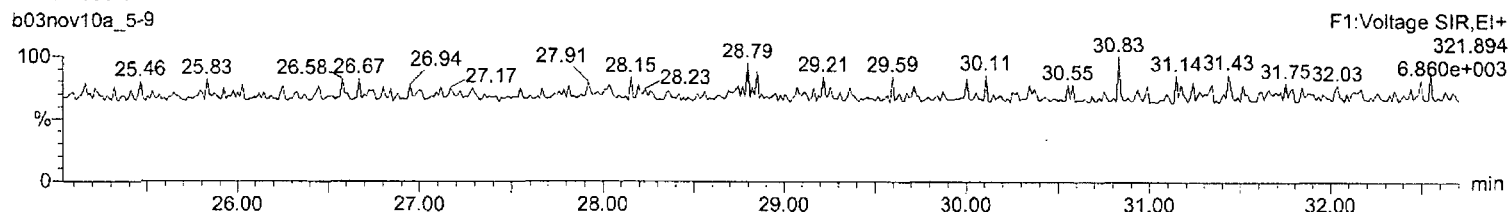
Task: HRP763_1, User: MJC

Total-tetradoxins

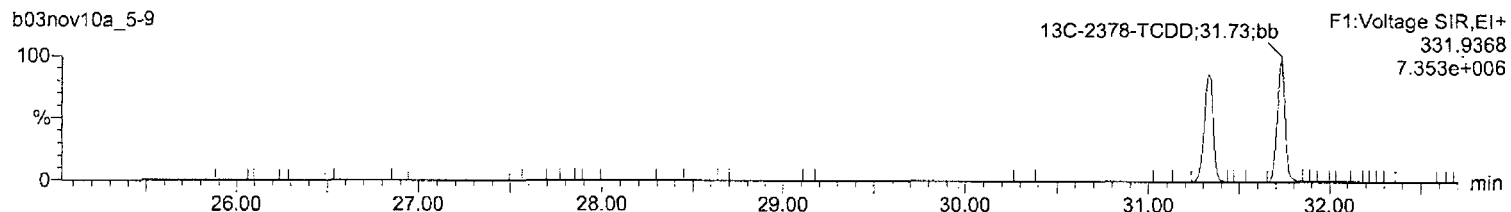
b03nov10a_5-9

**Total-tetradoxins**

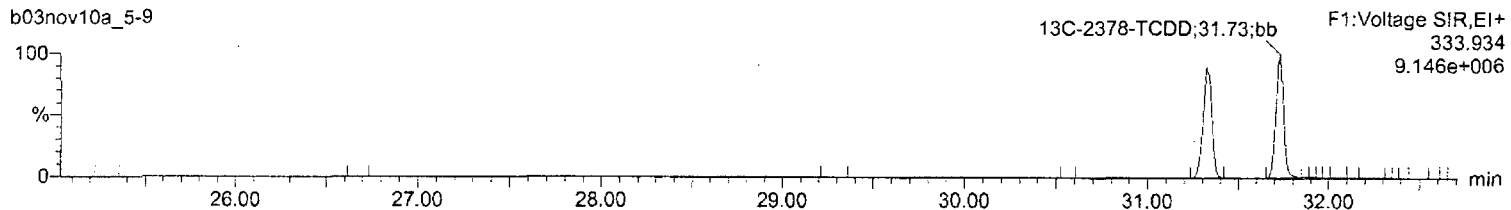
b03nov10a_5-9

**13C-2378-TCDD**

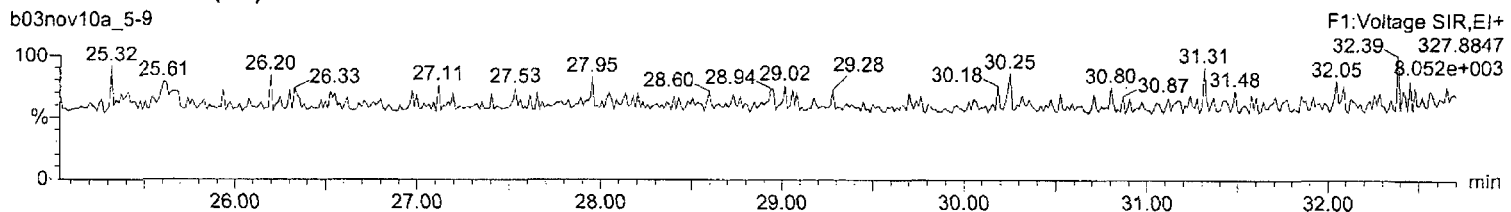
b03nov10a_5-9

**13C-2378-TCDD**

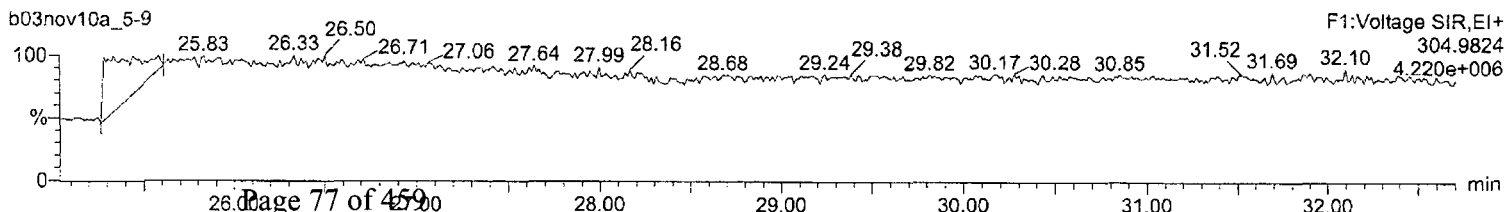
b03nov10a_5-9

**37Cl-2378-TCDD (SS)**

b03nov10a_5-9

**Lock Mass F1**

b03nov10a_5-9



Quality Control Raw Data

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 12002022
Client Sample: QC for batch 16733
Client ID: LCS for batch 16733
Batch ID: 17194
Run Date: 11/04/2010 14:48
Data File: b03nov10a_4-1
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001

Method: SW846 8290A
Analyst: MJC

Prep Method: SW846 3540C
Aliquot: 10 g

Project: QC
Matrix: SOIL

Prep Basis: As Received

Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		21.6		pg/g	0.0594	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		157	200	pg/g	78.3	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 12002023
Client Sample: QC for batch 16733
Client ID: LCSD for batch 16733
Batch ID: 17194
Run Date: 11/04/2010 15:35
Data File: b03nov10a_4-2
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001

Method: SW846 8290A
Analyst: MJC

Prep Method: SW846 3540C
Aliquot: 10 g

Project: QC
Matrix: SOIL

Prep Basis: As Received

Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		21.1		pg/g	0.0442	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		157	200	pg/g	78.7	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 12002024
Client Sample: QC for batch 16733
Client ID: MB for batch 16733
Batch ID: 17194
Run Date: 11/04/2010 16:24
Data File: b03nov10a_4-3
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001

Method: SW846 8290A
Analyst: MJC

Prep Method: SW846 3540C
Aliquot: 10 g

Project: QC
Matrix: SOIL

Prep Basis: As Received

Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.0554		pg/g	0.0554	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		157	200	pg/g	78.6	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

U Analyte was analyzed for , but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 12002027
Client Sample: QC for batch 16733
Client ID: JA58900-3 MS/MSD(1742003MS)
Batch ID: 17194
Run Date: 11/04/2010 20:26
Data File: b03nov10a_4-8
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/14/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.42 g

Project: QC
Matrix: Soil
%Moisture: 22.9
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		20.4		pg/g	0.0526	0.966

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		153	193	pg/g	79.0	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 12002028
Client Sample: QC for batch 16733
Client ID: JA58900-3 MS/MSD(1742003MSD)
Batch ID: 17194
Run Date: 11/04/2010 21:15
Data File: b03nov10a_4-9
Prep Batch: 16733
Prep Date: 19-OCT-10

Client: ACCU001
Date Collected: 10/14/2010 00:00
Date Received: 10/16/2010 09:40
Method: SW846 8290A
Analyst: MJC
Prep Method: SW846 3540C
Aliquot: 13.81 g

Project: QC
Matrix: Soil
%Moisture: 22.9
Prep Basis: Dry Weight
Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		19.8		pg/g	0.0753	0.939

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		149	188	pg/g	79.5	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 12002074
Client Sample: QC for batch 17115
Client ID: LCS for batch 17115
Batch ID: 17315
Run Date: 11/05/2010 02:13
Data File: b03nov10a_5-1
Prep Batch: 17115
Prep Date: 27-OCT-10

Client: ACCU001

Method: SW846 8290A
Analyst: MJC

Prep Method: SW846 3520C
Aliquot: 1000 mL

Project: QC
Matrix: WATER

Prep Basis: As Received

Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		211		pg/L	0.966	10.0

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1790	2000	pg/L	89.7	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 12002075
Client Sample: QC for batch 17115
Client ID: LCSD for batch 17115
Batch ID: 17315
Run Date: 11/05/2010 03:01
Data File: b03nov10a_5-2
Prep Batch: 17115
Prep Date: 27-OCT-10

Client: ACCU001

Method: SW846 8290A
Analyst: MJC

Prep Method: SW846 3520C
Aliquot: 1000 mL

Project: QC
Matrix: WATER

Prep Basis: As Received

Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		211		pg/L	0.668	10.0

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1680	2000	pg/L	83.9	(40%-135%)

Comments:

K Estimated Maximum Possible Concentration

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

Page 1 of 1

SDG Number: JA58900
Lab Sample ID: 12002076
Client Sample: QC for batch 17115
Client ID: MB for batch 17115
Batch ID: 17315
Run Date: 11/05/2010 03:49
Data File: b03nov10a_5-3
Prep Batch: 17115
Prep Date: 27-OCT-10

Client: ACCU001

Method: SW846 8290A
Analyst: MJC

Prep Method: SW846 3520C
Aliquot: 1000 mL

Project: QC
Matrix: WATER

Prep Basis: As Received

Instrument: HRP763
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.446		pg/L	0.446	10.0

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		1790	2000	pg/L	89.7	(40%-135%)

Comments:

J Value is estimated
K Estimated Maximum Possible Concentration
U Analyte was analyzed for , but not detected above the specified detection limit.

Quantify Sample Summary Report
Method 8290 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

Last Altered: Friday, November 05, 2010 4:14:46 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:34:54 PM Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15
Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-3, Date: 04-Nov-2010, Time: 16:24:26, ID: 12002024-1 MB, Description: 17194

Job: HMS8290TCL, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD							NO		0.0277		630			949		
2	12378-PeCDD	1.90e2	5.18e1	2.42e2	34.56	1.001	3.67	YES	0.031	0.0227	4.78e3	769	6.2	1.98e3	610	3.2	bb
3	123478-HxCDD	1.74e2	1.24e2	2.98e2	37.30	1.000	1.41	NO	0.044	0.0351	3.83e3	915	4.2	3.07e3	635	4.8	db
4	123678-HxCDD							NO		0.0325		915			635		
5	123789-HxCDD	7.70e1	2.06e2	2.83e2	37.56	1.007	0.37	YES	0.043	0.0363	3.80e3	915	4.1	4.05e3	635	6.4	bd
6	1234678-HpCDD	3.24e2	1.52e2	4.76e2	40.76	1.001	2.13	YES	0.075	0.0389	5.13e3	601	8.5	3.61e3	558	6.5	bb
7	OCDD	4.78e2	2.99e2	7.77e2	45.17	1.000	1.60	YES	0.154	0.0575	8.47e3	479	17.7	6.33e3	526	12.0	db
8	2378-TCDF	8.81e2	9.62e2	1.84e3	31.22	1.001	0.92	YES	0.127	0.0232	1.94e4	794	24.4	1.69e4	1176	14.4	bb
9	12378-PeCDF	1.49e2	2.43e2	3.92e2	33.70	1.000	0.61	YES	0.034	0.0333	4.73e3	1412	3.3	4.14e3	1594	2.6	bb
10	23478-PeCDF	2.39e2	2.25e2	4.64e2	34.33	1.019	1.06	YES	0.041	0.0340	5.21e3	1412	3.7	3.99e3	1594	2.5	bb
11	123478-HxCDF	1.26e2	9.45e1	2.21e2	36.48	0.997	1.33	NO	0.026	0.0369	4.10e3	956	4.3	2.81e3	1156	2.4	bd
12	123678-HxCDF	2.07e2	7.87e1	2.86e2	36.58	1.000	2.63	YES	0.029	0.0317	4.94e3	956	5.2	2.97e3	1156	2.6	db
13	234678-HxCDF	9.19e1	1.67e2	2.59e2	37.08	1.014	0.55	YES	0.029	0.0351	1.93e3	956	2.0	4.97e3	1156	4.3	bb
14	123789-HxCDF	1.35e2	1.09e2	2.44e2	37.90	1.036	1.24	NO	0.033	0.0424	3.87e3	956	4.0	2.53e3	1156	2.2	bd
15	1234678-HpCDF	2.55e2	2.61e2	5.16e2	39.45	1.001	0.97	NO	0.054	0.0235	5.27e3	753	7.0	3.40e3	476	7.1	bd
16	1234789-HpCDF	1.97e2	1.10e2	3.08e2	41.44	1.051	1.79	YES	0.044	0.0323	3.80e3	753	5.0	4.65e3	476	9.8	bb
17	OCDF	3.28e2	3.31e2	6.59e2	45.49	1.007	0.99	NO	0.106	0.0672	4.09e3	522	7.8	5.57e3	931	6.0	bb
18	13C-2378-TCDD	3.52e5	4.41e5	7.93e5	31.73	1.013	0.80	NO	78.605	0.0642	7.48e6	2239	3340.0	9.26e6	1765	5248.8	bb
19	13C-12378-PeCDD	4.63e5	2.92e5	7.56e5	34.53	1.102	1.59	NO	88.298	0.0601	1.08e7	1399	7727.4	6.91e6	1780	3880.5	bb
20	13C-123678-HxCDD	4.26e5	3.37e5	7.63e5	37.30	0.993	1.26	NO	86.654	0.110	8.26e6	3013	2741.1	6.44e6	2859	2253.3	bb
21	13C-1234678-HpCDD	3.22e5	3.14e5	6.36e5	40.73	1.085	1.03	NO	100.252	0.123	4.50e6	2225	2024.2	4.34e6	2487	1744.0	bb
22	13C-OCDD	4.85e5	5.26e5	1.01e6	45.15	1.202	0.92	NO	191.017	0.159	5.05e6	2418	2089.6	5.60e6	2698	2073.9	bd
23	13C-2378-TCDF	6.56e5	8.17e5	1.47e6	31.19	0.996	0.80	NO	89.749	0.0282	1.15e7	1462	7875.1	1.43e7	1394	10247.4	bb
24	13C-12378-PeCDF	7.70e5	4.68e5	1.24e6	33.70	1.076	1.65	NO	81.167	0.0537	1.80e7	2958	6095.0	1.14e7	2099	5430.7	bd
25	13C-123678-HxCDF	3.19e5	6.10e5	9.29e5	36.58	0.974	0.52	NO	71.917	0.0691	6.49e6	2371	2736.5	1.21e7	3037	3990.9	bb
26	13C-1234678-HpCDF	2.32e5	5.16e5	7.48e5	39.43	1.050	0.45	NO	87.385	0.0870	3.81e6	2063	1847.1	8.42e6	2453	3432.9	bd
27	13C-1234-TCDD	4.05e5	4.95e5	9.01e5	31.33	0.000	0.82	NO	100.000	0.0719	7.51e6	2239	3355.3	9.29e6	1765	5264.7	bb
28	13C-123789-HxCDD	4.45e5	3.48e5	7.92e5	37.55	0.000	1.28	NO	100.000	0.122	8.09e6	3013	2683.9	6.21e6	2859	2173.1	bb
29	37Cl-2378-TCDD (SS)									0.0132		780					
30	13C-23478-PeCDF (SS)	2.56e3	1.66e3	4.21e3	34.34	1.019	1.54	NO	0.365	0.0561	5.21e4	2958	17.6	4.00e4	2099	19.0	bb

HMP
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HMS8290TCL

Quantify Sample Report MassLynx 4.1
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

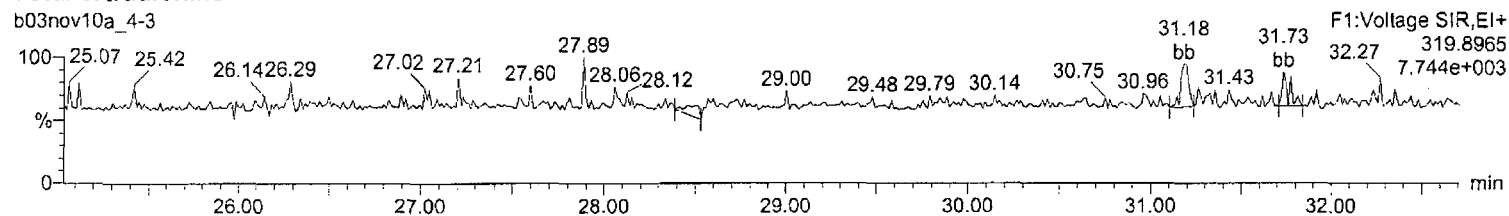
Last Altered: Friday, November 05, 2010 4:14:46 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:18:12 PM Eastern Standard Time

Name: b03nov10a_4-3, Date: 04-Nov-2010, Time: 16:24:26, ID: 12002024-1 MB, Description: 17315, Job: HMS8290TCL,
Task: HRP763_1, User: MJC

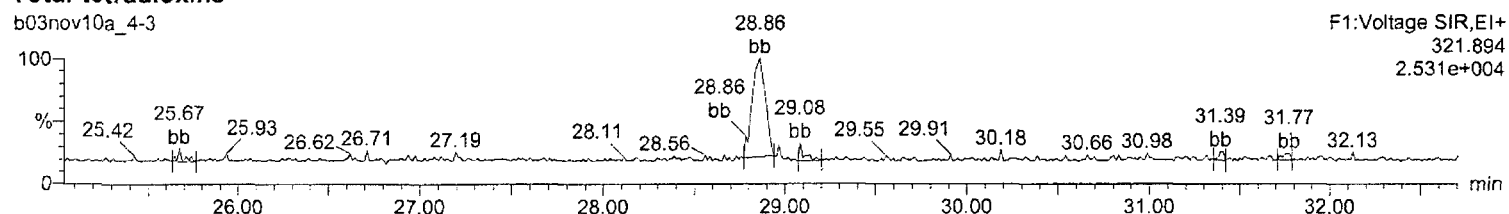
Total-tetradioxins

b03nov10a_4-3



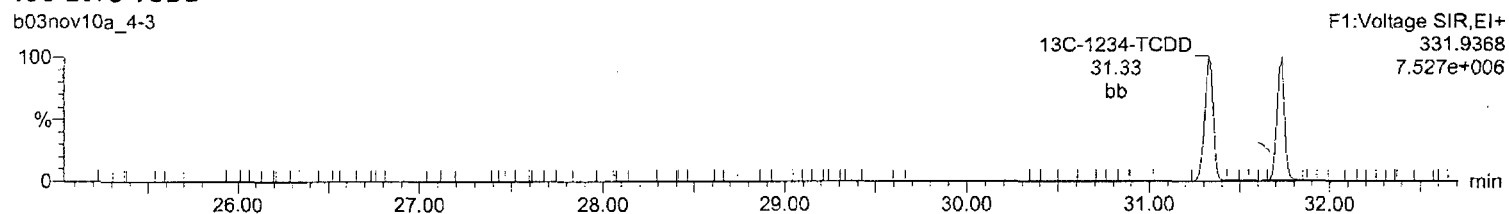
Total-tetradioxins

b03nov10a_4-3



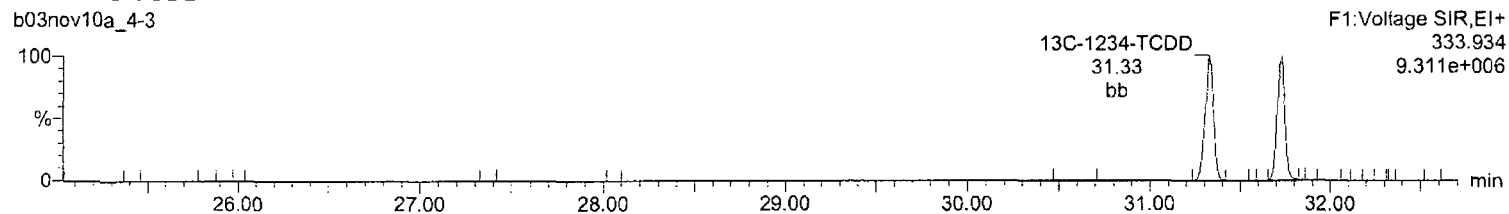
13C-2378-TCDD

b03nov10a_4-3



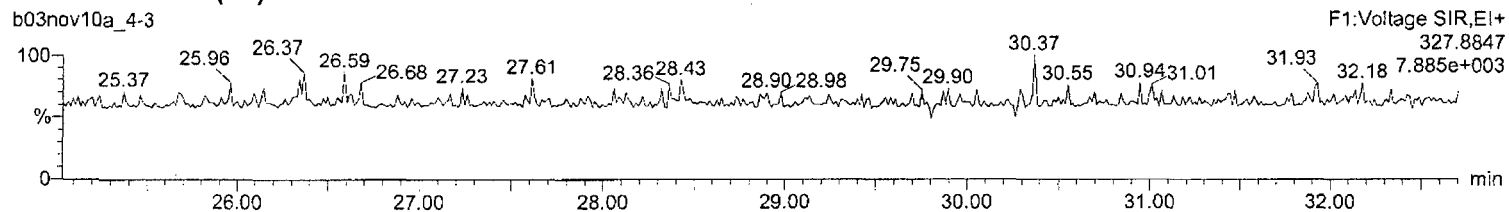
13C-2378-TCDD

b03nov10a_4-3



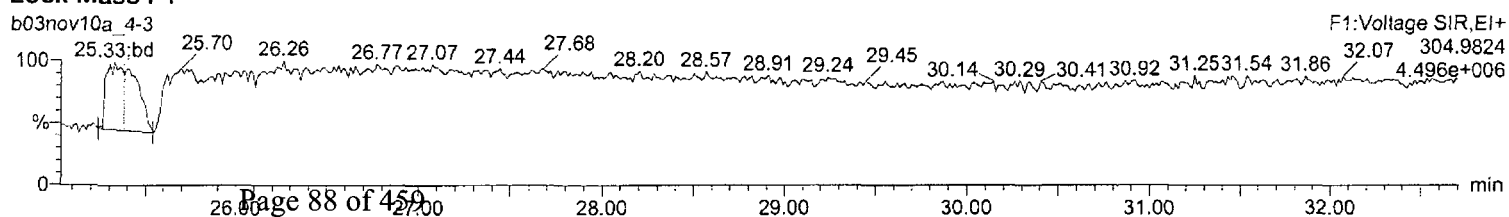
37Cl-2378-TCDD (SS)

b03nov10a_4-3



Lock Mass F1

b03nov10a_4-3



Quantify Sample Summary Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 3:26:48 PM Eastern Standard Time

Printed: Friday, November 05, 2010 3:27:06 PM Eastern Standard Time

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Method: Untitled 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17313 HMS8290JCL, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD							NO		0.0223		763			852		
2	12378-PeCDD	2.07e2	1.62e2	3.69e2	34.54	1.000	1.28	YES	0.041	0.0318	3.54e3	1129	3.1	4.07e3	841	4.8	MM
3	123478-HxCDD	1.47e2	1.58e2	3.04e2	37.22	0.998	0.93	YES	0.037	0.0409	3.13e3	1130	2.8	4.25e3	900	4.7	bd
4	123678-HxCDD	1.37e2	1.46e2	2.83e2	37.31	1.000	0.94	YES	0.032	0.0379	2.93e3	1130	2.6	2.45e3	900	2.7	db
5	123789-HxCDD	2.08e2	1.79e2	3.87e2	37.55	1.007	1.16	NO	0.048	0.0424	3.03e3	1130	2.7	3.44e3	900	3.8	MM
6	1234678-HpCDD		3.21e2					YES		0.0465		776		3.97e3	621	6.4	MM-
7	OCDD	2.55e2	2.31e2	4.87e2	45.16	1.000	1.10	YES	0.099	0.0875	3.46e3	570	6.1	3.44e3	872	3.9	MM
8	2378-TCDF							NO		0.0335		1355			1761		
9	12378-PeCDF	4.61e2	2.85e2	7.46e2	33.73	1.001	1.62	NO	0.053	0.0522	1.04e4	2169	4.8	8.72e3	2939	3.0	bb
10	23478-PeCDF	7.22e2	5.02e2	1.22e3	34.41	1.021	1.44	NO	0.089	0.0533	2.01e4	2169	9.3	1.44e4	2939	4.9	MM
11	123478-HxCDF	2.45e2	1.28e2	3.73e2	36.49	0.998	1.92	YES	0.034	0.0559	5.45e3	2084	2.6	3.09e3	1839	1.7	bd
12	123678-HxCDF	3.14e2	1.38e2	4.53e2	36.60	1.001	2.27	YES	0.036	0.0481	7.34e3	2084	3.5	3.94e3	1839	2.1	db
13	234678-HxCDF							NO		0.0532		2084			1839		
14	123789-HxCDF							NO		0.0642		2084			1839		
15	1234678-HpCDF	1.90e2	1.71e2	3.61e2	39.44	1.000	1.12	NO	0.032	0.0315	4.93e3	846	5.8	4.36e3	905	4.8	MM
16	1234789-HpCDF	1.34e2	1.82e2	3.16e2	41.45	1.051	0.74	YES	0.039	0.0432	2.26e3	846	2.7	2.74e3	905	3.0	MM
17	OCDF	6.89e1	2.77e2	3.46e2	45.46	1.007	0.25	YES	0.057	0.0649	2.96e3	595	5.0	4.07e3	730	5.6	bd
18	13C-2378-TCDD	4.67e5	5.85e5	1.05e6	31.73	1.013	0.80	NO	89.720	0.0564	9.53e6	2104	4531.6	1.20e7	1833	6553.8	bb
19	13C-12378-PeCDD	5.36e5	3.36e5	8.73e5	34.54	1.102	1.59	NO	87.675	0.128	1.11e7	4882	2266.6	6.93e6	2701	2566.4	bb
20	13C-123678-HxCDD	5.16e5	4.07e5	9.23e5	37.30	0.993	1.27	NO	89.297	0.123	9.28e6	3507	2647.2	7.38e6	3388	2177.2	bb
21	13C-1234678-HpCDD	4.01e5	3.65e5	7.66e5	40.73	1.085	1.10	NO	102.828	0.206	4.70e6	4492	1047.0	4.45e6	3851	1154.8	bd
22	13C-OCDD	4.62e5	5.28e5	9.91e5	45.15	1.202	0.87	NO	159.363	0.171	4.64e6	2139	2167.2	5.08e6	3625	1400.9	bb
23	13C-2378-TCDF	7.76e5	9.68e5	1.74e6	31.19	0.996	0.80	NO	91.400	0.0242	1.26e7	1315	9600.1	1.62e7	1430	11309.5	bb
24	13C-12378-PeCDF	9.20e5	5.80e5	1.50e6	33.71	1.076	1.59	NO	84.609	0.0717	1.93e7	4375	4407.2	1.24e7	3190	3878.2	bd
25	13C-123678-HxCDF	4.15e5	7.86e5	1.20e6	36.58	0.974	0.53	NO	79.177	0.108	8.00e6	4611	1734.1	1.51e7	4274	3539.8	bb
26	13C-1234678-HpCDF	2.76e5	6.01e5	8.77e5	39.43	1.050	0.46	NO	87.229	0.117	4.11e6	3243	1266.9	9.26e6	3123	2964.8	bd
27	13C-1234-TCDD	4.66e5	5.82e5	1.05e6	31.33	0.000	0.80	NO	100.000	0.0631	8.32e6	2104	3951.9	1.05e7	1833	5713.7	bb
28	13C-123789-HxCDD	5.18e5	4.12e5	9.30e5	37.55	0.000	1.26	NO	100.000	0.137	8.43e6	3507	2403.2	6.91e6	3388	2040.3	bb
29	37Cl-2378-TCDD (SS)	1.59e2		1.59e2	31.73	1.000			0.014	0.0234	3.78e3	1770	2.1				bb
30	13C-23478-PeCDF (SS)	8.79e2	1.10e3	1.98e3	34.34	1.019	0.80	YES	0.142	0.0773	1.91e4	4375	4.4	2.57e4	3190	8.1	bd

Quantify Sample Summary Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 3:26:48 PM Eastern Standard Time

Printed: Friday, November 05, 2010 3:27:06 PM Eastern Standard Time

Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
32	13C-123478-HxCDF (SS)							NO		0.142		4611			4274		
32	13C-123478-HxCDD (SS)							NO		0.145		3507			3388		
33	13C-1234789-HpCDF (SS)	4.82e2	1.35e3	1.84e3	41.44	1.051	0.36	YES	0.277	0.193	1.17e4	3243	3.6	1.58e4	3123	5.0	bb

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Quantify Totals Report MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 3:26:48 PM Eastern Standard Time

Printed: Friday, November 05, 2010 3:27:06 PM Eastern Standard Time

Method: Untitled 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L, Task: HRP763_1, User: MJC

TD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	Total-tetradoxins	1.04e2	6.26e1	1.67e2	32.13	1.66	YES	0.016	0.0223	1.96e3	763	2.6	1.10e3	852	1.3	bb
2	Total-tetradoxins	6.21e1	7.72e1	1.39e2	32.65	0.80	NO	0.013	0.0223	2.30e3	763	3.0	1.80e3	852	2.1	bb

PD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	12378-PeCDD	2.07e2	1.62e2	3.69e2	34.54	1.28	YES	0.041	0.0318	3.54e3	1129	3.1	4.07e3	841	4.8	MM

HD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	123478-HxCDD	1.47e2	1.58e2	3.04e2	37.22	0.93	YES	0.037	0.0409	3.13e3	1130	2.8	4.25e3	900	4.7	bd
2	123678-HxCDD	1.37e2	1.46e2	2.83e2	37.31	0.94	YES	0.032	0.0379	2.93e3	1130	2.6	2.45e3	900	2.7	db
3	123789-HxCDD	2.08e2	1.79e2	3.87e2	37.55	1.16	NO	0.048	0.0424	3.03e3	1130	2.7	3.44e3	900	3.8	MM
4	Total-hexadoxins	6.14e1	5.13e1	1.13e2	38.90	1.20	NO	0.013	0.0403	4.20e3	1130	3.7	2.09e3	900	2.3	bb

HPD

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	1234678-HpCDD		3.21e2			0.00	YES		0.0465		776		3.97e3	621	6.4	MM-

Quantify Totals Report MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 3:26:48 PM Eastern Standard Time

Printed: Friday, November 05, 2010 3:27:06 PM Eastern Standard Time

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Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	Total-tetrafurans	6.50e1	5.23e1	1.17e2	26.56	1.24	YES	0.007	0.0335	2.01e3	1355	1.5	2.00e3	1761	1.1	bb
2	Total-tetrafurans	1.67e2	3.28e2	4.95e2	28.48	0.51	YES	0.029	0.0335	4.95e3	1355	3.7	5.09e3	1761	2.9	MM
3	Total-tetrafurans	2.49e2	4.06e2	6.54e2	29.02	0.61	YES	0.038	0.0335	2.56e3	1355	1.9	5.21e3	1761	3.0	MM
4	Total-tetrafurans	5.54e1	6.76e1	1.23e2	29.08	0.82	NO	0.007	0.0335	2.27e3	1355	1.7	2.11e3	1761	1.2	db
5	Total-tetrafurans	4.65e2	5.89e2	1.05e3	30.28	0.79	NO	0.061	0.0335	7.98e3	1355	5.9	9.98e3	1761	5.7	bb
6	Total-tetrafurans	1.78e2	1.68e2	3.46e2	31.63	1.06	YES	0.020	0.0335	3.46e3	1355	2.6	3.37e3	1761	1.9	bb
7	Total-tetrafurans	1.77e2	1.92e2	3.68e2	31.82	0.92	YES	0.021	0.0335	3.96e3	1355	2.9	3.15e3	1761	1.8	bb
8	Total-tetrafurans	4.66e2	4.67e2	9.33e2	32.27	1.00	YES	0.054	0.0335	1.44e4	1355	10.7	1.05e4	1761	6.0	bd
9	Total-tetrafurans	6.48e2	4.70e2	1.12e3	32.39	1.38	YES	0.065	0.0335	1.86e4	1355	13.7	8.84e3	1761	5.0	dd
10	Total-tetrafurans	1.19e2	5.57e1	1.75e2	32.47	2.14	YES	0.010	0.0335	3.11e3	1355	2.3	2.19e3	1761	1.2	db
11	Total-tetrafurans	2.01e2	1.35e2	3.35e2	32.65	1.49	YES	0.020	0.0335	2.86e3	1355	2.1	2.61e3	1761	1.5	bb

PF1

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	Total-pentafurans (F1)	6.11e1	1.91e2	2.52e2	26.71	0.32	YES	0.018	0.0268	2.70e3	1241	2.2	2.32e3	1381	1.7	bd
2	Total-pentafurans (F1)	5.38e1	5.17e1	1.06e2	29.08	1.04	YES	0.008	0.0268	1.77e3	1241	1.4	1.53e3	1381	1.1	db
3	Total-pentafurans (F1)	8.97e1	1.01e2	1.91e2	31.61	0.88	YES	0.014	0.0268	2.41e3	1241	1.9	2.71e3	1381	2.0	bb
4	Total-pentafurans (F1)	1.84e2	1.49e2	3.33e2	32.27	1.23	YES	0.024	0.0268	4.24e3	1241	3.4	4.36e3	1381	3.2	bb
5	Total-pentafurans (F1)	2.37e2	2.29e2	4.66e2	32.37	1.04	YES	0.033	0.0268	5.83e3	1241	4.7	5.00e3	1381	3.6	MM
6	Total-pentafurans (F1)	1.41e2	7.91e1	2.20e2	32.65	1.79	YES	0.016	0.0268	4.77e3	1241	3.8	1.82e3	1381	1.3	bb

PF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	Total-pentafurans	7.15e2	4.52e2	1.17e3	33.24	1.58	NO	0.084	0.0527	1.79e4	2169	8.2	1.04e4	2939	3.5	bb
2	12378-PeCDF	4.61e2	2.85e2	7.46e2	33.73	1.62	NO	0.053	0.0522	1.04e4	2169	4.8	8.72e3	2939	3.0	bb
3	23478-PeCDF	7.22e2	5.02e2	1.22e3	34.41	1.44	NO	0.089	0.0533	2.01e4	2169	9.3	1.44e4	2939	4.9	MM
4	Total-pentafurans	5.15e3	3.53e3	8.68e3	35.07	1.46	NO	0.626	0.0527	1.30e5	2169	59.9	7.87e4	2939	26.8	bd
5	Total-pentafurans	6.65e2	3.71e2	1.04e3	35.19	1.80	YES	0.075	0.0527	1.57e4	2169	7.3	9.43e3	2939	3.2	db

Quantify Totals Report MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 3:26:48 PM Eastern Standard Time

Printed: Friday, November 05, 2010 3:27:06 PM Eastern Standard Time

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Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	123478-HxCDF	2.45e2	1.28e2	3.73e2	36.49	1.92	YES	0.034	0.0559	5.45e3	2084	2.6	3.09e3	1839	1.7	bd
2	123678-HxCDF	3.14e2	1.38e2	4.53e2	36.60	2.27	YES	0.036	0.0481	7.34e3	2084	3.5	3.94e3	1839	2.1	db
3	Total-hexafurans	6.35e2	4.90e2	1.12e3	38.03	1.30	NO	0.101	0.0548	1.21e4	2084	5.8	1.19e4	1839	6.5	bb

HPF

	Name	Ion1Area	Ion2Area	Response	RT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	1234678-HpCDF	1.90e2	1.71e2	3.61e2	39.44	1.12	NO	0.032	0.0315	4.93e3	846	5.8	4.36e3	905	4.8	MM
2	1234789-HpCDF	1.34e2	1.82e2	3.16e2	41.45	0.74	YES	0.039	0.0432	2.26e3	846	2.7	2.74e3	905	3.0	MM

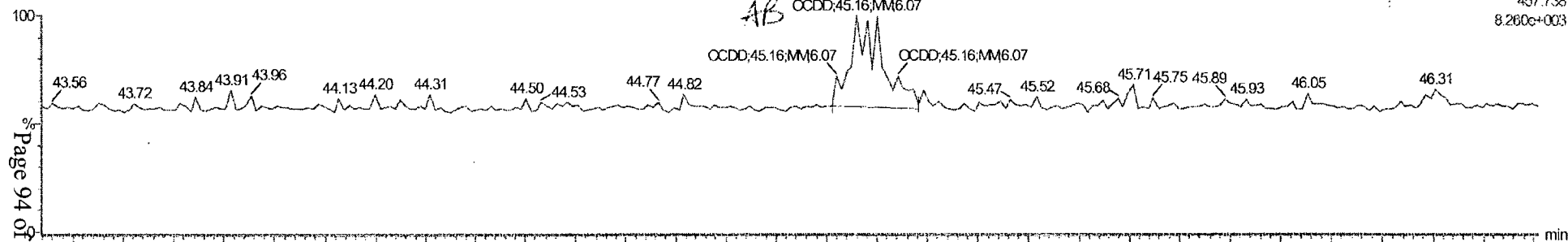
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b03nov10a_5-3

F5:Voltage SIF,EI+

457.738

8.260e+003

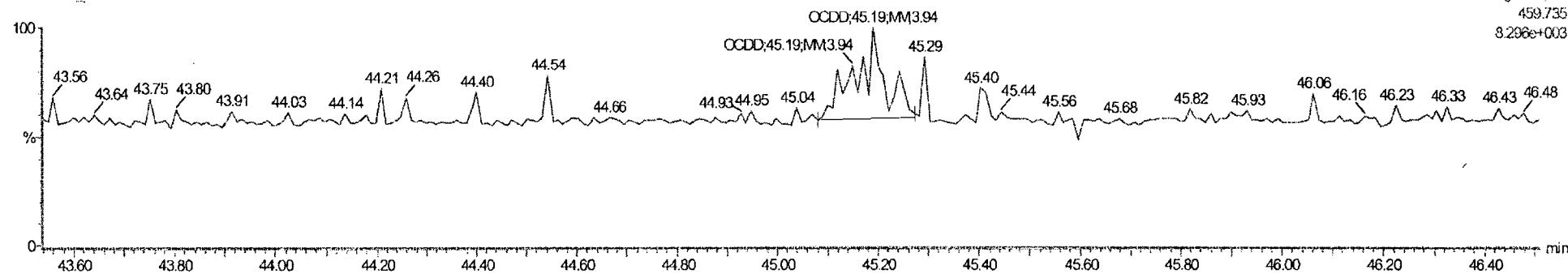


b03nov10a_5-3

F5:Voltage SIF,EI+

459.735

8.296e+003

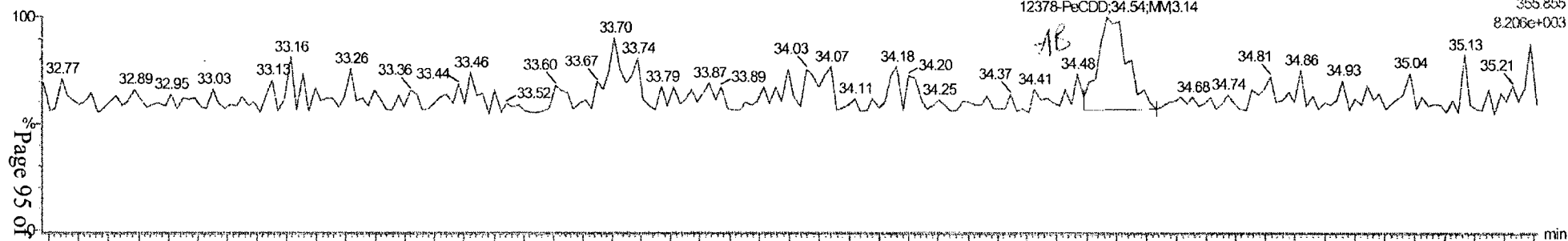


HMP DSNov10

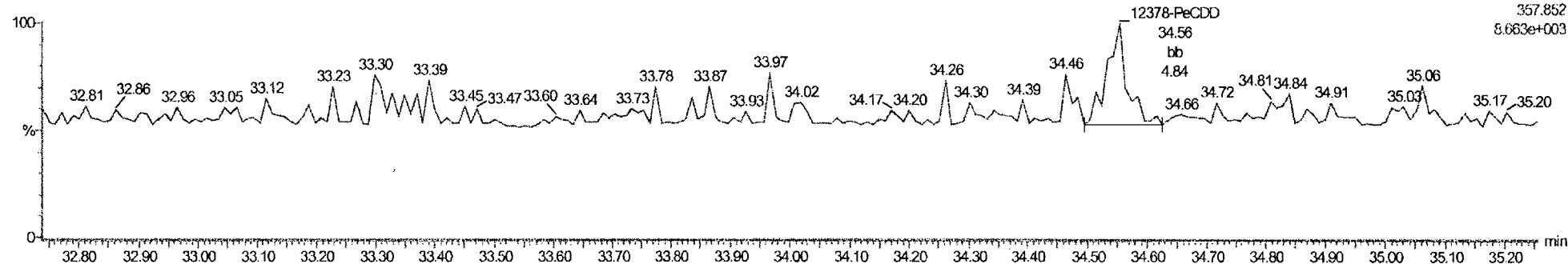
in 20010

MANUAL INTEGRATION

b03nov10a_5-3



b03nov10a_5-3

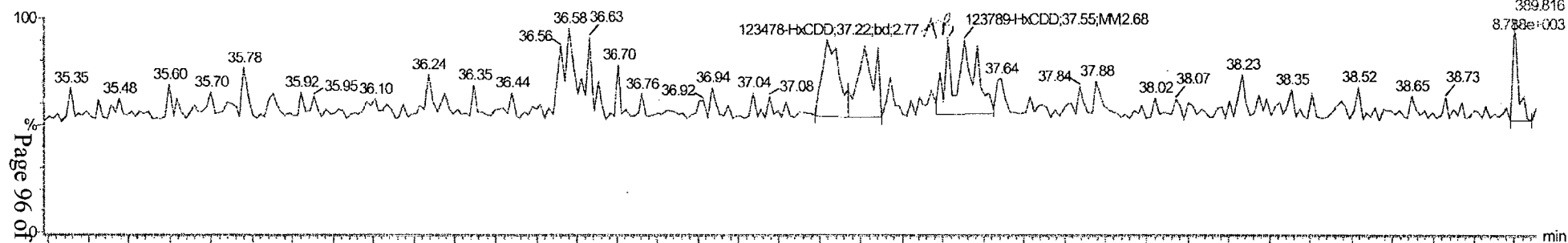


HMP 05 NOV 10

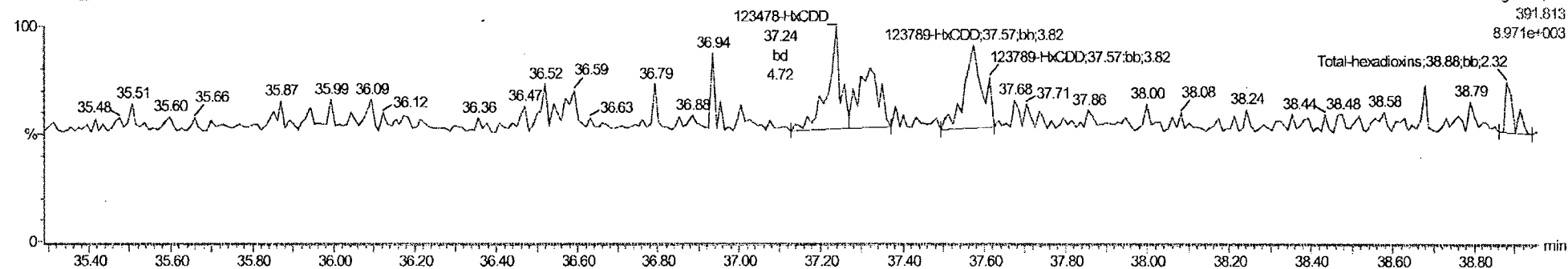
me 9 NOV 10

MANUAL INTEGRATION

b03nov10a_5-3



b03nov10a_5-3

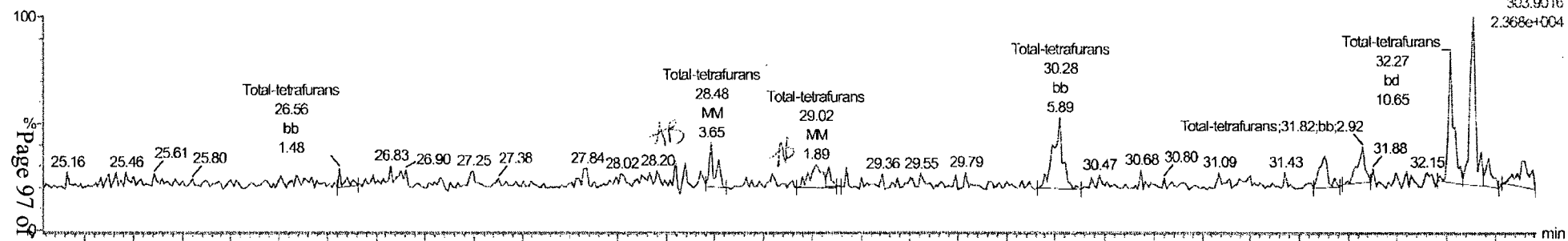


HMP 05Nov10

u 9Nov10

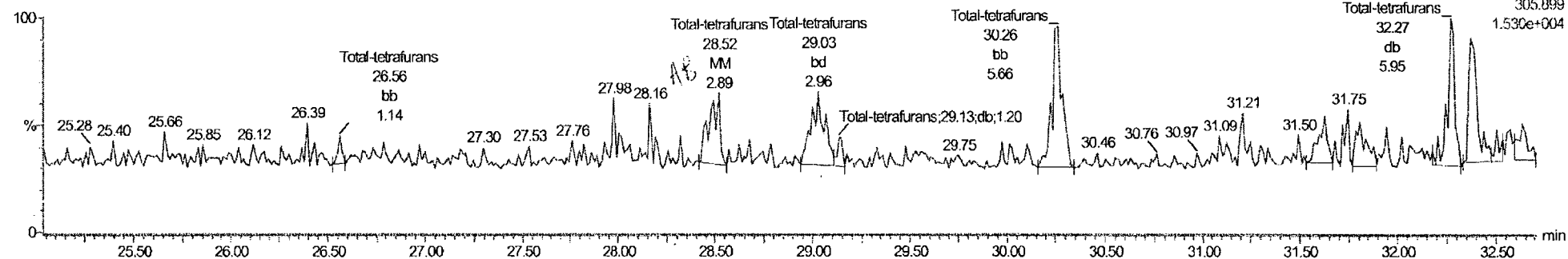
MANUAL INTEGRATION

b03nov10a_5-3



F1:Voltage SIR,EI+
303.9016
2.368e+004

b03nov10a_5-3



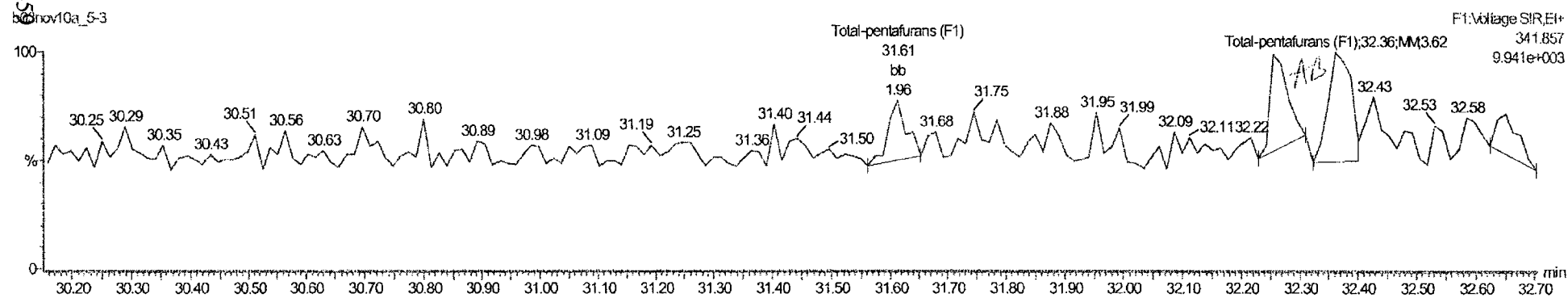
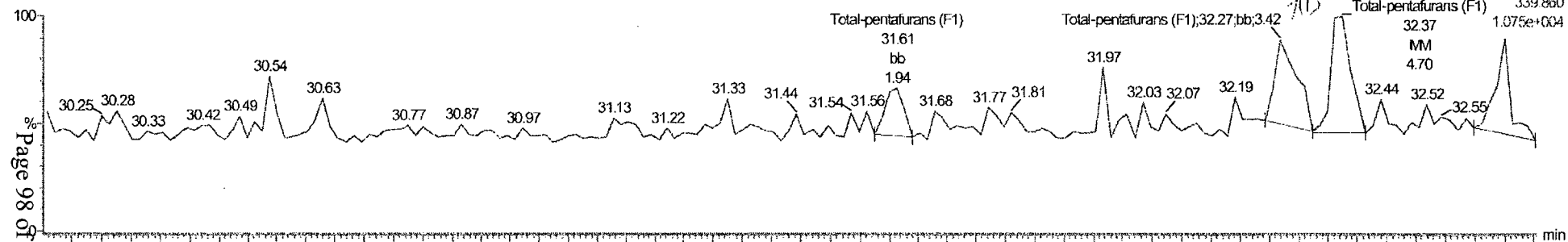
F1:Voltage SIR,EI+
305.899
1.530e+004

AMP 05Nov10

we 9Nov10

MANUAL INTEGRATION

b03nov10a_5-3

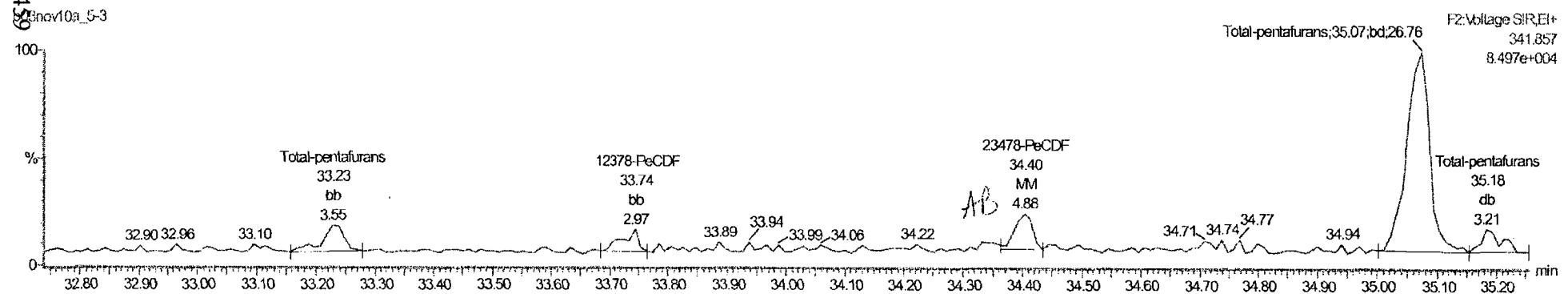
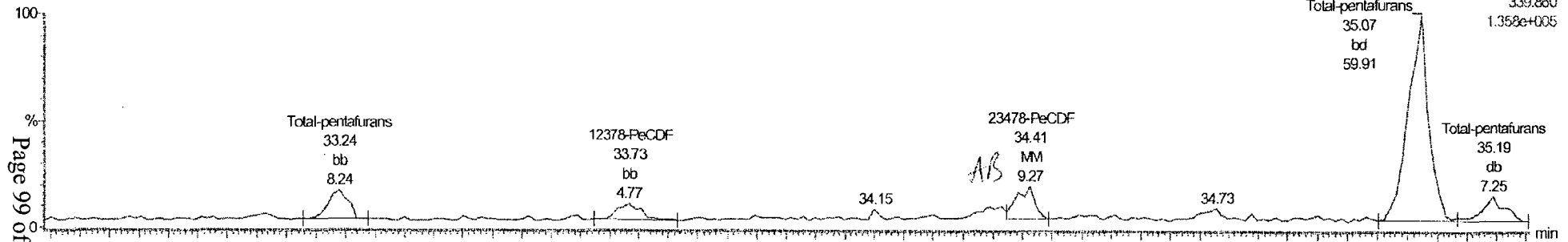


TIME 05 NOV 10

IN 9 NOV 10

MANUAL INTEGRATION

b03nov10a_5-3

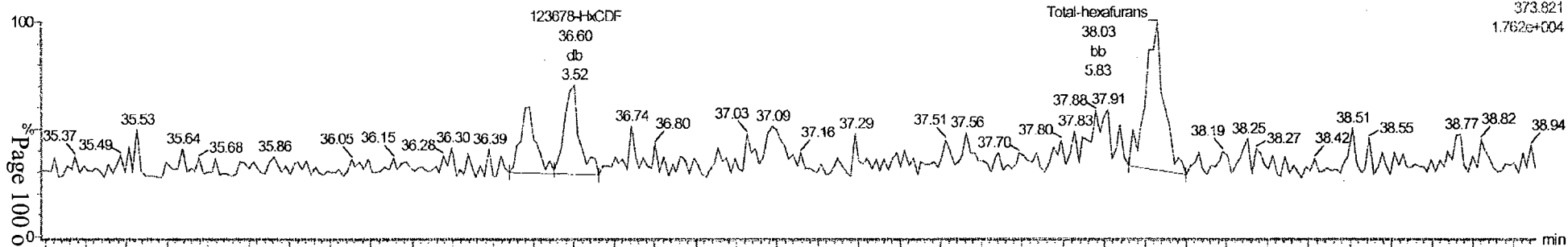


HMP 05NOV10

W 9NOV10

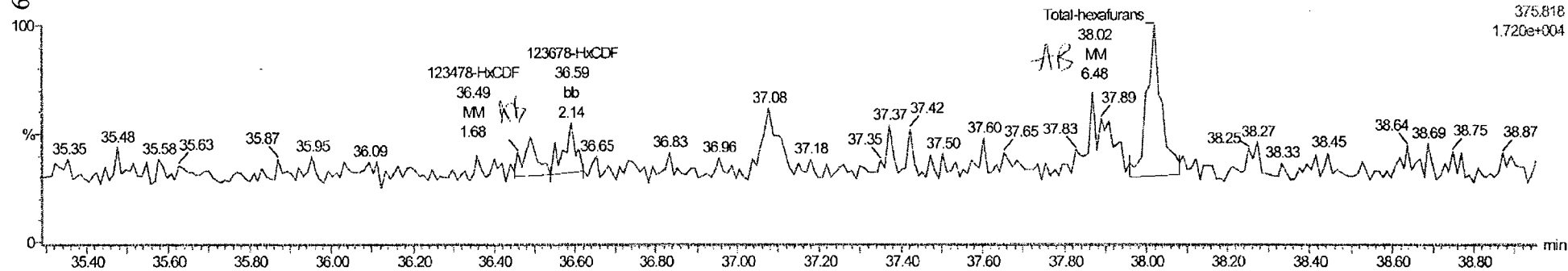
MANUAL INTEGRATION

b03nov10a_5-3



F3:Voltage SIR,EI+
373.821
1.762e+004

b03nov10a_5-3



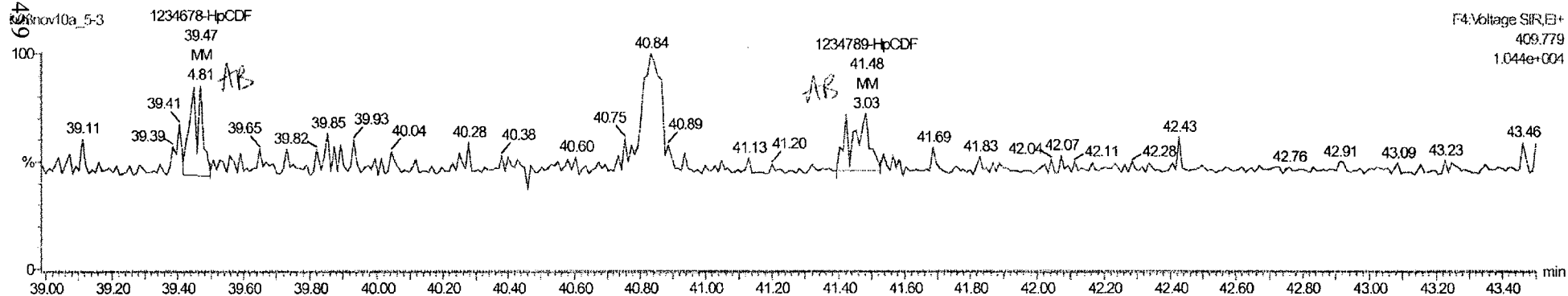
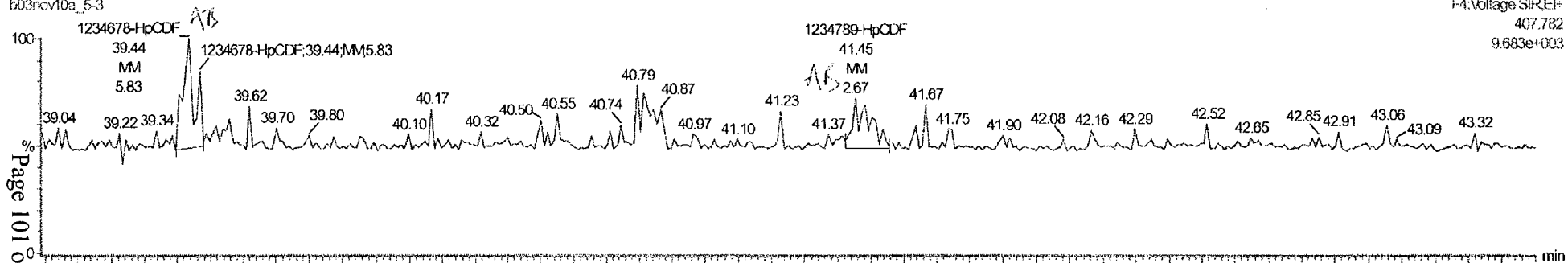
F3:Voltage SIR,EI+
375.818
1.720e+004

HMP 05 Nov 10

in 9 MW 10

MANUAL INTEGRATION

b03nov10a_5-3



HMP 05Nov10

W
GNOV10

Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

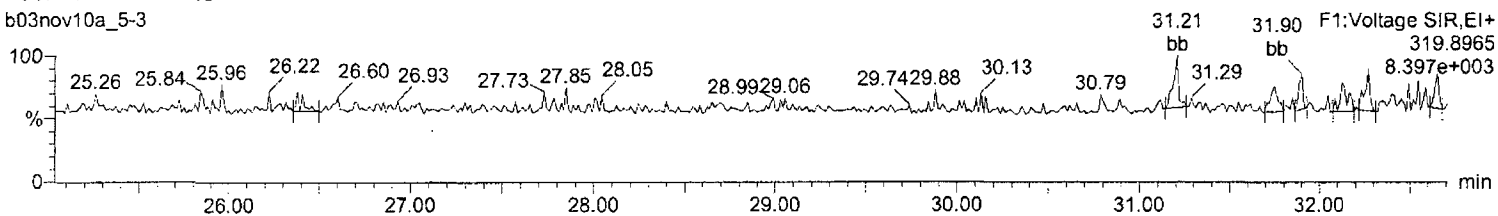
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

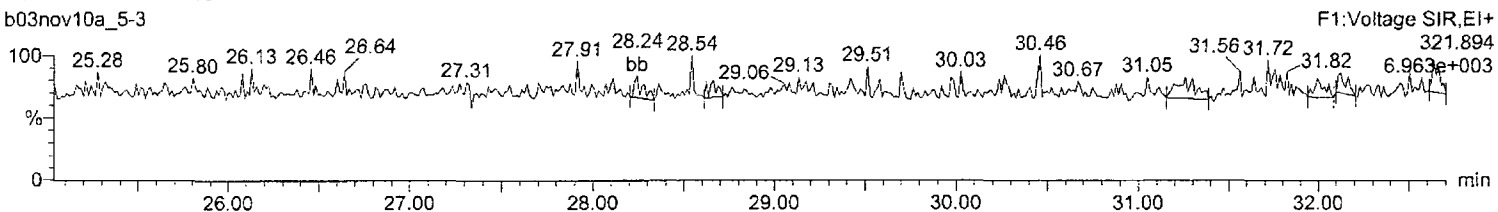
Total-tetradoxins

b03nov10a_5-3



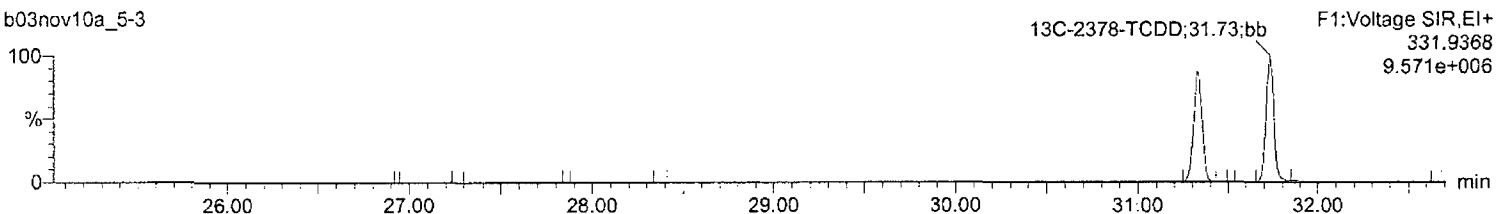
Total-tetradoxins

b03nov10a_5-3



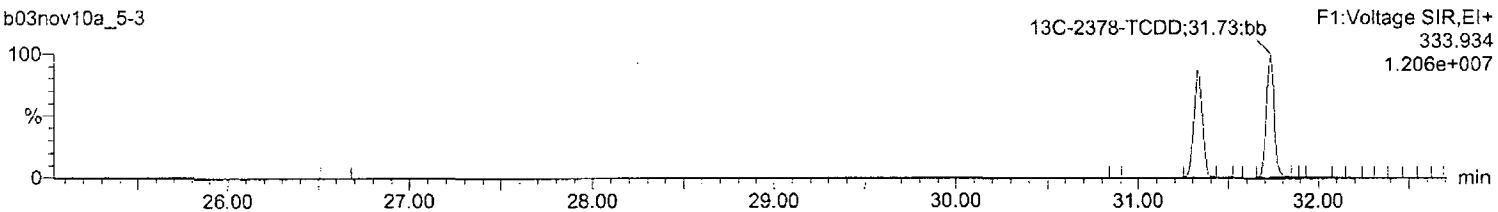
13C-2378-TCDD

b03nov10a_5-3



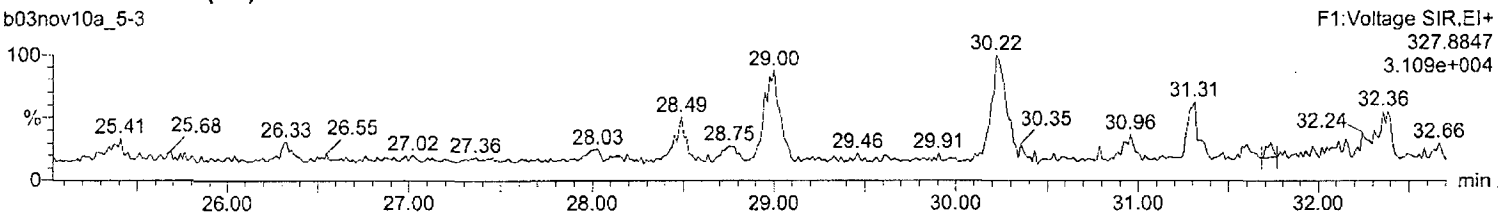
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b03nov10a_5-3



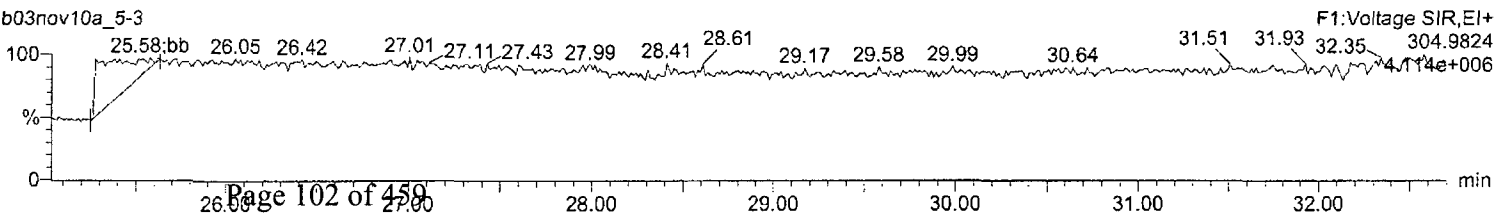
37Cl-2378-TCDD (SS)

b03nov10a_5-3



Lock Mass F1

b03nov10a_5-3



Quantify Sample Report MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

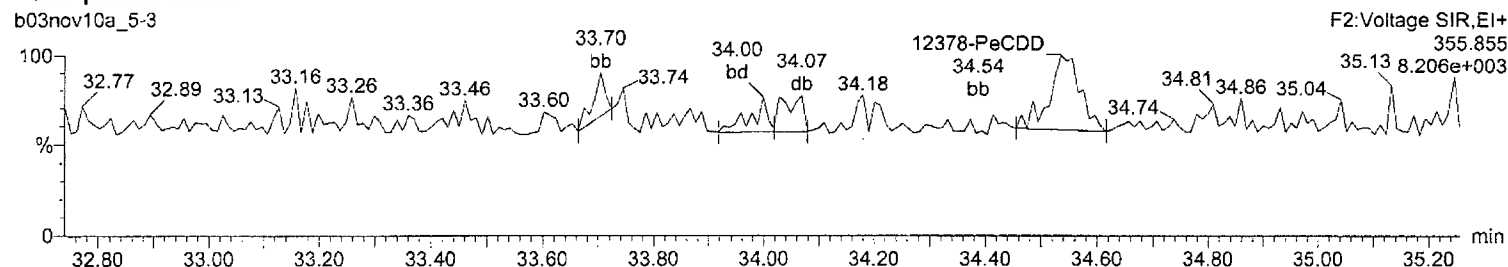
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Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L,

Task: HRP763_1, User: MJC

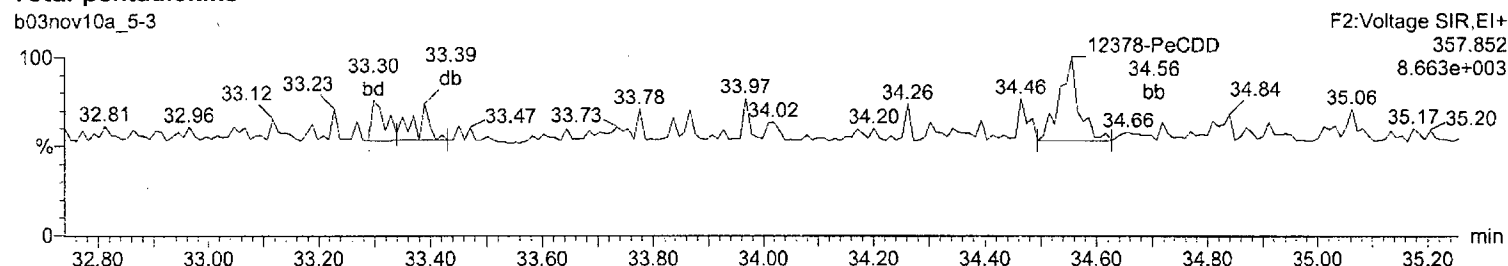
Total-pentadioxins

b03nov10a_5-3



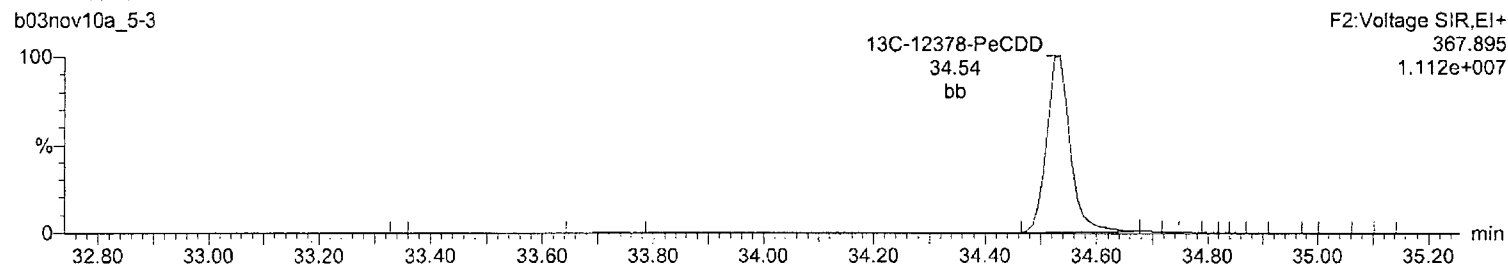
Total-pentadioxins

b03nov10a_5-3



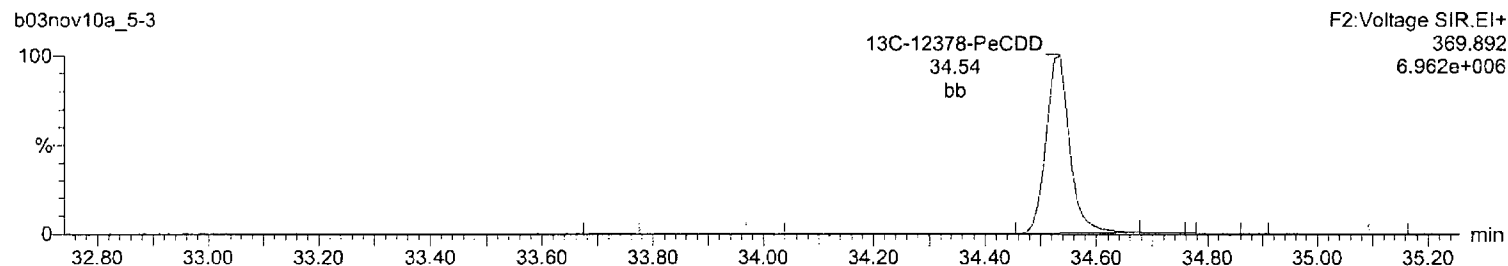
13C-12378-PeCDD

b03nov10a_5-3



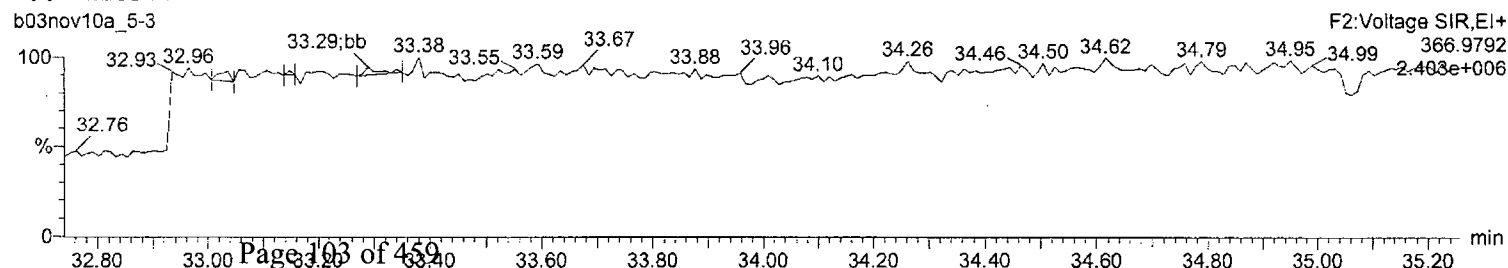
13C-12378-PeCDD

b03nov10a_5-3



Lock Mass F2

b03nov10a_5-3



Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

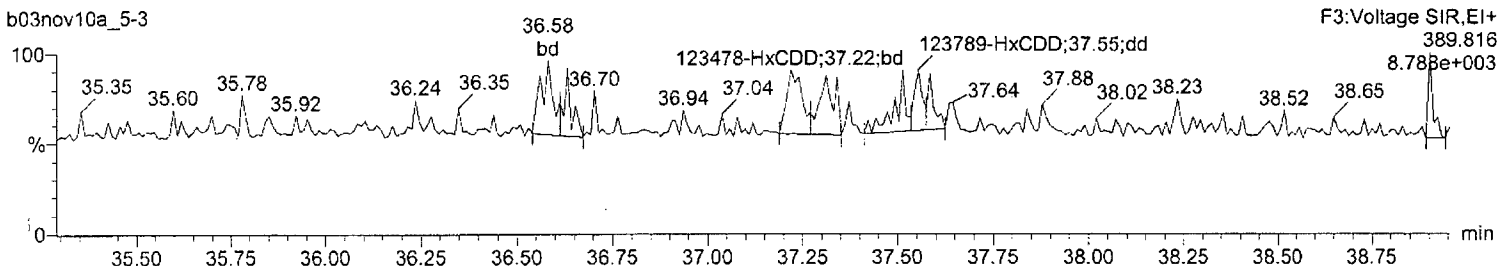
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Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

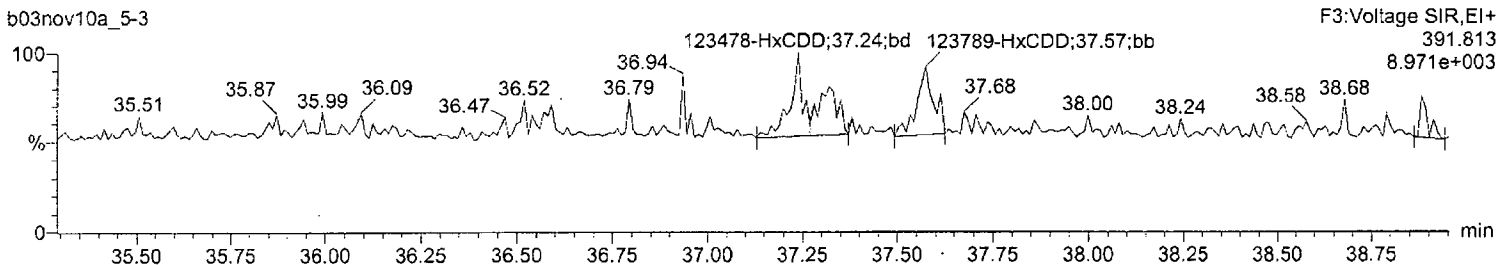
Total-hexadioxins

b03nov10a_5-3



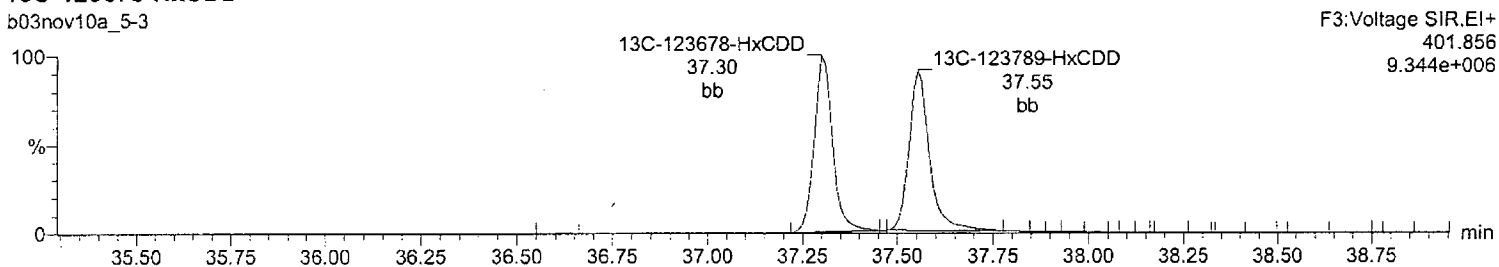
Total-hexadioxins

b03nov10a_5-3



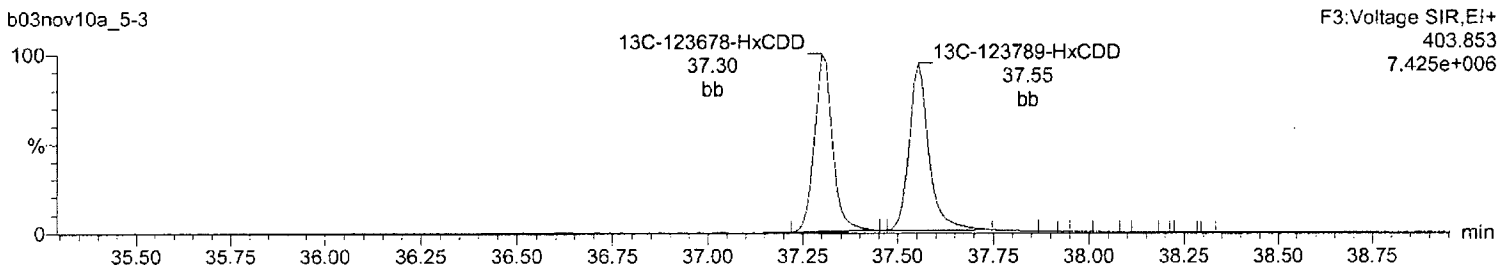
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b03nov10a_5-3



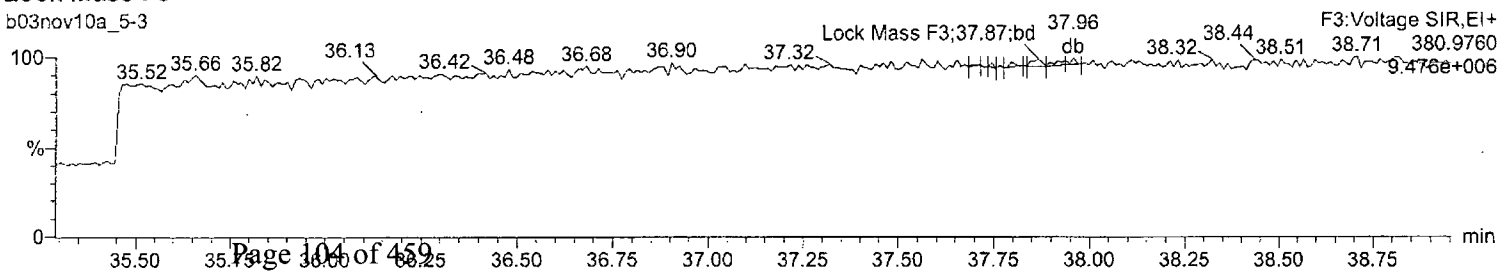
¹³C-123678-HxCDD

b03nov10a_5-3



Lock Mass F3

b03nov10a_5-3



Quantify Sample Report**MassLynx 4.1**

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

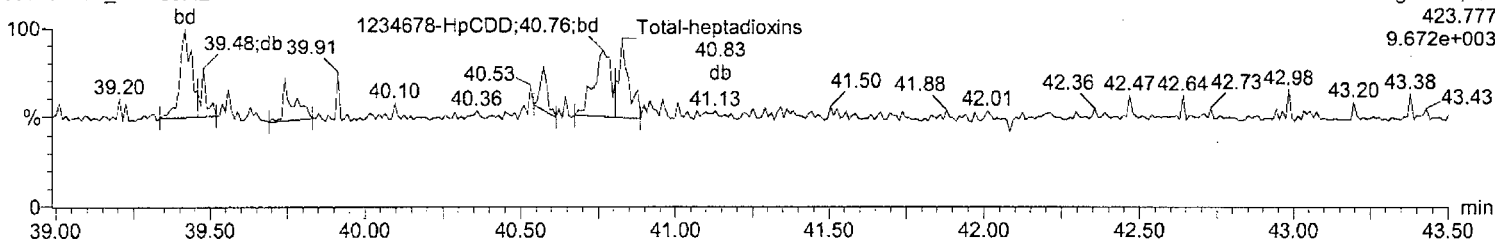
Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

Total-heptadioxins

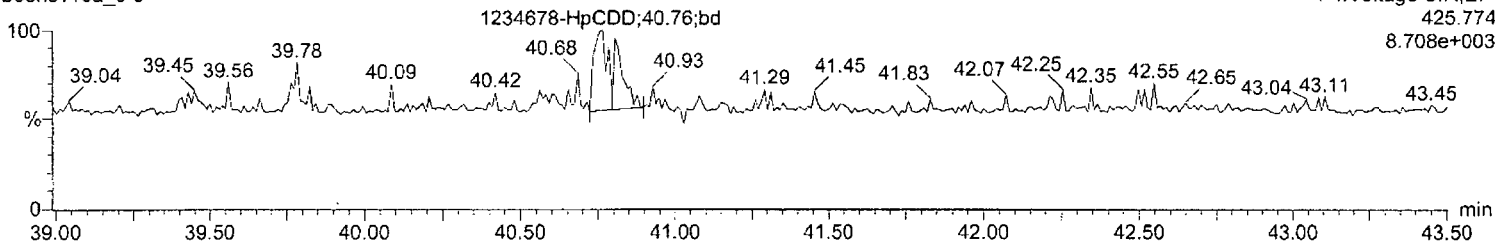
b03nov10a_5-3

F4:Voltage SIR,EI+

423.777
9.672e+003**Total-heptadioxins**

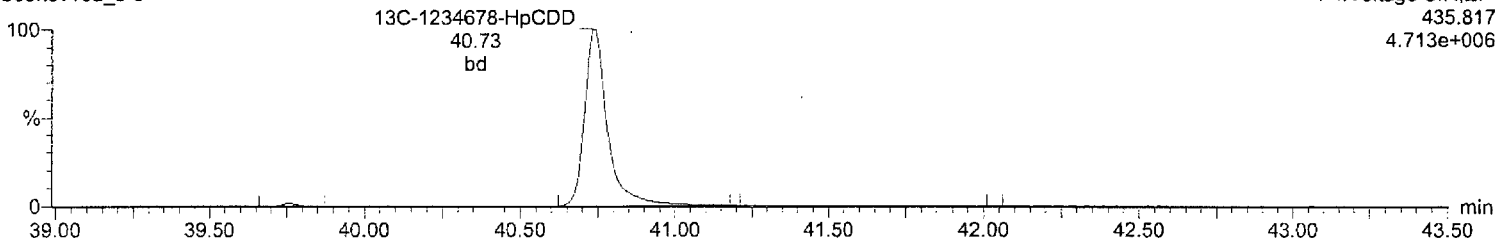
b03nov10a_5-3

F4:Voltage SIR,EI+

425.774
8.708e+003**13C-1234678-HpCDD**

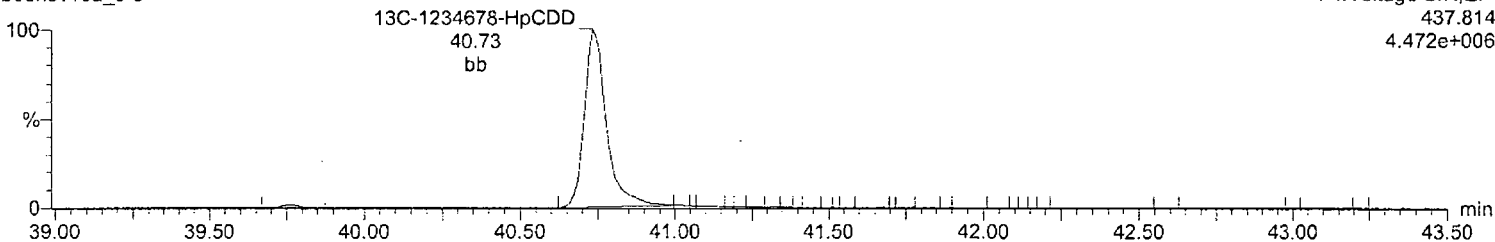
b03nov10a_5-3

F4:Voltage SIR,EI+

435.817
4.713e+006**13C-1234678-HpCDD**

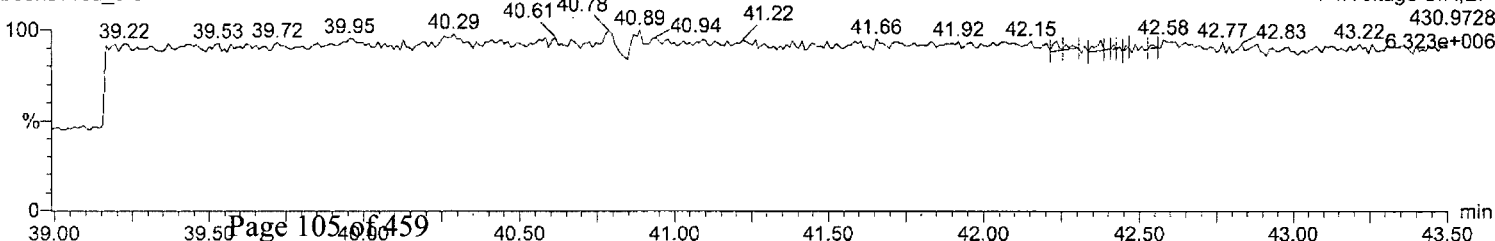
b03nov10a_5-3

F4:Voltage SIR,EI+

437.814
4.472e+006**Lock Mass F4**

b03nov10a_5-3

F4:Voltage SIR,EI+

430.9728
6.323e+006

Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

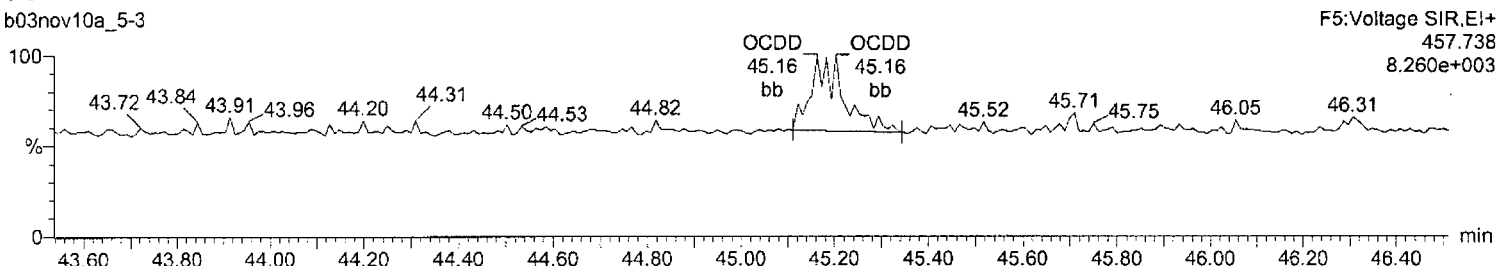
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

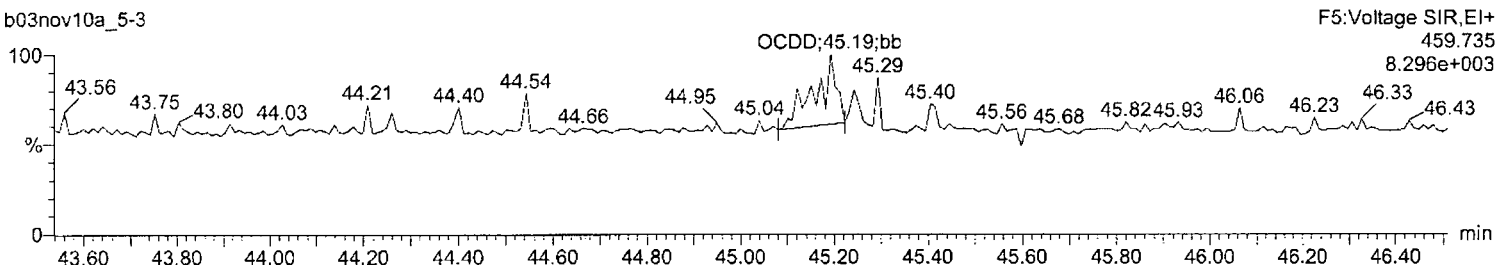
OCDD

b03nov10a_5-3



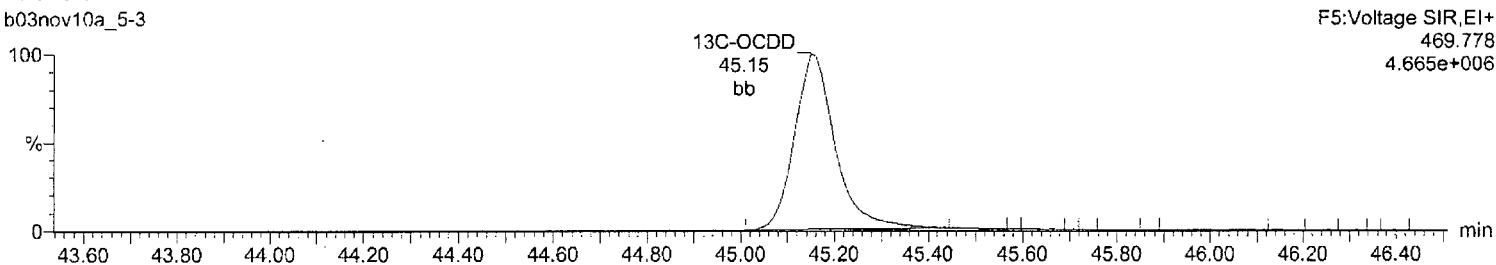
OCDD

b03nov10a_5-3



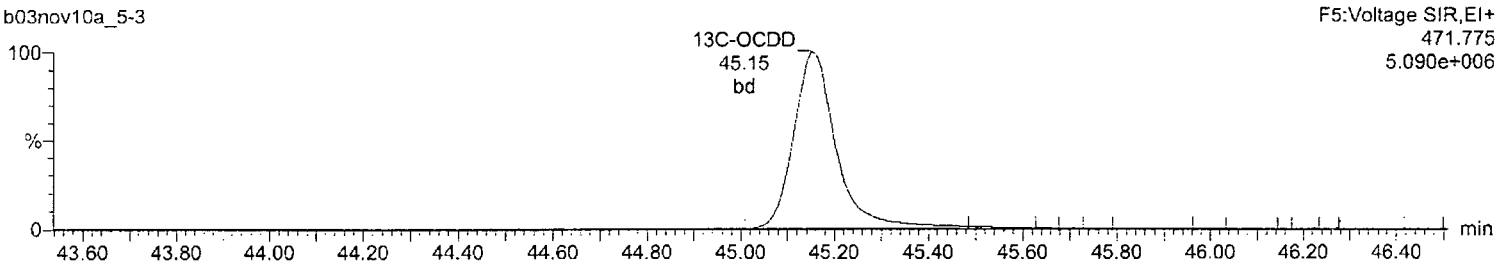
¹³C-OCDD

b03nov10a_5-3



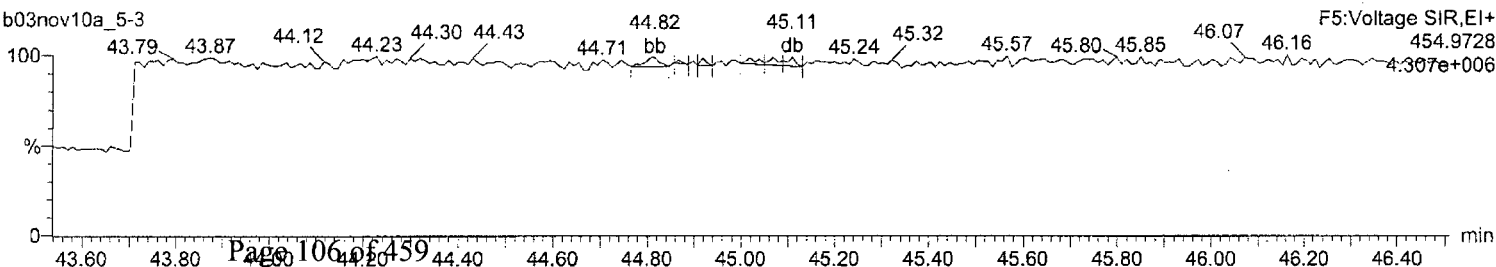
¹³C-OCDD

b03nov10a_5-3



Lock Mass F5

b03nov10a_5-3



Quantify Sample Report **MassLynx 4.1**

Method 8290 Quantification Report

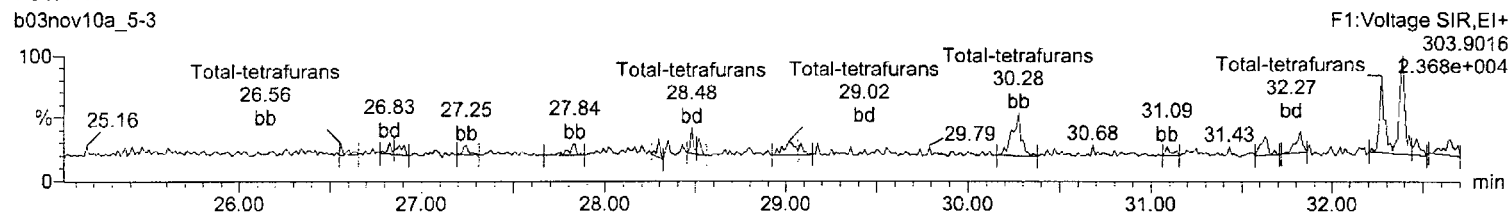
Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

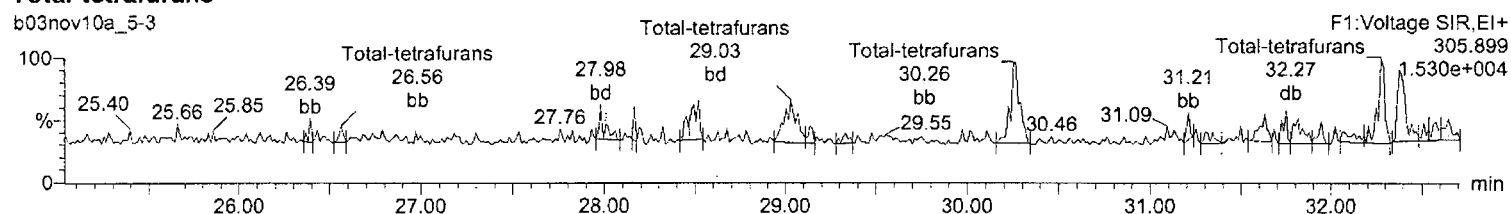
Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L, Task: HRP763_1, User: MJC**Total-tetrafurans**

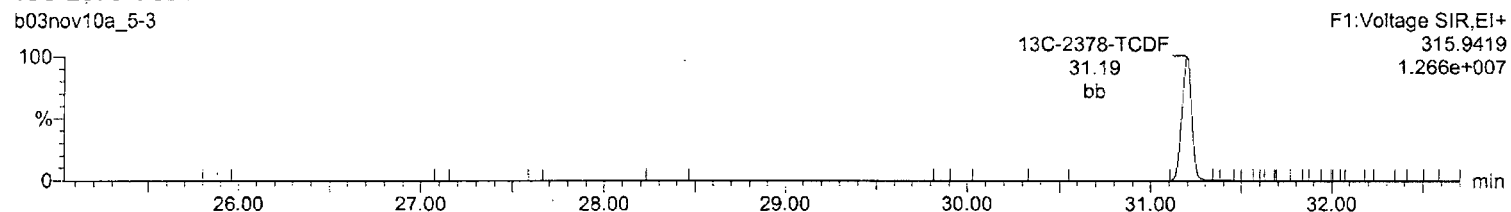
b03nov10a_5-3

**Total-tetrafurans**

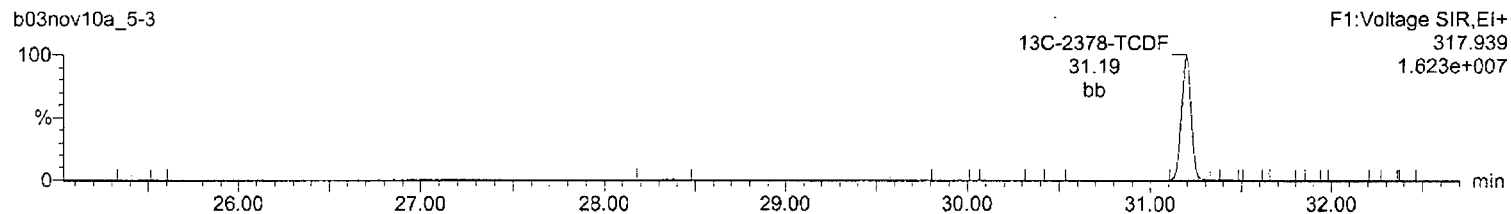
b03nov10a_5-3

**13C-2378-TCDF**

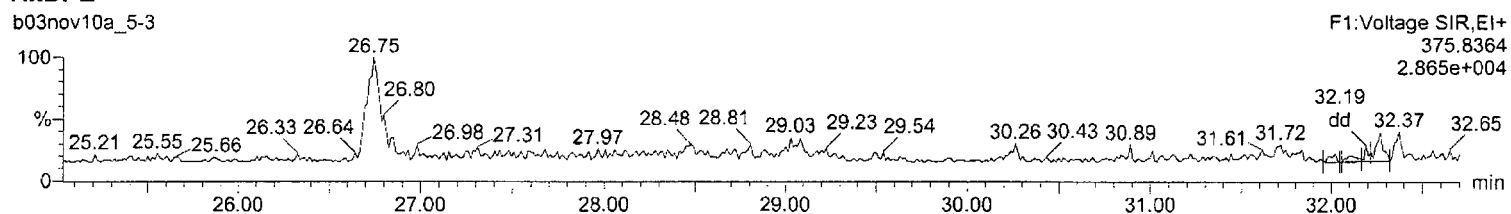
b03nov10a_5-3

**13C-2378-TCDF**

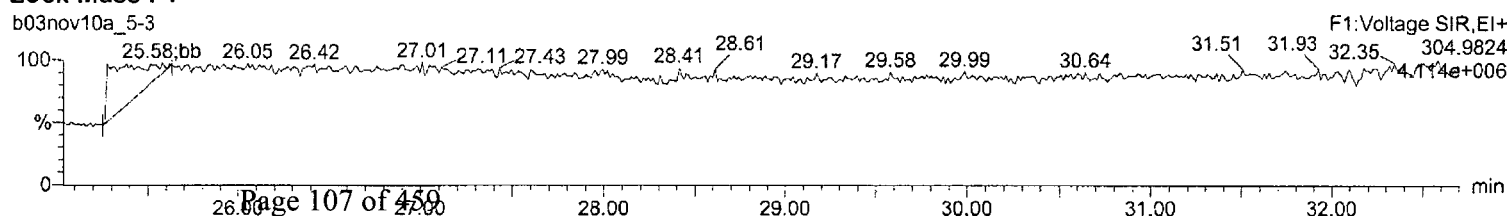
b03nov10a_5-3

**HxDPE**

b03nov10a_5-3

**Lock Mass F1**

b03nov10a_5-3



Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

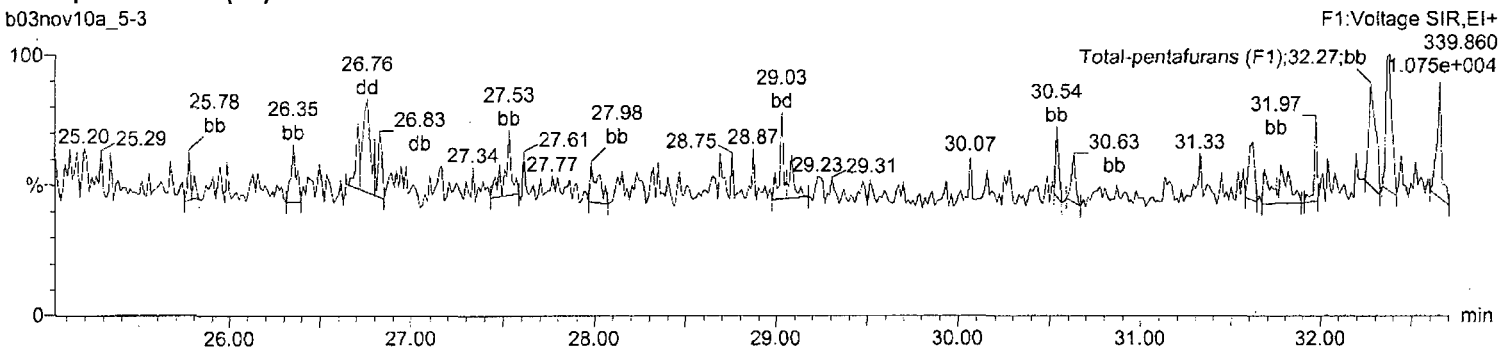
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

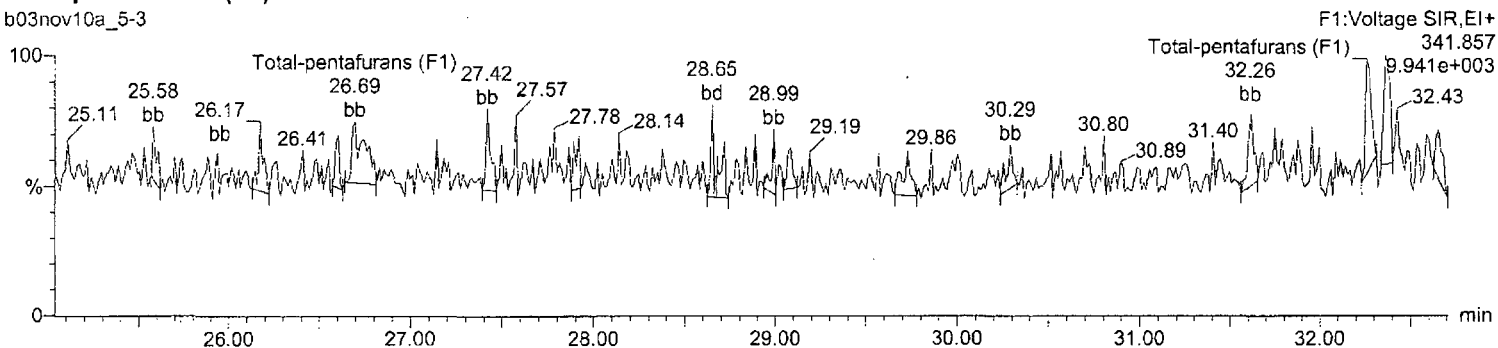
Total-pentafurans (F1)

b03nov10a_5-3



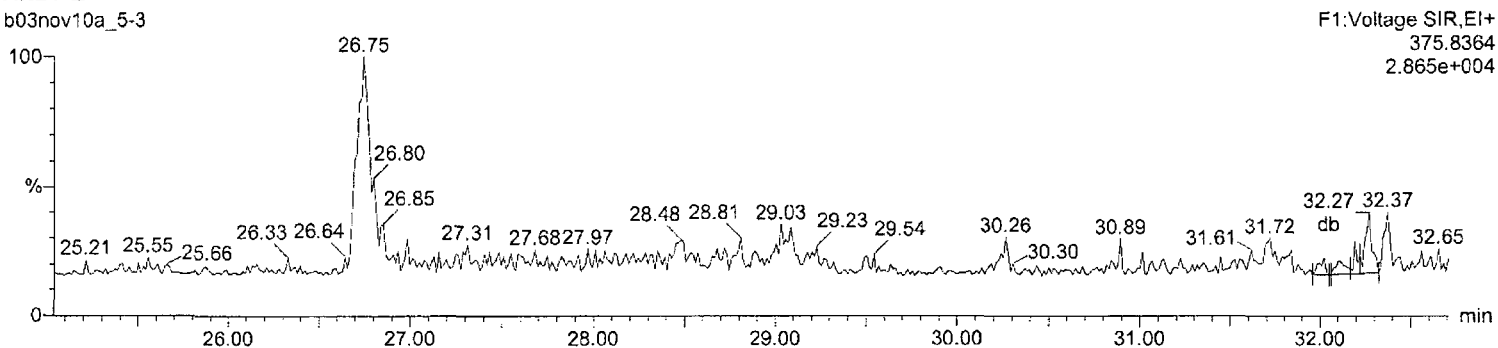
Total-pentafurans (F1)

b03nov10a_5-3



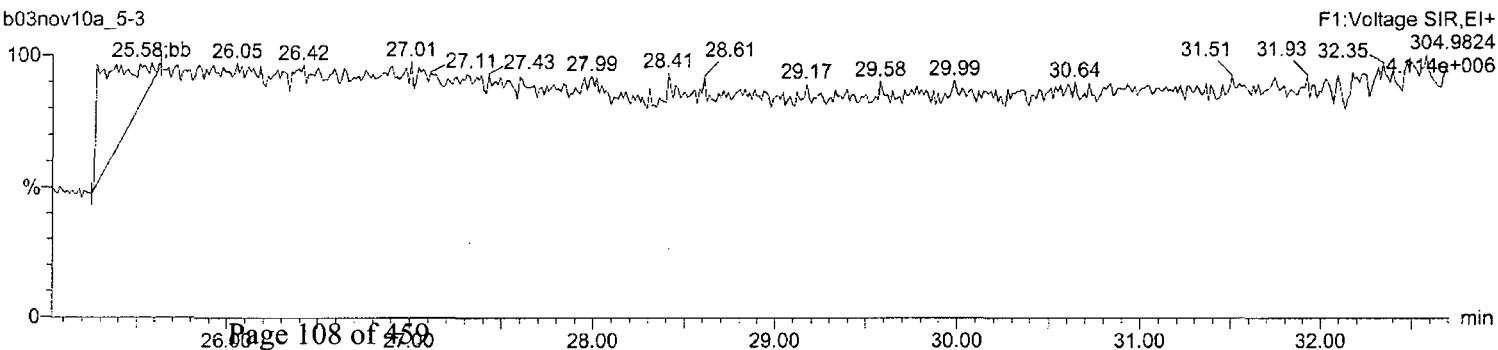
HxDPE

b03nov10a_5-3



Lock Mass F1

b03nov10a_5-3



Quantify Sample Report **MassLynx 4.1**

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

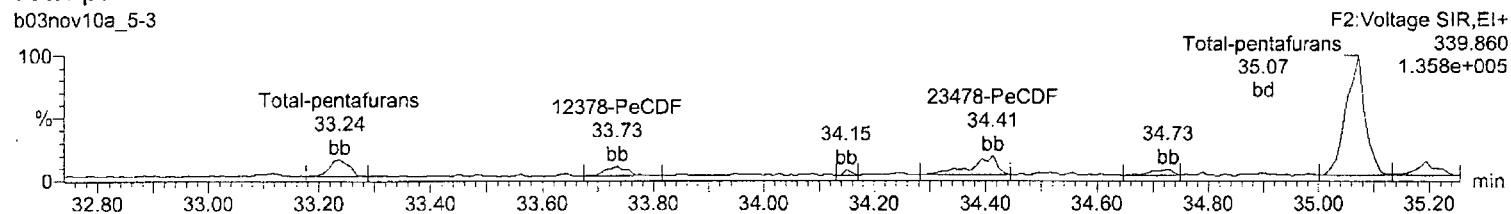
Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L,

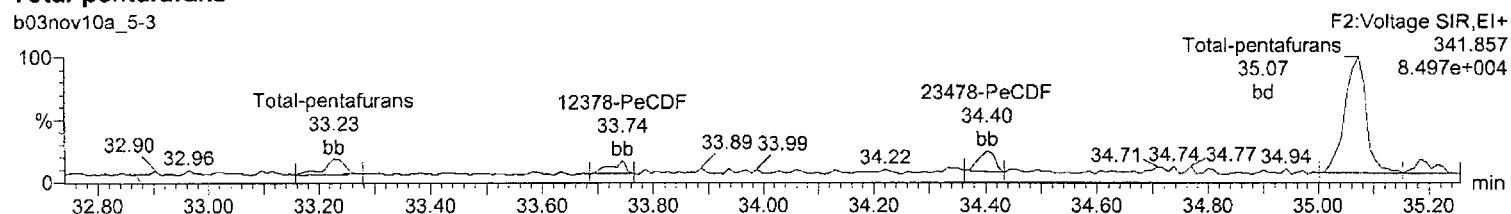
Task: HRP763_1, User: MJC

Total-pentafurans

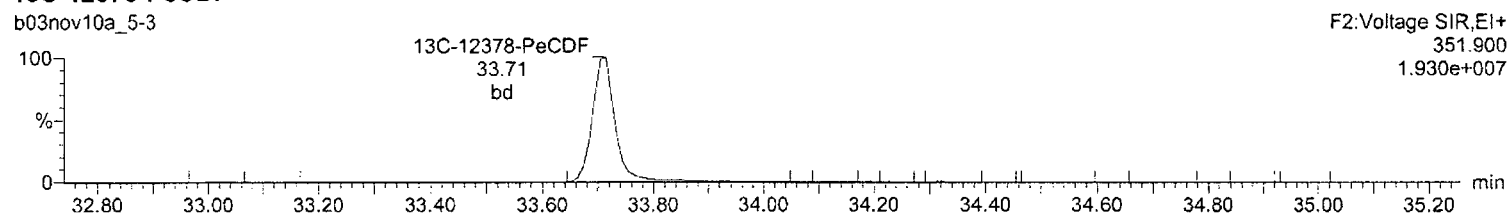
b03nov10a_5-3

**Total-pentafurans**

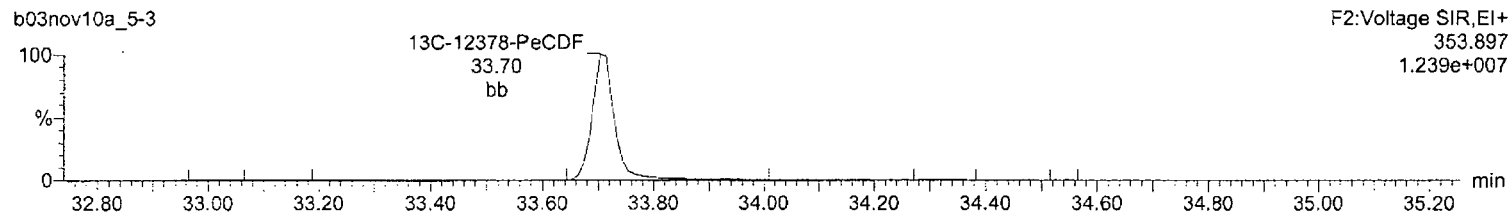
b03nov10a_5-3

**¹³C-12378-PeCDF**

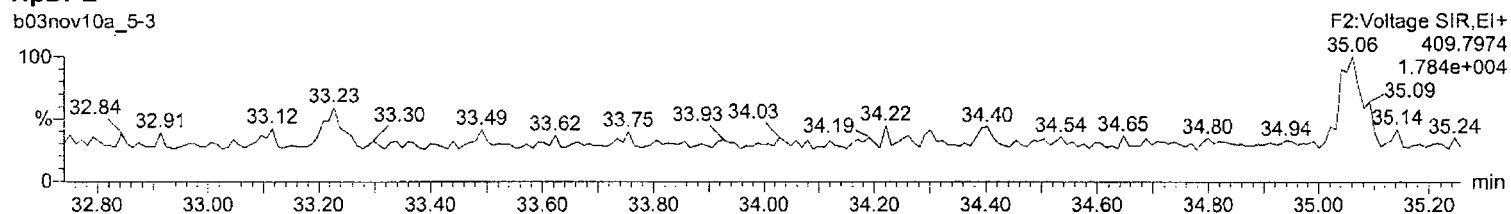
b03nov10a_5-3

**¹³C-12378-PeCDF**

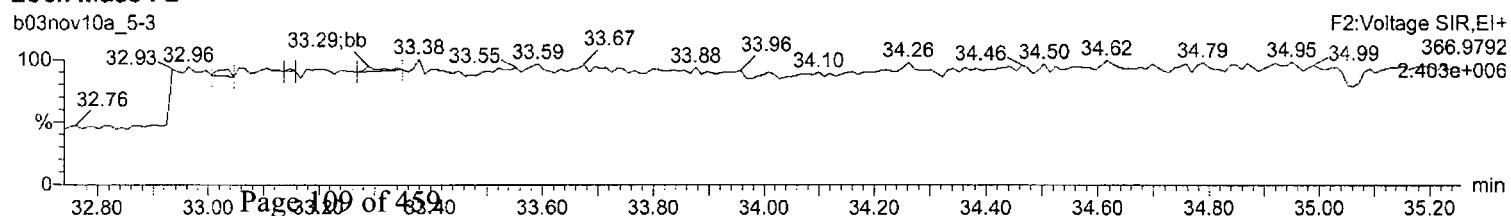
b03nov10a_5-3

**HpDPE**

b03nov10a_5-3

**Lock Mass F2**

b03nov10a_5-3



Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

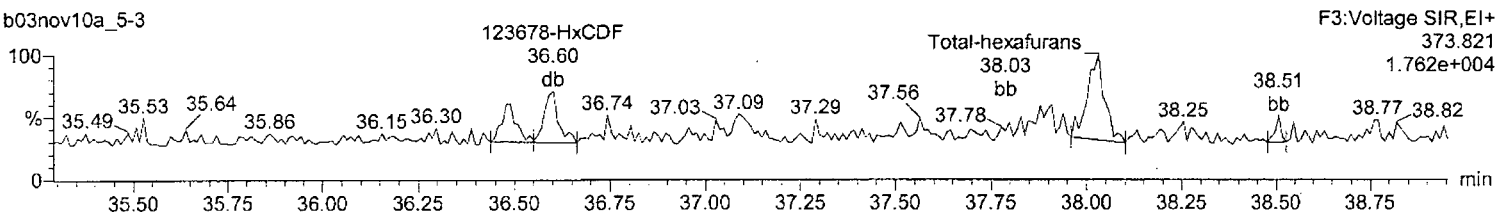
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

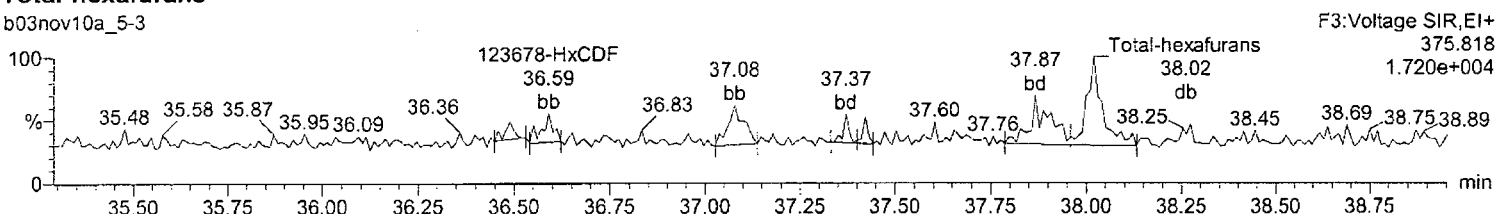
Total-hexafurans

b03nov10a_5-3



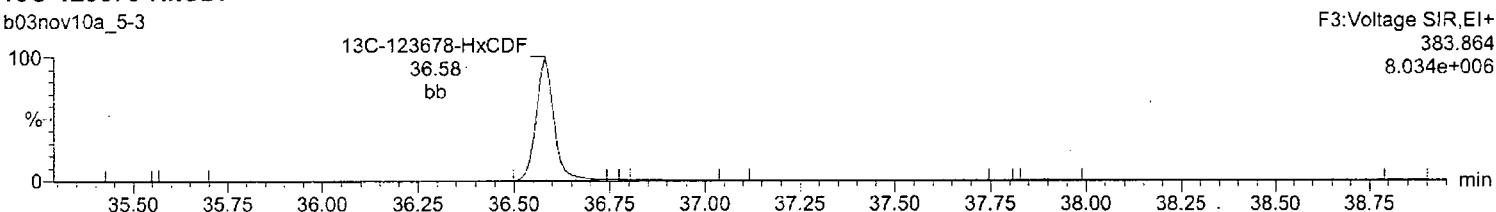
Total-hexafurans

b03nov10a_5-3



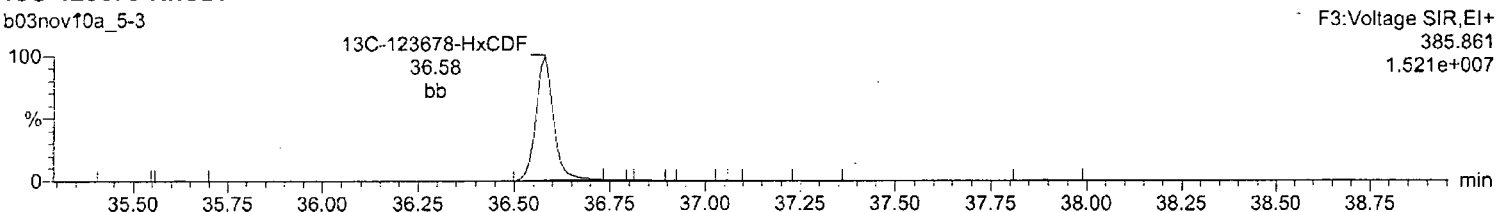
13C-123678-HxCDF

b03nov10a_5-3



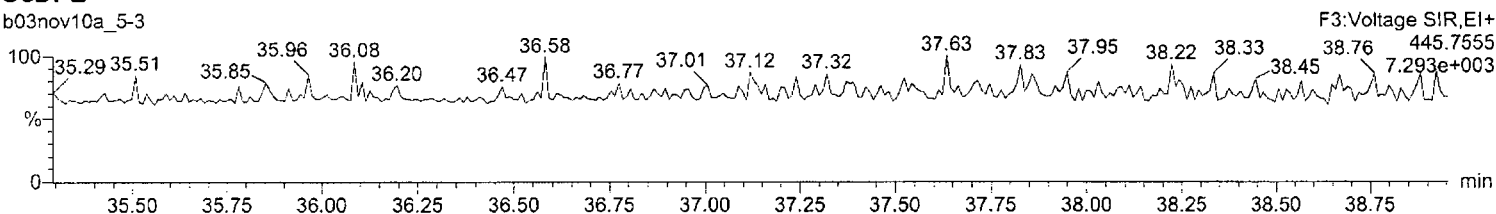
13C-123678-HxCDF

b03nov10a_5-3



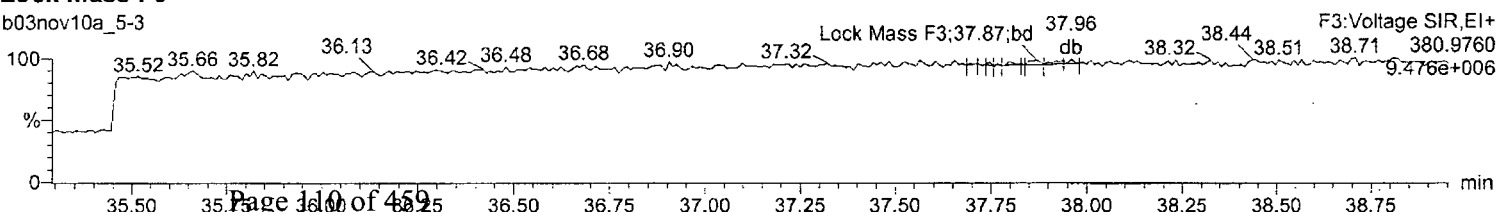
OcDPE

b03nov10a_5-3



Lock Mass F3

b03nov10a_5-3



Quantify Sample Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

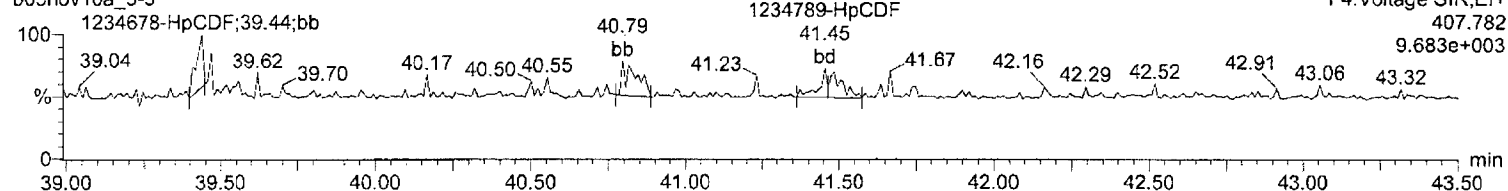
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

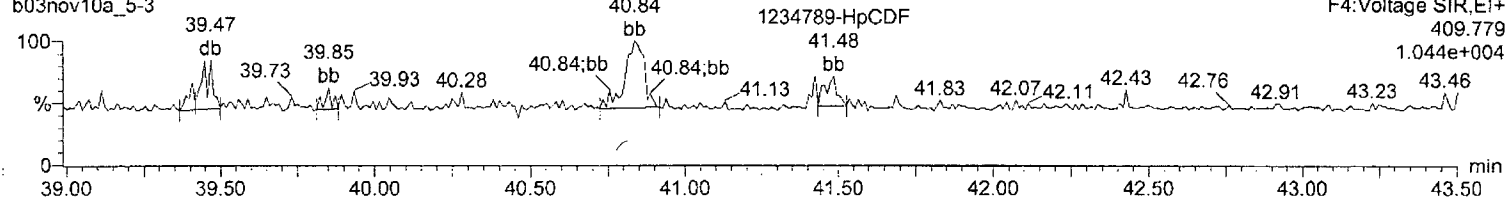
Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

Total-heptafurans

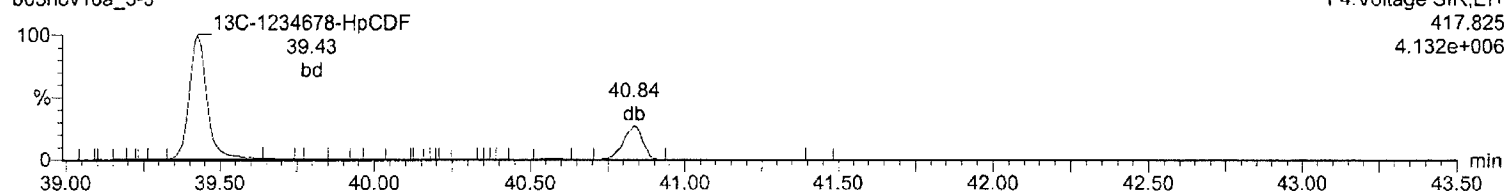
b03nov10a_5-3

**Total-heptafurans**

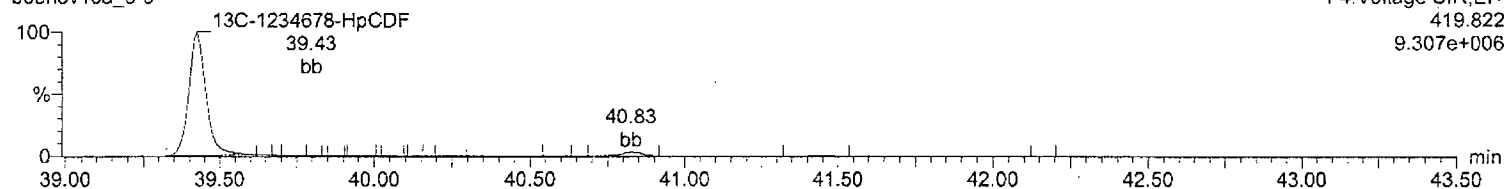
b03nov10a_5-3

**13C-1234678-HpCDF**

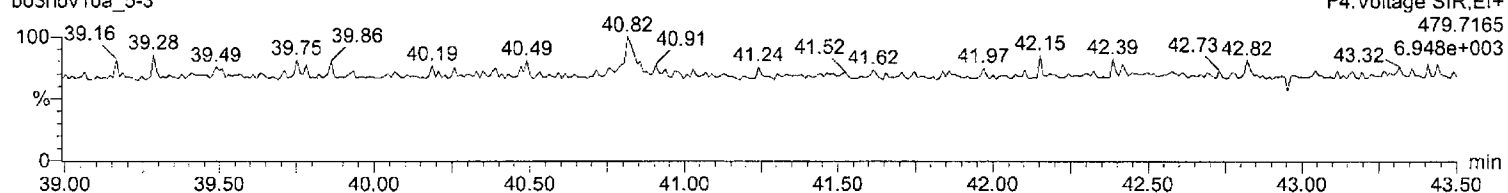
b03nov10a_5-3

**13C-1234678-HpCDF**

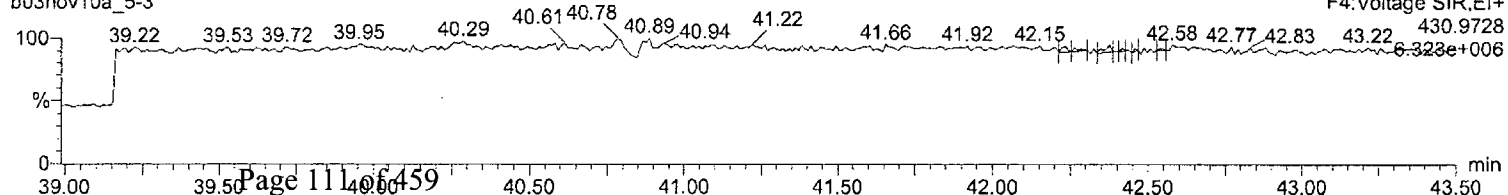
b03nov10a_5-3

**NoDPE**

b03nov10a_5-3

**Lock Mass F4**

b03nov10a_5-3



Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

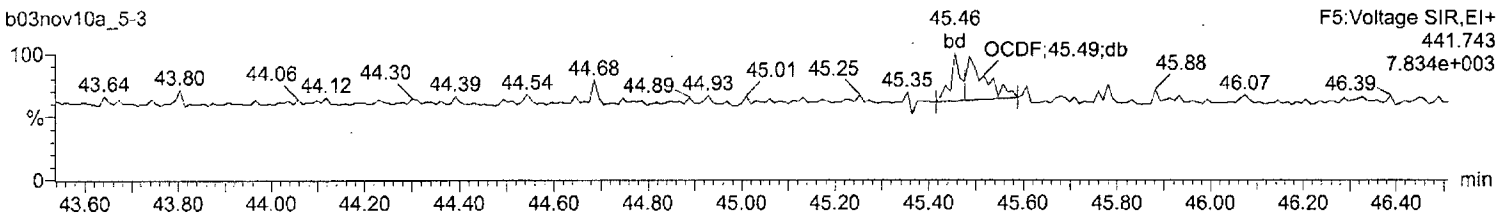
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-3, Date: 05-Nov-2010, Time: 03:49:52, ID: 12002076-1 MB, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

OCDF

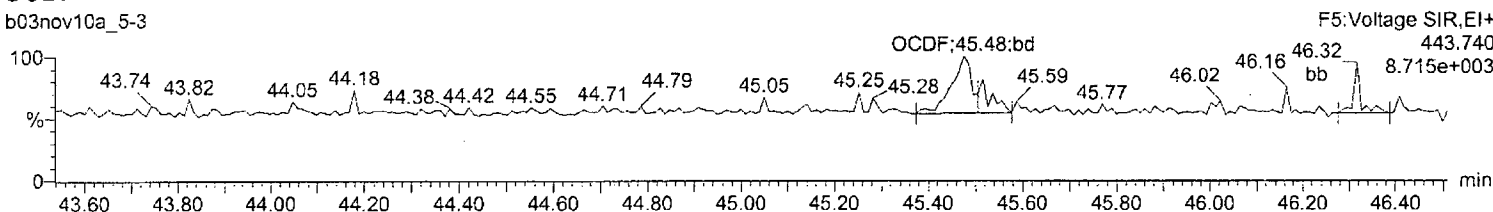
b03nov10a_5-3



F5: Voltage SIR, EI+
441.743
7.834e+003

OCDF

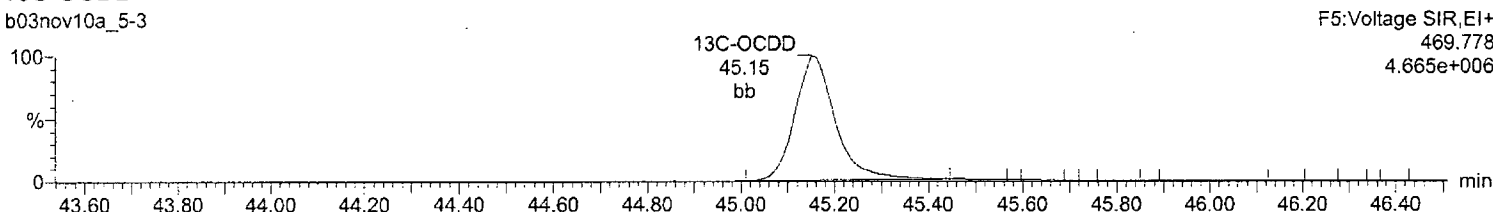
b03nov10a_5-3



F5: Voltage SIR, EI+
443.740
8.715e+003

13C-OCDD

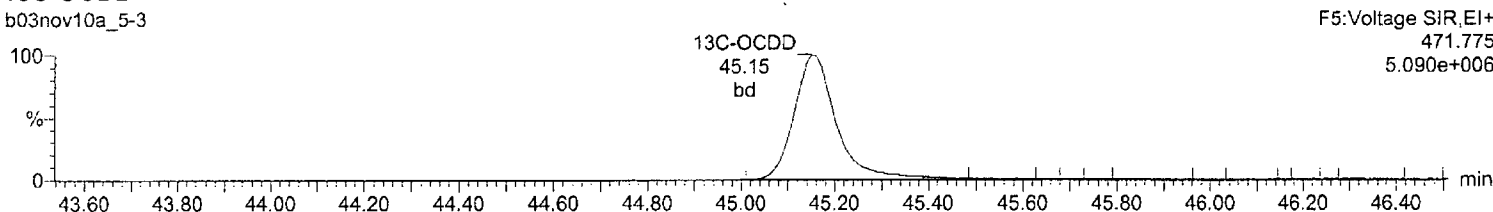
b03nov10a_5-3



F5: Voltage SIR, EI+
469.778
4.665e+006

13C-OCDD

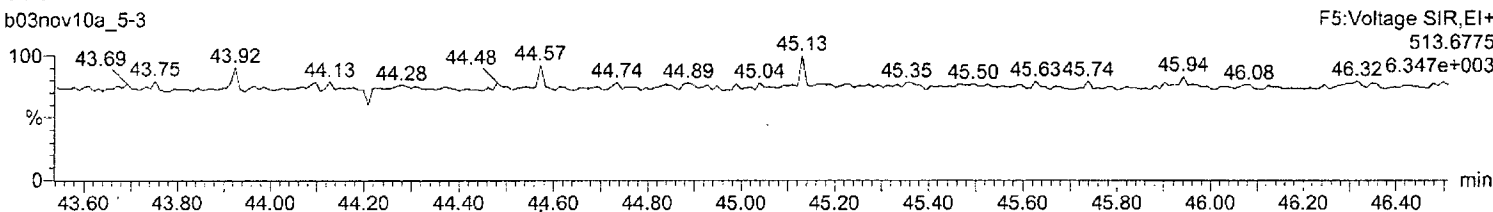
b03nov10a_5-3



F5: Voltage SIR, EI+
471.775
5.090e+006

DeDPE

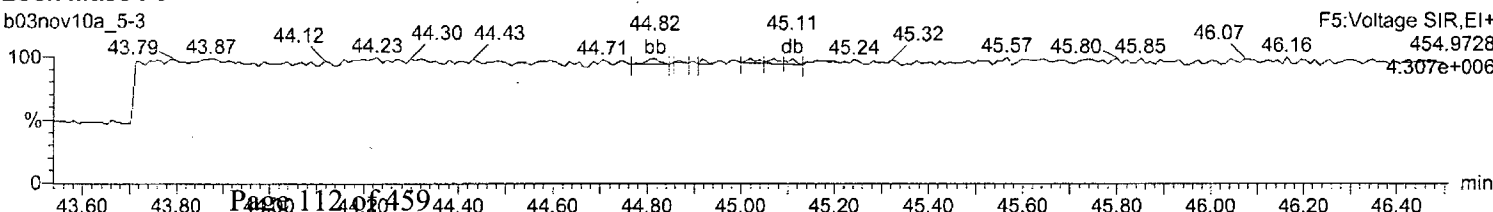
b03nov10a_5-3



F5: Voltage SIR, EI+
513.6775
6.347e+003

Lock Mass F5

b03nov10a_5-3



F5: Voltage SIR, EI+
454.9728
4.307e+006

Quantify Sample Summary Report
Method 8290 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

Last Altered: Friday, November 05, 2010 4:14:46 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:28:03 PM Eastern Standard Time

Page

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-1, Date: 04-Nov-2010, Time: 14:48:16, ID: 12002022-1 LCS, Description: 17194, Job: HMS8290TCL, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	4.58e4	5.70e4	1.03e5	31.75	1.000	0.80	NO	10.791	0.0297	1.01e6	1042	967.7	1.24e6	977	1273.4	bb
2	12378-PeCDD	2.87e5	1.80e5	4.67e5	34.55	1.000	1.60	NO	50.599	0.0651	6.63e6	2980	2224.2	4.38e6	1765	2479.8	bb
3	123478-HxCDD	2.26e5	1.81e5	4.07e5	37.23	0.998	1.25	NO	54.627	0.131	4.61e6	3438	1340.5	3.79e6	3216	1178.0	bd
4	123678-HxCDD	2.32e5	1.83e5	4.15e5	37.32	1.000	1.27	NO	51.610	0.122	4.77e6	3438	1386.7	3.72e6	3216	1156.0	db
5	123789-HxCDD	2.31e5	1.83e5	4.14e5	37.57	1.007	1.26	NO	57.571	0.136	4.39e6	3438	1276.0	3.52e6	3216	1094.8	bd
6	1234678-HpCDD	1.83e5	1.73e5	3.56e5	40.76	1.000	1.06	NO	50.909	0.109	2.63e6	1912	1378.2	2.59e6	1806	1432.5	bd
7	OCDD	2.72e5	3.00e5	5.72e5	45.18	1.000	0.91	NO	101.384	0.211	2.93e6	2270	1290.4	3.25e6	1817	1789.8	bd
8	2378-TCDF	6.49e4	8.49e4	1.50e5	31.22	1.000	0.77	NO	10.526	0.0348	1.21e6	1343	902.0	1.57e6	1535	1025.0	bb
9	12378-PeCDF	4.08e5	2.67e5	6.75e5	33.72	1.000	1.52	NO	58.780	0.0604	1.00e7	3040	3298.3	6.63e6	2917	2274.1	bd
10	23478-PeCDF	3.59e5	2.30e5	5.89e5	34.35	1.019	1.56	NO	52.400	0.0617	8.63e6	3040	2837.6	5.55e6	2917	1901.6	bb
11	123478-HxCDF	2.79e5	2.25e5	5.04e5	36.49	0.997	1.24	NO	58.518	0.131	6.05e6	3345	1808.4	5.02e6	4409	1138.0	bd
12	123678-HxCDF	3.23e5	2.61e5	5.84e5	36.60	1.000	1.24	NO	58.224	0.113	6.67e6	3345	1994.9	5.38e6	4409	1220.3	db
13	234678-HxCDF	2.66e5	2.19e5	4.85e5	37.10	1.014	1.21	NO	53.530	0.125	5.44e6	3345	1625.4	4.48e6	4409	1015.3	bb
14	123789-HxCDF	2.49e5	1.94e5	4.42e5	37.91	1.036	1.28	NO	58.955	0.150	4.44e6	3345	1326.5	3.60e6	4409	817.5	bd
15	1234678-HpCDF	2.91e5	2.83e5	5.74e5	39.45	1.000	1.03	NO	60.584	0.109	4.91e6	2916	1683.8	4.82e6	2731	1764.7	bd
16	1234789-HpCDF	1.84e5	1.82e5	3.66e5	41.46	1.051	1.01	NO	52.986	0.149	2.60e6	2916	893.4	2.50e6	2731	915.9	bb
17	OCDF	2.78e5	3.15e5	5.92e5	45.50	1.007	0.88	NO	84.843	0.171	2.95e6	2610	1130.8	3.25e6	1483	2189.0	bd
18	13C-2378-TCDD	4.19e5	5.22e5	9.41e5	31.75	1.013	0.80	NO	78.255	0.0464	8.96e6	2075	4319.0	1.14e7	1497	7631.4	bd
19	13C-12378-PeCDD	5.55e5	3.40e5	8.95e5	34.54	1.102	1.63	NO	87.744	0.0481	1.31e7	1350	9733.9	8.06e6	1794	4492.3	bd
20	13C-123678-HxCDD	4.66e5	3.66e5	8.31e5	37.31	0.993	1.27	NO	81.568	0.104	9.49e6	3501	2710.7	7.53e6	2921	2579.0	bb
21	13C-1234678-HpCDD	3.58e5	3.37e5	6.95e5	40.74	1.085	1.06	NO	94.689	0.119	5.22e6	2411	2165.2	4.83e6	2846	1695.5	bb
22	13C-OCDD	5.36e5	5.96e5	1.13e6	45.17	1.203	0.90	NO	184.847	0.126	5.52e6	2141	2576.4	6.18e6	2518	2456.3	bd
23	13C-2378-TCDF	6.40e5	8.07e5	1.45e6	31.21	0.996	0.79	NO	74.014	0.0233	1.12e7	1531	7290.6	1.44e7	1385	10402.0	bb
24	13C-12378-PeCDF	7.52e5	4.77e5	1.23e6	33.71	1.076	1.58	NO	67.632	0.0743	1.94e7	6016	3222.7	1.23e7	2630	4665.4	bb
25	13C-123678-HxCDF	3.24e5	6.24e5	9.48e5	36.59	0.974	0.52	NO	63.411	0.0554	6.68e6	2159	3094.9	1.28e7	2833	4522.2	bb
26	13C-1234678-HpCDF	2.33e5	5.09e5	7.42e5	39.44	1.050	0.46	NO	74.921	0.0830	3.83e6	1870	2048.6	8.56e6	3091	2770.5	bd
27	13C-1234-TCDD	4.79e5	5.95e5	1.07e6	31.34	0.000	0.81	NO	100.000	0.0520	9.20e6	2075	4433.6	1.14e7	1497	7624.5	bb
28	13C-123789-HxCDD	5.16e5	4.01e5	9.17e5	37.56	0.000	1.29	NO	100.000	0.116	9.33e6	3501	2665.9	7.25e6	2921	2481.4	bd
29	37Cl-2378-TCDD (SS)	4.30e2		4.30e2	31.75	1.000			0.043	0.0124	8.42e3	878	9.6				bb
30	13C-23478-PeCDF (SS)	4.77e3	2.63e3	7.40e3	34.34	1.019	1.81	YES	0.645	0.0877	1.15e5	6016	19.2	5.99e4	2630	22.8	bb

HMP
07Nov10

17194 HMS8290TCL

3/11/10

Quantify Sample Report MassLynx 4.1
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

Last Altered: Friday, November 05, 2010 4:14:46 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:18:12 PM Eastern Standard Time

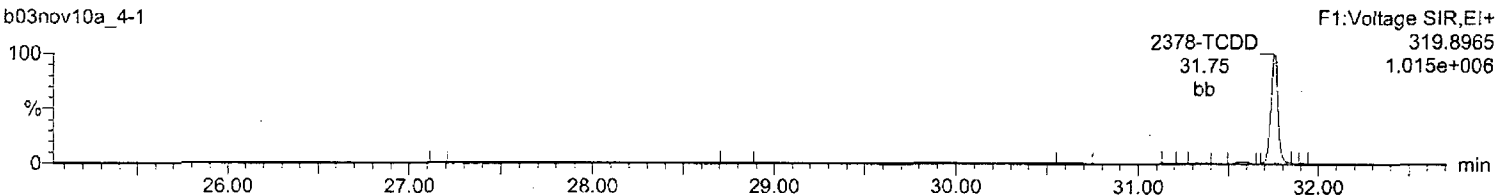
Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-1, Date: 04-Nov-2010, Time: 14:48:16, ID: 12002022-1 LCS, Description: 17315, Job: HMS8290TCL,
Task: HRP763_1, User: MJC

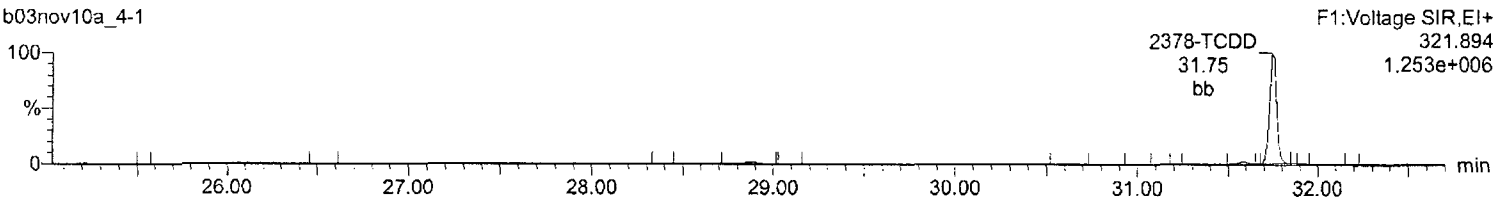
Total-tetradoxins

b03nov10a_4-1



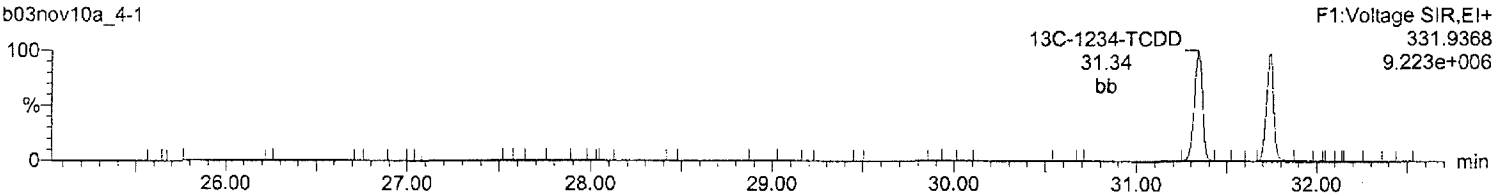
Total-tetradoxins

b03nov10a_4-1



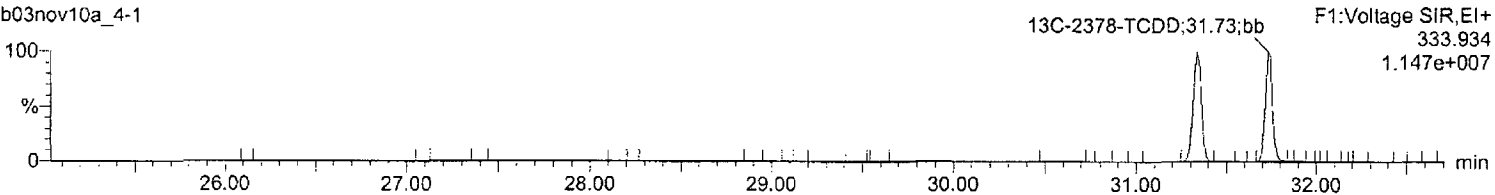
13C-2378-TCDD

b03nov10a_4-1



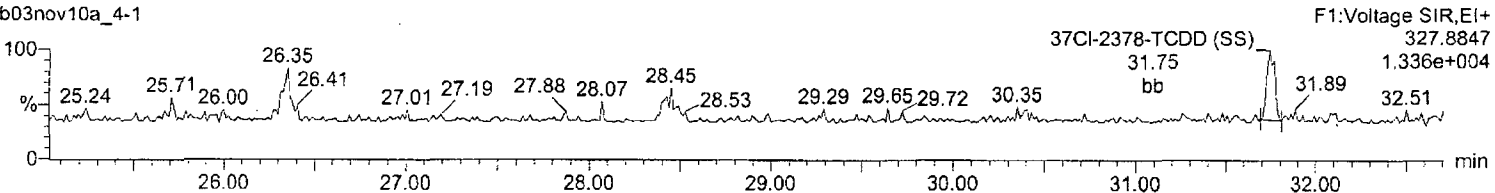
13C-2378-TCDD

b03nov10a_4-1



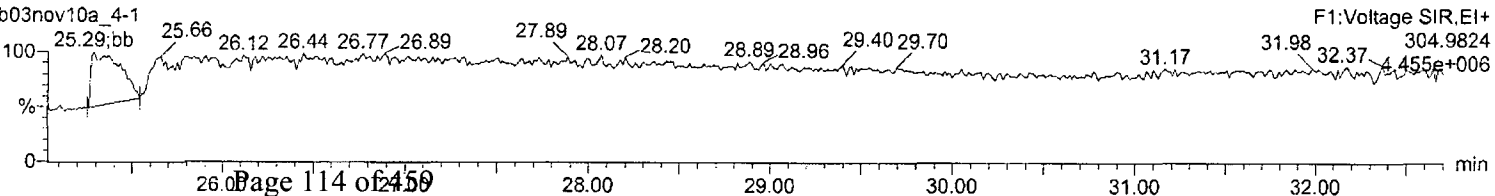
37Cl-2378-TCDD (SS)

b03nov10a_4-1



Lock Mass F1

b03nov10a_4-1



Quantify Sample Summary Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 15:04:18 Eastern Standard Time

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of 9

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-1, Date: 05-Nov-2010, Time: 02:13:45, ID: 12002074-1 LCS, Description: 17315 HMS8290TCL
17315 HMS8290TCLPle
9/11/10

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	3.44e4	4.44e4	7.88e4	31.75	1.000	0.78	NO	10.573	0.0483	7.32e5	788	929.4	9.24e5	1796	514.3	bd
2	12378-PeCDD	2.04e5	1.29e5	3.33e5	34.55	1.001	1.58	NO	51.219	0.0740	4.45e6	1890	2353.8	2.77e6	1546	1795.3	bd
3	123478-HxCDD	1.79e5	1.47e5	3.26e5	37.22	0.998	1.22	NO	51.452	0.165	3.43e6	3251	1053.9	2.78e6	2860	970.4	bd
4	123678-HxCDD	1.99e5	1.68e5	3.66e5	37.31	1.000	1.18	NO	53.586	0.153	3.45e6	3251	1060.4	2.87e6	2860	1002.6	db
5	123789-HxCDD	1.86e5	1.62e5	3.48e5	37.56	1.007	1.15	NO	56.903	0.171	3.17e6	3251	975.4	2.62e6	2860	916.9	bd
6	1234678-HpCDD	1.37e5	1.32e5	2.69e5	40.75	1.000	1.03	NO	51.090	0.204	1.75e6	2167	809.8	1.71e6	2300	742.2	bd
7	OCDD	1.68e5	1.91e5	3.58e5	45.17	1.000	0.88	NO	104.419	0.344	1.73e6	1771	976.9	1.93e6	2236	863.1	bd
8	2378-TCDF	5.05e4	6.45e4	1.15e5	31.21	1.000	0.78	NO	9.813	0.0362	8.67e5	1290	672.6	1.07e6	1190	902.1	bb
9	12378-PeCDF	3.16e5	2.03e5	5.19e5	33.71	1.000	1.55	NO	51.160	0.112	7.02e6	4177	1681.2	4.52e6	4187	1080.1	bd
10	23478-PeCDF	3.13e5	2.03e5	5.16e5	34.34	1.019	1.54	NO	51.988	0.115	7.01e6	4177	1678.7	4.70e6	4187	1123.3	bb
11	123478-HxCDF	2.37e5	1.94e5	4.30e5	36.49	0.998	1.22	NO	57.043	0.274	4.77e6	5823	819.4	3.93e6	7188	546.7	bd
12	123678-HxCDF	2.81e5	2.23e5	5.03e5	36.59	1.000	1.26	NO	57.342	0.235	5.06e6	5823	868.5	4.04e6	7188	562.4	db
13	234678-HxCDF	2.65e5	2.16e5	4.81e5	37.09	1.014	1.22	NO	60.586	0.261	4.84e6	5823	831.1	3.86e6	7188	537.5	bb
14	123789-HxCDF	2.17e5	1.81e5	3.98e5	37.90	1.036	1.20	NO	60.576	0.314	3.55e6	5823	609.4	2.89e6	7188	402.7	bb
15	1234678-HpCDF	2.07e5	1.97e5	4.04e5	39.44	1.000	1.05	NO	50.165	0.194	3.12e6	3873	805.5	3.07e6	4008	766.8	bd
16	1234789-HpCDF	1.41e5	1.33e5	2.74e5	41.46	1.052	1.06	NO	46.719	0.266	1.79e6	3873	462.2	1.73e6	4008	431.2	bd
17	OCDF	1.95e5	2.20e5	4.14e5	45.50	1.008	0.89	NO	97.579	0.457	2.02e6	3705	545.3	2.21e6	2887	764.9	bd
18	13C-2378-TCDD	3.25e5	4.11e5	7.36e5	31.73	1.013	0.79	NO	89.743	0.0677	7.01e6	1891	3706.1	8.81e6	1569	5615.0	bb
19	13C-12378-PeCDD	3.82e5	2.48e5	6.30e5	34.53	1.102	1.54	NO	90.510	0.127	8.19e6	3020	2712.0	5.12e6	2498	2049.6	bb
20	13C-123678-HxCDD	3.99e5	3.07e5	7.06e5	37.30	0.993	1.30	NO	83.310	0.168	6.99e6	3267	2140.9	5.58e6	4101	1360.4	bd
21	13C-1234678-HpCDD	2.72e5	2.52e5	5.24e5	40.74	1.085	1.08	NO	85.774	0.196	3.39e6	3310	1025.0	3.17e6	2869	1104.0	bd
22	13C-OCDD	3.25e5	3.64e5	6.89e5	45.15	1.202	0.89	NO	135.236	0.278	3.31e6	4373	757.6	3.67e6	2958	1240.8	bb
23	13C-2378-TCDF	5.28e5	6.65e5	1.19e6	31.19	0.996	0.79	NO	89.341	0.0349	9.25e6	1638	5643.9	1.17e7	1261	9279.5	bb
24	13C-12378-PeCDF	6.65e5	4.21e5	1.09e6	33.71	1.076	1.58	NO	87.557	0.0877	1.46e7	3747	3902.6	9.30e6	3030	3068.8	bb
25	13C-123678-HxCDF	2.84e5	5.46e5	8.30e5	36.58	0.974	0.52	NO	66.759	0.0995	5.37e6	2943	1824.8	1.04e7	3448	3016.3	bb
26	13C-1234678-HpCDF	1.94e5	4.36e5	6.30e5	39.43	1.050	0.44	NO	76.441	0.138	2.94e6	2854	1029.4	6.52e6	3043	2142.3	bd
27	13C-1234-TCDD	3.22e5	4.11e5	7.33e5	31.33	0.000	0.78	NO	100.000	0.0758	6.02e6	1891	3183.2	7.65e6	1569	4878.3	bb
28	13C-123789-HxCDD	4.33e5	3.29e5	7.63e5	37.55	0.000	1.32	NO	100.000	0.187	6.71e6	3267	2055.2	5.31e6	4101	1295.1	dd
29	37Cl-2378-TCDD (SS)	5.53e2		5.53e2	31.75	1.000			0.071	0.0291	1.13e4	1623	6.9				bb
30	13C-23478-PeCDF (SS)	7.26e2	7.79e2	1.51e3	34.34	1.019	0.93	YES	0.149	0.0912	1.58e4	3747	4.2	1.38e4	3030	4.6	bd

Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

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Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

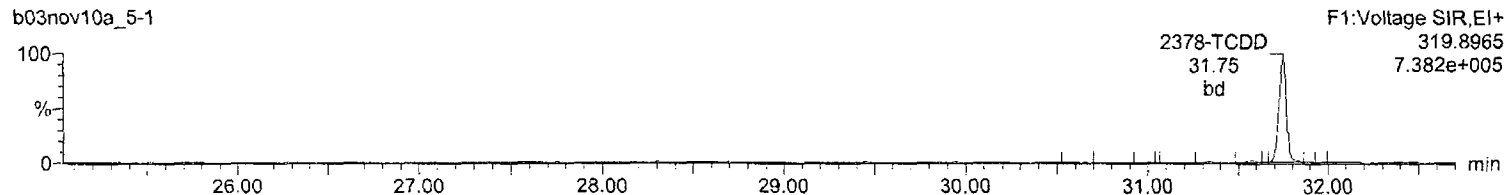
Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-1, Date: 05-Nov-2010, Time: 02:13:45, ID: 12002074-1 LCS, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

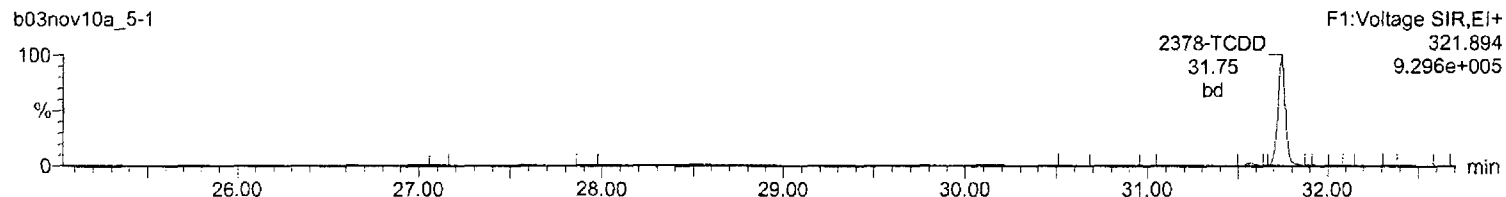
Total-tetradoxins

b03nov10a_5-1



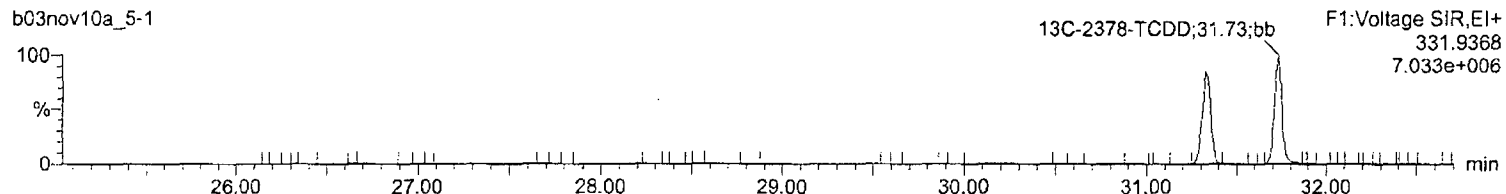
Total-tetradoxins

b03nov10a_5-1



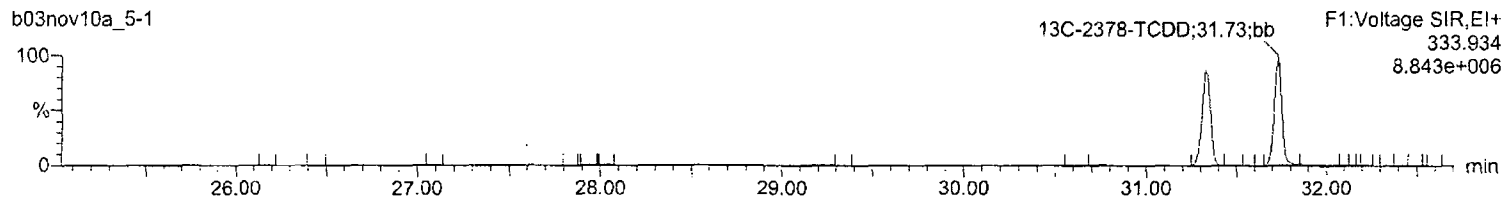
13C-2378-TCDD

b03nov10a_5-1



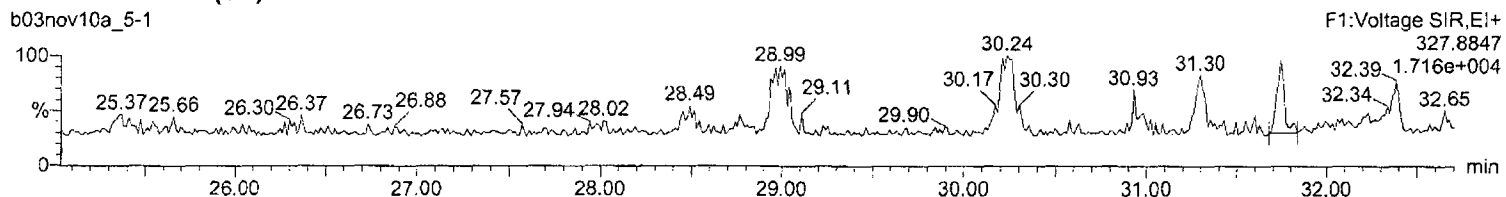
13C-2378-TCDD

b03nov10a_5-1



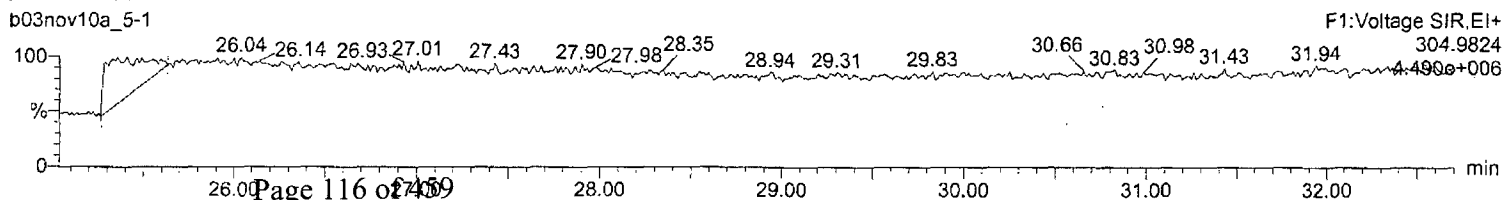
37Cl-2378-TCDD (SS)

b03nov10a_5-1



Lock Mass F1

b03nov10a_5-1



Quantify Sample Report MassLynx 4.1
Method 8290 Quantification Report

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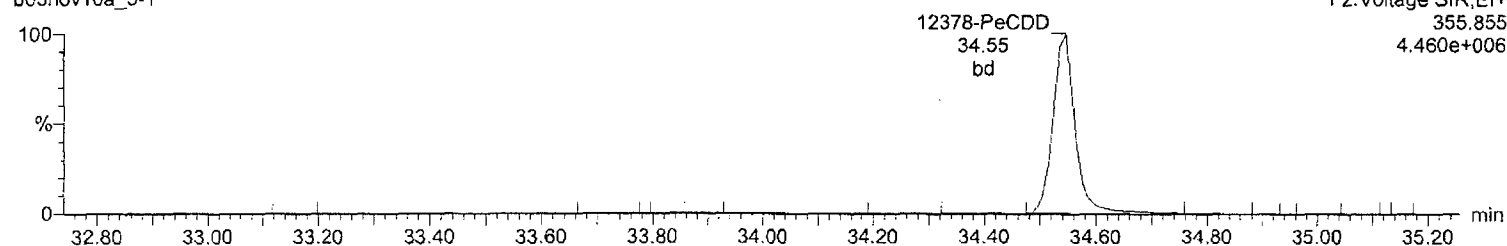
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Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-1, Date: 05-Nov-2010, Time: 02:13:45, ID: 12002074-1 LCS, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

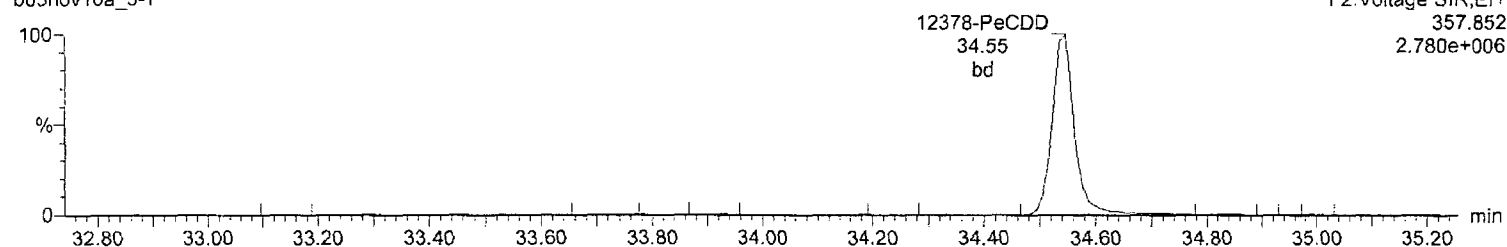
Total-pentadioxins

b03nov10a_5-1



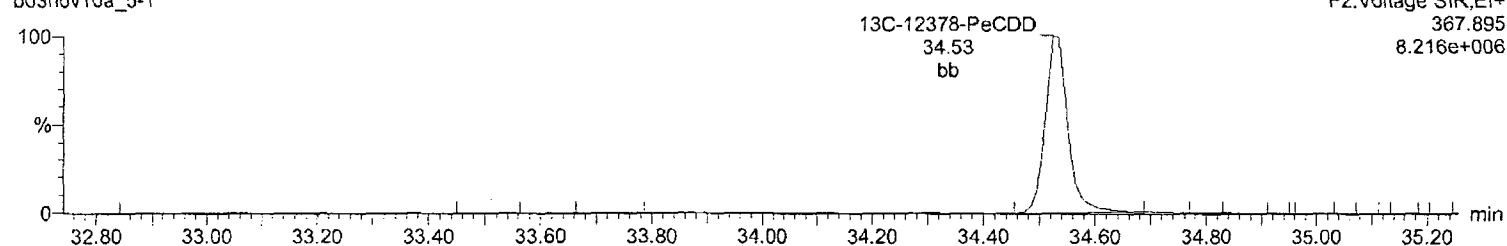
Total-pentadioxins

b03nov10a_5-1



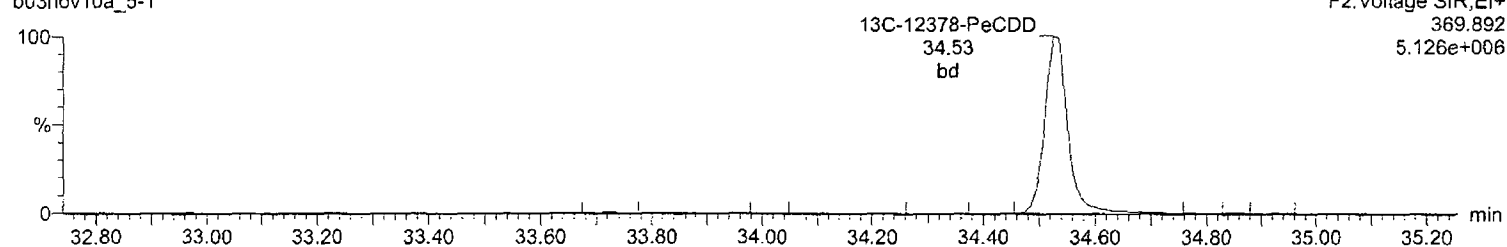
13C-12378-PeCDD

b03nov10a_5-1



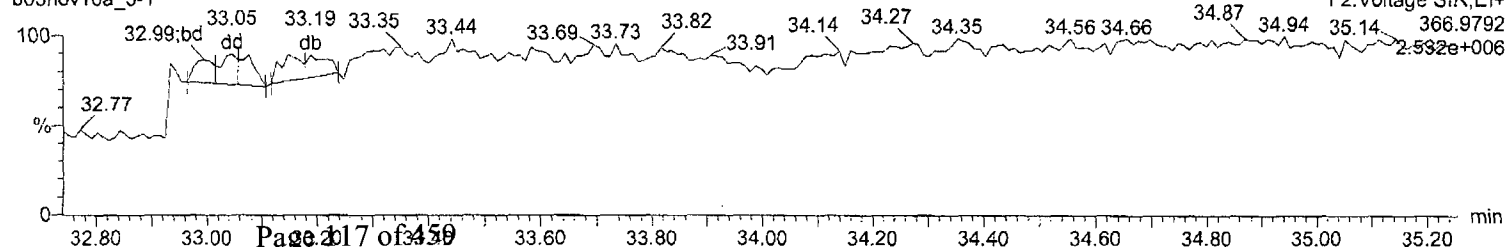
13C-12378-PeCDD

b03nov10a_5-1



Lock Mass F2

b03nov10a_5-1



Quantify Sample Report MassLynx 4.1
Method 8290 Quantification Report

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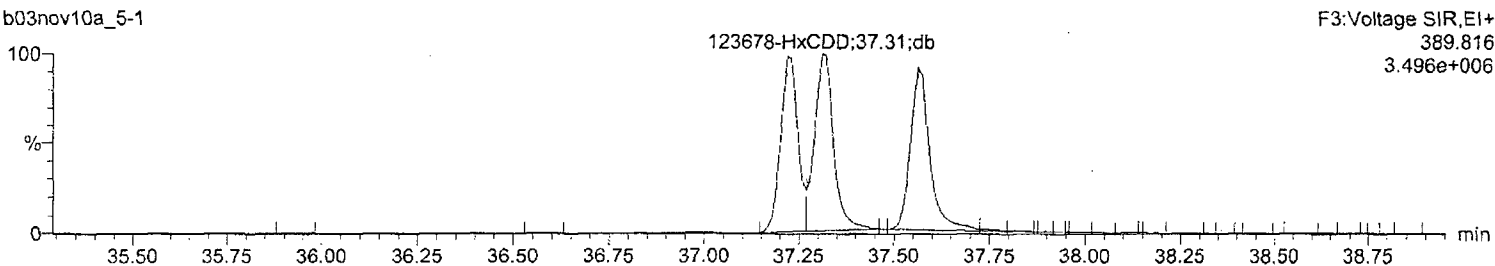
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Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-1, Date: 05-Nov-2010, Time: 02:13:45, ID: 12002074-1 LCS, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

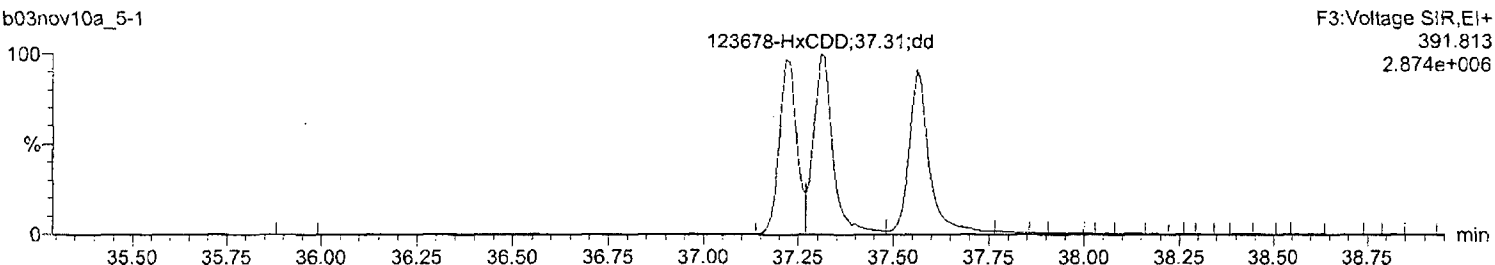
Total-hexadioxins

b03nov10a_5-1



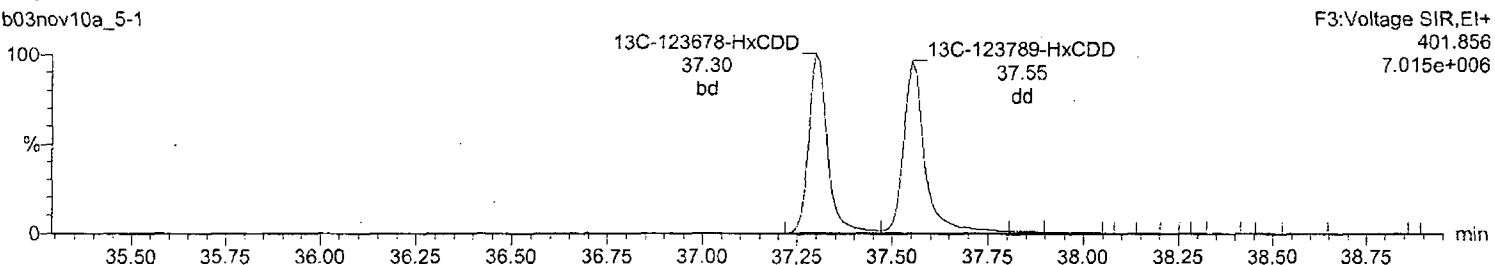
Total-hexadioxins

b03nov10a_5-1



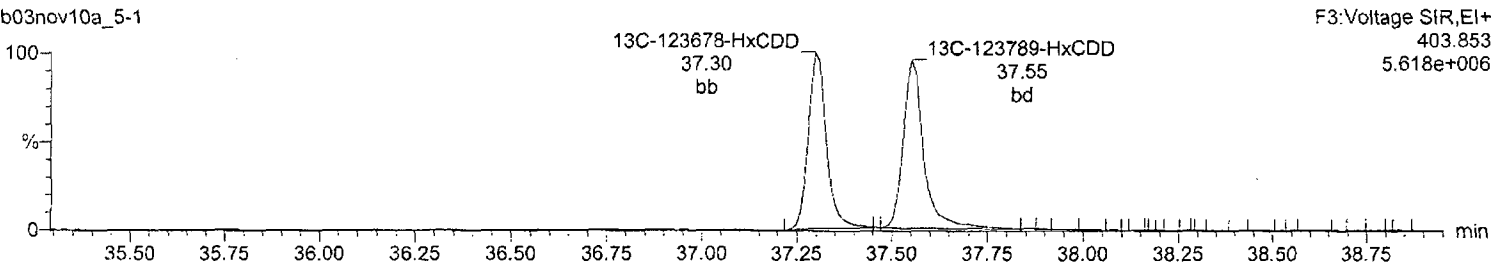
13C-123678-HxCDD

b03nov10a_5-1



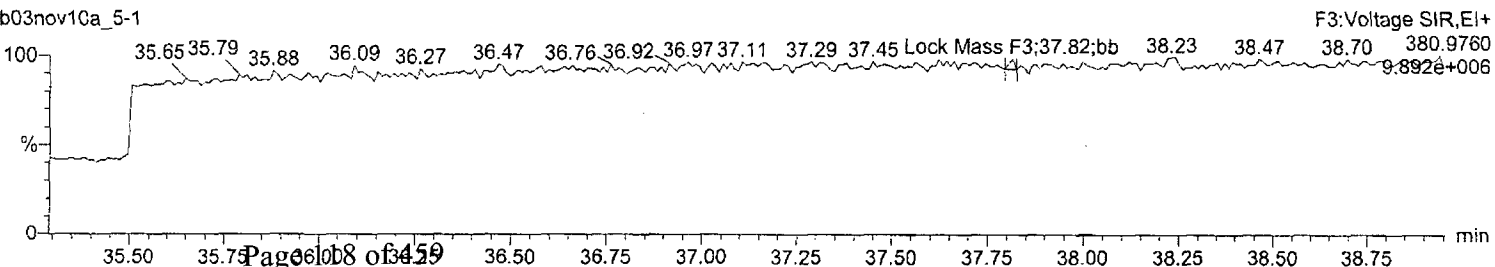
13C-123678-HxCDD

b03nov10a_5-1



Lock Mass F3

b03nov10a_5-1



Quantify Sample Report MassLynx 4.1
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

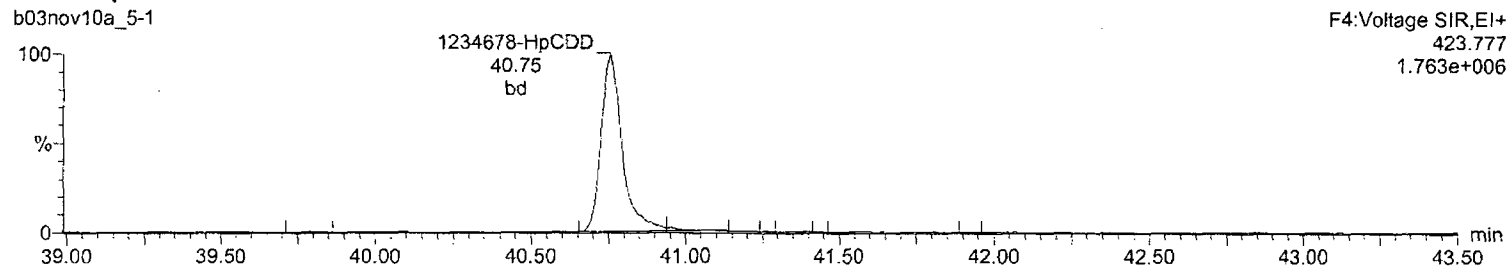
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-1, Date: 05-Nov-2010, Time: 02:13:45, ID: 12002074-1 LCS, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

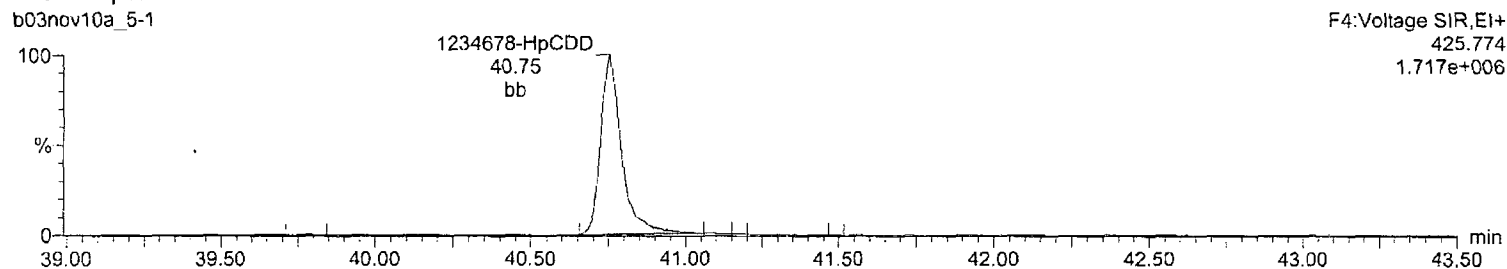
Total-heptadioxins

b03nov10a_5-1



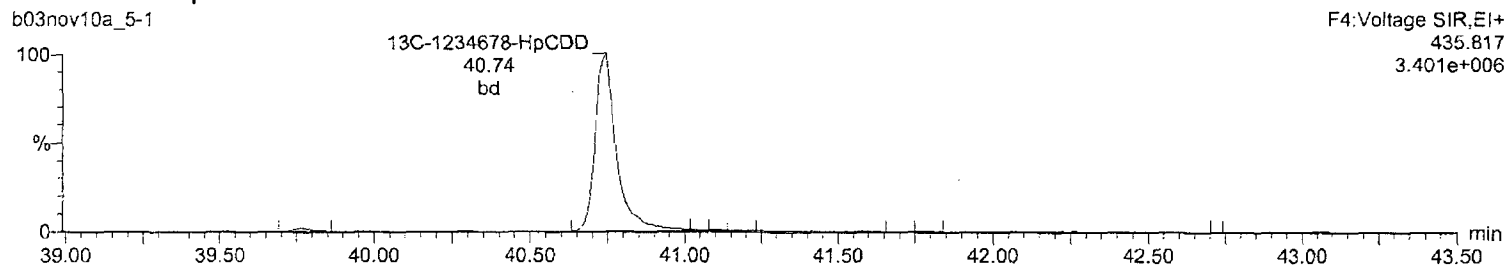
Total-heptadioxins

b03nov10a_5-1



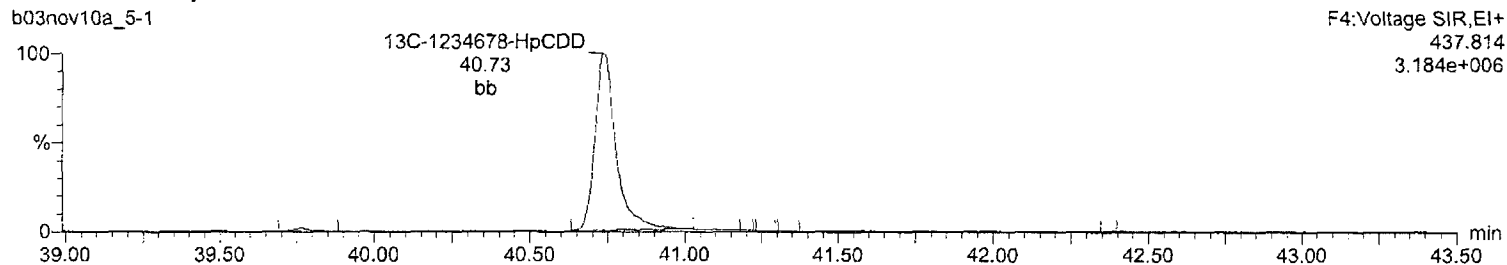
13C-1234678-HpCDD

b03nov10a_5-1



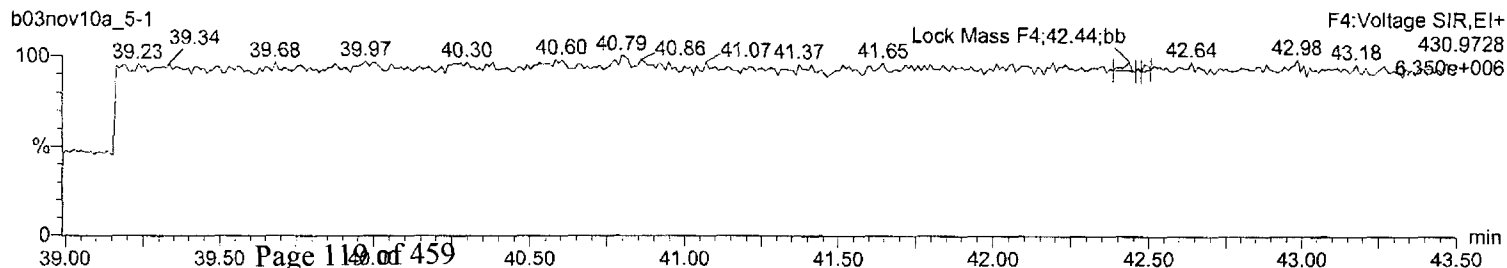
13C-1234678-HpCDD

b03nov10a_5-1



Lock Mass F4

b03nov10a_5-1



Quantify Sample Report MassLynx 4.1
Method 8290 Quantification Report

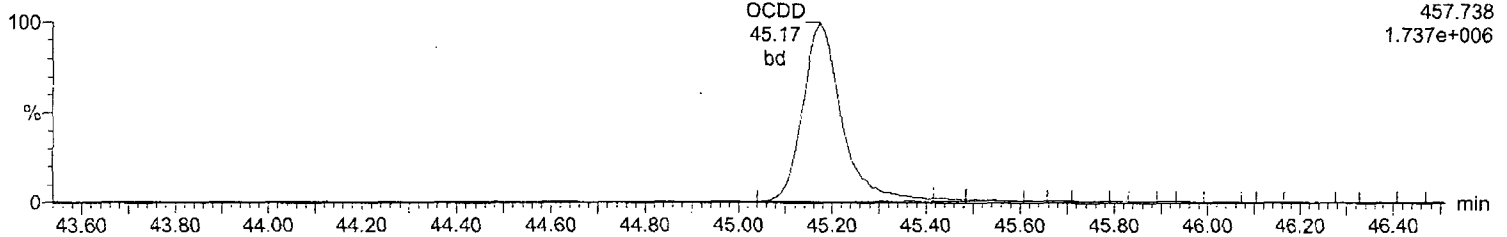
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Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time
Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-1, Date: 05-Nov-2010, Time: 02:13:45, ID: 12002074-1 LCS, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

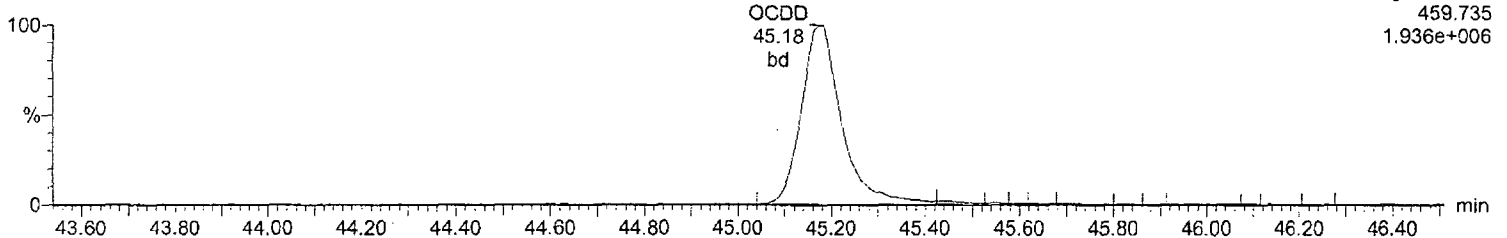
OCDD

b03nov10a_5-1



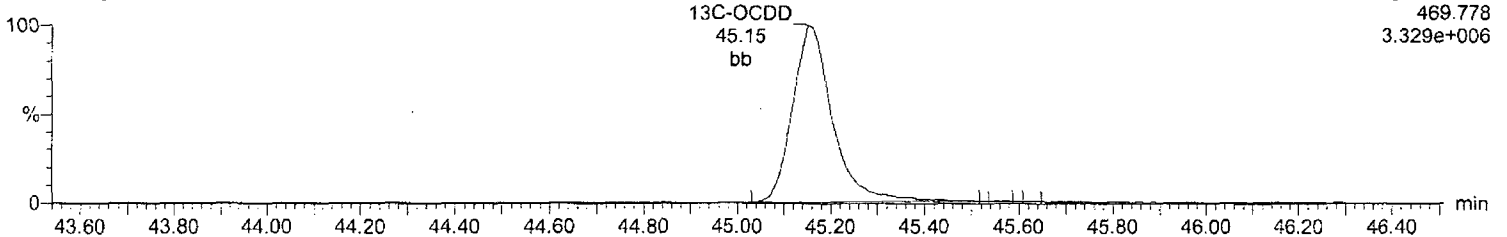
OCDD

b03nov10a_5-1



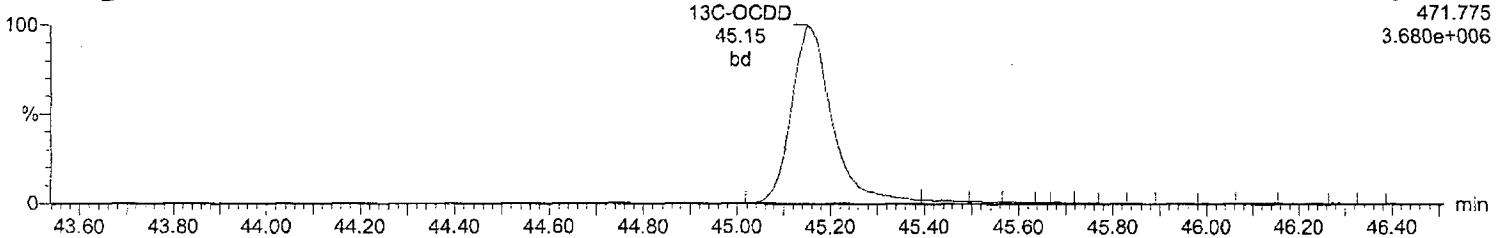
13C-OCDD

b03nov10a_5-1



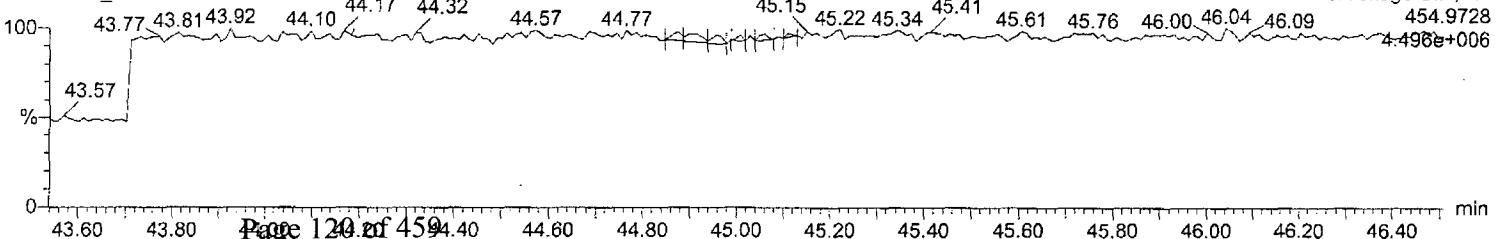
13C-OCDD

b03nov10a_5-1



Lock Mass F5

b03nov10a_5-1



Quantify Sample Report MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

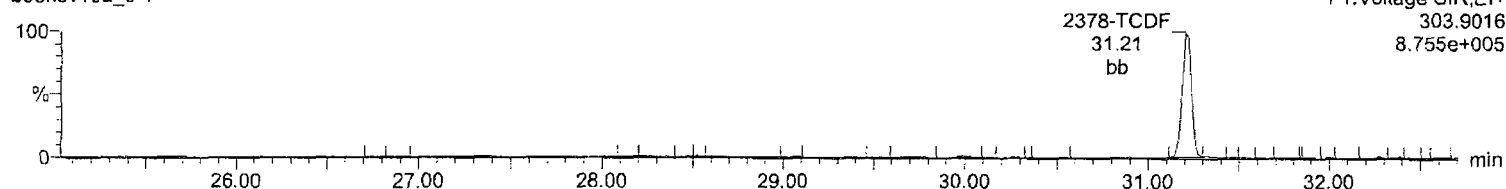
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-1, Date: 05-Nov-2010, Time: 02:13:45, ID: 12002074-1 LCS, Description: 17295, Job: HMS8290_1L, Task: HRP763_1, User: MJC

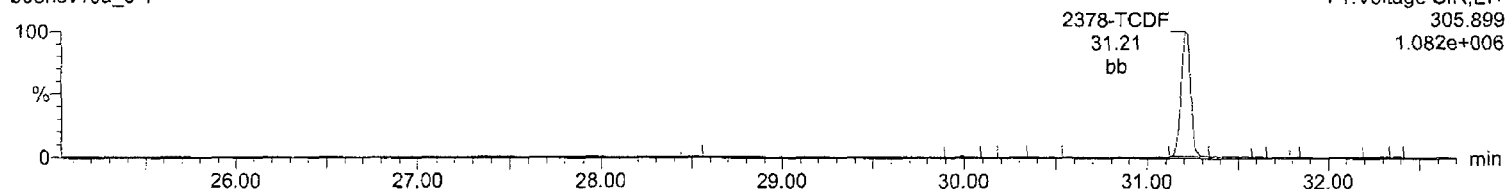
Total-tetrafurans

b03nov10a_5-1



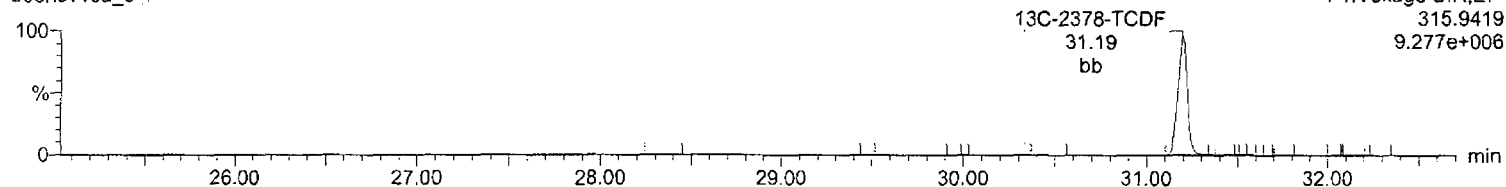
Total-tetrafurans

b03nov10a_5-1



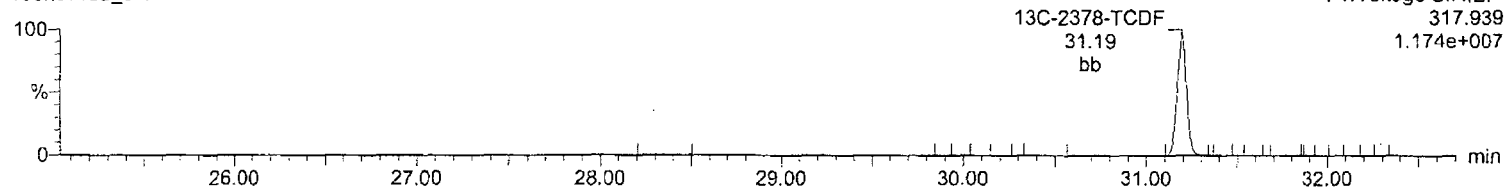
13C-2378-TCDF

b03nov10a_5-1



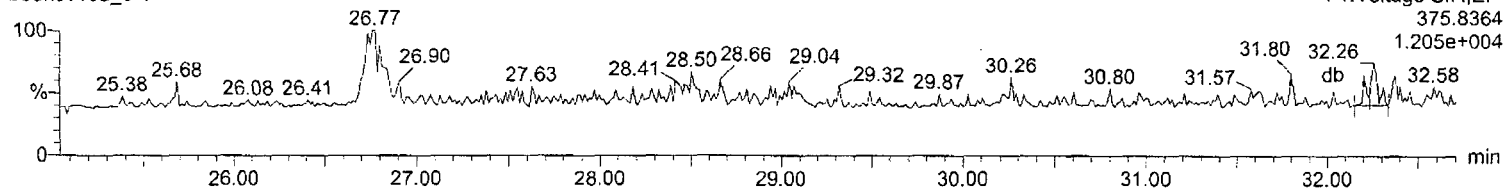
13C-2378-TCDF

b03nov10a_5-1



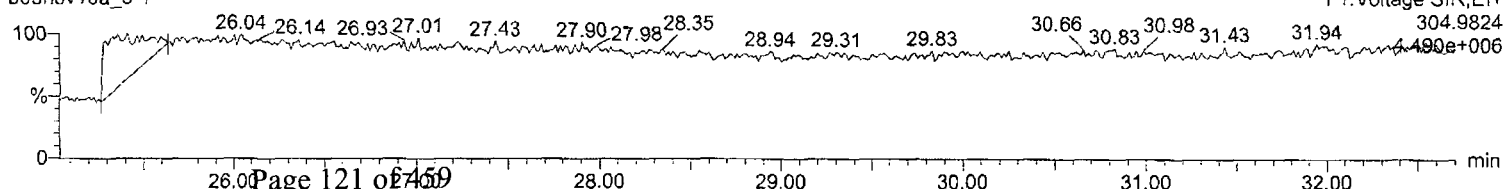
HxDPE

b03nov10a_5-1



Lock Mass F1

b03nov10a_5-1



Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

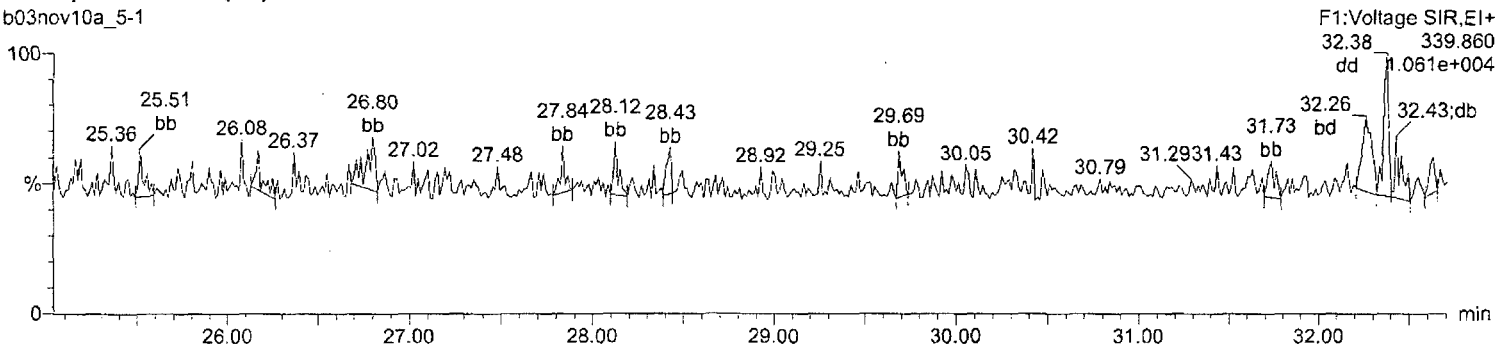
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-1, Date: 05-Nov-2010, Time: 02:13:45, ID: 12002074-1 LCS, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

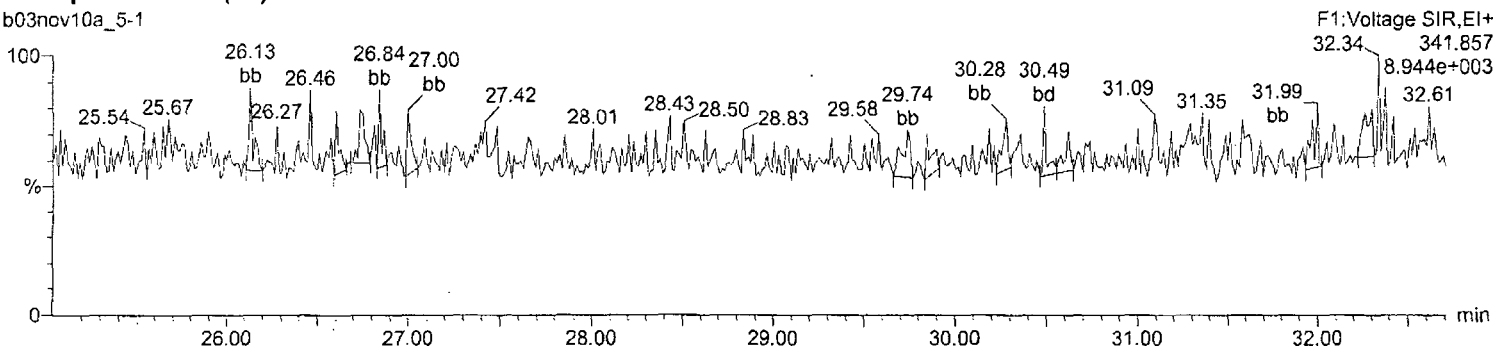
Total-pentafurans (F1)

b03nov10a_5-1



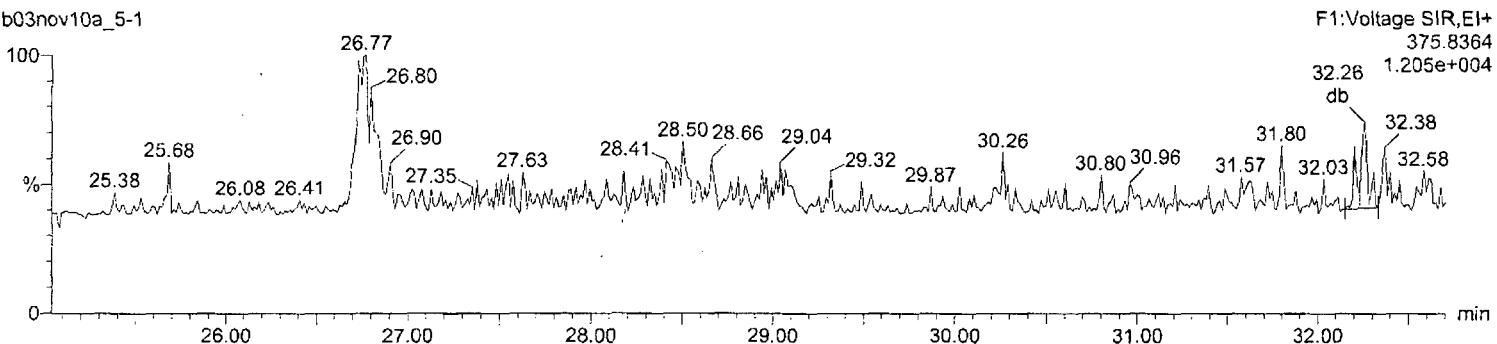
Total-pentafurans (F1)

b03nov10a_5-1



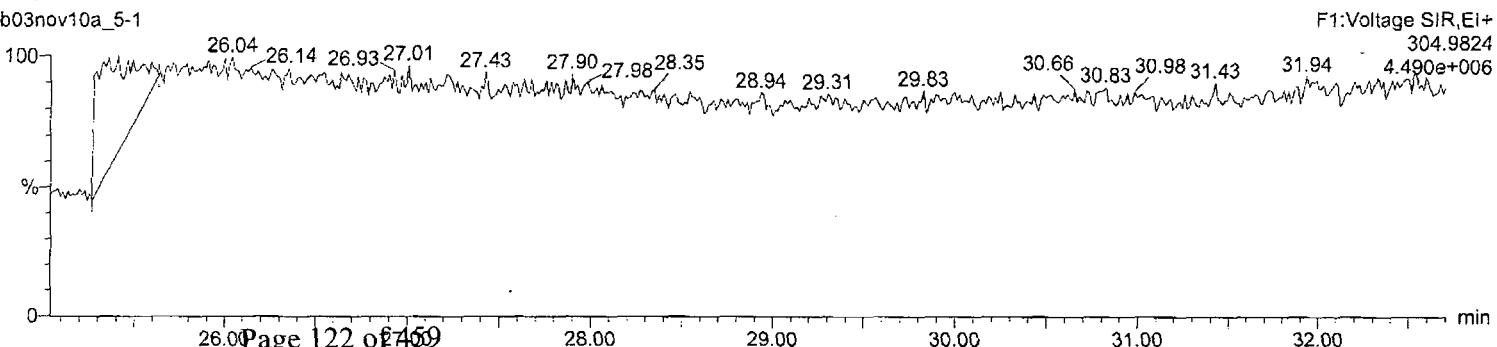
HxDPE

b03nov10a_5-1



Lock Mass F1

b03nov10a_5-1



Quantify Sample Report MassLynx 4.1
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

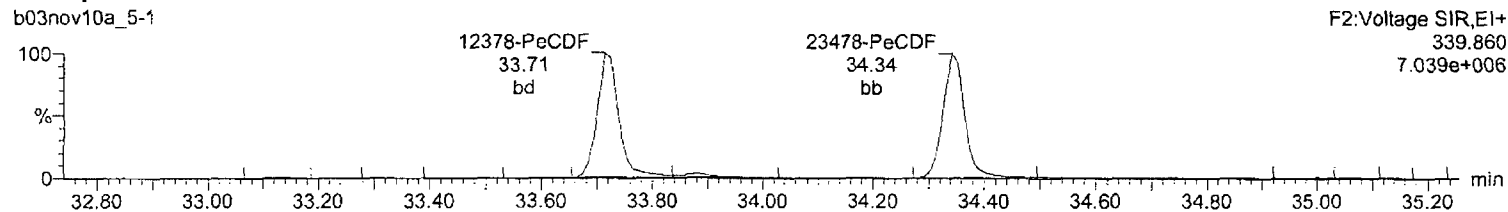
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-1, Date: 05-Nov-2010, Time: 02:13:45, ID: 12002074-1 LCS, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

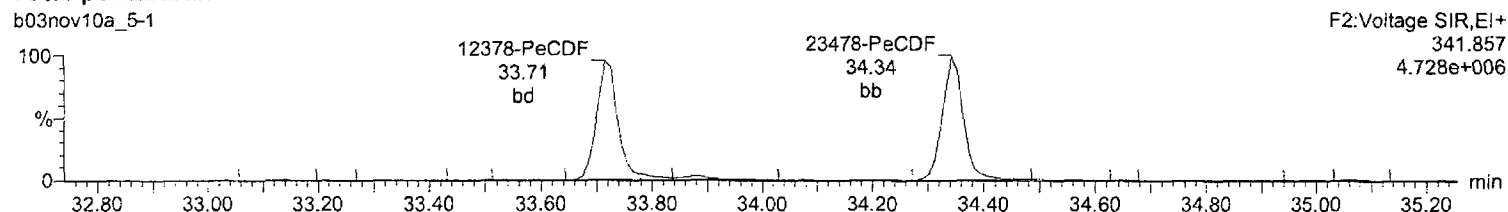
Total-pentafurans

b03nov10a_5-1



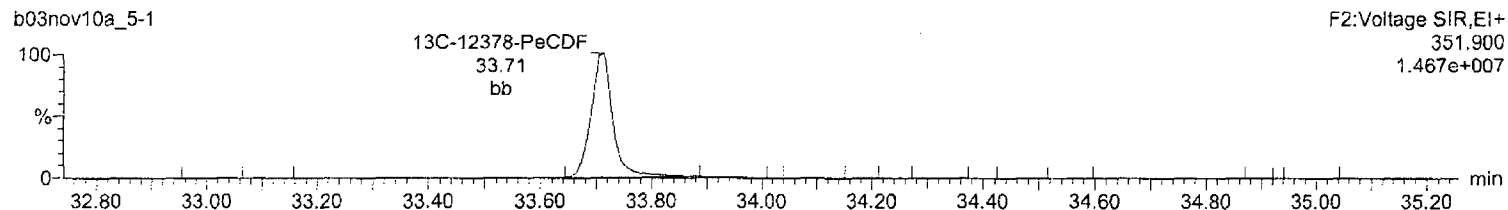
Total-pentafurans

b03nov10a_5-1



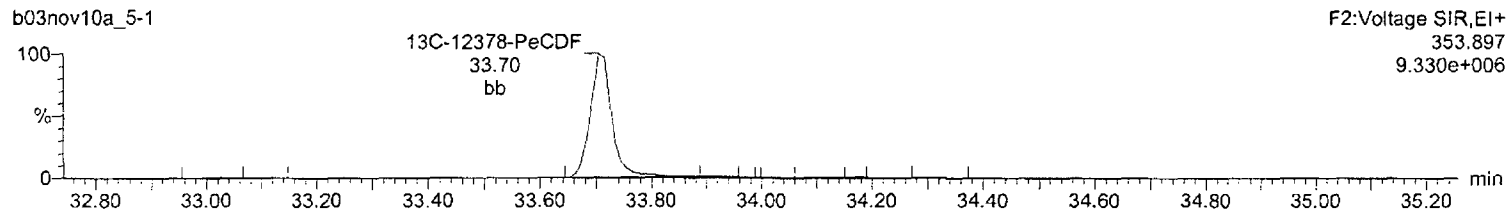
¹³C-12378-PeCDF

b03nov10a_5-1



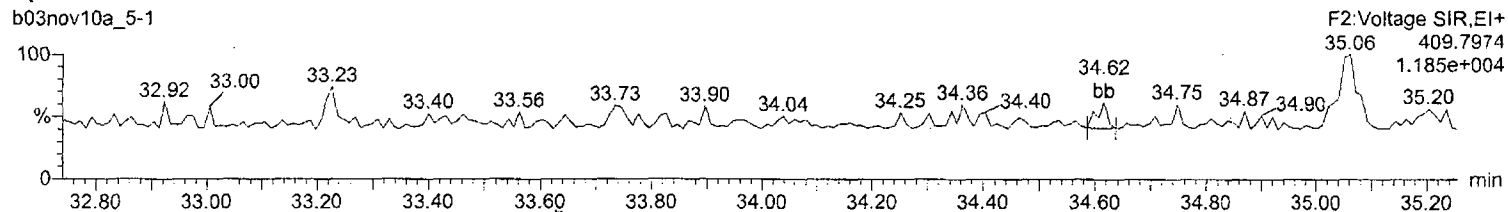
¹³C-12378-PeCDF

b03nov10a_5-1



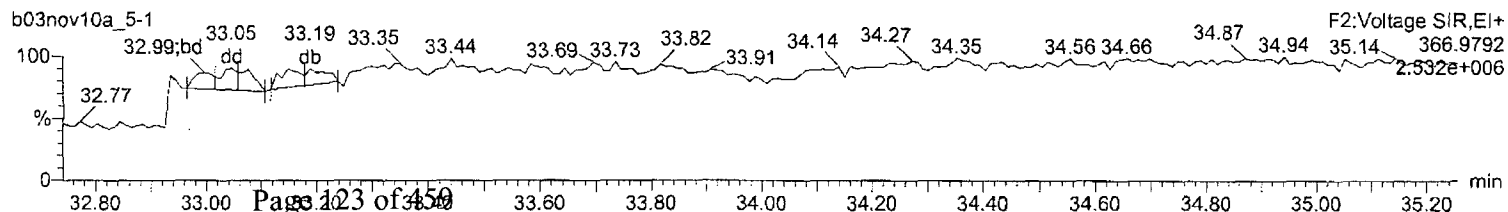
HpDPE

b03nov10a_5-1



Lock Mass F2

b03nov10a_5-1



Quantify Sample Report MassLynx 4.1
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

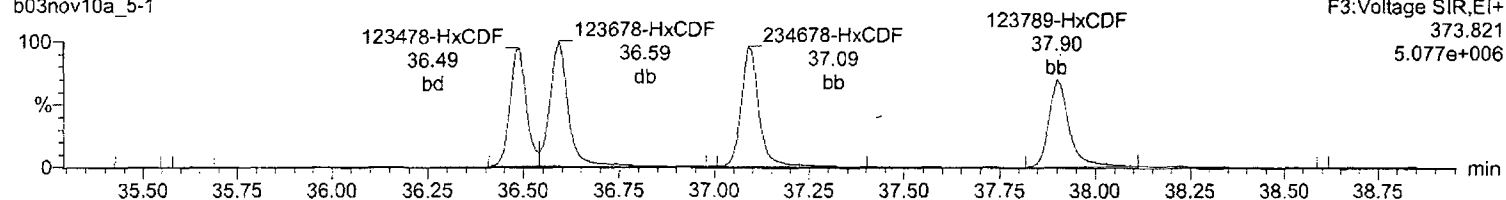
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-1, Date: 05-Nov-2010, Time: 02:13:45, ID: 12002074-1 LCS, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

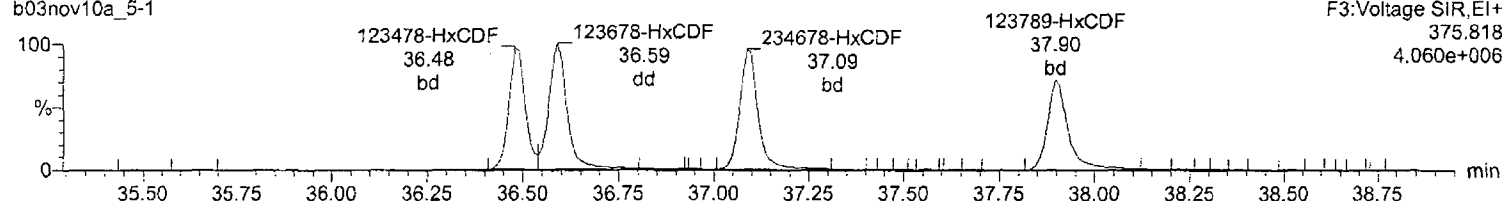
Total-hexafurans

b03nov10a_5-1



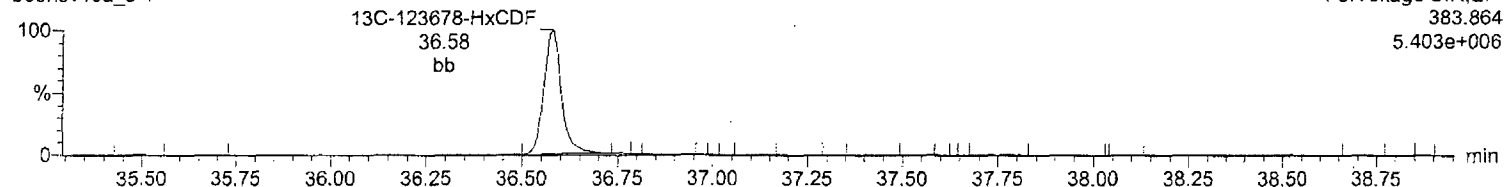
Total-hexafurans

b03nov10a_5-1



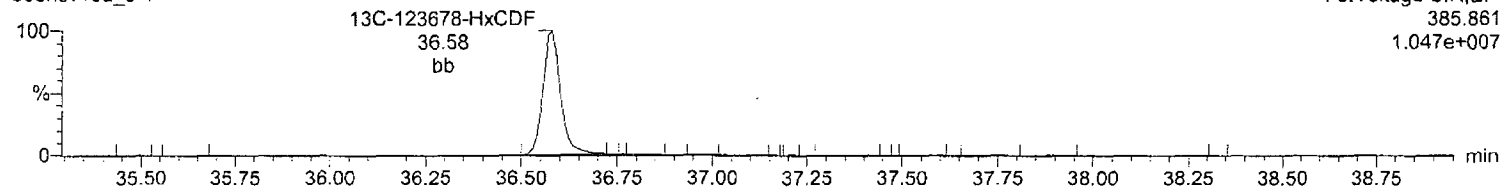
13C-123678-HxCDF

b03nov10a_5-1



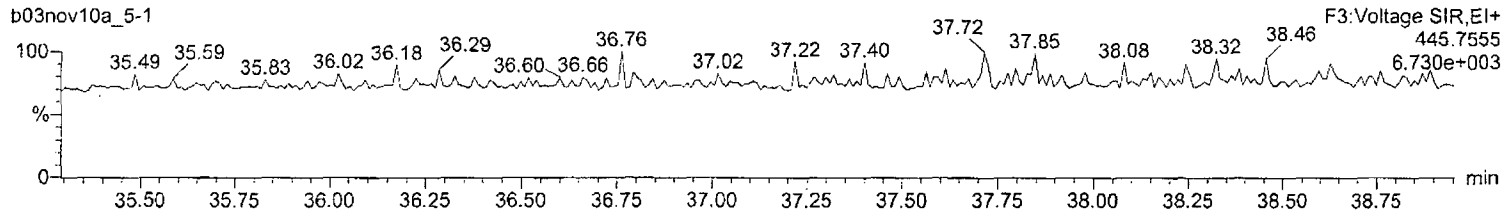
13C-123678-HxCDF

b03nov10a_5-1



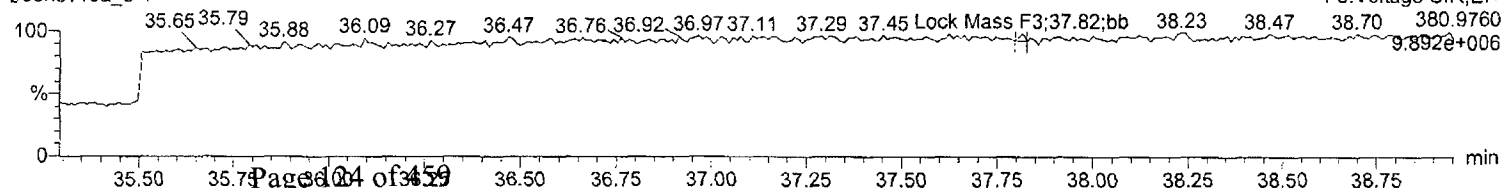
OcDPE

b03nov10a_5-1



Lock Mass F3

b03nov10a_5-1



Quantify Sample Report MassLynx 4.1
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

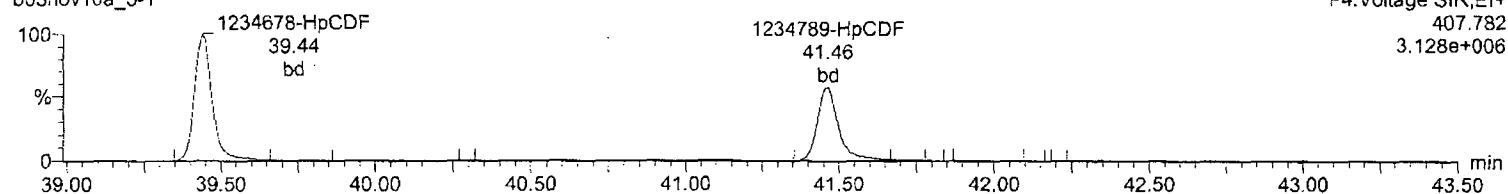
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-1, Date: 05-Nov-2010, Time: 02:13:45, ID: 12002074-1 LCS, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

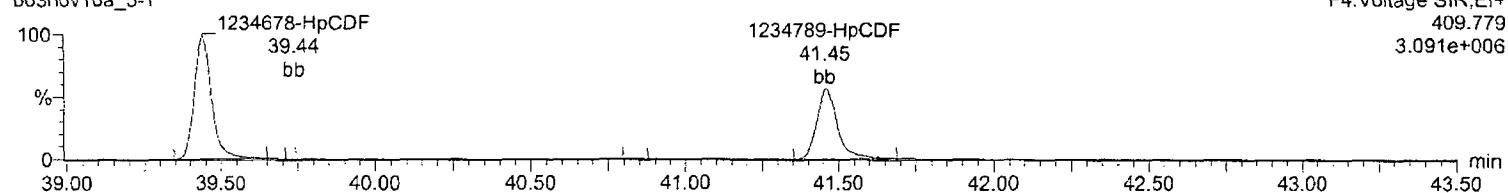
Total-heptafurans

b03nov10a_5-1



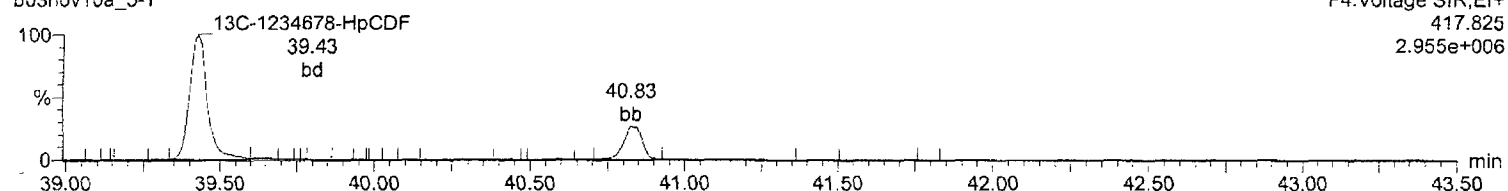
Total-heptafurans

b03nov10a_5-1



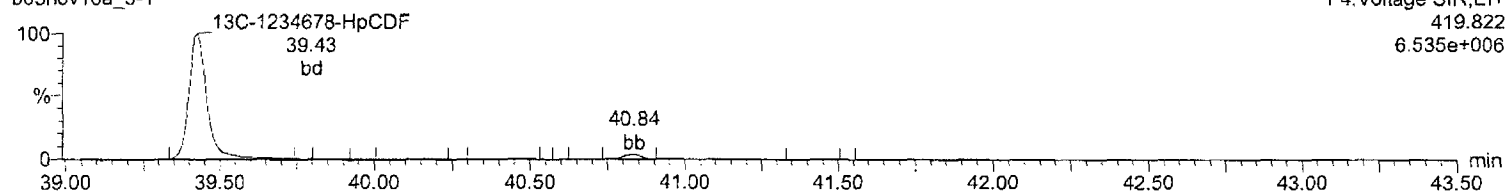
¹³C-1234678-HpCDF

b03nov10a_5-1



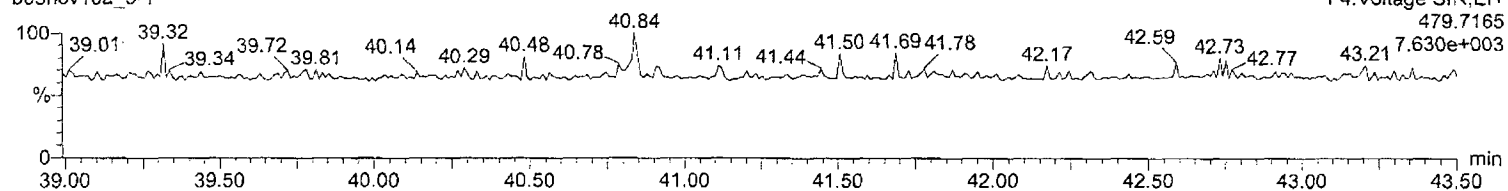
¹³C-1234678-HpCDF

b03nov10a_5-1



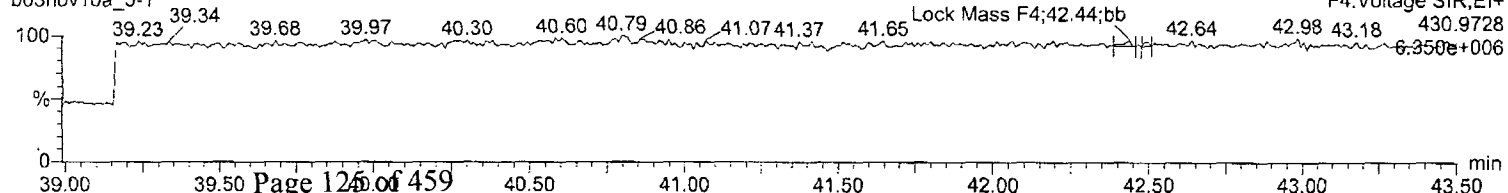
NoDPE

b03nov10a_5-1



Lock Mass F4

b03nov10a_5-1



Quantify Sample Report MassLynx 4.1
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

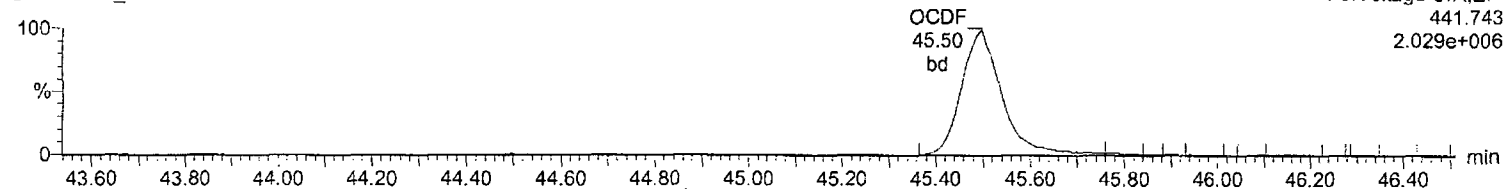
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-1, Date: 05-Nov-2010, Time: 02:13:45, ID: 12002074-1 LCS, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

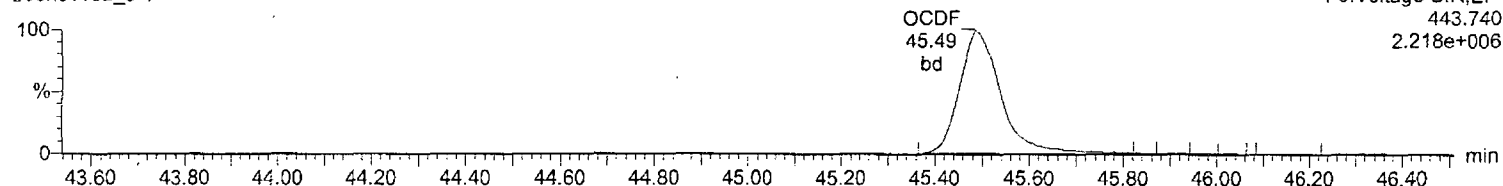
OCDF

b03nov10a_5-1



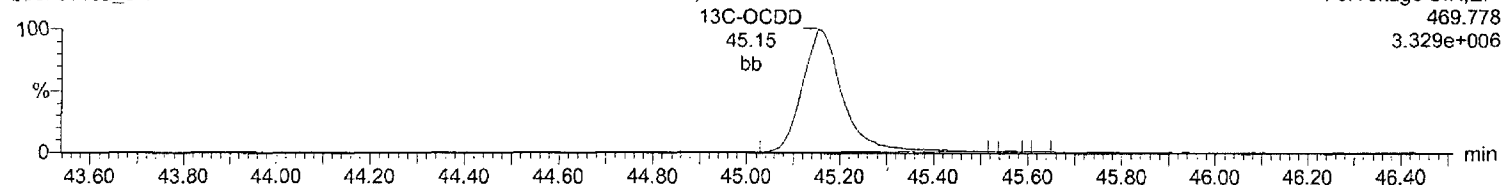
OCDF

b03nov10a_5-1



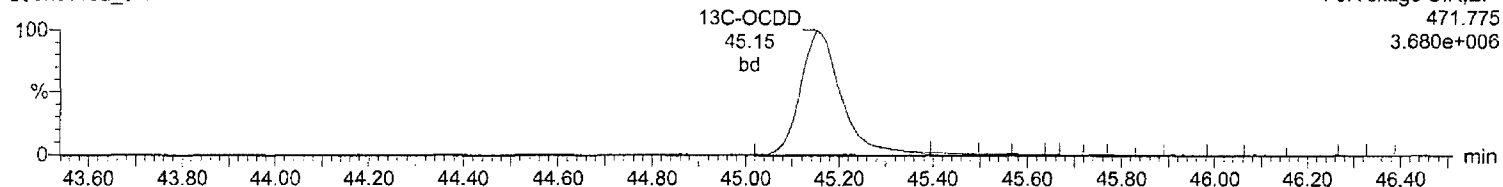
13C-OCDD

b03nov10a_5-1



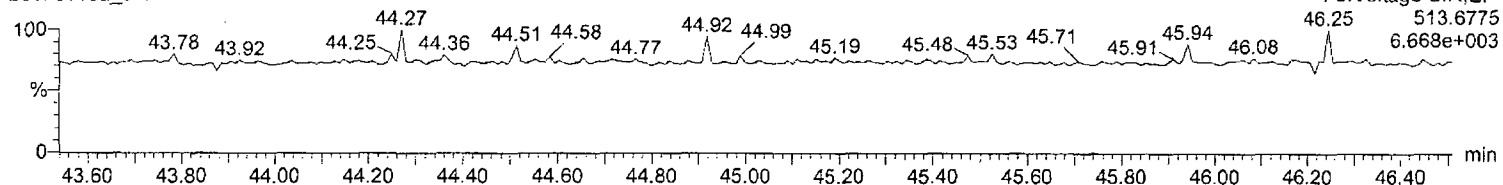
13C-OCDD

b03nov10a_5-1



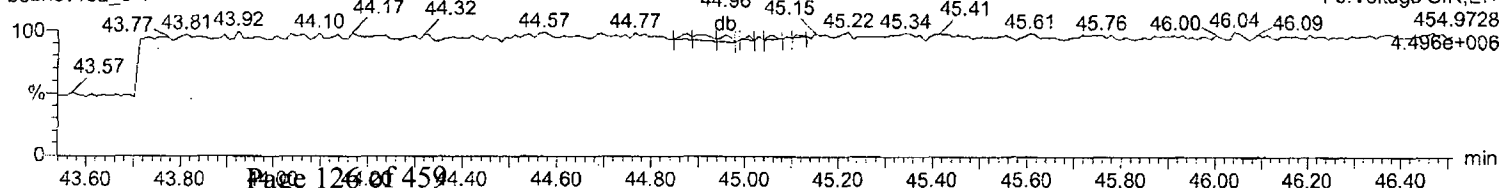
DeDPE

b03nov10a_5-1



Lock Mass F5

b03nov10a_5-1



Quantify Sample Summary Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

Last Altered: Friday, November 05, 2010 4:14:46 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:30:18 PM Eastern Standard Time

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Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-2, Date: 04-Nov-2010, Time: 15:35:56, ID: 12002023-1 LCSD, Description: 17194 HMS8290TCL, Job: HMS8290TCL, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	5.25e4	6.75e4	1.20e5	31.75	1.000	0.78	NO	10.533	0.0221	1.12e6	845	1321.1	1.42e6	932	1522.9	bb
2	12378-PeCDD	3.43e5	2.14e5	5.57e5	34.55	1.000	1.60	NO	51.492	0.0395	7.95e6	1187	6695.0	5.02e6	2056	2440.8	bb
3	123478-HxCDD	2.71e5	2.16e5	4.87e5	37.23	0.998	1.25	NO	52.640	0.0829	5.36e6	2344	2286.7	4.22e6	2494	1691.5	bd
4	123678-HxCDD	2.94e5	2.29e5	5.23e5	37.32	1.000	1.28	NO	52.410	0.0768	5.25e6	2344	2239.0	4.26e6	2494	1707.5	dd
5	123789-HxCDD	2.84e5	2.21e5	5.04e5	37.57	1.007	1.28	NO	56.513	0.0859	5.13e6	2344	2188.5	3.97e6	2494	1592.1	db
6	1234678-HpCDD	2.31e5	2.16e5	4.47e5	40.75	1.000	1.07	NO	51.460	0.123	3.18e6	2916	1090.6	3.03e6	2143	1412.0	bd
7	OCDD	3.50e5	3.93e5	7.43e5	45.18	1.000	0.89	NO	103.164	0.233	3.65e6	2687	1357.3	4.23e6	3184	1328.6	bd
8	2378-TCDF	8.48e4	1.12e5	1.97e5	31.22	1.000	0.76	NO	10.169	0.0202	1.50e6	1032	1449.7	1.97e6	1177	1670.4	bb
9	12378-PeCDF	5.23e5	3.36e5	8.59e5	33.72	1.000	1.56	NO	53.748	0.0652	1.23e7	5038	2442.5	7.70e6	3297	2333.9	bd
10	23478-PeCDF	4.78e5	3.08e5	7.86e5	34.35	1.019	1.55	NO	50.210	0.0666	1.13e7	5038	2244.5	7.13e6	3297	2161.1	bb
11	123478-HxCDF	3.67e5	2.97e5	6.64e5	36.49	0.998	1.24	NO	57.993	0.118	7.38e6	4391	1681.2	6.08e6	4326	1404.7	bd
12	123678-HxCDF	4.10e5	3.33e5	7.43e5	36.60	1.001	1.23	NO	55.731	0.101	7.79e6	4391	1774.0	6.36e6	4326	1469.3	db
13	234678-HxCDF	3.67e5	3.02e5	6.70e5	37.10	1.014	1.22	NO	55.593	0.112	7.15e6	4391	1629.1	5.76e6	4326	1330.5	bb
14	123789-HxCDF	3.20e5	2.55e5	5.75e5	37.91	1.036	1.25	NO	57.650	0.135	5.52e6	4391	1257.0	4.35e6	4326	1004.4	bb
15	1234678-HpCDF	3.63e5	3.59e5	7.21e5	39.45	1.000	1.01	NO	57.269	0.111	6.00e6	3114	1926.8	5.73e6	4249	1348.3	bb
16	1234789-HpCDF	2.50e5	2.36e5	4.86e5	41.46	1.051	1.06	NO	52.922	0.152	3.34e6	3114	1073.1	3.22e6	4249	758.1	bb
17	OCDF	3.79e5	4.29e5	8.08e5	45.50	1.007	0.88	NO	90.678	0.188	3.84e6	2527	1520.1	4.38e6	3341	1310.0	bb
18	13C-2378-TCDD	4.98e5	6.27e5	1.13e6	31.73	1.013	0.79	NO	78.674	0.0433	1.05e7	2241	4707.1	1.34e7	1450	9242.1	bb
19	13C-12378-PeCDD	6.42e5	4.07e5	1.05e6	34.54	1.102	1.58	NO	86.381	0.0469	1.46e7	1442	10141.4	9.24e6	1950	4736.0	bb
20	13C-123678-HxCDD	5.77e5	4.54e5	1.03e6	37.31	0.993	1.27	NO	83.992	0.0710	1.09e7	2908	3760.0	8.61e6	2229	3863.3	bb
21	13C-1234678-HpCDD	4.42e5	4.21e5	8.64e5	40.74	1.085	1.05	NO	97.687	0.115	6.28e6	2913	2155.0	5.96e6	3099	1923.2	bb
22	13C-OCDD	6.77e5	7.69e5	1.45e6	45.16	1.202	0.88	NO	195.992	0.162	7.10e6	4223	1681.6	7.94e6	2838	2799.0	bb
23	13C-2378-TCDF	8.74e5	1.09e6	1.97e6	31.21	0.996	0.80	NO	84.529	0.0271	1.48e7	1994	7440.4	1.82e7	1764	10298.9	bb
24	13C-12378-PeCDF	1.05e6	6.57e5	1.71e6	33.71	1.076	1.61	NO	79.165	0.0455	2.53e7	3516	7198.7	1.58e7	2348	6728.5	bd
25	13C-123678-HxCDF	4.32e5	8.28e5	1.26e6	36.58	0.974	0.52	NO	70.027	0.0649	8.40e6	2805	2993.4	1.63e7	4078	3987.8	bb
26	13C-1234678-HpCDF	3.08e5	6.79e5	9.87e5	39.44	1.050	0.45	NO	82.676	0.0686	4.87e6	1720	2831.8	1.08e7	3104	3471.3	bb
27	13C-1234-TCDD	5.68e5	7.10e5	1.28e6	31.34	0.000	0.80	NO	100.000	0.0485	1.01e7	2241	4525.5	1.28e7	1450	8849.4	bb
28	13C-123789-HxCDD	6.16e5	4.88e5	1.10e6	37.56	0.000	1.26	NO	100.000	0.0789	1.09e7	2908	3744.7	8.65e6	2229	3879.4	bd
29	37Cl-2378-TCDD (SS)	5.66e2		5.66e2	31.75	1.000			0.048	0.0121	1.11e4	1017	10.9				bb
30	13C-23478-PeCDF (SS)	4.16e3	2.39e3	6.55e3	34.33	1.018	1.74	NO	0.410	0.0459	8.30e4	3516	23.6	6.04e4	2348	25.7	db

Quantify Sample Report MassLynx 4.1
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

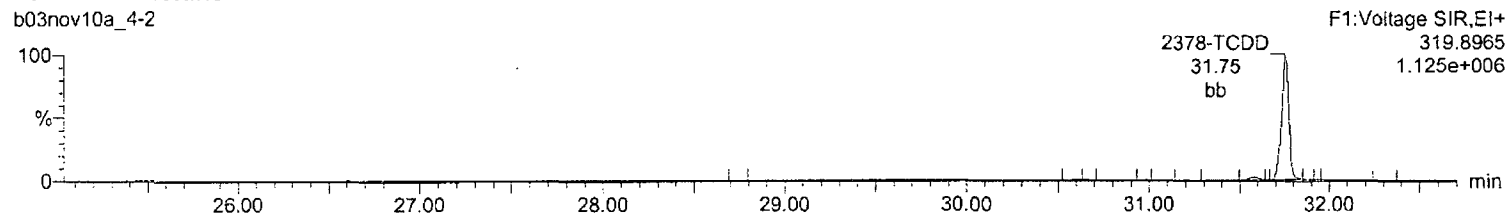
Last Altered: Friday, November 05, 2010 4:14:46 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:18:12 PM Eastern Standard Time

Name: b03nov10a_4-2, Date: 04-Nov-2010, Time: 15:35:56, ID: 12002023-1 LCSD, Description: 17315, Job: HMS8290TCL,
Task: HRP763_1, User: MJC

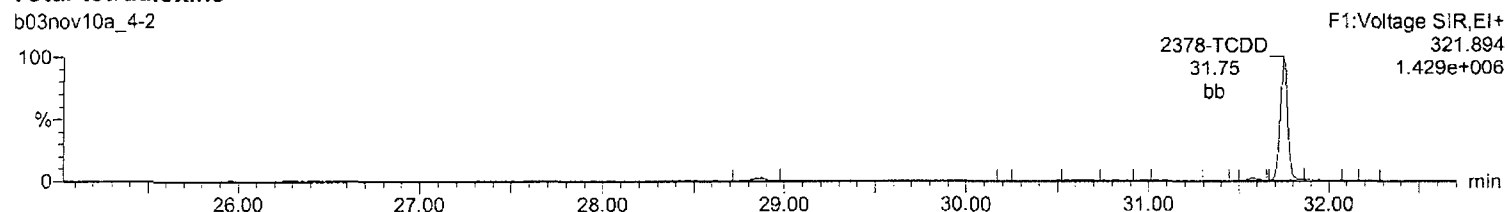
Total-tetradoxins

b03nov10a_4-2



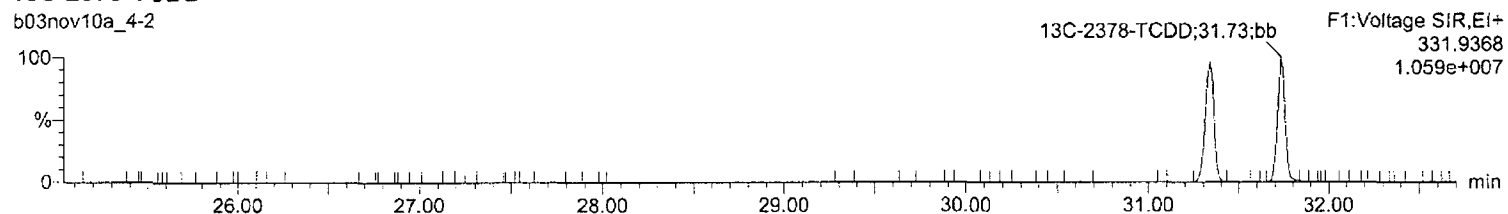
Total-tetradoxins

b03nov10a_4-2



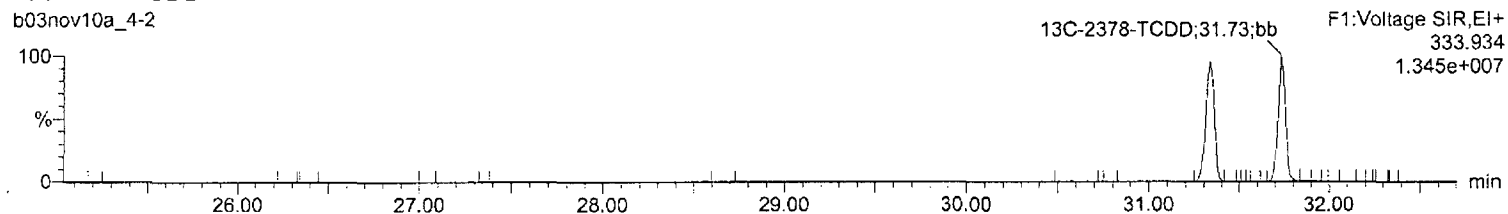
13C-2378-TCDD

b03nov10a_4-2



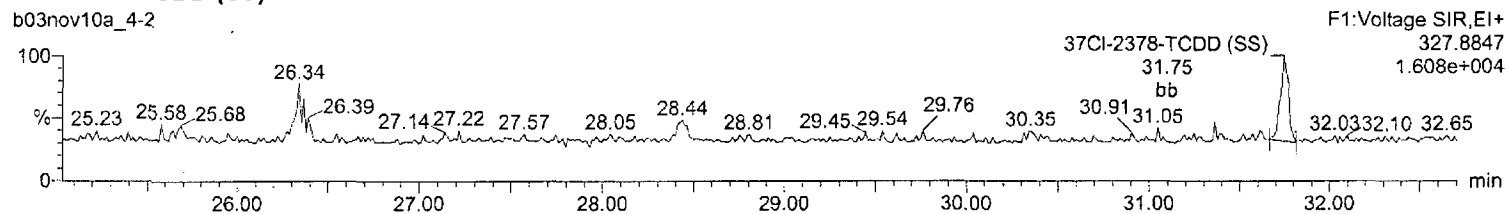
13C-2378-TCDD

b03nov10a_4-2



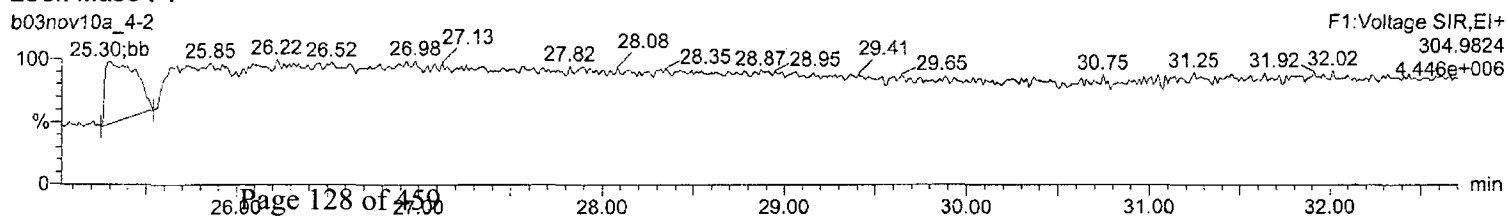
37Cl-2378-TCDD (SS)

b03nov10a_4-2



Lock Mass F1

b03nov10a_4-2



Quantify Sample Summary Report
Method 8290 Quantification Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 15:08:14 Eastern Standard Time

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Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-2, Date: 05-Nov-2010, Time: 03:01:27, ID: 12002075-1 LCSD, Description: 17295, Job: HMS8290_1L, Task: HRP763_1, User: MJC

17315 HMS8290_TCL

*Pls
mail*

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	3.59e4	4.61e4	8.20e4	31.75	1.000	0.78	NO	10.538	0.0334	6.90e5	958	720.4	9.15e5	773	1183.4	bb
2	12378-PeCDD	1.95e5	1.25e5	3.21e5	34.55	1.000	1.56	NO	50.916	0.0913	4.13e6	2767	1492.2	2.66e6	1463	1820.7	bb
3	123478-HxCDD	1.62e5	1.29e5	2.91e5	37.23	0.998	1.25	NO	51.954	0.136	3.05e6	2673	1141.1	2.42e6	1835	1316.7	bd
4	123678-HxCDD	1.82e5	1.45e5	3.27e5	37.32	1.000	1.26	NO	54.025	0.126	3.11e6	2673	1162.7	2.47e6	1835	1346.4	db
5	123789-HxCDD	1.37e5	1.09e5	2.46e5	37.57	1.007	1.26	NO	45.465	0.141	2.22e6	2673	830.0	1.73e6	1835	944.4	bb
6	1234678-HpCDD	1.16e5	1.12e5	2.29e5	40.77	1.000	1.03	NO	51.058	0.301	1.40e6	2903	483.1	1.34e6	2444	548.5	bd
7	OCDD	9.78e4	1.07e5	2.05e5	45.17	1.000	0.91	NO	101.387	0.611	9.57e5	1965	487.2	1.04e6	2168	481.8	bd
8	2378-TCDF	5.53e4	7.14e4	1.27e5	31.21	1.000	0.77	NO	9.792	0.0437	8.88e5	1657	536.0	1.14e6	1403	813.8	bb
9	12378-PeCDF	2.99e5	1.95e5	4.94e5	33.72	1.000	1.54	NO	49.843	0.110	6.58e6	3365	1954.7	4.23e6	4206	1005.9	bd
10	23478-PeCDF	3.19e5	2.12e5	5.31e5	34.35	1.019	1.51	NO	54.729	0.112	6.89e6	3365	2048.3	4.31e6	4206	1024.9	bb
11	123478-HxCDF	2.24e5	1.80e5	4.03e5	36.49	0.998	1.25	NO	56.491	0.237	4.36e6	4818	904.7	3.54e6	5444	650.3	bd
12	123678-HxCDF	2.59e5	2.04e5	4.64e5	36.59	1.000	1.27	NO	55.812	0.203	4.42e6	4818	916.7	3.69e6	5444	677.0	db
13	234678-HxCDF	2.15e5	1.73e5	3.88e5	37.10	1.014	1.25	NO	51.681	0.225	3.81e6	4818	790.5	3.12e6	5444	573.7	bd
14	123789-HxCDF	1.87e5	1.55e5	3.41e5	37.90	1.036	1.21	NO	54.850	0.271	2.81e6	4818	583.2	2.33e6	5444	428.3	bb
15	1234678-HpCDF	1.58e5	1.54e5	3.11e5	39.45	1.000	1.02	NO	50.075	0.236	2.35e6	4029	583.7	2.27e6	3019	752.2	bd
16	1234789-HpCDF	1.22e5	1.18e5	2.41e5	41.46	1.051	1.03	NO	53.160	0.323	1.52e6	4029	378.1	1.46e6	3019	483.4	bd
17	OCDF	1.20e5	1.39e5	2.58e5	45.50	1.007	0.86	NO	103.247	0.404	1.21e6	1181	1022.6	1.33e6	2203	603.8	bd
18	13C-2378-TCDD	3.43e5	4.25e5	7.68e5	31.73	1.013	0.81	NO	83.924	0.0791	6.85e6	2379	2879.0	8.43e6	1993	4231.9	bd
19	13C-12378-PeCDD	3.74e5	2.36e5	6.11e5	34.54	1.102	1.59	NO	78.586	0.129	8.26e6	3097	2666.7	5.04e6	2942	1712.4	bb
20	13C-123678-HxCDD	3.48e5	2.77e5	6.25e5	37.31	0.994	1.26	NO	105.299	0.264	6.19e6	4905	1262.9	4.96e6	3245	1529.7	bb
21	13C-1234678-HpCDD	2.28e5	2.18e5	4.46e5	40.74	1.085	1.05	NO	104.295	0.306	2.71e6	3551	764.1	2.51e6	3247	771.8	bd
22	13C-OCDD	1.91e5	2.15e5	4.06e5	45.16	1.203	0.89	NO	113.868	0.307	1.91e6	2720	703.2	2.13e6	2985	711.9	bd
23	13C-2378-TCDF	5.81e5	7.35e5	1.32e6	31.19	0.995	0.79	NO	88.332	0.0366	9.43e6	1567	6021.7	1.20e7	1722	6972.7	bb
24	13C-12378-PeCDF	6.50e5	4.10e5	1.06e6	33.71	1.076	1.59	NO	76.624	0.101	1.36e7	3671	3707.7	8.42e6	4795	1756.7	bd
25	13C-123678-HxCDF	2.65e5	5.21e5	7.86e5	36.58	0.974	0.51	NO	90.268	0.147	4.82e6	3243	1487.3	9.42e6	3407	2765.8	bb
26	13C-1234678-HpCDF	1.50e5	3.38e5	4.87e5	39.44	1.050	0.44	NO	84.436	0.244	2.16e6	3775	571.6	4.89e6	3546	1379.2	bd
27	13C-1234-TCDD	3.62e5	4.56e5	8.18e5	31.34	0.000	0.79	NO	100.000	0.0886	6.55e6	2379	2754.4	8.24e6	1993	4133.4	bb
28	13C-123789-HxCDD	3.02e5	2.32e5	5.34e5	37.55	0.000	1.30	NO	100.000	0.293	4.71e6	4905	959.4	3.76e6	3245	1160.2	bd
29	37Cl-2378-TCDD (SS)	5.60e2		5.60e2	31.75	1.000			0.069	0.0267	8.49e3	1442	5.9				bb
30	13C-23478-PeCDF (SS)	9.83e2	1.03e3	2.01e3	34.34	1.019	0.95	YES	0.204	0.123	2.06e4	3671	5.6	2.27e4	4795	4.7	bb

Quantify Sample Report MassLynx 4.1
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

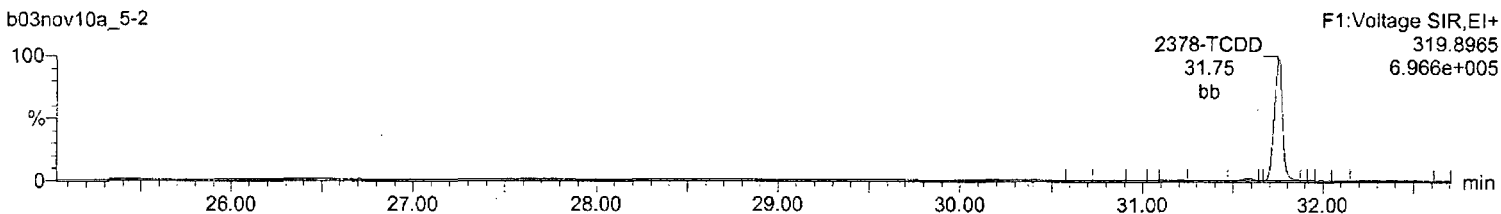
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-2, Date: 05-Nov-2010, Time: 03:01:27, ID: 12002075-1 LCSD, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

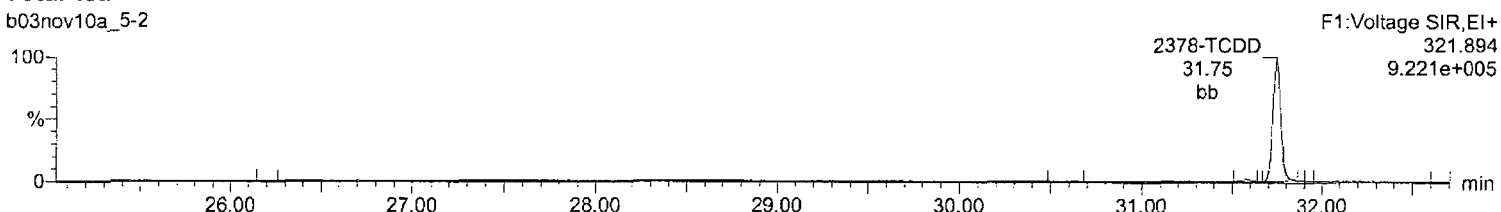
Total-tetradoxins

b03nov10a_5-2



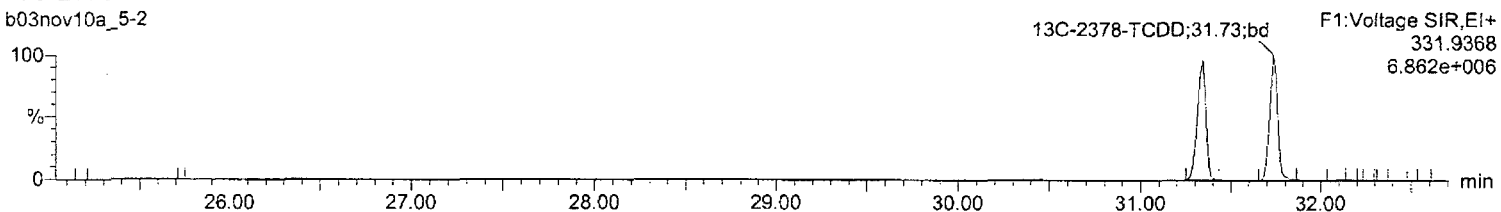
Total-tetradoxins

b03nov10a_5-2



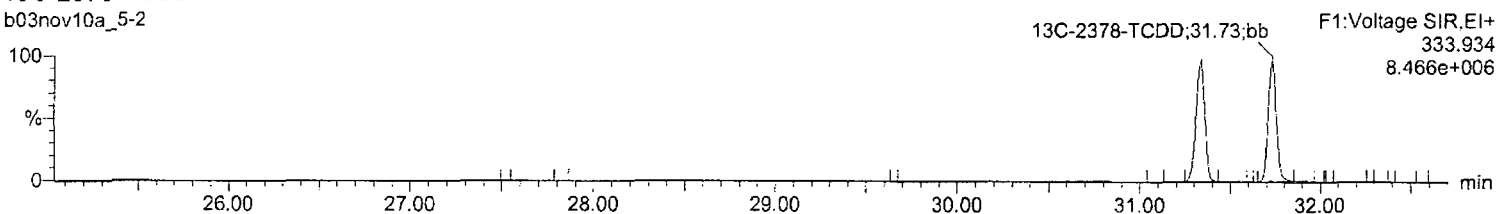
13C-2378-TCDD

b03nov10a_5-2



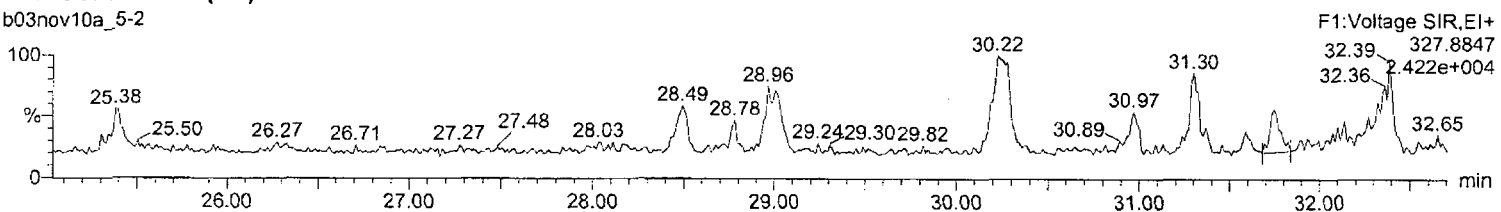
13C-2378-TCDD

b03nov10a_5-2



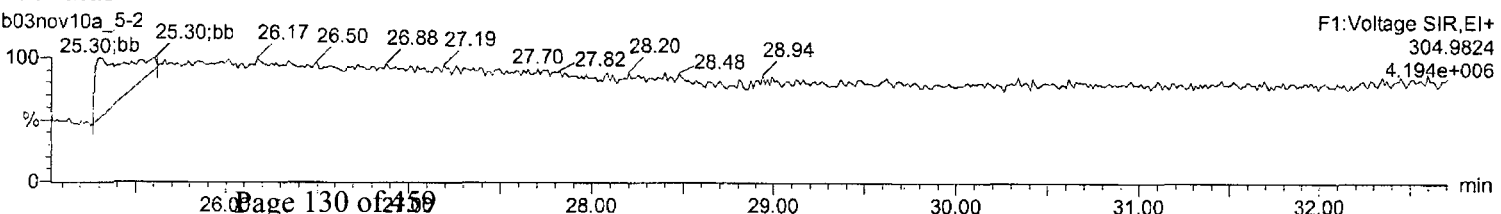
37Cl-2378-TCDD (SS)

b03nov10a_5-2



Lock Mass F1

b03nov10a_5-2



Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

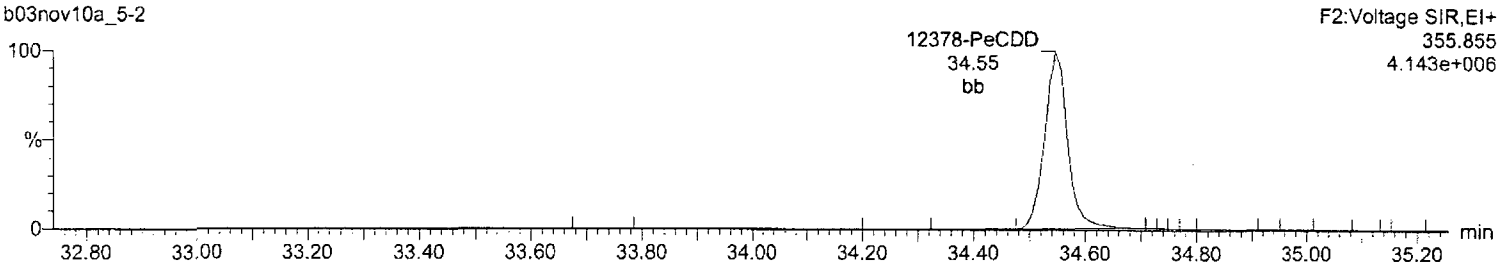
Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time
Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-2, Date: 05-Nov-2010, Time: 03:01:27, ID: 12002075-1 LCSD, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

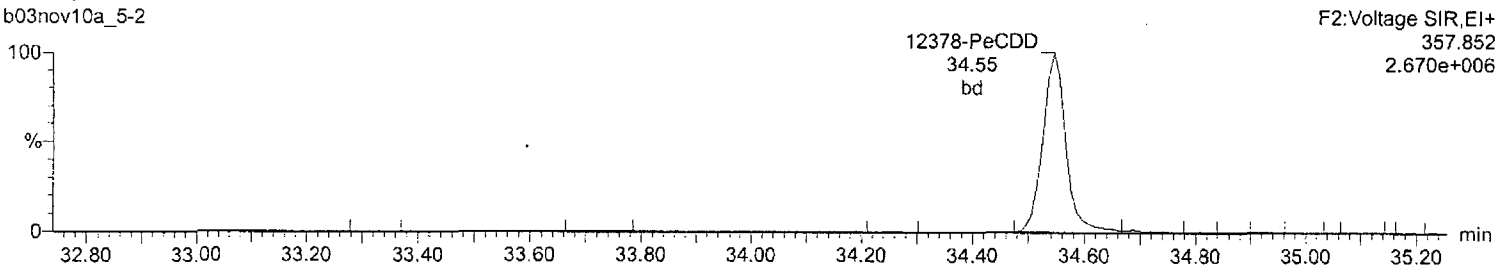
Total-pentadioxins

b03nov10a_5-2



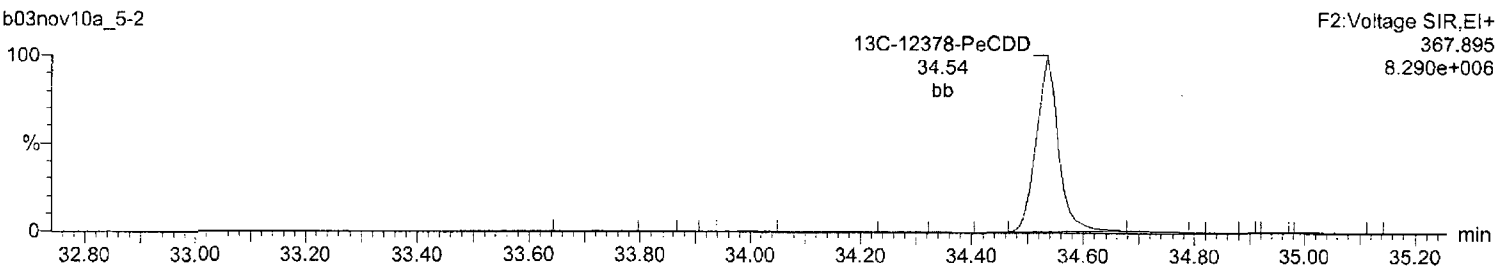
Total-pentadioxins

b03nov10a_5-2



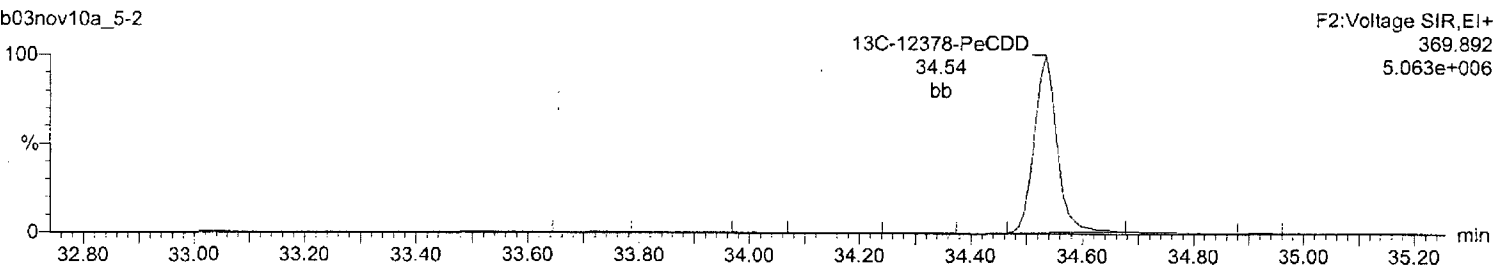
¹³C-12378-PeCDD

b03nov10a_5-2



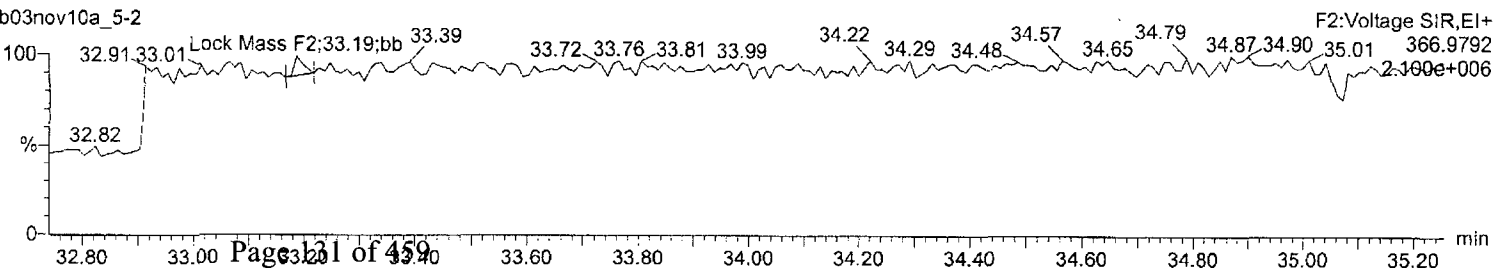
¹³C-12378-PeCDD

b03nov10a_5-2



Lock Mass F2

b03nov10a_5-2



Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

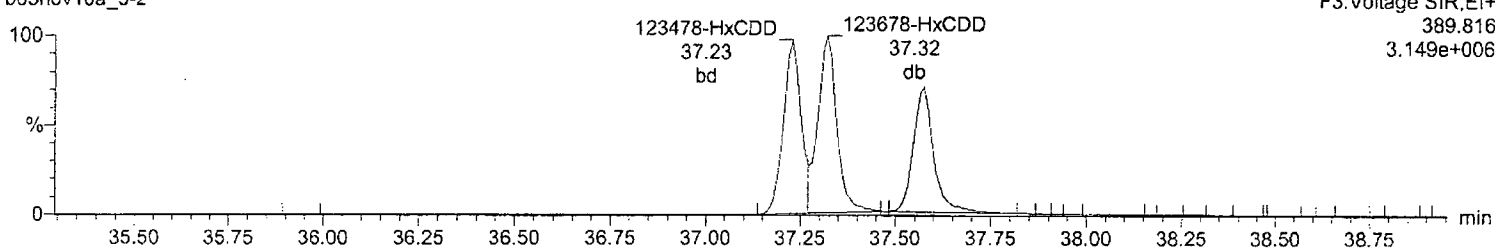
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-2, Date: 05-Nov-2010, Time: 03:01:27, ID: 12002075-1 LCSD, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

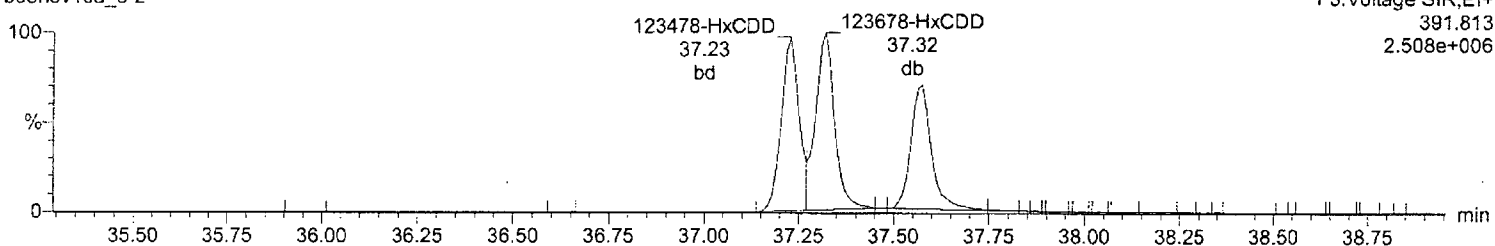
Total-hexadioxins

b03nov10a_5-2



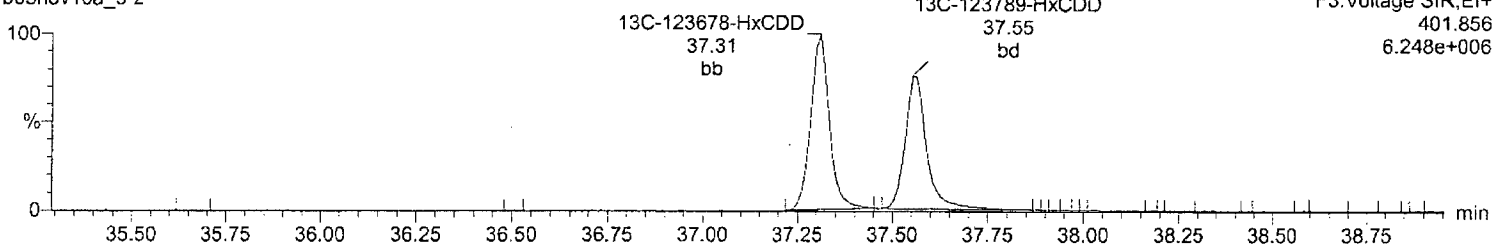
Total-hexadioxins

b03nov10a_5-2



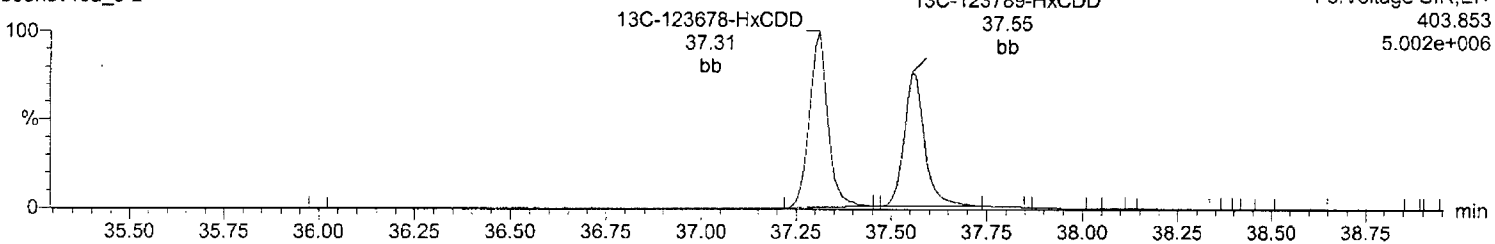
13C-123678-HxCDD

b03nov10a_5-2



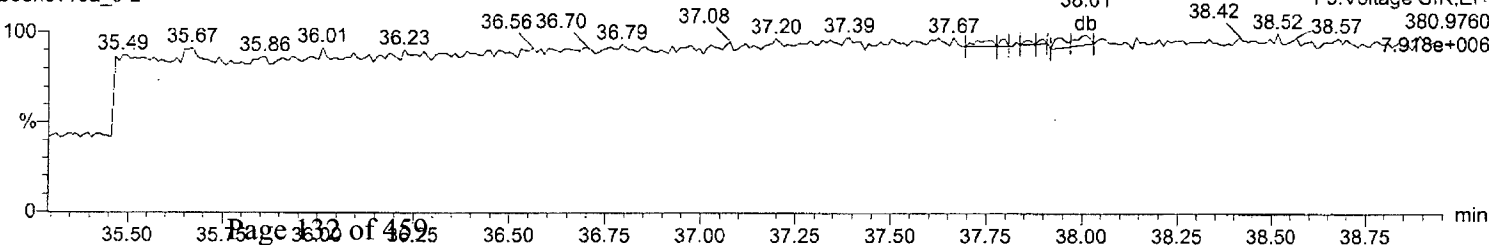
13C-123678-HxCDD

b03nov10a_5-2



Lock Mass F3

b03nov10a_5-2



Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

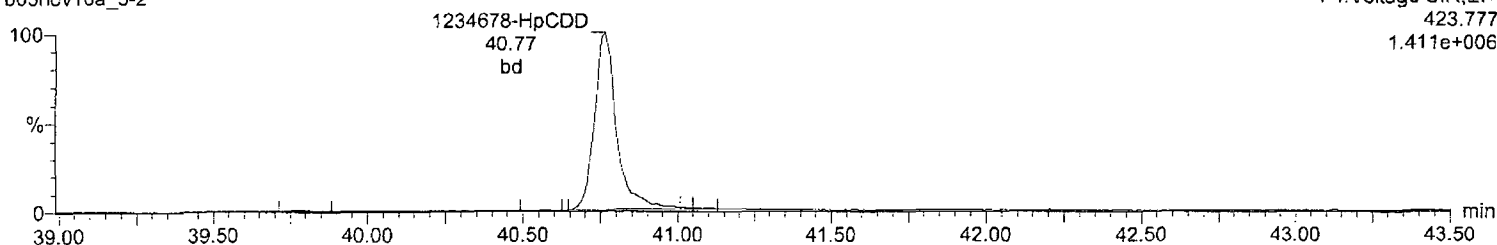
Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-2, Date: 05-Nov-2010, Time: 03:01:27, ID: 12002075-1 LCSD, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

Total-heptadioxins

b03nov10a_5-2

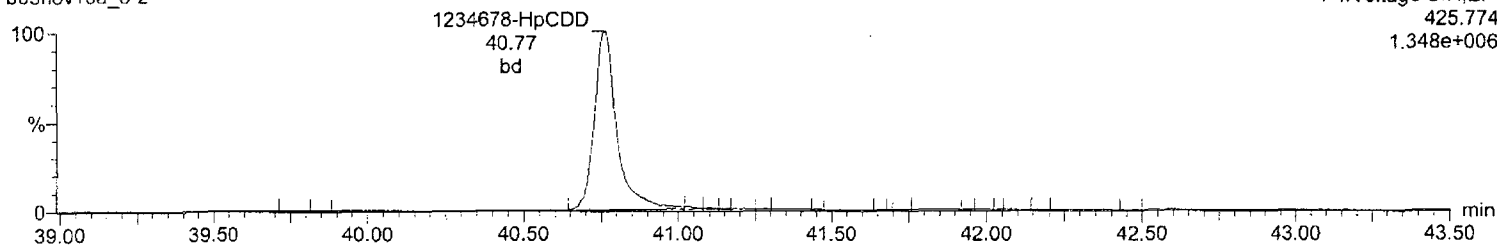
F4:Voltage SIR,EI+
423.777
1.411e+006



Total-heptadioxins

b03nov10a_5-2

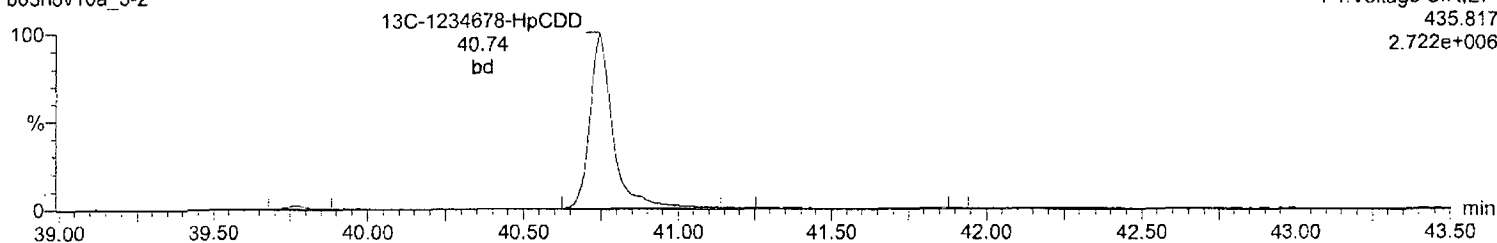
F4:Voltage SIR,EI+
425.774
1.348e+006



13C-1234678-HpCDD

b03nov10a_5-2

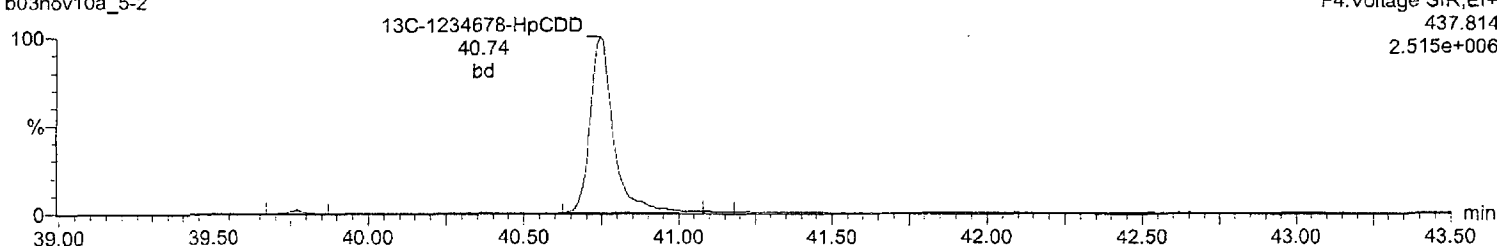
F4:Voltage SIR,EI+
435.817
2.722e+006



13C-1234678-HpCDD

b03nov10a_5-2

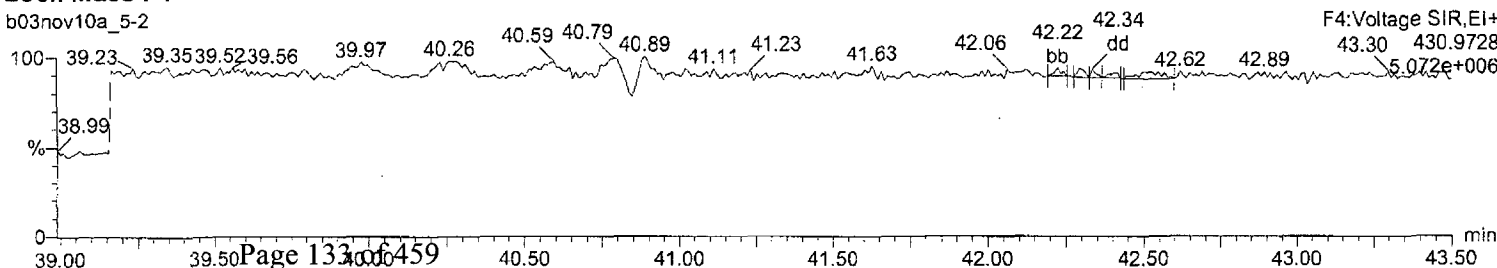
F4:Voltage SIR,EI+
437.814
2.515e+006



Lock Mass F4

b03nov10a_5-2

F4:Voltage SIR,EI+
430.9728
5.072e+006



Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

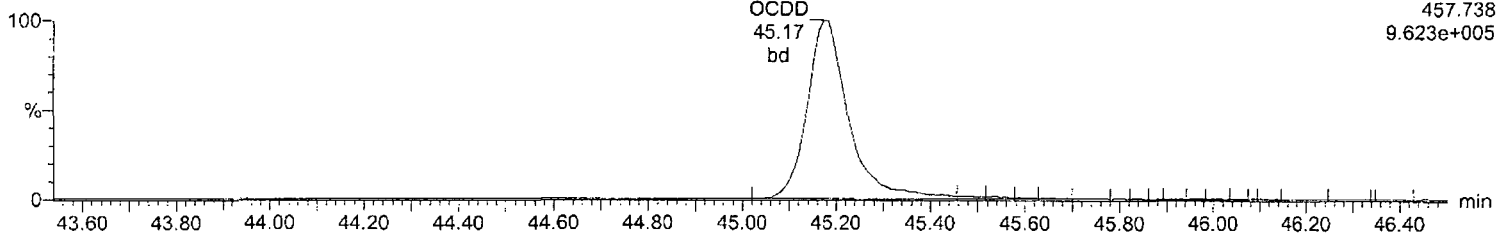
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-2, Date: 05-Nov-2010, Time: 03:01:27, ID: 12002075-1 LCSD, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

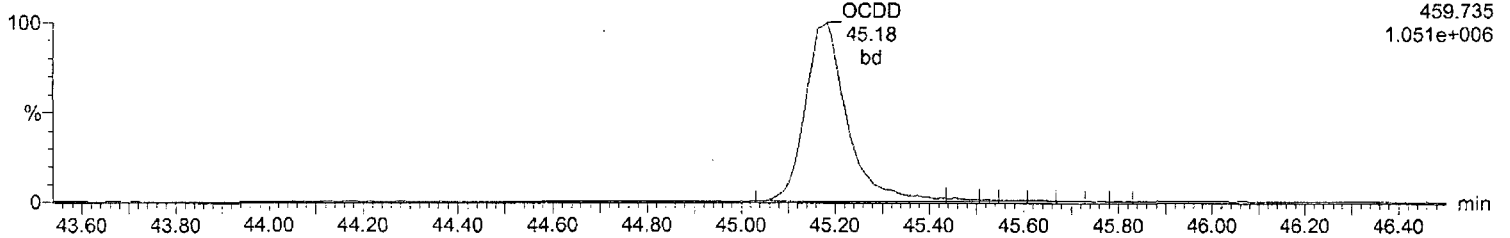
OCDD

b03nov10a_5-2



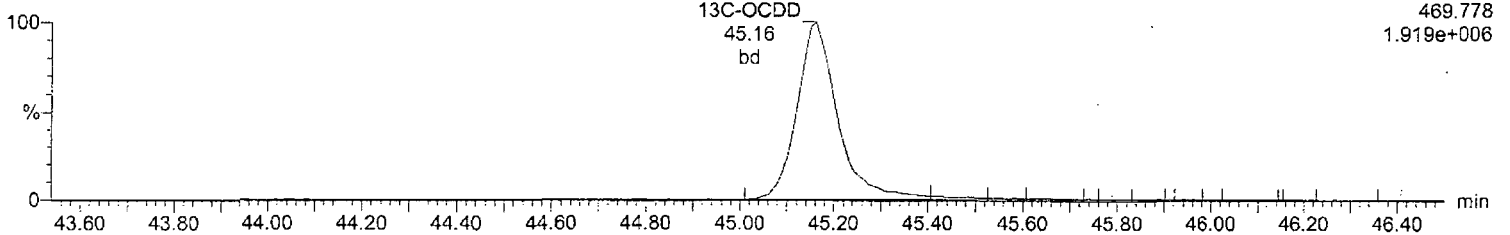
OCDD

b03nov10a_5-2



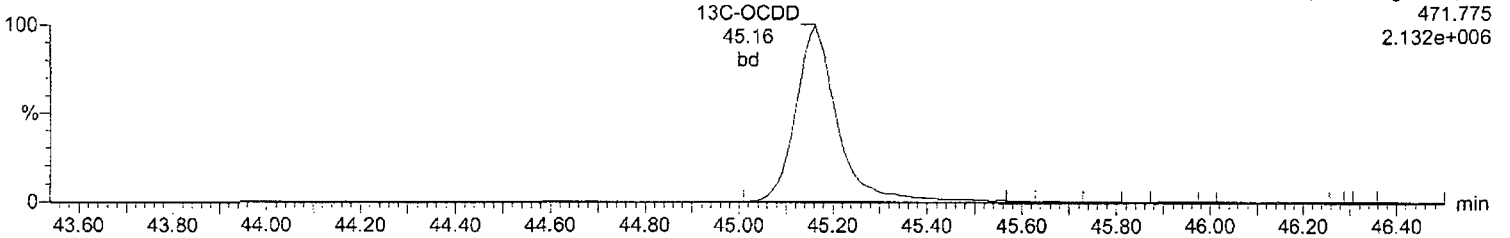
13C-OCDD

b03nov10a_5-2



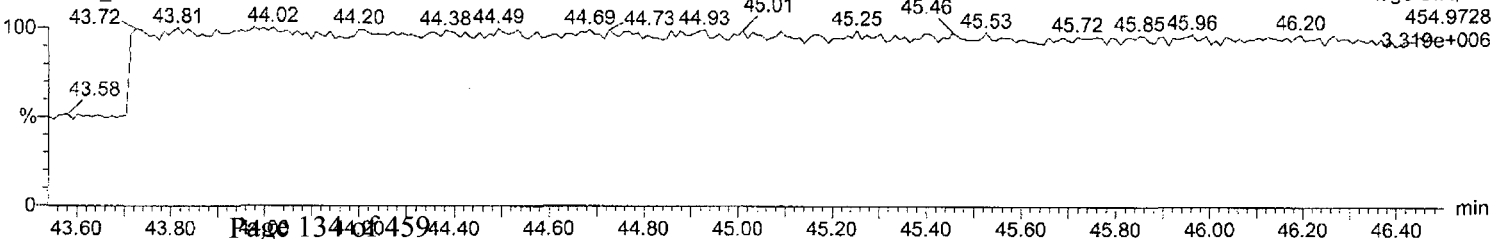
13C-OCDD

b03nov10a_5-2



Lock Mass F5

b03nov10a_5-2



Quantify Sample Report MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

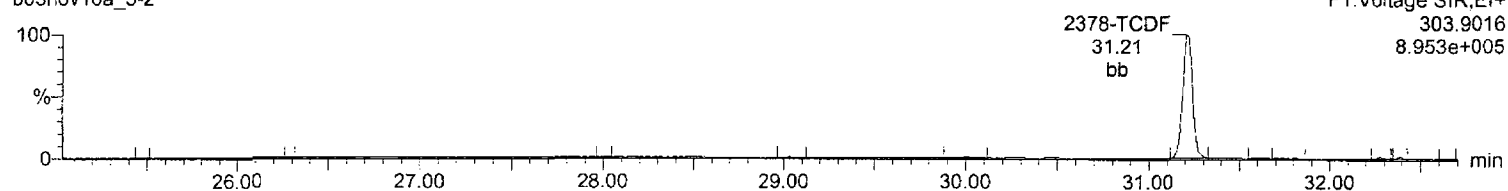
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-2, Date: 05-Nov-2010, Time: 03:01:27, ID: 12002075-1 LCSD, Description: 17295, Job: HMS8290_1L, Task: HRP763_1, User: MJC

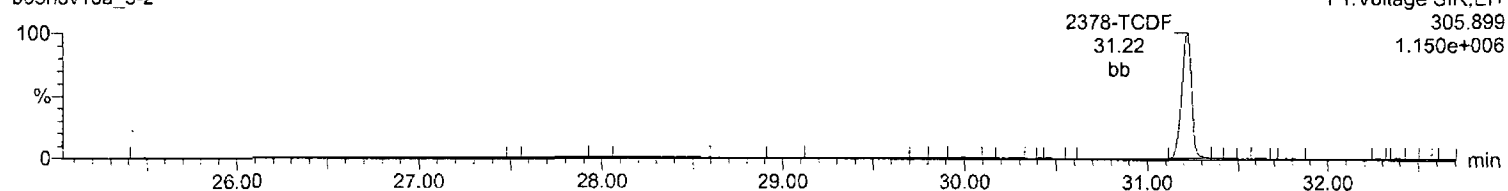
Total-tetrafurans

b03nov10a_5-2



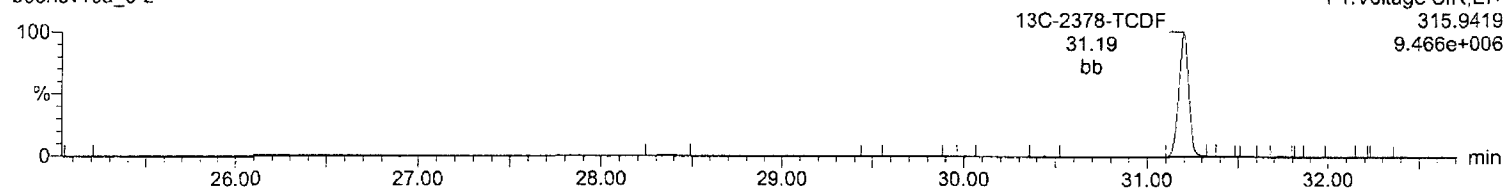
Total-tetrafurans

b03nov10a_5-2



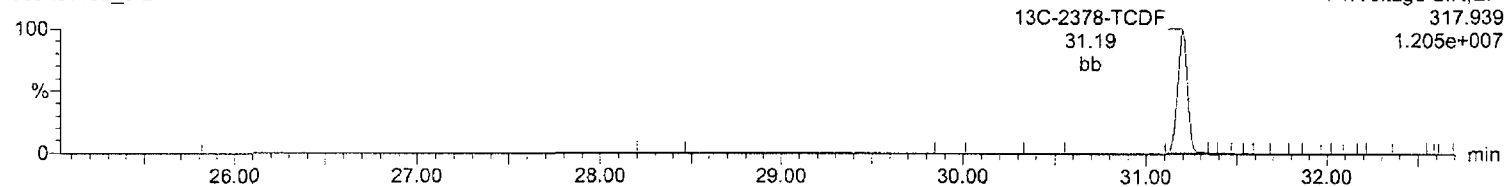
13C-2378-TCDF

b03nov10a_5-2



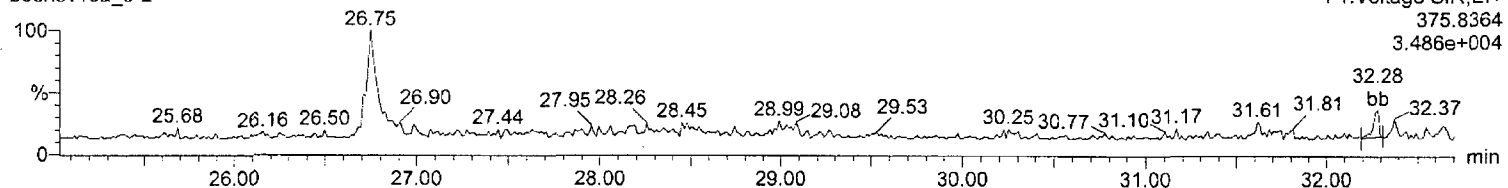
13C-2378-TCDF

b03nov10a_5-2



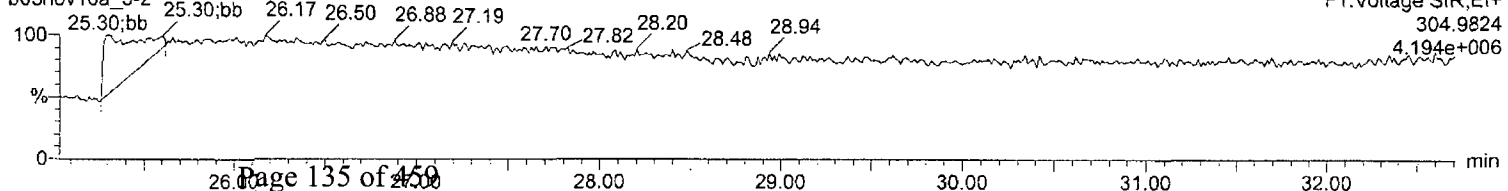
HxDPE

b03nov10a_5-2



Lock Mass F1

b03nov10a_5-2



Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

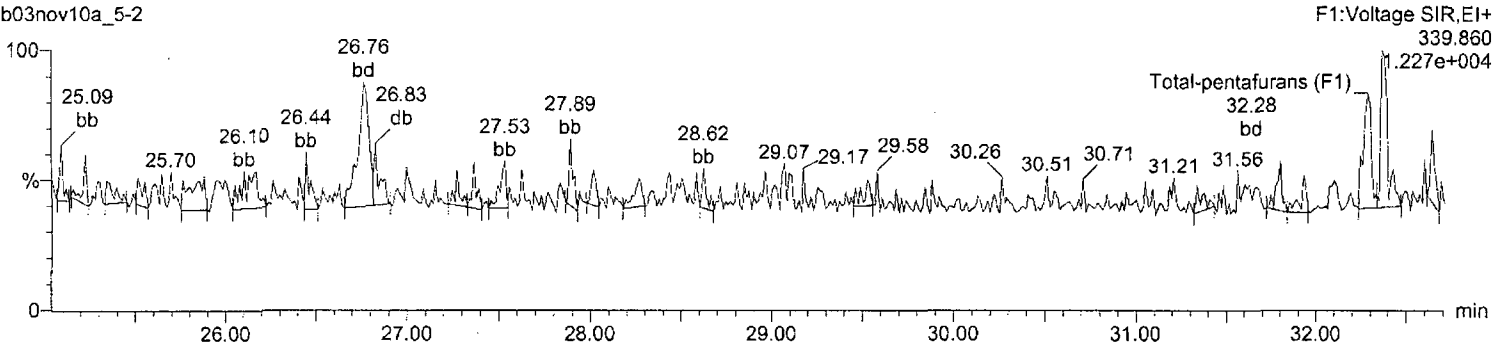
Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time
Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-2, Date: 05-Nov-2010, Time: 03:01:27, ID: 12002075-1 LCSD, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

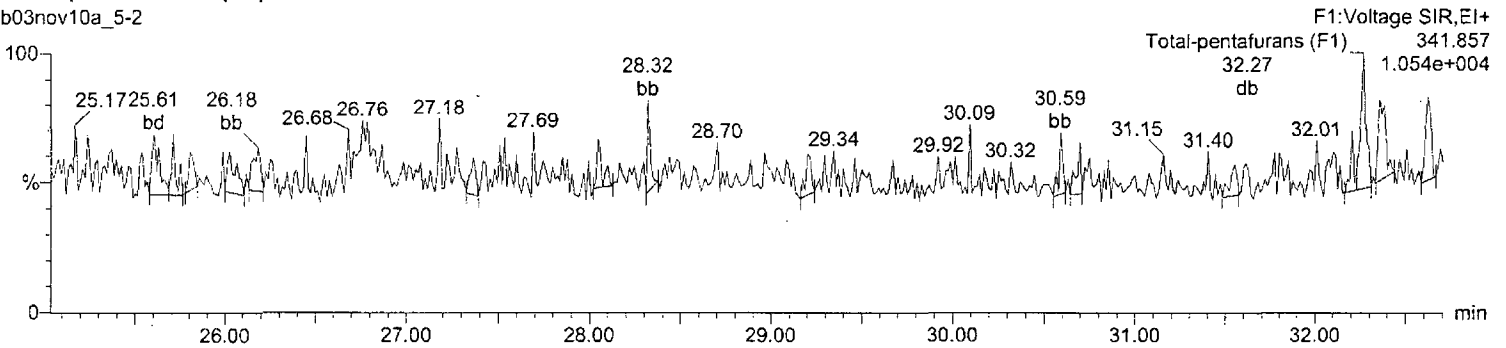
Total-pentafurans (F1)

b03nov10a_5-2



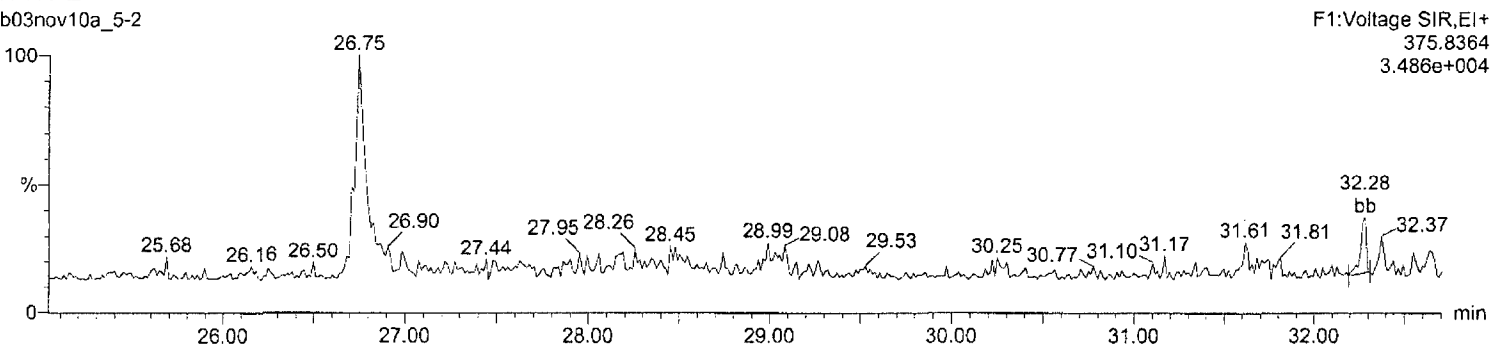
Total-pentafurans (F1)

b03nov10a_5-2



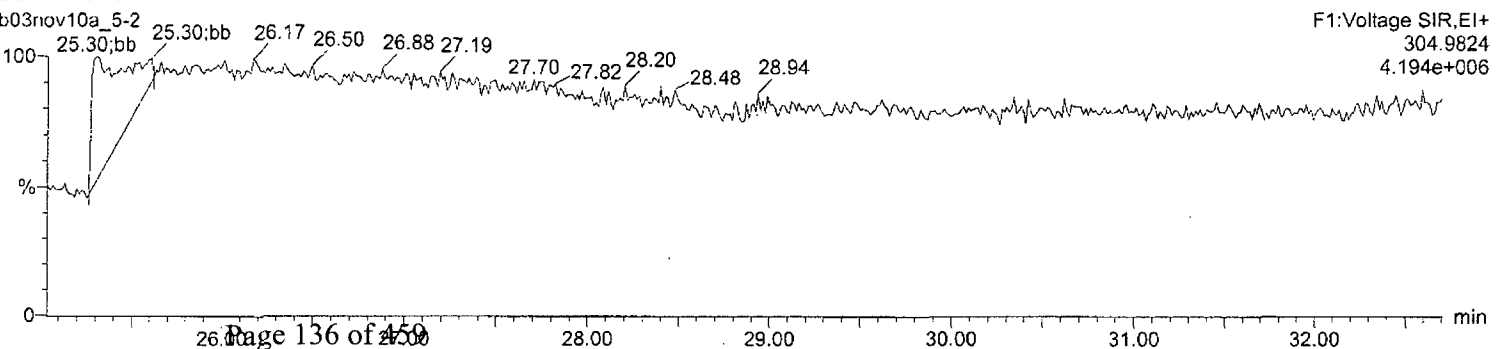
HxDPE

b03nov10a_5-2



Lock Mass F1

b03nov10a_5-2



Quantify Sample Report**MassLynx 4.1**

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

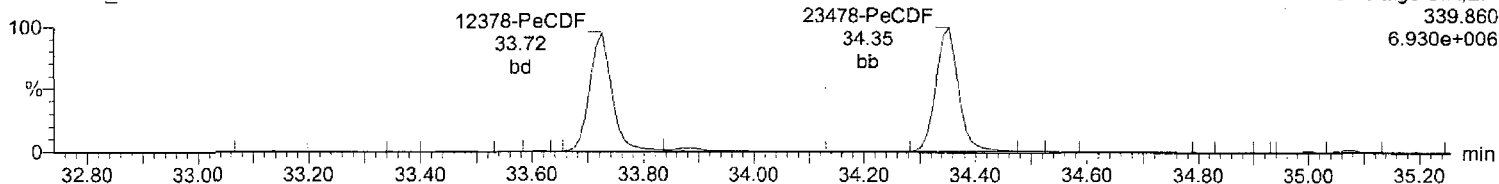
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

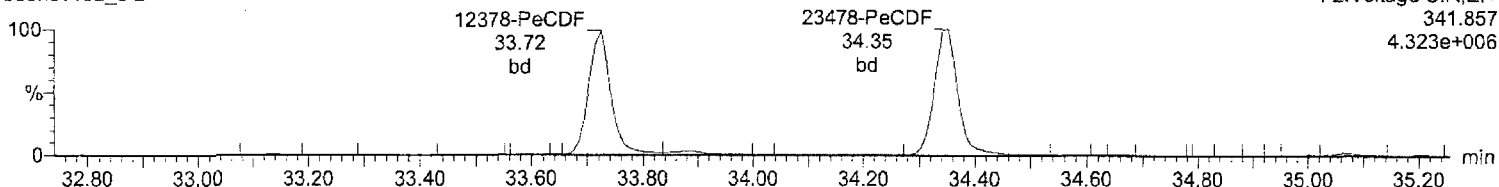
Name: b03nov10a_5-2, Date: 05-Nov-2010, Time: 03:01:27, ID: 12002075-1 LCSD, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

Total-pentafurans

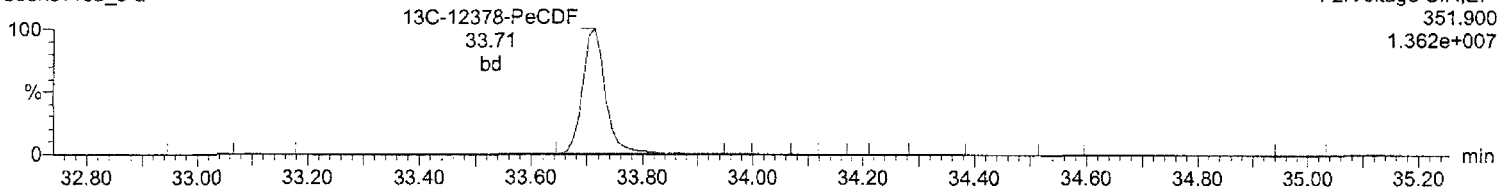
b03nov10a_5-2

F2:Voltage SIR,El+
339.860
6.930e+006**Total-pentafurans**

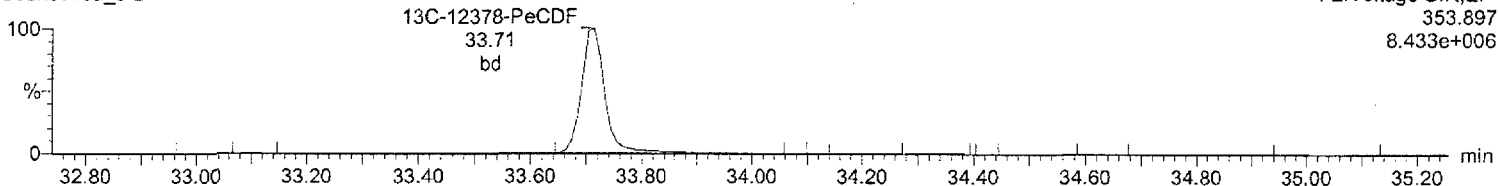
b03nov10a_5-2

F2:Voltage SIR,El+
341.857
4.323e+006**13C-12378-PeCDF**

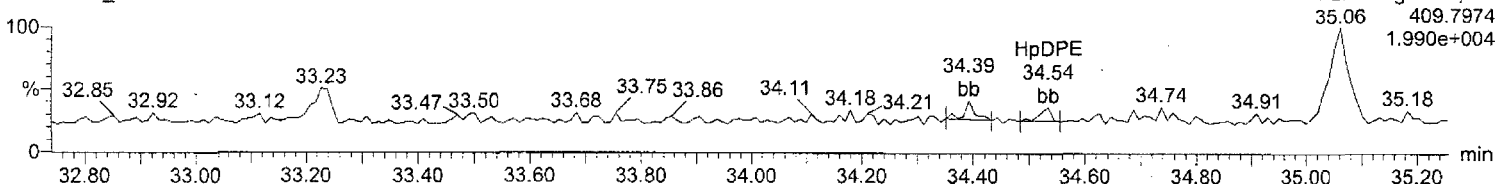
b03nov10a_5-2

F2:Voltage SIR,El+
351.900
1.362e+007**13C-12378-PeCDF**

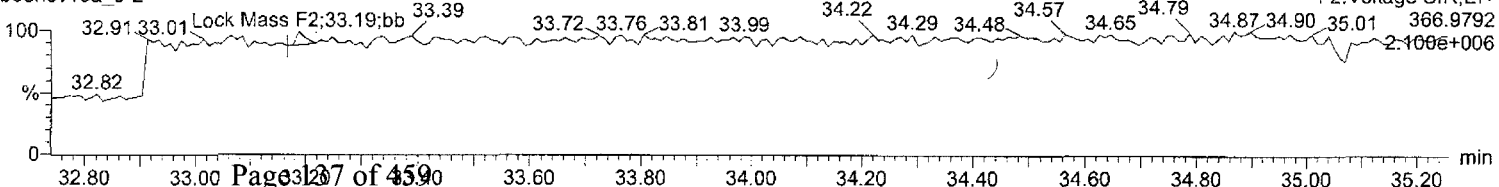
b03nov10a_5-2

F2:Voltage SIR,El+
353.897
8.433e+006**HpDPE**

b03nov10a_5-2

F2:Voltage SIR,El+
350.06 409.7974
1.990e+004**Lock Mass F2**

b03nov10a_5-2

F2:Voltage SIR,El+
366.9792
2.106e+006

Quantify Sample Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

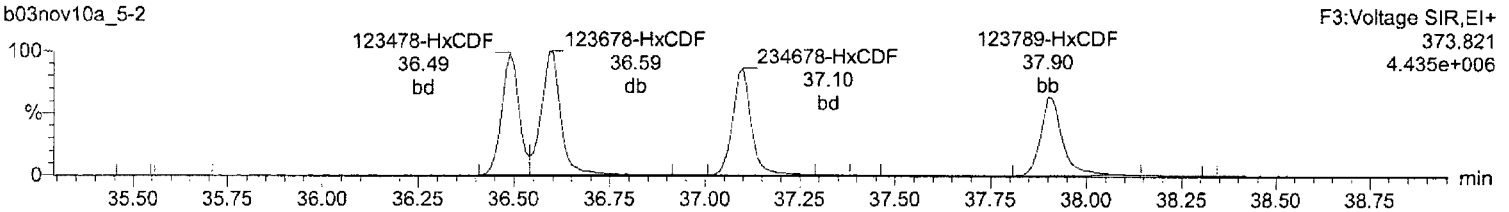
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

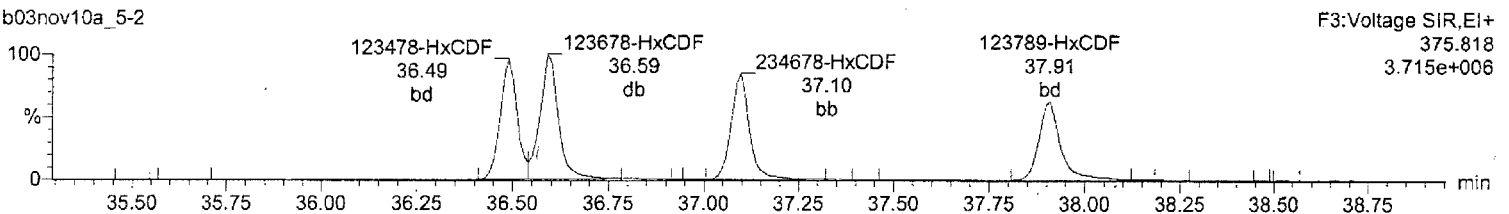
Name: b03nov10a_5-2, Date: 05-Nov-2010, Time: 03:01:27, ID: 12002075-1 LCSD, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

Total-hexafurans

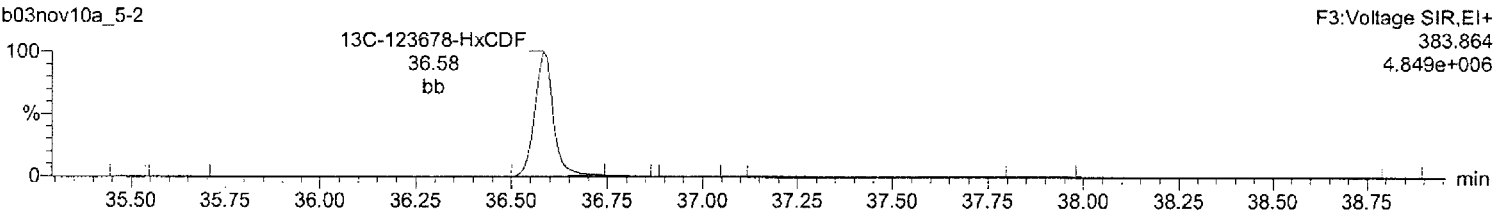
b03nov10a_5-2

**Total-hexafurans**

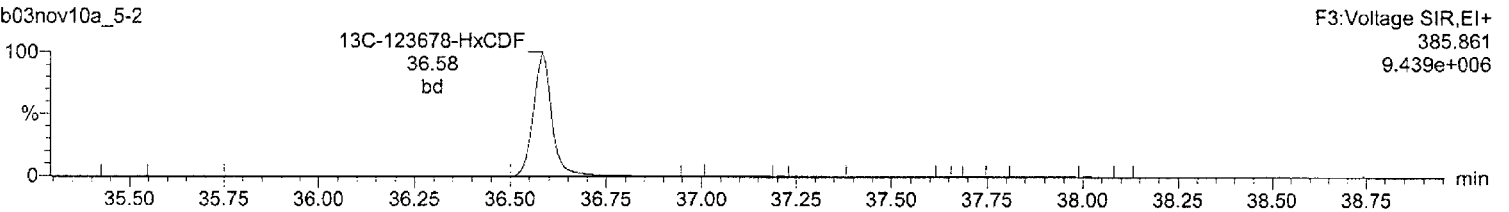
b03nov10a_5-2

**13C-123678-HxCDF**

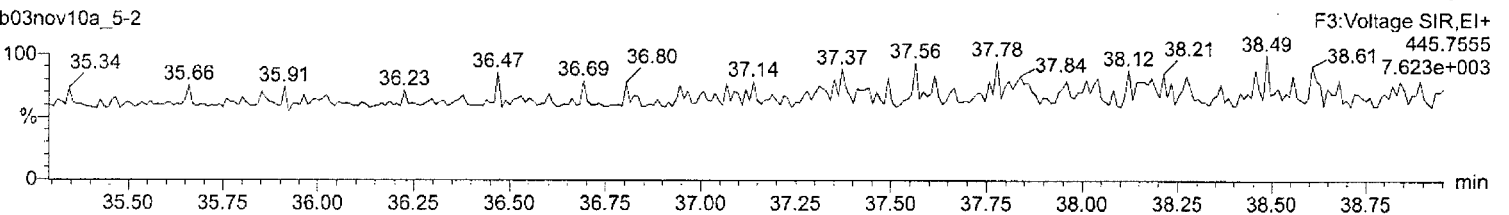
b03nov10a_5-2

**13C-123678-HxCDF**

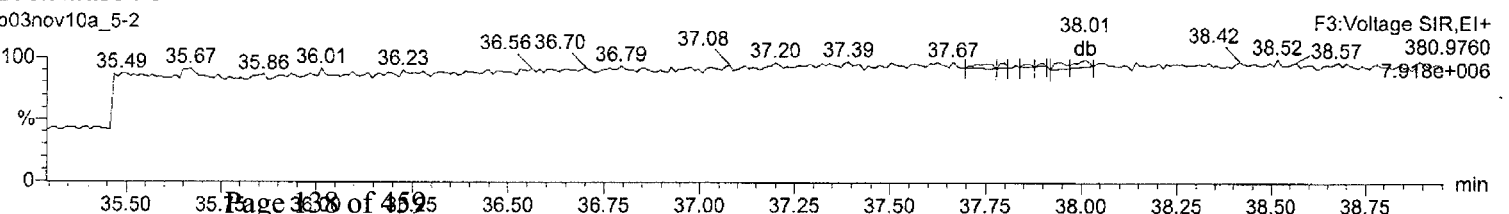
b03nov10a_5-2

**OcDPE**

b03nov10a_5-2

**Lock Mass F3**

b03nov10a_5-2



Quantify Sample Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

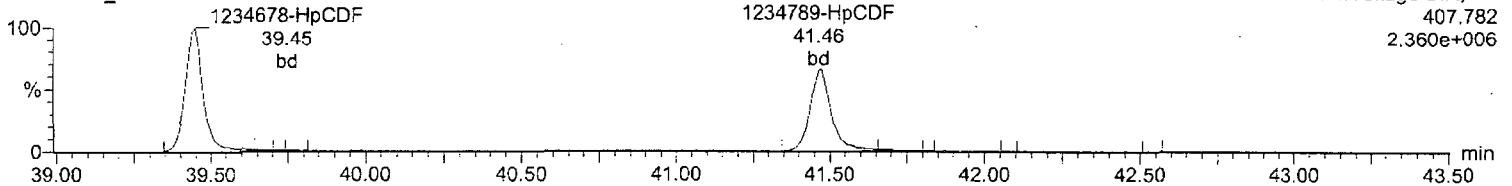
Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-2, Date: 05-Nov-2010, Time: 03:01:27, ID: 12002075-1 LCSD, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

Total-heptafurans

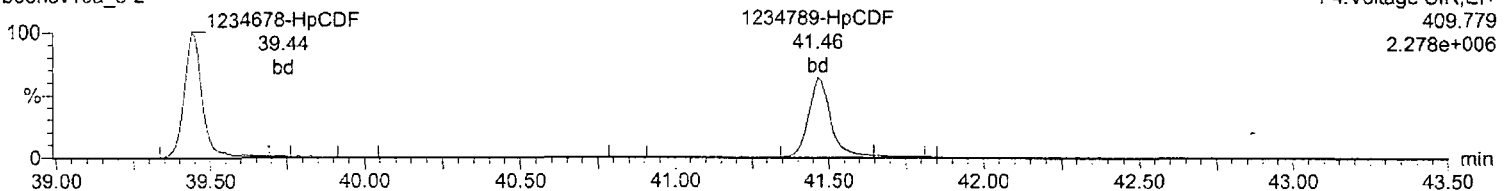
b03nov10a_5-2

F4:Voltage SIR,EI+
407.782
2.360e+006

**Total-heptafurans**

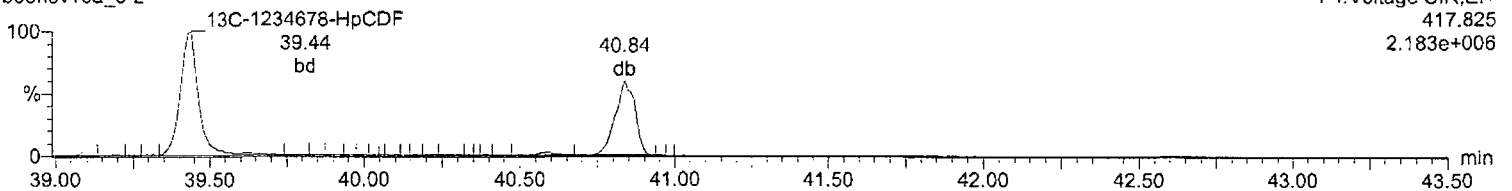
b03nov10a_5-2

F4:Voltage SIR,EI+
409.779
2.278e+006

**13C-1234678-HpCDF**

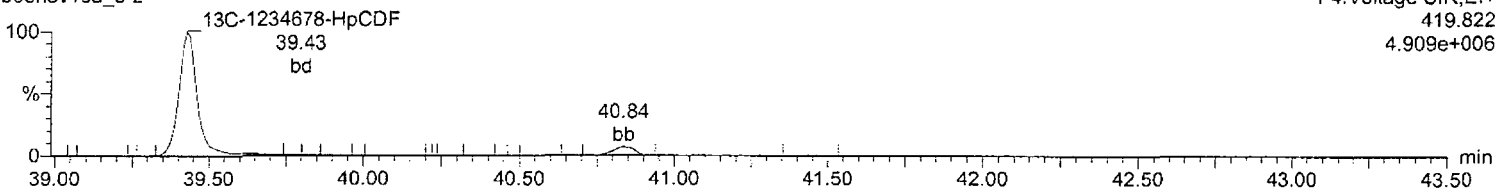
b03nov10a_5-2

F4:Voltage SIR,EI+
417.825
2.183e+006

**13C-1234678-HpCDF**

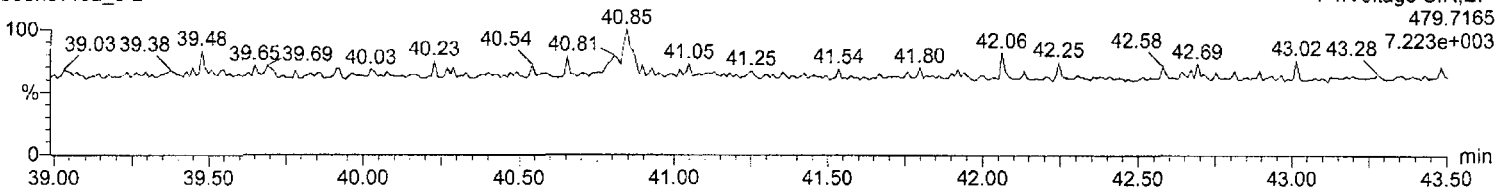
b03nov10a_5-2

F4:Voltage SIR,EI+
419.822
4.909e+006

**NoDPE**

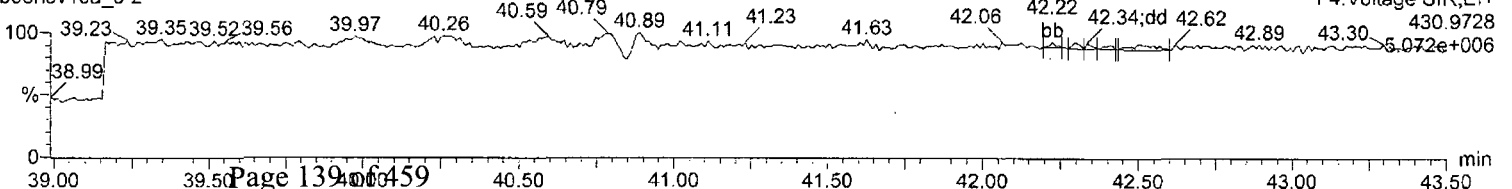
b03nov10a_5-2

F4:Voltage SIR,EI+
479.7165
7.223e+003

**Lock Mass F4**

b03nov10a_5-2

F4:Voltage SIR,EI+
430.9728
5.072e+006



Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_5.qld

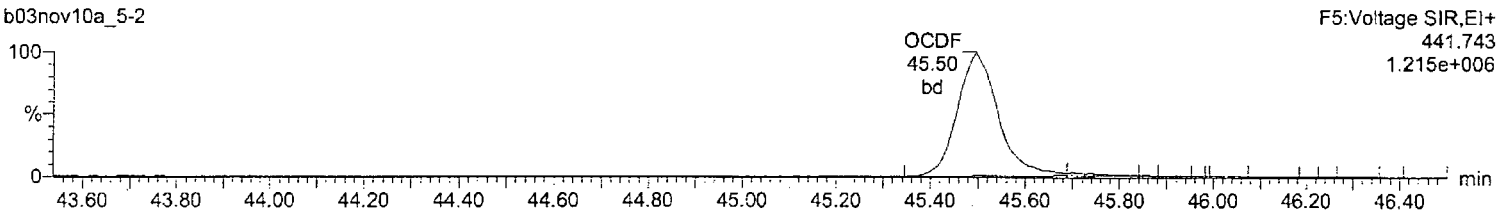
Last Altered: Friday, November 05, 2010 14:38:09 Eastern Standard Time

Printed: Friday, November 05, 2010 14:45:04 Eastern Standard Time

Name: b03nov10a_5-2, Date: 05-Nov-2010, Time: 03:01:27, ID: 12002075-1 LCSD, Description: 17295, Job: HMS8290_1L,
Task: HRP763_1, User: MJC

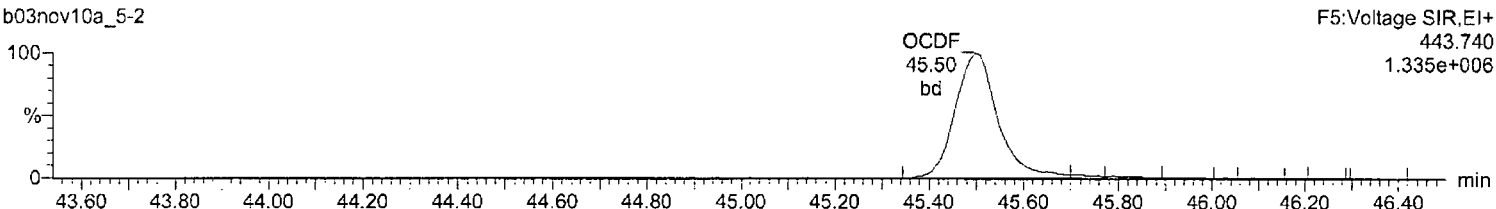
OCDF

b03nov10a_5-2



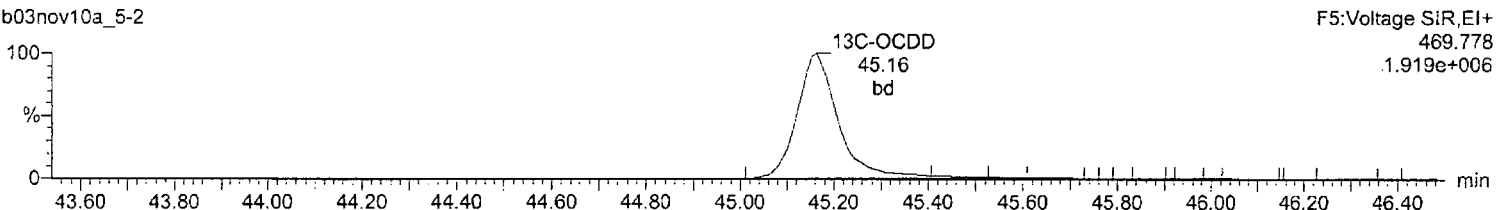
OCDF

b03nov10a_5-2



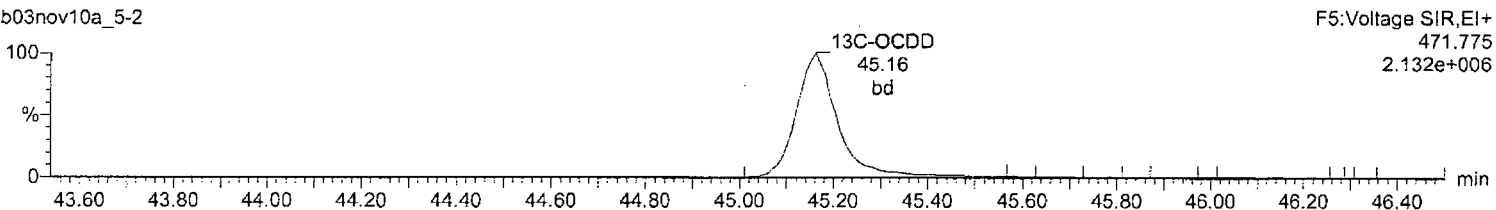
13C-OCDD

b03nov10a_5-2



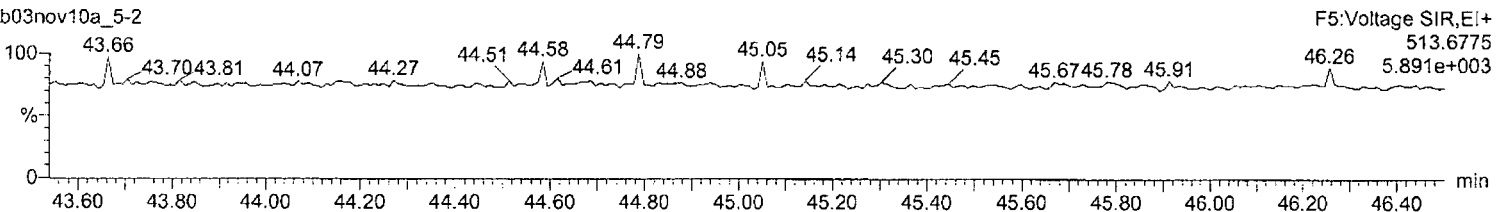
13C-OCDD

b03nov10a_5-2



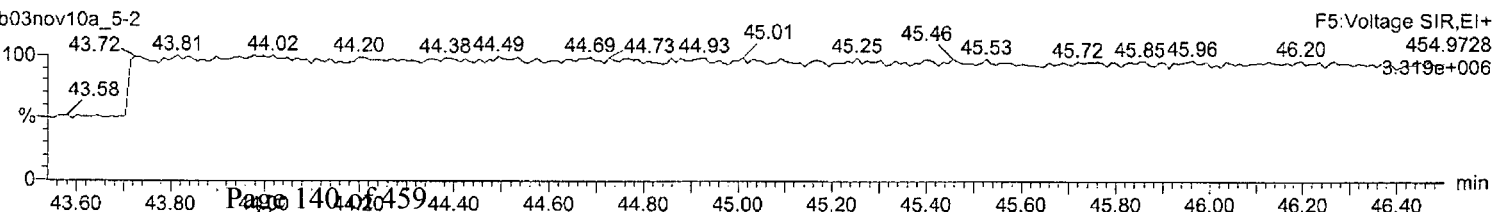
DeDPE

b03nov10a_5-2



Lock Mass F5

b03nov10a_5-2



Quantify Sample Summary Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

Last Altered: Friday, November 05, 2010 4:49:10 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:58:20 PM Eastern Standard Time

Page 1 of 49
Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-8, Date: 04-Nov-2010, Time: 20:26:34, ID: 12002027-1 MS, Description: 17194 HMS8290TCS, Job: HMS8290TCL, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	4.64e4	5.94e4	1.06e5	31.75	1.000	0.78	NO	10.547	0.0272	1.02e6	971	1052.1	1.25e6	1014	1233.4	bb
2	12378-PeCDD	2.88e5	1.81e5	4.69e5	34.54	1.000	1.59	NO	50.921	0.0626	6.49e6	2727	2380.9	4.10e6	1546	2653.9	bb
3	123478-HxCDD	2.24e5	1.78e5	4.02e5	37.22	0.998	1.26	NO	53.421	0.123	4.25e6	2792	1521.7	3.44e6	3141	1093.8	bd
4	123678-HxCDD	2.31e5	1.82e5	4.13e5	37.31	1.000	1.27	NO	50.898	0.114	4.33e6	2792	1552.2	3.53e6	3141	1124.1	db
5	123789-HxCDD	2.21e5	1.76e5	3.97e5	37.56	1.007	1.26	NO	54.637	0.127	3.84e6	2792	1376.0	3.22e6	3141	1026.1	bd
6	1234678-HpCDD	1.79e5	1.72e5	3.51e5	40.74	1.000	1.04	NO	50.418	0.190	2.49e6	2152	1155.9	2.44e6	3818	638.8	bd
7	OCDD	2.62e5	2.94e5	5.56e5	45.17	1.000	0.89	NO	103.243	0.265	2.73e6	2093	1304.8	2.96e6	2804	1056.8	bd
8	2378-TCDF	8.07e4	1.02e5	1.83e5	31.21	1.000	0.79	NO	10.762	0.0243	1.39e6	1096	1271.8	1.74e6	1353	1285.2	bb
9	12378-PeCDF	4.27e5	2.80e5	7.07e5	33.71	1.000	1.53	NO	57.694	0.0731	9.95e6	3696	2692.2	6.60e6	3177	2077.1	bd
10	23478-PeCDF	3.92e5	2.54e5	6.47e5	34.34	1.019	1.54	NO	53.939	0.0747	9.37e6	3696	2535.5	5.98e6	3177	1883.6	bb
11	123478-HxCDF	2.85e5	2.29e5	5.14e5	36.48	0.997	1.25	NO	57.473	0.173	5.94e6	5037	1180.1	4.88e6	4834	1010.1	bd
12	123678-HxCDF	3.43e5	2.72e5	6.14e5	36.59	1.000	1.26	NO	59.058	0.148	6.58e6	5037	1306.2	5.23e6	4834	1081.8	db
13	234678-HxCDF	2.88e5	2.35e5	5.23e5	37.09	1.014	1.22	NO	55.615	0.164	5.64e6	5037	1120.1	4.63e6	4834	958.8	bb
14	123789-HxCDF	2.24e5	1.80e5	4.04e5	37.90	1.036	1.25	NO	51.859	0.198	3.71e6	5037	737.3	3.00e6	4834	620.5	bb
15	1234678-HpCDF	2.84e5	2.80e5	5.63e5	39.44	1.001	1.02	NO	63.972	0.161	4.51e6	3203	1407.1	4.42e6	4437	995.6	bb
16	1234789-HpCDF	1.84e5	1.81e5	3.66e5	41.45	1.052	1.02	NO	56.997	0.221	2.49e6	3203	777.0	2.51e6	4437	566.3	bd
17	OCDF	2.65e5	2.96e5	5.61e5	45.50	1.008	0.89	NO	84.265	0.156	2.65e6	2035	1300.4	2.94e6	1529	1921.4	bd
18	13C-2378-TCDD	4.35e5	5.55e5	9.90e5	31.73	1.013	0.78	NO	79.000	0.0512	9.49e6	2018	4702.7	1.21e7	1796	6713.0	bb
19	13C-12378-PeCDD	5.45e5	3.48e5	8.93e5	34.53	1.102	1.57	NO	84.020	0.0617	1.21e7	2261	5363.0	7.82e6	1633	4786.1	bb
20	13C-123678-HxCDD	4.70e5	3.69e5	8.39e5	37.30	0.993	1.27	NO	89.051	0.126	9.05e6	3309	2735.1	7.12e6	3732	1908.5	bb
21	13C-1234678-HpCDD	3.55e5	3.38e5	6.94e5	40.73	1.085	1.05	NO	102.222	0.127	4.81e6	2262	2124.8	4.63e6	2872	1610.3	bd
22	13C-OCDD	5.04e5	5.77e5	1.08e6	45.15	1.202	0.87	NO	190.884	0.221	5.19e6	3192	1625.6	5.82e6	4258	1366.7	bb
23	13C-2378-TCDF	7.59e5	9.70e5	1.73e6	31.19	0.996	0.78	NO	84.882	0.0236	1.35e7	1404	9607.1	1.70e7	1458	11655.4	bb
24	13C-12378-PeCDF	8.07e5	5.04e5	1.31e6	33.70	1.076	1.60	NO	69.255	0.0521	1.86e7	3315	5607.0	1.19e7	2545	4675.9	bd
25	13C-123678-HxCDF	3.39e5	6.45e5	9.84e5	36.58	0.974	0.53	NO	71.188	0.0720	6.51e6	2584	2518.7	1.24e7	3329	3733.3	bb
26	13C-1234678-HpCDF	2.14e5	4.76e5	6.90e5	39.42	1.050	0.45	NO	75.297	0.0824	3.46e6	1647	2102.5	7.65e6	2838	2697.5	bb
27	13C-1234-TCDD	4.98e5	6.21e5	1.12e6	31.33	0.000	0.80	NO	100.000	0.0574	8.88e6	2018	4399.6	1.11e7	1796	6156.2	bb
28	13C-123789-HxCDD	4.68e5	3.79e5	8.48e5	37.55	0.000	1.24	NO	100.000	0.140	8.35e6	3309	2523.5	6.55e6	3732	1755.3	bb
29	37Cl-2378-TCDD (SS)	5.47e2		5.47e2	31.75	1.000			0.052	0.0110	1.37e4	836	16.4				bb
30	13C-23478-PeCDF (SS)	5.39e3	3.45e3	8.84e3	34.33	1.019	1.56	NO	0.722	0.0624	1.27e5	3315	38.3	8.11e4	2545	31.9	bb

Quantify Sample Report MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

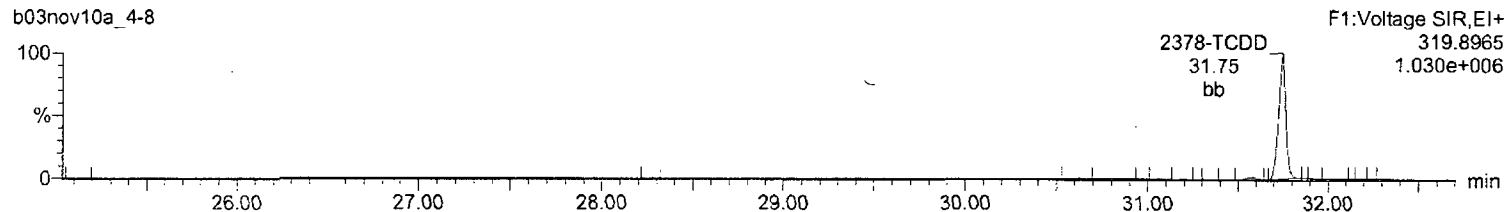
Last Altered: Friday, November 05, 2010 4:14:46 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:18:12 PM Eastern Standard Time

Name: b03nov10a_4-8, Date: 04-Nov-2010, Time: 20:26:34, ID: 12002027-1 MS, Description: 17315, Job: HMS8290TCL, Task: HRP763_1, User: MJC

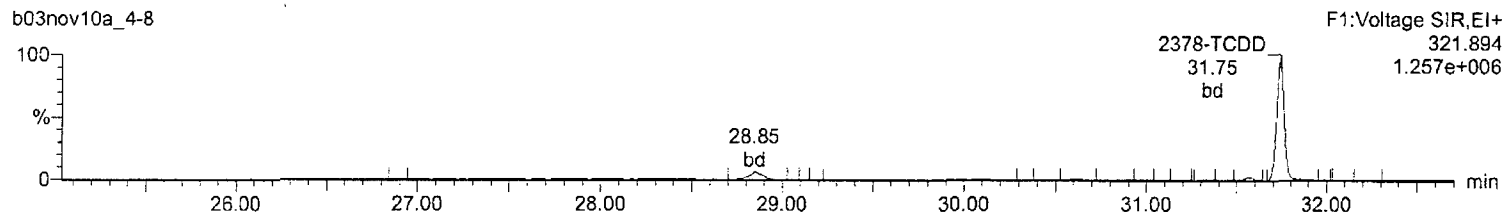
Total-tetradoxins

b03nov10a_4-8



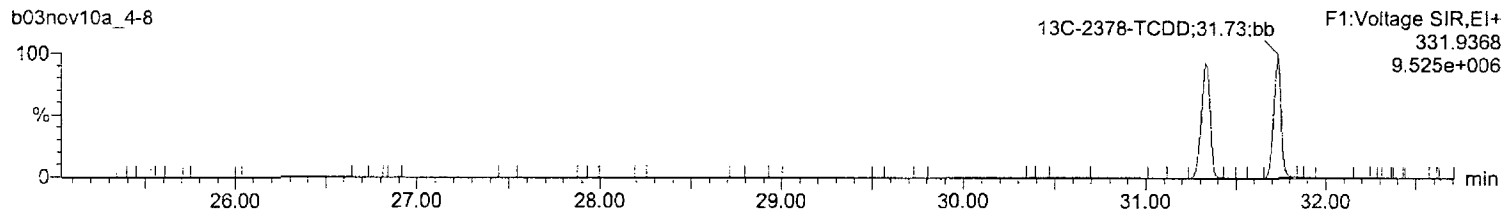
Total-tetradoxins

b03nov10a_4-8



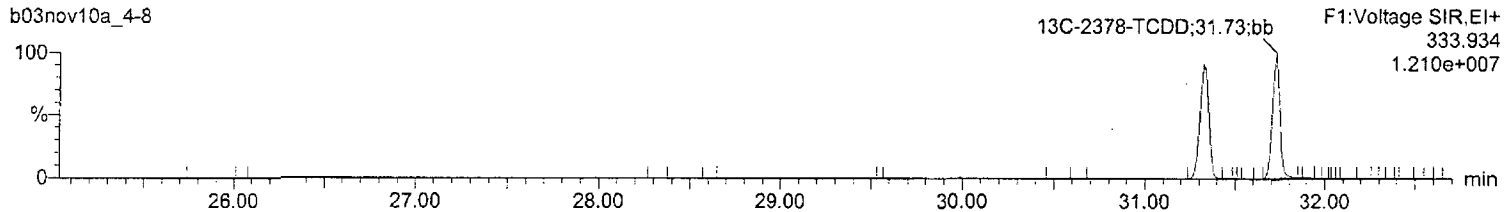
13C-2378-TCDD

b03nov10a_4-8



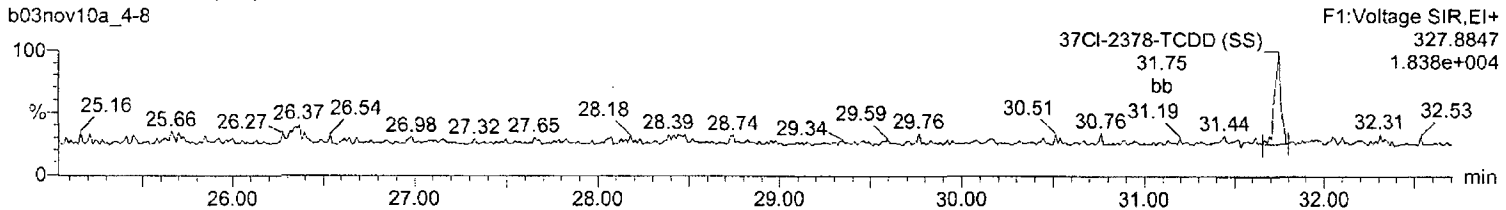
13C-2378-TCDD

b03nov10a_4-8



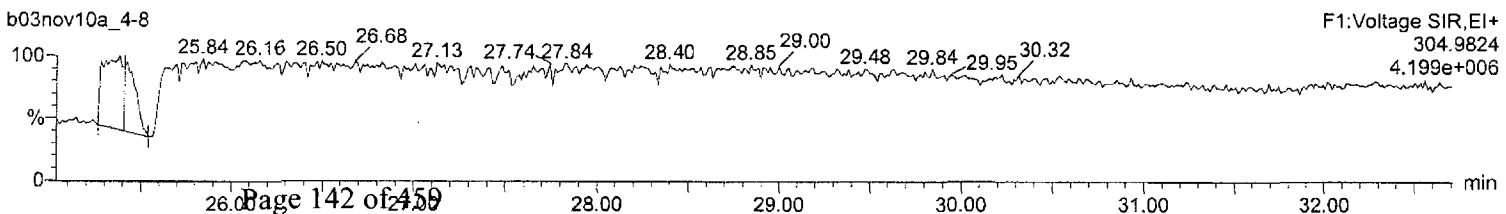
37Cl-2378-TCDD (SS)

b03nov10a_4-8



Lock Mass F1

b03nov10a_4-8



Quantify Sample Summary Report

MassLynx 4.1

Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

Last Altered: Friday, November 05, 2010 4:49:10 PM Eastern Standard Time

Printed: Friday, November 05, 2010 5:03:15 PM Eastern Standard Time

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Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-9, Date: 04-Nov-2010, Time: 21:15:00, ID: 12002028-1 MSD, Description: 17194 HMSB290TCS 3/16/10
17315 Job: HMS8290TGL Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	3.39e4	4.22e4	7.61e4	31.75	1.000	0.80	NO	10.540	0.0401	7.41e5	784	944.2	9.15e5	1279	715.5	bd
2	12378-PeCDD	2.08e5	1.34e5	3.43e5	34.55	1.001	1.55	NO	50.277	0.101	4.57e6	3121	1463.0	2.96e6	2070	1429.9	bb
3	123478-HxCDD	1.68e5	1.32e5	3.00e5	37.22	0.998	1.27	NO	52.146	0.126	3.13e6	1921	1627.6	2.56e6	2543	1007.1	bd
4	123678-HxCDD	1.81e5	1.40e5	3.21e5	37.31	1.000	1.30	NO	51.538	0.117	3.30e6	1921	1719.6	2.56e6	2543	1006.6	dd
5	123789-HxCDD	1.83e5	1.38e5	3.21e5	37.56	1.007	1.32	NO	57.720	0.131	3.07e6	1921	1596.0	2.31e6	2543	908.7	dd
6	1234678-HpCDD	1.31e5	1.27e5	2.58e5	40.75	1.000	1.03	NO	50.600	0.162	1.77e6	2318	764.6	1.72e6	1602	1071.2	bd
7	OCDD	1.89e5	2.09e5	3.97e5	45.17	1.000	0.90	NO	100.527	0.337	1.87e6	2518	744.5	2.14e6	1900	1127.8	bd
8	2378-TCDF	5.62e4	7.32e4	1.29e5	31.21	1.000	0.77	NO	10.015	0.0333	9.70e5	1031	940.5	1.27e6	1351	942.3	bb
9	12378-PeCDF	3.15e5	2.04e5	5.19e5	33.71	1.000	1.55	NO	52.047	0.155	7.31e6	5714	1279.7	4.79e6	5962	803.7	bd
10	23478-PeCDF	3.15e5	2.03e5	5.18e5	34.34	1.019	1.55	NO	53.053	0.158	7.43e6	5714	1300.8	4.80e6	5962	804.4	bb
11	123478-HxCDF	2.24e5	1.79e5	4.03e5	36.49	0.998	1.25	NO	57.264	0.178	4.46e6	4194	1062.2	3.58e6	4194	854.3	bd
12	123678-HxCDF	2.55e5	2.00e5	4.55e5	36.59	1.000	1.28	NO	55.469	0.153	4.93e6	4194	1174.3	4.06e6	4194	967.0	dd
13	234678-HxCDF	2.37e5	1.95e5	4.32e5	37.09	1.014	1.21	NO	58.343	0.170	4.46e6	4194	1064.3	3.68e6	4194	876.7	bb
14	123789-HxCDF	2.03e5	1.61e5	3.64e5	37.90	1.036	1.26	NO	59.265	0.205	3.30e6	4194	786.0	2.58e6	4194	614.5	bb
15	1234678-HpCDF	2.09e5	2.04e5	4.14e5	39.44	1.000	1.02	NO	54.126	0.158	3.35e6	3591	933.0	3.31e6	2782	1189.6	bb
16	1234789-HpCDF	1.42e5	1.42e5	2.85e5	41.45	1.051	1.00	NO	51.096	0.217	1.89e6	3591	526.9	1.81e6	2782	650.2	bb
17	OCDF	2.12e5	2.31e5	4.43e5	45.50	1.007	0.91	NO	90.548	0.271	2.05e6	1955	1046.9	2.34e6	2433	960.8	bd
18	13C-2378-TCDD	3.14e5	3.99e5	7.13e5	31.73	1.013	0.79	NO	79.511	0.0598	6.73e6	1984	3390.0	8.44e6	1385	6093.8	bb
19	13C-12378-PeCDD	4.02e5	2.58e5	6.60e5	34.53	1.102	1.56	NO	86.758	0.0667	9.08e6	1665	5456.4	5.79e6	1524	3795.7	bb
20	13C-123678-HxCDD	3.59e5	2.84e5	6.43e5	37.30	0.993	1.27	NO	85.985	0.158	6.61e6	3113	2123.5	5.37e6	3608	1489.2	bb
21	13C-1234678-HpCDD	2.57e5	2.50e5	5.07e5	40.73	1.085	1.03	NO	94.177	0.149	3.66e6	2366	1548.8	3.40e6	2190	1554.7	bb
22	13C-OCDD	3.77e5	4.17e5	7.94e5	45.16	1.203	0.91	NO	176.769	0.233	3.75e6	3137	1195.5	4.07e6	2793	1458.4	bd
23	13C-2378-TCDF	5.82e5	7.32e5	1.31e6	31.19	0.996	0.80	NO	90.095	0.0350	9.67e6	1675	5776.2	1.24e7	1529	8079.9	bb
24	13C-12378-PeCDF	6.54e5	4.14e5	1.07e6	33.70	1.076	1.58	NO	78.784	0.0876	1.48e7	2838	5211.7	9.59e6	4622	2075.1	bd
25	13C-123678-HxCDF	2.66e5	5.09e5	7.75e5	36.58	0.974	0.52	NO	70.686	0.0753	5.32e6	2091	2545.5	1.01e7	2591	3909.0	bb
26	13C-1234678-HpCDF	1.89e5	4.10e5	5.99e5	39.43	1.050	0.46	NO	82.431	0.139	3.00e6	1176	2548.9	6.50e6	4552	1427.0	bd
27	13C-1234-TCDD	3.54e5	4.47e5	8.01e5	31.33	0.000	0.79	NO	100.000	0.0669	6.68e6	1984	3366.7	8.45e6	1385	6104.8	bb
28	13C-123789-HxCDD	3.77e5	2.95e5	6.72e5	37.55	0.000	1.28	NO	100.000	0.176	6.42e6	3113	2061.9	5.01e6	3608	1390.0	bd
29	37Cl-2378-TCDD (SS)	4.23e2		4.23e2	31.76	1.001			0.056	0.0164	8.88e3	879	10.1				bb
30	13C-23478-PeCDF (SS)	2.04e3	1.20e3	3.24e3	34.33	1.019	1.70	NO	0.325	0.0992	5.06e4	2838	17.8	2.80e4	4622	6.1	bb

Quantify Sample Report **MassLynx 4.1**
Method 8290 Quantification Report

Dataset: C:\MassLynx\Default.pro\Sample Results\8290-b03nov10a_4.qld

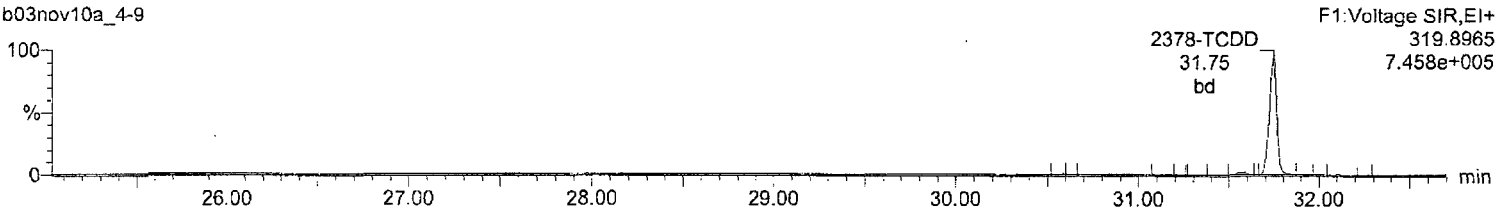
Last Altered: Friday, November 05, 2010 4:14:46 PM Eastern Standard Time

Printed: Friday, November 05, 2010 4:18:12 PM Eastern Standard Time

Name: b03nov10a_4-9, Date: 04-Nov-2010, Time: 21:15:00, ID: 12002028-1 MSD, Description: 17315, Job: HMS8290TCL,
Task: HRP763_1, User: MJC

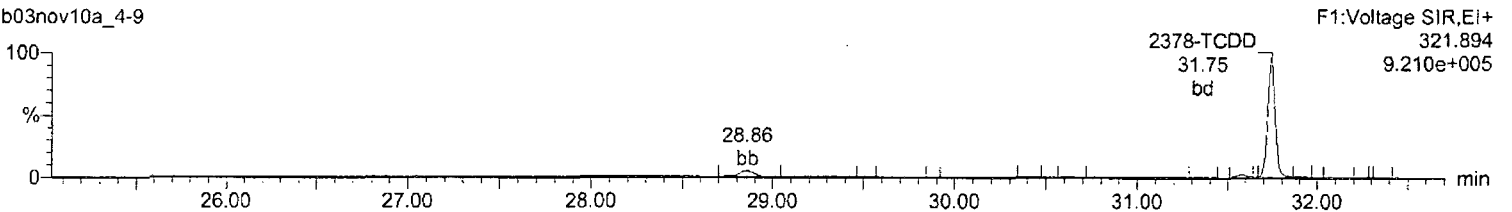
Total-tetradoxins

b03nov10a_4-9



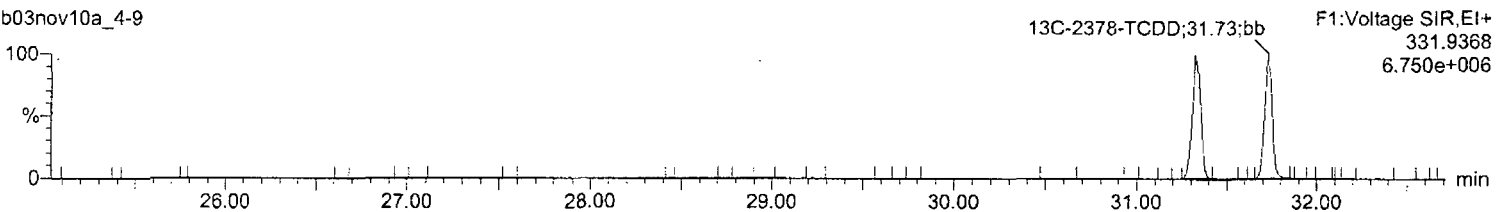
Total-tetradoxins

b03nov10a_4-9



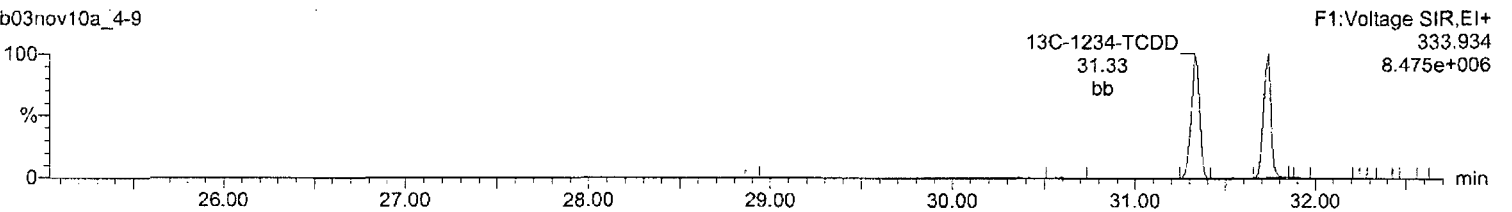
¹³C-2378-TCDD

b03nov10a_4-9



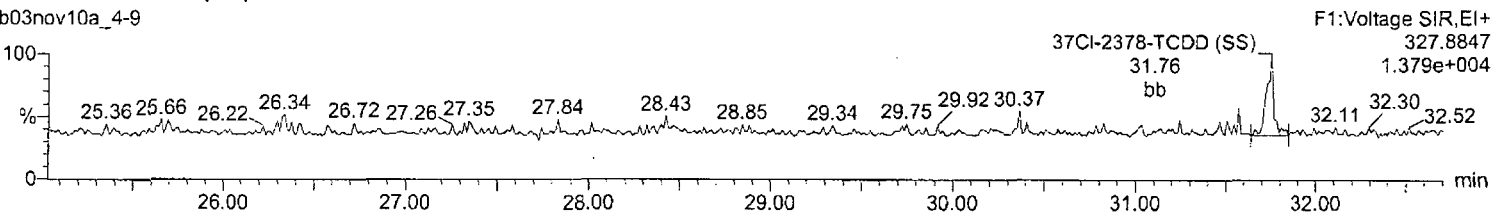
¹³C-2378-TCDD

b03nov10a_4-9



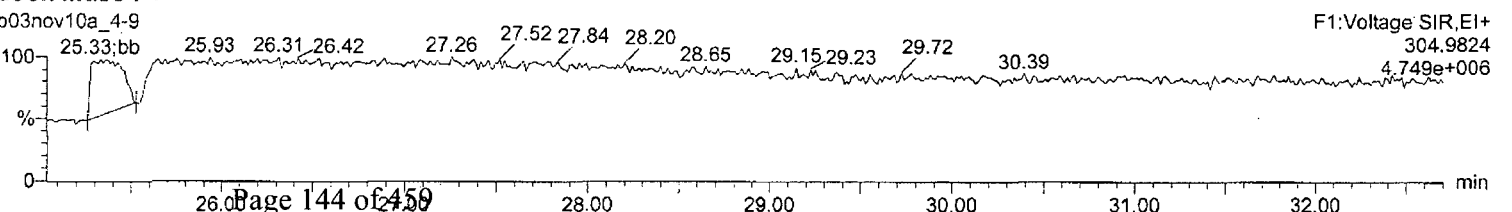
³⁷Cl-2378-TCDD (SS)

b03nov10a_4-9



Lock Mass F1

b03nov10a_4-9



Logbooks

Batch: 16673

Analyst: JB

Date/Time: 19-OCT-2010

Procedure Code DRY WEIGHT

Procedure Description Dry Weight-Percent Moisture

Lab Sop:

Moisture LogBook

Sample St	Sample Id	Rpd(%)
DUP	12002009	7.923

Sample ID	Instrument	Run Time	Container Wt	Initial Wt	Final Wt (g)	Net Initial Wt (g)	Net Final Wt (g)	Moisture (%)	Solids (%)	Equivalent Wt (g)
1742001	B1	08:20	1.01	10.21	8.01	9.2	7	23.913	76.087	13.14
1742002	B1	08:20	1.01	10.67	8.26	9.66	7.25	24.948	75.052	13.32
1742003	B1	08:20	1.01	10.97	8.69	9.96	7.68	22.892	77.108	12.97
1742004	B1	08:20	1.01	10.43	8.19	9.42	7.18	23.779	76.221	13.12
1742005	B1	08:20	1.01	10.11	8.12	9.1	7.11	21.868	78.132	12.8
1742006	B1	08:20	1.01	9.96	8.01	8.95	7	21.788	78.212	12.79
1742007	B1	08:20	1.01	10.81	8.77	9.8	7.76	20.816	79.184	12.63
1742008	B1	08:20	1.01	9.66	7.47	8.65	6.46	25.318	74.682	13.39
1742009	B1	08:20	1.01	10.43	8.34	9.42	7.33	22.187	77.813	12.85
1742010	B1	08:20	1.01	10.48	8.57	9.47	7.56	20.169	79.831	12.53
1742011	B1	08:20	1.01	10.09	7.96	9.08	6.95	23.458	76.542	13.06
12002009	B1	08:20	1.01	10.29	8.24	9.28	7.23	22.091	77.909	12.84

Comments:

A) Result = (Net Initial - Net Final) / Net Initial * 100

Note: Aliquot is used for the determination of the effective MDL and PQL in LIMS

Prep Logbook

3540C Solid Extraction for Method 8290A

Batch ID: 16733
Analyst: Jessica Burpee
Method: SW846 3540C

Verified by: _____

Lab SOP:
Instrument: Ohaus Scout Pro 400

Sample ID	Start Run Date	Aliquot (g)	ES Amount (uL)	ES Serial#	MX Amount (uL)	MX Serial#
12002024 MB	19-OCT-2010 14:13	10	40	WD101006-08 .05 ng/uL		
12002022 LCS	19-OCT-2010 14:13	10	40	WD101006-08 .05 ng/uL	40	WD101019-03 .005 ng/uL
12002023 LCSD	19-OCT-2010 14:13	10	40	WD101006-08 .05 ng/uL	40	WD101019-03 .005 ng/uL
1742001	19-OCT-2010 14:13	13.35	40	WD101006-08 .05 ng/uL		
1742002	19-OCT-2010 14:13	13.46	40	WD101006-08 .05 ng/uL		
1742003	19-OCT-2010 14:13	13.77	40	WD101006-08 .05 ng/uL		
12002027 MS (1742003)	19-OCT-2010 14:13	13.42	40	WD101006-08 .05 ng/uL	40	WD101019-03 .005 ng/uL
12002028 MSD (1742003)	19-OCT-2010 14:13	13.81	40	WD101006-08 .05 ng/uL	40	WD101019-03 .005 ng/uL
1742004	19-OCT-2010 14:13	13.88	40	WD101006-08 .05 ng/uL		
1742005	19-OCT-2010 14:13	13.44	40	WD101006-08 .05 ng/uL		
1742006	19-OCT-2010 14:13	13.46	40	WD101006-08 .05 ng/uL		
1742007	19-OCT-2010 14:13	13.47	40	WD101006-08 .05 ng/uL		
1742008	19-OCT-2010 14:13	13.99	40	WD101006-08 .05 ng/uL		
1742009	19-OCT-2010 14:13	13.06	40	WD101006-08 .05 ng/uL		
1742010	19-OCT-2010 14:13	13.56	40	WD101006-08 .05 ng/uL		
1742011	19-OCT-2010 14:13	13.93	40	WD101006-08 .05 ng/uL		

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		Glass beads	1073217-A	10	g	Finish Time: 20-OCT-2010 09:00
REAGENT		Purified tridecane	1076604-C	500	uL	
REAGENT		Teflon boiling chips	1081091-A.6	10	each	
REAGENT		Sodium Sulfate	1081093-A	10	g	
REAGENT		Thimbles	1081711-A.6	1	g	
REAGENT		Toluene	1082965-A.3	350	L	
REAGENT		Toluene	1082967-A.4	350	L	

Prep Logbook

Cleanup Procedure for Solids

Batch ID: 17095

Verified by: _____

Analyst: Mike Medwedeff

Lab SOP:

Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Aliquot Analyzed (percent)
12002024 MB	27-OCT-2010 08:37	AB Silica Florisil	100
12002022 LCS	27-OCT-2010 08:37	AB Silica Florisil	100
12002023 LCSD	27-OCT-2010 08:37	AB Silica Florisil	100
1742001	27-OCT-2010 08:37	AB Silica Florisil	100
1742002	27-OCT-2010 08:37	AB Silica Florisil	100
1742003	27-OCT-2010 08:37	AB Silica Florisil	100
12002027 MS (1742003)	27-OCT-2010 08:37	AB Silica Florisil	100
12002028 MSD (1742003)	27-OCT-2010 08:37	AB Silica Florisil	100
1742004	27-OCT-2010 08:37	AB Silica Florisil	100
1742005	27-OCT-2010 08:37	AB Silica Florisil	100
1742006	27-OCT-2010 08:37	AB Silica Florisil	100
1742007	27-OCT-2010 08:37	AB Silica Florisil	100
1742008	27-OCT-2010 08:37	AB Silica Florisil	100
1742009	27-OCT-2010 08:37	AB Silica Florisil	100
1742010	27-OCT-2010 08:37	AB Silica Florisil	100
1742011	27-OCT-2010 08:37	AB Silica Florisil	100

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		Glass Wool	1065012-A	1	each	
REAGENT		Sodium Sulfate	1081093-A	3	g	
REAGENT		Florisil	1081251-A.6	1.5	g	
REAGENT		Methylene Chloride	1081621-A	100	mL	
REAGENT		Hexane	1081867-A.16	150	mL	
REAGENT		Silica Gel	1082916-A.1	2	g	
REAGENT		Acid silica	1084141-C	7	g	

Prep Logbook

3520C Aqueous Extraction for Method 8290A

Batch ID: 17115
Analyst: Jessica Burpee
Method: SW846 3520C

Verified by: _____

Lab SOP:
Instrument: Ohaus Scout Pro 4000

Sample ID	Start Run Date	Aliquot (mL)	pH (su)	ES Amount (uL)	MX Amount (uL)	MX Serial#	ES Serial#
12002076 MB	27-OCT-2010 10:23	1000	5	40			WD101027-02 .05 ng/uL
12002076 MB	27-OCT-2010 10:23	1000	5	40			WD101027-02 .05 ng/uL
12002074 LCS	27-OCT-2010 10:23	1000	5	40	40	WD101025-02 .005 ng/uL	WD101027-02 .05 ng/uL
12002074 LCS	27-OCT-2010 10:23	1000	5	40	40	WD101025-02 .005 ng/uL	WD101027-02 .05 ng/uL
12002075 LCSD	27-OCT-2010 10:23	1000	5	40	40	WD101025-02 .005 ng/uL	WD101027-02 .05 ng/uL
12002075 LCSD	27-OCT-2010 10:23	1000	5	40	40	WD101025-02 .005 ng/uL	WD101027-02 .05 ng/uL
1731001	27-OCT-2010 10:23	862.4	7	40			WD101027-02 .05 ng/uL
1731002	27-OCT-2010 10:23	887.6	7	40			WD101027-02 .05 ng/uL
1734001	27-OCT-2010 10:23	942.4	7	40			WD101027-02 .05 ng/uL
1734002	27-OCT-2010 10:23	881.2	7	40			WD101027-02 .05 ng/uL
1734003	27-OCT-2010 10:23	894.7	7	40			WD101027-02 .05 ng/uL
1734004	27-OCT-2010 10:23	942.2	7	40			WD101027-02 .05 ng/uL
1739001	27-OCT-2010 10:23	924.7	7	40			WD101027-02 .05 ng/uL
1740001	27-OCT-2010 10:23	865.2	7	40			WD101027-02 .05 ng/uL
1740002	27-OCT-2010 10:23	897.2	7	40			WD101027-02 .05 ng/uL
1742012	27-OCT-2010 10:23	899.9	7	40			WD101027-02 .05 ng/uL
1742013	27-OCT-2010 10:23	864.1	7	40			WD101027-02 .05 ng/uL
1752001	27-OCT-2010 10:23	958.3	7	40			WD101027-02 .05 ng/uL
1752002	27-OCT-2010 10:23	949	7	40			WD101027-02 .05 ng/uL
1752003	27-OCT-2010 10:23	916.3	7	40			WD101027-02 .05 ng/uL
1752004	27-OCT-2010 10:23	940.9	7	40			WD101027-02 .05 ng/uL
1752005	27-OCT-2010 10:23	964.9	8	40			WD101027-02 .05 ng/uL
1752006	27-OCT-2010 10:23	926	8	40			WD101027-02 .05 ng/uL
1752007	27-OCT-2010 10:23	966.2	7	40			WD101027-02 .05 ng/uL

Prep Logbook

Batch ID: 17115
Analyst: Jessica Burpee
Method: SW846 3520C

Verified by: _____

Lab SOP:
Instrument: Ohaus Scout Pro 4000

Sample ID	Start Run Date	Aliquot (mL)	pH (su)	ES Amount (uL)	MX Amount (uL)	MX Serial#	ES Serial#
1752008	27-OCT-2010 10:23	910.1	7	40			WD101027-02 .05 ng/uL
1757001	27-OCT-2010 10:23	933.5	7	40			WD101027-02 .05 ng/uL

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		Sodium Sulfate	1081093-A	10	g	Finish Time: 28-OCT-10 08:00:00
REAGENT		Methylene Chloride	1081621-A	250	L	

Prep Logbook

Cleanup Procedure for Liquids

Batch ID: 17173 Verified by: _____
 Analyst: Mike Medwedeff

Lab SOP:
 Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Aliquot Analyzed (percent)
12002076 MB	28-OCT-2010 09:01	AB Silica	100
		Florisil	
12002074 LCS	28-OCT-2010 09:01	AB Silica	100
		Florisil	
12002075 LCSD	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1731001	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1731002	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1734001	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1734002	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1734003	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1734004	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1739001	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1740001	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1740002	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1742012	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1742013	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1752001	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1752002	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1752003	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1752004	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1752005	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1752006	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1752007	28-OCT-2010 09:01	AB Silica	100
		Florisil	
1752008	28-OCT-2010 09:01	AB Silica	100
		Florisil	
12002076 MB	28-OCT-2010 09:01	AB Silica	100
		Florisil	
12002074 LCS	28-OCT-2010 09:01	AB Silica	100
		Florisil	

Prep Logbook

Batch ID: 17173

Verified by: _____

Analyst: Mike Medwedeff

Lab SOP:

Instrument: No analytical instrument

Sample ID	Start Run Date	Cleanup Type	Aliquot Analyzed (percent)			
12002075 LCSD	28-OCT-2010 09:01	AB Silica Florisil	100			
Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		Glass Wool	1065012-A	1	each	
REAGENT		Sodium Sulfate	1081093-A	3	g	
REAGENT		Methylene Chloride	1081621-A	100	mL	
REAGENT		Hexane	1081867-A.16	130	mL	
REAGENT		Silica Gel	1082916-A.1	2	g	
REAGENT		Florisil	1083381-A.1	1.5	g	
REAGENT		Acid silica	1084141-C	7	g	

Prep Logbook

Method 8290A HRMS Solid Analysis

Batch ID: 17194
 Analyst: Matt Cash
 Method: SW846 8290A

Verified by: _____

Lab SOP: CF-OA-E-002 REV# 7
 Instrument: Waters Autospec Premier

Sample ID	Start Run Date	Final Volume (uL)	Prep Factor (Final Volume /Aliquot) (uL/g)	Dilution	Dilution Type	Injection Volume (uL)
12002024 MB	28-OCT-2010 11:23	20	2	1	External	1
12002022 LCS	28-OCT-2010 11:23	20	2	1	External	1
12002023 LCSD	28-OCT-2010 11:23	20	2	1	External	1
1742001	28-OCT-2010 11:23	20	1.49813	1	External	1
1742002	28-OCT-2010 11:23	20	1.48588	1	External	1
1742003	28-OCT-2010 11:23	20	1.45243	1	External	1
12002027 MS (1742003)	28-OCT-2010 11:23	20	1.49031	1	External	1
12002028 MSD (1742003)	28-OCT-2010 11:23	20	1.44823	1	External	1
1742004	28-OCT-2010 11:23	20	1.44092	1	External	1
1742005	28-OCT-2010 11:23	20	1.4881	1	External	1
1742006	28-OCT-2010 11:23	20	1.48588	1	External	1
1742007	28-OCT-2010 11:23	20	1.48478	1	External	1
1742008	28-OCT-2010 11:23	20	1.42959	1	External	1
1742009	28-OCT-2010 11:23	20	1.53139	1	External	1
1742010	28-OCT-2010 11:23	20	1.47493	1	External	1
1742011	28-OCT-2010 11:23	20	1.43575	1	External	1

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		8290 Injection Standard	WD101028-01	20	uL	
STANDARD		8290 Injection Standard	WD101028-01	20	uL	

Prep Logbook

HRMS 8290 Aqueous Analysis

Batch ID: 17315
Analyst: Matt Cash
Method: SW846 8290A

Verified by: _____

Lab SOP: CF-OA-E-002 REV# 7
Instrument: Waters Autospec Premier

Sample ID	Start Run Date	Final Volume (uL)	Prep Factor (Final Volume /Aliquot) (uL/uL)	Dilution	Dilution Type	Injection Volume (uL)
12002076 MB	29-OCT-2010 15:39	20	2.00E-05	1	External	1
12002074 LCS	29-OCT-2010 15:39	20	2.00E-05	1	External	1
12002075 LCSD	29-OCT-2010 15:39	20	2.00E-05	1	External	1
1742012	29-OCT-2010 15:39	20	2.22E-05	1	External	1
1742013	29-OCT-2010 15:39	20	2.31E-05	1	External	1

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
REAGENT		8290 Injection Standard	WD101029-08	20	uL	
STANDARD		8290 Injection Standard	WD101029-08	20	uL	

Initial Calibration Data

HRP763-8290

Ple
Nov 10

Runlog Information

	Name	Instrument	Run Date	Procedure	Analyst	Batch ID	Sample Info	Injection Volume
•	b01nov10b-1	HRP763_1	01-NOV-2010 17:33	b01nov10b	Matt Cash		CS3WT UD100713-01.2	1 uL
•	b01nov10b-2	HRP763_1	01-NOV-2010 18:28	b01nov10b	Matt Cash		SB	1 uL
•	b01nov10b-3	HRP763_1	01-NOV-2010 19:16	b01nov10b	Matt Cash		CS0.5 UD101022-01	1 uL
•	b01nov10b-4	HRP763_1	01-NOV-2010 20:04	b01nov10b	Matt Cash		CS1 UD090323-02	1 uL
•	b01nov10b-5	HRP763_1	01-NOV-2010 20:53	b01nov10b	Matt Cash		CS2 UD090323-03	1 uL
•	b01nov10b-6	HRP763_1	01-NOV-2010 21:41	b01nov10b	Matt Cash		CS3 UD090323-04	1 uL
•	b01nov10b-7	HRP763_1	01-NOV-2010 22:29	b01nov10b	Matt Cash		CS4 UD101022-05	1 uL
•	b01nov10b-8	HRP763_1	01-NOV-2010 23:18	b01nov10b	Matt Cash		CS5 UD090323-06	1 uL
•	b01nov10b-9	HRP763_1	02-NOV-2010 00:06	b01nov10b	Matt Cash		SB	1 uL

HRP763 8290 ICAL B01NOV10B

Quantify Compound Summary Report **MassLynx 4.1**

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

Method: Untitled 19 Oct 2010 08:35:07**Calibration: 02 Nov 2010 08:19:01****Compound name: 2378-TCDD**

Response Factor: 1.0126

RRF SD: 0.0732305, Relative SD: 7.2319 ✓

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	0.250	31.76	0.27	1.094	1.013	bb
2	b01nov10b-4	CS1 UD090323-02	0.500	31.76	0.46	0.926	1.013	bb
3	b01nov10b-5	CS2 UD090323-03	2.000	31.75	1.85	0.938	1.013	bd
4	b01nov10b-6	CS3 UD090323-04	10.000	31.76	9.81	0.994	1.013	bb
5	b01nov10b-7	CS4 UD101022-05	40.000	31.75	43.21	1.094	1.013	bb
6	b01nov10b-8	CS5 UD090323-06	200.000	31.76	203.29	1.029	1.013	bb

Compound name: 12378-PeCDD

Response Factor: 1.0319

RRF SD: 0.0411984, Relative SD: 3.99249 ✓

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	1.250	34.54	1.21	0.998	1.032	bd
2	b01nov10b-4	CS1 UD090323-02	2.500	34.56	2.37	0.977	1.032	bb
3	b01nov10b-5	CS2 UD090323-03	10.000	34.55	10.02	1.034	1.032	bd
4	b01nov10b-6	CS3 UD090323-04	50.000	34.56	49.79	1.028	1.032	bb
5	b01nov10b-7	CS4 UD101022-05	200.000	34.55	207.68	1.072	1.032	bb
6	b01nov10b-8	CS5 UD090323-06	1000.000	34.55	1050.37	1.084	1.032	bb

Compound name: 123478-HxCDD

Response Factor: 0.896587

RRF SD: 0.0501524, Relative SD: 5.59371 ✓

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	1.250	37.24	1.30	0.935	0.897	bd
2	b01nov10b-4	CS1 UD090323-02	2.500	37.23	2.39	0.856	0.897	bd
3	b01nov10b-5	CS2 UD090323-03	10.000	37.23	9.16	0.821	0.897	bd
4	b01nov10b-6	CS3 UD090323-04	50.000	37.24	50.13	0.899	0.897	bd
5	b01nov10b-7	CS4 UD101022-05	200.000	37.23	203.47	0.912	0.897	bd
6	b01nov10b-8	CS5 UD090323-06	1000.000	37.23	1066.50	0.956	0.897	bd

Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

Compound name: 123678-HxCDD

Response Factor: 0.967836

RRF SD: 0.0286259, Relative SD: 2.95772 ✓

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	1.250	37.33	1.24	0.957	0.968	dd
2	b01nov10b-4	CS1 UD090323-02	2.500	37.33	2.41	0.932	0.968	dd
3	b01nov10b-5	CS2 UD090323-03	10.000	37.32	9.75	0.944	0.968	db
4	b01nov10b-6	CS3 UD090323-04	50.000	37.33	51.20	0.991	0.968	db
5	b01nov10b-7	CS4 UD101022-05	200.000	37.32	201.36	0.974	0.968	db
6	b01nov10b-8	CS5 UD090323-06	1000.000	37.32	1041.10	1.008	0.968	db

Compound name: 123789-HxCDD

Response Factor: 0.865341

RRF SD: 0.0374697, Relative SD: 4.33004 ✓

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	1.250	37.57	1.25	0.864	0.865	bb
2	b01nov10b-4	CS1 UD090323-02	2.500	37.58	2.34	0.810	0.865	bb
3	b01nov10b-5	CS2 UD090323-03	10.000	37.57	9.73	0.842	0.865	bb
4	b01nov10b-6	CS3 UD090323-04	50.000	37.57	50.85	0.880	0.865	bd
5	b01nov10b-7	CS4 UD101022-05	200.000	37.57	202.43	0.876	0.865	bb
6	b01nov10b-8	CS5 UD090323-06	1000.000	37.57	1063.64	0.920	0.865	bb

Compound name: 1234678-HpCDD

Response Factor: 1.00484 ✓

RRF SD: 0.0579116, Relative SD: 5.76326 ✓✓

Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	1.250	40.76	1.19	0.958	1.005	M...
2	b01nov10b-4	CS1 UD090323-02	2.500	40.77	2.38	0.957	1.005	bd
3	b01nov10b-5	CS2 UD090323-03	10.000	40.75	9.41	0.946	1.005	bd
4	b01nov10b-6	CS3 UD090323-04	50.000	40.76	51.46	1.034	1.005	bb
5	b01nov10b-7	CS4 UD101022-05	200.000	40.76	210.04	1.055	1.005	bb
6	b01nov10b-8	CS5 UD090323-06	1000.000	40.75	1073.29	1.078	1.005	bb

Compound name: OCDD

Response Factor: 0.995746

RRF SD: 0.0753126, Relative SD: 7.56344 ✓

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	2.500	45.19	2.32	0.924	0.996	bd
2	b01nov10b-4	CS1 UD090323-02	5.000	45.19	4.68	0.932	0.996	bd

Quantify Compound Summary Report**MassLynx 4.1**

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

Compound name: OCDD

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
3	b01nov10b-5	CS2 UD090323-03	20.000	45.17	18.62	0.927	0.996	bd
4	b01nov10b-6	CS3 UD090323-04	100.000	45.19	104.54	1.041	0.996	bd
5	b01nov10b-7	CS4 UD101022-05	400.000	45.18	431.74	1.075	0.996	bd
6	b01nov10b-8	CS5 UD090323-06	2000.000	45.19	2158.82	1.075	0.996	bd

Compound name: 2378-TCDF

Response Factor: 0.983356

RRF SD: 0.0381153, Relative SD: 3.87604 ✓

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	0.250	31.22	0.25	0.982	0.983	bb
2	b01nov10b-4	CS1 UD090323-02	0.500	31.22	0.47	0.932	0.983	bb
3	b01nov10b-5	CS2 UD090323-03	2.000	31.22	2.00	0.984	0.983	bb
4	b01nov10b-6	CS3 UD090323-04	10.000	31.22	10.21	1.004	0.983	bb
5	b01nov10b-7	CS4 UD101022-05	40.000	31.22	38.92	0.957	0.983	bb
6	b01nov10b-8	CS5 UD090323-06	200.000	31.22	211.98	1.042	0.983	bb

Compound name: 12378-PeCDF

Response Factor: 0.934223

RRF SD: 0.0345013, Relative SD: 3.69305 ✓

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	1.250	33.72	1.18	0.882	0.934	bd
2	b01nov10b-4	CS1 UD090323-02	2.500	33.72	2.41	0.901	0.934	bd
3	b01nov10b-5	CS2 UD090323-03	10.000	33.72	10.09	0.943	0.934	bd
4	b01nov10b-6	CS3 UD090323-04	50.000	33.72	51.62	0.964	0.934	bd
5	b01nov10b-7	CS4 UD101022-05	200.000	33.72	203.70	0.951	0.934	bd
6	b01nov10b-8	CS5 UD090323-06	1000.000	33.72	1031.39	0.964	0.934	bd

Compound name: 23478-PeCDF

Response Factor: 0.91433

RRF SD: 0.0357945, Relative SD: 3.91484 ✓

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	1.250	34.35	1.20	0.874	0.914	bd
2	b01nov10b-4	CS1 UD090323-02	2.500	34.35	2.37	0.866	0.914	bb
3	b01nov10b-5	CS2 UD090323-03	10.000	34.34	10.06	0.920	0.914	bb
4	b01nov10b-6	CS3 UD090323-04	50.000	34.35	50.98	0.932	0.914	bb
5	b01nov10b-7	CS4 UD101022-05	200.000	34.35	206.23	0.943	0.914	bb
6	b01nov10b-8	CS5 UD090323-06	1000.000	34.35	1039.68	0.951	0.914	bb

Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

Compound name: 123478-HxCDF

Response Factor: 0.908747

RRF SD: 0.0246049, Relative SD: 2.70757 ✓

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	1.250	36.49	1.23	0.896	0.909	bd
2	b01nov10b-4	CS1 UD090323-02	2.500	36.49	2.45	0.891	0.909	bd
3	b01nov10b-5	CS2 UD090323-03	10.000	36.49	9.79	0.890	0.909	bd
4	b01nov10b-6	CS3 UD090323-04	50.000	36.50	49.28	0.896	0.909	bd
5	b01nov10b-7	CS4 UD101022-05	200.000	36.49	205.35	0.933	0.909	bd
6	b01nov10b-8	CS5 UD090323-06	1000.000	36.49	1041.71	0.947	0.909	bd

Compound name: 123678-HxCDF

Response Factor: 1.05753

RRF SD: 0.049877, Relative SD: 4.71634 ✓

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	1.250	36.60	1.20	1.019	1.058	dd
2	b01nov10b-4	CS1 UD090323-02	2.500	36.60	2.35	0.994	1.058	dd
3	b01nov10b-5	CS2 UD090323-03	10.000	36.59	9.80	1.037	1.058	dd
4	b01nov10b-6	CS3 UD090323-04	50.000	36.60	50.47	1.068	1.058	dd
5	b01nov10b-7	CS4 UD101022-05	200.000	36.60	210.31	1.112	1.058	db
6	b01nov10b-8	CS5 UD090323-06	1000.000	36.60	1055.20	1.116	1.058	db

Compound name: 234678-HxCDF

Response Factor: 0.955669

RRF SD: 0.0509714, Relative SD: 5.33358 ✓

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	1.250	37.11	1.23	0.940	0.956	bb
2	b01nov10b-4	CS1 UD090323-02	2.500	37.11	2.38	0.909	0.956	bd
3	b01nov10b-5	CS2 UD090323-03	10.000	37.10	9.63	0.920	0.956	bd
4	b01nov10b-6	CS3 UD090323-04	50.000	37.10	48.42	0.925	0.956	bd
5	b01nov10b-7	CS4 UD101022-05	200.000	37.10	210.80	1.007	0.956	bb
6	b01nov10b-8	CS5 UD090323-06	1000.000	37.10	1079.38	1.032	0.956	bd

Compound name: 123789-HxCDF

Response Factor: 0.791619

RRF SD: 0.0351231, Relative SD: 4.43687 ✓

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	1.250	37.91	1.21	0.767	0.792	bd
2	b01nov10b-4	CS1 UD090323-02	2.500	37.92	2.40	0.759	0.792	bb

Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

Compound name: 123789-HxCDF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
3	b01nov10b-5	CS2 UD090323-03	10.000	37.90	9.88	0.782	0.792	bd
4	b01nov10b-6	CS3 UD090323-04	50.000	37.91	48.59	0.769	0.792	bd
5	b01nov10b-7	CS4 UD101022-05	200.000	37.91	211.49	0.837	0.792	bb
6	b01nov10b-8	CS5 UD090323-06	1000.000	37.91	1054.67	0.835	0.792	bb

Compound name: 1234678-HpCDF

Response Factor: 1.27673

RRF SD: 0.0736486, Relative SD: 5.76852 ✓

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	1.250	39.45	1.17	1.190	1.277	bd
2	b01nov10b-4	CS1 UD090323-02	2.500	39.45	2.34	1.195	1.277	bb
3	b01nov10b-5	CS2 UD090323-03	10.000	39.44	9.83	1.256	1.277	bd
4	b01nov10b-6	CS3 UD090323-04	50.000	39.45	52.41	1.338	1.277	bb
5	b01nov10b-7	CS4 UD101022-05	200.000	39.45	208.03	1.328	1.277	bb
6	b01nov10b-8	CS5 UD090323-06	1000.000	39.45	1060.63	1.354	1.277	bb

Compound name: 1234789-HpCDF

Response Factor: 0.930207

RRF SD: 0.0563113, Relative SD: 6.05363 ✓

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	1.250	41.46	1.20	0.894	0.930	bd
2	b01nov10b-4	CS1 UD090323-02	2.500	41.46	2.30	0.854	0.930	bd
3	b01nov10b-5	CS2 UD090323-03	10.000	41.45	9.66	0.898	0.930	bd
4	b01nov10b-6	CS3 UD090323-04	50.000	41.46	51.34	0.955	0.930	bd
5	b01nov10b-7	CS4 UD101022-05	200.000	41.46	210.87	0.981	0.930	bd
6	b01nov10b-8	CS5 UD090323-06	1000.000	41.46	1073.17	0.998	0.930	bb

Compound name: OCDF

Response Factor: 1.23238

RRF SD: 0.132391, Relative SD: 10.7427 ✓

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	2.500	45.50	2.31	1.140	1.232	M...
2	b01nov10b-4	CS1 UD090323-02	5.000	45.51	4.33	1.066	1.232	bd
3	b01nov10b-5	CS2 UD090323-03	20.000	45.50	18.73	1.154	1.232	bd
4	b01nov10b-6	CS3 UD090323-04	100.000	45.52	103.43	1.275	1.232	bd
5	b01nov10b-7	CS4 UD101022-05	400.000	45.51	452.77	1.395	1.232	bd
6	b01nov10b-8	CS5 UD090323-06	2000.000	45.51	2213.28	1.364	1.232	bb

Quantify Compound Summary Report**MassLynx 4.1**

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

Compound name: 13C-2378-TCDD

Response Factor: 1.11963

RRF SD: 0.0658623, Relative SD: 5.88249 ✓

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	100.000	31.75	93.00	1.041	1.120	bb
2	b01nov10b-4	CS1 UD090323-02	100.000	31.75	102.23	1.145	1.120	bb
3	b01nov10b-5	CS2 UD090323-03	100.000	31.73	102.80	1.151	1.120	bb
4	b01nov10b-6	CS3 UD090323-04	100.000	31.75	94.51	1.058	1.120	bb
5	b01nov10b-7	CS4 UD101022-05	100.000	31.73	98.57	1.104	1.120	bb
6	b01nov10b-8	CS5 UD090323-06	100.000	31.73	108.89	1.219	1.120	bb

Compound name: 13C-12378-PeCDD

Response Factor: 0.95005

RRF SD: 0.0811964, Relative SD: 8.54654 ✓

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	100.000	34.53	95.21	0.905	0.950	bb
2	b01nov10b-4	CS1 UD090323-02	100.000	34.54	93.08	0.884	0.950	bb
3	b01nov10b-5	CS2 UD090323-03	100.000	34.54	94.30	0.896	0.950	bb
4	b01nov10b-6	CS3 UD090323-04	100.000	34.55	99.74	0.948	0.950	bd
5	b01nov10b-7	CS4 UD101022-05	100.000	34.54	101.57	0.965	0.950	bb
6	b01nov10b-8	CS5 UD090323-06	100.000	34.53	116.10	1.103	0.950	bb

Compound name: 13C-123678-HxCDD

Response Factor: 1.1118

RRF SD: 0.0424519, Relative SD: 3.8183 ✓

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	100.000	37.31	94.94	1.056	1.112	db
2	b01nov10b-4	CS1 UD090323-02	100.000	37.32	98.33	1.093	1.112	db
3	b01nov10b-5	CS2 UD090323-03	100.000	37.31	97.21	1.081	1.112	dd
4	b01nov10b-6	CS3 UD090323-04	100.000	37.32	103.32	1.149	1.112	db
5	b01nov10b-7	CS4 UD101022-05	100.000	37.31	104.90	1.166	1.112	db
6	b01nov10b-8	CS5 UD090323-06	100.000	37.31	101.30	1.126	1.112	db

Compound name: 13C-1234678-HpCDD

Response Factor: 0.800607

RRF SD: 0.0273231, Relative SD: 3.4128 ✓

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	100.000	40.74	100.11	0.801	0.801	bb
2	b01nov10b-4	CS1 UD090323-02	100.000	40.74	98.31	0.787	0.801	bd

Quantify Compound Summary Report **MassLynx 4.1**
Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

Compound name: 13C-1234678-HpCDD

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
3	b01nov10b-5	CS2 UD090323-03	100.000	40.74	94.03	0.753	0.801	bd
4	b01nov10b-6	CS3 UD090323-04	100.000	40.75	101.82	0.815	0.801	bd
5	b01nov10b-7	CS4 UD101022-05	100.000	40.74	102.86	0.823	0.801	bd
6	b01nov10b-8	CS5 UD090323-06	100.000	40.74	102.87	0.824	0.801	bb

Compound name: 13C-OCDD

Response Factor: 0.668312

RRF SD: 0.0489064, Relative SD: 7.3179 ✓

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	200.000	45.17	190.53	0.637	0.668	bd
2	b01nov10b-4	CS1 UD090323-02	200.000	45.17	190.95	0.638	0.668	bd
3	b01nov10b-5	CS2 UD090323-03	200.000	45.16	184.94	0.618	0.668	bd
4	b01nov10b-6	CS3 UD090323-04	200.000	45.17	201.32	0.673	0.668	bd
5	b01nov10b-7	CS4 UD101022-05	200.000	45.16	207.46	0.693	0.668	bd
6	b01nov10b-8	CS5 UD090323-06	200.000	45.17	224.80	0.751	0.668	bd

Compound name: 13C-2378-TCDF

Response Factor: 1.82115

RRF SD: 0.042666, Relative SD: 2.34281 ✓

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	100.000	31.21	98.53	1.794	1.821	bb
2	b01nov10b-4	CS1 UD090323-02	100.000	31.21	97.45	1.775	1.821	bb
3	b01nov10b-5	CS2 UD090323-03	100.000	31.21	98.99	1.803	1.821	bb
4	b01nov10b-6	CS3 UD090323-04	100.000	31.21	99.98	1.821	1.821	bb
5	b01nov10b-7	CS4 UD101022-05	100.000	31.21	100.95	1.838	1.821	bb
6	b01nov10b-8	CS5 UD090323-06	100.000	31.21	104.11	1.896	1.821	bb

Compound name: 13C-12378-PeCDF

Response Factor: 1.69249

RRF SD: 0.136138, Relative SD: 8.04364 ✓

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	100.000	33.71	95.03	1.608	1.692	bd
2	b01nov10b-4	CS1 UD090323-02	100.000	33.71	92.78	1.570	1.692	bd
3	b01nov10b-5	CS2 UD090323-03	100.000	33.71	94.64	1.602	1.692	bd
4	b01nov10b-6	CS3 UD090323-04	100.000	33.71	100.12	1.694	1.692	bd
5	b01nov10b-7	CS4 UD101022-05	100.000	33.71	102.97	1.743	1.692	bd
6	b01nov10b-8	CS5 UD090323-06	100.000	33.71	114.46	1.937	1.692	bd

Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

Compound name: 13C-123678-HxCDF

Response Factor: 1.63056

RRF SD: 0.0789708, Relative SD: 4.84316 ✓

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	100.000	36.59	98.20	1.601	1.631	dd
2	b01nov10b-4	CS1 UD090323-02	100.000	36.59	99.49	1.622	1.631	dd
3	b01nov10b-5	CS2 UD090323-03	100.000	36.58	93.76	1.529	1.631	dd
4	b01nov10b-6	CS3 UD090323-04	100.000	36.59	108.43	1.768	1.631	dd
5	b01nov10b-7	CS4 UD101022-05	100.000	36.58	101.42	1.654	1.631	dd
6	b01nov10b-8	CS5 UD090323-06	100.000	36.58	98.70	1.609	1.631	db

Compound name: 13C-1234678-HpCDF

Response Factor: 1.0808

RRF SD: 0.0409675, Relative SD: 3.79049 ✓

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	100.000	39.44	99.55	1.076	1.081	bd
2	b01nov10b-4	CS1 UD090323-02	100.000	39.44	99.80	1.079	1.081	bb
3	b01nov10b-5	CS2 UD090323-03	100.000	39.43	92.85	1.004	1.081	bd
4	b01nov10b-6	CS3 UD090323-04	100.000	39.44	102.53	1.108	1.081	bd
5	b01nov10b-7	CS4 UD101022-05	100.000	39.44	103.00	1.113	1.081	bd
6	b01nov10b-8	CS5 UD090323-06	100.000	39.44	102.26	1.105	1.081	bb

Compound name: 13C-1234-TCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0 ✓

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	100.000	31.34	100.00	1.000	1.000	bb
2	b01nov10b-4	CS1 UD090323-02	100.000	31.34	100.00	1.000	1.000	bb
3	b01nov10b-5	CS2 UD090323-03	100.000	31.34	100.00	1.000	1.000	bb
4	b01nov10b-6	CS3 UD090323-04	100.000	31.34	100.00	1.000	1.000	bb
5	b01nov10b-7	CS4 UD101022-05	100.000	31.34	100.00	1.000	1.000	bb
6	b01nov10b-8	CS5 UD090323-06	100.000	31.34	100.00	1.000	1.000	bb

Compound name: 13C-123789-HxCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0 ✓

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	100.000	37.56	100.00	1.000	1.000	bb
2	b01nov10b-4	CS1 UD090323-02	100.000	37.56	100.00	1.000	1.000	bb

Quantify Compound Summary Report**MassLynx 4.1**

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

Compound name: 13C-123789-HxCDD

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
3	b01nov10b-5	CS2 UD090323-03	100.000	37.56	100.00	1.000	1.000	dd
4	b01nov10b-6	CS3 UD090323-04	100.000	37.56	100.00	1.000	1.000	bb
5	b01nov10b-7	CS4 UD101022-05	100.000	37.56	100.00	1.000	1.000	bb
6	b01nov10b-8	CS5 UD090323-06	100.000	37.56	100.00	1.000	1.000	bb

Compound name: 37CI-2378-TCDD (SS)

Response Factor: 1.05413

RRF SD: 0.0569641, Relative SD: 5.40392 ✓

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	0.250	31.76	0.26	1.110	1.054	bb
2	b01nov10b-4	CS1 UD090323-02	0.500	31.76	0.46	0.980	1.054	bb
3	b01nov10b-5	CS2 UD090323-03	2.000	31.75	1.91	1.009	1.054	bb
4	b01nov10b-6	CS3 UD090323-04	10.000	31.76	9.84	1.037	1.054	bb
5	b01nov10b-7	CS4 UD101022-05	40.000	31.75	42.72	1.126	1.054	bb
6	b01nov10b-8	CS5 UD090323-06	200.000	31.75	201.82	1.064	1.054	bb

Compound name: 13C-23478-PeCDF (SS)

Response Factor: 0.933349

RRF SD: 0.00699789, Relative SD: 0.749762 ✓

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	100.000	34.34	100.53	0.938	0.933	bb
2	b01nov10b-4	CS1 UD090323-02	100.000	34.34	100.22	0.935	0.933	bb
3	b01nov10b-5	CS2 UD090323-03	100.000	34.33	100.28	0.936	0.933	bb
4	b01nov10b-6	CS3 UD090323-04	100.000	34.34	98.87	0.923	0.933	bb
5	b01nov10b-7	CS4 UD101022-05	100.000	34.34	100.79	0.941	0.933	bb
6	b01nov10b-8	CS5 UD090323-06	100.000	34.34	99.30	0.927	0.933	bb

Compound name: 13C-123478-HxCDF (SS)

Response Factor: 0.809676

RRF SD: 0.0245219, Relative SD: 3.02861 ✓

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	100.000	36.48	102.98	0.834	0.810	bd
2	b01nov10b-4	CS1 UD090323-02	100.000	36.48	101.05	0.818	0.810	bd
3	b01nov10b-5	CS2 UD090323-03	100.000	36.48	100.63	0.815	0.810	bd
4	b01nov10b-6	CS3 UD090323-04	100.000	36.49	94.21	0.763	0.810	bd
5	b01nov10b-7	CS4 UD101022-05	100.000	36.48	99.76	0.808	0.810	bd
6	b01nov10b-8	CS5 UD090323-06	100.000	36.48	101.38	0.821	0.810	bd

Quantify Compound Summary Report **MassLynx 4.1**

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

Compound name: 13C-123478-HxCDD (SS)

Response Factor: 0.860981

RRF SD: 0.0367108, Relative SD: 4.26384 ✓

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	100.000	37.22	104.88	0.903	0.861	bd
2	b01nov10b-4	CS1 UD090323-02	100.000	37.23	101.26	0.872	0.861	bd
3	b01nov10b-5	CS2 UD090323-03	100.000	37.22	94.73	0.816	0.861	bd
4	b01nov10b-6	CS3 UD090323-04	100.000	37.22	99.84	0.860	0.861	bd
5	b01nov10b-7	CS4 UD101022-05	100.000	37.22	95.32	0.821	0.861	bd
6	b01nov10b-8	CS5 UD090323-06	100.000	37.22	103.98	0.895	0.861	bd

Compound name: 13C-1234789-HpCDF (SS)

Response Factor: 0.756048

RRF SD: 0.0115395, Relative SD: 1.5263 ✓

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

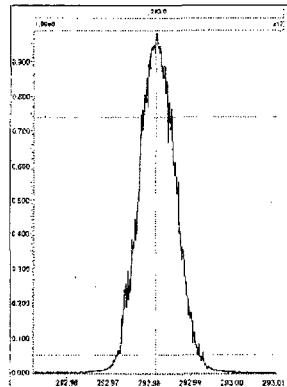
Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b01nov10b-3	CS0.5 UD101022-01	100.000	41.45	98.68	0.746	0.756	bb
2	b01nov10b-4	CS1 UD090323-02	100.000	41.45	98.98	0.748	0.756	bb
3	b01nov10b-5	CS2 UD090323-03	100.000	41.44	100.18	0.757	0.756	bd
4	b01nov10b-6	CS3 UD090323-04	100.000	41.45	98.95	0.748	0.756	bd
5	b01nov10b-7	CS4 UD101022-05	100.000	41.45	100.46	0.760	0.756	bb
6	b01nov10b-8	CS5 UD090323-06	100.000	41.45	102.74	0.777	0.756	bb

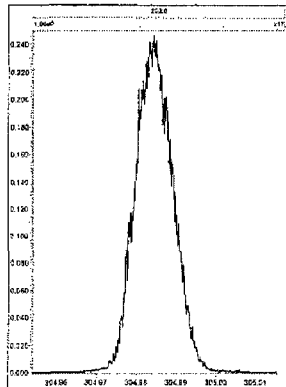
File: Experiment: dioxin_db5.ms.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, November 01, 2010 17:30:44 Eastern Standard Time

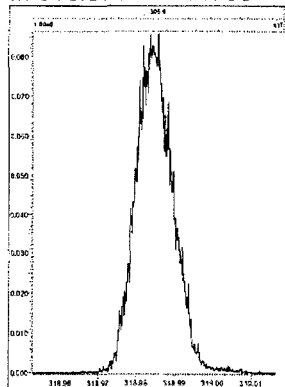
M 292.9824 R 14620



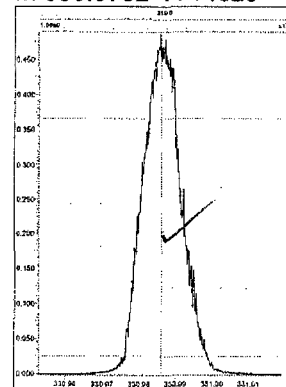
M 304.9824 R 14879



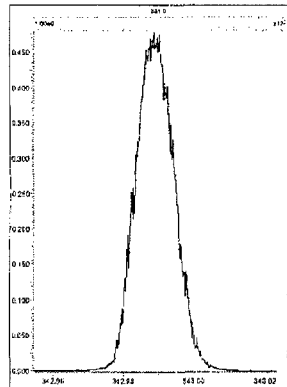
M 318.9792 R 14709



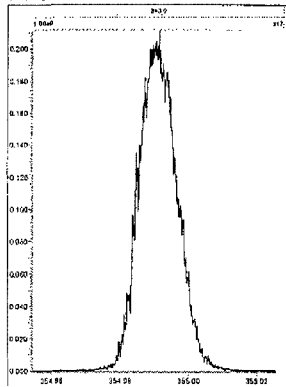
M 330.9792 R 14529



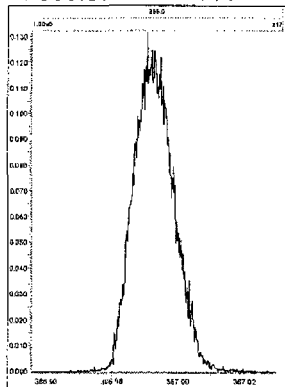
M 342.9792 R 14711



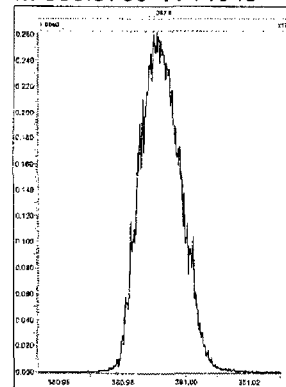
M 354.9792 R 14622



M 366.9792 R 13587



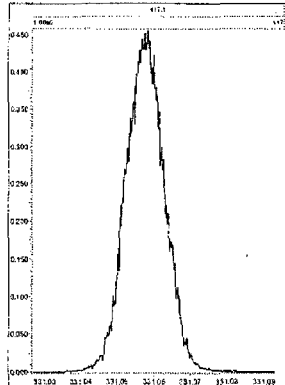
M 380.9760 R 14049



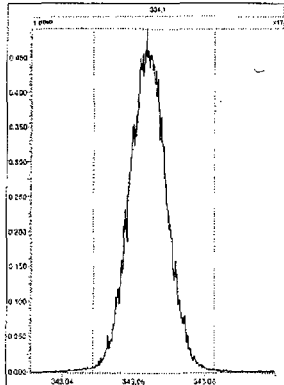
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, November 01, 2010 17:31:03 Eastern Standard Time

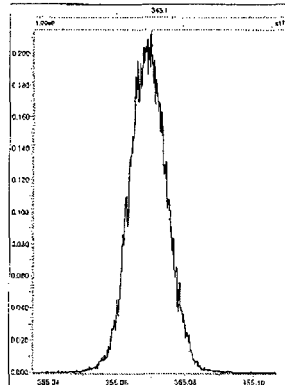
M 330.9792 R 13964



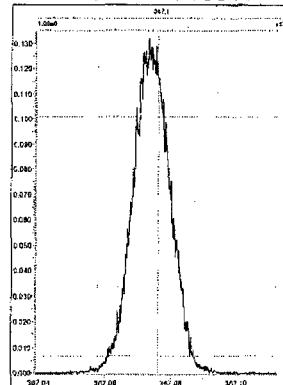
M 342.9792 R 14046



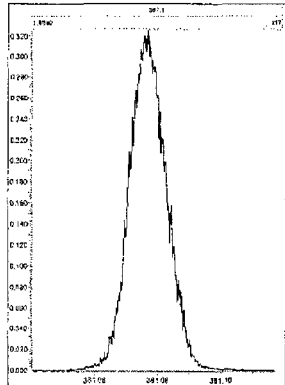
M 354.9792 R 13966



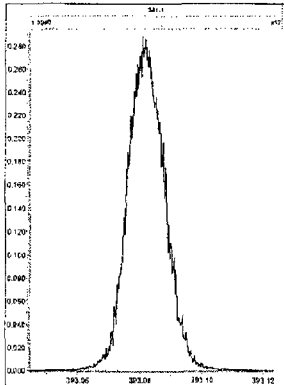
M 366.9792 R 13810



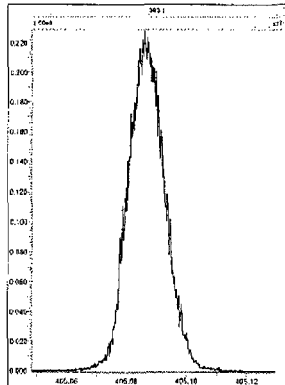
M 380.9760 R 14453



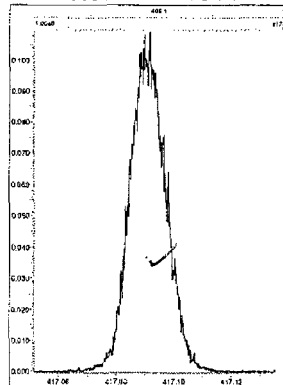
M 392.9760 R 15152



M 404.9760 R 15059



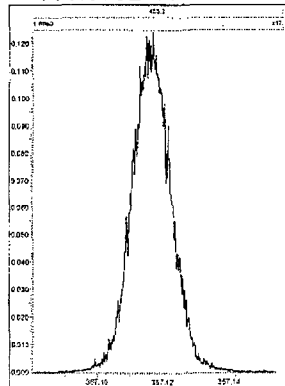
M 416.9760 R 15148



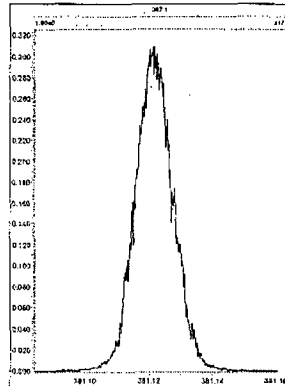
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Printed: Monday, November 01, 2010 17:31:26 Eastern Standard Time

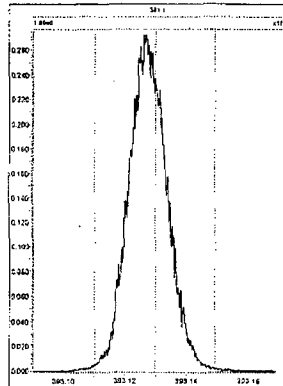
M 366.9792 R 13513



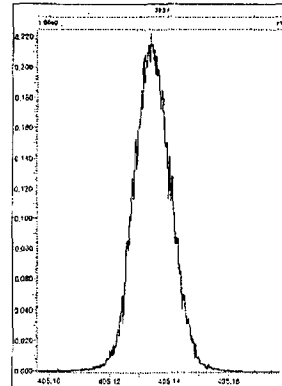
M 380.9760 R 13590



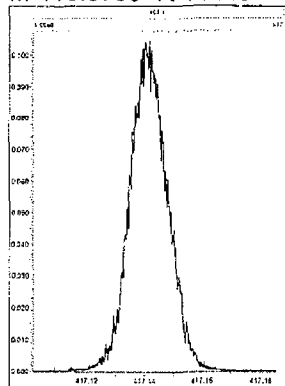
M 392.9760 R 13442



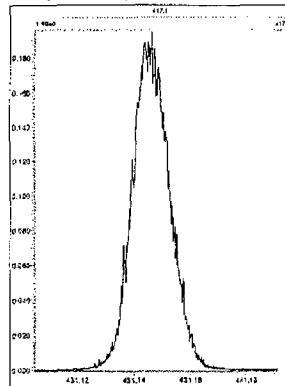
M 404.9760 R 14620



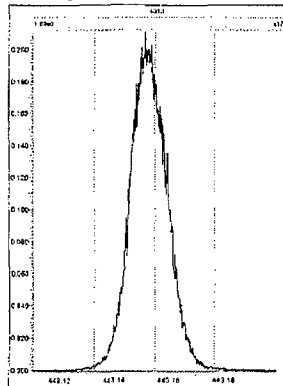
M 416.9760 R 14449



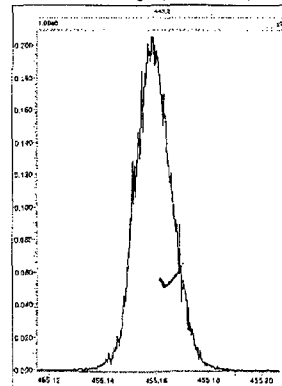
M 430.9728 R 14127



M 442.9728 R 14369



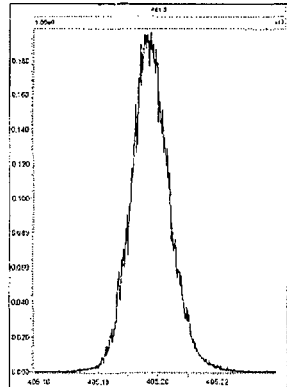
M 454.9728 R 14450



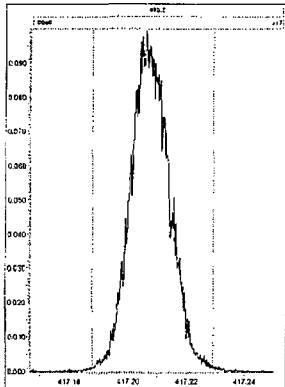
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Printed: Monday, November 01, 2010 17:31:46 Eastern Standard Time

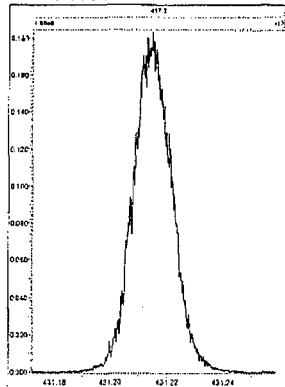
M 404.9760 R 12435



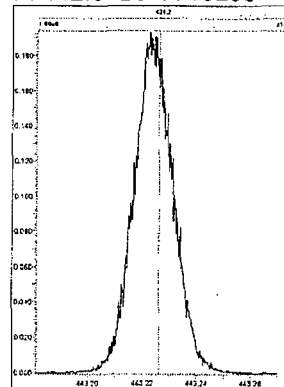
M 416.9760 R 14281



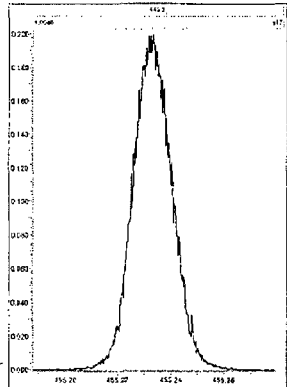
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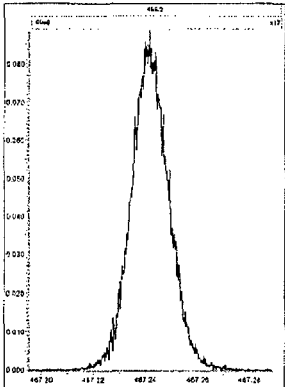
M 442.9728 R 13296



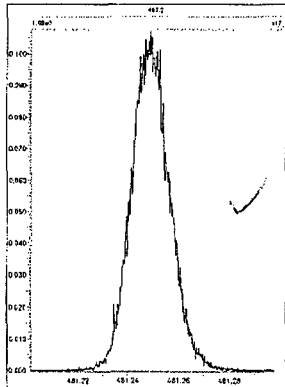
M 454.9728 R 13442



M 466.9728 R 14368



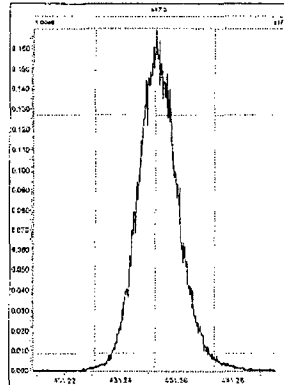
M 480.9696 R 13811



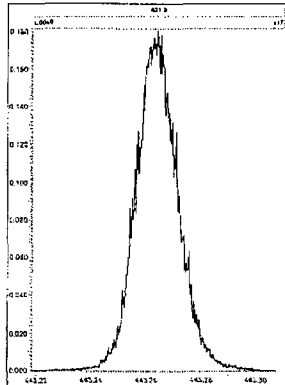
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Printed: Monday, November 01, 2010 17:32:09 Eastern Standard Time

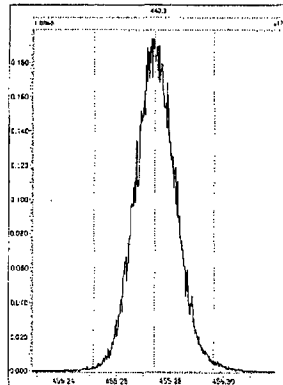
M 430.9728 R 12251



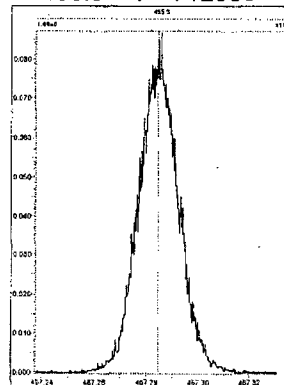
M 442.9728 R 12254



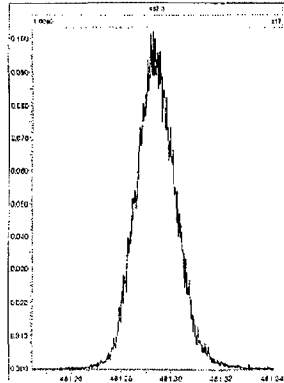
M 454.9728 R 12561



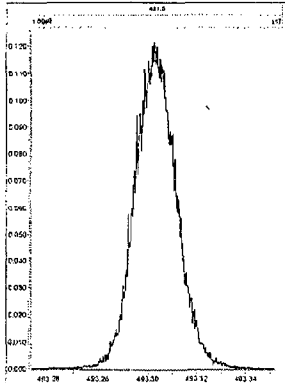
M 466.9728 R 12888



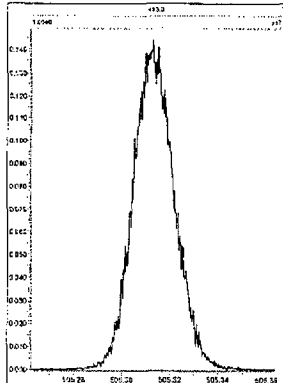
M 480.9696 R 13085



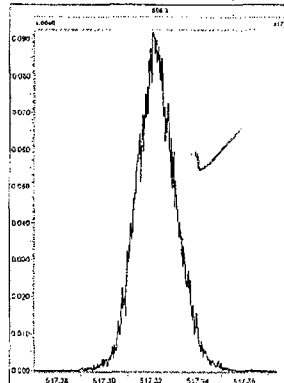
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M 504.9696 R 13023

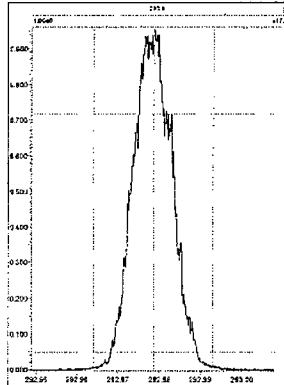


M 516.9697 R 13737

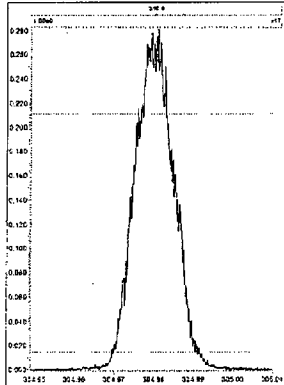


Printed: Tuesday, November 02, 2010 01:03:22 Eastern Standard Time

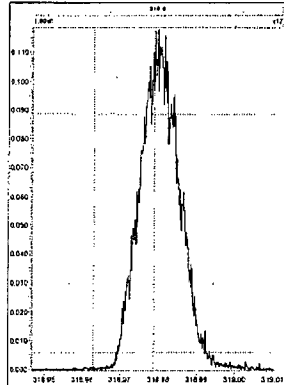
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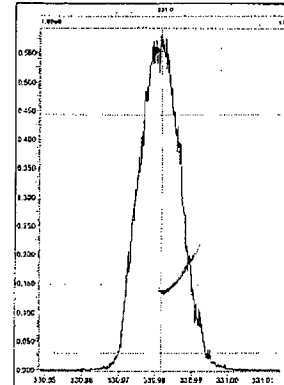
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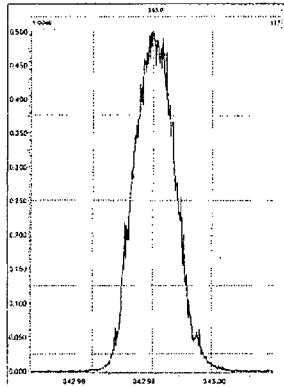
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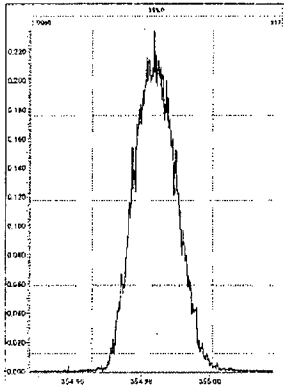
M 330.9792 R 13550



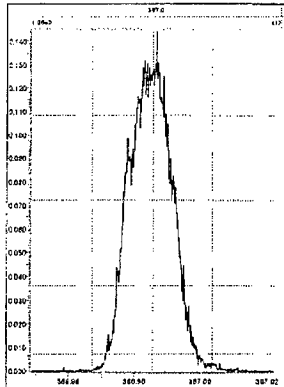
M 342.9792 R 13301



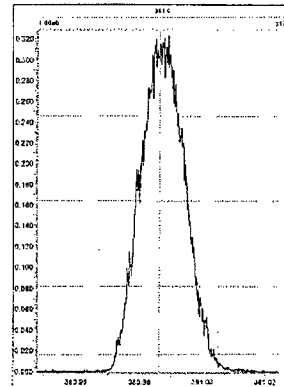
M 354.9792 R 13459



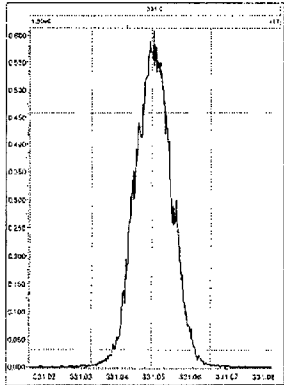
M 366.9792 R 13335



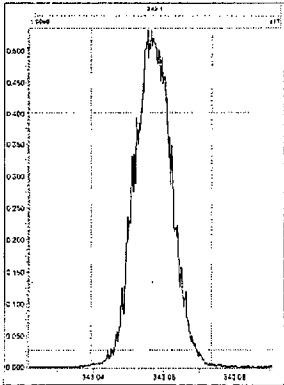
M 380.9760 R 12595



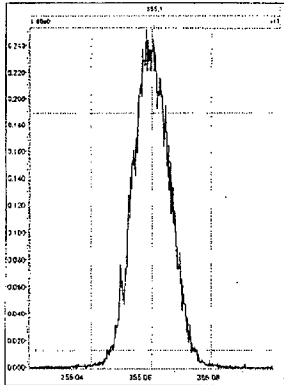
M 330.9792 R 14663



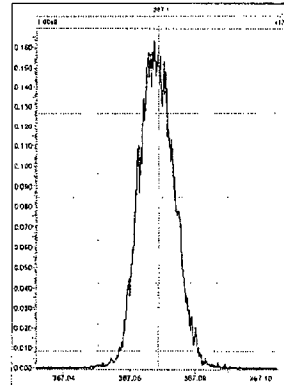
M 342.9792 R 14335



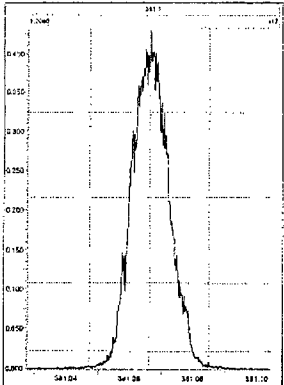
M 354.9792 R 14792



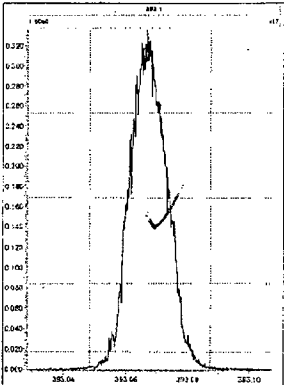
M 366.9792 R 14880



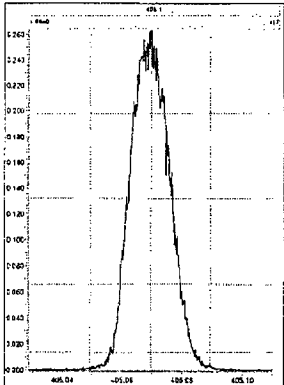
M 380.9760 R 14458



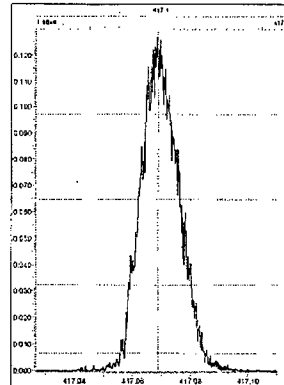
M 392.9760 R 14450



M 404.9760 R 14752

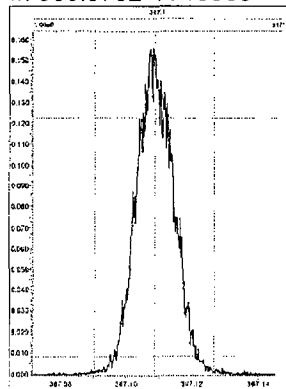


M 416.9760 R 14880

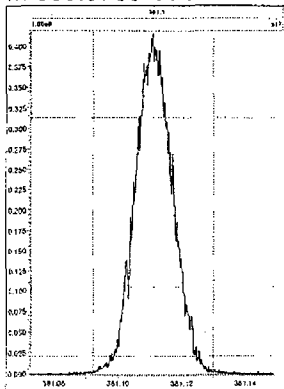


Printed: Tuesday, November 02, 2010 01:03:22 Eastern Standard Time

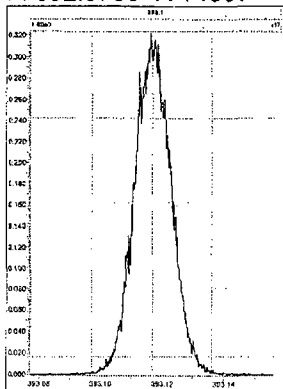
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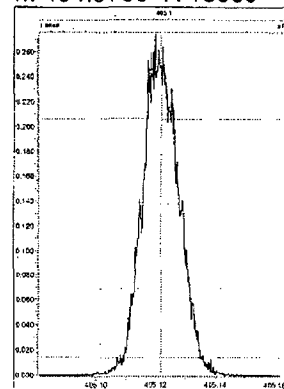
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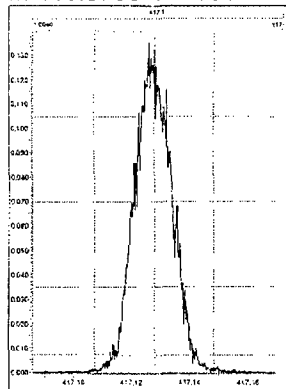
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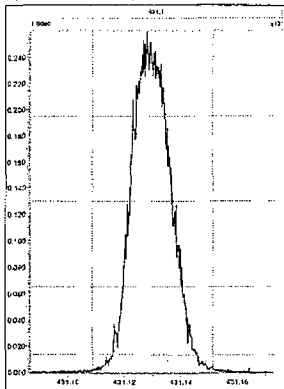
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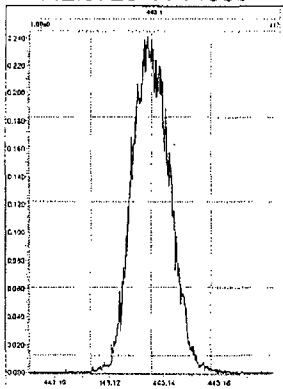
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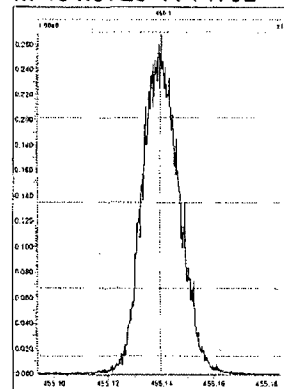
M 430.9728 R 15068



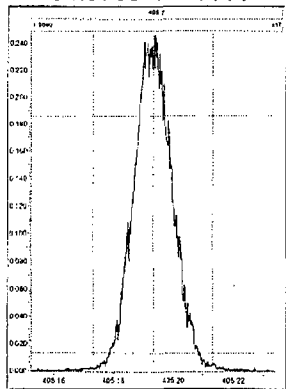
M 442.9728 R 14885



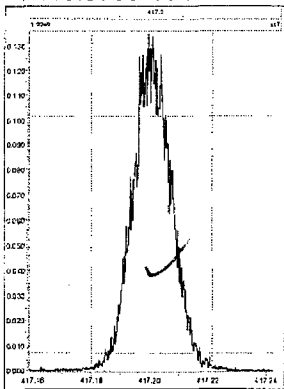
M 454.9728 R 14792



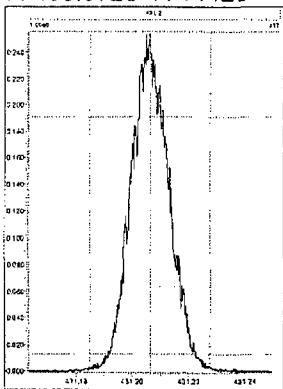
M 404.9760 R 13858



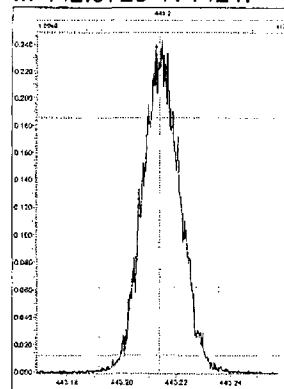
M 416.9760 R 14084



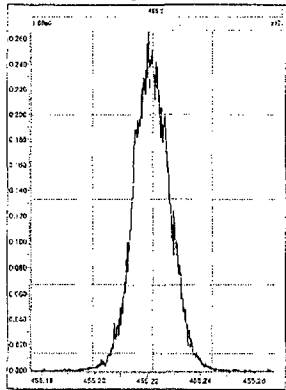
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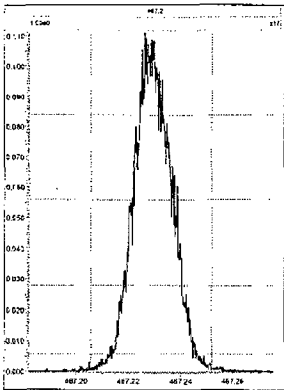
M 442.9728 R 14247



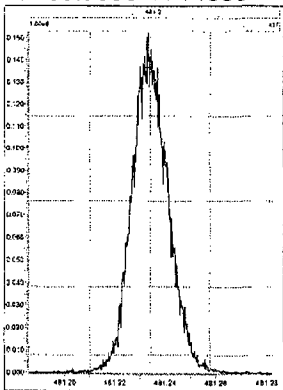
M 454.9728 R 14454



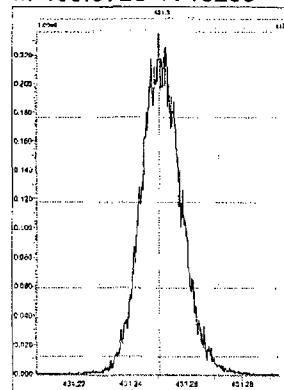
M 466.9728 R 14752



M 480.9696 R 14885

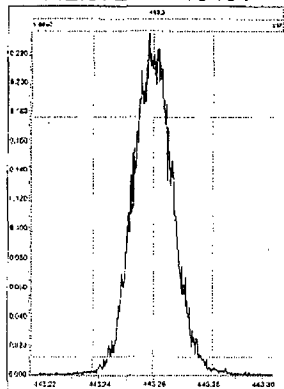


M 430.9728 R 13233

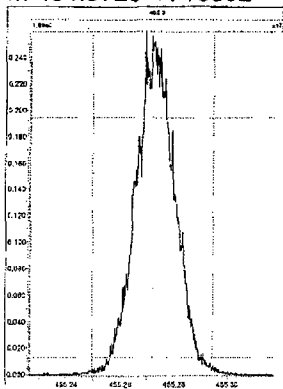


Printed: Tuesday, November 02, 2010 01:03:22 Eastern Standard Time

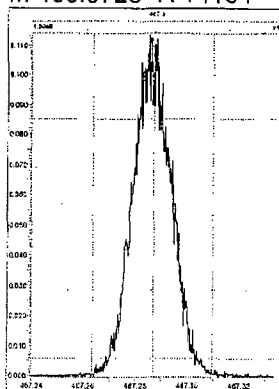
M 442.9728 R 13481



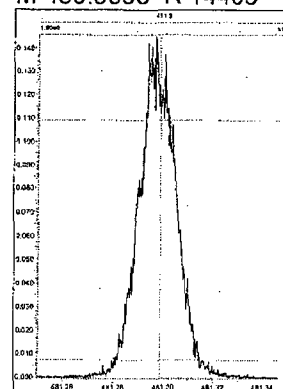
M 454.9728 R 13892



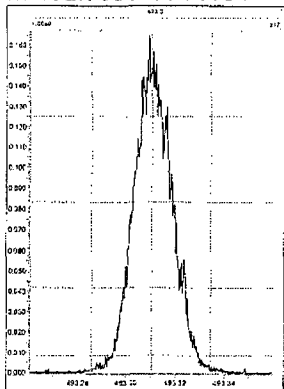
M 466.9728 R 14164



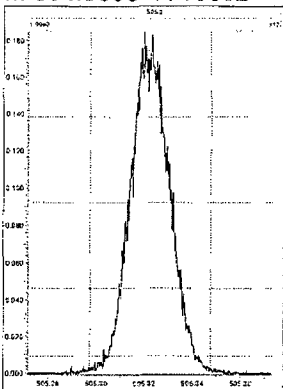
M 480.9696 R 14409



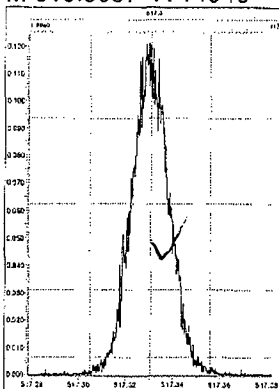
M 492.9696 R 14164



M 504.9696 R 13852



M 516.9697 R 14046



Quantify Sample Summary Report**MassLynx 4.1**

Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b01nov10b-1.qld

Last Altered: Tuesday, November 02, 2010 09:12:49 Eastern Standard Time

Printed: Tuesday, November 02, 2010 09:13:30 Eastern Standard Time

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Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 19 Oct 2010 08:23:47

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b01nov10b-1, Date: 01-Nov-2010, Time: 17:33:30, ID: CS3WT UD100713-01.2, Description: , Job: b01nov10b, Task: HRP763_1, User: MJC

	Name	RT
1	First TCDF	27.06
2	Last TCDF	32.34
3	First PeCDF	32.30
4	Last PeCDF	35.02
5	First HxCDF	35.52
6	Last HxCDF	37.93
7	First HpCDF	39.47
8	Last HpCDF	41.48
9	OCDF	45.52
10	First TCDD	28.81
11	2378-TCDD	31.76
12	Last TCDD	32.26
13	First PeCDD	33.18
14	Last PeCDD	34.83
15	First HxCDD	35.95
16	Last HxCDD	37.59
17	First HpCDD	39.80
18	Last HpCDD	40.77
19	OCDD	45.20

Quantify Sample Report
Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b01nov10b-1.qld

Last Altered: Tuesday, November 02, 2010 09:12:49 Eastern Standard Time

Printed: Tuesday, November 02, 2010 09:13:30 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 19 Oct 2010 08:23:47

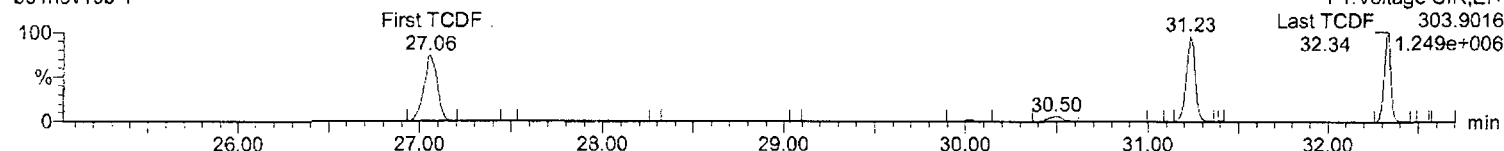
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b01nov10b-1, Date: 01-Nov-2010, Time: 17:33:30, ID: CS3WT UD100713-01.2, Description: , Job: b01nov10b,

Task: HRP763_1, User: MJC

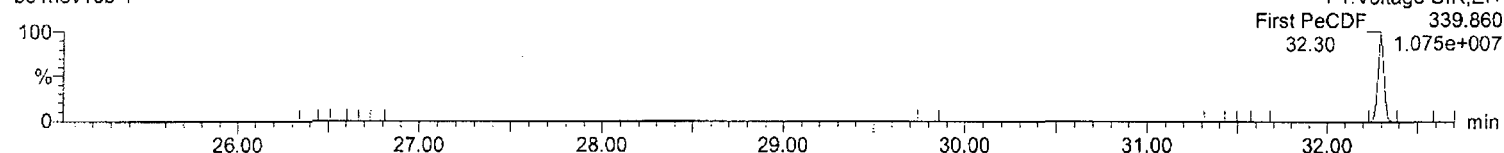
First TCDF

b01nov10b-1



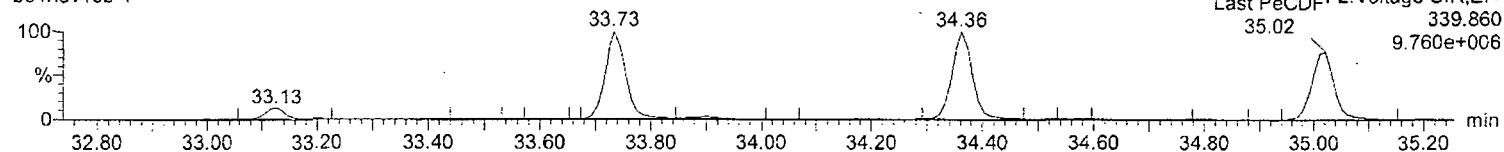
First PeCDF

b01nov10b-1



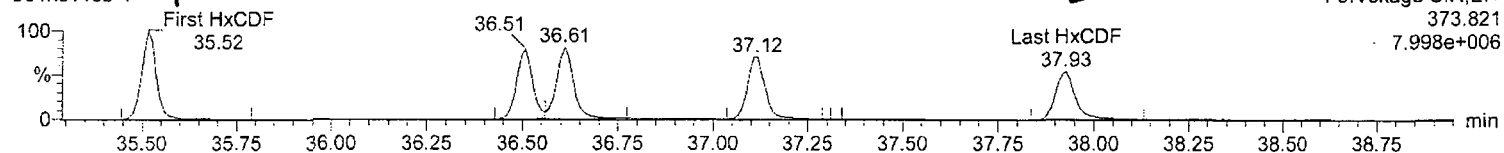
Last PeCDF

b01nov10b-1



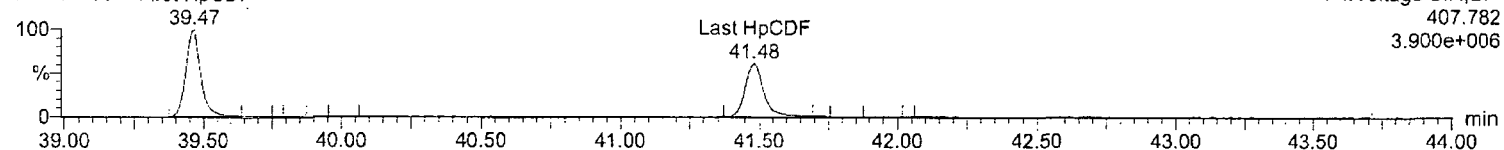
First HxCDF

b01nov10b-1



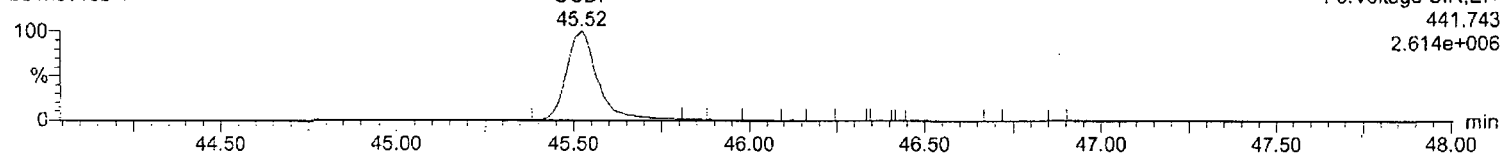
First HpCDF

b01nov10b-1 First HpCDF



OCDF

b01nov10b-1



Quantify Sample Report
Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b01nov10b-1.qld

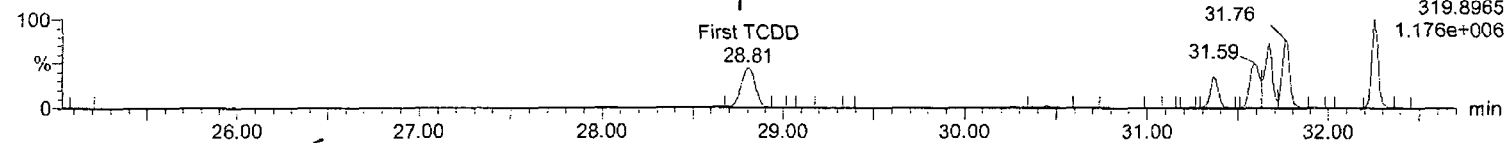
Last Altered: Tuesday, November 02, 2010 09:12:49 Eastern Standard Time

Printed: Tuesday, November 02, 2010 09:13:30 Eastern Standard Time

Name: b01nov10b-1, Date: 01-Nov-2010, Time: 17:33:30, ID: CS3WT UD100713-01.2, Description: , Job: b01nov10b, Task: HRP763_1, User: MJC

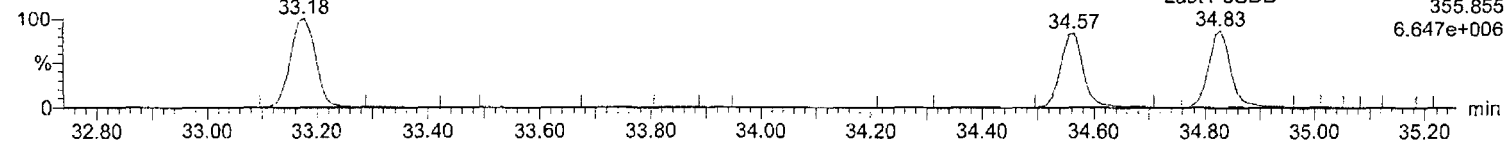
First TCDD

b01nov10b-1



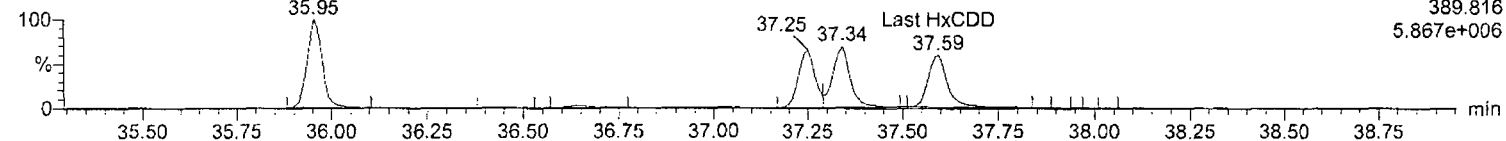
First PeCDD

b01nov10b-1



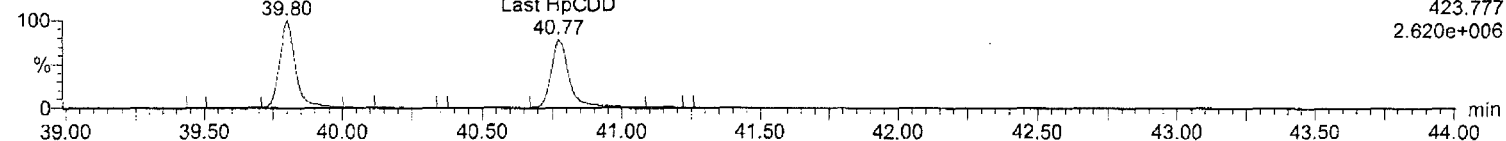
First HxCDD

b01nov10b-1



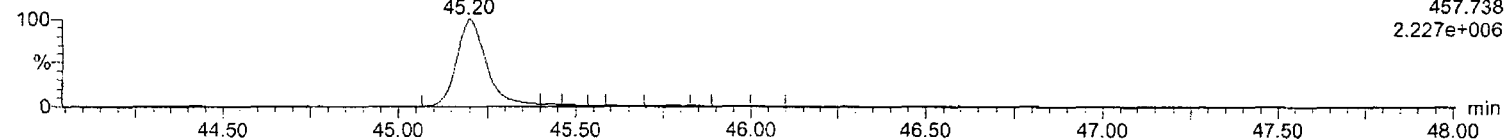
First HpCDD

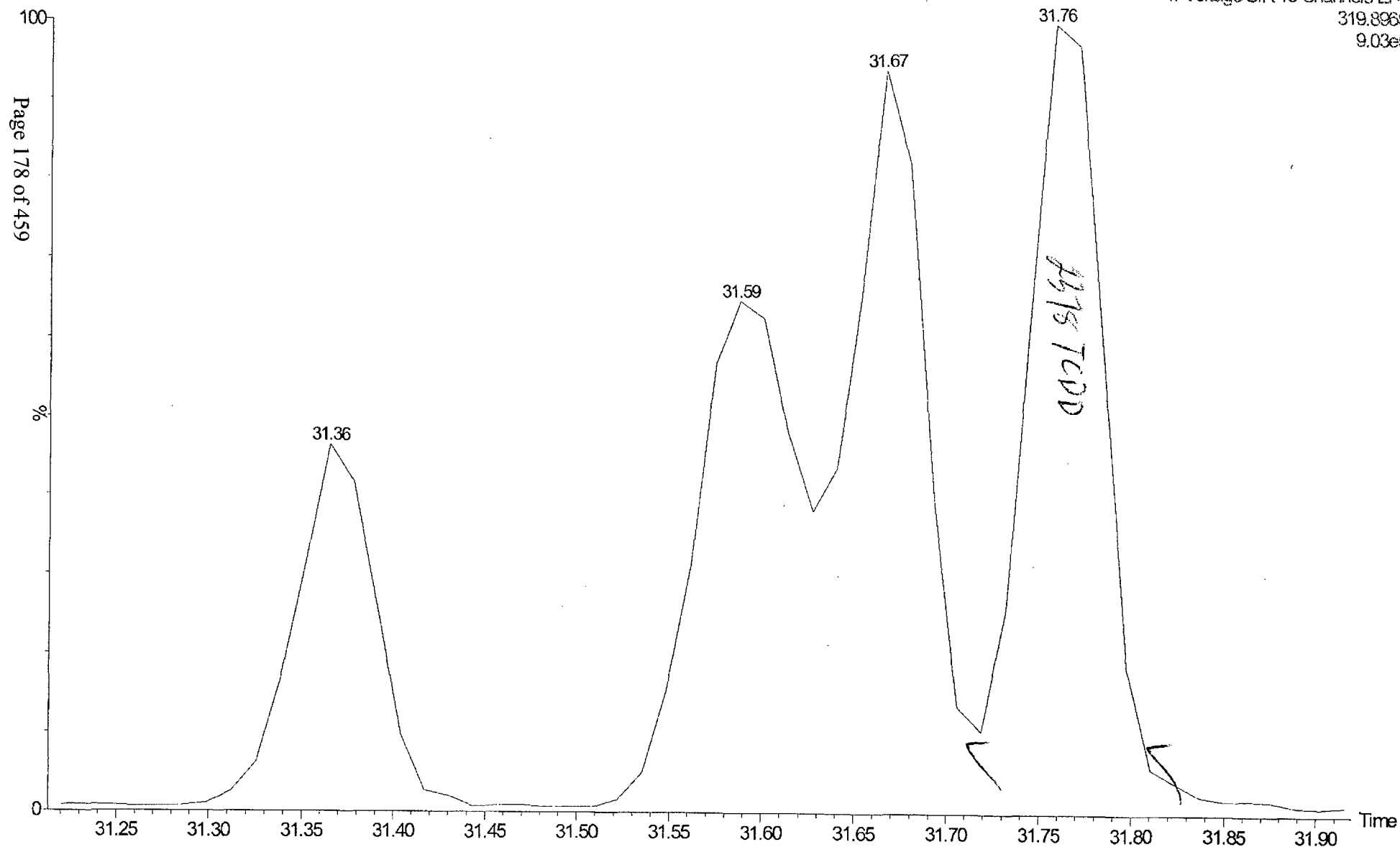
b01nov10b-1



OCDD

b01nov10b-1





Quantify Sample Summary Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time.

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

Page

Method: Untitled 19 Oct 2010 08:35:07

Calibration: 02 Nov 2010 08:19:01

Name: b01nov10b-3, Date: 01-Nov-2010, Time: 19:16:15, ID: CS0.5 UD101022-01, Description: , Job: b01nov10b, Task: HRP763_1, User: MJC

*Blue
b01nov10*

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	1.13e3	1.51e3	2.64e3	31.76	1.00	0.75	NO	0.270	1.094	0.0248	2.68e4	697	✓38.5	3.16e4	969	✓32.6	bb
2	12378-PeCDD	6.48e3	3.98e3	1.05e4	34.54	1.00	1.63	NO	1.209	0.998	0.0314	1.33e5	1153	115.2	8.67e4	825	105.2	bd
3	123478-HxCDD	5.02e3	4.17e3	9.19e3	37.24	1.00	1.21	NO	1.303	0.935	0.0533	9.90e4	1103	89.8	7.65e4	1108	69.1	bd
4	123678-HxCDD	5.24e3	4.17e3	9.41e3	37.33	1.00	1.26	NO	1.237	0.957	0.0494	9.55e4	1103	86.6	7.03e4	1108	63.4	dd
5	123789-HxCDD	4.93e3	3.56e3	8.50e3	37.57	1.01	1.38	NO	1.249	0.864	0.0553	8.74e4	1103	79.2	7.01e4	1108	63.3	bb
6	1234678-HpCDD	3.66e3	3.50e3	7.15e3	40.76	1.00	1.05	NO	1.192	0.958	0.0602	5.04e4	885	57.0	4.59e4	647	70.9	M...
7	OCDD	5.14e3	5.83e3	1.10e4	45.19	1.00	0.88	NO	2.321	0.924	0.126	5.72e4	1029	55.5	6.16e4	817	75.3	bd
8	2378-TCDF	1.86e3	2.22e3	4.08e3	31.22	1.00	0.84	NO	0.250	0.982	0.0208	3.29e4	689	47.7	3.48e4	1287	27.0	bb
9	12378-PeCDF	1.01e4	6.33e3	1.64e4	33.72	1.00	1.60	NO	1.180	0.882	0.0377	2.18e5	1674	130.2	1.36e5	2327	58.3	bd
10	23478-PeCDF	9.83e3	6.46e3	1.63e4	34.35	1.02	1.52	NO	1.195	0.874	0.0386	2.19e5	1674	131.0	1.45e5	2327	62.2	bd
11	123478-HxCDF	7.26e3	6.11e3	1.34e4	36.49	1.00	1.19	NO	1.233	0.896	0.0457	1.46e5	1728	84.7	1.16e5	1190	97.5	bd
12	123678-HxCDF	8.73e3	6.46e3	1.52e4	36.60	1.00	1.35	NO	1.204	1.019	0.0392	1.57e5	1728	90.7	1.19e5	1190	99.8	dd
13	234678-HxCDF	7.89e3	6.14e3	1.40e4	37.11	1.01	1.28	NO	1.230	0.940	0.0434	1.51e5	1728	87.2	1.18e5	1190	98.9	bb
14	123789-HxCDF	6.54e3	4.90e3	1.14e4	37.91	1.04	1.33	NO	1.212	0.767	0.0524	1.14e5	1728	66.2	9.19e4	1190	77.2	bd
15	1234678-HpCDF	6.02e3	5.91e3	1.19e4	39.45	1.00	1.02	NO	1.165	1.190	0.0447	9.33e4	1083	86.1	9.64e4	1157	83.4	bd
16	1234789-HpCDF	4.73e3	4.23e3	8.96e3	41.46	1.05	1.12	NO	1.202	0.894	0.0613	6.03e4	1083	55.7	5.79e4	1157	50.1	bd
17	OCDF	6.28e3	7.24e3	1.35e4	45.50	1.01	0.87	NO	2.313	1.140	0.277	6.37e4	1576	40.4	7.26e4	3441	21.1	M...
18	13C-2378-TCDD	4.26e5	5.39e5	9.65e5	31.75	1.01	0.79	NO	93.002	1.041	0.0751	8.79e6	3010	2919.1	1.09e7	1577	6901.0	bb
19	13C-12378-PeCDD	5.14e5	3.24e5	8.38e5	34.53	1.10	1.59	NO	95.212	0.905	0.0921	1.12e7	2977	3771.4	7.13e6	1794	3972.5	bb
20	13C-123678-HxCDD	4.27e5	3.59e5	7.87e5	37.31	0.99	1.19	NO	94.939	1.056	0.165	7.54e6	4859	1551.0	6.13e6	2481	2471.4	db
21	13C-1234678-HpCDD	3.08e5	2.90e5	5.97e5	40.74	1.08	1.06	NO	100.107	0.801	0.195	3.92e6	3705	1056.8	3.81e6	2534	1504.6	bb
22	13C-OCDD	4.49e5	5.00e5	9.49e5	45.17	1.20	0.90	NO	190.525	0.637	0.306	4.18e6	3823	1092.7	4.68e6	4344	1076.9	bd
23	13C-2378-TCDF	7.32e5	9.31e5	1.66e6	31.21	1.00	0.79	NO	98.526	1.794	0.0318	1.27e7	1351	9422.3	1.60e7	1810	8852.2	bb
24	13C-12378-PeCDF	9.14e5	5.77e5	1.49e6	33.71	1.08	1.58	NO	95.028	1.608	0.139	2.09e7	6621	3152.8	1.33e7	6201	2136.9	bd
25	13C-123678-HxCDF	4.08e5	7.85e5	1.19e6	36.59	0.97	0.52	NO	98.204	1.601	0.158	7.22e6	4623	1561.0	1.36e7	5684	2394.5	dd
26	13C-1234678-HpCDF	2.47e5	5.55e5	8.02e5	39.44	1.05	0.45	NO	99.554	1.076	0.193	3.63e6	3284	1106.2	8.13e6	5074	1602.3	bd
27	13C-1234-TCDD	4.12e5	5.15e5	9.27e5	31.34	0.00	0.80	NO	100.000	1.000	0.0841	7.27e6	3010	2413.9	9.15e6	1577	5800.4	bb
28	13C-123789-HxCDD	4.04e5	3.41e5	7.45e5	37.56	0.00	1.18	NO	100.000	1.000	0.184	6.50e6	4859	1338.1	5.20e6	2481	2093.6	bb
29	37Cl-2378-TCDD (SS)	2.68e3		2.68e3	31.76	1.00			0.263	1.110	0.0207	6.33e4	1449	43.7				bb
30	13C-23478-PeCDF (SS)	8.57e5	5.41e5	1.40e6	34.34	1.02	1.58	NO	100.531	0.938	0.121	2.00e7	6621	3027.8	1.26e7	6201	2038.8	bb

Quantify Sample Summary Report

MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qtd

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

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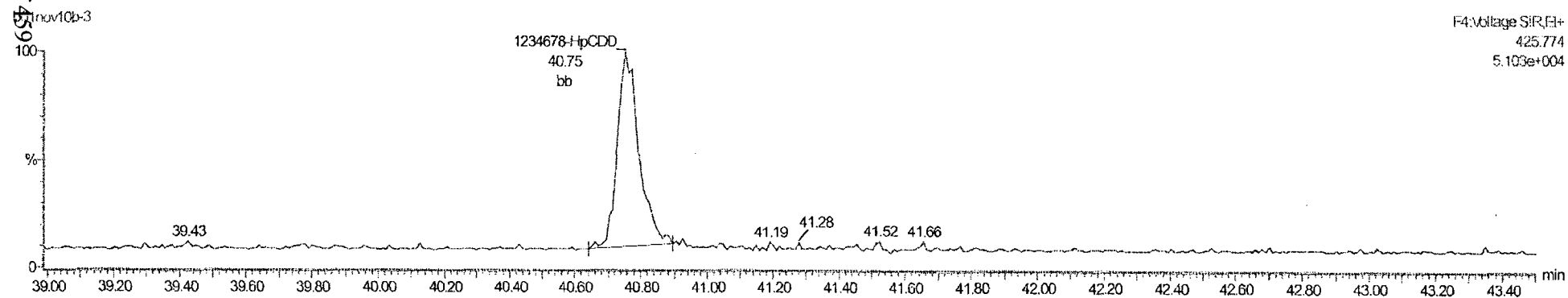
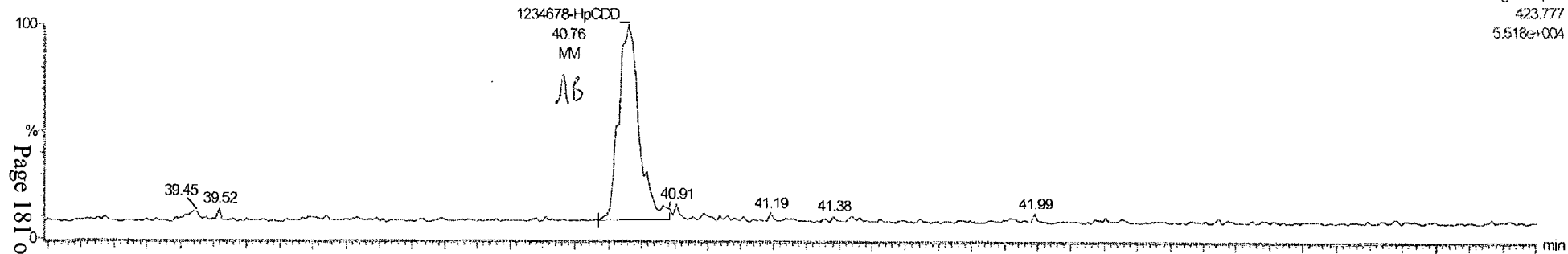
Name: b01nov10b-3, Date: 01-Nov-2010, Time: 19:16:15, ID: CS0.5 UD101022-01, Description: , Job: b01nov10b, Task: HRP763_1, User: MJC

Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
13C-123478-HxCDF (SS)	3.39e5	6.56e5	9.95e5	36.48	1.00	0.52	NO	102.985	0.834	0.181	6.76e6	4623	1462.7	1.32e7	5684	2317.1	bd
13C-123478-HxCDD (SS)	3.98e5	3.12e5	7.10e5	37.22	1.00	1.28	NO	104.877	0.903	0.184	7.82e6	4859	1610.2	5.96e6	2481	2401.9	bd
13C-1234789-HpCDF (SS)	1.80e5	4.18e5	5.98e5	41.45	1.05	0.43	NO	98.678	0.746	0.281	2.25e6	3284	685.7	5.07e6	5074	999.8	bb

MANUAL INTEGRATION

b01nov10b-3

F4: Voltage SiR,B+
423.777
5.518e+004

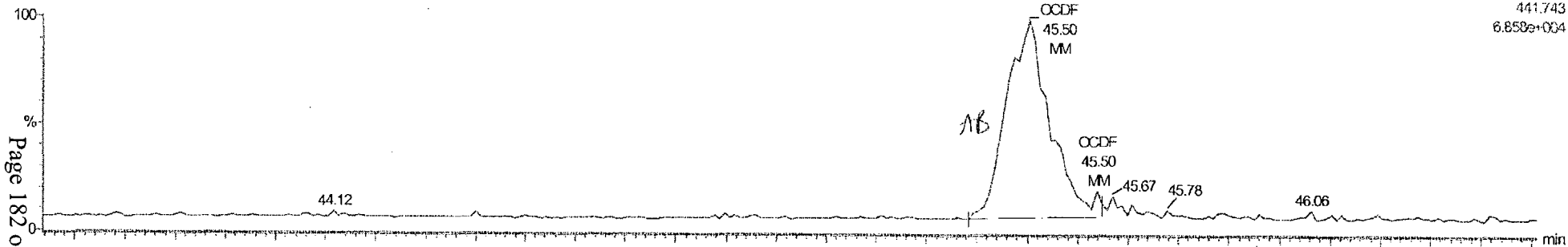


HMP 02Nov10

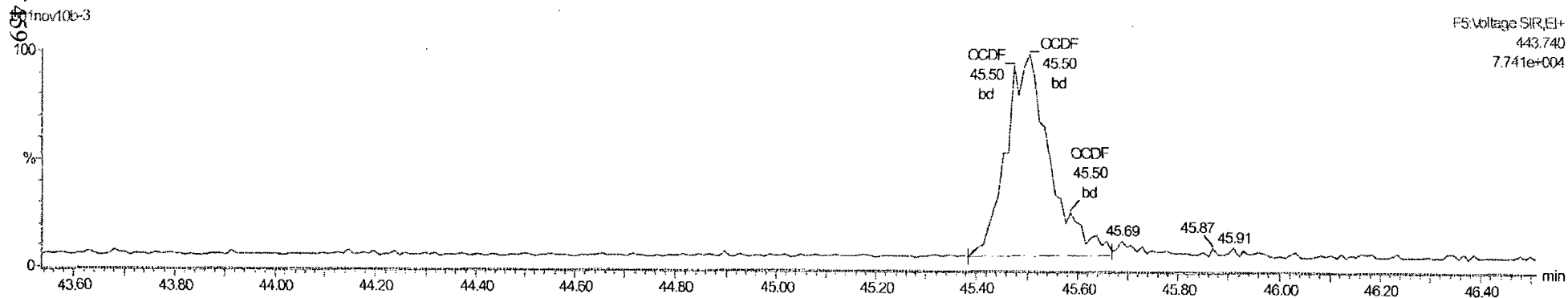
ll
3/10/10

MANUAL INTEGRATION

b01nov10b-3



F5:Voltage SIR,EI+
441.743
6.850e+004



F5:Voltage SIR,EI+
443.740
7.741e+004

HMP 02Nov10

we
2/11/10

Quantify Sample Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

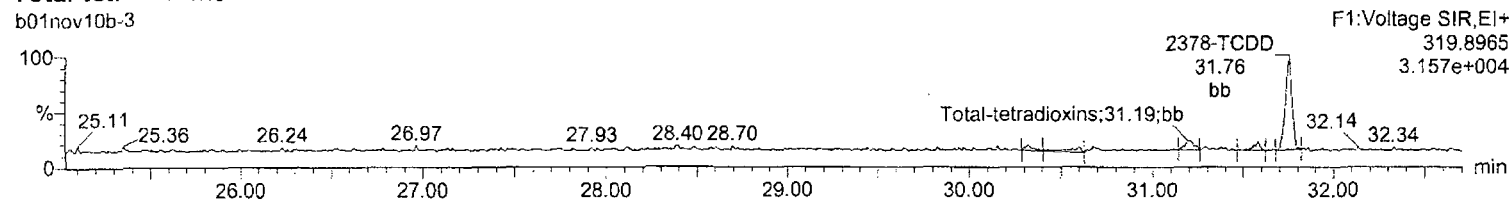
Method: Untitled 19 Oct 2010 08:35:07

Calibration: 02 Nov 2010 08:16:43

Name: b01nov10b-3, Date: 01-Nov-2010, Time: 19:16:15, ID: CS0.5 UD101022-01, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

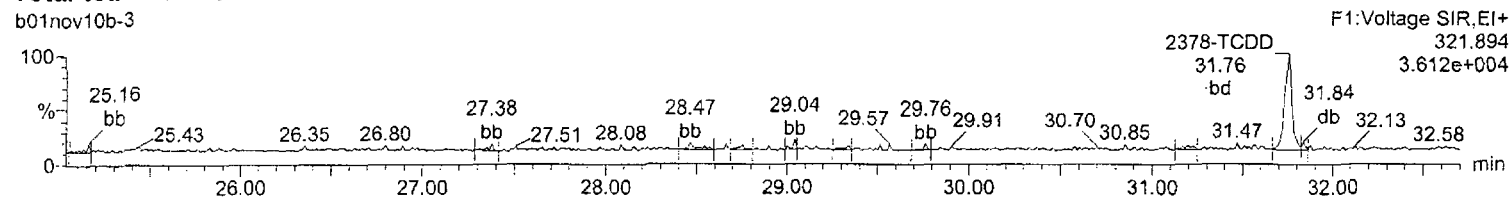
Total-tetradoxins

b01nov10b-3



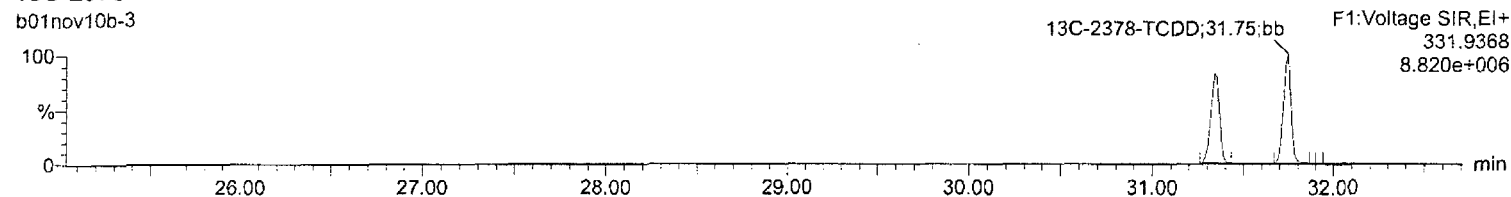
Total-tetradoxins

b01nov10b-3



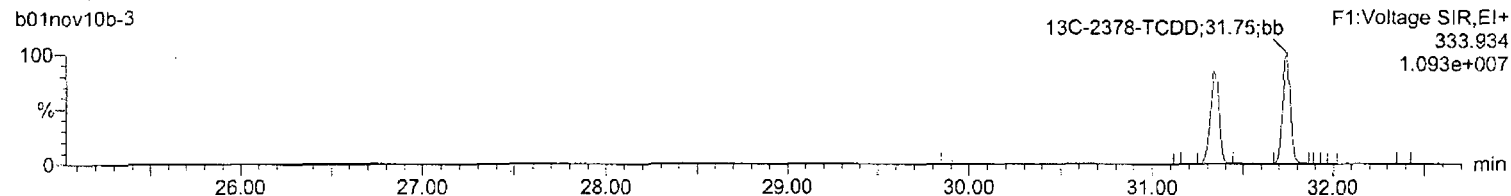
13C-2378-TCDD

b01nov10b-3



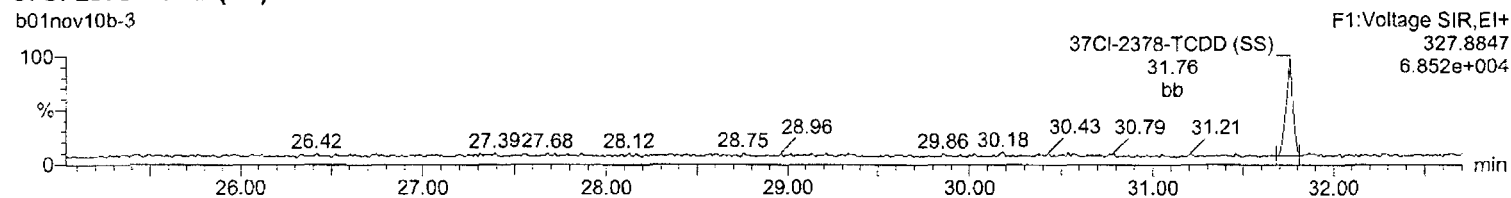
13C-2378-TCDD

b01nov10b-3



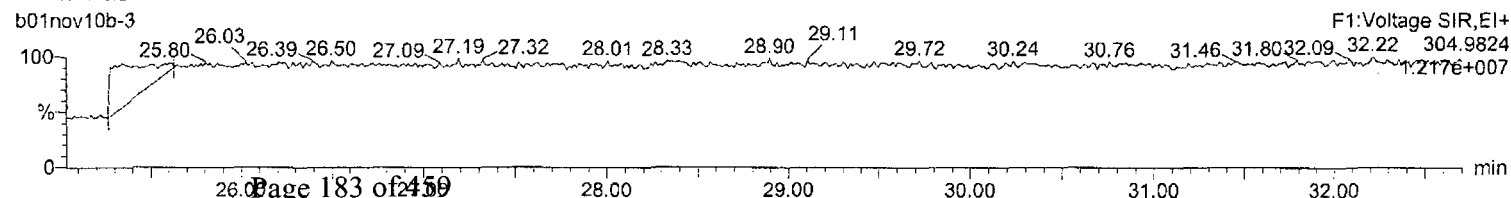
37Cl-2378-TCDD (SS)

b01nov10b-3



Lock Mass F1

b01nov10b-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

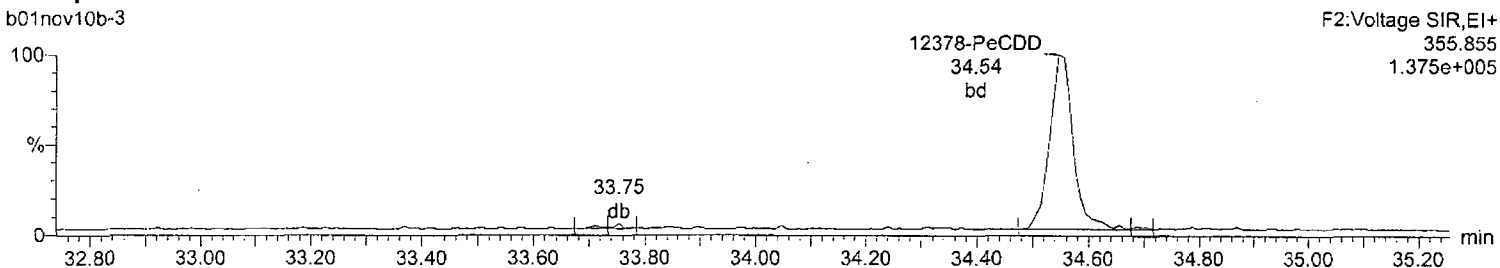
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-3, Date: 01-Nov-2010, Time: 19:16:15, ID: CS0.5 UD101022-01, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

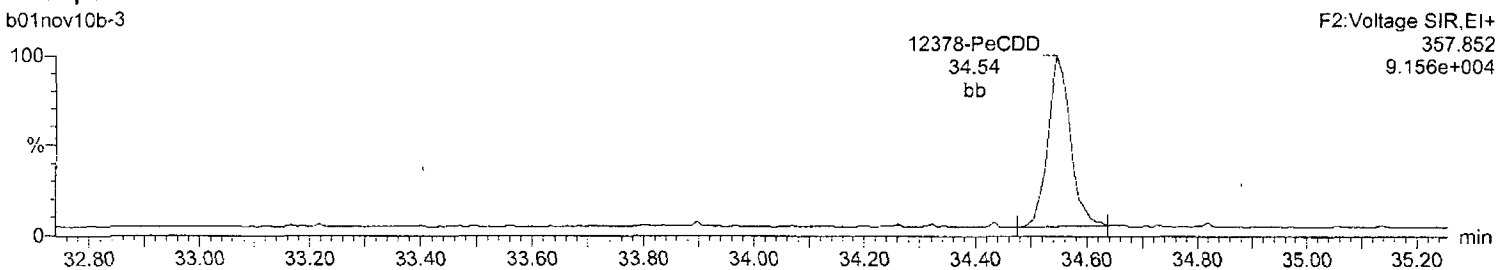
Total-pentadioxins

b01nov10b-3



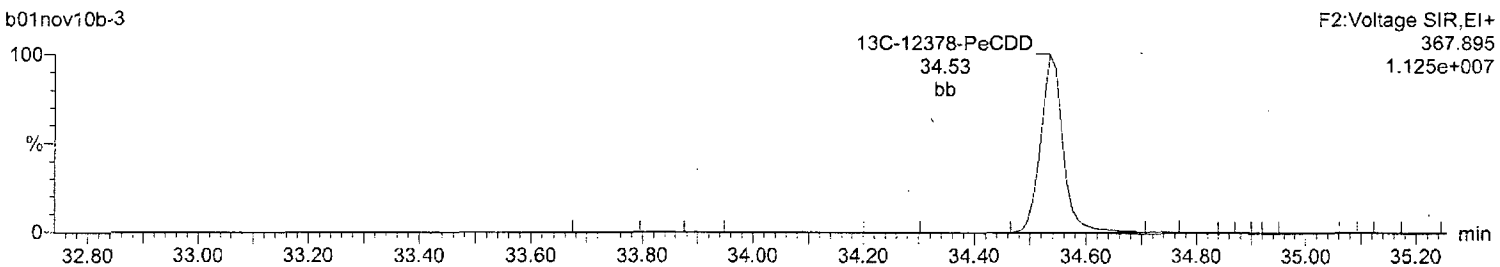
Total-pentadioxins

b01nov10b-3



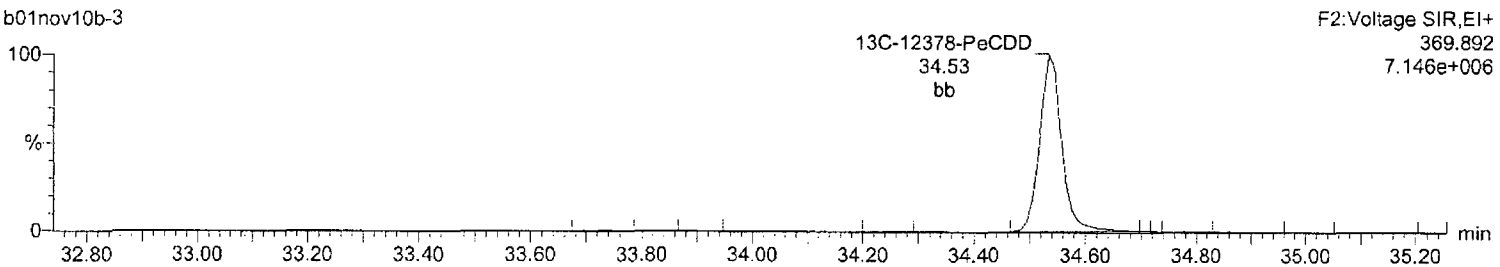
13C-12378-PeCDD

b01nov10b-3



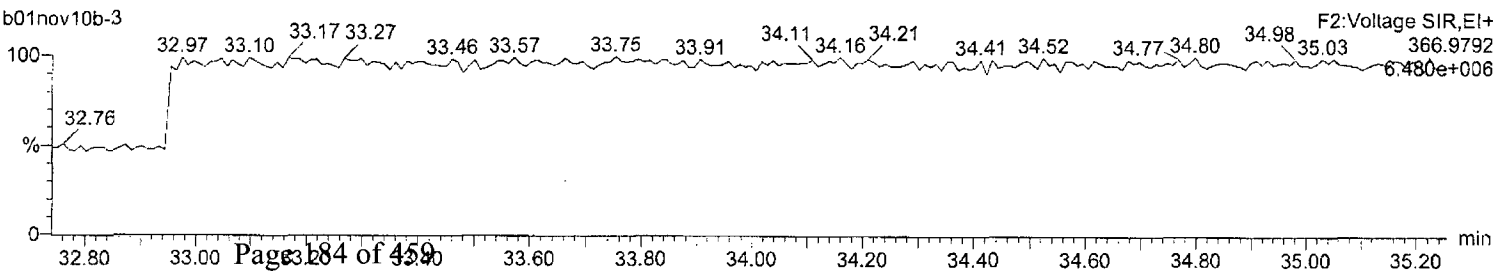
13C-12378-PeCDD

b01nov10b-3



Lock Mass F2

b01nov10b-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

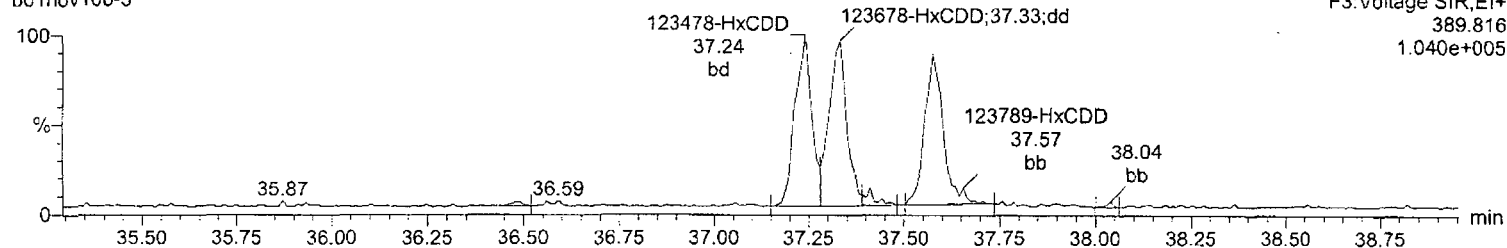
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-3, Date: 01-Nov-2010, Time: 19:16:15, ID: CS0.5 UD101022-01, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

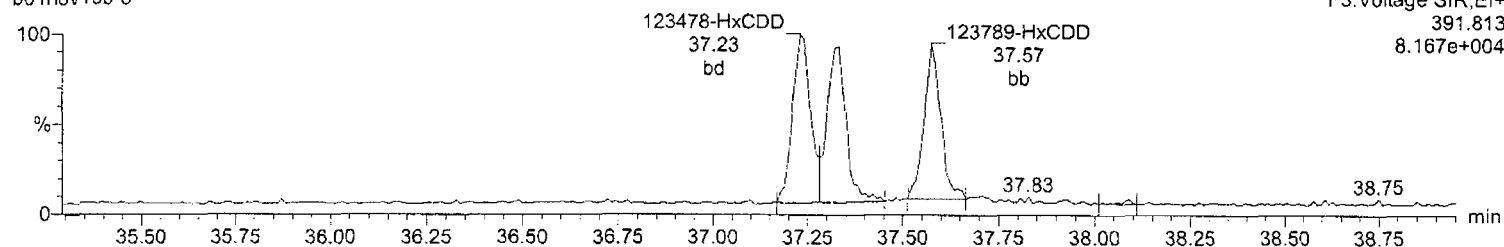
Total-hexadioxins

b01nov10b-3



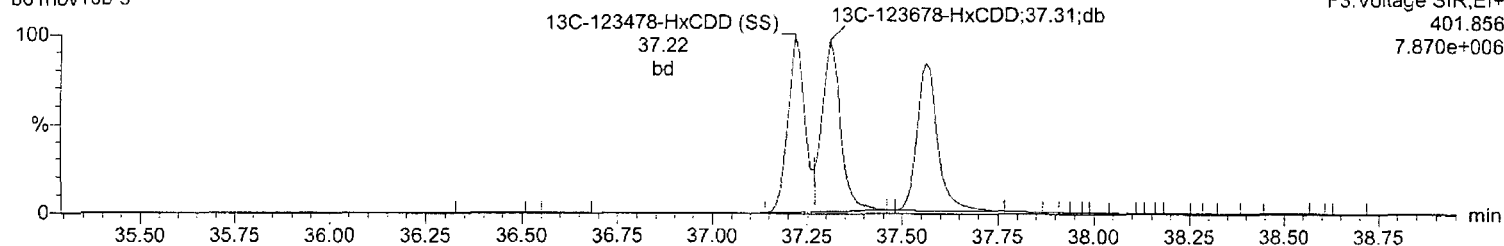
Total-hexadioxins

b01nov10b-3



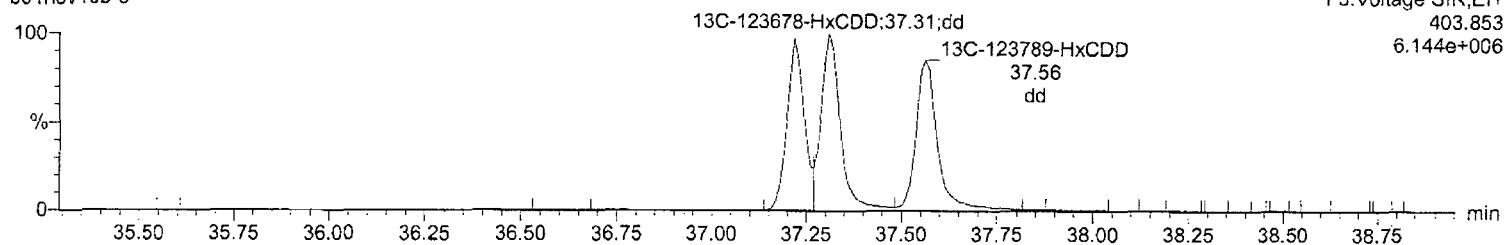
¹³C-123678-HxCDD

b01nov10b-3



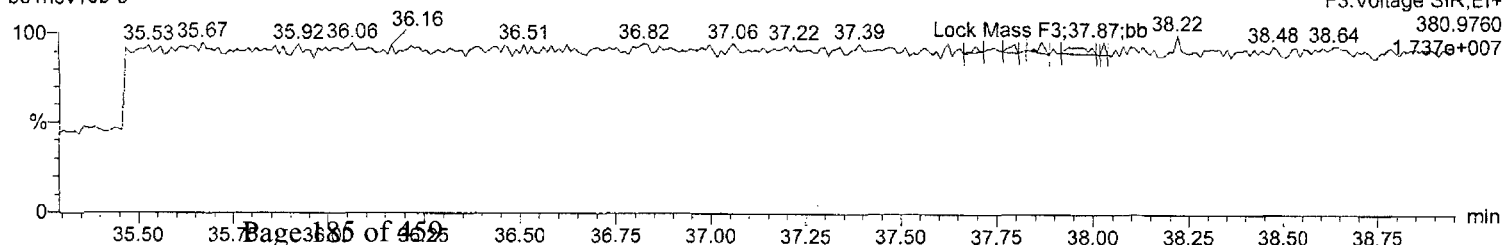
¹³C-123678-HxCDD

b01nov10b-3



Lock Mass F3

b01nov10b-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

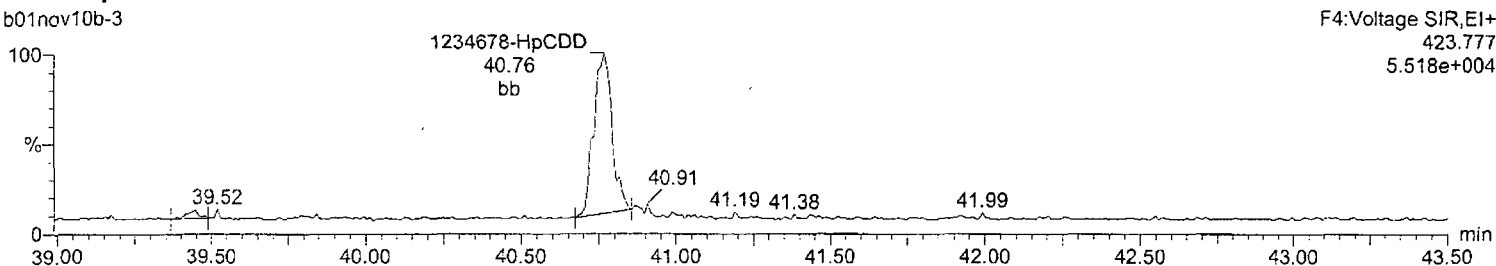
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-3, Date: 01-Nov-2010, Time: 19:16:15, ID: CS0.5 UD101022-01, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

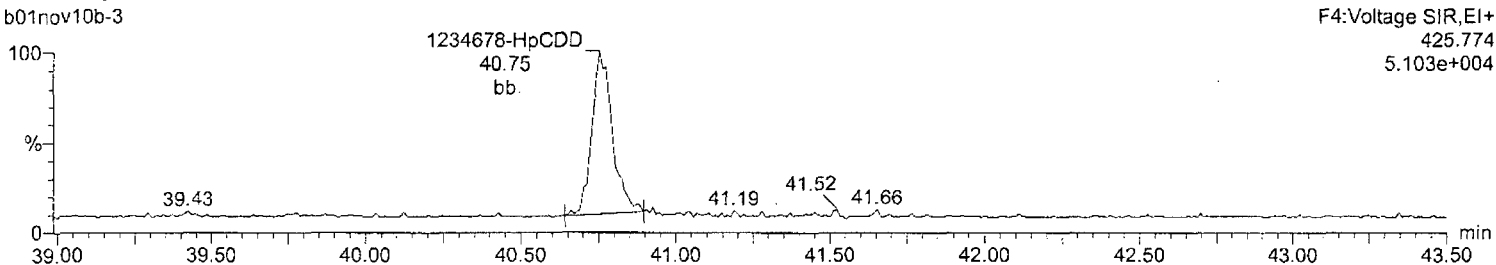
Total-heptadioxins

b01nov10b-3



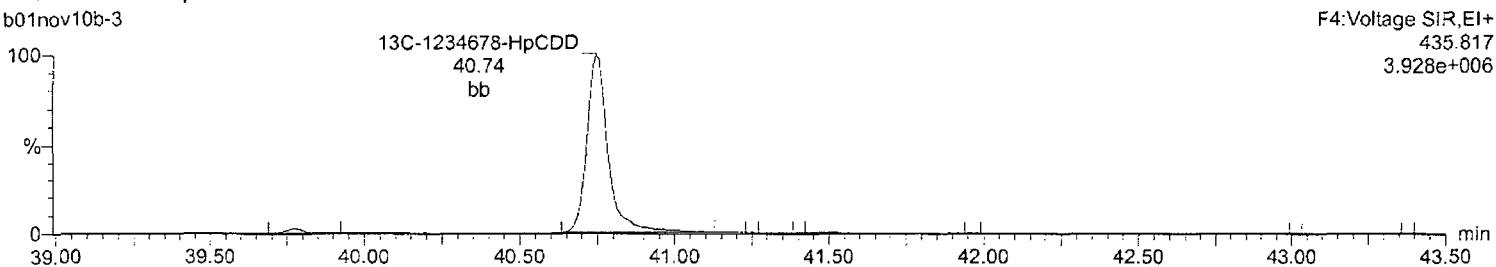
Total-heptadioxins

b01nov10b-3



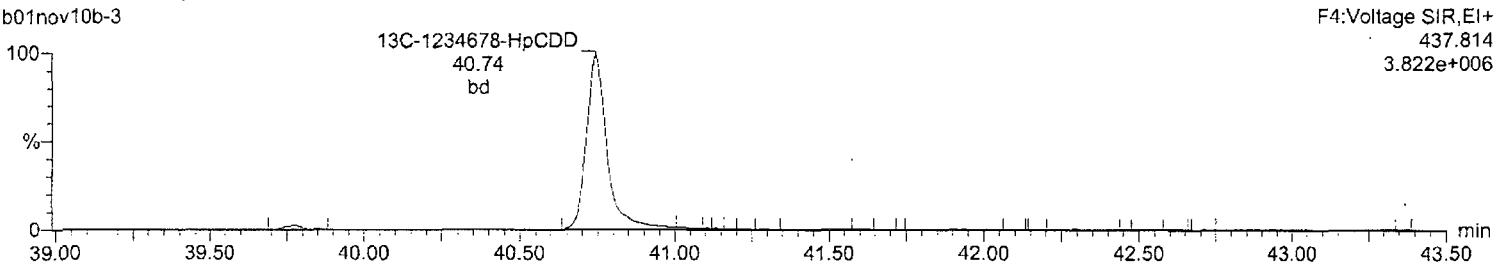
13C-1234678-HpCDD

b01nov10b-3



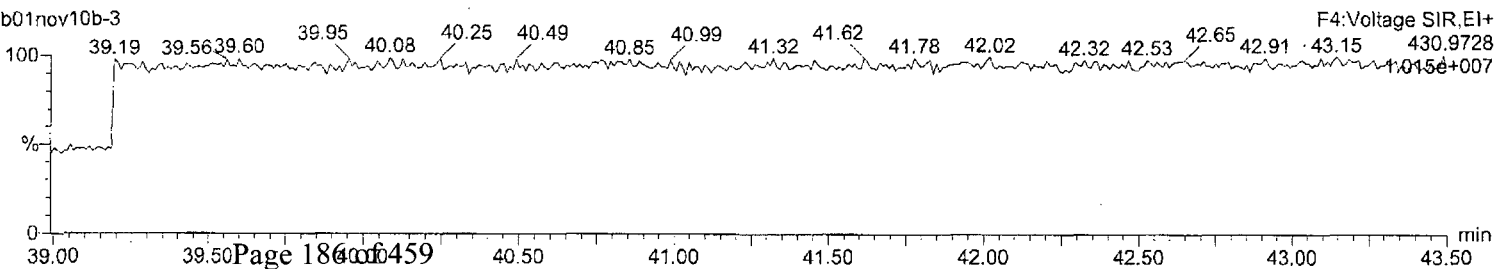
13C-1234678-HpCDD

b01nov10b-3



Lock Mass F4

b01nov10b-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

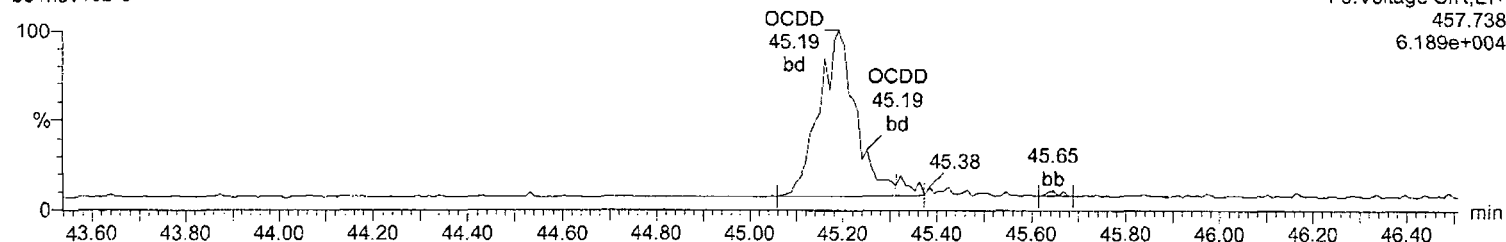
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-3, Date: 01-Nov-2010, Time: 19:16:15, ID: CS0.5 UD101022-01, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

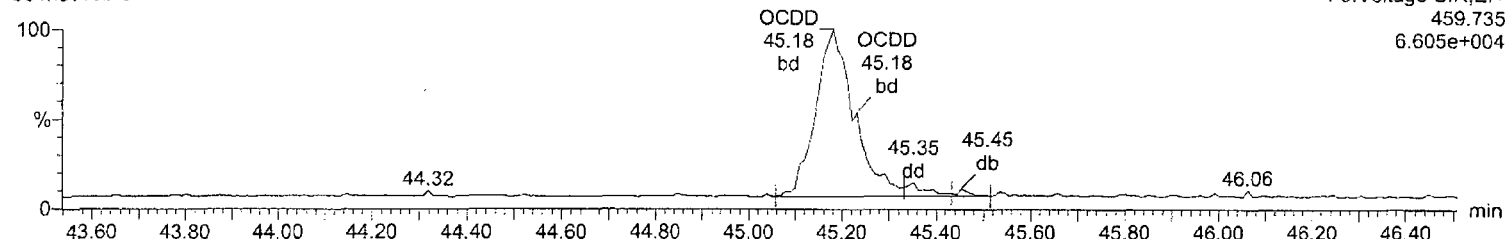
OCDD

b01nov10b-3



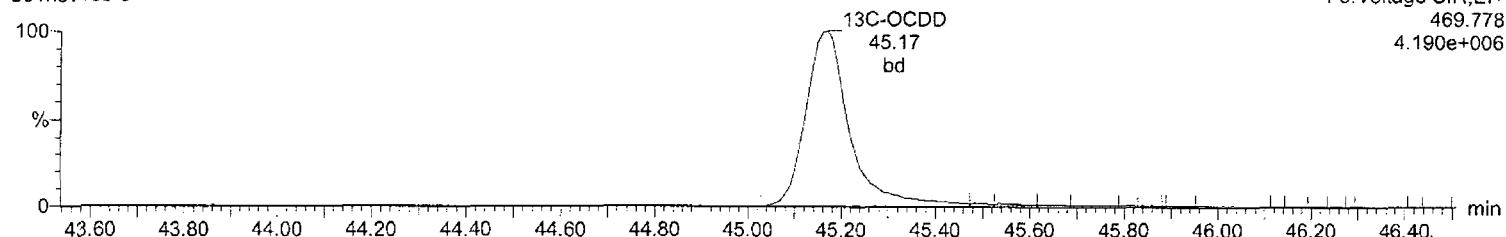
OCDD

b01nov10b-3



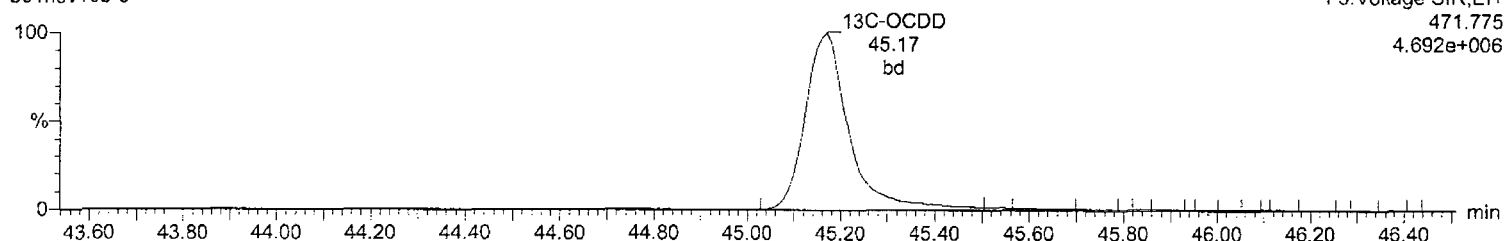
¹³C-OCDD

b01nov10b-3



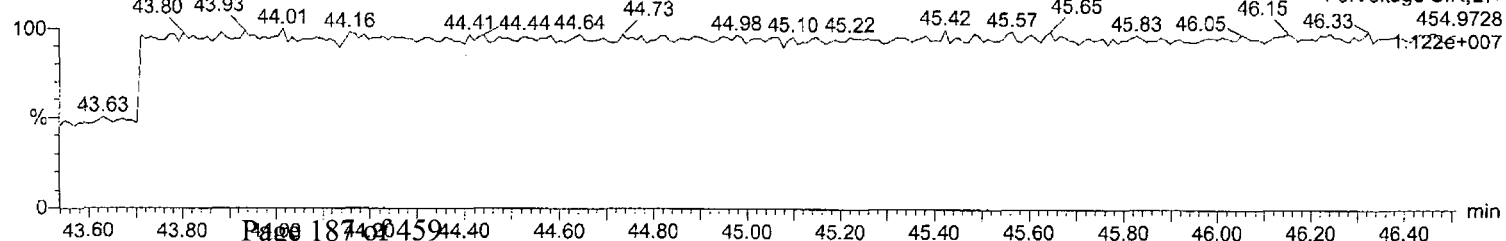
¹³C-OCDD

b01nov10b-3



Lock Mass F5

b01nov10b-3



Quantify Sample Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

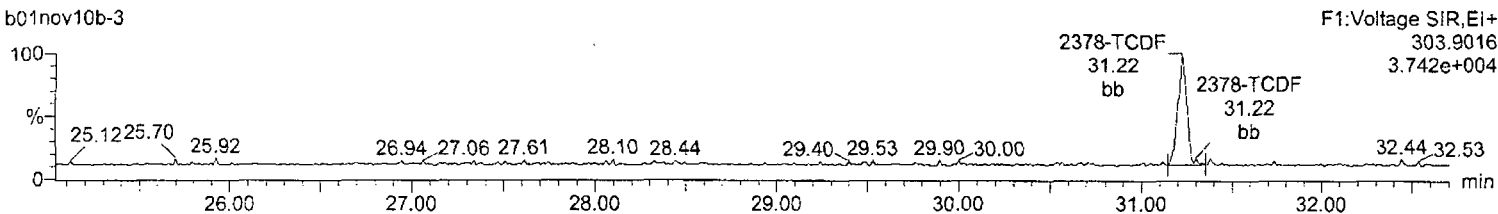
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-3, Date: 01-Nov-2010, Time: 19:16:15, ID: CS0.5 UD101022-01, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

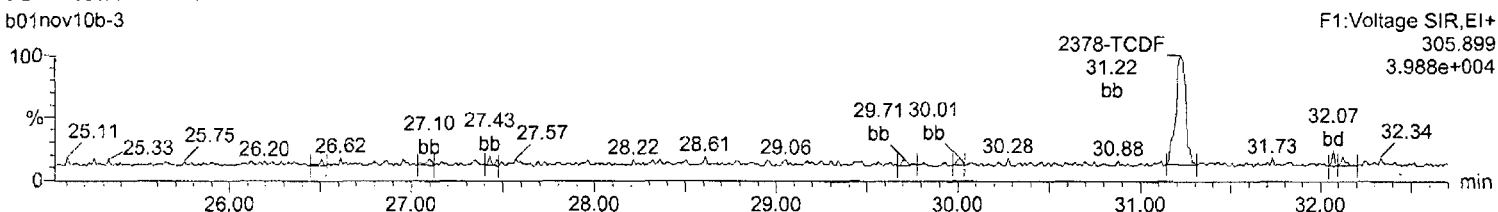
Total-tetrafurans

b01nov10b-3



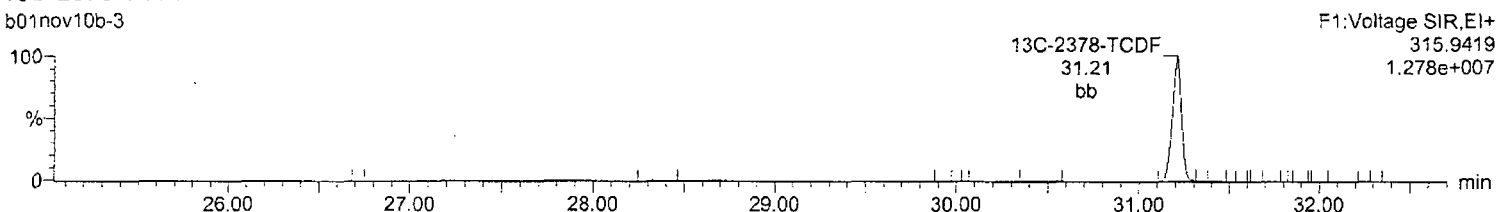
Total-tetrafurans

b01nov10b-3



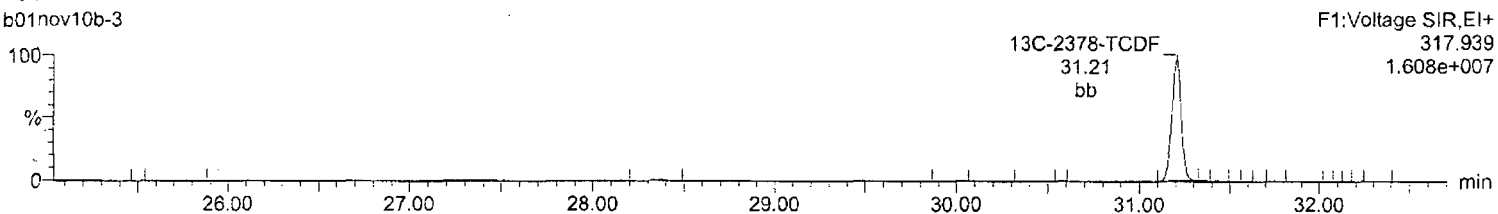
¹³C-2378-TCDF

b01nov10b-3



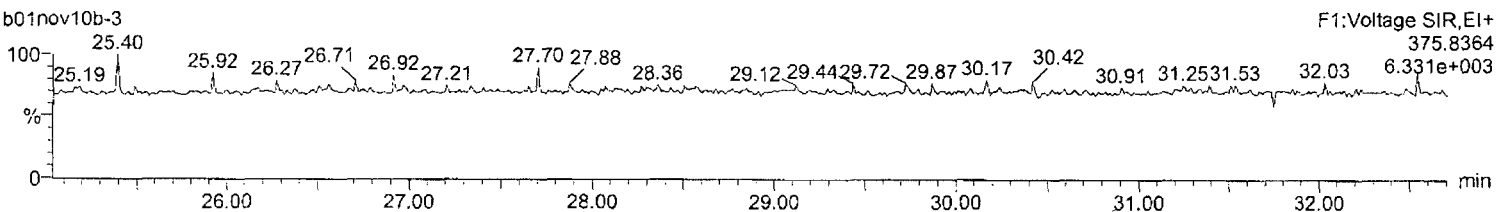
¹³C-2378-TCDF

b01nov10b-3



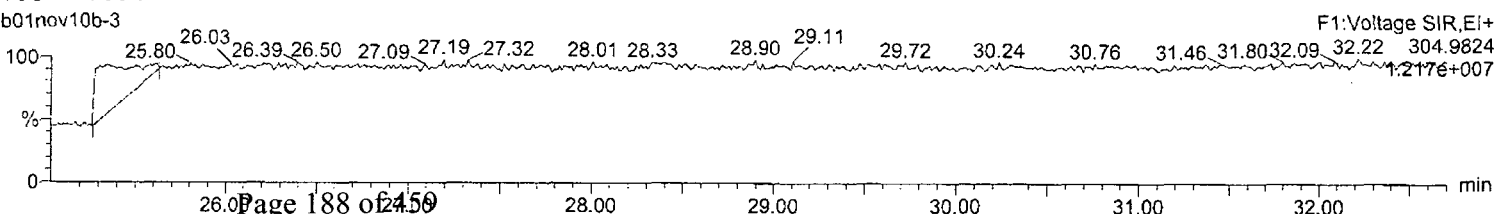
HxDPE

b01nov10b-3



Lock Mass F1

b01nov10b-3



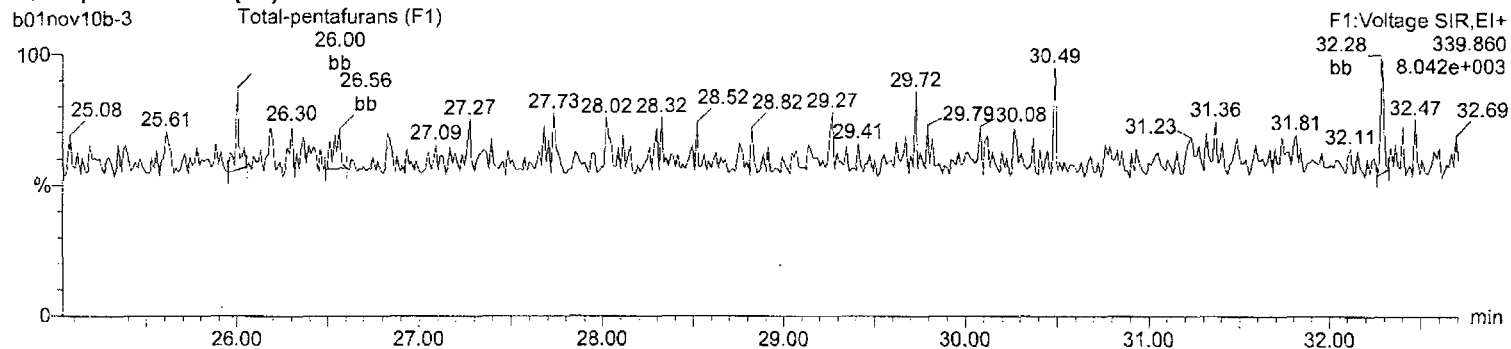
Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

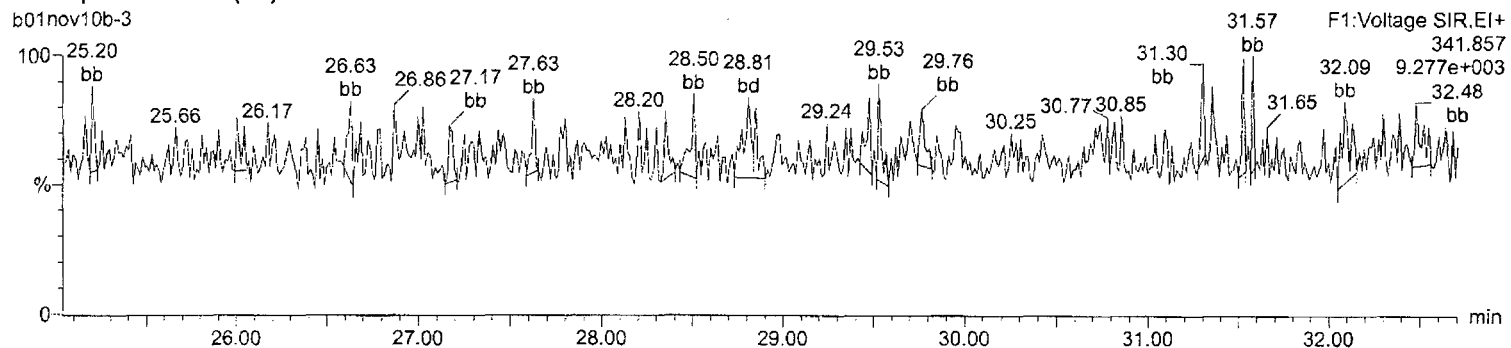
Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-3, Date: 01-Nov-2010, Time: 19:16:15, ID: CS0.5 UD101022-01, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

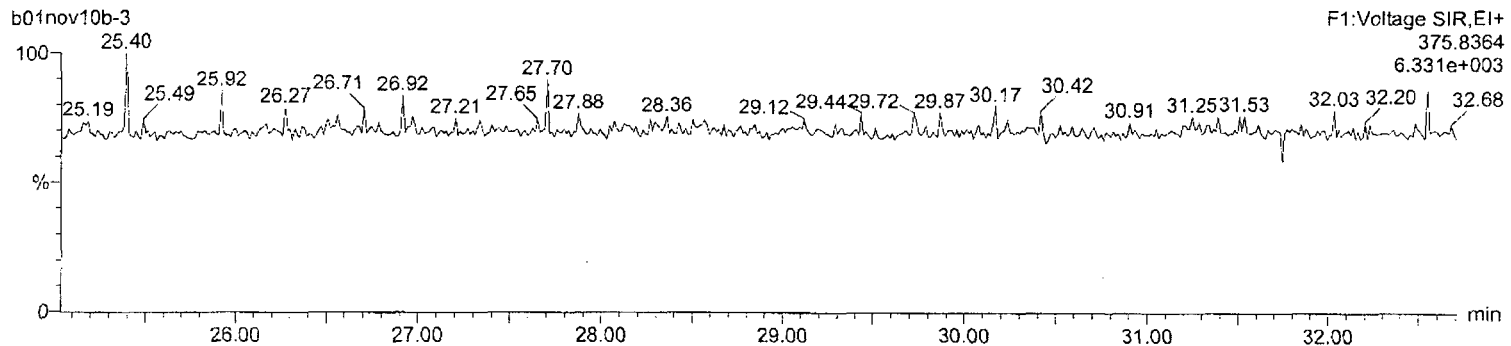
Total-pentafulurans (F1)



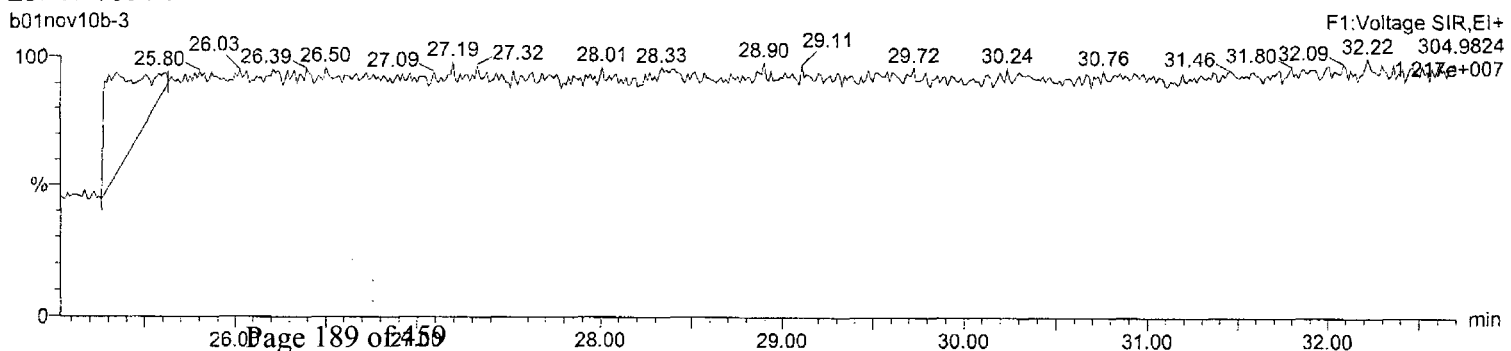
Total-pentafulurans (F1)



HxDPE



Lock Mass F1



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

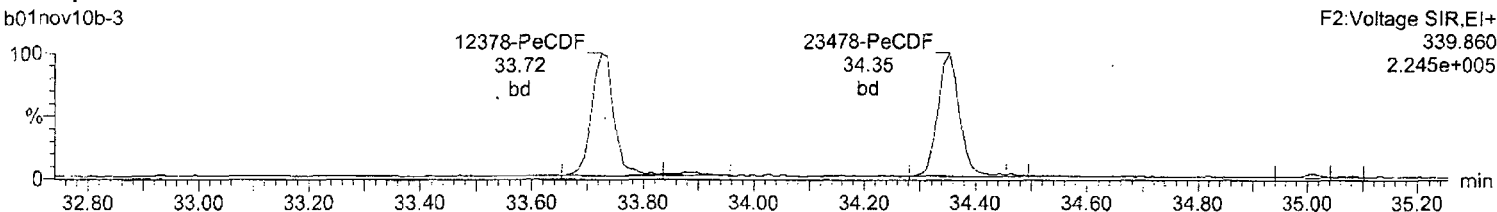
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-3, Date: 01-Nov-2010, Time: 19:16:15, ID: CS0.5 UD101022-01, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

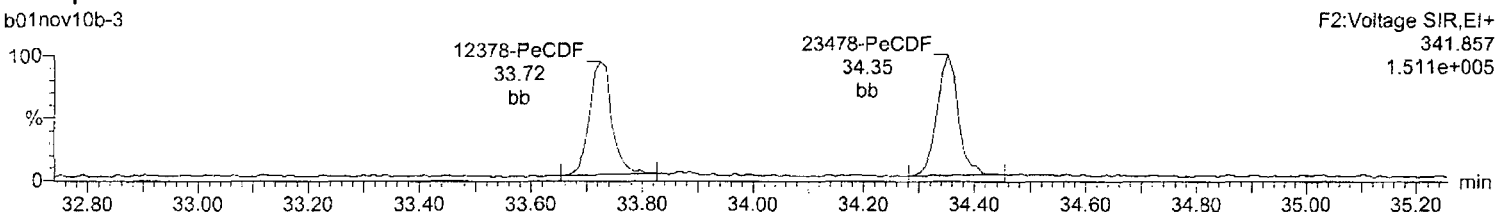
Total-pentafurans

b01nov10b-3



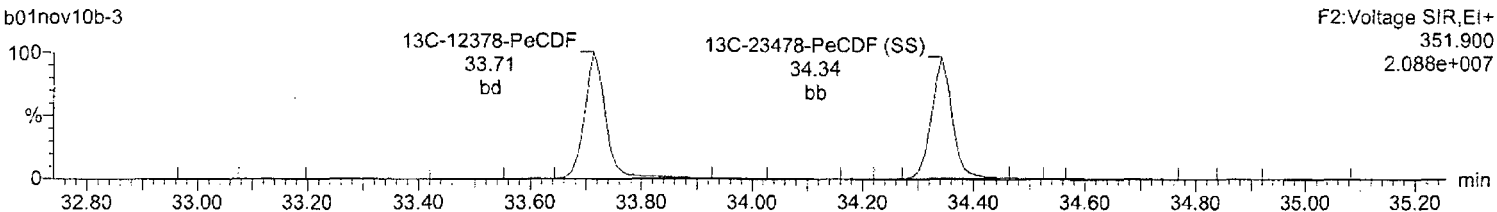
Total-pentafurans

b01nov10b-3



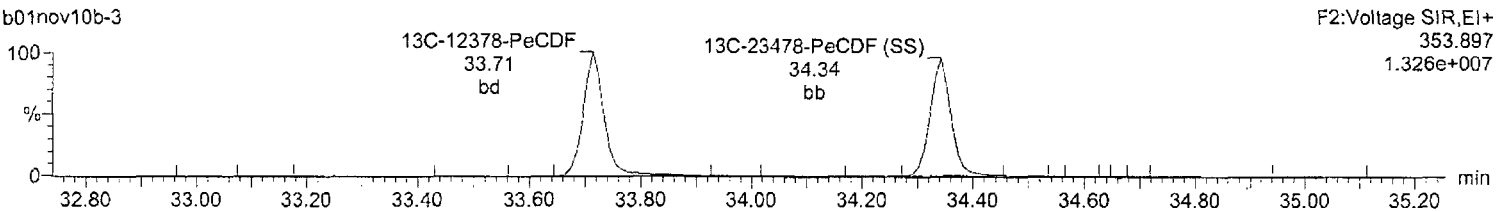
¹³C-12378-PeCDF

b01nov10b-3



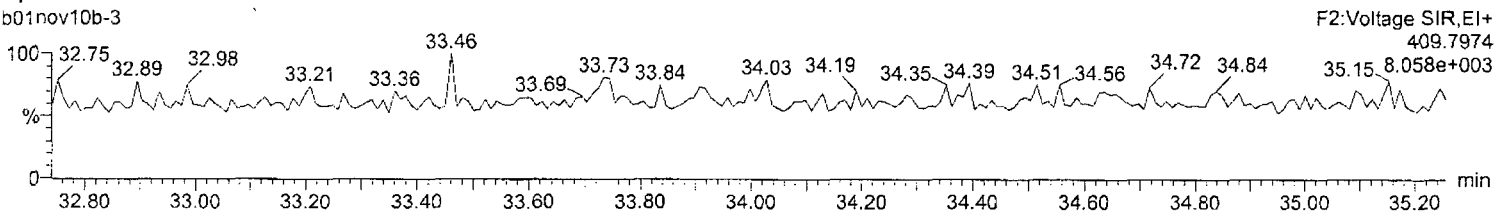
¹³C-12378-PeCDF

b01nov10b-3



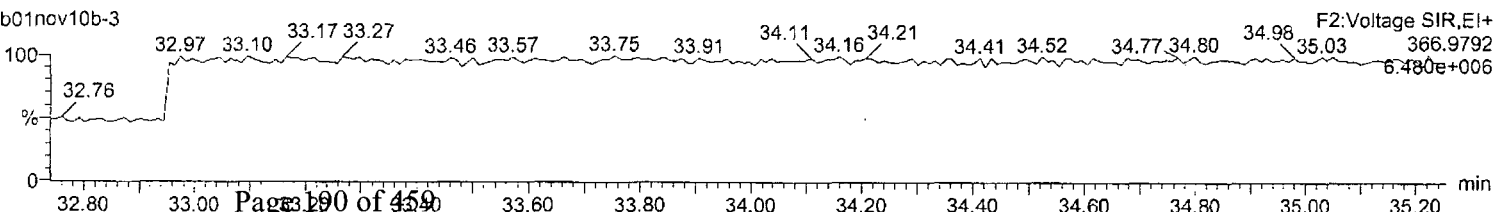
HpDPE

b01nov10b-3



Lock Mass F2

b01nov10b-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

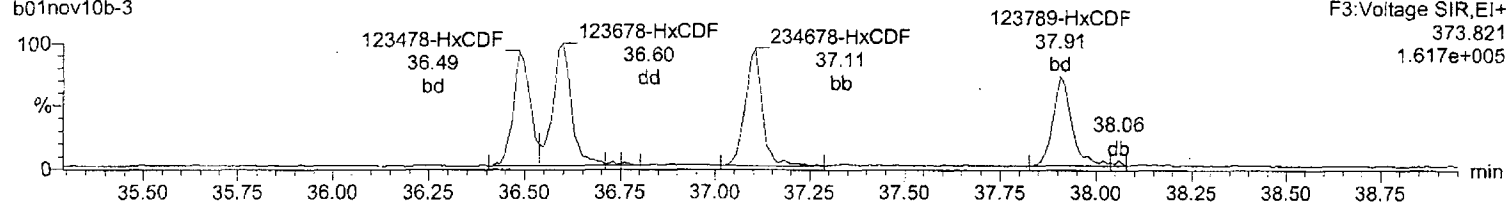
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-3, Date: 01-Nov-2010, Time: 19:16:15, ID: CS0.5 UD101022-01, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

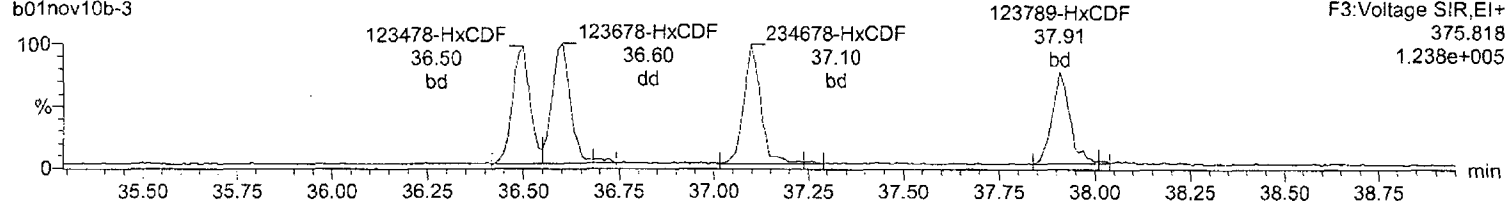
Total-hexafurans

b01nov10b-3



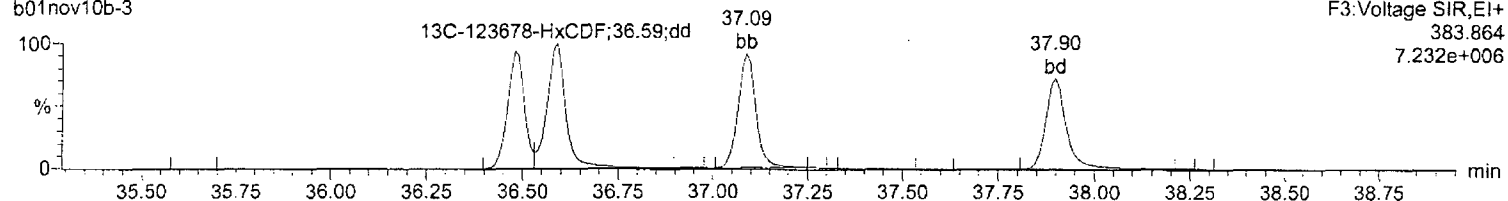
Total-hexafurans

b01nov10b-3



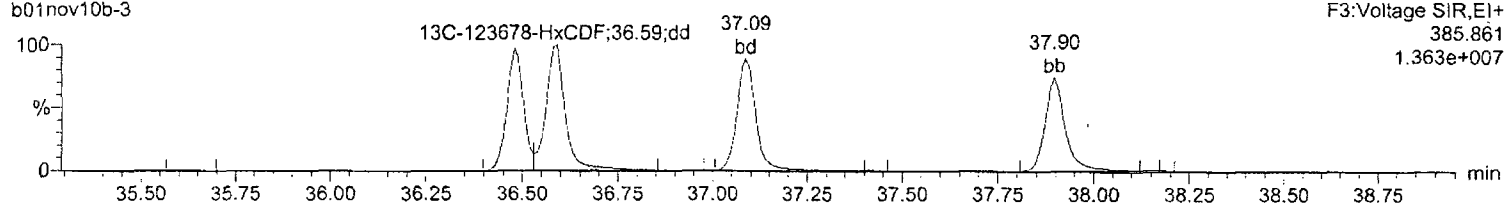
13C-123678-HxCDF

b01nov10b-3



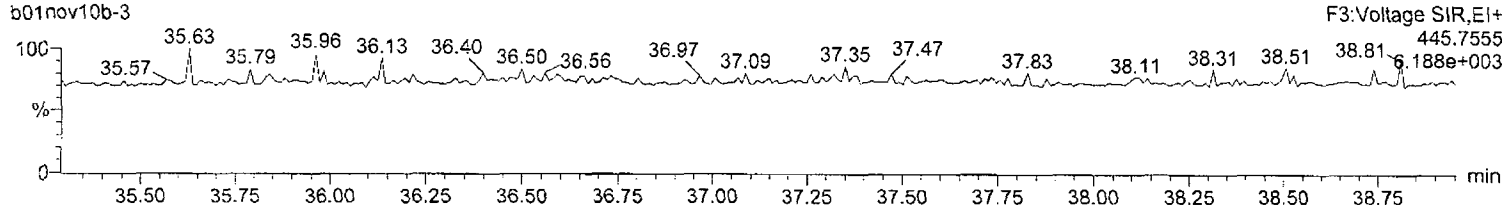
13C-123678-HxCDF

b01nov10b-3



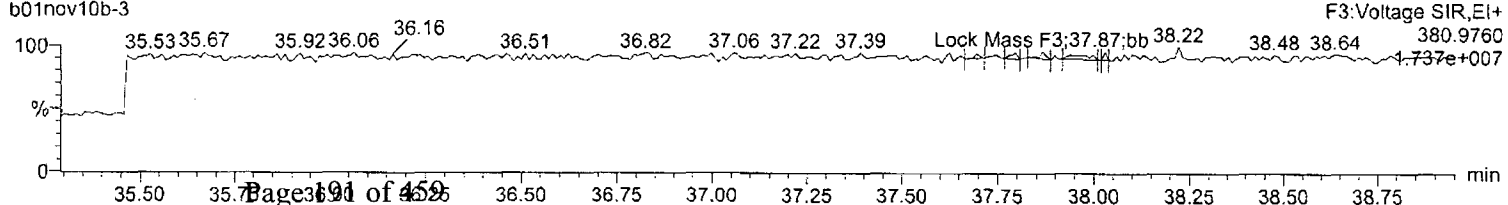
OcDPE

b01nov10b-3



Lock Mass F3

b01nov10b-3



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

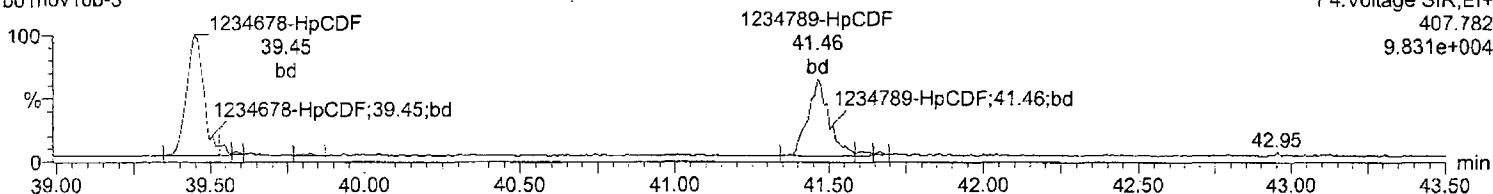
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-3, Date: 01-Nov-2010, Time: 19:16:15, ID: CS0.5 UD101022-01, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

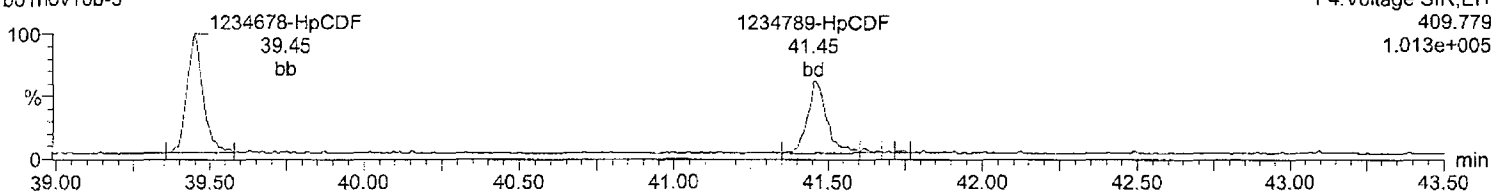
Total-heptafurans

b01nov10b-3



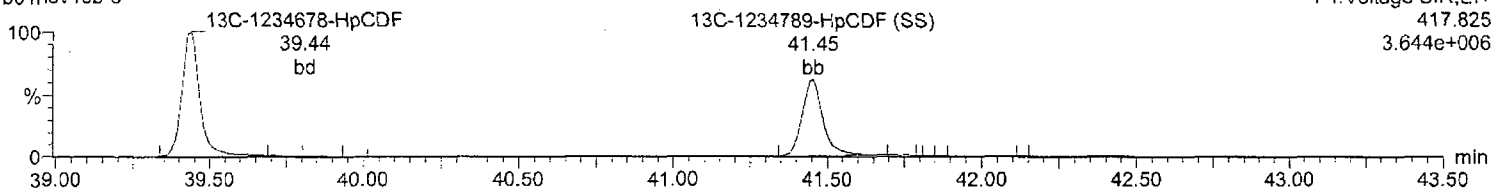
Total-heptafurans

b01nov10b-3



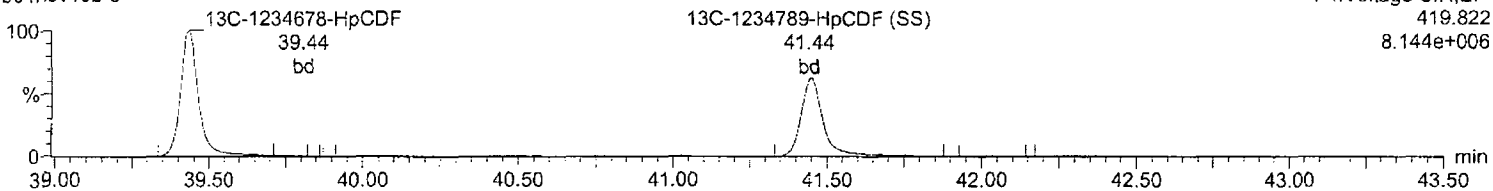
13C-1234678-HpCDF

b01nov10b-3



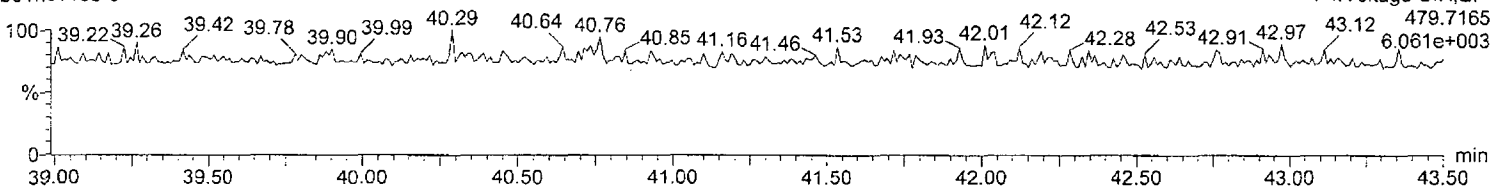
13C-1234678-HpCDF

b01nov10b-3



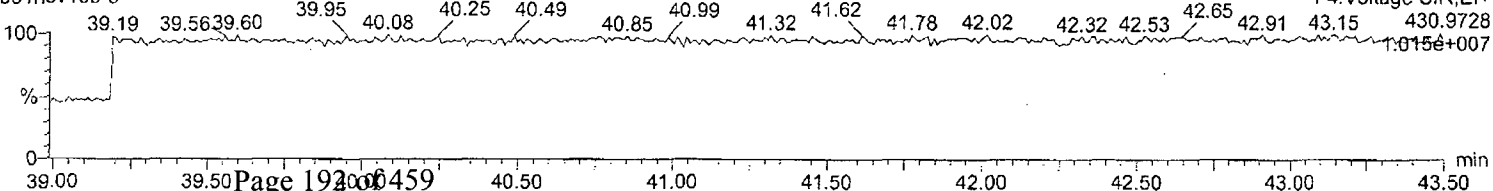
NoDPE

b01nov10b-3



Lock Mass F4

b01nov10b-3



Quantify Sample Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

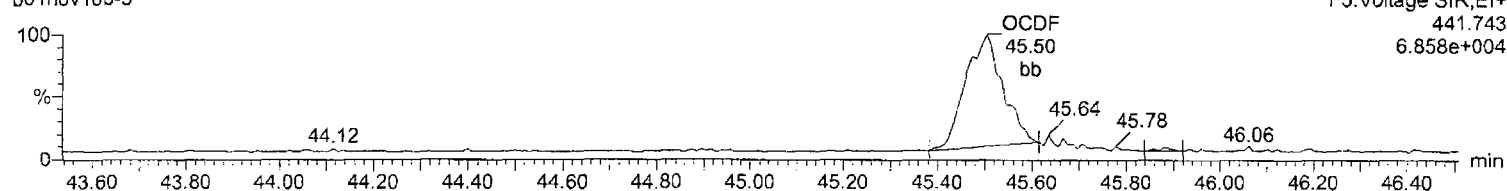
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-3, Date: 01-Nov-2010, Time: 19:16:15, ID: CS0.5 UD101022-01, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

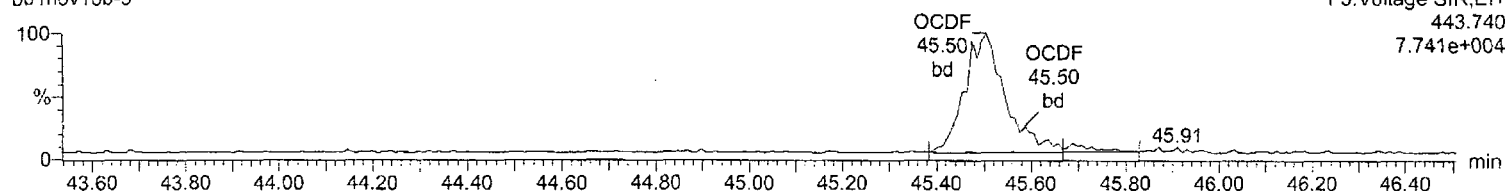
OCDF

b01nov10b-3



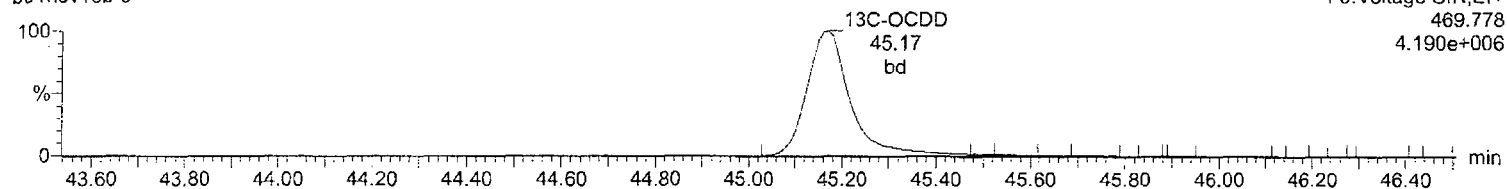
OCDF

b01nov10b-3



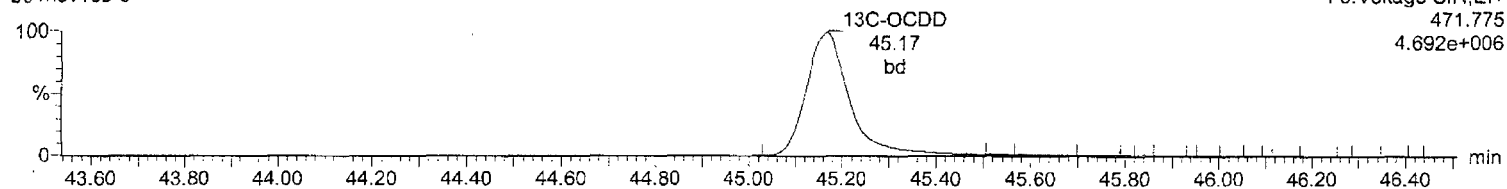
13C-OCDD

b01nov10b-3



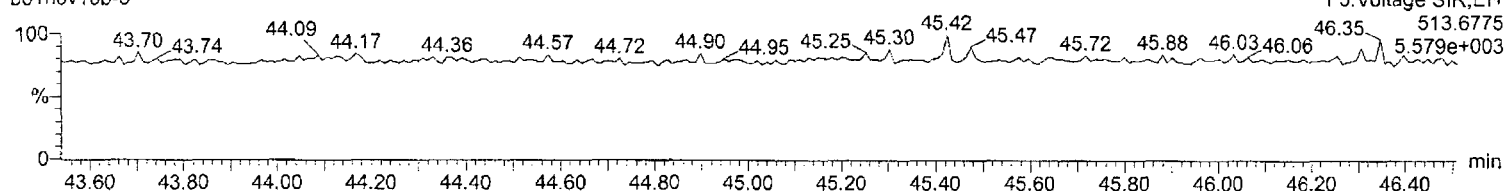
13C-OCDD

b01nov10b-3



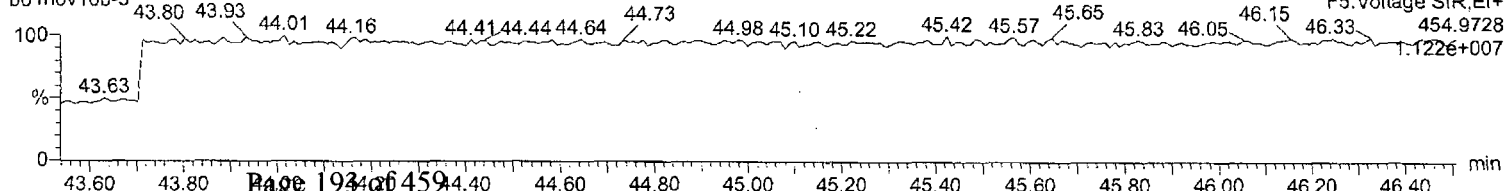
DeDPE

b01nov10b-3



Lock Mass F5

b01nov10b-3



Quantify Sample Summary Report

MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

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Name: b01nov10b-4, Date: 01-Nov-2010, Time: 20:04:39, ID: CS1 UD090323-02, Description: , Job: b01nov10b, Task: HRP763_1, User: MJC

Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	RRF	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
2378-TCDD	2.34e3	2.88e3	5.21e3	31.76	1.00	0.81	NO	0.457	0.926	0.0225	4.38e4	774	56.6	5.99e4	988	60.6	bb
12378-PeCDD	1.31e4	8.13e3	2.12e4	34.56	1.00	1.61	NO	2.367	0.977	0.0466	2.74e5	1357	202.2	1.68e5	1475	113.6	bb
123478-HxCDD	9.88e3	8.07e3	1.79e4	37.23	1.00	1.22	NO	2.387	0.856	0.0560	1.93e5	1232	156.3	1.45e5	1244	116.8	bd
123678-HxCDD	1.10e4	8.53e3	1.95e4	37.33	1.00	1.29	NO	2.409	0.932	0.0519	1.91e5	1232	154.8	1.50e5	1244	120.8	dd
123789-HxCDD	9.57e3	7.41e3	1.70e4	37.58	1.01	1.29	NO	2.339	0.810	0.0580	1.62e5	1232	131.2	1.34e5	1244	107.8	bb
1234678-HpCDD	7.24e3	7.20e3	1.44e4	40.77	1.00	1.01	NO	2.380	0.957	0.0782	9.17e4	1195	76.7	9.16e4	844	108.5	bd
OCDD	1.06e4	1.23e4	2.28e4	45.19	1.00	0.86	NO	4.682	0.932	0.151	1.10e5	774	142.1	1.24e5	1545	80.4	bd
2378-TCDF	3.44e3	4.69e3	8.13e3	31.22	1.00	0.73	NO	0.474	0.932	0.0187	5.54e4	663	83.5	7.56e4	1197	63.1	bb
12378-PeCDF	2.13e4	1.35e4	3.48e4	33.72	1.00	1.58	NO	2.412	0.901	0.0421	4.80e5	1343	357.0	3.16e5	3194	99.1	bd
23478-PeCDF	2.03e4	1.31e4	3.34e4	34.35	1.02	1.55	NO	2.368	0.866	0.0430	4.57e5	1343	340.2	3.11e5	3194	97.4	bb
123478-HxCDF	1.54e4	1.23e4	2.77e4	36.49	1.00	1.25	NO	2.451	0.891	0.0586	2.91e5	2063	141.0	2.38e5	1525	156.0	bd
123678-HxCDF	1.70e4	1.39e4	3.09e4	36.60	1.00	1.22	NO	2.350	0.994	0.0503	3.10e5	2063	150.5	2.57e5	1525	168.6	dd
234678-HxCDF	1.58e4	1.25e4	2.83e4	37.11	1.01	1.27	NO	2.378	0.909	0.0557	2.78e5	2063	134.7	2.20e5	1525	143.9	bd
123789-HxCDF	1.33e4	1.04e4	2.36e4	37.92	1.04	1.28	NO	2.398	0.759	0.0672	2.03e5	2063	98.5	1.68e5	1525	110.3	bb
1234678-HpCDF	1.29e4	1.18e4	2.47e4	39.45	1.00	1.09	NO	2.339	1.195	0.0467	1.90e5	1061	178.9	1.75e5	1400	125.3	bb
1234789-HpCDF	8.72e3	8.95e3	1.77e4	41.46	1.05	0.97	NO	2.296	0.854	0.0641	1.24e5	1061	116.6	1.21e5	1400	86.3	bd
OCDF	1.24e4	1.37e4	2.61e4	45.51	1.01	0.91	NO	4.326	1.066	0.127	1.24e5	1141	108.8	1.40e5	1268	110.1	bd
13C-2378-TCDD	4.96e5	6.29e5	1.12e6	31.75	1.01	0.79	NO	102.228	1.145	0.0616	1.02e7	2533	4041.6	1.26e7	1591	7914.0	bb
13C-12378-PeCDD	5.33e5	3.36e5	8.69e5	34.54	1.10	1.59	NO	93.078	0.884	0.122	1.08e7	4256	2544.2	6.73e6	2677	2514.7	bb
13C-123678-HxCDD	4.70e5	3.68e5	8.38e5	37.32	0.99	1.28	NO	98.328	1.093	0.155	8.30e6	3719	2231.1	6.35e6	3448	1842.3	db
13C-1234678-HpCDD	3.16e5	2.88e5	6.04e5	40.74	1.08	1.10	NO	98.307	0.787	0.195	4.07e6	3435	1186.0	3.83e6	3088	1240.7	bd
13C-OCDD	4.67e5	5.12e5	9.79e5	45.17	1.20	0.91	NO	190.952	0.638	0.368	4.41e6	4486	983.9	4.83e6	5761	839.2	bd
13C-2378-TCDF	7.70e5	9.74e5	1.74e6	31.21	1.00	0.79	NO	97.449	1.775	0.0272	1.34e7	1284	10441.6	1.66e7	1680	9895.2	bb
13C-12378-PeCDF	9.44e5	5.99e5	1.54e6	33.71	1.08	1.58	NO	92.782	1.570	0.115	2.12e7	5008	4225.5	1.35e7	6587	2051.5	bd
13C-123678-HxCDF	4.24e5	8.20e5	1.24e6	36.59	0.97	0.52	NO	99.492	1.622	0.214	6.89e6	6936	993.8	1.34e7	7644	1752.6	dd
13C-1234678-HpCDF	2.52e5	5.75e5	8.27e5	39.44	1.05	0.44	NO	99.805	1.079	0.178	3.77e6	3304	1141.4	8.52e6	4738	1798.9	bb
13C-1234-TCDD	4.32e5	5.51e5	9.83e5	31.34	0.00	0.79	NO	100.000	1.000	0.0690	7.89e6	2533	3113.8	9.74e6	1591	6121.1	bb
13C-123789-HxCDD	4.28e5	3.39e5	7.67e5	37.56	0.00	1.26	NO	100.000	1.000	0.172	6.98e6	3719	1876.8	5.52e6	3448	1601.0	bb
37Cl-2378-TCDD (SS)	5.51e3		5.51e3	31.76	1.00			0.465	0.980	0.0156	1.18e5	1273	92.6				bb
13C-23478-PeCDF (SS)	8.80e5	5.64e5	1.44e6	34.34	1.02	1.56	NO	100.221	0.935	0.108	2.01e7	5008	4005.6	1.27e7	6587	1931.2	bb
13C-123478-HxCDF (SS)	3.46e5	6.72e5	1.02e6	36.48	1.00	0.52	NO	101.046	0.818	0.267	6.94e6	6936	1001.3	1.35e7	7644	1761.1	bd
13C-123478-HxCDD (SS)	4.09e5	3.22e5	7.31e5	37.23	1.00	1.27	NO	101.255	0.872	0.169	7.36e6	3719	1978.4	6.02e6	3448	1745.5	bd
13C-1234789-HpCDF (SS)	1.88e5	4.31e5	6.19e5	41.45	1.05	0.44	NO	98.982	0.748	0.258	2.45e6	3304	740.6	5.34e6	4738	1127.8	bb

Quantify Sample Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

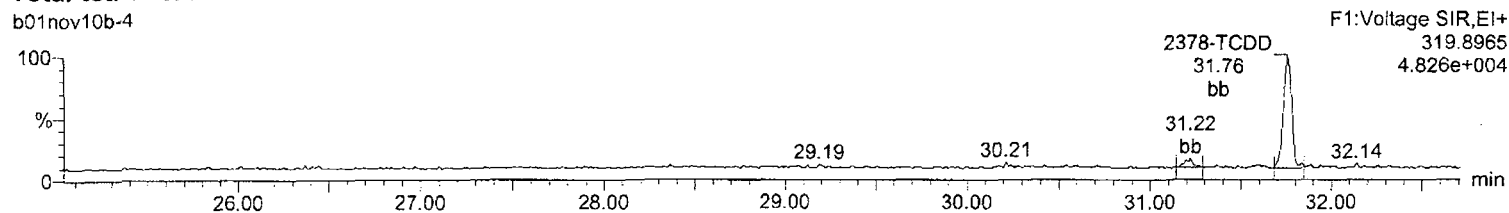
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-4, Date: 01-Nov-2010, Time: 20:04:39, ID: CS1 UD090323-02, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

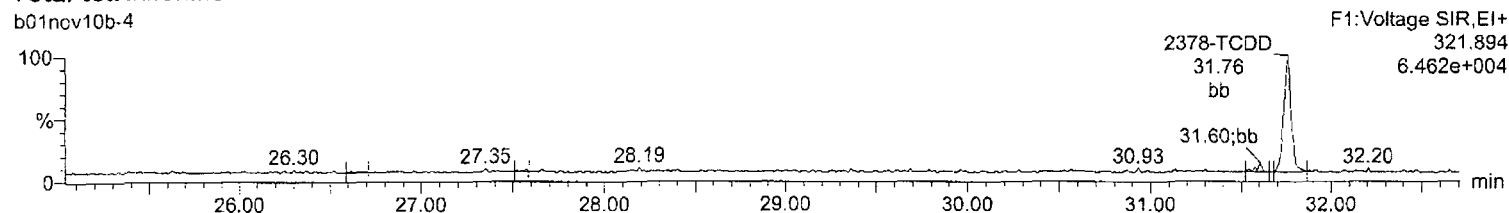
Total-tetradoxins

b01nov10b-4



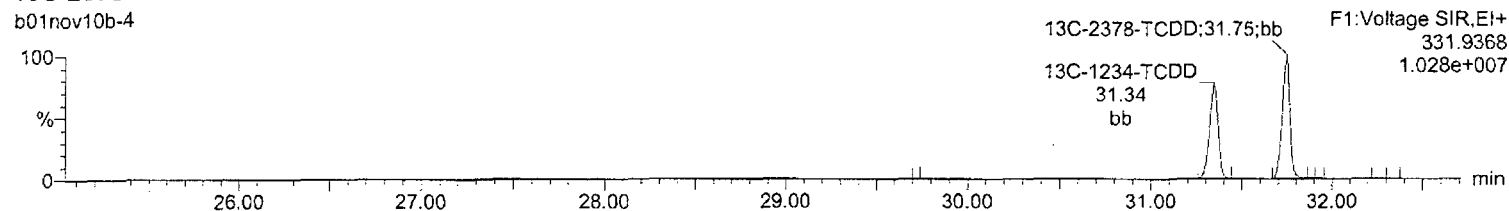
Total-tetradoxins

b01nov10b-4



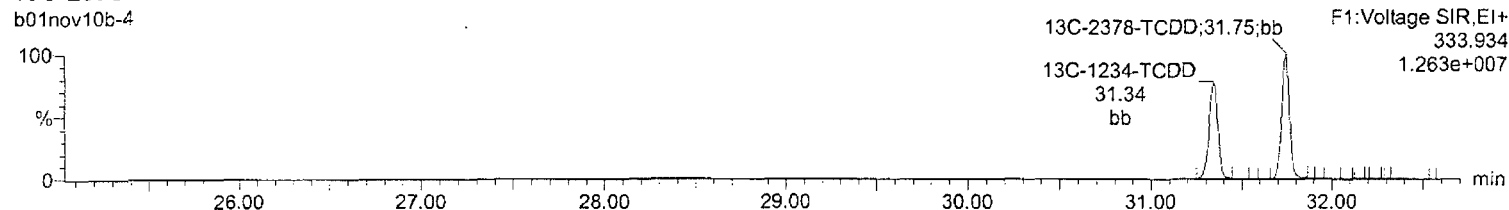
13C-2378-TCDD

b01nov10b-4



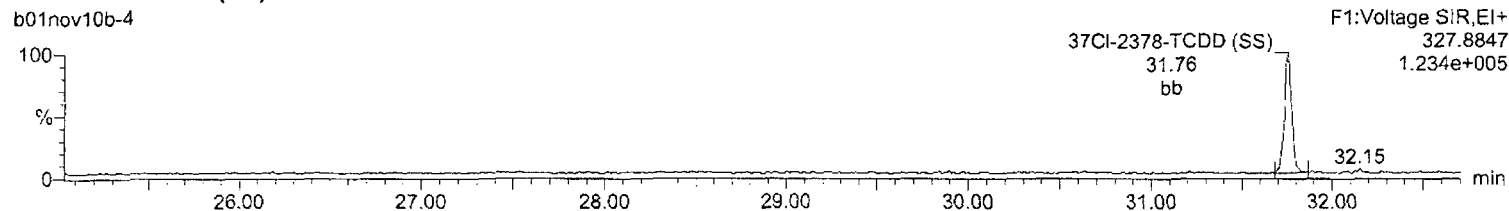
13C-2378-TCDD

b01nov10b-4



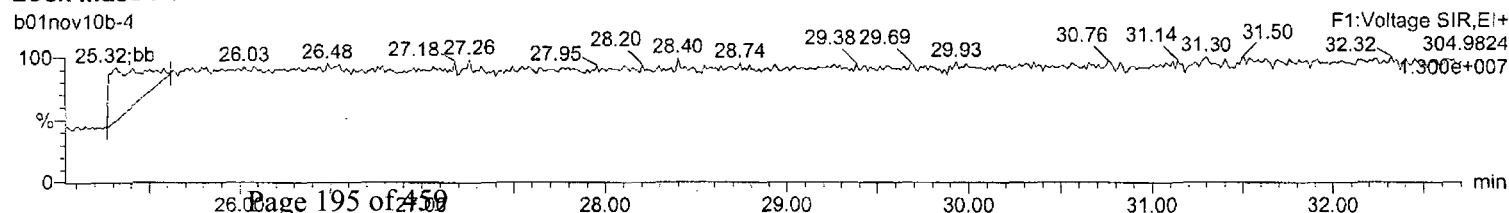
37Cl-2378-TCDD (SS)

b01nov10b-4



Lock Mass F1

b01nov10b-4



Quantify Sample Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

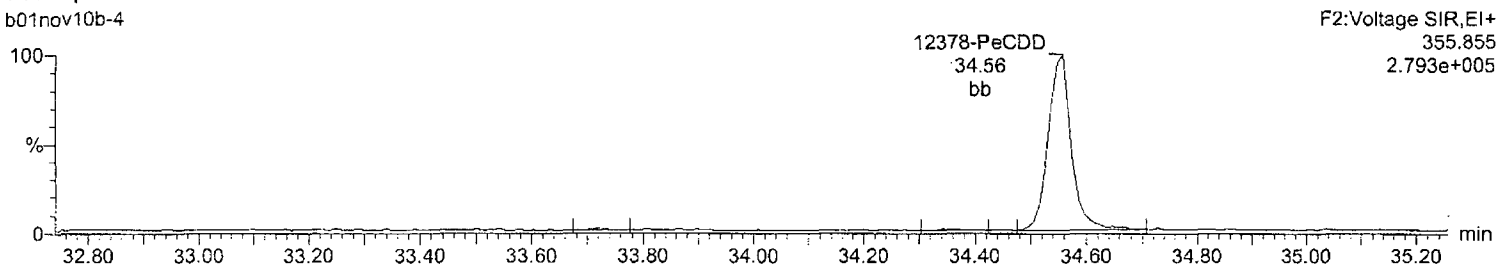
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Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-4, Date: 01-Nov-2010, Time: 20:04:39, ID: CS1 UD090323-02, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

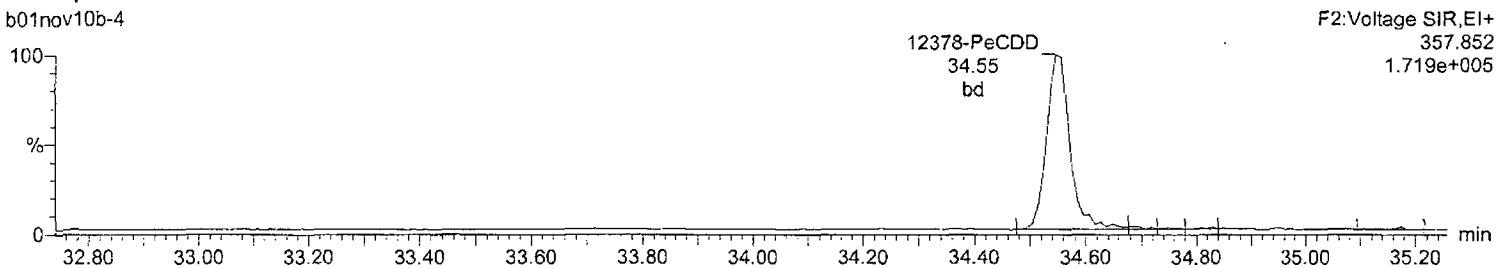
Total-pentadioxins

b01nov10b-4



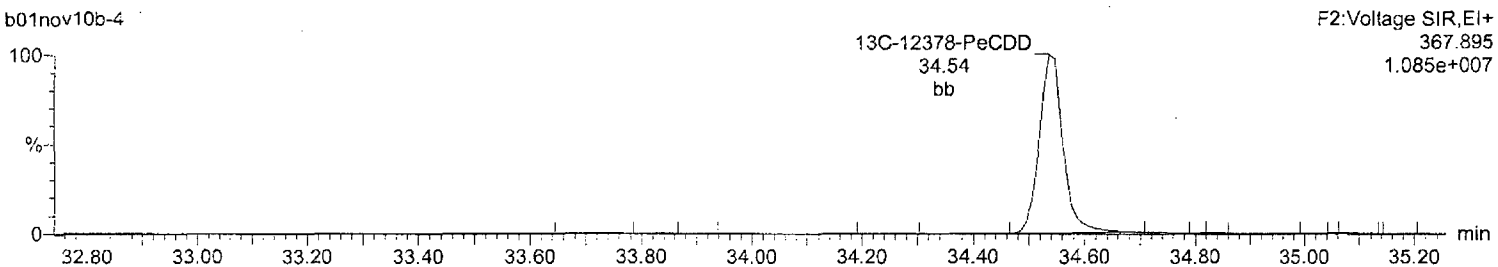
Total-pentadioxins

b01nov10b-4



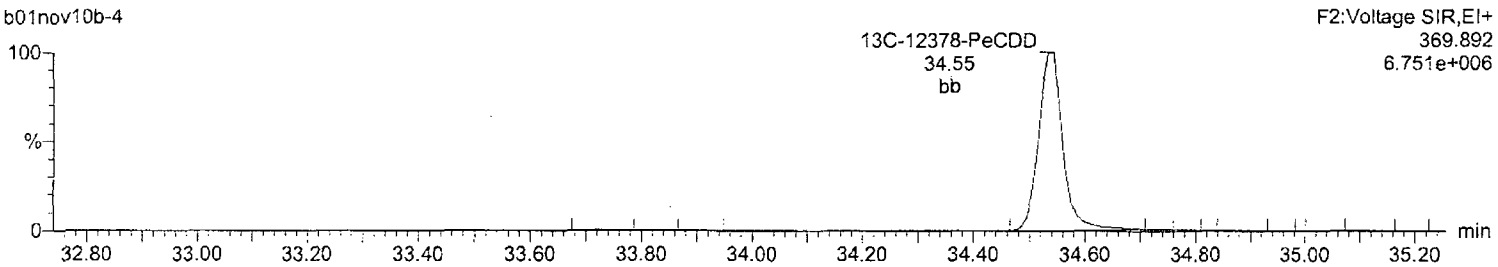
13C-12378-PeCDD

b01nov10b-4



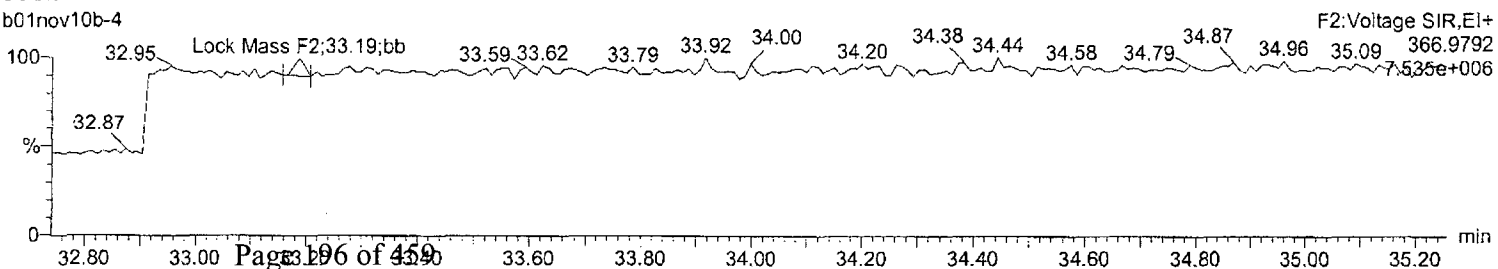
13C-12378-PeCDD

b01nov10b-4



Lock Mass F2

b01nov10b-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

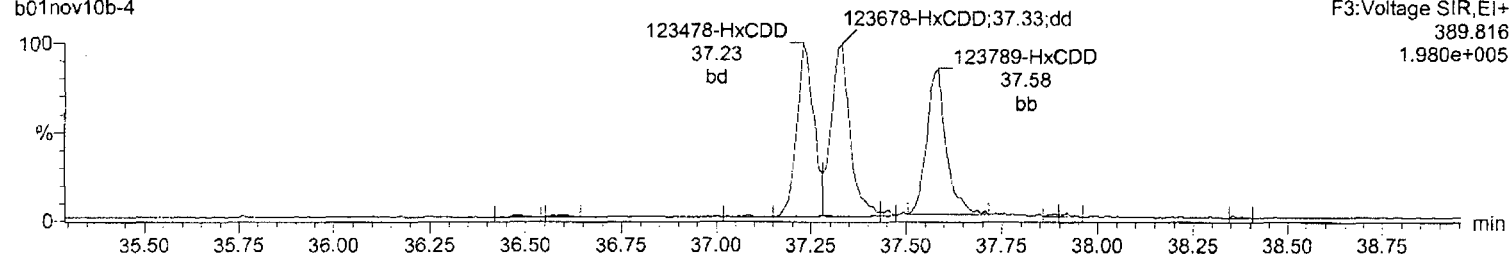
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Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-4, Date: 01-Nov-2010, Time: 20:04:39, ID: CS1 UD090323-02, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

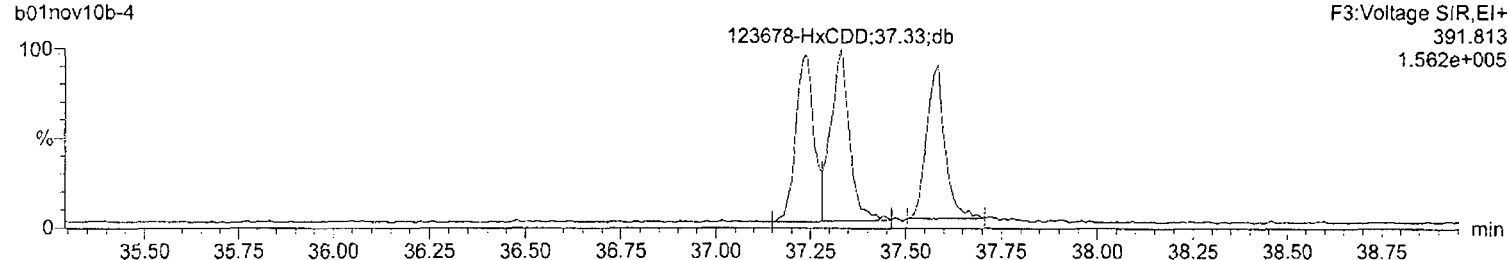
Total-hexadioxins

b01nov10b-4



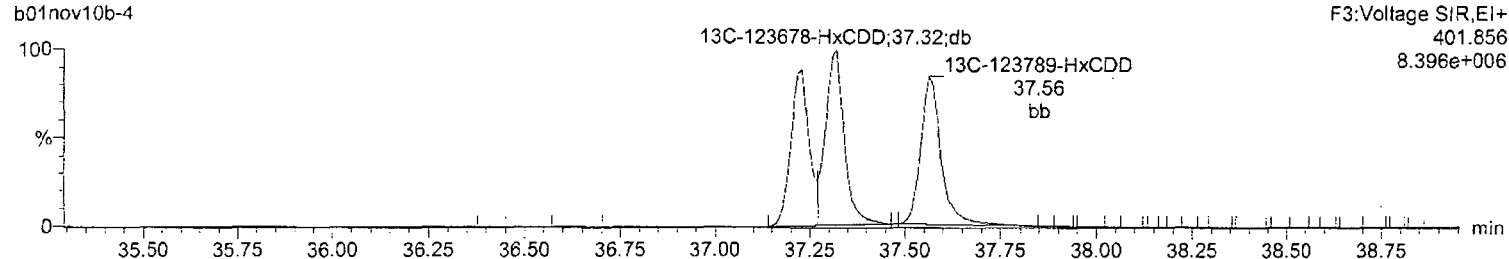
Total-hexadioxins

b01nov10b-4



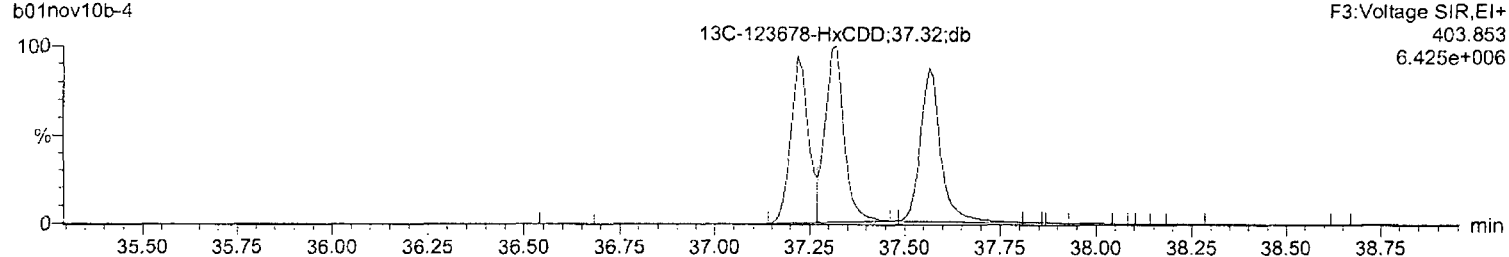
13C-123678-HxCDD

b01nov10b-4



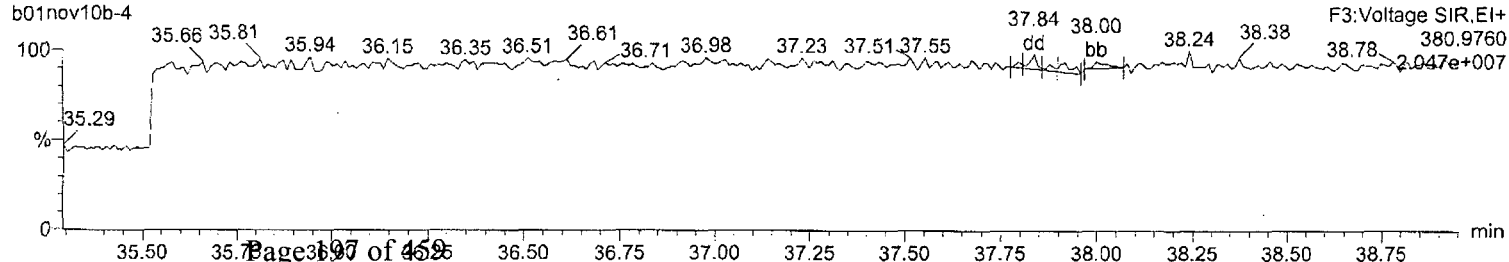
13C-123678-HxCDD

b01nov10b-4



Lock Mass F3

b01nov10b-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

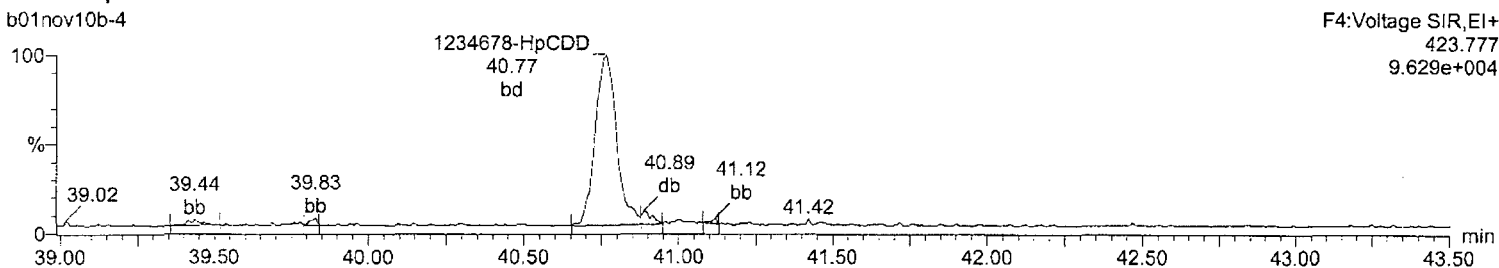
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-4, Date: 01-Nov-2010, Time: 20:04:39, ID: CS1 UD090323-02, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

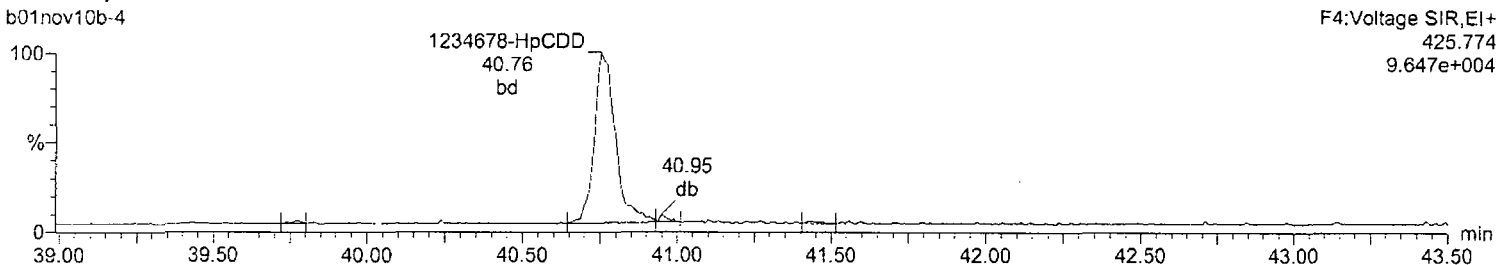
Total-heptadioxins

b01nov10b-4



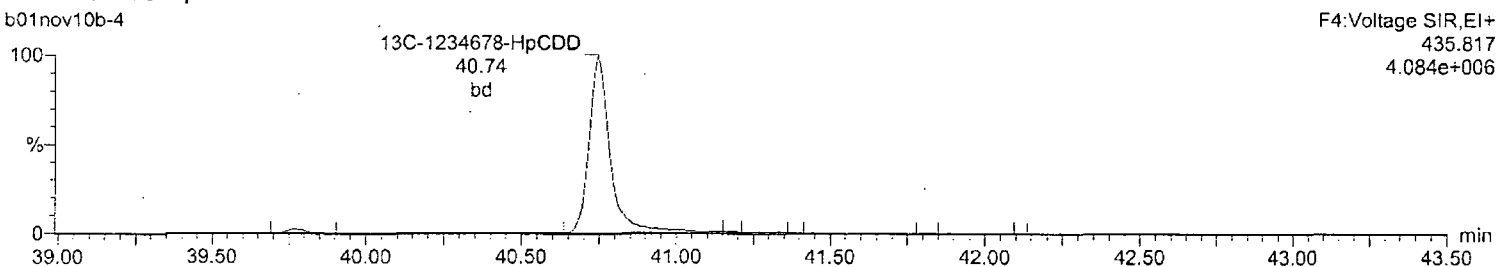
Total-heptadioxins

b01nov10b-4



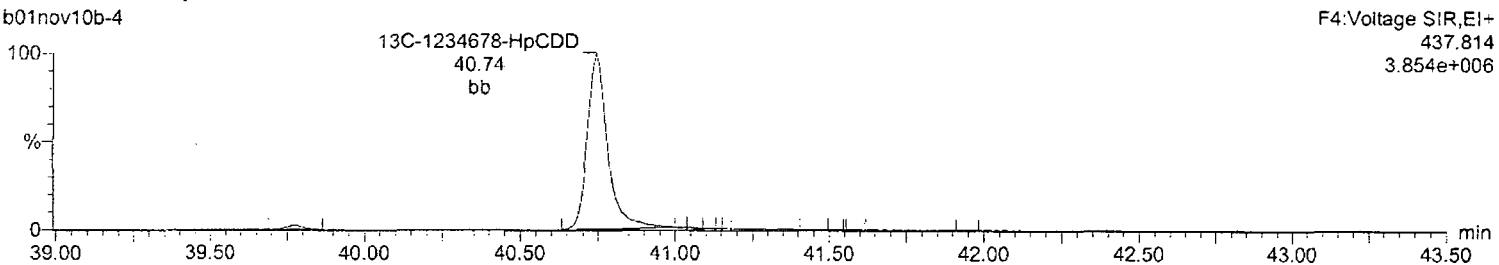
¹³C-1234678-HpCDD

b01nov10b-4



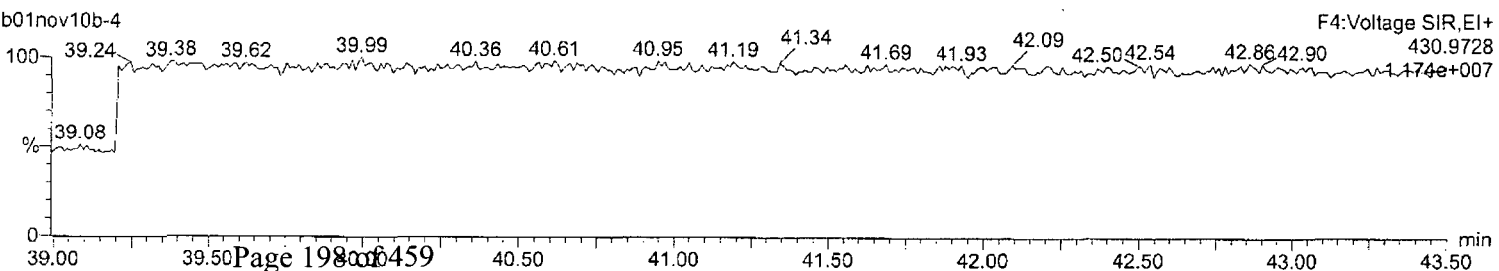
¹³C-1234678-HpCDD

b01nov10b-4



Lock Mass F4

b01nov10b-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

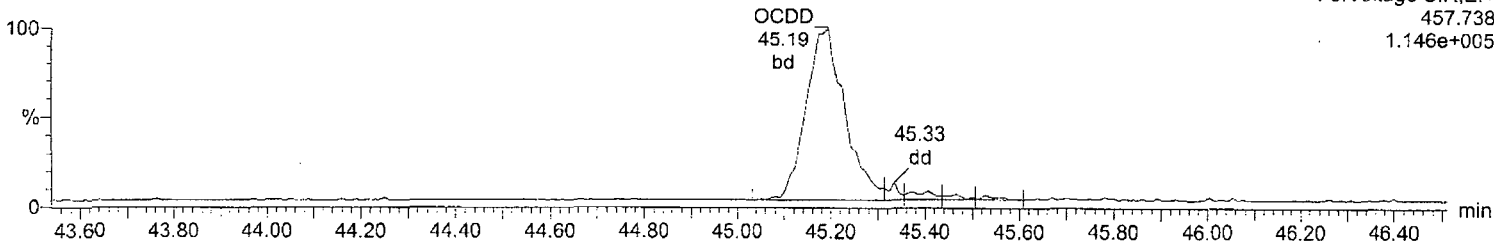
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-4, Date: 01-Nov-2010, Time: 20:04:39, ID: CS1 UD090323-02, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

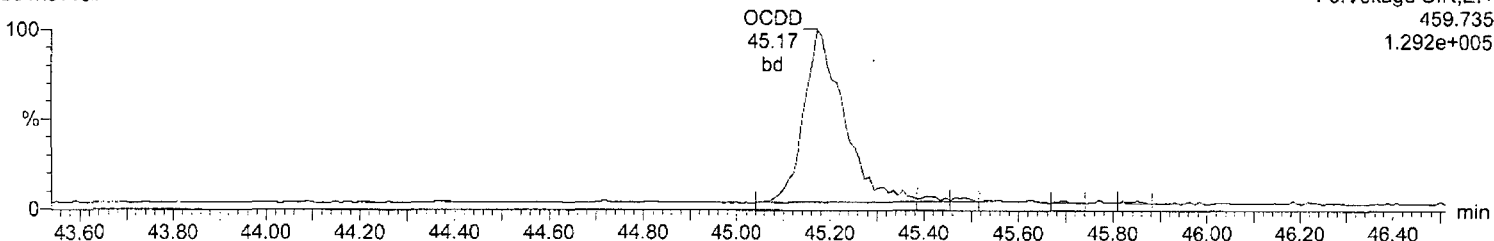
OCDD

b01nov10b-4



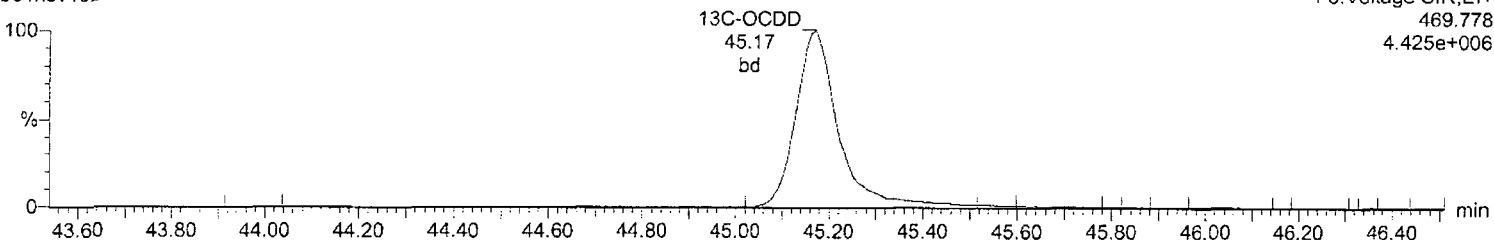
OCDD

b01nov10b-4



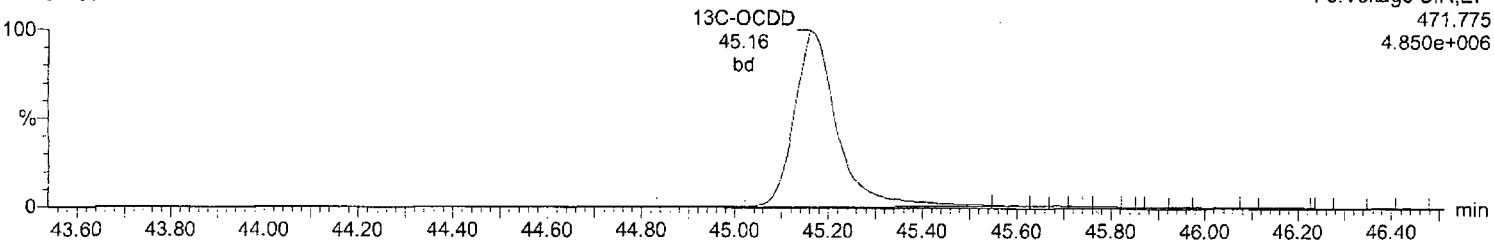
¹³C-OCDD

b01nov10b-4



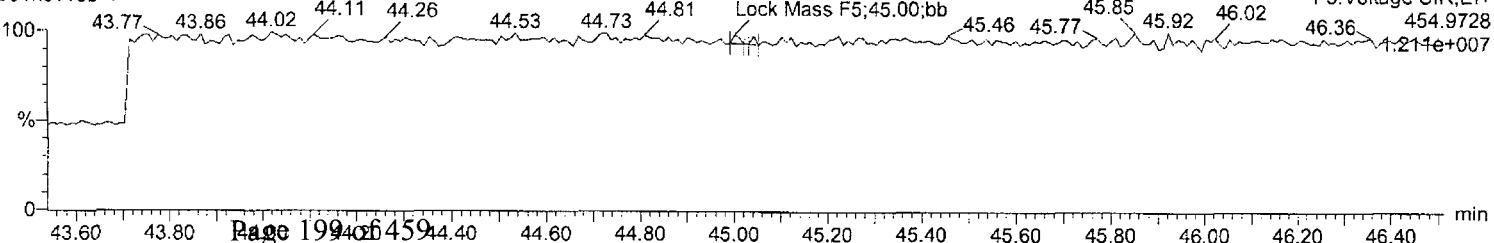
¹³C-OCDD

b01nov10b-4



Lock Mass F5

b01nov10b-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

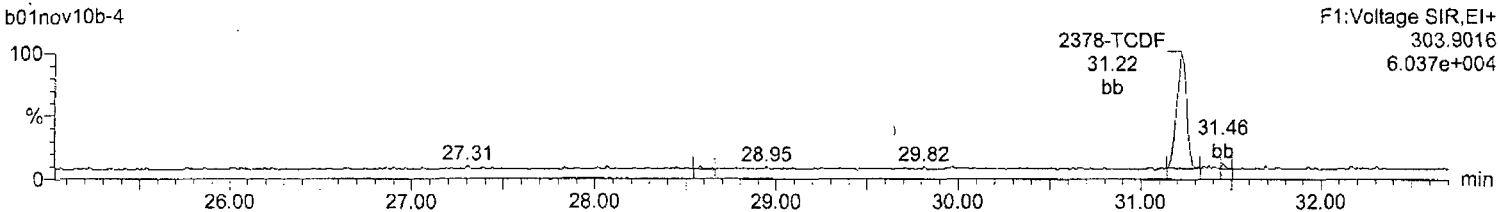
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-4, Date: 01-Nov-2010, Time: 20:04:39, ID: CS1 UD090323-02, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

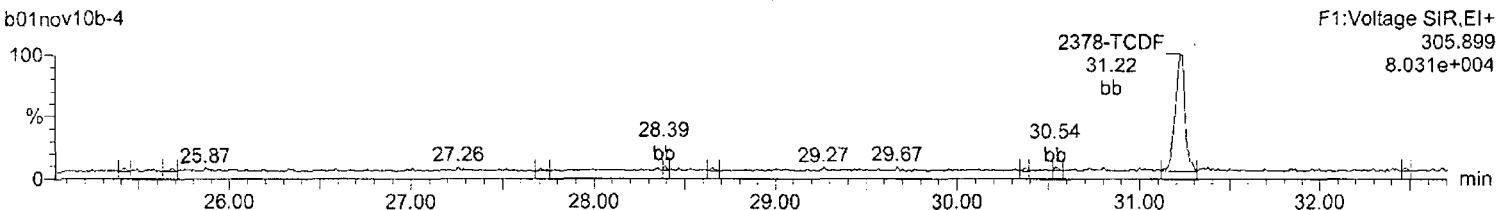
Total-tetrafurans

b01nov10b-4



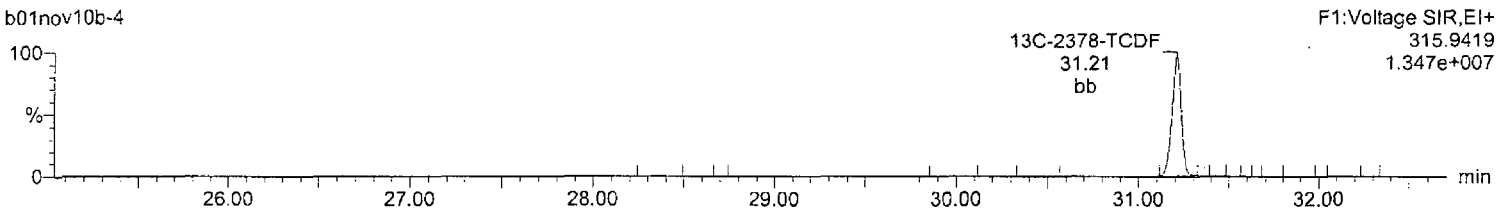
Total-tetrafurans

b01nov10b-4



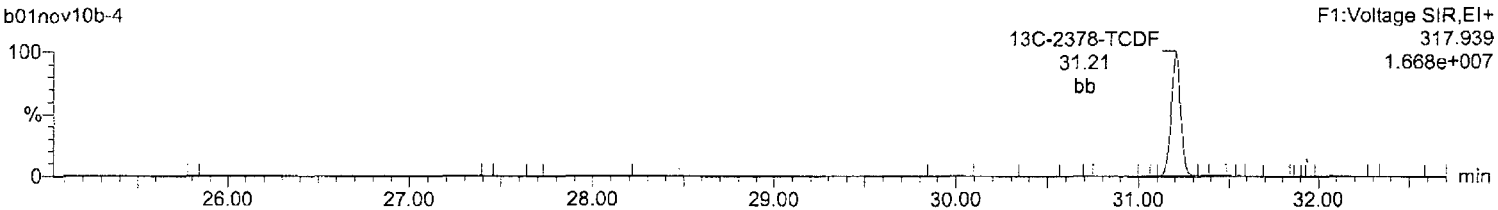
13C-2378-TCDF

b01nov10b-4



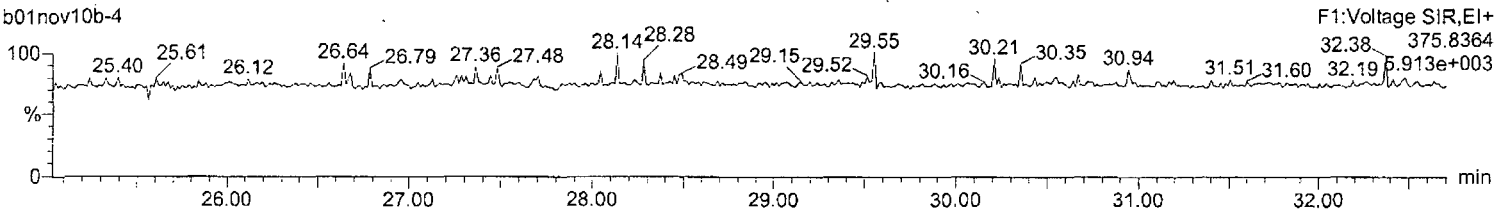
13C-2378-TCDF

b01nov10b-4



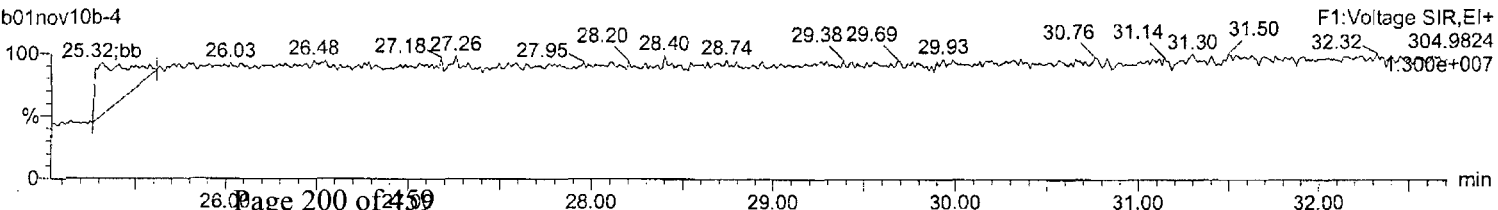
HxDPE

b01nov10b-4



Lock Mass F1

b01nov10b-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

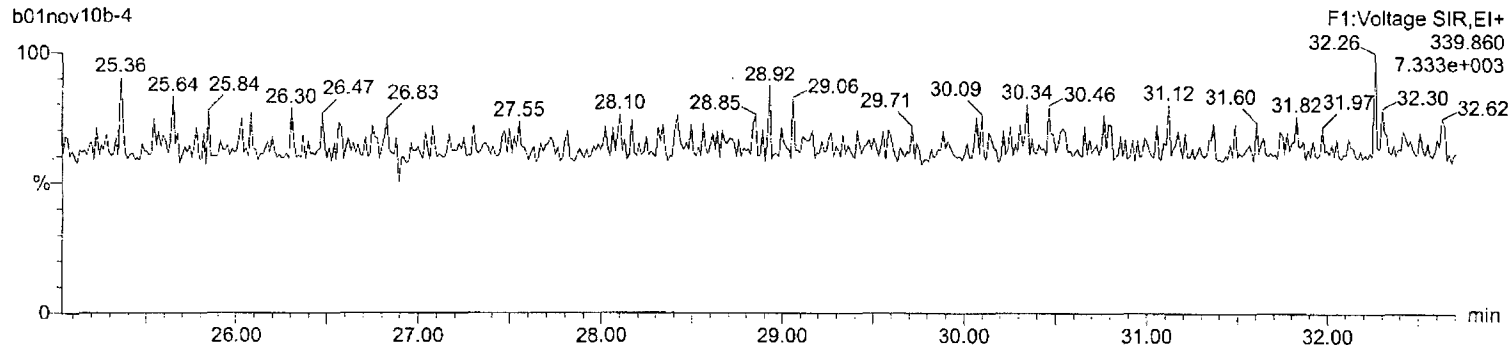
Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-4, Date: 01-Nov-2010, Time: 20:04:39, ID: CS1 UD090323-02, Description: , Job: b01nov10b,

Task: HRP763_1, User: MJC

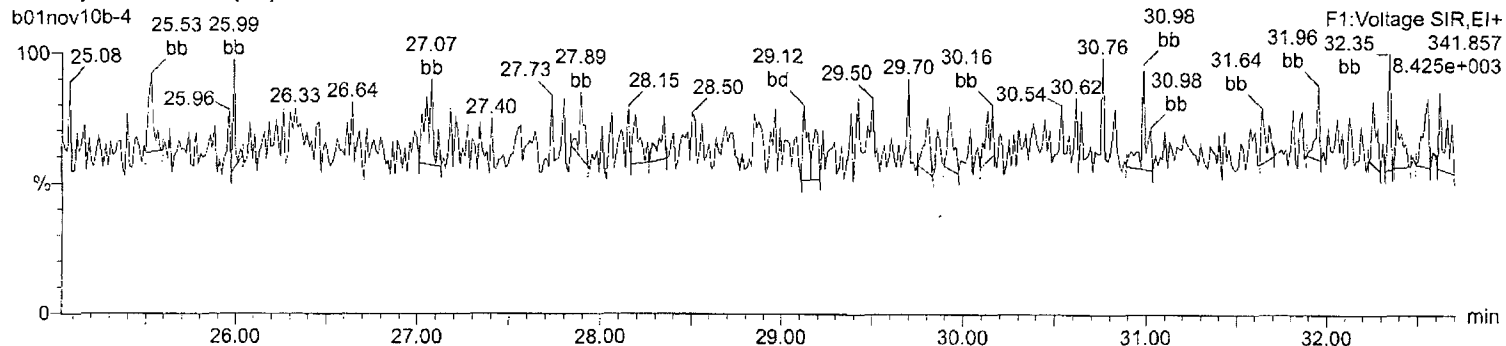
Total-pentafurans (F1)

b01nov10b-4



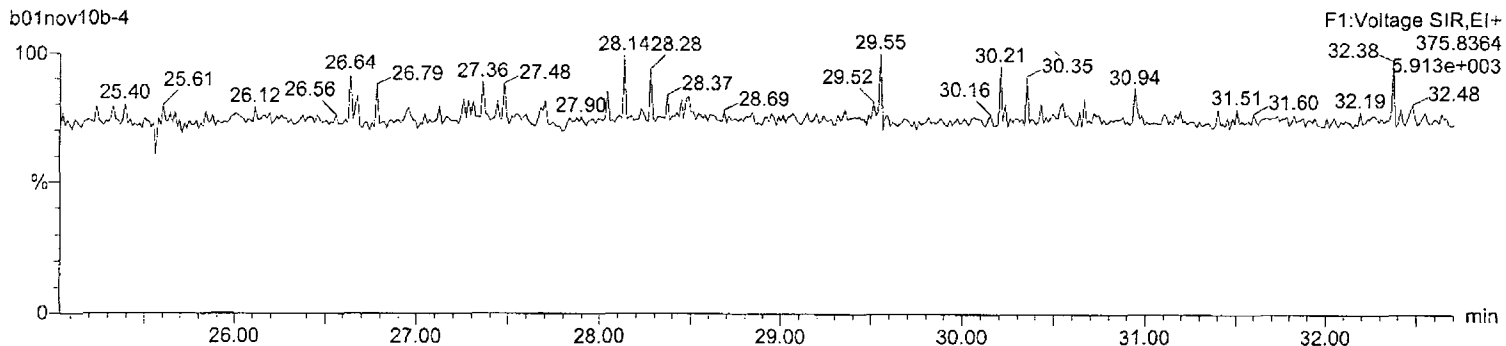
Total-pentafurans (F1)

b01nov10b-4



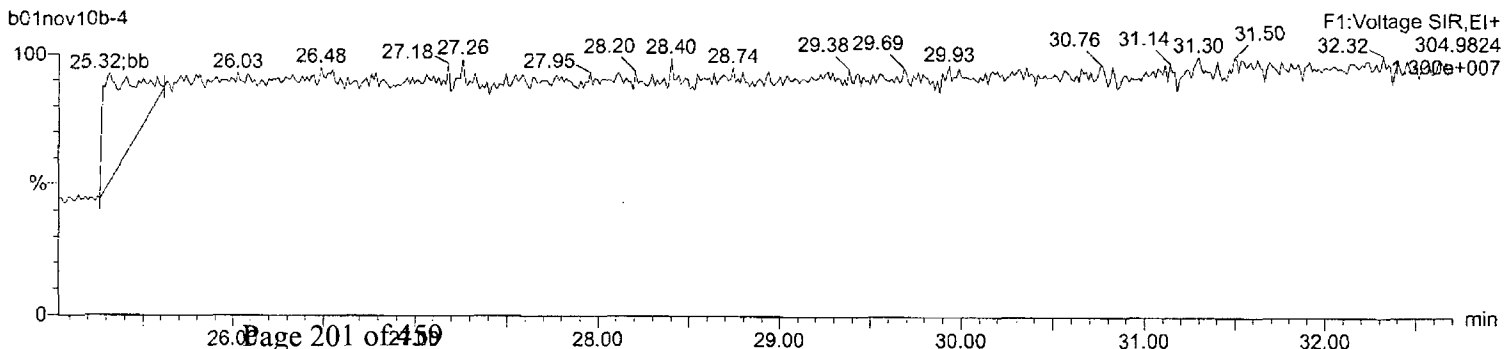
HxDPE

b01nov10b-4



Lock Mass F1

b01nov10b-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

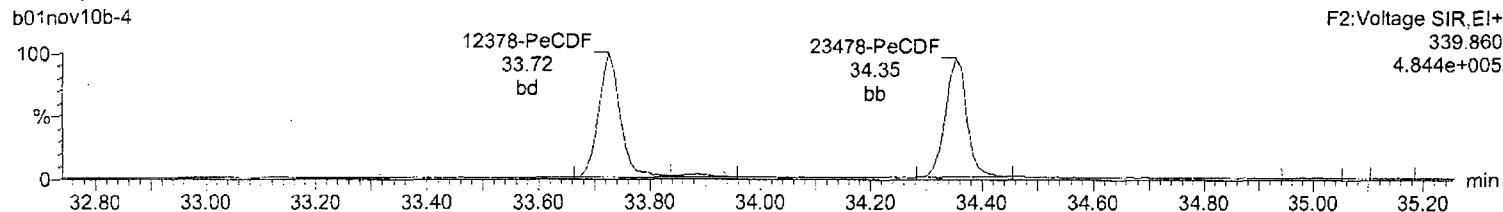
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-4, Date: 01-Nov-2010, Time: 20:04:39, ID: CS1 UD090323-02, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

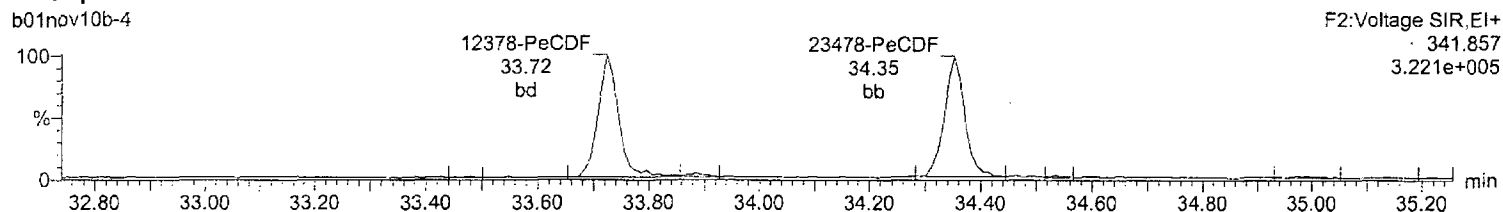
Total-pentafurans

b01nov10b-4



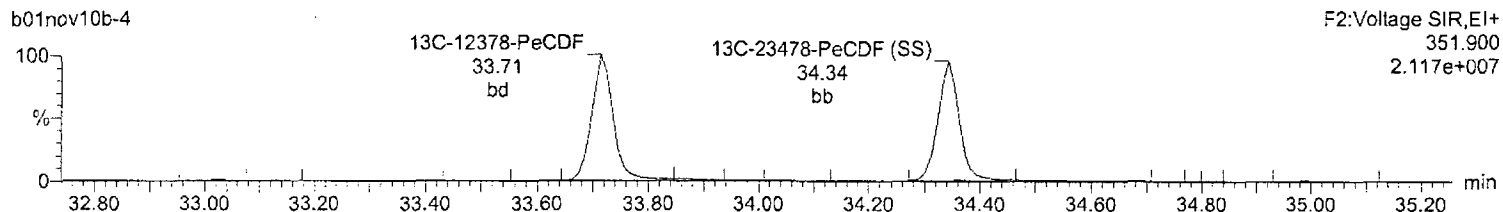
Total-pentafurans

b01nov10b-4



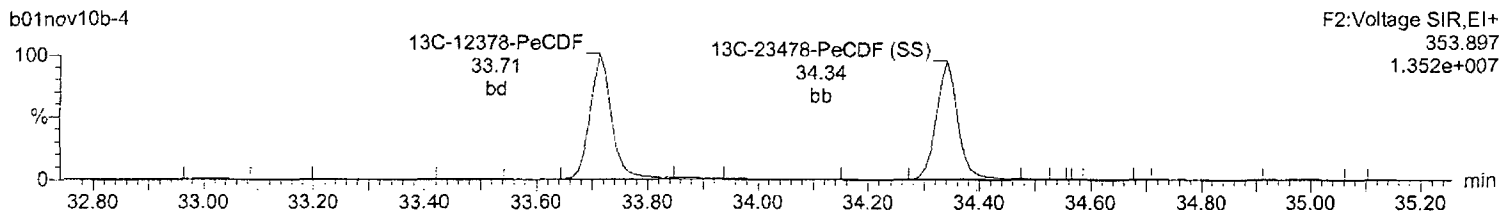
¹³C-12378-PeCDF

b01nov10b-4



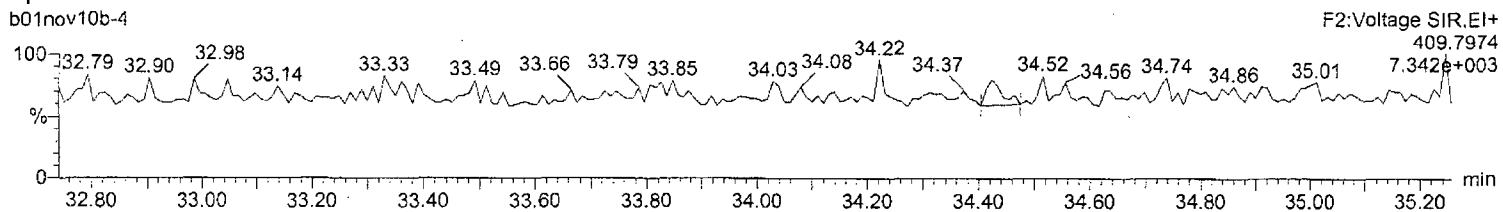
¹³C-12378-PeCDF

b01nov10b-4



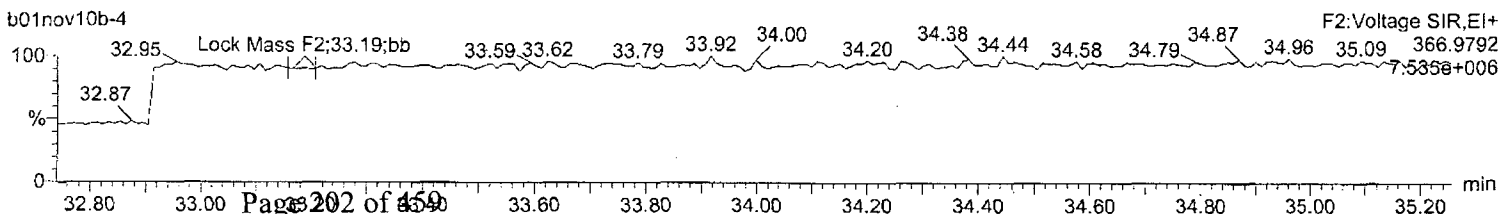
HpDPE

b01nov10b-4



Lock Mass F2

b01nov10b-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

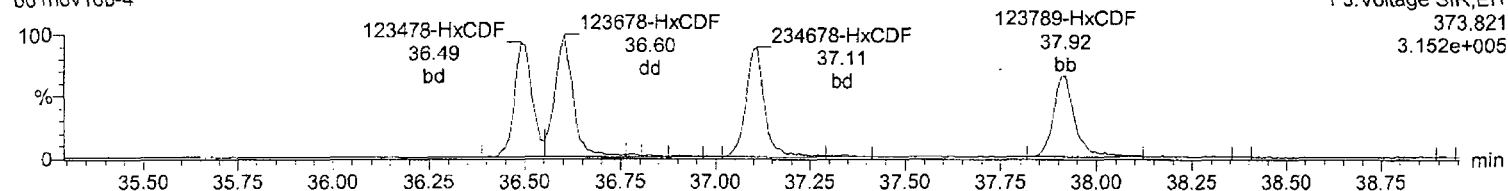
Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-4, Date: 01-Nov-2010, Time: 20:04:39, ID: CS1 UD090323-02, Description: , Job: b01nov10b,

Task: HRP763_1, User: MJC

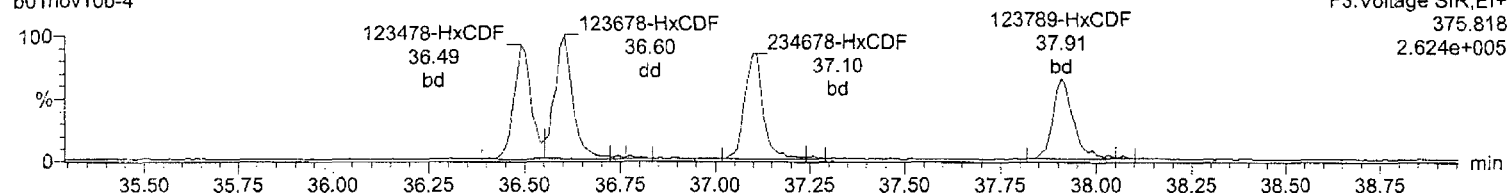
Total-hexafurans

b01nov10b-4



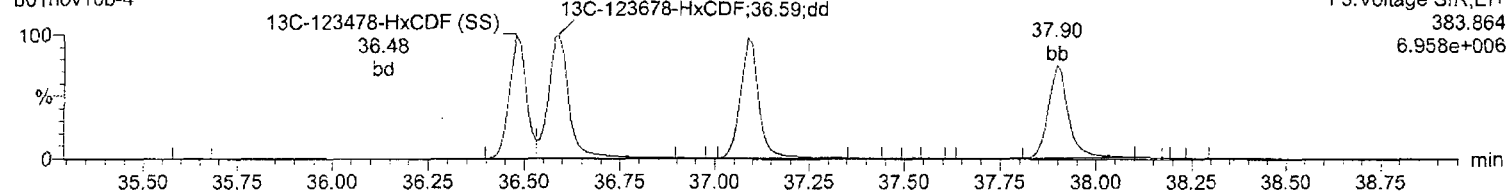
Total-hexafurans

b01nov10b-4



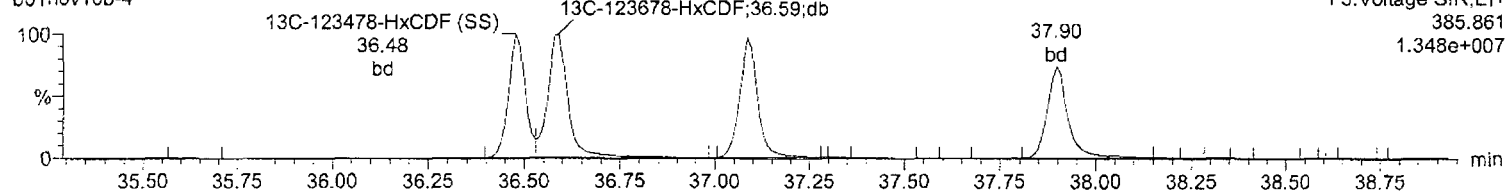
¹³C-123678-HxCDF

b01nov10b-4



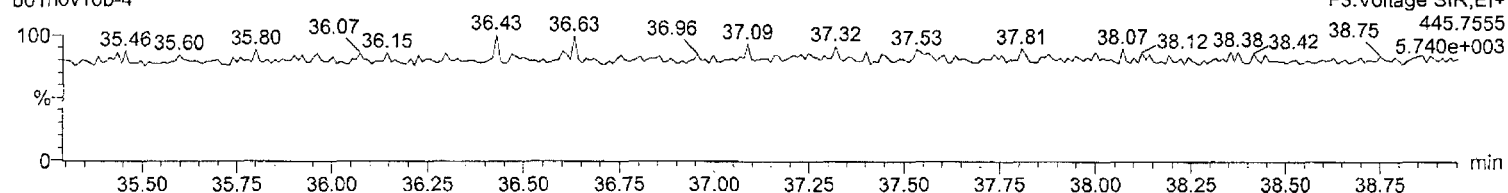
¹³C-123678-HxCDF

b01nov10b-4



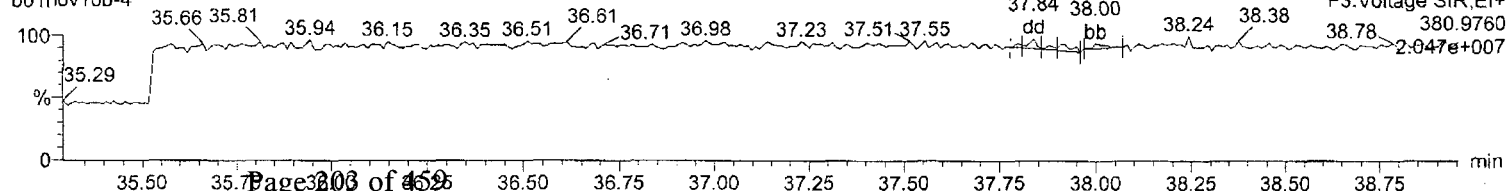
OcDPE

b01nov10b-4



Lock Mass F3

b01nov10b-4



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

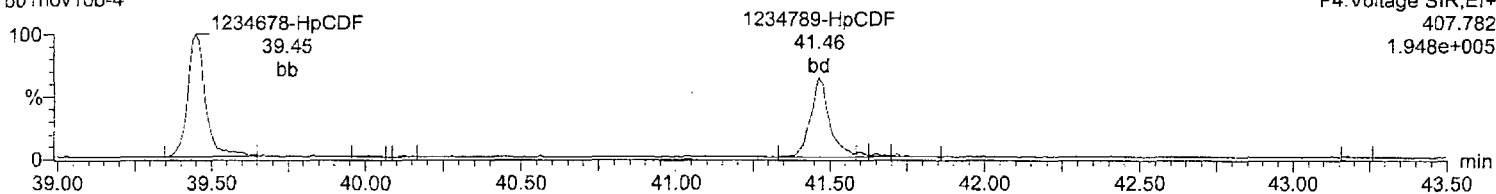
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-4, Date: 01-Nov-2010, Time: 20:04:39, ID: CS1 UD090323-02, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

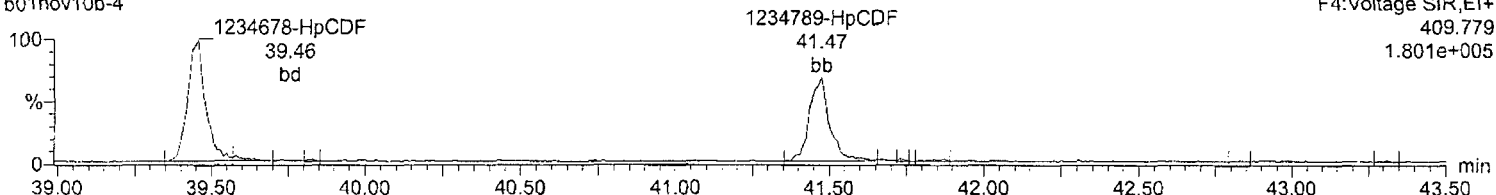
Total-heptafurans

b01nov10b-4



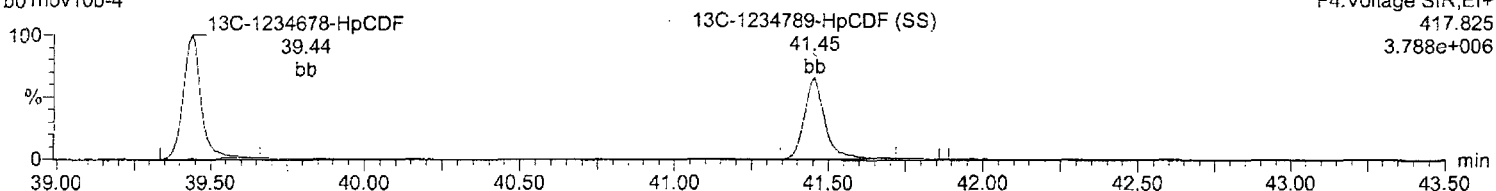
Total-heptafurans

b01nov10b-4



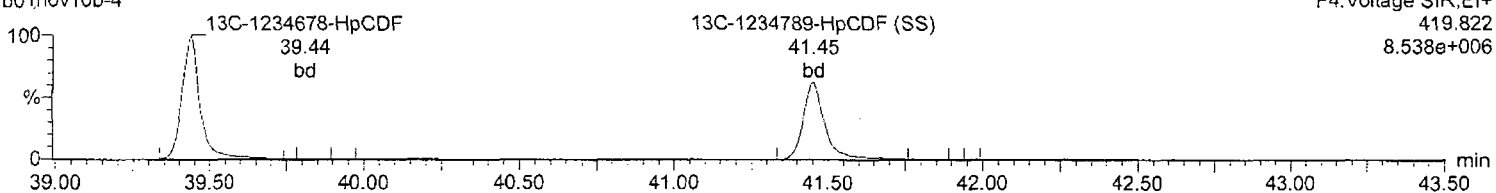
13C-1234678-HpCDF

b01nov10b-4



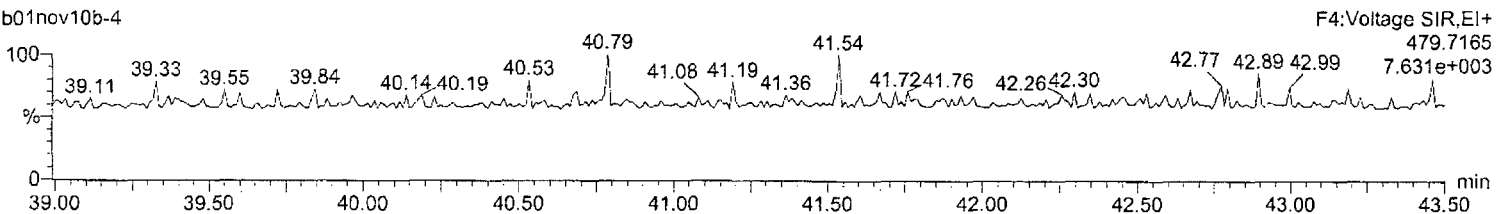
13C-1234678-HpCDF

b01nov10b-4



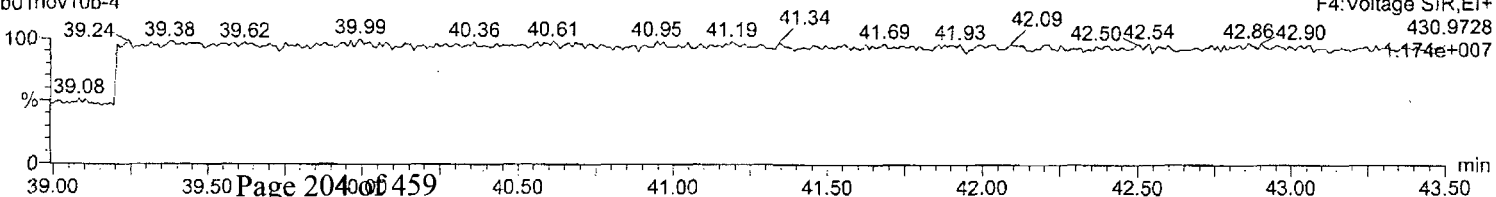
NoDPE

b01nov10b-4



Lock Mass F4

b01nov10b-4



Quantify Sample Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

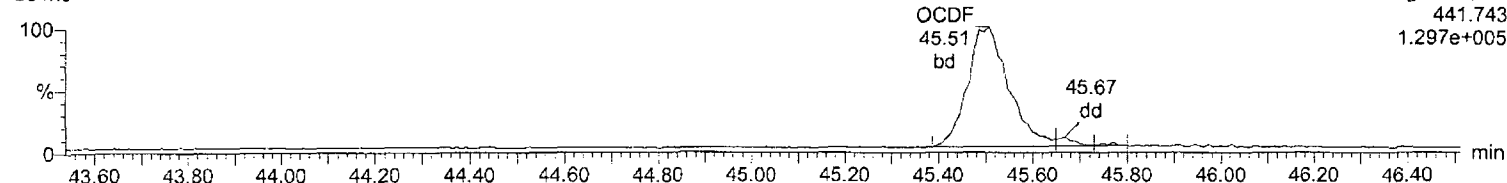
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-4, Date: 01-Nov-2010, Time: 20:04:39, ID: CS1 UD090323-02, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

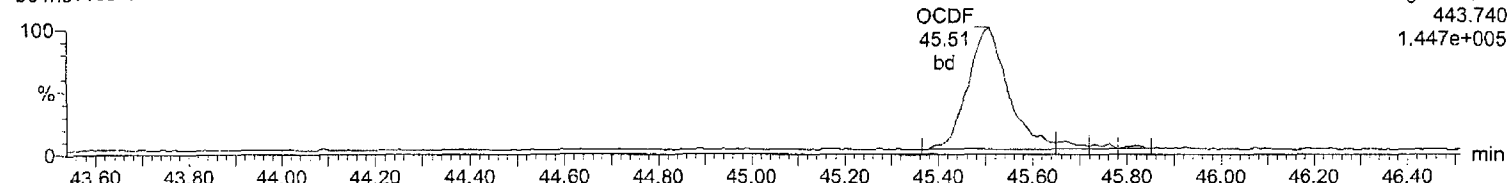
OCDF

b01nov10b-4



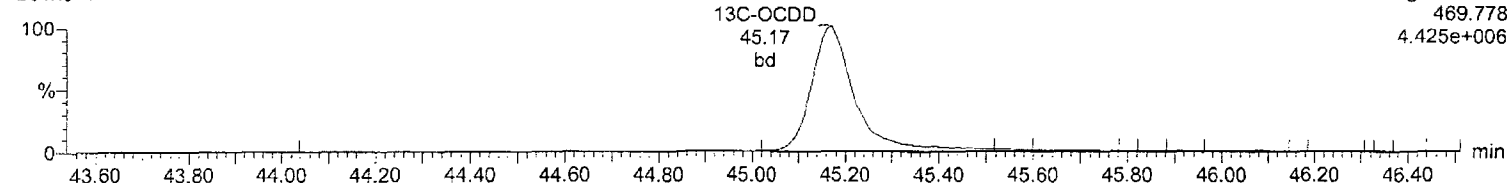
OCDF

b01nov10b-4



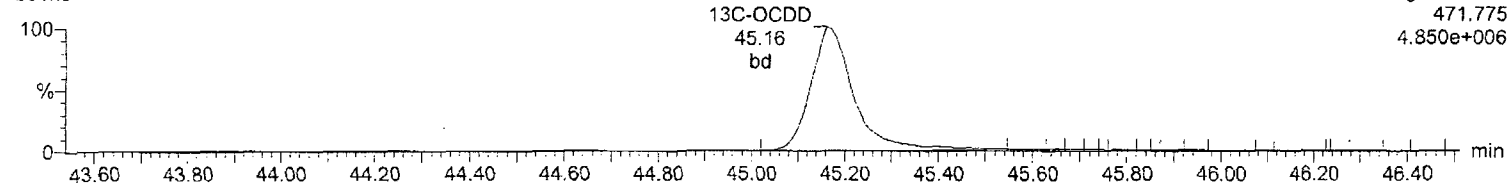
13C-OCDD

b01nov10b-4



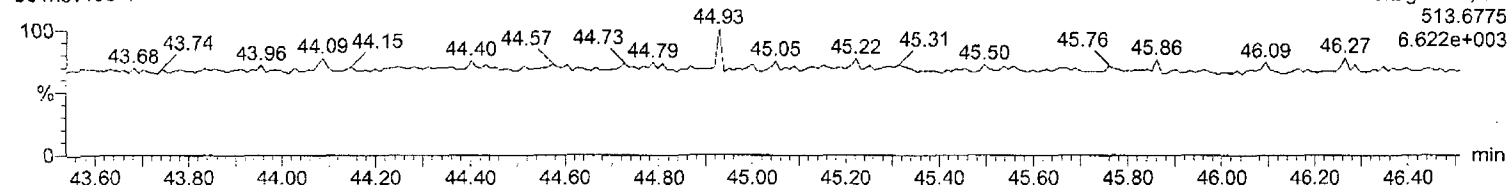
13C-OCDD

b01nov10b-4



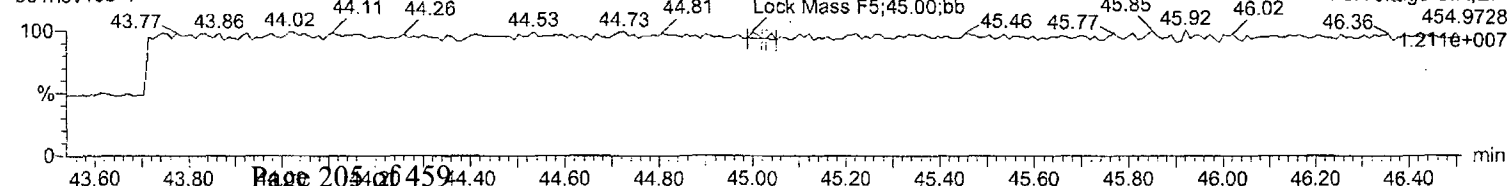
DeDPE

b01nov10b-4



Lock Mass F5

b01nov10b-4



Quantify Sample Summary Report

MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

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Name: b01nov10b-5, Date: 01-Nov-2010, Time: 20:53:05, ID: CS2 UD090323-03, Description: , Job: b01nov10b, Task: HRP763_1, User: MJC

Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
2378-TCDD	9.76e3	1.26e4	2.24e4	31.75	1.00	0.77	NO	1.854	0.938	0.0200	2.03e5	675	301.0	2.42e5	1005	240.3	bd
12378-PeCDD	5.93e4	3.67e4	9.60e4	34.55	1.00	1.62	NO	10.017	1.034	0.0451	1.29e6	1638	789.0	7.74e5	1476	524.3	bd
123478-HxCDD	4.42e4	3.42e4	7.84e4	37.23	1.00	1.29	NO	9.160	0.821	0.0617	8.45e5	1148	736.4	6.48e5	1777	364.8	bd
123678-HxCDD	4.92e4	4.09e4	9.01e4	37.32	1.00	1.20	NO	9.753	0.944	0.0572	8.43e5	1148	734.2	6.99e5	1777	393.4	db
123789-HxCDD	4.34e4	3.70e4	8.03e4	37.57	1.01	1.17	NO	9.726	0.842	0.0639	7.35e5	1148	640.0	5.89e5	1777	331.7	bb
1234678-HpCDD	3.20e4	3.09e4	6.29e4	40.75	1.00	1.04	NO	9.414	0.946	0.0966	4.43e5	1578	280.8	4.05e5	1107	365.9	bd
OCDD	4.66e4	5.46e4	1.01e5	45.17	1.00	0.85	NO	18.622	0.927	0.245	4.84e5	1915	252.9	5.50e5	2091	263.0	bd
2378-TCDF	1.64e4	2.03e4	3.68e4	31.22	1.00	0.81	NO	2.001	0.984	0.0209	2.84e5	704	403.1	3.28e5	1358	241.2	bb
12378-PeCDF	9.51e4	6.14e4	1.57e5	33.72	1.00	1.55	NO	10.089	0.943	0.0538	2.09e6	3167	658.6	1.30e6	2698	483.5	bd
23478-PeCDF	9.25e4	6.02e4	1.53e5	34.34	1.02	1.54	NO	10.061	0.920	0.0549	1.97e6	3167	623.6	1.30e6	2698	480.4	bb
123478-HxCDF	6.72e4	5.29e4	1.20e5	36.49	1.00	1.27	NO	9.794	0.890	0.0810	1.34e6	3259	412.2	1.08e6	2443	441.4	bd
123678-HxCDF	7.80e4	6.20e4	1.40e5	36.59	1.00	1.26	NO	9.804	1.037	0.0696	1.33e6	3259	408.4	1.09e6	2443	447.1	dd
234678-HxCDF	6.86e4	5.56e4	1.24e5	37.10	1.01	1.23	NO	9.630	0.920	0.0771	1.31e6	3259	401.5	9.93e5	2443	406.6	bd
123789-HxCDF	5.92e4	4.63e4	1.06e5	37.90	1.04	1.28	NO	9.876	0.782	0.0930	9.14e5	3259	280.4	7.42e5	2443	303.6	bd
1234678-HpCDF	5.71e4	5.41e4	1.11e5	39.44	1.00	1.06	NO	9.834	1.256	0.0903	8.63e5	2112	408.6	8.22e5	2969	277.0	bd
1234789-HpCDF	4.02e4	3.94e4	7.96e4	41.45	1.05	1.02	NO	9.657	0.898	0.124	5.06e5	2112	239.5	4.86e5	2969	163.7	bd
OCDF	5.90e4	6.69e4	1.26e5	45.50	1.01	0.88	NO	18.733	1.154	0.210	5.87e5	2178	269.6	6.32e5	2062	306.5	bd
13C-2378-TCDD	5.28e5	6.65e5	1.19e6	31.73	1.01	0.79	NO	102.799	1.151	0.0623	1.10e7	2706	4067.7	1.40e7	1678	8360.8	bb
13C-12378-PeCDD	5.67e5	3.62e5	9.29e5	34.54	1.10	1.57	NO	94.296	0.896	0.0749	1.23e7	2913	4205.2	7.73e6	1557	4966.4	bb
13C-123678-HxCDD	5.36e5	4.18e5	9.54e5	37.31	0.99	1.28	NO	97.212	1.081	0.151	8.91e6	4716	1888.5	6.73e6	2431	2770.1	dd
13C-1234678-HpCDD	3.44e5	3.21e5	6.65e5	40.74	1.08	1.07	NO	94.032	0.753	0.227	4.29e6	3183	1349.1	4.08e6	4557	894.8	bd
13C-OCDD	5.14e5	5.78e5	1.09e6	45.16	1.20	0.89	NO	184.941	0.618	0.275	4.63e6	4119	1123.7	5.18e6	3700	1399.6	bd
13C-2378-TCDF	8.24e5	1.05e6	1.87e6	31.21	1.00	0.79	NO	98.994	1.803	0.0322	1.33e7	1563	8485.5	1.67e7	2114	7901.1	bb
13C-12378-PeCDF	1.02e6	6.45e5	1.66e6	33.71	1.08	1.58	NO	94.641	1.602	0.0864	2.14e7	5760	3720.4	1.35e7	3429	3932.0	bd
13C-123678-HxCDF	4.62e5	8.88e5	1.35e6	36.58	0.97	0.52	NO	93.756	1.529	0.220	7.95e6	5756	1381.7	1.53e7	9497	1607.6	dd
13C-1234678-HpCDF	2.78e5	6.08e5	8.86e5	39.43	1.05	0.46	NO	92.852	1.004	0.190	4.15e6	4022	1032.2	9.03e6	4720	1912.6	bd
13C-1234-TCDD	4.61e5	5.76e5	1.04e6	31.34	0.00	0.80	NO	100.000	1.000	0.0698	8.38e6	2706	3095.3	1.03e7	1678	6112.8	bb
13C-123789-HxCDD	4.92e5	3.91e5	8.83e5	37.56	0.00	1.26	NO	100.000	1.000	0.168	7.11e6	4716	1507.6	5.76e6	2431	2370.1	dd
37Cl-2378-TCDD (SS)	2.41e4		2.41e4	31.75	1.00			1.914	1.009	0.0148	4.81e5	1294	372.1				bb
13C-23478-PeCDF (SS)	9.56e5	5.98e5	1.55e6	34.33	1.02	1.60	NO	100.284	0.936	0.0843	2.07e7	5760	3587.3	1.29e7	3429	3771.8	bb
13C-123478-HxCDF (SS)	3.76e5	7.24e5	1.10e6	36.48	1.00	0.52	NO	100.625	0.815	0.243	7.39e6	5756	1284.7	1.39e7	9497	1467.5	bd
13C-123478-HxCDD (SS)	4.37e5	3.42e5	7.78e5	37.22	1.00	1.28	NO	94.735	0.816	0.157	8.37e6	4716	1774.8	6.38e6	2431	2623.6	bd
13C-1234789-HpCDF (SS)	2.07e5	4.64e5	6.71e5	41.44	1.05	0.45	NO	100.184	0.757	0.262	2.57e6	4022	638.0	5.63e6	4720	1193.8	bd

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

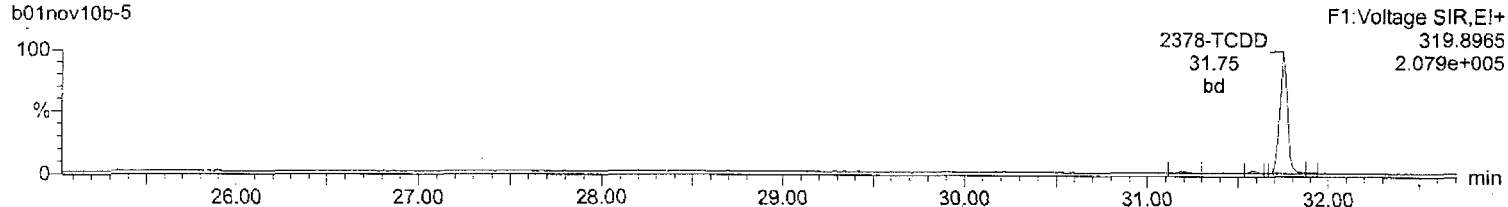
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-5, Date: 01-Nov-2010, Time: 20:53:05, ID: CS2 UD090323-03, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

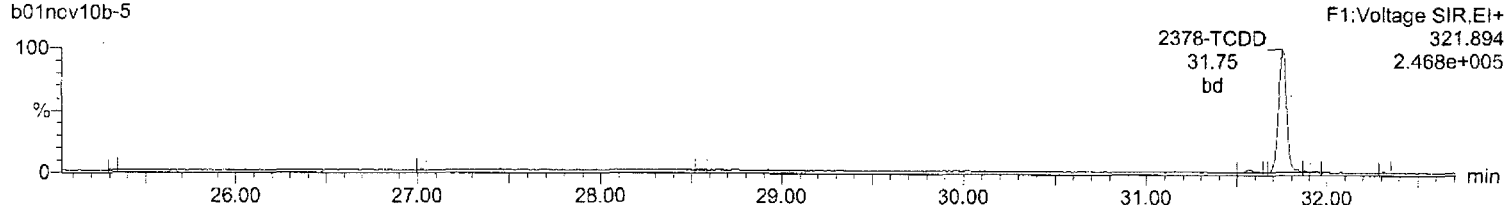
Total-tetradoxins

b01nov10b-5



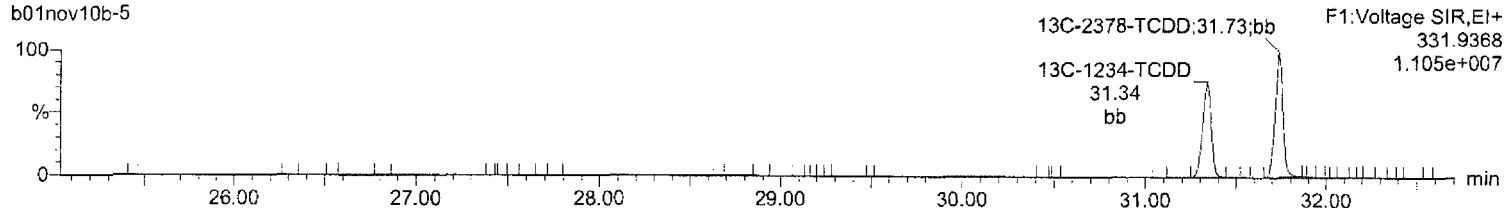
Total-tetradoxins

b01nov10b-5



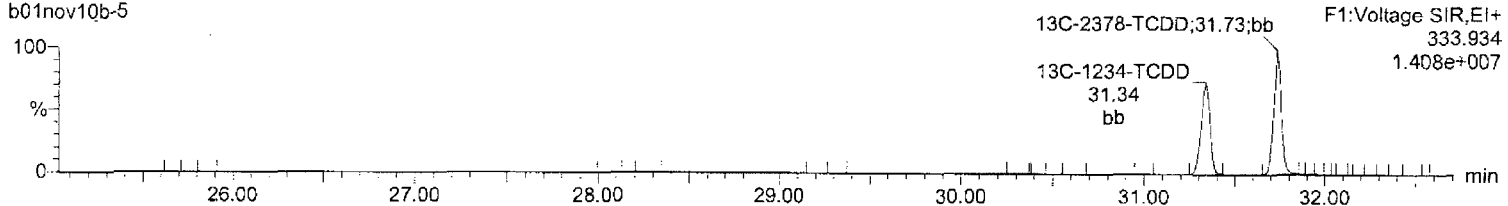
13C-2378-TCDD

b01nov10b-5



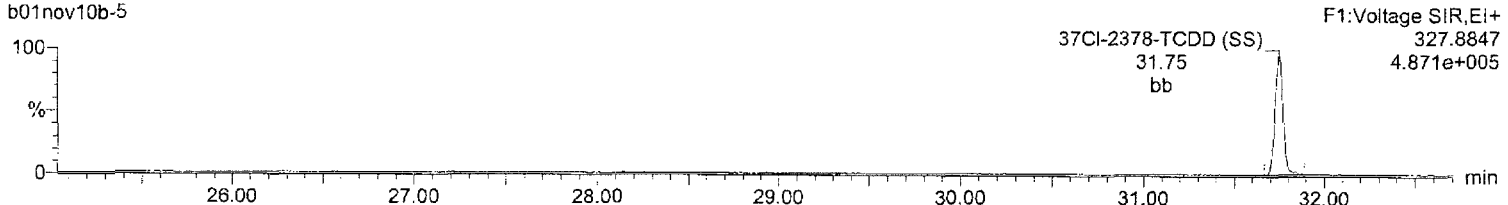
13C-2378-TCDD

b01nov10b-5



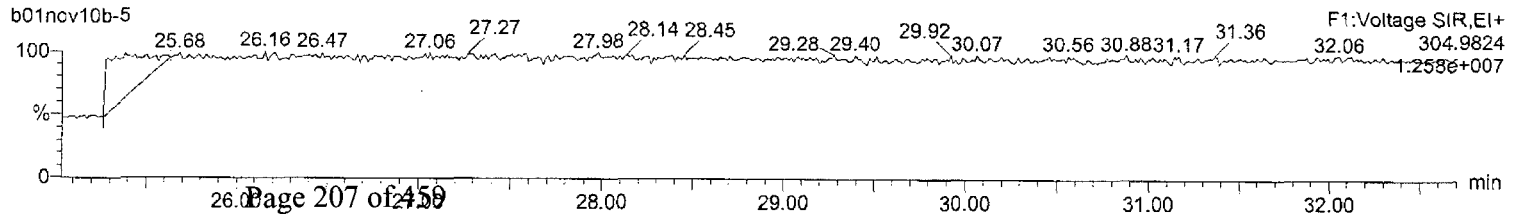
37Cl-2378-TCDD (SS)

b01nov10b-5



Lock Mass F1

b01nov10b-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

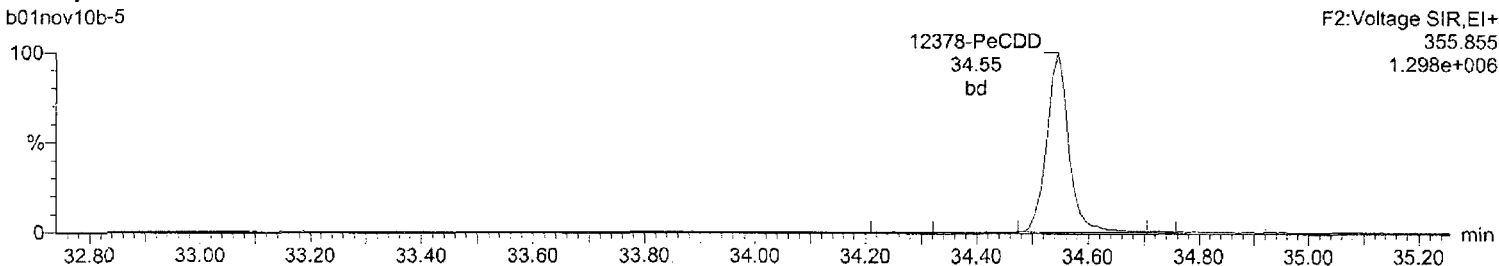
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-5, Date: 01-Nov-2010, Time: 20:53:05, ID: CS2 UD090323-03, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

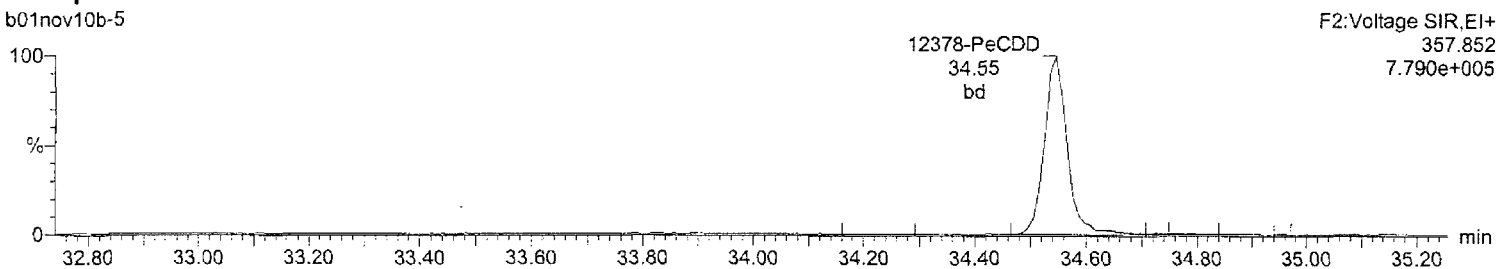
Total-pentadioxins

b01nov10b-5



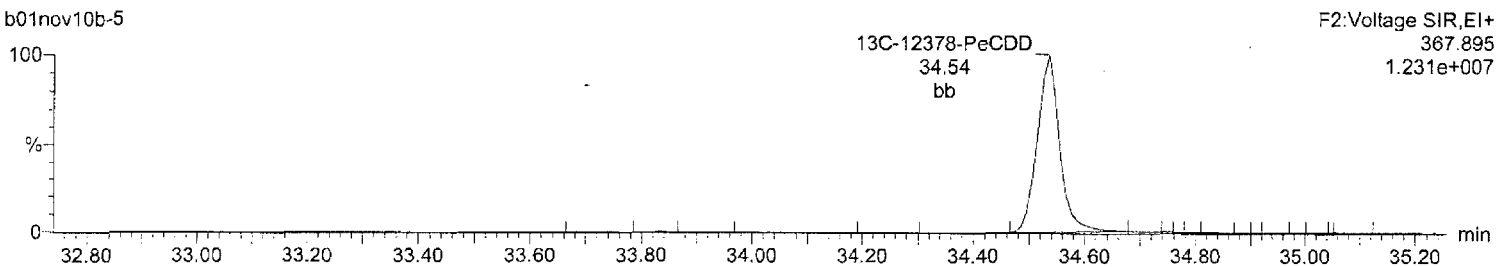
Total-pentadioxins

b01nov10b-5



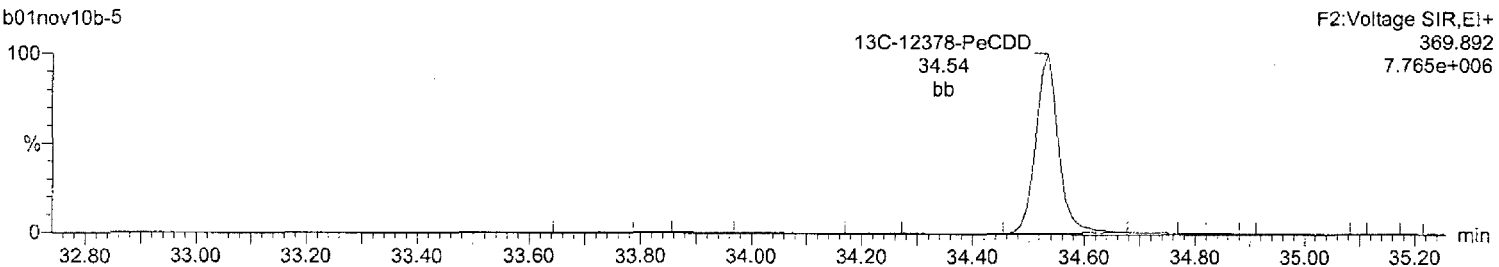
¹³C-12378-PeCDD

b01nov10b-5



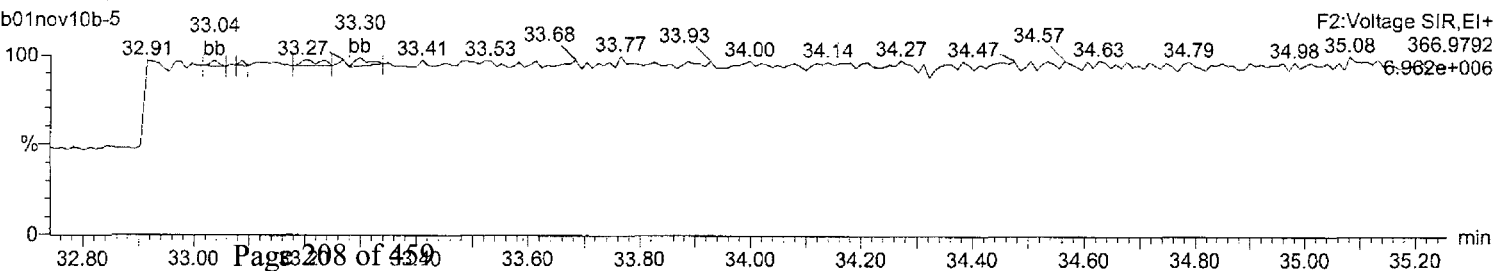
¹³C-12378-PeCDD

b01nov10b-5



Lock Mass F2

b01nov10b-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

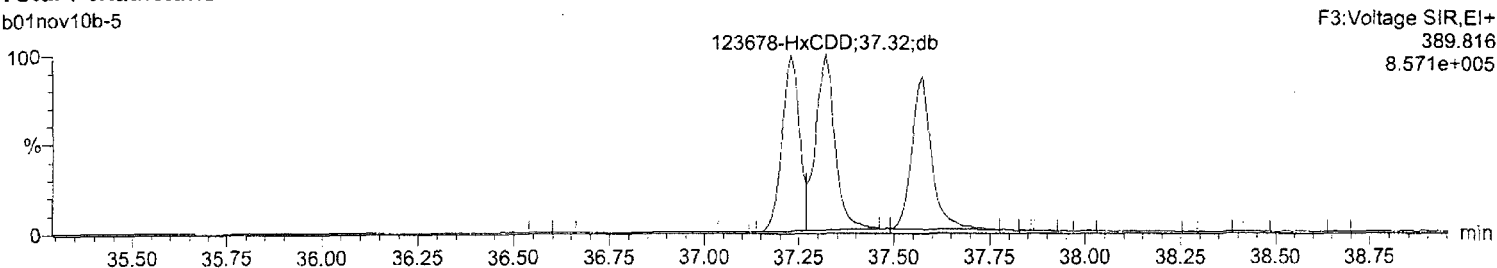
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-5, Date: 01-Nov-2010, Time: 20:53:05, ID: CS2 UD090323-03, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

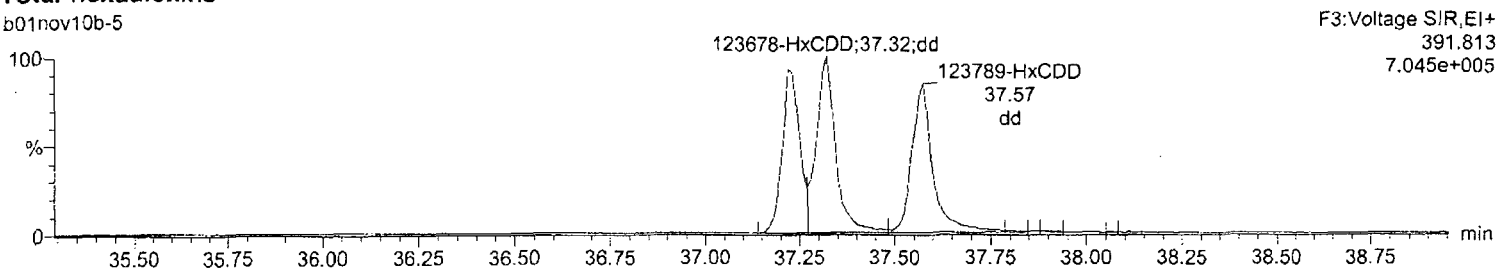
Total-hexadioxins

b01nov10b-5



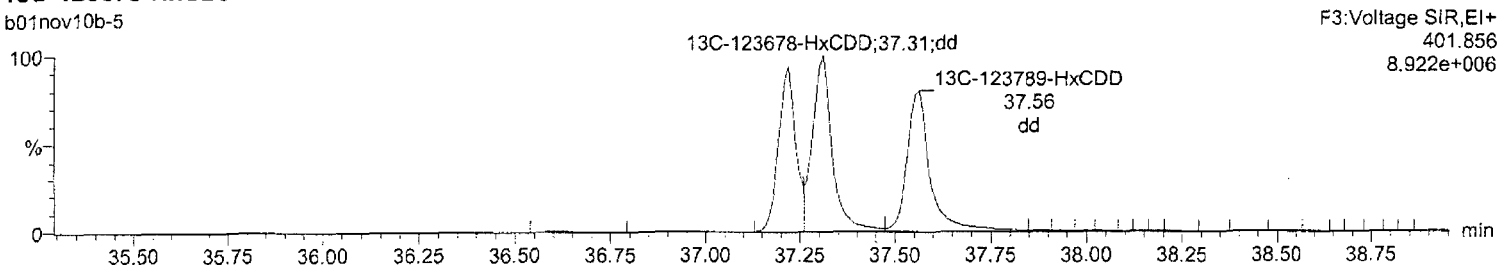
Total-hexadioxins

b01nov10b-5



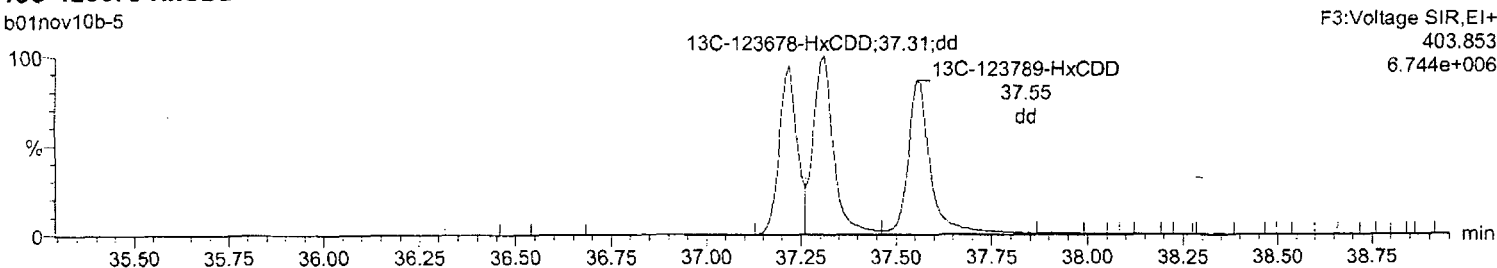
13C-123678-HxCDD

b01nov10b-5



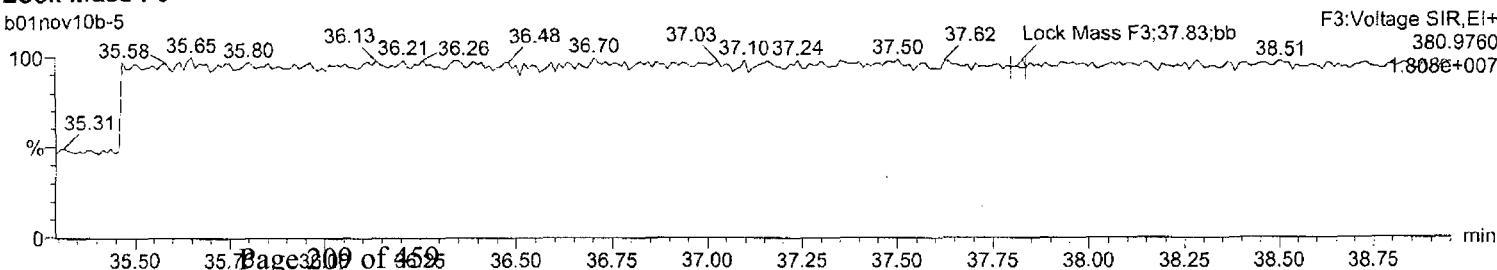
13C-123678-HxCDD

b01nov10b-5



Lock Mass F3

b01nov10b-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

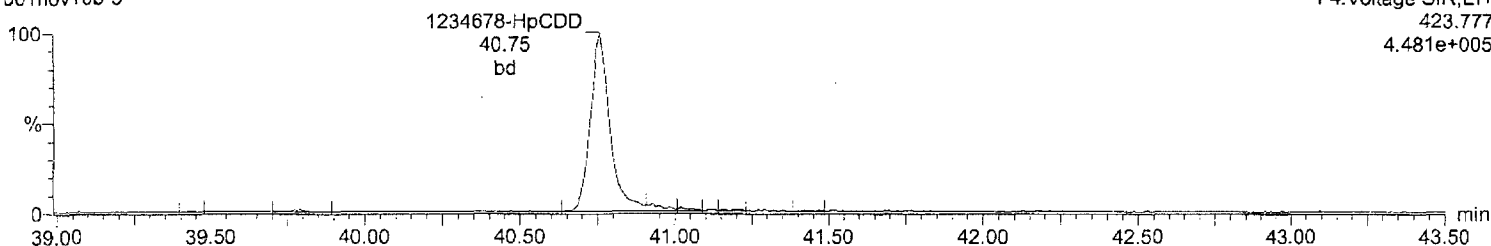
Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-5, Date: 01-Nov-2010, Time: 20:53:05, ID: CS2 UD090323-03, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

Total-heptadioxins

b01nov10b-5

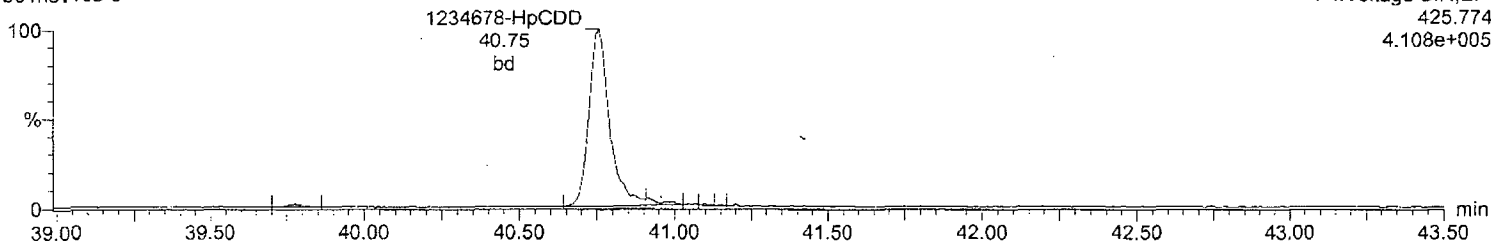
F4:Voltage SIR,EI+
423.777
4.481e+005



Total-heptadioxins

b01nov10b-5

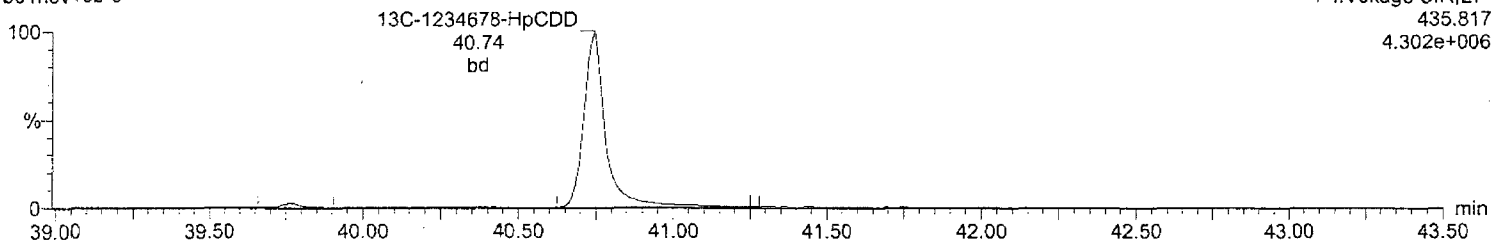
F4:Voltage SIR,EI+
425.774
4.108e+005



13C-1234678-HpCDD

b01nov10b-5

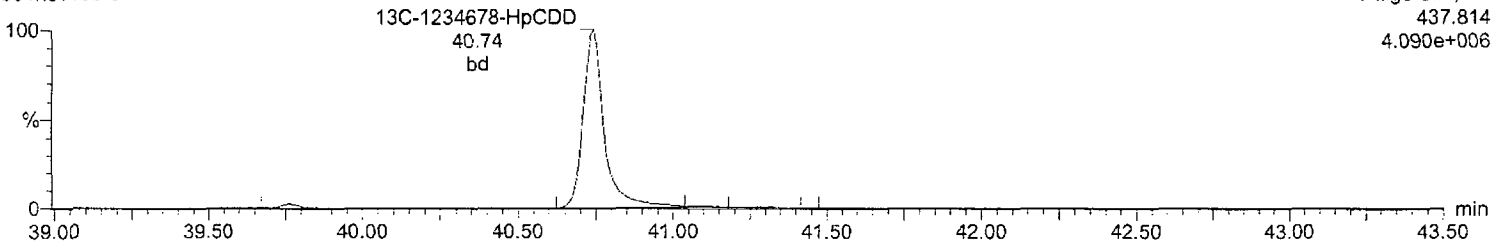
F4:Voltage SIR,EI+
435.817
4.302e+006



13C-1234678-HpCDD

b01nov10b-5

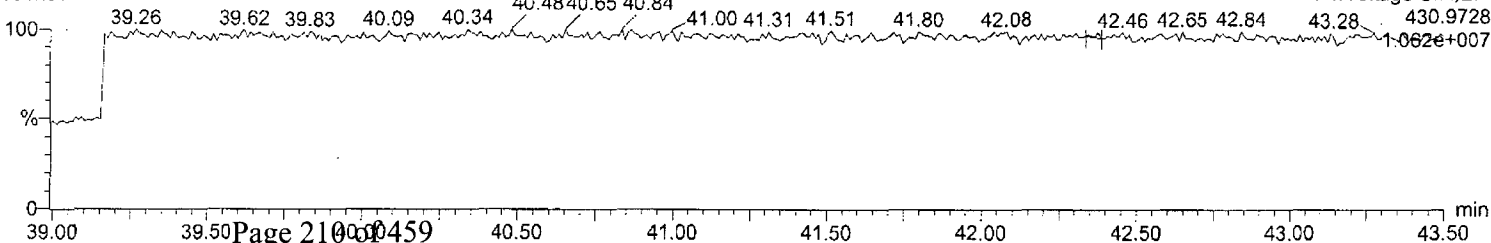
F4:Voltage SIR,EI+
437.814
4.090e+006



Lock Mass F4

b01nov10b-5

F4:Voltage SIR,EI+
430.9728
1.062e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

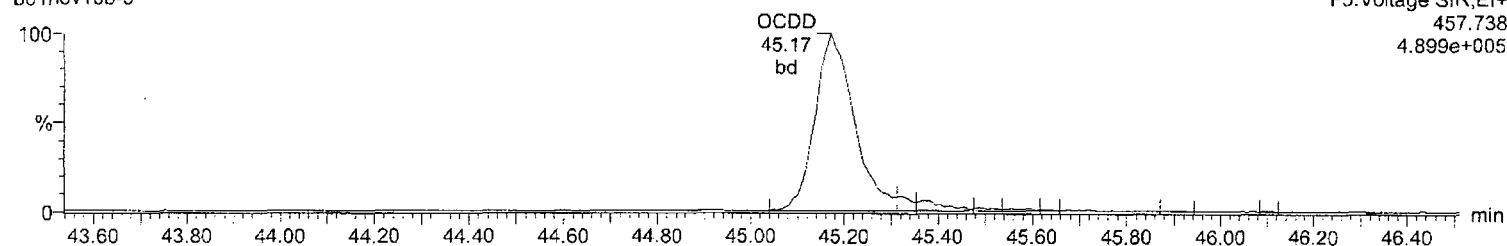
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-5, Date: 01-Nov-2010, Time: 20:53:05, ID: CS2 UD090323-03, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

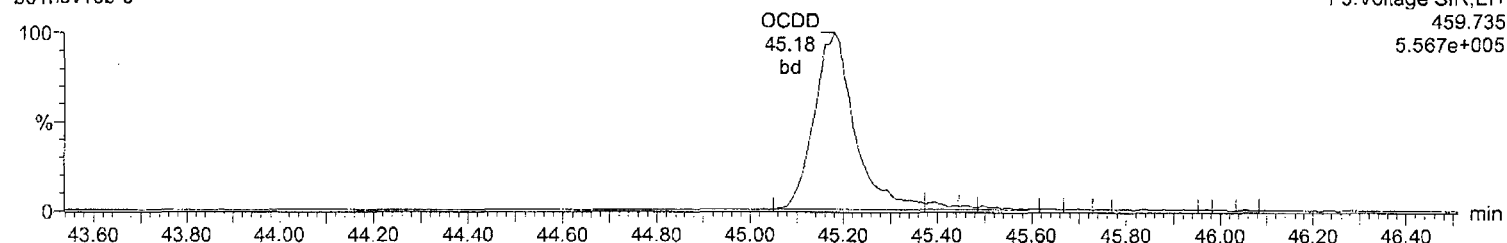
OCDD

b01nov10b-5



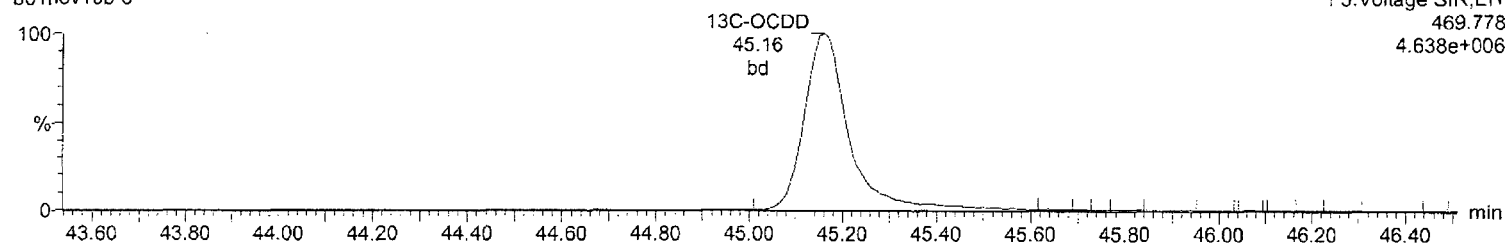
OCDD

b01nov10b-5



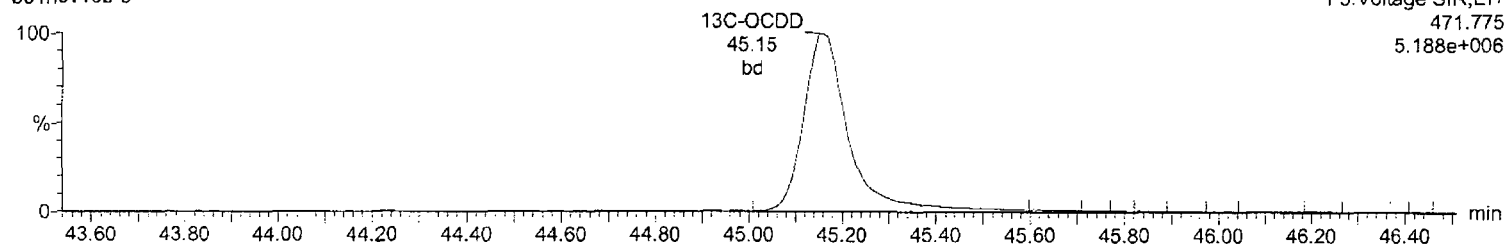
13C-OCDD

b01nov10b-5



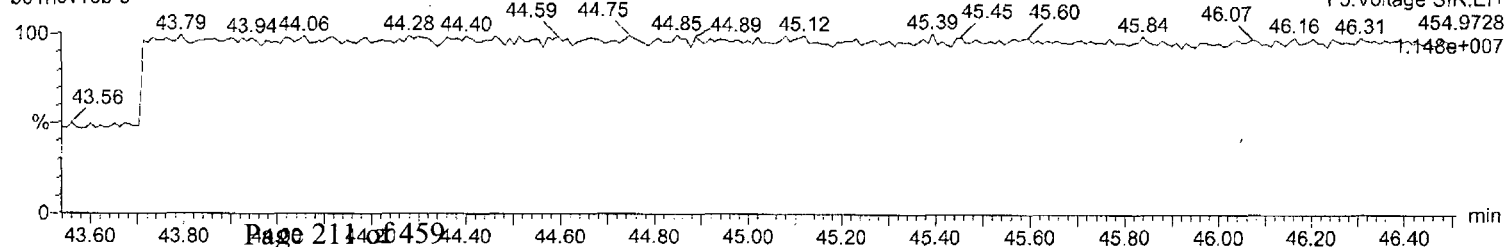
13C-OCDD

b01nov10b-5



Lock Mass F5

b01nov10b-5



Quantify Sample Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

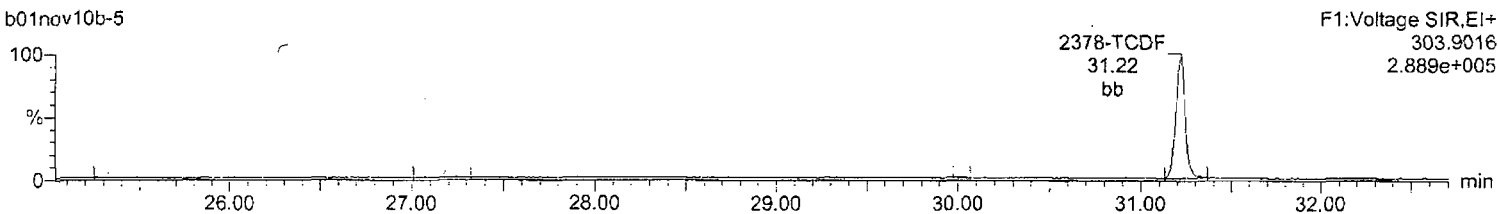
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-5, Date: 01-Nov-2010, Time: 20:53:05, ID: CS2 UD090323-03, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

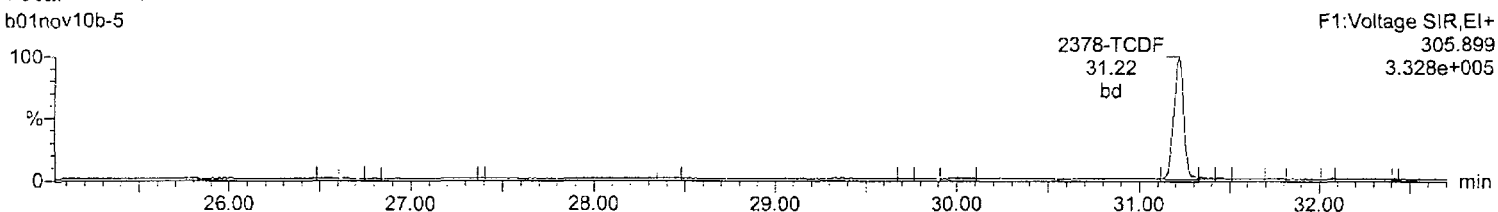
Total-tetrafurans

b01nov10b-5



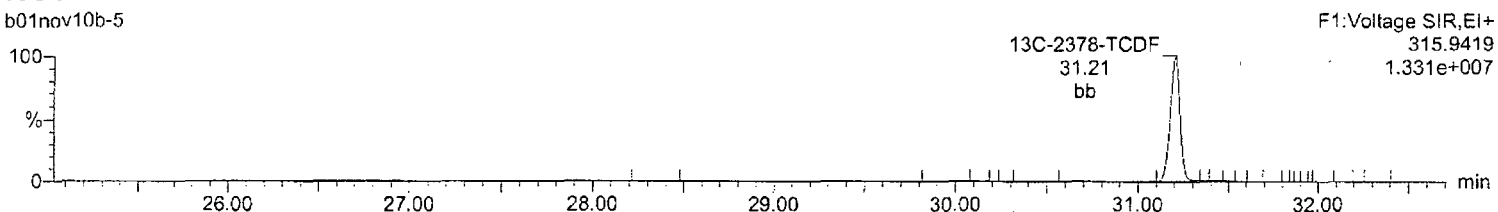
Total-tetrafurans

b01nov10b-5



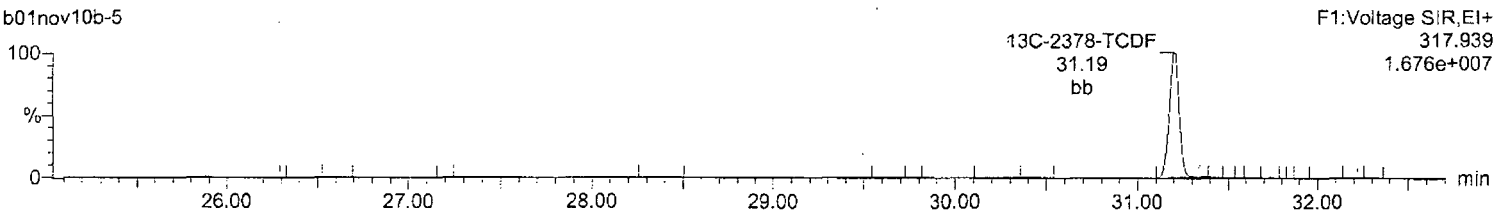
13C-2378-TCDF

b01nov10b-5



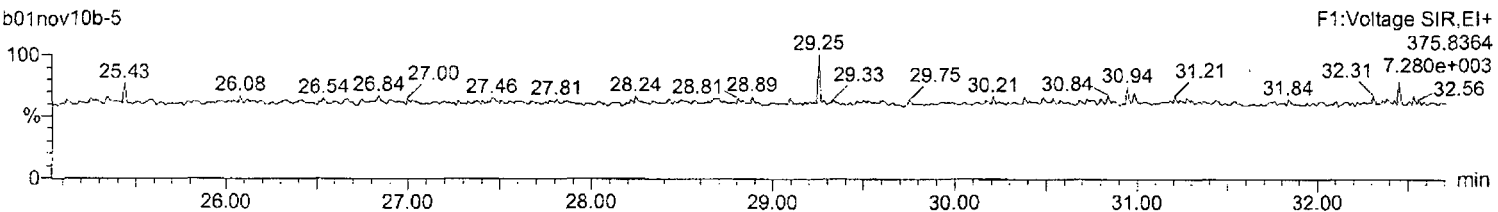
13C-2378-TCDF

b01nov10b-5



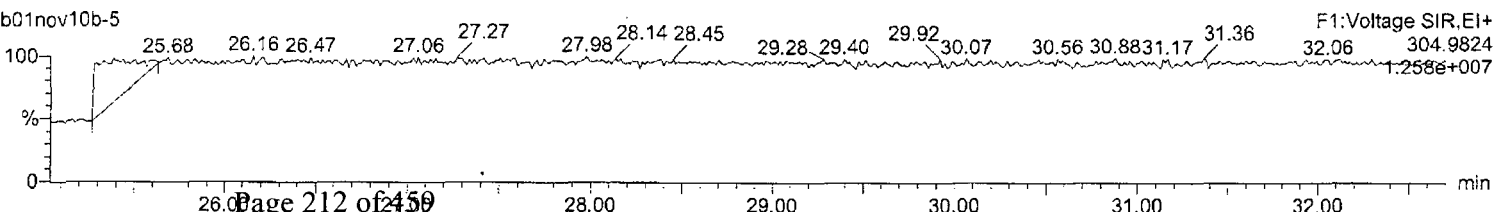
HxDPE

b01nov10b-5



Lock Mass F1

b01nov10b-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

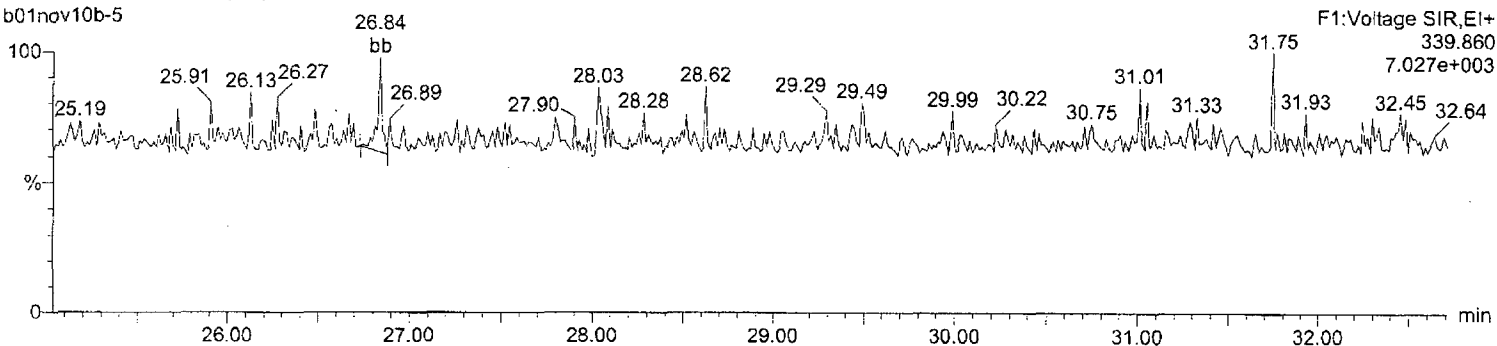
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-5, Date: 01-Nov-2010, Time: 20:53:05, ID: CS2 UD090323-03, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

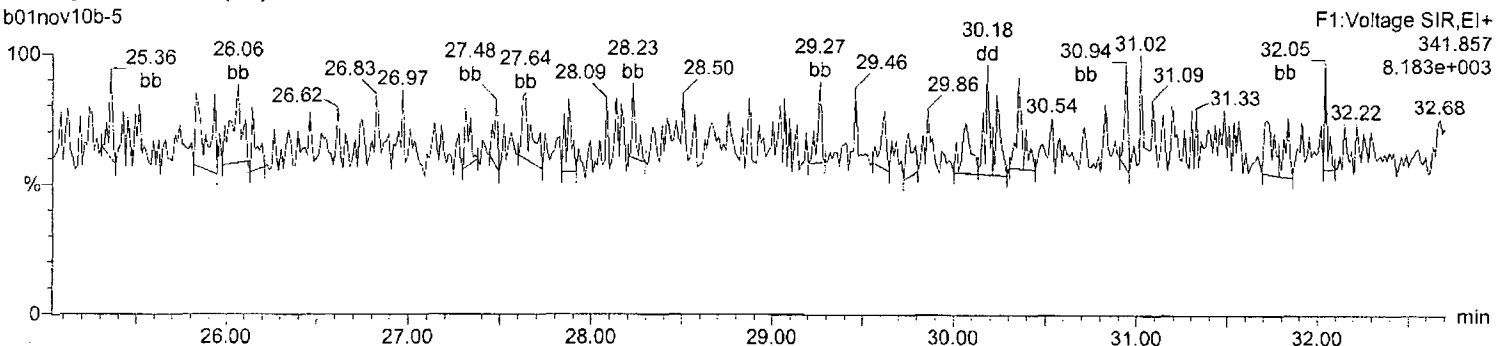
Total-pentafurans (F1)

b01nov10b-5



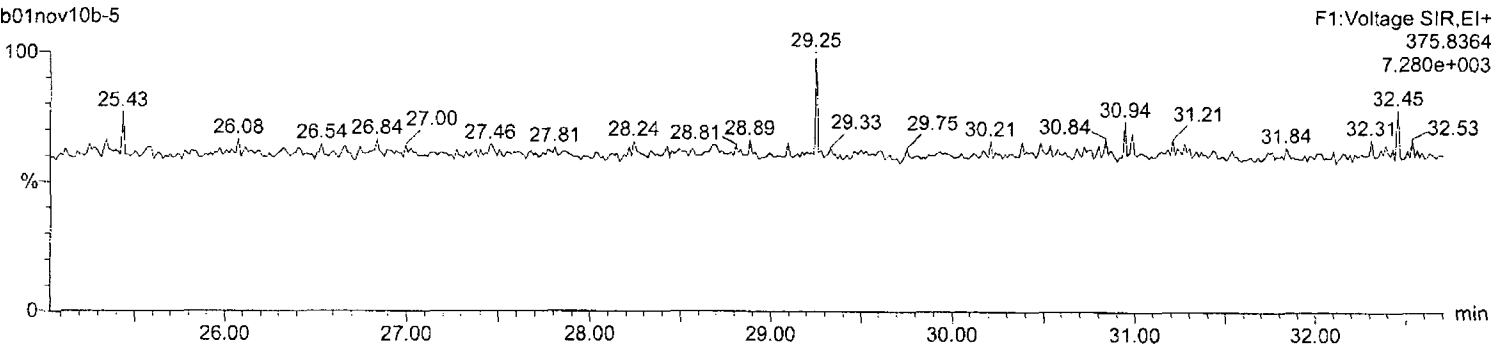
Total-pentafurans (F1)

b01nov10b-5



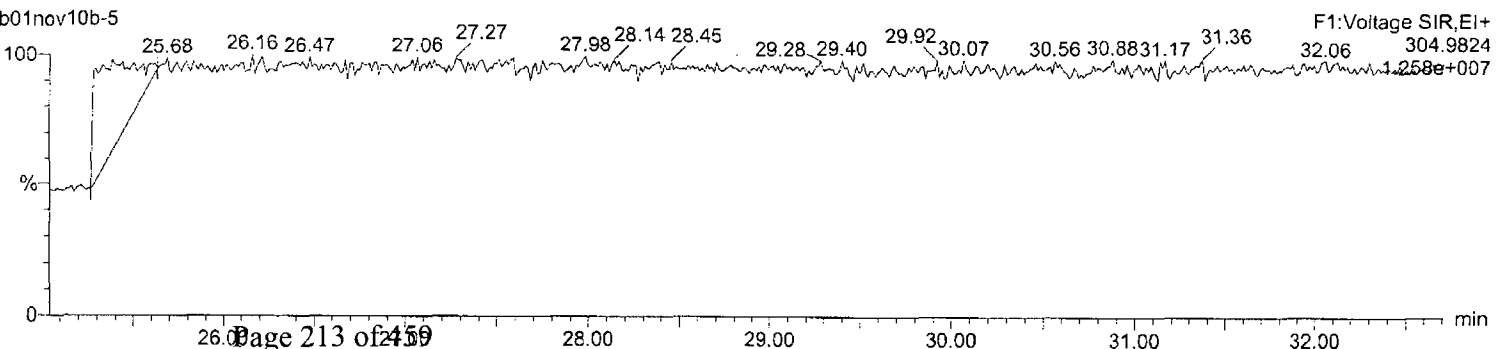
HxDPE

b01nov10b-5



Lock Mass F1

b01nov10b-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

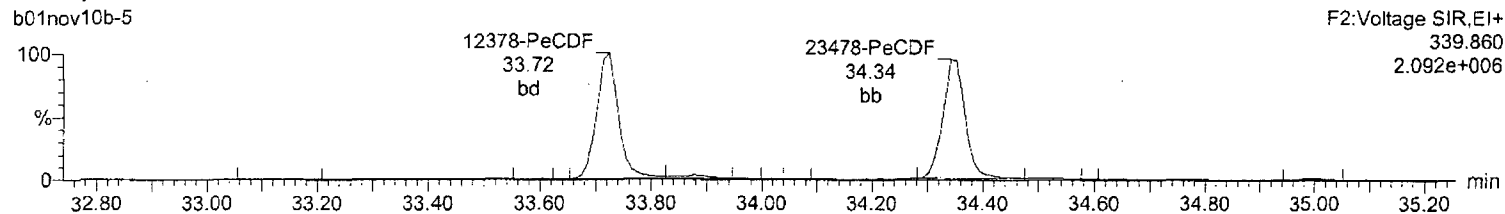
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-5, Date: 01-Nov-2010, Time: 20:53:05, ID: CS2 UD090323-03, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

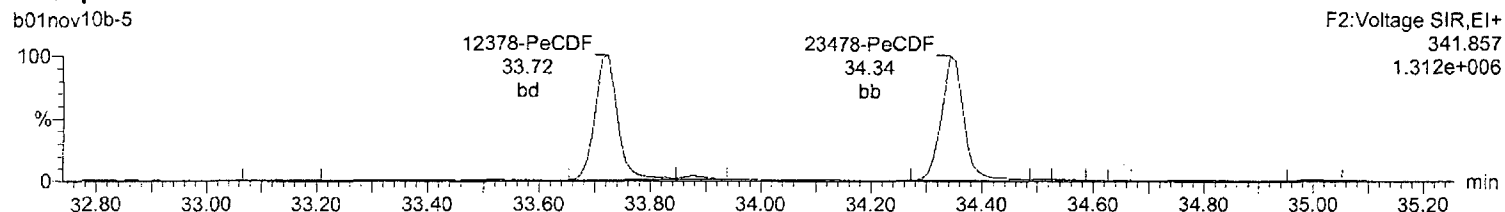
Total-pentafurans

b01nov10b-5



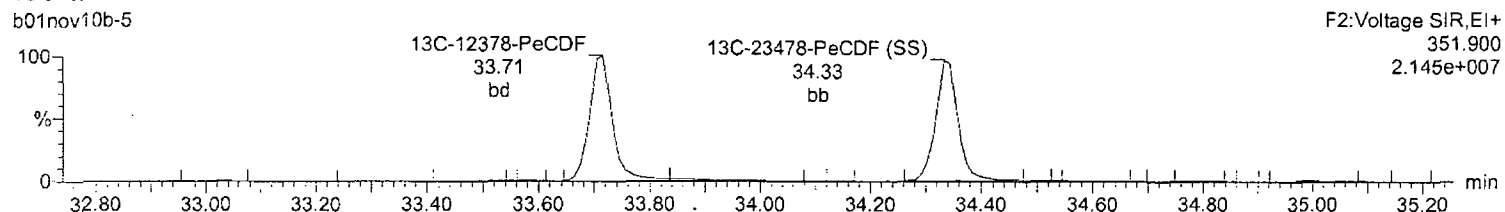
Total-pentafurans

b01nov10b-5



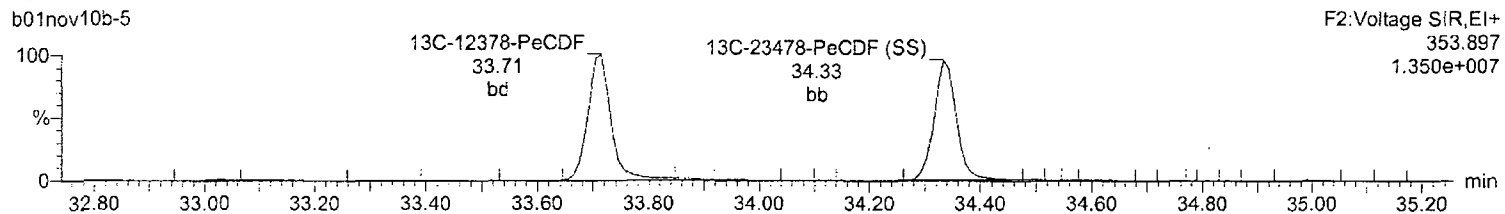
¹³C-12378-PeCDF

b01nov10b-5



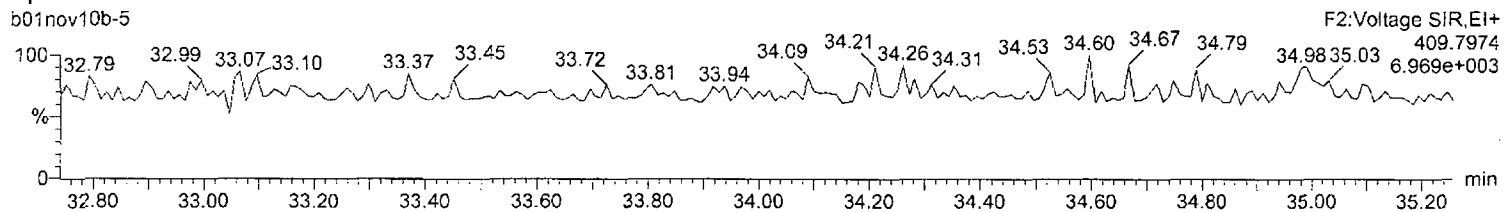
¹³C-12378-PeCDF

b01nov10b-5



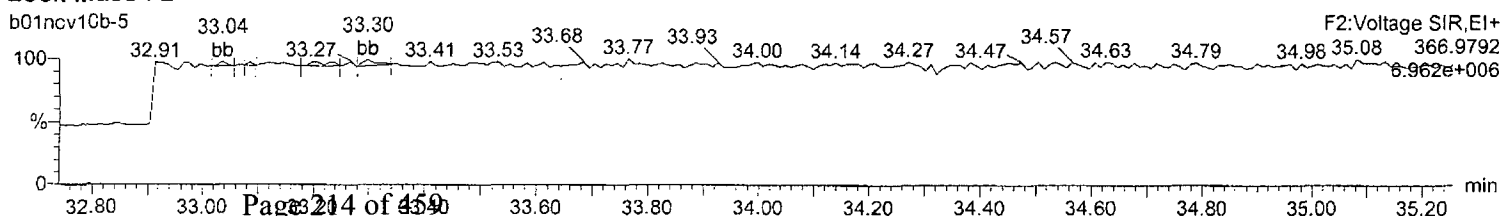
HpDPE

b01nov10b-5



Lock Mass F2

b01nov10b-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

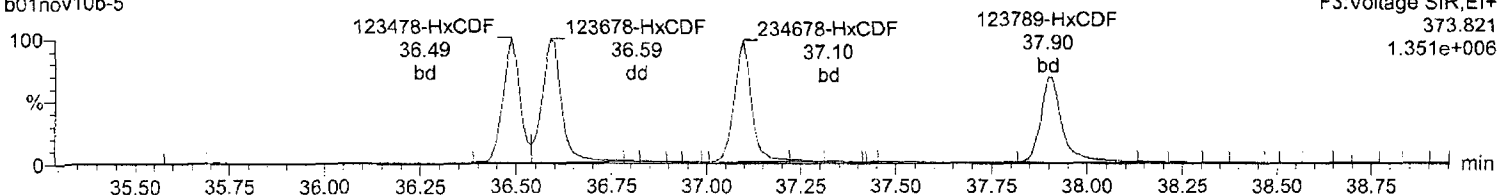
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-5, Date: 01-Nov-2010, Time: 20:53:05, ID: CS2 UD090323-03, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

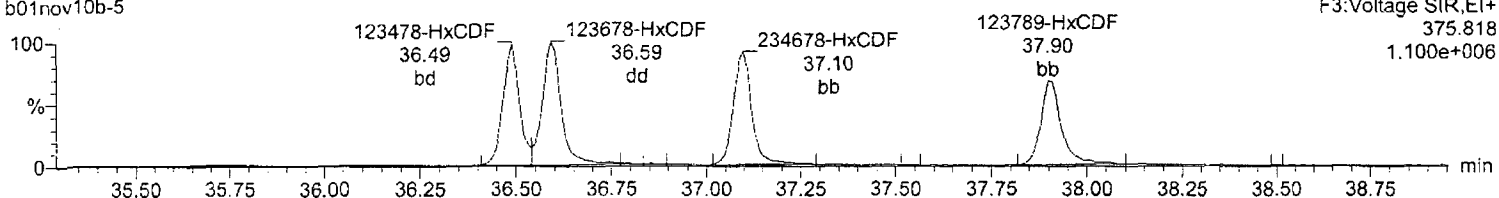
Total-hexafurans

b01nov10b-5



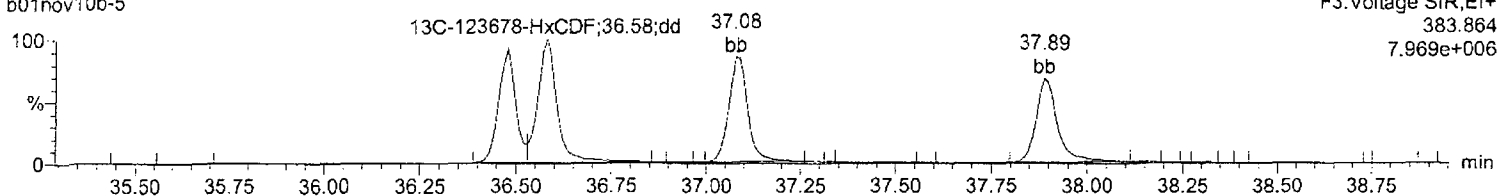
Total-hexafurans

b01nov10b-5



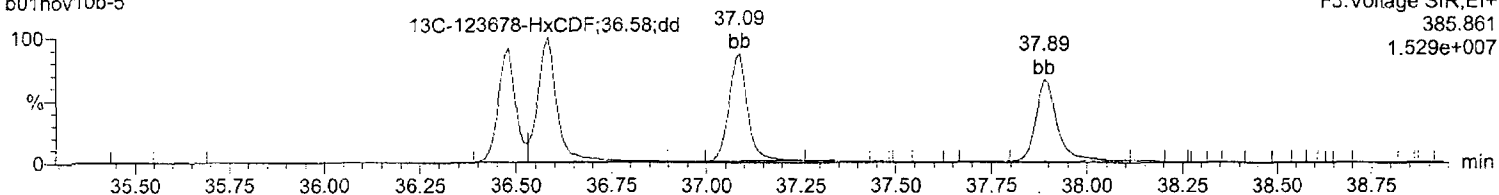
13C-123678-HxCDF

b01nov10b-5



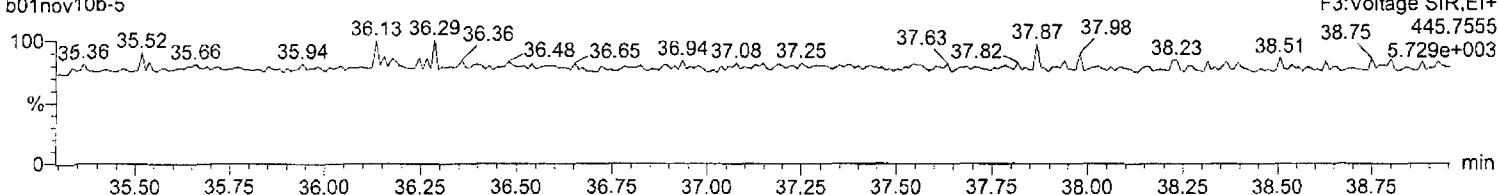
13C-123678-HxCDF

b01nov10b-5



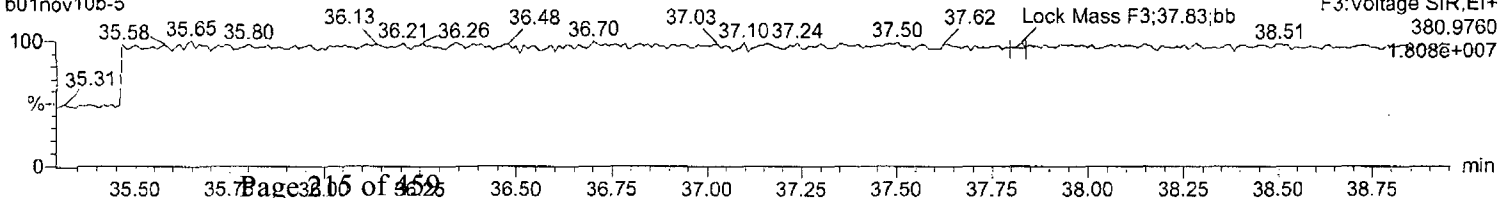
OcDPE

b01nov10b-5



Lock Mass F3

b01nov10b-5



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

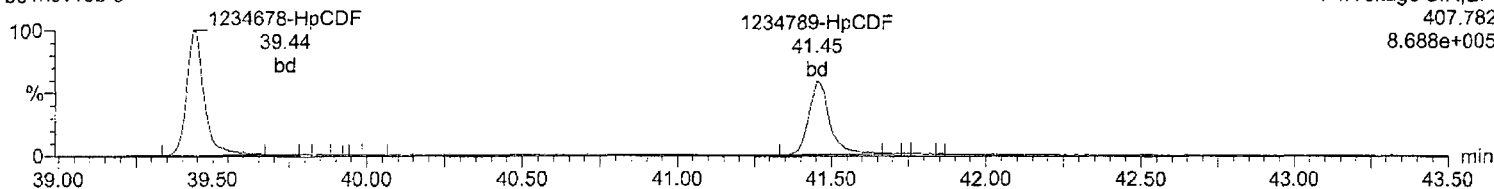
Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-5, Date: 01-Nov-2010, Time: 20:53:05, ID: CS2 UD090323-03, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

Total-heptafurans

b01nov10b-5

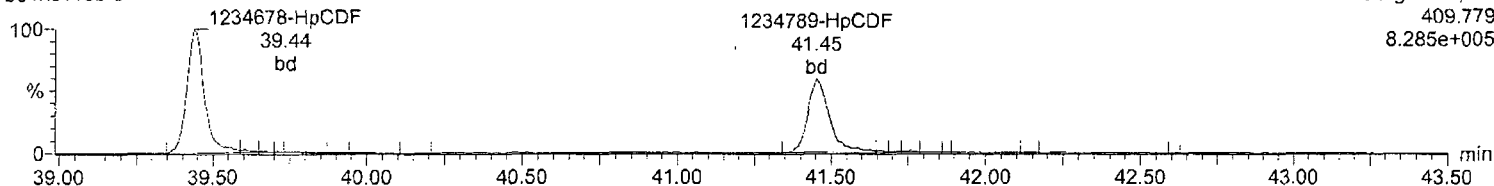
F4:Voltage SIR,EI+
407.782
8.688e+005



Total-heptafurans

b01nov10b-5

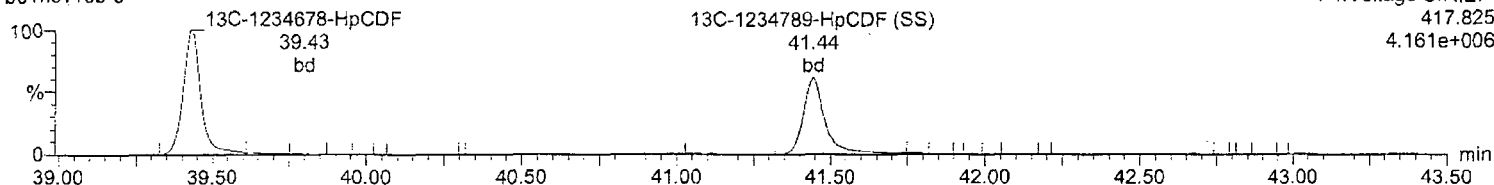
F4:Voltage SIR,EI+
409.779
8.285e+005



13C-1234678-HpCDF

b01nov10b-5

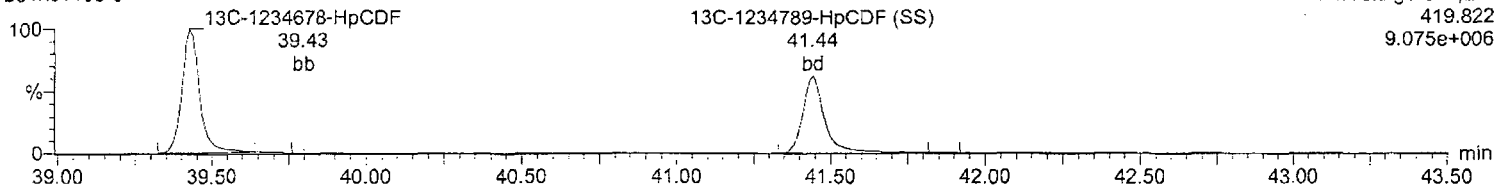
F4:Voltage SIR,EI+
417.825
4.161e+006



13C-1234678-HpCDF

b01nov10b-5

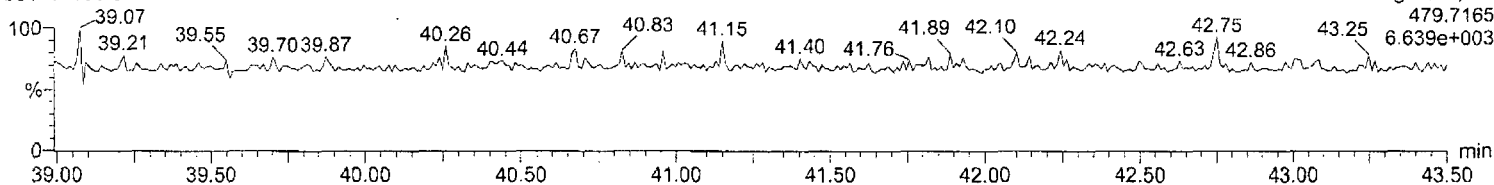
F4:Voltage SIR,EI+
419.822
9.075e+006



NoDPE

b01nov10b-5

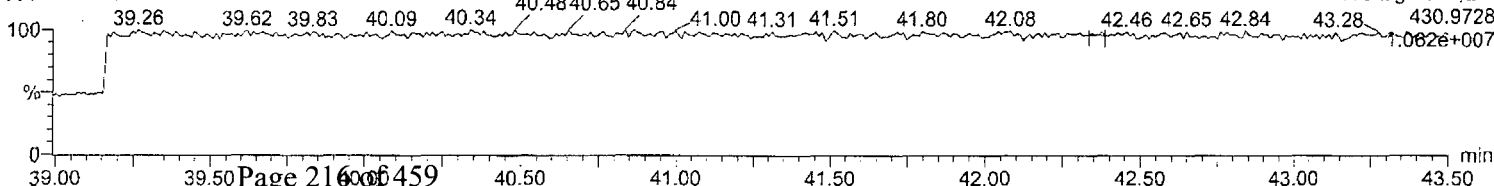
F4:Voltage SIR,EI+
479.7165
6.639e+003



Lock Mass F4

b01nov10b-5

F4:Voltage SIR,EI+
430.9728
1.062e+007



Quantify Sample Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

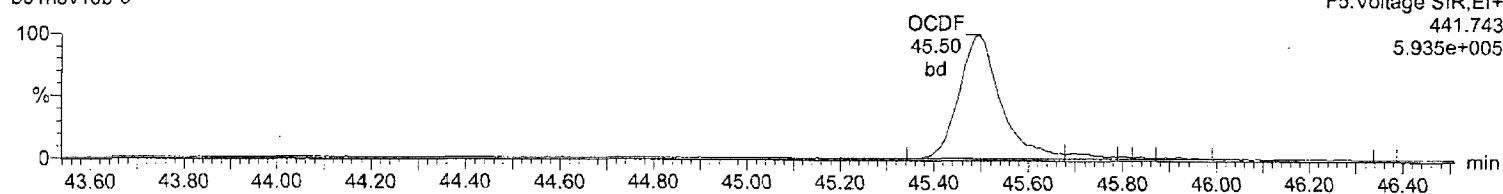
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-5, Date: 01-Nov-2010, Time: 20:53:05, ID: CS2 UD090323-03, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

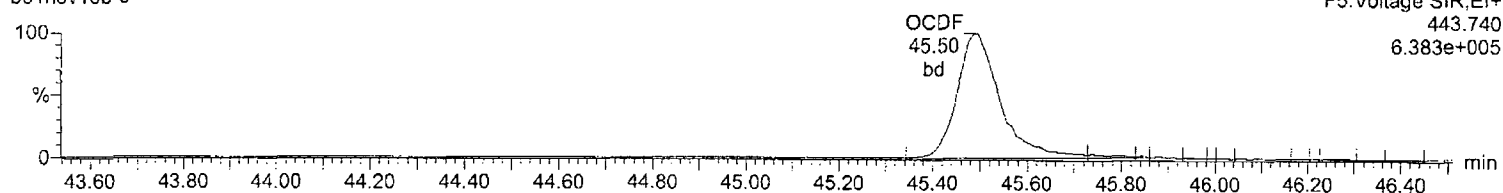
OCDF

b01nov10b-5



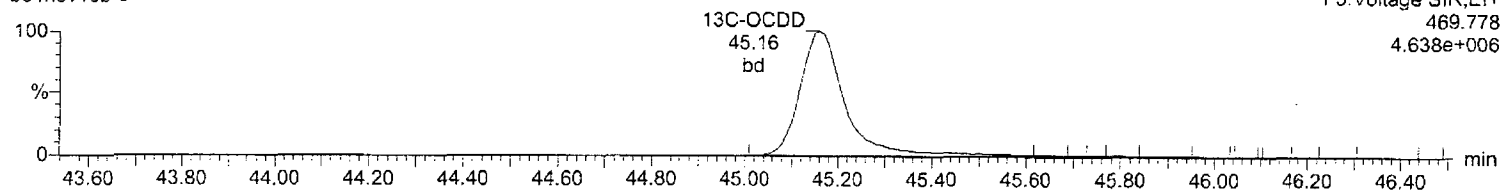
OCDF

b01nov10b-5



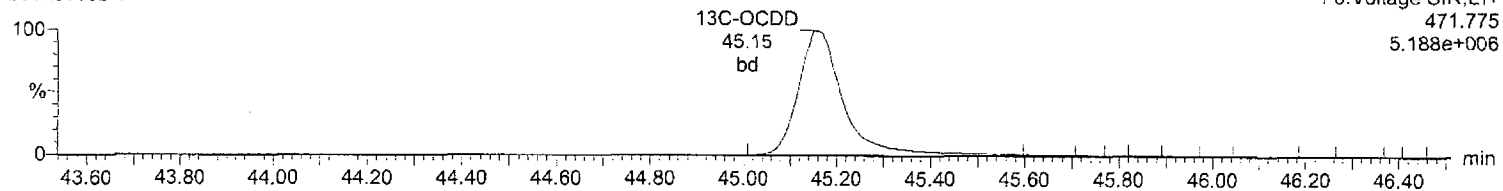
13C-OCDD

b01nov10b-5



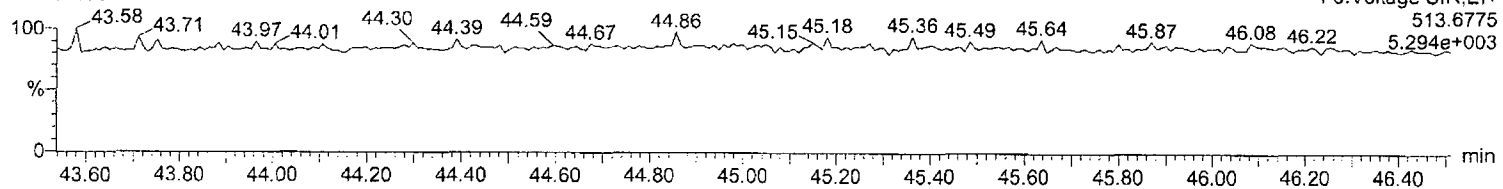
13C-OCDD

b01nov10b-5



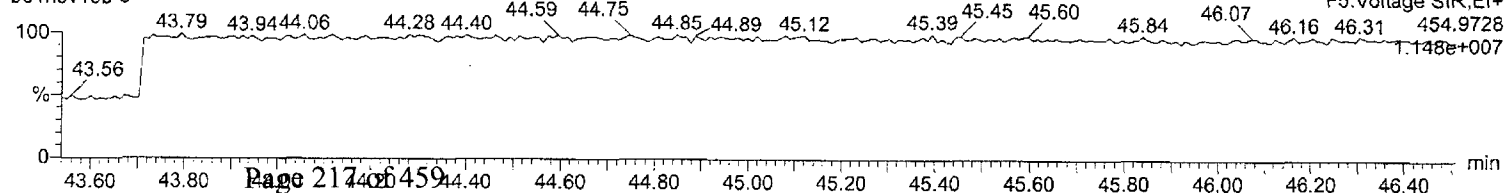
DeDPE

b01nov10b-5



Lock Mass F5

b01nov10b-5



Quantify Sample Summary Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

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Name: b01nov10b-6, Date: 01-Nov-2010, Time: 21:41:31, ID: CS3 UD090323-04, Description: , Job: b01nov10b, Task: HRP763_1, User: MJC

Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
2378-TCDD	4.36e4	5.35e4	9.71e4	31.76	1.00	0.81	NO	9.813	0.994	0.0278	9.09e5	802	1132.5	1.12e6	1024	1095.4	bb
12378-PeCDD	2.72e5	1.78e5	4.50e5	34.56	1.00	1.53	NO	49.794	1.028	0.0685	5.68e6	2466	2303.1	3.60e6	1635	2203.3	bb
123478-HxCDD	2.11e5	1.67e5	3.79e5	37.24	1.00	1.26	NO	50.130	0.899	0.142	3.97e6	2884	1378.0	3.11e6	2940	1056.4	bd
123678-HxCDD	2.32e5	1.85e5	4.18e5	37.33	1.00	1.25	NO	51.203	0.991	0.131	3.98e6	2884	1381.6	3.05e6	2940	1038.5	db
123789-HxCDD	2.07e5	1.64e5	3.71e5	37.57	1.01	1.26	NO	50.852	0.880	0.147	3.38e6	2884	1173.2	2.63e6	2940	895.7	bd
1234678-HpCDD	1.56e5	1.53e5	3.09e5	40.76	1.00	1.02	NO	51.460	1.034	0.219	2.04e6	2559	799.0	1.96e6	2788	703.7	bb
OCDD	2.41e5	2.72e5	5.14e5	45.19	1.00	0.89	NO	104.545	1.041	0.503	2.34e6	4871	480.1	2.55e6	2486	1024.0	bd
2378-TCDF	7.33e4	9.55e4	1.69e5	31.22	1.00	0.77	NO	10.207	1.004	0.0239	1.22e6	742	1646.3	1.59e6	1392	1145.7	bb
12378-PeCDF	4.60e5	2.94e5	7.55e5	33.72	1.00	1.56	NO	51.618	0.964	0.107	9.88e6	5587	1768.0	6.39e6	5255	1215.5	bd
23478-PeCDF	4.43e5	2.86e5	7.29e5	34.35	1.02	1.55	NO	50.981	0.932	0.109	9.61e6	5587	1720.7	6.36e6	5255	1209.8	bb
123478-HxCDF	3.20e5	2.61e5	5.81e5	36.50	1.00	1.23	NO	49.277	0.896	0.222	6.13e6	7007	874.9	4.82e6	7499	642.7	bd
123678-HxCDF	3.83e5	3.10e5	6.92e5	36.60	1.00	1.24	NO	50.472	1.068	0.190	6.73e6	7007	959.9	5.25e6	7499	700.2	dd
234678-HxCDF	3.34e5	2.66e5	6.00e5	37.10	1.01	1.26	NO	48.415	0.925	0.211	5.69e6	7007	812.0	4.56e6	7499	608.1	bd
123789-HxCDF	2.78e5	2.21e5	4.99e5	37.91	1.04	1.26	NO	48.586	0.769	0.254	4.23e6	7007	603.9	3.33e6	7499	444.3	bd
1234678-HpCDF	2.74e5	2.70e5	5.44e5	39.45	1.00	1.02	NO	52.406	1.338	0.174	4.07e6	4755	855.3	3.92e6	4023	974.1	bb
1234789-HpCDF	1.97e5	1.91e5	3.88e5	41.46	1.05	1.03	NO	51.340	0.955	0.238	2.48e6	4755	520.8	2.31e6	4023	573.7	bd
OCDF	2.99e5	3.30e5	6.29e5	45.52	1.01	0.91	NO	103.426	1.275	0.343	2.70e6	3045	887.4	3.06e6	3174	963.5	bd
13C-2378-TCDD	4.31e5	5.46e5	9.77e5	31.75	1.01	0.79	NO	94.508	1.058	0.0668	8.58e6	2533	3388.7	1.06e7	1390	7641.2	bb
13C-12378-PeCDD	5.33e5	3.42e5	8.75e5	34.55	1.10	1.56	NO	99.737	0.948	0.0931	1.06e7	2695	3934.1	6.68e6	1943	3436.0	bd
13C-123678-HxCDD	4.67e5	3.76e5	8.43e5	37.32	0.99	1.24	NO	103.322	1.149	0.127	7.63e6	2726	2799.1	6.15e6	2779	2212.8	db
13C-1234678-HpCDD	3.07e5	2.91e5	5.98e5	40.75	1.08	1.06	NO	101.824	0.815	0.224	3.74e6	3745	999.6	3.65e6	3265	1116.5	bd
13C-OCDD	4.75e5	5.12e5	9.87e5	45.17	1.20	0.93	NO	201.316	0.673	0.239	4.25e6	3735	1137.2	4.67e6	2506	1864.2	bd
13C-2378-TCDF	7.45e5	9.36e5	1.68e6	31.21	1.00	0.80	NO	99.979	1.821	0.0350	1.21e7	1741	6948.1	1.51e7	1604	9440.6	bb
13C-12378-PeCDF	9.58e5	6.07e5	1.56e6	33.71	1.08	1.58	NO	100.115	1.694	0.177	1.99e7	9477	2100.2	1.29e7	6263	2059.5	bd
13C-123678-HxCDF	4.46e5	8.51e5	1.30e6	36.59	0.97	0.52	NO	108.432	1.768	0.200	7.43e6	5737	1295.0	1.41e7	7020	2009.9	dd
13C-1234678-HpCDF	2.56e5	5.57e5	8.13e5	39.44	1.05	0.46	NO	102.529	1.108	0.191	3.74e6	3705	1009.3	8.22e6	4346	1891.0	bd
13C-1234-TCDD	4.10e5	5.14e5	9.24e5	31.34	0.00	0.80	NO	100.000	1.000	0.0748	6.98e6	2533	2756.3	8.95e6	1390	6438.0	bb
13C-123789-HxCDD	4.05e5	3.29e5	7.34e5	37.56	0.00	1.23	NO	100.000	1.000	0.141	6.47e6	2726	2374.6	5.12e6	2779	1841.0	bb
37Cl-2378-TCDD (SS)	1.01e5		1.01e5	31.76	1.00			9.840	1.037	0.0187	2.06e6	1281	1606.4				bb
13C-23478-PeCDF (SS)	8.86e5	5.58e5	1.44e6	34.34	1.02	1.59	NO	98.872	0.923	0.156	1.92e7	9477	2024.5	1.23e7	6263	1968.3	bb
13C-123478-HxCDF (SS)	3.37e5	6.52e5	9.90e5	36.49	1.00	0.52	NO	94.211	0.763	0.219	6.42e6	5737	1119.3	1.26e7	7020	1797.6	bd
13C-123478-HxCDD (SS)	4.03e5	3.21e5	7.25e5	37.22	1.00	1.25	NO	99.836	0.860	0.139	7.26e6	2726	2665.0	5.72e6	2779	2057.8	bd
13C-1234789-HpCDF (SS)	1.86e5	4.22e5	6.08e5	41.45	1.05	0.44	NO	98.952	0.748	0.269	2.25e6	3705	607.6	5.11e6	4346	1176.1	bd

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

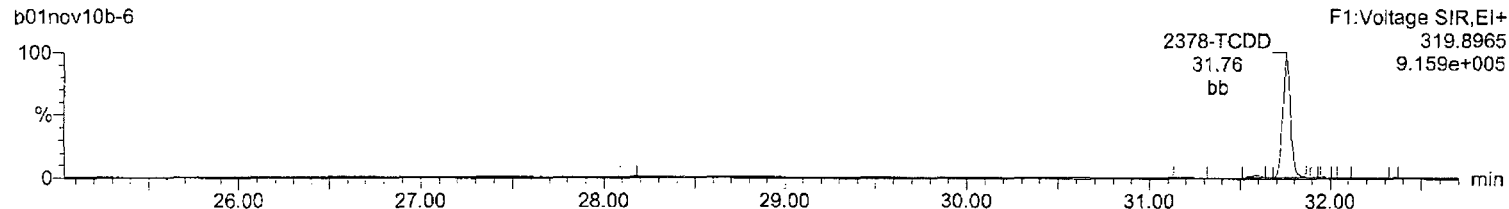
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-6, Date: 01-Nov-2010, Time: 21:41:31, ID: CS3 UD090323-04, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

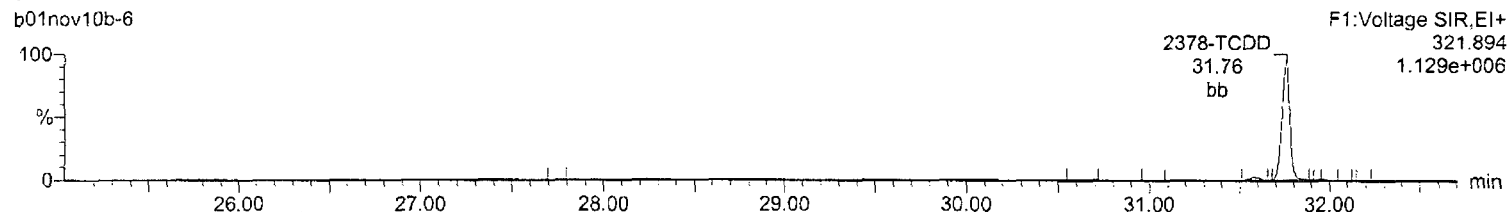
Total-tetradoxins

b01nov10b-6



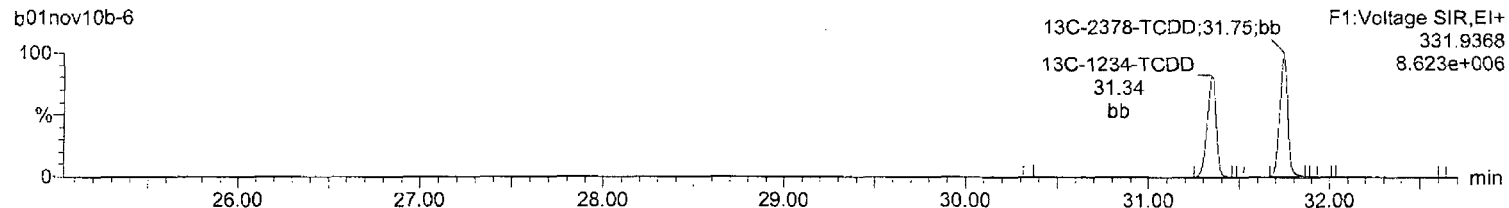
Total-tetradoxins

b01nov10b-6



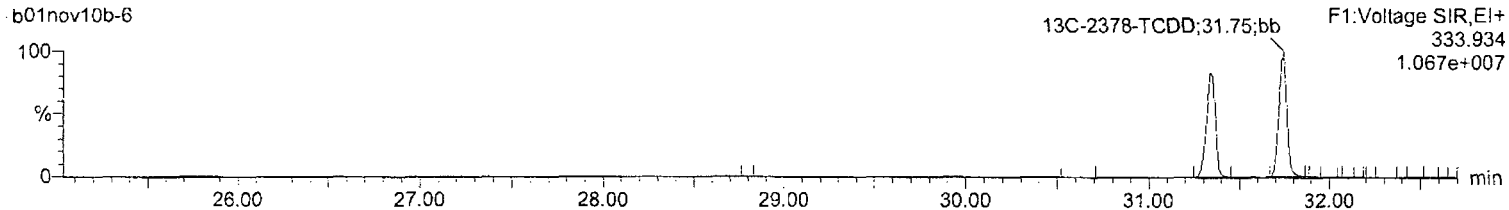
¹³C-2378-TCDD

b01nov10b-6



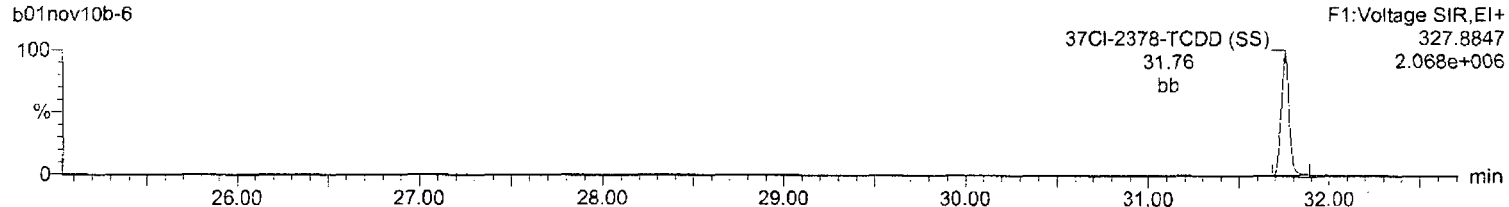
¹³C-2378-TCDD

b01nov10b-6



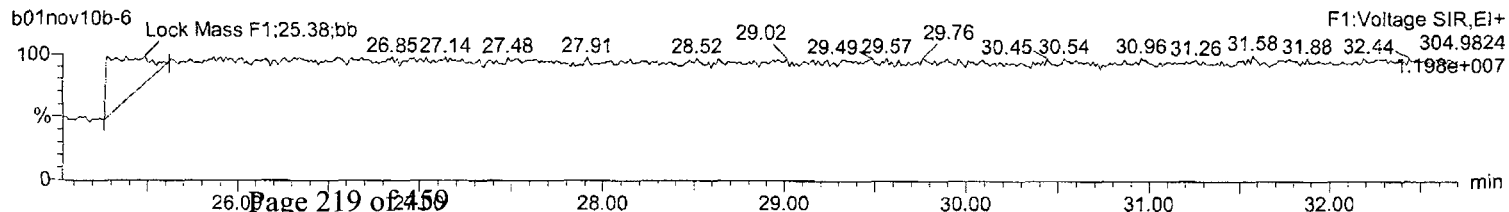
³⁷Cl-2378-TCDD (SS)

b01nov10b-6



Lock Mass F1

b01nov10b-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

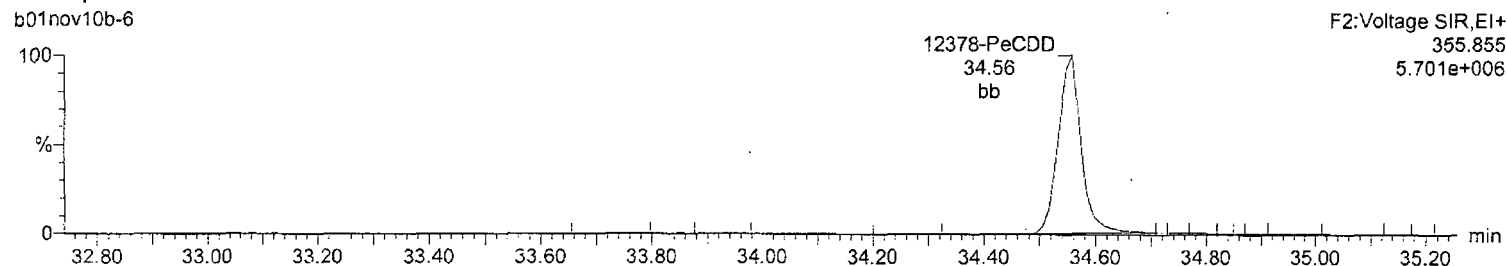
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-6, Date: 01-Nov-2010, Time: 21:41:31, ID: CS3 UD090323-04, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

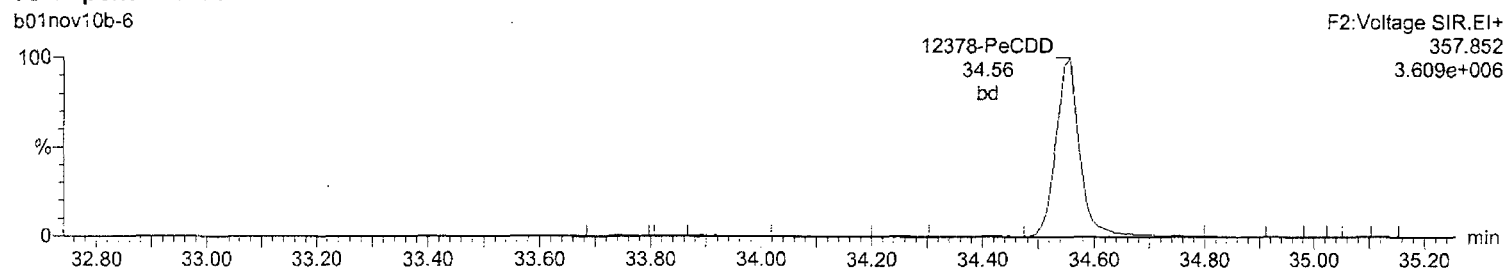
Total-pentadioxins

b01nov10b-6



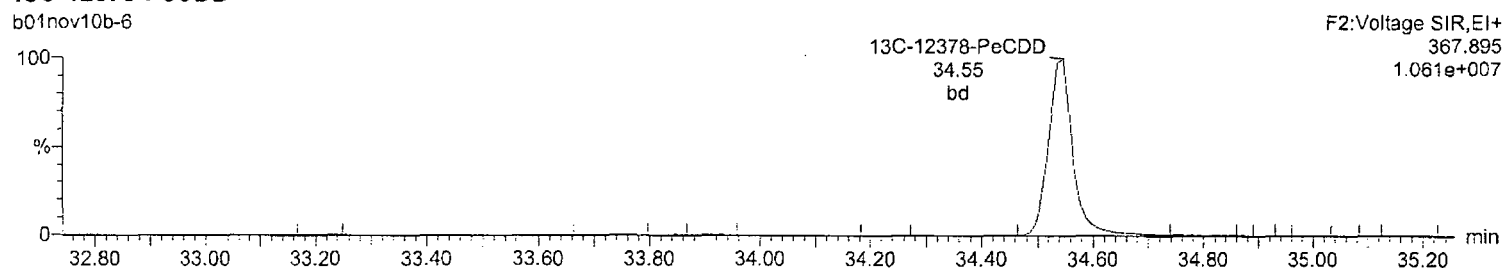
Total-pentadioxins

b01nov10b-6



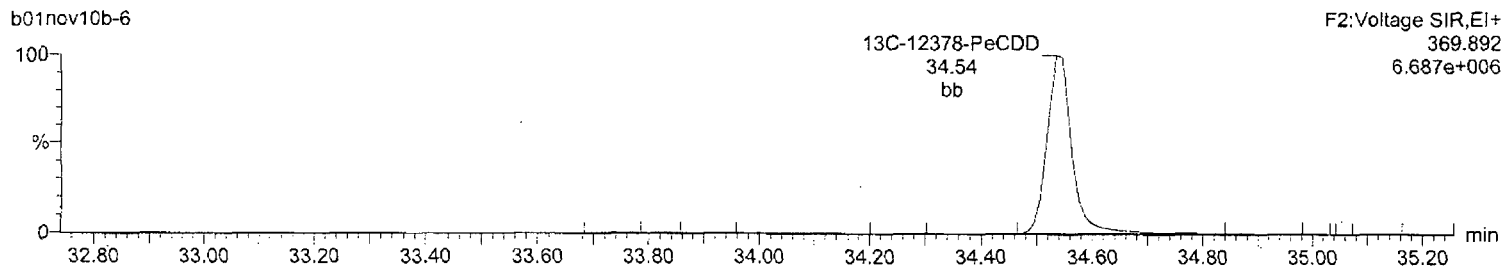
¹³C-12378-PeCDD

b01nov10b-6



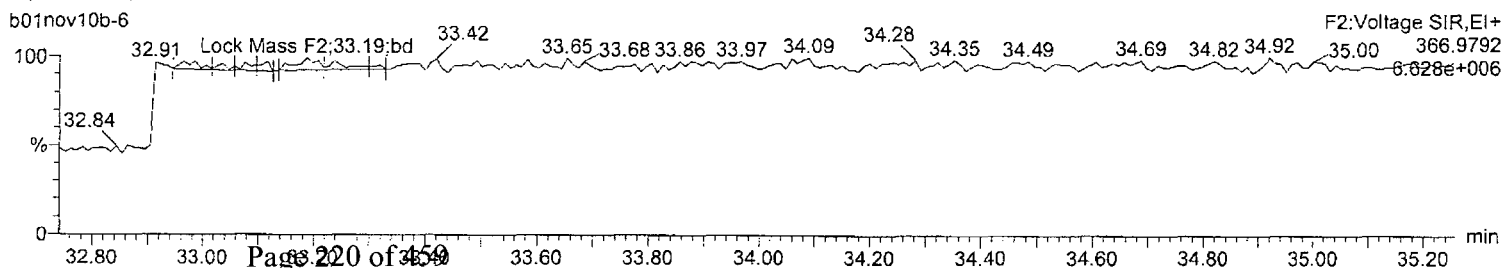
¹³C-12378-PeCDD

b01nov10b-6



Lock Mass F2

b01nov10b-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

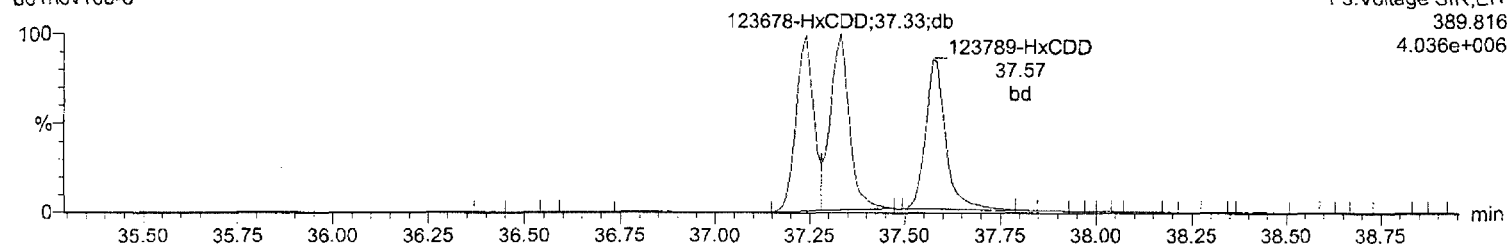
Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-6, Date: 01-Nov-2010, Time: 21:41:31, ID: CS3 UD090323-04, Description: , Job: b01nov10b,

Task: HRP763_1, User: MJC

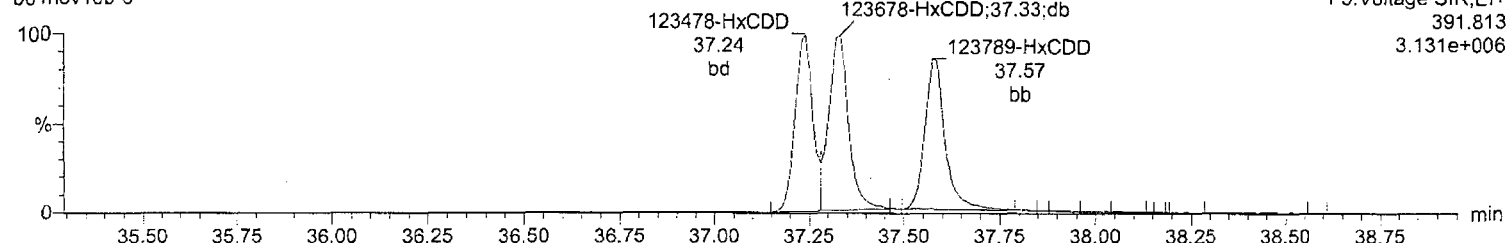
Total-hexadioxins

b01nov10b-6



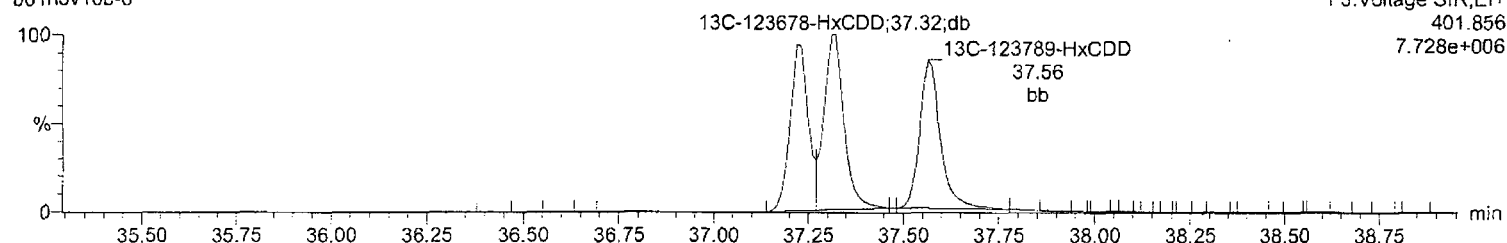
Total-hexadioxins

b01nov10b-6



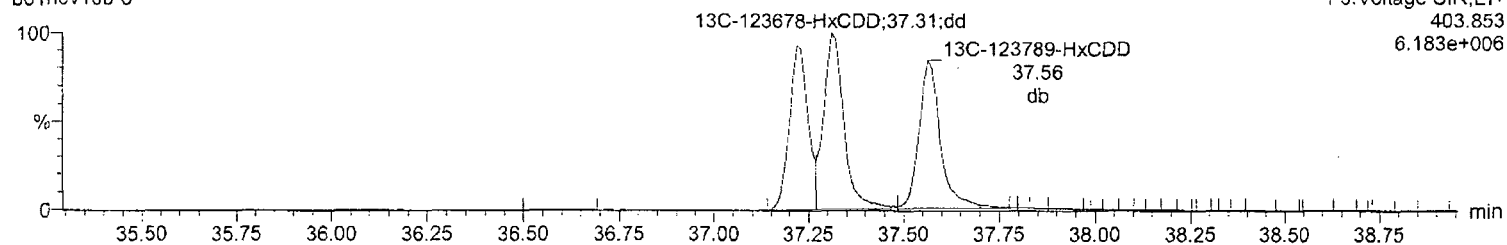
13C-123678-HxCDD

b01nov10b-6



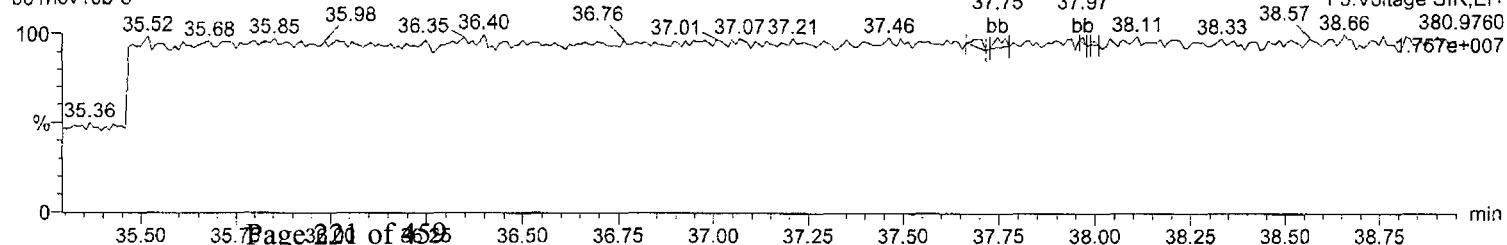
13C-123678-HxCDD

b01nov10b-6



Lock Mass F3

b01nov10b-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

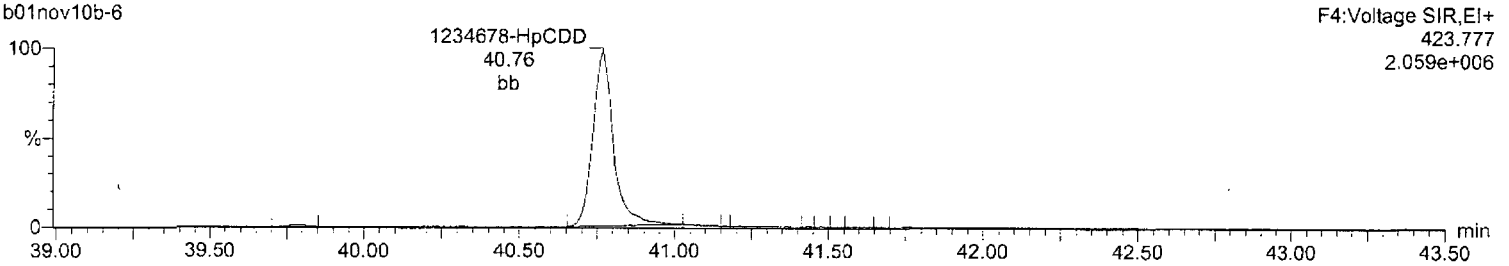
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-6, Date: 01-Nov-2010, Time: 21:41:31, ID: CS3 UD090323-04, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

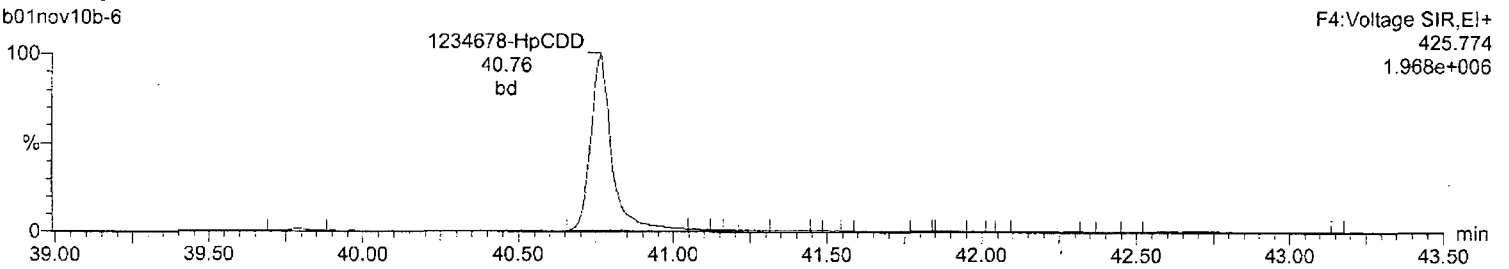
Total-heptadioxins

b01nov10b-6



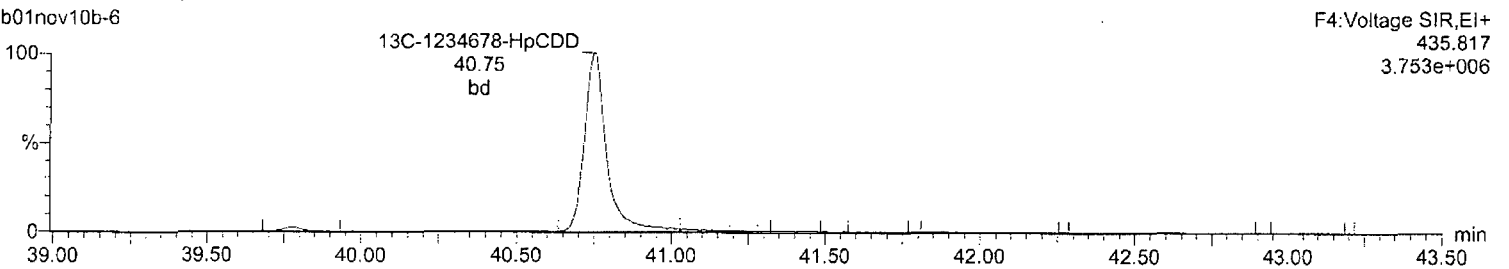
Total-heptadioxins

b01nov10b-6



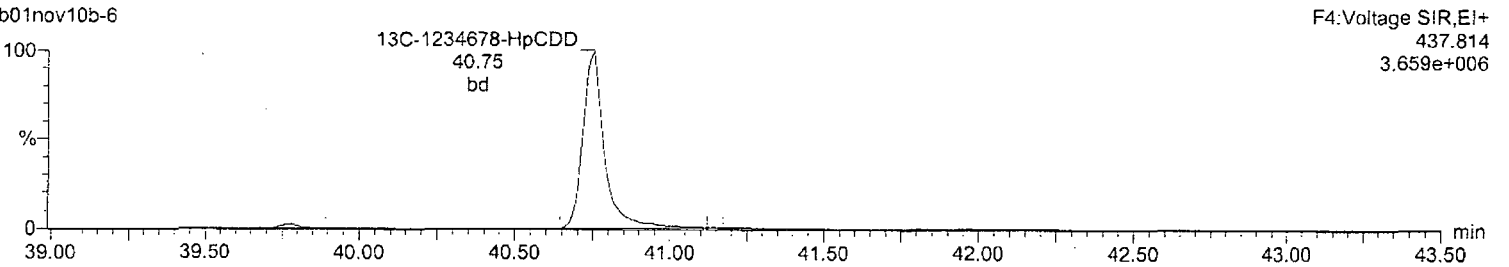
13C-1234678-HpCDD

b01nov10b-6



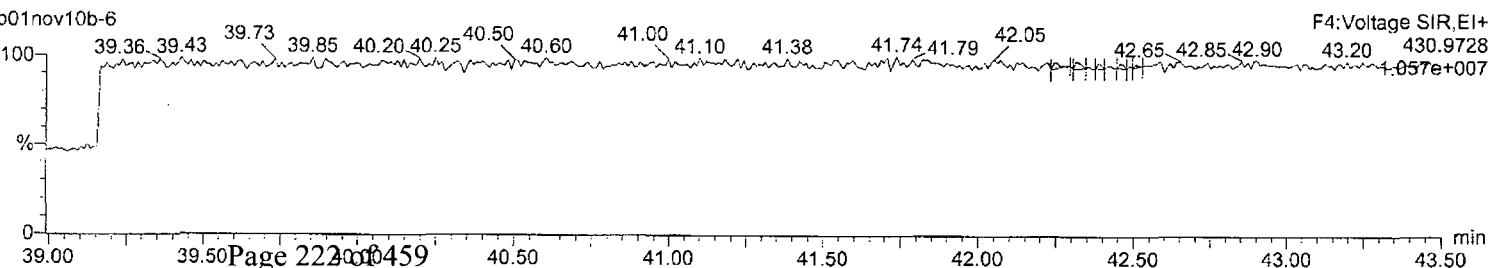
13C-1234678-HpCDD

b01nov10b-6



Lock Mass F4

b01nov10b-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

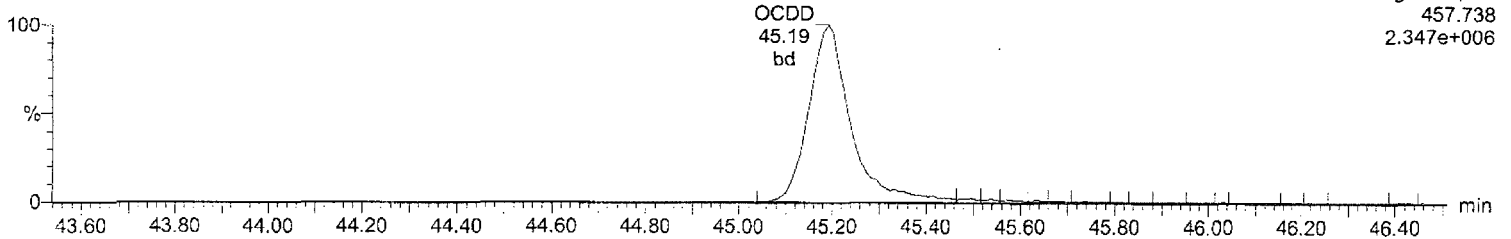
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-6, Date: 01-Nov-2010, Time: 21:41:31, ID: CS3 UD090323-04, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

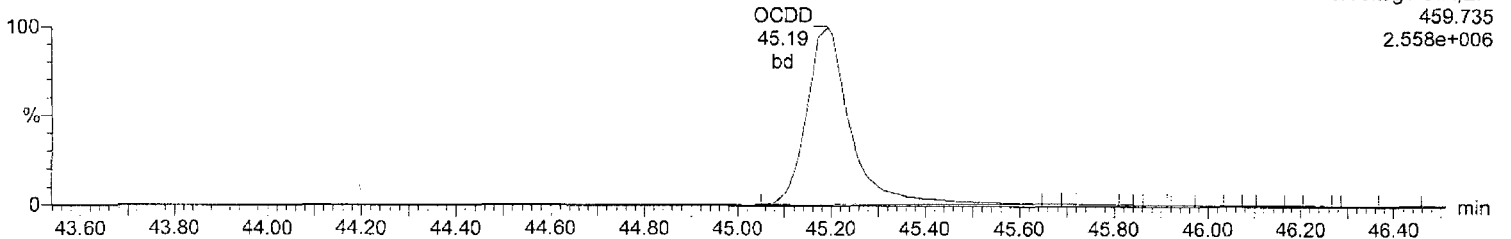
OCDD

b01nov10b-6



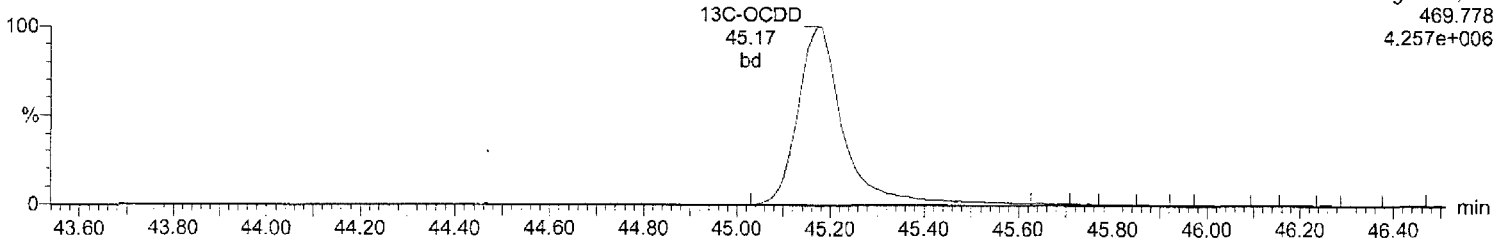
OCDD

b01nov10b-6



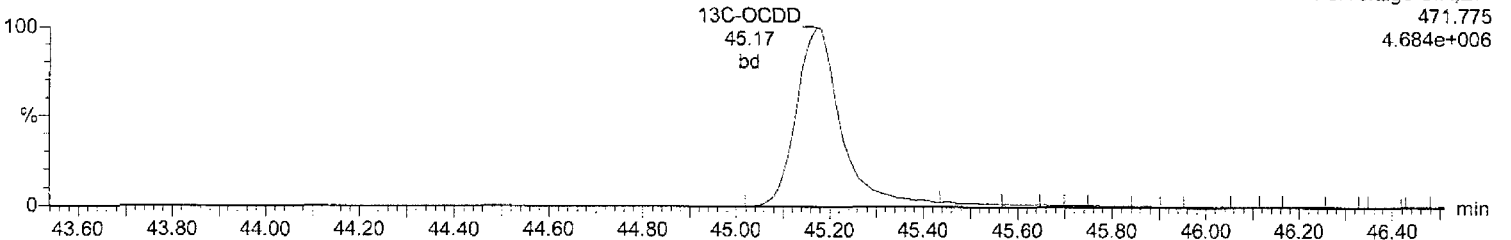
13C-OCDD

b01nov10b-6



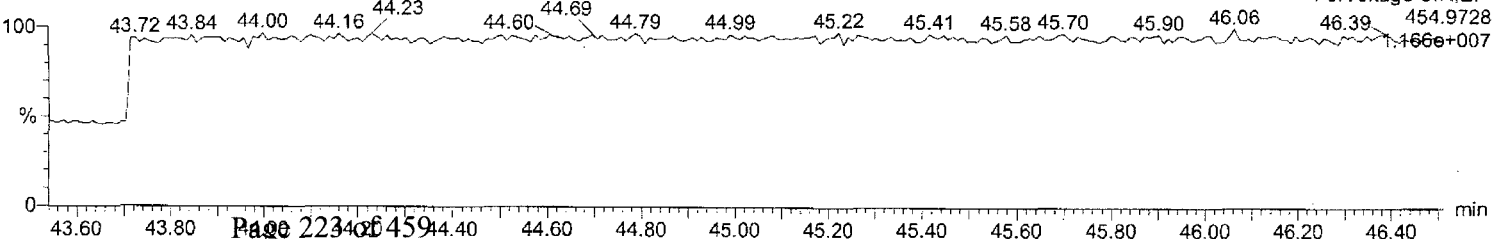
13C-OCDD

b01nov10b-6



Lock Mass F5

b01nov10b-6



Quantify Sample Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

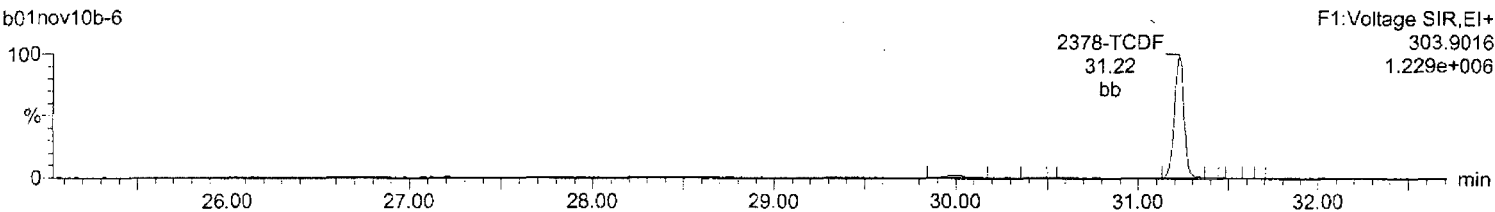
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-6, Date: 01-Nov-2010, Time: 21:41:31, ID: CS3 UD090323-04, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

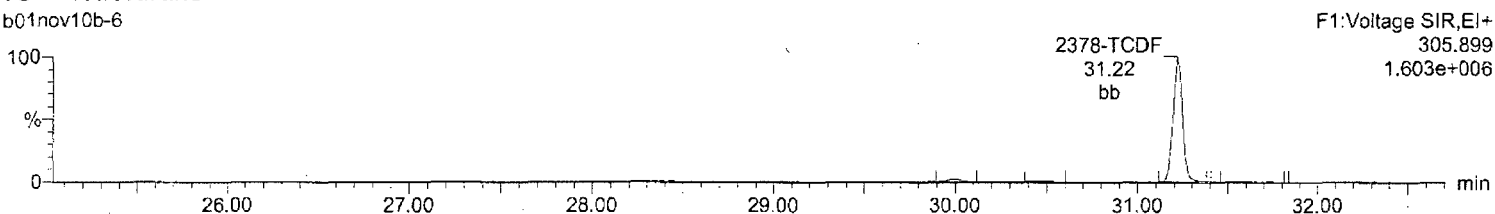
Total-tetrafurans

b01nov10b-6



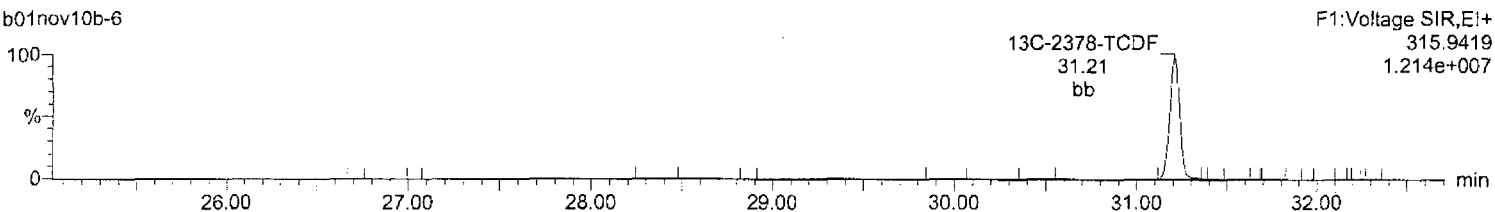
Total-tetrafurans

b01nov10b-6



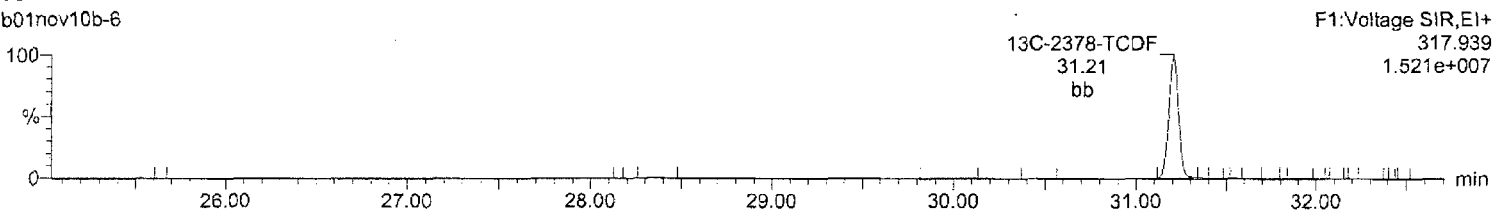
¹³C-2378-TCDF

b01nov10b-6



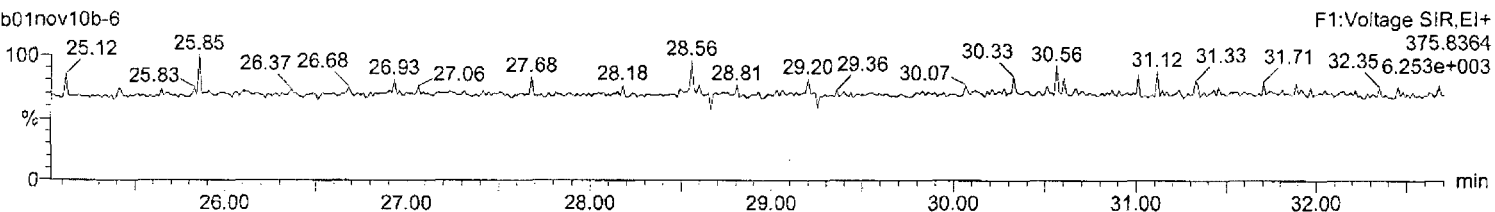
¹³C-2378-TCDF

b01nov10b-6



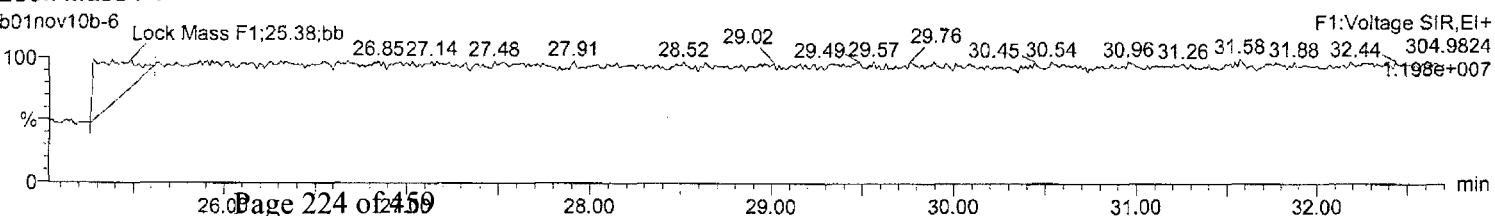
HxDPE

b01nov10b-6



Lock Mass F1

b01nov10b-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

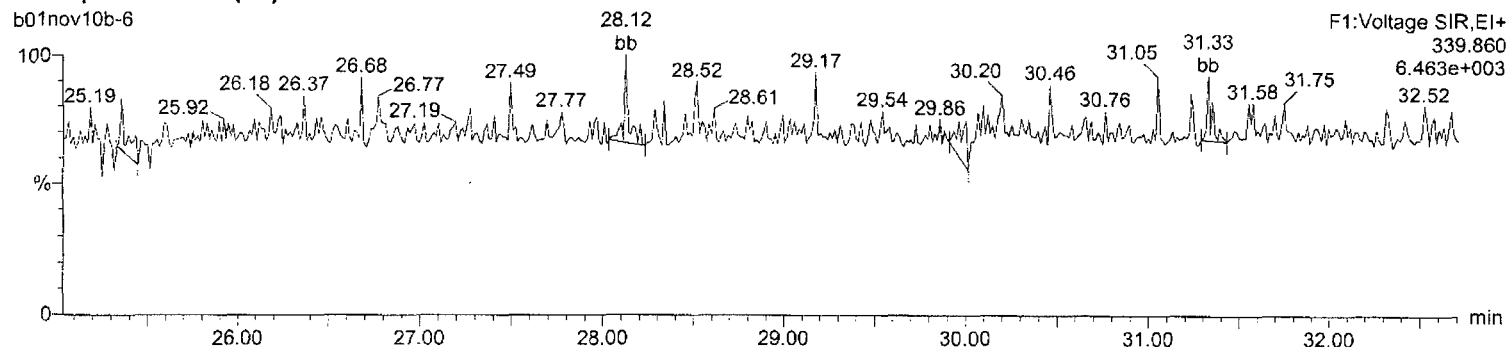
Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-6, Date: 01-Nov-2010, Time: 21:41:31, ID: CS3 UD090323-04, Description: , Job: b01nov10b,

Task: HRP763_1, User: MJC

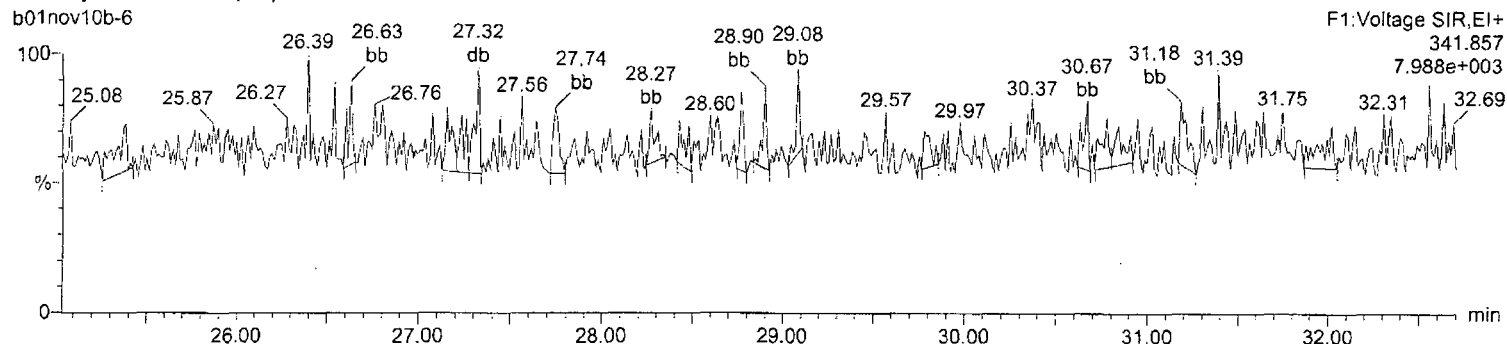
Total-pentafurans (F1)

b01nov10b-6



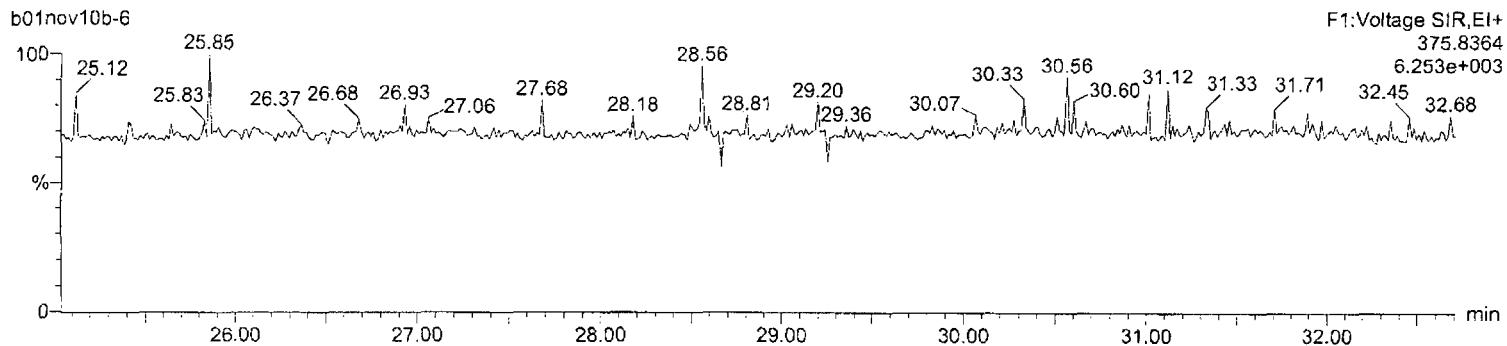
Total-pentafurans (F1)

b01nov10b-6



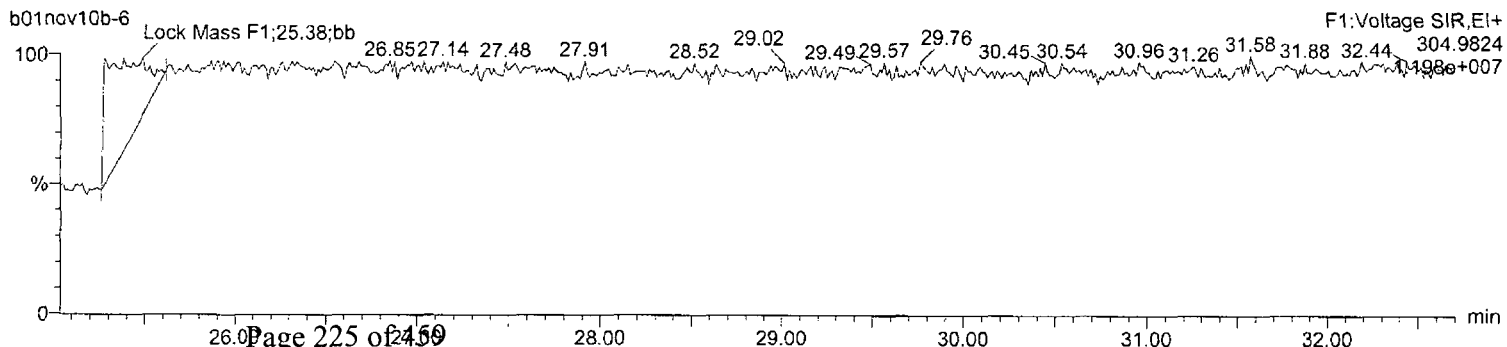
HxDPE

b01nov10b-6



Lock Mass F1

b01nov10b-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

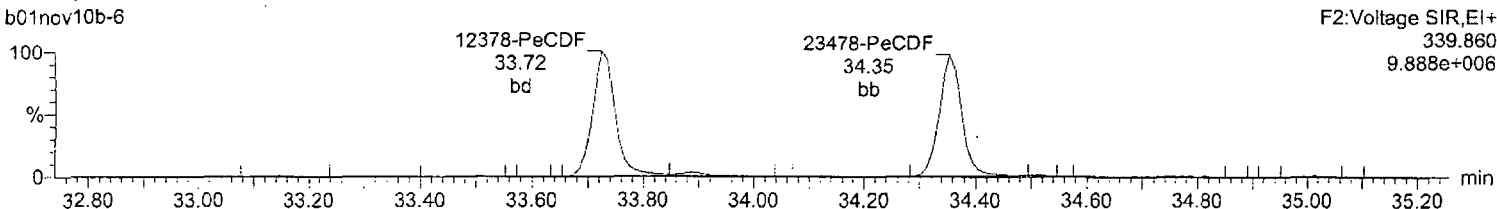
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-6, Date: 01-Nov-2010, Time: 21:41:31, ID: CS3 UD090323-04, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

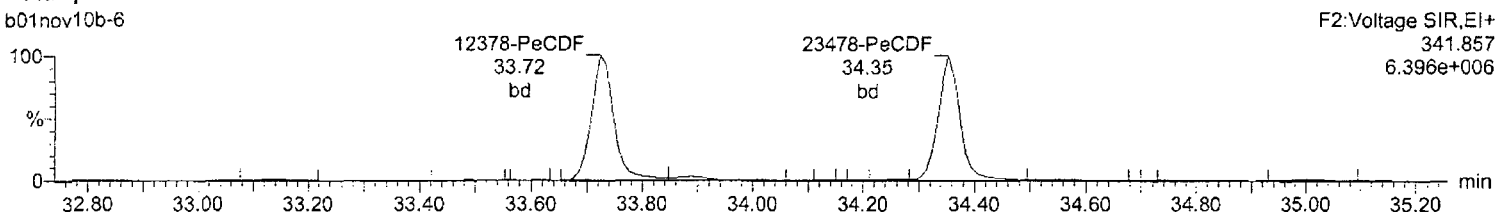
Total-pentafurans

b01nov10b-6



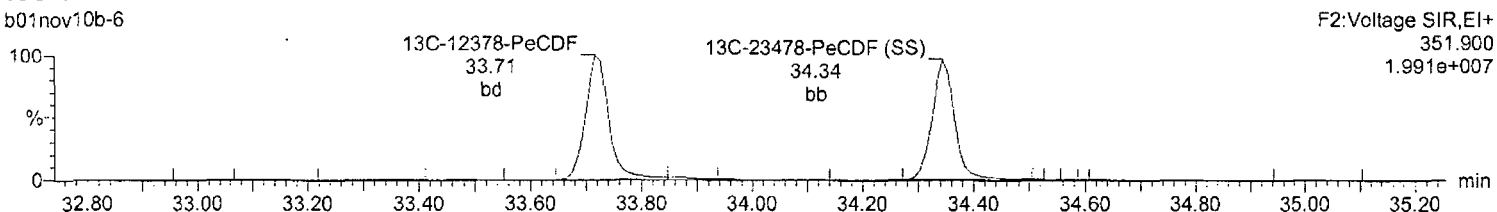
Total-pentafurans

b01nov10b-6



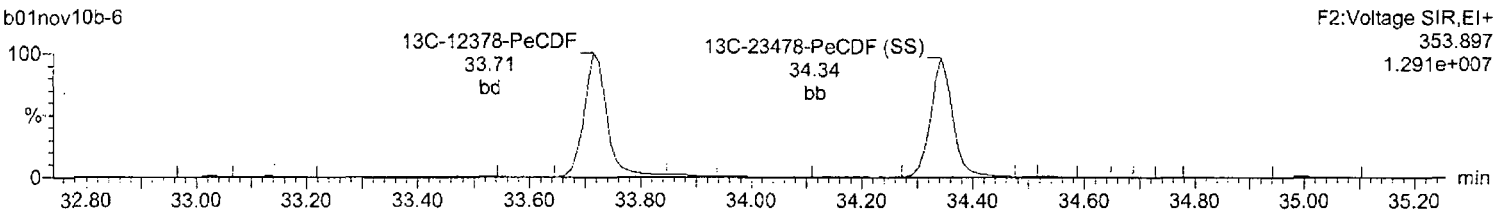
13C-12378-PeCDF

b01nov10b-6



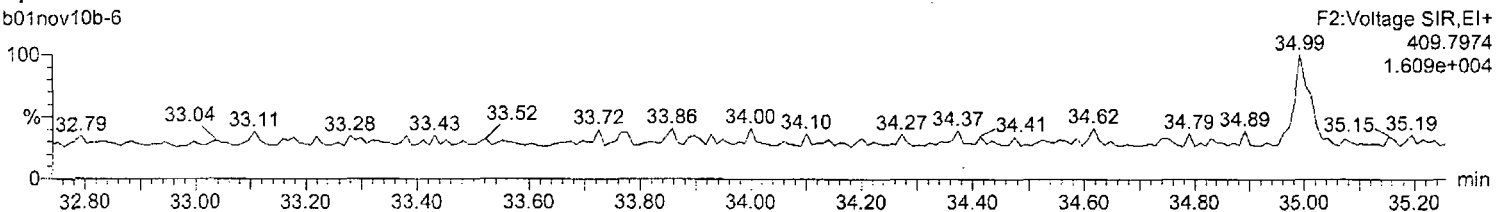
13C-12378-PeCDF

b01nov10b-6



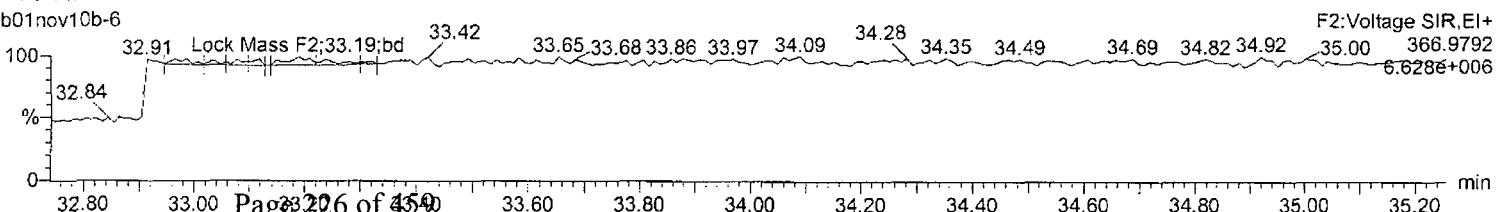
HpDPE

b01nov10b-6



Lock Mass F2

b01nov10b-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

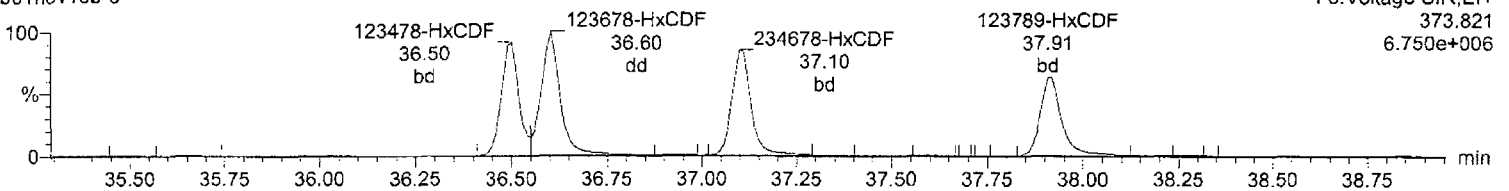
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-6, Date: 01-Nov-2010, Time: 21:41:31, ID: CS3 UD090323-04, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

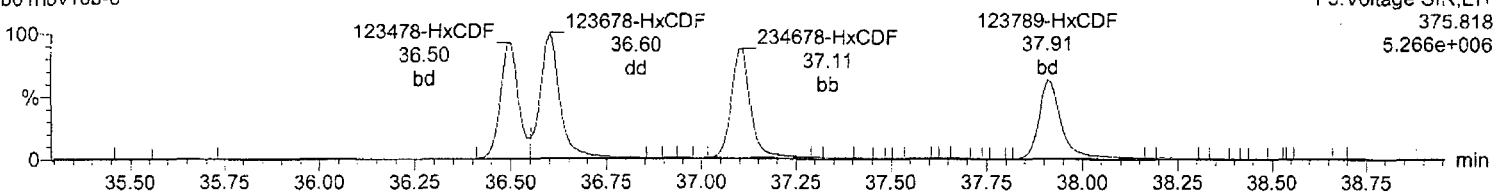
Total-hexafurans

b01nov10b-6



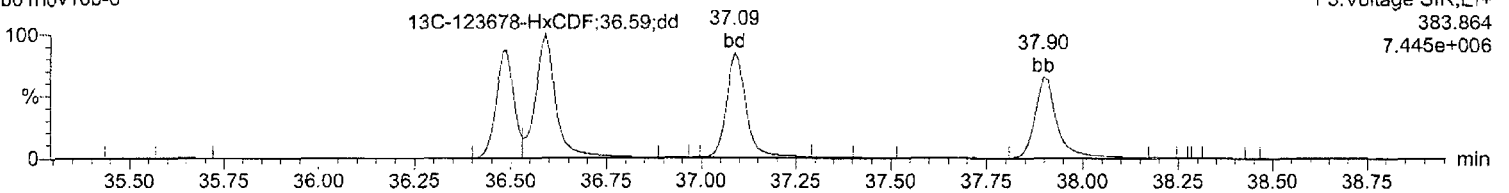
Total-hexafurans

b01nov10b-6



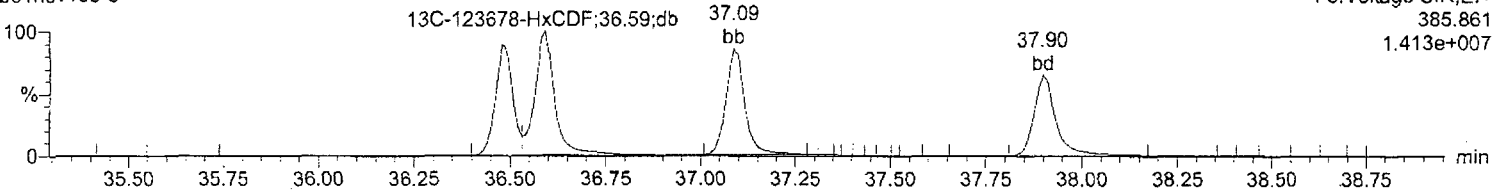
¹³C-123678-HxCDF

b01nov10b-6



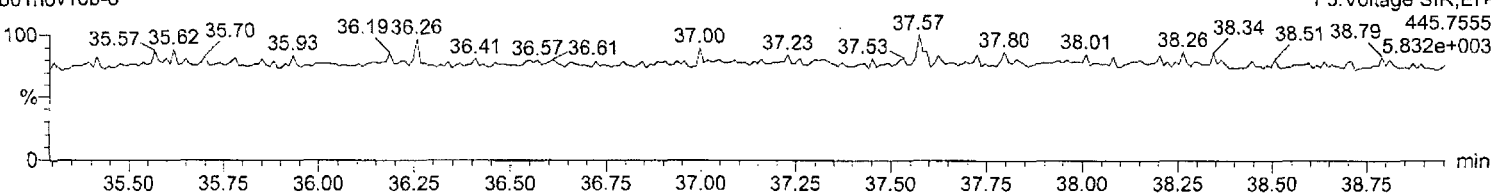
¹³C-123678-HxCDF

b01nov10b-6



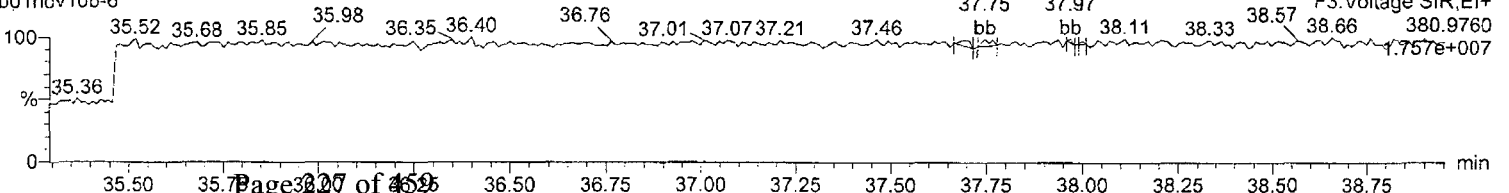
OcDPE

b01nov10b-6



Lock Mass F3

b01nov10b-6



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

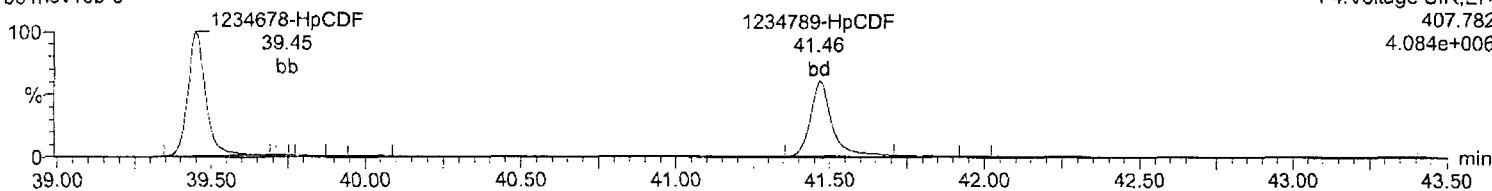
Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-6, Date: 01-Nov-2010, Time: 21:41:31, ID: CS3 UD090323-04, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

Total-heptafurans

b01nov10b-6

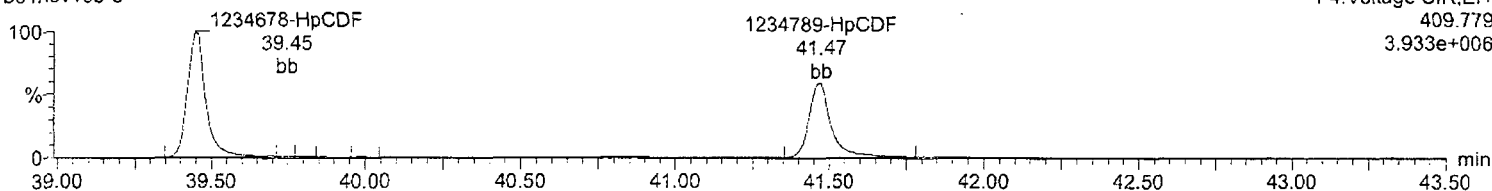
F4:Voltage SIR,EI+
407.782
4.084e+006



Total-heptafurans

b01nov10b-6

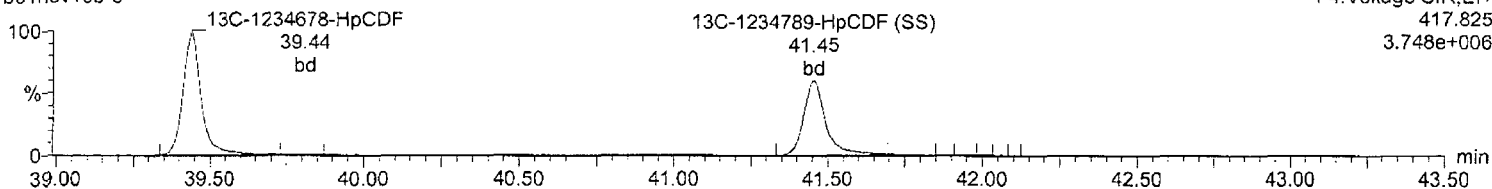
F4:Voltage SIR,EI+
409.779
3.933e+006



13C-1234678-HpCDF

b01nov10b-6

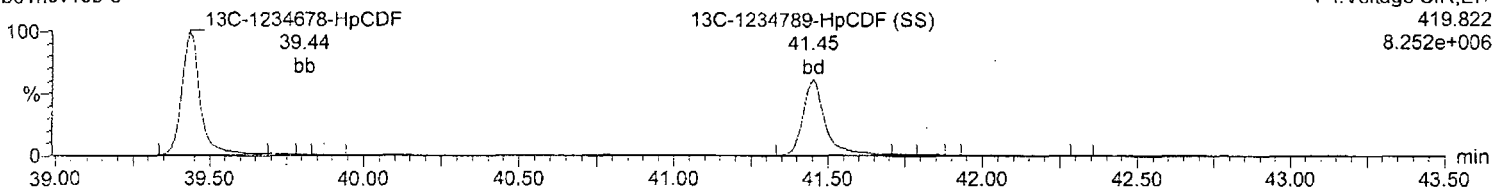
F4:Voltage SIR,EI+
417.825
3.748e+006



13C-1234678-HpCDF

b01nov10b-6

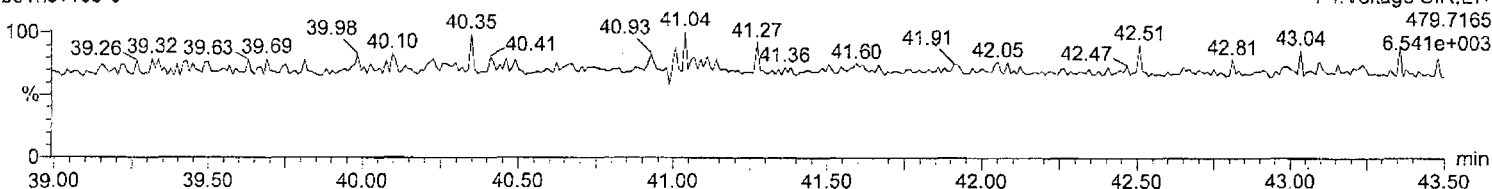
F4:Voltage SIR,EI+
419.822
8.252e+006



NoDPE

b01nov10b-6

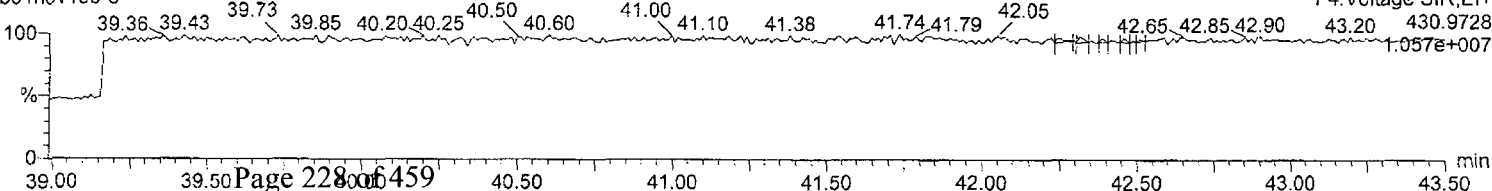
F4:Voltage SIR,EI+
479.7165
6.541e+003



Lock Mass F4

b01nov10b-6

F4:Voltage SIR,EI+
430.9728
1.057e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

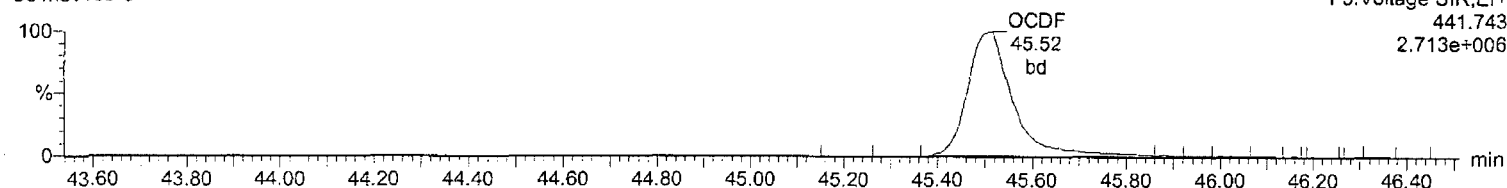
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-6, Date: 01-Nov-2010, Time: 21:41:31, ID: CS3 UD090323-04, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

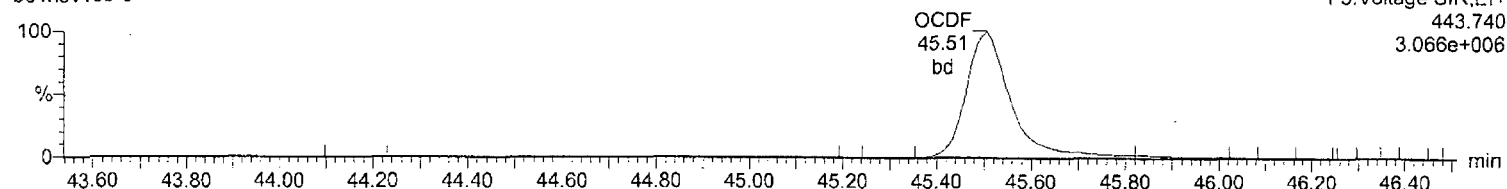
OCDF

b01nov10b-6



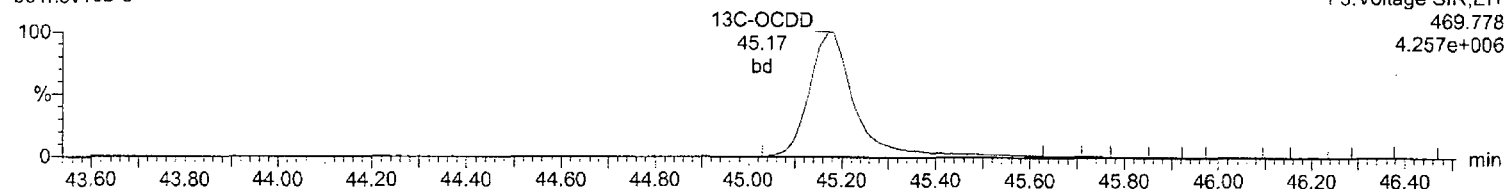
OCDF

b01nov10b-6



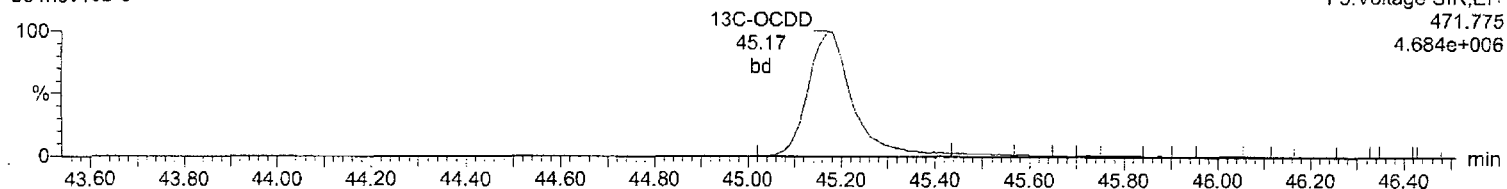
¹³C-OCDD

b01nov10b-6



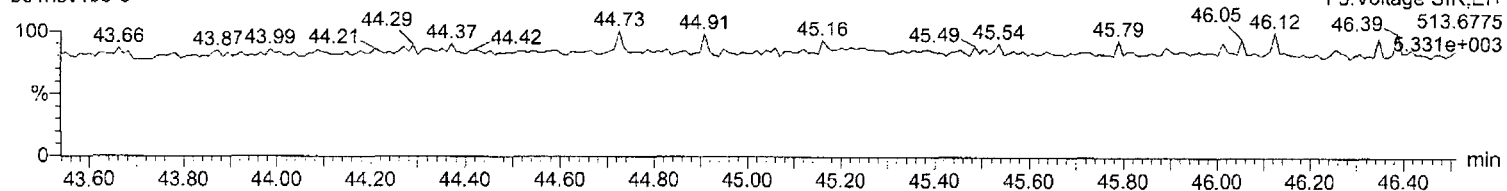
¹³C-OCDD

b01nov10b-6



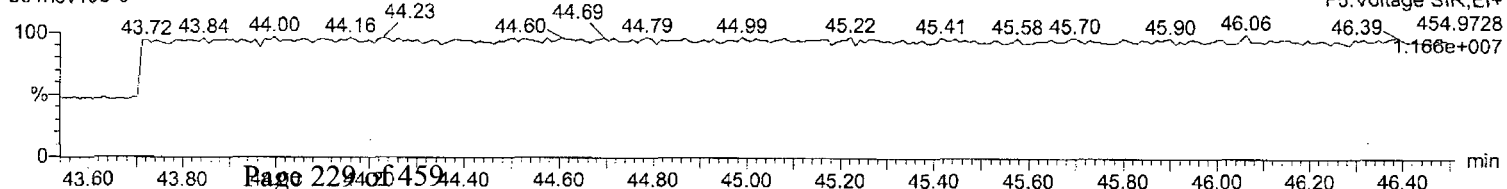
DeDPE

b01nov10b-6



Lock Mass F5

b01nov10b-6



Quantify Sample Summary Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

Die
nick

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Name: b01nov10b-7, Date: 01-Nov-2010, Time: 22:29:56, ID: CS4 UD101022-05, Description: , Job: b01nov10b, Task: HRP763_1, User: MJC

Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
2378-TCDD	1.77e5	2.29e5	4.05e5	31.75	1.00	0.77	NO	43.207	1.094	0.0364	3.45e6	1091	3165.2	4.47e6	1122	3984.9	bb
12378-PeCDD	1.05e6	6.84e5	1.74e6	34.55	1.00	1.54	NO	207.682	1.072	0.162	2.26e7	5757	3926.1	1.48e7	3509	4208.2	bb
123478-HxCDD	8.32e5	6.67e5	1.50e6	37.23	1.00	1.25	NO	203.468	0.912	0.295	1.52e7	7142	2134.2	1.23e7	4466	2751.8	bd
123678-HxCDD	8.95e5	7.07e5	1.60e6	37.32	1.00	1.27	NO	201.363	0.974	0.273	1.58e7	7142	2206.9	1.23e7	4466	2756.4	db
123789-HxCDD	7.99e5	6.40e5	1.44e6	37.57	1.01	1.25	NO	202.434	0.876	0.306	1.33e7	7142	1855.4	1.04e7	4466	2323.7	bb
1234678-HpCDD	6.18e5	6.07e5	1.22e6	40.76	1.00	1.02	NO	210.042	1.055	0.371	7.85e6	4485	1750.7	7.63e6	4341	1757.2	bb
OCDD	9.84e5	1.12e6	2.10e6	45.18	1.00	0.88	NO	431.741	1.075	0.788	9.64e6	5653	1705.9	1.10e7	6315	1748.7	bd
2378-TCDF	2.58e5	3.33e5	5.91e5	31.22	1.00	0.78	NO	38.921	0.957	0.0342	4.31e6	1104	3907.7	5.49e6	1737	3157.9	bb
12378-PeCDF	1.69e6	1.09e6	2.78e6	33.72	1.00	1.55	NO	203.695	0.951	0.132	3.77e7	5021	7509.9	2.40e7	8006	2999.5	bd
23478-PeCDF	1.68e6	1.08e6	2.76e6	34.35	1.02	1.55	NO	206.228	0.943	0.135	3.66e7	5021	7282.1	2.31e7	8006	2888.5	bb
123478-HxCDF	1.21e6	9.68e5	2.17e6	36.49	1.00	1.25	NO	205.350	0.933	0.333	2.41e7	11062	2180.7	1.90e7	8343	2281.0	bd
123678-HxCDF	1.43e6	1.16e6	2.59e6	36.60	1.00	1.24	NO	210.308	1.112	0.287	2.51e7	11062	2264.8	2.02e7	8343	2418.0	db
234678-HxCDF	1.30e6	1.05e6	2.35e6	37.10	1.01	1.24	NO	210.799	1.007	0.317	2.28e7	11062	2064.8	1.85e7	8343	2219.6	bb
123789-HxCDF	1.06e6	8.94e5	1.95e6	37.91	1.04	1.18	NO	211.491	0.837	0.383	1.69e7	11062	1524.1	1.35e7	8343	1615.5	bb
1234678-HpCDF	1.04e6	1.04e6	2.08e6	39.45	1.00	1.00	NO	208.033	1.328	0.301	1.54e7	7317	2101.8	1.52e7	7470	2030.1	bb
1234789-HpCDF	7.90e5	7.48e5	1.54e6	41.46	1.05	1.06	NO	210.871	0.981	0.412	9.67e6	7317	1321.0	9.30e6	7470	1245.3	bd
OCDF	1.29e6	1.43e6	2.73e6	45.51	1.01	0.90	NO	452.772	1.395	0.477	1.22e7	6300	1942.2	1.36e7	2661	5114.0	bd
13C-2378-TCDD	4.10e5	5.16e5	9.26e5	31.73	1.01	0.79	NO	98.572	1.104	0.0694	7.97e6	2456	3246.1	1.01e7	1427	7061.4	bb
13C-12378-PeCDD	4.96e5	3.14e5	8.10e5	34.54	1.10	1.58	NO	101.575	0.965	0.129	1.02e7	2630	3872.0	6.73e6	3477	1935.1	bb
13C-123678-HxCDD	4.63e5	3.59e5	8.22e5	37.31	0.99	1.29	NO	104.897	1.166	0.179	7.42e6	4418	1678.7	5.80e6	2978	1948.5	db
13C-1234678-HpCDD	2.95e5	2.85e5	5.80e5	40.74	1.08	1.04	NO	102.857	0.823	0.222	3.61e6	3457	1045.4	3.42e6	3152	1085.5	bd
13C-OCDD	4.61e5	5.15e5	9.77e5	45.16	1.20	0.89	NO	207.463	0.693	0.285	4.32e6	3199	1350.4	5.00e6	3868	1292.6	bd
13C-2378-TCDF	6.80e5	8.63e5	1.54e6	31.21	1.00	0.79	NO	100.947	1.838	0.0353	1.12e7	1451	7704.9	1.40e7	1761	7978.6	bb
13C-12378-PeCDF	8.92e5	5.71e5	1.46e6	33.71	1.08	1.56	NO	102.973	1.743	0.119	1.93e7	5842	3303.6	1.26e7	4261	2959.5	bd
13C-123678-HxCDF	4.07e5	7.58e5	1.17e6	36.58	0.97	0.54	NO	101.417	1.654	0.171	6.71e6	5108	1314.1	1.31e7	5250	2501.3	dd
13C-1234678-HpCDF	2.43e5	5.41e5	7.84e5	39.44	1.05	0.45	NO	102.996	1.113	0.221	3.59e6	3673	976.2	7.90e6	5221	1513.8	bd
13C-1234-TCDD	3.71e5	4.68e5	8.39e5	31.34	0.00	0.79	NO	100.000	1.000	0.0777	6.63e6	2456	2701.7	8.31e6	1427	5823.4	bb
13C-123789-HxCDD	3.93e5	3.11e5	7.05e5	37.56	0.00	1.26	NO	100.000	1.000	0.199	6.22e6	4418	1408.9	4.95e6	2978	1661.6	bb
37Cl-2378-TCDD (SS)	4.17e5		4.17e5	31.75	1.00			42.719	1.126	0.0229	8.18e6	1447	5654.5				bb
13C-23478-PeCDF (SS)	8.42e5	5.34e5	1.38e6	34.34	1.02	1.58	NO	100.795	0.941	0.103	1.81e7	5842	3103.8	1.15e7	4261	2697.4	bb
13C-123478-HxCDF (SS)	3.22e5	6.19e5	9.41e5	36.48	1.00	0.52	NO	99.757	0.808	0.200	6.24e6	5108	1221.8	1.21e7	5250	2314.3	bd
13C-123478-HxCDD (SS)	3.81e5	2.94e5	6.74e5	37.22	1.00	1.30	NO	95.316	0.821	0.196	7.29e6	4418	1650.0	5.67e6	2978	1904.7	bd
13C-1234789-HpCDF (SS)	1.84e5	4.12e5	5.96e5	41.45	1.05	0.45	NO	100.462	0.760	0.305	2.20e6	3673	599.2	4.96e6	5221	950.8	bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

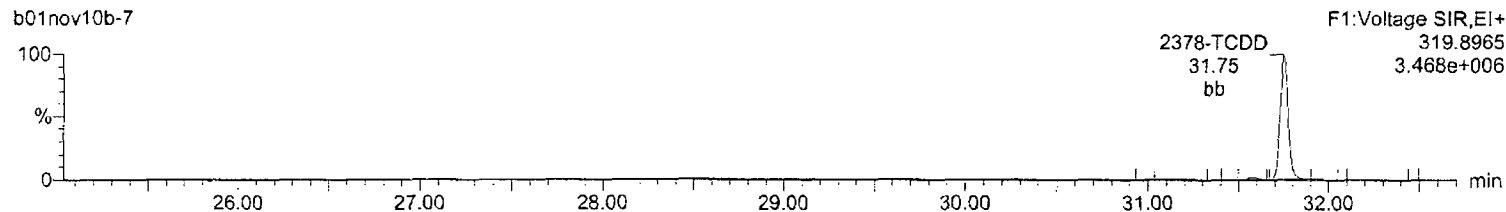
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-7, Date: 01-Nov-2010, Time: 22:29:56, ID: CS4 UD101022-05, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

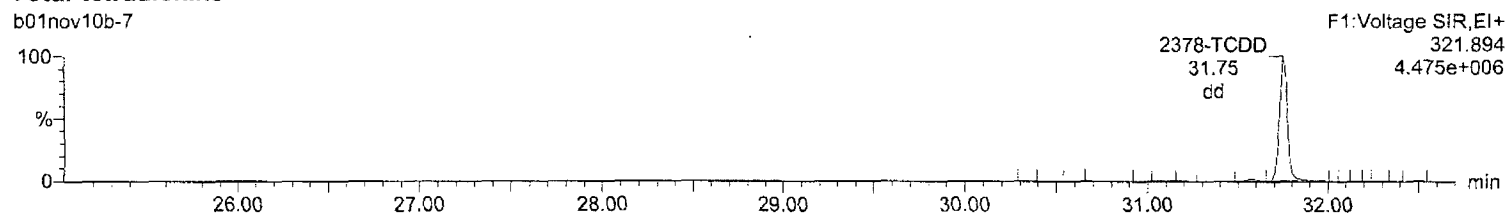
Total-tetradoxins

b01nov10b-7



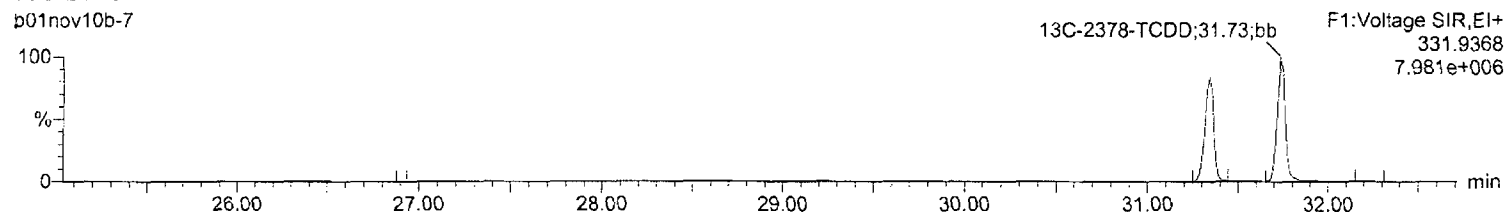
Total-tetradoxins

b01nov10b-7



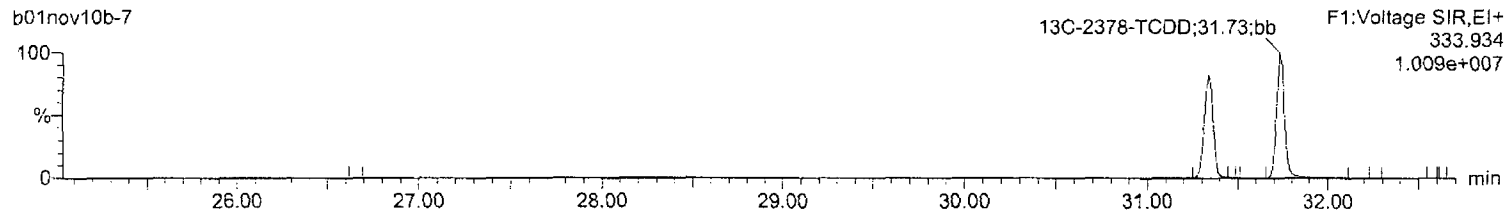
13C-2378-TCDD

b01nov10b-7



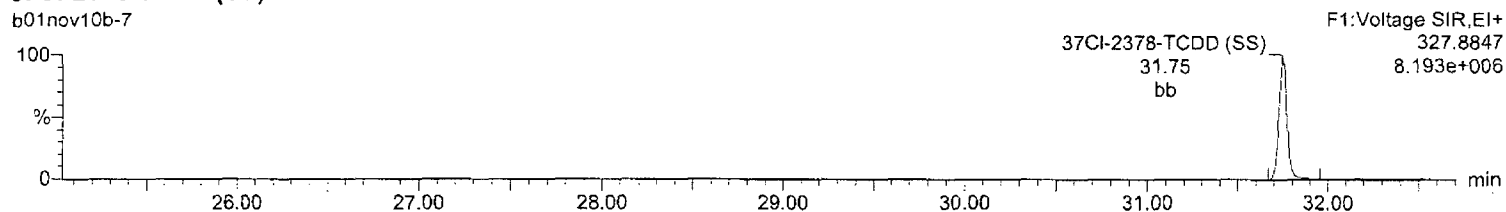
13C-2378-TCDD

b01nov10b-7



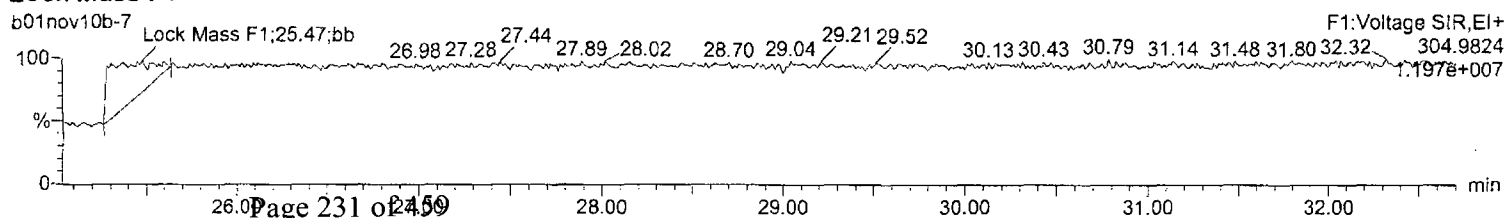
37Cl-2378-TCDD (SS)

b01nov10b-7



Lock Mass F1

b01nov10b-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

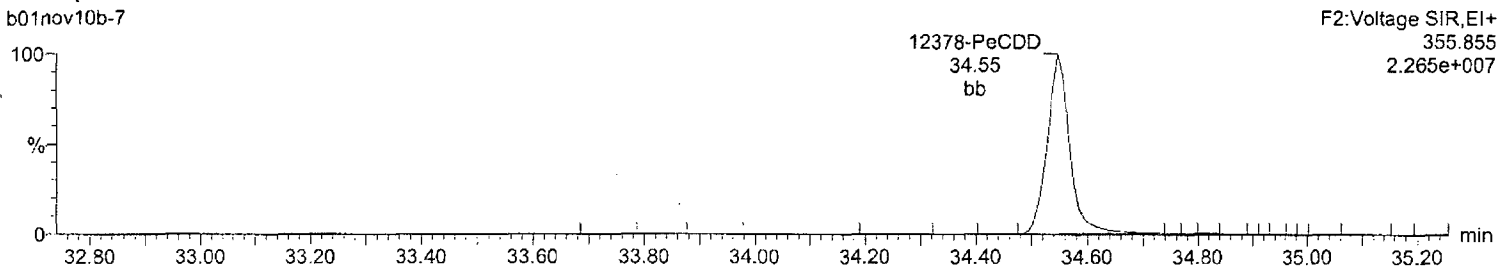
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-7, Date: 01-Nov-2010, Time: 22:29:56, ID: CS4 UD101022-05, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

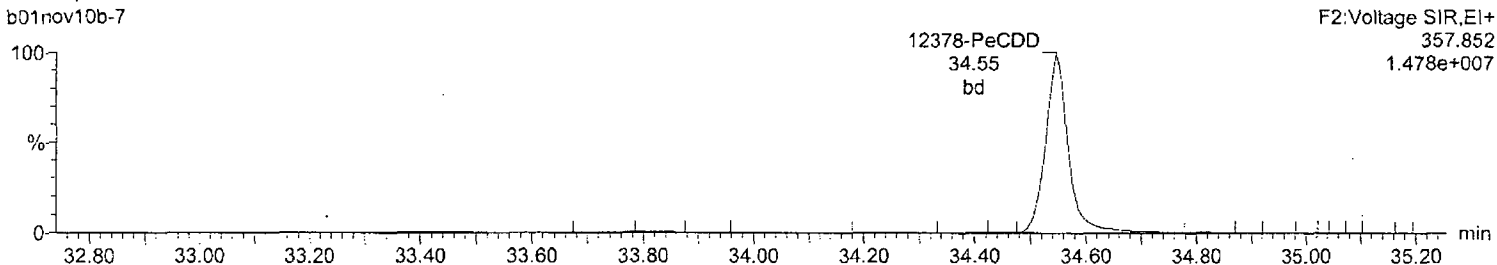
Total-pentadioxins

b01nov10b-7



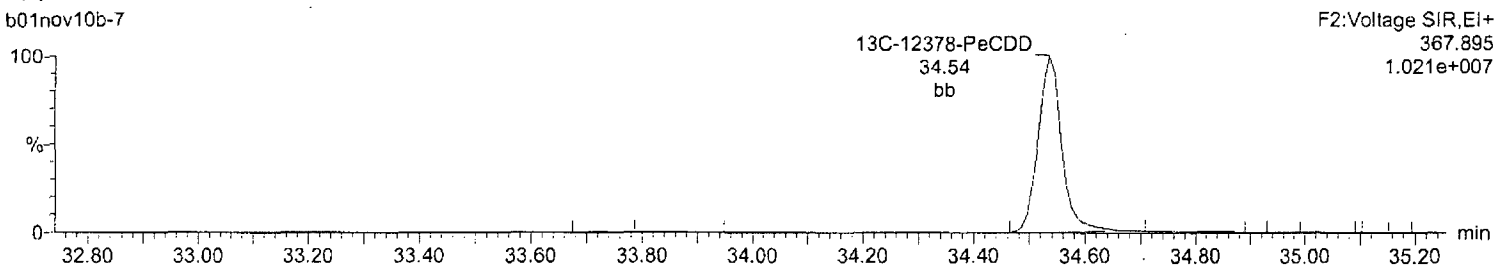
Total-pentadioxins

b01nov10b-7



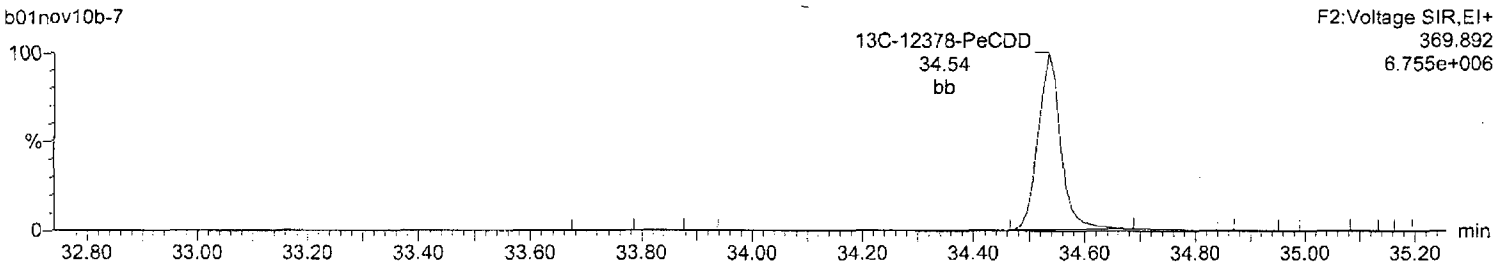
13C-12378-PeCDD

b01nov10b-7



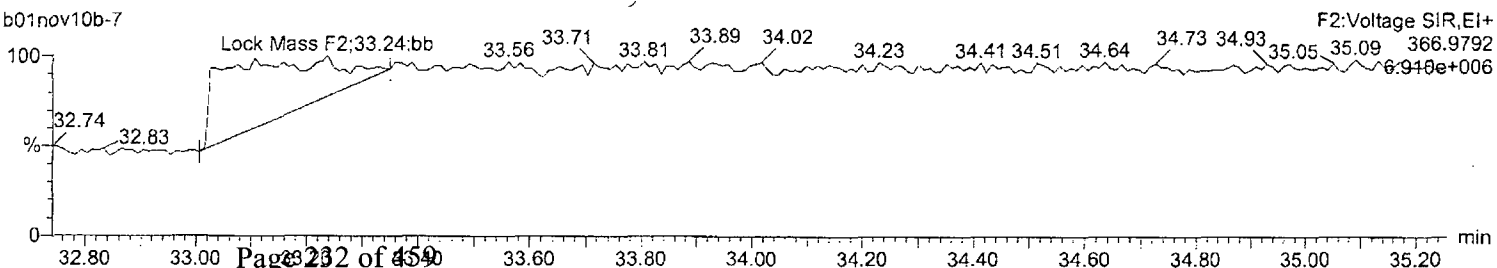
13C-12378-PeCDD

b01nov10b-7



Lock Mass F2

b01nov10b-7



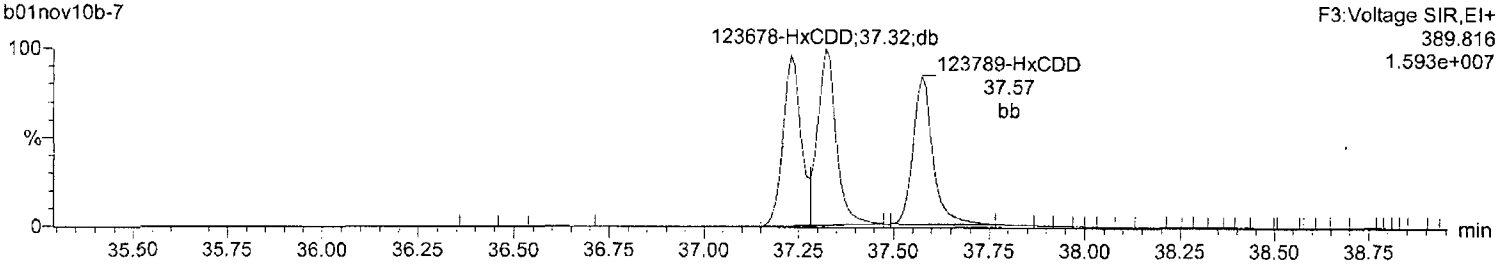
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Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time
Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-7, Date: 01-Nov-2010, Time: 22:29:56, ID: CS4 UD101022-05, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

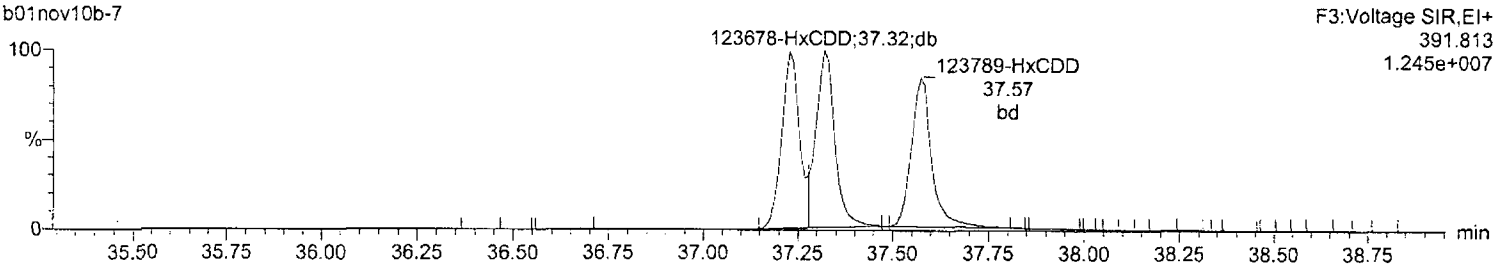
Total-hexadioxins

b01nov10b-7



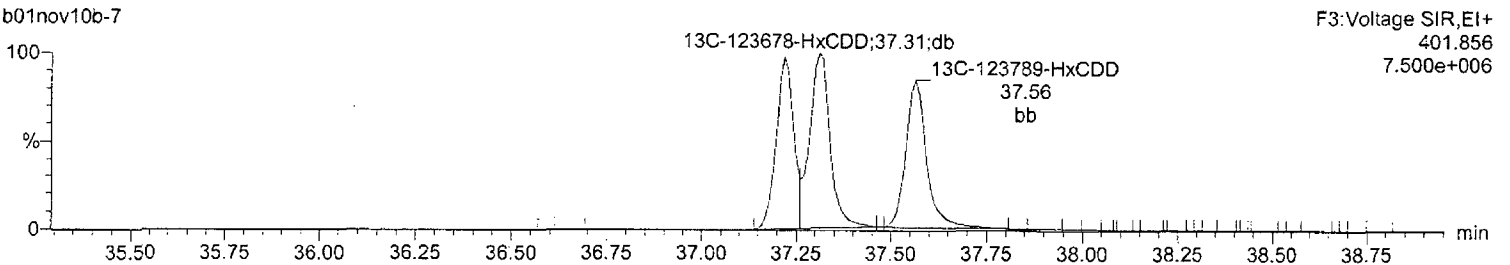
Total-hexadioxins

b01nov10b-7



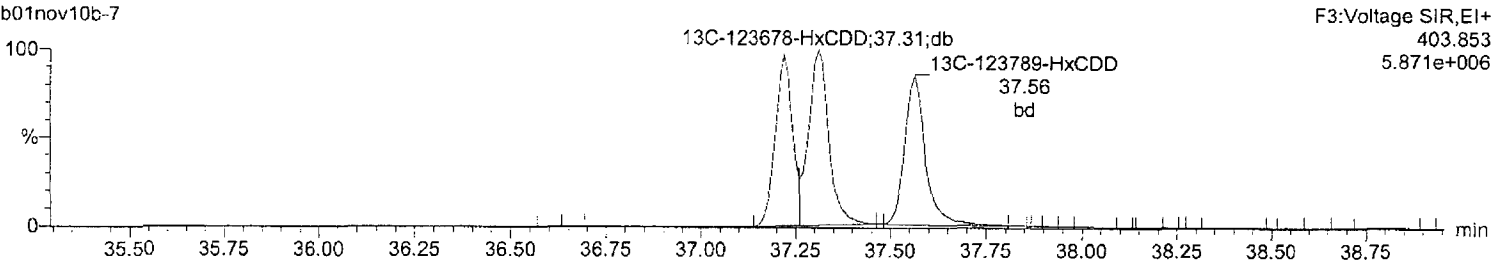
¹³C-123678-HxCDD

b01nov10b-7



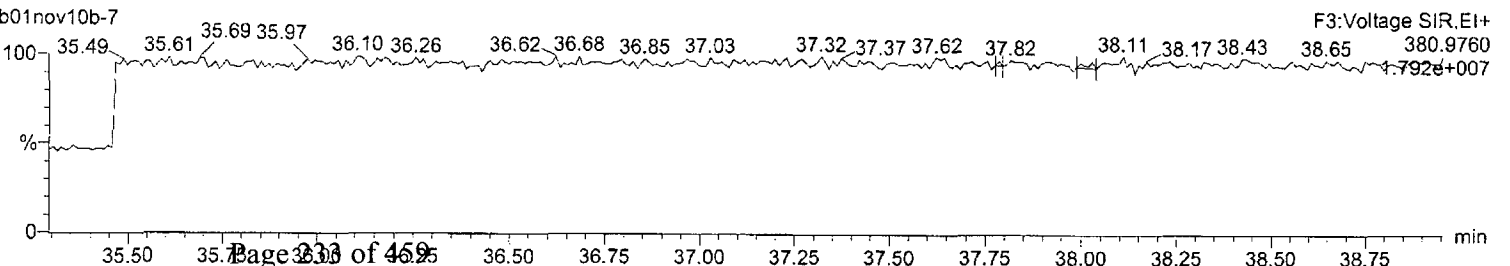
¹³C-123678-HxCDD

b01nov10b-7



Lock Mass F3

b01nov10b-7



Quantify Sample Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

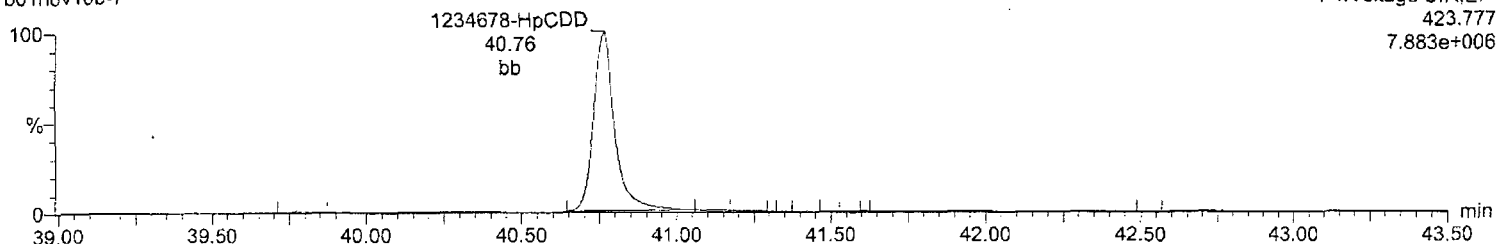
Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-7, Date: 01-Nov-2010, Time: 22:29:56, ID: CS4 UD101022-05, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

Total-heptadioxins

b01nov10b-7

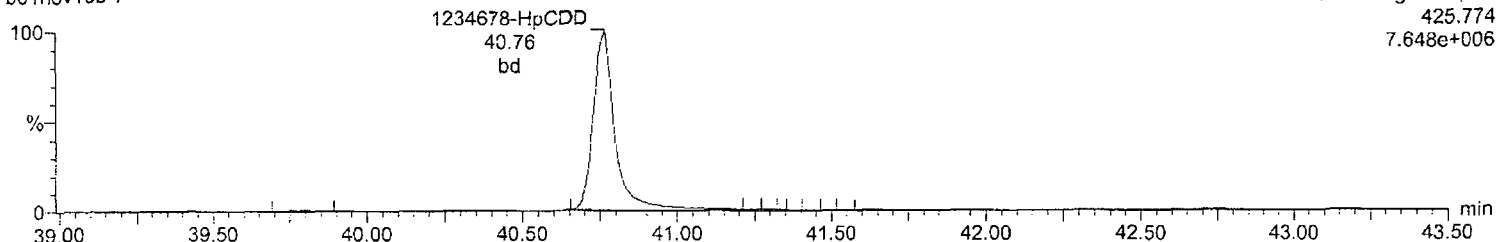
F4:Voltage SIR, EI+
423.777
7.883e+006



Total-heptadioxins

b01nov10b-7

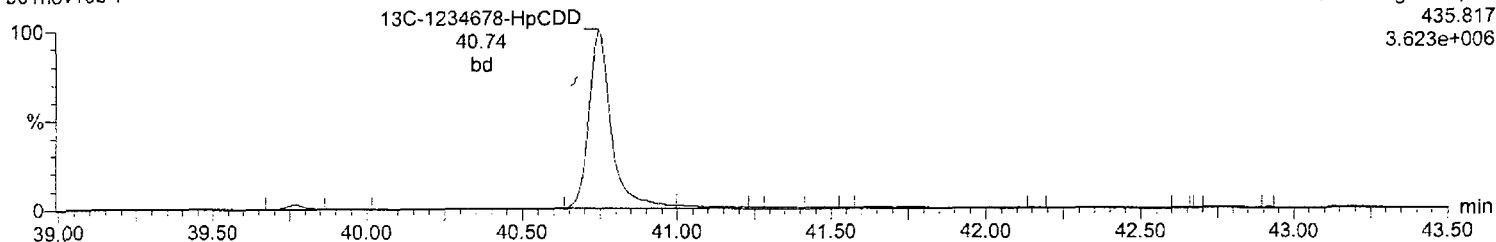
F4:Voltage SIR, EI+
425.774
7.648e+006



13C-1234678-HpCDD

b01nov10b-7

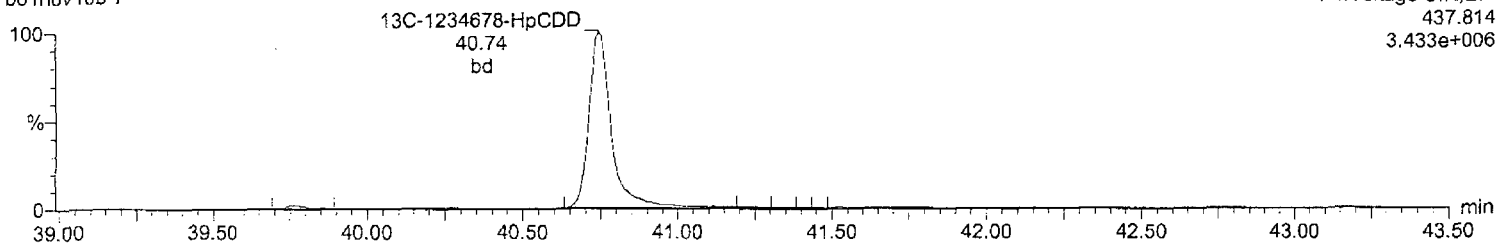
F4:Voltage SIR, EI+
435.817
3.623e+006



13C-1234678-HpCDD

b01nov10b-7

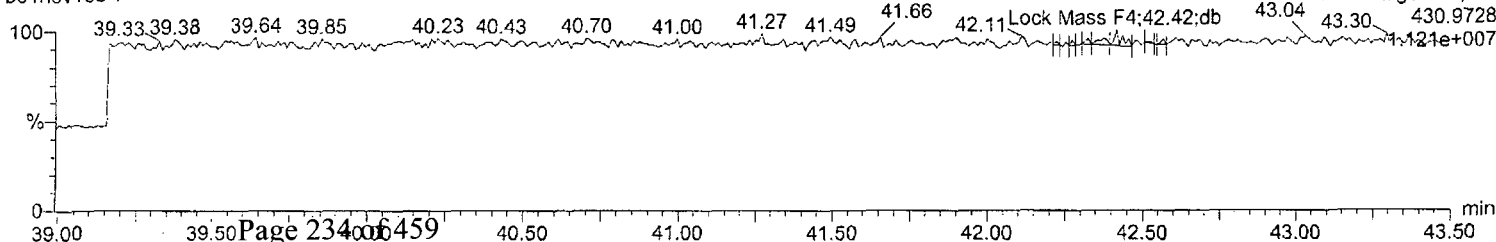
F4:Voltage SIR, EI+
437.814
3.433e+006



Lock Mass F4

b01nov10b-7

F4:Voltage SIR, EI+
430.9728
1.121e+007



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

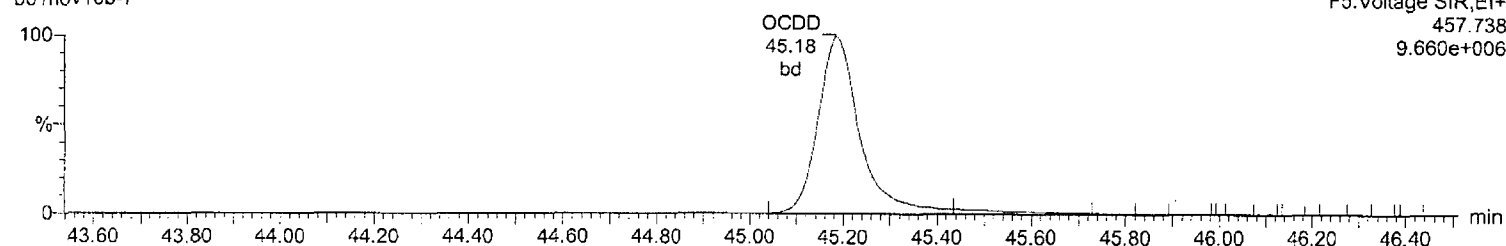
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Task: HRP763_1, User: MJC

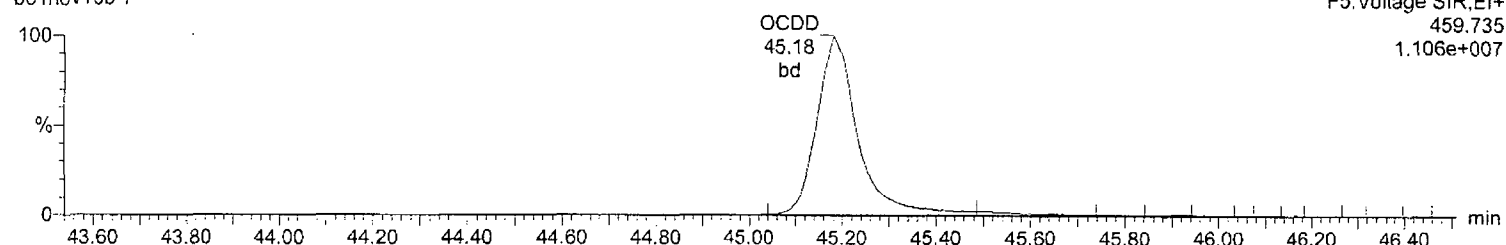
OCDD

b01nov10b-7



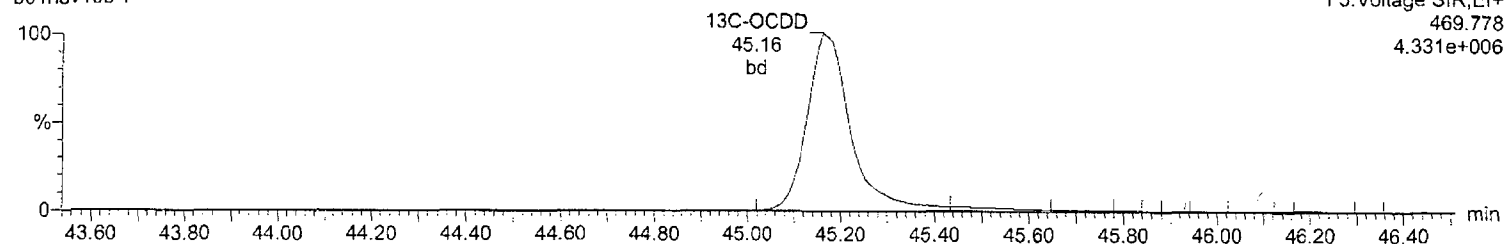
OCDD

b01nov10b-7



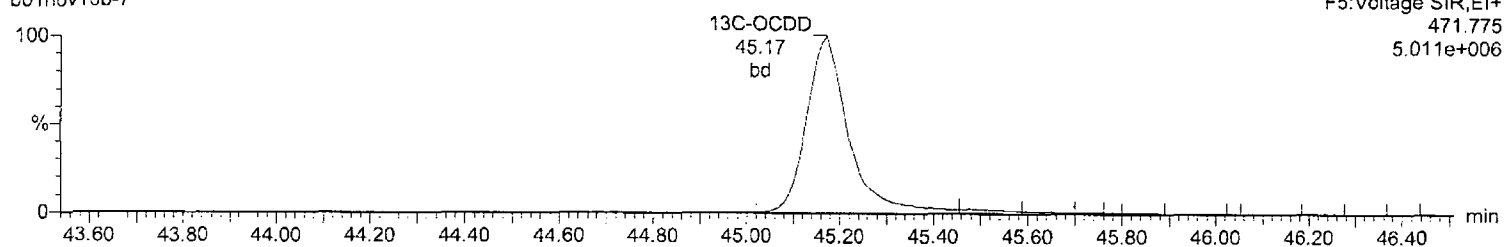
¹³C-OCDD

b01nov10b-7



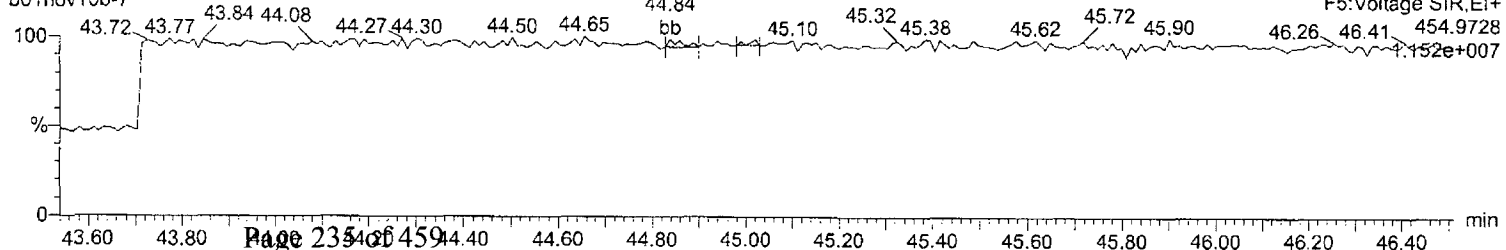
¹³C-OCDD

b01nov10b-7



Lock Mass F5

b01nov10b-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

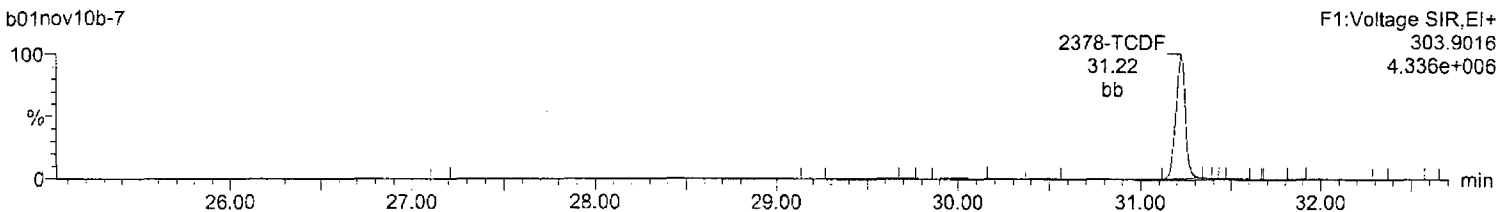
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Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-7, Date: 01-Nov-2010, Time: 22:29:56, ID: CS4 UD101022-05, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

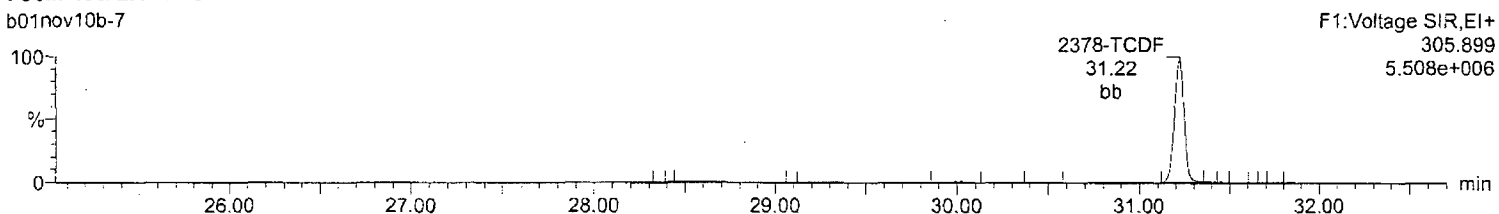
Total-tetrafurans

b01nov10b-7



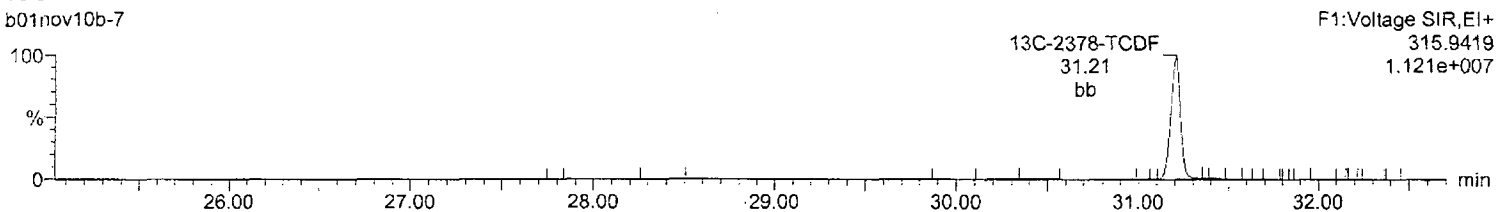
Total-tetrafurans

b01nov10b-7



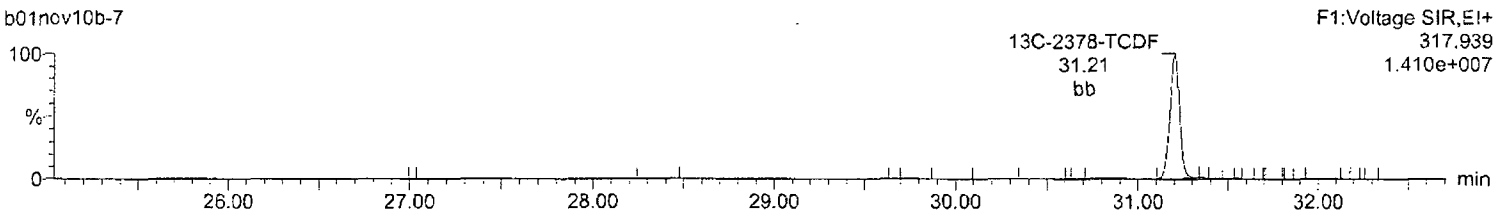
13C-2378-TCDF

b01nov10b-7



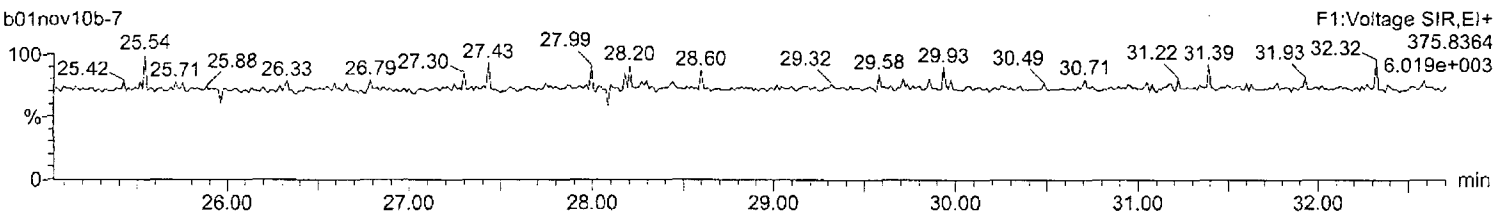
13C-2378-TCDF

b01nov10b-7



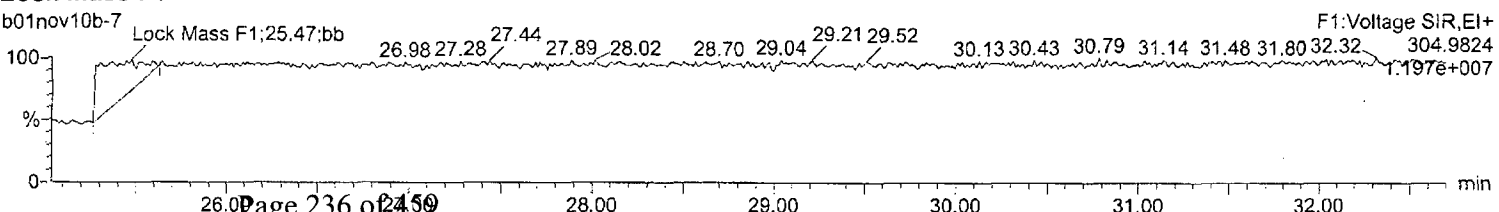
HxDPE

b01nov10b-7



Lock Mass F1

b01nov10b-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

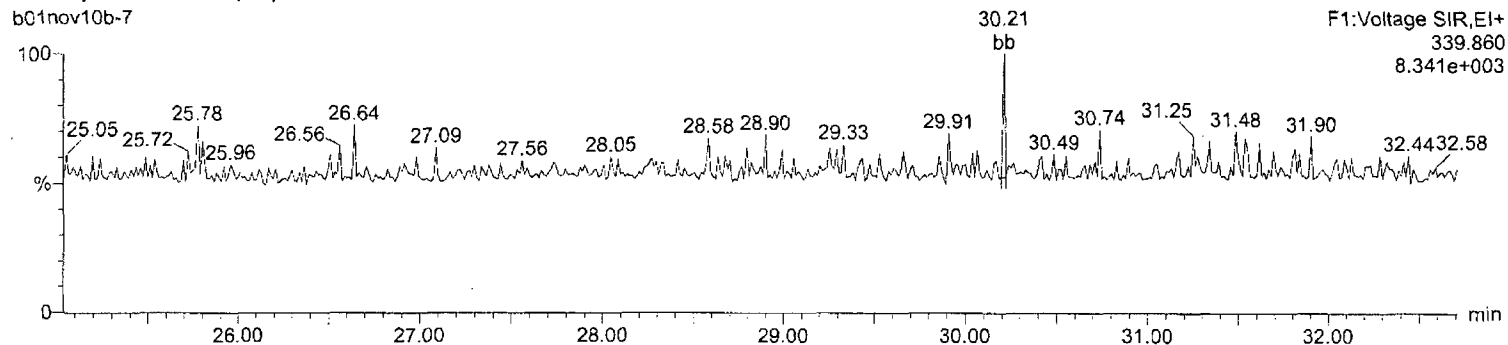
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Name: b01nov10b-7, Date: 01-Nov-2010, Time: 22:29:56, ID: CS4 UD101022-05, Description: , Job: b01nov10b,

Task: HRP763_1, User: MJC

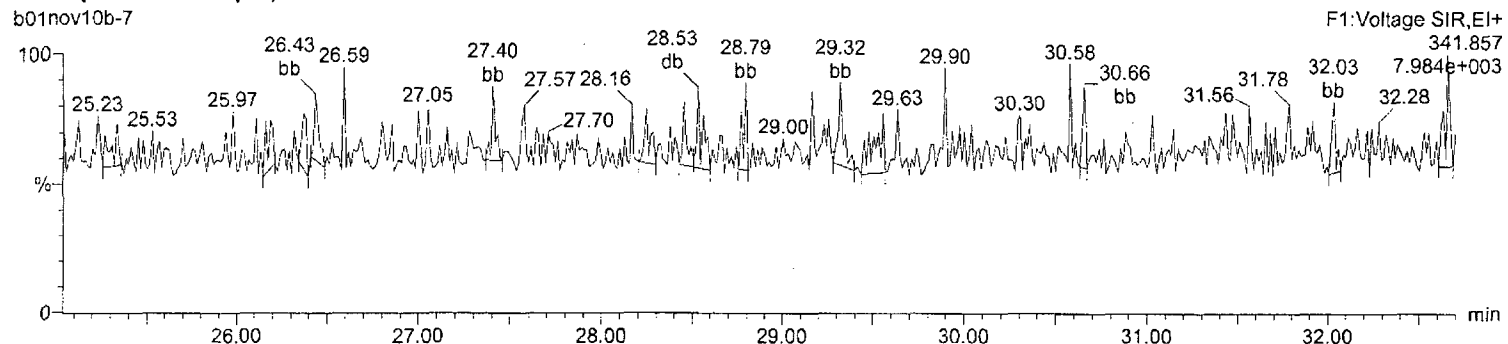
Total-pentafurans (F1)

b01nov10b-7



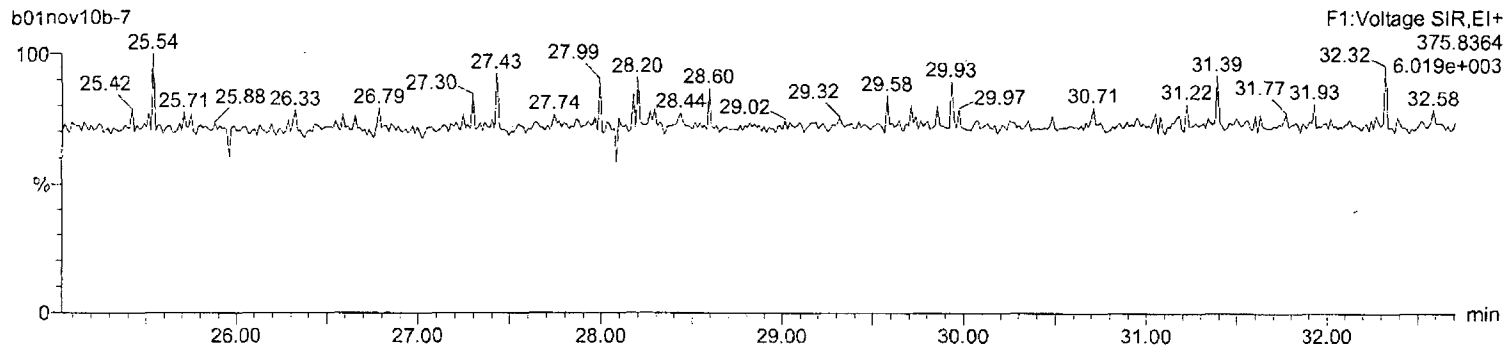
Total-pentafurans (F1)

b01nov10b-7



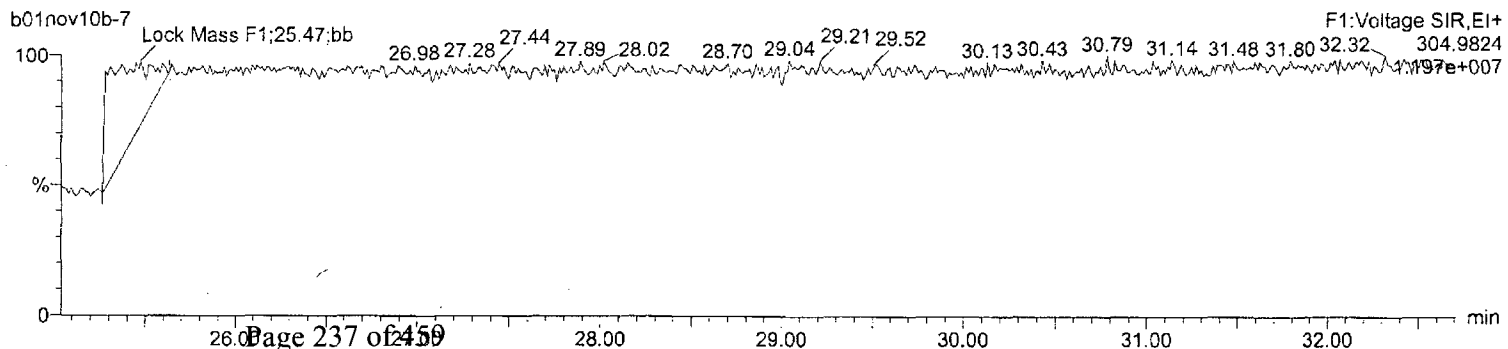
HxDPE

b01nov10b-7



Lock Mass F1

b01nov10b-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

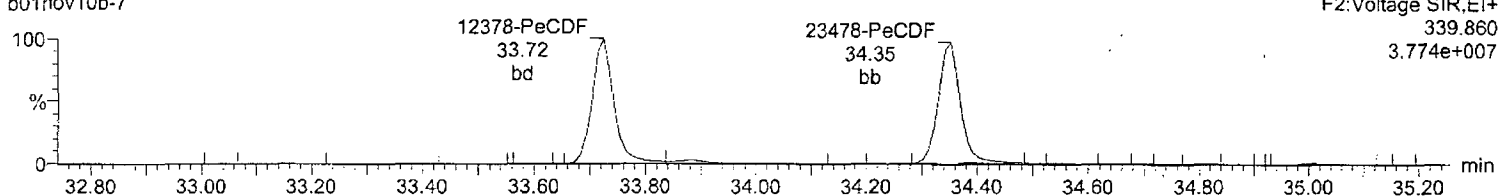
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

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Task: HRP763_1, User: MJC

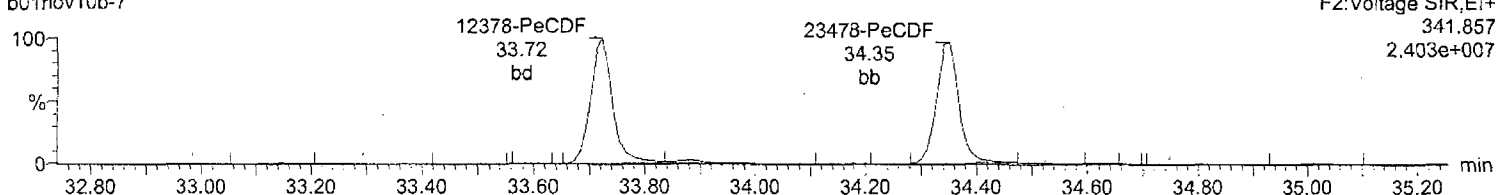
Total-pentafurans

b01nov10b-7



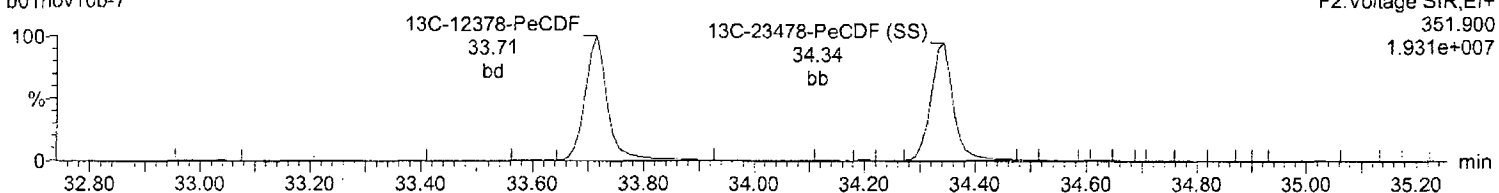
Total-pentafurans

b01nov10b-7



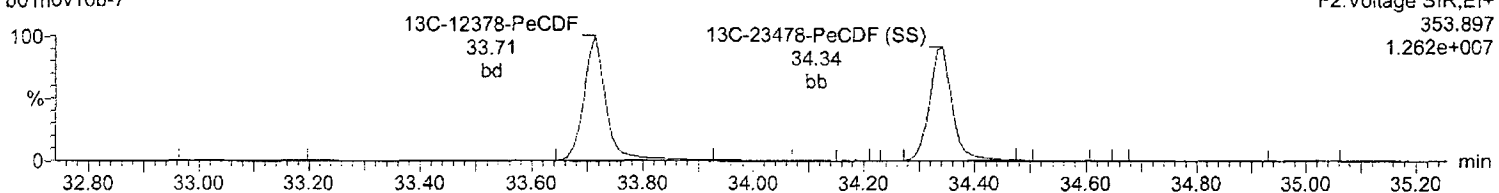
13C-12378-PeCDF

b01nov10b-7



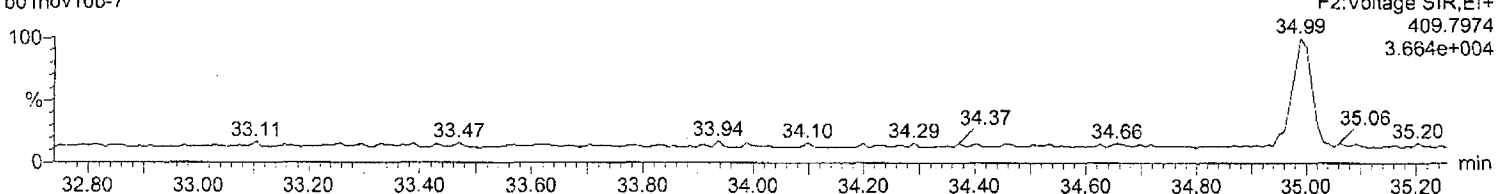
13C-12378-PeCDF

b01nov10b-7



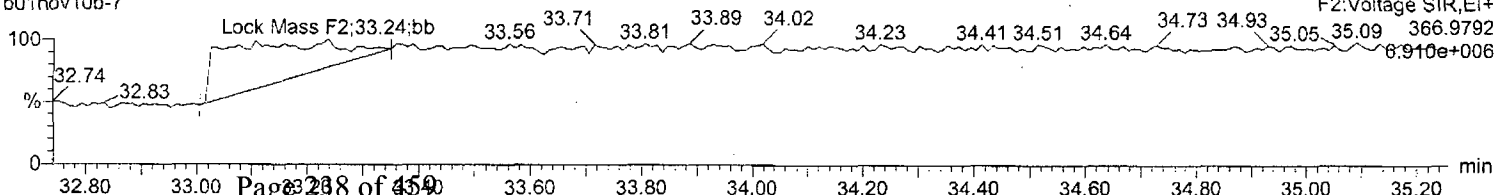
HpDPE

b01nov10b-7



Lock Mass F2

b01nov10b-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

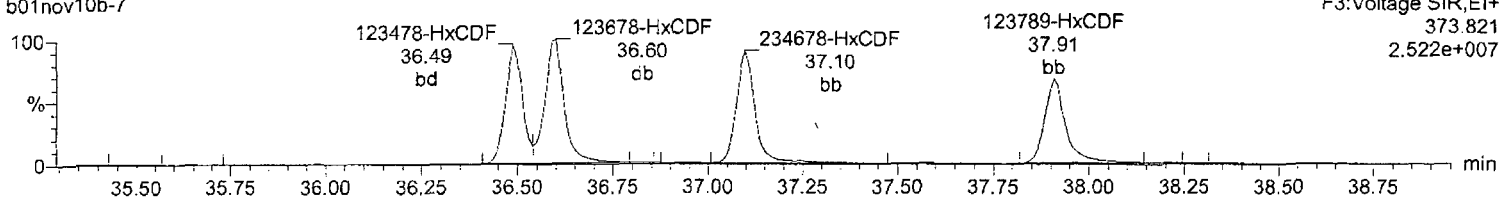
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Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

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Task: HRP763_1, User: MJC

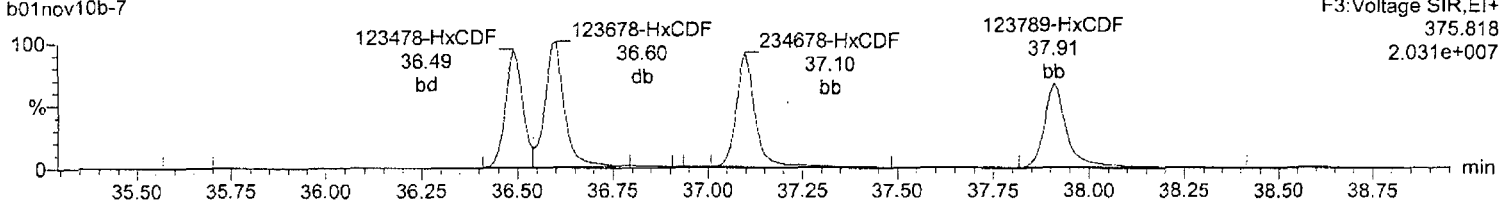
Total-hexafurans

b01nov10b-7



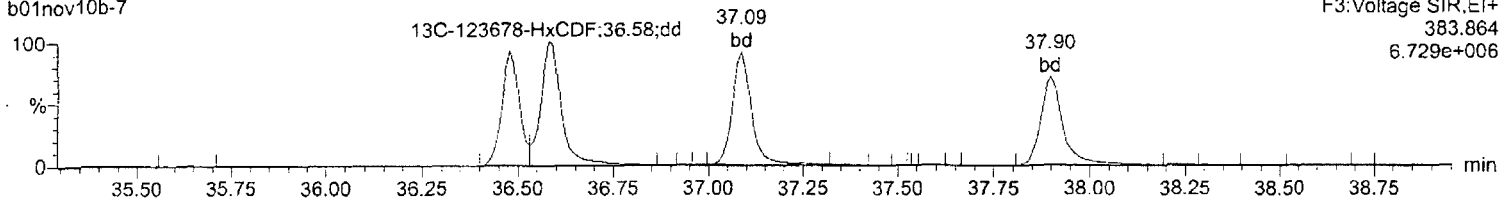
Total-hexafurans

b01nov10b-7



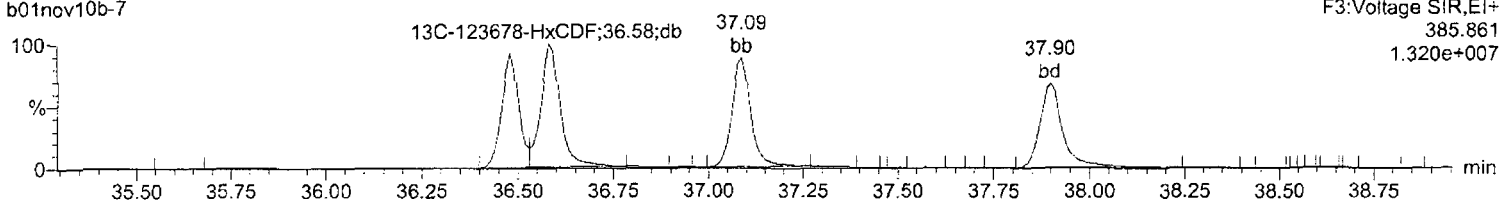
13C-123678-HxCDF

b01nov10b-7



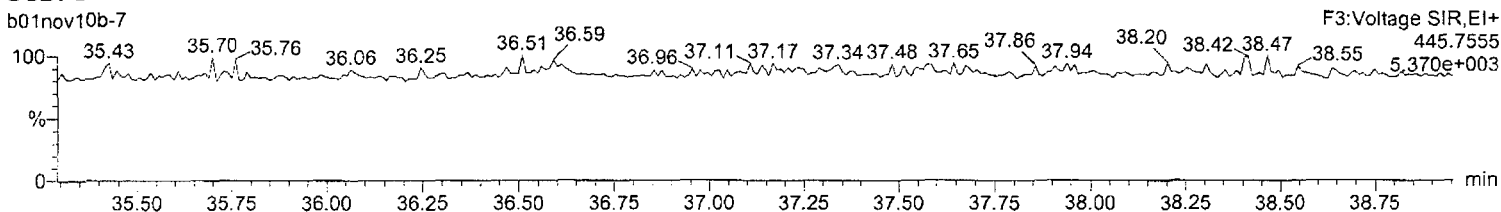
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b01nov10b-7



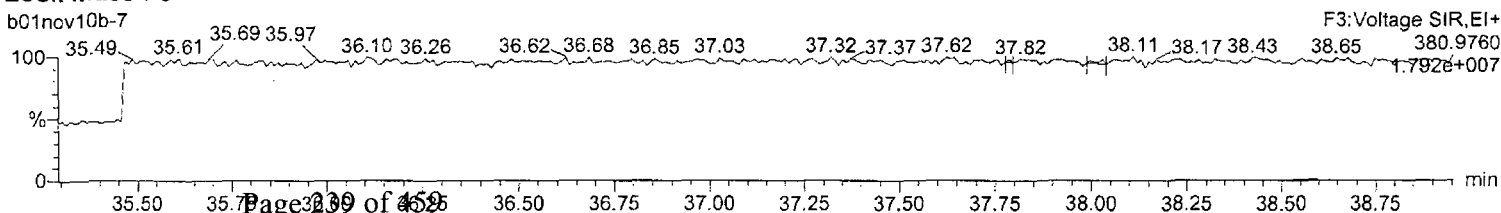
OcDPE

b01nov10b-7



Lock Mass F3

b01nov10b-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

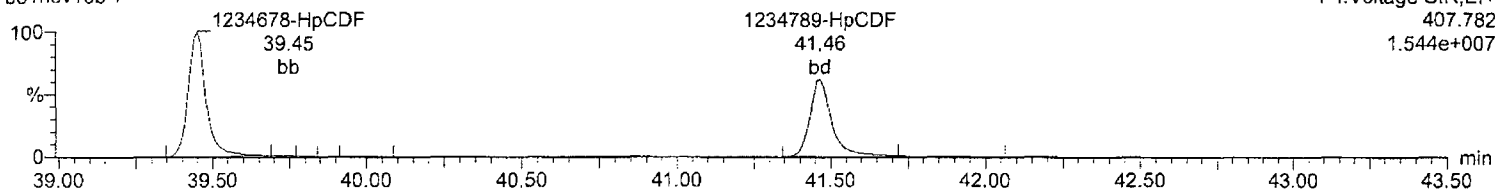
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Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-7, Date: 01-Nov-2010, Time: 22:29:56, ID: CS4 UD101022-05, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

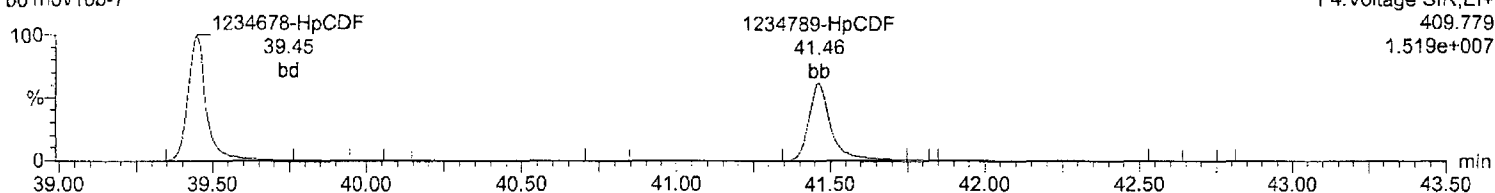
Total-heptafurans

b01nov10b-7



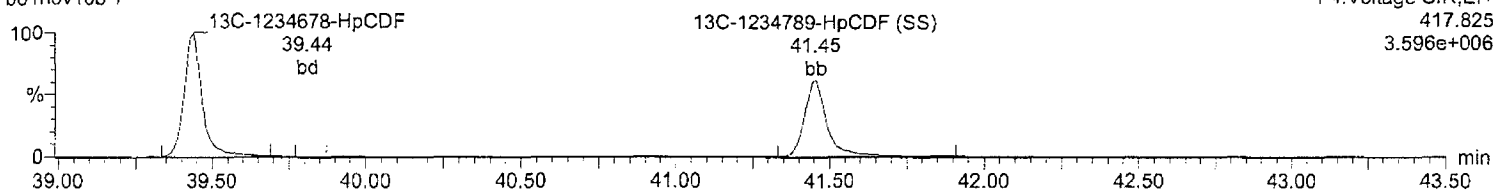
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b01nov10b-7



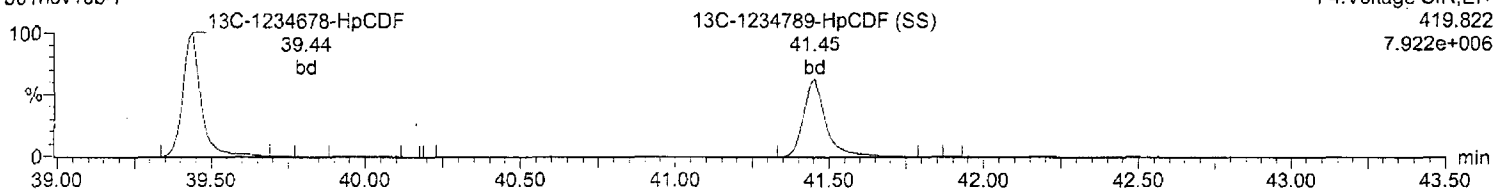
¹³C-1234678-HpCDF

b01nov10b-7



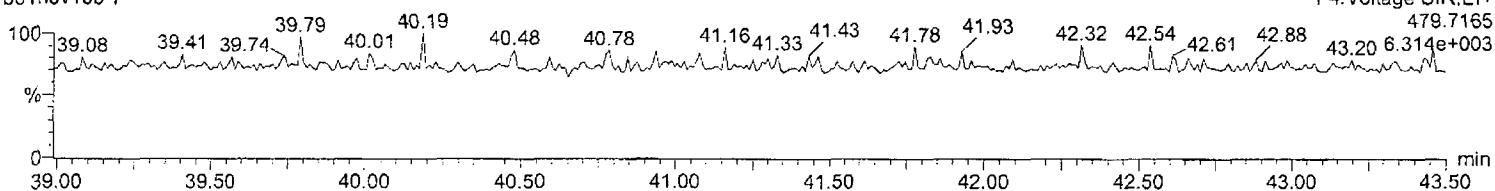
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b01nov10b-7



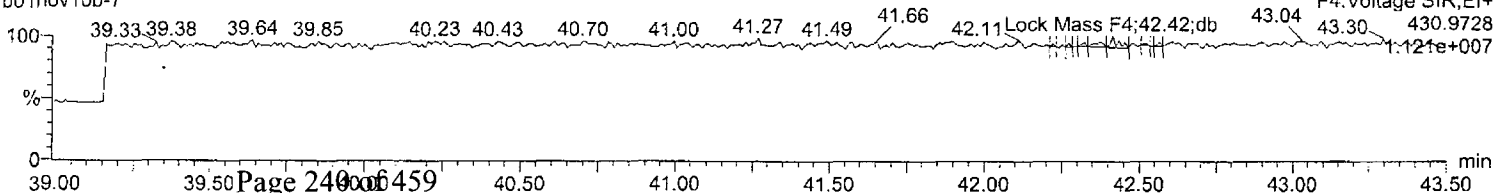
NoDPE

b01nov10b-7



Lock Mass F4

b01nov10b-7



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

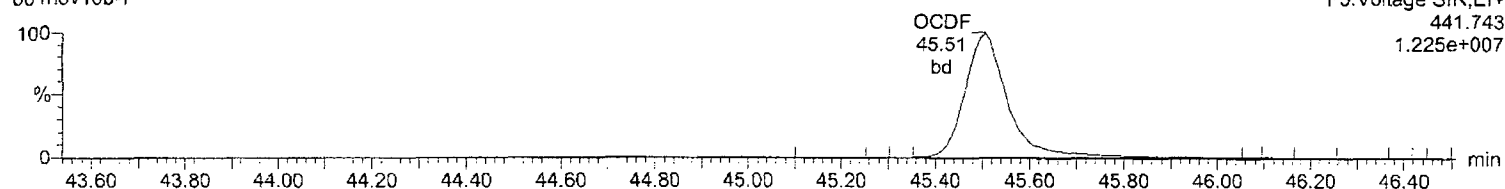
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-7, Date: 01-Nov-2010, Time: 22:29:56, ID: CS4 UD101022-05, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

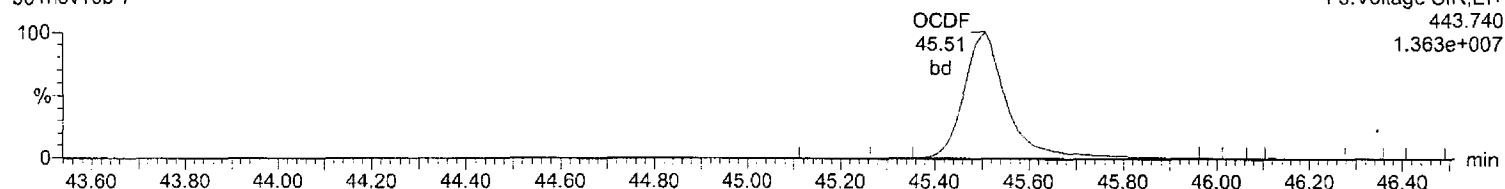
OCDF

b01nov10b-7



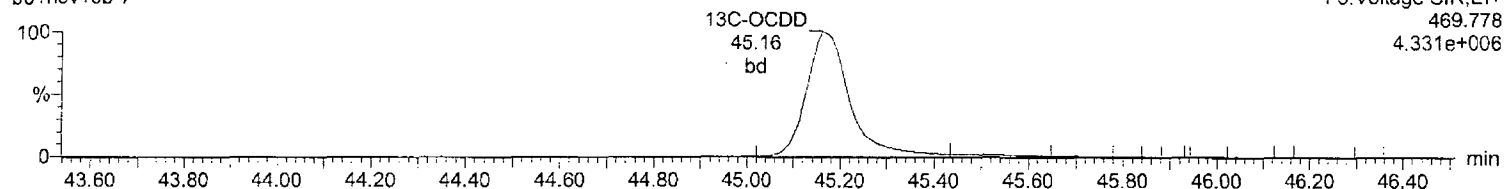
OCDF

b01nov10b-7



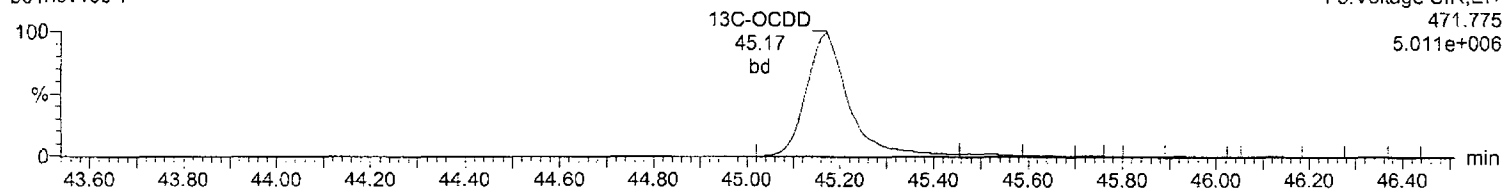
13C-OCDD

b01nov10b-7



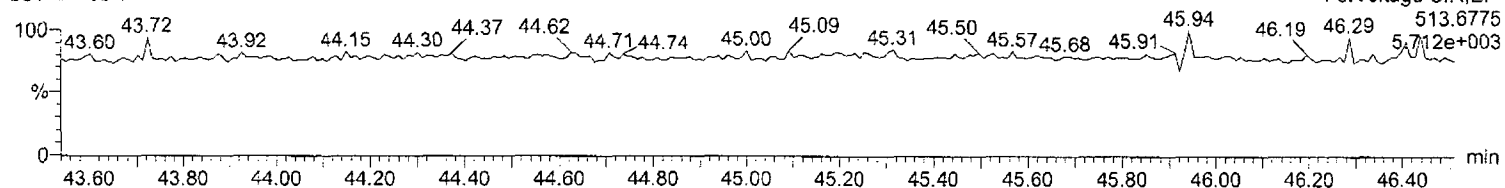
13C-OCDD

b01nov10b-7



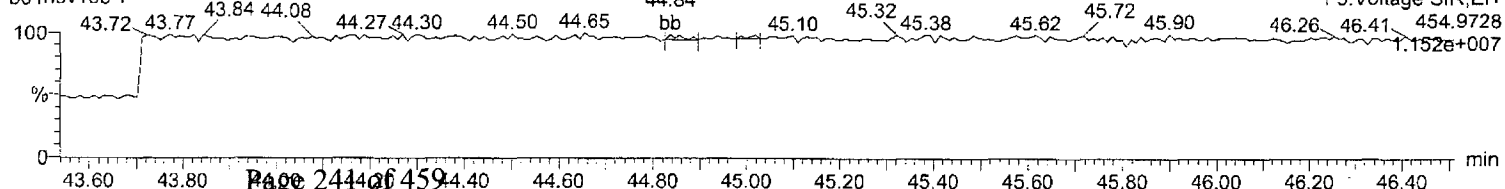
DeDPE

b01nov10b-7



Lock Mass F5

b01nov10b-7



Quantify Sample Summary Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:19:01 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:23:00 Eastern Standard Time

Handwritten signature

Name: b01nov10b-8, Date: 01-Nov-2010, Time: 23:18:22, ID: CS5 UD090323-06, Description: , Job: b01nov10b, Task: HRP763_1, User: MJC

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Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	RRF	EDL	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
2378-TCDD	1.21e6	1.55e6	2.75e6	31.76	1.00	0.78	NO	203.291	1.029	0.0369	2.38e7	1758	13540.3	3.02e7	1613	18739.8	bb
12378-PeCDD	8.03e6	5.09e6	1.31e7	34.55	1.00	1.58	NO	1050.368	1.084	0.0858	1.79e8	4027	44498.4	1.16e8	4128	28005.5	bb
123478-HxCDD	6.46e6	5.11e6	1.16e7	37.23	1.00	1.26	NO	1066.500	0.956	0.275	1.22e8	9873	12328.0	9.94e7	8153	12191.6	bd
123678-HxCDD	6.84e6	5.35e6	1.22e7	37.32	1.00	1.28	NO	1041.096	1.008	0.255	1.24e8	9873	12589.6	9.73e7	8153	11938.2	db
123789-HxCDD	6.22e6	4.92e6	1.11e7	37.57	1.01	1.26	NO	1063.636	0.920	0.285	1.12e8	9873	11313.2	8.68e7	8153	10645.1	bb
1234678-HpCDD	4.87e6	4.67e6	9.54e6	40.75	1.00	1.04	NO	1073.286	1.078	0.389	6.70e7	7541	8885.0	6.56e7	8208	7992.9	bb
OCDD	8.19e6	9.15e6	1.73e7	45.19	1.00	0.89	NO	2158.822	1.075	0.556	8.52e7	10245	8314.3	9.56e7	5089	18785.3	bd
2378-TCDF	1.90e6	2.44e6	4.34e6	31.22	1.00	0.78	NO	211.980	1.042	0.0453	3.14e7	2050	15299.3	4.10e7	3070	13365.3	bb
12378-PeCDF	1.24e7	8.06e6	2.05e7	33.72	1.00	1.54	NO	1031.391	0.964	0.145	2.77e8	10398	26637.5	1.80e8	12181	14772.8	bd
23478-PeCDF	1.22e7	8.00e6	2.02e7	34.35	1.02	1.53	NO	1039.676	0.951	0.148	2.71e8	10398	26028.5	1.77e8	12181	14511.6	bb
123478-HxCDF	9.04e6	7.32e6	1.64e7	36.49	1.00	1.24	NO	1041.712	0.947	0.343	1.87e8	17449	10691.7	1.49e8	14744	10125.7	bd
123678-HxCDF	1.06e7	8.66e6	1.93e7	36.60	1.00	1.23	NO	1055.199	1.116	0.295	1.92e8	17449	11028.2	1.57e8	14744	10670.0	db
234678-HxCDF	9.86e6	7.97e6	1.78e7	37.10	1.01	1.24	NO	1079.383	1.032	0.326	1.79e8	17449	10259.7	1.47e8	14744	9958.8	bd
123789-HxCDF	7.98e6	6.45e6	1.44e7	37.91	1.04	1.24	NO	1054.670	0.835	0.394	1.32e8	17449	7584.2	1.08e8	14744	7346.5	bb
1234678-HpCDF	8.14e6	7.93e6	1.61e7	39.45	1.00	1.03	NO	1060.626	1.354	0.372	1.30e8	13791	9404.8	1.25e8	15180	8242.1	bb
1234789-HpCDF	6.01e6	5.84e6	1.19e7	41.46	1.05	1.03	NO	1073.172	0.998	0.510	7.82e7	13791	5669.5	7.54e7	15180	4964.9	bb
OCDF	1.04e7	1.16e7	2.20e7	45.51	1.01	0.89	NO	2213.282	1.364	0.580	1.07e8	8506	12623.2	1.22e8	11279	10832.1	bb
13C-2378-TCDD	5.91e5	7.47e5	1.34e6	31.73	1.01	0.79	NO	108.891	1.219	0.0612	1.19e7	2955	4042.3	1.53e7	1573	9737.9	bb
13C-12378-PeCDD	7.43e5	4.68e5	1.21e6	34.53	1.10	1.59	NO	116.103	1.103	0.0736	1.69e7	2509	6753.9	1.05e7	2108	4994.3	bb
13C-123678-HxCDD	6.77e5	5.33e5	1.21e6	37.31	0.99	1.27	NO	101.303	1.126	0.105	1.23e7	4403	2787.1	9.63e6	3032	3176.2	db
13C-1234678-HpCDD	4.54e5	4.31e5	8.85e5	40.74	1.08	1.05	NO	102.873	0.824	0.131	6.20e6	3540	1751.9	6.05e6	3164	1911.0	bb
13C-OCDD	7.68e5	8.46e5	1.61e6	45.17	1.20	0.91	NO	224.803	0.751	0.164	7.90e6	2510	3147.9	8.66e6	4510	1920.2	bd
13C-2378-TCDF	9.23e5	1.16e6	2.08e6	31.21	1.00	0.80	NO	104.105	1.896	0.0316	1.53e7	1852	8255.9	1.96e7	1947	10061.0	bb
13C-12378-PeCDF	1.31e6	8.21e5	2.13e6	33.71	1.08	1.59	NO	114.461	1.937	0.123	3.07e7	8385	3661.8	1.96e7	5402	3622.9	bd
13C-123678-HxCDF	5.97e5	1.13e6	1.73e6	36.58	0.97	0.53	NO	98.698	1.609	0.117	1.07e7	7567	1414.3	2.04e7	4615	4418.9	db
13C-1234678-HpCDF	3.67e5	8.21e5	1.19e6	39.44	1.05	0.45	NO	102.265	1.105	0.120	5.65e6	3199	1766.5	1.26e7	5113	2466.9	bb
13C-1234-TCDD	4.88e5	6.10e5	1.10e6	31.34	0.00	0.80	NO	100.000	1.000	0.0686	8.81e6	2955	2979.9	1.08e7	1573	6893.5	bb
13C-123789-HxCDD	5.99e5	4.75e5	1.07e6	37.56	0.00	1.26	NO	100.000	1.000	0.116	1.07e7	4403	2428.5	8.38e6	3032	2765.4	bb
37Cl-2378-TCDD (SS)	2.85e6		2.85e6	31.75	1.00			201.816	1.064	0.0246	5.65e7	2336	24188.0				bb
13C-23478-PeCDF (SS)	1.20e6	7.70e5	1.97e6	34.34	1.02	1.56	NO	99.297	0.927	0.0886	2.67e7	8385	3189.4	1.70e7	5402	3142.4	bb
13C-123478-HxCDF (SS)	4.84e5	9.35e5	1.42e6	36.48	1.00	0.52	NO	101.376	0.821	0.146	9.89e6	7567	1306.6	1.90e7	4615	4116.3	bd
13C-123478-HxCDD (SS)	6.08e5	4.75e5	1.08e6	37.22	1.00	1.28	NO	103.981	0.895	0.118	1.09e7	4403	2479.6	8.55e6	3032	2821.0	bd
13C-1234789-HpCDF (SS)	2.84e5	6.39e5	9.22e5	41.45	1.05	0.44	NO	102.742	0.777	0.180	3.67e6	3199	1146.9	7.97e6	5113	1559.6	bb

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

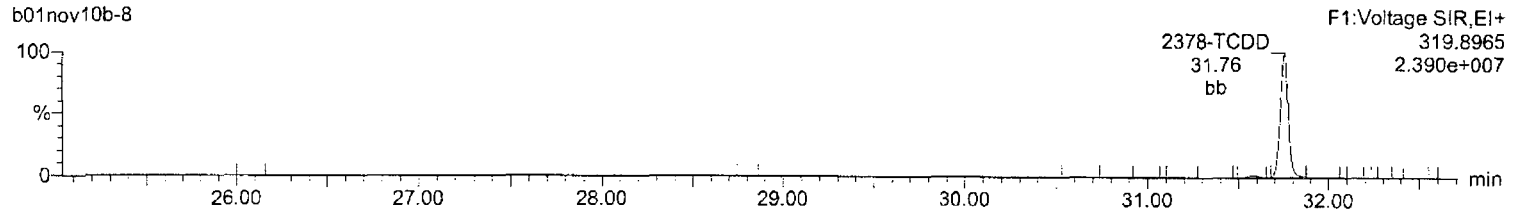
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Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-8, Date: 01-Nov-2010, Time: 23:18:22, ID: CS5 UD090323-06, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

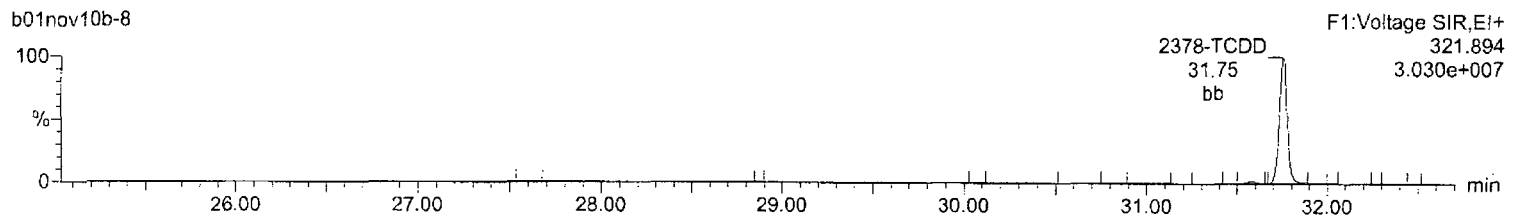
Total-tetradoxins

b01nov10b-8



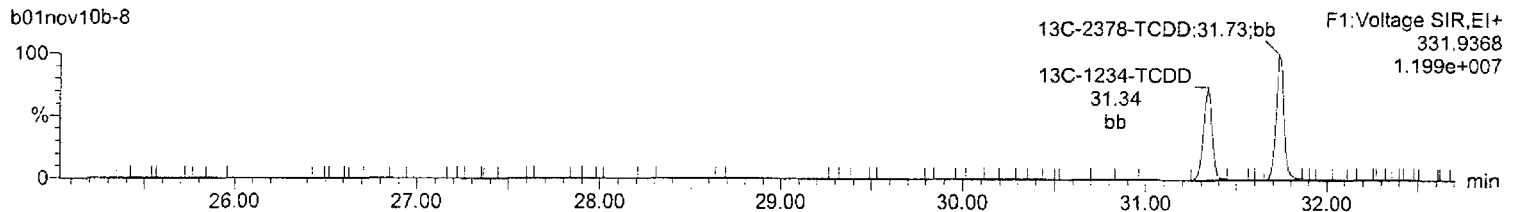
Total-tetradoxins

b01nov10b-8



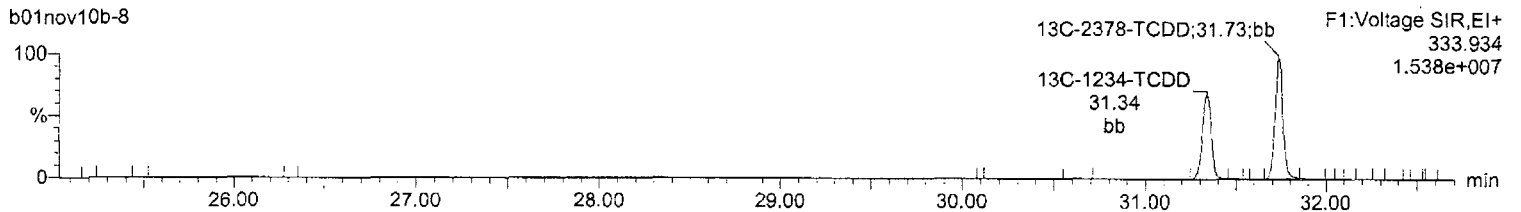
13C-2378-TCDD

b01nov10b-8



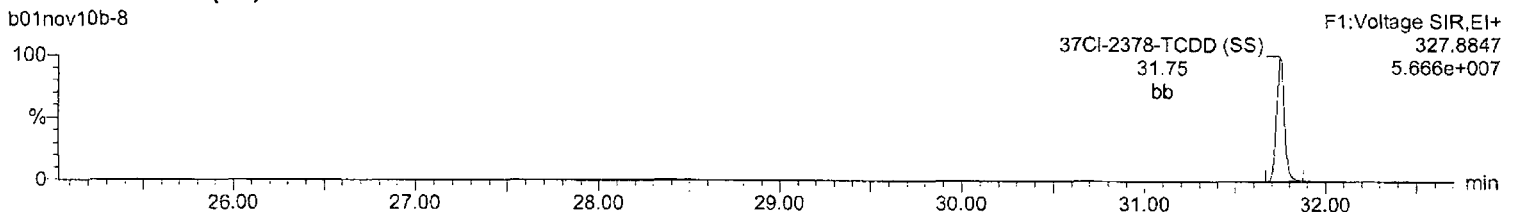
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b01nov10b-8



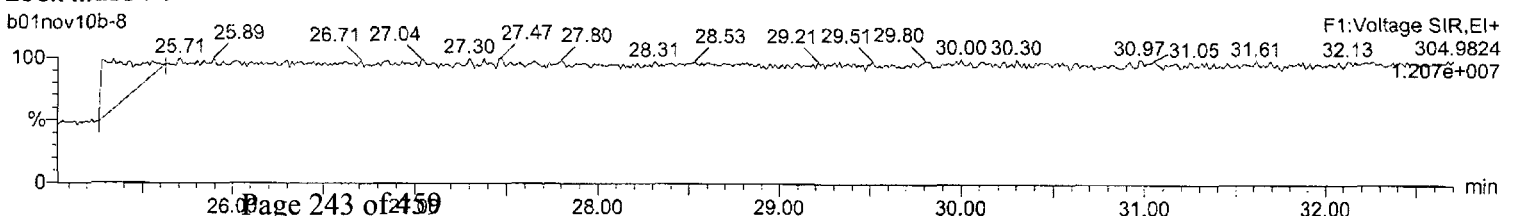
37Cl-2378-TCDD (SS)

b01nov10b-8



Lock Mass F1

b01nov10b-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

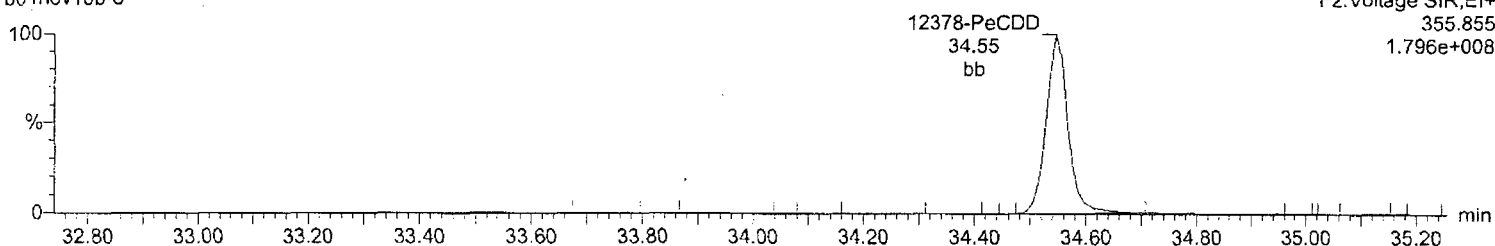
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Name: b01nov10b-8, Date: 01-Nov-2010, Time: 23:18:22, ID: CS5 UD090323-06, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

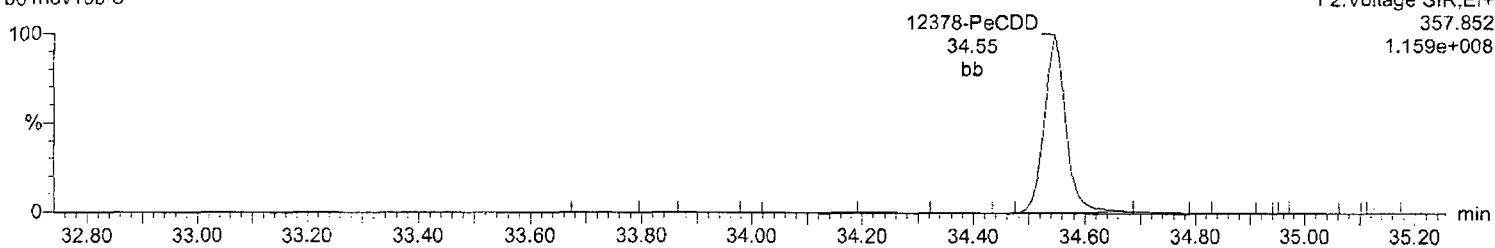
Total-pentadioxins

b01nov10b-8



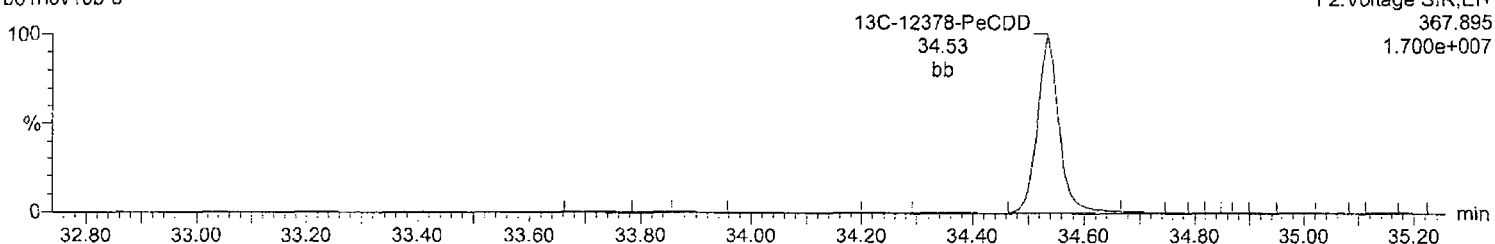
Total-pentadioxins

b01nov10b-8



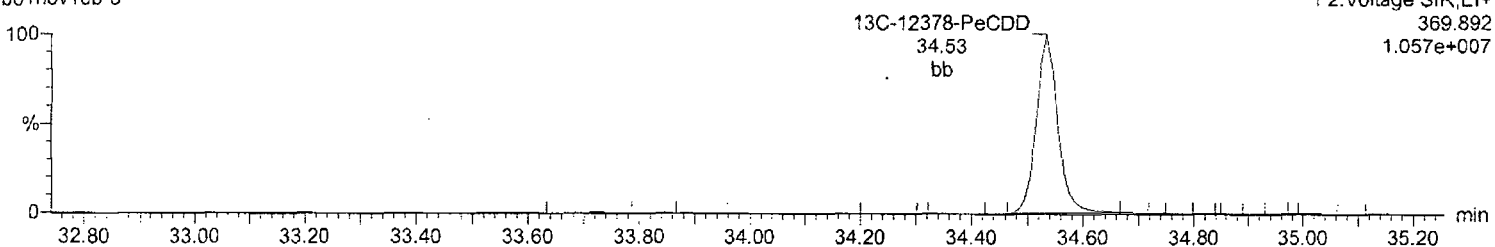
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b01nov10b-8



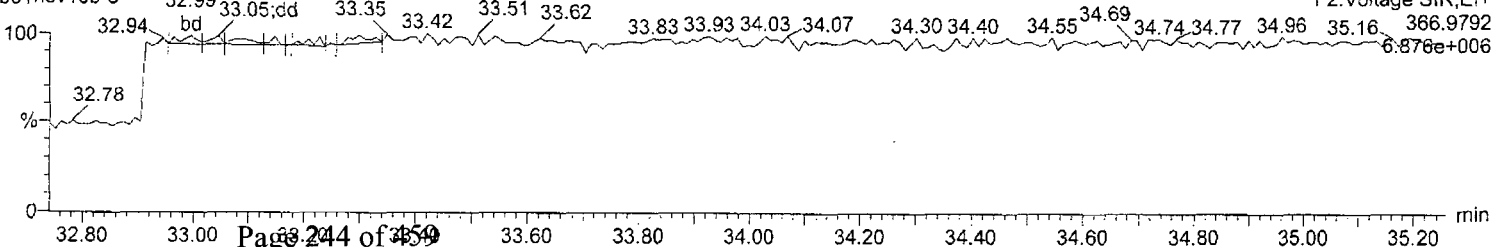
¹³C-12378-PeCDD

b01nov10b-8



Lock Mass F2

b01nov10b-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

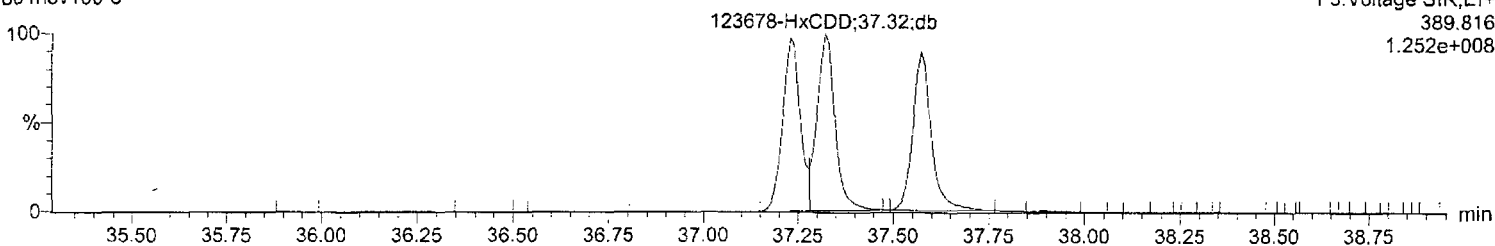
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Name: b01nov10b-8, Date: 01-Nov-2010, Time: 23:18:22, ID: CS5 UD090323-06, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

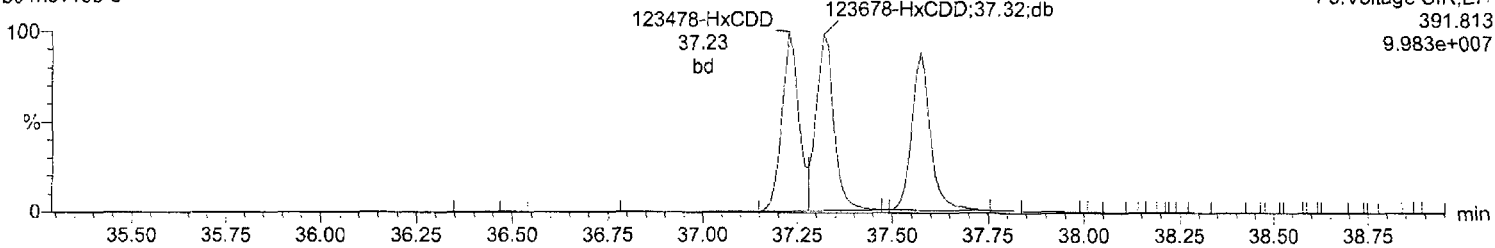
Total-hexadioxins

b01nov10b-8



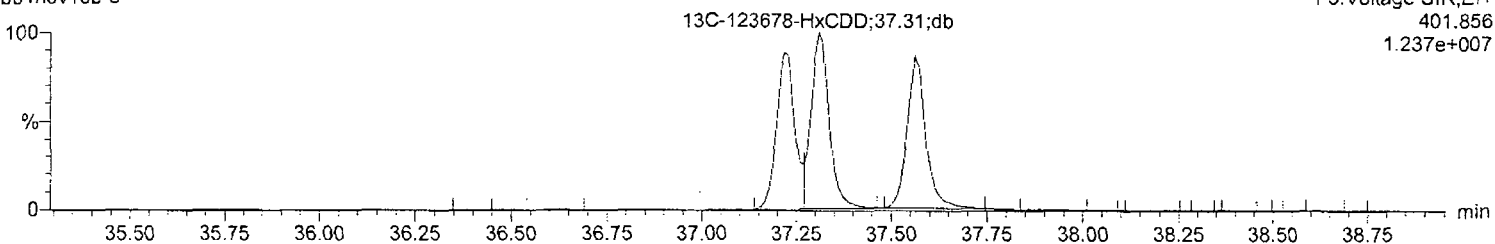
Total-hexadioxins

b01nov10b-8



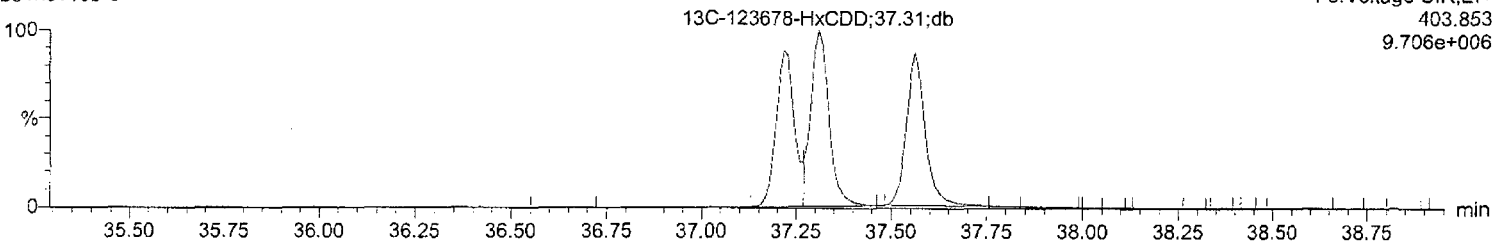
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b01nov10b-8



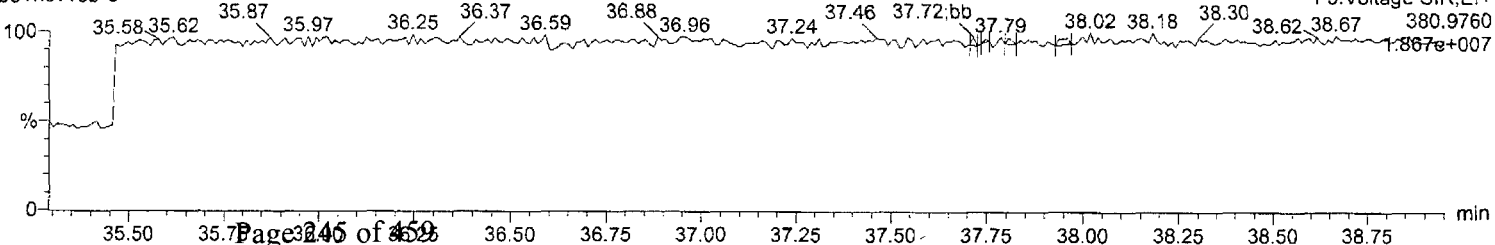
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b01nov10b-8



Lock Mass F3

b01nov10b-8



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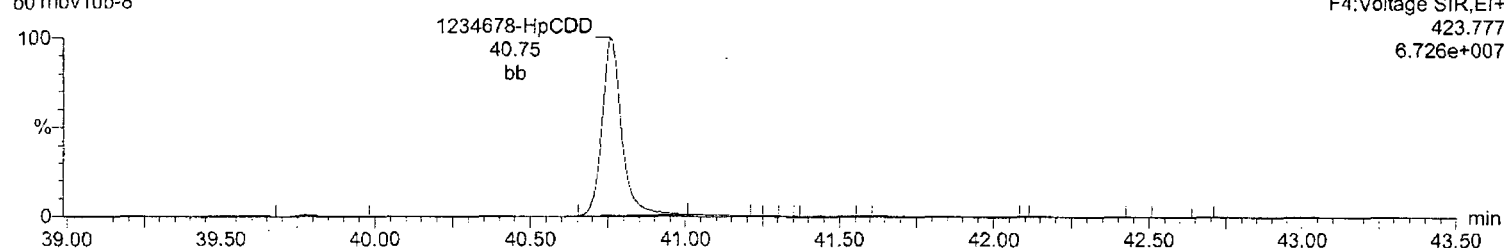
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Name: b01nov10b-8, Date: 01-Nov-2010, Time: 23:18:22, ID: CS5 UD090323-06, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

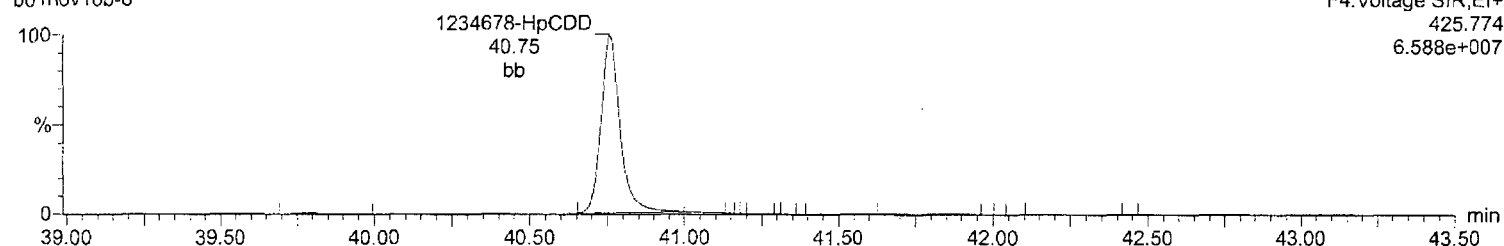
Total-heptadioxins

b01nov10b-8



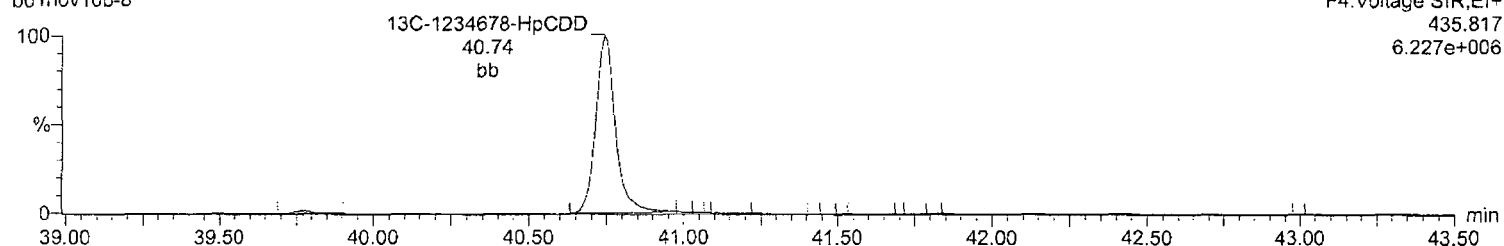
Total-heptadioxins

b01nov10b-8



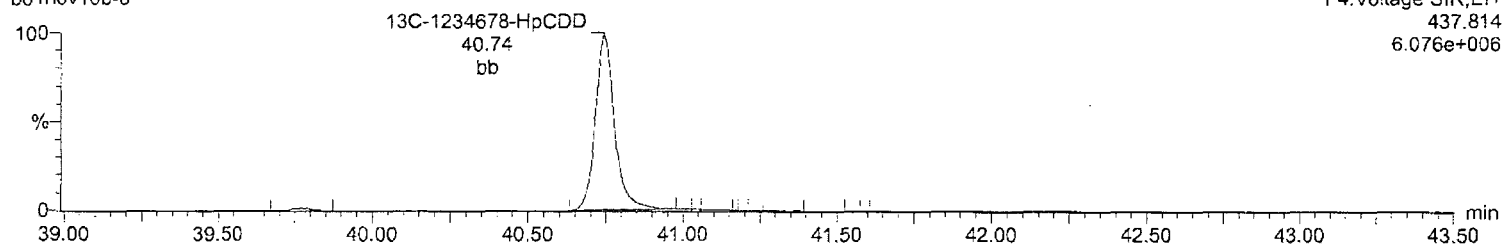
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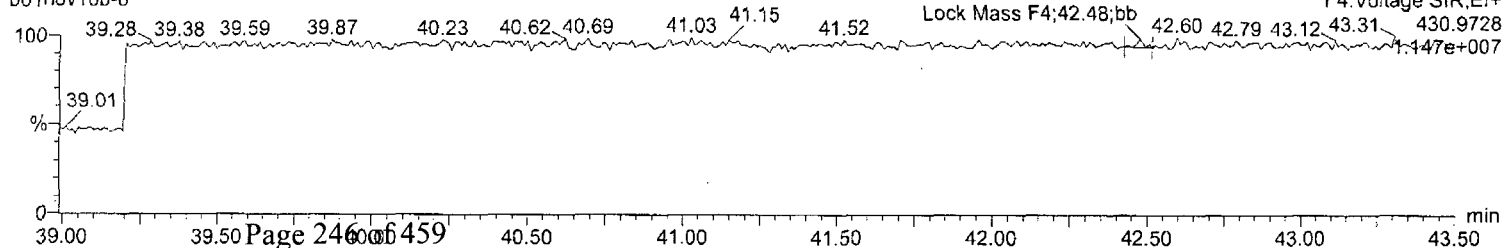
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b01nov10b-8



Lock Mass F4

b01nov10b-8



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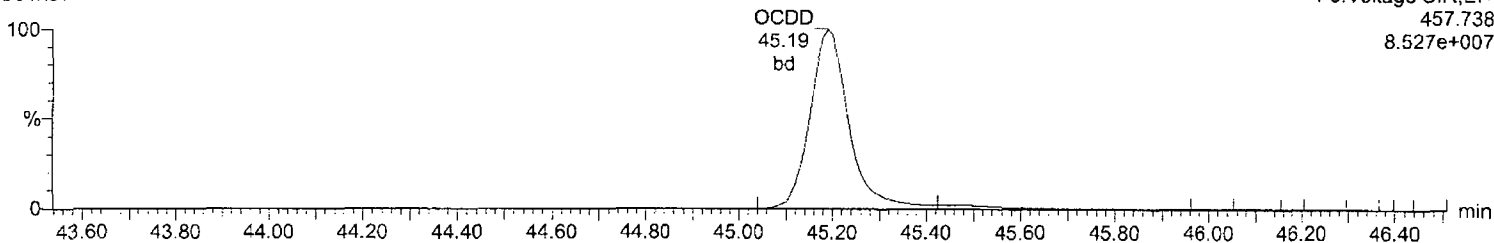
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Name: b01nov10b-8, Date: 01-Nov-2010, Time: 23:18:22, ID: CS5 UD090323-06, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

OCDD

b01nov10b-8

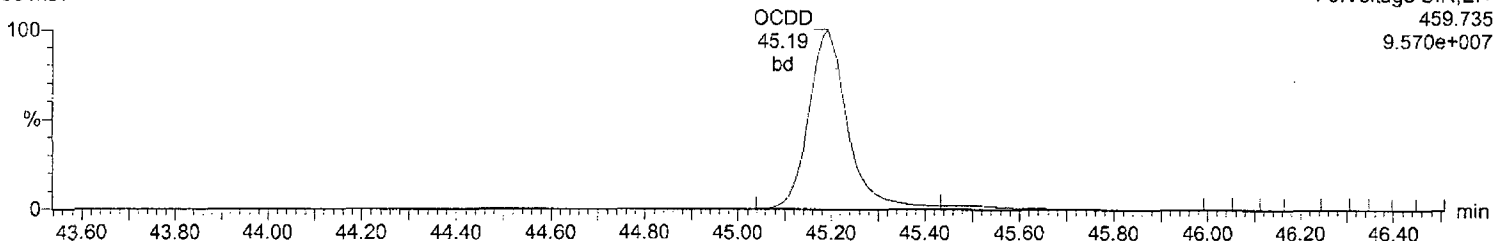
F5:Voltage SIR,EI+
457.738
8.527e+007



OCDD

b01nov10b-8

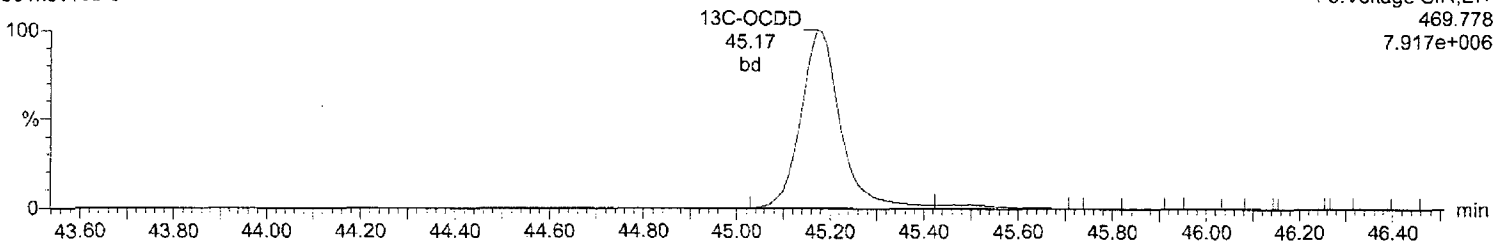
F5:Voltage SIR,EI+
459.735
9.570e+007



¹³C-OCDD

b01nov10b-8

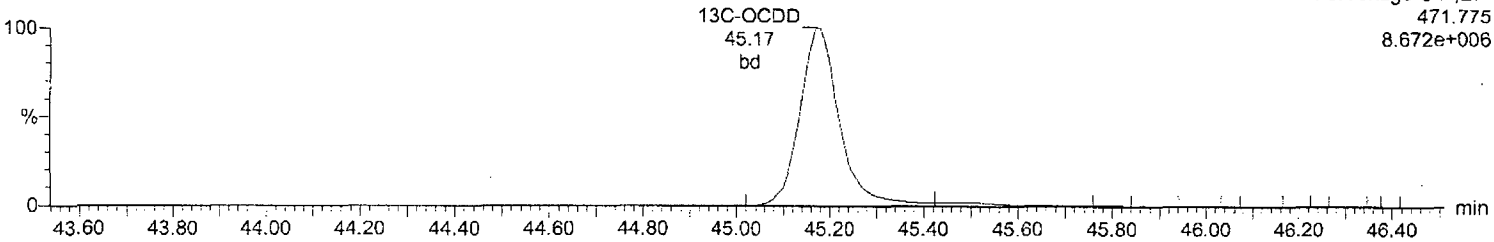
F5:Voltage SIR,EI+
469.778
7.917e+006



¹³C-OCDD

b01nov10b-8

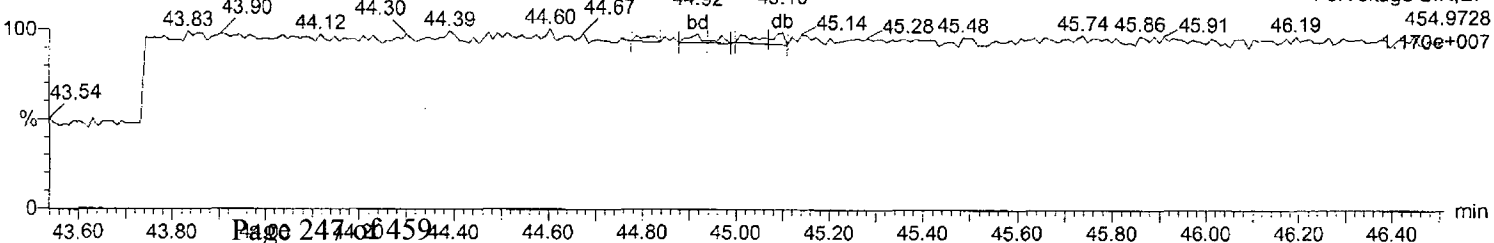
F5:Voltage SIR,EI+
471.775
8.672e+006



Lock Mass F5

b01nov10b-8

F5:Voltage SIR,EI+
454.9728
1.170e+007



Quantify Sample Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

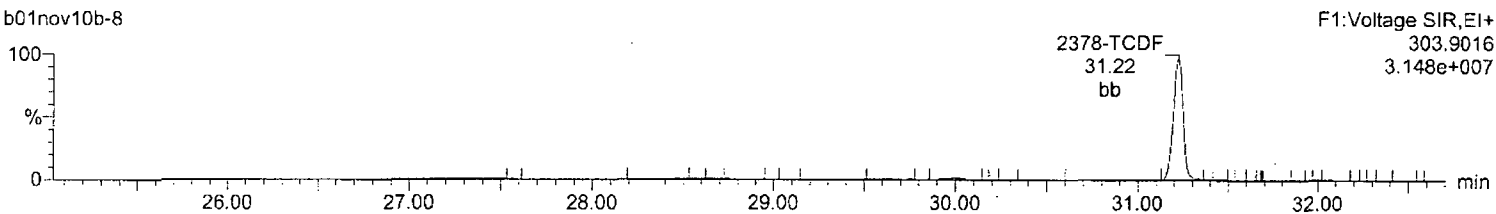
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-8, Date: 01-Nov-2010, Time: 23:18:22, ID: CS5 UD090323-06, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

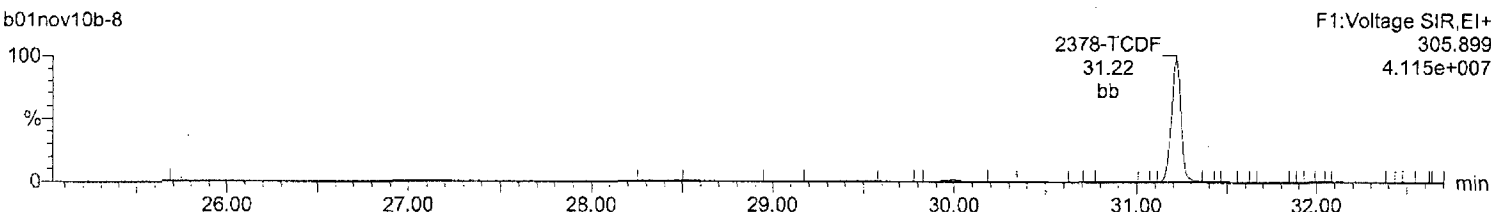
Total-tetrafurans

b01nov10b-8



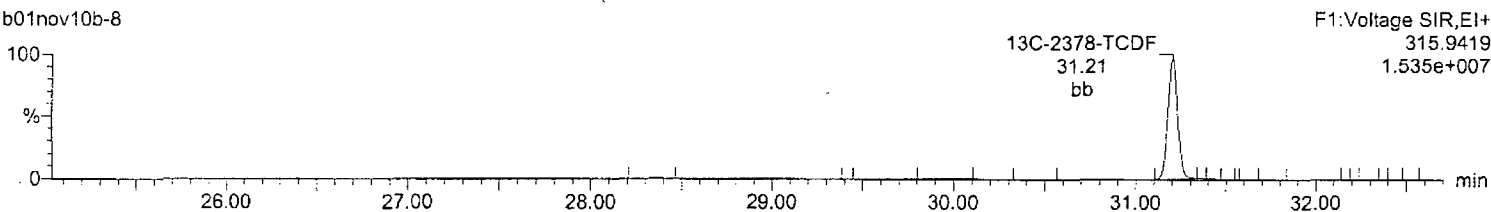
Total-tetrafurans

b01nov10b-8



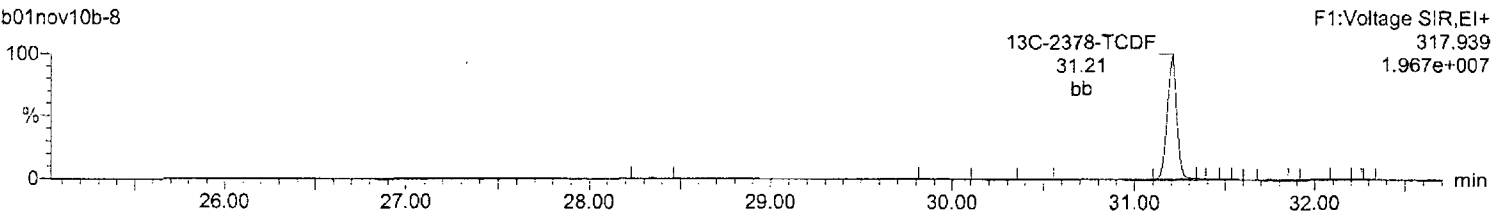
13C-2378-TCDF

b01nov10b-8



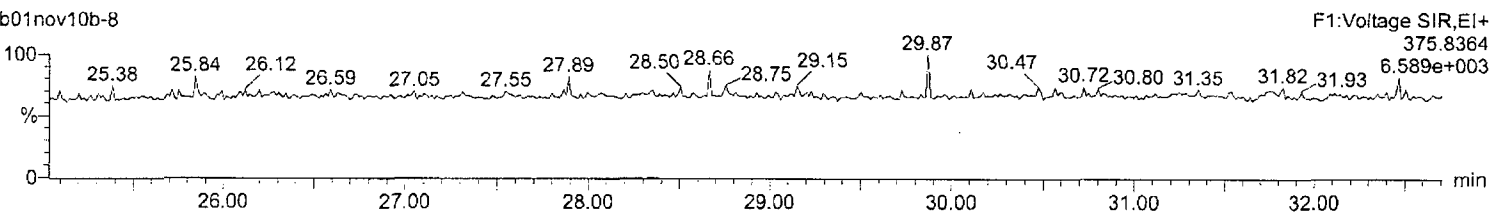
13C-2378-TCDF

b01nov10b-8



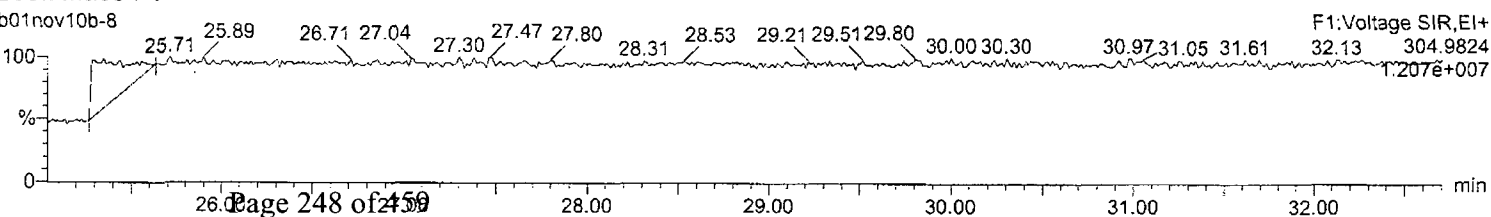
HxDPE

b01nov10b-8



Lock Mass F1

b01nov10b-8



Quantify Sample Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

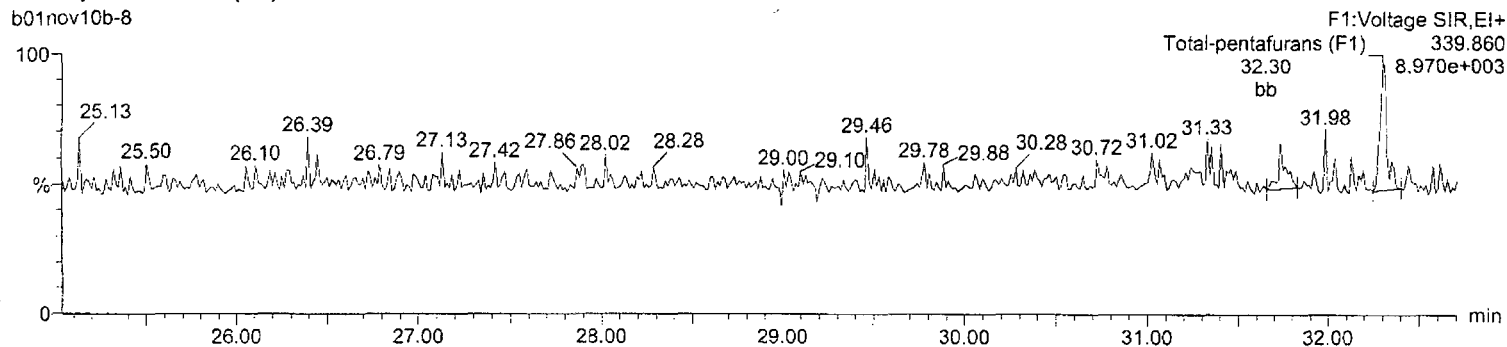
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-8, Date: 01-Nov-2010, Time: 23:18:22, ID: CS5 UD090323-06, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

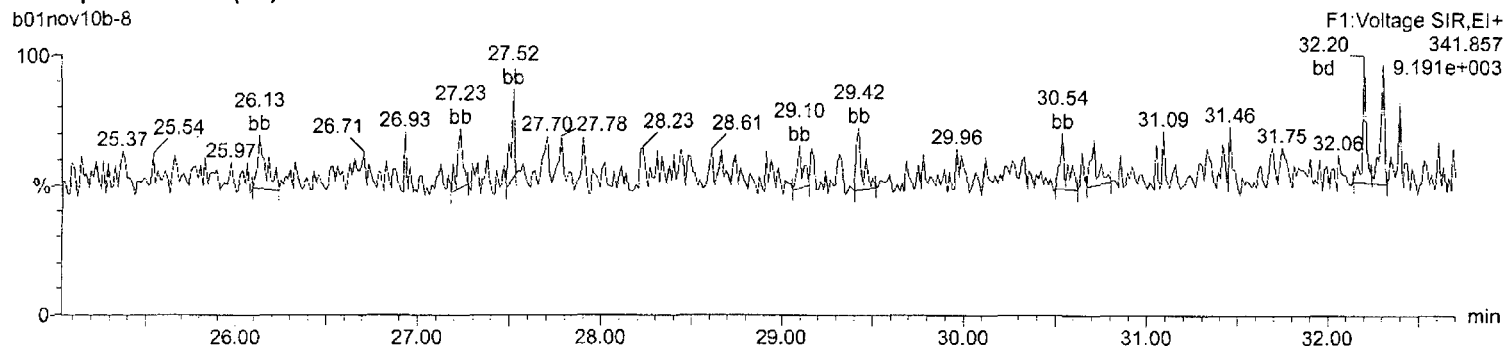
Total-pentafurans (F1)

b01nov10b-8



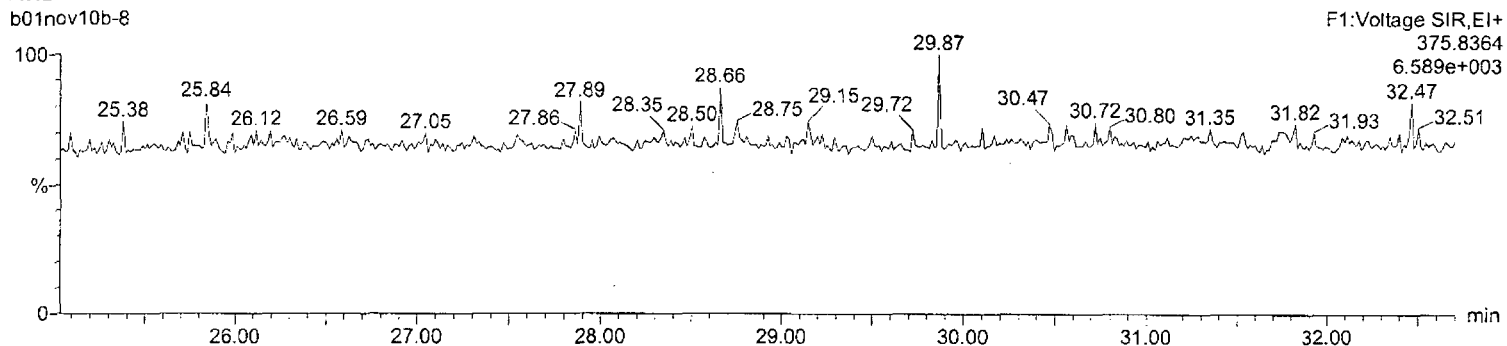
Total-pentafurans (F1)

b01nov10b-8



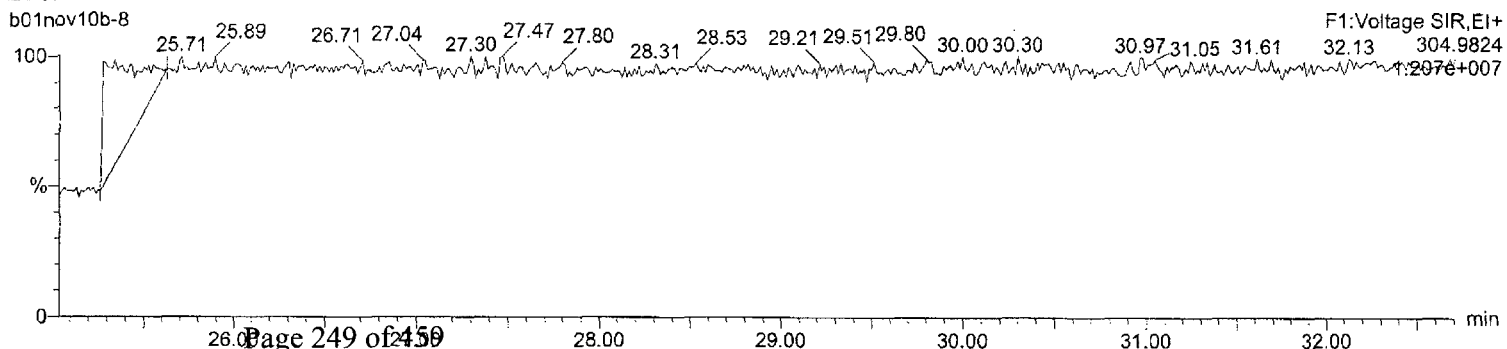
HxDPE

b01nov10b-8



Lock Mass F1

b01nov10b-8



Quantify Sample Report
Method 8290 ICAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

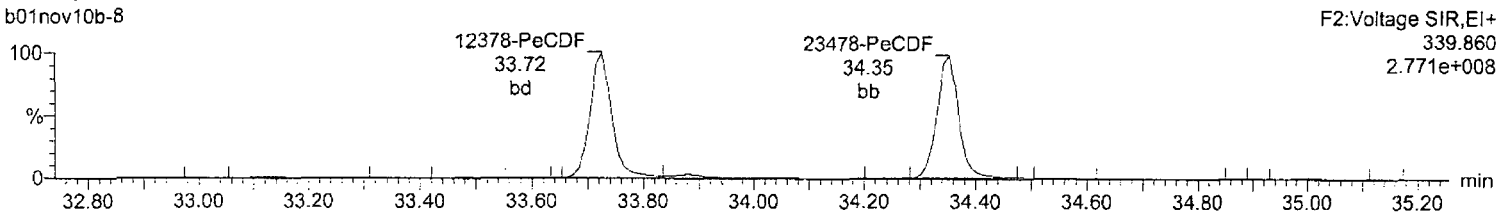
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-8, Date: 01-Nov-2010, Time: 23:18:22, ID: CS5 UD090323-06, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

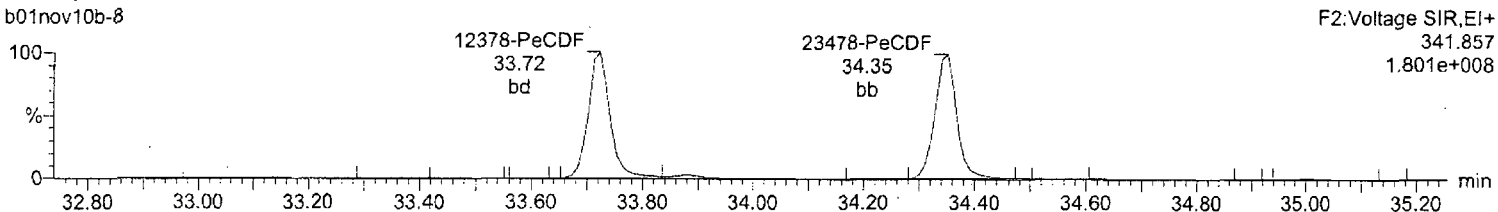
Total-pentafulurans

b01nov10b-8



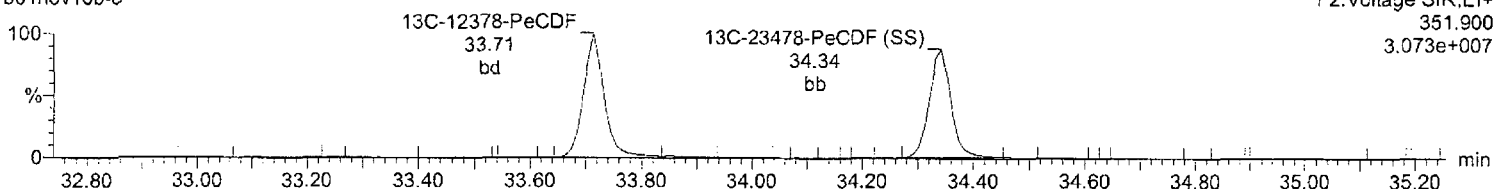
Total-pentafulurans

b01nov10b-8



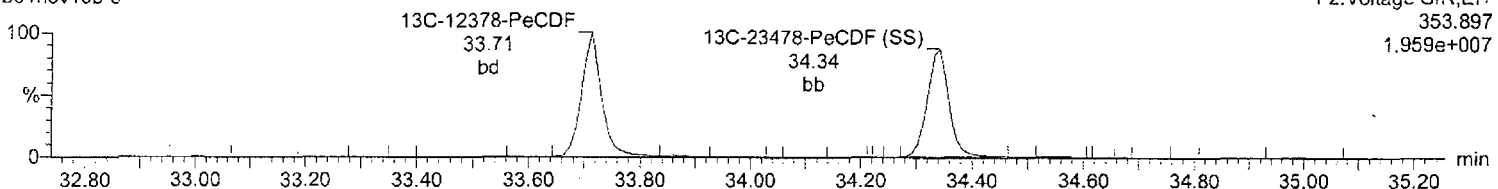
¹³C-12378-PeCDF

b01nov10b-8



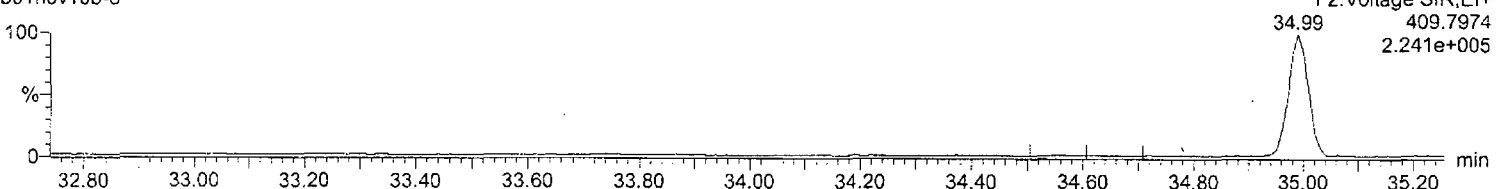
¹³C-12378-PeCDF

b01nov10b-8



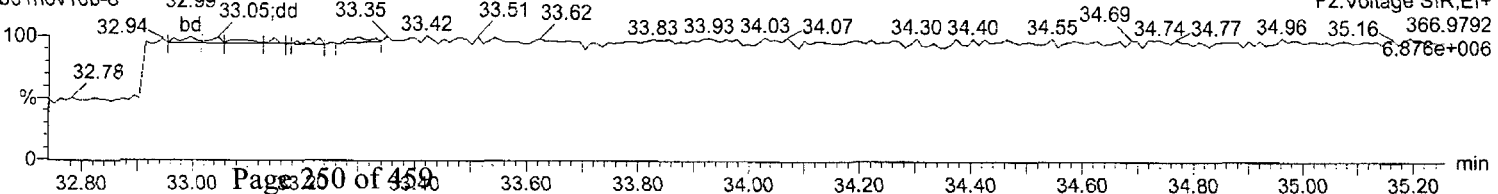
HpDPE

b01nov10b-8



Lock Mass F2

b01nov10b-8



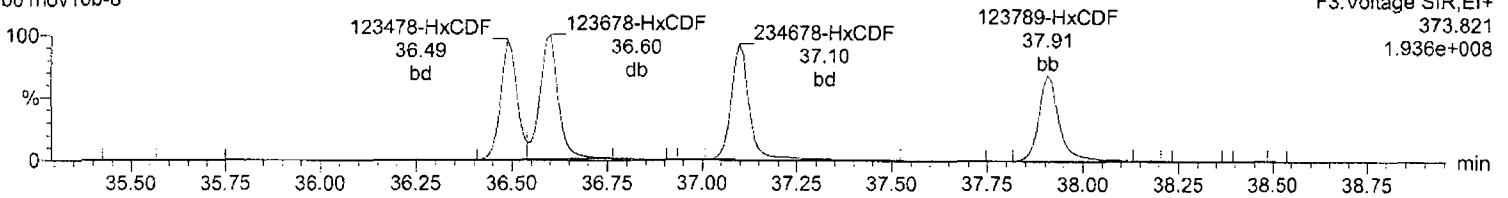
Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time
Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-8, Date: 01-Nov-2010, Time: 23:18:22, ID: CS5 UD090323-06, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

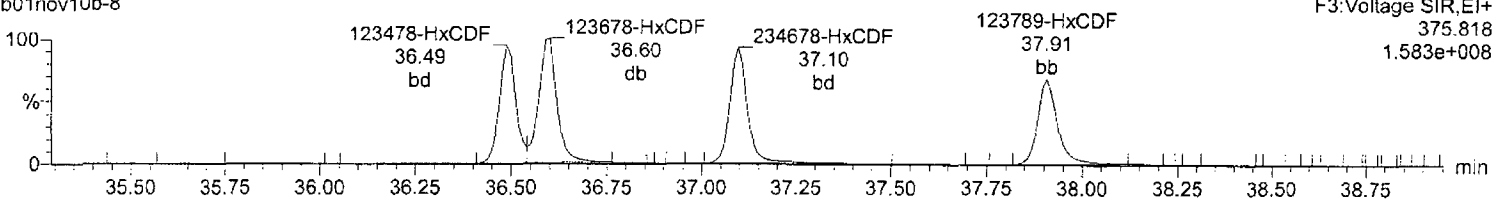
Total-hexafurans

b01nov10b-8



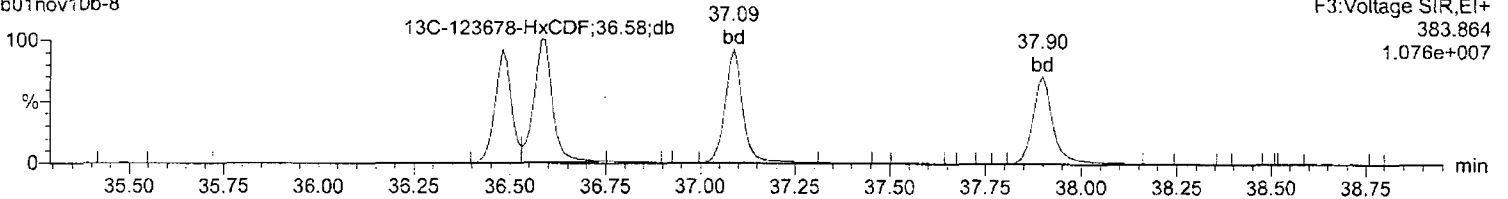
Total-hexafurans

b01nov10b-8



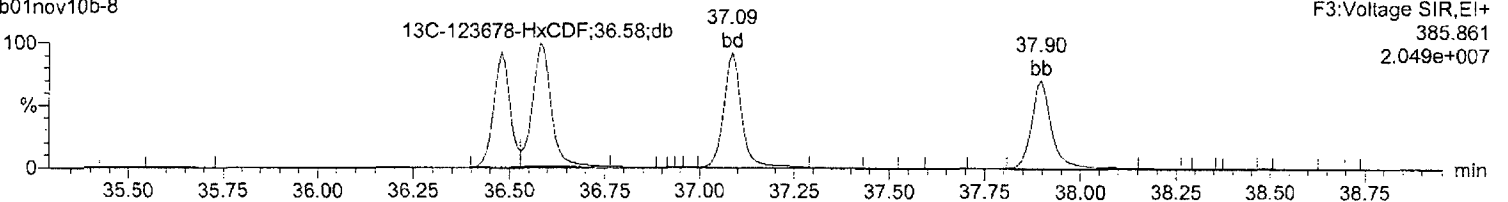
13C-123678-HxCDF

b01nov10b-8



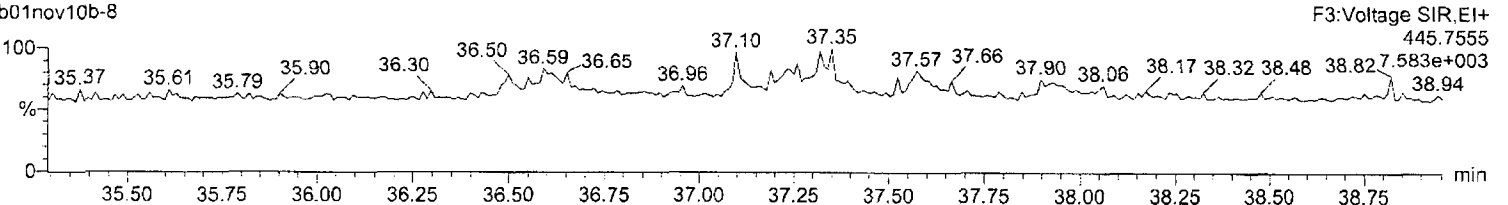
13C-123678-HxCDF

b01nov10b-8



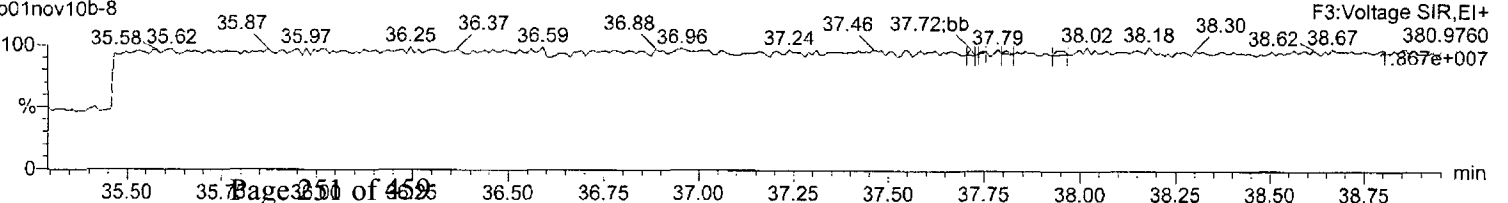
OcdPE

b01nov10b-8



Lock Mass F3

b01nov10b-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

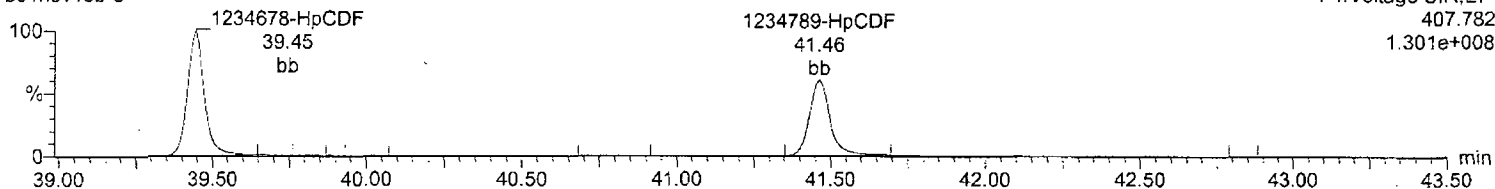
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-8, Date: 01-Nov-2010, Time: 23:18:22, ID: CS5 UD090323-06, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

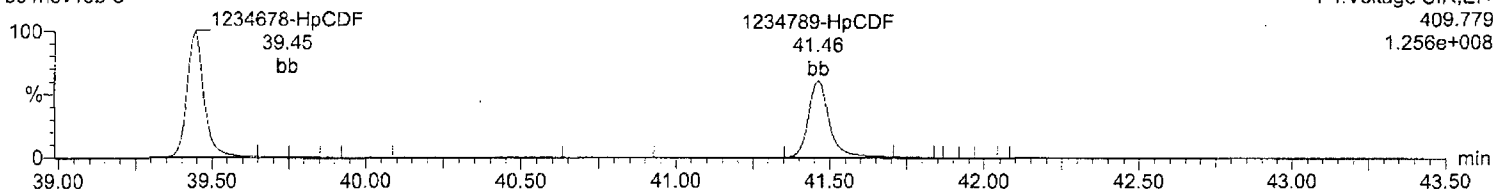
Total-heptafurans

b01nov10b-8



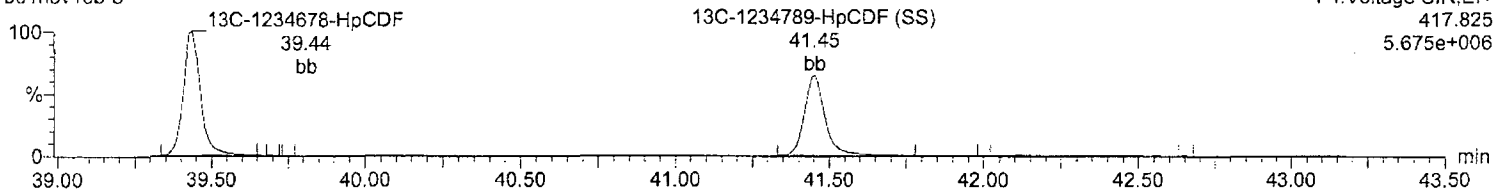
Total-heptafurans

b01nov10b-8



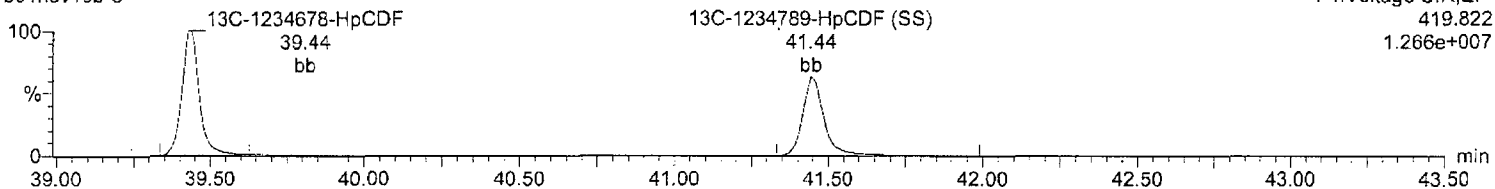
13C-1234678-HpCDF

b01nov10b-8



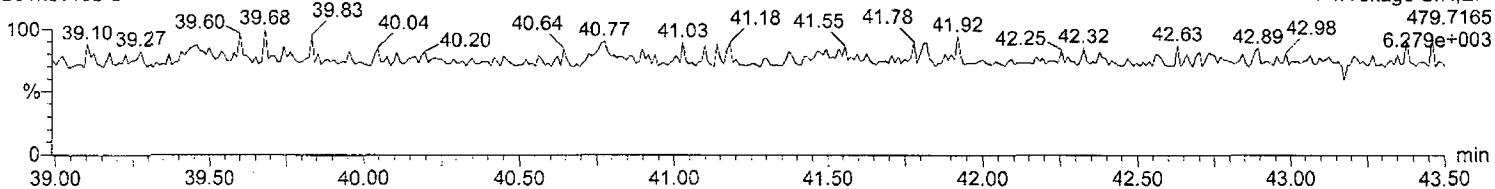
13C-1234678-HpCDF

b01nov10b-8



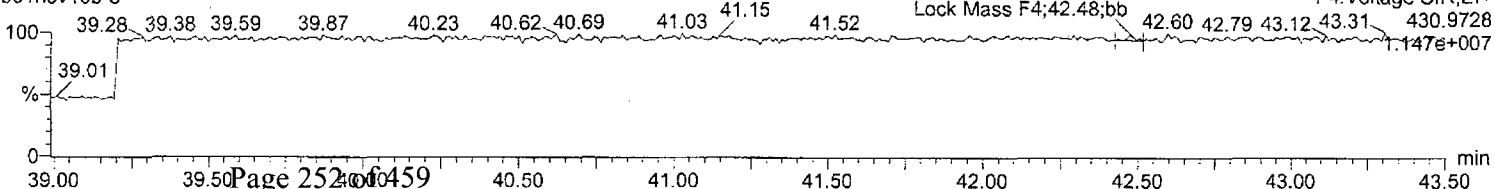
NoDPE

b01nov10b-8



Lock Mass F4

b01nov10b-8



Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b01nov10b.qld

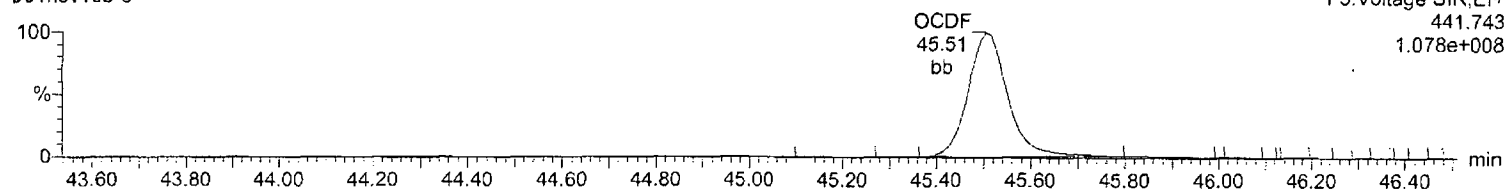
Last Altered: Tuesday, November 02, 2010 08:16:46 Eastern Standard Time

Printed: Tuesday, November 02, 2010 08:17:27 Eastern Standard Time

Name: b01nov10b-8, Date: 01-Nov-2010, Time: 23:18:22, ID: CS5 UD090323-06, Description: , Job: b01nov10b,
Task: HRP763_1, User: MJC

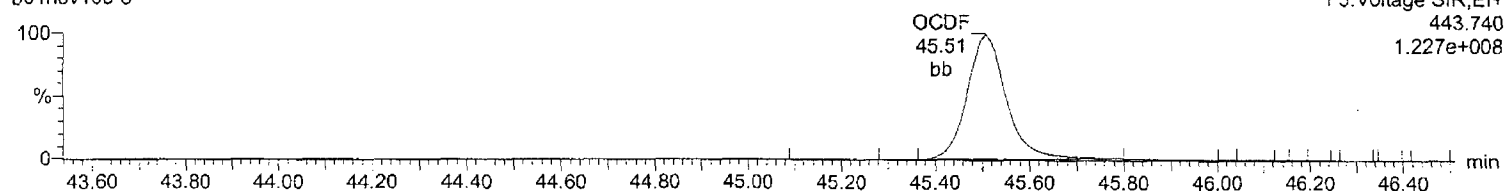
OCDF

b01nov10b-8



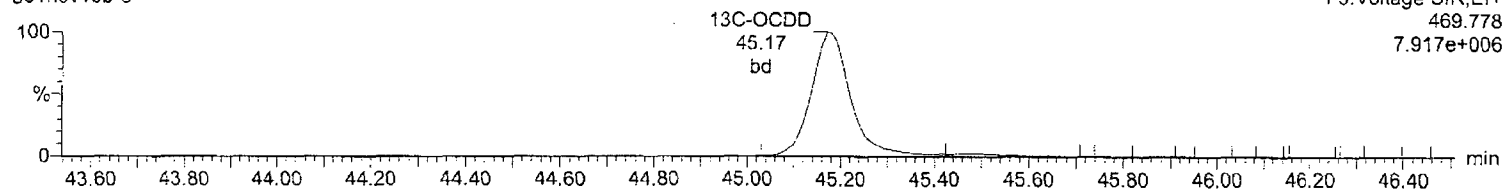
OCDF

b01nov10b-8



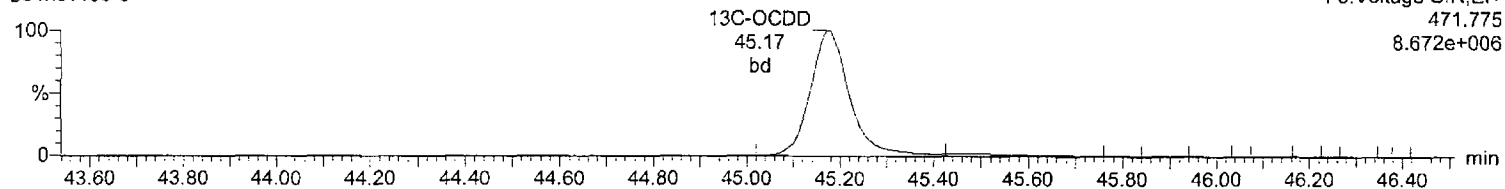
13C-OCDD

b01nov10b-8



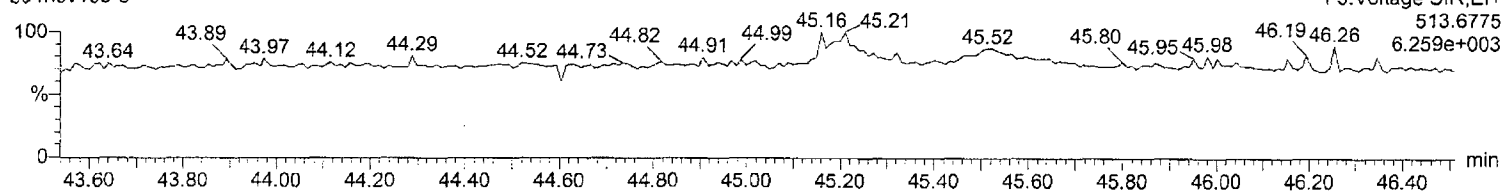
13C-OCDD

b01nov10b-8



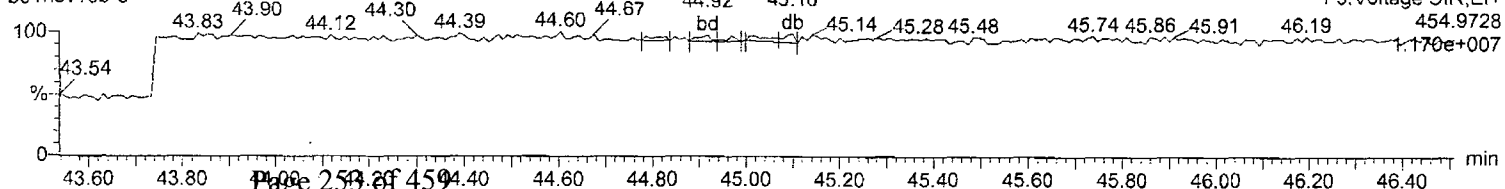
DeDPE

b01nov10b-8



Lock Mass F5

b01nov10b-8



Continuing Calibration Data

Runlog Information

HMP
03 Nov 10

Name	Instrument	Run Date	Procedure	Analyst	Batch ID	Sample Info	Injection Volume
• b03nov10a-1	HRP763_1	03-NOV-2010 08:32	b03nov10a	Matt Cash		CS3WT UD100713-01.2	1 uL
• b03nov10a-2	HRP763_1	03-NOV-2010 09:19	HMS8290_1S	Matt Cash	17293	12002069-1 LCS	1 uL
12002092-1 LCS 17294							
• b03nov10a-3	HRP763_1	03-NOV-2010 10:08	HMS8290_1S	Matt Cash	17293	12002070-1 LCSD	1 uL
12002093-1 LCSD 17294							
• b03nov10a-4	HRP763_1	03-NOV-2010 10:56	HMS8290_1S	Matt Cash	17293	12002071-1 MB	1 uL
12002094-1 MB 17294							
• b03nov10a-5	HRP763_1	03-NOV-2010 11:45	HMS8290_1S	Matt Cash	17293	1755001-1	1 uL
• b03nov10a-6	HRP763_1	03-NOV-2010 12:33	HMS8290_1S	Matt Cash	17293	1756001-1	1 uL
• b03nov10a-7	HRP763_1	03-NOV-2010 13:22	HMS8290_1S	Matt Cash	17293	12002072-1 MS	1 uL
• b03nov10a-8	HRP763_1	03-NOV-2010 14:10	HMS8290_1S	Matt Cash	17293	12002073-1 MSD	1 uL
• b03nov10a-9	HRP763_1	03-NOV-2010 14:58	b03nov10a	Matt Cash		CS3WT UD100713-01.2	1 uL
• b03nov10a_2-1	HRP763_1	03-NOV-2010 15:57	HMS1613_1S	Matt Cash	17393	12002083-1 LCS	1 uL
• b03nov10a_2-2	HRP763_1	03-NOV-2010 16:45	HMS1613_1S	Matt Cash	17393	12002084-1 LCSD	1 uL
• b03nov10a_2-3	HRP763_1	03-NOV-2010 17:33	HMS1613_1S	Matt Cash	17393	12002085-1 MB	1 uL
• b03nov10a_2-4	HRP763_1	03-NOV-2010 18:22	HMS1613_1S	Matt Cash	17393	1763001-1	1 uL
• b03nov10a_2-5	HRP763_1	03-NOV-2010 19:10	HMS1613_1S	Matt Cash	17393	12002086-1 MS	1 uL
• b03nov10a_2-6	HRP763_1	03-NOV-2010 19:58	HMS1613_1S	Matt Cash	17393	12002087-1 MSD	1 uL
• b03nov10a_2-7	HRP763_1	03-NOV-2010 20:47	HMS1613_1S	Matt Cash	17393	1763002-1	1 uL
• b03nov10a_2-8	HRP763_1	03-NOV-2010 21:35	HMS1613_1S	Matt Cash	17393	1763003-1	1 uL
• b03nov10a_2-9	HRP763_1	03-NOV-2010 22:24	HMS1613_1S	Matt Cash	17393	1763004-1	1 uL

• b03nov10a_2-10	HRP763_1	03-NOV-2010 23:12	HMS1613_1S	Matt Cash	17393	1764001-1	1 uL
• b03nov10a_2-11	HRP763_1	04-NOV-2010 00:01	HMS8290TCS	Matt Cash	17153	1741017-1	1 uL
• b03nov10a_2-12	HRP763_1	04-NOV-2010 00:49	HMS8290TCS	Matt Cash	17153	1741018-1	1 uL
• b03nov10a_2-13	HRP763_1	04-NOV-2010 01:37	HMS8290_1S	Matt Cash	17154	1728001-1	1 uL
• b03nov10a_2-14	HRP763_1	04-NOV-2010 02:26	b03nov10a_2	Matt Cash		CS3WT UD100713-01.2	1 uL
• b03nov10a_3-1	HRP763_1	04-NOV-2010 03:22	HMS8290_1L	Matt Cash	17193	12002057-1 LCS	1 uL
• b03nov10a_3-2	HRP763_1	04-NOV-2010 04:10	HMS8290_1L	Matt Cash	17193	12002058-1 LCSD	1 uL
• b03nov10a_3-3	HRP763_1	04-NOV-2010 04:59	HMS8290_1L	Matt Cash	17193	12002059-1 MB	1 uL
• b03nov10a_3-4	HRP763_1	04-NOV-2010 05:47	HMS8290_1L	Matt Cash	17193	1730001-1	1 uL
• b03nov10a_3-5	HRP763_1	04-NOV-2010 06:35	HMS8290_1L	Matt Cash	17193	1730002-1	1 uL
• b03nov10a_3-6	HRP763_1	04-NOV-2010 07:24	HMS8290_1L	Matt Cash	17193	1730003-1	1 uL
• b03nov10a_3-7	HRP763_1	04-NOV-2010 08:12	HMS8290_1S	Matt Cash	17294	1744002-1	1 uL
• b03nov10a_3-8	HRP763_1	04-NOV-2010 09:01	HMS8290_1S	Matt Cash	17294	1744003-1	1 uL
• b03nov10a_3-9	HRP763_1	04-NOV-2010 09:49	HMS8290_1S	Matt Cash	17294	1744001-1	1 uL
• b03nov10a_3-10	HRP763_1	04-NOV-2010 10:37	HMS8290_1S	Matt Cash	17294	1746001-1	1 uL
• b03nov10a_3-11	HRP763_1	04-NOV-2010 11:26	HMS8290_1S	Matt Cash	17294	1746002-1	1 uL
• b03nov10a_3-12	HRP763_1	04-NOV-2010 12:14	HMS8290_1S	Matt Cash	17294	1746003-1	1 uL
• b03nov10a_3-13	HRP763_1	04-NOV-2010 13:03	HMS8290_1L	Matt Cash	17193	1745001-1	1 uL
• b03nov10a_3-14	HRP763_1	04-NOV-2010 13:51	b03nov10a_3	Matt Cash		CS3WT UD100713-01.2	1 uL
• b03nov10a_4-1	HRP763_1	04-NOV-2010 14:48	HMS8290TCL	Matt Cash	17315	12002022-1 LCS	1 uL
• b03nov10a_4-2	HRP763_1	04-NOV-2010 15:35	HMS8290TCL	Matt Cash	17315	12002023-1 LCSD	1 uL
• b03nov10a_4-3	HRP763_1	04-NOV-2010 16:24	HMS8290TCL	Matt Cash	17315	12002024-1 MB	1 uL

• b03nov10a_4-4	HRP763_1	04-NOV-2010 17:12	HMS8290_1L	Matt Cash	17193	1745002-1	1 uL
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• b03nov10a_4-7	HRP763_1	04-NOV-2010 19:38	HMS8290TCL	Matt Cash	17315	1742003-1	1 uL
• b03nov10a_4-8	HRP763_1	04-NOV-2010 20:26	HMS8290TCL	Matt Cash	17315	12002027-1 MS	1 uL
• b03nov10a_4-9	HRP763_1	04-NOV-2010 21:15	HMS8290TCL	Matt Cash	17315	12002028-1 MSD	1 uL
• b03nov10a_4-10	HRP763_1	04-NOV-2010 22:03	HMS8290TCL	Matt Cash	17315	1742004-1	1 uL
• b03nov10a_4-11	HRP763_1	04-NOV-2010 22:51	HMS8290TCL	Matt Cash	17315	1742005-1	1 uL
• b03nov10a_4-12	HRP763_1	04-NOV-2010 23:40	HMS8290TCL	Matt Cash	17315	1742006-1	1 uL
• b03nov10a_4-13	HRP763_1	05-NOV-2010 00:28	HMS8290TCL	Matt Cash	17315	1742007-1	1 uL
• b03nov10a_4-14	HRP763_1	05-NOV-2010 01:17	b03nov10a_4	Matt Cash		CS3WT UD100713-01.2	1 uL
• b03nov10a_5-1	HRP763_1	05-NOV-2010 02:13	HMS8290_1L	Matt Cash	17295	12002074-1 LCS	1 uL
• b03nov10a_5-2	HRP763_1	05-NOV-2010 03:01	HMS8290_1L	Matt Cash	17295	12002075-1 LCSD	1 uL
• b03nov10a_5-3	HRP763_1	05-NOV-2010 03:49	HMS8290_1L	Matt Cash	17295	12002076-1 MB	1 uL
• b03nov10a_5-4	HRP763_1	05-NOV-2010 04:38	HMS8290TCL	Matt Cash	17315	1742008-1	1 uL
• b03nov10a_5-5	HRP763_1	05-NOV-2010 05:26	HMS8290TCL	Matt Cash	17315	1742009-1	1 uL
• b03nov10a_5-6	HRP763_1	05-NOV-2010 06:15	HMS8290TCL	Matt Cash	17315	1742010-1	1 uL
• b03nov10a_5-7	HRP763_1	05-NOV-2010 07:03	HMS8290TCL	Matt Cash	17315	1742011-1	1 uL
• b03nov10a_5-8	HRP763_1	05-NOV-2010 07:52	HMS8290TCL	Matt Cash	17315	1742012-1	1 uL
• b03nov10a_5-9	HRP763_1	05-NOV-2010 08:40	HMS8290TCL	Matt Cash	17315	1742013-1	1 uL
• b03nov10a_5-10	HRP763_1	05-NOV-2010 09:28	HMS8290_1L	Matt Cash	17295	1731001-1	1 uL
• b03nov10a_5-11	HRP763_1	05-NOV-2010 10:17	HMS8290_1L	Matt Cash	17295	1731002-1	1 uL

• b03nov10a_5-12	HRP763_1	05-NOV-2010 11:05	HMS8290_1L	Matt Cash	17295	1734001-1	1 uL
• b03nov10a_5-13	HRP763_1	05-NOV-2010 11:54	HMS8290_1L	Matt Cash	17295	1734002-1	1 uL
• b03nov10a_5-14	HRP763_1	05-NOV-2010 12:42	b03nov10a_5	Matt Cash		CS3WT UD100713-01.2	1 uL
• b03nov10a_6-1	HRP763_1	05-NOV-2010 13:39	HMS8290_1L	Matt Cash	17614	12002089-1 LCS	1 uL
• b03nov10a_6-2	HRP763_1	05-NOV-2010 14:26	HMS8290_1L	Matt Cash	17614	12002090-1 LCSD	1 uL
• b03nov10a_6-3	HRP763_1	05-NOV-2010 15:15	HMS8290_1L	Matt Cash	17614	12002091-1 MB	1 uL
• b03nov10a_6-4	HRP763_1	05-NOV-2010 16:03	HMS8290_1L	Matt Cash	17295	1734003-1	1 uL
• b03nov10a_6-5	HRP763_1	05-NOV-2010 16:52	HMS8290_1L	Matt Cash	17295	1734004-1	1 uL
• b03nov10a_6-6	HRP763_1	05-NOV-2010 17:40	HMS8290_1L	Matt Cash	17295	1739001-1	1 uL
• b03nov10a_6-7	HRP763_1	05-NOV-2010 18:28	HMS8290_1L	Matt Cash	17295	1740001-1	1 uL
• b03nov10a_6-8	HRP763_1	05-NOV-2010 19:17	HMS8290_1L	Matt Cash	17295	1740002-1	1 uL
• b03nov10a_6-9	HRP763_1	05-NOV-2010 20:05	HMS8290_1L	Matt Cash	17614	1749001-1	1 uL
• b03nov10a_6-10	HRP763_1	05-NOV-2010 20:54	HMS8290_1L	Matt Cash	17614	1749002-1	1 uL
• b03nov10a_6-11	HRP763_1	05-NOV-2010 21:42	HMS8290TCL	Matt Cash	17633	1773001-1	1 uL
• b03nov10a_6-12	HRP763_1	05-NOV-2010 22:31	HMS8290TCL	Matt Cash	17633	1774001-1	1 uL
• b03nov10a_6-13	HRP763_1	05-NOV-2010 23:19	HMS8290TCL	Matt Cash	17633	1775001-1	1 uL
• b03nov10a_6-14	HRP763_1	06-NOV-2010 00:07	b03nov10a_6	Matt Cash		CS3WT UD100713-01.2	1 uL
• b03nov10a_7-1	HRP763_1	06-NOV-2010 01:04	HMS8290TCS	Matt Cash	17733	12002097-1 LCS	1 uL
• b03nov10a_7-2	HRP763_1	06-NOV-2010 01:52	HMS8290TCS	Matt Cash	17733	12002098-1 LCSD	1 uL
• b03nov10a_7-3	HRP763_1	06-NOV-2010 02:40	HMS8290TCS	Matt Cash	17733	12002099-1 MB	1 uL
• b03nov10a_7-4	HRP763_1	06-NOV-2010 03:29	HMS8290TCS	Matt Cash	17733	1776001-1	1 uL
• b03nov10a_7-5	HRP763_1	06-NOV-2010 04:17	HMS8290TCS	Matt Cash	17733	12002100-1 MS	1 uL

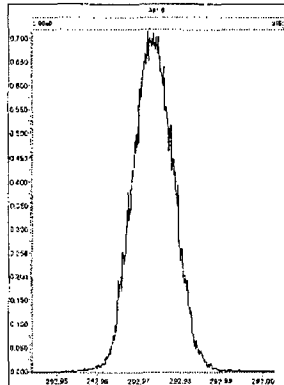
HMP
08Nov10

• b03nov10a_7-6	HRP763_1	06-NOV-2010 05:05	HMS8290TCS	Matt Cash	17733	12002101-1 MSD	1 uL
• b03nov10a_7-7	HRP763_1	06-NOV-2010 05:54	HMS8290TCS	Matt Cash	17733	1776002-1	1 uL
• b03nov10a_7-8	HRP763_1	06-NOV-2010 06:42	HMS8290TCS	Matt Cash	17733	1776003-1	1 uL
• b03nov10a_7-9	HRP763_1	06-NOV-2010 07:31	HMS8290TCS	Matt Cash	17733	1776004-1	1 uL
• b03nov10a_7-10	HRP763_1	06-NOV-2010 08:19	HMS8290TCS	Matt Cash	17733	1776005-1	1 uL
• b03nov10a_7-11	HRP763_1	06-NOV-2010 09:08	HMS8290TCS	Matt Cash	17733	1776006-1	1 uL
• b03nov10a_7-12	HRP763_1	06-NOV-2010 09:56	HMS8290TCS	Matt Cash	17733	1776007-1	1 uL
• b03nov10a_7-13	HRP763_1	06-NOV-2010 10:44	HMS8290TCS	Matt Cash	17733	1776008-1	1 uL
• b03nov10a_7-14	HRP763_1	06-NOV-2010 11:33	b03nov10a_7	Matt Cash		CS3WT UD100713-01.2	1 uL
• b03nov10a_8-1	HRP763_1	06-NOV-2010 12:30	HMSTO9AIRm	Matt Cash	17734	12002103-1 LCS	1 uL
• b03nov10a_8-2	HRP763_1	06-NOV-2010 13:17	HMSTO9AIRm	Matt Cash	17734	12002104-1 LCSD	1 uL
• b03nov10a_8-3	HRP763_1	06-NOV-2010 14:06	HMSTO9AIRm	Matt Cash	17734	12002105-1 MB	1 uL
• b03nov10a_8-4	HRP763_1	06-NOV-2010 14:54	HMSTO9AIRm	Matt Cash	17734	1777001-1	1 uL
• b03nov10a_8-5	HRP763_1	06-NOV-2010 15:43	HMS8290TCS	Matt Cash	17733	1776009-1	1 uL
• b03nov10a_8-6	HRP763_1	06-NOV-2010 16:31	HMS8290TCS	Matt Cash	17733	1776010-1	1 uL
• b03nov10a_8-7	HRP763_1	06-NOV-2010 17:19	b03nov10a_8	Matt Cash		CS3WT UD100713-01.2	1 uL

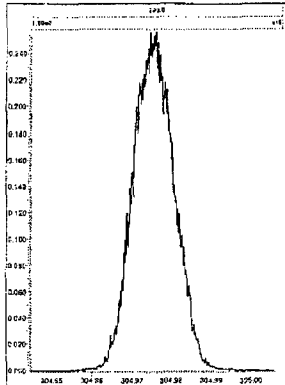
File: Experiment: dioxin_db5.ms.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

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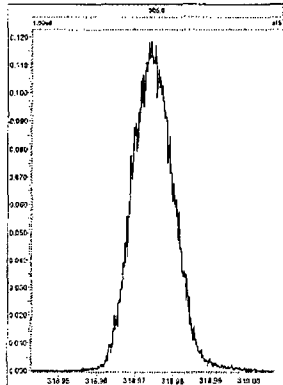
M 292.9824 R 13587



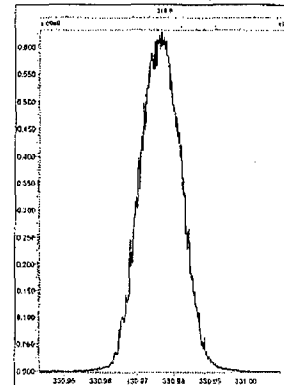
M 304.9824 R 13225



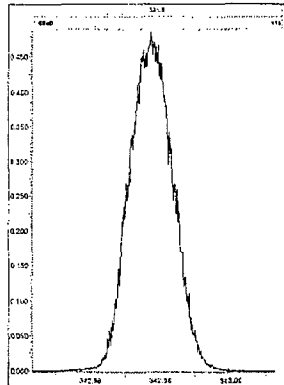
M 318.9792 R 12956



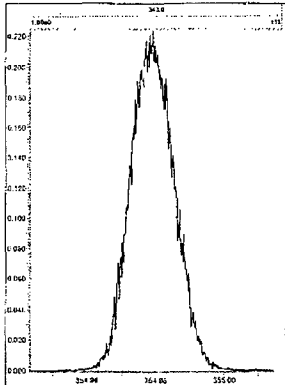
M 330.9792 R 13228 ✓



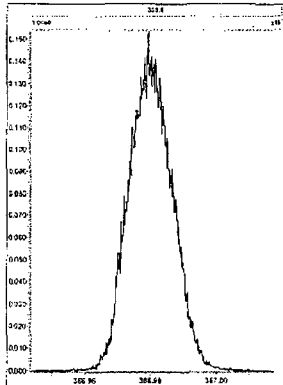
M 342.9792 R 12890



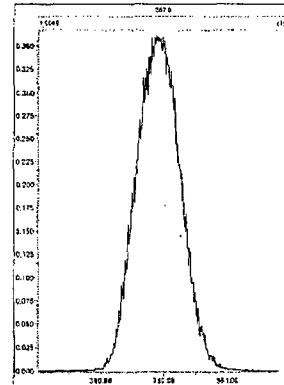
M 354.9792 R 12955



M 366.9792 R 12438



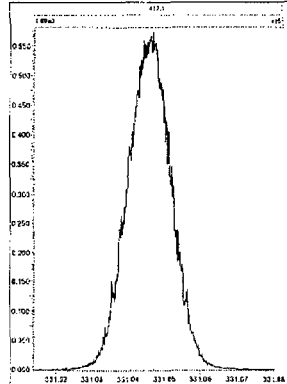
M 380.9760 R 12436



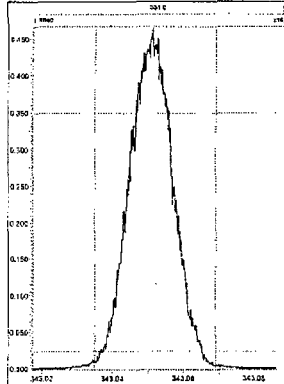
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

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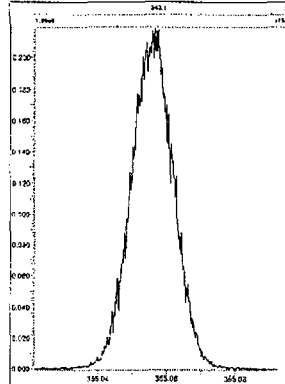
M 330.9792 R 12016



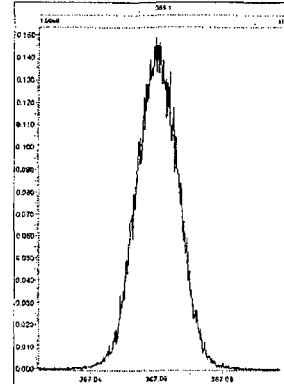
M 342.9792 R 11844



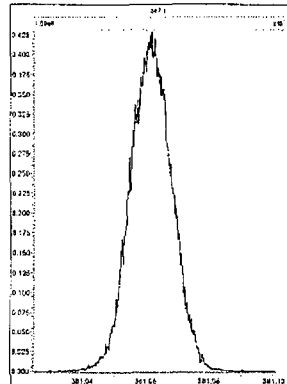
M 354.9792 R 12562



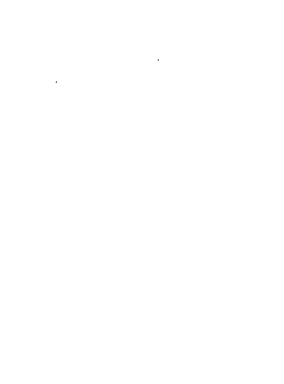
M 366.9792 R 13023



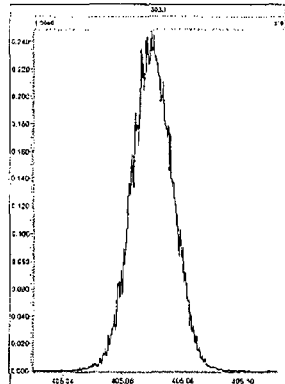
M 380.9760 R 12627



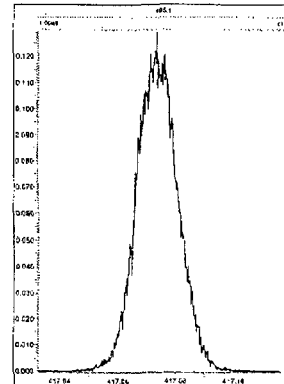
M 392.9760 R 12690



M 404.9760 R 13019



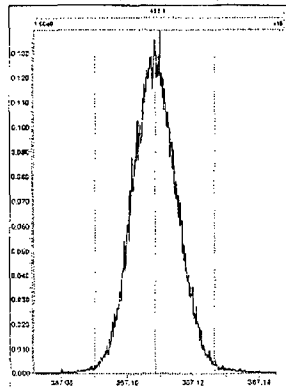
M 416.9760 R 13090



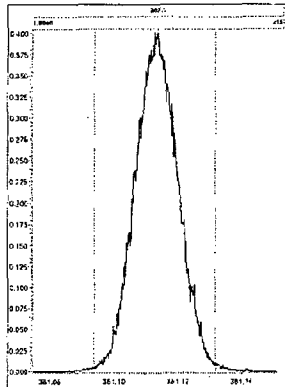
File: Experiment: dioxin_db5.ms.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

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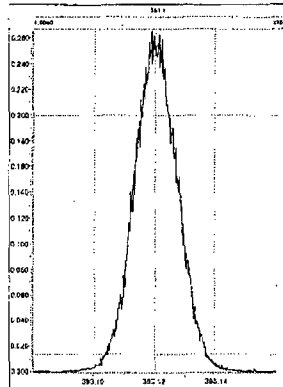
M 366.9792 R 11627



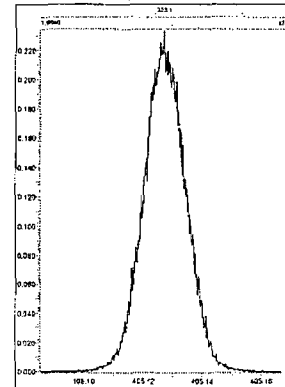
M 380.9760 R 12374



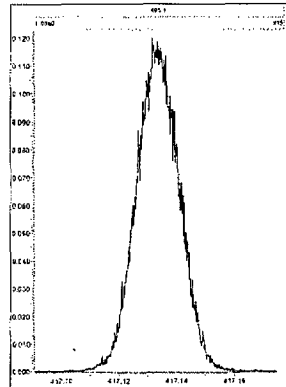
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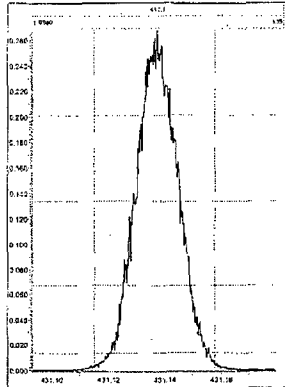
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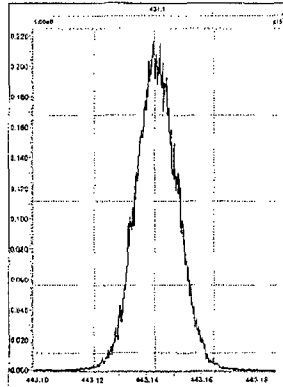
M 416.9760 R 12625



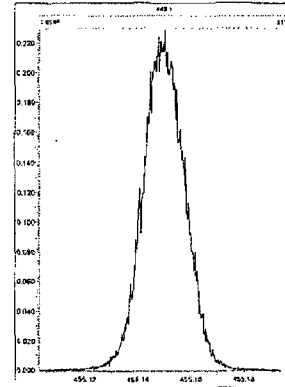
M 430.9728 R 12624



M 442.9728 R 12563



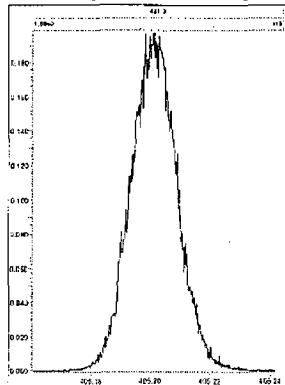
M 454.9728 R 12952



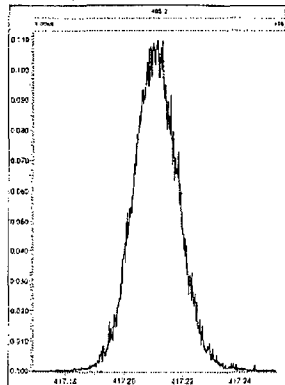
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

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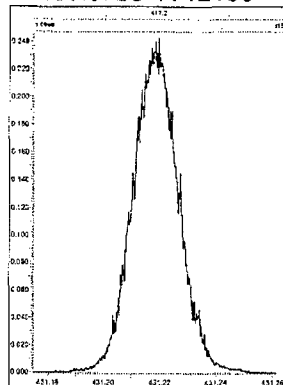
M 404.9760 R 11470



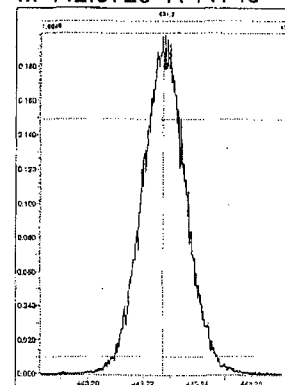
M 416.9760 R 11575



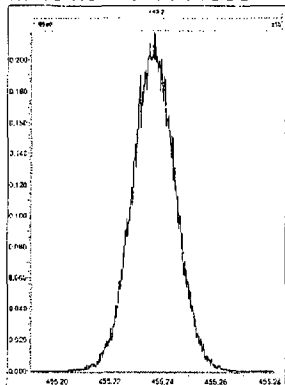
M 430.9728 R 12195



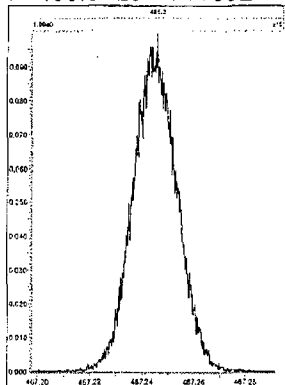
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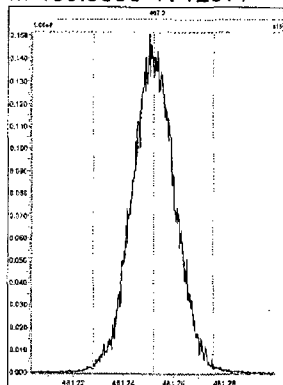
M 454.9728 R 11963



M 466.9728 R 11682



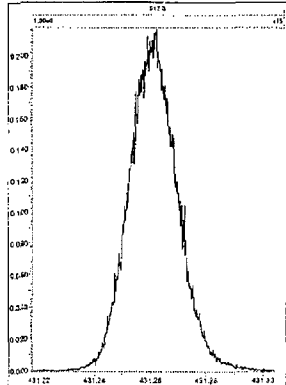
M 480.9696 R 12077



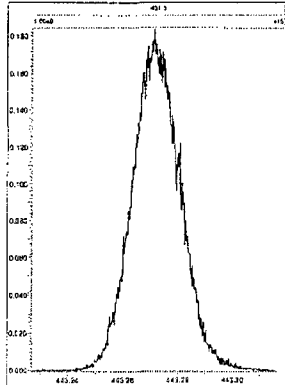
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Wednesday, November 03, 2010 08:27:37 Eastern Standard Time

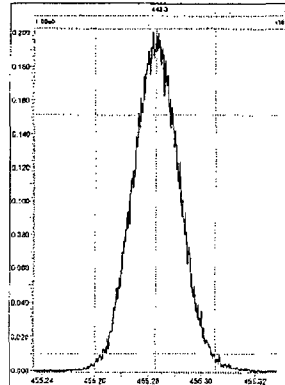
M 430.9728 R 10962



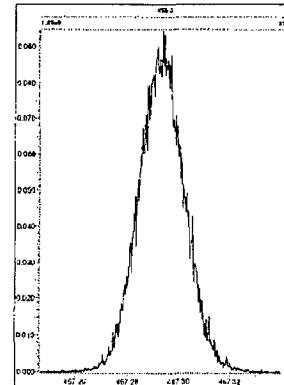
M 442.9728 R 10638



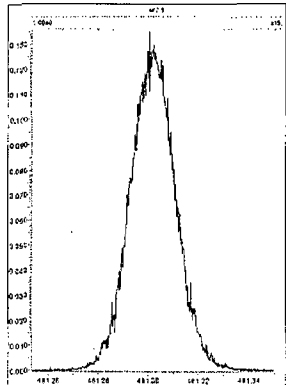
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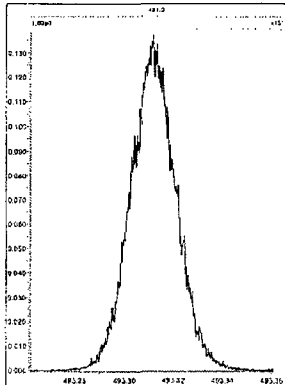
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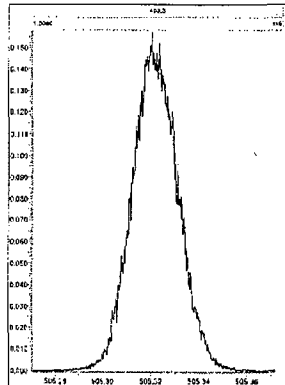
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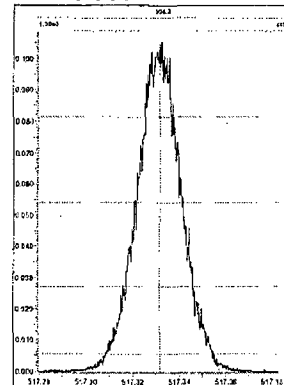
M 492.9696 R 11415



M 504.9696 R 11260

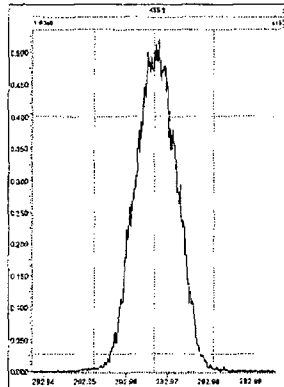


M 516.9697 R 11212

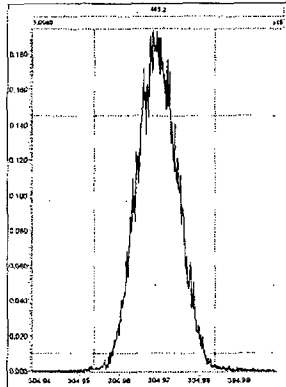


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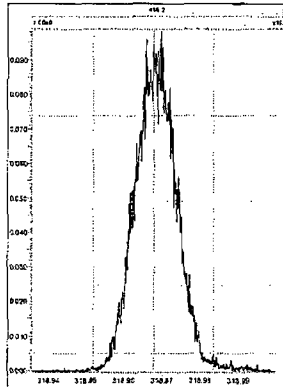
M 292.9824 R 13090



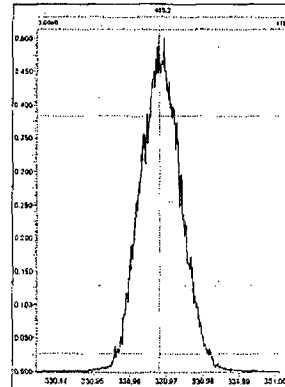
M 304.9824 R 13370



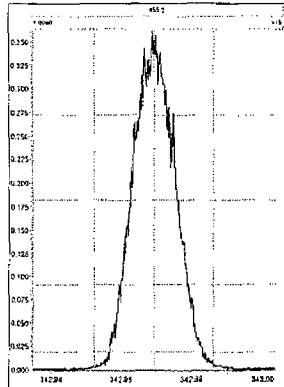
M 318.9792 R 13624



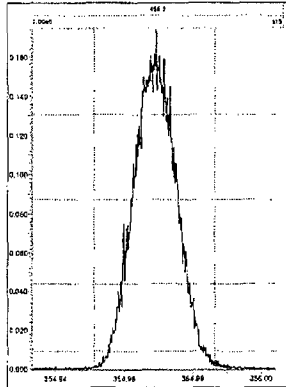
M 330.9792 R 13378 ✓



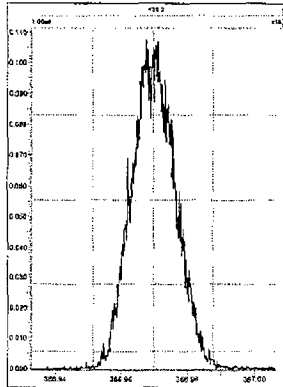
M 342.9792 R 12660



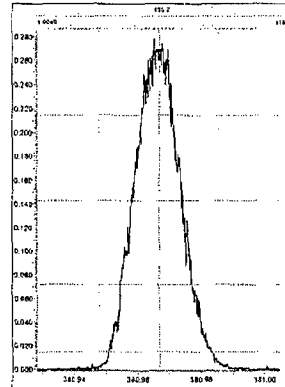
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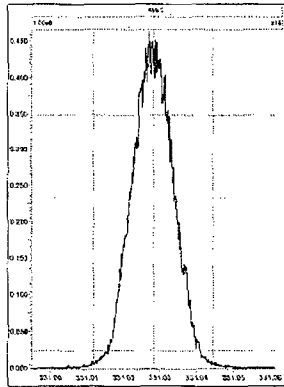
M 366.9792 R 12823



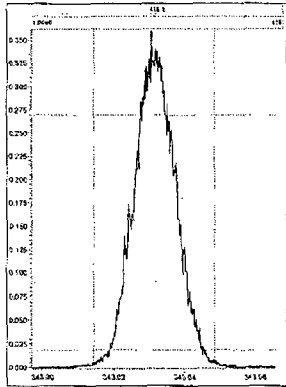
M 380.9760 R 11881



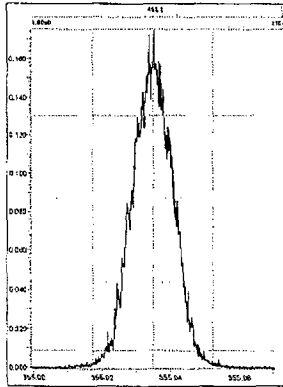
M 330.9792 R 12825



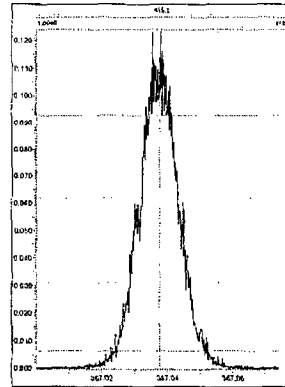
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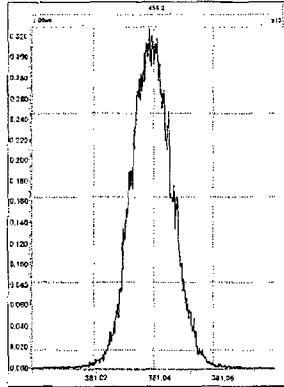
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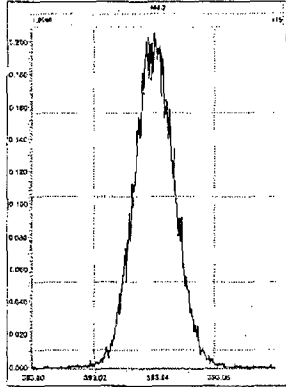
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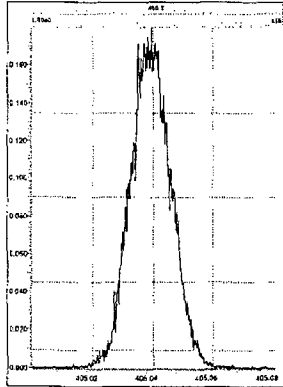
M 380.9760 R 13090



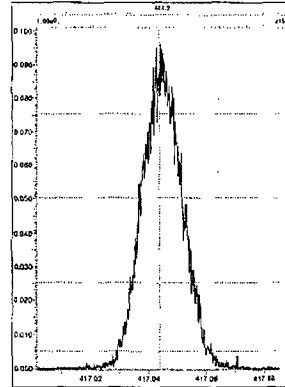
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M 404.9760 R 13631

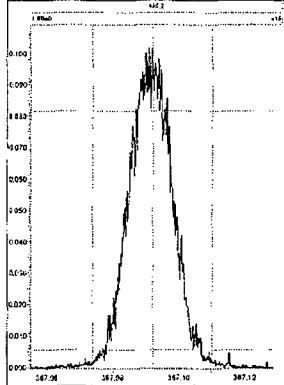


M 416.9760 R 13586

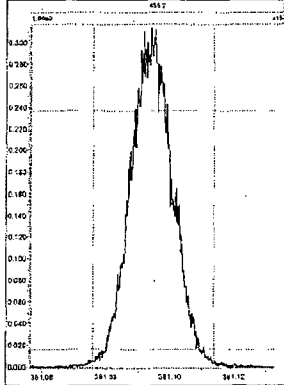


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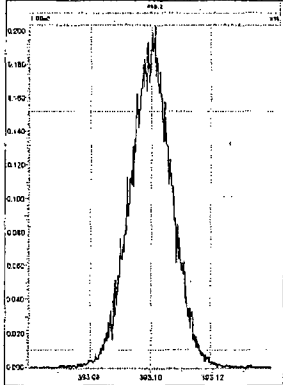
M 366.9792 R 12658



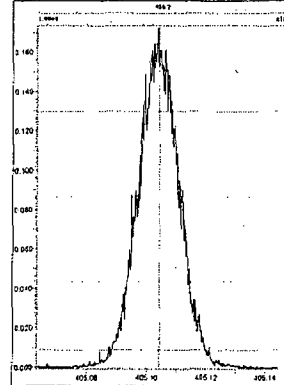
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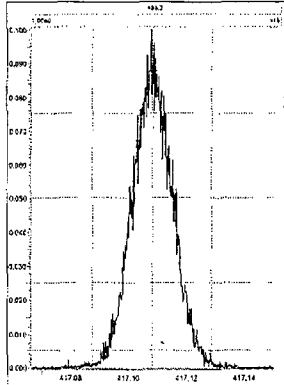
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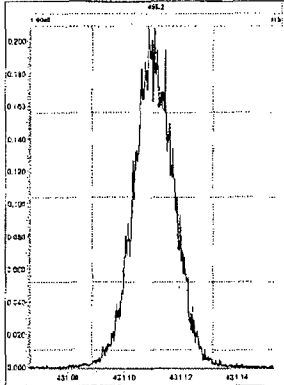
M 404.9760 R 12991



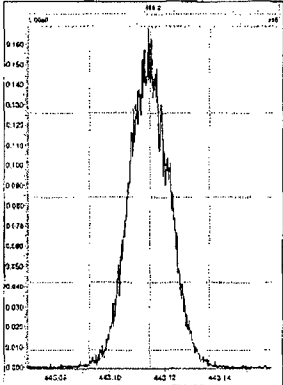
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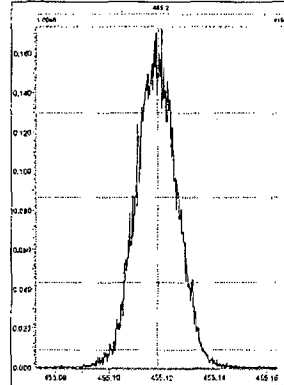
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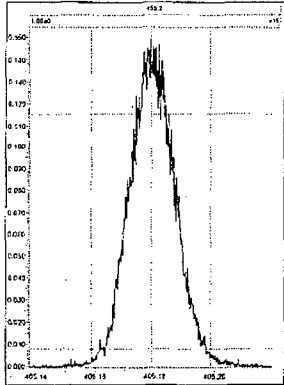
M 442.9728 R 13297



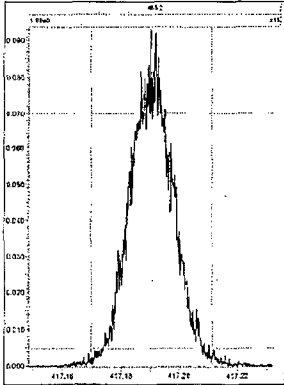
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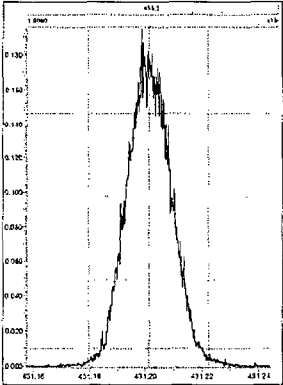
M 404.9760 R 11765



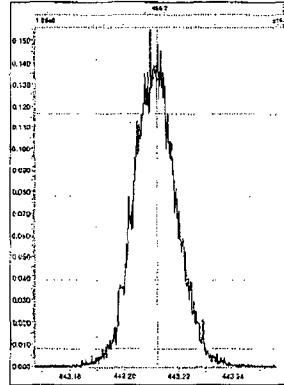
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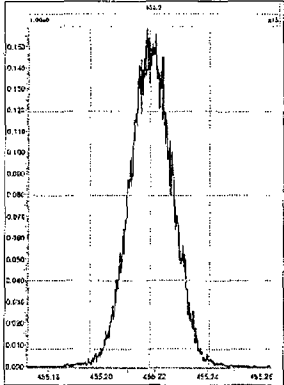
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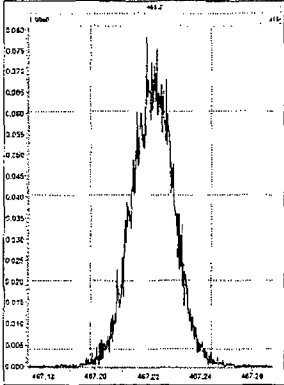
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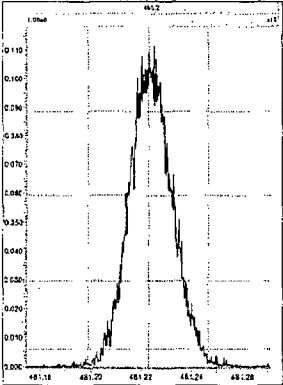
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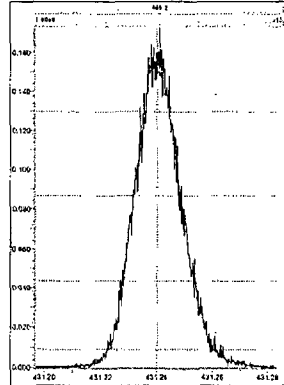
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M 480.9696 R 12559

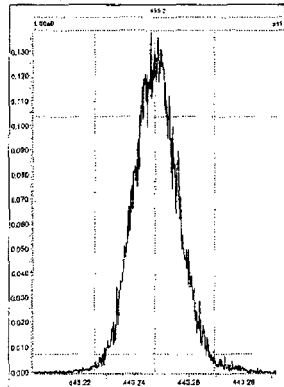


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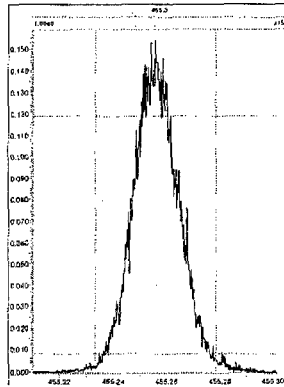


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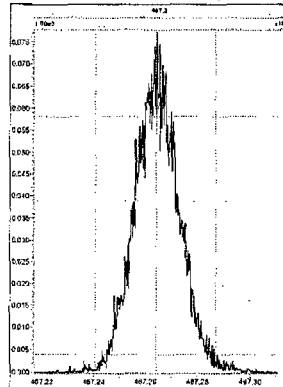
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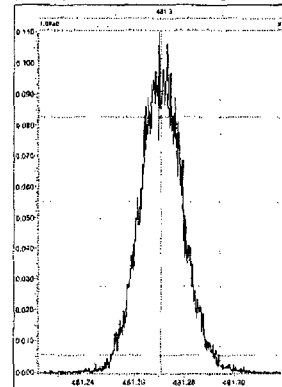
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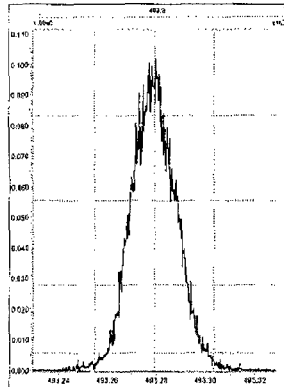
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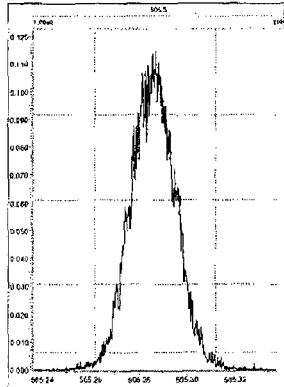
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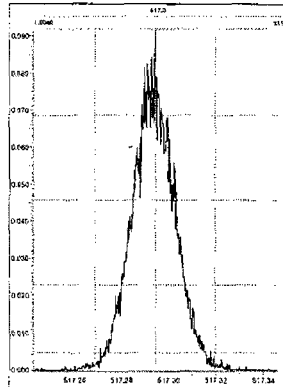
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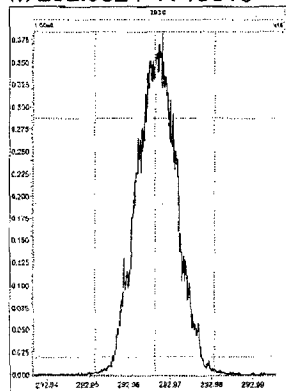


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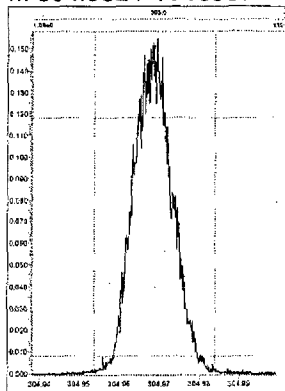


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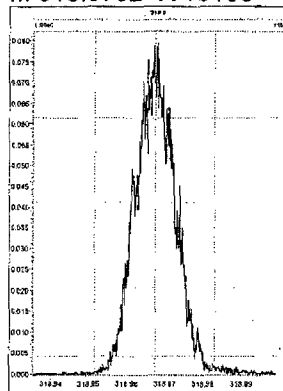
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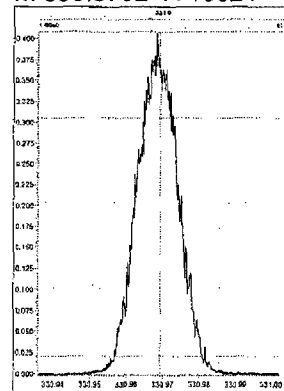
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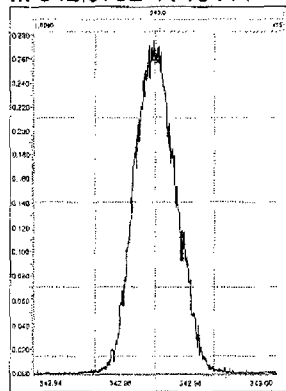
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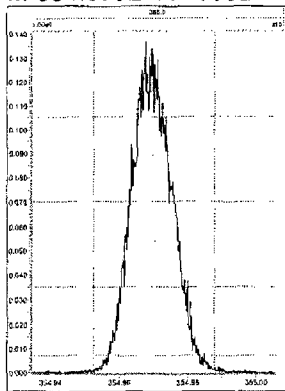
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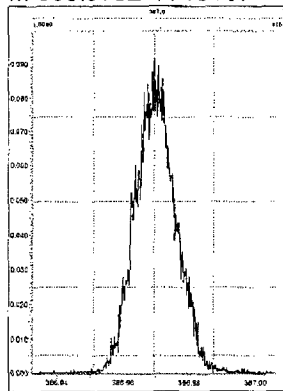
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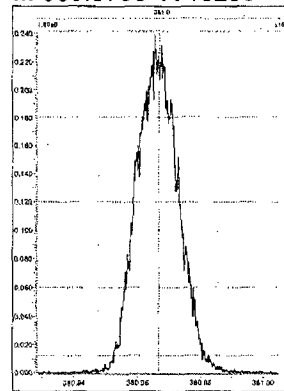
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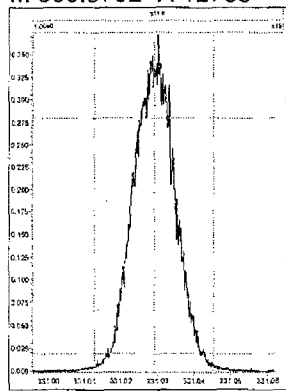
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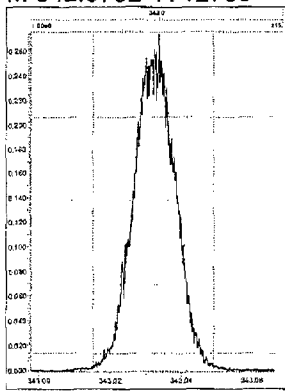
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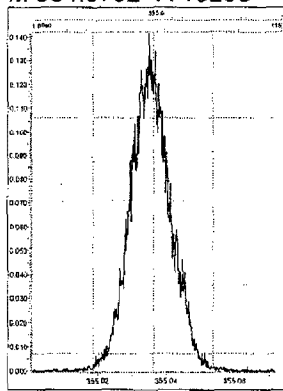
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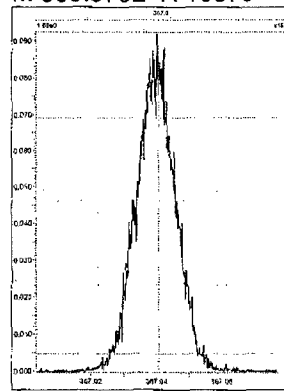
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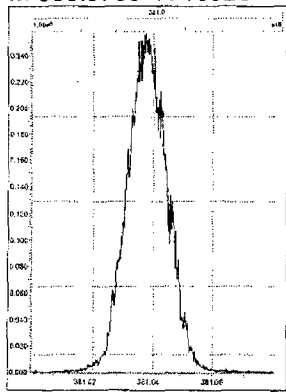
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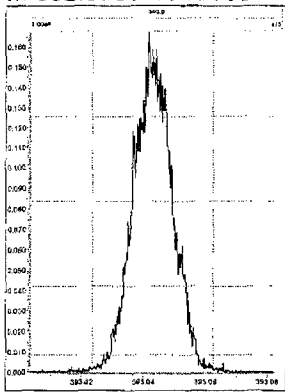
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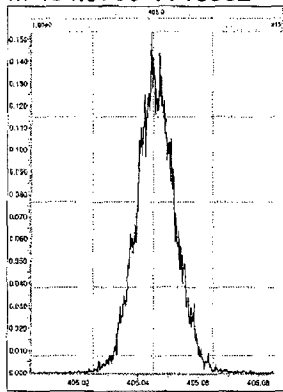
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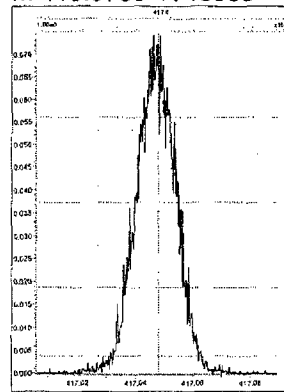
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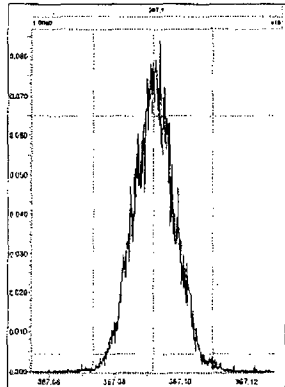


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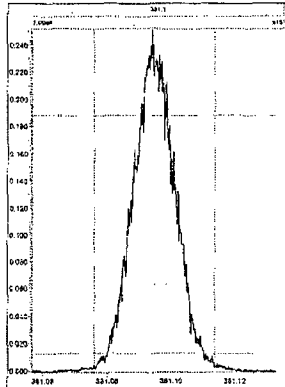


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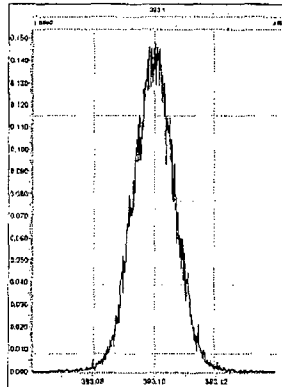
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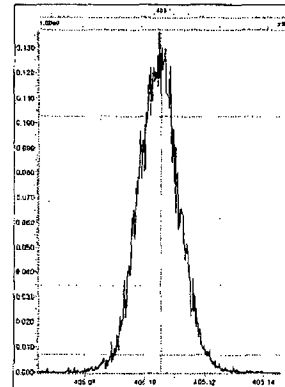
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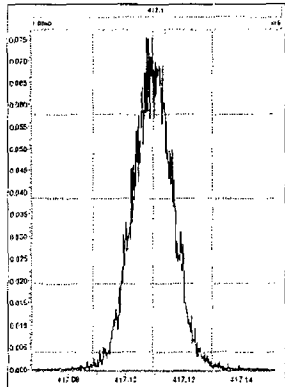
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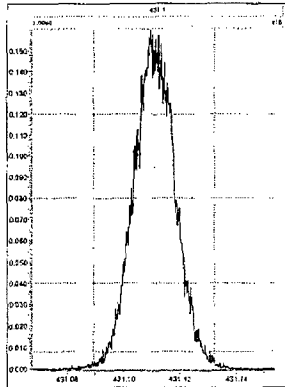
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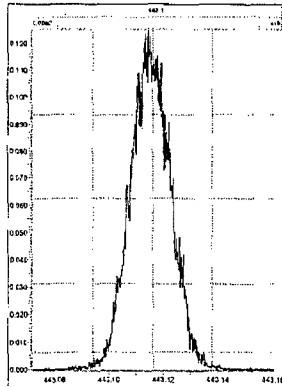
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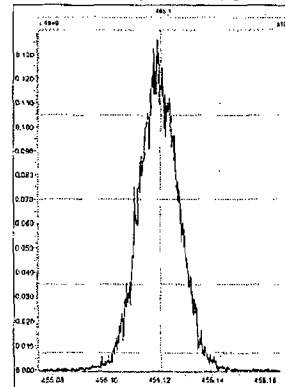
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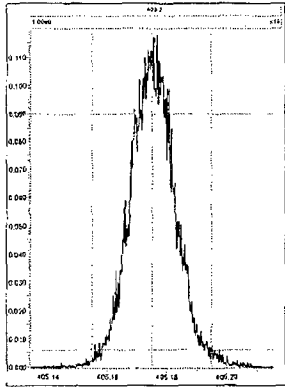
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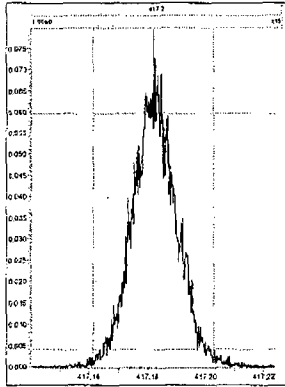
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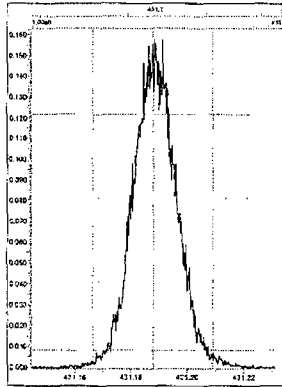
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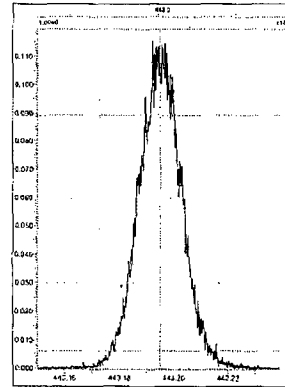
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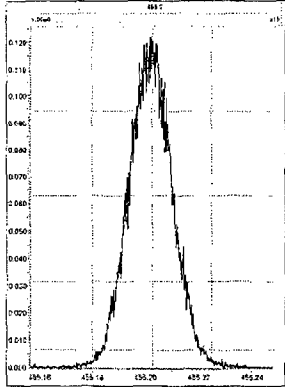
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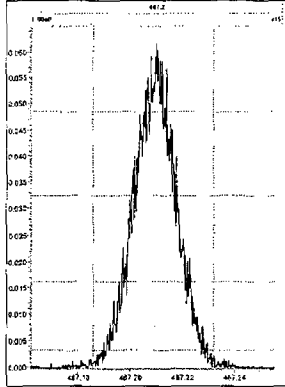
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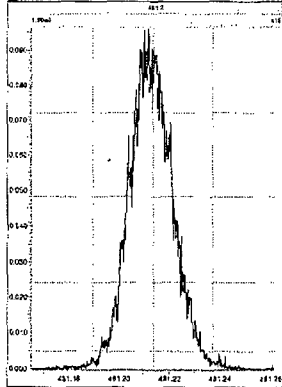
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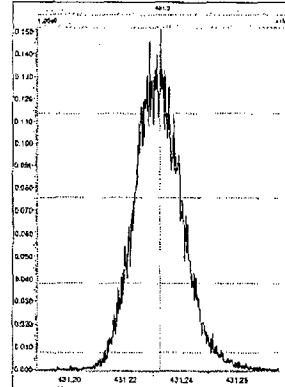
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M 480.9696 R 12428

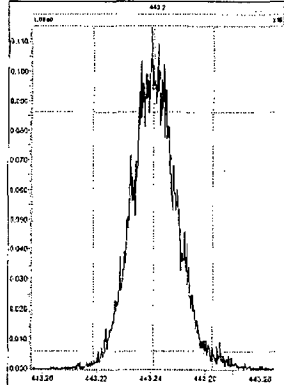


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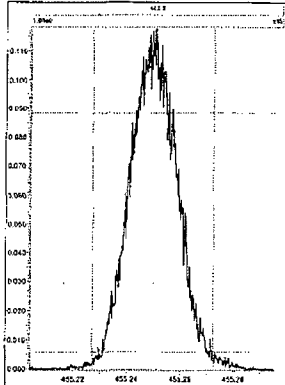


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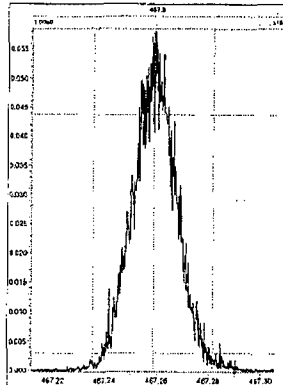
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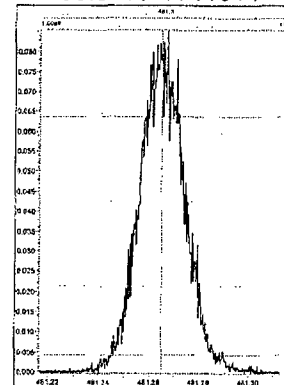
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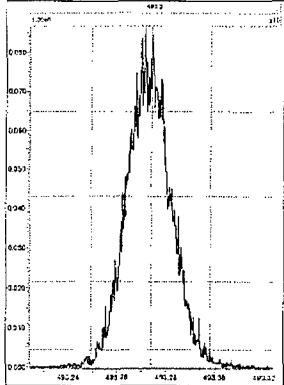
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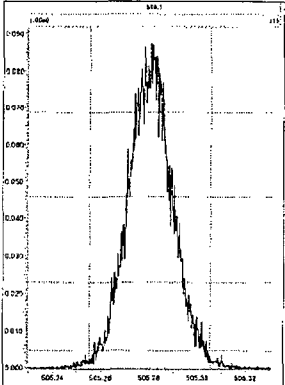
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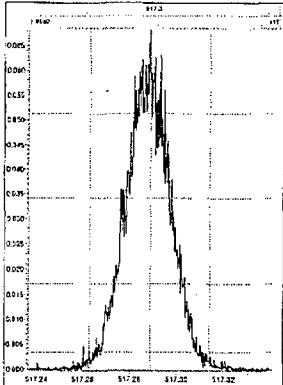
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M 504.9696 R 11448



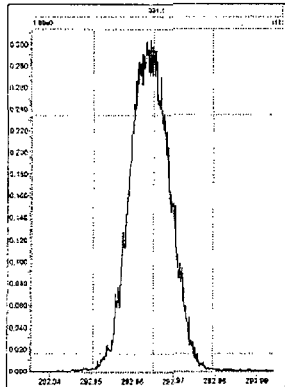
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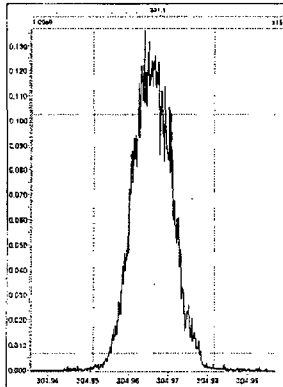
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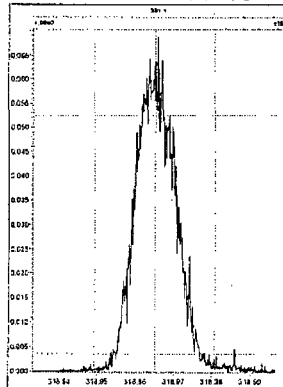
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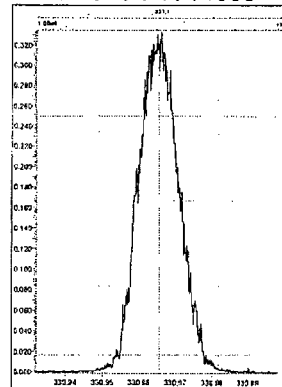
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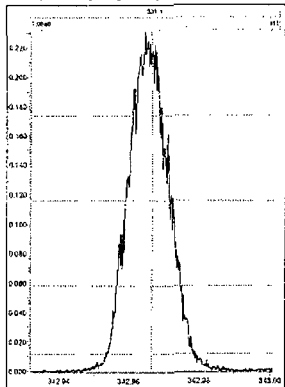
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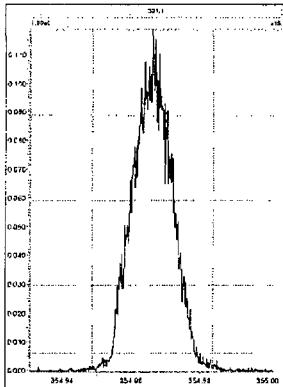
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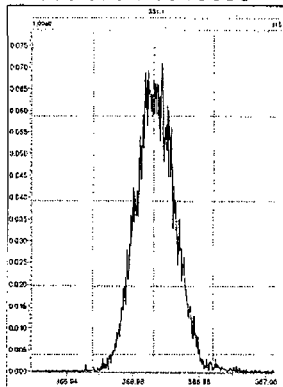
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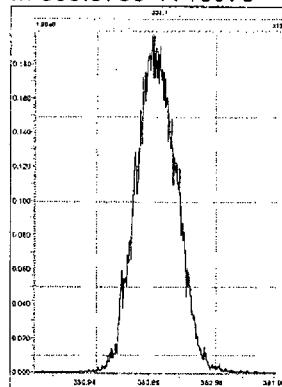
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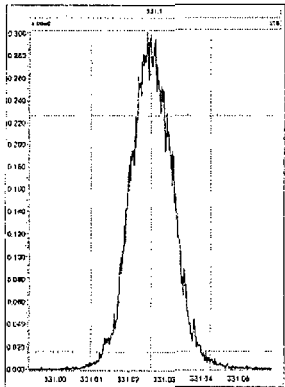
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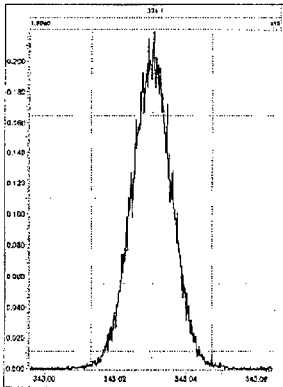
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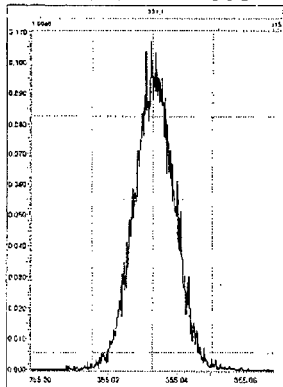
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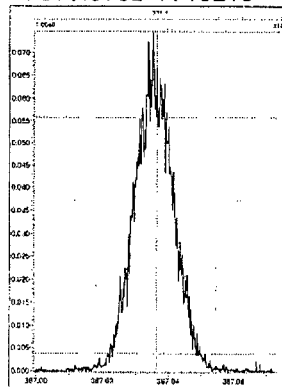
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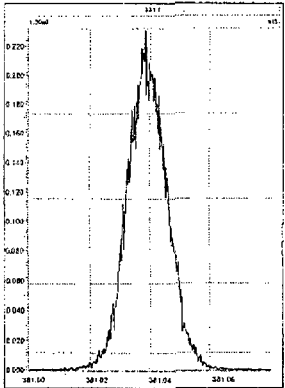
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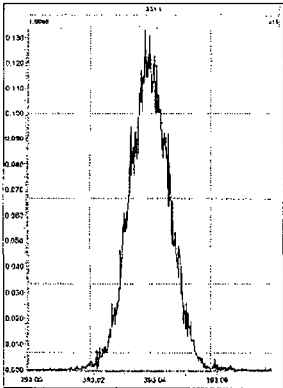
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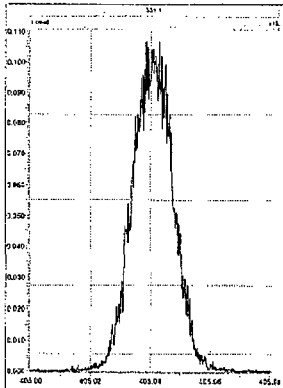
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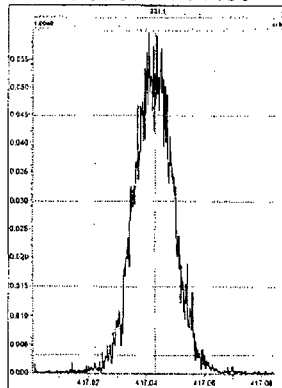
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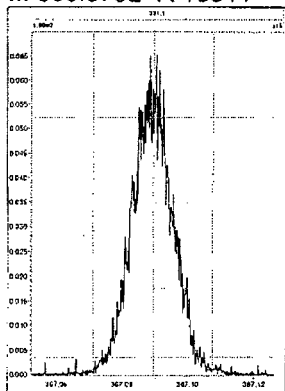


M 416.9760 R 14450

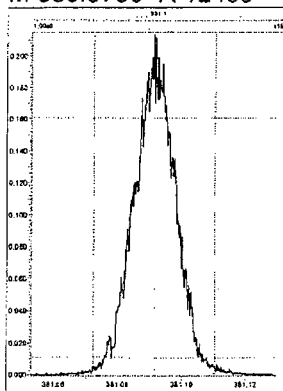


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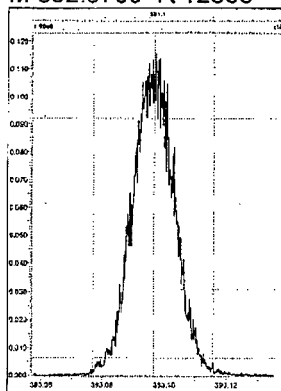
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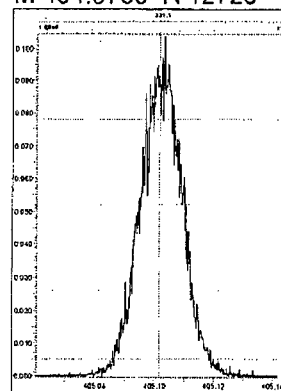
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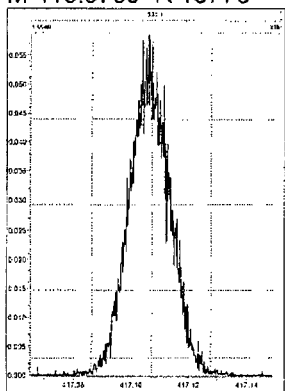
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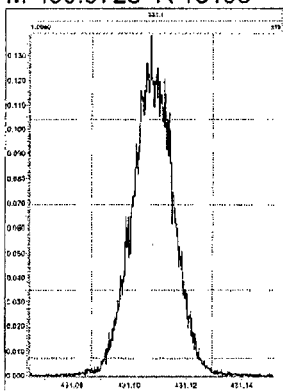
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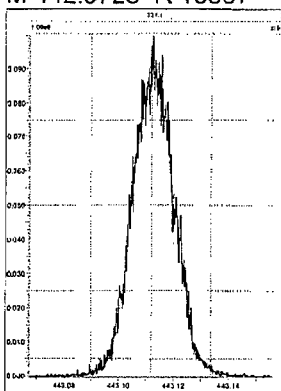
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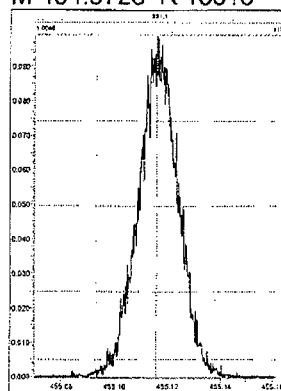
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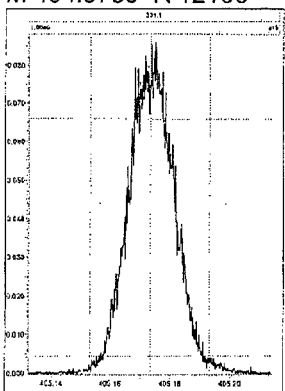
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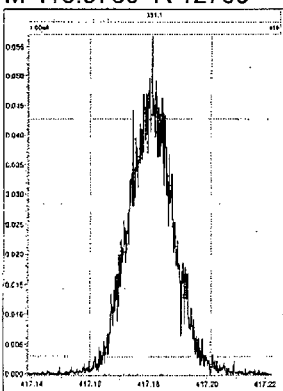
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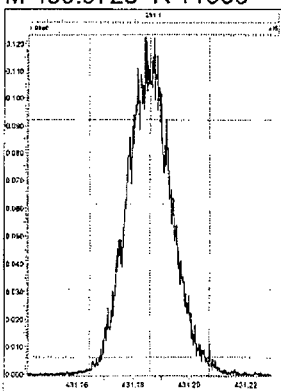
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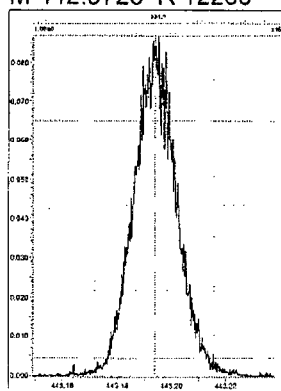
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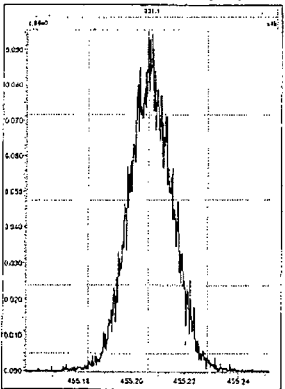
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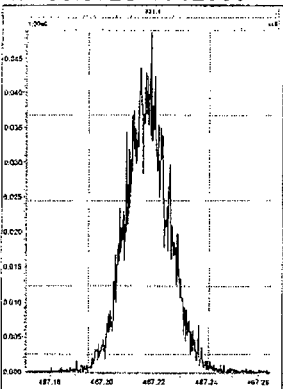
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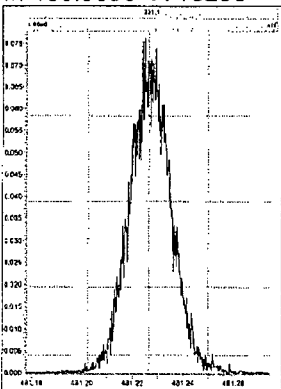
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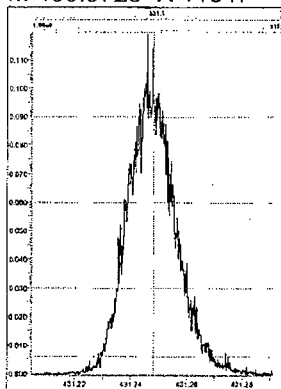
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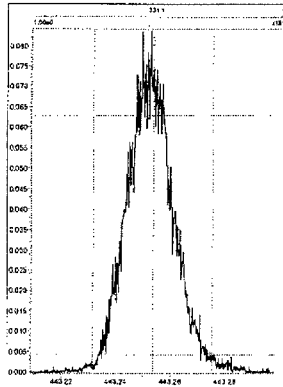


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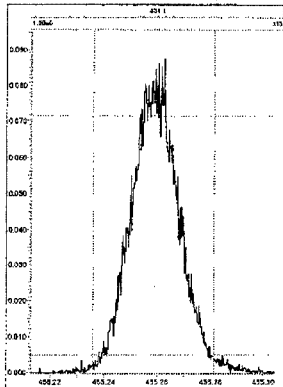


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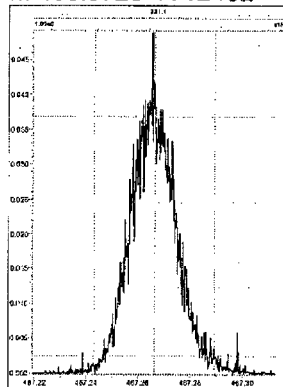
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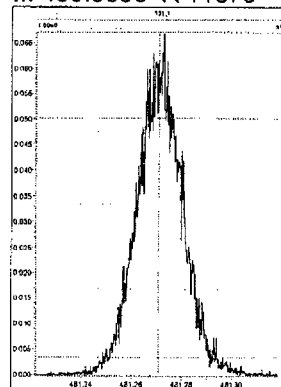
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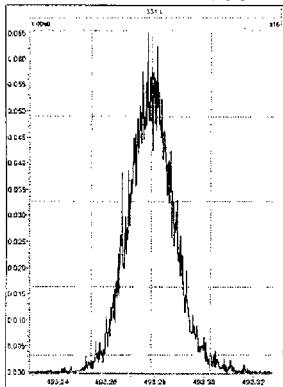
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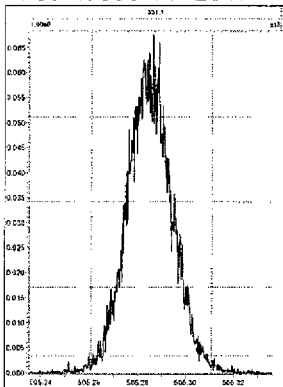
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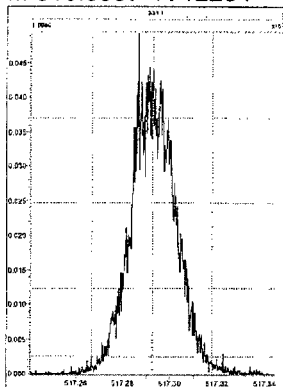
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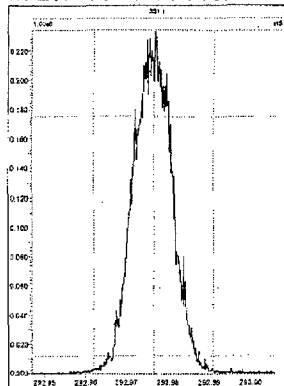
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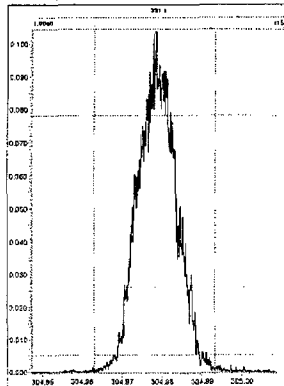
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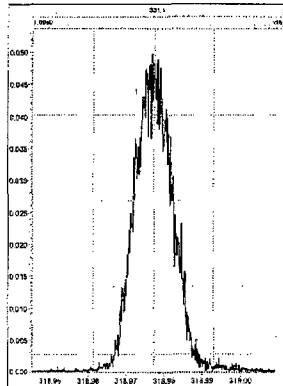
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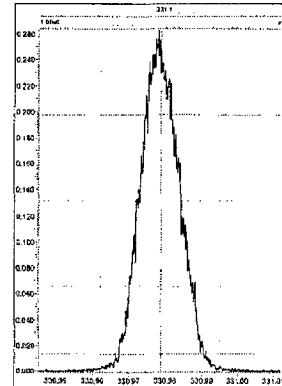
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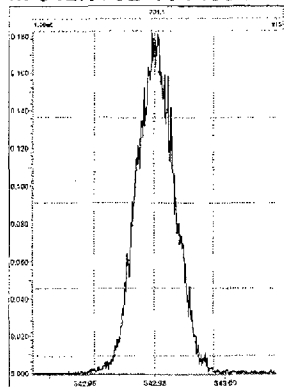
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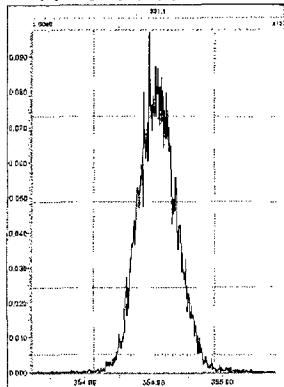
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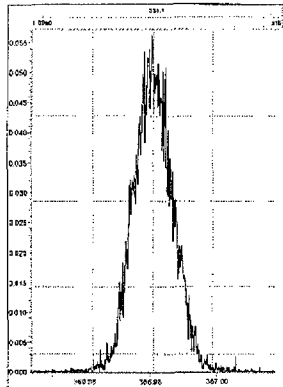
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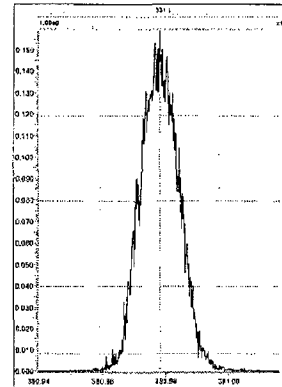
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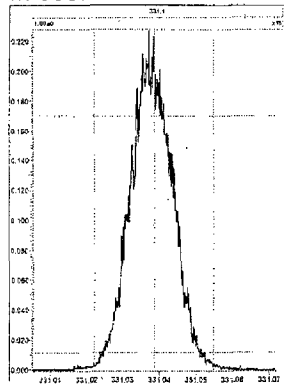
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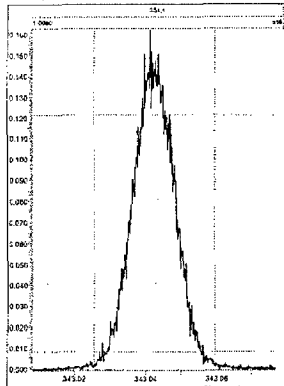
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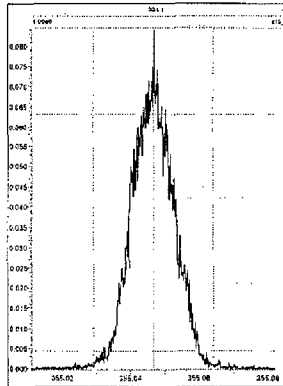
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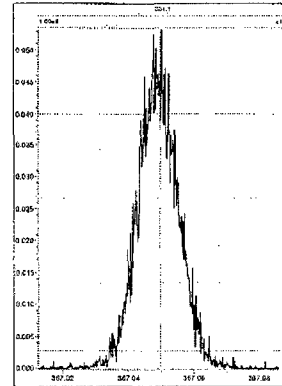
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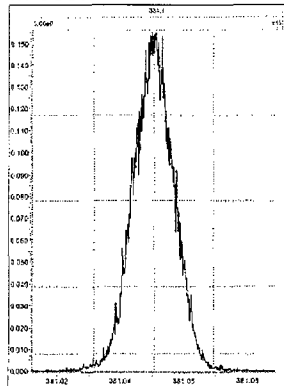
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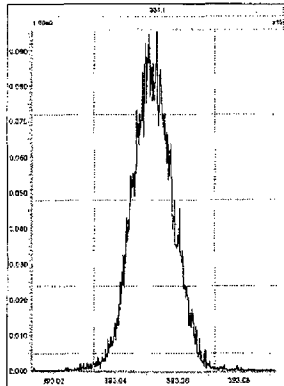
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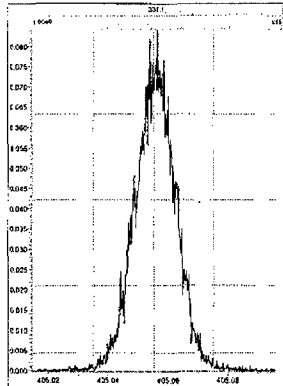
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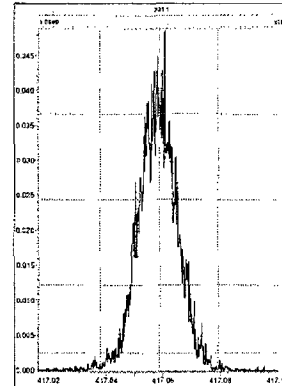
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M 404.9760 R 13743



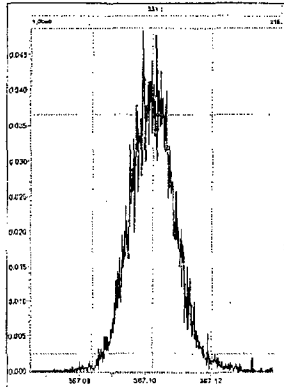
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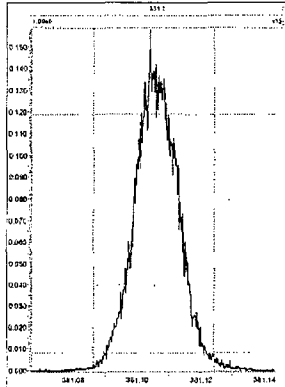
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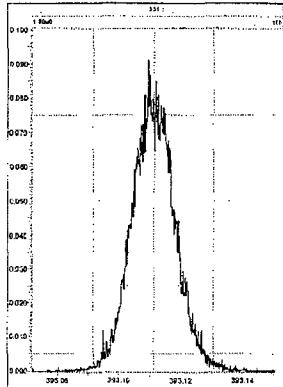
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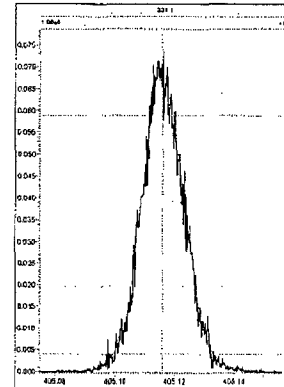
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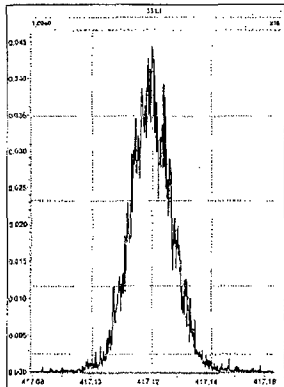
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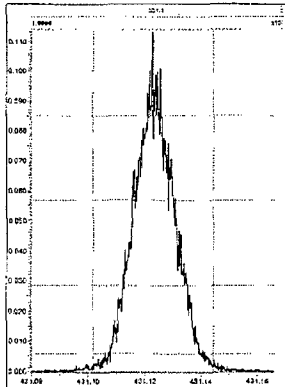
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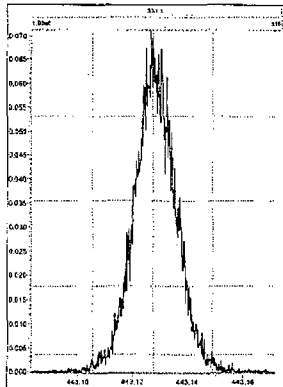
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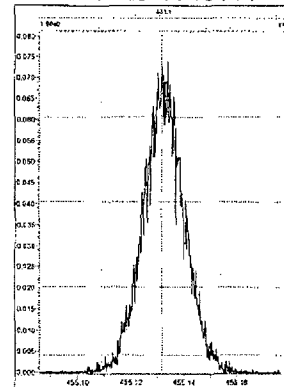
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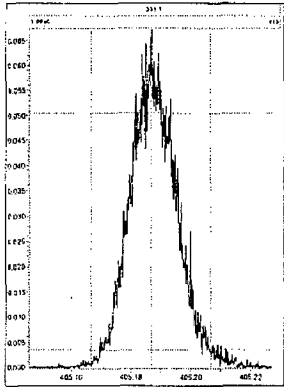
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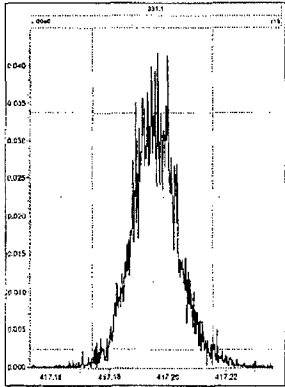
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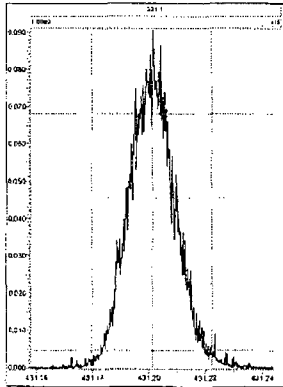
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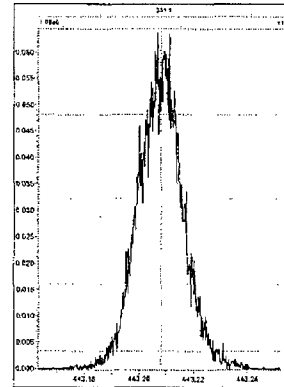
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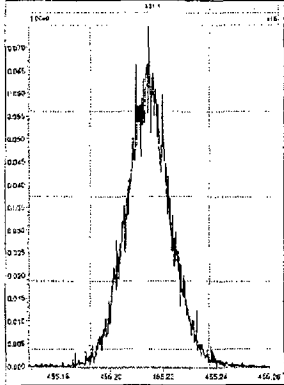
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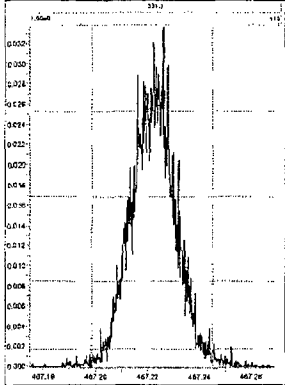
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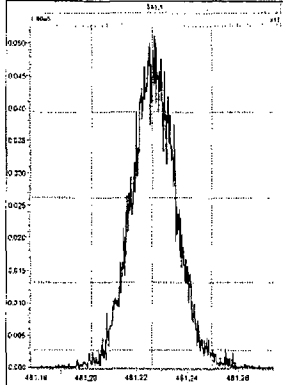
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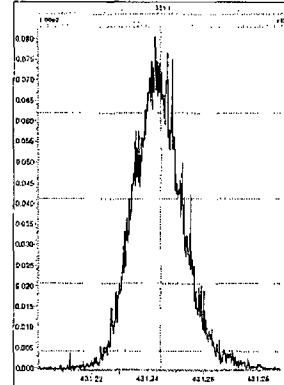
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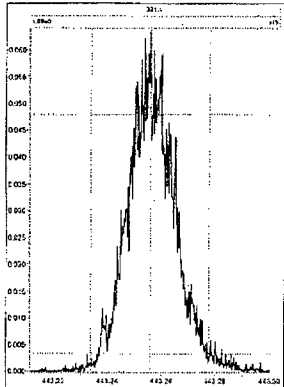


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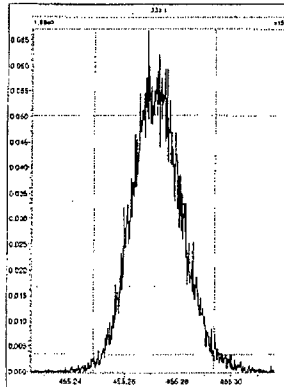


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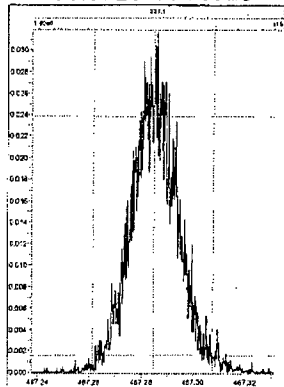
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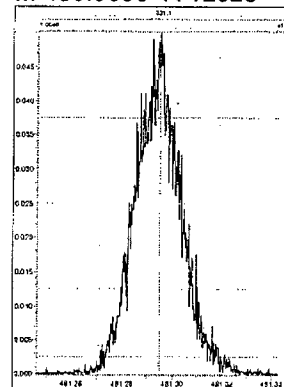
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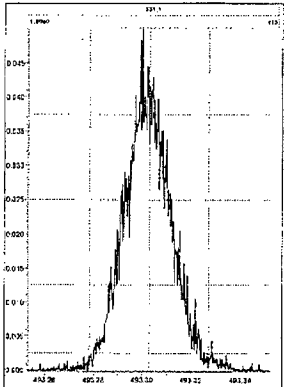
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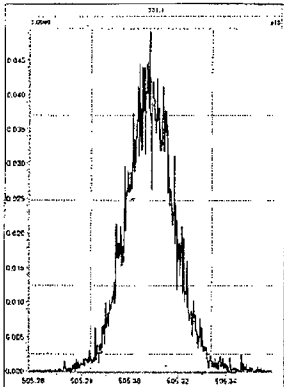
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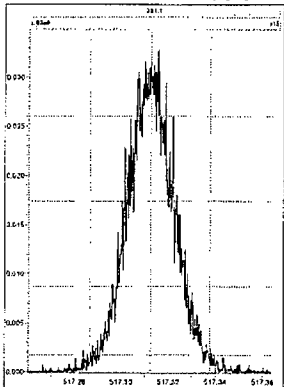
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M 504.9696 R 11614



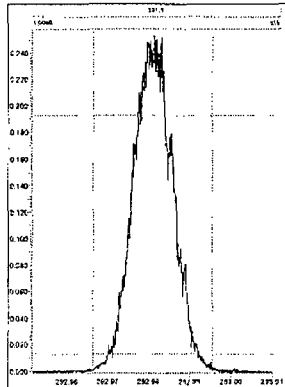
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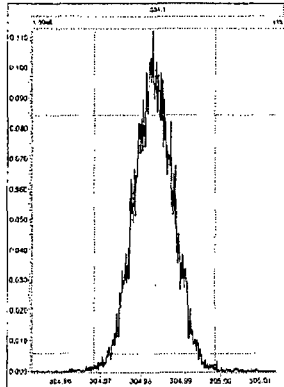
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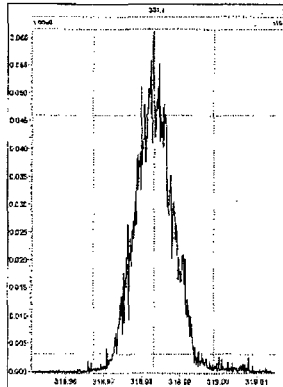
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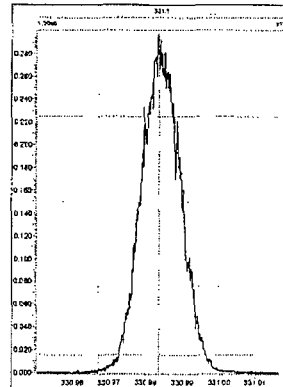
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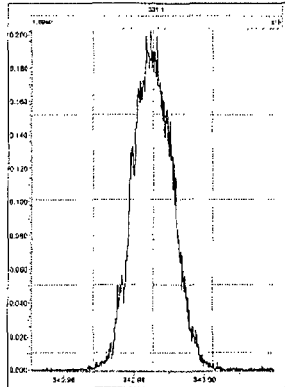
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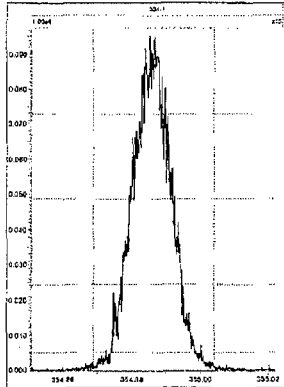
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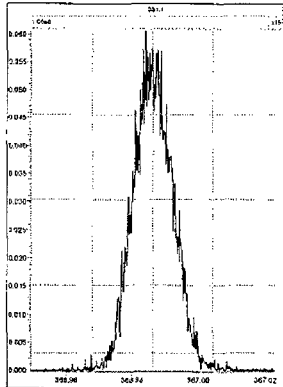
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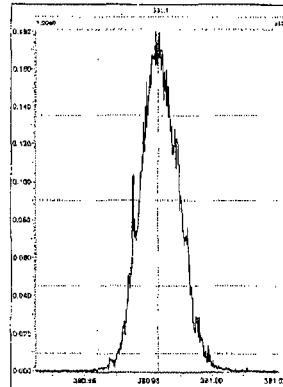
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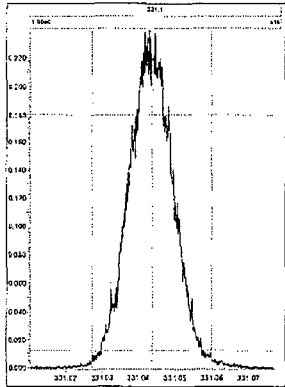
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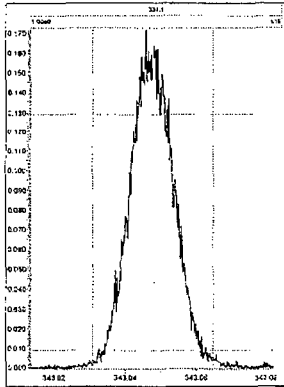
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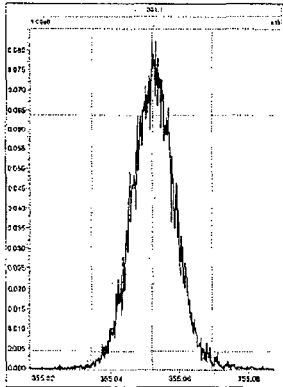
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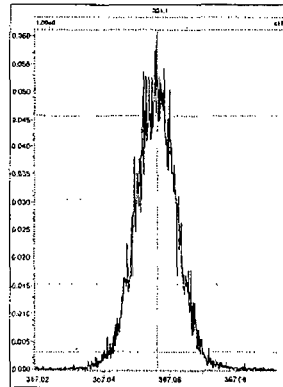
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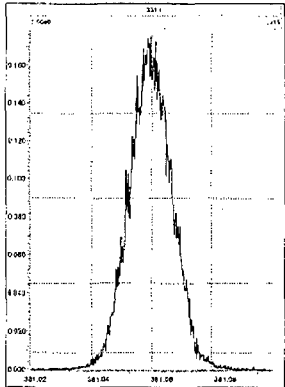
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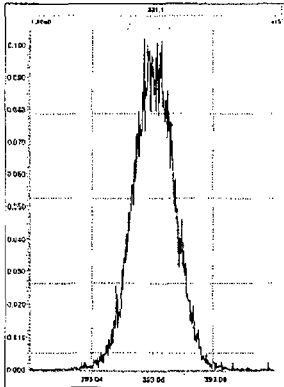
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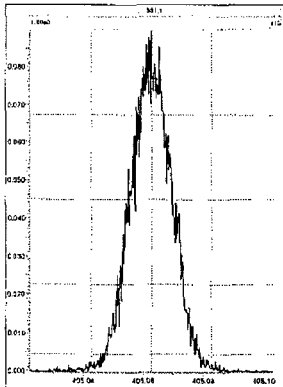
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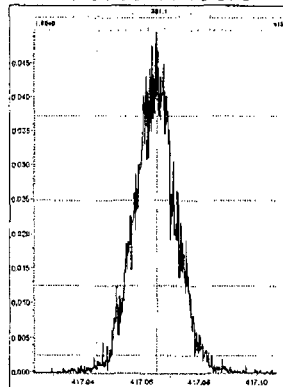
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M 404.9760 R 13927

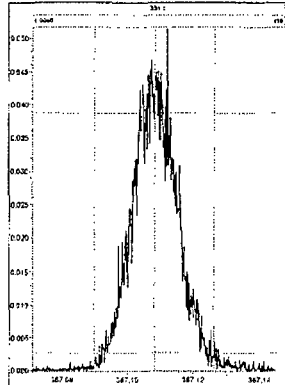


M 416.9760 R 13278

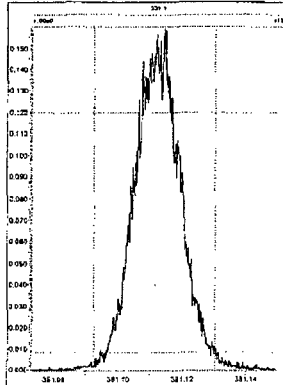


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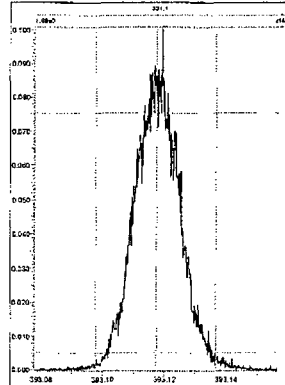
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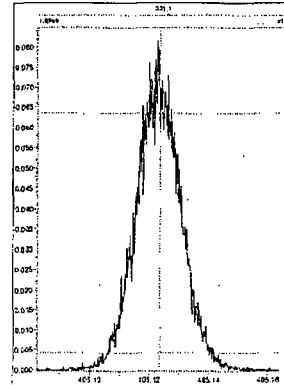
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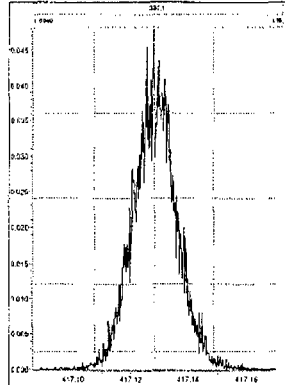
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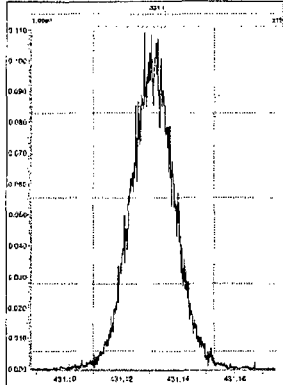
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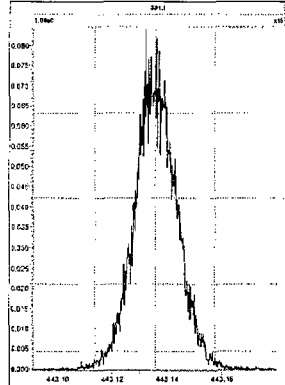
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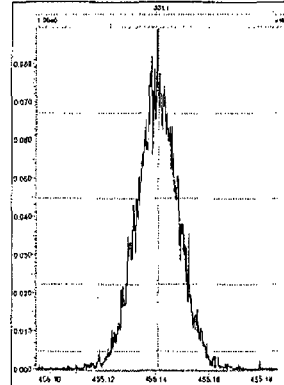
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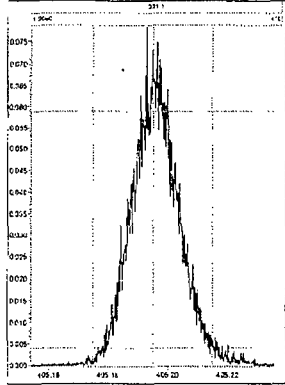
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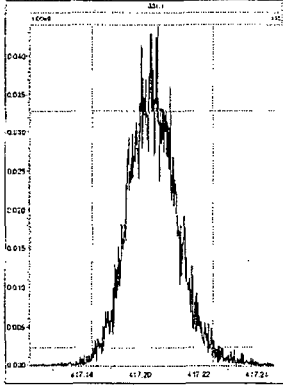
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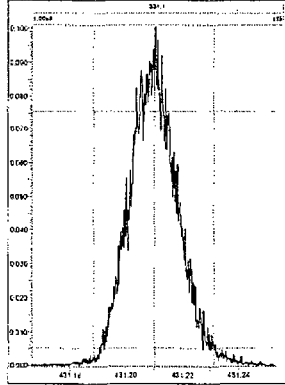
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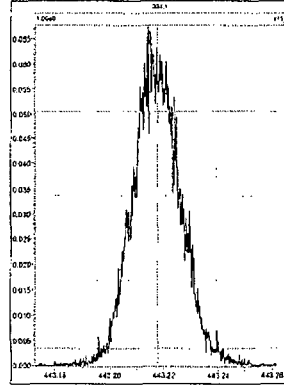
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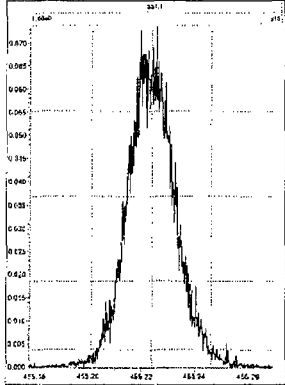
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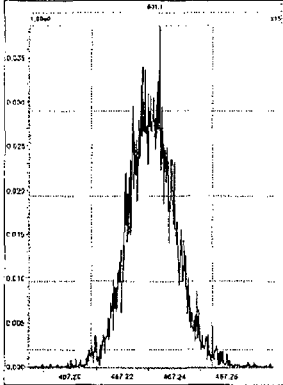
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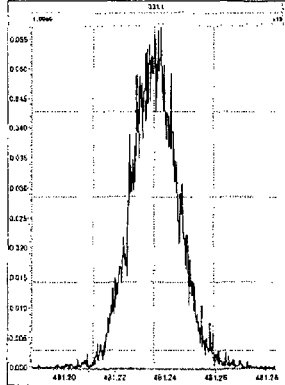
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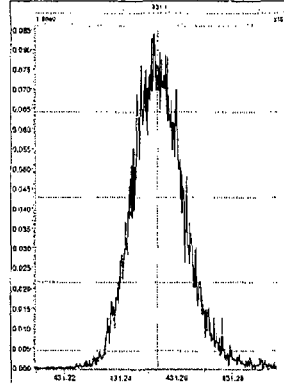
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M 480.9696 R 11990

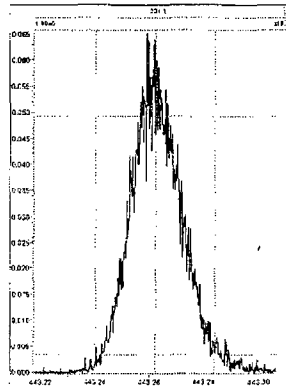


M 430.9728 R 10504

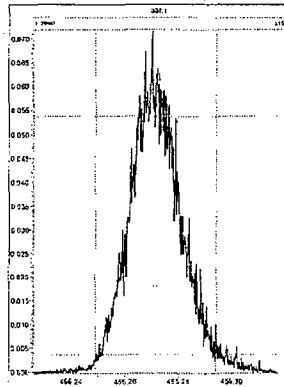


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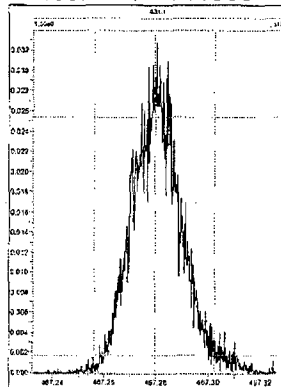
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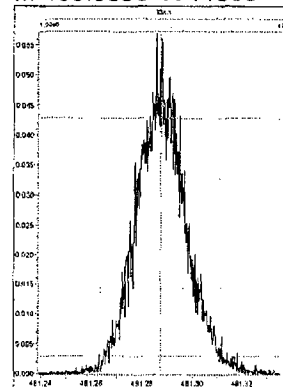
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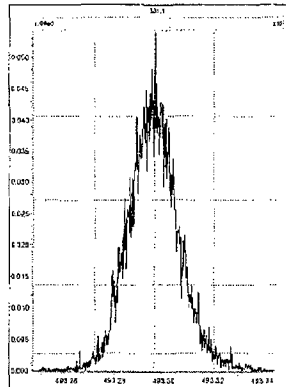
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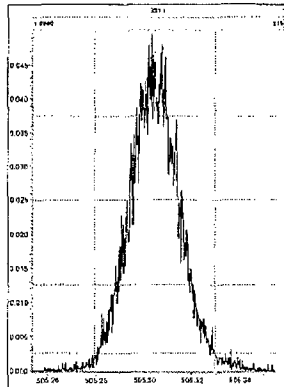
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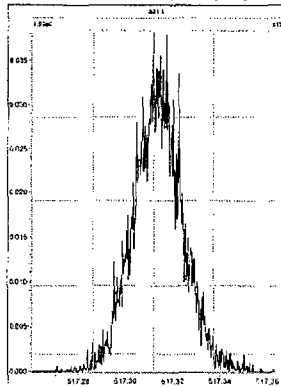
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M 504.9696 R 11000

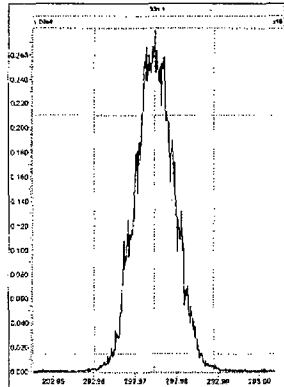


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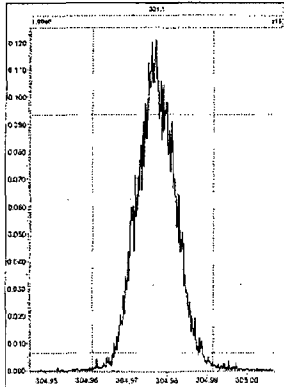


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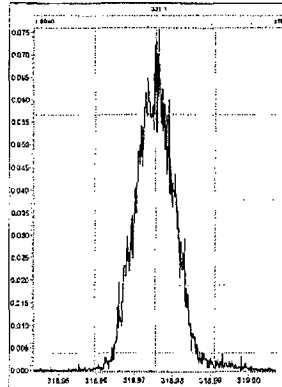
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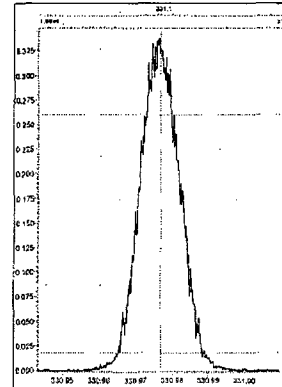
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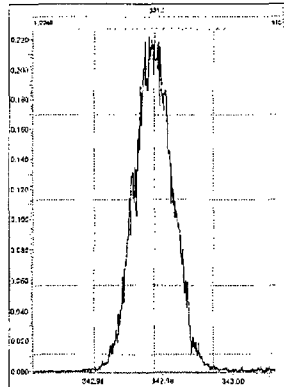
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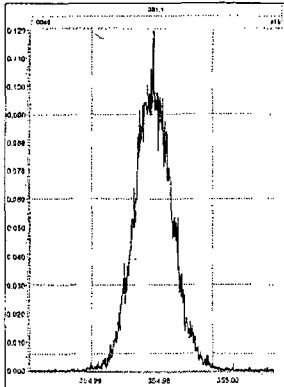
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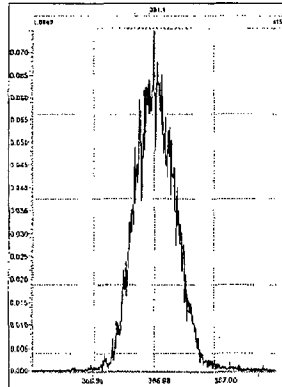
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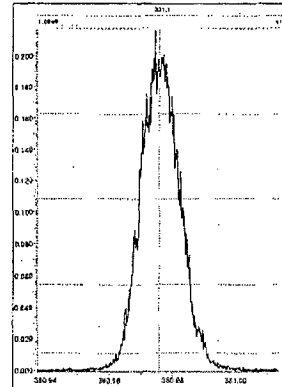
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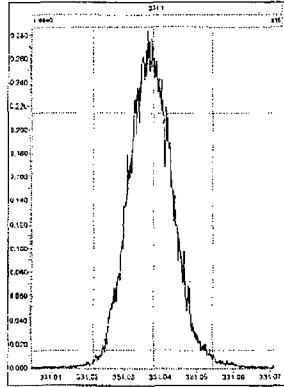
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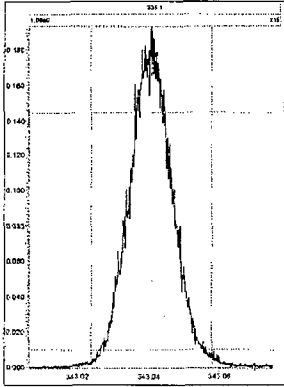
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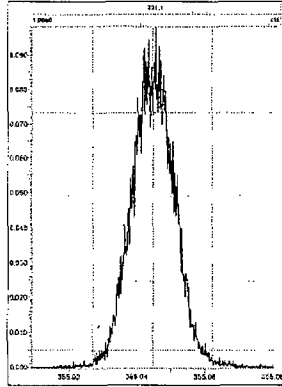
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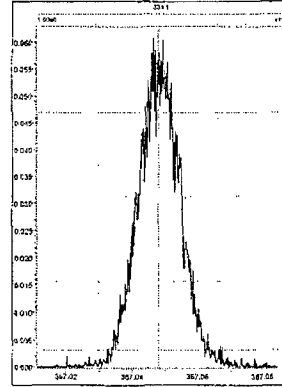
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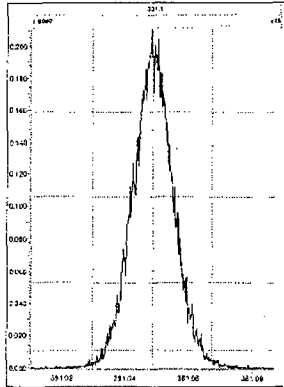
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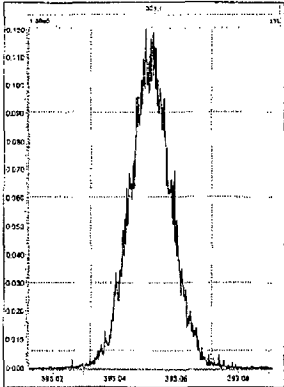
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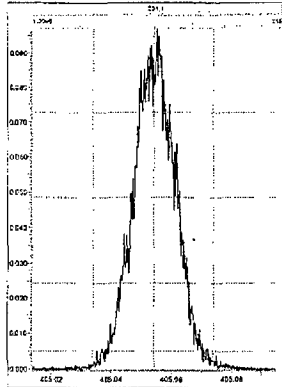
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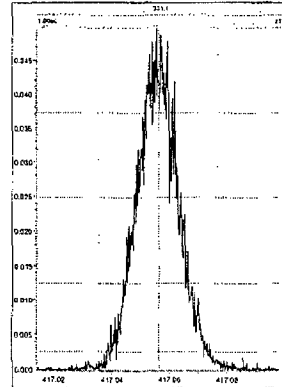
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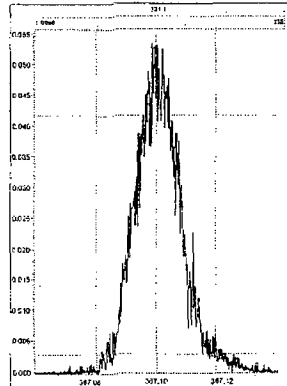


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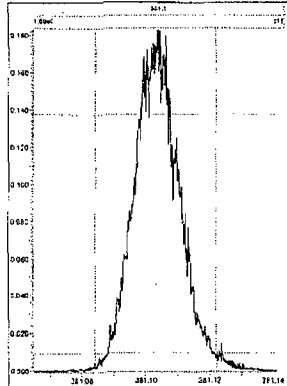


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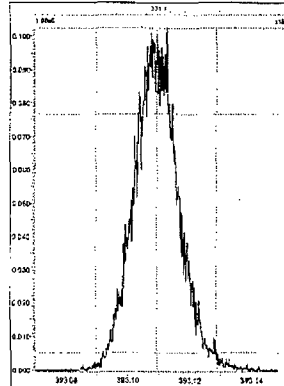
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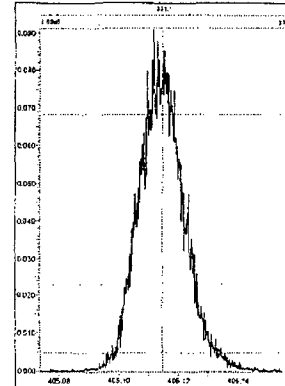
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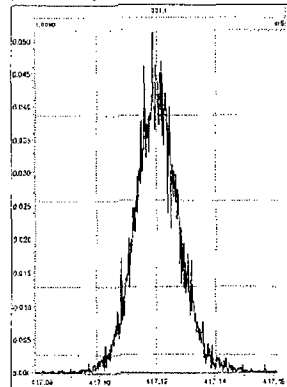
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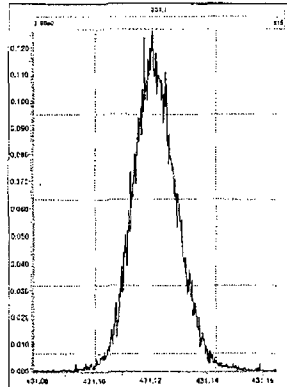
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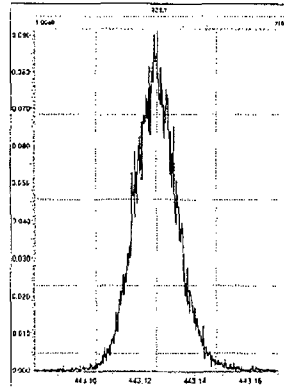
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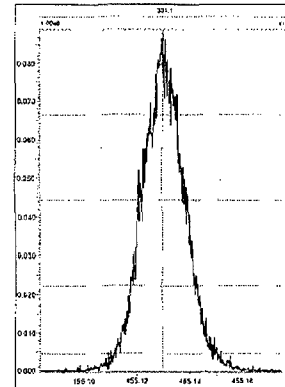
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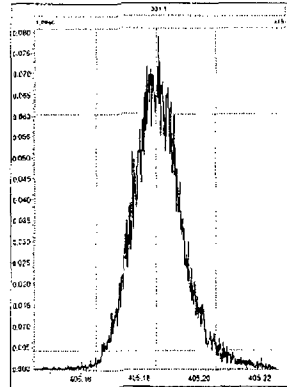
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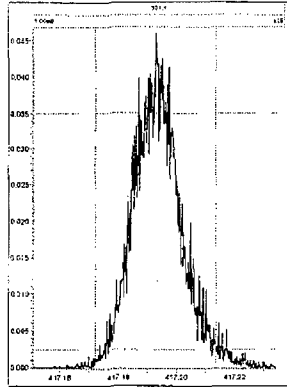
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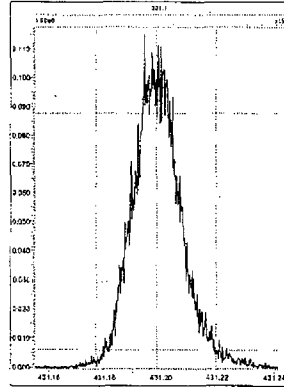
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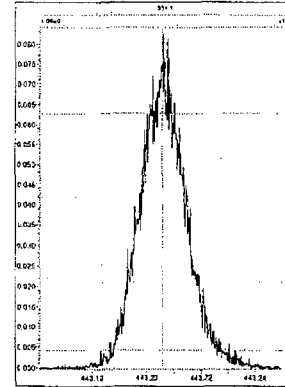
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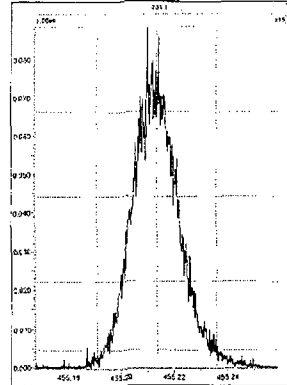
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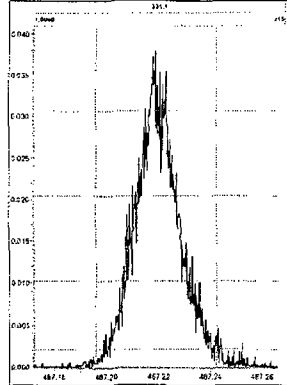
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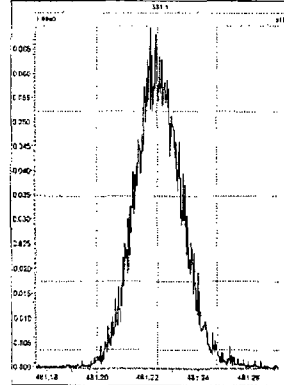
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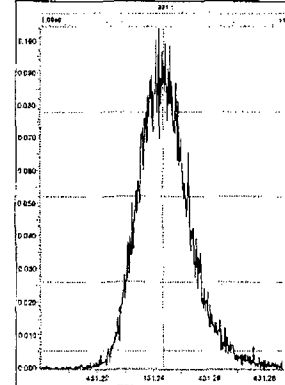
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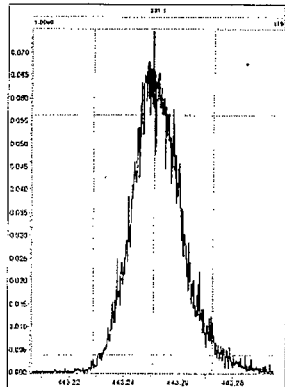


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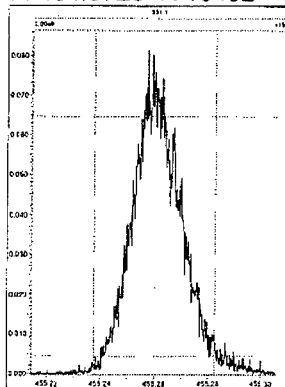


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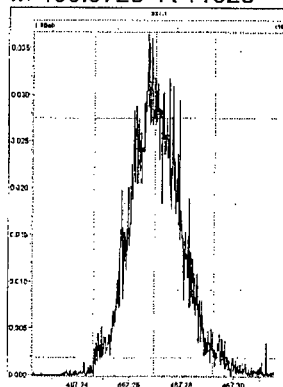
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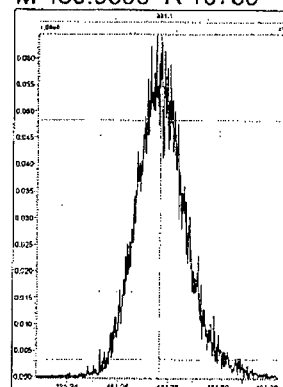
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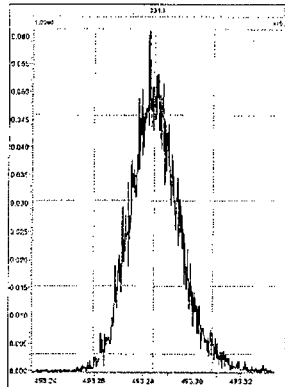
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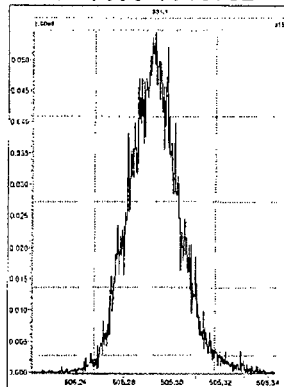
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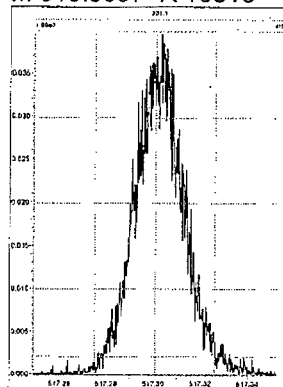
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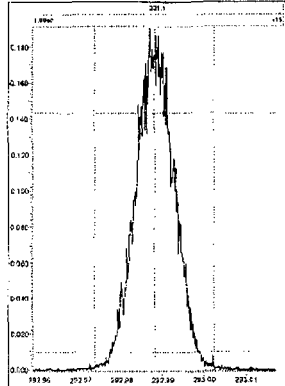
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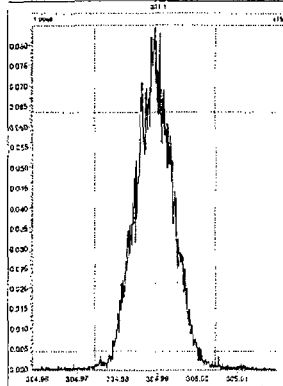
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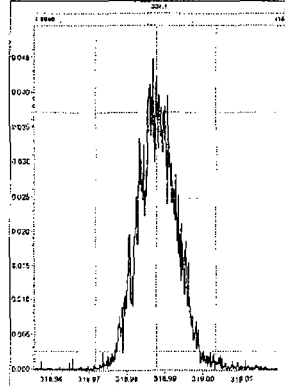
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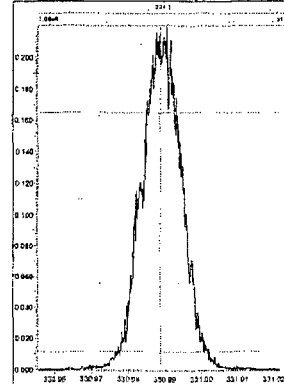
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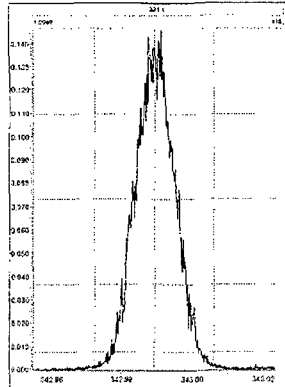
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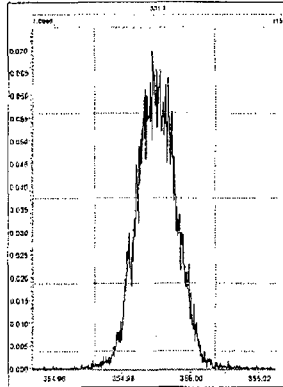
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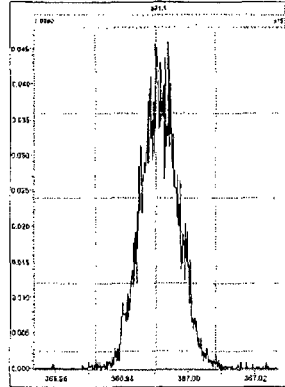
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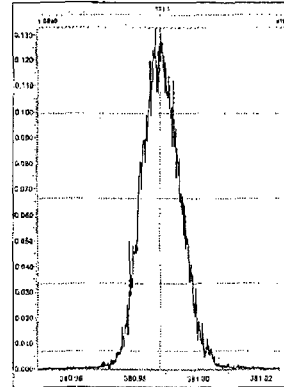
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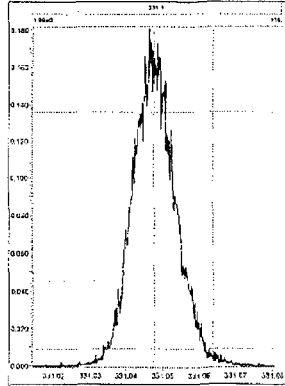
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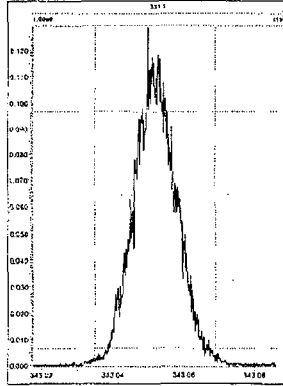
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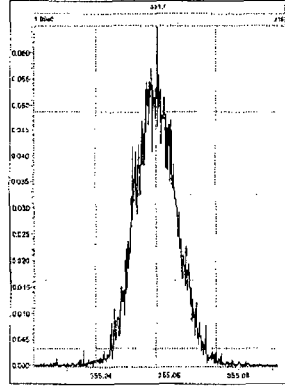
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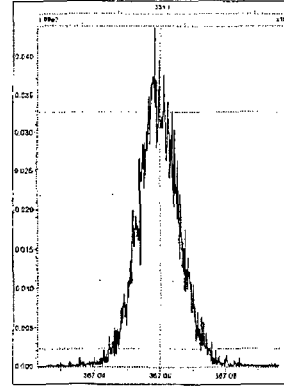
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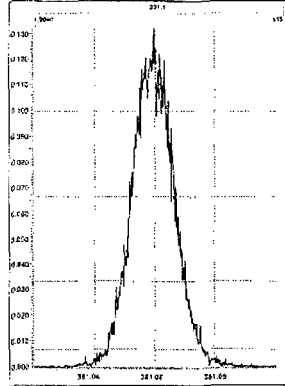
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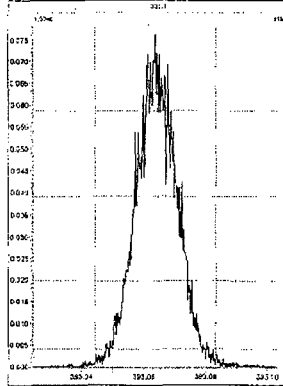
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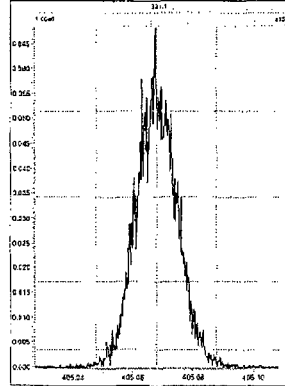
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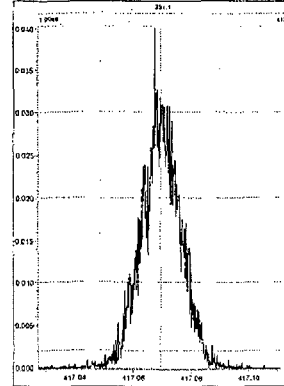
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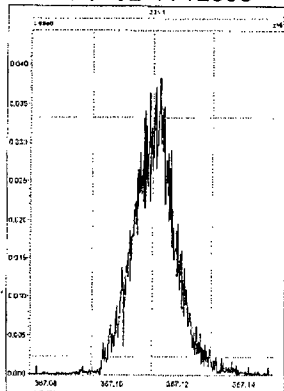
Resolution Check Report

MassLynx 4.1

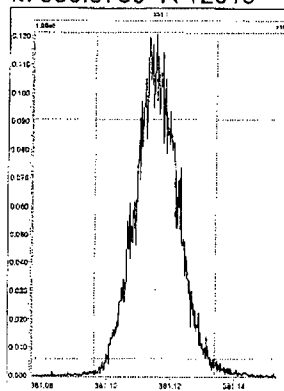
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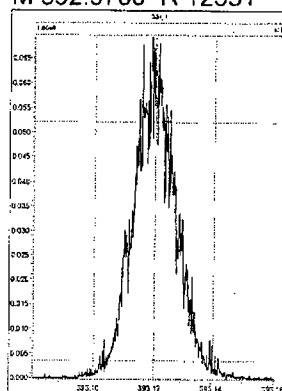
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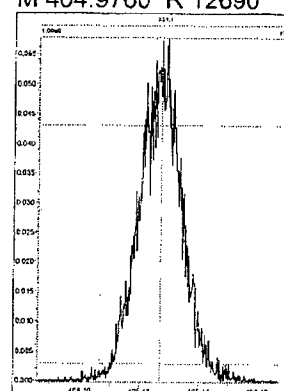
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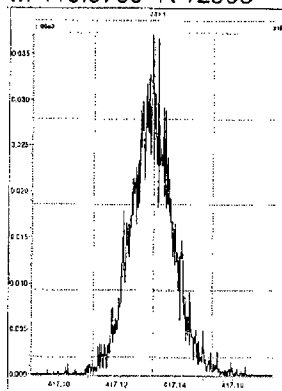
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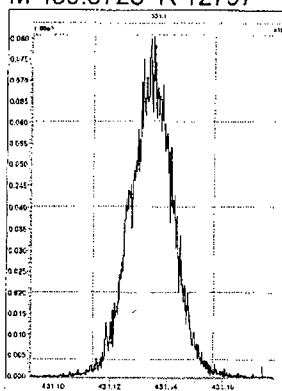
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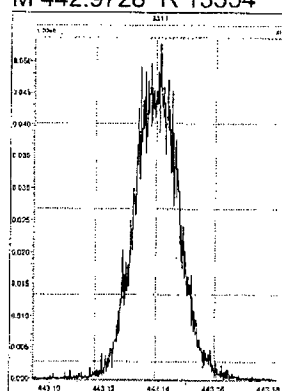
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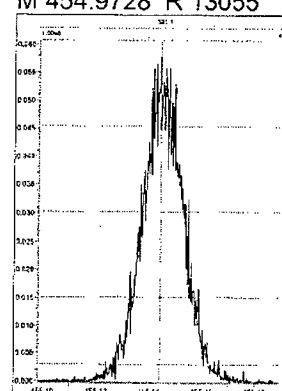
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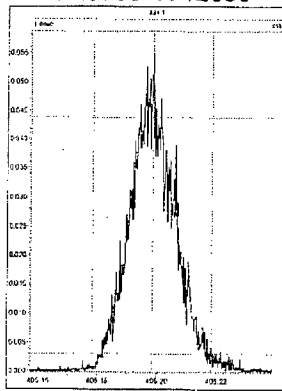
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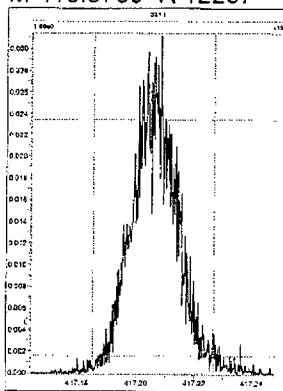
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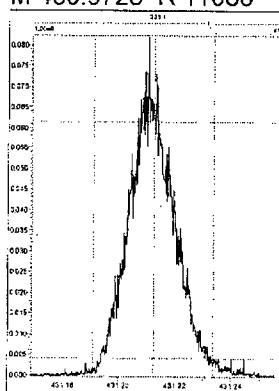
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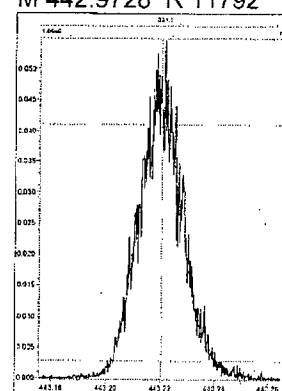
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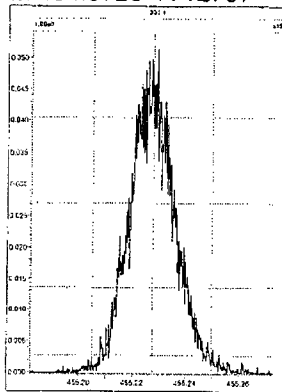
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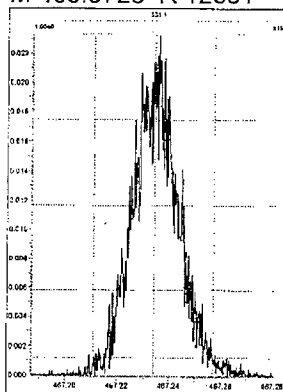
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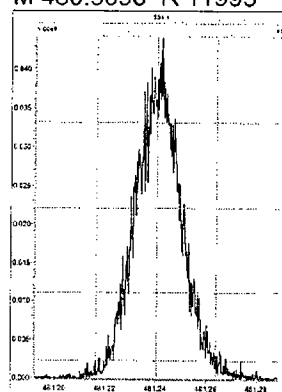
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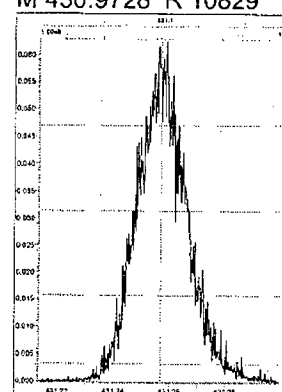
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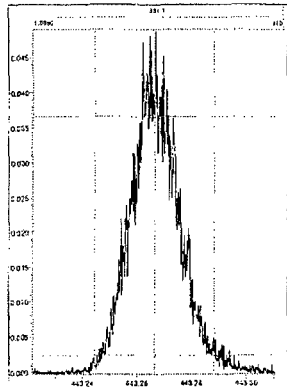


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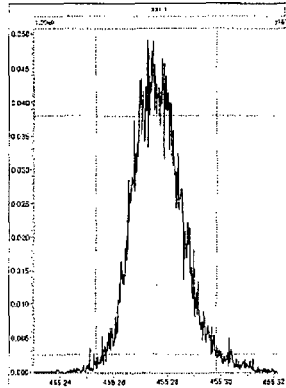


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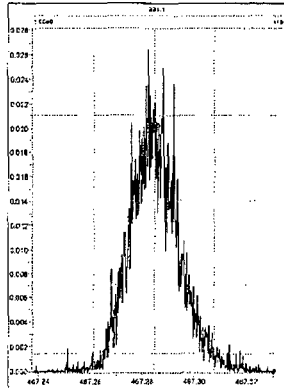
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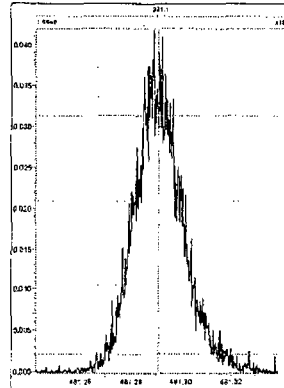
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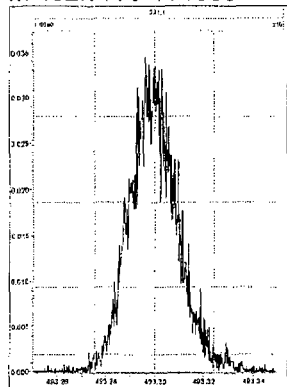
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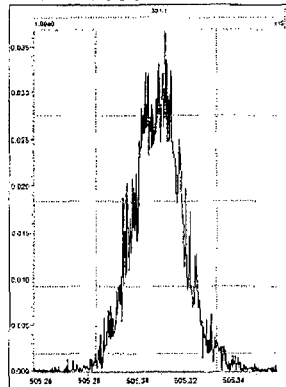
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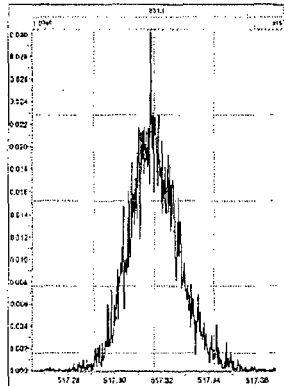
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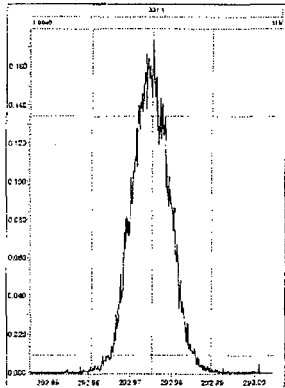


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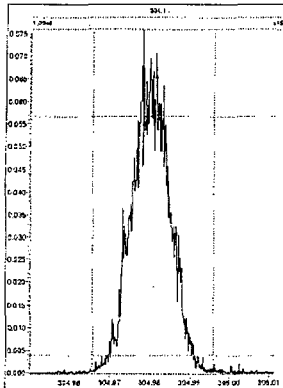


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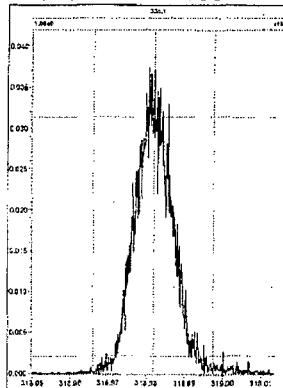
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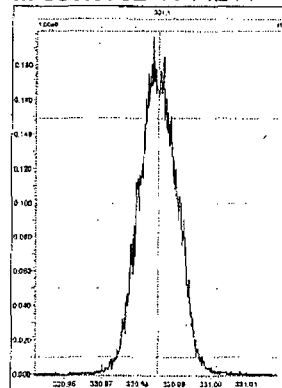
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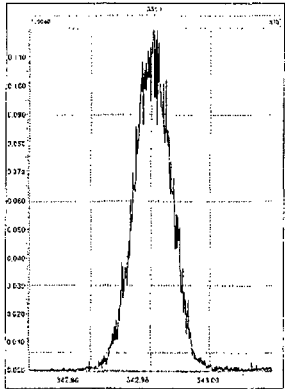
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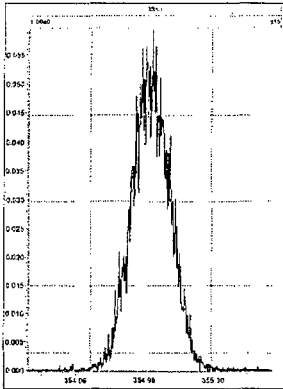
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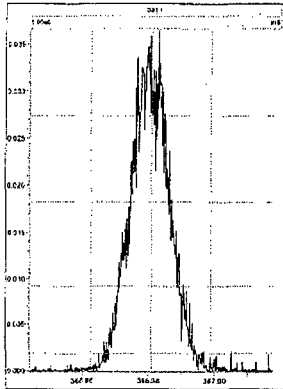
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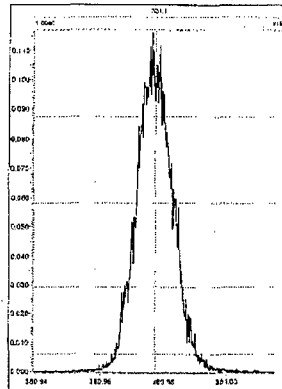
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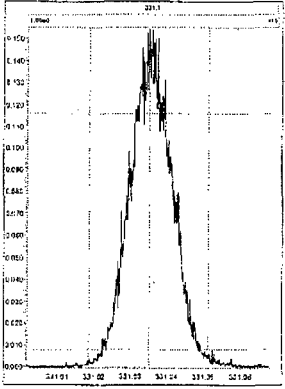
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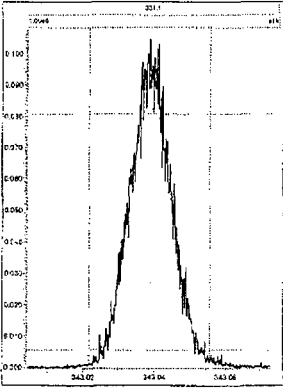
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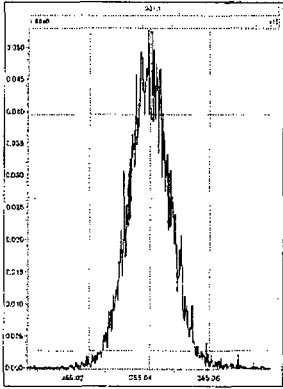
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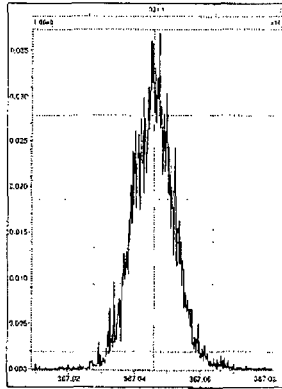
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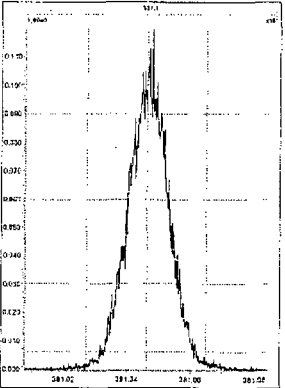
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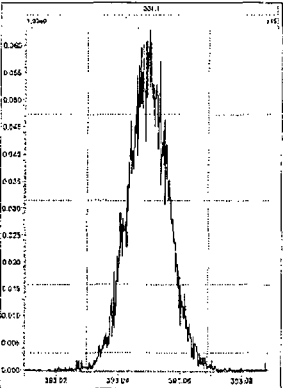
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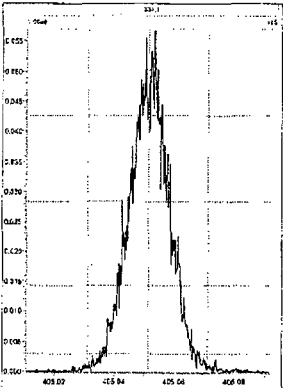
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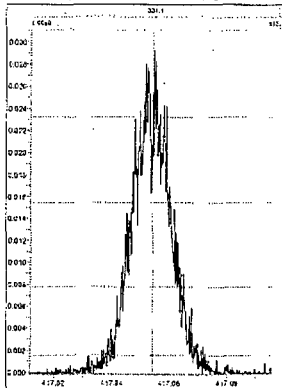
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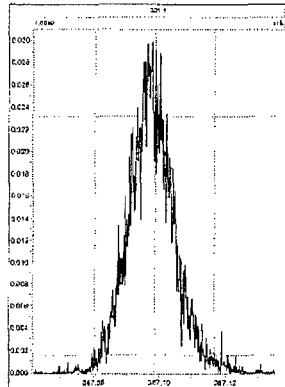
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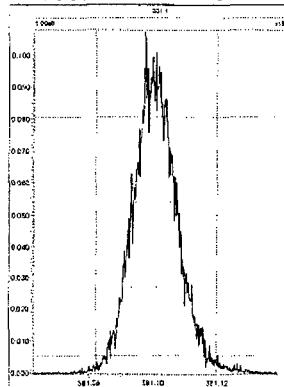
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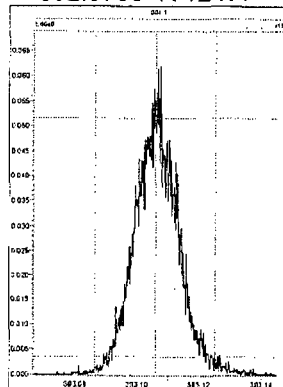
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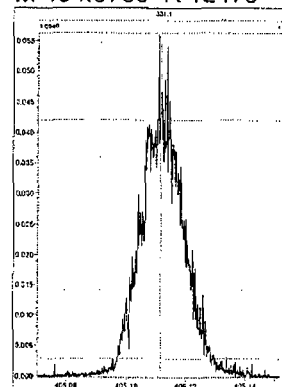
M 380.9760 R 12544



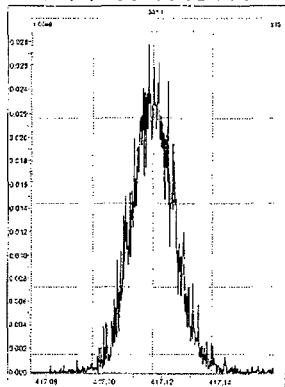
M 392.9760 R 12477



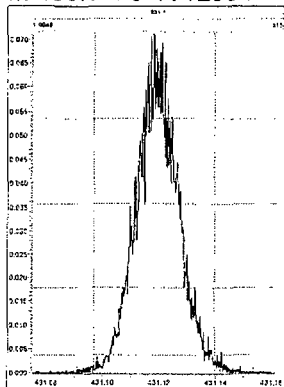
M 404.9760 R 12475



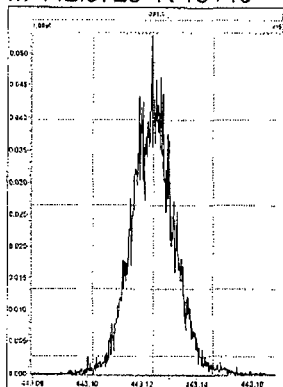
M 416.9760 R 13444



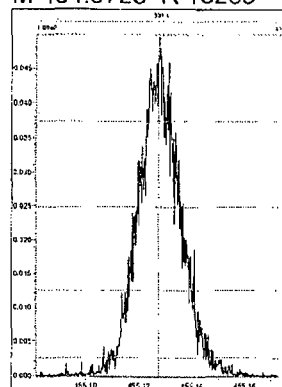
M 430.9728 R 12954



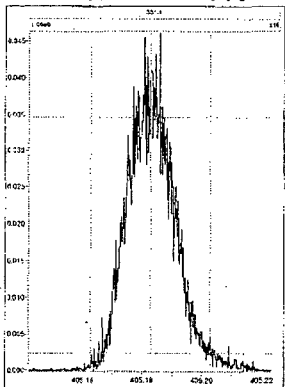
M 442.9728 R 13143



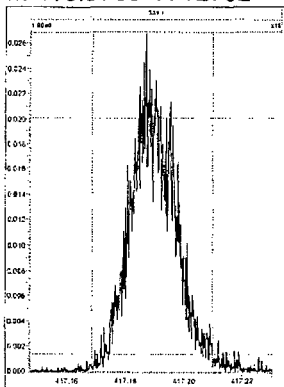
M 454.9728 R 13289



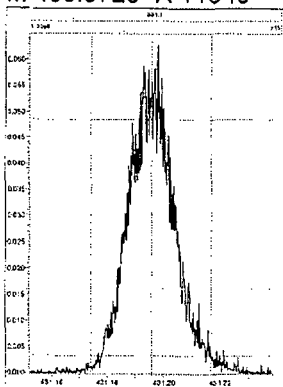
M 404.9760 R 11963



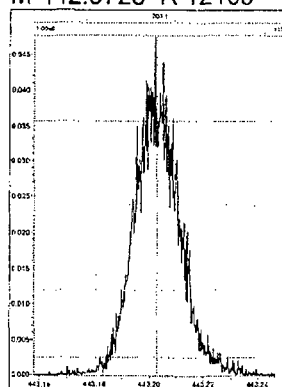
M 416.9760 R 12782



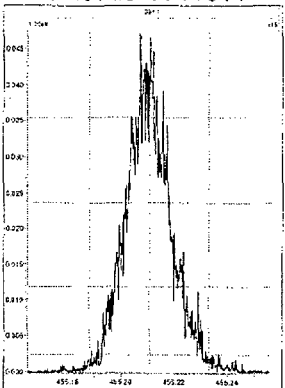
M 430.9728 R 11849



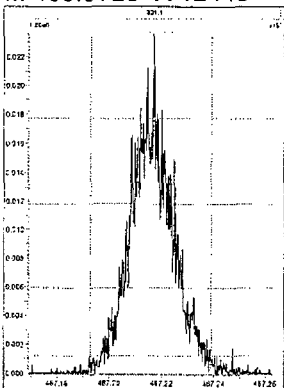
M 442.9728 R 12109



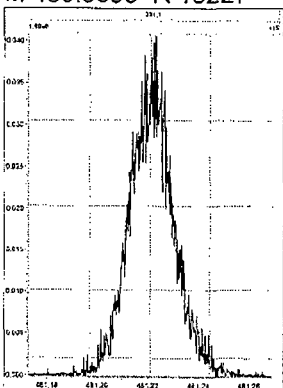
M 454.9728 R 11611



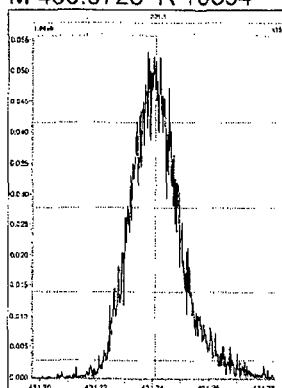
M 466.9728 R 12448



M 480.9696 R 13227

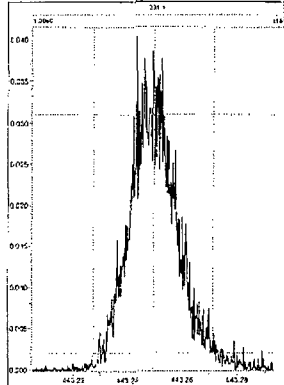


M 430.9728 R 10894

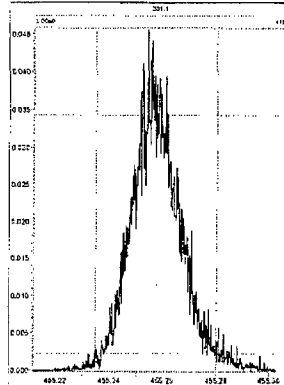


Printed: Saturday, November 06, 2010 18:16:24 Eastern Standard Time

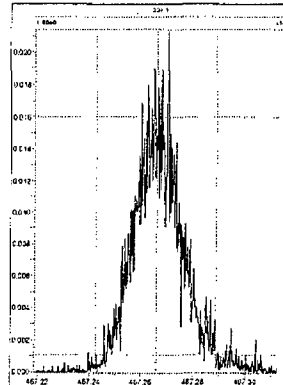
M 442.9728 R 11698



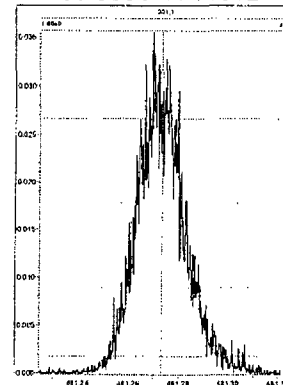
M 454.9728 R 10941



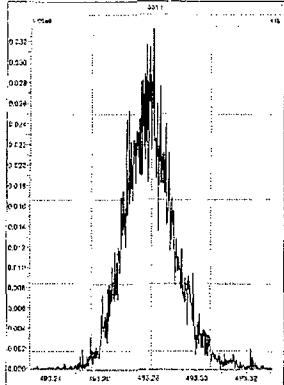
M 466.9728 R 12345



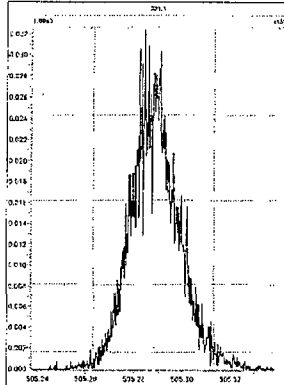
M 480.9696 R 11312



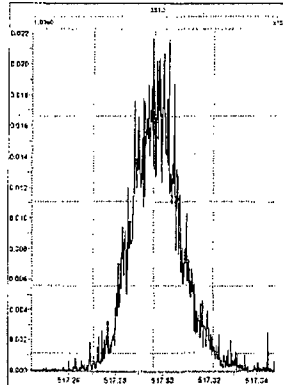
M 492.9696 R 10443

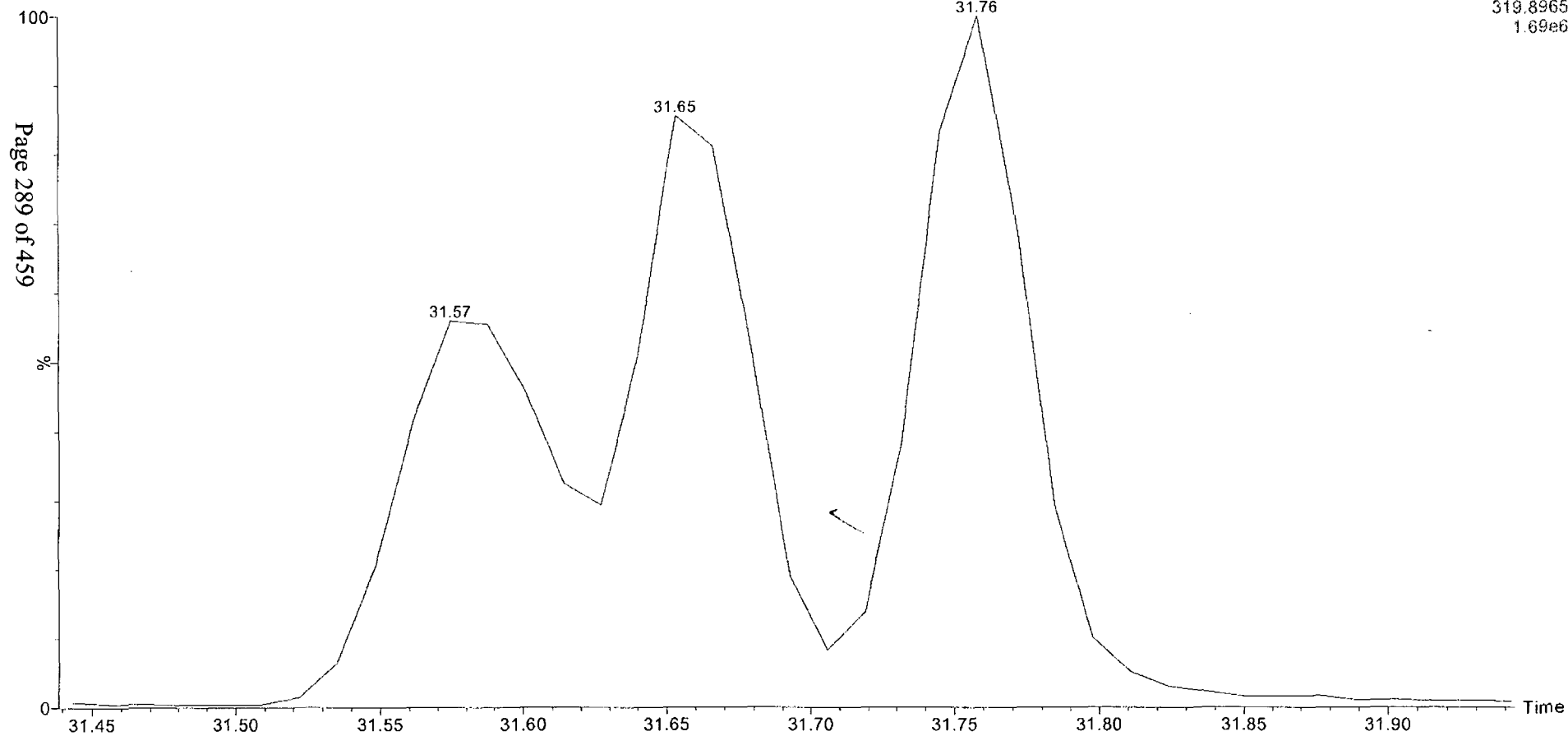


M 504.9696 R 11603



M 516.9697 R 11160





Quantify Sample Summary Report
Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a-1.qld

Last Altered: Wednesday, November 03, 2010 15:13:15 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:14:00 Eastern Standard Time

Page 2 of 4
Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a, Task: HRP763_1, User: MJC

	Name	RT
1	First TCDF	27.05
2	Last TCDF	32.32
3	First PeCDF	32.30
4	Last PeCDF	35.00
5	First HxCDF	35.51
6	Last HxCDF	37.91
7	First HpCDF	39.45
8	Last HpCDF	41.45
9	OCDF	45.51
10	First TCDD	28.79
11	2378-TCDD	31.76
12	Last TCDD	32.24
13	First PeCDD	33.17
14	Last PeCDD	34.82
15	First HxCDD	35.94
16	Last HxCDD	37.57
17	First HpCDD	39.78
18	Last HpCDD	40.75
19	OCDD	45.18

Quantify Sample Report
Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a-1.qld

Last Altered: Wednesday, November 03, 2010 15:13:15 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:14:00 Eastern Standard Time

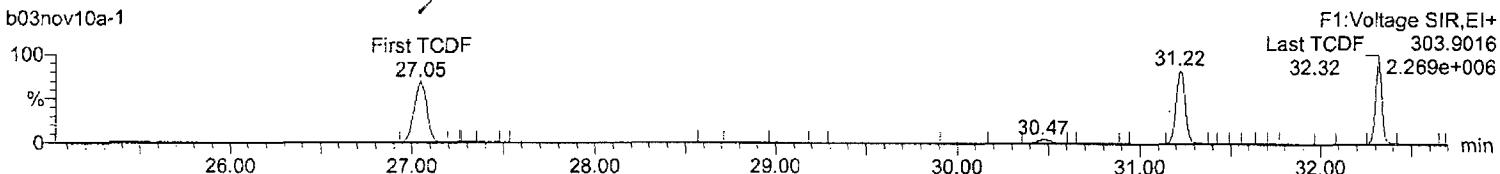
Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

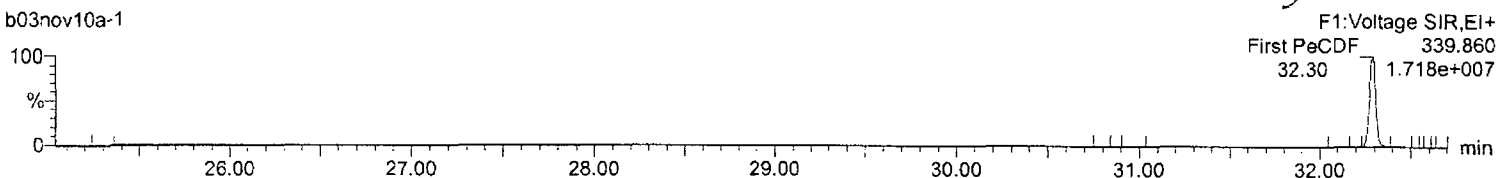
First TCDF

b03nov10a-1



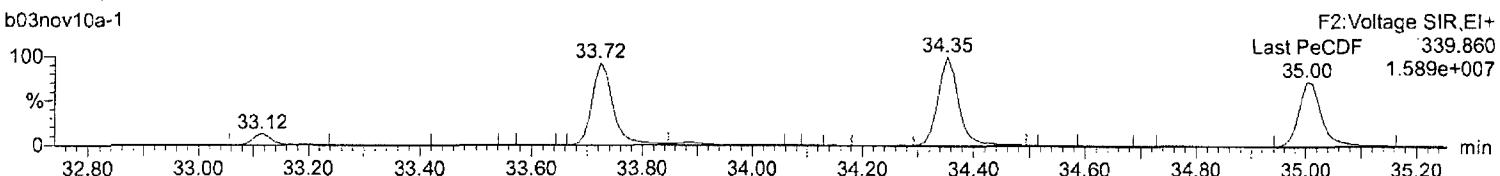
First PeCDF

b03nov10a-1



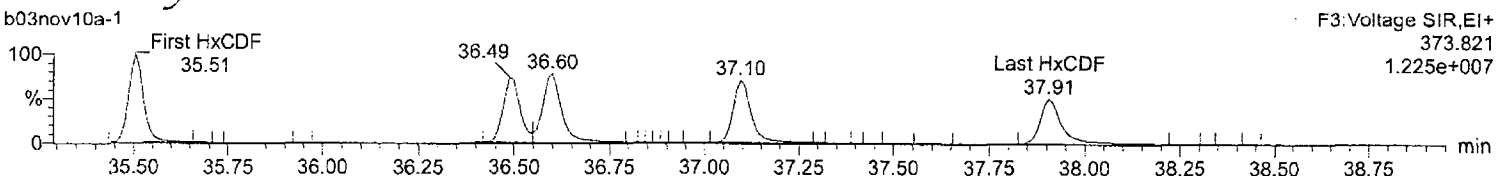
Last PeCDF

b03nov10a-1



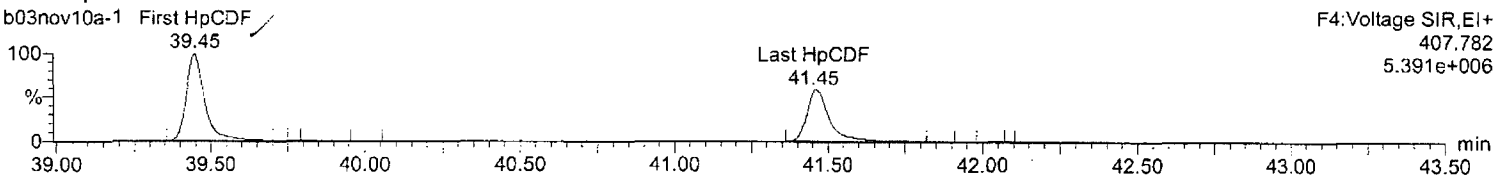
First HxCDF

b03nov10a-1



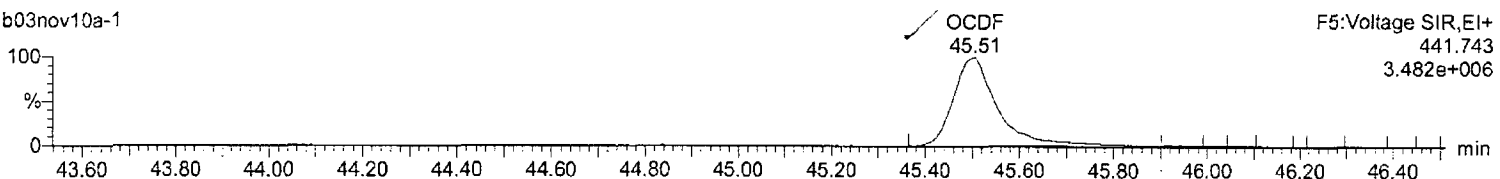
First HpCDF

b03nov10a-1



OCDF

b03nov10a-1



Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a-1.qld

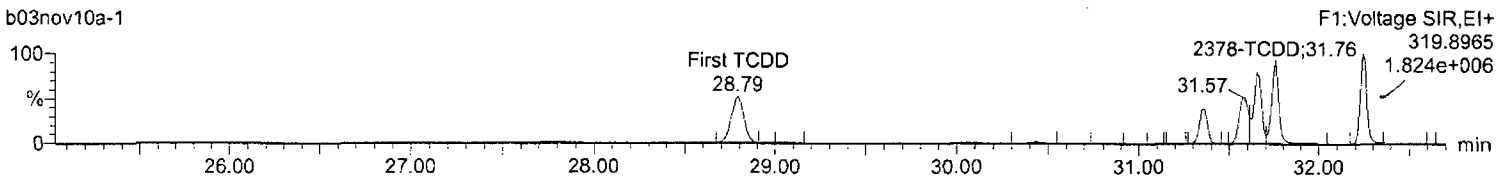
Last Altered: Wednesday, November 03, 2010 15:13:15 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:14:00 Eastern Standard Time

Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

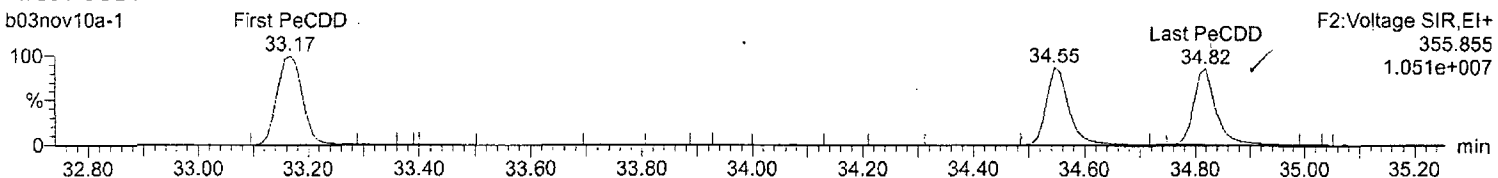
First TCDD

b03nov10a-1



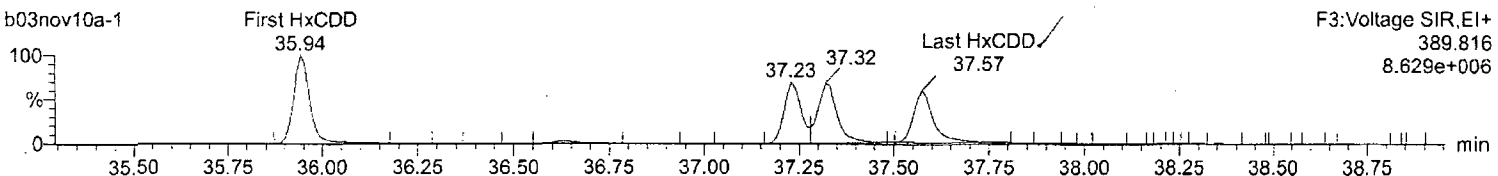
First PeCDD

b03nov10a-1



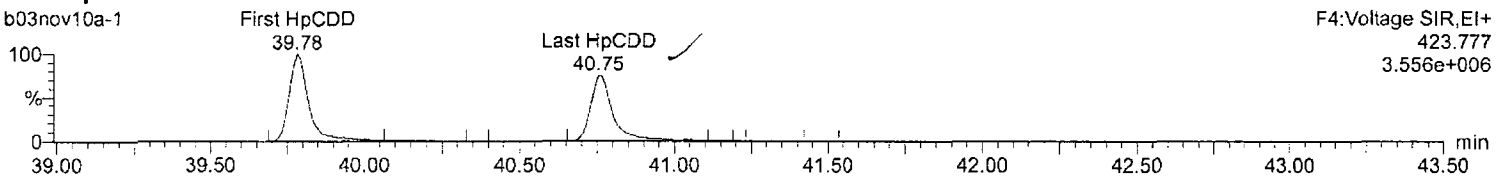
First HxCDD

b03nov10a-1



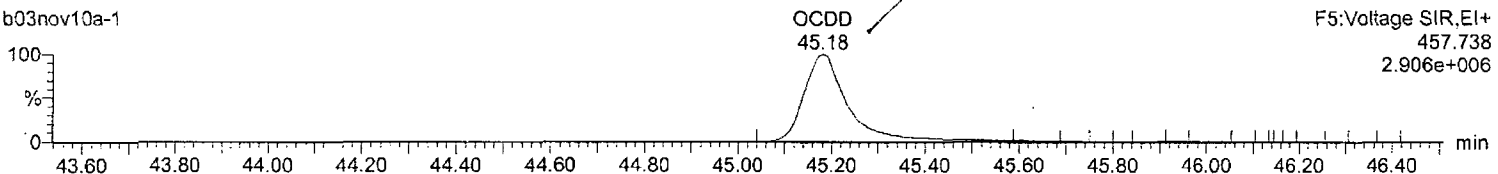
First HpCDD

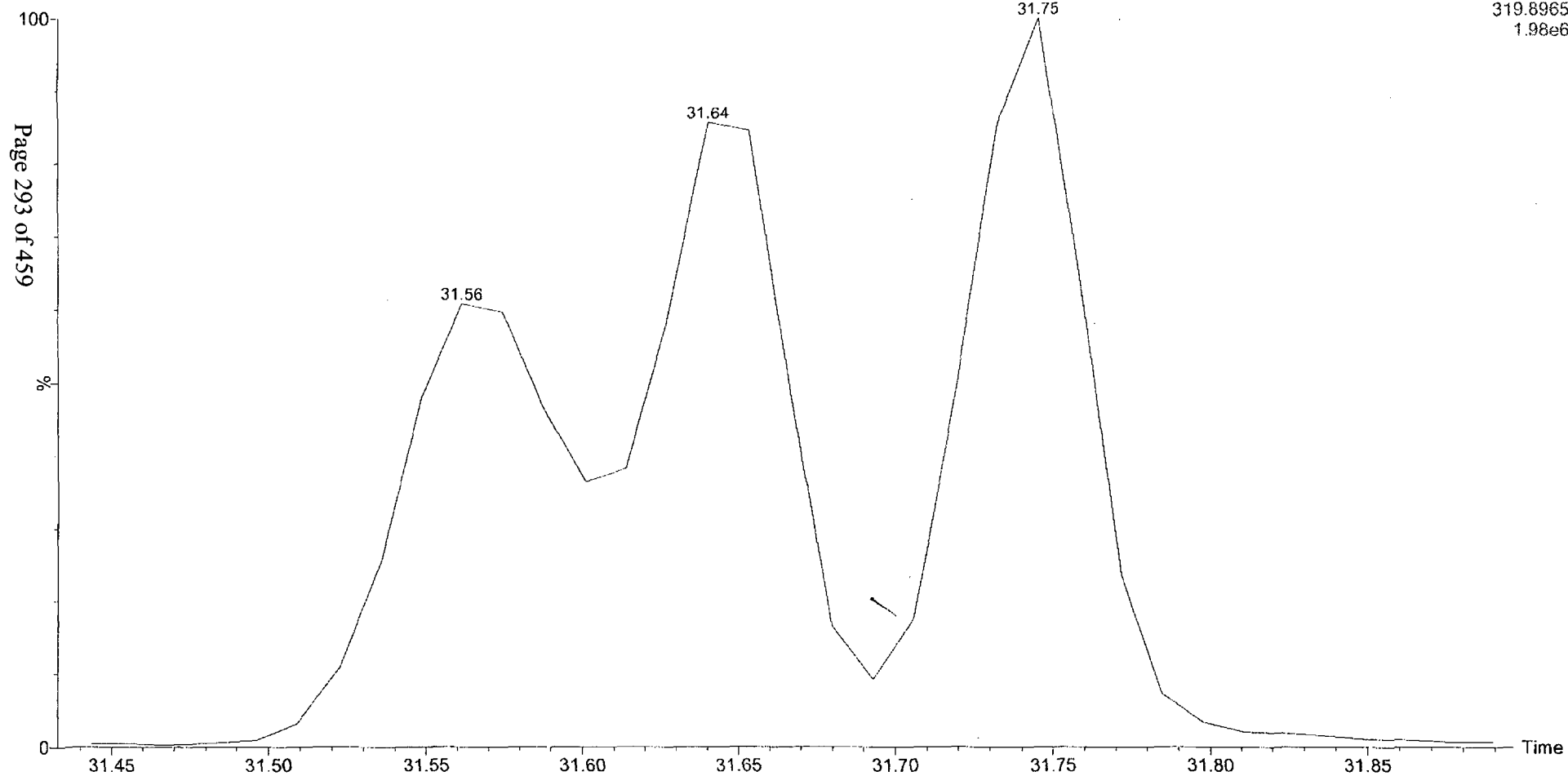
b03nov10a-1



OCDD

b03nov10a-1





Quantify Sample Summary Report
Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a-9.qld

Last Altered: Wednesday, November 03, 2010 15:53:31 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:54:06 Eastern Standard Time

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of 4

Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b01nov10b.cdb 02 Nov 2010 10:40:09

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a, Task: HRP763_1, User: MJC

	Name	RT
1	First TCDF	27.02
2	Last TCDF	32.31
3	First PeCDF	32.28
4	Last PeCDF	34.99
5	First HxCDF	35.50
6	Last HxCDF	37.90
7	First HpCDF	39.43
8	Last HpCDF	41.44
9	OCDF	45.49
10	First TCDD	28.78
11	2378-TCDD	31.75
12	Last TCDD	32.23
13	First PeCDD	33.16
14	Last PeCDD	34.80
15	First HxCDD	35.93
16	Last HxCDD	37.56
17	First HpCDD	39.77
18	Last HpCDD	40.74
19	OCDD	45.16

Quantify Sample Report
Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a-9.qld

Last Altered: Wednesday, November 03, 2010 15:53:31 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:54:06 Eastern Standard Time

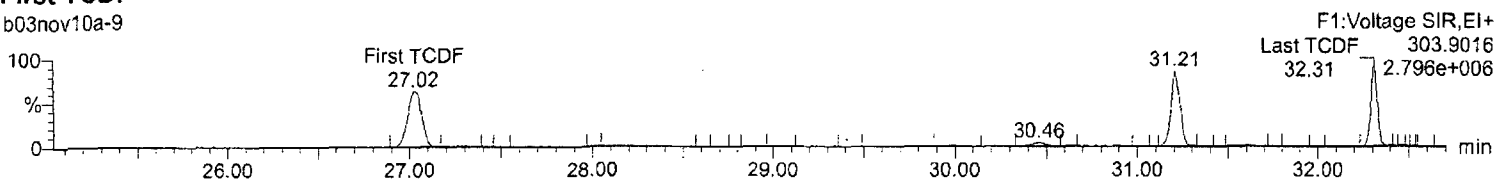
Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b01nov10b.cdb 02 Nov 2010 10:40:09

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

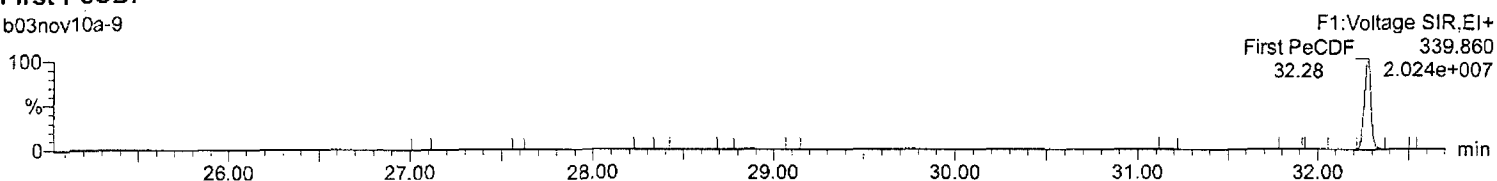
First TCDF

b03nov10a-9



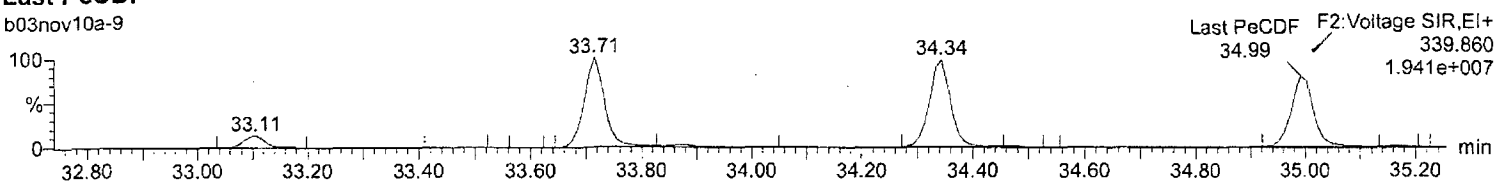
First PeCDF

b03nov10a-9



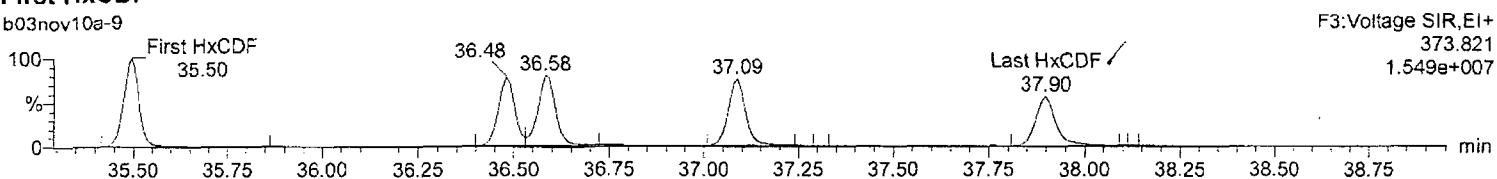
Last PeCDF

b03nov10a-9



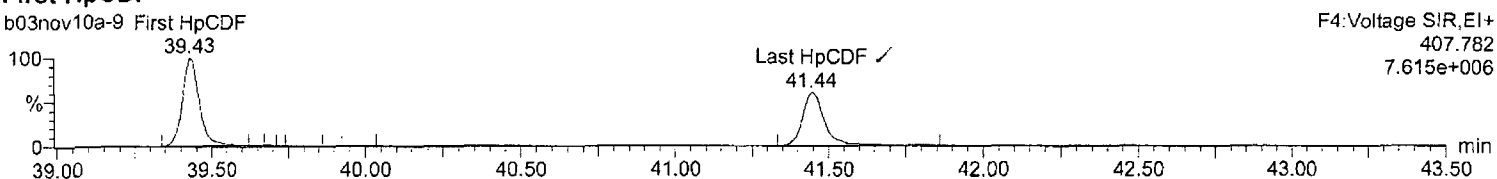
First HxCDF

b03nov10a-9



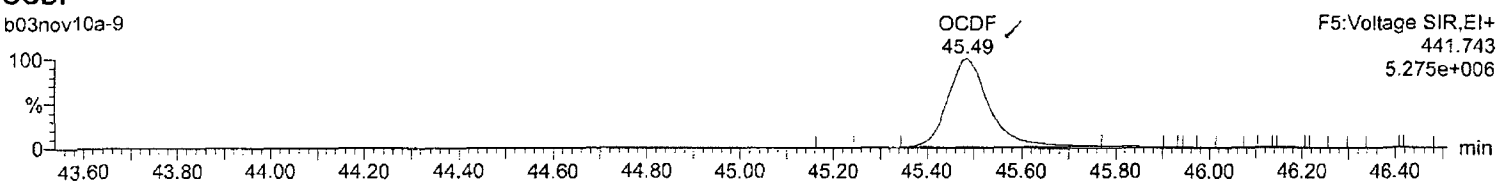
First HpCDF

b03nov10a-9 First HpCDF



OCDF

b03nov10a-9



Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a-9.qld

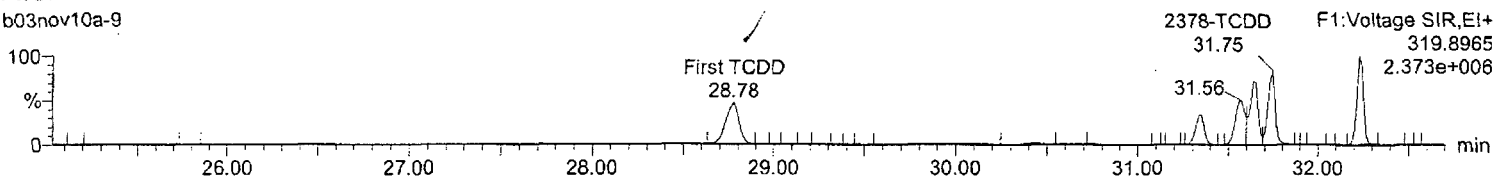
Last Altered: Wednesday, November 03, 2010 15:53:31 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:54:06 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

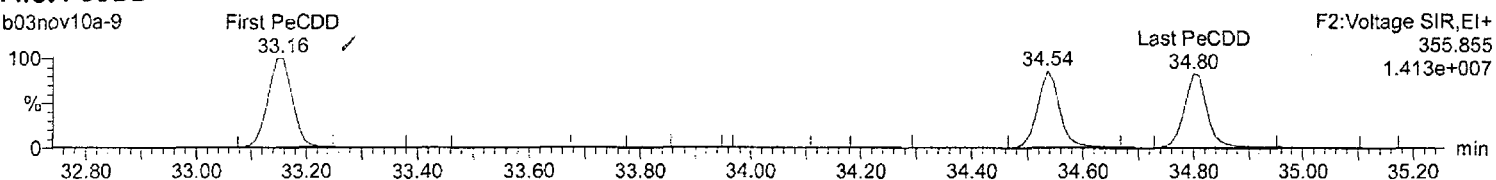
First TCDD

b03nov10a-9



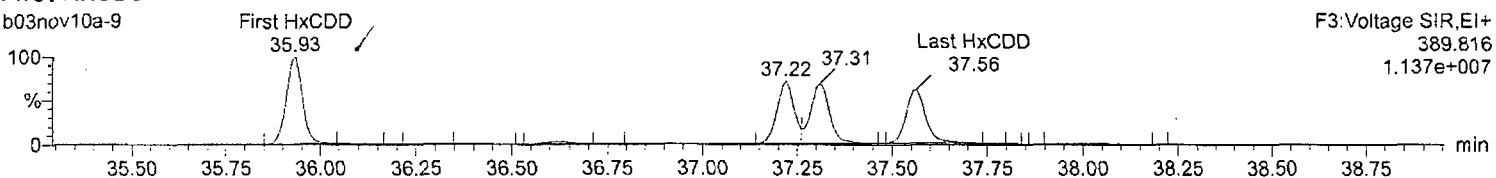
First PeCDD

b03nov10a-9



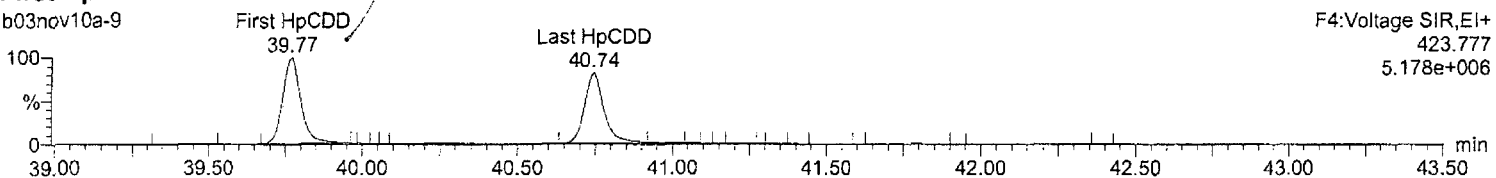
First HxCDD

b03nov10a-9



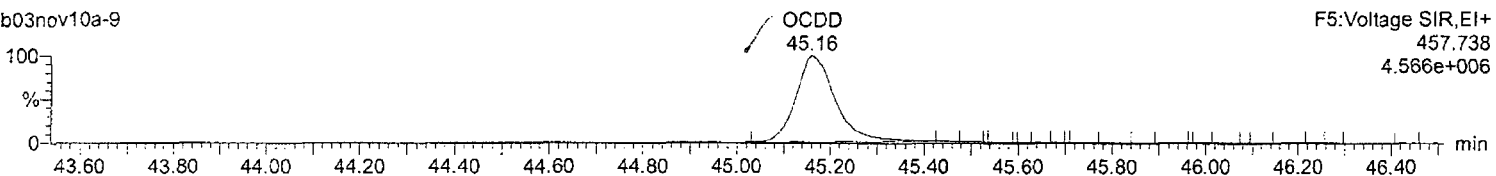
First HpCDD

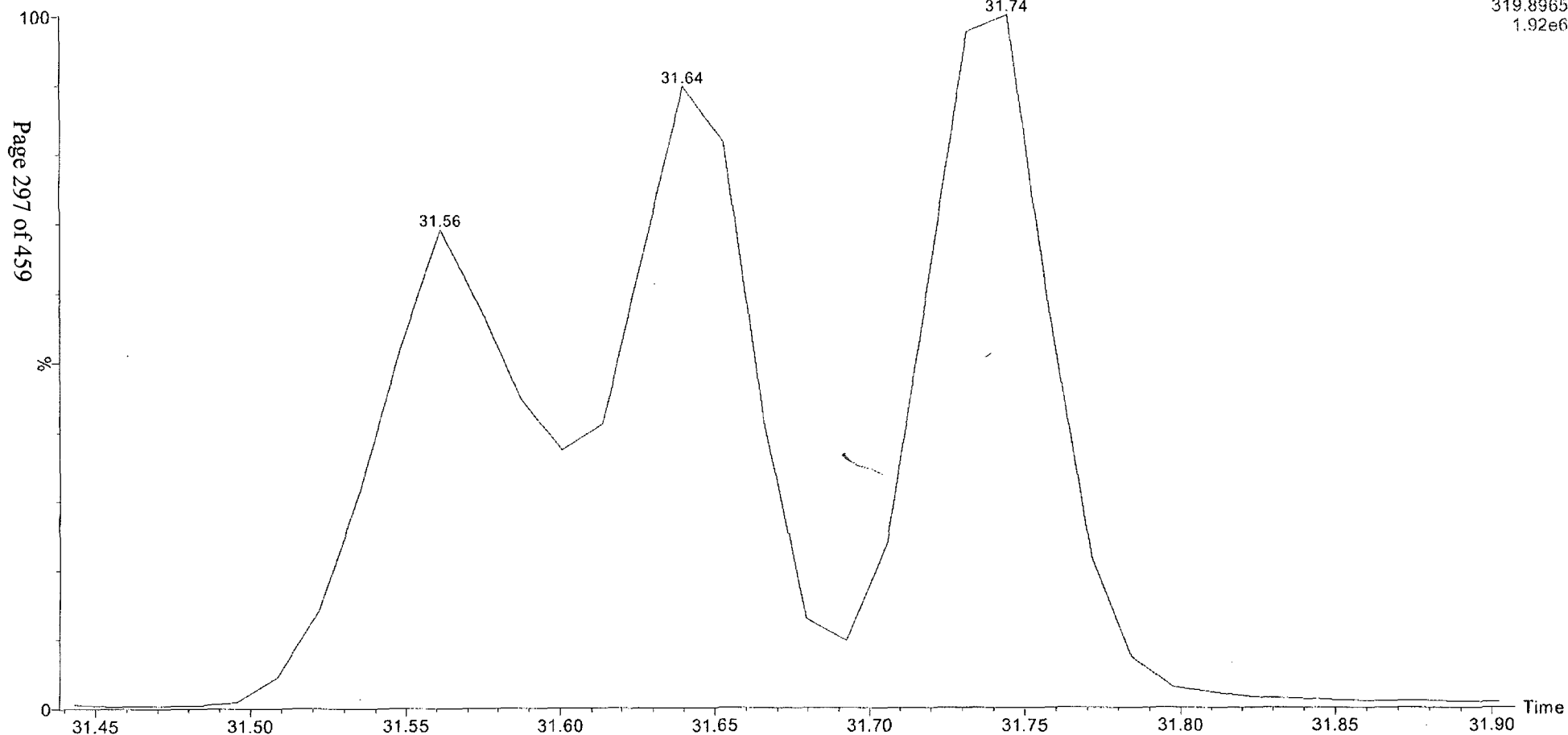
b03nov10a-9



OCDD

b03nov10a-9





Quantify Sample Summary Report**MassLynx 4.1**

Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_2-14.qld

Last Altered: Thursday, November 04, 2010 08:32:00 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:34:42 Eastern Standard Time

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Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2, Task: HRP763_1, User: MJC

	Name	RT
1	First TCDF	27.02
2	Last TCDF	32.31
3	First PeCDF	32.27
4	Last PeCDF	34.99
5	First HxCDF	35.50
6	Last HxCDF	37.90
7	First HpCDF	39.44
8	Last HpCDF	41.45
9	OCDF	45.49
10	First TCDD	28.77
11	2378-TCDD	31.74
12	Last TCDD	32.23
13	First PeCDD	33.15
14	Last PeCDD	34.80
15	First HxCDD	35.93
16	Last HxCDD	37.56
17	First HpCDD	39.77
18	Last HpCDD	40.74
19	OCDD	45.17

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_2-14.qld

Last Altered: Thursday, November 04, 2010 08:32:00 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:34:42 Eastern Standard Time

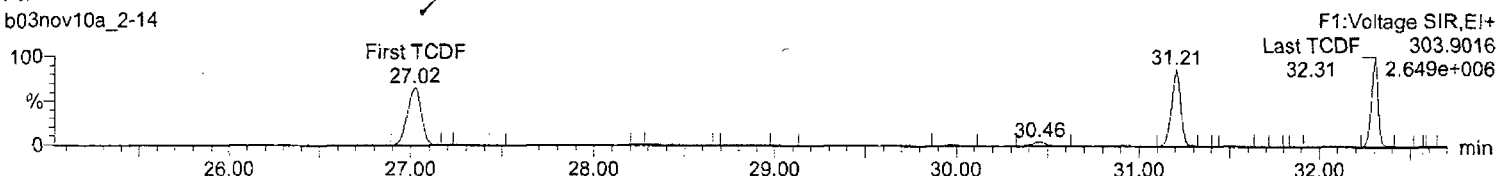
Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2,
Task: HRP763_1, User: MJC

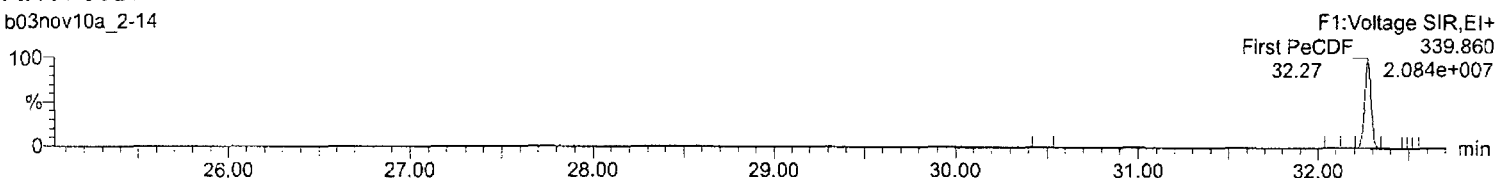
First TCDF

b03nov10a_2-14



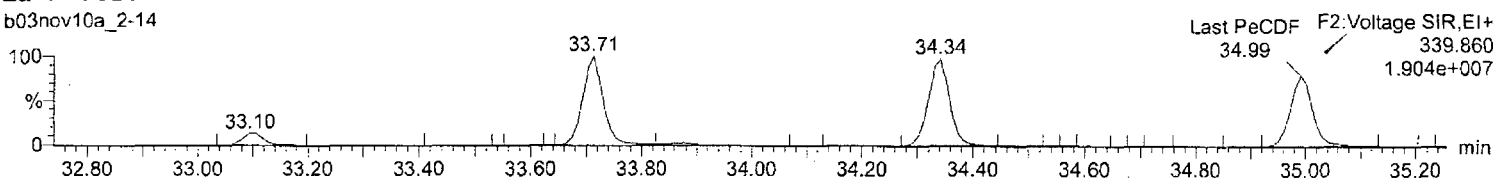
First PeCDF

b03nov10a_2-14



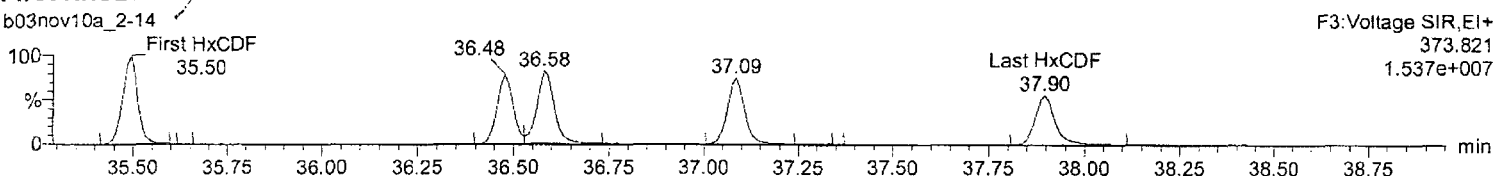
Last PeCDF

b03nov10a_2-14



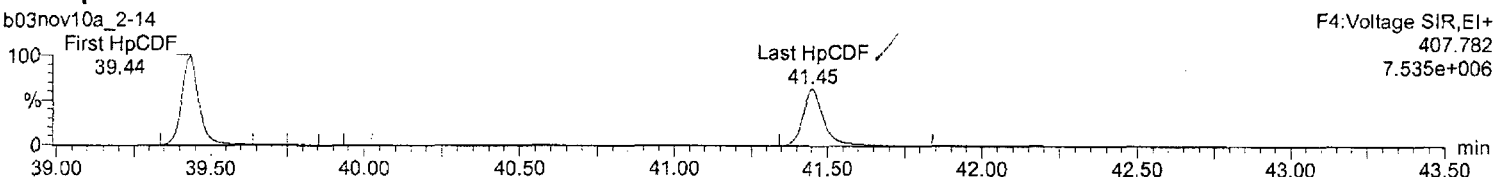
First HxCDF

b03nov10a_2-14



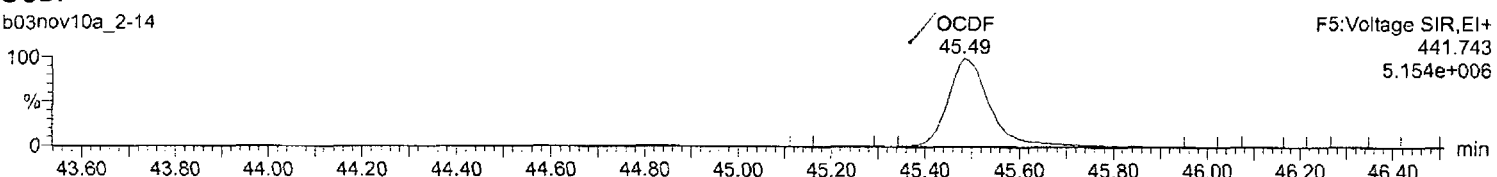
First HpCDF

b03nov10a_2-14



OCDF

b03nov10a_2-14



Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_2-14.qld

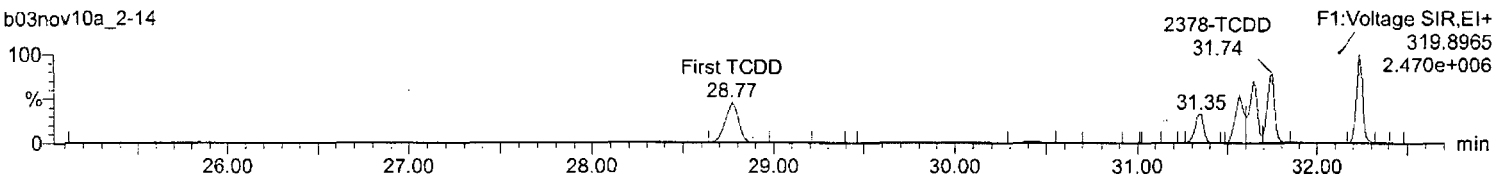
Last Altered: Thursday, November 04, 2010 08:32:00 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:34:42 Eastern Standard Time

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2,
Task: HRP763_1, User: MJC

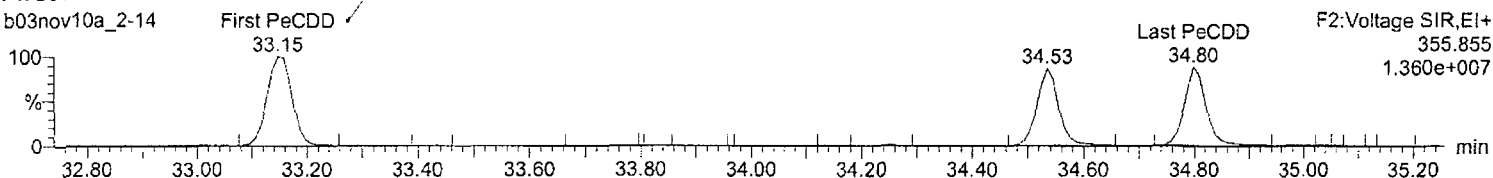
First TCDD

b03nov10a_2-14



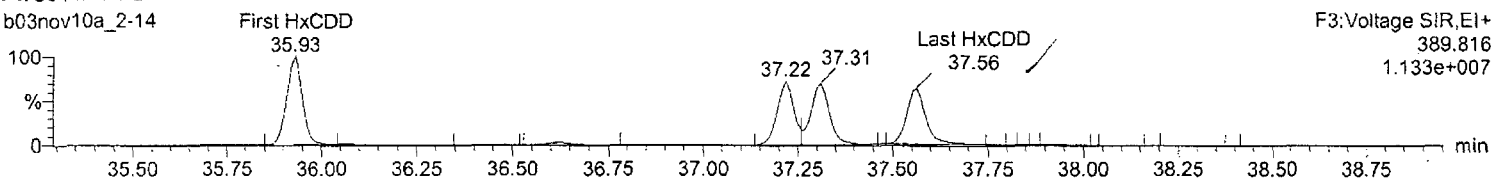
First PeCDD

b03nov10a_2-14



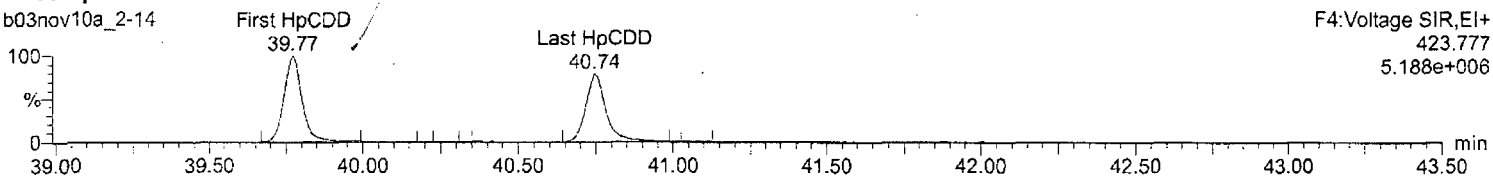
First HxCDD

b03nov10a_2-14



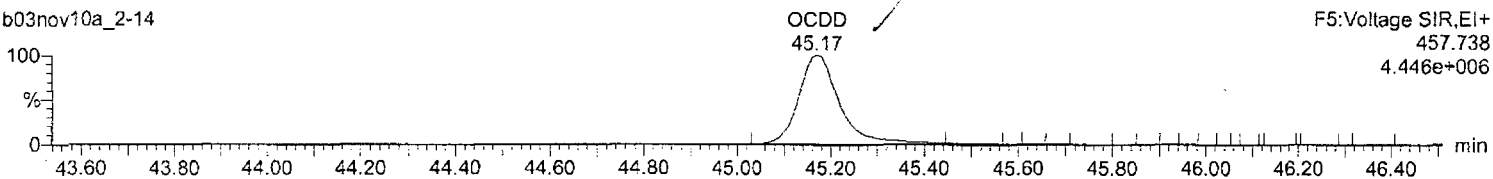
First HpCDD

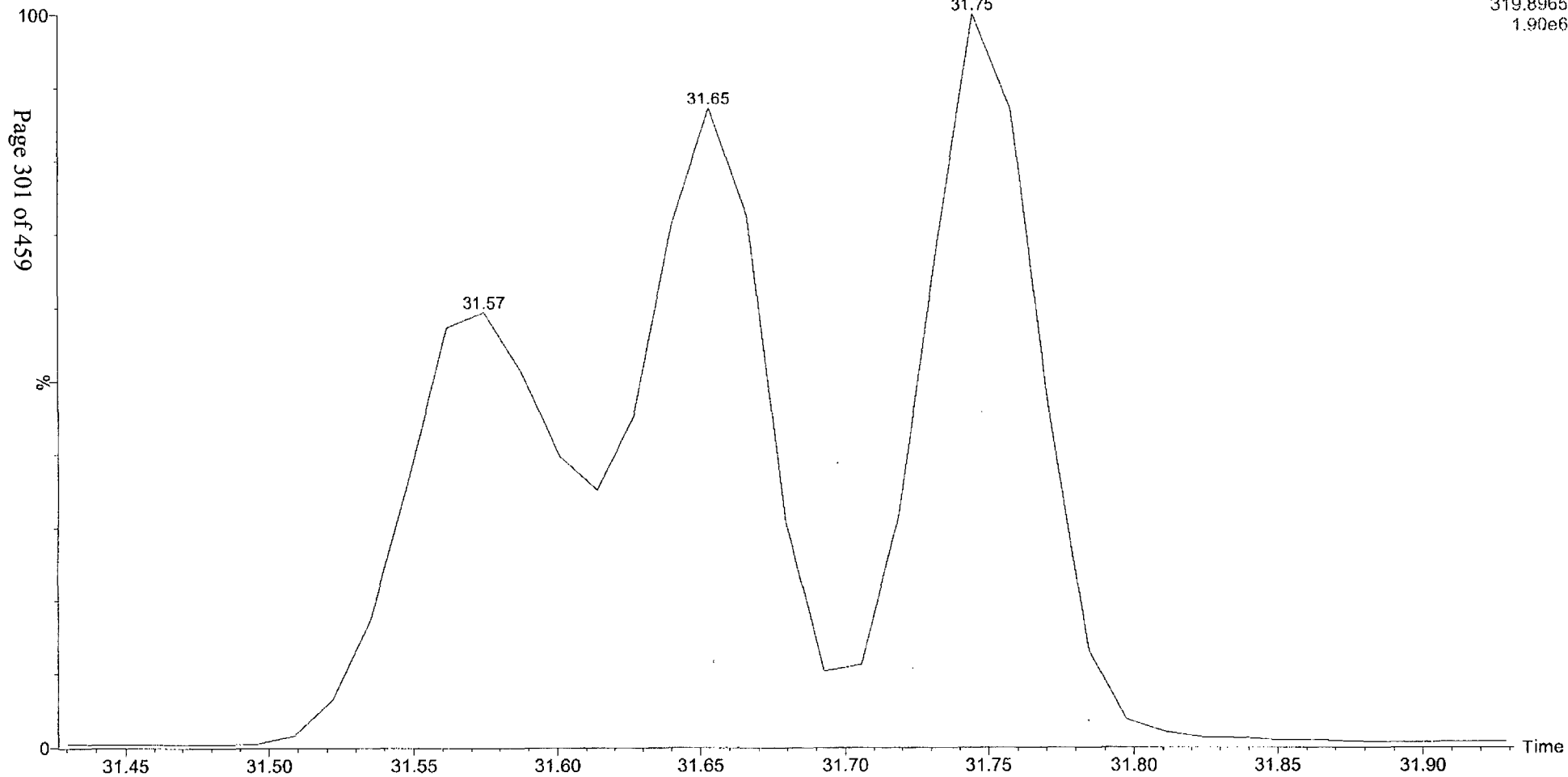
b03nov10a_2-14



OCDD

b03nov10a_2-14





Quantify Sample Summary Report
Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_3-14.qld

Last Altered: Thursday, November 04, 2010 16:40:15 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:41:35 Eastern Standard Time

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of 4

Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\Default.pro\Curvedb\1613-b01nov10b.cdb 02 Nov 2010 10:40:09

Name: b03nov10a_3-14, Date: 04-Nov-2010, Time: 13:51:40, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_3, Task: HRP763_1, User: MJC

	Name	RT
1	First TCDF	27.04
2	Last TCDF	32.32
3	First PeCDF	32.28
4	Last PeCDF	35.00
5	First HxCDF	35.51
6	Last HxCDF	37.91
7	First HpCDF	39.45
8	Last HpCDF	41.45
9	OCDF	45.50
10	First TCDD	28.78
11	2378-TCDD	31.75
12	Last TCDD	32.24
13	First PeCDD	33.16
14	Last PeCDD	34.81
15	First HxCDD	35.94
16	Last HxCDD	37.57
17	First HpCDD	39.78
18	Last HpCDD	40.75
19	OCDD	45.18

Quantify Sample Report
Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_3-14.qld

Last Altered: Thursday, November 04, 2010 16:40:15 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:41:35 Eastern Standard Time

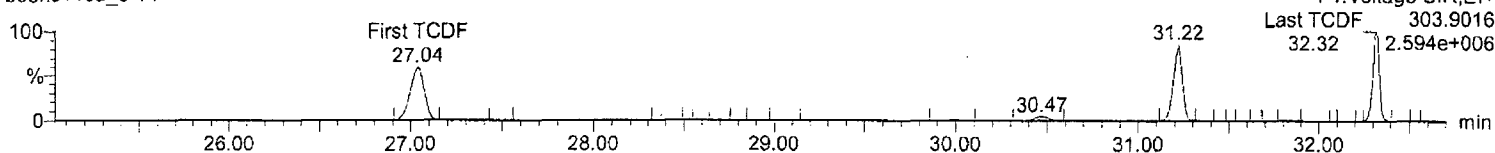
Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\Default.pro\Curvedb\1613-b01nov10b.cdb 02 Nov 2010 10:40:09

Name: b03nov10a_3-14, Date: 04-Nov-2010, Time: 13:51:40, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_3,
Task: HRP763_1, User: MJC

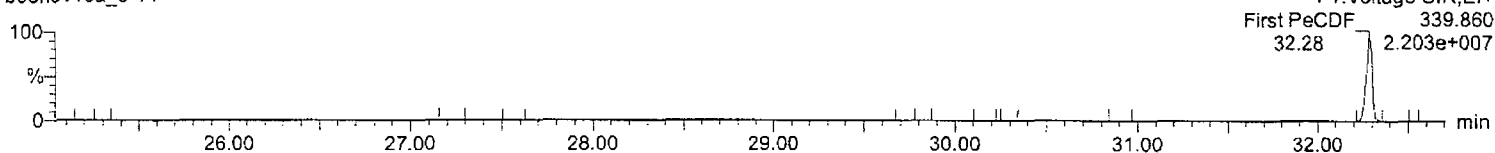
First TCDF

b03nov10a_3-14



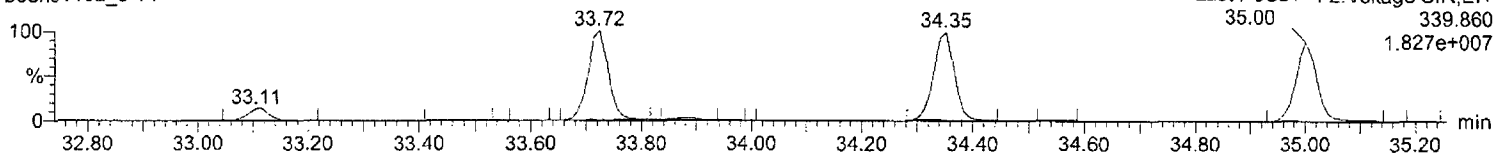
First PeCDF

b03nov10a_3-14



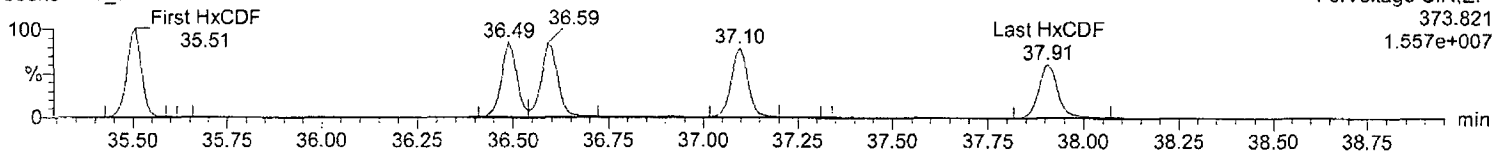
Last PeCDF

b03nov10a_3-14



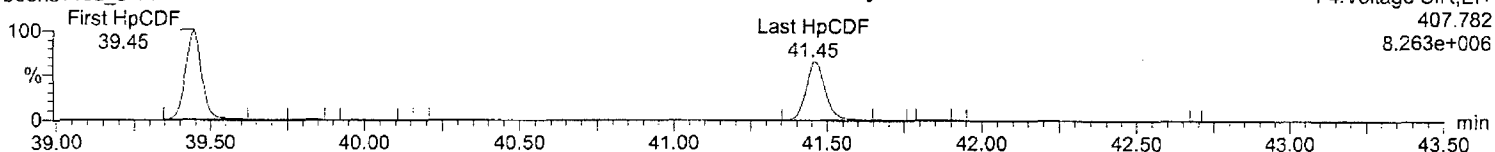
First HxCDF

b03nov10a_3-14



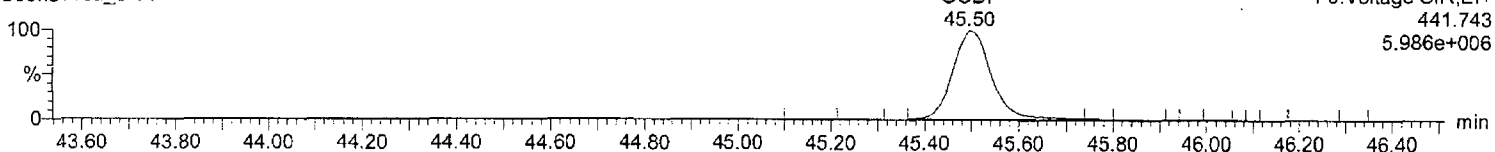
First HpCDF

b03nov10a_3-14



OCDF

b03nov10a_3-14



Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_3-14.qld

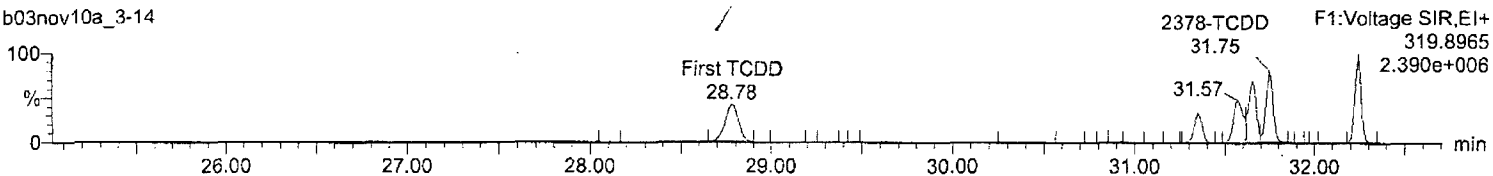
Last Altered: Thursday, November 04, 2010 16:40:15 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:41:35 Eastern Standard Time

Name: b03nov10a_3-14, Date: 04-Nov-2010, Time: 13:51:40, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_3, Task: HRP763_1, User: MJC

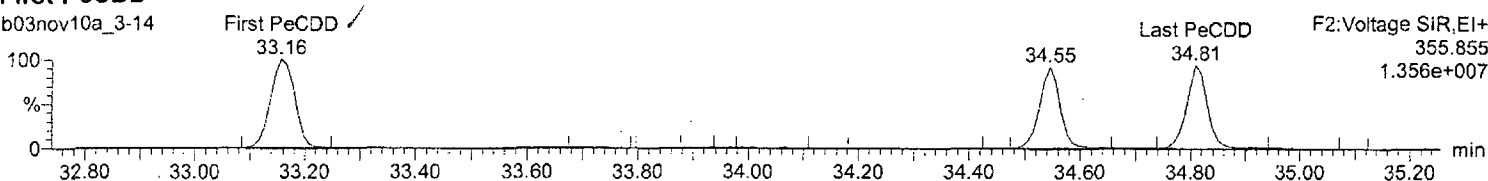
First TCDD

b03nov10a_3-14



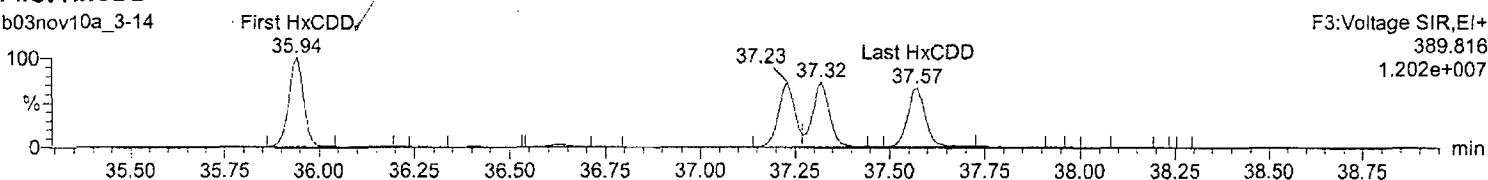
First PeCDD

b03nov10a_3-14



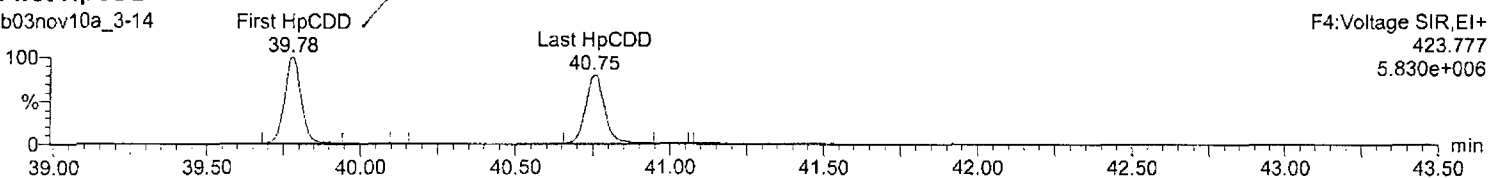
First HxCDD

b03nov10a_3-14



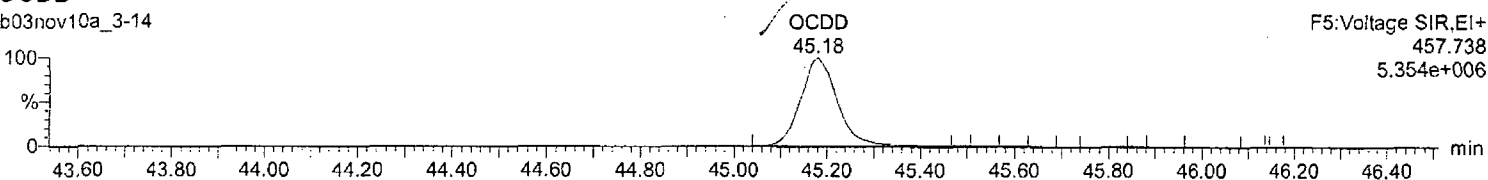
First HpCDD

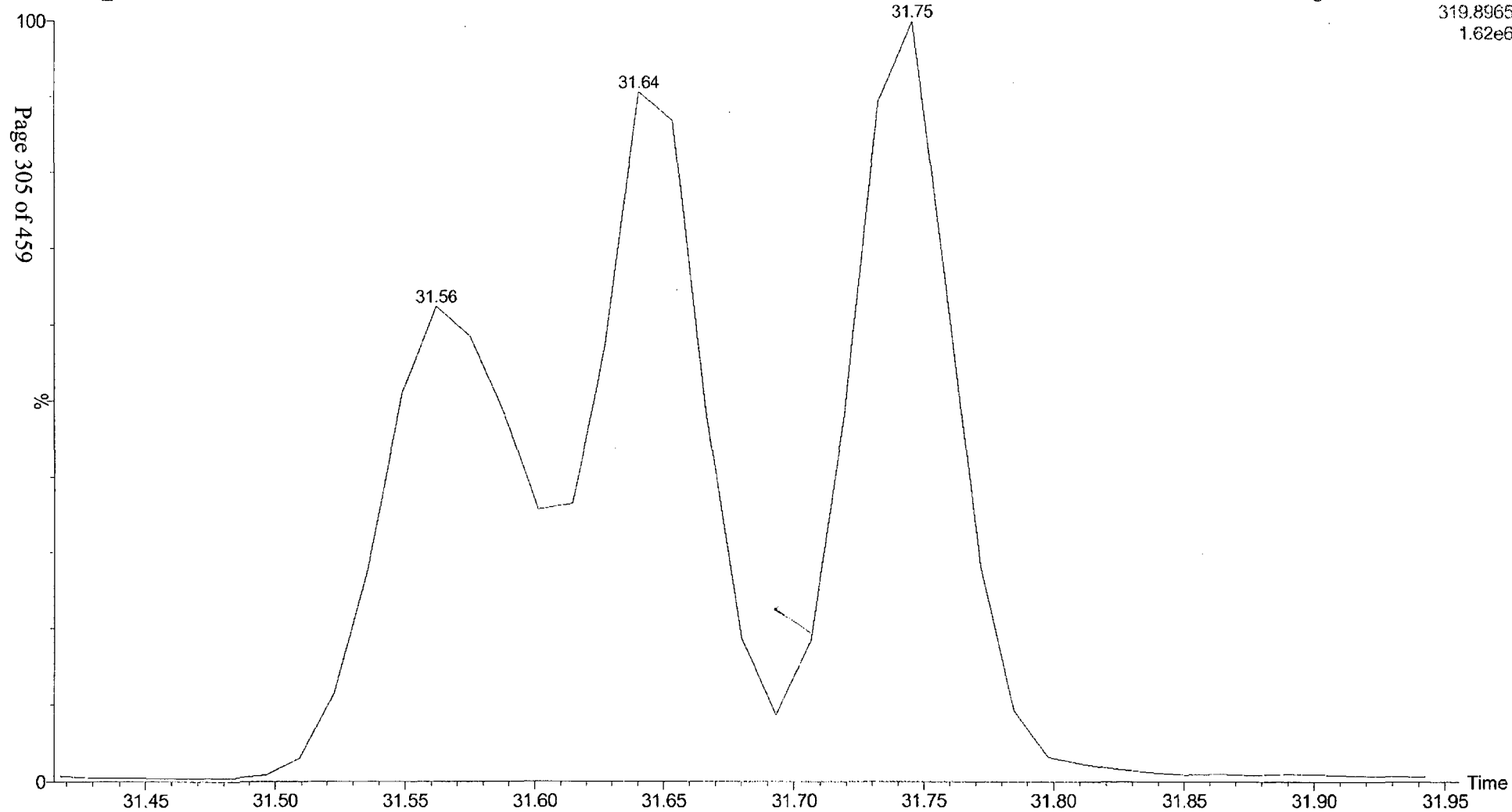
b03nov10a_3-14



OCDD

b03nov10a_3-14





Quantify Sample Summary Report
Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_4-14.qld

Last Altered: Friday, November 05, 2010 10:45:25 Eastern Standard Time

Printed: Friday, November 05, 2010 10:46:21 Eastern Standard Time

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Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4, Task: HRP763_1, User: MJC

	Name	RT
1	First TCDF	27.04
2	Last TCDF	32.31
3	First PeCDF	32.28
4	Last PeCDF	34.99
5	First HxCDF	35.50
6	Last HxCDF	37.90
7	First HpCDF	39.44
8	Last HpCDF	41.45
9	OCDF	45.49
10	First TCDD	28.78
11	2378-TCDD	31.75
12	Last TCDD	32.23
13	First PeCDD	33.16
14	Last PeCDD	34.81
15	First HxCDD	35.93
16	Last HxCDD	37.56
17	First HpCDD	39.77
18	Last HpCDD	40.74
19	OCDD	45.17

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_4-14.qld

Last Altered: Friday, November 05, 2010 10:45:25 Eastern Standard Time

Printed: Friday, November 05, 2010 10:46:21 Eastern Standard Time

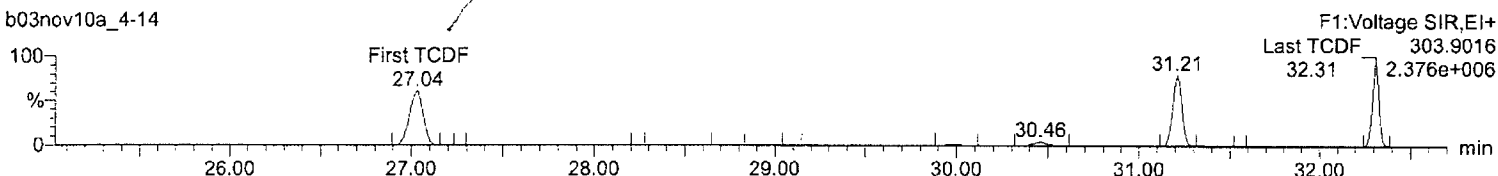
Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4, Task: HRP763_1, User: MJC

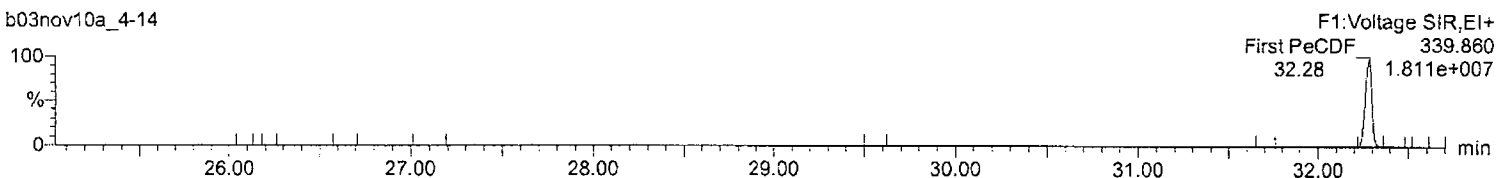
First TCDF

b03nov10a_4-14



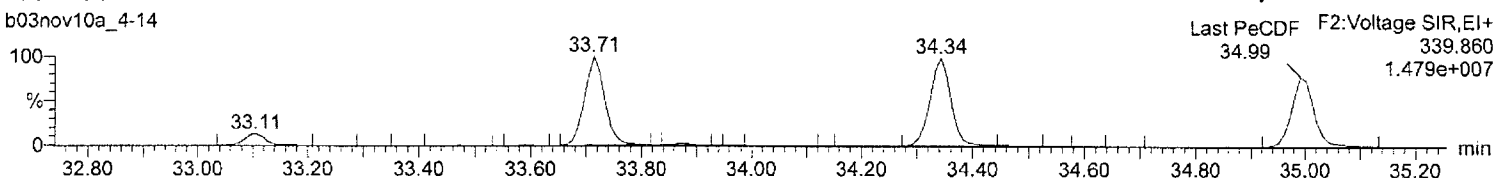
First PeCDF

b03nov10a_4-14



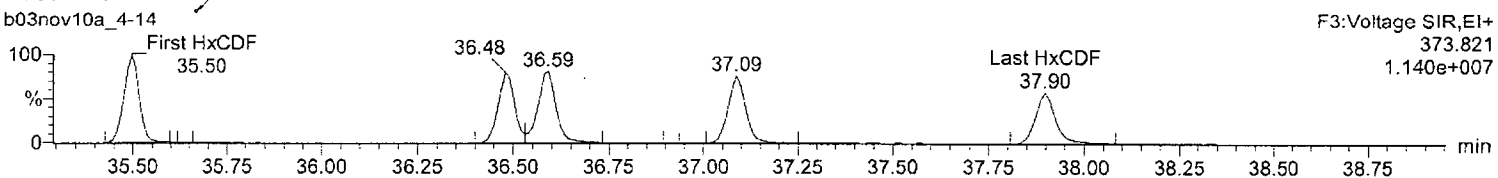
Last PeCDF

b03nov10a_4-14



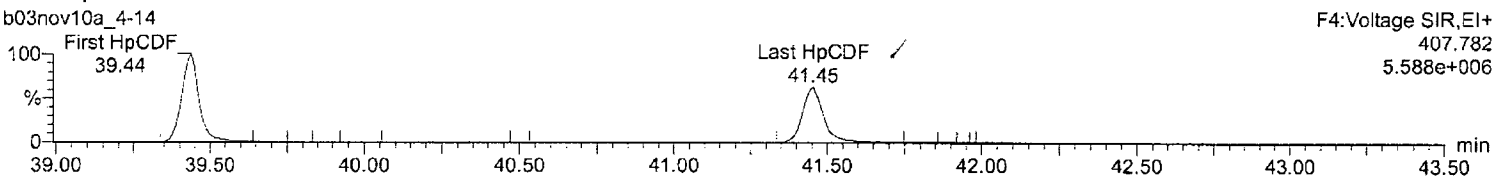
First HxCDF

b03nov10a_4-14



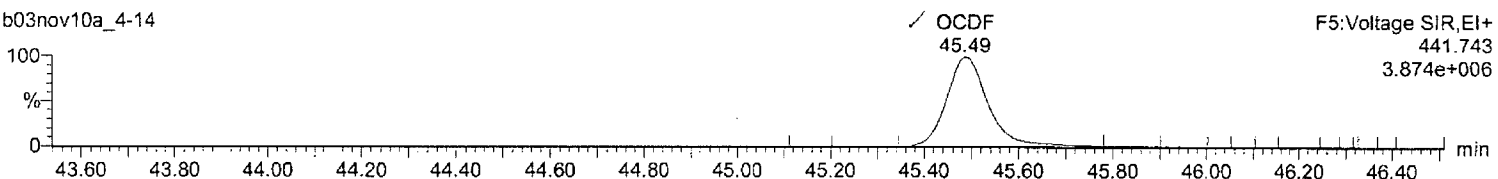
First HpCDF

b03nov10a_4-14



OCDF

b03nov10a_4-14



Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_4-14.qld

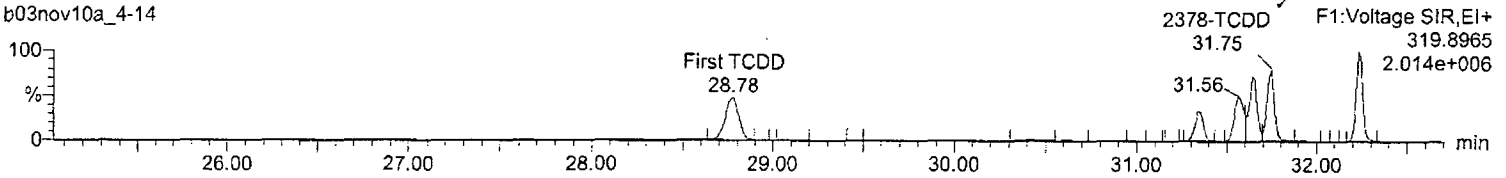
Last Altered: Friday, November 05, 2010 10:45:25 Eastern Standard Time

Printed: Friday, November 05, 2010 10:46:21 Eastern Standard Time

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4, Task: HRP763_1, User: MJC

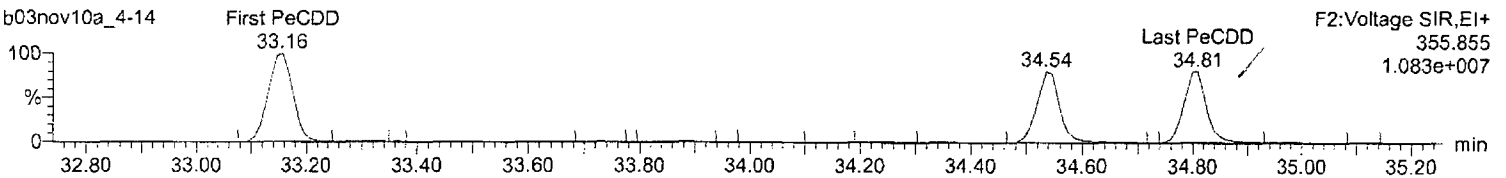
First TCDD

b03nov10a_4-14



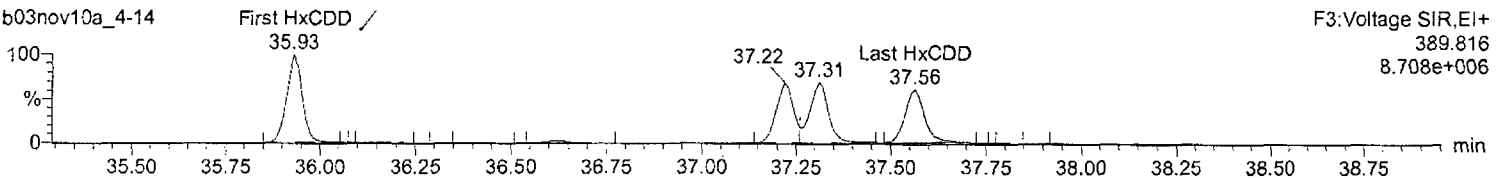
First PeCDD

b03nov10a_4-14



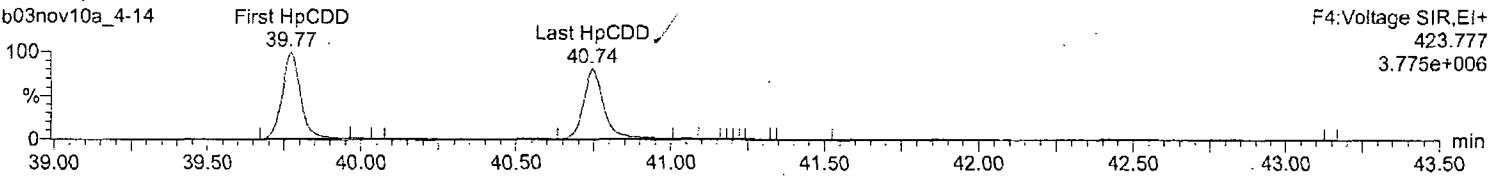
First HxCDD

b03nov10a_4-14



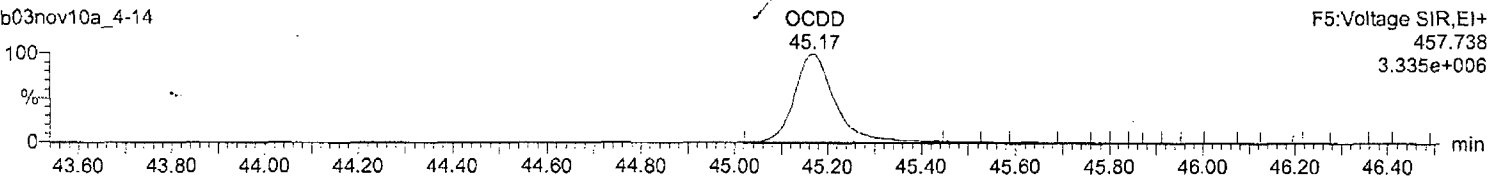
First HpCDD

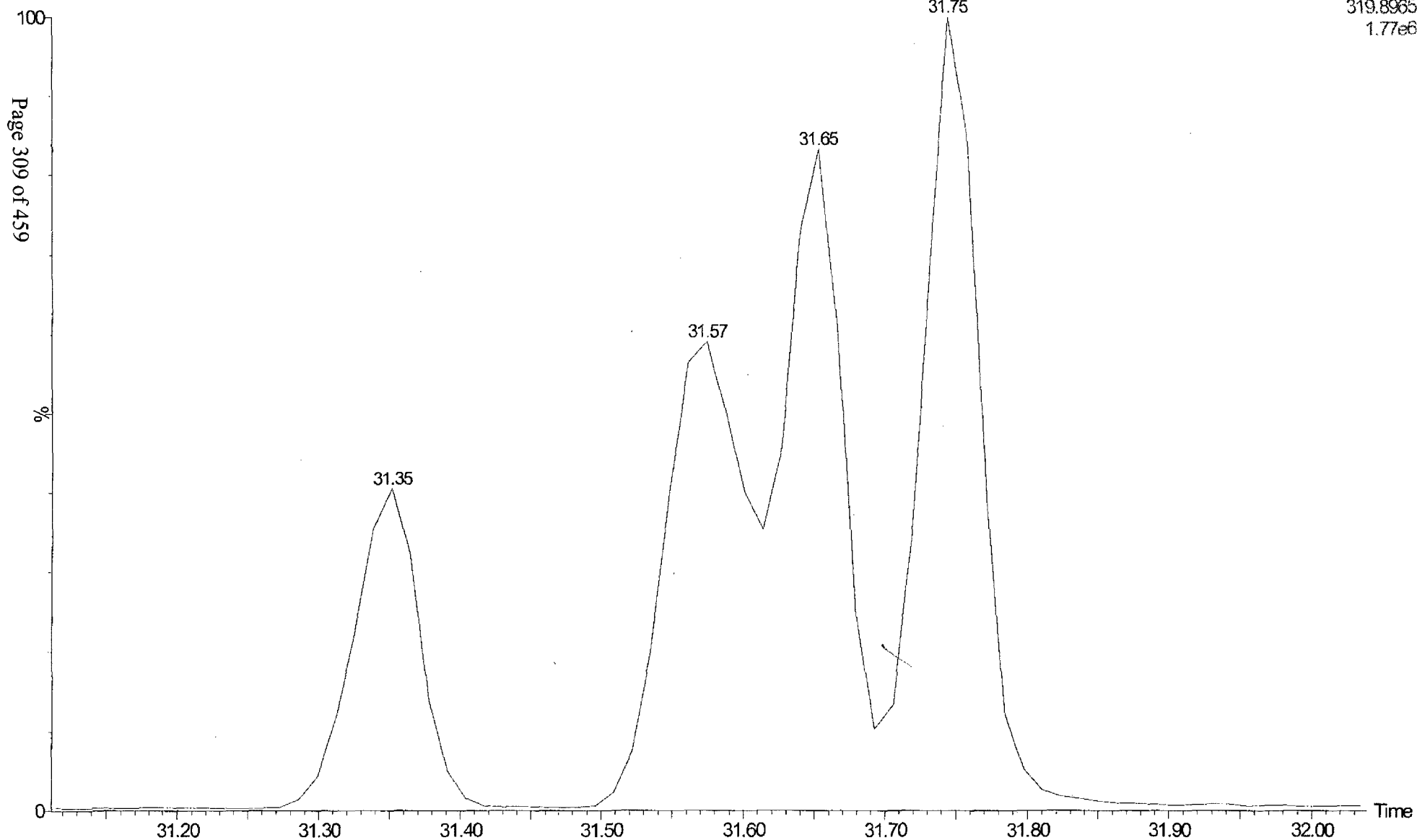
b03nov10a_4-14



OCDD

b03nov10a_4-14





Quantify Sample Summary Report**MassLynx 4.1**

Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_5-14.qld

Last Altered: Friday, November 05, 2010 14:26:27 Eastern Standard Time

Printed: Friday, November 05, 2010 14:31:57 Eastern Standard Time

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1
of
49

Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5, Task: HRP763_1, User: MJC

	Name	RT
1	First TCDF	27.02
2	Last TCDF	32.32
3	First PeCDF	32.28
4	Last PeCDF	35.00
5	First HxCDF	35.51
6	Last HxCDF	37.91
7	First HpCDF	39.44
8	Last HpCDF	41.45
9	OCDF	45.50
10	First TCDD	28.78
11	2378-TCDD	31.75
12	Last TCDD	32.24
13	First PeCDD	33.16
14	Last PeCDD	34.81
15	First HxCDD	35.94
16	Last HxCDD	37.56
17	First HpCDD	39.77
18	Last HpCDD	40.75
19	OCDD	45.17

Quantify Sample Report
Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_5-14.qld

Last Altered: Friday, November 05, 2010 14:26:27 Eastern Standard Time

Printed: Friday, November 05, 2010 14:31:57 Eastern Standard Time

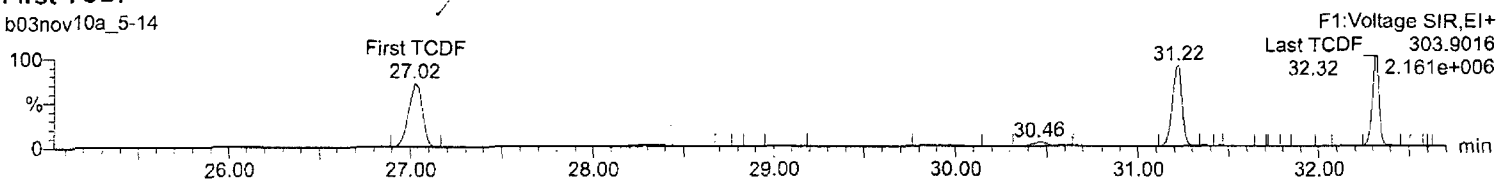
Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5,
Task: HRP763_1, User: MJC

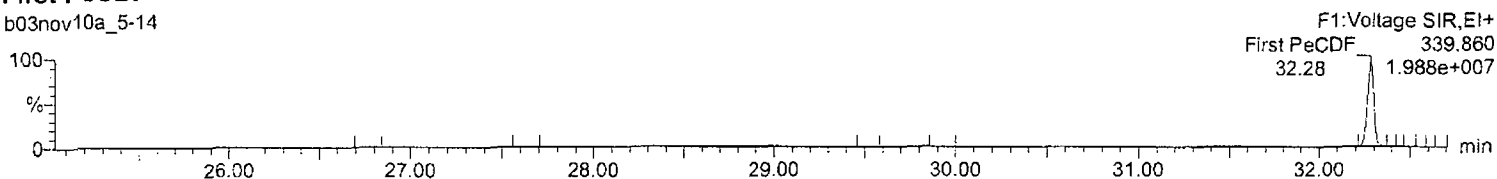
First TCDF

b03nov10a_5-14



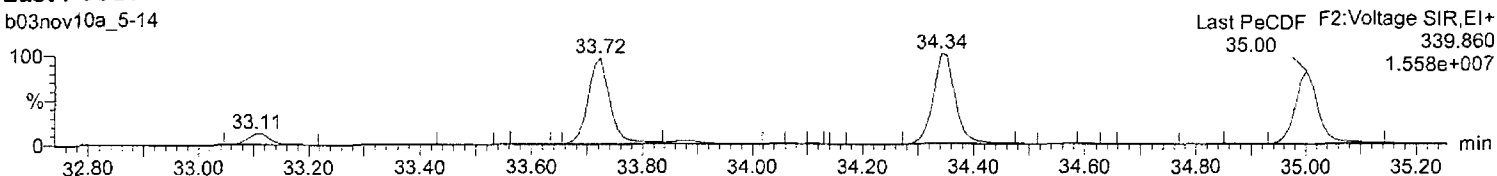
First PeCDF

b03nov10a_5-14



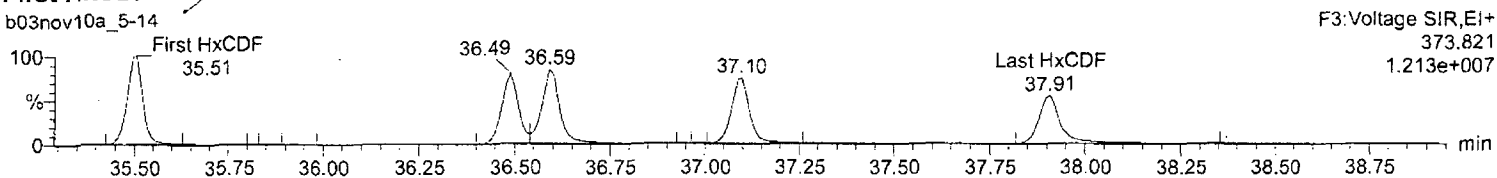
Last PeCDF

b03nov10a_5-14



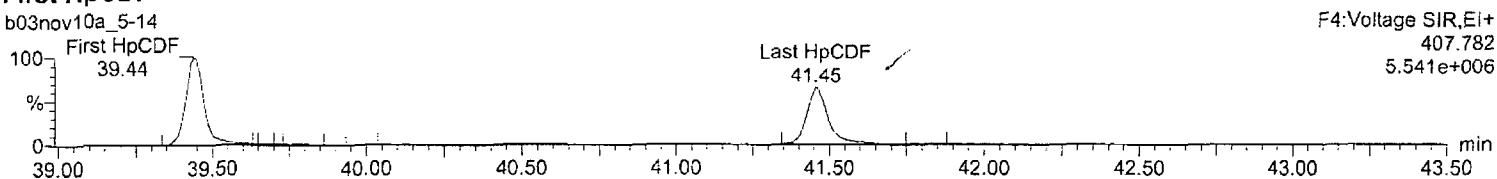
First HxCDF

b03nov10a_5-14



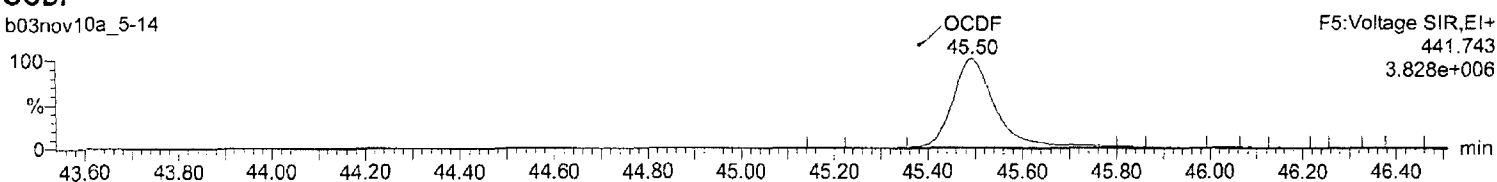
First HpCDF

b03nov10a_5-14



OCDF

b03nov10a_5-14



Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_5-14.qld

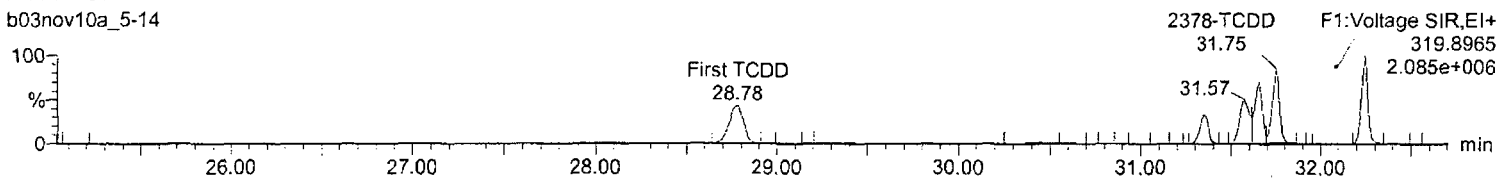
Last Altered: Friday, November 05, 2010 14:26:27 Eastern Standard Time

Printed: Friday, November 05, 2010 14:31:57 Eastern Standard Time

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5,
Task: HRP763_1, User: MJC

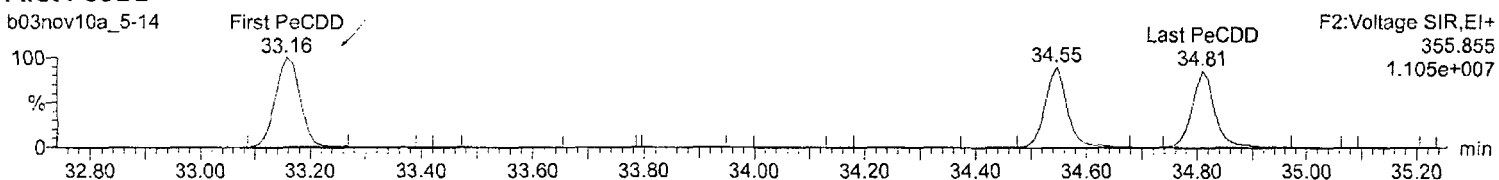
First TCDD

b03nov10a_5-14



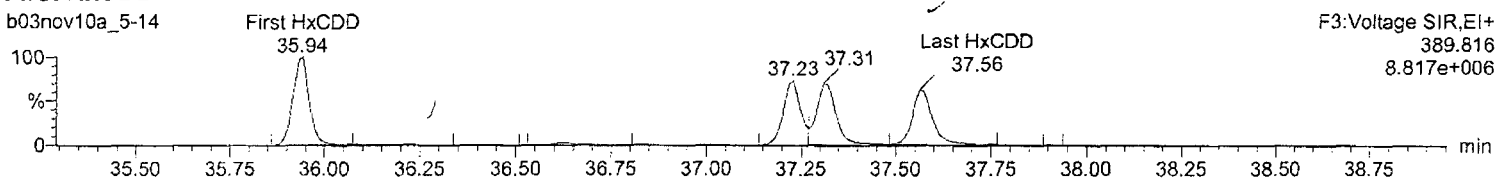
First PeCDD

b03nov10a_5-14



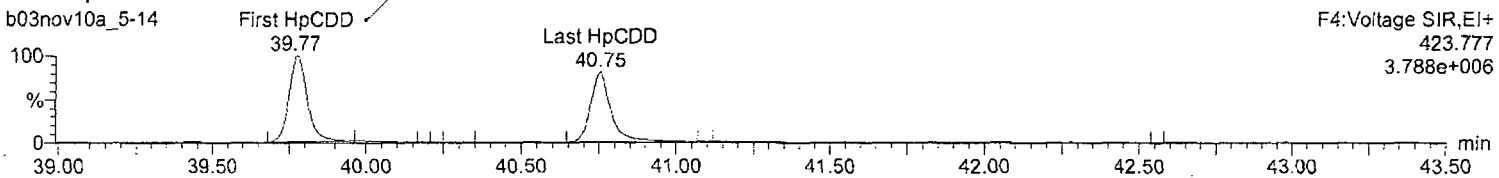
First HxCDD

b03nov10a_5-14



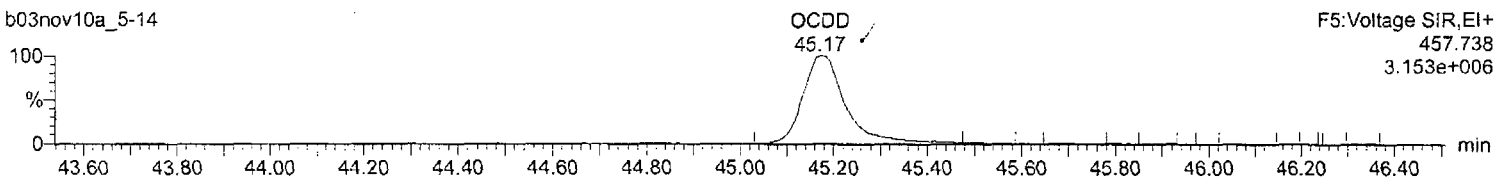
First HpCDD

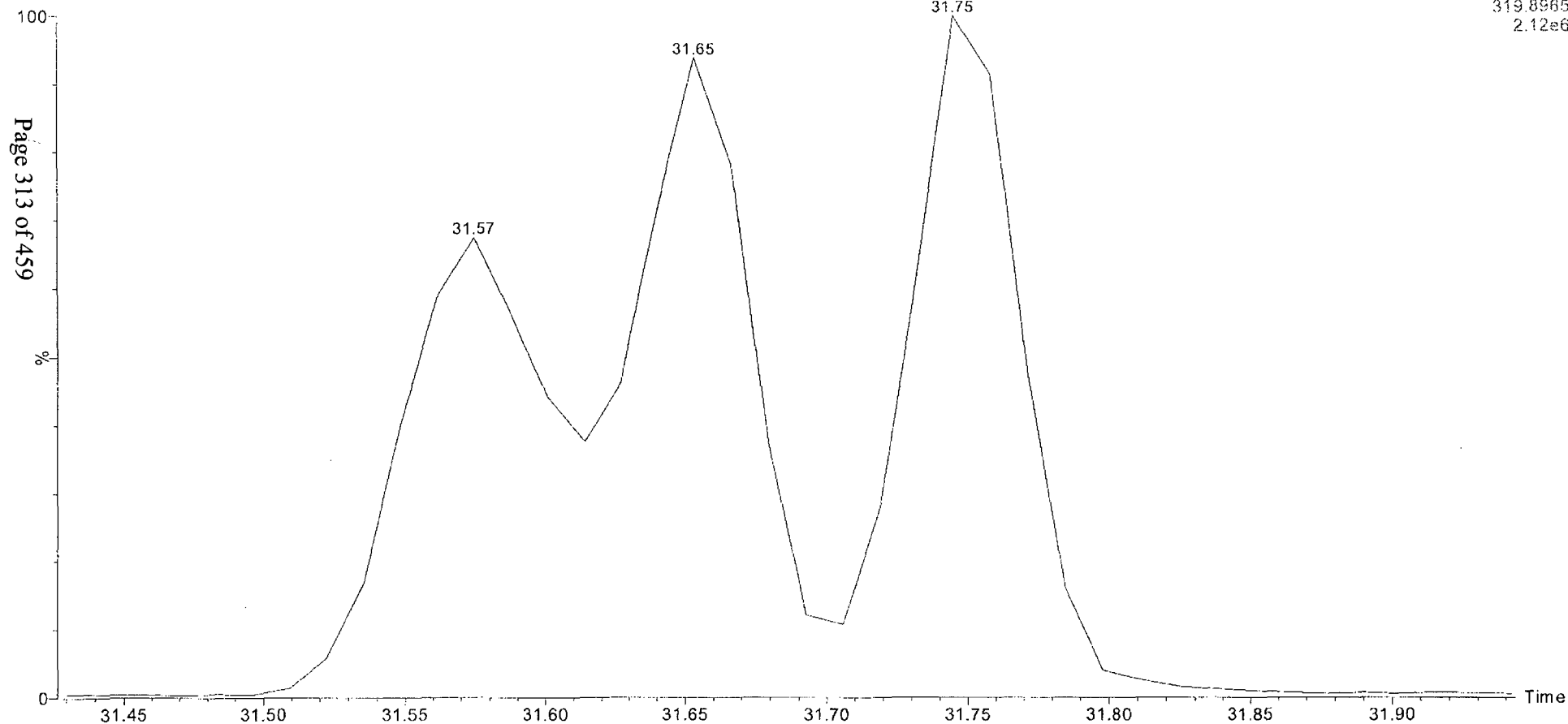
b03nov10a_5-14



OCDD

b03nov10a_5-14





Quantify Sample Summary Report**MassLynx 4.1**

Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_6-14.qld

Last Altered: Monday, November 08, 2010 10:03:35 Eastern Standard Time

Printed: Monday, November 08, 2010 10:05:47 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6, Task: HRP763_1, User: MJC

	Name	RT
1	First TCDF	27.04
2	Last TCDF	32.32
3	First PeCDF	32.28
4	Last PeCDF	35.00
5	First HxCDF	35.51
6	Last HxCDF	37.91
7	First HpCDF	39.45
8	Last HpCDF	41.46
9	OCDF	45.50
10	First TCDD	28.78
11	2378-TCDD	31.75
12	Last TCDD	32.24
13	First PeCDD	33.16
14	Last PeCDD	34.81
15	First HxCDD	35.94
16	Last HxCDD	37.57
17	First HpCDD	39.78
18	Last HpCDD	40.75
19	OCDD	45.18

Quantify Sample Report
Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_6-14.qld

Last Altered: Monday, November 08, 2010 10:03:35 Eastern Standard Time

Printed: Monday, November 08, 2010 10:05:47 Eastern Standard Time

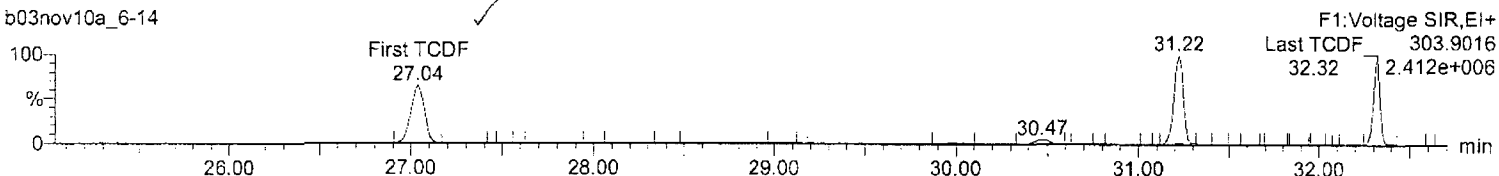
Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6,
Task: HRP763_1, User: MJC

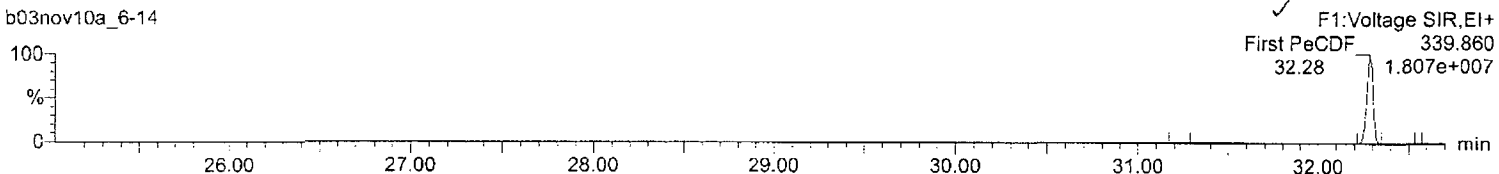
First TCDF

b03nov10a_6-14



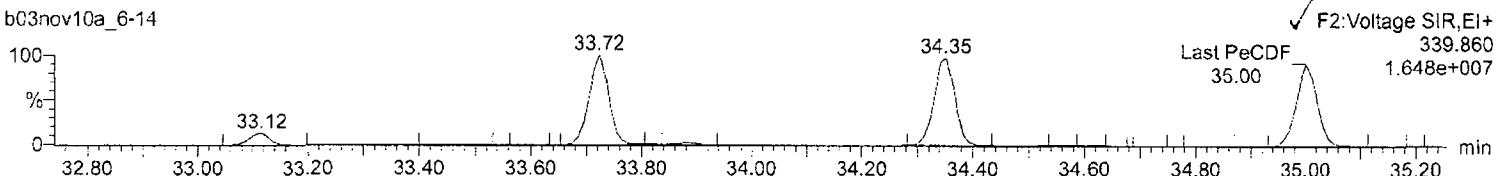
First PeCDF

b03nov10a_6-14



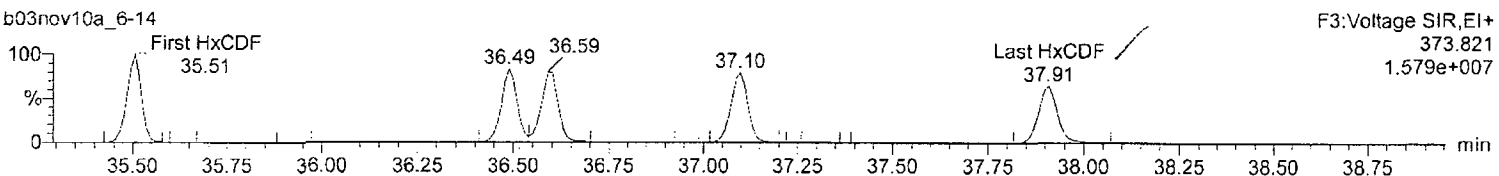
Last PeCDF

b03nov10a_6-14



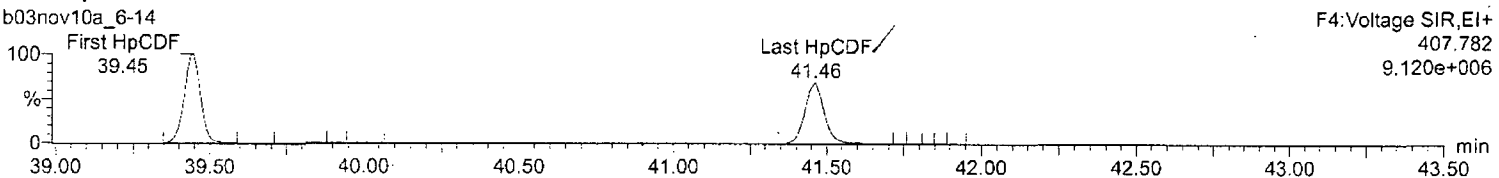
First HxCDF

b03nov10a_6-14



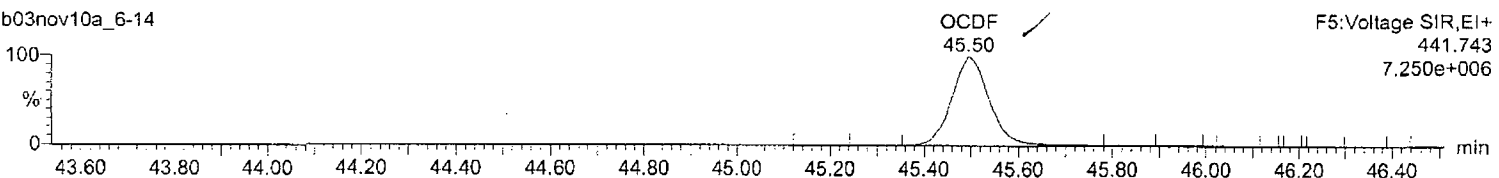
First HpCDF

b03nov10a_6-14



OCDF

b03nov10a_6-14



Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_6-14.qld

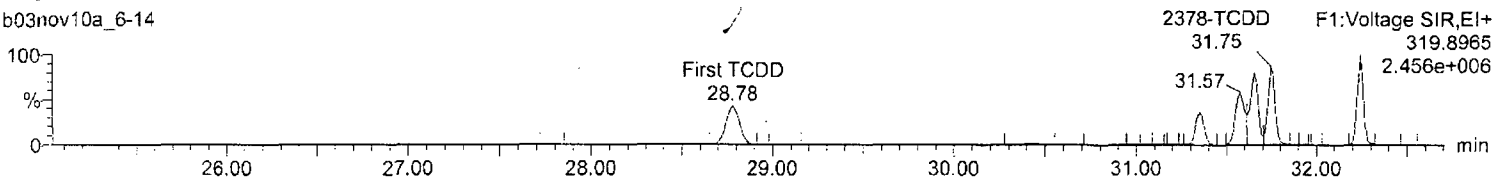
Last Altered: Monday, November 08, 2010 10:03:35 Eastern Standard Time

Printed: Monday, November 08, 2010 10:05:47 Eastern Standard Time

Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6,
Task: HRP763_1, User: MJC

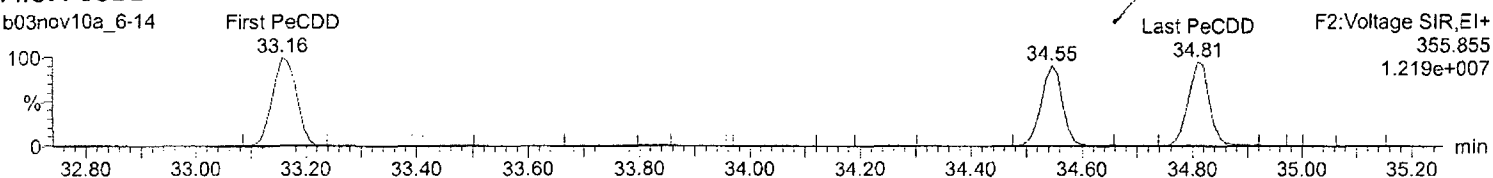
First TCDD

b03nov10a_6-14



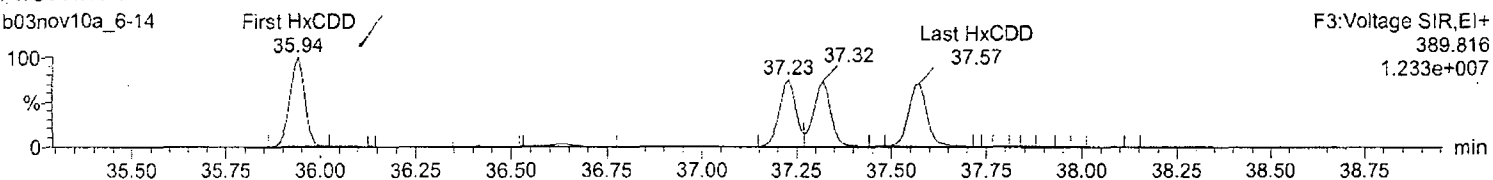
First PeCDD

b03nov10a_6-14



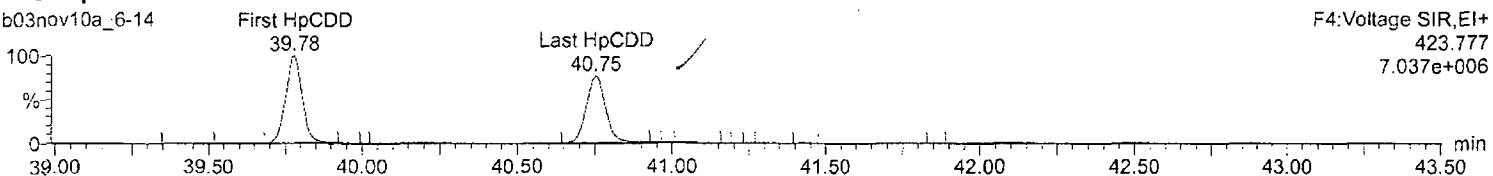
First HxCDD

b03nov10a_6-14



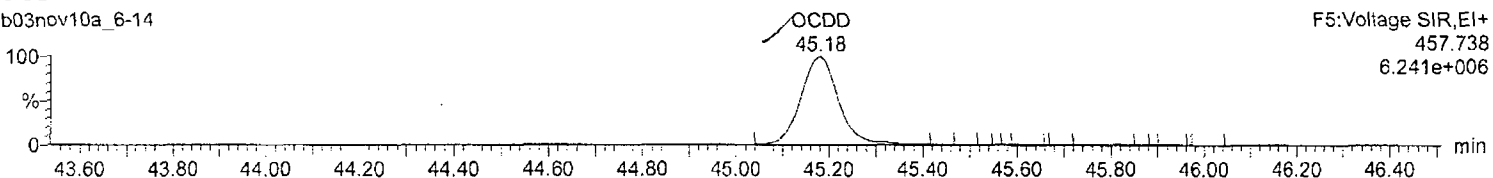
First HpCDD

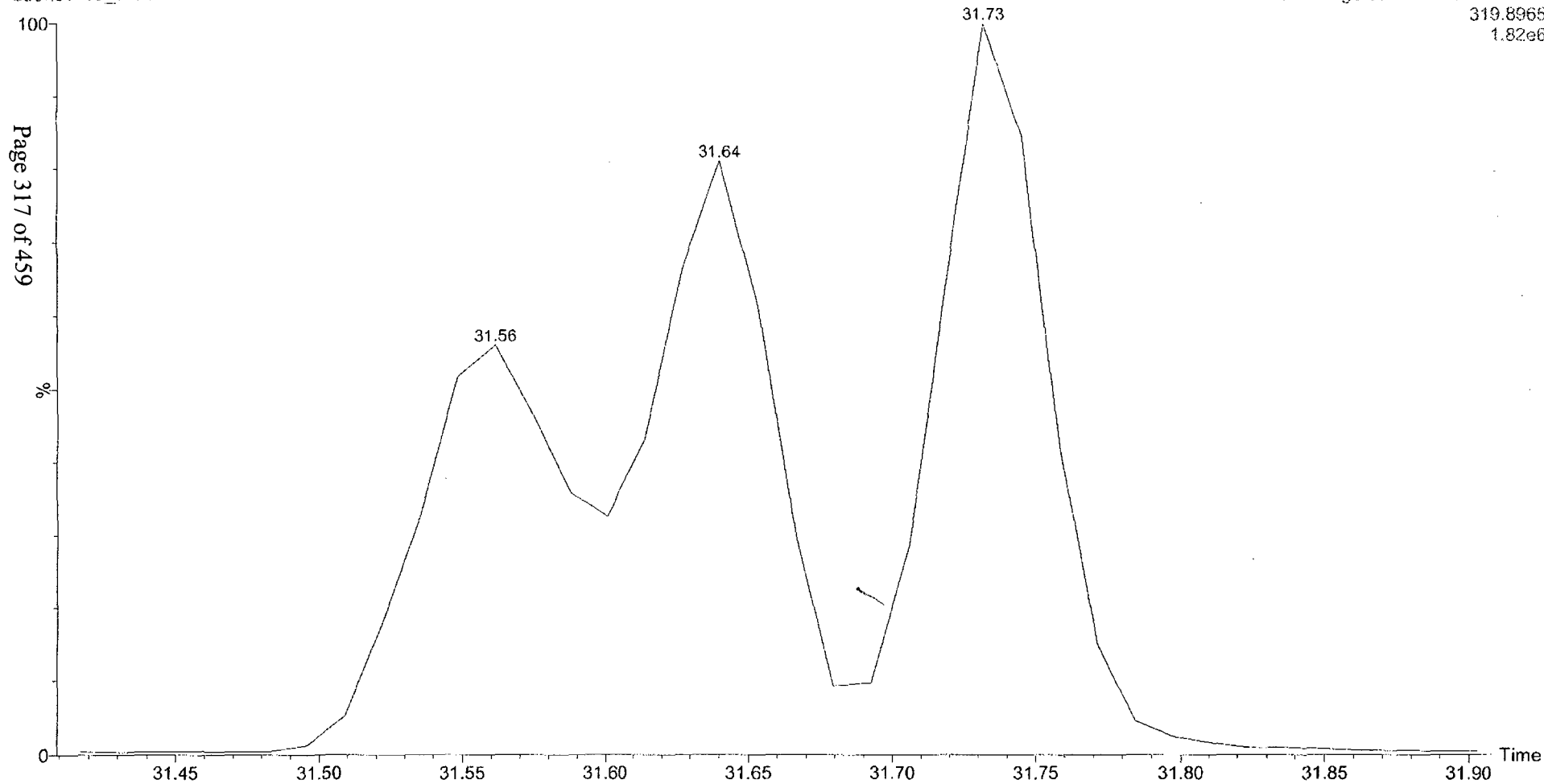
b03nov10a_6-14



OCDD

b03nov10a_6-14





Quantify Sample Summary Report**MassLynx 4.1**

Window Defining Report

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_7-14.qld

Last Altered: Monday, November 08, 2010 12:22:33 Eastern Standard Time

Printed: Monday, November 08, 2010 12:23:15 Eastern Standard Time

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of 4

Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7, Task: HRP763_1, User: MJC

	Name	RT
1	First TCDF	27.01
2	Last TCDF	32.31
3	First PeCDF	32.27
4	Last PeCDF	34.99
5	First HxCDF	35.49
6	Last HxCDF	37.89
7	First HpCDF	39.43
8	Last HpCDF	41.44
9	OCDF	45.49
10	First TCDD	28.77
11	2378-TCDD	31.73
12	Last TCDD	32.23
13	First PeCDD	33.15
14	Last PeCDD	34.80
15	First HxCDD	35.92
16	Last HxCDD	37.55
17	First HpCDD	39.76
18	Last HpCDD	40.73
19	OCDD	45.16

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_7-14.qld

Last Altered: Monday, November 08, 2010 12:22:33 Eastern Standard Time

Printed: Monday, November 08, 2010 12:23:15 Eastern Standard Time

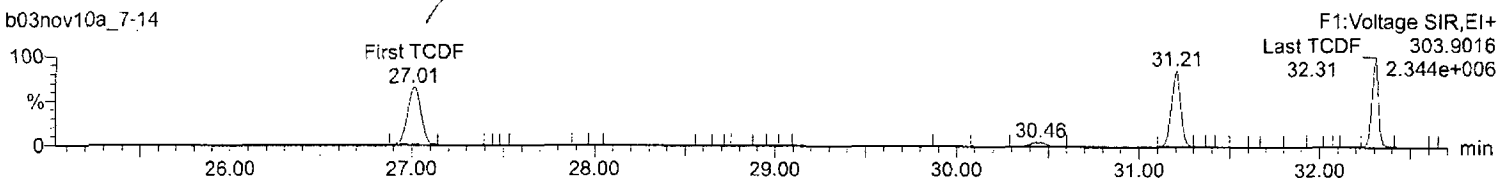
Method: C:\MassLynx\Default.pro\Methdb\WDM_110110.mdb 02 Nov 2010 09:13:24

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7, Task: HRP763_1, User: MJC

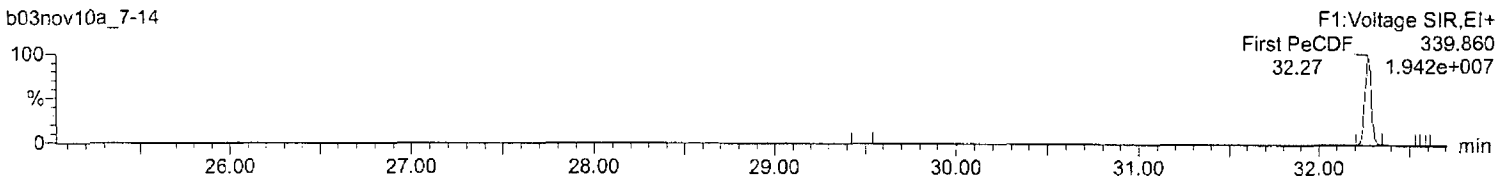
First TCDF

b03nov10a_7-14



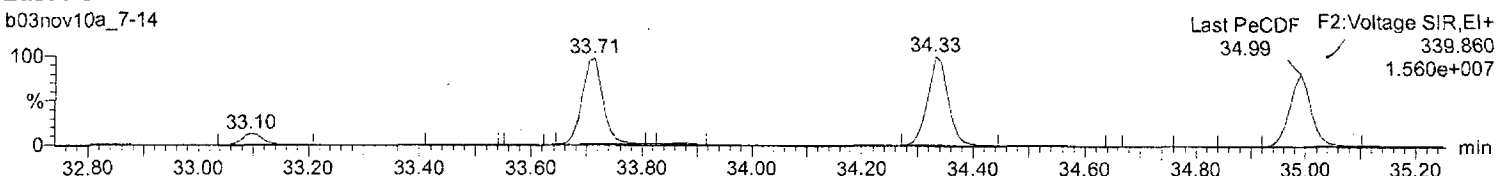
First PeCDF

b03nov10a_7-14



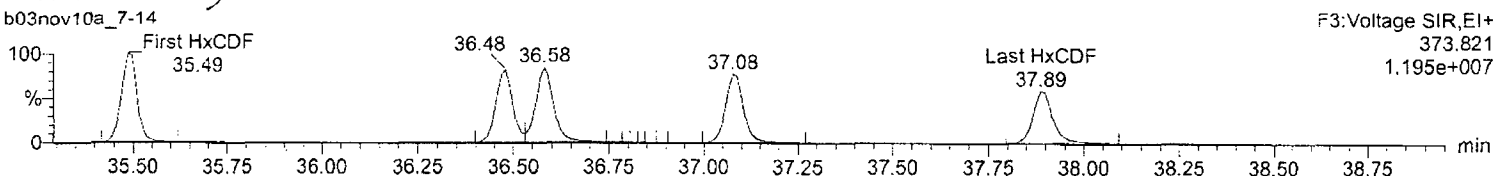
Last PeCDF

b03nov10a_7-14



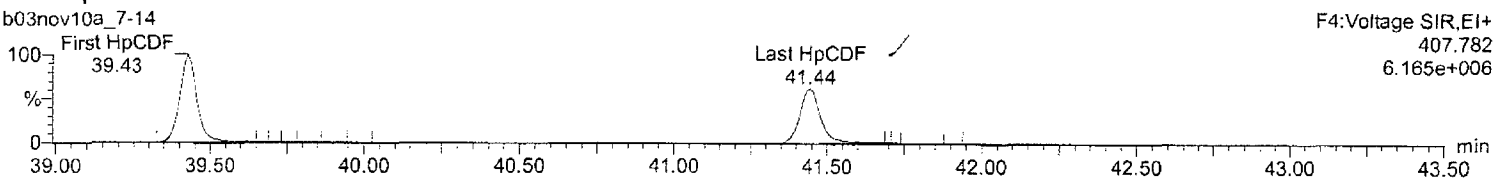
First HxCDF

b03nov10a_7-14



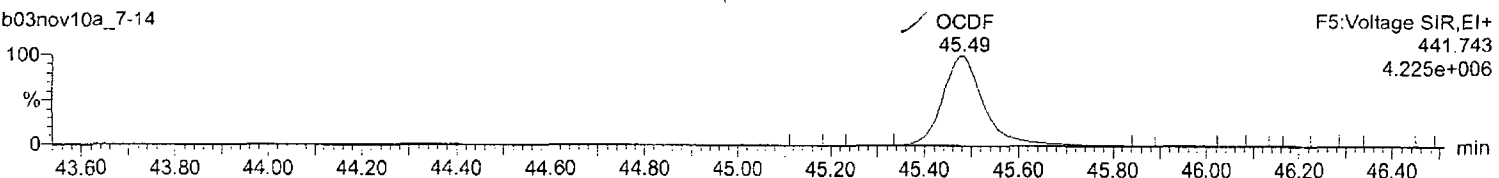
First HpCDF

b03nov10a_7-14



OCDF

b03nov10a_7-14



Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b03nov10a_7-14.qld

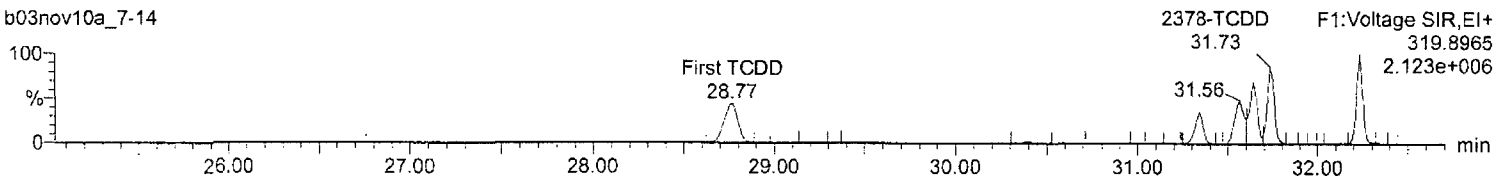
Last Altered: Monday, November 08, 2010 12:22:33 Eastern Standard Time

Printed: Monday, November 08, 2010 12:23:15 Eastern Standard Time

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7,
Task: HRP763_1, User: MJC

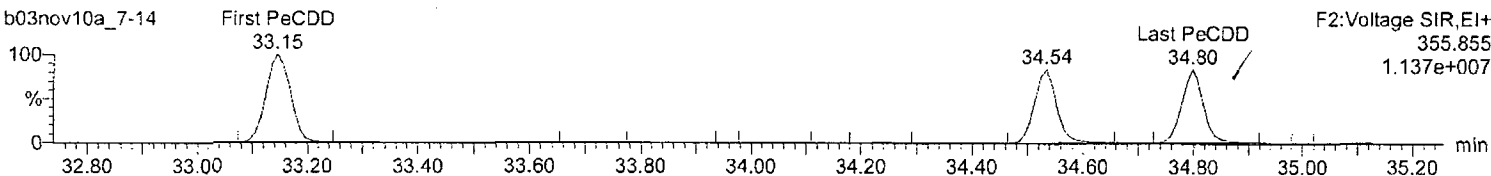
First TCDD

b03nov10a_7-14



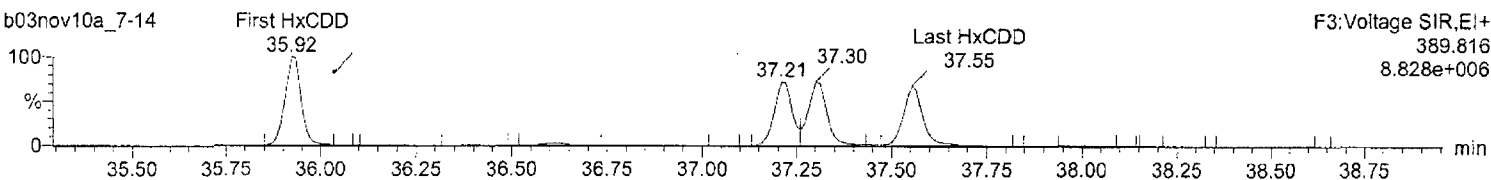
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b03nov10a_7-14



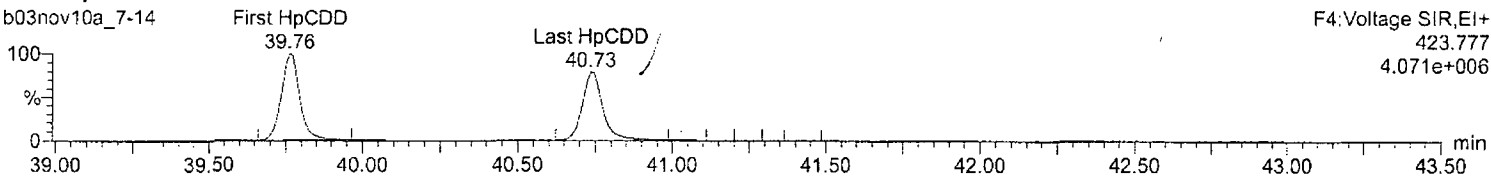
First HxCDD

b03nov10a_7-14



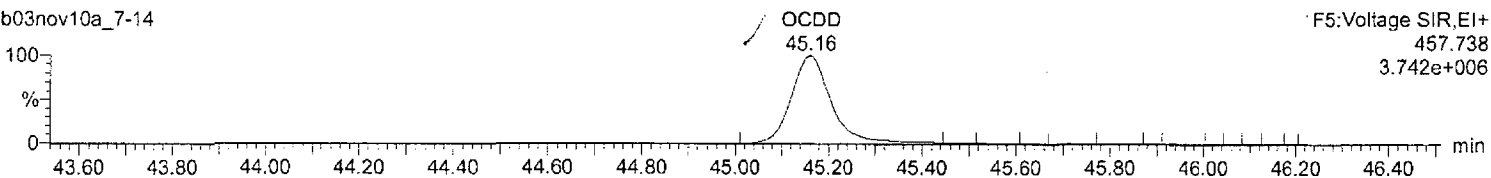
First HpCDD

b03nov10a_7-14



OCDD

b03nov10a_7-14



Quantify Sample Summary Report

MassLynx 4.1

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-1.qld

Last Altered: Wednesday, November 03, 2010 15:14:58 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:18:22 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/UL	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	8.03e4	9.94e4	1.80e5	31.76	1.000	0.81	NO	11.051	0.0277	1.119	10.5	1.68e6	1428	1177.3	2.09e6	1788	1171.7	db
2	12378-PeCDD	4.23e5	2.67e5	6.90e5	34.55	1.000	1.58	NO	50.491	0.111	1.042	1.0	9.14e6	4439	2058.4	5.73e6	6338	903.4	bb
3	123478-HxCDD	3.06e5	2.45e5	5.51e5	37.23	0.998	1.25	NO	49.034	0.174	0.879	-1.9	5.97e6	6397	932.9	4.83e6	4981	970.6	bd
4	123678-HxCDD	3.39e5	2.67e5	6.06e5	37.32	1.000	1.27	NO	49.983	0.161	0.967	-0.0	5.81e6	6397	907.4	4.54e6	4981	912.0	db
5	123789-HxCDD	3.04e5	2.37e5	5.41e5	37.57	1.007	1.28	NO	49.886	0.180	0.863	-0.2	5.13e6	6397	801.5	3.99e6	4981	800.3	bb
6	1234678-HpCDD	2.15e5	2.06e5	4.21e5	40.75	1.000	1.05	NO	50.633	0.228	1.018	1.3	2.66e6	3887	683.6	2.59e6	3836	676.2	bb
7	OCDD	3.16e5	3.45e5	6.61e5	45.18	1.000	0.91	NO	102.766	0.418	1.023	2.8	2.90e6	3880	747.4	3.26e6	4003	814.2	bd
8	2378-TCDF	1.08e5	1.43e5	2.52e5	31.22	1.000	0.76	NO	9.474	0.0240	0.932	-5.3	1.89e6	1768	1066.8	2.46e6	1878	1310.1	bb
9	12378-PeCDF	6.37e5	4.08e5	1.05e6	33.72	1.000	1.56	NO	49.628	0.0714	0.927	-0.7	1.47e7	4371	3358.8	9.41e6	6908	1362.1	bd
10	23478-PeCDF	6.75e5	4.40e5	1.11e6	34.35	1.019	1.53	NO	54.036	0.0730	0.988	8.1	1.58e7	4371	3619.0	1.01e7	6908	1458.2	bb
11	123478-HxCDF	4.53e5	3.68e5	8.21e5	36.49	0.998	1.23	NO	49.365	0.164	0.897	-1.3	8.91e6	7660	1163.0	7.35e6	7878	933.3	bd
12	123678-HxCDF	5.29e5	4.29e5	9.57e5	36.60	1.001	1.23	NO	49.459	0.141	1.046	-1.1	9.41e6	7660	1228.3	7.62e6	7878	967.3	db
13	234678-HxCDF	4.67e5	3.85e5	8.51e5	37.10	1.014	1.21	NO	48.671	0.156	0.930	-2.7	8.57e6	7660	1119.3	7.00e6	7878	888.5	bb
14	123789-HxCDF	3.97e5	3.15e5	7.13e5	37.91	1.036	1.26	NO	49.194	0.189	0.779	-1.6	6.16e6	7660	803.8	4.93e6	7878	625.3	bd
15	1234678-HpCDF	3.63e5	3.48e5	7.11e5	39.45	1.000	1.04	NO	49.475	0.139	1.263	-1.1	5.37e6	5445	986.1	5.04e6	4214	1196.8	bb
16	1234789-HpCDF	2.68e5	2.61e5	5.29e5	41.45	1.051	1.03	NO	50.540	0.191	0.940	1.1	3.16e6	5445	580.9	3.17e6	4214	753.3	bd
17	OCDF	3.82e5	4.17e5	7.99e5	45.51	1.008	0.91	NO	100.344	0.293	1.237	0.3	3.47e6	3060	1135.5	3.81e6	3795	1003.0	bd
18	13C-2378-TCDD	7.07e5	8.99e5	1.61e6	31.75	1.013	0.79	NO	92.220	0.0420	1.033	-7.8	1.52e7	2633	5757.7	1.90e7	2020	9404.6	bb
19	13C-12378-PeCDD	8.10e5	5.15e5	1.32e6	34.54	1.102	1.57	NO	89.645	0.0798	0.852	-10.4	1.72e7	5302	3241.5	1.12e7	2203	5075.3	bb
20	13C-123678-HxCDD	6.89e5	5.64e5	1.25e6	37.31	0.993	1.22	NO	102.842	0.149	1.143	2.8	1.20e7	4346	2769.0	9.56e6	5311	1800.9	db
21	13C-1234678-HpCDD	4.23e5	4.03e5	8.27e5	40.74	1.085	1.05	NO	94.237	0.165	0.754	-5.8	5.18e6	4327	1196.7	4.82e6	3383	1426.1	bd
22	13C-OCDD	6.14e5	6.79e5	1.29e6	45.16	1.202	0.90	NO	176.455	0.183	0.590	-11.8	5.40e6	3147	1716.5	6.10e6	4008	1521.7	bd
23	13C-2378-TCDF	1.20e6	1.50e6	2.70e6	31.21	0.996	0.80	NO	95.321	0.0200	1.736	-4.7	2.05e7	1735	11824.7	2.63e7	1878	14006.0	bd
24	13C-12378-PeCDF	1.37e6	8.80e5	2.26e6	33.71	1.076	1.56	NO	85.657	0.0993	1.450	-14.3	3.09e7	8855	3491.0	2.01e7	7791	2580.5	bd
25	13C-123678-HxCDF	6.12e5	1.22e6	1.83e6	36.58	0.974	0.50	NO	102.442	0.148	1.670	2.4	1.05e7	5093	2052.0	2.05e7	8983	2284.9	db
26	13C-1234678-HpCDF	3.44e5	7.81e5	1.12e6	39.44	1.050	0.44	NO	94.981	0.174	1.027	-5.0	4.99e6	4780	1043.3	1.10e7	6202	1765.5	bd
27	13C-1234-TCDD	6.88e5	8.67e5	1.56e6	31.34	0.000	0.79	NO	100.000	0.0470	1.000	0.0	1.31e7	2633	4992.8	1.68e7	2020	8329.4	bb
28	13C-123789-HxCDD	6.11e5	4.85e5	1.10e6	37.56	0.000	1.26	NO	100.000	0.165	1.000	0.0	9.77e6	4346	2248.8	7.59e6	5311	1429.7	bb
29	37Cl-2378-TCDD (SS)	1.80e5		1.80e5	31.76	1.000			10.619	0.0158	1.119	6.2	3.83e6	1915	1998.1				bb
30	13C-23478-PeCDF (SS)	1.41e6	8.98e5	2.31e6	34.34	1.019	1.57	NO	109.693	0.106	1.024	9.7	3.23e7	8855	3649.7	2.07e7	7791	2660.2	bb

Quantify Sample Summary Report MassLynx 4.1

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-1.qld

Last Altered: Wednesday, November 03, 2010 15:14:58 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:18:22 Eastern Standard Time

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Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
	13C-123478-HxCDF (SS)	4.85e5	9.47e5	1.43e6	36.48	0.997	0.51	NO	96.607	0.167	0.782	-3.4	9.70e6	5093	1904.4	1.88e7	8983	2095.4	bd
	13C-123478-HxCDD (SS)	5.96e5	4.43e5	1.04e6	37.22	0.998	1.34	NO	96.381	0.154	0.830	-3.6	1.15e7	4346	2643.3	8.81e6	5311	1659.7	bd
33	13C-1234789-HpCDF (SS)	2.50e5	5.64e5	8.14e5	41.44	1.051	0.44	NO	95.723	0.267	0.724	-4.3	3.07e6	4780	641.4	6.72e6	6202	1083.4	bd

Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-1.qld

Last Altered: Wednesday, November 03, 2010 15:14:58 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:18:22 Eastern Standard Time

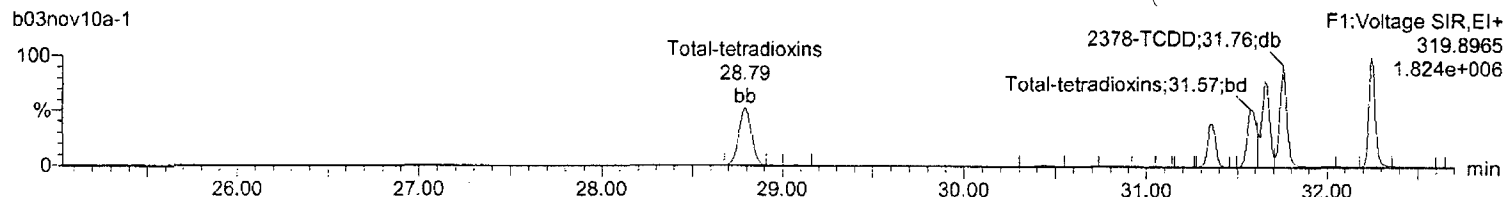
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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

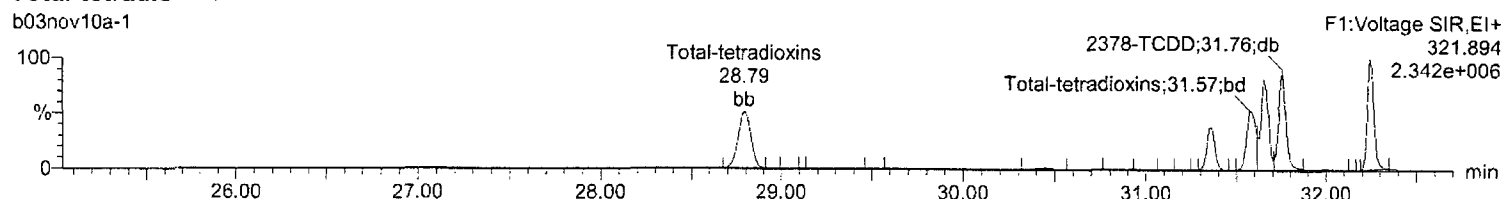
Total-tetradoxins

b03nov10a-1



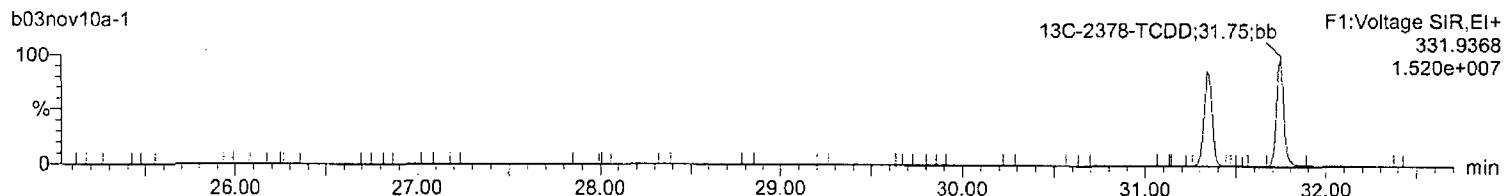
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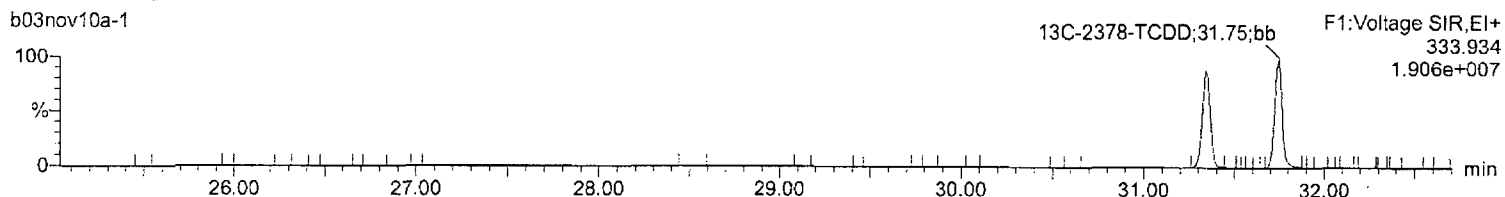
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b03nov10a-1



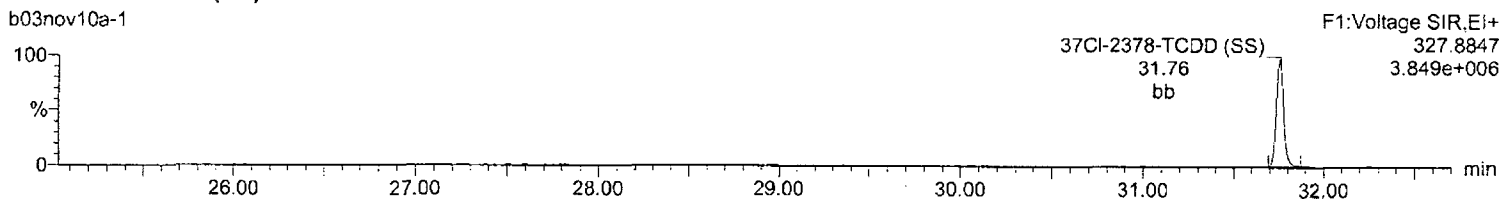
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b03nov10a-1



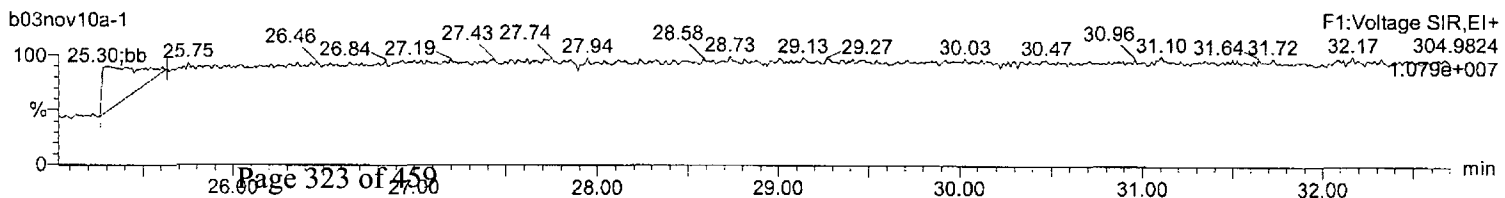
37Cl-2378-TCDD (SS)

b03nov10a-1



Lock Mass F1

b03nov10a-1



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-1.qld

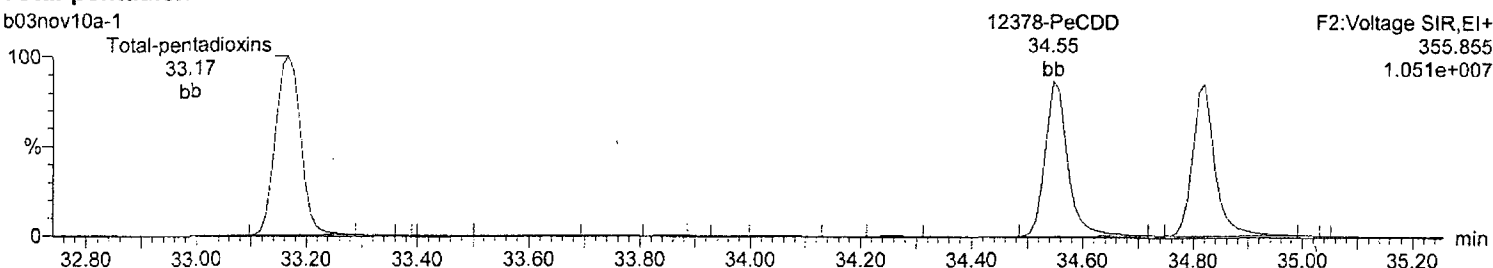
Last Altered: Wednesday, November 03, 2010 15:14:58 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:18:22 Eastern Standard Time

Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

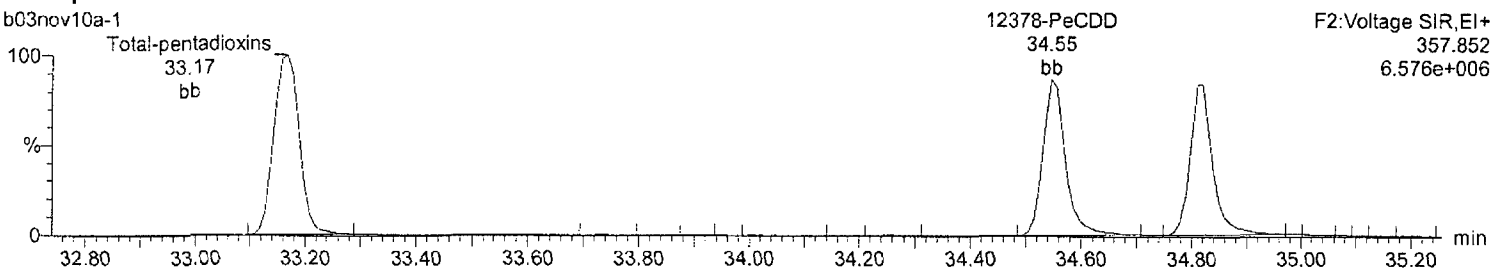
Total-pentadioxins

b03nov10a-1



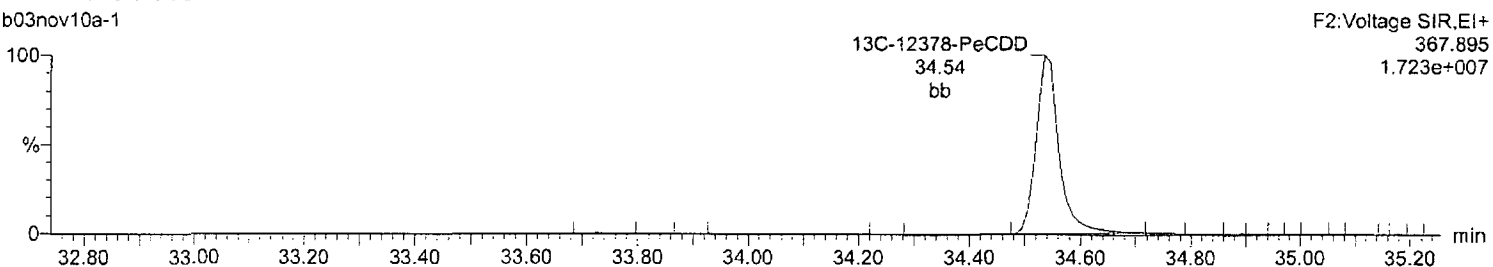
Total-pentadioxins

b03nov10a-1



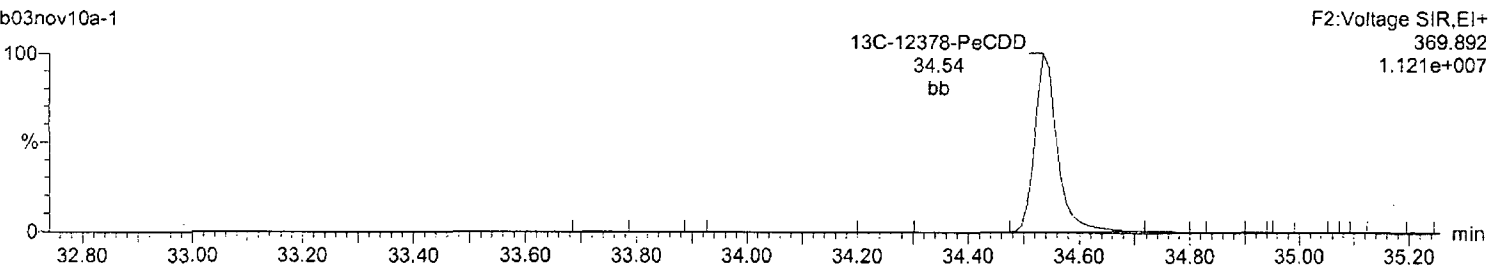
13C-12378-PeCDD

b03nov10a-1



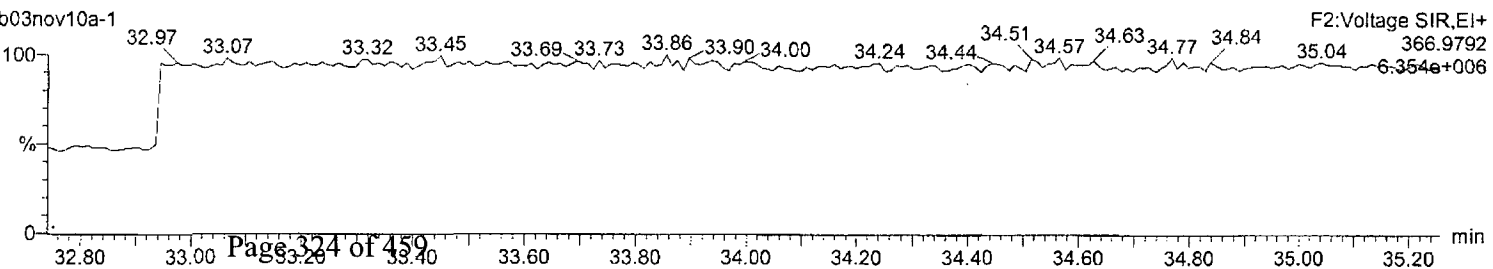
13C-12378-PeCDD

b03nov10a-1



Lock Mass F2

b03nov10a-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-1.qld

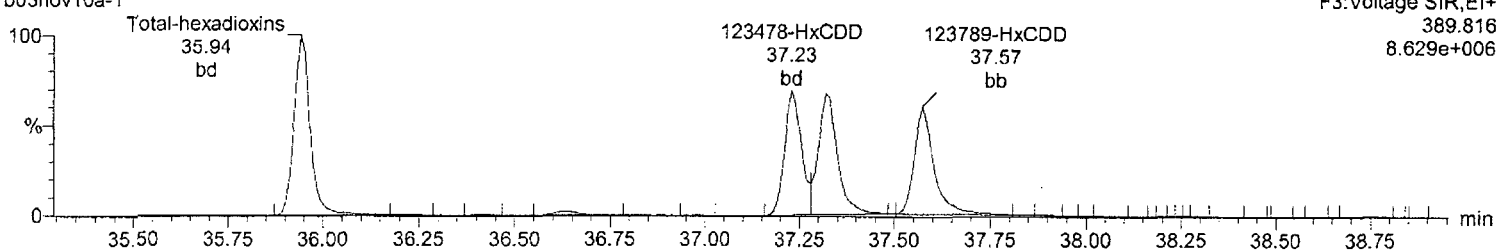
Last Altered: Wednesday, November 03, 2010 15:14:58 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:18:22 Eastern Standard Time

Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

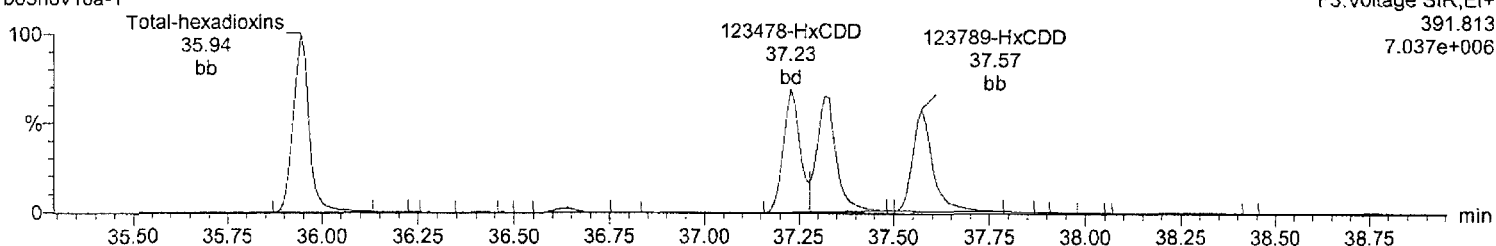
Total-hexadioxins

b03nov10a-1



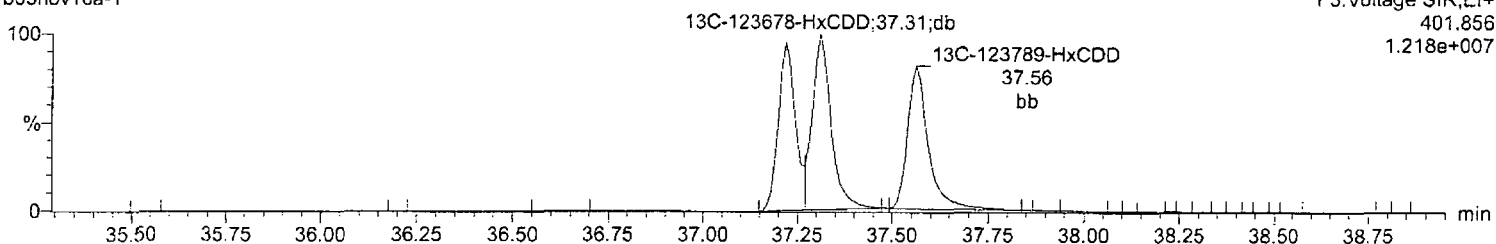
Total-hexadioxins

b03nov10a-1



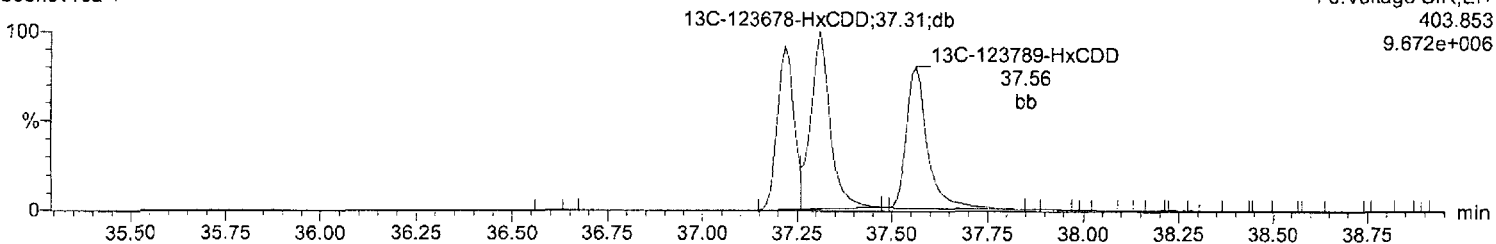
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b03nov10a-1



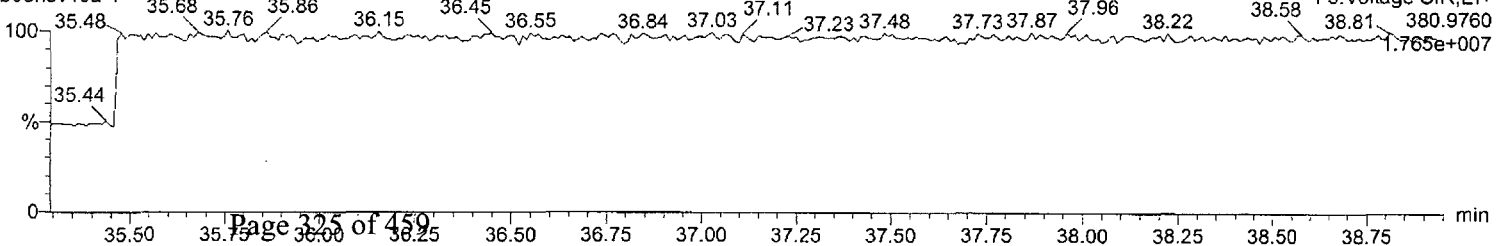
13C-123678-HxCDD

b03nov10a-1



Lock Mass F3

b03nov10a-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-1.qld

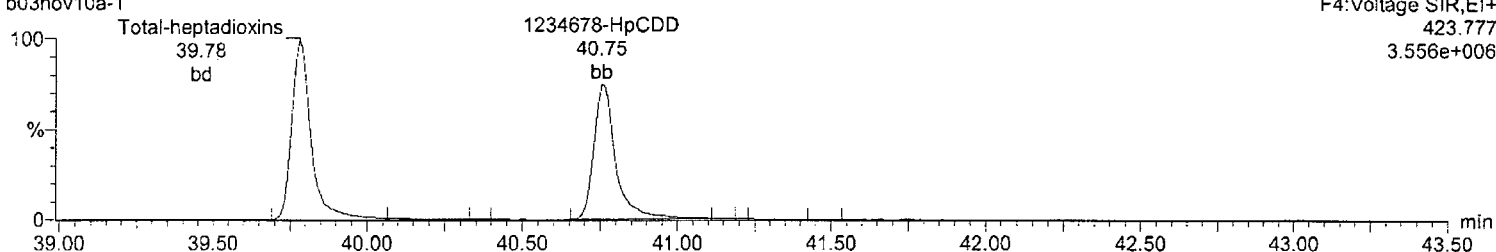
Last Altered: Wednesday, November 03, 2010 15:14:58 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:18:22 Eastern Standard Time

Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

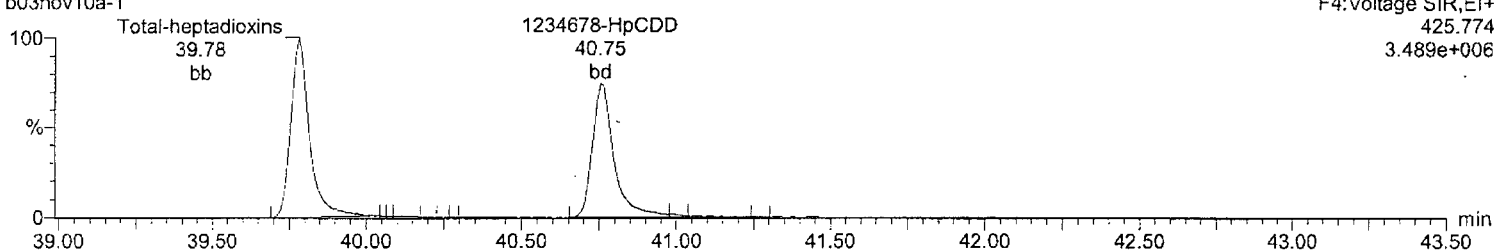
Total-heptadioxins

b03nov10a-1



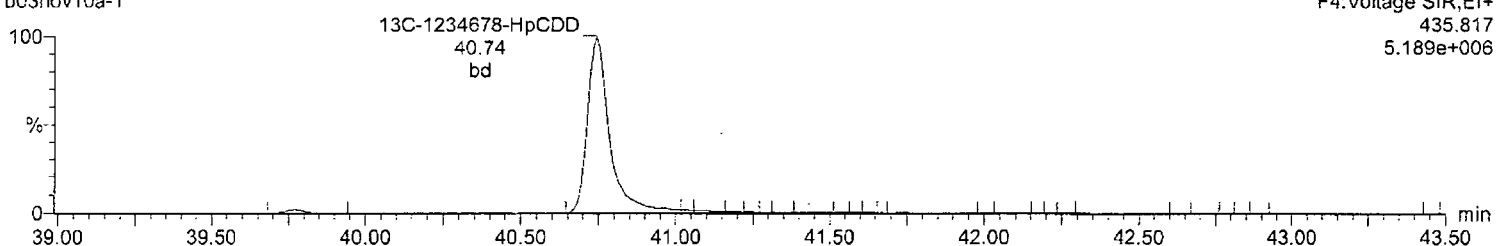
Total-heptadioxins

b03nov10a-1



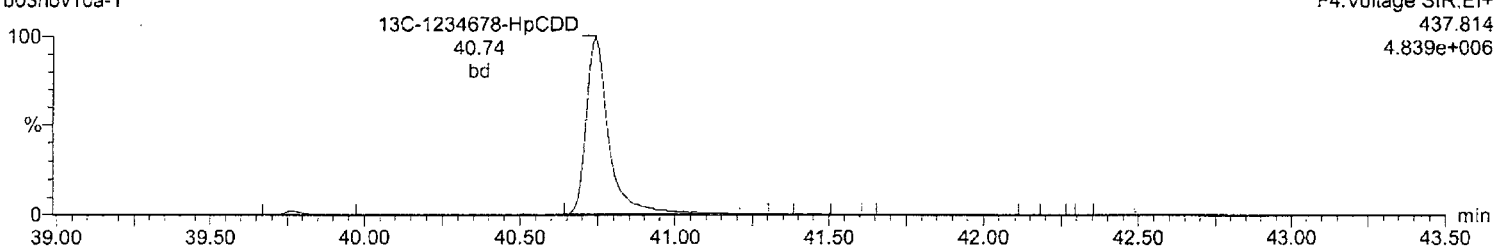
13C-1234678-HpCDD

b03nov10a-1



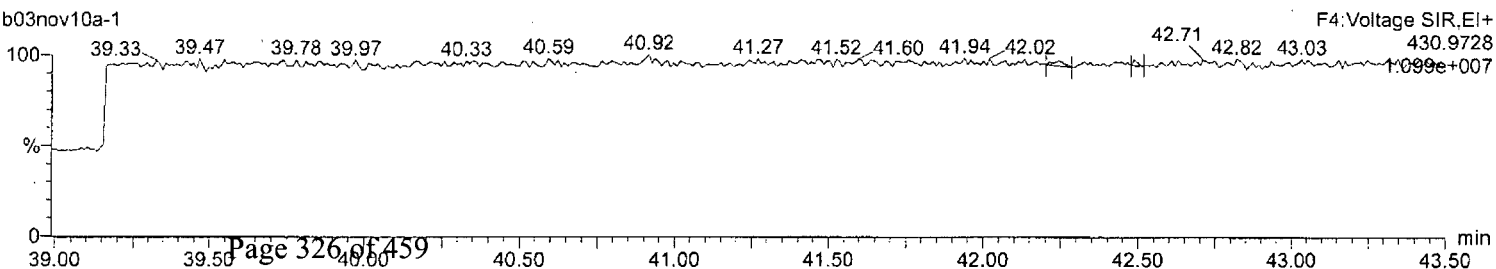
13C-1234678-HpCDD

b03nov10a-1



Lock Mass F4

b03nov10a-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-1.qld

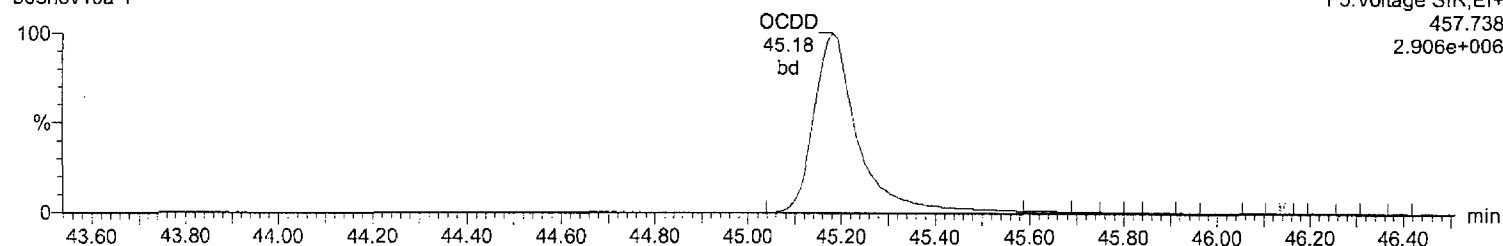
Last Altered: Wednesday, November 03, 2010 15:14:58 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:18:22 Eastern Standard Time

Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

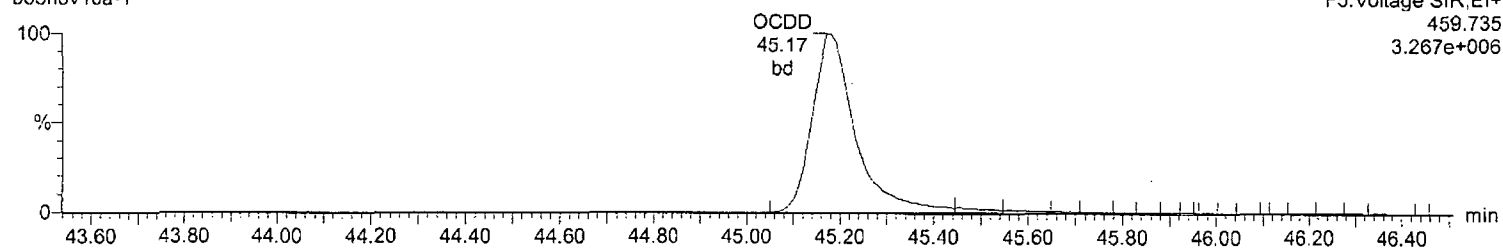
OCDD

b03nov10a-1



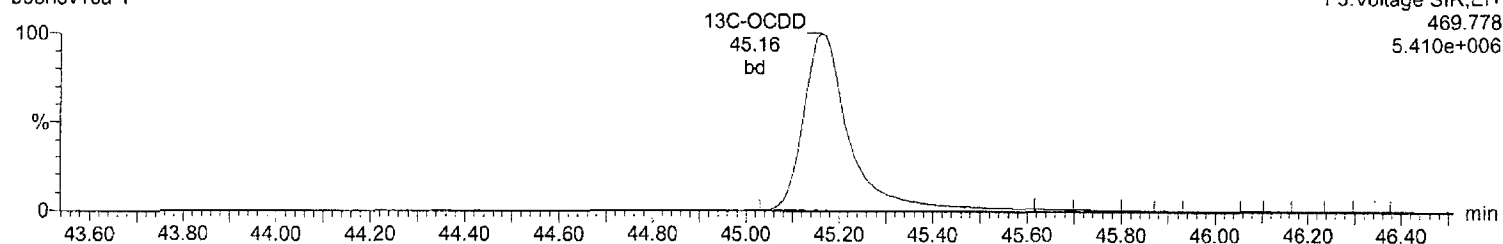
OCDD

b03nov10a-1



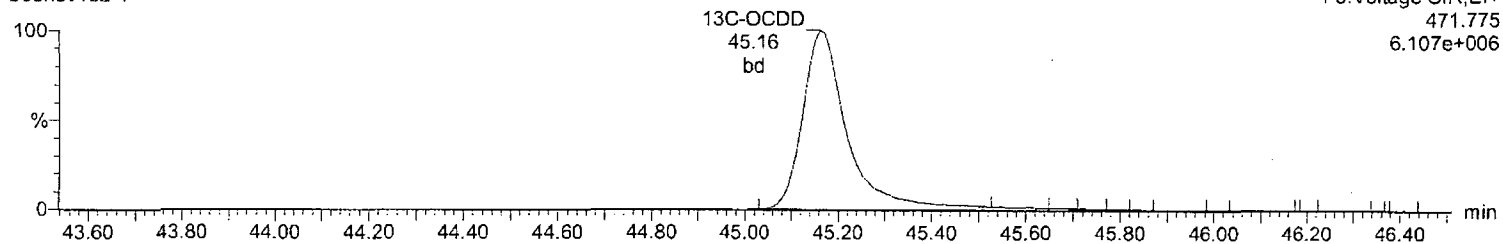
¹³C-OCDD

b03nov10a-1



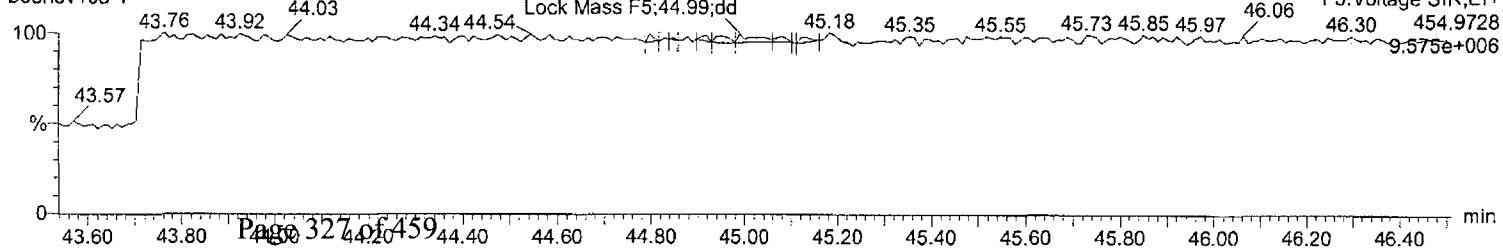
¹³C-OCDD

b03nov10a-1



Lock Mass F5

b03nov10a-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-1.qld

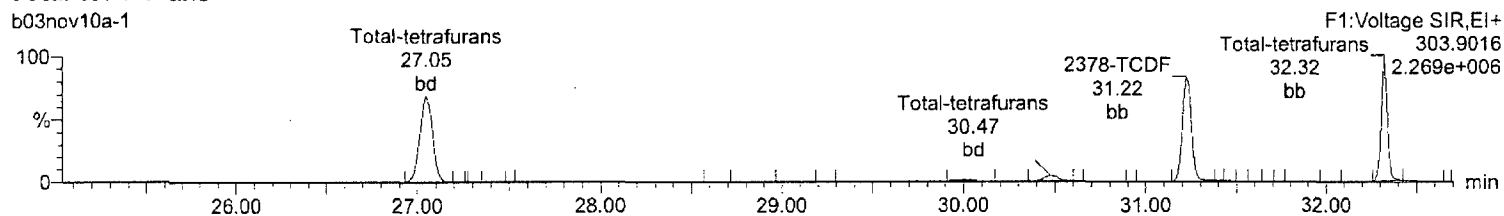
Last Altered: Wednesday, November 03, 2010 15:14:58 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:18:22 Eastern Standard Time

Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

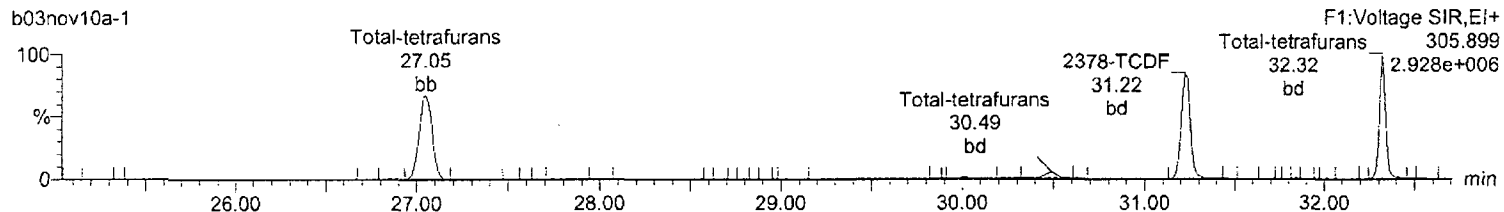
Total-tetrafurans

b03nov10a-1



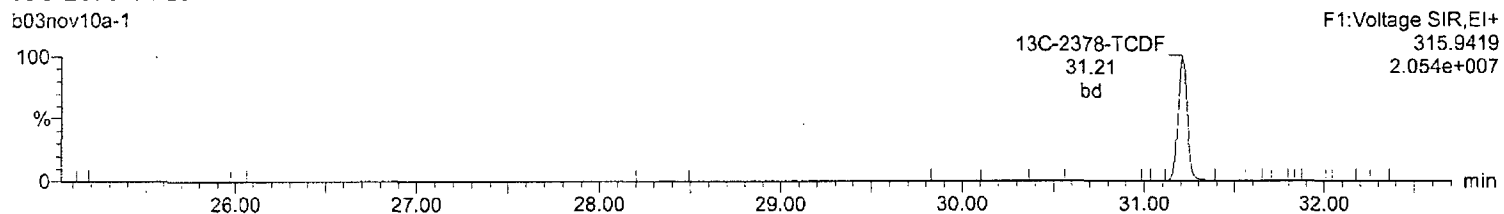
Total-tetrafurans

b03nov10a-1



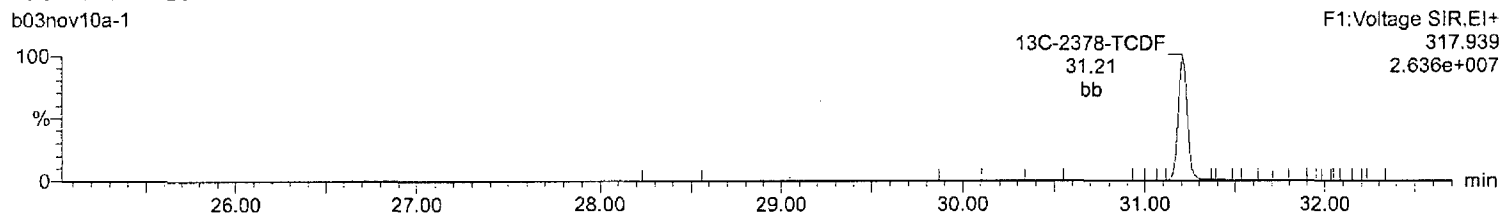
13C-2378-TCDF

b03nov10a-1



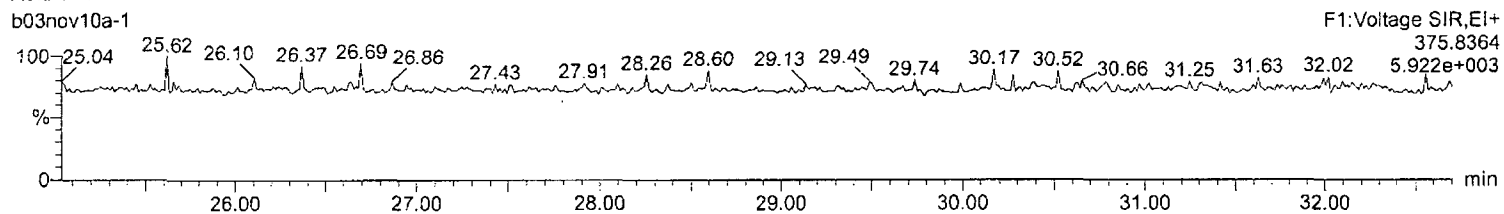
13C-2378-TCDF

b03nov10a-1



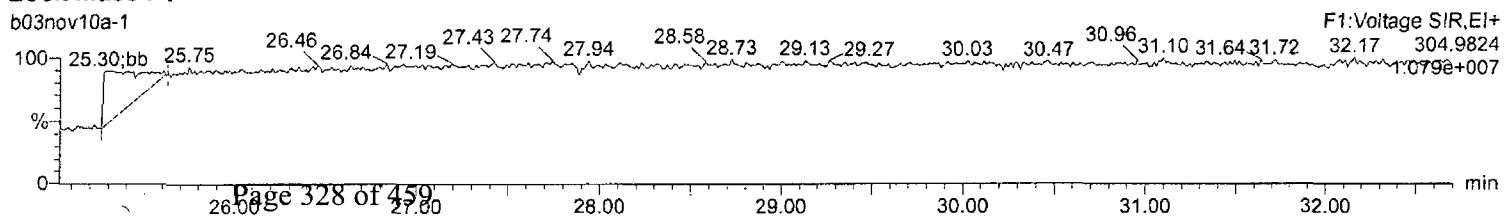
HxDPE

b03nov10a-1



Lock Mass F1

b03nov10a-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-1.qld

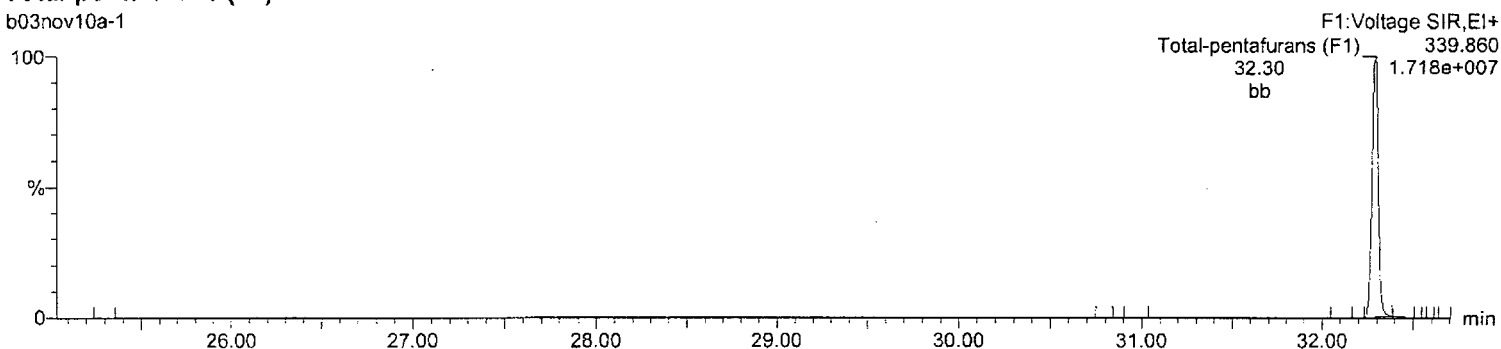
Last Altered: Wednesday, November 03, 2010 15:14:58 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:18:22 Eastern Standard Time

Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

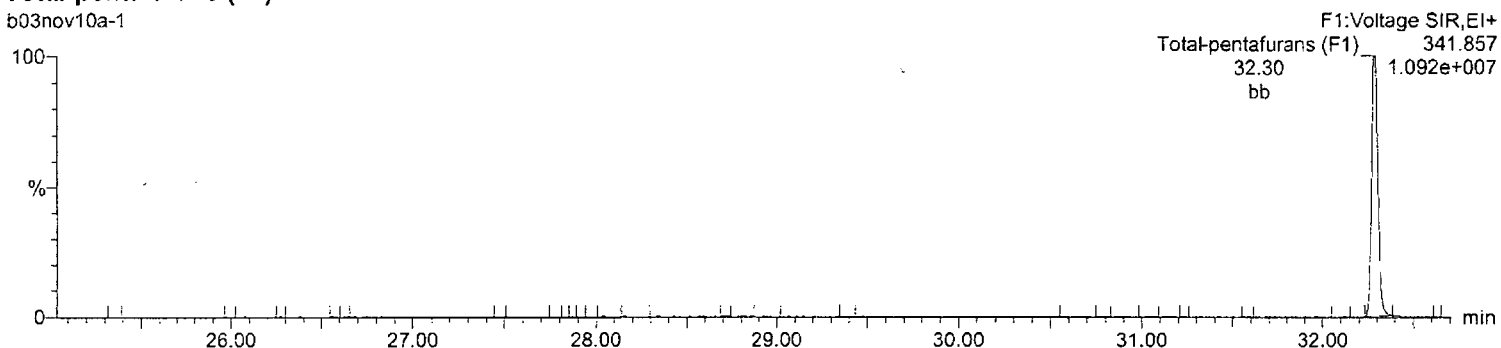
Total-pentafulurans (F1)

b03nov10a-1



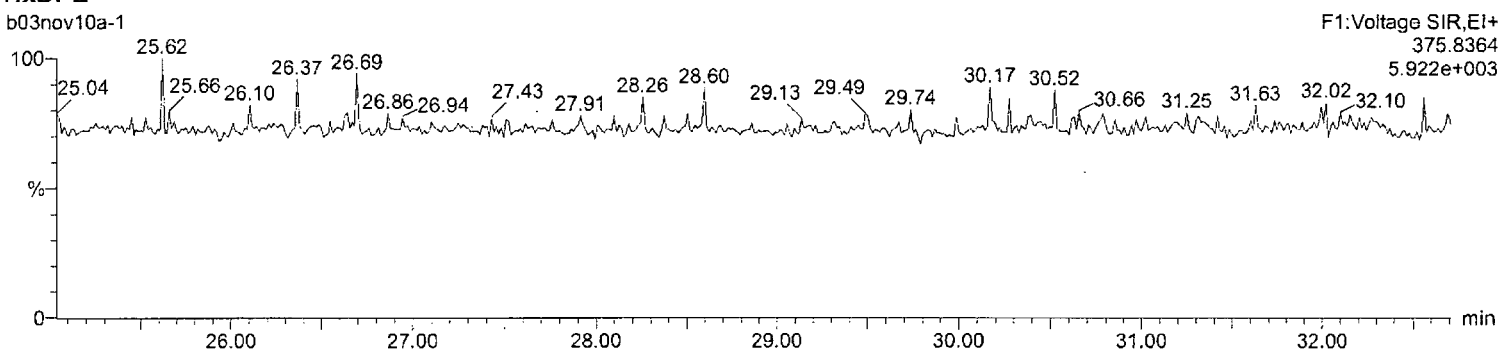
Total-pentafulurans (F1)

b03nov10a-1



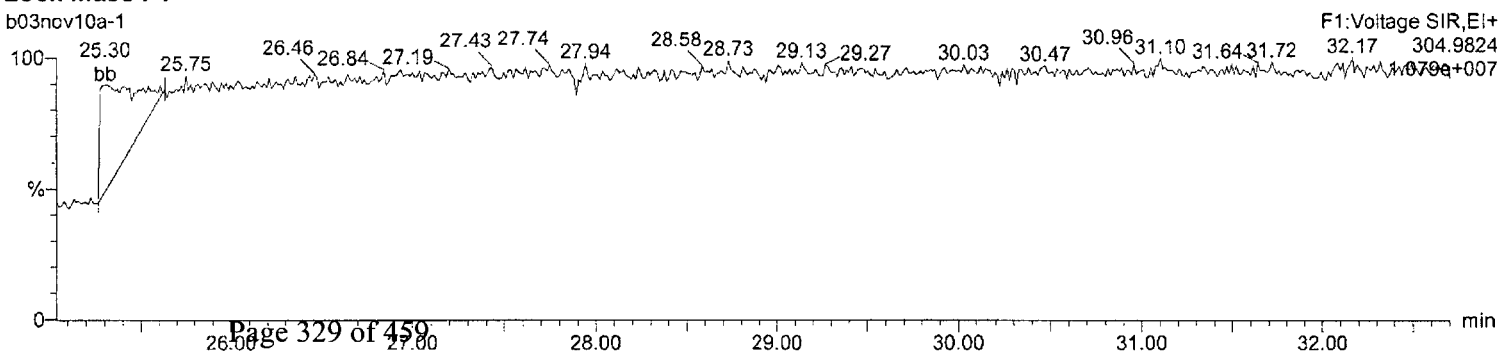
HxDPE

b03nov10a-1



Lock Mass F1

b03nov10a-1



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-1.qld

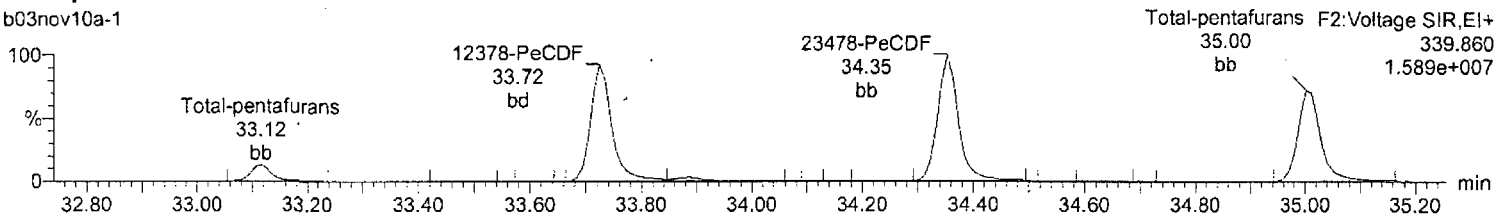
Last Altered: Wednesday, November 03, 2010 15:14:58 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:18:22 Eastern Standard Time

Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

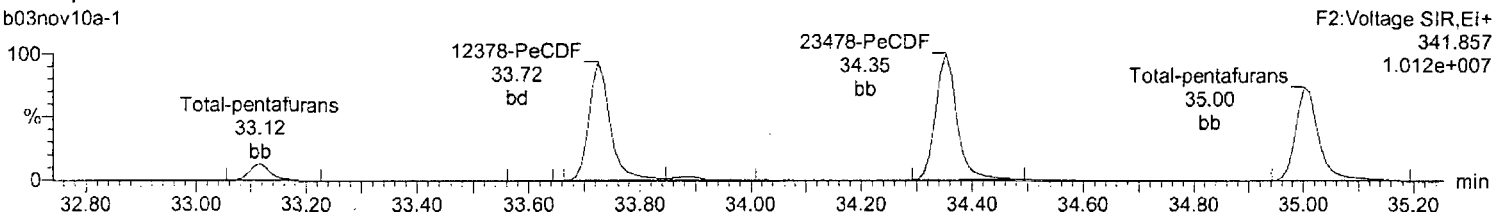
Total-pentafurans

b03nov10a-1



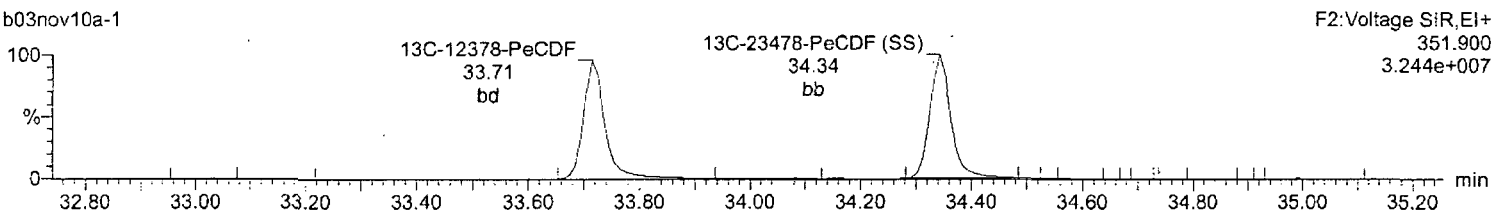
Total-pentafurans

b03nov10a-1



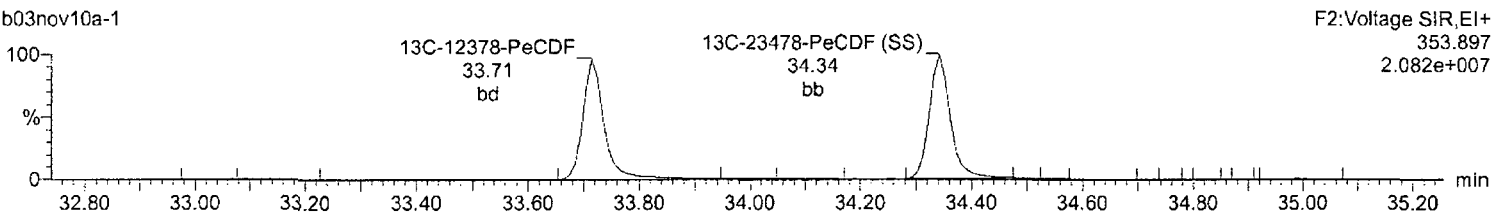
13C-12378-PeCDF

b03nov10a-1



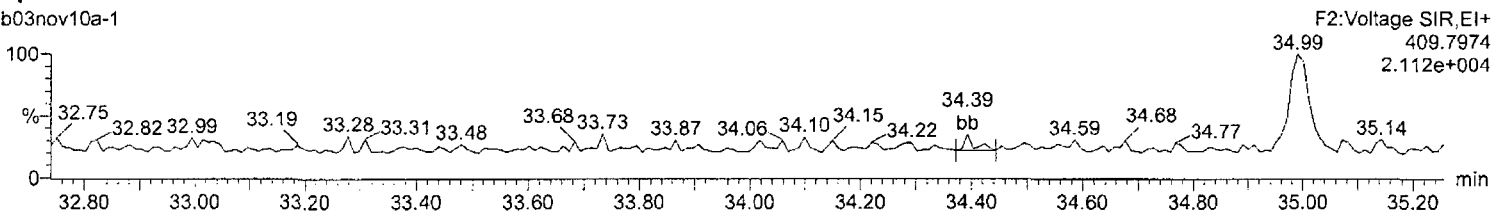
13C-12378-PeCDF

b03nov10a-1



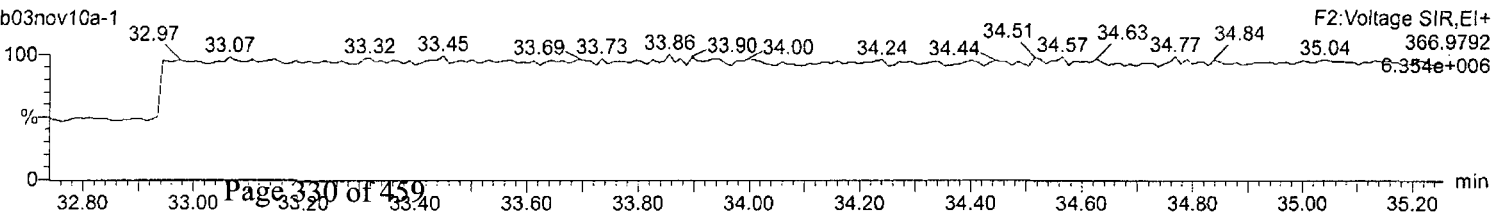
HpDPE

b03nov10a-1



Lock Mass F2

b03nov10a-1



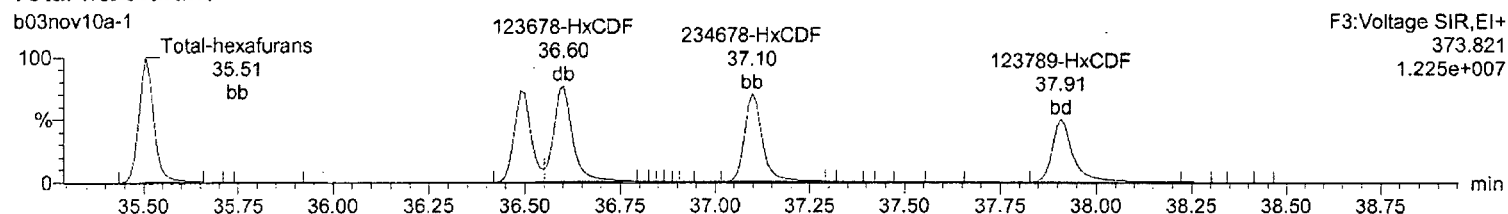
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-1.qld

Last Altered: Wednesday, November 03, 2010 15:14:58 Eastern Standard Time

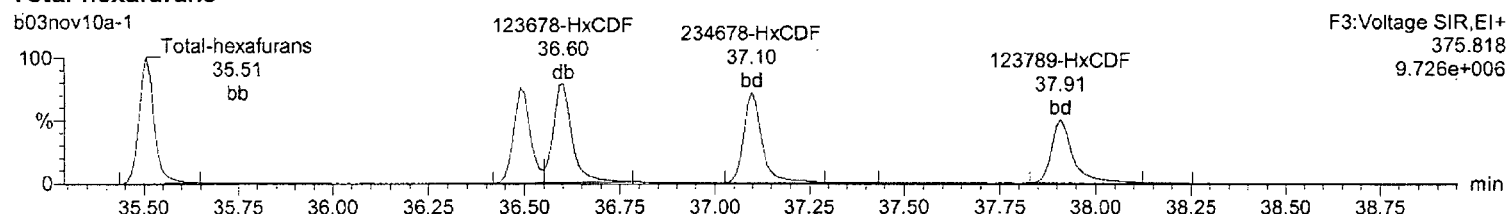
Printed: Wednesday, November 03, 2010 15:18:22 Eastern Standard Time

Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

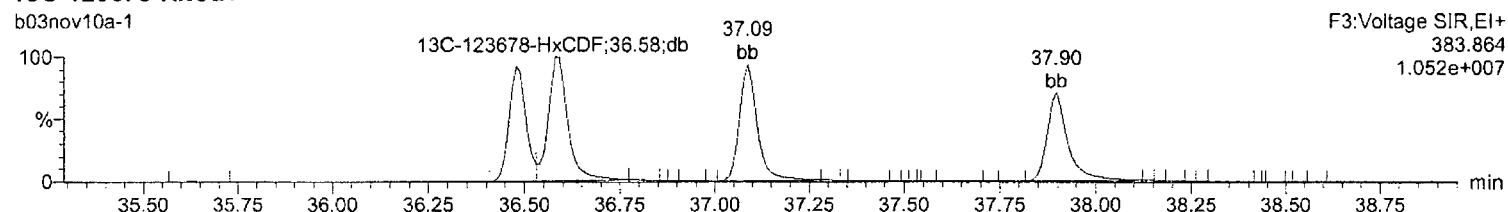
Total-hexafurans



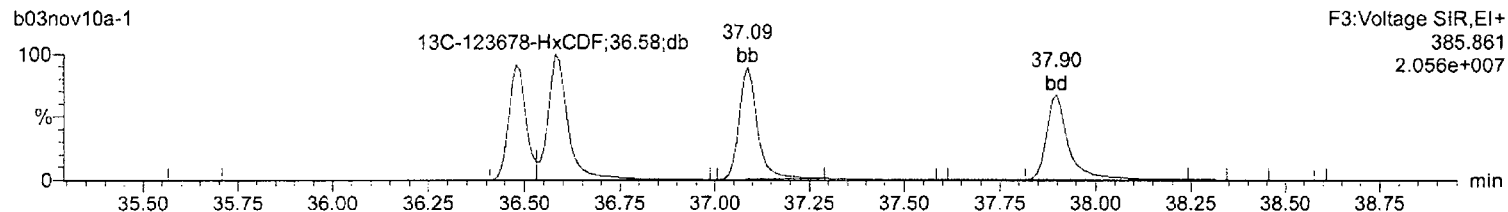
Total-hexafurans



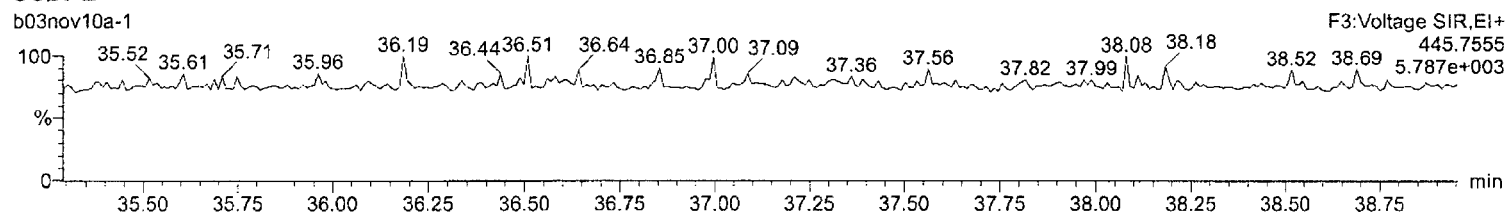
13C-123678-HxCDF



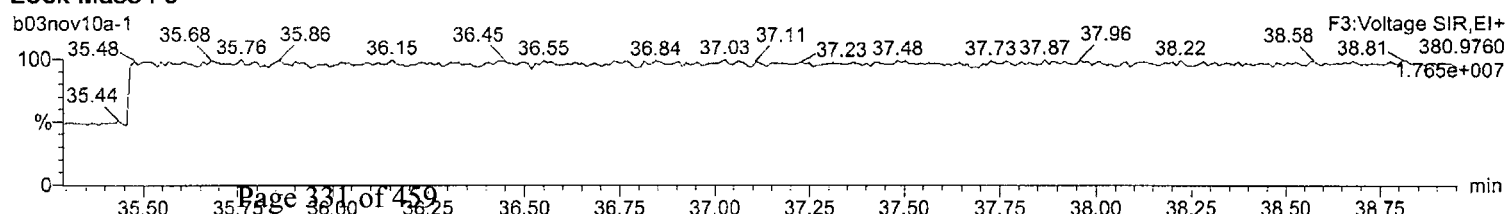
13C-123678-HxCDF



OcDPE



Lock Mass F3



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-1.qld

Last Altered: Wednesday, November 03, 2010 15:14:58 Eastern Standard Time

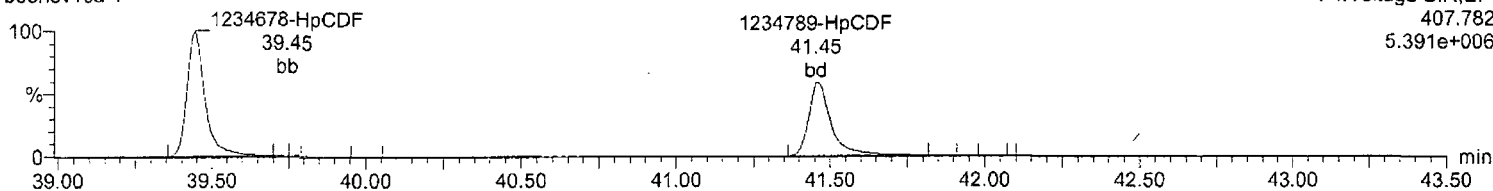
Printed: Wednesday, November 03, 2010 15:18:22 Eastern Standard Time

Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

Total-heptafurans

b03nov10a-1

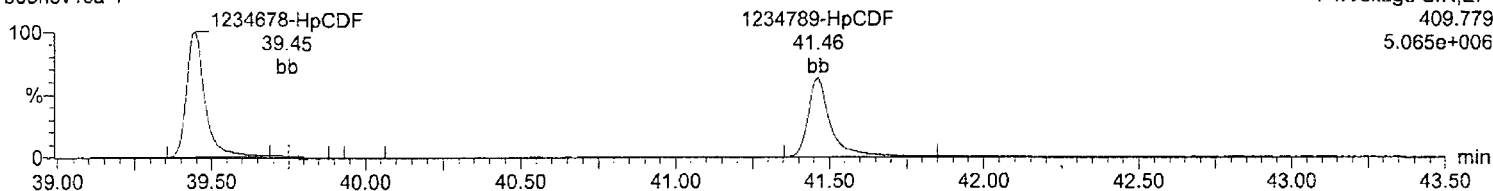
F4:Voltage SIR,EI+
407.782
5.391e+006



Total-heptafurans

b03nov10a-1

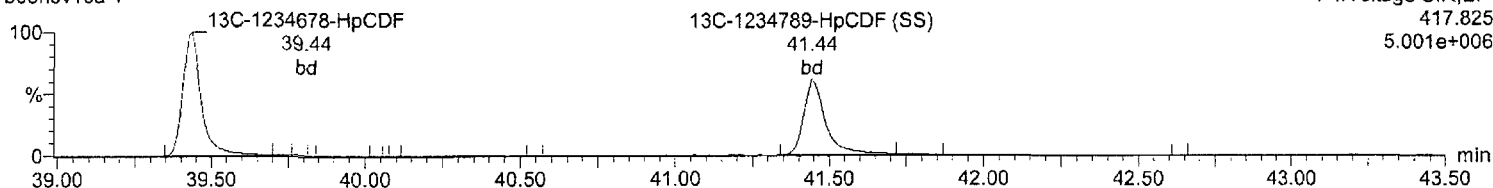
F4:Voltage SIR,EI+
409.779
5.065e+006



13C-1234678-HpCDF

b03nov10a-1

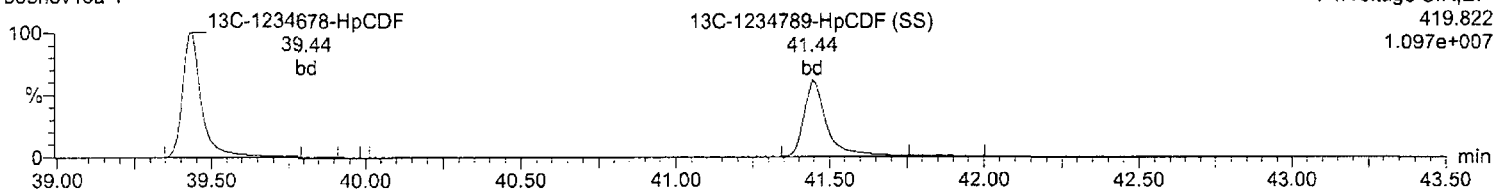
F4:Voltage SIR,EI+
417.825
5.001e+006



13C-1234678-HpCDF

b03nov10a-1

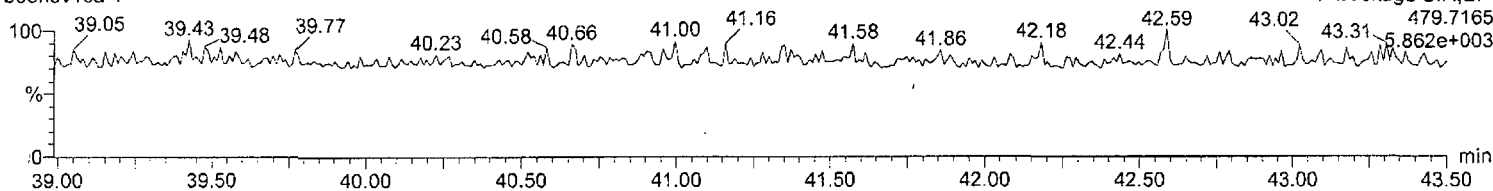
F4:Voltage SIR,EI+
419.822
1.097e+007



NoDPE

b03nov10a-1

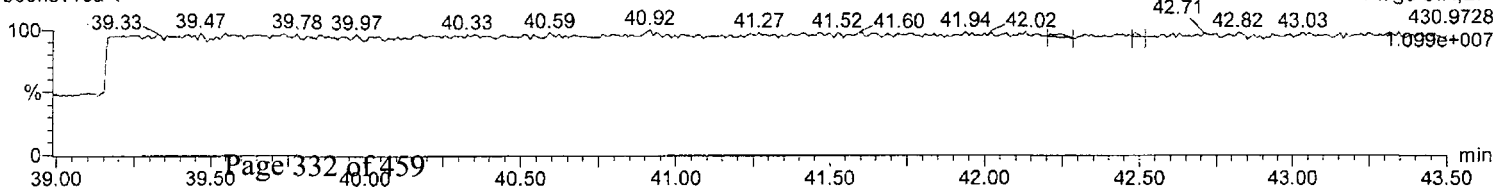
F4:Voltage SIR,EI+
479.7165
5.862e+003



Lock Mass F4

b03nov10a-1

F4:Voltage SIR,EI+
430.9728
1.099e+007



Quantify Sample Report

MassLynx 4.1

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-1.qld

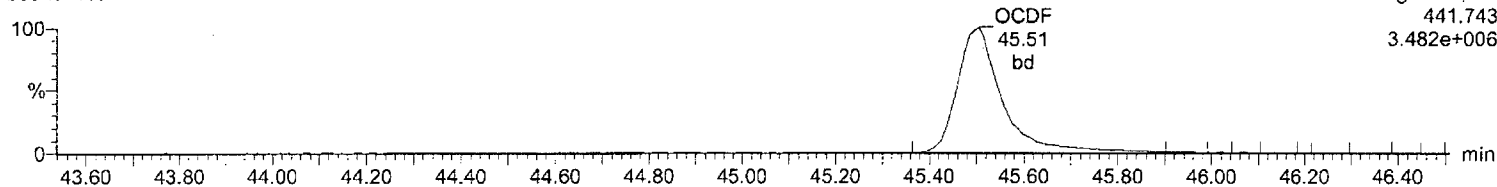
Last Altered: Wednesday, November 03, 2010 15:14:58 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:18:22 Eastern Standard Time

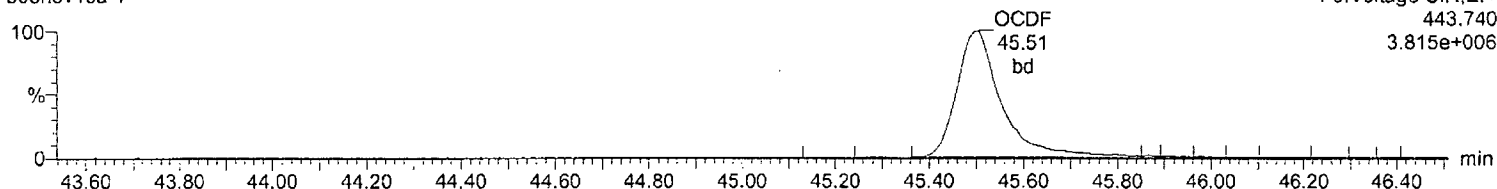
Name: b03nov10a-1, Date: 03-Nov-2010, Time: 08:32:18, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

OCDF

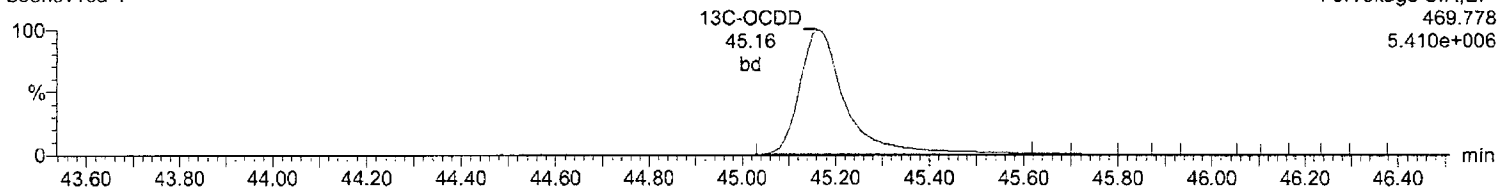
b03nov10a-1

**OCDF**

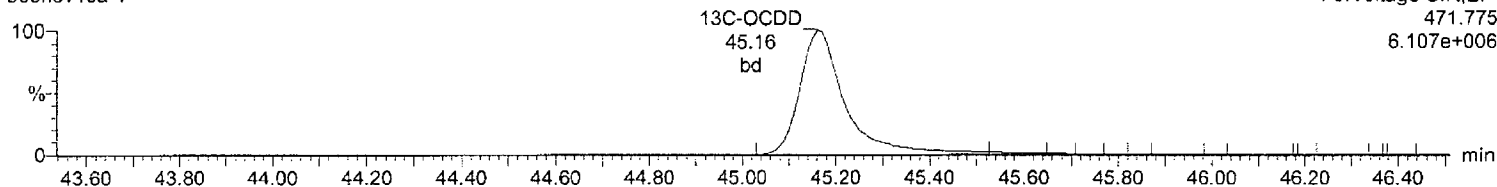
b03nov10a-1

**¹³C-OCDD**

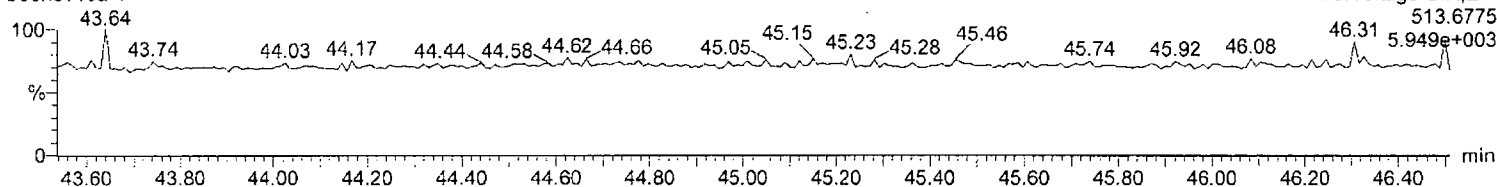
b03nov10a-1

**¹³C-OCDD**

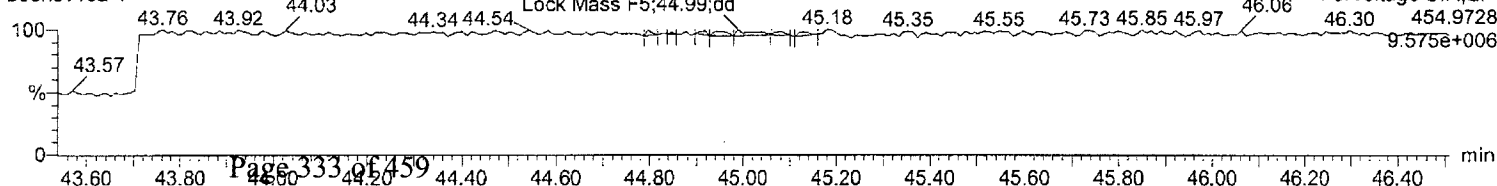
b03nov10a-1

**DeDPE**

b03nov10a-1

**Lock Mass F5**

b03nov10a-1



Quantify Sample Summary Report

MassLynx 4.1

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-9.qld

Last Altered: Wednesday, November 03, 2010 15:47:59 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:48:58 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15
 Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	9.21e4	1.18e5	2.10e5	31.75	1.000	0.78	NO	10.712	0.0183	1.085	7.1	1.97e6	1302	1512.0	2.48e6	1161	2134.7	db
2	12378-PeCDD	5.28e5	3.34e5	8.62e5	34.54	1.000	1.58	NO	50.625	0.0592	1.045	1.2	1.20e7	3733	3215.2	7.59e6	4154	1827.9	bb
3	123478-HxCDD	4.08e5	3.28e5	7.36e5	37.22	0.998	1.25	NO	50.824	0.115	0.911	1.6	8.10e6	4900	1653.1	6.46e6	4971	1299.0	bd
4	123678-HxCDD	4.41e5	3.60e5	8.01e5	37.31	1.000	1.22	NO	51.244	0.106	0.992	2.5	7.73e6	4900	1578.3	6.23e6	4971	1253.8	db
5	123789-HxCDD	4.07e5	3.35e5	7.42e5	37.56	1.007	1.22	NO	53.072	0.119	0.919	6.1	6.88e6	4900	1403.6	5.64e6	4971	1134.1	bb
6	1234678-HpCDD	3.06e5	2.86e5	5.93e5	40.74	1.000	1.07	NO	51.619	0.140	1.037	3.2	4.24e6	3721	1140.2	3.93e6	3415	1151.1	bd
7	OCDD	4.39e5	5.15e5	9.54e5	45.16	1.000	0.85	NO	102.095	0.204	1.017	2.1	4.53e6	2900	1562.7	5.03e6	3384	1485.4	bb
8	2378-TCDF	1.33e5	1.68e5	3.01e5	31.21	1.000	0.79	NO	9.651	0.0214	0.949	-3.5	2.37e6	2012	1178.5	2.84e6	1881	1507.8	bb
9	12378-PeCDF	8.05e5	5.20e5	1.33e6	33.71	1.000	1.55	NO	51.082	0.0683	0.954	2.2	1.94e7	7871	2464.7	1.25e7	6305	1978.7	bd
10	23478-PeCDF	8.11e5	5.20e5	1.33e6	34.34	1.019	1.56	NO	52.420	0.0698	0.959	4.8	1.88e7	7871	2393.1	1.21e7	6305	1911.3	bb
11	123478-HxCDF	5.94e5	4.82e5	1.08e6	36.48	0.998	1.23	NO	52.586	0.130	0.956	5.2	1.21e7	8351	1443.7	9.95e6	7742	1284.7	bd
12	123678-HxCDF	6.54e5	5.36e5	1.19e6	36.58	1.000	1.22	NO	50.021	0.112	1.058	0.0	1.23e7	8351	1472.8	9.97e6	7742	1288.1	db
13	234678-HxCDF	6.08e5	4.89e5	1.10e6	37.09	1.014	1.24	NO	51.021	0.123	0.975	2.0	1.17e7	8351	1397.9	9.44e6	7742	1219.4	bb
14	123789-HxCDF	5.21e5	4.19e5	9.40e5	37.90	1.036	1.24	NO	52.731	0.149	0.835	5.5	8.68e6	8351	1039.1	6.92e6	7742	894.5	bb
15	1234678-HpCDF	4.79e5	4.62e5	9.41e5	39.43	1.000	1.03	NO	50.342	0.101	1.285	0.7	7.58e6	4894	1548.2	7.33e6	4862	1507.3	bb
16	1234789-HpCDF	3.75e5	3.65e5	7.40e5	41.44	1.051	1.03	NO	54.341	0.139	1.011	8.7	4.59e6	4894	938.4	4.62e6	4862	949.3	bb
17	OCDF	5.27e5	6.05e5	1.13e6	45.49	1.007	0.87	NO	97.899	0.174	1.206	-2.1	5.24e6	2957	1772.6	5.81e6	3694	1572.5	bb
18	13C-2378-TCDD	8.51e5	1.08e6	1.93e6	31.73	1.013	0.79	NO	91.781	0.0383	1.028	-8.2	1.75e7	3081	5685.2	2.15e7	1902	11299.5	bb
19	13C-12378-PeCDD	1.01e6	6.38e5	1.65e6	34.53	1.102	1.59	NO	92.390	0.0584	0.878	-7.6	2.38e7	2808	8465.6	1.45e7	3641	3973.9	bb
20	13C-123678-HxCDD	9.04e5	7.11e5	1.62e6	37.30	0.994	1.27	NO	98.400	0.0992	1.094	-1.6	1.61e7	5747	2802.7	1.27e7	3430	3693.7	db
21	13C-1234678-HpCDD	5.88e5	5.54e5	1.14e6	40.72	1.085	1.06	NO	96.626	0.102	0.774	-3.4	7.82e6	3642	2146.3	7.43e6	3137	2370.0	bb
22	13C-OCDD	8.81e5	9.97e5	1.88e6	45.15	1.203	0.88	NO	190.264	0.169	0.636	-4.9	8.72e6	5071	1719.7	9.57e6	4347	2201.4	bd
23	13C-2378-TCDF	1.40e6	1.77e6	3.17e6	31.19	0.996	0.79	NO	92.569	0.0242	1.686	-7.4	2.45e7	2980	8226.0	3.09e7	2133	14483.8	bb
24	13C-12378-PeCDF	1.70e6	1.08e6	2.78e6	33.70	1.076	1.57	NO	87.232	0.0602	1.476	-12.8	4.07e7	5360	7599.9	2.58e7	6479	3986.1	bb
25	13C-123678-HxCDF	7.72e5	1.48e6	2.25e6	36.57	0.974	0.52	NO	93.489	0.102	1.524	-6.5	1.40e7	6743	2082.8	2.73e7	7081	3852.4	dd
26	13C-1234678-HpCDF	4.52e5	1.01e6	1.46e6	39.42	1.050	0.45	NO	91.740	0.0942	0.992	-8.3	6.97e6	4172	1671.5	1.59e7	4302	3704.4	bb
27	13C-1234-TCDD	8.34e5	1.05e6	1.88e6	31.33	0.000	0.80	NO	100.000	0.0429	1.000	0.0	1.55e7	3081	5020.2	1.93e7	1902	10147.7	bb
28	13C-123789-HxCDD	8.22e5	6.55e5	1.48e6	37.54	0.000	1.25	NO	100.000	0.110	1.000	0.0	1.39e7	5747	2417.0	1.13e7	3430	3300.7	bb
29	37Cl-2378-TCDD (SS)	2.13e5		2.13e5	31.75	1.000			10.462	0.0110	1.103	4.6	4.47e6	1534	2912.6				bb
30	13C-23478-PeCDF (SS)	1.71e6	1.08e6	2.79e6	34.33	1.019	1.58	NO	107.759	0.0571	1.006	7.8	4.00e7	5360	7470.7	2.46e7	6479	3803.3	bb

Quantify Sample Summary Report**MassLynx 4.1**

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-9.qld

Last Altered: Wednesday, November 03, 2010 15:47:59 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:48:58 Eastern Standard Time

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Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a, Task: HRP763_1, User: MJC

Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
13C-123478-HxCDF (SS)	6.62e5	1.28e6	1.94e6	36.47	0.997	0.52	NO	106.564	0.125	0.863	6.6	1.36e7	6743	2023.4	2.60e7	7081	3667.0	bd
13C-123478-HxCDD (SS)	7.88e5	6.16e5	1.40e6	37.21	0.998	1.28	NO	100.965	0.111	0.869	1.0	1.52e7	5747	2643.2	1.18e7	3430	3453.1	bd
13C-1234789-HpCDF (SS)	3.54e5	7.72e5	1.13e6	41.43	1.051	0.46	NO	101.660	0.149	0.769	1.7	4.42e6	4172	1060.2	9.89e6	4302	2297.9	bd

Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-9.qld

Last Altered: Wednesday, November 03, 2010 15:47:59 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:48:58 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFE_EPA8290_110110.mdb 02 Nov 2010 08:23:15

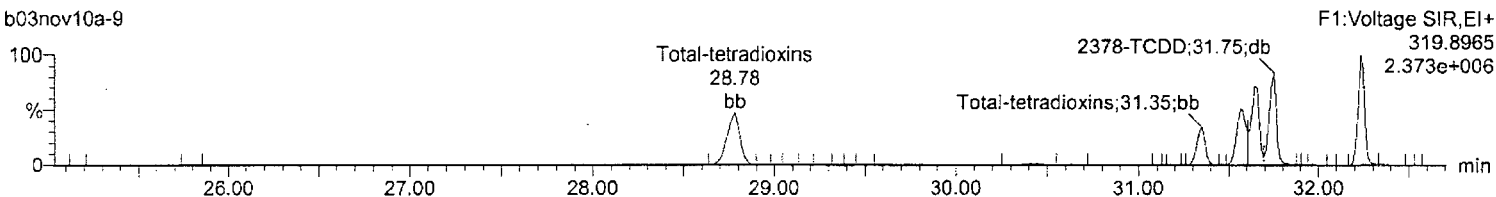
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,

Task: HRP763_1, User: MJC

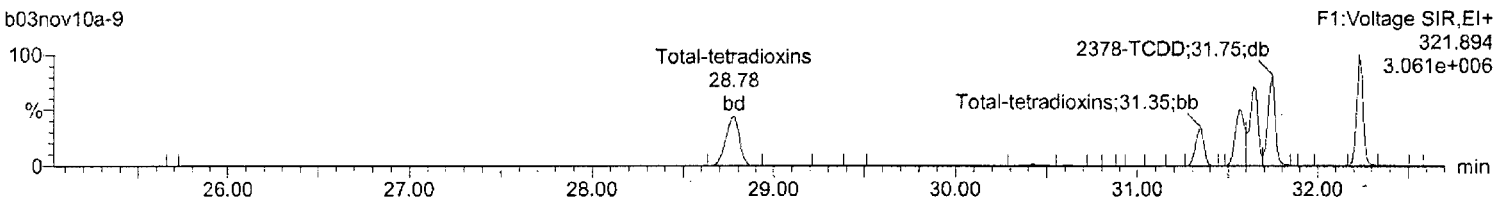
Total-tetradoxins

b03nov10a-9



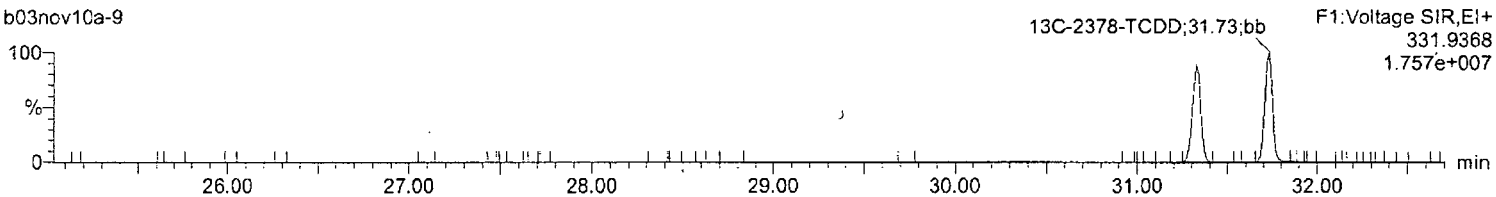
Total-tetradoxins

b03nov10a-9



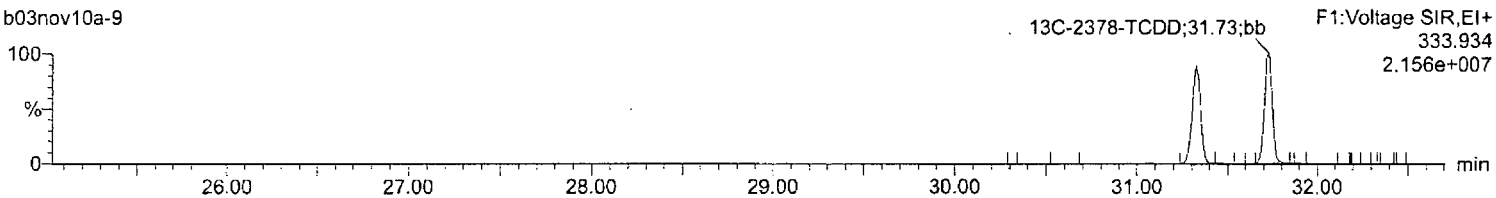
13C-2378-TCDD

b03nov10a-9



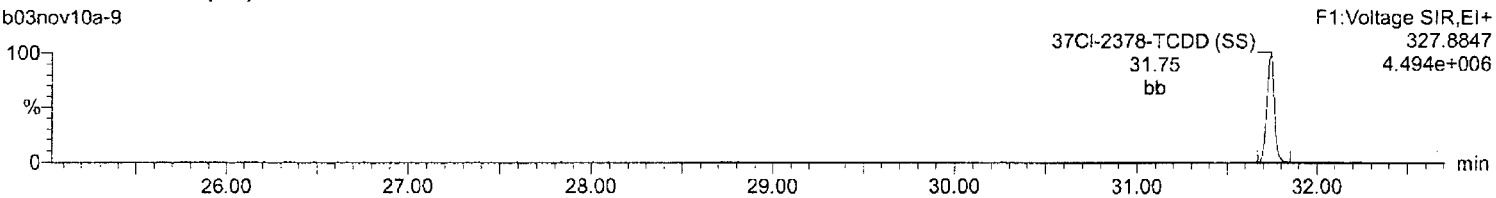
13C-2378-TCDD

b03nov10a-9



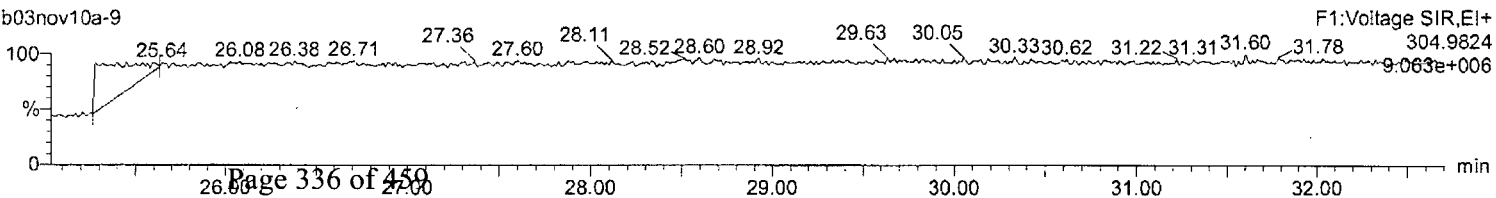
37Cl-2378-TCDD (SS)

b03nov10a-9



Lock Mass F1

b03nov10a-9



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-9.qld

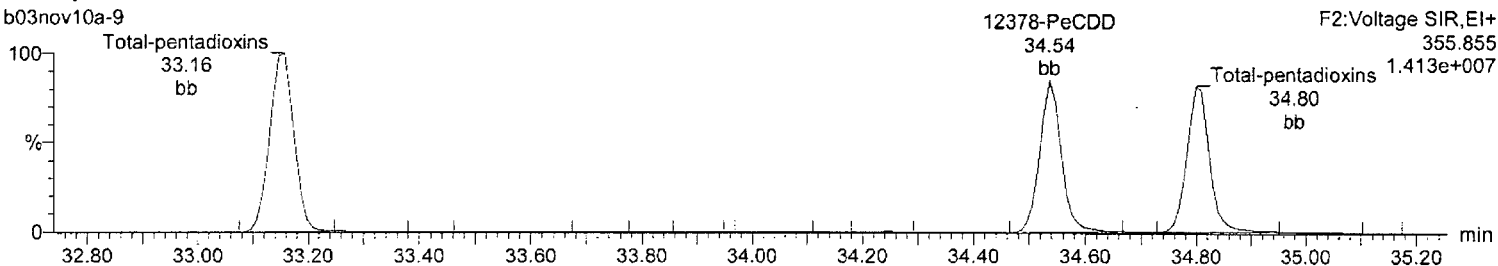
Last Altered: Wednesday, November 03, 2010 15:47:59 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:48:58 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

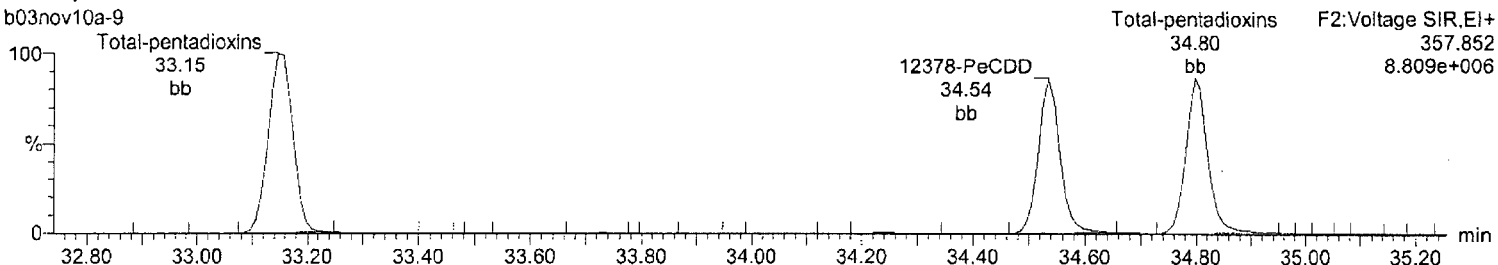
Total-pentadioxins

b03nov10a-9



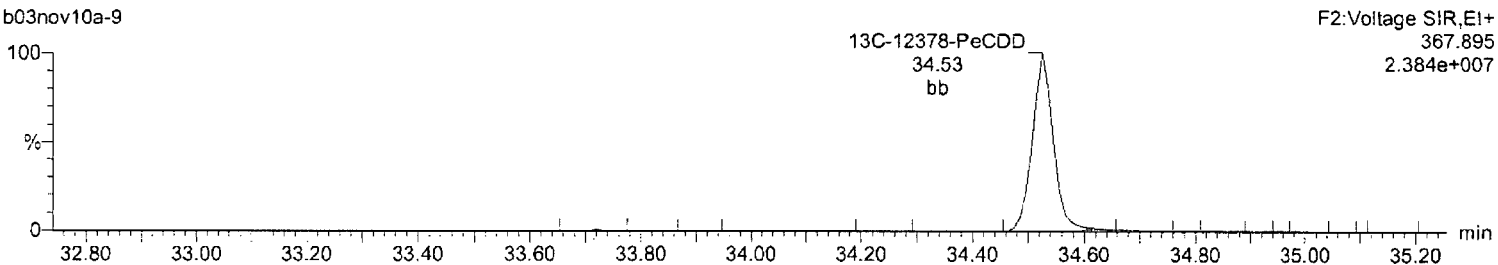
Total-pentadioxins

b03nov10a-9



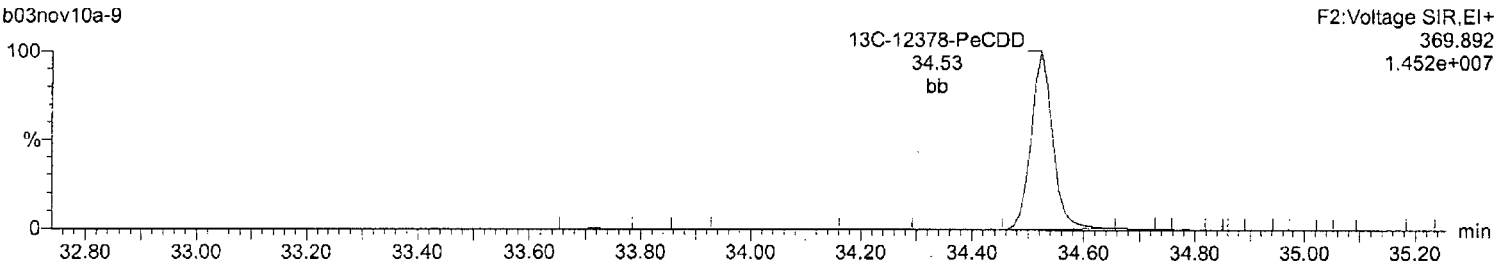
13C-12378-PeCDD

b03nov10a-9



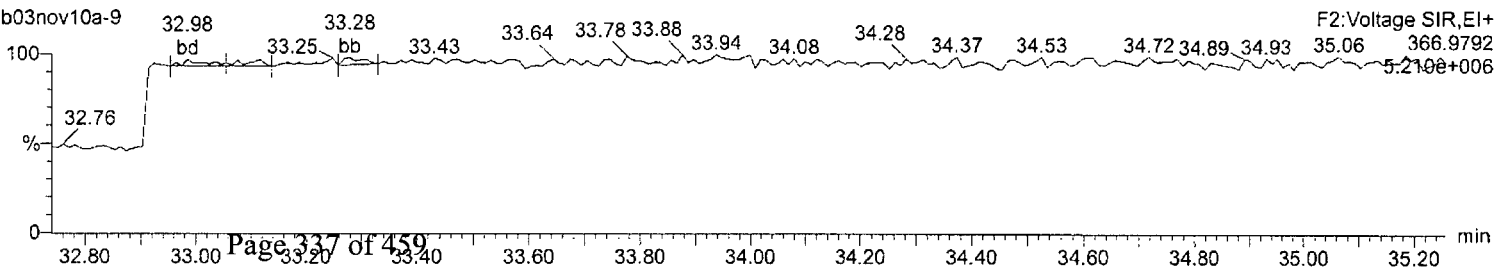
13C-12378-PeCDD

b03nov10a-9



Lock Mass F2

b03nov10a-9



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-9.qld

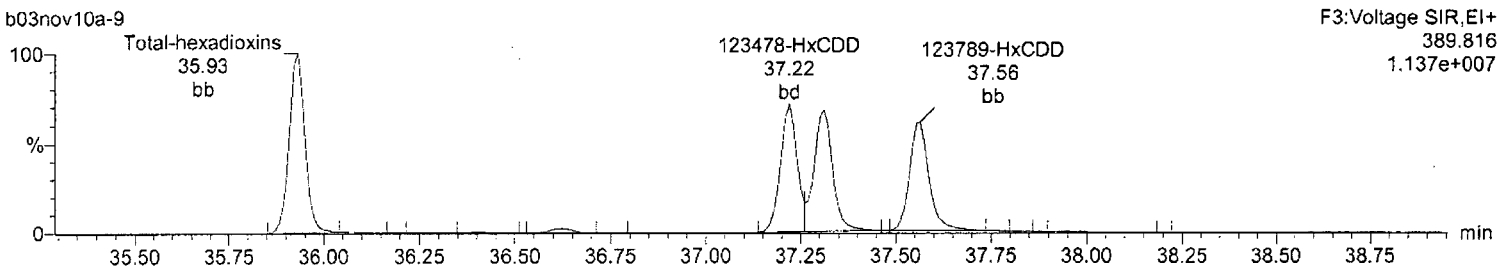
Last Altered: Wednesday, November 03, 2010 15:47:59 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:48:58 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

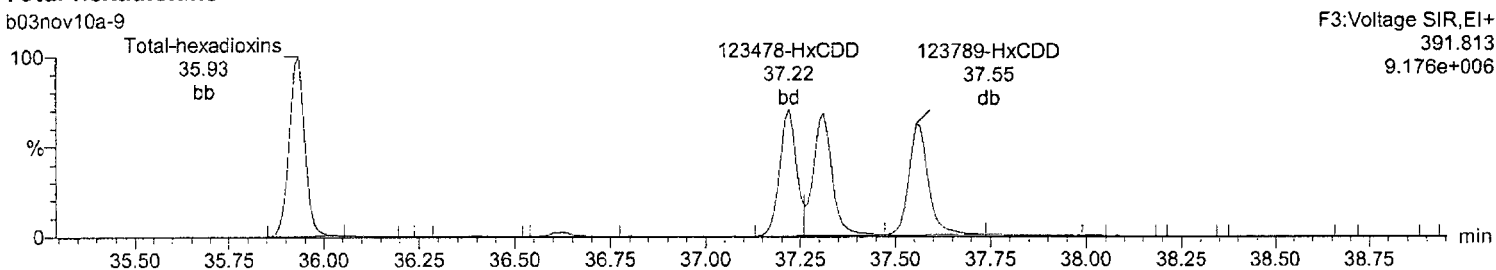
Total-hexadioxins

b03nov10a-9



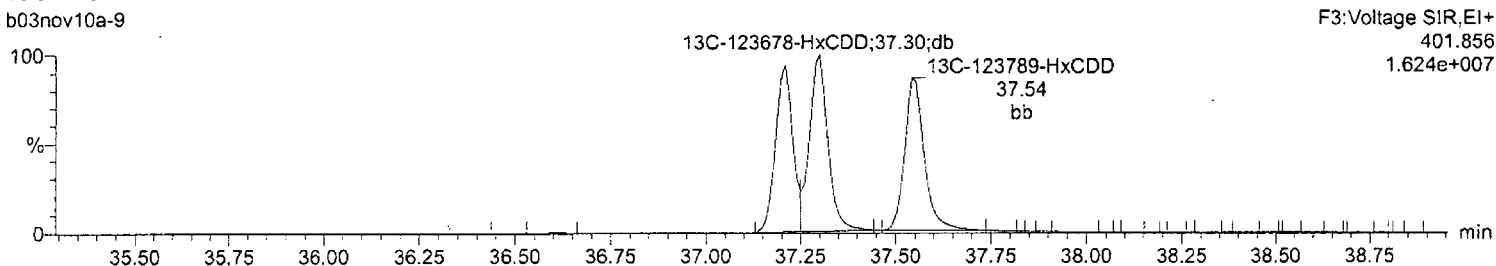
Total-hexadioxins

b03nov10a-9



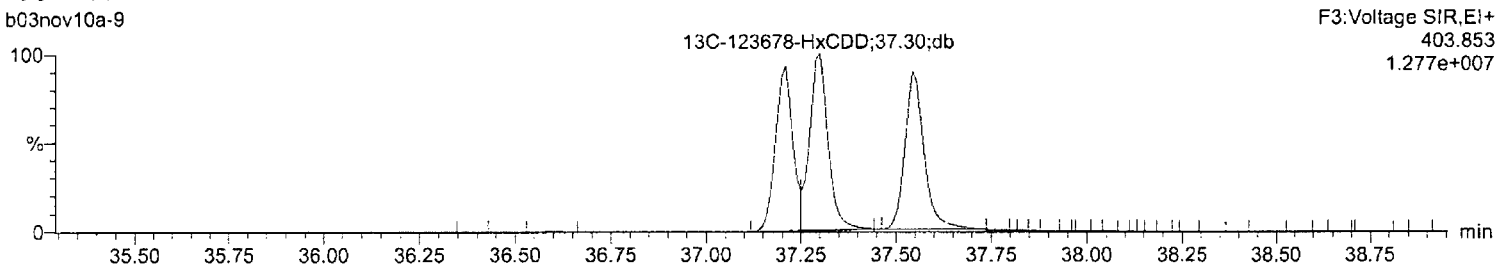
13C-123678-HxCDD

b03nov10a-9



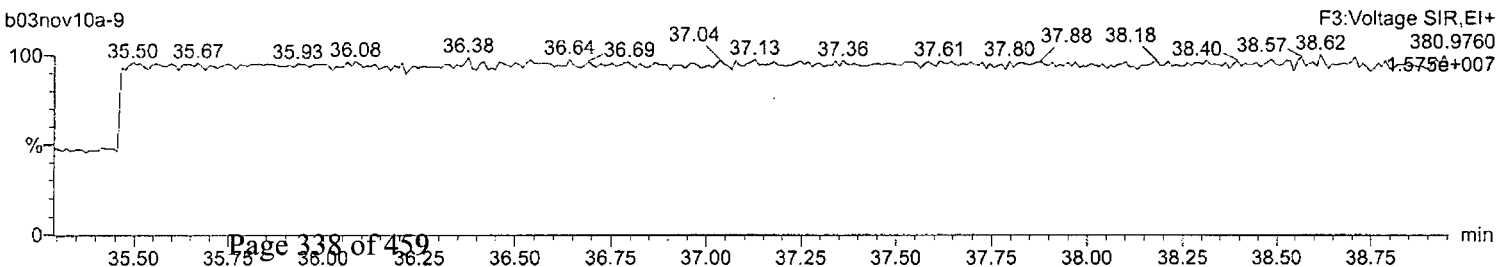
13C-123678-HxCDD

b03nov10a-9



Lock Mass F3

b03nov10a-9



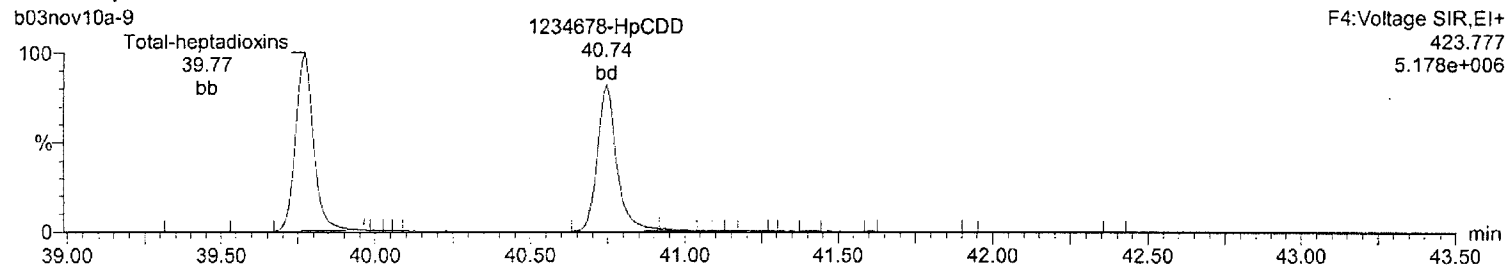
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-9.qld

Last Altered: Wednesday, November 03, 2010 15:47:59 Eastern Standard Time

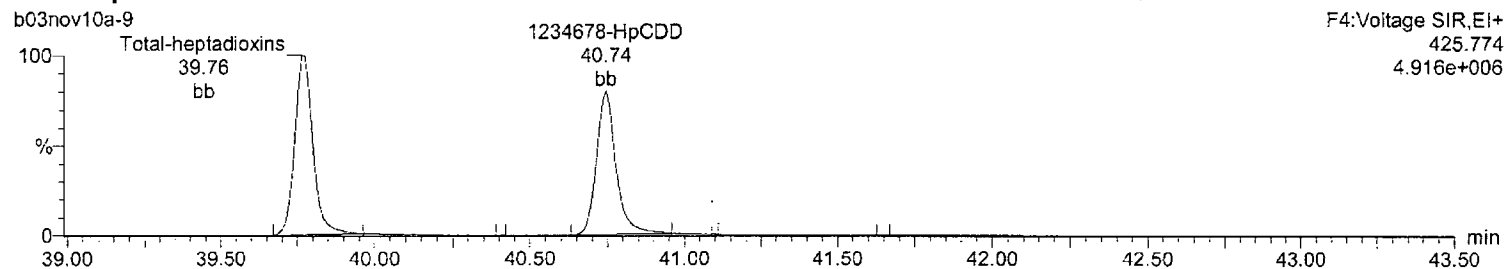
Printed: Wednesday, November 03, 2010 15:48:58 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

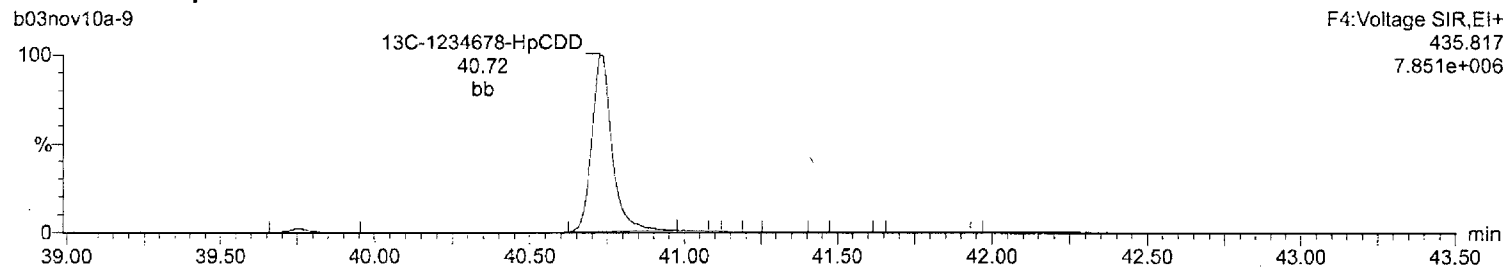
Total-heptadioxins



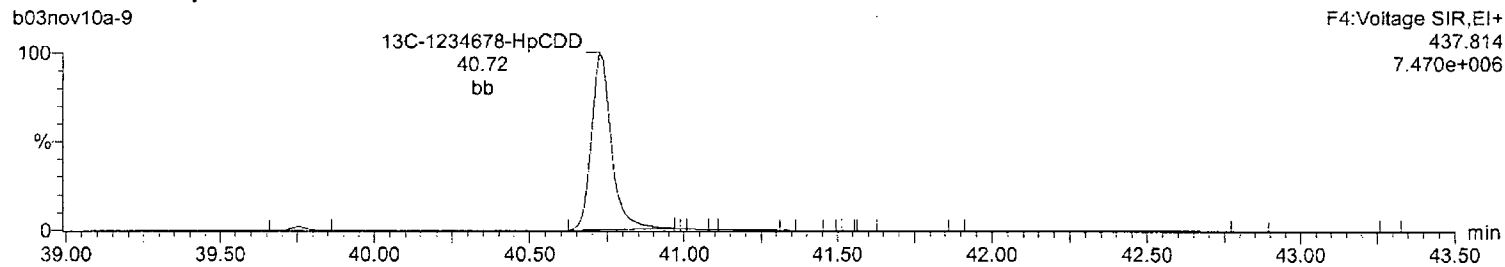
Total-heptadioxins



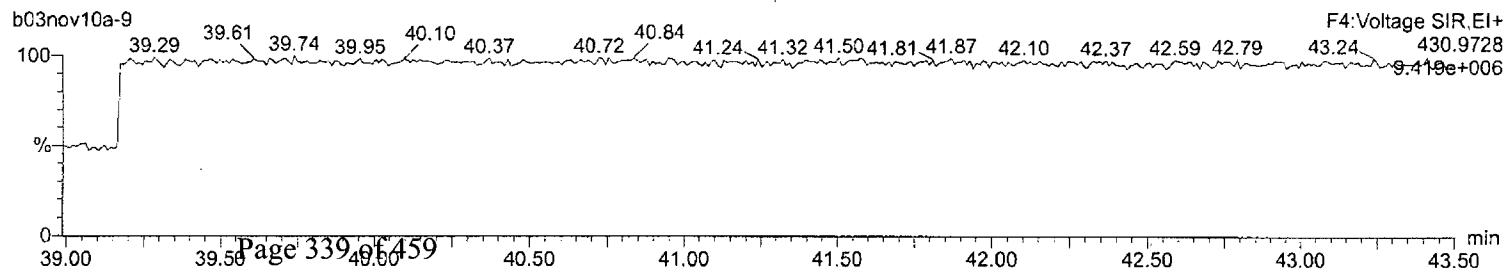
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-9.qld

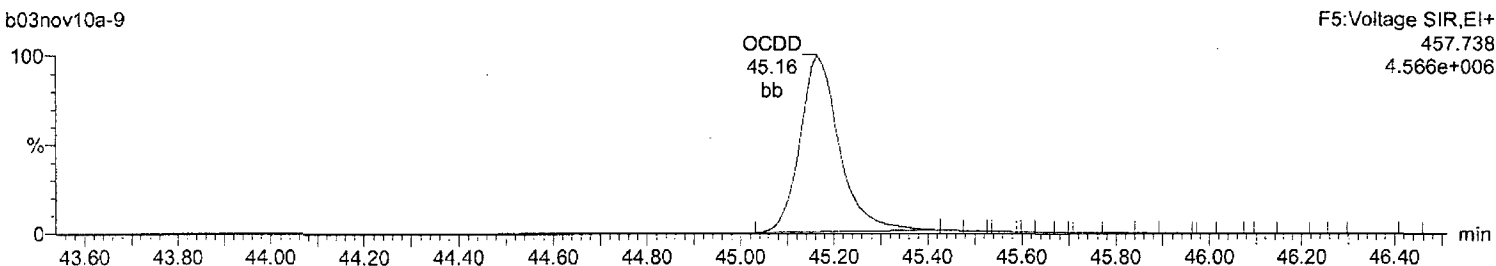
Last Altered: Wednesday, November 03, 2010 15:47:59 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:48:58 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

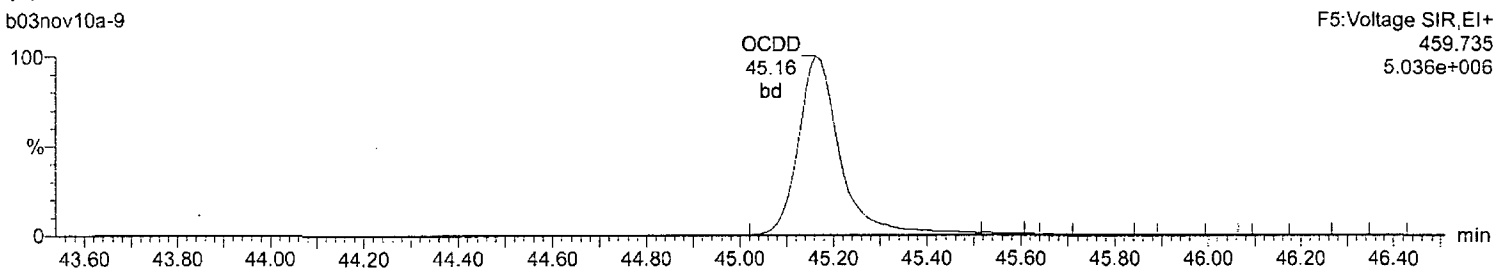
OCDD

b03nov10a-9



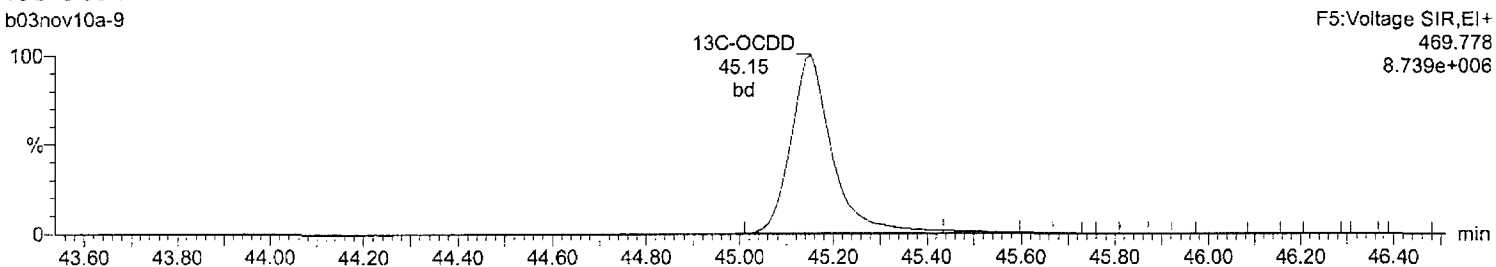
OCDD

b03nov10a-9



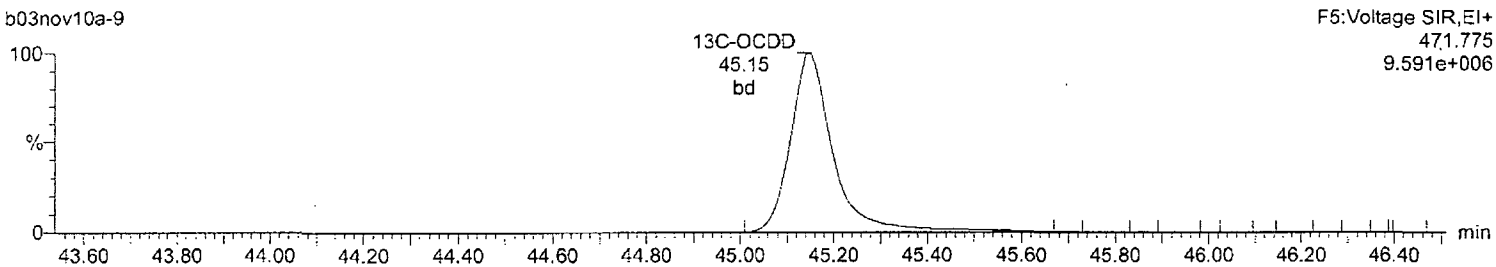
13C-OCDD

b03nov10a-9



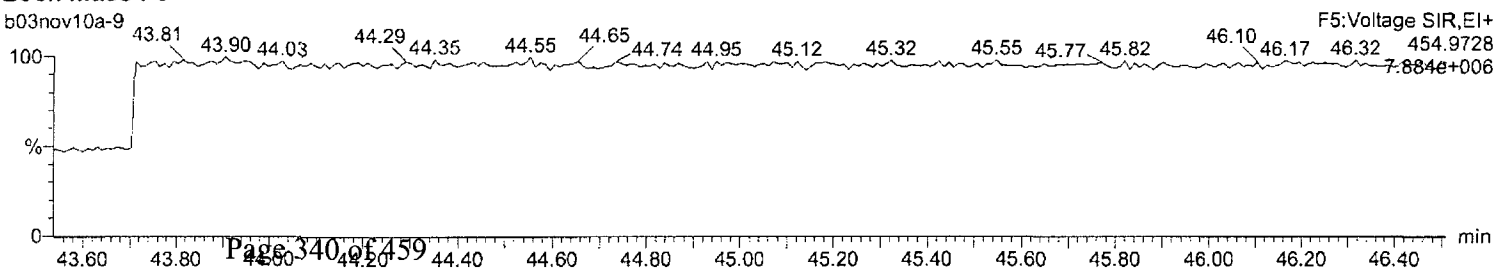
13C-OCDD

b03nov10a-9



Lock Mass F5

b03nov10a-9



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-9.qld

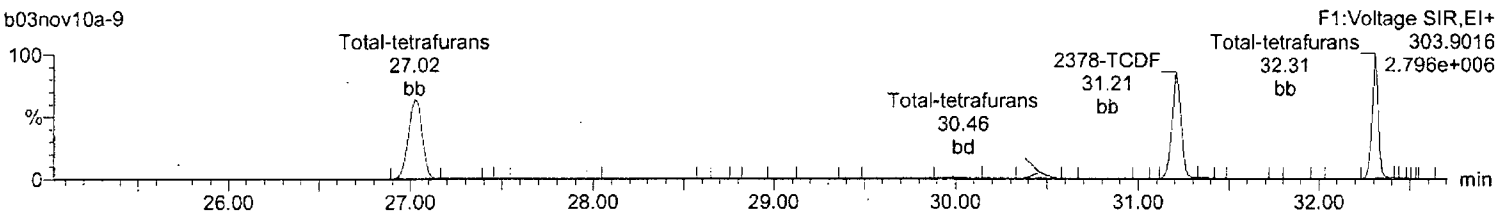
Last Altered: Wednesday, November 03, 2010 15:47:59 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:48:58 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

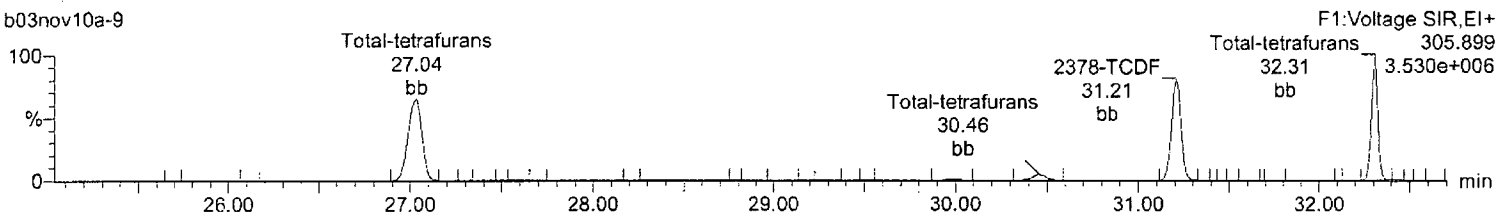
Total-tetrafurans

b03nov10a-9



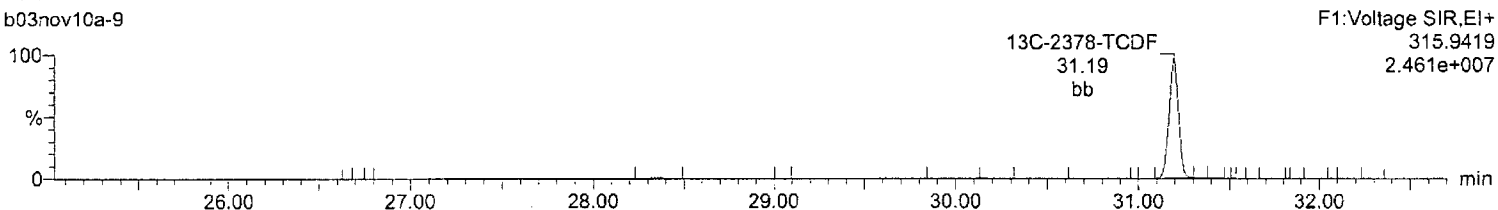
Total-tetrafurans

b03nov10a-9



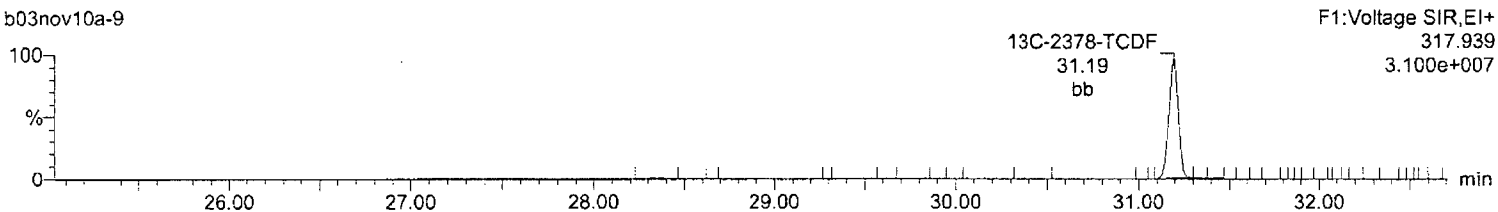
13C-2378-TCDF

b03nov10a-9



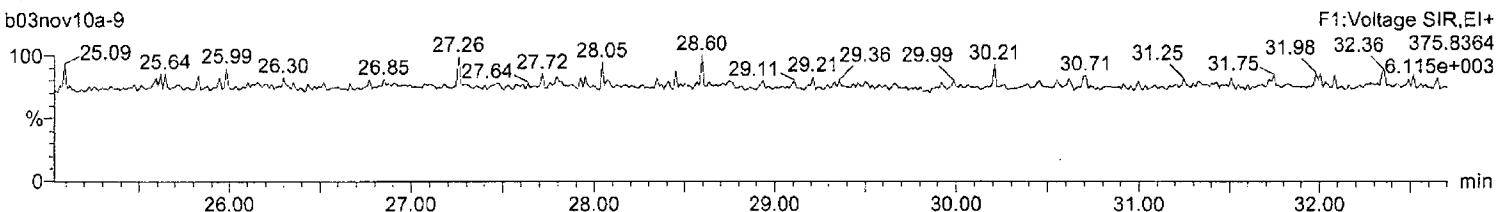
13C-2378-TCDF

b03nov10a-9



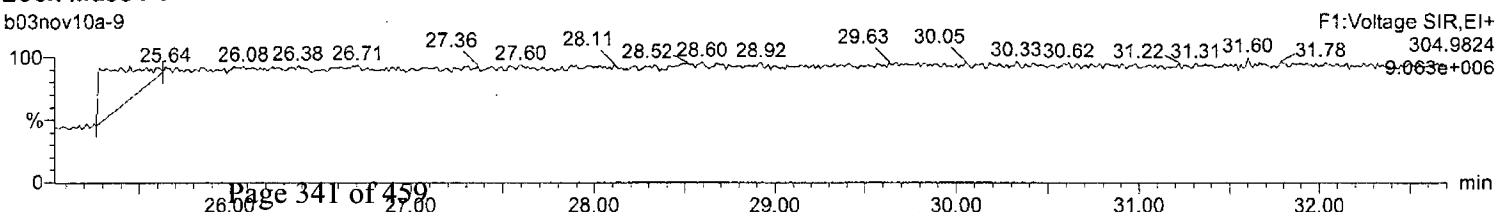
HxDPE

b03nov10a-9



Lock Mass F1

b03nov10a-9



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-9.qld

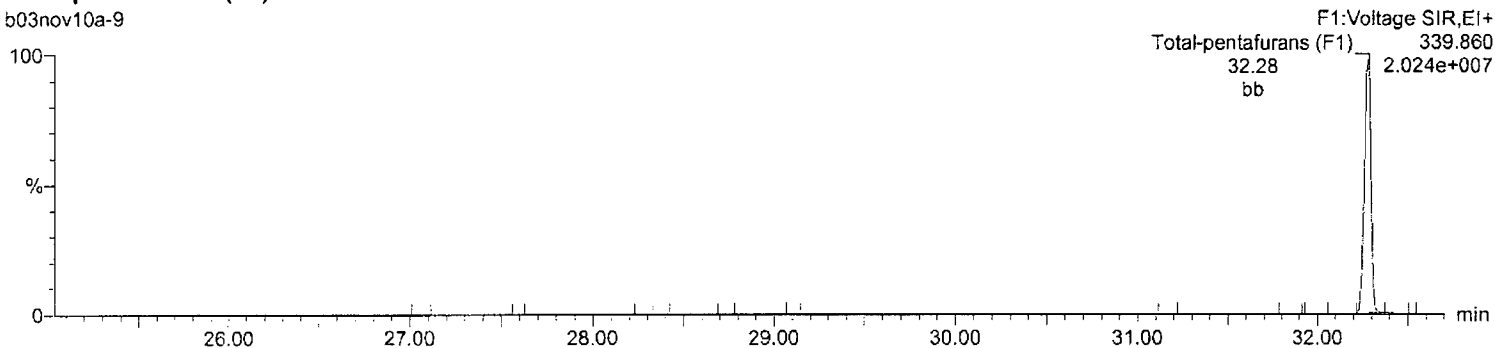
Last Altered: Wednesday, November 03, 2010 15:47:59 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:48:58 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

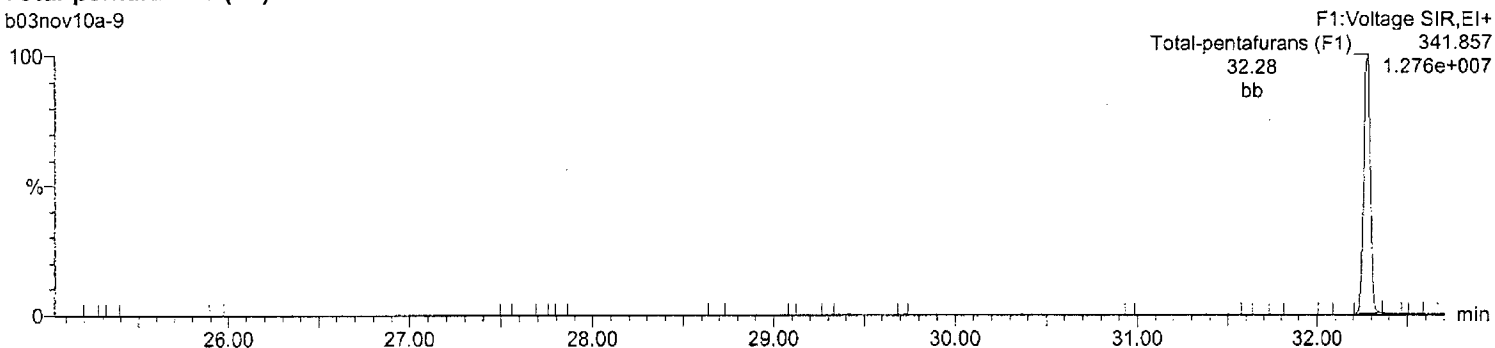
Total-pentafulurans (F1)

b03nov10a-9



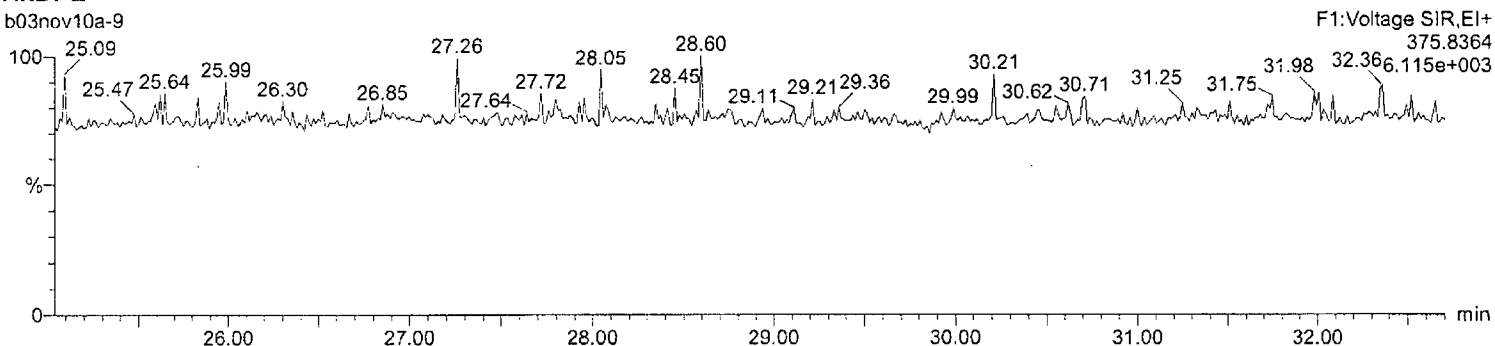
Total-pentafulurans (F1)

b03nov10a-9



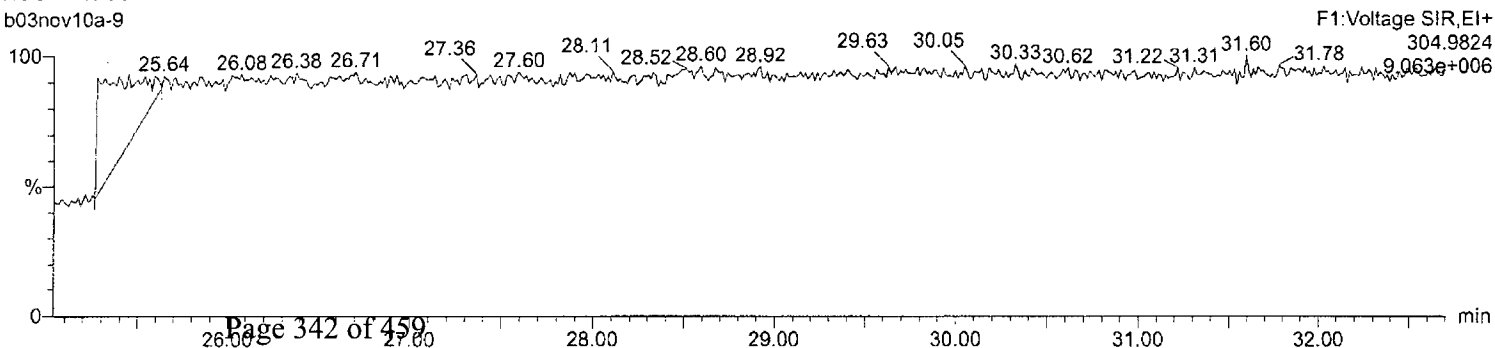
HxDPE

b03nov10a-9



Lock Mass F1

b03nov10a-9



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-9.qld

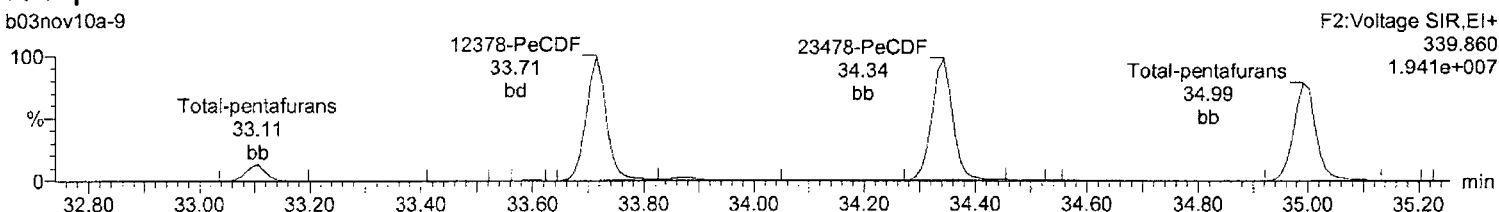
Last Altered: Wednesday, November 03, 2010 15:47:59 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:48:58 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

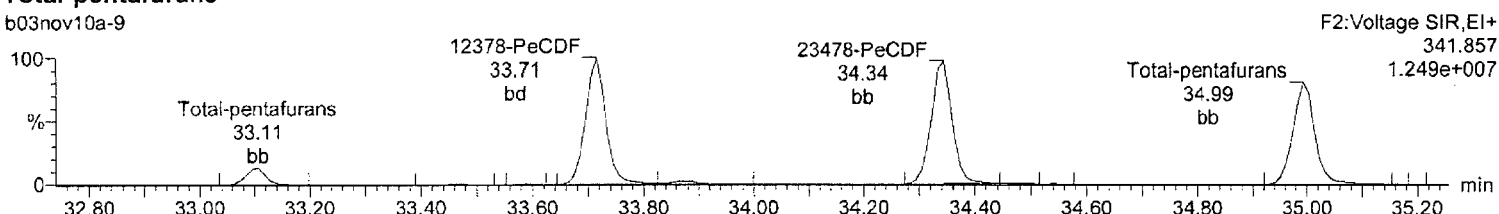
Total-pentafurans

b03nov10a-9



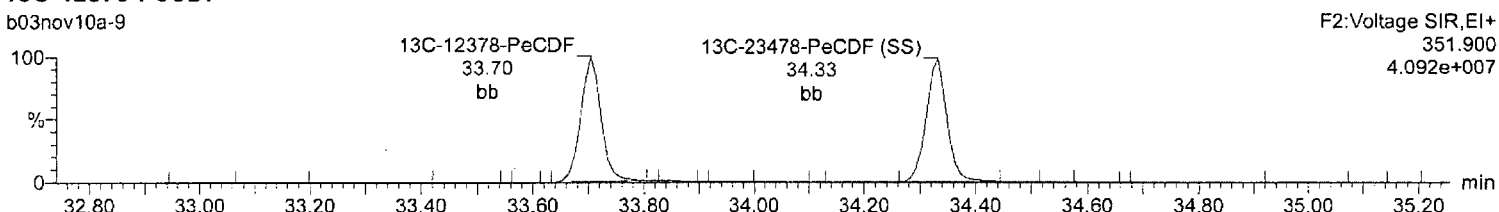
Total-pentafurans

b03nov10a-9



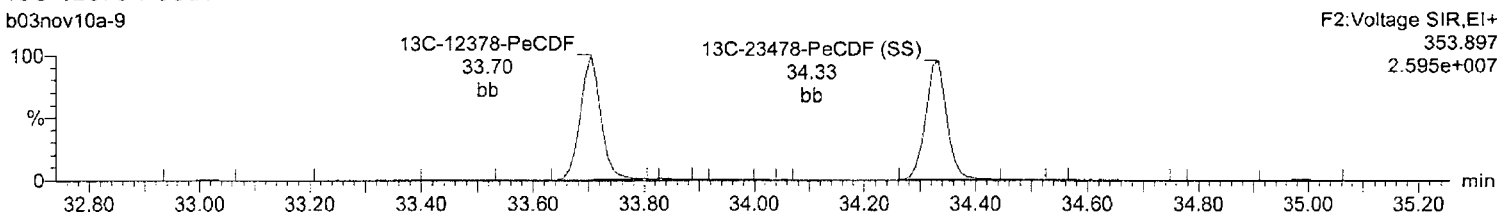
13C-12378-PeCDF

b03nov10a-9



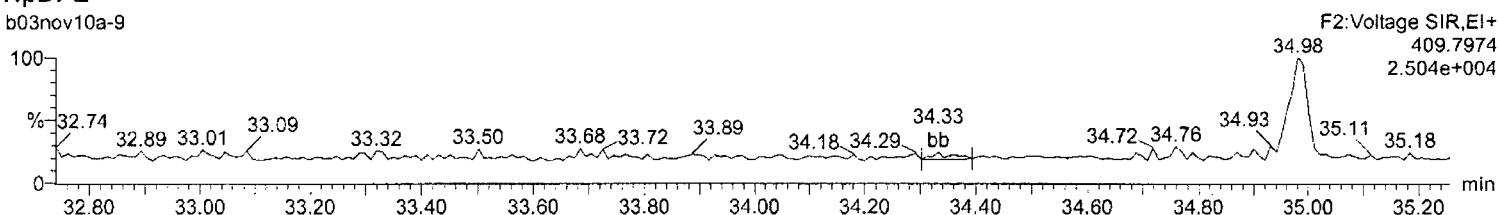
13C-12378-PeCDF

b03nov10a-9



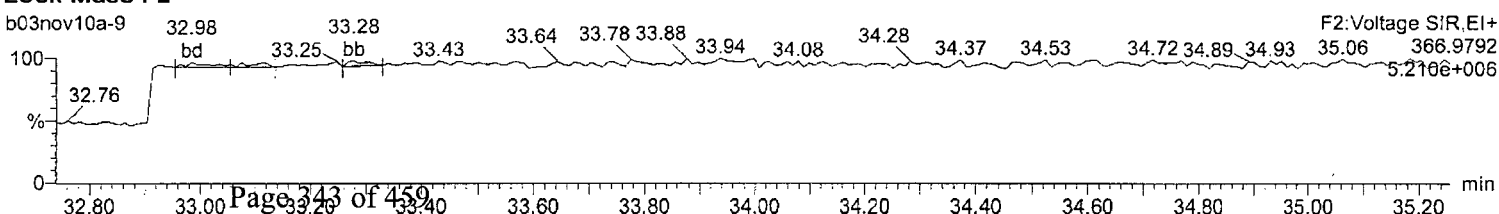
HpDPE

b03nov10a-9



Lock Mass F2

b03nov10a-9



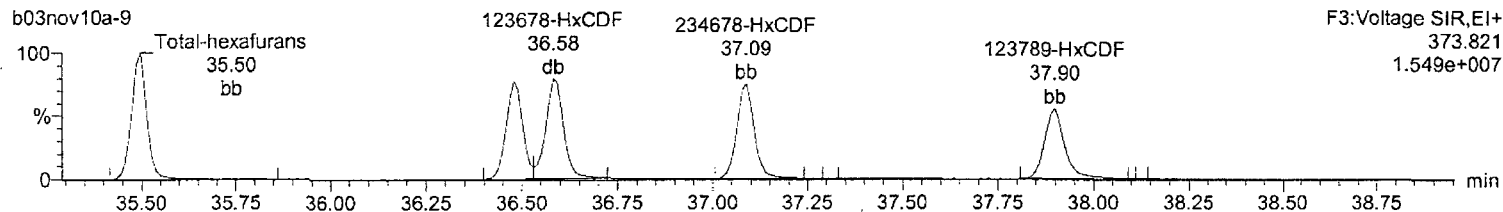
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-9.qld

Last Altered: Wednesday, November 03, 2010 15:47:59 Eastern Standard Time

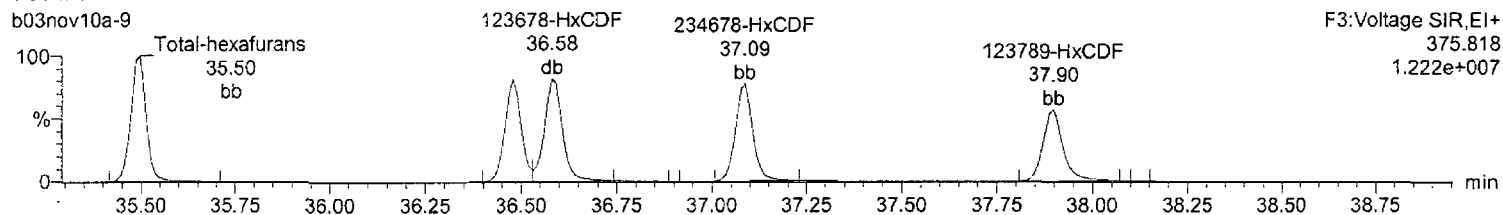
Printed: Wednesday, November 03, 2010 15:48:58 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

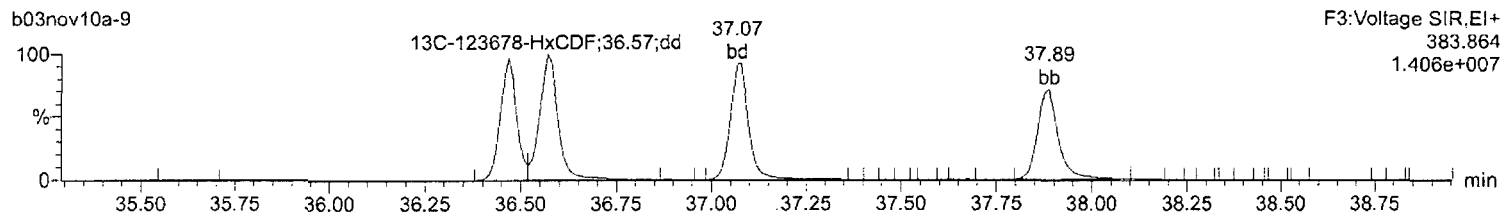
Total-hexafurans



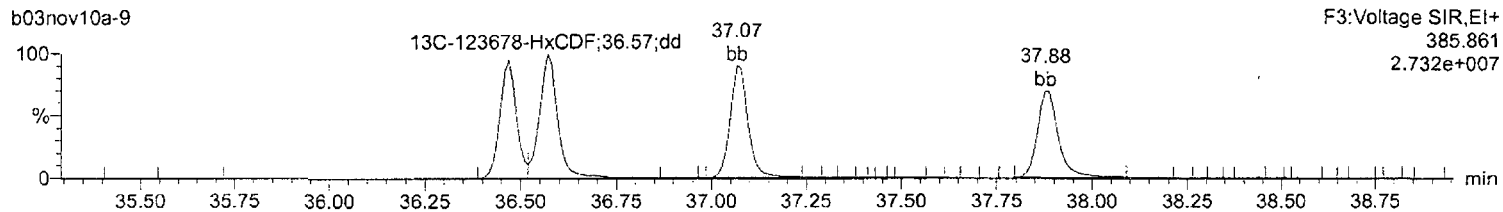
Total-hexafurans



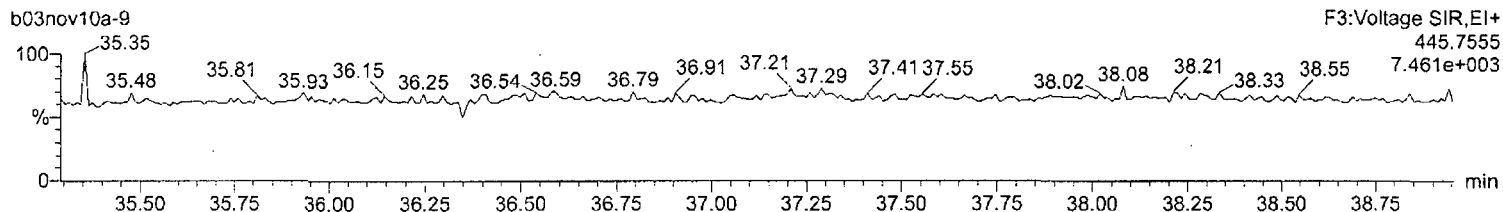
13C-123678-HxCDF



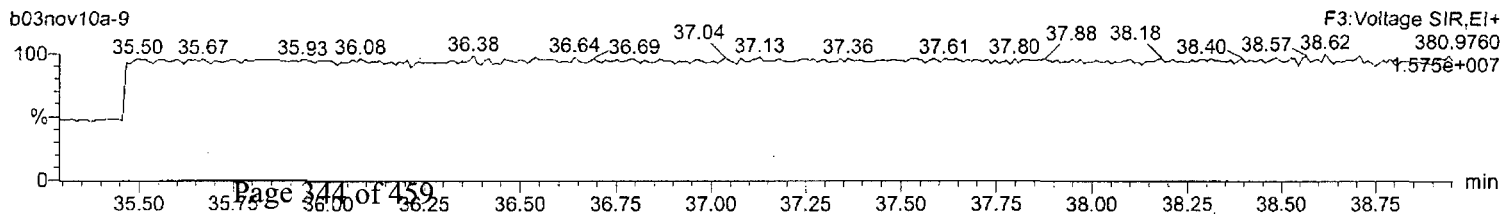
13C-123678-HxCDF



OcDPE



Lock Mass F3



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-9.qld

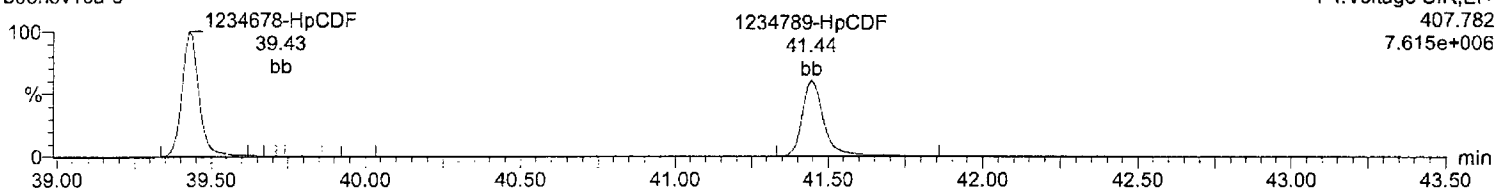
Last Altered: Wednesday, November 03, 2010 15:47:59 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:48:58 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

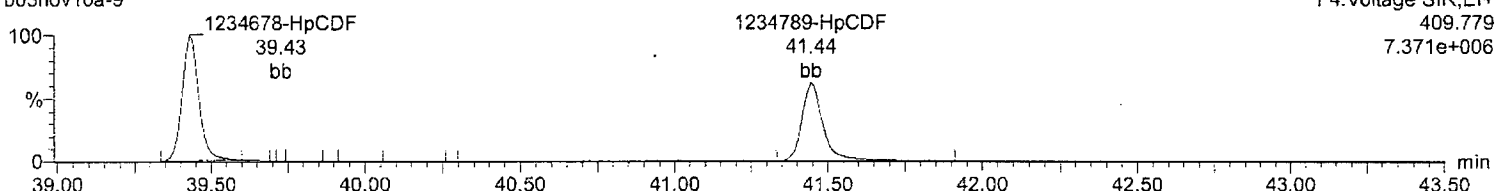
Total-heptafurans

b03nov10a-9



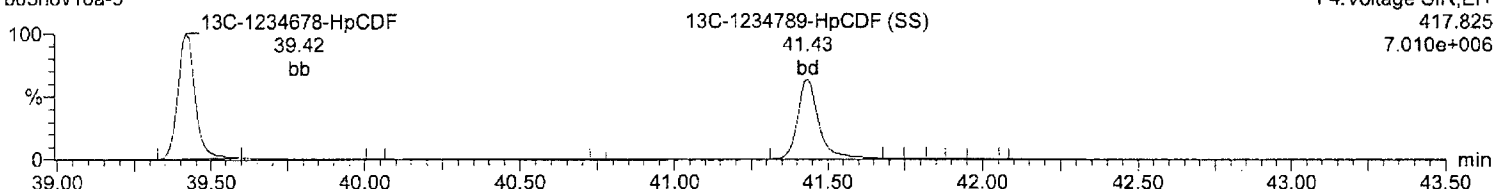
Total-heptafurans

b03nov10a-9



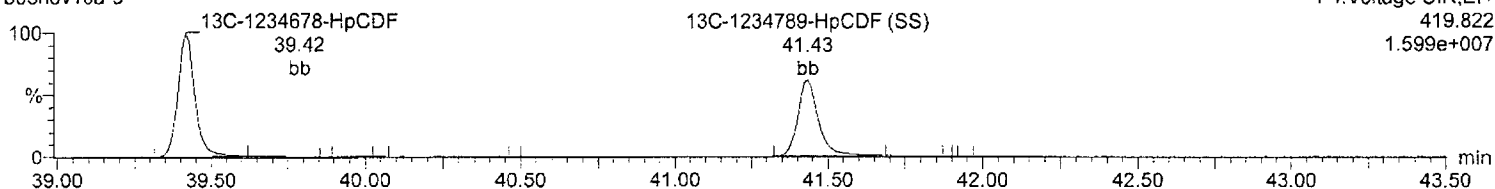
¹³C-1234678-HpCDF

b03nov10a-9



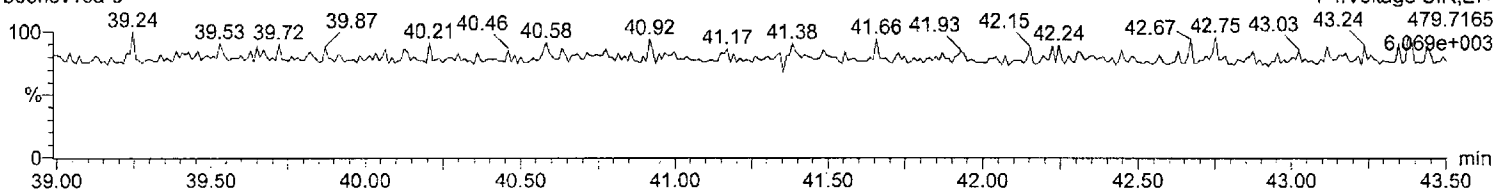
¹³C-1234678-HpCDF

b03nov10a-9



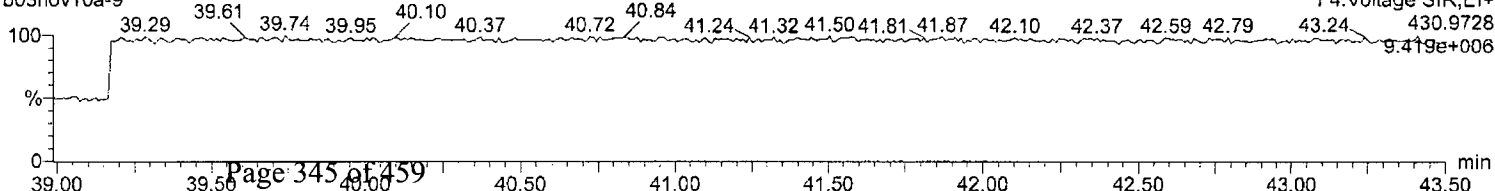
NoDPE

b03nov10a-9



Lock Mass F4

b03nov10a-9



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a-9.qld

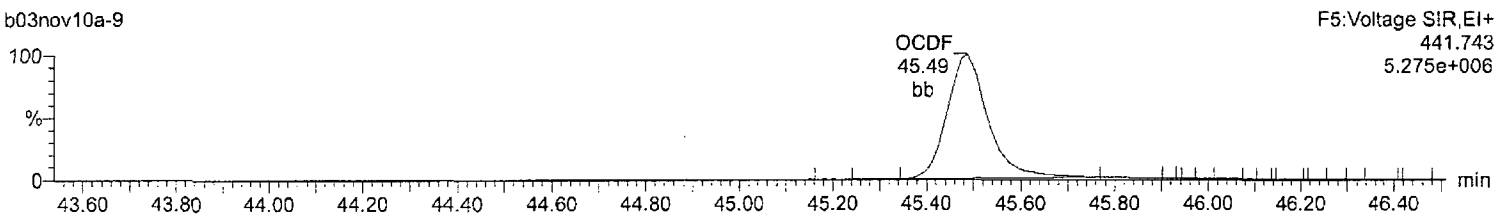
Last Altered: Wednesday, November 03, 2010 15:47:59 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:48:58 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

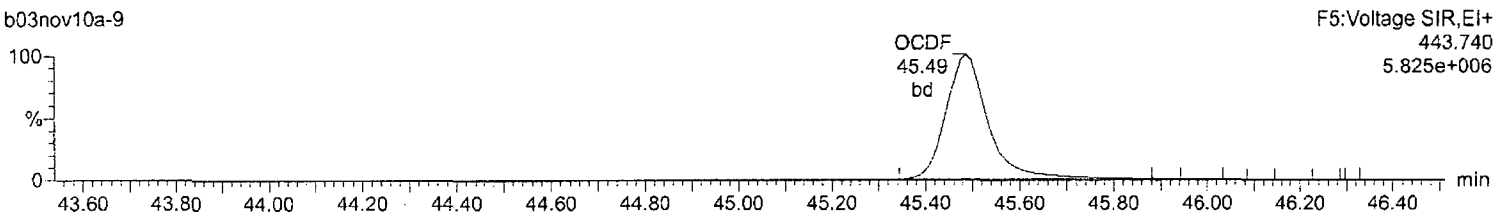
OCDF

b03nov10a-9



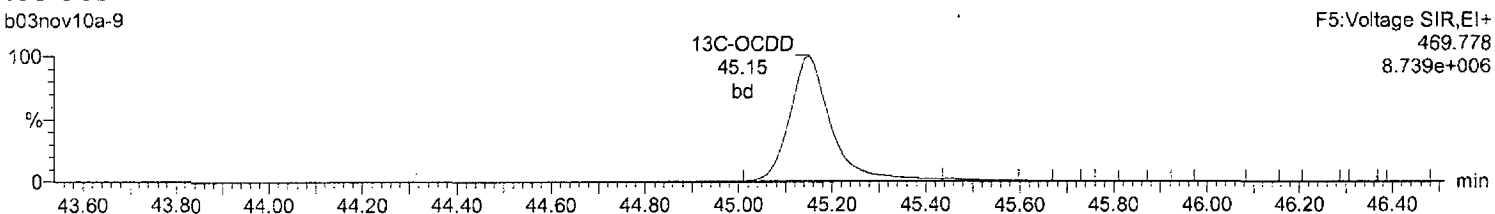
OCDF

b03nov10a-9



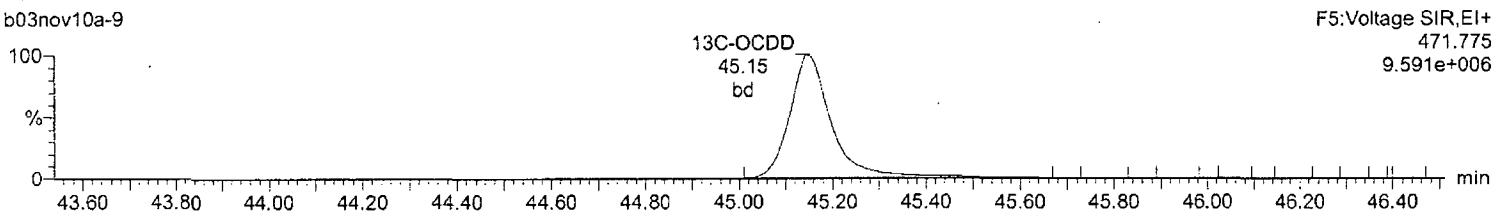
13C-OCDD

b03nov10a-9



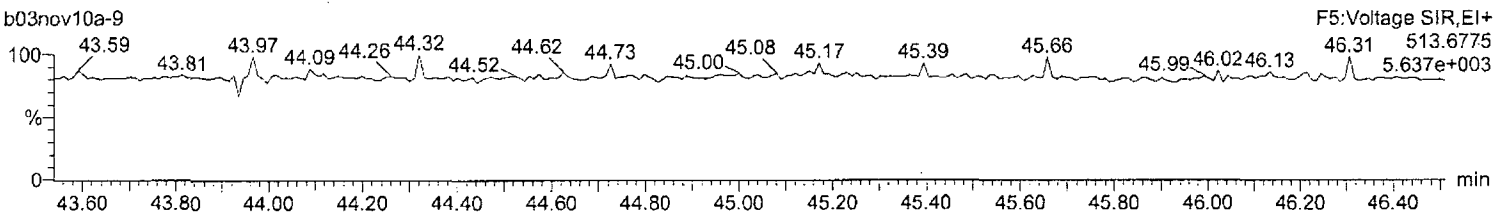
13C-OCDD

b03nov10a-9



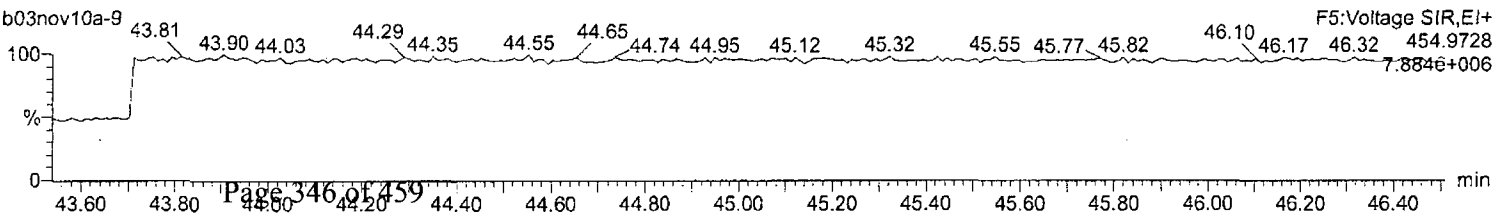
DeDPE

b03nov10a-9



Lock Mass F5

b03nov10a-9



Quantify Sample Summary Report

MassLynx 4.1

Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b03nov10a-9.qld

Last Altered: Wednesday, November 03, 2010 15:50:52 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:51:41 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_1613_110110.mdb 02 Nov 2010 10:41:17

Calibration: C:\MassLynx\Default.pro\Curvedb\1613-b01nov10b.cdb 02 Nov 2010 10:40:09

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	9.21e4	1.18e5	2.10e5	31.75	1.000	0.78	NO	10.712	0.0183	1.085	1.013	7.1	1.97e6	1302	1512.0	2.48e6	1161	2134.7	db
2	12378-PeCDD	5.28e5	3.34e5	8.62e5	34.54	1.000	1.58	NO	50.625	0.0592	1.045	1.032	1.2	1.20e7	3733	3215.2	7.59e6	4154	1827.9	bb
3	123478-HxCDD	4.08e5	3.28e5	7.36e5	37.22	1.000	1.25	NO	50.327	0.105	1.048	1.042	0.7	8.10e6	4900	1653.1	6.46e6	4971	1299.0	bd
4	123678-HxCDD	4.41e5	3.60e5	8.01e5	37.31	1.000	1.22	NO	51.244	0.106	0.992	0.968	2.5	7.73e6	4900	1578.3	6.23e6	4971	1253.8	db
5	123789-HxCDD	4.07e5	3.35e5	7.42e5	37.56	1.007	1.22	NO	52.829	0.114	0.983	0.930	5.7	6.88e6	4900	1403.6	5.64e6	4971	1134.1	bb
6	1234678-HpCDD	3.06e5	2.86e5	5.93e5	40.74	1.000	1.07	NO	51.660	0.140	1.037	1.004	3.3	4.24e6	3721	1140.2	3.93e6	3415	1151.1	bd
7	OCDD	4.39e5	5.15e5	9.54e5	45.16	1.000	0.85	NO	102.095	0.204	1.017	0.996	2.1	4.53e6	2900	1562.7	5.03e6	3384	1485.4	bb
8	2378-TCDF	1.33e5	1.68e5	3.01e5	31.21	1.000	0.79	NO	9.651	0.0214	0.949	0.983	-3.5	2.37e6	2012	1178.5	2.84e6	1881	1507.8	bb
9	12378-PeCDF	8.05e5	5.20e5	1.33e6	33.71	1.000	1.55	NO	51.082	0.0683	0.954	0.934	2.2	1.94e7	7871	2464.7	1.25e7	6305	1978.7	bd
10	23478-PeCDF	8.11e5	5.20e5	1.33e6	34.34	1.000	1.56	NO	48.639	0.0664	0.953	0.980	-2.7	1.88e7	7871	2393.1	1.21e7	6305	1911.3	bb
11	123478-HxCDF	5.94e5	4.82e5	1.08e6	36.48	1.000	1.23	NO	49.313	0.107	1.108	1.123	-1.4	1.21e7	8351	1443.7	9.95e6	7742	1284.7	bd
12	123678-HxCDF	6.54e5	5.36e5	1.19e6	36.58	1.000	1.22	NO	50.021	0.112	1.058	1.058	0.0	1.23e7	8351	1472.8	9.97e6	7742	1288.1	db
13	234678-HxCDF	6.08e5	4.89e5	1.10e6	37.09	1.001	1.24	NO	49.163	0.118	1.089	1.107	-1.7	1.17e7	8351	1397.9	9.44e6	7742	1219.4	bb
14	123789-HxCDF	5.21e5	4.19e5	9.40e5	37.90	1.000	1.24	NO	49.769	0.159	1.037	1.042	-0.5	8.68e6	8351	1039.1	6.92e6	7742	894.5	bb
15	1234678-HpCDF	4.79e5	4.62e5	9.41e5	39.43	1.000	1.03	NO	50.342	0.101	1.285	1.277	0.7	7.58e6	4894	1548.2	7.33e6	4862	1507.3	bb
16	1234789-HpCDF	3.75e5	3.65e5	7.40e5	41.44	1.000	1.03	NO	53.472	0.169	1.315	1.230	6.9	4.59e6	4894	938.4	4.62e6	4862	949.3	bb
17	OCDF	5.27e5	6.05e5	1.13e6	45.49	1.007	0.87	NO	97.860	0.174	1.206	1.233	-2.1	5.24e6	2957	1772.6	5.81e6	3694	1572.5	bb
18	13C-2378-TCDD	8.51e5	1.08e6	1.93e6	31.73	1.013	0.79	NO	91.781	0.0383	1.028	1.120	-8.2	1.75e7	3081	5685.2	2.15e7	1902	11299.5	bb
19	13C-12378-PeCDD	1.01e6	6.38e5	1.65e6	34.53	1.102	1.59	NO	92.390	0.0584	0.878	0.950	-7.6	2.38e7	2808	8465.6	1.45e7	3641	3973.9	bb
20	13C-123478-HxCDD	7.88e5	6.16e5	1.40e6	37.21	0.991	1.28	NO	99.400	0.115	0.951	0.957	-0.6	1.52e7	5747	2643.2	1.18e7	3430	3453.1	bd
21	13C-123678-HxCDD	9.04e5	7.11e5	1.62e6	37.30	0.994	1.27	NO	98.400	0.0992	1.094	1.112	-1.6	1.61e7	5747	2802.7	1.27e7	3430	3693.7	db
22	13C-1234678-HpCDD	5.88e5	5.54e5	1.14e6	40.72	1.085	1.06	NO	96.626	0.102	0.774	0.801	-3.4	7.82e6	3642	2146.3	7.43e6	3137	2370.0	bb
23	13C-OCDD	8.81e5	9.97e5	1.88e6	45.15	1.203	0.88	NO	190.264	0.169	0.636	0.668	-4.9	8.72e6	5071	1719.7	9.57e6	4347	2201.4	bd
24	13C-2378-TCDF	1.40e6	1.77e6	3.17e6	31.19	0.996	0.79	NO	92.569	0.0242	1.686	1.821	-7.4	2.45e7	2980	8226.0	3.09e7	2133	14483.8	bb
25	13C-12378-PeCDF	1.70e6	1.08e6	2.78e6	33.70	1.076	1.57	NO	87.232	0.0602	1.476	1.692	-12.8	4.07e7	5360	7599.9	2.58e7	6479	3986.1	bb
26	13C-23478-PeCDF	1.71e6	1.08e6	2.79e6	34.33	1.096	1.58	NO	94.022	0.0645	1.485	1.579	-6.0	4.00e7	5360	7470.7	2.46e7	6479	3803.3	bb
27	13C-123478-HxCDF	6.62e5	1.28e6	1.94e6	36.47	0.971	0.52	NO	99.727	0.126	1.315	1.319	-0.3	1.36e7	6743	2023.4	2.60e7	7081	3667.0	bd
28	13C-123678-HxCDF	7.72e5	1.48e6	2.25e6	36.57	0.974	0.52	NO	93.489	0.102	1.524	1.631	-6.5	1.40e7	6743	2082.8	2.73e7	7081	3852.4	dd
29	13C-234678-HxCDF	7.06e5	1.31e6	2.02e6	37.07	0.987	0.54	NO	97.089	0.118	1.365	1.406	-2.9	1.29e7	6743	1919.5	2.45e7	7081	3462.9	bd
30	13C-123789-HxCDF	6.20e5	1.19e6	1.81e6	37.89	1.009	0.52	NO	99.041	0.134	1.227	1.239	-1.0	9.99e6	6743	1481.3	1.89e7	7081	2673.9	bb

Quantify Sample Summary Report

MassLynx 4.1

Method 1613 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b03nov10a-9.qld

Last Altered: Wednesday, November 03, 2010 15:50:52 Eastern Standard Time

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Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a, Task: HRP763_1, User: MJC

OT	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	ICRRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	N
33	13C-1234678-HpCDF	4.52e5	1.01e6	1.46e6	39.42	1.050	0.45	NO	91.740	0.0942	0.992	1.081	-8.3	6.97e6	4172	1671.5	1.59e7	4302	3704.4	bb
33	13C-1234789-HpCDF	3.54e5	7.72e5	1.13e6	41.43	1.104	0.46	NO	93.257	0.125	0.762	0.817	-6.7	4.42e6	4172	1060.2	9.89e6	4302	2297.9	bd
34	13C-1234-TCDD	8.34e5	1.05e6	1.88e6	31.33	0.000	0.80	NO	100.000	0.0429	1.000	1.000	0.0	1.55e7	3081	5020.2	1.93e7	1902	10147.7	bb
34	13C-123789-HxCDD	8.22e5	6.55e5	1.48e6	37.54	0.000	1.25	NO	100.000	0.110	1.000	1.000	0.0	1.39e7	5747	2417.0	1.13e7	3430	3300.7	bb
35	37Cl-2378-TCDD	2.13e5		2.13e5	31.75	1.013			9.612	0.0112	1.133	1.179	-3.9	4.47e6	1534	2912.6				bb

Quantify Sample Report
Method 1613 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b03nov10a-9.qld

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Printed: Wednesday, November 03, 2010 15:51:41 Eastern Standard Time

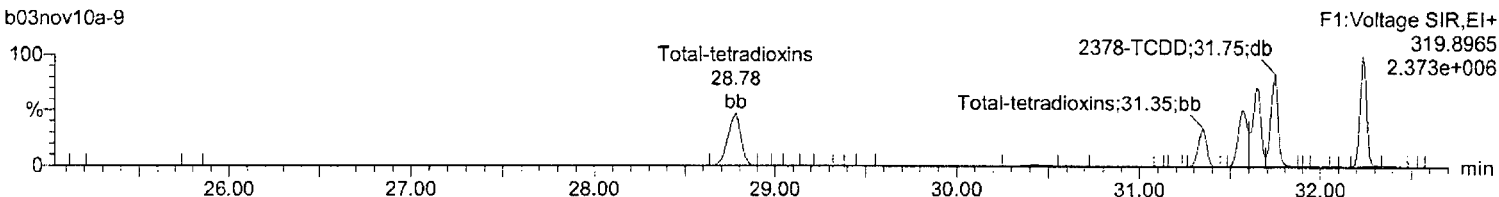
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Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

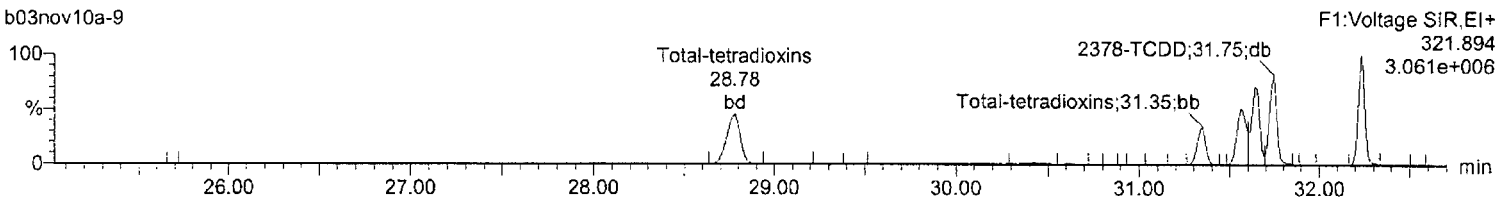
Total-tetradoxins

b03nov10a-9



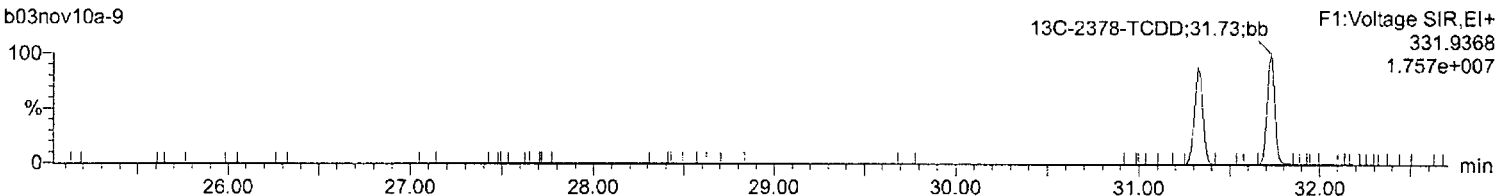
Total-tetradoxins

b03nov10a-9



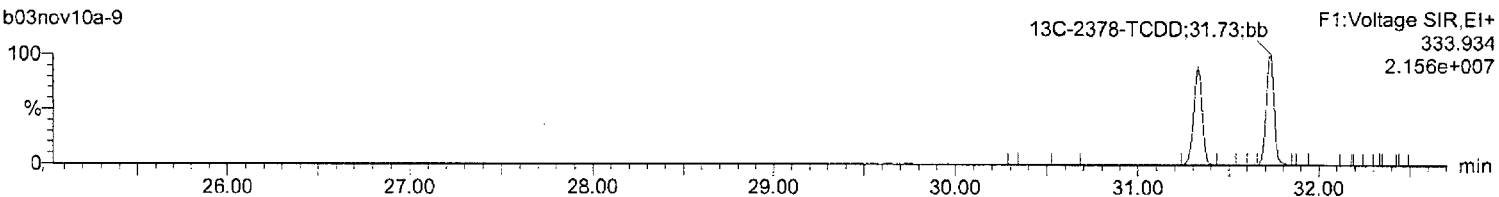
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b03nov10a-9



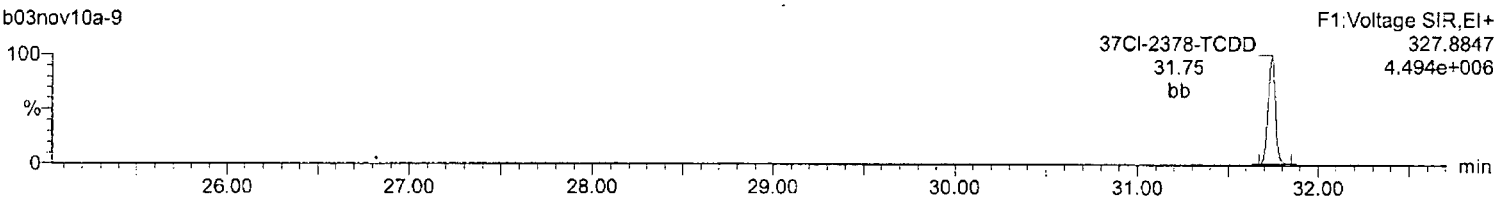
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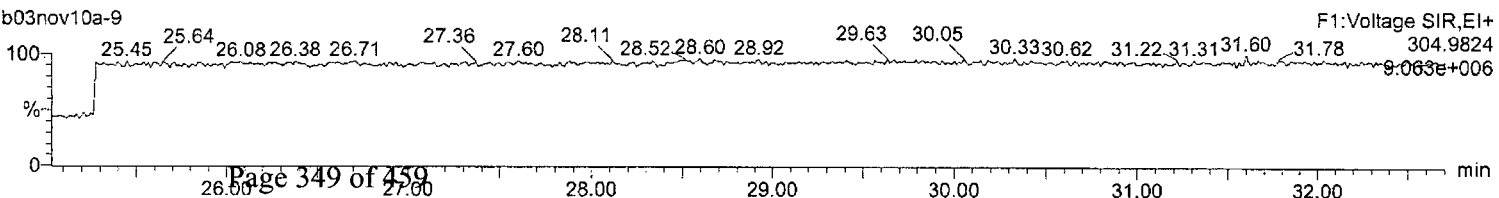
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b03nov10a-9



Lock Mass F1

b03nov10a-9



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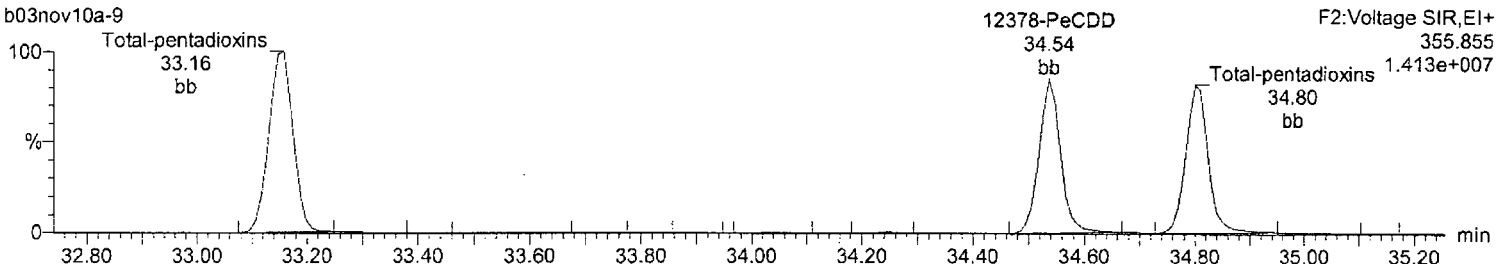
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Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

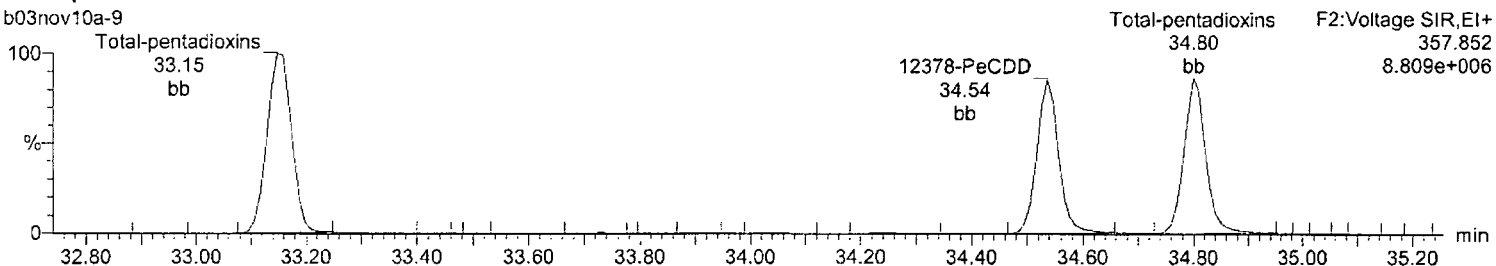
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b03nov10a-9



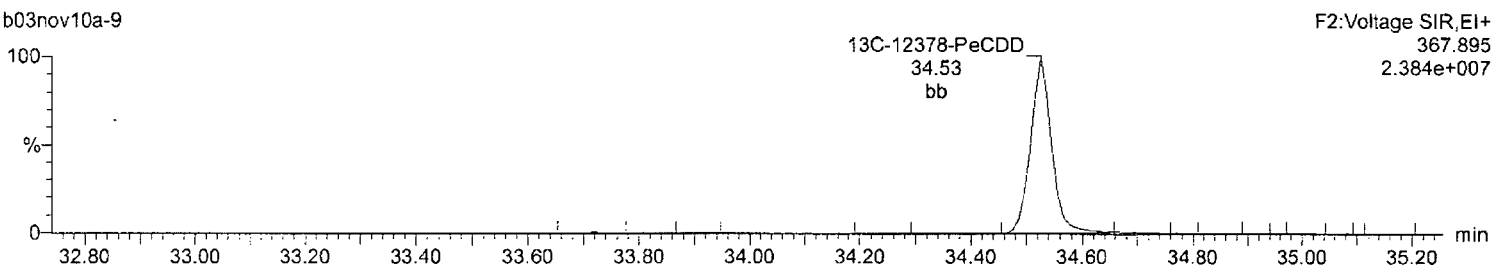
Total-pentadioxins

b03nov10a-9



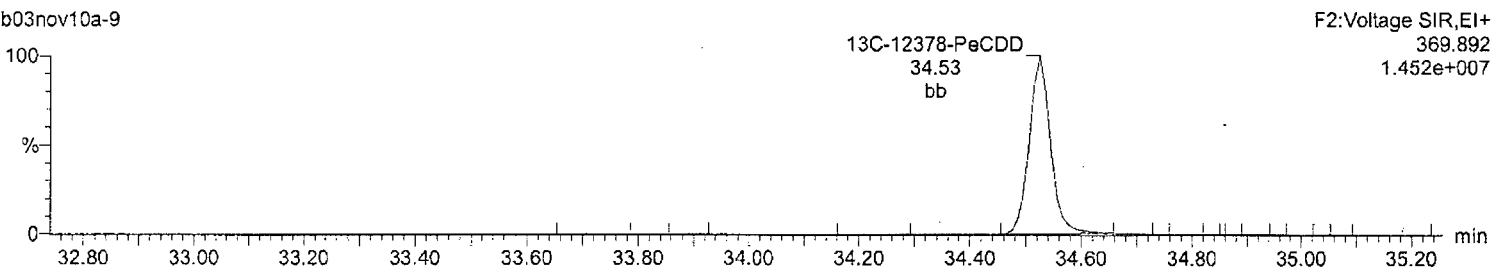
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b03nov10a-9



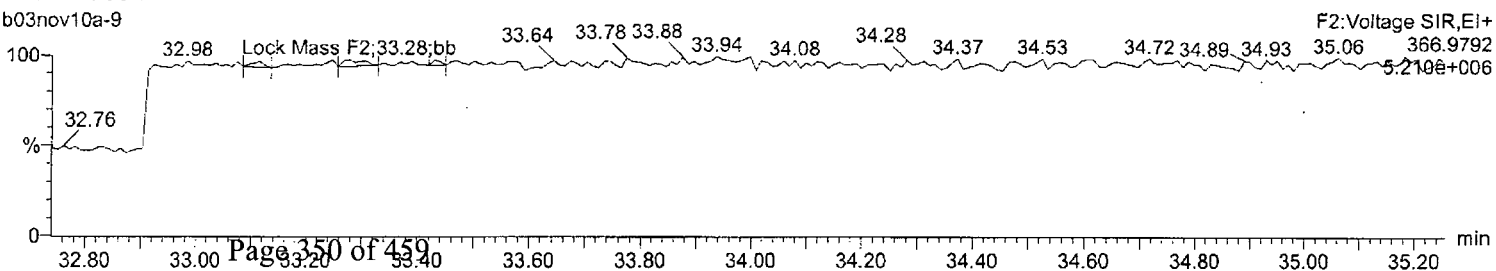
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b03nov10a-9



Lock Mass F2

b03nov10a-9



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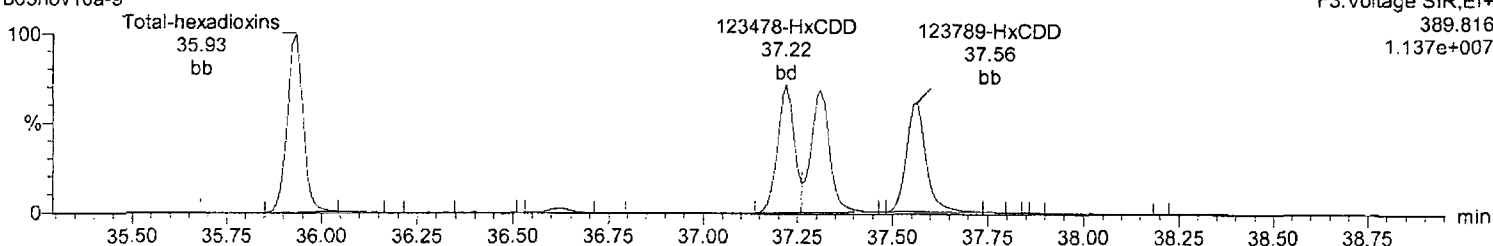
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Task: HRP763_1, User: MJC

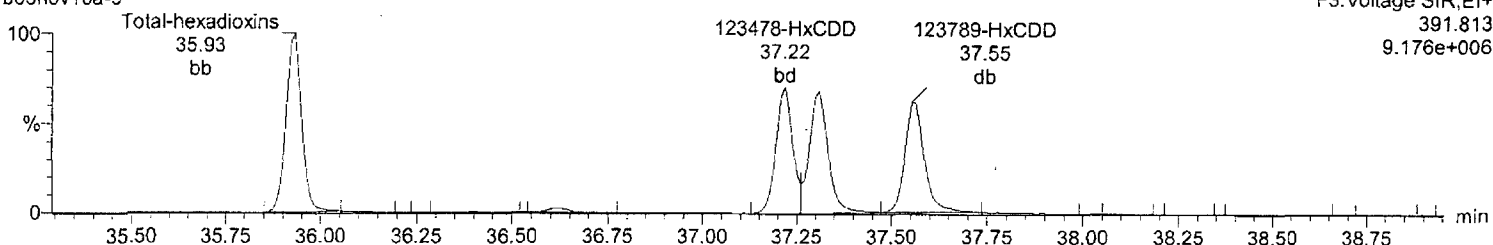
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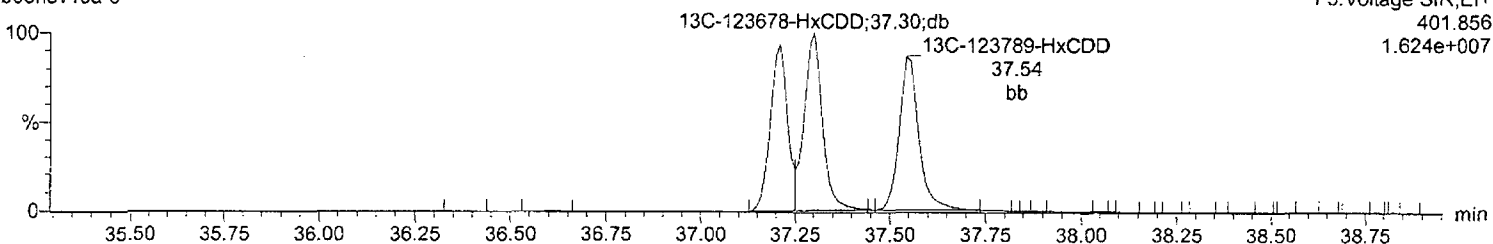
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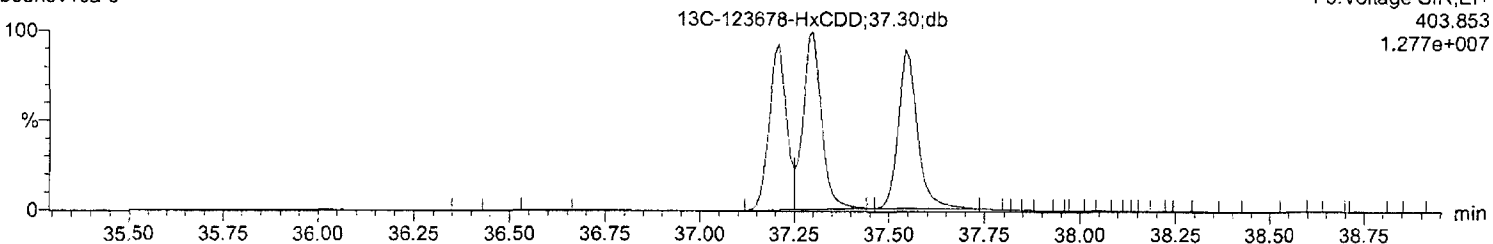
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b03nov10a-9



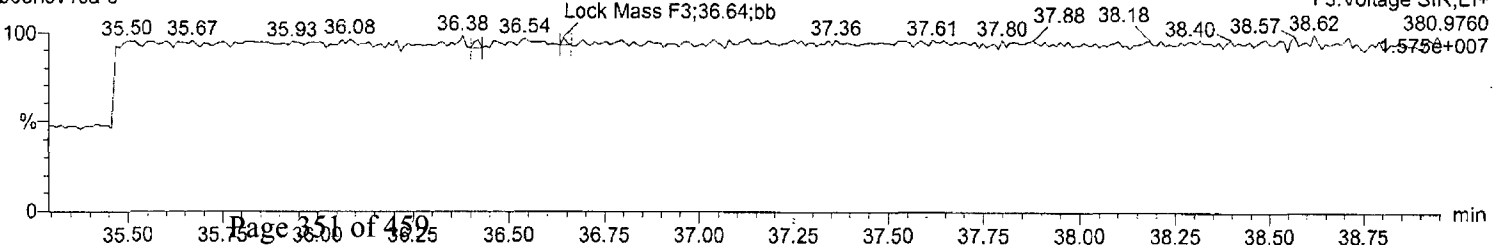
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b03nov10a-9



Lock Mass F3

b03nov10a-9



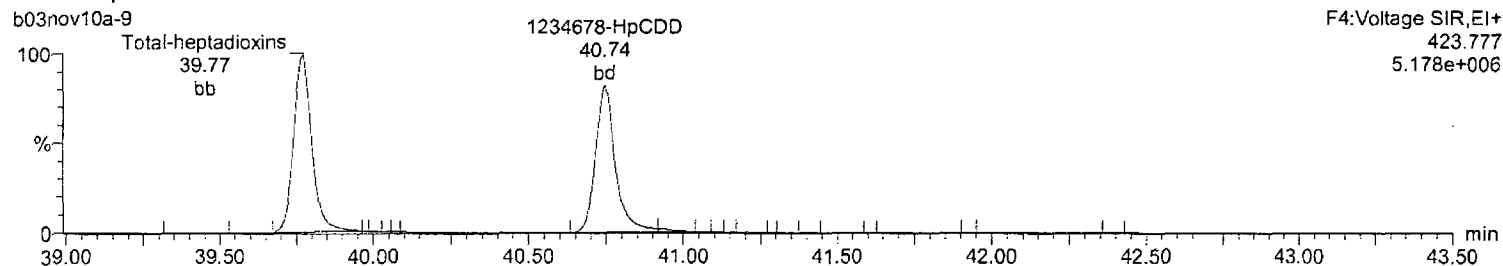
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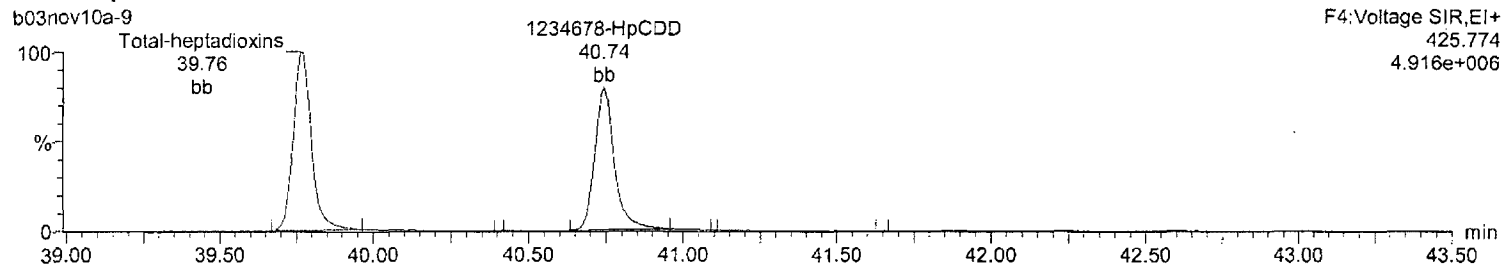
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Task: HRP763_1, User: MJC

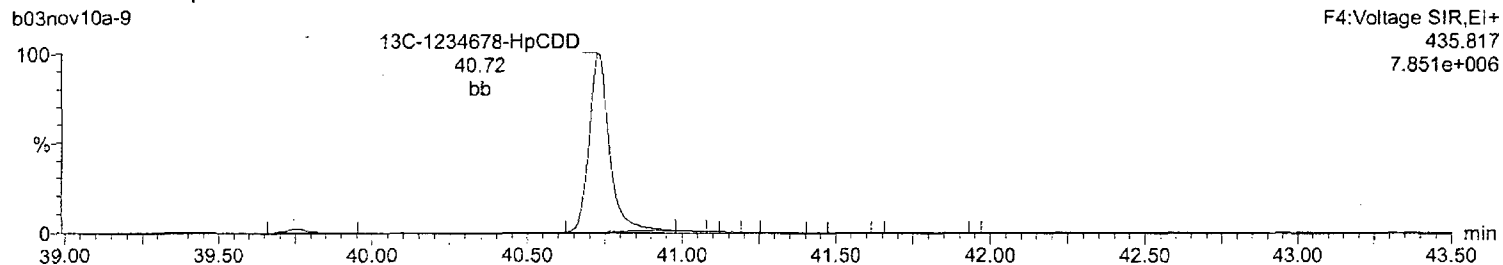
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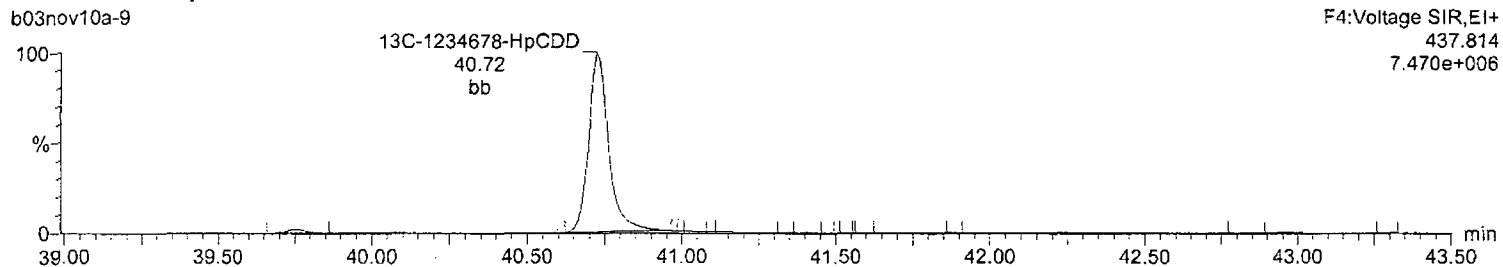
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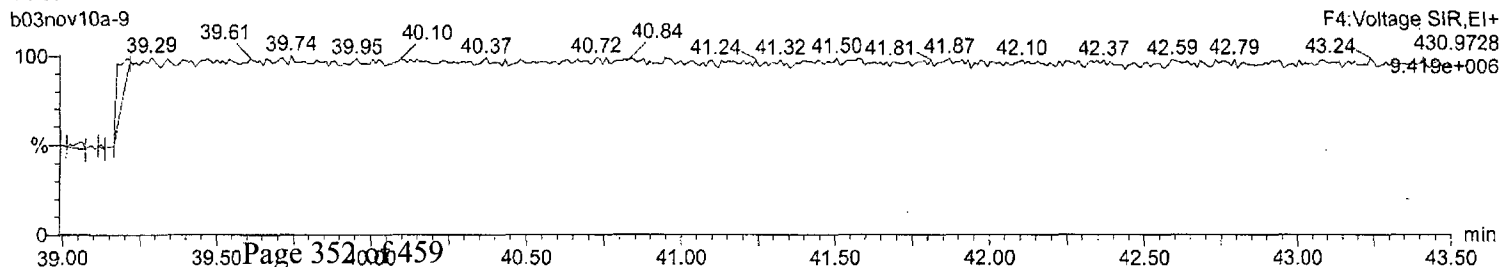
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13C-1234678-HpCDD



Lock Mass F4



Quantify Sample Report
Method 1613 CCAL Report

MassLynx 4.1

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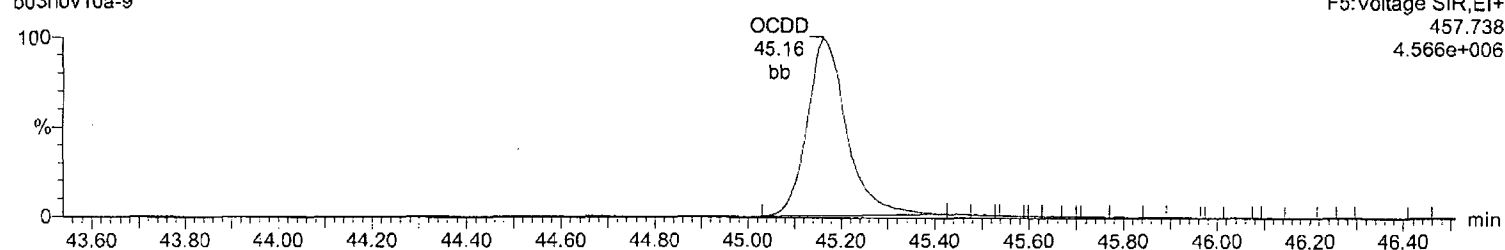
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Task: HRP763_1, User: MJC

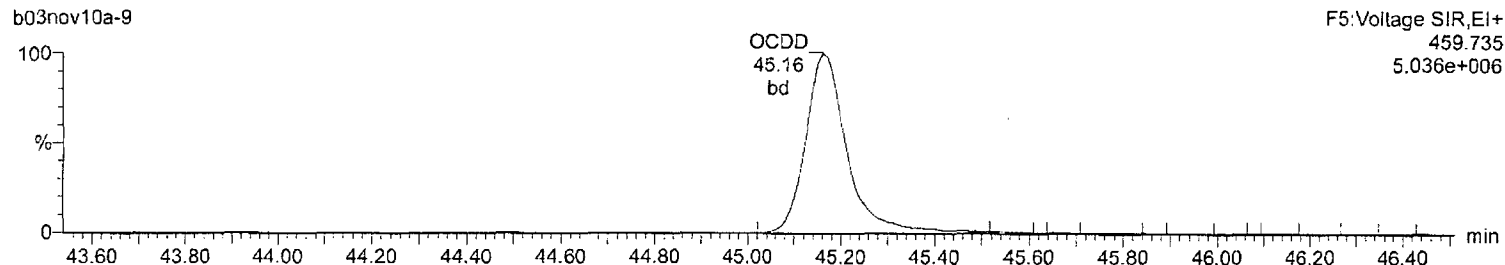
OCDD

b03nov10a-9



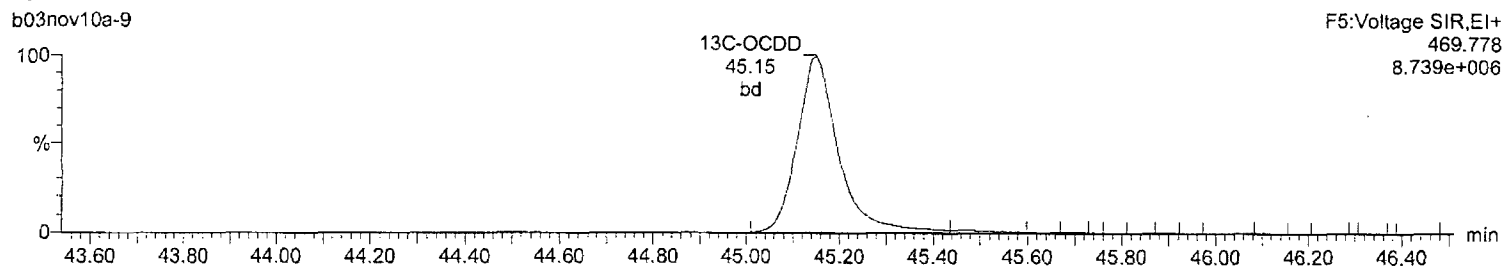
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b03nov10a-9



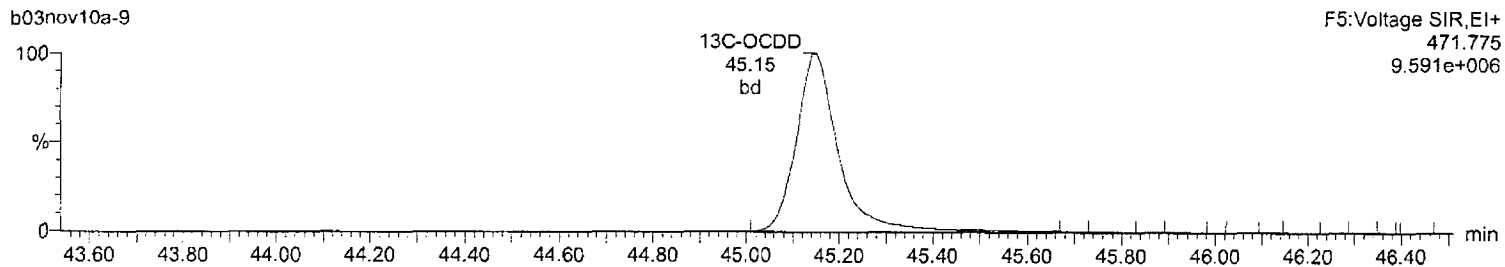
13C-OCDD

b03nov10a-9



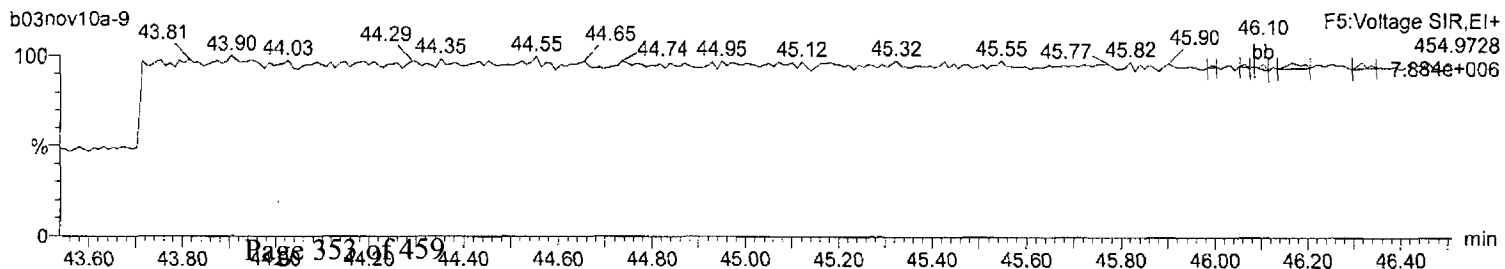
13C-OCDD

b03nov10a-9



Lock Mass F5

b03nov10a-9



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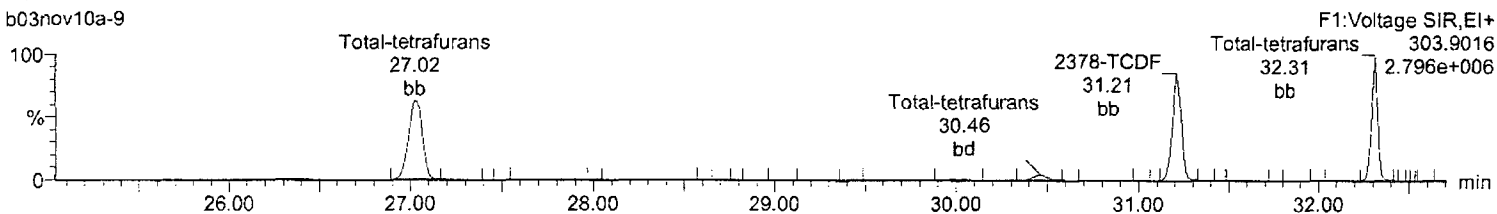
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Task: HRP763_1, User: MJC

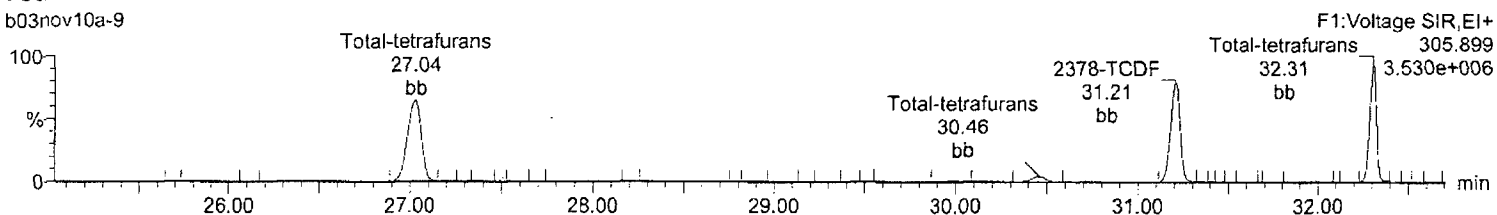
Total-tetrafurans

b03nov10a-9



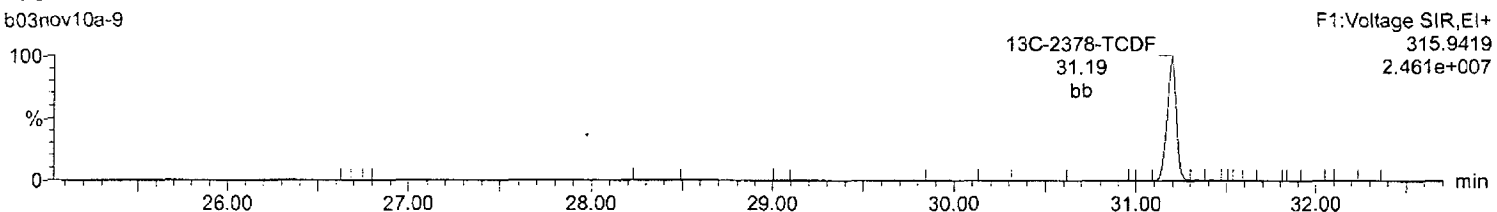
Total-tetrafurans

b03nov10a-9



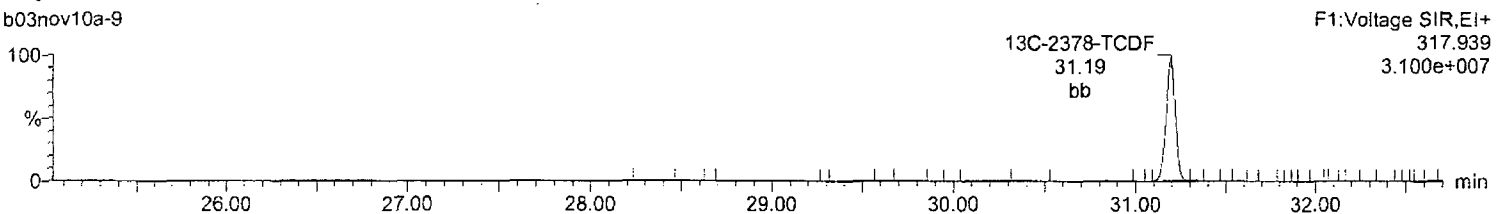
13C-2378-TCDF

b03nov10a-9



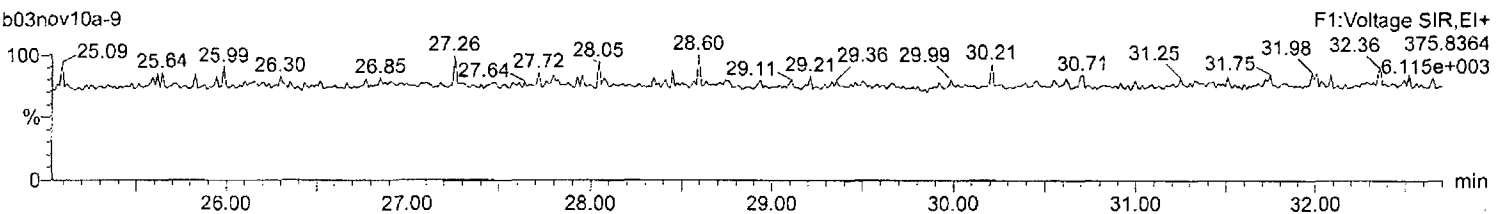
13C-2378-TCDF

b03nov10a-9



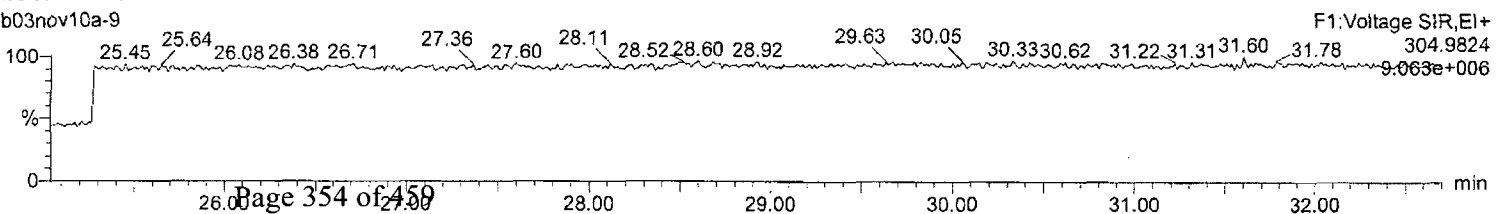
HxDPE

b03nov10a-9



Lock Mass F1

b03nov10a-9



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b03nov10a-9.qld

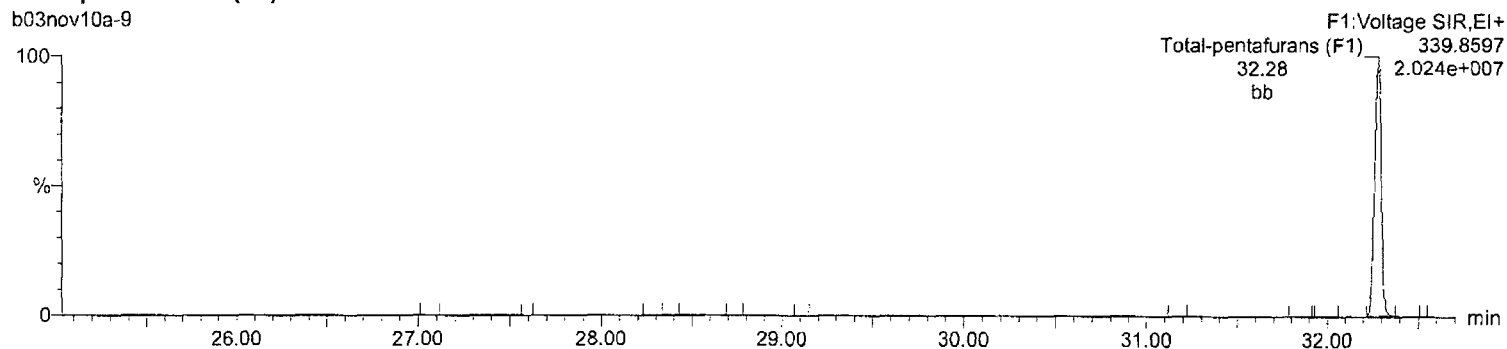
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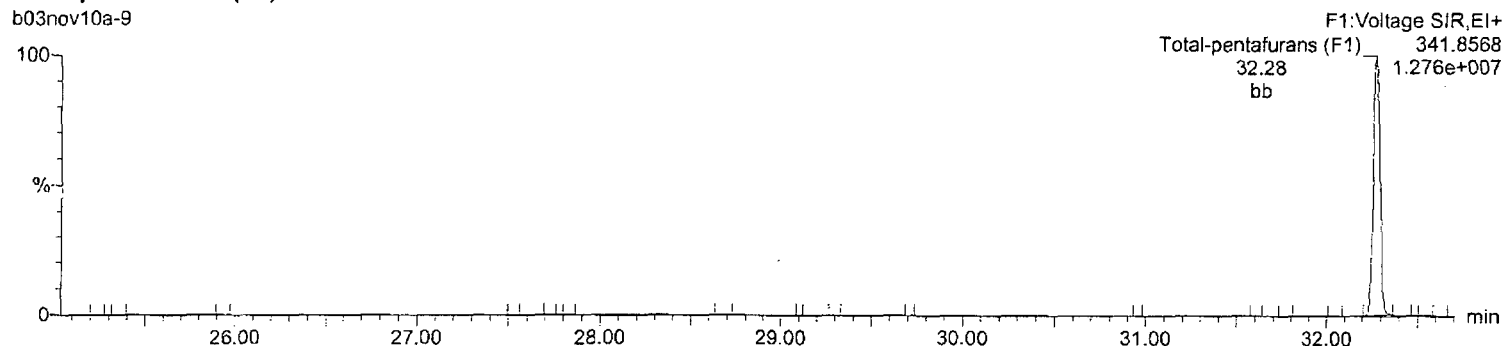
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b03nov10a-9



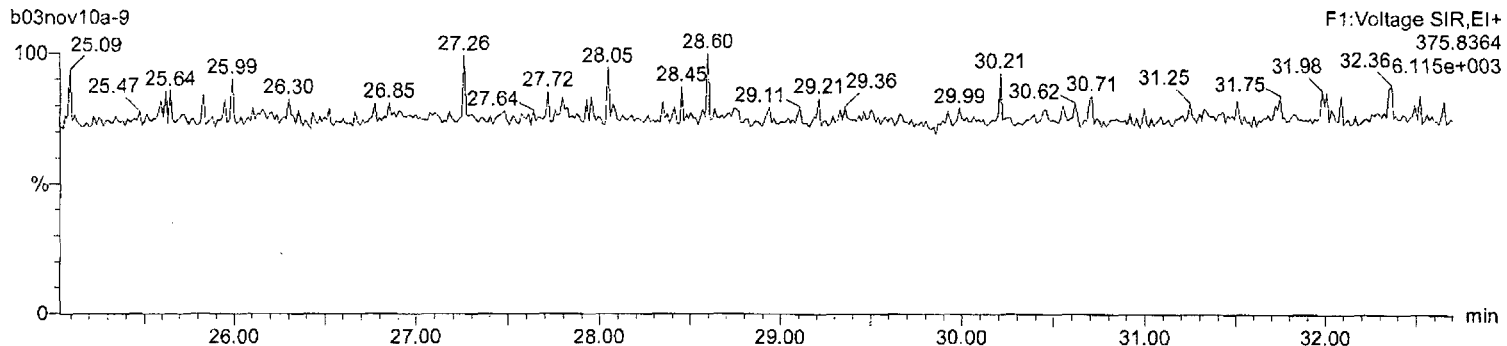
Total-pentafurans (F1)

b03nov10a-9



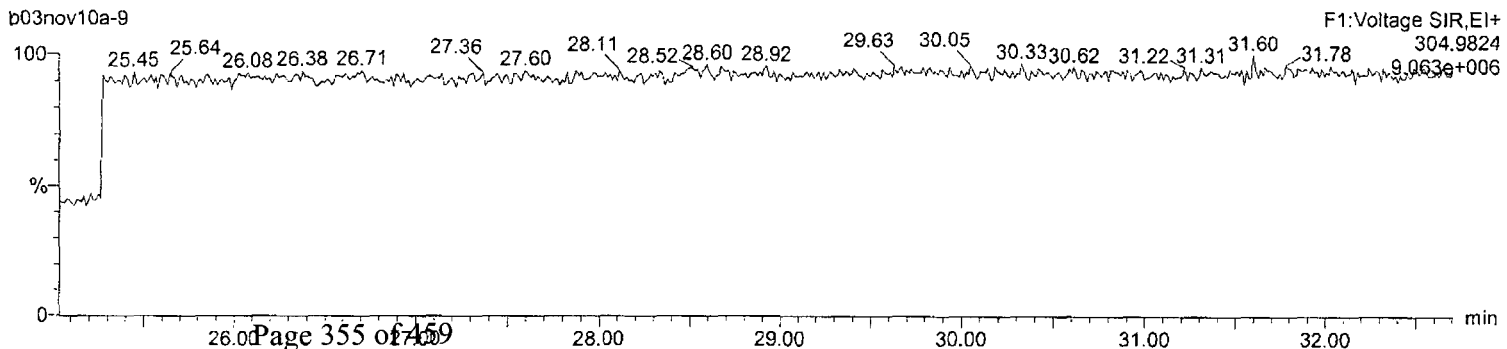
HxDPE

b03nov10a-9



Lock Mass F1

b03nov10a-9



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b03nov10a-9.qld

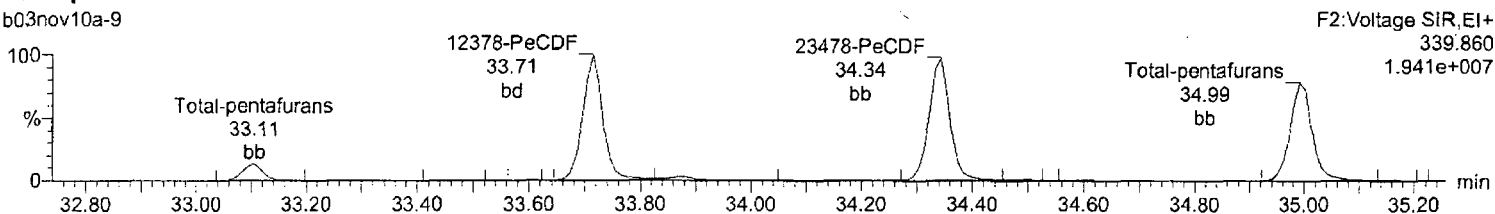
Last Altered: Wednesday, November 03, 2010 15:50:52 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:51:41 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

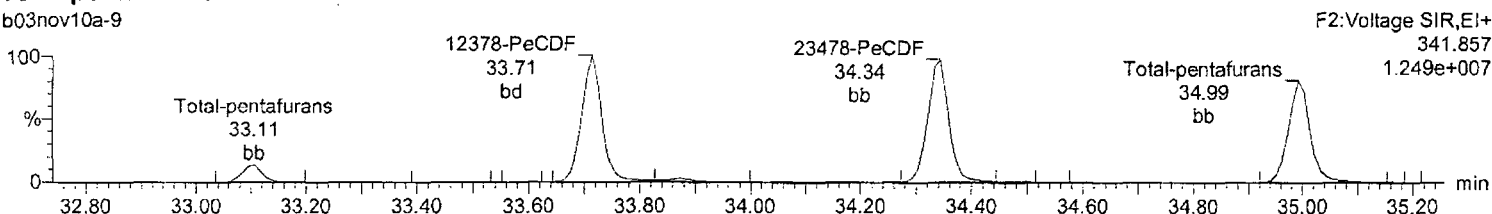
Total-pentafurans

b03nov10a-9



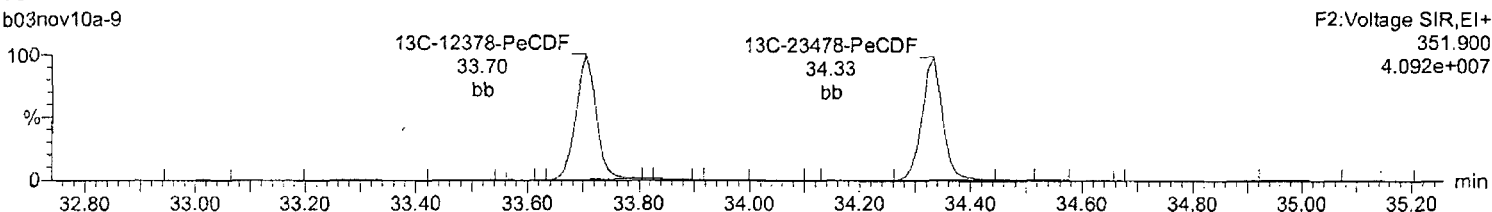
Total-pentafurans

b03nov10a-9



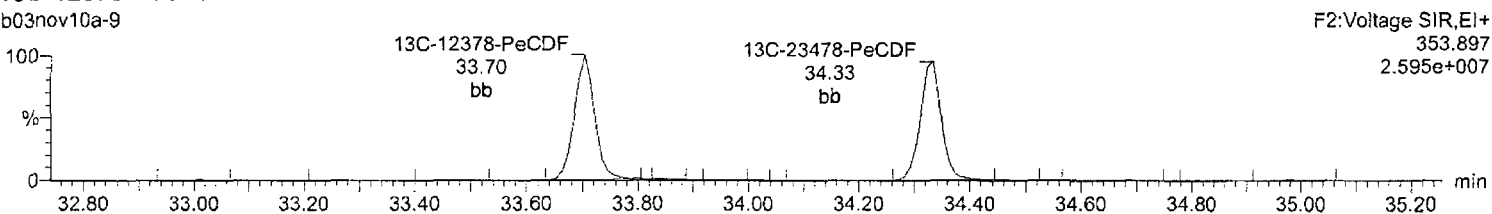
13C-12378-PeCDF

b03nov10a-9



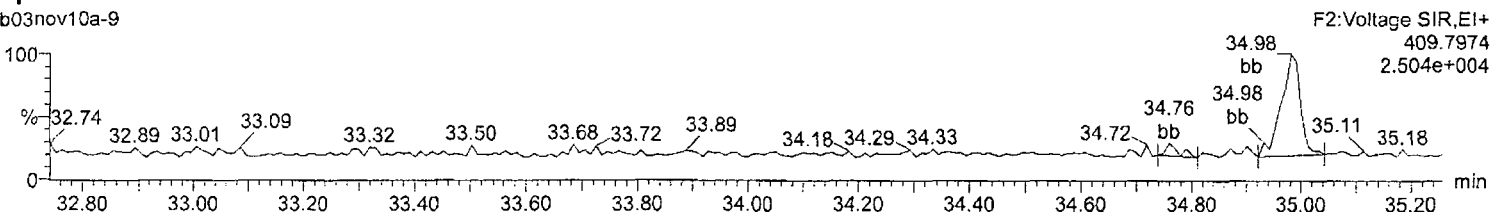
13C-12378-PeCDF

b03nov10a-9



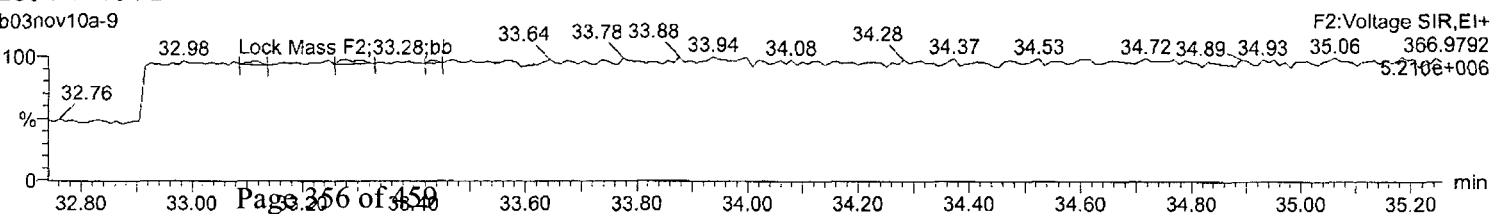
HpDPE

b03nov10a-9



Lock Mass F2

b03nov10a-9



Quantify Sample Report
Method 1613 CCAL Report

MassLynx 4.1

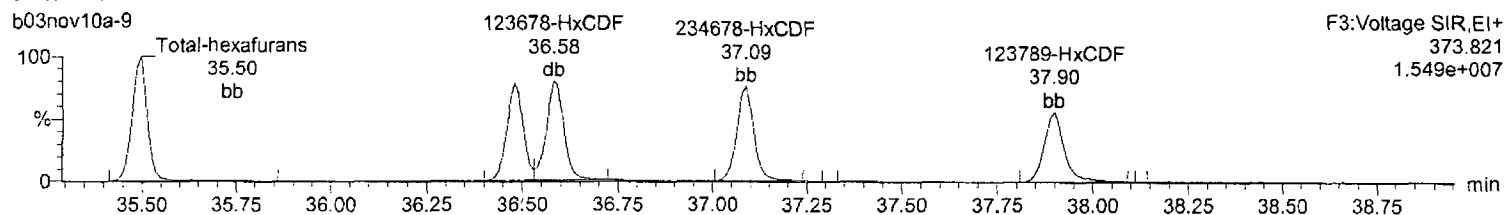
Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b03nov10a-9.qld

Last Altered: Wednesday, November 03, 2010 15:50:52 Eastern Standard Time

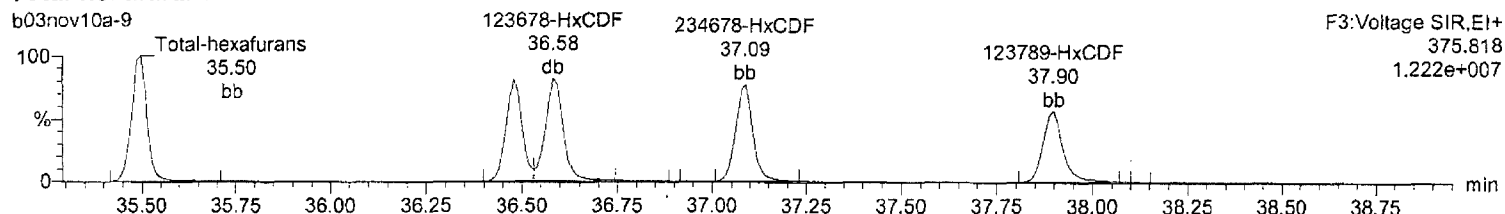
Printed: Wednesday, November 03, 2010 15:51:41 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

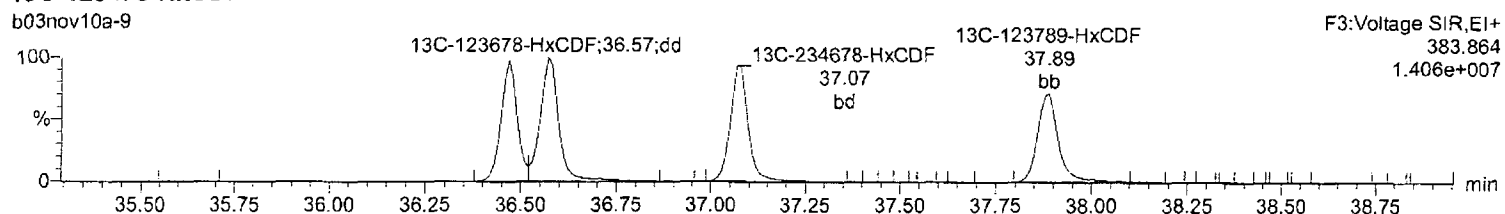
Total-hexafurans



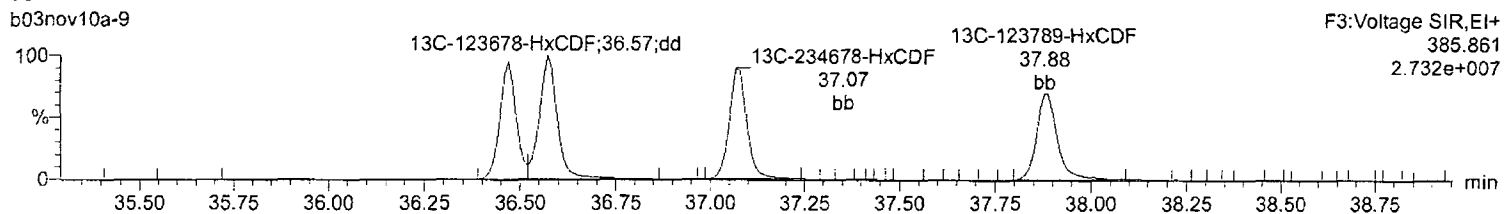
Total-hexafurans



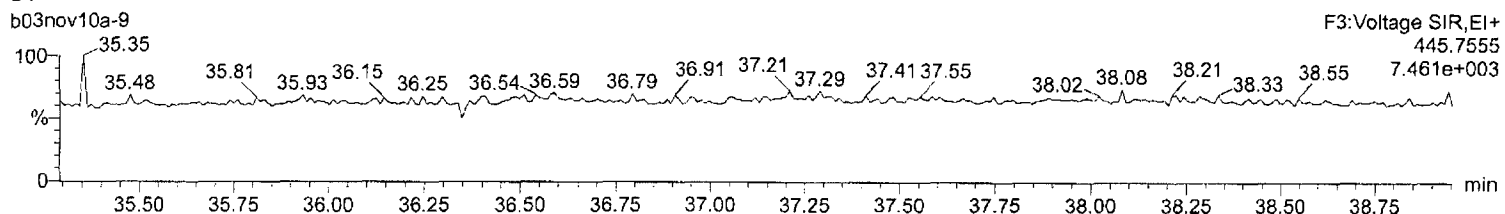
¹³C-123478-HxCDF



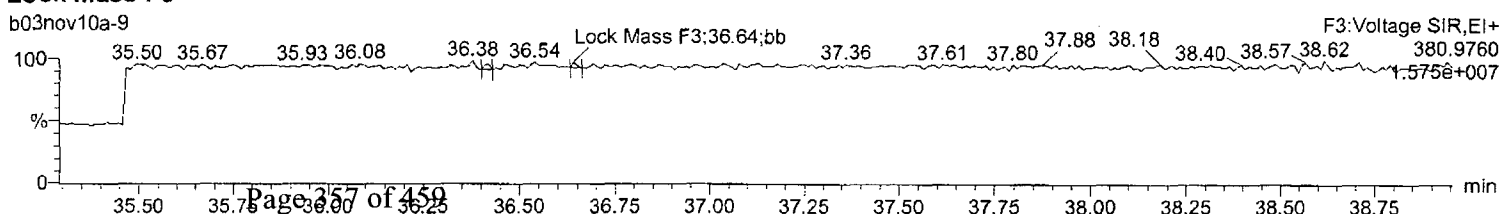
¹³C-123478-HxCDF



OcDPE



Lock Mass F3



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b03nov10a-9.qld

Last Altered: Wednesday, November 03, 2010 15:50:52 Eastern Standard Time

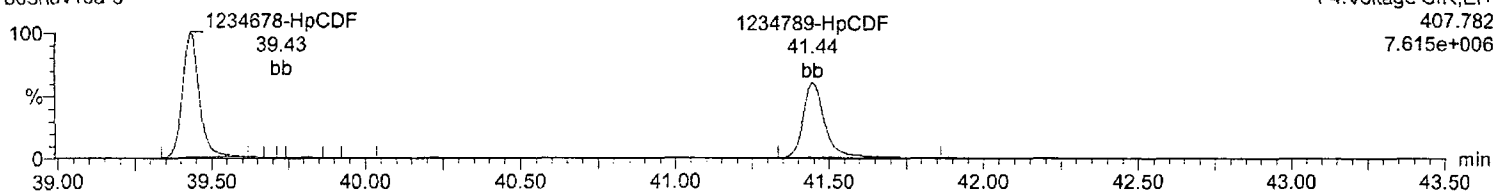
Printed: Wednesday, November 03, 2010 15:51:41 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

Total-heptafurans

b03nov10a-9

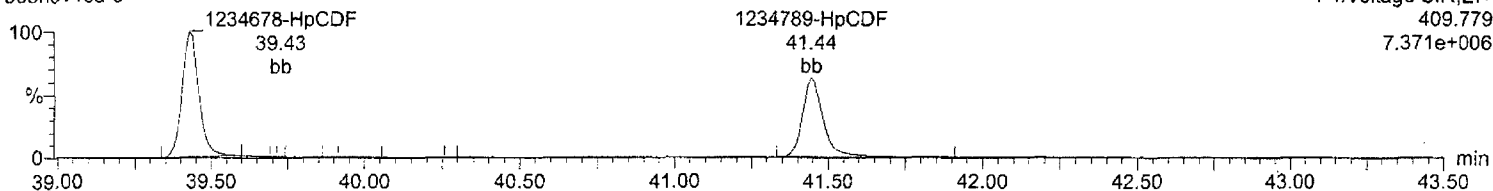
F4:Voltage SIR,EI+
407.782
7.615e+006



Total-heptafurans

b03nov10a-9

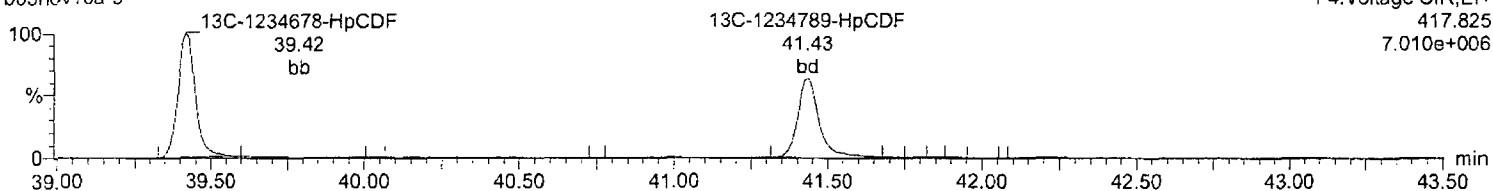
F4:Voltage SIR,EI+
409.779
7.371e+006



13C-1234678-HpCDF

b03nov10a-9

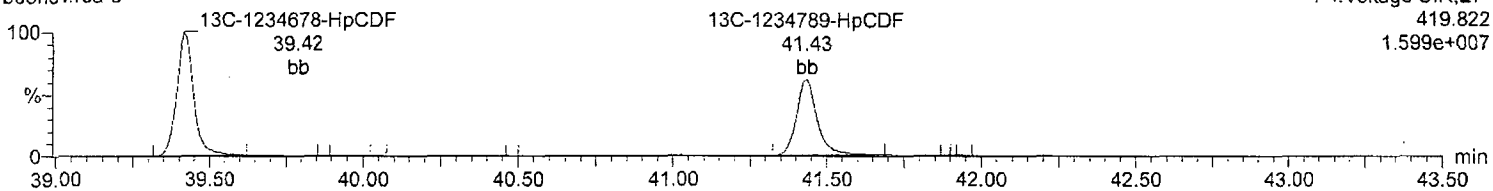
F4:Voltage SIR,EI+
417.825
7.010e+006



13C-1234678-HpCDF

b03nov10a-9

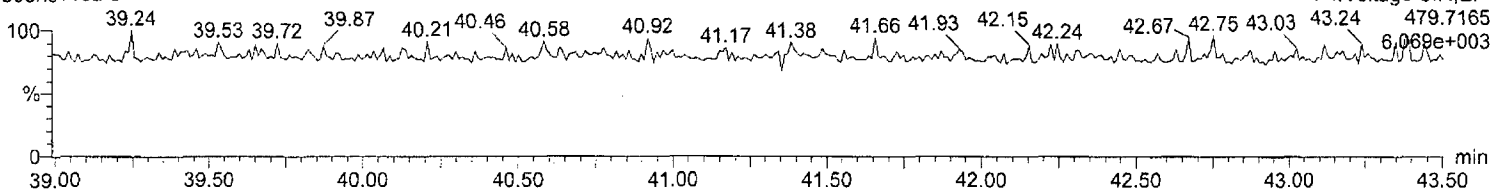
F4:Voltage SIR,EI+
419.822
1.599e+007



NoDPE

b03nov10a-9

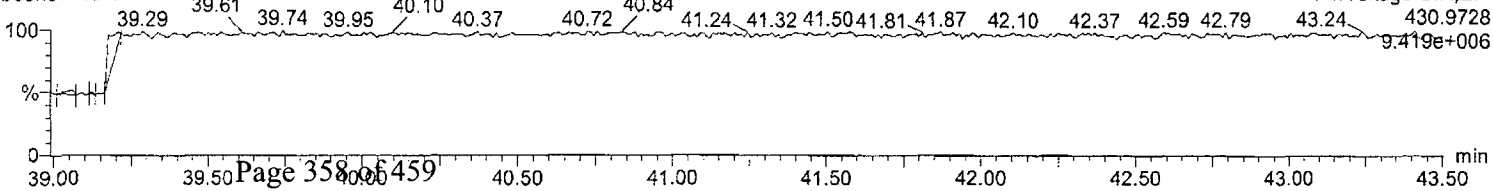
F4:Voltage SIR,EI+
479.7165
6.069e+003



Lock Mass F4

b03nov10a-9

F4:Voltage SIR,EI+
430.9728
9.419e+006



Dataset: C:\MassLynx\Default.pro\CCAL Results\1613-b03nov10a-9.qld

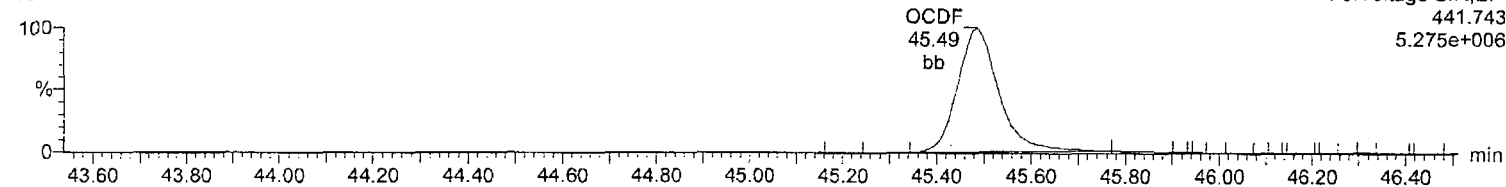
Last Altered: Wednesday, November 03, 2010 15:50:52 Eastern Standard Time

Printed: Wednesday, November 03, 2010 15:51:41 Eastern Standard Time

Name: b03nov10a-9, Date: 03-Nov-2010, Time: 14:58:55, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a,
Task: HRP763_1, User: MJC

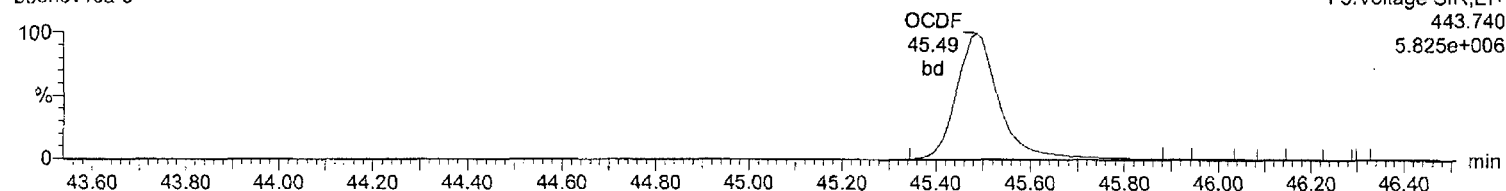
OCDF

b03nov10a-9



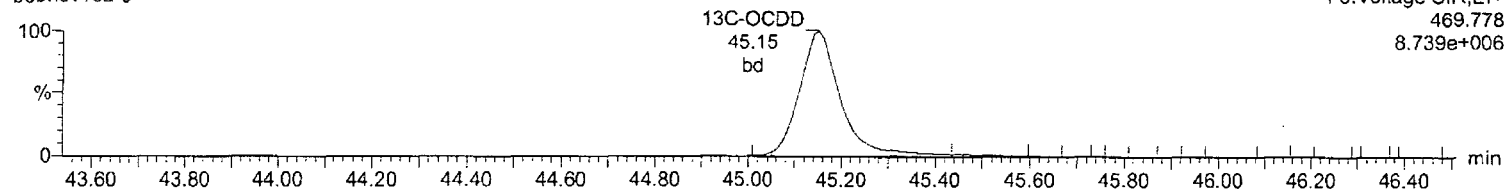
OCDF

b03nov10a-9



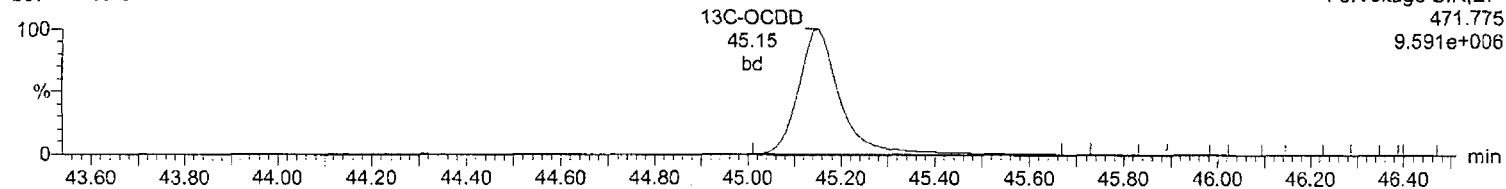
13C-OCDD

b03nov10a-9



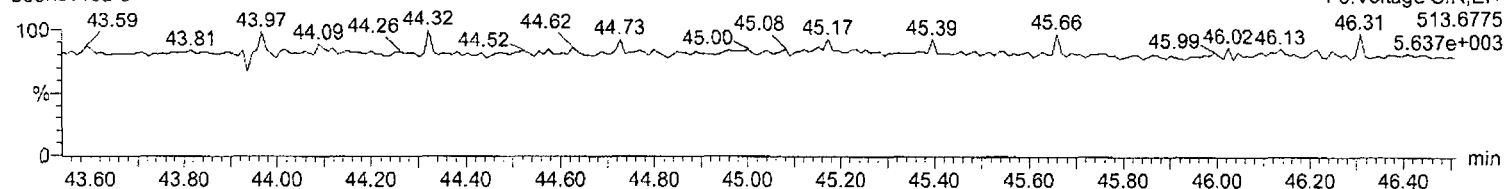
13C-OCDD

b03nov10a-9



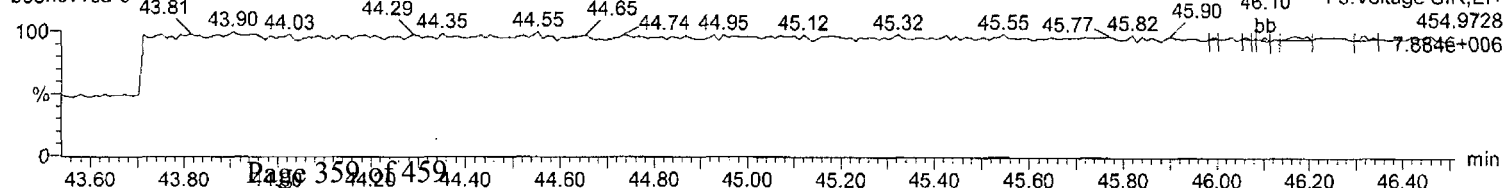
DeDPE

b03nov10a-9



Lock Mass F5

b03nov10a-9



Quantify Sample Summary Report

MassLynx 4.1

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_2-14.qld

Last Altered: Thursday, November 04, 2010 08:36:01 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:37:35 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	9.31e4	1.19e5	2.12e5	31.74	1.000	0.78	NO	10.652	0.0219	1.079	6.5	1.91e6	1134	1683.4	2.41e6	1781	1354.4	db
2	12378-PeCDD	5.19e5	3.31e5	8.51e5	34.53	1.000	1.57	NO	50.334	0.0591	1.039	0.7	1.17e7	3708	3166.3	7.36e6	3898	1886.8	bb
3	123478-HxCDD	4.04e5	3.22e5	7.26e5	37.22	0.998	1.25	NO	51.015	0.122	0.915	2.0	8.10e6	5853	1383.5	6.37e6	4830	1318.0	bd
4	123678-HxCDD	4.42e5	3.48e5	7.90e5	37.31	1.000	1.27	NO	51.397	0.113	0.995	2.8	7.80e6	5853	1331.9	6.19e6	4830	1281.1	db
5	123789-HxCDD	4.10e5	3.24e5	7.33e5	37.56	1.007	1.27	NO	53.348	0.127	0.923	6.7	7.13e6	5853	1217.5	5.63e6	4830	1166.0	bb
6	1234678-HpCDD	3.00e5	2.90e5	5.90e5	40.74	1.000	1.03	NO	51.217	0.135	1.029	2.4	4.12e6	2889	1425.4	3.82e6	4064	940.7	bb
7	OCDD	4.49e5	5.10e5	9.59e5	45.17	1.000	0.88	NO	102.867	0.304	1.024	2.9	4.44e6	2965	1496.7	4.91e6	6190	793.4	bd
8	2378-TCDF	1.30e5	1.69e5	2.99e5	31.21	1.000	0.77	NO	9.308	0.0166	0.915	-6.9	2.28e6	1489	1533.7	3.02e6	1517	1988.1	bb
9	12378-PeCDF	8.06e5	5.24e5	1.33e6	33.71	1.000	1.54	NO	49.422	0.0570	0.923	-1.2	1.90e7	6906	2754.1	1.22e7	4840	2516.7	bd
10	23478-PeCDF	8.01e5	5.19e5	1.32e6	34.34	1.019	1.54	NO	50.110	0.0582	0.916	0.2	1.85e7	6906	2677.1	1.17e7	4840	2415.5	bb
11	123478-HxCDF	5.91e5	4.83e5	1.07e6	36.48	0.998	1.22	NO	52.846	0.115	0.960	5.7	1.21e7	7387	1640.8	9.83e6	6965	1410.9	bd
12	123678-HxCDF	6.60e5	5.34e5	1.19e6	36.58	1.000	1.24	NO	50.546	0.0992	1.069	1.1	1.26e7	7387	1711.8	1.03e7	6965	1484.6	db
13	234678-HxCDF	6.02e5	4.92e5	1.09e6	37.09	1.014	1.22	NO	51.191	0.110	0.978	2.4	1.15e7	7387	1555.3	9.37e6	6965	1344.8	bb
14	123789-HxCDF	5.20e5	4.15e5	9.35e5	37.90	1.036	1.25	NO	52.840	0.132	0.837	5.7	8.62e6	7387	1167.2	7.04e6	6965	1011.2	bb
15	1234678-HpCDF	4.76e5	4.66e5	9.42e5	39.44	1.001	1.02	NO	50.213	0.0870	1.282	0.4	7.51e6	3925	1912.0	7.06e6	4349	1624.0	bb
16	1234789-HpCDF	3.71e5	3.56e5	7.26e5	41.45	1.052	1.04	NO	53.113	0.119	0.988	6.2	4.82e6	3925	1226.8	4.71e6	4349	1083.8	bb
17	OCDF	5.36e5	5.79e5	1.12e6	45.49	1.007	0.93	NO	96.742	0.145	1.192	-3.3	5.14e6	2251	2284.8	5.69e6	3139	1813.3	bd
18	13C-2378-TCDD	8.61e5	1.10e6	1.96e6	31.73	1.013	0.78	NO	94.463	0.0354	1.058	-5.5	1.73e7	2642	6547.9	2.21e7	2013	10967.8	bb
19	13C-12378-PeCDD	1.00e6	6.36e5	1.64e6	34.52	1.102	1.57	NO	92.817	0.0535	0.882	-7.2	2.29e7	2381	9614.4	1.45e7	3583	4035.6	bb
20	13C-123678-HxCDD	8.89e5	7.00e5	1.59e6	37.30	0.994	1.27	NO	97.134	0.0908	1.080	-2.9	1.64e7	4515	3628.1	1.30e7	3826	3396.0	db
21	13C-1234678-HpCDD	5.79e5	5.67e5	1.15e6	40.73	1.085	1.02	NO	97.382	0.128	0.780	-2.6	7.77e6	4422	1757.0	7.41e6	4047	1832.2	bb
22	13C-OCDD	8.89e5	9.82e5	1.87e6	45.15	1.203	0.91	NO	190.416	0.147	0.636	-4.8	8.62e6	4221	2042.1	9.62e6	3926	2451.6	bd
23	13C-2378-TCDF	1.44e6	1.82e6	3.26e6	31.19	0.996	0.79	NO	96.523	0.0198	1.758	-3.5	2.45e7	2161	11334.5	3.03e7	2062	14693.8	bb
24	13C-12378-PeCDF	1.77e6	1.11e6	2.88e6	33.70	1.076	1.60	NO	91.634	0.0607	1.551	-8.4	4.07e7	6686	6090.2	2.56e7	5367	4768.4	bd
25	13C-123678-HxCDF	7.67e5	1.47e6	2.23e6	36.57	0.974	0.52	NO	93.187	0.108	1.519	-6.8	1.41e7	5735	2457.7	2.70e7	8831	3053.9	dd
26	13C-1234678-HpCDF	4.62e5	1.01e6	1.47e6	39.42	1.050	0.46	NO	92.476	0.104	0.999	-7.5	7.02e6	4631	1515.4	1.56e7	4621	3375.0	bb
27	13C-1234-TCDD	8.21e5	1.04e6	1.86e6	31.33	0.000	0.79	NO	100.000	0.0397	1.000	0.0	1.56e7	2642	5895.0	1.88e7	2013	9356.8	bb
28	13C-123789-HxCDD	8.24e5	6.47e5	1.47e6	37.54	0.000	1.27	NO	100.000	0.101	1.000	0.0	1.39e7	4515	3075.9	1.12e7	3826	2929.3	bb
29	37Cl-2378-TCDD (SS)	2.18e5		2.18e5	31.73	1.000			10.510	0.0117	1.108	5.1	4.47e6	1623	2752.2				bb
30	13C-23478-PeCDF (SS)	1.67e6	1.06e6	2.74e6	34.33	1.019	1.57	NO	101.773	0.0585	0.950	1.8	3.80e7	6686	5682.5	2.38e7	5367	4432.1	bb

Quantify Sample Summary Report

MassLynx 4.1

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_2-14.qld

Last Altered: Thursday, November 04, 2010 08:36:01 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:37:35 Eastern Standard Time

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Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2, Task: HRP763_1, User: MJC

Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
13C-123478-HxCDF (SS)	6.55e5	1.27e6	1.93e6	36.47	0.997	0.52	NO	106.527	0.131	0.863	6.5	1.33e7	5735	2327.7	2.59e7	8831	2933.5	bd
13C-123478-HxCDD (SS)	7.90e5	6.20e5	1.41e6	37.21	0.998	1.27	NO	103.076	0.0993	0.887	3.1	1.52e7	4515	3373.3	1.18e7	3826	3094.5	bd
13C-1234789-HpCDF (SS)	3.50e5	7.96e5	1.15e6	41.43	1.051	0.44	NO	103.067	0.164	0.779	3.1	4.39e6	4631	947.4	9.90e6	4621	2141.2	bd

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_2-14.qld

Last Altered: Thursday, November 04, 2010 08:36:01 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:37:35 Eastern Standard Time

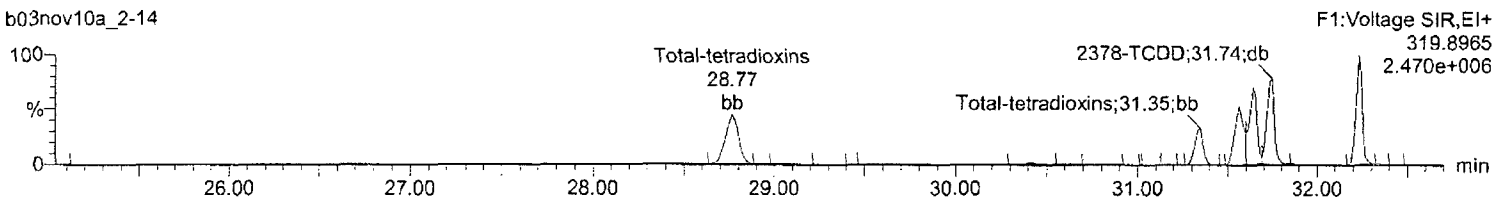
Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2,
Task: HRP763_1, User: MJC

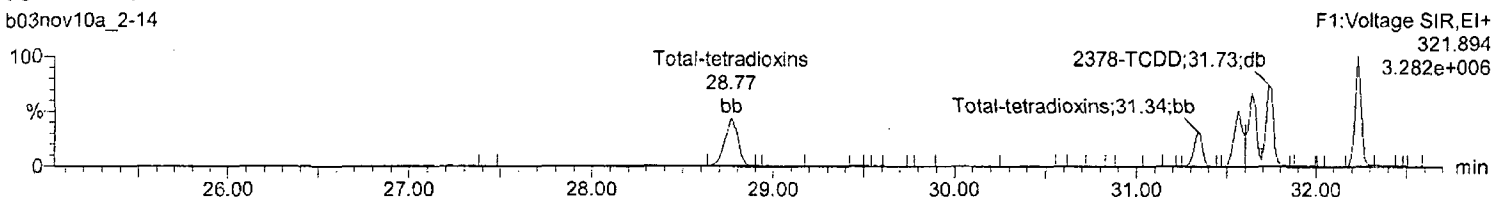
Total-tetradoxins

b03nov10a_2-14



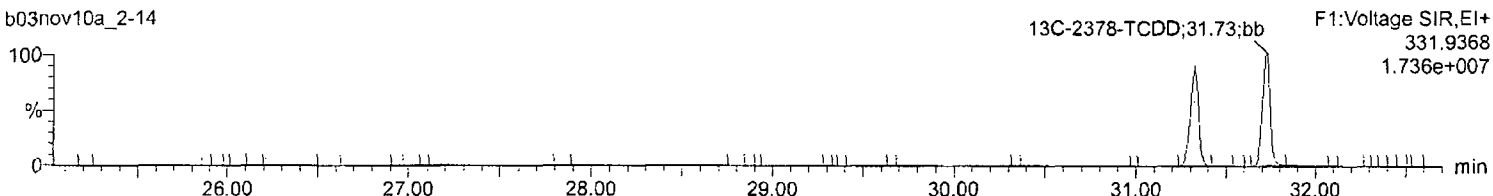
Total-tetradoxins

b03nov10a_2-14



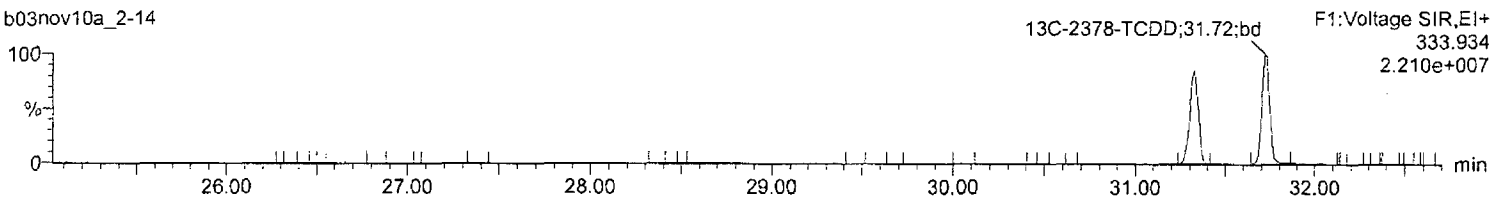
13C-2378-TCDD

b03nov10a_2-14



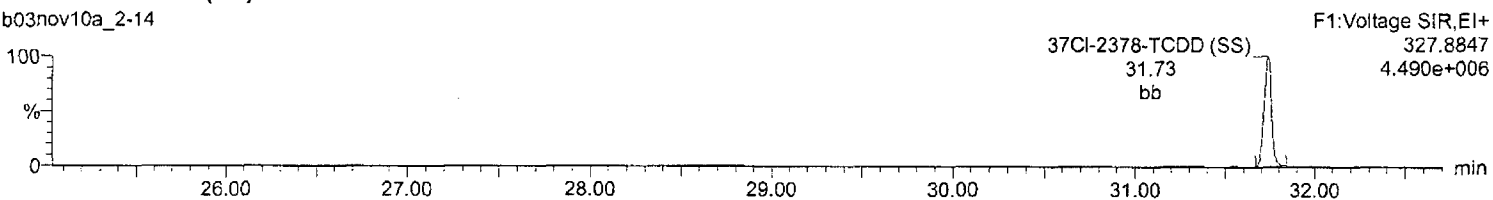
13C-2378-TCDD

b03nov10a_2-14



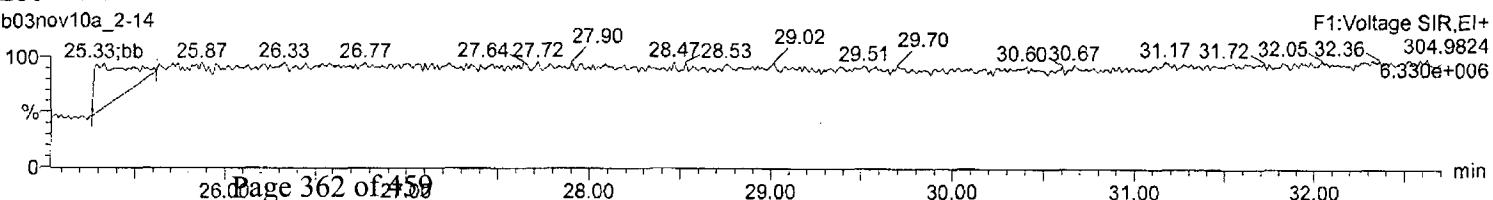
37Cl-2378-TCDD (SS)

b03nov10a_2-14



Lock Mass F1

b03nov10a_2-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_2-14.qld

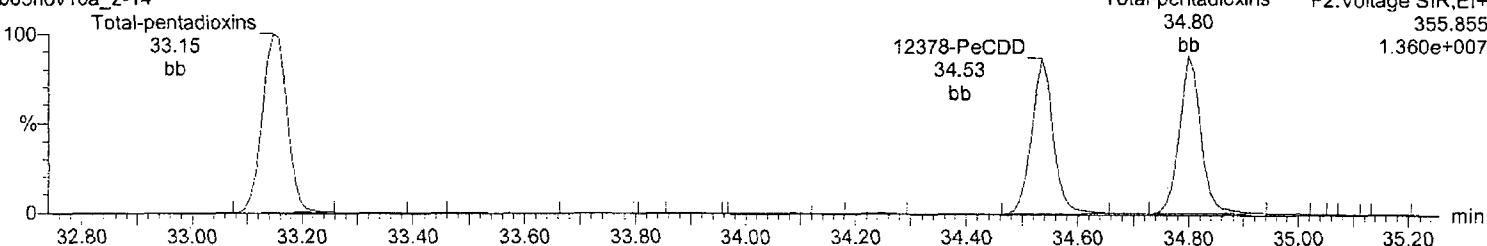
Last Altered: Thursday, November 04, 2010 08:36:01 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:37:35 Eastern Standard Time

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2,
Task: HRP763_1, User: MJC

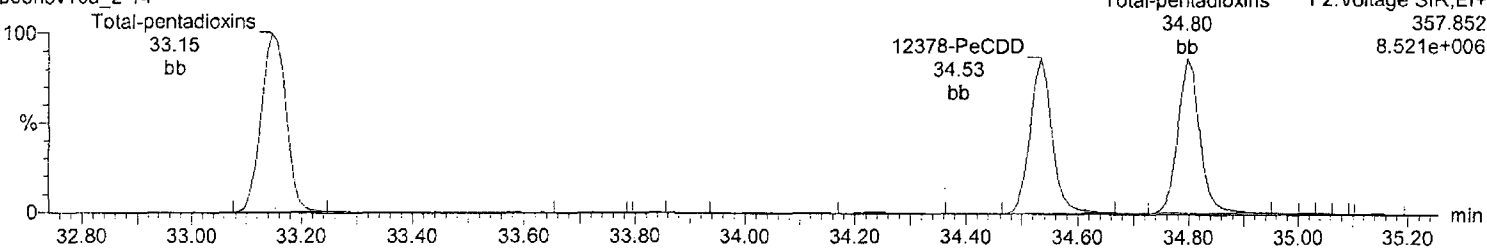
Total-pentadioxins

b03nov10a_2-14



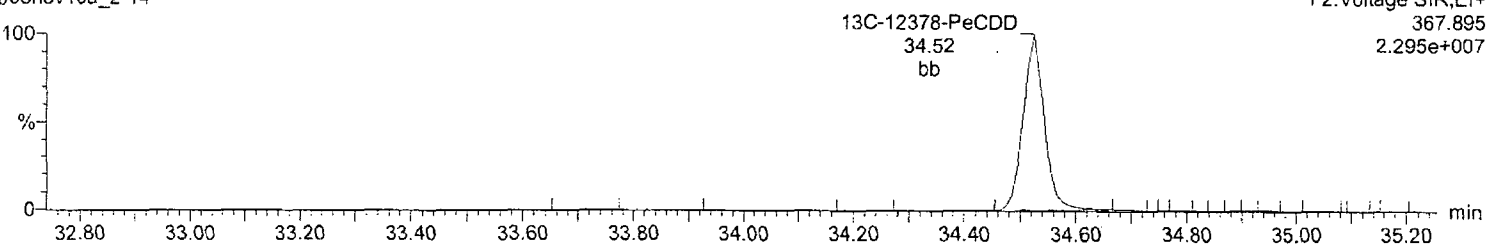
Total-pentadioxins

b03nov10a_2-14



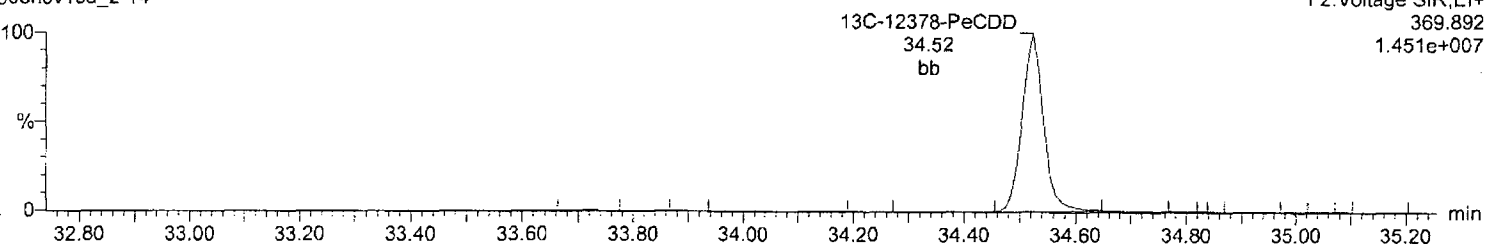
13C-12378-PeCDD

b03nov10a_2-14



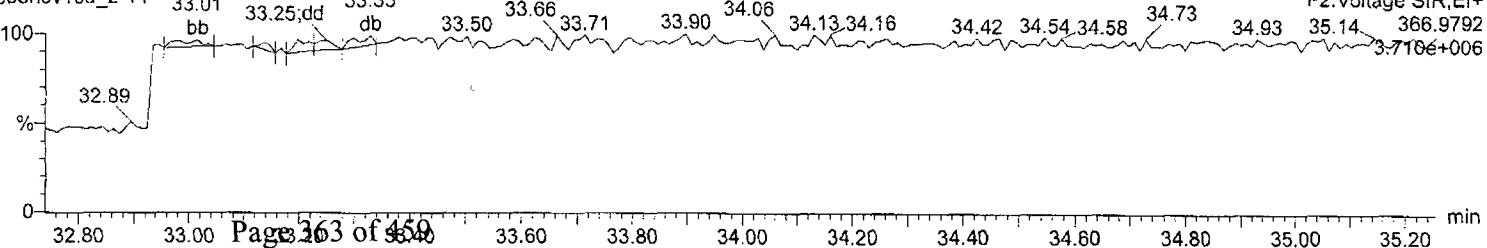
13C-12378-PeCDD

b03nov10a_2-14



Lock Mass F2

b03nov10a_2-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_2-14.qld

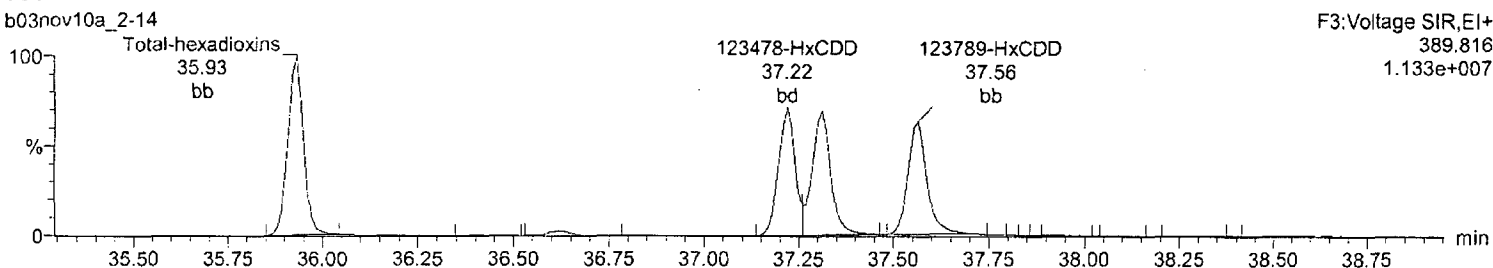
Last Altered: Thursday, November 04, 2010 08:36:01 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:37:35 Eastern Standard Time

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2,
Task: HRP763_1, User: MJC

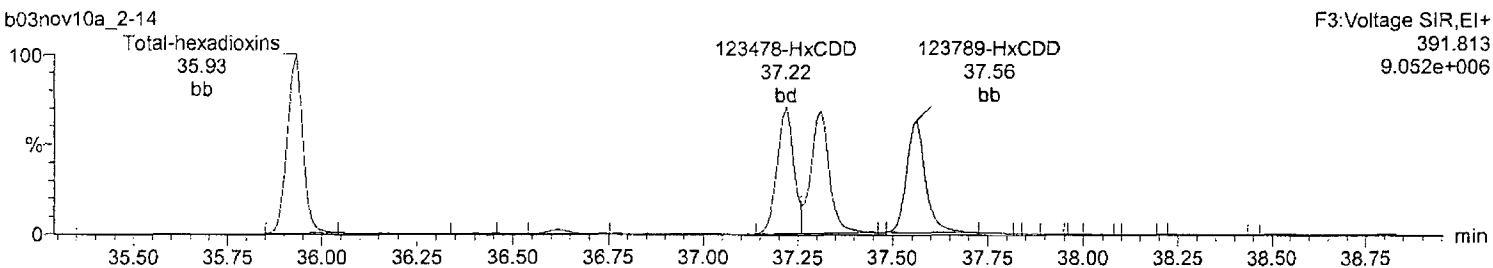
Total-hexadioxins

b03nov10a_2-14



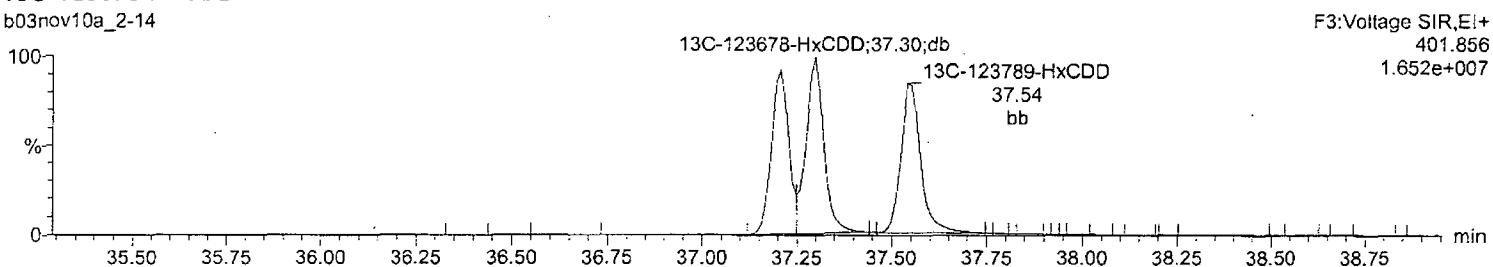
Total-hexadioxins

b03nov10a_2-14



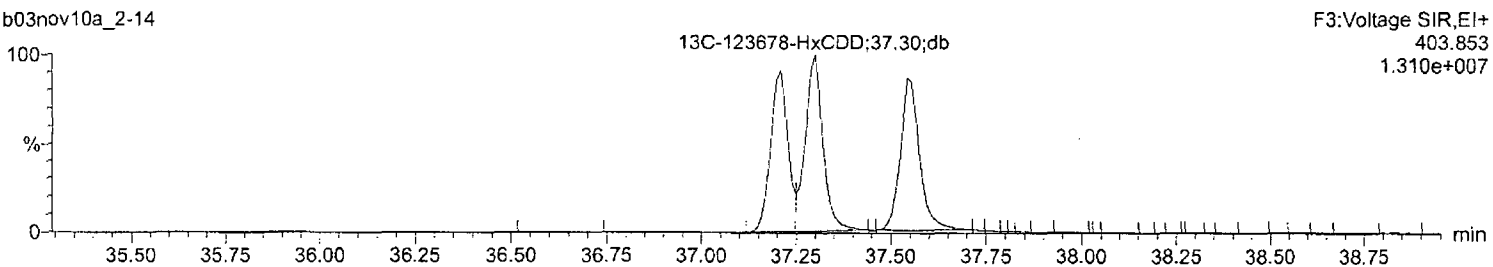
13C-123678-HxCDD

b03nov10a_2-14



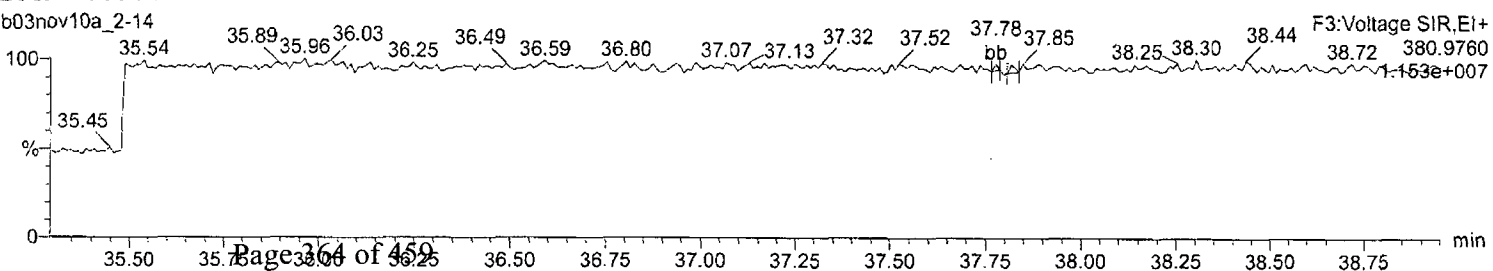
13C-123678-HxCDD

b03nov10a_2-14



Lock Mass F3

b03nov10a_2-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_2-14.qld

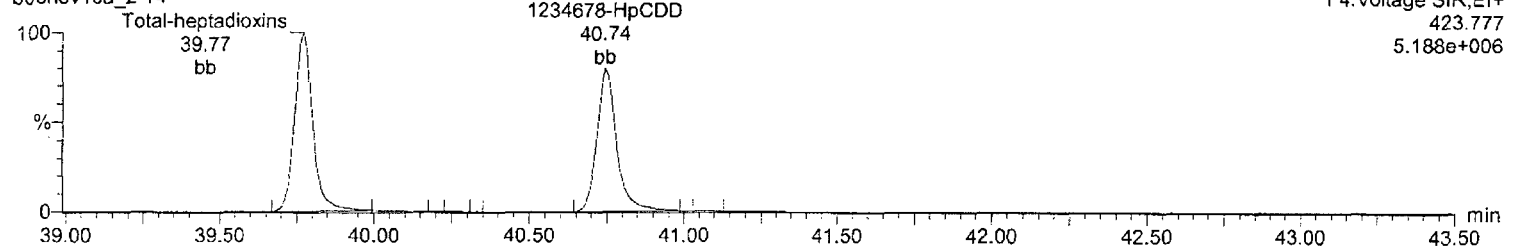
Last Altered: Thursday, November 04, 2010 08:36:01 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:37:35 Eastern Standard Time

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2,
Task: HRP763_1, User: MJC

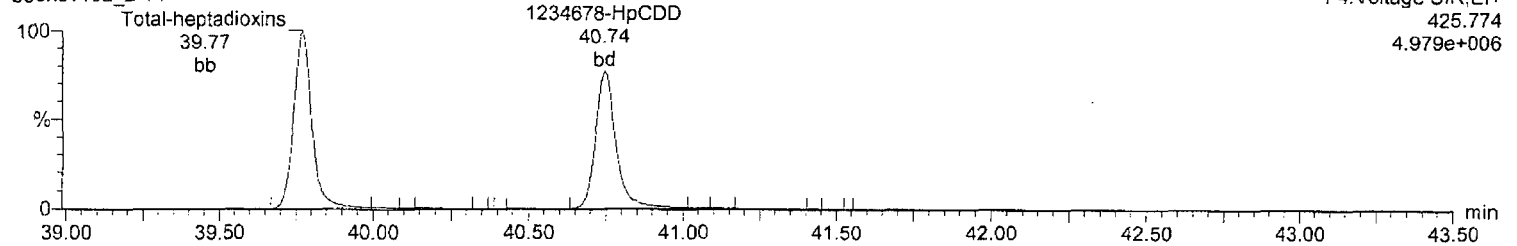
Total-heptadioxins

b03nov10a_2-14



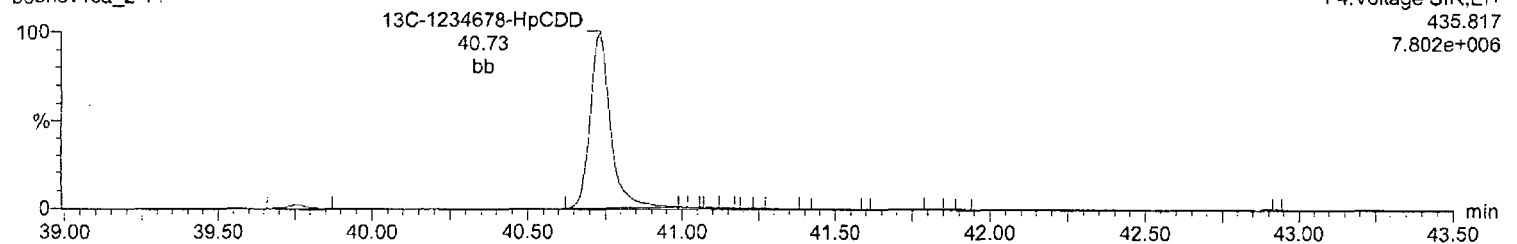
Total-heptadioxins

b03nov10a_2-14



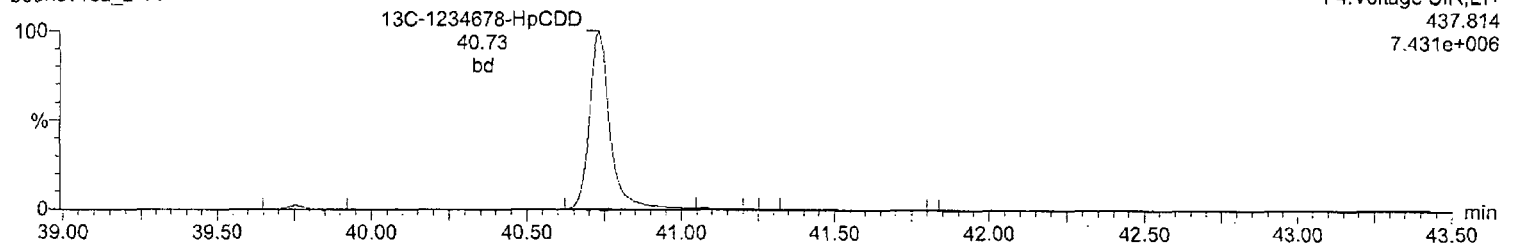
13C-1234678-HpCDD

b03nov10a_2-14



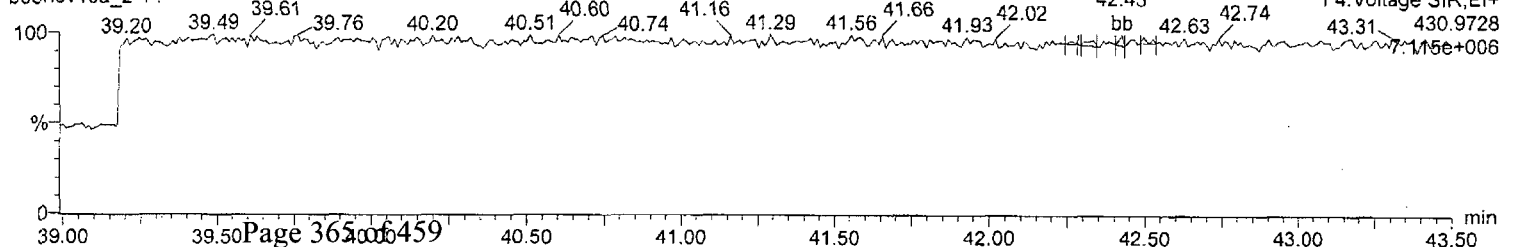
13C-1234678-HpCDD

b03nov10a_2-14



Lock Mass F4

b03nov10a_2-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_2-14.qld

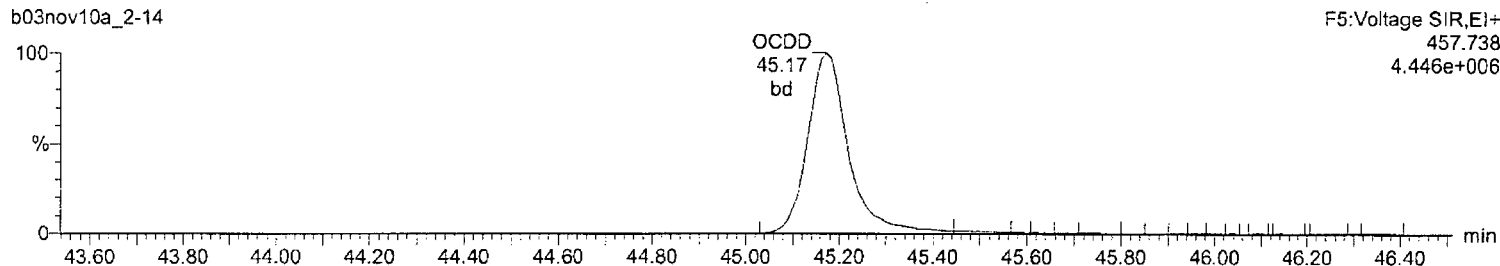
Last Altered: Thursday, November 04, 2010 08:36:01 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:37:35 Eastern Standard Time

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2,
Task: HRP763_1, User: MJC

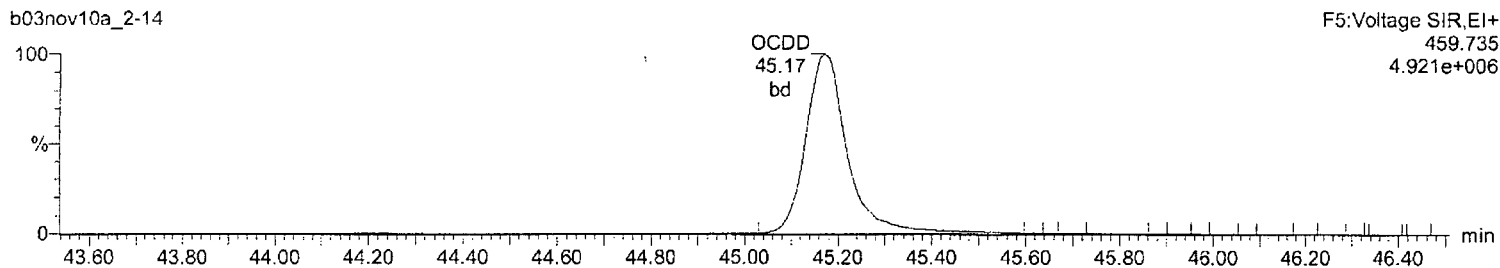
OCDD

b03nov10a_2-14



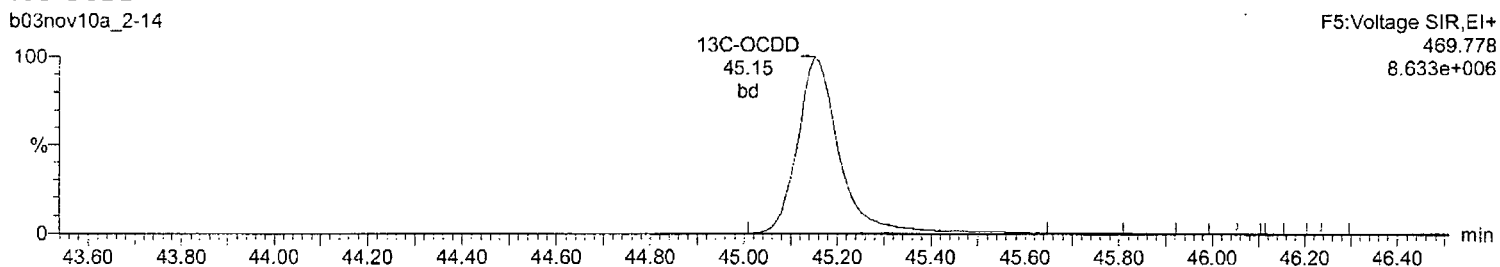
OCDD

b03nov10a_2-14



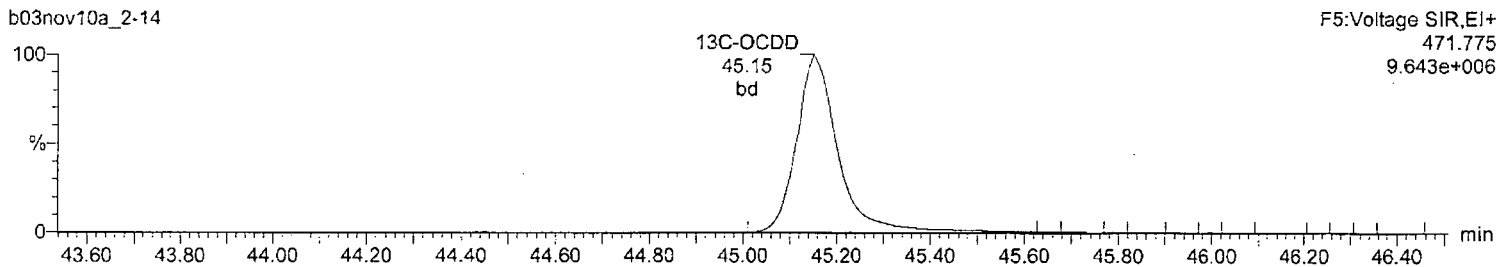
13C-OCDD

b03nov10a_2-14



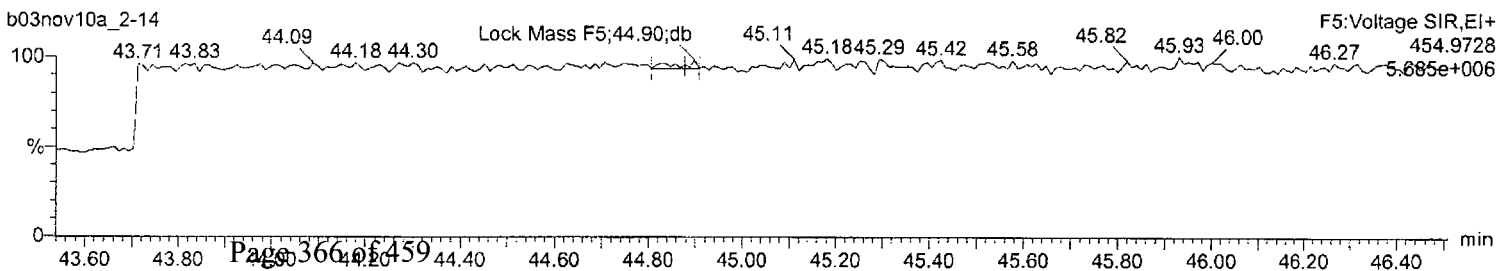
13C-OCDD

b03nov10a_2-14



Lock Mass F5

b03nov10a_2-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_2-14.qld

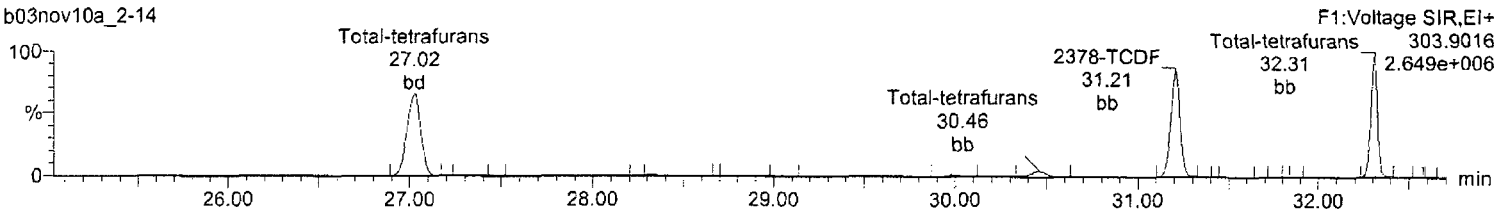
Last Altered: Thursday, November 04, 2010 08:36:01 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:37:35 Eastern Standard Time

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2,
Task: HRP763_1, User: MJC

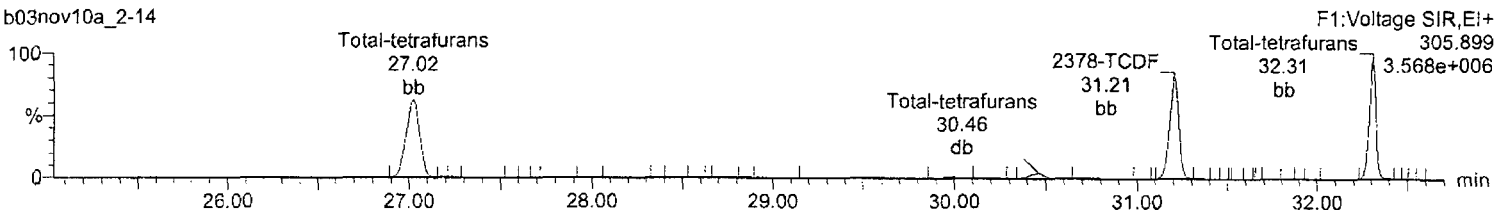
Total-tetrafurans

b03nov10a_2-14



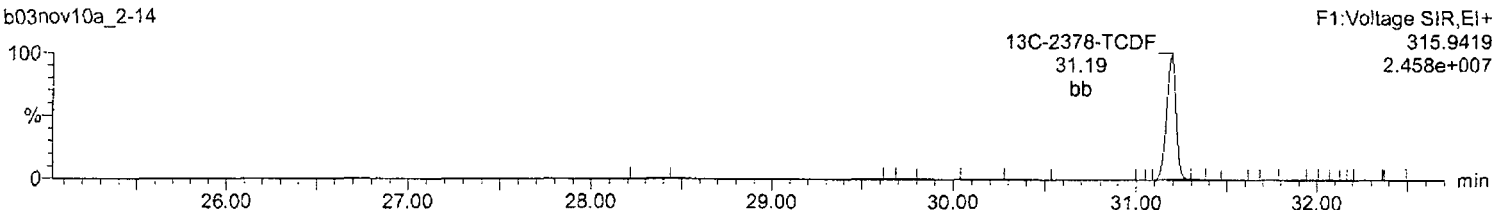
Total-tetrafurans

b03nov10a_2-14



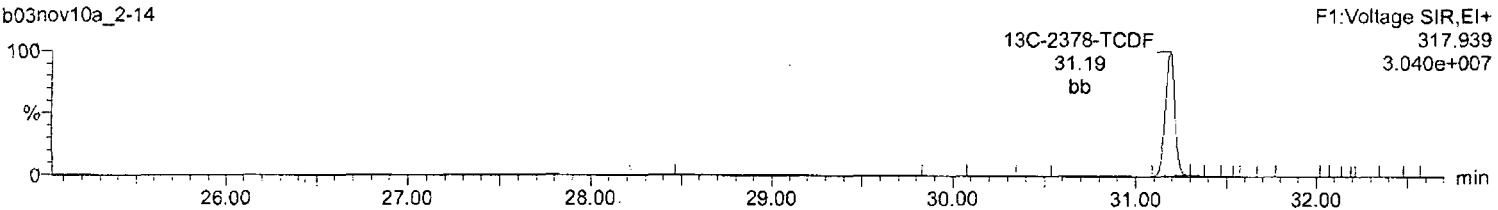
13C-2378-TCDF

b03nov10a_2-14



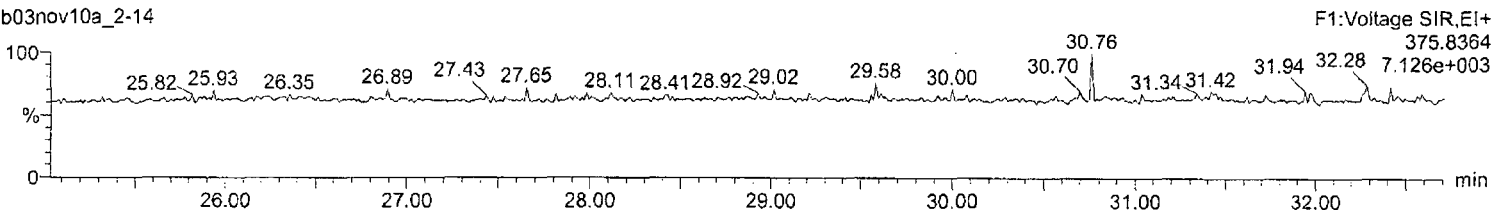
13C-2378-TCDF

b03nov10a_2-14



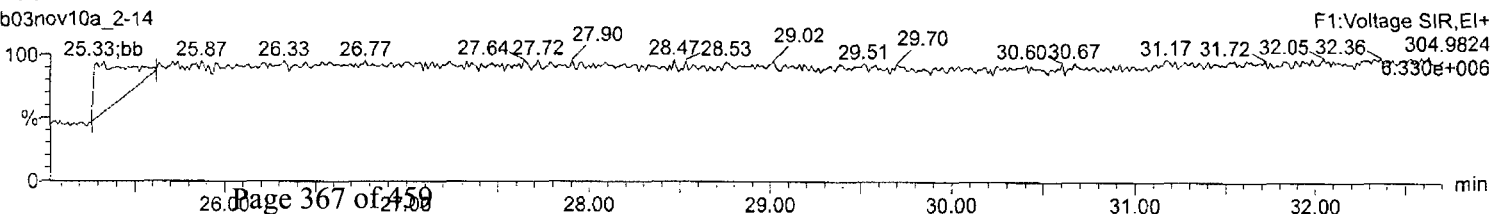
HxDPE

b03nov10a_2-14



Lock Mass F1

b03nov10a_2-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_2-14.qld

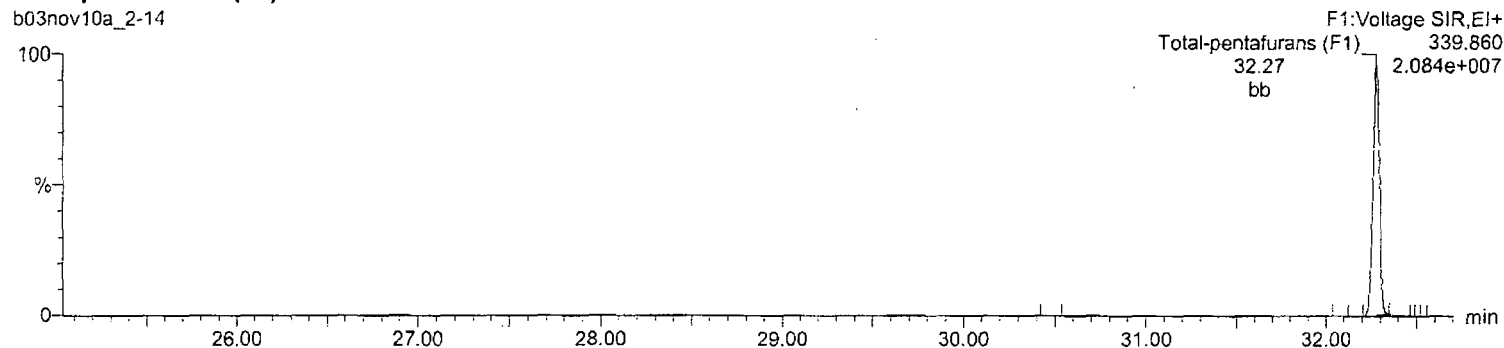
Last Altered: Thursday, November 04, 2010 08:36:01 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:37:35 Eastern Standard Time

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2,
Task: HRP763_1, User: MJC

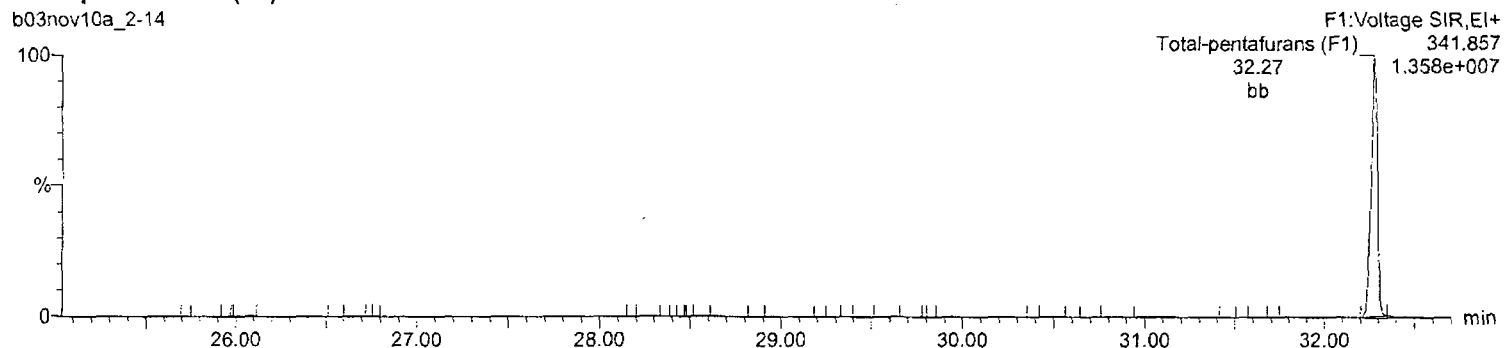
Total-pentafurans (F1)

b03nov10a_2-14



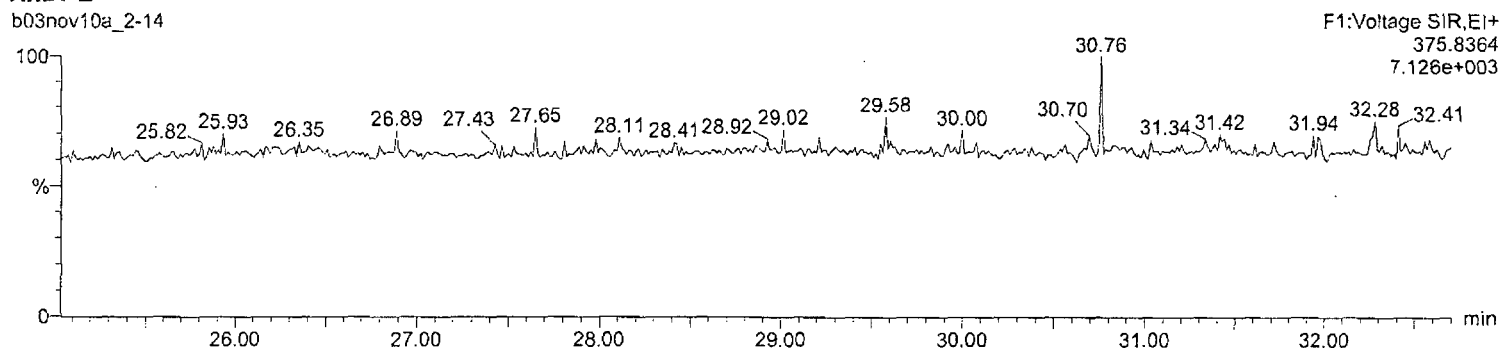
Total-pentafurans (F1)

b03nov10a_2-14



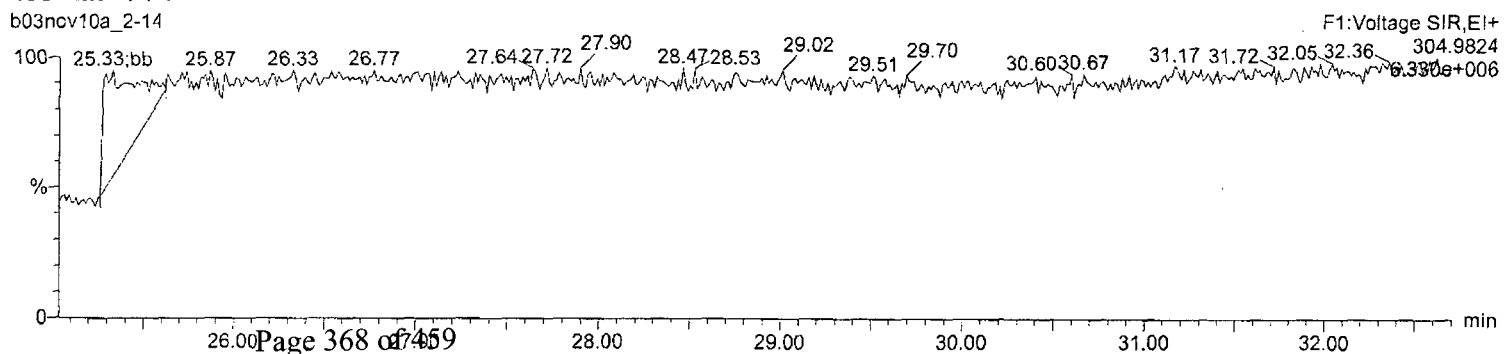
HxDPE

b03nov10a_2-14



Lock Mass F1

b03nov10a_2-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_2-14.qld

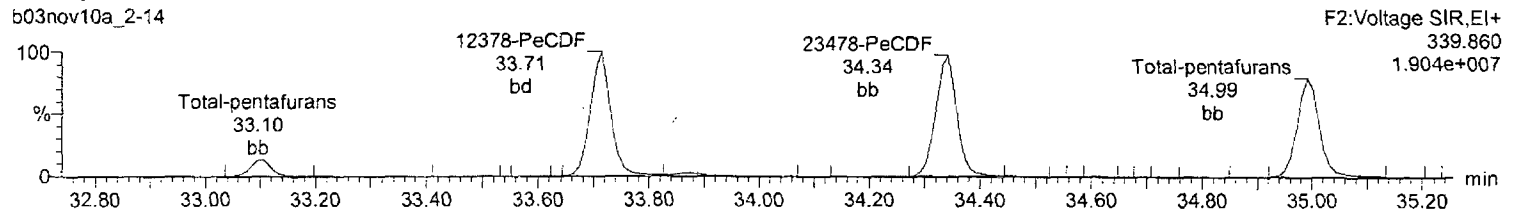
Last Altered: Thursday, November 04, 2010 08:36:01 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:37:35 Eastern Standard Time

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2,
Task: HRP763_1, User: MJC

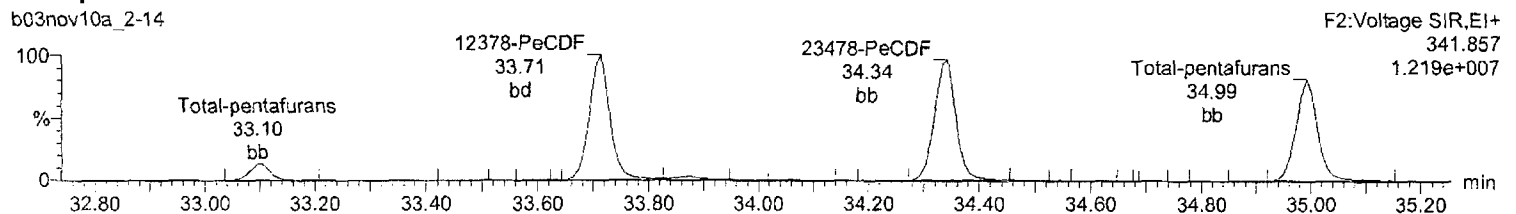
Total-pentafurans

b03nov10a_2-14



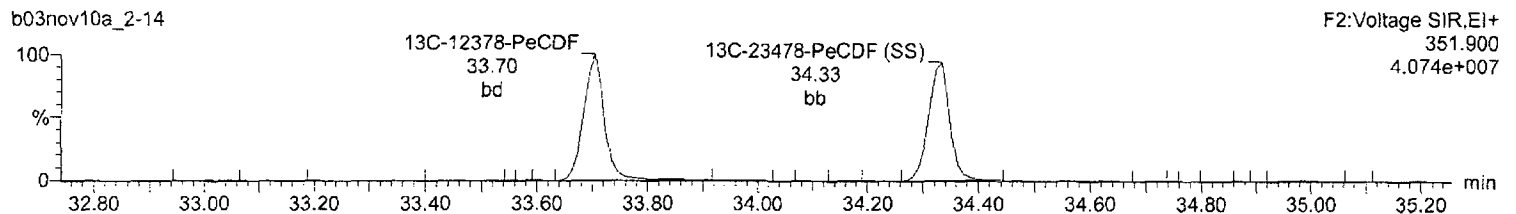
Total-pentafurans

b03nov10a_2-14



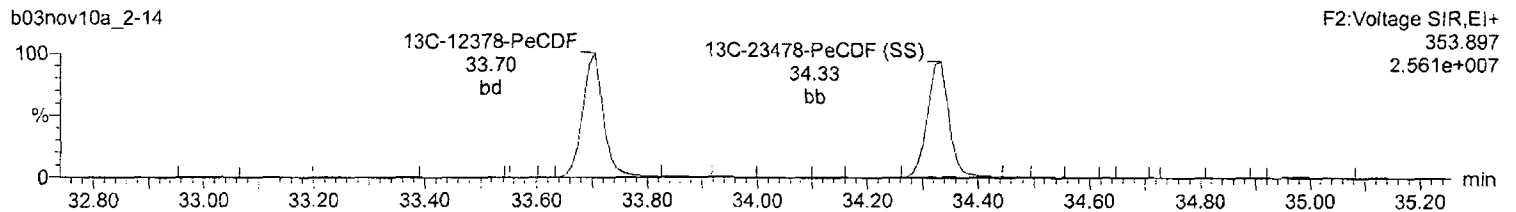
13C-12378-PeCDF

b03nov10a_2-14



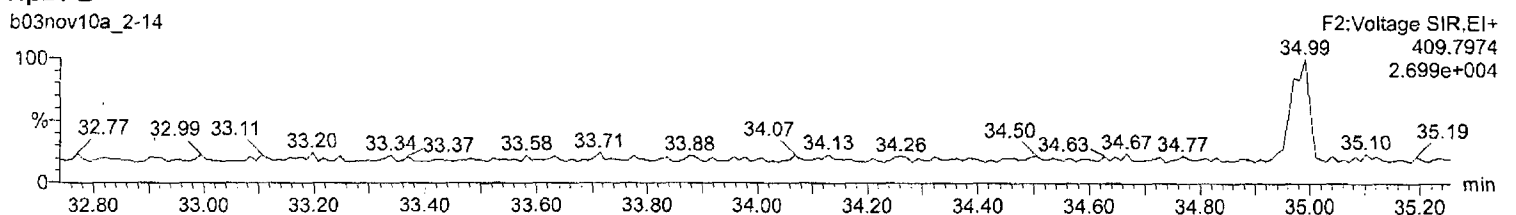
13C-12378-PeCDF

b03nov10a_2-14



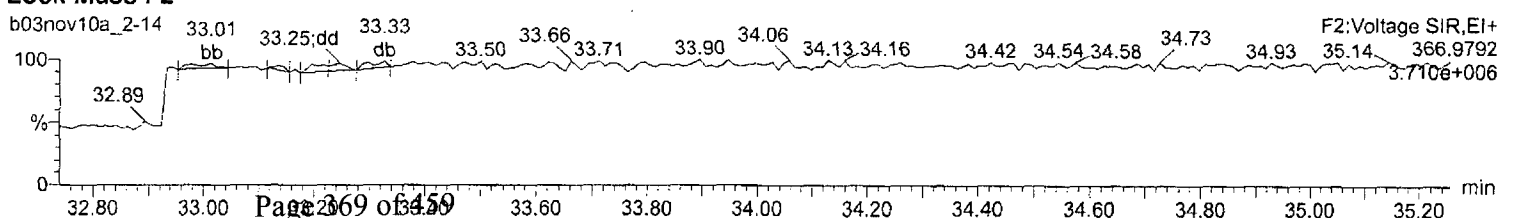
HpDPE

b03nov10a_2-14



Lock Mass F2

b03nov10a_2-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

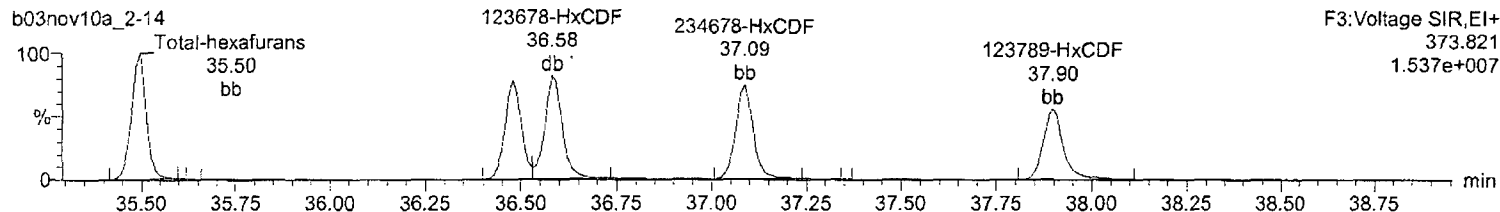
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_2-14.qld

Last Altered: Thursday, November 04, 2010 08:36:01 Eastern Standard Time

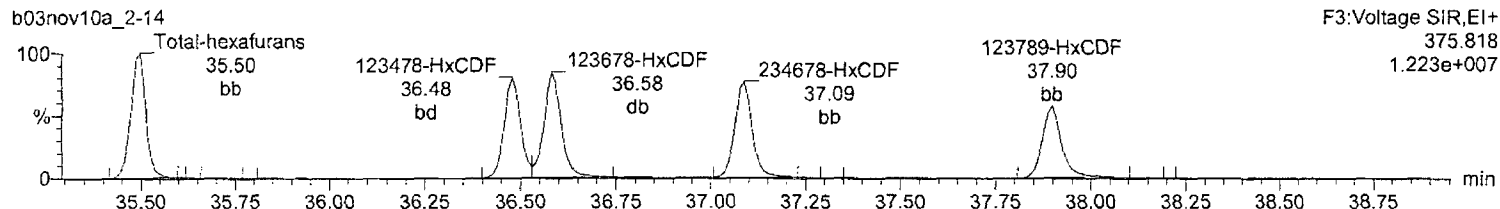
Printed: Thursday, November 04, 2010 08:37:35 Eastern Standard Time

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2, Task: HRP763_1, User: MJC

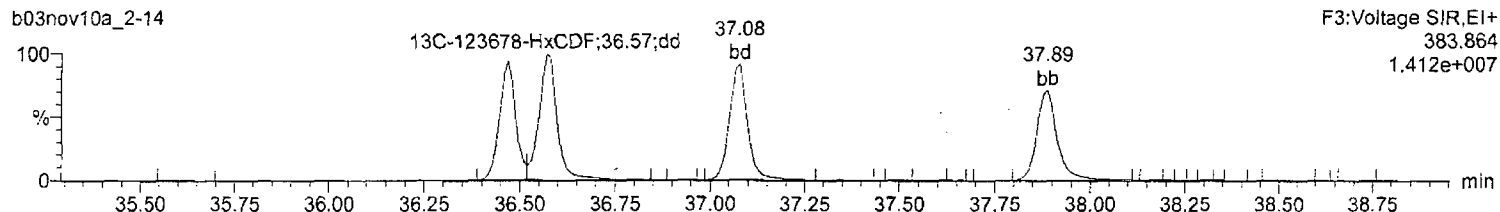
Total-hexafurans



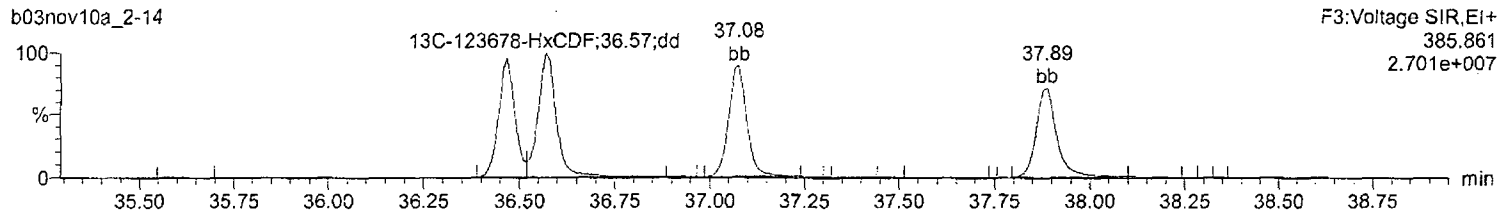
Total-hexafurans



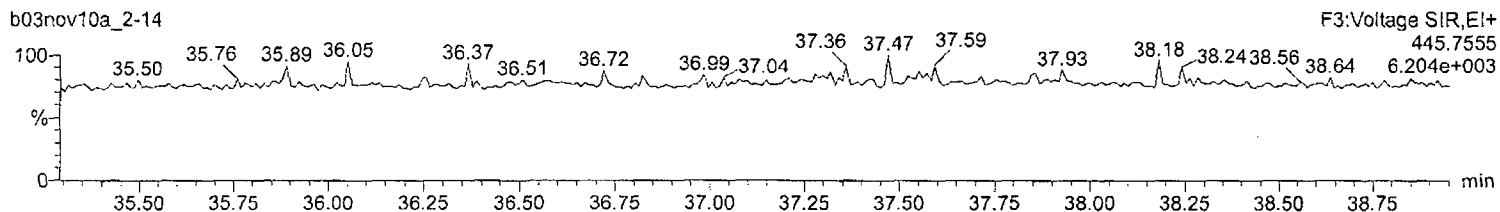
¹³C-123678-HxCDF



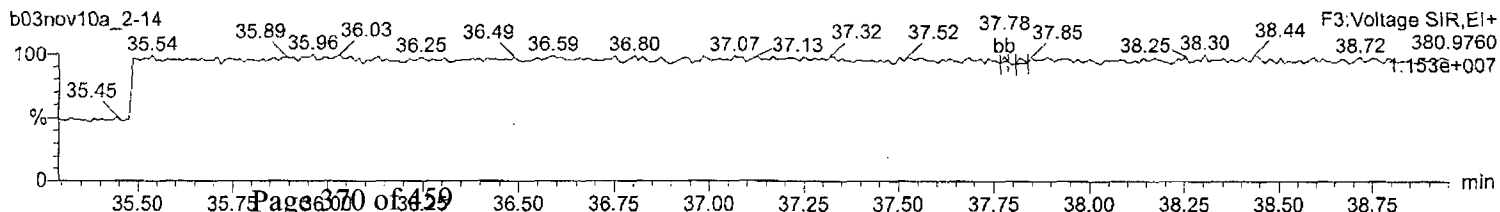
¹³C-123678-HxCDF



OcDPE



Lock Mass F3



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_2-14.qld

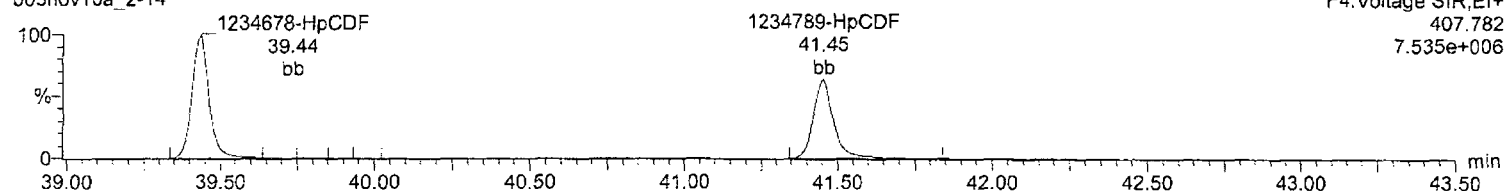
Last Altered: Thursday, November 04, 2010 08:36:01 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:37:35 Eastern Standard Time

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2, Task: HRP763_1, User: MJC

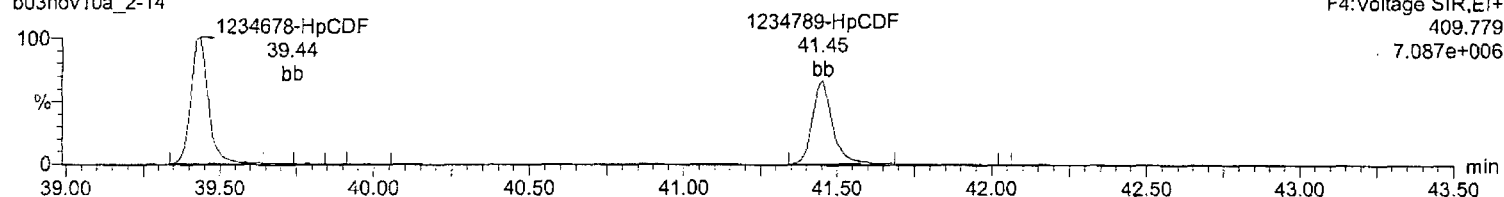
Total-heptafurans

b03nov10a_2-14



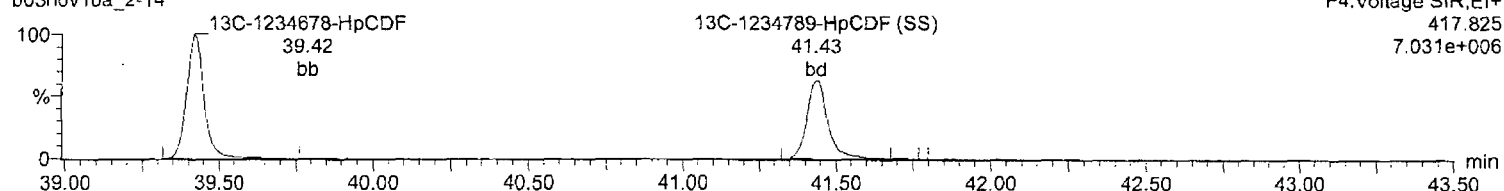
Total-heptafurans

b03nov10a_2-14



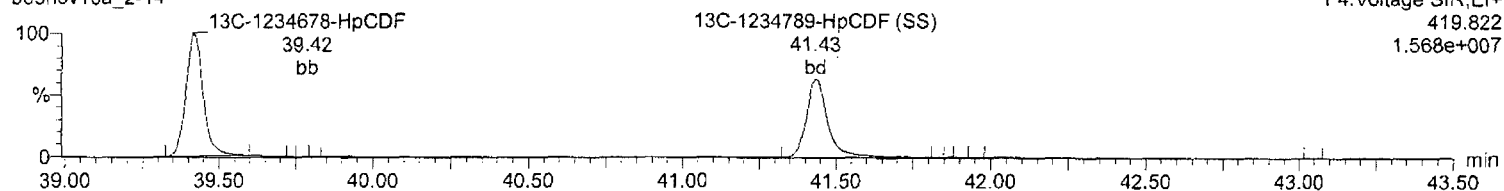
¹³C-1234678-HpCDF

b03nov10a_2-14



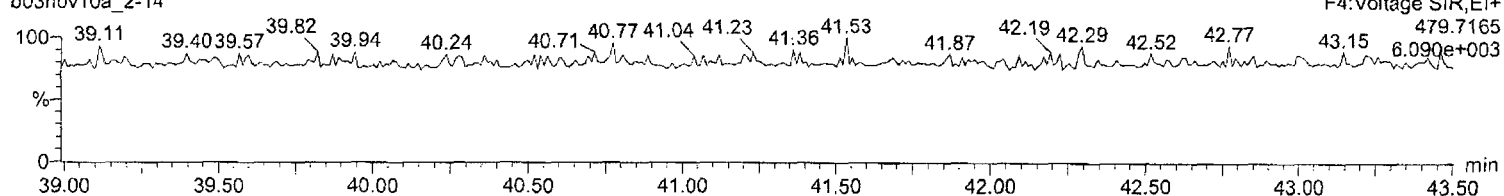
¹³C-1234678-HpCDF

b03nov10a_2-14



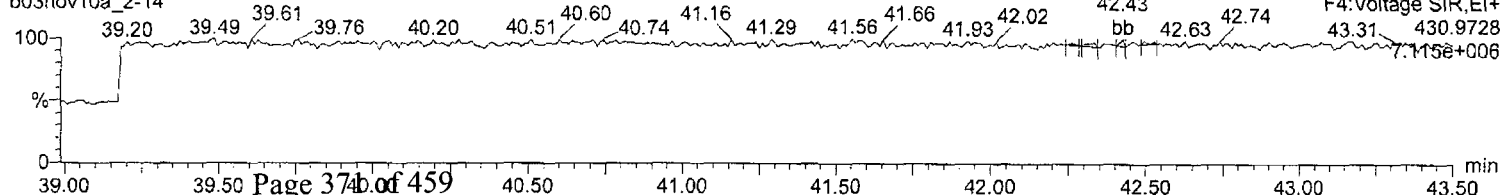
NoDPE

b03nov10a_2-14



Lock Mass F4

b03nov10a_2-14



Quantify Sample Report MassLynx 4.1
Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_2-14.qld

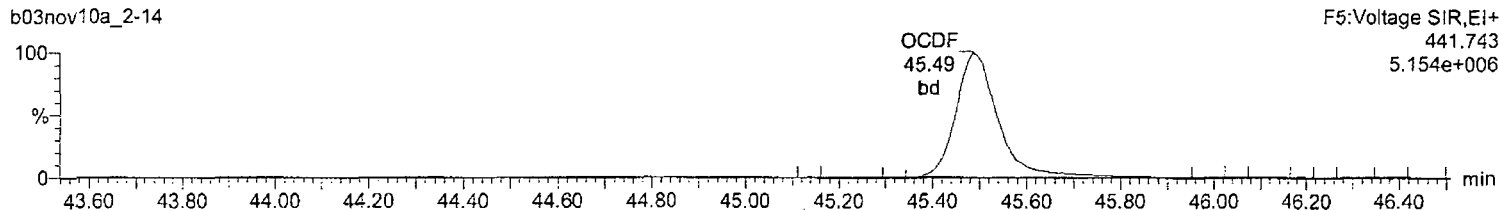
Last Altered: Thursday, November 04, 2010 08:36:01 Eastern Standard Time

Printed: Thursday, November 04, 2010 08:37:35 Eastern Standard Time

Name: b03nov10a_2-14, Date: 04-Nov-2010, Time: 02:26:16, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_2,
Task: HRP763_1, User: MJC

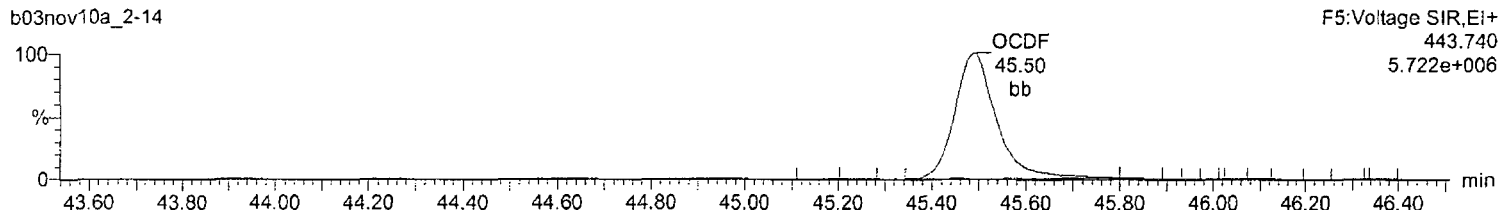
OCDF

b03nov10a_2-14



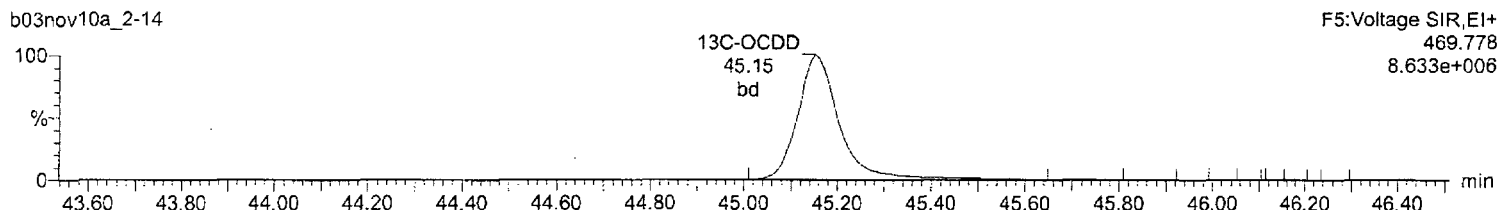
OCDF

b03nov10a_2-14



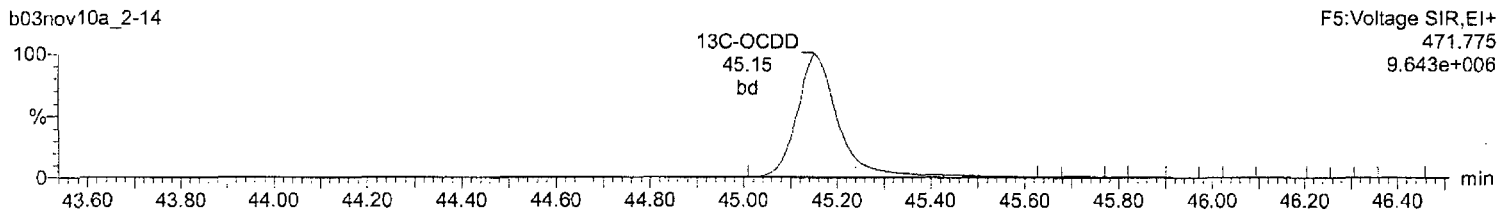
13C-OCDD

b03nov10a_2-14



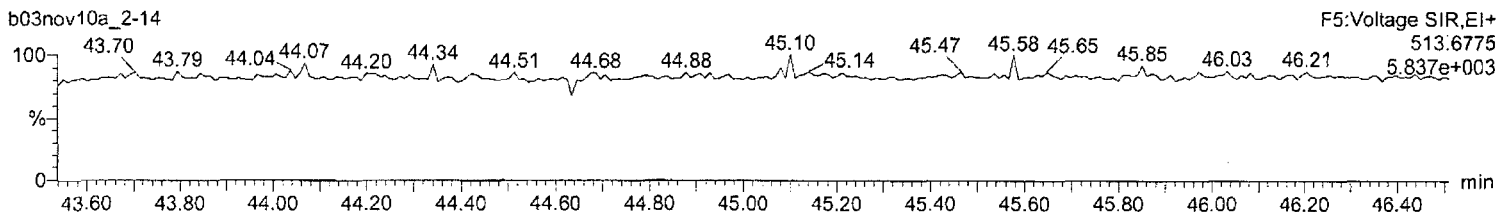
13C-OCDD

b03nov10a_2-14



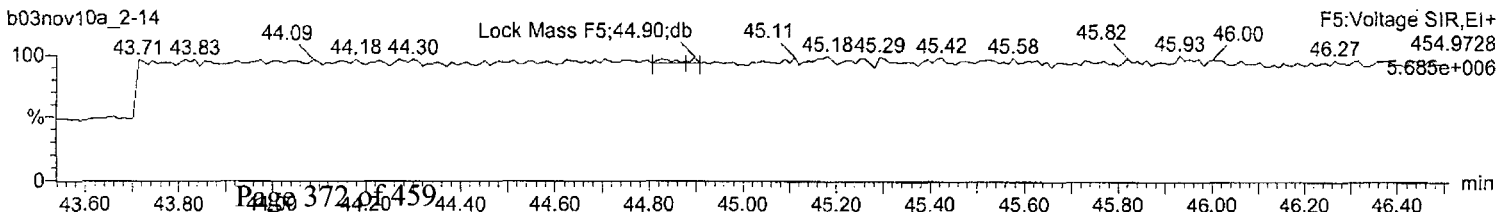
DeDPE

b03nov10a_2-14



Lock Mass F5

b03nov10a_2-14



Quantify Sample Summary Report

MassLynx 4.1

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_3-14.qld

Last Altered: Thursday, November 04, 2010 16:42:51 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:44:08 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_3-14, Date: 04-Nov-2010, Time: 13:51:40, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_3, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	8.98e4	1.13e5	2.03e5	31.75	1.000	0.79	NO	10.763	0.0238	1.090	7.6	1.89e6	1803	1047.1	2.37e6	1331	1784.7	db
2	12378-PeCDD	5.21e5	3.25e5	8.46e5	34.55	1.000	1.60	NO	50.766	0.0658	1.048	1.5	1.24e7	5341	2320.6	7.82e6	3273	2387.9	bb
3	123478-HxCDD	4.27e5	3.43e5	7.70e5	37.23	0.998	1.25	NO	53.088	0.102	0.952	6.2	8.69e6	5488	1582.7	6.93e6	4026	1721.2	bd
4	123678-HxCDD	4.47e5	3.56e5	8.03e5	37.32	1.000	1.25	NO	51.252	0.0948	0.992	2.5	8.69e6	5488	1584.0	6.87e6	4026	1707.0	db
5	123789-HxCDD	4.32e5	3.51e5	7.84e5	37.57	1.007	1.23	NO	55.989	0.106	0.969	12.0	7.95e6	5488	1449.1	6.26e6	4026	1555.7	bb
6	1234678-HpCDD	3.22e5	3.09e5	6.31e5	40.75	1.000	1.04	NO	50.247	0.116	1.010	0.5	4.61e6	4151	1109.6	4.41e6	2717	1624.9	bb
7	OCDD	4.90e5	5.50e5	1.04e6	45.18	1.000	0.89	NO	103.639	0.178	1.032	3.6	5.34e6	3345	1597.0	5.91e6	2972	1987.7	bd
8	2378-TCDF	1.20e5	1.55e5	2.76e5	31.22	1.000	0.77	NO	9.371	0.0189	0.922	-6.3	2.20e6	1404	1568.4	2.69e6	1765	1524.3	bb
9	12378-PeCDF	7.57e5	4.99e5	1.26e6	33.72	1.000	1.52	NO	49.847	0.0615	0.931	-0.3	1.82e7	7206	2523.6	1.18e7	5560	2125.1	bb
10	23478-PeCDF	7.65e5	4.98e5	1.26e6	34.35	1.019	1.54	NO	51.204	0.0629	0.936	2.4	1.79e7	7206	2487.9	1.17e7	5560	2109.3	bb
11	123478-HxCDF	6.04e5	4.87e5	1.09e6	36.49	0.998	1.24	NO	55.731	0.0977	1.013	11.5	1.32e7	6342	2084.6	1.06e7	6165	1724.8	bd
12	123678-HxCDF	6.37e5	5.15e5	1.15e6	36.59	1.000	1.24	NO	50.587	0.0839	1.070	1.2	1.28e7	6342	2023.8	1.03e7	6165	1664.6	db
13	234678-HxCDF	6.07e5	4.91e5	1.10e6	37.10	1.014	1.24	NO	53.358	0.0929	1.020	6.7	1.21e7	6342	1906.2	9.83e6	6165	1594.3	bb
14	123789-HxCDF	5.34e5	4.38e5	9.72e5	37.91	1.036	1.22	NO	57.016	0.112	0.903	14.0	9.45e6	6342	1489.4	7.57e6	6165	1228.6	bb
15	1234678-HpCDF	4.95e5	4.76e5	9.71e5	39.45	1.001	1.04	NO	50.758	0.0698	1.296	1.5	8.24e6	3497	2355.1	7.91e6	3710	2132.5	bb
16	1234789-HpCDF	3.83e5	3.72e5	7.56e5	41.45	1.051	1.03	NO	54.225	0.0958	1.009	8.5	5.34e6	3497	1525.7	5.13e6	3710	1382.1	bb
17	OCDF	5.64e5	6.17e5	1.18e6	45.50	1.007	0.91	NO	95.127	0.142	1.172	-4.9	5.97e6	3293	1813.5	6.47e6	2934	2206.6	bd
18	13C-2378-TCDD	8.20e5	1.04e6	1.87e6	31.73	1.013	0.79	NO	95.600	0.0349	1.070	-4.4	1.72e7	2532	6779.6	2.24e7	1742	12869.0	bb
19	13C-12378-PeCDD	9.87e5	6.28e5	1.61e6	34.54	1.102	1.57	NO	97.543	0.0666	0.927	-2.5	2.33e7	3907	5954.6	1.49e7	3008	4965.0	bb
20	13C-123678-HxCDD	9.03e5	7.15e5	1.62e6	37.31	0.994	1.26	NO	93.194	0.0842	1.036	-6.8	1.73e7	4723	3673.1	1.36e7	4083	3333.5	db
21	13C-1234678-HpCDD	6.48e5	6.02e5	1.25e6	40.74	1.085	1.08	NO	100.013	0.0830	0.801	0.0	9.14e6	2721	3359.7	8.67e6	3528	2458.3	bd
22	13C-OCDD	9.65e5	1.05e6	2.02e6	45.16	1.203	0.92	NO	193.066	0.104	0.645	-3.5	1.03e7	2871	3571.6	1.14e7	3699	3070.5	bd
23	13C-2378-TCDF	1.33e6	1.67e6	2.99e6	31.21	0.996	0.80	NO	94.328	0.0176	1.718	-5.7	2.26e7	2094	10815.4	2.82e7	1407	20016.7	bb
24	13C-12378-PeCDF	1.65e6	1.05e6	2.70e6	33.71	1.076	1.58	NO	91.471	0.0633	1.548	-8.5	4.08e7	6512	6261.2	2.55e7	5213	4897.7	bb
25	13C-123678-HxCDF	7.40e5	1.41e6	2.15e6	36.58	0.974	0.52	NO	84.556	0.0831	1.379	-15.4	1.45e7	5547	2619.9	2.77e7	7198	3843.7	dd
26	13C-1234678-HpCDF	4.68e5	1.03e6	1.50e6	39.43	1.050	0.45	NO	88.769	0.0872	0.959	-11.2	7.57e6	3766	2011.5	1.66e7	5101	3248.1	bb
27	13C-1234-TCDD	7.75e5	9.67e5	1.74e6	31.34	0.000	0.80	NO	100.000	0.0391	1.000	0.0	1.46e7	2532	5766.3	1.80e7	1742	10307.6	bb
28	13C-123789-HxCDD	8.66e5	6.95e5	1.56e6	37.55	0.000	1.25	NO	100.000	0.0936	1.000	0.0	1.57e7	4723	3314.8	1.26e7	4083	3076.6	bb
29	37Cl-2378-TCDD (SS)	2.08e5		2.08e5	31.75	1.000			10.576	0.00990	1.115	5.8	4.47e6	1357	3291.4				bb
30	13C-23478-PeCDF (SS)	1.62e6	1.02e6	2.64e6	34.34	1.019	1.59	NO	104.843	0.0566	0.979	4.8	3.81e7	6512	5855.5	2.33e7	5213	4470.0	bb

Quantify Sample Summary Report

MassLynx 4.1

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_3-14.qld

Last Altered: Thursday, November 04, 2010 16:42:51 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:44:08 Eastern Standard Time

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Name: b03nov10a_3-14, Date: 04-Nov-2010, Time: 13:51:40, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_3, Task: HRP763_1, User: MJC

Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
13C-123478-HxCDF (SS)	6.69e5	1.29e6	1.96e6	36.48	0.997	0.52	NO	112.506	0.112	0.911	12.5	1.44e7	5547	2597.7	2.79e7	7198	3881.9	bd
13C-123478-HxCDD (SS)	8.34e5	6.54e5	1.49e6	37.22	0.998	1.28	NO	106.812	0.0987	0.920	6.8	1.63e7	4723	3450.0	1.26e7	4083	3079.8	bd
13C-1234789-HpCDF (SS)	3.66e5	8.22e5	1.19e6	41.44	1.051	0.45	NO	104.835	0.145	0.793	4.8	5.03e6	3766	1335.1	1.14e7	5101	2240.4	bb

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_3-14.qld

Last Altered: Thursday, November 04, 2010 16:42:51 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:44:08 Eastern Standard Time

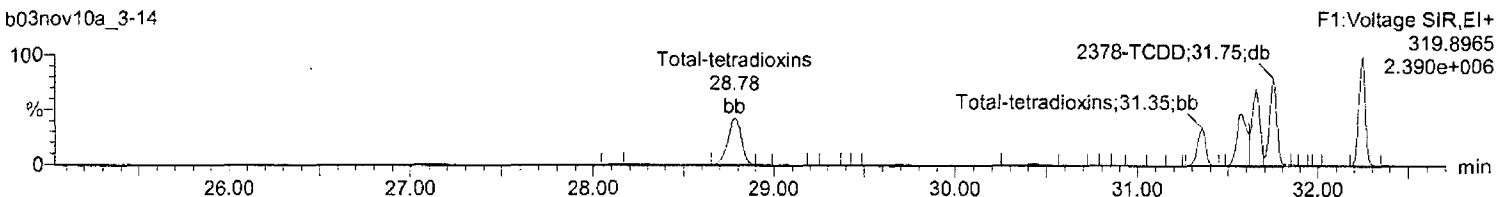
Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_3-14, Date: 04-Nov-2010, Time: 13:51:40, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_3,
Task: HRP763_1, User: MJC

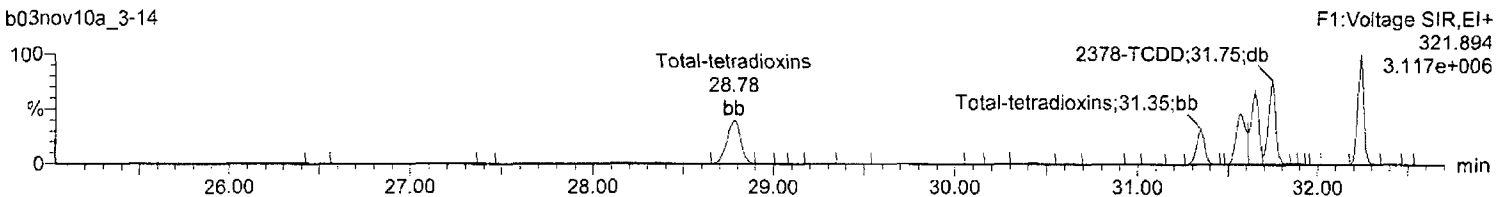
Total-tetradoxins

b03nov10a_3-14



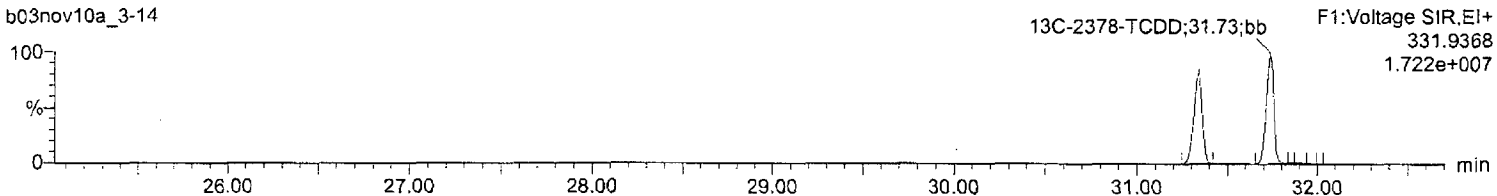
Total-tetradoxins

b03nov10a_3-14



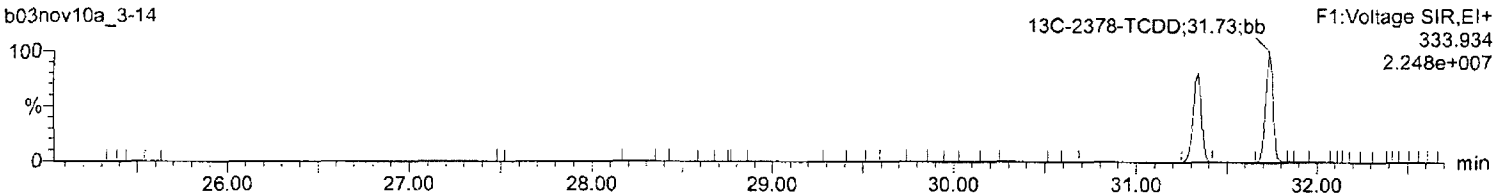
13C-2378-TCDD

b03nov10a_3-14



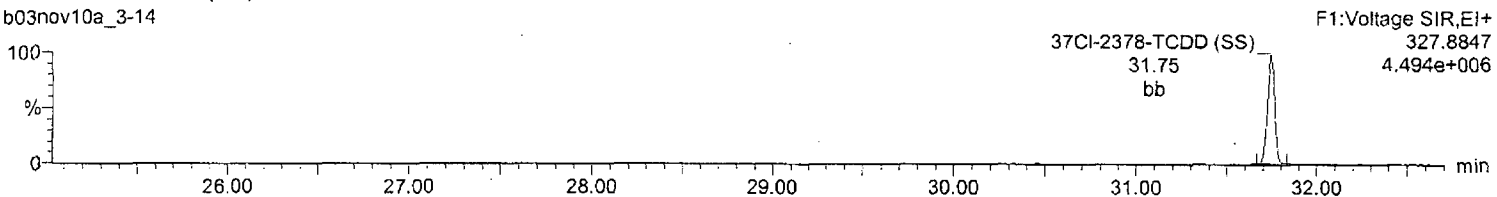
13C-2378-TCDD

b03nov10a_3-14



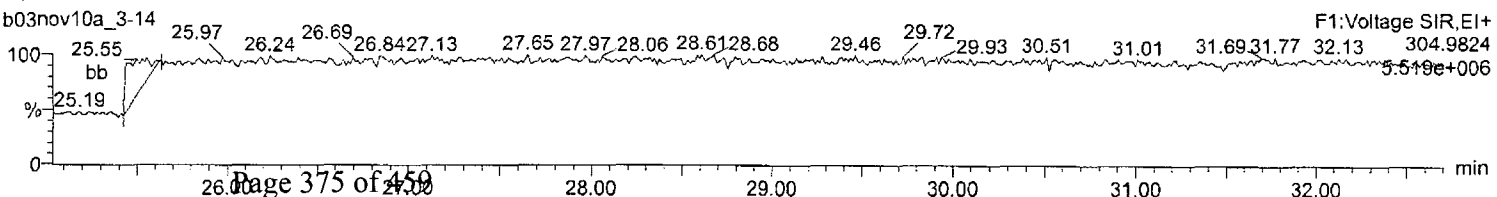
37Cl-2378-TCDD (SS)

b03nov10a_3-14



Lock Mass F1

b03nov10a_3-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_3-14.qld

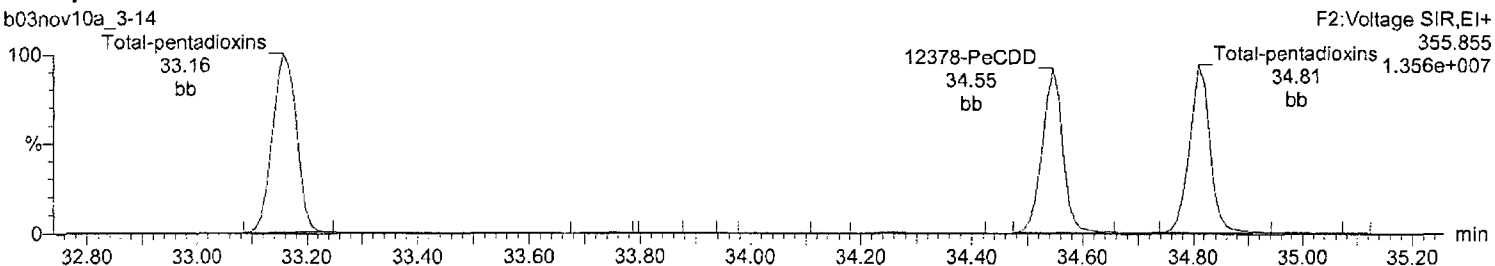
Last Altered: Thursday, November 04, 2010 16:42:51 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:44:08 Eastern Standard Time

Name: b03nov10a_3-14, Date: 04-Nov-2010, Time: 13:51:40, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_3,
Task: HRP763_1, User: MJC

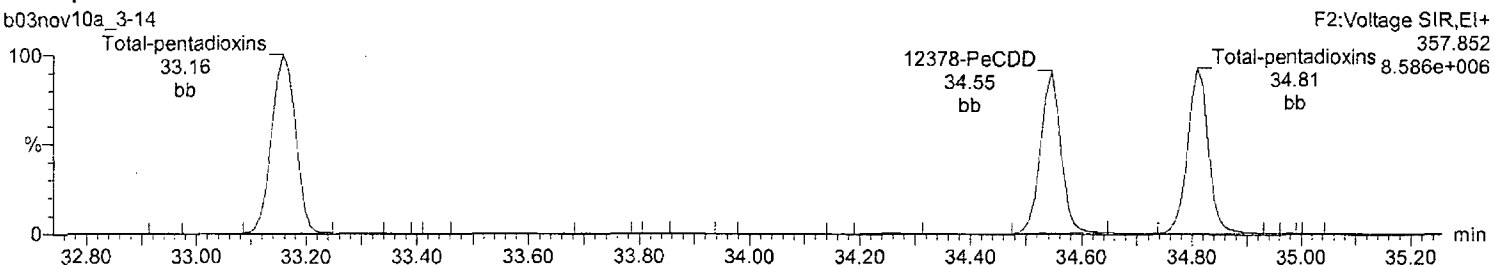
Total-pentadioxins

b03nov10a_3-14



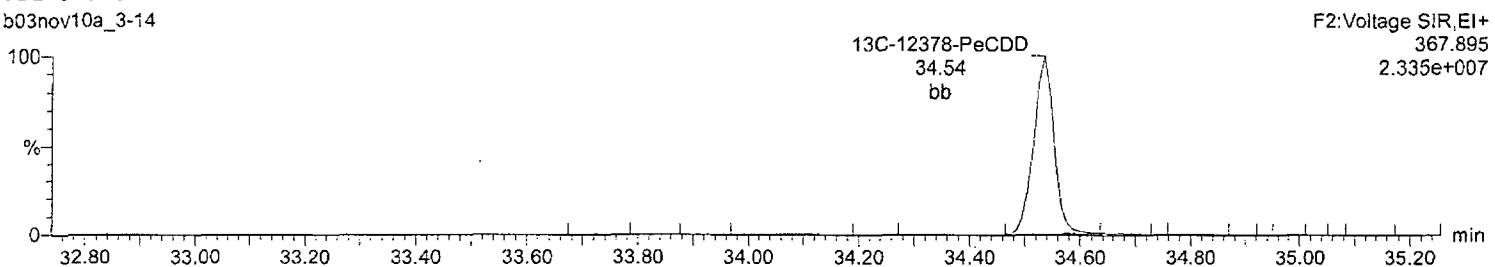
Total-pentadioxins

b03nov10a_3-14



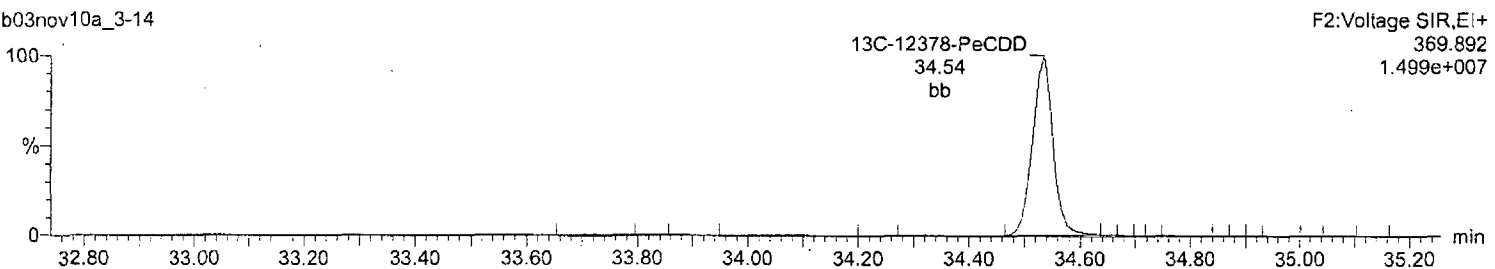
13C-12378-PeCDD

b03nov10a_3-14



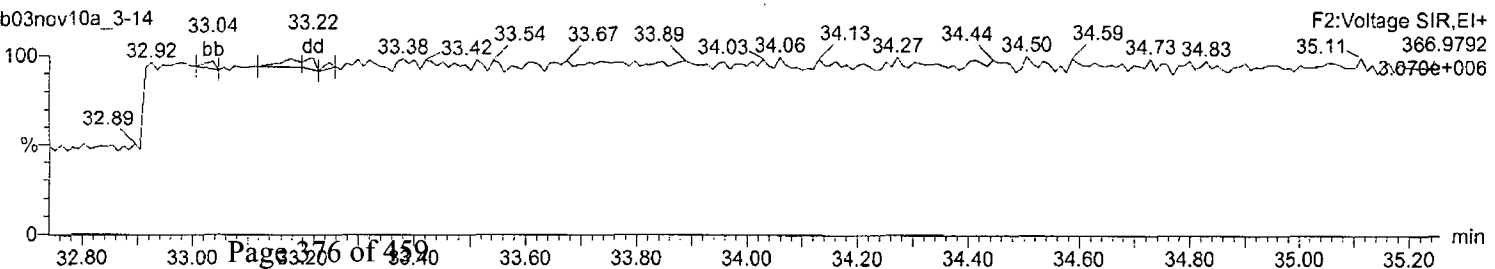
13C-12378-PeCDD

b03nov10a_3-14



Lock Mass F2

b03nov10a_3-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_3-14.qld

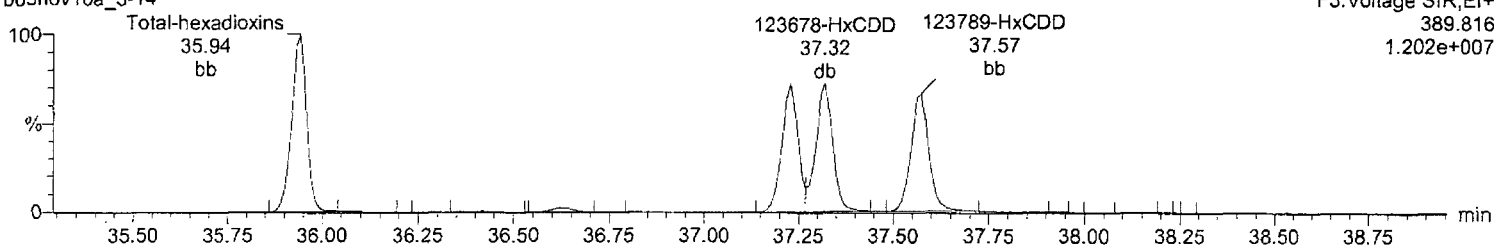
Last Altered: Thursday, November 04, 2010 16:42:51 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:44:08 Eastern Standard Time

Name: b03nov10a_3-14, Date: 04-Nov-2010, Time: 13:51:40, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_3,
Task: HRP763_1, User: MJC

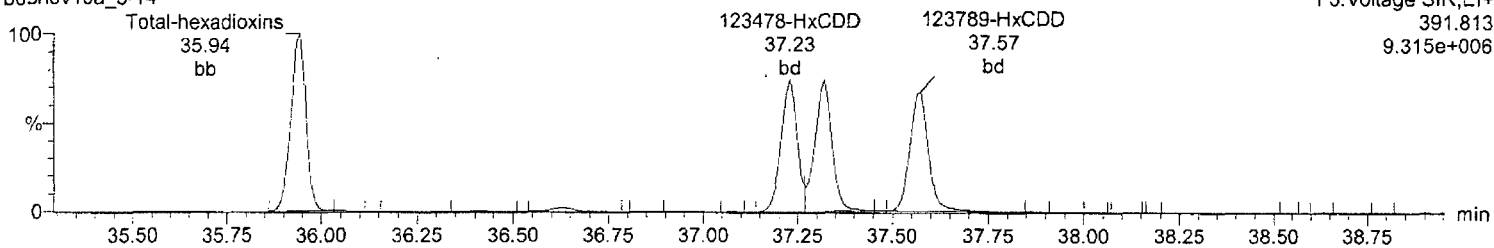
Total-hexadioxins

b03nov10a_3-14



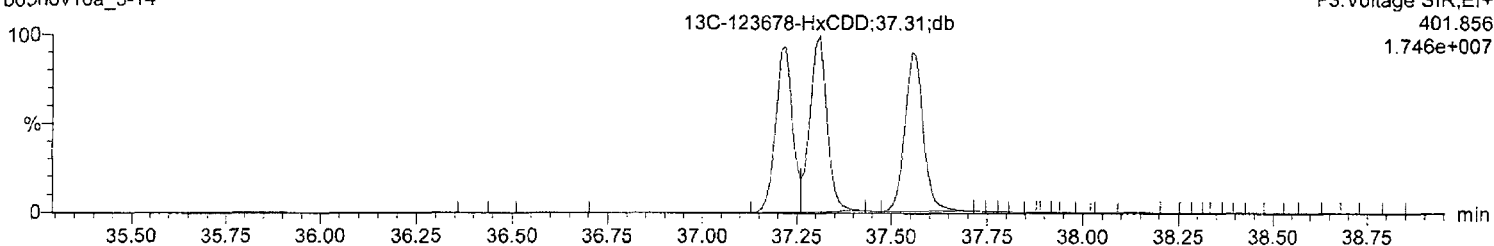
Total-hexadioxins

b03nov10a_3-14



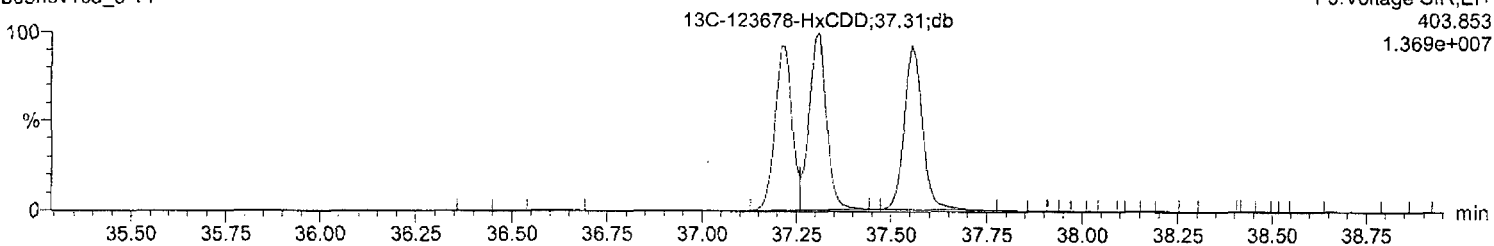
13C-123678-HxCDD

b03nov10a_3-14



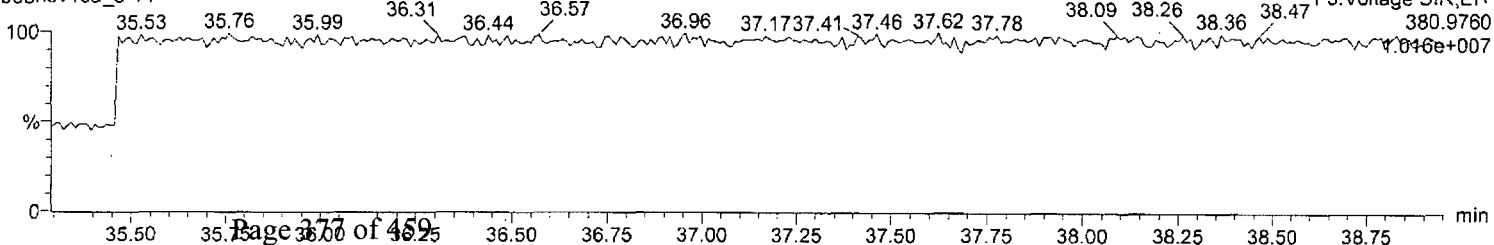
13C-123678-HxCDD

b03nov10a_3-14



Lock Mass F3

b03nov10a_3-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_3-14.qld

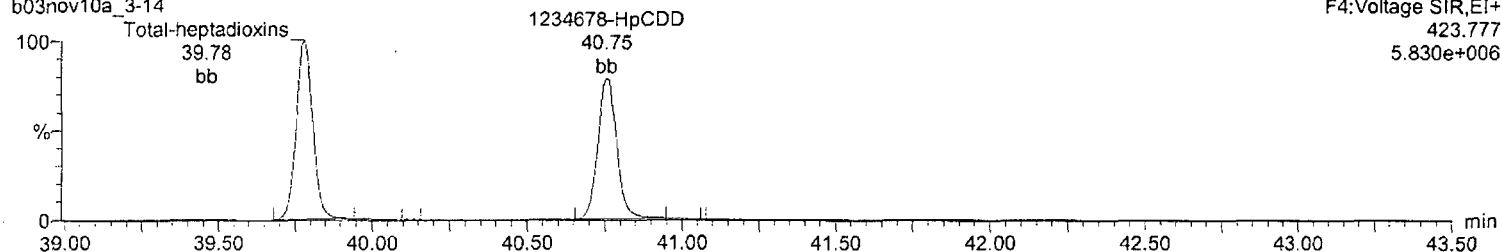
Last Altered: Thursday, November 04, 2010 16:42:51 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:44:08 Eastern Standard Time

Name: b03nov10a_3-14, Date: 04-Nov-2010, Time: 13:51:40, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_3,
Task: HRP763_1, User: MJC

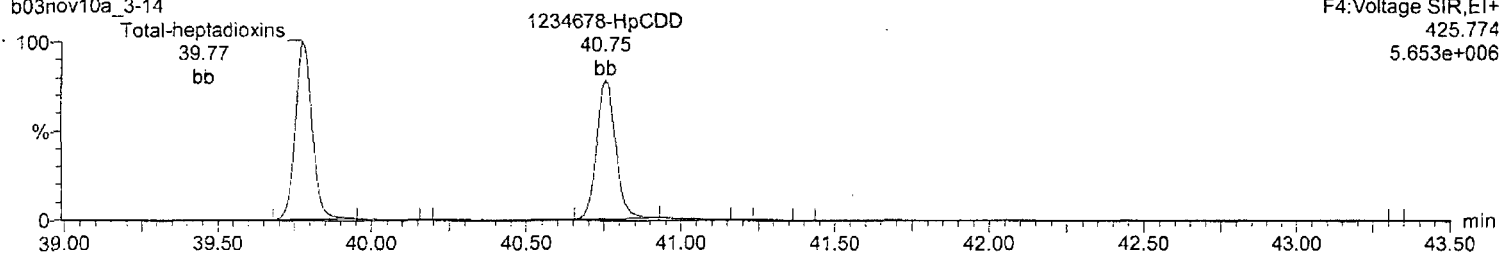
Total-heptadioxins

b03nov10a_3-14



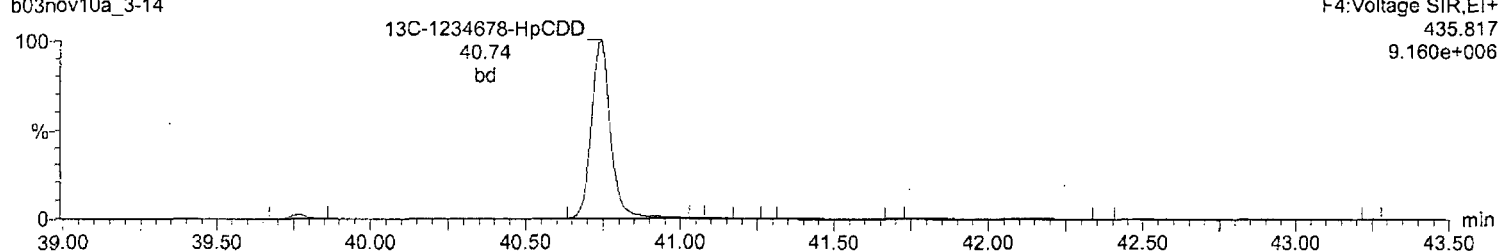
Total-heptadioxins

b03nov10a_3-14



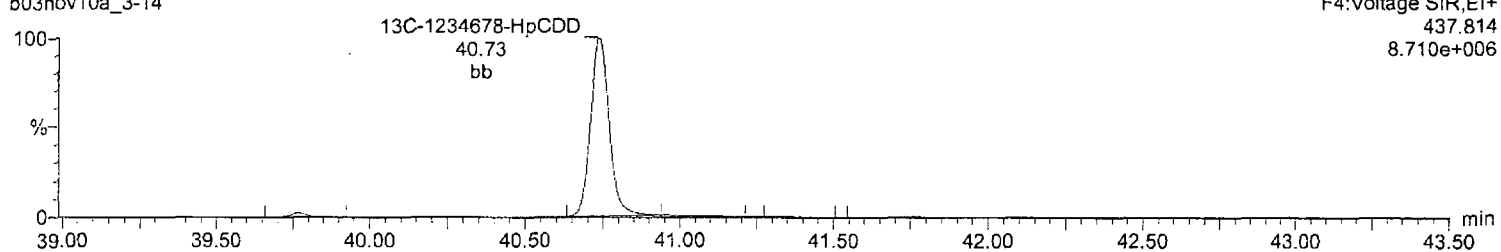
13C-1234678-HpCDD

b03nov10a_3-14



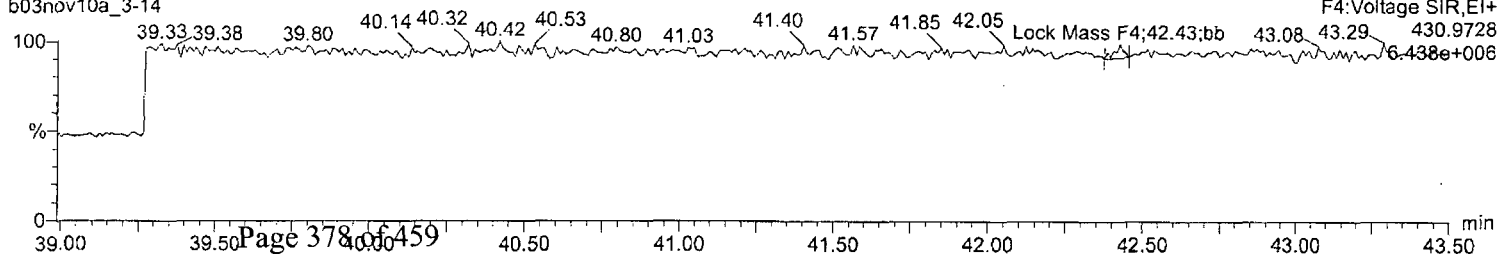
13C-1234678-HpCDD

b03nov10a_3-14



Lock Mass F4

b03nov10a_3-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_3-14.qld

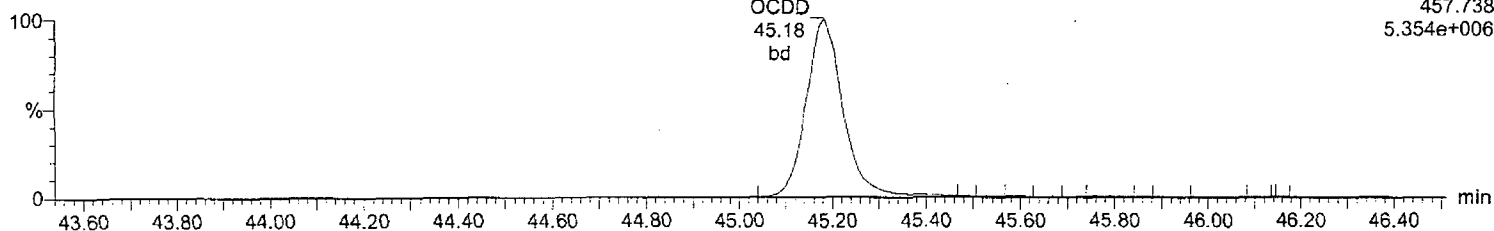
Last Altered: Thursday, November 04, 2010 16:42:51 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:44:08 Eastern Standard Time

Name: b03nov10a_3-14, Date: 04-Nov-2010, Time: 13:51:40, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_3,
Task: HRP763_1, User: MJC

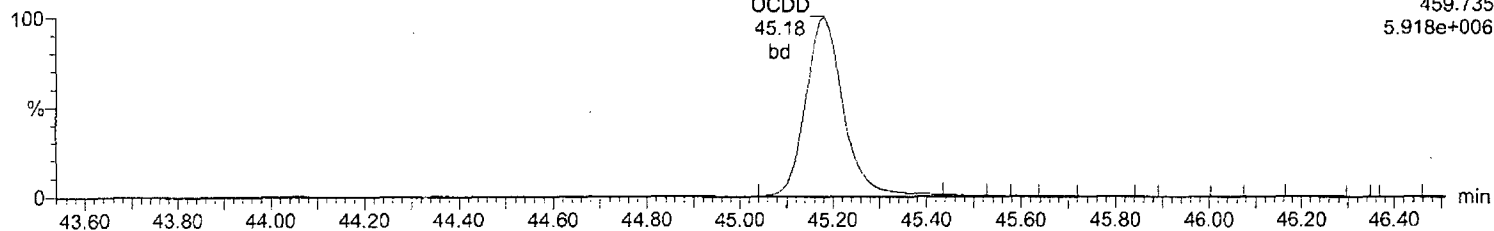
OCDD

b03nov10a_3-14



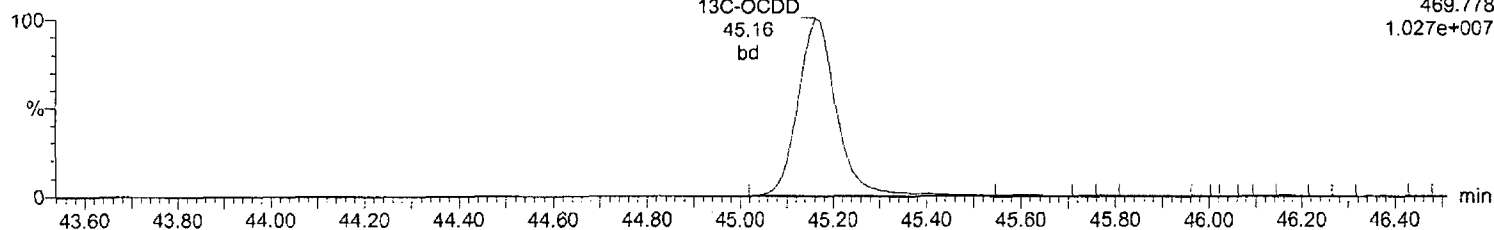
OCDD

b03nov10a_3-14



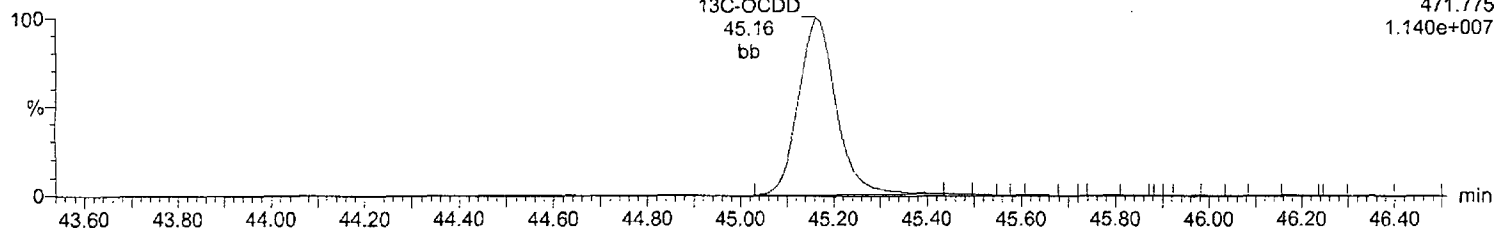
13C-OCDD

b03nov10a_3-14



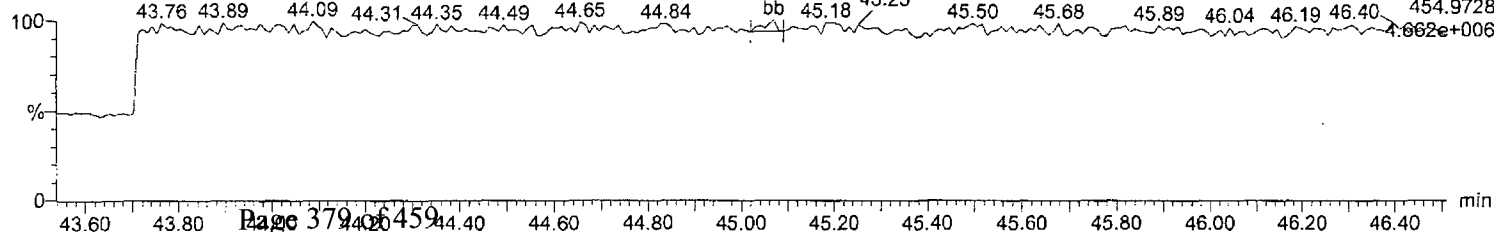
13C-OCDD

b03nov10a_3-14



Lock Mass F5

b03nov10a_3-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_3-14.q\d

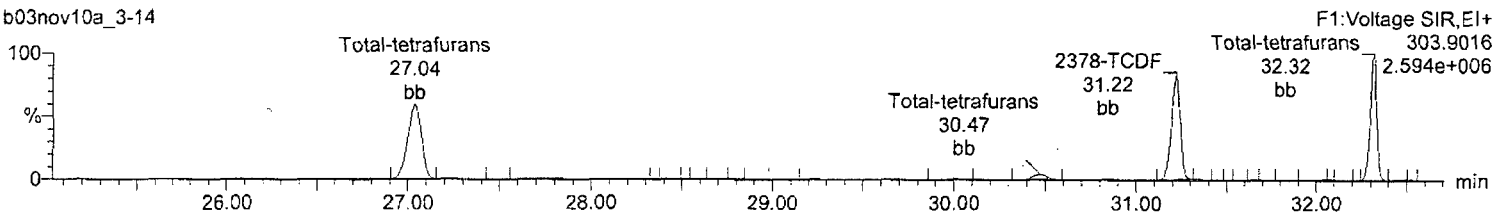
Last Altered: Thursday, November 04, 2010 16:42:51 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:44:08 Eastern Standard Time

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Task: HRP763_1, User: MJC

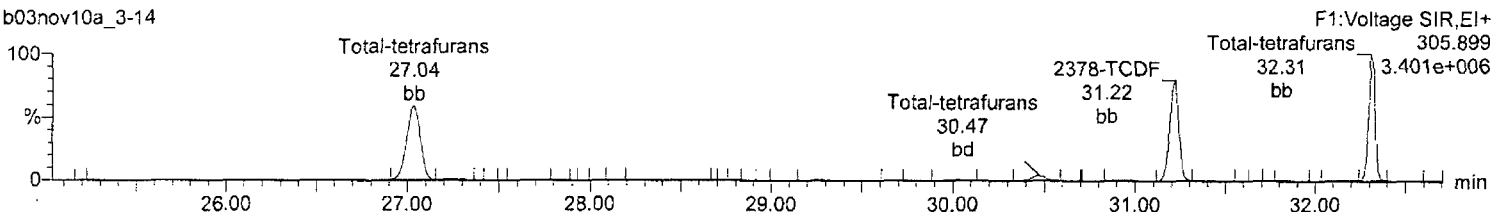
Total-tetrafurans

b03nov10a_3-14



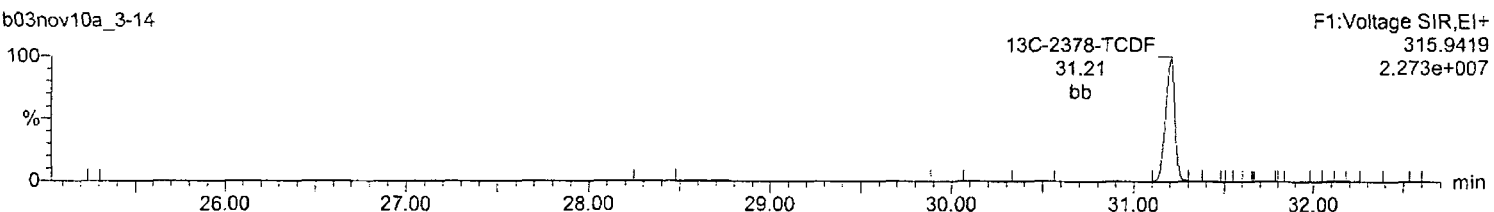
Total-tetrafurans

b03nov10a_3-14



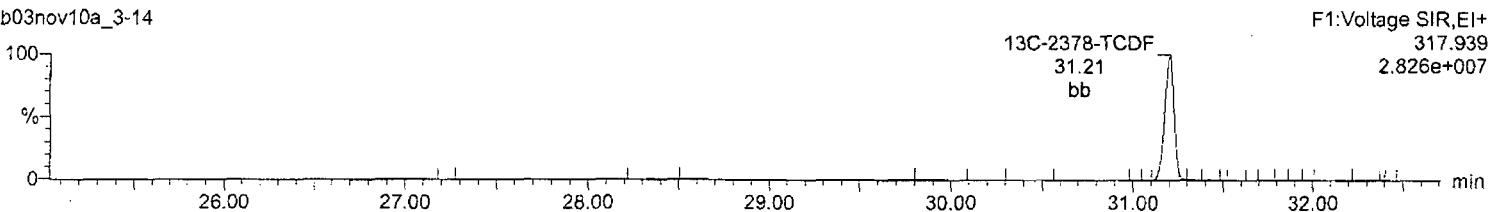
13C-2378-TCDF

b03nov10a_3-14



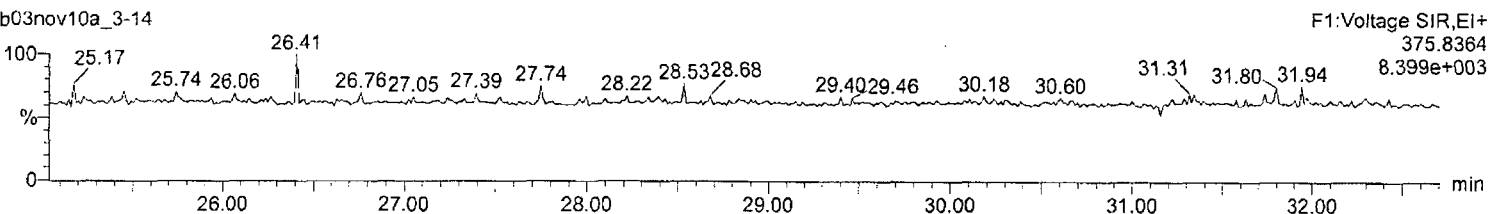
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b03nov10a_3-14



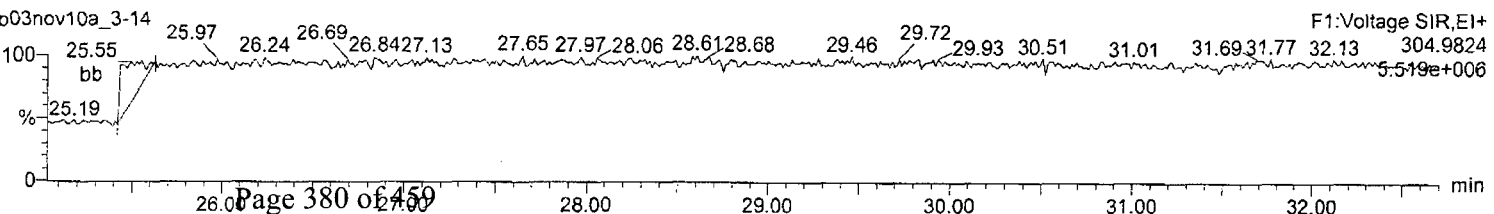
HxDPE

b03nov10a_3-14



Lock Mass F1

b03nov10a_3-14



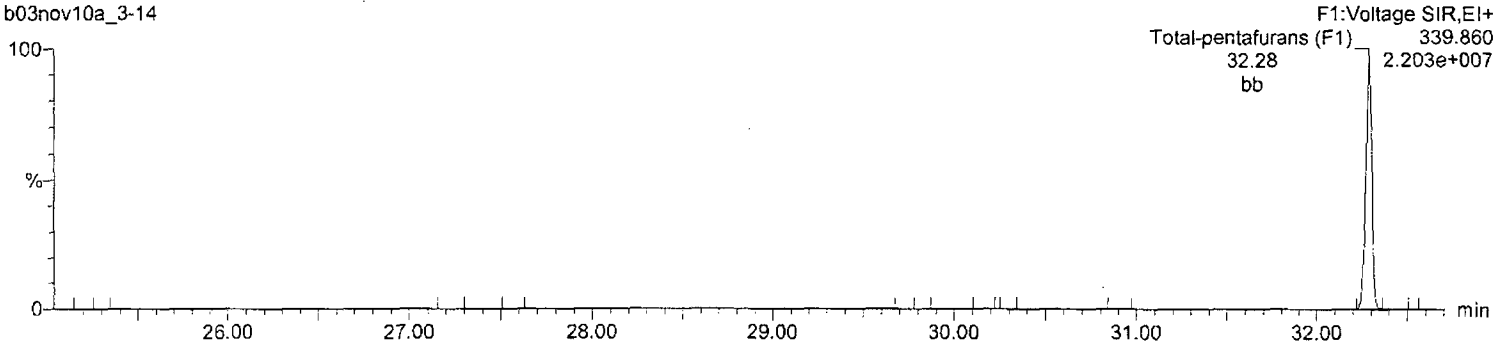
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Last Altered: Thursday, November 04, 2010 16:42:51 Eastern Standard Time
Printed: Thursday, November 04, 2010 16:44:08 Eastern Standard Time

Name: b03nov10a_3-14, Date: 04-Nov-2010, Time: 13:51:40, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_3,
Task: HRP763_1, User: MJC

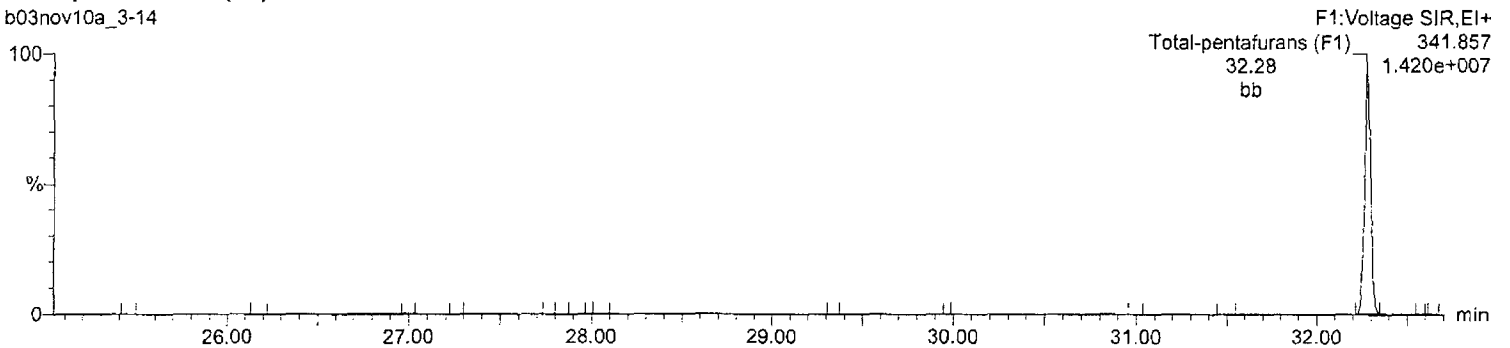
Total-pentafulurans (F1)

b03nov10a_3-14



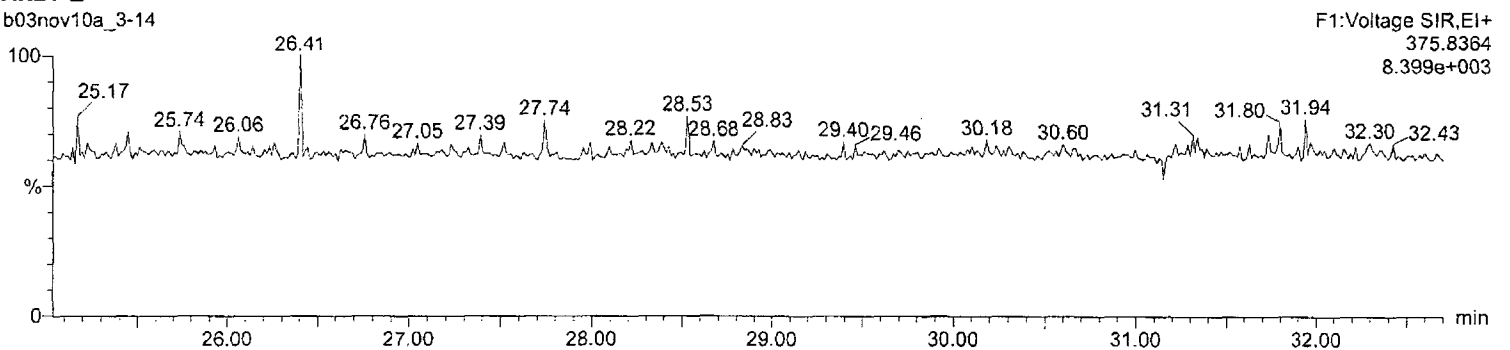
Total-pentafulurans (F1)

b03nov10a_3-14



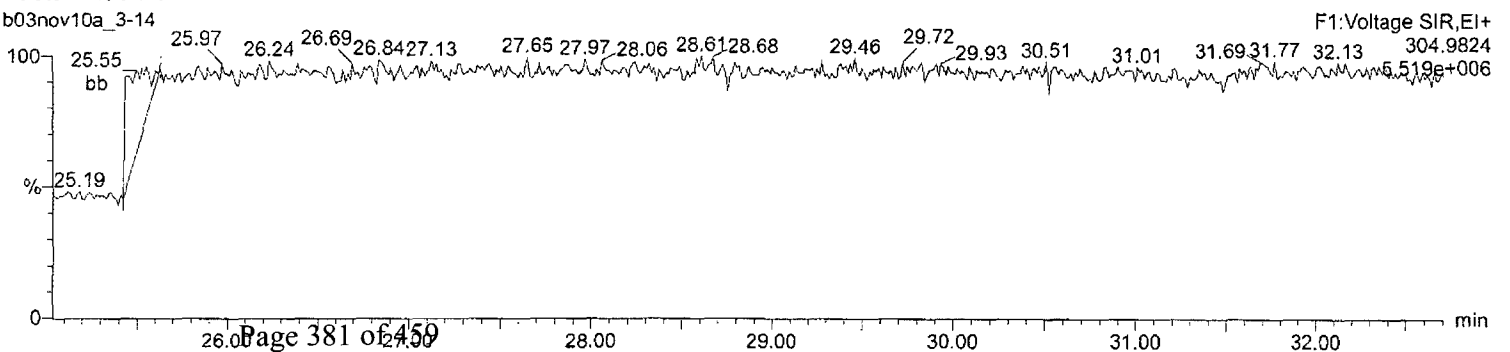
HxDPE

b03nov10a_3-14



Lock Mass F1

b03nov10a_3-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_3-14.qld

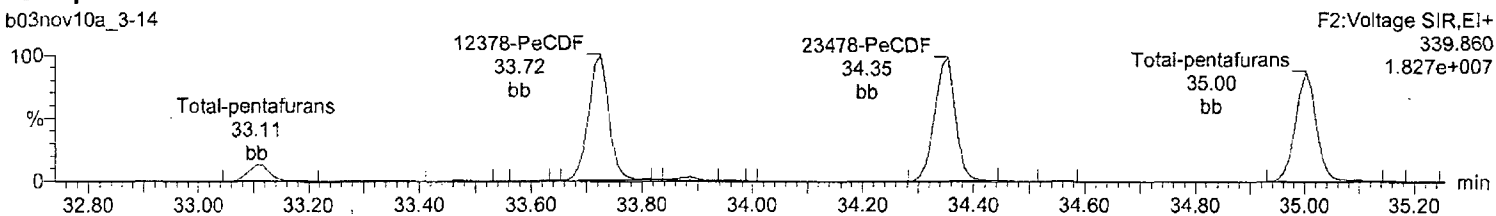
Last Altered: Thursday, November 04, 2010 16:42:51 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:44:08 Eastern Standard Time

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Task: HRP763_1, User: MJC

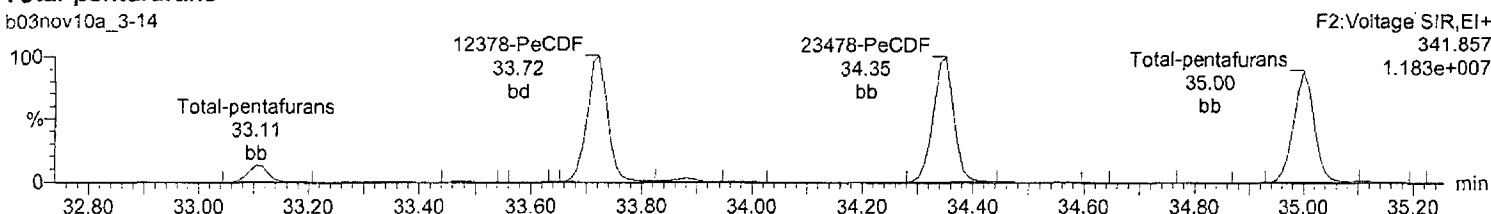
Total-pentafurans

b03nov10a_3-14



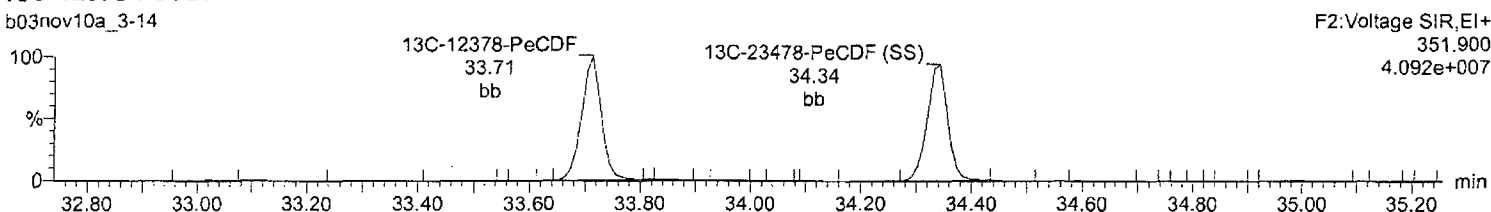
Total-pentafurans

b03nov10a_3-14



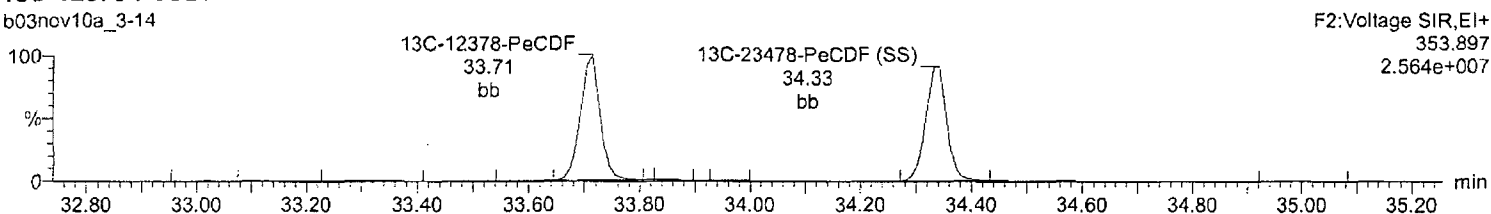
13C-12378-PeCDF

b03nov10a_3-14



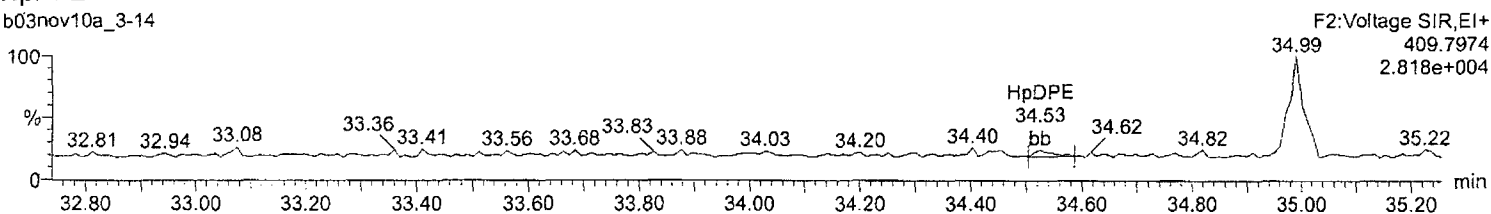
13C-12378-PeCDF

b03nov10a_3-14



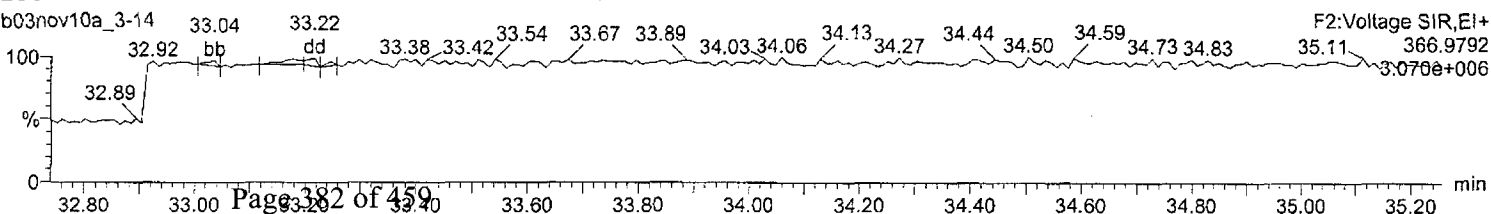
HpDPE

b03nov10a_3-14



Lock Mass F2

b03nov10a_3-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_3-14.qld

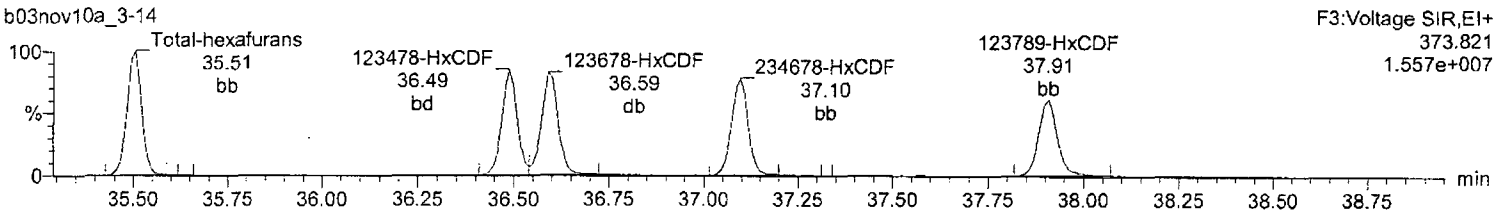
Last Altered: Thursday, November 04, 2010 16:42:51 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:44:08 Eastern Standard Time

Name: b03nov10a_3-14, Date: 04-Nov-2010, Time: 13:51:40, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_3, Task: HRP763_1, User: MJC

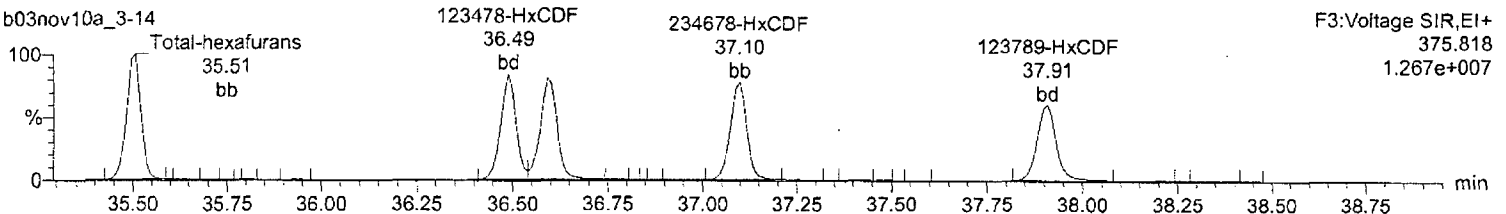
Total-hexafurans

b03nov10a_3-14



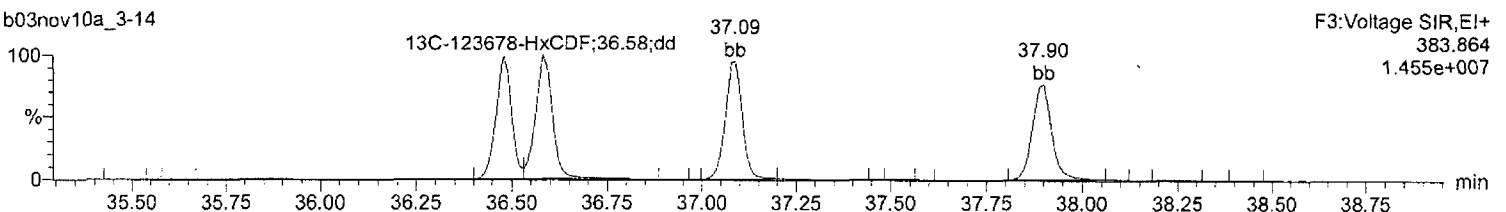
Total-hexafurans

b03nov10a_3-14



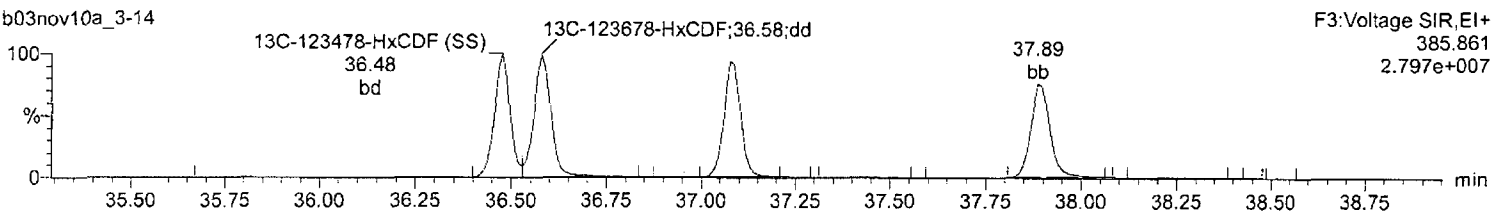
¹³C-123678-HxCDF

b03nov10a_3-14



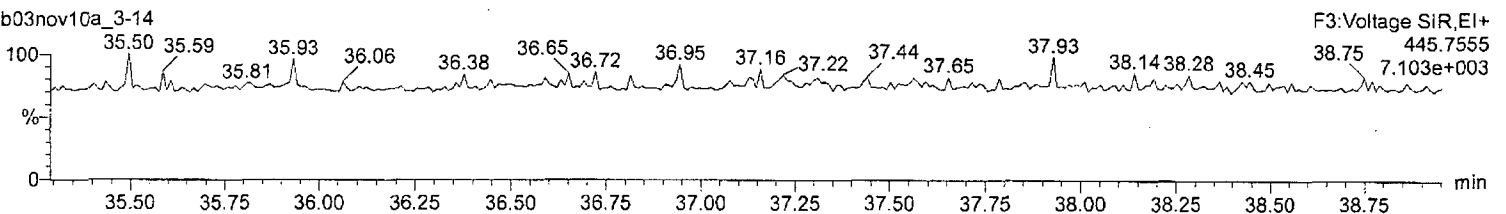
¹³C-123678-HxCDF

b03nov10a_3-14



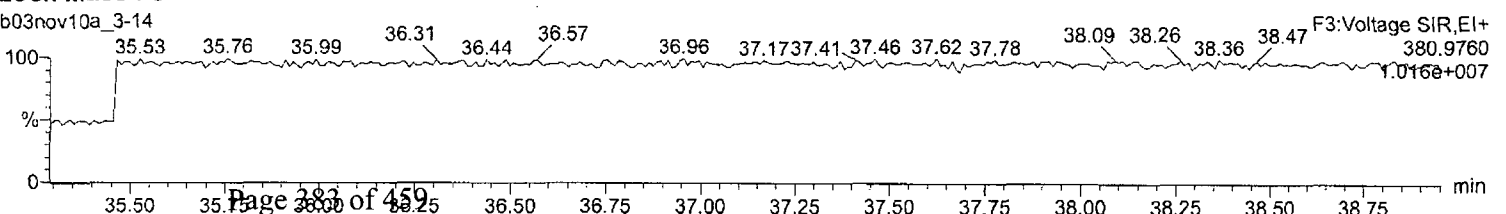
OcDPE

b03nov10a_3-14



Lock Mass F3

b03nov10a_3-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_3-14.qld

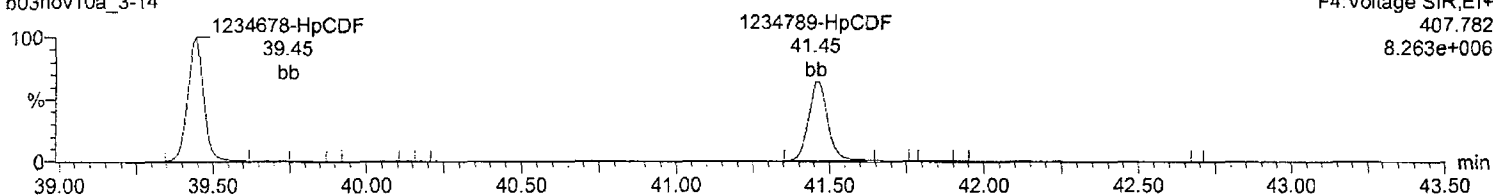
Last Altered: Thursday, November 04, 2010 16:42:51 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:44:08 Eastern Standard Time

Name: b03nov10a_3-14, Date: 04-Nov-2010, Time: 13:51:40, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_3,
Task: HRP763_1, User: MJC

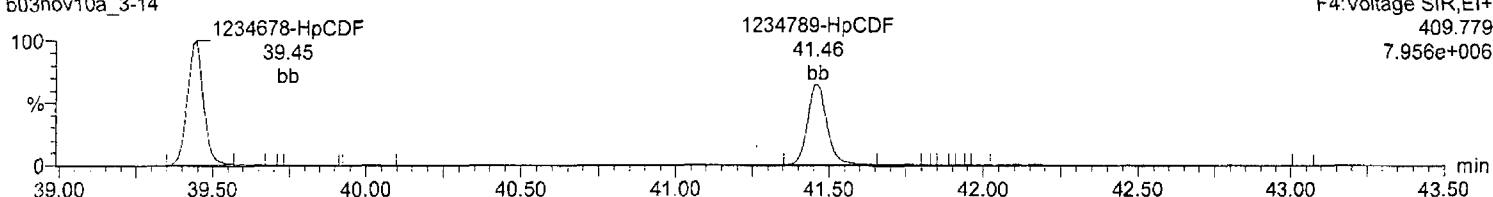
Total-heptafurans

b03nov10a_3-14



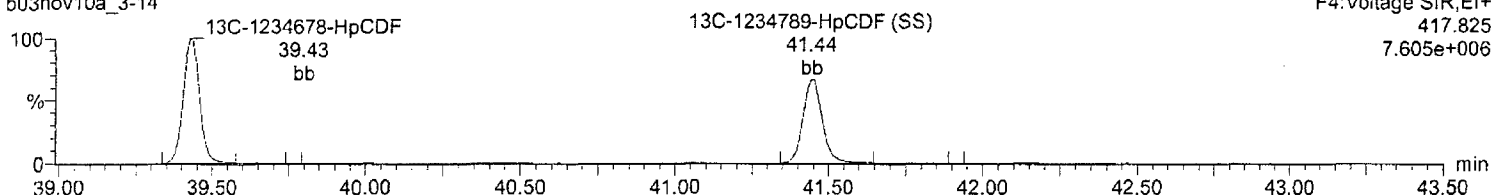
Total-heptafurans

b03nov10a_3-14



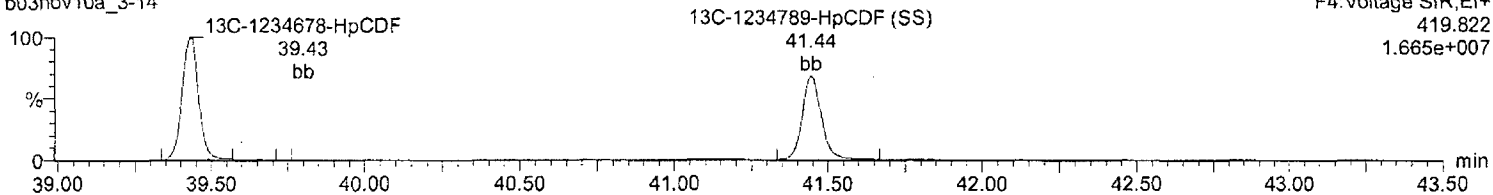
13C-1234678-HpCDF

b03nov10a_3-14



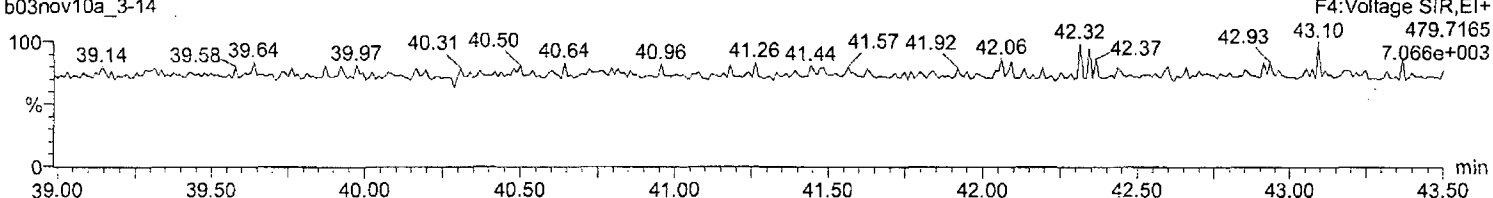
13C-1234678-HpCDF

b03nov10a_3-14



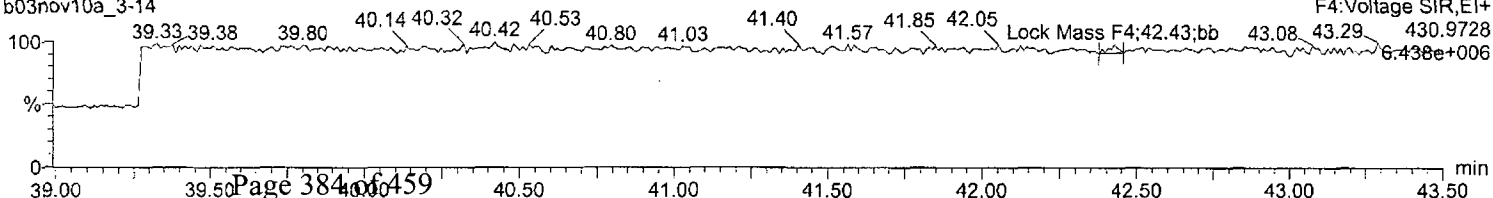
NoDPE

b03nov10a_3-14



Lock Mass F4

b03nov10a_3-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_3-14.qld

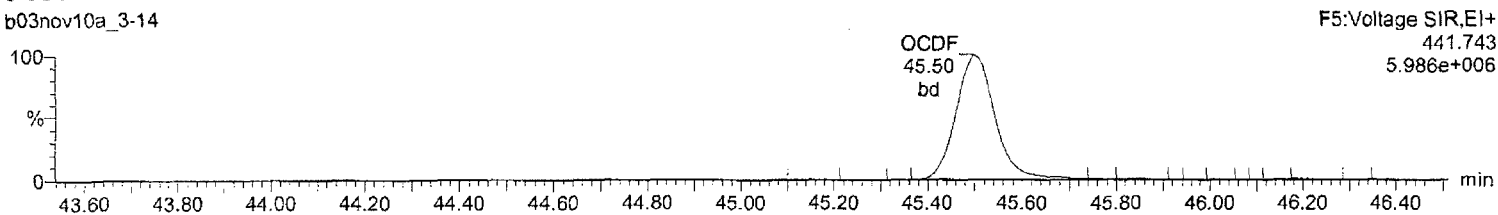
Last Altered: Thursday, November 04, 2010 16:42:51 Eastern Standard Time

Printed: Thursday, November 04, 2010 16:44:08 Eastern Standard Time

Name: b03nov10a_3-14, Date: 04-Nov-2010, Time: 13:51:40, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_3,
Task: HRP763_1, User: MJC

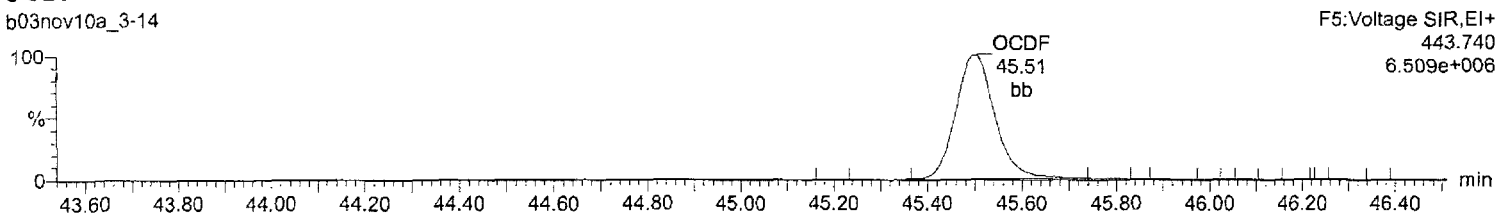
OCDF

b03nov10a_3-14



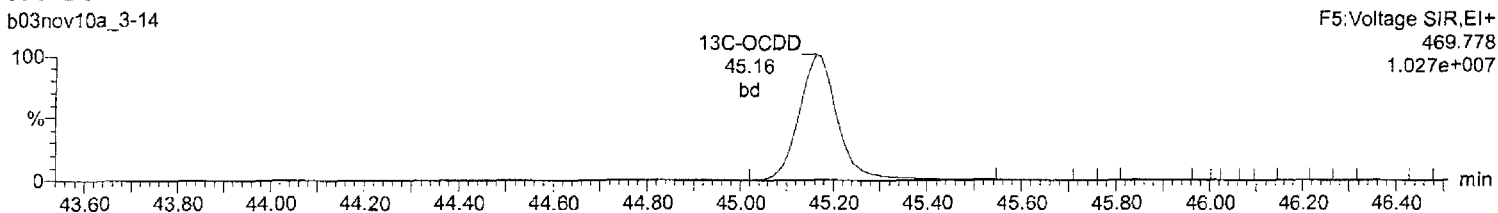
OCDF

b03nov10a_3-14



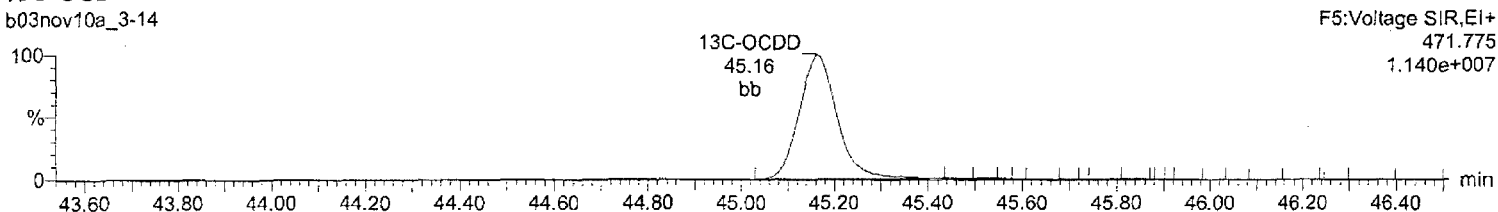
13C-OCDD

b03nov10a_3-14



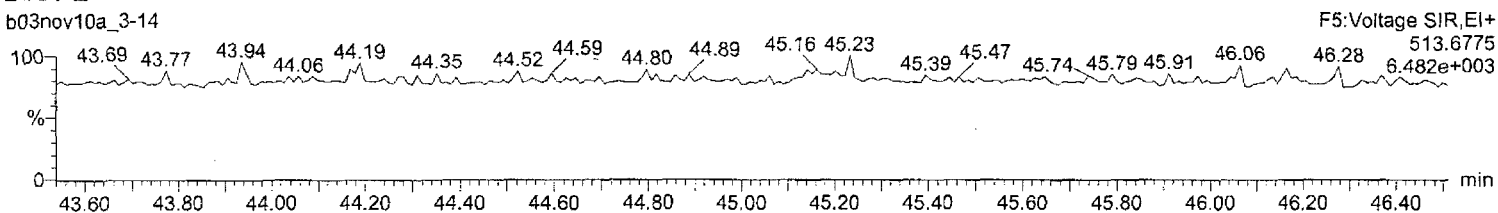
13C-OCDD

b03nov10a_3-14



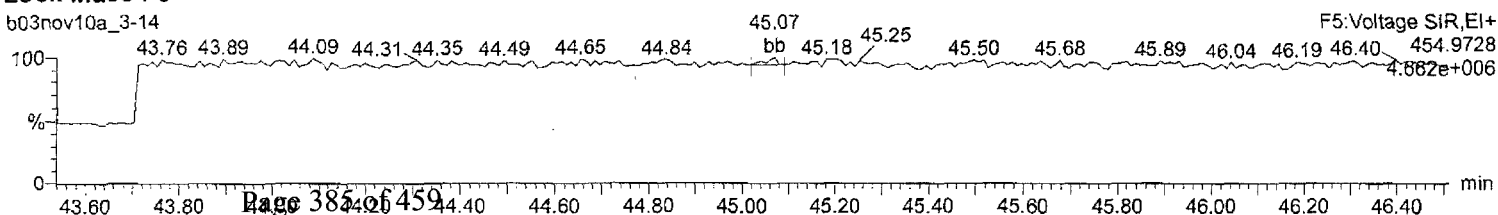
DeDPE

b03nov10a_3-14



Lock Mass F5

b03nov10a_3-14



Quantify Sample Summary Report

MassLynx 4.1

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_4-14.qld

Last Altered: Friday, November 05, 2010 10:36:23 Eastern Standard Time

Printed: Friday, November 05, 2010 10:39:25 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRE	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	7.82e4	1.00e5	1.78e5	31.75	1.000	0.78	NO	10.570	0.0183	1.070	5.7	1.61e6	1129	1430.0	2.04e6	1014	2008.8	dd
2	12378-PeCDD	4.06e5	2.58e5	6.64e5	34.54	1.000	1.57	NO	50.453	0.0723	1.041	0.9	8.67e6	4263	2034.0	5.67e6	2626	2157.7	bb
3	123478-HxCDD	3.06e5	2.47e5	5.53e5	37.22	0.998	1.24	NO	49.334	0.113	0.885	-1.3	5.92e6	3556	1665.1	4.77e6	3779	1262.5	bd
4	123678-HxCDD	3.39e5	2.68e5	6.07e5	37.31	1.000	1.27	NO	50.152	0.104	0.971	0.3	6.02e6	3556	1693.3	4.73e6	3779	1252.4	db
5	123789-HxCDD	3.09e5	2.49e5	5.58e5	37.56	1.007	1.24	NO	51.575	0.117	0.893	3.1	5.30e6	3556	1491.1	4.28e6	3779	1133.5	bb
6	1234678-HpCDD	2.26e5	2.19e5	4.45e5	40.74	1.000	1.03	NO	51.087	0.173	1.027	2.2	3.06e6	3462	882.5	2.92e6	3127	935.0	bd
7	OCDD	3.34e5	3.75e5	7.08e5	45.17	1.000	0.89	NO	102.267	0.260	1.018	2.3	3.33e6	3568	932.5	3.72e6	2385	1561.6	bd
8	2378-TCDF	1.09e5	1.42e5	2.51e5	31.21	1.000	0.77	NO	9.219	0.0197	0.907	-7.8	1.89e6	1386	1365.1	2.48e6	1659	1495.6	bb
9	12378-PeCDF	6.09e5	4.06e5	1.02e6	33.71	1.000	1.50	NO	49.795	0.0676	0.930	-0.4	1.47e7	5850	2516.2	9.56e6	4766	2006.3	bb
10	23478-PeCDF	6.19e5	4.03e5	1.02e6	34.34	1.019	1.53	NO	51.229	0.0691	0.937	2.5	1.45e7	5850	2479.1	9.55e6	4766	2004.6	bb
11	123478-HxCDF	4.44e5	3.64e5	8.08e5	36.48	0.997	1.22	NO	53.278	0.141	0.968	6.6	8.99e6	6402	1404.6	7.42e6	6142	1207.6	bd
12	123678-HxCDF	4.97e5	4.02e5	9.00e5	36.59	1.000	1.24	NO	50.950	0.121	1.078	1.9	9.18e6	6402	1434.4	7.46e6	6142	1215.1	db
13	234678-HxCDF	4.63e5	3.80e5	8.43e5	37.09	1.014	1.22	NO	52.829	0.134	1.010	5.7	8.65e6	6402	1351.1	7.04e6	6142	1145.5	bb
14	123789-HxCDF	3.89e5	3.23e5	7.12e5	37.90	1.036	1.20	NO	53.880	0.162	0.853	7.8	6.56e6	6402	1025.0	5.29e6	6142	861.2	bb
15	1234678-HpCDF	3.59e5	3.51e5	7.10e5	39.44	1.001	1.02	NO	50.238	0.0993	1.283	0.5	5.57e6	3291	1691.6	5.45e6	3692	1477.2	bb
16	1234789-HpCDF	2.76e5	2.67e5	5.43e5	41.45	1.052	1.03	NO	52.749	0.136	0.981	5.5	3.50e6	3291	1064.4	3.33e6	3692	902.7	bd
17	OCDF	3.95e5	4.41e5	8.37e5	45.49	1.007	0.90	NO	97.643	0.223	1.203	-2.4	3.86e6	2189	1765.0	4.21e6	4123	1020.5	bd
18	13C-2378-TCDD	7.38e5	9.27e5	1.66e6	31.73	1.013	0.80	NO	92.620	0.0362	1.037	-7.4	1.54e7	2075	7417.7	1.96e7	1944	10090.6	bb
19	13C-12378-PeCDD	7.78e5	4.98e5	1.28e6	34.53	1.102	1.56	NO	83.659	0.0471	0.795	-16.3	1.69e7	2181	7740.6	1.09e7	2252	4833.0	bb
20	13C-123678-HxCDD	6.93e5	5.57e5	1.25e6	37.30	0.993	1.24	NO	99.013	0.128	1.101	-1.0	1.21e7	5652	2137.4	9.67e6	3225	2997.3	db
21	13C-1234678-HpCDD	4.49e5	4.18e5	8.67e5	40.73	1.085	1.07	NO	95.389	0.127	0.764	-4.6	5.88e6	3206	1834.0	5.47e6	3134	1746.1	bd
22	13C-OCDD	6.53e5	7.38e5	1.39e6	45.15	1.202	0.88	NO	183.223	0.180	0.612	-8.4	6.46e6	4481	1442.3	7.32e6	2991	2446.9	bd
23	13C-2378-TCDF	1.22e6	1.54e6	2.76e6	31.19	0.996	0.79	NO	94.538	0.0181	1.722	-5.5	2.09e7	1853	11275.9	2.56e7	1403	18259.6	bb
24	13C-12378-PeCDF	1.32e6	8.64e5	2.18e6	33.70	1.076	1.53	NO	80.319	0.0777	1.359	-19.7	3.05e7	6311	4825.9	1.97e7	6712	2940.5	bb
25	13C-123678-HxCDF	5.72e5	1.10e6	1.67e6	36.58	0.974	0.52	NO	90.162	0.123	1.470	-9.8	1.00e7	5743	1749.1	1.97e7	6729	2934.2	db
26	13C-1234678-HpCDF	3.46e5	7.62e5	1.11e6	39.42	1.050	0.45	NO	90.199	0.117	0.975	-9.8	5.16e6	3438	1500.2	1.15e7	4427	2593.5	bd
27	13C-1234-TCDD	7.10e5	8.95e5	1.61e6	31.33	0.000	0.79	NO	100.000	0.0406	1.000	0.0	1.31e7	2075	6334.2	1.66e7	1944	8514.9	bb
28	13C-123789-HxCDD	6.31e5	5.04e5	1.14e6	37.55	0.000	1.25	NO	100.000	0.143	1.000	0.0	1.04e7	5652	1835.2	8.16e6	3225	2529.2	bb
29	37Cl-2378-TCDD (SS)	1.86e5		1.86e5	31.75	1.000			10.618	0.0122	1.119	6.2	3.78e6	1491	2538.8				bb
30	13C-23478-PeCDF (SS)	1.31e6	8.33e5	2.14e6	34.33	1.019	1.57	NO	105.047	0.0830	0.980	5.0	3.06e7	6311	4845.1	1.96e7	6712	2918.0	bb

Quantify Sample Summary Report

MassLynx 4.1

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_4-14.qld

Last Altered: Friday, November 05, 2010 10:36:23 Eastern Standard Time

Printed: Friday, November 05, 2010 10:39:25 Eastern Standard Time

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Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4, Task: HRP763_1, User: MJC

Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/UL	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
13C-123478-HxCDF (SS)	5.02e5	9.66e5	1.47e6	36.47	0.997	0.52	NO	108.520	0.158	0.879	8.5	1.01e7	5743	1766.1	1.94e7	6729	2876.4	bd
13C-123478-HxCDD (SS)	6.07e5	4.74e5	1.08e6	37.21	0.998	1.28	NO	100.440	0.142	0.865	0.4	1.15e7	5652	2037.0	8.96e6	3225	2777.1	bd
13C-1234789-HpCDF (SS)	2.65e5	5.99e5	8.63e5	41.43	1.051	0.44	NO	103.101	0.189	0.779	3.1	3.32e6	3438	966.4	7.39e6	4427	1668.8	bd

Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_4-14.qld

Last Altered: Friday, November 05, 2010 10:36:23 Eastern Standard Time

Printed: Friday, November 05, 2010 10:39:25 Eastern Standard Time

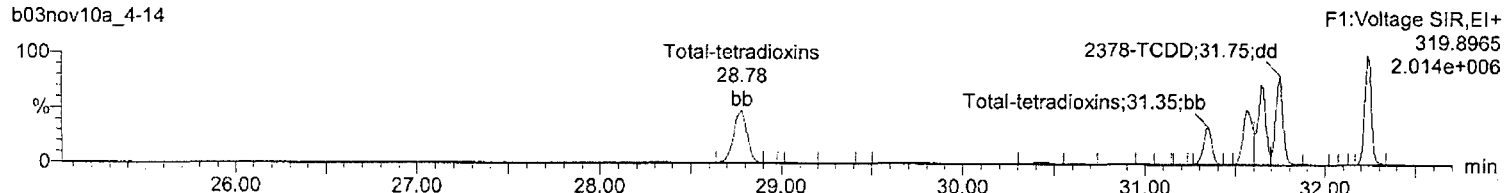
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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4, Task: HRP763_1, User: MJC

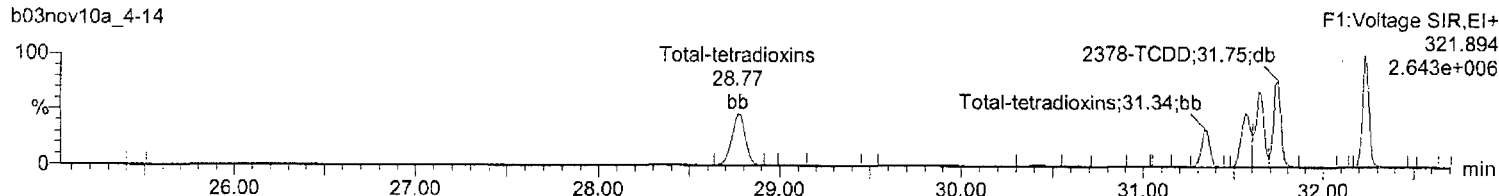
Total-tetradoxins

b03nov10a_4-14



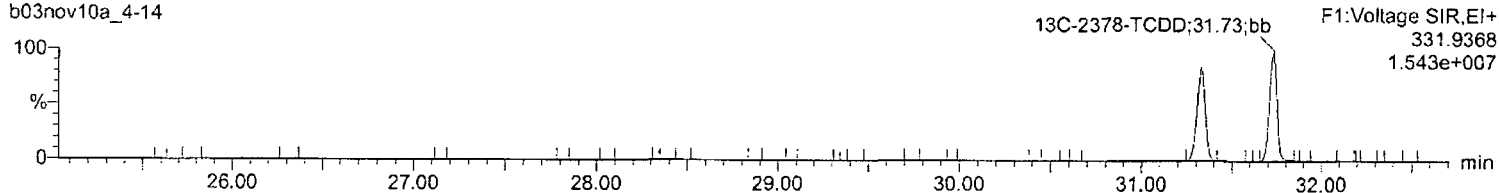
Total-tetradoxins

b03nov10a_4-14



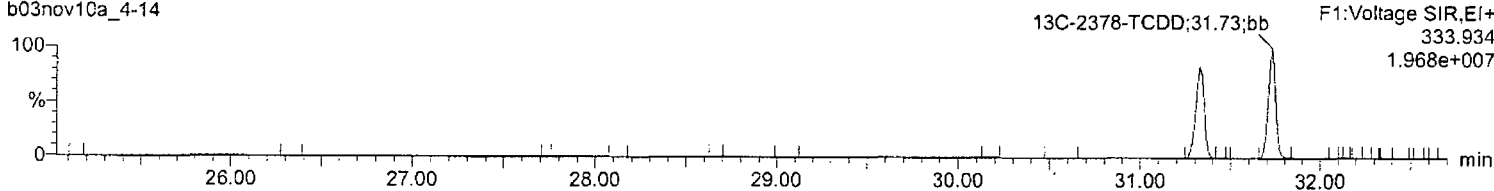
13C-2378-TCDD

b03nov10a_4-14



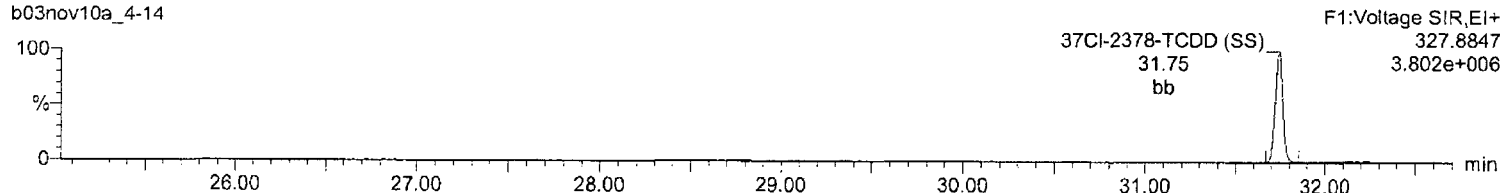
13C-2378-TCDD

b03nov10a_4-14



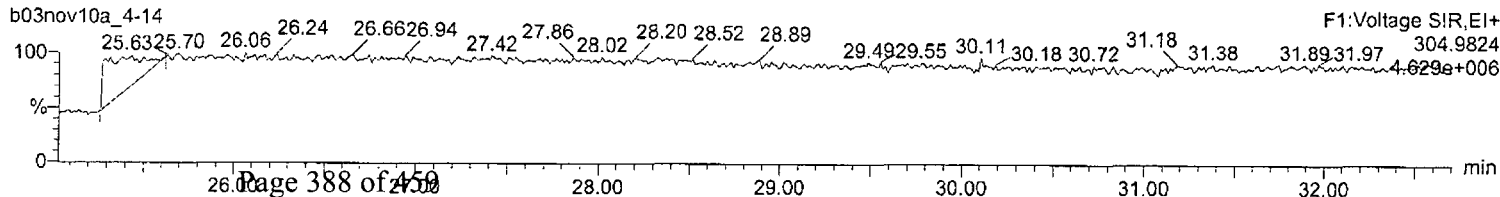
37Cl-2378-TCDD (SS)

b03nov10a_4-14



Lock Mass F1

b03nov10a_4-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_4-14.qld

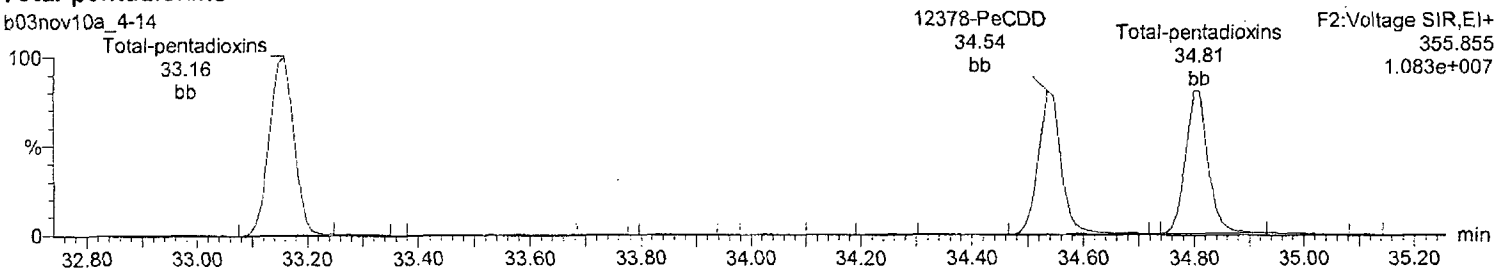
Last Altered: Friday, November 05, 2010 10:36:23 Eastern Standard Time

Printed: Friday, November 05, 2010 10:39:25 Eastern Standard Time

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4,
Task: HRP763_1, User: MJC

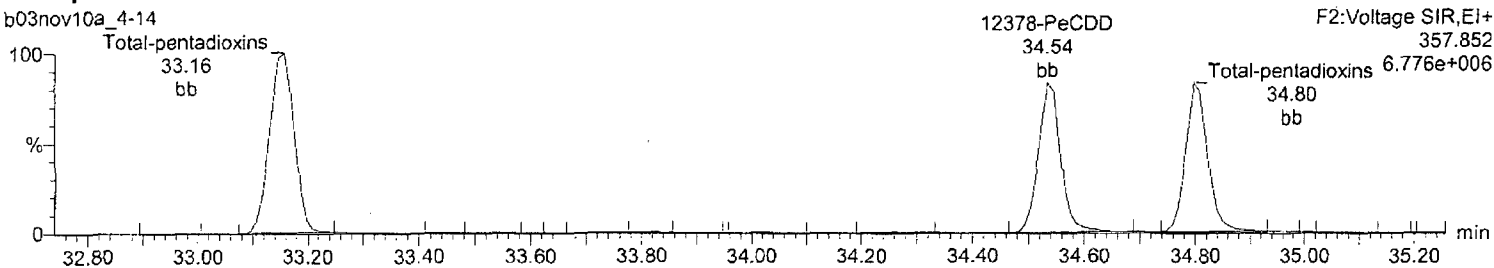
Total-pentadioxins

b03nov10a_4-14



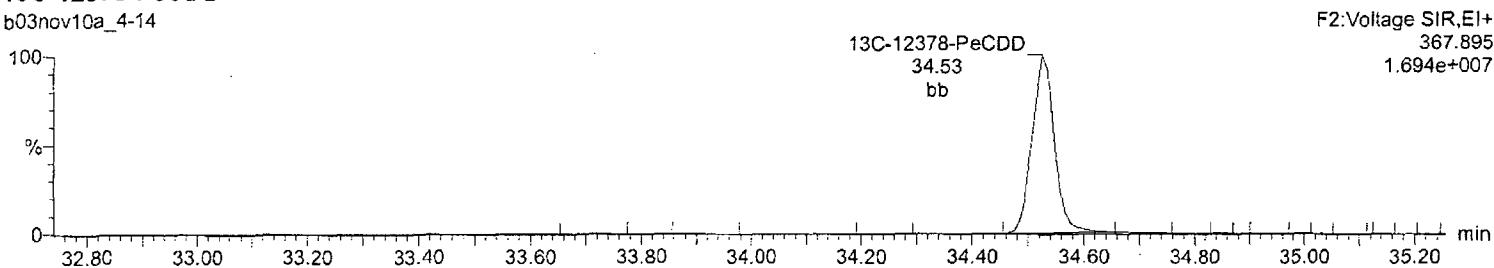
Total-pentadioxins

b03nov10a_4-14



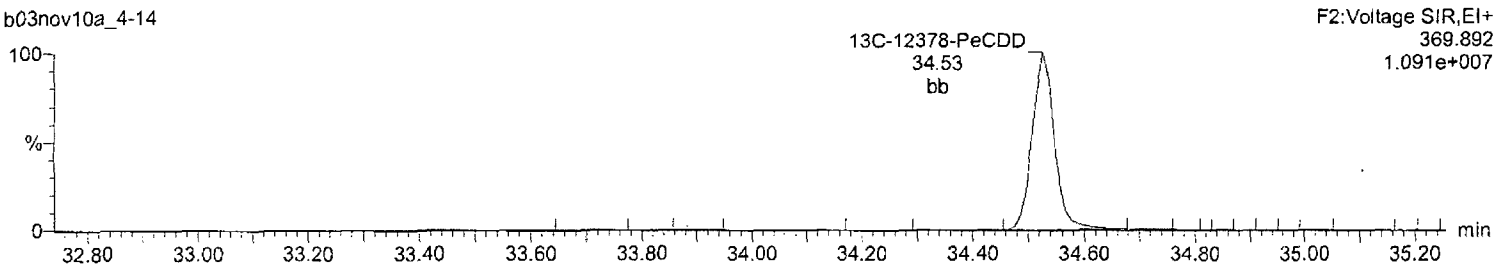
13C-12378-PeCDD

b03nov10a_4-14



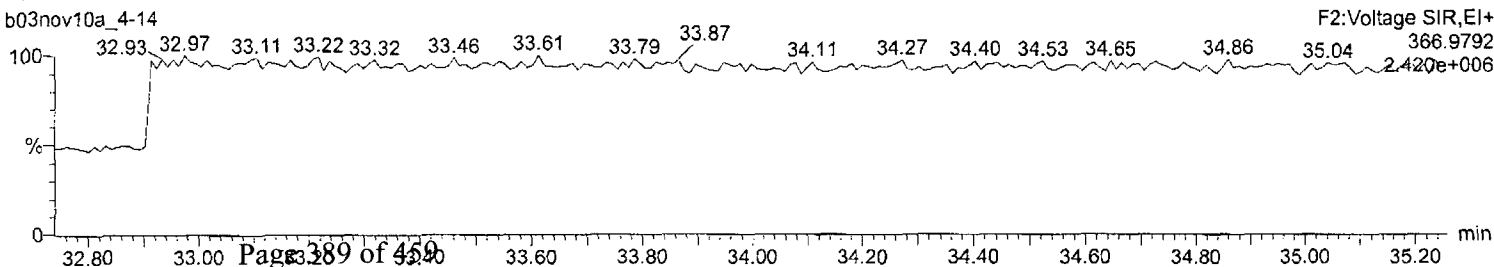
13C-12378-PeCDD

b03nov10a_4-14



Lock Mass F2

b03nov10a_4-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_4-14.qld

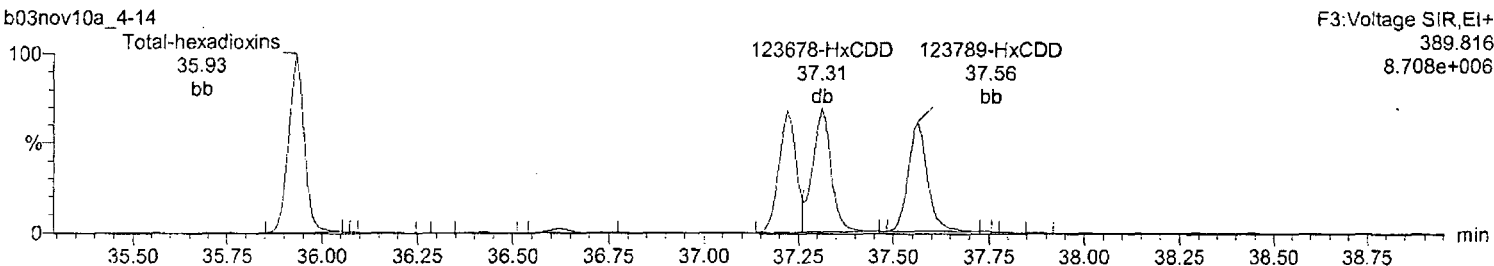
Last Altered: Friday, November 05, 2010 10:36:23 Eastern Standard Time

Printed: Friday, November 05, 2010 10:39:25 Eastern Standard Time

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4,
Task: HRP763_1, User: MJC

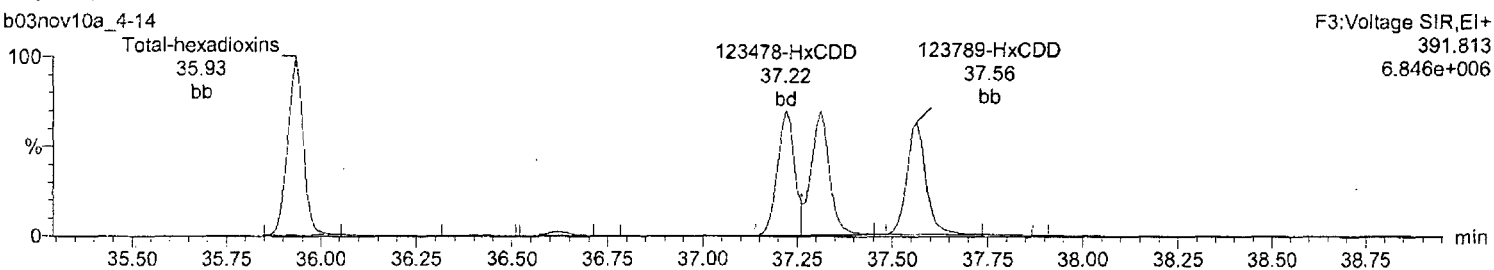
Total-hexadioxins

b03nov10a_4-14



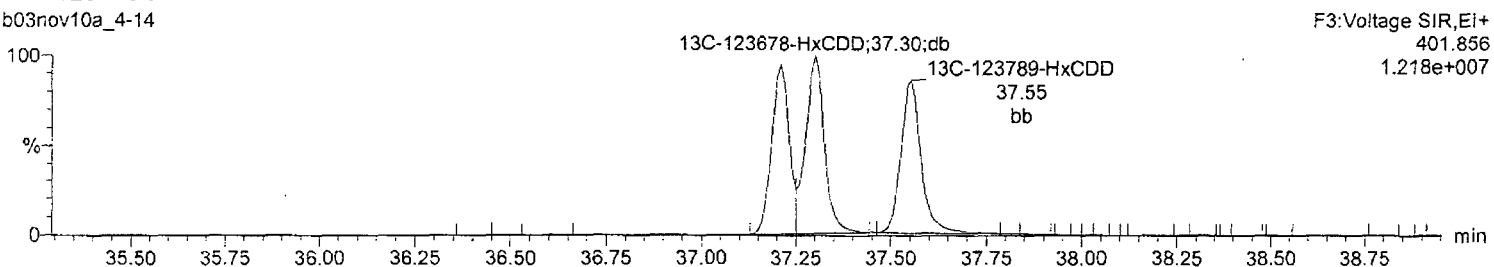
Total-hexadioxins

b03nov10a_4-14



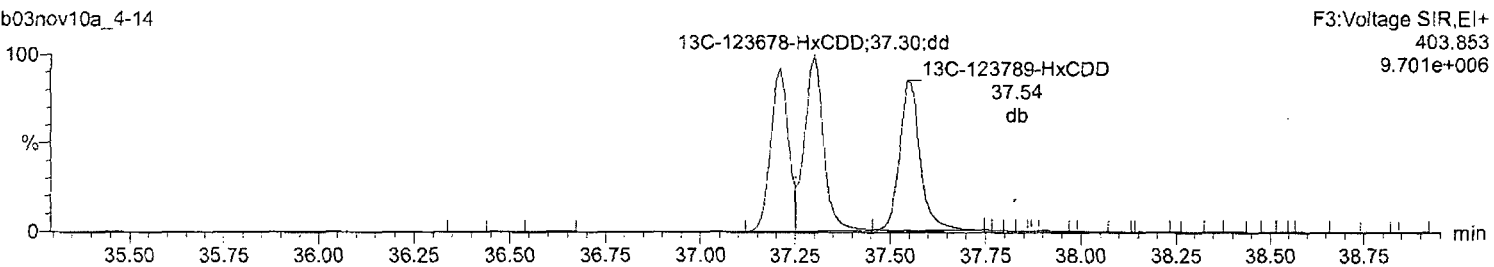
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b03nov10a_4-14



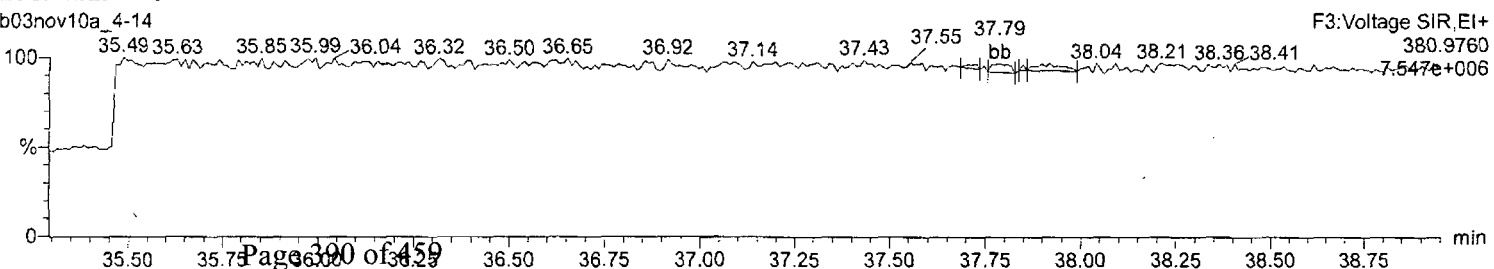
13C-123678-HxCDD

b03nov10a_4-14



Lock Mass F3

b03nov10a_4-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_4-14.qld

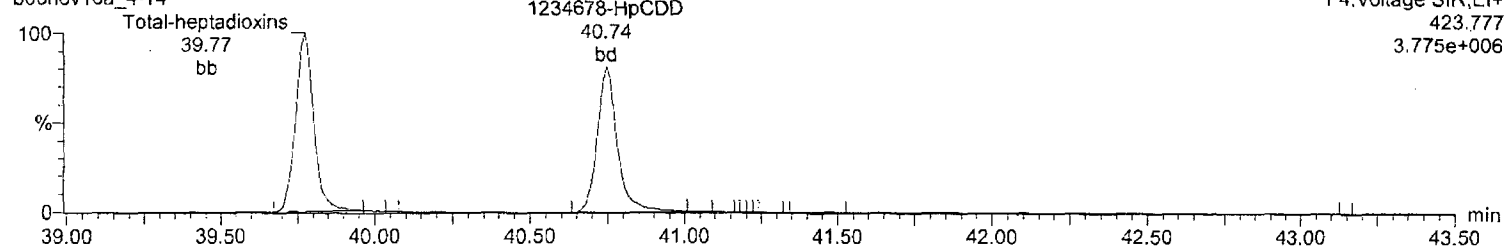
Last Altered: Friday, November 05, 2010 10:36:23 Eastern Standard Time

Printed: Friday, November 05, 2010 10:39:25 Eastern Standard Time

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4,
Task: HRP763_1, User: MJC

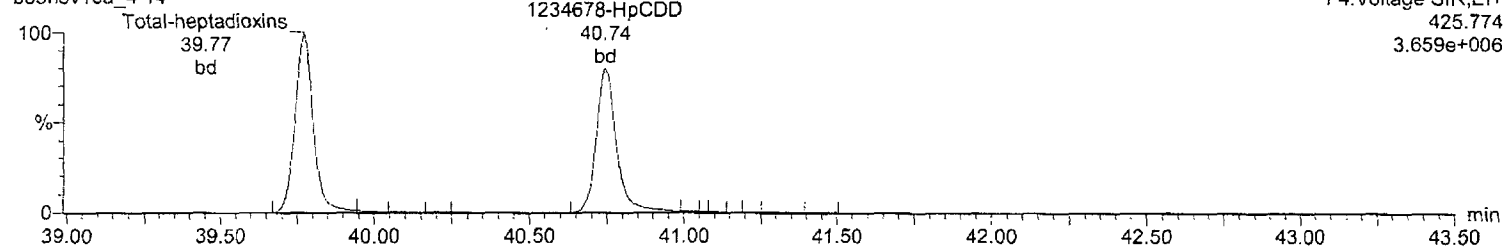
Total-heptadioxins

b03nov10a_4-14



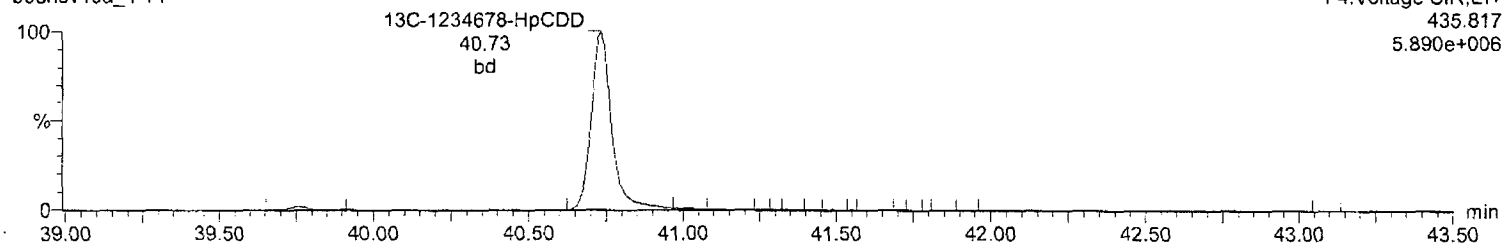
Total-heptadioxins

b03nov10a_4-14



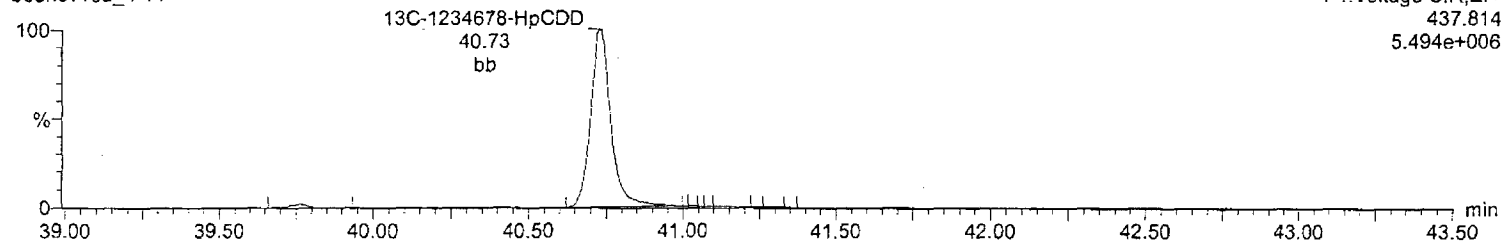
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b03nov10a_4-14



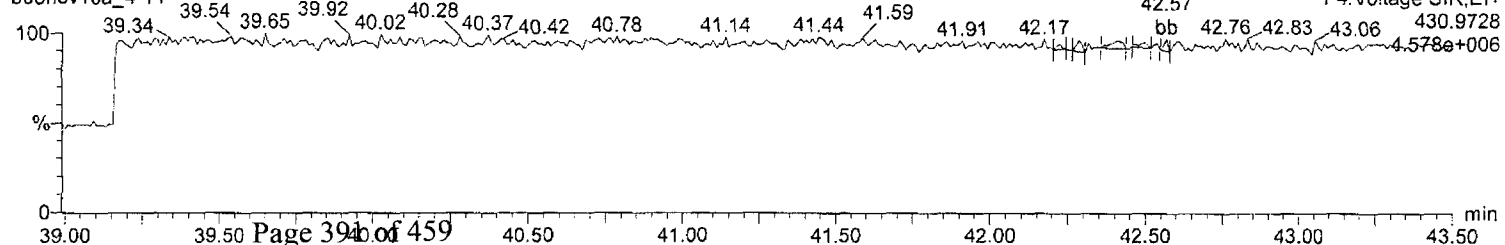
13C-1234678-HpCDD

b03nov10a_4-14



Lock Mass F4

b03nov10a_4-14



Quantify Sample Report MassLynx 4.1
Method 8290 CCAL Report

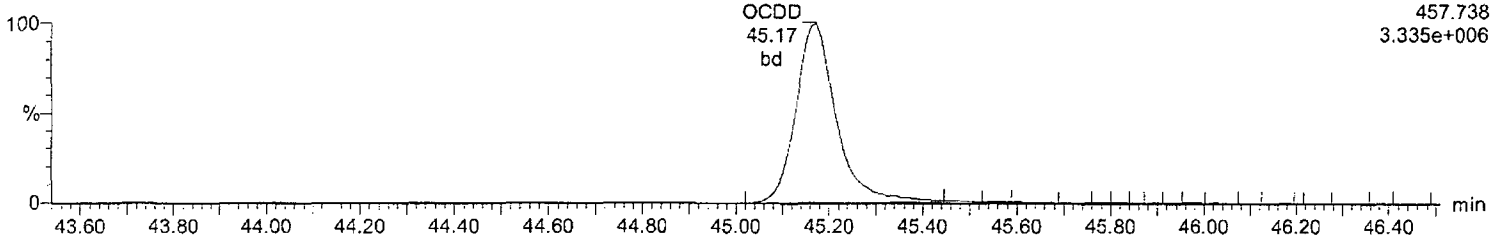
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_4-14.qld

Last Altered: Friday, November 05, 2010 10:36:23 Eastern Standard Time
Printed: Friday, November 05, 2010 10:39:25 Eastern Standard Time

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4,
Task: HRP763_1, User: MJC

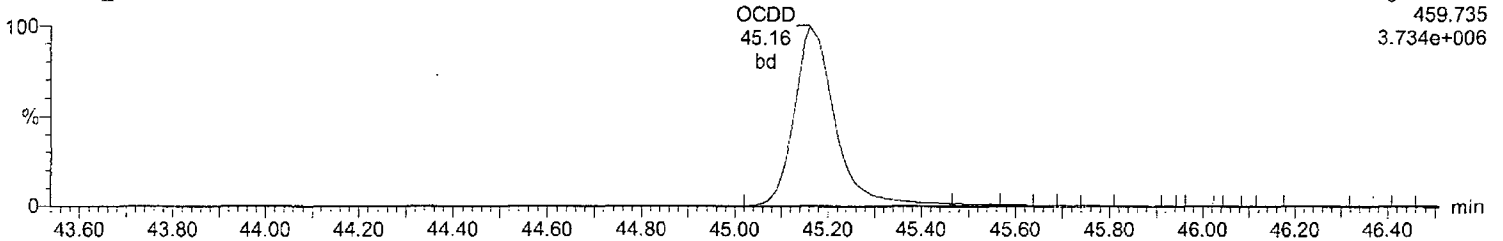
OCDD

b03nov10a_4-14



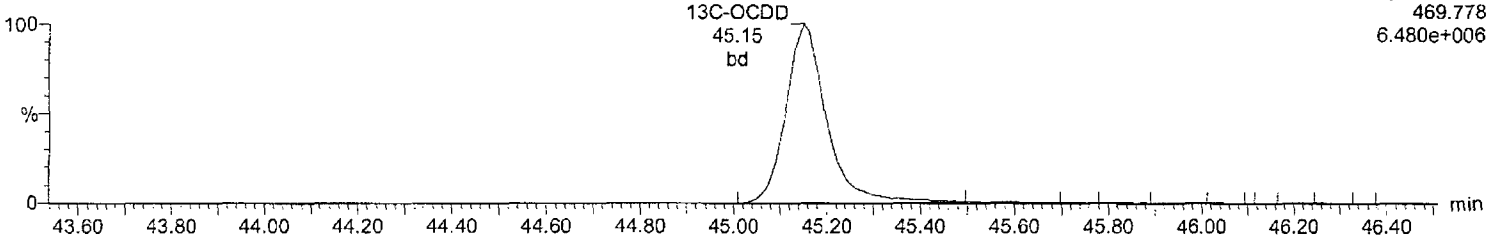
OCDD

b03nov10a_4-14



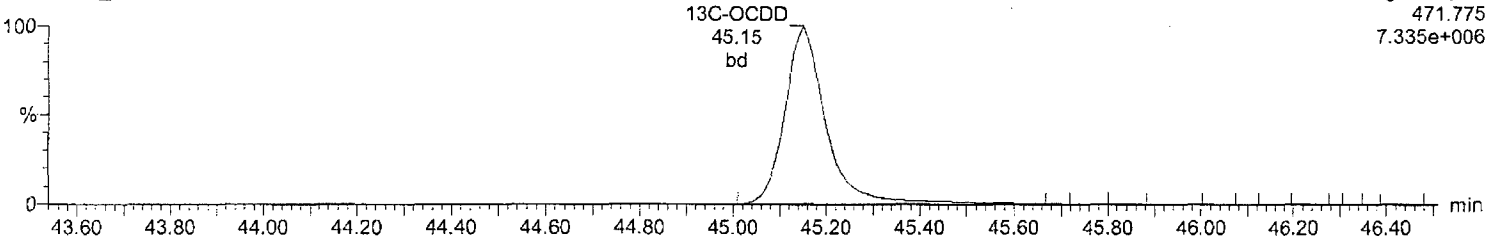
¹³C-OCDD

b03nov10a_4-14



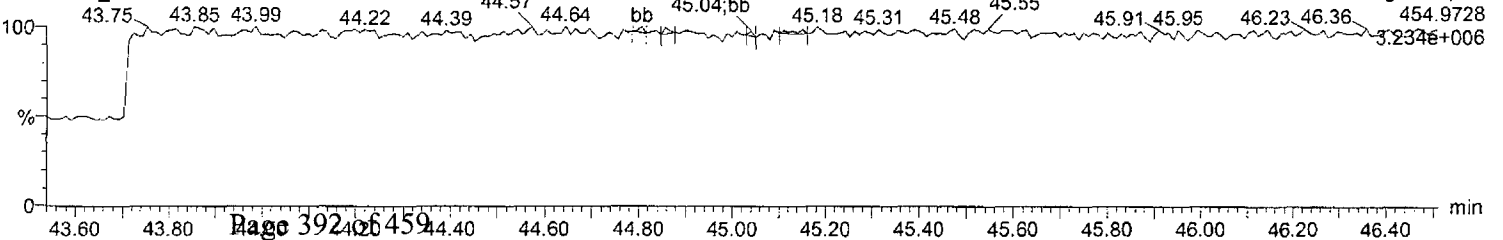
¹³C-OCDD

b03nov10a_4-14



Lock Mass F5

b03nov10a_4-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_4-14.qld

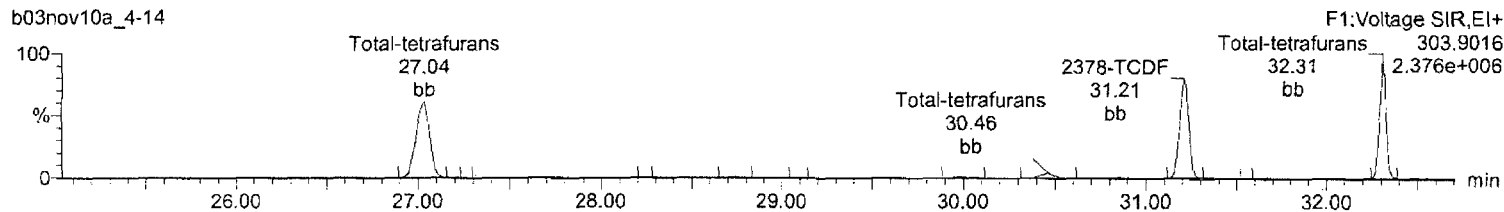
Last Altered: Friday, November 05, 2010 10:36:23 Eastern Standard Time

Printed: Friday, November 05, 2010 10:39:25 Eastern Standard Time

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4, Task: HRP763_1, User: MJC

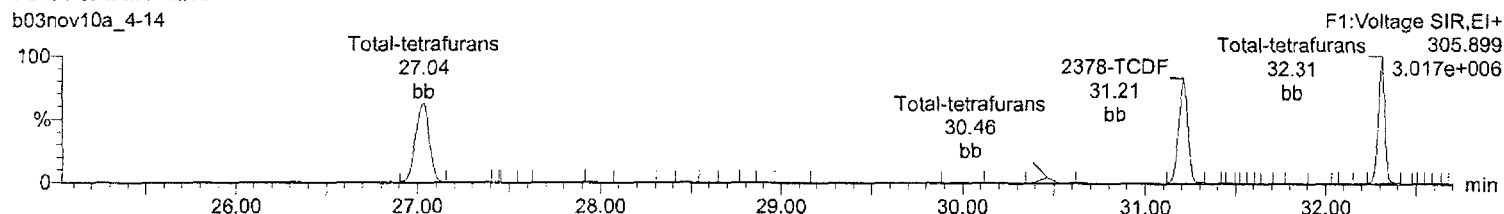
Total-tetrafurans

b03nov10a_4-14



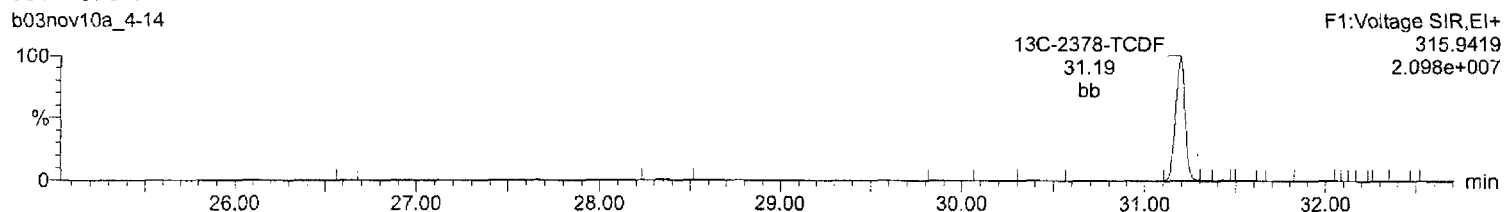
Total-tetrafurans

b03nov10a_4-14



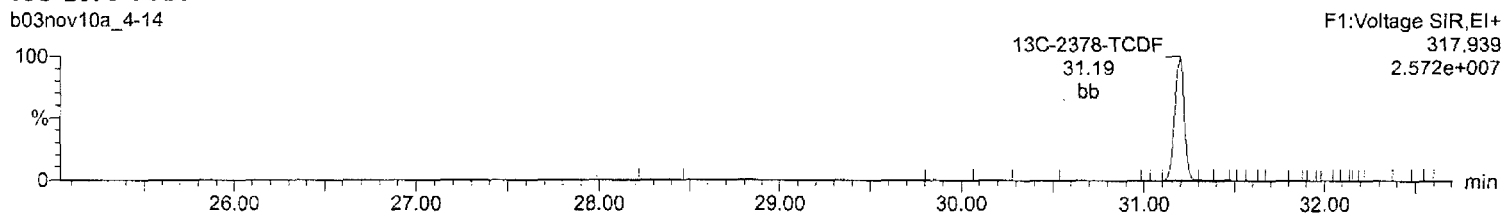
13C-2378-TCDF

b03nov10a_4-14



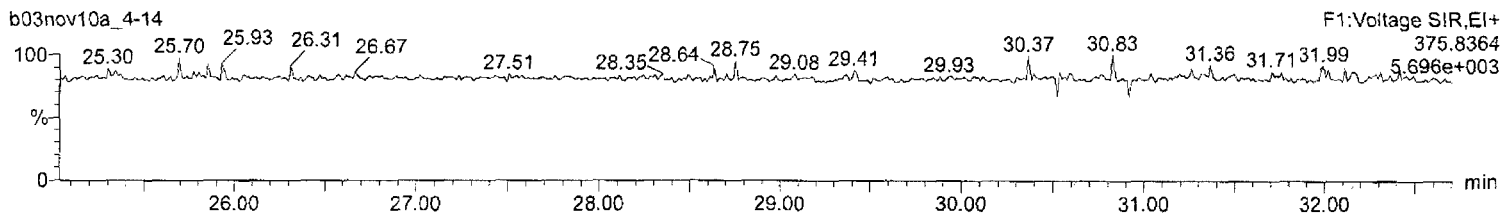
13C-2378-TCDF

b03nov10a_4-14



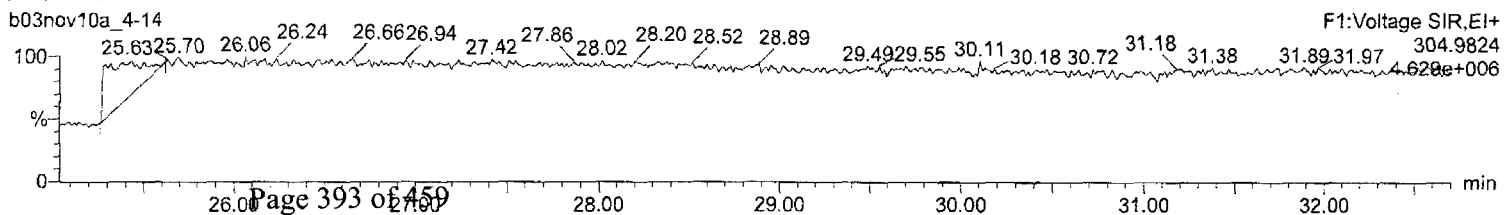
HxDPE

b03nov10a_4-14



Lock Mass F1

b03nov10a_4-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_4-14.qld

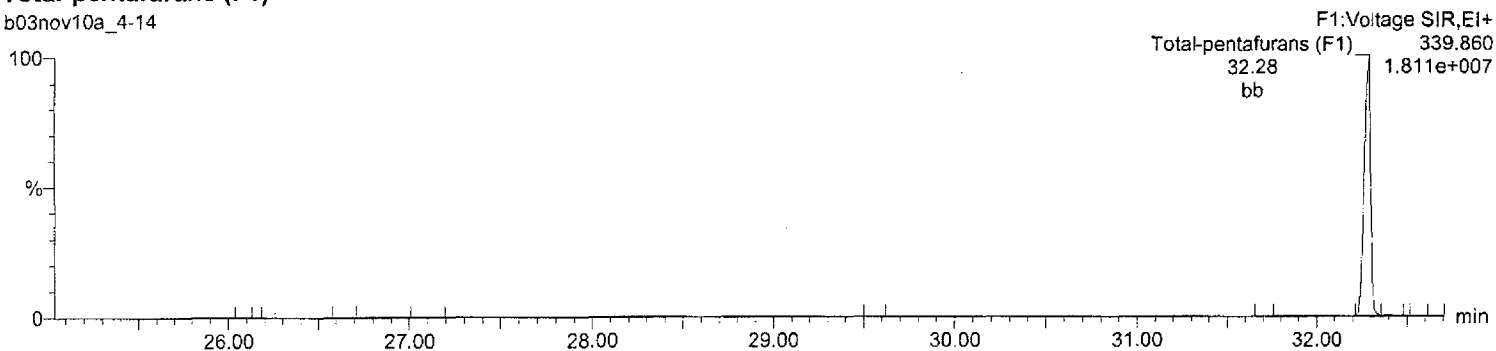
Last Altered: Friday, November 05, 2010 10:36:23 Eastern Standard Time

Printed: Friday, November 05, 2010 10:39:25 Eastern Standard Time

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4,
Task: HRP763_1, User: MJC

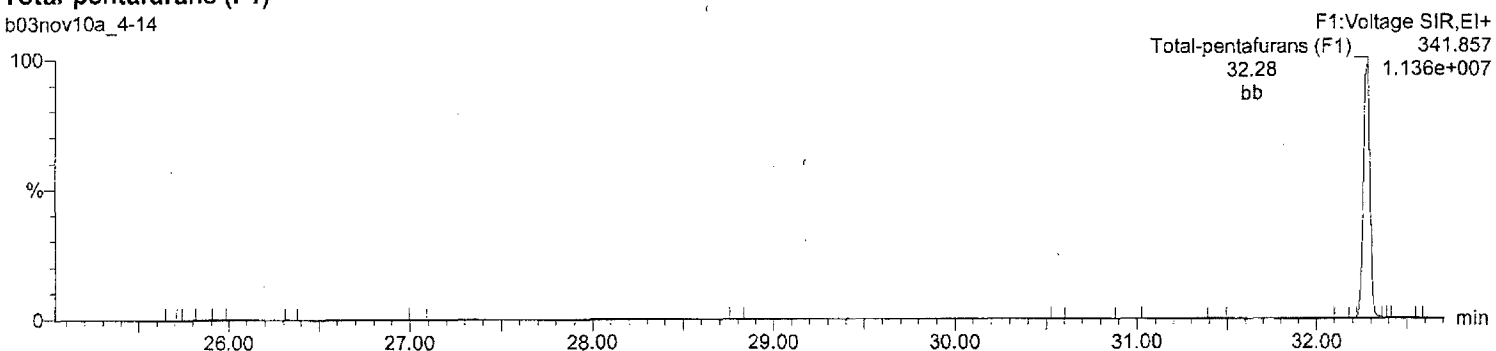
Total-pentafulurans (F1)

b03nov10a_4-14



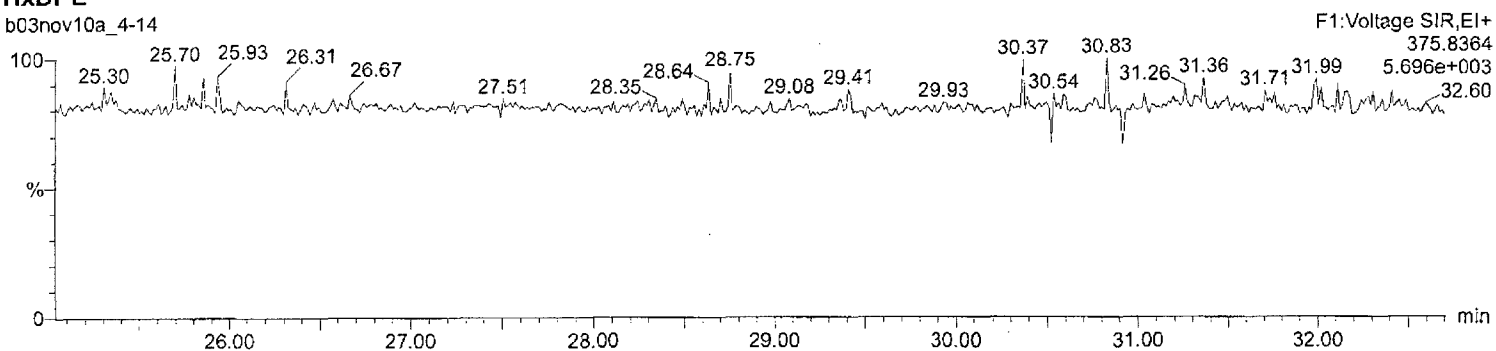
Total-pentafulurans (F1)

b03nov10a_4-14



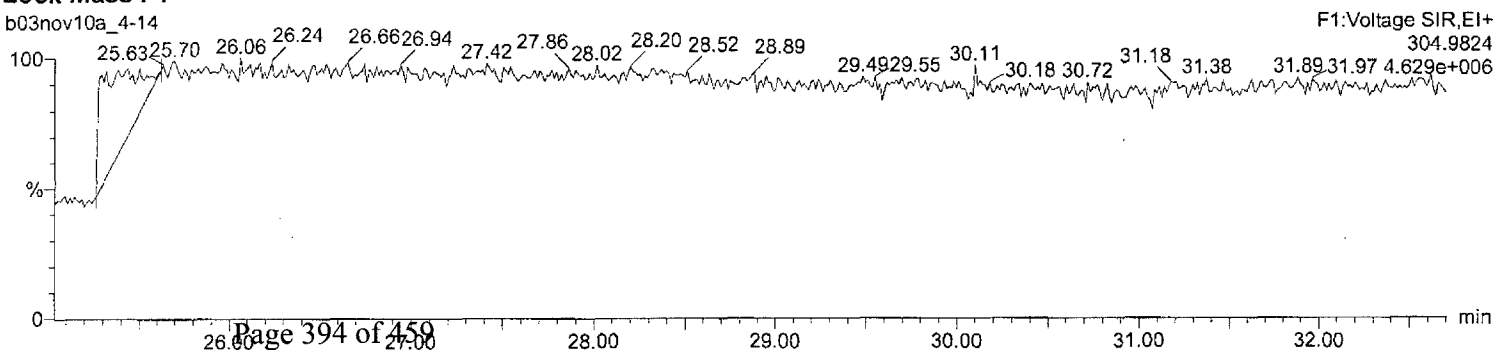
HxDPE

b03nov10a_4-14



Lock Mass F1

b03nov10a_4-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_4-14.qld

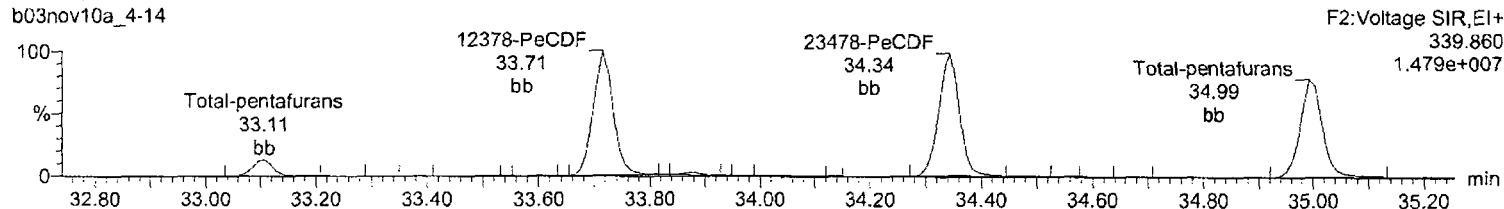
Last Altered: Friday, November 05, 2010 10:36:23 Eastern Standard Time

Printed: Friday, November 05, 2010 10:39:25 Eastern Standard Time

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4, Task: HRP763_1, User: MJC

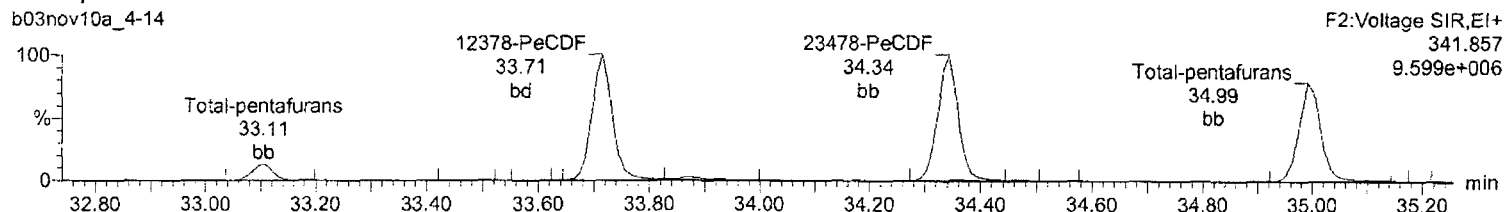
Total-pentafurans

b03nov10a_4-14



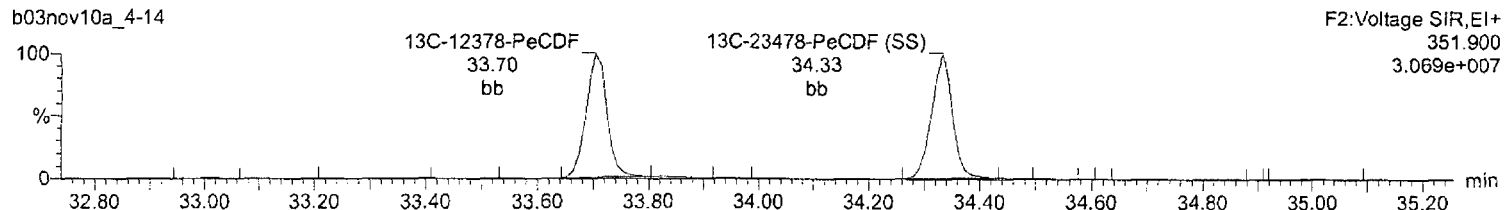
Total-pentafurans

b03nov10a_4-14



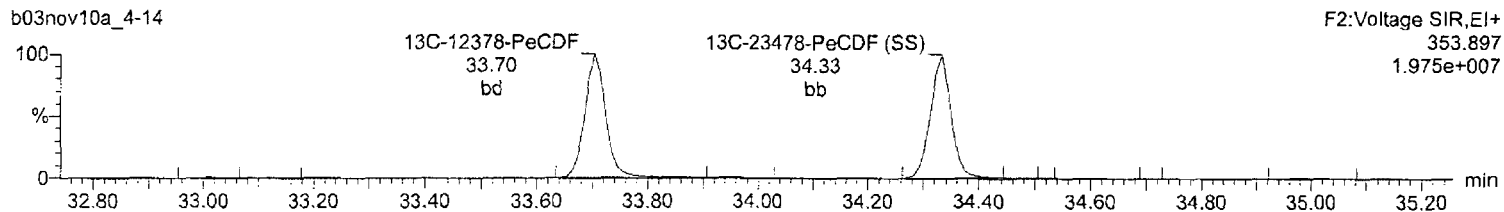
13C-12378-PeCDF

b03nov10a_4-14



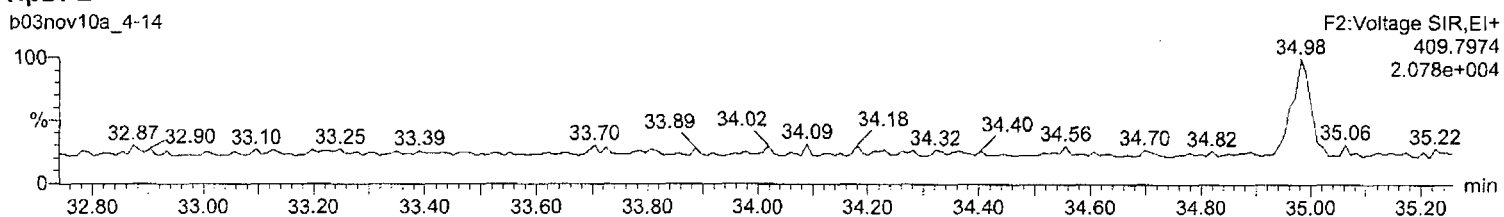
13C-12378-PeCDF

b03nov10a_4-14



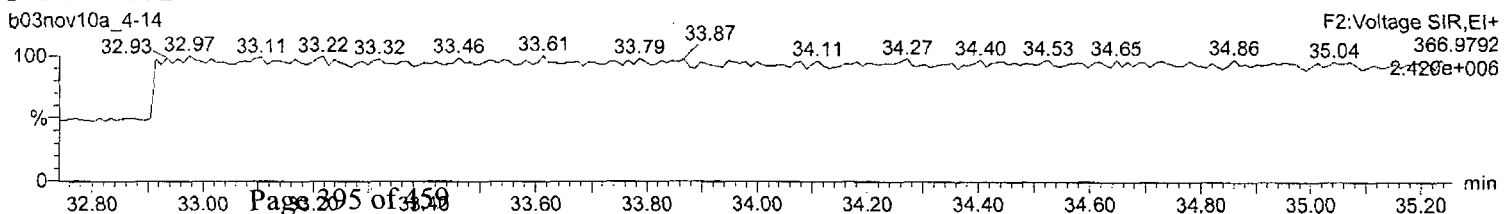
HpDPE

b03nov10a_4-14



Lock Mass F2

b03nov10a_4-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_4-14.qld

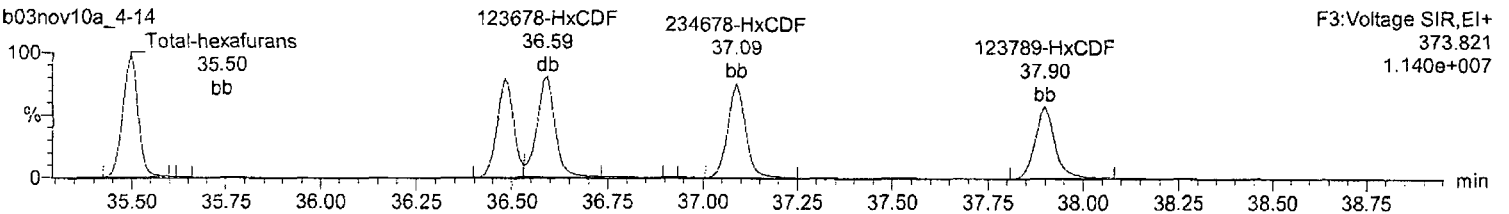
Last Altered: Friday, November 05, 2010 10:36:23 Eastern Standard Time

Printed: Friday, November 05, 2010 10:39:25 Eastern Standard Time

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4,
Task: HRP763_1, User: MJC

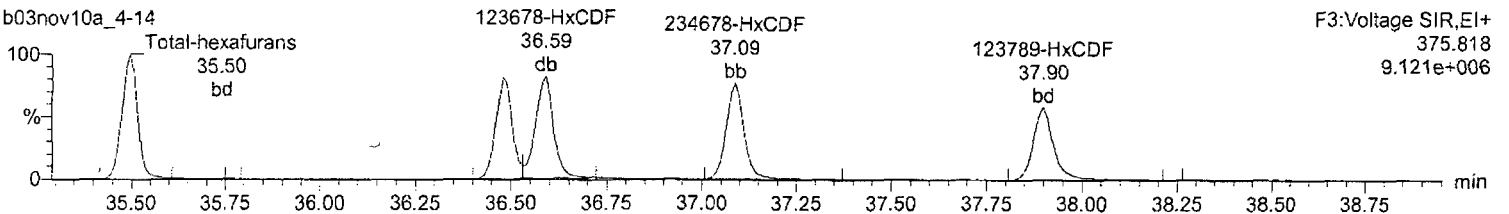
Total-hexafurans

b03nov10a_4-14



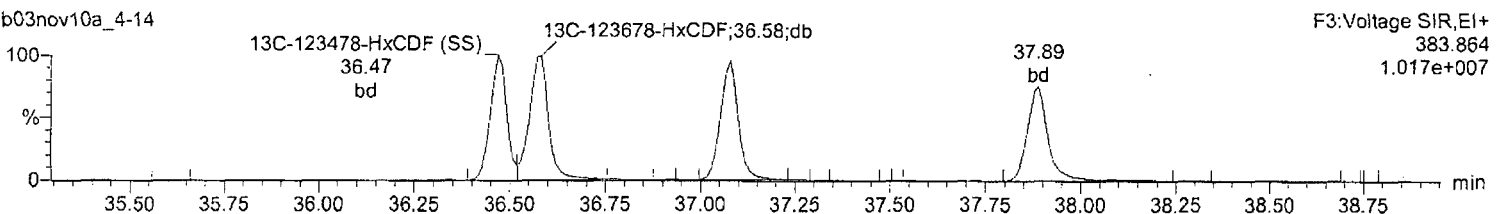
Total-hexafurans

b03nov10a_4-14



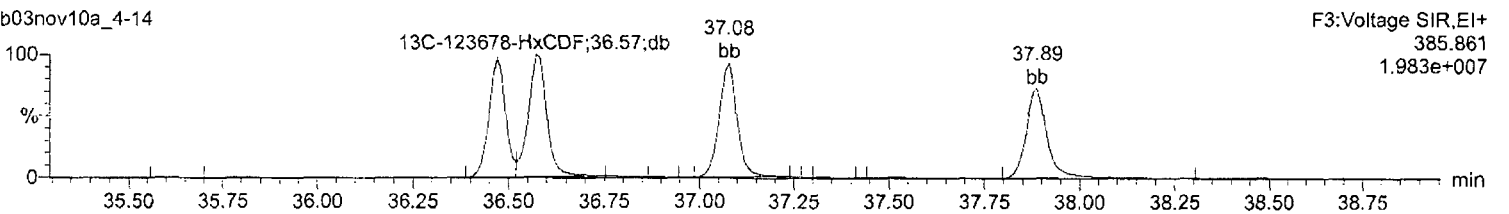
13C-123678-HxCDF

b03nov10a_4-14



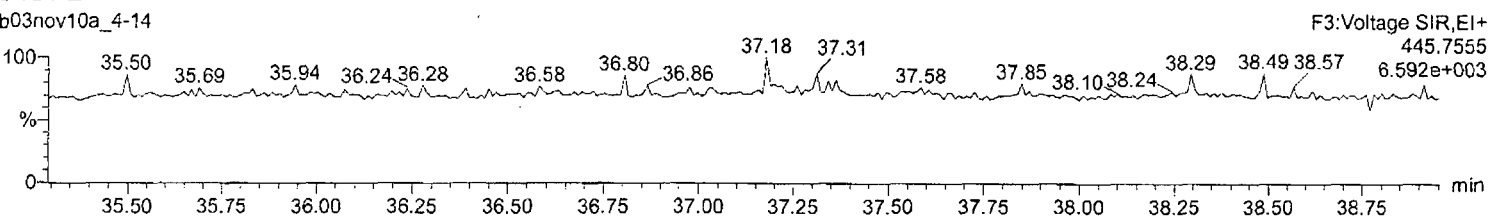
13C-123678-HxCDF

b03nov10a_4-14



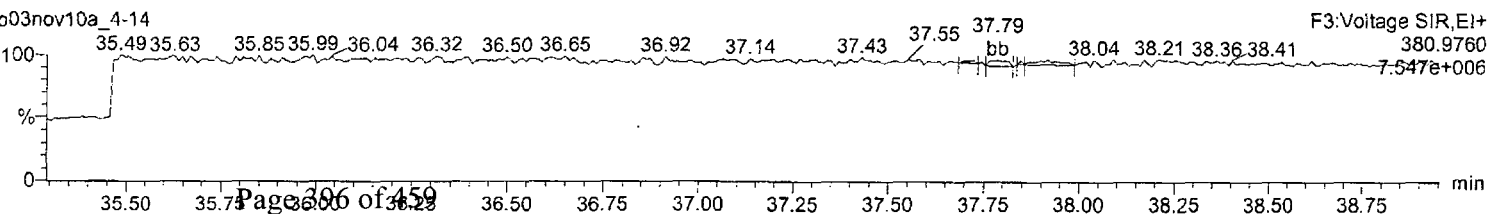
OcDPE

b03nov10a_4-14



Lock Mass F3

b03nov10a_4-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_4-14.qld

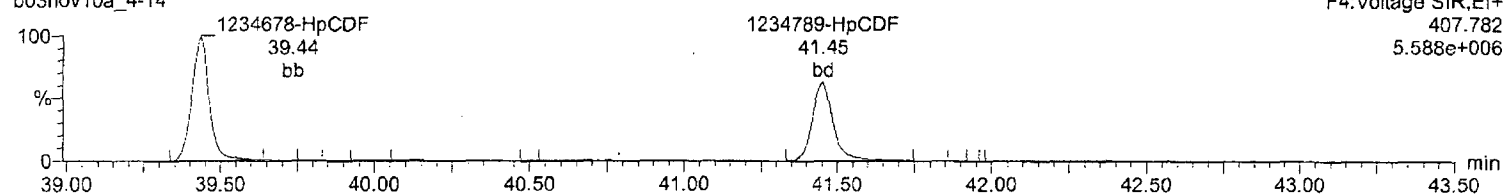
Last Altered: Friday, November 05, 2010 10:36:23 Eastern Standard Time

Printed: Friday, November 05, 2010 10:39:25 Eastern Standard Time

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4, Task: HRP763_1, User: MJC

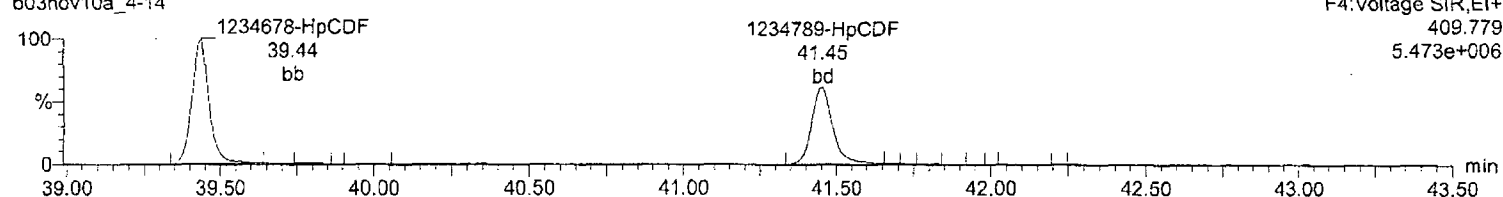
Total-heptafurans

b03nov10a_4-14



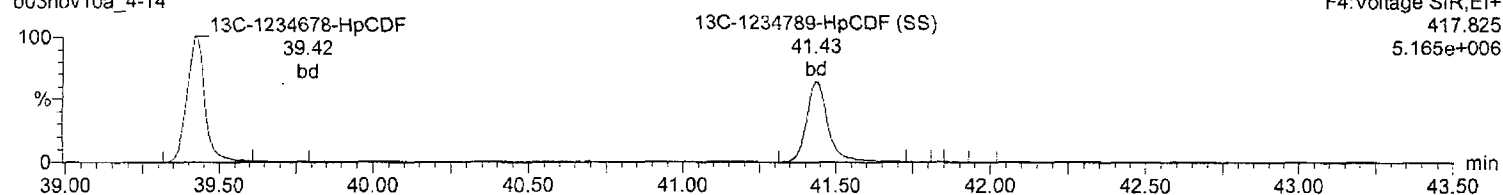
Total-heptafurans

b03nov10a_4-14



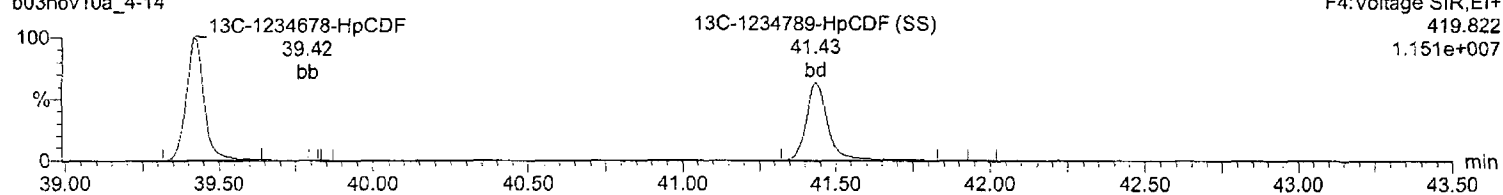
¹³C-1234678-HpCDF

b03nov10a_4-14



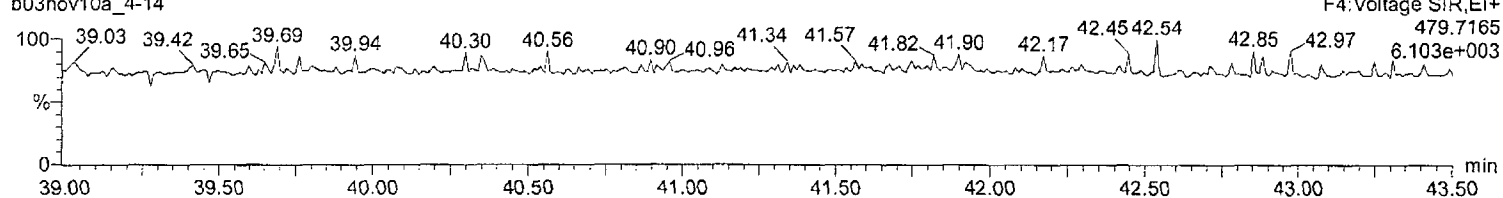
¹³C-1234678-HpCDF

b03nov10a_4-14



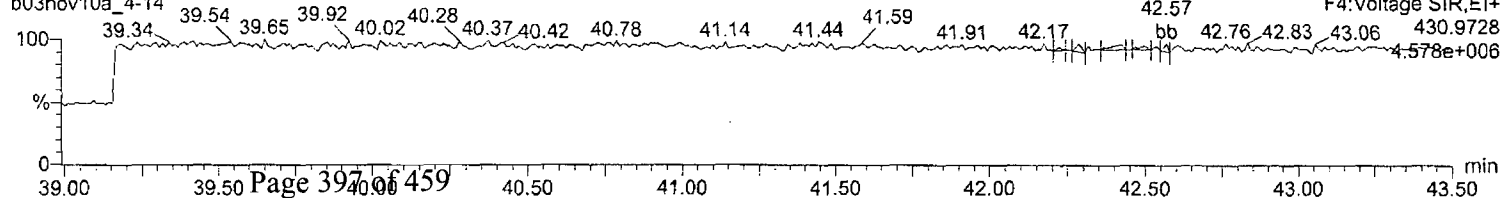
NoDPE

b03nov10a_4-14



Lock Mass F4

b03nov10a_4-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_4-14.qld

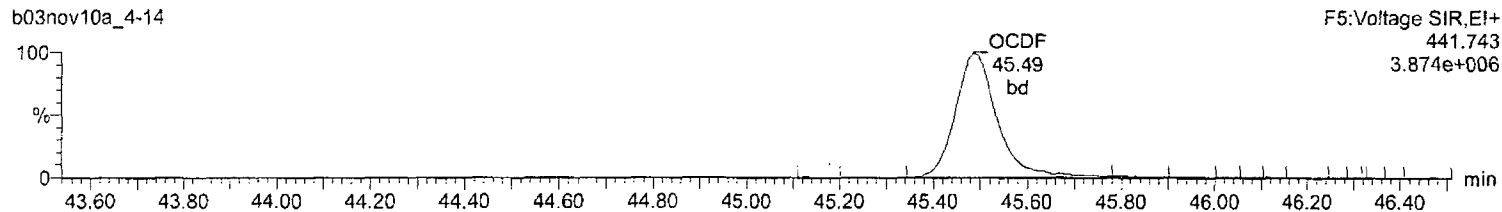
Last Altered: Friday, November 05, 2010 10:36:23 Eastern Standard Time

Printed: Friday, November 05, 2010 10:39:25 Eastern Standard Time

Name: b03nov10a_4-14, Date: 05-Nov-2010, Time: 01:17:09, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_4, Task: HRP763_1, User: MJC

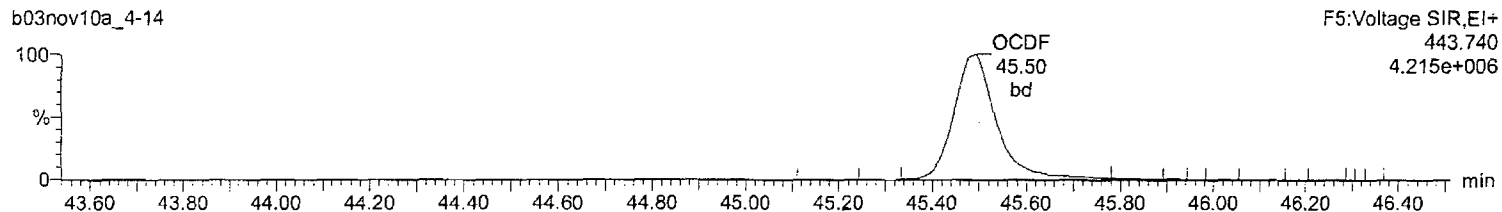
OCDF

b03nov10a_4-14



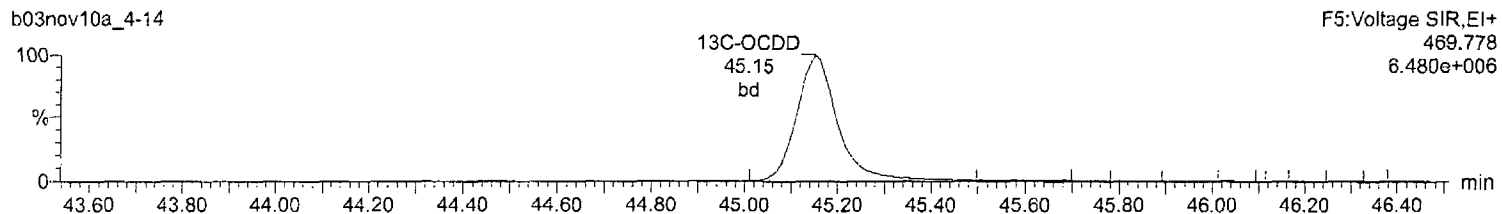
OCDF

b03nov10a_4-14



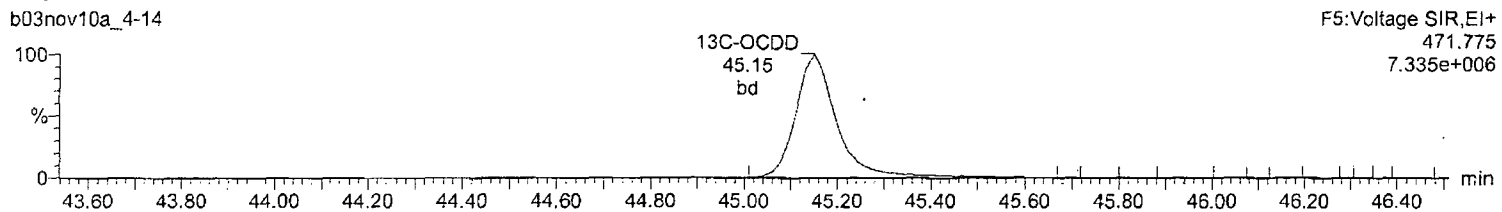
13C-OCDD

b03nov10a_4-14



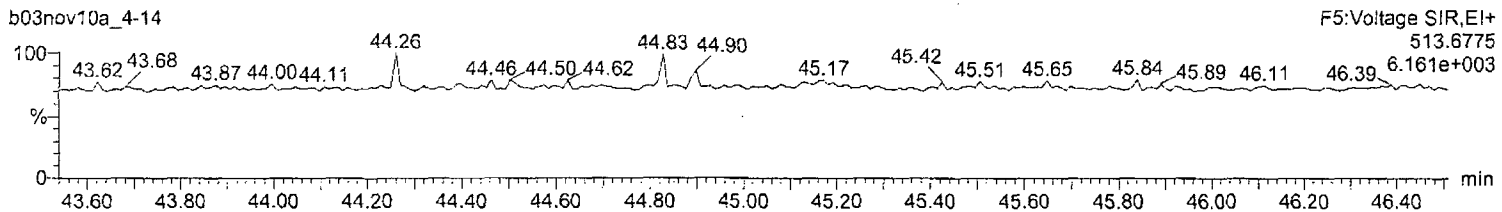
13C-OCDD

b03nov10a_4-14



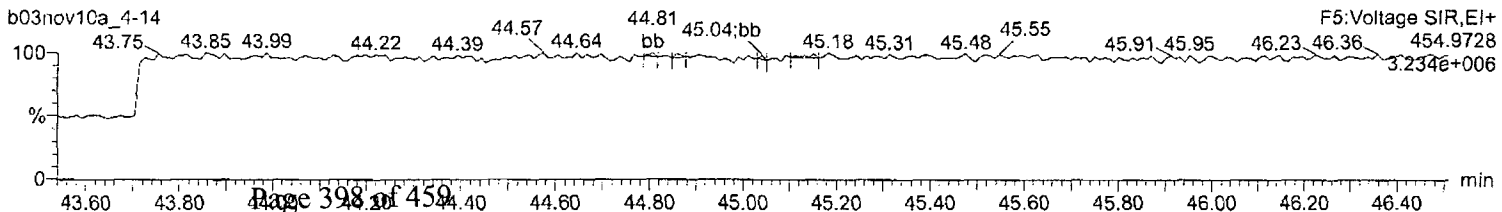
DeDPE

b03nov10a_4-14



Lock Mass F5

b03nov10a_4-14



Quantify Sample Summary Report

MassLynx 4.1

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_5-14.qld

Last Altered: Friday, November 05, 2010 14:04:54 Eastern Standard Time

Printed: Friday, November 05, 2010 14:15:00 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	8.35e4	1.08e5	1.91e5	31.75	1.000	0.77	NO	10.887	0.0175	1.102	8.9	1.75e6	794	2210.3	2.24e6	1318	1702.9	db
2	12378-PeCDD	4.44e5	2.85e5	7.30e5	34.55	1.000	1.56	NO	50.741	0.0702	1.047	1.5	9.89e6	3594	2751.0	6.15e6	3664	1677.0	bb
3	123478-HxCDD	3.35e5	2.65e5	6.00e5	37.23	0.998	1.26	NO	51.340	0.117	0.921	2.7	6.45e6	4142	1557.4	5.01e6	3819	1311.7	bd
4	123678-HxCDD	3.64e5	2.83e5	6.47e5	37.31	1.000	1.28	NO	51.302	0.108	0.993	2.6	6.10e6	4142	1473.4	4.89e6	3819	1280.0	dd
5	123789-HxCDD	3.32e5	2.63e5	5.95e5	37.56	1.007	1.26	NO	52.745	0.121	0.913	5.5	5.47e6	4142	1319.7	4.50e6	3819	1178.6	db
6	1234678-HpCDD	2.32e5	2.19e5	4.52e5	40.75	1.000	1.06	NO	49.997	0.206	1.005	-0.0	3.07e6	4410	695.0	2.91e6	3481	835.2	bd
7	OCDD	3.32e5	3.70e5	7.03e5	45.17	1.000	0.90	NO	102.595	0.311	1.022	2.6	3.15e6	3788	830.4	3.65e6	2823	1292.2	bd
8	2378-TCDF	1.18e5	1.53e5	2.71e5	31.22	1.001	0.77	NO	9.451	0.0220	0.929	-5.5	1.95e6	1384	1407.0	2.52e6	2024	1246.9	bb
9	12378-PeCDF	6.66e5	4.34e5	1.10e6	33.72	1.000	1.54	NO	49.043	0.0873	0.916	-1.9	1.48e7	5006	2966.1	9.51e6	8784	1083.1	bd
10	23478-PeCDF	6.96e5	4.52e5	1.15e6	34.34	1.019	1.54	NO	52.300	0.0892	0.956	4.6	1.55e7	5006	3099.4	1.02e7	8784	1164.1	bb
11	123478-HxCDF	4.79e5	3.87e5	8.65e5	36.49	0.998	1.24	NO	52.880	0.139	0.961	5.8	9.57e6	6516	1468.2	7.72e6	7538	1024.1	bd
12	123678-HxCDF	5.55e5	4.38e5	9.93e5	36.59	1.000	1.27	NO	52.170	0.120	1.103	4.3	1.02e7	6516	1568.4	8.26e6	7538	1095.2	dd
13	234678-HxCDF	4.89e5	3.98e5	8.87e5	37.10	1.014	1.23	NO	51.574	0.132	0.986	3.1	8.96e6	6516	1374.5	7.25e6	7538	961.1	bb
14	123789-HxCDF	4.25e5	3.30e5	7.56e5	37.91	1.036	1.29	NO	53.033	0.160	0.840	6.1	6.59e6	6516	1010.9	5.22e6	7538	692.0	bb
15	1234678-HpCDF	3.72e5	3.68e5	7.40e5	39.44	1.000	1.01	NO	50.822	0.123	1.298	1.6	5.51e6	4451	1238.8	5.63e6	4860	1157.7	bb
16	1234789-HpCDF	2.83e5	2.72e5	5.55e5	41.45	1.051	1.04	NO	52.287	0.168	0.973	4.6	3.60e6	4451	808.5	3.50e6	4860	719.6	bd
17	OCDF	4.00e5	4.47e5	8.47e5	45.50	1.008	0.89	NO	99.861	0.178	1.231	-0.1	3.82e6	2086	1830.6	4.25e6	2606	1630.8	bd
18	13C-2378-TCDD	7.61e5	9.76e5	1.74e6	31.73	1.013	0.78	NO	92.823	0.0399	1.039	-7.2	1.57e7	2604	6021.3	2.04e7	1841	11078.4	bb
19	13C-12378-PeCDD	8.53e5	5.40e5	1.39e6	34.54	1.102	1.58	NO	87.765	0.0506	0.834	-12.2	1.84e7	2796	6581.0	1.15e7	1993	5755.2	bb
20	13C-123678-HxCDD	7.30e5	5.74e5	1.30e6	37.31	0.994	1.27	NO	99.186	0.145	1.103	-0.8	1.27e7	3813	3340.1	1.02e7	6837	1485.6	db
21	13C-1234678-HpCDD	4.60e5	4.39e5	8.99e5	40.73	1.085	1.05	NO	94.984	0.115	0.760	-5.0	5.86e6	2948	1988.0	5.46e6	3169	1721.6	bd
22	13C-OCDD	6.58e5	7.18e5	1.38e6	45.15	1.202	0.92	NO	174.206	0.199	0.582	-12.9	6.12e6	4315	1418.8	6.94e6	4474	1552.1	bd
23	13C-2378-TCDF	1.29e6	1.62e6	2.91e6	31.19	0.995	0.80	NO	95.762	0.0225	1.744	-4.2	2.10e7	1234	17019.4	2.69e7	2847	9439.6	bb
24	13C-12378-PeCDF	1.47e6	9.31e5	2.40e6	33.71	1.076	1.58	NO	84.852	0.0982	1.436	-15.1	3.11e7	10510	2954.9	2.00e7	6038	3318.1	bd
25	13C-123678-HxCDF	6.12e5	1.19e6	1.80e6	36.58	0.974	0.52	NO	93.429	0.144	1.523	-6.6	1.13e7	7290	1554.3	2.20e7	8296	2652.7	db
26	13C-1234678-HpCDF	3.54e5	7.87e5	1.14e6	39.43	1.050	0.45	NO	89.286	0.114	0.965	-10.7	5.54e6	3598	1539.1	1.23e7	4581	2676.1	bb
27	13C-1234-TCDD	7.41e5	9.30e5	1.67e6	31.34	0.000	0.80	NO	100.000	0.0446	1.000	0.0	1.32e7	2604	5085.3	1.65e7	1841	8957.5	bb
28	13C-123789-HxCDD	6.63e5	5.19e5	1.18e6	37.55	0.000	1.28	NO	100.000	0.161	1.000	0.0	1.11e7	3813	2919.4	8.88e6	6837	1298.7	bb
29	37Cl-2378-TCDD (SS)	1.96e5		1.96e5	31.75	1.000			10.721	0.0101	1.130	7.2	4.18e6	1267	3300.6				bb
30	13C-23478-PeCDF (SS)	1.47e6	9.38e5	2.41e6	34.34	1.019	1.56	NO	107.447	0.105	1.003	7.4	3.24e7	10510	3081.3	2.08e7	6038	3445.8	bb

Quantify Sample Summary Report

MassLynx 4.1

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_5-14.qld

Last Altered: Friday, November 05, 2010 14:04:54 Eastern Standard Time

Printed: Friday, November 05, 2010 14:15:00 Eastern Standard Time

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Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5, Task: HRP763_1, User: MJC

Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
13C-123478-HxCDF (SS)	5.33e5	1.03e6	1.56e6	36.48	0.997	0.52	NO	107.071	0.173	0.867	7.1	1.06e7	7290	1459.7	2.02e7	8296	2431.4	bd
13C-123478-HxCDD (SS)	6.55e5	5.09e5	1.16e6	37.22	0.998	1.29	NO	103.787	0.163	0.894	3.8	1.23e7	3813	3231.7	9.52e6	6837	1392.4	bd
13C-1234789-HpCDF (SS)	2.69e5	5.87e5	8.56e5	41.44	1.051	0.46	NO	99.293	0.182	0.751	-0.7	3.37e6	3598	936.1	7.24e6	4581	1580.3	bb

Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_5-14.qld

Last Altered: Friday, November 05, 2010 14:04:54 Eastern Standard Time

Printed: Friday, November 05, 2010 14:15:00 Eastern Standard Time

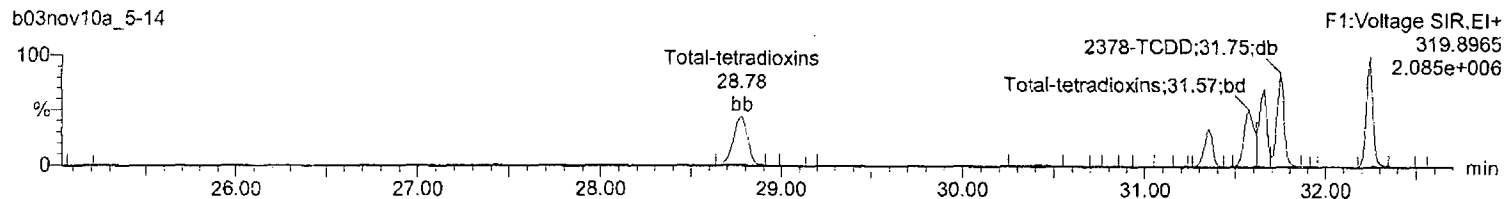
Method: C:\MassLynx\Default.pro\Methdb\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\Default.pro\Curvedb\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5,
Task: HRP763_1, User: MJC

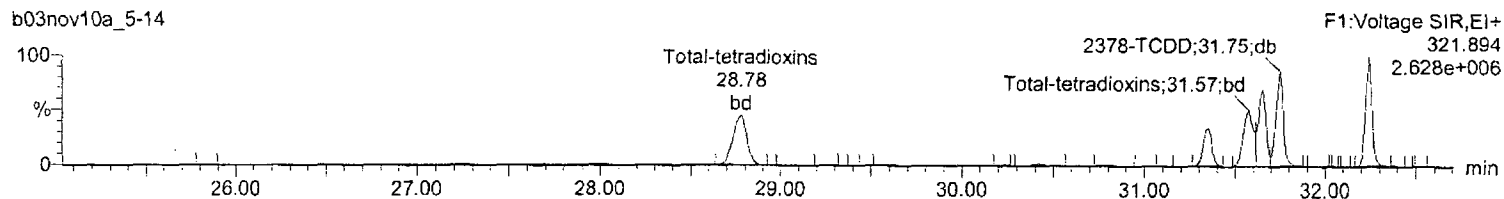
Total-tetradoxins

b03nov10a_5-14



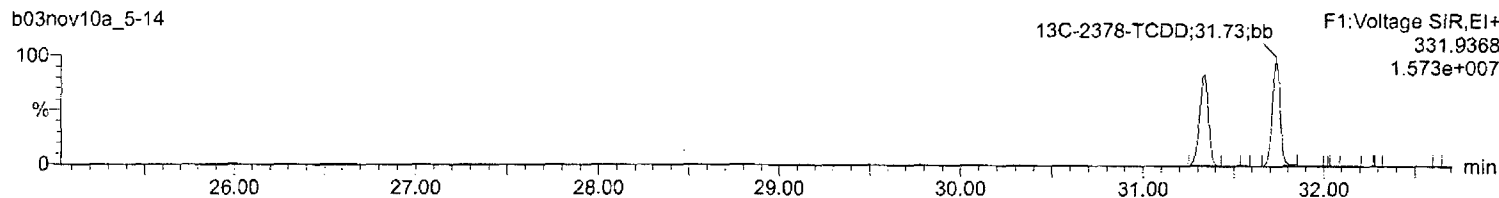
Total-tetradoxins

b03nov10a_5-14



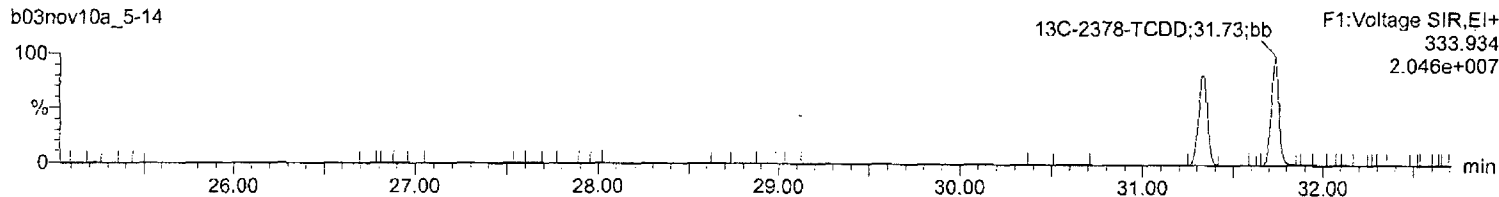
13C-2378-TCDD

b03nov10a_5-14



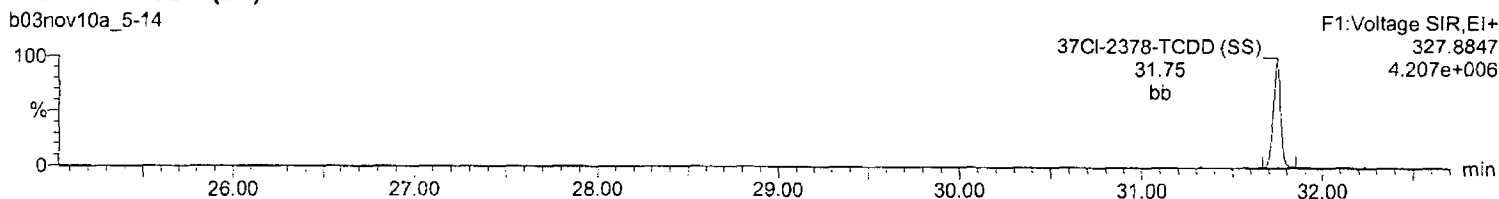
13C-2378-TCDD

b03nov10a_5-14



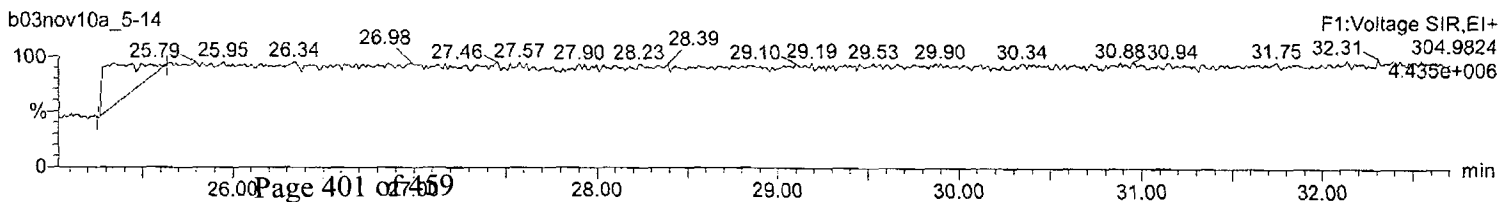
37Cl-2378-TCDD (SS)

b03nov10a_5-14



Lock Mass F1

b03nov10a_5-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_5-14.qld

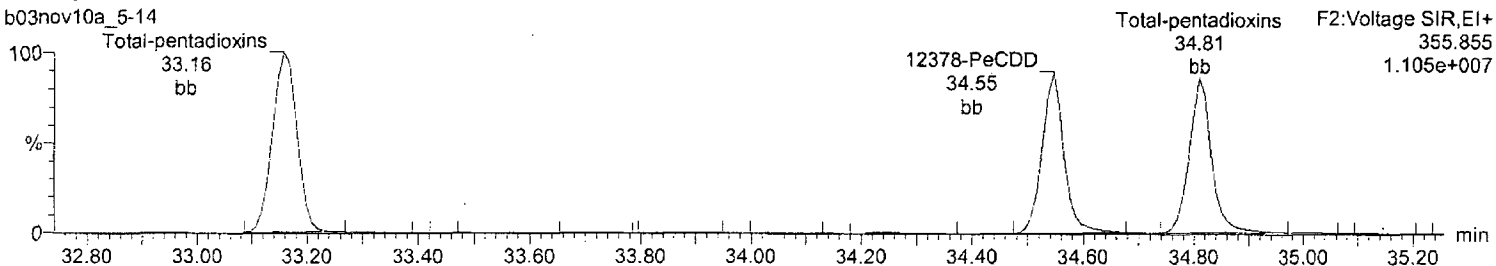
Last Altered: Friday, November 05, 2010 14:04:54 Eastern Standard Time

Printed: Friday, November 05, 2010 14:15:00 Eastern Standard Time

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5,
Task: HRP763_1, User: MJC

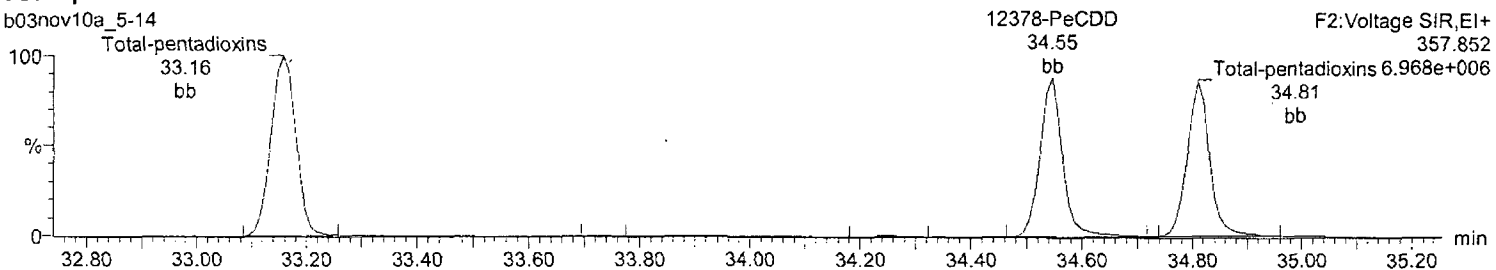
Total-pentadioxins

b03nov10a_5-14



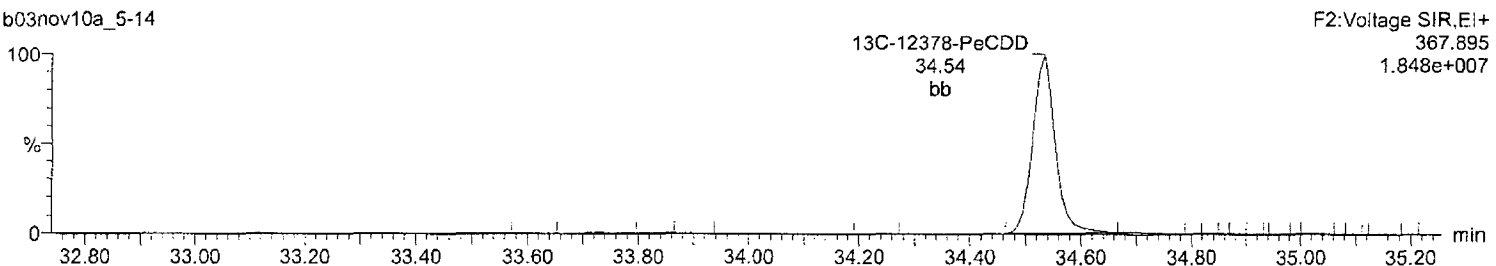
Total-pentadioxins

b03nov10a_5-14



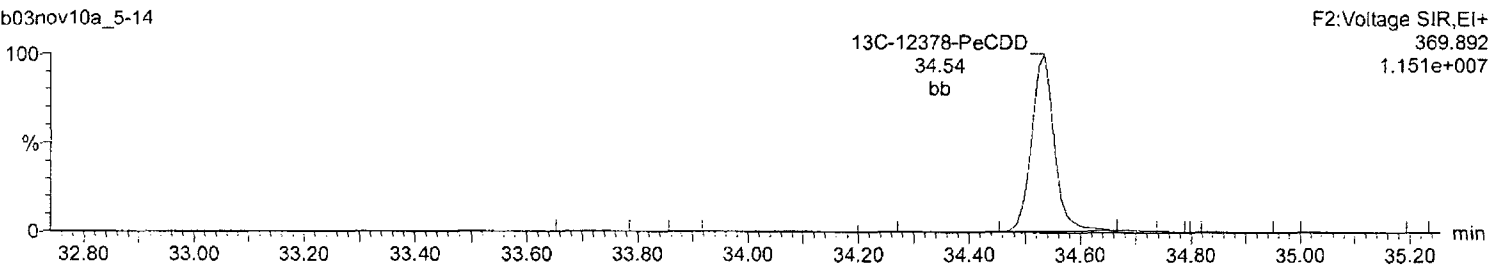
13C-12378-PeCDD

b03nov10a_5-14



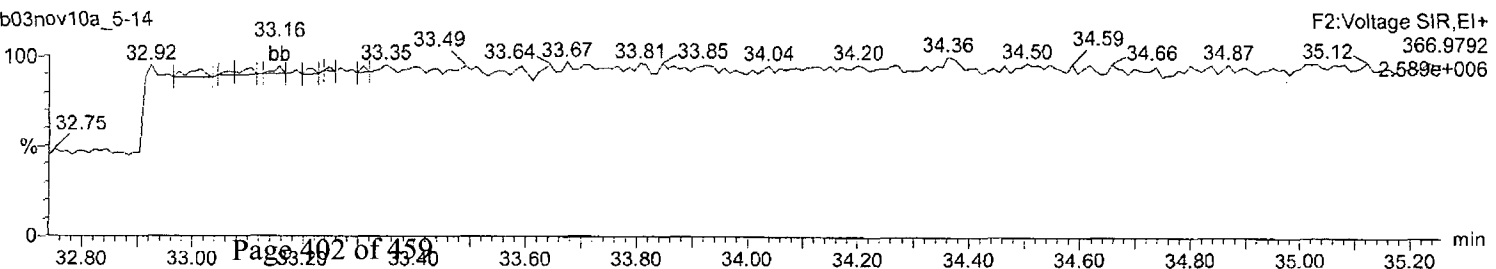
13C-12378-PeCDD

b03nov10a_5-14



Lock Mass F2

b03nov10a_5-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_5-14.qld

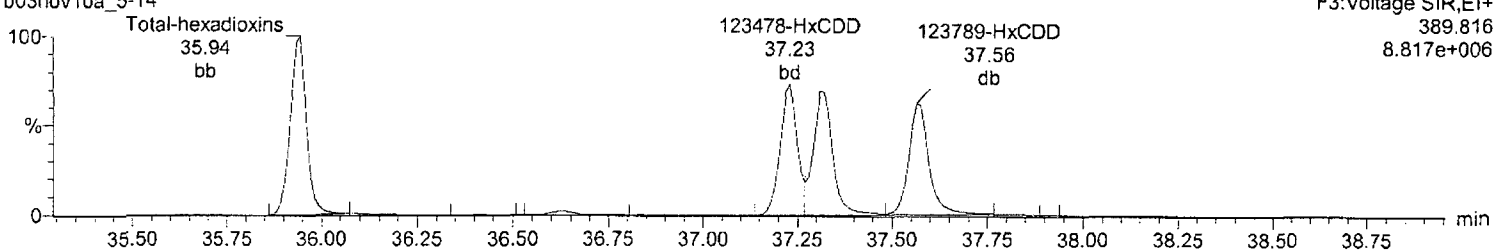
Last Altered: Friday, November 05, 2010 14:04:54 Eastern Standard Time

Printed: Friday, November 05, 2010 14:15:00 Eastern Standard Time

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5, Task: HRP763_1, User: MJC

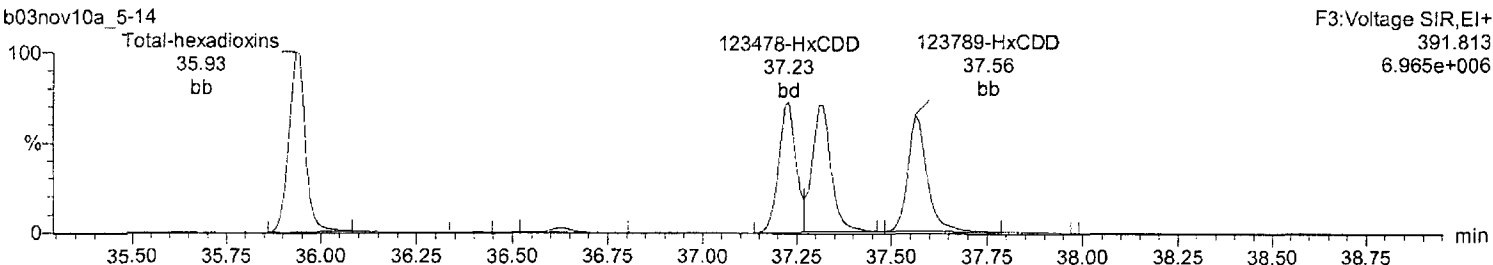
Total-hexadioxins

b03nov10a_5-14



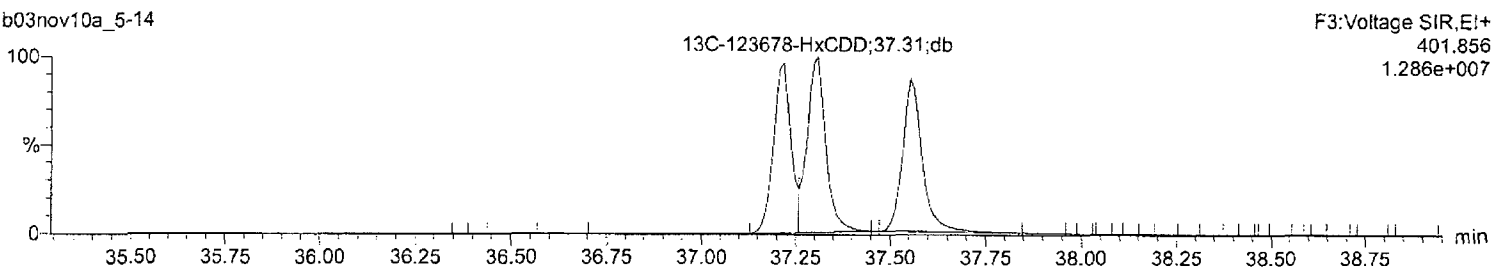
Total-hexadioxins

b03nov10a_5-14



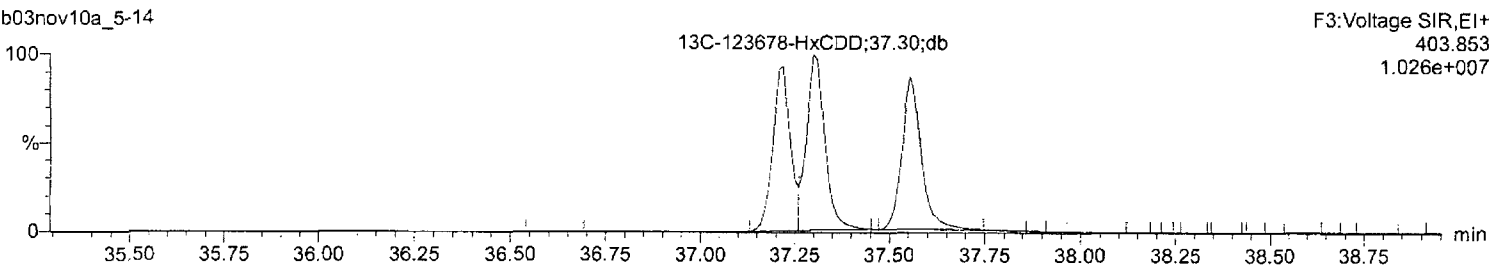
13C-123678-HxCDD

b03nov10a_5-14



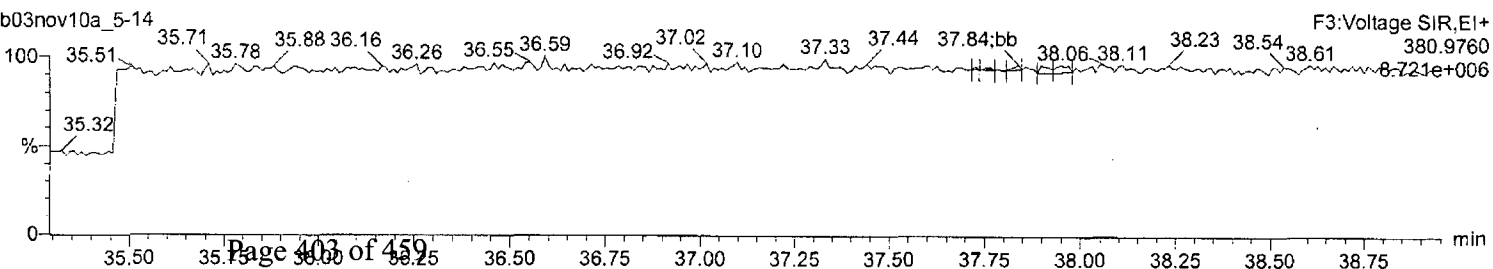
13C-123678-HxCDD

b03nov10a_5-14



Lock Mass F3

b03nov10a_5-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_5-14.qld

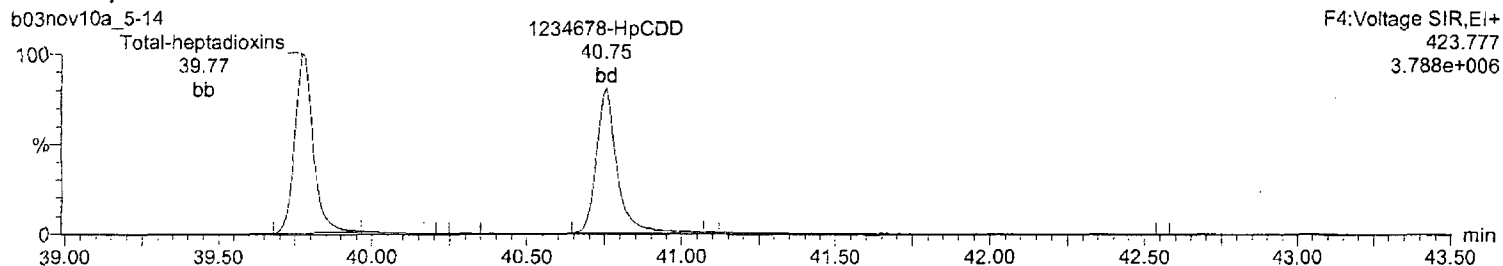
Last Altered: Friday, November 05, 2010 14:04:54 Eastern Standard Time

Printed: Friday, November 05, 2010 14:15:00 Eastern Standard Time

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5,
Task: HRP763_1, User: MJC

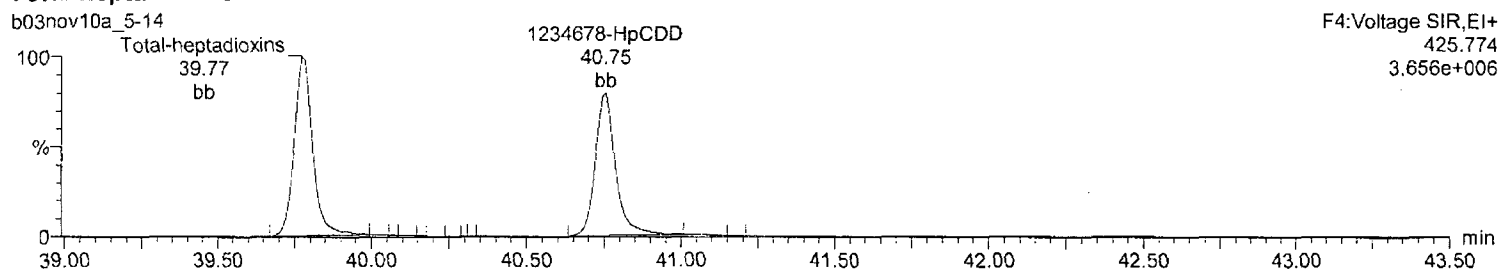
Total-heptadioxins

b03nov10a_5-14



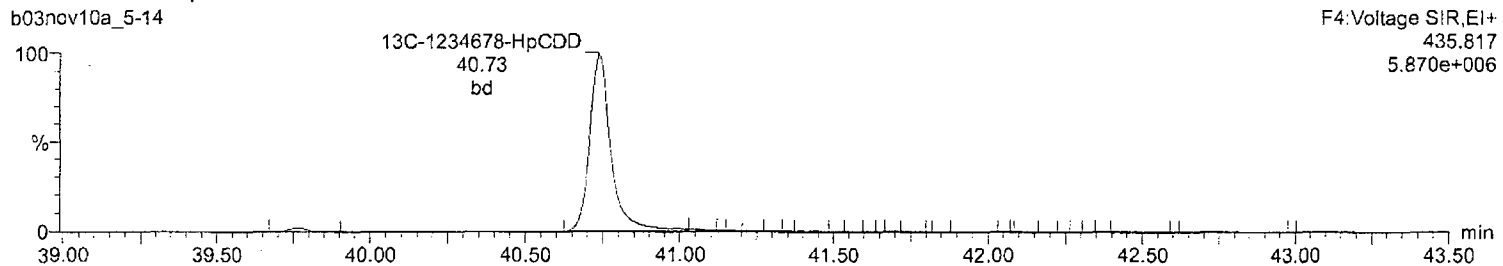
Total-heptadioxins

b03nov10a_5-14



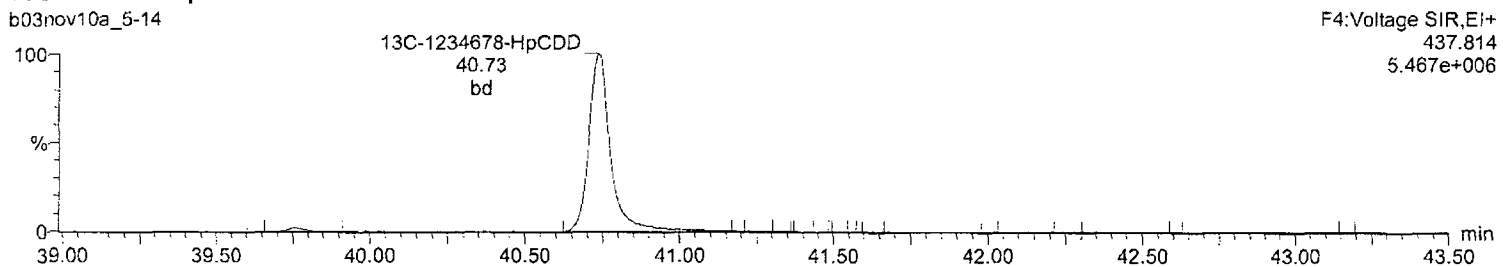
13C-1234678-HpCDD

b03nov10a_5-14



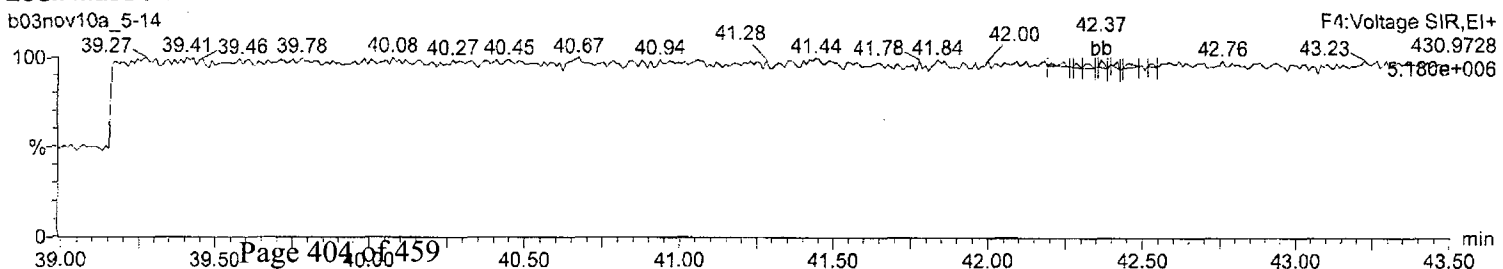
13C-1234678-HpCDD

b03nov10a_5-14



Lock Mass F4

b03nov10a_5-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_5-14.qld

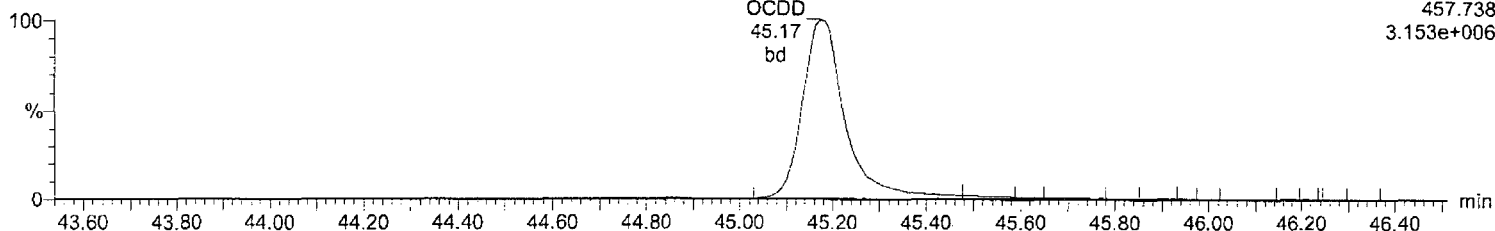
Last Altered: Friday, November 05, 2010 14:04:54 Eastern Standard Time

Printed: Friday, November 05, 2010 14:15:00 Eastern Standard Time

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5,
Task: HRP763_1, User: MJC

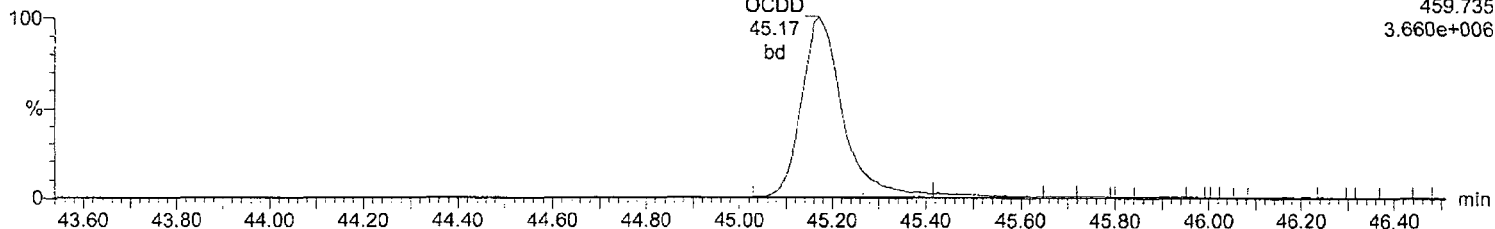
OCDD

b03nov10a_5-14



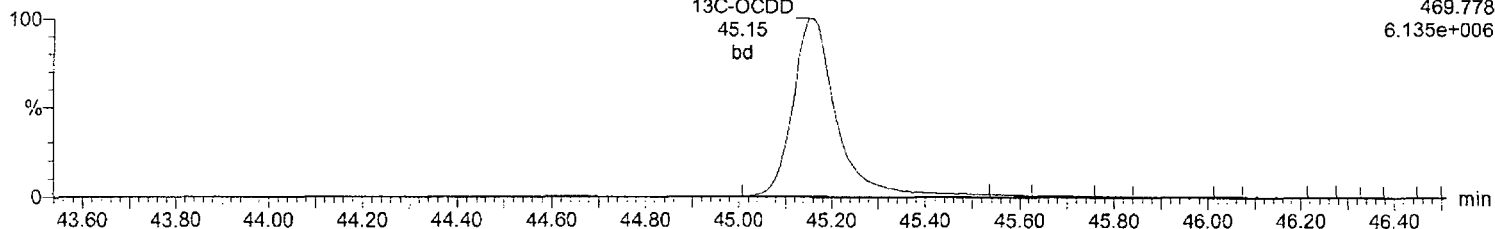
OCDD

b03nov10a_5-14



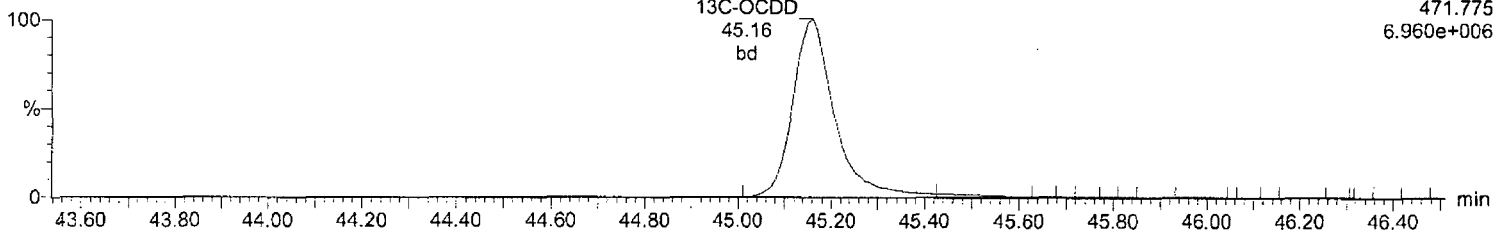
¹³C-OCDD

b03nov10a_5-14



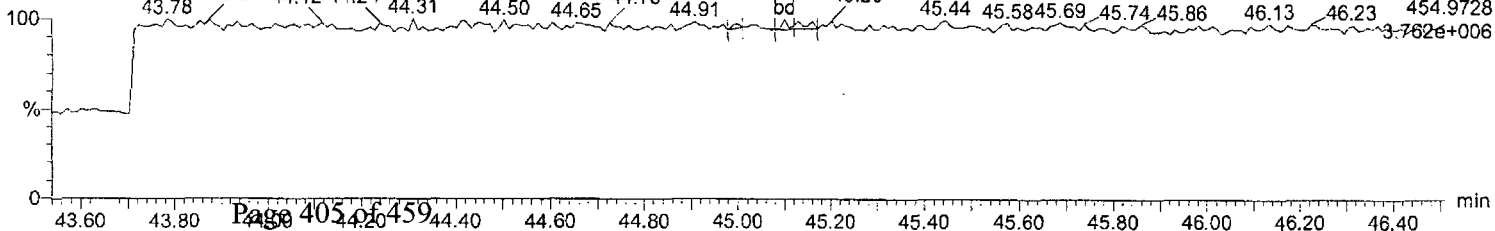
¹³C-OCDD

b03nov10a_5-14



Lock Mass F5

b03nov10a_5-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_5-14.qld

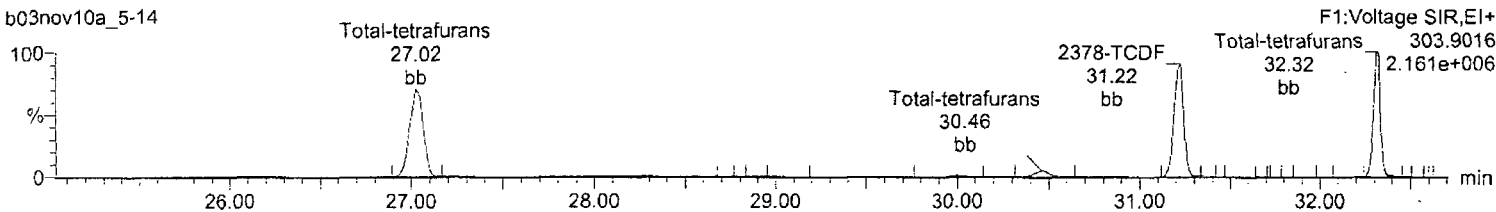
Last Altered: Friday, November 05, 2010 14:04:54 Eastern Standard Time

Printed: Friday, November 05, 2010 14:15:00 Eastern Standard Time

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5,
Task: HRP763_1, User: MJC

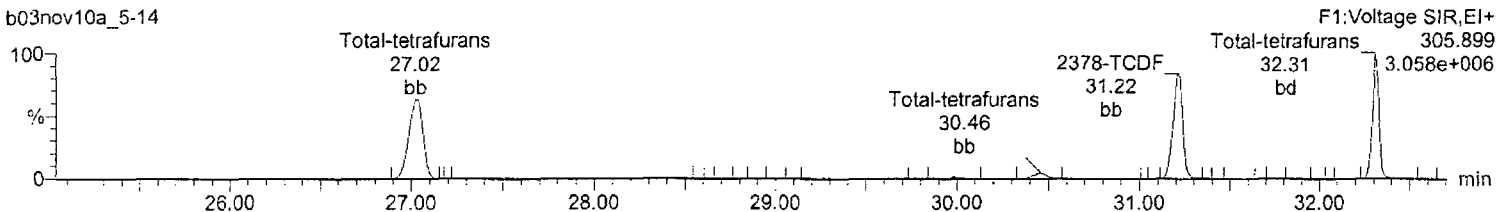
Total-tetrafurans

b03nov10a_5-14



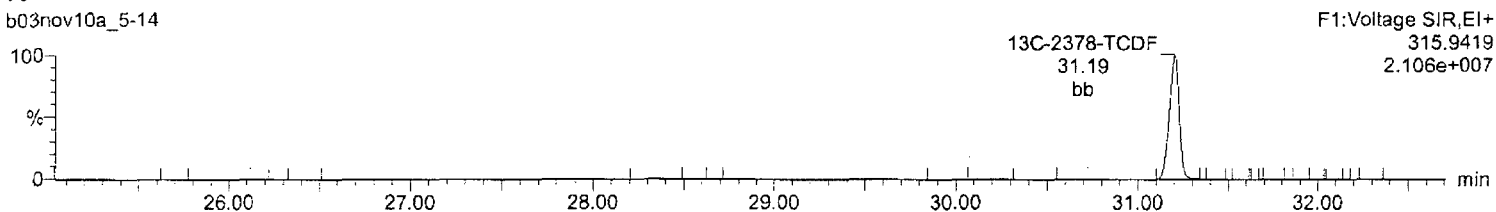
Total-tetrafurans

b03nov10a_5-14



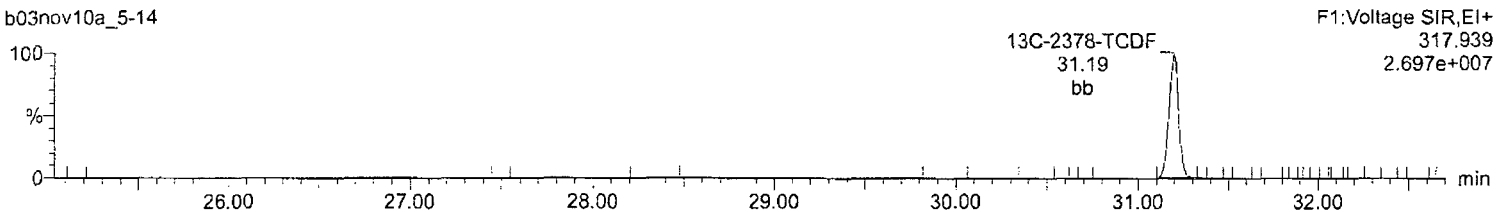
13C-2378-TCDF

b03nov10a_5-14



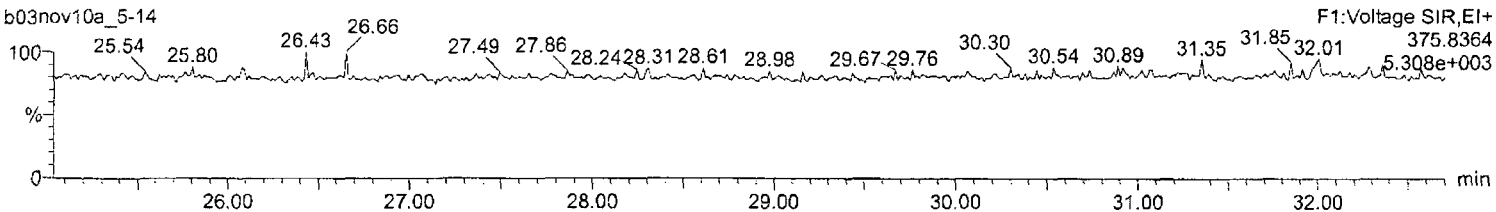
13C-2378-TCDF

b03nov10a_5-14



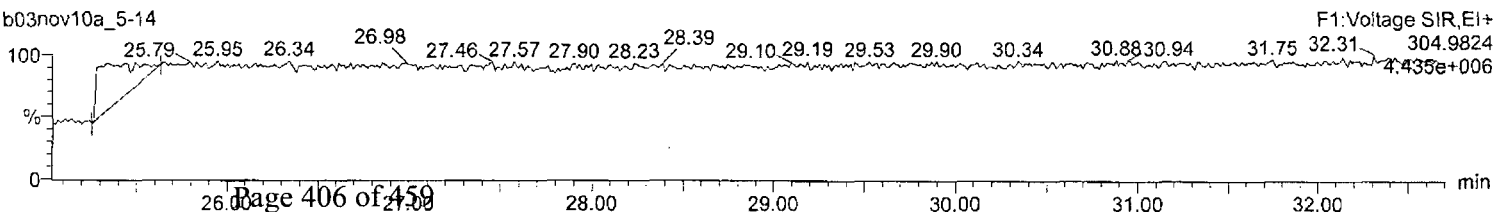
HxDPE

b03nov10a_5-14



Lock Mass F1

b03nov10a_5-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_5-14.qld

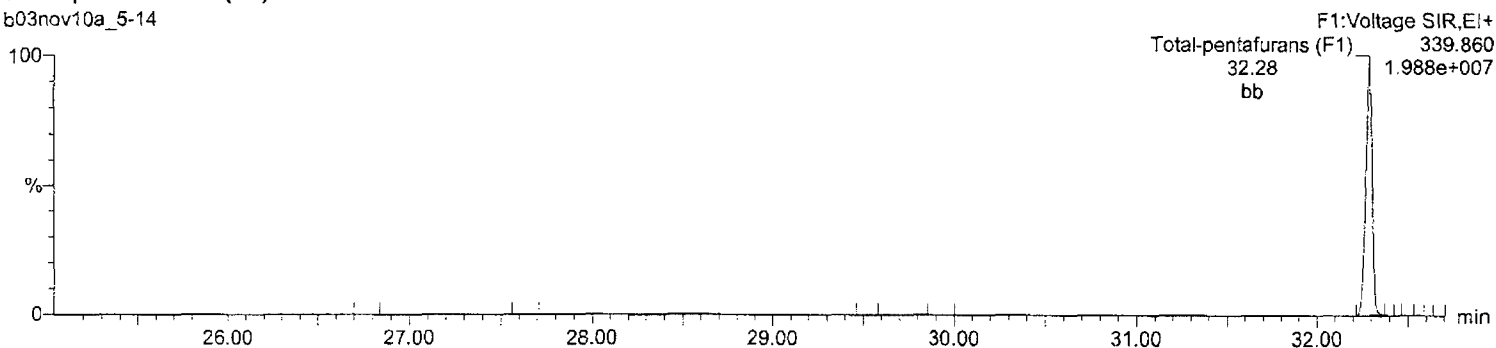
Last Altered: Friday, November 05, 2010 14:04:54 Eastern Standard Time

Printed: Friday, November 05, 2010 14:15:00 Eastern Standard Time

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5, Task: HRP763_1, User: MJC

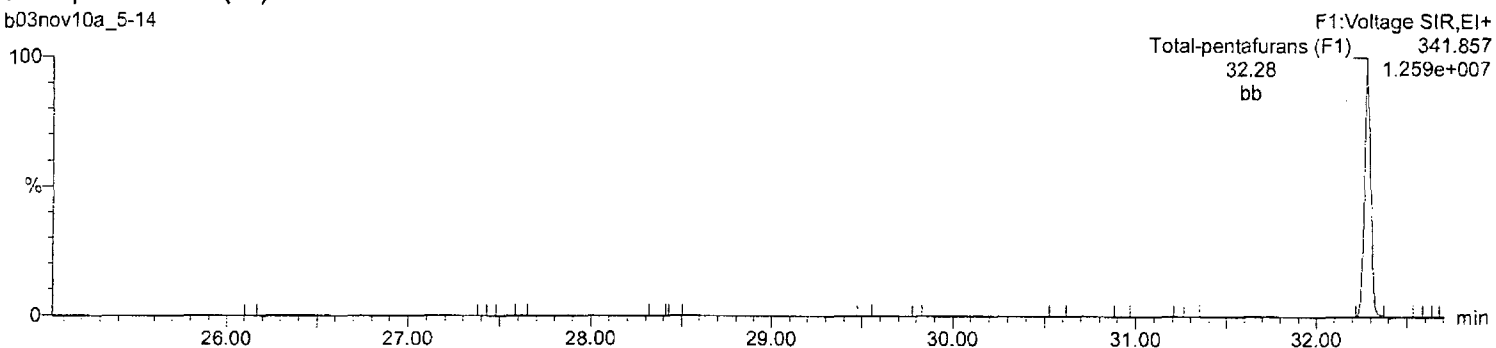
Total-pentafulurans (F1)

b03nov10a_5-14



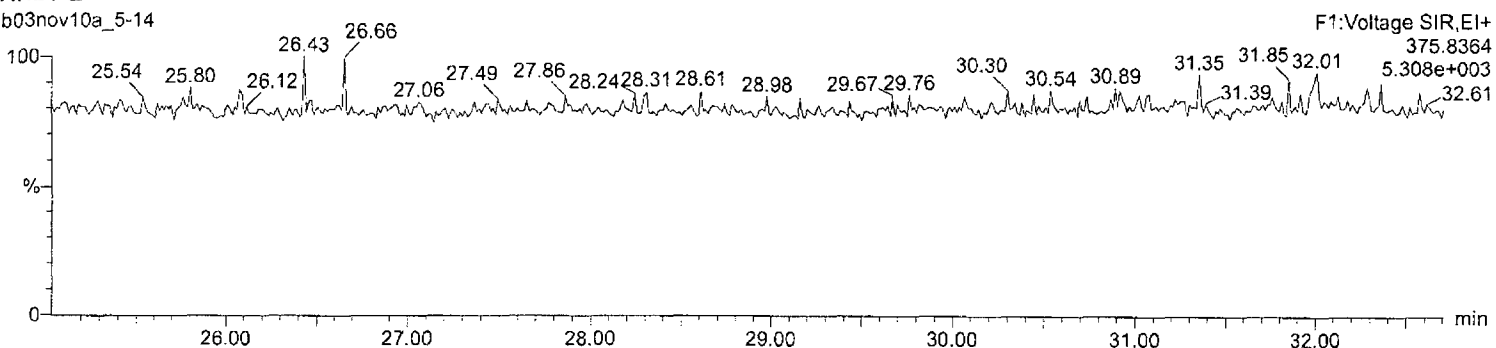
Total-pentafulurans (F1)

b03nov10a_5-14



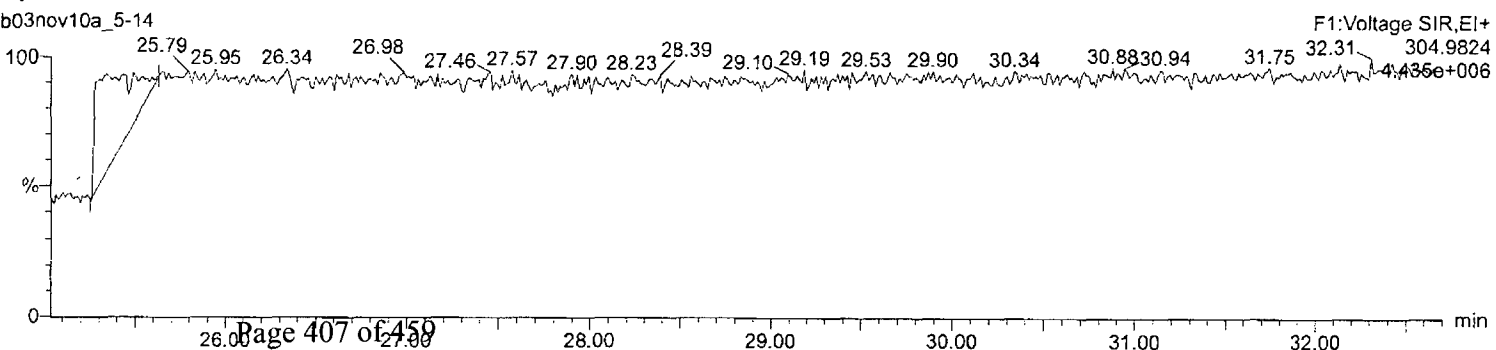
HxDPE

b03nov10a_5-14



Lock Mass F1

b03nov10a_5-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_5-14.qld

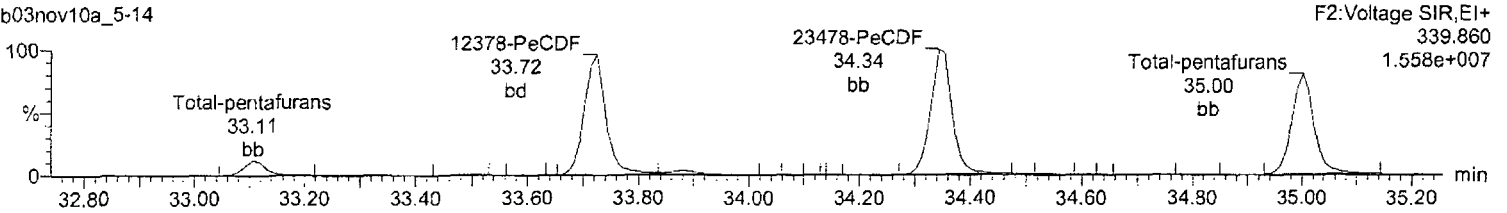
Last Altered: Friday, November 05, 2010 14:04:54 Eastern Standard Time

Printed: Friday, November 05, 2010 14:15:00 Eastern Standard Time

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5,
Task: HRP763_1, User: MJC

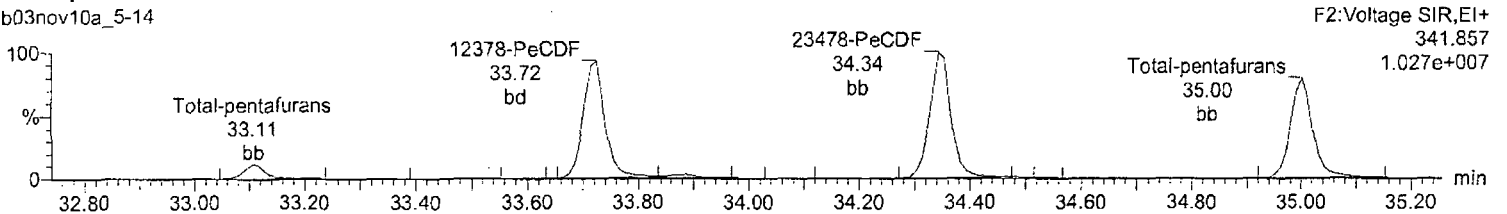
Total-pentafurans

b03nov10a_5-14



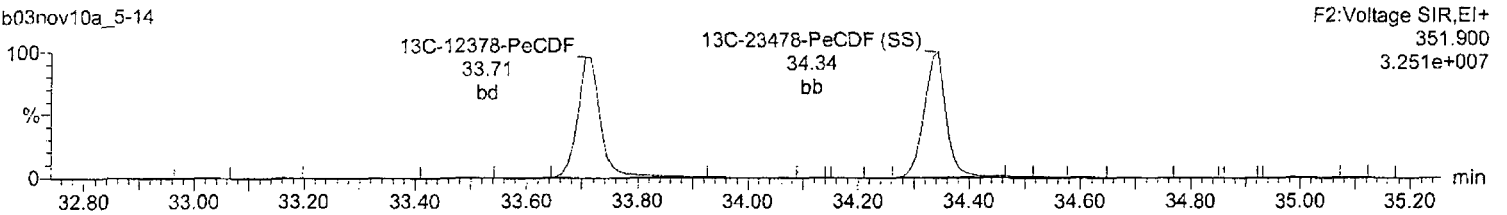
Total-pentafurans

b03nov10a_5-14



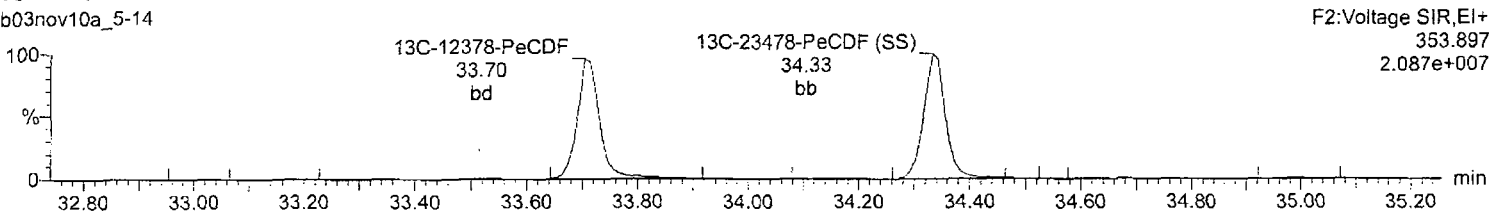
¹³C-12378-PeCDF

b03nov10a_5-14



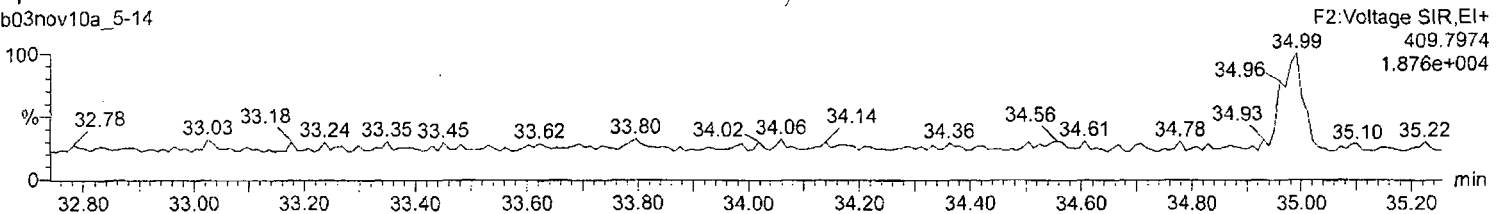
¹³C-12378-PeCDF

b03nov10a_5-14



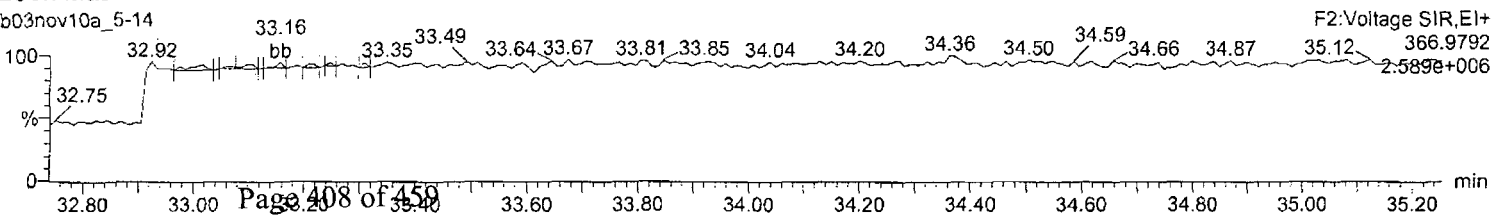
HpDPE

b03nov10a_5-14



Lock Mass F2

b03nov10a_5-14



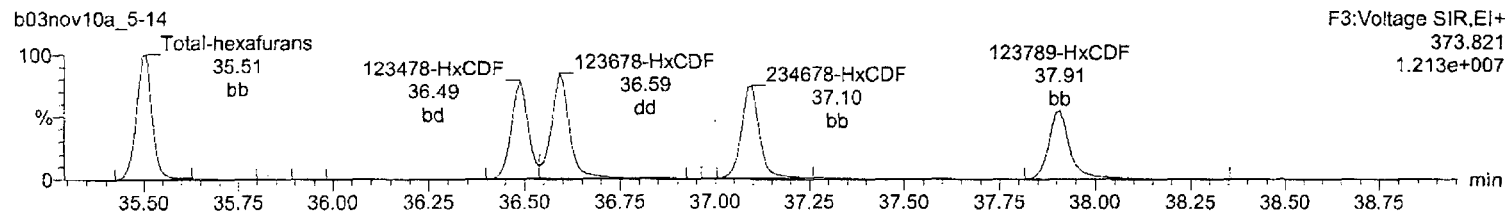
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_5-14.qld

Last Altered: Friday, November 05, 2010 14:04:54 Eastern Standard Time

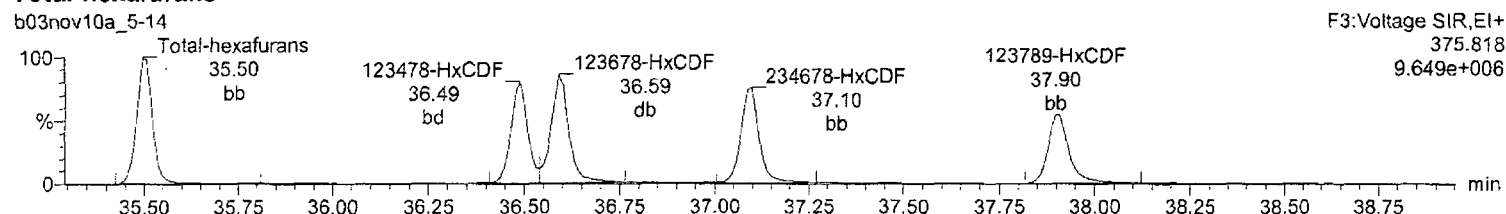
Printed: Friday, November 05, 2010 14:15:00 Eastern Standard Time

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5,
Task: HRP763_1, User: MJC

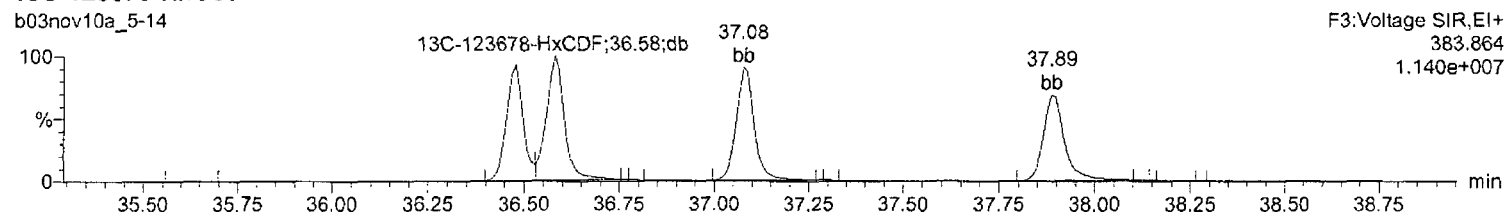
Total-hexafurans



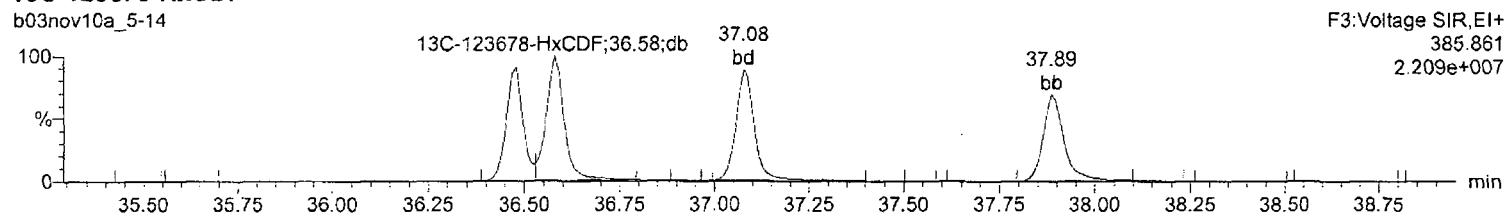
Total-hexafurans



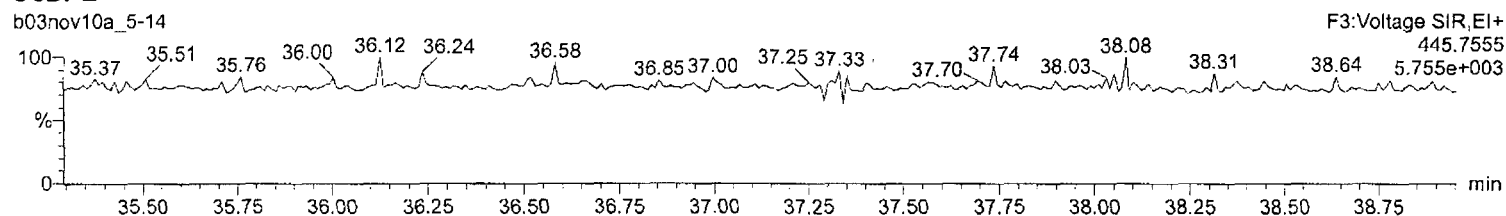
13C-123678-HxCDF



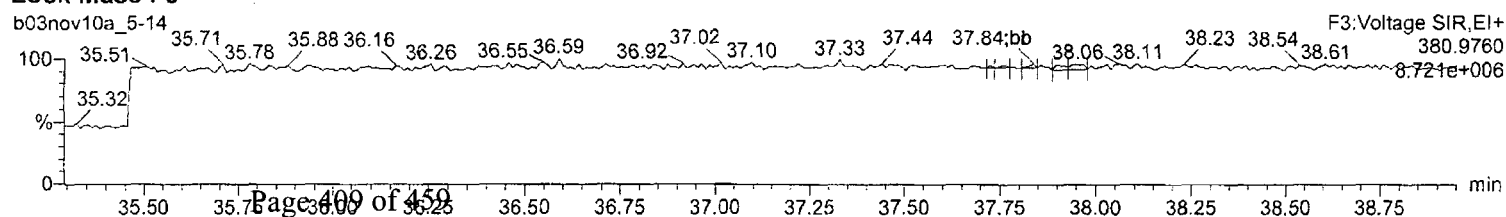
13C-123678-HxCDF



OcDPE



Lock Mass F3



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_5-14.qld

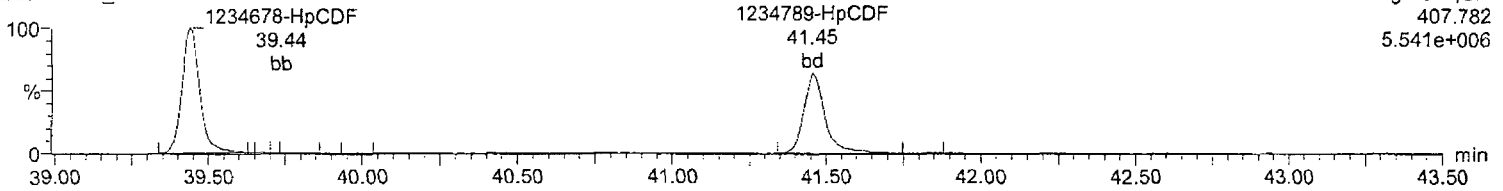
Last Altered: Friday, November 05, 2010 14:04:54 Eastern Standard Time

Printed: Friday, November 05, 2010 14:15:00 Eastern Standard Time

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5,
Task: HRP763_1, User: MJC

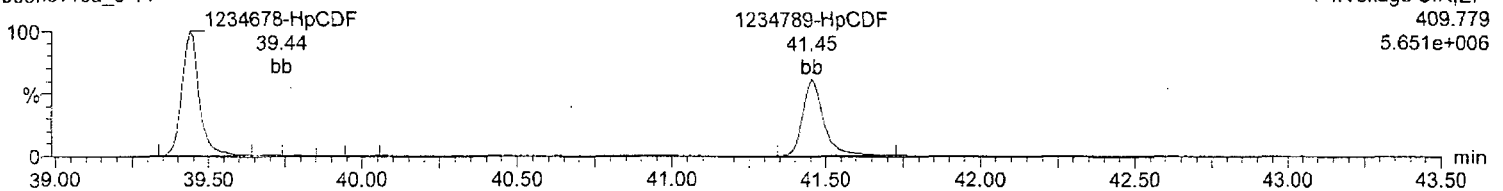
Total-heptafurans

b03nov10a_5-14



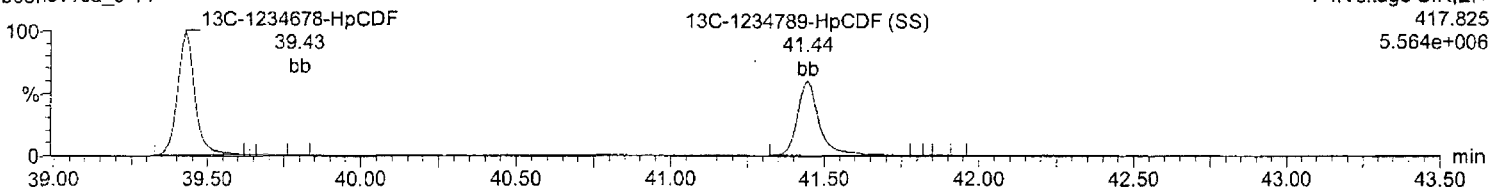
Total-heptafurans

b03nov10a_5-14



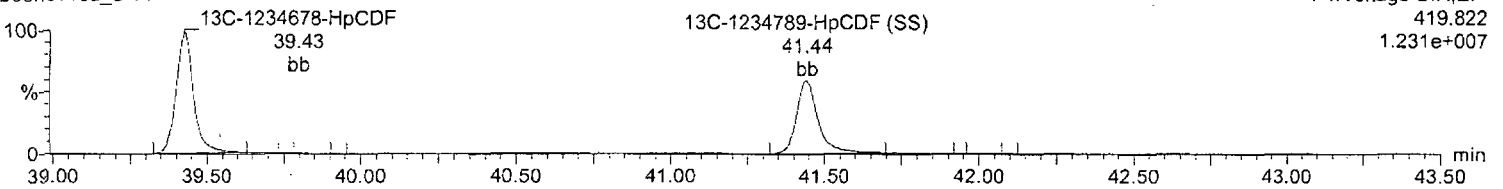
13C-1234678-HpCDF

b03nov10a_5-14



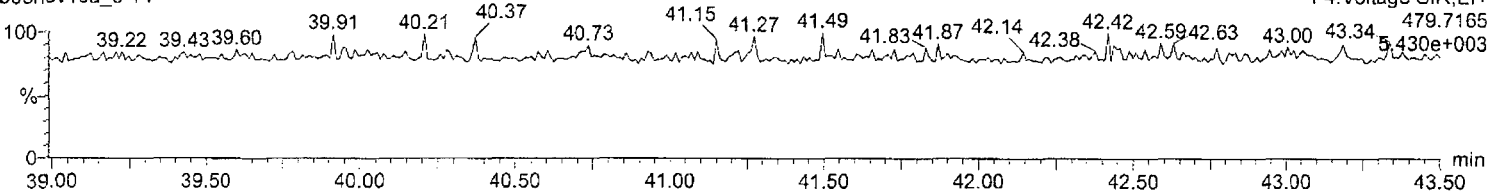
13C-1234678-HpCDF

b03nov10a_5-14



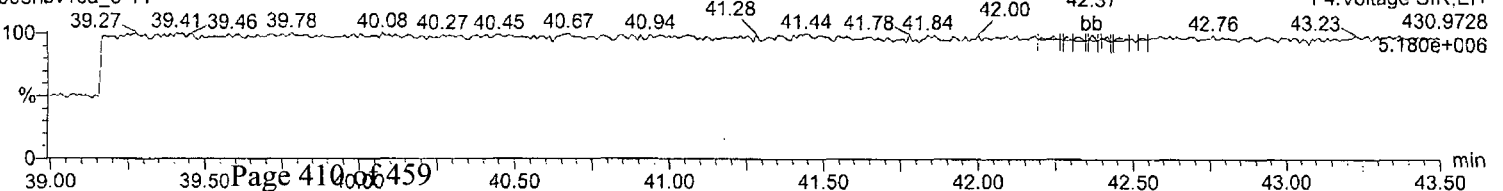
NoDPE

b03nov10a_5-14



Lock Mass F4

b03nov10a_5-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_5-14.qld

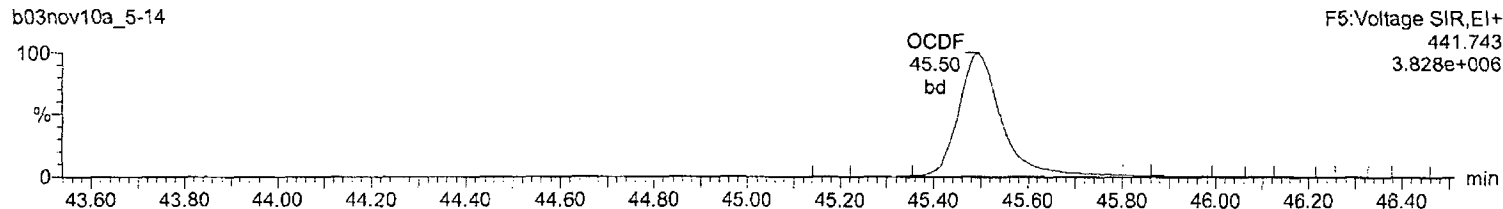
Last Altered: Friday, November 05, 2010 14:04:54 Eastern Standard Time

Printed: Friday, November 05, 2010 14:15:00 Eastern Standard Time

Name: b03nov10a_5-14, Date: 05-Nov-2010, Time: 12:42:33, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_5,
Task: HRP763_1, User: MJC

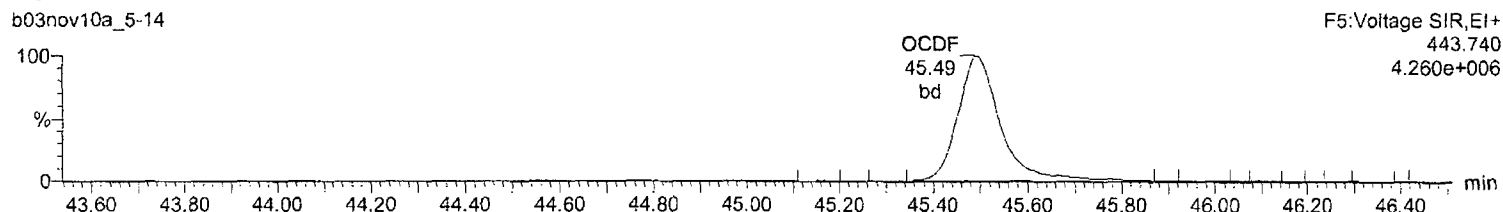
OCDF

b03nov10a_5-14



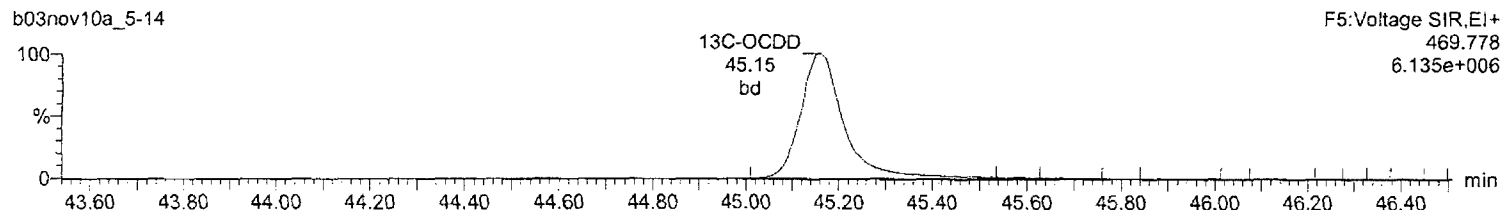
OCDF

b03nov10a_5-14



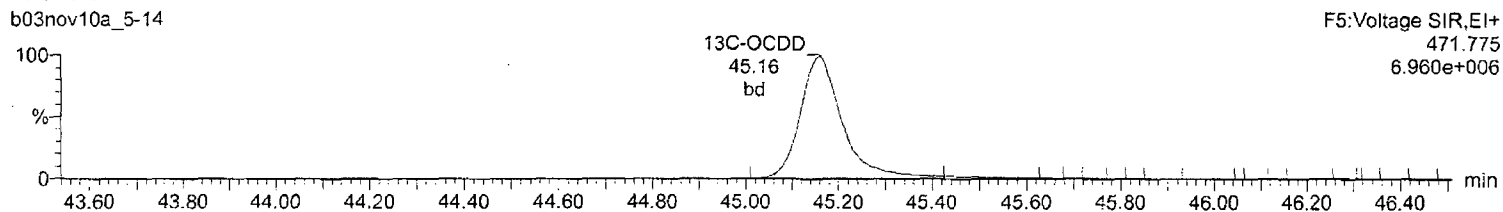
13C-OCDD

b03nov10a_5-14



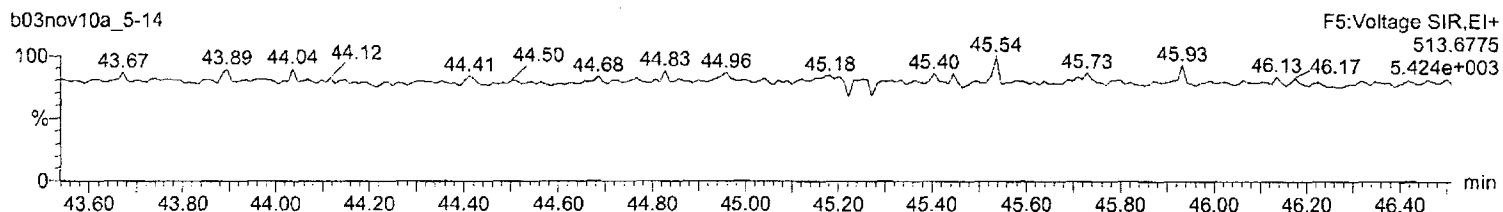
13C-OCDD

b03nov10a_5-14



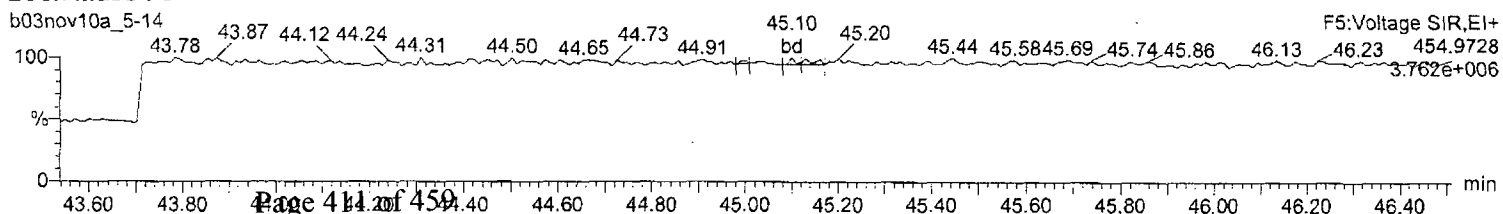
DeDPE

b03nov10a_5-14



Lock Mass F5

b03nov10a_5-14



Quantify Compound Summary Report **MassLynx 4.1**
Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b03nov10a_6_avg.qld

Last Altered: Monday, November 08, 2010 09:48:44 Eastern Standard Time
Printed: Monday, November 08, 2010 09:52:32 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15
Calibration: 08 Nov 2010 09:48:44

Compound name: 2378-TCDD

Response Factor: 1.08382
RRF SD: 0.0263254, Relative SD: 2.42893
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	10.000	31.75	10.17	1.102	1.084	db
2	b03nov10a_6-14	CS3WT UD100713-01.2	10.000	31.75	9.83	1.065	1.084	db

Compound name: 12378-PeCDD

Response Factor: 1.05008
RRF SD: 0.00410149, Relative SD: 0.390587
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	50.000	34.55	49.86	1.047	1.050	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	50.000	34.55	50.14	1.053	1.050	bb

Compound name: 123478-HxCDD

Response Factor: 0.95035
RRF SD: 0.0420637, Relative SD: 4.42612
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	50.000	37.23	48.44	0.921	0.950	bd
2	b03nov10a_6-14	CS3WT UD100713-01.2	50.000	37.23	51.56	0.980	0.950	bd

Compound name: 123678-HxCDD

Response Factor: 0.98669
RRF SD: 0.00898531, Relative SD: 0.910652
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	50.000	37.31	50.32	0.993	0.987	dd
2	b03nov10a_6-14	CS3WT UD100713-01.2	50.000	37.32	49.68	0.980	0.987	db

Compound name: 123789-HxCDD

Response Factor: 0.956777
RRF SD: 0.0621148, Relative SD: 6.49208
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
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Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b03nov10a_6_avg.qld

Last Altered: Monday, November 08, 2010 09:48:44 Eastern Standard Time

Printed: Monday, November 08, 2010 09:52:32 Eastern Standard Time

Compound name: 123789-HxCDD

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	50.000	37.56	47.70	0.913	0.957	db
2	b03nov10a_6-14	CS3WT UD100713-01.2	50.000	37.57	52.30	1.001	0.957	bb

Compound name: 1234678-HpCDD

Response Factor: 1.01413

RRF SD: 0.0132362, Relative SD: 1.30518

Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	50.000	40.75	49.54	1.005	1.014	bd
2	b03nov10a_6-14	CS3WT UD100713-01.2	50.000	40.75	50.46	1.023	1.014	bb

Compound name: OCDD

Response Factor: 1.02609

RRF SD: 0.0063688, Relative SD: 0.620687

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	45.17	99.56	1.022	1.026	bd
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	45.18	100.44	1.031	1.026	bb

Compound name: 2378-TCDF

Response Factor: 0.936316

RRF SD: 0.00981201, Relative SD: 1.04794

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	10.000	31.22	9.93	0.929	0.936	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	10.000	31.22	10.07	0.943	0.936	bb

Compound name: 12378-PeCDF

Response Factor: 0.923743

RRF SD: 0.0104788, Relative SD: 1.13439

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	50.000	33.72	49.60	0.916	0.924	bd
2	b03nov10a_6-14	CS3WT UD100713-01.2	50.000	33.72	50.40	0.931	0.924	bb

Compound name: 23478-PeCDF

Response Factor: 0.960566

RRF SD: 0.00590675, Relative SD: 0.614924

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b03nov10a_6_avg.qld

Last Altered: Monday, November 08, 2010 09:48:44 Eastern Standard Time

Printed: Monday, November 08, 2010 09:52:32 Eastern Standard Time

Compound name: 23478-PeCDF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	50.000	34.34	49.78	0.956	0.961	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	50.000	34.35	50.22	0.965	0.961	bb

Compound name: 123478-HxCDF

Response Factor: 0.998462

RRF SD: 0.0528633, Relative SD: 5.29448

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	50.000	36.49	48.13	0.961	0.998	bd
2	b03nov10a_6-14	CS3WT UD100713-01.2	50.000	36.49	51.87	1.036	0.998	bd

Compound name: 123678-HxCDF

Response Factor: 1.0868

RRF SD: 0.0235282, Relative SD: 2.16489

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	50.000	36.59	50.77	1.103	1.087	dd
2	b03nov10a_6-14	CS3WT UD100713-01.2	50.000	36.59	49.23	1.070	1.087	db

Compound name: 234678-HxCDF

Response Factor: 1.03003

RRF SD: 0.0626175, Relative SD: 6.07919

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	50.000	37.10	47.85	0.986	1.030	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	50.000	37.10	52.15	1.074	1.030	bb

Compound name: 123789-HxCDF

Response Factor: 0.90796

RRF SD: 0.0966151, Relative SD: 10.6409

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	50.000	37.91	46.24	0.840	0.908	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	50.000	37.91	53.76	0.976	0.908	bb

Compound name: 1234678-HpCDF

Response Factor: 1.2946

RRF SD: 0.00441222, Relative SD: 0.340816

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b03nov10a_6_avg.qld

Last Altered: Monday, November 08, 2010 09:48:44 Eastern Standard Time

Printed: Monday, November 08, 2010 09:52:32 Eastern Standard Time

Compound name: 1234678-HpCDF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	50.000	39.44	50.12	1.298	1.295	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	50.000	39.45	49.88	1.291	1.295	bb

Compound name: 1234789-HpCDF

Response Factor: 1.01841

RRF SD: 0.06458, Relative SD: 6.34125

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	50.000	41.45	47.76	0.973	1.018	bd
2	b03nov10a_6-14	CS3WT UD100713-01.2	50.000	41.46	52.24	1.064	1.018	bd

Compound name: OCDF

Response Factor: 1.21412

RRF SD: 0.023389, Relative SD: 1.92641

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	45.50	101.36	1.231	1.214	bd
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	45.50	98.64	1.198	1.214	bd

Compound name: 13C-2378-TCDD

Response Factor: 1.01293

RRF SD: 0.0372659, Relative SD: 3.67903

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	31.73	102.60	1.039	1.013	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	31.73	97.40	0.987	1.013	bb

Compound name: 13C-12378-PeCDD

Response Factor: 0.774757

RRF SD: 0.0835094, Relative SD: 10.7788

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	34.54	107.62	0.834	0.775	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	34.54	92.38	0.716	0.775	bb

Compound name: 13C-123678-HxCDD

Response Factor: 1.04722

RRF SD: 0.0785413, Relative SD: 7.50001

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b03nov10a_6_avg.qld

Last Altered: Monday, November 08, 2010 09:48:44 Eastern Standard Time

Printed: Monday, November 08, 2010 09:52:32 Eastern Standard Time

Compound name: 13C-123678-HxCDD

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	37.31	105.30	1.103	1.047	db
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	37.31	94.70	0.992	1.047	db

Compound name: 13C-1234678-HpCDD

Response Factor: 0.803771

RRF SD: 0.0612673, Relative SD: 7.62248

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	40.73	94.61	0.760	0.804	bd
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	40.73	105.39	0.847	0.804	bb

Compound name: 13C-OCDD

Response Factor: 0.630808

RRF SD: 0.0688554, Relative SD: 10.9154

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	200.000	45.15	184.56	0.582	0.631	bd
2	b03nov10a_6-14	CS3WT UD100713-01.2	200.000	45.16	215.44	0.679	0.631	bb

Compound name: 13C-2378-TCDF

Response Factor: 1.68522

RRF SD: 0.0830767, Relative SD: 4.92973

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	31.19	103.49	1.744	1.685	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	31.21	96.51	1.626	1.685	bb

Compound name: 13C-12378-PeCDF

Response Factor: 1.27364

RRF SD: 0.229762, Relative SD: 18.0397

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	33.71	112.76	1.436	1.274	bd
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	33.71	87.24	1.111	1.274	bb

Compound name: 13C-123678-HxCDF

Response Factor: 1.38761

RRF SD: 0.192074, Relative SD: 13.8421

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b03nov10a_6_avg.qld

Last Altered: Monday, November 08, 2010 09:48:44 Eastern Standard Time

Printed: Monday, November 08, 2010 09:52:32 Eastern Standard Time

Compound name: 13C-123678-HxCDF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	36.58	109.79	1.523	1.388	db
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	36.58	90.21	1.252	1.388	dd

Compound name: 13C-1234678-HpCDF

Response Factor: 0.976285

RRF SD: 0.0159599, Relative SD: 1.63476

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	39.43	98.84	0.965	0.976	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	39.43	101.16	0.988	0.976	bb

Compound name: 13C-1234-TCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	31.34	100.00	1.000	1.000	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	31.34	100.00	1.000	1.000	bb

Compound name: 13C-123789-HxCDD

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	37.55	100.00	1.000	1.000	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	37.55	100.00	1.000	1.000	bb

Compound name: 37Cl-2378-TCDD (SS)

Response Factor: 1.12984

RRF SD: 0.000390995, Relative SD: 0.0346063

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	10.000	31.75	10.00	1.130	1.130	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	10.000	31.75	10.00	1.130	1.130	bb

Compound name: 13C-23478-PeCDF (SS)

Response Factor: 1.00312

RRF SD: 0.000368515, Relative SD: 0.036737

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

Quantify Compound Summary Report MassLynx 4.1

Method 8290 ICAL Report

Dataset: C:\MassLynx\Default.pro\ICAL Results\8290-b03nov10a_6_avg.qld

Last Altered: Monday, November 08, 2010 09:48:44 Eastern Standard Time

Printed: Monday, November 08, 2010 09:52:32 Eastern Standard Time

Compound name: 13C-23478-PeCDF (SS)

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	34.34	99.97	1.003	1.003	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	34.34	100.03	1.003	1.003	bb

Compound name: 13C-123478-HxCDF (SS)

Response Factor: 0.895145

RRF SD: 0.0399076, Relative SD: 4.45822

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	36.48	96.85	0.867	0.895	bd
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	36.48	103.15	0.923	0.895	bd

Compound name: 13C-123478-HxCDD (SS)

Response Factor: 0.926348

RRF SD: 0.0463359, Relative SD: 5.002

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	37.22	96.46	0.894	0.926	bd
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	37.22	103.54	0.959	0.926	bd

Compound name: 13C-1234789-HpCDF (SS)

Response Factor: 0.780562

RRF SD: 0.0422229, Relative SD: 5.40929

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

	Filename	Sample ID	Std. Conc	RT	pg/uL	RRF	AvgRRF	M
1	b03nov10a_5-14	CS3WT UD100713-01.2	100.000	41.44	96.18	0.751	0.781	bb
2	b03nov10a_6-14	CS3WT UD100713-01.2	100.000	41.44	103.82	0.810	0.781	bb

Quantify Sample Summary Report
Method 8290 CCAL Report

MassLynx 4.1

Average

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_6-14.qld

Last Altered: Monday, November 08, 2010 09:57:19 Eastern Standard Time

Printed: Monday, November 08, 2010 10:00:08 Eastern Standard Time

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Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFE_EPA8290_110110.mdb 02 Nov 2010 08:23:15
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	9.76e4	1.23e5	2.21e5	31.75	1.000	0.79	NO	10.520	0.0189	1.065	5.2	2.10e6	1218	1727.7	2.71e6	1526	1775.2	db
2	12378-PeCDD	4.85e5	3.06e5	7.91e5	34.55	1.000	1.58	NO	51.022	0.0655	1.053	2.0	1.11e7	3717	2979.1	7.15e6	4113	1737.5	bb
3	123478-HxCDD	4.63e5	3.69e5	8.32e5	37.23	0.998	1.26	NO	54.657	0.0690	0.980	9.3	9.25e6	3598	2570.8	7.32e6	3198	2288.1	bd
4	123678-HxCDD	4.64e5	3.68e5	8.32e5	37.32	1.000	1.26	NO	50.646	0.0639	0.980	1.3	9.00e6	3598	2501.3	7.09e6	3198	2218.3	db
5	123789-HxCDD	4.75e5	3.75e5	8.49e5	37.57	1.007	1.27	NO	57.821	0.0714	1.001	15.6	8.71e6	3598	2419.4	6.83e6	3198	2134.5	bb
6	1234678-HpCDD	3.79e5	3.63e5	7.42e5	40.75	1.000	1.04	NO	50.928	0.0841	1.023	1.9	5.41e6	2468	2193.2	5.23e6	3409	1535.2	bb
7	OCDD	5.67e5	6.32e5	1.20e6	45.18	1.000	0.90	NO	103.500	0.162	1.031	3.5	6.21e6	2340	2655.9	6.97e6	4477	1556.4	bb
8	2378-TCDF	1.39e5	1.83e5	3.22e5	31.22	1.000	0.76	NO	9.592	0.0145	0.943	-4.1	2.39e6	1331	1797.1	3.11e6	1486	2092.4	bb
9	12378-PeCDF	6.59e5	4.27e5	1.09e6	33.72	1.000	1.55	NO	49.836	0.0666	0.931	-0.3	1.64e7	6464	2541.7	1.05e7	5331	1968.0	bb
10	23478-PeCDF	6.83e5	4.42e5	1.13e6	34.35	1.019	1.54	NO	52.757	0.0680	0.965	5.5	1.60e7	6464	2476.0	1.02e7	5331	1909.8	bb
11	123478-HxCDF	6.11e5	4.98e5	1.11e6	36.49	0.998	1.23	NO	56.993	0.0776	1.036	14.0	1.31e7	5009	2617.6	1.08e7	5132	2100.9	bd
12	123678-HxCDF	6.31e5	5.15e5	1.15e6	36.59	1.000	1.22	NO	50.597	0.0667	1.070	1.2	1.25e7	5009	2502.6	1.03e7	5132	2003.9	db
13	234678-HxCDF	6.37e5	5.14e5	1.15e6	37.10	1.014	1.24	NO	56.207	0.0738	1.074	12.4	1.25e7	5009	2499.0	1.00e7	5132	1957.5	bb
14	123789-HxCDF	5.76e5	4.70e5	1.05e6	37.91	1.036	1.22	NO	61.663	0.0891	0.976	23.3	1.03e7	5009	2047.0	8.16e6	5132	1589.9	bb
15	1234678-HpCDF	5.56e5	5.35e5	1.09e6	39.45	1.001	1.04	NO	50.578	0.0564	1.291	1.2	9.09e6	3042	2986.7	8.84e6	3529	2505.6	bb
16	1234789-HpCDF	4.55e5	4.45e5	8.99e5	41.46	1.052	1.02	NO	57.196	0.0774	1.064	14.4	6.27e6	3042	2059.4	6.05e6	3529	1714.4	bd
17	OCDF	6.66e5	7.27e5	1.39e6	45.50	1.007	0.92	NO	97.177	0.126	1.198	-2.8	7.24e6	3258	2221.9	7.66e6	3286	2332.7	bd
18	13C-2378-TCDD	9.20e5	1.15e6	2.07e6	31.73	1.013	0.80	NO	88.116	0.0277	0.987	-11.9	1.91e7	2531	7564.0	2.42e7	1653	14633.6	bb
19	13C-12378-PeCDD	9.21e5	5.82e5	1.50e6	34.54	1.102	1.58	NO	75.334	0.0427	0.716	-24.7	2.13e7	1843	11551.3	1.32e7	3641	3611.9	bb
20	13C-123678-HxCDD	9.49e5	7.48e5	1.70e6	37.31	0.994	1.27	NO	89.196	0.0557	0.992	-10.8	1.84e7	2698	6834.1	1.42e7	3745	3791.4	db
21	13C-1234678-HpCDD	7.44e5	7.05e5	1.45e6	40.73	1.085	1.06	NO	105.806	0.0643	0.847	5.8	1.07e7	2535	4228.2	1.03e7	2815	3667.6	bb
22	13C-OCDD	1.11e6	1.22e6	2.33e6	45.16	1.203	0.91	NO	203.347	0.110	0.679	1.7	1.21e7	3641	3312.8	1.32e7	4015	3288.2	bb
23	13C-2378-TCDF	1.51e6	1.90e6	3.41e6	31.21	0.996	0.79	NO	89.310	0.0122	1.626	-10.7	2.62e7	1712	15313.1	3.23e7	1287	25132.4	bb
24	13C-12378-PeCDF	1.43e6	9.07e5	2.33e6	33.71	1.076	1.57	NO	65.654	0.0406	1.111	-34.3	3.48e7	5122	6789.9	2.19e7	4165	5265.7	bb
25	13C-123678-HxCDF	7.35e5	1.41e6	2.14e6	36.58	0.974	0.52	NO	76.770	0.0684	1.252	-23.2	1.48e7	4869	3040.1	2.84e7	6734	4220.8	dd
26	13C-1234678-HpCDF	5.23e5	1.17e6	1.69e6	39.43	1.050	0.45	NO	91.374	0.0628	0.988	-8.6	8.48e6	3104	2732.8	1.90e7	3958	4793.1	bb
27	13C-1234-TCDD	9.26e5	1.17e6	2.10e6	31.34	0.000	0.79	NO	100.000	0.0310	1.000	0.0	1.79e7	2531	7061.7	2.22e7	1653	13412.1	bb
28	13C-123789-HxCDD	9.55e5	7.56e5	1.71e6	37.55	0.000	1.26	NO	100.000	0.0620	1.000	0.0	1.74e7	2698	6452.0	1.38e7	3745	3679.3	bb
29	37Cl-2378-TCDD (SS)	2.34e5		2.34e5	31.75	1.000			10.716	0.00821	1.130	7.2	5.04e6	1243	4052.1				bb
30	13C-23478-PeCDF (SS)	1.43e6	9.08e5	2.34e6	34.34	1.019	1.58	NO	107.503	0.0524	1.003	7.5	3.36e7	5122	6557.5	2.13e7	4165	5108.8	bb

Quantify Sample Summary Report MassLynx 4.1
Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_6-14.qld

Last Altered: Monday, November 08, 2010 09:57:19 Eastern Standard Time

Printed: Monday, November 08, 2010 10:00:08 Eastern Standard Time

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Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6, Task: HRP763_1, User: MJC

Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
13C-123478-HxCDF (SS)	6.75e5	1.30e6	1.98e6	36.48	0.997	0.52	NO	114.041	0.0997	0.923	14.0	1.45e7	4869	2977.9	2.78e7	6734	4128.3	bd
13C-123478-HxCDD (SS)	9.16e5	7.12e5	1.63e6	37.22	0.998	1.29	NO	111.398	0.0681	0.959	11.4	1.77e7	2698	6556.5	1.37e7	3745	3654.4	bd
13C-1234789-HpCDF (SS)	4.24e5	9.46e5	1.37e6	41.44	1.051	0.45	NO	107.191	0.102	0.810	7.2	5.91e6	3104	1902.9	1.31e7	3958	3307.8	bb

Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_6-14.qld

Last Altered: Monday, November 08, 2010 09:57:19 Eastern Standard Time

Printed: Monday, November 08, 2010 10:00:08 Eastern Standard Time

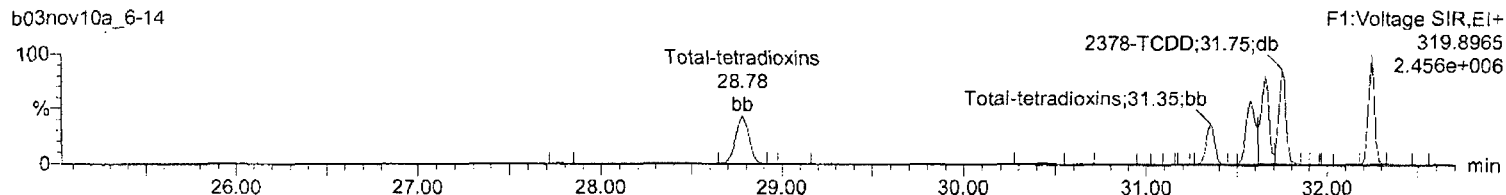
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6,
Task: HRP763_1, User: MJC

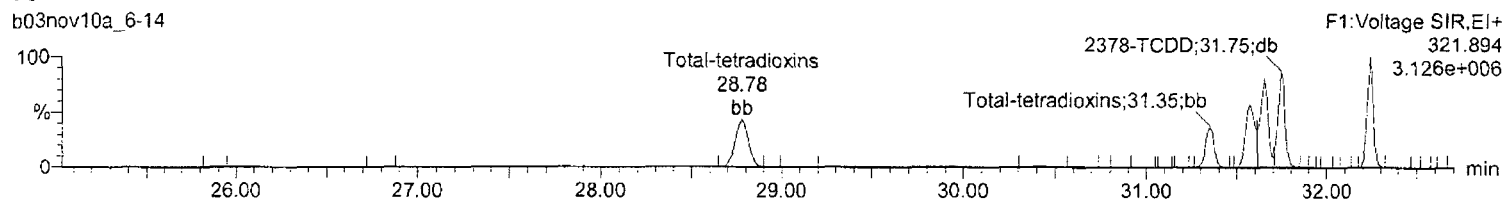
Total-tetradoxins

b03nov10a_6-14



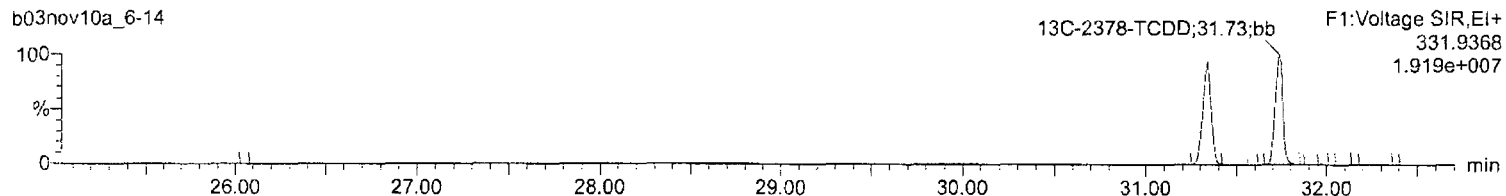
Total-tetradoxins

b03nov10a_6-14



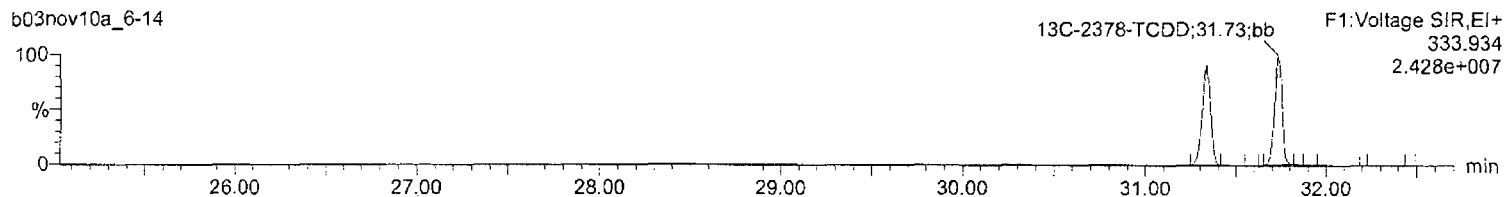
13C-2378-TCDD

b03nov10a_6-14



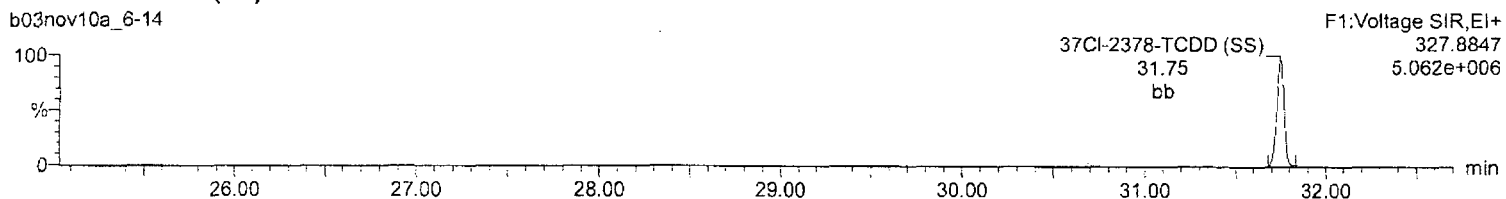
13C-2378-TCDD

b03nov10a_6-14



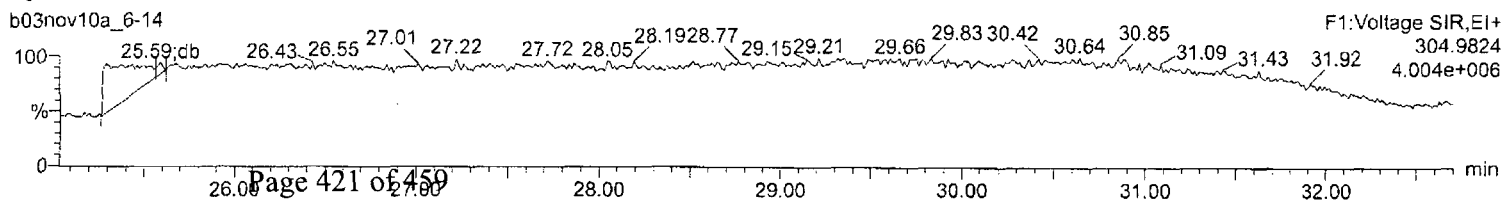
37Cl-2378-TCDD (SS)

b03nov10a_6-14



Lock Mass F1

b03nov10a_6-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_6-14.qld

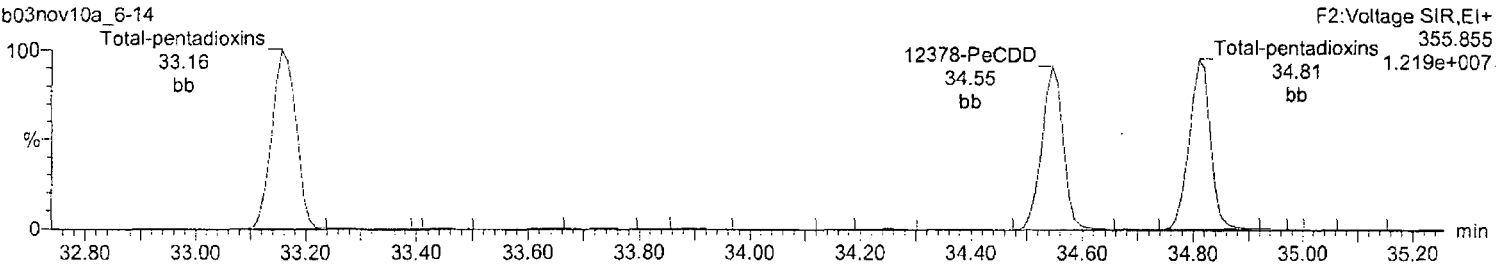
Last Altered: Monday, November 08, 2010 09:57:19 Eastern Standard Time

Printed: Monday, November 08, 2010 10:00:08 Eastern Standard Time

Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6,
Task: HRP763_1, User: MJC

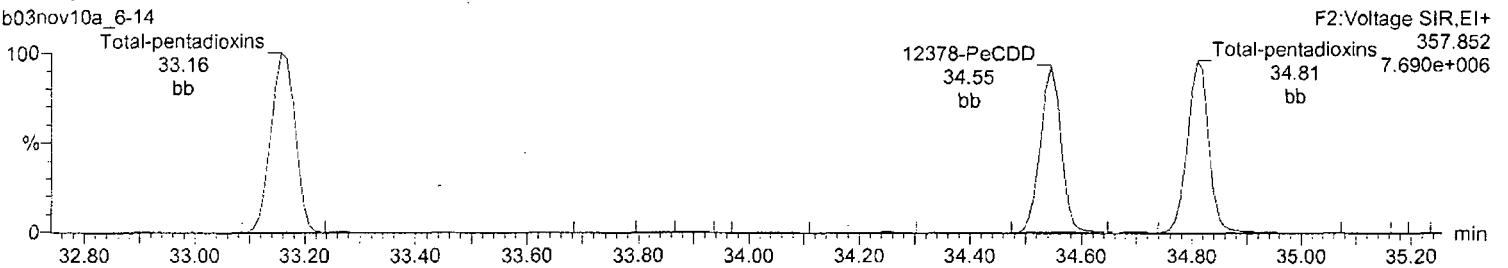
Total-pentadioxins

b03nov10a_6-14



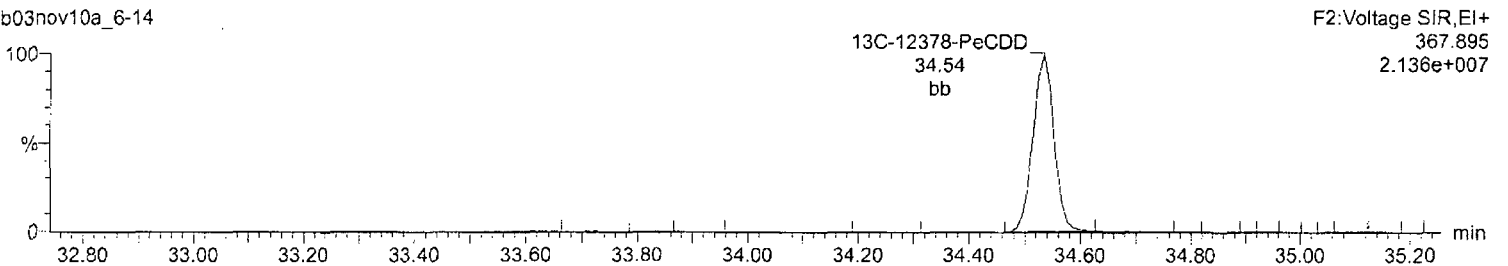
Total-pentadioxins

b03nov10a_6-14



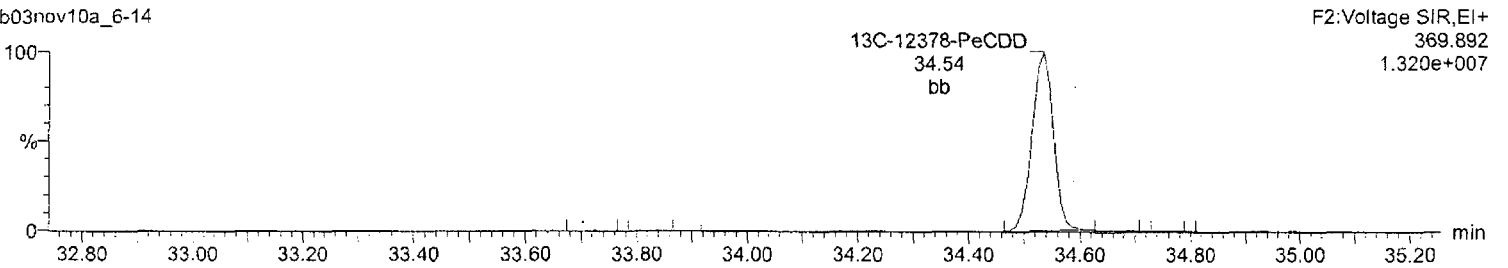
¹³C-12378-PeCDD

b03nov10a_6-14



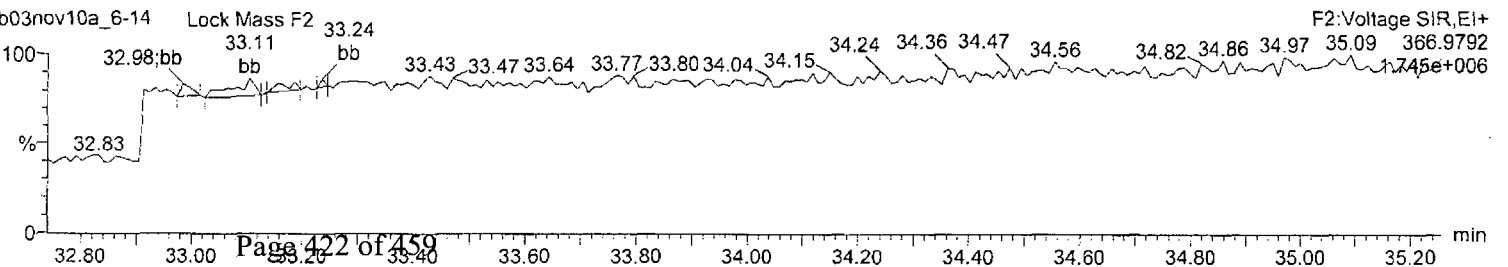
¹³C-12378-PeCDD

b03nov10a_6-14



Lock Mass F2

b03nov10a_6-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_6-14.qld

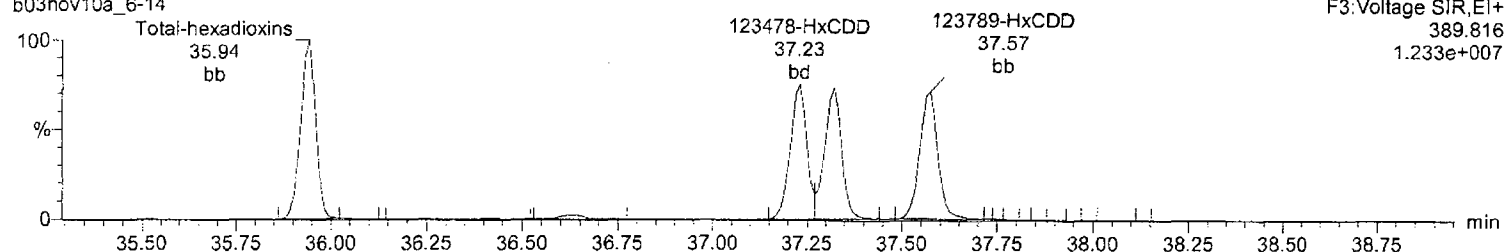
Last Altered: Monday, November 08, 2010 09:57:19 Eastern Standard Time

Printed: Monday, November 08, 2010 10:00:08 Eastern Standard Time

Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6, Task: HRP763_1, User: MJC

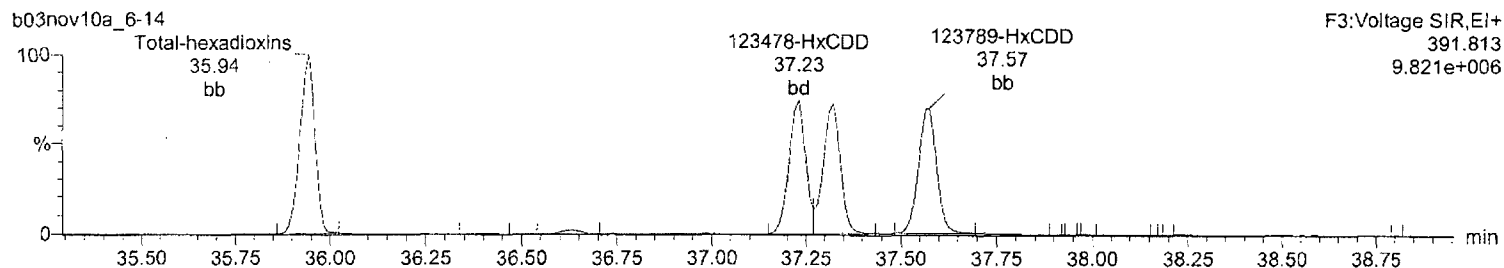
Total-hexadioxins

b03nov10a_6-14



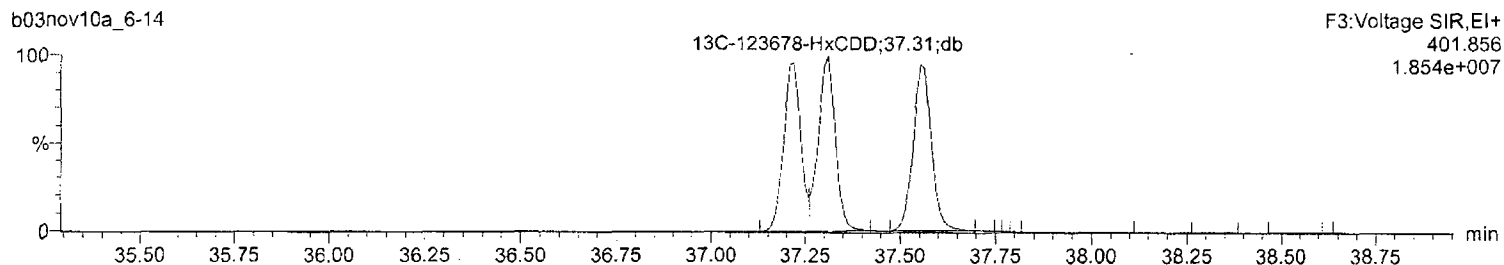
Total-hexadioxins

b03nov10a_6-14



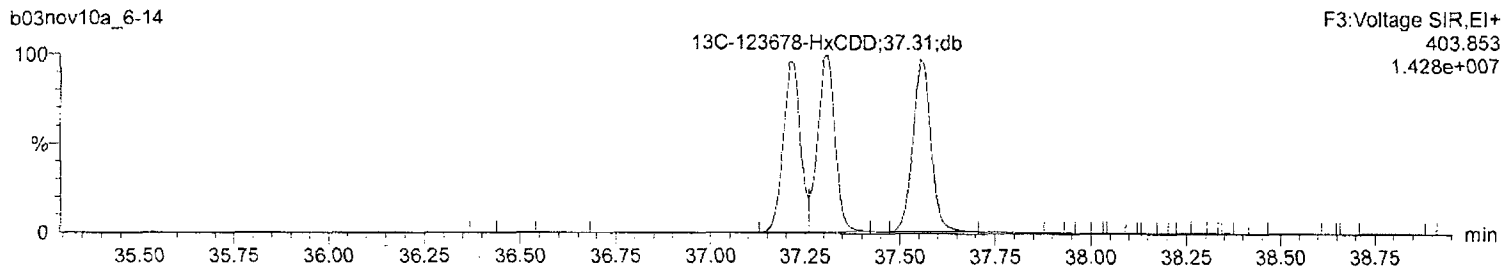
13C-123678-HxCDD

b03nov10a_6-14



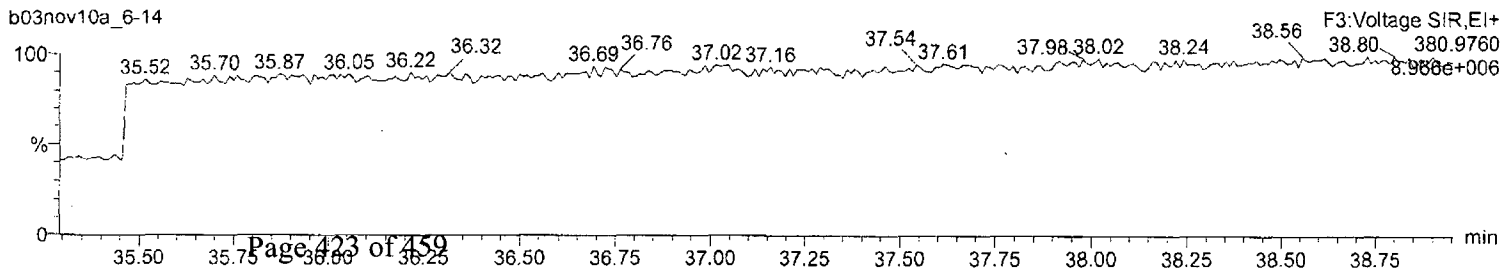
13C-123678-HxCDD

b03nov10a_6-14



Lock Mass F3

b03nov10a_6-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_6-14.qld

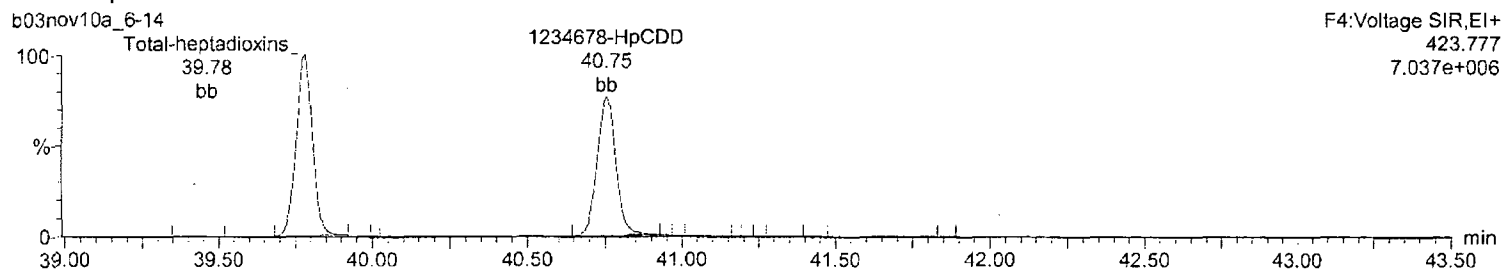
Last Altered: Monday, November 08, 2010 09:57:19 Eastern Standard Time

Printed: Monday, November 08, 2010 10:00:08 Eastern Standard Time

Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6, Task: HRP763_1, User: MJC

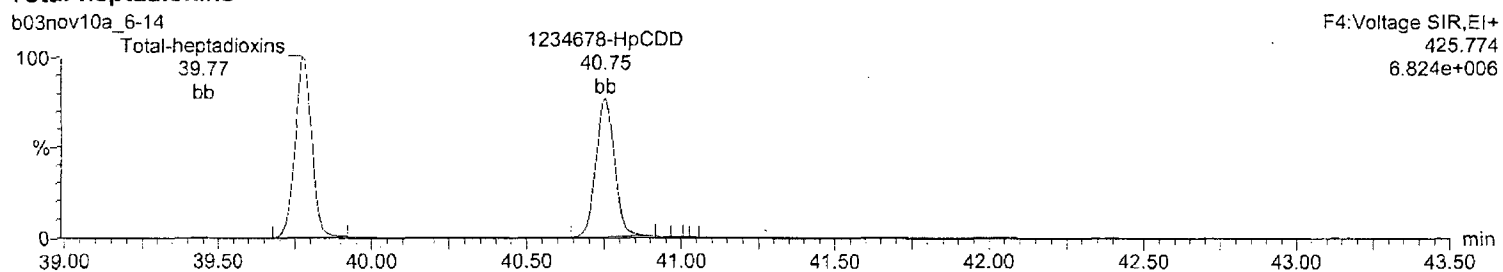
Total-heptadioxins

b03nov10a_6-14



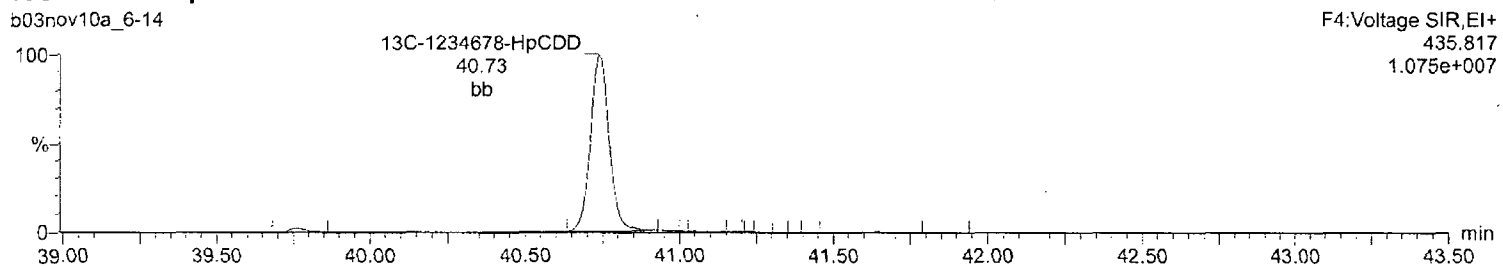
Total-heptadioxins

b03nov10a_6-14



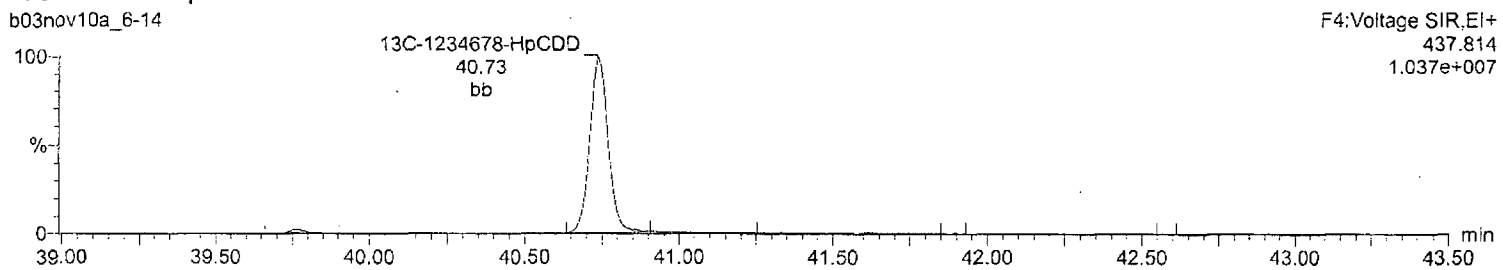
13C-1234678-HpCDD

b03nov10a_6-14



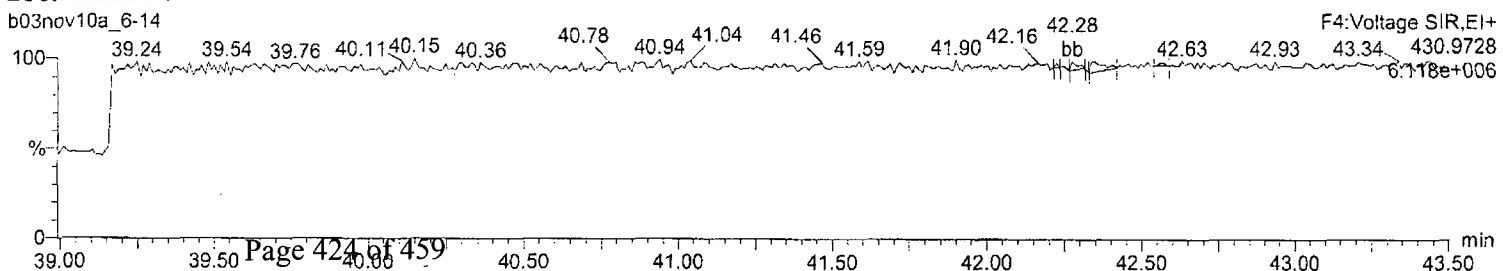
13C-1234678-HpCDD

b03nov10a_6-14



Lock Mass F4

b03nov10a_6-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_6-14.qld

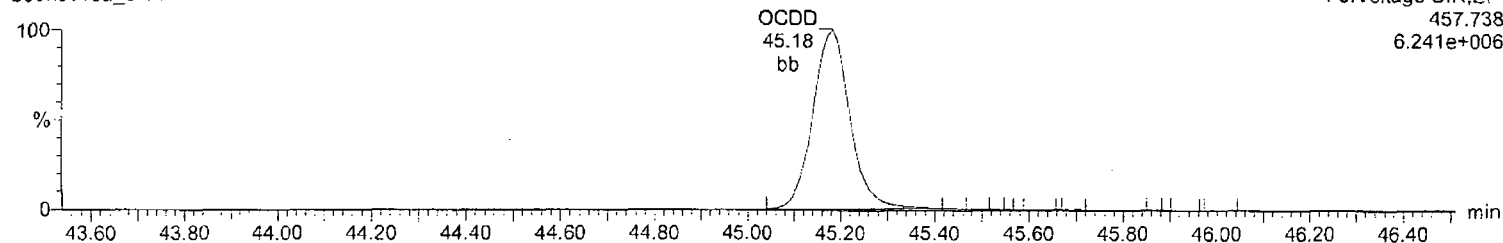
Last Altered: Monday, November 08, 2010 09:57:19 Eastern Standard Time

Printed: Monday, November 08, 2010 10:00:08 Eastern Standard Time

Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6, Task: HRP763_1, User: MJC

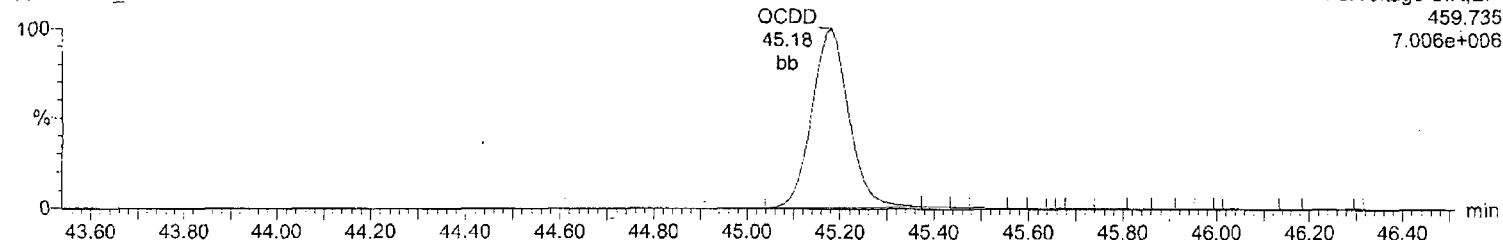
OCDD

b03nov10a_6-14



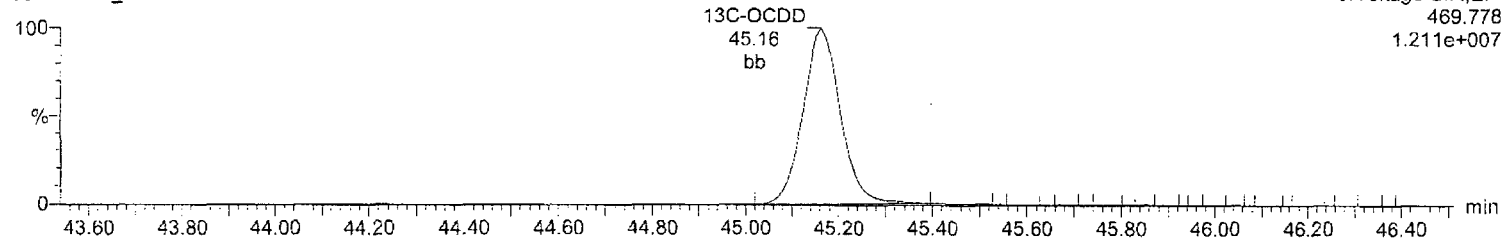
OCDD

b03nov10a_6-14



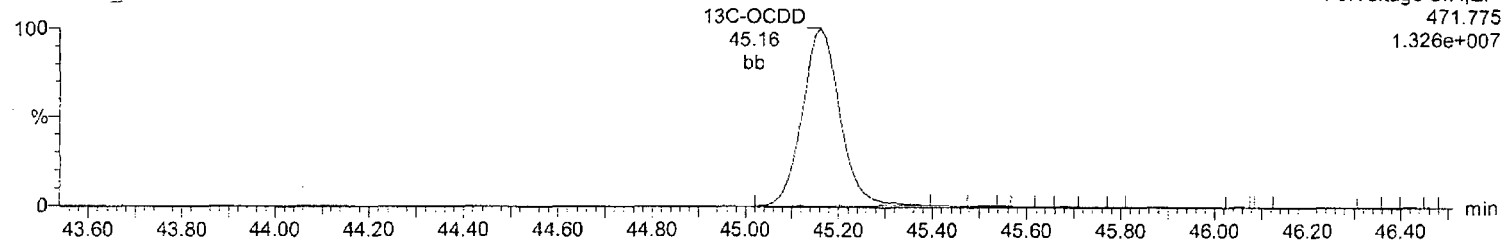
13C-OCDD

b03nov10a_6-14



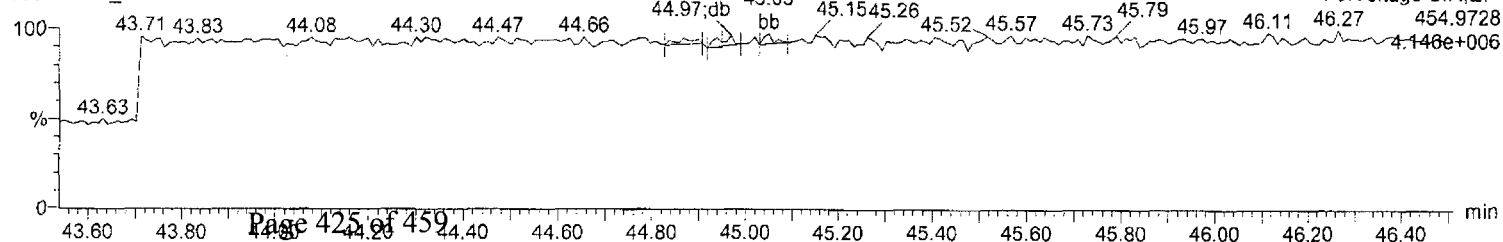
13C-OCDD

b03nov10a_6-14



Lock Mass F5

b03nov10a_6-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_6-14.qld

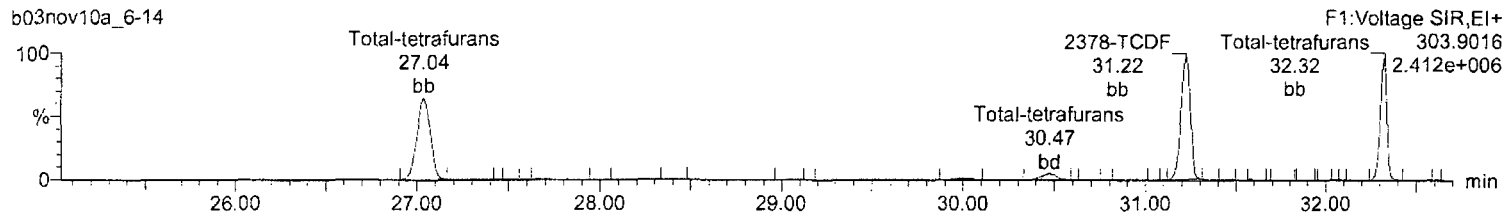
Last Altered: Monday, November 08, 2010 09:57:19 Eastern Standard Time

Printed: Monday, November 08, 2010 10:00:08 Eastern Standard Time

Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6,
Task: HRP763_1, User: MJC

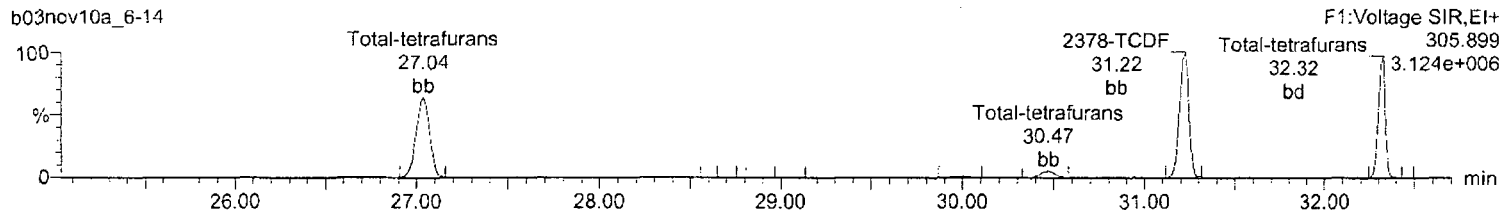
Total-tetrafurans

b03nov10a_6-14



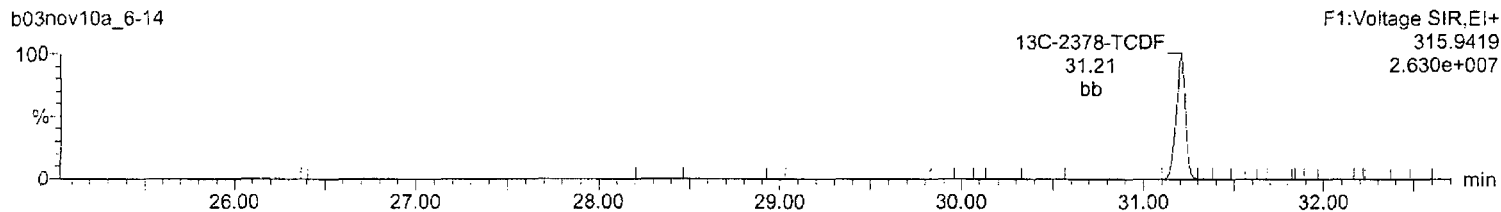
Total-tetrafurans

b03nov10a_6-14



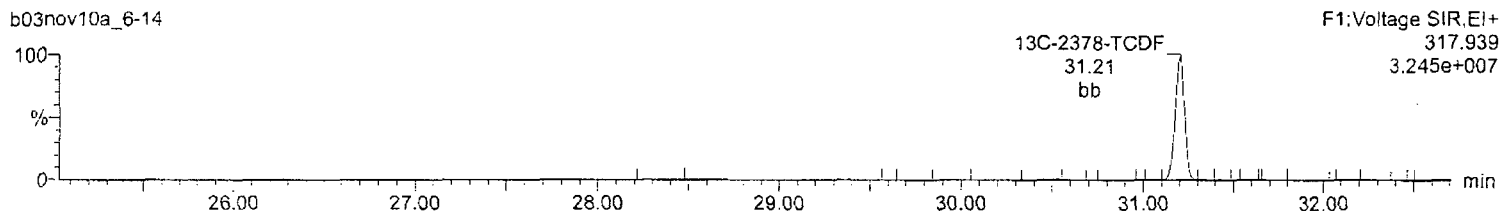
13C-2378-TCDF

b03nov10a_6-14



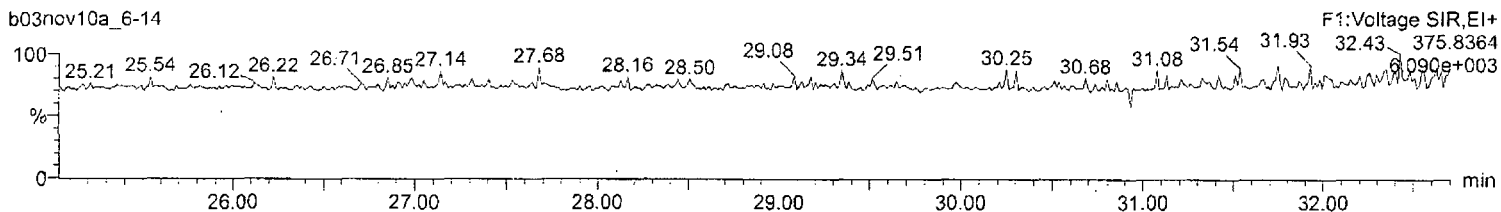
13C-2378-TCDF

b03nov10a_6-14



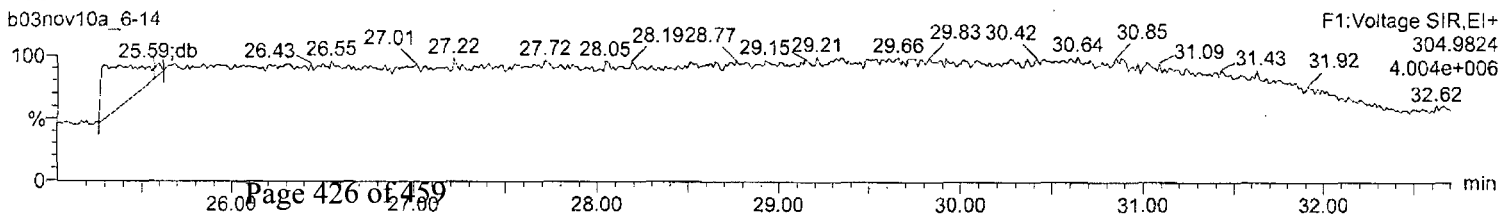
HxDPE

b03nov10a_6-14



Lock Mass F1

b03nov10a_6-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_6-14.qld

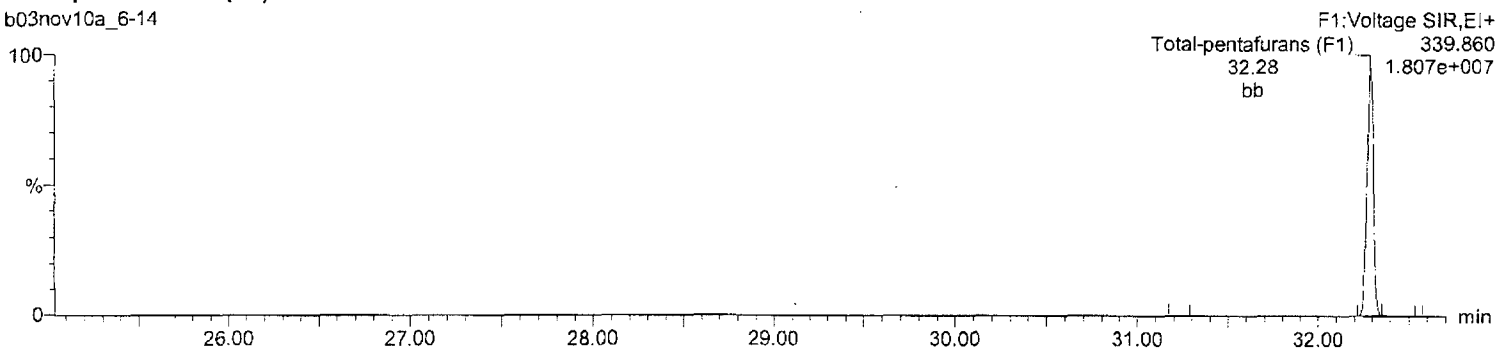
Last Altered: Monday, November 08, 2010 09:57:19 Eastern Standard Time

Printed: Monday, November 08, 2010 10:00:08 Eastern Standard Time

Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6,
Task: HRP763_1, User: MJC

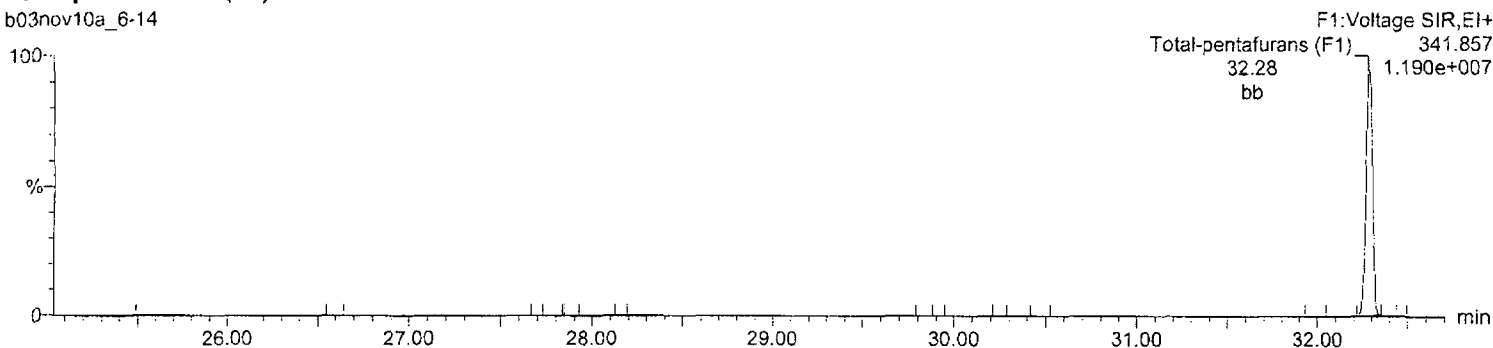
Total-pentafurans (F1)

b03nov10a_6-14



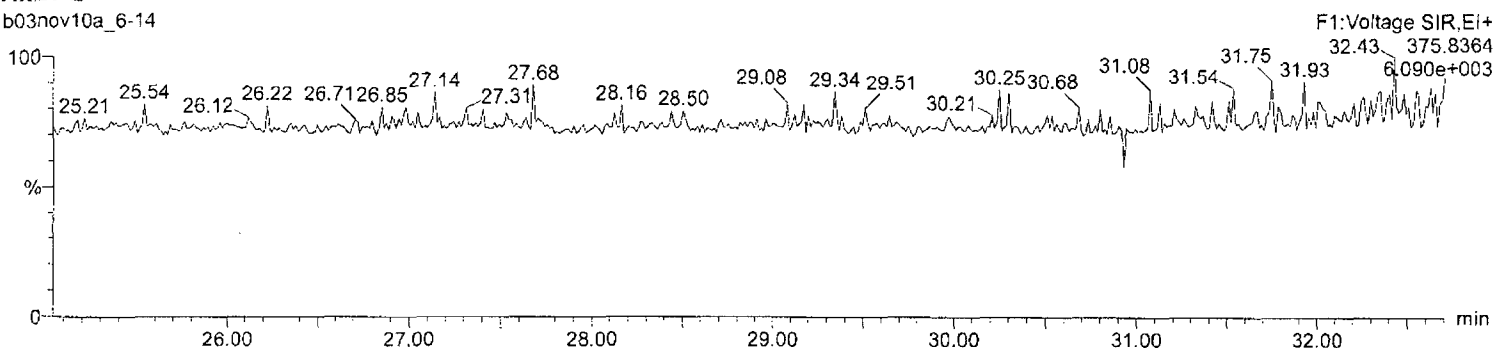
Total-pentafurans (F1)

b03nov10a_6-14



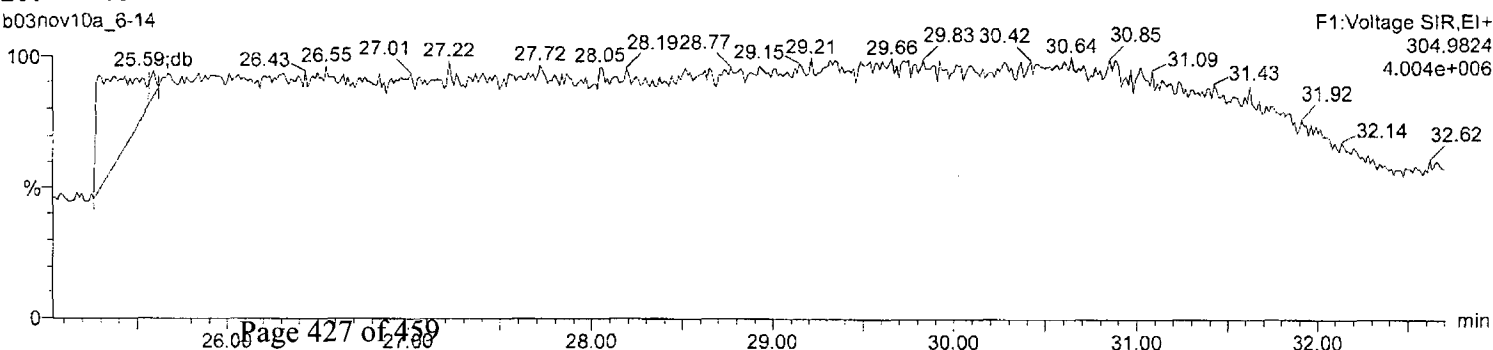
HxDPE

b03nov10a_6-14



Lock Mass F1

b03nov10a_6-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_6-14.qld

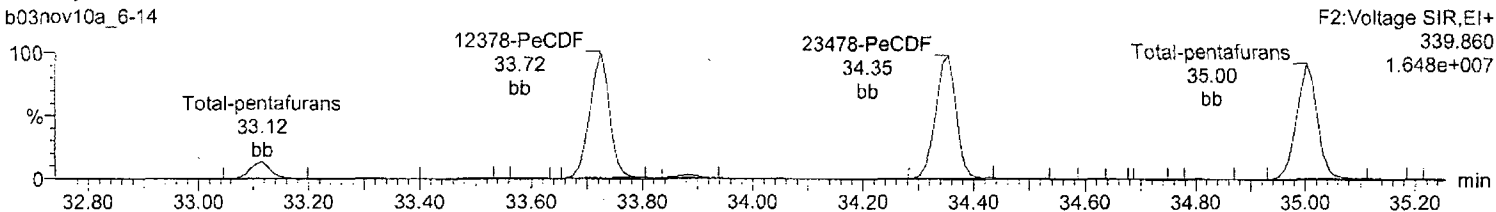
Last Altered: Monday, November 08, 2010 09:57:19 Eastern Standard Time

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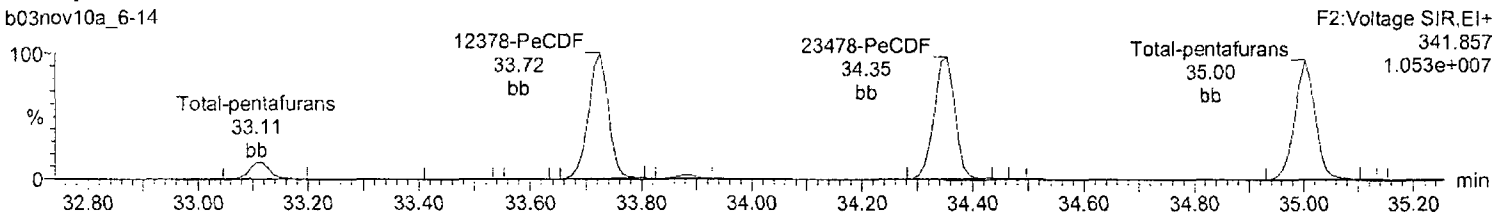
Total-pentafurans

b03nov10a_6-14



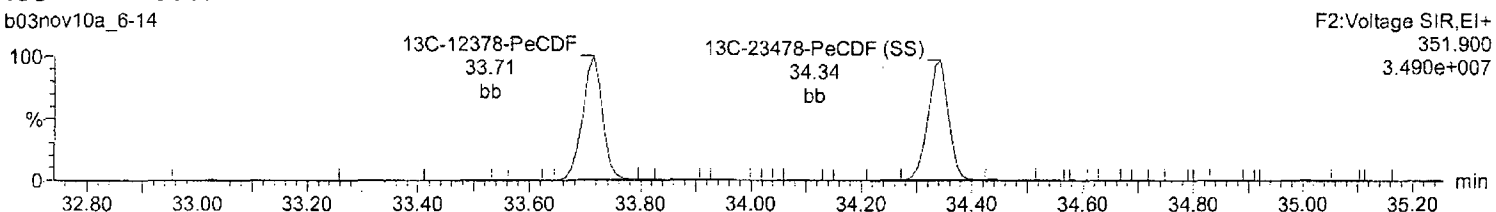
Total-pentafurans

b03nov10a_6-14



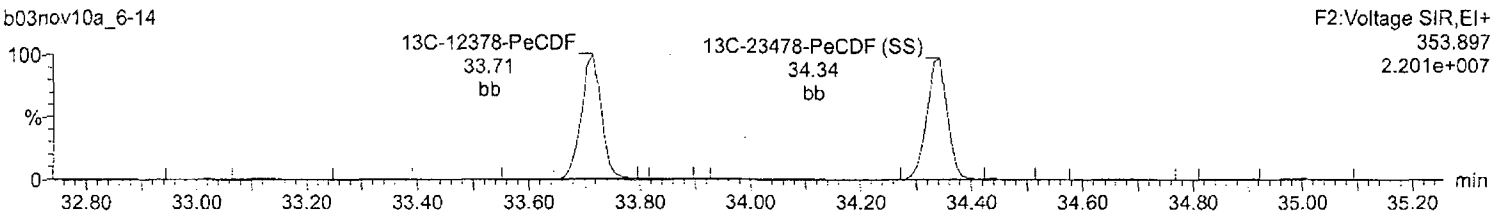
13C-12378-PeCDF

b03nov10a_6-14



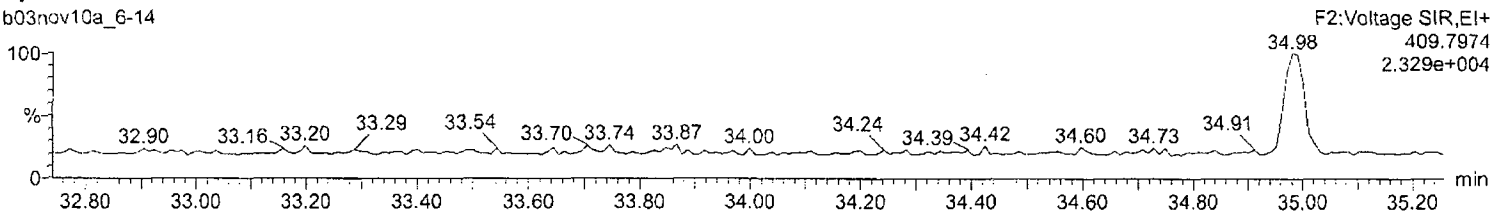
13C-12378-PeCDF

b03nov10a_6-14



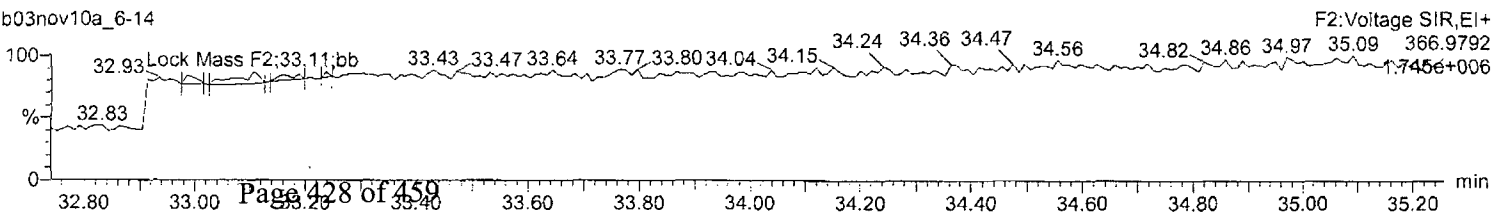
HpDPE

b03nov10a_6-14



Lock Mass F2

b03nov10a_6-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

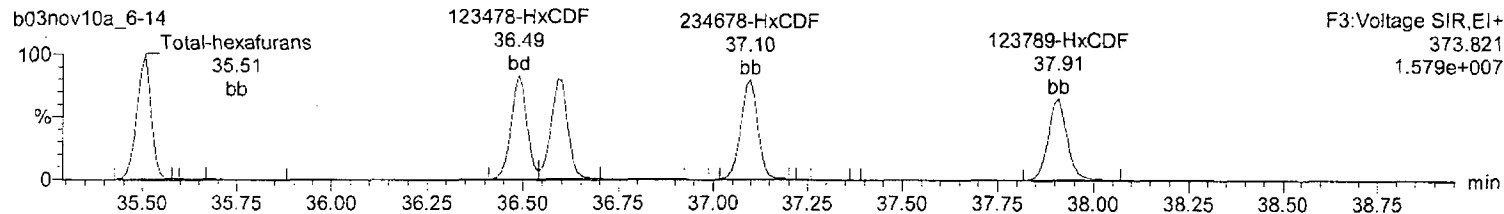
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_6-14.qld

Last Altered: Monday, November 08, 2010 09:57:19 Eastern Standard Time

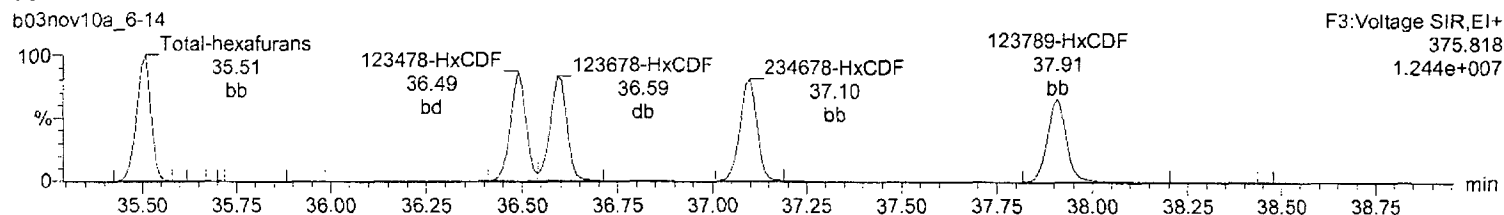
Printed: Monday, November 08, 2010 10:00:08 Eastern Standard Time

Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6, Task: HRP763_1, User: MJC

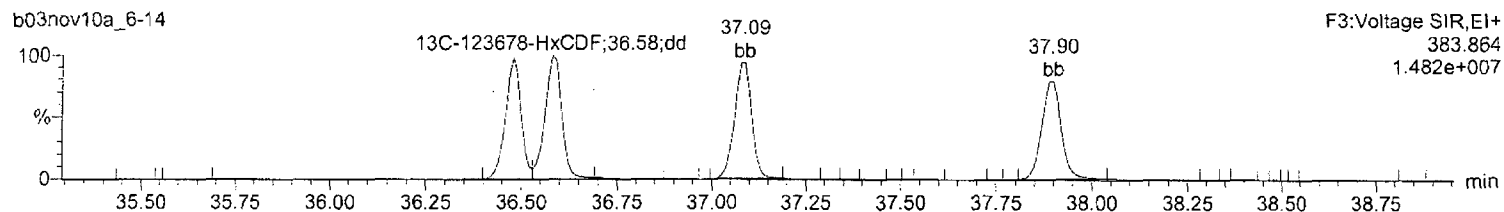
Total-hexafurans



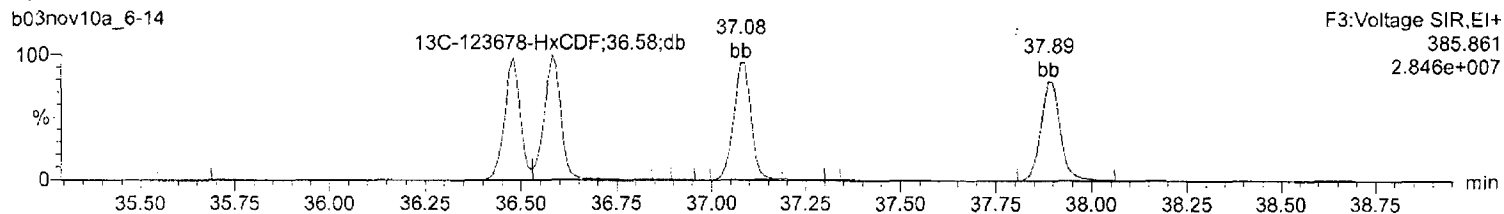
Total-hexafurans



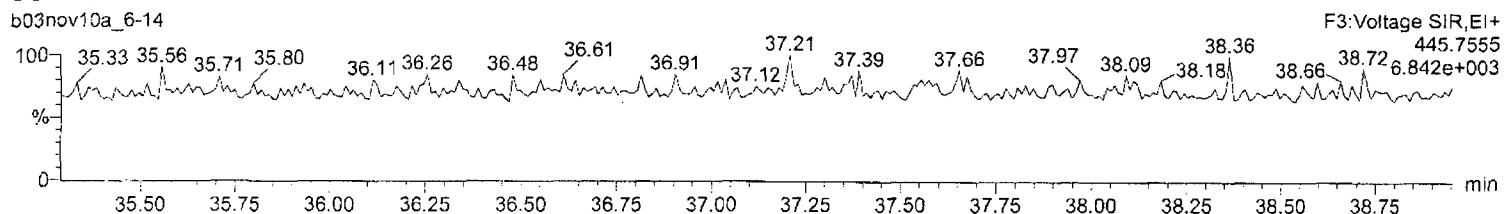
13C-123678-HxCDF



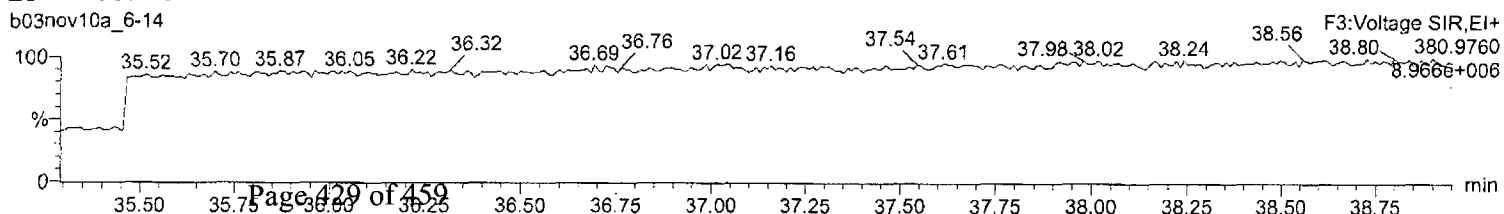
13C-123678-HxCDF



OcDPE



Lock Mass F3



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_6-14.qld

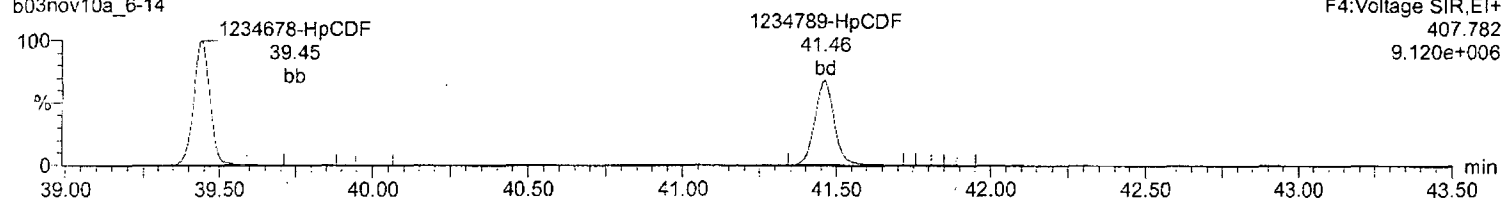
Last Altered: Monday, November 08, 2010 09:57:19 Eastern Standard Time

Printed: Monday, November 08, 2010 10:00:08 Eastern Standard Time

Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6,
Task: HRP763_1, User: MJC

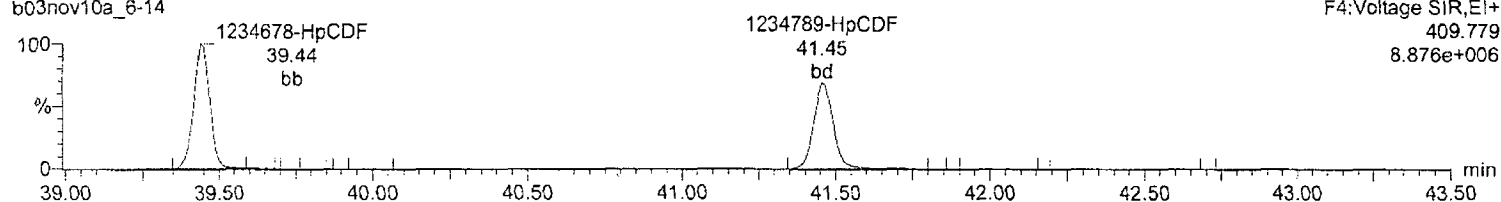
Total-heptafurans

b03nov10a_6-14



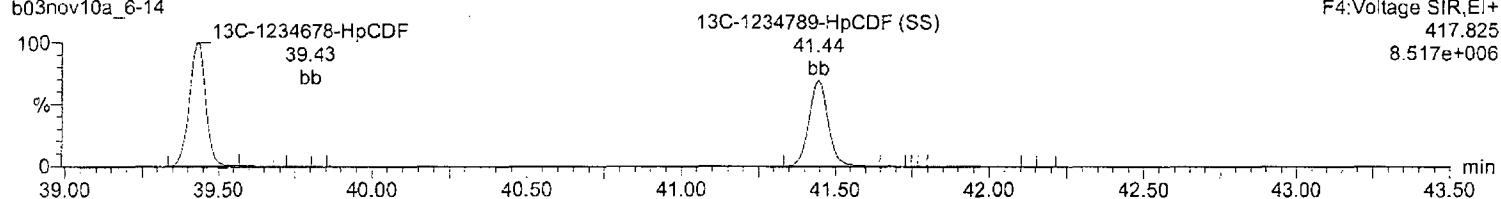
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b03nov10a_6-14



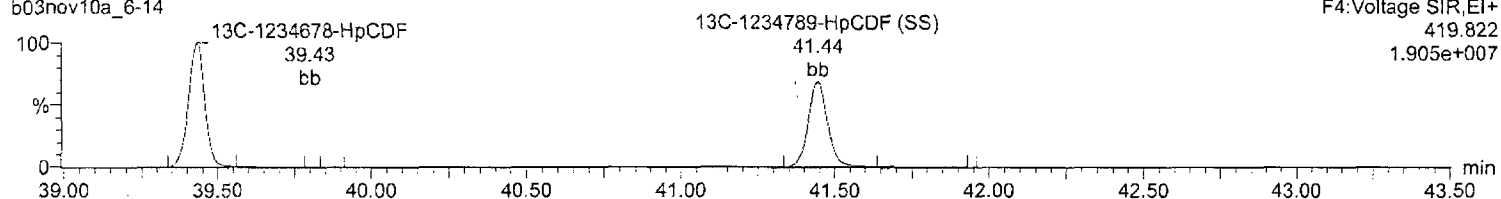
13C-1234678-HpCDF

b03nov10a_6-14



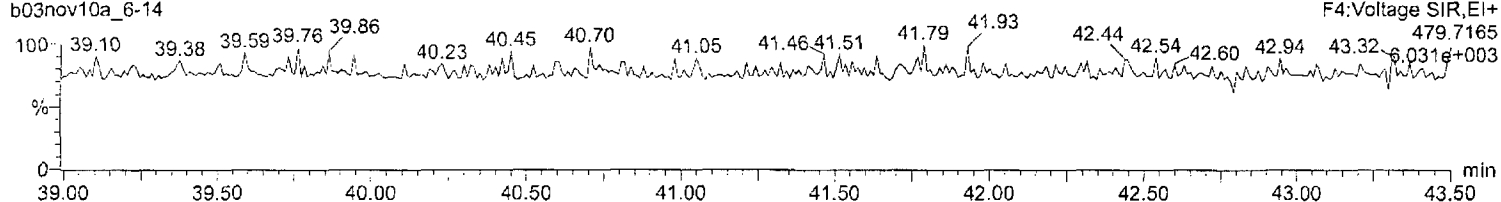
13C-1234678-HpCDF

b03nov10a_6-14



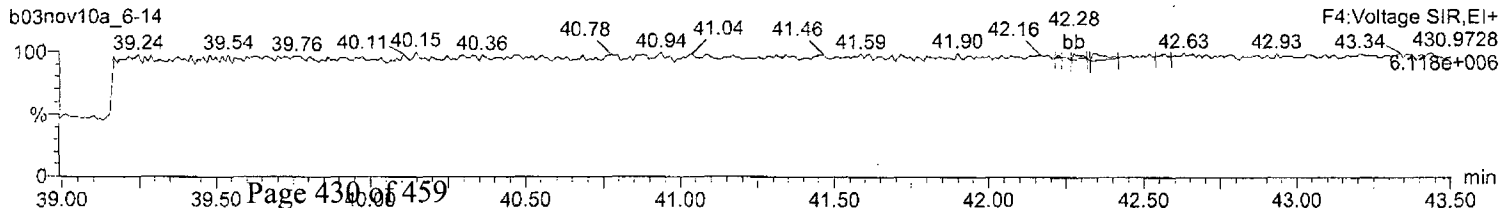
NoDPE

b03nov10a_6-14



Lock Mass F4

b03nov10a_6-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_6-14.qld

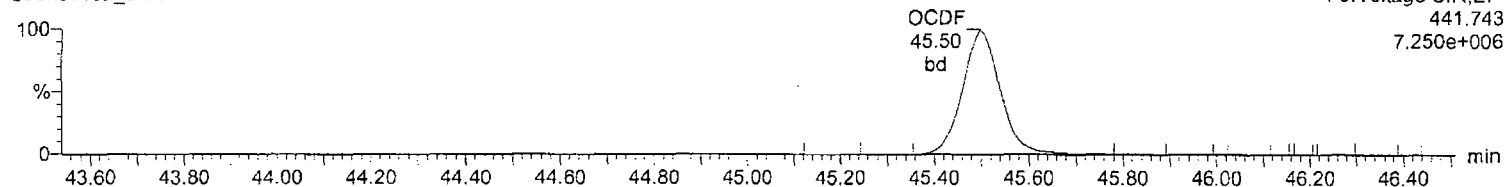
Last Altered: Monday, November 08, 2010 09:57:19 Eastern Standard Time

Printed: Monday, November 08, 2010 10:00:08 Eastern Standard Time

Name: b03nov10a_6-14, Date: 06-Nov-2010, Time: 00:07:57, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_6, Task: HRP763_1, User: MJC

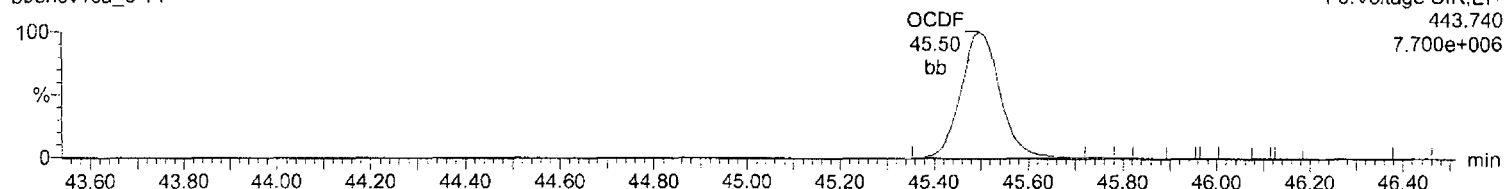
OCDF

b03nov10a_6-14



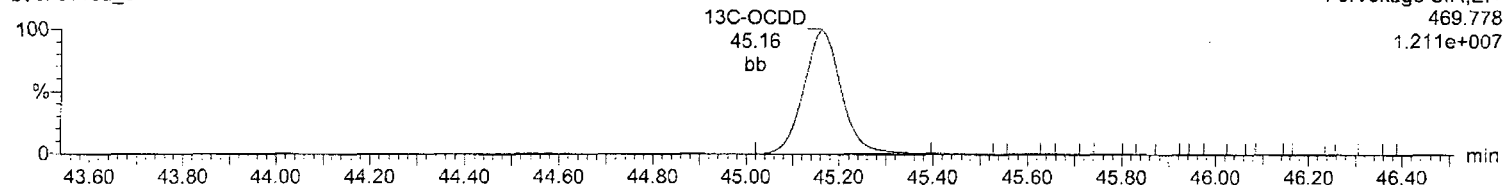
OCDF

b03nov10a_6-14



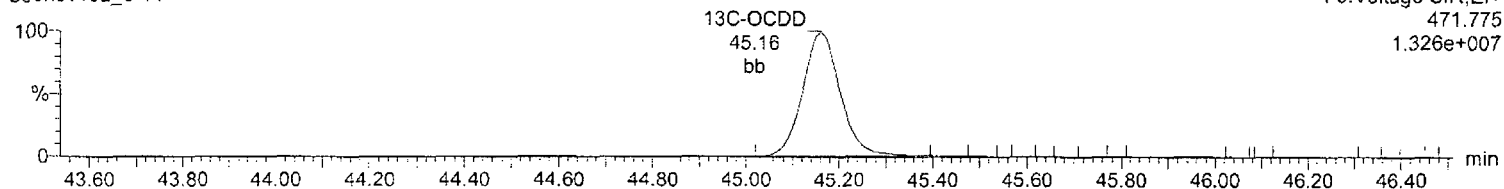
13C-OCDD

b03nov10a_6-14



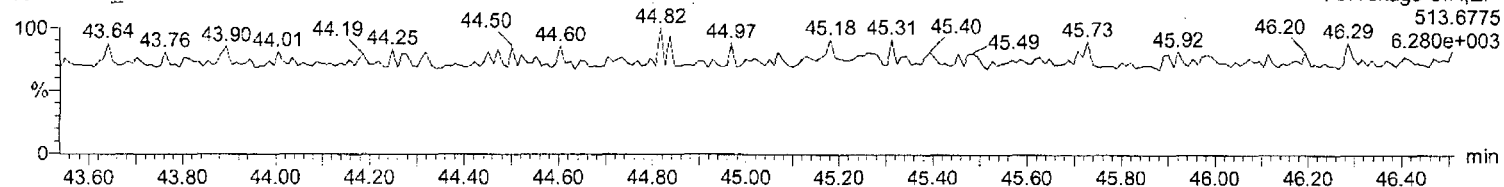
13C-OCDD

b03nov10a_6-14



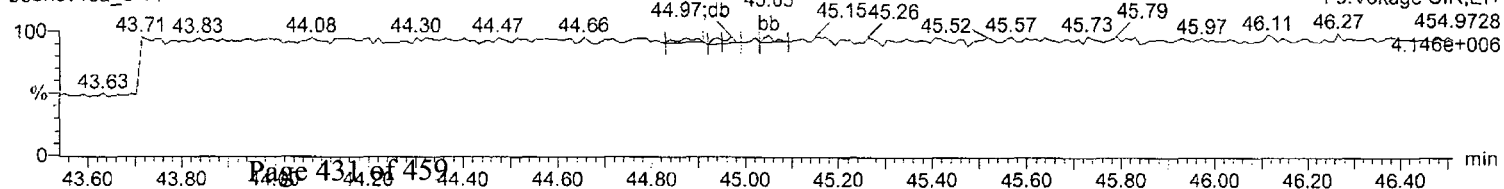
DeDPE

b03nov10a_6-14



Lock Mass F5

b03nov10a_6-14



Quantify Sample Summary Report

MassLynx 4.1

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_7-14.qld

Last Altered: Monday, November 08, 2010 12:19:18 Eastern Standard Time

Printed: Monday, November 08, 2010 12:20:39 Eastern Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	8.11e4	1.05e5	1.87e5	31.73	1.000	0.77	NO	10.620	0.0210	1.075	6.2	1.80e6	1268	1421.2	2.24e6	1333	1676.8	db
2	12378-PeCDD	4.31e5	2.74e5	7.05e5	34.54	1.000	1.57	NO	50.689	0.0693	1.046	1.4	9.54e6	3797	2513.9	6.01e6	3197	1878.9	bb
3	123478-HxCDD	3.42e5	2.75e5	6.17e5	37.21	0.998	1.24	NO	52.802	0.137	0.947	5.6	6.34e6	5415	1171.7	5.17e6	4281	1208.4	bd
4	123678-HxCDD	3.55e5	2.83e5	6.37e5	37.30	1.000	1.26	NO	50.494	0.127	0.977	1.0	6.29e6	5415	1161.0	4.95e6	4281	1155.9	db
5	123789-HxCDD	3.43e5	2.66e5	6.09e5	37.55	1.007	1.29	NO	53.976	0.142	0.934	8.0	5.91e6	5415	1091.5	4.65e6	4281	1085.2	bb
6	1234678-HpCDD	2.45e5	2.29e5	4.74e5	40.73	1.000	1.07	NO	51.221	0.178	1.029	2.4	3.24e6	3807	849.8	3.08e6	3376	912.3	bd
7	OCDD	3.70e5	4.02e5	7.72e5	45.16	1.000	0.92	NO	101.646	0.224	1.012	1.6	3.74e6	3127	1194.7	4.19e6	2459	1704.9	bd
8	2378-TCDF	1.14e5	1.51e5	2.65e5	31.21	1.001	0.75	NO	9.319	0.0159	0.916	-6.8	1.98e6	1378	1433.6	2.65e6	1142	2320.2	bb
9	12378-PeCDF	6.51e5	4.24e5	1.07e6	33.71	1.000	1.54	NO	48.866	0.0746	0.913	-2.3	1.50e7	6841	2198.1	9.75e6	5820	1674.8	bb
10	23478-PeCDF	6.62e5	4.30e5	1.09e6	34.33	1.019	1.54	NO	50.744	0.0762	0.928	1.5	1.55e7	6841	2270.5	1.02e7	5820	1753.9	bb
11	123478-HxCDF	4.93e5	4.04e5	8.97e5	36.48	0.998	1.22	NO	53.287	0.126	0.968	6.6	9.73e6	7991	1217.4	7.96e6	5318	1497.6	bd
12	123678-HxCDF	5.32e5	4.38e5	9.70e5	36.58	1.000	1.21	NO	49.507	0.108	1.047	-1.0	1.01e7	7991	1258.7	8.31e6	5318	1563.6	db
13	234678-HxCDF	5.06e5	4.06e5	9.12e5	37.08	1.014	1.25	NO	51.548	0.119	0.985	3.1	9.24e6	7991	1155.8	7.56e6	5318	1422.6	bb
14	123789-HxCDF	4.24e5	3.41e5	7.64e5	37.89	1.036	1.24	NO	52.131	0.144	0.825	4.3	7.04e6	7991	880.9	5.65e6	5318	1062.6	bb
15	1234678-HpCDF	3.97e5	3.81e5	7.78e5	39.43	1.000	1.04	NO	50.353	0.0852	1.286	0.7	6.15e6	3095	1988.3	5.95e6	3551	1675.6	bd
16	1234789-HpCDF	2.96e5	2.92e5	5.88e5	41.44	1.051	1.01	NO	52.176	0.117	0.971	4.4	3.83e6	3095	1237.4	3.81e6	3551	1073.4	bb
17	OCDF	4.32e5	4.81e5	9.13e5	45.49	1.008	0.90	NO	97.136	0.160	1.197	-2.9	4.21e6	1942	2170.3	4.75e6	3014	1576.5	bd
18	13C-2378-TCDD	7.64e5	9.70e5	1.73e6	31.72	1.013	0.79	NO	92.805	0.0323	1.039	-7.2	1.62e7	2054	7880.1	2.09e7	1593	13102.1	bb
19	13C-12378-PeCDD	8.25e5	5.24e5	1.35e6	34.53	1.102	1.58	NO	85.047	0.0562	0.808	-15.0	1.80e7	4010	4476.5	1.13e7	1378	8200.7	bb
20	13C-123678-HxCDD	7.30e5	5.74e5	1.30e6	37.29	0.993	1.27	NO	96.534	0.0862	1.073	-3.5	1.33e7	3094	4293.3	1.05e7	3497	2993.9	db
21	13C-1234678-HpCDD	4.79e5	4.42e5	9.21e5	40.72	1.085	1.08	NO	94.664	0.120	0.758	-5.3	6.25e6	3103	2013.2	5.95e6	3496	1701.1	bd
22	13C-OCDD	7.19e5	8.06e5	1.52e6	45.14	1.202	0.89	NO	187.727	0.181	0.627	-6.1	7.09e6	3418	2074.7	8.10e6	4910	1649.7	bd
23	13C-2378-TCDF	1.28e6	1.61e6	2.89e6	31.18	0.995	0.79	NO	95.106	0.0149	1.732	-4.9	2.14e7	1144	18692.1	2.70e7	1598	16876.4	bb
24	13C-12378-PeCDF	1.42e6	9.33e5	2.35e6	33.70	1.076	1.52	NO	83.308	0.0635	1.410	-16.7	3.29e7	5105	6445.1	2.10e7	5732	3656.9	bb
25	13C-123678-HxCDF	6.15e5	1.24e6	1.85e6	36.57	0.974	0.50	NO	93.472	0.130	1.524	-6.5	1.16e7	4757	2441.9	2.21e7	9781	2254.5	db
26	13C-1234678-HpCDF	3.73e5	8.37e5	1.21e6	39.42	1.050	0.45	NO	92.165	0.108	0.996	-7.8	5.65e6	3492	1619.2	1.26e7	4553	2777.0	bd
27	13C-1234-TCDD	7.42e5	9.27e5	1.67e6	31.33	0.000	0.80	NO	100.000	0.0362	1.000	0.0	1.35e7	2054	6549.4	1.63e7	1593	10236.0	bb
28	13C-123789-HxCDD	6.81e5	5.34e5	1.22e6	37.54	0.000	1.28	NO	100.000	0.0958	1.000	0.0	1.16e7	3094	3739.8	9.12e6	3497	2606.8	bb
29	37Cl-2378-TCDD (SS)	1.94e5		1.94e5	31.73	1.000			10.606	0.0111	1.118	6.1	4.26e6	1434	2973.3				bb
30	13C-23478-PeCDF (SS)	1.40e6	8.86e5	2.28e6	34.33	1.019	1.58	NO	103.946	0.0639	0.970	3.9	3.16e7	5105	6190.1	1.99e7	5732	3479.1	bb

Quantify Sample Summary Report

MassLynx 4.1

Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_7-14.qld

Last Altered: Monday, November 08, 2010 12:19:18 Eastern Standard Time

Printed: Monday, November 08, 2010 12:20:39 Eastern Standard Time

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Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7, Task: HRP763_1, User: MJC

Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
13C-123478-HxCDF (SS)	5.47e5	1.04e6	1.58e6	36.47	0.997	0.53	NO	105.606	0.154	0.855	5.6	1.08e7	4757	2260.9	2.03e7	9781	2076.2	bd
13C-123478-HxCDD (SS)	6.78e5	5.28e5	1.21e6	37.20	0.998	1.28	NO	107.365	0.0968	0.924	7.4	1.25e7	3094	4037.9	9.63e6	3497	2754.9	bd
13C-1234789-HpCDF (SS)	2.79e5	6.38e5	9.17e5	41.43	1.051	0.44	NO	100.195	0.174	0.758	0.2	3.56e6	3492	1019.4	8.01e6	4553	1758.4	bb

Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_7-14.qld

Last Altered: Monday, November 08, 2010 12:19:18 Eastern Standard Time

Printed: Monday, November 08, 2010 12:20:39 Eastern Standard Time

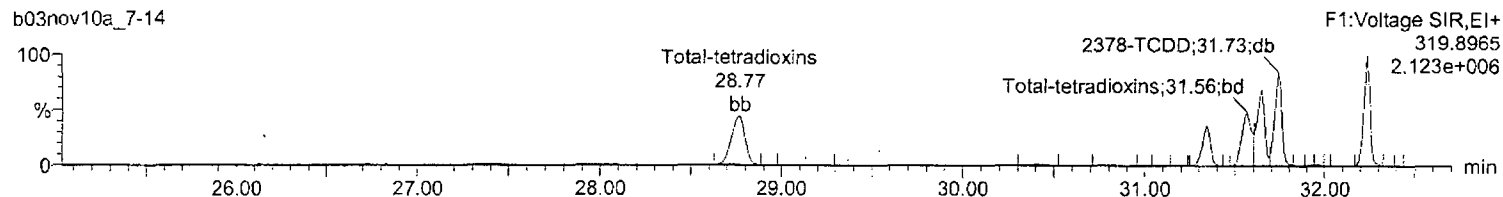
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7, Task: HRP763_1, User: MJC

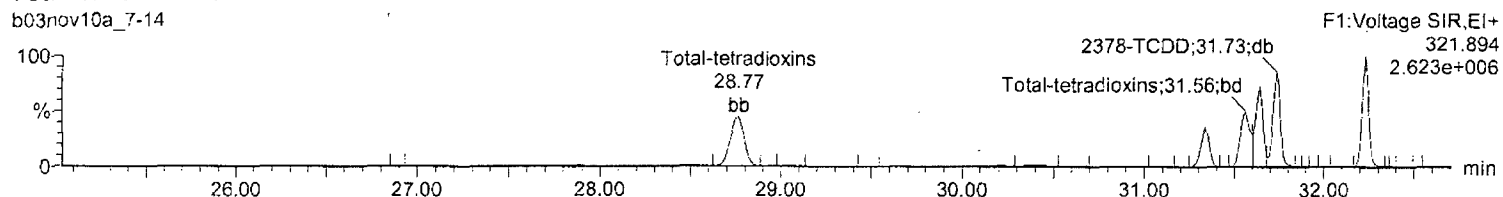
Total-tetradoxins

b03nov10a_7-14



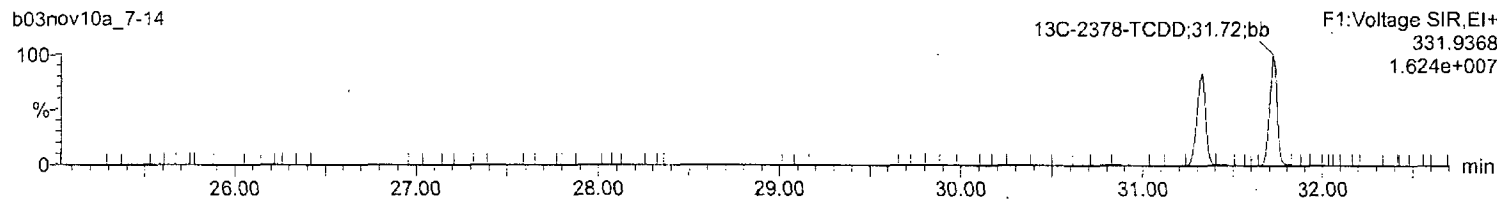
Total-tetradoxins

b03nov10a_7-14



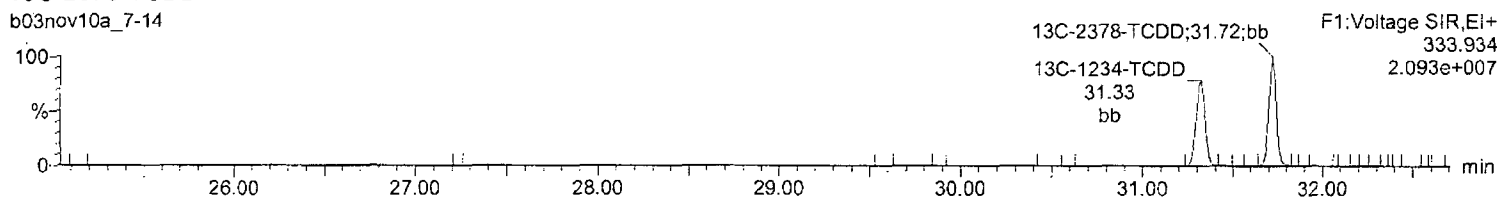
13C-2378-TCDD

b03nov10a_7-14



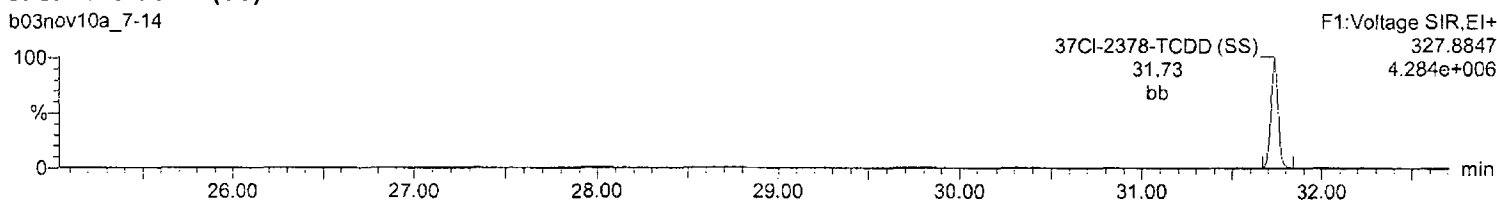
13C-2378-TCDD

b03nov10a_7-14



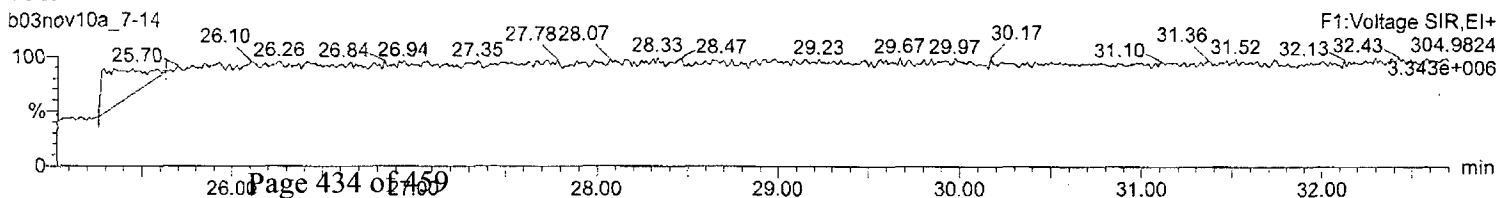
37Cl-2378-TCDD (SS)

b03nov10a_7-14



Lock Mass F1

b03nov10a_7-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_7-14.qld

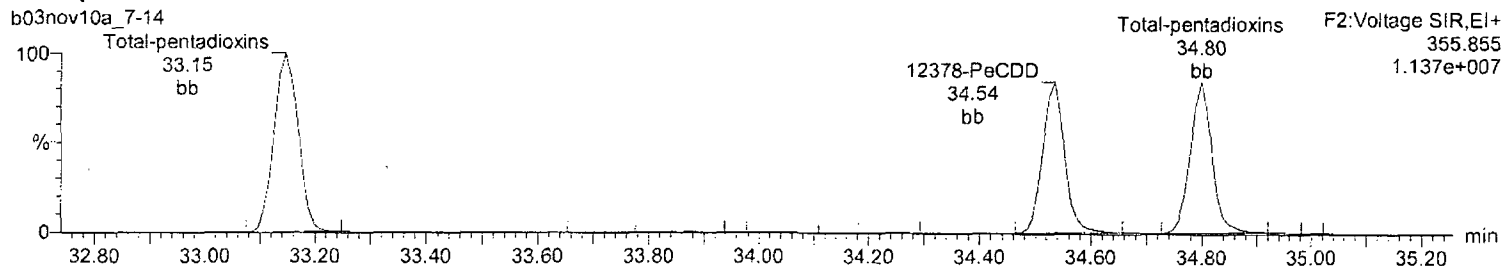
Last Altered: Monday, November 08, 2010 12:19:18 Eastern Standard Time

Printed: Monday, November 08, 2010 12:20:39 Eastern Standard Time

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7, Task: HRP763_1, User: MJC

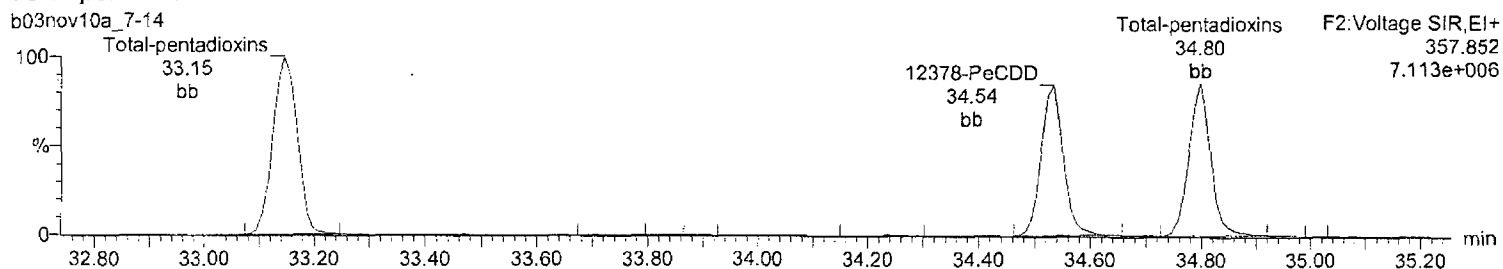
Total-pentadioxins

b03nov10a_7-14



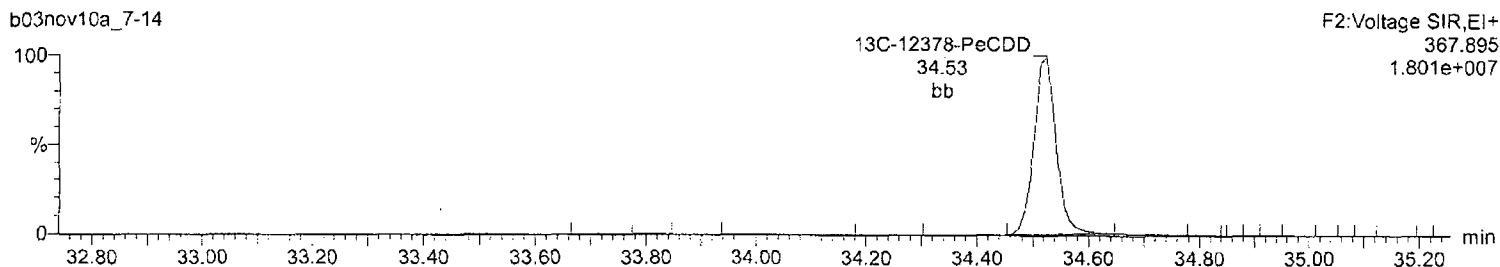
Total-pentadioxins

b03nov10a_7-14



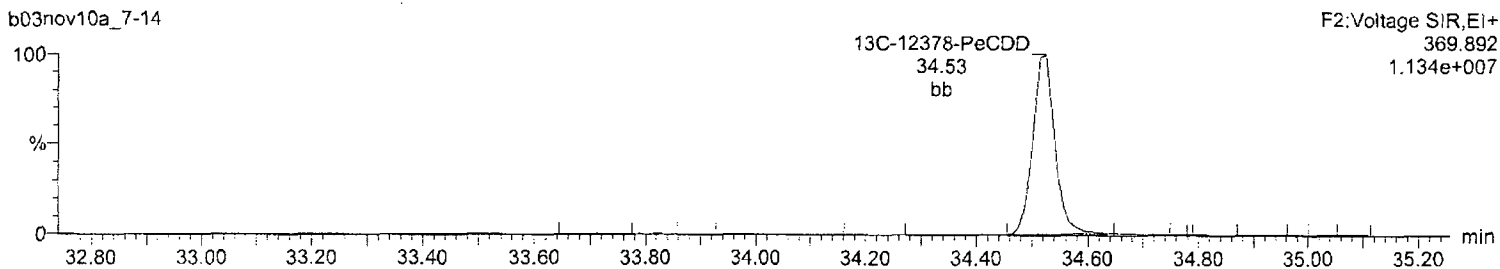
13C-12378-PeCDD

b03nov10a_7-14



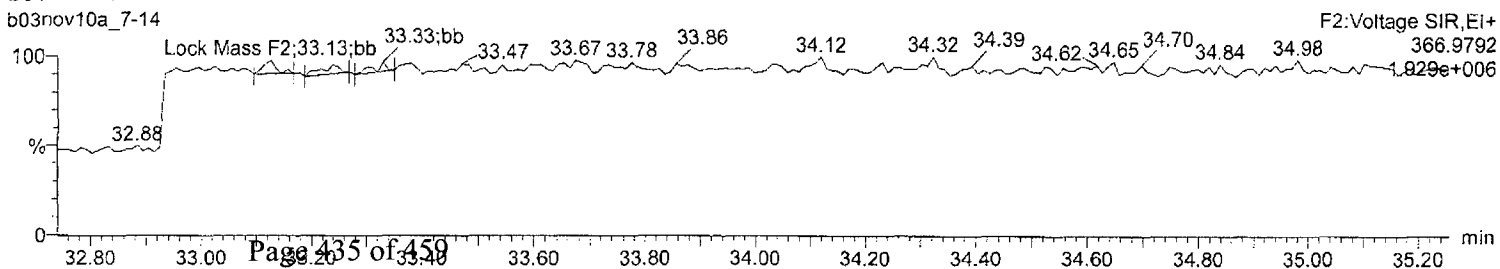
13C-12378-PeCDD

b03nov10a_7-14



Lock Mass F2

b03nov10a_7-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_7-14.qld

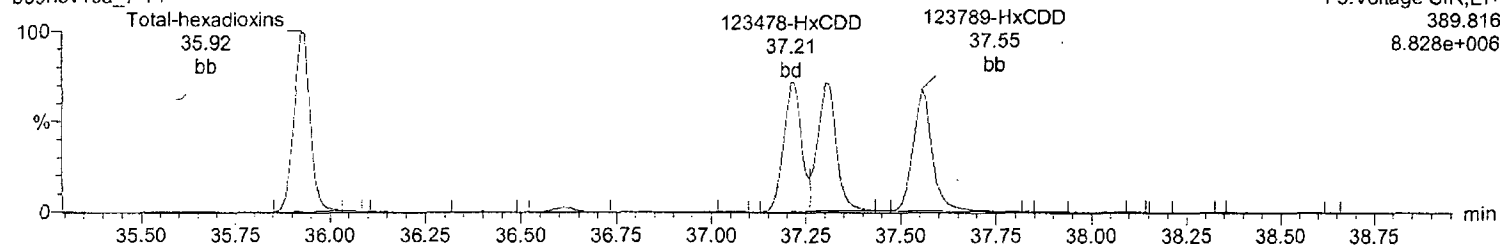
Last Altered: Monday, November 08, 2010 12:19:18 Eastern Standard Time

Printed: Monday, November 08, 2010 12:20:39 Eastern Standard Time

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7,
Task: HRP763_1, User: MJC

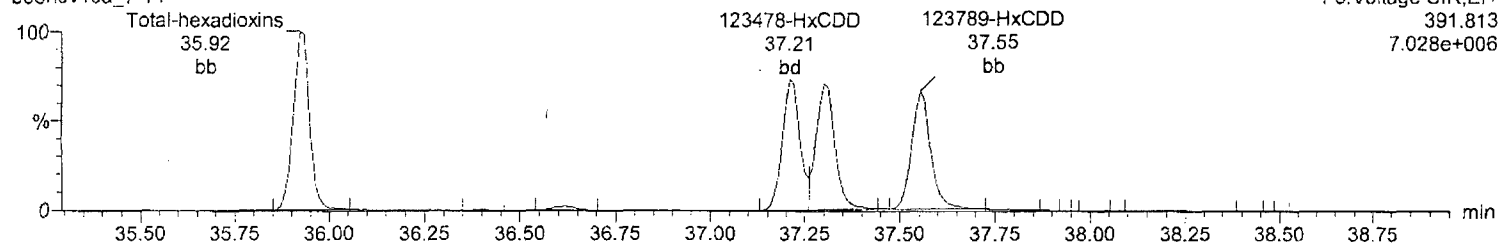
Total-hexadioxins

b03nov10a_7-14



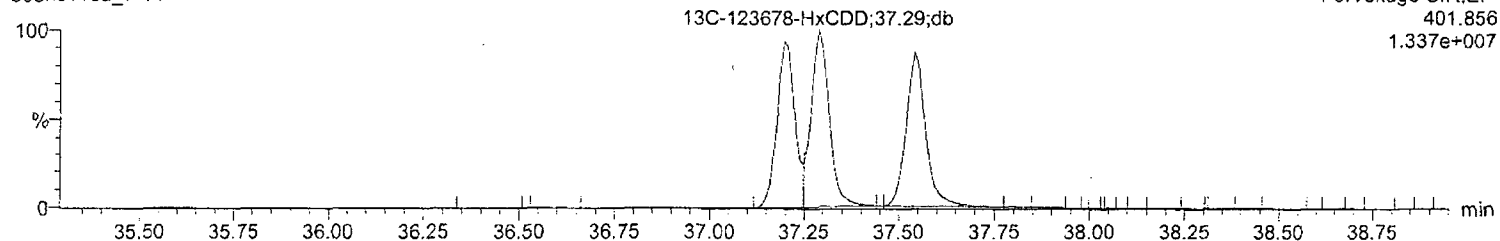
Total-hexadioxins

b03nov10a_7-14



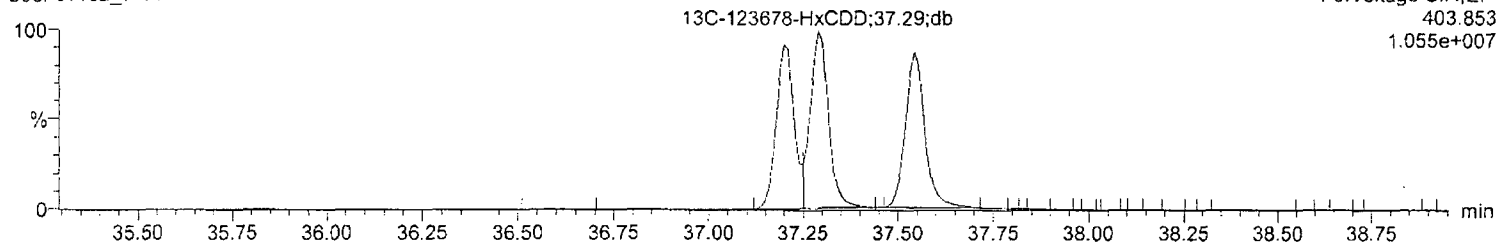
13C-123678-HxCDD

b03nov10a_7-14



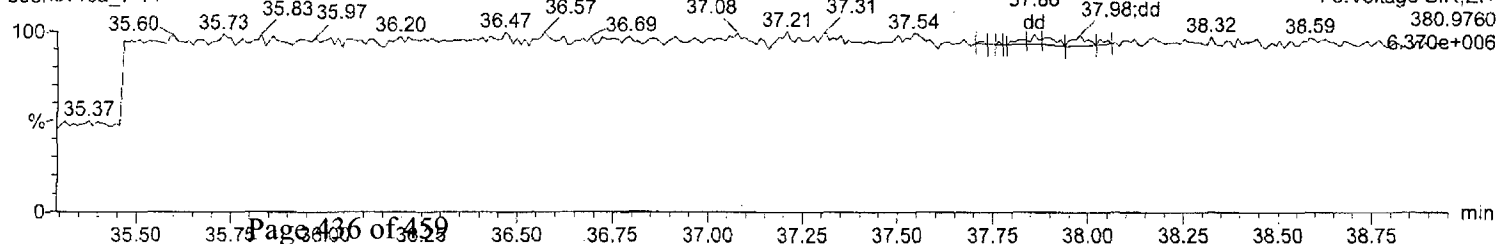
13C-123678-HxCDD

b03nov10a_7-14



Lock Mass F3

b03nov10a_7-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_7-14.qld

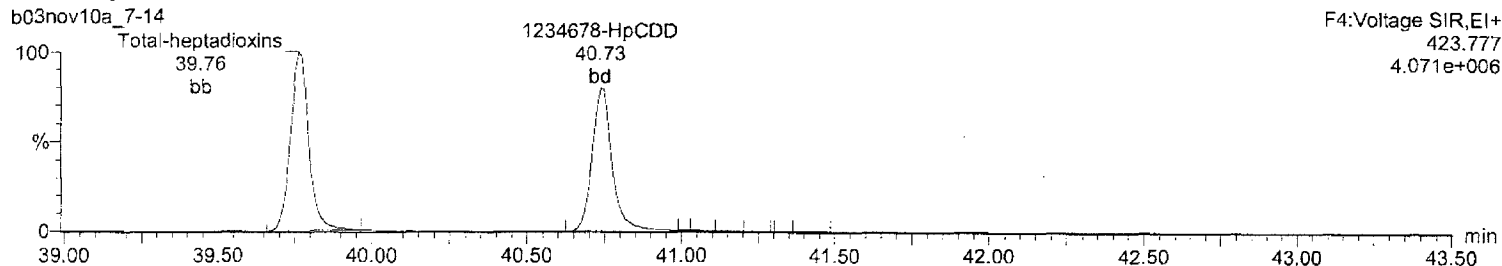
Last Altered: Monday, November 08, 2010 12:19:18 Eastern Standard Time

Printed: Monday, November 08, 2010 12:20:39 Eastern Standard Time

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7,
Task: HRP763_1, User: MJC

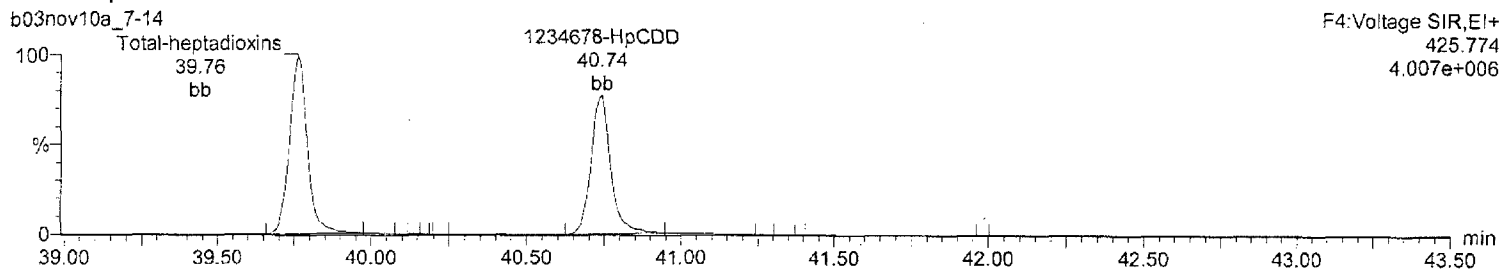
Total-heptadioxins

b03nov10a_7-14



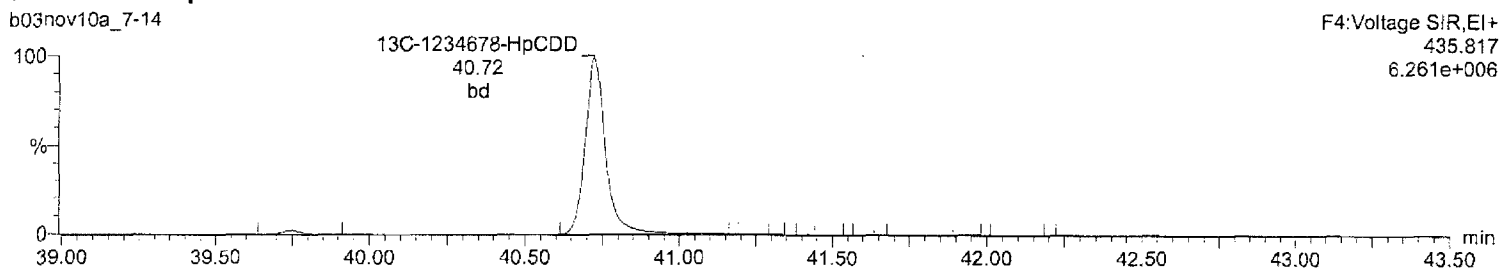
Total-heptadioxins

b03nov10a_7-14



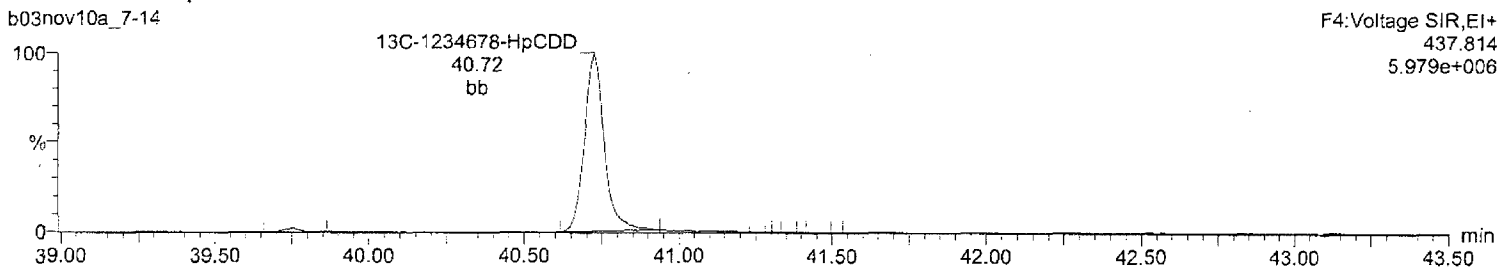
13C-1234678-HpCDD

b03nov10a_7-14



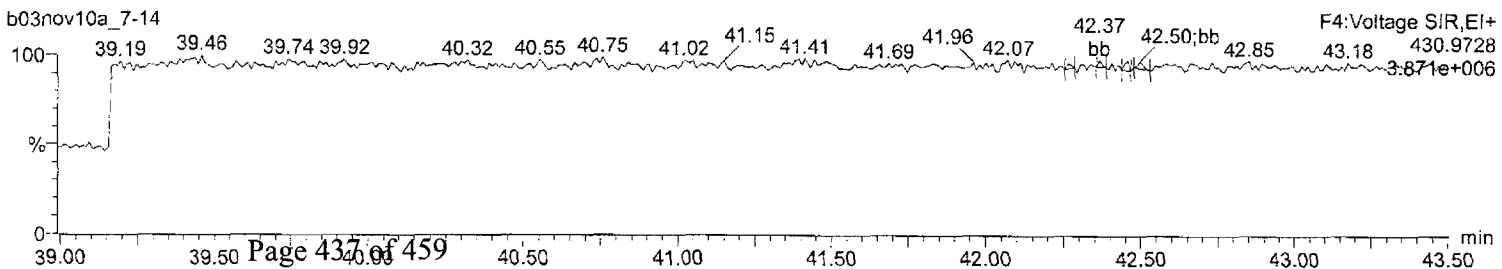
13C-1234678-HpCDD

b03nov10a_7-14



Lock Mass F4

b03nov10a_7-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_7-14.qld

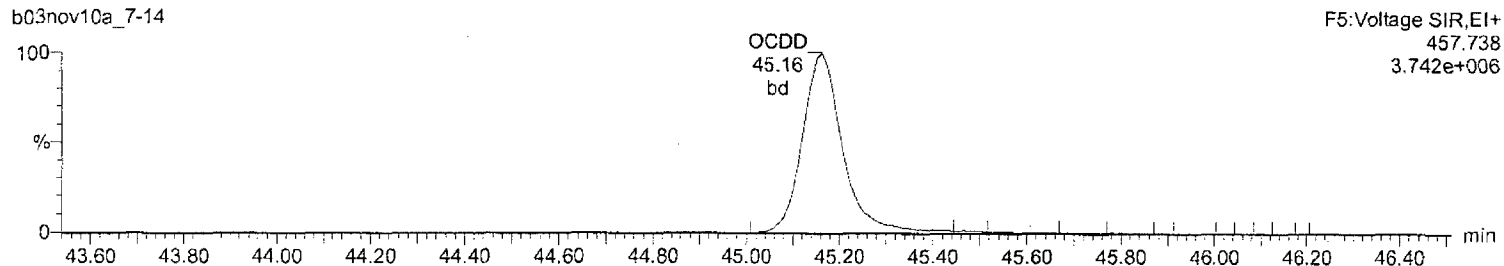
Last Altered: Monday, November 08, 2010 12:19:18 Eastern Standard Time

Printed: Monday, November 08, 2010 12:20:39 Eastern Standard Time

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7,
Task: HRP763_1, User: MJC

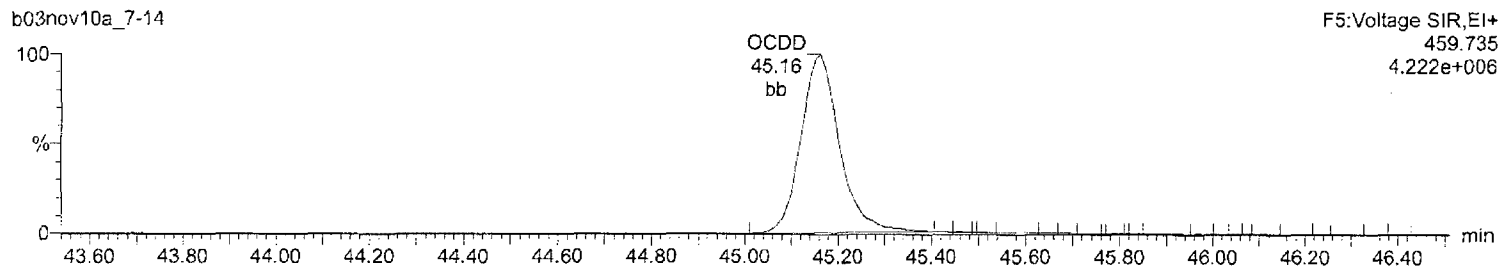
OCDD

b03nov10a_7-14



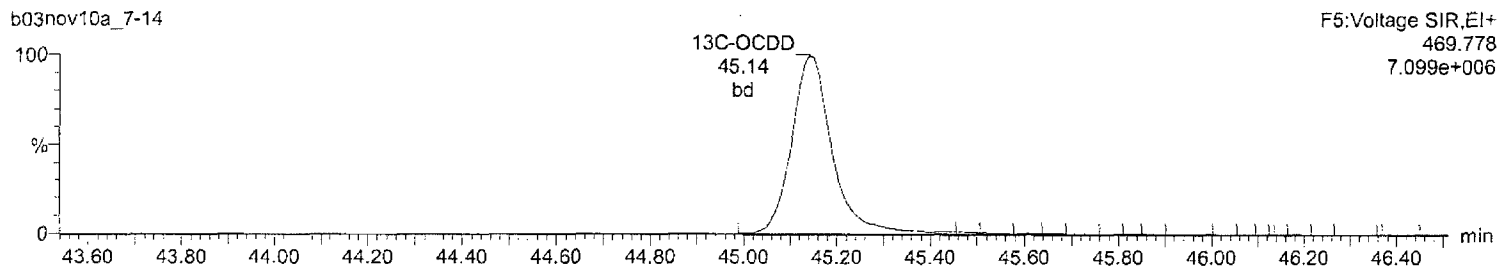
OCDD

b03nov10a_7-14



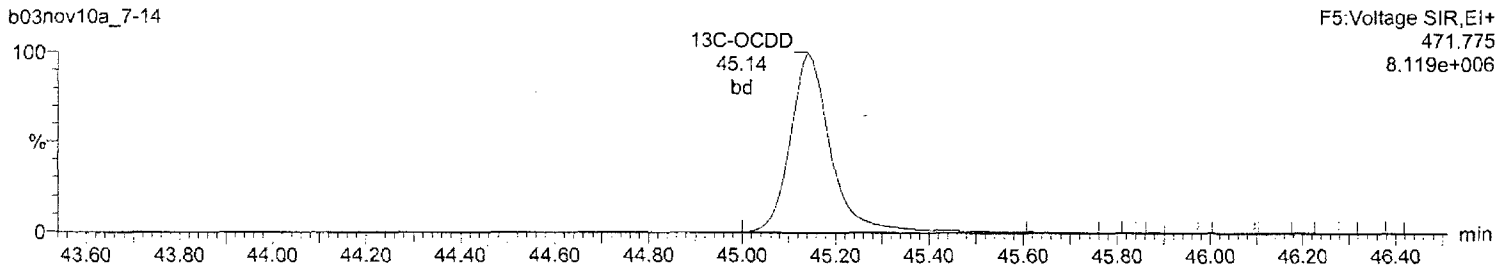
13C-OCDD

b03nov10a_7-14



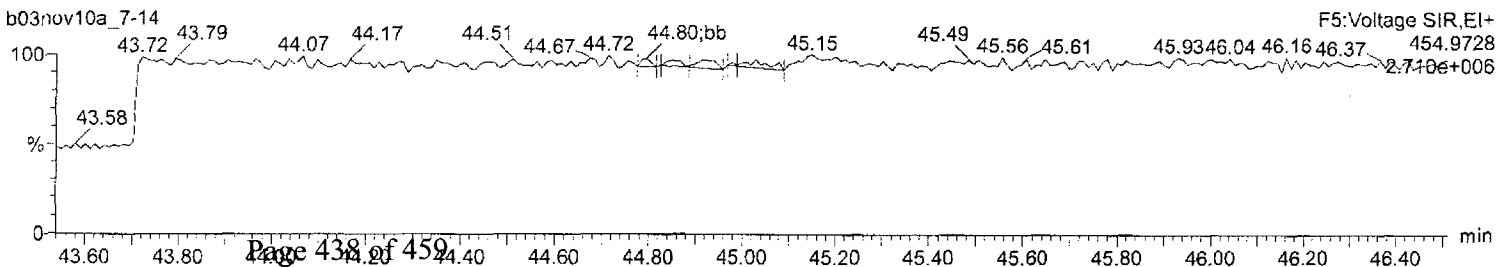
13C-OCDD

b03nov10a_7-14



Lock Mass F5

b03nov10a_7-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_7-14.qld

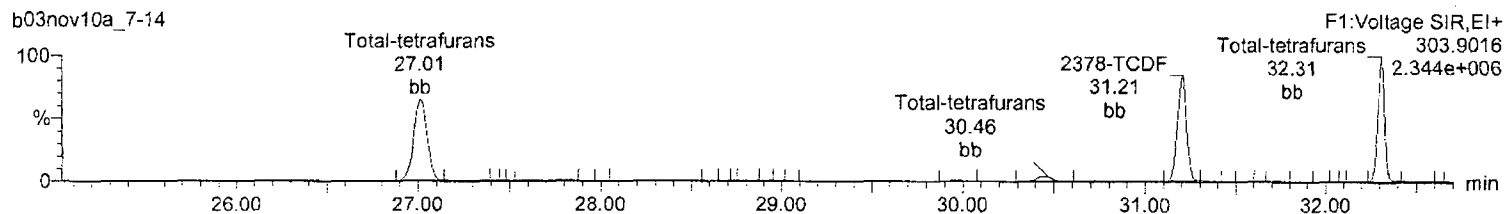
Last Altered: Monday, November 08, 2010 12:19:18 Eastern Standard Time

Printed: Monday, November 08, 2010 12:20:39 Eastern Standard Time

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7, Task: HRP763_1, User: MJC

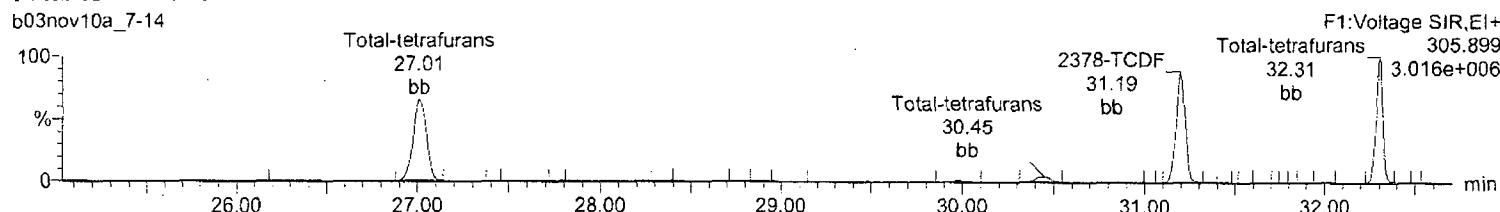
Total-tetrafurans

b03nov10a_7-14



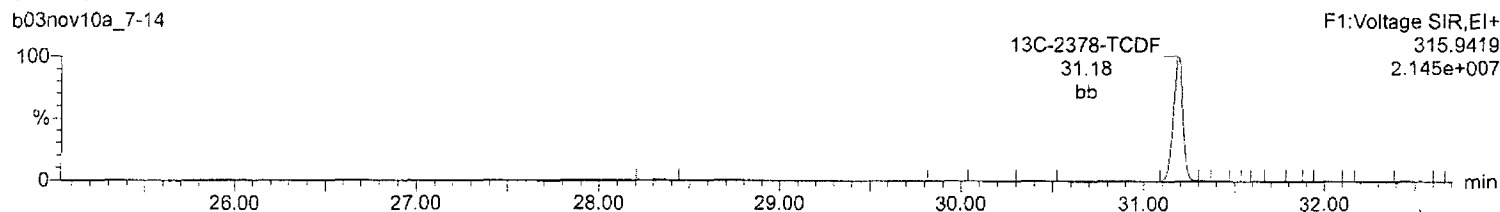
Total-tetrafurans

b03nov10a_7-14



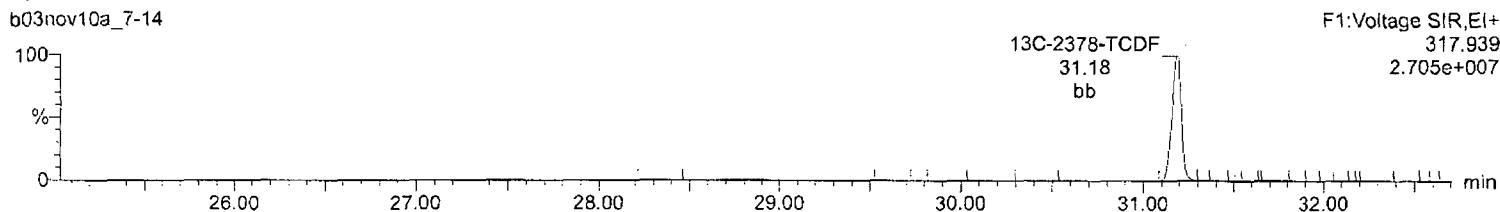
13C-2378-TCDF

b03nov10a_7-14



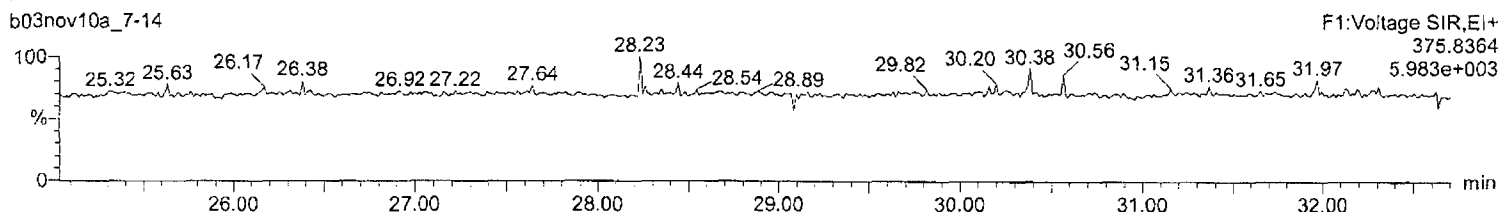
13C-2378-TCDF

b03nov10a_7-14



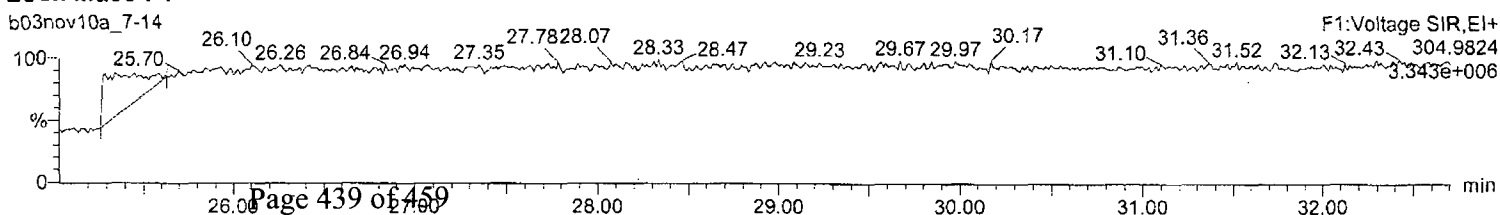
HxDPE

b03nov10a_7-14



Lock Mass F1

b03nov10a_7-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_7-14.qld

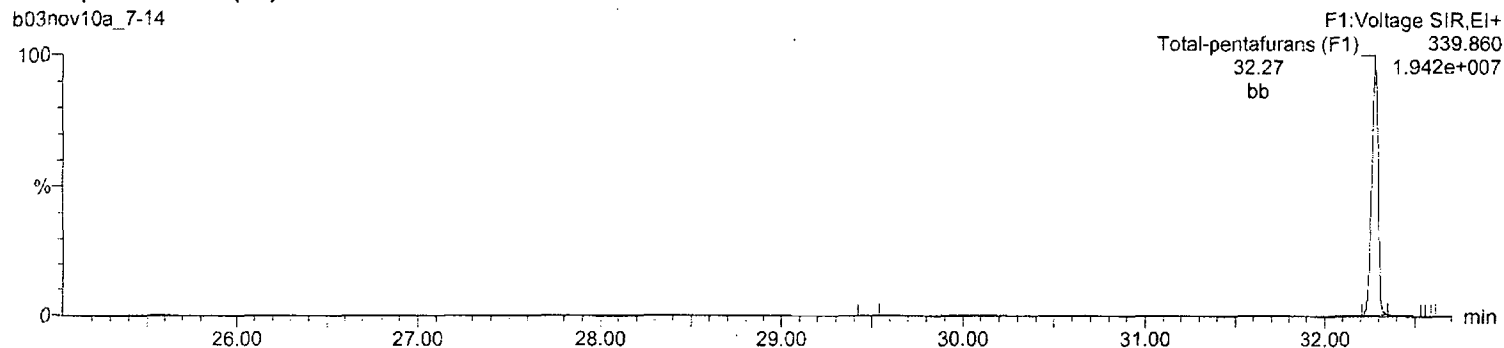
Last Altered: Monday, November 08, 2010 12:19:18 Eastern Standard Time

Printed: Monday, November 08, 2010 12:20:39 Eastern Standard Time

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7,
Task: HRP763_1, User: MJC

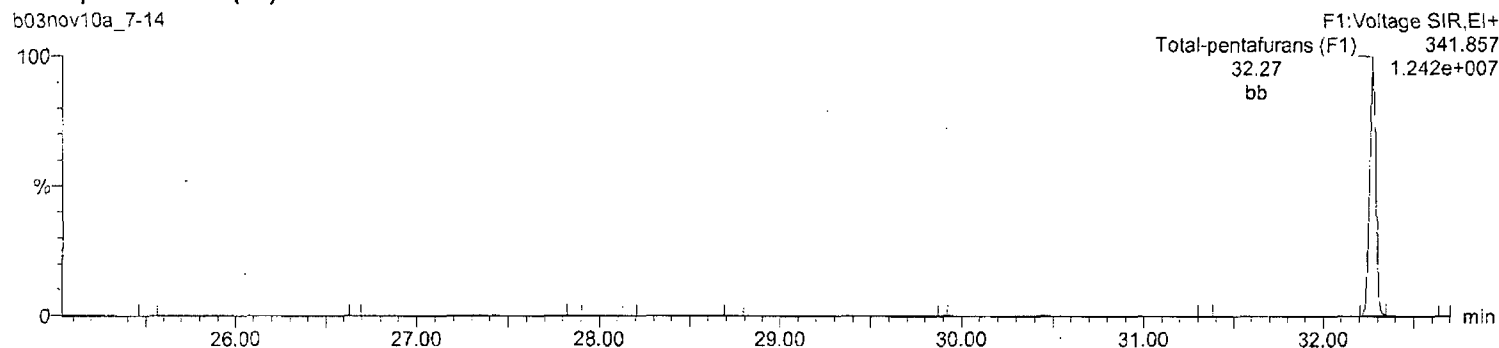
Total-pentafurans (F1)

b03nov10a_7-14



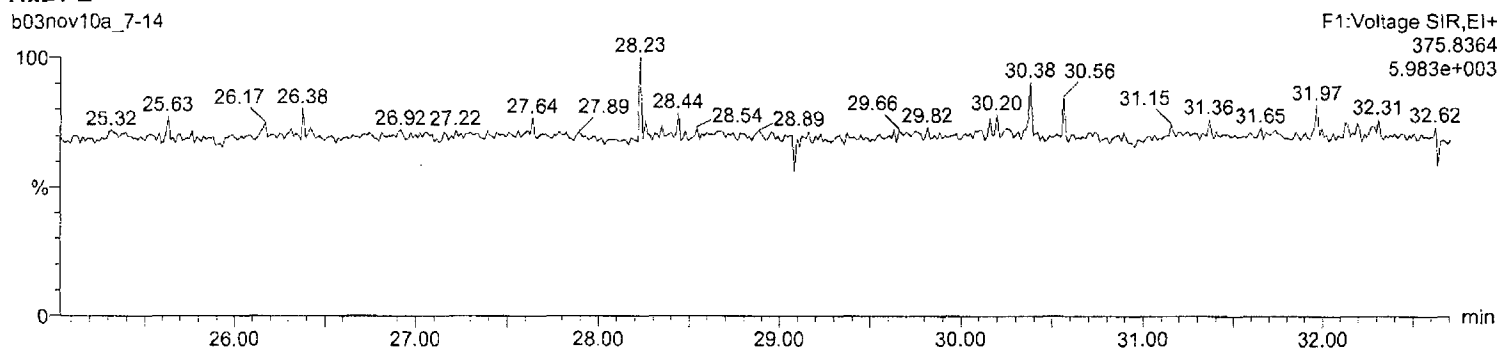
Total-pentafurans (F1)

b03nov10a_7-14



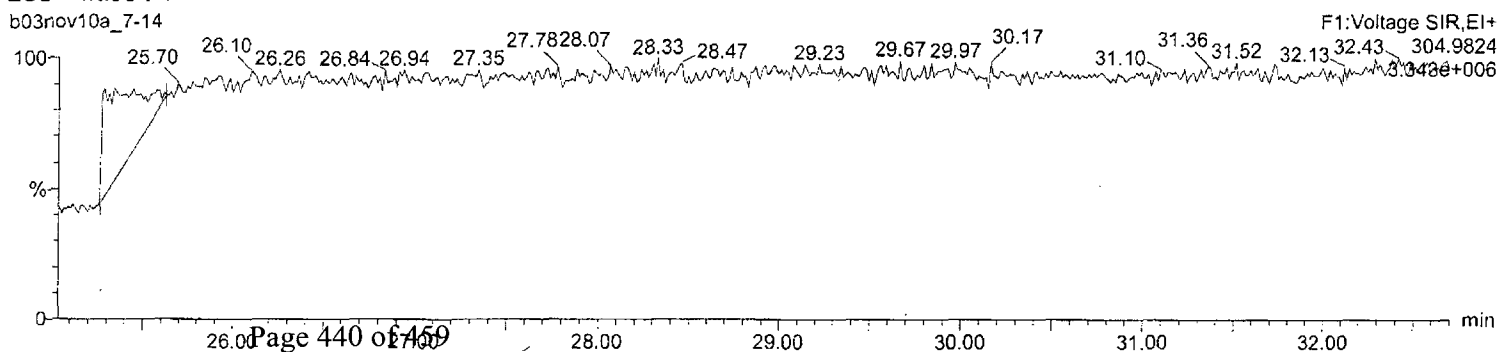
HxDPE

b03nov10a_7-14



Lock Mass F1

b03nov10a_7-14



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_7-14.qld

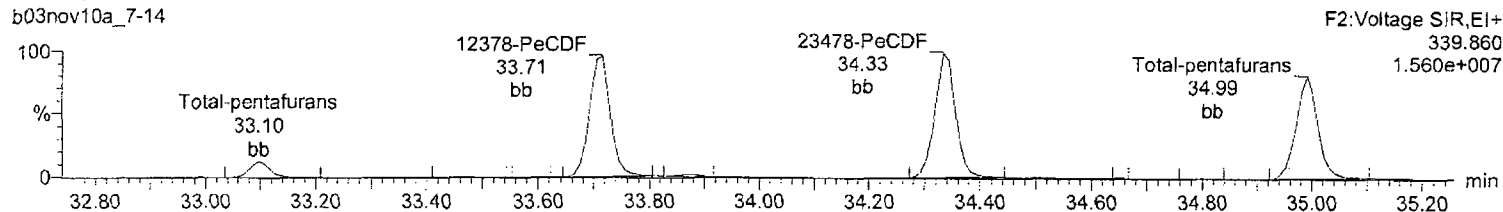
Last Altered: Monday, November 08, 2010 12:19:18 Eastern Standard Time

Printed: Monday, November 08, 2010 12:20:39 Eastern Standard Time

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7, Task: HRP763_1, User: MJC

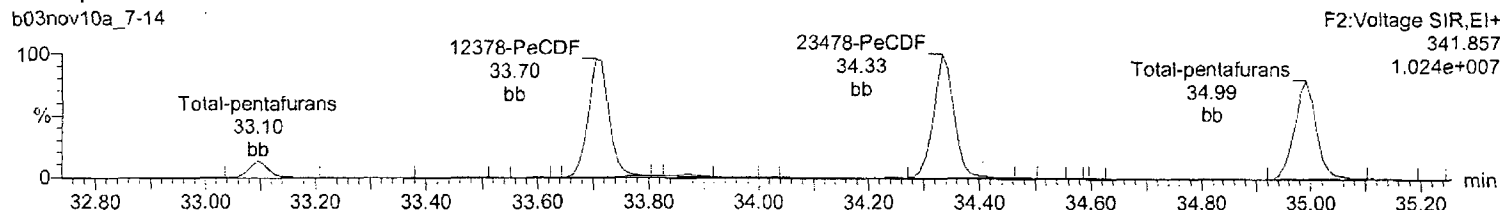
Total-pentafurans

b03nov10a_7-14



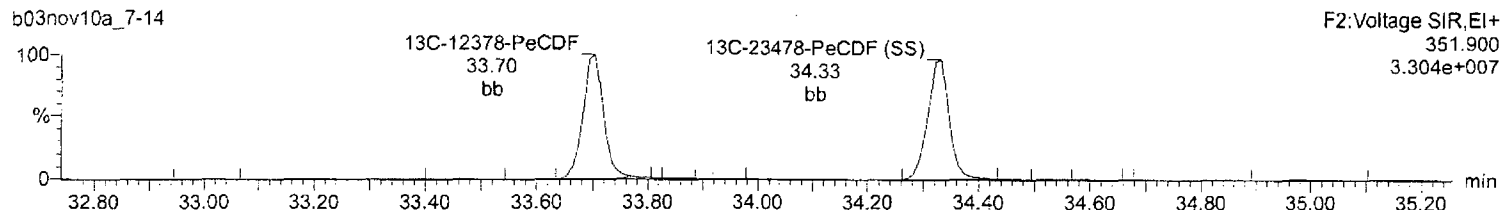
Total-pentafurans

b03nov10a_7-14



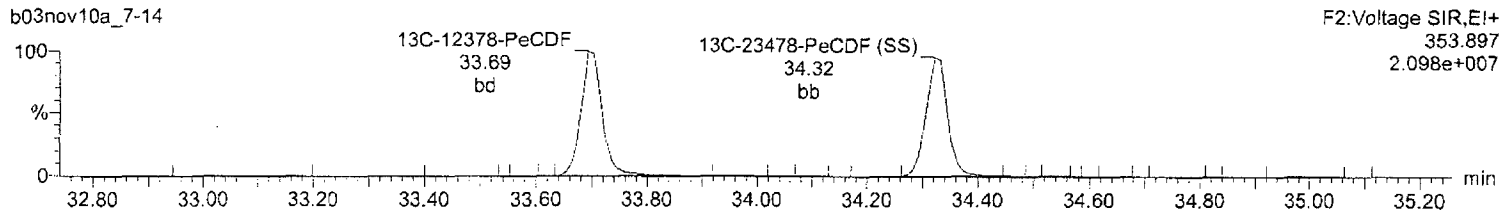
¹³C-12378-PeCDF

b03nov10a_7-14



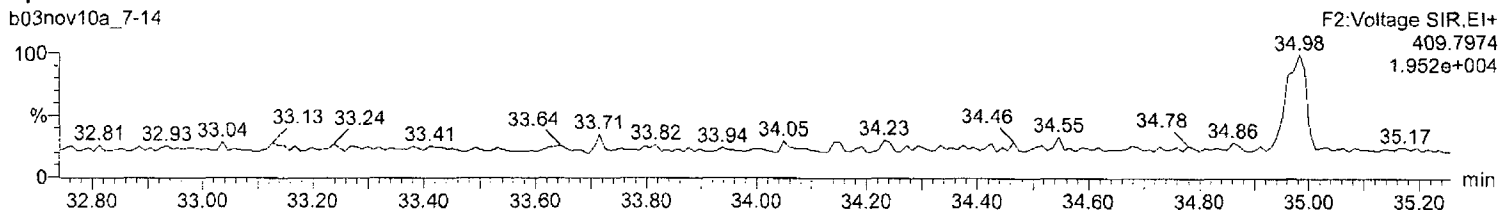
¹³C-12378-PeCDF

b03nov10a_7-14



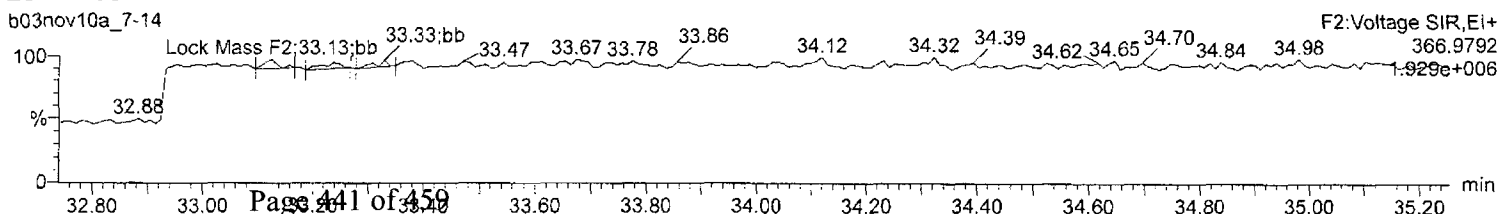
HpDPE

b03nov10a_7-14



Lock Mass F2

b03nov10a_7-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_7-14.qld

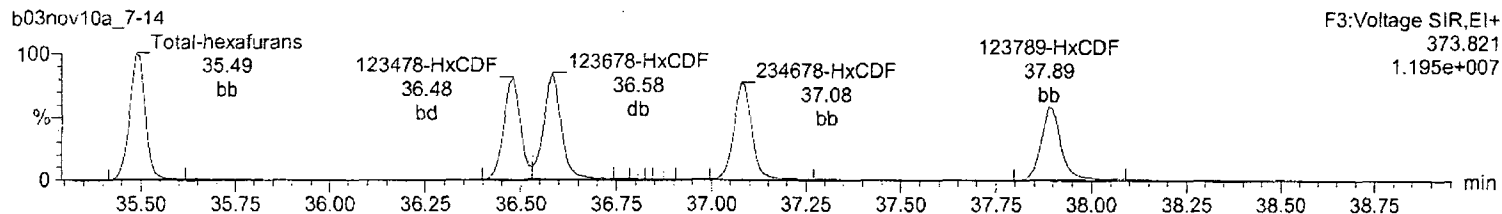
Last Altered: Monday, November 08, 2010 12:19:18 Eastern Standard Time

Printed: Monday, November 08, 2010 12:20:39 Eastern Standard Time

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7,
Task: HRP763_1, User: MJC

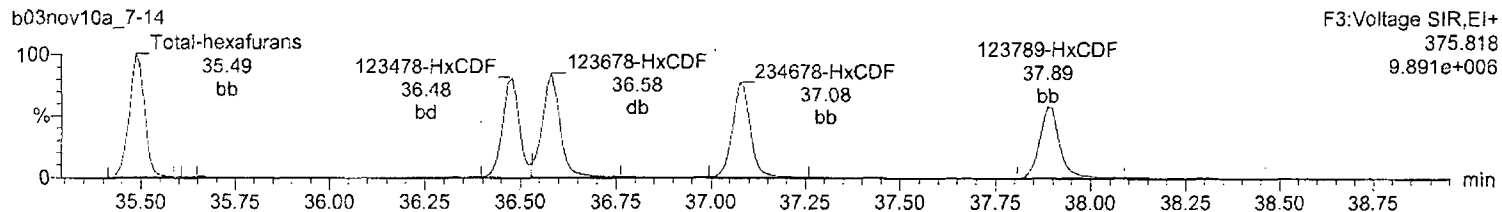
Total-hexafurans

b03nov10a_7-14



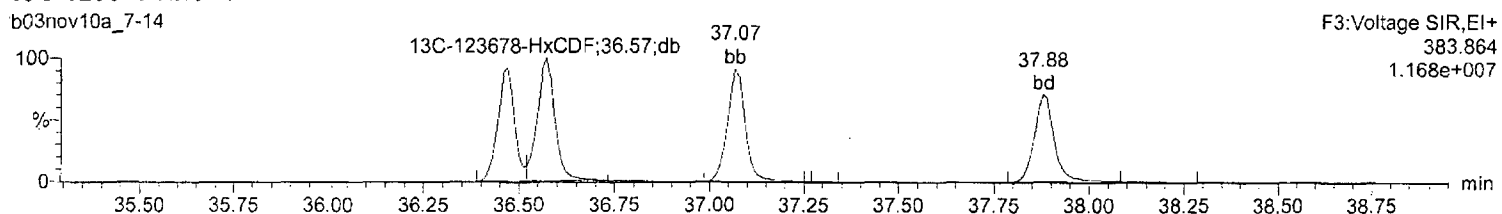
Total-hexafurans

b03nov10a_7-14



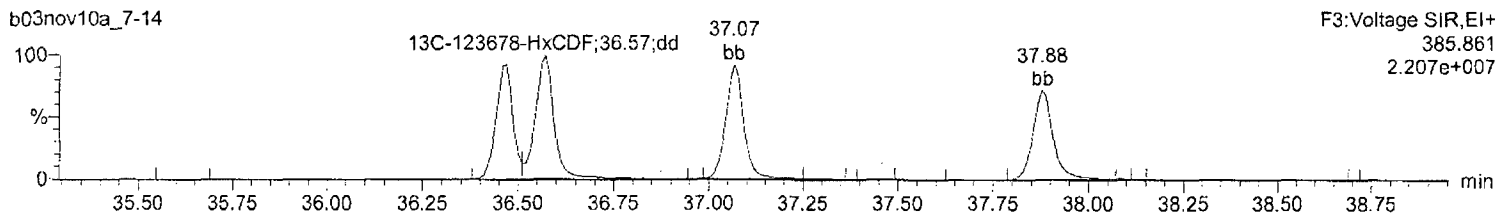
¹³C-123678-HxCDF

b03nov10a_7-14



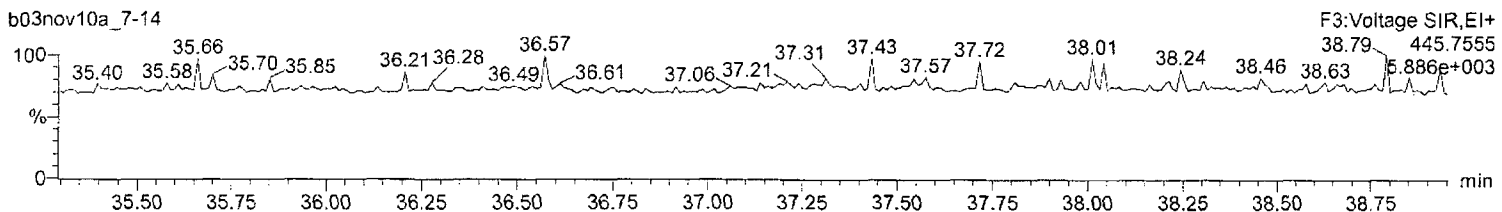
¹³C-123678-HxCDF

b03nov10a_7-14



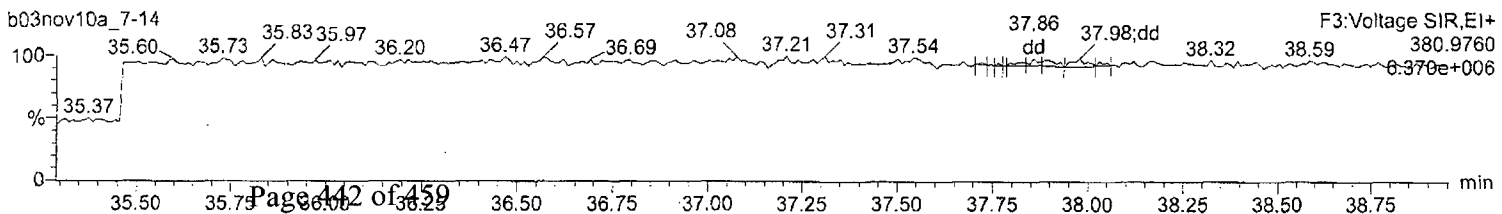
OcDPE

b03nov10a_7-14



Lock Mass F3

b03nov10a_7-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_7-14.qld

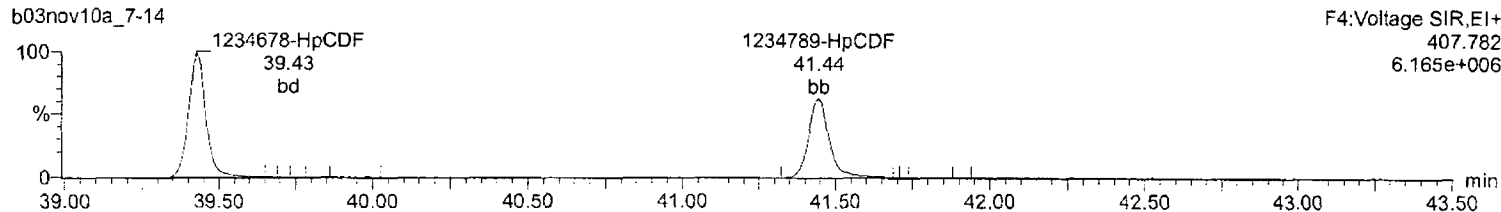
Last Altered: Monday, November 08, 2010 12:19:18 Eastern Standard Time

Printed: Monday, November 08, 2010 12:20:39 Eastern Standard Time

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7,
Task: HRP763_1, User: MJC

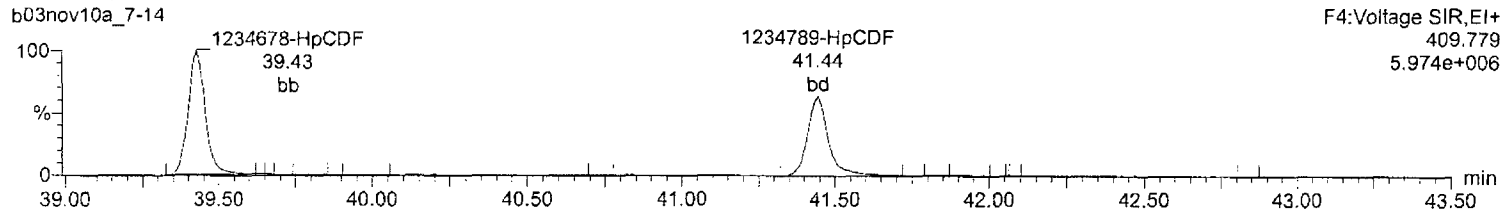
Total-heptafulurans

b03nov10a_7-14



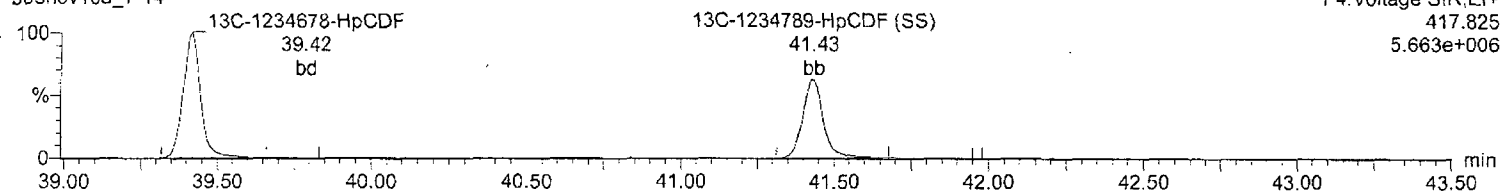
Total-heptafulurans

b03nov10a_7-14



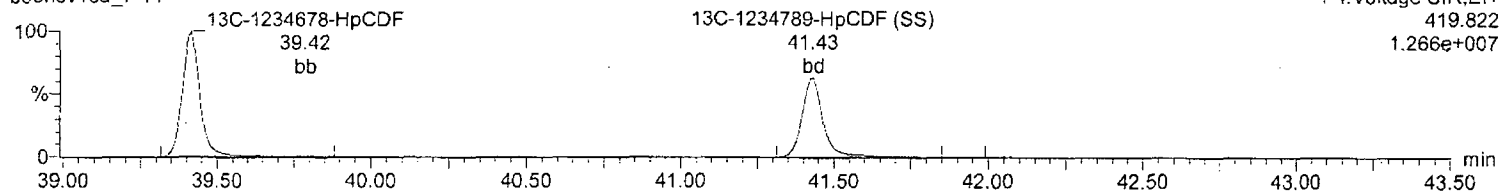
¹³C-1234678-HpCDF

b03nov10a_7-14



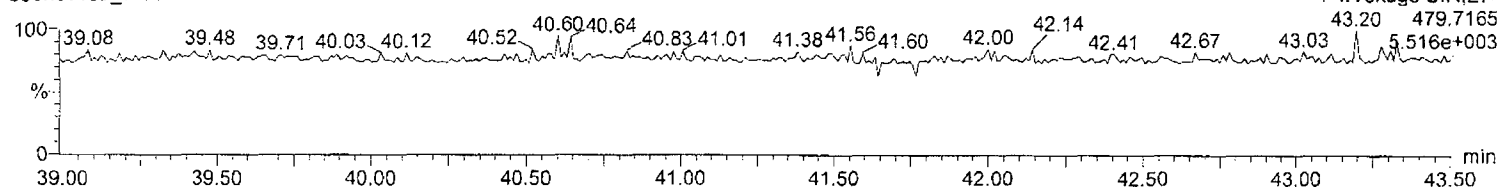
¹³C-1234678-HpCDF

b03nov10a_7-14



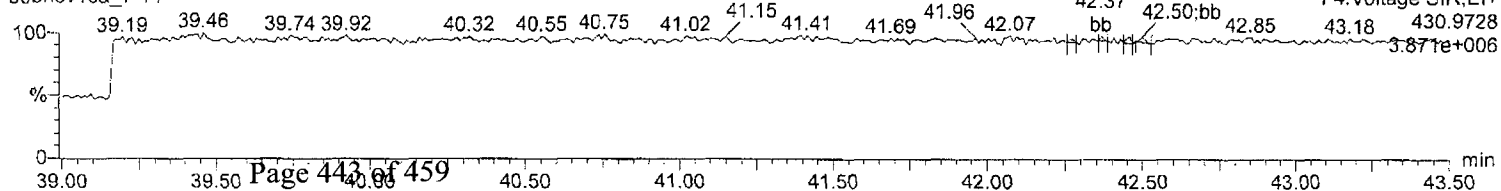
NoDPE

b03nov10a_7-14



Lock Mass F4

b03nov10a_7-14



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_7-14.qld

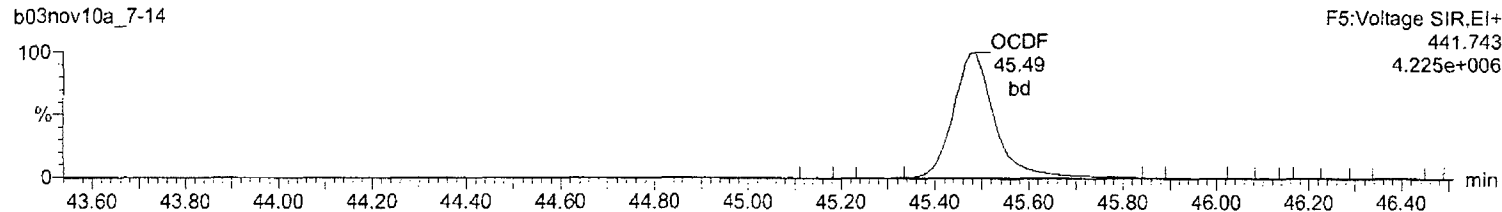
Last Altered: Monday, November 08, 2010 12:19:18 Eastern Standard Time

Printed: Monday, November 08, 2010 12:20:39 Eastern Standard Time

Name: b03nov10a_7-14, Date: 06-Nov-2010, Time: 11:33:25, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_7,
Task: HRP763_1, User: MJC

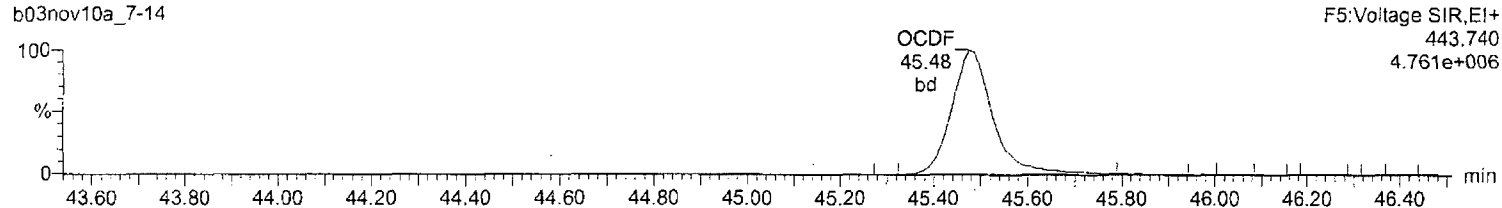
OCDF

b03nov10a_7-14



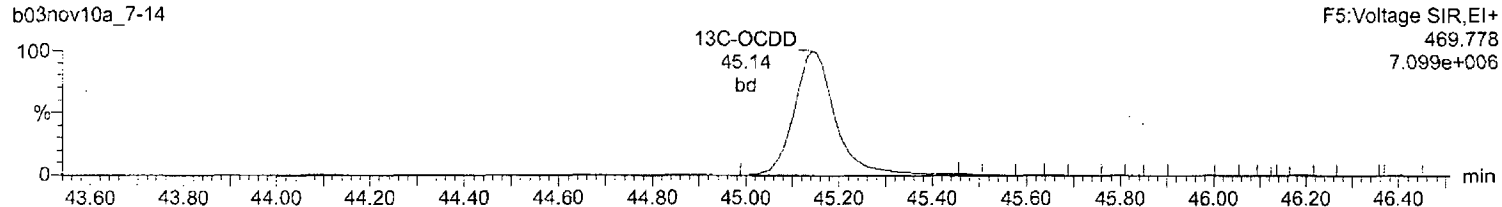
OCDF

b03nov10a_7-14



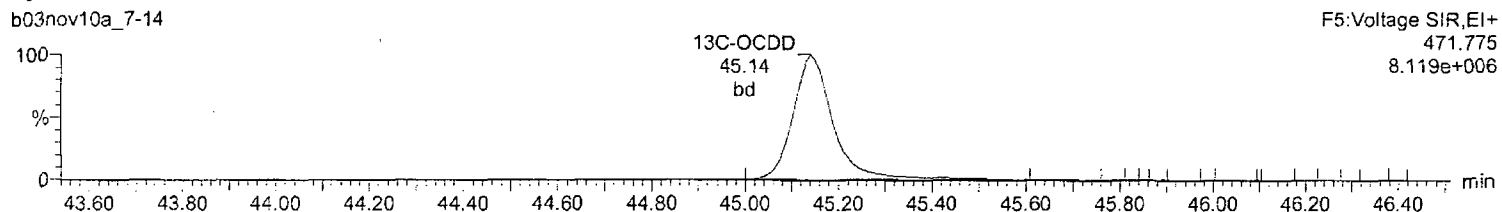
¹³C-OCDD

b03nov10a_7-14



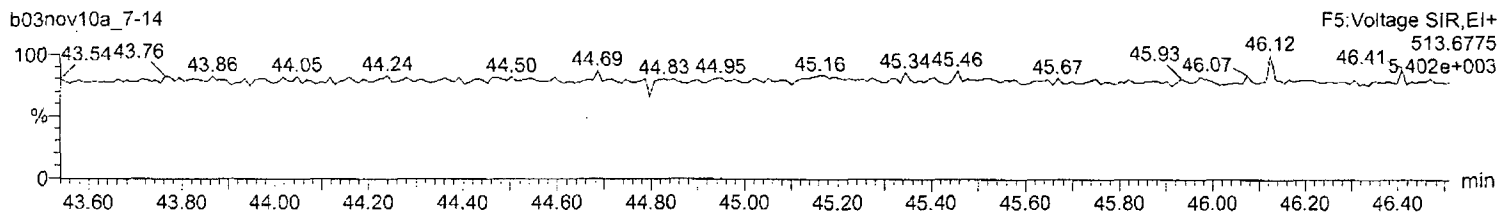
¹³C-OCDD

b03nov10a_7-14



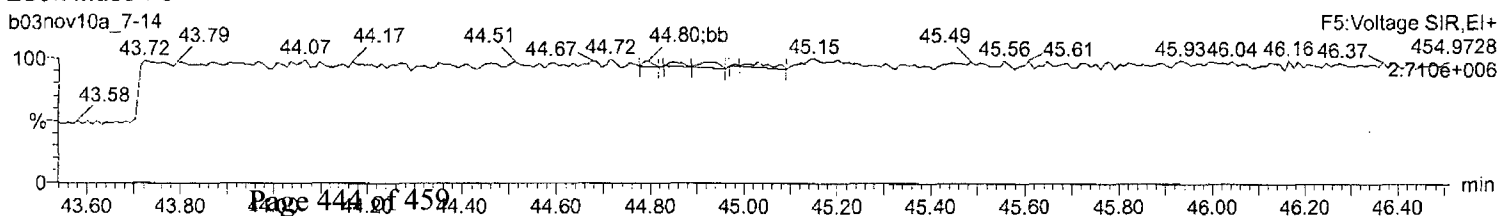
DeDPE

b03nov10a_7-14



Lock Mass F5

b03nov10a_7-14



Quantify Sample Summary Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_8-7.qld

Last Altered: Monday, November 08, 2010 12:15:35 Eastern Standard Time

Printed: Monday, November 08, 2010 12:16:52 Eastern Standard Time

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Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_8-7, Date: 06-Nov-2010, Time: 17:19:52, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_8, Task: HRP763_1, User: MJC

	Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/uL	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
1	2378-TCDD	8.59e4	1.06e5	1.92e5	31.73	1.000	0.81	NO	10.494	0.0172	1.063	4.9	1.72e6	1029	1667.3	2.17e6	1096	1980.1	dd
2	12378-PeCDD	4.72e5	3.00e5	7.72e5	34.54	1.000	1.57	NO	50.227	0.0803	1.037	0.5	1.06e7	5246	2025.0	6.78e6	3830	1768.9	bb
3	123478-HxCDD	3.95e5	3.16e5	7.10e5	37.22	0.998	1.25	NO	52.438	0.111	0.940	4.9	7.47e6	5452	1370.4	5.93e6	3696	1603.8	bd
4	123678-HxCDD	4.11e5	3.29e5	7.40e5	37.30	1.000	1.25	NO	50.628	0.103	0.980	1.3	7.32e6	5452	1342.6	6.01e6	3696	1625.3	db
5	123789-HxCDD	3.87e5	3.07e5	6.94e5	37.55	1.007	1.26	NO	53.059	0.115	0.918	6.1	6.78e6	5452	1242.8	5.38e6	3696	1456.6	bd
6	1234678-HpCDD	2.81e5	2.69e5	5.49e5	40.73	1.000	1.04	NO	50.686	0.153	1.019	1.4	3.84e6	3271	1174.0	3.66e6	4271	857.1	bd
7	OCDD	4.27e5	4.67e5	8.94e5	45.15	1.000	0.91	NO	101.935	0.271	1.015	1.9	4.27e6	5721	746.4	4.75e6	2415	1966.5	bd
8	2378-TCDF	1.23e5	1.61e5	2.84e5	31.21	1.000	0.77	NO	9.357	0.0195	0.920	-6.4	2.07e6	1505	1376.4	2.64e6	1717	1535.5	bb
9	12378-PeCDF	7.05e5	4.70e5	1.18e6	33.71	1.000	1.50	NO	50.278	0.0584	0.939	0.6	1.67e7	5973	2800.2	1.08e7	4888	2213.0	bb
10	23478-PeCDF	7.26e5	4.76e5	1.20e6	34.34	1.019	1.52	NO	52.546	0.0597	0.961	5.1	1.61e7	5973	2693.0	1.06e7	4888	2176.5	bb
11	123478-HxCDF	5.47e5	4.44e5	9.90e5	36.48	0.998	1.23	NO	53.550	0.128	0.973	7.1	1.12e7	7473	1492.5	8.94e6	7398	1208.4	bd
12	123678-HxCDF	5.91e5	4.79e5	1.07e6	36.58	1.000	1.23	NO	49.702	0.110	1.051	-0.6	1.13e7	7473	1510.0	9.03e6	7398	1220.8	db
13	234678-HxCDF	5.61e5	4.55e5	1.02e6	37.08	1.014	1.23	NO	52.246	0.122	0.999	4.5	1.06e7	7473	1425.0	8.69e6	7398	1174.1	bb
14	123789-HxCDF	4.96e5	4.03e5	8.99e5	37.89	1.036	1.23	NO	55.808	0.147	0.884	11.6	7.98e6	7473	1068.5	6.63e6	7398	896.6	bb
15	1234678-HpCDF	4.37e5	4.40e5	8.76e5	39.43	1.000	0.99	NO	51.025	0.0905	1.303	2.0	6.90e6	4100	1681.8	6.74e6	4114	1637.0	bb
16	1234789-HpCDF	3.44e5	3.38e5	6.82e5	41.44	1.051	1.02	NO	54.503	0.124	1.014	9.0	4.45e6	4100	1086.1	4.41e6	4114	1073.0	bb
17	OCDF	4.91e5	5.55e5	1.05e6	45.48	1.008	0.88	NO	96.375	0.156	1.188	-3.6	4.93e6	2549	1932.8	5.60e6	3260	1718.4	bb
18	13C-2378-TCDD	8.00e5	1.01e6	1.81e6	31.72	1.013	0.79	NO	92.483	0.0348	1.035	-7.5	1.62e7	2260	7160.9	2.04e7	1756	11585.4	bb
19	13C-12378-PeCDD	9.11e5	5.78e5	1.49e6	34.53	1.102	1.58	NO	89.644	0.0439	0.852	-10.4	2.01e7	2376	8462.5	1.27e7	1918	6629.6	bb
20	13C-123678-HxCDD	8.48e5	6.62e5	1.51e6	37.29	0.993	1.28	NO	98.342	0.0852	1.093	-1.7	1.55e7	3924	3955.3	1.25e7	3754	3321.8	db
21	13C-1234678-HpCDD	5.53e5	5.25e5	1.08e6	40.72	1.085	1.05	NO	97.527	0.107	0.781	-2.5	7.56e6	3518	2149.4	7.07e6	3397	2081.0	bd
22	13C-OCDD	8.33e5	9.28e5	1.76e6	45.13	1.202	0.90	NO	190.697	0.151	0.637	-4.7	8.55e6	3330	2568.9	9.51e6	4861	1956.7	bd
23	13C-2378-TCDF	1.37e6	1.72e6	3.08e6	31.19	0.996	0.80	NO	96.899	0.0179	1.765	-3.1	2.23e7	1363	16386.9	2.81e7	1994	14079.6	bb
24	13C-12378-PeCDF	1.53e6	9.70e5	2.50e6	33.70	1.076	1.58	NO	84.586	0.0692	1.432	-15.4	3.66e7	6655	5492.5	2.26e7	5403	4187.9	bb
25	13C-123678-HxCDF	6.94e5	1.34e6	2.04e6	36.57	0.974	0.52	NO	90.331	0.0927	1.473	-9.7	1.31e7	5652	2312.1	2.43e7	6600	3688.7	dd
26	13C-1234678-HpCDF	4.15e5	9.30e5	1.34e6	39.42	1.050	0.45	NO	90.054	0.112	0.973	-9.9	6.58e6	4144	1588.6	1.46e7	5693	2572.3	bb
27	13C-1234-TCDD	7.74e5	9.74e5	1.75e6	31.33	0.000	0.79	NO	100.000	0.0390	1.000	0.0	1.37e7	2260	6053.2	1.68e7	1758	9563.6	bb
28	13C-123789-HxCDD	7.72e5	6.10e5	1.38e6	37.54	0.000	1.26	NO	100.000	0.0947	1.000	0.0	1.36e7	3924	3460.2	1.08e7	3754	2864.0	bb
29	37Cl-2378-TCDD (SS)	2.02e5		2.02e5	31.73	1.000			10.593	0.00927	1.117	5.9	4.16e6	1192	3492.1				bb
30	13C-23478-PeCDF (SS)	1.53e6	9.72e5	2.51e6	34.33	1.019	1.58	NO	107.259	0.0649	1.001	7.3	3.41e7	6655	5126.7	2.14e7	5403	3966.5	bb

Quantify Sample Summary Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_8-7.qld

Last Altered: Monday, November 08, 2010 12:15:35 Eastern Standard Time

Printed: Monday, November 08, 2010 12:16:52 Eastern Standard Time

Page 446 of 496
Name: b03nov10a_8-7, Date: 06-Nov-2010, Time: 17:19:52, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_8, Task: HRP763_1, User: MJC

Name	Ion1Area	Ion2Area	Response	RT	RRT	RA	Fail?	pg/ul	EDL	RRF	%D	Height1	Noise1	S/N1	Height2	Noise2	S/N2	M
13C-123478-HxCDF (SS)	6.09e5	1.14e6	1.75e6	36.47	0.997	0.53	NO	106.155	0.118	0.860	6.2	1.20e7	5652	2130.3	2.31e7	6600	3499.5	bd
13C-123478-HxCDD (SS)	7.72e5	6.08e5	1.38e6	37.20	0.998	1.27	NO	106.142	0.0968	0.914	6.1	1.45e7	3924	3686.3	1.14e7	3754	3045.3	bd
13C-1234789-HpCDF (SS)	3.23e5	7.30e5	1.05e6	41.42	1.051	0.44	NO	103.568	0.183	0.783	3.6	4.24e6	4144	1021.9	9.52e6	5693	1671.9	bd

Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_8-7.qld

Last Altered: Monday, November 08, 2010 12:15:35 Eastern Standard Time

Printed: Monday, November 08, 2010 12:16:52 Eastern Standard Time

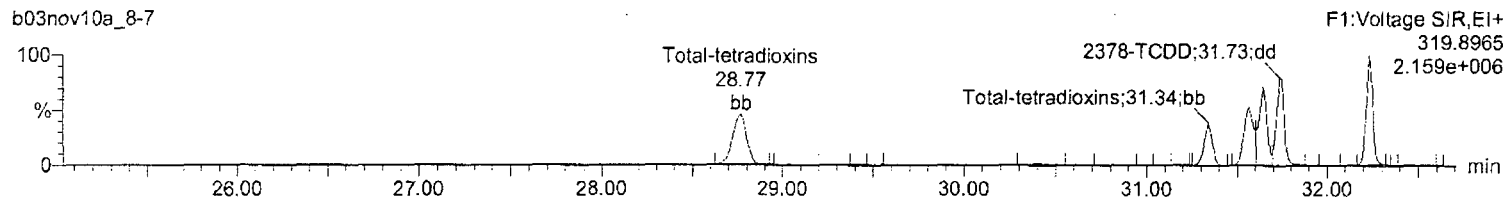
Method: C:\MassLynx\DEFAULT.PRO\MethDB\CFA_EPA8290_110110.mdb 02 Nov 2010 08:23:15

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\8290-b01nov10b.cdb 02 Nov 2010 08:19:01

Name: b03nov10a_8-7, Date: 06-Nov-2010, Time: 17:19:52, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_8,
Task: HRP763_1, User: MJC

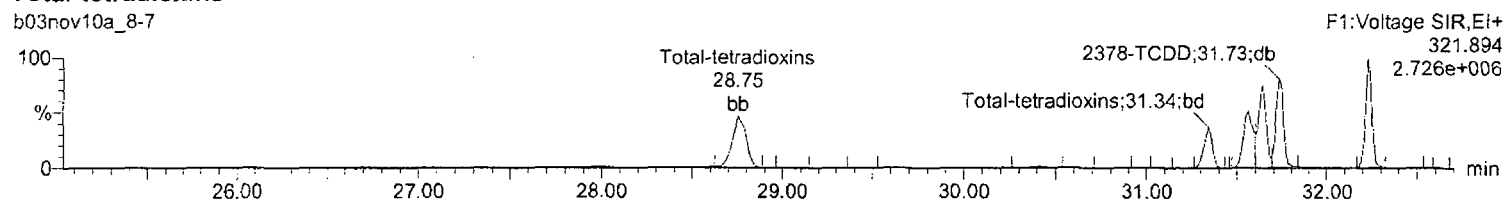
Total-tetradoxins

b03nov10a_8-7



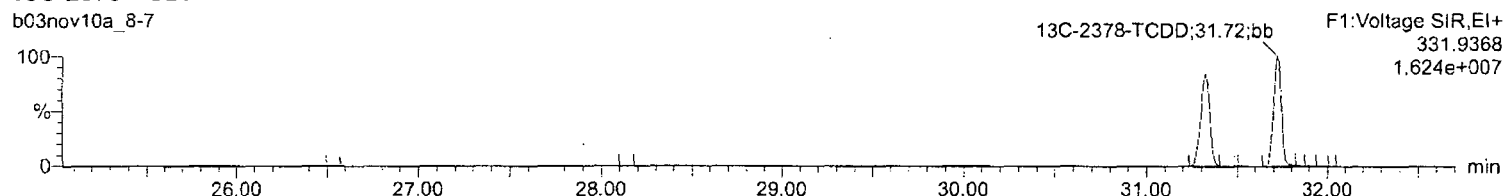
Total-tetradoxins

b03nov10a_8-7



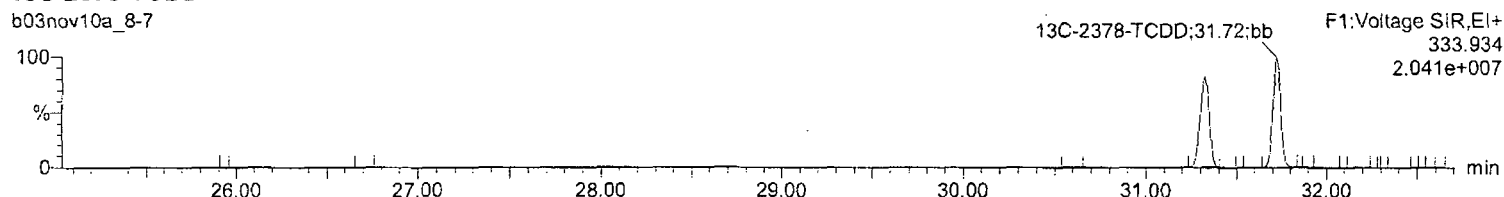
13C-2378-TCDD

b03nov10a_8-7



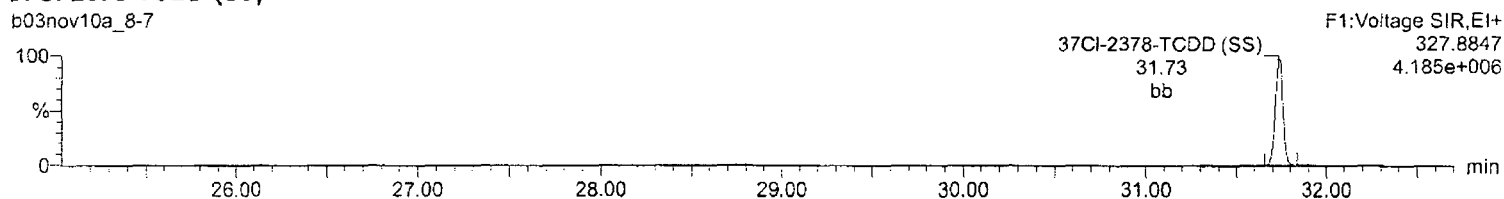
13C-2378-TCDD

b03nov10a_8-7



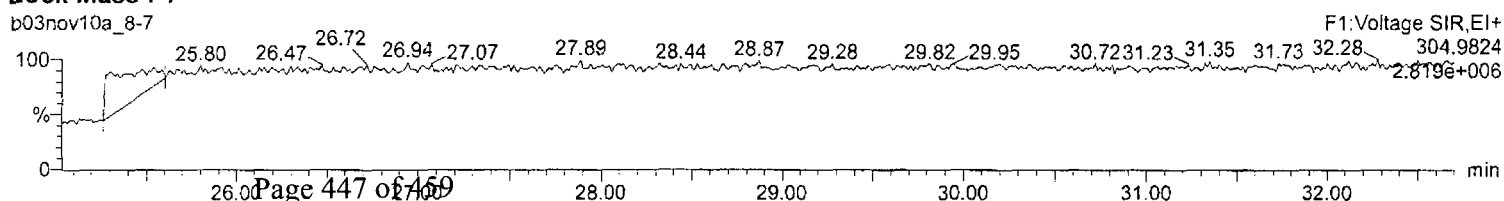
37Cl-2378-TCDD (SS)

b03nov10a_8-7



Lock Mass F1

b03nov10a_8-7



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_8-7.qld

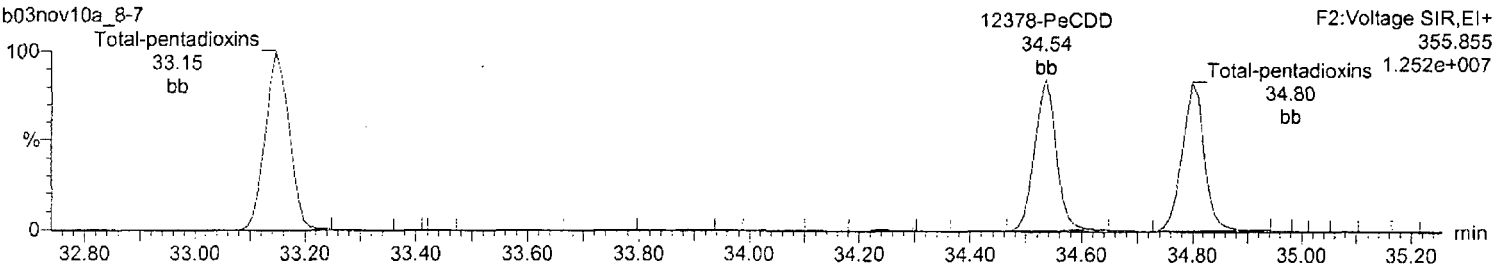
Last Altered: Monday, November 08, 2010 12:15:35 Eastern Standard Time

Printed: Monday, November 08, 2010 12:16:52 Eastern Standard Time

Name: b03nov10a_8-7, Date: 06-Nov-2010, Time: 17:19:52, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_8,
Task: HRP763_1, User: MJC

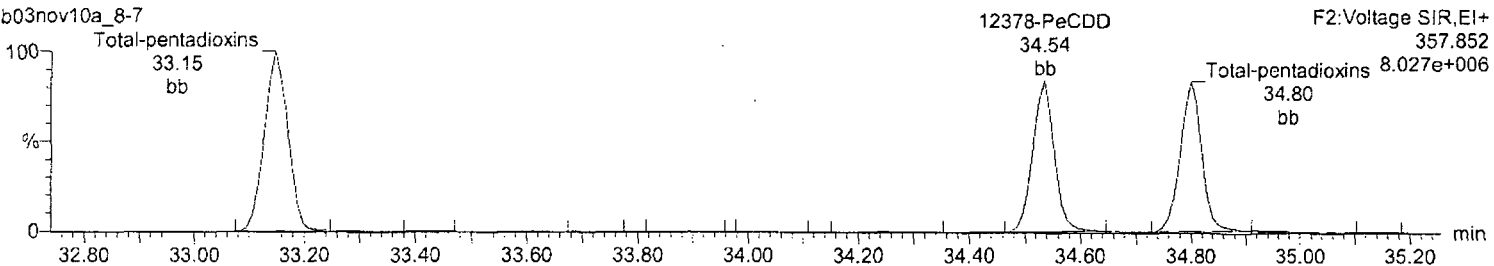
Total-pentadioxins

b03nov10a_8-7



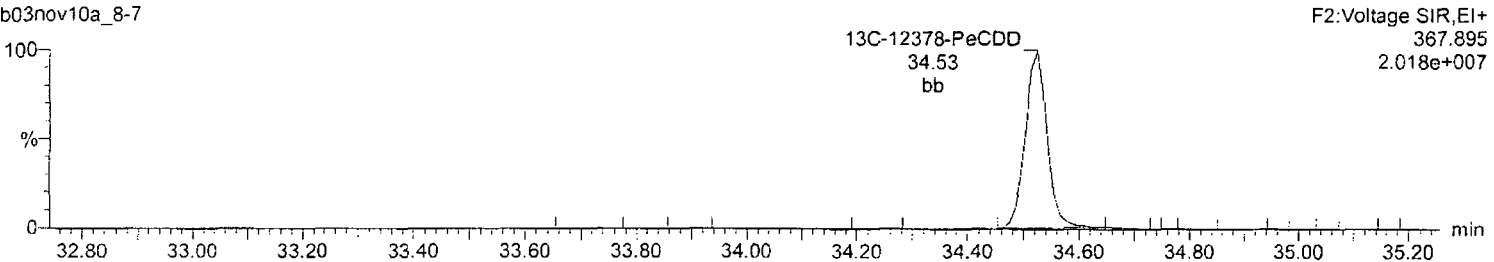
Total-pentadioxins

b03nov10a_8-7



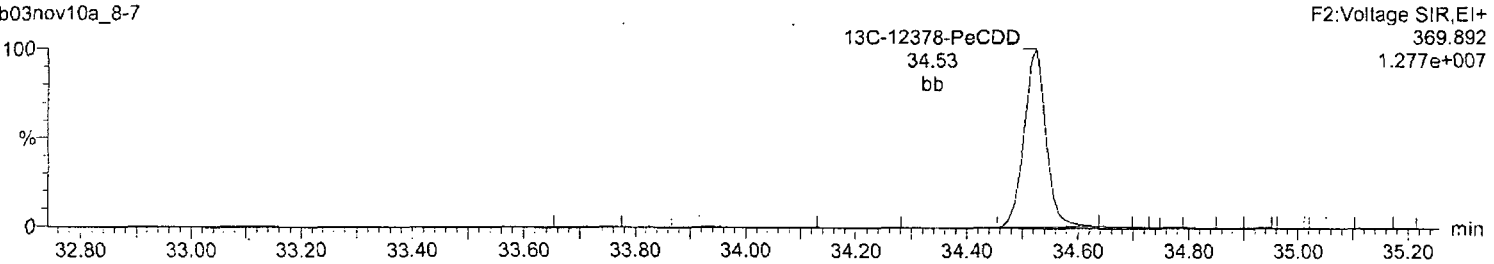
13C-12378-PeCDD

b03nov10a_8-7



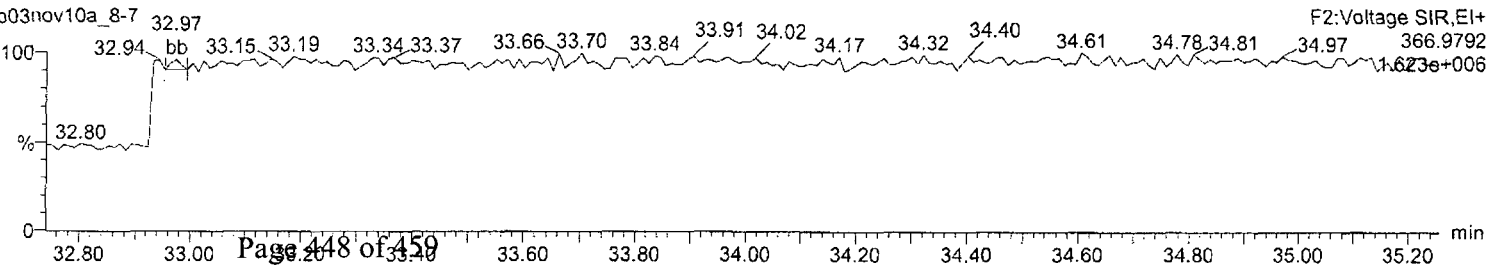
13C-12378-PeCDD

b03nov10a_8-7



Lock Mass F2

b03nov10a_8-7



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_8-7.qld

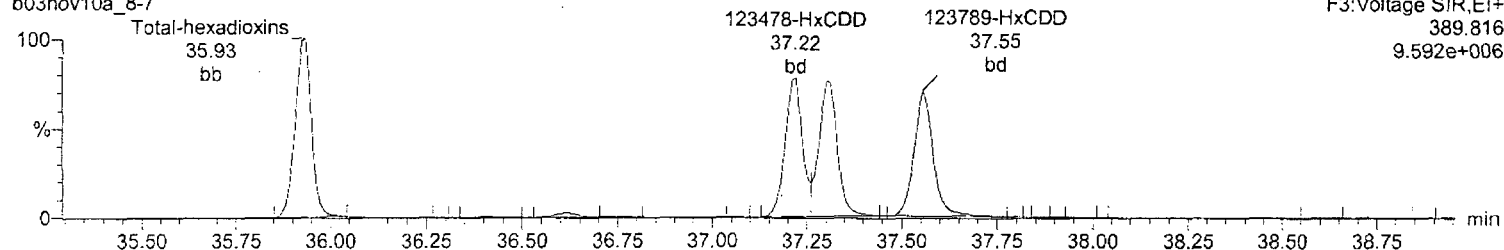
Last Altered: Monday, November 08, 2010 12:15:35 Eastern Standard Time

Printed: Monday, November 08, 2010 12:16:52 Eastern Standard Time

Name: b03nov10a_8-7, Date: 06-Nov-2010, Time: 17:19:52, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_8,
Task: HRP763_1, User: MJC

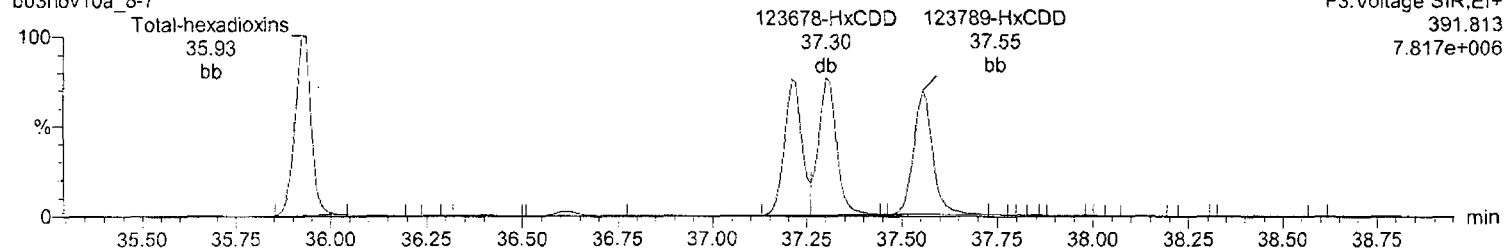
Total-hexadioxins

b03nov10a_8-7



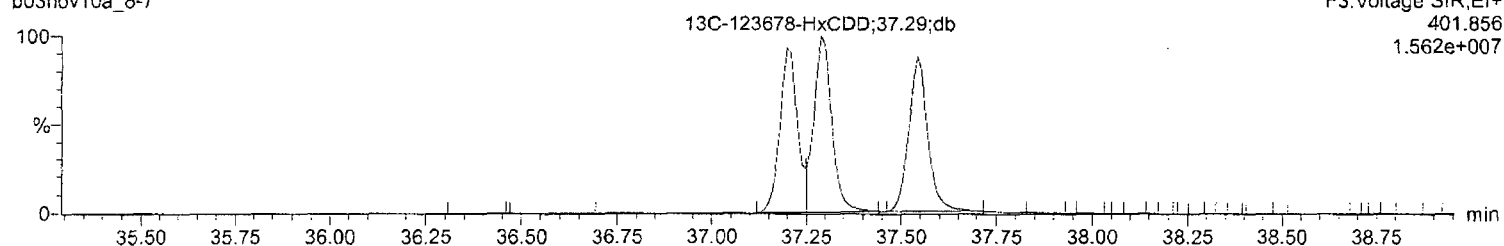
Total-hexadioxins

b03nov10a_8-7



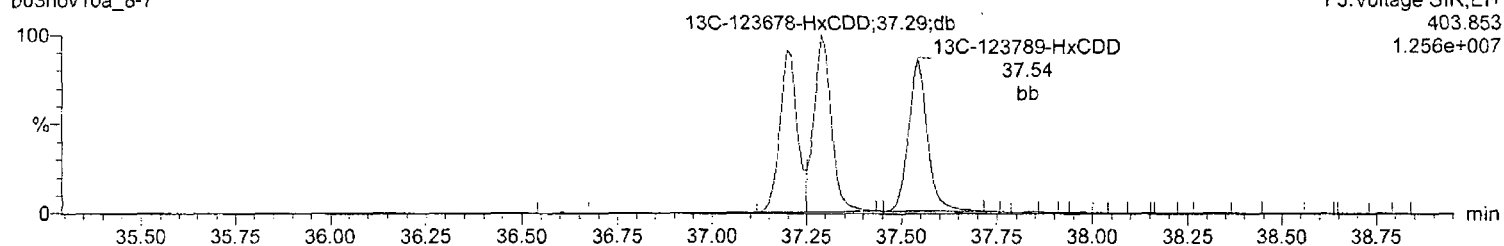
13C-123678-HxCDD

b03nov10a_8-7



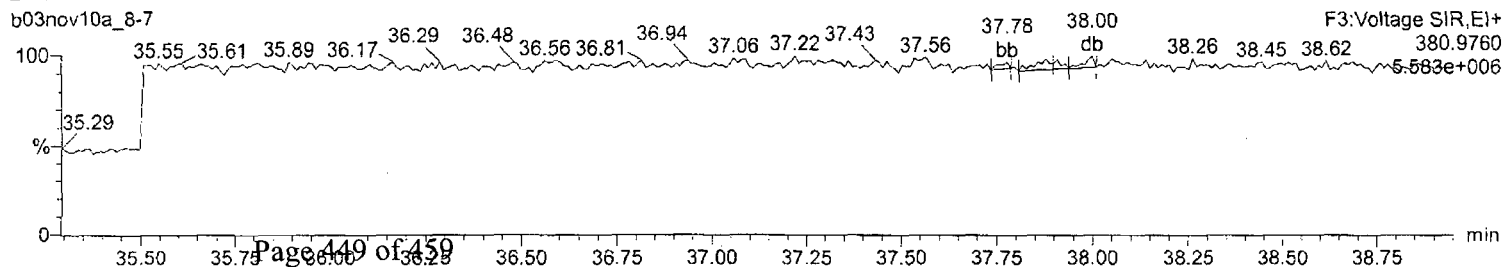
13C-123678-HxCDD

b03nov10a_8-7



Lock Mass F3

b03nov10a_8-7



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

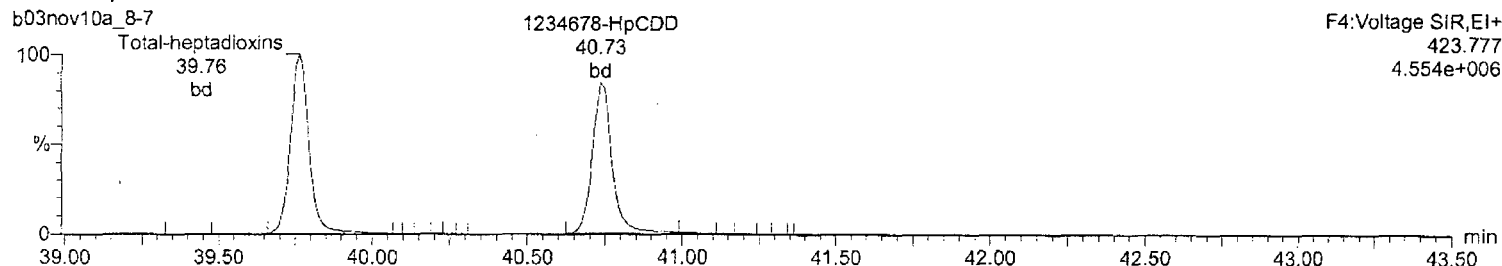
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_8-7.qld

Last Altered: Monday, November 08, 2010 12:15:35 Eastern Standard Time

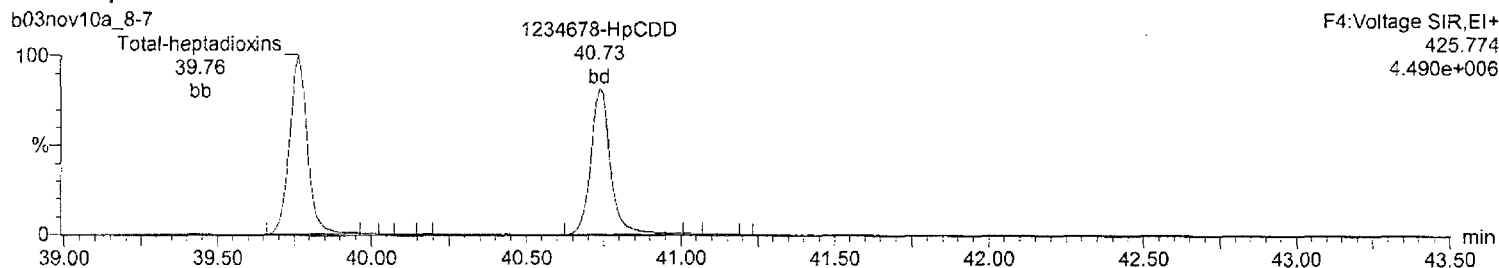
Printed: Monday, November 08, 2010 12:16:52 Eastern Standard Time

Name: b03nov10a_8-7, Date: 06-Nov-2010, Time: 17:19:52, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_8,
Task: HRP763_1, User: MJC

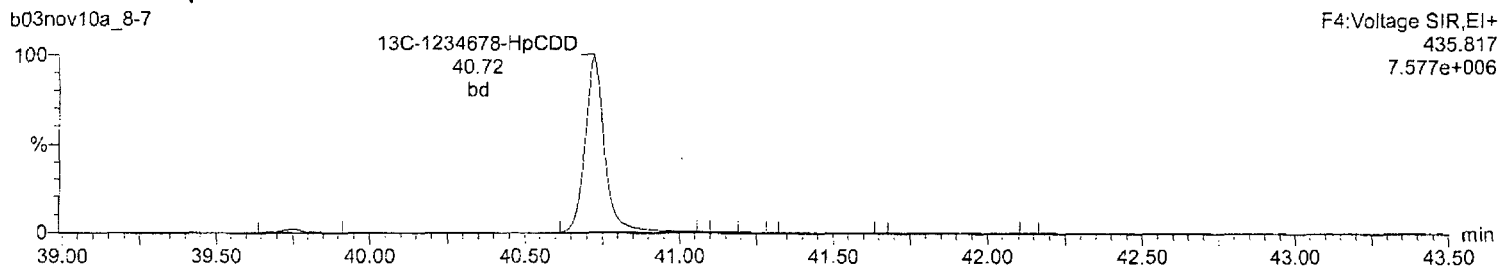
Total-heptadioxins



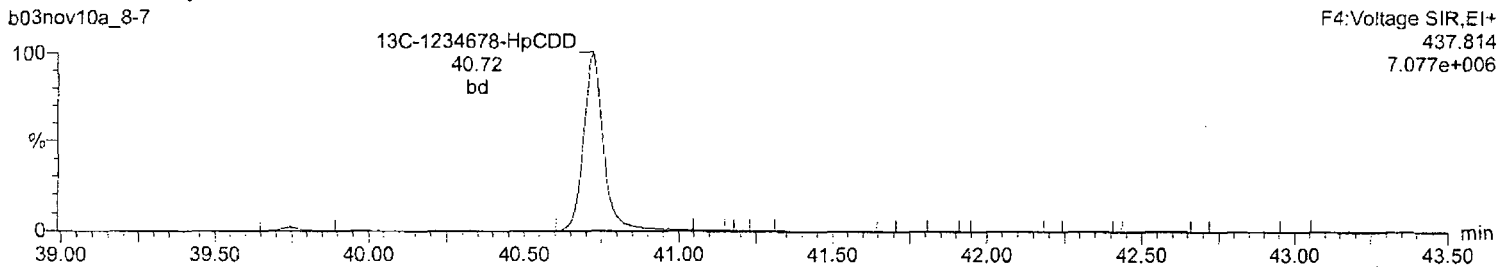
Total-heptadioxins



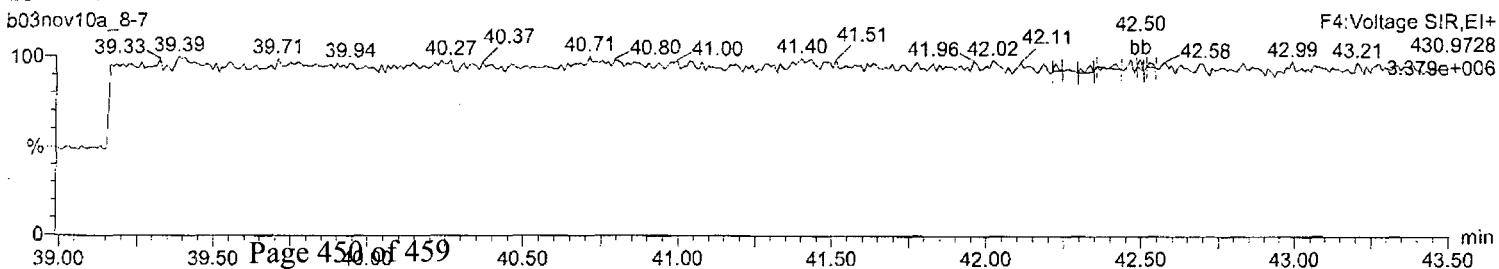
13C-1234678-HpCDD



13C-1234678-HpCDD



Lock Mass F4



Quantify Sample Report MassLynx 4.1
Method 8290 CCAL Report

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_8-7.qld

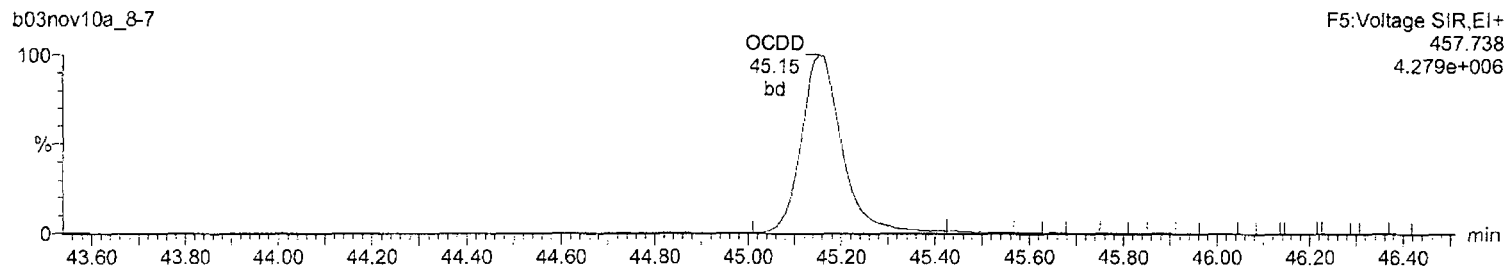
Last Altered: Monday, November 08, 2010 12:15:35 Eastern Standard Time

Printed: Monday, November 08, 2010 12:16:52 Eastern Standard Time

Name: b03nov10a_8-7, Date: 06-Nov-2010, Time: 17:19:52, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_8,
Task: HRP763_1, User: MJC

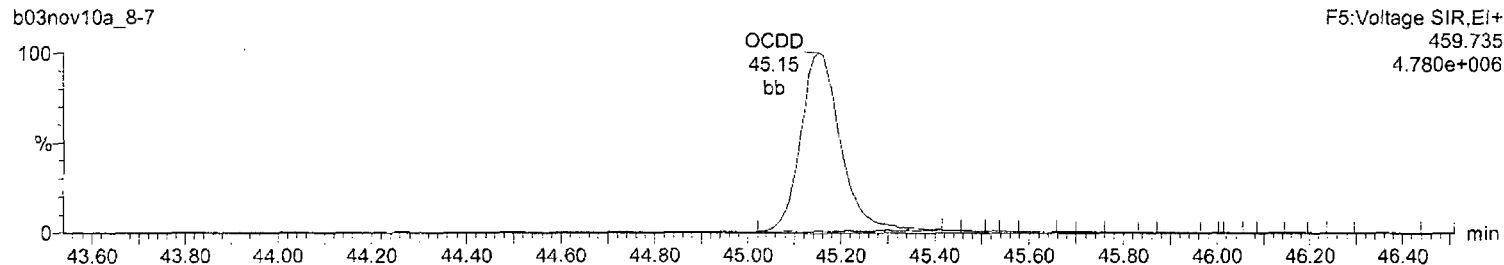
OCDD

b03nov10a_8-7



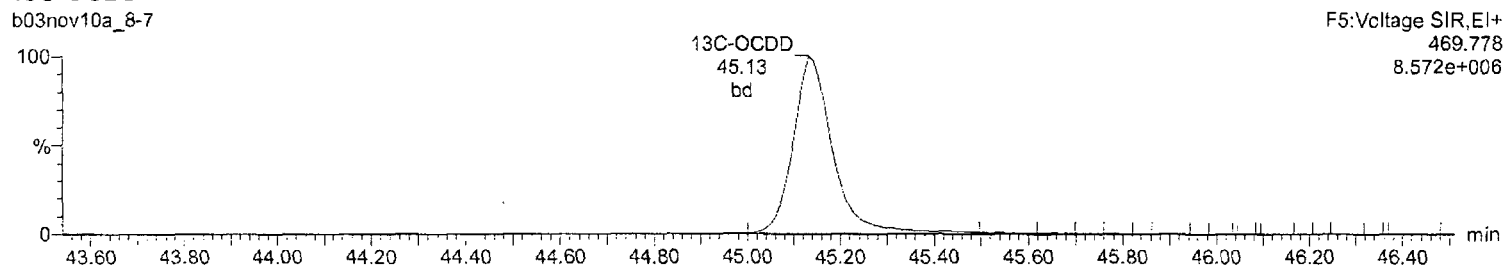
OCDD

b03nov10a_8-7



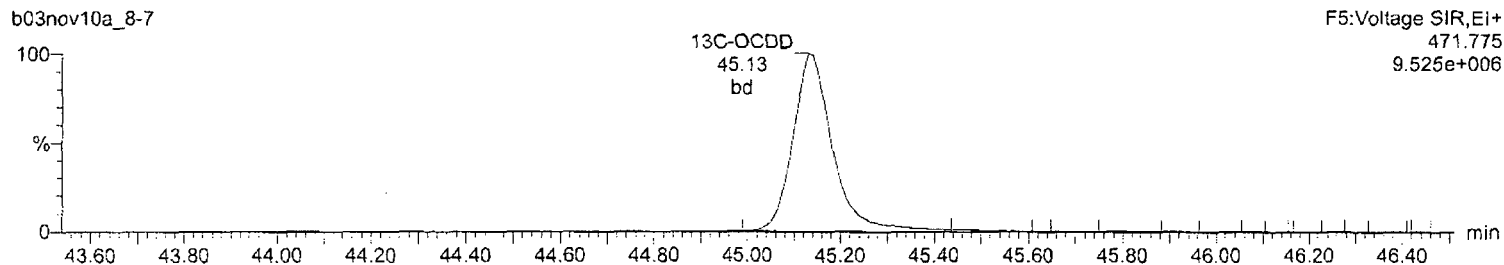
¹³C-OCDD

b03nov10a_8-7



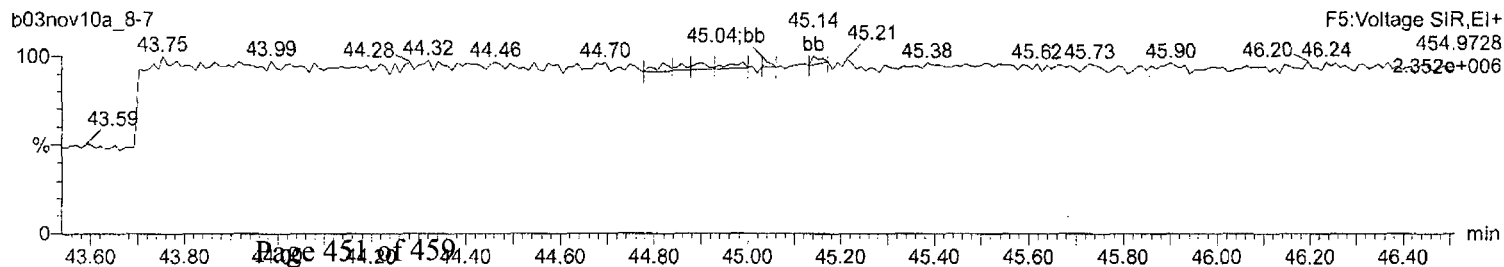
¹³C-OCDD

b03nov10a_8-7



Lock Mass F5

b03nov10a_8-7



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_8-7.qld

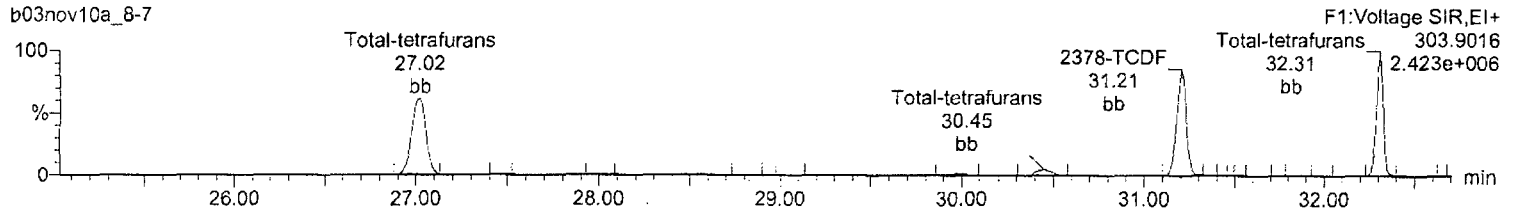
Last Altered: Monday, November 08, 2010 12:15:35 Eastern Standard Time

Printed: Monday, November 08, 2010 12:16:52 Eastern Standard Time

Name: b03nov10a_8-7, Date: 06-Nov-2010, Time: 17:19:52, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_8,
Task: HRP763_1, User: MJC

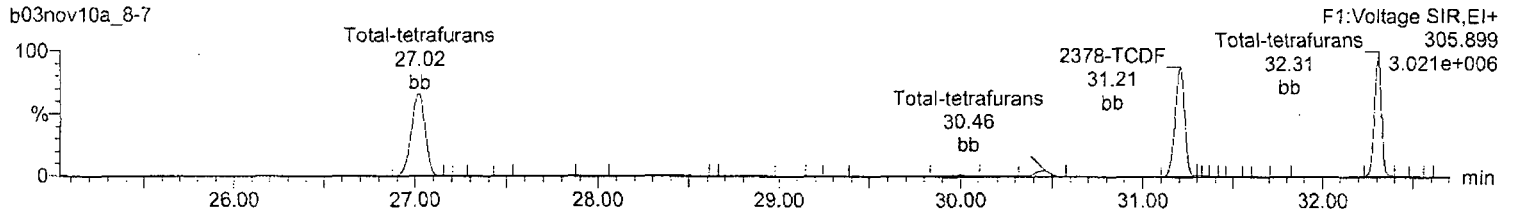
Total-tetrafurans

b03nov10a_8-7



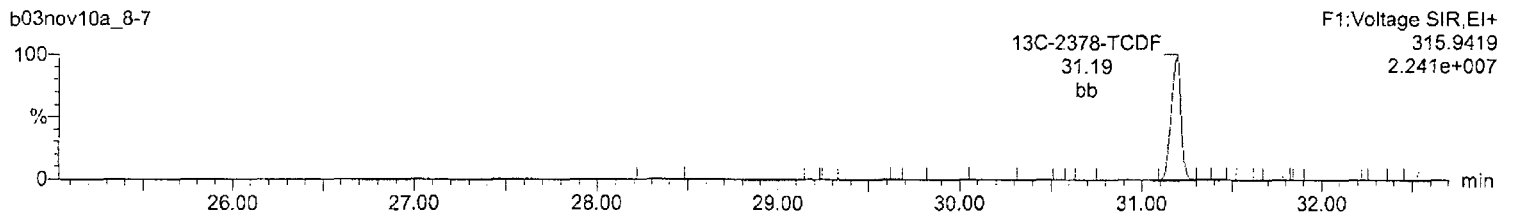
Total-tetrafurans

b03nov10a_8-7



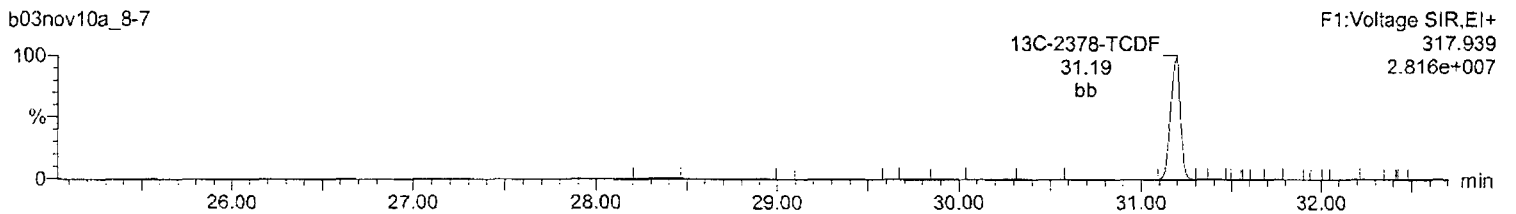
13C-2378-TCDF

b03nov10a_8-7



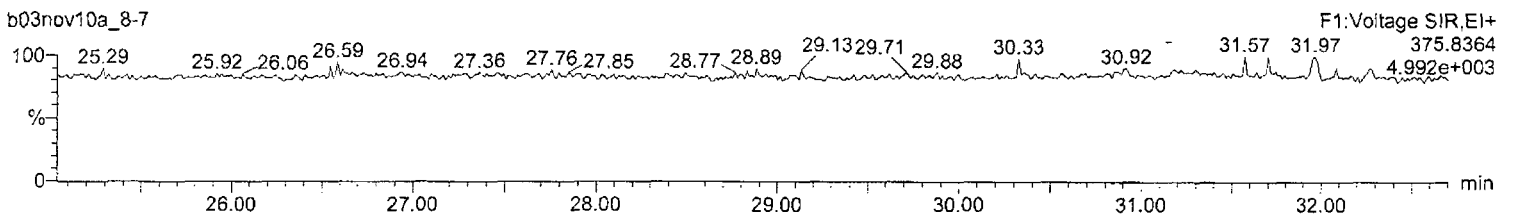
13C-2378-TCDF

b03nov10a_8-7



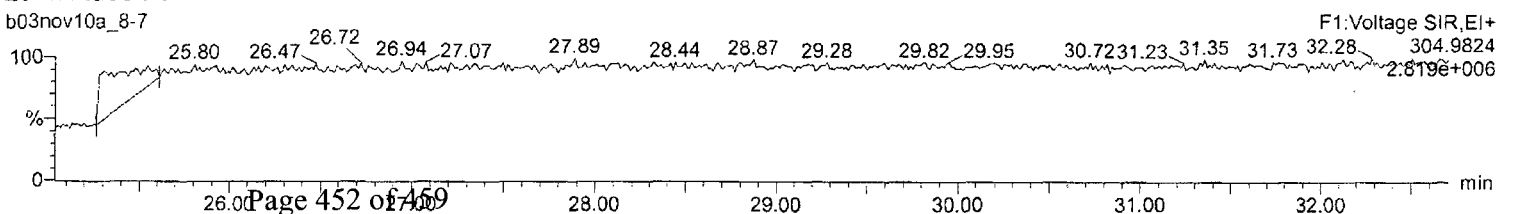
HxDPE

b03nov10a_8-7



Lock Mass F1

b03nov10a_8-7



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_8-7.qld

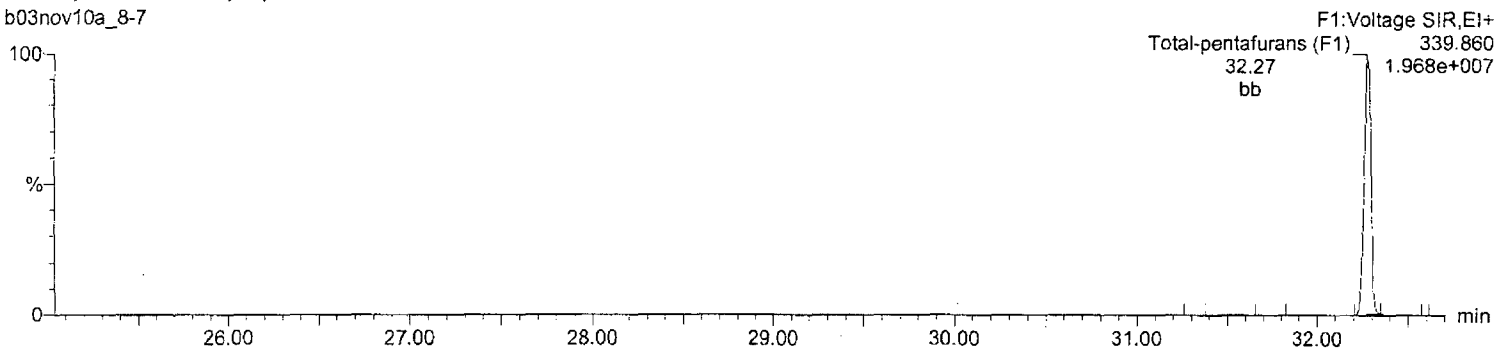
Last Altered: Monday, November 08, 2010 12:15:35 Eastern Standard Time

Printed: Monday, November 08, 2010 12:16:52 Eastern Standard Time

Name: b03nov10a_8-7, Date: 06-Nov-2010, Time: 17:19:52, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_8,
Task: HRP763_1, User: MJC

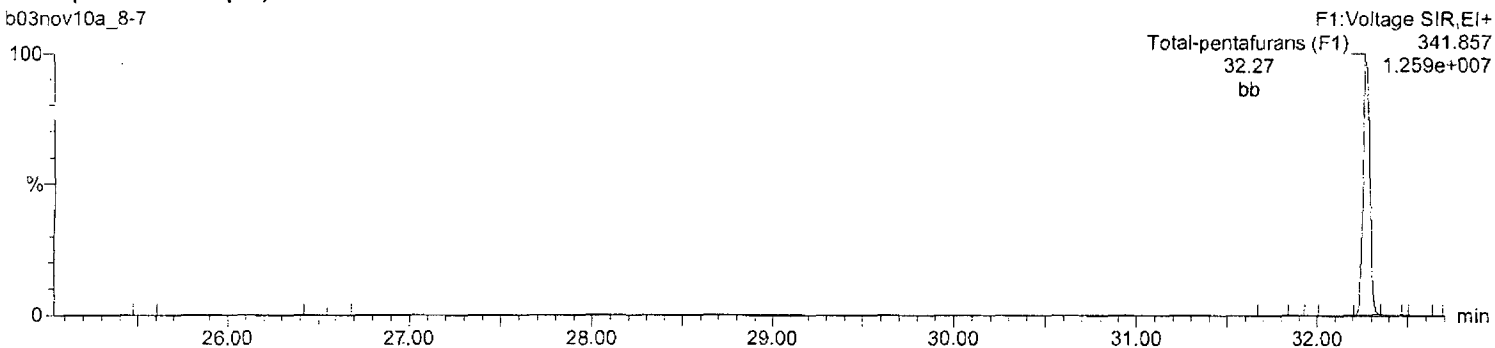
Total-pentafurans (F1)

b03nov10a_8-7



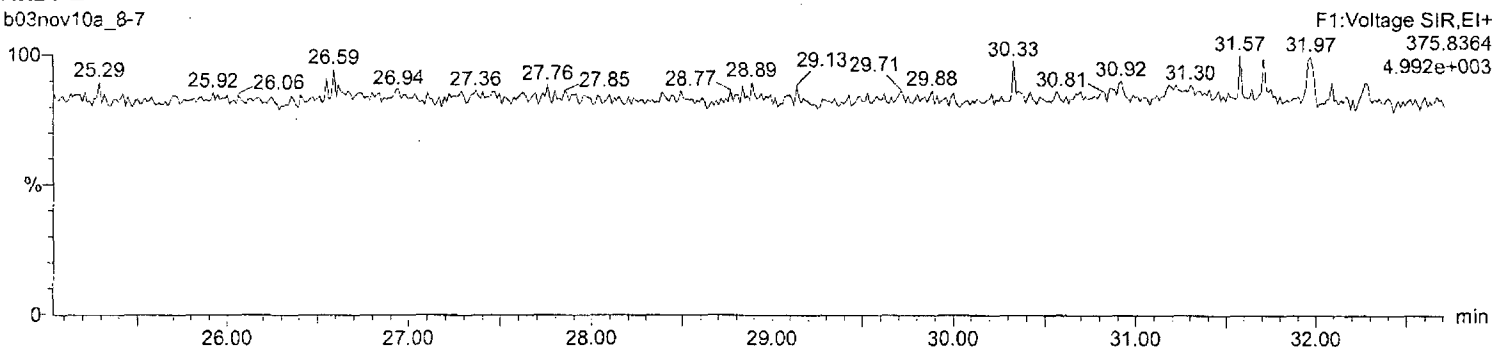
Total-pentafurans (F1)

b03nov10a_8-7



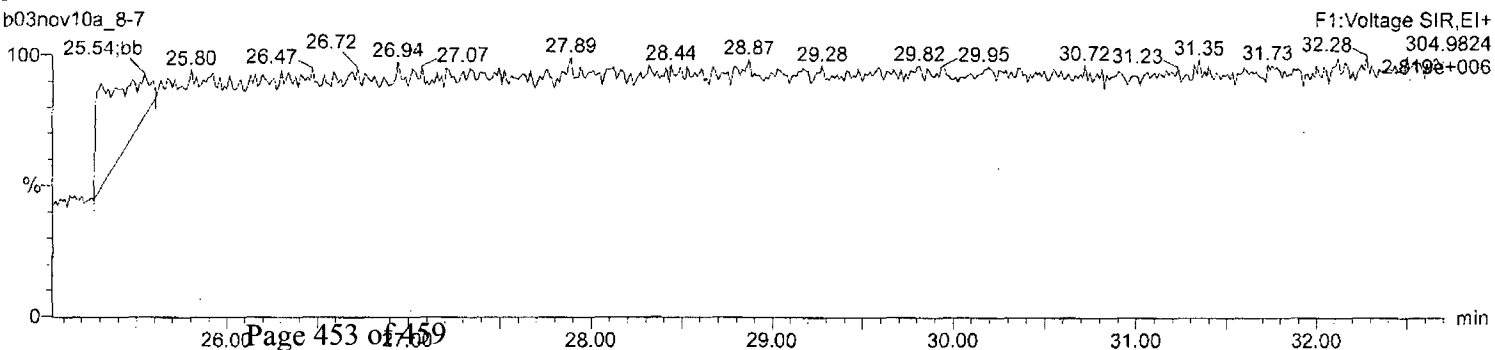
HxDPE

b03nov10a_8-7



Lock Mass F1

b03nov10a_8-7



Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_8-7.qld

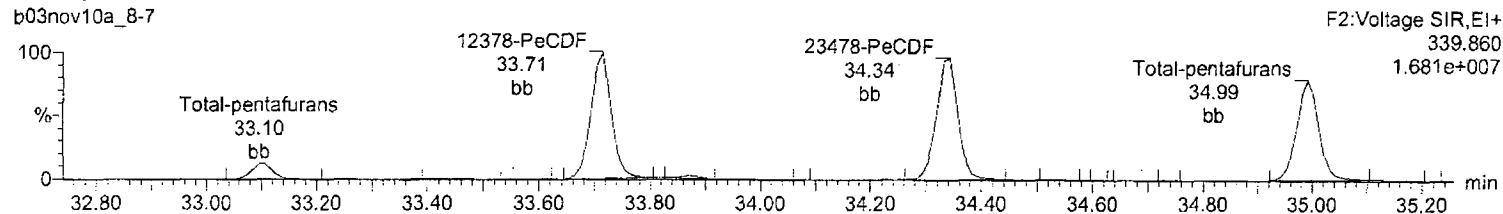
Last Altered: Monday, November 08, 2010 12:15:35 Eastern Standard Time

Printed: Monday, November 08, 2010 12:16:52 Eastern Standard Time

Name: b03nov10a_8-7, Date: 06-Nov-2010, Time: 17:19:52, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_8,
Task: HRP763_1, User: MJC

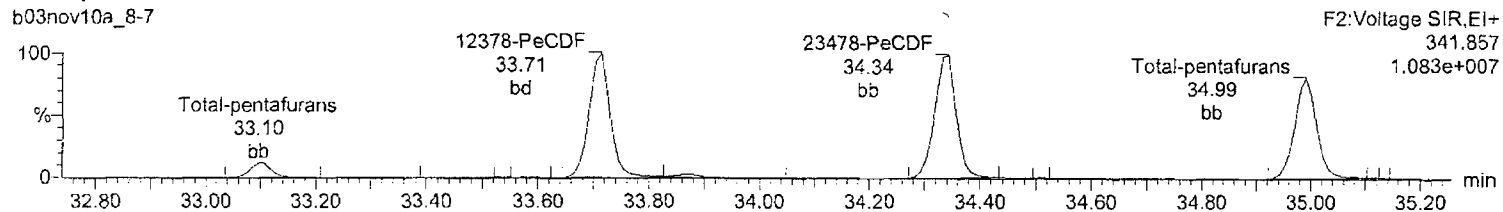
Total-pentafurans

b03nov10a_8-7



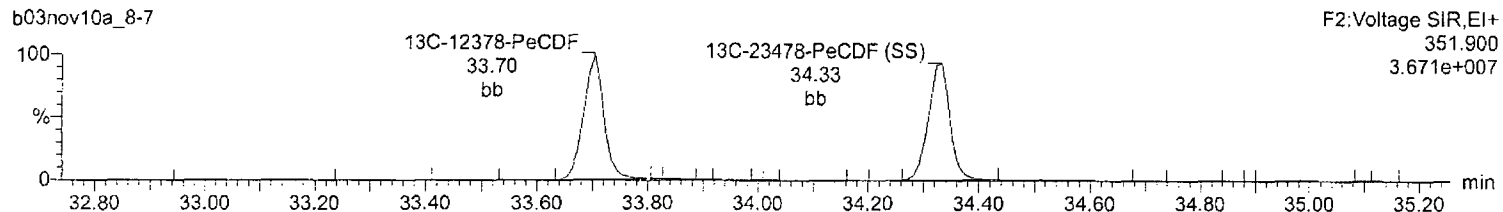
Total-pentafurans

b03nov10a_8-7



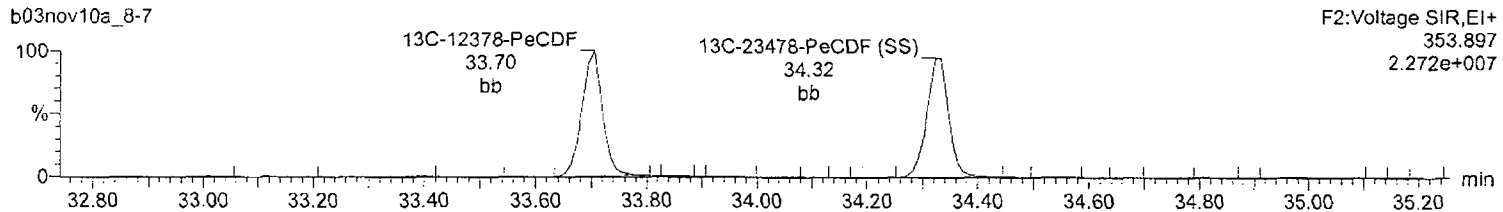
¹³C-12378-PeCDF

b03nov10a_8-7



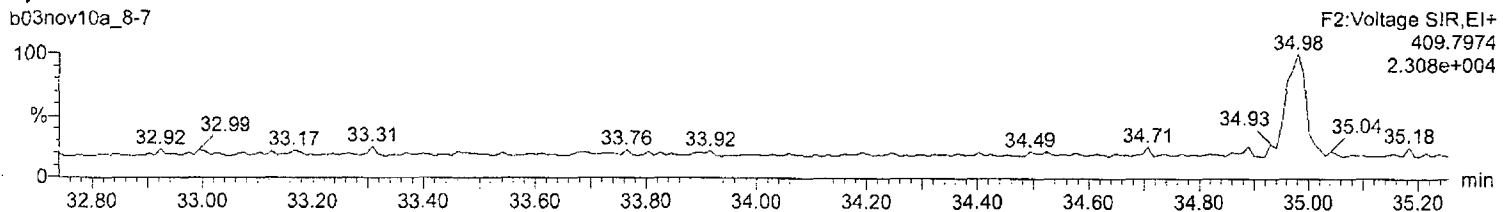
¹³C-12378-PeCDF

b03nov10a_8-7



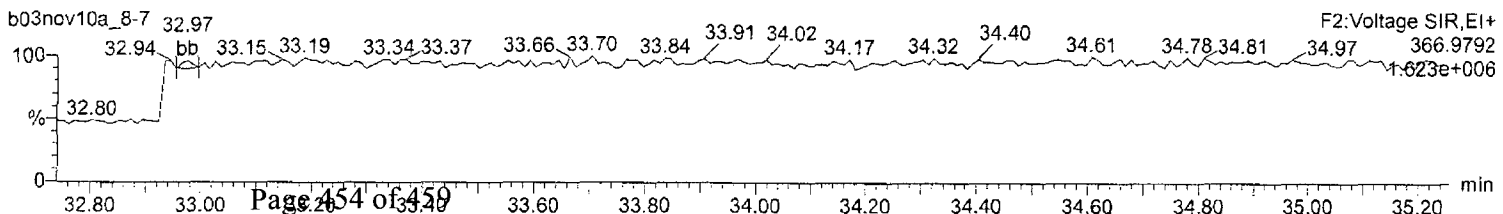
HpDPE

b03nov10a_8-7



Lock Mass F2

b03nov10a_8-7



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

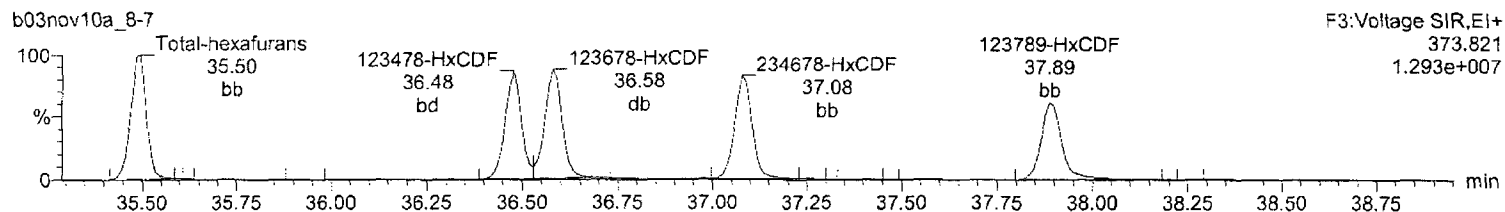
Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_8-7.qld

Last Altered: Monday, November 08, 2010 12:15:35 Eastern Standard Time

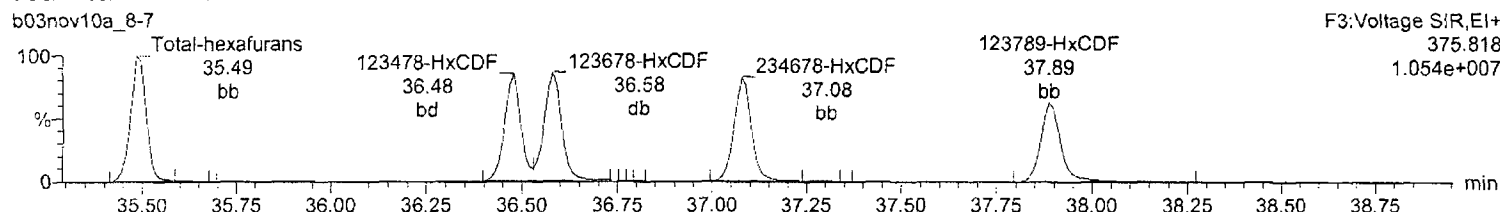
Printed: Monday, November 08, 2010 12:16:52 Eastern Standard Time

Name: b03nov10a_8-7, Date: 06-Nov-2010, Time: 17:19:52, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_8,
Task: HRP763_1, User: MJC

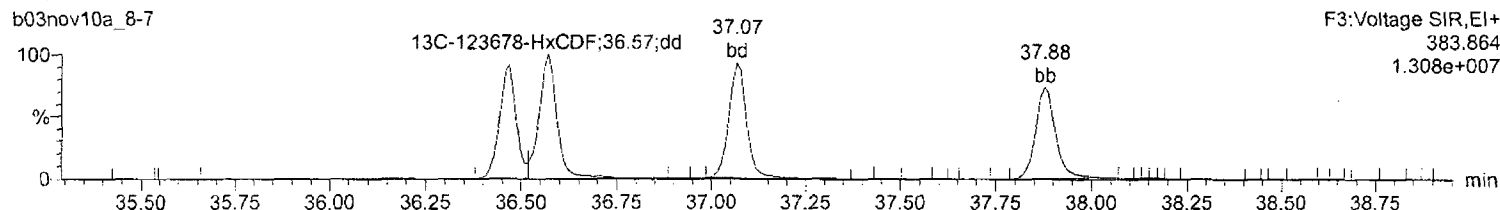
Total-hexafurans



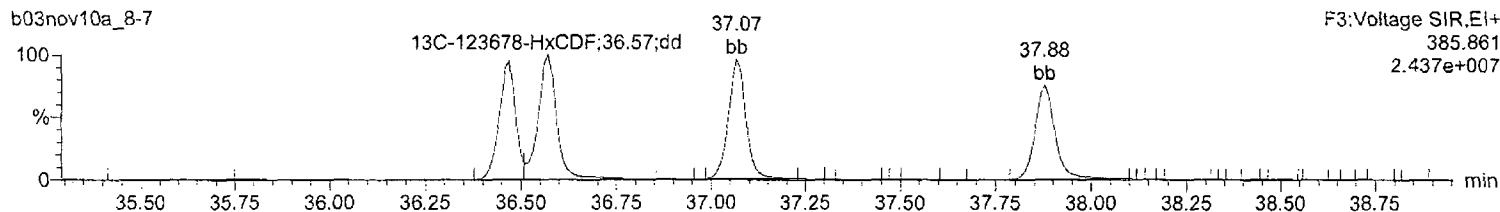
Total-hexafurans



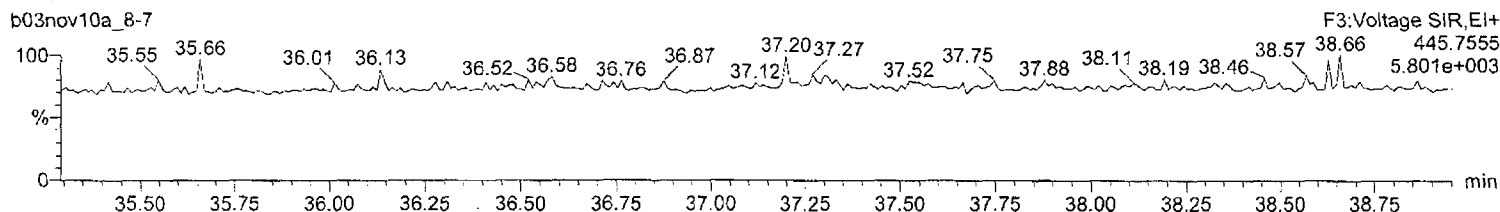
¹³C-123678-HxCDF



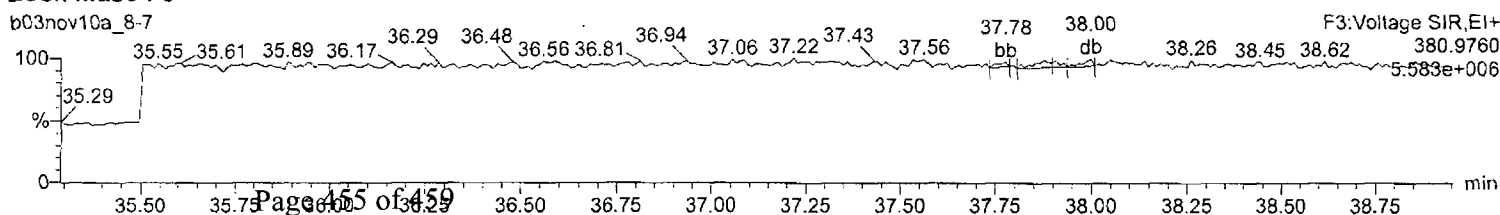
¹³C-123678-HxCDF



OCDE



Lock Mass F3



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_8-7.qld

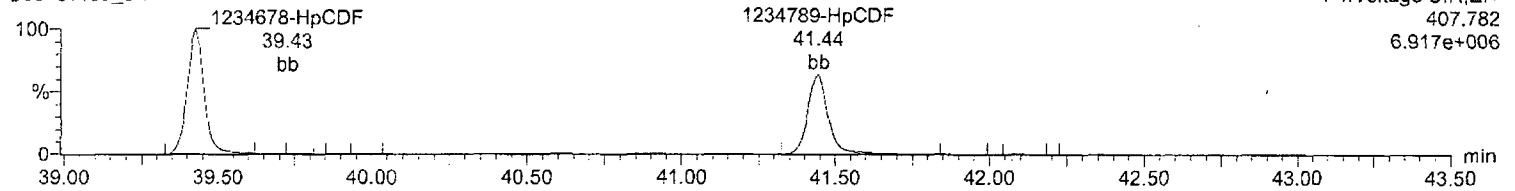
Last Altered: Monday, November 08, 2010 12:15:35 Eastern Standard Time

Printed: Monday, November 08, 2010 12:16:52 Eastern Standard Time

Name: b03nov10a_8-7, Date: 06-Nov-2010, Time: 17:19:52, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_8,
Task: HRP763_1, User: MJC

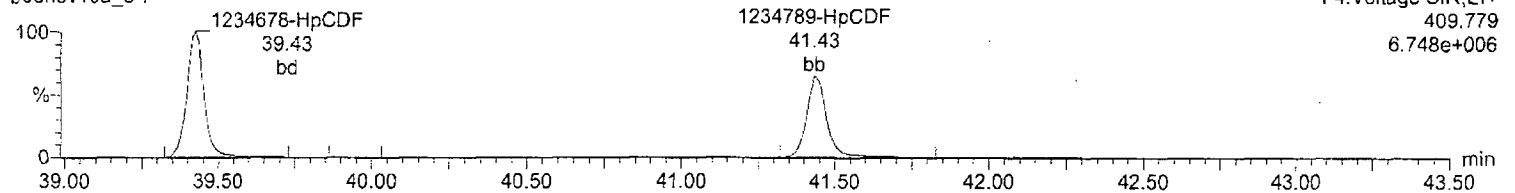
Total-heptafurans

b03nov10a_8-7



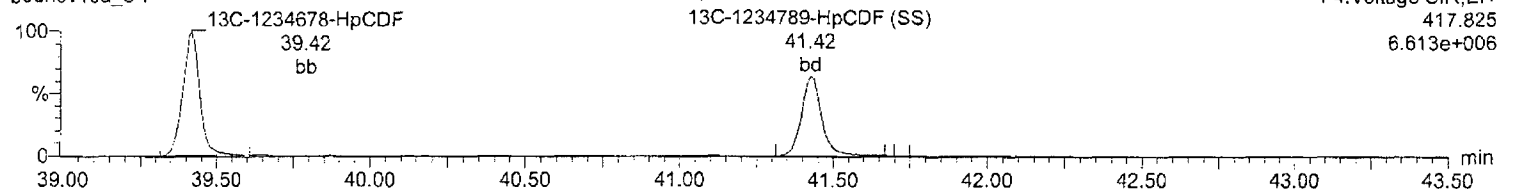
Total-heptafurans

b03nov10a_8-7



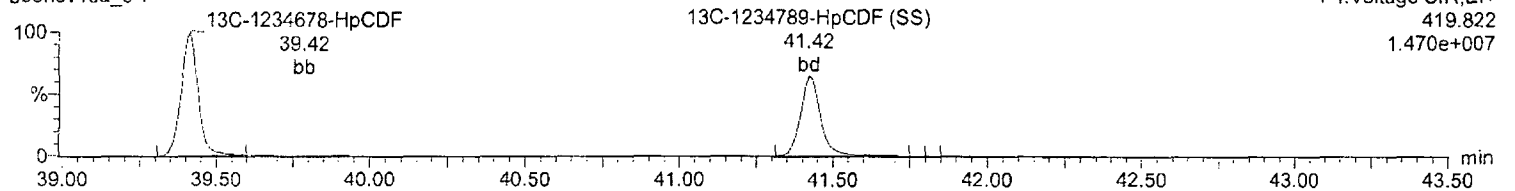
13C-1234678-HpCDF

b03nov10a_8-7



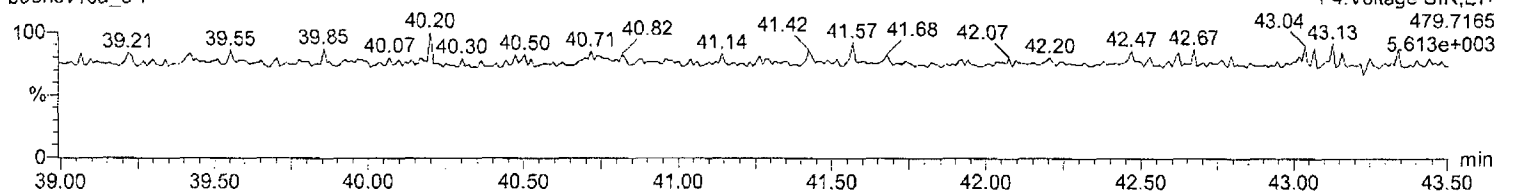
13C-1234678-HpCDF

b03nov10a_8-7



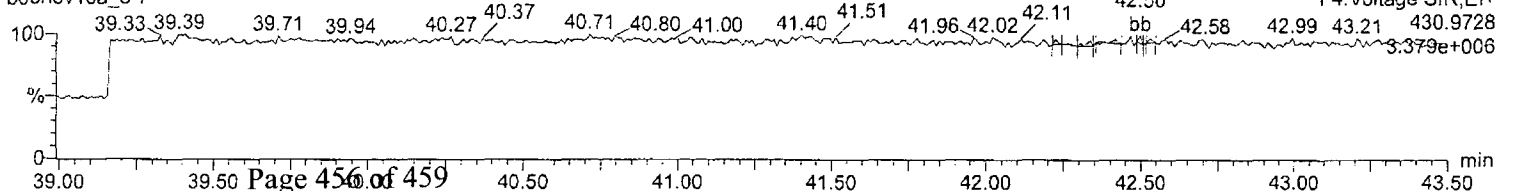
NoDPE

b03nov10a_8-7



Lock Mass F4

b03nov10a_8-7



Quantify Sample Report
Method 8290 CCAL Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\CCAL Results\8290-b03nov10a_8-7.qld

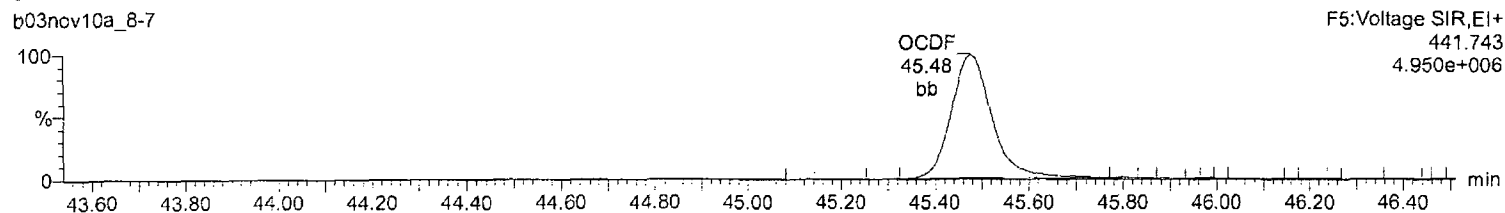
Last Altered: Monday, November 08, 2010 12:15:35 Eastern Standard Time

Printed: Monday, November 08, 2010 12:16:52 Eastern Standard Time

Name: b03nov10a_8-7, Date: 06-Nov-2010, Time: 17:19:52, ID: CS3WT UD100713-01.2, Description: , Job: b03nov10a_8,
Task: HRP763_1, User: MJC

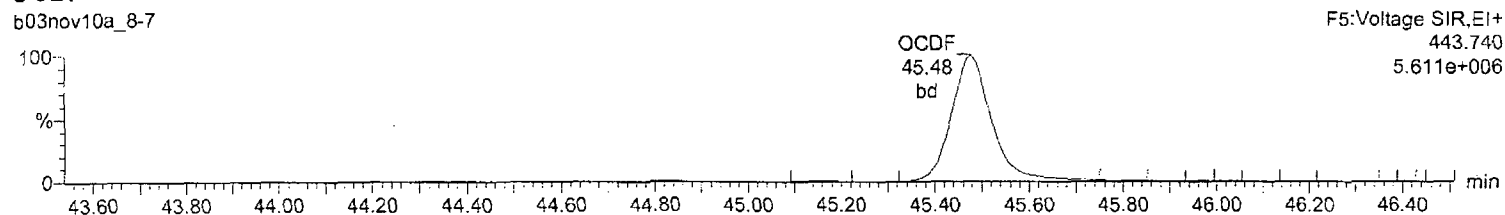
OCDF

b03nov10a_8-7



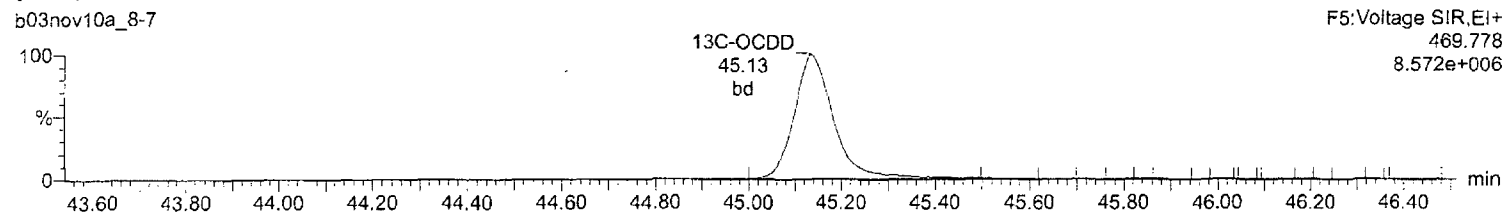
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b03nov10a_8-7



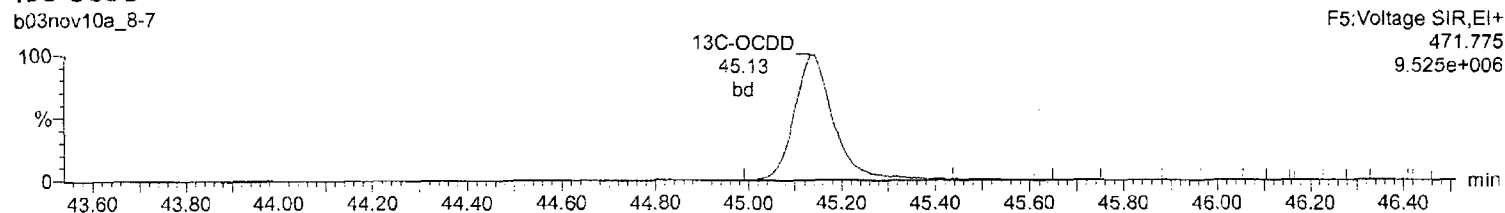
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b03nov10a_8-7



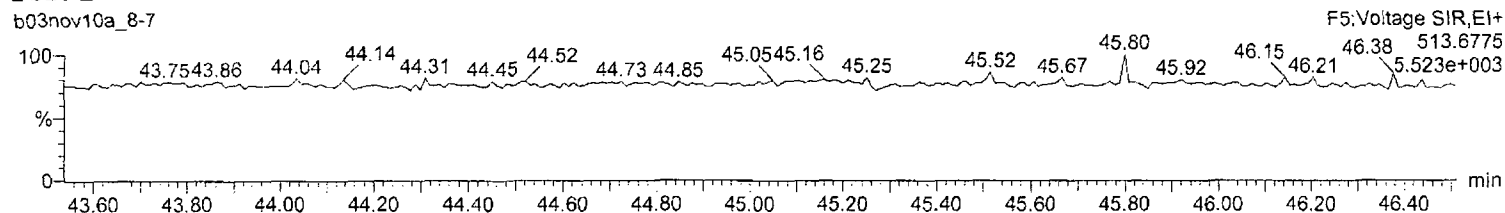
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b03nov10a_8-7



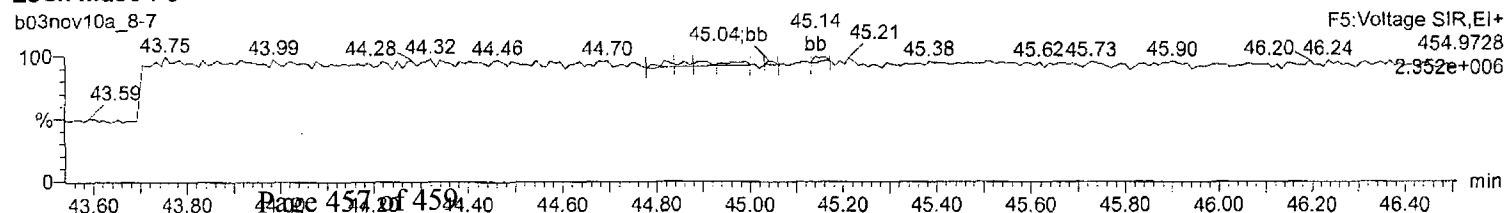
DeDPE

b03nov10a_8-7



Lock Mass F5

b03nov10a_8-7



Miscellaneous

No non conformance reports were generated for this work order



Cape Fear Analytical

The GEL Group LLC

3336 Kroy-Hank Road, Suite 123 Wilmington, NC 28405

P 910.795.0421

www.capefearanalytical.com

November 30, 2010

Ms. Tammy McCloskey
Accutest
Fresh Ponds Corporate Village, Bldg B
2235 Route 130
Dayton, New Jersey 08810

Re: Laboratory Response to Resubmission Request
CFA Work Order: 1741
SDG: JA58900

Lab Contact: Chris Cornwell

Dear Ms. McCloskey:

Cape Fear Analytical, LLC (CFA) is issuing this addendum to provide the corrections or additions requested in the resubmission request. We apologize for the inconvenience. Thank you for bringing these issues to our attention.

If you have any questions, please do not hesitate to call me at (910) 795-0421.

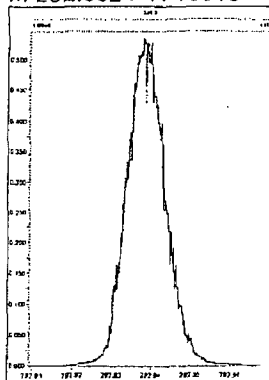
Sincerely,

Chris Cornwell
Project Manager

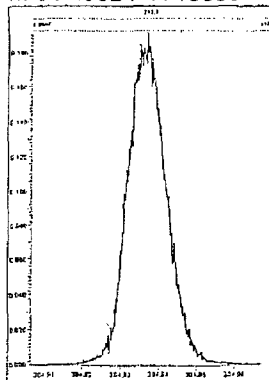
File: Experiment: dioxin_db5ms.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

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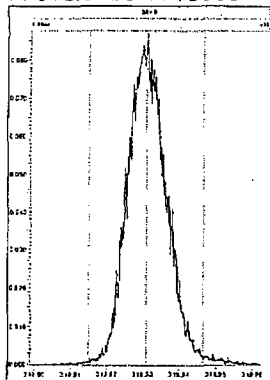
M 292.9824 R 13019



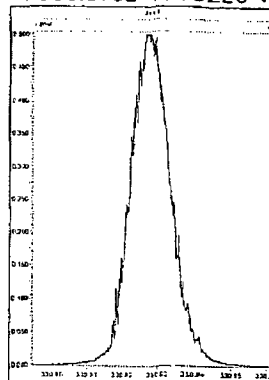
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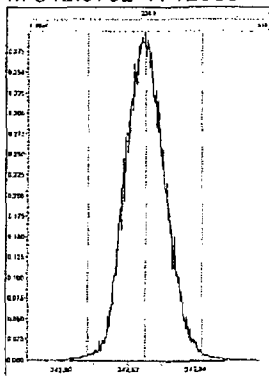
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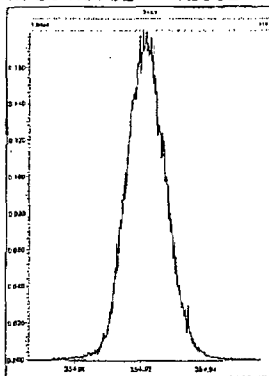
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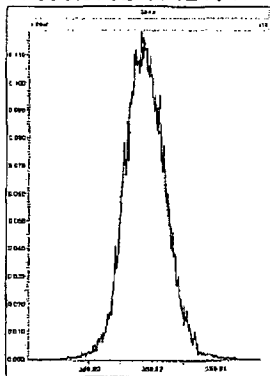
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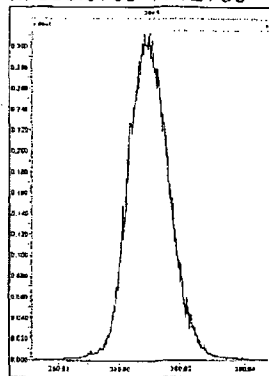
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M 366.9792 R 12134



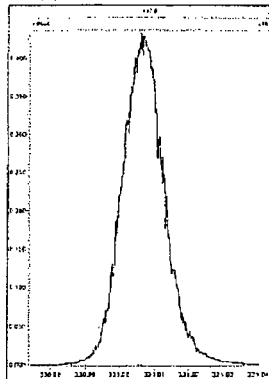
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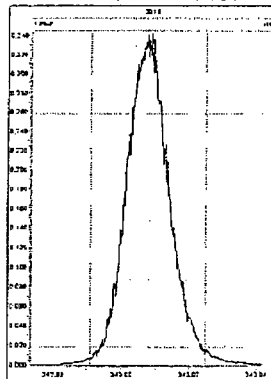
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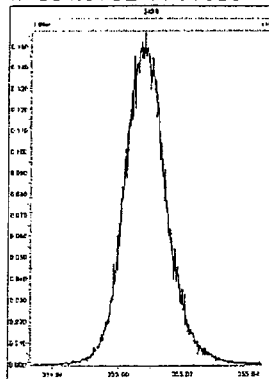
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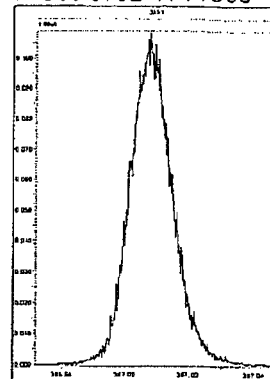
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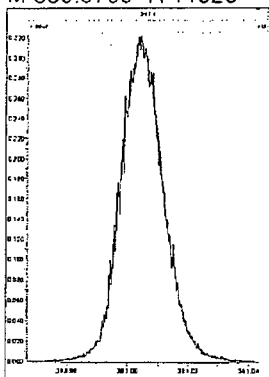
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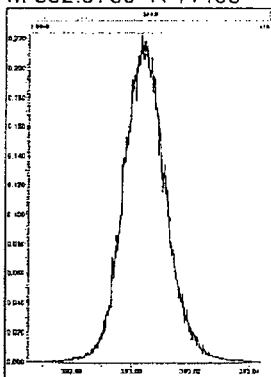
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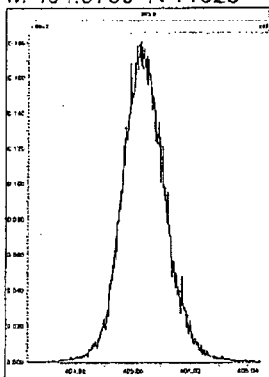
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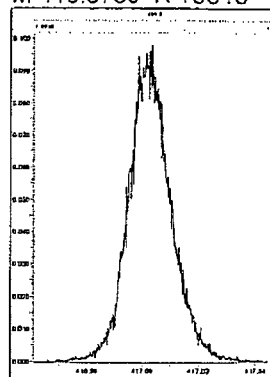
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M 404.9760 R 11628



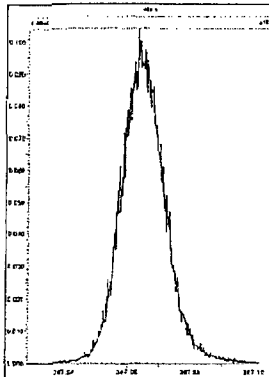
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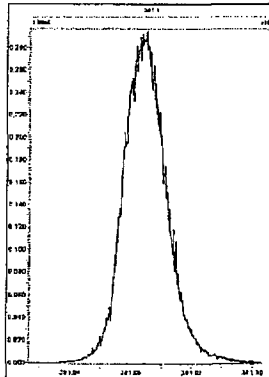
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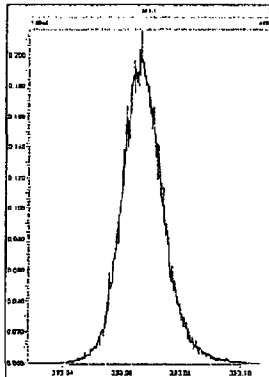
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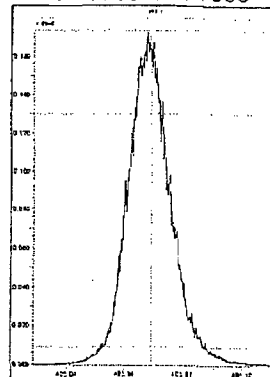
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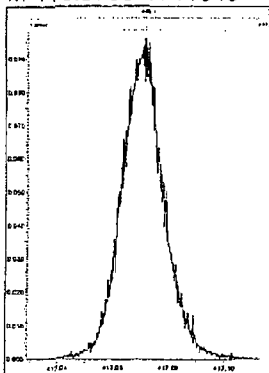
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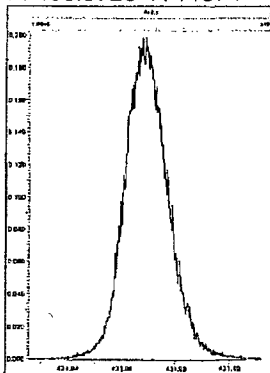
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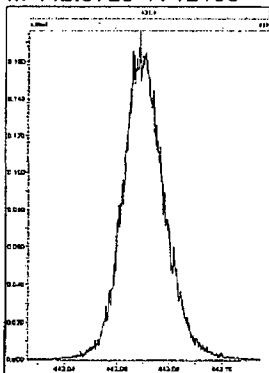
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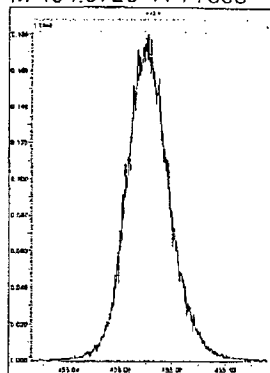
M 430.9728 R 11574



M 442.9728 R 12138



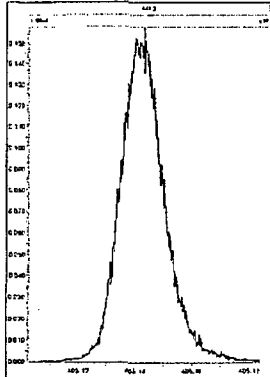
M 454.9728 R 11365



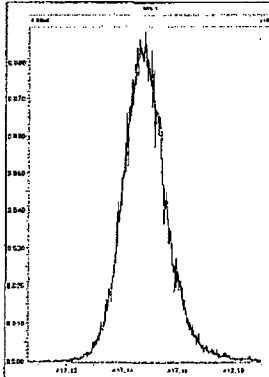
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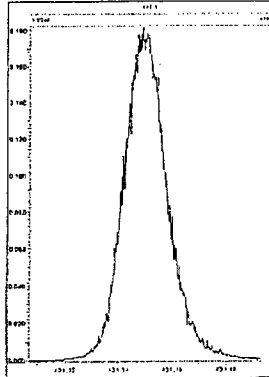
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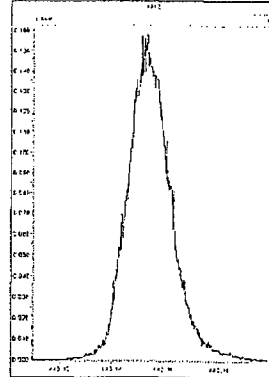
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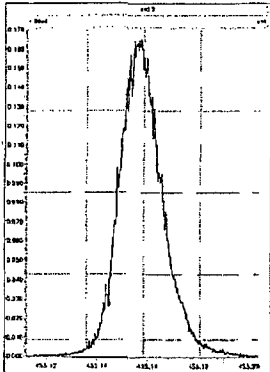
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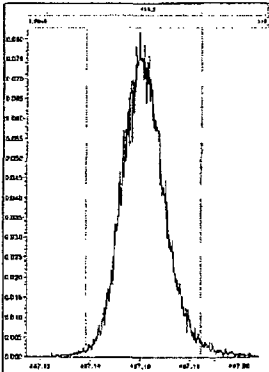
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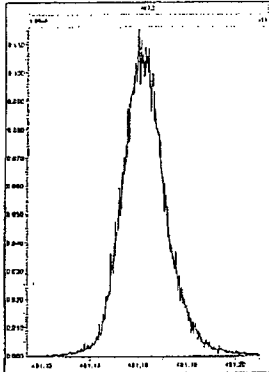
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M 466.9728 R 11572



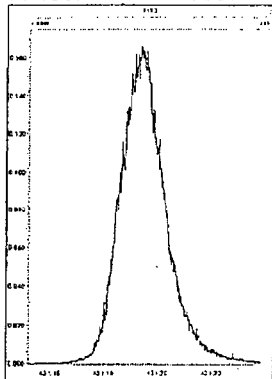
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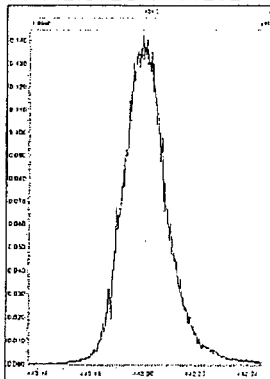
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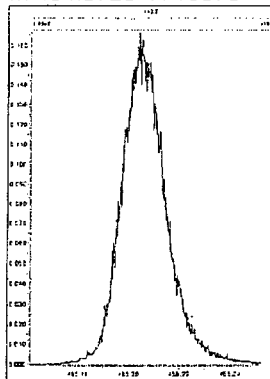
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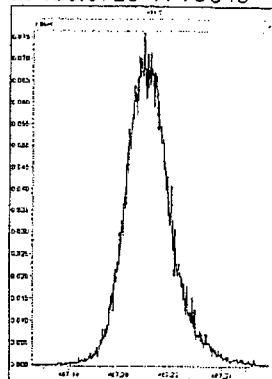
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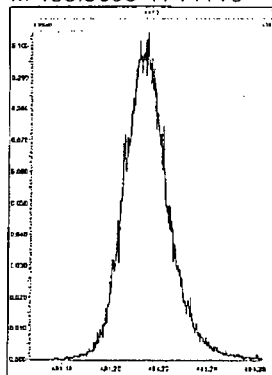
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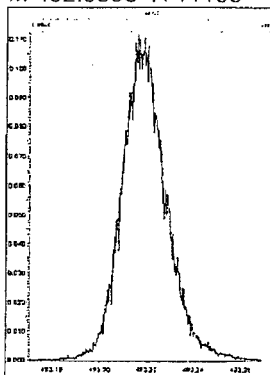
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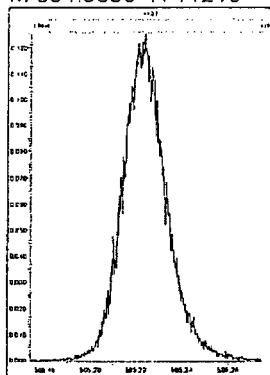
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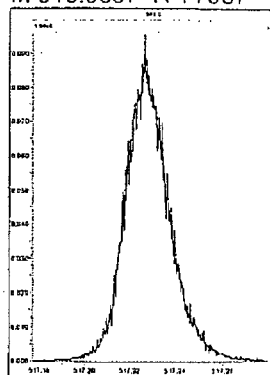
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M 504.9696 R 11210

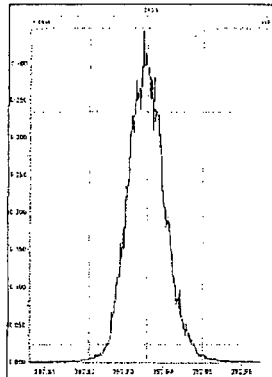


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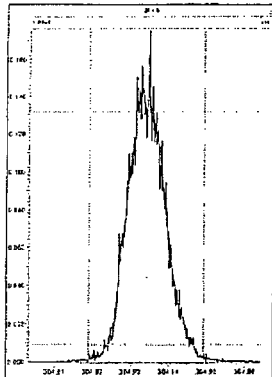


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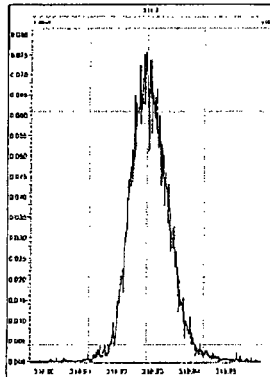
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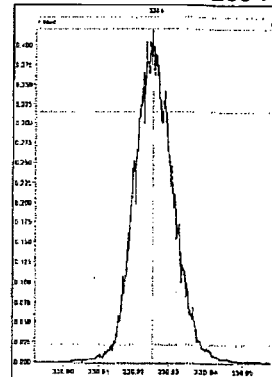
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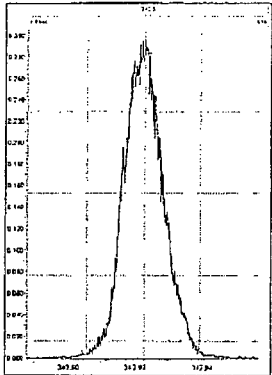
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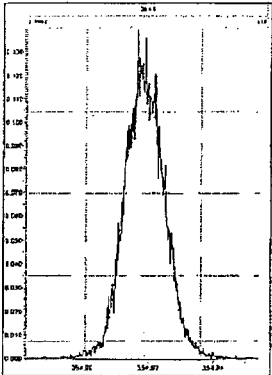
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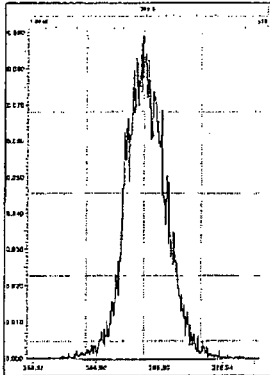
M 342.9792 R 12823



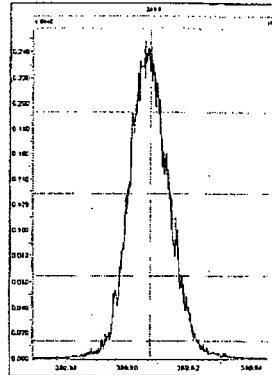
M 354.9792 R 12923



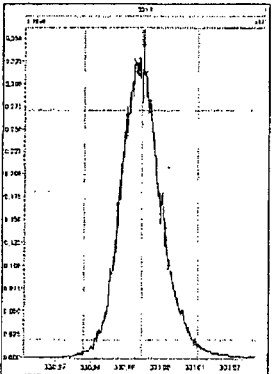
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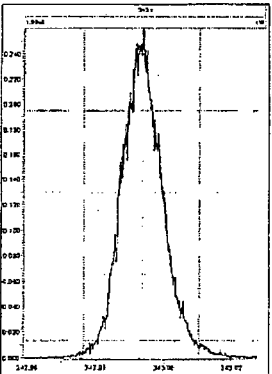
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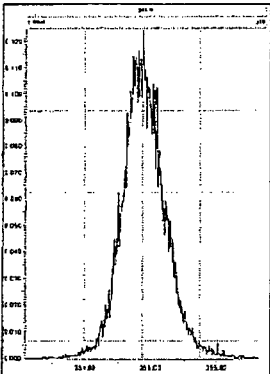
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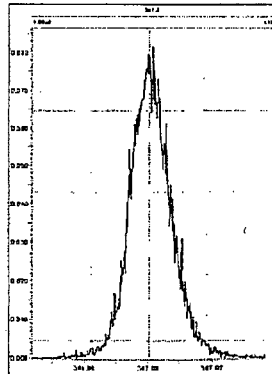
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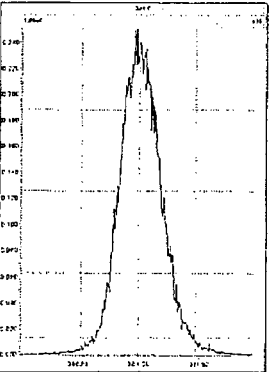
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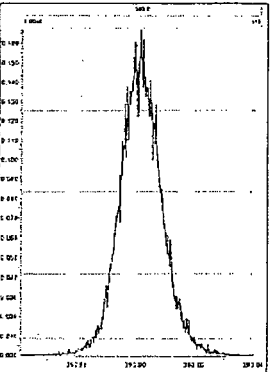
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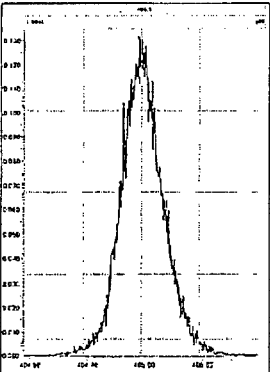
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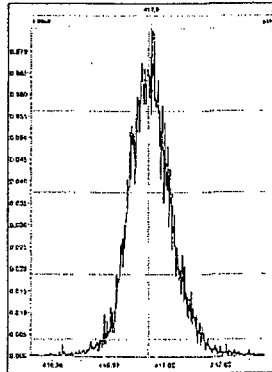
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M 404.9760 R 11876

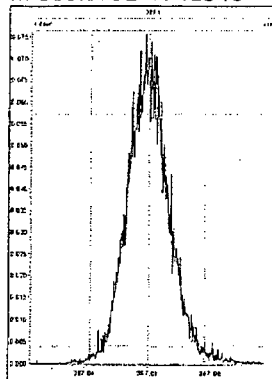


M 416.9760 R 12792

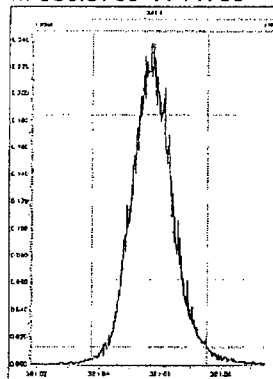


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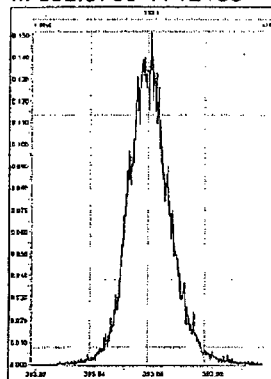
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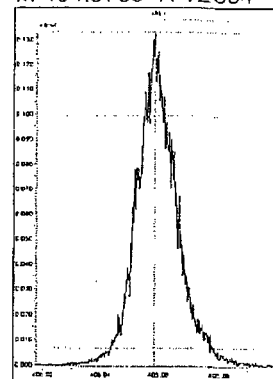
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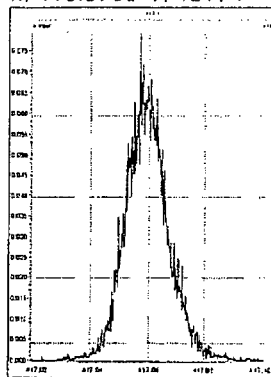
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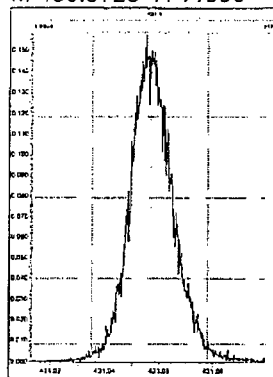
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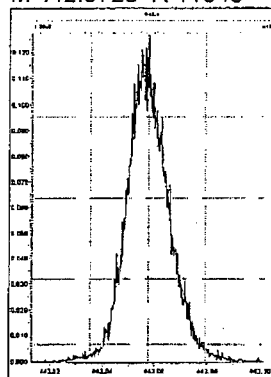
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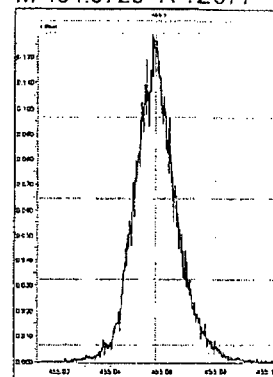
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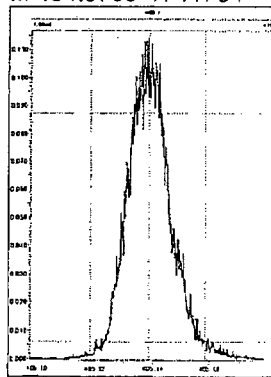
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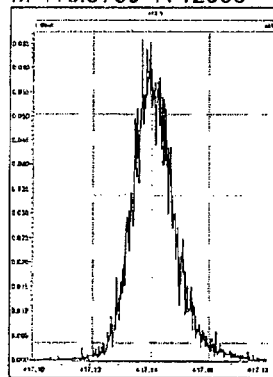
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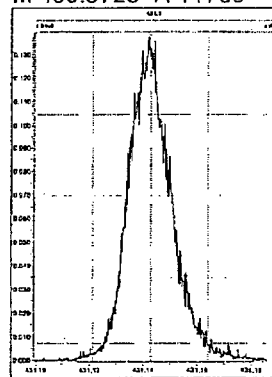
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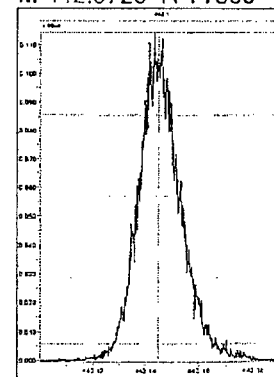
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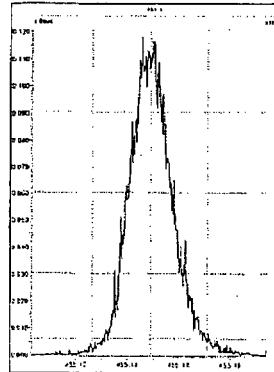
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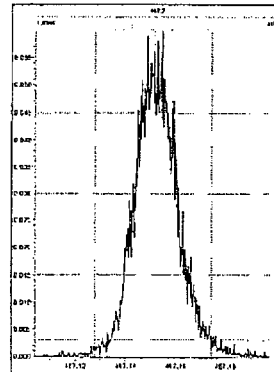
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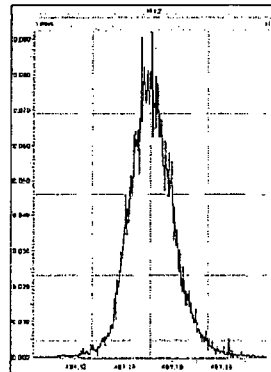
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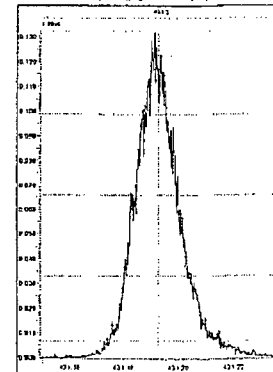
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M 480.9696 R 12689

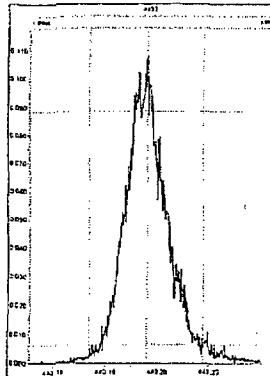


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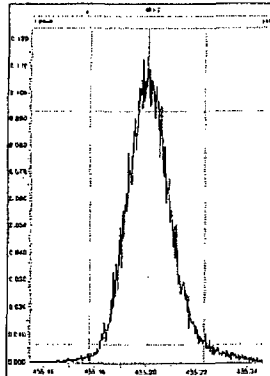


Printed: Friday, October 22, 2010 17:48:54 Eastern Standard Time

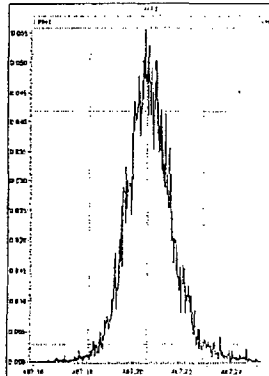
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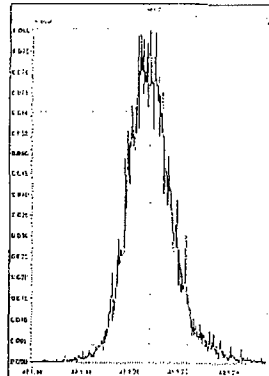
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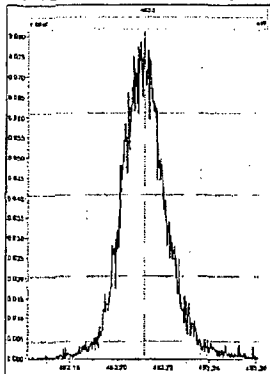
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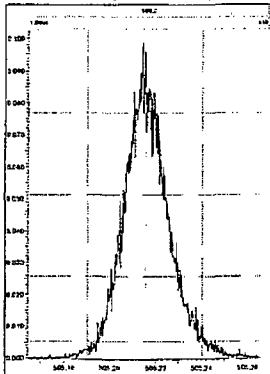
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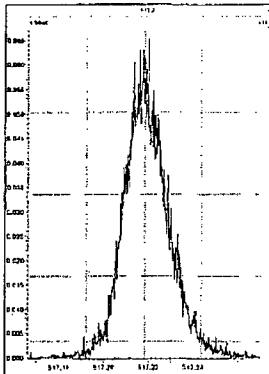
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M 504.9696 R 11204



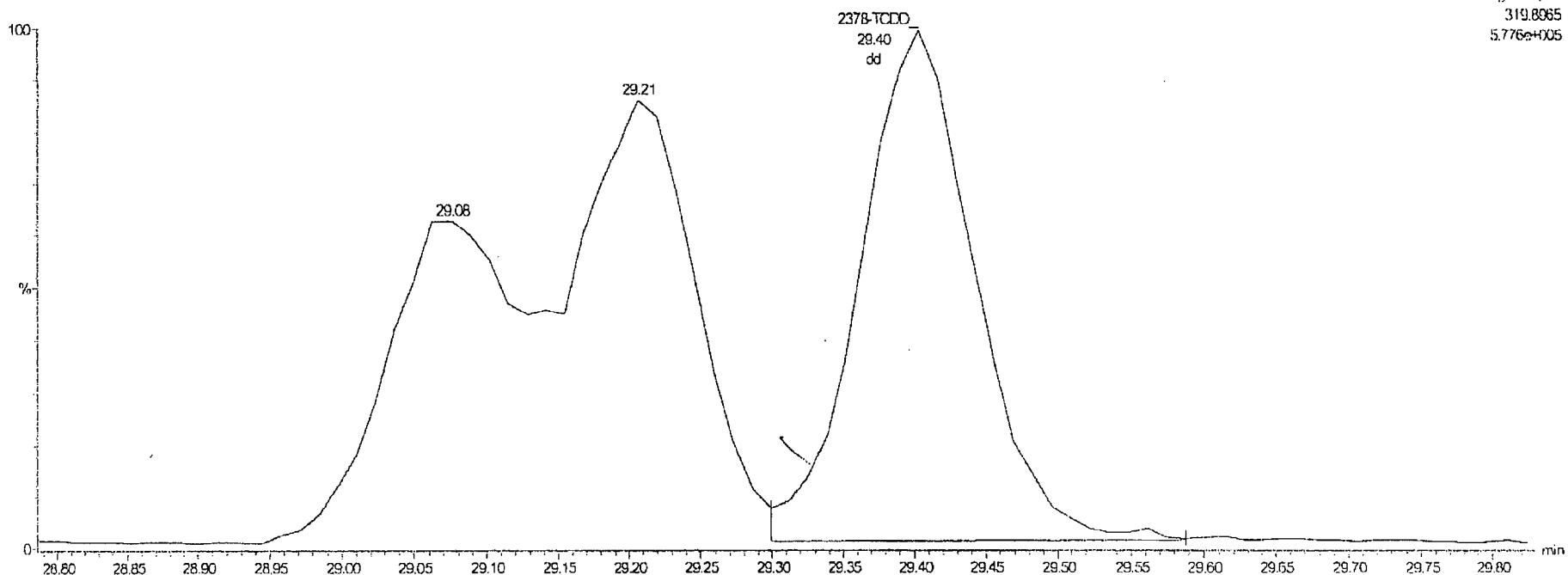
M 516.9697 R 11654



COLUMN PERFORMANCE CHECK (2378-TCDD 8%)

b22cd10a-1

F1:Voltage SIRE+
319.8065
5.776e+005



Quantify Sample Summary Report
Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b22oct10a-1.qld

Last Altered: Friday, October 22, 2010 11:34:26 Eastern Standard Time

Printed: Friday, October 22, 2010 11:35:34 Eastern Standard Time

Method: C:\MassLynx\Default.pro\Methdb\WDM_101810.mdb 19 Oct 2010 08:23:47

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b02oct10a.cdb 03 Oct 2010 13:55:41

Name: b22oct10a-1, Date: 22-Oct-2010, Time: 10:47:34, ID: CS3WT UD100713-01.1, Description: , Job: b22oct10a, Task: HRP763_1, User: MJC

	Name	RT
1	First TCDF	24.26
2	Last TCDF	30.61
3	First PeCDF	30.60
4	Last PeCDF	33.59
5	First HxCDF	34.07
6	Last HxCDF	36.15
7	First HpCDF	37.46
8	Last HpCDF	39.14
9	OCDF	42.50
10	First TCDD	25.95
11	2378-TCDD	29.40
12	Last TCDD	30.47
13	First PeCDD	31.91
14	Last PeCDD	33.44
15	First HxCDD	34.46
16	Last HxCDD	35.87
17	First HpCDD	37.76
18	Last HpCDD	38.57
19	OCDD	42.24

Quantify Sample Report
Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b22oct10a-1.qld

Last Altered: Friday, October 22, 2010 11:34:26 Eastern Standard Time

Printed: Friday, October 22, 2010 11:35:34 Eastern Standard Time

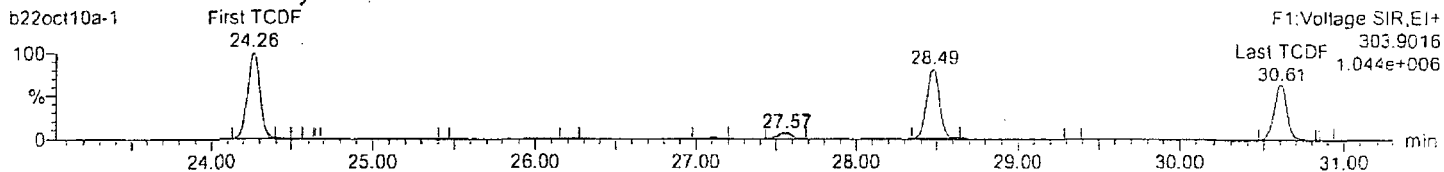
Method: C:\MassLynx\Default.pro\Methdb\WDM_101810.mdb 19 Oct 2010 08:23:47

Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\1613-b02oct10a.cdb 03 Oct 2010 13:55:41

Name: b22oct10a-1, Date: 22-Oct-2010, Time: 10:47:34, ID: CS3WT UD100713-01.1, Description: , Job: b22oct10a,
Task: HRP763_1, User: MJC

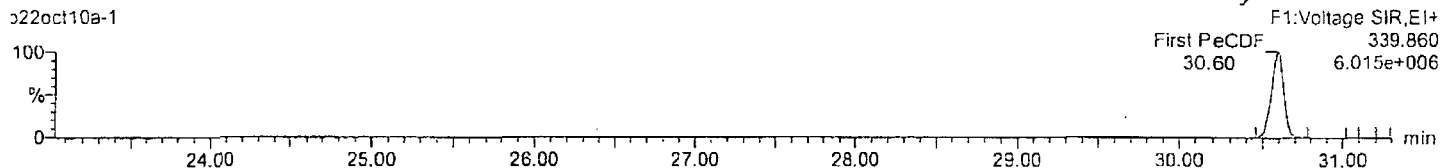
First TCDF

b22oct10a-1



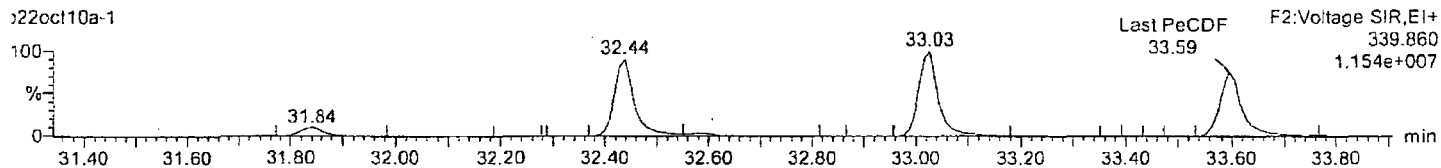
First PeCDF

b22oct10a-1



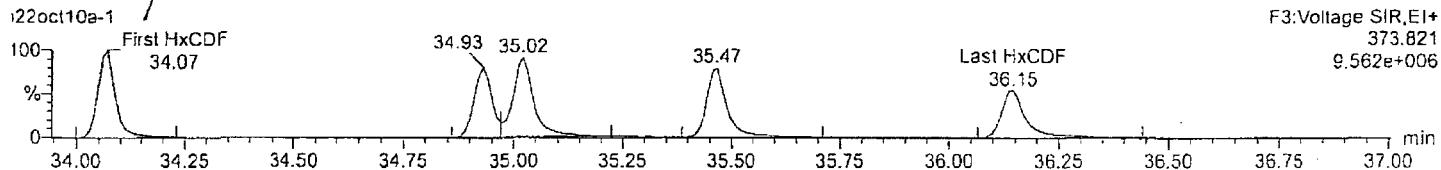
Last PeCDF

b22oct10a-1



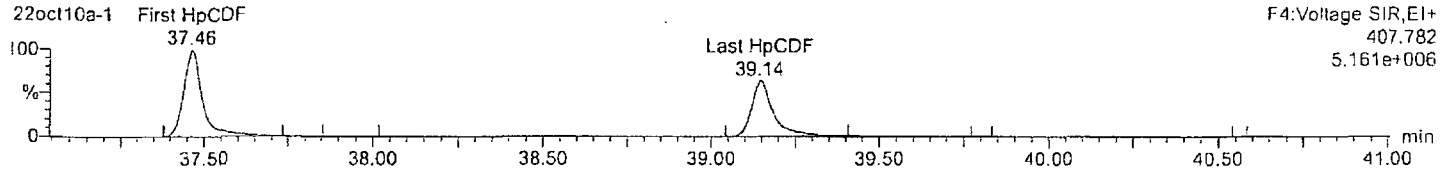
First HxCDF

b22oct10a-1



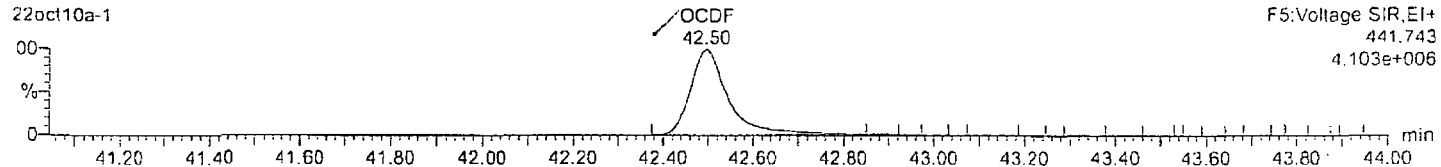
First HpCDF

b22oct10a-1



OCDF

b22oct10a-1



Quantify Sample Report
Window Defining Report

MassLynx 4.1

Dataset: C:\MassLynx\Default.pro\WDM Results\wdm-b22oct10a-1.qld

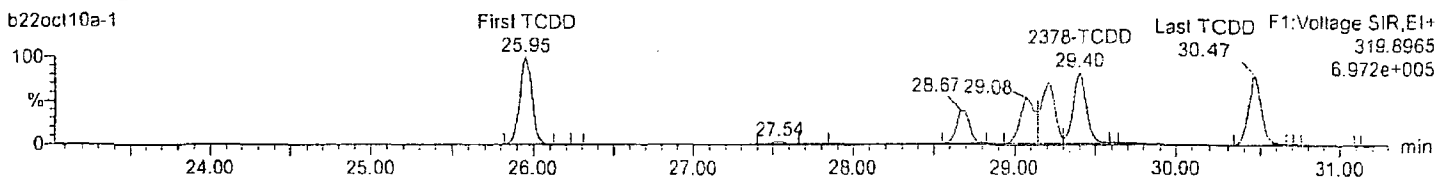
Last Altered: Friday, October 22, 2010 11:34:26 Eastern Standard Time

Printed: Friday, October 22, 2010 11:35:34 Eastern Standard Time

Name: b22oct10a-1, Date: 22-Oct-2010, Time: 10:47:34, ID: CS3WT UD100713-01.1, Description: , Job: b22oct10a,
Task: HRP763_1, User: MJC

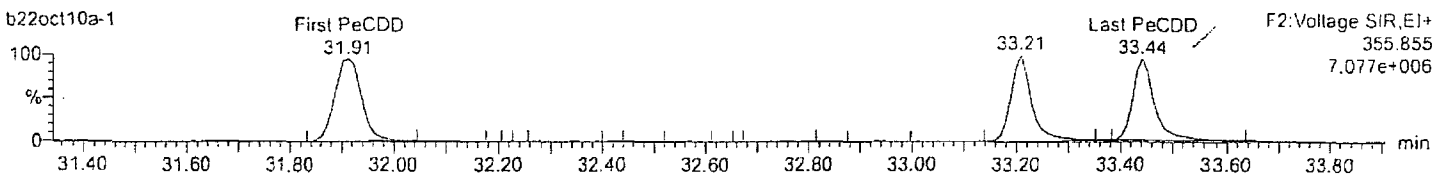
First TCDD

b22oct10a-1



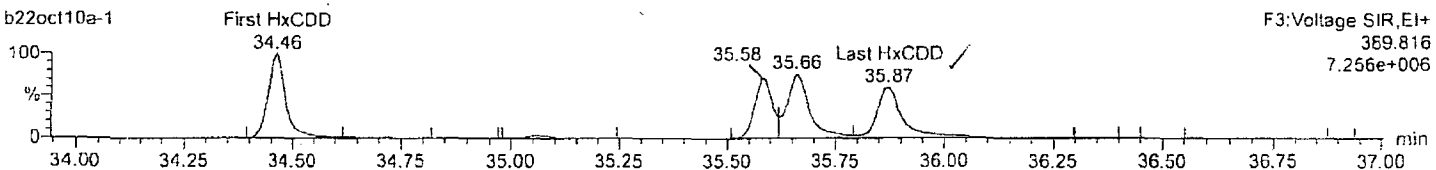
First PeCDD

b22oct10a-1



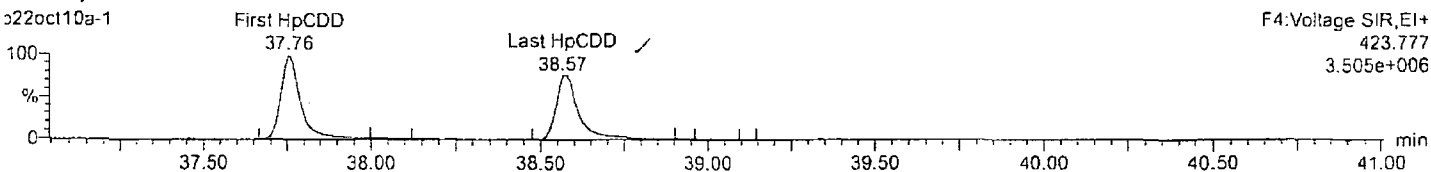
First HxCDD

b22oct10a-1



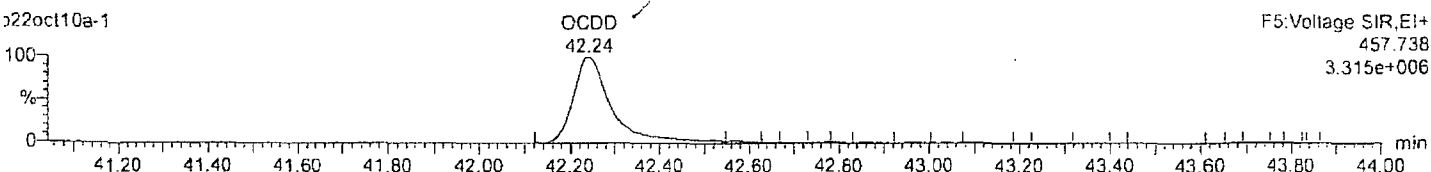
First HpCDD

b22oct10a-1



OCDD

b22oct10a-1



Appendix F

Supporting UCL Statistical Data

General UCL Statistics for Data Sets with Non-Detects

User Selected Options

From File WorkSheet.wst
 Full Precision OFF
 Confidence Coefficient 95%
 Number of Bootstrap Operations 2000
 Cobalt_max (mg/kg)

General Statistics

Number of Valid Data	25	Number of Detected Data	23
Number of Distinct Detected Data	16	Number of Non-Detect Data	2
		Percent Non-Detects	8.00%

Raw Statistics

Minimum Detected	6
Maximum Detected	13.7
Mean of Detected	7.965
SD of Detected	2.019
Minimum Non-Detect	6
Maximum Non-Detect	6.1

Log-transformed Statistics

Minimum Detected	1.792
Maximum Detected	2.617
Mean of Detected	2.05
SD of Detected	0.221
Minimum Non-Detect	1.792
Maximum Non-Detect	1.808

Note: Data have multiple DLs - Use of KM Method is recommended
 For all methods (except KM, DL/2, and ROS Methods),
 Observations < Largest ND are treated as NDs

Number treated as Non-Detect	3
Number treated as Detected	22
Single DL Non-Detect Percentage	12.00%

UCL Statistics

Normal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.783
5% Shapiro Wilk Critical Value	0.914

Data not Normal at 5% Significance Level

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.856
5% Shapiro Wilk Critical Value	0.914

Data not Lognormal at 5% Significance Level

Assuming Normal Distribution			Assuming Lognormal Distribution		
DL/2 Substitution Method			DL/2 Substitution Method		
	Mean	7.57		Mean	1.974
	SD	2.368		SD	0.336
	95% DL/2 (t) UCL	8.38		95% H-Stat (DL/2) UCL	8.641
Maximum Likelihood Estimate(MLE) Method			Log ROS Method		
	Mean	7.669		Mean in Log Scale	2.011
	SD	2.156		SD in Log Scale	0.25
	95% MLE (t) UCL	8.407		Mean in Original Scale	7.714
	95% MLE (Tiku) UCL	8.385		SD in Original Scale	2.12
				95% t UCL	8.44
				95% Percentile Bootstrap UCL	8.442
				95% BCA Bootstrap UCL	8.536
Gamma Distribution Test with Detected Values Only			Data Distribution Test with Detected Values Only		
	k star (bias corrected)	17.21	Data do not follow a Discernable Distribution (0.05)		
	Theta Star	0.463			
	nu star	791.8			
	A-D Test Statistic	1.409	Nonparametric Statistics		
	5% A-D Critical Value	0.742	Kaplan-Meier (KM) Method		
	K-S Test Statistic	0.742		Mean	7.808
	5% K-S Critical Value	0.181		SD	1.968
Data not Gamma Distributed at 5% Significance Level				SE of Mean	0.402
Assuming Gamma Distribution				95% KM (t) UCL	8.496
Gamma ROS Statistics using Extrapolated Data				95% KM (z) UCL	8.47
	Minimum	4.355		95% KM (jackknife) UCL	8.485
	Maximum	13.7		95% KM (bootstrap t) UCL	8.786
	Mean	7.71		95% KM (BCA) UCL	8.504
	Median	7.6		95% KM (Percentile Bootstrap) UCL	8.492
	SD	2.129		95% KM (Chebyshev) UCL	9.562
	k star	13.85		97.5% KM (Chebyshev) UCL	10.32
	Theta star	0.557		99% KM (Chebyshev) UCL	11.81
	Nu star	692.3	Potential UCLs to Use		
	AppChi2	632.3		95% KM (Chebyshev) UCL	9.562
	95% Gamma Approximate UCL	8.442			
	95% Adjusted Gamma UCL	8.494			

Note: DL/2 is not a recommended method.

Cobalt_avg (mg/kg)

General Statistics

Number of Valid Data	25	Number of Detected Data	23
Number of Distinct Detected Data	15	Number of Non-Detect Data	2
		Percent Non-Detects	8.00%

Raw Statistics

Minimum Detected	6
Maximum Detected	13.7
Mean of Detected	7.872
SD of Detected	1.867
Minimum Non-Detect	6
Maximum Non-Detect	6.1

Log-transformed Statistics

Minimum Detected	1.792
Maximum Detected	2.617
Mean of Detected	2.041
SD of Detected	0.208
Minimum Non-Detect	1.792
Maximum Non-Detect	1.808

Note: Data have multiple DLs - Use of KM Method is recommended
For all methods (except KM, DL/2, and ROS Methods),
Observations < Largest ND are treated as NDs

Number treated as Non-Detect	3
Number treated as Detected	22
Single DL Non-Detect Percentage	12.00%

UCL Statistics

Normal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.802
5% Shapiro Wilk Critical Value	0.914

Data not Normal at 5% Significance Level

Lognormal Distribution Test with Detected Values Only

Shapiro Wilk Test Statistic	0.872
5% Shapiro Wilk Critical Value	0.914

Data not Lognormal at 5% Significance Level

Assuming Normal Distribution

DL/2 Substitution Method

Mean	7.484
SD	2.235
95% DL/2 (t) UCL	8.249

Maximum Likelihood Estimate(MLE) Method

Mean	7.595
SD	1.997
95% MLE (t) UCL	8.279
95% MLE (Tiku) UCL	8.261

Assuming Lognormal Distribution

DL/2 Substitution Method

Mean	1.966
SD	0.327
95% H-Stat (DL/2) UCL	8.511

Log ROS Method

Mean in Log Scale	2.005
SD in Log Scale	0.236
Mean in Original Scale	7.634
SD in Original Scale	1.968
95% t UCL	8.308
95% Percentile Bootstrap UCL	8.268
95% BCA Bootstrap UCL	8.42

Gamma Distribution Test with Detected Values Only

k star (bias corrected)	19.46
Theta Star	0.405
nu star	895.1

A-D Test Statistic	1.248
5% A-D Critical Value	0.742
K-S Test Statistic	0.742
5% K-S Critical Value	0.181

Data not Gamma Distributed at 5% Significance Level

Assuming Gamma Distribution

Gamma ROS Statistics using Extrapolated Data

Minimum	4.488
Maximum	13.7
Mean	7.632
Median	7.6
SD	1.973
k star	15.68
Theta star	0.487
Nu star	784
AppChi2	720

95% Gamma Approximate UCL 8.311

95% Adjusted Gamma UCL 8.359

Note: DL/2 is not a recommended method.

Data Distribution Test with Detected Values Only

Data do not follow a Discernable Distribution (0.05)

Nonparametric Statistics

Kaplan-Meier (KM) Method

Mean 7.722

SD 1.823

SE of Mean 0.373

95% KM (t) UCL 8.36

95% KM (z) UCL 8.335

95% KM (jackknife) UCL 8.349

95% KM (bootstrap t) UCL 8.601

95% KM (BCA) UCL 8.422

95% KM (Percentile Bootstrap) UCL 8.34

95% KM (Chebyshev) UCL 9.347

97.5% KM (Chebyshev) UCL 10.05

99% KM (Chebyshev) UCL 11.43

Potential UCLs to Use

95% KM (Chebyshev) UCL 9.347

General UCL Statistics for Full Data Sets

User Selected Options

From File WorkSheet.wst
Full Precision OFF
Confidence Coefficient 95%
Number of Bootstrap Operations 2000

Formaldehyde_max (ug/kg)

General Statistics

Number of Valid Observations 25

Number of Distinct Observations 23

Raw Statistics

Minimum 339
Maximum 23800
Mean 14643
Median 16300
SD 5621
Coefficient of Variation 0.384
Skewness -0.466

Log-transformed Statistics

Minimum of Log Data 5.826
Maximum of Log Data 10.08
Mean of log Data 9.429
SD of log Data 0.821

Relevant UCL Statistics

Normal Distribution Test

Shapiro Wilk Test Statistic 0.949
Shapiro Wilk Critical Value 0.918

Data appear Normal at 5% Significance Level

Lognormal Distribution Test

Shapiro Wilk Test Statistic 0.576
Shapiro Wilk Critical Value 0.918

Data not Lognormal at 5% Significance Level

Assuming Normal Distribution

95% Student's-t UCL 16566
95% UCLs (Adjusted for Skewness)
95% Adjusted-CLT UCL (Chen-1995) 16380
95% Modified-t UCL (Johnson-1978) 16549

Assuming Lognormal Distribution

95% H-UCL 25516
95% Chebyshev (MVUE) UCL 30585
97.5% Chebyshev (MVUE) UCL 36411
99% Chebyshev (MVUE) UCL 47854

Gamma Distribution Test

k star (bias corrected) 2.863

Theta Star 5114

MLE of Mean 14643

MLE of Standard Deviation 8653

nu star 143.2

Approximate Chi Square Value (.05) 116.5

Adjusted Level of Significance 0.0395

Adjusted Chi Square Value 114.9

Anderson-Darling Test Statistic 1.579

Anderson-Darling 5% Critical Value 0.751

Kolmogorov-Smirnov Test Statistic 0.202

Kolmogorov-Smirnov 5% Critical Value 0.176

Data not Gamma Distributed at 5% Significance Level**Assuming Gamma Distribution**

95% Approximate Gamma UCL 17992

95% Adjusted Gamma UCL 18249

Potential UCL to Use**Data Distribution****Data appear Normal at 5% Significance Level****Nonparametric Statistics**

95% CLT UCL 16492

95% Jackknife UCL 16566

95% Standard Bootstrap UCL 16462

95% Bootstrap-t UCL 16463

95% Hall's Bootstrap UCL 16413

95% Percentile Bootstrap UCL 16380

95% BCA Bootstrap UCL 16380

95% Chebyshev(Mean, Sd) UCL 19543

97.5% Chebyshev(Mean, Sd) UCL 21663

99% Chebyshev(Mean, Sd) UCL 25828

Use 95% Student's-t UCL 16566

Formaldehyde_avg (ug/kg)

General Statistics

Number of Valid Observations 25

Number of Distinct Observations 24

Raw Statistics

Minimum 339

Maximum 23800

Mean 14495

Median 15400

SD 5674

Coefficient of Variation 0.391

Skewness -0.406

Log-transformed Statistics

Minimum of Log Data 5.826

Maximum of Log Data 10.08

Mean of log Data 9.416

SD of log Data 0.822

Relevant UCL Statistics

Normal Distribution Test

Shapiro Wilk Test Statistic 0.957

Shapiro Wilk Critical Value 0.918

Data appear Normal at 5% Significance Level

Lognormal Distribution Test

Shapiro Wilk Test Statistic 0.59

Shapiro Wilk Critical Value 0.918

Data not Lognormal at 5% Significance Level

Assuming Normal Distribution

95% Student's-t UCL 16436

95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995) 16263

95% Modified-t UCL (Johnson-1978) 16421

Assuming Lognormal Distribution

95% H-UCL 25247

95% Chebyshev (MVUE) UCL 30259

97.5% Chebyshev (MVUE) UCL 36029

99% Chebyshev (MVUE) UCL 47363

Gamma Distribution Test

k star (bias corrected) 2.824

Theta Star 5133

MLE of Mean 14495

MLE of Standard Deviation 8626

nu star 141.2

Approximate Chi Square Value (.05) 114.7

Adjusted Level of Significance 0.0395

Adjusted Chi Square Value 113.1

Anderson-Darling Test Statistic 1.442

Anderson-Darling 5% Critical Value 0.751

Kolmogorov-Smirnov Test Statistic 0.181

Kolmogorov-Smirnov 5% Critical Value 0.176

Data not Gamma Distributed at 5% Significance Level**Assuming Gamma Distribution**

95% Approximate Gamma UCL 17837

95% Adjusted Gamma UCL 18094

Potential UCL to Use**Data Distribution****Data appear Normal at 5% Significance Level****Nonparametric Statistics**

95% CLT UCL 16361

95% Jackknife UCL 16436

95% Standard Bootstrap UCL 16360

95% Bootstrap-t UCL 16318

95% Hall's Bootstrap UCL 16332

95% Percentile Bootstrap UCL 16279

95% BCA Bootstrap UCL 16197

95% Chebyshev(Mean, Sd) UCL 19442

97.5% Chebyshev(Mean, Sd) UCL 21582

99% Chebyshev(Mean, Sd) UCL 25786

Use 95% Student's-t UCL 16436

Appendix G

Data Validation Memorandum

Data Validation Report

To	Alek Modjeski, AECOM.	Page 1
Project	Dredge Management Support at the Bell Bend Nuclear Power Plant, Salem, Pennsylvania	
Laboratory	Accutest Laboratories, Dayton, NJ	
Laboratory SDG	JA58750, JA58900	
Analyses/Method	Ethylene Glycol	
Validation Level	Limited- Level M-2	
AECOM Project Number	60160208.4	
Prepared by	Richard Purdy/AECOM	Completed: December 7, 2010
Reviewed by	Andrea Mischel/AECOM	
CC	Dion Lewis/AECOM	

OVERVIEW

Level M-2 validation was performed on the data for 29 sediment samples and two equipment blanks analyzed for ethylene glycol. The method associated with this parameter is summarized in the table below. The samples were collected by AECOM at the proposed Bell Bend Nuclear Power Plant site located in Salem Township, Luzerne County, Pennsylvania on October 12-14, 2010 and submitted to Accutest Laboratories (Accutest) in Dayton, NJ for analysis. Accutest processed the samples and reported the results under Job Numbers JA58750 and JA58900.

Parameter	Method
Ethylene Glycol	SW-846 8260B (SIM)

SAMPLES

The samples included in this review are listed below:

Client Sample ID	Matrix	Parameter
BBNP-CW1-C	Sediment	Ethylene Glycol
BBNP-CW2-C	Sediment	Ethylene Glycol

Client Sample ID	Matrix	Parameter
BBNP-CW3-C	Sediment	Ethylene Glycol
BBNP-CW6-C	Sediment	Ethylene Glycol
BBNP-CW9-C	Sediment	Ethylene Glycol
BBNP-CW9-FD (field duplicate of BBNP-CW9-C)	Sediment	Ethylene Glycol
BBNP-CW12-C	Sediment	Ethylene Glycol
BBNP-CW15-C	Sediment	Ethylene Glycol
BBNP-CW18-C	Sediment	Ethylene Glycol
BBNP-CW21-C	Sediment	Ethylene Glycol
BBNP-CW5-C	Sediment	Ethylene Glycol
BBNP-CW8-C	Sediment	Ethylene Glycol
BBNP-CW11-C	Sediment	Ethylene Glycol
BBNP-CW14-C	Sediment	Ethylene Glycol
BBNP-CW17-C	Sediment	Ethylene Glycol
BBNP-CW20-C	Sediment	Ethylene Glycol
BBNP-CW23-C	Sediment	Ethylene Glycol
BBNP-CW20-C-FD (field duplicate of BBNP-CW20-C)	Sediment	Ethylene Glycol
BBNPP-D2	Sediment	Ethylene Glycol
BBNPP-D1-C	Sediment	Ethylene Glycol
BBNPP-R-C	Sediment	Ethylene Glycol
BBNPP-CW22-C	Sediment	Ethylene Glycol
BBNPP-C-EB (equipment blank)	Aqueous	Ethylene Glycol
BBNPP-PB (equipment blank)	Aqueous	Ethylene Glycol
BBNPP-CW4-C	Sediment	Ethylene Glycol
BBNPP-CW7-C	Sediment	Ethylene Glycol
BBNPP-CW10-C	Sediment	Ethylene Glycol
BBNPP-CW13-C	Sediment	Ethylene Glycol
BBNPP-CW16-C	Sediment	Ethylene Glycol
BBNPP-CW19-C	Sediment	Ethylene Glycol
BBNPP-D1-CFD (field duplicate of BBNPP-D1-C)	Sediment	Ethylene Glycol

SUMMARY

In general, the data are valid as reported and may be used for decision making purposes. There were no data points rejected. Selected data points were qualified as estimated and may be biased low (UL) due to QC non-conformances (see discussion below).

MAJOR PROBLEMS

No major problems were encountered in the review of the data.

MINOR PROBLEMS

Surrogates

The percent recovery for the surrogate compound in sample BBNPP-D2 was less than the lower quality control limits, but greater than 10%. Ethylene glycol was not detected the sample. The result is qualified as estimated and may be biased low (UL). Qualified results are shown in Table 1.

Sample ID	Surrogate	% Recovery	Lower Limit	Upper Limit
BBNPP-D2	1-hexanol	47	50	150

Matrix Spike/Matrix Spike Duplicate

Samples BBNPP-CW5-C and BBNPP-R-C were analyzed as the matrix spike/matrix spike duplicate pairs for this sample set. The percent recoveries for the spiked compound in both samples were less than the lower quality control limits, but greater than 10%. Ethylene glycol was not detected the sediment samples. Because the MS and MSD recoveries in both spiked pairs were consistently low and because ethylene glycol may not efficiently purge from the samples by this analytical technique, professional judgment was used to qualify the nondetect results in all samples as estimated with possible low bias (UL). Qualified results are shown in Table 1.

Sample ID	Compound	MS % Recovery	MSD % Recovery	Lower Limit	Upper Limit	RPD	RPD Limit
BBNP-CW5-C	Ethylene glycol	32	29	39	156	10	57
BBNPP-R-C	Ethylene glycol	36	34	39	156	7	57

NOTES

The following issues were noted during the data review.

Surrogates

The percent recovery of surrogate 1-hexanol in soil sample BBNP-CW10-C exceeded the upper quality control limit. Ethylene glycol was not detected in the sample; therefore no validation actions were necessary.

Holding Time

Region 3 M-2 recommends analytical holding times of 14 days for preserved aqueous samples and for soils for samples analyzed by SW846 8260B. Holding times for unpreserved aqueous samples and sediments are not specified. Because the aqueous and sediment samples were analyzed within 7 and 14 days of collection, respectively, professional judgment was used to accept the results without qualification. No data qualifications were applied.

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD, BBNP-CW9-C/BBNP-CW9-FD, and BBNPP-D1-C/BBNPP-D1-CFD were submitted as the field duplicate pairs with this sample set. Ethylene glycol was not detected in any of the parent or field duplicate samples. Precision was deemed acceptable.

REPORT CONTENT

Data validation activities were conducted with reference to SW-846 Method 8260, *Region III Modifications to National Functional Guidelines for Organic Data Review Multi-Media, Multi-Concentration (OLMO1.0-OLMO1.9)* (1994), *Region III Innovative Approaches to Data Validation* (June 1995) modified to reflect the use of non-CLP (Contract Laboratory Program) methods, the Sampling and Analysis Plan (SAP) for Dredge Management Support at the Bell Bend Nuclear Power Plant (September 2010), and the laboratory specific standard operating procedures (SOPs). In the absence of SAP-specified criteria, method or laboratory quality assurance limits were used as appropriate. The text of this report was formulated to address issues affecting data usability.

ATTACHMENTS

Attachment A: Validation Qualifier Codes and Explanation

Attachment B: Reason Codes and Explanation

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNP-CW1-C	SE	Ethylene glycol		0.32	mg/kg	UL	m
BBNP-CW11-C	SE	Ethylene glycol		0.30	mg/kg	UL	m
BBNP-CW12-C	SE	Ethylene glycol		0.29	mg/kg	UL	m
BBNP-CW14-C	SE	Ethylene glycol		0.30	mg/kg	UL	m
BBNP-CW15-C	SE	Ethylene glycol		0.29	mg/kg	UL	m
BBNP-CW17-C	SE	Ethylene glycol		0.32	mg/kg	UL	m
BBNP-CW18-C	SE	Ethylene glycol		0.33	mg/kg	UL	m
BBNP-CW2-C	SE	Ethylene glycol		0.30	mg/kg	UL	m
BBNP-CW20-C	SE	Ethylene glycol		0.30	mg/kg	UL	m
BBNP-CW20-C-FD	SE	Ethylene glycol		0.42	mg/kg	UL	m
BBNP-CW21-C	SE	Ethylene glycol		0.31	mg/kg	UL	m
BBNP-CW23-C	SE	Ethylene glycol		0.31	mg/kg	UL	m
BBNP-CW3-C	SE	Ethylene glycol		0.30	mg/kg	UL	m
BBNP-CW5-C	SE	Ethylene glycol		0.30	mg/kg	UL	m
BBNP-CW6-C	SE	Ethylene glycol		0.30	mg/kg	UL	m
BBNP-CW8-C	SE	Ethylene glycol		0.31	mg/kg	UL	m
BBNP-CW9-C	SE	Ethylene glycol		0.32	mg/kg	UL	m
BBNP-CW9-FD	SE	Ethylene glycol		0.29	mg/kg	UL	m
BBNPP-CW10-C	SE	Ethylene glycol		0.32	mg/kg	UL	m
BBNPP-CW13-C	SE	Ethylene glycol		0.41	mg/kg	UL	m
BBNPP-CW16-C	SE	Ethylene glycol		0.35	mg/kg	UL	m
BBNPP-CW19-C	SE	Ethylene glycol		0.34	mg/kg	UL	m
BBNPP-CW22-C	SE	Ethylene glycol		0.32	mg/kg	UL	m
BBNPP-CW4-C	SE	Ethylene glycol		0.32	mg/kg	UL	m
BBNPP-CW7-C	SE	Ethylene glycol		0.32	mg/kg	UL	m
BBNPP-D1-C	SE	Ethylene glycol		0.36	mg/kg	UL	m
BBNPP-D1-CFD	SE	Ethylene glycol		0.41	mg/kg	UL	m
BBNPP-D2	SE	Ethylene glycol		0.33	mg/kg	UL	m,s
BBNPP-R-C	SE	Ethylene glycol		0.33	mg/kg	UL	m

Attachment A

Qualifier Codes and Explanation

Qualifier	Explanation
U	Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
No Code	Confirmed identification
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
N	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.
J	Analyte present. Reported value may not be accurate or precise.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	Not detected. Quantitation limit is probably higher.
NJ	Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.
Q	No analytical result.

Attachment B

Reason Codes and Explanation

Reason Code	Explanation
be	Equipment blank (or trip blank) contamination
bl	Laboratory blank contamination
bm	Missing blank information
c	Calibration issue
cl	Clean-up standard recovery
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ip	DDT/Endrin breakdown
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column precision
q	Quantitation issue
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature preservation issue
v	Compound identification issue
x	Low % solids
y	Serial dilution results
z	ICS results

Data Validation Report

To	Alek Modjeski, AECOM.	Page	1
Project	Dredge Management Support at the Bell Bend Nuclear Power Plant, Salem, Pennsylvania		
Laboratory	Accutest Laboratories, Dayton, NJ		
Laboratory SDG	JA58750, JA58900		
Analyses/Method	Formaldehyde and Acetaldehyde		
Validation Level	Limited, Level M-2		
AECOM Project Number	60160208.4		
Prepared by	Richard Purdy/AECOM	Completed: December 20, 2010	
Reviewed by	Andrea Mischel/AECOM		
CC	Dion Lewis/AECOM		

OVERVIEW

Level M-2 validation was performed on the data for 29 sediment samples and two aqueous equipment blank samples analyzed for the carbonyl compounds formaldehyde and acetaldehyde. The method associated with these parameters is summarized in the table below. The samples were collected by AECOM at the proposed Bell Bend Nuclear Power Plant site located in Salem Township, Luzerne County, Pennsylvania on October 12-14, 2010 and submitted to Accutest Laboratories in Dayton, NJ for analysis. Accutest processed the samples and reported the results under Job Numbers JA58750 and JA58900.

Parameter	Method
Formaldehyde, Acetaldehyde	SW-846 8315A (HPLC)

SAMPLES

The samples included in this review are listed below:

Client Sample ID	Matrix	Parameter
BBNP-CW1-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW2-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW3-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW6-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW9-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW9-FD	Sediment	Formaldehyde, Acetaldehyde

Client Sample ID	Matrix	Parameter
BBNP-CW12-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW15-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW18-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW21-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW5-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW8-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW11-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW14-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW17-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW20-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW23-C	Sediment	Formaldehyde, Acetaldehyde
BBNP-CW20-C-FD	Sediment	Formaldehyde, Acetaldehyde
BBNPP-D2	Sediment	Formaldehyde, Acetaldehyde
BBNPP-D1-C	Sediment	Formaldehyde, Acetaldehyde
BBNPP-R-C	Sediment	Formaldehyde, Acetaldehyde
BBNPP-CW22-C	Sediment	Formaldehyde, Acetaldehyde
BBNPP-C-EB (equipment blank)	Aqueous	Formaldehyde, Acetaldehyde
BBNPP-PB (equipment blank)	Aqueous	Formaldehyde, Acetaldehyde
BBNPP-CW4-C	Sediment	Formaldehyde, Acetaldehyde
BBNPP-CW7-C	Sediment	Formaldehyde, Acetaldehyde
BBNPP-CW10-C	Sediment	Formaldehyde, Acetaldehyde
BBNPP-CW13-C	Sediment	Formaldehyde, Acetaldehyde
BBNPP-CW16-C	Sediment	Formaldehyde, Acetaldehyde
BBNPP-CW19-C	Sediment	Formaldehyde, Acetaldehyde
BBNPP-D1-C-FD	Sediment	Formaldehyde, Acetaldehyde

SUMMARY

In general, the data are valid as reported and may be used for decision making purposes. No data points were rejected. Selected data points were qualified as estimated due to QC non-conformances (see discussion below).

MAJOR PROBLEMS

No major problems were encountered in the review of the data.

MINOR PROBLEMS

Holding Time

The SW846 8315A method specifies that aqueous samples be extracted and derivatized within 3 days of collection and that the holding times for preparation of soil leachates be kept at a minimum. All derivatized extracts must be analyzed within 3 days of preparation. The table below lists the samples that did not meet these holding time criteria. The results are usable as estimated values with potential low bias. Qualified results are shown in Table 1.

Sample ID	Days from Sampling to Prep	Actions	Days from Prep to Analysis	Actions Detects/Nondetects	Days from Sampling to Analysis	Actions
BBNP-CW1-C	6	ok	4	L/UL	10	ok
BBNP-CW11-C	5	ok	4	L/UL	9	ok
BBNP-CW12-C	6	ok	4	L/UL	10	ok
BBNP-CW14-C	5	ok	4	L/UL	9	ok
BBNP-CW17-C	5	ok	4	L/UL	9	ok
BBNP-CW18-C	6	ok	4	L/UL	10	ok
BBNP-CW2-C	6	ok	4	L/UL	10	ok
BBNP-CW20-C	5	ok	4	L/UL	9	ok
BBNP-CW20-C-FD	5	ok	4	L/UL	9	ok
BBNP-CW21-C	6	ok	4	L/UL	10	ok
BBNP-CW23-C	5	ok	4	L/UL	9	ok
BBNP-CW3-C	6	ok	4	L/UL	10	ok
BBNP-CW5-C	5	ok	4	L/UL	9	ok
BBNP-CW6-C	6	ok	4	L/UL	10	ok
BBNP-CW8-C	5	ok	4	L/UL	9	ok
BBNP-CW9-C	6	ok	4	L/UL	10	ok
BBNP-CW9-FD	6	ok	4	L/UL	10	ok

Surrogates

The percent recoveries for the surrogate compound butyraldehyde that exceeded acceptance limit criteria in the samples are shown in the table below. The positive sample results are qualified as estimated and may be biased high (K). Nondetect results are not qualified on the basis of high surrogate recoveries. Qualified results are shown in Table 1.

Sample ID	Surrogate	% Recovery	Lower Limit	Upper Limit	Actions Detects/Nondetects
BBNPP-C-EB	BUTYRALDEHYDE	155 / 155	10	150	K/Accept
BBNPP-CW10-C	BUTYRALDEHYDE	199 / 202	18	186	K/Accept
BBNPP-CW22-C	BUTYRALDEHYDE	212 / 214	18	186	K/Accept
BBNPP-CW7-C	BUTYRALDEHYDE	208	18	186	K/Accept

Chromatograms

Because of an apparent matrix interference, the on-column concentrations for acetaldehyde differed significantly between Signal #1 (450nm) and Signal #2 (425 nm) – approximately two orders of magnitude. Given this imprecision and the good agreement in concentrations between the two

signal for formaldehyde, professional judgment was used to qualify the acetaldehyde results as estimated (J).

BBNP-CW1-C	BBNP-CW18-C	BBNP-CW23-C
BBNP-CW2-C	BBNP-CW21-C	BBNP-CW20-C-FD
BBNP-CW3-C	BBNP-CW5-C	BBNPP-D2
BBNP-CW6-C	BBNP-CW8-C	BBNPP-D1-C
BBNP-CW9-C	BBNP-CW11-C	BBNPP-R-C
BBNP-CW9-FD	BBNP-CW14-C	BBNPP-CW4-C
BBNP-CW12-C	BBNP-CW17-C	BBNPP-CW7-C
BBNP-CW15-C	BBNP-CW20-C	BBNPP-D1-C-FD

Qualified results are shown in Table 1.

NOTES

The following issues were noted during the data review.

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD, BBNP-CW9-C/BBNP-CW9-FD, and BBNPP-D1-C/BBNPP-D1-CFD were submitted as the field duplicate pairs with this sample set. For this data review, samples were not qualified on the basis of field duplicate precision. Field duplicate relative percent differences (RPDs) are tabulated below for informational purposes only. Where the RPD could be calculated, the duplicate precision was considered acceptable. No qualifications were necessary.

Sample ID	Duplicate ID	Compound	Sample Result	Duplicate Result	RL	Units	RPD
BBNP-CW9-C	BBNP-CW9-FD	Acetaldehyde	ND	75.5 J	1000	ug/kg	NC
BBNP-CW9-C	BBNP-CW9-FD	Formaldehyde	16400	12600	5100	ug/kg	26.2
BBNP-CW20-C	BBNP-CW20-C-FD	Acetaldehyde	111 J	127 J	980	ug/kg	13.4
BBNP-CW20-C	BBNP-CW20-C-FD	Formaldehyde	10800	12000	4900	ug/kg	10.5
BBNPP-D1-C	BBNPP-D1-CFD	Acetaldehyde	120 J	101 J	1200	ug/kg	17.2
BBNPP-D1-C	BBNPP-D1-CFD	Formaldehyde	9210	6790	5800	ug/kg	30.3

ND – not detected

NC – not calculated

Reporting Limits

Due to elevated concentrations of formaldehyde, all sediment samples were analyzed at either 5-fold or 10-fold dilutions. Reporting limits were adjusted accordingly for the dilutions.

REPORT CONTENT

Data validation activities were conducted with reference to SW-846 Method 8260, *Region III Modifications to National Functional Guidelines for Organic Data Review Multi-Media, Multi-Concentration (OLMO1.0-OLMO1.9)* (1994), *Region III Innovative Approaches to Data Validation*

(June 1995) modified to reflect the use of non-CLP (Contract Laboratory Program) methods, the Sampling and Analysis Plan (SAP) for Dredge Management Support at the Bell Bend Nuclear Power Plant (September 2010), the method and the laboratory specific standard operating procedures (SOPs). In the absence of SAP-specified criteria, method or laboratory quality assurance limits were used as appropriate. The text of this report was formulated to address issues affecting data usability.

ATTACHMENTS

Attachment A: Validation Qualifier Codes and Explanation

Attachment B: Reason Codes and Explanation

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNP-CW1-C	SE	ACETALDEHYDE	108	1000	ug/kg	J	r
BBNP-CW1-C	SE	FORMALDEHYDE	18700	5100	ug/kg	L	h
BBNP-CW11-C	SE	FORMALDEHYDE	10600	4800	ug/kg	L	h
BBNP-CW12-C	SE	FORMALDEHYDE	9470	4700	ug/kg	L	h
BBNP-CW14-C	SE	ACETALDEHYDE	88.5	950	ug/kg	J	r
BBNP-CW14-C	SE	FORMALDEHYDE	20600	4700	ug/kg	L	h
BBNP-CW15-C	SE	ACETALDEHYDE	73.8	960	ug/kg	J	r
BBNP-CW17-C	SE	ACETALDEHYDE	79.5	1000	ug/kg	J	r
BBNP-CW17-C	SE	FORMALDEHYDE	8570	5100	ug/kg	L	h
BBNP-CW18-C	SE	ACETALDEHYDE	103	1100	ug/kg	J	r
BBNP-CW18-C	SE	FORMALDEHYDE	16300	5300	ug/kg	L	h
BBNP-CW2-C	SE	ACETALDEHYDE	65.1	970	ug/kg	J	r
BBNP-CW2-C	SE	FORMALDEHYDE	20300	4900	ug/kg	L	h
BBNP-CW20-C	SE	ACETALDEHYDE	111	980	ug/kg	J	r
BBNP-CW20-C	SE	FORMALDEHYDE	10800	4900	ug/kg	L	h
BBNP-CW20-C-FD	SE	ACETALDEHYDE	127	1300	ug/kg	J	h, r
BBNP-CW20-C-FD	SE	FORMALDEHYDE	12000	6700	ug/kg	L	h
BBNP-CW21-C	SE	ACETALDEHYDE	69.6	980	ug/kg	J	r
BBNP-CW21-C	SE	FORMALDEHYDE	13600	4900	ug/kg	L	h
BBNP-CW23-C	SE	ACETALDEHYDE	99.9	1000	ug/kg	J	h, r
BBNP-CW23-C	SE	FORMALDEHYDE	17800	10000	ug/kg	L	h
BBNP-CW3-C	SE	ACETALDEHYDE	65.9	960	ug/kg	J	r
BBNP-CW3-C	SE	FORMALDEHYDE	9470	4800	ug/kg	L	h
BBNP-CW5-C	SE	ACETALDEHYDE	133	960	ug/kg	J	r
BBNP-CW5-C	SE	FORMALDEHYDE	15400	4800	ug/kg	L	h
BBNP-CW6-C	SE	ACETALDEHYDE	65.7	960	ug/kg	J	r
BBNP-CW6-C	SE	FORMALDEHYDE	18400	4800	ug/kg	L	h
BBNP-CW8-C	SE	ACETALDEHYDE	81.4	1000	ug/kg	J	r
BBNP-CW8-C	SE	FORMALDEHYDE	19500	5000	ug/kg	L	h
BBNP-CW9-C	SE	FORMALDEHYDE	16400	5100	ug/kg	L	h
BBNP-CW9-FD	SE	ACETALDEHYDE	75.5	940	ug/kg	J	r
BBNP-CW9-FD	SE	FORMALDEHYDE	12600	4700	ug/kg	L	h
BBNPP-CW10-C	SE	ACETALDEHYDE	111	1000	ug/kg	J	s
BBNPP-CW22-C	SE	ACETALDEHYDE	255	1000	ug/kg	J	s
BBNPP-CW4-C	SE	ACETALDEHYDE	66.2	1000	ug/kg	J	r
BBNPP-CW7-C	SE	ACETALDEHYDE	84.0	1000	ug/kg	J	r, s
BBNPP-D1-C	SE	ACETALDEHYDE	120	1200	ug/kg	J	r
BBNPP-D1-CFD	SE	ACETALDEHYDE	101	1300	ug/kg	J	r
BBNPP-D2	SE	ACETALDEHYDE	99.0	1100	ug/kg	J	r
BBNPP-R-C	SE	ACETALDEHYDE	95.3	1100	ug/kg	J	r

Attachment A

Qualifier Codes and Explanation

Qualifier	Explanation
U	Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
No Code	Confirmed identification
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
N	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.
J	Analyte present. Reported value may not be accurate or precise.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	Not detected. Quantitation limit is probably higher.
NJ	Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.
Q	No analytical result.

Attachment B**Reason Codes and Explanation**

Reason Code	Explanation
be	Equipment blank (or trip blank) contamination
bl	Laboratory blank contamination
bm	Missing blank information
c	Calibration issue
cl	Clean-up standard recovery
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ip	DDT/Endrin breakdown
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column precision
q	Quantitation issue
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature preservation issue
v	Compound identification issue
x	Low % solids
y	Serial dilution results
z	ICS results

Data Validation Report -Addendum

To	Alek Modjeski, AECOM.		Page	1
Project	Dredge Management Support at the Bell Bend Nuclear Power Plant, Salem, Pennsylvania			
Laboratory	Accutest Laboratories, Dayton, NJ			
Laboratory SDG	JA58750, JA58900			
Analyses/Method	Herbicides, Pesticides			
Validation Level	Level M-2			
AECOM Project Number	60160208.4			
Prepared by	Greg Malzone/AECOM	Completed: December 14, 2010		
Reviewed by	Lisa Krowitz/AECOM			
Addendum Prepared by	Andrea Mischel/AECOM	Date: February 4, 2011		
CC	Dion Lewis/AECOM			

1.0 OVERVIEW - ADDENDUM

Additional level M-2 validation was performed on the data for 29 sediment samples analyzed for herbicides and organochlorine (OC) pesticides. The purpose of the additional validation was to review results for two target herbicides (dalapon and dinoseb) and one target pesticide (chlordan) that were included in the original sample analyses, but had been unreported. Revised reports that included the additional target compounds were received from Accutest Laboratories on January 21, 2011. This addendum incorporates the review findings of these additional compounds with the original validation memorandum. Any qualifications to data resulting from this additional validation are summarized in Table 1A.

The methods associated with these parameters are summarized in the table below. The samples were collected by AECOM at the proposed Bell Bend Nuclear Power Plant site located in Salem Township, Luzerne County, Pennsylvania on October 12-14, 2010 and submitted to Accutest Laboratories in Dayton, NJ for analysis. Accutest processed the samples and reported the results under Job Numbers JA58750 and JA58900.

Parameter	Method
Herbicides	SW-846 8151
Pesticides (Organochlorine)	SW-846 8081A

2.0 SAMPLES

The samples included in this review are listed below:

Client Sample ID	Matrix	Parameters
BBNP-CW1-C	Sediment	Herbicides, OC Pesticides
BBNP-CW2-C	Sediment	Herbicides, OC Pesticides
BBNP-CW3-C	Sediment	Herbicides, OC Pesticides
BBNP-CW6-C	Sediment	Herbicides, OC Pesticides
BBNP-CW9-C	Sediment	Herbicides, OC Pesticides
BBNP-CW9-FD (field duplicate of BBNP-CW9-C)	Sediment	Herbicides, OC Pesticides
BBNP-CW12-C	Sediment	Herbicides, OC Pesticides
BBNP-CW15-C	Sediment	Herbicides, OC Pesticides
BBNP-CW18-C	Sediment	Herbicides, OC Pesticides
BBNP-CW21-C	Sediment	Herbicides, OC Pesticides
BBNP-CW5-C	Sediment	Herbicides, OC Pesticides
BBNP-CW8-C	Sediment	Herbicides, OC Pesticides
BBNP-CW11-C	Sediment	Herbicides, OC Pesticides
BBNP-CW14-C	Sediment	Herbicides, OC Pesticides
BBNP-CW17-C	Sediment	Herbicides, OC Pesticides
BBNP-CW20-C	Sediment	Herbicides, OC Pesticides
BBNP-CW23-C	Sediment	Herbicides, OC Pesticides
BBNP-CW20-C-FD (field duplicate of BBNP-CW20-C)	Sediment	Herbicides, OC Pesticides
BBNPP-D2	Sediment	Herbicides, OC Pesticides
BBNPP-D1-C	Sediment	Herbicides, OC Pesticides
BBNPP-R-C	Sediment	Herbicides, OC Pesticides
BBNPP-CW22-C	Sediment	Herbicides, OC Pesticides
BBNPP-C-EB (equipment blank)	Aqueous	Herbicides, OC Pesticides
BBNPP-PB (field blank)	Aqueous	Herbicides, OC Pesticides
BBNPP-CW4-C	Sediment	Herbicides, OC Pesticides
BBNPP-CW7-C	Sediment	Herbicides, OC Pesticides
BBNPP-CW10-C	Sediment	Herbicides, OC Pesticides
BBNPP-CW13-C	Sediment	Herbicides, OC Pesticides
BBNPP-CW16-C	Sediment	Herbicides, OC Pesticides
BBNPP-CW19-C	Sediment	Herbicides, OC Pesticides
BBNPP-D1-CFD (field duplicate of BBNPP-D1-C)	Sediment	Herbicides, OC Pesticides

3.0 SUMMARY

In general, the data are valid as reported and may be used for decision making purpose with the exception of several dalapon results. Nondetect dalapon results were rejected (R) in select samples due to low laboratory control spike (LCS) recoveries (<10%). Other selected data points were qualified as estimated (UJ) and as estimated, biased low (UL) due to QC non-conformances (see discussion below).

4.0 MAJOR PROBLEMS

4.1 Herbicides

Laboratory Control Sample Recoveries

The percent recovery (%R) for dalapon for the LCS associated with organic preparation batch OP46377, was less than 10% as presented in the table below.

LCS ID	Compound	LCS %R	Lower Limit %R	Upper Limit %R	Associated Samples
OP46377-BS1	dalapon	0	18	70	GWW3340 PREP: OP46377

The soil samples in sample delivery group (SDG) JA58900 were affected. The dalapon results were nondetect in all samples in SDG JA58900; therefore, these results were qualified as rejected (R) and are considered unusable. Qualified results are shown in Table 1A.

The percent recoveries (%Rs) for 2,4,5-T and 2,4-D for the LCS associated with organic preparation batch OP46377, were less than the lower quality control limits, but greater than 10%. Qualifications for 2,4,5-T and 2,4-D are discussed under section 5.0 Minor Problems.

5.0 MINOR PROBLEMS

5.1 Herbicides

Laboratory Control Sample Recoveries

The percent recoveries (%Rs) for 2,4,5-T and 2,4-D for the LCS associated with organic preparation batch OP46377, were less than the lower quality control limits, but greater than 10% as presented in the table below.

LCS ID	Compound	LCS %R	Lower Limit %R	Upper Limit %R	Associated Samples
OP46377-BS1	2,4,5-T	12	51	148	GWW3340 PREP: OP46377
OP46377-BS1	2,4-D	16	49	137	GWW3340 PREP: OP46377

The soil samples in sample delivery group (SDG) JA58900 were affected. The 2,4,5-T and 2,4-D results were nondetect in all samples in SDG JA58900; therefore, these results were qualified as estimated, biased low (UL). Qualified results are shown in Table 1.

5.2 OC Pesticides

Dual Column Precision

The relative percent difference (RPD) between the primary and confirmation column for 4,4'-DDT results for samples BBNP-CW14-C and BBNP-CW2-C were greater than 40%, but less than 70%. The SW-846 8081A criteria of results greater than or equal to the sample quantitation limit with RPDs greater than 40%, but less than or equal to 70% was applied to the samples in these SDGs. Thus, the positive 4,4'-DDT results for samples BBNP-CW14-C and BBNP-CW2-C were qualified as estimated (J). Qualified results are shown in Table 1.

6.0 NOTES

The following issues were noted during the data review.

6.1 Herbicides

Surrogate Recoveries

The percent recovery for DCAA in soil sample BBNP-CW20-C was greater than the upper quality control limit on the confirmation column. No herbicides were detected in sample BBNP-CW20-C, thus qualification of the data on this basis was not required.

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD, BBNP-CW9-C/BBNP-CW9-FD, and BBNPP-D1-C/BBNPP-D1-CFD were submitted as the field duplicate pairs with this sample set. Target herbicides were not detected in the parent or field duplicate samples, thus precision was deemed acceptable.

6.2 OC Pesticides

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD, BBNP-CW9-C/BBNP-CW9-FD, and BBNPP-D1-C/BBNPP-D1-CFD were submitted as the field duplicate pairs with this sample set. Target OC pesticides were not detected in any of the parent or field duplicate samples. Precision was deemed acceptable.

REPORT CONTENT

Data validation activities were conducted with reference to SW-846 Methods 8151 and 8081A, *Region III Modifications to National Functional Guidelines for Organic Data Review Multi-Media, Multi-Concentration (OLMO1.0-OLMO1.9)* (1994), *Region III Innovative Approaches to Data Validation* (June 1995) modified to reflect the use of non-CLP (Contract Laboratory Program) methods, the Sampling and Analysis Plan (SAP) for Dredge Management Support at the Bell Bend Nuclear Power Plant (September 2010), the method and the laboratory specific standard operating procedures (SOPs). In the absence of SAP-specified criteria, method or laboratory quality assurance limits were used as appropriate. The text of this report was formulated to address issues affecting data usability.

ATTACHMENTS

Attachment A: Validation Qualifier Codes and Explanation

Attachment B: Reason Codes and Explanation

Table 1 - Data Validation Summary of Qualified Data

Herbicides							
Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-D2	SE	2,4,5-T		3.7	ug/kg	UL	I
BBNPP-D2	SE	2,4-D		19	ug/kg	UL	I
BBNPP-CW13-C	SE	2,4,5-T		4.7	ug/kg	UL	I
BBNPP-CW13-C	SE	2,4-D		23	ug/kg	UL	I
BBNPP-CW16-C	SE	2,4,5-T		4.0	ug/kg	UL	I
BBNPP-CW16-C	SE	2,4-D		20	ug/kg	UL	I
BBNPP-CW19-C	SE	2,4,5-T		3.8	ug/kg	UL	I
BBNPP-CW19-C	SE	2,4-D		19	ug/kg	UL	I
BBNPP-D1-CFD	SE	2,4,5-T		4.7	ug/kg	UL	I
BBNPP-D1-CFD	SE	2,4-D		23	ug/kg	UL	I
BBNPP-D1-C	SE	2,4,5-T		4.1	ug/kg	UL	I
BBNPP-D1-C	SE	2,4-D		21	ug/kg	UL	I
BBNPP-R-C	SE	2,4,5-T		3.8	ug/kg	UL	I
BBNPP-R-C	SE	2,4-D		19	ug/kg	UL	I
BBNPP-CW22-C	SE	2,4,5-T		3.6	ug/kg	UL	I
BBNPP-CW22-C	SE	2,4-D		18	ug/kg	UL	I
BBNPP-CW4-C	SE	2,4,5-T		3.7	ug/kg	UL	I
BBNPP-CW4-C	SE	2,4-D		18	ug/kg	UL	I
BBNPP-CW7-C	SE	2,4,5-T		3.6	ug/kg	UL	I
BBNPP-CW7-C	SE	2,4-D		18	ug/kg	UL	I
BBNPP-CW10-C	SE	2,4,5-T		3.6	ug/kg	UL	I
BBNPP-CW10-C	SE	2,4-D		18	ug/kg	UL	I

Organochlorine Pesticides							
Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNP-CW14-C	SE	4,4'-DDT	2.7	1.4	ug/kg	J	r
BBNP-CW2-C	SE	4,4'-DDT	1.8	1.4	ug/kg	J	r

Table 1A - Data Validation Summary of Qualified Data

Herbicides							
Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-CW10-C	SE	Dalapon		3.6	ug/kg	R	I
BBNPP-CW13-C	SE	Dalapon		4.7	ug/kg	R	I
BBNPP-CW16-C	SE	Dalapon		4.0	ug/kg	R	I

Herbicides							
Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-CW19-C	SE	Dalapon		3.8	ug/kg	R	I
BBNPP-CW22-C	SE	Dalapon		3.6	ug/kg	R	I
BBNPP-CW4-C	SE	Dalapon		3.7	ug/kg	R	I
BBNPP-CW7-C	SE	Dalapon		3.6	ug/kg	R	I
BBNPP-D1-C	SE	Dalapon		4.1	ug/kg	R	I
BBNPP-D1-CFD	SE	Dalapon		4.7	ug/kg	R	I
BBNPP-D2	SE	Dalapon		3.7	ug/kg	R	I
BBNPP-R-C	SE	Dalapon		3.8	ug/kg	R	I

Attachment A

Qualifier Codes and Explanation

Qualifier	Explanation
U	Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
No Code	Confirmed identification
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
N	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.
J	Analyte present. Reported value may not be accurate or precise.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	Not detected. Quantitation limit is probably higher.
NJ	Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.
Q	No analytical result.

Attachment B

Reason Codes and Explanation

Reason Code	Explanation
be	Equipment blank (or trip blank) contamination
bl	Laboratory blank contamination
bm	Missing blank information
c	Calibration issue
cl	Clean-up standard recovery
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ip	DDT/Endrin breakdown
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column precision
q	Quantitation issue
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature preservation issue
v	Compound identification issue
x	Low % solids
y	Serial dilution results
z	ICS results

Data Validation Report – Addendum

To	Alek Modjeski, AECOM.		Page	1
Project	Dredge Management Support at the Bell Bend Nuclear Power Plant, Salem, Pennsylvania			
Laboratory	Accutest Laboratories, Dayton, NJ			
Laboratory SDG	JA58750			
Analyses/Method	SVOCs, OP Pesticides, and PCBs			
Validation Level	Limited – Level M-2			
AECOM Project Number	60160208.4			
Prepared by	Linda Adams/AECOM	Completed: November 23, 2010		
Reviewed by	Andrea Mischel/AECOM			
Addendum Prepared by	Andrea Mischel/AECOM	Date: February 4, 2011		
CC	Dion Lewis/AECOM			

1.0 OVERVIEW -ADDENDUM

Additional level M-2 validation was performed on the data for 18 sediment samples analyzed for a project specific list of semi-volatile organic compounds (SVOCs), organophosphorus (OP) pesticides, and polychlorinated biphenyls (PCBs). The purpose of the additional validation was to review results for three previously analyzed, but unreported, target SVOCs (pyridine, quinoline and 1,2,4-trichlorobenzene). The unreported target SVOCs were subsequently reported in revised Accutest laboratory report JA58750 on January 21, 2011. This addendum incorporates the review findings of the additional compounds with the original validation memorandum.

The methods associated with these parameters are summarized in the table below. The samples were collected by AECOM at the proposed Bell Bend Nuclear Power Plant site located in Salem Township, Luzerne County, Pennsylvania on October 12 and 13, 2010 and submitted to Accutest Laboratories in Dayton, NJ for analysis. Accutest processed the samples and reported the results under Job Number JA58750. It should be noted that Accutest subcontracted the OP pesticide analyses to their facility in Orlando, FL.

Parameter	Method
SVOCs	SW-846 8270C
OP Pesticides	SW-846 8141B
PCBs	SW-846 8082

2.0 SAMPLES

The samples included in this review are listed below:

Client Sample ID	Matrix	Parameters
BBNP-CW1-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW2-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW3-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW6-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW9-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW9-FD (field duplicate of BBNP-CW9-C)	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW12-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW15-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW18-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW21-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW5-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW8-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW11-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW14-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW17-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW20-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW23-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNP-CW20-C-FD (field duplicate of BBNP-CW20-C)	Sediment	SVOCs, OP Pesticides, PCBs

3.0 SUMMARY

In general, the data are valid as reported and may be used for decision making purposes. There were no qualifications made to additional SVOC target compounds pyridine, quinoline or 1,2,4-trichlorobenzene. No data points were rejected. Other selected data points were qualified as estimated (UJ) due to QC nonconformances (see discussion below).

4.0 MAJOR PROBLEMS

No major problems were encountered in the review of the data.

5.0 MINOR PROBLEMS

5.1 SVOCs

Initial and Continuing Calibrations

The percent relative standard deviations (%RSDs), the correlation coefficients (r), the percent differences (%Ds), and/or the relative response factors (RRFs) were all within the method QC acceptance criteria in the initial and continuing calibrations (ICAL and CCALs) and initial calibration verification (ICV) standards with the following exceptions summarized in the table below. Sample results were qualified as indicated. Qualified results are shown in Table 1.

Calibration	Compound	%D	Actions (Detects/Nondetects)
ICV 10/21/2010 GCMS2P	Benzidine	85.6	J/UJ
Associated Samples: All soil samples			
ICV 11/02/2010 GCMS2P	Benzidine	25.9	J/UJ
Associated Samples: All soil samples except BBNP-CW21-C and BBNP-CW8-C			

5.2 OP Pesticides

No minor problems were encountered in the review of the data.

5.3 PCBs

Holding Times

Soil sample BBNP-CW2-C was re-extracted due to sample contamination 21 days after sample collection which is beyond the holding time of 14 days. Target analytes were not detected in this sample. The nondetect results were qualified as estimated (UJ). Qualified results are shown in Table 1.

6.0 NOTES

The following issues were noted during the data review.

6.1 SVOCs

Reported Target Analyte List

The laboratory did not report 27 of the project specific target semi-volatile compounds listed in Table 5-4 "BBNPP Organic COPCs and Reporting Limits" of the project SAP. The laboratory was notified of the missing data and subsequently reported it in a separate addendum report under Job Number JA58750A. *[Note that pyridine, quinoline and 1,2,4-trichlorobenzene were reported in revised Accutest report JA58750 (January 21, 2011) and are discussed in this validation addendum.]*

Surrogate Recoveries

It should be noted that the percent recovery of 2,4,6-tribromophenol in soil sample BBNP-CW3-C was initially reported as 0%. Upon review of the chromatogram of this sample, the 2,4,6-tribromophenol peak was apparent, however, the peak was not integrated. The laboratory was contacted regarding this discrepancy. The laboratory resubmitted the reports associated with this sample. The %R of 2,4,6-tribromophenol in soil sample BBNP-CW3-C was within the QC acceptance limits in the resubmitted report. Qualification of the data on this basis was not required.

Internal Standard Recoveries

The internal standards appear to be double spiked in soil samples BBNP-CW14-C and BBNP-CW23-C since all recoveries exceeded the upper control limit. Target analytes were not detected in these samples. Qualification of the data on this basis was not required.

Blanks

Target analytes were not detected in the laboratory method blank or in equipment blank sample BBNPP-PB (reported in Job Number JA58900). Bis(2-ethylhexyl)phthalate (1.6 ug/L) was detected in equipment blank BBNPP-C-EB (reported in Job Number JA58900). Bis(2-ethylhexyl)phthalate was not detected in the soil samples. Qualification of the data on this basis was not required.

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD and BBNP-CW9-C/BBNP-CW9-C-FD were submitted as the field duplicate pairs with this sample set. Target analytes were not detected in samples BBNP-CW9-C/BBNP-CW9-C-FD. Precision was deemed acceptable.

The following table summarizes the RPD of the detected analyte in field duplicate pair BBNP-CW20-C/BBNP-CW20-C-FD, which was not calculable due to a nondetect result in sample BBNP-CW20-C. For this data review, sample results were not qualified on the basis of field duplicate precision. The RPD tabulated below is for informational purposes only. Based on AECOM professional judgment, precision would be considered acceptable since the detected result in field duplicate sample BBNP-CW20-C-FD was <5x the sample quantitation limit (SQL).

Analyte	BBNP-CW20-C (µg/Kg)	BBNP-CW20-C-FD (µg/Kg)	RPD (%)
Pyrene	35 U	19.6 J	NC

Non-Spiked MS/MSD Comparison

MS/MSD analyses were requested and were performed on sample BBNP-CW5-C from this sample set. All compounds were spiked therefore, no comparison was possible.

Tentatively Identified Compounds (TICs)

TICs were not reported for this sample set.

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

Results less than the SQL were flagged with "J" by the laboratory to indicate an estimated value; these qualifiers were retained by the validator.

6.2 OP Pesticides

Initial and Continuing Calibrations

The percent relative standard deviations (%RSDs), the correlation coefficients (r), the percent differences (%Ds), and/or the calibration factors (CFs) were all within the method QC acceptance criteria in the initial and continuing calibrations (ICAL and CCALs) and initial calibration verification (ICV) standards with the following exceptions summarized in the table below. Qualification of the data was not required.

Calibration	Compound	%D Col 1/Col 2	Actions (Detects/Nondetects)
CC 10/20/2010	Sulfotepp	28.2/ok	None required. High bias on column

Calibration	Compound	%D Col 1/Col 2	Actions (Detects/Nondetects)
08:07	Phorate	20.3/ok	1. Samples ND and Col 2 within limits.
	Dimethoate	38.4/ok	
	Diazinon	18.8/ok	
	Disulfoton	21.9/ok	
	Ronnel	22.0/ok	
	Methyl parathion	29.1/ok	
	Malathion	30.3/ok	
	Chloropyrifos	22.6/ok	
	Ethyl parathion	36.6/ok	
Associated Samples: Initial continuing calibration for samples BBNP-CW1-C, BBNP-CW2-C, BBNP-CW3-C, BBNP-CW6-C, BBNP-CW9-C, BBNP-CW9-FD, BBNP-CW12-C, and BBNP-CW15-C			

Calibration	Compound	%D Col 1/Col 2	Actions (Detects/Nondetects)
CC 10/20/2010 14:22	Dichlorovos	20.6/ok	None required. High bias on column 1. Samples ND and Col 2 within limits.
Associated Samples: Post continuing calibration for samples BBNP-CW1-C, BBNP-CW2-C, BBNP-CW3-C, BBNP-CW6-C, BBNP-CW9-C, BBNP-CW9-FD, BBNP-CW12-C, and BBNP-CW15-C Initial continuing calibration for samples BBNP-CW18-C, BBNP-CW21-C, BBNP-CW5-C, BBNP-CW8-C, BBNP-CW11-C, BBNP-CW14-C, BBNP-CW17-C, and BBNP-CW20-C.			
CC 10/20/2010 20:15	Dichlorovos	30.3/36.0	None required. High bias on both columns and samples ND.
Associated Samples: Post continuing calibration for samples BBNP-CW18-C, BBNP-CW21-C, BBNP-CW5-C, BBNP-CW8-C, BBNP-CW11-C, BBNP-CW14-C, BBNP-CW17-C, and BBNP-CW20-C. BBNP-CW21-C. Initial continuing calibration for samples BBNP-CW23-C and BBNP-CW20-C-FD			
CC 10/20/2010 20:15	Dichlorovos	36.8/24.9	None required. High bias on both columns and samples ND.
Associated Samples: Post continuing calibration for samples BBNP-CW23-C and BBNP-CW20-C-FD			

LCS Recoveries

The laboratory spiked seven of 11 target compounds. Dimethoate, ethyl parathion, sulfotep, and malathion were not spiked. The percent recovery of chlorpyrifos (121%) exceeded the QC limits (51-119%) in the LCS analysis associated with all soil samples. Chlorpyrifos was not detected in these samples. Qualification of the data was not required.

Blanks

Target analytes were not detected in the laboratory method blanks or in equipment blank samples BBNPP-PB and BBNPP-C-EB (reported in Job Number JA58900).

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD and BBNP-CW9-C/BBNP-CW9-FD were submitted as the field duplicate pairs with this sample set. Target analytes were not detected in these samples. Precision was deemed acceptable.

Non-Spiked MS/MSD Comparison

MS/MSD analyses were requested and were performed on sample BBNP-CW5-C from this sample set. The laboratory spiked seven of 11 target compounds. Dimethoate, ethyl parathion, sulfotep, and malathion were not spiked. Non-spiked target analytes were not detected in the samples therefore, no comparison was possible.

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

6.3 PCBs

Initial and Continuing Calibrations

The percent relative standard deviations (%RSDs), the correlation coefficients (r), the percent differences (%Ds), and/or the calibration factors (CFs) were all within the method QC acceptance criteria in the initial and continuing calibrations (ICAL and CCALs) and initial calibration verification (ICV) standards with the following exceptions summarized in the table below. Qualification of the data was not required.

Calibration	Compound	%D Col 1/Col 2	Actions (Detects/Nondetects)
CC 10/26/2010 23:11	Aroclor-1260	17/ok	None required. High bias on column 1. Samples ND for Aroclor-1260 and Col 2 within limits.
Associated Samples: BBNP-CW9-FD, BBNP-CW15-C, BBNP-CW18-C, BBNP-CW21-C, BBNP-CW8-C, BBNP-CW11-C, BBNP-CW14-C, BBNP-CW17-C, and BBNP-CW20-C			

Blanks

PCBs were not detected in the laboratory method blanks or in equipment blank samples BBNPP-PB and BBNPP-C-EB (reported in Job Number JA58900).

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD and BBNP-CW9-C/BBNP-CW9-FD were submitted as the field duplicate pairs with this sample set. Target analytes were not detected in these samples. Precision was deemed acceptable.

Non-Spiked MS/MSD Comparison

MS/MSD analyses were requested and were performed on sample BBNP-CW5-C from this sample set. Aroclor-1016 and Aroclor-1260 were spiked. Non-spiked target analytes were not detected in the samples therefore, no comparison was possible.

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

REPORT CONTENT

Data validation activities were conducted with reference to SW846 Methods 8270C, 8141B, and 8082, *Region III Modifications to National Functional Guidelines for Organic Data Review Multi-Media, Multi-Concentration (OLMO1.0-OLMO1.9)* (1994), and *Region III Innovative Approaches for Validation of Organic and Inorganic Data- Standard Operating Procedures* (June 1995) modified to reflect the use of non-CLP (Contract Laboratory Program) methods, the Sampling and Analysis Plan (SAP) for Dredge Management Support at the Bell Bend Nuclear Power Plant (September 2010), the method and the laboratory specific standard operating procedures (SOPs). In the absence of SAP-specified criteria, method or laboratory quality assurance limits were used as appropriate. The text of this report was formulated to address issues affecting data usability.

ATTACHMENTS

Attachment A: Validation Qualifier Codes and Explanation

Attachment B: Reason Codes and Explanation

Table 1 - Data Validation Summary of Qualified Data

SVOCs							
Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNP-CW1-C	SE	BENZIDINE		720	ug/kg	UJ	c
BBNP-CW11-C	SE	BENZIDINE		690	ug/kg	UJ	c
BBNP-CW12-C	SE	BENZIDINE		660	ug/kg	UJ	c
BBNP-CW14-C	SE	BENZIDINE		670	ug/kg	UJ	c
BBNP-CW15-C	SE	BENZIDINE		680	ug/kg	UJ	c
BBNP-CW17-C	SE	BENZIDINE		720	ug/kg	UJ	c
BBNP-CW18-C	SE	BENZIDINE		750	ug/kg	UJ	c
BBNP-CW2-C	SE	BENZIDINE		690	ug/kg	UJ	c
BBNP-CW20-C	SE	BENZIDINE		700	ug/kg	UJ	c
BBNP-CW20-C-FD	SE	BENZIDINE		960	ug/kg	UJ	c
BBNP-CW21-C	SE	BENZIDINE		700	ug/kg	UJ	c
BBNP-CW23-C	SE	BENZIDINE		720	ug/kg	UJ	c
BBNP-CW3-C	SE	BENZIDINE		680	ug/kg	UJ	c
BBNP-CW5-C	SE	BENZIDINE		680	ug/kg	UJ	c
BBNP-CW6-C	SE	BENZIDINE		680	ug/kg	UJ	c
BBNP-CW8-C	SE	BENZIDINE		710	ug/kg	UJ	c
BBNP-CW9-C	SE	BENZIDINE		730	ug/kg	UJ	c
BBNP-CW9-FD	SE	BENZIDINE		670	ug/kg	UJ	c

PCBs							
Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNP-CW2-C	SE	Aroclor-1016		35	ug/kg	UJ	h
BBNP-CW2-C	SE	Aroclor-1221		35	ug/kg	UJ	h
BBNP-CW2-C	SE	Aroclor-1232		35	ug/kg	UJ	h
BBNP-CW2-C	SE	Aroclor-1242		35	ug/kg	UJ	h
BBNP-CW2-C	SE	Aroclor-1248		35	ug/kg	UJ	h
BBNP-CW2-C	SE	Aroclor-1254		35	ug/kg	UJ	h
BBNP-CW2-C	SE	Aroclor-1260		35	ug/kg	UJ	h

Attachment A

Qualifier Codes and Explanation

Qualifier	Explanation
U	Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
No Code	Confirmed identification
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
N	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.
J	Analyte present. Reported value may not be accurate or precise.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	Not detected. Quantitation limit is probably higher.
NJ	Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.
Q	No analytical result.

Attachment B**Reason Codes and Explanation**

Reason Code	Explanation
be	Equipment blank (or trip blank) contamination
bl	Laboratory blank contamination
bm	Missing blank information
c	Calibration issue
cl	Clean-up standard recovery
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ip	DDT/Endrin breakdown
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column precision
q	Quantitation issue
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature preservation issue
v	Compound identification issue
x	Low % solids
y	Serial dilution results
z	ICS results

Data Validation Report

To	Alek Modjeski, AECOM	Page 1
Project	Dredge Management Support at the Bell Bend Nuclear Power Plant, Salem, Pennsylvania	
Laboratory	Accutest Laboratories, Dayton, NJ	
Laboratory SDG	JA58750	
Analyses/Method	Chloride, Sulfate, Hexavalent and Trivalent Chromium, Cyanide, TOC, Nitrogen (Nitrate and Nitrite) and pH	
Validation Level	Limited – Level M-1	
AECOM Project Number	60160208.4	
Prepared by	Linda Adams/AECOM	Completed: November 29, 2010
Reviewed by	Andrea Mischel/AECOM	
CC	Dion Lewis/AECOM	

OVERVIEW

Level M-1 validation was performed on the data for 18 sediment samples analyzed for chloride , sulfate , hexavalent and trivalent chromium, cyanide, total organic carbon (TOC) nitrogen (nitrate and nitrite) and pH. The methods associated with these parameters are summarized in the table below. The samples were collected by AECOM at the proposed Bell Bend Nuclear Power Plant site located in Salem Township, Luzerne County, Pennsylvania on October 12 and 13, 2010 and submitted to Accutest Laboratories in Dayton, NJ for analysis. Accutest processed the samples and reported the results under Job Number JA58750.

Parameter	Method
Chloride and Sulfate	EPA 300.0/SW-846 9056
Hexavalent Chromium	SW-846 3060A/7196A
Trivalent Chromium	SW-846 6010/7196A
Cyanide	SW-846 9012B (modified)/Lachat
TOC	SW-846 9060B (modified)
Nitrogen (Nitrate and Nitrite)	EPA 353.2 (modified)/Lachat
pH	SW-846 9045C,D

SAMPLES

The samples included in this review are listed below:

Client Sample ID	Matrix	Parameters
BBNP-CW1-C	Sediment	Chloride, Sulfate, Hexavalent and Trivalent Chromium, Cyanide,
BBNP-CW2-C	Sediment	

Client Sample ID	Matrix	Parameters
BBNP-CW3-C	Sediment	TOC, Nitrogen (Nitrate and Nitrite) and pH
BBNP-CW6-C	Sediment	
BBNP-CW9-C	Sediment	
BBNP-CW9-FD (field duplicate of BBNP-CW9-C)	Sediment	
BBNP-CW12-C	Sediment	
BBNP-CW15-C	Sediment	
BBNP-CW18-C	Sediment	
BBNP-CW21-C	Sediment	Chloride, Sulfate, Hexavalent and Trivalent Chromium, Cyanide, TOC, Nitrogen (Nitrate and Nitrite) and pH
BBNP-CW5-C	Sediment	
BBNP-CW8-C	Sediment	
BBNP-CW11-C	Sediment	
BBNP-CW14-C	Sediment	
BBNP-CW17-C	Sediment	
BBNP-CW20-C	Sediment	
BBNP-CW23-C	Sediment	
BBNP-CW20-C-FD (field duplicate of BBNP-CW20-C)	Sediment	

SUMMARY

In general, the data are valid as reported and may be used for decision making purposes. No data points were rejected. Selected data points were as estimated (J) due to QC nonconformances (see discussion below).

MAJOR PROBLEMS

No major problems were encountered in the review of the data for chloride, sulfate, hexavalent chromium, trivalent chromium, cyanide, total organic carbon, nitrate, nitrite and pH analyses.

MINOR PROBLEMS

Chloride and Sulfate

No minor problems were encountered in the review of the data.

Hexavalent Chromium

No minor problems were encountered in the review of the data.

Trivalent Chromium

No minor problems were encountered in the review of the data.

Cyanide

No minor problems were encountered in the review of the data.

TOC**Sample Results**

The correlation of variation (CV) exceeded the QC acceptance criteria ($\leq 15\%$) in the analyses of samples BBNP-CW20-C (37.6%), BBNP-CW20-C-FD (29.8%), BBNP-CW8-C (16.3%) and BBNP-CW17-C (21.4%). Multiple injections (4) were performed on samples BBNP-CW8-C and BBNP-CW17-C due to sample nonhomogeneity. The positive results for TOC in samples BBNP-CW20-C, BBNP-CW20-C-FD, BBNP-CW8-C and BBNP-CW17-C were qualified as estimated (J). Qualified results are shown in Table 1.

Nitrogen (Nitrate and Nitrite)

No minor problems were encountered in the review of the data.

pH

No minor problems were encountered in the review of the data.

NOTES

The following issues were noted during the data review.

Chloride and Sulfate**Blanks**

Chloride and sulfate were not detected in the laboratory method blanks, in the initial and continuing calibration blanks (ICB/CCBs), or in equipment blank samples BBNPP-PB and BBNPP-C-EB (reported in Job Number JA58900).

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD and BBNP-CW9-C/BBNP-CW9-FD were submitted as the field duplicate pairs with this sample set. Target analytes were not detected in any of these samples. Precision was deemed acceptable.

Sample Results

No dilutions were required for this sample set; therefore, sample quantitation limits (SQLs) were not affected.

Hexavalent Chromium

Matrix Spike Recoveries

The percent recovery (%R) of the soluble spike (2%) fell below the QC acceptance criteria in the matrix spike analysis performed on sample BBNP-CW5-C. The laboratory re-digested and analyzed all samples within hold time confirming the low soluble spike results. It should be noted that the post spikes and the insoluble matrix spikes recovered within the QC acceptance criteria in both the initial analysis and the re-analyses of the samples.

Based on SW-846 method 3060A, the laboratory performed pH analysis by SW-846 method 9045 and oxidation reduction potential (ORP) by ASTM Method D 1498-76 modified and plotted the results. The results of the plotted data indicated that all soil samples in this sample set were of a reducing nature. The low recovery of the soluble matrix spike was attributed to the reductive nature of the soil samples. Hexavalent chromium was not detected in any of the sediment samples in this sample set. Qualification of the data on this basis was not required.

Blanks

Hexavalent chromium was not detected in the laboratory method blanks, in the ICB/CCBs, or in equipment blank samples BBNPP-PB and BBNPP-C-EB (reported in Job Number JA58900).

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD and BBNP-CW9-C/BBNP-CW9-FD were submitted as the field duplicate pairs with this sample set. Hexavalent chromium was not detected in these samples. Precision was deemed acceptable.

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

Trivalent Chromium

Blanks

Trivalent chromium was not detected in the laboratory method blanks, in the ICB/CCBs, or in equipment blank samples BBNPP-PB and BBNPP-C-EB (reported in Job Number JA58900).

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD and BBNP-CW9-C/BBNP-CW9-FD were submitted as the field duplicate pairs with this sample set. For this data review, sample results were not qualified on the basis of field duplicate precision. For informational purposes, the following table summarizes the relative percent difference (RPD) of trivalent chromium in field duplicate pair BBNP-CW20-C/BBNP-CW20-C-FD, which was within the QC acceptance criteria of 50%RPD for soil matrices.

Analyte	BBNP-CW20-C (mg/Kg)	BBNP-CW20-C-FD (mg/Kg)	RPD (%)
Trivalent Chromium	8.6	7.0	21

The following table summarizes the RPD of trivalent chromium in field duplicate pair BBNP-CW9-C/BBNP-CW9-C-FD, which was also within the QC acceptance criteria.

Analyte	BBNP-CW9-C (mg/Kg)	BBNP-CW9-FD (mg/Kg)	RPD (%)
Trivalent Chromium	8.2	11.2	31

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

Cyanide

Blanks

Cyanide was not detected in the laboratory method blanks or in the ICB/CCBs associated with all samples in this sample set.

Equipment blank samples BBNPP-PB and BBNPP-C-EB (reported in Job Number JA58900) were not analyzed for cyanide due to insufficient sample volume received.

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD and BBNP-CW9-C/BBNP-CW9-FD were submitted as the field duplicate pairs with this sample set. Cyanide was not detected in these samples. Precision was deemed acceptable.

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

TOC

Blanks

TOC was not detected in the laboratory method blanks, in the ICB/CCBs, or in equipment blank samples BBNPP-PB and BBNPP-C-EB (reported in Job Number JA58900).

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD and BBNP-CW9-C/BBNP-CW9-FD were submitted as the field duplicate pairs with this sample set. For this data review, sample results were not qualified on the basis of field duplicate precision. The RPDs tabulated below are for informational purposes only. The following table summarizes the RPD of TOC in field duplicate pair BBNP-CW20-C/BBNP-CW20-C-FD, which was within the QC acceptance criteria.

Analyte	BBNP-CW20-C (mg/Kg)	BBNP-CW20-C-FD (mg/Kg)	RPD (%)
TOC	27700	31300	12

The following table summarizes the RPD of TOC in field duplicate pair BBNP-CW9-C/BBNP-CW9-C-FD, which exceeded the QC acceptance criteria.

Analyte	BBNP-CW9-C (mg/Kg)	BBNP-CW9-FD (mg/Kg)	RPD (%)
TOC	23000	7600	101

Sample Results

The laboratory analyzed a smaller aliquot (approximately 0.05 g) of sample BBNP-CW20-C due to the high concentration of TOC detected in the sample. All remaining samples were analyzed at the approximately 0.1g sample size needed to achieve a reporting limit of 1000 mg/Kg. Other than this notation, qualification of the data on this basis was not required.

Nitrogen (Nitrate and Nitrite)

Blanks

Nitrogen (nitrate and nitrite) was not detected in the laboratory method blank or in the ICB associated with all samples in this sample set. Nitrogen (nitrate and nitrite) was detected in several of the CCBs associated with all samples in this sample set. Qualification of the data on this basis was not required since nitrogen (nitrate and nitrite) were not detected in the sediment samples.

Equipment blank samples BBNPP-PB and BBNPP-C-EB (reported in Job Number JA58900) were not analyzed for nitrogen (nitrate and nitrite) due to insufficient sample volume received.

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD and BBNP-CW9-C/BBNP-CW9-FD were submitted as the field duplicate pairs with this sample set. Nitrogen (nitrate and nitrite) was not detected in these samples. Precision was deemed acceptable.

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

pH

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD and BBNP-CW9-C/BBNP-CW9-FD were submitted as the field duplicate pairs with this sample set. For this data review, sample results were not qualified on the basis of field duplicate precision. The RPDs tabulated below are for informational purposes only. The following table summarizes the RPD of pH in field duplicate pair BBNP-CW20-C/BBNP-CW20-C-FD, which was within the QC acceptance criteria.

Analyte	BBNP-CW20-C (pH units)	BBNP-CW20-C-FD (pH units)	RPD (%)
pH	7.98	7.94	0.5

The following table summarizes the RPD of pH in field duplicate pair BBNP-CW9-C/BBNP-CW9-C-FD, which was within the QC acceptance criteria.

Analyte	BBNP-CW9-C (pH units)	BBNP-CW9-FD (pH units)	RPD (%)
TOC	7.34	7.24	1.4

REPORT CONTENT

Data validation activities were conducted with reference to EPA Methods 300.0 and 353.2, SW846 Methods 9056, 6010, 7196A, 9012B, 9060B, and 9045C, *Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses (April 1993)*, *Region III Innovative Approaches for Validation of Organic and Inorganic Data- Standard Operating Procedures* (June 1995) modified to reflect the use of non-CLP (Contract Laboratory Program) methods, the Sampling and Analysis Plan (SAP) for Dredge Management Support at the Bell Bend Nuclear Power Plant (September 2010), the method and the laboratory specific standard operating procedures (SOPs). In the absence of SAP-specified criteria, method or laboratory quality assurance limits were used as appropriate. The text of this report was formulated to address issues affecting data usability.

ATTACHMENTS

Attachment A: Validation Qualifier Codes and Explanation

Attachment B: Reason Codes and Explanation

Table 1 - Data Validation Summary of Qualified Data

TOC							
Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNP-CW17-C	SE	Total Organic Carbon	9090	1300	mg/kg	J	q
BBNP-CW20-C	SE	Total Organic Carbon	27700	1200	mg/kg	J	q
BBNP-CW20-C-FD	SE	Total Organic Carbon	31300	1700	mg/kg	J	q
BBNP-CW8-C	SE	Total Organic Carbon	10400	1300	mg/kg	J	q

Attachment A

Qualifier Codes and Explanation

Qualifier	Explanation
U	Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
No Code	Confirmed identification
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
N	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.
J	Analyte present. Reported value may not be accurate or precise.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	Not detected. Quantitation limit is probably higher.
NJ	Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.
Q	No analytical result.

AECOM

Attachment B

Reason Codes and Explanation

Reason Code	Explanation
be	Equipment blank (or trip blank) contamination
bl	Laboratory blank contamination
bm	Missing blank information
c	Calibration issue
cl	Clean-up standard recovery
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ip	DDT/Endrin breakdown
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column precision
q	Quantitation issue
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature preservation issue
v	Compound identification issue
x	Low % solids
y	Serial dilution results
z	ICS results

Data Validation Report - Addendum

To	Alek Modjeski, AECOM.	Page 1
Project	Dredge Management Support at the Bell Bend Nuclear Power Plant, Salem, Pennsylvania	
Laboratory	Accutest Laboratories, Dayton, New Jersey	
Laboratory SDG	JA58750	
Analyses/Method	Volatile Organic Compounds/EPA 8260B	
Validation Level	Limited – Level M-2	
AECOM Project Number	60160208.4	
Prepared by	Kristin Rutherford/AECOM	Completed: December 16, 2010
Reviewed by	Andrea Mischel/AECOM	
Addendum Prepared by	Andrea Mischel/AECOM	Date: February 4, 2011
CC	Dion Lewis/AECOM	

OVERVIEW

Additional level M-2 validation was performed on the data for 18 sediment samples analyzed for a project-specific list of volatile organic compounds (VOCs) by SW-846 method 8260B. The purpose of the additional validation was to review results for two previously analyzed, but unreported, target VOCs (2-nitropropane, n-butyl alcohol). The unreported target VOCs were subsequently reported in revised Accutest laboratory report JA58750 on January 21, 2011. This addendum incorporates the review findings of the additional compounds with the original validation memorandum. Qualifications made to the additional compounds are summarized in Table 1A.

The samples were collected by AECOM at the proposed Bell Bend Nuclear Power Plant site located in Salem Township, Luzerne County, Pennsylvania on October 12 and 13, 2010 and submitted to Accutest Laboratories (Accutest) in Dayton, New Jersey for analysis. Accutest processed the samples and reported the results under submission number JA58750.

The samples included in this review are listed below:

Client Sample ID	Matrix	Parameters
BBNP-CW1-C	Sediment	VOCs
BBNP-CW11-C	Sediment	VOCs
BBNP-CW12-C	Sediment	VOCs
BBNP-CW14-C	Sediment	VOCs
BBNP-CW15-C	Sediment	VOCs
BBNP-CW17-C	Sediment	VOCs

Client Sample ID	Matrix	Parameters
BBNP-CW18-C	Sediment	VOCs
BBNP-CW2-C	Sediment	VOCs
BBNP-CW20-C	Sediment	VOCs
BBNP-CW20-C-FD	Sediment	VOCs
BBNP-CW21-C	Sediment	VOCs
BBNP-CW23-C	Sediment	VOCs
BBNP-CW3-C	Sediment	VOCs
BBNP-CW5-C	Sediment	VOCs
BBNP-CW6-C	Sediment	VOCs
BBNP-CW8-C	Sediment	VOCs
BBNP-CW9-C	Sediment	VOCs
BBNP-CW9-FD	Sediment	VOCs

SUMMARY

With the exception of the results for isobutyl alcohol, 2-nitropropane and n-butyl alcohol in all samples, the data are valid as reported and may be used for decision making purposes. Nondetect results for isobutyl alcohol, 2-nitropropane and n-butyl alcohol in all sediment samples were rejected on the basis of initial calibration exceedance. Other sample results required minor qualification and are considered usable. The following issues were noted during the review of the data (see discussion below).

MAJOR PROBLEMS

Initial Calibration

The minimum relative response factor (RRF) did not meet the acceptance criteria for isobutyl alcohol (2-methyl-1-propanol). The nondetect results for isobutyl alcohol in all samples were rejected (R).

Calibration	Compound	RRF	Minimum RRF	Actions (Detects/Nondetects)
ICAL 9/14/2010	Isobutyl alcohol	0.005	≥ 0.05	Estimate (L)/Reject (R)
ICAL 9/14/2010	n-butyl alcohol	0.008	≥ 0.05	Estimate (L)/Reject (R)
ICAL 9/14/2010	2-nitropropane	0.004	≥ 0.05	Estimate (L)/Reject (R)

MINOR PROBLEMS

Initial Calibrations

The percent relative standard deviations (%RSDs), minimum relative response factors (RRF), and the correlation coefficients (r), were all within the method QC acceptance criteria in the initial

calibrations (ICAL) and initial calibration verification (ICV) standards with the following exceptions summarized in the table below. Qualified results are shown in Table 1.

Calibration	Compound	RRF	Minimum RRF	Actions (Detects/Nondetects)
ICAL 9/14/2010	acetone	0.039	≥ 0.05	Estimate (L/UL)
ICAL 9/14/2010	acetonitrile	0.038	≥ 0.05	Estimate (L/UL)
ICAL 9/14/2010	epichlorohydrin	0.022	≥ 0.05	Estimate (L/UL)
ICAL 9/14/2010	2-butanone	0.043	≥ 0.05	Estimate (L/UL)
ICAL 9/14/2010	vinyl acetate	0.046	≥ 0.05	Estimate (L/UL)
ICAL 9/14/2010	ethyl acetate	0.042	≥ 0.05	Estimate (L/UL)

Continuing Calibrations

The percent differences (%Ds) were all within the method QC acceptance criteria in the continuing calibration (CCAL) standards with the following exceptions summarized in the table below. Qualified results are shown in Table 1.

Calibration	Compound	%D	Actions (Detects/Nondetects)
CCAL 10/23/2010	dichlorodifluoromethane	26.3	Estimate (J/UJ)
CCAL 10/23/2010	vinyl acetate	41.3	Estimate (J/UJ)
CCAL 10/23/2010	1,2-dichloroethane	26.0	Estimate (J/UJ)
CCAL 10/23/2010	dibromomethane	26.2	Estimate (J/UJ)
CCAL 10/23/2010	bromoform	25.8	Estimate (J/UJ)
Associated Samples: BBNP-CW1-C, BBNP-CW12-C, BBNP-CW15-C, BBNP-CW17-C, BBNP-CW18-C, BBNP-CW2-C, BBNP-CW20-C, BBNP-CW20-C-FD, BBNP-CW3-C, BBNP-CW5-C, BBNP-CW6-C, BBNP-CW9-C, BBNP-CW9-FD			
Calibration	Compound	%D	Actions (Detects/Nondetects)
CCAL 10/25/2010	vinyl acetate	54.3	Estimate (J/UJ)
CCAL 10/25/2010	ethyl acetate	26.2	Estimate (J/UJ)
CCAL 10/25/2010	1,2-dichloroethane	28.1	Estimate (J/UJ)
CCAL 10/25/2010	4-methyl-2-pentanone	34.3	Estimate (J/UJ)
Associated Samples: BBNP-CW11-C, BBNP-CW14-C, BBNP-CW21-C, BBNP-CW23-C, BBNP-CW8-C			

Surrogates

Surrogate recoveries were within the laboratory acceptance criteria with the following exceptions summarized in the table below. Qualified results are shown in Table 1.

Sample ID	Surrogate	% Rec	Lower Limit	Upper Limit	Actions (Detects/Nondetects)
BBNP-CW11-C	bromofluorobenzene	175	62	138	J/UJ
BBNP-CW23-C	bromofluorobenzene	143	62	138	J/UJ

Laboratory Control Sample

Laboratory Control Sample (LCS) recoveries were within acceptance criteria with the following exception in the table below. Qualified results are shown in Table 1.

Compound	LCS % Rec	Lower Limit	Upper Limit	Associated Samples	Actions (Detects/Nondetects)
vinyl acetate	135	58	131	BBNP-CW11-C, BBNP-CW14-C, BBNP-CW21-C, BBNP-CW8-C	K/Accept

Internal Standard Areas

Internal standard recoveries were within the laboratory acceptance criteria with the following exception summarized in the table below. Sample results for BBNP-CW11-C that were quantified using internal standard 1,4-dichlorobenzene-d4 were qualified as estimated (J/UJ). Qualified results are shown in Table 1.

Sample ID	Internal Standard	Area	Lower Limit	Upper Limit	Actions (Detects/Nondetects)
BBNP-CW11-C	1,4-Dichlorobenzene-d4	37093	42820	85639	J/UJ

MS/MSD results

MS/MSD analyses were requested and analyzed for sample BBNPP-CW5-C. Recoveries and RPDs were within the laboratory acceptance criteria with the following exceptions summarized in the table below. Qualified results are shown in Table 1.

Compound	MS % Rec	MSD %Rec	Lower Limit	Upper Limit	RPD	RPD Limit	Actions (Detects/Nondetects)
hexane	36	52	4	166	38	31	J/UJ
acetone	224	227	26	178	1	32	K/Accept
2-butanone	161	162	32	159	0	28	K/Accept
1,1,2,2-tetrachloroethane	131	95	35	136	32	25	J/UJ
1,2-dibromo-3-chloropropane	145	103	24	154	34	27	J/UJ
1,2,3-trichloropropane	137	97	38	143	34	23	J/UJ

Compound	MS % Rec	MSD %Rec	Lower Limit	Upper Limit	RPD	RPD Limit	Actions (Detects/Nondetects)
chloroprene	53	70	26	159	28	27	J/UJ

Field Duplicates Results

Field duplicate pair BBNPP-CW-20-C and BBNPP-CW20-C-FD was submitted with this sample set. For this data review, sample results were not qualified on the basis of field duplicate imprecision. The relative percent differences (RPDs) of detected target compounds are tabulated below for informational purposes only. Based on AECOM professional judgment, data would not be qualified.

Sample ID	Duplicate ID	Compound	Sample Result	Duplicate Result	QL	Units	RPD
BBNPP-CW-20-C	BBNPP-CW20-C-FD	acetone	9.3	12.2	6.9/9.5	ug/kg	27

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

NOTES

The following issues were noted during the data review.

The laboratory failed to analyze and report results for the following project specific target volatile organic compounds listed in Table 5-4 "BBNPP Organic COPCs and Reporting Limits" of the project SAP: 1-chlorobutane, ethyl acrylate, methanol, methyl acrylate, n-butyl alcohol, cyclohexanone, 2-nitropropane, and 1,2,4-trichlorobenzene. The laboratory was notified of the missing data and subsequently reported it in a separate addendum report under Job Number JA58750A. *[Note that 2-nitropropane and n-butyl alcohol were reported in revised Accutest report JA58750 (January 21, 2011) and are discussed in this validation addendum.]*

REPORT CONTENT

Data validation activities were conducted with reference to Method SW846 Methods 8260B, Region III Innovative Approaches to Data Validation (June 1995) modified to reflect the use of non-CLP (Contract Laboratory Program) methods, the Sampling and Analysis Plan (SAP) for Dredge Management Support at the Bell Bend Nuclear Power Plant (September 2010), the method and the laboratory specific standard operating procedures (SOPs). In the absence of SAP-specified criteria, method or laboratory quality assurance limits were used as appropriate. The text of this report was formulated to address issues affecting data usability.

ATTACHMENTS

Attachment A: Validation Qualifier Codes and Explanation

Attachment B: Reason Codes and Explanation

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result (ug/Kg)	QL (ug/Kg)	Validation Qualifiers	Validation Reason
BBNP-CW1-C	SE	1,2-dichloroethane		0.55	UJ	c
BBNP-CW1-C	SE	1-chloro-2,3-epoxypropane		55	UL	c
BBNP-CW1-C	SE	2-butanone		5.5	UL	c
BBNP-CW1-C	SE	2-methyl-1-propanol		27	R	c
BBNP-CW1-C	SE	acetone		5.5	UL	c
BBNP-CW1-C	SE	acetonitrile		55	UL	c
BBNP-CW1-C	SE	bromoform		2.7	UJ	c
BBNP-CW1-C	SE	dibromomethane		2.7	UJ	c
BBNP-CW1-C	SE	dichlorodifluoro-methane		2.7	UJ	c
BBNP-CW1-C	SE	ethyl acetate		2.7	UL	c
BBNP-CW1-C	SE	vinyl acetate		5.5	UL	c
BBNP-CW11-C	SE	1,1,2,2-tetrachloroethane		2.8	UJ	i
BBNP-CW11-C	SE	1,2,4-trimethylbenzene		2.8	UJ	i
BBNP-CW11-C	SE	1,2-dibromo-3-chloropropane		5.7	UJ	i
BBNP-CW11-C	SE	1,2-dichloroethane		0.57	UJ	c
BBNP-CW11-C	SE	1,3,5-trichlorobenzene		2.8	UJ	i
BBNP-CW11-C	SE	1-chloro-2,3-epoxypropane		57	UL	c
BBNP-CW11-C	SE	2-butanone		5.7	UL	c
BBNP-CW11-C	SE	2-chlorotoluene		2.8	UJ	i
BBNP-CW11-C	SE	2-methyl-1-propanol		28	R	c
BBNP-CW11-C	SE	4-methyl-2-pentanone		2.8	UJ	c
BBNP-CW11-C	SE	acetone		5.7	UL	c
BBNP-CW11-C	SE	acetonitrile		57	UL	c
BBNP-CW11-C	SE	benzyl chloride		2.8	UJ	i
BBNP-CW11-C	SE	n-butylbenzene		2.8	UJ	i

Sample ID	Matrix	Compound	Result (ug/Kg)	QL (ug/Kg)	Validation Qualifiers	Validation Reason
BBNP-CW11-C	SE	tert-butylbenzene		2.8	UJ	i
BBNP-CW11-C	SE	chlorodifluoro-methane	1.0	2.8	J	s
BBNP-CW11-C	SE	ethyl acetate		2.8	UL	c
BBNP-CW11-C	SE	isopropylbenzene		2.8	UJ	i
BBNP-CW11-C	SE	p-isopropyltoluene		2.8	UJ	i
BBNP-CW11-C	SE	n-propylbenzene		2.8	UJ	i
BBNP-CW11-C	SE	sec-butylbenzene		2.8	UJ	i
BBNP-CW11-C	SE	1,2,3-trichloropropane		2.8	UJ	i
BBNP-CW11-C	SE	vinyl acetate		5.7	UL	c
BBNP-CW12-C	SE	1,2-Dichloroethane		0.59	UJ	c
BBNP-CW12-C	SE	1-chloro-2,3-epoxypropane		59	UL	c
BBNP-CW12-C	SE	2-Butanone		5.9	UL	c
BBNP-CW12-C	SE	2-methyl-1-propanol		29	R	c
BBNP-CW12-C	SE	Acetone		5.9	UL	c
BBNP-CW12-C	SE	acetonitrile		59	UL	c
BBNP-CW12-C	SE	Bromoform		2.9	UJ	c
BBNP-CW12-C	SE	dibromomethane		2.9	UJ	c
BBNP-CW12-C	SE	Dichlorodifluoro-methane		2.9	UJ	c
BBNP-CW12-C	SE	ethyl acetate		2.9	UL	c
BBNP-CW12-C	SE	vinyl acetate		5.9	UL	c
BBNP-CW14-C	SE	1,2-Dichloroethane		0.61	UJ	c
BBNP-CW14-C	SE	1-chloro-2,3-epoxypropane		61	UL	c
BBNP-CW14-C	SE	2-Butanone		6.1	UL	c
BBNP-CW14-C	SE	2-methyl-1-propanol		31	R	c
BBNP-CW14-C	SE	4-Methyl-2-pentanone		3.1	UJ	c
BBNP-CW14-C	SE	Acetone		6.1	UL	c
BBNP-CW14-C	SE	acetonitrile		61	UL	c
BBNP-CW14-C	SE	ethyl acetate		3.1	UL	c

Sample ID	Matrix	Compound	Result (ug/Kg)	QL (ug/Kg)	Validation Qualifiers	Validation Reason
BBNP-CW14-C	SE	vinyl acetate		6.1	UL	c
BBNP-CW15-C	SE	1,2-Dichloroethane		0.60	UJ	c
BBNP-CW15-C	SE	1-chloro-2,3-epoxypropane		60	UL	c
BBNP-CW15-C	SE	2-Butanone		6.0	UL	c
BBNP-CW15-C	SE	2-methyl-1-propanol		30	R	c
BBNP-CW15-C	SE	Acetone		6.0	UL	c
BBNP-CW15-C	SE	acetonitrile		60	UL	c
BBNP-CW15-C	SE	Bromoform		3.0	UJ	c
BBNP-CW15-C	SE	dibromomethane		3.0	UJ	c
BBNP-CW15-C	SE	Dichlorodifluoromethane		3.0	UJ	c
BBNP-CW15-C	SE	ethyl acetate		3.0	UL	c
BBNP-CW15-C	SE	vinyl acetate		6.0	UL	c
BBNP-CW17-C	SE	1,2-Dichloroethane		0.57	UJ	c
BBNP-CW17-C	SE	1-chloro-2,3-epoxypropane		57	UL	c
BBNP-CW17-C	SE	2-Butanone		5.7	UL	c
BBNP-CW17-C	SE	2-methyl-1-propanol		28	R	c
BBNP-CW17-C	SE	Acetone		5.7	UL	c
BBNP-CW17-C	SE	acetonitrile		57	UL	c
BBNP-CW17-C	SE	Bromoform		2.8	UJ	c
BBNP-CW17-C	SE	dibromomethane		2.8	UJ	c
BBNP-CW17-C	SE	Dichlorodifluoromethane		2.8	UJ	c
BBNP-CW17-C	SE	ethyl acetate		2.8	UL	c
BBNP-CW17-C	SE	vinyl acetate		5.7	UL	c
BBNP-CW18-C	SE	1,2-Dichloroethane		0.73	UJ	c
BBNP-CW18-C	SE	1-chloro-2,3-epoxypropane		73	UL	c
BBNP-CW18-C	SE	2-Butanone		7.3	UL	c
BBNP-CW18-C	SE	2-methyl-1-propanol		36	R	c
BBNP-CW18-C	SE	Acetone		7.3	UL	c

Sample ID	Matrix	Compound	Result (ug/Kg)	QL (ug/Kg)	Validation Qualifiers	Validation Reason
BBNP-CW18-C	SE	acetonitrile		73	UL	c
BBNP-CW18-C	SE	Bromoform		3.6	UJ	c
BBNP-CW18-C	SE	dibromomethane		3.6	UJ	c
BBNP-CW18-C	SE	Dichlorodifluoromethane		3.6	UJ	c
BBNP-CW18-C	SE	ethyl acetate		3.6	UL	c
BBNP-CW18-C	SE	vinyl acetate		7.3	UL	c
BBNP-CW2-C	SE	1,2-Dichloroethane		0.54	UJ	c
BBNP-CW2-C	SE	1-chloro-2,3-epoxypropane		54	UL	c
BBNP-CW2-C	SE	2-Butanone		5.4	UL	c
BBNP-CW2-C	SE	2-methyl-1-propanol		27	R	c
BBNP-CW2-C	SE	Acetone		5.4	UL	c
BBNP-CW2-C	SE	acetonitrile		54	UL	c
BBNP-CW2-C	SE	Bromoform		2.7	UJ	c
BBNP-CW2-C	SE	dibromomethane		2.7	UJ	c
BBNP-CW2-C	SE	Dichlorodifluoromethane		2.7	UJ	c
BBNP-CW2-C	SE	ethyl acetate		2.7	UL	c
BBNP-CW2-C	SE	vinyl acetate		5.4	UL	c
BBNP-CW20-C	SE	1,2-Dichloroethane		0.69	UJ	c
BBNP-CW20-C	SE	1-chloro-2,3-epoxypropane		69	UL	c
BBNP-CW20-C	SE	2-Butanone		6.9	UL	c
BBNP-CW20-C	SE	2-methyl-1-propanol		35	R	c
BBNP-CW20-C	SE	Acetone	9.3	6.9	UL	c
BBNP-CW20-C	SE	acetonitrile		69	UL	c
BBNP-CW20-C	SE	Bromoform		3.5	UJ	c
BBNP-CW20-C	SE	dibromomethane		3.5	UJ	c
BBNP-CW20-C	SE	Dichlorodifluoromethane		3.5	UJ	c
BBNP-CW20-C	SE	ethyl acetate		3.5	UL	c
BBNP-CW20-C	SE	vinyl acetate		6.9	UL	c

Sample ID	Matrix	Compound	Result (ug/Kg)	QL (ug/Kg)	Validation Qualifiers	Validation Reason
BBNP-CW20-C-FD	SE	1,2-Dichloroethane		0.95	UJ	c
BBNP-CW20-C-FD	SE	1-chloro-2,3-epoxypropane		95	UL	c
BBNP-CW20-C-FD	SE	2-Butanone		9.5	UL	c
BBNP-CW20-C-FD	SE	2-methyl-1-propanol		47	R	c
BBNP-CW20-C-FD	SE	Acetone	12.2	9.5	UL	c
BBNP-CW20-C-FD	SE	acetonitrile		95	UL	c
BBNP-CW20-C-FD	SE	Bromoform		4.7	UJ	c
BBNP-CW20-C-FD	SE	dibromomethane		4.7	UJ	c
BBNP-CW20-C-FD	SE	Dichlorodifluoromethane		4.7	UJ	c
BBNP-CW20-C-FD	SE	ethyl acetate		4.7	UL	c
BBNP-CW20-C-FD	SE	vinyl acetate		9.5	UL	c
BBNP-CW21-C	SE	1,2-Dichloroethane		0.59	UJ	c
BBNP-CW21-C	SE	1-chloro-2,3-epoxypropane		59	UL	c
BBNP-CW21-C	SE	2-Butanone		5.9	UL	c
BBNP-CW21-C	SE	2-methyl-1-propanol		29	R	c
BBNP-CW21-C	SE	4-Methyl-2-pentanone		2.9	UJ	c
BBNP-CW21-C	SE	Acetone		5.9	UL	c
BBNP-CW21-C	SE	acetonitrile		59	UL	c
BBNP-CW21-C	SE	ethyl acetate		2.9	UL	c
BBNP-CW21-C	SE	vinyl acetate		5.9	UL	c
BBNP-CW23-C	SE	1,2-Dichloroethane		0.69	UJ	c
BBNP-CW23-C	SE	1-chloro-2,3-epoxypropane		69	UL	c
BBNP-CW23-C	SE	2-Butanone		6.9	UL	c

Sample ID	Matrix	Compound	Result (ug/Kg)	QL (ug/Kg)	Validation Qualifiers	Validation Reason
BBNP-CW23-C	SE	2-methyl-1-propanol		34	R	c
BBNP-CW23-C	SE	4-Methyl-2-pentanone		3.4	UJ	c
BBNP-CW23-C	SE	Acetone		6.9	UL	c
BBNP-CW23-C	SE	acetonitrile		69	UL	c
BBNP-CW23-C	SE	chlorodifluoromethane	1.0	3.4	J	s
BBNP-CW23-C	SE	ethyl acetate		3.4	UL	c
BBNP-CW23-C	SE	vinyl acetate		6.9	UL	c
BBNP-CW3-C	SE	1,2-Dichloroethane		0.54	UJ	c
BBNP-CW3-C	SE	1-chloro-2,3-epoxypropane		54	UL	c
BBNP-CW3-C	SE	2-Butanone		5.4	UL	c
BBNP-CW3-C	SE	2-methyl-1-propanol		27	R	c
BBNP-CW3-C	SE	Acetone		5.4	UL	c
BBNP-CW3-C	SE	acetonitrile		54	UL	c
BBNP-CW3-C	SE	Bromoform		2.7	UJ	c
BBNP-CW3-C	SE	dibromomethane		2.7	UJ	c
BBNP-CW3-C	SE	Dichlorodifluoromethane		2.7	UJ	c
BBNP-CW3-C	SE	ethyl acetate		2.7	UL	c
BBNP-CW3-C	SE	vinyl acetate		5.4	UL	c
BBNP-CW5-C	SE	1,1,2,2-Tetrachloroethane		3.2	UJ	m
BBNP-CW5-C	SE	1,2-Dibromo-3-chloropropane		6.4	UJ	m
BBNP-CW5-C	SE	1,2-Dichloroethane		0.64	UJ	c
BBNP-CW5-C	SE	1-chloro-2,3-epoxypropane		64	UL	c
BBNP-CW5-C	SE	2-Butanone		6.4	UL	c
BBNP-CW5-C	SE	2-chlor-1,3-butadiene		3.2	UJ	m
BBNP-CW5-C	SE	2-methyl-1-propanol		32	R	c
BBNP-CW5-C	SE	Acetone		6.4	UL	c

Sample ID	Matrix	Compound	Result (ug/Kg)	QL (ug/Kg)	Validation Qualifiers	Validation Reason
BBNP-CW5-C	SE	acetonitrile		64	UL	c
BBNP-CW5-C	SE	Bromoform		3.2	UJ	c
BBNP-CW5-C	SE	dibromomethane		3.2	UJ	c
BBNP-CW5-C	SE	Dichlorodifluoromethane		3.2	UJ	c
BBNP-CW5-C	SE	ethyl acetate		3.2	UL	c
BBNP-CW5-C	SE	hexane		3.2	UJ	m
BBNP-CW5-C	SE	vinyl acetate		6.4	UL	c
BBNP-CW6-C	SE	1,2-Dichloroethane		0.58	UJ	c
BBNP-CW6-C	SE	1-chloro-2,3-epoxypropane		58	UL	c
BBNP-CW6-C	SE	2-Butanone		5.8	UL	c
BBNP-CW6-C	SE	2-methyl-1-propanol		29	R	c
BBNP-CW6-C	SE	Acetone		5.8	UL	c
BBNP-CW6-C	SE	acetonitrile		58	UL	c
BBNP-CW6-C	SE	Bromoform		2.9	UJ	c
BBNP-CW6-C	SE	dibromomethane		2.9	UJ	c
BBNP-CW6-C	SE	Dichlorodifluoromethane		2.9	UJ	c
BBNP-CW6-C	SE	ethyl acetate		2.9	UL	c
BBNP-CW6-C	SE	vinyl acetate		5.8	UL	c
BBNP-CW8-C	SE	1,2-Dichloroethane		0.58	UJ	c
BBNP-CW8-C	SE	1-chloro-2,3-epoxypropane		58	UL	c
BBNP-CW8-C	SE	2-Butanone		5.8	UL	c
BBNP-CW8-C	SE	2-methyl-1-propanol		29	R	c
BBNP-CW8-C	SE	4-Methyl-2-pentanone		2.9	UJ	c
BBNP-CW8-C	SE	Acetone		5.8	UL	c
BBNP-CW8-C	SE	acetonitrile		58	UL	c
BBNP-CW8-C	SE	ethyl acetate		2.9	UL	c
BBNP-CW8-C	SE	vinyl acetate		5.8	UL	c
BBNP-CW9-C	SE	1,2-Dichloroethane		0.55	UJ	c

Sample ID	Matrix	Compound	Result (ug/Kg)	QL (ug/Kg)	Validation Qualifiers	Validation Reason
BBNP-CW9-C	SE	1-chloro-2,3-epoxypropane		55	UL	c
BBNP-CW9-C	SE	2-Butanone		5.5	UL	c
BBNP-CW9-C	SE	2-methyl-1-propanol		28	R	c
BBNP-CW9-C	SE	Acetone		5.5	UL	c
BBNP-CW9-C	SE	acetonitrile		55	UL	c
BBNP-CW9-C	SE	Bromoform		2.8	UJ	c
BBNP-CW9-C	SE	dibromomethane		2.8	UJ	c
BBNP-CW9-C	SE	Dichlorodifluoromethane		2.8	UJ	c
BBNP-CW9-C	SE	ethyl acetate		2.8	UL	c
BBNP-CW9-C	SE	vinyl acetate		5.5	UL	c
BBNP-CW9-FD	SE	1,2-Dichloroethane		0.56	UJ	c
BBNP-CW9-FD	SE	1-chloro-2,3-epoxypropane		56	UL	c
BBNP-CW9-FD	SE	2-Butanone		5.6	UL	c
BBNP-CW9-FD	SE	2-methyl-1-propanol		28	R	c
BBNP-CW9-FD	SE	Acetone		5.6	UL	c
BBNP-CW9-FD	SE	acetonitrile		56	UL	c
BBNP-CW9-FD	SE	Bromoform		2.8	UJ	c
BBNP-CW9-FD	SE	dibromomethane		2.8	UJ	c
BBNP-CW9-FD	SE	Dichlorodifluoromethane		2.8	UJ	c
BBNP-CW9-FD	SE	ethyl acetate		2.8	UL	c
BBNP-CW9-FD	SE	vinyl acetate		5.6	UL	c

Table 1A - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result (ug/Kg)	QL (ug/Kg)	Validation Qualifiers	Validation Reason
BBNP-CW11-C	SE	2-NITROPROPANE		5.7	R	c
BBNP-CW12-C	SE	2-NITROPROPANE		5.9	R	c
BBNP-CW14-C	SE	2-NITROPROPANE		6.1	R	c

Sample ID	Matrix	Compound	Result (ug/Kg)	QL (ug/Kg)	Validation Qualifiers	Validation Reason
BBNP-CW15-C	SE	2-NITROPROPANE		6.0	R	c
BBNP-CW17-C	SE	2-NITROPROPANE		5.7	R	c
BBNP-CW18-C	SE	2-NITROPROPANE		7.3	R	c
BBNP-CW1-C	SE	2-NITROPROPANE		5.5	R	c
BBNP-CW20-C	SE	2-NITROPROPANE		6.9	R	c
BBNP-CW20-C-FD	SE	2-NITROPROPANE		9.5	R	c
BBNP-CW21-C	SE	2-NITROPROPANE		5.9	R	c
BBNP-CW23-C	SE	2-NITROPROPANE		6.9	R	c
BBNP-CW2-C	SE	2-NITROPROPANE		5.4	R	c
BBNP-CW3-C	SE	2-NITROPROPANE		5.4	R	c
BBNP-CW5-C	SE	2-NITROPROPANE		6.4	R	c
BBNP-CW6-C	SE	2-NITROPROPANE		5.8	R	c
BBNP-CW8-C	SE	2-NITROPROPANE		5.8	R	c
BBNP-CW9-C	SE	2-NITROPROPANE		5.5	R	c
BBNP-CW9-FD	SE	2-NITROPROPANE		5.6	R	c
BBNP-CW11-C	SE	N-BUTYL ALCOHOL		140	R	c
BBNP-CW12-C	SE	N-BUTYL ALCOHOL		150	R	c
BBNP-CW14-C	SE	N-BUTYL ALCOHOL		150	R	c
BBNP-CW15-C	SE	N-BUTYL ALCOHOL		150	R	c
BBNP-CW17-C	SE	N-BUTYL ALCOHOL		140	R	c
BBNP-CW18-C	SE	N-BUTYL ALCOHOL		180	R	c
BBNP-CW1-C	SE	N-BUTYL ALCOHOL		140	R	c
BBNP-CW20-C	SE	N-BUTYL ALCOHOL		170	R	c
BBNP-CW20-C-FD	SE	N-BUTYL ALCOHOL		240	R	c
BBNP-CW21-C	SE	N-BUTYL ALCOHOL		150	R	c
BBNP-CW23-C	SE	N-BUTYL ALCOHOL		170	R	c
BBNP-CW2-C	SE	N-BUTYL ALCOHOL		140	R	c
BBNP-CW3-C	SE	N-BUTYL ALCOHOL		140	R	c
BBNP-CW5-C	SE	N-BUTYL ALCOHOL		160	R	c
BBNP-CW6-C	SE	N-BUTYL ALCOHOL		140	R	c
BBNP-CW8-C	SE	N-BUTYL ALCOHOL		140	R	c
BBNP-CW9-C	SE	N-BUTYL ALCOHOL		140	R	c
BBNP-CW9-FD	SE	N-BUTYL ALCOHOL		140	R	c

Attachment A

Qualifier Codes and Explanation

Qualifier	Explanation
U	Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
No Code	Confirmed identification
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
N	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.
J	Analyte present. Reported value may not be accurate or precise.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	Not detected. Quantitation limit is probably higher.
NJ	Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.
Q	No analytical result.

Attachment B

Reason Codes and Explanation

Reason Code	Explanation
be	Equipment blank (or trip blank) contamination
bl	Laboratory blank contamination
bm	Missing blank information
c	Calibration issue
cl	Clean-up standard recovery
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ip	DDT/Endrin breakdown
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column precision
q	Quantitation issue
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature preservation issue
v	Compound identification issue
x	Low % solids
y	Serial dilution results
z	ICS results

Data Validation Report

To	Alek Modjeski, AECOM.		Page	1
Project	Dredge Management Support at the Bell Bend Nuclear Power Plant, Salem, Pennsylvania			
Laboratory	Cape Fear Analytical, Wilmington, North Carolina			
Laboratory SDG	JA58750X			
Analyses/Method	Dioxins (2,3,7,8-TCDD only)/SW-846 Method 8290A			
Validation Level	Full			
AECOM Project Number	60160208.4			
Prepared by	Paula DiMattei/AECOM	Completed: November 28, 2010		
Reviewed by	Robert Kennedy/AECOM			
CC	Dion Lewis/AECOM			

1.0 OVERVIEW

Full validation was performed on the data for 18 sediment samples analyzed for 2,3,7,8-TCDD. The samples were analyzed according to SW-846 Method 8290A. The samples were collected by AECOM at the proposed Bell Bend Nuclear Power Plant site located in Salem Township, Luzerne County, Pennsylvania on October 12 and 13, 2010 and submitted to Accutest Laboratories in Dayton, NJ for analysis. Accutest subsequently subcontracted the analysis to Cape Fear Analytical (CFA) in Wilmington, North Carolina. CFA processed and reported these samples under sample delivery group (SDG) JA58750X.

2.0 SAMPLES

The samples included in this review are listed below:

Client Sample ID	Accutest Lab ID	Matrix	Parameter
BBNP-CW1-C	JA58750-1	Sediment	2,3,7,8-TCDD
BBNP-CW2-C	JA58750-2	Sediment	2,3,7,8-TCDD
BBNP-CW3-C	JA58750-3	Sediment	2,3,7,8-TCDD
BBNP-CW6-C	JA58750-4	Sediment	2,3,7,8-TCDD
BBNP-CW9-C	JA58750-5	Sediment	2,3,7,8-TCDD
BBNP-CW9-FD	JA58750-6	Sediment	2,3,7,8-TCDD

Client Sample ID	Accutest Lab ID	Matrix	Parameter
(field duplicate of BBNP-CW9-C)			
BBNP-CW12-C	JA58750-7	Sediment	2,3,7,8-TCDD
BBNP-CW15-C	JA58750-8	Sediment	2,3,7,8-TCDD
BBNP-CW18-C	JA58750-9	Sediment	2,3,7,8-TCDD
BBNP-CW21-C	JA58750-10	Sediment	2,3,7,8-TCDD
BBNP-CW5-C	JA58750-11	Sediment	2,3,7,8-TCDD
BBNP-CW8-C	JA58750-12	Sediment	2,3,7,8-TCDD
BBNP-CW11-C	JA58750-13	Sediment	2,3,7,8-TCDD
BBNP-CW14-C	JA58750-14	Sediment	2,3,7,8-TCDD
BBNP-CW17-C	JA58750-15	Sediment	2,3,7,8-TCDD
BBNP-CW20-C	JA58750-16	Sediment	2,3,7,8-TCDD
BBNP-CW23-C	JA58750-17	Sediment	2,3,7,8-TCDD
BBNP-CW20-C-FD (field duplicate of BBNP-CW20-C)	JA58750-18	Sediment	2,3,7,8-TCDD

3.0 SUMMARY

In general, the data are valid as reported and may be used for decision making purposes. Qualification of the data was not required.

4.0 MAJOR PROBLEMS

No major problems were encountered in the review of the data.

5.0 MINOR PROBLEMS

No minor problems were encountered in the review of the data.

6.0 NOTES

The following issues were noted during the data review.

Blanks

2,3,7,8-TCDD was not detected in the associated laboratory method blank or field and equipment blank samples BBNPP-PB and BBNPP-C-EB, respectively, (reported in Job Number JA58900).

Field Duplicate Results

Samples BBNP-CW20-C/BBNP-CW20-C-FD and BBNP-CW9-C/BBNP-CW9-FD were submitted as the field duplicate pairs with this sample set. 2,3,7,8-TCDD was not detected in any sample. Precision was deemed acceptable.

REPORT CONTENT

Data validation activities were conducted with reference to SW846 Method 8290A, *Region III Standard Operating Procedure for Dioxin/Furan Data Validation* (March 1999), *Region III Innovative Approaches to Data Validation* (June 1995) modified to reflect the use of non-CLP (Contract

Laboratory Program) methods, the Sampling and Analysis Plan (SAP) for Dredge Management Support at the Bell Bend Nuclear Power Plant (September 2010), and the laboratory specific standard operating procedures (SOPs). In the absence of SAP-specified criteria, method or laboratory quality assurance limits were used as appropriate. The text of this report was formulated to address only those issues affecting data usability.

ATTACHMENTS

Attachment A: Validation Qualifier Codes and Explanation

Attachment A

Qualifier Codes and Explanation

Qualifier	Explanation
U	Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
No Code	Confirmed identification
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
N	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.
J	Analyte present. Reported value may not be accurate or precise.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	Not detected. Quantitation limit is probably higher.
NJ	Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.
Q	No analytical result.

Data Validation Report -Addendum

To	Alek Modjeski, AECOM		Page	1
Project	Dredge Management Support at the Bell Bend Nuclear Power Plant, Salem, Pennsylvania			
Laboratory	Accutest Laboratories, Dayton, NJ			
Laboratory SDG	JA58900			
Analyses/Method	SVOCs, OP Pesticides, and PCBs			
Validation Level	Limited – Level M-2			
AECOM Project Number	60160208.4			
Prepared by	Linda Adams/AECOM	Completed: November 28, 2010		
Reviewed by	Andrea Mischel/AECOM			
Addendum Prepared by	Andrea Mischel/AECOM	Date: February 4, 2011		
CC	Dion Lewis/AECOM			

OVERVIEW -ADDENDUM

Additional level M-2 validation was performed on the data for 11 sediment samples and two equipment blanks analyzed for a project specific list of semi-volatile organic compounds (SVOCs), organophosphorus (OP) pesticides, and polychlorinated biphenyls (PCBs). The purpose of the additional validation was to review results for three previously analyzed, but unreported, target SVOCs (pyridine, quinoline and 1,2,4-trichlorobenzene). The unreported target SVOCs were subsequently reported in revised Accutest laboratory report JA58900 on January 21, 2011. This addendum incorporates the review findings of the additional compounds with the original validation memorandum.

The methods associated with these parameters are summarized in the table below. The samples were collected by AECOM at the proposed Bell Bend Nuclear Power Plant site located in Salem Township, Luzerne County, Pennsylvania on October 13 and 14, 2010 and submitted to Accutest Laboratories in Dayton, NJ for analysis. Accutest processed the samples and reported the results under Job Number JA58900. It should be noted that Accutest subcontracted the OP pesticide analyses to their facility in Orlando, FL.

Parameter	Method
SVOCs	SW-846 8270C
OP Pesticides	SW-846 8141B
PCBs	SW-846 8082

SAMPLES

The samples included in this review are listed below:

Client Sample ID	Matrix	Parameters
BBNPP-D2	Sediment	SVOCs, OP Pesticides, PCBs
BBNPP-D1-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNPP-R-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNPP-CW22-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNPP-C-EB (equipment blank)	Aqueous	SVOCs, OP Pesticides, PCBs
BBNPP-PB (equipment blank)	Aqueous	SVOCs, OP Pesticides, PCBs
BBNPP-CW4-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNPP-CW7-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNPP-CW10-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNPP-CW13-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNPP-CW16-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNPP-CW19-C	Sediment	SVOCs, OP Pesticides, PCBs
BBNPP-D1-CFD (field duplicate of BBNPP-D1-C)	Sediment	SVOCs, OP Pesticides, PCBs

SUMMARY

In general, the data are valid as reported and may be used for decision making purposes. There were no qualifications made to additional SVOC target compounds pyridine, quinoline or 1,2,4-trichlorobenzene. Selected data points were rejected (R) or were qualified as estimated (UJ) due to QC nonconformances (see discussion below).

MAJOR PROBLEMS

SVOCs

MS/MSD Recoveries

MS/MSD analyses were performed on sample BBNPP-R-C. Benzidine did not recover in the MS analysis. The nondetect result for benzidine in the unspiked sample BBNPP-R-C was rejected (R) due to the very low recovery (<10%) in the MS analysis.

OP Pesticides

No major problems were encountered in the review of the data.

PCBs

No major problems were encountered in the review of the data.

MINOR PROBLEMS

SVOCs

Initial and Continuing Calibrations

The percent relative standard deviations (%RSDs), the correlation coefficients (r), the percent differences (%Ds), and/or the relative response factors (RRFs) were all within the method QC acceptance criteria in the initial and continuing calibrations (ICAL and CCALs) and initial calibration verification (ICV) standards with the following exceptions summarized in the tables below. Sample results were qualified as indicated. Qualified results are shown in Table 1.

Calibration	Compound	%RSD	Actions (Detects/Nondetects)
ICAL 10/20/2010 GCMSF	Benzidine	26.2	J/UJ
Associated Samples: Aqueous EB samples BBNPP-C-EB and BBNPP-PB			
ICV 10/20/2010 GCMSF	Benzidine	57.5	J/UJ
Associated Samples: Aqueous EB samples BBNPP-C-EB and BBNPP-PB			
ICV 10/25/2010 GCMS3P	Benzidine	66.2	J/UJ
	Benzaldehyde	36.7	J/UJ
Associated Samples: All soil samples.			
CCV 11/02/2010 GCMS3P	N-nitroso-dimethylamine	27.7	J/UJ
	2,4-Dinitrophenol	38.3	J/UJ
	1,2-Diphenylhydrazine	28.7	J/UJ
	Benzidine	50.0	J/UJ
Associated Samples: All soil samples except BBNPP-R-C			
CCV 11/01/2010 GCMS3P	N-nitroso-dimethylamine	29.6	J/UJ
	Benzyl alcohol	36.1	J/UJ
	2,4-Dinitrophenol	28.4	J/UJ
	Benzidine*	46.1	J/UJ
Associated Sample: Soil sample BBNPP-R-C			
*Previously rejected due to very low MS recovery.			

OP Pesticides

No minor problems were encountered in the review of the data.

PCBs

No minor problems were encountered in the review of the data.

NOTES

The following issues were noted during the data review.

SVOCs

Reported Target Analyte List

The laboratory did not report 27 project specific target compounds listed in Table 5-4 "BBNPP Organic COPCs and Reporting Limits" of the project SAP. The laboratory was notified of the missing data and subsequently reported it in a separate addendum report under Job Number JA58900A.

Blanks

Target analytes were not detected in the laboratory method blanks or in equipment blank sample BBNPP-PB. Bis(2-ethylhexyl)phthalate (1.6 ug/L) was detected in equipment blank BBNPP-C-EB. Bis(2-ethylhexyl)phthalate was not detected in the soil samples. Qualification of the data on this basis was not required.

Field Duplicate Results

Samples BBNPP-D1-C and BBNPP-D1-CFD were submitted as the field duplicate pair with this sample set. For this data review, sample results were not qualified on the basis of field duplicate precision. The RPD tabulated below is for informational purposes only. The RPD of the detected analyte in field duplicate pair BBNPP-D1-C and BBNPP-D1-CFD was not calculable due to a nondetect result in field duplicate sample BBNPP-D1-CFD. Based on AECOM professional judgment, precision would be considered acceptable since the detected result in sample BBNPP-D1-C was <5x the sample quantitation limit (SQL).

Analyte	BBNPP-D1-C (µg/Kg)	BBNPP-D1-CFD (µg/Kg)	RPD (%)
Dimethylphthalate	83 U	116	NC

MS/MSD Recoveries

MS/MSD analyses were performed on sample BBNPP-R-C. As noted previously, benzidine did not recover in the MS analysis. All remaining compounds were within the acceptance criteria in the MS analysis. In the MSD analysis, 65 of the 76 spiked compounds yielded recoveries below the QC acceptance criteria. Additionally, all surrogate recoveries in the MSD were also below the QC acceptance criteria. The low recoveries in the MSD resulted in the RPDs of all compounds exceeding the acceptance criteria. Since all soil samples, the soil LCS, and the soil MS demonstrated acceptable surrogate recoveries, it was the opinion of the validator that the poor MSD recoveries were an isolated incident. Qualification of the data on this basis was not required.

Non-Spiked MS/MSD Comparison

MS/MSD analyses were performed on sample BBNPP-R-C from this sample set. All compounds were spiked therefore, no comparison was possible.

Tentatively Identified Compounds (TICs)

TICs were not reported for this sample set.

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

Results less than the SQL were flagged with "J" by the laboratory to indicate an estimated value; these qualifiers were retained by the validator.

OP Pesticides

Initial and Continuing Calibrations

The percent relative standard deviations (%RSDs), the correlation coefficients (r), the percent differences (%Ds), and/or the calibration factors (CFs) were all within the method QC acceptance criteria in the initial and continuing calibrations (ICAL and CCALs) and initial calibration verification (ICV) standards with the following exceptions summarized in the table below. Qualification of the data was not required.

Calibration	Compound	%D Col 1/Col 2	Actions (Detects/Nondetects)
CC 10/21/2010 10:04	Dichlorovos	19.9/ok	None required. High bias on column 1. Samples ND and Col 2 within limits.
	Phorate	ok/26.9	None required. Low bias on column 2. Samples ND and Col 1 within limits.
	Diazinon	ok/18.5	
	Ronnel	ok/15.4	
Associated Samples: Initial continuing calibration for samples BBNPP-D2, BBNPP-D1-C, and BBNPP-R-C			
CC 10/21/2010 15:59	Dichlorovos	35.9/15.4	None required. High bias on both columns and samples ND.
	Phorate	ok/28.6	None required. Low bias on column 2. Samples ND and Col 1 within limits.
	Dimethoate	ok/25.1	
	Diazinon	ok/27.6	
	Disulfoton	ok/23.0	
	Ronnel	ok/24.4	
	Malathion	ok/19.1	
	Chloropyrifos	ok/16.0	
Ethyl parathion	ok/16.0		
Associated Samples: Post continuing calibration for samples BBNPP-D2, BBNPP-D1-C, and BBNPP-R-C. Initial continuing calibration for samples BBNPP-CW22-C, BBNPP-CW4-C, BBNPP-CW7-C, BBNPP-CW10-C, BBNPP-CW13-C, BBNPP-CW16-C, BBNPP-CW19-C, and BBNPP-D1-CFD.			
CC 10/21/2010 20:53	Dichlorovos	70.1/40.7	None required. High bias on both columns and samples ND.
	Phorate	ok/36.5	None required. Low bias on column 2. Samples ND and Col 1 within limits.
	Dimethoate	ok/27.9	
	Diazinon	ok/29.4	
	Disulfoton	ok/23.5	
	Ronnel	ok/23.5	
	Malathion	ok/19.1	
Associated Samples: Post continuing calibration for samples BBNPP-CW22-C, BBNPP-CW4-C, BBNPP-CW7-C, BBNPP-CW10-C, BBNPP-CW13-C, BBNPP-CW16-C, BBNPP-CW19-C, and BBNPP-D1-CFD. Initial continuing calibration for samples BBNPP-C-EB and BBNPP-PB.			
CC 10/21/2010 23:20	Dichlorovos	65.5/39.0	None required. High bias on both columns and samples ND.
	Phorate	ok/29.7	None required. Low bias on column 2. Samples ND and Col 1 within limits.
	Dimethoate	ok/23.9	
	Diazinon	ok/26.2	
	Disulfoton	ok/19.0	
	Ronnel	ok/18.4	
	Sulfotep	17.7/ok	None required. Low bias on column 1. Samples ND and Col 2 within limits.
	Ethyl parathion	19.9/ok	
Associated Samples: Post continuing calibration for samples BBNPP-C-EB and BBNPP-PB.			

LCS Recoveries

The laboratory spiked seven of 11 target compounds. Dimethoate, ethyl parathion, sulfotep, and malathion were not spiked. The percent recovery of the spiked target analytes were within the acceptance criteria with the following exceptions summarized in the tables below. All sample results were nondetect, therefore qualification of the data was not required.

LCS ID	Compound	%R	QC Limits	Action (Detects/Nondetects)
OP34758-BS	Chlorpyrifos	133	51-119	K/Accept
	Diazinon	132	50-120	K/Accept
	Disulfoton	118	33-107	K/Accept
	Methyl parathion	136	57-128	K/Accept
	Phorate	124	53-114	K/Accept
	Ronnel	130	53-120	K/Accept
Associated Samples: All soil samples				

LCS ID	Compound	%R	QC Limits	Action (Detects/Nondetects)
OP34761-BS	Chlorpyrifos	146	56-117	K/Accept
	Diazinon	146	57-122	K/Accept
	Disulfoton	140	62-117	K/Accept
	Methyl parathion	150	62-125	K/Accept
	Phorate	144	61-118	K/Accept
	Ronnel	142	58-116	K/Accept
Associated Samples: Aqueous EB samples BBNPP-C-EB and BBNPP-PB				

Blanks

Target analytes were not detected in the laboratory method blanks or in equipment blank samples BBNPP-PB and BBNPP-C-EB.

Field Duplicate Results

Samples BBNPP-D1-C and BBNPP-D1-CFD were submitted as the field duplicate pair with this sample set. Target analytes were not detected in these samples. Precision was deemed acceptable.

MS/MSD Recoveries

MS/MSD analyses were performed on sample BBNPP-R-C from this sample set. The laboratory spiked seven of 11 target compounds. Dimethoate, ethyl parathion, sulfotep, and malathion were not spiked. Six of the seven spiked compounds recovered above the QC acceptance criteria in the MS analysis. Five of the seven spiked compounds recovered above the QC acceptance criteria in the MSD analysis. All RPDs were within the acceptance criteria. Target analytes were not detected in the unspiked sample BBNPP-R-C. Qualification of the data was not required.

Non-Spiked MS/MSD Comparison

MS/MSD analyses were performed on sample BBNPP-R-C from this sample set. Non-spiked target analytes were not detected in the samples therefore, no comparison was possible.

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

PCBs

Blanks

PCBs were not detected in the laboratory method blanks or in equipment blank samples BBNPP-PB and BBNPP-C-EB.

Field Duplicate Results

Samples BBNPP-D1-C and BBNPP-D1-CFD were submitted as the field duplicate pair with this sample set. Target analytes were not detected in these samples. Precision was deemed acceptable.

Non-Spiked MS/MSD Comparison

MS/MSD analyses were performed on sample BBNPP-R-C from this sample set. Aroclor-1016 and Aroclor-1260 were spiked. Non-spiked target analytes were not detected in the samples therefore, no comparison was possible.

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

REPORT CONTENT

Data validation activities were conducted with reference to SW846 Methods 8270C, 8141B, and 8082, *Region III Modifications to National Functional Guidelines for Organic Data Review Multi-Media, Multi-Concentration (OLMO1.0-OLMO1.9)* (1994), and *Region III Innovative Approaches for Validation of Organic and Inorganic Data- Standard Operating Procedures* (June 1995) modified to reflect the use of non-CLP (Contract Laboratory Program) methods, the Sampling and Analysis Plan (SAP) for Dredge Management Support at the Bell Bend Nuclear Power Plant (September 2010), the method and the laboratory specific standard operating procedures (SOPs). In the absence of SAP-specified criteria, method or laboratory quality assurance limits were used as appropriate. The text of this report was formulated to address issues affecting data usability.

ATTACHMENTS

Attachment A: Validation Qualifier Codes and Explanation

Attachment B: Reason Codes and Explanation

Table 1 - Data Validation Summary of Qualified Data

SVOCs							
Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-C-EB	WQ	BENZIDINE		21	ug/l	UJ	c
BBNPP-PB	WQ	BENZIDINE		24	ug/l	UJ	c
BBNPP-CW10-C	SE	1,2-DIPHENYLHYDRAZINE		72	ug/kg	UJ	c
BBNPP-CW10-C	SE	2,4-Dinitrophenol		720	ug/kg	UJ	c
BBNPP-CW10-C	SE	Benzaldehyde		180	ug/kg	UJ	c
BBNPP-CW10-C	SE	BENZIDINE		720	ug/kg	UJ	c
BBNPP-CW10-C	SE	METHANAMINE, N-METHYL-N-NITROSO		72	ug/kg	UJ	c
BBNPP-CW13-C	SE	1,2-DIPHENYLHYDRAZINE		93	ug/kg	UJ	c
BBNPP-CW13-C	SE	2,4-Dinitrophenol		930	ug/kg	UJ	c
BBNPP-CW13-C	SE	Benzaldehyde		230	ug/kg	UJ	c
BBNPP-CW13-C	SE	BENZIDINE		930	ug/kg	UJ	c
BBNPP-CW13-C	SE	METHANAMINE, N-METHYL-N-NITROSO		93	ug/kg	UJ	c
BBNPP-CW16-C	SE	1,2-DIPHENYLHYDRAZINE		79	ug/kg	UJ	c
BBNPP-CW16-C	SE	2,4-Dinitrophenol		790	ug/kg	UJ	c
BBNPP-CW16-C	SE	Benzaldehyde		200	ug/kg	UJ	c
BBNPP-CW16-C	SE	BENZIDINE		790	ug/kg	UJ	c
BBNPP-CW16-C	SE	METHANAMINE, N-METHYL-N-NITROSO		79	ug/kg	UJ	c
BBNPP-CW19-C	SE	1,2-DIPHENYLHYDRAZINE		76	ug/kg	UJ	c
BBNPP-CW19-C	SE	2,4-Dinitrophenol		760	ug/kg	UJ	c
BBNPP-CW19-C	SE	Benzaldehyde		190	ug/kg	UJ	c
BBNPP-CW19-C	SE	BENZIDINE		760	ug/kg	UJ	c
BBNPP-CW19-C	SE	METHANAMINE, N-METHYL-N-NITROSO		76	ug/kg	UJ	c
BBNPP-CW22-C	SE	1,2-DIPHENYLHYDRAZINE		73	ug/kg	UJ	c
BBNPP-CW22-C	SE	2,4-Dinitrophenol		730	ug/kg	UJ	c
BBNPP-CW22-C	SE	Benzaldehyde		180	ug/kg	UJ	c
BBNPP-CW22-C	SE	BENZIDINE		730	ug/kg	UJ	c
BBNPP-CW22-C	SE	METHANAMINE, N-METHYL-N-NITROSO		73	ug/kg	UJ	c
BBNPP-CW4-C	SE	1,2-DIPHENYLHYDRAZINE		73	ug/kg	UJ	c
BBNPP-CW4-C	SE	2,4-Dinitrophenol		730	ug/kg	UJ	c
BBNPP-CW4-C	SE	Benzaldehyde		180	ug/kg	UJ	c
BBNPP-CW4-C	SE	BENZIDINE		730	ug/kg	UJ	c
BBNPP-CW4-C	SE	METHANAMINE, N-METHYL-N-NITROSO		73	ug/kg	UJ	c
BBNPP-CW7-C	SE	1,2-DIPHENYLHYDRAZINE		72	ug/kg	UJ	c
BBNPP-CW7-C	SE	2,4-Dinitrophenol		720	ug/kg	UJ	c
BBNPP-CW7-C	SE	Benzaldehyde		180	ug/kg	UJ	c
BBNPP-CW7-C	SE	BENZIDINE		720	ug/kg	UJ	c
BBNPP-CW7-C	SE	METHANAMINE, N-METHYL-N-NITROSO		72	ug/kg	UJ	c
BBNPP-D1-C	SE	1,2-DIPHENYLHYDRAZINE		83	ug/kg	UJ	c
BBNPP-D1-C	SE	2,4-Dinitrophenol		830	ug/kg	UJ	c
BBNPP-D1-C	SE	Benzaldehyde		210	ug/kg	UJ	c
BBNPP-D1-C	SE	BENZIDINE		830	ug/kg	UJ	c

SVOCs							
Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-D1-C	SE	METHANAMINE, N-METHYL-N-NITROSO		83	ug/kg	UJ	c
BBNPP-D1-CFD	SE	1,2-DIPHENYLHYDRAZINE		94	ug/kg	UJ	c
BBNPP-D1-CFD	SE	2,4-Dinitrophenol		940	ug/kg	UJ	c
BBNPP-D1-CFD	SE	Benzaldehyde		240	ug/kg	UJ	c
BBNPP-D1-CFD	SE	BENZIDINE		940	ug/kg	UJ	c
BBNPP-D1-CFD	SE	METHANAMINE, N-METHYL-N-NITROSO		94	ug/kg	UJ	c
BBNPP-D2	SE	1,2-DIPHENYLHYDRAZINE		75	ug/kg	UJ	c
BBNPP-D2	SE	2,4-Dinitrophenol		750	ug/kg	UJ	c
BBNPP-D2	SE	Benzaldehyde		190	ug/kg	UJ	c
BBNPP-D2	SE	BENZIDINE		750	ug/kg	UJ	c
BBNPP-D2	SE	METHANAMINE, N-METHYL-N-NITROSO		75	ug/kg	UJ	c
BBNPP-R-C	SE	2,4-Dinitrophenol		760	ug/kg	UJ	c
BBNPP-R-C	SE	Benzaldehyde		190	ug/kg	UJ	c
BBNPP-R-C	SE	BENZIDINE		760	ug/kg	R	m,c
BBNPP-R-C	SE	BENZYL ALCOHOL		76	ug/kg	UJ	c
BBNPP-R-C	SE	METHANAMINE, N-METHYL-N-NITROSO		76	ug/kg	UJ	c

Attachment A

Qualifier Codes and Explanation

Qualifier	Explanation
U	Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
No Code	Confirmed identification
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
N	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.
J	Analyte present. Reported value may not be accurate or precise.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	Not detected. Quantitation limit is probably higher.
NJ	Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.
Q	No analytical result.

Attachment B

Reason Codes and Explanation

Reason Code	Explanation
be	Equipment blank (or trip blank) contamination
bl	Laboratory blank contamination
bm	Missing blank information
c	Calibration issue
cl	Clean-up standard recovery
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ip	DDT/Endrin breakdown
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column precision
q	Quantitation issue
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature preservation issue
v	Compound identification issue
x	Low % solids
y	Serial dilution results
z	ICS results

Data Validation Report

To	Alek Modjeski, AECOM	Page 1
Project	Dredge Management Support at the Bell Bend Nuclear Power Plant, Salem, Pennsylvania	
Laboratory	Accutest Laboratories, Dayton, NJ	
Laboratory SDG	JA58900	
Analyses/Method	Chloride, Sulfate, Hexavalent and Trivalent Chromium, Cyanide, TOC, Nitrogen (Nitrate and Nitrite) and pH	
Validation Level	Limited –Level M-1	
AECOM Project Number	60160208.4	
Prepared by	Linda Adams/AECOM	Completed: November 30, 2010
Reviewed by	Andrea Mischel/AECOM	
CC	Dion Lewis/AECOM	

OVERVIEW

Level M-1 validation was performed on the data for 11 sediment samples and two equipment blank samples analyzed for chloride, sulfate, hexavalent and trivalent chromium, cyanide, total organic carbon (TOC), nitrogen (nitrate and nitrite), and/or pH. The methods associated with these parameters are summarized in the table below. The samples were collected by AECOM at the proposed Bell Bend Nuclear Power Plant site located in Salem Township, Luzerne County, Pennsylvania on October 13 and 14, 2010 and submitted to Accutest Laboratories in Dayton, NJ for analysis. Accutest processed the samples and reported the results under Job Number JA58900.

Parameter	Method
Chloride and Sulfate	EPA 300.0/SW-846 9056
Hexavalent Chromium	SW-846 3060A/7196A
Trivalent Chromium	SW-846 6010/7196A
Cyanide	SW-846 9012B (modified)/Lachat
TOC	SW-846 9060B (modified)
Nitrogen (Nitrate and Nitrite)	EPA 353.2 (modified)/Lachat
pH	SW-846 9045C,D

SAMPLES

The samples included in this review are listed below:

Client Sample ID	Matrix	Parameters
BBNPP-D2	Sediment	Chloride, Sulfate, Hexavalent and Trivalent Chromium,
BBNPP-D1-C	Sediment	

Client Sample ID	Matrix	Parameters
BBNPP-R-C	Sediment	Cyanide, TOC, Nitrogen (Nitrate and Nitrite) and pH
BBNPP-CW22-C	Sediment	
BBNPP-CW4-C	Sediment	
BBNPP-CW7-C	Sediment	
BBNPP-CW10-C	Sediment	
BBNPP-CW13-C	Sediment	
BBNPP-CW16-C	Sediment	

Client Sample ID	Matrix	Parameters
BBNPP-CW19-C	Sediment	Chloride, Sulfate, Hexavalent and Trivalent Chromium, Cyanide, TOC, Nitrogen (Nitrate and Nitrite) and pH
BBNPP-D1-CFD (field duplicate of BBNPP-D1-C)	Sediment	
BBNPP-C-EB (equipment blank)	Aqueous	Chloride, Sulfate, Hexavalent and Trivalent Chromium, and TOC
BBNPP-PB (equipment blank)	Aqueous	

SUMMARY

In general, the data are valid as reported and may be used for decision making purposes. No data points were rejected. Selected data points were qualified as estimated due to QC nonconformances (see discussion below).

MAJOR PROBLEMS

No major problems were encountered in the review of the data for chloride, sulfate, hexavalent chromium, trivalent chromium, cyanide, total organic carbon, nitrate, nitrite and pH analyses..

MINOR PROBLEMS

Chloride and Sulfate

No minor problems were encountered in the review of the data.

Hexavalent Chromium

Matrix Spike Recoveries

The percent recovery (%R) of the soluble spike (3%) fell below the QC acceptance criteria in the matrix spike analysis performed on sample BBNPP-R-C. The insoluble spike (64%) also recovered below the QC acceptance criteria (75-125%) in the matrix spike analysis performed on sample BBNPP-R-C. It should be noted that the post spike recovered within the QC acceptance criteria. The laboratory re-digested and analyzed all samples within hold time confirming the low soluble spike results. It should be noted that the post spike and the insoluble matrix spike recovered within the QC acceptance criteria in the re-analyses of the samples.

Based on SW-846 method 3060A, the laboratory performed pH analysis by SW-846 method 9045 and oxidation reduction potential (ORP) by ASTM Method D 1498-76 modified and plotted the results. The results of the plotted data indicated that soil samples BBNPP-D1-C, BBNPP-CW22-C, BBNPP-CW13-C, BBNPP-CW16-C, and BBNPP-D1-CFD in this sample set were also of a reducing nature like unspiked sample BBNPP-R-C. The low recovery of the soluble matrix spike was attributed to the reductive nature of the soil samples. Hexavalent chromium was not detected in soil samples BBNPP-D1-C, BBNPP-CW22-C, BBNPP-CW13-C, BBNPP-CW16-C, and BBNPP-D1-CFD. Qualification of the data for samples BBNPP-R-C, BBNPP-D1-C, BBNPP-CW22-C, BBNPP-CW13-C, BBNPP-CW16-C, and BBNPP-D1-CFD was not required.

The results of the plotted data of pH and ORP for soil samples BBNPP-D2, BBNPP-CW4-C, BBNPP-CW7-C, BBNPP-CW10-C, and BBNPP-CW19-C indicated that these samples were of an oxidative nature. It was the opinion of the validator that no data were rejected on the basis of the low soluble MS recovery since the laboratory spiked a reductive sample. However, the validator qualified the oxidative samples, which have the capacity to support hexavalent chromium, as estimated biased low (UL) due to the low MS recovery. The results for the re-analyses were reported since the insoluble MS recovery was within limits in this analysis. Qualified results are shown in Table 1.

Trivalent Chromium

No minor problems were encountered in the review of the data.

Cyanide

No minor problems were encountered in the review of the data.

TOC

Sample Results

The correlation of variation (CV) exceeded the QC acceptance criteria ($\leq 15\%$) in the analyses of samples BBNPP-CW10-C (16.0%), BBNPP-CW13-C (17.4%), BBNPP-CW19-C (26.7%) and BBNPP-D1-CFD (37.4%). Multiple injections (4) were performed on these samples due to sample nonhomogeneity as evidenced by the high CV. The positive results for TOC in samples BBNPP-CW10-C, BBNPP-CW13-C, BBNPP-CW19-C and BBNPP-D1-CFD were qualified as estimated (J). Qualified results are shown in Table 1.

Nitrogen (Nitrate and Nitrite)

No minor problems were encountered in the review of the data.

pH

No minor problems were encountered in the review of the data.

NOTES

The following issues were noted during the data review.

Chloride and Sulfate

Blanks

Chloride and sulfate were not detected in the laboratory method blanks or in equipment blank samples BBNPP-PB and BBNPP-C-EB. Sulfate was detected in several of the continuing calibration blanks (CCBs) associated with all samples in this sample set. With the exception of sample BBNPP-CW22-C, sulfate was not detected in the samples. The positive result for sulfate in sample BBNPP-CW22-C exceeded the blank action level for sulfate. Qualification of the data on this basis was not required.

Field Duplicate Results

Samples BBNPP-D1-C and BBNPP-D1-CFD were submitted as the field duplicate pair with this sample set. Chloride and sulfate were not detected in these samples. Precision was deemed acceptable.

Sample Results

No dilutions were required for this sample set; therefore, sample quantitation limits (SQLs) were not affected.

Hexavalent Chromium

Blanks

Hexavalent chromium was not detected in the laboratory method blanks, in the initial calibration blank (ICB), in the CCBs, or in equipment blank samples BBNPP-PB and BBNPP-C-EB.

Field Duplicate Results

Samples BBNPP-D1-C and BBNPP-D1-CFD were submitted as the field duplicate pair with this sample set. Hexavalent chromium was not detected in these samples. Precision was deemed acceptable.

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

Trivalent Chromium

Blanks

Trivalent chromium was not detected in the laboratory method blanks, in the ICB/CCBs, or in equipment blank samples BBNPP-PB and BBNPP-C-EB.

Field Duplicate Results

Samples BBNPP-D1-C and BBNPP-D1-CFD were submitted as the field duplicate pair with this sample set. For this data review, sample results were not qualified on the basis of field duplicate precision. The RPD tabulated below is for informational purposes only and summarizes the relative

percent difference (RPD) of trivalent chromium in field duplicate pair BBNPP-D1-C and BBNPP-D1-CFD, which was within the QC acceptance criteria.

Analyte	BBNPP-D1-C (mg/Kg)	BBNPP-D1-CFD (mg/Kg)	RPD (%)
Trivalent Chromium	14.7	19.3	27

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

Cyanide

Blanks

Cyanide was not detected in the laboratory method blanks or in the ICB/CCBs associated with all samples in this sample set.

Equipment blank samples BBNPP-PB and BBNPP-C-EB were not analyzed for cyanide due to insufficient sample volume received. Qualification of the data on this basis was not required.

Field Duplicate Results

Samples BBNPP-D1-C and BBNPP-D1-CFD were submitted as the field duplicate pair with this sample set. Cyanide was not detected in these samples. Precision was deemed acceptable.

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

TOC

Blanks

TOC was not detected in the laboratory method blanks, in the ICB/CCBs, or in equipment blank samples BBNPP-PB and BBNPP-C-EB.

Field Duplicate Results

Samples BBNPP-D1-C and BBNPP-D1-CFD were submitted as the field duplicate pair with this sample set. For this data review, sample results were not qualified on the basis of field duplicate precision. The RPD tabulated below is for informational purposes only and summarizes the RPD of TOC in field duplicate pair BBNPP-D1-C and BBNPP-D1-CFD, which was within the QC acceptance criteria.

Analyte	BBNPP-D1-C (mg/Kg)	BBNPP-D1-CFD (mg/Kg)	RPD (%)
TOC	8170	9910	19

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

Nitrogen (Nitrate and Nitrite)

Blanks

Nitrogen (nitrate and nitrite) was not detected in the laboratory method blank or in the ICB/CCBs associated with all samples in this sample set.

Equipment blank samples BBNPP-PB and BBNPP-C-EB were not analyzed for nitrogen (nitrate and nitrite) due to insufficient sample volume received. Qualification of the data on this basis was not required.

Field Duplicate Results

Samples BBNPP-D1-C and BBNPP-D1-CFD were submitted as the field duplicate pair with this sample set. Nitrogen (nitrate and nitrite) was not detected in these samples. Precision was deemed acceptable.

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

pH

Field Duplicate Results

Samples BBNPP-F1-C and BBNPP-D1-CFD were submitted as the field duplicate pair with this sample set. For this data review, sample results were not qualified on the basis of field duplicate precision. The RPD tabulated below is for informational purposes only and summarizes the RPD of pH in field duplicate pair BBNPP-D1-C and BBNPP-D1-CFD, which was within the QC acceptance criteria.

Analyte	BBNPP-D10-C (pH units)	BBNPP-D1-CFD (pH units)	RPD (%)
pH	7.47	7.65	2.4

REPORT CONTENT

Data validation activities were conducted with reference to EPA Methods 300.0 and 353.2, SW846 Methods 9056, 6010, 7196A, 9012B, 9060B, and 9045C, *Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses* (April 1993), *Region III Innovative Approaches for Validation of Organic and Inorganic Data- Standard Operating Procedures* (June 1995) modified to reflect the use of non-CLP (Contract Laboratory Program) methods, the Sampling and Analysis Plan (SAP) for Dredge Management Support at the Bell Bend Nuclear Power Plant (September 2010), the method and the laboratory specific standard operating procedures (SOPs). In the absence of SAP-specified criteria, method or laboratory quality assurance limits were used as appropriate. The text of this report was formulated to address issues affecting data usability.

ATTACHMENTS

Attachment A: Validation Qualifier Codes and Explanation

Attachment B: Reason Codes and Explanation

Table 1 - Data Validation Summary of Qualified Data

TOC							
Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-CW10-C	SE	Total Organic Carbon	18500	1300	mg/kg	J	q
BBNPP-CW13-C	SE	Total Organic Carbon	30000	1600	mg/kg	J	q
BBNPP-CW19-C	SE	Total Organic Carbon	11700	1300	mg/kg	J	q
BBNPP-D1-CFD	SE	Total Organic Carbon	9910	1700	mg/kg	J	q

Hexavalent Chromium							
Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-CW10-C	SE	Chromium, hexavalent		0.51	mg/kg	UL	m
BBNPP-CW19-C	SE	Chromium, hexavalent		0.54	mg/kg	UL	m
BBNPP-CW4-C	SE	Chromium, hexavalent		0.52	mg/kg	UL	m
BBNPP-CW7-C	SE	Chromium, hexavalent		0.51	mg/kg	UL	m
BBNPP-D2	SE	Chromium, hexavalent		0.53	mg/kg	UL	m

Attachment A

Qualifier Codes and Explanation

Qualifier	Explanation
U	Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
No Code	Confirmed identification
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
N	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.
J	Analyte present. Reported value may not be accurate or precise.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	Not detected. Quantitation limit is probably higher.
NJ	Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.
Q	No analytical result.

Attachment B

Reason Codes and Explanation

Reason Code	Explanation
be	Equipment blank (or trip blank) contamination
bl	Laboratory blank contamination
bm	Missing blank information
c	Calibration issue
cl	Clean-up standard recovery
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ip	DDT/Endrin breakdown
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column precision
q	Quantitation issue
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature preservation issue
v	Compound identification issue
x	Low % solids
y	Serial dilution results
z	ICS results

Data Validation Report - Addendum

3To	Alek Modjeski, AECOM.		Page 1
Project	Dredge Management Support at the Bell Bend Nuclear Power Plant, Salem, Pennsylvania		
Laboratory	Accutest Laboratories, Dayton, New Jersey		
Laboratory SDG	JA58900- Level M-2		
Analyses/Method	Volatile Organic Compounds/EPA 8260B		
Validation Level	Limited – Level M-2		
AECOM Project Number	60160208.4		
Prepared by	Kristin Rutherford/AECOM	Completed: December 16, 2010	
Reviewed by	Andrea Mischel/AECOM		
Addendum Prepared by	Andrea Mischel/AECOM	Date: February 4, 2011	
CC	Dion Lewis/AECOM		

OVERVIEW - ADDENDUM

Additional level M-2 validation was performed on the data for 11 sediment samples, 2 aqueous trip blanks, and 2 equipment blanks, analyzed for project-specific list of volatile organic compounds (VOCs) by SW-846 method 8260B. The purpose of the additional validation was to review results for two previously analyzed, but unreported, target VOCs (2-nitropropane, n-butyl alcohol). The unreported target VOCs were subsequently reported in revised Accutest laboratory report JA58900 on January 21, 2011. This addendum incorporates the review findings of the additional compounds with the original validation memorandum.

The samples were collected by AECOM at the proposed Bell Bend Nuclear Power Plant site located in Salem Township, Luzerne County, Pennsylvania on October 13 and 14, 2010 and submitted to Accutest Laboratories (Accutest) in Dayton, New Jersey for analysis. Accutest processed the samples and reported the results under submission number JA58900.

The samples included in this review are listed below:

Client Sample ID	Matrix	Parameters
BBNPP-C-EB (equipment blank)	Aqueous	VOCs
BBNPP-PB (equipment blank)	Aqueous	VOCs
TRIP BLANK	Aqueous	VOCs
BBNPP-CW10-C	Sediment	VOCs
BBNPP-CW13-C	Sediment	VOCs
BBNPP-CW16-C	Sediment	VOCs

Client Sample ID	Matrix	Parameters
BBNPP-CW19-C	Sediment	VOCs
BBNPP-CW22-C	Sediment	VOCs
BBNPP-CW4-C	Sediment	VOCs
BBNPP-CW7-C	Sediment	VOCs
BBNPP-D1-C	Sediment	VOCs
BBNPP-D1-CFD (field duplicate of BBNPP-D1-C)	Sediment	VOCs
BBNPP-D2	Sediment	VOCs
BBNPP-R-C	Sediment	VOCs
T101410 (trip blank)	Aqueous	VOCs

SUMMARY

The data are valid as reported and may be used for decision making purposes with several exceptions. The majority of 2-nitropropane and n-butyl alcohol results were rejected due to calibration nonconformances. Other sample results required minor qualification and are considered usable. The following issues were noted during the review of the data (see discussion below).

MAJOR PROBLEMS

Initial Calibrations

The minimum relative response factors (RRF) were below acceptance criteria in the initial calibrations (ICAL) for the following compounds presented below. Qualified results are shown in Table 1A.

Calibration	Compound	RRF	Minimum RRF	Actions (Detects/Nondetects)
ICAL 8/4/2010	n-butyl alcohol	0.009	≥ 0.05	Estimate L/Reject R
Associated Samples: BBNPP-C-EB, BBNPP-PB, TRIP BLANK				
Calibration	Compound	RRF	Minimum RRF	Actions (Detects/Nondetects)
ICAL 9/14/2010	n-butyl alcohol	0.008	≥ 0.05	Estimate L/Reject R
ICAL 9/14/2010	2-nitropropane	0.004	≥ 0.05	Estimate L/Reject R
Associated Samples: BBNPP-CW10-C, BBNPP-CW13-C, BBNPP-CW16-C, BBNPP-CW19-C, BBNPP-CW22-C, BBNPP-CW7-C, BBNPP-D1-CFD, BBNPP-D2, T101410				

MINOR PROBLEMS

Initial Calibrations

The percent relative standard deviations (%RSDs), minimum relative response factors (RRF), and the correlation coefficients (r), were all within the QAPP QC acceptance criteria in the initial calibrations (ICAL) and initial calibration verification (ICV) standards with the following exceptions summarized in the table below. Qualified results are shown in Table 1.

Calibration	Compound	RRF	Minimum RRF	Actions (Detects/Nondetects)
ICAL 8/4/2010	acetone	0.046	≥ 0.05	Estimate (L/UL)
ICAL 8/4/2010	acetonitrile	0.039	≥ 0.05	Estimate (L/UL)
ICAL 8/4/2010	epichlorohydrin	0.029	≥ 0.05	Estimate (L/UL)
ICAL 8/4/2010	2-nitropropane	0.014	≥ 0.05	Estimate (L/UL)
Associated Samples: BBNPP-C-EB, BBNPP-PB, TRIP BLANK				
Calibration	Compound	RRF	Minimum RRF	Actions (Detects/Nondetects)
ICAL 9/14/2010	acetone	0.039	≥ 0.05	Estimate (L/UL)
ICAL 9/14/2010	acetonitrile	0.038	≥ 0.05	Estimate (L/UL)
ICAL 9/14/2010	2-butanone	0.043	≥ 0.05	Estimate (L/UL)
ICAL 9/14/2010	vinyl acetate	0.046	≥ 0.05	Estimate (L/UL)
ICAL 9/14/2010	ethyl acetate	0.042	≥ 0.05	Estimate (L/UL)
ICAL 9/14/2010	epichlorohydrin (1-chloro-2,3-epoxypropane)	0.022	≥ 0.05	Estimate (L/UL)
Associated Samples: BBNPP-CW10-C, BBNPP-CW13-C, BBNPP-CW16-C, BBNPP-CW19-C, BBNPP-CW22-C, BBNPP-CW7-C, BBNPP-D1-CFD, BBNPP-D2, T101410				
Calibration	Compound	RRF	Minimum RRF	Actions (Detects/Nondetects)
ICAL 10/7/2010	acrolein	0.026	≥ 0.05	Estimate (L/UL)
ICAL 10/7/2010	acrylonitrile	0.049	≥ 0.05	Estimate (L/UL)
ICAL 10/7/2010	n-butyl alcohol	0.027	≥ 0.05	Estimate (L/UL)
Associated Samples: BBNPP-D1-C, BBNPP-R-C, BBNPP-CW4-C				

Continuing Calibrations

The percent differences (%Ds) were all within the method QC acceptance criteria in the continuing calibration (CCAL) standards with the following exceptions summarized in the table below. Qualified results are shown in Table 1.

Calibration	Compound	%D	Actions (Detects/Nondetects)
CCAL 10/21/2010	1,4-dioxane	37	Estimate (J/UJ)
CCAL 10/21/2010	benzyl chloride	32.2	Estimate (J/UJ)
Associated Samples: BBNPP-C-EB, BBNPP-PB, TRIP BLANK			
Calibration	Compound	%D	Actions (Detects/Nondetects)
CCAL 10/26/2010	dichlorodifluoromethane	29.8	Estimate (J/UJ)
CCAL 10/26/2010	trichlorofluoromethane	29.0	Estimate (J/UJ)
CCAL 10/26/2010	vinyl acetate	37.0	Estimate (J/UJ)
CCAL 10/26/2010	carbon tetrachloride	41.3	Estimate (J/UJ)
CCAL 10/26/2010	1,2-dichloroethane	39.6	Estimate (J/UJ)
CCAL 10/26/2010	trichloroethene	25.6	Estimate (J/UJ)
CCAL 10/26/2010	dibromomethane	32.3	Estimate (J/UJ)
CCAL 10/26/2010	bromodichloromethane	28.9	Estimate (J/UJ)
CCAL 10/26/2010	bromoform	27.2	Estimate (J/UJ)
CCAL 10/26/2010	1,3,5-trichlorobenzene	27.1	Estimate (J/UJ)
Associated Samples: BBNPP-D2, BBNPP-D1-C, BBNPP-R-C, BBNPP-CW22-C, BBNPP-CW7-C, BBNPP-CW10-C, BBNPP-CW13-C, BBNPP-CW16-C, BBNPP-CW19-C, BBNPP-D1-CFD, T101410			
Calibration	Compound	%D	Actions (Detects/Nondetects)
CCAL 10/27/2010 10:09	vinyl acetate	38.0	Estimate (J/UJ)

Associated Samples: BBNPP-D2, BBNPP-D1-C, BBNPP-R-C, BBNPP-CW4-C			
Calibration	Compound	%D	Actions (Detects/Nondetects)
CCAL 10/27/2010 15:02	chlorodifluoromethane	30.2	Estimate (J/UJ)
Associated Samples: BBNPP-CW4-C			

Surrogates

Surrogate recoveries were within the laboratory acceptance criteria with the following exceptions summarized in the table below. Qualified results are shown in Table 1.

Sample ID	Surrogate	% Rec	Lower Limit	Upper Limit	Actions (Detects/Nondetects)
BBNPP-R-C	bromofluorobenzene	147	62	138	K/Accept
BBNPP-R-C	1,2-dichloroethane-d4	141	65	132	K/Accept
BBNPP-R-C	dibromofluoromethane	227	67	127	K/Accept
BBNPP-R-C	bromofluorobenzene	174	62	138	K/Accept

Laboratory Control Sample

Laboratory Control Sample (LCS) recoveries were within acceptance criteria with the following exception in the table below. Qualified results are shown in Table 1.

Compound	LCS % Rec	Lower Limit	Upper Limit	Associated Samples	Actions (Detects/Nondetects)
vinyl acetate	134	58	131	BBNPP-D2, BBNPP-D1-C, BBNPP-R-C, BBNPP-CW22-C, BBNPP-CW7-C, BBNPP-CW10-C, BBNPP-CW13-C, BBNPP-CW16-C, BBNPP-CW19-C, T101410, BBNPP-D1-CFD	K/Accept

MS/MSD results

MS/MSD analyses were requested and analyzed for sample BBNPP-R-C. Recoveries and RPDs were within the laboratory acceptance criteria with the following exceptions summarized in the table below. Qualified results are shown in Table 1.

Compound	MS %Rec	MSD %Rec	Lower Limit	Upper Limit	RPD	RPD Limit	Actions (Detects/Nondetects)
styrene	43	29	23	156	38	29	J/UJ
cis-1,3-dichloropropene	57	42	37	143	27	26	J/UJ
trans-1,3-dichloropropene	53	35	34	148	38	26	J/UJ
n-propylbenzene	53	34	13	158	40	31	J/UJ
n-butylbenzene	40	26	4	165	40	35	J/UJ
1,2-dibromoethane	72	52	41	140	30	23	J/UJ
1,3,5-trimethylbenzene	79	54	15	157	34	30	J/UJ
1,3,5-trichlorobenzene	63	28	60	140	75	30	L/UL
chlorobenzene	50	37	33	140	28	26	J/UJ
hexane	19	30	4	166	45	31	J/UJ
chloroprene	34	50	26	159	41	27	J/UJ
sec-butylbenzene	73	49	10	161	36	32	J/UJ
trans-1,2-dichloroethene	36	31	37	140	13	25	L/UL
vinyl bromide	43	50	50	150	17	30	L/UL
acetone	186	127	26	178	35	32	J/UJ
benzyl chloride	--	--	--	--	51	28	J/UJ
bromoform	99	74	31	153	26	24	J/UJ
1,1,2,2-tetrachloroethane	138	92	35	136	37	25	J/UJ
methyl methacrylate	87	64	37	157	27	26	J/UJ
2-chlorotoluene	73	47	16	156	40	31	J/UJ

Compound	MS %Rec	MSD %Rec	Lower Limit	Upper Limit	RPD	RPD Limit	Actions (Detects/Nondetects)
1,2,4-trimethylbenzene	72	44	13	158	45	36	J/UJ
1,2-dibromo-3-chloropropane	153	97	24	154	42	27	J/UJ
1,2,3-trichloropropane	149	100	38	143	36	23	J/UJ
isopropylbenzene	72	51	19	157	31	30	J/UJ

-- = no recovery limits for benzyl chloride

Field Duplicates Results

Field duplicate pair BBNPP-D1-C and BBNPP-D1-CFD was submitted with this sample set. For this data review, sample results were not qualified on the basis of field duplicate imprecision. The relative percent differences (RPDs) of detected target compounds are tabulated below for informational purposes only. Based on AECOM professional judgment, since one result was nondetect and the other was <5X the reporting limit, data would not be qualified.

Sample ID	Duplicate ID	Compound	Sample Result	Duplicate Result	QL	Units	RPD
BBNPP-D1-C	BBNPP-D1-CFD	Toluene	ND	1.1	0.63	ug/kg	54.3

Internal Standard

The internal standard area did not meet the acceptance criteria of -50% to +100% of the IS area in the associated continuing calibration standard (CCAL) for 1,4-dichlorobenzene-d4 in sample BBNPP-R-C. The nondetect results for isopropylbenzene, 1,1,2,2-tetrachloroethane, 1,2,3-trichloropropane, n-propylbenzene, 2-chlorotoluene, 1,3,5-trimethylbenzene, tert-butylbenzene, 1,2,4-trimethylbenzene, sec-butylbenzene, benzyl chloride, n-butylbenzene, 1,2-dibromo-3-chloropropane and 1,3,5-trichlorobenzene were qualified as estimated (J/UJ).

Sample Results

No dilutions were required for this sample set; therefore, SQLs were not affected.

NOTES

The following issues were noted during the data review.

The laboratory failed to analyze and report results for the following project specific target volatile organic compounds listed in Table 5-4 "BBNPP Organic COPCs and Reporting Limits" of the project

SAP : 1-chlorobutane, ethyl acrylate, methanol, methyl acrylate, cyclohexanone, n-butyl alcohol, 2-nitropropane and 1,2,4-trichlorobenzene. The laboratory was notified of the missing data and subsequently reported it in a revised report under Job Number JA58900A. *[Note that 2-nitropropane and n-butyl alcohol were reported in revised Accutest report JA58900 (January 21, 2011) and are discussed in this validation addendum.]*

REPORT CONTENT

Data validation activities were conducted with reference to Method SW846 Methods 8260B, Region III Innovative Approaches to Data Validation (June 1995) modified to reflect the use of non-CLP (Contract Laboratory Program) methods, the Sampling and Analysis Plan (SAP) for Dredge Management Support at the Bell Bend Nuclear Power Plant (September 2010), the method and the laboratory specific standard operating procedures (SOPs). In the absence of SAP-specified criteria, method or laboratory quality assurance limits were used as appropriate. The text of this report was formulated to address issues affecting data usability.

ATTACHMENTS

Attachment A: Validation Qualifier Codes and Explanation

Attachment B: Reason Codes and Explanation

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-C-EB	WQ	1,4-Dioxane		130	ug/l	UJ	c
BBNPP-C-EB	WQ	1-CHLORO-2,3-EPOXYPROPANE		100	ug/l	UL	c
BBNPP-C-EB	WQ	Acetone		10	ug/l	UL	c
BBNPP-C-EB	WQ	ACETONITRILE		100	ug/l	UL	c
BBNPP-C-EB	WQ	ACROLEIN		50	ug/l	UL	c
BBNPP-C-EB	WQ	ACRYLONITRILE		50	ug/l	UL	c
BBNPP-C-EB	WQ	BENZYL CHLORIDE		5.0	ug/l	UJ	c
BBNPP-PB	WQ	1,4-Dioxane		130	ug/l	UJ	c
BBNPP-PB	WQ	1-CHLORO-2,3-EPOXYPROPANE		100	ug/l	UL	c
BBNPP-PB	WQ	Acetone		10	ug/l	UL	c
BBNPP-PB	WQ	ACETONITRILE		100	ug/l	UL	c
BBNPP-PB	WQ	ACROLEIN		50	ug/l	UL	c
BBNPP-PB	WQ	ACRYLONITRILE		50	ug/l	UL	c
BBNPP-PB	WQ	BENZYL CHLORIDE		5.0	ug/l	UJ	c
TRIP BLANK	WQ	1,4-Dioxane		130	ug/l	UJ	c
TRIP BLANK	WQ	1-CHLORO-2,3-EPOXYPROPANE		100	ug/l	UL	c
TRIP BLANK	WQ	Acetone		10	ug/l	UL	c
TRIP BLANK	WQ	ACETONITRILE		100	ug/l	UL	c
TRIP BLANK	WQ	ACROLEIN		50	ug/l	UL	c
TRIP BLANK	WQ	ACRYLONITRILE		50	ug/l	UL	c
TRIP BLANK	WQ	BENZYL CHLORIDE		5.0	ug/l	UJ	c
VV4578-MB1	WQ	ACROLEIN		50	ug/l	UL	c
VV4578-MB1	WQ	ACRYLONITRILE		50	ug/l	UL	c
BBNPP-CW10-C	SE	1,2-Dichloroethane		0.52	ug/kg	UJ	c
BBNPP-CW10-C	SE	1,3,5-trichlorobenzene		2.6	ug/kg	UJ	c
BBNPP-CW10-C	SE	1-CHLORO-2,3-EPOXYPROPANE		52	ug/kg	UL	c

Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-CW10-C	SE	2-Butanone		5.2	ug/kg	UL	c
BBNPP-CW10-C	SE	Acetone		5.2	ug/kg	UL	c
BBNPP-CW10-C	SE	ACETONITRILE		52	ug/kg	UL	c
BBNPP-CW10-C	SE	ACROLEIN		26	ug/kg	UL	c
BBNPP-CW10-C	SE	ACRYLONITRILE		26	ug/kg	UL	c
BBNPP-CW10-C	SE	Bromodichloro-methane		2.6	ug/kg	UJ	c
BBNPP-CW10-C	SE	Bromoform		2.6	ug/kg	UJ	c
BBNPP-CW10-C	SE	Carbon Tetrachloride		2.6	ug/kg	UJ	c
BBNPP-CW10-C	SE	dibromomethane		2.6	ug/kg	UJ	c
BBNPP-CW10-C	SE	ETHYL ACETATE		2.6	ug/kg	UL	c
BBNPP-CW10-C	SE	Trichloroethene		2.6	ug/kg	UJ	c
BBNPP-CW10-C	SE	VINYL ACETATE		5.2	ug/kg	UL	c
BBNPP-CW13-C	SE	1,2-Dichloroethane		0.85	ug/kg	UJ	c
BBNPP-CW13-C	SE	1,3,5-trichlorobenzene		4.2	ug/kg	UJ	c
BBNPP-CW13-C	SE	1-CHLORO-2,3-EPOXYPROPANE		85	ug/kg	UL	c
BBNPP-CW13-C	SE	2-Butanone		8.5	ug/kg	UL	c
BBNPP-CW13-C	SE	Acetone	16.3	8.5	ug/kg	L	c
BBNPP-CW13-C	SE	ACETONITRILE		85	ug/kg	UL	c
BBNPP-CW13-C	SE	ACROLEIN		42	ug/kg	UL	c
BBNPP-CW13-C	SE	ACRYLONITRILE		42	ug/kg	UL	c

Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-CW13-C	SE	Bromodichloro-methane		4.2	ug/kg	UJ	c
BBNPP-CW13-C	SE	Bromoform		4.2	ug/kg	UJ	c
BBNPP-CW13-C	SE	Carbon Tetrachloride		4.2	ug/kg	UJ	c
BBNPP-CW13-C	SE	DIBROMO-METHANE		4.2	ug/kg	UJ	c
BBNPP-CW13-C	SE	ETHYL ACETATE		4.2	ug/kg	UL	c
BBNPP-CW13-C	SE	Trichloroethene		4.2	ug/kg	UJ	c
BBNPP-CW13-C	SE	VINYL ACETATE		8.5	ug/kg	UL	c
BBNPP-CW16-C	SE	1,2-Dichloroethane		0.76	ug/kg	UJ	c
BBNPP-CW16-C	SE	1,3,5-TRICHLORO-BENZENE		3.8	ug/kg	UJ	c
BBNPP-CW16-C	SE	1-CHLORO-2,3-EPOXYPROPANE		76	ug/kg	UL	c
BBNPP-CW16-C	SE	2-Butanone	5.7	7.6	ug/kg	L	c
BBNPP-CW16-C	SE	Acetone	33.1	7.6	ug/kg	L	c
BBNPP-CW16-C	SE	ACETONITRILE		76	ug/kg	UL	c
BBNPP-CW16-C	SE	ACROLEIN		38	ug/kg	UL	c
BBNPP-CW16-C	SE	ACRYLONITRILE		38	ug/kg	UL	c
BBNPP-CW16-C	SE	Bromodichloro-methane		3.8	ug/kg	UJ	c
BBNPP-CW16-C	SE	Bromoform		3.8	ug/kg	UJ	c
BBNPP-CW16-C	SE	Carbon Tetrachloride		3.8	ug/kg	UJ	c
BBNPP-CW16-C	SE	DIBROMO-METHANE		3.8	ug/kg	UJ	c
BBNPP-CW16-C	SE	ETHYL ACETATE		3.8	ug/kg	UL	c

Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-CW16-C	SE	Trichloroethene		3.8	ug/kg	UJ	c
BBNPP-CW16-C	SE	vinyl acetate		7.6	ug/kg	UL	c
BBNPP-CW19-C	SE	1,2-Dichloroethane		0.68	ug/kg	UJ	c
BBNPP-CW19-C	SE	1,3,5-trichlorobenzene		3.4	ug/kg	UJ	c
BBNPP-CW19-C	SE	1-CHLORO-2,3-EPOXYPROPANE		68	ug/kg	UL	c
BBNPP-CW19-C	SE	2-Butanone	1.5	6.8	ug/kg	L	c
BBNPP-CW19-C	SE	Acetone	24.7	6.8	ug/kg	L	c
BBNPP-CW19-C	SE	ACETONITRILE		68	ug/kg	UL	c
BBNPP-CW19-C	SE	ACROLEIN		34	ug/kg	UL	c
BBNPP-CW19-C	SE	ACRYLONITRILE		34	ug/kg	UL	c
BBNPP-CW19-C	SE	Bromodichloro-methane		3.4	ug/kg	UJ	c
BBNPP-CW19-C	SE	Bromoform		3.4	ug/kg	UJ	c
BBNPP-CW19-C	SE	Carbon Tetrachloride		3.4	ug/kg	UJ	c
BBNPP-CW19-C	SE	DIBROMO-METHANE		3.4	ug/kg	UJ	c
BBNPP-CW19-C	SE	ETHYL ACETATE		3.4	ug/kg	UL	c
BBNPP-CW19-C	SE	Trichloroethene		3.4	ug/kg	UJ	c
BBNPP-CW19-C	SE	VINYL ACETATE		6.8	ug/kg	UL	c
BBNPP-CW22-C	SE	1,2-Dichloroethane		0.69	ug/kg	UJ	c
BBNPP-CW22-C	SE	1,3,5-TRICHLORO-BENZENE		3.4	ug/kg	UJ	c
BBNPP-CW22-C	SE	1-CHLORO-2,3-EPOXYPROPANE		69	ug/kg	UL	c

Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-CW22-C	SE	2-Butanone		6.9	ug/kg	UL	c
BBNPP-CW22-C	SE	Acetone		6.9	ug/kg	UL	c
BBNPP-CW22-C	SE	ACETONITRILE		69	ug/kg	UL	c
BBNPP-CW22-C	SE	ACROLEIN		34	ug/kg	UL	c
BBNPP-CW22-C	SE	ACRYLONITRILE		34	ug/kg	UL	c
BBNPP-CW22-C	SE	Bromodichloro-methane		3.4	ug/kg	UJ	c
BBNPP-CW22-C	SE	Bromoform		3.4	ug/kg	UJ	c
BBNPP-CW22-C	SE	Carbon Tetrachloride		3.4	ug/kg	UJ	c
BBNPP-CW22-C	SE	DIBROMO-METHANE		3.4	ug/kg	UJ	c
BBNPP-CW22-C	SE	ETHYL ACETATE		3.4	ug/kg	UL	c
BBNPP-CW22-C	SE	Trichloroethene		3.4	ug/kg	UJ	c
BBNPP-CW22-C	SE	VINYL ACETATE		6.9	ug/kg	UL	c
BBNPP-CW4-C	SE	ACROLEIN		26	ug/kg	UL	c
BBNPP-CW4-C	SE	ACRYLONITRILE		26	ug/kg	UL	c
BBNPP-CW7-C	SE	1,2-Dichloroethane		0.61	ug/kg	UJ	c
BBNPP-CW7-C	SE	1,3,5-TRICHLORO-BENZENE		3.1	ug/kg	UJ	c
BBNPP-CW7-C	SE	1-CHLORO-2,3-EPOXYPROPANE		61	ug/kg	UL	c
BBNPP-CW7-C	SE	2-Butanone		6.1	ug/kg	UL	c
BBNPP-CW7-C	SE	Acetone		6.1	ug/kg	UL	c
BBNPP-CW7-C	SE	ACETONITRILE		61	ug/kg	UL	c

Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-CW7-C	SE	ACROLEIN		31	ug/kg	UL	c
BBNPP-CW7-C	SE	ACRYLONITRILE		31	ug/kg	UL	c
BBNPP-CW7-C	SE	Bromodichloro-methane		3.1	ug/kg	UJ	c
BBNPP-CW7-C	SE	Bromoform		3.1	ug/kg	UJ	c
BBNPP-CW7-C	SE	Carbon Tetrachloride		3.1	ug/kg	UJ	c
BBNPP-CW7-C	SE	DIBROMO-METHANE		3.1	ug/kg	UJ	c
BBNPP-CW7-C	SE	ETHYL ACETATE		3.1	ug/kg	UL	c
BBNPP-CW7-C	SE	Trichloroethene		3.1	ug/kg	UJ	c
BBNPP-CW7-C	SE	VINYL ACETATE		6.1	ug/kg	UL	c
BBNPP-D1-C	SE	ACROLEIN		31	ug/kg	UL	c
BBNPP-D1-C	SE	ACRYLONITRILE		31	ug/kg	UL	c
BBNPP-D1-CFD	SE	1,2-Dichloroethane		0.85	ug/kg	UJ	c
BBNPP-D1-CFD	SE	1,3,5-TRICHLORO-BENZENE		4.3	ug/kg	UJ	c
BBNPP-D1-CFD	SE	1-CHLORO-2,3-EPOXYPROPANE		85	ug/kg	UL	c
BBNPP-D1-CFD	SE	2-Butanone		8.5	ug/kg	UL	c
BBNPP-D1-CFD	SE	Acetone		8.5	ug/kg	UL	c
BBNPP-D1-CFD	SE	ACETONITRILE		85	ug/kg	UL	c
BBNPP-D1-CFD	SE	ACROLEIN		43	ug/kg	UL	c
BBNPP-D1-CFD	SE	ACRYLONITRILE		43	ug/kg	UL	c
BBNPP-D1-CFD	SE	Bromodichloro-methane		4.3	ug/kg	UJ	c
BBNPP-D1-CFD	SE	Bromoform		4.3	ug/kg	UJ	c

Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-D1-CFD	SE	Carbon Tetrachloride		4.3	ug/kg	UJ	c
BBNPP-D1-CFD	SE	DIBROMO-METHANE		4.3	ug/kg	UJ	c
BBNPP-D1-CFD	SE	ETHYL ACETATE		4.3	ug/kg	UL	c
BBNPP-D1-CFD	SE	Trichloroethene		4.3	ug/kg	UJ	c
BBNPP-D1-CFD	SE	VINYL ACETATE		8.5	ug/kg	UL	c
BBNPP-D2	SE	1,2-Dichloroethane		0.72	ug/kg	UJ	c
BBNPP-D2	SE	1,3,5-TRICHLORO-BENZENE		3.6	ug/kg	UJ	c
BBNPP-D2	SE	1-CHLORO-2,3-EPOXYPROPANE		72	ug/kg	UL	c
BBNPP-D2	SE	2-Butanone		7.2	ug/kg	UL	c
BBNPP-D2	SE	Acetone		7.2	ug/kg	UL	c
BBNPP-D2	SE	ACETONITRILE		72	ug/kg	UL	c
BBNPP-D2	SE	ACROLEIN		36	ug/kg	UL	c
BBNPP-D2	SE	ACRYLONITRILE		36	ug/kg	UL	c
BBNPP-D2	SE	Bromodichloro-methane		3.6	ug/kg	UJ	c
BBNPP-D2	SE	Bromoform		3.6	ug/kg	UJ	c
BBNPP-D2	SE	Carbon Tetrachloride		3.6	ug/kg	UJ	c
BBNPP-D2	SE	DIBROMO-METHANE		3.6	ug/kg	UJ	c
BBNPP-D2	SE	ETHYL ACETATE		3.6	ug/kg	UL	c
BBNPP-D2	SE	Trichloroethene		3.6	ug/kg	UJ	c
BBNPP-D2	SE	VINYL ACETATE		7.2	ug/kg	UL	c
BBNPP-R-C	SE	Vinyl Bromide		3.1	ug/kg	UL	m
BBNPP-R-C	SE	1,1,2,2-Tetrachloroethane		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	1,2,4-TRIMETHYL-BENZENE		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	1,2-Dibromo-3-chloropropane		6.1	ug/kg	UJ	m
BBNPP-R-C	SE	1,2-Dibromoethane		0.61	ug/kg	UJ	m

Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-R-C	SE	1,2-Dichloroethane		0.61	ug/kg	UJ	c
BBNPP-R-C	SE	1,3,5-TRICHLORO-BENZENE		3.1	ug/kg	UL	m,c
BBNPP-R-C	SE	2-CHLOR-1,3-BUTADIENE		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	2-chlorotoluene		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	Acetone		6.1	ug/kg	UJ	m
BBNPP-R-C	SE	ACROLEIN		31	ug/kg	UL	c
BBNPP-R-C	SE	ACRYLONITRILE		31	ug/kg	UL	c
BBNPP-R-C	SE	BENZYL CHLORIDE		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	Bromodichloro-methane		3.1	ug/kg	UJ	c
BBNPP-R-C	SE	Bromoform		3.1	ug/kg	UJ	m,c
BBNPP-R-C	SE	n-butylbenzene		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	Carbon Disulfide	2.1	3.1	ug/kg	K	s
BBNPP-R-C	SE	Carbon Tetrachloride		3.1	ug/kg	UJ	c
BBNPP-R-C	SE	Chlorobenzene		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	cis-1,3-Dichloropropene		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	DIBROMO-METHANE		3.1	ug/kg	UJ	c
BBNPP-R-C	SE	HEXANE		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	Isopropylbenzene		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	METHYL METHACRYLATE		6.1	ug/kg	UJ	m
BBNPP-R-C	SE	n-propylbenzene		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	sec-butylbenzene		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	Styrene		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	trans-1,2-Dichloroethene		3.1	ug/kg	UL	m
BBNPP-R-C	SE	trans-1,3-Dichloropropene		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	Trichloroethene		3.1	ug/kg	UJ	c
BBNPP-R-C	SE	1,2,3-trichloropropane		3.1	ug/kg	UJ	m

Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-R-C	SE	1,3,5-trimethylbenzene		3.1	ug/kg	UJ	m
BBNPP-R-C	SE	VINYL ACETATE		6.1	ug/kg	UJ	c
BBNPP-R-C	SE	Tert butyl benzene		3.1	ug/kg	UJ	i

Table 1A - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-C-EB	WQ	2-NITROPROPANE		10	ug/l	UL	c
BBNPP-CW10-C	SE	2-NITROPROPANE		5.2	ug/kg	R	c
BBNPP-CW13-C	SE	2-NITROPROPANE		8.5	ug/kg	R	c
BBNPP-CW16-C	SE	2-NITROPROPANE		7.6	ug/kg	R	c
BBNPP-CW19-C	SE	2-NITROPROPANE		6.8	ug/kg	R	c
BBNPP-CW22-C	SE	2-NITROPROPANE		6.9	ug/kg	R	c
BBNPP-CW7-C	SE	2-NITROPROPANE		6.1	ug/kg	R	c
BBNPP-D1-CFD	SE	2-NITROPROPANE		8.5	ug/kg	R	c
BBNPP-D2	SE	2-NITROPROPANE		7.2	ug/kg	R	c
BBNPP-PB	WQ	2-NITROPROPANE		10	ug/l	UL	c
TRIP BLANK	WQ	2-NITROPROPANE		10	ug/l	UL	c
BBNPP-C-EB	WQ	N-BUTYL ALCOHOL		250	ug/l	R	c
BBNPP-CW10-C	SE	N-BUTYL ALCOHOL		130	ug/kg	R	c
BBNPP-CW13-C	SE	N-BUTYL ALCOHOL		210	ug/kg	R	c
BBNPP-CW16-C	SE	N-BUTYL ALCOHOL		190	ug/kg	R	c

Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-CW19-C	SE	N-BUTYL ALCOHOL		170	ug/kg	R	c
BBNPP-CW22-C	SE	N-BUTYL ALCOHOL		170	ug/kg	R	c
BBNPP-CW4-C	SE	N-BUTYL ALCOHOL		100	ug/kg	UL	c
BBNPP-CW7-C	SE	N-BUTYL ALCOHOL		150	ug/kg	R	c
BBNPP-D1-C	SE	N-BUTYL ALCOHOL		180	ug/kg	UL	c
BBNPP-D1-CFD	SE	N-BUTYL ALCOHOL		210	ug/kg	R	c
BBNPP-D2	SE	N-BUTYL ALCOHOL		180	ug/kg	R	c
BBNPP-PB	WQ	N-BUTYL ALCOHOL		250	ug/l	R	c
BBNPP-R-C	SE	N-BUTYL ALCOHOL		150	ug/kg	UL	c
TRIP BLANK	WQ	N-BUTYL ALCOHOL		250	ug/l	R	c

Attachment A

Qualifier Codes and Explanation

Qualifier	Explanation
U	Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
No Code	Confirmed identification
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
N	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.
J	Analyte present. Reported value may not be accurate or precise.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	Not detected. Quantitation limit is probably higher.
NJ	Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.
Q	No analytical result.

Attachment B

Reason Codes and Explanation

Reason Code	Explanation
be	Equipment blank (or trip blank) contamination
bl	Laboratory blank contamination
bm	Missing blank information
c	Calibration issue
cl	Clean-up standard recovery
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ip	DDT/Endrin breakdown
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column precision
q	Quantitation issue
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature preservation issue
v	Compound identification issue
x	Low % solids
y	Serial dilution results
z	ICS results

Data Validation Report

To	Alek Modjeski, AECOM.	Page 1
Project	Dredge Management Support at the Bell Bend Nuclear Power Plant, Salem, Pennsylvania	
Laboratory	Cape Fear Analytical, Wilmington, North Carolina	
Laboratory SDG	JA58900X	
Analyses/Method	Dioxins (2,3,7,8-TCDD only)/SW-846 Method 8290A	
Validation Level	Full	
AECOM Project Number	60160208.4	
Prepared by	Paula DiMattei/AECOM	Completed: December 5, 2010
Reviewed by	Robert Kennedy/AECOM	
CC	Dion Lewis/AECOM	

1.0 OVERVIEW

Full validation was performed on the data for 11 sediment samples, one field blank, and one equipment blank analyzed for 2378-TCDD. The samples were analyzed according to SW-846 Method 8290A. The samples were collected by AECOM at the proposed Bell Bend Nuclear Power Plant site located in Salem Township, Luzerne County, Pennsylvania on October 13 and 14, 2010 and submitted to Accutest Laboratories in Dayton, NJ for analysis. Accutest subsequently subcontracted the analysis to Cape Fear Analytical (CFA) in Wilmington, North Carolina. CFA processed and reported these samples under sample delivery group (SDG) JA58900X.

2.0 SAMPLES

The samples included in this review are listed below:

Client Sample ID	Accutest Lab ID	Matrix	Parameter
BBNPP-D2	JA58900-1	Sediment	2,3,7,8-TCDD
BBNPP-D1-C	JA58900-2	Sediment	2,3,7,8-TCDD
BBNPP-R-C	JA58900-3	Sediment	2,3,7,8-TCDD
BBNPP-CW22-C	JA58900-4	Sediment	2,3,7,8-TCDD
BBNPP-CW4-C	JA58900-7	Sediment	2,3,7,8-TCDD
BBNPP-CW7-C	JA58900-8	Sediment	2,3,7,8-TCDD

Client Sample ID	Accutest Lab ID	Matrix	Parameter
BBNPP-CW10-C	JA58900-9	Sediment	2,3,7,8-TCDD
BBNPP-CW13-C	JA58900-10	Sediment	2,3,7,8-TCDD
BBNPP-CW16-C	JA58900-11	Sediment	2,3,7,8-TCDD
BBNPP-CW19-C	JA58900-12	Sediment	2,3,7,8-TCDD
BBNPP-D1-CFD (Field duplicate of BBNPP-D1-C)	JA58900-14	Sediment	2,3,7,8-TCDD
BBNPP-PB	JA58900-6	Field Blank	2,3,7,8-TCDD
BBNPP-C-EB	JA58900-5	Equipment Blank	2,3,7,8-TCDD

3.0 SUMMARY

In general, the data are valid as reported and may be used for decision making purposes. Minor qualification of the data was required.

4.0 MAJOR PROBLEMS

No major problems were encountered in the review of the data.

5.0 MINOR PROBLEMS

- Compound Quantitation

The 2,3,7,8-TCDD result in sample BBNPP-D1-C was reported by the laboratory as an estimated maximum possible concentration (EMPC) since the ion abundance ratio was greater than $\pm 15\%$ of the theoretical ratio. As stipulated in the Region 3 Dioxin Data Validation Guidance, this result has been reported as 2,3,7,8-TCDD and is qualified as estimated (J).

The 2378-TCDD result in samples BBNPP-CW22-C and BBNPP-CW-10-C was reported by the laboratory as an EMPC since the ion abundance ratio was greater than $\pm 15\%$ of the theoretical ratio. The ion abundance ratio for these results also exceeded the Region 3 expanded criterion of $\pm 25\%$ of the theoretical ratio. Consequently, the 2,3,7,8-TCDD results in samples BBNPP-CW22-C and BBNPP-CW-10-C were qualified as tentatively identified (N) due to the uncertainty in the compound identification and should be regarded as estimated maximum possible concentrations. The laboratory "J" qualifier indicating that the result was found at a concentration less than the practical quantitation limit (PQL) was removed during data validation because of the required hierarchy of qualifiers defined by the Region 3 Data Validation Guidance.

Qualified data are summarized in Table 1.

6.0 NOTES

The following issues were noted during the data review.

Blanks

2,3,7,8-TCDD was not detected in the associated laboratory method blank or field and equipment blank samples BBNPP-PB and BBNPP-C-EB, respectively.

Field Duplicate Results

Samples BBNPP-D1-C and BBNPP-D1-CFD were submitted as the field duplicate pair with this sample set. The following table summarizes the field duplicate results.

Compound	BBNPP-D1-C (µg/Kg)	BBNPP-D1-CFD (µg/Kg)	RPD (%)
2,3,7,8-TCDD	0.0554 J	0.052 U	NC

The RPD was not calculable (NC) since 2,3,7,8-TCDD was not detected in the field duplicate sample. 2,3,7,8-TCDD was detected in sample BBNPP-D1-C at a concentration that was below the laboratory's PQL; therefore, data validation actions were not required on this basis.

REPORT CONTENT

Data validation activities were conducted with reference to SW846 Method 8290A, *Region III Standard Operating Procedure for Dioxin/Furan Data Validation* (March 1999), *Region III Innovative Approaches to Data Validation* (June 1995) modified to reflect the use of non-CLP (Contract Laboratory Program) methods, the Sampling and Analysis Plan (SAP) for Dredge Management Support at the Bell Bend Nuclear Power Plant (September 2010), and the laboratory specific standard operating procedures (SOPs). In the absence of SAP-specified criteria, method or laboratory quality assurance limits were used as appropriate. The text of this report was formulated to address only those issues affecting data usability.

ATTACHMENTS

Attachment A: Validation Qualifier Codes and Explanation

Attachment B: Reason Codes and Explanation

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
BBNPP-CW10-C	SO	2,3,7,8-TCDD	0.0506	0.0467	pg/g	N	k2
BBNPP-CW22-C	SO	2,3,7,8-TCDD	0.0643	0.051	pg/g	N	k2
BBNPP-D1-C	SO	2,3,7,8-TCDD	0.0554	0.0461	pg/g	J	k1

Attachment A
Qualifier Codes and Explanation

Qualifier	Explanation
U	Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
No Code	Confirmed identification
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
N	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.
J	Analyte present. Reported value may not be accurate or precise.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	Not detected. Quantitation limit is probably higher.
NJ	Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.
Q	No analytical result.

Attachment B

Reason Codes and Explanation

Reason Code	Explanation
a	Tracer recovery (radiochemical data only)
be	Equipment blank (or trip blank) contamination
bl	Laboratory blank contamination
bm	Missing blank information
c	Calibration issue
cp	Insufficient in growth (radiochemical data only)
cl	Clean-up standard recovery
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
e	Ether interference
fd	Field duplicate RPDs
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ip	DDT/Endrin breakdown
k1	Estimated Maximum Possible Concentrations (ion abundance ratio >15% but <25% of theoretical ratio)
k2	Estimated Maximum Possible Concentrations (ion abundance ratio >25% of theoretical ratio)
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column precision
rp	Re-extraction precision issue [PAHs only]
q	Quantitation issue
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature preservation issue
u	High combined sample result uncertainty (radiochemical data only)
v	Compound identification issue
x	Low % solids
y	Serial dilution results
z	ICS results

Data Validation Report

To	Alek Modjeski, AECOM.		Page	1
Project	Dredge Management Support at the Bell Bend Nuclear Power Plant, Salem, Pennsylvania			
Laboratory	Accutest Laboratories, Dayton, NJ			
Laboratory SDG	JA58750, JA58900			
Analyses/Method	Total Metals and Mercury			
Validation Level	Limited – Level IM-1			
AECOM Project Number	60160208.4			
Prepared by	Richard Purdy/AECOM	Completed: January 3, 2011		
Reviewed by	Andrea Mischel/AECOM			
CC	Dion Lewis/AECOM			

OVERVIEW

Level IM-1 validation was performed on the data for 29 sediment samples and two aqueous equipment blanks analyzed for a project specific list of total metals and mercury. The methods associated with these parameters are summarized in the table below. The samples were collected by AECOM at the proposed Bell Bend Nuclear Power Plant site located in Salem Township, Luzerne County, Pennsylvania on October 12-14, 2010 and submitted to Accutest Laboratories (Accutest) in Dayton, NJ for analysis. Accutest processed the samples and reported the results under Job Numbers JA58750 and JA58900.

Parameter	Method
Metals	SW-846 6010B (Inductively coupled plasma – atomic emission spectrometry (ICP-AES))
Mercury (water)	SW-846 7470A Cold vapor atomic absorption (CVAA)
Mercury (soil)	SW-846 7471A (CVAA)

SAMPLES

The samples included in this review are listed below:

Client Sample ID	Matrix	Parameter
BBNP-CW1-C	Sediment	metals, mercury
BBNP-CW2-C	Sediment	metals, mercury
BBNP-CW3-C	Sediment	metals, mercury

Client Sample ID	Matrix	Parameter
BBNP-CW6-C	Sediment	metals, mercury
BBNP-CW9-C	Sediment	metals, mercury
BBNP-CW9-FD (field duplicate of BBNP-CW9-C)	Sediment	metals, mercury
BBNP-CW12-C	Sediment	metals, mercury
BBNP-CW15-C	Sediment	metals, mercury
BBNP-CW18-C	Sediment	metals, mercury
BBNP-CW21-C	Sediment	metals, mercury
BBNP-CW5-C	Sediment	metals, mercury
BBNP-CW8-C	Sediment	metals, mercury
BBNP-CW11-C	Sediment	metals, mercury
BBNP-CW14-C	Sediment	metals, mercury
BBNP-CW17-C	Sediment	metals, mercury
BBNP-CW20-C	Sediment	metals, mercury
BBNP-CW23-C	Sediment	metals, mercury
BBNP-CW20-C-FD (field duplicate of BBNP-CW20-C)	Sediment	metals, mercury
BBNPP-D2	Sediment	metals, mercury
BBNPP-D1-C	Sediment	metals, mercury
BBNPP-R-C	Sediment	metals, mercury
BBNPP-CW22-C	Sediment	metals, mercury
BBNPP-C-EB (equipment blank)	Aqueous	metals, mercury
BBNPP-PB (equipment blank)	Aqueous	metals, mercury
BBNPP-CW4-C	Sediment	metals, mercury
BBNPP-CW7-C	Sediment	metals, mercury
BBNPP-CW10-C	Sediment	metals, mercury
BBNPP-CW13-C	Sediment	metals, mercury
BBNPP-CW16-C	Sediment	metals, mercury
BBNPP-CW19-C	Sediment	metals, mercury
BBNPP-D1-C-FD (field duplicate of BBNPP-D1-C)	Sediment	metals, mercury

SUMMARY

In general, the data are valid as reported and may be used for decision making purposes. No data points were rejected. Selected data points were qualified as estimated due to QC non-conformances (see discussion below).

MAJOR PROBLEMS

No major problems were encountered in the review of the data.

MINOR PROBLEMS

Initial and Continuing Calibrations

The recoveries for cobalt (87%), copper (85%), lead (84%), and selenium (70%) in the ICP-AES reporting limit check standard (CRI) associated with the aqueous samples were below the 90%-110% acceptance criteria. The nondetect results for cobalt, copper, lead, and selenium in samples BBNPP-C-EB and BBNPP-PB were qualified as estimated (UL) and may be biased low. Qualified results are shown in Table 1.

Matrix Spike/ Matrix Spike Duplicate Results

Samples BBNPP-CW5-C and BBNPP-R-C were analyzed as the matrix spike/matrix spike duplicate pairs for this sample set. The percent recoveries for manganese and antimony in either the MS or MSD in both samples were less than the lower quality control limits, but greater than 30%. The positive and nondetect results in all sediment samples are qualified as estimated (L/UL, respectively) and may be biased low. Qualified results are shown in Table 1.

Sample ID	Compound	MS % Recovery	MSD % Recovery	Lower Limit	Upper Limit	RPD	RPD Limit
BBNPP-CW5-C	Manganese	88.5	74.2	75	125	3.2	20
	Antimony	61.5	66.2	75	125	5.8	20
BBNPP-R-C	Manganese	90.2	73.8	75	125	3.7	20
	Antimony	60.3	59.8	75	125	0.9	20

NOTES

The following issues were noted during the data review.

Field Duplicate Results

Samples BBNPP-CW20-C/BBNPP-CW20-C-FD, BBNPP-CW9-C/BBNPP-CW9-FD, and BBNPP-D1-C/BBNPP-D1-CFD were submitted as the field duplicate pairs with this sample set. Field duplicate relative percent differences (RPDs) that would result in data qualification are summarized below for informational purposes only. However, for this data review, sample results were not qualified on the basis of field duplicate precision.

Sample ID	Duplicate ID	Compound	Sample Result	Duplicate Result	QL	Units	RPD
BBNPP-D1-C	BBNPP-D1-C-FD	Zinc	63.6	159	2.9	mg/kg	85.7

REPORT CONTENT

Data validation activities were conducted with reference to SW-846 Methods 6010B, 7470A, and 7471A; *Region III Modifications to National Functional Guidelines for Evaluating Inorganics Analyses* (1993); *Region III Innovative Approaches to Data Validation* (June 1995) modified to reflect the use of non-CLP (Contract Laboratory Program) methods; the *Sampling and Analysis*

Plan (SAP) for Dredge Management Support at the Bell Bend Nuclear Power Plant (September 2010); the method and the laboratory specific standard operating procedures (SOPs). In the absence of SAP-specified criteria, method or laboratory quality assurance limits were used as appropriate. The text of this report was formulated to address issues affecting data usability.

ATTACHMENTS

Attachment A: Validation Qualifier Codes and Explanation

Attachment B: Reason Codes and Explanation

Table 1 - Data Validation Summary of Qualified Data

Sample ID	Matrix	Compound	Result	QL	Units	Validation Qualifiers	Validation Reason
BBNPP-C-EB	WQ	Cobalt		50	ug/l	UL	c
BBNPP-C-EB	WQ	Copper		10	ug/l	UL	c
BBNPP-C-EB	WQ	Lead		3.0	ug/l	UL	c
BBNPP-C-EB	WQ	Selenium		10	ug/l	UL	c
BBNPP-PB	WQ	Cobalt		50	ug/l	UL	c
BBNPP-PB	WQ	Copper		10	ug/l	UL	c
BBNPP-PB	WQ	Lead		3.0	ug/l	UL	c
BBNPP-PB	WQ	Selenium		10	ug/l	UL	c
BBNP-CW1-C	SE	Antimony		2.5	mg/kg	UL	m
BBNP-CW1-C	SE	Manganese	344	1.9	mg/kg	L	m
BBNP-CW11-	SE	Antimony		2.3	mg/kg	UL	m
BBNP-CW11-	SE	Manganese	407	1.7	mg/kg	L	m
BBNP-CW12-	SE	Antimony		2.2	mg/kg	UL	m
BBNP-CW12-	SE	Manganese	387	1.7	mg/kg	L	m
BBNP-CW14-	SE	Antimony		2.4	mg/kg	UL	m
BBNP-CW14-	SE	Manganese	416	1.8	mg/kg	L	m
BBNP-CW15-	SE	Antimony		2.4	mg/kg	UL	m
BBNP-CW15-	SE	Manganese	152	1.8	mg/kg	L	m
BBNP-CW17-	SE	Antimony		2.6	mg/kg	UL	m
BBNP-CW17-	SE	Manganese	406	1.9	mg/kg	L	m
BBNP-CW18-	SE	Antimony		2.7	mg/kg	UL	m
BBNP-CW18-	SE	Manganese	627	2.1	mg/kg	L	m
BBNP-CW2-C	SE	Antimony		2.4	mg/kg	UL	m
BBNP-CW2-C	SE	Manganese	373	1.8	mg/kg	L	m
BBNP-CW20-	SE	Antimony		2.4	mg/kg	UL	m
BBNP-CW20-	SE	Manganese	381	1.8	mg/kg	L	m
BBNP-CW20-	SE	Antimony		3.5	mg/kg	UL	m
BBNP-CW20-	SE	Manganese	532	2.6	mg/kg	L	m
BBNP-CW21-	SE	Antimony		2.4	mg/kg	UL	m
BBNP-CW21-	SE	Manganese	411	1.8	mg/kg	L	m
BBNP-CW23-	SE	Antimony		2.4	mg/kg	UL	m
BBNP-CW23-	SE	Manganese	529	1.8	mg/kg	L	m
BBNP-CW3-C	SE	Antimony		2.4	mg/kg	UL	m
BBNP-CW3-C	SE	Manganese	308	1.8	mg/kg	L	m
BBNP-CW5-C	SE	Antimony		2.3	mg/kg	UL	m
BBNP-CW5-C	SE	Manganese	486	1.7	mg/kg	L	m
BBNP-CW6-C	SE	Antimony		2.4	mg/kg	UL	m
BBNP-CW6-C	SE	Manganese	428	1.8	mg/kg	L	m
BBNP-CW8-C	SE	Antimony		2.6	mg/kg	UL	m

BBNP-CW8-C	SE	Manganese	499	1.9	mg/kg	L	m
BBNP-CW9-C	SE	Antimony		2.4	mg/kg	UL	m
BBNP-CW9-C	SE	Manganese	438	1.8	mg/kg	L	m
BBNP-CW9-	SE	Antimony		2.4	mg/kg	UL	m
BBNP-CW9-	SE	Manganese	370	1.8	mg/kg	L	m
BBNPP-	SE	Antimony		2.6	mg/kg	UL	m
BBNPP-	SE	Manganese	397	2.0	mg/kg	L	m
BBNPP-	SE	Antimony		3.1	mg/kg	UL	m
BBNPP-	SE	Manganese	394	2.3	mg/kg	L	m
BBNPP-	SE	Antimony		2.7	mg/kg	UL	m
BBNPP-	SE	Manganese	355	2.0	mg/kg	L	m
BBNPP-	SE	Antimony		2.7	mg/kg	UL	m
BBNPP-	SE	Manganese	393	2.0	mg/kg	L	m
BBNPP-	SE	Antimony		2.4	mg/kg	UL	m
BBNPP-	SE	Manganese	277	1.8	mg/kg	L	m
BBNPP-CW4-	SE	Antimony		2.6	mg/kg	UL	m
BBNPP-CW4-	SE	Manganese	440	2.0	mg/kg	L	m
BBNPP-CW7-	SE	Antimony		2.5	mg/kg	UL	m
BBNPP-CW7-	SE	Manganese	449	1.9	mg/kg	L	m
BBNPP-D1-C	SE	Antimony		2.9	mg/kg	UL	m
BBNPP-D1-C	SE	Manganese	580	2.1	mg/kg	L	m
BBNPP-D1-	SE	Antimony		3.3	mg/kg	UL	m
BBNPP-D1-	SE	Manganese	617	2.5	mg/kg	L	m
BBNPP-D2	SE	Antimony		2.5	mg/kg	UL	m
BBNPP-D2	SE	Manganese	456	1.9	mg/kg	L	m
BBNPP-R-C	SE	Antimony		2.7	mg/kg	UL	m
BBNPP-R-C	SE	Manganese	429	2.0	mg/kg	L	m

Attachment A

Qualifier Codes and Explanation

Qualifier	Explanation
U	Not detected. The associated number indicates the approximate sample concentration necessary to be detected.
No Code	Confirmed identification
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
N	Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.
J	Analyte present. Reported value may not be accurate or precise.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
UJ	Not detected. Quantitation limit may be inaccurate or imprecise.
UL	Not detected. Quantitation limit is probably higher.
NJ	Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.
Q	No analytical result.

Attachment B

Reason Codes and Explanation

Reason Code	Explanation
be	Equipment blank (or trip blank) contamination
bl	Laboratory blank contamination
bm	Missing blank information
c	Calibration issue
cl	Clean-up standard recovery
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ip	DDT/Endrin breakdown
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column precision
q	Quantitation issue
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature preservation issue
v	Compound identification issue
x	Low % solids
y	Serial dilution results
z	ICS results

Data Validation Report

To	Alek Modjeski, AECOM.	Page 1
Project	Dredge Management Support at the Bell Bend Nuclear Power Plant, Salem, Pennsylvania	
Laboratory	Meta Environmental, Inc., Watertown MA	
Laboratory SDG	A21010	
Analyses/Method	Tetraethyl Lead	
Validation Level	Limited –Level M-2	
AECOM Project Number	60160208.4	
Prepared by	Richard Purdy/AECOM	Completed: November 24, 2010
Reviewed by	Andrea Mischel/AECOM	
CC	Dion Lewis/AECOM	

OVERVIEW

Level M-2 validation was performed on the data for 29 sediment samples and 2 aqueous equipment blank samples analyzed for tetraethyl lead (TEL) by SW-846 method 8270M. The samples were collected by AECOM at the proposed Bell Bend Nuclear Power Plant site located in Salem Township, Luzerne County, Pennsylvania on October 12, 13 and 14, 2010 and submitted to Meta Environmental, Inc. (META) in Watertown, Massachusetts for laboratory analysis. Meta processed the samples and reported the results under submission number A21010.

The samples included in this review are listed below:

Client Sample ID	Matrix	Parameter
BBNPP-CW1-C	Sediment	Tetraethyl lead
BBNPP-CW2-C	Sediment	Tetraethyl lead
BBNPP-CW3-C	Sediment	Tetraethyl lead
BBNPP-CW6-C	Sediment	Tetraethyl lead
BBNPP-CW9-C	Sediment	Tetraethyl lead
BBNPP-CW9-FD (field duplicate of BBNPP-CW9-C)	Sediment	Tetraethyl lead
BBNPP-CW12-C	Sediment	Tetraethyl lead
BBNPP-CW15-C	Sediment	Tetraethyl lead
BBNPP-CW18-C	Sediment	Tetraethyl lead
BBNPP-CW21-C	Sediment	Tetraethyl lead
BBNPP-CW5-C	Sediment	Tetraethyl lead
BBNPP-CW8-C	Sediment	Tetraethyl lead

Client Sample ID	Matrix	Parameter
BBNPP-CW11-C	Sediment	Tetraethyl lead
BBNPP-CW14-C	Sediment	Tetraethyl lead
BBNPP-CW17-C	Sediment	Tetraethyl lead
BBNPP-CW20-C	Sediment	Tetraethyl lead
BBNPP-CW23-C	Sediment	Tetraethyl lead
BBNPP-CW20-C-FD (field duplicate of BBNPP-CW20-C)	Sediment	Tetraethyl lead
BBNPP-D2	Sediment	Tetraethyl lead
BBNPP-D1-C	Sediment	Tetraethyl lead
BBNPP-R-C	Sediment	Tetraethyl lead
BBNPP-CW22-C	Sediment	Tetraethyl lead
BBNPP-C-EB (equipment blank)	Aqueous	Tetraethyl lead
BBNPP-PB (equipment blank)	Aqueous	Tetraethyl lead
BBNPP-CW4-C	Sediment	Tetraethyl lead
BBNPP-CW7-C	Sediment	Tetraethyl lead
BBNPP-CW10-C	Sediment	Tetraethyl lead
BBNPP-CW13-C	Sediment	Tetraethyl lead
BBNPP-CW16-C	Sediment	Tetraethyl lead
BBNPP-CW19-C	Sediment	Tetraethyl lead
BBNPP-D1-CFD (field duplicate of BBNPP-D1-C)	Sediment	Tetraethyl lead

SUMMARY

The target compound, TEL, was not detected in the sediment samples or associated equipment blank samples. In general, the data are valid as reported and may be used for decision making purposes. There were no data points rejected or qualified as a result of this data review. See below for a discussion of issues noted during the data review.

MAJOR PROBLEMS

No major problems were identified during the validation of this data.

MINOR PROBLEMS

COC/Sample Integrity

The aqueous equipment blank samples associated with the sediment samples in this data set were incorrectly identified as sediments on the chains-of-custody. Additionally, the number and type of containers for these blanks were also incorrectly indicated. No actions were taken except this notation.

Field Duplicate Results

Three field duplicate pairs, BBNPP-D1-C/BBNPP-D1-C-FD, BBNPP-CW9-C/BBNPP-CW9-C-FD and BBNPP-CW20-C/BBNPP-CW20-C-FD were submitted with this sample set. For this data review, sample results were not qualified on the basis of field duplicate imprecision. Since the TEL results for all field duplicate pairs were nondetect, no qualification of the data was necessary.

Sample Results and Quantitation Limits

No sample results were qualified as a result of the validation. Consequently, a table of qualified results is not included in this memorandum.

NOTES

The following issue was noted during the data review:

The results for TEL in all sediment samples were nondetect with a reporting limit of 0.005 mg/Kg or 0.006 mg/Kg. These reporting limits exceed that specified in the project Sampling and Analysis Plan (SAP) for the project (0.0046 mg/Kg). The reported limits are based on the low calibration standard.

REPORT CONTENT

Data validation activities were conducted with reference to Level M-2 described in *Region III Innovative Approaches to Data Validation* (June 1995) modified to reflect the use of non-CLP (Contract Laboratory Program) methods, the *Sampling and Analysis Plan (SAP) for Dredge Management Support at the Bell Bend Nuclear Power Plant* (September 2010), and the laboratory's standard operating procedure (based on SW846 Method 8270). In the absence of SAP-specified criteria, method or laboratory quality assurance limits were used as appropriate. The text of this report was formulated to address issues affecting data usability.

Appendix H

Laboratory Certifications

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

*OFFICE OF FIELD OPERATIONS
BUREAU OF LABORATORIES*



Certifies that
68-01121

**ACCUTEST LABORATORIES OF NEW ENGLAND INC
BLDG ONE
495 TECHNOLOGY CENTER WEST
MARLBOROUGH, MA 01752**

Having duly met the requirement of
The Act of June 29, 2002 (P.L. 596, No. 90)
dealing with Environmental Laboratory Accreditation
(27 Pa. C.S. §§4101-4113) and the
National Environmental Laboratory Accreditation Conference Standard


is hereby approved as an

Accredited Laboratory

As more fully described in the attached Scope of Accreditation

Expiration Date: **9/30/2011**
Certificate Number: **003**

Certificate not transferable Surrender upon revocation
To Be Conspicuously Displayed at the Laboratory
Not valid unless accompanied by a valid Scope of Accreditation
Shall not be used to imply endorsement by the Commonwealth of Pennsylvania
Customers are urged to verify the laboratory's current accreditation status
PA DEP is a NELAP recognized accrediting authority


Aaren S. Alger, Chief
Laboratory Accreditation Program
Bureau of Laboratories

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

*OFFICE OF FIELD OPERATIONS
BUREAU OF LABORATORIES*



Certifies that

68-00408

**ACCUTEST LABORATORIES
2235 US ROUTE 130
DAYTON NJ 08810**



Having duly met the requirement of
The Act of June 29, 2002 (P.L. 596, No. 90)
dealing with Environmental Laboratory Accreditation
(27 Pa. C.S. §§4101-4113) and the
National Environmental Laboratory Accreditation Conference Standard

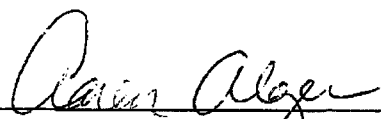
is hereby approved as an

Accredited Laboratory

As more fully described in the attached Scope of Accreditation

Expiration Date: **5/31/2011**
Certificate Number: **007**

Continued accreditation status depends on successful ongoing participation in the Program
Certificate not transferable Surrender upon revocation
To be conspicuously displayed at the Laboratory
Not valid unless accompanied by a valid Scope of Accreditation
Shall not be used to imply endorsement by the Commonwealth of Pennsylvania
Customers are urged to verify the laboratory's current accreditation status
PA DEP is a NELAP recognized accreditation body


Aaren S. Alger, Chief
Laboratory Accreditation Program
Bureau of Laboratories



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

CAPE FEAR ANALYTICAL, LLC
3306 Kitty Hawk Road, Suite 120
Wilmington, NC 28405
W. Michael Larkins Phone: 910-795-0421
mlarkins@cfanalytical.com

ENVIRONMENTAL

Valid To: May 31, 2012

Certificate Number: 3014.01

In recognition of the successful completion of the A2LA evaluation process, (including an assessment of the laboratory's compliance with ISO IEC 17025:2005, the 2003 NELAC Chapter 5 Standard, and the requirements of the DoD Environmental Laboratory Accreditation Program (DoD ELAP) as detailed in the DoD Quality Systems Manual for Environmental Laboratories (DoD QSM v4.1)) accreditation is granted to this laboratory to perform recognized EPA methods using the following testing technologies and in the analyte categories identified below:

Testing Technologies

High Resolution Gas Chromatography / Mass Spectrometry

Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste
2,3,7,8-Tetrachlorodibenzo-p-dioxin	EPA 1613B	EPA 1613B/8290A	EPA 1613B/8290A
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	-----	EPA 1613B/8290A	EPA 1613B/8290A
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	-----	EPA 1613B/8290A	EPA 1613B/8290A
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	-----	EPA 1613B/8290A	EPA 1613B/8290A
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	-----	EPA 1613B/8290A	EPA 1613B/8290A
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	-----	EPA 1613B/8290A	EPA 1613B/8290A
1,2,3,4,5,6,7,8-Octachlorodibenzo-p-dioxin	-----	EPA 1613B/8290A	EPA 1613B/8290A
2,3,7,8-Tetrachlorodibenzofuran	-----	EPA 1613B/8290A	EPA 1613B/8290A
1,2,3,7,8-Pentachlorodibenzofuran	-----	EPA 1613B/8290A	EPA 1613B/8290A
2,3,4,7,8-Pentachlorodibenzofuran	-----	EPA 1613B/8290A	EPA 1613B/8290A
1,2,3,4,7,8-Hexachlorodibenzofuran	-----	EPA 1613B/8290A	EPA 1613B/8290A
1,2,3,6,7,8-Hexachlorodibenzofuran	-----	EPA 1613B/8290A	EPA 1613B/8290A
2,3,4,6,7,8-Hexachlorodibenzofuran	-----	EPA 1613B/8290A	EPA 1613B/8290A
1,2,3,7,8,9-Hexachlorodibenzofuran	-----	EPA 1613B/8290A	EPA 1613B/8290A
1,2,3,4,6,7,8-Heptachlorodibenzofuran	-----	EPA 1613B/8290A	EPA 1613B/8290A
1,2,3,4,7,8,9-Heptachlorodibenzofuran	-----	EPA 1613B/8290A	EPA 1613B/8290A
1,2,3,4,5,6,7,8-Octachlorodibenzofuran	-----	EPA 1613B/8290A	EPA 1613B/8290A
Total Tetrachlorodibenzo-p-dioxin	-----	EPA 1613B/8290A	EPA 1613B/8290A
Total Pentachlorodibenzo-p-dioxin	-----	EPA 1613B/8290A	EPA 1613B/8290A
Total Hexachlorodibenzo-p-dioxin	-----	EPA 1613B/8290A	EPA 1613B/8290A
Total Heptachlorodibenzo-p-dioxin	-----	EPA 1613B/8290A	EPA 1613B/8290A

Peter M. Larkins

Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste
Total Tetrachlorodibenzofuran	-----	EPA 1613B/8290A	EPA 1613B/8290A
Total Pentachlorodibenzofuran	-----	EPA 1613B/8290A	EPA 1613B/8290A
Total Hexachlorodibenzofuran	-----	EPA 1613B/8290A	EPA 1613B/8290A
Total Heptachlorodibenzofuran	-----	EPA 1613B/8290A	EPA 1613B/8290A
2-Chlorobiphenyl (1)	-----	EPA 1668A	EPA 1668A
3-Chlorobiphenyl (2)	-----	EPA 1668A	EPA 1668A
4-Chlorobiphenyl (3)	-----	EPA 1668A	EPA 1668A
2,2'-Dichlorobiphenyl (4)	-----	EPA 1668A	EPA 1668A
2,3-Dichlorobiphenyl (5)	-----	EPA 1668A	EPA 1668A
2,3'-Dichlorobiphenyl (6)	-----	EPA 1668A	EPA 1668A
2,4-Dichlorobiphenyl (7)	-----	EPA 1668A	EPA 1668A
2,4'-Dichlorobiphenyl (8)	-----	EPA 1668A	EPA 1668A
2,5-Dichlorobiphenyl (9)	-----	EPA 1668A	EPA 1668A
2,6-Dichlorobiphenyl (10)	-----	EPA 1668A	EPA 1668A
3,3'-Dichlorobiphenyl (11)	-----	EPA 1668A	EPA 1668A
3,4-Dichlorobiphenyl (12)	-----	EPA 1668A	EPA 1668A
3,4'-Dichlorobiphenyl (13)	-----	EPA 1668A	EPA 1668A
3,5-Dichlorobiphenyl (14)	-----	EPA 1668A	EPA 1668A
4,4'-Dichlorobiphenyl (15)	-----	EPA 1668A	EPA 1668A
2,2',3-Trichlorobiphenyl (16)	-----	EPA 1668A	EPA 1668A
2,2',4-Trichlorobiphenyl (17)	-----	EPA 1668A	EPA 1668A
2,2',5-Trichlorobiphenyl (18)	-----	EPA 1668A	EPA 1668A
2,2',6-Trichlorobiphenyl (19)	-----	EPA 1668A	EPA 1668A
2,3,3'-Trichlorobiphenyl (20)	-----	EPA 1668A	EPA 1668A
2,3,4-Trichlorobiphenyl (21)	-----	EPA 1668A	EPA 1668A
2,3,4'-Trichlorobiphenyl (22)	-----	EPA 1668A	EPA 1668A
2,3,5-Trichlorobiphenyl (23)	-----	EPA 1668A	EPA 1668A
2,3,6-Trichlorobiphenyl (24)	-----	EPA 1668A	EPA 1668A
2,3',4-Trichlorobiphenyl (25)	-----	EPA 1668A	EPA 1668A
2,3',5-Trichlorobiphenyl (26)	-----	EPA 1668A	EPA 1668A
2,3',6-Trichlorobiphenyl (27)	-----	EPA 1668A	EPA 1668A
2,4,4'-Trichlorobiphenyl (28)	-----	EPA 1668A	EPA 1668A
2,4,5-Trichlorobiphenyl (29)	-----	EPA 1668A	EPA 1668A
2,4,6-Trichlorobiphenyl (30)	-----	EPA 1668A	EPA 1668A
2,4',5-Trichlorobiphenyl (31)	-----	EPA 1668A	EPA 1668A
2,4',6-Trichlorobiphenyl (32)	-----	EPA 1668A	EPA 1668A
2',3,4-Trichlorobiphenyl (33)	-----	EPA 1668A	EPA 1668A
2',3,5-Trichlorobiphenyl (34)	-----	EPA 1668A	EPA 1668A
3,3',4-Trichlorobiphenyl (35)	-----	EPA 1668A	EPA 1668A
3,3',5-Trichlorobiphenyl (36)	-----	EPA 1668A	EPA 1668A
3,4,4'-Trichlorobiphenyl (37)	-----	EPA 1668A	EPA 1668A
3,4,5-Trichlorobiphenyl (38)	-----	EPA 1668A	EPA 1668A
3,4',5-Trichlorobiphenyl (39)	-----	EPA 1668A	EPA 1668A
2,2',3,3'-Tetrachlorobiphenyl (40)	-----	EPA 1668A	EPA 1668A
2,2',3,4-Tetrachlorobiphenyl (41)	-----	EPA 1668A	EPA 1668A
2,2',3,4'-Tetrachlorobiphenyl (42)	-----	EPA 1668A	EPA 1668A
2,2',3,5-Tetrachlorobiphenyl (43)	-----	EPA 1668A	EPA 1668A
2,2',3,5'-Tetrachlorobiphenyl (44)	-----	EPA 1668A	EPA 1668A
2,2',3,6-Tetrachlorobiphenyl (45)	-----	EPA 1668A	EPA 1668A
2,2',3,6'-Tetrachlorobiphenyl (46)	-----	EPA 1668A	EPA 1668A
2,2',4,4'-Tetrachlorobiphenyl (47)	-----	EPA 1668A	EPA 1668A

Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste
2,2',4,5-Tetrachlorobiphenyl (48)	-----	EPA 1668A	EPA 1668A
2,2',4,5'-Tetrachlorobiphenyl (49)	-----	EPA 1668A	EPA 1668A
2,2',4,6-Tetrachlorobiphenyl (50)	-----	EPA 1668A	EPA 1668A
2,2',4,6'-Tetrachlorobiphenyl (51)	-----	EPA 1668A	EPA 1668A
2,2',5,5'-Tetrachlorobiphenyl (52)	-----	EPA 1668A	EPA 1668A
2,2',5,6'-Tetrachlorobiphenyl (53)	-----	EPA 1668A	EPA 1668A
2,2',6,6'-Tetrachlorobiphenyl (54)	-----	EPA 1668A	EPA 1668A
2,3,3',4-Tetrachlorobiphenyl (55)	-----	EPA 1668A	EPA 1668A
2,3,3',4'-Tetrachlorobiphenyl (56)	-----	EPA 1668A	EPA 1668A
2,3,3',5-Tetrachlorobiphenyl (57)	-----	EPA 1668A	EPA 1668A
2,3,3',5'-Tetrachlorobiphenyl (58)	-----	EPA 1668A	EPA 1668A
2,3,3',6-Tetrachlorobiphenyl (59)	-----	EPA 1668A	EPA 1668A
2,3,4,4'-Tetrachlorobiphenyl (60)	-----	EPA 1668A	EPA 1668A
2,3,4,5-Tetrachlorobiphenyl (61)	-----	EPA 1668A	EPA 1668A
2,3,4,6-Tetrachlorobiphenyl (62)	-----	EPA 1668A	EPA 1668A
2,3,4',5-Tetrachlorobiphenyl (63)	-----	EPA 1668A	EPA 1668A
2,3,4',6-Tetrachlorobiphenyl (64)	-----	EPA 1668A	EPA 1668A
2,3,5,6-Tetrachlorobiphenyl (65)	-----	EPA 1668A	EPA 1668A
2,3',4,4'-Tetrachlorobiphenyl (66)	-----	EPA 1668A	EPA 1668A
2,3',4,5-Tetrachlorobiphenyl (67)	-----	EPA 1668A	EPA 1668A
2,3',4,5'-Tetrachlorobiphenyl (68)	-----	EPA 1668A	EPA 1668A
2,3',4,6-Tetrachlorobiphenyl (69)	-----	EPA 1668A	EPA 1668A
2,3',4',5-Tetrachlorobiphenyl (70)	-----	EPA 1668A	EPA 1668A
2,3',4',6-Tetrachlorobiphenyl (71)	-----	EPA 1668A	EPA 1668A
2,3',5,5'-Tetrachlorobiphenyl (72)	-----	EPA 1668A	EPA 1668A
2,3',5',6-Tetrachlorobiphenyl (73)	-----	EPA 1668A	EPA 1668A
2,4,4',5-Tetrachlorobiphenyl (74)	-----	EPA 1668A	EPA 1668A
2,4,4',6-Tetrachlorobiphenyl (75)	-----	EPA 1668A	EPA 1668A
2',3,4,5-Tetrachlorobiphenyl (76)	-----	EPA 1668A	EPA 1668A
3,3',4,4'-Tetrachlorobiphenyl (77)	-----	EPA 1668A	EPA 1668A
3,3',4,5-Tetrachlorobiphenyl (78)	-----	EPA 1668A	EPA 1668A
3,3',4,5'-Tetrachlorobiphenyl (79)	-----	EPA 1668A	EPA 1668A
3,3',5,5'-Tetrachlorobiphenyl (80)	-----	EPA 1668A	EPA 1668A
3,4,4',5-Tetrachlorobiphenyl (81)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4-Pentachlorobiphenyl (82)	-----	EPA 1668A	EPA 1668A
2,2',3,3',5-Pentachlorobiphenyl (83)	-----	EPA 1668A	EPA 1668A
2,2',3,3',6-Pentachlorobiphenyl (84)	-----	EPA 1668A	EPA 1668A
2,2',3,4,4'-Pentachlorobiphenyl (85)	-----	EPA 1668A	EPA 1668A
2,2',3,4,5-Pentachlorobiphenyl (86)	-----	EPA 1668A	EPA 1668A
2,2',3,4,5'-Pentachlorobiphenyl (87)	-----	EPA 1668A	EPA 1668A
2,2',3,4,6-Pentachlorobiphenyl (88)	-----	EPA 1668A	EPA 1668A
2,2',3,4,6'-Pentachlorobiphenyl (89)	-----	EPA 1668A	EPA 1668A
2,2',3,4',5-Pentachlorobiphenyl (90)	-----	EPA 1668A	EPA 1668A
2,2',3,4',6-Pentachlorobiphenyl (91)	-----	EPA 1668A	EPA 1668A
2,2',3,5,5'-Pentachlorobiphenyl (92)	-----	EPA 1668A	EPA 1668A
2,2',3,5,6-Pentachlorobiphenyl (93)	-----	EPA 1668A	EPA 1668A
2,2',3,5,6'-Pentachlorobiphenyl (94)	-----	EPA 1668A	EPA 1668A
2,2',3,5',6-Pentachlorobiphenyl (95)	-----	EPA 1668A	EPA 1668A
2,2',3,6,6'-Pentachlorobiphenyl (96)	-----	EPA 1668A	EPA 1668A
2,2',3',4,5-Pentachlorobiphenyl (97)	-----	EPA 1668A	EPA 1668A
2,2',3',4,6-Pentachlorobiphenyl (98)	-----	EPA 1668A	EPA 1668A

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Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste
2,2',4,4',5-Pentachlorobiphenyl (99)	-----	EPA 1668A	EPA 1668A
2,2',4,4',6-Pentachlorobiphenyl (100)	-----	EPA 1668A	EPA 1668A
2,2',4,5,5'-Pentachlorobiphenyl (101)	-----	EPA 1668A	EPA 1668A
2,2',4,5,6'-Pentachlorobiphenyl (102)	-----	EPA 1668A	EPA 1668A
2,2',4,5',6-Pentachlorobiphenyl (103)	-----	EPA 1668A	EPA 1668A
2,2',4,6,6'-Pentachlorobiphenyl (104)	-----	EPA 1668A	EPA 1668A
2,3,3',4,4'-Pentachlorobiphenyl (105)	-----	EPA 1668A	EPA 1668A
2,3,3',4,5-Pentachlorobiphenyl (106)	-----	EPA 1668A	EPA 1668A
2,3,3',4',5-Pentachlorobiphenyl (107)	-----	EPA 1668A	EPA 1668A
2,3,3',4,5'-Pentachlorobiphenyl (108)	-----	EPA 1668A	EPA 1668A
2,3,3',4,6-Pentachlorobiphenyl (109)	-----	EPA 1668A	EPA 1668A
2,3,3',4',6-Pentachlorobiphenyl (110)	-----	EPA 1668A	EPA 1668A
2,3,3',5,5'-Pentachlorobiphenyl (111)	-----	EPA 1668A	EPA 1668A
2,3,3',5,6-Pentachlorobiphenyl (112)	-----	EPA 1668A	EPA 1668A
2,3,3',5',6-Pentachlorobiphenyl (113)	-----	EPA 1668A	EPA 1668A
2,3,4,4',5-Pentachlorobiphenyl (114)	-----	EPA 1668A	EPA 1668A
2,3,4,4',6-Pentachlorobiphenyl (115)	-----	EPA 1668A	EPA 1668A
2,3,4,5,6-Pentachlorobiphenyl (116)	-----	EPA 1668A	EPA 1668A
2,3,4',5,6-Pentachlorobiphenyl (117)	-----	EPA 1668A	EPA 1668A
2,3',4,4',5-Pentachlorobiphenyl (118)	-----	EPA 1668A	EPA 1668A
2,3',4,4',6-Pentachlorobiphenyl (119)	-----	EPA 1668A	EPA 1668A
2,3',4,5,5'-Pentachlorobiphenyl (120)	-----	EPA 1668A	EPA 1668A
2,3',4,5',6-Pentachlorobiphenyl (121)	-----	EPA 1668A	EPA 1668A
2',3,3',4,5-Pentachlorobiphenyl (122)	-----	EPA 1668A	EPA 1668A
2',3,4,4',5-Pentachlorobiphenyl (123)	-----	EPA 1668A	EPA 1668A
2',3,4,5,5'-Pentachlorobiphenyl (124)	-----	EPA 1668A	EPA 1668A
2',3,4,5',6-Pentachlorobiphenyl (125)	-----	EPA 1668A	EPA 1668A
3,3',4,4',5-Pentachlorobiphenyl (126)	-----	EPA 1668A	EPA 1668A
3,3',4,5,5'-Pentachlorobiphenyl (127)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,4'-Hexachlorobiphenyl (128)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,5-Hexachlorobiphenyl (129)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,5'-Hexachlorobiphenyl (130)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,6-Hexachlorobiphenyl (131)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,6'-Hexachlorobiphenyl (132)	-----	EPA 1668A	EPA 1668A
2,2',3,3',5,5'-Hexachlorobiphenyl (133)	-----	EPA 1668A	EPA 1668A
2,2',3,3',5,6-Hexachlorobiphenyl (134)	-----	EPA 1668A	EPA 1668A
2,2',3,3',5,6'-Hexachlorobiphenyl (135)	-----	EPA 1668A	EPA 1668A
2,2',3,3',6,6'-Hexachlorobiphenyl (136)	-----	EPA 1668A	EPA 1668A
2,2',3,4,4',5-Hexachlorobiphenyl (137)	-----	EPA 1668A	EPA 1668A
2,2',3,4,4',5'-Hexachlorobiphenyl (138)	-----	EPA 1668A	EPA 1668A
2,2',3,4,4',6-Hexachlorobiphenyl (139)	-----	EPA 1668A	EPA 1668A
2,2',3,4,4',6'-Hexachlorobiphenyl (140)	-----	EPA 1668A	EPA 1668A
2,2',3,4,5,5'-Hexachlorobiphenyl (141)	-----	EPA 1668A	EPA 1668A
2,2',3,4,5,6-Hexachlorobiphenyl (142)	-----	EPA 1668A	EPA 1668A
2,2',3,4,5,6'-Hexachlorobiphenyl (143)	-----	EPA 1668A	EPA 1668A
2,2',3,4,5',6-Hexachlorobiphenyl (144)	-----	EPA 1668A	EPA 1668A
2,2',3,4,6,6'-Hexachlorobiphenyl (145)	-----	EPA 1668A	EPA 1668A
2,2',3,4,5,5'-Hexachlorobiphenyl (146)	-----	EPA 1668A	EPA 1668A
2,2',3,4,5,6-Hexachlorobiphenyl (147)	-----	EPA 1668A	EPA 1668A
2,2',3,4,5,6'-Hexachlorobiphenyl (148)	-----	EPA 1668A	EPA 1668A
2,2',3,4,5',6-Hexachlorobiphenyl (149)	-----	EPA 1668A	EPA 1668A

Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste
2,2',3,4',6,6'-Hexachlorobiphenyl (150)	-----	EPA 1668A	EPA 1668A
2,2',3,5,5',6-Hexachlorobiphenyl (151)	-----	EPA 1668A	EPA 1668A
2,2',3,5,6,6'-Hexachlorobiphenyl (152)	-----	EPA 1668A	EPA 1668A
2,2',4,4',5,5'-Hexachlorobiphenyl (153)	-----	EPA 1668A	EPA 1668A
2,2',4,4',5',6-Hexachlorobiphenyl (154)	-----	EPA 1668A	EPA 1668A
2,2',4,4',6,6'-Hexachlorobiphenyl (155)	-----	EPA 1668A	EPA 1668A
2,3,3',4,4',5-Hexachlorobiphenyl (156)	-----	EPA 1668A	EPA 1668A
2,3,3',4,4',5'-Hexachlorobiphenyl (157)	-----	EPA 1668A	EPA 1668A
2,3,3',4,4',6-Hexachlorobiphenyl (158)	-----	EPA 1668A	EPA 1668A
2,3,3',4,5,5'-Hexachlorobiphenyl (159)	-----	EPA 1668A	EPA 1668A
2,3,3',4,5,6-Hexachlorobiphenyl (160)	-----	EPA 1668A	EPA 1668A
2,3,3',4,5',6-Hexachlorobiphenyl (161)	-----	EPA 1668A	EPA 1668A
2,3,3',4',5,5'-Hexachlorobiphenyl (162)	-----	EPA 1668A	EPA 1668A
2,3,3',4',5,6-Hexachlorobiphenyl (163)	-----	EPA 1668A	EPA 1668A
2,3,3',4',5',6-Hexachlorobiphenyl (164)	-----	EPA 1668A	EPA 1668A
2,3,3',5,5',6-Hexachlorobiphenyl (165)	-----	EPA 1668A	EPA 1668A
2,3,4,4',5,6-Hexachlorobiphenyl (166)	-----	EPA 1668A	EPA 1668A
2,3',4,4',5,5'-Hexachlorobiphenyl (167)	-----	EPA 1668A	EPA 1668A
2,3',4,4',5',6-Hexachlorobiphenyl (168)	-----	EPA 1668A	EPA 1668A
3,3',4,4',5,5'-Hexachlorobiphenyl (169)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,4',5-Heptachlorobiphenyl (170)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,4',6-Heptachlorobiphenyl (171)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,5,5'-Heptachlorobiphenyl (172)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,5,6-Heptachlorobiphenyl (173)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,5,6'-Heptachlorobiphenyl (174)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,5',6-Heptachlorobiphenyl (175)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,6,6'-Heptachlorobiphenyl (176)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4',5,6-Heptachlorobiphenyl (177)	-----	EPA 1668A	EPA 1668A
2,2',3,3',5,5',6-Heptachlorobiphenyl (178)	-----	EPA 1668A	EPA 1668A
2,2',3,3',5,6,6'-Heptachlorobiphenyl (179)	-----	EPA 1668A	EPA 1668A
2,2',3,4,4',5,5'-Heptachlorobiphenyl (180)	-----	EPA 1668A	EPA 1668A
2,2',3,4,4',5,6-Heptachlorobiphenyl (181)	-----	EPA 1668A	EPA 1668A
2,2',3,4,4',5,6'-Heptachlorobiphenyl (182)	-----	EPA 1668A	EPA 1668A
2,2',3,4,4',5',6-Heptachlorobiphenyl (183)	-----	EPA 1668A	EPA 1668A
2,2',3,4,4',6,6'-Heptachlorobiphenyl (184)	-----	EPA 1668A	EPA 1668A
2,2',3,4,5,5',6-Heptachlorobiphenyl (185)	-----	EPA 1668A	EPA 1668A
2,2',3,4,5,6,6'-Heptachlorobiphenyl (186)	-----	EPA 1668A	EPA 1668A
2,2',3,4',5,5',6-Heptachlorobiphenyl (187)	-----	EPA 1668A	EPA 1668A
2,2',3,4',5,6,6'-Heptachlorobiphenyl (188)	-----	EPA 1668A	EPA 1668A
2,3,3',4,4',5,5'-Heptachlorobiphenyl (189)	-----	EPA 1668A	EPA 1668A
2,3,3',4,4',5,6-Heptachlorobiphenyl (190)	-----	EPA 1668A	EPA 1668A
2,3,3',4,4',5',6-Heptachlorobiphenyl (191)	-----	EPA 1668A	EPA 1668A
2,3,3',4,5,5',6-Heptachlorobiphenyl (192)	-----	EPA 1668A	EPA 1668A
2,3,3',4',5,5',6-Heptachlorobiphenyl (193)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (194)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,4',5,6-Octachlorobiphenyl (195)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (196)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,4',6,6'-Octachlorobiphenyl (197)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,5,5',6-Octachlorobiphenyl (198)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,5,5',6'-Octachlorobiphenyl (199)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,5,6,6'-Octachlorobiphenyl (200)	-----	EPA 1668A	EPA 1668A

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Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (201)	-----	EPA 1668A	EPA 1668A
2,2',3,3',5,5',6,6'-Octachlorobiphenyl (202)	-----	EPA 1668A	EPA 1668A
2,2',3,4,4',5,5',6-Octachlorobiphenyl (203)	-----	EPA 1668A	EPA 1668A
2,2',3,4,4',5,6,6'-Octachlorobiphenyl (204)	-----	EPA 1668A	EPA 1668A
2,3,3',4,4',5,5',6-Octachlorobiphenyl (205)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (206)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (207)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (208)	-----	EPA 1668A	EPA 1668A
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (209)	-----	EPA 1668A	EPA 1668A
Soxhlet/Dean-Stark Extraction	-----	-----	EPA 3540C
Continuous Liquid-Liquid Extraction	EPA 3520C	-----	-----



World Class Accreditation

The American Association for Laboratory Accreditation

Accredited DoD ELAP Laboratory

A2LA has accredited

CAPE FEAR ANALYTICAL, LLC

Wilmington, NC

for technical competence in the field of

Environmental Testing

In recognition of the successful completion of the A2LA evaluation process that includes an assessment of the laboratory's compliance with ISO/IEC 17025:2005, the 2003 NELAC Chapter 5 Standard, and the requirements of the Department of Defense Environmental Laboratory Accreditation Program (DoD ELAP) as detailed in the DoD Quality Systems Manual for Environmental Laboratories (QSM v4.1); accreditation is granted to this laboratory to perform recognized EPA methods as defined on the associated A2LA Environmental Scope of Accreditation. This accreditation demonstrates technical competence for this defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).

Presented this 5th day of April 2010.



President & CEO
For the Accreditation Council
Certificate Number 3014.01
Valid to May 31, 2012

For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Environmental Scope of Accreditation.

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER
RICHARD F. DAINES, M.D.



Expires 12:01 AM April 01, 2011
Issued April 01, 2010

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE
Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. DAVID M. MAURO
META ENVIRONMENTAL INC.
49 CLARENDON STREET
WATERTOWN, MA 02472

NY Lab Id No: 11886
EPA Lab Code: MA00905

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Amines

2-Nitroaniline	EPA 8270C
3-Nitroaniline	EPA 8270C
4-Chloroaniline	EPA 8270C
4-Nitroaniline	EPA 8270C
Aniline	EPA 8270C
Carbazole	EPA 8270C

Benzidines

3,3'-Dichlorobenzidine	EPA 8270C
Benzidine	EPA 8270C

Chlorinated Hydrocarbon Pesticides

4,4'-DDD	EPA 8081A
4,4'-DDE	EPA 8081A
4,4'-DDT	EPA 8081A
Aldrin	EPA 8081A
alpha-BHC	EPA 8081A
alpha-Chlordane	EPA 8081A
beta-BHC	EPA 8081A
Chlordane Total	EPA 8081A
delta-BHC	EPA 8081A
Dieldrin	EPA 8081A
Endosulfan I	EPA 8081A
Endosulfan II	EPA 8081A
Endosulfan sulfate	EPA 8081A
Endrin	EPA 8081A
Endrin aldehyde	EPA 8081A
Endrin Ketone	EPA 8081A
gamma-Chlordane	EPA 8081A

Chlorinated Hydrocarbon Pesticides

Heptachlor	EPA 8081A
Heptachlor epoxide	EPA 8081A
Lindane	EPA 8081A
Methoxychlor	EPA 8081A
Toxaphene	EPA 8081A

Chlorinated Hydrocarbons

1,2,4-Trichlorobenzene	EPA 8270C
2-Chloronaphthalene	EPA 8270C
Hexachlorobenzene	EPA 8270C
Hexachlorobutadiene	EPA 8270C
Hexachlorocyclopentadiene	EPA 8270C
Hexachloroethane	EPA 8270C
Hexachloropropene	EPA 8270C
Pentachlorobenzene	EPA 8270C

Haloethers

4-Bromophenylphenyl ether	EPA 8270C
4-Chlorophenylphenyl ether	EPA 8270C
Bis (2-chloroisopropyl) ether	EPA 8270C
Bis(2-chloroethoxy)methane	EPA 8270C
Bis(2-chloroethyl)ether	EPA 8270C

Low Level Polynuclear Aromatic Hydrocarbons

Acenaphthene	EPA 8270-SIM
Acenaphthylene	EPA 8270-SIM
Anthracene	EPA 8270-SIM
Benzo(a)anthracene	EPA 8270-SIM
Benzo(a)pyrene	EPA 8270-SIM
Benzo(b)fluoranthene	EPA 8270-SIM

Serial No.: 42206

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER
RICHARD F. DAINES, M.D.



Expires 12:01 AM April 01, 2011
Issued April 01, 2010

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. DAVID M. MAURO
META ENVIRONMENTAL INC.
49 CLARENDON STREET
WATERTOWN, MA 02472

NY Lab Id No: 11886
EPA Lab Code: MA00905

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Low Level Polynuclear Aromatic Hydrocarbons

Benzo(g,h,i)perylene	EPA 8270-SIM
Benzo(k)fluoranthene	EPA 8270-SIM
Chrysene	EPA 8270-SIM
Dibenzo(a,h)anthracene	EPA 8270-SIM
Fluoranthene	EPA 8270-SIM
Fluorene	EPA 8270-SIM
Indeno(1,2,3-cd)pyrene	EPA 8270-SIM
Naphthalene	EPA 8270-SIM
Phenanthrene	EPA 8270-SIM
Pyrene	EPA 8270-SIM

Nitroaromatics and Isophorone

2,4-Dinitrotoluene	EPA 8270C
2,6-Dinitrotoluene	EPA 8270C
Isophorone	EPA 8270C
Nitrobenzene	EPA 8270C
Pyridine	EPA 8270C

Nitrosoamines

N-Nitrosodimethylamine	EPA 8270C
N-Nitrosodi-n-propylamine	EPA 8270C
N-Nitrosodiphenylamine	EPA 8270C

Phthalate Esters

Benzyl butyl phthalate	EPA 8270C
Bis(2-ethylhexyl) phthalate	EPA 8270C
Diethyl phthalate	EPA 8270C
Dimethyl phthalate	EPA 8270C
Di-n-butyl phthalate	EPA 8270C
Di-n-octyl phthalate	EPA 8270C

Polychlorinated Biphenyls

PCB-1016	EPA 8082
PCB-1221	EPA 8082
PCB-1232	EPA 8082
PCB-1242	EPA 8082
PCB-1248	EPA 8082
PCB-1254	EPA 8082
PCB-1260	EPA 8082

Polynuclear Aromatic Hydrocarbons

Acenaphthene	EPA 8270C
Acenaphthylene	EPA 8270C
Anthracene	EPA 8270C
Benzo(a)anthracene	EPA 8270C
Benzo(a)pyrene	EPA 8270C
Benzo(b)fluoranthene	EPA 8270C
Benzo(ghi)perylene	EPA 8270C
Benzo(k)fluoranthene	EPA 8270C
Chrysene	EPA 8270C
Dibenzo(a,h)anthracene	EPA 8270C
Fluoranthene	EPA 8270C
Fluorene	EPA 8270C
Indeno(1,2,3-cd)pyrene	EPA 8270C
Naphthalene	EPA 8270C
Phenanthrene	EPA 8270C
Pyrene	EPA 8270C

Priority Pollutant Phenols

2,3,4,6-Tetrachlorophenol	EPA 8270C
2,4,5-Trichlorophenol	EPA 8270C

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE*

All approved analytes are listed below:

Priority Pollutant Phenols

2,4,6-Trichlorophenol	EPA 8270C
2,4-Dichlorophenol	EPA 8270C
2,4-Dimethylphenol	EPA 8270C
2,4-Dinitrophenol	EPA 8270C
2-Chlorophenol	EPA 8270C
2-Methyl-4,6-dinitrophenol	EPA 8270C
2-Methylphenol	EPA 8270C
2-Nitrophenol	EPA 8270C
3-Methylphenol	EPA 8270C
4-Chloro-3-methylphenol	EPA 8270C
4-Methylphenol	EPA 8270C
4-Nitrophenol	EPA 8270C
Pentachlorophenol	EPA 8270C
Phenol	EPA 8270C

Semi-Volatile Organics

2-Methylnaphthalene	EPA 8270C
Benzyl alcohol	EPA 8270C
Dibenzofuran	EPA 8270C

Sample Preparation Methods

EPA 3540C

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World Class Accreditation

The American Association for Laboratory Accreditation

Accredited Laboratory

A2LA has accredited

GEOTESTING EXPRESS, INC.

Boxborough, MA

for technical competence in the field of

Geotechnical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).



Presented this 23rd day of March 2010.

A handwritten signature in cursive script, reading "Peter Meyer".

President & CEO
For the Accreditation Council
Certificate Number 2965.01
Valid to March 31, 2012

For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Geotechnical Scope of Accreditation.



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

GEOTESTING EXPRESS, INC.
1145 Massachusetts Avenue
Boxborough, MA 01719
Gary T. Torosian Phone: 978 635 0424

Valid To: March 31, 2012

Certificate Number: 2965.01

GEOTECHNICAL

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests under the ASTM recommended practice D3740:

Designation	Short Title
Soils:	
ASTM D421	Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constant
ASTM D422	Particle Size Analysis of Soils
ASTM D698	Moisture-Density Relations (Standard Proctor)
ASTM D854	Specific Gravity of Soils
ASTM D1140	Amount of Material in Soils Finer than No. 200 Sieve
ASTM D1556	Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Moisture-Density Relations (Modified Proctor)
ASTM D1883	CBR (California Bearing Ratio) of Laboratory-Compacted Soils
ASTM D2166	Unconfined Compressive Strength of Cohesive Soil
ASTM D2216	Water Content of Soil, Rock & Soil-Aggregate Mixtures
ASTM D2434-68 (2006)	Permeability of Granular Soils (Constant Head)
ASTM D2435	One-dimensional Consolidation Properties of Soils
ASTM D2487	Classification of Soils for Engineering Purposes
ASTM D2488	Description and Identification of Soils (Visual-Manual Procedure)
ASTM D2850	Undrained, Unconsolidated Strength in Triaxial Compression
ASTM D2937*	Density of Soil in Place by the Drive-Cylinder Method
ASTM D3080	Direct Shear Test of Soils Under Consolidated Drained Conditions
ASTM D4186	One-Dimensional Consolidation Properties of Saturated Cohesive Soils Using Controlled-Strain Loading
ASTM D4253	Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
ASTM D4254	Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density
ASTM D4318	Liquid Limit, Plastic Limits & Plasticity Index of Soils
ASTM D4546	One-Dimensional-Swell or Settlement Properties of Cohesive Soils
ASTM D4718	Correction of Unit Weight and Water Content for Soils Containing Oversize Particles
ASTM D4767	Consolidated Undrained Triaxial Compression Test for Cohesive Soils
ASTM D4972	pH of Soils

ASTM D5084	Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter
ASTM D6938*	In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Rock:

ASTM D2664-04	Triaxial Compressive Strength of Undrained Rock Core Specimens Without Pore Pressure Measurements
ASTM D2845	Laboratory Determination of Pulse Velocities and Ultrasonic Elastic Constants of Rock
ASTM D2936	Direct Tensile Strength of Intact Rock Core Specimens
ASTM D3967	Splitting Tensile Strength of Intact Rock Core Specimens
ASTM D4543	Preparing Rock Core as Cylindrical Test Specimens and Verifying Conformance to Dimensional and Shape Tolerances
ASTM D7012	Compressive Strength and Elastic Moduli of Intact Rock Core Specimens under Varying States of Stress and Temperature

* This laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these tests or calibrations.

